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VOL. I.

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1908.

MINNESOTA STATE LIBRARY.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING THE PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED MAY 18, 1908.

(21,176, 21,177, 21,178.)

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ALSO

INDEX OF COMPLETE RECORD.

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JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., JULY 2, 1908.

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125—Deed of Edward Jones to C. S. Bushnell, dated November 25, 1871	7463	5128
126—Deed of Shepherd F. Knapp to C. S. Bushnell *et al.*, dated November 28, 1871	7465	5130
127—Deed of Wm. H. Bloom to Cornelius Corson, dated July 3, 1871	7468	5131
128—Deed of Cornelius Corson to C. S. Bushnell *et al.*, dated November 27, 1871	7470	5132
129—Deed of Joel A. Fithian to Richard B. Connolly, dated July 6, 1871	7472	5134
130—Deed of Richard B. Connolly to C. S. Bushnell *et al.*, dated November 25, 1871	7474	5135

	Original.	Print.
Complainant's Exhibit 131—Deed of Walter Smith to C. S. Bushnell *et al.*, dated Nov. 28, 1871...	7477	5136
132—Deed of Joseph Murphy to Forbes Holland, dated July 13, 1871....	7479	5138
133—Deed of Forbes Holland to C. S. Bushnell *et al.*, dated November 25, 1871......................	7481	5139
134—Deed of Edward Taylor to Wm. M. Tweed, Jr., dated July 3, 1871...	7484	5140
135—Deed of Wm. M. Tweed, Jr., to C. S. Bushnell *et al.*, dated November 27, 1871......................	7486	5141
136—Deed of John E. Cronley to Alexander Frear, dated July 18, 1871.	7488	5143
137—Deed of George H. Wicks to Alexander Frear, dated November 24, 1871.........................	7490	5144
138—Deed of Alexander Frear to C. S. Bushnell *et al.*, dated November 24, 1871......................	7492	5145
139—Deed of Joseph G. Jennings to Charles Banks, dated June 28, 1871.........................	7494	5146
140—Deed of Charles Banks to C. S. Bushnell *et al.*, dated November 25, 1871.........................	7496	5147
141—Deed of Henry Johnson to Wm. Hitchman, dated November 24, 1871.........................	7499	5149
142—Deed of Wm. Hitchman to C. S. Bushnell *et al.*, dated November 25, 1871......................	7501	5150
143—Deed of Edward J. Shandley to C. S. Bushnell *et al.*, dated November 25, 1871................	7503	5151
144—Deed of John C. Angell to James M. Sweeney, June 21, 1871......	7506	5153
145—Deed of James M. Sweeney to C. S. Bushnell *et al.*, dated November —, 1871..................	7507	5154
146—Deed of Wm. Vail to Thomas C. Fields, dated June 14, 1871......	7512	5156
147—Deed of Patrick Quinn to Thomas C. Fields, dated June 14, 1871...	7514	5157
148—Deed of Wm. H. Murphy to Thomas C. Fields, dated June 14, 1871.........................	7516	5159
149—Deed of Wm. Higgins to Thomas C. Fields, dated June 26, 1871...	7518	5160
150—Deed of John H. Johnston to Thomas C. Fields, dated June 14, 1871......................	7521	5161

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Complainant's Exhibit 151—Deed of George Chivvis to Thomas C. Fields, dated July 6, 1871....	7523	5163
152—Deed of Thomas C. Fields to C. S. Bushnell *et al.*, dated November 25, 1871..........................	7525	5164
153—Deed of Richard Vaughan to George L. Loutrel, dated July 3, 1871..........................	7528	5165
154—Deed of George L Loutrel to C. S. Bushnell *et al.*, dated November 25, 1871..........................	7529	5166
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156—Deed of Henry A. Smith to C. S. Bushnell *et al.*, dated November 6, 1871..........................	7534	5169
157—Deed of Joseph Bell to C. S. Bushnell *et al.*, dated November 25, 1871..........................	7538	5171
158—Deed of John J. Walsh to C. S. Bushnell *et al.*, dated December 30, 1871..........................	7540	5173
159—Deed of Delavan Peck to C. S. Bushnell, dated November 27, 1871..........................	7543	5174
160—Deed of Thomas T. Avery to A. Oakey Hall, dated June 29, 1871.	7545	5175
161—Deed of A. Oakey Hall to C. S. Bushnell *et al.*, dated June 29, 1871..........................	7547	5177
162—Deed of John Balmore to C. S. Bushnell *et al.*, dated November 27, 1871..........................	7549	5178
163—Deed of James S. Turner to Wm. M. Tweed, dated July 3, 1871...	7551	5179
164—Deed of Wm. M. Tweed to C. S. Bushnell *et al.*, dated July 31, 1871..........................	7553	5180
165—Deed of Wm. Johnston to John Ryan, dated December 16, 1871.	7556	5181
166—Deed of John Ryan to C. S. Bushnell *et al.*, dated December 18, 1871..........................	7559	5183
167—Deed of Henry S. Murray to Peter B. Sweeney, dated July 3, 1871..	7561	5185
168—Deed of Peter B. Sweeney to C. S. Bushnell *et al.*, dated July 3, 1871..........................	7563	5186
169—Deed of Peter H. E. Baxter, Jr., to Henry W. Genet, dated June 16, 1871..........................	7566	5187

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Complainant's Exhibit 170—Deed of Henry W. Genet to C. S. Bushnell *et al.*, dated November 28, 1871	7567	5188
171—Deed of John Cox to C. S. Bushnell *et al.*, dated November 25, 1871	7570	5189
172—Deed of John J. Turner to Wm. E. King, dated July 3, 1871	7572	5191
173—Deed of Wm. E. King to James F. Pierce, dated June 12, 1871	7574	5192
174—Deed of James F. Pierce to C. S. Bushnell *et al.*, dated November 25, 1871	7576	5193
175—Deed of Edgar Brower to Charles E. Wilbour, dated July 3, 1871	7578	5194
176—Deed of Charles E. Wilbour to C. S. Bushnell *et al.*, dated November 27, 1871	7580	5195
177—Deed of Charles E. Loew to C. S. Bushnell *et al.*, dated November 25, 1871	7583	5197
178—Deed of Mathew T. Brennan to C. S. Bushnell *et al.*, dated November 25, 1871	7585	5198
179—Resignations of executive committee	7587	5199
180—Same as No. 120 (not set out here)	7589	5200
181—Deed of Cornelius S. Bushnell *et al.* to William Foster, Jr., dated February 14, 1874	7589	5201
182—Deed of Cornelius S. Bushnell *et al.* to Eben F. Bacon, dated February 14, 1874	7592	5202
183—Deed of Cornelius S. Bushnell *et al.* to James M. Townsend, dated February 14, 1874	7594	5204
184—Deed of Cornelius S. Bushnell *et al.* to Samuel J. Young, dated February 14, 1874	7597	5205
185—Deed of Cornelius S. Bushnell *et al.* to Charles E. Appleby, dated February 14, 1874	7600	5207
186—Deed of Cornelius S. Bushnell *et al.* to Paschal W. Turney, dated February 14, 1874	7602	5208
187—Deed of Cornelius S. Bushnell *et al.* to Henry H. Porter, dated February 14, 1874	7605	5210
188—Deed of Wm. Foster, Jr., *et al.* to the Union Gas Light Co., dated February 25, 1874	7608	5212
189—Deed of Wm. Foster, Jr., to Robert M. C. Graham, dated December 5, 1876	7614	5215

	Original.	Print.
Complainant's Exhibit 190—Deed of Eben F. Bacon to John Sickels, dated December 5, 1876.	7617	5217
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192—Deed of Sam'l J. Young to George Howes, dated December 5, 1876.	7622	5220
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196—Request and consent of the Union Gas Light Company, dated December 11, 1876................	7632	5225
197—Deed of Charles E. Appleby, receiver, to Clark Bell, dated August 10, 1876..................	7635	5227
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201—General release from Walter Osborn *et al.* to Knickerbocker Gas Light Company, dated May 20, 1878...	7648	5235
202—Consent to transfer State grant from Knickerbocker Gas Light Company to Wm. Bayard Cutting *et al.*, dated March 11, 1880.....	7650	5236
203—Deed of Jared E. Redfield to Wm. W. Moir, dated May 20, 1878...	7653	5238
204—Deed of Tilton E. Doolittle to Oliver P. C. Billings, dated May 20, 1878.........................	7655	5239
205—Deed of Robert M. C. Graham to M. Bayard Brown, dated May 20, 1878.........................	7658	5240
206—Deed of Henry H. Porter to Robert F. Cutting, dated May 18, 1878..	7660	5242
207—Deed of Walter Osborn to Wm. Bayard Cutting, dated May 20, 1878.........................	7663	5243

	Original.	Print.
Complainant's Exhibit 208—Deed of Wm. W. Moir to Charles G. Francklyn, dated March 8, 1880	7664	5244
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210—Deed of M. Bayard Brown to Henry Day, dated March 11, 1880	7669	5247
211—Deed of Robert F. Cutting to H. E. Gawtry, dated March 11, 1880	7671	5248
212—Deed of Wm. Bayard Cutting to O. Ottendorfer, dated March 11, 1880	7674	5250
213—Deed of George Howes to S. C. Thompson, dated March 11, 1880	7676	5251
214—Deed of John Sickels to Peter Gardner, dated March 10, 1880	7678	5252
215—Resignation of executive committee under State grant, dated March 11, 1880	7681	5254
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217—Chapter 125, An act in relation to illuminating gas in the city of New York, and regulating the quality and pressure thereof and the price to consumers other than said city, and providing a penalty for violation; accepted by the city; became a law April 3, 1906	7692	5263
218—Laws of 1897, chapter 385, An act to regulate the price of illuminating gas in cities of fifteen hundred thousand inhabitants; became a law May 7, 1897	7694	5264
219—Notice from the Commission of Gas and Electricity to Consolidated Gas Co. of New York *et al.*, dated November 8, 1905	7696	5265

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	2*a*—Contract of Consolidated Gas Co. for furnishing gas, &c., to city of New York for year ending March 15, 1905	7911	5396
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	Original.	Print.
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	Original.	Print.
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Percy R. Pyne	8953	6170
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1 Circuit Court of United States, Southern District of New York. In Equity.

Consolidated Gas Company of New York, Complainant,
against
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederic E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Bill of Complaint.

To the Honorable the Judges of the Circuit Court of the United States for the Southern District of New York:

The Consolidated Gas Company of New York, a corporation organized and existing under the laws of the State of New York, and having its principal place of business in the County of New York, and in the Borough of Manhattan, City of New York, in the Southern District of New York, brings this its bill of complaint against Julius M. Mayer, of the Borough of Manhattan, City of New York, who is the Attorney General of the State of New York, William Travers Jerome, of the Borough of Manhattan, City of New York, who 2 is the District Attorney of New York County, Frederic E. Gunnison, John C. Davies and Lucian L. Shedden, all citizens and residents of the State of New York, who constitute the State Commission of Gas and Electricity of the State of New York, as is hereinafter more particularly set forth, the said Commission having an office in the Borough of Manhattan, City of New York, in the Southern District of New York, and the City of New York, which is a municipal corporation, organized and existing under the laws of the State of New York and situated in the Southern District of New York; and thereupon your orator alleges, upon information and belief, and complains:

I. That your orator is a corporation, duly incorporated for the purpose of manufacturing and selling gas in the City and County of New York, under and by virtue of a Consolidation Agreement, duly executed on September 29, 1884, pursuant to a statute of the State of New York, entitled, "An Act to Authorize the Consolidation of Manufacturing Corporations," known as Chapter 367 of the Laws of 1884, which became a law on May 28, 1884. The said Consolidation Agreement was executed by and on behalf of the New York Gas Light Company, The Manhattan Gas Light Company, The Metropolitan Gas Light Company of the City of New York, The Municipal Gas Light Company of New York, The Knickerbocker Gas Light Company and The Harlem Gas Light Company, all of which were corporations theretofore duly organized and existing under the laws of the State of New York, with the property, powers and franchises hereinafter referred to. The said Agreement was, thereafter, duly filed in the office of the Secretary of State of the State of New York and of the Clerk of New York County, on November 10, 1884, pursuant to the said statute. Your orator was duly organized as a corporation thereunder, to continue for fifty years by virtue of the said Consolidation Agreement and of the aforesaid statute; but, under the laws of New York, its corporate existence may, at any time, be extended, upon the consent of two-thirds in amount of the stockholders.

3 II. That by virtue of the said Consolidation Agreement, your orator became the owner of various franchises or consents, duly obtained by its said predecessor Companies, authorizing them to lay, maintain and operate mains, pipes and conductors in the streets, highways and public places of the City and County of New York; and it further became the owner of, and entitled to maintain, and operate mains, pipes and conductors theretofore laid in the various streets, highways and public places, in the said City and County of New York by the said predecessor Companies; and it also became thereby the owner of large and expensive works for the manufacture and distribution of gas, which had been erected by the said various predecessor Companies. Your orator has, ever since, been engaged in the business of manufacturing and selling gas to the inhabitants of the said City and County of New York and to the City of New York, and has maintained and operated the said mains, pipes and conductors in the said streets, highways and public places of the said City and County of New York, and has laid additional mains, pipes and conductors therein, with the consent of the municipal authorities of the said City duly obtained. In addition to your orator and the various constituent companies, whose property and franchises were acquired by it, as aforesaid, there were, at the time of such acquisition, and have since been organized and now are, other gas companies engaged in the manufacture, sale and distribution of gas in the City of New York, as well as a number of electric light companies engaged in distributing electric light to the inhabitants of the said City.

III. That by virtue of various laws of the State of New York, enacted sebsequent to the said Consolidation Agreement, and to which your orator is subject, your orator has been charged with the performance of various public duties and obligations, to wit:

By Chapter 566 of the Laws of 1890, known as "The Trans-
4 portation Corporations Law," with the duty of supplying gas
to the owner or occupant of any building or premises within one hundred feet of any main laid down by your orator, with the duty of furnishing gas meters to its consumers, without rent or charge, and with the duty of furnishing illuminating gas at a price not exceeding a certain amount, fixed in the said Act, having an illuminating power prescribed by the said Act and the standard of purity established by law.

Your orator has duly complied with all the requirements of the said several statutes.

IV. That by Chapter 736 of the Laws of 1905, which became a law on or about June 3, 1905, it was provided that a corporation, engaged in the business of furnishing or selling illuminating gas in the City of New York, should not charge the said City, or receive therefrom, for such gas, a sum in excess of seventy-five cents per thousand cubic feet. It was further provided by the said Act, that the gas furnished or sold by such corporation to the said City should have a certain illuminating power and standard of purity therein prescribed, and that the pressure of the said gas in any service mains in the said City should not be less than one inch, nor more than two and one-half inches, and that any corporation violating any provision of the said Act should forfeit the sum of one thousand dollars for each offense, to be sued for and recovered in the name of and by the City of New York, for its benefit. A copy of the said statute is hereto annexed, marked "Exhibit A."

V. That by Chapter 737 of the laws of 1905, provision was made for the appointment of a State commission of Gas and Electricity by the Governor of the State of New York; and, thereafter, the defendants, Frederic E. Gunnison, John C. Davies and Lucian L. Shedden were appointed such Commissioners by the said Governor. The said Act purported to give the said commission general supervision of all persons and corporations having authority to lay down
5 pipes and other fixtures in or under the streets, highways and public places of any municipality in the State of New York, for the purpose of furnishing gas for light, heat or power; to investigate the quality of gas supplied; to examine the methods used in supplying gas or in transmitting the same; to order such improvements as would best promote the public interests, preserve the public health and protect consumers of gas and those employed in the manufacture and distribution thereof; to fix the standard of illuminating power and purity of gas manufactured and sold for illuminating purposes, not less than that prescribed by law; to require the gas so manufactured and sold to equal the standard established by law or by said Commission, and to establish a standard of pressure at which gas should be delivered; to prescribe the methods of keeping accounts and books to be observed by corporations engaged in the manufacture, sale and distribution of gas; to examine all corporations under its supervision, keep informed as to the methods employed by them, and see that their property is maintained and operated for the security and accommodation of the public and in compliance with their charters; to require the corporations under its supervision to submit an annual report verified by the oath of the President or other officer, showing in detail the amount of its capital stock, the amount of its indebtedness, and of its receipts and expenditures during the preceding year, the amount of its dividends, the amount of salaries paid, the location of its plant and system, and other facts required by the Commission; to enter upon the property, buildings, plants, factories and offices of such corporations, to examine the books and affairs of such corporations and to compel the production of their books and papers; to subpœna witnesses and inspect gas meters. It was further provided by the said Act that the capital stock and bonded indebtedness of such corporations could not be increased without the consent in writing of the said Commission, and that no such corporation should transfer or
6 lease its franchises, works, system or property, or any part thereof, or acquire, directly or indirectly, the stock or

bonds of any other corporations engaged in the same or similar business, without the written consent of the said Commission. In case such consent should be refused by the said Commission, the applicant was given the right, within sixty days after notice of said refusal, to have the ruling reviewed by the Appellate Division of the Supreme Court of this State for the Third Department.

It was further provided by the said Act that, upon complaint in writing by the Mayor of a City, or of not less than one hundred customers, either as to illuminating power, purity, pressure or price of gas sold and delivered, the Commission should investigate such complaint, should have power to inspect the works of the corporation manufacturing such gas and to examine the books and papers of such corporation, and, after public hearing, at which the complainants and the corporation complained of should have an opportunity to be heard and be represented by counsel, should have power to fix, within the limits prescribed by law, the maximum price of gas which should be charged by such corporation, or to order such improvement in the manufacture or supply of such gas, or in the methods employed by such corporations, as would, in its judgment, improve its service; and that the price so fixed by the Commission should be the maximum price to be charged by said corporation for gas for the term of three years and until, after such term, the Commission should, upon complaint, again fix the price of such gas. The said Act further provided that the complainant, or any person aggrieved by any order of the Commission, might, within thirty days after notice of the making of such order, appeal to the Appellate Division of the Supreme Court of this State for the Department, within which the property of the corporation affected by such order was situated, and that the said Court might affirm, reverse in whole or in part, or modify, the order appealed from, or make
such order as it might deem just and proper; and that, on all
7 such appeals, the Commission should be represented by the
Attorney General. The said Act further provided, that an order made by the said Commission pursuant thereto, or, in case of an appeal, the order as affirmed or modified or made upon such appeal, might be enforced by writ of mandamus, and that the Commission or any person, corporation or municipality interested in the enforcement of such order might apply to the Supreme Court for a writ of mandamus to compel compliance with such order; and the said Court was given the power to issue a writ of mandamus to enforce the provisions of such order. The said Act further provided that, if it should be alleged and established, in an action brought in any court for the collection of any charge for gas, that a price had been demanded in excess of that fixed by said Commission or by statute, no recovery should be had therein, but the fact of such excessive charge should be a complete defense to such action. A copy of the said statute is hereto annexed, marked, "Exhibit B."

Your orator is also charged with the duty, at common law, of exercising the highest degree of care in the conduct of said business, to prevent injury to persons or property due to the inflammable, explosive and poisonous character of the commodity manufactured and distributed in the performance of the aforesaid duties and obligations.

VI. That the defendant, the City of New York, is a domestic municipal corporation, organized and existing under the laws of the State of New York, and situated in the Southern District of New York. The said City of New York itself is, and for many years last past, has been, a customer of your orator, in the same sense and in the same way and under the same legal conditions as each and every other customer of your orator in the said City; and the amount of your orator's gas, consumed by the said City during the year 1905, was nearly 400,000,000 cubic feet.

VII. That the defendants, Gunnison, Davies and Shedden, at the time of the matters herein referred to, constituted and still
8 constitute the Commission of Gas and Electricity of the State of New York, established by the said Act, Chapter 737 of the Laws of 1905, and have an office for the transaction of the business and affairs of the said Commission in the Borough of Manhattan, City of New York, in the Southern District of New York. The said Act purported to confer upon the said Commissioners the power, from time to time, to fix and determine the maximum price at, which your orator might sell its gas to the inhabitants of the City of New York, and to enforce compliance with their said orders, fixing the maximum price of gas, by applying for a writ of mandamus. Compliance with such orders may also be enforced, under the said Act, by an application for a writ of mandamus, made by any person, corporation or municipality interested in the enforcement of such order.

VIII. That on or about November 8, 1905, your orator was notified by the said Commission that it had received in writing two complaints against your orator, each signed by one hundred or more consumers and purchasers of gas sold and delivered by your orator, requesting the said Commission to reduce the maximum price to be charged for gas by your orator to its customers in the City of New York. After a hearing by the said Commission on the said petitions, the said Commission, on or about February 23, 1906, made an order, a copy of which is hereto annexed, marked "Exhibit C," providing that on and after May 1, 1906, the maximum price for gas to be charged by your orator, in the Borough of Manhattan, City of New York, should be eighty cents per thousand cubic feet, and prescribing a standard of illuminating power and of purity, and making the same provision in regard to the pressure of gas in its service mains to be supplied to its private consumers, as was made by Chapter 736 of the Laws of 1905, hereinbefore referred to, in regard to the pressure of gas to be supplied to the City of New York. The said order requires a reduction of twenty cents per thousand cubic feet, from the reasonable price of one dollar per thousand cubic feet,
9 heretofore and now charged by your orator, as aforesaid, pursuant to Chapter 385 of the Laws of 1897, by which the maximum price of gas in the City of New York was fixed for the year 1901 and subsequently at $1 per thousand cubic feet.

IX. That by Chapter 125 of the Laws of 1906 of the State of

New York, which became a law on or about April 3, 1906, it was provided that no corporation, engaged in the business of manufacturing, furnishing or selling illuminating gas in the Borough of Manhattan, or in the Borough of The Bronx, except in that portion thereof contained in the former towns of Eastchester and Pelham and in the former town of Westchester outside the Villages of Wakefield and Williamsbridge, should charge for gas manufactured, furnished or sold in the said City, a sum in excess of eighty cents per thousand cubic feet. The said Act prescribed a standard of illuminating power and purity and of pressure of illuminating gas furnished by such corporations, and provided that any corporation violating any provision of the Act should forfeit the sum of one thousand dollars for each offense to the people of the State. It was further provided that the said Act should not apply to gas furnished or sold to the City of New York. A copy of the said statute is hereto annexed, marked "Exhibit D."

X. That your orator was originally incorporated by consolidation in the year 1884, pursuant to Chapter 367 of the Laws of New York of that year, as hereinbefore set forth. The said Act provided that the capital of the consolidated corporation, organized thereunder, should not be larger in amount than the fair aggregate value of the property, franchises and rights of the several companies thus to be consolidated. Pursuant to the authority conferred by the said Act, the property of the various Companies (exclusive of the franchises and rights hereinafter referred to), which entered into the Consolidation Agreement aforesaid, was carefully appraised by disinterested persons, and the fair value thereof was fixed at the sum of $29,994,000. The value of the franchises and rights of the said Companies was estimated at the sum of $7,781,000, and the aggregate value of the property, franchises and rights of the said Companies was accordingly fixed at the sum of $37,775,000; and this amount of stock was issued by your orator to the stockholders of the various constituent Companies in exchange for the property, franchises and rights of the said Companies. The issue of such stock, pursuant to authority conferred by the said Act of 1884, created a contract between your orator and the State of New York, under which your orator has the right to earn a fair return upon the stock so issued; and under Section 10 of Article I of the Constitution of the United States, the State of New York has no power to impair the obligation of the said contract. The authorized capital stock of your orator has, since then, been increased in various amounts and at various times, to the aggregate of $100,000,000, par value, $80,000,000, par value, of which is issued and outstanding. In the case of every increase, the Company has realized for the additional stock issued, either in cash or property, or in payment of indebtedness, an amount largely in excess of the par value of the stock so issued. Your orator has further duly issued for cash, at par, and there is now outstanding, in addition to said capital stock, $19,857,600 of six per cent. bonds or debentures, convertible, at par, into stock of your orator after July 1, 1907, and maturing on July 1, 1909.

For many years, your orator's capital stock has been favorably

known and regarded by the investing public, owing to the fact that your orator owns a large and valuable property, well located in a prosperous metropolitan community, and that the entire capitalization represents actual value, there being no underlying mortgages or liens upon the property which are prior to the rights of the stockholders therein. The said stock has been largely dealt in, and is widely held by stockholders not only in the State of New
11 York, but in many of the other States of this country, as well
as abroad; and there are, at the present time, about five thousand registered holders of your orator's stock.

XI. That your orator has, ever since its incorporation, devoted large amounts of money to making all additional improvements and extensions to its plant and works, necessary to enable it to meet the increasing demands of the inhabitants of the City and County of New York for gas, as well as of the defendant, the City of New York, and to perform its said public duties, and had and owned, at the time of the order and statutes hereinbefore referred to and complained of, and now owns, plants, consisting of real estate, buildings, machinery, pipes and other apparatus, in good order and repair, suitable and actually used for the purpose of manufacturing and distributing gas in the said City and County of New York, representing a cost to your orator of about $40,000,000, and having a present cash value in excess of that amount, *exclusive* of any value of its franchises, goodwill or business; and your orator further has supplies and materials on hand necessary for the conduct of its said business, having a value in excess of $600,000 and a cash working capital necessary for the conduct of its said business of $1,000,000, and bills and accounts receivable, representing more than $2,000,000. Furthermore, your orator has found it necessary to provide a means of disposing of the by-products produced by it in the manufacture of gas, consisting of coal, tar and ammonia, and has invested capital to the extent of $50,000 in such business. Furthermore, your orator has found it necessary to provide an extensive additional plant, in order to meet the increase in the consumption of gas in the City and County of New York, and for that purpose has lawfully acquired, pursuant to the statutes of the State of New York, all the stock of a corporation, duly incorporated under the laws of the State of New York, for the purpose of manufacturing and supplying gas, with the corporate title of The Astoria Light, Heat and Power Company, which
12 has acquired land and erected buildings and improvements
thereon at Astoria, in the former City of Long Island City, Borough of Queens, in the City of New York, at an expense of over $5,500,000. There is no mortgage, lien or indebtedness of the said Astoria Company which is not held entirely by your orator. The aggregate of these various items of capital, employed by your orator in its said business, is accordingly over $49,000,000. Furthermore, your orator had, at the time the said order of the said Commission was made, in addition to the said amount, the sum of $6,200,000 in cash, and a further sum in excess of $6,500,000 in temporary investments and loans, aggregating a sum in excess of $12,700,000 additional, temporarily held by your orator, pending the completion

of the said investment, now in progress, which your orator is making in its new plant at Astoria. Your orator's actual investment in its said business, accordingly, at the time the said order was adopted, was about $62,000,000, *exclusive* of the value of its franchise and rights and *exclusive* of the value of its other intangible property. Your orator has always performed its public duties in a manner satisfactory to the inhabitants of the City and County of New York; the quantity of gas furnished by it has been sufficient and the quality of such gas has been excellent and better than the average of the gas furnished by the gas companies in the State of New York. The business of your orator has always been managed in an economical and skillful manner, with the highest regard for the safety and convenience of the public. The prices, charged to the inhabitants of the City and County of New York by your orator for gas, have always been reasonable, and have been lowered by your orator, from time to time, as rapidly as was warranted by the decrease in the cost of manufacture and distribution, due to improvements, made and introduced by your orator in the manufacture and distribution of gas, to the economy and skill, with which the business of your orator has been conducted, and to the increase in the consumption of your orator's gas, or to other causes.

13 XII. That the price charged by your orator for its gas has been gradually reduced from $2.25 per thousand cubic feet, in 1884, to one dollar per thousand cubic feet in 1901; and the prices charged by your orator for its gas have always been as low as prices charged by other manufacturers of gas in communities corresponding in size and in other conditions to the said City and County of New York. The price of one dollar per thousand cubic feet for gas is lower than the average price charged throughout the State of New York. In view of the local conditions now prevailing in the City of New York and other conditions as to candle power, pressure and purity, and in respect to the cost of construction and labor, coal, naphtha, oil and other materials used in the manufacture of gas, the market for residuals or by-products, and the other conditions upon which the cost of manufacturing and distributing gas depends, the said price of one dollar per thousand cubic feet is relatively as low a price as the prices charged in any other city or town in the said State or elsewhere in the eastern part of the United States, and is as low as business prudence would have justified your orator in adopting and charging.

XIII. That since its organization, in 1884, your orator has declared and paid dividends to its stockholders, averaging much less than eight per cent. upon its capital stock; and the entire profits of your orator in the prosecution of its business, in excess of the said reasonable dividend, have been devoted to making such replacements, additions, extensions, improvements and acquisitions as have, from time to time, been necessary to enable your orator to carry on its business and to perform its said public duties. Your orator has constantly maintained, improved and extended its system of pipes, mains, feeders and plants; and, in the regular growth and evolution of your orator's business, it has been and will continue to be neces-

sary to abandon and remove many miles of gas mains in the streets
of said City and County (which are no longer available for
14 use in distributing gas, because they were laid at an early
day, were small in size), and to lay and maintain new and enlarged pipes and mains. Several hundred miles of gas mains and pipes have been newly laid by your orator in all sections and divisions of the City and County of New York, since your orator acquired the aforesaid properties, in extending, enlarging, improving and bettering your orator's plant and system. In order to enable your orator to comply with the duties and obligations imposed upon it by law, as herein stated, and in extending and enlarging its said gas works and system, it has, since its organization in 1884, rebuilt or enlarged all of the manufacturing plants acquired, as aforesaid; it has acquired additional real estate and built and constructed additional buildings thereon, and installed in the buildings so erected, and in the buildings acquired as aforesaid, new and improved machinery and appliances for the production and distribution of gas; and it has expended in doing said work and in extending, enlarging, replacing, repairing and connecting its system of pipes, mains, services and feeders, over $17,000,000.

XIV. That, in order to enable your orator to carry on its business, as authorized by its charter and the general laws of the State of New York, to fulfill and perform its public duties, as hereinbefore set forth, and to take all reasonable precautions against accidents to persons and property, it is necessary for your orator to charge a price for gas sufficient to cover or include the following items: (1) the reasonable cost of the materials, wages, repairs, insurance, taxes, office expenses, superintendence and expenses of management and such other expenses as are reasonably necessary, as part of the current annual cost of manufacturing and distributing gas in the said City and County of New York; (2) a reasonable allowance or charge to offset the depreciation in the value of its plant, that is to say, to
enable your orator to defray the cost (in excess of the amount
15 expended on repairs) of renewing such portions of the said
plant as may, from time to time, wear out (notwithstanding the same are kept by your orator in as good condition and repair as possible) to meet the cost of such changes in machinery and apparatus, as may, from time to time, be rendered necessary by the discovery and invention of better or more economical methods of manufacture, and to make good the loss occasioned, from time to time, by the abandonment of certain portions of the said plants, due to the occasional necessity for the reconstruction or enlargement of its works and to meet any other expenditures or losses necessary to be met, in order that your orator's plant may not, at any time, become depreciated in efficiency or value. In order to enable your orator to meet the constantly increasing demand for gas, it is necessary for your orator, from time to time, to make large additions to its plant in excess of such additions as are necessary, as hereinbefore set forth, to prevent the said plant from shrinking in efficiency or value through depreciation. Since the organization of your orator in 1884, as aforesaid, it has been necessary to expend a very

large amount annually in repairs and replacements of your orator's building, plant, equipment, mains and services, owing to the extension of your orator's business and the increase in the number of consumers of your orator's gas; and the total of such expenditures up to the present time exceeds the sum of $17,000,000, and the amount of such expenditures has increased and will increase annually. Furthermore, during the same period, it has been necessary every year to increase the amount of your orator's investment in real estate, plant, property and construction. The amount of such increased investment aggregates about $10,000,000, or at the rate of about $500,000 a year. It will be necessary in the future for your orator to increase its real estate, plant, property and construction in the same way as it has in the past; and, upon the value of such increased investment, including the value of the entire property, both tangible and intangible, employed in its business, your orator will be entitled to receive a fair and reasonable return.

16 XV. That by Chapter 737 of the Laws of 1905, hereinbefore referred to, it is provided that stocks or bonds shall not be issued by any gas corporation until the Commission of Gas and Electricity shall certify, in writing, as to the amount of stock or bonds reasonably required for the purposes of the corporation. Your orator is informed and believes, that the said Commission will not permit the issue of stock or bonds by your orator or by any gas company in the State of New York, unless, at the time of such proposed issue, the fair cash value of the plant of such gas company is at least equal to its outstanding stock and bonds; and for this reason, as well as for the business reasons hereinbefore set forth, your orator and all other gas companies in the State of New York will be obliged either to charge enough for gas to enable them to pay for all such additions, extensions and improvements out of their current earnings, or else to meet such expenses by the issue of new stock or bonds; and in order to obtain the right to make such new issue of stock or bonds, your orator and every other gas company in the State of New York must charge enough for gas to cover the cost of manufacture and distribution, and, in addition thereto, a sufficient sum for depreciation in order to prevent the cash value of its plant from falling below the amount of its outstanding stock and bonds. For these reasons, your orator and all other gas companies in the State of New York, if they desire to continue in the said business, will be compelled by law to charge a price for their gas at least sufficient to cover the reasonable cost of manufacturing and distributing gas, and to prevent the depreciation of their plants below the amount of their outstanding stock and bonds; and they will be compelled, by ordinary business prudence, to charge a price for gas sufficient to manufacture and distribute gas and to prevent the depreciation of their plants below the fair cash value thereof, irrespective of any profits on their capital or property.

17 XVI. That, under and by virtue of the Constitution of the United States and particularly of the Fourteenth Amendment thereto, your orator is entitled to charge a price for its gas, sufficient to cover the reasonable cost of manufacturing and distributing the

same with an allowance sufficient to prevent the depreciation of your orator's plant from any of the causes above set forth, and also a reasonable profit on the fair value of the property owned and used by it in its said business; and any law passed by the Legislature of the State of New York, and any order made by any Officer or Commission acting under the authority of the said Legislature, fixing a price for your orator's gas at any figure, which will not permit your orator to recoup the reasonable cost of the manufacture and distribution thereof, with a reasonable allowance for depreciation, as aforesaid, and a reasonable profit on the fair value of the property, both tangible and intangible, owned and used by your orator in its said business, takes your orator's property without just compensation, deprives your orator of its property without due process of law, and denies to your orator the equal protection of the laws, and is in violation of the provisions of the Fourteenth Amendment to the Constitution of the United States; and the aforesaid Acts of the Legislature of the State of New York and the aforesaid order of the said Commission of Gas and Electricity are, for the foregoing reasons, in violation of the said provisions of the Fourteenth Amendment to the Constitution of the United States.

XVII. That by Chapter 712 of the Laws of 1899, the Tax Law of the State of New York was amended so as to render taxable, as real estate, all mains or pipes, laid or placed in or under any public or private street or place for conducting gas, including the value of all franchises, rights, authority or permission to construct, maintain or operate the same in or under any streets, highways or public
places. It was provided by the said Act, that a franchise,
18 right, authority or permission therein specified, should, for
the purpose of taxation, be known as a Special Franchise,
and should be deemed to include the value of the tangible property of the corporation, situated in or under any street, highway, public place or public waters, and that the tangible property so included should be taxed as a part of the Special Franchise. The said Act created a State Board of Tax Commissioners to determine the valuation of such Special Franchises subject to assessment in each City, Town or Tax District. The value of your orator's Special Franchise, as fixed by the said State Board of Tax Commissioners for the year 1906, is the sum of $31,900,000. The actual cost to your orator of the mains and pipes in and under the public streets, which are included in the said assessment, was not less than the sum of $7,852,151.03, and the present value thereof is not less than that sum. Accordingly the value of your orator's franchise rights, as fixed by the State Board of Tax Commissioners for the year 1906, is in excess of $24,000,000; and your orator will be compelled to pay taxes upon such sum in the same way and at the same rate as it is taxed for its real estate. Notwithstanding this fact, the said Commission of Gas and Electricity, in their said order fixing the maximum price to be charged by your orator for gas, did not take into consideration at all, as a part of your orator's property and investment, upon which it is entitled to receive a reasonable profit, the value of its franchise rights. That this is the case appears from

the memorandum or opinion of the said Commission, which was filed with their order, and a copy of which is hereto annexed, marked "Exhibit E."

XVIII. That the actual and reasonable cost to your orator of manufacturing and distributing gas during the four years prior to 1905, exclusive of any allowance for repairs or for a fair annual return upon the intangible property employed by your orator in its business, including your orator's franchise rights, as aforesaid, but
19 adding thereto an allowance of 3 cents per thousand cubic feet of gas for contingencies, and of 2.62 cents per thousand cubic feet for increased illuminating power, now required by law, averaged about 67 cents per thousand cubic feet. The estimated reasonable cost to your orator, to be allowed for manufacturing and distributing gas during the year 1906, will be in excess of 70 cents per thousand cubic feet, such increase being due to the actual and reasonable cost to your orator of the coal, naphtha, pipe and other materials necessary for the manufacturing and distribution of your orator's gas, the cost of which has increased, owing to the increase of the amount of taxes which must be paid by your orator, and to the increase in the standard of illuminating power required by law. The said cost in 1906 of 70 cents per thousand cubic feet includes a reasonable allowance for depreciation and contingencies, based upon the experience of your orator and other gas companies in the City of New York. The said contingencies represent three cents per thousand cubic feet.

XIX. That as hereinbefore stated, the reasonable value of the plant and investment of your orator, employed in the manufacture and distribution of gas, is nearly $62,000,000, and the reasonable value of its franchise rights as fixed by the State Board of Tax Commissioners, as hereinbefore stated, exceeds $24,000,000, and the aggregate value of your orator's said property, employed in its said business, is, accordingly, about $86,000,000. In addition to its said franchise rights, your orator is possessed of a large amount of intangible property, which constitutes an integral and important part of its said business. Such property consists of the value of the connections between the pipes and mains of your orator and the various buildings throughout the City of New York, the value of various contracts owned by your orator in connection with its business, the value of the organization of your orator's business and good will, and various other elements of value which have been created and developed by your orator and its predecessors
20 through intelligent and efficient business management during the past three-quarters of a century and fidelity to their engagements, all of which possess the full attributes of property and materially add to the gross earnings of your orator, upon which it pays an annual tax of one per cent. to the State of New York. By reason of such good will, it would be difficult, if not impossible, for any company in the City of New York, even if vested with similar franchises to those possessed by your orator, to compete in selling gas to consumers in the said City; and if your orator elected to sell its tangible property and franchises, it could, apart from these,

obtain a large sum for the said good will. And your orator avers that upon this good will, as an element of substantive value, it is entitled to a reasonable return, and that, in fixing the price, at which your orator should sell its gas, as hereinbefore stated, the said Commission of Gas and Electricity allowed no return whatever upon the value of the said good will but wholly eliminated it as an item of substantive value. The said intangible property possesses very great value, as your orator is informed and verily believes. The reasonable profit upon the said investments, to which your orator is entitled and the enjoyment of which is guaranteed to it, as hereinbefore stated, by the Fourteenth Amendment to the Constitution of the United States, is at least ten per cent. per annum, in view of the care and skill required to be exercised in the management of its said business, its location and the hazard and risk necessarily involved in the conduct of the said business. The care required and the hazard and risks of the business and the cost of conducting it are constantly and inevitably increasing, owing to the substitution of asphalt paving for cobble stones, the rapid and extensive use of electricity for traction, power and lighting purposes (which may cause electrolysis and disintegration of the gas mains and conductors of your orator), and the construction of tunnels and subways, which greatly increase the danger of explosions and in-
juries to persons and property and add largely to the expense
21 of supervision. The amount of profits, to which your orator
is entitled, in accordingly in excess of $8,500,000 per year. The total sales of gas made by your orator during the year ending October 31, 1905, was about 13,300,000,000 cubic feet. In order to earn the said profit of $8,500,000 a year upon your orator's said actual investment, it will be necessary, accordingly, for your orator to receive the sum of about 64 cents per thousand cubic feet in addition to the actual reasonable cost of manufacturing and distributing gas, for which there should be allowed, as hereinbefore stated, during the year 1906, a sum in excess of 70 cents per thousand cubic feet. Taking all the circumstances of the case and the interests of both the Company and of the inhabitants of the City and County of New York as well as of the defendant, the City of New York, into account, a fair, just and reasonable price for gas in the said City, at the date of the said order of February 23, 1906, and at the present time, could not possibly be less than $1 per thousand cubic feet. The said rate of eighty cents per thousand cubic feet, fixed by the said Commission, as aforesaid, will permit a profit of only ten cents per thousand cubic feet to your orator, as aforesaid; and should the sales of your orator's gas continue at the rate of $13,300,000,000 cubic feet per year, as during the year ending October 31, 1905, as aforesaid, your orator's total annual profits will not exceed the sum of $1,330,000, or less than 1½% of profit on your orator's actual investment of $86,000,000, in its said business, as aforesaid.

XX. That the price of 30 cents per thousand cubic feet, fixed by the said Commission by the order aforesaid, was not, in fact, based upon the reasonable cost to your orator of manufacturing and distributing gas in the said City and County, and does not bear any relation to such reasonable cost or to the amount reasonably necessary to be allowed for depreciation, as aforesaid, or to the amount required to furnish a reasonable return to your orator upon 22 its capital stock or upon the fair value of the property owned and used by it in its said business, and is and would be an unreasonable and confiscatory rate of compensation for the gas supplied and the service rendered by your orator.

XXI. That the opinion or statement, rendered by the said Commission in connection with its said order, a copy of which is hereto annexed, marked "Exhibit E," stated that the said Commission had determined that the reasonable value of the property, actually employed by your orator in the manufacture and distribution of gas on October 31, 1905, did not exceed the sum of $30,000,000; whereas, as hereinbefore stated, the reasonable value of such property is in excess of the sum of $86,000,000, as hereinbefore specified. Furthermore, as appears from the said statement, the said Commission deducted the sum of $2,665,000 as the value of a plant formerly used by your orator for the manufacture and distribution of gas, which has been taken by the City of New York in condemnation proceedings, in which an award has not yet been made by the Commission, and will probably not be made for some time to come. The said value of $2,665,000 was stated to be the value placed upon the property by witnesses for your orator, whereas witnesses called on behalf of the City have testified that the value of such property is not in excess of $1,089,197.73. The award of the Commissioners in the said proceeding may be less than the value claimed by the witnesses who testified on behalf of your orator. It furthermore appears from the said statement that the said Commission considered eight per cent. a reasonable percentage of profit upon the actual value of the property owned by your orator and used in the manufacture and distribution of gas, whereas such percentage is unreasonably low; and if your orator is limited to such return, it will be deprived of its property without due process of law, in violation of the Constitution of the United States. It furthermore appears from the said statement, that the Com- 23 missioners do not consider that your orator was entitled to earn any return upon the value of its franchise rights, notwithstanding the fact that your orator is taxed upon the said franchise rights upon a valuation in excess of $24,000,000. It furthermore appears from the said statement, that the said Commission did not allow anything for the expenditures, which have been made by your orator at Astoria for the construction of the additional plant as hereinbefore stated, erroneously concluding that the prospective economies in the cost of manufacture and the increase in the sale of gas by reason of the reduction in price, would enable your orator to pay a reasonable return on any necessary investment in Astoria; whereas, in the opinion of your orator and of persons familiar with the gas business in New York City, it is purely conjectural whether there will be any substantial increase in the sale of gas by reason of the said reduction in price; and any possible economies in the cost of production at Astoria will largely be offset by the increased cost of distribution, owing to the necessity of distributing the gas through a tunnel under the East River. The price fixed in the said order of February 23, 1906, is not a just, fair or reasonable compensation for the use of your orator's property, or a just, fair or reasonable return for the services rendered by your orator; and the effect of the said order of February 23, 1906, will be to reduce the gross income of your orator below the actual and reasonable cost of manufacturing and distributing gas (including an allowance for depreciation of its plant and a fair profit upon its capital stock or upon the property owned and used by it in its said business) to prevent your orator from fulfilling the purposes of its incorporation and from performing the duties, imposed upon it by the common law and by the statutes of this State, hereinbefore referred to, and to compel your orator either to continue in said business without the fair profit, to which it is entitled, or to abandon its business altogether and to sacrifice its said plants for a small fraction of their cost and present value.

24 XXII. That Chapter 736 of the Laws of 1905, hereinbefore referred to, which fixes the price of gas supplied to the City of New York at 75 cents per thousand cubic feet and attempts to regulate the pressure thereof, is unconstitutional and in violation of the Fourteenth Amendment to the Constitution of the United States, because it deprives your orator of its property without due process of law and denies to your orator the equal protection of the laws and offers special privileges to one of your orator's consumers which it does not offer to any other of said consumers. Chapter 125 of the Laws of 1906, which fixes the price of gas furnished by your orator to private consumers in the City and County of New York at the rate of 80 cents per thousand cubic feet and which, by its terms, does not apply to the municipality of New York, and attempts to regulate the pressure of gas, is unconstitutional and in violation of the Fourteenth Amendment to the Constitution of the United States, for the same reasons. The order of the said Commission of Gas and Electricity of February 23, 1906, prescribing a maximum price of eighty cents per thousand cubic feet to all consumers, will, if enforced, deprive your orator of its property, without due process of law, in violation of the Fourteenth Amendment to the Constitution of the United States, inasmuch as the action of the said Commission, in making the said order, is without authority of law and wholly void, by reason of the fact that it is in direct violation of the said Chapter 736 of the Laws of 1905, which prescribed a maximum price of 75 cents per thousand cubic feet for gas supplied to the defendant, the City of New York; and the action of the said Commission in making the said order is also void, by reason of the fact that Chapter 737 of the Laws of 1905, creating the State Commission of Gas and Electricity, is unconstitutional and void and confers no authority upon the said Commission, as it is in violation of the Constitution of the State of New York, which provides that the legislative power of the State
25 shall be vested exclusively in the Senate and Assembly;
whereas, by the said Act, the Legislature of the State of New

York, in disregard of the said constitutional provision, attempted to delegate to the said Commission of Gas and Electricity the absolute, unqualified and discretionary legislative power to fix the maximum price, to be charged for gas in all communities throughout the State, without prescribing any rule or method in accordance with which such rate should be fixed; and the said Chapter 737 of the Laws of 1905 is void upon the further ground that it purports to confer upon the Appellate Division of the Supreme Court for the Department, in which the property of any company affected by any such order of the said Commission is situated, upon an appeal thereto from such order, the legislative power to fix a new rate, instead of the rate so fixed by the said Commission, in violation of the provision of the Constitution of the State of New York that the legislative power of the said State shall be vested exclusively in the Senate and Assembly.

All of the said Acts and the said order are unconstitutional and in violation of the Fourteenth Amendment to the Constitution of the United States, because they deprive your orator of its property without due process of law and take its property for public and private use without just compensation and deprive your orator of the equal protection of the laws.

XXIII. That it is an absolute physical impossibility for your orator to comply with the provisions in the said statutes and order in regard to pressure. The pressure must, of necessity, vary beyond the limits prescribed thereby in the mains of your orator, owing to differences of elevation of the said mains and the consequent difference of atmospheric pressure; and, owing to the laws of nature, these differences of pressure cannot be obviated by your orator. The defendant, the City of New York, has brought actions against your
orator to recover the penalties prescribed by Chapter 736 of
26 the Laws of 1905, for violations of said provision in regard
to pressure, and the amount which it claims to recover in the said actions already aggregates the sum of $46,000; and your orator is informed and believes that it intends to bring further actions against it, from time to time, to recover additional penalties for such violation.

Your orator now has upwards of 390,000 customers in the City and County of New York, in addition to the said municipality of New York, to whom it is daily selling and distributing gas. The amount of gas so sold and distributed during the year ending October 31, 1905, as hereinbefore stated, exceeded 13,000,000,000 cubic feet. A large proportion of your orator's said customers are people of small means, who are financially irresponsible; and many of them are only temporary residents of the City of New York. Your orator renders to each of its customers monthly statements for gas consumed by them during the preceding month, and collects therefor within a short time thereafter. Unless such bills are promptly paid, it discontinues the supply of gas to such customers, pursuant to the provisions of Section 68 of the Transportation Corporations Law; and that is the only method by which your orator is enabled to avoid great loss resulting from the failure or the inability of such customers to pay the bills for the gas consumed by them. If the rate of 80 cents per thousand cubic feet, fixed by the said order and by the said statute, should be enforced as hereinbefore stated, and if your orator should make a charge to any consumer in excess of the rate fixed by the order of the said Commission, it is provided by Chapter 737 of the Laws of 1905, that the fact of such charge in excess of 80 cents per thousand cubic feet shall be a complete defense to your orator's entire claim against such consumer. Furthermore, as hereinbefore stated, it is provided by Chapter 125 of the Laws of 1906, that any corporation, violating any provision of the said Act shall forfeit the sum of one thousand dollars for *each* offense to the 27 people of the State. Your orator is advised and believes that this provision may be construed to impose a penalty of one thousand dollars for every charge made by your orator to its customers in excess of 80 cents per thousand cubic feet. Your orator is informed and believes that the defendant Mayer, the Attorney General of the State of New York and the defendant Jerome, the District Attorney of New York County, intend to institute suits for the recovery of such penalties, pursuant to the requirements of Section 1962 of the Code of Civil Procedure of the State of New York, which provides that where a penalty has been incurred to the People of the State, the Attorney-General, or the District Attorney of the County in which the action is triable, must bring an action to recover the penalty. Furthermore, your orator is informed and believes that the defendants Gunnison, Davies and Shedden, Commissioners, and the defendant, the City of New York, and various persons, interested in the matter by virtue of being consumers of your orator's product, intend to institute mandamus proceedings to compel the enforcement of the 80 cent rate fixed by said the Commission, pursuant to the provisions of Section 20 of Chapter 737 of the Laws of 1905, hereinbefore referred to.

XXIV. That if the said 80 cent rate should be enforced, or if the defendant Mayer, the Attorney General, or the defendant Jerome, the District Attorney, should begin prosecutions against your orator for failure to comply with the 80 cent rate, a large number of consumers would decline to pay the price fixed by your orator, as aforesaid, and would refuse to pay any part of your orator's claim for gas furnished to them, upon the pretext that the fact of your orator's having made a charge in excess of the 80 cent rate constitutes a complete defense to your orator's claim against them. If your orator should attempt to remove the meters in the houses of such consumers, or should attempt to discontinue the supply of gas to them, it would immediately be subjected to a multiplicity of proceedings to compel it to restore the meters and supply gas to 28 such consumers; and if your orator should permit the bills of such consumers to run until the final determination of such suit or suits or proceedings as might be brought to compel the enforcement of the said rate or to enforce the penalties for failure to comply with the 80 cent rate as fixed, the outstanding bills due and payable to your orator would aggregate several million dollars, the exact amount of which your orator is, at present, unable to calculate.

By reason of the financial irresponsibility of a large number of such consumers, your orator, if it should finally succeed in defeating the said suits and prosecutions, would be unable to collect from such customers the amount of such outstanding indebtedness; and thereby your orator would suffer enormous loss, the exact amount of which your orator is unable to calculate, and which it is impossible to calculate, but which would amount to an enormous sum. If it should be held that every charge in excess of the 80 cent rate is a violation of the provisions of Chapter 125 of the Laws of 1906, for which a forfeiture of one thousand dollars should be imposed, and your orator should make such a charge in excess of the 80 cent rate each month to each of its consumers, numbering, as hereinbefore stated, over 390,000 the aggregate of the penalties so incurred during one year would amount to over $4,680,000,000 and would be over fifty-four times as great as the value of all the tangible assets and franchises belonging to your orator, and employed by it in its said business, as aforesaid, and would exceed in amount the entire assessed valuation of all the real estate situated in the Boroughs of Manhattan and The Bronx; and the damage to your orator would be irreparable and absolutely destructive of all its assets, franchises, and property, in violation of the Fourteenth Amendment to the Constitution of the United States, insuring to your orator the equal protection of the laws.

XXV. That the necessary operation of the said order and statutes would be to reduce the amount of the gross receipts of your
29 orator one-fifth of the present amount, and its net profits more than two-thirds; and your orator would thereby suffer irretrievable loss for each day's enforcement of such rate, amounting to nearly $7,300 per day in loss of revenue due to the decreased rate alone, not considering any penalties imposed by the said statutes. The penalties imposed by the said statutes were intended and calculated to coerce your orator and its officers to acquiesce therein; and a refusal and failure to observe and comply with the said 80 cent rate, if only for the purpose of having the question tested in good faith in a court of law, would involve a risk of absolute ruin to your orator, in that your orator has over $390,000 customers in the City of New York, as aforesaid, and that the said Act of 1906 may be held to impose a penalty of one thousand dollars for every monthly charge to each customer in excess of 80 cents per thousand cubic feet. In other words, the possible penalties under the said Act, in case each such charge in excess of the rate fixed thereby should be held to be a violation of the Act, would amount to $390,000,000 per month. The defendants Mayer, Attorney General and Jerome, District Attorney, have no discretion in the matter, but the absolute duty is imposed upon them by Section 1962 of the Code of Civil Procedure, hereinbefore referred to, to institute suits for the recovery of the said penalties. Your orator is advised by counsel, and, therefore, avers and claims, that there is no remedy, except in equity, to test adequately and completely the said Acts and order, and that, in the absence of such remedy in equity, the penalties, provided in the said Acts and order would be unreasonable and confiscatory, and

would deprive your orator of its liberty of contract and of its property without due process of law and without just compensation and would likewise deny to it the equal protection of the laws, in contravention of the Fourteenth Amendment to the Constitution of the United States; on which account your orator invokes the jurisdiction of this Court, to protect it against the aforesaid threatened
30 invasion by the defendants of its inherent rights under and guaranteed by the Constitution of the United States.

XXVI. That the business of your orator which will be impaired by the threatened acts of the defendants, as hereinbefore stated, is of very great value, to wit, of the value of more than $5,000,000 a year; and the amount involved in this suit is more than $2,000.

XXVII. That, if a temporary injunction shall be granted herein, restraining the enforcement of the rate prescribed by the said statutes and order, during the pendency of this action, your orator is willing and hereby offers, to pay into this Court all sums which shall be received by it in excess of the rate so fixed, to await the determination of this action; and in case the validity of said rate shall finally be sustained herein, the amount so paid into court shall be returned to the persons from whom the same was received.

To the end, therefore, that your orator may have that relief which it can only obtain in a court of equity, and that the defendants may each answer the premises, but not upon oath or affirmation, the benefit whereof is hereby expressly waived by your orator, it now prays:

1. That it be adjudged and decreed that Chapters 736 and 737 of the Laws of 1905 and Chapter 125 of the Laws of 1906 and the order of the Commission of Gas and Electricity of the State of New York, of February 23, 1906, are illegal and void, because in contravention of the Fourteenth Amendment to the Constitution of the United States, as aforesaid, and of Section 10 of Article I of the Constitution of the United States, in that it impairs the obligation of the contract rights of your orator, hereinbefore referred to.

2. That it be adjudged and decreed that your orator has no adequate remedy at law for the injury which would result from
31 the threatened enforcement of the said Acts and order and that such injury would be irreparable.

3. That it be adjudged and decreed that your orator be granted writs, both temporary and permanent, of injunction, issuing out of and under the seal of this Honorable Court, against the defendants, restraining them and each of them, and each of their officers, agents, servants and employees and any and every person acting under and by virtue of the authority of the said Acts and order, from in any way, enforcing or attempting to enforce the said Acts and order, or any of the provisions thereof, against your orator, and that under and by virtue of the provisions of section 718 of the Revised Statutes, a restraining order may be granted against the defendants and each of them, their officers, agents, servants and employees, restraining them, as herein stated, until your honorable Court shall determine, upon motion and hearing, whether a temporary injunction, with like effect, shall not be granted *pendente lite.*

4. Your orator further prays that if, at any time hereafter and

prior to the final hearing hereof, any consumers of gas or other customer of your orator, or any other person, association or corporation in the City of New York shall attempt to enforce the provisions of the said Acts and order or otherwise act or proceed thereunder, such persons, or some of them on behalf of all, be made parties defendant hereto and each of them be enjoined and restrained as heretofore prayed; and that your orator have such other and further or different relief as to the Court may seem meet and the nature of the case may require.

5. Your orator further prays that your Honors grant unto your orator a writ of *subpœna ad respondendum,* issuing out of and under the seal of this Honorable Court, to be directed to the said defendants, commanding them and each of them, on a certain day and under a certain penalty, to be therein inserted, to appear before your Honors in this Honorable Court, and then and there full, true, direct 32 and perfect answer make to all and singular the premises and further to stand, do, perform and abide by such further order and decree as to your Honors may seem meet; and also that a writ of provisional injunction to the same purport, tenor and effect, as hereinbefore set forth and appears, be granted during the pendency of this action.

And your orator will ever pray, etc.

CONSOLIDATED GAS COMPANY
OF NEW YORK,
By WALTER R. ADDICKS,
Vice-President.

SHEARMAN & STERLING,
Solicitors for Complainant, 44 *Wall Street, New York City.*

JOHN A. GARVER,
Of Counsel.

UNITED STATES OF AMERICA,
Southern District of New York, County of New York:

Walter R. Addicks, being duly sworn, says that he is the Vice-President of the Consolidated Gas Company of New York, the complainant named in the foregoing bill of complaint and who has subscribed to the same; and that the same is true to his own knowledge, except as to the matters therein stated to be alleged upon information and belief, and that, as to those matters, he believes it to be true.

WALTER R. ADDICKS.

Sworn to before me, May 1, 1906.

[SEAL.] CORNELIUS A. LOUGHLIN,
Notary Public, New York Co.

33

EXHIBIT A.

CHAP. 736.

An Act in relation to the price of illuminating gas furnished or sold to the city of New York and providing a penalty for violation.

Accepted by the city.

Became a law, June 3, 1905, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. A corporation, association, copartnership or person engaged in the business of furnishing or selling illuminating gas in the city of New York, shall not charge said city or receive therefrom for such gas, a sum in excess of seventy-five cents per one thousand cubic feet.

§ 2. The illuminating gas furnished or sold by any such corporation, association, copartnership or person to said city shall have an illuminating power of not less than twenty-two sperm candles of six to a pound burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. The pressure of said illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches.

§ 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars for each offense to be sued for and recovered in the name of and by the city of New York for its benefit.

34 § 4. All acts or parts of acts inconsistent herewith are hereby repealed.

§ 5. This act shall take effect on the first day of July, nineteen hundred and five.

EXHIBIT B.

CHAP. 737.

An Act to establish a commission of gas and electricity with power to regulate the price of gas and electric light and certain other electric services, and to provide for the control and supervision of gas, electric light and other electric corporations and making an appropriation therefor.

Became a law, June 3, 1905, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. *Commission of gas and electricity established.*—The commission of gas and electricity is hereby established and shall possess the powers and perform the duties hereinafter specified.

§ 2. *Definitions; applications of act.*—The word "commission" when used in this act means the commission of gas and electricity. The word "corporation" includes a company, association and joint-stock association. The word "municipality" includes a city, village, town or lighting district organized as provided by a general or special act. The word "person" includes an individual, firm or copartnership. This act shall not apply to railroad, telegraph or telephone corporations.

35 § 3. *Appointment; terms of office; vacancies.*—The commission of gas and electricity shall consist of three commissioners to be appointed by the governor, by and with the advice and consent of the senate, one of whom shall be designated by the governor as chairman. Of the commissioners first appointed hereunder, one shall be appointed for a term of two years, one for a term of four years, and one for a term of six years, from the first day of June, nineteen hundred and five. Upon the expiration of such terms, the term of office of commissioners thereafter appointed shall be six years beginning on the first day of June in the year in which they are appointed. Each commissioner appointed hereunder shall hold office until his successor shall have been appointed, and shall have qualified. If a vacancy shall occur in any such office, otherwise than by expiration of term, the governor shall appoint a commissioner to fill such vacancy for the unexpired term.

§ 4. *Oath of office; eligibility of commissioners and officers of commission.*—Each commissioner and each person appointed to office by the commission shall, before entering upon the duties of his office, take and subscribe the constitutional oath of office. No person shall be eligible to appointment or shall hold the office of commissioner, or be appointed by the commission to, or hold any office or position under the commission, who holds any official relation to any gas or electric light or power corporation, or who owns stock or bonds therein.

§ 5. *Officers and meetings of commission; official seal; stationery.*—The principal office of the commission shall be in the city of Al-

bany, in rooms designated by the trustees of public buildings, and it may have a branch office in the city of New York, and one in the city of Buffalo. The commission shall meet at least once a month during the year at its office in Albany. The commission shall have an official seal, to be prepared by the secretary of state as provided by law, and its offices shall be supplied with necessary postage, stationery, office furniture and appliances, to be paid for as other expenses authorized by this act, and it shall have prepared for
36 it by the state the necessary books, maps and statistics, incidentally necessary for the discharge of its duties.

§ 6. *Quorum of commission; powers of single commissioner.*—Two of the commissioners shall constitute a quorum for the transaction of any business or the performance of any duty of the commission and may hold meetings thereof at any time or place within the state. All examinations or investigations made by the commission may be held and taken by and before any one of the commissioners, and the proceedings and decisions of such single commissioner, shall be deemed to be the proceedings and decisions of the commission, when approved and confirmed by it.

§ 7. *Officers, clerks, inspectors and employees.*—The commission may appoint such officers, clerks, inspectors, experts and employees as may be required to carry out the provisions of this act, subject to the provisions of the civil service law, and may prescribe their duties.

§ 8. *Salaries and expenses.*—The annual salary of each commissioner shall be eight thousand dollars. The officers, clerks, inspectors, experts and other employees of the commission shall receive the compensation fixed by the commission. In the discharge of their official duties the commissioners shall have reimbursed to them the necessary traveling expenses and disbursements of themselves, their officers, clerks, inspectors, experts and other employees, not exceeding in the aggregate the sum of five hundred dollars per month. All salaries and disbursements shall be audited and allowed by the comptroller and paid monthly by the state treasurer upon the warrant of the comptroller.

§ 9. *General powers of commission.*—Such commission shall:

1. Have the general supervision of all persons and corporations having authority under any general or special law to lay down or erect and maintain wires, pipes, and other fixtures in, over or under the streets, highways and public places of any municipality
37 in this state, for the purpose of furnishing gas or of furnishing or transmitting electricity for light, heat or power.

2. Investigate and ascertain, from time to time, the quality of gas supplied by persons, corporations or municipalities; examine the methods employed by such persons, corporations or municipalities in supplying gas and electricity for light, heat and power or in transmitting the same, and order such improvements as will best promote public interests, preserve the public health and protect those using such gas or electricity, and those employed in the manufacture and distribution thereof, or in the maintenance or operation of the works, wires, poles, lines and systems connected therewith.

3. Fix the standard of illuminating power and purity of gas

manufactured and sold by persons, corporations and municipalities for lighting purposes, not less than that prescribed by law, and require the gas so manufactured and sold to equal the standard established by law or by it, and establish a standard of pressure at which gas shall be delivered, where such standard is not otherwise prescribed by law.

4. Have power, in its discretion, to prescribe methods of keeping accounts and books, to be observed by the persons, corporations and municipalities engaged in the manufacture, sale and distribution of gas and electricity for light, heat or power.

5. Examine all persons, corporations and municipalities under its supervision, keep informed as to the methods employed by them in the transaction of their business, and see that their property is maintained and operated for the security and accommodation of the public and in compliance with the provisions of law and of their franchises and charters.

6. Require each corporation under its supervision to submit to it an annual report, verified by the oath of the president, treasurer or general manager thereof, showing in detail (1) the amount of its authorized capital stock, the amount issued and outstanding; (2) the amount of its authorized bonded indebtedness and the 38 amount of its bonds issued and outstanding; (3) its receipts and expenditures during the preceding year; (4) the amount paid as dividends upon its stock and as interest upon its bonds; (5) the amount paid as salaries to its officers and as wages to its employees; (6) the location of its plant and system, with a full description of its property and franchises; and (7) such other facts pertaining to the operation and maintenance of the plant and system, and the affairs of such corporation as may be required by the commission. Such reports shall be in the form, cover the period, and be submitted at the time prescribed by the commission.

7. Make to the legislature an annual report containing the result (1) of examinations or investigations conducted by it, abstracts of reports of corporations made to it, (2) recommendations as to modifications of the laws pertaining to the affairs of corporations subject to its supervision, (3) such facts and explanations as will disclose the methods employed in the manufacture, sale and distribution of gas and electricity for light, heat and power, (4) suggestions as to the better protection of public interests and health in the transaction of business by such corporations, and (5) a record of the meetings and an abstract of the proceedings of the commission during the preceding year.

8. Have power, either through its members or inspectors or employees duly authorized by it, to enter in or upon the property, buildings, plants, factories, power houses and offices of any of such corporations, persons or municipalities while the same are open for the purpose of operation or while the business of such corporation is being done therein.

9. Have power to examine the books and affairs of any such corporations, persons or municipalities, and to compel the production

before it of books and papers pertaining to the affairs being investigated by it.

10. Have power to subpœna witnesses, take testimony and administer oaths to witnesses in any proceeding or examination instituted before it, or conducted by it under the provisions of this act.

39 11. Have power to adopt rules governing practice in proceedings brought by or before it not inconsistent with law.

§ 10. *Inspection of gas and electric meters.*—Such commission shall have full power, control and supervision of the inspection of gas and electric meters by any state or municipal officer appointed for such purpose, and may adopt and enforce rules and regulations, not inconsistent with law, prescribing the manner, methods and conditions of testing such meters. It shall see that the state inspector of gas meters, and the inspectors appointed by him, and municipal inspectors of gas and electric meters, faithfully perform the duties imposed upon them by law, and by the rules and regulations of the commission, and shall report any failure of such performance or any violation of law or of such rules and regulations to the officer or board appointing such inspectors, and such failure or violation shall be a sufficient cause for their removal. The commission may provide for the inspection of electric meters, and may appoint an inspector for such purpose who shall perform the duties required of him by the commission.

§ 11. *Approval of incorporation and franchises; certificate.*—A corporation hereafter incorporated under the laws of this or any other state for manufacturing and supplying gas for lighting the streets, highways and public places, and for heating and lighting public or private buildings, or for manufacturing, using, transmitting and supplying electricity for producing light, heat or power for public or private buildings or for lighting streets, highways and public places, shall not exercise any of its powers, or transact any business within this state, until it shall have secured a certificate of authority therefor signed and executed by the commission under its official seal. Before such certificate shall be issued a certified copy of the charter of such corporation shall be filed in the office of the commission, together with a verified statement of the president and secretary of the corporation, showing that it has received the
40 required consent of the proper municipal authorities. The commission may inquire as to the necessity of the service to be furnished by such corporation, and as to the intentions and good faith of the corporation and its officers, and if satisfied that the territory within which such corporation proposes to operate is already supplied by an ample and well constructed system, furnishing the service which such corporation proposes to furnish, at a fair and reasonable rate, such commission may refuse to grant its certificate of authority. No municipality shall build, maintain and operate for other than municipal purposes any works or systems for the manufacture and supplying of gas or electricity for lighting purposes without a certificate of authority granted by the commission. If the certificate of authority is refused, no further proceedings shall be

taken before the commission, but a new application may be made therefor after one year from the date of such refusal.

§ 12. *Approval of issue of stock and bonds.*—Stock or bonds shall not be issued by any corporation hereafter incorporated which is subject to the supervision of the commission, until the certificate of authority has been issued as required in the preceding section, and until such commission shall further certify, in writing as to the amount of stock or bonds reasonably required for the purposes of the corporation. Stock and bonds of such corporation shall not be issued in excess of the amount so certified. Any such corporation heretofore or hereafter incorporated shall not increase its capital stock or its bonded indebtedness without the consent in writing of such commission, stating the amount of the authorized increase. For the purpose of making its determination as to the amount of stock and bonds to be issued or the amount of the authorized increase of the capital stock and bonded indebtedness of any such corporation, the commission may take and hear testimony, and examine the books and papers of the corporation, and require verified statements from the officers thereof, pertaining to the value of the property and
franchises owned and operated by such corporation. Such
41 determination shall be made within thirty days after the
final submission of the papers or a final hearing on the application.

§ 13. *Approval of transfer of franchise.*—A corporation subject to the general supervision of the commission shall not transfer or lease its franchise, works, system or property or any part of such franchise, works, system or property to any other person or corporation or contract for the operation of its works, system and property without the written consent of the commission. No such corporation shall directly or indirectly acquire the stock or bonds of any other corporation incorporated for, or engaged in, the same or a similar business, or proposing to operate or operating under a franchise from the same or any other municipality, unless authorized so to do by the commission.

§ 14. *Appeals to appellate division.*—If the commission shall refuse any certificate, authority or consent required under the provisions of either of the three preceding sections, the commission shall, if requested by the applicant for such certificate, authority or consent, furnish a certified copy of all papers before it pertaining to the application, and of its findings thereon, and such applicant may, within sixty days after notice of such refusal, present such papers and findings for review to the appellate division of the supreme court of the third department, and such appellate division may order the commission to issue the certificate or grant the authority or consent applied for. Upon such review the commission shall be represented by the attorney general.

§ 15. *Complaints as to quality and price of gas and electricity.*—Upon the complaint in writing of the mayor of a city, the trustees of a village or the town board of a town in which a person or corporation is authorized to manufacture, sell or supply gas or electricity for heat, light or power, or upon the complaint in writing of not less

than one hundred customers, or purchasers of such gas or electricity, either as to illuminating power, purity, pressure or
42 price of such gas or electricity sold and delivered in such municipality, the commission shall investigate as to cause for such complaint, and may, by its agents and inspectors, inspect the works. system, plant and methods used by such person or corporation in manufacturing, transmitting and supplying such gas or electricity and examine or cause to be examined the books and papers of such person or corporation pertaining to the manufacture, sale, transmitting and supplying of such gas or electricity.

§ 16. *Forms of complaints; signatures.*—The form and contents of complaints made as provided in the preceding section shall be prescribed by the commission. Such complaints shall be signed by the officers or by the customers, purchasers or subscribers making them, who must add to their signatures their places of residence, by street and number, if any.

§ 17. *Notice and hearing; fixing price of gas or electricity; orders requiring improvement.*—Before proceeding under a complaint presented as provided in section fifteen, the commission shall cause notice of complaint, and the purpose thereof, to be served upon the person or corporation affected thereby. A public hearing shall be had upon such complaint at which the complainants and the person or corporation complained of shall have an opportunity to be heard, and may be represented by counsel. After such hearing and upon such investigation as may have been made by the commission or its officers, agents or inspectors, the commission, within the limits prescribed by law, may fix the maximum price of gas or electricity which shall be charged by such corporation or person in such municipality, or may order such improvement in the manufacture or supply of such gas or in the manufacture, transmission or supply of such electricity, or in the methods employed by such person or corporation, as will in its judgment improve the service. The price so fixed by the commission shall be the maximum price to be charged by such person or corporation for gas or electricity in such municipality for a term of three years and until, after the expira-
43 tion of such term such commission shall upon complaint as provided in this section again fix the price of such gas or electricity.

§ 18. All orders made by the commission upon its own motion or without complaint, as above provided, shall be made after reasonable notice to the person or corporation affected thereby, and after reasonable opportunity to such person or corporation to present his, their or its defence or objections to the demands of the commission.

§ 19. The complainant, or any person or corporation aggrieved by any order made by the commission whether upon complaint or otherwise, may, within thirty days after notice of the making of such order, appeal to the appellate division of the supreme court of any department within which the property of the person or corporation affected by said order is situated, except as otherwise hereinbefore provided, in whole or in part. Such court may affirm, reverse in whole or in part or modify the order appealed from, or may make such order in the premises in its discretion as it may deem just and proper. On all such appeals the commission shall be represented by the attorney-general.

§ 20. An order made by the commission, as in this act provided, or in case of an appeal from an order, the order as affirmed or modified or the order made on such appeal may be enforced by writ of mandamus. The commission or any person, corporation or municipality interested in the enforcement of such order may apply to the supreme court at a special term thereof for a writ of mandamus to compel compliance with such order, upon proof that the said order has been duly made, as in this act provided, and has not been complied with, after notice of the making thereof, to the person or corporation affected thereby, the supreme court may issue a writ of mandamus to enforce the provisions of said order.

44 § 21. *Defense in cases of excessive charges.*—If it be alleged and established in an action brought in any court for the collection of any charge for gas or electricity, that a price has been demanded in excess of that fixed by the commission or by statute in the municipality wherein the action arose, no recovery shall be had therein, but the fact that such excessive charges have been made shall be a complete defence to such action.

§ 22. There shall be appropriated for the use of the commission and for the payment of salaries and disbursements under this act, from money not otherwise appropriated the sum of sixty thousand dollars.

§ 23. This act shall take effect immediately.

45

Exhibit C.

At a meeting of the Commission of Gas and Electricity of the State of New York, held at the Capitol in the City of Albany, N. Y., on the 23rd day of February, 1906.

Present: Frederic E. Gunnison, John C. Davies, Lucian L. Shedden, Commissioners.

In the Matter of the Complaint of Edward C. Keys and Others, Being Upwards of One Hundred Customers of the Consolidated Gas Company of New York, and the Complaint of R. H. & M. McGurrin and Others, also Being Upwards of One Hundred Customers of said Company.

46 Complaint in writing having been made and signed by Edward C. Keys and others, being upwards of one hundred customers and purchasers of gas sold and delivered by the Consolidated Gas Company of New York in the Borough of Manhattan, City and State of New York, as to the price of such gas so sold and delivered in said city, wherein the complainants pray that the maximum price which the said Company may charge for gas be fixed at seventy-five cents per thousand cubic feet; and the further complaint in writing made and signed by R. H. & M. McGurrin and others, being upwards of one hundred customers and purchasers of gas sold

and delivered in said Borough of Manhattan, City of New York, by the said Consolidated Gas Company of New York as to the price of such gas so sold and delivered, wherein the complainants pray that an order may be made reducing the price charged for such gas to the extent warranted by the evidence; and public hearings having been had upon such complaints in said city of New York pursuant to a notice of said complaints, and the purposes thereof, which notice was duly served on said Consolidated Gas Company;

Page, Brant & Booth, by Alfred R. Page, Esq., appearing for the complainant first above mentioned;

Clarence J. Shearn, Esq., by William A. De Ford, Esq., appearing for the complainants last above mentioned;

Charles F. Mathewson, Esq., appearing in behalf of said Consolidated Gas Company;

And the said proceedings having been consolidated at said hearing by order of said Commission, and the said Commission having investigated as to the cause for such complaints and inspected the works, system, plants and methods used by said Consolidated Gas Company in manufacturing and distributing such gas, and having examined the books and papers of said Company pertaining thereto; and, pursuant to a further notice, duly served upon the said Consolidated Gas Company of New York, the Commission at said hearing having inquired into, examined and investigated the illuminating power, purity and pressure of gas supplied by said Company, and having examined the methods employed by it in the transaction of its business and inquired into the methods and means employed in manufacturing, distributing and supplying gas for light, heat and power; Now, after such hearings and upon such investigations and upon the evidence and argument of counsel, and due deliberation having been had, it is

47 Ordered, that on and after the first day of May, 1906, the maximum price for gas which shall be charged by the Consolidated Gas Company of New York, in the Borough of Manhattan, City of New York, State of New York, be and is hereby fixed at eighty cents per thousand cubic feet; and, it is further

Ordered, that the gas furnished, sold and delivered by the Consolidated Gas Company of New York shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour, tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour, as is now provided by law; and, it is further

Ordered, that the gas furnished, sold and delivered by the Consolidated Gas Company of New York shall not contain in each one hundred cubic feet of such gas more than five grains of ammonia, nor more than twenty grains of sulphur, nor more than a trace of sulphurated hydrogen.

As the gas supplied to all customers of the Consolidated Gas Company is delivered through the same service mains as gas supplied to the City of New York, and as the pressure of gas so supplied is fixed by law at not less than one inch nor more than two and one-half inches in any service mains in said city, at any distance from the place of manufacture, said law fixes the pressure of gas at which all customers and consumers of the Company must be furnished in said city.

FREDERIC E. GUNNISON,
JOHN C. DAVIES,
LUCIAN L. SHEDDEN,
Commission of Gas and Electricity of the State of New York.

48

EXHIBIT D.

CHAPTER 125.

An Act in relation to illuminating gas in the City of New York and regulating the quality and pressure thereof and the price to consumers other than said city and providing a penalty for violation.

Accepted by the City.

Became a Law April 3, 1906, with the approval of the Governor Passed, a majority being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. A corporation, association, copartnership or person engaged in the business of manufacturing, furnishing or selling illuminating gas in the city of New York, except in the fifth ward of the borough of Queens and in that portion of the borough of the Bronx formerly contained in the towns of Eastchester and Pelham, shall not charge or receive for gas manufactured, furnished or sold in said city a sum per one thousand cubic feet in excess of the following rates:

1. In the borough of Manhattan, in the first ward of the borough of Queens, in the borough of Brooklyn except the thirtieth and thirty-first wards thereof, and in the borough of the Bronx, except that portion of it formerly contained in the town of Westchester outside of the villages of Wakefield and Williamsbridge, eighty cents.

2. In the second and fourth wards of the borough of Queens and in the thirtieth ward of the borough of Brooklyn, one dollar.

3. In the third ward of the borough of Queens, in the thirty-first ward of the borough of Brooklyn, and in the borough of Richmond, one dollar and twenty-five cents for the remainder of the year nineteen hundred and six; one dollar and twenty cents during the year nineteen hundred and seven; one dollar and fifteen cents during the year nineteen hundred and eight; one dollar and ten 49 cents during the year nineteen hundred and nine; one dollar and five cents during the year nineteen hundred and ten; and one dollar thereafter.

4. In that portion of the borough of the Bronx formerly contained in the town of Westchester, outside of the villages of Wakefield and Williamsbridge, one dollar and fifteen cents during the years nineteen hundred and six, nineteen hundred and seven and nineteen hundred and eight; one dollar and ten cents during the year

nineteen hundred and nine; one dollar and five cents, during the year nineteen hundred and ten; and one dollar thereafter.

§ 2. The illuminating gas furnished by any such corporation, association, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. The pressure of illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch, nor more than two and one-half inches.

§ 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars for each offense to the people of the state.

§ 4. This act shall not apply to gas furnished or sold to the city of New York.

§ 5. Chapter three hundred and eighty-five of the laws of eighteen hundred and ninety-seven, entitled "An act to regulate the price of illuminating gas in cities of fifteen hundred thousand inhabitants," and all other acts or parts of acts inconsistent herewith are hereby repealed.

§ 6. This act shall take effect on the first day of May, nineteen hundred and six.

50

EXHIBIT E.

Memorandum or Opinion of Commission.

"The Commission of Gas and Electricity has this day filed an order fixing the maximum rate at which the Consolidated Gas Company of New York shall sell its gas to its consumers for three years from May 1st, 1906, at eighty cents per thousand cubic feet, such gas to be of 22 candle power, and of the purity and pressure now established by law.

"Orders have also been issued in the case of the other companies operating in the Borough of Manhattan against which complaints were filed, viz., the New Amsterdam, Standard and Mutual. The rate of eighty cents per thousand cubic feet has been fixed in the case of each of said companies.

"Orders will be issued forthwith in the cases of the Central Union and Northern Union companies, operating in the Borough of The Bronx.

"An investigation is now being held in the matter of the complaints against the Brooklyn Union Gas Company.

"The Consolidated Company is the largest company operating in New York and on October 31st, 1905, had issued and outstanding $80,000,000 capital stock, and bonds and convertible debentures amounting to $21,245,000. During the nominal year ending Oct.

31, 1905, it sold to consumers 13,037,164,550 cubic feet gas; street lamp use, 271,199,223 cubic feet gas; total, 13,308,363,773 cubic feet gas.

"The company received an income from consumers, $13,012,206.09; street lamps, $559,823.11; total, $13,572,029.20.

"The cost of manufacturing and distributing the gas sold to consumers amounts to $7,920,077.46 or 60.75c. per thousand cubic feet, not including fixed charges of the company amounting to $936,883.24. This cost per thousand cubic feet includes not only the
actual repairs and replacements for the year ending Oct. 31,
51 1905, but an additional sum sufficient to bring the expendi-
tures for repairs and replacements to the average expenditure by the company for twenty years for these items.

"Upon the hearing the Consolidated Gas Company produced its contracts for the purchase of oil, coal and other materials used in the manufacture of gas, and also its contracts for the sale of its residuals.

"On the first day of July, 1905, a law passed by the Legislature of 1905, went into effect, which compelled the Consolidated Gas Company to furnish gas of an illuminating power of twenty-two candles, which was an increase of two candle-power over that formerly prescribed by law.

"The nominal year ending Oct. 31, 1905, included four months only of operation under the higher candle-power requirement. As these months were during the warmer weather, when the cost of enrichment is least, the commission found that 1.81c. per thousand cubic feet should be added to the actual cost of gas as found for the nominal year to obtain the cost of manufacturing and distributing gas of twenty-two candle-power for twelve months.

"The value of the property of the Consolidated Gas Company actually employed in the manufacture and distribution of gas on Oct. 31, 1905, did not exceed the sum of $30,000,000.

"Evidence taken before the committee appointed by Senate by resolution adopted May 15, 1885, was introduced, showing the cost of the properties of the constituent companies, exclusive of franchises, as appeared on their books, to be in 1884, $20,942,632.88. The net additions for construction from 1884 to Oct. 31, 1905, amounted to $9,693,565.90. To this should be added value of materials on hand Oct. 31, 1905, $616,470.08, making a total of $31,252,668.83.

"Recently property at Eighteenth street, formerly used as a coal gas manufacturing plant by the Consolidated Gas Company, was condemned by the city of New York, and while an award has not
yet been made by the commissioners appointed to condemn
52 said property, title has passed to the city and the amount of
the award, when made, will carry interest at the rate of 6 per cent. from the date the city took title. The value of the property so taken is not actually used by the Consolidated Gas Company in the manufacture and distribution of gas. The value of said property, as testified to by the Consolidated Gas Company on the condemnation proceedings, was $2,655,000.

"The commission also had before it the return of the Consolidated

Gas Company made to the State Board of Tax Commissioners for the purpose of taxation, which return was duly verified. The value of the property of the company, as shown by the return to the State Tax Commissioners June 30, 1905, exclusive of franchise, allowing for depreciation of the real estate, plant, mains, services and material and also meters, supplies and other personal property, was $27,408,700.91. It was contended by the company that the amount so returned to the State Board of Tax Commissioners did not represent the true value. But all of this testimony, with other pertinent evidence, was considered by the commission in arriving at the value of the property of the Consolidated Gas Company actually used in the manufacture and distribution of gas.

"In allowing a fair return upon the value of the property actually employed in the gas-making business, account has been taken of the nature and hazard of the business and of the return allowed on similar investments.

"The commission thinks that 8 per cent. is a reasonable return upon the actual value of the property owned by the company and used in the manufacture and distribution of gas. It will be remembered that this return is not based upon the capitalization of the company, but upon the actual capital engaged in the manufacture and distribution of gas.

"It was strenuously urged before the commission on behalf of the company that the commission should allow the capitalization of the company's franchise as it was assessed by the State Board of
53 Tax Commissioners at $7,781,000. And upon this the company paid a yearly tax, which entitled the company as a matter of law to such capitalization. On the evidence before the commission it is questionable whether the Consolidated Gas Company has franchises of any considerable value. The commission believes that these franchises, granted by the people without compensation, should not be capitalized against the public, thereby compelling the public to pay a profit upon the value of the favor granted by it. The seeming injustice of requiring a corporation to pay taxes upon a franchise and at the same time refusing to allow the capitalization of that franchise is sophistical, not real. The franchise tax is paid by the corporation but charged against the public as an expense of operation, and in reality is therefore paid by the consumer, not by the company.

"The Astoria Light, Heat & Power Company is building a plant at Astoria, Long Island, and proposes building a tunnel under the East River connecting its works with the distributing system of the Consolidated Gas Company in Manhattan. The Consolidated Gas Company is the owner of all of the capital stock of the Astoria Company. Large expenditures have already been made in the construction of its first unit, which unit will have a total capacity of 20,000,000 cubic feet per day, while the plant when completed will eventually produce an amount of gas equivalent to that now sold by the Consolidated Gas Company on the Island of Manhattan, including that purchased from other companies by it. Considerable evidence was taken in reference to the Astoria plant and the proposed removal of the Consolidated manufacturing plant thereto. The company claims that such removal from the island of Manhattan is made in obedience to a public demand therefor. In any event, the commission believes that the prospective economies in the cost of manufacture and the increase in the sale of gas by reason of the reduction in price will enable the company to pay a reasonable return on any necessary investment in Astoria.

54 "This conclusion was arrived at by the commission after a most exhaustive and painstaking hearing and investigation covering a period of nearly three months, in the course of which the plants of the company were examined and over 5,000 pages of testimony taken.

"It will be remembered that this investigation was not initiated by the commission, as it has no authority to inquire into and fix the price of gas in the city of New York or elsewhere, except upon the complaint of 100 or more customers of the company complained against, or upon the complaint of the Mayor of the city. After such complaint was made such investigation was commenced, and the commission then had but one duty to perform, and that was to proceed with the same as carefully and as expeditiously as possible.

"The commission believes that the natural increase in gas sales will be greatly stimulated by the reduction in price and is satisfied that the price fixed is fair to the consumer, the public and the company."

February 23, 1906.

55 Endorsed: Circuit Court of the United States, Southern District of New York. Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney-General of the State of New York, William Travers Jerome, as District Attorney of New York County, Frederic E. Gunnison, John C. Davies and Lucian L.Shedden, constituting the New York State Commission of Gas and Electricity, and the City of New York, Defendants. In Equity. Bill of Complaint. Shearman & Sterling, Solicitors for Complainant. U. S. Circuit Court Southern District of New York. Filed May 1, 1906. John A. Shields, Clerk.

56 The President of the United States of America to Julius M. Mayer, as Attorney-General of the State of New York, William Travers Jerome, as District Attorney of New York
[L. S.] County, Frederick E. Gunnison, John C. Davis and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, and the City of New York, Greeting:

You are hereby commanded that you and each of you personally appear before the Judges of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, in Equity, on the first Monday of June A. D. 1906 wherever the said Court shall then be, to answer a bill of complaint exhibited against you in the said Court by Consolidated Gas Company of New York and do further and receive what the said Court shall have considered in that behalf. And this you are not to omit under the penalty on you and each of you of two hundred and fifty dollars.

Witness, The Honorable Melville W. Fuller, Chief Justice of the United States, at the Borough of Manhattan, in the City of New York, on the 1st day of May in the year of our Lord one thousand nine hundred and six and of the Independence of the United States of America, the one hundred and thirt*ei*th.

JOHN A. SHIELDS, *Clerk.*

SHEARMAN & STERLING,
Solicitors for Complainant.

The Defendants are required to enter appearance in the above cause, in the Clerk's office of this Court, on or before the first Monday of June 1906, or the bill will be taken *pro confesso* against them.

J. A. S., *Clerk.*

57 I hereby certify, That on the 2nd day of May 1906, at the City of New York, in my district, I served the within Subpœna in Equity upon the within-named Defendant Julius M. Mayer, as Attorney-General of the State of New York, by exhibiting to Ernest A. Needham, Clerk in charge of the office of the Attorney-General of the State of New York at 27 William Street, the within original, and at the same time leaving with him a copy thereof, as per admission of service endorsed upon this original.

I hereby further certify, That on the 2nd day of May 1906, at the City of New York, in my District, I personally served the within Subpœna in Equity upon the within named Defendant William Travers Jerome as District Attorney of New York County, by exhibiting to him at the Criminal Court Building, Centre and Franklin Streets, the within original, and at the same time leaving with him a copy thereof.

I hereby further certify, That on the 2nd day of May 1906, at the City of New York, in my District, I served the within Subpœna in Equity upon the within-named Defendant The New York State Commission of Gas and Electricity by exhibiting to Frederic E. Gunnison as a member of the said Commission, at 5 Nassau Street, the within original, and at the same time leaving with him a copy thereof for himself and one for each of his associate members on said Commission, John C. Davies and Lucian L. Shedden.

I hereby certify, That on the 2nd day of May 1906, at the City
of New York, in my District, I served the within Subpœna in Equity
upon the within-named Defendant The City of New York, by
58 exhibiting to John J. Delany as Corporation Counsel of the
City of New York, at 2 Tryon Row, the within original, and
at the same time leaving with him a copy thereof.

Dated, N. Y. May 2nd 1906.

WM. HENKEL,
United States Marshal, S. D. N. Y.

Endorsed: Copy of the within paper received this 2 day of May 1906. Julius M. Mayer, Attorney General, Ernest A. Needham. U. S. Circuit Court Southern District of New York. Filed May 2, 1906. John A. Shields, Clerk.

59 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK
against
JULIUS M. MAYER, as Attorney-General of the State of New York, and Others.

Temporary Restraining Order.

The complainant having moved upon the bill of complaint and various affidavits for an injunction, during the pendency of this action, against the defendants, to restrain them and each of them and each and every person acting under or by virtue of the authority of the Acts of the Legislature and Order of the Commission of Gas and Electricity, specified in the bill of complaint, from in any way enforcing or attempting to enforce the said Acts and Order, or any provisions thereof, against the complainant and the defendants having appeared on May 12, 1906, and applied for an adjournment of the said motion and such adjournment having been granted by the Court to May 17, 1906; and the defendants having then applied for a further adjournment of the said action, and the said application having been granted, defendants opposing, upon condition that a temporary restraining order should be entered herein; and it appearing that the complainant demands and claims to be entitled to a decree 59a against the defendants, restraining the commission of the acts hereinafter enjoined, upon the ground that they would result in irreparable injury to the complainant and would constitute a taking of complainant's property for public and private use, without due process of law and without just compensation, and would constitute a denial to the complainant of the equal protection of the laws, in violation of the Fourteenth Amendment to the Constitution of the United States and would impair the obligation of the complainant's contract rights in violation of Section 10 of Article 1 of the Constitution of the United States, and would result in a multiplicity of suits, and that the complainant has no adequate remedy at law for the injury which would result from the threatened acts of the defendants, it is

Ordered:

I. That, until the entry of an order upon the said motion, the defendants, and each of them, their officers, agents, servants and employees, and each and every person acting under and by virtue of the authority of the Acts and Order referred to in the bill of complaint, or any of them, be and they hereby are enjoined and restrained from in any way enforcing or attempting to enforce the said Acts and Order, or any of the provisions thereof, against the complainant.

II. That, until the entry of an order upon the said motion, the complainant may make the same charge for gas furnished since April 30, 1906, to its consumers other than the defendant, the City of New York, as that which it has heretofore made, namely $1 per thousand cubic feet, notwithstanding the said Acts and Order, provided it pay into the Citizens Central National Bank of this City, as hereinafter provided forthwith a sum estimated to represent 20 cents per thousand cubic feet upon all gas so furnished for the month of May, 1906, such sum to be 20% of the amount received by the complainant for gas furnished to its customers during the month of May, 1905, and that, at the beginning of each week thereafter during the continuance of this order, it pay in like manner a further 59*b* sum, estimated to represent 20 cents per thousand cubic feet, upon all gas so furnished for the ensuing week, such sum to be 20% of the amount received by the complainant for gas furnished to its customers in the corresponding week in 1905; and provided also that as soon as possible after the end of each calendar month, not exceeding, however, the period of six days, the complainant file with the Clerk of this Court an affidavit showing, in detail, the name and address of each customer, or such facts as may be sufficient to identify such customer to whom gas had been furnished and the amount collected during such calendar month from each said customer for such gas in excess of 80 cents per thousand cubic feet. At the time of filing such affidavit, the complainant shall be entitled to credit for any sums paid into said bank as hereinafter directed in excess of 20 cents per thousand cubic feet of gas supplied to such customers subsequent to April 30, 1906, and in case there should be any deficiency in such amount, the complainant shall forthwith pay the same to the said Bank.

III. That the money so paid into the said Citizens Central National Bank shall be by it received and held as a special deposit, appropriately entitled, upon which interest at the rate of two and one-half per centum per annum shall be paid, and that the same shall be paid out only upon draft of the Special Master hereby appointed countersigned by a federal judge sitting in this Court. In order to facilitate the return of the moneys so deposited in the event of a decision of this Court directing such return, John A. Shields, Esq., of this City is hereby appointed a Special Master to ascertain and report as to the amounts to be paid to each individual claimant and as to the identity of such claimant. He is thus selected as Special Master, although Clerk of the Court for the reason that the claimants of the fund will be extremely numerous and their identity and amount of their claims will have to be established by incessant references to the sworn statements of the gas companies which will be filed in the Circuit Court and be kept in the Clerk's custody, 59*c* and such reports can be more expeditiously and economically consulted by a special master, whose place of business is in the Federal Building.

IV. That all sums paid in under this order shall be held subject to the further order of the Court.

V. That the argument for the motion of a temporary injunction herein be adjourned until June 4, 1906, at eleven o'clock A. M., and that the defendants serve on the solicitors for the complaint any affidavits which they may desire to use in opposition to complainant's said motion on or prior to June 1, 1906.

New York, May 18, 1906.

E. HENRY LACOMBE,
U. S. Circuit Judge.

Endorsed: U. S. Circuit Court, Southern District of New York. Consolidated Gas Company of New York, against Julius M. Mayer, as Attorney General of the State of New York, and others. Temporary restraining order. Shearman & Sterling, Attorneys for Complainant, 44 Wall Street, N. Y. U. S. Circuit Court, Southern District of New York, Filed May 18, 1906, John A. Shields, Clerk.

59d Circuit Court of the United States, Southern District of New York. In Equity.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Answer of Defendants, Attorney General, District Attorney, and State Commission of Gas and Electricity.

The joint and several answer of Julius M. Mayer, as Attorney General of the State of New York, William Travers Jerome, as District Attorney of New York County, and Frederic E. Gunnison, John C. Davies, and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, to the bill of Complaint of the Consolidated Gas Company of New York complainant.

60 These defendants, now and at all times hereafter saving and reserving to themselves all manner of benefit and advantage of exception to the many errors and insufficiencies in the Complainant's said Bill of Complaint contained, for answer thereunto, or to so much or such parts thereof as these defendants are advised is material for them to make answer unto, they answer and say upon information and belief:

First. That they admit that the Complainant is a corporation incorporated for the purpose of manufacturing and selling gas in the City and County of New York, under and by virtue of a consolidation agreement, pursuant to the statute of the State of New York, executed by and on behalf of the several corporations of the date, and to such purpose and effect as is in the said Bill of Complaint at Subdivision I thereof mentioned and set forth. That the said agreement was thereafter filed in the office of the Secretary of State of the State of New York, and of the Clerk of the County of New York, as and on the date set forth in said subdivision of said Bill of Complaint, and that the complainant was organized as a corporation thereunder for the period and with the right to extend its corporate existence as and in the manner in said subdivision I of said Bill of Complaint is set forth.

Second. These defendants admit that the complainant became the owner of mains, pipes and conductors theretofore laid in the various streets, highways and public places in the City and County of New York by the said predecessor companies; and that it also became thereby the owner of large and expensive works for the manufacture and distribution of gas, which had been erected by the said predecessor companies; and that the said complainant has, ever since, been engaged in the business of manufac- 61 turing and selling gas to the inhabitants of the said City and County of New York and to the City of New York, and has maintained and operated the said mains, pipes and conductors, or some portion thereof, in the said streets, highways and public places of the said City and County of New York, and has laid additional mains, pipes and conductors therein, but these defendants do not know and have not been informed save by the complainant's bill whether the same have been laid with the consent of the municipal authorities of the said City. But these defendants deny that by virtue of the said consolidation agreement, or otherwise, the complainant became the owner of various franchises or consents obtained by its predecessor Companies authorizing them to lay, maintain and operate mains, pipes and conductors in the streets, highways and public places of the City and County of New York, but, on the contrary thereof, allege the truth to be that the said franchises and consents held by the New York Gas Light Company and the Manhattan Gas Light Company, which related to all that part of the City and County of New York south of Forty-second Street, had expired by the limitation of their terms and had not been renewed. That the said franchises and consents held by the remaining Companies did not run to the successors thereof. These defendants admit that there were and are, as is alleged in the II subdivision of said Complaint, other gas Companies engaged in the manufacture, sale and distribution of gas in the City of New York, as well as a number of electric light companies engaged in distributing electric light to the inhabitants of the said City, but these 62 defendants allege the truth to be that all such gas and electric light Companies that distribute gas within the County of New York are owned or controlled by the complainant, and that the complainant has a monopoly of the gas and electric lighting business in the County of New York.

Third. These defendants further answering say each for himself that he knows not and has not been informed save by the said complainant's Bill, and cannot set forth whether the complainant has duly or otherwise complied with all the requirements of the several statutes mentioned in subdivision III of said bill of complaint.

Fourth. That these defendants verily believe that the true tenor and effect of Chapters 736 and 737 of the Laws of 1905, are as set forth in subdivisions IV and V of said Bill of Complaint, and that true copies thereof are annexed to the said bill of complaint and marked Exhibits A and B, but for greater certainty these defendants crave leave to refer to the originals or to the duly authenticated copies thereof when the same shall be produced. And they admit that the defendants, Gunnison, Davies and Shedden were duly appointed commissioners under and by virtue of said Chapter 737.

Fifth. That these defendants admit that the City of New York is a domestic municipal corporation, organized, existing and situated as in the VI subdivision is alleged, and that it has been a customer of the complainant, but they deny that the City of New York itself is, and for many years past has been a customer of the complainant, in the same sense and in the same way and under the same
63 legal conditions as each and every other customer of the
complainant in the said City. But these defendants know not and have not been informed save by the said complainant's bill as to the amount of gas consumed by said city in the year 1905.

Sixth. These defendants admit that Gunnison, Davies and Shedden at the times therein referred to constituted and still constitute the commission of Gas and Electricity of the State of New York established by an act, Chapter 737 of the Laws of 1905, having a branch office in the City of New York, and by virtue of said act having the powers conferred upon them as is alleged in the VII subdivision of said bill of complaint, and also that compliance with the orders of said commission may be enforced by an application for a writ of mandamus, as set forth in said subdivision of said bill of complaint.

Seventh. These defendants admit that on or about the 8th of November, 1905, copies of two complaints, each signed by one hundred or more customers of the complainant, charging that the price charged by the said complainant for gas was excessive and unreasonable and praying that the same might be reduced, were received by said commission; and that the defendants Gunnison, Davies and Shedden, as the Commission of Gas and Electricity of the State of New York gave notice to the complainant of a public hearing on said complaints, and they allege that the said hearings were commenced on the 20th day of November, 1905, and that the complainant appeared on said date by attorney and that the hearings proceeded until and including the 24th day of January, 1906, and that witnesses were produced for and against
64 the complainant and the same were examined or cross-ex-
amined in full by the complainant's attorneys, and that the testimony taken at such hearing consists of 2,223 printed pages, and that upon said hearings it appeared by the clear preponderance of evidence that the reasonable cost of manufacturing and distributing the same, allowing for all the expenses of administering and carrying on the said business, and allowing for depreciation and replacement of plant and for repairs and for taxes, and for all legal allowances, did not exceed 62 cents per thousand cubic feet, and that the reasonable value of the property of the complainant actually engaged in said business did not exceed the sum of $30,000,000, and that 80 cents per thousand cubic feet would be a fair and reasonable price for the said complainant to charge for gas in the City of New York, and they allege that eighty cents per thousand cubic feet is to the complainant a fair and reasonable price to charge therefor; and they allege that after due deliberation had

upon said evidence the aforesaid defendants made the order a copy of which is annexed to the bill of complaint and marked Exhibit C. That the said order requires a reduction of twenty cents per thousand cubic feet from the price of one dollar per thousand cubic feet heretofore charged by the complainant pursuant to Chapter 385 of the Laws of 1897 by which the maximum price of gas in the City of New York was fixed for the year 1901 and subsequently at one dollar per thousand cubic feet, but these defendants deny that one dollar per thousand cubic feet is now a reasonable price for the said complainant to charge for gas in the City of New York.

Eighth. These defendants verily believe that the true tenor and effect of Chapter 125 of the Laws of 1906 of the State of
65 New York is as set forth in subdivision IX of the said bill of
complaint and that a true copy thereof is annexed to the said bill of complaint and marked Exhibit D, but for greater certainty these defendants crave leave to refer to the original or to the duly authenticated copy thereof when the same shall be produced.

Ninth. Further answering, these defendants admit that the complainant was originally incorporated by consolidation in the year 1884, pursuant to Chapter 367 of the Laws of New York of that year. That the said act provided that the capital of the consolidated corporation, organized thereunder, should not be larger in amount than the fair aggregate value of the property franchises and rights of the several companies thus consolidated. These defendants admit that for the purposes of such consolidation the property was appraised at the sum of $29,994,000., exclusive of the alleged franchise and rights of the company which was estimated at $7,781,000, and that the aggregate value of the property franchises and rights of the said companies were accordingly estimated at the sum of $37,775,000, but these defendants deny that they have any knowledge or information sufficient to form a belief as to whether said appraisal was made by disinterested persons and they deny that that amount of stock was issued to the stockholders of the various constituent companies, but on the contrary thereof state the truth to be that stock to the amount of $39,078,000. was issued by the said Consolidated Company of which $35,430,060 was issued for the acquisition of the property and franchises of the constituent companies, subject to certain indebtedness, and that the remain-
66 ing $3,647,940 was held in the treasury to provide for this
indebtedness and subsequently issued. These defendants deny that the issue of such stock created a contract between the complainant and the State of New York under which complainant has a right to earn a fair return upon the stock so issued. These defendants further deny that the stock so issued represented the fair aggregate value of the property franchises and rights for which it was issued, as required by Chapter 367 of the Laws of 1884, of the State of New York, but on the contrary thereof alleges that the total capital stock of the consolidated companies amounted to $17,000,000, and their outstanding indebtedness amounted to $3,415,150.76, making a total of $20,415,150.76, and that the total cost of the prop-

erties of the said companies was $20,942,632.85, and that the full value in 1884 at the time of the said consolidation did not exceed that sum. These defendants further answering admit that the authorized capital stock of the said complainant has since 1884 been increased in various amounts and at various times to the aggregate of $100,000,000. par value, $80,000,000. par value of which is issued and outstanding, but these defendants deny that the said increased stock has been lawfully issued and allege as to said increase of capital stock that in April, 1900, the capital stock of the complainant was increased to $54,595,200., and the increased stock amounting to $15,517,200. was exchanged for debentures of the complainant, said debentures having been issued for the purchase of the entire stock of the New York Gas and Electric Light, Heat & Power Company, amounting to $36,000,000 par value, which said stock was intrinsically worthless and was purchased by said
67 complainant not for the use and lawful purpose of said com-
plainant but to secure the control of the Electric Light industry, and to give the complainant a monopoly of the lightning business in said City of New York. That thereafter the said shares of the said Power Company were exchanged for substantially the entire capital stock of the New York Edison Company, a corporation representing a merger of electric properties and the stock of which was intrinsically worthless, being subject to a bonded indebtedness in excess of the value of all its assets; the complainant has not received any dividends on the said shares either of said Power Company or said Edison Company. That in July, 1900, the capital stock of the complainant was increased to $80,000,000, that of the increased stock $3,773,600 par value was exchanged for debentures of the complainant which had been issued to purchase $7,170,142. par value of the stock of the New Amsterdam Gas Company, which said stock was intrinsically worthless and was purchased by said complainant, not for the use and lawful purposes of said complainant but to secure the control of the said New Amsterdam Gas Company to give the complainant a monopoly of the lighting business in the County of New York. The said debentures and said debentures issued for the purchase of the stock of the said Power Company were not secured by any mortgage or other lien upon the property of the complainant, and the issue of said increased stock in exchange therefor, was without authority of and was contrary to the laws of the State of New York. These defendants further answering allege

That the proceeds of the remaining $21,631,200 of increased stock were used only to a small, if any extent, in the ac-
68 quisition of plant or property for the manufacture and dis-
tribution of gas by the complainant, and that the proceeds of not less than $21,000,000 of said increased stock, as defendants are informed and believe, were used exclusively for the purchase by the complainant of stock and bonds of other companies engaged in the manufacture and sale of gas and in generating and distributing electric current in the county of New York, including a majority of the stock of the New Amsterdam Gas Company, the

Standard Gas Light Company, the New York Mutual Gas Light Company, and the United Electric Light and Power Company; that the said purchases were made by the complainant for the sole purpose of securing the control of the said corporations and thereby obtaining a monopoly of all the lighting business in the county of New York, and that by these last purchases, and with the holdings of said complainant theretofore acquired, the complainant has obtained and now has a monopoly of the lighting business, both gas and electric, in said county.

These defendants deny that the complainant, in the case of every increase of stock, has realized for the additional stock issued, either in cash or property or in payment of indebtedness, an amount greatly in excess of the par value of the stock so issued. These defendants allege that the shares of the said New Amsterdam Gas Company are intrinsically worthless and that the shares of the said United Electric Light and Power Company are not of any substantial value, and that the complainant has never received, as defendants are informed and believe, any dividends upon any of said shares; and that of the said additional stock issued by the 69 complainant on the increase thereof from $39,078,000 to $80,000,000, and issued for the purpose of acquiring securities as aforesaid, not less than $23,000,000 were used for the purpose of acquiring securities of no value, save as they might be used by the complainant to complete its monopoly of said business.

These defendants further admit that the complainant has issued at par and that there is now outstanding its debentures to the amount of $19,857,600 as is in said bill of complaint alleged.

These defendants, further answering, admit that for many years the capital stock of the complainant was well and favorably known and regarded by the investing public, owing to the fact that the complainant owns a large and valuable property, well located in a prosperous metropolitan community, but they deny that the entire capitalization represents actual value, but on the contrary thereof allege that by reason of the complainants charging one dollar per one thousand cubic feet of gas, it has been enabled to pay dividends at the rate of eight per cent. on a capitalization of $80,000,000., when its actual investment in the gas making business did not exceed $30,000,000. These defendants further say that they know not and have not been informed save by the said complainant's Bill and cannot set forth whether the complainant's stock is widely held and by whom or where the said stockholders reside or the number of said stockholders.

Tenth. These defendants further answering say that they admit that the complainant has since its incorporation devoted certain sums of money to making additional improvements and extensions to its plant and works, and now owns plants, consisting of real estate, buildings, machinery, pipes and other apparatus, in 70 good order and repair, suitable and actually used for the purpose of manufacturing and distributing gas in said City and County of New York, but these defendants deny that the same represents a cost to the complainants of $40,000,000, and having

a present value in excess of that sum and allege the truth to be that the same, together with supplies and material on hand mentioned in the bill of complaint, represents a cost not to exceed $30,000,000, and that the present value, together with the value of said supplies and material on hand, does not exceed $27,500,000, exclusive of any value of its franchises, good will or business. These defendants further say that they know not and have not been informed save by said complainant's bill and cannot set forth whether the said complainant has a cash working capital necessary for the conduct of its business of $1,000,000 and bills and accounts receivable representing more than $2,000,000, but they deny that bills and accounts receivable are property which is to be taken into account in determining a fair and reasonable charge for gas. The defendants further answering deny that to provide a means of disposing of its by-products of the manufacture of gas, consisting of coal, tar and ammonia, it has invested $50,000 in such business. But these defendants say that the complainants have invested $50,000, the proceeds of the sale of $33,333.33 par value of its stock, in the stock of the National Coke & Coal Company, which Company carts the coke of complainants. These defendants admit that the complainant has acquired all the stock of the Astoria Light, Heat & Power Company, and that the said Astoria Light, Heat and Power Company has acquired land and has erected and in
71 course of erection buildings and improvements thereon, and
that the complainant has loaned to said Astoria Light, Heat and Power Company sums of money to what extent these defendants know not and have not been informed save by the said complainant's bill. But they deny that the said loans to and purchases of stock of the Astoria Light, Heat and Power Company have increased the plant or capital account or property of the complainant which should be taken into consideration in determining the fair and reasonable price of gas sold by complainant. But they allege the said $5,500,000 alleged to have been invested in the Astoria Light, Heat and Power Company, and the $6,200,000 in cash and a further sum of $6,500,000 in temporary investments and loans, aggregating a sum in excess of $12,700,000 additional, temporarily held by complainants pending the completion of the plant of the Astoria Light, Heat & Power Company at Astoria if the same has been invested or is held as alleged, is all a portion of the proceeds of the $19,857,600 debenture bonds on which the complainant is paying 6 per cent. interest. These defendants deny that complainant's actual investment in its business of making and selling gas at the time the said order was adopted was $62,000,000, exclusive of the value of its franchise and right and exclusive of the value of its other intangible property, if any of either it has. These defendants know not and have not been informed save by the said complainant's bill and can not set forth whether the complainant's business has always been managed in an economical and skillful manner, with the highest regard for the safety and convenience of the public, but they deny that the prices charged to inhabitants of the City and

County of New York by the said complainant for gas have
72 always been reasonable and have been lowered from time to
time by the complainant as rapidly as was warranted by the decrease in the cost of manufacture and distribution, as is alleged in said bill of complaint, and these defendants also deny that the complainant has always performed its duties in a manner satisfactory to the inhabitants of the City and County of New York, and that the quantity has been sufficient and the quality of such gas has been excellent. But, on the contrary thereof, alleged that the price of gas in the City of New York was reduced by Chapter 385 of the Laws of 1897 of the State of New York from $1.25 per thousand cubic feet to $1 per thousand cubic feet in 1901 and thereafter for private consumers, and to ninety cents per thousand cubic feet for gas for the use of the City of New York. And that by reason of the widespread complaint of the quality and price charged for said gas by the inhabitants of the said City of New York, and of the inordinate pressure under which gas was delivered to the customers by the complainant the Legislature of the State of New York appointed a Committee to investigate the same, and as a result of that investigation the remedial legislation, which is attacked in this suit, was passed.

Eleventh. These defendants admit that the price of gas in the City of New York has been gradually reduced from $2.25 per thousand cubic feet, but deny that the price charged for gas has always been as low as prices charged by other manufacturers of gas in communities corresponding in size and in other conditions to the said City and County of New York. Defendants admit that one dollar per thousand cubic feet for gas is lower than the average
price charged throughout the State of New York, but these
73 defendants allege that there is no other city in the State of
New York where there is the same amount of gas manufactured and sold nor where there is the same number of meters per mile of mains, nor so high an average consumption of gas per meter, nor where any of the conditions would be so favorable to as cheap cost in manufacture and delivery of gas as in the City of New York. These defendants deny that in view of the local conditions now prevailing in the City of New York and other conditions as to candle power, pressure and purity, and in respect to the cost of construction and labor, coal, naphtha, oil and other materials used in the manufacture of gas, the market for residuals or by-products, and the other conditions upon which the cost of manufacturing and distributing gas depends, the price of one dollar per thousand cubic feet is relatively as low a price as the prices charged in any other city or town in the said state or elsewhere in the eastern part of the United States, or as low as business prudence would have justified the complainant in adopting and charging.

Twelfth. Further answering, these defendants say that they know not and have not been informed save by the said complainant's bill whether since its organization in 1884, the complainant has declared and paid dividends to its stockholders, averaging much less than eight per cent. But these defendants allege the truth to be that dur-

ing the period from 1901 to date, while the price of gas in the City of New York was fixed by law, as aforesaid, the complainant has paid from the profits of its gas-making business dividends of at least eight per cent. per annum on its entire capital stock of $80,000,000
74 in par value, although its investment in its own business of
making and selling gas does not exceed $30,000,000, and despite the fact that upon its large investment in the stocks of other companies on which the complainant has received a very slight income, and had the said profits been applied to the payment of dividends on the capital invested by complainant in its gas business, the rate of dividend would have ranged between sixteen and twenty-three per cent. per annum in the same period. These defendants admit that the said complainant has devoted a portion of its earnings to making replacements, additions, extensions, improvements and acquisitions necessary for it to carry on its business, and that complainant has constantly maintained, improved and extended its system of pipes, mains, feeders and plants, and that some gas mains and pipes have been newly laid and that it has to some extent rebuilt and enlarged portions of its plant since 1884 and that it has purchased some additional real estate, built and constructed some additional buildings and installed some additional machinery to the extent of increasing the cost of its plant by the sum of about $9,000,000. That as defendants are informed and believe that the present value of said plant has not been increased thereby to exceed $27,500,000. These defendants further say that all the said matters and things were fully and in detail proved before the joint committee of the Senate and Assembly of the State of New York hereinbefore mentioned, in 1905, and before the New York State Gas Commission in 1906, and in ascertaining a fair and reasonable rate for the said complainant to charge due consideration was given thereto in fixing said rate at eighty cents per thousand cubic feet.

75 *Thirteenth.* These defendants, further answering, admit that it is necessary for the complainants to charge a price for gas sufficient to include the reasonable cost of materials, wages, insurance, taxes, office expenses, superintendence and expenses of management and such other expenses as are reasonably necessary, as part of the current annual cost of the manufacture and distributing of gas in the said City of New York; a reasonable allowance to make such reasonable repairs and renewals as may be rendered necessary by wear and tear. But these defendants deny that it is necessary or proper for the complainant to charge a price for gas sufficient to enable it in addition to the outlays aforesaid, and in addition to the proper and fair return upon its investment, to extend its plant or to make new installations, or for the purpose of reconstruction or enlargement. These defendants further say that in fixing the reasonable price to be charged for gas by the complainant in the City of New York at eighty cents for a thousand cubic feet, the Legislature of the State of New York and the New York State Gas Commission took into consideration all the items of outlay in making and distributing gas and a proper allowance for repairs and replacements,

including all matters necessary to be considered in order to allow a fair return upon its investment, and made due allowance therefor in the light of the actual experience of the complainant in its operations. These defendants deny that it is proper to charge the public as a part of the expense for the manufacture and sale of gas any additions to its plant, to enable the complainant to meet the constantly increasing demand for gas; but that such additions will properly be taken care of from the profits accruing from the 76 increased sale of gas. These defendants admit that it has been necessary for the complainant, since its organization in 1884 to expend a large amount annually in repairs and replacements to its buildings, plant, equipment, mains and services but these defendants allege that all said expenditures have been paid by the complainant out of the proceeds of its sales of gas, and have been treated as a part of the expense of its operation, and that the amount of these expenses and the experience of the complainant in relation thereto, were fairly taken into consideration in fixing the price of gas at eighty cents per one thousand cubic feet, as aforesaid.

These defendants further allege that since 1884, the complainant's investment in its gas making plant has been increased to the extent of about $9,000,000, and that the value of the property so acquired, is included in the present value of the complainant's investment in its gas making business, which does not exceed as defendants are informed and believe, the aggregate amount of $30,000,000 as aforesaid. These defendants say that they do not know to what extent it will be necessary for the complainants in the future to increase its real estate, plant, property and construction, but that it verily believes that the return for the same will be secured from the increased sale of gas produced by such increased plant, and that sales of gas at eighty cents per thousand cubic feet will give to the complainants an ample return for such investments, and upon the value of its entire property employed in its business.

Fourteenth. These defendants further answering, deny that by Chapter 737 of the Laws of 1905, any additional burden is 77 placed upon complainants, by reason of the provisions thereof as set forth in the XV subdivision of the said Bill of Complaint. They deny that it is necessary for any reason that the complainant should be permitted to earn enough to maintain the cash value of its plant at a sum equal to its outstanding stocks and bonds, (or debentures), or that it has any right to have the cash value of its plant maintained at such a sum and they aver that the present cash value of its property employed in its gas making business is about $70,000,000, less than the par value of its present outstanding stock and bonds (or debentures), and further these defendants submit that there is no allegation of facts contained in said subdivision XV that need be answered by these defendants.

Fifteenth. These defendants further answering, state that the order of the New York State Gas Commission and Chapter 125 of the Laws of 1906 of the State of New York, in fixing the price to be charged by this complainant gives a price sufficient to cover the reasonable cost of manufacture and distribution of the same with an allowance sufficient to prevent the depreciation of the complainant's plant, and also a fair and reasonable profit on the value of the property owned and used by it in its said business, and that they deny that the said order or act in any way contravene- or violate- the provisions of the fourteenth amendment to the Constitution of the United States.

Sixteenth. That these defendants further answering admit that the statements contained in the XVII subdivision of the said bill of complaint as to the provisions of Chapter 712 of the Laws of 1899, of the State of New York, and the assessment thereunder by the State Board of Tax Commissioners are substantially as therein 78 set forth, but they allege that the complainant is contesting the validity of the said assessment and the amount thereof in the courts of the State of New York, and that the said tax is based in large measure upon the power of the company to earn a sum over and above the average rate of income prevailing in the community upon the tangible property owned by it, and that if the complainant shall establish in the said proceeding in the courts of the State of New York, that it cannot earn any amount over and above any reasonable return upon the value of its tangible property, the said assessment must be and will be set aside.

The defendants further allege that as they are informed and believe, the complainant has not contested the said assessment upon the ground that, if it ever had any special franchises, most of them had expired and that the others would soon expire.

They alleged that the taxes assessed against the said complainant and its property, were taken into consideration and due allowance made therefor in fixing the price of gas at eighty cents per thousand cubic feet, but these defendants deny that such special franchises which have been received by the complainant without cost to it from the public can be legally capitalized and the public compelled to pay an additional sum as a return upon the value of such franchises. These defendants deny that Exhibit E attached to the Complaint is a memorandum or opinion of the State Commission of Gas and Electricity which was filed with their order, and these defendants deny that any memorandum or opinion was so filed by the said Commission.

Seventeenth. These defendants further answering, deny that 79 the actual and reasonable cost to the said complainant of manufacturing and distributing gas during the four years prior to 1905 exclusive of any allowance for repairs or for a fair annual return upon the intangible property employed by the complainant in its business, including franchise rights if any but adding thereto an allowance of three cents per thousand cubic feet of gas for contingencies and of 2.62 cents per thousand cubic feet for increased illuminating power averaged about 67 cents per thousand cubic feet; and these defendants deny that the reasonable cost to complainants for manufacturing and distributing gas during the year 1906 will be in excess of seventy cents per thousand cubic feet, but on the contrary thereof allege the truth to be that the said cost will not exceed sixty-two cents per thousand cubic feet, making the due allowances for depreciation and increase in illuminating power, as aforesaid.

Eighteenth. These defendants further answering, deny that the reasonable value of the plant and investment of the complainant employed in the manufacture and distribution of gas is nearly $62,000,000, but on the contrary thereof state the truth to be that the same does not exceed $30,000,000. These defendants deny that the assessed value of the complainant's franchise rights as fixed by the State Board of Tax Commissioners for the purposes of taxation should be added to the value of the complainant's plant for the purpose of estimating a return upon the capital of the complainant engaged in its business, and these defendants deny that the said complainant is possessed of intangible property, which constitutes an integral and important part of its business; the defendants state that the value of connections between the pipes and mains of the complainant and the various buildings throughout the City
80 of New York has been allowed for in the valuation of the complainant's plant, as hereinbefore set forth. These defendants have no knowledge or information of any contracts owned by the complainant in connection with its business. These defendants deny that the organization of the complainant's business and good will and the various other elements of value which are in said bill alleged to have been created and developed by the complainant and its predecessors through intelligent and efficient business management during the past three-quarters of a century and fidelity to their engagement possess the attributes of property, or that the same can be taken into consideration in estimating the capital upon which the complainant is entitled to a return, and these defendants deny that said alleged intangible property possesses very great or any value whatever.

These defendants further allege the fact to be that the conduct by the complainant of its business, and the manipulations of its stock issues, and its successful endeavors to monopolize the lighting industry in the County of New York, have been viewed with disfavor by the public, and that the complainant has no good will of value, but that on the contrary, it owes its custom not to the manner in which it has conducted its business, but to the absence of competition.

These defendants deny that the reasonable profit upon the said investments to which the complainant is entitled and the enjoyment of which is guaranteed to it by the fourteenth amendment to the Constitution of the United States is at least 10% per annum. These defendants deny that the amount of profit to which complainant is entitled is in excess of $8,500,000 per year, and these defendants deny that in order to earn 10% that it will be necessary for the complainants to receive the sum of about 64 cents per thou-
81 sand cubic feet in addition to the actual reasonable cost of manufacturing and distributing gas which is alleged in said bill to be a sum in excess of 70 cents per thousand cubic feet, making a total of $1.34 per thousand cubic feet for gas. These defendants deny that taking all the circumstances of the case and the in-

terests of both the company and of the inhabitants of the City and County of New York, as well as of the defendant, the City of New York, into account, the fair, just and reasonable price for gas in the said city at the date of the said order of February 23rd, 1906, and at the present time, could not possibly be less than $1.00 per thousand cubic feet, on the contrary thereof these defendants allege that the rate of eighty cents per thousand cubic feet fixed by the said Commission and the law of the State of New York as aforesaid will permit a fair, just and reasonable profit to the complainant, and these defendants deny that the said rate of eighty cents per thousand cubic feet will permit a profit of only ten cents per thousand cubic feet to the complainant.

Nineteenth. These defendants deny the allegations contained in the XX subdivision of said bill, that the price of eighty cents per thousand cubic feet fixed by the said Commission by the order aforesaid was not in fact based upon the reasonable cost to the complainant of manufacturing and distributing gas in said City and County, and does not bear any relation to such reasonable cost or to the amount reasonably necessary to be allowed for depreciation, as aforesaid, or to the amount required to furnish a reasonable return to the complainant upon its capital stock, or upon a fair value of the property owned and used by it in its said business; but on the contrary thereof these defendants allege the truth to be that each and every of the aforesaid matters and things taken into consideration
82 by the said Commission in fixing the price aforesaid. And these defendants deny that the same would be an unreasonable and confiscatory rate of compensation for the gas supplied by the complainant.

Twentieth. These defendants further answering, deny that the opinion or statement attached to the Bill of Complaint and marked Exhibit E was rendered by the said Commission in connection with its said order. These defendants further state that the said Commission rendered no opinion and that Exhibit E is a statement made to the public press merely, and does not fully state the grounds of the decision of the Commission. These defendants aver the truth to be that the reasonable value of the property actually employed by the complainant in the manufacture and distribution of gas on October 31st, 1905, did not exceed the sum of $30,000,000 and deny that the reasonable value of said property is in excess of the sum of $86,000,000. These defendants further deny that in determining the value of complainant's plant the said Commission deducted the sum of $2,665,000 as the value of the plant formerly used by the complainants for the manufacture and distribution of gas, which has been taken by the City of New York in condemnation proceedings. These defendants further state that the said Commission did consider eight per cent. a percentage of profit upon the actual value of the property owned and used in the manufacture and distribution of gas reasonable to this complainant and to other manufacturers of gas in the City of New York and in excess of the returns commonly to be obtained upon investments of like character, and these defendants deny that such percentage is unreasonably low, and

83 that if the complainant is limited to such return, it will be deprived of its property without due process of law in violation of the Constitution of the United States.

These defendants further allege that a profit of eight per cent. upon the actual value of property owned and used in the manufacture and distribution of gas after making allowance for all proper outlays, including the necessary repairs and replacements, would be a rate of return to which no just objection could be made on the part of the complainant, and that a price of gas which would result in a much lower rate of profit could not be regarded as unreasonable or confiscatory, nor could an act of the Legislature or any order of the State Commission fixing such a price, be properly regarded as in contravention of any provision of the Constitution of the United States. These defendants further deny that the complainant was entitled to earn any return upon the assessed value of its special franchise rights, as hereinbefore stated.

These defendants further deny that the complainants should be allowed anything for the expenditures for the construction of the plant at Astoria, as is hereinbefore at the tenth subdivision of this answer fully stated.

These defendants allege that the plant at Astoria mentioned in the complaint, is the property of the Astoria Light, Heat and Power Company, a corporation, and that the complainant is merely a stockholder and creditor thereof; that the price fixed by the legislation and order complained of in the bill of complaint, will enable the said Astoria Light, Heat and Power Company, as the defendants are informed and believe, to make a fair profit upon its investment in the business of making and distributing gas.

84 These defendants further answering, deny that the price fixed in said order of February 23rd, 1906, is not a just, fair or reasonable compensation for the use of complainant's property, or a just, fair or reasonable return for the services rendered by the complainant. They further deny that the effect of said order of February 23rd, 1906, will be to reduce the gross income of the complainant below the actual and reasonable cost of manufacturing and distributing gas (including an allowance for depreciation of its plant and a fair profit upon the property owned and used by it in its said business), and they deny that it will prevent the complainant from fulfilling the purposes of its incorporation in performing the duties imposed upon it by the common law and by the statutes of this State, or that it will compel the complainant either to continue in said business without the fair profit to which it is entitled, or to abandon its business without the fair profit to which it is entitled.

Twenty-First. These defendants further answering, deny that Chapter 736 of the Laws of 1905, which fixes the price of gas supplied by the City of New York at 75 cents per thousand cubic feet, and regulates the pressure thereof is unconstitutional and in violation of the fourteenth amendment to the Constitution of the United States; and they allege to the contrary thereof, that by reason of the reserved power in the State of New York of taxation and regulation

of public service corporations, it was competent for the State to prescribe the rates at which complainant should be allowed to deliver gas to the State or any subdivision thereof, and furthermore, these defendants allege that the said price gives to the complainant a fair and reasonable return for the gas furnished and services
85 rendered. These defendants further deny that Chapter 125 of the Laws of 1906 which fixed the price of gas furnished by the complainant to private consumers in the City and County of New York at the rate of eighty cents per thousand cubic feet, by reason of the fact that it does not apply to the municipality of New York is unconstitutional in violation of the fourteenth amendment to the Constitution of the United States. These defendants further deny that the order of the said Commission of Gas and Electricity prescribing the maximum price of eighty cents per thousand cubic feet is without authority of law, or is void, or is in violation of Chapter 736 of the Laws of 1905, or will deprive the complainant of its property without due process of law in violation of the fourteenth amendment to the Constitution of the United States.

The defendants further deny that Chapter 737 of the Laws of 1905, creating the State Commission of Gas and Electricity, is unconstitutional and void, or that it confers no authority upon the said Commission, or that it or any of its provisions is in violation of the Constitution of the State of New York or of the United States.

And these defendants allege that Chapter 737 of the Laws of 1905 of the State of New York, creating the State Commission of Gas and Electricity provides for an investigation and hearing at which the person or corporation complained of shall have an opportunity to be heard and may be represented by counsel. And further that before making such order the complainant had an opportunity to be and was heard by counsel and produced witnesses before the said Commission, and the said Chapter 737 of the Laws of 1905 provides for an appeal to the Appellate Division of the Supreme Court of the State of New York, that the complainant has taken such
86 an appeal to the Appellate Division of the Supreme Court of the State of New York in the First Department, and that said appeal is now pending therein. And that all the matters and things alleged in the XXII subdivision of the said Bill of Complaint wherein it is claimed that said Chapter 737 is in violation of the Constitution of the State of New York are before that court for determination. And these defendants allege that in as much as there is no federal question involved therein, that this Court has not jurisdiction to hear and determine the same. These defendants deny that all or any of said acts and the said order are unconstitutional and in violation of the fourteenth amendment to the Constitution of the United States, as has been hereinbefore fully set forth.

Twenty-second. These defendants further answering, deny that it is a physical impossibility for the complainant to comply with the provisions in the said Statute and order in regard to pressure; but on the contrary thereof allege the same can be complied with by employment of well known methods of distribution and pressure control. These defendants further allege that actions are already pending at law in the Supreme Court of the State of New York in which this question is involved and in which the complainant can obtain full and adequate relief, if it is entitled to any relief in the premises.

These defendants further say that they know not and have not been informed save by the complainant's bill whether the complainant now has upwards of 390,000 customers in the City and County of New York in addition to the said municipality of New York to whom it is daily selling and distributing gas. The defendants admit that the amount of gas so sold and distributed during 87 the year ending October 31st, 1905, exceeded 13,000,000 cubic feet. They deny that a large proportion of complainant's customers are people of small means who are financially irresponsible or that unless the Court shall grant a preliminary injunction herein the complainant will be irreparably damaged. And these defendants further answering, aver that by Section 66 of Chapter 566 of the Laws of 1890 of the State of New York, known as the Transportation Corporations Law, it is provided that every gas light corporation may require every person to which such corporation shall supply gas for lighting any building, room or premises to deposit with such corporation a reasonable sum of money according to the number and size of lights used or required, or proposed to be used for two calendar months by such person, and the quantity of gas necessary to supply the same, as security for the payment for gas consumed during such period and that the complainant has exacted such deposit from all persons whom it had any reason to suppose to be irresponsible or about whom it had no information and now has in its possession a large sum of money, that said deposit on October 31st, 1905, amounted to $904,000, and is now believed to be a much larger amount, so deposited under agreements that the same is deposited as security for payment of bills rendered or to be rendered for gas supplied, and that the said sum now in possession of the complainant is sufficient to cover the 20% reduction provided by law on the bills of such persons for the next ten months.

Twenty-third. The defendants deny that if the said eighty cent gas rate should be enforced, or if the defendant Mayer, the Attorney General, or the defendant Jerome, the District Attorney, should begin prosecutions against the complainant for failure to 88 comply with the eighty cent rate, or if the defendants Gunnison, Davies and Shedden, constituting the Commission of Gas and Electricity, should institute mandamus proceedings to compel the enforcement of said rate in the event of the affirmance of the order of the said Commission by the Courts of the State of New York, that the complainant would necessarily be subjected to a multiplicity of suits. The defendants allege that the failure of the defendants Mayer and Jerome to begin prosecutions against the complainant, or the failure of the said Commissioners to institute mandamus proceedings, will not affect the rights or defences of consumers of gas, nor in the event that it be established that the enactments of the Legislature of the State of New York complained

of in the Bill of Complaint and the acts of the Commission pursuant thereto, are valid, will the complainant by reason of this suit or of any order herein, be excused from any penalty for which the complainant shall become liable by reason of its disobedience to the said laws of said order. The defendants deny that the said act and order fixing the said eighty cent gas rate or the enforcement thereof, now or hereafter, or the prosecution of any suits for penalties for the violation thereof, will cause to the complainant irreparable damage, or will deprive it of any assets, franchise or property, or of the equal protection of the laws in violation of any provision of the Constitution of the United States; and the defendants allege that if the plaintiff complies with the said rate of eighty cents, as prescribed in said legislation and order complained of, reserving to itself the right to make a further charge in the event that the said act shall be held to be void, it will not become liable to any of the said penalties, nor will any of the conditions arise that have been
set forth in subdivisions XXIV and XXV of said Bill of
89 Complaint, and if the complainant shall succeed in this suit,
it will not be subjected to any substantial loss, inasmuch as it will be able to recover the additional twenty cents per thousand cubic feet from its responsible customers, and will be able to deduct this amount from the deposits made as aforesaid by those whom it may deem irresponsible.

Twenty-fourth. That these defendants deny that the operation of the said order and statutes would cause the complainant to suffer irretrievable loss for the reasons set forth, and that these defendants deny that there is no remedy except in equity to test adequately and completely the said acts and order, and that in the absence of such remedy in equity the penalties provided in said acts and order would be unreasonable and confiscatory and would deprive the complainant of its liberty of contract and of its property without due process of law and without just compensation, and would likewise deny to it the equal protection of the laws in contravention of the fourteenth amendment to the Constitution of the United States. And these defendants further answering, say that there is no statement of fact in the said XXV subdivision of said Bill that these defendants are required to answer.

Twenty-fifth. And this- defendant- submits to this Honorable Court that all and every of the matters in said complainant's bill mentioned and complained of are matters which may be tried and determined at law, and with respect to which the said complainant is not entitled to any relief from a court of equity, and these defendants hope that they shall have the same benefit of this defense as if they had demurred to the complainant's Bill.

Twenty-sixth. And the defendants further aver that the bill herein directed is against the defendants as officers of the State of New
York; that it is in substance and reality a suit against the
90 State of New York; and that this Court has no jurisdiction
thereof.

Twenty-seventh. And these defendants deny all unlawful combination and confederacy in the said bill charged, without that, that any other matter or thing material or necessary for these defendants to make answer unto, and not herein or hereby, well and sufficiently answered unto, confessed or invited, traversed or denied is true to the knowledge or belief of these defendants. All which matters and things these defendants are ready to aver maintain and prove as this honorable Court shall direct; and hereby pray to be hence dismissed with their reasonable costs and charges in that behalf most wrongfully sustained.

JULIUS M. MAYER,
Attorney General of the State of New York.
WILLIAM TRAVERS JEROME,
District Attorney of the County of New York.
FREDERIC E. GUNNISON,
JOHN C. DAVIES AND
LUCIAN L. SHEDDEN,
Commission of Gas and Electricity of the State of New York, Defendants.

JULIUS M. MAYER,
Attorney General, Solicitor for Defendants Mayer, Gunnison, Davis and Shedden.
ROBERT C. TAYLOR,
Assistant District Attorney,
Solicitor for Defendant Jerome.
CHARLES E. HUGHES,
ALFRED R. PAGE,
HOWARD S. GANS,
Of Counsel.

91 UNITED STATES OF AMERICA,
Southern District of New York, County of New York, ss:

Julius M. Mayer, being duly sworn, says that he is the Attorney General of the State of New York, one of the defendants named in the Bill of Complaint herein, that he has read the foregoing answer and that the same is true to his own knowledge, except as to the matters therein stated to be alleged on information and belief, and as to those matters he believes it to be true.

JULIUS M. MAYER.

Sworn to before me this 4th day of June, 1906.
[SEAL.] WALTER G. MERRITT,
Notary Public, N. Y. Co.

UNITED STATES OF AMERICA,
Southern District of New York, County of New York, ss:

Julius M. Mayer, being duly sworn, deposes and says: That he lives at 375 West 123rd Street, in the City of New York, County of New York, and that his office is at 27 William Street, in said County; that he is an attorney and counsellor at law of the State of New York, duly admitted to practice in the Circuit Court of the United States of America for the Southern District of New York, and is Attorney General of the State of New York, and is solicitor for the defendants

Frederic E. Gunnison, John C. Davies and Lucien L. Shedden, sued as constituting the New York State Commission of Gas and Electricity; that he has read the foregoing answer and knows the contents thereof, and that the same is true to the knowledge of
92 deponent, except as to the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true.

Deponent further says that the reason why this verification is made by deponent and not by said defendants or one of them is that no one of said defendants is in the said County of New York.

JULIUS M. MAYER.

Subscribed and sworn to before me this 4th day of June, 1906.
[SEAL.] WALTER G. MERRITT,
Notary Public, N. Y. County.

UNITED STATES OF AMERICA,
Southern District of New York, County of New York, ss:

Robert C. Taylor, being duly sworn, deposes and says: That he resides at 13 Central Park, West, in the City of New York, County of New York; that his office is in the Criminal Courts Building, in said County, and that he is an attorney and counsellor at law of the State of New York, duly admitted to practice in the Circuit Court of the United States for the Southern District of New York and is solicitor for the defendant William Travers Jerome, sued as District Attorney; that he has read the foregoing answer and knows the contents thereof, and that the same is true to the personal knowledge of deponent, except as to the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true.

Deponent further states that, as to all matters therein stated
93 upon information and belief, the sources of his information and the grounds for his belief are conversations with Julius M. Mayer, Attorney General and Alfred R. Page, general knowledge of the investigation of the Committee of the Legislature known as the Stevens' Committee and of the pleadings and affidavits herein.

Deponent further says that the reason why this verification is made by deponent and not by said defendant William Travers Jerome is that said defendant is not within the said County of New York.

ROBERT C. TAYLOR.

Subscribed and sworn to before me this 4th day of June, 1906.
[SEAL.] JOHN J. SMITH, [SEAL.]
Notary Public, N. Y. Co.

94 Endorsed: Circuit Court of the United States, Southern District of New York. Consolidated Gas Company of New York, Complainant, again Julius M. Mayer, as Attorney-General of the State of New York, William Travers Jerome, as District Attorney of New York County, Frederic E. Gunnison, John C. Davies and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, and the City of New York, Defendants. In

Equity. Answer. Julius M. Mayer, Attorney General of the State of N. Y. Solicitor for Defendants Mayer and Gunnison, Davies & Sheddon, as the Commission of Gas and Electricity. Robert C. Taylor, Solicitor for Wm. Travers Jerome, as District Attorney. U. S. Circuit Court, Southern District of N. Y. Filed June 4—1906, John A. Shields, Clerk.

95 *Answer of Defendant, The City of New York.*

Circuit Court of the United States, Southern District of New York.
In Equity.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney-General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

To the Honorable the Judges of the Circuit Court of the United States for the Southern District of New York:

The answer of The City of New York, one of the above-named defendants, to the Bill of Complaint of the Consolidated Gas Company of New York.

96 The said defendant, The City of New York, now and at all times hereafter saving to itself all and all manner of benefit of exception or otherwise that can or may be had or taken to the many errors, uncertainties and imperfections in the said bill contained, for answer thereto or to so much thereof as this defendant is advised it is material or necessary for it to make answer to, answering on information and belief:

I.

Denies the allegations contained in the paragraph or subdivision of the Bill of Complaint numbered "I."; and furthermore alleges that the said Consolidated Gas Company of New York is not and never was a corporation organized as alleged in the said paragraph "I."; and further, that the companies alleged in said paragraph "I." to have been consolidated were not, at or before said consolidation, as alleged, duly organized and existing under the laws of the State of New York, with property, powers and franchises as alleged in said paragraph "I."

II.

Admits that the said Consolidated Gas Company of New York has, through its constituent companies, for a number of years past been engaged in the manufacture and distribution of gas, and for that purpose has maintained and operated pipes, mains and conductors in the streets, highways and public places in the City and County of New York, and that there are a number of electric light companies engaged in distributing electric light to the inhabitants of The City of New York; and denies each and every other allegation in said paragraph or subdivision of said Bill of Complaint numbered "II." And furthermore alleges that the said Consolidated Gas Company did not become the owner of the various franchises or consents of its said predecessor companies, as alleged in said paragraph "II." 97 And furthermore that it did not become the owner or entitled to maintain and operate the mains, pipes and conductors theretofore laid in the various streets, highways and public places in the said City and County of New York by said predecessor companies and that it has not laid additional mains, pipe and conductors in said City and County of New York with the consent of the municipal authorities of said City.

III.

Denies that the said Consolidated Gas Company of New York has duly complied with all the requirements of the said several statutes referred to in the "III" paragraph or sub-division of said Bill of Complaint.

IV.

Admits the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "IV."

V.

Admits the allegations contained in the paragraph or subdivision of said Bill of Complaint numbered "V."

VI.

Admits that the defendant, The City of New York is — domestic municipal corporation organized and existing under the Laws of the State of New York and situated in the Southern District of New York, and that the said City of New York has for years last past been a customer of the said Consolidated Gas Company of New York, and that the amount of gas consumed by the said City during the year 1905, was nearly 400,000,000 cubic feet, and denies any knowledge or information sufficient to form a belief as to the other allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "VI."

98 VII.

Admits the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "VII."

VIII.

Admits that the order made by the Commission of Gas and Electricity of the State of New York on or about February 23, 1906, a copy of which is annexed to the Bill of Complaint marked Exhibit

"C," requires a reduction of twenty cents per thousand cubic feet from the price of one dollar per thousand cubic feet charged by the said Consolidated Gas Company of New York, pursuant to chapter 385 of the Laws of 1897, by which the maximum price of gas in The City of New York was fixed for the year 1901 and subsequently at $1 per 1,000 cubic feet, denies that said price of $1 per thousand cubic feet is a reasonable price; and denies any knowledge or information sufficient to form a belief as to the other allegations contained in the paragraph or subdivision of said Bill of Complaint numbered "VIII."

IX.

Admits the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "IX."

X.

Admits that the Consolidated Gas Company of New York was incorporated pursuant to chapter 367 of the Laws of 1884 of the State of New York, and refers to said statute for greater particularity; and alleges on information and belief that at the time of the commencement of this action the orator was not and never has been a corporation duly incorporated for the manufacture and sale of gas in the City and County of New York; and denies the other
99 allegations contained in the paragraph or sub-division of said
Bill of Complaint numbered "X."

XI.

Admits that the said Consolidated Gas Company of New York controls plants consisting of real estate, buildings, machinery, pipes and other apparatus in good order and repair, suitable and actually used for the purpose of manufacturing and distributing gas in the City and County of New York; and denies the other allegations contained in the paragraph or subdivision of said Bill of Complaint numbered "XI."

XII.

Admits that the price charged by the said Consolidated Gas Company of New York, has been gradually reduced from $2.25 per thousand cubic feet in 1884 to $1.00 per thousand cubic feet in 1901, and denies that "the said price of $1.00 per thousand cubic feet is relatively as low a price as the prices charged in any other city or town in the said State, or elsewhere in the eastern part of the United States, and is as low as business prudence would have justified your orator in adopting and charging," as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XII."

Denies any knowledge or information sufficient to form a belief as to the other allegations contained in said paragraph or sub-division of said Bill of Complaint.

XIII.

Denies any knowledge or information sufficient to form a belief as to the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XIII."

XIV.

Denies any knowledge or information sufficient to form a belief
as to the allegations contained in the paragraph or sub-
100 division of said Bill of Complaint numbered "XIV."

XV.

Admits that "By chapter 737 of the Laws of 1905, hereinbefore referred to, it is provided that stock or bonds shall not be issued by any gas corporation until the Commission of Gas and Electricity shall certify in writing as to the amount of stock or bonds reasonably required for the purposes of the corporation," and denies any knowledge or information sufficient to form a belief as to the other allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XV."

XVI.

Admits that under and by virtue of the Constitution of the United States, and particularly of the Fourteenth Amendment thereto, the Consolidated Gas Company of New York is entitled to charge a price for its gas sufficient to cover the fair and reasonable cost of manufacturing and distributing the same, with a reasonable profit thereon; and denies all the other allegations contained in the paragraph or subdivision of said Bill of Complaint numbered "XVI."

XVII.

Admits that "By chapter 712 of the Laws of 1899, the State Board of Tax Commissioners was created, to determine the valuation of special franchises subject to assessment in each city, town or tax district, and refers to the said statute for greater particularity.

Denies any knowledge or information sufficient to form a belief as to the other allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XVII."

XVIII.

Denies that the actual and reasonable cost to the said Consolidated
Gas Company of New York of manufacturing and dis-
101 tributing gas during the four years prior to 1905 averaged
about 67 cents per 1,000 cubic feet.

Denies that the reasonable cost to the said Consolidated Gas Company of New York for manufacturing and distributing gas during the year 1906 "will be in excess of seventy cents per thousand cubic feet, such figures being due to the actual and reasonable cost to the said Gas Company of the coal, naphtha, pipe and other materials necessary for the manufacturing and distribution of the said consolidated Gas Company of New York's gas, the cost of which has increased owing to the increase of the amount of taxes which must be paid by the said Gas Company and to the increase in the standard of illuminating power required by law," as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XVIII."

Denies any knowledge or information sufficient to form a belief as to the other allegations contained in said paragraph or subdivision of said Bill of Complaint.

XIX.

Denies that "the reasonable profit upon the said investments to which your orator is entitled, and the enjoyment of which is guaranteed to it as hereinbefore stated by the Fourteenth Amendment to the Constitution of the United States, is at least ten per cent. per annum," as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XIX."

Denies that "a fair, just and reasonable price for gas in the said City at the date of the order of February 23, 1906, and at the present time, could not possibly be less than $1.00 per thousand cubic feet; that the said rate of 80 cents per thousand cubic, fixed by said Commission as aforesaid, will permit a profit of only 10 cents per
102 thousand cubic feet to your orator," as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XIX."

Denies the other allegations contained in the said paragraph or sub-division of said Bill of Complaint.

XX.

Denies any knowledge or information sufficient to form a belief as to the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XX."

XXI.

Admits that the exhibit marked "E," annexed to the Bill of Complaint, is a true copy of the opinion or statement rendered by the said Commission in connection with its said order, as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XXI." and refers to the same for greater particularity.

Denies any knowledge or information sufficient to form a belief as to the other allegations contained in the paragraph or sub-division of said complaint numbered "XXI," except the allegation in words following:

"The price fixed in the said order of February 23, 1906, is not a just, fair or reasonable compensation for the use of your orator's property, or a just, fair or reasonable return for the services rendered by your orator, and the effect of the said order of February 23, 1906, will be to reduce the gross income of your orator below the actual and reasonable cost of manufacturing and distributing gas, including an allowance for depreciation of its plant and a fair profit upon its capital stock or upon the property owned and used by it in its said business, to prevent your orator from fulfilling the purposes of its incorporation and from performing the duties 103 imposed upon it by the common law and by the statutes of this State hereinbefore referred to, and to compel your orator either to continue in said business without the fair profit to which it is entitled, or to abandon its business altogether and to sacrifice its said plants for a small fraction of their cost and present value,"

which allegation this defendant denies.

XXII.

Denies the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XXII."

XXIII.

Admits that the defendant, The City of New York, has brought actions against the Consolidated Gas Company of New York to recover the penalties prescribed by chapter 736 of the Laws of 1905 for violations of the provisions thereof in regard to pressure, and the amount which it claims to recover in the said actions already aggregates the sum of $46,000, and that it intends to bring other actions of the same nature against the said gas company.

Denies any knowledge or information sufficient to form a belief as to the other allegations contained the paragraph or sub-division of said Bill of Complaint numbered "XXIII."

XXIV.

Denies any knowledge or information sufficient to form a belief as to the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XXIV."

104 XXV.

Denies that "the penalties provided in said acts and order would be unreasonable and confiscatory and would deprive your orator of its liberty of contract and of its property without due process of law and without just compensation, and would likewise deny to it the equal protection of the laws, in contravention of the Fourteenth Amendment to the Constitution of the United States," as alleged in the paragraph or sub-division of said Bill of Complaint numbered "XXV."

Denies any knowledge or information sufficient to form a belief as to the other allegations contained in said paragraph or subdivision of said Bill of Complaint.

XXVI.

Denies any knowledge or information sufficient to form a belief as to the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XXVI." Except that it admits the amount involved in this suit is more than $2,000.

XXVII.

Denies any knowledge or information sufficient to form a belief as to the allegations contained in the paragraph or sub-division of said Bill of Complaint numbered "XXVII."

XXVIIA.

Denies each and every allegation in the Complaint contained not hereinbefore specifically admitted, controverted or denied.

XXVIII.

For a first separate and distinct defense to the Bill of Complaint of the said Consolidated Gas Company of New York, the defendant shows and alleges, on information and belief, that heretofore
105 and before the passage of the said acts, fixing the price of gas to The City of New York at seventy-five cents and to the inhabitants thereof at eighty cents, and the order made by the said Commission of Gas and Electricity, fixing the price of gas to the inhabitants of The City of New York at eighty cents, a fair and impartial investigation was made by and through the Legislature of the State of New York and the said Commission of Gas and Electricity into the business and affairs of the said Consolidated Gas Company for the purpose of ascertaining what was the actual cost to said Consolidated Gas Company of the manufacture and distribution of gas in the territory in which said Company was engaged in business and what was a fair and reasonable profit thereon. That full and ample opportunity was afforded said Company on each occasion to present all the facts it desired in connection therewith and said Company on each occasion availed itself of such opportunity so presented. That all the facts presented at said investigation by said Company were duly considered and that the actions taken by the Legislature and the said Commission, in view of these facts, thus ascertained, were just and reasonable and such as to enable the said Gas Company to maintain its existence, to preserve its property from destruction or confiscation and to receive on its capital actually and *bona fide* invested in its plants a fair and reasonable remuneration or dividend.

XXIX.

That full, fair and comprehensive examinations and investigations were made into the business and affairs of said Company under the Act of the Legislature of the State of New York passed in 1885, and again in 1886, and again in 1905, and by the said Commission of Gas and Electricity in the years of 1905 and 1906, and defendant prays leave to refer to and use the testimony offered on behalf
106 of said Gas Company and the reports made thereon as to the result of such investigations and examinations on the trial of this action.

That annexed hereto and made part of this answer is a copy of the report of the joint committee of the Senate and Assembly of the State of New York, dated Albany, N. Y., April 29, 1905. Senate D.

XXX.

Defendant further alleges that it is the largest consumer of gas supplied by said Consolidated Gas Company, and that by an examination made on behalf of the said defendant The City of New York of the books of the said Consolidated Gas Company and a true and correct inventory of all its plants and property, made by competent accountants and engineers—for permission to make which accounting, examination and inventory this defendant intends to apply to this Honorable Court—it will conclusively appear that the price of gas to The City of New York, fixed by statute at seventy-five cents per thousand cubic feet, is far more than sufficient to repay to the said *New York Mutual* Gas *Light* Company a fair and reasonable profit upon the cost of manufacture and distribution of gas to the said defendant The City of New York.

XXXI.

For a second separate and distinct defense the defendant shows and alleges, on information and belief, that said Consolidated Gas Company owns or controls every corporation, with one unimportant exception, to wit, The Bronx Gas & Electricity Company, engaged in manufacturing and supplying gas or electricity for illuminating purposes, or distributing the same in the Boroughs of Manhattan and The Bronx, in The City of New York, said gas and Electricity being commodities of common use for lighting and other purposes, and that said plaintiff corporation was formed for the purpose
107 of regulating and controlling and does regulate and control
as a monopoly the price of gas and electricity in the Boroughs of Manhattan and The Bronx in The City of New York, and that said plaintiff was further organized to and does prevent competition in the manufacture, sale and distribution of gas and electricity for lighting and other purposes in said Boroughs of Manhattan and The Bronx, and said ownership and control by plaintiff of all the said other corporations, created and was for the purpose of creating, establishing and maintaining a monopoly within this State, to wit, in the Boroughs of Manhattan and The Bronx, in The City of New York, to control the prices, manufacture, production and sale of gas and electricity for lighting and other purposes in the said Boroughs of Manhattan and The Bronx, and such consolidation and control of said companies, was and is, by reason thereof, against public policy, illegal and void, and the agreement or agreements under which such consolidation of said companies has been effected are against public policy, illegal and void, under the provisions of chapter 690, Laws of 1899, of the State of New York.

That the said Consolidated Gas Company is a monopoly, and in consequence there is no standard or market price or value for either gas or electricity in the Boroughs of Manhattan and The Bronx, in The City of New York, and that the only manner in which such market value can be ascertained is through an examination and inspection of its books and an inventory of its property to determine the actual cost of production and distribution of the gas supplied by it, and adding thereto a sum sufficient to return a fair and reasonable profit upon the money actually invested in the business with due regard to the hazard involved.

XXXII.

108 That the plaintiff, as a public, or quasi-public, service corporation, was and is bound to furnish light and lighting service to defendant, and is entitled to recover only the fair value of the same.

For a third separate and distinct defense the defendant shows and alleges on information and belief that at the time of the commencement of this action the plaintiff was not and never has been a corporation duly incorporated for the purpose of manufacture and sale of gas in the City and County of New York. And furthermore alleges that the New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company of the City of New York, the Municipal Gas Light Company of the City of New York, the Knickerbocker Gas Light Company, and the Harlem Gas Light Company, were not corporations duly organized and existing under the laws of the State of New York, with powers, property and franchises as alleged in said paragraph "I." of the Bill of Complaint at, prior to or since the time of the consolidation as alleged in said paragraph "I." And defendant further alleges that said Consolidated Gas Company did not become the owner of the franchises or consents of its predecessor companies to lay, maintain and operate mains, pipes and conductors as alleged in paragraph "II." of the Bill of Complaint; that it does not become the owner or entitled to maintain and operate the mains, pipes and conductors theretofore laid by said predecessor companies, as alleged in said paragraph "II."; that it did not lay additional mains, pipes and conductors in The City of New York with the consent of the municipal authorities of said city, as alleged in said paragraph "II."

That the said Consolidated Gas Company of New York has not, as appears by its said Bill of Complaint, made out any title to the relief thereby prayed.

109 Wherefore, this defendant having fully answered, confessed, traversed and avoided or denied all the matters in the said Bill of Complaint material to be answered, according to its best knowledge and belief, humbly prays this Honorable Court to enter its judgment that this defendant be hence dismissed with its reasonable costs and charges in this behalf most wrongfully sustained, and for such further and other relief in the premises as

to this Honorable Court may seem meet and in accordance with equity.

Dated New York, June —, 1906.

JOHN J. DELANY,
Corporation Counsel, Solicitor for the Defendant,
The City of New York.

Office and Post-office Address, No. 2 Tryon Row, New York City.

WILLIAM P. BURR,
Of Counsel.

STATE OF NEW YORK, *County of New York, ss:*

John J. Delany, Corporation Counsel of The City of New York, and an officer of the Defendant in the above-entitled action, being duly sworn, says: That the foregoing answer is true to his knowledge, except as to the matters therein stated to be alleged upon information and belief, and as to those matters he believes it to be true. Deponent further says that the reason why this verification is not made by the Defendant is that it is a corporation; that this deponent is an officer of the same, to wit, Corporation Counsel, and that the grounds of his belief as to all matters not therein stated upon his knowledge are as follows: Information obtained from the books and records of the Department of Finance, or of other depart-
110 ments of the City government, or from statements made to him by certain officers or agents of the Defendant.

JOHN J. DELANY,
Corporation Counsel.

Sworn to before me this 4th day of June, 1906.

THOMAS F. NOONAN,
Notary Public, New York County.

111 & 112

EXHIBIT "A."

Report of the Joint Committee of the Senate and Assembly of the State of New York.

April, 1905.

New York:
Martin B. Brown Company, Printers and Stationers,
Nos. 49 to 57 Park Place.
1905.

113 *Report of the Joint Committee of the Senate and Assembly of the State of New York.*

To the Senate and Assembly:

The Joint Committee of the Senate and Assembly appointed pursuant to Joint Resolution adopted March 16, 1905, submits the following report:

The Resolution directed the Committee "To proceed to investigate and examine into the organization and operation of the Gas and Electric Lighting Companies: the reasonableness of the charges maintained by the Gas and Electric Lighting Companies operating in The City of New York for services rendered the city and its inhabitants with reference to the cost of service and the actual capital employed therein: the condition in which the business of the companies is conducted with reference to competition: the quality of the service: the circumstances connected with the negotiation and execution of the city light contracts of 1904: and any other phase of the Gas and Electric Lighting business as they are conducted in The City of New York, deemed by the Committee to be germane to the purposes of such investigation"; and to report "the result of their investigation with such remedial measures as it may deem proper."

113*a* From the evidence taken by the Committee the following facts are deemed to be established:

Boroughs of Manhattan and Bronx.

The companies engaged in the manufacture and sale of gas, and in the production and sale of electric current for light, heat and power purposes, in these boroughs, are the following:

Gas Companies:

Consolidated Gas Company of New York.
The New York Mutual Gas Light Company.
The Standard Gas Light Company.
New Amsterdam Gas Company.
Central Union Gas Company.
Northern Union Gas Company.

Electric Companies:

The New York Edison Company.
The United Electric Light and Power Company.
The Brush Electric Illuminating Company.

Gas and Electric Companies:

Westchester Lighting Company.
Bronx Gas and Electric Company.

The following companies are engaged in the business of providing and maintaining conduits for electrical conductors in these boroughs:

Consolidated Telegraph and Electric Subway Company.
Empire City Subway Company.

The Consolidated Gas Company of New York controls all the other Gas and Electric Companies above mentioned, with the unimportant exception of the Bronx Gas and Electric Company. One of the companies so controlled, the New York Edison Company, owns the Consolidated Telegraph and Electrical Subway Company; it also has an interest in the Empire City Subway Company, whose conduits, however, are mainly used for telegraph and telephone conductors.

113*b* Consolidated Gas Company of New York.

History:

The Consolidated Gas Company of New York has an authorized capital of $100,000,000, of which $80,000,000 have been issued. It was organized in November, 1884, under chapter 367 of the Laws of 1884, as a consolidation of the following six gas companies:

New York Gas Light Company, incorporated 1823.
Manhattan Gas Light Company, incorporated 1830.
Metropolitan Gas Light Company, incorporated 1848.
Harlem Gas Light Company, incorporated 1855.
Municipal Gas Light Company, incorporated 1874.
Knickerbocker Gas Light Company, incorporated 1876.

It was intended to embrace in the consolidation the New York Mutual Gas Light Company, the only other company then manufacturing and selling gas in the then City of New York, but this purpose was abandoned apparently on account of the provision of the charter of the Mutual Company, to which reference is hereafter made.

The authorized capital of the Consolidated Gas Company was, at the outset, $39,078,000, of which $35,430,060 was issued for acquisition of the properties and franchises of the constituent companies, subject to certain indebtedness. The remaining $3,647,940 was held in the treasury to provide for the payment of this indebtedness and for other purposes, and was subsequently issued.

In April, 1900, the capital stock was increased to $54,595,200.00 and the increased capital, $15,517,200.00, was used to retire debentures which had been issued for the purchase of the entire stock of the New York Gas and Electric Light, Heat and Power Company, amounting to $36,000,000 in par value. The shares of the New York Gas and Electric Light, Heat and Power Company, as will subsequently appear, were intrinsically worthless, and the evident purpose of their acquisition was to control the electric light industry represented by the merger of interests through which that company had been formed.

113*c* In 1901 the New York Edison Company was formed by the consolidation of the New York Gas and Electric Light, Heat and Power Company with the Edison Electric Illuminating Company, and its capital stock to the amount of $45,041,000, out of a total issue of $45,051,000 was taken by the Consolidated Gas Company in exchange for its shares of the New York Gas and Electric Light, Heat and Power Company, and stands upon its books at a valuation of $18,202,969.63.

In July, 1900, the capital stock of the Consolidated Gas Company was further increased to $80,000,000. Of the new shares, $3,773,600 in par value were issued to retire debentures made in the purchase of shares of the New Amsterdam Gas Company. Of the remaining ($21,631,200 in par value), $900,000 were sold at 193⅜, and the residue, $20,731,000 in par value, were sold to stockholders at 150, the proceeds aggregating $32,837,175. These moneys were used in the purchase of securities of other companies and in the repayment of loans.

In July, 1904, authority was obtained for the increase of the capital stock to $100,000,000. The additional shares have not been issued, but 6 per cent. debentures have been issued and taken by the stockholders to the amount of $19,857,600, which are convertible into stock of the company at par at the option of the holder.

A portion of the moneys thus obtained was invested by the Consolidated Gas Company in certain securities, which it now owns, as follows:

17,632 shares of the stock out of a total of 34,366 issued shares of the New York Mutual Gas Light Company.

39,344 preferred shares out of a total of 42,957 preferred shares and 46,309 common shares out of a total of 49,857 common shares of the Standard Gas Light Company.

89,775 preferred shares out of a total of 90,000 preferred shares, and 121,095 common shares out of a total of 121,650 common shares of the New Amsterdam Gas Company.

Bonds of the Brush Electric Illuminating Company to the amount of $277,500, substantially all of the stock of that company being held by the United Electric Light and Power Company.

113*d* All the shares (500) of the National Coke and Coal Company, a corporation organized for the purpose of attending to its cartage and sales of coke.

16,398 preferred shares out of a total of 16,495 preferred shares and 36,086 common shares out of a total of 36,971 common shares of the United Electric Light and Power Company. It also holds the obligations of the United Electric Light and Power Company to the amount of $5,781,998.32 in par value.

All the capital stock (5,000 shares) of the Astoria Light, Heat and Power Company and its entire issue of bonds ($375,000) and also its notes for advances made in connection with the construction of a generating gas plant at Astoria, Long Island.

The entire capital stock of the Westchester Lighting Company (25,000 preferred, 100,000 common), which it acquired about July, 1904, by the assumption of the bonded indebtedness, principal and interest, of the New York and Westchester Lighting Company amounting to $12,500,000. It also holds certain obligations of this company.

The following is a statement of the amounts invested in these securities to December 31, 1904, according to the books of the Consolidated Gas Company:

New Amsterdam Gas Company, shares	$4,772,584 66
New York Mutual Gas Light Company, shares	5,328,227 80
Standard Gas Light Company, shares	14,123,519 10
New York Edison Company	18,202,969 63
United Electric Light and Power Company, shares	9,418,951 98
Brush Electric Illuminating Company, bonds	277,500 00
Astoria Light, Heat and Power Company, stock, bonds and notes	3,760,000 00
National Coke and Coal Company, shares	50,000 00
Westchester Lighting Company	4,895 00
Total (to December 31, 1904)	$55,938,648 17

113*e* The moneys realized from the convertible debentures issued in July, 1904, have not all been expended for corporate purposes, but to a large extent have been invested in Government and City bonds, as follows:

United States Government Bonds	$8,008,000 00
City of New York Corporate Stock	3,087,500 00
Total	$11,095,500 00

Large amounts have been loaned to the companies controlled by the Consolidated Gas Company, the loan to the New York Edison Company amounting to $3,000,000, of which $2,900,000 has been advanced since July, 1904.

The following is a comparative condensed balance sheet showing the assets and liabilities of the company as of December 31, 1904, and November 11, 1884, respectively, and the increases and decreases according to the books.

Assets.

	December 31, 1904.	November 11, 1884.	Increase.
Real estate, property, plant and construction	$47,402,617 53	$37,971,419 01	$9,431,198 52
Cash in banks in hand	1,391,137 41	....	1,391,137 41
Accounts and bills receivable	18,223,995 26	824,865 86	17,399,129 40
Material and supplies	653,705 19	436,506 96	217,198 23
Securities, stocks and bonds	55,938,648 17	....	55,938,648 17
Profit and loss	....	62,441 36	*62,441 36
	$123,610,103 56	$39,295,233 19	$84,314,870 37

* Decrease.

113*f* *Liabilities.*

	December 31, 1904.	November 11, 1884.	Increase.
Capital stock.........	$80,000,000 00	$35,430,060 00	$44,569,940 00
" scrip....	....	920 00	*920 00
Bonded debt..........	1,394,000 00	1,836.507 53	*442,507 53
Convertible debentures.................	19,857,600 00	....	19,857,600 00
Bonds and mortgages................	15,000 00	38,676 67	*23,676 67
Consumers' deposits....................	835,482 86	301,162 02	534,320 84
Accounts and bills payable	3,997,997 70	1,687,906 87	2,310,090 73
Insurance fund, etc..................	304,153 93	....	304,153 93
Capital stock premium..............	14,322,217 95	....	14,322,217 95
Profit and loss......	2.883,651 12	.. ..	2,883,651 12
	$123,610,103 56	$39,295,233 19	$84,314,870 37

The details of the investments and securities aggregating $55,938,648.17 have already been given.

The details of the increases in accounts and bills receivable, amounting to $17,399,129.40, are as follows:

Sundry Consumers	$485,804 89	
Sundry Debtors	585,414 00	
Instalment Stove Sales	2,129 00	
Accounts Receivable—Branches......................	7,299 48	
East River Gas Company of Long Island City	496,511 11	
New York Edison Company.......	3,000,000 00	
U. S. Government Bonds..........	8,008,000 00	
City of New York Corporate Stock..	3,087,500 00	
Accrued Interest, viz:		
113*g* New York City Corporate Stock	17,500 00	
New York Edison Company.....	41,124 99	
National City Bank	62,599 44	
Brush Electric Ill'g Co..........	27,500 00	
United Electric Light and Power Company....................	842,166 68	
General Suspense	735,579 81	
		$17,399,129 40

It thus appears that the total amount invested (to December 31, 1904), by the Consolidated Gas Company in securities of other companies controlled by it, including advances made to such companies, is $60,579,654.54, to wit:

Invested in securities, as shown by statement above.	$55,938,648 17
Advanced to East River Gas Company of Long Island City (controlled by New Amsterdam Gas Company)	496,511 11
Advanced to New York Edison Company	3,000,000 00
Advanced to United Electric Light and Power Company	842,166 68
Advanced to Westchester Lighting Company (included in item General Suspense, $735,579.81)	302,328 58
Total	$60,579,654 54

Gas Business:

Apart from the amounts invested in the securities of other companies, the balance of the "Real Estate, Plant, Property and Construction Accounts" as shown by the books of the Consolidated Gas Company on December 31, 1904, was $47,402,617.53. This was the book value at that date of the Real Estate and Plant used in its gas business, including apparatus, holders, mains, services, meters, gas stoves, and franchises, and rights.

113*h* The corresponding items of property on November 11, 1884, showed a book value of $37,971,419.01.

The total issues of stock of the six constituent companies and their indebtedness assumed by the Consolidated Gas Company were as follows:

	Stock.	Indebtedness assumed.
Manhattan Gas Light Company	$4,000,000 00	$590,724 08
New York Gas Light Company	4,000,000 00	131,741 76
Metropolitan Gas Light Company	2,500,000 00	825,763 46
Municipal Gas Light Company	3,000,000 00	402,410 33
Knickerbocker Gas Light Company	1,500,000 00	1,175,271 48
Harlem Gas Light Company	2,000,000 00	289,239 65
	$17,000,000 00	$3,415,150 76

The appraisal of the properties of the constituent companies for the purposes of consolidation was as follows:

114	New York.	Manhattan.	Metropolitan.	Municipal.	Knickerbocker.	Harlem.	Total.
Street mains, valves, etc. .	$950,000	$1,083,000	$971,000	$749,000	$744,000	$720,000	$5,217,000
Meters	215,000	367,000	273,000	158,000	69,000	113,000	1,195,000
Services	127,000	350,000	233,000	103,000	81,000	111,000	1,005,000
Plant	2,874,000	3,623,000	2,044,000	1,804,000	980,000	826,000	12,151,000
Real estate	1,607,000	3,563,000	1,474,000	889,000	480,000	604,000	8,617,000
Bulkheads, piers and water rights	250,000	425,000	300,000	200,000	115,000	100,000	1,390,000
Office buildings	100,000	175,000	....	....	....	50,000	325,000
Office furniture	15,000	20,000	12,000	16,000	2,000	5,000	70,000
Laboratories, photometer rooms, etc.	5,000	5,000	5,000	6,000	1,000	2,000	24,000
	$6,143,000	$9,611,000	$5,312,000	$3,952,000	$2,472,000	$2,531,000	$29,994,000
Rights, franchises, etc....	1,417,000	2,329,000	1,863,000	1,175,000	528,000	469,000	7,781,000
Totals...........	$7,560,000	$11,940,000	$7,175,000	$5,100,000	$3,000,000	$3,000,000	$37,775,000

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115 This appraisal, as of June, 1884, was adjusted so as to cover additions up to November 11, 1884, amounting to $196,419.01, making the total of the property account of the latter date $37,971,419.01, as follows:

	As per schedule, June, 1884.	Additions to Nov. 11, 1884.	Total, Nov. 11, 1884.
Real estate	$10,332,000 00	....	$10,332,000 00
Plant	12,175,000 00	$7,491 41	12,182,491 41
Mains	5,217,000 00	16,962 10	5,233,962 10
Services	1,005,000 00	29,241 41	1,034,241 41
Meters	1,195,000 00	36,753 98	1,231,753 98
Meter cocks and connections	....	11,926 53	11,926 53
Pipes and specials	....	88,398 43	88,398 43
Office furniture and fixtures	70,000 00	....	70,000 00
Horses, wagons and harness	....	1,115 00	1,115 00
Tools and implements	....	3,273 70	3,273 70
Gas stoves	....	1,256 45	1,256 45
Scows			
	$29,994,000 00	$196,419 01	$30,190,419 01
Franchises and rights	7,781,000 00	....	7,781,000 00
	$37,775,000 00	$196,419 01	$37,971,419 01

It appears from the evidence taken by the investigating committee appointed by the Senate by resolution adopted May 15, 1885, that the cost of the properties of the constituent companies as shown by their books, exclusive of franchises, was $20,942,632.85, as follows:

Cost of Property.

Manhattan	$4,872,999 49
New York	4,630,642 03
Metropolitan	5,292,175 35
Municipal	4,092,347 86
116 Knickerbocker	810,481 15
Harlem	1,243,986 97
	$20,942,632 85

But evidence was offered on behalf of the Company to the effect that the fair cost of the real estate and plant necessary to produce and deliver gas in The City of New York was about $1,000,000 for every million of feet produced and distributed daily. Upon this basis the majority of the Committee concluded that a valuation of $29,994,000 was not too high. The majority report upon this point was as follows:

"The question for your committee to examine was, was this capitalization thus obtained more than the fair aggregate value of the property franchises and rights of the constituent companies at the time of the consolidation. The street mains, valves, meters, services, plant, office building, office furniture, laboratories appear to have been appraised at the value of what it would cost to reproduce them at the time of the consolidation, and there is no evidence that any of these items were appraised too high except the evidence of the expert, Mr. Yalden, who finds that they were valued higher than they appear to have been charged as costing in the company's books. As to the value of the real estate, bulkheads, piers and water rights there is a conflict of testimony. It is a difficult question to determine, owing to the various opinions of real estate dealers. It appears from the evidence given by the three presidents of the Equitable, Consolidated and Mutual Companies that it costs for real estate and everything necessary for a capacity to produce and deliver gas in The City of New York about $1,000,000 for every million of feet produced and distributed daily.

"The Consolidated Gas Company can now produce and deliver 28,000,000 cubic feet daily and having a large amount of plant not now in use by the additional expense of $1,000,000 it can produce and deliver thirty-three million feet per day. If the above basis is a correct one then the aggregate value of the real estate and plants of the several companies given at $29,994,000 is not too high."

(Senate Document (86) No. 47, page lxxvi.)

117 From this conclusion Senator John I. Gilbert dissented vigorously, saying, after an examination of the evidence in detail:

"Thus it is indisputable that upon the evidence the fair capital of the combined constituent companies, having regard to their actual and prospective capacities and present output of gas, should stand at less than twenty millions of dollars" (*Ibid.*, page 48).

To the valuation of $29,994,000 covering tangible properties there was added $7,781,000 for franchises and rights. As to this addition the majority of the committee said:

"There certainly seems to be a great injustice to the people in permitting the value of the franchise conferred by the State to form a basis of capitalization for the purpose of organization as a corporation and that the consumers of gas should be required to pay such a price for it as would pay a dividend upon the value of these franchises which are a gift to the people. But it is a fact that the laws of 1884, under which these companies consolidated, expressly authorized this to be done. * * * Thus the question for your committee to decide was this: Was $7,781,000 more than the fair aggregate value of the franchises and rights of these six companies? We are forced to the conclusion that it was not; that the franchises of the New York, Manhattan, Metropolitan and Municipal were worth more than that sum, and if these companies saw fit to give a part of the value of their franchises to the stockholders of the Harlem and Knickerbocker it was matter that interested only the stockholders of those companies (*Ibid.* (77) lxxix).

As to this Senator Gilbert, in his dissenting opinion, said:

"One fictitious item of $7,781,000.

"With no limitation by law on the price of gas, or regulation as to its quality or measurement, the effect of adding arbitrarily $7,781,000, the last scheduled item, to the capitalization of six companies already capitalized excessively for the business they were conducting, is to tax gas consumers for an unrestricted profit on an apparent investment of $7,781,000, when in honest truth that $7,781,000 does not represent one dollar.

"Seven per cent. on this sum is over half a million dollars per
annum. More than four times that amount has already been
118 distributed as dividends and collected by the consolidation
from the gas-paying public of New York.

"This item alone of $7,781,000 is a significant badge. The public wrongs its approval would perpetuate justifies the Legislature in disintegrating the transaction of which it is an essential element" (*Ibid.*, page 46).

This item of $7,781,000 was described by Harrison E. Gawtry, former president of the Consolidated Gas Company, in his testimony before the State Board of Tax Commissioners, as representing the good will of the consolidated companies, the right to exist as a corporation, contracts with the City, etc., the right to make and sell gas and the right to occupy the streets.

The result of the consolidation was that the shareholders of the six companies capitalized the properties which, according to their books, had cost them $20,942,632.85, at $37,971,419.01, without any additional contribution.

Since 1884 the company has expended for replacements $4,663,838.32, and a corresponding amount has been written off for depreciation. There have also been added for betterments $9,431,198.52, which represents the net increase of the plant account according to the books. The actual book cost of the present plant thus appears to be $30,373,831.37, as follows:

Original cost as shown by the books of the constitutent companies (Senate Document (86) 47, page 776)	$20,942,632 85
Increase since 1884, as shown by company's books (Exhibit 387)	9,431,198 52
Total book cost..............................	$30,373,831 37

As to the actual value of this property invested in the gas making business of the company we have its sworn statements to the State Board of Tax Commissioners as of June 30, 1904. Schedule D of this report shows the following assets as of said date:

119	Real Estate and Plant	$19,673,075 42
	Mains and Services	4,261,156 39
Bonds and Obligations of other Companies		8,686,744 70
Stocks of other Companies		46,674,034 27
Material and Supplies		697,014 92
Accounts and Bills Receivable		1,944,968 09
Cash on Hand		1,146,866 87
Unclaimed Dividends		39,052 50
Metropolitan Fund		500 00
Contracts, Rights, etc.		7,781,000 00
Meters, Stoves and other Personal Property		2,667,329 77
	Total	$93,571,742 93

Taking out the items of stocks, bonds and obligations of other companies, accounts and bills, receivable, cash on hand, unclaimed dividends and Metropolitan Fund, the remainder represents the value of the company's plant.

Real Estate and Plant	$19,673,075 42
Mains and Services	4,261,156 39
Material and Supplies	697,014 92
Meters, Stoves, etc.	2,667,329 77
Contracts, Rights, etc.	7,781,000 00
Total	$35,079,576 50

The secretary of the company testified that this was the value of the assets on the basis of cost of reproduction, allowing depreciation. It will be found by reference to Schedule K of the said report, verified by him, that the value of the assets was stated on the basis of the cost of reproduction without allowing depreciation save in the case of property in streets; to wit, mains and services. These mains and services were put at $4,261,156.39 as their present value, allowing depreciation, while their value on the basis of cost of reproduction without allowing depreciation was stated to be $5,613,221.12.

The following is a comparison of the items constituting plant as shown by the books and by the report to the State Board of Tax Commissioners, both as of June 30th, 1904 (Exhibit 390):

120

	Book value.	Value as stated in report.	Difference.
Real estate............	$11,216,479 71	$11,216,479 71	....
Plant.....................	15,755,462 88	8,456,595 71	$7,298,867 17
Mains	7,571,808 83	3,666,531 38*	3,905,277 45
Services..................	1,227,931 86	594,625 01*	633,306 85
Material and supplies.	697,014 92	697,014 92	....
Meters, stoves and other personal property...............	3,630,772 12	2,667,329 77	963,442 35
Franchises and rights.	7,781,000 00	7,781,000 00	....
Total...........	$47,880,470 32	$35,079,576 50	$12,790,893 82

If from the total value of plant as stated in the report to the State Board of Tax Commissioners the item of franchises and rights, $7,781,000, be deducted, there remains as the actual value on the basis of cost of reproduction without depreciation, except in the case of mains and services, $27,298,576.50, as follows:

Total Value of Plant as stated in Report..........	$35,079,576 50
Franchises and rights............................	7,781,000 00
Total Value of Tangible Properties.......	$27,298,576 50

There is no satisfactory evidence that the plant of the company is worth more than this amount, which may fairly be taken as its present actual value.

Good-will, Franchises, etc.:

The fact that the company, by rendering competition impossible, has been able to earn large dividends does not justify it in 121 adding to the value of its plant an additional amount for good-will or earning capacity and thereby justify a continuance of excessive charges. If this were permitted it would be able to secure in perpetuity the maintenance of exorbitant rates. Extortion for a series of years would be the sufficient excuse for further extortion. Indeed, there would seem to be no escape from the conclusion that successful imposition upon the public would warrant increased charges upon the ground of enhanced good-will. The company is entitled to a fair return upon its capital actually invested, but it is not entitled to capitalize its grip upon the public. The fact that it may be proper to value good-will due to efficient

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* Stated in Tax Report under the heading "Present Value allowing for Depreciation." Reproduction value stated as $5,613,221.12 for mains and services made up as follows (detail not given in report):

Mains......................................	$4,829,925 82
Services.....	783,295 30
Total..............................	$5,613,221 12

organization and to the securing of public esteem through good service under ordinary conditions of competition furnishes no reason for an addition to capital in order to maintain high charges of an amount which, while termed good-will, is really an estimate of an earning capacity due to a monopolization of a public service. Upon the facts disclosed by the evidence the Consolidated Gas Company cannot properly claim the right to add to value of its plant upon the score of franchises and rights save as these may be deemed to represent actual property, to wit, rights in the streets duly acquired pursuant to law.

But it is doubtful whether the Consolidated Gas Company has any extensive rights in The City of New York. It appears that no franchise other than the franchise to be a corporation has been granted to the Consolidated Gas Company, and it would seem that several of the grants to the constituent companies have expired or will soon expire.

The grant to the New York Gas Light Company was made May 12, 1823, for thirty years. The grant to the Manhattan Gas Light Company was made May 5, 1848, for twenty years. The grant to the Metropolitan Gas Light Company was made December 22, 1858, for thirty years. The grant to the Municipal Gas Light Company under ordinance of December 23, 1876, apparently will expire in 1907. The grant to the Anthracite Gas Lighting and Heating Company, made September 17, 1863, and claimed by the Knickerbocker
Gas Light Company, apparently will expire in 1913. The
122 grant to the Harlem Gas Light Company, which was incor-
porated in 1855 for a period of fifty years, was made April 25, 1855, and contained no time limitation. The City, however, reserved the right "to purchase at any time from the said company all the materials, pipes, fixtures, buildings and all and singular all the personal and real property owned by said company by paying to said company the cost of the same and ten per cent. over and above said cost." No evidence has been furnished of any other franchise granted to any other constituent company or claimed by the Consolidated Gas Company.

It is not the province of this committee to determine precisely to what extent the Consolidated Gas Company may possess rights in the streets. It is the duty of the municipal officers to take proper steps to prevent an unauthorized encroachment upon public property, and the matter is now under consideration by the Corporation Counsel.

Sufficient facts appear, however, to make it extremely doubtful whether the Consolidated Gas Company has any rights in the streets of considerable value. It has been urged upon the committee that the Senate Committee in 1886, long after several of the grants to constituent companies had lapsed, reported that the franchises of four of the companies were worth more than $7,781,000. It would seem, however, that the Senate Committee referred simply to the good-will of the constituent companies, based upon the large dividends they had previously declared, a matter as to which we have already expressed our opinion. Reliance is also placed upon the fact

that the State Board of Tax Commissioners has assessed the franchises of the Consolidated Gas Company at several millions of dollars. Not only has the Company resisted these assessments, upon the ground that they were without warrant of law, but it is obvious that the State Board of Tax Commissioners could not by their assessment create franchises, and the company has had it in its power by proper proceedings to review the assessments in the courts. For obvious reasons the company has not seen fit to challenge the assessments upon the ground that it had no rights in the streets or that its rights were not as extensive as its mains, and the assessments cannot
123 be regarded as evidence that the company possesses franchises
of value, when the question of the fairness of the charges of the company, in relation to its actual investment, is under consideration. Taking into consideration the original cost of its properties, we have no reason to believe that the company has underestimated their value, and our conclusion, based upon the sworn statements of the officers of the company, is that the fair value of its gas-making plant, including whatever franchises it may own, does not exceed the sum of $30,000,000.

Income and Dividends:

The income of the Consolidated Gas Company from gas sales, securities owned, and miscellaneous sources (including rentals from gas stoves, interest on bank balances, etc.) for the years 1900 to 1904, inclusive, was as follows:

124	1900.	1901.	1902.	1903.	1904.
Gas sales..........................	$8,167,710 82	$10,290,331 90	$11,499,438 88	$12,774,240 18	$13,167,609 70
Income from securities owned (less taxable applicable to same)............	210,693 53	586,868 59	634,607 53	738,806 40	963,514 19
Miscellaneous income......	215,599 64	76,483 16	100,165 33	109,905 87	119,717 55

125 With the exception of the years 1899 and 1900, the Consolidated Gas Company paid dividends at the rate of 8 per cent. per annum from 1894 until December, 1904, when a quarterly dividend was declared of 2½ per cent., or at the rate of 10 per cent. per annum. The dividends for the year 1899 were 5½ per cent. and in 1900 6 per cent. The following is a table of the capital outstanding and the rate of dividends paid for the years 1900 to 1904, inclusive:

Dividend dates.	Capital stock.	Rate. *Pr. ct.*	Dividend paid.
March 15, 1900..........	$39,077,900 00	1	$390,779 00
June 15, 1900............	54,551,900 00	1	545,519 00
September 15, 1900......	54,551,900 00	2	1,091,038 00
December 15, 1900.......	71,593,700 00	2	1,431,874 00
March 15, 1901..........	72,533,900 00	2	1,450,678 00
June 15, 1901............	72,830,200 00	2	1,456,604 00
September 15, 1901......	72,831,100 00	2	1,456,622 00
December 15, 1901.......	72,886,400 00	2	1,457,728 00
March 15, 1902..........	72,891,100 00	2	1,457,822 00

June 15, 1902...........	72,891,800 00	2	1,457,836 00
September 15, 1902......	72,916,400 00	2	1,458,328 00
December 15, 1902.......	72,917,100 00	2	1,458,342 00
March 15, 1903...........	72,917,200 00	2	1,458,344 00
June 15, 1903...........	72,917,200 00	2	1,458,344 00
September 15, 1903......	72,917,600 00	2	1,458,352 00
December 15, 1903.......	79,986,300 00	2	1,599,726 00
March 15, 1904.........	79,998,900 00	2	1,599,978 00
June 15, 1904...........	79,999,600 00	2	1,599,992 00
September 15, 1904......	80,000,000 00	2	1,600,000 00
December 15, 1904.......	80,000,000 00	2½	2,000,000 00

126 In addition to these dividends the stockholders are receiving interest at the rate of 6 per cent. per annum upon $19,857,600 of debentures convertible into the stock of the company at par. It is apparent that these dividends and interest are paid for the most part out of the profits of the gas business. The income from securities owned is slight in comparison with the amount of capital invested in them. Upon a large proportion of the shares of other lighting companies owned by it the Consolidated Gas Company receives no return whatever. The investment in these securities serves the double purpose of preventing competition, on the one hand, and of so enlarging the capital stock, on the other hand, as to disguise in a lower rate of dividends the large amount of profits received from the business of making and selling gas.

Cost of Making Gas:

In the last few years the Consolidated Gas Company has purchased a considerable amount of the gas sold by it from the companies which it controls. The amount of gas made by the Consolidated Gas Company and manufactured for it by other companies in the years 1901 to 1904, inclusive, is as follows:

Gas Manufactured by Consolidated Gas Company.

1901.	1902.	1903.	1904.
9,696,461,000 c. f.	9,899,300,000 c. f.	9,911,434.000 c. f.	8,984,950,000 c. f.

Gas Manufactured for Consolidated Gas Company by New Amsterdam Gas Company.

1901.	1902.	1903.	1904.
672,991,538 c. f.	1,758,139,300 c. f.	2,794,598,600 c. f.	3,487,038,600 c. f.

127 *By Standard Gas Light Company.*

1901.	1902.	1903.	1904.
557.287,582 c. f.	561,049,017 c. f.	517,445,182 c. f.	675,853,790 c. f.

By Mutual Gas Light Company.

1901.	1902.	1903.	1904.
88,012,733 c, f.	135,795,500 c. f.	193,178,400 c. f.	738,324,300 c. f.

By Central Union Gas Company.

1901.	1902.	1903.	1904.
......	......	......	27,258,300 c. f.

This gas was delivered to the Consolidated Gas Company either at its holders or in its mains. The price agreed to be paid therefor was the actual cost of the labor and material entering into its manufacture, plus 10 per cent. thereof for the service rendered. There was an exception to this in the case of the Mutual Gas Light Company in 1901, when the net price was fixed at fifty cents per thousand cubic feet. The rates paid upon this basis per thousand cubic feet of gas purchased were as follows:

Purchased from.	1901.	1902.	1903.	1904.	Average.
New Amsterdam Gas Company	33.17	38.03	34.74	32.88	34.54
Standard Gas Light Company.	35.18	33.82	33.96	32.36	33.51
Mutual Gas Light Company..	50.00	44.10	45.07	40.46	42.39
Central Union Gas Company..	.....	.....	.....	28.0	28.09
Total................	35.15	37.18	35.19	33.92	35.07

128 The cost of the gas made by the Consolidated Gas Company at its holders during the years 1901 to 1904, inclusive, is, according to its books, as follows:

Year.	Quantity.	Cost out of holder.	Rate per 1,000 cu. ft.
1901.............	9,696,461 c. f.	$3,521,619 67	.363
1902.............	9,899,300 c. f.	3,445,229 12	.348
1903.............	9,911,434 c. f.	3,824,806 14	.386
1904.............	8,984,950 c. f.	3,528,901 55	.393
Total.......	38,492,145 c. f.	$14,320,556 48	Avg. .3725

The foregoing cost out of holder includes the actual cost of production, that is to say, labor and materials, and also covers repairs to apparatus, the buildings, and to tools and implements. Replacements of plant are also charged to the cost of production. The cost out of holder does not, however, include the expenses of distribution of the gas or any portion of the general administration.

It is noticeable that the Consolidated Gas Company bought gas cheaper than it made it. Its larger purchases were made from the New Amsterdam Gas Company. In the year 1904 the New Amsterdam Gas Company manufactured for the Consolidated Gas Company 3,487,038,600 cubic feet, or about one-quarter of the entire amount of the gas sold by the latter. The average price of this gas at cost and 10 per cent. was .3288 per 1,000 cubic feet, while the gas made by the Consolidated Gas Company during the same year was produced at a cost out of holder of .393.

Taking the cost of gas made and the cost of gas purchased by the Consolidated Gas Company the total average cost out of holder of all the gas manufactured and purchased is found to be as follows:

129 1901:

Gas Manufactured	9,696,461,000 cf.	at .363
Gas Purchased	1,318,291,673 cf.	at .363
Total	11,014,752,673 cf.	Av. .362

1902:

Gas Manufactured	9,899,300,000 cf.	at .348
Gas Purchased	2,454,983,817 cf.	at .372
Total	12,354,283,817 cf.	Av. .353

1903:

Gas Manufactured	9,911,434,000 cf.	at .386
Gas Purchased	3,505,222,182 cf.	at .35
Total	13,416,656,182 cf.	Av. .377

1904:

Gas Manufactured	8,984,950,000 cf.	at .393
Gas Purchased	4,928,474,990 cf.	at .339
Total	13,913,424,990 cf.	Av. .374

Cost of Distribution.

The following is the cost of distribution, amount of repairs to property, other than that used in manufacture, interest on consumers' deposits, bad debts, replacements of mains, meters, services, etc.:

Year.	Quantity (total mfd. and purchased.)	Cost of distribution.	Rate per 1,000 cf.
1901	$11,014,752,673 cf.	$1,408,258 38	.128
1902	12,354,283,817 cf.	1,605,554 04	.13
1903	13,416,656,182 cf.	1,547,994 59	.1154
1904	13,913,424,990 cf.	1 611,263 18	.1158

130 *General Expenses Not Embraced in Cost of Production and Distribution.*

These include general office expenses, advertising and legal expenses, insurance, taxes, etc., and are as follows:

Year.	Quantity.	Amount.	Rate.
1901	11,014,752,673 cf.	$950,032 28	.086
1902	12,054,283,817 cf.	1,032,691 05	.084
1903	13,416,656,182 cf.	1,272,085 41	.095
1904	13,913,424,990 cf.	1,224,467 07	.088

The foregoing does not include dividends, or interest on funded debt or outstanding debentures.

The total average cost, according to the books of the company, for the manufacture and purchase of gas for the years 1901 to 1904 inclusive is as follows:

Total Cost of Gas Manufactured and Purchased Per 1,000 *C. F.*

Year.	Cost of manufacture.	Cost of distribution.	General expense.	Total.
1901.............	.362	.128	.086	.576
1902.............	.352	.13	.084	.566
1903.............	.377	.115	.095	.587
1904.............	.374	.116	.088	.578
Average for four years	.366	.122	.082	.577

A portion of the gas manufactured and purchased was used by the company and a further portion is unaccounted for owing to losses in distribution, leakage, etc. The rate of cost based upon gas sales is therefore somewhat larger than the rate based upon gas production.

131 The gas sales in the years 1901 to 1904 inclusive were as follows:

Year.	Gas manufactured and purchased.	Gas used by company.	Gas unaccounted for.	Gas sold.
1901....	11,014,752,673 c. f.	70,055,963 c. f.	647,740,949 c. f.	10,296,955,761 c. f.
1902....	12,354,283,817 c. f.	60,460,556 c. f.	798,985,010 c. f.	11,494,838,251 c. f.
1903....	13,416,656,182 c. f.	61,923,306 c. f.	588,187,597 c. f.	12,766,545,279 c. f.
1904....	13,913,424,990 c. f.	64,914,306 c. f.	677,750,504 c. f.	13,170,760,180 c. f.

The following is the cost per thousand cubic feet upon the basis of gas actually sold:

Year.	Gas sold.	Total expenses, exclusive of interest.	Rate per 1,000 c. f.
1901...........................	10,296,955,761 c. f.	$6,338,143 50	.6155
1902...........................	11,494,838,251 c. f.	6,996,143 38	.6086
1903...........................	12,766,545,279 c. f.	7,878,601 88	.6171
1904...........................	13,170,760,180 c. f.	8,036,281 97	.6101

Future Plans:

The Consolidated Gas Company contemplates the abandonment of the generating stations in the Borough of Manhattan, and the substitution therefor of the new generating plant which it is now erecting at Astoria, L. I., through its subsidiary corporation, The Astoria Light, Heat and Power Company. The plant at Astoria is to have a total capacity of 40,000,000 cubic feet per day, or capable of producing a yearly average substantially equivalent to the production of the present plants in Manhattan. There have already been expended for this purpose upwards of $3,000,000, represented by the obligations of the Astoria Company. The plant which will thus be replaced has a book value of approximately $10,000,000. It has been testified that the improvements in apparatus and the economies due to centralization will reduce the cost of gas out of holder to about twenty-nine cents per thousand cubic feet.

132 The New York Mutual Gas Light Company.

History:

This company was incorporated by chapter 651 of the Laws of 1866, with a capital stock of $500,000, which was subsequently increased to $3,500,000, of which $3,436,600 is outstanding.

Section VI. of the Act of Incorporation provided:

"In case the directors of the said corporation hereby created shall consolidate with or transfer the franchise hereby granted to any of the organized gas companies of The City of New York, the director or directors voting for such consolidation or transfer shall be deemed guilty of misdemeanor and upon conviction shall be punished by imprisonment in the penitentiary of said county for a period of not less than six nor more than twelve months."

This provision has been evaded by the purchase by the Consolidated Gas Company in the years 1899 to 1903 of a control of the corporation, that is to say, of a majority of its capital stock amounting in par value to $1,763,200, for which, as already stated, the Consolidated Gas Company paid $5,328,227.80.

The Mutual Company has no funded debt.

Properties:

The company has no interest in the securities of other corporations, and its real estate and manufacturing and distribution plant, at book value, according to the balance sheet of December 31, 1904, amounts to $3,350,522.71, to wit:

Real estate		$882,550 00
Bulkheads	$29,936 52	
Mains	433,893 09	
Services	153,551 46	
Meters	162,986 81	
Tools	8,474 81	
Office furniture	1,280 13	
Gas stoves	8,530 75	
Manufacturing plant	1,618,915 13	
		2,417,568 70
Material and supplies		50,404 01
		$3,350,522 71

133 The company has in the last two years expended out of accumulated earnings upwards of $800,000 for the improvement of its plant which was "worn out, out of date and had outlived its usefulness." And it is contemplated that an expenditure of about

$700,000 to $800,000 will be needed in order to complete the necessary improvements.

The amounts expended for betterments, and written off for depreciation, since 1894, are as follows:

Book value of plant and property Dec. 31st, 1894, as per bal. sheet		$2,094,040 84
Amounts expended on same:		
1895	$98,143 60	
1896	56,357 52	
1897	174,155 59	
1898	127,437 41	
1899	48,580 97	
1900	64,934 36	
1901	27,430 40	
1902	44,148 58	
1903	646,023 67	
1904	296,458 28	
		1,583,670 38
Meters and stoves condemned and lost	$57,810 33	
Holders taken down (8)	309,289 48	
Depreciation	893,042 71	
		1,260,142 52
Book value of plant and property Dec. 31, 1904		$2,417,568 70

Franchises:

On April 30, 1868, a grant was made to the company by the City of permission to "lay pipes for conducting gas through the streets, avenues, lanes, alleys and squares in said city for the period of thirty years." It does not appear that any other grant has been made to the company.

134 Income, Expenses and Dividends:

The Mutual Company sells gas to the Consolidated Gas Company and buys gas from that company, the accounts being adjusted in each case on the basis of cost of labor and materials plus ten per cent. for services. The Mutual Company also sells gas to the New Amsterdam Gas Company and to the Standard Gas Light Company at the rate of $1.00 per thousand cubic feet, permitting an offset of fifty cents for distribution and general services, the net sum received being fifty cents per thousand cubic feet.

The sales to the New Amsterdam Gas Company and the Standard Gas Light Company figure among the total sales of gas, while the sales to the Consolidated Gas Company are treated on the books as a credit on manufacturing account against the general cost of manufacture.

The total amount of gas sold, with the net proceeds realized, exclusive of sales to the Consolidated Gas Company, for the years 1900 to 1904 is as follows:

Year.	Gas sold.	Amount realized.
1900	1,336,778,125 c. f.	$1,105,698 11
1901	1,407,615,800 c. f.	1,361,355 33
1902	1,457,287,000 c. f.	1,445,129 53
1903	1,579,584,700 c. f.	1,559,889 74
1904	1,707,311,700 c. f.	1,680,611 15
	7,488,577,325 c. f.	$7,152,683 86

The company also has a small income from investments of surplus, sundry rentals, etc.

The expenses of the company for the years 1900 to 1904, after crediting the net amount received from the Consolidated Gas
135 Company, exclusive of reserves for depreciation and book value of property dismantled, are as follows:

Year.	Gas sales as above.	Expenses.	Cost per 1,000 c. f. of gas sold.
1900	1,336,778,125 c. f.	$826,205 58	.617
1901	1,407,615,800 c. f.	913,321 39	.648
1902	1,454,287,000 c. f.	1,004,181 92	.690
1903	1,579,584,700 c. f.	1,151,054 35	.728
1904	1,707,311,700 c. f.	1,083,549 65	.634

The following is a statement of the net earnings of the company from gas sales for the years 1900 to 1904, its reserves for depreciation, dividends and net surplus from such earnings as shown by its books:

Year.	Net earnings from gas sales.	Reserved for depreciation.	Rate of dividends.	Amount of dividends.	Net surplus from gas earnings.
1900	$317,211 58	....	6 %	$210,000 00	$107,211 58
1901	485,137 22	$154,206 77	9 %	312,464 00	18,466 45
1902	484,779 39	146,375 90	9 %	309,294 00	29,109 39
1903	455,196 01	108,750 00	9 %	309,294 00	37,152 01
1904	678,358 53	350,630 56	9 %	309,294 00	18,433 97
	$2,420,682 73	$759,963 23		$1,450,346 00	$210,373 40

The total net book surplus on December 31, 1904, after deducting reserves for depreciation and paying dividends, amounted to $646,370.71.

Section IV. of the Act of Incorporation provides:

"Whenever the profits which shall be earned by said com-
136 pany after deducting all expenses and necessary outlays for labor and materials used in carrying on and extending the business of said company shall exceed in any one year the sum of ten per cent. upon the whole capital stock of said company, then, and in that event the excess over the said sum of ten per cent. shall be divided, the one-half of such excess between the consumers of the gas furnished by such company pro-rata according to the amount consumed by them respectively, and the other half shall be paid as a

dividend to such owners and holders of the stock of said company as may be consumers of the gas furnished by said company; provided that no individual holder or owner of said stock shall be entitled or shall receive, nor shall there be paid to him, such dividends upon more than fifty shares of such stock."

No such division as is contemplated by the statute has been made. It appears that the reserves for depreciation have not been fixed with reference to actual loss of value save in the case of certain dismantled holders in the year 1904, but that an amount has been set aside under the guise of reserve for depreciation when otherwise the net earnings of the company would have exceeded ten per cent. of the capital stock. When the earnings permitted a dividend of only six per cent. no such reserve was created. Such reserve has depended not upon the condition of the property but on the amount of profits, and when the latter has exceeded the statutory limit it has been the practice to pay dividends at the rate of nine per cent. and set aside a gross amount for depreciation which was then distributed among the various property accounts. In this way the intention of the act of incorporation has been defeated; the stockholders have received handsome dividends, and, in addition, the plant has been largely re-equipped out of earnings.

Standard Gas Light Company.

History:

This company was incorporated in the year 1886 with a capital of $500,000 which was subsequently increased to $10,000,000 of which there are now issued $9,295,700, consisting of $4,295,700 of preferred stock and $5,000,000 of common stock. $14,300 of common stock is in the treasury.

137 The funded debt of the company is $1,285,000.

By chapter 248 of the Laws of 1886, the company was authorized "to lay conductors and mains for conducting gas through and under all the streets, avenues and squares and public places" of The City of New York. The act then provided as follows:

"And as a consideration therefor the said company shall file in the office of the Comptroller of The City of New York a stipulation or agreement that all the gas supplied through such conductors and mains shall have illuminating power of 25 candles and that no greater price or charge for supplying the same shall be charged or received by said company or its successors, lessees, agents or assigns, than at the rate of $1.50 for each thousand feet of gas; provided, however, that said Standard Gas Light Company shall be subject to the provisions of any general law that may be passed regulating the price of gas in The City of New York. And that said company shall not consolidate or in any way unite with any other gas company in said city or in any way pool its earnings or receipts with any other company or organization organized for the distribution and sale of illuminating gas."

It was further provided that if the company after having filed said stipulation should violate its terms it should be the duty of the Attorney-General to institute proceedings to forfeit its charter.

Pursuant to the act a stipulation was filed with the Comptroller of the City on August 6, 1886. The stipulation did not contain any provision as to consolidation or pooling of earnings.

As has been mentioned above the Consolidated Gas Company has acquired more than nine-tenths of the stock of the company, to wit: $3,934,400 of the preferred stock and $4,630,900 of the common stock in par value.

Properties:

The company has no interest in other companies.

The book value of its real estate, plant, property, franchise and material and supplies is stated in the balance sheet of January 1, 1905, as $10,558,350.30, to wit:

138 Real estate	$1,443,297 82
Plant, Property and Franchises	9,047,794 82
Material and Supplies	67,257 86

The item "Plant, Property and Franchise" ($9,047,794.62) is made up as follows:

Leases and Contracts	$3,795,007 50
Construction Works	1,668,691 93
Construction Street Mains	2,753,397 73
Construction Services	638,141 24
Gas Stoves	49,166 50
Meters	304,435 11
Tools	9,932 92
Cocks and Connections	6,218 44
Furniture and Fixtures	17,149 04
Horses and Carts	5,069 91
Badges	484 30
Service Carts	100 00
Total	$9,247,794 62
Less General Depreciation	200,000 00
	$9,047,794 62

It is not claimed that the item "leases and contracts" ($3,795,007.50) represents any property whatever.

The street mains and services, carried in the books at $2,753,397.73 and $638,141.24, respectively, making a total of $3,391,538.97, are stated in the report of the company to the State Board of Tax Commissioners as of June 30, 1904, to be worth on the basis of cost of reproduction, new, $1,156,577.04, and allowing depreciation as worth $967,432.78. The book value of the plant, property and franchise therefore exceeds the actual value of the property by $3,028,680.93, to wit:

Plant, property and franchise, book value			$9,047,794 62
Deducted in plant account for depreciation			200,000 00
			$9,247,794 62
139 Leases and contracts non-existent, book value		$3,795,007 50	
Mains and services, book value	$3,391,538 97		
Present value on basis of reproduction, new	1,156,517 04	2,234,961 93	$6,029,969 43
Value of plant on basis of reproduction, new			$3,217,825 19
Deduct for depreciation in mains, as shown by report to State Board of Tax Commissioners (difference between $1,156,577.04 and $967,432.78)			189,144 26
Value of plant, allowing depreciation			$3,028,680 93

On this basis the value of the real estate, plant and material and supplies would be as follows:

Real estate (book value)	$1,443,297 82
Plant, allowing depreciation	3,028,680 93
Material and supplies	67,257 86
	$4,539,236 61

Franchises:

The company claims the right to open streets under the provision of chapter 248 of the Laws of 1886, above quoted.

Income, expenses and dividends:

The Standard Company sells gas to the Consolidated Gas Company on the basis of cost of labor and materials plus 10 per cent. for service and credits the amount received against the operating expenses, the gas sold not being included in the total gas sales as shown by its profit and loss account.

140 The total amount of gas sold, with the net proceeds realized, exclusive of sales to the Consolidated Gas Company, for the years 1900 to 1904, are as follows:

Year.	Gas sold.	Amount realized.
1900	1,757,858,421 c. f.	$1,435,036 27
1901	1,756,333,606 c. f.	1,706,998 60
1902	1,856,350,733 c. f.	1,838,906 54
1903	1,987,743,082 c. f.	1,962,158 29
1904	2,042,719,409 c. f.	2,011,126 20

The company receives an additional income of a small amount from rentals, interest, etc.

The expenses of the company for the years 1900 to 1904, after crediting the net amount received from the Consolidated Gas Company, exclusive of interest on funded debt and reserves for depreciation, are as follows:

Year.	Gas sales as above.	Expenses.	Cost per 1,000 c. f. of gas sold.
1900	1,757,858,421 c. f.	$968,570 22	.5516
1901	1,756,333,606 c. f.	939,636 31	.535
1902	1,856,350,733 c. f.	1,048,238 90	.561
1903	1,987,743,082 c. f.	1,044,317 63	.525
1904	2,042,719,409 c. f.	1,051,779 98	.514

The net earnings of the company for these years and its reserves for depreciation, dividends and net surplus are shown below:

141 Year.	Net earnings from gas sales.	Interest on bonds.	Reserved for depreciation.	Rate of dividends.		Amount of dividends.	Net surplus.
				Preferred.	Common.		
1900	$466,466 05	$68,100 00	$31,680 49	2½ per ct.	......	$107,392 50	$259,293 06
1901	767,362 29	68,100 00	9,896 40	6 "	5 per ct.	507,027 00	182,338 89
1902	790,727 64	68,100 00	54,152 59	6 "	6 "	556,884 00	111,591 05
1903	917,840 66	68,100 00	220,590 04	6 "	6 "	556,884 00	72,266 52
1904	959,346 22	63,608 32	200,000 00	6 "	6 "	556,884 00	138,853 90

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142 The total net book surplus on December 31, 1904, after deducting reserves for depreciation and paying dividends, amounted to $1,430,999.86.

New Amsterdam Gas Company.

History:

The New Amsterdam Gas Company was incorporated in 1898, being a consolidation of the following companies:

Equitable Gas Light Company of New York, incorporated in 1882.

New York and East River Gas Company, incorporated in 1893.

New Amsterdam Gas Company, incorporated in 1897.

The Equitable Gas Light Company had a capital stock of $4,000,000 and a funded debt of $3,500,000. It owned plant and mains in the then City of New York and operated under a permission to lay mains and pipes granted December 26, 1882, pursuant to ordinance of December 23, 1876. It was provided that the permission, unless sooner revoked for breach of condition, should continue for thirty years from its date and that the said permission should not be assigned or transferred without the consent of the Mayor, Comptroller and Commissioner of Public Works.

Paragraph 16 provided:

"16. The Equitable Gas Light Company, its successor or successors, shall not make or enter into any combination, arrangement or agreement with any other company or companies in regard to the amount of gas mains to be laid or to the streets in which mains are to be laid, nor in regard to the quantity of illuminating gas to be manufactured or the price for which gas is to be sold, exceeding the prices fixed in these conditions, and in the event of their so doing this permission shall *ipso facto* become null and void."

The New York and East River Gas Company had an authorized capital stock of $1,668,500 preferred and $5,000,000 common stock. Its bonded debt was $5,000,000. It had acquired the entire capital stock of the East River Gas Company of Long Island City, amounting to $1,000,000.

143 The East River Gas Company of Long Island City was incorporated in 1890, and by chapter 338 of the Laws of 1892 was authorized to supply gas and electricity in The City of New York, and for that purpose to lay and maintain conductors, mains and pipes under the streets of The City and also under the East river and across any intervening land belonging to The City of New York or to private persons. The corporation was given the right to "acquire by condemnation or purchase such real property, public or private, or right, interest or easement therein, for the laying and maintaining of its mains, pipes and conductors," as might be necessary in the exercise of the powers conferred. It was required to pay annually into the treasury of The City of New York three per cent. of its gross receipts "for gas furnished by it to private and public buildings in The City of New York through mains laid by it under the streets or avenues of said city." It was expressly

authorized "to supply gas and electricity to any other company or companies engaged in supplying gas or electricity in The City of New York."

Pursuant to this act the East River Gas Company of Long Island City built a tunnel under the East river and also under Blackwell's Island. It does not appear that it acquired any rights for the building of its tunnel either by condemnation proceedings or by agreement or purchase. It seems that certain mains were also laid in The City of New York and a plan for the production and distribution of gas was established in Long Island City.

The East River Gas Company of Long Island City conveyed to the New York and East River Gas Company its real estate and plant in Long Island City, reserving to itself, as it seems, simply its franchise, its mains and tunnel. The New York and East River Gas Company also received as a part of the transaction $1,300,000 in cash. It also acquired the stock of the Central Union Gas Company and 7,400 shares of the stock of the Northern Union Gas Company.

The original New Amsterdam Gas Company had not acquired any property prior to the consolidation.

The funded debt and capital stock of the consolidated company, the present New Amsterdam Company, is as follows:

144 Funded Debt of Constituent Companies, assumed:

New York and East River Gas Company bonds......		$5,000,000
Equitable Gas Light Company, bonds..............		3,500,000
Equitable Gas Light Company, certificates of indebtedness		500,000
Equitable Gas Light Company, purchase money mortgage		100,000
Total..................................		$9,100,000
Bonds, New Amsterdam Gas Company:		
Total issue	$11,000,000	
In treasury	365,000	
		10,635,000
Total funded debt.........................		$19,735,000
Capital Stock:		
Preferred shares, $10,000,000 issued....	$9,000,000	
Common shares, $13,000,00 issued......	12,165,000	
		$21,165,000
Total funded debt and capital stock outstanding.		$31,900,000

This capitalization is greatly in excess of the properties owned by the company. There are, apparently, no records available showing precisely the values of the constituent companies, but it certainly appears that these properties, together with later additions, furnish no adequate consideration for the securities which have been issued.

Included in the property acquired are the following shares of other companies:

New York Carbide and Acetylene Co., par value......	$7,000,000
Central Union Gas Company, par value..............	3,500,000
Northern Union Gas Company, par value............	740,000
East River Gas Co. of L. I. City, par value...........	1,000,000
Total par value............................	$12,240,000

145 The stock of the New York Carbide and Acetylene Company is apparently worthless, and it does not appear that it ever had any substantial value. The Central Union Gas Company and the Northern Union Gas Company have paid no dividends save a small dividend in the year 1902.

In its statement to the Department of Taxes and Assessments of the City of New York, made in March, 1904, for the purpose of revision of assessment, its property is stated as follows:

Total gross assets, including real estate......		$26,138,500
Of above real estate other than franchise.	$3,464,000	
Of above value of franchise (as fixed by State Board of Tax Commissioners)...	4,732,000	
Of above value of personal property, not including good will	17,942,500	
		$26,138,500

In a similar statement made to the same department under date of March 9, 1905, the assets are stated as follows:

Total gross assets including real estate.......		$26,323,927
Of above real estate other than franchise.	$3,414,000	
Of above value of franchise (as fixed by State Board of Tax Commissioners)...	7,280,000	
Of above personal property............	15,629,927	
		26,323,927

In each case the statement was made up in the following manner: From the total book value of the assets was deducted the amount of $15,000,000, arbitrarily stated as the value of the good-will, leaving as a balance in 1904 $26,138,560, and in 1905 $26,323,927. Of the amount stated as the value of personal property in each case, the sum of $12,240,000 is the par value of the shares of other companies. The difference in the total value of personal prop-
146 erty in the two statements of 1904 and 1905, is due to the
increase of the assessment of franchises made by the State

Board of Tax Commissioners, it being the practice of the company to take the assessed value of the real estate and the assessed value of its franchise as fixed by the State Board and arbitrarily treat the remainder of its book assets as the value of its tangible personal property. It is evident that statements prepared in this way, in utter disregard of the obligations assumed in making them, furnish no trustworthy index to the value of the personal property.

We have, however, the total gross assets at book value, after deducting the arbitrary estimate of good-will, as $26,323,927 in January, 1905. If from this amount of assets there is deducted only the par value of the worthless stock of the New York Carbide and Acetylene Company ($7,000,000), there remains only $19,323,927, a sum less than the funded debt of the company. There is little reason to doubt that the property of the New Amsterdam Gas Company is worth very much less than this amount, and the conclusion is irresistible that its stock (held by the Consolidated Gas Company) represents no value whatever. No dividends have ever been paid.

Of these shares, $8,977,500 out of a total $9,000,000 par value of preferred shares issued and $12,109,500 out of a total in par value of $12,165,000 common shares issued are held by the Consolidated Gas Company:

Franchises:

The New Amsterdam Gas Company claims no franchises in the Boroughs of Manhattan and The Bronx other than that granted to the Equitable Gas Light Company for the term and upon the conditions above stated. It is a serious question whether, without the consent of the City authorities, the franchise of the latter company could be transferred by consolidation to the New Amsterdam Gas Company, but assuming the franchise to have been lawfully transferred, the further question is presented whether the present relations between the New Amsterdam Gas Company and the Consolidated Gas Company do not constitute a breach of the conditions of the franchise, rendering it subject to forfeiture. 147

The New Amsterdam Gas Company, however, controls the East River Gas Company of Long Island City, which still holds the franchise granted by the Act of 1892.

Since the consolidation it seems that no serious effort has been made to operate separately the mains in the Borough of Manhattan of the East River Gas Company of Long Island City, and the amount payable to The City of New York under the Act of 1892 has been arbitrarily determined by reference to a percentage of business bases upon conditions immediately prior to the consolidation. It seems that a recommendation of the Corporation Counsel, made some years ago, that an action should be brought for the purpose of ascertaining the amount justly payable to the City, has not been acted upon and no steps have been taken to ascertain whether the provisions of the Act of 1892 have been duly complied with. It may also be doubted whether, in the absence of condemnation proceedings or of due purchase of the easement, the East River Gas Company of Long Island City is entitled to maintain the tunnel under Blackwell's Island.

Income and Expenses:

Save for a small dividend on the shares of the Central Union Gas Company and Northern Union Gas Company, paid in 1902, the New Amsterdam Gas Company has received no income upon the securities it owns.

It sells gas as already mentioned to the Consolidated Gas Company, and the amount manufactured for the latter company in the years 1903 and 1904 largely exceeded the gas sold to consumers. The former does not appear among its gas sales, but the amount receiver therefor is credited against the expenses of its operations. The total amount of gas sold, with the net proceeds realized, exclusive of sales to the Consolidated Gas Company for the years 1900 to 1904, are as follows:

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Year.	Gas sold.	Amount realized.
1900	2,274,610,000 c. f.	$1,942,496 19
1901	2,239,588,200 c. f.	2,212,779 17
1902	2,440,251,000 c. f.	2,410,883 97
1903	2,657,495,000 c. f.	2,626,590 05
1904	2,772,251,700 c. f.	2,747,721 82

The expenses of the company for the years 1900 to 1904, after crediting the net amount received from the Consolidated Gas Company, exclusive of reserves for depreciation and interest upon funded debt, are as follows:

Year.	Gas sales as above.	Expenses.	Cost per 1,000 ft. of gas sold.
1900	2,274,610,000 c. f.	$1,497,109 36	.658
1901	2,239,588,200 c. f.	1,412,711 29	.630
1902	2,440,251,000 c. f.	1,396,107 82	.562
1903	2,657,495,000 c. f.	1,371,458 81	.506
1904	2,772,251,700 c. f.	1,387,043 98	.500

For the purposes of comparison it may be noted that the total amount of gas sold by the New Amsterdam Gas Company, including the amount manufactured for the Consolidated Gas Company in the year 1904, was 259,290,300 cubic feet, to wit:

Gas sold to consumers	2,772,251,700 c. f.
Gas manufactured for Consolidated Gas Co.	3,487,038,600 c. f.
Total	6,259,290,300 c. f.

The total cost of the production of this amount of gas to the
point of distribution, that is to the point when the part
149 manufactured for the Consolidated Gas Company was taken
by it, amounted (as stated by the company's vice-president in
his testimony) to 32½ cents per 1,000 cubic feet.

The following is a statement of the net earnings of the company from gas sales for the years 1900 to 1904, its reserves for depreciation, and net surplus from such earnings as shown by its books:

Years.	Net earnings from gas sales.	Interest on funded debt.	Reserve for depreciation.	Net surplus from gas earnings.
1900.............	$445,386 83	$924,380 56	....	Deficit $478,993 73
1901.............	800,067 88	954,416 35	....	" 154,348 47
1902.............	1,014,776 15	971,812 00	....	42,964 15
1903.............	1,255,131 24	939,289 71	....	315,841 53
1904.............	1,360,677 84	830,092 28	$205,278 88	225,306 68

The balance sheet of December 31, 1904, showed a total net deficit in the operations of the company to that date of $953,496.06.

Central Union Gas Company.

History:

The Central Union Gas Company was organized in 1897 and operates in the Borough of The Bronx. It has a capital stock of $3,500,000, bonds outstanding, $3,500,000, and an additional funded debt of $62,000. All its capital, as mentioned above, is held by the New Amsterdam Gas Company.

Properties:

It owns 7,600 shares of the stock of the Northern Union Gas Company of the par value of $760,000, which it acquired by the issue of its bonds to the amount of $250,000.

The book value of its real estate and plant and its material and supplies on December 31, 1904, was as follows:

150 Plant, rights, franchises and good-will......	$6,340,630 79
Real Estate	187,217 07
Construction	1,425,563 34
Material and supplies.........................	63,680 70
Total.............................	$8,027,091 90

The corresponding items of property appear in its balance sheet of December 31, 1903, at the book value of $7,778,375.75.

According to its sworn statement under date of March 10, 1904, presented to the Department of Taxes and Assessments of The City of New York, for the purpose of revising the assessment upon its property, its total gross assets amounted to $3,515,036.54. This included stock of other corporations $250,000, leaving as the stated value of the remainder $3,265,036.54. This amount was made up as follows:

Real estate other than franchises.................	$1,345,364 72
Franchises as fixed by State Board, 1903..........	1,450,000 00
Personal property	579,671 82
Total.............................	$3,265,036 54

It may be concluded that the property of the company is worth less than the amount of its funded debt. No dividends have been paid upon its stock, save 2½ per cent. in the year 1902.

Franchises:

The only franchises claimed by the company are grants made by certain officers of the towns of Morrisania and West Farms, respectively, to Robert Campbell & Co. of the privilege to lay pipes under the streets of said towns. Each grant provided as follows: "This privilege to be exclusive to them for the term of twenty years from the date hereof, and said pipes may be extended from time to time during said term."

The Central Union Gas Company claims under assignment, although the grants were not in terms assignable, and apart from this, it appears that the franchises have expired by limitation.

151 In its petition, verified April 17, 1901, to the State Board of Tax Commissioners the company stated as follows: "That the said Central Union Gas Company does not now possess any franchise or right to open the streets of The City of New York for the laying of its pipes and mains and enjoys no special privilege whatsoever in that behalf." This statement was repeated in a similar petition in 1902.

Income and Expenses:

The Central Union Company manufactures gas for the Northern Union Gas Company and the Consolidated Gas Company, receiving cost and ten per cent. additional for services.

The total amount of gas sold and the net proceeds realized, exclusive of sales to these companies, is as follows:

Year.	Gas sold.	Amount realized.
1900	584,794,200 c. f.	$610,926 70
1901	699,240,600 c. f.	719,173 54
1902	847,683,600 c. f.	867,065 04
1903	950,364,800 c. f.	969,608 78
1904	1,010,119,700 c. f.	1,024,237 68

The expenses of the company for the years 1900 to 1904, after crediting the net amount received from gas manufactured for other companies, exclusive of interest on bonded debt and reserves for depreciation, are as follows:

Year.	Gas sales as above.	Expenses.	Cost per 1,000 c. f. of gas sold.
1900	584,794,200 c. f.	$315,192 03	.538
1901	699,240,600 c. f.	403,876 08	.577
1902	847,683,600 c. f.	444,766 24	.524
1903	950,364,800 c. f.	489,819 26	.515
1904	1,010,119,700 c. f.	485,054 73	.480

152 The following is a statement of the net earnings of the company from gas sales for these years, its reserve for depreciation, dividends and net surplus from such earning as shown by its books:

Year.	Net earnings from gas sales.	Interest on bonds.	Reserve for deprectation.	Rate of dividends.	Amount of dividends.	Net surplus from gas earnings.
1900..	$295,734 67	$168,850 00	....	....	....	$126,884 67
1901..	315,297 46	163,985 96	$3,971 98	....	....	147,339 52
1902..	422,298 80	166,138 89	4,760 71	2½%	$87,500 00	163,899 20
1903..	479,789 52	172,500 00	1,025 88	....	....	302,263 64
1904..	539,182 95	172,500 00	151,739 20	....	....	214,843 75

Northern Union Gas Company.

History:

The Northern Union Gas Company was organized in 1897 and also operates in the Borough of The Bronx. It has a capital of $1,500,000 and a funded debt of $1,250,000. A majority of its stock is owned by the Central Union Gas Company, and the remainder by the New Amsterdam Gas Company.

Properties:

On December 31, 1904, its balance sheet showed the amount of its real estate, plant, material and supplies at book value to be as follows:

Franchise and property	$2,608,629 22
Street lamps	150,999 33
Construction	485,626 45
Stoves and supplies	7,989 62
Total	$3,253,245 22

As in the case of the New Amsterdam Gas Company and the Central Gas Company, no records are in existence furnishing satisfactory evidence of the original cost of the properties included
153 in the franchise and property account. But the corresponding items of property appear in its balance sheet of December 31, 1903, at the book value of $3,041,483.89. And in March, 1904, the company presented a sworn statement to the Department of Taxes and Assessments of the City of New York, giving its total gross assets as worth $1,356,313.76, made up as follows:

Real Estate other than franchise	$576,428 49
Value of franchise	575,000 00
Personal property	204,885 27
	$1,356,313 76

Franchises:

In its petition to the State Board of Tax Commissioners, verified April 17, 1900, the company stated in the same language as that used by the Central Union Gas Company that it did not "possess any franchise or right to open streets of The City of New York for the laying of its pipes and mains" and enjoyed "no special privilege whatsoever in that behalf."

In 1902 the Central Union Gas Company attempted to assign to the Northern Union Gas Company the franchise claimed to have been acquired by it under the grant to Robert Campbell & Co., in 1859, already mentioned, so far as it related "to that portion of the former town of West Farms now included in the Twenty-fourth Ward of the Borough of The Bronx." There would seem to be no basis for any claim on the part of the Northern Union Gas Company by virtue of this assignment.

It may also be claimed that certain franchises were acquired in 1902 through the merger with the Northern Union Gas Company of the Wakefield Gas Light Company and the Williamsbridge Gas and Electric Light Company for so much of the city as lies within the old towns of East Chester, South Mt. Vernon and Williamsbridge. There is no satisfactory evidence before us as to the performance of the conditions upon which these franchises were granted or as to the right of the Northern Union Gas Company to operate under them.

154 Income and Expenses:

The Northern Union Gas Company buys a considerable amount of gas from the Central Union Gas Company, and the amount paid on the basis of cost and ten per cent. figures in its expense account.

The total amount of gas sold, with the net proceeds realized, for the years 1900 to 1904, is as follows:

Year.	Gas sold.	Amount realized.
1900	197,135,000 c. f.	$238,303 76
1901	238,611,100 c. f.	272,220 35
1902	296,908,400 c. f.	319,666 33
1903	363,501,800 c. f.	398,081 07
1904	371,504,900 c. f.	397,050 68

The expenses of the company for these years, after deducting the amount paid for gas received from the Central Union Gas Company, exclusive of interest on bonds and reserves for depreciation, are as follows:

Year.	Gas sales as above.	Expenses.	Cost per thousand c. f. of gas sold.
1900	197,135,000 c. f.	$150,647 52	.764
1901	238,611,100 c. f.	172,065 27	.725
1902	296,908,400 c. f.	187,090 37	.630
1903	363,501,800 c. f.	240,284 35	.661
1904	371,504,900 c. f.	225,951 16	.608

The following is a statement of the net earnings of the company from gas sales for the years 1900 to 1904, its interest on bonds, reserve for depreciation, dividends and net surplus from net earnings as shown by its books:

155 Year.	Net earnings from gas sales.	Interest on bonds	Reserve for depreciation.	Rate of dividends.	Amount of dividends.	Net surplus from gas earnings.
1900	$87,656 24	$62,500	....	...	....	$25,156 24
1901	99,155 08	62,500	....	...	....	36,655 08
1902	132,575 96	62,500	$3,050 80	4%	$60,000	7,025 16
1903	150,796 72	62,500	3,499 12	...	....	84,797 60
1904	171,099 52	62,500	53,503 37	...	....	55,096 15

ELECTRIC COMPANIES.

New York Edison Company.

History:

The New York Edison Company was formed in May, 1901, by the consolidation of the Edison Electrict Illuminating Company and the New York Gas and Electric Light, Heat and Power Company.

Edison Electric Illuminating Company:

This company was organized under chapter 512 of the Laws of 1879. In 1900 there were merged with it the Harlem Lighting Company and the Manhattan Electric Light Company. It has a capital stock of $9,200,000 and a funded debt of $6,500,000.

New York Gas and Electric Light, Heat and Power Company (called The Power Company):

This corporation was formed in 1898. It acquired the following securities of the companies named:

156 Companies.	Stock, par value.	Bonds, par value.	Coupons unpaid.
Mount Morris Electric Light Company	$1,500,000 00	....	....
North River Electric Light and Power Company	400,000 00	$100,000 00	....
N. Y. Heat, Light and Power Company	375,000 00	170,000 00	....
Borough of Manhattan Electric Company	100,000 00	....	....
Consolidated Telegraph and Electrical Subway Company,	1,521,200 00	4,225,000 00	$884,000 00
Block Lighting and Power Company, No. 1	98,000 00	....	....
Manhattan Lighting Company	250,000 00	250,000 00	....
Yonkers Electric Light and Power Company	190,100 00	200,000 00	60,000 00
Totals	$4,434,300 00	$4,945,000 00	$944,000 00

It also acquired all but a few shares of the stock of the Edison Electric Illuminating Company and executed a purchase money mortgage in payment therefor (covering also the other property of the mortgagor), securing an issue of 4 per cent. bonds to the amount of $21,000,000, at a rate of $220 a share for the entire 92,000 shares of the Edison Electric Illuminating Company. By this mortgage it was provided that the sum of $4,000,000 should be deposited with the Trustee to be used exclusively in extensions or betterments of the property of the Edison Electric Illuminating Company.

The Power Company also acquired a piece of real estate at Ninety-seventh street and First avenue, New York City.

For the purpose of acquiring these properties the Power Company, in addition to the bonds above mentioned, issue bonds to the amount of $7,500,000 and its entire capital stock $36,000,000 in par value. The bonds of $7,500,000 were secured by a mortgage for $15,000,000, which constituted a first lieu upon all the property of the company except the shares of the Edison Electric Illuminating Company. Of the remaining bonds under this mortgage $4,000,-
157 000 were issued in order to raise the moneys required to be
deposited in accordance with the terms of the purchase money mortgage for $21,000,000. The remainder of the $15,000,000 bonds secured by the general mortgage ($3,500,000) were held in the treasury.

In addition to the bonds purchased by the Power Company, there remained outstanding liens upon the properties of the companies whose stocks were thus acquired, as follows:

Edison Electric Illuminating Company	$6,500,000 00
Mount Morris Electric Light Company	988,000 00
Real Estate Mortgages	315,000 00
Total	$7,803,000 00

The total funded debt and capital stock of the Power Company thus amounted to $76,232,883.80, as follows:

Capital Stock		$36,000,000 00
First General Mortgage Bonds ($15,000,000), issued for purchase of securities	$7,500,000 00	
First General Mortgage Bonds ($15,000,000), issued for betterments of Edison properties	4,000,000 00	
		11,500,000 00
Purchase Money Mortgage ($21,000,000)		20,929,883 80
Outstanding liens on properties of companies whose stocks had been acquired		7,803,000 00
Total		$76,232,883 80

In 1900 all the companies whose stocks had been acquired, save only the Consolidated Telegraph and Electrical Subway Company, the Yonkers Electric Light and Power Company and the Edison Electric Illuminating Company, were merged with the Power Company. The stocks of these companies were thus canceled and the title to the properties formerly represented thereby were vested in the Power Company.

Then followed in 1901 the consolidation of the Edison Electric

Illuminating Company with the Power Company, under the 158 name of the New York Edison Company. This Company was capitalized at $45,200,000, the aggregate amount of the capital stocks of the two constituent companies, but the value of the stock of the Edison Company was already represented in the stock of the Power Company, the latter having acquired practically all the shares of the former, that is to say, 91,681 out of 92,000 shares. No additional property was acquired through the consolidation, and there was no justification for this addition of $9,200,000 to an already grossly inflated capital.

The capital stock and funded debt of the New York Edison Company upon its formation was—

Capital Stock ($45,200,000), issued	$45,051,000 00
Funded debt and real estate mortgages	40,232,883 80
Total	$85,283,883 80

The assets of the New York Edison Company (exclusive of good will), represented by its capital stock and funded debt, amounted at book value to $34,819,368.60. They are thus stated by the auditor of the company (Exhibit 188):

Physical Assets in New York Edison Plant and Property Account, May 1, 1901.

License, Edison		$3,159,000 00
Edison Plants		15,259,162 77
Power Co. Plants	$5,260,027 21	
Less Credits	13,832 69	
		5,246,194 52
Real Estate 97 st.		100,000 00
Subway Stk. & Bonds		5,746,200 00
Ykrs " "		1,390,100 00
Furniture & Fixtures Power Co		2,009 25
Construction, Bronx		95,186 42
Investment		2,191,017 61
Gen'l Fixtures		1,007 50
C. Trust Co., Trustee G. F.		584,881 77
		$32,774,759 84
159 Excess Currents, Assets over Current Liabilities		2,044,608 76
		$34,819,368 60

The item "license Edison $3,159,000" covers licenses under patents most if not all of which have expired, and whatever value it now represents is apparently speculative and is incident to the existence of favorable contracts for the purchase of supplies and the continued use of the name of Edison.

The item "Edison Plants, $15,259,162.77" included in the plant of the Harlem Lighting Company which had been destroyed by fire, save certain overhead conductors subsequently removed by the City, and also covered the property of the Manhattan Electric Light Company which was carried on the books at a value largely in excess of its replacement cost. The statement that was submitted to the Referee in the certiorari proceeding to review the franchise assessment in 1901 showed the production value (without allowing depreciation) of the real estate and plant of the Edison Illuminating Company as of June 30, 1900, to be $6,025,647.27 as against the book value of the same items of $9,068,634.03, the excess of the book value being $3,042,986.76.

The item "Power Company Plants $5,246,194.52" was the net book value of the plants as they stood upon the books of the five companies which were subsequently merged with the Power Company, as above stated, as follows:

Manhattan Lighting Company	$500,865 35
New York Heat, Light and Power Company	695,000 00
North River Electric Light and Power Co.	1,068,284 36
Borough of Manhattan Electric Company	259,138 56
Mt. Morris Electric Light Company	2,736,738 94
	$5,260,027 21
Less credits	13,832 69
	$5,246,194 52

160 Included in the book value of the property of the Mt. Morris Electric Light Company was $1,100,000 for patents evidently worthless.

The item in the plant and property account New York Edison, May 1, 1901 (above), "subway stock and bonds $5,746,200," includes $4,225,000 of the bonds and debentures and $1,521,200 of the stock of the Consolidated Telegraph and Electrical Subway Company. This company has never paid dividends, and the interest on its bonds is largely in arrears. Its stock is worthless and was plainly acquired for the purpose of monopoly control. The bonds are also worth much less than par.

It seems that $1,674,000 were bonds secured by a first mortgage originally issued for construction at 90, and $1,511,000 were second mortgage bonds originally issued at 60. Apparently the entire lot, with the debentures, was purchased by the syndicate which formed the Power Company at 60, and there is no evidence that they were worth more.

The item "Investment, $2,191,017.61," covers mainly the shares of the Edison Light and Installation Company and the stock and bonds of the Empire City Subway Company. The Edison Light and Installation Company was a company organized by the Edison Electric Illuminating Company to serve as an agency for the construction of the subways of the Empire City Subway Company occupied by the conductors of the Edison Company. The Edison Illuminating Company received the securities issued in payment for such construction, and owned the entire stock of the Edison Light and Installation Company, amounting to $1,216,400 in par value, which forms part of the item aforesaid. This stock is without value and the corporation is a mere dummy used by the Edison Company in connection with its work in the construction of subways.

The item "Central Trust Company, Trustee, G. F. $584,381.77" refers to the unexpended balance of the $4,000,000 of bonds, the proceeds of which were to be expended in betterments of the property of the Edison Electric Illuminating Company in accordance with the terms of the purchase money mortgage under which the stock of that company was acquired by the Power Company.

161 To make a proper estimate of the value of the assets of the New York Edison Company, exclusive of good will at the time of its formation, it would seem that the following deductions should be made:

Total book value of assets May 1, 1901, as above...		$34,819,368 60
Deduct—		
License Edison	$3,159,000 00	
Difference between book value and reproduction value of inside properties of Edison Electric Illuminating Company	3,042,986 76	
Patents Mount Morris Electric Light Company	1,100,000 00	
Stock Consolidated Telegraph and Electrical Subway Company....	1,521,200 00	
Bonds, same company, excess over 60 per cent. of par value.......	1,690,000 00	
Stock Edison Light and Installation Company	1,216,400 00	
		11,729,586 76
Leaving as the value of the property......		$23,089,781 84

The testimony is that since its organization the plant, property and investments of the New York Edison Company were increased, to December 31, 1904, to the extent of $11,270,123.89, making the present value of its property, without allowing for depreciation, $34,359,905.73, as follows:

Value May 1, 1901..........................	$23,089,781 84
Increase	11,270,123 89
Total, December 31, 1904...............	$34,359,905 73

Of the increase $2,021,194.44 is represented by subway securities.

162 In other words, exclusive of alleged good-will and franchises, the property of the New York Edison Company upon any reasonable valuation appears to be worth much less than the amount of its funded debt.

Franchises:

The New York Edison Company claims perpetual franchises under various grants made to its constituent companies of the right to lay and maintain conductors in the streets.

Control of Company:

It will be remembered that the Consolidated Gas Company had acquired the entire stock of the Power Company ($36,000,000), first issuing debentures therefor, which were returned by the issue of $15,517,200 in par value of its own capital stock. Upon the consolidation forming the New York Edison Company the stock of the Power Company was exchanged for the stock of the new company at the rate of 1.25111 per share. The Consolidated Gas Company now owns $45,041,000, or all but 100 shares of the issued stock. No dividends have been paid upon this stock and it is impossible to assign to it any substantial value.

Income and Expenses:

The net profits of the business after payment of interest on the funded debt, for the past five years have amounted to $10,521,302.04. All the repairs necessary to maintain the plant in the highest degree of efficiency have been charged to operating expenses. The net profits for each year, after payment of the funded debt, are as follows:

Year.	Net Profits.
1900	$904,005 89
1901	1,245,560 56
1902	2,298,966 80
1903	2,611,611 84
1904	3,460,856 95
	$10,521,302 04

163 Cost and Profit:

The average cost of producing and distributing current, including all necessary repairs, for the past five years has been 4.500 cents per kilowatt hour. The cost has gradually decreased from 5.053 cents per kilowatt hour in 1900 to 3.664 cents in 1904. The income, cost and net earnings per kilowatt hour on current sold for each year is given in the following table:

Year.	Income.	Cost.	Net earnings.
1900	9.694 cents.	5.053 cents.	4.641 cents.
1901	9.505 "	4.858 "	4.647 "
1902	9.211 "	4.703 "	4.508 "
1903	8.636 "	4.223 "	4.413 "
1904	8.042 "	3.664 "	4.378 "
Average	9.017 cents.	4.500 cents.	4.517 cents.

The amounts paid out of earnings for interest upon funded debt and the net surplus per kilowatt hour are as follows:

Year.	Net earnings.	Interest on funded debt.	Net surplus.
1900	4.641 cents.	3.47 cents.	1.171 cents.
1901	4.647 "	2.89 "	1.757 "
1902	4.508 "	2.39 "	2.118 "
1903	4.413 "	2.00 "	2.413 "
1904	4.378 "	1.663 "	2.715 "
Average	4.517 cents.	2.4826 cents.	2.035 cents.

Charges for Current:

The New York Edison has several schedules of rates, a retail schedule, two wholesale schedules, a special schedule and a separate schedule exclusively for power.

164 Of the total amount received for current sold in the Borough of Manhattan in 1904 ($8,991,635) approximately 49 per cent., or $4,371,046.54 was received under the retail schedule. This schedule provides for a rate of fifteen cents per kilowatt hour for first and second hours' average daily use of equipment, and a reduced rate for additional hours' use. The rate for the first and second hours' use, however, is based upon a scheduled capacity of the consumption of the lights installed, and the rate is not lowered until the consumption has reached the equivalent of two hours' use of all such lights. It may also be observed that it would be necessary for the consumer to use all his lights for seven hours each in order to have an average rate of ten cents per kilowatt hour under this schedule. The average amount paid under the retail schedule in the Borough of Manhattan in 1904 was 12.27 per kilowatt hour.

The two wholesale schedules provide for lower rates upon an agreed minimum monthly consumption of 2,000 and 2,500 kilowatt hours respectively, with an average daily use of not less than two hours. The maximum wholesale rate upon this basis is ten cents per kilowatt hour, with lower rates and discounts for increased consumption.

The special wholesale rate on the basis of an agreed monthly use of not less than 10,000 kilowatt hours is five cents per kilowatt hour for the first 15,000 K. W. H. and lower rates for increased consumption, reaching as low as three cents for excess over 50,000 K. W. H. It is further provided that suitable space shall be furnished without rental charge for such service and converting apparatus as the company may consider for the installation. It may be proper to say that the low rates maintained under the special wholesale schedule serve the purpose of meeting the demands of consumers who otherwise might install private plants.

Current for power is also furnished under the schedules above mentioned, the separate schedule for power exclusively having a maximum rate of ten cents per horse power hour, with a sliding scale of discounts according to consumption, the highest discount being fifty per cent. on monthly bills for 1,500 horse power hours and over.

165 We have already noted that the average rate paid for all current supplied by the Company in 1904 was 8.042 per kilowatt hour, against an actual cost of 3.664, which covered all the expenses of the company in producing and distributing the current, all necessary repairs, all general expenses and all outlays whatever except the payment of interest upon the funded debt.

The United Electric Light and Power Company.

History:

This company was formerly the New York Safety Electric Light and Power Company, and in 1889 its name was changed to the United Electric Light and Power Company. Its capital stock is $1,649,500 par value preferred shares, and $3,697,100 par value common shares, making a total of $5,346,600. It has a funded debt of $4,838,000. More than nine-tenths of the stock and almost all the bonds of the Company are held by the Consolidated Gas Company.

Properties:

The United Electric Light and Power Company owns 9,940 shares of the Brush Electric Illuminating Company, 2,000 shares of the Consolidated Telegraph and Electrical Subway Company, five $1,000 bonds of the New York Gas, Electric Light, Heat and Power Company, and other securities, making a total in book value of $1,052,600.75.

As the shares of the Brush Electric Illuminating Company and of the Consolidated Telegraph and Electrical Subway Company are worthless, the actual value represented by this item is less than $10,000. The book value of its plant account, December 31, 1904, is $10,197,900.36, made up as follows:

Patents, licenses and rights	$6,069,422 94
General construction	2,417,805 57
Machinery and fixtures	1,197,319 22
Real estate and buildings	548,486 78
Office furniture	7,301 59
166 Tools	10,915 31
Automobiles	21,648 95
Total	$10,272,900 36
Less depreciation	75,000 00
	$10,197,900 36

Of the first items "Patents, Licenses and Rights" $3,500,000 represents discount on bonds sold and expenses of reorganization, and the remainder represents alleged patent rights, franchises, etc.

The actual value of the properties of the Company may be gathered from the statement made by it to the Department of Taxes and Assessments of The City of New York under date of March 1, 1905, of which the total gross assets are stated to be of the value of $5,065,172.85. The items composing this valuation, as testified to by the treasurer of the Company, who verified the statement, are as follows:

Dec. 31, 1904:

General construction		$2,417,805 57
Machinery and fixtures		1,197,319 22
Office furniture		7,301 59
Tools		10,915 31
Automobiles		21,648 95
		$3,654,990 64
Allow 25 per cent		913,747 66
		$2,741,242 98
Add, Real estate and buildings		548,486 78
Stock of other companies		1,047,744 50
Brush Elec. Ill. Company		358,110 40
Insurance ind.		4,856 25
Accounts receivable	$254,529 68	
Cash	59,163 66	
Materials and supplies	51,038 60	
		364,731 94
		$5,065,172 85

167 This statement includes at least $1,040,000 as the value of stocks of other companies which are in fact worthless, and a valuation of the plant and property of the Company, exclusive of franchise and good will, at the sum of $4,000,000.

The Company claims to hold a franchise granted to it under its former name, the New York Safety Electric Light and Power Company, and also under franchise granted to the United States Illuminating Company, a corporation merged with it in 1902.

Income and Expenses:

The rates of Charges are the same as those of the New York Edison Company. The gross earnings are relatively small, averaging approximately $1,000,000 yearly. The earnings and total expenses, including depreciation charged off upon the books, but not including interest upon the funded debt, per kilowatt hour sold, are as follows:

Year.	Gross earnings per K. W. hour.	Cost per K. W. hour sold.	Net earnings.
1900..................	9.49 cents.	9.00 cents.	.49 cents.
1901..................	9.33 "	6.36 "	2.97 "
1902..................	9.24 "	6.12 "	3.12 "
1903..................	9.48 "	5.64 "	3.84 "
1904..................	9.45 "	6.24 "	3.21 "

The net earnings and the interest upon the funded debt per kilowatt hour sold are:

Year.	Net earnings per K. W. hour.	Interest on funded debt.		Net surplus.
1900...........	.49 cents.	3.20 cents.	Deficit,	2.71 cents.
1901...........	2.97 "	2.80 "	Surplus,	.17 "
1902...........	3.12 "	2.58 "	"	.54 "
1903...........	4.84 "	2.39 "	"	.145 "
1904...........	3.21 "	2.27 "	"	.94 "

168 Brush Electric Illuminating Company.

History:

This company was organized in 1881. It has a capital stock of $1,000,000 and a funded debt of $275,000. Substantially all its stock is held by the United Electric Light and Power Company, and its bonds are owned by the Consolidated Gas Company.

Properties:

The book value of its real estate and plant, December 31, 1904, was $1,437,534.97.

In its report to the Department of Taxes and Assessments, dated March 1, 1905, its total gross assets, exclusive of franchise, were stated to be $808,126.96, made up of real estate $147,824.96 and personal property $660,302.10.

Against these assets is owed, as appears by the same statement:

Accounts payable	$455,436 21
First Mortgage Bonds	275,000 00
Total....................................	$730,436 21

Franchises:

It claims a direct franchise to lay and maintain conductors granted in 1881.

Income, Expenses, etc.:

Its income in 1904 was $121,470.44 and its expenses, including interest on bonds and the item of $25,000 for depreciation, amounted to $113,049.71.

It has paid no dividends and its interest has been in arrears since 1902.

The company is not now operating its own plant, but the New York Edison Company is supplying the customers of the Brush Company under an operating agreement. The plant of the Brush Company has been abandoned and most of its apparatus and machinery sold. The conductors have been withdrawn from the ducts and most of them have been disposed of as scrap.

169 Gas and Electric Companies.

Westchester Lighting Company:

This company, whose entire capital stock has recently been acquired by the Consolidated Gas Company in the manner already stated, operates chiefly in Westchester County, having only a small business in the northern part of the City of New York.

Bronx Gas and Electric Company:

This company was organized in the year 1893 and claims franchises in that section of the Borough of The Bronx lying east of the Bronx river, formerly the old Town of Westchester. Its issued capital stock is $270,500 and its funded debt amounts to $495,000.

Its property is as follows:

Real estate	$210,950 00
Personal property	131,575 24
Total	$342,525 70

Its business is comparatively small and its gas and electric departments are operated under one management. Its gross electric receipts for the past two years average about 8.3 cents per kilowatt hour and it sells gas at the rate of $1.15 per thousand cubic feet. It pays its bond interest and its dividends were at the rate of 5 per cent. in 1903 and 6 per cent. in 1904.

Subway Companies.

Consolidated Telegraph and Electrical Subway Company.

By chapter 534 of the Laws of 1884 provision was made for the placing of electrical conductors under ground, and by chapter 499 of the Laws of 1885, as amended by chapter 503 of the Laws of 1886, authority was given for the appointment of Boards of Commissioners in cities to which the Act applied, who should be charged with the responsibility of its enforcement.

The Consolidated Telegraph and Electrical Subway Company was incorporated in 1885, and on July 22, 1886, entered into a
170 contract with the Commissioners appointed in the City of New York, which was supplemented by a further contract dated April 7, 1887. The company undertook to build and maintain such subways as might be required for electrical conductors and to furnish the capital necessary for the purpose, not less than $3,000,-

000. The construction of the subways was to be made under the supervision of the Commissioners, and the rentals were to be subject to their control. Apt clauses were inserted to insure fair and equal treatment to all companies requiring space in the subways. The City of New York was permitted to use such space as it might need for its electrical conductors free of charge. The contract of April 7, 1887, further provided:

"VI. Whenever the net annual profits of the party of the second part remaining after the payment of the expenses of maintaining and operating such subways shall exceed ten per cent. upon the actual cash capital invested by it in providing, constructing and equipping such subways, then the excess of such profit over the ten per cent. shall be paid into the treasury of the City of New York; but if in any year or years prior to the earning of such excess the earnings of the party of the second part shall not have equalled ten per cent., then the party of the second part shall be first entitled to recoup itself out of such excess for the difference between the actual annual earnings and the said ten per cent., the intention hereof being that no payment shall be made to the City of New York out of such excess of earnings until the party of the second part shall first have actually earned and received ten per cent. for each year thereafter."

The company further agreed to keep accurate books of account open to the inspection of the Commissioners and their successors and of the Comptroller of the City, showing the amount of space in the subways occupied, the number and kind of electrical conductors therein, with the names of the owners, the gross and net amount in detail of rentals and all payments of every kind made by the company, specifying in detail and separately to whom each payment was made, "so that it may be determined whether the same is chargeable to the cost of construction or of maintenance."

171 In case of a substantial failure by the company to carry out the provisions of their agreement and an adjudication to this effect by a competent judicial authority, it was provided that the City should be entitled to enter into possession of the subways and that the company, "subject to any valid mortgages or liens then thereon outstanding not exceeding 50 per cent. of the actual cost of such subways and all leases or contract then existing for the use thereof as hereinbefore provided," should forfeit its interest in such subways and should peaceably surrender the same to the City (Par. XII.).

The agreement also contemplated the acquisition of all or any of the subways by the City and of all or any of the contracts or other property of the company, "subject, however, to all leases, mortgages or contracts heretofore lawfully made within the limitations imposed by section 12 of this contract." Upon the demand of the Commissioners of the Sinking Fund and on payment of not less than the cost thereof, or in case the company had not earned ten per cent. per annum on actual cost, on the payment of a sum in addition to the cost not exceeding ten per cent. thereof to the extent of such deficiency in annual earnings.

Pursuant to chapter 716 of the Laws of 1887, the Board of Electrical Control succeeded the Board of Commissioners of Electrical Subways in the City of New York, and the agreements made between the Consolidated Telegraph and Electrical Subway Company and the Commissioners were duly confirmed.

Both the letter and the spirit of these contracts have been violated by the Consolidated Telegraph and Electrical Subway Company.

Instead of securing the necessary capital and constructing subways itself, it entered into contracts for their construction with the Phœnix Construction Company, a corporation to which it was closely allied.

The Phœnix Construction Company agreed to construct 800 miles of duct for $2,500,000, or, at the option of the company, at cost and fifteen per cent. additional. It proceeded with the work of 172 construction until 1891, building upwards of 900 miles of high tension and low tension ducts, and upon final settlement was paid in stock and bonds of the subway company. First mortgage bonds to the amount of $2,375,000 were taken by the construction company at ninety per cent., and second mortgage bonds to the amount of $2,375,000 at sixty per cent. The discount on the bonds, amounting to $1,187,500, together with the fifteen per cent. profit of the construction company, were treated as a part of the cost of construction and so reported to the Comptroller.

For the stock of the subway company only $40,000 was received in cash, $722,500 being issued for patents, and $1,102,500 as a part of the payment made to the Phœnix Construction Company.

By chapter 231 of the Laws of 1891, the Board of Electrical Control was authorized, with the consent of the Consolidated Telegraph and Electrical Subway Company, to enter into new contracts with the said company and with the Empire City Subway Company, Limited, providing for the division of the work of constructing and maintaining subways so that the Consolidated Subway Company should retain and proceed with the construction and maintenance of subways for high tension conductors; and the Empire City Subway should take over and proceed with the construction and maintenance of subways for low tension conductors. Accordingly on May 15, 1891, contracts were entered into between the Board of Electrical Control and the subway companies respectively providing for such division.

In taking over the low tension subways the Empire City Subway Company assumed the payment of $2,500,000 of the bonds of the Consolidated Subway Company which had been issued to the Phœnix Construction Company, the proportion of discount upon the bonds being treated as a part of the cost of the construction of these subways.

The total cost of construction of all the subways to December 31, 1890, was reported to the Comptroller as amounting to $8,317,795.74, of which there was credited by transfer to the Empire City Subway Company, $3,675,633.25, leaving as the reported cost of the high tension subways retained by the Consolidated Sub- 173 way Company, $4,660,162.40. This amount not only included the loss on bonds issued at less than par and the fifteen per cent. profit of the Phœnix Construction Company, and interest on deferred payments, but also apparently included the profits of sub-contractors by which the work was actually done.

On March 26, 1891, the Consolidated Subway Company entered into a contract with the Empire City Subway Company for the construction of high tension subways for the former on a basis of cost and fifteen per cent.

The Empire Subway Company worked under this contract for a little over a year and was paid in bonds in the same manner as the Phœnix Company, that is to say, in first mortgage bonds at ninety per cent. and in second mortgage bonds at sixty per cent. of their par value, the discount being treated as a part of the cost of construction. In July, 1892, the Empire Subway Company assigned its contract for the construction of high tension subways to the Union Subway Construction Company, which built subways for the Consolidated Subway Company until 1898, receiving its compensation in debentures at par of the Consolidated Subway Company.

In 1899 the New York Gas and Electric Light, Heat and Power Company purchased the greater part of the stock and $4,225,000 of the bonds and debentures of the Consolidated Subway Company, with unpaid coupons attached, thus acquiring absolute control at the same time that it secured the ownership of the various electric light and power companies in the boroughs of Manhattan and The Bronx, the absolute control of the high tension subway system.

Since that time the Power Company and its successor, the New York Edison Company, have supplied the moneys for the construction of additional subways, receiving therefor the debentures of the Consolidated Subway Company.

The company claims to have constructed, to the end of the year 1904, 1,452 miles of duct, exclusive of those transferred to the Empire City Subway Company, at a cost of $8,980,418.35.

The accounts of the company have not been kept in the manner required by its contract with the City. The books do not 174 show the actual cost of construction within the meaning of the contract, nor have proper statements been furnished to the Comptroller. The cost per mile as given by the company in different years exhibits extraordinary variations; and the testimony taken by the Committee has revealed many discrepancies in the various statements of cost which have not been satisfactorily explained. Certain statements have been made to the Comptroller professing to give the actual cost of construction which do not in fact state such cost, and were apparently prepared with the deliberate intention of inducing the belief on the part of the municipal officers that there had been an actual cash outlay, which in fact had not been made. The transactions of the company show an utter disregard of its obligations.

Rentals have been charged at the rate of $1,000 per mile, per annum, for three-inch ducts. It would seem that no attention has been paid to the requirement of the contract, that the excess of earning over ten per cent. of the *actual cash capital invested* by the company in providing, equipping and constructing such subways should be paid to the City. The rights of the City in this respect can only be determined through a judicial accounting. A suit brought by the City is now pending for the purpose of obtaining such an accounting, and also to have the rights of the subway company declared forfeited by the reason of its failure to perform its contract.

It may be added that the intention of the act providing for the construction and operation of the subways, and the purpose of the contract, has to a large extent been defeated by the passing of the subways, constructed by this company, into the absolute control of a monopoly embracing the entire lighting industry of the Boroughs of Manhattan and The Bronx.

Pending the acquisition of the subways by the City, which is most desirable, the situation calls for the most effective supervision of the operations of the company.

Empire City Subway Company:

175 The Empire City Subway Company was organized in 1890, and pursuant to contract of May 15, 1891, took over, in the manner already explained, the low tension ducts built by the Consolidated Subway Company. Its contract contained similar provisions to the contract with the Consolidated Company, for the keeping of proper accounts, for the payment to the City of earnings in excess of ten per cent. of the actual cash capital invested, for forfeiture in case of breach of contract, and for purchase by the City at its option. Since that time it has constructed and maintained such low tension ducts as have been required. They are used for telegraph and telephone conductors and for the low tension conductors of the New York Edison Company.

The Edison Electric Illuminating Company originally built such ducts as it required for the Empire City Subway Company, through the medium of the Edison Light and Power Installation Company, and this practice has been continued by its successor, the New York Edison Company, to some extent, although it appears that at present the new low tension ducts required by that company are built by the Consolidated Subway Company. The low tension ducts which were built by the Edison Electric Illuminating Company and its successor for the Empire City Subway Company have been paid for in bonds and stock of the Empire Company, and the New York Edison Company now holds $493,000 of the bonds of the Empire Company and 5,120 shares of its stock. Upon these it receives interest and dividends.

About ten years ago an agreement was made between the Empire Company and the Edison Electric Illuminating Company, by which the latter undertook to maintain the ducts used by it for the sum of $200 per mile of duct per year. This arrangement has been continued and is now in force with the New York Edison Company. This payment under ordinary conditions is very largely in excess of the amount required to be expended for maintenance, and the New York Edison Company charges, as a part of its expenses for maintenance, the cost of conductors replaced. Through this method,

and by the interest and dividends it received upon the bonds and stock issued in payment for construction, the New York Edison Company secures in effect an offset to a large extent against the
176 rentals paid for the use of the Empire subways. The result is that the net amount that it pays is substantially equivalent to the interest upon the investment it would have made if it had built and owned its own subways.

Suit has also been brought by the City against the Empire City Subway Company for an accounting, in order to determine the amounts due to the City, and also to enforce the provision for forfeiture on the ground of breach of its contract obligations.

Boroughs of Brooklyn, Queens and Richmond.

The gas and electric companies in these boroughs are:

The Brooklyn Union Gas Company,

Controlling—

The Woodhaven Gas Light Company,
The Flatbush Gas Company,
The Newtown Gas Company,
The Richmond Hill and Queens County Gas Light Company, and
The Jamaica Gas Light Company.

The East River Gas Company of Long Island City,

Controlled by—

New Amsterdam Gas Company (above).

The Kings County Electric Light and Power Company,

Controlling—

The Edison Electric Illuminating Company of Brooklyn.

The Kings County Lighting Company.
The Brooklyn Borough Gas Company.
The Newtown and Flushing Gas Company.
The Queens Borough Gas and Electric Company.
The New York and Queens Electric Light and Power Company.
The New York and Richmond Gas Company.
The Richmond Light and Railroad Company.

177 Brooklyn Union Gas Company.

This company was organized in 1895; it has a capital of $15,000,000, first mortgage bonds $15,000,000 and six per cent. convertible debentures $3,000,000.

Upon its organization it acquired by purchase, subject to existing mortgages, all the properties of the following companies previously engaged in the business of making and selling gas in the city of Brooklyn, to wit

Brooklyn Gas Light Company,
Fulton Municipal Gas Company,
Metropolitan Gas Light Company,
Citizens Gas Company,
Williamsburgh Gas Light Company,
Peoples Gas Light Company, and
Nassau Gas Light Company.

The combined capital stock of these companies was $9,970,000, and their outstanding bonds amounted to $3,900,000. By the terms of purchase, the Brooklyn Union Gas Company reserved $3,900,000 of its bonds to retire the outstanding bonds of the original companies and $500,000 more of its bonds for betterments, and issued its remaining bonds, to wit, $10,600,000, and its capital stock, $15,000,000, making an aggregate of $25,600,000 for the properties represented by stocks of the par value of $9,970,000.

The stock and bonds of the original companies and the distribution of the stock and bonds of the Brooklyn Union Gas Company are shown in the following table:

Name.	Shares, par value.	Outstanding bonds, par value.	Brooklyn Union Company securities issued in payment.		Brooklyn Union Company bonds reserved.	
			Stock.	Bonds.	To retire outstanding bonds.	For betterments.
Brooklyn Gas Light Company	$2,000,000 00	....	$1,950,000 00	$1,885,000 00	....	$65,000 00
Citizens Gas Company	1,750,000 00	$1,250,000 00	1,500,000 00	200,000 00	$1,250,000 00	50,000 00
Fulton Municipal Gas Company ...	2,100,000 00	300,000 00	2,850,000 00	2,455,000 00	300,000 00	95,000 00
Metropolitan Gas Light Company ..	870,000 00	250,000 00	1,500,000 00	1,200,000 00	250,000 00	50,000 00
Nassau Gas Light Company	1,250,000 00	600,000 00	3,150,000 00	2,445,000 00	500,000 00	105,000 00
Peoples Gas Light Company	1,000,000 00	500,000 00	900,000 00	370,000 00	500,000 00	30,000 00
Williamsburgh Gas Light Company ..	1,000,000 00	1,000,000 00	3,150,000 00	2,045,000 00	1,000,000 00	105,000 00
	$9,900,000 00	$3,900,000 00	$15,000,000 00	$10,600,000 00	$3,900,000 00	$500,000 00

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179 The books were opened under the supervision of a bookkeeper (since deceased), an employee of the Consolidated Gas Company, and an exact comparison between the new entries and the valuations on the books of the constituent companies is not obtainable. But the evidence shows that the book values of the properties acquired were largely increased. For example, there were added between $4,000,000 and $5,000,000 to the book value of the street mains for rights in the streets, about $5,000,000 for goodwill, and an additional $3,050,000 for the rights of the constituent companies to "make and sell gas," or an aggregate increase in valuation of about $13,000,000. There is the additional fact that the mains and services were old and had greatly depreciated. It is evident that the capital stock of the Brooklyn Union Gas Company to a very large extent, to say the least, did not represent value.

Franchises:

The Brooklyn Union Gas Company claims the right to lay and maintain mains in streets under grants made to the original companies. Many of these grants applied only to particular districts. Although the transfers made by the companies to the Brooklyn Union Gas Company in 1895 purported to convey all their franchises and rights, many of these were not in terms assignable, and it is a serious question to what extent the Brooklyn Union Gas Company is lawfully exercising rights in the streets of the borough. It is evident that the matter should at an early date be made a subject of judicial inquiry upon proper action taken by the municipal authorities.

Stocks and Bonds of Other Companies:

The Brooklyn Union Gas Company has acquired the entire capital stock and certain bonds of the companies named below, which are carried upon the books of the Brooklyn Union Gas Company at the following amounts:

		Book Value.
200	shares Woodhaven Gas Light Company	$20,000 00
4,000	shares Flatbush Gas Company	372,771 64
	bonds Flatbush Gas Company	35,700 00
180		
2,500	shares Equity Gas Light Company	318,065 56
	bonds Equity Gas Light Company	250,000 00
10,000	shares Richmond Hill and Queens County Gas Light Company	26,758 86
600	shares Newton Gas Company	60,000 00
	bonds Newtown Gas Company	61,500 00
2,000	shares Jamaica Gas Light Company	145,000 00
		$1,182,686 06

The book values of these securities are stated to be the amounts actually paid therefor in cash.

All these companies, with the exception of the Equity Gas Light Company, are still operating. The Equity Gas Light Company transacts no business, its properties being held and operated directly by the Brooklyn Union Gas Company. In the case of the other companies the Brooklyn Union Gas Company supplies the gas which they distribute to the consumer.

Income, Expenses and Profits:

The total amount of gas sold, with the net proceeds realized (including sales to its subsidiary companies which were made at the rate of sixty cents per 1,000 cubic feet), for the years 1901 to 1904, are as follows:

Year.	Gas sold.	Amount realized.
1901	4,738,536,493 c. f.	$4,676,567 68
1902	5,340,869,683 c. f.	5,243,188 77
1903	6,119,002,436 c. f.	5,992,516 63
1904	6,650,377,184 c. f.	6,534,611 41
	22,848,785,796 c. f.	$22,446,884 49

The expenses of the Company showing the total cost of the gas produced in holders, including repairs at works, the rate of cost in holders per 1,000 cubic feet of gas sold, the expenses of distribution (including general expenses, salaries, general repairs, taxes, insurance and all outlays except interest on funded debt), and the total cost per 1,000 cubic feet of gas sold are as follows:

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Year.	Cost in holders.	Rate per 1,000 C. F. of cost in holders.	Cost of distribution, including all other outlays.	Rate of distribution cost per 1,000 C. F.	Total cost.	Rate of total cost per 1,000 C. F. of gas sold.
1901......	$1,746,133 30	36.85 cents.	$1,019,085 79	21.51 cents.	$2,765,218 99	58.36 cents.
1902......	2,379,291 97	44.55 "	1,047,419 68	19.60 "	3,426,711 65	64.15 "
1903......	2,623,988 12	42.88 "	1,078,972 38	17.64 "	3,702,960 50	60.52 "
1904......	2,722,984 74	40.94 "	1,222,222 30	18.38 "	3,945,207 04	59.32 "
	$9,472,398 13		$4,367,700 15		$13,840,098 18	

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182 The following is a statement of the net earnings of the company from gas sales for the years 1901 to 1904, its interest on funded debt, dividends and net surplus from such earnings as shown by its books:

Year.	Net earnings.	Interest paid.	Rate of dividends.	Amount of dividends.	Net surplus from such earnings.	
1901..	$1,911,348 69	$768,212 52	8%	$1,200,000 00	Deficit	$56,863 83
1902..	1,816,477 12	784,023 46	8%	1,200,000 00	"	167,546 34
1903..	2,289,556 13	840,295 74	8%	1,200,000 00	Surplus	249,260 39
1904..	2,589,404 37	934,155 49	9½%	1,425,000 00	"	230,248 88
	$8,606,786 31	$3,326,687 21		$5,025,000 00	Surplus	$255,099 10

The Company derived a small income from investments and from sales of gas stoves, etc., amounting for the four years to $229,321.59, making its total surplus from the entire operations of these years, after payment of interest on funded debt and dividends upon its stock, $484,420.69.

Operations of Subsidiary Companies:

The operations of the subsidiary companies whose stock is owned by the Brooklyn Union Gas Company are relatively small and unimportant. They are without the purview of chapter 385 of the Laws of 1897, fixing the price of gas Greater New York Charter, section 1539).

The receipts and expenses of these companies for the year 1904 are as follows:

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Name.	Gas sales.	Expenses.	Surplus.
Woodhaven Gas Company...........	$43,222 26	$33,664 76	$9,557 50
Newtown Gas Company..............	216,035 88	157,028 81	59,007 07
Richmond Hill and Queens County Gas Light Company...............	56,719 62	39,474 12	17,245 50
Jamaica Gas Company...............	56,201 82	43,324 88	12,876 94
Flatbush Gas Company. Gas sold	174,680 79	166,235 54	8,445 25
Electric current sold..	105,917 67	66,715 61	39,202 06

East River Gas Company of Long Island City.

The facts with reference to this Company have already been given in connection with the New Amsterdam Gas Company, which owns its stock. It does not operate independently, and the earnings from the use of its property are included in the operations of the New Amsterdam Gas Company.

Apart from its claims of rights to maintain mains in New York City under chapter 338 of the Laws of 1892, it claims franchises in Long Island City through various assignments. Its rights under these assignments are questionable and should be judicially determined.

The Kings County Electric Light and Power Company.

The Edison Electric Illuminating Company of Brooklyn.

It is understood that the Edison Electric Illuminating Company of Brooklyn, controlled by the Kings County Electric Light and Power Company, is the only company save the Flatbush Company furnishing electric current in the Borough of Brooklyn.

The Kings County Electric Light and Power Company was organized in 1890; it has a capital stock of $5,000,000 and first mortgage bonds outstanding amounting to $2,500,000. About 1898 it
acquired all the stock (50,000 shares) of the Edison Electric
184 Illuminating Company of Brooklyn, issuing therefor bonds
secured by a purchase money mortgage for the sum of
$5,176,000. The property of the Edison Electric Illuminating Company of Brooklyn was taken subject to a mortgage securing outstanding bonds amounting to $4,275,000, making the aggregate of the outstanding stock and bonds of the two companies $16,951,000, as follows:

Capital Stock, Kings County Electric Light and Power Company	$5,000,000 00
First Mortgage 5% Bonds Kings County Electric Light and Power Company	2,500,000 00
Purchase Money 6% Bonds Kings County Electric Light and Power Company	5,176,000 00
4% Bonds Edison Electric Illuminating Company	4,275,000 00
Total	$16,951,000 00

Properties:

The property of the Kings County Electric Light and Power Company, exclusive of special franchises, is thus set forth in its statement to the Department of Taxes and Assessments of The City of New York in March, 1901:

Total value of real property other than special franchises		$1,200,000 00
Total value of personal property, exclusive of stock of Edison Electric Illuminating Company	$8,884,464 38	
Less stock Edison Electric Illuminating Company taken at	5,175,870 00	
		3,708,594 38
Total		$4,908,595 38

The combined property and construction accounts of the companies on December 31, 1904, amounted to $14,315,472.63, which
is claimed to represent cash invested.
185 The companies claim to hold four special franchises origin-
ally granted upon specific conditions to the Citizens' Illuminating Company of New York, the Municipal Electric Light Com-

pany, the Kings County Electric Light and Power Company and the Edison Electric Illuminating Company of Brooklyn, respectively. The first two companies named were merged into the Edison Company.

Income, Expenses and Profits:

The Kings County Electric Light and Power Company leases its plant to the Edison Electric Illuminating Company, which operates it in conjunction with its own and out of the gross earnings of both plants pays all expenses, including interest upon the funded debt of both companies, and pays over the net earnings of its operations to the Kings County Electric Light and Power Company.

The income account of the Edison Electric Illuminating Company of Brooklyn, for the year 1904, shows:

Total gross earnings		$2,507,813 21
Income from rentals, etc		5,346 28
Total income		$2,513,159 49
Operating, maintenance, renewal and general expenses	$1,050,254 65	
Taxes and insurance	165,350 00	
Interest on loans, legal expenses and accident damage claims	18,919 66	
Doubtful accounts written off	11,574 63	
		1,246,098 94
Net earnings		$1,267,060 55
Interest paid on funded debt of $11,951,000, as follows:		
Edison 4% bonds	$171,000 00	
186 Kings County 5% bonds	125,000 00	
Kings County 6% bonds	310,560 00	
		606,560 00
Surplus after payment of interest		$660,500 55

This surplus of $660,500.55, after paying interest upon the entire funded debt, was transferred to the Kings County Electric Light and Power Company, whose income account for the same year is as follows:

Net earnings of Edison Company transferred		$660,500 55
Interest on guaranty fund, deposits, etc		46,927 00
Total		$707,427 55
Dividend 2% (issued stock, $3,750,000):		
March 1, 1904	$75,000 00	
June 1, 1904	75,000 00	
September 1, 1904	75,000 00	
December 1, 1904 (increased stock)	96,508 00	
		321,508 00
Net surplus after paying interest and dividends		$385,919 55

The accumulated surplus, after paying interest and dividends, at the end of the year 1904 was $1,047,704.68.

The amount of current sold to consumers in the years 1903 and 1904 is as follows:

	1903.	1904.
Current sold..........	32,205,831 kw. hrs.	35,062,019 kw. hrs.

187 The income from current sold during these years and cost per kilowatt hour are as follows:

	1903.	1904.
Income per kilowatt hour sold......	9.46 cents.	8.80 cents.
Operating expenses	4.9938 "	4.3163 "
Net earnings	4.46 cents.	4.38 cents.

The amount paid in interest and dividends and remaining net surplus per kilowatt hour sold for the years 1903 and 1904, are as follows:

	1903.	1904.
Interest	2.7955	2.2219
Dividends	1.0946	1.1777
Surplus after paying interest and dividends	.58	.99
Total net earnings.........	4.46	4.38

Prior to January 1, 1905, the retail schedule of the Edison Electric Illuminating Company of Brooklyn involved a gross charge of twenty cents per kilowatt hour upon which discounts were allowed in proportion to the average total use of the consumers' installation. Since January 1, 1905, a retail schedule has been put in effect, making a minimum charge of fifteen cents per kilowatt hour for the first two hours' average daily use and reduced charges, the rates being substantially the same as those charged in the retail schedule by the New York Edison Company. The wholesale charges of the Brooklyn Company vary somewhat from those of the New York Edison. Thirty-six per cent. of the total revenue from commercial customers is under the retail schedule.

The Kings County Lighting Company (formerly Kings County Gas and Illuminating Company) operates in the Eighth, 188 Thirtieth and Thirty-first Wards of the Borough of Brooklyn and in the Borough of Queens.

The Brooklyn Borough Gas Company operates in the Thirty-first Ward of the Borough of Brooklyn (Coney Island, formerly the Town of Gravesend).

The Newtown and Flushing Gas Company operates in the Third Ward of the Borough of Queens, commonly known as Flushing. In July last it was merged with the New York and Queens Gas Company.

The Queens Borough Gas and Electric Company operates in the Fifth Ward of the Borough of Queens and in the Town of Hempstead, including the unincorporated Villages of Inwood, Cedarhurst, Woodmere and Lynbrook, and the incorporated villages at Lawrence and East Rockaway.

The New York and Queens Electric Light and Power Company also operates in the Borough of Queens.

The New York and Richmond Gas Company and The Richmond Light and Railroad Company operate in the Borough of Richmond.

These companies do business for the most part under widely different conditions from those which obtain in the more congested portions of the City. Many of them have resulted from the merger of a number of small companies through which franchises are claimed. Their financial condition and the result of the operations for the past year are shown by statements which appear in the record. It is not necessary to present a summary of these statements in this report. It should be said, however, that as in the case of the other companies the claims of franchises should be subjected to judicial scrutiny, to the end that none of them should be longer allowed to exercise rights in the streets or highways to which they are not lawfully entitled. It is also important that these companies as well as the others should be brought under a comprehensive system of supervision as hereinafter recommended.

189 Municipal Lighting.

In 1903, in accordance with a provision of the proposals for bids, the Commissioner of Water Supply, Gas and Electricity referred the bids for city lighting to the Board of Estimate and Apportionment calling attention to the absence of competition and to the charges for gas and electric lighting in The City of New York as compared with those which obtain in other cities, the conclusion being reached that the charges in New York were grossly excessive. The Board of Estimate and Apportionment appointed a Committee consisting of the Mayor, Comptroller and the President of the Board of Aldermen, which reported to the Board of Estimate and Apportionment in December, 1903. In this report the Committee among other things said:

"The prices bid for open flame gas lamps range from $12 per lamp per year, bid by the New Amsterdam Gas Company, a subsidiary of the Consolidated Gas Company, to $22 bid by the Central Union Gas Company, and $24 by the Northern Union Gas Company (both companies under the control of the Consolidated Gas Company), and $25 by the Newtown and Flushing Gas Company, Queens Borough Gas and Electric Company and Newtown Gas Company. The greatest number of open flame gas lamps in the city is, however, supplied by the Consolidated Gas Company at $17.50 and the Brooklyn Union Gas Company at $16 per lamp per year. These same prices have prevailed for many years, and while the wide range in charges may be accounted for to some extent by local conditions in different districts, the price in each district seems to be arbitrarily fixed by the company operating therein. There is no district where more than one independent company operates.

"The Consolidated Gas Company bids for 1903 for open flame lamps $17.50 per lamp per year, agreeing to furnish 22 candle power gas through a burner consuming three cubic feet per hour at a pressure not less than one inch. In the year 1882 the Metropolitan Gas Light Company, since absorbed by the Consolidated Gas Company, bid for such lights $17.50 per lamp per year, agreeing to furnish gas of from twenty to thirty candle power, through a burner consuming three cubic feet an hour at a pressure of not less
190 than one inch. In the year 1882 the lowest price charged
to private consumers in the Borough of Manhattan was $2.25 per 1,000 cubic feet. During the past twenty years the cost of manufacture has been greatly reduced and the price charged to private consumers in this borough is to-day $1 per 1,000 cubic feet. It is also difficult to see why the price bid in Manhattan should be above the bid of the Brooklyn Union Gas Company for the same service in most of the Borough of Brooklyn, where illuminating gas is sold to all private consumers at the same price as in Manhattan. On the other hand, for mantle lights the price named in Manhattan is $29 per lamp per year, while the corresponding bid in Brooklyn is $31.

"A proper adjustment in prices for mantle lights with a more extended use would, in our opinion, result in marked improvement in street illumination. We are in a position to state that such improvement can be attained, and that the leading gas companies will cooperate to that end. The Consolidated Gas Company, with its subsidiary companies, at present maintains in the Borough of Manhattan and The Bronx between nineteen and twenty thousand open flame gas lamps, and somewhat less than five thousand incandescent gas mantle lamps. A mantle lamp, while consuming less illuminating gas, gives out three times as much light as the open flame burner. General use of the latter is consequently poor economy. If all the open flame burners in the boroughs of Manhattan and The Bronx were changed to mantle lamps, and the Consolidated Gas Company were given a contract for supplying 22,500 and upward of the latter, that company would materially reduce the price now bid for such lights. It may also be practicable to have the gas company supply the illuminant alone, and leave to open competition the maintenance of the lamps themselves. By changing to mantle lights, the illumination to our gas-lit streets can be more than doubled at a comparatively slight increase over the present cost. Power to make a long term contract, as previously recommended, would facilitate such a change and enable the City to secure the most favorable terms.

"The charge for 2,000 candle power electric arc lamps in Manhattan and The Bronx is $146 per lamp per year. This is far above that which is charged in other cities in the United States for the same service. There are 5,050 arc lamps in service in Manhattan and The Bronx—2,234 are served by overhead wires and 2,816 are upon underground system. The same prices are bid for
191 lamps on both systems. The prices bid for electric lighting
of public buildings are also higher than the City should be compelled to pay. The New York Edison Company charges on the average 10.15 cents per kilowatt hour. The City is undoubtedly the

largest consumer of that company, but does not receive as favorable terms as certain other customers in the Borough of Manhattan. We are informed that the Edison Company is supplying current to some of their private consumers at from one-half to one-third the above rates. These consumers, of course, have the option of obtaining current from their own plants if the Edison rates are not made satisfactory—an option which the State Legislature ought certainly to grant to the City.

"The Edison Electric Illuminating Company of Brooklyn bids $124.50 per year for a 1,200 candle power lamp and 14 cents per kilowatt hour for incandescent lighting in the public buildings.

"In every borough of the city the prices for electric lighting are, in our opinion, unreasonably high. We are unable to report that under existing conditions any of the lighting companies are willing, materially, to reduce their claims or charges for lights supplied during the present year, or that upon re-advertisement of the same proposals lower prices will be bid for lights furnished the City.

"We concur in the Commissioner's recommendation that all bids received for 1903 public lighting be rejected, with this modification: that we recommend the acceptance of the lowest bid for open flame gas lamps, viz., that of the New Amsterdam Gas Company, at $12 per annum.

* * * * * * *

"We are firmly of the opinion that a city official is not justified in accepting a bid merely because the statutory requirements as to public advertisement have been complied with. The theory that the lowest competitive bid affords a practical test of what is a fair and reasonable price falls to the ground when there is no real competition. When a fair price for an article cannot be reached, or even indicated by actual competition, the sum the City is to pay should be settled after investigation into the cost of production and delivery of the commodity supplied.

"Under section 149 of the Greater New York Charter the Comptroller has power to settle and adjust all claims against the City, and through his ability to subpœna witnesses and compel them to testify under oath he has ample facilities for testing the correctness 192 of any claim which may be filed with him. The companies which have provided public lighting during the current year should file their claims with the Comptroller. Any company feeling aggrieved by his decision can doubtless recover by suit what it may be reasonably entitled to receive.

"While these various questions have been under discussion, the Comptroller has been ready and willing to pay eighty per cent, of all gas bills and sixty per cent. of all electric lighting bills without prejudice to the City or to the companies.

"In view of the recommendation made by this Committee to-day, to the effect that the bid of the New Amsterdam Gas Company for $12 per lamp per year be accepted as the standard for open flame gas lamps, it is recommended that the Comptroller limit his payments on account, so far as open flame gas lamps are concerned, to

$12 per lamp, pending the adjustment of the question in dispute between the City and the companies.

"We again urge the recommendation made to the Legislature last March, that section 530 of the Charter be so amended that the Commissioner of Water Supply, Gas and Electricity may make lighting contracts without public letting for a term not exceeding five years, when authorized by the Board of Estimate and Apportionment so to do, and also that a bill be passed empowering the City to establish and maintain an electric lighting plant for public purposes."

This report was adopted by the Board and the bids, with the exception of the bid of the New Amsterdam Gas Company (which was made in accordance with the provisions of the franchise granted to the Equitable Gas Light Company, one of its constituent companies), were rejected.

The then Commissioner of Water Supply, Gas and Electricity went out of office at the end of 1903, and his successor advertised for bids for city lighting in March, 1904. When the bids were opened they were found, with the exception of mantle gas lights in the Boroughs of Manhattan and The Bronx, to be substantially the same as those of former years. In the case of mantle lamps in the two boroughs there was a provision for a price of $24.75 per lamp on the basis of an order for 22,500, this being a substantial reduction from former prices. It was contemplated that by changing open flame
193 gas burners to mantle lights, which was highly desirable, the minimum order required to secure the low rate could be given, and this bid, upon the recommendation of the Board of Estimate and Apportionment, was accepted. The other bids, covering electric lighting in all the boroughs and gas lighting in the boroughs other than Manhattan and The Bronx, remained in abeyance, and in August, 1904, the then Commissioner of Water Supply, Gas and Electricity requested a report from the engineer of his department, which was duly made. In this report the subject of city lighting was carefully considered and the charges contrasted with those made elsewhere, and it was recommended that the bids should be rejected.

Notwithstanding this report and despite the formal action of the Board of Estimate and Apportionment in December, 1903, disapproving substantially similar bids, and although the matter, by reason of the well-considered opinion that the bids were excessive, had been permitted to remain long in abeyance, the then Commissioner of Water Supply, Gas and Electricity, on October 31, 1904, signed all the pending contracts at the prices bid. This was done without consultation with either the Mayor, the Comptroller, the Corporation Counsel or any officer outside his own department and, according to his testimony, upon his sole responsibility. At the same time the back bills of the company for light furnished in 1903 and 1904, at the prices named in their bids for those years, were certified by the Commissioner and forwarded to the Comptroller for payment. It is claimed by the Commissioner that he took this action because he had negotiated a contemporaneous agreement for a reduction in the prices for 1904 of electric current furnished by the New York Edison Company, the United Electric Light and Power

Company and the Brush Electric Illuminating Company, and for a waiver of interest upon back bills. The reduction stated was evidenced by letters under the same date as the contracts and was as follows:

"Underground 2,000 c. p. lamps from $146 to $140 per lamp per annum.

"'Overhead 2,000 c. p. lamps from $146 to $130 per lamp per annum."

194 These reductions applied to about 3,929 lamps out of a total of about 12,709 lamps, and amounted to about $43,000 a year. The letters evidencing this agreement were not forwarded to the Comptroller with the contracts, but were subsequently submitted to him when called for, pursuant to a conversation with an officer of one of the companies in which the Comptroller was apprised of their existence. The Comptroller requested that the agreements should be put in formal shape, and as a result, under date of December 3, 1904, supplemental agreements to this effect were executed.

The Commissioner of Water Supply, Gas and Electricity obtained no documentary evidence whatever of any arrangement to waive interest upon the back bills of any of the companies, nor was there any reference to such waiver even in the letters which were exchanged on October 31, 1904, or in the formal contracts subsequently executed. On the contrary, these contracts, providing for the reduction above stated, recited that the reduction was made in consideration of the payment of the back bills, without any suggestion of a release of interest where interest was collectible.

The Comptroller undertook to negotiate a release of interest in consideration of the payment of back bills, but in deference to this public sentiment, which was strongly opposed to the payment of the back bills without contest and to the signing of the contracts by the Commissioner of Water Supply, Gas and Electricity, the Comptroller finally refused to pay the back bills and negotiations were abandoned. It is understood that the companies have taken the position that their contracts for 1904 are in effect and that the reduction in the case of certain arc lamps, as above stated, has not become effective by reason of the failure of the City to furnish the agreed consideration. It is claimed by the City officials that the agreement for the reduction in the case of the three companies was a part of the transactions embracing the signing of the contracts and that the City is not bound by the latter. It will be noted, however, that in the case of the contracts with all other companies, apart from these three, there is no conditional stipulation for reduction and no appropriate evi-
195 dence of any agreement affecting their terms. And it is also apparent that the reduction in the prices of the three companies was insignificant in comparison with the total amount called for by the contracts signed.

The action of the Commissioner in signing the contracts for 1904 deserves strong condemnation, and has resulted in greatly embarrassing the City in its opposition to the payment of exorbitant prices. The Mayor has disapproved the action of the Commissioner, and by his orders the bids for similar prices for the year 1905 have been rejected.

Conclusions.

Prices of Gas, Pressure and Quality:

From the evidence which has been presented we are satisfied that a price of seventy-five cents per thousand cubic feet will be fair to the consumer and will afford to the companies, after allowing the proper costs for manufacture and distribution, taking into consideration all the elements of such cost, a reasonable return upon their capital investment in their gas making business. This applies to the Borough of Manhattan, the Borough of Brooklyn and a large part of the Borough of The Bronx. In our opinion it would not be just to make such a rate applicable to the more sparsely settled sections of The City of New York, in which, owing to local conditions, the cost of manufacture and distribution is necessarily higher.

The investigation has shown clearly that by increasing the pressure a quality of gas poorer than the standard required by law may be made to furnish a required degree of illumination, thus entailing an increased consumption at an increased cost to the consumer. In order that the consumer may benefit by the reduction of the price of gas, it is important that the degree of pressure should be effectively regulated. The evidence has also shown that there is at present no official inspection in any borough of the city except Manhattan, and that the inspection in the last named borough is too infrequent to be adequate. Provision should be made for a system of inspection insuring a supply of pure gas in accordance with the legal standard and its accurate measurements at the meter. This inspection should be made by officials of the City at the City's expense.

196 Price of Electric Current:

We are also satisfied that electric current can be furnished for light, heat and power purposes at a maximum price of 10 cents per kilowatt hour for the current actually consumed, and that this rate will permit a proper return to the companies, over and above all elements of cost, upon their actual investments in the business. We also think that there should be an adequate system of inspection, particularly of meters, so as to assure a charge only for the actual current furnished.

Municipal Lighting:

At the time the resolution for this investigation was introduced in the Senate, the fact that contracts had been signed for municipal lighting for 1904, had but recently become public. Since that time, the action of the Commissioner in signing the contract has been disapproved and the City has taken the position that the contracts are not binding upon it. It has also refused to accept the bids at similar prices for the year 1905. The question of the City's liability for lights furnished in the years 1903 and 1904 is now before the courts. In our judgment there is nothing, so far as the past is concerned, requiring legislative action.

As to the future, the price to be paid for gaslights may properly be left to the action of the City's officers.

With regard to electric current for arc lamps, however, we are of the opinion that the price per lamp of the inclosed arc lamps for street lighting of 2,000 candle power, consuming at the arc 450 watts of electric current, should not exceed $100 per lamp per year; and that the price of twin lamps, that is, two lamps suspended from a single post and consuming each 250 watts at the arc, should not exceed $65 each per lamp per year.

We are also of the opinion that the City should be given authority to utilize water power now owned or hereafter acquired by it for the purpose of generating electric current for the use of the municipality, provided that no additonal water shall be used for said purposes than would otherwise be required by the City. We are advised
197 that there will be no difficulty in utilizing the water-power of the City for the purpose of generating electric current for its use without increasing the total consumption of water by the City.

Franchises:

As had been noted, serious questions are presented to the extent to which the companies are entitled to use the streets of the city. This is a matter peculiarly within the control of the City authorities, and the validity of the franchises that are claimed is a subject for judicial determination. No action by the Legislature is recommended, as the laws already in force, if properly invoked by the local authorities, are adequate to meet the demands of the situation.

Supervision of Public Service Corporations:

It is manifest that the conditions disclosed by the testimony make it necessary that the operations of the companies supplying gas and electricity, as well as those engaged in other public service, should be the subject of constant and effective supervision by a body paid by the State and clothed with power to execute its orders, subject to suitable review by the courts upon appeal. The gross abuse of legal privilege in over-capitalization and in the manipulation of securities, for the purpose of unifying control and eliminating all possible competition, shows clearly that there can be no effective remedy by general legislation or through ordinary legal proceedings, and that for the protection of the public there should be created a commission with inquisitorial authority, competent to make summary investigations of corporations, to supervise issues of securities and investment in the stocks or bonds of other companies, to regulate rates and to secure adequate inspection, and otherwise to enforce the provisions of law. The history of the subway companies affords an apt illustration of the futility of carefully phrased contracts executed in pursuance of express legislation in the absence of an effective scheme for regulation. The failure of general provisions prohibiting the consolidation of corporations is conspicuously shown

by the manner in which the provisions of the charter of the
198 New York Mutual Gas Light Company and the Act of 1886
regarding the Standard Gas Light Company has been evaded. The investment of millions in securities earning no dividends and intrinsically worthless solely for the purpose of securing monopoly control points to the necessity of strict supervision in this regard. The plan of providing a commission paid by the State and invested with ample power has worked most satisfactorily in other States, and there is every reason to believe that a similar plan put in operation here will prevent a recurrence of the mischiefs revealed in this investigation.

Specific Recommendations:

We therefore recommend—

(1) That the price of gas sold in the Boroughs of Manhattan and Brooklyn and in that part of the Borough of The Bronx west of the Bronx river should be fixed at a maximum of seventy-five cents per thousand cubic feet.

(2) That the pressure of gas in any of the street mains should not be permitted to exceed 2½ inches or to be less than 1 inch.

(3) That the standard of purity and of illuminating power of gas be fixed.

(4) That a proper system of inspection be provided to secure the enforcement of the law with reference to pressure, purity, illuminating power and accurate measurement of gas delivered.

(5) That the price of electric current for heat, light and power purposes in the Boroughs of Manhattan and Brooklyn and in that part of the Borough of The Bronx west of the Bronx river, should be fixed at a maximum of ten cents per kilowatt hour of current actually consumed and that provision should be made for inspection to secure accurate metering.

(6) That the price of arc lamps for street lighting in the City of New York should be fixed at $100 per lamp per year for single arc lamps of 2,000 candle power, consuming 450 watts at the arc, and that the price of twin arc lamps, consuming 250 arcs each at
the arc, should be fixed at $65 each per year.

199 (7) That the City of New York be given authority to
utilize water power, now owned or hereafter acquired by it, for the purpose of generating electric current for the use of the municipality, provided that no additional water shall be used for said purposes than would otherwise be required by the City.

(8) That provision should be made for the creation of a commission, the members of which should be appointed by the Governor, with the consent of the Senate, to be paid by the State and to have general supervision of all persons and corporations having authority to lay or erect and maintain wires or pipes for the purpose of furnishing gas or electricity for light, heat or power, with power to investigate and ascertain the character of the service and reasonablenesss of charges, and the methods employed in manufacture and distribution, and in the maintenance of works and distributing systems, and to enforce the provisions of law applicable thereto; to

prescribe methods of keeping accounts; to examine the corporations under its supervision; to require annual reports; to examine books and papers and compel their production; to subpœna witness and to take testimony; to supervise issues and increases of securities, investments in the stocks or bond of other companies, and transfers of franchises, and to regulate rates within the limits prescribed by law. It should be provided that the orders of said commission, on confirmation by the Supreme Court at Special Term, should be enforcible by punishment for contempt in case of disobedience.

Bills to carry out these recommendations will be presented.

Respectfully submitted,

FREDERICK C. STEVENS,
Chairman,
ALFRED R. PAGE,
JAMES K. APGAR,
GEORGE B. AGNEW,
EDWIN A. MERRITT, Jr.,
Committee.

Dated Albany, New York, April 29, 1905.

200 Circuit Court of the United States, Southern District of New York. The Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney-General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederic E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants. (In Equity.) Answer of the Defendant, The City of New York. John J. Delany, Solicitor for Defendant, The City of New York. No. 2 Tryon Row, Manhattan. William P. Burr, Counsel. U. S. Circuit Court, Southern District of N. Y. Filed June 4, 1906. John A. Shields, Clerk.

201 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY
against
JULIUS M. MAYER, as Attorney General; WILLIAM T. JEROME, as District Attorney; FREDERIC E. GUNNISON, and Others, Constituting the N. Y. State Commission of Gas, etc., and THE CITY OF NEW YORK.

LACOMBE, *C. J.:*

The parties to this suit are all citizens of the State of New York, but the main contention—practically the sole contention—of the complainant is that certain statutes of this state and an order of the Gas Commission are obnoxious to various provisions of the Constitution of the United States and for that reason void. This Court, therefore, from which appeal lies direct, without review by any intermediate tribunal, to the Supreme Court of the United States, not only has jurisdiction, but is the appropriate *forum,* because through a suit brought here a final decision by the ultimate interpreter of that constitution can be most quickly obtained.

This is a motion by the complainant for a continuance of the temporary injunction which was issued as the condition of an adjournment asked for by defendants, and also for an enlargement of the terms of such injunction. It is in no sense a hearing 202 upon the merits of the issues presented. The fundamental propositions in dispute involve many controverted questions of fact and it is the practice of this court not to resolve such questions upon affidavits, but to reserve them for final hearing, where every sworn statement comes to the court, not *ex parte*, but after the test of a cross-examitation.

The matters to be passed upon here and now can be most tersely and quickly presented by an analysis of the injunction order already made.

1. In entering that order the Court did not find, nor did it express, nor even intimate an opinion that the action of the Gas Commission in fixing the price to be charged for gas at 80 cents per 1,000 feet was confiscatory, nor that the Act of the Legislature establishing the same price (Chap. 125 of 1906) was in that respect unconstitutional and void. It did not undertake to abrogate or nullify that provision of the statute. As between the consumer and the manufacturer it left the question as to what the former should pay to the latter precisely where it stood before. Any consumer who might be asked to pay the old rate was left by the order entirely free to decline to pay it, and to make a tender at the new rate for the gas he had consumed. Naturally so, because (except for the City of New York, whose situation is exceptional) the individual consumer was not a party to the suit and had not been served with process. In the case of a consumer, who upon demand chose to pay the old rate, the order provided that the Company should not cover the 20 cents difference into its treasury, but should leave it impounded under direction of the court, so as fully to ensure its return to the person paying the same, in the event of the Company's failing to succeed in its litigation. In the case of a consumer who chose to make tender at the new rate, and to stand upon whatever rights were secured to him by the action of the Gas Commission in fixing that rate and by the action of the Legislature in establishing the same rate, the order left him entirely free 203 and untrammeled to apply for such relief as the law afforded him in the event of the company's seeking to compel payment of the difference. It was not perceived when the order was made nor is it perceived now upon what theory this court could by an injunction restrain any individual who was not a defendant and had never been served with process from himself applying to an appropriate court, if he should conceive himself to be aggrieved. What relief he might obtain when he so applied would be for that court to determine when it heard his application.

The order did, however, provide that the Gas Company might charge or demand payment at the old rate, and might collect that rate from such as chose to pay and it enjoined the defendants,—

who are public officers and as such, the proper persons to institute and prosecute actions to enforce and recover certain statutory penalties—from in any way *enforcing or attempting to enforce* two acts of the legislature and an order of the Gas Commission, or any of the provisions thereof, against the complainant, until it should have its day in court, upon such a case as it might be able to make, to question the constitutionality of that order and of those acts.

The reason why it was thought that a court of equity, irrespective of any question of the merits of the controversy as to the propriety of the new rate, should upon mere inspection of the statutes themselves, grant such temporary relief will be apparent upon the statement of a few elementary propositions of law and an analysis of certain provisions of those statutes.

A corporation which undertakes, for its own emolument, to supply gas to the inhabitants of a municipality under charters and franchises from the State which allow it to embark in such industry and invite its stockholders to invest their money therein, is engaged in what is called a "public service" or a "public utility," and therefore is under the supervision, inquisition and regulation of the State as to the manner in which it conducts its business. If, untrammeled by competition, it charges a price far above all
204 reasonable cost to the helpless consumer, who must pay that price or go without, while it receives an exorbitant return on such of its property as is invested in the enterprise, the State may step in and reduce that price to such sum as will, taking everything into consideration, be a reasonable return upon what has been adventured in the enterprise on the faith of the State's franchises. No one disputes this proposition.

But in fixing such price the State should itself be fair and reasonable—should certainly stop short of confiscation. If it were established by uncontroverted proof that, in materials, labor and wear and tear of plant at the lowest conceivable valuation, the actual cost of producing gas of a proper standard in the holders was 50 cents per 1,000 cubic feet, it would be confiscation for the State to require the manufacturer to deliver such gas to all consumers at 5 cents per cubic foot. Such an Act of the Legislature would be obnoxious to the Constitution of the State, to the Constitution of the United States, and to common rights and justice. There may be persons who dispute this proposition, but it may safely be assumed that it is accepted by every community which lives under law and not under anarchy.

These are the two extremes, and somewhere between them there lies a dividing line. Who is to determine where that dividing line lies? Under our system of government that question has always been left to the decision of the courts. Reagan *v.* Farmers' L. & T. Co. 154 U. S., 362. Smyth *v.* Ames, 169 U. S., 466. Every individual, who feels himself aggrieved either by the action of some other individual, or of the State or the Nation is secured the right to bring his grievance before some court. It may be a court of law or of equity, a court established by a statute or by a constitution, a state court or a federal court, but somewhere or other there is provided for him a forum to which he can present his case, can support it by proof and have his hearing. That is "due process of law," a heritage from long centuries of struggles which this nation and its constituent states have deposited in the corner stones of their 205 written constitution. Every one is entitled,—sometime, somewhere,—to his "day in court." The most swollen aggregation of capital, crystallized into an individual by the act of the state or national government which has made it a corporation, is as much entitled to have free access to the courts as is the humblest toiler by night to whom every additional cent, disbursed for the light he works by, means a shrinkage of his food supplies.

There are two statutes dealing with the matter now in controversy. Neither of them in express terms undertakes to deny the complainant access to any court to test the merit of the contention it makes, viz: that the new rate is confiscatory and that, therefore, the old rate should be paid. But there are two sections in those acts which challenge consideration. In the Gas Commission Act (Chap. 737 of the Laws of 1905) we find:

"SEC. 21. *Defence in Cases of Excessive Charges.*—If it be alleged and established in any action brought in any court for the collection of any charge for gas or electricity, that a price has been demanded in excess of that fixed by the commission or by statute in the municipality wherein the action arose, no recovery shall be had therein, but the fact that such excessive charges have been made shall be a complete defence to such action." In the Act which provides that companies furnishing gas in the Borough of Manhattan "shall not charge or receive for gas manufactured, furnished or sold * * * a sum per 1,000 cubic feet in excess of * * * 80 cents," we find the following:

"SEC. 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of $1,000 for such offense to the people of the state."

The drastic character of these provisions will be perceived when their results are considered. If the Gas Company, pending the final determination of a suit such as this to determine whether the legislature has fixed a just and proper price, should charge its 206 consumers the lower rate and receive the same without protest or demand of payment at the higher rate, it could never recover the difference even should it be decided by the court of last resort that it was entitled to demand such higher rate. Having delivered its product for the particular month and received the amount it asked for such product, that transaction would be finally closed; both parties having agreed upon the price, without any reservation, it would be the contract price for that month's delivery, which the seller could not thereafter dispute. If it should take two or three years to get a final decision on the merits, the twenty cents difference of rate, all claim to which during the interim the Company had thus abandoned, would concededly amount to several million of dollars. Should the company ultimately prevail in the test suit, this would be an enormous fine to pay for the privilege of having its day in court. It could escape that fine only by demanding, on presentation of each monthly bill, payment at the higher rate preserving its claim to the difference (whenever the lower rate was paid and received) by a protest which would reiterate the demand. The statute (Chap. 737 Laws of 1905) undertakes effectually to close up that avenue of escape.

Ordinarily when there is a dispute between the seller and buyer as to the rate to be paid for anything the question is settled by the seller bringing suit for the price of what he has sold calculated at the higher rate. The statute, however, practically undertakes to debar the company from bringing any such suits against its customers. The twenty-first section (quoted *supra*) provides that if in any action brought to collect any charge for gas it shall appear that a price has been demanded in excess of the rate fixed by the Gas Commission or by statute, that fact shall be a complete defense to the action—to the whole action, not only to so much of it as seeks to collect the excess, but also to so much of it as seeks to collect the amount concededly due. Now, whenever the seller of any-
207 thing verifies a complaint to be used in an action at law which asserts that he is entitled to receive and asks to recover a sum of money, he may fairly be said to be preparing to make a demand therefor; and the moment he serves such complaint upon the buyer he has indisputably made such demand. But the statute says that the mere making of such a demand shall constitute a complete defense. It other words, if the statute is valid, the cause of action, which the plaintiff may think it has, is slaughtered at the very moment it sets foot within the halls of justice. The merits of the controversy as to what rate should be charged will never be litigated in that action because no defendant would be so foolish as to discuss any such issue, when the mere fact that action is brought relieves him from all payment whatsoever.

The only course left for the Gas Company is to bring some direct suit, such as this, to test the constitutionality of the action of the Gas Commission and of the Legislature in fixing an 80 cent rate, and meanwhile to preserve its rights to the difference by demanding payment thereof, as each monthly bill is presented to each consumer. To close up this avenue of approach to the courts, however, the other act (Chap. 125 of 1906) provides that whenever a manufacturer and seller of gas in the Borough of Manhattan shall charge or receive anything in excess of 80 cents per 1,000 cubic feet it shall, for each offence, forfeit $1,000 to the people of the State, and Sec. 1962 of the Code of Civil Procedure makes it the duty of the defendants the Attorney General and the District Attorney to institute suits for recovery of such penalties. Every time the Company demands payment for gas furnished at the higher rate, every time it receives such payment from any consumer who may be willing to pay temporarily and abide the result of the test suit, it incurs such a penalty. For very many years it has been the custom in this Borough to present monthly bills for gas sold, and it appears from the record that the complainant has upwards of 390,000 customers. The calculation is a simple
208 one. Long before this test suit could be heard next fall, the aggregate of the penalties incurred would utterly wipe out the

entire property of the complainant, whether it were worth the amount found by the Gas Commission, or were worth the highest estimate at which the most astute and experienced financiers might capitalize it.

Commenting upon a statute which prescribed similar cumulative penalties for every charge of more than a certain sum per head for yarding cattle, where a few days' violation of the statute by merely *charging* a higher rate would exhaust the entire value of the property in satisfaction of the penalties incurred, Mr. Justice Brewer, writing the opinion in Cotting *v.* Kansas City Stock Yards Co. 183 U. S. 79 says: "Do the laws secure to an individual an equal protection when he is allowed to come into court and make his claim or defence subject to the condition that upon a failure to make good that claim or defence the penalty for such failure either appropriate all his property or subjects him to extravagant and unreasonable loss? Suppose a law were passed that if any laboring man should bring or defend an action and fail in his claim or defence, either in whole or in part, he should in the one instance forfeit to the defendant half of the amount of his claim, and in the other be punished by a fine equal to half the recovery against him, and that such law by its terms applied only to laboring men, would there be the slightest hesitation in holding that the laborer was denied the equal protection of the laws? The mere fact that the courts are open to hear his claim or defence is not sufficient if upon him alone there is visited a substantial penalty for a failure to make good his entire claim or defence. * * * Suppose a statute providing that every corporation failing to establish its entire claim, or to make good its entire defense, should as a penalty therefor forfeit its corporate franchise, and that no penalty of any kind except a matter of costs was attached to like failures of other litigants, could it be said that the
corporations received the equal protection of the laws?
209 * * * A statute (although in terms opening the doors of
the courts to a particular litigant) which places upon him as a penalty for a failure to make good his claim or defence a burden so great as practically to intimidate him from asserting that which he believes to be his rights is, when no such penalty is inflicted upon others, tantamount to a denial of the equal protection of the laws." In the case cited the judges who concurred in reversing the judgment appealed from did so upon another ground, but the language of Mr. Justice Brewer, *dictum* though it be, commends itself as a clear and forceful exposition of the law.

It is difficult to see in what respect the provisions of the two acts now under consideration differ from those passed upon in the Kansas City Stock Yards case, except that they are perhaps more drastic. On this branch of the case there is no controversy as to the facts, and, under the opinion last quoted, these provisions seem obnoxious to the Fourteenth Amendment to the Constitution of the United States. In order, therefore, to secure to the complainant its right to prosecute this suit to its orderly conclusion, without meanwhile being trammeled—or, as it may be more appropriately expressed, overwhelmed—by multitudinous actions for cumulative penalties, the temporary injunction which restrains the public officers, who are made defendants, and any one else whom the injunction may reach and hold, from *enforcing or attempting to enforce,* the provisions of the acts and order of the Gas Commission against the complainant, will be continued until final hearing and decision of the cause in this court. The judge, who hears the cause upon the merits of the whole case, may find some good reason for modifying the injunction, or even for vacating it, but on the record as it stands now, to this measure of relief the complainant seems clearly entitled.

2. The application to extend the terms of the injunction,
210 so as to enable complainant to collect the 20 cent difference
by summary measures, (such as refusal to supply gas) from such consumers as may not be willing to pay it, to have it impounded and to abide the result of this suit, presents different questions and brings us into a field of controversy upon the facts. However obnoxious the statutory provisions already discussed may be to the prohibitions of the Constitution, it would seem that their elimination would still leave a statute consistent and complete. Provisions hampering the right to question a rate fixed by legislative action are not essential to a scheme which undertakes to fix such rate. "It is familiar law that one section or part of any act may be invalid without affecting the validity of the remaining portion of the statute. Any independent provision may be thus dropped out if that which is left is fully operative as a law, unless it is evident from a consideration of all the sections that the legislature would not have exacted that which is within, independently of that which is beyond, its powers."

Regan *v.* Farmers' L. & T. Co. 154 U. S., 362.

The complainant contends that it should be protected against the irreparable injury it would suffer by reason of its inability after two or three years to collect, in the event of ultimate success, the unpaid differences from a floating aggregate of consumers, some of whom will disappear and others of whom are pecuniarily irresponsible, so that a judgment against them would not be worth the cost of entering it. It is thought that complainant's apprehensions in this respect are exaggerated. On the contrary it seems quite likely that the great bulk of its customers will prefer to pay the small amounts of excess rate demanded each month, when assured that the sums thus paid will remain secure and intact to be repaid upon the termination of the test case, should complainant not succeed therein, rather than to begin a multiplicity of suits to prevent the company from making
its collections in the usual manner. The first two or three
211 months will show how this will be. Meanwhile each individ-
ual is left free to make his election, and a loss, possibly a heavy one, may result, which in the event of final success the company could not recover. This is an argument, which has always appealed most strongly to courts of equity, and there are abundant authorities to support the proposition that pending the decision of a doubtful question the *status quo,* proper security being exacted, should be preserved. But the courts in all such cases also take into consideration what is the character and measure of the doubtfulness. Here the state, which concededly has the right to fix a proper rate,

has prescribed a rate, whose propriety is challenged. *Prima facie* it is to be presumed that the state's rate is a proper one, and the burden is upon the complainant to show that it is not. If we are correct in the assumption that the penalty clauses already discussed are not an essential part of the statute without which it would be abortive, then the question of the propriety of the rate can only be decided upon a careful and exhaustive examination of many facts and deductions therefrom some of which will certainly be controverted. In the Kansas Stock Yards case, which is mainly relied upon, the fundamental vice of the statute was that it undertook to provide that the owner of a single stock-yard should charge only a named sum for each head of cattle while the owners of all other stock-yards in the state and there were several of them might charge what they pleased. That vice could be as clearly demonstrated, by undisputed affidavits, to a court upon application for preliminary injunction as it could be at final hearing. A similar vice is alleged to inhere in the later Act (of 1906) fixing the 80 cent rate, which subjects New York City gas corporations to a different rule from that applicable under the Gas Commission Act of 1905 to all the other gas corporations in this State. But if the Gas Commission Act be held to be itself unconstitutional (as complainant with great apparent force, contends here) this argument will not be so persuasive.

212 3. If the only subject of enquiry were the rate fixed by the Gas Commission a different situation would be presented. Under the authorities, in fixing the rate to be charged for "public service" by private corporations two elements of calculation are of fundamental importance. What is the true present value of the property embarked in the enterprise? And what, in view of the risks of the business, is a fair annual percentage of return thereon? That precentage would not necessarily be the same in every variety of business. The manufacture, storage and delivery of a highly explosive material is a more risky business than is the transforming of flour into bread, or of leather into shoes, and the delivery of such products. The Commission reached the conclusion that eight per cent. was a proper return on property invested in the gas business. In estimating the value of the property of complainant embarked in the business the Commission reached the conclusion that the franchises, under which it has laid mains and is delivering gas and which are a part of its property, should be considered as of no value whatever, although the State through the action of its taxing officers has declared that it is worth several millions of dollars. It is suggested that some of these franchises have expired or lapsed in some way. That proposition need not be considered because it is not asserted that all of them have lapsed. The complainant has taken over the franchises of many different corporations granted at different times. So long as a substantial part of these still remain the argument is not affected, except as to details of result. The reason assigned by the Commission for not including the value of the franchises is that "they were granted by the people without compensation." That is so: these franchises were granted very many years ago at a time when there seems to have been no intelligent appre-

ciation of the fact that they might become enormously valuable; when reckless improvidence was the rule and all sorts of franchises were given away without any provision for securing to the
213 State its fair share of unearned increment thereon. Nevertheless when the State offers a franchise to whomever will take it without requiring any money return thereon, and for the sole consideration that the taker shall promptly, continuously and fully develop it by the expenditure of his own money, and such offer is accepted and the terms of the agreement carried out by the taker, there results a contract, which—with due consideration of all proper conditions and limitations inherent in the nature of the particular contract—is as much within the protection of the Constitution as are all other contracts. If the State twenty-five or fifty years thereafter should say to the taker: "We were very improvident in not providing that you should pay us something each year for this franchise; therefore, hereafter you shall pay us eight per cent. annually on $10,000,000 or $20,000,000 or we will evict you from the franchise"—it might find itself embarrassed by the provisions of the Constitution in thus undertaking to avoid the results of its own improvidence.

A franchise, whatever its value may be, which has not expired, nor lapsed, nor been in some way forfeited is property in the hands of its holder. There is force in the argument that when the State says: "We will value this property at several millions of dollars when we tax you on it, but at nothing at all when we fix the rate you may charge for your product in order to receive an eight per cent. return on your property" it is seeking to accomplish by indirect methods what it might not be able to accomplish directly. Moreover it is contended that the Act of 1905 under which the Gas Commission acted is obnoxious to the Constitution for grounds not already discussed apparent on the face of that act itself.

4. But in the case at bar these arguments seem wholly academic. Irrespective of any action of the Gas Commission the Legislature has itself fixed the 80 cent rate, and there is nothing to indicate upon what is predicated such action. For aught that we know it may have reached the conclusion that the Commission was in error in
214 not including the franchises at their taxable value in the estimate of complainant's property; and may, at the same time, have concluded that seven—or six or even five—per cent was a proper return to be received by the owner of such property. This brings us to the fundamental question presented by the pleadings: is the rate, fixed by the legislature, eighty cents, so low as to be unjust or confiscatory? As was indicated at the outset of this opinion, there can be no intelligent answer given to this question until the whole case is presented upon testimony taken, not *ex parte,* but according to the rules for taking testimony in equity causes. Therefore, until the court at final hearing may have the opportunity to pass upon such a record although the existing order is continued its terms will not be enlarged so as to undertake to restrain the actions of individual consumers, who are not parties to this suit and have not been served with process.

York, of February 23, 1906, during the pendency of this suit from in any way enforcing or attempting to enforce the said acts and order, or any of the provisions thereof, against the complainant, and upon reading and filing the *subpœna ad respondendum* herein, dated May 1, 1906, and the bill of complaint herein, verified the same day, and the affidavits of Walter R. Addicks, Robert A. Carter, 218 William H. Bradley and Colin C. Simpson, all verified May 4, 1906, of James A. Bennett, verified May 7, 1906, of Charles F. Dieterich, verified May 3, 1906, of Walton Clark and Emerson McMillin, verified April 30, 1906, of Allen B. Forbes, Charles S. Fairchild, Frank A. Vanderlip, Horace J. Morse and N. Wetmore Halsey, all verified May 4, 1906, of Alexander C. Humphreys, verified May 7, 1906, of Henry S. Redmond, verified May 8, 1906, of Walter R. Addicks, verified May 12, 1906, of Thomas F. Rowland, William H. Bradley, Colin C. Simpson, Alexander C. Humphreys, Robert A. Carter and Walter R. Addicks, all verified June 4, 1906, in support of the said motion, and the answer of the defendant the City of New York, verified June 4, 1906, the joint and several answer of the other defendants herein, verified June , 1906, the affidavits of William D. Marks and John K. Hayward, both verified June 4, 1906, of Frederic E. Gunnison, verified May 31, 1906, together with the printed case on appeal of all the testimony and proceedings of the Commissioners of Gas and Electricity in its investigation upon the complaints against the Consolidated Gas Company referred to in the affidavit of the said Gunnison, of Alfred R. Page, verified June 4th, 1906, of William Hallock, verified June 1, 1905, of James G. Graham, Marvyn Scudder, Peter Deyo and Henry H. Edgerton, all verified June 2, 1906, in opposition thereto, a temporary restraining order having been entered herein on May 18, 1906, and after hearing John F. Dillon, John A. Garver, Charles F. Matthewson and James M. Beck, of counsel for the complainant, in favor of the said motion and Charles E. Hughes, Esq., of counsel for the defendants, Mayer, Jerome, Gunnison, Davies and Shedden, and William P. Burr, Esq., of counsel for the defendant, the City of New York, in opposition thereto, Now, on motion of Shearman & Sterling, the solicitors for the complainant, it is

Ordered:

1. That the provisions of the said temporary restraining order shall continue in full force and effect until final hearing and disposition of this case thereat.

219 II. That payment by the defendant, the City of New York, for gas supplied to it by the complainant, at the rate of seventy-five cents per thousand cubic feet, and acceptance thereof by the complainant, under protest, shall not operate as an accord, satisfaction, waiver or estoppel to the prejudice of either party in any present or future litigation or dispute.

III. In the event of any unreasonable delay on the part of the complainant in the prosecution of this suit, the defendants, or any of them, may apply, upon notice, for an order suspending this injunction.

IV. In case the complainant shall not succeed finally in this suit, the preparation of the papers required for the refund and distribution of the amounts in excess of 80 cents per thousand cubic feet, collected by it from its customers and paid into court, as directed herein, shall be performed by the complainant; and, upon its being shown that refund has been made by it to any consumer, by crediting the amount due him upon any current monthly bill or bills, or otherwise, such amount shall be returned to the complainant week by week or at such shorter intervals as the Court may approve. All customers who shall change their address or remove out of the Borough of Manhattan should notify the Clerk of this Court, or the complainant of such change of address, to the end that any refund to which they may eventually be found to be entitled may be paid to them at their correct address, without the necessity of their calling at the office of the Special Master or of the complainant to collect it.

E. HENRY LACOMBE,
U. S. Circuit Judge.

U. S. Circuit Court Southern District of New York. Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney General of the State of New York, *et al.* Defendants. Injunction Order. Shearman & Sterling, Solicitors for Complainant, 44 Wall Street, New York City. Due service of a copy of the within is hereby admitted June 13, 1906 Robt. C. Taylor Solicitor for Jerome Def't. A copy of the within paper has been this day received at the Office of the Corporation Counsel. June 13, 1906 John J. Dulany, Corporation Counsel. Copy of the within paper received this 13 day of June 1906 Julius M. Mayer, Attorney General. U. S. Circuit Court Southern District of New York. Filed June 16 1906. John A. Shields, Clerk.

220 United States Circuit Court, Southern District of New York.

THE CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of the County of New York; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Replication.

The replication of the Consolidated Gas Company of New York, complainant, to the answer of Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederic E. Gunnison, John C. Davies, and Lucien L. Shedden, constituting the New York State Commission of Gas and Electricity, defendants.

This repliant, saving and reserving to itself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says:

That it will ever maintain and prove this bill of complaint 221 to be true, certain and sufficient in the law to be answered unto, and that the said answer of the said defendants is uncertain, untrue and insufficient to be replied unto by this repliant, without this that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto, and not herein or hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all of which matters and things this repliant is and will be ready to aver, maintain and prove, as This Honorable Court shall direct, and humbly prays as in and by its said bill it has already prayed.

SHEARMAN & STERLING,
Solicitors for Consolidated Gas Company of New York.

Endorsed: United States Circuit Court, Southern District of New York. Consolidated Gas Company of New York, Complainant, against Julius M. Mayer as Attorney General of the State of New York, *et al.,* Defendants. Replication. Shearman & Sterling, Solicitors for Complainants, Consolidated Gas Company, 44 Wall Street, New York City. U. S. Circuit Court, Southern District of New York. Filed Jul- 2, 1906, John A. Shields, Clerk.

222 "United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY
vs.
ATTORNEY GENERAL, THE GAS COMMISSION, and Others.

LACOMBE, *Circuit Judge:*

Replication having now been filed the cause is in condition for the taking of testimony. It is therefore sent to Arthur H. Masten, Esq., one of the Standing Masters of this Court to take the testimony, make all needed computations and fully find the facts, all in conformity to the practice indicated by the Supreme Court in Chicago M. & St. P. R. R. *v.* Tompkins, 176 U. S., 179. The master will also prior to final report, prepare and serve draft report in accordance with the approved practice in this circuit. Since the cause will ultimately go to the Supreme Court, he will be careful in taking the testimony to conform to the practice indicated in Blease *v.* Garlington, 90 U. S., 1. The ninety days allowed by the rules is apportioned as follows: 30 days to complainant, 45 to defendant and 15 to complainant in rebuttal, the time to begin to run from July 15th.

The Master will, when necessary, sit from day to day and hold two sessions a day. There is no reason apparent in the record already presented why the cause cannot be submitted to the master within the time limited. If leading counsel wish to take a vacation during the 90 days they must provide competent junior counsel to attend to the taking of testimony. To expedite matters, either side may read in evidence the testimony of any witness from the record made before the Gas Commission provided that the side so reading shall, upon request of the other side, produce the said witness for further cross-examination."

Endorsed: Circuit Court of the United States for the Southern District of New York. Consolidated Gas Co. *vs.* The Attorney General, The Gas Commission and others. Opinion. Lacombe, C. J. U. S. Circuit Court, Southern District of New York, Filed July 5, 1906. John A. Shields, Clerk.

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223 United States Circuit Court, Southern District of New York.

THE CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of the County of New York; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Replication.

The Replication of the Consolidated Gas Company of New York, Complainant, to the Answer of the City of New York.

This repliant, saving and reserving to itself now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto, says:

That it will ever maintain and prove this bill of complaint to be true, certain and sufficient in the law to be answered unto, and that the said answer of the said defendant is uncertain, untrue and insufficient to be replied unto by this repliant, without this that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto, and not herein or hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all of which matters and things this repliant is and will be ready to aver, maintain and prove, as This Honorable Court shall direct, and humbly prays as in and by its said bill it has already prayed.

SHEARMAN & STERLING,
Solicitors for Consolidated Gas Company of New York.

Endorsed: United States Circuit Court Southern District of New York. The Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney General of the State of New York, and others, Defendants. Replication. Shearman & Sterling, Solicitors for Complainant, 44 Wall Street, N. Y. U. S. Circuit Court Southern District of New York. Filed July 12 1906. John A. Shields, Clerk.

224 At a Stated Term of the Circuit Court of the United States, for the Southern District of New York, in the Second Circuit, held at the United States Court Rooms, in the Post Office Building in the Borough of Manhattan, City of New York, on September 10, 1906.

Present: Hon. E Henry Lacombe, Circuit Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK
against
JULIUS M. MAYER, as Attorney General of the State of New York, and Others.

Order Appointing Special Master.

Issue having been joined in this case on the bill of complaint, answers and replication on July 5, 1906, Now, on the Court's own motion, it is

Ordered:

1. That Arthur H. Masten, Esq., one of the Standing Masters of this Court, be and he hereby is appointed Special Master to take all the testimony herein, and make all needed computations and fully find the facts. The said Master shall, before making his 225 final report, prepare and serve on the solicitors for the parties hereto, a draft of such report. The time for taking testimony before the said Special Master shall be appointed herein as follows: The plaintiff shall have thirty days for the introduction of its *prima facie* evidence, the defendants shall then have forty-five days for the introduction of their answering evidence and the complainant shall then have fifteen days for the introduction of rebuttal evidence. The time shall begin to run from July 15, 1906. Hearings shall continue from day to day, and, if necessary, two sessions shall be held each day.

II. This order shall be entered and filed *nunc pro tunc* as of July 5, 1906.

Enter E. HENRY LACOMBE, *U. S. C. J.*

Endorsed: United States Circuit Court Southern District of New York. Consolidated Gas Company of New York, against Julius M. Mayer as Attorney General of the State of New York, and Others. Order Appointing Special Master. Shearman & Sterling, Attorneys for Complainant, 44 Wall Street, N. Y. U. S. Circuit Court Southern District of New York. *Nunc pro unc* July 5 1906. Filed Sep. 11 1906. John A. Shields, Clerk.

226 Circuit Court of the United States, Southern District of New York.

THE CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC C. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Master's Report.

To the Honorable the Judges of the said Court:

I, the undersigned, one of the Standing Masters of this Court, to whom, by direction of the Honorable E. Henry Lacombe, Circuit Judge, it was, on the 9th day of July, 1906, referred "to take the testimony, make all the needed computations and find fully the facts" herein, do hereby respectfully report that, having been 227 attended by counsel as below stated, I proceeded to take the proofs submitted by the several parties and to hear arguments thereon. The proofs so taken, consisting of nine volumes of printed testimony, pages 1 to 6956 inclusive, and five volumes of printed exhibits, pages 1 to 2771 inclusive, are herewith submitted and filed, together with a stipulation signed by the various solicitors of record, waiving the signatures of the various witnesses to their several depositions and further waiving the filing of the original exhibits marked in evidence.

There appeared before me counsel as follows:

For Complainant: Messrs. John A. Garver, Charles F. Mathewson and Carl A. Mead.

For Defendants Mayer, as Attorney General, and Gunnison *et al.*, constituting the New York State Commission of Gas and Electricity: Messrs. Alfred R. Page, Howard S. Gans and Gustavus T. Kirby; also on the briefs, Messrs. David B. Hill and William A. Deford.

For Defendant The City of New York: Mr. William P. Burr, also, on the briefs, Messrs. William J. Clarke, Edwin J. Freeman and Alfred W. Booraem.

Upon the proofs so taken I find and report as follows:

It is sought in this action to declare illegal and void,

1st. Chapter 736, Laws of 1905, which fixes the price of gas supplied to the City of New York at 75 cents per thousand cubic feet.

2nd. Chapter 737, Laws of 1905, which establishes a Commission of Gas and Electricity, with power, among other things, to regulate the price of gas, fix the standard of its illuminating power and purity when sold for illuminating purposes, and to establish a standard of pressure at which it shall be delivered; also an order made by said commission, on February 23rd, 1906, directing that

the maximum price for gas which shall be charged by the Consolidated Gas Company, in the Borough of Manhattan, City
228 of New York, shall be 80 cents per thousand cubic feet, that
the gas delivered by it shall have an illuminating power of not less than 22 sperm candles of six to a pound, and that it shall be delivered at a pressure of not less than one inch or more than 2½ inches, in any service mains in said City.

3rd. Chapter 125 of the Laws of 1906, which establishes a maximum rate of charge at 80 cents per thousand cubic feet for gas sold in the Borough of Manhattan and certain other portions of the City of New York and requires that the gas so delivered shall be of 22-candle power, as fixed by said Commission, and provides further that the pressure in any service mains in the City of New York, any distance from the place of manufacture shall not be less than one inch nor more than 2½ inches under penalty of $1000 for each offense in case of failure.

Besides other alleged grounds of invalidity specified in the bill, it is claimed that the foregoing Statutes and Order are in contravention of the 14th Amendment of the Constitution of the United States in that they deprive the Complainant of its property without due process of law and without just compensation and deprive it of the equal protection of the laws. The Complainant urges that the rates fixed by said Statutes and Order do not afford a fair and reasonable return upon the value of its property invested in the gas business and that harsh and unusual penalties are exacted for violations of the requirements as to pressure, although such violations cannot be avoided in the reasonable conduct of its business. Other important issues unnecessary to be specified are presented by the pleadings and have been dwelt upon to some extent in the arguments of counsel. They involve questions of law alone and the discussion of such questions is not within the scope of this report, save in so far as may be incidentally necessary in applying the principles according to which the issues of fact are to be determined.

The questions of fact, speaking broadly, are as follows:

229 1. The value of the assets employed in the production and distribution of the gas sold by Complainant.

2. The cost to the Complainant of the production and distribution of gas to the consumer.

3. Whether or not the rate allowed by said statutes and order afford to Complainant a fair and reasonable return upon its investment.

4. The possibility of maintaining at every point and at all times in Complainant's mains a pressure within the limits prescribed by the Statute.

Before taking up these questions the origin and development of the Company may be briefly considered.

Organization and Capitalization of the Company.

The Complainant has an authorized capital of $100,000,000, of which $80,000,000 have been issued. It was organized in November, 1884, by the consolidation of six then existing gas companies, as follows:

New York Gas Light Company, incorporated 1823.
Manhattan Gas Light Company, incorporated 1830.

Metropolitan Gas Light Company, incorporated 1848.
Harlem Gas Light Company, incorporated 1855.
Municipal Gas Light Company, incorporated 1874.
Knickerbocker Gas Light Company, incorporated 1876.

It was originally intended that the New York Mutual Gas Light Company, incorporated 1866, should join in the consolidation but it was prevented from so doing because of a prohibition in its charter. The Statute pursuant to which the consolidation was carried into effect, Chapter 367 of the Laws of 1884, entitled "An Act to authorize the Consolidation of Manufacturing Corporations," authorized corporations consolidating thereunder to form a single corporation which might be capitalized and issue its shares to an amount
230 not exceeding "the fair aggregate value of the property, franchises and rights of the several Companies thus to be consolidated." An appraisal was accordingly made during the Summer of 1884 of the tangible property of the six constituent companies, amounting in the aggregate to $30,052,453.96. Upon revision the final total was reduced to $29,994,000.

The value of the franchises and rights of the constituent Companies was then estimated at $7,781,000, said sum being by agreement between the Companies apportioned among them in proportion to their respective sales of gas.

The amount of the capital and assets of the Complainant as of June, 1884, exclusive of working capital in the shape of cash, accounts receivable and current supplies, was made up as follows:

Real Estate	$10,332,000
Plant	12,175,000
Mains	5,217,000
Services	1,005,000
Meters	1,195,000
Office Furniture & fixtures	70,000
	$29,994,000
Franchises & Rights	7,781,000
	$37,775,000

The figure at which these assets were acquired by the Complainant company and upon which its books were opened, was accordingly $37,775,000; although the authorized capital of the Company was fixed at $39,078,000, upon the basis of the actual market value of the shares of the constituent Companies at that time, leaving a balance of $1,303,000 to provide working capital.

Stock to the aggregate of $37,775,000 was thereupon issued in purchase of the assets of the six constituent Companies, appraised as above stated, except that $2,329,000 were retained in the treasury of the complainant company to retire obligations of a like
231 amount of said constituent companies which might be a lien on the property, and $15,940 were retained for the purpose of making sundry adjustments pursuant to agreement, the balance, $35,430,060, being issued directly to the shareholders of the constituent companies as follows:

For Plant and Property as above.......		$29,994,000
Less amount retained to retire obligations of constituent companies............	$2,329,000	
Add for Sundry Adjustments..........	15,940	
		2,344,940
Balance		27,649,060
For Franchises and Rights, as above..............		7,781,000
Total		$35,430,060

In April, 1900, the capital stock was increased to $54,595,200, such increased capital being used for the retirement of debentures which had been issued by the Company for the purchase of the entire stock of the New York Gas and Electric Light, Heat & Power Company, amounting to $36,000,000 in par value. The business of this Company consisted of the manufacture and sale of electricity. It was consolidated in 1901 with the Edison Electric Illuminating Company, under the name of the New York Edison Company. Stock of the new company thus formed to the amount of $45,041,000 out of a total issue of $45,051,000 was taken by the Consolidated Gas Company in exchange for its shares of the New York Gas and Electric Light, Heat & Power Company, and now stands upon its books at a valuation of $18,202,969.63.

In July, 1900, Complainant's capitalization was further increased to $80,000,000. Of the new shares $3,773,600, in par value were issued to retire debentures which had been given in payment for shares of the New Amsterdam Gas Company. Of the remainder
232 ($21,631,200 in par value) $900,000 were sold in open market at 193⅜, and the residue were disposed of to stockholders at 150, the proceeds aggregating $32,837,175. The funds thus realized were used in the purchase of securities of other Companies, as hereinafter more particularly stated, and in the repayment of loans.

In July, 1904, authority was obtained for a further increase of the capital stock to $100,000,000. The additional shares have not been issued but 6 per cent debentures have been issued and taken by the stockholders to the amount of $19,857,600, which are convertible into stock of the Company at par, at the option of the holder.

Value of Assets Employed in Complainant's Gas Business.

The Courts have recognized that in litigations to obtain judicial review of the reasonableness of the rates charged by public service corporations, each case must be determined to a large extent upon the particular facts presented. No absolute rule can be prescribed, though certain well-defined principles have been established from which it is possible to determine many of the elements necessary to be taken into consideration. As stated in *Smyth vs. Ames,* 169 U. S., 466, 546, an authority cited with approval in all the recent cases of this character, these principles are as follows:

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under Legislative sanction must be the fair value of the

property used by it for convenience of the public. And, in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and value of its bonds and stocks, the present as compared with the origi-
233 nal cost of construction, the probable earning capacity of the property under the rates prescribed by statute and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case.

"We do not say that there may not be other matters to be regarded in estimating the value of the property. What the Company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

In the present case the proofs present the usual divergence of views as to the value of the property concededly employed. There is also a controversy as to whether or not a number of important items may properly considered as among the assets on which complainant is entitled to a return.

It is conceded that the determination of the value of Complainant's property devoted to the public use should be made approximately as of the date of the Statutes and Order in question, and, for the purposes of convenience, the year ending December 31st, 1905, has been selected as the appropriate period for particular study of the affairs and operations of the Company.

The assets on which Complainant claims to be entitled to a return and its estimates of the present value thereof are shown below in contrast with the valuations of Defendant's witnesses, as summarized in briefs of counsel.

234	Complainant.	State.	City.
1 Real Estate	$14,558,000.*	$10,504,355.95	$10,587,685.
2 Plant	15,532,489.*	9,318,692.	9,348,692.
3 Mains	12,636,000.	7,383,533.	6,529,035.
4 Services	1,994,000.		1,222,228.
5 Meters & Miscellaneous property.	4,200,000.	3,802,544.	3,261,687.
6 Working capital, to wit, Current supplies	616,470.08	(See *post*) p. 43.)	(See *post* p. 43.)
Cash and accounts	3,000,000.		
7 National Coal & Coke Co	50,000.		
8 Astoria Plant	12,000,000.		
Total, excluding franchises and good will	$64,586,959.08		
9 Franchises	24,000,000.		
10 Good will	7,500,000.		
Total assets actively employed	$96,086,959.08	$31,039,124.95	$30,949,327
Proceeds of Debentures, not yet in "Plant," but temporarily invested pending such investment	$5,500,000.00		
Total investment, active and inactive	$101,586,959.08		

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* Exclusive of 18th St. property condemned by the City.

The above items will be considered in their order.

I.

Real Estate.

This comprises some 50 parcels variously located in New York City and one parcel of water front property, known as "Shadyside," on the New Jersey shore of the North River. By far the greater part of the real estate belonged to the constituent companies before the consolidation and was purchased many years ago at prices much below its present value.

235 The term "real estate," as employed in the books of the Company comprises land and water rights, including only such appurtenances as offices, stables and the like, and excluding all buildings and structures which are a part of the manufacturing or distributing plant of the Company. The structures included being of slight value as compared with the value of the land, the term "real estate" as thus used is practically synonymous with "land." The Complainant has introduced evidence showing the gross valuation of its real estate to be approximately $16,000,000. Included in this, however, is the sum of $1,392,500 representing the value of certain real estate forming a portion of its 18th Street Station which was acquired by the City of New York under eminent domain but has never been paid for. The valuations of defendant's witnesses for the corresponding property approximate $12,000,000, though it is not conceded that the condemned property should be taken into account nor that all of the other property valued is properly to be considered as a part of Complainant's assets used in gas manufacture. The assessed valuation of the same property on the books of the City approximates $8,500,000 for the land alone and $12,000,000 for the land with improvements. Included in the latter assessment, however, are various structures constituting the manufacturing or distributing plants of Complainant.

Three witnesses, Messrs. Wheelock, Preiss and Greene, were called by the Complainant, the testimony of the latter being confined to the value of bulkheads and lands under water. Two witnesses, Messrs. Thompson and McHale, testified on behalf of the City, and one, Mr. Wells, on behalf of the State. Owing to the diversity of methods followed in the presentation of their testimony, it has been difficult to make any comparison of their respective figures that is wholly satisfactory. The accompanying table, printed to face this page, affords, however, a reasonably accurate basis for such comparison. Without discussing in detail the evidence as to each parcel, I may say that, after a careful consideration, I am satisfied

Recapitulation and Comparison of Real Estate Valuations.

	Wheelock.	Preiss.	Thompson.	McHale.	Wells.
Land	15,499,500.00	14,134,611.00	11,781,865.02	11,956,521.61	$9,663,507.60
Buildings	151,000.00	171,000.00	96,500.00	96,500.00	(*c*) 96,500.00
Shadyside	300,000.00	(*a*) 300,000.00	245,000.00	245,000.00	(*d*) 245,000.00
Bulkheads and land under water	(included above with land)	(*b*) 1,448,750.00	(included above with land)	(included above with land)	(*e*) 779,597 40
Twelfth Avenue	do.	(included above with land)	do.	do.	(*f*) 539,000.00
Part of 18th Street Condemned	do.	do.	do.	do.	(*g*) 1,008,808.87
Total	15,950,500.00	16,054,361.00	12,123,365.02	12,298,021.61	$12,332,413.87
Difference between value of 18th St. land including and excluding land condemned.	1,392,500.00	1,574,589.00	1,008,808.87	1,008,808.87	(*g*) 1,008,808.87
Value excluding land condemned	$14,558,000.00	$14,479.772.00	11,114,556.15	$11,289,212.74	$11,323,605.00

(*a*) Wheelock's Valuation—Preiss did not value this parcel.
(*b*) " " —Where Wheelock valued land and bulkhead together the value of bulkhead has been found by deducting Preiss's value of land from Wheelock's total value—Preiss did not value any bulkheads or land under water.
(*c*) Thompson's Valuation—Wells did not value any buildings.
(*d*) " " — " " " " this part.
(*e*) " " — " " " " bulkheads except 110th to 111th Sts. Harlem River.
(*f*) " " —Obtained by deducting Wells' valuations, which omitted Twelfth Avenue, from Thompson's Valuations, which included Twelfth Avenue.
(*g*) Thompson's Valuation—Wells did not value that portion of 18th Street land which has been condemned.

238 that the valuations claimed by the Complainant are, as a rule, approximately correct. In arriving at that conclusion I have taken into account the standing and qualifications of the various witnesses, the degree of care devoted to their investigations, the extent of their familiarity with general real estate conditions in the City of New York, and their demeanor under cross-examination.

The chief witness for the Complainant, Mr. Wheelock, is connected with one of the largest and best known real estate offices in this City and has taken part personally in the actual purchase and sale of a very large amount of property in various parts of Manhattan Island. Preparatory to testifying in this case, he spent some six weeks in an examination of the properties and an investigation of such facts as would tend to enlighten him as to their value, including sales of neighboring property.

Mr. Preiss, a real estate dealer and appraiser of many years' experience, was also very fully advised as to current real estate transactions.

Mr. Greene, as engineer in chief of the Department of Docks for many years, acquired a familiarity with the terms of leases and sales of water front property and was qualified by experience to testify as to values in a degree not shown by any of the other witnesses.

Messrs. Thompson and McHale, the witnesses called by the City, appear to have made a specialty of appraising rather than of dealing in real estate as brokers. As appraisers, their experience has been to a considerable extent in condemnation proceedings where they have testified on behalf of the City or in *certiorari* proceedings for the reduction of taxation, on behalf of the property owners. Their manifest tendency was towards ultra conservatism of views, and I am satisfied that in the present case their valuations (which are frequently identical) are, in almost every instance, considerably too low. Their cross-examination disclosed numerous instances in which they disclaimed knowledge of actual sales in the immediate vicinity of the parcel under consideration, notwithstanding such sales were matters of public record. In a dozen or more instances their
239 valuations approximated, or were substantially below, the assessed valuation of the land. It is, of course, true that the assessed valuation of real property is often equal to or higher than its actual value, but it is generally understood, and was in fact admitted on the record, that, as a rule, tax values are substantially lower than the prices that can be realized for property sold under ordinary conditions. When, therefore, in so many instances Defendants' witnesses made their valuations approximate closely the assessed valuations, some question is suggested as to the weight to be given to their judgment.

Mr. Wells, the witness called by the State, was an auctioneer, broker and appraiser of long experience, and also had acquired familiarity with real estate values as Commissioner of the Tax Department for several years. His record, however, discloses no such extensive transactions, and particularly current transactions, as those with which Mr. Wheelock was connected. Like the other witnesses called by Defendants, he was not familiar in many instances with recent sales of property in the immediate neighborhood of the particular parcel under consideration. Taken as a whole, the testimony of these gentlemen does not show that they gave to their appraisals the amount of care and study that characterized the work of Complainant's witnesses. For example, one witness in valuing the property occupied by the Company at 42nd Street and 44th Street, excluded that portion of it comprised within the lines of 12th Avenue, on the ground that the Company had no title thereto. He failed, however, to make any allowance for the fact that on this theory certain of the lots remaining would have an enhanced value as corner lots which, according to well known rules, make them worth often 50 or 60 per cent. more than interior lots in the same block. In another instance no allowance was made for the circumstance that the parcel in question had a frontage both on an avenue and a side street. The discrepancy between Complainant's valuations and those of the Defendant was especially noticeable in respect of the large parcels. As to those, Defendants' witnesses made what seem to me an insufficient allowance for what is known as "plottage" or the enhancement of value due to the concentration in a single ownership of a number of adjoining lots. This is a well recognized element of value, and one which has assumed increasing importance in recent years owing to the growing demand for large building sites. In repeated instances Defendants' witnesses were unable to specify any transactions in the neighborhood at unit figures as low as those given in their valuations, whereas Complainant's in the great majority of cases were able to substantiate or at least to some extent to support their estimates by reference to actual transactions. 240

Taking the testimony as a whole my conclusion is that the present value of complainant's real estate (exclusive of that part of the 18th Street station condemned by the city) is the sum of $14,161,000. This includes the buildings valued by the witnesses and the various bulkhead properties, also the property at Shadyside, New Jersey, and is allotted between the various parcels as follows:

241

Block.	Lot.	Location.	
1643,	56-57-58	S. W. Cor. Lexington Ave. 116th St.	$85,000
1642,	32-33	N. W. Cor. 3rd. Ave. & 114th St....	95,000
870,	54-56-59-60	S. E. Cor. Irving Pl. & 15th St.....	300,000
239,	1-5	N. E. Cor. Hester & Elizabeth Sts..	182,000
985,	7-19-20-39-40	Between Avenues B & C, 17th. to 18th. Sts......................	260,000
972,	45	S. S. of E. 15th St. bet. Avenues A & B......................	22,000
982,	13	14th. to 15th Sts. West of Avenue C.	430,000
989,	1	15th. to 16th Sts. East of Avenue C.	180,000
989,	26	15th. to 16th. Sts. West of Avenue D.	124,000
991,	26	15th. to 16th. Sts. Ave. D to Tompkins St......................	157,000
991,	1	14th. to 15th. Sts. Ave. D to Tompkins St......................	233,000
988,	1	Avenue C to Ave. D, 14th. to 15th Sts............................	570,000

Block.	Lot.	Location.	
991,	47–50	Bulkheads East River, 14th. to 16th. Sts.	282,000
688,	.....	16th. to 17th. Sts. 10th to 11th Av's.	400,000
689,	.....	17th. to 18th. Sts. 10th to 11th Av's.	470,000
690,	12–40–42–43–44–45 48–49–50–51–52–53	18th. to 19th. Sts. West of 10th. Avenue	452,000
691,	.....	19th. to 20th. Sts. East of 11th. Avenue	186,000
716,	14	N. S. 18th. St. bet. 9th. & 10th. Ave's.	43,000
715,	51–59	S. S. 18th. St. bet. 9th. & 10th. Ave's.	121,000
951,	35	S. S. 20th. St. bet. 1st Ave. & Ave. A.	76,000
952,	7–29–30–33–34–35	20th. to 21st. Sts. West of Avenue A.	435,000
953,	1	21st. to 22nd. Sts. 1st. Ave. to Ave. A.	615,000
979,	1	21st. to 22nd. Sts. Ave. A to Marginal St.	570,000
978,	1–2–3–5–6	20th. to 21st. Sts. Ave. A to Ave. B.	537,000
987,	37–41–42–43–51	20th. to 21st. St-. Ave. B to Marginal St.	114,000*
1090,	23	N. S. 42nd St. bet. 11th. & 12th. Ave's.	72,000
1071,	10–11–12–13,	N. S. 42nd. St. bet. 10th. & 11th. Ave's.	57,000
1070,	5	N. S. 41st. St. St. bet. 10th. & 11th. Ave's.	83,000
1089,	1	41st. to 42nd. Sts. 11th Ave. to Hudson R.	1,150,000
1107,	7	Pier & Bulkhead Hudson R. 41st. to 42nd Sts.	included in above.
1092,	1–28–38–38½–39	44th. to 45th Sts. 100′ W. 11th Ave. to R.	645,000
1107,	23	Bulkhead 44th. to 45th. Sts.	225,000
242			
1093,	1	45th. to 46th. Sts. 225′ W. 11- Ave. to R.	546,000
1107,	28	Bulkhead 45th. to 46th. Streets.	225,000
1457,	6	62nd. to 63rd. Sts. bet. 1st. Ave. & Ave. A.	175,000
1455,	13	60th. to 61st. St. West of Avenue A.	220,000
1474,	24	N. E. Cor. Ave. A and 60th. St.	25,000
1177,	21	65th. to 66th. Sts. W. of West End Ave	190,000
1157,	1	65th. to 66th. Sts. Amsterdam to W. End Ave.	700,000
1156,	45–46	S. S. 65th. St. E. of West End Ave..	40,000
1670,	1	98th. to 99th. Sts. 1st. to 2nd Ave's.	665,000
1692,	1	98th. to 99th. Sts. 1st. Ave. to Marginal St.	255,000
1683,	18–34–35,	111th. to 112th. Sts. West of 1st. Ave.	118,000
1682,	6–11	110th. to 111th. Sts. West of 1st Ave.	435,000
1704,	1	110th. to 111th. Sts. 1st Ave. to Pleasant Avenue..	490,000
1712,	2	Bulkhead etc. 110th. to 111th. Streets.	71,000
1999,	1	132nd. to 133rd. Sts. East 12th. Ave.	445,000
2175,	15–18–22–100,	Inwood.	90,000
			13,861,000
		Shadyside, N. J.	300,000
			$14,161,000

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*[In pencil in copy:] 2,347,000.

243 *Deductions Claimed.*

The Defendant, the City of New York, urges that the Complainant has included in its valuations property that is leased by it to other parties, property which it does not own, and property that is vacant or unimproved, all of which should be deducted. It is argued that the Complainant is not entitled to capitalize as against the consumer unnecessary property or property not actually in use, whether plant or real estate, citing ***Brunswick & T. Water District vs. Maine Water Co.***, 59 Atlantic Rep., 537, 539; ***Capital City Gas Light Co. vs. City of Des Moines***, 72 Fed. Rep., 820, 842.

The total valuation of the lands which it is claimed should be thus deducted, according to the respective figures of Mr. Thompson, the City's witness, and Mr. Wheelock, the witness for Complainant, are computed in the City's brief as follows:

	Thompson.	Wheelock.
Land leased........................	$216,810.	$268,250
Land Vacant........................	650,757.20	757,155
Land not owned.....................	614,517.04	932,255
Land unimproved....................	621,305.16	1,115,750
Shadyside	245,000.	300,000
Total	$2,348,389.40	$3,373,410

(*A*) ***Land Leased:***

The leased parcels consist of 22 city lots forming parts of 8 different parcels:

(1.) Block 985, between 17th and 18th Streets, Avenues B and C. There are two gas holders on this plot and a storage yard occupied by Complainant's street department for storing pipe and fittings. There are in all 28 city lots, of which 8 are leased to contractors for storing material, at a rental of $3,170.

(2.) Block 690, between 18th and 19th Streets, Tenth Avenue and Marginal Street. Practically all of this block is owned by Complainant. There are two gasometers and a one story brick building on the property, also a wagon yard. Five lots are rented for $2,000.

244 (3.) Block 978, between 20th and 21st Streets, Avenues A and B. Practically all of this block is owned by the Gas Company. Three tenement houses and a lot 70 feet by 200 feet are leased by it at a rental of $2916. The lower floor of 329 Avenue A is used as a gas fitting shop.

(4.) Block 1092, between 44th and 45th Streets, Eleventh Avenue and North River. Practically the entire block is owned by the Gas Company and used for gas making. It has 5 gas holders and a coal shed. There are four tenement houses occupying about 50 feet front on 45th Street, and one tenement house occupying 25 feet on 44th Street, the latter rented for $360.

(5.) Block 1156, between 64th and 65th Streets, Amsterdam and

West End Avenues. The entire block between 65th and 66th Streets is occupied by gas holders. A small piece on the lower side of 65th Street, consisting of 4 lots, has upon it one tenement house rented for $1248. The remainder of the plot is being prepared for a valve house, for which plans have been filed.

(6.) Block 1692, between 98th and 99th Streets, First Avenue and Marginal Street. The main plant of the 99th Street works occupies the adjoining block between First and Second Avenues. The block in question, lying to the east of First Avenue, is used for storing coal and other material for the purposes of the 99th Street works, with the exception of one small tenement house, which is occupied by the foreman of Complainant's street department.

(7.) Block 952, between 20th and 21st Streets, First Avenue and Avenue A. Several entire blocks in this vicinity are occupied by Complainant's plant. The plot in question contains two small tenement houses one of which is rented for $498 the other being occupied by the foreman of the works.

(8.) Block 1683, between 111th and 112th Streets, First and Second Avenues. Block 1682, on the south side of 111th Street, is occupied by gas holders and a valve house. Another block 245 to the east of First Avenue is occupied for the storage of material belonging to the Company's street department. The piece in question, in Block 1683, is occupied in part by the Company's stable, the horses being turned out into a vacant portion of the premises. There are also two city lots rented for the purpose of storing push carts.

The leases of the foregoing parcels are, as a rule, terminable on 30 or 60 days' notice. In almost every case the lots in question are fractions of a large plot, the remainder of which is actually covered by the Company's operating plant, or they are immediately adjacent to portions of such plant. They are available at any time for purposes of extension by reason of the termination clause in these leases. The tenement houses are to a considerable extent occupied by employees of the Complainant, whose advantage it manifestly is to have its employees near at hand in case of emergency. The proper conduct of Complainant's business requires a large land area and when the property was originally acquired by Complainant or its constituent companies, it can hardly be doubted that it was sound business policy to purchase these entire tracts, notwithstanding the whole area of each block purchased might not be immediately required. Ordinary business prudence required the Company to anticipate the growth of the Company and the requirements of increased business. If odd lots occupied at the time by tenement houses, for instance, had been cut out they would detract from the value of the balance of the block and hamper the Company in making such necessary extensions or additions as might from time to time be required. In plants as large as those of Complainant it is inevitable that there should be here and there a small lot not covered at the moment with material or apparatus, but which, in view of the requirements of the business it would be extremely poor policy to sell. Its use may at any time be required. The Company would not, of course, be jus-

tified in buying and holding real estate merely because of the fact
that it was likely to enhance in value and irrespective of any
246 necessity therefor in the business of gas making. On the
other hand, it seems clearly unreasonable to require that every plot of land owned by the Company should be occupied to its utmost capacity and in constant use, in order that such property should be considered as part of the Company's gas making investment. In my judgment, none of the property in question can properly be regarded as unnecessary, under the circumstances. It may be pointed out further that the fact that these properties are rented as above described does not necessarily impose any additional burden upon the consumers of gas, notwithstanding their value is included with the assets of the Company on which it is entitled to a return. The real estate rents appear as part of the miscellaneous income of the Company and as will hereinafter appear, they are taken into account in determining the net profits of the Company applicable to dividends.

(*B*) *Land Vacant:*

This consists of seven different plots.

(1) Block 1643, between 115th and 116th Streets, Park and Lexington Avenues. This is a single parcel, 100 feet by 80 feet, stated to have been acquired for the purpose of constructing an office building thereon. It has been used for the storage of pipe.

(2) Block 1455, between 60th and 61st Streets, First Avenue and Avenue A. This is a plot 313 feet by 200 feet, acquired, as it is stated, for the purpose of constructing holders thereon. They have not been erected but mains have been recently laid from the terminus of the Company's tunnel at 71st Street for the purpose of conveying gas to the holders.

(3) Block 1156, between 64th and 65th Streets, West End and Amsterdam Avenues. A tenement house on this property is leased as hereinbefore stated. Plans have been prepared for the construction of a valve, boiler and exhauster house, to be located on these premises, and it was intended to begin work thereon last year, although the work has not in fact been begun.

247 (4) Block 1999, between 132nd and 133rd Streets, Broadway and Twelfth Avenue. This plot, 675 feet by 199 feet, in its longest dimension, is occupied by one gas holder. There is room for the construction of two additional holders and it is stated to be held by the Company for that purpose.

(5) Block 2175, Sherman Avenue and Broadway. This is a parcel of irregular shape, on which are now located a small gas holder and a valve house. So far as may be determined from the proof, only about one-quarter of the premises is thus occupied.

(6) Block 972, between 14th and 15th Streets, Avenues A and B. This is an irregular parcel near Complainant's 14th Street Station. There is nothing on the property except a pump house and well which has not recently been in use.

(7) Block 1474, between 60th and 61st Streets, Avenue A and East River. This is an irregular plot adjacent to the Complainant's 63rd Street Station, held, as is stated, for the purpose of constructing a holder thereon.

Of the several plots above described only two are wholly vacant. In view of their proximity to other property of the Company, and in default of further evidence of unavailability than is shown by the record, I find that they may reasonably be considered as a proper part of its operating plant. In the single instance where the evidence gives no indication that the property is not used or intended to be used in some way in connection with the gas business, namely, the parcel on the south side of 15th Street, Block 972, the amount involved is not large. Its value, according to the witnesses for the City, is about $12,000. Under the circumstances and in view of the numerous uses to which the property of this sort can properly be put for storage and other purposes by Complainant, I am not disposed to exclude it.

(*C*) *Land not Owned by Complainant:*

The property embraced in this category is valued by Mr. Thompson for the City at $614,517.04, and by Mr. Wheelock for the Complainant at $932,255. It consists,

248 (1) Of the land under water within the lines of Tompkins Street, between 14th and 16th Streets, East River, and certain lands adjacent thereto on either side.

(2) The lands within the lines of Twelfth Avenue, between 41st and 42nd Streets and 44th and 46th Streets and the North River; and

(3) Lands within the lines of Exterior Street, between 110th and 111th Streets, Harlem River.

Evidence was introduced tending to show that Complainant's title to the lands within the line of the streets was derived under grants by which there was reserved from the premises conveyed so much thereof as might be assigned, designated or laid out for public streets. Under the terms of the grants the grantees covenanted to build and constructed such streets within three months after receiving notice so to do from the City authorities. It was further shown that Tompkins Street, Twelfth Avenue and Exterior Street have all been laid out and established by the filing of maps. It is not claimed, however, that notice has ever been given by the City requiring the physical construction of the streets as contemplated by the terms of the grants. As to the lands outside of Tompkins Street, it is claimed that the Complainant and its predecessors in title were prohibited from filling in the same or erecting piers or wharves thereon, without permission of the City, and that such permission has never been granted.

It is not deemed necessary to consider the merits of the questions thus suggested. In one form or another they have been frequently before the Courts of this State, but it can hardly be said that the proposition for which the City contends is so decisively settled for all purposes as to admit of no further question. However this may be, it is obvious that the question of Complainant's title cannot be adjudicated in this action. For present purposes it is sufficient if the property is occupied by Complainant under a claim of title and used by it in connection with its business of gas making.
249 This requirement is sufficiently met by the proof. The Tompkins Street land forms a part of Complainant's 14th Street

plant and the Twelfth Avenue land part of its 42nd and 44th Street plant. The Complainant and its predecessors have been actually in possession of the areas in question since 1865 and 1870 respectively. The land has been fenced in and occupied by the Company's plants since at lease those dates, with no apparent question heretofore as to the rightfulness of such occupation. The 14th Street lots are held under deeds made as long ago as 1852, and they are assessed against the Company for purposes of taxation. The Exterior Street property consists solely of land under water adjacent to upland owned and occupied by Complainant as a part of its 111th Street plant. It may be noted also that, even assuming the City's contention to be correct, it would not practically affect the issues involved in this action. Should the Complainant be compelled to vacate the lots in question, upon which are located integral parts of its plants, it would obviously be compelled to acquire land of equivalent area as nearly contiguous as possible. It may well be doubted, in view of the evidence, if such equivalent land could be obtained for a price as low as the appraised value of the land so vacated.

(D) Land Unimproved:

This consists of several different plots, some of which has already been considered in part, under the head of Land Leased.

Block 688, Lot 21. This consists of an entire block between 16th and 17th Streets, Tenth Avenue and Marginal Street, which formerly constituted a part of Complainant's 18th Street station. It is one of the portions left after the condemnation by the City of certain premises required for the opening of Marginal Street. It was valued by Mr. Wells at $300,350, by Mr. Thompson at $382,181.20, and by Mr. Wheelock at $400,000. The evidence shows that the particular tract of which it formed a part originally contained four gas holders and two coal storage yards. The land on which
250 the holders were located was a part of that acquired by the City. No manufacturing is now carried on at the 18th Street station. The land remaining after condemnation, aside from the block now in question, is occupied by six gas holders and buildings for machine shops, stable, and other purposes. It does not appear that this block is any longer required *required* for coal storage, nor for any other purpose in connection with Complainant's gas making business, and Mr. Addicks, Complainant's Vice-President, admitted that it might properly be disposed of. Its value should, accordingly, be deducted from the aggregate valuation of Complainant's real estate employed in the gas making business.

As to the remainder of the property in respect of which a deduction is claimed, part of which has already been considered under Land Leased, the only proof introduced by the City consisted of a statement showing its assessment for purposes of taxation for the year 1906 as vacant land. The mere description of a particular parcel as "unimproved" or "vacant" in an assessment roll is not sufficient foundation for the conclusion that the property is not used by Complainant in its gas making business. It may very well be, and the proof in many instances showed, that the parcels assessed as vacant land were used for purposes necessary in connection with

Complainant's business, as, for example, the storage of coal, coke, pipe fittings, tools, and castings.

(E) Shadyside.

This consists of a large plot situated on the New Jersey shore of the North River having a frontage on the river of nearly 500 feet and a depth of approximately 1500 feet. It is valued by Mr. Wheelock at $300,000 and by Mr. Thompson at $245,000. The property is entirely vacant excepting for an iron runway, running back from the river. The property was used for a great many years as disposal ground for the refuse and ashes of Complainant's various stations, and a large amount of the land was built out in that way.
The plot is not now used by the Consolidated Company, but
251 is leased for purposes of coal storage. There is no evidence
indicating that it is necessary or likely to be used for any purpose of the Company in connection with its business of gas making, and its valuation should accordingly be deducted from the aggregate valuation of land so employed.

Cost of Real Estate.

It is claimed by the Defendants that the actual cost of Complainant's real estate investment was but $4,118,267.38 and that this is the only fair valuation to be included in the capitalization on which a return is to be based. The difference between such alleged cost and the book value on Complainant's books, as of December 31st, 1905, viz., $10,929,918.28, or its present value according to the appraisal of the experts, ranging from $10,500,000 to $14,500,000 approximately, consists, as it is urged, of an appreciation of value or unearned increment on which the Company is not equitably entitled to a return. Such appreciation amounts to $6,811,650.90, as determined by certain analyses made by expert accountants called by Defendants, which are based chiefly on data derived from the proceedings had before a Committee of the Senate of the State of New York appointed in 1885 to investigate the consolidation and capitalization of the six constituent companies.

In support of their argument counsel have referred to the fact that in cases where the question of cost has been discussed by the Court, it appeared that the original cost was greater than the present value, but has been disregarded in determining the basis of a fair return on the property. Such, for example, is *San Diego Land Company vs. National City,* 174 U. S., 139, in which the Court said:

"The contention of the appellant in the present case is that in ascertaining what are just rates the Court should take into consideration the cost of its plant; the cost per annum of operating the plant,
including interest paid on money borrowed and reasonably
252 necessary to be used in constructing the same; the annual
depreciation of the plant from natural causes resulting from its use; and a fair profit to the company over and above such charges for its services in supplying the water to customers, either by way of interest on the money it has expended for the public use, or upon some other fair and equitable basis. Undoubtedly, all these matters

ought to be taken into consideration, and such weight be given them, when rates are being fixed, as under all the circumstances will be just to the company and to the public. The basis of calculation suggested by the appellant is, however, defective in not requiring the real value of the property and the fair value in themselves of the services rendered to be taken into consideration. What the company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public. The property may have cost more than it ought to have cost, and its outstanding bonds for money borrowed and which went into the plant may be in excess of the real value of the property. So that it cannot be said that the amount of such bonds should in every case control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just both to the Company and to the public."

See also *Stanislaus County vs. San Joaquin C. & I. Co.*, 192 U. S., page 214.

In those cases it was the corporation whose rates were under consideration which made the claim that the actual cost should be considered. It is argued that if the Court refused to allow a return on money actually spent, but spent improperly or improvidently, it could not in reason allow such a return on money which had never in fact been disbursed. It is claimed, in other words, that if when the present value is less than cost the Court has decided that to allow a return only on such present value does not amount to confiscation, it must necessarily follow that where present value exceeds original cost there can be no confiscation if a return is allowed on the original investment.

253 The question thus suggested is largely academic so far as the present case is concerned, for the supposed facts on which it is based are not established by the evidence. There was no competent proof showing that the original cost of the real estate was, as stated, only the sum of $4,118,267.38, and, so far as the record discloses, it is quite evident that the actual cost was in excess of that sum. Defendants' experts derived their information as to its original cost to the constituent companies and the appreciation on its transfer to the Consolidated Company from the report of Mr. Yalden, an expert accountant employed by the Senate Committee. On the face of their analysis no real estate is included as belonging to the Knickerbocker Gas Light Company, and it appears from an examination of the report that the books of the Knickerbocker Company were not before Mr. Yalden. That it owned valuable real estate at that time does not appear to be questioned.

In the second place, if the question of original cost is to be considered, it should be the cost to the Complainant, the Consolidated Gas Company, and not the cost shown on the books of its constituent companies, some of which had acquired their property fifty years and more before the Complainant was organized. The cost to the Consolidated Company was represented by the amount of stock it issued to the constituent companies for their real estate, which, as already stated, was $10,332,000. It may possibly be that this amount was in excess of the fair market value of the property at that time, but the record indicates that the discrepancy, if any, was by no means as large as the defendants have argued.

In the majority report of the Senate Committee it is said:

"As to the value of the real estate, piers, property and water rights, there is a conflict of testimony. It is a difficult question to determine owing to the varying opinions of real estate dealers."

254 No specific finding was accordingly made on the subject, although the Committee reported that the aggregate value of the real estate and plants given at $29,994,000 was not too high.

The minority report recited that the Committee "had caused every piece of real estate to be appraised by a disinterested witness and had subjected his results to reasonable tests from other witnesses of large experience." As a result it was stated that "the scheduled values of lots designated in the schedules as 'real estate' are about 25 per cent. in excess of what was their fair value in September, 1884, when the agreement of consolidation was signed." Such appraised value having been approximately $10,000,000, it is evident that, even on the basis of the Committee's Minority Report and in the aspect least favorable to the Complainant, the original cost to it could from no point of view be considered as less than about $8,000,000.

Counsel for the City has further claimed that not only is Complainant not entitled as against the consumer to include in its capitalization the appreciation on its real estate, or unearned increment, but that it is to be seriously questioned whether Complainant is entitled to any return whatever on its real estate investment. No argument is advanced in support of this proposition beyond the suggestion that one per cent. over and above taxes has been sometimes regarded as reasonable for a real estate investment and that capital can be found to invest in real estate without expecting any return therefrom excepting by appreciation. There is nothing in the proof to support this contention.

As regards the main proposition that the unearned increment should not be taken into account in capitalization, counsel for Defendants have cited no authorities and their arguments are not persuasive. The cases cited elsewhere clearly indicate that a public service corporation is entitled to demand a fair return upon the reasonable value of its property at the time it is being used for the public. In so far as the question of appreciation has been considered, the expressions of the Courts are adverse to the Defendants' position.

255 It seems to be well settled for example, in the water works cases, that where capital is invested in property for the purpose of supplying a public necessity, if the property "has since enhanced in value, those who invested their money in it, like others who invest their money in other kinds of property, are justly entitled to the benefit of the increased value," in determining a reasonable rate of return upon the investment.

San Diego Land & Town Co. v. National City, 74 Fed., 79, 83; Affd., 174 U. S., 739.

San Diego Land Co. v. Jasper, 110 Fed., 702, 714.

The owner of property devoted to the public use "is entitled to the benefit of any appreciation in value above the original cost and the cost of improvements which is due to what may be termed natural causes," such as "improvements made in the vicinity of the property, the growth of the City or town where it is located, the building of railroads, the development of the surrounding country and like causes." The owner would be deprived of the increased value so produced, "by legislative action which prevents him from realizing an income commensurate with the enhanced value of his property."

> *Thayer, J., in Cotting v. Kansas City Stockyards Co.,* 82 Fed., 850, 854.

See also

> *Metropolitan Trust Company v. Houston and Texas Railroad Company,* 90 Fed. Rep., 583.

II.

Plant.

The term "plant" as used in this case includes four classes of items:

(*a*) Buildings and foundations of apparatus, forming part of the manufacturing and distributing stations;

(*b*) Apparatus;

(*c*) Holders; and

(*d*) General connections at the stations.

256 Six of the seven different witnesses called on this subject appraised all four classes of property with the aggregate results below set forth. Messrs. Bradley and Addicks, in testifying, included in their valuations the portion of the 18th Street plant which has been condemned by the City. There has accordingly been deducted from their figures, for the purposes of comparison, Mr. Mayer's valuation of the portion so condemned, which was $1,508,085.

William H. Bradley	$18,321,000.	
Excluding 18th Street condemned		$16,812,915.
Walter R. Addicks	17,640,000.	
Excluding 18th Street condemned		16,131,915.
Alexander C. Humphreys, *Incomplete.*		
Possibly	17,100,000.	
At least		16,400,000.
Frederick J. Mayer	17,040,524.	
Excluding 18th Street condemned		15,532,489.
H. H. Edgerton		10,023,057.25
William D. Marks		9,348,692.

A seventh witness, Mr. Walter H. Logan, confined his testimony to the value of the holders and certain of the apparatus. As to these items his results, as will be noticed later, do not materially differ from those of Mr. Mayer.

Of the above valuations that of Mr. Mayer is, in my judgment, entitled to most weight and may be regarded as representing with substantial accuracy the present value of the property. He is a graduate of the School Technology of Stuttgart, and has been a practicing mechanical engineer for 34 years. For the past 23 years he has been connected with the firm of Bartlett, Hayward & Company, the largest manufacturers of gas holders and apparatus in the country. During that time he has designed and constructed in the neighborhood of 100 complete gas plants and approximately 400 gas holders. A number of Complainant's holders now actually in use in New York, as well as a considerable part of its other apparatus, were constructed under his supervision and he was
257 in charge for Bartlett, Hayward & Company of the construction of a portion of the Astoria plant. He has access to the numerous estimates on the files of his firm made by him or under his supervision for gas holders and miscellaneous apparatus, from which the actual shipping weights can be determined, and from personal experience is fully familiar with the cost of labor, material and construction of both gas apparatus and buildings in the City of New York. The work of preparing his appraisal, including a careful personal examination of the plants, occupied the witness and twelve assistants for a period of six weeks and as was stated by the witness, without the assistance derived from the data in possession of his firm it would have taken many months to make an investigation of equal thoroughness and detail.

Mr. Bradley, the present Chief Engineer of Complainant, has been for over 30 years engaged as a Gas Engineer in the City of New York. Mr. Addicks, the Vice-President of the Company, was formerly Chief Engineer of the principal Boston Companies. Both of these gentlemen, and Mr. Bradley in particular, are fully familiar with the plants of Complainant, including their efficiency and physical condition. Dr. Humphreys, the President of Stevens Institute of Technology, has been continuously engaged in the gas business for some 35 years, both as a Consulting Engineer and in construction, and he is concededly a leading authority on the subject. Complainant's plants were carefully examined by him in the winter of 1905 and 1906 for the purpose of testifying before the Commission on Gas and Electricity. Since that time he has caused a further examination to be made through representatives of his office, in order to check or correct his previous conclusions. None of the three witnesses last named gave detailed valuations of the plants. Their figures were rather in the nature of estimates than appraisals. Although each was well qualified as an expert, their valuations, under the circumstances, are deemed chiefly of value as affording support to the conclusions of Mr. Mayer.

Defendants' witnesses, with the exception of Mr. Logan,
258 showed no especial qualifications to testify as experts on this branch of the case. Neither Mr. Marks nor Mr. Edgerton had recent experience in the construction of gas plants in large cities or showed familiarity with existing metropolitan conditions. The former, some 30 years ago, was connected with the construction of a

plant in St. Louis, but his practical experience in recent years has been limited to small towns in North Carolina. He has never conducted building operations or installed manufacturing apparatus in New York City. This is the case likewise with Mr. Edgerton. His chief connection with practical gas manufacturing, aside from a small plant in Connecticut, appears to have been over 30 years ago. Neither of these gentlemen made a careful detailed examination of the plants, and each frankly stated that the time at his disposal was entirely inadequate for the preparation of an accurate appraisal of values. Making all allowances for any possible predisposition in favor of the Complainant on the part of Mr. Mayer, in view of his past relations with the Company, his estimates are therefore on the whole, to be regarded as the most reliable. As hereafter pointed out, they were corroborated in many particulars by the Defendants' own witnesses and, although subjected to careful examination by the latter and a full cross-examination by counsel, no errors became apparent which would materially affect the general result of his computations.

(*a*) As Regards Buildings:

Mr. Mayer took as his unit similar buildings recently erected by him in the City of New York for the Kings County Gas & Illuminating Company. From such unit figures he computed the values of Complainant's buildings by the method of comparative cubical contents. In his units an ordinary foundation 4 feet in depth was assumed, with proper allowance where foundations were found to be of greater depth or more expensive character. This was determined by careful examination of Compainant's buildings to determine the exact character of the construction. In the valuation of buildings the foundations of apparatus therein contained were included. The accuracy of a valuation based on cubical contents was tested in several instances by the preparation of detailed estimates of the cost of certain buildings in Complainant's plant and found to be correct. Mr. Marks, although criticising the method of valuation by cubical contents, made his estimates upon the same theory, but does not appear to have made sufficient allowances for the difference in the character of the various buildings. Neither, as a rule, did he make allowance for piling or other expensive foundations. The testimony of Mr. Edgerton as to buildings revealed numerous omissions and inaccuracies. In some instances his figures were based practically on the cost of materials, without including contractors' profit. He likewise omitted in many instances to make allowance for piles or other foundations for the buildings, notwithstanding the ground was of such a character that the expense of foundations formed a very material part of the total cost. In many cases he estimated the cost of materials at very much less than the market prices shown elsewhere in the evidence.

259 & 260

(*b*) As Regards the Holders and Apparatus:

Mr. Mayer had actual measurement made of every article, after which detailed estimates were obtained for the apparatus, showing the exact shipping weights. In the case of articles made by special manufacturers the values were obtained by getting special estimates. Mr. Marks did not disagree materially with Mr. Mayer in his estimates as to apparatus and holders. In so far as differences appear, they are due chiefly to the fact that Mr. Mayer included the cost of installation, whereas Mr. Marks estimated for what is known as "sidewalk delivery" of the apparatus. Other differences appear in cases where Mr. Marks has assumed a different weight of material. Mr. Edgerton, in valuing the holders, assumed weights which in numerous instances were shown to be erroneous as the exact shipping weights of the particular holders in question were matters of record.

261 *Holders—Valuations of Mayer, Logan, and Edgerton.*

	Mayer, without depreciation.	Logan direct examination.	Logan's values corrected on cross-examination, assuming Mayer's weights.	Edgerton, without depreciation.
14th Street:				
6 holders....	$178,885.00	$180,000.00	....	$146,600
2 "	52,091.00	40,000.00	(*a*) $52,091.00	27,360
1 "	(*t*) 262,224.00	(*t*) 225,000.00	(*a*) 262,224.00	(*t*) 244,000
18th Street:				
2 "	29,800.00	19,000.00	27,650.00	21,320
4 "	105,378.00	72,000.00	103,600.00	53,000
42nd Street:				
4 "	112,180.00	120,000.00	....	73,900
44th Street:				
4 "	124,384.00	140,000.00	....	75,000
1 "	116,646.00	120,000.00	....	84,000
2 "	36,165.00	36,000.00	....	25,250
99th Street:				
2 "	119,348.00	70,000.00	....	54,600
1 "	24,913.00	26,000.00	....	16,300
1 "	12,271.00	12,000.00	....	7,350
21st Street:				
4 "	219,400.00	182,000.00	(*a*) 219,400.00	115,700
1 "	88,752.00	94,000.00	....	72,000
1 "	(*t*) 25,866.00	(*t*) 37,240.00	....	(*t*) 16,500
1 "	(*t*) 37,176.00	(*t*) 42,500.00	....	(*t*) 31,300
63rd Street:				
1 "	160,374.00	160,000.00	....	129,320
65th Street:				
2 "	57,197.00	52,000.00	56,350.00	32,800
4 "	104,040.00	104,000.00	....	65,600
2 "	398,645.00	400,000.00	....	294,000
111th Street.				
2 "	(*t*) 611,891.00	(*t*) 650,000.00	....	(*t*) 702,000
132nd Street:				
1 "	(*t*) 346,915.00	(*t*) 322,000.00	....	(*t*) 356,100
Inwood:				
1 "	11,882.00	8,200.00	....	3,100
Total..........	$3,236,423.00	$3,111,940.00	....	$2,647,100
Increase on Cross Examination, assuming Mayer's weights....	....	$131,315 00		
Logan's Total, including corrected items..	....	$3,243,255.00		

(*a*)—Mayer's valuation, accepted by Logan.
(*t*)—Includes Steel Tank.
Where Tank is constructed of masonry, Logan does not value it.

262 Mr. Logan, a witness called by the State, is President of the Logan Iron Works, Brooklyn, with which he has been connected since 1868. His Company builds gas tanks, holders, purifiers, condensers and other apparatus, and does general contracting iron work. In many respects his testimony was confirmatory of Mr. Mayer's estimate. He had not opportunity to measure and secure the exact weight of the apparatus which he valued lower than Mr. Mayer but, on cross-examination, admitted that, assuming the correctness of certain weights suggested to him (and which were those that had been ascertained by Mayer), the latter's figures were substantially correct. The tabulation herewith presented illustrates how nearly the two witnesses in question (both of whom were practical gas constructors) agree in their valuations, and, for purposes of comparison, Mr. Edgerton's values for corresponding items are presented.

(c) As to Yard Connections:

Mr. Mayer made his estimate from the exact mileage and size of pipe as existing and in use. Mr. Marks does not appear to have made any examination of such connections, but accepts Mr. Mayer's figures without change. Mr. Edgerton did not undertake to value the connections as they actually exist but assumed the value of connections which he thought might answer Complainant's purposes, if they were to be installed now for plants of the present capacity.

In arriving at his final figures of the value of the plants as a whole, Mr. Mayer adds to the contractor's figures, in the case of the manufacturing stations, 10 per cent., and in the case of the holder stations 5 per cent., to cover engineering and general expenses of the Company. This includes the planning of the works, making of drawings, grading, paving, curbing, sewerage and drain pipes, temporary fences, operating tools and other utensils, inspection and supervision of construction, water for holder tanks and apparatus required for operation of plant, as well as miscellaneous expenses for minor apparatus, connections, etc., which cannot be included in a general schedule. He also adds an interest charge of 5 per
263 cent., covering the entire plant, on the supposition that it would take at least two years to produce the plants as a whole, or, in other words, that there would be an average interest charge of one year at 5 per cent. These expenses amount in the aggregate to $1,939,132.00. That expenses of this character are properly to be included as a part of the cost of construction is a *a* matter of common experience and has been recognized in a recent proceeding analogous to the present case (*Columbus Railway & Light Company v. City of Columbus, post*). The allowance of 10 per cent. for engineering and miscellaneous expense does not appear excessive upon the evidence, which indicates that as high as 15 per cent. is sometimes allowed for this purpose. In assuming a construction period of at least two years for the entire plant, Mr. Mayer is supported by Mr. Logan as well as by Complainant's experts, although Mr. Logan expressed the opinion that the largest of the holders should be built in from 9 to 10 months, and the smaller

one in about 4 or 5 months. Mr. Edgerton allowed 3 per cent. for engineering and contingent expenses, although computing it not on the original cost of construction but on his estimate of the present value of the property as depreciated. His estimate of 3 per cent. is based upon the amount which he assumes to have been expended for similar purposs in the construction of the Astoria plant, hereinafter described but it was shown that such assumption was erroneous, as Mr. Edgerton took into account only a small portion of the expenditures of this character which passed through Complainant's books, while the actual engineering and miscellaneous expenses have amounted thus far at Astoria to upwards of 11 per cent. As to interest, he appears to have allowed at the rate of 5 per cent. and a construction period of somewhat less than two years. Mr. Marks made no specific allowance for either of these items, stating that although proper to do so in making estimates it is not customary in the case of inventories of apparatus already erected. But
264 obviously they are a necessary part of any estimate of reproduction cost, as Mr. Marks admitted.

Having thus obtained his total cost, Mr. Mayer made deductions for depreciations based on an examination of each individual item upon which it was computed. Such deductions represented his estimate of what would be required to place the plant in every respect in condition as good as new, and amounted in the aggregate to $604,988.

The examination made by Mr. Edgerton was of such a cursory nature that his figures for depreciation were necessarily made less carefully. In one case, for instance, he ascribed the same depreciation, 10 per cent., to new apparatus installed in 1904-5, as to old apparatus installed 15 or 16 years earlier.

Mr. Marks did not particularly regard the extent of depreciation actually existing, but assumed a theoretical deterioration of the supposed life of the plant.

He testified:

"Depreciation results from several causes. The most ordinary one is decay or wear and tear, as observed. There is another factor which is inadequacy, owing to the increase of the business. There is also another cause of depreciation, obsolescence, which is due to the changes in the arts and in the methods and in the general growth of scientific knowledge; if a works built at a certain period is kept in perfect repair, meaning by that, always restored to their original condition, and in good working condition, there remains, assuming that, a depreciation due to both obsolescence and to inadequacy."

In this view he made estimates on the theory of the cost of final replacement to cover such inadequacy or obsolescence, ranging from 25 per cent. to 60 per cent. and based on a supposed life of 120 years for the plant. The discrepancy between his valuations and those of Mr. Mayer is largely due to their different methods of estimating depreciation. He said:

"Mr. Mayer does not differ largely from my now figures of struc-

tural cost. You may say for all ordinary purposes they co-
265 incide, with the exception of the gas holders and even there
they do not differ largely. It is the question of depreciation
entirely."

As will hereafter appear, it is proper in the administration of a manufacturing plant to take depreciation of the character above described into account and provide against it by setting aside a reserve fund from current earnings. For the purpose of determining present value, however, particularly on the basis of cost of reproduction, the method followed by Mr. Marks does not commend itself. It appears from the record, without substantial dispute, that while certain of the plants and apparatus may not be in perfect repair, they are, as a whole, in efficient operating condition, and that a large proportion of their capacity is represented by the latest pattern of water gas apparatus installed within the last few years. The books show expenditures, since November, 1885:

For renewals offsetting depreciation by loss or abandonment	$1,227,683.10
For repairs to buildings	1,275,749.03
For repairs to apparatus	4,865,362.51
New construction	3,904,937.31
Total	$11,273,731.95

The fact thus being that the plants are in good order and operating efficiently, it does not appear reasonable, for the purposes of this case, to charge them with a theoretical deficiency so great as, if actually existing, would make their successful operation a practical impossibility. An estimate of depreciation like those of Mr. Edgerton and Mr. Mayer, based on a detailed examination of the property as it stands to-day, affords in my opinion a more fair and practicable method to be followed in determining its value.

I accordingly find and report the value of the Complainant's plants to be substantially in accordance with the estimate of Mr.
Mayer, a summary of which is given below but adopting, for pur-
poses of convenience and to allow for posslbie over-valuation
266 in some details, the round figure of $15,500,000 instead of
$15,532,489, as shown by the appraisal.

Valuations of Plants and Holder Stations, Depreciation Deducted.

21st Street Plant including all Holders	$4,162,021.00	
44th " " " " "	2,000,205.00	
99th " " " " "	963,011.00	
14th " " " " "	2,549,545.00	
42d " " " " "	1,744,660.00	
18th " " " " "	588,873.00	
Total for all plants		$12,008,315.06
63rd Street Holder Station Complete	$490,072.00	
65th " " " "	1,427,317.00	
11th " " " "	1,039,910.00	
132nd " " " "	540,702.00	
Inwood " " " "	26,173 00	
Total for all Holder Stations		$3,524,174.00
Total for Plants and Holders now in use		$15,532,489.00

This may be fairly said to represent the cost of reproducing the property as it stands. In this instance, as well as regards the three items next to be considered, such reproductive cost affords the only practicable basis of present valuation. While the real estate has a substantial value irrespective of the purposes for which it is now held, the plants, mains, etc., are of value only when used by a going concern. For any other purpose they are merely scrap, or second hand machinery, and their intrinsic worth is inappreciable. As to their market value, there is no means of judging. Dr. Marks, it is true, testified that his valuations were made from the standpoint of an intending purchaser desiring to take over the plants and operate them as a whole. But any such purchaser in order to continue business must own Complainant's franchises in addition to its tangible property, else the tangible property would have no substantial value. (*People ex rel. Consolidated Gas Co. vs. State Board, &c.,* 174 N. Y., 417, 440.)

There is no evidence as to the market value of any of Complainant's property taken in connection with its franchises, and disposed of as part of a going concern. Furthermore, it is clear that 267 a valuation that might be proper as between purchaser and seller would not necessarily be a fair one for the purposes of the present case. The evidence shows without contradiction that capitalists purchasing entire gas properties expect a return on their investment of at least 10 or 15 per cent., which much exceeds any rate conceded by Defendants to be a proper return to Complainant. On the other hand, a capitalization on the basis of reproductive cost seems fair to all parties. Complainant receives a return on the present value of its property as used, while the consumer pays no more than he would be required to pay had Complainant abandoned business, or a new company entered the field as its competitor.

III.

Mains.

Respecting the value of Complainant's mains, there is not such a wide variance in the figures of the witnesses as was shown in the case of real estate and plant. The evidence shows that on October 31st, 1905, Complainant's mains of various sizes amounted in the aggregate to 822 miles, exclusive of 70 or 80 miles of abandoned mains. They are carried on the Company's books at the sum of $7,852,000, which, according to the testimony of Dr. Humphreys and of Mr. Simpson, Complainant's superintendent of Mains, is a low estimate for original cost. Mr. Marks figured (City's Exhibit 89, page 1581,) that their total cost, minus an assumed contractor's profit of 15 per cent., was $7,141,231.51. It was shown by the Complainant that mains of the aggregate value of $2,891,690.22, at Mr. Marks' prices, had in fact been laid by contract. A computation of the 15 per cent. contractor's profit suggested by Mr. Marks, would accordingly add $433,753.53 to his cost valuation. It was further shown that his estimates were based on an assumed mileage, very much less than actually exists.

As to the present value of the mains based on the cost of
268 reproduction, Mr. Simpson testified that a conservative estimate
would be $12,636,000. This was supported by Dr. Humphreys. Mr. Marks stated that he had checked Mr. Simpson's estimate which seemed to him moderate and fair, though unnecessary. His own statement of reproduction cost, as finally presented in the City's brief, after certain corrections of his previous figures, is $6,529,035, made up as follows:

Actual structural cost of street mains (City Exhibit 89, corrected)		$7,518,603.
Deduct:		
Cost of 632,553 feet of 6-inch mains under new pavements....................	$1,674,843.	
Cost of 632,553 feet of removed 2-inch, 3-inch, 4-inch and 5-inch mains.........	637,825.	
		1,037,018.
		$6,481,585.
Add:		
Cost of mains in Bronx (Comp. Ex. 91, services).....		47,450.
		$6,529,035.

The deductions made from the actual structural cost are, as appears from the record (page 5108), in the nature of an allowance for obsolete mains, the grounds for which do not clearly appear.

Mr. Edgerton, on behalf of the State authorities, computed the present value of the mains at $8,919,792.55. Cross-examination developed, however, that this estimate was made without knowledge or practical experience of conditions existing in New York. When revised to conform to such conditions his estimate of reproductive cost would equal, if not exceed, that of Complainant's witnesses. For example, he assumed an insufficient depth and width of trench, a lighter weight of pipes than those actually in the ground and those
used elsewhere; cost of excavation and materials less than
269 those now prevailing in the market; and a cost of re-laying
pavement under that which is paid by the Complainant under the regulations of the City. No allowance was made for sheathing, which is used to a very large extent, nor for blocking and wedges used under the mains, nor for the bridging of street crossings.

The fact that reproduction cost is so greatly in excess of the cost of original construction is due largely to changes in the character of the City's pavements. Formerly, when the gas companies had occasion to open the streets for the purpose of laying new mains or repairing old mains or services, it was their custom to replace the pavement at a cost of from 15 to 25 cents per square yard. Now about 88 per cent. of the streets are covered with new styles of pavement, chiefly asphalt. The gas companies are permitted to open the streets only on condition that the pavements shall be relaid by the contractors for asphalt paving. The expense of this work is paid by the gas companies and amounts to from $2.70 to $7.00 per yard, the latter price being for pavement on Broadway. Pavements consisting of granite blocks on concrete are replaced by the City's employees, and for this work the Complainant is charged $8.00 for the first square yard and $4.00 for each additional yard. Another source of additional cost is the congested condition of the sub-surface of the streets, in view of the multiplication in recent years of various forms of underground construction. In addition to sewer and water mains there are now conduits for electric light, telephone and telegraph wires, underground trolley ducts, and salt water mains, besides, in certain streets, the elevated railroad columns, and structures of the rapid transit railway. The result is that in many streets the entire sub-surface is so filled with these structures that the replacement or repairing of existing mains is attended with great difficulty and consequent expense.

Taking the testimony on this subject as a whole, the preponderance of evidence is very clearly with the Complainant, and its estimate of the replacement value of the mains may be taken as reasonable.

270 IV.

Services.

These are carried on the Company's books at the sum of $1,212,000. Mr. Simpson and Dr. Humphreys testify that this is a low estimate of the original cost of installation, and Mr. Marks admits that such valuation is moderate and fair. In the report of the City's expert accountant, the capital invested in services as shown by the books as of December 31st, 1905, is $1,222,228.37, and this figure is adopted by counsel for the State and City in their briefs. The cost of reproducing these services at present prices, according to Complainant's witnesses, would be $1,994,000., and the record discloses no testimony to the contrary.

It is urged by the counsel for the State authorities that the appraised value of both mains and services at the time of the consolidation in 1884 was far in excess of their cost, and a computation is made showing that the value of the mains and services devoted by Complainant to the public use, as of December 31st, 1905, was but $6,359,324.46, "which represents the original cost of mains and services transferred by the constituent companies to Complainant, plus the expenditures of Complainant since 1884 on account of new construction thereof." This contention is without force, for the reason that it clearly appears that the term "cost of property", as used by the expert accountant, whose tabulations form part of the report of the Senate Committee of 1886, did not represent the actual cost but the amount at which the properties were carried on the books of the constituent Companies, so far as they were before him. In many instances the figures thus appearing on the books were reached after charging down as depreciation very large sums which represented the actual cost. Such charging down was in addition to and exclusive of expenditures for current repairs and renewals necessary to keep the plants of the Companies in efficient condition. For example, in the case of the Manhattan Company, it appears that during a period of 10 years there was written off on account of 271 mains, meters and services alone the sum of $768,517.96, while during that period the additions to those accounts amounted to but $147,630.70.

As regards mains and services, therefore, as well as real estate and plant, it does not appear that any sufficient ground exists for the suggestion that the appraisal value of 1884 was materially less than the actual cost of the tangible property to the Complainant.

V.

Meters and Miscellaneous Personal Property.

This item covers not only meters, meter cocks and connections, but scows, horses, wagons and harness, furniture and fixtures, gas stoves, tools, implements, etc. They are carried on the books of the Company at the sum of $3,802,544.50. This is the original cost of the property, practically all of which has been acquired since the consolidation in 1884. The present value of the property, based on the value of reproduction, is stated to be $4,100,000., according to an estimate made by Mr. Carter, Complainant's Secretary. These valuations were not contradicted by the Defendants.

VI.

Working Capital.

This is found in the shape of current supplies, cash and bills and accounts receivable. According to Mr. Carter, Complainant's material and supplies, consisting of coal, coke, oil, lime, etc., aggregated $616,470.08, as of October 31, 1905. In addition to this he testifies that $1,000,000 in cash was a fair conservative amount of working capital for the current purposes of a Company like Complainant, besides its accounts receivable outstanding to the extent of $2,000,000. His total estimate, therefore, aggregates $3,616,000. Dr. Humphreys testified that a fair allowance for working capital, including cash, accounts receivable and material, would be 272 about $0.30 per thousand cubic feet of annual sales. On the basis of annual sales amounting to 13,283,000,000 feet (the Complainant's sales for 1905), this would represent a working capital of $3,984,900.

Mr. Marks testified that, in addition to fixed or structural assets, a certain amount of capital is required for operating the works. He did not give his own views as to the proper amount, but stated that it bore a certain relation to the annual sales of gas. He accordingly selected four Massachusetts Companies, which he stated formed a group resembling very closely Complainant's five stations in the Island of Manhattan, and, on the basis of their annual sales, computed that the amount of capital actually necessary in their business was $0.13 per annual thousand feet of gas sold. Multiplying this by the annual sales of the Complainant for 1905, he obtained the sum of $1,726,811.32, as the proper amount of "actual capital furnished or quick assets" for the Complainant company. It appears, however, from the reports of the Massachusetts Gas Commission that there are included as a part of the capital of the Companies in question certain notes payable, which the witness had omitted in his computation. As corrected it appeared that the Massachusetts Companies were employing about $0.48 per thousand feet for their active capital and, on a like basis, according to Complainant's sales a proper working capital would be upwards of $6,000,000.

Although the necessity for working capital is conceded by the witnesses for the City, the subject is not discussed at length in counsel's brief excepting that in summarizing the cost of property devoted to the gas business, there is included $1,303,000, being the same amount set aside for working capital at the time of the consolidation in 1884. No testimony on the subject was offered by the State authorities and counsel in their brief include no allowance for working capital in their statement of the maximum amount which they claim as the value of Complainant's property devoted to the public use on December 31st, 1905. As the sales of gas for 273 1885 were approximately 4,000,000,000 feet as against approximately 13,000,000,000 feet for 1905, it is manifest that a much larger working capital is now required than that conceded by the City, and nothing is found in the evidence to justify the conclusion that the sum of $3,616,000, claimed by Complainant, is excessive.

VII.

National Coal and Coke Company.

This company, the capital of which is $50,000, was organized by Complainant for the purpose of conducting the business of carting the coke made at the various plants. All of the stock is held by Complainant, which paid for it in cash at par. Before the organization of the company the carting of coke was done by contractors and it was believed that by having it done under its own supervision, economies would be effected. The proof indicates that such has been the result. The profits resulting from the company's operations are paid to the Complainant in the form of dividends. As the carting of coke is a necessary incident to the disposition of one of Complainant's residuals, there is apparently no reason why the amount invested as above should not be regarded as part of Complainant's capital on which it is entitled to a return. This does not appear to be seriously questioned so far as the record discloses, although this item, like the preceding, is not covered by any allowance in the assets conceded by Defendants' counsel.

VIII.

Astoria Plant.

In the year 1900, after examining a number of other sites that had been suggested, the Complainant secured a tract of land, some 376 acres in extent, at Astoria, in the County of Queens, and shortly afterward commenced work preparatory to the erection of a large gas plant thereon. The plans contemplated the construction of 274 works capable of producing when completed 240,000,000 feet of gas per day, and consisting of 12 separate units, each of which is to have a maximum daily capacity of 20,000,000 feet. Work was begun upon the first unit in 1902 and it was completed and in actual operation during the progress of the hearings in the present case, the first gas having been delivered on the 3rd of December, 1906. Mr. Bradley, the Complainant's Chief Engineer, testified that the project of removing its manufacturing plants to some point outside of New York City had been urged by him in his annual reports for a number of years; that it was his intention gradually to supplant the manufacturing establishments in New York by the Astoria plant, reserving the holders, however, in the Borough of Manhattan, and building additional ones hereafter. He stated that the manufacture of gas in New York City was attended with more expense than in a place like Astoria, for the reason, among others, that the objectionable features of a gas plant located in a crowded residential locality gave rise to difficulties with the Board of Health, the Building Department and other City Bureaus; also because that, owing to the limitation in the size of City block, it was not practicable to obtain a sufficiently large area of land to construct a plant of the size desired in modern construction. The first unit occupies a strip of land approximately 2,000 feet long by 350 feet wide, or in the neghborhood of 12 acres and the holder already constructed, which is stated to be the largest in the world, has a capacity of 15,000,000 feet. The gas is conveyed through a 5-foot main to the Ravenswood plants of the New Amsterdam Company, a corporation controlled by the Complainant. From Ravenswood it is taken through the New Amsterdam Company's tunnel under the East River to Manhattan. Ultimately it will be conveyed under the East River through a tunnel constructed for the Astoria Company.

Mr. Bradley said:

"I have endeavored in the designing of the Astoria plant to put in everything that in my judgment would be advantageous 275 to bring about a decreased cost of gas. There is some machinery put there that is not in any of the other plants, some that will be put in no other plant in this country, and my endeavor has been to build an up-to-date plant and the best plant possible to be produced."

The estimated cost of the first unit was $13,134,519.65, composed as follows:

Grading and filling and excavating including Winthrop Avenue	$317,543.53
Dredging	160,000.00
Wharves	190,000.00
Coal and coke handling plant	700,000.00
Inclined retort house	1,400,471.92
Horizontal retort house	1,191,232.29
Purifying houses and contents	608,745.70

Boiler plant	$49,717.31
Exhauster house and contents	47,730.06
Condensing plant	599,981.81
Land drainage	50,000.00
General gas connections	40,000.00
Tar and ammonia separation and storage	40,000.00
Water supply	20,000.00
Meter house and contents	65,560.44
Holder	640,800.00
Holder tanks	460,000.00
Tunnel under Ward's Island exclusive of lining	2,050,000.00
Electric power plant	160,000.00
Gas pumping plant at Astoria	90,000.00
Office	50,000.00
Shops	40,000.00
Foundry, not included, first units, in this item.	
Soundings and borings	200,000.00
Fences and temporary structures including salt water plant	50,000.00
By-product plant not included in these figures.	
Undistributed expense 10 per cent	932,178.31
Total	$10,253,961.37
The 60-inch main with gas pumping plant	620,000.00
Total	$10,873,961.37
276 Real Estate	1,132,558.28
Lining of tunnel	600,000.00
Coal shed	400,000.00
Cement for two gas holder tanks	98,000.00
Overhead gas mains and apparatus between retort house and exhauster house	30,000.00
Estimated cost of first 20,000,000 cubic foot unit	$13,134,519.65

In addition to the above items, there are others amounting approximately to $2,500,000, for work yet to be done, nearly one-half of which, according to the testimony, it will be necessary to include in the additional cost of the first unit before it is finally completed. The remainder may or may not be necessary as the construction develops. If, in addition to the foregoing, there be included interest in course of construction, stated to amount to $1,081,711.14, the total cost of the first unit, including land and tunnel, and allowing $1,000,000 for work yet to be completed, would be the sum of $15,216,230.79. Obviously, however, a portion of the cost of land and tunnel is chargeable to additional units which may hereafter be built. The witness testified that the building of a smaller tunnel would have been very bad business judgment, as it is difficult and, in the case of a tunnel containing gas pipes, dangerous, to enlarge a tunnel when once constructed, and that the construction of a new tunnel would be preferable to enlargement. He estimated that the cost of a tunnel capable of carrying the product of the first unit would be about one-half of the present tunnel, or, say, $1,325,000. Assuming the proper allowance for the land occupied by the first unit to be one-twelfth of the entire price of the land, or, approximately, $100,000, and deducting cost of land and tunnel as thus adjusted from the total expenditures made or incurred, there remains as representing the cost of the first unit the sum of $13,791,230.79. This is, no doubt excessive, for it is probable that 277 certain of the work of grading, filling, dredging etc., as well as a portion of the interest accruing during construction, is properly attributable to the units hereafter to be constructed, but the evidence affords no sufficient basis for a finding in that respect.

Making due allowance for this fact, however, it seems reasonably certain from the figures of cost above given, which were not disputed, that Complainant's claim for an allowance of $12,000,000 as its investment in the Astoria plant is not excessive. This investment is represented by its ownership of the entire capital stock of the Astoria Light, Heat & Power Company, together with its first mortgage bonds and promissory notes to the aggregate amount, as carried on its books, of $7,010,000. In addition to this it is a creditor of the Astoria Company for advances made in the course of construction, which are carried in open account.

It is argued on behalf of the Defendant, The City of New York, that this investment should not be treated as property upon which at its fair value Complainant is entitled to earn a reasonable profit, for the following reasons:

"1. The construction of the said manufacturing gas plant and all the operations there carried on is the business not of the Complainant but of the Astoria Light, Heat & Power Company, and the fact that the Complainant is the owner of the outstanding stock of the said Company is not sufficient warrant for any treatment of the operations of the said Astoria Company as if they were Complainant's own.

2. Even if the operations at Astoria, involving the expenditure of a score of millions of dollars were regarded purely as Complainant's own and were so carried upon its books of account, there would be no propriety in its claim to earn a profit upon such investment until the completion of the plant and its product came into the market for sale. The correctness of this proposition is so elementary in its nature that we do not deem it necessary to do more than to state it."

278 As to the first objection, there would seem to be no ground, for the purposes of the present inquiry, for drawing any distinction between a plant built and operated directly by Complainant and one built and operated by a subsidiary corporation of which it owned the entire capital stock. No reason is apparent why the capital invested in the plant of such subsidiary corporation is not to be treated precisely as if invested in any of the manufacturing stations of Complainant on Manhattan Island, or like the capital invested by Complainant in the National Coal & Coke Company.

The second objection suggests a question which requires a consideration of Complainant's relations with other Gas Companies in the City of New York whose product forms a part of its annual output. The Complainant owns about 99 per cent. of the capital stock of the New Amsterdam Gas Company, about 51 per cent. of that of the New York Mutual Gas Light Company, and about 92 per cent. of that of the Standard Gas Light Company, which is carried upon its books at the respective valuations below stated:

New Amsterdam Gas Company	$4,814,608.03
New York Mutual Gas Light Company	5,703,290.65
Standard Gas Light Company	14,587,495.25

All of the above companies operate in the Borough of Manhattan. The Central Union Gas Company, and Northern Union Gas Company, operating in the Borough of the Bronx, are owned or controlled by the New Amsterdam Gas Company, which holds the entire capital stock of the former and about 56 per cent. of the stock of the latter. These five corporations and Complainant comprise all the Companies engaged in the manufacture of gas in the Boroughs of Manhattan and the Bronx. For some time past it has been the custom of the Complainant to obtain gas from certain of these corporations, which is delivered into the holders or mains of Complainant in any part of the City as it may be required. The gas so delivered is measured as furnished, and paid for in due course under the terms of certain so-called agency agreements, generally similar in their terms, which have been place in evidence. 279 In the case of the New York Mutual Gas Light Company, for example, the agreement provides that the Complainant employs the latter Company as its agent "to manufacture, purchase and deliver to it for the term of five years such illuminating gas and illuminating power required by the laws of the State of New York as it may require during each year for the said term of five years, estimated to be equal to at least 100,000,000 cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York in such quantities and at such times as may be reasonably required by it."

The agreement further provides as follows:

"II. The New York Mutual Gas Light Company shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery, and employ in such manufacture, production and delivery its own plant and appliances.

III. At the expiration of each month, the New York Mutual Gas Light Company shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent materials and labor made by it as aforesaid during such month, and the Consolidated Gas Company of New York agrees to pay to the New York Mutual Gas Light Company, within ten (10) days thereafter the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof, which shall be in full for its services and the use of its plant and appliances during the said month."

The gas purchased under the above arrangement for the nominal year ending October 31st, 1905, aggregated, approximately 3,000,000,000 feet. The entire sales of the Complainant for the year 1905 aggregated 13,283,000,000 feet, so that the amount purchased constituted about 22% of Complainant's entire output.

280 In estimating the amount of capital invested in gas manufacture upon which Complainant is entitled to a return, the capital required for the production of this 3,000,000,000 feet of gas has not been specifically appraised by any of the witnesses and manifestly is not susceptible of exact determination. Obviously, however, it must be taken into account in some form, for the Complainant is quite as much entitled to a return upon its capital employed in the purchase and distribution of gas made by some outside company as on capital employed in the manufacture of gas at its own works. The relations of Complainant with the companies in question are entirely different from its relations with the Astoria Company and National Coal & Coke Company, of which it owns the entire stock. While it holds the practical control, it does not own them in a legal sense, and, in the case of the New York Mutual Gas Light Company, there is a very substantial outstanding minority interest.

The producing capacity of the first Astoria unit (20,000,000 feet per day), is equivalent to 4,000,000,000 feet per annum, or about 1,000,000,000 feet more than the gas actually purchased from these companies during 1905. The maximum daily output of Complainant during 1905 was about 70,000,000 cubic feet, while the maximum capacity of its own plants was but 51,000,000 feet. Adding to this the maximum capacity of the first Astoria unit, would give a maximum daily capacity of 71,000,000, or only 1,000,000 more than Complainant's maximum daily output. This surplus, according to the testimony of Mr. Bradley, which was uncontradicted, is insufficient for purposes of a reserve. He stated that, in his opinion, it was not safe to operate gas plants for lighting large cities like New York with less than 20 per cent. reserve of their manufacturing capacity.

Furthermore, with an output so closely approximating the maximum daily capacity, it is clear that no allowance is made for increased sales of gas consequent on the growth of population. That such increase is to be naturally expected is conceded by all parties.

281 It appears, therefore, that the amount of gas to be produced by the first unit of the Astoria plant is under, rather than over, what was actually required in addition to Complainant's own output to meet the reasonable demands of its business in 1905.

In default of any better method of estimating the amount of capital employed in the production of the 3,000,000,000 feet of gas purchased by Complainant in 1905, it seems entirely proper to measure it by the standard of the known cost of the Astoria first unit. Equipped as it is with the most modern machinery and located on a site much less expensive than could be procured on Manhattan Island, the cost of the first unit seems a perfectly fair and safe basis of valuation. Mr. Marks concedes the propriety of an allowance for the cost of producing the gas purchased in 1905, and admitted that it made no difference whether the source of the gas so purchased was located in other Manhattan plants or in Astoria. He computed its value at $5,096,000, on an assumed cost of only $1.78 per thousand cubic feet of annual capacity, but this would appear to be inadequate. The testimony of other witnesses indicates that a coal gas plant would cost more than double that amount to construct.

I, therefore, allow Item No. 8 as claimed by Complainant, although, as the Astoria plant was not in operation and delivering gas in 1905, such item should, for the sake of accuracy, be designated as "Property of other companies employed in the production of gas delivered by them to the Complainant."

IX.

Franchises.

As already stated, the Act of 1884, under which Complainant was organized, authorized the constituent Companies to fix in their agreement of consolidation the amount "of the capital of the new Company and the number of shares of stock into which the same
282 is to be divided," and it provided that the amount of capital so fixed in the agreement "shall not be larger in amount than the fair aggregate value of the property, franchises and rights of the several Companies thus to be consolidated."

The value assigned to "franchises and rights" at the time of the consolidation was $7,781,000, and they are still carried for this amount on the books of the Company. The stock issued in payment therefor was apportioned between the constituent Companies as follows:

New York Gas Light Company	$1,417,000
Manhattan Gas Light Company	2,329,000
Metropolitan Gas Light Company	1,863,000
Municipal Gas Light Company	1,175,000
Knickerbocker Gas Light Company	528,000
Harlem Gas Light Company	469,000
	$7,781,000

The proof shows the following facts regarding the franchises of these Companies:

The New York Gas Light Company was incorporated by Chapter 85 of the Laws of 1823, passed March 26th, 1823, which provides that certain persons therein named were constituted

"a body politic and corporate in fact by the name of the 'New York Gas Light Company,' and by that name *they and their successors may have perpetual succession* * * * The said corporation shall have full power and authority to manufacture, make and sell gas to be made of coal, oil, tar, peat, pitch or turpentine or other materials; and to be used for the purpose of lighting the said city or the houses thereof and any buildings, manufactories or houses therein contained and situate. * * * *And provided also* that no public street, lane or highway in the City of New York *shall be dug into* or in any wise injured or defaced without the permission of the corporation of the said city first had and obtained." 283

By agreement dated May 12th, 1823, between the Mayor, Alderment & Commonalty of the City of New York and the New York Gas Light Company, there was granted to the

"said parties of the second part, and their successors, all and singular the sole and exclusive privilege and right *of laying or placing underground pipes* in all and every of the public streets and parts of streets of the City of New York lying and being south of a line commencing at the East River at the foot of Grand Street, and running through Grand Street to Sullivan Street, and through Sullivan Street to Canal Street, and through Canal Street to the North or Hudson River, for conducting gas, for lighting the public lamps in the streets and parts of streets south of said line, and the houses and buildings fronting, or to front on, or bounded by or adjacent to, the streets or parts of streets south of said line. To have and to hold and to enjoy the same unto the said parties of the second part, and their successors, from the day of the date of these presents for and during and until the 12th day of May, which will be in the year of our Lord one thousand eight hundred and fifty-three."

It is further provided in the grant that if the parties of the second part should not faithfully perform all of the conditions therein contained,

"then and in that case it shall and may be lawful for the said parties of the first part in common council convened by resolution and order to annul and vacate this grant, and thereupon the premises hereby demised shall be revested in the said parties of the first part, or their successors, as fully and completely as if this indenture had never been executed."

284 The Manhattan Gas Light Company was incorporated by Chapter 59 of the Laws of 1830, passed February 26th, 1830. The individuals named in the Act were declared to be a body politic and corporate,

"with full power and authority to manufacture, make and sell gas to be made of coal, oil, tar, peat, pitch and turpentine or other materials, and to be used for the purpose of lighting the City of New York or the streets thereof and any buildings, manufactories or houses therein contained and situate, *and to lay pipes for the purpose of conducting the gas* in any of the streets or avenues of the said city * * * and that no public street, lane or highway in the City of New York shall be *dug into,* or in any way injured or defaced without the permission of the corporation of said city first had and obtained."

By agreement dated May 8th, 1833, between the Mayor &c. and the Manhattan Gas Light Company, there was granted to the latter, "and their successors, the privilege or right *to lay or place underground pipes* in any and all of the streets, avenues and public places of the City of New York, comprised between a line commencing at the East River at the foot of Grand Street and running through the middle of Grand Street to Sullivan Street and through the middle of Sullivan Street from Grand Street to Canal Street, and through the middle of Canal Street from Sullivan Street to the North or Hudson River and a line commencing at the East River at the foot of Forty-second Street, on the north side thereof, and running parallel with said street to the North or Hudson's River and embracing both sides of said street, and in any or every part of any such street, avenue or public place, for the purpose of conducting gas, commonly called inflammable gas, for lighting the public lamps in said streets * * * and for lighting the houses
285 or buildings fronting or to front on or bounded by or adjacent to the said streets * * * To have, hold, use and enjoy the said right and privilege unto the said parties of the second part, and their successors, from the day of the date of these presents until the 12th day of May, which will be in the year of our Lord one thousand eight hundred and fifty-three."

The agreement further contained a clause providing for revocation in case of non-performance by the Company, in a form similar to that used in the grant to the New York Gas Light Company, *ante.*

By agreement between the same parties, dated May 5th, 1848, similar in its terms and provisions to the one just above quoted, there was granted to the Manhattan Gas Light Company the privilege of laying underground pipes within an enlarged area, such privilege to continue unto the 5th day of May, 1868.

The Metropolitan Gas Light Company was incorporated by Chapter 545 of the Laws of 1855, passed April 7th, 1855, by which the individuals therein named and their present and future associates were constituted a body politic and corporate,

"with full power and authority *at any time hereafter* to manufacture, make and sell gas to be made of coal, oil, tar, peat, pitch or turpentine or other materials * * * *and to lay pipes for the purpose of conducting the gas in any of the streets, avenues, lanes, alleys and squares of the said city* * * * and also that the said Company will so conduct their manufactory or manufactories of gas as not to create a nuisance, and that no public street, lane, alley, square or highway in the said city shall be *dug into* or defaced or other means adopted in regard thereto for the purpose aforesaid, without the permission of the two Boards of Common Council of the said city first had and obtained; and the said Boards are
286 hereby authorized to grant and vest exclusive permission and authority to and in said Company for said purposes to such extent and under such regulations as to them shall seem expedient, and such permission and authority shall be conclusive and shall

continue as thus fixed during the period designated by said Boards at the time of granting the same."

By resolution of the Boards of Aldermen and Councilmen, adopted respectively December 21st and 22nd, 1858, it was provided: "That permission be, and the same is hereby, given to the Metropolitan Gas Light Company of the City of New York, *to lay pipes* for conducting gas through the streets, avenues, lanes, alleys, and squares in said city for the period of thirty years, to be subject to the same restrictions as to the mode of laying down said conductors as apply to and govern the New York and Metropolitan Gas Light Companies in that respect."

The Harlem Gas Light Company was incorporated in 1855 and its certificate of incorporation, executed on February 1st of that year, provided that the term of existence of said corporation should be fifty years.

By resolution adopted by the Boards of Aldermen and Councilmen respectively on the 26th day of March and 23rd day of April, 1855, there was granted to the Harlem Gas Light Company the consent of the Mayor, Aldermen and Commonalty of the City of New York, to lay conductors for conducting gas through the streets, avenues, lanes, alleys and squares in all that portion of the city lying north of the center line of 79th Street for the purpose of supplying gas to public and private buildings," on various terms and conditions named, among which was the following:

287 "Third. The Mayor, Aldermen and Commonalty of said City hereby reserve the right to purchase at any time from the said Company all the materials, pipes, fixtures, buildings and all and singular all the personal and real property owned by said Company by paying to the said Company the cost of the same and 10 per cent. over and above the said cost."

The Municipal Gas Light Company was incorporated under the name of Municipal Oxygen Gas Company, under the provisions of the Act entitled, "An Act to authorize the Formation of Gas Light Companies," passed February 16th, 1848, and the several Acts amendatory thereof. By order of the Supreme Court entered June 5th, 1876, the name of the corporation was changed from Municipal Oxygen Gas Company to Municipal Gas Light Company of New York. The certificate of incorporation, executed May 29th, 1874, provided that the term of the existence of the Company should be fifty years.

By resolution of the Common Council, adopted December 21st, 1876, it was provided:

"Permission be, and the same is hereby, given to all incorporated gas light companies to lay gas mains and pipes in the streets, avenues and public places in this city for the purpose of supplying gas to this city and its inhabitants upon such conditions as may be prescribed and approved by his Honor, the Mayor, the Comptroller and the Commissioner of Public Works, who are now by law authorized to make provision for lighting the streets of this city."

Thereafter and on the 22nd day of March, 1877, an instrument was executed by the Mayor, Comptroller and Commissioner of Public

Works, reciting the resolution above quoted, and prescribing the terms and conditions upon which the Municipal Gas Light Company might lay its gas mains and pipes in the streets, avenues and 288 public places in the City of New York. It was therein provided, among other things, as follows:

"Ninth. The permission given by said resolution of the common Council, unless sooner revoked as hereinafter provided, shall continue for the period of thirty years from the date of the signing of these conditions by the Mayor, Comptroller and Commissioner of Public Works: provided all the conditions herein prescribed shall be fully performed by the said Company. Neither said permission nor any right conferred on said Company by said resolution shall be assigned nor transferred without the previous consent of the Common Council.

"Tenth. The Common Council may repeal, annul and revoke the said resolution and the permission hereby given upon the failure of the said Company to perform any of the conditions herein contained, and thereupon all right of said Company under said resolution and these conditions shall cease, and said Company shall thereupon remove all its pipes and mains from the streets, avenues and public places."

The Knickerbocker Gas Light Company was incorporated in 1876, under the provisions of the Act of the Legislature passed February 16th, 1848, entitled, "An Act to authorize the Formation of Gas Light Companies," and the various acts amendatory and supplementary thereof. The certificate of incorporation, executed June 24th, 1876, provided that the term of existence of the Company should be fifty years. The Company claims to have become vested through mesne assignments with all the rights and privileges conferred by Chapter 944 of the Laws of 1871, passed June 12th, 1871, whereby there was granted to certain individuals therein named, and their assigns, authority to manufacture, make and sell gas to be used for the purpose of lighting all that portion of the City of 289 New York lying north of the center line of 79th Street, including all of the Central Park,

"and to lay pipes for the purpose of conducting the gas in any streets, avenues, lanes, alleys, squares and parks of the said City and of the said Central Park; and also the said persons and their assigns shall so conduct their manufacture or manufactures of gas as not to create a nuisance, and that in digging and laying pipes in any public street, avenue, lane, alley, square, park or highway the same shall be done in a proper and workmanlike manner, with as little delay and inconvenience to the public travel as practicable and without injury to the Croton pipes."

It was further provided that nothing therein contained should be construed to authorize the laying of gas pipes within the Central Park or any of the parks or other territory within the control of the Department of Public Parks without the consent of the said Department of Public Parks first had and obtained.

The Knickerbocker Gas Light Company also claims to have succeeded to the rights of the Anthracite Gas Lighting and Heating Company of New York, a corporation organized under the General Manufacturing Act of 1848. Its certificate of incorporation was filed on May 28th, 1863, and provided that the corporate existence should continue for the period of fifty years.

By resolution of the Boards of Councilmen and Aldermen, adopted respectively June 18th and 22nd, 1863, said corporation was granted the right to lay pipes and mains for conducting gas through the streets etc. in the City of New York for a period of fifty years.

It is apparent that the Complainant exists and exercises powers under three classes of franchises or grants:

(1) The franchises granted by the State to the constituent companies to be corporations. These in some instances also confer rights to the use and occupation of the streets;

290 (2) The franchises, rights or licenses granted by the Municipality to the constituent companies to use its streets, alleys and public places for the purpose of laying their mains therein; and

(3) The franchise granted to Complainant by the State (Chapter 367, Laws of 1884, under which the consolidation was effectuated), to be a corporation and to hold and exercise the franchises and rights theretofore granted to the constituent companies.

It is claimed by the Defendants:

(1) As regards the State Franchises, that there are fatal defects in the title of the Knickerbocker Gas Light Company to any rights claimed by it under Chapter 944 of the Laws of 1871; and that the existence of the Harlem Gas Light Company terminated by the limitations of its charter on February 1st, 1905.

(2) As to the Municipal Franchises, that those of the New York Gas Light Company and Manhattan Gas Light Company expired many years before the consolidation—the former in 1853 and the latter in 1868, while that of the Metropolitan Gas Light Company expired in 1888; that the grant to the Harlem Gas Light Company, although by its terms unlimited as to time, necessarily expired with the termination of the Company's corporate existence. Moreover that even if still existent, such franchise was not in terms assignable, and was at best a mere license, because of the City's reserved right of purchase. That the Municipal Gas Light Company franchise was void in its inception, as the Common Council could not delegate its powers to the Commission by which the grant was made, and, even if valid, it was by its express terms not assignable without the consent of the Common Council; and that the Knickerbocker Gas Light Company acquired no rights as successor of the Anthracite Gas Lighting and Heating Company, for the reason that the latter was not incorporated under the Gas Companies' Act of 1848, but under the General Manufacturing Act.

(3) As to the Franchise under Chapter 367 of the Laws of 1884, pursuant to which consolidation was effected, that the statute
291 in question did not apply to public service corporations, and Complainant could, therefore, not be created as a valid legal entity for the purpose of holding franchises of the various constituent companies.

and that the land thereupon reverted to the plaintiff. The contention of the defendant railroad company that it took a perpetual easement for railroad purposes was sustained, the Court saying:

"The land was to be taken for a permanent public use. It could not have been understood or expected that the railroad should be operated for the accommodation of the public for fifty years, and that then, after the necessity for it had greatly increased, it should disappear. While the life of the corporation was limited to fifty years, it could not have been expected that it should really cease to exist at the end of that period. While the legislature reserved the right to cut its life short, it also had the power to extend it. It is the experience of mankind that such *quasi* public corporations never come to an end by mere effluxion of time. A raiload corporation which had, during fifty years, rendered a public service and properly discharged its corporate functions would, with the passage of years, become more and more useful and more and more a necessity. Could it have been the legislative intention that at the end of fifty years the lands taken under the act, with the railroad embankment, ties, culverts, bridges, buildings and other structures, so far as they had become fixtures, should revert to the original owners or their successors in title?"

See also *Peo. v. O'Brien* 111 N. Y. 1, 55.

Although the grant to this Company did not run to its successors and assigns its assignability would not appear to be open to serious question, particularly in view of the Statute of 1884 under which Complainant was organized.

The reserved right of purchase was of doubtful validity, as it is conceded by counsel for the City that, until the year 1904, the City had no legal authority to make its own gas or other illuminant. 295 Even assuming that such a sale would be now practicable, there is no evidence in this case that it has been contemplated or attempted.

As to the Municipal Gas Light Company, the objection that the Commission, by which its franchise was granted had no power to act, is covered by provision of Chapter 530 of the Laws of 1885, as follows:

"Nothing in this sub-division shall apply to or shall affect or impair the right to lay such pipes or mains in the streets, avenues and public places of the said city, heretofore conferred *or intended to be conferred* upon any corporation by the mayor, the comptroller and the commissioner of public works, acting under and in conformity with the resolution of the common council, adopted and approved in the month of December, one thousand eight hundred and seventy-six; *and any and all grants made by such officers under and pursuant to said resolution, prior to April twenty-first, one thousand eight hundred and eighty-three, are hereby in all respects ratified and confirmed.*"

Although this Statute is claimed to be unconstitutional, its validity must be assumed for the purposes of the present proceeding.

The fact that the Company was prohibited from assigning the permission given to it to lay gas mains without the consent of the

Common Council, and that no evidence of such consent has been given, is of little force, in view of the clause which immediately follows the prohibition. That provides that upon the failure on the part of the Company to perform any of the conditions imposed upon it the Common Council may revoke the permission previously granted, and all rights of the Company shall thereupon cease, and it shall remove its pipes and mains from the streets. As already stated, there is no proof of any such act of revocation.

296 Summarizing the situation as to the municipal grants, it will be noted that while those of the New York and Manhattan Companies expired in 1853 and 1868, respectively, that of the Metropolitan Company did not expire until 1888, four years subsequent to the consolidation. That of the Harlem Company is unlimited as to time, that of the Municipal Company did not expire until March, 1907, after the commencement of this action, and that of the Knickerbocker Company is unlimited as to time under the Act, Chapter 944, Laws of 1871, and will expire in 1913, under the grant to the Anthracite Gas Lighting and Heating Company.

The legislative grant to the Metropolitan Gas Light Company not only covers the entire Borough of Manhattan but is unlimited as to its terms. That to the Knickerbocker Company is broad, general and perpetual in its terms for all the territory above 79th street and for Central Park, granting authority to place pipes in the streets without consulting any municipal authority except so far as concerns the Park.

As bearing particularly upon the status of the older constituent companies the nature of the rights conferred respectively under the state and municipal franchises is to be considered. Concededly the power to grant to a corporation the right to manufacture and distribute gas is vested wholly in the Legislature. This power may be exercised either by special act of incorporation, as in the case of the New York, Manhattan and Metropolitan Companies, or by a general law, as was the case later with the Municipal, Knickerbocker and Harlem Companies. The municipality is vested with no power whatever to charter a corporation for such purposes or to confer on any such corporation the power to operate its plant and sell its gas.

On the other hand, it is quite within the power of the Legislature to authorize a gas company to open the streets without any reference to, or permit from, the municipal authorities, as was done in the case of the Knickerbocker Company (*Ghee vs. Northern Union Gas Company,* 158 N. Y., 510, 513). In the case just cited, the Court of Appeals recently considered at some length the nature of the rights enjoyed by gas companies in the City of New York. The

297 Transportation Corporations Act, (Chapter 566 of the Laws of 1890), provides in substance that if a corporation be incorporated for the purpose of supplying gas for light in the city, town or village where it is located, it must first obtain the consent of the municipal authorities. The question presented to the Court arose under certain provisions of the Greater New York Charter (Chapter 378 of the Laws of 1897), whereby certain powers were granted to the Com-

missioners of Public Buildings, Lighting and Supplies and the Commissioner of Highways, and, as certified to the Court, it was as follows:

"Are the municipal authorities of the City of New York whose consent is required to lay conductors for conducting gas through the streets of such city, under the Transportation Law, the head of the Department of Public Buildings, Lighting and Supplies and the Head of the Department of Highways, under the powers conferred by the charter of the City of New York, or are the 'municipal authorities' referred to in the said Transportation Corporations Law the municipal assembly, or any other officer or body in the City of New York?"

It was held, reversing the lower court, that the power to confer a franchise rested solely in the Municipal Assembly as the successor of the Common Council, and that the functions of the other officers named were merely administrative. The distinction drawn by the Court is of great significance in determining the proper effect to be given to the municipal grants. It was pointed out that Section 61 of the Transportation Corporations Act, above quoted, was but a reenactment of Section 18 of the Gas Companies' Act of 1848 (Laws 1848, Chapter 37). As to the effect of the consent thus given, the Court said:

"It operates to create a franchise by which is vested in the corporation receiving it a perpetual and indefeasible interest in the
298 land constituting the streets of a municipality. It is true that the franchise comes from the State, but the act of the local authorities, who represent the State by its permission and for that purpose, constitutes the act upon which the law operates to create the franchise. The State might grant the franchise directly to the corporation without the consent of the local authorities, and has done so in many instances; but the tendency of later years, which is well grounded in reason, is for the State to confer upon the local municipal authorities the right to represent it in the matter of granting franchises to the extent that the final act necessary to the creation of franchises must be exercised by such authorities. The legal effect of the consent, therefore, is the same as if the local authorities in form granted the franchise and the interest in the land. (*People ex rel. Woodhaven Gas Co. vs. Deehan,* 153 N. Y., 528). The court said at page 532: 'The consent of the town authorities conferred upon the relator a franchise to carry on its business in the town and to lay conductors in the streets and highways for the purpose of delivering gas. That such a franchise is property that cannot be destroyed or taken from it or rendered useless by the arbitrary act of the village authorities in refusing the permit to place the conductors under the streets.' "

As regards the power conferred upon the Commissioner of Public Buildings, Lighting and Supplies and the Commissioner of Highways, it was pointed out that such powers were administrative merely and were conferred in language similar to that used in earlier charters, beginning with Laws of 1862, Chapter 361, which contained a provision that

"The Croton Aqueduct Department of the City of New York shall have cognizance, control and general direction * * * in the laying down of gas and water pipes * * * and no removal of pavement for such purposes shall be made until a permit is first had of the said Croton Aqueduct Department."

299 The Court then stated its conclusion that,

"the consent that is necessary to confer a franchise upon a gas lighting corporation can be given only by the municipal assembly through appropriate ordinances, but that when the consent has been granted to a corporation duly created, by which a corporate franchise, which is property, has been acquired, the administrative officers must be applied to for a permit that will allow the corporation to exercise such rights in order that the public convenience may be subserved. The permission forms no part of the franchise and is not essential to its existence, and, if refused, the granting of it may be compelled by mandamus, as indeed, it has been in a number of cases, but the officers to whom application must be made may, within reasonable limits, fix the time when work on the streets may be begun, determine what portion of a street shall be first opened, how much of it may be left open at a a time, the depth of the trench and other details, the careful regulation of which is of first importance to a metropolitan city like New York. And the sole purpose of these sections, as we read them, was to vest completely this important administrative power in the commissioner of public buildings, lighting and supplies and the commissioner of highways, leaving to the legislative departments of the municipal government the power that has always belonged to it, of performing such act as the state has declared to be necessary in order to create a franchise."

Having in mind the distinction drawn in the foregoing decision between the consent necessary to confer a franchise and the mere administrative function of regulating the details of opening the streets, there would seem to be little question as to the validity of the rights now enjoyed by the older constituent companies. The consents to occupy the streets were given in the case of the New York and Manhattan Companies by the grants, and in the case of the Metropolitan Company by the resolution, of the Common Council, above recited. It is true that such consent was in each case for a limited period, but, in view of the acquiescence of the municipality in

300 the continued use and occupation of the streets for many years after the expiration of such periods, each company can now claim that it has, as the Court said, "a perpetual and indefeasible interest in the land constituting the streets" of the municipality. The only right that remains in the municipality is that of controlling, through its proper administrative officer, the details of opening such streets. In other words, the municipal authorities having, whether by formal consent or by acquiescence, assented to the "digging into" of the streets for the laying of the mains, have exhausted their power, excepting as to the matters of police regulation involved in the opening of street surfaces for repairs and the like. In view of the time that has elapsed since the expiration of the original grants—in the case of the New York Company over fifty years, dur-

ing which time the Company has continued to supply gas to the public in accordance with its charter,—it would seem that the Municipality is certainly estopped from asserting a position inconsistent with its own practical construction of the effect of the original grant. I have been referred to no authority precisely in point, but the trend of the decisions supports the views above expressed.

In *People ex rel. N. Y. & Richmond Gas Co. vs. Cromwell,* 89 App. Div., 291, the relator, which had been furnishing gas since 1856 in a territory which by operation of the Greater New York Charter of 1897 became a part of the City of New York, applied to the Commissioner of Gas & Electricity for a permit to open certain streets not previously occupied. That official denied the application on the ground "that no rights or franchises in the streets, lanes, avenues or highways have been shown to be in the applicant corporation." The relator alleged that consents to lay its pipes had been obtained directly after its organization from the town officials of each township in which it proposed to operate. The Court said:

> "The action of the highway commissioners of these several towns in the year 1856, acquiesced in without objection for nearly 301 half a century, in the absence of a plain provision to the contrary, raises a presumption of the consent of all of the municipal authorities of the several towns, and particularly where the consents so granted were acted upon promptly, and the corporation entered upon the discharge of its obligation to the public in supplying gas in the various townships under the provisions of the law. In *Jennings v. Van Schaick* (108 N. Y. 530, 532) where the plaintiff was injured by falling into an opening in the sidewalk, the court said: 'It does not appear that the defendant, who owned the premises, had ever obtained from the municipal authorities any formal license or permission to construct the opening in the sidewalk, but such authority was a reasonable inference from an acquiescence of eighteen years without objection from the city.' So in the case now before us, if the highway commissioners were not the municipal officers of the towns who were charged with the responsibility of acting, if they did act, and no other municipal authorities questioned their right to do so, but stood by and saw the plant installed, they would, unless the statute specially provided the method in which their consent was to be evidenced, be deemed to have ratified the consent of the highway commissioners, and the presumption would arise that they had given their consent. (*Schubkegel v. Butler,* 76 App. Div. 10, 13; *Jorgensen v. Squires,* 144 N. Y. 280, 285; *Donnelly v. City of Rochester,* 166 *id.* 315, 318.) This result would, it seems to us, under the authorities cited, follow even were it not possible to show any formal action on the part of the highway commissioners, for it is not suggested that the corporation did not construct its plant and distribute its gas in these several towns nearly a half century ago, and it appears that several of the villages which have since been created have taken gas under contracts with the relator and its predecessor. To say at this late day that the respondents may deny to the relator his rights under its franchise, upon any technical question growing out of the manner of the consent

given so long ago, is to give precedence to unimportant forms above the substantial requirements of justice."

See also *Peo. ex rel. Woodhaven Gas Co. v. Deehan, ante.*

302 *Second. Complainant's Right to a Return.*

The conclusion being thus reached that, for the purposes of this case, the Complainant holds valid existing franchises, the next question is whether they constitute such property as is properly to be included among the assets upon the value of which the Complainant is entitled to a return.

In the briefs submitted on behalf of the Defendants, counsel have argued this question at considerable length, claiming that while such franchises may be regarded as of value for purposes of taxation, they are not to be capitalized against the consumer.

It is said that—

"a franchise of a public service corporation is, in effect, a contract between that corporation and the public, whereby the public permits the corporation to render a public service, and the corporation agrees to render that service, at a rate of charge which will enable it to earn a fair return upon the tangible property necessarily devoted to the particular use; it is not a contract whereby the corporation is permitted to supply the service at a rate which would enable it to earn a fair return upon the tangible property devoted to the public use plus a fair return upon the value of the contract itself, as a source of profit."

No authorities have been cited in support of this proposition and numerous decisions to which I have been referred indicate that it is not well founded. The question is not open for discussion, however, as it is fully disposed of for the purposes of this report by the expressions of the Court in deciding the motion for preliminary injunction in this cause. It was then said (*Consolidated Gas Company vs. Mayer,* 146 Federal Reporter, 150, 157):

"In estimating the value of the property of Complainant embarked in the business, the commission (the defendant, the Commissioner of Gas & Electricity) reached the conclusion that the 303 franchises under which it has laid mains and is delivering gas, and which are a part of its property, should be considered as of no value whatever, although the state, through the action of its taxing officers, had declared that they are worth several millions of dollars. It is suggested that some of these franchises have expired or lapsed in some way. That proposition need not be considered, because it is not asserted that all of them have lapsed. The complainant has taken over the franchises of many different corporations, granted at different times. So long as a substantial part of these still remain, the argument is not affected, except as to details of result. The reason assigned by the commission for not including the value of the franchises is that 'they were granted by the people without compensation.' That is so. These franchises were granted very many years ago, at a time when there seems to have been no intelligent appreciation of the fact that they might become enormously valuable, when reckless improvidence was the rule, and

all sorts of franchises were given away, without any provision for securing to the state its fair share of unearned increment thereon. Nevertheless, when the state offers a franchise to whoever will take it without requiring any money return thereon, and for the sole consideration that the taker shall promptly, continuously, and fully develop it by the expenditure of his own money, and such offer is accepted, and the terms of the agreement carried out by the taker, there results a contract which, with due consideration of all proper conditions and limitations inherent in the nature of the particular contract, is as much within the protection of the Constitution as are all other contracts. If the state 25 or 50 years thereafter should say to the taker: 'We were improvident in not providing that you should pay us something each year for this franchise; therefore, hereafter you shall pay us 8 per cent. annually on $10,000,000 or $20,000,000, or we will evict you from the franchise,' it might find itself embarrassed by the provisions of the Constitution in thus undertaking to avoid the results of its own improvidence. A franchise, whatever its value may be, which has not expired nor lapsed, nor been in some way forfeited, is property in the hands of its holder. There
304 is force in the argument that when the state says: 'We will value this property at several millions of dollars when we tax you on it, but at nothing at all when we fix the rate you may charge for your product in order to receive an 8 per cent. return on your property,' it is seeking to accomplish by indirect methods what it might not be able to accomplish directly."

Third. Value of the Franchises.

It, therefore, remains only to determine the value to be ascribed to such franchises. The record contains but little direct evidence on the subject. There is no proof showing their original cost to the constituent companies. Their cost to Complainant at the time of the consolidation in 1884 does not clearly appear, for the reason that the item "franchises and rights," for which stock was issued to the amount of $7,781,000, embraced other items as well as the particular franchises now in question. Complainant's President testified in the Special Franchise Tax case, below referred to, as follows:

"The $7,781,000 was considered to represent at that time (1884) the franchise and business and contracts and patents and goodwill—everything in fact except the tangible property; the word 'franchise' was used (but not in the inventories) as a general word to cover the whole for which the $7,781,000 of new stock was issued and not as representing any particular franchise as that word is being used to-day * * * There was no appraisement of franchises. * * * The appraisement was made only of the tangible property."

Of the assets thus included, it is clear that the franchises and goodwill have increased enormously in value since 1884 from the growth of the City with the attendant increase in population and development of business. Their value is further enhanced by the fact that under the present law (Consolidation Act, Secs. 73 and 74)
305 such franchises may now only be granted for the period of 25 years, and onerous conditions are imposed for their procurement.

The only direct evidence as to their present valuation is based on the action of the State Board of Tax Commissioners, under the so-called Special Franchise Tax Law (Chapter 712 of the Laws of 1899), which was referred to by this Court in its opinion above quoted. This statute amended the Tax Law as previously existing by including, among other things, in its definition of real estate:

"The value of all franchises, rights, authority or permission to construct, maintain or operate in, under, above, upon or through any streets, highways or public places, any mains, pipes, tanks. conduits or wires, with their appurtenances, for conducting water, steam, heat, light, power, gas, oil or other substance or electricity, for telegraphic, telephonic or other purposes."

The act further provides that:

"A franchise, right, authority or permission specified in this subdivision shall for the purposes of taxation be known as a 'special franchise.' A special franchise shall be deemed to include the value of the tangible property of a person, copartnership, association or corporation, situated in, upon, under or above any street, highway, public place or public waters in connection with the special franchise. The tangible property so included shall be taxed as a part of the special franchise."

The State Board of Tax Commissioners fixed the assessment of the Complainant for the year 1899 at $15,828,600 which included the value of its tangible property in the street. After receipt of written complaint this was reduced to $13,950,000. Complainant and a number of other corporations affected procured writs of certiorari to review their respective assessments, and the proceedings were sent to a referee for hearing. In his report the referee sustained the validity of the statute, but found that the as-
306 sessment of Complainant's special franchises should be re-
duced to $9,346,500, to make it conform to the assessed valuation, for purposes of taxation, of other real estate in the City of New York. The judgment of the Special Term confirming the referee's report was upheld by the Court of Appeals (*People ex rel. Consolidated Gas Company vs. State Board of Tax Commissioners*, 174 N. Y., 417), and the constitutionality of the Act was sustained by the Supreme Court of the United States. (199 U. S., 1.)

The main objection to the statute urged by the relators was that it violated the Home Rule clause of the Constitution, in that the assessment of real estate was taken out of the hands of the local assessors and delegated to State Officials not elected by the electors of the City or appointed by any City authority. In discussing this question, the Court of Appeals took the position that it had been found by the Legislature, "that the valuation of this new kind of property,—intangible, invisible and elusive, but of great value,—would be attended with peculiar difficulties which would require a degree of knowledge and skill not possessed by local assessors but belonging only to experts, who had long and carefully studied the subject of taxation in all its varied aspects," and that accordingly, for the purpose of meeting this situation, the Legislature had "assigned the duty of making the valuation to the State Board of Tax Commissioners, composed of tax experts already in office, whose sole duty related to the subject of taxation in all its phases throughout the entire State."

The assessments of Complainant for special franchises in subsequent years were as follows:

1900	$13,950,000.	
1901	13,990,000.	
1902	16,275,000.	
1903	17,985,000.	
1904	21,900,000.	
1905	27,300,000.	(reduced from $30,500,000.)
1906	31,900,000.	

307 The Complainant called as a witness the Chairman of the State Board of Tax Commissioners, who stated that he had taken part in the valuation of the special franchises for the year 1906, and believed the $31,900,000. fixed by his Board to be a fair valuation thereof. As such valuation includes the mains of the Company and any portion of their services which are in the public streets, it was necessary, in order to determine the value ascribed to the franchises now under consideration, to deduct from the above figures the value of such mains and services as fixed by the Board. For this purpose the witness was asked to state the amount at which the mains and services were valued, and testified that, according to his recollection, the Commission had allowed about 50 per cent. more than the valuations given for such property in the report of the Complainant, submitted to the Board. The mains and services aggregated on the basis of cost of reproduction, according to that report, approximately $5,800,000. Adding 50 per cent. to this, the total valuation ascribed by the commission for the tangible property would be about $8,700,000, or, as Complainant's counsel urges, excluding portions of services outside of street lines, would amount to more than $7,900,000. Deducting this from the total assessment, would leave a valuation for the franchises proper of, say, $24,000,000.

On the part of the Defendants the only direct evidence bearing on the value of the franchises consisted of various tax reports submitted by Complainant to the State Officials.

It was shown that Complainant's Secretary, in verifying the complaint against the 1905 assessment, had stated that,

"the value of Complainant's special franchises in the City of New York does not exceed the sum of $4,261,156. The extent of said over-valuation (in the assessment for 1905) is, therefore, $26,238,844. * * *

"There is no method or evidence by which the value of the in-
tangible right to lay and maintain mains and pipes in the
308 streets can be determined. There exists no market or demand
for such rights, permissions and franchises. The price at
which complainant's franchises or rights would sell, under ordinary
circumstances is merely nominal. The municipal authorities of the

City of New York have never fixed any amount as the consideration for granting such a franchise, and the right to lay mains and pipes in the streets has always been procurable from said municipal authorities without the payment of any monetary consideration therefor. The number of such franchises which may exist at any one time has never been limited by said municipal authorities. The value of the said right to occupy the streets does not exceed the cost of procuring such a right from the City, and that cost is nominal."

In the complaint against the 1906 assessment, verified by the same officer, it was stated that the assessment of $31,900,000. was excessive and that

"the true value of complainant's special franchises in the City of New York and the amount for which the same would sell, under ordinary circumstances, does not exceed the sum of $14,000,000."

These valuations were explained in the testimony by the statement that, in view of the contention of the Complainant that the Special Franchise tax was unconstitutional, the counsel had advised the insertion in its petitions for revisions and for *certoirari* of simply the value of the tangible property in the streets. This was arrived at by a computation of the cost of laying pipes in soft earth with no obstructions. The figure stated in the petition of 1905, $4,261,156, was accordingly given, being the aggregate of two items, $3,666,531.38 for mains and $594,625.01 for services, appearing in the tax report of Complainant for the year 1904. 309 After the affirmance by the United States Supreme Court, in May, 1905, of the constitutionality of the Statute, the Company acting again under advice of counsel and in conformity with the assessment for 1899 of $13,950,000, fixed the valuation of the special franchise at $14,000,000.

It is obvious that the foregoing evidence is of but slight assistance in arriving at a satisfactory conclusion regarding the value of the franchises. While it is urged on Complainant's behalf that the special qualifications of the State Board of Tax Commissioners, as pointed out by the Court of Appeals, entitle their conclusions to peculiar weight, the fact remains that it is contesting the assessment as excessive. I am not, on the other hand, irrespective of the explanations made by Complainant's officers, disposed to attach particular importance to statements of the character appearing in the complaints above quoted. As hereafter pointed out, they do not, under the authorities, constitute an estoppel, although sometimes valuable as evidence.

There is nothing to show the basis on which the State Board arrived at its appraisement of the intangible element of the special franchise. It may fairly be assumed, however, that it had in mind chiefly the earning capacity of the property. A suggestion to this effect appears in the opinion of the Court of Appeals (p. 439):

"On the other hand, the valuation of special franchises had never been attempted before, but presented a new field of action and called for the exercise of new and different functions. They could not be seen, handled, measured, weighed or counted. They were specialties, and had no market value. There were no sales to guide and no experience from ownership, rental or use to rely upon. The new property is real estate in name, but not in reality, for it is a mere privilege to do something in public streets and places not permitted to citizens generally. While local in a narrow sense, it is unconfined in its real nature, for it depends largely on the *earning capacity* of a going concern, frequently, with several special franchises, but with *no means of determining the amount earned by each.*"

310 This method was followed in the recent case of *People ex rel. Brooklyn, Queens Co. & Suburban R. R. Co. vs. The State Board of Tax Commissioners* (New York Law Journal, March 5, 1907), in which Mr. Martin Saxe, the referee appointed in *certiorari* proceedings to review the special franchise assessment of the relator, held as follows:

"Now we are called upon to consider the two elements composing a special franchise under the tax law of this State, and they are, first, the tangible property in connection with the operation of the franchise, and secondly, the intangible property, that is the right to operate conferred by the franchise grant. The total value of these two elements makes up the value of the special franchise.

"*According to the foregoing method for estimating the value of a franchise we must first find the gross earnings from operation and deduct from that item the cost of operation, thus reaching the net earnings; and from the net earnings there should be deducted an allowance for a fair return upon the value of the tangible property, and this final sum is then capitalized at an arbitrary rate per cent. to ascertain the value of the intangible right under the franchise grant.*"

As authority for this procedure he cites Mr. Henry C. Adams, Professor of Political Science in the University of Michigan, a special expert on franchise valuations for the Michigan Tax Commission, as reported in the proceedings of the National Conference on Taxation, held in Buffalo, May, 1901.

Adopting this method in the present case, and taking the value of the tangible assets at $63,357,000, being the sum of the various items hereinbefore allowed, and allowing 5 per cent. upon the value thereof as a fair return, the amount representing the earning capacity of the tangible assets alone would be $3,167,850. Complainant's net earnings for the year 1905 were, in round figures $4,588,000. Deducting from this the $3,167,850, there remains the sum of $1,420,150 as representing that part of the net income attributable to the intangible assets. This sum capitalized at 7 per cent. would give a little more than $20,000,000 as the value of the intangible assets. The percentage rates of return on tangible assets and for capitalization are those adopted by the referee in the case in question. 311

This method of arriving at the value of a special franchise, though perhaps the best one available, is hardly accurate, for it results in ascribing to the special franchise alone a value which is in fact composed of a number of other elements. Not only is a public service corporation thus assessed on the value of its franchise to occupy the streets but also on all other intangible rights of every description, including its franchise to be a corporation and its good-will as a going concern. Such assets as these they have in common with all other corporations whether or not engaged in the public service, although it was evidently not within the purview of the Statute to reach anything except the value of the franchise derived from the public. That there is a wide distinction between the two is apparent. The right of a public corporation to occupy the street has a substantial value, whether for purpoess of sale, condemnation or taxation, upon the very organization of the company, and it is a matter of common knowledge that special franchises of this sort are often hawked about among capitalists and disposed of for substantial sums before any business whatever is transacted under them. But the intangible asset known as good-will is a matter of growth and necessarily involves the contined development of the company and the perfecting of its organization.

X.

Good Will.

In the present case, the Complainant claims that there should be included among its assets not only its franchises but also its good-will. It is alleged in the bill that, 312

"In addition to its said franchise rights, your orator is possessed of a large amount of intangible property, which constitutes an integral and important part of said business. Such property consists of the value of the connections between the pipes and mains of your orator and the various buildings throughout the City of New York, the value of various contracts owned by your orator in connection with its business, the value of the organization of your orator's business and good-will, and various other elements of value which have been created and developed by your orator and its predecessors through intelligent and efficient business management during the past three-quarters of a century and fidelity to their engagements, all of which possess the full attributes of property and materially add to the gross earnings of your orator, upon which it pays an annual tax of one per cent. to the State of New York. By reason of such good-will it would be difficult, if not impossible, for any company in the City of New York, even if vested with similar franchises to those possessed by your orator, to compete in selling gas to consumers in the said city; and if your orator elected to sell its tangible property and franchises, it could, apart from these, obtain a large sum for the said good-will. And your orator avers that upon this good-will, as an element of substantial value, it is entitled to a reasonable return, and that, in fixing the price, at which your orator should sell its gas, as hereinbefore stated, the said Commission of Gas and Electricity allowed no return whatever upon the value of the said good-will but wholly eliminated it as an item of substantial value."

These allegations are denied by the defendants, and the answer of the State officials alleges as follows:

"These defendants further allege the fact to be that the conduct

by the complainant of its business and manipulations of its stock issues and its successful endeavor to monopolize the lighting industry in the County of New York have been viewed with disfavor by the public and that the complainant has no good-will of
313 value but that, on the contrary, it owes its custom not to the manner in which it has conducted its business but to the absence of competition."

Outside of proof that Complainant had secured control of a majority of the stock of each of the other existing lighting companies, no evidence was offered in support of the above allegations, but, assuming them to be well founded, it seems to me that they are predicated upon an erroneous view of the meaning of the term "good-will" as involved in Complainant's claim. It is not necessarily the ordinary commercial good-will, such as attaches to an old firm name or place of business and is based in large degree upon the personal standing of the founder of the house. The modern decisions have recognized its proper scope as including that species of intangible value which comes from the gradual building up of a complete organization in the successful operation of a going concern. Such value can exist in the case of large corporations, notwithstanding public disfavor, unless this disfavor reaches such a point as to result in the absolute destruction of the business. An instance where good-will of this description was considered by the Court was in *National Water Works Company vs. Kansas City*, 62 Fed. Rep., 853, which was a condemnation proceeding. The Court in its opinion, per Brewer, J., said:

"Nor would the mere cost of reproducing the waterworks plant be a fair test, because that does not take into account the value which flows from the established connections between the pipes and buildings of the city. It is obvious that the mere cost of purchasing the land, constructing the buildings, putting in machinery, and laying the pipes in the streets—in other words, the cost of reproduction—does not give the value of the property as it is to-day. A completed system of water-works, such as the company has, without a single connection between the pipes in the streets and the buildings of the city, would be a property of much less value than that
314 system connected, as it is, with so many buildings and earning, in consequence thereof, the money which it does earn. The fact that it is a system in operation, not only with a capacity to supply the city, but actually supplying many buildings in the city,—not only with a capacity to earn, but actually earning,—makes it true that 'the fair and equitable value' is something in excess of the cost of reproduction. The fact that the company does not own the connections between the pipes in the streets and the buildings—such connections being the property of the individual property owners—does not militate against the proposition last stated, for who would care to buy, or at least give a large price for, a waterworks system without a single connection between the pipes in the streets and the buildings adjacent? Such a system would be a dead structure, rather than a living and going business. The additional value created by the fact of many connections with buildings, with

actual supply and actual earnings, is not represented by the mere cost of making such connections. Such connections are not compulsory, but depend upon the will of the property owners, and are secured only by efforts on the part of the owners of the waterworks, and inducements held out therefor. The City, by this purchase, steps into possession of a water-works plant—not merely a completed system for bringing water to the city, and distributing it through pipes placed in the streets, but a system already earning a large income by virtue of having secured connections between the pipes in the streets and a multitude of private buildings. It steps into possession of a property which not only has the ability to earn, but is in fact earning. It should pay therefor not merely the value of a system which might be made to earn, but that of a system which does earn."

See also, *Spring Valley Water Works vs. City and County of San Francisco,* 124 Fed. Rep., 574.

The nature of this intangible asset was well described in the report of Mr. Talfourd P. Linn, Special Master, filed June 8th, 1906, in the case of the *Columbus Railway & Light Co. vs. The City* 315 *of Columbus,** in the Circuit Court of the United States, Southern District of Ohio: That action was similar in its general scope to the present. It was said:

"Complainant is also entitled to a fair valuation of what may be called its going business, or its good-will; that intangible addition to the assets of every corporation which arises out of its management and is a gradual growth from its organization, consisting in this case of a knowledge of the buisness, a knowledge of the wants and demands of its customers, a knowledge of the growth of the city, and the tendencies of that growth as it has been observed through a period of years; the organization of its office and operating department, and in general, all the experience which belongs to and is the property of every going concern, and which is acquired through a period of years of active operation. In one sense of the word, the operating organization of a going concern, whether it be a common carrier, a gas company, or water company, a light company, or a private manufacturing company, may be said to be of even more value than its physical assets, its brick and mortar. The physical property is practically worthless without the management or organization; the management or organization is powerless without the physical property, and an electric plant for the purpose of furnishing light and power to the city of Columbus, standard built and equipped of the most modern type, with its lines extended and connected, its lamps installed in houses and business places, its wires connected up to furnish power for the machines, without an efficient organization and management would fail utterly to fulfill the purpose for which it was constructed, until that organization and management could be assembled, and acquire a knowledge of the city, the wants of its people, and the demands of the business.

*** Unreported. Confirmed without opinion, August, 1906, by Thompson, J.**

Granted that with a plant so established, there could instantly be found skilled, capable and efficient employees to occupy every position necessary to operate its business, and to deliver its
316 product or service, still this want of knowledge on the part of those employees and officials would necessarily hinder and delay the delivery of light and power, cripple the conduct of the business, and cause great loss until that knowledge had been acquired by the only teachers possible—time and experience.

This knowledge possessed by the Complainant derived by it from its own experience, and by acquisition and purchase from its predecessors, has an indeterminate, but necessarily a value, in ascertaining what is the true value of complainant's property devoted to the public use in any controversy as to compensation based upon that value."

In the above case the Special Master, while stating that he took the intangible assets into consideration, did not undertake to fix any definite value for the good-will described by him, and it is obviously very difficult, if not impracticable, to do so. As indicated in the remarks above quoted, it may very well be that, in some cases, the operating organization of a going concern is worth more than its physical assets, and this is especially true when the concern in question owns in combination therewith the additional intangible asset of a public franchise or of good-will in the ordinary commercial sense. For example, in *People ex rel. Cornell Steamship Co. vs. Dederick*, 161 N. Y., 195, which was a tax case, it appeared that the bonded indebtedness of the Company had been increased from $400,000. to $700,000 for the purpose of purchasing the boats and good-will of the business of another steamship company. The Court said (p. 210):

"The evidence fails to show the precise amount that was paid for the boats of the company, or how much was paid for the good will of the business. The parties to the transaction, doubtless, did not know themselves; for, as we understand, the purchase was for a lump sum of $300,000, and that included the good will of the business with the tangible property. The president of the relator, however, in his testimony, after fixing the value of the boats
317 owned by the company at $550,000., which included the boats purchased in 1893, stated that *in making that purchase he regarded the good will of the business as worth more than the boats.* This testimony, we think, permits us to properly treat as a fact in the case that at least one-half of the increased bonded indebtedness created in 1893, to wit, $150,000., was contracted for the good will of the business of the company then purchased by the relator."

In *Washburn vs. National Wall Paper Company*, 81 Fed. Rep., 17, which was an action to restrain the payment of interest upon certain obligations of the company on the ground that it would impair its capital, one of the questions discussed was whether stock is issued for "property actually received" within the meaning of the New York Statute when it is issued for good will only, and whether, in that particular case, assuming that it could be so issued, the good will was taken at its actual value. It appeared that common stock to the amount of $2,100,000. had been issued for the good will of a business purchased by the defendant corporation. The Court held that the evidence did not justify a finding that it was not worth this amount, especially in view of the fact that it appeared that a net profit of over $110,000. had been made in eleven months out of a plant worth considerably less than $320,000.

In the present case Complainant claims as the value of its good-will the sum of $7,500,000., and in support thereof relies on the opinions of two witnesses, Dr. Humphreys and Mr. Addicks. The Defendants offered no evidence on the subject.

Dr. Humphreys' testimony is as follows:

"Q. Assuming, Doctor, that in 1884, six gas light corporations operating in the City of New York were consolidated, forming the complainant company, the Consolidated Gas Company; that one of the constituent companies was incorporated in 1823 and was in
operation from 1825 to 1884; and that the other five were
318 incorporated at intervals prior to the consolidation in 1884;
that the output of the six companies in gas in 1885 was about 3,942,000,000 feet, and that the output has increased until in 1905 it was 13,283,000,000 feet or thereabouts; that the population of Manhattan Island, on which the Consolidated Gas Company is operating, is over 2,100,000 people; that it shows an increase of something like 50% in population in the last thirty years or so; that the Consolidated Gas Company has about 390,000 consumers, and is in active operation to-day, what would you consider to be the value of the good-will of that business, including the value of the established business, and its connections with consumers, and other elements which go to make up good-will as distinguished from its tangible plant?

A. I should estimate it at not less than $7,500,000."

This testimony is of little assistance for it does not clearly appear that the witness excluded, in fixing his valuation, all consideration of the value of Complainant's public franchises. Furthermore, it appeared later that his estimate was based upon a fixed scale of earnings. He assumed that the Company would be

"entitled to sell gas at one dollar; that it would be protected in its rights by the Courts to sell gas at a dollar and to make a return of 30 cents a thousand to cover profit and the burden of capital generally."

The basis of Mr. Addicks' testimony appears more clearly. He said that in his experience where consumers have connections and established relations with a gas company, it requires some special incentive to compel them to change. Such incentive, he said, would be a reduction in rate by a competing company to the minimum extent of 10 per cent. of the selling price of gas. Taking the Com-
plainant's sales for 1905, 13,283,000,000 feet, such percent-
319 age would aggregate $1,328,300. This capitalized at, say
7 per cent. would amount to $18,975,000., or at 8 per cent., to $16,603,750., as the value of the good-will.

In the recent English work (*The Depreciation of Factories*, by Ewing Matheson, London and New York, 1903) the writer states his conclusion that "Where good will is separately valued it seldom exceeds from one to three years' purchase of the net profits after deducting 5 per cent. interest on the capital employed in the business." On this basis, complainant's good will, assuming three years' net profits and capital invested of about $64,000,000, would have a present value of upwards of $5,000,000.

Neither of the methods above suggested affords a satisfactory basis for any specific finding as to the value of the good-will, considered apart from the question of franchises. It is clear that a new company, in addition to a substantial outlay for its franchises under existing laws (Greater New York Charter of 1897, as amended by Laws of 1901, Chap. 466, and Laws of 1905, Chap. 629, Sections 73-74), would be subjected to enormous expense before it could so perfect its organization as to supplant a powerful competitor already in the field. The relative cost of its franchises and good will might in such a case be to some extent apportioned. But in the present instance, their reproductive value is wholly in the realm of conjecure, and the two elements are so interwoven that there is no apparent basis for their separate appraisement. It is clear, however, that each is of substantial value and contributes very materially to complainant's earning capacity.

As I do not find it practicable to differentiate in figures the value of Complainant's franchises and good-will, I have concluded to consider all of the intangible assets together as a single item, the reasonable value of which I think may be fairly fixed at the sum of $20,000,000, or substantially the amount that would be reached by following the method adopted by the referee in the Queens County and Suburban Railroad case, before referred to. This appears to be a conservative estimate when tested by any available standard of comparison. 320 The State Board of Tax Commissioners, as above pointed out, have assessed Complainant's special franchises on the basis of $24,000,000, exclusive of about $7,900,000, deemed to be the value of its mains and services in the streets. If from the total special franchise assessment of $31,900,000 were deducted the entire original cost of such mains and services, as carried on the books of the Company, it would leave a balance of nearly $23,000,000 for the intangible franchise rights alone: and again, if there were deducted from the $31,900,000, the cost of reproduction of the mains and services to-day, as claimed by Complainant, it would leave a valuation for the intangible rights alone of over $17,000,000. It is not possible to satisfactorily test the valuation of $20,000,000. by comparison with the valuation of $7,781,000. in 1884, for the reason, among others, that I do not find in the record any evidence showing the net earnings of the constituent companies immediately prior to consolidation, or of the Consolidated Company for some years thereafter. It is to be noticed, however, that a valuation of the intangible assets at approximately three times the value ascribed to them in 1884 is in general proportion with the increase of sales of gas, which were about 4,000,000,000 cubic feet in that year as against approximately 13,000,000,000 cubic feet in 1905. It is true that included in these sales was a considerable amount of gas manufactured by other companies. On the other hand, it is to be remembered that, according to well recognized rules, the concentration of business of the constituent companies under a single management, had advantages that tended to increase their earning capacity to a marked degree and enhanced the value of their tangible assets. *Cleveland &c. Ry. Co. vs. Backus,* 154 U. S. 439, 444.

Capitalization and Value of Securities.

The amount and value of complainant's outstanding stocks and
bonds which, under the rule in *Smyth vs. Ames,* are proper
321 factors to be considered in arriving at the fair value of its
property, are of little service for that purpose in this case. The manner in which its capital has been employed in purchasing the securities of other gas companies and of electric light companies, and in financing the construction of its Astoria plant, makes it impossible to determine with any degree of accuracy what proportion of its outstanding capitalization represents its assets invested in the gas business on which it is entitled to a return. It now holds securities of other gas and electric lighting companies to the value, as shown on its books, of $53,000,000, representing their cost to the Company in cash or in its stock at par. Its holdings of securities of the Astoria Company aggregated, as of June 30th, 1906, $7,010,000, which is considerably less than its actual cash investment in that enterprise. Nor can the market value of the stock be properly considered in arriving at the present value of the complainant's property, for the reason that there is nothing in the proof to indicate how far such value has been affected by plaintiff's control of other lighting companies. There are, however, available the market quotations of the stock for the period between 1885 (the year after the consolidation) and 1900, when complainant's stock was first increased. During that time its capitalization stood at the sum of $39,078,000, and its outstanding bonded indebtedness did not exceed $1,836,507.53, all of which may be fairly regarded as having been invested in the gas business. The stock ranged in the year 1899 between 163 and 223¼, or an average of 193. At this price Complainant's share capital of $39,078,000 would represent a valuation of $75,420,540. Taking, in like manner, the average between the lowest and highest price of each year between 1885 and 1899, and then averaging the price for the entire period, the result is shown of an average of 1.558, which for the entire share capital would amount to $60,883,0[illegible] Tested, therefore, by this standard, the present valuation of $[illegible]357,000 for Complainant's assets, ex-
clusive of franchises and good-will, would appear to be con-
322 servative, especially in view of the substantial increase in the
business of the Company since 1900.

Complainant's Assets Compared with Those in Other Cities.

Considerable stress was laid by some of the witnesses upon the gas statistics of other cities. Such evidence cannot be regarded in general as of value because the variance in local conditions is so great as to make accurate comparisons impossible. A consideration of the statistics of any other city, therefore, is of doubtful utility without a careful investigation of all the conditions existing in the particular place in question. The cost of plant, material, labor and supplies varies greatly in different parts of the country and so does the expense of distribution. There is no city, not even Chicago or Boston, where land is so expensive as in New York nor, as it would appear, is the cost of construction elsewhere so high. Speaking generally, it would appear from the statistics of other cities to which my attention was called that the assets of Complainant represented a lower structural value per thousand feet of gas sold than most of the others.

Boston:

The City of Boston, from its location on the seaboard, the physical characteristics of its soil, and the manner in which its streets are laid out and occupied, seems most to resemble New York City in the general conditions affecting cost of plant.

The Consolidated Gas Company of Boston was capitalized about a year ago, by Act of the Massachusetts Legislature, at $15,124,600, with a proviso in Section 3 of the Act that the Company "shall not " by the acceptance of the capitalization herein authorized be deemed " to have admitted *for any purpose* that the par value of such capital- " ization is equal to the value of its property or to the value of the " property *necessary for the conduct of its business.*"

323 The output of the Boston Company, at the time it was so capitalized, was about 3,000,000,000 feet annually, representing a capitalization of a little over $5.00 per thousand feet. Such capitalization, applied to the sales of the Complainant, would sustain a "capital" (not assets), of $66,415,000.

Professor Bemis, a statistician called by the city states, that, on the present volume of sales of the Boston Company, its capital amounts to $4.26 per thousand feet, which would be equivalent to a "capital" (not assets) of $56,585,000, for the Complainant on the same basis.

But, as suggested by the terms of the Act of the Massachusetts Legislature, the "capital" was not necessarily equal to the assets. The present value of such assets was appraised at the time of consolidation, and is set forth in the published report of the Massachusetts Gas Commission, produced by one of Defendant's witnesses. It approximates $23,000,000, or nearly $8.00 per thousand feet; and if this unit be applied to the sales of the Complainant, it would indicate a present value of Complainant's property (exclusive of franchises and good will) of $106,000,000.

Philadelphia:

The Philadelphia plant is being operated by the United Gas Improvement Company under lease; and Mr. Marks showed that the Company has *added* to plant as turned over by the City, $16,018,-192.22, or 2.15 cents per thousand of sales. It was suggested in the record (although no proof to that effect was offered) that the value of the plant so turned over to and used by the Company is about $30,000,000. Assuming this to be the fact there would be a total plant value of $46,000,000, or about $6.00 per thousand feet of output.

At this rate, Complainant's tangible property only, would be valued at about $80,000,000 on its sales of 13,283,000,000 feet.

Chicago:

The capital of the Chicago Companies is over $6 per thousand feet, as Professor Bemis testifies; at which rate the capital of the New York Company would be about $80,000,000.

324 Professor Bemis testified in Chicago, that he thought the property of that Company could be duplicated at $3.20 per thousand feet or about $35,000,000 in total, at which rate the property of the Complainant (exclusive of franchises and good will) would be worth over $42,000,000; but Mr. E. G. Cowdrey, of St. Louis, a gas engineer of wide experience, who testified in the same proceeding, said, referring to Professor Bemis's estimate:

"I will say that I have taken a company and replaced it absolutely from beginning to end, and I know positively that it would "not be possible to replace the company here in Chicago with its "first-class property and its business for less than $5 per thousand "feet of annual output. I would consider it a *physical impossibility* "to replace the plant and business of the People's Company for "$35,000,000."

As a result of its investigations the Committee in Chicago found $5 per M. of sales, to be a fair valuation for "structural value and working capital" only; upon which basis Complainant's assets, exclusive of franchises and good-will, should be worth $66,425,000.

Baltimore:

In Baltimore, where the price of gas is also one dollar, Mr. Bemis testified that the value of that Company's entire property (including, it may be assumed, franchises and good will) should be computed at twenty times the net profits of the Company from its gas business; and that this was a conservative method of computing the value of gas properties.

It appears that the net earnings of the Complainant, from its gas sales only, for the year 1905 are $4,587,995.99 (Complainants' Ex., 96); and, if this be multiplied by twenty, it would produce a valuation for the Complainant of $91,759,919.80.

Montreal:

In a recent estimate for the City of Montreal Professor Bemis fixed for the construction of a plant $4.30 per thousand feet of capacity, although there labor is lower, land less expensive, there is practically no rock, the City has only thirty-three miles of permanently paved streets to 160 miles of macadam, and has wooden sidewalks in 240 miles of streets out of a total of 340 miles. 325

Even if this unit, wholly inadequate and inapplicable to New York conditions, were applied, it would produce assets of $57,000,000 in New York, exclusive of franchises, good will and working capital, which were not included in the Montreal estimate at all.

As elsewhere shown a gas company cannot run at its full capacity and should have a reserve of at least twenty per cent. beyond its sales. No allowance appears to have been made for this in the Montreal estimate of $4.30; and if such reserve had been provided, the total cost of plant would have been $5.16 per thousand feet of sales, or equal to $66,425,000.

Average Throughout United States:

An examination of the statistics of the United States Census of 1900 respecting the gas industry in this country gives the following result:

Average capital per thousand feet sold....................	$8.47
Average structural value per thousand feet sold.............	7.23

The cost as claimed by Complainant of its permanent plant and property (excluding franchises, good will and working capital) represents only $4.18 per thousand feet of sales or less than the capitalization per thousand feet, shown by the Boston Company under express authority of the Legislature; while the present value of the corresponding property of Complainant, as claimed amounts to only $5.06 per thousand feet of sales or substantially less than the present value of the assets of the Boston Consolidated Company.

Complainant's Tax Reports.

It is urged by Defendants, with regard generally to the assets on which Complainant seeks to be allowed a return, that its 326 valuations, as given to the tax offic*lais*, are far below those which it now claims. Reference has already been made to Complainant's valuation of franchises in its reports to the State Board of Tax Commissioners. The criticisms of Complainant's statements as to the other assets may be best illustrated by an analysis of the report to that Board for the year 1904, as compared with the book valuations of the different items:

	Investment as shown by ledger.	Value stated in tax report.	Difference.
Real Estate........................	$11,216,479.71	$11,216,479.71	
Plant..............................	15,755,462.88	8,456,595.71	$7,298,867.17
Mains..............................	7,571,808.83	*3,666,531.38	3,905,277.45
Services...........................	1,227,931.86	*594,625.01	633,306.85
Franchize and Rights.............	7,781,000.00	7,781,000.00	
Stocks of other Companies.........	46,674,034.27	46,674,034.27	
Bonds and obligations of other Companies.....................	8,686,744.70	8,686,744.70	
Material and Supplies.............	697,014.92	697,014.92	
Accounts and Bills Receivable....	1,944,968.09	1,944,968.00	
Cash on hand	1,146,866.87	1,146,866.87	
Unclaimed dividends...............	39,052.50	39,052.50	
Metropolitan Fund.................	500.00	500.00	
Meters, Stoves and other personal property......................	3,630,772.12	2,667,329.77	963,442.35
Totals.....................	$106,372,636.75	$93,571,742.93	$12,800,893.82

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* Stated in the Tax Report under the heading "Present Value allowing for depreciation." "Reproduction" value stated as $5,613,221.12 for Mains and Services, detail of which (not asked for and not given in Tax Report to State Board) is as follows:

For Mains.................................	$4,829,925.82
" Services...........................	783,295.30
. Total..........................	$5,613,221.12

The first two items under the second column, $11,216,479.71 and $8,456,597.71, appear in said tax report at one point or another as a single item, $19,673,075.42, "Real Estate and Plant."

327 With regard to the four items in which the book values differ from those in the tax report, Complainant's explanation is as follows:

(*A*) *Plant.*—The Charter of the City of New York (Chapter 466, Laws of 1901, Sec. 889) provides, in relation to assessments, that the Deputy Tax Commissioner shall furnish to the Board of Taxes and Assessments, detailed descriptions of real estate "and also, in their judgment, the sum for which said property, under ordinary circumstances, would sell."

Having in mind this statute and the fact that a gas plant is not susceptible of alteration for other purposes, Complainant's officers took the position that if a plot of land on which a gas plant was located was sold, it will bring merely the value of the land, with little or nothing additional for the plant, excepting the value of such machinery as could be transported. Accordingly, under advice of counsel, and assuming that sooner or later one-half of the real estate might be sold, in consequence of the removal to Astoria then contemplated, they made up the tax report on the basis of the full book value of the land, plus the book value of one half the plant, plus a few hundred thousand dollars to represent the possible scrap value of the other half of the plant, in the event of sale. This resulted as follows:

One-half of plant ($15,755,462.88) to be retained indefinitely in New York, consisting of holders, &c., full book value	$7,877,731.44
Add for value of the other half of plant, consisting of manufacturing plant, considered as scrap on removal	578,864.27
	$8,456,595.71
Land as per books	11,216,479.71
Total as stated in report of June 30, 1904	$19,673,075.42

328 (*B*) *Mains.*—The reproduction figure of $4,829,925.82 was reached on the theory that, for purposes of taxation, the lowest and most favorable basis to the company should be assumed. Accordingly a computation was made by the Superintendent of Mains representing the bare cost of material and labor in laying the mains in soft earth, excluding all allowance for rock excavation, sub-surface obstructions, replacing expensive pavement, and other items going to make up the total cost of mains as now laid in the City of New York. From this there was deducted 25 per cent., not because of any physical deterioration of the property, but on the theory that the smaller sizes of mains would from time to time be replaced at a loss to the Company.

(*C*) *Services.*—The cost of reproduction was fixed at $783,295.30, with 25 per cent. off for depreciation, leaving a net of $594,625.01. The evidence does not show in what manner the valuation of services was reached, but it is conceded that it was incorrect from any standpoint.

(*D*) *Meters, etc.*—In this case to reach the figure $2,667,329.77, as stated in the tax repot, there was taken off 25 per cent. as an estimate on the loss which might be expected should the property be sold at forced sale and irrespective of its value to the Company as a going concern.

While the foregoing explanations are not altogether satisfactory, my judgment as to the value of the property in question is not affected by the fact that the figures given to the tax officials are different from those now claimed on behalf of the Company.

It is a matter of common knowledge that reports, petitions and similar papers required in connection with matters of taxation are, in the case of large corporations, ordinarily prepared by counsel. To some extent they are in the nature of pleadings, and are so drawn as to support the theory on which it is hoped to secure the most favorable results, either before the tax officials or the courts. Under these circumstances, when, as in the present case, it appears that taxes are being constantly contested, it must very commonly occur that views are expressed on behalf of the corporation more or less inconsistent with the valuations it would put upon its property for purposes of sale, condemnation or such an action as the present. This has been recognized to a certain extent by the courts, and it has been held that, for example, admissions in tax reports, although valuable as evidence, constitute no estoppel when the question in controversy is actual value or cost of reproduction. (*Louisville R. R. Co. vs. Brown,* 946, 949; *Southern Pacific R. R. Co. vs. Board of R. R. Commissioners,* 87 Fed. Rep., 22.) 329

Here such admissions are of no particular value as evidence, because they are wholly at variance with the other facts clearly established in the case. As regards the plant, for example, the figures given in the tax report are of no significance when compared with the fact that its structural value at the time of the consolidation in 1884 was about $4,000,000 greater. Since that time there have been spent upwards of $11,000,000 in renewals, repairs and additional construction. The same is true as regards mains and services, beside which it is to be noticed that Complainant's valuations for mains, meters and services, as now claimed, are not seriously questioned by any of Defendants' witnesses, assuming the mileage of mains to be according to Complainant's figures.

Cost of Gas.

The Complainant presented a summary of its operations for the calendar year 1905 (marked as Exhibit 94), which was used as the basis of the calculations made by all the witnesses as to the cost of gas making. It is reproduced herewith, the various items being consecutively numbered for the purpose of convenient reference. This summary represents expenditures merely, and no account is made therein of income or receipts from any source, excepting *Residuals,* (Items Nos. 7 to 17). The amounts derived from these sources are deemed to be proper in an account of operating cost, as their

Complainant's Exhibit 94.

Consolidated Gas Company of New York.

Summary of Operations for the Calendar Year 1905.

		Quantity.	Price per unit.	Amount.	Quantity per N c. f. made.	Cost per M c. f. made.	Cost per M c. f. sold.
1.	Coal: Bituminous—Tons	229,282.81	$3.18	$729,606.21	48.19	6.48	7.00
2.	Anthracite — "	106,024.68	4.36	462,680.25	22.82	4.34	4.44
3.	Boiler — "	10,399.67	3.67	38,156.43	2.19	0.36	0.37
4.	Cartage — "	....	.....	18,222.89	.....	0.17	0.18
5.	Labor handling	....	.....	49,150.07	.....	0.46	0.47
6.	Total	....	.....	1,297,815.85	.....	12.17	12.46
7.	Residuals:						
8.	Coke—Loads	167,071.70	2.02	338,300.91	.....	3.17	3.25
9.	Less—Labor handling	....	.....	35,678.39	.....	0.34	0.34
10.	Cartage	....	.....	11,164.97	.....	0.10	0.11
11.	Net	....	.....	291,457.55	.....	2.73	2.80
12.	Tar (Coal) Tons Carbonized	229,282.81	28.59	65,546.70	.....	0.62	0.63
13.	Ammoniacal Liquor (Lbs.)	4,896,886	01.34	65,849.65	.....	0.62	0.63
14.	Carbon	485,720	01.00	4,857.20	.....	0.04	0.05
15.	Spent Oxide	5,577,034	00.11	6,196.47	.....	0.06	0.06
16.	Oil Tar—Gallons	2,710,826	01.93	52,207.26	.....	0.49	0.50
17.	Total Residuals	....	.....	486,114.83	.....	4.56	4.67
18.	**Net Total**	....	.....	811,701.02	.....	7.61	7.79

Summary of Operations for the Calendar Year 1905—Continued.

		Quantity.	Price per unit.	Amount.	Quantity per *F* c. f. made.	Cost per M c. f. made.	Cost per M c. f. sold.
19.	Coke used—Tons	19,892.54	$3.22	63,972.09		0.60	0.61
20.	Labor			1,293.31		0.01	0.01
21.	Cartage			43.87			
22.	Total			65,309.27		0.61	0.62
23.	Naptha—Gallons	5,587	04.38	244.43			
24.	Gas Oil— "	41,876,670	04.23	1,769,968.42	3.93	16.61	16.99
25.	Fuel Oil— "	2,502	02.00	50.04			
26.	Lime—Bushels	62,374	04.99	3,114.02		0.03	0.03
27.	Oxide— "	121,485	15.78	19,173.35		0.18	0.18
28.	Water—Cubic Feet	22,684,200	$1.00M.	22,684.20		0.22	0.22
29.	Fuel Oil (including Drip Oil Labor, if used in mfg.)			4,424.70		0.04	0.04
30.	Oil, Waste and Sundries			5,407.15		0.05	0.06
31.	Cartage			17,123.60		0.16	0.17
32.	Labor			382,632.04		3.59	3.67
33.	Net amount of Material & Labor			3,101,832.24		29.10	29.77
34.	Repairs to Apparatus			169,197.39		1.59	1.62
35.	do. Buildings			24,900.69		0.23	0.24
36.	do. Tools and Implements			16,228.48		0.16	0.16
37.	Expense			59,016.97		0.55	0.57
38.	Distribution			31,855.34		0.30	0.31

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39. Experiments	.....	.....	3,030.08	.....	0.03	0.03
40. Profit and Loss Adjustment	.....	.....	*7,508.39*	.....	*0.07*	*0.07*
41. Distributing Station Expenses	.....	.....	56,538.57	.....	0.53	0.54
42. Station Costs	.....	.....	3,455,091.37	.....	32.42	33.17
43. Cost of Gas Mfg. under Agency Agreements	.....	.....	997,039.89	.....	34.04	34.82
44. Total Cost of Holder	.....	.....	4,452,131.26	.....	32.77	33.52
45. Expense	.....	.....	490,855.36	.....	.....	03.69
46. Distribution	.....	.....	281,524.12	.....	.....	02.12
47. Repairs to Gas Stoves	.....	.....	55,954.35	.....	.....	00.42
48. do. Mains	.....	.....	126,110.31	.....	.....	00.95
49. do. Services	.....	.....	89,033.46	.....	.....	00.67
50. do. Meters	.....	.....	172,925.52	.....	.....	01.30
51. do. Buildings	.....	.....	15,116.68	.....	.....	00.11
52. do. Tools and Implements	.....	.....	15,610.59	.....	.....	00.11
53. Street Lamps	.....	.....	289,259.09	.....	.....	02.18
54. Interest on Consumers' Deposits	.....	.....	51,391.52	.....	.....	00.39
55. Bad and Doubtful Debts	.....	.....	82,995.11	.....	.....	00.63
56. Profit and Loss Adjustment	.....	.....	*29,683.92*	.....	.....	*00.22*
57. Total Distribution	.....	.....	1,641,092.19	.....	.....	12.35
58. Expense—General Office	.....	.....	339,999.51	.....	.....	02.56
59. Vacations and Sickness	.....	.....	8,175.20	.....	.....	00.06
60. Automobiles	.....	.....	5,064.16	.....	.....	00.04
61. Advertising and Legal	.....	.....	105,800 02	.....	.....	00.80

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Summary of Operations for the Calendar Year 1905—Continued.

	Quantity.	Price per unit.	Amount.	Quantity per *N* c. f. made.	Cost per M c. f. made.	Cost per M c. f. sold.
62. Real Estate Rents	....	.....	42,674.71	.....	.....	00.32
63. Gas Companies' Mutual Aid Society	....	.....	6,413.99	.....	.....	00.05
64. Superannuation	....	.....	14,943.86	.....	.....	00.11
65. Insurance	....	.....	54,031.83	.....	.....	00.41
66. Taxes	....	.....	965,843.88	.....	.....	07.27
67. Contingent Expense (includes renewals)	....	.....	1,328,316.37	.....	.....	10.00
						74.81
68. Total General Expenses	....	.....	2,871,263.53	.....	.....	21.62
69. Fixed Charges	....	.....	972,423.44	.....	.....	07.32
70. Total Operating	....	....	$9,936,910.42	.....	.....	74.81

71. Gas made at Consolidated Co.'s Stations	10,657,810,000	
72. " " " Other Co.'s Stations under Agcy. Agmt.	2,929,210,322	13,587,020,322
73. Gas sold—Made at Consolidated Co.'s Stations	10,419,461,426	
74. " " Other Co.'s Stations under Agcy. Agmt.	2,863,702,341	13,283,163,767
75. Excess make over sales (2.24%)		303,856,555
76. Gas Sales, cubic feet	13,283,163,767	

NOTE.—Figures in *italics* in red ink in original.

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331 production is the necessary result of the very process of gas making.

The expenditure of the various items shown on this statement is not questioned, excepting as to a portion of the Item No. 67, *Contingent Expenses* (*including renewals*). There was no question also as to the propriety of allowing most of the items as proper elements of gas cost, and, on the other hand, all the witnesses agreed in making certain eliminations, notably Item No. 69, *Fixed Charges*, and varying portions of Item No. 66, *Taxes*. All agreed also in eliminating for the purposes of their computations as a whole, Item No. 67, *Contingent Expenses* (*including renewals*), but each witness substituted in place thereof other figures, representing his views of a proper allowance for repairs, renewals, contingencies, etc.

The items as to which chief question was raised are as follows:

No. 47, Repairs to Gas Stoves.
No. 53, Street Lamps.
No. 54, Interest on Consumers' Deposits.
No. 58, General Office Expenses.
No. 61, Advertising and Legal Expenses.
No. 62, Real Estate Rents.
No. 66, Taxes.
No. 67, Contingent Expenses (including renewals).

Item 47. Repairs to Gas Stoves, $55.954.35:

For the purpose of increasing its sales the Complainant encourages the use by its customers of gas stoves, the repairs of which it looks after, as it does after the repairs of their other gas apparatus. The stoves are Complainant's property and it received rentals therefor during the year amounting to $122,322.60, less depreciation written off $54,954.98, leaving a net credit on account of stove income of $67,367.62.

The Defendants claim that instead of charging as a part of operating cost the amount of Item No. 47, $55,954.35, there should in fact be a credit of $11,413.27, being the difference between

332 that item and the rentals received, less depreciation.

The custom of renting stoves is not universal. A great many companies do not own their stoves, and yet are subject to expense for repairs to gas stoves used by their customers, the expense of which is charged to operating cost.

Complainant urges that its method of bookkeeping is the proper one because, if for any reason the Company should abandon the practice of renting its gas stoves, its receipts from this source would disappear, while the expenses would still remain, thereby apparently increasing the cost of gas, while as matter of fact there would be no increase in such cost but merely a decrease in income.

It is unquestioned that the ultimate result of either method is the same in arriving at the net operating cost. The evidence indicates that Complainant's method of bookkeeping is supported by the form of report adopted by the New York and Massachusetts Gas Commissions, the American Gas Light Association and various

British Companies, although a different method is apparently followed by the Buffalo Gas Company.

Under these circumstances, I see no sufficient reason for eliminating the item in question.

Item 53. Street Lamps, $289,259.09:

This represents the actual expenditures of the Complainant in caring for the public lamps under its contracts with the City, less all receipts by the Company for repairs independently charged.

Taking as an illustration a single contract (City's Exhibit 4), it appears that the lamps are furnished to the City for a lump sum, covering not only the gas delivered but

"the lighting, extinguishing, cleaning, repairing, reglazing, and painting of lanterns and lamp irons, the painting of lamp posts and cross-heads, the furnishing and repairing and replacing of
333 cocks, tubes and burners; the replacing of crossheads, lamp irons and lanterns and the replacing and repairing of lamp posts when owned by the contractor."

In a subsequent paragraph the Company agrees to do certain work in connection with "repairs of lamp posts and erection of new lamp posts" at a certain specified charge for each service.

The amount received from the City, including both gas sold and maintenance of lamps, appears in the income of the Company as a receipt from gas sales.

This involves the same principle as the preceding item. In this instance also complainants' method has the sanction of abundant authority in the practice followed elsewhere and I find no reason to question its propriety.

Item 54. Interest on Consumers' Deposits, $51,391.52:

Complainant, like most gas companies, is empowered by law to require a deposit from every consumer in order to protect itself against loss, but is required to pay legal interest thereon. The proof shows that the amount of such deposits practically forms a part of Complainant's working capital, and as specific allowance is elsewhere made for the amount of working capital deemed necessary for the conduct of its business, this item of interest on a portion thereof should not be allowed as part of the operating cost.

Item 58. General Office Expense, $339,999.51.

Item 61. Advertising and Legal Expenses, $105,800.02:

One of Defendants' witnesses excluded from Item 58 the sum of $25,671.74, representing disbursements in connection with legislative investigations, and from Item 61 the sum of $63,401.65, covering expenses growing out of franchise tax litigation.

No sufficient reason was shown why expenses of this character, which are common to the conduct of the business of large corporations, should not be treated as a part of Operating Expenses.
334 Such appears to be the general practice in this country, and the form of gas reports prescribed by the British Government expressly recognizes their propriety.

Item 62. Real Estate Rents, $42,674.71:

This represents rentals payable by Complainant for premises leased by it and occupied in the conduct of its business. *Per contra,* there appears in its miscellaneous income the amount which receives for real estate leased by it to other parties, viz., $37,408.88.

This question presented is merely one of book-keeping. My conclusion regarding it is the same as in the case of Items 47 and 53 *ante,* and for the same reasons.

Item No. 66. Taxes, $965,843.88:

This is made up as follows:

Taxes on Real Estate	$179,778.95	
" " Personal Property	88,839.00	
" " Special Franchises	406,909.23	
" " Mains, Pipes, etc	14.91	
" " Income from gas business	70,538.02	
		$746,080.11
Taxes on Income from other Companies' Securities	$5,257.48	
" on Dividends in excess of 4 per cent. on $38,643,590,14, Stock invested in Securities	57,965.39	
" " $41,356,409.86, Stock in Gas Business	62,034.61	
Interest on Unpaid Taxes	94,506.29	
		219,763.77
Total		$965,843.88

In making their computations as to cost of gas, all the witnesses seem to agree in including the above amount of $746,080.11,
335 and excluding the items, "Taxes on Income from other Companies' Securities," and "Taxes on Dividends in Excess of 4 per cent. on Stock Invested in Securities." The Defendants' witnesses however further exclude the items "Taxes on Stock in Gas Business" and "Interest on Unpaid Taxes."

No sufficient reason is perceived for the rejection of either of these items. The former is a tax assessed against the corporation under the terms of Section 186 of the Tax Law (Cumming & Gilbert's General Laws, page 3984). It is in no sense a charge against individual stockholders. The latter covers taxes chiefly on franchises, the validity of which is in controversy in the courts. Assuming that the taxes could be paid pending such litigation, under protest, and Complainant's rights fully protected, it is still apparent that in the event of ultimate success the Complainant would be subjected to more or less expense before the amount of such payment could be recovered. As it has seen fit to contest the tax pursuant to the advice of counsel, the interest meanwhile accruing would seem to be as much a necessary expense as the costs of court fees of counsel. It is not claimed or shown that the litigation was, in any case, unreasonable or improvident.

Item No. 67. Contingent Expenses, Including Renewals, $1,328,316.37:

All the witnesses agree, when making their computations of cost, in substituting for the above item their own estimates covering various elements embraced therein. It is therefore necessary to note exactly what it represents on the books of the Company. The proofs show that it consists of an arbitrary charge of 10 cents per thousand feet of gas sold, based upon the total sales of 1905. Its purpose according to Mr. Addicks was to cover

"any minor extensions, renewals on account of extraordinary wear and tear, depreciation not covered by repairs, all supersession, accidents of larger moments than usual, fluctuations in the business, changes in the cost of all materials, and electrolysis and other contingencies." 336

In amplification of this answer it was stated that, under modern conditions, there is a new element of danger in the gas business by reason of the subways. The risk of explosions is much increased, particularly during the period of construction, and increased expense for inspection is required. As an illustration of risk of this sort, the witnesses have cited a comparatively recent gas explosion in the Boston subway, involving an expense equal to 10 cents per thousand on the entire output of the Boston Gas Light Company for four years.

Mr. Carter said:

"I might say that we took into account such considerations as fluctuation in the cost of material, liability to serious and expensive accidents, having in mind the case of a very grave one which occurred in Boston not long ago which cost the Company there a great deal of money to settle in the way of damages; the possibility of variations in the volume of the business might render the presence of such a fund very serviceable to the Company; and many considerations of that sort were canvassed very thoroughly in determining the amount that we should reserve.

Q. Then as I understand, you did this to accumulate your surplus earnings as against a change in the volume of business or some extraordinary occurrence; it had nothing to do with the ordinary operations?

A. Our intent was of course to cover by that ten cents such extraordinary loss as the Company would sustain in the removal of the plant to Astoria, among other things, as well as to cover the cost of current replacements and renewals that would take place independently of any transfer of the plant to Astoria from New York."

This account was first opened in May, 1905.

337 There was posted into it monthly as a credit the arbitrary amount of 10c. per thousand feet of gas sales, and at the close of the year there were debited against the account the sum of $282,219.67, representing depreciation charges, chiefly renewals and replacements.

This was done pursuant to resolution of the Board of Directors as follows:

Resolved, that the officers of this Company be, and they hereby are, authorized and directed to apply from the amount now at the credit of Renewal and Contingency Account, the sum of $282,219.67 to cover the amount of loss and depreciation in, or cost of replacement of, certain items of this company's property specified in a memorandum signed by the Secretary of this Company, the same to be entered in detail upon its books.

Plant $3,424.00

For the original cost of sundry plant and apparatus dismantled during the year, to make room for new plant and apparatus plus the cost of dismantling, less what was recovered from the sale of old apparatus as scrap or from its use as repair material. Also the book value of plant and apparatus sold, less the amount recovered.

Mains 90,561.54

For the book value of mains abandoned during the year and the book values of mains replaced during the year with mains of larger capacity, less the value as stock of the old mains taken up.

Services 37,401.00

For the book value of services taken up or cut off and abandoned in the street during the year.

Meters 25,646.20

For the book value of meters condemned, lost or destroyed during the year.

Meters, Cocks and Connections................ 31,570.89

338 For the depreciation and replacement during the year, estimated at 10 per cent. of the book value.

Horses, Wagons and Harness.................... 5,338.62

For the depreciation and replacement during the year, estimated at 20 per cent. of the book value.

Office Furniture and Fixtures.................... 8,140.87

For the depreciation and replacement during the year, estimated at 20 per cent. of the book value.

Tools and Implements........................ 24,483.65

For the depreciation and replacement during the year, estimated at 40 per cent. of the book value.

Gas Stoves	54,954.98
For the depreciation and replacement during the year, estimated at 20 per cent. of the book value.	
Automobiles	697.92
For the depreciation and replacement during the year, estimated at 10 per cent. of the book value.	
	$282,219.67

This account therefore consists merely of bookkeeping entries and in one sense does not show the actual expenditure of any money. It does, however, represent an actual expenditure in the sense that the replacements and renewals thus charged as depreciation form a part of the Company's "construction account," all of which represents money actually expended. In other words, being an account for depreciation no item of expenditure directly appears therein but all expenditures for renewals and replacements must necessarily be shown in the construction account. Thus, in said $282,219.67, the first item, $3,424, represents items of "plant" abandoned, whereas the Company's balance sheet for the year shows that its plant construction for 1905 amounted to $403,255.53, resulting in a net increase to account of plant, after making good said depreciation item, of $399,831.53. The expenditure for construction account, therefore, taken as a whole for 1905, was not only sufficient to restore
339 the property account for that year to the point it occupied before said $282,219.67 was charged off, but left it at a net higher figure on December 31st, 1905, than it was shown to be by the balance sheet for the previous year.

Item 67, therefore, may to the extent of $282,219.67 be regarded as representing complainant's expenditures for current renewals and replacements during 1905, necessary (in addition to the current repairs covered by Items 34-36 and 47-52 of Ex. 94) for the maintenance of its plants and property. Such expenditures amounted on the basis of sales to 2.12c. per thousand feet, and the question presented is whether or not sufficient ground has been shown for the allowance of the remaining 7.88c. necessary to bring this amount up to the 10c. per thousand feet arbitrarily set aside in Item 67.

Complainant's claim is based on the necessity of a sufficient reserve fund to cover "final renewals" and "contingencies." The terms have been used more or less indiscriminately by the witnesses. They cover, however, distinctly different elements and have only one feature in common, in which they both relate to future requirements, for which, according to Complainant's contention, experience has shown that provision must be seasonably made.

(1) Final renewals:

A "final renewal" fund is in addition to *current* expenditures for "repairs and renewals," such as are embraced in Items 34 to 36 and 47 to 52 of Exhibit 94, and the current replacement charge of 2.12 per thousand feet, included in Item No. 67. It is intended (*a*) to cover physical deterioration which has taken place and which has not been met, by current repairs and renewals, and (*b*) to provide for the loss or displacement of plants, in whole or in part, in the future from any cause.

For example, in illustration of (*a*), Mr. Mayer found the value of Complainant's plants new to be $16,137,477, and as now existing to be only $15,532,489, in spite of the expenditures made for current "repairs and renewals." The balance ($604,988,) which it
340 would be necessary to expend some time to make the plants
as good as new would be covered by a "final renewal" provision; as to (*b*), if Complainant's manufacturing capacity should be removed to Astoria on completion of the second and subsequent Units there, it would involve the abandonment of working and efficient apparatus and buildings in Manhattan, of a value as claimed of upwards of $10,000,000. Such loss also would be covered by the "final renewal" charge.

Of course the requirement of such "final renewal" provision affects in no way the present value or efficiency of the plants of the Company as operating concerns, except to the extent of the "repairs" ($604,988 above mentioned), which would be required to make the operating plant as good as new.

This intangible or general depreciation of plants which it is necessary to provide for by such "final renewal" fund was well described in the Columbus Railway and Light Company case already cited:

"A building may be kept in as good repair as possible, and the cost of such repair can be ascertained, and is ascertained and legitimately added to the operating expense. But in however good repair a building may be maintained, in addition to this cost there is a gradual depreciation of the value of the building itself arising from lapse of time in spite of fresh paint, new roof, new bracings, repaired joists, etc., which eventually, according to circumstances, renders the building useless for the purpose for which it was constructed. In the case of buildings this intangible depreciation is naturally slower than the depreciation of its contents in the shape of machinery, or the depreciation of wires, poles, conduits, and distributing system of a property such as Complainant's.

A machine may be kept constantly in repair so far as skill and ingenuity can keep it in repair, but in spite of such repairs the machine eventually will wear out, and become useless for its purpose. Machinery and appliances devoted to any purpose in which the state of the art, or the condition of manufacture have not been brought to absolute perfection, so that there can be no further
341 progress, is subject also, and always, to the fact that newer
and better appliances, either furnishing service or product at less cost, or furnishing service or product of better quality, or of more constant value to the consumer, may be at any time invented, thereby compelling the producer to cast off the old machine and buy the new one, or to suffer loss of custom, or incur increased cost of product, by not so doing. For these reasons a machine today which is worth $10,000, may tomorrow, in the exercise of good judgment, have to be sold for scrap.

The pole line of an electric company may be constantly painted and watched with the utmost care, all that expense being charged to the operating expenses, but in addition to this, there is necessarily a deterioration and decay of the pole from year to year that cannot be prevented by any such care."

(2) Reserve Fund:

The purpose of this fund, as above stated, is to cover such contingencies as increase in cost of labor and materials, hazards of strikes, damage from electrolysis or by reason of explosions, and unforeseen events of any description which may tend to increase the cost of production.

As illustrating the necessity of providing for such contingencies, complainant has called attention to three specific items developed during the hearing, all of which represent an increased cost of manufacture:

1. Additional cost of enrichment of gas. By Chapter 737 Laws of 1905 the illuminating power of gas was fixed at 22 instead of 20 candle power to take effect on July 1st of that year. The cost of production for 1905 as shown by Ex. 94, covered the expense of enrichment for only six months while for a full year would require the addition of 1.83c per thousand feet to the cost as stated.

2. The taxes for 1906 were increased over those of 1905 to an extent amounting to 1.13c per thousand feet of gas.

342 3. Wages have been increased during the last year to an extent equivalent to an additional cost of 1.40c per thousand feet.

The Defendants urge that the arbitrary allowance of 10 cents per thousand feet represented by item 67 is wholly unjustifiable by the necessities of complainant's business; that such an account has no warrant in the experience of twenty years, but was opened merely as an afterthought in consequence of the Legislative investigation of 1905, and for the purpose of swelling the apparent cost of gas. To quote the language of counsel

"it represents a re-charge for a depreciation of plant that has been protected by a depreciation charge for twenty years; it represents 'depreciation' that has not accrued; it represents depreciation that may never accrue, and doubtless such as stated will never accrue; it represents fake depreciation—an afterthought, trumped up to swell the cost and justify over-charge, and it should so far as it is speculative be rejected."

If the account in question is in itself a proper one, the fact that it was not opened until 1905 has little bearing on the issues now to be determined. That it is proper, so far as regards the amount expended for current renewals and replacements is not seriously disputed. As to "final renewals" (or, as sometimes called "general depreciation") and "contingencies," the propriety of an allowance is fully established by the evidence and, to a greater or less extent, conceded by Defendants' witnesses. Counsel have cited two decisions of State Courts to the contrary (*Cedar Rapids Water Co. vs. Cedar Rapids*, 118 Iowa, 234, 263; *San Diego Water Co. vs. City of San Diego*, 118 California, 556, 583), but those cases are at variance with the views frequently expressed in the Federal Court (*Milwaukee &c. Co. vs. Milwaukee,* 87 Fed. Rep., 577, 582; *Spring Valley Water Works Company vs. San Francisco,* 124 Fed Rep., 574, 599).

343 They are also at variance with the common practice of well managed industrial corporations. No reason is apparent why such a rule should not be followed in the case of a public service corporation as well as any other. The propriety of so dong has been recognized in Massachusetts, where the percentage of intangible depreciation has been definitely fixed by statute, so far as municipal electric lighting companies are concerned, at 3 per cent. annually upon the total cost of the plant. A similar practice prevails in England where there is set aside an annual percentage based on the structural value of the assets to cover not only depreciation but contingencies.

The only question, therefore, to be determined is as to the extent to which an allowance should be made for this purpose and, in considering this question, reference must be had in some detail to the method pursued by the different witnesses in preparing their cost computations.

The aggregate expenditure for repairs, as shown by Exhibit 94 (Items 34 to 36 and 47 to 52 inclusive), amounted in 1905 to $685,077.47, or 5.58 cents per thousand feet. Adding this the amount of replacements and renewals included in Item 67 (2.12 cents) gives a total cost for 1905, for repairs and renewals, of 7.70 cents per thousand feet.* This is considerably less than Complainant's average expenditures for like purposes since its organization.

Between November, 1884, and January, 1906, such average expenditure was at the rate of 10.89 cents per thousand feet. During the first eleven years of that period the average was at the rate of 12.25 as against an average during the last eleven years of only 9.73 cents. It is urged by Complainant that, in order to properly determine the operating cost of gas, it is necessary to take
344 the average expenditures for repairs, replacements and renewals covering a period of years. A company may in one year abandon, or suffer damage to, considerable quantities of apparatus with the result of placing the repairs and renewals for that year at a very high figure, whereas in the following year there may be a minimum of loss and the repairs and renewals be much less. Accordingly, Complainant's witnesses in their computations have added to the total amount expended for this purpose, as shown by Exhibit 94, such further amount as was necessary, in their judgment, to bring the expenditure up to the normal rate, as shown by the average of earlier years. Dr. Humphreys took an average of the period between 1884 and 1905, which he placed at 10.60 cents. Mr. Addicks' selected the average of the last five years during which the Company manufactured all its own gas; to wit, 1894 to 1899, during which period the average was 12.31 cents.

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*Note.—According to State's Exhibit L the expenditures of 1905 for these purposes were $974,289.65, or 7.34 cents per thousand cubic feet upon complainant's total sales. The latter figure is used by several of the witnesses.

The propriety of this method is supported to some extent by Defendants' witnesses: Professor Bemis used the average of 10.89 cents for the last twenty years preceding 1905. It also appeared that the propriety of taking such an average, instead of expenditures for any particular year, was recognized by the State Gas Commission in its decision fixing the price of gas at 80 cents, and by a Committee of the Chicago Common Council, investigating the cost of gas, in that City.

It is, however, claimed by Defendants' counsel that as the operations of the Complainant for the year 1905 have been selected as material for a study of gas cost, the figures must be regarded as typical in every respect, and that no exception should be made in the case of repairs and renewals, notwithstanding the evidence may show they are not fairly representative of the actual cost to the Company in previous years. It is also suggested, and with much more force, that, if any average is to be taken, it should be the longer period used by Dr. Humphreys and Professor Bemis, instead of the short period selected by Mr. Addicks, covering the years
1895 to 1899 inclusive. This is especially true, in view of
345 the fact that most of the water gas apparatus has been built
within the last five years and is thoroughly modern in all
respects.

It is also urged that if Complainant is entitled to charge operating expenses to depreciation to cover renewals, actual and estimated, it should, on the other hand, be compelled to credit the operating account or debit the investment account with the appreciation of its real estate values. The force of this argument is not apparent. Under the authorities, the Complainant is entitled to a return upon the value of its property "at the time it is being used for the public" (*San Diego Land & Town Company vs. National City,* 174 U. S., 139). Whatever enhancement there may have been in its value since the date of purchase was the result of no efforts on the part of consumers of gas, and they are not equitably entitled to a return thereon. Whether it was the result of mere good fortune or was due to the shrewdness and foresight of the management of the Company is immaterial. In either case, the justice of permitting the general public to share its benefits at the expense of Complainant's stockholders is not apparent.

As to the amount to be allowed as a reserve for contingencies Dr. Humphreys advocates the allowance of 5 cents per thousand on sales for the accumulation of a fund which shall be equal to 10 per cent. of the capital.

Professor Bemis appears to have in other proceedings admitted the propriety of an allowance of 3 cents per thousand feet as a reserve fund. He did not do so in the present proceeding, however, on the assumption that the 10.89 cents, representing the average "repairs and renewals" for a period of the past twenty years, went in part to increase the property of the Company. In other words, that earnings formed a part of such "repairs and renewals" and had gone to swell the property account. In this assumption he appears to have been in error.

Mr. Addicks, in his computation, added for a reserve or contingent fund 3 cents per thousand.

346 Mr. Marks made no allowance for this purpose on the ground that, in his view, the Company had sufficient surplus to provide the necessary contingent fund if it had not applied the same to the purchase of the securities of other lighting companies. The force of this suggestion is not apparent, in view of the conceded fact that the securities of other lighting companies owned by the Complainant were not paid for by any surplus in its possession, but were acquired by the issue of increased stock beyond its original capital. In a work written by the witness, entitled "Finances of Gas and Electric Light and Power Enterprises," he advocates 15 per cent. on the structural value of gas property to cover return on capital and a fund for future contingencies. Assuming 10 per cent. as a dividend rate, and taking 5 per cent. for contingencies, this would amount on the basis of even so low a valuation as $25,000,000 for the structural value of Complainant's property to over 9 cents per thousand feet of sales. In fact, the witness admitted that assuming Complaint to have a return only upon the value of its assets, it would be entitled to an allowance of a reserve or contingent fund up to the amount of about 10 per cent. of the capitalization or structural value of the works, in accordance with the English custom.

The cost computations of the different witnesses may be analyzed and compared as follows:

Mr. Addicks:

Cost as per Complainant's Exhibit 94		74.81c.
From this he deducts fixed charges	7.32c.	
Taxes, based on dividends on the portion of the Company's stock, invested in securities of other Companies	.48c.	
Item, "Contingent expense, including renewals and replacements"	10. c.	
		17.80c.
		57.01c.
To this he adds depreciation items (or "replacements"), actually included in said 10.c. item last named		2.12c.
Amount without adjustments		59.13c.
347 To this he adds for cost of enrichment, due to 22 candle power law, for which the Gas Commission allowed 1.81c. (Bill of Complaint, p. 51)		1.83c.
The "repairs and renewals" of the Company for the last 5 years (1894-9), during which it manufactured all the gas it sold, was per M.	12.31c.	
To bring 1905 up to average of those 5 years, in view of the completion of the Astoria coal gas Unit, he adds the difference between said amount and the abnormally low "repairs and renewals" for 1905	7.34c.	
	4.97c.	

Less certain repairs of other Companies, already included in gas delivered under agency agreements ..	.35c.	
		4.62c.
He then adds for increased cost of labor, anticipated when he made the computation, but since actually realized, according to the testimony to the extent of 1.40c. per M., say		.78c.
To this he adds for a "reserve" or contingent fund		3. c.
Net chargeable to cost for year		69.36c.

On the subject of income, Mr. Addicks shows the following results:

Receipts from gas, in lump sum, which also covers maintenance of public lamps	102.03c.
Dividends from National Coke & Coal Company, in which $50,000 of capital was invested	.04c.
Miscellaneous income, including stove rents, discounts, real estate rentals and sundries, being all the other receipts of the Company, except from securities of other lighting Companies held	1.30c.
	103.37c.
Available for return on capital	34.01c.
348 Deduct fixed charges, being total payments of interest on Debentures, *less* any amounts received from investment of proceeds of Debentures, so far as they are not already turned into plant	7.32 c.
	26.69 c.
Deduct 20c. per M., if 80c. rate were assumed	20. c.
Remainder, applicable to dividends, assuming 80c. rate..	6.69 c.

Dr. HUMPHREYS:

He starts with Station cost of all the gas sold by Complainant in the holder (Ex. 94—33.52c.) at	33.517c.
He then adds "distribution" expenses (Ex. 94—12.35c) at	12.355c.
And "general" expenses (Ex. 94—21.62c.) at	21.616c.
Total, excluding fixed charges	67.488c.

From this he deducts taxes paid on dividends relating to the portion of Complainant's stock invested in securities of other Companies		.476c.
Net cost to this point		67.012c.
He then deducts, for the purpose of substituting average figures therefor, namely, certain charges, which appear in Ex. 94, *repairs and renewals* appearing in Exhibit 94, including the 10c. charge (Item 67), a part of which is "contingent," being in total		15.210c.
Cost at burner exclusive of Repairs, Final Renewals (Depreciation) and contingencies, excluding extraordinary hazards		51.802c.
He finds that the average expenditures for "*Repairs*" from 1884-1905 are	7.5858c.	
And that the average charge for *Renewals* (Depreciation) for the same period, based on this experience should be	6.5592c.	
Total for repairs, renewals & depreciation		14.145c.
349 Cost at burner with no reserve for contingencies		65.947c.
Reserve to cover contingencies, as explained in his testimony (pp. 1946-7)		5. c.
Total cost, including reserve		70.947c.

Turning to the income side of the account, Dr. Humphreys makes the following computations:

Receipts from gas, including lamp maintenance	102.0277c.
Miscellaneous income, including stove discounts, real estate rentals and sundries, and dividends from National Coal & Coke Company	1.3378c.
Total income from gas business	103.365 c.
Profit to cover return on capital (p. 1944)	32.418 c.

Mr. Marks:

Cost as per Exhibit 94			74.81c.
Deduct:			
Fixed Charges		7.32c.	
Taxes	0.48 0.47 0.71	1.66c.	
Contingent		10.00c.	
Street Lamps		2.18c.	
Int. on Consumers Deposits		0.39c.	

Repairs Gas Stoves	....	0.42c.	
Stove Rents	0.92		
" Repairs, already deducted........	0.42	0.50c.	
Real Estate rents	....	0.28c.	22.75c.
			52.06c.

Add:

Renewals—Nominal Year ending October 31, 1905.......	1.45c.
Balance for cost of gas..............................	53.51c.

350 This would leave the other side of the account as follows:

Receipts—Gas sales		102.03c.	
Street lamp, maintenance..........		2.18c.	99.85c.
Misc. Income		1.34	
Less stove rents..................	.92		
Real estate rents.................	.28	1.20	.14c.
Net income			99.99c.
Left for return on capital..............			46.52c.

Making certain corrections in the above in accordance with the views hereinbefore expressed the result is as follows:

Cost of gas, excluding fixed charges, as per Mr. Marks....	53.51c.
He has deducted not only taxes based on dividends paid on Complainant's stock, invested in securities of other companies (.48c.), as did Mr. Addicks and Dr. Humphreys; but also taxes based on dividends paid on stock, invested in the gas business (.47c.), and interest on deferred franchise taxes in litigation (.71c.), both of which are proper charges to operating expenses. There should therefore be added .47c. and .71c..................	1.18c.
He has also excluded maintenance of street lamps, which should be added	2.18c.
He also excludes repairs to gas stoves, which should be added	.42c.
He has not only deducted repairs to gas stoves but also deducted an item of income not appearing in Exhibit 94,—to wit, the difference between the expense item, "Repairs to gas stoves," (.42c.), and the income item of "stove rents" (.92c.), or, 50c. Restoring this item, there should be added	.50c.

Having deducted the 10c. "Contingent and renewal item, a part of which represented actual items of "renewals" (Depreciation), he adds only 1.145c. for renewals, taking the amount for the *nominal* year ending October 31, 1905; whereas the actual amount for the *calendar* year was 2.12c. The difference should be added........... .67c.

Total .... 58.88c.

351 If for purposes of illustration there are added to the above certain items insisted upon by complainant the result will be:

Corrected cost as above..............................	58.88
Add, to equalize the repairs and renewals of 1905 (7.34, according to Mr. Addicks), with the average for twenty years, 10.89	3.55
Add, for final renewal or reserve fund, 5% on an assumed structural value of $25,000,000 for tangible assets (the payment of which under certain conditions Mr. Marks admitted)	9.
Add as typical contingencies, additional cost of enrichment, 1.81; increased cost of labor, 1.40; increase in taxes, 1.13.	4.34
	75.77

Professor **Bemis**:

His computations, arranged in tabular form, are as follows:

	Operating cost according to Exhibit 94.	Operating cost according to Bemis' preliminary estimate.	Operating cost according to Bemis with "station cost" and item, "other expenses," as actually expended.
Station Cost (Item 44).....	33.52c.	26.68c.	33.52c.
Repairs on Distribution System.	3.56c.	3.56c.	3.56c.
Taxes	7.27c.	6.08c.	6.08c.
Contingent and Renewals..	10.00c.	5.31c.	5.31c.
Other Expenses aside from excluded items.........	9.45c.	7.00c.	9.45c.
	63.80c.	48.63c.	57.92c.
Excluded items:			
Lamps .... 1.96c.			
Miscellaneous income 1.34			
Fixed charges....... 7.32			
Interest 0.39			
	11.01c.		
	74.81c.		

352 As seen above Prof. Bemis includes in this computation, in place of the 10c. per thousand "contingencies and renewals," an allowance of 5.31c., in order to bring the repairs and renewals for 1905 up to the average for the previous twenty years.

Looking to the other side of the account, net income must on Professor Bemis' theory, be computed as follows:

Total including gas sales, miscellaneous income and dividend on National Coal & Coke Co., (*except* .22c. for street lamps, *i. e.* Item 53, 21.18—1.96=.22c., excluded by Prof. Bemis)		103.15c.	
Deductions:			
Public Lamps	1.96c.		
Miscellaneous Income	1.34	3.30	99.85c.
Profit for return on capital....................			41.93c.

Professor Bemis' station cost, 26.68, is purely hypothetical, being based on the assumption of possible lower cost of oil. This is not a present fact, however, and it is conceded that the actual station cost is as stated in Exhibit 94. So also as regards "other expenses aside from excluded items." It was not shown that this item was excessive in any respect and the 7.00 c. in the second column is entirely hypothetical. For purposes of comparison, therefore, it is proper to start with the total operating cost, as stated in the third column above	57.92 cents.
Professor Bemis allows taxes at 6.08 c., only, excluding 1.19 c. from the amount shown on Exhibit 94 (Item 66). The amount so excluded represents the taxes based on dividends on the Company's stock invested in securities of other companies .48, which ought properly to be deducted, and .71 c. interest accrued on deferred franchise taxes in litigation which ought to be allowed. There should accordingly be added	.71 "
He also excludes the charge for maintenance of lamps to the extent of 1.96 (having allowed .22 c.). This item is also to be allowed, and there should be added	1.96 "
353 The next item termed "excluded" is "miscellaneous income" of 1.34c. This, however, cannot be said to have been excluded from Exhibit 94, for it was never included therein. On the contrary, it appeared in the income account and has no proper place in an account of expenditures. It should accordingly, be restored......................	1.34 "
Cost, as thus far computed................	61.93 "

Adding to the above the items claimed by Complainant in support of Item 67, namely, gas enrichment, increased labor and increased taxes, would make a further expense of	3.73	"
In allowing for enrichment, as above, the amount computed by Professor Bemis is two-thirds of the 1.81 c. as claimed by Complainant.		
If further there be added for reserve fund, as allowed elsewhere by Professor Bemis, there would appear an additional expense of	3.00	"
Making a total of	68.66	"

A computation of cost was also made by Mr. Hall, an expert accountant who examined Complainant's books on behalf of Defendants, but it is not deemed profitable to analyze the same, as, to be of any value for purposes of comparison, it requires adjustment in considerable detail of various differences due to questions of bookkeeping.

After careful consideration of the evidence I have reached the conclusion that a fair computation of cost is as follows:

Cost per thousand cubic feet of sale, as per Exhibit 94			74.81c.
Deduct:			
Item 69, Fixed Charges	7.32c.		
From Item 66, Taxes computed on excess Dividends paid on stock invested in securities of other lighting companies	.48 "		
354 Item 54, Interest on Consumers' deposits		.39c.	
There should also be a deduction from Item 43, Cost of Gas manufactured under Agency Agreement, representing the 10 per cent. in excess of the cost of gas paid by Complainant to the subsidiary companies. This was deducted only by the witness Hall, and represents an expense per thousand cubic feet of	1.08c.		
Less, however, an allowance for proportionate station and distributing expense in connection with the gas so bought, of	.30c.		
Making a net deduction of		.78c.	8.97 "
Net Total			65.84c.

I am satisfied that the charge of 10 cents per thousand feet for "contingent expenses," including renewals and replacements, as shown by Item 67, is not excessive but, on the other hand, rather conservative. I have not deemed it necessary to differentiate between the amount to be allowed for final renewals and for contingencies, nor to determine that any fixed amount should be added to the current expenditures for repairs and renewals to bring them up to the average of former years. It is sufficient to say on this subject that the annual expenses for repairs and renewals have been very considerably less per thousand feet since the year 1900 than during the period between 1884 and 1899 inclusive. The renewals for 1903 were $237,576.96 as against $282,219.67 for 1905. With this single exception, the renewal charges for the five years 355 from 1900 to 1904 inclusive, were very considerably larger than for the year 1905. The testimony as to amount of depreciation now observable in the plants, or for which allowance should be made in appraising their value, indicates with reasonable certainty that the annual expense for renewals and replacements is likely to be over, rather than under, the 2.12 cents per thousand of the year 1905. This takes into account no extraordinary charge due to abandonment or "scrapping" of plant, in consequence of anticipated removal at some later date to Astoria.

As regards the elements to be taken into account in fixing a proper amount of reserve for contingencies, the direct testimony was confined chiefly to the matter of electrolysis. That this is a danger which may be reasonably apprehended is evident from the fact that it has received very considerable attention from electrical experts throughout the country and has been made the subject of special investigations on behalf of interests having capital invested in subsurface construction. No special damage has been shown to have thus far resulted in this City, and the evidence indicates that all possible precautions are being taken to prevent it and with a reasonable assurance of success. In view, however, of the increasing number of electrical installations now in progress in this City, with currents of unusual power, it cannot be wholly disregarded. The danger of explosion is more immediate. Experience has shown that such catastrophies are not at all uncommon in the experience of this and other Companies and may occur entirely without fault of the Companies' servants. Under existing conditions, the chance of their occurrence is likely to increase rather than decrease. It is also apparent that, in view of the increasing number of sub-surface structures in New York City, the expenses to which Complainant must be subject in the care and maintenance of its mains and connections are likely to increase, and this fact, in connection with the continued rise in the price of labor and materials, indicates strongly the necessity in prudent corporate management for maintaining a reserve in excess of the actual expenditures called for by 356 known requirements.

Suggested Economies:

While the various witnesses, with the exception of Professor Bemis, assumed the actual manufacturing cost to the company to be as shown by the expenditures set forth in Exhibit 94, the record contains suggestions of various economies which, as Defendants claim, would tend to reduce the cost of production. The items chiefly criticised formed part of Item No. 42, "Station Cost", and consisted of the cost of oil, on the one hand, and the price received for residuals (chiefly coke), on the other hand. It is also suggested that Complainant maintains excessive candle power. The testimony on these subjects was somewhat voluminous and need not be reviewed in detail.

Oil:

It appears that Complainant purchases its oil from the Standard Oil Company under a contract made November 1st, 1905, calling for the delivery of 255,000,000 gallons of oil within two years and eight months thereafter. Oil is delivered under said contract not only to the Complainant, but a portion is delivered to the New Amsterdam, Standard and Central Union Companies, in whose behalf as well as its own the Complainant was acting in making the contract, pursuant to an arrangement with their officers. The Mutual made a separate contract.

The contract for the Consolidated Company calls for 40% to 45% 34-Beaumé oil, and from 60% to 55% of 28-degree oil; and the obligations imposed on the Standard Oil Company are heavy, involving the delivery of the higher grade oil within the winter months exclusively, thereby requiring a large storage capacity; besides which the oil must be "homogeneous," that is to say, made up of straight run oils sufficiently near in maximum and minimum gravity to produce satisfactory results.

357 The price for the 34° oil is 4.875c. per gallon and for the 28° is 4.29c. per gallon.

Complainant's officers testified that these prices were obtained after some considerable negotiation and were the best that could be procured. The proof is convincing that the Standard Oil Company, which controls in one way or another, practically 90 per cent. of the gas oil of the United States, so far as the consumer is concerned, is the only producer capable of delivering to the Complainant the oil in such quantities and of such qualities as the necessities of its business require. It is also conceded that under the peculiar nature of Complainant's business, the absolute certainty of being able to receive its supplies under every contingency is a most important consideration. The Standard Oil Company not only has large storage facilities in the vicinity of New York Harbour, but a pipe line to tidewater. Even assuming that an adequate supply of oil of proper quality could be obtained from independent producers, the proof shows that the Complainant would be obliged in prudence to provide an assured storage capacity for at least ninety days' supply, and to establish a system of barges, lighters and other transportation facilities to distribute this oil as required. As now received, it is delivered at the Company's docks in the Borough of Manhattan, so that the price paid includes both storage and transportation, which otherwise would be a matter of expense to the Company.

The requirements of the Act (Chapter 736 of the Laws of 1905) prescribing 22-candle power, necessitates the use of a high grade oil in the winter months. The testimony is practically undisputed that a higher gravity oil is more efficient in carrying illuminants in cold weather than oil of a lower grade. It would appear further that form the standpoint of economy the greater efficiency of the higher grade oil more than offsets the difference in its cost per gallon.

There is no satisfactory evidence that oil of the grade used by Complainant could be delivered by any independent operator
358 at a price substantially less than the Complainant now pays;
nor, making due allowance for varying local conditions and differences in grade, is there any satisfactory evidence that the price paid by Complainant is on the whole excessive as compared with that paid by various other companies to which reference was made.

Coke:

It is claimed by Defendants that the price received by Complainant for its coke, $4.71 per net ton delivered, is insufficient. Complainant asserts it to be a favorable price when compared with the price of anthracite in this market and at all events, to be the highest price obtainable here. It is explained that it is impossible to get the same price for coke in New York as in Western cities where anthracite is scarce or unknown, and coke is the only clean fuel; also that it is not practicable to ship it to any distance because, by reason of its brittle character, its value is rapidly deteriorated by handling and transportation. These suggestions were not met by any satisfactory evidence on the part of Defendants, and I find no reason to conclude that Complainant is not realizing all that is possible under existing market conditions from this or, in fact, any of its other residuals.

Candle Power:

It is provided by the Statutes and order of the Gas Commission here in question that the gas to be furnished by Complainant shall have an illuminating power of not less than 22 sperm candles, tested at a distance of not less than one mile from the distributing holder. A penalty of $1,000. is prescribed for each violation of this provision.

Proof was offered by Defendants indicating, as a result of tests made by the City, that the candle power maintained was in excess of the standard required by law, and it was argued that the cost of gas was, in consequence, unnecessarily increased. It is urged by Complainant that there is necessarily a fall in candle power
359 between the works and the testing station and a further fall
between the testing station and various points in Complainant's system where gas is to be delivered; that it is incumbent on Complainant under the law to keep its candle power as such a point that in no instance nor at any place of test may its candle power be found below the legal standard, and accordingly it is essential that a margin should always be maintained above the required candle power. This contention is sustained by the proof which indicates that the average margin of candle power maintained is not in excess

of the requirements of prudent management, especially in view of the onerous penalties provided by the Statutes.

Cost of Gas to Other Companies:

Comparisons were made by Defendants' witnesses of the cost of gas to Complainant, with that to various other companies, chiefly those in New York City owned or controlled by Complainant. It is claimed that the statistics of these New York companies operating in the same field and purchasing their materials at the same prices as those paid by Complainant, clearly show the latter's operating cost to be excessive. An examination of the figures fails to sustain this contention, for it appears in each instance that, after correction of errors and making due adjustment for peculiar conditions existing in individual cases, the discrepancies in manufacturing cost are not great. It is practically agreed by the witnesses that no two companies even operating in the same city can reach precisely the same station cost and a difference of a few cents is not significant.

As to Central Union Gas Company.—Professor Bemis compared the station cost of coal gas to this Company for the year ending October 31, 1905, which he fixed at 13.49 cents, with the corresponding cost to the Complainant at its 14th and 42nd Street coal gas stations of 25.59 cents and 24.94 cents respectively. The proof shows that the Central Union plant had peculiar advantages as to coke, being able to deliver it, without storage or piling, to special customers, thus eliminating all loss from breakage. It was, 360 furthermore, possible to procure a substantially higher rate than can be realized in the Borough of Manhattan. The witness in his computation ignored the fact that the Central Union Gas Company during eight months of the year in question had no inspection for candle power and was consequently not maintaining as high a candle power as was required of Complainant and other companies in the Borough of Manhattan which were subject to inspection. The Central Union Company also enjoys certain advantages diminishing its cost of cartage and labor handling. Making due allowance for these items, the difference in cost between the two stations is found to be trifling. This result is confirmed by the fact that, although before July 1st, 1905, when the 22-candle power law went into effect, the Central Union delivered its gas under the agency agreement for less than 30 cents, the cost of its gas to the Complainant under the same agreement immediately after that date rose to substantially the same figures as the gas delivered by all other companies.

New Amsterdam Gas Company.—Mr. Edgerton made a comparison between the station cost of the New Amsterdam Gas Company, 29.01, and the station cost of the Complainant's water gas 31.05 cents. In so doing he took the nominal year 1905 for the New Amsterdam Company as against the calendar year for the Complainant, there being, however, in the latter two months during which 22-candle power gas was required. A comparison of corresponding periods reduces this difference to 1.61 cents, which is practically all accounted for by difference in cartage, as to which the New Amsterdam Company has special advantages, the item of station cost, which is less because of the New Amsterdam Company having but one station as against several used by Complainant, and other similar items.

Like comparisons were made with the statistics of the Standard and Mutual Companies, with practically similar results.

361 *New Bedford.*—Mr. Edgerton, in support of his opinion that gas should be manufactured in the City of New York at 24 cents per thousand feet in the holder, gave as an instance the City of New Bedford where, he said, the cost was approximately that amount. Aside from the fact that the legal candle power in Massachusetts was shown to be 16 candles as against 22 in this State, it appeared that, through a clerical or typographical error in a published Massachusetts report, the distribution expense had been misplaced in the column intended for station cost, and that the report elsewhere showed the station cost to be 38.65 cents. Making adjustment for difference in candle power, the New Bedford cost would be in the neighborhood of 68 cents.

Chicago.—The report of the Chicago Commission already referred to fixed the cost of gas in that city at 55 cents. It appears, however, without dispute, that coal is materially cheaper and residuals are higher in all the Lake cities than in New York City, also from the report of the accountants who examined the Chicago plant, that no allowance was made in their examination for depreciation of plant in excess of that covered by current renewals.

As to the Reasonableness of the Return Allowed by the Eighty Cent Rate.

The complainant urges that it is a well located and well managed company and as such is fairly entitled to earn 10% on the value of its investment; that it must be permitted a maximum earning power to that extent in good years if it is to pay an average dividend of 8%; and that it is not customary nor is it "just" or "reasonable" to limit an industrial corporation, created by private capital, to the same maximum rate of return which the law permits to be charged for money loaned upon absolute security and at no risk of the business. It is pointed out that a return of not exceeding 10 per cent. with an additional reserve fund of 10 per cent., was recom-
362 mended for the Company by the Senate Committee of 1886; that the New York Mutual Gas Light Company by its charter is permitted to earn dividends to the extent of 10 per cent., sharing with its customers any earnings beyond that point; that the Senate Committee of 1905 assumed a return of 8 per cent., and the Gas Commission in 1906 found that 8 per cent. was a reasonable return upon the actual value of Complainant's property used in gas manufacture; that in England, where the return expected upon capital is substantially lower than in this country, gas companies pay dividends ranging from 8 to 10 per cent., and the three Metropolitan Companies of London pay an average of 8.24 per cent. on their capital, and that the Railroad Law of the State of New York provides (§ 38) that the Legislature may, from time to time, alter or reduce the "rate of freight, fare or other profits upon such roads;"

but that the same shall not, without the consent of the Corporation, be so reduced as to produce with such profits "less than 10% per annum on the capital actually expended."

The proof shows Complainants' dividends since its organization to have been as follows, being an average of a fraction over 6%:

Year.	Rate.
1885	7%
1886	3%
1887	4%
1888	4%
1889	5%
1890	5%
1891	5%
1892	6%
1893	7½%
1894	8%
1895	8%
1896	8%
1897	8%
1898	8%
563 1899	5½%
1900	6%
1901	8%
1902	8%
1903	8%
1904	8½%
1905	8½%
1906 Six months to June 30	3%

Several witnesses were called by complainants on this subject. Dr. Humphreys, who is largely interested in gas properties and has had wide experience in their appraisal and purchase, testified that 10 per cent. is a fair return to the original investors up to the time the business is fairly well established, "and the final average must be "made up on the basis at what the new capital can be bought in at, "in view of the natural hazards." Mr. Emerson McMillan, who is also largely interested in gas companies, testified that a gas business to induce purchasers should show a return ranging at the start from 9 to 15 per cent. Messrs. N. W. Halsey, Samuel B. Bertron and Allen B. Forbes, bankers, having large experience with gas properties and their securities, testified generally to the same effect. It was pointed out that the question of the rate of dividends actually paid by the Company was not to be considered so much as its earnings, one witness stating that he did not mean, in speaking of a return of 10 per cent., that dividends at that rate should necessarily be paid, for "no company can pay all it earns and be safely managed."

However well founded may be the opinions of these witnesses, it is evident that their point of view is not one that can be properly adopted in the present case. As a rule they testified from the standpoint of purchasers of gas properties, and Messrs. Humphreys and

McMillan, in particular, from that of men concerned with the original establishment and development of the enterprises. Naturally capitalists would find slight inducement to undertake the organization and development of an industrial business, with its 364 attendant risk and labor, if its returns were limited to the ordinary interest rate, with the possibility of even less. Here a different aspect is presented. The question is whether Complainant, a fully organized and going concern, will be deprived of any portion of its existing assets because debarred from receiving from its customers such price as will afford a return thereon. Under the decisions of the Courts, considerations that might have weight from the standpoint of the purchaser or organizer of a business would have no force as between an existing company and its customers and *vice versa.*

For example, the original cost and present value of the assets are important factors to be considered here, but they were of secondary importance from the standpoint of the witnesses. Mr. McMillan said:

"I should not pay any attention to the original cost in figuring up its value. I should figure on what it would do, or what I would think it would do, under our management."

Mr. Bertron said, in regard to purchasing gas properties:

"We never consider such a proposition unless it is earning as much as 8 per cent., and we expect to get more than that out of it. If we should buy one on that basis it would be because we knew we could very largely increase our income by our development of the Company. * * * *We do not consider so much what the assets of that particular property are worth when we buy it.* We take into consideration of course the amount of money necessary to put the property into the shape we want it, and then, above all else, the franchise situation and whether or not the consumption can be largely increased."

The Defendants urge that the reasonableness of a return upon any given investment depends upon its security; that the security of the Complainants' investment is practically guaranteed by the 365 public demand and necessity for gas and the Company's virtual monopoly of the supply; and that if, in addition, Complainant is allowed depreciation as an operating charge, thereby preserving its Capital intact, the rate of return allowed upon the investment "should be as low as the nature of the investment as affected by such an allowance warrants," or, as counsel state it, that an earning of 5% per annum "would be a fair return, that an earning of 6% per annum would be a liberal return, and that an earning of 4% per annum would not be a confiscatory return."

The evidence offered in support of this contention consisted chiefly of figures showing the returns upon the stocks of various gas companies elsewhere. Mr. Marvyn Scudder, a compiler of statistics on financial subjects, presented the following as of December 31, 1905:

Company.	Price of stock.	Dividends.	Net to investors.
People's Gas Light Co. (Chicago)	100¾	6%	5.98%
United Gas Improvement Co. (Philadelphia)	188½	8	4.38
Consumers Gas Co. (Toronto)	207	10	4.85
Detroit City Gas Co. (Detroit)	200 (asked)	5	2.50
Laclede Gas Co. (St. Louis)	105	5	4.76
Lowell Gas Co. (Lowell)	245	10	4.08
Consolidated Gas Company	181	8	4.42

366 Professor Bemis presented the following:

Gas Stocks and Dividends.

January 1–September 1, 1906.

Company.	Annual dividends. Per cent.	Price of stocks.	Net return on investment. Per cent.
Cambridge, Mass	10	275	3.64
Charleston, Mass	10	252	4.
Lowell, Mass	10	248	4.
Lynn, Mass	10	325	3.08
Mass. Gas Companies, Com	...	57¾	
Mass. Gas Companies, Pref	4	88½	4.52
Montreal Light, Heat & Power Company	4	96	4.17
United Gas Improvement Co., Philadelphia.	8	172¾	4.65
Consolidated Gas, Baltimore, Common	...	37½	
Washington, D. C	10	300	3⅓
People's G. L. & C. Co., Chi	6	99 to 114 to	5.27 6.
Laclede G. L. Co., St. Louis, Common	5	95	5.26
Laclede G. L. Co., St. Louis, Preferred	5	95	5.26

Statistics were also offered as to the dividend rates and market prices of Complainant's stock but, as already pointed out, these are of little significance, as it is not possible to say to what extent the market quotations of recent years were affected by its ownership of electric lighting securities.

Nor are the market ratings of other gas stocks of much assistance.
The market price of a stock is well known to be dependent
367 on numerous elements other than its rate of dividends, as, for
example, its earning power, the amount of its surplus, its outstanding capital, and the general business conditions prevailing throughout the country. In the absence of full information on these matters, the figures above quoted are without significance. For example, in the case of the Laclede Gas Company of St. Louis, paying a dividend of 5 per cent. and netting to the investor 5.26, it appears that the Company is capitalized on a basis of $8.23 per thousand feet of production or an equivalent of 8.23 per cent. on a capitalization

of $5 per thousand feet. Applying this capitalization to Complainant's sales would give a capital of about $108,000,000, 5 per cent. on which would be much in excess of Complainant's present earnings.

As already pointed out, the Courts have established no definite rule by which the reasonableness of the rate of return may be determined. As was said in *Covington &c. Turnpike Company v. Sanford*, 164 U. S. 578, 597:

"Each case must depend upon its special facts; and when a court without assuming itself to prescribe rates, is required to determine whether the rates prescribed by the legislature for a corporation controlling a public highway are, as an entirety, so unjust as to destroy the value of its property for all the purposes for which it was acquired, its duty is to take into consideration the interests both of the public and of the owner of the property, together with all other circumstances that are fairly to be considered in determining whether the legislature has, under the guise of regulating rates, exceeded its constitutional authority and practically deprived the owner of property without due process of law."

The Court also said in that case:

"It is proper to say that if the answer had not alleged, in substance, that the tolls prescribed by the act of 1890 were wholly in-
368 adequate for keeping the road in proper repair and for earnin- dividends, we could not say that the act was unconstitutional merely because the company (as was alleged and as the demurrer admitted) could not earn more than four per cent. on its capital stock. It cannot be said that a corporation is entitled, as of right, and without reference to the interests of the public, to realize a given per cent. upon the capital stock."

In *Stanislaus Co. vs. San Joaquin and Kings River Canal Co.*, before cited, it was held, that it was not confiscation to fix water rates so as to give an income of 6 per cent. upon the then value of the property actually used, even though the Company had prior thereto been allowed to fix rates that would secure to it 1½ per cent. a month income upon the capital actually invested. On the other hand it was held in *Milwaukee &c. Co. vs. Milwaukee*, 87 Fed. Rep., 577, 585, that an ordinance permitting a gas company to earn 4.5 per cent. on the cost of reproduction of its tangible property was unconstitutional, and in *Spring Valley Water Works vs. City and County of San Francisco*, 124 Fed. Rep., 574, that 4.40 per cent. on the value of the property or 3.30 per cent. on the capital stock of the corporation was unreasonably low and confiscatory.

The legal rate of interest has sometimes been taken into consideration. Thus in *Louisville &c. Railway Co. vs. Brown*, 132 Fed. Rep., 946, 951, it was held, that a railroad is entitled to earn at least a legal rate of interest upon the actual value of its property. The legal rate was also considered in *Spring Valley Water Works vs. City and County of San Francisco*, above cited, though the Court in that case fixed as a proper return 5 per cent. In the *Columbus Railway & Light Company Case*, before cited, the Special Master expressed the view that the owner of the property should at least be permitted to receive as his compensation for its use the legal amount of interest

allowed by the State of Ohio to be collected, in the absence
369 of contract, for money loaned, goods supplied or services rendered, saying that:

> "Without at least this legal compensation the owner is deprived of the use of his property and of his property without due process of law, and is denied the equal protection of the laws,"

citing *Noyes on Railroad Rates,* 209. See, also, *Chicago Union Traction Co. vs. State Board of Equalizers,* 114 Fed. Rep., 557, 561.

In the present case the property on which Complainant is entitled to a return, as hereinbefore found, amounts to $83,357,000, made up as follows:

I. Real estate (less deductions)	$13,461,000
II. Plants	15,500,000
III. Mains	12,636,000
IV. Services	1,994,000
V. Meters and miscellaneous	4,100,000
VI. Working capital	3,616,000
VII. Coal & Coke Co.	50,000
VIII. Astoria, *i. e.,* capital invested in production of gas secured from other companies	12,000,000
	63,357,000
	*47,
	*16,357,000
IX. X. } Franchises and good will	20,000,000
	$83,357,000

[In pencil on margin:]

	$47,000,000
	2,141,155
	160,000
R. E.	2,301,155
W. C.	2,000,000
As.	12,000,000
	16,301,155
N. C. & C.	50,000
	$16,351,155

The net earnings for the year 1905, adjusted in accordance with the views already expressed, were $4,983,928.31 arrived at as follows:

NOTE.—Deductions (See pp. 23, 24, *ante*) $400,000, Block 688.
300,000, Shadyside.

* In pencil in copy.

370 Gas Sales				$13,552,482.97
Miscellaneous Income				172,710.53
National Coke & Coal dividend				5,000.00
Total				13,730,193.50
Operating Expenses (as per Exhibit 94)			$9,936,910.42	
Less: Fixed charges		$972,423.44		
Int. on Consumers' Deposits		51,391.52		
Taxes not applicable to gas business:				
On Earnings	$5,257.48			
On Dividends	57,965.39			
		63,222.87		
Premium p'd for gas manuf'd under agency agreements 13,283,000,000 cu. ft. @ 0.78c.		103,607.40		
			1,190,645.23	
				8,746,265.19
Net Earnings				$4,983,928.31

Of the 13,283,163,767 cubic feet of gas, sold and delivered in 1905 by Complainant, 398,525,978 cubic feet were delivered and charged to the City of New York at 90 cents per thousand cubic feet and 12,884,637,789 cubic feet to private consumers at $1.00 per thousand cubic feet; and

For present purposes it may be assumed, ignoring the special rate fixed for gas supplied to the City, that all the sales for 1905 were at the rate of $1.00, and that the 80 cent rate will similarly apply to all sales.

Deducting 20c. per thousand feet of sales from the net earnings of 1905 the result is as follows:

Net earnings as above	$4,983,028.31
Less 20c. per thousand on 13,283,000,000 feet of sales	2,656,600.00
	$2,327,328.31

371 This amount would yield on Complainant's entire assets of $83,357,000 a return of 2.8% and on its assets exclusive of franchises and goodwill 3.6% neither of which in my judgment constitutes a fair or reasonable return on the value of the property.

Assuming, on the basis of the decisions above quoted, that Complainant is entitled to receive at least the legal rate of interest as a return upon its investment, the above net earnings would yield 6% upon its assets to the extent only of $38,788,805, leaving assets amounting to $24,569,000 (exclusive of franchises and good will) on which it would receive no return whatever.

Pressure.

The Statutes here in question require that

> "the pressure of illuminating gas in any service mains in said city at any distance from the place of manufacture shall not be less than an inch, nor more than 2½ inches."

It seems reasonably clear that by the expression "service mains" is meant the ordinary distribution mains of Complainant to which its service pipes are attached. It is averred in the bill of complaint, that

"It is an absolute physical impossibility for your orator to comply with the provisions in regard to pressure. The pressure must of necessity vary beyond the limits prescribed thereby in the mains of your orator owing to differences of elevation in the city mains and the consequent difference of atmospheric pressure and, owing to the laws of nature, these differences of pressure cannot be obviated by your orator."

The limitation as to minimum pressure is not criticised, but it is pointed out that the proof shows no other city where a maximum pressure for gas has been established, and that modern appliances, such, for example, as Welsbach burners, gas logs and ranges, 372 require a much higher pressure for service to consumers than was the case some years ago.

As was explained by Mr. Bradley, Complainant's Chief Engineer, owing to variations of pressure caused by differences in elevation and by atmospheric and barometric conditions in connection with the varying consumption of gas by consumers, it is necessary at times to exceed a maximum pressure of 2½ inches at certain points, else there would be a great many other points on the mains where there would be practically no pressure whatever. At the latter points the lights would be extinguished and later, when by reason of diminishing pressure the supply was resumed, the gas would escape through the open burners with dangerous results. The witness testified that during the previous year he had installed automatic signal apparatus, connecting with pressure stations, to guide the regulation of the pressure at the distributing points, so far as possible, but that he had found it impossible to regulate the pressure within the limit of the law. While the pressure can be maintained at various points as required, it cannot be maintained, as Complainant claims, at every point and at every time within the limits prescribed by the statute. It appears that some of Complainant's mains are at an elevation of 250 feet above tide level, and that a difference in altitude results in a difference in pressure, owing to the levity of the gas, of one-tenth of an inch in every 17 feet, so that between tide level and the highest mains there would be a total difference in pressure of about an inch and a half with gas having a specific gravity of that made by Complainant.

Under the conditions now existing, Complainant's contention appears to be well founded. Mr. Marks, on behalf of the City, admits that at a height of 100 feet above sea level it is necessary to accept a minimum pressure of 1½, and a maximum pressure of 3 inches, and at a height of 200 feet a minimum pressure of 2 inches and a maximum of 3½ inches. He testified, however, that he could comply with the law if allowed to expend whatever sum he deemed 373 necessary for the purpose, which would involve, after a topographical survey showing differences in level, a segregation of mains according to those levels throughout the city, after which it would "then be necessary to see that in some method the pressure which comes from the holder usually should be so regulated or modified for each level that it would never go above 2½ inches or below 1 inch, and this is physically possible."

It would, however, be likely to require the substitution of larger mains than those now in use.

Mr. Edgerton testified that he thought the pressure required by statute could be maintained "under due precautions," by the introduction of changes in the Company's system of distribution and without great expense. He suggested that gas could be delivered in the mains at a more uniform pressure than at present by the construction of high pressure mains, running on either side of the city parallel with the shores of the island, the pressure of the gas being regulated by governors or valves. Aside from any question as to the feasibility of this system, as to which some doubt is suggested by the evidence, it appeared that the cost of the new construction necessary to carry out the plan as described would be in the neighborhood of $4,000,000.

Mr. Bradley admitted that it was practicable to divide the city into districts, as suggested by Mr. Marks, and place district regulators or governors at different points; also that such governors were used in many cities; that theoretically it was practicable to use them here, but added that practically there were serious objections, the chief of which appeared to be his doubts of the reliability of automatic machinery. He said it would cause

"the consumers in a great city like New York to depend upon the automatic action of an automatic governor buried somewhere 374 in the street, or an automatic governor situated in the basement or on the first floor of a building. If the city was districted off in that way and each district supplied through a governor, it would be a matter of very grave doubt whether at times this governor would not fail to operate, like all automatic machinery, and with an important, and I might state dangerous element, as gas is, it is not wise to introduce any element that adds to the danger. And in my opinion district governors do add to the dangers of interruption and difficulty with gas supply."

Various charts were presented by the witnesses illustrative of existing conditions as to pressure at different points. They do not, however, affect the general conclusion to be drawn from the testimony as a whole, which may be summarized as follows:

Under the distributing system as now existing and in operation, it is not possible to fulfill the statutory requirements as to pressure. It would, however, apparently be possible to remedy this condition, at least to some degree, by dividing the city into different districts, according to the varying levels and by regulating the pressure in each by district governors. The efficacy and safety of such governors is not free from doubt and the evidence affords no sufficient basis for an estimate of the cost of their installation or the expense of making the necessary changes in the system of mains.

Conclusion.

Counsel for the Complainant and for the State authorities have submitted requests for special findings as to sundry matters of fact. Practically all the questions covered thereby, so far as considered material, have been specifically passed upon in the foregoing pages, and for this reason it is deemed unnecessary to recapitulate said requests or make separate rulings thereon.

All of which is respectfully submitted.

Dated, New York, May 18, 1907.

375 *Notice of Completion of Draft Report.*

CONSOLIDATED GAS CO.
v.
MAYER ET AL.

To Shearman & Sterling, Esqs., solicitors for complainant; Robert C. Taylor, Esq., solicitor for defendant Wm. Travers Jerome, as district attorney, &c.; Hon. William S. Jackson, Attorney General, solicitor for defendants Julius M. Mayer, as Attorney General, &c., and Frederick E. Gunnison *et al.*, constituting the State Commission of Gas and Electricity; Hon. William B. Ellison, solicitor for defendant, the City of New York.

GENTLEMEN: Please take notice that I have completed my draft report in this cause, a copy of which is herewith served on each of you, and that counsel will be heard at my office on Tuesday, the 28th day of May, 1907, at 11 o'clock A. M., with regard to any suggested corrections therein or amendments or additions thereto. Such suggested corrections, amendments or additions should be reduced to writing, and a copy thereof served on the solicitors for the various parties to the cause, and filed in my office on or before Saturday, the 25th day of May.

In view of delays in the preparation of the draft report occasioned by the omission of citations from the record in certain of the briefs submitted, it is particularly requested that in all cases where the record is relied upon in support of any suggested changes the fullest reference should be made to the appropriate pages of the testimony or exhibits.

You are further notified that unless modified in consequence of suggested corrections amendments or additions served and filed as aforesaid, the said draft report will be signed and filed as my final report herein.

Yours &c.,
ARTHUR H. MASTEN,
Master in Chancery, U. S. Circuit Court,
Southern District of New York.

Dated New York, May 18, 1907.

376 On the 20th day of May, 1907, copies of the foregoing draft report and notice were delivered to counsel for the several parties, who thereafter, on the 25th day of May and various subsequent days to which the proceedings were on request adjourned, appeared before me and were heard regarding suggested changes and amendments in said draft report. Various typographical and other errors not of substance were noted which have been corrected before printing the foregoing pages. In addition thereto counsel presented certain written suggestions for amendment, and various objections, which so far as deemed material are hereinafter set forth with notations of the disposition made thereof:

Complainant's Amendments.

The complainant presented the following:

"The Complainant presents requests for the following amendments or additional findings in the Master's Report, in words or substance:

(As a possible convenience, a point in the report is indicated where such new matter might in each instance be appropriately read in or considered as inserted.)

I. Page 42, to correct a clerical error and conform the paragraph to the testimony, in line 5, after the word "plant" insert:

"and other tangible property."

And in line 7, in place of the word "less" insert:

"if any, greater in the aggregate."

And in line 8, in place of "Complainant" insert:

"constituent companies."

Allowed. As thus corrected the last sentence in sub-division IV (page 42) will read as follows:

"As regards mains and services, therefore, as well as real estate, plant and other tangible property, it does not appear that any sufficient ground exists for the suggestion that the appraised value of 1884 was materially, if at all, in excess of the aggregate cost of the tangible property to the constituent companies."

377 II. Page 45, line 26, after the word "construction" insert:

"Mr. Bradley's particular reference was to the cost of coal gas in Manhattan (about 9,500,000 cubic feet of maximum daily capacity out of a total capacity in Complainant's Manhattan plants of 51,000,000 cubic feet) as compared with expected cost of coal gas at Astoria; and he added in substance that he did not think he would be able to produce such gas at Astoria at any lower figure than the cost of water gas at the Consolidated stations in Manhattan."

Allowed, and I so find.

III. Page 49, line 8th from bottom, after "Bronx" insert "except the Bronx Gas and Electric Company."

Allowed, and I so find.

IV. Page 81, 3rd line from bottom, after the figures "$4,588,000" read in: "from gas sales, only according to its claim, which is less than I find its net earnings to be from its entire gas business."

Allowed, and the sentence in question amended so as to read as follows:

"Complainant's net earnings for the year 1905 were, in round figures, $4,588,000. from gas sales only, according to its claim, and this amount is less than its net earnings from its entire gas business."

V. Page 91, between lines 3 and 4 from bottom of the page insert:

"While, as I have indicated, I do not find it practicable to differentiate with exactness the relative value of Complainant's franchises and good-will, there is no doubt that the franchises of Complainant relating to public highways are of themselves worth not less than $..............." (amount to be inserted by Master).

Disallowed.

VI. Page 109, line 17, after the words "necessity of," insert:

378 "an allowance sufficient to bring the amount chargeable for current repairs and renewals for the year 1905 up to the average of the company's past experience, and also of."

And in consequence on line 19, after "terms," insert the words: "final renewals" and "contingencies."

Allowed, and the sentence in question amended so as to read as follows:

"Complainant's claim is based on the necessity of an allowance sufficient to bring the amount chargeable for current repairs and renewals for the year 1905 up to the average of the Company's past experience and also of a sufficient reserve fund to cover "final renewals" and "contingencies." The terms "final renewals" and "contingencies" have been used more or less indiscriminately by the witnesses."

VII. Page 112, 13th line from bottom, after the words "as to," insert:

"an allowance sufficient to bring the amount for current repairs and renewals for any year up to the company's average experience, and as to."

Disallowed, so far as concerns the insertion of the proposed amendment on the page indicated. It is, however, the fact that the propriety of an allowance sufficient to bring the amount expended for current repairs and renewals for any one year up to the average covering a period of years, is fully established by the evidence. I have so found on page 114.

VIII. Page 126, following line 2, insert:

"In said 65.84c there is included no allowance to bring charges for current repairs and renewals for 1905 up to the company's average for the preceding twenty years (3.55c), or for final renewals (computed by Dr. Humphreys to require 3.26c additional) or for any reserve fund (for which Professor Bemis allowed to Complainant 3c before the Gas Commission and which Dr. Humphreys

379 estimated at 5c), or for additional cost of enrichment, increase in taxes and increase in labor which has been actually experienced as hereinbefore mentioned (4.36c),—said items together aggregating over 14c per thousand feet of gas sold,—or for renewals or depreciation on the plants and property employed outside Complainant's Manhattan works in production of gas sold but not made by Complainant except so far as said items may be covered by the

7.88c remaining after deducting from the contingent fund of 10c above discussed, the current replacements of 2.12c included therein."

Allowed, and I so find.

IX. Page 131, line 18, after the word "that" insert:

"oil is cheaper in Chicago than New York, and that."

Allowed, and I so find.

X. Page 140, after the line reading "Net earnings * * * $4,983,928.31" insert:

"The above expenses, $8,746,265.19, represent the 65.84c. per thousand feet of gas sold in 1905 as above found; and accordingly include no allowance to bring current repairs and renewals up to the average of the company's previous experience, or for final renewals or reserve fund, or for actual increase in cost of enrichment or taxes or labor, or for renewals and depreciation on property employed outside Complainant's plants in production of gas sold by it, except to the extent hereinbefore stated."

Allowed, and I so find.

XI. Page 141, following line 12, insert:

"Although in my view, as above expressed, of the basis of valuation upon which the Complainant is entitled to a return, no additional findings on that subject are necessary, for the further information of the Court I find upon the evidence that the actual cost to Complainant of the tangible property and franchises employed in its gas business (including the amount found by me to be the capital invested in production of gas for Complainant outside Complainant's Manhattan works) is at least $60,214,000 made up as follows:

380 I. Real Estate, at least	$9,322,000
II. Plants (Manhattan) at least	14,579,000
III. Mains, at least	7,852,000
IV. Services, at least	1,212,000
V. Meters and Miscellaneous, at least	3,802,000
VI. Working capital, at least	3,616,000
VII. Coal and Coke Co.	50,000
VIII. Astoria Unit (*i. e.* capital invested in production of gas sold by Complainant, made outside Complainant's Manhattan Works)	12,000,000
IX. Franchises and rights	7,781,000
Total	$60,214,000

If franchises and good will included together at the aggregate value of $20,000,000 above found by me, in lieu of the item of "Franchises and rights," the actual cost to Complainant of its tangible property plus the value of its franchises and good will is at least $72,433,000.

Allowed and I so find.

XII. Following the last preceding proposed finding insert:

"There is no satisfactory evidence that the cost to Complainant of said property was unreasonable or excessive; or that the cost of production of said property was enhanced through faulty construction or waste; or that the various sums expended from time to time by

Complainant or its predecessor companies in permanent improvements and betterments were not intelligently and properly expended or that any such expenditure was made otherwise than providently and honestly.

"Nor is there any satisfactory evidence that any of the expenditures of Complainant for material, labor or otherwise, in the manufacture and distribution of gas have been improper, unnecessary or unreasonable."

Allowed and I so find.

XIII. Following the last preceding proposed finding insert:

"I also find, upon all the evidence and *criteria* before me, that in view of the character of Complainant's business and other 381 features which are to be taken into consideration, a just and reasonable rate of return upon the value of the investment in Complainant's gas business is not less than the legal rate of six per cent. per annum; *and that without at least this compensation, Complainant would be deprived of the use of its property and of its property, or some portion thereof, without just compensation.*"

All counsel in their briefs have treated the question as to what was a just and reasonable rate of return upon Complainant's invested capital as one that could properly be passed upon by me under the order of reference herein. As to whether this is the case does not seem altogether clear under the authorities. Upon the hearing of objections to the draft report, however, counsel both for the State officials and the City of New York objected to the making of any finding upon reasonableness of return as a question of fact. Counsel for Complainant urged that such a finding should in any event appear in the report for the information of the Court, in case it should be held herein that the question is one of fact and not of law. Accordingly, assuming the question to be one of fact, the above proposed finding is allowed, excepting as to the last sentence (in italics) which need not be passed upon, being a conclusion of law.

Such a finding is abundantly supported by the evidence, including that of Defendants' witnesses. In addition to the facts noted *ante,* pages 131, 132, the record shows that Professor Bemis in his calculations has assumed 6% as the proper rate of return in this and several other cases, while Dr. Marks expressed the view that a dividend rate of 8% was fair.

XIV. Page 143, 14th line fro[illegible]ottom, after figures "$4,000,000":

"for main and valve construction alone, in addition to which would be required pumping stations and apparatus, the annual charges and operating expenses in connection with which Mr. Ad- 382 dicks testified would amount to several cents per thousand feet of gas sold, and which would involve a corresponding increase in operating cost or proper selling price of such gas."

Allowed, and I so find.

XV. Also before the heading "Conclusions" on page 144 insert:

"I find that the Complainant has about 390,000 customers in the City of New York to whom bills are sent monthly, that the penalty imposed by Chapter 125 of the Laws of 1906 is $1,000 for each charge for gas in excess of eighty cents per thousand feet, to customers other than the City of New York, and that the penalties accruing against Complainant if it charged more than eighty cents would amount in the aggregate to about $390,000,000 per month, and over $4,680,000,000 per year, or fifty times as much as the value of the entire assets employed in Complainant's gas business as found by me.

"I also find that by Chapter 737 of the Laws of 1905 it is provided that where a price in excess of the statutory rate is demanded that fact shall constitute a complete defense to an action for a recovery for the amount of gas delivered, and that no recovery shall be had therein.

I also find that the penalty of $1,000 for each offense violating Chapter 736 of the Laws of 1905 and Chapter 125 of the Laws of 1906, which provide that the pressure of illuminating gas in any service main in the City of New York at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches, would aggregate $5,000 per diem upon evidence recorded at each of the five city testing stations, of only a single violation per diem of said laws, or at the rate of $1,800,000 per year under Complainant's distributing system as now existing and in operation, which amounts are liable to be increased by additional or more frequent tests.

I also find that said penalties so far as the evidence shows are unexampled in extent and severity, *and that under and by reason of the same there is denied to Complainant the equal protection of the laws.*"

Allowed except as to the conclusion of law (in italics), and I so find.

383 *State's Objections and Amendments.*

Counsel for the State authorities presented the following:

"The defendants, Attorney-General, Commissioners of Gas and Electricity, and District Attorney, do hereby make the following objections to the draft report of Arthur H. Masten, herein, dated May 18th, 1907.

First. To the finding at page 5 of the draft report that the amount of the capital and assets of complainant as of June, 1884, exclusive of working capital, in the shape of cash, accounts receivable and current supplies was $37,775,000. But on the contrary thereof request the Master to find that the cost to the constituent companies, of its several classes of property without appreciation or depreciation, was, as shown by the books of the constituent companies, $20,942.632.85 (see City Exhibit 48, page 1398), and that the item of $7,781,000 did not represent anything of value but was an arbitrary figure, used for the purpose of equalizing stock values, as shown by their market price, between the constituent companies (Complainant's Exhibit 227, pages 921 and 922).

Objection overruled and proposed finding disallowed. The evidence clearly shows that the actual cost, to them, of the property of the constituent companies was in excess of the $20,942,632.85 shown on their books (see *ante,* page 41). As to the item of $7,781,000 representing the franchises, there is no evidence whatever that it did not represent actual value, and such evidence as the record discloses on the subject is to the contrary effect.

Second. To the findings on pages 13 to 15 of the draft report, that the present value of the complainant's real estate (exclusive of that part of the 18th Street station condemned by the City) is the sum of $14,161,000., and to each specific allotment of the valuation thereof.

Overruled.

384 Third. To the finding of the Master at pages 16 to 23 of the draft report, that lands leased, vacant, unimproved or not owned by the complainant should not be excluded from the valuation of property upon which the complainant is entitled to receive a return from the income derived from its gas business.

Overruled. The objection as drawn is too broad. There is no general finding to the effect above stated.

Fourth. To the Master's refusal to exclude from the valuation of the real estate upon which complainant is entitled to receive a return from its gas business, the land covered by the abandoned and partially dismantled manufacturing plants at 18th Street and 11th Street stations.

Overruled. The land occupied by the unused portion of the manufacturing plant at 18th Street (valued at $400,000.) was excluded by me from the valuation of the real estate upon which Complainant is entitled to a return. (*Ante*, page 23.) At 111th Street station there are located two large holders of 5,000,000 cubic feet capacity. The property is in use or available for use, and, upon the evidence, it cannot be regarded as abandoned.

Fifth. To the Master's finding at page 26 of the draft report, that the original cost of the real estate of the complainant is represented by the issue of stock, to the extent of $10,332,000 to the constituent companies and not the cost to the constituent companies, as shown by their books.

Overruled.

Sixth. To the Master's finding at pages 27 and 28 of the draft report that the complainant should be allowed the benefit of appreciation in the value of real estate over and above its cost, inasmuch as he declined to allow for depreciation in the value of the plant.

Overruled. Depreciation of plant was allowed (*ante*, p. 35).

385 Seventh. To the Master's finding the value of the plant by estimating the value of the land as vacant property, and the buildings thereon separately and adding them together, instead of taking the value of the propetry as improved.

Overruled. This objection is inaccurately stated. All parties, including the State, submitted separate estimates for the value of the land and of the buildings, apparatus, etc., constituting "plant," as defined *ante*, page 28. Buildings other than those constituting part of "plant" were valued by me in connection with the land (*Ante*, page 13).

Eighth. To the Master's finding at pages 31 and 32 of the draft report, that the correct method of estimating the value of complainant's buildings was to obtain a unit of value based on cubical contents of the buildings of the Kings County Gas and Illuminating Company and from such unit figures, computing the values of complainant's buildings by the method of comparative cubical contents.

Over-ruled. There was no finding in the broad terms above stated.

Ninth. To the Master's finding at page 31 of the draft report that the buildings of the Kings County Gas and Illuminating Company were similar to the buildings of the complainant.

Over-ruled. The testimony to that effect was uncontradicted.

Tenth. To the finding on pages 36 and 37 of the draft report, that the value of the complainant's plant to be substantially in accordance with the estimate of Mr. Mayer, the summary of which is given upon page 37 and fixing the value thereof at $15,500,000 and to each specification of value on page 37, on the ground that the theory upon which the estimate was made was wrong, in that the present cost of reproduction, irrespective of the fact as to whether the particular apparatus was commercially and economically worth reproducing, and does not show the cost of reproducing a modern plant to-day that would accomplish the same results, and upon the further ground that there is contained therein apparatus that had been abandoned and is not now in use by the complainant in its gas-making business, and upon the further ground that the valuations thereof are excessive.

386 Overruled. Counsel fail to point out, as requested, any evidence in the record in support of the statement that the Mayer estimate included apparatus abandoned or not now in use.

Eleventh. To the valuation given on page 37 of the draft report to the 18th Street plant, to the 111th Street Holder Station and the Inwood Holder Station, on the ground that there is contained therein in excess of Mr. Mayer's valuation for the holders at 18th Street, $453,695., the value of the dismantled and abandoned manufacturing plant, both at 18th and 111th Streets, and that the Inwood Station is not used by the company.

Overruled. See *ante,* Objections Fourth and Tenth.

Twelfth. To the finding of the value of the manufacturing plant of the complainant to be $15,500,000., on the ground that the complainant has failed to give any correct and true value of the plant used by it, and that the Master should have found a failure of proof on the part of the complainant in this behalf.

Overruled.

Thirteenth. To the finding on page 38 of the draft report, that the evidence shows, that on October 31st, 1905, complainant's mains of various sizes amounted in the aggregate to 822 miles, exclusive of 70 or 80 miles of abandoned mains, on the ground that the evidence shows that complainant has 795.47 miles of active mains (Page 2031 of the testimony).

Overruled. While the evidence shows that the mileage of active mains amounted to but 795.47, the mains actually in the ground and carried on the books aggregate 822.2 miles. The difference, amounting to 26.7, represents mains that have not been abandoned but are available for active use at any time.

Fourteenth. To the finding on page 39 of the draft report, that the present value of the mains to be $12,636,000, on the ground that the same were carried upon the books of the company 387 at the value of $7,852,151.03, as the actual cost thereof, and that the allowance of $4,783,849, for an estimated increase in cost of laying the same to-day because of the change of pavements over that which it has actually cost the company is not the proper allowance representing no outlay of cash on the part of the company and representing the value of no property devoted by it to the public use.

Overruled.

Fifteenth. To the finding contained on pages 42 to 44 of the draft report, that the complainant should be allowed a working capital of $3,616,000 as a part of its property devoted to the public use upon which it is entitled to earn a return, and specifically including therein accounts receivable outstanding as an item upon which the consumers of gas are required to pay a return.

Overruled.

Sixteenth. To the finding on pages 44-48 of the draft report, that the value of the plant of the Astoria Light, Heat & Power Company placed at $12,000,000 should be included in the property upon which the complaint is to be allowed a return.

Overruled. It was not intended to make any finding so broad as above stated. The cost of the first Astoria unit was used as a standard by which to determine the amount of capital employed in the production of the 3,000,000,000 cubic feet of gas purchased in 1905. (See *ante,* page 52.)

Seventeenth. To the finding on pages 49-52, that the complainant is entitled to earn a return upon the capital employed by other companies in the production of 3,000,000,000 cubic feet of gas purchased by the complainant in 1905, and that if the complainant was not to be allowed $12,000,000. on the value of the Astoria plant that it should be allowed the said sum of $12,000,000 as an equivalent investment to produce the 3,000,000,000 cubic feet of gas purchased by it.

Overruled.

388 Eighteenth. To the finding on pages 52-90, that the complainant's franchises and good will are of the reasonable value of $20,000,000., or that the same should be taken at any value whatever as property devoted to the public use upon which the complainant is entitled to a return.

Overruled.

Nineteenth. To the finding on page 101, that in ascertaining the cost of making gas in the year 1905, there should be included item 47, repairs to gas stoves, $55,954.35.

Overruled.

Twentieth. To the finding on page 102 of the draft report, that item 53, the amount expended by the company in caring for street-lamps, $289,259.09 should be included in the cost of gas.

Overruled.

Twenty-first. To the finding on page 103 of the draft report, that the sum of $25,671.74, representing disbursements in connection with legislative investigation, and the sum of $63,401.65 covering expenses growing out of franchise tax litigation should be included in ascertaining the cost of gas.

Overruled.

Twenty-second. To the finding on page 104 of the draft report, that item 62, $42,674.71 rentals paid by complainant for premises leased by it, it not appearing that said premises are necessary for use in its business.

Overruled. These rentals cover various bulkheads, piers, etc., occupied and used by Complainant. There is evidence to the effect that they are necessary in the conduct of Complainant's business, and counsel have failed to indicate any evidence to the contrary appearing in the record.

Twenty-third. To the finding on page 104 of the draft re-
389 port, that complainant should be allowed the following items
under item No. 66 as a proper charge against the cost of gas:

"taxes on income from other companies' securities...	$5,257.48
taxes on dividends in excess of 40% on $38,643,590.14, stock invested in securities..............	57,965.39
taxes on $41,356,409.86 stock in gas companies" (excess dividend on capital stock employed in gas business State's Exhibit M., page 419)..............	62,034.61
Interest on unpaid taxes.........................	94,506.29
Total..................................	$219,763.77

Overruled. The first two items were disallowed as a proper charge against the cost of gas. (*Ante*, page 123.)

Twenty-fourth. To the finding on pages 105-124 of the draft report, that the sum of $1,328,316.37, being 10 cents per thousand feet of gas sold in the year 1905 is a proper charge as a part of the cost of gas for contingent expenses including renewals.

Overruled.

Twenty-fifth. To the finding on pages 126 and 127 of the draft report, that the price for 34° oil at 4.875c. per gallon and for 28° at 4.29c. per gallon was a reasonable price.

Overruled.

Twenty-sixth. To the finding on page 128 of the draft report, that the price received by the complainant for its coke, $4.71 per ton is a sufficient and proper price.

Overruled.

Twenty-seventh. To the finding on pages 131-141 of the draft report, that the rate of 80 cents per thousand cubic feet for gas does not allow to the complainant a reasonable return.

Overruled.

Twenty-eighth. To the finding on page 141 of the draft report,
that it is impossible for the complainant to comply with the
390 requirements of the statutes: "the pressure of illuminating
gas in any service main in said City at any distance from
the place of manufacture shall not be less than an inch nor more
than 2½ inches."

Overruled.

Twenty-ninth. To the Master's refusal at page 144 to specifically pass upon the request for special findings on behalf of these defendants, and request that the same may be taken up and passed upon in the final report or that the same, with Master's ruling noted thereon, may be filed as a part of the final report.'

Overruled. The special findings requested are hereinafter passed upon.

"The said defendants hereby request the Master to find the further facts and embody them in his final report:

"I. That of the real estate of the constituent companies transferred to the complainant in 1884 the following parcels have either been sold or are not now used by the complainant in its gas business. That the said parcels were valued in the appraisal made at that time at the figuring set opposite each parcel respectively.

1. Deeded to Standard Gas Light Company (Ex. p. 233 & Ex. 48)		
8 lots Ave. A, 62nd to 63rd Sts. with corners........		68,000
115 ft. on 63rd St. 4 3/5 lots at $6,000.............		27,600
115 ft. on 62nd St. 4 3/5 lots at $5,000............		23,000
		118,600
2. Deeded to New Amsterdam Gas Company (Ex. 48 Ex. p. 200, 201) 10 lots 15th St. bet. Ave. C. & D. at 7,000...............	70,000	
10 lots 16th St. bet. Ave. C. & D. at 6, 000..	60,000	
		130,000
3. 111th St. Station (Ex. p. 318)..................		604,000
3. bulkhead (Ex. p. 319)........................		100,000
5. 18th St. Station (Test. p. 203).................		1,823,000
6. East 20th to 22nd Sts. bulkhead taken by the City		250,000
391 7. 60th to 61st Sts. Ave. A. wooden buildings rented (test. p. 30 Ex. 232)...............		158,500
8. Shadyside (test. p. 50 Ex. 235)..................		50,000
9 South side 15th St. bet. Ave. A. & B. well property...		12,000
10. 65th St. & West End Ave. w. s. vacant, (test. p. 107; Ex. p. 234)...............................		115,000
		$3,361,100

which, deducted from the appraisal value of the real estate, $10,332,000 would leave the amount of real estate taken over and now in use, of the appraised value in 1884 of $6,970,900. If the Master shall refuse to find that all of said parcels should be excluded, he find specifically as to each item from 1 to 10 above set forth.

Dissallowed, excepting that it is the fact and I so report, that (1) the several parcels numbered 1 to 10 inclusive were appraised in 1884 at the figures respectively indicated, amounting in the aggregate to $3,361,100; (2) parcels 1 and 2 have been sold; (3) a portion of parcel 3 representing, according to the appraisal of 1884, a valuation of $84,000, has been taken in condemnation proceedings; (4) a portion of parcel 5 has been similarly taken, amounting, according to 1884 valuations, to $1,101,250, and (5) parcel 6 has been similarly taken. I decline to find that the remaining portion of parcel 3, or that parcels, 4, 7, 9 and 10 are not now used by complainant in its gas business, for the evidence shows the contrary to be the fact. I similarly decline to find as regard the land remaining in parcel 5, excepting one block valued at $400,000, which I have already excluded in my report (*ante,* p. 23).

Parcel 8 (Shadyside) has also already been excluded (*ante,* p. 23).

II. That of the plant taken over by the complainant from the constituent companies in 1884 at the appraisal valuation of $12,182,491, the following have been abandoned and are not now in use.

392	1. 111th St. works (p. 322 Ex.)		$826,175
	2. 18th St. works (p. 188 Ex.):		
	Block 1	$1,078,144	
	" 2	45,251	
	" 3	304,264	
	" 4	132,915	
	" 6	2,060	
	" 7	8,226	
	" 8	19,366	
	Misc.	113,309	
			1,603,535
	3. 60th & 61st St., p. 237		12,500
	Making a total of		$2,442,210.00

Thereby making the value of the plant taken over in 1884 and now in use, $9,740,281.41, according to the then appraisal thereof. If the Master shall refuse to find that all of said plant should be excluded that he find specifically as to each item above separately stated.

Disallowed, except as hereinafter set forth.

Item 1. The 111th Street works were appraised in 1884 at $826,175. as stated. This appraisal, however, covered the entire plant of the Harlem Gas Light Company, a portion of which was located on land afterward taken under condemnation proceedings, and the evidence does not indicate the exact value of the plant so condemned. As stated elsewhere (*ante,* p. 154) the land remaining is used in part for a holder station. Counsel have failed to indicate the evidence in support of their claim that any part of the plant has been abandoned.

Item 2. The parts of the 18th Street works described in the above request (Blocks 1 to 4 and 6 to 8 inclusive, and Miscellaneous) were appraised in 1884 at $1,796,421. instead of $1,603,535. as therein stated.

393 In determining the present value of the plant the estimate of Mr. Mayer referred to (*ante*, p. 37) made due deduction for the value of so much of the plant as had been acquired by the City under condemnation proceedings. I am referred to no evidence indicating that any part thereof has been included as a part of the property now used in Complainant's gas business.

Item 3. The buildings at 60th and 61st Streets were appraised in 1884 at the figure stated. I have already found that the property on which they are situated is not to be regarded as abandoned (*ante*, p. 19).

III. That deducting from "the amount of capital and assets of the complainant as of June, 1884" (as found by the Master at page 6 of the draft report) $27,649,060 would leave the cost to the complainant of the assets now used by it to $21,845,850. as the proper cost-price, in accordance with said findings of the Master.

Disallowed. The finding at page 6 was that stock was issued to the constituent companies "For Plant and Property as above, $29,994,000."

IV. That the complainant has invested, in addition to real estate, plant and property, since the appraisal in 1884 to October 31st, 1905 (Ex. 79, p. 347*a*) $9,693,565.90, making the total cost of the real estate, plant and property used by the complainant in its gas business $31,539,415.90, to which should be added the value of material and supplies on hand, $616,470.08 (draft report 42) or a total of $32,155,885.98.

Disallowed. The figures stated ($9,693,565.90), exclude working capital and some other assets, also $196,419.01 increase in Complainant's quick assets between June and November, 1884.

It may be added, as applicable generally to the above proposed findings I. to IV. inclusive (1) that I find the facts as to the cost to Complainant of its tangible property to be as set forth in Complainant's additional finding No. XI. (*ante*, p. 149) and (2) that there is fundamental error in the method suggested by counsel for the State in arriving at the proper cost price. The 394 evidence shows that the amount of Complainant's additional investment from 1884 to 1905, as shown by Ex. 79, viz., $9,693,565.90, is a net amount arrived at after deductions of all amounts received from sale or condemnation of property. If, therefore, the value of real estate and plant sold since 1884 should be deducted from the gross appraisal values of 1884, and the above amount of subsequent investment be added to the balance remaining, the result would be a double deduction of the receipts for property sold.

V. That on December 4th, 1905, the complainant made a report for the year ending June 30th, 1905, to the State Board of Tax Commissioners, verified by Robert A. Carter, its Secretary, upon oath, that it was "a true, full and correct statement of the property of said company and the value thereof." That said report was made pursuant to Chapter 712 of the Laws of 1899, which required a full and correct statement of the property of complainant and of the true value thereof under oath. That in said report the value of its real estate, including plant, was given at $19,678,612.76; that its mains and services were given at the value of $4,398,160.82; that its meters, stoves and other personal property were of the value of $2,736,290.48.

Allowed, and I so find, referring, however, for greater exactness to the report, as set forth in full at pages 383 to 396 of Exhibits, Vol. I; also referring to the discussion of the tax reports at pages 96 to 100, *ante*.

VI. That the daily capacity of the coal gas plants of the complainant is 9,500,000 cubic feet, and that the daily capacity of the carburetted water gas plants are 41,500,000 cubic feet. That the complainant is constructing at Astoria a modern "up-to-date plant, the best plant possible to be produced" (page 46 draft report), with a daily capacity of 20,000,000 cubic feet. That a similar plant with a daily capacity of 10,000,000 cubic feet could be constructed
at a cost of $2,441,014.51 (test. of William H. Bradley, pages
395 1966-1978) exclusive of real estate and holder; or a unit of
$244 per thousand of capacity. On this basis a modern, first-class coal gas plant of 9,500,000 cubic feet daily capacity could be produced for $2,318,000.

Allowed, so far as regards the first two sentences of the proposed finding, and disallowed as regards the remainder thereof.

From the record as cited it appears that the witness expressly stated that the figures regarding the Astoria cost, which he then gave at counsel's request, were not complete or accurate. They were supplemented later by a statement of items omitted, amounting in the aggregate to $4,327,930.67.

VII. That the cost of the 21st Street Station, which is a modern up-to-date plant, exclusive of holders, with a daily capacity of 27,500,000 cubic feet of carburetted water gas (Test. pages 83,223) was $123 per thousand cubic feet of capacity, which is a fair unit to assume as the value of the water gas plant, no matter what the capacity might be (test. of Frederick J. Mayer, pages 1567-1568). Upon this unit it would cost to reproduce the water gas plant of the complainant with a daily capacity of 41,500,000 cubic feet, $5,104,500.

Allowed, if after the figures $5,104,500 there be added the words "exclusive of holders," and I so find.

VIII. That the complainant entered into an agreement on or about April 26th, 1904, with the Standard Oil Company for 177,000,000 gallons of gas oil, 25% of which was to be a specific gravity of 34° at 4.625c, and the balance, 28° at 4.04c, (City's Exhibit 10). That up to November 1st, 1905, there had been delivered 7,000,000 gallons of the 34° oil and 82,000,000 gallons of the 28° gravity oil, leaving still to be delivered, under said contract, 88,000,000 gallons (see testimony, pages 925, 1014 to 1027, 1840 to 1844). That on or about November 1st, 1905, the complainant cancelled the aforesaid contract and entered into a new agreement (City's Exhibit No. 30) for 255,000,000 gallons of oil, 40% of 34° at 4.875c per gallon, and the remainder, 28° at 4.29c per gallon (page 977).

396 Allowed, and I so find. The evidence further shows and
at the request of Complainant's counsel I find that the contract of April 26, 1904, provided for the delivery of high grade and

low grade oil in certain proportions "currently." The meaning of this term, as understood both by the Complainant and the Oil Company, was that oil must be taken from month to month in the proportions specified in the contract; so that while the Complainant had received under the contract an amount of oil considerably less *in toto* than the total specified in said contract, it could not call during the Winter of 1905-6 for all high grade oil. The use of high grade oil during the cold months to meet the requirements of the Act of 1905 prescribing 22-candle power after July 1st of that year was advised by the Chief Engineer. It was accordingly necessary to readjust the current contract and the contract of November 1st, 1905, was made for that reason. It is computed that the additional cost resulting added .0013 of a cent per thousand feet to the cost of gas for 1905.

IX. The master having found at page 128 that the complainant received for its coke $4.71 per net ton, he is requested to find that in Exhibit 94, item 8, the price per unit for coke should be $3.53 per load, and the amount $589,763.10, instead of $338,800.91; and item 11 net should be $542,919.64 and carried out under cost per M. c. f. sold 5.21, and the proper deductions made from the said Exhibit, reducing item 70 total operating from 74.81 to 72.41.

Disallowed. The evidence shows that the price $4.71 per net ton was gross; whereas the price received by complainant through the National Coal & Coke Company is subject to an allowance for cartage which the Coke Company retains. Furthermore, the price of $4.71 per ton is for screened coke, whereas screenings and "breeze" or broken coke, bring a very much lower figure. The amount shown
in Exhibit 94, Item 8, is what was received for screened coke
397 delivered to the National Coal & Coke Company, less cartage,
and for screenings and "breeze" delivered to the same Company, also less cartage, and for coke and screenings delivered to the water gas stations.

X. That in addition to the allowances made by the Master in Exhibit 94, that he allow the following in his computation of cost at page 123 of the draft report:

Item 47, repairs to gas stoves, $55,954.35 cost per M. cubic feet sold	.42
Item 53, street lamps, $289,259.09 cost per M. cubic feet sold	2.18
Item 62, real estate rents, $42,674.71 cost per M. cubic feet sold	.32
Item 66, in addition to the amount of taxes on excess dividends paid on stock invested in the securities of other lighting companies	.48

the following should be deducted; taxes on dividends in excess of 4% on $80,000,000., $120,000., and interest on unpaid taxes, $94,506.29 or 1.61c. per thousand cubic feet sold.

Item 67, contingent expenses, $1,328,316.37, or 10c. per thousand cubic feet sold.

Disallowed. There are apparently verbal errors in the foregoing, but I understand it to be a request for a re-consideration of the conclusions set forth at pages 123 and 124 *ante*.

XI. That the complainant in the year 1905, paid in dividends, $6,800,000. That its entire income from other sources than its gas business was $1,238,352 27 (Complainant's Exhibit 96, p. 382), thus leaving $5,561,647.73, or forty-one cents per thousand of gas sold paid in dividends.

Disallowed. To find as above requested would be misleading. The Exhibit referred to shows the total income to have been $4,853,924.82, and that the difference between this amount and the total dividends paid was drawn from Surplus Account.

398 XII. That the sales of gas in the Borough of Manhattan are larger per capita than in any other City in the world, being in 1905, 9,250 cubic feet (Humphreys testimony, p. 1782; Marks testimony, pp. 2288, 2289). That during the five years from 1900 to 1905, the population of the Borough of Manhattan increased at the rate of 52,457 persons per year. A reduction in the price of gas leads to a proportionate increase in consumption in the City of New York to 46.46 cubic feet for each cent of reduction (pp. 2287–2289, City's Exhibit 46, 1404 M.).

Allowed, and I so find as to all except the concluding sentence, inserting, however, before the figures "9,250" the word "approximately."

Disallowed as to the concluding sentence. The evidence indicates that a reduction in price is not the only factor leading to increased consumption and does not lead to it in all cases.

The special findings requested by the State and hereinbefore referred to (*ante*, p. 160, Twenty-ninth objection), are as follows:

"The defendants, the Attorney-General and the State Commission of Gas and Electricity, request the special master herein to report the following special findings of fact:

First. That on September 29, 1884, the New York Gas Light Company, incorporated in 1823; the Manhattan Gas Light Company, incorporated in 1830; the Metropolitan Gas Light Company, incorporated in 1848; the Harlem Gas Light Company, incorporated for a period of fifty years, in 1855; the Municipal Gas Light Company, incorporated in 1876, and the Knickerbocker Gas Light Company, incorporated in 1876, entered into a consolidation agreement under chapter 367 of the Laws of 1884, whereby complainant was organized.

Found in substance, *ante, p.* 4.

Second. That said consolidation agreement (prepared by the representatives of the constituent companies, who constituted the directing committee under a previous pooling agreement), fixed the
amount of the capital of the consolidated company, or com-
399 plainant, at $39,078,000, which was determined by multi-
plying the number of shares of stock of each constituent
company by the then market price thereof.

Found, in substance, *ante*, p. 5.

Third. That of such authorized capital, $39,078,000, the sum of $35,430,060 was issued in payment of the properties and franchises of the consolidated company, subject to certain indebtedness, and that the remaining $3,647,940 was retained by the consolidated company to provide for the payment of outstanding indebtedness of the constituent companies, and for other purposes, and was subsequently issued.

Found, in substance, *ante,* pp. 5, 6.

Fourth. That thereafter, and for the purposes of consolidation pursuant to the act, the said constituent companies, by their officers and employees, and by agents especially employed for that purpose, appraised their several properties, to be transferred to the consolidated company, as of the total value of $29,994,000, and that the properties of the constituent companies were, on or about November 11, 1884, transferred at that value to complainant.

Found, in substance, *ante,* p. 5.

Fifth. That the properties of the constituent companies, so as aforesaid transferred to complainant as of the value of $29,994,000, cost the constituent companies new, without allowance for either appreciation or depreciation of its several classes of property, the sum of $20,942,632.85, as shown by the books of account of the several companies.

Disallowed, see p. 42, *ante.*

Sixth. That the constituent companies, for the purposes of the
consolidation aforesaid, by appraisers selected by them, appraised
their land in excess of the then market value thereof and appraised
their buildings, plant, mains, services and other tangible property
at what it would then cost to produce the same new, as a part
400 of a going concern; and that, if the master should find the
facts to be otherwise, he find and state the basis and method
of such appraisal.

Disallowed. See p. 42, *ante.* As to the basis and method of such appraisal the evidence in the record is not sufficient to justify the specific finding requested.

Seventh. That on or about November 11, 1884, the first appraisal of the values of the properties of the several constituent companies, so as aforesaid made, was adjusted to cover additions to that date, and that said adjusted appraisal, as then made, was as follows:

Real estate	$10,332,000 00
Plant	12,182,491 00
Mains	5,233,962 10
Services	1,034,241 41
Meters	1,231,753 98
Meters, cocks and connections	11,926 53
Pipes and specials	88,398 43
Office furniture and fixtures	70,000 00
Horses, wagons and harness	1,115 00
Tools and implements	3,273 70
Gas stoves	1,256 45
Scows	....
Franchises and rights	7,781,000 00
	$37,971,419 01

Allowed, and I so find.

Eighth. That complainant has invested in new construction, or in additions to its real estate, plant and property since the appraisal of 1884, to October 31, 1905, the sum of $9,693,565.90.

Allowed, and I so find with the additional statement that this amount is net after deducting various sums received as proceeds of land, plant or other property sold.

Ninth. That complainant had on hand on October 31, 1905, materials and supplies, necessary for use in the manufacture and distribution of gas, of the total value of $616,470.08.

Allowed, and I so find. See also *ante,* p. 42.

401 Tenth. That complainant, in December, 1904, by its secretary, R. A. Carter, filed a verified report with the State Board of Tax Commissioners, pursuant to chapter 712 of the Laws of 1899, which required a full statement of the property of the complainant and the value thereof, that its real estate, including plant, was of the value of $19,678,612.76; that its mains and services were of the value of $4,398,160.82; that its contract rights were of the value of $7,781,000; that its meters, stoves and other personal property were of the value of $2,733,516.90, and that its materials and supplies on hand were of the value of $595,410.39, and that its said mains and services, being property in the streets, highways and public places, were of the value, on the basis of reproduction new, of $5,801,466.10, as of date June 30, 1905, all of the total value of $35,189,700; that said report was made pursuant to chapter 712 of the Laws of 1899, which required a full and correct statement of the property of complainant, and of the true value thereof, under oath.

The figures 1904 in the first line should be 1905

Found as thus corrected, on the conditions stated under State's Additional Finding V, *ante,* p. 164.

Eleventh. That, in December, 1904, complainant filed its verified report with the State Board of Tax Commissioners, pursuant to chapter 712 of the Laws of 1899, which required a full statement of the property of complainant and of the value thereof; that in said verified complaint, complainant, by its secretary, R. A. Carter, stated that its real estate, including plant, was of the value of $19,673,075.42; that its mains and services were of the value of $4,261,156.39; that its contract rights were of the value of $7,781,000; that its meters, stoves and other personal property were of the value of $2,667,329.77; and that its materials and supplies on hand for use in the manufacture and distribution of gas were of the value of $697,014.92, all of the total value of $35,079,576.50; and that the present value of the property of complainant in the streets, highways and public places, or of its mains and services, on the basis of the cost of reproduction new was $5,613,321.12, all as of date of June 30, 1904.

Found in substance, *ante,* p. 97.

402 Twelfth. That complainant's constituent companies paid for the real estate used by it in its gas business, including additions and improvements, to November 11, 1884, the sum of $3,377,791.10, and that complainant paid for the real estate purchased by it, including improvements and additions thereto, from November 11, 1884, to December 31, 1905, the sum of $740,296.28;

that complainant's constituent companies wrote up the value of its real estate, prior to November 11, 1884, on account of appreciation, in the sum of $1,584,963.37, and that the complainant has written up the value of its real estate, on account of appreciation since November 11, 1884, in the sum of $369,065.53, or a total of $6,954,028.90; that complainant has realized a profit of $142,378 on real estate sold by it since November 11, 1884; but that, if the master find the fact to be otherwise, as to amount, that he find and report the cost value of complainant's real estate, as above, and the several amounts written up on account of appreciation in the value thereof, and the profits realized on sales thereof, during the periods stated.

Disallowed, except as below stated. The cost of the real estate to the constituent companies was, as found *ante,* p. 26, much in excess of $3,377,891.10. These figures do not include the real estate of the Knickerbocker Company nor a considerable expenditure made on real estate account by the Harlem Company, and the proof shows that certain real estate of the Manhattan Company was carried on its books at less than its cost. The sum of $740,295.28 is less than the entire amount paid by Complainant for real estate, including improvements and additions thereto, for the reason that it represents a net sum, the receipts from real estate sold having been deducted from real estate expenditures, as previously stated. The amount $1,584,963.37 written up to appreciation was also a net amount representing increase in values by two Companies, less depreciation marked down by the Manhattan Company. The sum of $369,-
065.53 stated to have been written up by Complainant on
403 account of appreciation, should be $5,369,065.53, but neither
that sum nor the total stated of $6,954,028.90 correctly represents the amount of appreciation for the reason that neither the cost of the Knickerbocker real estate, the Harlem real estate and possibly other items were included in the so-called original cost. It is the fact, and I so find, that Complainant has realized a profit of $142,378. on real estate sold by it since November 11th, 1884.

Thirteenth. That the cost of the plant of the constituent companies, new, transferred to complainant, did not exceed the sum of $6,133,690; that the same was appraised for the purposes of consolidation at the sum of $12,283,403.73, of which about $6,049,101.41 was pretended appreciation in the value thereof, arbitrarily written up; that the value of the plant of complainant on December 31, 1905, did not exceed the sum of $9,348,692; but, if the master find the fact to be otherwise, that he find and report the cost of the plant transferred by the constituent companies to complainant in 1884, with the additions and improvements thereto; the value thereof as appraised for the purposes of consolidation, and the cost of the plant purchased by complainant from November 11, 1884, to December 31, 1905, with the additions and improvements thereto.

Disallowed. The cost of the plant of the constituent companies, new, considerably exceeded the sum of $6,133,690., as found in discussing "cost of property" (p. 41, *ante*). I am referred to no evidence in support of the figures stated in the fifth line of the above request. The proof indicates that the plants of the constituent companies were carried on their books at an amount greater than that at which they were appraised for the purposes of consolidation. It is not possible from the evidence to state the total cost to the constituent companies of their plants, mains, or similar tangible assets. As already stated (*ante,* p. 41), various amounts were arbitrarily written off on their books for depreciation and the evidence does not show how such amounts were sub-divided as between the various classes of property.

404 . Fourteenth. That the mains and services of the constituent companies transferred to complainant in 1884, cost, new, not to exceed the sum of $3,563,315.83; that they were transferred to the complainant at an appraisal valuation of $6,222,000; that, from November 11, 1884, to October 31, 1905, the complainant expended $2,618,188.93 for construction of new mains, and $177,829.68 for construction of new services, or $2,796,008.61; that the value of complainant's mains, as shown by its books on December 31, 1905, was $7,498,526.15, and that the value of its services, as shown by its books on said date, was $1,222,228.37, which includes the appraisal value aforesaid; that complainant reported the value of its mains and services, upon the basis of reproduction new, to the State Board of Tax Commissioners, as of date June 30, 1905, to be $5,801,466.10; that the difference between the cost value of complainant's mains and services and the value thereof as returned in the appraisals of the experts employed to inventory the value of the same in 1906, was upon the basis of the increased cost to install the same under conditions at present existing, under pavement that has been laid since their original installation, etc., and the difference between the expense of the cost of labor and materials in laying them at the present time, as compared with the cost thereof at the time of their installation.

Disallowed. The proof shows that the cost of the mains and services transferred to Complainant in 1884 was considerably in excess of the sum of $3,563,315.83 (see *ante,* p. 41). Furthermore, the mains and services of the Knickerbocker Company were not included in the figures of the accountants excepting in so far as they had been laid by the Municipal Company. The Complainant expended on mains between November 11th, 1884, and October 31st, 1905, $3,459,249.15, instead of the sum of $2,618,188.93. This figure and the sum of $177,829.68, stated to have been expended for construction of new services in the above proposed finding, are net figures representing new construction, less expenditures for renewals made. The proposed finding also omits any increase in mains and services between June, 1884, and November, 1884.

405 The values of mains and services as shown by Complainant's books on December 31, 1905, is as stated in the finding. Their valuation in the tax reports has already been considered (*ante,* pp. 96 to 100).

Fifteenth. That the increase in the value of the property of the complainant over the original cost thereof, including the cost of new construction, has been caused by the increase in the population of the city of New York, the development of its industries and commerce, the increase in the demand for complainant's product, the extension of paving and the change in the character thereof, and the estimated cost of reproducing the company's plant at the present time, under such conditions.

Counsel have failed to indicate the particular testimony relied upon in support of the above and the request is so broad in scope that it cannot otherwise be passed upon in all its details, in view of the length of the record. As to the increase in pavements and changes in the character thereof, see *ante,* p. 40. The increase in the value of the real estate is unquestionably due to the growth and general development of the city to which the laying and operating of gas mains doubtless in some degree contributed, especially in the outlying and thinly settled districts. The value of the plants and certain other tangible property, based on reproductive cost has naturally been affected by increases in the prices of labor and material.

Sixteenth. That of the balance of the stock of the Consolidated Company, after deducting $29,994,000 thereof, to be issued in payment for the property of the constituent companies, there remained, of the total so fixed, or $39,078,000, the sum of $9,084,000, of which $1,303,000 was set apart to be issued for working capital, and $7,781,000 was arbitrarily designated as representing the total value of the franchises and rights of the constituent companies.

Found in substance, *ante,* pp. 5, 6.

406 Seventeenth. That at the time of such consolidation, the constituent companies held and were operating in New York City, under franchises granted by ordinance, and to others, as follows: The New York Gas Light Company, of date May 12, 1823, for thirty years; the Manhattan Gas Light Company, of date May 5, 1848 for twenty years; the Metropolitan Gas Light Company, of date December 22, 1858, for thirty years; the Municipal Gas Light Company, of date March 22, 1876, for thirty years; the Anthracite Lighting and Heating Company, of date September 17, 1863, claimed by the Knickerbocker Gas Light Company, for the period of fifty years, and the Harlem Gas Light Company (incorporated in 1855 for a period of fifty years) of date April 25, 1855, without time limitation.

Found in substance, *ante,* pp. 52–72.

Eighteenth. That complainant does not now own, and since said consolidation has not owned, any other franchise to manufacture and distribute gas in New York, than those of the constituent companies heretofore referred to.

As above, under Seventeenth.

Nineteenth. That all of the franchises and rights sold or transferred by the constituent companies to complainant, under and by virtue of such consolidation, have expired, with the exception of the Anthracite Lighting and Heating Company, claimed by the Knickerbocker Gas Light Company, which will expire in 1913; but that, if the Master should not find the foregoing to be the fact, that he especially find and designate the franchises which complainant now owns to manufacture and distribute gas in the city of New York.

Disallowed, except as found, *ante,* pp. 52–72.

Twentieth. That the franchises to manufacture and distribute gas in the city of New York, or any part thereof, now owned or held by complainant, if any, do not exceed in value the sum of $200,000; and that, if the Master should find the fact to be otherwise, 407 that he designate the franchises so owned and held by complainant, and the value of each of them respectively.

Disallowed. There is no evidence in the record upon which a separate finding can be made as to the value of any one or more of the franchises.

The value of the property on which Complainant is entitled to a return is to be determined as of the present time, under the authorities (*ante*, p. 25). The franchises being now united in a single ownership, their present value must necessarily be considered as a whole and is not susceptible of apportionment.

As pointed out (*ante* p. 63) the power granted under certain of the older franchises held by Complainant are so broad that if one or more of the others were invalid or of no substantial value, it would not affect the value as a whole of Complainant's franchise rights as now exercised.

Twenty-first. That none of the constituent companies paid to the State of New York or to the city of New York, or to any of the governmental division thereof, any sum whatsoever as a consideration for any of the franchises granted to them, whether by the State or the municipality.

Disallowed. The record contains no evidence on this subject, excepting as specified at p. 78, *ante*.

Twenty-second. That, if the Master find that complainant is the owner of existing franchises to manufacture and distribute gas in the city of New York, that he find and state the elements of such value and his basis of reckoning same.

Found as at pp. 75-91, *ante*.

Twenty-third. That the cost of the manufacture and distribution of gas to complainant, or its cost of operation, for the calendar year 1905, as shown by its records and books of account, with proper adjustments, was 52.50 cents per 1000 cubic feet, as stated by the 408 audit of Marwick, Mitchell & Company, in the abstracts of the city's Exhibits C and D, as set forth at pages 1435, 1436 and 1437 of Exhibits, and that the report set out the several items of cost as therein shown and the allowances made therefor respectively; but if the facts should be found to be otherwise, that the cost thereof should be reported for each item as set forth in complainant's Exhibit 94, and in said abstracts.

Disallowed. See *ante* pp. 100-125.

Twenty-fourth. That the following items of cost, as set forth in complainant's Exhibit No. 94, and as adjusted by the audit of Marwick, Mitchell & Company, appearing at pages 1435, 1436 and 1437, were not proper items of expense to be allowed or computed as a part of complainant's cost of operation for the year 1905:

	Amount per M. cu. ft.
Cost of street lamps	$0.18
Interest on consumers' deposits	.39
Interest on funded debt	7.32
Tax on surplus profits, etc.	1.62
Legislative and franchise litigation, etc.	.61
Contingencies, less 1.71 cents allowed as depreciation	8.29

Disallowed, except as found *ante,* pp. 123, 124.

Twenty-fifth. That the item of street lamps, $289,259.09, as set forth in complainant's Exhibit No. 94, represents the cost to complainant of the maintenance of street lamps through which it supplied gas to the city of New York, during the year 1905, at a yearly rate per lamp, which yearly rate reimbursed the company for its expenditures on account thereof, and that said item is not properly chargeable as an element of the cost of gas supplied by complainant to private consumers.

Disallowed, see *ante,* p. 102.

Twenty-sixth. That the item "Interest on Consumers' Deposits," $920,685.80, as set forth in complainant's Exhibit No. 94, represents the sum total of deposits received by complainant from consumers or customers of complainant, who are required by 409 law to make the same; that complainant has used such deposits as a part of its working capital, and that the interest on the same, as shown, is not properly chargeable as an element of the cost of gas supplied to private consumers.

Allowed, and I have so found, *ante,* pp. 103, 124.

Twenty-seventh. That the item of fixed charges, $972,423.44, as set forth in complainant's Exhibit No. 94, represents the amount of interest on its bonded debt, and that the same is not properly chargeable as an element of the cost of making gas supplied to private consumers.

Allowed, and so found *ante,* pp. 101, 123.

Twenty-eighth. That the item of taxes, $965,843.88, as set forth in complainant's Exhibit No. 94, is made up in part of the following items:

Taxes on income from investments in other securities.	$5,257 48
Taxes on real estate from which the company draws rents	2,928 85
Taxes on dividends in excess of 4 per cent	120,000 00
Interest on unpaid taxes	94,506 00
	$222,692 62

That the foregoing items of expense on account of taxes are not proper elements of the cost of gas delivered by complainant to private consumers.

Disallowed, except as found, *ante,* pp. 104, 123.

Twenty-ninth. That the item of expense, general office, is made up in part as follows:

Legislative investigation expenses	$25,671 74
Miscellaneous extraordinary expenses	1,604 21
Claims for damages	3,800 00
	$31,075 95

410 That the items thereof are not properly chargeable as an element of the cost of gas supplied by complainant to private consumers.

Disallowed. See *ante,* p. 103.

Thirtieth. That the item "Contingent Expenses," $1,328,316.37, as set forth in the complainant's Exhibit No. 94, did not represent any actual expenditure of complainant, but was simply an estimate of charges on account of depreciation, entered by it on its books of account for the first time in May, 1905, and that the same is not properly chargeable as an item of expense of the cost of gas supplied to private consumers in the city of New York; but if the fact should be found to be otherwise, that the report should show just how much thereof is allowed on account of the actual expenditures of complainant, and the items of expense for which such disbursements were made.

Disallowed, except as found, *ante,* pp. 105-116.

Thirty-first. That the following items, as shown by complainant's Exhibit No. —, should be deducted from the cost of gas representing income incidentally derived by complainant from property devoted to the public use of manufacturing and distributing gas, upon the theory of the deduction of the income from residuals from the cost of gas, as shown by complainant's Exhibit No. 94:

Deduct stove rentals	$122,322 60
Discounts	9,497 57
Real estate rentals	37,408 88
Sundries	3,481 48
Dividends, National Coke & Coal Co.	5,000 00
	$177,710 63

Disallowed. See *ante,* pp. 101, 102.

Thirty-second. That the New Amsterdam Gas Light Company, the Standard Gas Light Company, and the Central Union Gas Light Company are domestic corporations engaged in the manufacture and distribution of gas in the city of New York; that they are owned by the Consolidated Gas Company, but that during
411 the nominal year ending October 31, 1905, they purchased the materials used in the manufacture and distribution of gas at the same prices which the Consolidated Gas Company paid therefor.

Found in substance, *ante,* pp. 49, 50.

Thirty-third. That the Standard Gas Light Company manufactured water gas and placed it in the holders during the nominal year ending October 31, 1905, at a total cost to it of 30.23 cents per 1,000 cubic feet; that the New Amsterdam Gas Company during the nominal year ending October 31, 1905, manufactured water gas of an average candle power of 23.38, and placed it in its holders at a total cost to it of 29.01 cents per 1,000 cubic feet; that the Standard Gas Light Company, during the same period manufactured water gas of an average candle power of 23.73, and placed it in its holders, at a total cost to it of 30.23 cents per 1,000 cubic feet; that the Central Union Gas Company manufactured coal gas during the nominal year ending October 31, 1905, of an average candle power of not less than 22 sperm candles of 6 to a pound, and placed it in its holders at a total cost to it of 13.49 cents per 1,000 cubic feet; that the Consolidated Gas Company, at it- Forty-second street station, manufactured coal gas of the same candle power, during the same period, and placed it in its holders at a total cost to it of 25.59 cents per 1,000 cubic feet, and that the Consolidated Gas Company manufactured coal gas of not less than the same candle power during the same period at its Fourteenth street station, and placed it in its holders at a total cost to it of not less than 24.98 cents per 1,000 cubic feet; but that, if the master should find the fact to be otherwise, that he find and report the holder cost of gas to the companies above named, of the candle power, at the stations, and for the period named.

Disallowed, except as hereinafter stated. The holder cost to the Standard Gas Light Company was 30.26 cents (instead of 30.23) per thousand feet for the period in question, and to the New Amsterdam Company it was 29.01 cents, as stated. In the absence of any citation of the evidence showing candle power, I am unable to verify the figures given in the above request as regards these
412 two Companies. The gas manufactured by the Central Union Gas Company during the period in question did not exceed 14 or 15 candles, instead of 22, as above stated, and its cost was 19.64 per thousand feet instead of 13.49 as stated. The cost to the Consolidated Gas Company at its 42nd and 14th Street Stations was respectively .3773 and .3477, instead of as stated in the proposed finding. Various facts appeared in the record indicating that for purposes of comparison, the operations of the three Companies above named are not of value in determining the cost of gas to Complainant. (See *ante,* pp. 129–130.)

Thirty-fourth. That, if complainant had manufactured its coal and water gas during the year ending December 31, 1905, with reasonable prudence, economy and skill, and at the reasonably necessary cost thereof, it would have realized a saving in the cost of manufacture of its coal and water gas, as shown upon its Exhibit 94, of $532,444.57; but that if the master find the fact to be as stated, except as to the amount, that he find the amount thereof.

Disallowed. Counsel fail to refer to any evidence to justify such a finding.

Thirty-fifth. That, if complainant, during the year ending December 31, 1905, had purchased the oil used by it in the manufacture of gas, at the then fair market price thereof, or at the reasonable and necessary cost thereof, it would have made a saving in the cost of gas manufactured by it as shown by its Exhibit 94, of

$305,699.99; but that, if the master finds the fact to be as stated, except as to the amount of such saving, that he find and state the amount thereof.

Disallowed. See *ante,* pp. 126-127, also ruling on State's Additional Finding VIII., *ante,* p. 166.

Thirty-sixth. That if complainant had exercised reasonable prudence, skill and economy in the manufacture of its gas, as shown by said Exhibit 94, and had manufactured the same at the reasonable and necessary cost thereof, it would have manufactured
413 gas and placed it in its holders at a total cost of 26.68 cents per 1,000 cubic feet instead of 33.52 cents; but that, if the master should find the fact to be otherwise, that he state and find the reasonable and necessary holder cost of gas to complainant for the year ending December 31, 1905.

Disallowed, except as found, *ante,* pp. 123-124.

Thirty-seventh. That the Central Union Gas Company, during the year ending October 31, 1905, manufactured 24.93 candle power gas, and delivered the same to the consumers' meters at a total cost of 46.23 cents per 1,000 cubic feet, and that it manufactured carburetted water gas, of about 28 candle power during the same period, and delivered the same at the consumers' meters at a total cost of 51.96 cents per 1,000 cubic feet.

Disallowed. The average station candle power of the Central Union Company during the year ending October 31, 1905, was only 22.08. The gas sold by this Company was a mixed coal and water gas. I have been referred to no evidence in the record showing the cost of the same at consumers' meters.

Thirty-eighth. That the complainant has expended on account of repairs and renewals for the 20 years preceding 1905 an average sum of 10.89 cents per 1,000 cubic feet.

Allowed, and I so find, adding thereto, however, the words "of gas sold."

Thirty-ninth. That the complainant has expended, from November, 1884, to January, 1906, on account of repairs and renewals, a total sum of $17,392,512.68; that during the last eleven years of that period complainant's sales amounted to 56,878,689,000 cubic feet, and the amount expended for repairs, renewals, etc., was $6,967,874.39, or 12.25 cents per 1,000 cubic feet, for all sales; and that for the last eleven years of that period, its sales were $107,197,511,000 cubic feet, and it expended for repairs and renewals $10,424,638.29, or 9.73 cents per 1,000 cubic feet of sales.

Found in substance, *ante,* p. 113.

413½ Fortieth. That several of the coal gas plants which were transferred to complainant by its constituent companies in 1884, have been replaced with water and oil gas plants of the latest and most improved methods; that the maximum daily capacity of the water and oil plants of the complainant is 41,500,000 cubic feet, out of a total capacity of the complainant's plants in operation, amounting to 51,000,000, which does not include the 18th street plant; that all of the manufacturing plants of the complainant are in good and efficient condition and that four-fifths of the present generating capacity thereof are in the shape of modern up-to-date water gas plants which could not be improved upon anywhere; and that one-fifth of the generating capacity thereof, or the coal gas plants, while possessed of some apparatus which is not of the latest pattern, are efficient and in shape to operate for an indefinite period without impairment; that the plants of complainant were in good condition, operating continuously and successfully when they were taken over by complainant in 1884, and are in good condition now,—better than they were at that time,—and are producing about twice as much gas, at a lower rate.

Allowed, and I so find.

Forty-first. That during the twenty years preceding the year 1905, all of complainant's expenditures on account of repairs and renewals, whether correct or final, actual or estimated, have not exceeded 10.89 cents per 1000 cubic feet, and that from the period of its organization in 1884, to May, 1905, complainant never charged off on account of depreciation or reserve, accrued or estimated, any sum whatever in addition to said 10.89 cents, actual expenditure.

Allowed, and I so find, changing the word "correct" in the third line to "current."

Forty-second. That every item of expense or loss arising out of disintegration, impairment or depreciation of complainant's plant, including its mains, services, meters, meter-cocks, etc., was fully covered during said period by the said disbursements of 10.89 cents.

Disallowed. The depreciation found by the witness Meyer, amounting to $604,988, was not covered thereby.

413¾ Forty-third. That the expenditures on account of repairs, as set forth in complainant's Exhibit No. 94, cover complainant's total expense or loss on account of disintegration, impairment or depreciation in its plant, mains, service, etc., for the year 1905; but that if the fact should be found to be otherwise, the report showed what items of expense, on account of the disintegration, impairment or depreciation in additon thereto, actually accrued, which were not covered thereby.

Disallowed, except as found at pp. 107-109, *ante*.

Forty-fourth. That in July, 1904, the complainant issued to its stockholders 6 per cent. debenture bonds, convertible into stock at par, at the option of the holder, to the amount of $19,857,600; that the average market price of the debenture bonds issued during the year 1905, was $174.75, yielding a net return to the investor therein, at that price, of 3.4 per cent.

Allowed, and I so find.

Forty-fifth. That the average market price of the stock of complainant during the year ending December 31, 1905, was $192.33, or $92.33 above par, which yielded a return to the investor, upon the basis of investment, at that price, of 4.1 per cent. upon his cash investment.

Allowed, and I so find.

Forty-sixth. That complainant, by virtue of its own business and the control of the business of the New Amsterdam, Standard, Central Union and New York Mutual Gas Light companies, and by virtue of its control of the companies engaged in the business of the manufacture and distribution of electric current, has a virtual monopoly in the supply of gas and electricity in the boroughs of Manhattan and The Bronx, in the city of New York; but, if the master should find the fact to be otherwise, that he find and report the names of the competitors of complainant in the manufacture and distribution of gas therein, and the names of the companies engaged in the manufacture and distribution of electric current therein, which are competitors of the companies owned and controlled by the complianant." 414

Disallowed, except as found at p. 49, *ante,* as amended by complainant's Finding III., *ante,* p. 147.

Addenda.

"1. That the master find and report severally the present value, or the value as of about December 31, 1905, upon the basis of the present cost of reproduction new, less depreciation (stating the basis or the principles which govern the determination thereof), of the real estate, plant, mains, services, meters, meter cocks and connections, pipes and specials, tools and implements of complainant, claimed by complainant to be devoted by it to the public use, and that the master finds to be so devoted to the public use.

Found as in report *passim.*

2. That the master find and report the present value, upon the basis of reproduction new, less depreciation (stating the basis or the principles which govern the determination thereof), of the property set forth in paragraph one above, but which the master finds was *not* devoted by complainant to the public use.

Found as in report *passim.*

3. That the master find and report the present value upon the basis of the present cost of reproduction new, of the property set forth in paragraphs one and two above, claimed by complainant to be devoted to the public use.

Found as in report *passim.*

4. That where the master is requested at any paragraph hereof to find a certain fact, as of a stated sum or amount, and he finds the fact to be as stated except as to the sum or amount, that he find and report the fact in accordance with the sum or amount found by him."

Disallowed, excepting as hereinbefore found.

415 *City's Objections and Amendments.*

On behalf of the defendant The City of New York there was presented a memorandum, evidently prepared to a considerable extent by the expert witnesses instead of by counsel. In view of its length and as in many respects it does not conform to the practice, said memorandum is not set forth in full but is filed herewith. Such extracts therefrom are herein-fter made as suggest specific changes in or additions to the draft report or such objections thereto as are deemed pertinent for the information of the court.

"First. * * * The complainant company in its 'Brief for the Complainant on the Question of Franchises and Good Will' dated June 4, 1906, and submitted to Mr. Justice Lacombe on the argument of the motion for an injunction herein claim (page 2) special franchises are property in the fullest sense, that the operating franchises of a corporation must be paid for in condemnation proceedings (p. 4) and that the same principle is applicable to rate regulation (p. 5). 'If the operating franchise', say counsel for the complainant on page 5 of the brief referred to, 'of a public service corporation constitutes property for which compensation must be made where property is taken under the right of eminent domain, it requires no argument or precedent to make it clear that the same principle must be applied where the Legislature seeks to regulate the rates charged by such corporation. In both cases the property of the corporation is taken in the interest of the public.' Assuming this to be so, there can be no recovery in a condemnation proceeding for property taken under the right of eminent domain until the party claiming to be injured by such taking has proven his title to the property in question. This the complainant has utterly failed to do either as to the franchises or the real estate to which the city claimed the company had no title. Therefore the Master should find the fact to be that as to the franchises claimed and the particular real estate referred to, the complainant had proved no title and could not base any capitalization thereon in this case."

Disallowed. See pp. 21, 22 and 62–72, *ante*.

416 Second. The evidence in this case is that the complainant company owns or controls all the gas and electric lighting companies operating in the Boroughs of Manhattan and the Bronx with the unimportant exception of the Bronx Gas and Electric Company (see States Ex. D., Schedule L, p. 408 Ex., Report of Stevens' Committee, p. 41), and the Master should so state in his final report.

Found as at p. 49, *ante*, as amended by Complainant's Finding V., *ante*, p. 147.

Third. The evidence in this case shows that the consumption of gas in the Borough of Manhattan is greater per capita than in any other city in the world (See Sten. Min., p. 781), and the Master should so state in his report.

Allowed and I so find. See *ante*, p. 168.

Fourth. It is conceded in this case, and the evidence shows that the land of the complainant used in the business of manufacturing gas, is no more valuable as land for that purpose to-day than when it was first acquired, and the Master should so state in his report. (Sten. Min. pp. 1766, 6825).

Disallowed, except as below set forth.

I find no concession to the effect stated. There is no evidence that the land *alone* is more valuable for purposes of gas making than it was when purchased. Mr. Bradley testified that in several of the plants he had put in more apparatus on the same number of square feet than formerly, which made the land more valuable for gas making purposes.

Dr. Humphreys testified that appreciation in the value of real estate did not add anything to its earning capacity so long as it was occupied by a manufacturing plant.

Fifth. On line 21, page 8 of the draft report, change "it was conceded" to read, "it was claimed by complainant," and add, after the word "selected" on page 8, line 26 of report, the words "by the complainant."

417 The defendants were refused permission to examine the accounts of the company for any other period. (Sten. Min. pp. 2778, 2915.)

Disallowed. The Defendants cited authorities holding that the value of Complainants' property devoted to public use should be taken as of the time of such use (*Ante*, p. 25). Counsel for the State in their brief set forth as one of the issues herein "Determination of the value of Complainants' property devoted to the public use approximately as of date of the order of the Commission and of the enactment of said Chapters, namely, 736 Laws of 1905, and 125 Laws of 1906." Defendants' representatives were in numerous instances permitted to examine Complainants' books for periods anterior to 1905.

Sixth. The Master should state in his report that the witnesses McHale and Thompson had prior to the trial of this case examined the real estate of the complainant, having been employed to do so by the complainant, and testified to the value of the same on behalf of the complainant as its expert witnesses as to the value of the land in *certiorari* proceedings to review the assessment thereon of the Tax Commissioners. (See Sten. Min. pp. 2725, 2814.)

Allowed, and I so find with the qualification that the employment in question, which was some two or three years prior to this suit, did not embrace a general appraisal of Complainants' real estate but only certain parcels then the subject of tax litigation.

Seventh. The Master should state in his report that as shown by the testimony of the witnesses called by The City and the charts offered in evidence, increased consumption is the rule where there is reduction in the price of gas in the City of New York, and that because of such rule and increased population, the sales of the complainant company would be 15,300,000,000 cubic feet in the year 1907. (See Sten. Min. pp. 3073-6—City's Exhibit 57.)

Disallowed. See *ante*, p. 168, State Finding XII.

418 Eighth. The testimony of Mayor, who appraised the plants for complainant, is that he spent 3,800 hours in viewing and appraising the property, and 3,800 hours more in tabulating the result of such examination and appraisal, and that it was absolutely necessary to take that time even with all the data and special facilities he had as expert for the company; whereas the experts for the defendant were at first denied any opportunity to inspect the plants and then only allowed a very limited and inadequate time in which to make such examination and appraisal. (See Sten. Min. p. 2773-2776, 2419-2420, 2466-2469, 6600, 6670, 5244-5250, 2106.)

Allowed, and I so find, in so far as regards the testimony of Mayer.

As regards the remainder of the finding, disallowed, excepting as below set forth.

Complainants' counsel claimed that Defendants were not entitled to an inspection of the plants, and in the first instance refused to permit it. Later the opportunity to make such inspection was granted, Complainants' counsel stating that this was done as a matter of courtesy, and not because the right was conceded.

In the latter part of August, 1906, while complainant's case was still in progress, an application was made on behalf of the State for an order permitting such inspection, but this application was postponed and subsequently withdrawn, as appears from a memorandum of the Circuit Judge filed herein on October 10, 1906 (Record, p. 2742). Complainants' main case was closed on Sept. 14, 1906, and an adjournment was taken at Defendants' request to October 1, 1906. In the interim a motion was made by the City before the Circuit Judge for an order permitting among other things an inspection of the plants. After an adjournment at the City's request this motion was duly heard, but as appears from the memorandum above referred to, it was settled by consent so far as regards the inspection of plant, Complainant not objecting. The State's
419 first witness on the subject of plant was called on November
22d, 1906, and the City's first witness on that subject on December 5, 1906. The latter stated that his examination of the plant had been begun during the previous week.

It is clear that by the exercise of proper diligence Defendants could have secured inspection of the plants at a much earlier date than it was in fact begun and this fact was repeatedly brought to the attention of counsel during the progress of the hearings.

Ninth. The testimony of Bradley, the Chief Engineer of the company, is that without a detailed and exhaustive examination of the plants and apparatus, no proper appraisal could be made. (Sten. Min. p. 173).

Allowed and I so find.

Tenth. The evidence in this case is, as appears from Sten. Min. p. 5505 *et seq.*, and complainant's exhibits 286 to 294, that the congested conditions of the subsurface of the streets is largely due to the unnecessary duplication and quadruplication of gas mains due to the consolidation of the constituent companies of the Consolidated Gas Company already operating in the same territory at the time of the consolidation in 1884.

Disallowed. The evidence fails to show duplication to any large extent of the mains of the constituent companies. There is however more or less duplication due to the presence in the streets of the mains of the Standard and New Amsterdam Companies, both organized subsequent to the consolidation. Over 56% of the City blocks have but a single main, and over 86% have two mains or less.

Eleventh. The evidence in this case shows that the consolidation of the constituent companies did not result in reduced cost of operation, but so far as oil is concerned, tended to and did increase the cost of the same because, as claimed by the company, of the great quantities required they could get it but from one Company,—the

429 Standard Oil Company,—and then at any price fixed by said company; so that the Gas Company is entirely at the mercy of the Oil Company.

Disallowed. Counsel have failed to indicate any evidence to the effect that the consolidation did not reduce operating cost. There is some evidence from which a contrary conclusion might be shown. In one of the tables prepared by the accountants for the Senate Committee of 1885 the cost of gas to five of the constituent companies per thousand feet was stated as follows:

Manhattan Gas Light Co.	$1.0676
Metropolitan Gas Light Co.	.9171
New York Gas Light Co.	1.0771
Harlem Gas Light Co.	1.0237
Municipal Gas Light Co.	.9845

As to oil see *ante*, pp. 127, 128.

"Referring to the statements contained in the Report regarding the testimony of Dr. Marks, the following corrections should be made:

Correction to Master's Report No. 1.

(Master's Report, p. 36). "In this view he made estimates on the theory that the cost of final replacements to cover such an inadequacy or obsolescence ranging from 25 to 60% and based on the supposed life of 120 years for the plant" (Defendants' Brief, p. 113; Testimony, p. 6696).

Substitute: "In this view he made estimates on the theory of the cost of final replacements to cover such an inadequacy or obsolescence would be about 21% for the average of buildings, gas meter apparatus, yard connections and holders."

Disallowed.

Correction to Master's Report No. 2.

(Master's Report, p. 36): "The fact thus being that the plants are in good order and operating efficiently it does not appear 421 reasonable for the purposes of this case to charge them with a theoretical deficiency so great as if actually existing would make their successful operation a practicable impossibility." Please eliminate this as incorrect and not in accordance with the facts.

Disallowed.

Correction to Master's Report No. 3.

(Master's Report, p. 32): "Neither as a rule did he make allowance for piling or other expensive foundations." (See Test., pp. 5251, 5256, 5266).

Please eliminate above statement as incorrect and not in accordance with the facts.

Disallowed.

Correction to Master's Report No. 4.

(Master's Report, p. 32): "Mr. Marks did not disagree materially with Mr. Mayer in his estimates as to apparatus and holders. They are due chiefly to the fact that Mr. Mayer included the cost of installation whereas Mr. Marks estimated what is known as "sidewalk delivery" of the apparatus. Other differences appear in the cases where Mr. Marks has assumed a different weight of material." (Refer to Complainants' Ex. 70; Test., pp. 6680, 6687, 6693; Defendants' Brief, pp. 113, 115, 115 Recapitulation).

Please eliminate above statement as not in accordance with the facts.

Disallowed.

Correction to Master's Report No. 5.

(Master's Report p. 35) "Mr. Marks did not regard the extent of depreciation actually existing but assumed a theoretical deterioration of the supposed life of the plant."

Refer to Testimony p. 5063, and following giving inventories of all stations of Consolidated Gas Company in Manhattan.

These inventories show that neither buildings nor water gas apparatus nor holders built within the last five years have been subjected to any depreciation whatsoever. Please eliminate as not in accordance with the facts and the testimony.

Disallowed.

422 *Correction to Master's Report No. 6.*

(Master's Report p. 31): "As hereafter pointed out they were corroborated in many particulars by the defendants' own witnesses and although subjected to careful examination by the latter and a full cross examination by counsel, no errors became apparent which would materially affect the general result of his computations."

Refer to testimony, pp. 6687, 6693, Defendants' Brief, pp. 115, 116, showing error of $749,000 in four items and objecting to the addition of 10% and 5% to inventories.

Please eliminate as not in accordance with the facts and testimony and exhibits.

Disallowed. The so-called errors arise from certain discrepancies pointed out between the witness' valuations of 1906 and those made in 1884 by Mr. Rowland, who appraised the plants for the purpose of the consolidation.

It was not satisfactorily shown that the buildings were in the same condition at the two dates named. Furthermore, the evidence indicates that the Rowland valuations as to buildings were probably much below their actual value. For example, one of the buildings at the 21st station appraised for Defendants by Mr. Marks at $27,890, and by Mr. Edgerton at $27,000, appears in the Rowland schedules to be valued at $5,000.

Correction to Master's Report No. 7.

(Master's Report, p. 93) "Considerable stress was laid by some of the witnesses upon the gas statistics of other cities." "Such evidence cannot be regarded generally as of value because the variance in local conditions is so great as to make accurate comparisons impossible."

Refer to testimony, pp. 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, Defendants' Brief, pp. 110, 111.

The difference in cost of structures may amount to an increase of 10 to 25% but the difference in sales of gas *per capita* between Manhattan and other cities is 100% or more in favor of Manhattan.

The valuation of Boston Gas Works was fixed by an inexpert
423 legislature. The valuation of Philadelphia Gas Works is
based on a mere suggestion and is not testimony.

Please eliminate as not in accordance with the facts or the testimony.

Disallowed.

Correction to Master's Report No. 8.

(Master's Report, pp. 34-5.) "But obviously they are a necessary part of any estimate of reproduction cost, as Mr. Marks admitted."

See Defendants' Brief, p. 116.
See City's Exhibits 125 to 135 inclusive.

Please eliminate as not in accordance with the facts and the testimony.

Disallowed.

Correction to Master's Report No. 9.

(Master's Report, p. 38): "It was shown by the complainant that mains of the aggregate value of $2,891,690.22, at Mr. Marks' prices, had in fact been laid by contract.

"A computation of the 15% contractors' profit suggested by Mr. Marks would accordingly add $433,753.53 to his cost valuation."

"It was further shown that his estimates were bases on an assumed mileage very much less than actually existing."

An assistant to Mr. Marks, after measuring five maps, failed to include them. The Master did not permit this testimony to be corrected when offered, but made use of corrected figures in Defendants' Brief, p. 118.

Mr. Simpson's testimony, p. 5454 and 5455, made use of contractors' prices which include 15% on the cost in City's Ex. 50, and then added an additional 15% to obtain $433,753.53.

Refer to Defendants' Brief, p. 117.

Please eliminate as not in accordance with the facts and the statements in Defendants' Brief.

Disallowed.

424 *Correction to Master's Report No. 10.*

(Master's Report, p. 43.) "It appears however from the reports of the Massachusetts Gas Commission that there are included as part of the capital of the companies in question certain notes payable which the witnesses had omitted in his computation. As corrected it appeared that the Massachusetts Gas Companies were employing about 48c. per M. cu. ft. for their active capital and on a like basis according to complainant's sales a proper working capital would be upwards of $6,000,000."

Dr. Humphries received from the Massachusetts Gas and Electric Light Commission a letter stating that these notes payable were considered as bonds because they were used for the structural assets and considered a part of the fixed capital sunk in construction.

Therefore these notes payable in no wise affect the liquid assets of the companies leaving 13c. per M. cu. ft. of sales as correct for this purpose.

Please eliminate as not in accordance with the facts or the letter from the Massachusetts Gas and Electric Light Commission. (Testimony p. 6857.)

Disallowed.

Correction to Master's Report No. 11.

(Master's Report, p. 52): "He computed its value at $5,000,000 on the assumed cost of only $1.78 per M. cu. ft. of annual capacity but this would appear to be inadequate.

Refer to Defendant's Brief p. 111 and to testimony pp. 2348 to 2358. The $1.78 is deduced from the official figures of the four Massachusetts companies and is not "assumed." No proof from these companies or their representatives of the incorrectness of $1.78 has been adduced proving the incorrectness of $1.78.

Please eliminate as not in accordance with the testimony and the facts.

Disallowed.

Correction to Master's Report No. 12.

(Master's Report p. 46): "For the purpose of determining
425 present value however, particularly on the basis of the cost
of reproduction, the method followed by Mr. Marks does not
commend itself."

The Master has forgotten that the Astoria plant is to replace and reproduce the existing plants which should be deducted from its cost as abandoned and sold.

Please eliminate as not in accordance with the facts and the statements of the Complainant's witnesses.

Disallowed.

Correction to Master's Report No. 13.

(Master's Report, p. 90) "The reasonable value of which I think may be fairly fixed at the sum of $20,000,000."

As the franchise is a gift of the public costing the company nothing and as the franchise tax is charged to the cost of gas and costs nothing to collect, the consequence is the Consolidated Gas Company has expended nothing and invested nothing for a franchise.

The alleged franchises have no value on which a return should be charged against the gas consumer and the Report should so state.

Disallowed.

Correction to Master's Report No. 14.

(Master's Report p. 113: "Depreciation of 5% on electric lighting plants."

Please eliminate as having no proper relation to the depreciation of Gas Works.

Disallowed.

Correction to Master's Report No. 15.

(Master's Report, p. 116.) "9 cents per M. cu. ft."

Please eliminate as further reading of "Finances of Gas, Electric Light and Power Enterprises" shows this arbitrary statement to be qualified.

Disallowed.

426 *Correction to Master's Report No. 16.*

(Master's Report p. 140): Apparent price of gas obtained $1,034. True price of gas $.998/ Difference 3.6 cents.

(Master's Report p. 123)

Apparent cost of gas	65 84/100c.
Less	3 6/100c.
True cost of gas	62 24/100c.

This is the corrected cost of gas according to the Master's method if there is subtracted the amount by which the apparent price of gas exceeds the true price of gas making all allowances in the cost of gas claimed by the Master.

Disallowed.

On page 52 of the Report, second line of section headed "Franchises" add after the word "was" the words "attempted to be."

Disallowed.

Change the second paragraph on page 53 so as to read "additional stock of the new company was issued for franchises and rights to the extent of $7,781,000," and an item franchises and rights

$7,781,000 is still carried on the books of the company. This stock was apportioned between the constituent companies as follows," etc.

Disallowed.

Page 61, line 1, after the word "the" at the commencement of the line, add "consents." After the word "licenses" add the words "estimated to be."

Allowed as to "consents." Disallowed as to the remainder.

Strike out the paragraph marked 3, as the statute referred to, Chapter 367, Laws of 1884, does not apply to the complainant.

Disallowed.

427 In the paragraph marked 2, under the statement "it is claimed by the defendants" after the word "although" in line 7, strike out "by its terms unlimited as to time necessary expired with the termination of" and add instead thereof the words "the limit of its term is not expressly stated therein and could not survive the company's corporate existence," and add at the end of said paragraph 2 the words "and therefore had no power to use the streets of the municipality even though the latter may attempt to consent to such use," and on the last line after the word "was" insert the words "alleged to have been."

Disallowed.

After the word return on line 10, add the words "as against the consumer."

Disallowed.

On page 63, there is no evidence to support the statement in the second paragraph reading "in short so far as the present record shows the municipal authorities have fully acquiesced in the continued use and occupation of the streets by complainant."

Overruled.

It is respectfully submitted that the objection made by the city that there is an entire absence of proof that the grantees under this act of 1871 met and selected an executive committee was not technical.

Overruled.

On page 64, there is no evidence of any extension of the consent to the Harlem Company referred to on this page.

Overruled.

On page 66 there is no reason stated for the conclusion expressed "although this statute is claimed to be unconstitutional its validity must be assumed for the purposes of the present proceeding.

Overruled.

428 On page 67 the words "unlimited as to time" on lines 4 and 5 should be stricken out and the words "not specified in the consent itself" inserted instead thereof.

Overruled.

Besides the foregoing a general objection is urged that the Master's statements are as a rule too broad, and frequently in stating that no proof exists, impose upon the defendants the burden of proving a negative.

Overruled.

Report page 38. A return of 10% or 15% is not expected or required where there is a monopoly. This was the testimony of complainants' own witnesses and is at variance with the statement of the Master appearing on this page. (See Sten. Min. pp. 2077, 2079.)

Overruled.

It should be stated in the Report that although complainant's officers were examined as to the terms and conditions under which the Consolidated Gas Company was receiving gas from the Astoria Light, Heat and Power Company, they were unable to do so stating no arrangement had been made as yet.

Disallowed.

In view of the fact that requests to find have been submitted by the Complainant and by the State although it was understood no request as to findings would be required by the Master prior to the coming in of the Report, the defendant, The City of New York, asks leave to adopt and present on its behalf the Requests for Special Findings heretofore presented in behalf of the State."

So ordered. The fact is that no findings were required, and counsel were so informed when the taking of testimony was closed.

"At page 37 of Report, the Master allows the round figure
429 $15,500,000 for the manufacturing plant and holder stations,
the capacity of which is 51,000,000 daily. Of this capacity 38,000,000 daily is due to the water gas stations at 44th, 71st and 99th streets. The maximum allowance as to cost of the various water gas plants, per 1000 daily capacity is stated by Mr. Meyer at $125.00, and for storage or holder capacity $80.75 per 1000 cu. ft. contents, as appraised by Mr. Meyer, at 132nd street and 111th street. (Sten. Min., pp. 1568, 1389, 1391.)

All of the 3,000,000,000 of gas bought from other companies was water gas, and the average delivery for 200 days was equal to 15,000,000 a day. The capital required to make and store this gas is, according to complainant's testimony $205.75 per thousand daily capacity. (Sten. Min., pp. 1389, 1391).

On this basis, capital required for making and storing 15,000,000 cu. ft. would be	$3,086,000
Real estate required on the basis of water gas	750,000
	$3,836,000

instead of $12,000,000 as allowed by the Master for property of other companies devoted to use of complainant Error of Master's findings on this item, $8,164,000 which should be deducted from the sum, total

Also on that account, should be deducted the 10% profit allowed other companies on the labor and material used, to make complainant's gas.

The defendant the City of New York submits for the consideration of the Master.

Estimate of the amount of Real Estate required for the manufacture of 15,000,000 ft. water gas (daily) and cost of the same based upon New York (Manhattan) valuation and requests that he amends his Report by a finding in accordance therewith."

430

Exhibit 125, page 1692, Exhibit Item.		Area sq. ft.
25	Generator house over Machine 6–13	10,200
27	Generator house 2nd St. 5 machines	15,096
35	Purifier house	12,243
36	Condenser & Scrubber house	12,243
37	Purifier house	12,243
39	Shaving and Scrubber house	12,243
40	Exhauster house	3,205
19	Engine room machine shops & gangway	13,124
20	Engine room	6,864
	Total square feet	97,461

	Area.	Valued at	
Block 978	121,700	$537,000	See Master's
" 979	133,900	570,000	Report p. 14
	255,600	$1,107,000	

Pro rata value of 97,461 sq. ft.	$420,660
Daily capacity.. 24,000,000 cu. ft.	
Pro rata value for 15,000,000 daily	263,905

Real Estate for 15,000,000 holder capacity 132nd Holder Station as a basis

Block 1999—662'5 long 199'83 wide

	Diameter.	Depth.
3 Holder tanks	192' 9" x	40' 1"

Capacity of each holder	5,000,000
Total capacity	15,000,000

Block valued by Master (Page 15 "Report") $445,000

Value of real estate pro ratio to 15,000,00 for building area 97,461	263,905
Value of real estate for holders	445,000
	$708,905
Add coal & oil storage	40,000
Total	$748,905

431 Disallowed. Without discussing the foregoing in detail, several inaccuracies and omissions may be noted.

The evidence shows that all of the 3,000,000,000 feet of gas bought from other Companies was not water gas but a part thereof consisted of coal gas produced in the plant of the Central Union Company.

The testimony as cited does not appear to sustain the contention that $80.75 per thousand cubic feet is a sufficient allowance for storage or holder capacity. Both the 111th and 132nd Street holders are valued at more than $100. per thousand, while the 63rd Street holder, with accompanying apparatus and pipe connections, is valued at $163. per thousand. This would make an aggregate of $288. per thousand for plant and holder capacity instead of the $205.75 assumed above.

Complainant's Manhattan capacity being 51,000,000 feet and its sales 70,000,000 feet per maximum day in 1905, an actual capacity of 19,000,000 cubic feet was necessary in addition to Complainant's Manhattan plants instead of the 15,000,000 feet assumed in the above calculations. Furthermore, the above figures make no allowance for the necessary reserve capacity which, without contradiction, was fixed at 20 per cent. above the actual sales.

There is also no allowance for the value of that portion of the mains and general distribution system of the other Companies which is employed in sending and delivering the purchased gas and which should be taken into account in addition to the land and plant required for the production thereof.

As regards the cost of real estate, estimated at $750,000, what has been already said as to the capacity required and the necessity of providing for reserve is fully applicable. Furthermore, the testimony is undisputed that the 21st Street land is crowded with apparatus and a greater area would be required if a new plant
432 were to be constructed. No allowance is made for a proper proportion of the land used for general holder purposes not located immediately at the 21st Street plant, but which is necessary for handling its output.

The following additional findings were subsequently requested by the City regarding the Astoria plant. Without reviewing the same in detail, I may state generally that I do not find that the evidence sustains the contentions of counsel and the said requests are each of them hereby disallowed.

"First. That the stations of the Consolidated were ample to supply the Consolidated business and still have a margin of 11% in January over the average day's output and 27% over the average day's output in December.

"Second. That the stations of the subsidiary companies with their maximum capacity of 62,000,000 and maximum day's output of but 30,000,000 have ample capacity to fulfill their contracts with the Consolidated Company and still leave a large margin for their own growth.

"Third. Under these conditions it is in the highest degree inequitable to impose a capitalization of $12,000,000 for a third plant

(Astoria) which under the conditions is shown to be totally unnecessary to the gas supply of New York."

The draft report, amended in the respects hereinbefore specified, is accordingly signed and filed as my final report herein.

All of which is respectfully submitted.

ARTHUR H. MASTEN,
Master in Chancery.

Dated New York, June 24th, 1907.

433 (Endorsed:) Circuit Court of the United States, Southern District of New York. The Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney-General of the State of New York, William Travers Jerome, as District-Attorney of New York County, Frederic C. Gunnison, John C. Davies and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity and The City of New York, Defendants. (Copy.) Master's Report. Filed June 24th, 1907. U. S. Circuit Court, Southern District N. Y. Filed June 24, 1907. John A. Shields, Clerk.

434 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY
against
JULIUS M. MAYER, Attorney-General; THE CITY OF NEW YORK, ET AL.

Before Arthur H. Masten, Esq., Special Master.

Corrections, Amendments and Additions to the Special Master's Report Proposed by the Defendant The City of New York.

The City of New York, under the notice given herein, dated May 18, 1907, submits the following for the consideration of the Master:

First. It is suggested apropos of the statement of the Master on page 46 of the proceedings on May 28, 1907, as follows: "All I say is that the Gas Company is in possession of the field. They are presumed to have title as I am presumed, if I pay taxes on a house and say it is mine, to own the house," that the complainant company in its "Brief for Complainant on the Question of Franchises and Good Will," dated June 4, 1906, and submitted to Mr. Justice Lacombe on the argument of the motion for an injunction herein claim (page 2) special franchises are property in the fullest sense, that the operating franchises of a corporation must be paid for in condemnation proceedings (p. 4) and that the same principle is 435 applicable to rate regulation (p. 5). "If the operating franchise," say counsel for the complainant on page 5 of the brief referred to, "of a public service corporation constitutes property for which compensation must be made where property is taken under the right of eminent domain, it requires no argument or precedent to make it clear that the same principle must be applied where the Legislature seeks to regulate the rates charged by such corporation. In both cases the property of the corporation is taken in the interest of the public." Assuming this to be so, there can be no recovery in a condemnation proceeding for property taken under the right of eminent domain until the party claiming to be injured by such taking has proven his title to the property in question. This the complainant has utterly failed to do either as to the franchises or the real estate to which the City claimed the company had no title. Therefore, the Master should find the fact to be that as to the franchises claimed and the particular real estate referred to, the complainant had proved no title and could not base any capitalization thereon in this case.

Second. The evidence in this case is that the complainant company owns or controls all the gas and electric lighting companies operating in the Boroughs of Manhattan and the Bronx with the unimportant exception of the Bronx Gas and Electric Company—(see States Ex. D., schedule L, p. 408 Ex., Report of Stevens' Committee, p. 41), and the Master should so state in his final report.

Third. The evidence in this case shows that the consumption of gas in the Borough of Manhattan is greater per capita than in any other city in the world (see Sten. Min., p. 781), and the Master should so state in his report.

Fourth. It is conceded in this case, and the evidence shows
436 that the land of the complainant used in the business of manufacturing gas, is no more valuable as land for that purpose to-day than when it was first acquired, and the Master should so state in his report. (Sten. Min., pp. 1766, 6825.)

Fifth. On line 21, page 8, of the draft report, change "it was conceded" to read "it was claimed by complainant," and add, after the word "selected" on page 8, line 26, of report, the words "by the complainant."

The defendants were refused permission to examine the accounts of the company for any other period. (Sten. Min., pp. 2778, 2915.)

Sixth. The Master should state in his report that the witnesses, McHale and Thompson, had prior to the trial of this case examined the real estate of the complainant, having been employed to do so by the complainant, and testified to the value of the same on behalf of the complainant as its expert witnesses as to the value of the land in certiorari proceedings to review the assessment thereon of the Tax Commissioners. (See Sten. Min., pp. 2725, 2814.)

Seventh. The Master should state in his report that as shown by the testimony of the witnesses called by the City and the charts offered in evidence, increased consumption is the rule where there is reduction in the price of gas in the Borough of Manhattan, and that because of such rule and increased population the sales of the complainant company would be 15,300,000,000 cubic feet in the year 1907. (See Sten. Min., pp. 3073-6; City's Exhibit 57.)

Eighth. The testimony of Mayer, who appraised the plants for complainant, is that he spent 3,800 hours in viewing and appraising

the property, and 3,800 hours more in tabulating the result of such examination and appraisal, and that it was absolutely necessary to take that time even with all the data and special facilities he
437 had as expert for the company; whereas the experts for the defendant were at first denied any opportunity to inspect the plants and then only allowed a very limited and inadequate time in which to make such examination and appraisal. (See Sten. Min,. pp. 6600, 6670, 2273-6, 2472, 2419-20, 2466-9, 2406, 5244-50.)

Ninth. The testimony of Bradley, the chief engineer of the company, is that without a detailed and exhaustive examination of the plants and apparatus no proper appraisal could be made. (Sten. Min., p. 173.)

Tenth. The evidence in this case is, as appears from Sten. Min., p. 5505 *et seq.*, and complainant's exhibits 286 to 294, that the congested conditions of the sub-surface of the streets is largely due to the unnecessary duplication and quadruplication of gas mains due to the consolidation of the constituent companies of the Consolidated Gas Company already operating in the same territory at the time of the consolidation in 1884.

Eleventh. The evidence in this case shows that the consolidation of the constituent companies did not result in reduced cost of operation, but so far as oil is concerned, tended to and did increase the cost of the same because, as claimed by the company, of the great quantities required they could get it but from one company—the Standard Oil Company—and then at any price fixed by said company; so that the Gas Company is entirely at the mercy of the Oil Company (pp. 5938-62, 6072, 6075-81).

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Block.	Lot.	Page.	Year.	Valuation admitted by complainant as excessive of what property would sell for under ordinary circumstances.		Reduction asked for.	Master's valuation.
991	1	2670	1904	$180,000 00		$156,250 00	$233,000 00
991	26	2673	1904	125,000 00		106,250 00	157,000 00
988	1	2669	1905	550,000 00	(with improvements)	400,000 00(*a*)	570,000 00
979	1	2660	1906	542,000 00	"	351,500 00	570,000 00
1090	23	2678	1905	53,000 00	"	46,000 00	72,000 00
1070	5	2675	1905	70,000 00	"	62,500 00	83,000 00
1089	1	2676	1906	800,000 00	"	525,000 00	1,150,000 00
1093	1	2681	1906	425,000 00	"	250,000 00	546,000 00

(*a*) Page 2670 admits land appraised after January 1, 1905, at $293,188, by skillful real estate experts.

PAGE BOUND VERTICAL IN BOOK

439 On page 98, Master's Report, the following statement appears:

"Accordingly, under advice of counsel, and assuming that sooner or later one-half of the real estate might be sold, in consequence of the removal to Astoria then contemplated, they made up the tax report on the basis of the full value of the land, plus the book value of one-half the plant, plus a few hundred thousand dollars to represent the possible scrap value of the other half of the plant in the event of sale. This resulted as follows:

One-half of plant ($15,755,462.88) to be retained indefinitely in New York, consisting of holders, etc., full book value	$7,877,731.44
Add for value of the other half of plant, consisting of manufacturing plant, considered as scrap on removal	578,864.27
	$8,456,595.71
Land as per books	11,216,479.71
Total as stated in report of June 30, 1901	$19,673,075.42"

In the above report the company gives the value of its own land as $11,216,479.71.

Master's Report, page 47: Astoria real estate is given as $1,132,558.28.

This Astoria property is stated to have been purchased for the purpose of the erection of a plant to replace the plants now on the island of Manhattan.

The 376 acres or more of land at Astoria are intended to
440 contain all the future manufacturing apparatus and holders, with the exception of the holders in existence on the island of Manhattan.

We have therefore as a result the allowance to the Consolidated Gas Company of an exaggerated present value of real estate (land) plus the allowance of $100,000 for 1/12 of the land at present containing constructions at Astoria. No reduction is made for over one-half of the Manhattan real estate which will be available for sale when a removal of the manufacturing plant to Astoria is accomplished.

The Master has allowed the Consolidated Company the full present value of its real estate in use and in addition the value of land to be used to replace it in the ftture.

Master's Report, page 115:

"Whatever enhancement there may have been in its value since the date of purchase was the result of no efforts on the part of consumers of gas and they are not equitably entitled to a return thereon. Whether it was the result of mere good fortune or was due to the shrewdness and foresight of the management of the company is immaterial. In either case the justice of permitting the general public to share its benefits at the expense of complainant stockholders is not apparent."

Keeping the value of land at its cost price is not an "expense to stockholders."

While the statement quoted might be partially true with regard to an establishment or to a factory engaged in a competitive business and with the corrective control resulting from competition bearing upon its business, we submit it is not true in regard to a corporation dependent for the larger part of its business upon the free use of the streets of this city and dependent upon the increase of population due to other causes than its own exertions for the increasing use of
441 its gas. The Consolidated Gas Company is a monopoly and every improved pavement put down upon the streets is in effect a barrier created at the cost of the City (and not of the company) to protect it in its monopoly by rendering it more costly for a possible competitor to lay street mains.

There is no doubt of the legal right of the Consolidated Gas Company to sell its land to individual purchasers when it finds it convenient to do so at as high a price and as great a profit as it is able to obtain, but it is a positive injustice to claim that a monopoly should be allowed to capitalize against its public the increasing value of property, which increased value is entirely due to the efforts of the public.

Plants.

The plant as defined by the Master is as follows:

(*a*) Buildings and foundations of apparatus forming part of the manufacturing and distributing stations.

(*b*) Apparatus.

(*c*) Holders.

(*d*) General connections at the stations.

Referring to the Master's Report, page 28, and following, there is no doubt (p. 37) that the $15,532,489 more than covers the cost of the reproduction new of the six generating plants and the five holder stations.

The Master mistakes the testimony (p. 32 Master's Report.)

Quotation from Mr. Marks' statement:

"Neither as a rule did he (Marks) make allowance for piling or other expensive foundations."

See testimony, page 5251. Cross-examination Marks.

442 (Mr. MATHEWSON:)

"Q. You differed with him chiefly as to the amount of depreciation that should be allowed on first cost considering the present condition of the machinery.

"A. And also on the valuation of the buildings."

"Q. Then leaving the buildings out you would quarrel with Mr. Mayer's figures as to apparatus and contents and holders with reference to the amount for depreciation that should be allowed on the original cost.

"A. That is right."

Testimony, page 5256. Cross-examination; Marks.

Question by Mr. MATHEWSON: "Yes, and where does your foundation of apparatus come in in this total? Did you include your foundation of apparatus in your total of buildings?

"A. In every case more than included; I was exceedingly liberal."

Testimony, page 5266, Marks' Cross-examination.

(By Mr. MATHEWSON:)

"Q. Did you allow for the piling in these foundations of these various works?

"A. In every building where I could learn (I accepted this on faith entirely), that piling had been used in the foundations I used 15 cents per cubic foot for the buildings in the place of 10 cents, which I would have used in the case of ordinary foundations."

Page 32, the further statement is made in Master's Report:

"Mr. Marks did not disagree materially with Mr. Mayer in his estimates as to apparatus and holders. They are due chiefly to the fact that Mr. Mayer included the cost of installation, whereas Mr.
Marks estimated for what is known as sidewalk delivery of
443 the apparatus; other differences appear in cases where Mr.
Marks has assumed a different weight of material."

The Master has entirely ignored the inventory of Thomas Rowland of the manufacturing apparatus, buildings and holders made in 1884. This inventory is introduced by the Complainants as Exhibit 70. At that time Mr. Thomas Rowland was actively engaged in building, and as the Exhibit states, did build a large portion of the apparatus and buildings and holders now remaining in use by the Consolidated Gas Company.

Mr. Rowland's intimate knowledge of the cost of construction and his close association with the six companies merged into the Consolidated Gas Company, gave him his information at first hand. In selecting these four examples, Mr. Marks was careful to identify the holders, the sheds and the buildings and satisfy himself that they had not been added to or extended.

Testimony, page 6680, Mr. Mayer computes the valuation of eight holders in his inventory of the Fourteenth Street Station at $586,044, and Rowland, in 1884, values these same holders at $508,800.

On page 6687, Testimony, Mr. Mayer gives his valuation of nine sheds at the Twenty-first Street Station at $725,652, and Rowland gives a valuation of these same sheds in 1884 at $246,349.

On page 6687, Mr. Mayer gives his valuation of brick and brownstone building inclosing two holders at Eighteenth Street Station as $179,151. Mr. Rowland, in Complainant's Exhibit 70, gives this same building at $45,250.

In the case of the Forty-second Street Station, Testimony, page 6693, Mr. Mayer values four gas holders there at $268,610, and Mr. Rowland, Complainant's Exhibit 70, page 242, gives the value of these same holders as $210,000.

444 *Recapitulation.*

	Mayer *vs.*	Rowland.
14th St. Sta. 8 holders	$586,044	$508,800
21st St. Sta. 9 sheds	725,652	246,349
18th St. Sta. brick holder bld	179,151	45,250
42d St. Sta. 4 gas holders	268,610	210,000
Mayer, 1906	$1,759,457	$1,010,399
Rowland, 1884	1,010,399	
	$749,058	

It will be seen at a glance that Mr. Mayer, after twenty-two years of use has valued these four items at 75 per cent. more than the valuation given in 1884 by Mr. Thomas Rowland.

It does not appear where the Master obtained his phrase "sidewalk delivery," or on what basis he permits the addition of 15½ per cent. by Mr. Mayer to an inventory.

Surely no one would take Rowland's figures for "sidewalk delivery" or set them aside in the figures of complainant's Exhibit 70, four items cleary identified for the figures of any engineer, even if he had built 1,000 instead of 100 complete gas plants, as he claims.

Master's Report, page 35.

"Mr. Marks did not regard the extent of depreciation actually existing, but assumed a theoretical deterioration of the supposed life of the plant."

Refer to Testimony, page 5063, Fourteenth Street Station; Forty-second Street Station; Forty-fourth Street Station; Twenty-first Street Station; Ninety-ninth Street Station; Eighteenth Street Station; Sixty-third Street Station; Sixty-fifth Street Station; One Hundred and Eleventh Street Station; One Hundred and Thirty-second Street Station and Inwood Station.

445 The careful re-examination of these inventories as clearly stated, shows that neither buildings nor water gas apparatus nor holders built within the last five years have been subjected to any depreciation whatsoever; but on the contrary have led their values as now allowed to the Consolidated Gas Company and prove that this statement of the Master is a pure assumption, made without proper examination of the testimony and the facts in the case.

Master's Report, page 110: It is not until the Master reaches the extraordinary allowance of 10c. per 1,000 cu. ft. of gas that he begins to take notice of the depreciation claimed by Mr. Marks. On that page he quotes as follows:

Columbus Ry. & Lt. Co.'s statement:

"A building may be kept in as good repair as possible and the cost of such repair can be ascertained and is ascertained and legitimately added to the operating expense. But in however good repair a building may be maintained, in adition to this cost there is a gradual depreciation of the value of the building itself arising from lapse of time in spite of fresh paint, new roof, new bracings, repaired joists, etc.; which eventually according to circumstances renders the building useless for the purpose for which it was constructed. In the case of buildings this intangible depreciation is naturally slower than the depreciation of its contents in the shape of machinery, or the depreciation of wires, poles, conduits, and distributing system of a property such as complainant's.

"A machine may be kept constantly in repair so far as skill and ingenuity can keep it in repair, but in spite of such repairs the machine will wear out and become useless for its purpose. Machin-
ery and appliances devoted to any purpose in which the state
446 of the art or the condition of manufacture have not been
brought to absolute perfection so that there can be no further
progress, is subject also, and always, to the fact that newer and better appliances either furnishing service or product at less cost, or furnishing service or product of better quality, or of more constant value to the consumer, may be at any time invented, thereby compelling the producer to cast off the old machinery and buy the new one, or to suffer loss of custom, or incur increased cost of product, by not so doing. For these reasons the machine to-day which is worth $10,000 may tomorrow, in the exercise of good judgment have to be sold for scrap.

"The pole line of an electric company may be constantly painted and watched with the utmost care, all that expense being charged to the operating expenses, but in addition to this there is necessarily a deterioration and decay of the pole from year to year that cannot be prevented by any such care."

Master's Report, page 98:

Book value of the plant (1904)	$15,755,462.88
Taxable value of plant (Bradley)	8,456,595.71
Difference	$7,298,867.17

This difference of $7,298,867.17 is the depreciation due to obsolescence and inadequacy predicted by Chief Engineer Bradley as a result of the necessity of removal in part to Astoria.

Testimony, page 6696, Mayer's Cross-examination: Mark's depreciation is given as $2,479,323.

Master's Report, page 37: Mayer's valuation of $15,500,000 is covered by this remark: "This may be fairly said to represent the
cost of reproducing property as it stands. In this instance as
447 well as regards the three items to be considered, such repro-
ductive cost affords the only practical basis of present valua-
tion."

Chief Engineer Bradley did not find this so in 1901 when he announced the intention to sell one-half the Company's real estate in Manhattan, and scrap the manufacturing buildings.

Master's Report, page 31: The Master, referring to Mayer's estimate of apparatus, buildings and holders, states: "As hereafter pointed out, there were corroborated many particulars by the defendants' own witnesses and although subjected to careful examination by the latter and a full cross-examination by counsel no errors became apparent which would materially affect the general result of his computations."

For the purpose of checking his own calculations (Testimony, page 6693), Marks pointed out a difference of $749,058 between Rowland in 1884 and Mayer in 1906 in four items only.

In Mr. Mayer's eyes these buildings, sheds and holders had increased three-quarters of a million dollars in value by twenty-two years of use.

Referring to City's Exhibit 87, page 1543, we find the total insurance carried by the Consolidated Gas Company on buildings and contents and holders to be $7,390,722. This is much nearer Mr. Bradley's valuation (Tax Report 1901) than to Mr. Mayer's, which is over twice that amount.

Gas Statistics in Other Cities.

Master's Report, page 93, complainant's assets compared with those in other cities: "Considerable stress was laid by some of the witnesses upon the gas statistics of other cities." "Such evidence cannot be regarded generally as of value because the variance in local condition is so great as to make accurate comparisons impossible." 448 To any one familiar with the cost of construction in an engineering way there is no such mystery or variance as appears to have been imposed upon the Master in the cost of buildings and land. The prominent characteristic of the Island of Manhattan as a gas consumer is its enormous sales and the fact that every piece of apparatus in possession of the Consolidated Gas Company is and has been driven to its utmost limit and the only effect of this then will be to reduce the cost of structures per annual M. cu. ft. of sales far below the same cost in other cities. The difference in total cost of structures may amount to an increase of 10 or 15 per cent., and possibly 25 per cent., but the difference in sales of gas per capita between Manhattan and other cities is 100 *per cent. or more,* in favor of Manhattan.

It should be and is obvious that while it is necessary to use the annual sales in discussing operating expenses, it is equally necessary to use the true capacity of the works in comparing investment per annual M. cu. ft.

Referring to Montreal, $4.30 is given as Bemis' cost of construction. No reference is made to the capacity of the works or to the fact that Prof. Bemis' figures are fixed on sales and not on the capacity of the proposed new works or to the relatively larger cost of distribution in a thinly settled municipality.

Tax Reports.

Master's Report, pages 96 to 100: With apologetic remarks not flattering to the ethics of the company's officials or counsel and the statement that the inconsistent values of property and tax reports "have been recognized to a certain extent by courts," the Master sweeps aside the valuations given in the Tax Reports by the officials of the Consolidated Gas Company, saying: "The figures given in the Tax Report are of no significance," although they reduce the Company's property by $12,801,000.

449 The evidence of the Chief Engineer, the Secretary and the Assistant Secretary shows misrepresentation of the values of the plants, the mains, the services and the meters and other properties against the evidence of other witnesses whose records are clean, whatever the Master's opinion may be of their relative abilities and experience.

Master's Report, pages 34 and 35: The Master makes the following statement regarding 10 per cent. undistributed expense and 5 per cent. interest, "but obviously they are a necessary part of any estimate of reproduction cost, as Mr. Marks admitted." The fact is that Mr. Marks distinctly stated that it was customary to add 10 per cent. and then 5 per cent. to estimates of works not yet built but not customary nor had Mr. Rowland (Complainant's Ex. 70) done so in making an inventory of existing works. (See Defendant's Brief, p. 116.)

Street Mains.

Master's Report, page 38: "It was shown by the complainant that mains of the aggregate value of $2,891,690.22, at Mr. Marks' prices, had in fact been laid by contract. A computation of the 15 per cent. contractor's profit suggested by Mr. Marks, would accordingly add $433,753.53 to his cost valuation.. It was further shown that his estimates were based on an assumed mileage, very much less than actually exists."

In City's Brief, page 117, and City's Exhibit 91, 804 93/100 miles was found to very closely agree with 804 59/100 miles given by the company's books December 31, 1905.

Referring to City's brief page 117, and to Mr. Simpson's testimony, the statement is made: "This chart was misused by the omission in subtraction of 15% from contractor's prices as mentioned in note and besides that of adding 15% additional upon the prices containing contractor's profits."

450 Master's Report, page 39: The deductions made from the actual structural cost are, as appears from the record (p. 5108), in the nature of an allowance for obsolete mains, the grounds for which do not clearly appear."

Mr. Simpson in his testimony stated that nothing less than 8" mains were used, being laid to replace existing 2, 3, 4 and 5" mains. In using 6" mains to replace these inadequate small mains, a moderate sum, $1,037,018, was obtained as required for final renewals which ought to be made as rapidly as possible.

In allowing a replacement value on mains at $12,636,000 as against the cost on the books for $7,852,000 the Master has awarded the value of pavements $4,784,000 to the Consolidated Gas Company, although when pavements are laid, they are laid at a cost to the property holders of New York City, and at no cost to the Gas Company.

The valuation stated in the Tax Report for mains (Master's Report, p. 97) is $3,666,531.38.

House Services.

Master's Report, page 97: The taxable value for house services is given as $594,625.01 and the book value as $1,227,931.86.

In the testimony of complainant's witnesses, the value of the services is fixed at $1,994,000. If from this we substract the book value given above, we have an award of $766,068 to the company for pavements laid by The City of New York. It should be noted that the computations of Mr. Marks in all cases have not included any form of depreciation for either mains or services, he having stated that the depreciation of cast-iron mains is inappreciable and that the services having been enlarged and replaced recently, did not appear to be over-valued on the books of the Company.

451

Pavements.

When the City of New York paved over the existing mains of the Consolidated Gas Company (according to the graphic valuations given in the City's Exhibit 50 by Mr. Marks) it expended for pavements—

Over street mains	$4,784,000
Over house services	766,068
Making a total of	$5,550,068

The Consolidated Gas Company has paid nothing for this, but the Master has added it to the Company's possessions.

Master's Report, page 97: The officials of the Company in their valuation—

For the Tax report	mains	$3,666,531.38
	services	594,625.01
Total		$4,261,156.39

did not claim as much for the total valuation of mains and services as the Master has presented to them at the City's expense for the pavements over mains and services.

Meters and Miscellaneous Personal Property.

Master's Report, page 42: $4,100,000. City's Ex., 87: The meters and meter cocks as taken from the books of the Company amount to $3,261,687.42. The meters and all miscellaneous personal property are carried on the books of the Company at $3,802,544.50.

The Master, however, accepts the estimate of the Secretary of the

Company at $4,100,000, notwithstanding the fact that the same individual when valuing for a Tax Report (Master's Report, p. 97), had given this property in as $2,667,329.77.

452

Working Capital, $3,616,000.

In considering the working capital (Master's Report, p. 42) the Master has overlooked the $904,000 Consumers' deposits, and bases his figures on Mr. Carter's statements.

In addition to the $616,470.08 Supplies which he grants without commenting on same, he adds $1,000,000 cash to the nearly $1,000,000 already received as a forced loan from consumers.

The Consolidated Gas Company does a cash business, collecting its bills every 30 days, and it is not obliged to pay its bills for 30 days unless it elects to do so for the sake of discount.

For such a business as this the allowance of $2,000,000 accounts receivable is incomprehensible. It has no business to loan money unless it has a surplus which it cannot utilize in the prosecution of its business, and which should be divided amongst its stockholders.

Master's Report, page 43: "Mr. Marks testified that, in addition to fixed or structural assets, a certain amount of capital is required for operating the works. He did not give his own views as to the proper amount, but stated that it bore a certain relation to the annual sales of gas. He accordingly selected four Massachusetts companies, which he stated formed a group resembling very closely complainant's five stations in the island of Manhattan, and, on the basis of their actual annual sales, computed that the amount of capital actually necessary in their business was $0.13 per annual M. feet of gas sold. Multiplying this by the annual sales of the complainant for 1905, he obtained the sum of $1,726,811.32, as the proper amount of actual capital furnished or quick assets for the complainant company. It appears, however, from the reports of the Massachusetts
Gas Commission that there are included as a part of the cap-
453 ital of the companies in question certain notes payable, which
the witness had omitted in his computation. As corrected it appeared that the Massachusetts companies were employing about $0.48 per M. feet for their active capital, and, on a like basis, according to complainant's sales a proper working capital would be upwards of $6,000,000."

Dr. Humphries received from the Massachusetts Gas and Electric Light Commission a letter (Testimony, p. 6857) stating that these notes payable were considered as bonds and *part of the investment in the fixed structural assets;* this letter was presented for identification so that it appears that while those notes payable might be added to the fixed capitalization of the company, they in no wise affected the 13 cents per M. cubic feet of sales or the $1,726,811.32 active capital required by the Consolidated Gas Company.

If we add the $1,000,000 cash to the $616.470.08 we obtain $1,616,470.08 working capital as against $1,726,790 allowed by Mr. Marks.

National Coal and Coke Company, $50,000,000.

Master's Report, p. 44: This amount is added to the capitalization of the company for the purpose of economizing in the hauling of coke: "The proof indicates that such has been the result." "The profits resulting from the company's operations are paid to the complainant in the form of dividends." The Master overlooks the fact that the profits of hauling its own coke are charges to the cost of gas, having the result of increasing its apparent cost and these profits are credited to miscellaneous income with the result of increasing the apparent price of gas, which is an absurdity.

Astoria Plant, $12,000,000.

Master's Report, p. 44: It should be noted that the valuation of the Astoria plant does not include meters, services, mains
454 (with the exception of sixty-inch main, $620,000), miscellaneous material, working capital, or anything except one-twelfth of the real estate, gas manufacturing plant and one large holder.

It is a fact that no access was given to the defendants' representatives for the purpose of making an inventory during this trial nor has the Master made any reduction from the $12,000,000 (Master's Report, p. 98) to cover even any part of the $8,456,595.71 manufacturing apparatus to be abandoned in Manhattan or the further reduction of one-half of $11,216,479.71 real estate to be sold amounting to $5,600,000 more when Astoria gets into operation.

Master's Report, p. 48: "This investment is represented by its ownership of the entire capital stock of the Astoria Light, Heat and Power Company, together with its first mortgage bonds and promissory notes to the aggregate amount, as carried on its books, of $7,010,000. In addition to this it is a creditor of the Astoria Company for advances made in the course of construction, which are carried in open account. Thus we see the master has given to the Consolidated Gas Company an allowance of $15,500,000 for the manufacturing plant and holders and to this added another $12,000,000 for the Astoria Company, although it is clearly stated that the Astoria Company is to replace one-half the value of existing manufacturing plants.

In addition it would appear as though the Consolidated Gas Company had actually paid out only about $7,000,000, and in order to make up the $12,000,000 has been allowed an additional $5,000,000 *which it expected to pay* for the Astoria plant and that this whole valuation of $12,000,000 is an *ex parte* statement of a combined expenditure and proposed expenditure not yet made.

It appears to be the flimsiest pretext for an excessive allowance of capitalization possible to be conceived.

455 Master's Report, p. 49:

New Amsterdam Gas Co.	$4,814,608 03
N. Y. Mut. Gas Lt. Co.	5,703,290 65
Stand. Gas Lt. Co.	14,587,495 23
	$25,105,393 91

The above total of $25,105,393.91 is given as investment in companies doing an independent business, in which the Consolidated Gas Company purchases something less than 3,000,000,000 feet of gas annually.

Master's Report, p. 52: "Mr. Marks concedes the propriety of an allowance for the cost of producing the gas purchased in 1905, and admitted that it made no difference whether the source of the gas so purchased was located in other Manhattan plants or in Astoria. He computed its value at $5,000,000 on the assumed cost of only $1.78 per 1,000 cubic feet of annual capacity, but this would appear to be inadequate." Had Mr. Marks assumed 3,000,000,000 cubic feet, the cost would have been nearer $5,400,000, and as the values of the Massachusetts companies were not contradicted on the basis of their own figures, we are still of the opinion that somewhere between $5,400,000 and $6,000,000 would be a fair allowance for the Astoria plant and holder if it is to be included and that from this should be deducted the amounts recouped by the sales of real estate and scrap plants abandoned on the Island of Manhattan (see Testimony, p. 2353).

The Astoria plant would appear to be a most extravagant undertaking if the figures given are real and not estimates. On page 36, Master's Report, he says: "For the purpose of determining present value, however, particularly on the basis of cost of reproduction, the method followed by Mr. Marks does not commend itself," and then the Master apparently forgets that the Astoria plant is to re-
456 place and reproduce the existing manufacturing plants.

Franchises and Good Will, $20,000,000.

Master's Report, p. 90: "Neither of the methods above suggested affords a satisfactory basis for any specific finding as to the value of the good will, considered apart from the question of franchises." "As I do not find it practicable to differentiate in figures the value of complainant's franchises and good will, I have concluded to consider all of the intangible assets together as a single item, the reasonable value of which, I think, may fairly be fixed at the sum of $20,000,000, or substantially the amount that would be reached by following the method adopted by the referee in the Queens County and Suburban Railroad case before referred to. Reduced to its ultimate effect, any value of a franchise and good will, possessed by a monopoly virtual or practical, depends upon its ability to extort more than a fair profit in fixing the price of what it sells.

Defendant City of New York's brief, p. 63: This shows that the franchise tax amounts to 3 13/100 cents per M. cubic feet. of sales, and that this is charged into the cost of gas and collected from the consumers.

This, on the basis of defendant's valuation, means about 1½ per cent.

Six per cent. is allowed for interest in all cases in the State of New York, where a contract does not exist, and may be considered a fair profit. In the present case the New York State Gas and Electric Commission has fixed 8 per cent. as a profit and with the valuation of $64,000,000 the 3 13/100 cents amounts to 6/10 of 1 per cent. This 6/10 of 1 per cent., being allowed in the cost of gas, should be added to the 6 per cent. allowed to the company. Six and six-tenths per cent. of $64,000,000 is $4,224,000.

457 Deducting this from net earnings, $4,984,000 (Master's Report, p. 140) (error in Master's Report, p. 81, given as $4,588,000), we have a balance of $760,000, which, capitalized at 7 per cent., means about $10,800,000 under the assumptions of the Master, instead of the $20,000,000 which he allows. The New York State Gas and Electric Commission did not allow anything for franchises for the very good reason that they were the gift of the people and should not be capitalized against them.

As for good will, there can be no such thing as good will in case of monopoly.

Good will can be obtained in a competitive business by superior service and ability; but referring to "Depreciation of Factories" by Ewing Matheson (Master's Report, p. 90) this author says on p. 41 of his work, referring to factories engaged in competitive trades, "The very fact that good will is seldom appraised at more than 1 to 3 years' purchase shows that it is considered to have a doubtful and fleeting value."

Has the Master continued his reading he would have found the depreciation of brick buildings with iron work due to obsolescence and inadequacy at 1¼ per cent. annually, instead of .85 of 1 per cent. And further, on p. 17, this statement, "Gas undertakings afford useful examples in the principles of depreciation."

Were the Master's methods of reasoning correct and just, the greater the prosperity of the community the greater the improvement of the streets and values of real estate, the higher would the capitalization of a gas company be raised, for he sees but one thing, the present reproductive value new of the plant in this problem.

458 And the greater the capitalization of a company becomes the higher would the price of gas become in order to meet increased profits demanded at specific rates, and the higher the price of gas is raised or held above a fair profit the greater will become the value of the free gift of franchises and good will because of the power of extortion conferred by this gift. The Master's reasoning is tortuous and in defiance of the recognized laws of business and of nature.

No. 53, Street Lamps, 2.18c. is omitted as a reduction from the cost of gas although this covers only repairs and caring for lamps and is covered by a contract for which the Consolidated Gas Company is the sole bidder and 2.18 cents per M. does not include the cost of gas furnished to street lamps.

No. 54, Interest on Consumers' Deposits, is excluded. It amounts to 39/100c. per M. cu. ft.

Nos. 58, 61, 62 are omitted as a reduction.

No. 66, Taxes, is partially omitted as a reduction.

No. 67, an arbitrary charge of 10c. per M. cu. ft. of gas sold is added for the purpose "of any minor extensions, renewals on account of extraordinary wear and tear, depreciation not covered by repairs of supersession, accidents of larger moment than usual, fluctuations in the business, changes in cost of all materials and electrolysis and other contingencies." It is difficult to account for the amazing admission of 10c. per M. cu. ft. Certainly it was not shown that the Consolidated Gas Company or any other company in any country where gas companies are regulated by law, have been allowed to charge to the cost of gas anything more than the actually proved expenditures. In discussing the cost of repairs, amounting to 10 and a fraction cents per M. cu. ft., in some cases the Master has confused the repairs already charged to the cost of gas with the contingencies.

The Master refers (Master's Report, p. 113) to the depreciation of 5 per cent. on electric lighting plants.

459 Master's Report, p. 116, he states: "In a work written by the witness (Marks), entitled 'Finances of Gas and Electric Light and Power Enterprises,' he advocates 15 per cent. on the structural value of gas property to cover return on capital and a fund for future contingencies."

Marks' calculation (Defendant's brief, p. 121) of the original structural cost of the Manhattan works complete is $201; 15 per cent. of this is 30c.

(Master's Report, p. 123:) Taking the total cost of gas as presented in Complainant's Ex. 94 at 74 81-100c. the Master finds a total reduction of 8 97-100c. which he subtracts, leaving a net total cost of gas at consumers' meter of 65 84-100c. per M. cu. ft. of sales.

Of this deducted 8 97-100c., 7 32-100c. is a fixed charge never claimed by either complainant or defendant as chargeable to the cost of gas. As a matter of fact the Master has deducted from the cost of gas claimed by complainant 1 65-100c. only and has produced a cost of gas which exceeds any heretofore allowed in previous investigations.

Testimony, page 5014: "Secretary of the New York State Gas and Electric Commission gives an average price for oil 3 27-100c." Apparently entirely ignoring the well-known rules of trade, the Master finds no objection to the payment of 4 5-8c. per gallon for oil in the vast quantities stated to be required in New York City (Master's Report, p. 127) and he has no criticism for the excessive illumination clearly proving waste of oil.

(Master's Report, p. 140:) Referring to the net profit of $2,327,-328.31 fixed by the Master and to his subsequent calculations, it is easy to see that on the valuation of $31,000,000 present value, the profit would be in the neighborhood of 7 per cent. and on the true cost of gas manufactured in Manhattan (52½c. per M. in the Consolidated Gas Company) would be over 21 per cent.

460 Referring to the statements contained in the report regarding the testimony of Dr. Marks, the following corrections should be made:

Correction to Master's Report, No. 1.

(Master's Report, p. 35:) "In this view he made estimates on the theory that the cost of final replacements to cover such an inadequacy or obsolescence ranging from 25 to 60 per cent. and based on the supposed life of 120 years for the plant." (Defendants' Brief, p. 113; Testimony, p. 6696.)

Substitute: "In this view he made estimates on the theory of the cost of final replacements to cover such an inadequacy or obsolescence would be about 21 per cent. for the average of buildings, gas meter apparatus, yard connections and holders."

Correction to Master's Report, No. 2.

(Master's Report, p. 36:) "The fact thus being that the plants are in good order and operating efficiently it does not appear reasonable for the purposes of this case to charge them with a theoretical deficiency so great as if actually existing would make their successful operation a practicable impossibility." Please eliminate this as incorrect and not in accordance with the facts.

Correction to Master's Report, No. 4.

(Master's Report, p. 32:) "Mr. Marks did not disagree materially with Mr. Mayer in his estimates as to apparatus and holders. They are due chiefly to the fact that Mr. Mayer included the cost of installation whereas Mr. Marks estimated what is known as 'sidewalk delivery' of the apparatus. Other differences appear in the cases where Mr. Marks has assumed a different weight of material." Refer to Complainants' Ex. 70.

Test—6680, 6687, 6693, Defendants' Brief pp. 113, 115, 115 Recapitulation.

461 Please eliminate above statement as not in accordance with the facts.

Correction to Master's Report, No. 5.

(Master's Report p. 35:) "Mr. Marks did not regard the extent of depreciation actually existing but assumed a theoretical deterioration of the supposed life of the plant."

Refer to Testimony p. 5063, and following giving inventories of all stations of Consolidated Gas Company in Manhattan.

These inventories show that neither buildings nor water gas apparatus nor holders built within the last five years have been subjected to any depreciation whatsoever. Please eliminate as not in accordance with the facts and the testimony.

Correction to Master's Report, No. 6.

(Master's Report, p. 31:) "As hereafter pointed out there were corroborated many parts by the defendants own witnesses and although subjected to careful examination by the latter and a full cross-examination by counsel, no errors became apparent which would materially effect the general result of his computations."

Refer to testimony, p. 6687, Defendants' Brief, pp. 115, 116, showing error of $749,000 in four items and objecting to the addition of 10 per cent. and 5 per cent. to inventories.

Please eliminate as not in accordance with the facts and testimony and exhibits.

Correction to Master's Report, No. 7.

(Master's Report, p. 93:) "Considerable stress was laid by some of the witnesses upon the gas statistics of other cities. Such 462 evidence cannot be regarded generally as of value because the variance in local conditions is so great as to make accurate comparisons impossible."

Refer to testimony pp. 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, Defendants' Brief pp. 110, 111.

The difference in cost of structures may amount to an increase of 10 to 25 per cent. but the difference in sales of gas per capita between Manhattan and other cities is 100 per cent. or more in favor of Manhattan. The valuation of Boston Gas Works was fixed by an inexpert legislature. The valuation of Philadelphia Gas Works is based on a mere suggestion and is not testimony.

Please eliminate as not in accordance with the facts or the testimony.

Correction to Master's Report, No. 8.

(Master's Report, pp. 34-35:) "But obviously they are a necessary part of any estimate of reproduction cost, as Mr. Marks admitted."

See Defendants' Brief, p. 116.

See City's Exhibits 125 to 135 inclusive.

Please eliminate as not in accordance with the facts and the testimony.

Correction to Master's Report, No. 9.

(Master's Report, p. 38:) "It was shown by the complainant that mains of the aggregate value of $2,891,690.22, at Mr. Marks' prices, had in fact been laid by contract.

"A computation of the 15 per cent. contractors' profit suggested by Mr. Marks would accordingly add $433,753.53 to his cost valuation."

463 "It was further shown that his estimates were bases on an assumed mileage very much less than actually existing."

An assistant to Mr. Marks, after measuring five maps, failed to include them. The Master did not permit this testimony to be corrected when offered, but made use of corrected figures in Defendants' Brief, p. 118.

Mr. Simpson's testimony, p. 5454 and 5455 made use of contractors' prices which includes 15 per cent. on the cost in City's Ex. 50 and then added an additional 15 per cent. to obtain $433,753.53.

Refer to Defendants' Brief, p. 117.

Please eliminate as not in accordance with the facts and the statements in Defendants' Brief.

Correction to Master's Report, No. 10.

(Master's Report, p. 43:) "It appears however from the reports of the Massachusetts Gas Commission that there are included as part of the capital of the companies in question certain notes payable which the witnesses had omitted in his computation. As corrected it appeared that the Massachusetts Gas Companies were employing about 48c. per M. cubic feet for their active capital and on a like basis according to complainant's sales a proper working capital would be upwards of $6,000,000."

Dr. Humphries received from the Massachusetts Gas and Electric Light Commission a letter stating that these notes payable were considered as bonds because they were used for the structural assets and considered a part of the fixed capital sunk in construction.

Therefore these notes payable in no wise affect the liquid assets of the companies leaving 13c. per M. cubic feet of sales as correct for this purpose.

464 Please eliminate as not in accordance with the facts or the letter from the Massachusetts Gas and Electric Light Commission. (Testimony p. 6857).

Correction to Master's Report, No. 11.

(Master's Report, p. 52:) "He computed its value at $5,000,000 on the assumed cost of only $1.78 per M. *cy.* ft. of annual capacity, but this would appear to be inadequate."

Refer to Defendants' Brief, p. 111, and to testimony pp. 2348 to 2358. The $1.78 is deduced from the official figures of the four Massachusetts companies and is not "assumed." No proof from these companies or their representatives of the incorrectness of $1.78 has been adduced proving the incorrectness of $1.78.

Please eliminate as not in accordance with the testimony and the facts.

Correction to Master's Report, No. 12.

(Master's Report, p. 36:) "For the purpose of determining present value, however, particularly on the basis of the cost of reproduction, the method followed by Mr. Marks does not commend itself."

The Master has forgotten that the Astoria plant is to replace and reproduce the existing plants which should be deducted from its cost as abandoned and sold.

Please eliminate as not in accordance with the facts and the statements of the Complainant's witnesses.

Correction to Master's Report, No. 13.

(Master's Report, p. 90:) "The reasonable value of which I think may be fairly fixed at the sum of $20,000,000."

As the franchise is a gift of the public costing the company nothing and as the franchise tax is charged to the cost of gas
465 and costs nothing to collect, the consequence is the Consolidated Gas Company has expended nothing and invested nothing for a franchise.

The alleged franchises have no value on which a return should be charged against the gas consumer and the Report should so state.

Correction to Master's Report, No. 14.

(Master's Report, p. 113:) "Depreciation of 5% on electric lighting plants."

Please eliminate as having no proper relation to the depreciation of Gas Works.

Correction to Master's Report, No. 15.

(Master's Report, p. 116:) "9 cents per M. cu. ft."

Please eliminate as further reading of "Finances of Gas, Electric Light and Power Enterprises" shows this arbitrary statement to be qualified.

Correction to Master's Report, No. 16.

(Master's Report, p. 140:) Apparent price of gas obtained, $1,034. True price of gas, $.998. Difference, 3.6 cents.

(Master's Report, p. 123:)

Apparent cost of gas	65 84-100c.
Less	3 6-100c.
True cost of gas	62 24-100c.

This is the corrected cost of gas according to the Master's method if there is subtracted the amount by which the apparent price of gas exceeds the true price of gas making all allowances in the cost of gas claimed by the Master.

466 *Appraisal.*

As regards buildings:

(*a*) In regard to the method of Mr. Meyer for ascertaining the value of buildings, that is, by cubic foot contents, multiplied by an assumed factor; this is well known to be an incorrect and uncertain method, even when used with all the precautions possible. It is only approximate at the best (Meyer's testimony, p. 1401) and is not used by Mr. Meyer when making a bid. It is merely a rule of thumb method of getting an approximate estimate.

An example of the crudity of the method in Mr. Meyer's hands, is notably shown in the case of the Twenty-first street sheds, where the same factor of cost is applied whether the sheds have party walls or end walls; where the buildings have slate roofs or tar roofs or no roof; whether it has double floors or no floor; one uniform cubic foot factor answers the purpose. The instance of these sheds is a notable one, but there are many others equally erroneous in results. A still more flagrant case of error from the use and abuse of the cubic foot factor is shown in the Fourteenth Street Retort House, where there are three roofs supported on columns, equivalent to party walls, where there is but one end wall and where the side walls are *separately appraised* as a brick wall. In claiming to back up the sufficiency of the cubic foot factor, Mr. Meyer has made use of the method of quantities and units of cost. Mr. Edgerton's estimate was upon quantities, based upon Mr. Meyer's schedule. There were no omissions; Mr. Meyer's Schedule of "Edgerton's omissions" (Complainants' Ex. 372) was found to be erroneous. On sufficiently careful inspection, it will be found that the printer made the correction of an error of the typewriter at page 5399 of $72,438, but failed to deduct it from the totals, which is therefore that amount too great.

467 At pages 6733 to 6739 a discussion arose as to the admission of the detail sheets and estimates of Mr. Edgerton. These had been in the possession of the Gas Company for several weeks, in order that they might be examined for errors or omissions. Mr. Meyer testified that although he had not time to go over them (p. 6734) "the time was too short, but in the time I did examine them I found they were so full of errors and omissions that I took it for granted that they were all on the same basis and of no value."

No omissions or errors have been pointed out save in the case of One Hundred and Thirty-second street building and Twenty-first street.

In the case of One Hundred and Thirty-second street a clerical error occurs in calculating the brick work at $14 per thousand in place of $21, as Mr. Edgerton testified it should be.

In the case of Twenty-first street, Mr. Meyer was in error; the excavation item was not short as claimed by him, but was included in the item foundations for machinery. Twenty-five thousand dollars was allowed for foundations, including excavations, as shown on the detail sheets. (See p. 6579.)

NOTE.—On pages 5385 and 6738 there was a discussion as to Mr. Edgerton's memoranda, which the Master directed should be marked for identification, although he refused to admit them as evidence. Such memoranda were never given any designation by the stenographer, as will appear from an examination of the various days' records immediately preceding p. 5385. Such pages show the State's last exhibit as O. O. O., which, according to the index, was the last exhibit introduced by the State.

It is requested that they be given the designation of State's Exhibits P. P. P. for identification, being detailed estimates for buildings and holder tanks of complainant.

468 References to Mr. Edgerton's factor for cost of brickwork laid, are in pages 5370 to 5383, at $21 per thousand. In his summary of cost at from $14 to $21, according to class of work. These prices were obtained from the most responsible contracting firms in the city.

In no case was an estimate for pile foundations omitted where called for in Mr. Meyer's schedule. Mr. Edgerton did not agree with Mr. Meyer's "market prices" for the simple reason that Mr. Meyer's prices were not those of December, 1906.

Any difference between Mr. Meyer and Mr. Edgerton must be due to the difference in methods of arriving at weights, for the same cost factors were employed.

Pressure.

On Page 142 of the report the Master computes the variations of pressure for Consolidated Gas Company to be 1/10 inch for 17 feet difference of level. There is no basis for such computation in the testimony or exhibits. A variation of 1/10 of an inch for 22 feet difference of level is the correct amount as shown by State's diagrams of pressure at Columbia College compared with those at the printing office at One Hundred and Twenty-fifth street—a difference of level of 250 feet therefore would account for but 1.14 inch variation while the law allows 1.50 inch.

The estimated cost of a pressure regulating system was made by Mr. Simpson of the Consolidated Company. It is to be noted that the cost of piping as assumed by him was at four times the cost of the large mains already laid.

It will be noticed that the gain of pressure of 1/10 inch for each 17 feet elevation, assumed by the Master as due to the levity of consolidated gas, would require 15 to 17, or 255 feet extreme difference of level in order to exhaust the margin of 1.5 inch allowed
469 by the statute as the extreme allowable difference of pressure from a maximum of 2.5 inch to a minimum of 1 inch.

It follows that the requirement of the law in regard to pressure is not opposed to the laws of gravitation as stated by Bradley, but on the contrary, the violations of the law are due to the undue forcing of gas through the pipe system of the Consolidated Gas Company by means of pumps and unduly heavy holder pressure, as shown by Complainant's Exhibits.

Report, page 10.

Mr. Edgerton's valuation included the offices and stables, except Irving place and Hester street.

The Consolidated appraisal included all offices and stable in the real estate, according to this statement the offices and stables have been included twice.

In regard to estimates of Mr. Meyer and Mr. Edgerton on apparatus the former continued his method of "estimate by comparison" with apparatus of similar size as constructed by Bartlett, Hayward & Co., at Baltimore, while Mr. Edgerton based his upon measurements and calculated weights of the apparatus in position.

Mr. Meyer accepted the one party bids for the Lowe apparatus in the various works, made by the United Gas Improvement Company, although several manufacturers erect Lowe apparatus, in competition, the patents having expired.

Mr. Edgerton estimated on the apparatus by quantities and units of cost which would fully cover such construction.

Corrections of the Master's Statements Regarding the Testimony of Prof. Bemis.

470 (1) On page 94 of the draft report it is stated that Prof. Bemis testified to a capital of $4.26 per 1,000 feet for the Boston Gas Company, but the Master remarks: "The present value of such assets was appraised at the time of consolidation and is set forth in the published report of the Massachusetts Gas Commission produced by one of defendant's witnesses. It approximates $23,000,000 or nearly $8 per 1,000 feet.".

On the other hand, Prof. Bemis testified on the subject as follows (page 3376): "An appraisal was brought in which was disputed and never came to a final issue. * * * Hardly any deduction was made for depreciation or duplication or because the mains were duplicated." As a matter of fact, the $23,000,000 merely represented a preliminary claim of the gas company before the State Commission. The claim was vigorously disputed by the other side, the City of Boston, but before the latter had completed presentation of its case the Legislature fixed on a capitalization substantially equivalent to the sum total of the existing stocks and bonds.

In the same state report of the Massachusetts Gas Commission referred to by the Master (Twenty-first Annual Report for year ending June 30, 1905, p. 125), the mains of this Boston Company are given as 806 miles or more than those in use of the Consolidated, although the sales were only about one-fourth as great.

(2) On page 95 of the Report, the testimony Bemis gave in Chicago is quoted, that the People's plant of that city could be duplicated for $3.20 per 1,000 feet, or about $35,000,000, and then Mr. Cowdrey is quoted as saying: "It would not be possible to replace the company here in Chicago with its first class property and its business for less than $5.00 per 1,000 feet of annual output. I would consider it a physical impossibility to replace the plant and business of the People's Company for $35,000,000." Observe that

Mr. Cowdrey included the *business* which Mr. Bemis did not
471 for all the cost of soliciting and canvassing for new business are charged to operating expenses by all gas companies and paid for by the consumer and not by the stockholder.

With respect to Prof. Bemis' estimate of $3.20 at Chicago, he testified (p. 3377):

"I think I spoke of a new plant as $3.20 per 1,000 feet.

Q. That was for water gas, was it not?

A. Yes, but they had twice as many mains—I had to allow for twice as many mains as in New York."

The testimony of Prof. Bemis and Mr. Cowdrey with respect to Chicago was based upon a manufacturing plant of adequate capacity, while it is a matter of record that the Consolidated Gas Company for several years has been buying from other companies from 20 to 25 per cent. of the gas which it sells, and therefore would not require, for that reason alone, as large a capital as Chicago.

Further, with respect to the distribution system in Chicago, Prof. Bemis testified (p. 3210), that "the mileage of the People's Gas Company in Chicago was 2,000 miles and their sales 11,000,000,000 feet.

The Master ignores the fact that Prof. Bemis' estimate of Chicago was for a new plant with only one-third the sales of gas per 1,000 feet which are enjoyed by the New York company. Upon this point Prof. Bemis testified (p. 3538):

"I think I spoke of a new plant as $3.20 per 1,000 feet * * * The difference in the mains in the two cities will account for almost the entire difference. There are, if I remember rightly, about 795 miles, or call it 800 miles, in use in New York, and 2,000 miles in use in Chicago; in other words, 150 per cent. more in
472 Chicago; you take the book value even of the mains here in New York, which is, I think, in the neighborhood of $7,600,000, I don't recall exactly at the moment, but about this, and 150 per cent. of that is $11,400,000, and that alone divided into the 13,300,000,000 feet of sales would make 90 cents of capitalization per thousand feet, or account for almost the entire difference; then again, I was considering in the case of Chicago a plant that was buying its land more recently, while in New York I was considering the land as bought many years ago."

The Master ignores the fact that the Chicago, like the Boston company, voluntarily reduced its price to 85 cents early in 1906 for the same quality of gas in Chicago as in New York. He tries to break its force by stating (p. 131):

"It appears, however, without dispute that coal is materially cheaper and residuals are higher in all the lake cities than in New York City."

On the contrary it was disputed by Prof. Bemis that coal was materially cheaper in Chicago. Notice his testimony (pp. 3233-4):

"I think gas coal in Chicago may be quite as expensive as in New York * * * In making water gas they use anthracite coal and coke * * * I never got absolute data, but the anthracite coal goes further * * * In making water gas they use anthracite coal and coke."

As for residuals there are none whatever produced in Chicago, except a little water gas tar for the gas there is all water gas. This, also was brought out in the testimony (p. 3234).

(3) With respect to Montreal, the Master states (Report, p. 9516), in a recent estimate for the City of Montreal:

473 "Prof. Bemis fixed for the construction of a plant $4.30 per 1,000 feet of capacity, although there labor is high, land less expensive, there is practically no rock, the city has only 33 miles of permanent paved streets to 160 miles of macadam, etc. * * * As elsewhere shown, a gas company can be run at its full capacity and should have a reserve of at least 20 per cent. beyond its sales; no allowance appears to have been made for this in the Montreal estimate of $4.30."

On the contrary, Bemis stestified (pp. 3539-40, 3637) (1). That he estimated 300 miles of mains for a billion feet of sales, or nearly a third as many mains as in New York with thirteen times as great a business; (2) that "25 miles will be laid in rock." This is as large a ratio as is laid in rock in New York; (3) the mains in Montreal were to be buried 6 feet deep, or twice as deep as in New York. This would involve three times as much cost for laying as at the New York depth, other things being equal, although the latter point of the exact amount of increased cost was not directly stated; (4) it was testified that the unit figures used in Montreal when applied to New York would give a cost of only $1.70 per 1,000 feet of sales, but that the larger average size in New York for these mains would increase this, so that there was no contradiction between the estimate of Professor Bemis of about $2.20 in New York and the Montreal estimate. (5) There is no authority whatever for the Master's assertion that the capacity was not ample in Montreal. On the other hand, the capacity in proportion to the yearly sales was a third larger than in the case of the Consolidated Gas Company plans outside of Astoria.

The Master's Report, p. 95, quotes Professor Bemis as stating that the value of the properties of the Baltimore Gas Company "including, it may be assumed, franchise and good will, should 474 be computed at twenty times the net profits of the company from its gas business, and that this was a conservative method of computing the value of gas properties."

The Master omits to state that Professor Bemis explained at some length (pp. 3384-6 and elsewhere) that this was their value for purposes of taxation while they were permitted to charge the existing price and make existing profits. He testified (page 3384): "The company in Baltimore had no inalienable right to continue to earn on that, but as long as it was earning on that basis, the City had the right to tax it on that basis."

The Master on pages 129-30 dismissed all the evidence of excessive costs of manufacture of coal gas that were deduced from comparison with the Central Union Company, but he utterly fails to take up the evidence brought together on pages 188-9 of the brief of The City of New York showing, first, that the labor cost of coal gas for the Central Union is 3.69 cents per 1,000 feet less than in the coal gas plants of the Consolidated, and, second, that the amount of coke produced for sale by the Central Union is 30 per cent. greater per 1,000 feet of gas made, or equal to 3.48 cents per 1,000 feet, even at the price of coke per bushel or per ton obtained by the Consolidated. He ignores the fact that these two items aggregating 7.17 cents per 1,000 feet are due to the superior plant of the Central Union and not at all due to the market for coke or to the candle power.

The Master on page 113 states that in Massachusetts "the percentage of intangible depreciation has been definitely fixed by statute so far as municipal electric lighting companies are concerned, at 5 per cent., annually, upon the total cost of the plant." On the contrary, the statute is quoted verbatim in the testimony by professor Bemis (page 3239) to the effect that the depreciation shall be "equal to 3 per cent. of the cost of the plant exclusive of land and
475 any water power appurtenant thereto or such smaller or larger amount as the Board of Gas and Electric Light Commissioners may approve."

The Master in his treatment of depreciation, contingent fund, etc., refers (page 109) to the only depreciation brought out by the company, $604,988. This divided over the 164,000,000,000 feet of the last twenty-one years would only be 0.37 cents per 1,000 feet of sales. The Master claims more for the company than it asks for itself. He also ignores all the evidence on depreciation and reserve funds, and all the deductions and computations therefrom made by The City of New York in its brief (pages 166-91 and elsewhere, including 130-7, 295-6, 300-1).

On page 115 the Master justified the capitalization of the increased value of the land, which he says was "the result of mere good fortune or was due to the shrewdness and foresight" of the company. He ignores the fact that such capitalization of increased land value and also of franchises and paving is not allowed in fixing the price of gas in either Massachusetts or Great Britain. (Testimony pages 3024-3068 and brief of City, p. 227-37 and 299-303). He is also more appreciative of the company than it is of itself. The company stated that the increase in the value was due to "Divine Providence and the growth of The City of New York, p. 3819." The Master leaves out both elements and ascribes it to "good fortune" and "shrewdness" of the company. Mr. Humphreys testified the last day of the hearings that the land is not worth any more for gas-making purposes to-day than when it was purchased (page 6825).

On page 129 the Master, referring to candle-power, absolutely ignores the testimony that in Philadelphia the United Gas Improvement Company is able on cheap Texas oil to maintain a candle-power at the testing stations every day in the year within three-fourths of a candle-power of that given at the consumer's
476 meter. A margin of two to three candles is not necessary as maintained by the Consolidated Gas Company. (Testimony, pp. 6902-5. See paper on Candle-Power in Philadelphia, by Gartley.)

With respect to the capitalization of gas companies throughout the United States of $8.47, referred to by the Master (p. 96), Mr. Humphreys admitted that this figure was probably somewhat more than the structural value (page 6877).

Professor Bemis testified (page 3541) that the Massachusetts companies average less than 70,000,000 feet of annual sales, which was less than the average sales in the rest of the United States, and, furthermore, he testified that the cost of laying mains was greater in Massachusetts than on the average elsewhere because mains had to be laid deeper in Massachusetts on account of the frost.

The master also ignores the evidence summarized in the Brief of The City of New York (295, 296 and testimony of Professor Bemis, pages 3024, 3068), that the capitalization of paving and growth in the value of land is not allowed in either Massachusetts or Great Britain.

The Master's dismissal (page 123) in one sentence of the elaborate report of Messrs. Marwick and Mitchell because "it requires adjustment in considerable detail of various differences due to questions of bookkeeping" in order to make it "of any value for purposes of comparison," is fully answered in the Brief of The City of New York (pages 145, 160, 185-7).

The Master has also ignored the elaborate summary of the evidence on oil in the brief of The City of New York (pages 192, 203), where it is shown among other things with quotations of the exact page of evidence, first, that the company admits that with its Astoria plant making coal gas it will need half as much oil per 1,000 feet as with water gas; and, second, that cheap Texas oil is used exclusively by two companies—Philadelphia and Newark—to a 477
larger extent than all the expensive oil bought by the Consolidated plants of New York City, yet the candle-power made with this oil in Philadelphia must be the same—22 candle-power—at the testing stations, as is required in New York.

Franchises.

On page 52 of the report, second line of section headed "Franchises," add after the word "was" the words "attempted to be."

Change the second paragraph on page 53 so as to read "additional stock of the new company was issued for franchises and rights to the extent of $7,781,000," and an item franchises and rights $7,781,000 is still carried on the books of the company. This stock was apportioned between the constituent companies as follows," etc.

Page 61, line 1, after the word "the" at the commencement of the line, add "consents." After the word "licenses" add the words "estimated to be."

Strike out the paragraph marked 3 as the statute referred to, chapter 367, Laws of 1884, does not apply to the complainant.

In the paragraph marked 2, under the statement "it is claimed by the defendants" after the word "although" in line 7, strike out "by its terms unlimited as to time necessarily expired with the termination of" and add instead thereof the words "the limit of its term is not expressly stated therein and could not survive the company's corporate existence," and add at the end of said paragraph 2 the words "and therefore had no power to use the streets of the municipality, even though the latter may attempt to consent to such use," and on the last line after the word "was" insert the words "alleged to have been."

After the word return on line 10 add the words "as against the consumer."

478 On page 63 there is no evidence to support the statement in the second paragraph reading "in short, so far as the present record shows, the municipal authorities have fully acquiesced in the continued use and occupation of the streets by complainant."

It is respectfully submitted that the objection made by the City that there is an entire absence of proof that the grantees under this Act of 1871 met and selected an executive committee was not technical.

On page 64 there is no evidence of any extension of the consent to the Harlem Company referred to on this page.

On page 66 there is no reason stated for the conclusion expressed "although this statute is claimed to be unconstitutional its validity must be assumed for the purposes of the present proceeding.

On page 67 the words "unlimited as to time" on lines 4 and 5 should be stricken out and the words "not specified in the consent itself" inserted instead thereof.

Besides the foregoing a general objection is urged that the Master's statements are, as a rule, too broad, and frequently in stating that no proof exists, impose upon the defendant the burden of proving a negative.

It should be stated in the report that although complainant's officers were examined as to the terms and conditions under which the Consolidated Gas Company was receiving gas from the Astoria Light, Heat and Power Company, they were unable to do so stating no arrangement had been made as yet.

In view of the fact that requests to find have been submitted by the complainant and by the State although it was understood no requested findings would be required by the Master prior to the coming in of the report, the defendant, The City of New York, asks
479 leave to adopt and present on its behalf the requests and special findings heretofore presented in behalf of the State.

WILLIAM B. ELLISON,
Corporation Counsel, Solicitor for City of New York.

WILLIAM P. BURR,
Of Counsel.

Additional Objections to Master's Report.

At page 37 of Report, the Master allows the round figure $15,500,00 for the manufacturing plant and holder stations, the capacity of which is 51,000,000 daily. Of this capacity 38,000,000 daily is due to the water gas stations at Forty-fourth, Seventy-first and Ninety-ninth streets. The maximum allowance as to cost of the various water gas plants, per 1,000 daily capacity is stated by Mr. Meyer at $125, and for storage or holder capacity $80.75 per 1,000 cu. ft. contents, as appraised by Mr. Meyer at One Hundred and Thirty-second street and One Hundred and Eleventh street. (Sten. Min., pp. 1568, 1389, 1391. See also Sten. Min., pp. 1567, 1370, 1380, 1389, 1391.)

All of the 3,000,000,000 of gas bought from other companies was water gas, and the average delivery for 200 days was equal to 15,000,000 a day. The capital required to make and store this gas is, according to complainant's testimony 205.75 per thousand daily capacity. (Sten. Min., pp. 1389, 1391, 1568.)

On this basis, capital required for making and storing 15,000,000 cu. ft. would be......................	$3,086,000
Real estate required on the basis of water gas.........	750,000
	$3,836,000

480 instead of $12,000,000 as allowed by the Master for property of other companies devoted to use of complainant—Error of Master's findings on this item, 8,164,000 which should be deducted from the sum total.

Also on this account, should be deducted the 10 per cent. profit allowed other companies on the labor and material used, to make complainant's gas.

On page 63 the Master says:

"In short, so far as the present record shows, the municipal authorities have fully acquiesced in the continued use and occupation of the streets by complainant."

The Master is respectfully referred to the third, separate and distinct defense in the answer of the defendant The City of New York, on page 14 thereof.

With regard to the proportion of occupied and unoccupied land to the output and storage of gas, this defendant desires to submit a tabulation based on the record in evidence, which, as it requires considerable calculation, it has not yet been able to complete, and which defendant The City of New York deems necessary to clearly show that complainant is the owner of, and places capitalization on a far greater amount of land than is actually necessary for the production and storage of its gas.

The defendant The City of New York, to preserve its rights, respectfully protests against the refusal of the Master to allow additional time for submission of proposed changes and corrections to the Master's reports, in view of the size of the record and the importance of the proceeding.

WILLIAM B. ELLISON,
Solicitor for Defendant,
The City of New York.

WILLIAM P. BURR,
Of Counsel.

Endorsed: United States Circuit Court Southern District of New York. Consolidated Gas Company against Julius M. Mayer, Attorney General The City of New York, *et al.* Corrections to Masten's Report Submitted by Defendant, The City of New York. William B. Ellison, Corporation Counsel, Hall of Records, New York City. Filed with Master's Report Dated June 24 1907. Arthur Masten Master in Chancery U. S. Circuit Court S. D. N. Y. U. S. Circuit Court Southern District of New York. Filed June 24 1908. John A. Shields, Clerk.

481 Circuit Court of the United States for the Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Petition for Reviver and Substitution.

To the Honorable Circuit Court of the United States for the Southern District of New York:

Now, comes William S. Jackson, Attorney General of the State of New York, and represents to the Court that at a general election of the people of the State of New York, held on the sixth day of November, 1906, he, the said William S. Jackson, was duly elected Attorney General of the State of New York, and that he was duly installed and qualified for such office and entered upon his duties as such officer on the first day of January, 1907, in lieu of Julius M. Mayer, whose term of office as Attorney General of the State of New York expired on the thirty-first day of December, 1906; and he, the said William S. Jackson, petitions this Court that he may be substituted as a defendant herein in lieu of the said Julius M. Mayer, as Attorney General of the State of New York, whose term expired, as aforesaid, and that this action may be revived and continued against your petitioner as one of the defendants herein, in the same manner as if your petitioner had been named as defendant in all the pleadings and proceedings herein.

WM. S. JACKSON,
Petitioner.

ALFRED R. PAGE,
WM. A. DEFORD,
Of Counsel.

482 COUNTY OF ——, *District of New York:*

William S. Jackson, being duly sworn, says that he is the petitioner above named; that he has read the foregoing petition and knows the contents thereof, and that the same is true to his own knowledge.

WM. S. JACKSON.

Sworn to before me, February —, 1907.

June 24.

ANNA E. BURKE,
Com. of Deeds, Albany, N. Y.

483 Circuit Court of the United States for the Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York, and Others, Defendants.

Stipulation.

It is hereby stipulated and agreed that an order may be entered in this action, substituting William S. Jackson, Esq., as Attorney General of the State of New York, in lieu of Julius M. Mayer, Esq., as Attorney General of said State, and that this action stand revived as to the newly elected Attorney General, and that it may be continued in his name as one of the defendants herein, in the same manner as if said petitioner had been named as defendant in all the pleadings and proceedings herein.

SHEARMAN & STERLING,
Solicitor- for Complainant.
WILLIAM B. ELLISON,
Solicitor for Defendant, the City of New York.

Endorsed: U. S. Circuit Court, Southern District of New York. Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney General of the State of New York, *et al.,* Defendants. Petition for Review- and Substitution and Stipulation. Shearman & Sterling, Attorneys for Complainant, 44 Wall Street, N. Y. U. S. Circuit Court, Southern District of N. Y. Filed Jul- 11, 1907, John A. Shields, Clerk.

484 Circuit Court of the United States for the Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Order of Reviver and Substitution.

This cause coming on to be heard on the petition of William S. Jackson, as Attorney-General of the State of New York, to have said cause of action revived in his name as one of the parties defendant, it is

Ordered, adjudged and decreed That said petition be, and the same is hereby granted, and the cause of action is revived as to him, the said William S. Jackson, as Attorney-General of the State of New York, in his name; and he is hereby substituted as a party defendant in lieu of Julius M. Mayer, as Attorney-General of the State of New York, and this suit is hereby directed to be continued in the name of him, the said William S. Jackson, as Attorney-General of said State, as one of the parties defendant herein in the same manner as if the said petitioner had been named as a defendant in all the pleadings and proceedings herein.

E. HENRY LACOMBE,
U. S. Circuit Judge.

Endorsed: United States Circuit Court, Southern District of New York, Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney General of the State of New York, *et al.*, Defendants. Order of Reviver and Substitution. Shearman & Sterling, Attorneys for Complainant, 44 Wall Street, N. Y. U. S. Circuit Court, Southern District of N. Y. Filed Jul- 11, 1907. John A. Shields, Clerk.

485 Circuit Court of the United States for the Southern District of New York. In Equity.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
JULIUS M. MAYER, as Attorney-General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Exceptions to the Report of the Special Master.

Now comes the defendants Julius M. Mayer, as Attorney-General of the State of New York, Frederic E. Gunnison, John C. Davies and Lucien L. Shedden, constituting the New York State Commission of Gas and Electricity, and excepts to the findings of fact and conclusions of law filed herein by Arthur H. Masten, special master herein, in the following particulars, to wit:

First. These defendants except to the finding of fact on page 5 of the report, as follows: "The amount of the capital and assets 486 of the complainant as of June, 1884, exclusive of working capital in the shape of cash, accounts receivable, and current supplies was made up as follows:

Real estate	$10,332,000
Plant	12,175,000
Mains	5,217,000
Services	1,005,000
Meters	1,195,000
Office furniture and fixtures	70,000
	$29,994,000
Franchise and rights	7,781,000
	$37,775,000

The figure at which these assets were acquired by the complainant company was accordingly, $37,775,000." These defendants further specify that the evidence does not justify the said finding as a statement of the value of the assets of the complainant company in 1884.

Second. These defendants except to the refusal of the master to find, as requested by these defendants, "That the cost to the constituent companies of its several classes of property, without appreciation or depreciation, was, as shown by the books of the constituent companies, $20,942,632.85, and that the item of $7,781,000 did not represent any thing of value, but was an arbitrary figure, used for the purpose of equalizing stock values, as shown by their market price, between the constituent companies."

Third. These defendants except to the finding of fact on 487 page 13 of the report, as follows: "Taking the testimony as a whole my conclusion is that the present value of complainant's real estate (exclusive of that part of the Eighteenth Street station condemned by the city) is the sum of $14,161,000," whereas the said master should have reported the value thereof to have been not to exceed $10,784,605.

Fourth. These defendants except to the finding of fact that the value of the land of the complainant on which it is entitled to earn a return is $13,461,000, at page 139 of the report. These defendants further specify that the evidence does not justify the said finding, but that the same (1) was grossly excessive of the actual value thereof; (2) that there was included therein real estate not necessarily used in the business of making and distributing gas, as more fully appears in exceptions following, and (3) that for the purpose of ascertaining the value of the property of the complainant necessarily used in business of making and distributing gas, it was erroneous to value the real estate, when the same was occupied by complainant's buildings as vacant land, and not its value, together with its buildings and for the use and purposes for which it was then used.

Fifth. These defendants except to the finding of the master at page 26, "That there was no competent proof showing that the original cost of the real estate was, as stated, only the sum of $4,118,267.38." whereas the evidence shows said sum to have been the cost price at which the real estate was carried on the books of the constituent companies.

Sixth. These defendants except to the finding of the master at page 26, "That so far as the record discloses, it is quite evident that the actual cost was in excess of that sum" ($4,118,267.38) * * * no real estate is included belonging to the Knickerbocker
488 Gas Light Company, and it appears from an examination of the report that the books of the Knickerbocker Company were not before Mr. Yalden. That it owned valuable real estate at that time does not appear to be questioned." These defendants further specify that the evidence does not justify the said finding, but that the evidence shows that the real estate which became the property of the Knickerbocker Gas Light Company was purchased from the receivers of the Union Gas Company in May, 1878, for $2,000. That there were no books of account of the Knickerbocker Gas Light Company, but that all cash was advanced by the Estate of Mrs. Elizabeth Bayard, and the accounts were kept in the books of her estate, and that the works of said company were practically destroyed by fire, and on March 11, 1880, all the stock of the Knickerbocker Company was purchased by the Municipal Gas Light Company for $350,000 in stock of the said Municipal Company at par.

Seventh. These defendants except to the finding of the master as a conclusion of law on page 26 (fol. 103), that "if the question of original cost is to be considered, it should be the cost to the complainant, the Consolidated Gas Company, and not the cost shown on the books of the constituent companies," whereas the said master should have found: That the cost of said real estate was as to the real estate acquired before consolidation, the original cost thereof to its constituent companies, and as to the real estate acquired since the consolidation, the cost thereof to the Consolidated Company.

Eighth. These defendants except to the finding of fact and con-

clusion of law, at page 27 (fols. 107, 108), that the complainant was entitled to earn a fair return upon the amount of the increase in value of its real estate holdings or of the unearned incre-
489 ment in the value thereof; whereas the master should have found that the complainant was not entitled to earn a return thereupon.

Ninth. These defendants except to the finding of the master at pages 16-19, that the following real estate of the complainant which is leased by it to others, should be included in the valuation of the property upon which the complainant is entitled to earn a return from its gas business:

(1) Eight lots in block 985, between Seventeenth and Eighteenth streets, leased to contractors for storing materials, at a rental of $3,170;

(2) Five lots in block 690, between Eighteenth and Nineteenth streets, Tenth avenue and Marginal street, rented for $2,000;

(3) In block 978, between Twentieth and Twenty-first streets, Avenues A and B, three tenement-houses and a lot 70 feet by 200 feet, leased at a rental of $2,916;

(4) In block 1,092, between Forty-fourth and Forty-fifth streets, Eleventh avenue and North river, four tenement-houses occupying about 50 feet front on Forty-fifth street and one tenement-house occupying 25 feet on Forty-fourth street, the latter rented for $360;

(5) In block 1,156, between Sixty-fourth and Sixty-fifth streets, Amsterdam and West End avenues, a tenement-house and lot 25 feet by 100 feet, rented for $1,248;

(6) In block 1,692, between Ninety-eighth and Ninety-ninth streets, First avenue and Marginal street, a lot on which is a small house rented and not used in the gas business;

(7) In block 952, between Twentieth and Twenty-first streets, First avenue and Avenue A, two small tenement-houses on the westerly side of Avenue A, leased by the complainant and not used in the gas business;

490 (8) In block 1,683, between One Hundred and Eleventh and One Hundred and Twelfth streets, First and Second avenues, two lots rented for the purpose of storing push-carts.

Whereas the master shall have found that the said real estate was not necessarily used in the complainant's business of making and distributing gas upon which the complainant is entitled to earn a return from its gas business and should have deducted from the valuation of the real estate of the complainant upon which it is entitled to earn a return, the sum of $268,250, allowed by him for said property.

Tenth. These defendants except to the finding of the master at pages 19-20 of the report, that the following vacant land of the complainant should be included in the valuation of the property upon which the complainant is entitled to earn a return from its gas business:

(1) In block 1,643, between One Hundred and Fifteenth and One Hundred and Sixteenth streets, Park and Lexington avenues, 100 feet on Lexington avenue, and 80 feet on One Hundred and Sixteenth street;

(2) In block 1,455, between Sixtieth and Sixty-first streets, First avenue and Avenue A, 313 feet by 200 feet;

(3) In block 1,156, between Sixty-fourth and Sixty-fifth streets, West End and Amsterdam avenues, three lots, 25 feet by 100 feet;

(4) Two-thirds of block 1,999, between One Hundred and Thirty-second and One Hundred and Thirty-third streets, the plot being 675 feet by 199 feet in its longest dimension;

(5) Three-fourths of block 2,175, Sherman avenue and Broadway;

491 (6) In block 1,474, between Sixtieth and Sixty-first streets, Avenue A and East river.

Whereas the master should have found that the said real estate was not necessarily used in the complainant's business of making and distributing gas upon which the complainant is entitled to earn a return from its gas business and should have deducted from the valuation of the real estate of the complainant upon which it is entitled to earn a return, the sum of $745,155, allowed by him for said property.

Eleventh. These defendants except to the finding of the master at pages 20-22 of the report, that certain land not owned by complainant should be included in the valuation of the property upon which complainant is entitled to earn a return from its gas business. "The property embraced in this category is valued by Mr. Thompson for the city at $614,517.04, and by Mr. Wheelock for the complainant, at $932,255. It consists:

"(1) Of the land under water within the lines of Tompkins street, between Fourteenth and Sixteenth streets, East river, and certain lands adjacent thereto on either side;

"(2) The lands within the lines of Twelfth avenue, between Forty-first and Forty-second streets and Forty-fourth and Forty-sixth streets and the North river; and

"(3) Lands within the lines of Exterior street between One Hundred and Tenth and One Hundred and Eleventh streets, Harlem river."

Whereas the master should have found that the said real estate was not necessarily used in the complainant's business of making and distributing gas upon which the complainant is entitled to earn a return from its gas business, and should have deducted from the valuation of the real estate of the complainant upon which it is entitled to earn a return, the sum of $932,255, allowed by him for said property. 492

Twelfth. These defendants except to the master's conclusion of law on page 21, at folio 84 of the report: "for present purposes it is sufficient if the property is occupied by complainant under a claim of title and used by it in connection with its business of gas making.

"This requirement is sufficiently met by the proof. The Tompkins street land forms a part of complainant's Fourteenth street plant and the Twelfth avenue land part of its Forty-second and Forty-fourth street land," upon the ground that complainant is entitled to earn a return only upon the property owned by it and occupied for the purposes of its business, and it cannot capitalize the value of property to which it has not proved title; mere possession of property reserved for streets is insufficient to make title as against the city.

Thirteenth. These defendants except to the master's refusal to find, as requested at folios 639-644, "I decline to find that the remaining portion of parcel 3" (One Hundred and Eleventh street station) "or that parcel 4 (bulkhead) 7 (Sixtieth-Sixty-first streets, Avenue A wooden buildings rented) 9 (South side Fifteenth street between Avenues A and B well property), and 10 (Sixty-fifth street and West End avenue, west side vacant), are not now used by the complainant in its gas business, for the evidence shows the contrary to be the fact. I similarly decline to find as regard to land remaining in parcel 5 (Eighteenth street station) excepting one block valued at $400,000, which I have already excluded on my report," as requested by these defendants. These defendants further specify that the evidence does not justify the refusal to find, but on the contrary 493 thereof, it appears clearly from the evidence that none of the said properties are used by the complainant in its gas business.

Fourteenth. The defendants except to the finding on page 36 at folios 144-147 of the master's report, to-wit: "I accordingly find and report the value of the complainant's plants to be substantially in accordance with the estimate of Mr. Mayer, a summary of which is given below, but adopting, for purposes of convenience and to allow for possible over-valuations in some details, the round figure of $15,500,000 instead of $15,532,489, as shown by the appraisal.

Valuations of Plants and Holder Stations, Depreciation Deducted.

Twenty-first street plant, including all holders	$4,162,021	
Forty-fourth street plant, including all holders	2,000,205	
Ninety-ninth street plant, including all holders	963,011	
Fourteenth street plant, including all holders	2,549,545	
Forty-second street plant, including all holders	1,744,660	
Eighteenth street plant, including all holders	588,873	
Total for all plants		$12,008,315
Sixty-third street holder station, complete	$490,072	
Sixty-fifth street holder station, complete	1,427,317	
One Hundred and Eleventh street holder station, complete	1,039,910	
494 One Hundred and Thirty-second street holder station, complete	$540,702	
Inwood street holder station, complete	26,173	
Total for all holder stations		3,524,174
		$15,532,489

"This may be fairly said to represent the cost of reproducing the property as it stands;" whereas the master should have found that the value upon such basis was $9,348,692, and that the valuation of complainant's witness so adopted by the master was excessive.

Fifteenth. These defendants further except to each specification of value on page 37, for the reason that there is no proper foundation in the evidence to sustain such finding. That the theory upon which the valuation was made is erroneous, in that the present cost of reproducing the identical apparatus was used irrespective of the fact as to whether the particular apparatus was commercially and economically worth reproducing, and does not show the value of a modern plant that would accomplish the same results.

Sixteenth. These defendants further except to the last-mentioned finding as to valuation of plants, in that there is included therein the valuation of buildings not calculated upon the cost to reproduce the same by considering the cost of material and labor that entered therein, but based upon an estimated valuation in accordance with the cubical contents thereof by comparison with the buildings of the Kings County Gas and Illuminating Company.

495 *Seventeenth.* These defendants further except to said finding, on the ground that there is included therein in the valuation of the Eighteenth street plant the sum of $453,695, as a reproduction value of the dismantled and abandoned manufacturing plant which is not now used in the business of the company, whereas the said amount should have been deducted from the valuation contained in the said finding.

Eighteenth. These defendants further except to the said finding of fact, on the ground that in the One Hundred and Eleventh street holder station there is included $428,019 as the value of the dismantled and abandoned manufacturing plant at the said station, whereas the said amount should have been deducted from the valuation contained in the said finding.

Nineteenth. These defendants further except to the said finding of fact, on the ground that there is included therein the value of the Inwood street holder station, complete, $26,173, whereas the same should have been deducted from said finding because the evidence shows that the same has been abandoned and is not used in the business of the company.

Twentieth. These defendants except to the master's finding of fact, at pages 31 and 32, "as regards to buildings, Mr. Mayer took as his unit similar buildings recently erected by him in the city of New York for the Kings County Gas and Illuminating Company. From such unit figures he computed the valuations of complainant's buildings by the method of comparative cubical contents, and of the master's further finding that the valuations thus ascertained were the correct valuations of the buildings of the complainant, and carrying the same in the finding as to value into the valuation of plants and holder stations, on page 37, whereas the master should have 496 found that the valuation of the buildings should have been computed from the cost of materials and labor entering into the construction thereof.

Twenty-first. These defendants further except to the master's finding of fact, that the buildings of the Kings County Gas and Illuminating Company were similar to the buildings of the complainant, on the ground that there is no evidence tending to sustain the said finding.

Twenty-second. These defendants further except to the finding of the master as a conclusion of law, on page 37, folio 147, in finding that with regard to the valuation of the plant, holder stations, mains and services, the reproductive cost thereof affords the only practical basis of present valuation, but on the contrary thereof the master should have found, as a conclusion of law, that the value of complainant's plant, holder, station, mains and services should be ascertained by finding the cost thereof to the complainant and making due allowance for depreciation, or, if the reproductive value on the basis of a new plant was to have been ascertained, the master should have found, as a conclusion of law, that the complainant be allowed the value of a modern, up-to-date plant capable of producing the same quantity and quality of gas as now produced by it.

Twenty-third. These defendants except to the finding of fact of the master on page 38, folio 151, that "the evidence shows that on October 31, 1905, complainant's mains of various sizes amounted in the aggregate to 822 miles exclusive of 70 or 80 miles of abandoned mains, on the ground that the evidence shows that the complainant has 795.47 miles of active mains, and that the complainant is only entitled to a return upon the value of such mains as are now in active use.

497 *Twenty-fourth.* These defendants except to the finding of fact of the master on page 39, folio 153, page 139, folio 555, that the present value of the mains based on the cost of reproduction upon which the complainant is entitled to earn a return was $12,636,000, whereas the said master should have found the same upon the basis of cost of reproduction to be $6,529,035.

Twenty-fifth. These defendants further except to the said finding that $12,636,000 is the value of the mains upon which the complainant is entitled to earn a return, whereas the evidence shows that the same were carried on the books of the company at the sum of $7,852,000, and that in said finding the master has allowed $4,784,000 as an estimated increase of cost to relay all the mains of the said company by reason of the changes in the pavements of the streets of the city, and that the same represents no outlay on the part of the company.

Twenty-sixth. These defendants except to the finding of fact of the master on page 41, folio 162, that the cost of reproducing the services at present prices would be $1,994,000, and the allowance of $1,994,000 as the value of the services on which complainant is entitled to earn a return, on page 139, folio 554, whereas the evidence shows that the cost of the services to the complainant is $1,222,228.37, which the master should have taken as the value of the services on which the complainant is entitled to earn a return.

Twenty-seventh. These defendants except to the master's refusal to find at page 41, folios 162-163, that the appraised value of both

mains and services at the time of the consolidation in 1884, was far in excess of their cost, and that the value of mains and services devoted by complainant to the public use as of December 31, 1905, was $6,359,324.46, which represents the original cost of
498 mains and services transferred by the constituent companies to complainant, plus the expenditures of the complainant since 1884 on account of new construction thereof, and that the reasons stated for the said refusal to find at folios 163-165 are misleading and not supported by the evidence adduced before the said master.

Twenty-eighth. These defendants except to the finding of fact (page 42, folio 166), that the meters and miscellaneous personal property are valued at $4,100,000, and carried into the valuation of the property on which complainant is entitled to a return at that figure, on page 139, folio 554 of the report, whereas the master should have found that they were worth not to exceed $3,802,544.50, at which value they were carried on the books of the company as the original cost thereof.

Twenty-ninth. These defendants except to the finding of fact and of law on page 42, folio 168, that the complainant, in addition to the value of its materials and supplies on hand and $1,000,000 in cash as a working capital should be allowed for accounts receivable and outstanding to the extent of $2,000,000 as an item upon which the consumers of gas are required to pay a return, but on the contrary thereof such item should have been excluded.

Thirtieth. These defendants except to the finding of fact and of law on page 48, folio 189, that the complainant should be allowed $12,000,000 as its investment in the Astoria plant and the carrying of the said sum of $12,000,000 into the valuation of the property on which the complainant is entitled to earn a return (page 139, folio 555), for the reason that so far as it involves the finding of fact, it is without evidence tending to support it, and in so far as it involves a conclusion of law is erroneous.

499 *Thirty-first.* These defendants except to the finding of fact of the master, that the plant and property owned by the Astoria Light, Heat and Power Company designated as the Astoria plant in said report is the property of the Consolidated Gas Company and an asset thereof, whereas the master should have found the same to have been property owned by the said Astoria Light, Heat and Power Company.

Thirty-second. To the finding of fact on page 52, folio 207, "I, therefore, allow item No. 8" (the value of the Astoria plant, $12,000,000) "as claimed by complainant, although the Astoria plant was not in operation and delivering gas in 1905, such item should for the sake of accuracy, be designated as property of other companies employed in the production of gas delivered by them to the complainant," for the reason that the finding of the master that complainant is entitled to earn a return upon the capital invested in their business by other companies from whom the complainant purchases gas is an erroneous conclusion of law, and there is no evidence tending to support the same as a finding of fact. That the evidence shows that the complainant paid to other companies for the gas purchased from them at the rate of cost and 10 per cent. in addition, and that under this arrangement the complainant paid to other companies in the year 1905, the sum of $997,039.89, 10 per cent. of which, $99,703.99,, would represent the return on capital devoted by said companies to the production of gas for complainant, whereas the master allows as a reasonable return therefor 6 per cent. on $12,000,000, or $720,000.

Thirty-third. These defendants except to the finding of the master, at page 90, folio 360, that the complainant's franchises are of the reasonable value of $20,000,000, and that the carrying of that 500 amount into the valuation of the property on which the complainant is entitled to earn a return, on page 139, folio 555, for the reason that in so far as the same is a finding of fact there is no evidence tending to support the value thereof, and in so far as the same is a conclusion of law the same is erroneous.

Thirty-fourth. These defendants except to the mixed finding of fact and conclusion of law of the master, at pages 52-73, folio 289, that the complainant, on the date of the enactment of the statutes involved in this suit and the making of the order complained of owned, by virtue of the consolidation whereby complainant was created, franchises to carry on a gas business in the city of New York, and to use the streets, avenues and public places thereof for that purpose, as follows: The franchises granted to the New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company, the Municipal Gas Light Company, and to the further finding that such franchises were, at the dates aforesaid, property devoted by complainant to the public use, whereas said master should have found, under the evidence, that at the times aforesaid the said franchises, rights and privileges formerly conferred thereby had ceased, terminated and expired.

Thirty-fifth. These defendants further except to the finding of fact and conclusion of law, that complainant was the owner, by virtue of the consolidation whereby it was created, of the franchises to carry on a gas business in the city of New York, and to use the streets, avenues and public places thereof for that purpose claimed by the Knickerbocker Company, by and under chapter 944 of the Laws of 1871, whereas said master should have found that the said Knickerbocker Company never owned or had the legal title to the franchises, if any conferred thereby, and that complainant 501 never held nor owned and has never been entitled to, and is not now entitled, to use the same.

Thirty-sixth. These defendants further except to the finding of fact and conclusion of law, that said complainant owned, by virtue of the consolidation whereby it was created, the franchises to carry on the gas business in the city of New York, and to use the streets, avenues and public places thereof for that purpose, granted to the Harlem Gas Light Company, and that the same was an assignable franchise in perpetuity at the time of the enactment of the statutes and of the making of the order complained of, property of the complainant devoted by it to the public use; whereas the said master should have reported that the said franchises granted to the Harlem Gas Light Company ceased and expired on February 1, 1907, and are not the property of the complainant and are not, and were not at the dates aforesaid, property devoted by the complainant to the public use.

Thirty-seventh. These defendants except to the finding of fact and conclusion of law that the franchises of the constituent companies to carry on the gas business in the city of New York, and to use the streets, avenues and public places thereof for that purpose, claimed to be owned by the complainant, were property devoted by complainant to the public use upon which it was entitled to earn a fair return at the time of the enactment of the statutes and of the making of the order complained of; whereas said master should have found that said franchises were not at said dates property devoted by complainant to the public use, upon which it was entitled to earn a return.

Thirty-eighth. These defendants except to the finding of the master, that the franchises of complainant and of the good
502 will appertaining to it as a corporation engaged in the gas business in the city of New York, and in using the streets, avenues and public places thereof for that purpose, were property devoted by complainant to the public use, upon which it was entitled to earn a fair return, and were of the value of $20,000,000; whereas the said master should have found and reported that neither said franchises nor good will were property devoted to the public use, upon which complainant was entitled to earn a return; and that the franchises of complainant, if of any value, did not exceed the sum of $200,000; and that the good will did not exist as an asset of complainant, and was not property devoted by complainant to the public use.

Thirty-ninth. These defendants except to the finding of fact and conclusion of law of the master, on page 139, folios 554-556, that the property upon which complainant is entitled to earn a return, as hereinbefore found, amounting to $83,357,000, is made up as follows:

"I.	Real property (less deductions)	$13,461,000
II.	Plant	15,500,000
III.	Mains	12,636,000
IV.	Services	1,994,000
V.	Meters and miscellaneous	4,100,000
VI.	Working capital	3,616,000
VII.	Coal and coke company	50,000
VIII.	Astoria, *i. e.* capital invested in production of gas secured from the other companies	12,000,000
		$63,357,000
IX. X.	Franchises and good will	20,000,000
		$83,357,000"

503 *Fortieth.* These defendants except to the finding of the master as a matter of fact and conclusion of law, at page 101, folios 404-407, that in ascertaining the cost of making gas in the year 1905 there should be included item 47 of complainant's exhibit No. 94, repairs to gas stoves, $55,954.35; whereas the master should have found that the complainant received a rental from its gas stoves of $67,367.62, and that the repairs to said gas stoves are $55,954.35 deducted therefrom, leaving a net income of $11,413.27, and that as a conclusion of law the master should have found that the repairs to gas stoves did not properly enter into the computation of the cost of making gas.

Forty-first. These defendants except to the finding of the master on page 102 of the report, that the amount expended by the company in caring for street lamps, item 53 of complainant's exhibit No. 94, $289,259.09, is a proper charge or element of the cost of gas.

Forty-second. These defendants except to the finding of the master on page 103 of the report, that the sum of $25,671.74, representing disbursements in connection with legislative investigations included in item 58 of complainant's exhibit No. 94, general office expenses, is a proper charge or element of the cost of gas.

Forty-third. These defendants except to the finding of the master on page 103 of the report, that the sum of $63,401.65 covering expenses growing out of franchise tax litigation included in item 61 of complainant's exhibit No. 94, advertising and legal expenses, is a proper charge or element of the cost of gas.

Forty-fourth. These defendants except to the finding of the master on page 104 of the report, that rentals paid by complainant for premises hired by it, $42,674.71, item 62 of complainant's exhibit No. 94, there being no evidence tending to show that the
504 property so rented was necessarily used in the business of making and distributing gas.

Forty-fifth. These defendants except to the finding of the master on page 104 of the report, that the complainant be allowed the following amount included in item No. 66, complainant's exhibit 94, as a proper charge or element of the cost of gas: "taxes on $41,356,409.86, stock in gas business, $62,034.61," meaning thereby taxes on dividends in excess of 4 per cent. on capital stock claimed by the complainant to be employed in its gas business.

Forty-sixth. These defendants except to the finding of the master on page 104 of the report, that the complainant should be allowed the following amount included in item No. 66, complainant's exhibit 94, as a proper charge or element of the cost of gas: "interest on unpaid taxes, $94,506.29."

Forty-seventh. These defendants except to the finding of the master on page 105 of the report, that the sum of $1,328,316.37, item No. 67, complainant's exhibit 94, should be included as a charge or element of the cost of gas as a contingent expense of ten cents per thousand cubic feet of gas sold, based upon the total sales in 1905; whereas the master should have found that such item did not represent the actual disbursement or expenses of the complainant, except to the amount of $222,382.82, and over and above said amount was not a proper charge or element of the cost of gas.

Forty-eighth. These defendants except to the finding of fact on pages 123, 124 of the report, that the gas sold by compainant during the calendar year 1905, as shown by complainant's exhibit No. 94, cost complainant, upon a fair computation, the sum of 65.84 cents, whereas said master should have found the cost thereof to 505 have been, upon a fair and proper computation thereof, as per exhibit No. 94, the sum of 52.50 cents; that the report of the master in this respect, in so far as it involves the finding of fact, was without the support of evidence, and in so far as it involves a conclusion of law is erroneous.

Forty-ninth. These defendants except to the finding of the master on page 141, folio 561, that a charge of 80 cents per thousand cubic feet of gas sold by complainant would yield on complainant's entire assets a return of 2.8 per cent., and on its assets, exclusive of franchises and good will, 3.6 per cent., neither of which constitutes a fair and reasonable return on the value of such property, which finding, in so far as it involves that finding of fact, is not supported by evidence, and in so far as it involves a conclusion of law, is erroneous.

Fiftieth. These defendants except to the finding of the master at page 141, folio 561, as a conclusion of law, that complainant is entitled to receive at least the legal rate of interest at the rate of 6 per cent. per annum, as a return upon its investment.

Fifty-first. These defendants except to the finding of the master as a conclusion of law that the rate of 80 cents per thousand cubic feet for gas, does not allow to the complainant a reasonable return upon its property actually and necessarily used in the business of making and distributing gas.

Fifty-second. These defendants except to the finding of the master on page 144, folio 574 "under the distributing system as now existing and in operation, it is not possible to fulfill the statutory requirements as to pressure," and in so far as the same is a finding of fact, it is not supported by the evidence, and in so far as it is a conclusion of law it is immaterial and has no bearing upon the case.

506 *Fifty-third.* These defendants except to the allowance of the IV amendment proposed by the complainant on page 147, on the ground that there is no evidence tending to support the said finding, as amended.

Fifty-fourth. These defendants except to the allowance of the complainant's VI proposed amendment, and to the finding, as amended on page 148, on the ground that in so far as the same is a finding of fct, there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law, it is erroneous.

Fifty-fifth. These defendants except to the allowance of the complainant's VIII proposed amendment, and to the finding, as amended on page 148, on the ground that in so far as the same is a finding of fact, there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law, it is erroneous.

Fifty-sixth. These defendants except to the allowance of the complainant's X proposed amendment, and to the finding, as amended, on page 149, on the ground that in so far as the same is a finding of fact there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law it is erroneous.

Fifty-seventh. These defendants except to the allowance of the complainant's XI proposed amendment, and to the finding, as amended, on page 149, on the ground that in so far as the same is a finding of fact there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law it is erroneous.

Fifty-eighth. These defendants except to the allowance of the complainant's XII proposed amendment, and to the finding, as amended, on page 150, on the ground that in so far as the same is a finding of fact there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law it is erroneous.

507 *Fifty-ninth.* These defendants except to the allowance of the complainant's XIII proposed amendment, and to the finding, on page 150, as amended, on the ground that in so far as the same is a finding of fact there is not sufficient evidence to sustain it, and in so far as it is a conclusion of law it is erroneous.

Sixtieth. These defendants further except to the allowance of the XV proposed amendment, on page 152, on the ground that in so far as the same is a finding of fact it is based upon a hypothetical and absurd supposition; that in so far as the same is a conclusion of law the same is erroneous.

Sixty-first. These defendants except to the refusal of the master to find the fifth special finding of fact, and each and every part thereof, as requested by these defendants, at page 169 of the said report.

Sixty-second. These defendants except to the refusal of the master to find the twelfth special finding of fact, and each and every part thereof, as requested by these defendants, at page 172 of the said report, except as to the sum of $369,065.53, as stated therein, which should have been $5,369,065.53, which was a typographical error, as will appear from the total set forth in said request to find.

Sixty-third. These defendants except to the refusal of the master to find the thirteenth special finding of fact, and each and every part thereof, as requested by these defendants, at page 173 of the said report.

Sixty-fourth. These defendants except to the refusal of the master to find the fourteenth special finding of fact, and each and every part thereof, as requested by these defendants, at page 174 of the said report.

Sixty-fifth. These defendants except to the refusal of the master to find the nineteenth special finding of fact, and each and every part thereof, as requested by these defendants, at page 176 of the said report.

508 *Sixty-sixth.* These defendants except to the refusal of the master to find the twentieth special finding of fact, and each and every part thereof, as requested by these defendants, at pages 176-177 of the said report.

Sixty-seventh. These defendants except to the refusal of the master to find the twenty-first special finding of fact, and each and every part thereof, as requested by these defendants, at page 177 of the said report.

Sixty-eighth. These defendants except to the refusal of the master to find the twenty-third special finding of fact, and each and every part thereof, as requested by these defendants, at pages 177-178 of the said report.

Sixty-ninth. These defendants except to the refusal of the master to find the twenty-fourth special finding of fact, and each and every part thereof, as requested by these defendants, at page 178 of the said report.

Seventieth. These defendants except to the refusal of the master to find the twenty-fifth special finding of fact, and each and every part thereof, as requested by these defendants, at page 178 of the said report.

Seventy-first. These defendants except to the refusal of the master to find the twenty-eighth special finding of fact, and each and every part thereof, as requested by these defendants, at page 179 of the said report.

Seventy-second. These defendants except to the refusal of the master to find the twenty-ninth special finding of fact, and each and every part thereof, as requested by these defendants, at pages 179-180.

Seventy-third. These defendants except to the refusal of the master to find the thirtieth special finding of fact, and each and every part thereof, as requested by these defendants, at page 180 of the said report.

Seventy-fourth. These defendants except to the refusal of the master to find the thirty-first special finding of fact, and each and every part thereof, as requested by these defendants, at page 180 of the said report.

509 *Seventy-fifth.* These defendants except to the refusal of the master to find the thirty-third special finding of fact, and each and every part thereof, as requested by these defendants, at page 181 of the said report.

Seventy-sixth. These defendants except to the refusal of the master to find the thirty-seventh special finding of fact, and each and every part thereof, as requested by these defendants, at page 183 of the said report.

Seventy-seventh. These defendants except to the refusal of the master to find the forty-second special finding of fact, and each and every part thereof, as requested by these defendants, at page 184 of the said report.

Seventy-eighth. These defendants except to the refusal of the master to find the forty-third special finding of fact, and each and every part thereof, as requested by these defendants, at page 185 of the said report.

Seventy-ninth. These defendants except to the refusal to find the I request to find, at pages 160-161, in the form and manner as proposed by these defendants.

Eightieth. These defendants except to the refusal to find the II request, at pages 161-163, in the form and manner as proposed by these defendants.

Eighty-first. These defendants except to the refusal to find the III request to find, at page 163, in the form and manner as proposed by these defendants.

Eighty-second. These defendants except to the refusal to find the IV request, at pages 163, 164, in the form and manner as proposed by these defendants.

Eighty-third. These defendants except to the refusal to find the VI request to find, at pages 164, 165, as therein stated, and further except to the statement given for disallowing the request as not founded upon the evidence.

510 *Eighty-fourth.* These defendants except to the further finding under the VIII request to find on page 166, as follows:

"The evidence further shows and at the request of complainant's counsel I find that the contract of April 26, 1904, provided for the delivery of high-grade and low-grade oil in certain proportions "currently." The meaning of this term, as understood both by the complainant and the oil company, was that oil must be taken from month to month in the proportions specified in the contract; so that while the complainant had received under the contract an amount of oil considerably less *in toto* than the total specified in said contract, it could not call during the winter of 1905-'6 for all high-grade oil. The use of high-grade oil during the cold months to meet the requirements of the act of 1905, prescribing 22-candle power after July first of that year, was advised by the chief engineer. It was accordingly necessary to readjust the current contract and the contract of November 1, 1905, was made for that reason. It is computed that the additional cost resulting added .0013 of a cent per thousand feet to the cost of gas for 1905."

Eighty-fifth. These defendants except to the refusal to find the XI request to find at page 167 in the form and manner proposed by these defendants.

Eighty-sixth. These defendants except to the refusal to find the concluding sentence of the XII request to find, at page 168, which is as follows: "A reduction in the price of gas leads to a proportionate increase in consumption in the City of New York to 46.46 cubic feet for each cent of reduction."

Respectfully submitted,

WILLIAM L. JACKSON,
Solicitor for Defendants.

ALFRED R. PAGE,
WILLIAM A. DEFORD,
Of Counsel.

The defendant Wm. Travers Jerome hereby joins in the foregoing exceptions.

ROBERT C. TAYLOR,
Solicitor for Wm. Travers Jerome.

July 23, '07.

511 Endorsed: Circuit Court of the United States, Southern District of New York. The Consolidated Gas Company of New York, Complainant, against Julius M. Mayer, as Attorney-General of the State of New York, William Travers Jerome, as District Attorney of New York County, Frederic E. Gunnison, John C. Davies and Lucien L. Shedden, constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants. In Equity. Exceptions to the Report of the Special Master. William Schuyler Jackson, Attorney General of the State of New York, Solicitor for Defendants Mayer and Gunnison, Davies & Shedden, as the Commission of Gas and Electricity. Alfred R. Page, William A. Deford, of Counsel. U. S. Circuit Court, Southern District of N. Y. Filed July 24, 1907. John A. Shields, Clerk.

512 Circuit Court of the United States, Southern District of New York.

THE CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

JULIUS M. MAYER, as Attorney-General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK C. GUNNISON, JOHN C. DAVIES, and THOMAS L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Exceptions to Master's Report.

Exceptions Taken by the Defendant The City of New York to the Report Made Herein and Entered on the 24th Day of June, 1907, by Hon. Arthur H. Masten, one of Masters of This Court, to Whom This Cause was Referred by an Order Dated July 9, 1906.

513 *First exception.* For that the said Master in his report, on page 139, folios 554-556, finds that the property on which the complainant is entitled to a return amounting to the sum of $83,357,000, made up as follows:

"I. Real Estate, less deductions	$13,461,000 00
II. Plants	15,500,000 00
III. Mains	12,636,000 00
IV. Services	1,994,000 00
V. Meters and Miscellaneous	4,100,000 00
VI. Working Capital	3,616,000 00
VII. Coal and Coke	50,000 00
VIII. Astoria, *i. e.*, capital invested in production of gas secured from other companies	12,000,000 00
	$63,357,000 00
IX. and X. Franchises and Good Will	20,000,000 00
	$83,357,000 00

Whereas he should have found that such amount was $30,949,327, as stated on page 9, folios 33-36 of the report, and made up as follows:

"I. Real Estate	$10,587,685 00
II. Plants	9,348,692 00
III. Mains	6,529,035 00
IV. Services	1,222,228 00
V. Meters and Miscellaneous	3,261,687 00
	$30,949,327 00"

The Actual Cost to the Complainant.

Second exception. For that the said Master has found on page 5 of his report:

"The amount of the capital and assets of the complainant 514 as of June, 1884, exclusive of working capital in the shape of cash, accounts receivable and current supplies, was made up as follows:

Real Estate	$10,332,000 00
Plant	12,175,000 00
Mains	5,217,000 00
Services	1,005,000 00
Meters	1,195,000 00
Office Furniture and Fixtures	70,000 00
	$29,994,000 00
Franchises and Rights	7,781,000 00
	$37,775,000 00"

The figure at which these assets were acquired by the complainant company and upon which its books were opened was accordingly $37,775,000."

On page 42, as corrected by Complainant's Amendment I, p. 146: "As regards mains and services, therefore, as well as real estate, plant and other tangible property, it does not appear that any sufficient ground exists for the suggestion that the appraised value of 1884 was materially, if at all, in excess of the aggregate cost of the tangible property to the constituent companies."

On pages 149-150, Complainant's Amendments XI. and XII., as allowed:

"XI. Page 141, following line 12, insert: 'Although in my view, as above expressed, of the basis of valuation upon which the complainant is entitled to a return, no additional findings on that subject are necessary, for the further information of the Court I find upon the evidence that the *actual cost* to complainant of the tangible

property and franchises employed in its gas business (includ-
515 ing the amount found by me to be the capital invested in
production of gas for complainant outside complainant's Manhattan works) is at least $60,214,000, made up as follows:

I. Real estate, at least	$9,322,000
II. Plants (Manhattan), at least	14,579,000
III. Mains, at least	7,852,000
IV. Services, at least	1,212,000
V. Meters and miscellaneous, at least	3,802,000
VI. Working capital, at least	3,616,000
VII. Coal and Coke Co.	50,000
VIII. Astoria unit (*i. e.*, capital invested in production of gas sold by complainant, made outside complainant's Manhattan Works)	12,000,000
IX. Franchises and rights	7,781,000
Total	$60,214,000

If franchises and good will be included together at the aggregate value of $20,000,000 above found by me, in lieu of the item of 'Franchises and Rights,' the actual cost to complainant of its tangible property, plus the value of its franchises and good will, is at least $72,433,000.

Allowed and I so find.

XII. Following the last preceding proposed finding insert:

'There is no satisfactory evidence that the cost to complainant of said property was unreasonable or excessive; or that the cost of production of said property was enhanced through faulty construction or waste; or that the various sums expended from time to time by
complainant or its predecessor companies in permanent im-
516 provements and betterments were not intelligently and prop-
erly expended, or that any such expenditure was made otherwise than providently and honestly.

'Nor is there any satisfactory evidence that any of the expenditures of complainant for material, labor or otherwise, in the manufacture and distribution of gas, have been improper, unnecessary or unreasonable.'"

And on page 153 said Master refused to find:

"That the cost to the constituent companies of its several classes of property, without appreciation or depreciation, was as shown by the books of the constituent companies, $20,942,632.85, and that the item of $7,781,000 did not represent anything of value, but was an arbitrary figure used for the purpose of equalizing stock values, as shown by the market prices, between the constituent companies."

Whereas he should have found, as requested on page 153, and also that by said consolidation in 1884 the capital of complainant was arbitrarily written up over the capital of the six constituent companies, by the amount of over $17,000,000 on the basis of the market valuation of the stock of the constituent companies, without any expenditure of cash for such increase; that the appraisal of 1884 exceeded the then value of the property as carried on the books of the constituent companies by taking the duplication value as estimated by themselves as distinguished from the cost less depreciation, as the basis; that such transaction cannot in equity be considered a purchase of the property by the complainant from its six constituent companies; and if so considered, said complainant paid in excess of its real value therefor, and such excess cannot be included in an investment on which a return is to be allowed.

That the consolidation under chapter 367, Laws of 1884, was unauthorized and against public policy, as such act cannot be construed to cover gas companies.

517 That not sufficient opportunity was given defendant to examine cost of construction of complainant's works.

I.—Real Estate.

Third Exception. For that the said Master, in his report, pages 10, 11, 12 and 13 finds:

"Without discussing in detail the evidence as to each parcel, I may say that, after a careful consideration, I am satisfied that the valuations claimed by the complainant are, as a rule, approximately correct. In arriving at that conclusion I have taken into account the standing and qualifications of the various witnesses, the degree of care devoted to their investigations, the extent of their familiarity with general real estate conditions in The City of New York, and their demeanor under cross-examination.

"The chief witness for the complainant, Mr. Wheelock, is connected with one of the largest and best known real estate offices in this City, and has taken part personally in the actual purchase and sale of a very large amount of property in various parts of Manhattan Island. Preparatory to testifying in this case, he spent some six weeks in an examination of the properties and an investigation of such facts as would tend to enlighten him as to their value, including sales of neighboring property.

"Mr. Preiss, a real estate dealer and appraiser of many years' experience, was also very fully advised as to current real estate transactions.

"Mr. Greene, as engineer in chief of the Department of Docks for many years, acquired a familiarity with the terms of leases and sales of water front property and was qualified by experience to testify as to values in a degree not shown by any of the other witnesses.

518 "Messrs. Thompson and McHale, the witnesses called by the City, appear to have made a specialty of appraising rather than of dealing in real estate as brokers. As appraisers, their experience has been to a considerable extent in condemnation proceedings where they have testified on behalf of the City or in certiorari proceedings for the reduction of taxation, on behalf of the property owners. Their manifest tendency was towards ultra conservatism of views, and I am satisfied that in the present case their valuations (which are frequently identical) are, in almost every instance, considerably too low. Their cross-examination disclosed numerous instances in which they disclaimed knowledge of actual

sales in the immediate vicinity of the parcel under consideration, notwithstanding such sales were matters of public record. In a dozen or more instances their valuations approximated, or were substantially below, the assessed valuation of the land. It is, of course, true that the assessed valuation of real property is often equal to or higher than its actual value, but it is generally understood, and was in fact admitted on the record that as a rule, tax values are substantially lower than the prices that can be realized for property sold under ordinary conditions. When, therefore, in so many instances defendants' witnesses made their valuations approximate closely the assessed valuations, some question is suggested as to the weight to be given to their judgment.

"Mr. Wells, the witness called by the State, was an auctioneer, broker and appraiser of long experience, and also had acquired familiarity with real estate values as Commissioner of the Tax Department for several years. His record, however, disclosed no such extensive transactions, and particularly current transactions, as those with which Mr. Wheelock was connected. Like the other 519 witnesses called by defendants, he was not familiar in many instances with recent sales of property in the immediate neighborhood of the particular parcel under consideration. Taken as a whole the testimony of these gentlemen does not show that they gave to their appraisals the amount of care and study that characterized the work of complainant's witnesses. For example, one witness in valuing the property occupied by the company at Forty-second street and Forty-fourth street, excluded that portion of it comprised within the lines of Twelfth avenue, on the ground that the company had no title thereto. He failed, however, to make any allowance for the fact that on this theory certain of the lots remaining would have an enhanced value as corner lots which, according to well-known rules, make them worth often 50 or 60 per cent. more than interior lots in the same block. In another instance no allowance was made for the circumstance that the parcel in question had a frontage both on an avenue and a side street. The discrepancy between complainant's valuations and those of the defendant was especially noticeable in respect of the large parcels. As to those, defendant's witnesses made what seem to me an insufficient allowance for what is known as 'plottage' or the enhancement of value due to the concentration in a single ownership of a number of adjoining lots. This is a well recognized element of value, and one which has assumed increasing importance in recent years owing to the growing demand for large building sites. In repeated instances defendant's witnesses were unable to specify any transactions in the neighborhood at unit figures as low as those given in their valuations, whereas complainant's in the great majority of cases were able to substantiate or at least to some extent to support their estimates by reference to actual transactions.

520 "Taking the testimony as a whole, my conclusion is that the present value of complainant's real estate (exclusive of that part of the Eighteenth street station condemned by the City) is the sum of $14,161,000. This includes the buildings valued by

the witnesses and the various bulkhead properties, also the property at Shadyside, New Jersey, and is allotted between the various parcels as follows:

And on page 139, has carried the sum of $13,461,000 without deductions, into the amount on which a return is allowed.

Whereas he should have found—

I. That such figures for the present value of the real estate were grossly excessive, that the actual value was more nearly coincident with the testimony of the defendants' witnesses, and the assessed valuation of the real estate for purposes of taxation, and did not exceed, excluding the value of Eighteenth street land condemned the amount of $11,289,212.74, as found by McHale.

That Thompson has been engaged in buying and selling, as well as appraising real estate for a period of 14 years (pp. 2744-5): Whereas Wheelock has only been in the business eight years, has only specialized as an appraiser 2½ years, and acted as collecter of rents for a considerable period (pp. 1125-7).

That while the defendants' witnesses have in 12 out of 51 instances arrived at valuations equal to or below the assessed valuations, such determination is no reflection on their judgment. That McHale and Thompson were both witnesses for the complainant in various certiorari proceedings to review the various assessments of some of those parcels for the past few years (pp. 2724, 2810, 2814, 2834). That ninety odd petitions have been filed by complainant for such purpose during the years 1903-1904, 1905-1906 (pp. 2626 to 2722). That in such petitions complainant has admitted the value of such parcels at amounts greatly below the values now claimed, as follows:

521

Block.	Lot.	Page.	Year.	Valuation admitted by complainant as excessive of what property would sell for under ordinary circumstances.	Amount to which reduction was asked.	Master's valuation.
991	1	2670	1904	$180,000 00	$156,250 00	$233,000 00
991	26	2673	1904	125,000 00	106,250 00	157,000 00
988	1	2669	1905	550,000 00 (with improvements)	400,000 00 (a)	570,000 00
979	1	2660	1906	542,000 00 "	351,500 00	570,000 00
1090	23	2678	1905	53,000 00 "	46,000 00	72,000 00
1070	5	2675	1905	70,000 00 "	62,500 00	83,000 00
1089	1	2676	1906	800,000 00 "	525,000 00	1,150,000 00
1093	1	2681	1906	425,000 00 "	250,000 00	546,000 00

(*a*) Page 2670 admits land appraised after January 1, 1905, at $293,188, by skillful real estate experts.

PAGE BOUND VERTICAL IN BOOK

522 That the assessed valuation of the land alone ($8,508,100) is 78 and 80 per cent. of the totals of Thompson & McHale, respectively, excluding Shadyside (pp. 2897 and 2903) while the proportion of such assessed valuation to the figure of the complainant's witnesses of $13,861,000, after deduction of $151,000 for the value of buildings, is only 62 per cent., which clearly manifests that such total is excessive, as it is unreasonable to suppose that out of a total of 51 parcels situate in various parts of the Borough of Manhattan and assessed on a basis of 100 per cent., could fall as far as 38 per cent. short, where the complainant has contested the assessment of so many parcels for overvaluation.

That the valuation given by the complainant to its land in its statement to the Board of Taxes and Assessments is $11,216,479.71. (Master's Report, p. 98; State's Ex. D., p. 402, of Exhibits for 1904; State's Ex. C., p. 388, of Exhibits for 1905.)

II. That there were included therein real estate not necessarily used in the gas business of making and distributing gas as more fully appears in Seventh, Eighth, Ninth, Tenth and Twelfth Exceptions.

That by computation from the testimony and exhibits it appears that not more than one-half the real estate of complainant was occupied by buildings and gas holders. Also, that the large holdings of real estate were predicated upon the manufacture of coal gas, by methods and apparatus long since obsolete; that 80 per cent. of the gas actually produced by the complainants was of a kind known as water gas, which required, according to the testimony and exhibits, less than one-fourth the space actually occupied for the manufacture of coal gas. That from choice the complainant leads a "hand-to-mouth" existence as far as storage of supplies is concerned. That it does not undertake the treatment of residuals, and the large 523 areas and buildings devoted to storage are only nominally so; that real estate acquired in recognition of the former state of the art, purchased from surplus after the payment of large dividends, are not required in the present state of the art; that the complainant was only justified in retaining such real estate as required by the present state of manufacture, with a reasonable margin for growth.

III. That for the purpose of ascertaining the value of the property of the complainant necessarily used in the business of making and distributing gas, it was erroneous to value said real estate, when the same was occupied by complainant's buildings, as vacant land, that it should have been valued together with its buildings and for the use and purposes for which it was then used, that the presence of such plants detracts from its market value as they must be torn down before any other use can be made of the property.

Fourth Exception. For that the said Master has found that the complainant is entitled to a return on the present value of its real estate, as distinguished from its original cost, that (p. 9) "By far the greater part of the real estate belonged to the constituent companies before the consolidation and was purchased many years ago at prices much below its present value" and on pages 27-28, that complainant was entitled to a fair return upon the amount of the increase in value of its real estate holdings or of the unearned increment thereof.

Whereas he should have found that the value on which the complainant was entitled to a return was such cost value to the six constituent companies up to consolidation and to the complainant since then for such land acquired since, less the amount received for sales of any real estate; that the difference between such cost and such present value represents the appreciation thereon, due to local conditions in Manhattan, and not to any increase in investment 524 by the complainant, and amounts to an unliquidated surplus which can be determined as soon as the property is sold, and both before and after such sale cannot be treated as other than a surplus, and it is not proper to allow a return thereon as against the consumer.

Fifth Exception. For that the said Master has found on page 26 as follows:

"There was no competent proof showing that the original cost of real estate was as stated only the sum of $4,118,267.38 and so far as the record discloses it is quite evident that the actual cost was in excess of that sum. Defendants' experts derived their information as to its original cost to the constituent companies and the appreciation on its transfer to the Consolidated Company from the report of Mr. Yalden, an expert accountant employed by the Senate Committee.

"On the face of their analysis no real estate is included as belonging to the Knickerbocker Gas Light Company and it appears from an examination of the report that the books of the Knickerbocker Company were not before Mr. Yalden.

That it owned valuable real estate at that time does not appear to be questioned."

Whereas, said Master should have found that the sum of $4,118,267.38 did represent the cost of such real estate as carried in the books of the constituent companies; that the evidence shows that the real estate which became the property of the Knickerbocker Gas Light Company was purchased from the receivers of the Union Gas Company in May, 1878, for $2,000. That there were no books of account of the Knickerbocker Company, but that all cash was advanced by the estate of Mrs. Elizabeth Bayard, and the accounts were kept in the books of her estate, and that the works of said company were practically destroyed by fire, and on March 11, 1880, all 525 the stock of the Knickerbocker Company was purchased by the Municipal Gas Light Company for $350,000 in stock of the said Municipal Company at par.

That any omissions from said report and total would be substantially immaterial.

Sixth Exception. For that the said Master has found on page 26-27 as follows:

"In the second place, if the question of original cost is to be considered, it should be the cost to the complainant, the Consolidated Gas Company, and not the cost shown on the books of its constituent companies, some of which had acquired their property fifty years and more before the complainant was organized. The cost to the Consolidated Company was represented by the amount of stock it issued to the constituent companies for their real estate, which, as already stated, was $10,332,000. It may possibly be that this amount was in excess of the fair market value of the property at that time, but the record indicates that the discrepancy, if any, was by no means as large as the defendants have argued.

In the majority report of the Senate Committee it is said:

'As to the value of the real estate, piers, property and water rights, there is a conflict of the testimony. It is a difficult question to determine owing to the varying opinions of real estate dealers.'

No specific finding was accordingly made on the subject, although the Committee reported that the aggregate value of the real estate and plants given as $29,994,000 was not too high.

The minority report recited that the Committee 'had caused every piece of real estate to be appraised by a disinterested witness and had subjected his results to reasonable tests from other witnesses
526 of large experience.' As a result it was stated that 'the scheduled values of the lots designated in the schedules as "real estate" are about 25 per cent. in excess of what was their fair value in September, 1884, when the agreement of consolidation was signed.' Such appraised value having been approximately $10,000,000, it is evident that, even on the basis of the Committee's Minority Report and in the aspect least favorable to the complainant, the original cost to it could from no point of view be considered at less than about $8,000,000."

Whereas he should have found that such value did not represent the true cost of the real estate on which if at all the complainant was entitled to a return, but that such cost was the original cost to the constituent companies of the real estate acquired before consolidation; and as to real estate acquired since consolidation the cost to the complainant. That by the mere act of consolidation in 1884 the complainant was not entitled to increase its real estate investment on which a return is demanded, without any additional outlay of cash.

Seventh Exception. For that the Master has allowed a return on the present value of the real estate of the complainant; whereas he should have found that where the taxes for such real estate are included in the cost of gas, and the complainant on the sale of such real estate will be able to realize a considerable surplus above the original investment therein, that said surplus represents an ample return thereon, inasmuch as it is customary in localities where such rises in real estate occur, for investors to hold real estate without return other than sufficient to pay taxes, relying merely on the profit made from such advances at the time of sale, and therefore complainant is not entitled to a return against the consumer on any real estate investment.

527 *a.* Land leased.

Eighth Exception. For that said Master on page 18 of his report finds:

"That the proper conduct of complainant's business required a large land area and when the property was originally acquired by complainant or its constituent companies, it can hardly be doubted that it was sound business policy to purchase these entire tracts, notwithstanding the whole area of each block purchased might not be

immediately required. Ordinary business prudence required the company to anticipate the growth of the company and the requirements of increased business. If odd lots occupied at the time by tenement houses, for instance, had been cut out they would detract from the value of the balance of the block and hamper the company in making such necessary extensions or additions as might from time to time be required. In plants as large as those of complainant it is inevitable that there should be here and there a small lot not covered at the moment with material or apparatus, but which, in view of the requirements of the business it would be extremely poor policy to sell. Its use may at any time be required. The company would not, of course, be justified in buying and holding real estate merely because of the fact that it was likely to enhance in value and irrespective of any necessity therefor in the business of gas making. On the other hand it seems clearly unreasonble to require that every plot of land owned by the company should be occupied to its utmost capacity and in constant use, in order that such property should be considered as part of the company's gas-making investment. In my judgment, none of the property in question can properly be regarded as unnecessary, under the circumstances. It may be pointed out further that the fact that these properties are rented as
528 above described, does not necessarily impose any additional burden upon the consumer of gas, notwithstanding their value is included with the assets of the company on which it is entitled to a return. The real estate rents appear as part of the miscellaneous income of the company and as will hereinafter appear, they are taken into account in determining the net profits of the company applicable to dividends."

Whereas the Master should have found that the parcels cited were not used by the complainant in the manufacture of gas (Francklyn, pp. 68, 69, 70).

That the sites are too valuable in New York to extend their existing plants (Bradley, p. 220).

That ordinary business prudence then did not require the holding of such real estate for extensions. That complainant already had considerable space and that the plants were greatly extended, and could, if necessary, be more advantageously constructed.

That by calculating from Complainant's Exhibit 48, as to area of the real estate and from pages 1351 and 5120 *et seq.*, as to areas of the plants, it appears that the output per square foot varies greatly in the different plants showing a more advantageous arrangement in some plants than others. That such difference is accounted for by the use of more modern and larger apparatus.

That lots not actually used by complainant in the manufacture could not be included in the investment on which a return was to be figured until such parcels were actually used; that only those actually and in constant and necessary use could be included.

That while it might be poor policy from an investment standpoint in view of the rapid rise of land values, to sell odd parcels not so occupied and in use, the value thereof should not be included in the gas making investment as against the consumer.

529 That the inclusion of these rented properties does impose an additional burden on the consumer notwithstanding the rents therefrom are included in the miscellaneous income of complainant, as such rents, according to the Master (pp. 16-17), amount to less than 6 per cent. on an investment of $268,250, and as the Master claims complainant is entitled to a 6 per cent. return, the consumer is prejudiced to the extent of the difference as well as the necessity of paying the taxes thereon, as included in the cost of gas.

That there should be deducted from the valuation of complainant's real estate upon which it is entitled to a return the sum of $268,250 allowed by the Master for said property.

b. Land Vacant.

Ninth Exception. For that the Master has found on p. 20 of this report as follows:

"Of the seven plots above described only two are wholly vacant. In view of their proximity to other property of the company, and in default of further evidence of unavailability than is shown by the record, I find that they may reasonably be considered as a proper part of its operating plant. In the single instance where the evidence gives no indication that the property is not used or intended to be used in some way in connection with the gas business, namely, the parcel on the south side of Fifteenth street, Block 972, the amount involved is not large. Its value, according to the witnesses for the City, is about $12,000. Under the circumstances and in view of the numerous uses to which property of this sort can properly be put for storage and other purposes by Complainant, I am not disposed to exclude it."

530 Whereas he should have found that these parcels were vacant and not used by the complainant in the gas business (Francklyn, pp. 71, 72, 76).

That the sites are too valuable in New York to use for extension of plants (Bradley, p. 220).

That calculations based on Complainant's Exhibit 48 as to area of land and testimony, pages 1351 *et seq.*, and 5120 *et seq.*, as to plants show that some of complainant's plants are more advantageously arranged on the basis of output per square foot than others; that land not actually and necessarily in use by the Complainant in the gas business cannot be included in the gas investment upon which a return is to be provided;

That in a locality like New York when land is so expensive the complainant is not justified in spreading over large areas or using ground areas only for storage when buildings with floors could be used and employ such areas to more efficient use.

That there should be deducted from the valuation of the real estate upon which the complainant is entitled to a return the sum of $745,155 allowed by the Master for said property.

c. Property not owned.

Tenth Exception. For that the said Master has found on page 21 of his report:

"It is not deemed necessary to consider the merits of the questions thus suggested. In one form or another they have been frequently

before the Courts of this State, but it can hardly be said that the proposition for which the City contends is so decisively settled for all purposes as to admit of no further question. However this may be, it is obvious that the question of complainant's title cannot be adjudicated in this action. For present purposes it is sufficient
531 if the property is occupied by complainant under a claim of title and used by it in connection with its business of gas making. This requirement is sufficiently met by the proof."

Whereas said Master should have found: that not sufficient evidence of title was presented by complainant as to the parcels considered under this division; that mere possession of such parcels is insufficient to acquire adverse possession as against The City of New York where the property has been reserved for street purposes; that no evidence was presented by complainant as to the ownership of blocks 715 and 716, not mentioned by the Master.

That the value of such parcels should not be included in the gas investment on which a return was to be provided; but that there should be deducted from the valuation of the real estate of the complainant upon which it is entitled to earn a return, the sum of $932,255 allowed by the Master for said property.

Eleventh Exception. For that the said Master has found on page 22 of his report as follows:

"It may be noted also that, even assuming the City's contention to be correct, it would not practically affect the issues involved in this action. Should the complainant be compelled to vacate the lots in question, upon which are located integral parts of its plants, it would obviously be compelled to acquire land of equivalent areas as nearly contiguous as possible. It may well be doubted, in view of the evidence, if such equivalent land could be obtained for a price as low as the appraised value of the land so vacated."

Whereas he should have found that if complainant were required to vacate such parcels it does not follow that similar areas would have to be acquired, as nearly contiguous as possible; that
532 complainant holds ample area already for such extension if required as appears from comparison of areas of land computed from Complainant's Exhibit 48 and of buildings computed from testimony, pp. 1351 *e*[illegible]*q.*, and 5120 *et seq.* That complainant furthermore has not [illegible]austed its ability to extend up in the air by use of more modern apparatus. That other areas could, if necessary, be acquired for less than the appraised value.

d. **Land unimproved.**

Twelfth Exception. For that the said Master has found on page 23 of his report as follows:

"As to the remainder of the property in respect of which a deduction is claimed, part of which has already been considered under land leased, the only proof introduced by the City consisted of a statement showing its assessment for purposes of taxation for the year 1906 as vacant land. The mere description of a particular parcel as 'unimproved' or 'vacant' in an assessment roll is not sufficient foundation for the conclusion that the property is not used by complainant in its gas-making business. It may very well be, and the proof in many instances showed, that the parcels assessed as vacant land were used for purposes necessary in connection with complainant's business, as, for example, the storage of coal, coke, pipe fittings, tools and castings."

Whereas the said Master should have found that the record showed that in addition to the said property being assessed only as unimproved land for the year 1906, that said property was vacant and not used by the complainant in the gas business, and not necessary for such purpose.

533

Block 690.

Francklyn, p. 69, shows five lots leased. State's Exhibit A, page 175, of Exhibits, shows ten lots in all that are unimproved.

Thompson, p. 2732, shows wagon yard on Marginal street, and

Rowland, p. 183 of Exhibits, shows coal yards and pipe yards, which must be construed unnecessary now, as Eighteenth street is no longer an operating plant.

Mayer, p. 1378, describes coal yard fence, 520 feet, nine feet high—assuming this to be enclosed on four sides we would have a plot 130 feet square, which is considerably more than five lots 25 x 100.

Block 715—Lot 51.

State's Exhibit A, p. 175 of Exhibits, shows lot 51 unimproved.

Francklyn, p. 50, shows this block contains two gas holders.

Rowland, p. 184, describes gas holder building 188 x 92.

Mayer describes same building, 1378. Also wagon shed 21 x 28 x 15, timber covered with corrugated iron.

Complainant's Exhibit 48 shows this parcel as 92 feet deep by 225 feet long.

That one lot 25 by 92 is not required for holder and not occupied or used in the gas business at present.

Block 952, Lot 29.

State's Exhibit A shows this lot unimproved.

Block 987.

State's Exhibit A, p. 176 shows this entire block as unimproved.

534 In 1884, when this parcel was conveyed to complainant, it was part of Block 978, which, according to description, ran from Avenue A to East River (Complainant's Exhibit 19, p. 85, paragraph "Fifth").

Rowland, p. 217 of Exhibits, mentions

"*Enclosure east* of storage warehouse, wooden fences enclosing the property east of storage warehouses bounded by Twentieth street, East River and Twenty-first street."

Preiss, p. 1334, in giving his value thereto, adds nothing for improvements.

Thompson, p. 2736, describes it as vacant land, also McHale, p. 2925.

Block 1071, Lots 10, 11, 12 and 13.

State's Exhibit A, p. 176 of Exhibits, shows these lots as unimproved.

Complainant's Exhibit 48 shows parcel was conveyed by Henry Murray and wife to complainant July 7, 1898. Complainant's Exhibit 35, p. 221-2 of Exhibits, in describing the premises makes no mention of any building.

Thompson, p. 2736, and McHale, 2826, describes it as vacant.

Wheelock, p. 1111, and Preiss, 1335, add nothing for improvements.

Block 1683, Lot 18.

State's Exhibit A, p. 176, shows those lots as unimproved.

Thompson, p. 2740, and McHale, p. 2830, describe premises as "vacant with exception of small brick building in rear of lots facing on One Hundred and Eleventh street."

535 That there is no proof that such parcels were used in connection with the complainant's business for storage of coke, coal, pipe fittings, tools, castings, etc. That such use, together with the use of parcels for pasturing of horses, is not necessarily a proper use for unimproved real estate in Manhattan, in conjunction with complainant's gas business where such storage could be obtained on other portions of complainant's property actually and necessarily in use, or in properly constructed buildings making proper use of floor areas.

That the value of such parcels is not properly to be included in the gas investment on which the complainant demands a return; that there should be deducted from the valuation of the real property of complainant on which a return is allowed, the sum of $715,750 allowed by the Master for said property.

Thirteenth Exception. For that the Master in his report on page 115 has found:

"Whatever enhancement there may have been in its value since the date of purchase was the result of no efforts on the part of consumers of gas, and they are not equitably entitled to a return thereon. Whether it was the result of mere good fortune or was due to the shrewdness and foresight of the management of the company is immaterial; in either case, the justice of permitting the general public to share its benefits at the expense of complainant's stockholders is not apparent."

Whereas he should have found that whatever enhancement there may have been in its value since the date of purchase was the result of no efforts on the part of the complainant, but, according to complainant, p. 3819, due to "Divine Providence and the growth of The City of New York."

536 That the capitalization of the increased land value, and also of franchises and paving is not allowed either in Massachusetts or Great Britain (pp. 3024-3068).

That the complainant is not entitled to include such enhancement in the gas investment on which the consumer must provide a return, but that complainant may get the benefit of such enhanced value upon the sale of such property when it will be treated as a surplus entirely, and must be so treated prior to its liquidation. That to so do imposes no burden upon the complainant, as the taxes are paid by the consumer during the time the property is held.

That to do otherwise would be to impose a greater burden upon the consumer, which would in time enable even a dollar rate to be held confiscatory, since the investment on which the return is figured, would be continually enhancing.

II.—Plant.

Fourteenth Exception. For that the said Master has found on pages 37 and 38 as follows:

"In this instance, as well as regards the three items next to be considered, such reproductive cost affords the only practicable basis of present valuation. While the real estate has a substantial value irrespective of the purposes for which it is now held, the plants, mains, etc., are of value only when used by a going concern. For any other purpose they are merely scrap, or secondhand machinery, and their intrinsic worth is inappreciable. As to their market value, there is no means of judging. Dr. Marks, it is true, testified that his valuations were made from the standpoint of an intending purchaser desiring to take over the plants and operate them as a whole. But any such purchaser in order to continue business must own complainant's franchises in addition to its tangible property, else 537 the tangible property would have no substantial value. (People *ex rel.* Consolidated Gas Co. *vs.* State Board, etc., 174 N. Y., 417, 440.)

"There is no evidence as to the market value of any of complainant's property taken in connection with its franchises, and disposed of as part of a going concern. Furthermore, it is clear that a valuation that might be proper as between purchaser and seller would not necessarily be a fair one for the purposes of the present case. The evidence shows without contradiction that capitalists purchasing entire gas properties expect a return on their investment of at least 10 or 15 per cent., which much exceeds any rate conceded by defendants to be a proper return to complainant. On the other hand, a capitalization on the basis of reproductive cost seems fair to all parties. Complainant receives a return on the present value of its property as used, while the consumer pays no more than he would be required to pay had complainant abandoned business, or a new company entered the field as its competitor."

Whereas he should have found that the only practicable basis of the present valuation (if such present valuation is to be taken) is the standpoint of the intending purchaser, and not the reproductive cost view, that the former is the fairer method, as between the parties,

as it does not enable the complainant to burden the consumer with increased cost for depreciated, old-fashioned or inadequate machinery, but gives such machinery a fair value only; that other franchises than the complainant's can be obtained from the proper authorities upon application, that nothing appears from the record that such a new franchise would require any original outlay; that no franchise would in fact be required for the manufacture, as distinguished from the distribution of gas; that a return on the present value of complainant's property as used, based on cost of
538 duplication, burdens consumer by requiring him to pay return on a value in excess of complainant's real investment, that such consumer would then pay more than if a competitor entered the field, as such competitor would not duplicate the antiquated and old-fashioned plants of complainant, but would construct an ideal plant to meet the given output; that the taking of duplication cost of complainant's plants as basis, imposes on the consumer all the burdens without giving any of the benefits of the competition theory.

Fifteenth Exception. For that the said Master has found that the complainant is entitled to a return on the present value of the plant, based on the cost of reproduction, and not on the original cost less depreciation, whereas he should have found that where such present value based on the original cost less depreciation, is less than the present value based on the reproduction cost, that the complainant is entitled to a return as against the consumer only on the smaller amount. Otherwise, the consumer is burdened with paying a return on money never spent, and deprived of benefits accruing from duplication by an ideal plant, while no injustice can accrue to complainant in allowing a return on its actual investment at its present condition.

Sixteenth Exception. For that the said Master has found, pages 36 and 37:

"I accordingly find and report the value of the complainant's plants to be substantially in accordance with the estimate of Mr. Meyer, a summary of which is given below but adopting, for purposes of convenience and to allow for possible over-valuation in some details, the round figure of $15,500,000 instead of $15,532,489, as shown by the appraisal.

539 *Valuations of Plants and Holder Stations, Depreciation Deducted.*

21st Street Plant including all Holders	$4,162,021 00
44th Street Plant including all Holders	2,000,205 00
99th Street Plant including all Holders	963,011 00
14th Street Plant including all Holders	2,549,545 00
42d Street Plant including all Holders	1,744,660 00
18th Street Plant including all Holders	588,873 00
Total for all Plants........................	$12,008,315 00

63d Street Holder Station complete	$490,072 00	
65th Street Holder Station complete	1,427,317 00	
111th Street Holder Station complete	1,039,910 00	
132d Street Holder Station complete	540,702 00	
Inwood Street Holder Station complete	26,173 00	
Total for all Holder Stations		3,524,174 00
Total for Plants and Holders now in use		15,532,489 00

"This may be fairly said to represent the cost of reproducing the property as it stands."

and has found, on page 29 P.:

"Of the above valuations that of Mr. Mayer is, in my judgment entitled to most weight and may be regarded as representing with substantial accuracy the present value of the property."

540 and on page 31:

"Making all allowances for any possible predisposition in favor of the complainant on the part of Mr. Meyer, in view of his past relations with the Company, his estimates are therefore on the whole, to be regarded as the most reliable. As hereafter pointed out, they were corroborated in many particulars by the Defendants' own witnesses, and, although subjected to careful examination by the latter and a full cross-examination by counsel, no errors became apparent which would materially affect the general result of his computations."

—and on page 139 has carried such figures of $15,500,000 into the total on which a return is to be allowed;

Whereas he should have found that the present value of said plants was more nearly the figures of Defendants' witnesses, to wit, $9,348,692.00; that the testimony of Mayer was not entitled to the most weight, that his figures were excessive and his basis erroneous in many respects, which materially affected his general result; that Mayer included piling where none existed, but, where from nature of ground, he deemed they should have been (p. 6576); that Marks and Edgerton relying on Mayer's schedule, included piling wherever he stated (State's Ex., P. P. P.) and that Mayer in his testimony also included piling where according to Rowland none existed, nor shown in Mayer's schedules (Compl. Ex. 70).

That Marks made allowances for piling and other expensive foundations wherever they existed (pp. 5251, 5256, 5266).

That the correct and accepted method for ascertaining the cost of construction is by a calculation of the quantities of materials involved and applying thereto the cost of such material, including labor and builders' profit, due allowance being made for engineering, and interest on capital during the period of construction such as 541 shown in Defendants' Exhibit P. P. P. in detail for buildings and brick tanks and in the summary of the same (pp. 5116-5238).

That the method adopted by Mr. Meyer of estimating by comparison is erroneous.

(*a*) Buildings.

That Mayer's figures for cubical contents were excessive and erroneous; that his results in some instances were even more than Rowland's, made for the same building in 1884; that Mayer's basis was the buildings of the Kings County Gas and Illuminating Company, and that there is no evidence showing such buildings were similar to complainant's.

On page 6687 Mayer values 9 sheds at Twenty-first street station at $725,652, as against Rowland's $246,349 (Complainant's Exhibit 70); and to a brick and brownstone building enclosing two holders at Eighteenth street he gives a value of $179,151, against Rowland's $45,250.

The estimates of Mr. Edgerton in regard to buildings were only gone into in detail with reference to two buildings; the Governor and Boiler house, One Hundred and Thirty-second street, involving about $21,000 construction, and the generator houses at Twenty-first street valued at $129,000 new. In regard to one item there was an apparent error; brick had been taken at $14 per thousand, which was the unit price for the poorest class of brickwork instead of $21 for the highest class. With this exception there was none of the errors attributed by the Master on page 32 of the findings, as to piling omitted, foundations omitted, prices based upon cost of materials without including profit, or materials below market prices. On the contrary, the details of the estimate conclusively show that nothing was omitted that was contained in Mr. Meyer's schedules of buildings and holder tanks; but on the contrary additions were made to 542 cost of materials and labor, in many cases to the extent of twenty per cent. wherever the insufficiencies of Mr. Meyer's schedules failed to give sufficient data or there was reason to estimate on a superior construction to that defined in the schedules.

(*b*) Holders and Apparatus.

Meyer's figures were excessive, and his method was erroneous; his figures in Exhibit 376 were not "exact" shipping weights, but merely estimated or calculated weights from the dimensions taken;

That the correct method was adopted by Edgerton and was finally acknowledged by Meyer as correct (pp. 6731, 142);

That Meyer's method of comparison with similar holders (p. 6730) constructed by Bartlett, Hayward & Co., was misleading as the weights of holders have been increased in recent years, thus duplicating holders at an exaggerated weight and of a size the complainant had ceased duplicating in practice for over thirty years;

That Meyer's appraisal of the plant taken in July and August, 1906, rather than December 31, 1905, enabled the claiming of apparatus dismantled and laid aside, as apparatus merely not in use owing to small summer demand;

That Meyer applied to some of the holder construction the cost of the most expensive part, thereby increasing the cost of the least expensive part (pp. 1596-7; Compl. Ex. 376, pp. 2553-78);

That Meyer admits it costs less to-day to build benches than it did in 1884, and yet gives a greater value for same than Rowland (p. 1411) (290 and 1497).

543 (*c*) Yard Connections.

That Meyer's figures here are erroneous (pp. 1359-64); in estimating for Fourteenth street and Forty-second street he finds present value of $281,052, which with 10 per cent. and 5 per cent. added makes $324,614—a cost per 1,000 cubic feet of capacity of $34.17, as against estimated Astoria cost of $3.50 (Addicks, p. 1871), $4.36 as revised. (State's Ex. V.)

For Forty-fourth, Twenty-first and Ninety-ninth street his figures are $431,229, which with daily capacity of 38,000,000 equals $11.35 per 1,000 cubic feet.

That Meyer has included a great duplication of pipes due to changes and enlargements.

Engineering.

That the figure of 10 per cent. adopted by Meyer is excessive by at least 7 per cent. (pp. 5119-5181, 5204, 5387-91).

That Edgerton's figure in this respect, 3 per cent., was more nearly correct, and did not contain such contingencies of grading, paving, curbing, sewerage, etc., which were charged as separate items (pp. 5132-48 *et seq.*).

That the item of 10 per cent. for such engineering and contingent expenses is not justified where an inventory is made by engineers of buildings and apparatus already erected and in operation.

No such additions were made in Rowland's inventory. (Complainant's Ex. 70.)

Depreciation.

That the figure of $604,988 for depreciation adopted by Meyer was too low, being less than 4 per cent.; that it did not include obsolescence or inadequacy but merely wear and tear; that Marks'
544 average depreciation, 21 per cent. (p. 6697), was more accurate; that the plants were inadequate and obsolete in many respects and not as a whole in efficient operating condition; the total insurance carried by the complainant on buildings and holders was but $7,390,722 (City's Ex. 87, p. 1543); that the difference between the book value and the tax value of Bradley stated on p. 98 of the report represents depreciation.

That on page 36, fol. 144, Mr. Edgerton's method is commended by the Master, and his only criticism thereof is on page 35, as follows:

"The examination made by Mr. Edgerton was of such a cursory nature that his figures for depreciation were necessarily made less carefully. In one case, for instance, he ascribed the same depreciation, 10 per cent., to new apparatus installed in 1904-5 as to old apparatus installed 15 or 16 years earlier."

The Master finds such a figure for depreciation anomalous, peculiar and the result of cursory observation; whereas he should have found that a correct and careful estimate of depreciation on Lowe apparatus, to which the Master's remarks referred (p. 5980, testimony of Vice-President Addicks) should be based upon the condition of the apparatus, whether relatively new or old. A new machine of the Lowe water gas type has just as frequent shut-downs for repairs as an old one, and is just as liable to derangement. This is clearly indicated in the City's Exhibits showing the performance of the complainant's apparatus; in the testimony of Mr. Addicks, page 1774, "Yes, but water gas generators are very apt to break down and you must have some to spare for that purpose." On pp. 6055-6056 Mr. Addicks states in effect that a machine in action has depreciation accruing which will not appear in repairs until the repairs are made.

545 While a cursory study of the testimony and exhibits would not disclose these facts, they lie quite near the surface.

A fair depreciation factor in a going concern would be the amount it falls short of its fairly rated capacity during such time as there is urgent demand for its maximum output.

The Fourteenth street plant was in a dilapidated condition (p. 4661).

The eight small holders were out of use (pp. 4659-60) during the time of maximum output.

The direct fire benches at Fourteenth street produce results inferior to works erected many years ago (p. 4646).

The water gas stations (City's Ex. 87, pp. 1503-10) were short of their rated capacity from 33 to 50 per cent. during the heavy months of January and December.

Seventeenth Exception. For that the said Master in finding $15,500,000 as the value of the plant and holder stations as set forth in the exceptions has included therein.

I.—In the value of the Eighteenth street plant to the amount of $453,695 as the reproduction value of dismantled and abandoned manufacturing plant which is not now in use in the gas business.

II.—In the value of the One Hundred and Eleventh street holder station the amount of $428,019 as the reproduction value of dismantled and abandoned manufacturing plant not now used in the gas business.

III.—In the value of the Inwood holder station the amount of $26,173 for the reproduction value of abandoned plant, which is not now used in the gas business.

IV.—In the value of the Fourteenth street station the reproduction value of holders not used is included.

546 Whereas he should have deducted such values from the amount allowed by him, as such property is no longer in use.

III.—Mains.

Eighteenth Exception. For that the said Master in his report on pages 38, 39 and 40, has found the value of the mains of the complainant on which it is entitled to a return as against the consumer, to be the replacement value based on the cost of reproduction of the same.

Whereas said Master should have found said value of the mains to be the actual cost of investment therein by the complainant, less the depreciation, as the only fair basis between the complainant and the consumer, otherwise the consumer is charged with the burden of providing a return on an amount in excess of the actual investment of the complainant due to increased cost resulting from modern conditions, pavements, etc., without the consumer receiving the benefits which replacement, at the present time, under the present conditions, would give. That in no sense can the mains of the complainant, many of which have been in the ground for fifty years, be said to be at the present time of a greater value than the actual cost, merely because modern conditions would not permit duplication of such identical mains at the same cost at the present time.

Nineteenth Exception. For that the said Master in his report on pp. 38, 39, 40 and 139 finds the present value of 822 miles of mains at $12,636,000 based on the cost of reproduction thereof as specified to by Mr. Simpson, and rejects the testimony of Mr. Marks of $6,529,035 and Mr. Edgerton of $8,919,792.55, and on page 40 finds:

"Taking the testimony on this subject as a whole, the preponderance of evidence is very clearly with the complainant, and its estimate of the replacement value of the mains may be taken as reasonable."

547 Whereas said Master should have found said reproduction value was not greater than the highest figure of defendant's witnesses and that the figures of complainant's witnesses were excessive; that Mr. Simpson's testimony was inaccurate in many respects; that the total mileage was only 795.47 in place of 822 claimed; that he used an excessive price per ton for iron for 1906, instead of for 1905, and used an excessive price for excavation.

That at least 25 per cent. depreciation for inadequacy and obsolescence should be allowed, as found in tax reports on page 99, that the system of mains as existing today is inadequate, that the increase in mileage in 1905 over 1884 is only 16 per cent., that the increase in capacity of said mains during said period is a little over 100 per cent., while the increase in output is 330 per cent., that over 50 per cent. of its mains are six inches or less, and 17 per cent. four inches or less, none of which latter sizes are now laid.

Twentieth Exception. For that the said Master, in his report at pages 41 and 42 has refused to find that the appraisal value of both mains and services at the time of consolidation in 1884, was far in excess of their cost; and that the value of mains and services devoted by complainant to the public use were as of December 31, 1905, $6,359,324.46, which represents the original cost of mains and services transferred by the constituent companies to the complainant plus the expenditures of the complainant since 1884 on account of new construction thereof.

Whereas he should have found that such figures represented the then value of such mains and services on the basis of cost less depreciation, as carried on the books of the constituent companies, and that any figure in excess of such amount which the complainant claimed therefor at that time was in excess of the real value of such mains and services and such excess should not be included 548 in the investment on which a return is to be allowed, for the reason that it does not represent a cash outlay by the complainant, and any capital stock issued for such excess by complainant was unwisely and wastefully issued.

Twenty-first Exception. For that the Master has refused to find (p. 191) that owing to the consolidation of the six constituent companies in 1884, forming the complainant, there exists to-day considerable duplication of mains in the streets of the City, which would not have existed had not these companies attempted to consolidate, and that the consumer should not be required to provide a return on the value of this duplication.

IV.—Services.

Twenty-second Exception. For that the said Master on page 41 of his report, found that the complainant is entitled to a return from the consumer on an amount for services based on the cost of reproduction at present prices; whereas he should have found that if the basis of present value is to be taken, no amount at all could be charged by the complainant, as such services are no longer owned by such complainant, inasmuch as so much thereof as are in the public streets are considered as separate from the franchises, and the balance thereof as is on private property belonged to the owner of said property, and that it is only when the basis of actual cost, less depreciation, is adopted that any amount for services can be included by the complainant in the amount on which a return is to be provided by the consumer.

Twenty-third Exception. For that the said Master on pages 41 and 139, has fixed the value of the services on which the complainant is entitled to a return at $1,994,000, that such amount is based on the cost of reproduction and is excessive in that it capitalizes pavements and allows no depreciation, that complainant has claimed such services depreciate to the extent of 25 per cent. (p. 99 of Report), that the proper present valuation is the cost less de- 549 preciation, and such value does not exceed $1,222,228.37, as shown on the books on December 31, 1905.

V.—Meters and Miscellaneous Personal Property.

Twenty-fourth Exception. For that the said Master in his report, on page 42 thereof, finds that the amount which the complainant is entitled to a return on as against the consumer for meters and miscellaneous personal property is based on the reproduction value thereof at $4,100,000, adopting the estimate of Mr. Carter; and on p. 139 he carries such figures into the total.

Whereas he should have found that such reproduction value was excessive; that such reproduction value is not a fair basis, as between the plaintiff and the consumer, in that it burdens the consumer with providing returns on an increase over the actual investment of the complainant, which increase is due to modern conditions, without allowing the consumer any benefits which reproduction by an ideal plant at the present time would give; that the only fair method between complainant and the consumer of determining the present value is to take the actual investment of complainant less depreciation, and such value should not exceed the figures of $3,261,687.

VI.—Working Capital.

Twenty-fifth Exception. For that the said Master on page 44 has found that a much larger working capital is now required than that conceded by the City and that nothing is found in the evidence to justify the conclusion that the sum of $3,616,000 claimed by the complainant is excessive.

Whereas he should have found that the amount of $2,000,000 included in said sum of $3,616,000, being the amount of accounts receivable outstanding, should not be included therein.

550 VII.—National Coal and Coke Company.

Twenty-sixth Exception. For that the said Master, on page 44 of his report, has found that as the carting of coke is a necessary incident to the disposition of one of the complainant's residuals, there is apparently no reason why the amount invested as above ($50,000) should not be regarded as part of complainant's capital on which it is entitled to a return.

Whereas, the Master should have found that the complainant was not entitled to include said amount in its capital; that said business is a separate and distinct business run by a separate corporation and that its inclusion is prejudicial to the consumer.

VIII.—Astoria Plant.

Twenty-seventh Exception. For that the said Master has found on pages 52 and 139 of his report that item No. 8 as claimed by the complainant, amounting to $12,000,000, for Astoria, should be allowed to be included by the complainant in its assets on which it is entitled to a return and should be designated as "property of other companies employed in the production of gas delivered by them to the complainant," and that on page 51 the Master finds "obviously, however, it must be taken into account in some form, for the complainant is quite as much entitled to a return upon its capital employed in the purchase and distribution of gas made by some outside company as on the capital employed in the manufacture of gas at its own works."

Whereas, he should have found that such amount should not have been allowed at all; that the capacity of the complainant's works was sufficient to manufacture all of the gas bought from other companies during the year 1905 if the complainant had deemed it for its best interests so to do rather than to purchose such gas, unless it be held that such plants were in greatly depreciated state
551 and incapable of approaching their maximum output. That while from the stockholders' standpoint the complainant might be justified in buying gas where it could be done cheaper than by manufacturing it at its own plants, it cannot burden the consumer by increasing the gas investment on which it claims a return to the extent of the capital necessary to make the gas bought. That where complainant's output was sufficient to cover the total consumption, any attempt to include in the gas investment the capital necessary to produce the gas bought would be equivalent to a duplication to that extent of the complainant's investment as against the consumer.

Twenty-eighth Exception. For that the said Master in his report on page 48 has found that the complainant's claim of $12,000,000 for the allowance of the Astoria investment is not excessive.

Whereas, he should have found such figure was excessive. That if such investment was to be allowed at all it should not exceed the figure of $5,096,000, as shown by Dr. Marks, or the figure of $3,836,000, as set forth in this defendant's amendments, pages 200 to 204, and disallowed by the Master. That the testimony of Professor Bemis shows that it does not cost as much to increase the capacity of a works by 3,000,000,000 cubic feet per annum as to build a complete works for such additional amount. That the complainant, holding so much vacant leased and unimproved real estate in the Island of Manhattan to provide for future contingencies, is not justified in claiming the value of this new investment until it has shown that extension on its existing properties is impossible.

Twenty-ninth Exception. For that the said Master finds on page 51 of his report the maximum daily output of the complainant during the year 1905 is about 70,000,000 cubic feet.

Whereas, he should have found that such maximum output did not exceed 51,000,000 cubic feet, as can be shown in detail by computation from the testimony.

552 *Thirtieth Exception.* For that the said Master has found that the maximum daily capacity of the complainant's plants was but 51,000,000 cubic feet.

Whereas he should have found such maximum daily capacity was at least 58,500,000 cubic feet as appears from the calculations based on complainant's exhibits.

Thirty-first Exception. For that the said Master on page 61 of his report has found that the 20 per cent. reserve of the complainant's manufacturing capacity is necessary in a large city like New York, and that the complainant to cover such reserve was justified in buying gas from other companies.

Whereas he should have found that ample reserve capacity existed in the complainant's works at the present time as shown from their own exhibits unless complainant's plants must be admitted to be in a greatly depreciated state and incapable of approaching their maximum output.

IX.—Franchises.

First. As to complainant's ownership of existing franchises.

Thirty-second Exception. For that the said Master in his report on page 65 has found that the Statute of 1884 under which the complainant was organized, cured defects in the franchise of the Harlem Gas Light Company.

Whereas he should have found that said act did not authorize nor apply to the consolidation effected by the complainant or in any manner revive or validate franchises of the six constituent companies.

Thirty-third Exception. For that said Master has found on pages 52 to 73 that complainant at the time of enactment of the statutes and the making of the order complained of, owned, by virtue 553 of the consolidation whereby complainant was consolidated and devoted to public use, franchises to carry on a gas business in The City of New York and to use the streets, avenues and public places thereof for that purpose as follows: The franchise granted to the New York Gas Light Company; The Manhattan Gas Light Company; The Metropolitan Gas Light Company; the Municipal Gas Light Company.

Whereas he should have found that at the times aforesaid the said franchises, rights and privileges formerly conferred thereby had ceased, terminated and expired.

Thirty-fourth Exception. For that said Master has found that complainant was the owner by virtue of the consolidation whereby it was created, of the franchises to carry on a gas business in The City of New York, and to use the streets, avenues and public places thereof for that purpose claimed by the Knickerbocker Company by and under chapter 944 of the Laws of 1871, and on page 63 has found that the objections to the Knickerbocker Gas Light Company franchise under chapter 944 of the Laws of 1871, and by assignment from the Anthracite Company, are technical and many of them could obviously be cured.

Whereas said Master should have found that the said Knickerbocker Company never owned or had the legal title to the franchises, if any, conferred thereby and that complainant never held or owned and has never been entitled to and is not now entitled to use the same, and that such assignments not having been recorded and not having seen the light of day since their execution until this action was brought, that all objections and irregularities noted, or the great majority of them, were important and material, and at least until such defects were cured or explained the records relied on had no probative force whatever.

Thirty-fifth Exception. For that the said Master has found that

the said complainant owned by virtue of the consolidation
554 whereby it was created, the franchises to carry on the gas
business in The City of New York and to use the streets, avenues and public places thereof for that purpose, granted to the Harlem Gas Light Company and that the same was an assignable franchise in perpetuity at the time of the enactment of the statutes and the making of the order complained of, property of the complainant devoted by it to public use.

Whereas he should have found that the said franchise- granted to the Harlem Gas Light Company ceased and expired on May 26, 1905, and were not at the dates aforesaid property devoted by the complainant to public use.

Thirty-sixth Exception. For that the said Master on page 63 of his report finds that under the Charter of The City of New York the municipal authorities have been permitted to grant franchises only on condition requiring a substantial return to the City.

Whereas said finding is not justified as there is no evidence in the record to support the same.

Thirty-seventh Exception. For that the said Master in his report on pages 63, 70 and 71 finds as follows:

(Page 93.) "In short, so far as the present record shows, the municipal authorities have fully acquiesced in the continued use and occupation of the streets by complainant.

"These considerations would appear to be sufficient for the purposes of the present case, and render unnecessary a discussion of the elaborate arguments submitted by counsel."

(Pp. 70 and 71.) "Having in mind the distinction drawn in the foregoing decision between the consent necessary to confer a franchise and the mere administrative function of regulating the details of opening the streets, there would seem to be little question
555 as to the validity of the rights now enjoyed by the older constituent companies: The consents to occupy the streets were given in the case of the New York and Manhattan Companies by the grants, and in the case of the Metropolitan Company by the resolution of the Common Council, above recited. It is true that such consent was in each case for a limited period, but, in view of the acquiescence of the municipality in the continued use and occupation of the streets for many years after the expiration of such periods, each company can now claim that it has, as the Court said, 'a perpetual and indefeasible interest in the land constituting the streets' of the municipality. The only right that remains in the municipality is that of controlling, through its proper administrative officers, the details of opening such streets. In other words, the municipal authorities having, whether by formal consent or by acquiescence, assented to the 'digging into' of the streets for the laying of the mains, have exhausted their power, excepting as to the matters of police regulation involved in the opening of street surfaces for repairs and the like. In view of the time that has elapsed since the expiration of the original grant—in the case of the New York Company over fifty years, during which time the company has continued to supply gas to the public in accordance with its charter—it would

seem that the municipality is certainly estopped from asserting a position inconsistent with its own practical construction of the effect of the original grant. I have been referred to no authority precisely in point, but the trend of the decisions supports the views above expressed."

Whereas, said Master should have found that the complainant cannot and has not gained any franchise by any omission of the City or by adverse possession, nor is the City estopped by any 556 acquiescence on its part in the unlawful use of the streets. That the City, though the largest single consumer of the complainant, does not represent all the consumers, and that the remainder of such consumers should not be prejudiced by any acquiescence or omission of the City.

Second. Complainant's Right to a Return.

Thirty-eighth Exception. For that the said Master on page 73 of his report has reached the conclusion that the complainant having valid existing franchises, such franchises constitute such property as is properly included among the assets upon the value of which complainant is entitled to a return;

Whereas he should have found that even if such franchises were valid and existing, they did not constitute property properly included among the assets upon which complainant is entitled to a return. That there is no evidence in the record showing the original cost of such franchises to the complainant, and that in the absence of the sum originally invested therein, whatever value such franchises may have at the present time is entirely a resultant value depending on the possibilities of the business which the franchise covers. That the greater profits the complainant can make in such business the greater becomes the value of the franchise. That as the value of the franchise depends upon the profits and therefore upon the rate, any change in the rate affecting the profits must affect the value of the franchise, and therefore to include the present value of the franchise in the assets on which a return is to be allowed in fixing a rate, is to reason in a circle and to enable the complainant to lift itself up by its boot straps, *i e.,* the higher the rate the higher the value of the franchise, and as the complainant claims the higher the value of the franchise the greater must be the rate to allow a return thereon. That in time, under such conditions, with only the normal increase in business augmenting the value of the franchise, any rate would become confiscatory and rate regulation impossible.

557 *Third. Value of the Franchises.*

Thirty-ninth Exception. For that the said Master in his report under this head has included in the property on which the complainant is entitled to a return the present value of its franchises;

Whereas he should have allowed only the actual investment therein or cost thereof and that there is no proof of such cost to complainant as is more fully stated in the previous exception.

Fortieth Exception. For that the said Master has allowed for franchises and good will the figure of $20,000,000 as the present value thereof, based on the receipts for the year 1905, whereas such value was excessive in that it was based on a year when the rate of $1 per thousand feet of gas was in force.

X.—Good Will.

Forty-first Exception. For that the said Master on page 90 of his report finds that "It is clear, however, that each (good will and franchise) is of substantial value and contributes very materially to the complainant's earning capacity."

Whereas he should have found that good will may be considered as of some value in cases of condemnation sale or taxation, and that the same should not be considered in a proceeding to determine the property on which the complainant is entitled to a return when a rate has been fixed, for substantially the same reasons set forth in the exceptions to the inclusion of the present value of the franchises. Furthermore, good will as to a monopoly is impossible of definition other than the expense of getting the business started, that is of initiating a going concern. That such expense is covered under the head of working capital. The usual and accepted definition of good will applying to ordinary trade ceases where a monopoly
558 is concerned, as the consumer has no alternative but to deal with the monopoly.

Forty-second Exception. For that the said Master in his report on page 92 thereof finds that the average price of complainant's stock in the year 1899 was 193; that at such rate the complainant's then capital of $39,078,000 would represent a valuation of $75,420,540; that the average between 1885 and 1899 was 155.8, which for the entire capital would amount to $60,883,000, and that tested by this standard the present valuation of $63,357,000 for the complainant's assets, exclusive of franchises and good will, would appear to be conservative;

Whereas the said Master should have found that such comparison was inaccurate in that it is manifest that the market price of the complainant's stock includes the value of its earning capacity and unexpended surplus.

Forty-third Exception. For that the said Master on page 99 in considering the figures in complainant's tax reports has failed to give proper weight to same as disqualifying the figures of said witnesses given elsewhere on the same property.

Cost of Gas.

Forty-fourth Exception. For that the said Master on pages 123-4 has found as follows:

"After careful consideration of the evidence I have reached the conclusion that a fair computation of cost is as follows:

Cost per thousand cubic feet of sale, as per Exhibit 94			74.81c.
Deduct:			
Item 69, fixed charges	7.32c.		
559 From Item 66, taxes computed on excess dividends paid on stock invested in securities of other lighting companies	.48c.		
Item 54, interest on consumers' deposits		.39.	
There should also be a deduction from Item 43, cost of gas manufactured under agency agreement representing the 10 per cent. in excess of the cost of gas paid by complainant to the subsidiary companies; this was deducted only by the witness, Hall, and represents an expense per thousand cubic feet of	1.08c.		
Less, however, an allowance for proportionate station and distributing expense in connection with the gas so bought of	.30c.		
Making a net deduction of		.78c.	
			8.97c.
Net total			65.84c."

560 and on pages 139-140 he finds as follows:

The net earnings for the year 1905, adjusted in accordance with the views already expressed, were $4,983,928.31, arrived at as follows:

Gas sales				$13,552,482 97
Miscellaneous income				172,710 53
National Coke & Coal dividend				5,000 00
Total				$13,730,193 50
Operating expenses (as per Exhibit 94)			$9,936,910 42	
Less—				
Fixed charges		$972,423 44		
Interest on consumers' deposits		51,391 52		
Taxes not applicable to gas business on earnings	$5,257 48			
On dividends	57,965 39			
		63,222 87		
Premium paid for gas manufactured under agency agreements, 13,283,000,000 cubic feet at .78 cents		103,607 40		
			1,190,645 23	
				8,746,265 19
Net earnings				$4,983,958 31"

and on page 149, complainant's amendment X as allowed:

"The above expenses, $8,746,265.19 represent the 65.84c. per thousand feet of gas sold in 1905 as above found; and accordingly include no allowance to bring current repairs and renewals up to the average of the company's previous experience, or for final renewals or reserve fund, or for actual increase in cost of enrichment or taxes or labor, or for renewals and depreciation on property 561 employed outside complainant's plants in production of gas sold by it, except to the extent hereinbefore stated."

Whereas, said Master should have found that such cost of gas more nearly approximates the figures of defendant's witnesses, and is in the vicinity of 52.50 cents with the deductions made as hereinafter claimed in exceptions numbered forty-fifth to fifty-third, inclusive.

That said 52.50 cents represents an expense of $6,922,738.35 which deducted from the total receipts of $13,730,193.50 leaves net earnings of $6,807,455.15.

Forty-fifth Exception. For that the said Master has allowed the complainant to include in its Cost of Gas Item No. 47, Repairs to Gas Stoves, amounting to $55,954.35, whereas said Master should have found that such item forms no proper part of the cost of the complainant's gas and should not be included therein; and further that as complainant receives a rental from its gas stoves of $67,367.62 the repairs to said gas stoves amounting to $55,954.35, deducted therefrom, would leave a net income of $11,413.27.

Forty-sixth Exception. For that the said Master on pages 102-3 has allowed complainant to include in the cost of its Gas Item No. 53, Street Lamps, amounting to the sum of $289,259.09, whereas the Master should have found that such item forms no proper part of the cost of complainant's gas, and should be excluded therefrom.

Forty-seventh Exception. For that the said Master on pages 103-4 of his Report, has allowed the complainant to include in the cost of Gas Item No. 58, General Office Expense, amounting to $25,671.74 and Item No. 61, Advertising and Legal Expenses, $63,401.65, whereas said Master should have found that such items were exceptional and unusual; that they were not apt to recur regularly; that to include the same in the cost of gas would be prejudicial to 562 consumers in the future; that such expenses would not recur; and that the same form no proper part of the cost of gas, and should be excluded therefrom.

Forty-eighth Exception. For that the said Master, on page 104 of his Report has included in the Cost of Complainant's Gas, Item No. 62, Real Estate Rents, amounting to the sum of $42,674.71; whereas he should have found that there was no evidence tending to show that the property so rented was necessarily used in the business of making and distributing gas; that such item formed no proper part of and should not be included in such cost.

Forty-ninth Exception. For that the said Master, on pages 104-5 of his Report has included in the cost of complainant's gas the following portions of Item No. 66, designated Taxes:

A. Taxes on $41,356,409.86 stock in gas business......	$62,034.61
B. Interest on unpaid taxes........................	94,506.29

whereas, he should have found that such amounts did not represent expenses likely to recur in future periods, and to include them in the cost of gas herein would be prejudicial to consumers in the future; that the same form no proper part of the cost of gas and should be excluded therefrom.

Fiftieth Exception. For that the said Master has included in the cost of gas in Item 66, taxes on special franchises to the amount of $406,909.23,

Whereas such amount has not yet been paid, is being litigated and may never be paid, is based on a value predicated on a rate of $1.00 per thousand feet of gas; that such tax was intended to reach the surplus earning capacity of the business after a fair return is
provided (p. 81 of Report, fol. 323) and therefore to burden
563 the stockholders not the consumer, that a fixed rate is not re-
quired to produce a surplus net earning to be not confiscatory and not producing such, no taxable basis would be provided.

Fifty-first Exception. For that the said Master has failed to deduct from the cost of gas the amount of the taxes on real estate held by the complainant but not used in the gas business,

Whereas such amount should be deducted from the cost of gas in the same manner as the value of such real estate is deducted from investment.

Fifty-second Exception. For that the Master has neglected to deduct from the apparent price of gas the sum of 3.6 cents, as claimed in defendant's amendment No. 16, p. 198.

Fifty-third Exception. For that the said Master on pages 124, 125 and 126 of his report with regard to Item No. 67, contingent expenses, including renewals, amounting to $1,328,316.37, has found as follows:

"I am satisfied that the charge of 10 cents per thousand feet for "Contingent Expenses," including renewals and replacements, as shown by Item 67, is not excessive but, on the other hand, rather conservative. I have not deemed it necessary to differentiate between the amount to be allowed for final renewals and for contingencies, nor to determine that any fixed amount should be added to the current expenditures for repairs and renewals to bring them up to the average of former years. It is sufficient to say on this subject that the annual expenses for repairs and renewals has been very considerably less per thousand feet since the year 1900 than during the period between 1884 and 1889, inclusive. The renewals for 1903 were $237,576.96, as against $282,219.67 for 1905. With
this single exception, the renewal charges for the five years
564 from 1900 to 1904, inclusive, were very considerably larger
than for the year 1905. The testimony as to amount of depreciation now observable in the plants, or for which allowance should be made in appraising their value, indicates with reasonable certainty that the annual expense for renewals and replacements is likely to be over, rather than under, the 2.12 cents per thousand of the year 1905. This takes into account no extraordinary charge due to abandonment or "scrapping" of plant in consequence of anticipated removal at some later date to Astoria.

"As regards the elements to be taken into account in fixing a proper amount of reserve for contingencies, the direct testimony was confined chiefly to the matter of electrolysis. That this is a danger which may be reasonably apprehended is evident from the fact that it has received very considerable attention from electrical experts throughout the country, and has been made the subject of special investigations on behalf of interests having capital invested in subsurface construction. No special damage has been shown to have thus far resulted in this City, and the evidence indicates that all possible precautions are being taken to prevent it and with a reasonable assurance of success. In view, however, of the increasing number of electrical installations now in progress in this City, with currents of unusual power, it cannot be wholly disregarded. The danger of explosions is more immediate. Experience has shown that such catastrophes are not at all uncommon in the experience of this and other companies and may occur entirely without fault of the companies' servants. Under existing conditions, the chance of their occurrence is likely to increase rather than decrease. It is also apparent that, in view of the increasing number of subsurface structures in New York City, the expenses to which complainant must be subject in the care and maintenance of its mains and connections are likely to increase, and this fact in connection with the continued rise in the price of labor and materials, indicates strongly the necessity in prudent corporate management for maintaining a reserve in excess of the actual expenditures called for by known requirements." 565

Whereas he should have found that such charge of 10 cents a thousand cubic feet for contingent expenses was excessive and not a proper amount to be included in the cost of gas; that as to the element (1) final renewals, it represents a recharge for depreciation of plant which is improper unless there is taken into consideration a similar depreciation of complainant's plants from the time of its consolidation in 1884, which wasn't done on the books of the complainant, and which, had it been done, it would have reduced the value of complainant's present investments considerably, or would have provided a sinking fund of ample proportions to cover any such contingencies at the present time; that complainant not having seen fit to keep its surplus unimpaired but having preferred to conceal the same or pay the same out for dividends or to tie the same up with its real estate holdings or to expend it for construction or for the suppression of competition is not justified in burdening the present consumer with such an excessive charge to cover possibilities of final renewals. As to the element (2) reserve fund, the danger from electrolysis is remote; that complainant's witnesses state the mains to be in absolutely perfect condition today notwithstanding the fact that electricity has been in use for a number of years; that as to explosions the danger is remote—the instance of the Boston Subway explosion not being shown to have been a necessary result, but apparently due to the gas company's neglect (Testimony, p. 3021); that such single instance, the only one cited in the record, does not justify

its perpetuation by a provision being made in the cost of gas
566 to cover similar possible contingencies; that such item is excessive and should not be included as an element in the cost of gas.

Suggested Economies.

Fifty-fourth Exception. For that the Master at pages 126, 127, 128 and 129, under the heading of Suggested Economies, has refused to allow any reduction in the cost of gas to complainant under the several headings there set forth, and has disregarded other headings suggested by defendant, and on page 150, has allowed and found complainant's amendment XII, reading in part as follows:

"Nor is there any satisfactory evidence that any of the expenditures of the complainant for material, labor, or otherwise in the manufacture and distribution of gas have been improper, unnecessary or unreasonable."

Whereas he should have found as follows:

Oil.—That the cost of gas to complainant is increased unnecessarily by injudicious use and purchase of oil; that it is unnecessary for the complainant to make one contract for all its oil, where it claims that there is only one company which can supply the total amount required; that separate contracts could be made for the separate stations in the same manner as with the Mutual Gas Light Company; that the complainant abandoned in 1905 a contract more advantageous than the one subsequently entered into; and by the proper use of modern machinery complainant would not be restricted to homogeneous oils; that the prices paid by complainant are excessive and above the rates paid by other companies.

Coke and Other Residuals.—The residuals from the manufacture of gas are handled by middlemen with poor results to the company. That the yield of salable coke is insufficient, that the coke sales of the company are stated by the Master to have averaged $4.71
567 per short ton (2,000 pounds) to the "inside" company handling the coke, while but $2.35, or one-half is realized by the gas company. Although the stock of the company which handles the coke is owned by the Consolidated Gas Company, the returns to the gas company amount to but four cents per 1,000 cubic feet of gas sold. That the other residuals are not handled to the best advantage. Coal tar is handled by an outside corporation on still better terms to itself. When the market price of tar products is 7 cents per gallon, the gas company's share by contract is a trifle over 2 cents.

Ammonia liquor is treated on somewhat similar lines; the complainant receiving for its share about one-half the market price. That the other residuals are not handled to the best advantage, and that all the residuals which the present state of the art returns, are not made use of.

Candle Power.—That the average candle power maintained was unnecessarily in excess of the legal requirements.

Real Estate.—That the complainant holds, claims a return and pays taxes on considerable real estate in excess of the amount actually or necessarily in use in its business.

That by all of the above the cost of gas to the complainant is increased; that by proper management the cost to complainant could be reduced and such wasteful methods should not be permitted to increase the cost as against the consumer.

Fifty-fifth Exception. For that the said Master, on pages 129, 130 and 131 of his Report, finds that an examination of the figures as to the cost of gas by other companies does not sustain the contention that the complainant's operating cost is excessive; whereas, he should have found that such figures show that the cost to the complainant is excessive, and that the complainant finds it cheaper 568 to buy gas than to manufacture it; and buys a considerable portion of its output from other companies; that its plants are not as advantageously arranged or equipped to produce gas as such other companies; and that it is not justified in charging the consumer with such excess cost.

Rate of Return.

Fifty-sixth Exception. For that the said Master on page 141 of his report has found that the rate of 80 cents per thousand cubic feet of gas sold by complainant would give a return of 2.8 per cent. on its assets and 3.6 per cent. on its assets exclusive of franchise and good will, neither of which constituted a fair and reasonable return on the value of the property and on pages 141 and 151 complainant's amendment XIII. that such a fair and reasonable rate is not less than 6 per cent.

Whereas he should have found that the rates of 2.8 per cent. and 3.6 per cent. return were fair and reasonable; that the records show that both the public and the complainant are content with similar investments bringing no greater return; that complainant is not entitled to a 6 per cent. return.

Fifty-seventh Exception. For that the Master has found that the 80c. rate does not allow the complainant a reasonable return upon the fair value of the property actually and necessarily used in the business of making and distributing gas.

Whereas he should have found that with net earnings of $6,807,455.15 based on a cost of 52.50c. (see Forty-fourth Exception) after deducting 20c. per thousand on 13,283,000,000 feet of sales or $2,656,600 would leave a balance of $4,150,855.15 which would provide a return of 4.97 per cent. on a valuation of $83,357,000 and a return of 6.55% on a valuation of $63,357,000 and a still higher return on a valuation based on a fair present valuation of 569 the property; that none of such rates are unfair or unreasonable.

Pressure.

Fifty-eighth Exception. For that the said Master has found on page 142 that modern appliances such "as Welshbach burners, gas logs and gas ranges require a much higher pressure for service to consumers than was the case some years ago;" and has also found, page 143 and 151-152 complainant's amendment, that the method suggested for overcoming at moderate cost the deficiency of complainant's mains is subject to "some doubt suggested by the evidence as to the feasibility of the system" and "it appeared that the cost of the new construction necessary to carry out the plan as described would be in the neighborhood of $4,000,000 for main and valve construction alone, in addition to which would be required pumping stations and apparatus, the annual charges and operating expenses in connection with which Mr. Addicks testified would amount to several cents per thousand feet of gas sold, and which would involve a corresponding increase in operating cost or proper selling price of such gas" and on page 144 has found

"Under the distributing system as now existing and in operation, it is not possible to fulfil the statutory requirements as to pressure. It would, however, apparently be possible to remedy this condition, at least to some degree, by dividing the city into different districts according to the varying levels and by regulating the pressure in each by district governors. The efficiency and safety of such governors is not free from doubt and the evidence affords no sufficient basis for an estimate of the cost of their installation or the expense of making the necessary changes in the system of mains."

Whereas he should have found that the distribution system as now
existing is inadequate for the output of complainant; that by
570 a proper increase of capacity in such system gas could be fur-
nished at pressures within the limits of the statute; that the Welsbach burner gave as high an efficiency at 1½ pressure as at any other within reasonable bounds, and that heating appliances, requiring large volumes of gas, did not require higher pressure, but more adequate piping as demanded in complainant's house piping rules and regulations; also that such cost for new construction was grossly exaggerated, being based on a rate for piping four times greater than the cost of complainant's mains laid under asphalt, according to complainant's highest "or not for taxation purposes" estimate. Also that it appears both from the testimony and exhibits that such governors have been in use throughout the stations of the complainant day and night, and when piping is adequate, with perfect success.

Fifty-ninth Exception. For that the said Master has refused to find as requested by the State, on page 168, XII., and by the City, on page 189, seventh, that a reduction in price of gas leads to a proportionate increase in the per capita consumption in The City of New York of 46.46 cents for each 1 cent of reduction, and that on such basis the estimated sales of complainant in 1907 would be 15,300,000,000 cubic feet.

Whereas, he should have so found, and further found, that such an increase should be considered in determining the net earnings from the reduced rate, and not by the method followed on page 140 of deducting 20 cents per thousand on the output for the year 1905, on the basis of the old rate.

Sixtieth Exception. For that the Master has allowed on page 148, Complainant's Amendment VII., and on page 114

"that the propriety of an allowance sufficient to bring the amount expended for current repairs and renewals for any one year

571 up to the average covering a period of years, is fully established by the evidence."

Whereas, he should have found that such addition should not have been allowed without allowing the average of other items entering into the cost, concerning which, for years other than 1905, defendants were denied access to the books of complainant; and further that the repairs for past years are no criterion for the present, owing to the improvements in the manufacture of gas during the past thirty years.

Sixty-first Exception. For that the said Master has allowed Complainant's Amendment II., page 147, whereas he should not have so found; but should have found that the capital required for coal gas at Astoria as shown by the exhibits, would have made it inadvisable to construct such works unless far better results could have been reasonably anticipated.

Sixty-second Exception. For that the said Master has allowed Complainant's Amendment IV., page 147, whereas he should not have allowed the same; but have found that such figure omits several important items, the most important being surplus fund of $1,328,000, and therefore is not the net earnings from gas as stated.

Sixty-third Exception. For that the said Master on pages 147 and 148 has allowed the Complainant's Amendment VI., whereas he should not have allowed same; but have found that such amendment ignores the progress made in the last thirty years in the manufacture of gas.

Sixty-fourth Exception. For that the said Master has allowed, on pages 147, 148, Complainant's Amendment VIII., with regard to items not included in the 65.84 cents found on page 126.

Whereas, he should not have allowed the same, but should have found that the figure 65.84 cents, including, as it does, an
572 unexpended amount of $1,328,000, as a surplus earnings,
more than covers all assumed and problematic expenses injected into the business of gas manufacture and distribution, and not warranted by Complainant's past practice, nor by any correct method of bookkeeping.

Sixty-fifth Exception. For that the Master on page 149 has allowed Complainant's Amendment IX., that "oil is cheaper in Chicago than New York, and that,"

Whereas, he should have found that complainants have raised the price of oil in New York by a specification in regard to its quality and therefore there is no basis of comparison with New York, nor is the kind or degree of oil specified.

Sixty-sixth Exception. For that the Master on page 156 has overruled State's Amendment Twelfth, whereas he should have allowed the same.

Sixty-seventh Exception. For that the said Master on page 156, has overruled State's Amendment Fourteenth, whereas the same should have been allowed.

Sixty-eighth Exception. For that the said Master on page 159 has overruled State's Amendment Twenty-fifth, whereas the same should have been allowed.

Sixty-ninth Exception. For that the said Master has refused to find State's amendment I, page 160, whereas the same should have been allowed.

Seventieth Exception. For that the said Master has disallowed State's amendment II., pages 161-2, whereas the same should have been allowed.

Seventy-first Exception. For that the said Master has disallowed State's amendment III., page 163, whereas the same should have been allowed.

573 *Seventy-second Exception.* For that the said Master has disallowed State's amendment IV., page 163, whereas the same should have been allowed.

Seventy-third Exception. For that the said Master has disallowed part of State's amendment VI., pages 164, 165, whereas the same should have been allowed.

Seventy-fourth Exception. For that the said Master has disallowed State's amendment IX., page 166, whereas the same should have been allowed.

Seventy-fifth Exception. For that the said Master on page 169, has disallowed State's Fifth Special Finding, whereas the same should have been allowed.

Seventy-sixth Exception. For that the said Master on pages 169-170 has disallowed State's Special Finding Sixth, whereas the same should have been allowed.

Seventy-seventh Exception. For that the Master on page 172 has disallowed part of State's Special Finding Twelfth, whereas the same should have been allowed.

Seventy-eighth Exception. For that the said Master on page 173 has disallowed part of State's Special Finding Thirteenth, whereas the same should have been allowed.

Seventy-ninth Exception. For that the said Master on page 174, has disallowed part of State's Special Finding Fourteenth, whereas the same should have been allowed.

Eightieth Exception. For that the said Master has on page 181 disallowed part of State's Special Finding Thirty-third, whereas the same should have been allowed.

Eighty-first Exception. For that the Master on page 182, has disallowed State's Special Finding Thirty-fourth, whereas the same should have been allowed.

574 *Eighty-second Exception.* For that the said Master on page 182 has disallowed State's Special Finding Thirty-fifth, whereas he should have so found.

Eighty-third Exception. For that the said Master on page 183, has disallowed State's Special Finding Thirty-sixth, whereas the same should have been allowed.

Eighty-fifth Exception. For that the said Master on page 183 has disallowed State's Special Finding Thirty-seventh, whereas the same should have been allowed.

Eighty-sixth Exception. For that the Master has disallowed City's amendment Fifth, page 189, whereas the same should have been allowed.

Eighty-seventh Exception. For that the said Master on page 190 has disallowed part of City's amendment Eighth and has found, page 191:

"It is clear that by the proper diligence defendants could have secured inspection of the plants at a much earlier date than it was in fact begun, and this fact was repeatedly brought to the attention of counsel during the progress of the hearings."

Whereas he should have found, as requested, and that the defendants made every effort to have the Master pass on their application made at the first session, but failing to do so, finally sought relief by applying to the Courts.

Eighty-eighth Exception. For that the said Master at page 191-192 has disallowed City's amendment Eleventh, whereas the same should have been allowed.

575 The defendant, The City of New York, adopts such of the exceptions filed by the other defendants as have not been specifically covered herein.

Respectfully submitted,

FRANCIS K. PENDLETON,
Corporation Council, Solicitor for Defendant The City of New York, Hall of Records, Manhattan, N. Y. City.

WILLIAM P. BURR,
Of Counsel.

Endorsed: Circuit Court of the United States, Southern District of New York. The Consolidated Gas Company of New York, Complainant, against Julius M. Mayer as Attorney General of the State of New York, The City of New York *et al.*, Defendants. Exception to Master's Report Taken by Defendant The City of New York. Franics K. Pendleton, Corporation Counsel, Hall of Records, Borough of Manhattan, New York City. Filed Aug. 7th, 1907, "*nunc pro tunc*" July 24th, 1907. U. S. Circuit Court, Southern District of N. Y. Filed Aug. 7, 1907, John A. Shields, Clerk.

576 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Notice of Final Hearing.

Take notice that this cause and the issues therein will be brought on for final hearing at a Stated Term of the Circuit Court of the

United States for the Southern District of New York, to be held at its Court Rooms in the General Post Office Building, in the Borough of Manhattan, City of New York, on Monday, the 21st day of October, 1907, at the opening of the Court on that day or as soon thereafter as counsel can be heard, and that at the same place and time we shall move the said Court for an order, overruling the exceptions to and confirming the Master's Report herein, and shall also move on the pleadings herein, the order appointing the Special Master, the testimony, exhibits and the said Master's Report and all the proceedings herein, for a Final Decree, in accordance with the prayer of the Bill of Complaint herein and for such other and further or different relief as to the Court may seem meet and the nature of this case may require.

New York, August 15, 1907.

Yours, &c., SHEARMAN & STERLING,
Solicitors for Complainant,
44 Wall Street, New York City.

577 To William S. Jackson, Esq., as Att'y Gen'l of the State of New York and as solicitor for the defendants, Frederic E. Gunnison, John C. Davies, and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity;
Francis K. Pendleton, Esq., corporation counsel, solicitor for defendant, The City of New York.
Robert C. Taylor, Esq., solicitor for defendant William Travers Jerome, as district attorney.

Endorsed: Cir. Ct. of the U. S., So. Dist. of N. Y. Consolidated Gas Company of New York, against William S. Jackson, as Att'y Gen'l *et al.,* Notice of Hearing. Shearman & Sterling, Solicitirs for Complainant, 44 Wall Street, N. Y., Service of the within notice is hereby admitted this 15th day of August, 1907, Wm. S. Jackson, Att'y Gen'l of the State of New York and Solicitor for Comm. of Gas & Electricity. Robert C. Taylor, Solicitor for William Travers Jerome as Dist. Atty. A copy of the within paper has been this day received at the office of the Corporation Counsel, Aug. 15, 1907, Francis K. Pendleton, Corporation Counsel. U. S. Circuit Court, Southern District of N. Y., Filed Aug. 15, 1907, John A. Shields, Clerk.

578 At a Stated Term of the Circuit Court of the United States of America for the Southern District of New York, in the Second Circuit, held at the United States Court Rooms in the Post Office Building in said District, on the 2nd day of October, 1907.

Present: Hon. E. Henry Lacombe, Circuit Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

On reading and filing the affidavit of Henry H. Whitman, sworn to the 2nd day of October, 1907, and on the annexed consent of the solicitors for all parties, it is

Ordered: That William R. Willcox, Chairman, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission for the First District, be and hereby are substituted parties defendants herein in place of the defendants, Frederic E. Gunnison, John C. Davies and Lucian
579 L. Shedden, constituting the New York State Commission of Gas and Electricity, and that this suit be continued against them as parties defendants herein, without prejudice to the proceedings already had herein, the answer of said last named defendants heretofore filed herein to stand as the answer of said William R. Willcox, Chairman, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission for the First District; and it is further

Ordered: That the exceptions heretofore filed to the Special Master's report on behalf of the said defendants, Gunnison and others, stand as the exceptions of said substituted defendants.

E. H. LACOMBE,
U. S. Circuit Judge.

We hereby consent to the entry of the foregoing order.
Dated, New York, October 1, 1907.

SHEARMAN & STERLING,
Solicitors for Complainant.
W. S. JACKSON,
Attorney-General.
ROB'T C. TAYLOR,
Solicitor for William Travers Jerome, as District Attorney.
580 FRANCIS K. PENDLETON,
Solicitor for the City of New York.
ABEL E. BLACKMAR,
Solicitor for the Public Service Commission.

581 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC C. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

UNITED STATES OF AMERICA, *Southern District of New York, ss:*

Henry H. Whitman, being first duly sworn, says:—

I am Assistant Counsel to the Public Service Commission for the First District.

William R. Willcox, Chairman, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis constitute the Public Service Commission for the First District, under Chapter 429 of the Laws of 1907, to which reference is hereby made, and whereby the above named Commission of Gas and Electricity was abolished.

HY. H. WHITMAN.

Sworn to before me this 2nd day of October, 1907.

[SEAL.] LE ROY T. HARKNESS,
Notary Public, Kings Co.

Cert. Filed in N. Y. Co.

Endorsed: U. S. Circuit Court, Southern District of New York, Complainant, against William S. Jackson, as Attorney General, etc. and others, Defendants. Order of substitution. U. S. Circuit Court Southern District of N. Y., Filed Oct. 2, 1907, John A. Shields, Clerk.

582 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General, etc.; WILLIAM R. WILLCOX ET AL., Constituting the Public Service Commission of the First District, Impleaded.

Please take notice that on the record herein and the annexed affidavit of Edward B. Whitney, the undersigned will move this court at a Stated Term thereof to be held at the Federal Building in the County of New York, on November 1, 1907, at 10:30 o'clock in the forenoon of that day or as soon thereafter as counsel can be heard, for leave to file the annexed supplemental exceptions to the report of the Special Master herein, without prejudice to the proceedings already had, and for such other or further relief in the premises as may be equitable.

Dated New York, October 28, 1907.

ABEL E. BLACKMAR,
Solicitor for the Defendants William R. Willcox et al., Constituting the Public Service Commission for the First District.

To Messrs. Shearman & Sterling, solicitors for complainant;
Hon. William S. Jackson, Attorney General;
Hon. Francis K. Pendleton, solicitor for defendant City of New York;
Robert C. Taylor, Esq., solicitor for William Travers Jerome, as District Attorney, etc.

583 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General, etc.; WILLIAM R. WILLCOX ET AL., Constituting the Public Service Commission of the First District, Impleaded.

SOUTHERN DISTRICT OF NEW YORK,
County of New York, ss:

Edward B. Whitney being duly sworn says I am the special assistant, for the purposes of the defense to this suit, of Abel E. Blackmar, Esq., the counsel to the Public Service Commission of the First District under the New York Statute, Chapter 429 of the Laws of 1907. Although said commission became the successors to the original defendants Frederick E. Gunnison *et al.*, constituting the New York State Commission of Gas and Electricity, upon the abolition of the latter commission by said statute on July 1, 1907, no application was made by any of the other parties to this suit to bring the members of the new commission in as parties, until by consent they were joined as parties defendant by order entered October 2, 1907. 584 Exceptions were filed herein by the solicitor for said former commission on or about July 23, some three weeks after it went out of existence, and the order bringing in members of the present commission as parties permitted them to join in the exceptions so taken. Owing to the great volume and complexity of the record herein, it was necessary for me to spend a large amount of time and work upon the other portions thereof before I could intelligently deal with said exceptions, and I understood that they covered all of the questions in the case; nor was I able to give them careful examination until within two days past, having but within a few days been able to take up for careful consideration the questions which as I understand the practice are properly subject of exception, namely, whether the various statements of fact in the Master's report are sustained by the evidence in the case.

On examining the exceptions aforesaid I find that they fail specifically to refer to the complainant's claim of franchise derived from the Anthracite Gas Lighting and Heating Company, and that also by some inadvertence the franchise of the Municipal Gas Light Company is referred to in the "Thirty-fourth" exception in lieu of that of the Harlem Gas Light Company, whereas the franchise of the Harlem Gas Light Company is referred to in the "Thirty-sixth" exception in lieu of that of the Municipal Gas Light Company,
585 and the date of expiration of said last named franchise (if valid) is given as February 1, 1907, instead of March 22, 1907, and that they also fail to set up the invalidity of the alleged franchise of the Municipal Gas Light Company and of the alleged franchise claimed by the Knickerbocker Gas Light Company from said Anthracite Company. These objections to the Master's report are included in the exceptions filed on behalf of the City of New York. The exceptions filed on behalf of said former commission also failed to cover the objection to the inclusion of the capital of the National Coal & Coke Company, which is also covered by the exceptions filed on behalf of the City of New York. I find also that a large number of exceptions have been filed to matter merely evidentiary and therefore not subject to exception as I understand the procedure; and among these I find that exception has been taken to the findings of the Master that certain disbursements made or claimed to have been made by the complainant during the year 1905, or pertaining to its business for the year 1905, were properly chargeable to operating expenses or to the cost of making and distributing gas during that year. Among the items so objected to, the item of $406,909.23 is not included in the exceptions filed on behalf of said former commission, in which the present commission is permitted to join, although it is included in the exceptions filed
586 on behalf of the city. In order to avoid any claim of waiver or concession by reason of this omission, and for greater caution, we desire to be permitted to add an exception covering this specific item.

EDWARD B. WHITNEY.

Sworn to before me this 28th day of October, 1907.

[N. S.] S. M. HAYES,
Notary Public, #201, New York County.

587 United States Circuit Court, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
against
William S. Jackson, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; William R. Willcox, William M. Carroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the First District, and The City of New York, Defendants.

Supplemental Exceptions to Master's Report.

The defendants William R. Willcox, William M. Carroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the First District, respectfully except to the following rulings of the Master in his report in the above entitled suit:

A. That the franchises of the New York Gas Light Company and the Manhattan Gas Light Company were still in existence on May 1, 1906.

B. That the franchise of the Metropolitan Gas Light Company was still in existence on May 1, 1906.

C. That the franchise of the Harlem Gas Light Company was still in existence on May 1, 1906.

588 D. That the alleged franchise of the Municipal Gas Light Company was valid.

E. That the alleged franchise derived from chapter 944 of the Laws of 1871 became the property of or available to the Knickerbocker Gas Light Company.

F. That the alleged franchise of the Anthracite Gas Lighting and Heating Company was valid.

G. That the Knickerbocker Gas Light Company succeeded to the rights of said last named company under said last named franchise.

H. That the complainant's shares of stock in the National Coal and Coke Company are a part of the property employed in the supply of gas.

I. That the item of $406,909.23 included in complainant's Exhibit 94, in item 66, is properly to be taken into consideration in estimating the probable operating expenses of the complainant after May 1, 1906; whereas it should be diminished to an amount representing the tax upon complainant's tangible property situated in, upon, under or above the streets, highways, public places and public waters in connection with its special franchise, or upon said tangible property *plus* any further value of its special franchise after the reduction of its charge for gas to eighty cents per thousand cubic feet.

ABEL E. BLACKMAR,
Solicitor for Exceptants.

589 Endorsed: United States Circuit Court, Southern District of New York. Consolidated Gas Company of New York, Complainant, against William S. Jackson, as Attorney General, etc., *et al.,* Defendants. Notice of Motion, Affidavit and Supplemental Exceptions. Abel E. Blackmar, Solicitor for the defendants, William R. Willcox, *et al.,* constituting the Public Service Commission for the First District. Service of a copy of the within notice of motion, affidavit and supplemental exceptions admitted this 28th day of October, 1907. Shearman & Sterling, Solicitors for Complainant; William S. Jackson, Attorney General; F. K. Pendleton, Solicitor for defendant City of New York; Robert C. Taylor, District Attorney, etc., U. S. Circuit Court, Southern District of N. Y., Filed Nov. 2, 1907, John A. Shields, Clerk.

590 *Order Substituting Defendants.*

At a Stated Term of the Circuit Court of the United States of America for the Southern District of New York, in the Second Circuit, held at the United States Court Rooms, in the Post Office Building in said District, on the 2nd day of October, 1907.

Present: Hon. E. Henry Lacombe, Circuit Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

591 On reading and filing the affidavit of Henry H. Whitman, sworn to the 2nd day of October, 1907, and on the annexed consent of the solicitors for all parties, it is

Ordered, that William R. Willcox, Chairman, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the First District, be and hereby are substituted parties defendants herein in place of the defendants, Frederic E. Gunnison, John C. Davies and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, and that this suit be continued against them as parties defendants herein, without prejudice to the proceedings already had herein, the answer of said last named defendants heretofore filed herein to stand as the answer of said William R. Willcox, Chairman, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission for the First District; and it is further

Ordered, that the exceptions heretofore filed to the Special Master's Report on behalf of said defendants, Gunnison and others, stand as the exceptions of said substituted defendants.

E. H. LACOMBE,
J. S. Circuit Judge.

592 We hereby consent to the entry of the foregoing order.
Dated, New York, October 1, 1907.

SHEARMAN & STERLING,
Solicitors for Complainant.
W. S. JACKSON,
Attorney General.
ROBERT C. TAYLOR,
Solicitor for William Travers Jerome, as District Attorney.
FRANCIS K. PENDLETON,
Solicitor for the City of New York.
ABEL E. BLACKMAR,
Solicitor for the Public Service Commission.

(Endorsed:) U. S. Circuit Court, Southern District of New York. Consolidated Gas Company of New York, Complainant, against William S. Jackson, as Attorney General, etc., and others, Defendants. Order of Substitution. U. S. Circuit Court, Southern District N. Y. Filed Oct. 2, 1907. John A. Shields, Clerk.

593 *Order Granting Leave to File Supplemental Exceptions.*

At a Stated Term of the United States Circuit Court for the Southern District of New York, held in the City of New York this 1st day of November, 1907.

Present: Hon. Henry Galbraith Ward, Circuit Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General, etc.; WILLIAM R. WILLCOX ET AL., Constituting the Public Service Commission of the First District, Impleaded.

The motion of defendants William R. Willcox and others constituting the Public Service Commission of the First District, for leave to file supplementary exceptions coming on to be heard, and no opposition being made thereto, it is hereby

594 Ordered that said defendants have leave to file the supplemental exceptions, a copy whereof is annexed to the notice of said motion, without prejudice to the proceedings already had.

H. G. WARD, *W. S. C. J.*

(Endorsed:) United States Circuit Court Southern District of New York Consolidated Gas Company of New York, Complainant, against William S. Jackson as Attorney General etc., William R. Willcox *et al.,* constituting the Public Service Commission of the First District, impleaded. Order. Abel E. Blackmar, Solicitor for Public Service Commission for the First District. U. S. Circuit Court, Southern District N. Y. Filed Nov. 2, 1907. John A. Shields, Clerk.

595 *Supplemental Exceptions to Master's Report.*

United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney-General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILLCOX, WILLIAM M. CARROLL, EDWARD M. BASSETT, MILO R. MALTBIE, and JOHN E. EUSTIS, Constituting the Public Service Commission of the First District, and THE CITY OF NEW YORK, Defendants.

The defendants, William R. Willcox, William M. Carroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the First District, respectfully except to the following rulings of the Master in his report in the above entitled suit:

596 A. That the franchise of the New York Gas Light Company and the Manhattan Gas Light Company were still in existence on May 1, 1906.

B. That the franchise of the Metropolitan Gas Light Company was still in existence on May 1, 1906.

C. That the franchise of the Harlem Gas Light Company was still in existence on May 1, 1906.

D. That the alleged franchise of the Municipal Gas Light Company was valid.

E. That the alleged franchise derived from chapter 944 of the Laws of 1871 became the property of or available to the Knickerbocker Gas Light Company.

F. That the alleged franchise of the Anthracite Gas Lighting and Heating Company was valid.

G. That the Knickerbocker Gas Light Company succeeded to the rights of said last named company under said last named franchise.

H. That the complainant's shares of stock in the National Coal and Coke Company are a part of the property employed in the supply of gas.

I. That the item of $406,909.23 included in complainant's Exhibit 94, in item 66, is properly to be taken into consideration in estimating the probable operating expenses of the complainant after May 1, 1906; whereas it should be diminished to an amount representing the tax upon complainant's tangible property sit- 597 uated in, upon, under or above the streets, highways, public places and public waters in connection with its special franchise, or upon said tangible property *plus* any further value of its special franchise after the reduction of its charge for gas to eighty cents per thousand cubic feet.

ABEL E. BLACKMAR,
Solicitor for Said Exceptants.

(Endorsed:) United States Circuit Court, Southern District of New York. Consolidated Gas Company of New York, Complainant, against William S. Jackson, As Attorney General, etc., *et al.*, Defendants. Supplemental Exceptions. Abel E. Blackmar, Solicitor for said exceptants. U. S. Circuit Court, Southern District N. Y. Filed Nov. 2, 1907. John A. Shields, Clerk.

598 At a Stated Term of the United States Circuit Court for the Southern District of New York, held in the City of New York this 1st day of November, 1907.

Present: Hon. Henry Galbraith Ward, Circuit Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General, etc.; WILLIAM R. WILLCOX ET AL., Constituting the Public Service Commission of the First District, Impleaded.

The motion of defendants William R. Willcox and others constituting the Public Service Commission of the First District, for leave to file supplementary exceptions, coming on to be heard, and no opposition being made thereto, it is hereby

Ordered that said defendants have leave to file the supplemental exceptions, a copy whereof is annexed to the notice of said motion, without prejudice to the proceedings already had.

H. G. WARD,
U. S. C. J.

Endorsed: United States Circuit Court Southern District of New York. Consolidated Gas Company of New York, Complainant, against William S. Jackson, as Attorney General etc., William R. Wilcox *et al.,* constituting the Public Service Commission of the First District, impleaded. Order. Abel E. Blackmar, Solicitor for Public Service Commission for the First District. U. S. Circuit Court Southern District of New York. Filed Nov. 2 1907. John A. Shields, Clerk.

599 At a Stated Term of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, held at the United States Court Rooms in the Borough of Manhattan, in the City of New York, on Monday, the fourth day of November, in the year of our Lord one thousand nine hundred and seven.

Present: The Honorable Charles M. Hough, Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK
vs.
JULIUS M. MAYER, as Attorney General of the State of New York, and Others.

The Exceptions to the Master's Report in the above entitled cause coming on for hearing, Alton B. Parker, Esq., is heard on behalf of the defendant City of New York, William A. De Ford, Esq., is heard on behalf of the defendant State of New York, Charles F. Mathewson, John A. Garver and James M. Beck are heard for the Complainant. Edward B. Whitney, Esq., is heard in reply on behalf of the Public Service Commission, David B. Hill, Esq., is also heard in reply on behalf of the State of New York.

The Court takes the cause under advisement.

An extract from the minutes.

JOHN A. SHIELDS, *Clerk.*

600 (Reg. 62, Fol. 248.)

Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY
against
CITY OF NEW YORK ET AL.

Bill in equity alleging the unconstitutionality of certain Statutes of the State of New York, and of a certain order passed by "The Commission of Gas and Electricity" for the said State, pursuant to statutory authority.

Charles F. Mathewson, John A. Garver and James M. Beck, for complainant;

Francis K. Pendleton, Corporation Counsel; and Alton B. Parker, William P. Burr and William J. Clarke, for The City of New York;

Alfred R. Page, William A. Deford and David B. Hill, for Hon. Wm. S. Jackson, Attorney General;

Abel E. Blackmar and Edward B. Whitney, for the Public Service Commission.

HOUGH, *D. J.:*

(History of the Litigation.)

By cap. 736 of 1905 (N. Y. Sessions Laws), all corporations or persons engaged in the business of furnishing or selling illu-
601 minating gas in The City of New York were forbidden to charge said City a higher price therefor than 75 cents per thousand cubic feet. The same act required that all gas so sold should have a specified illuminating power, and also that the pressure of such gas in any service main in the City and at all distances from the place of manufacture in said City, should not be less than one inch nor more than two and a half inches. It was further provided that any person or corporation violating any provision "of this act shall forfeit the sum of $1,000 for each offence."

Cap. 737 of 1905 created "The Commission of Gas and Electricity," and among other powers gave the Commission that of entertaining written complaints signed by more than a hundred customers of any gas company, or by the chief executive officers or officers of a City or other municipal organization; to examine by public hearing into the propriety of the price charged by said company for its product, and after such hearing to fix "the maximum price of gas * * * which shall be charged by such corporation in such municipality." The Commission had also authority granted to it, to fix the standard of illuminating power of gas manufactured and sold in any municipality; as also the standard of pressure thereof; provided such standard of illumination should not be less than that prescribed by law, and that the establishment of a standard of pressure should only be made where it was not otherwise legally prescribed.

In pursuance of these powers the Commission on February 23, 1906, made an order specifically affecting this complainant, and requiring that on and after May 1, 1906, the maximum price for gas furnished within the Borough of Manhattan in this City be fixed at 80 cents per thousand, and also requiring this complainant to furnish gas with an illuminating power of not less than that prescribed by the first statute referred to, and likewise requiring it to maintain the pressure provided for by said statute.

602 On April 3, 1906, the Legislature enacted chapter 125 of the Laws of that year, which fixed the price of gas for all persons or corporations manufacturing, furnishing or selling the same in the Borough of Manhattan at 80 cents per thousand, and also made applicable to gas furnished by any person or corporation in said Borough to private consumers, the same regulation as to illuminating power and pressure which in the previous year had been applied to gas consumed by the municipality. This act also declares that the violation of any provision thereof shall occasion the forfeiture of "the sum of $1,000 for each offense to the People of the State."

On the same day that the Gas Commission's order became operative, *i. e.,* May 1, 1906, this action was begun by the company especially affected, which is also the principal gas manufacturing and supplying company, doing business in the Borough of Manhattan.

The parties defendant to this proceeding are the Attorney-General of the State and the District Attorney of New York County, they being the officers upon whom is imposed the duty by section 1962 of the New York Code of Civil Procedure to institute suits for the recovery of the penalties prescribed by the statutes referred to; The City of New York, and the several members of the Commission, the constitutionality of whose order is attacked by the bill, were the remaining original defendants.

During the pendency of the suit the Commission of Gas and Electricity has been abolished, and all its powers and duties transferred to a new board known as the "Public Service Commission," which last is specifically charged by recent legislation with the enforcement of orders made by the old Commission, and therefore with the enforcement of the order complained of. The Public Service Commission has appeared in this action in the place and stead of the defunct Gas Commission.

603 An injunction *pendente lite* issued herein restraining the enforcement of the said statutes and order (146 R., 150),

and as of July 5, 1906, and order of reference was made to Arthur H. Masten, Esq., as Special Master, "to take all the testimony herein, make all needed computations, and fully find the facts." For nearly a year the cause proceeded before the Master, who on June 24, 1907, filed his report; and the cause is now before the Court on final hearing under complainant's motion that an order be now made "overruling the exceptions to and confirming the Master's report herein;" and complainants also move for a "final decree in accordance with the prayer of the bill."

(*The Issues in the Case.*)

The complainants seek to enjoin the Attorney-General and District Attorney from prosecuting under the penalty clauses in the statutes above referred to; to enjoin The City of New York from insisting upon the 75 cent rate given it by the Act of 1905; to enjoin the Public Service Commission from enforcing said order of the Gas Commission, and to attain these objects because,

1st. The 80-cent gas rate is substantially confiscatory;

2d. The two statutes taken together are unconstitutionally discriminatory;

3d. The penalty clauses in both statutes are so oppressive as to be unconstitutional;

4th. The provisos regulating pressure in the mains are (under commercially possible conditions) impossible of fulfillment, and therefore illegal; and

5th. The legislative power was by the statute creating the Gas Commission improperly and unlawfully delegated to that body.

(*The first question of fact tried before the Master.*)

The report states this inquiry as to "ascertain the value of the assets employed in the production and distribution of the gas 604 sold by complainant." This is obviously an inquiry preliminary and vital to ascertaining whether the 80-cent rate for the sale of gas yields any return at all. The report states that such assets consist of:

Tangible Assets.

Real estate	$13,461,000 00
Plant	15,500,000 00
Mains	12,636,000 00
Services	1,994,000 00
Meters and miscellaneous	4,100,000 00
Working capital	3,616,000 00
Coal & Coke Company	50,000 00
Astoria establishment, representing capital invested in production of gas secured from other companies	12,000,000 00
	$63,357,000 00

Intangible Assets.

Franchises and good will	20,000,000 00
Total assets	$83,357,000 00

The disputed questions involved in this finding (so far as tangible property is concerned), are three:

First. Whether the values ascribed to the several enumerated items of property are based upon competent and persuasive evidence.

Second. Whether the method of valuation pursued by the Master is in accordance with law, and

Third. Whether (assuming said items of property to be possessed and enjoyed by complainant), they are "employed (within the legal signification of that word) in the production and distribution of gas.

605 From an examination of the expert testimony submitted, and giving due weight to the careful and able report of the Master, it is clear that the first query must be answered affirmatively, and it be found that complainant was when this action began in the possession and enjoyment of property of the kind and value above set forth.

The question first stated, and just answered, is wholly one of fact; but the second and third are largely, if not entirely, questions of law.

(*Method of Valuation.*)

As to the realty, the values assigned are those of the time of inquiry; not cost when the land was acquired for the purposes of manufacture, and not the cost to the complainant of so much as it acquired when organized in 1884, as a consolidation of several other gas manufacturing corporations.

It is objected that such method of appraisement seeks to confer upon complainant the legal right of earning a fair return upon land values which represent no original investment by it; does not indicate land especially appropriate for the manufacture of gas; and increase apparent assets without increasing earning power.

Analogous questions arise as to plant, mains, services and meters; the reported values whereof are the reproductive cost less depreciation, and not original cost to the complainant or its predecessors.

It appears by undisputed evidence that some of these last items of property cost more than new articles of the same kind would have cost at the time of inquiry; that some are of designs not now favored by the scientific and manufacturing world, so that no one now entering upon a similar business would consider it wise to erect such machines or obtain such apparatus. In every instance, however, 606 the value assigned in the report is what it would cost presently to reproduce each item of property, in its present condition, and capable of giving service neither better nor worse than it now does.

As to all of the items enumerated, therefore—from real estate to meters inclusive—the complainant demands a fair return upon the reproductive value thereof, which is the same thing as the present value properly considered.

To vary the statement, complainant's arrangements for manufacturing and distributing gas are reported to be worth the amounts above tabulated if disposed of (in commercial parlance) "as they are."

Upon authority, I consider this method of valuation correct. What the Court should ascertain is the "fair value of the property being used" (*Smyth vs. Ames,* 169 U. S., at 546); the "present" as compared with "original" cost (*ibid.,* p. 547); and what complainant "employs for the public convenience" (*ibid.,* p. 547); and it is also the "value of the property *at the time* it is being used" (*San Diego Land Co. vs. National City,* 174 U. S., at 757. And see also *Stanislaus Co. vs. San Joaquin Co.,* U. S., 201).

It is impossible to observe this continued use of the present tense in these decisions of the highest Court without feeling that the actual or reproductive value at the time of inquiry is the first and most important figure to be ascertained; and these views are amplified by *San Diego Land Co. vs. Jasper* (110 Fed. Rep., at 714), and *Cotting vs. Kansas City Stock Yards* (82 Fed. Rep., at 854), where the subject is more fully discussed.

Upon reason, it seems clear that in solving this equation the plus and minus quantities should be equally considered, and appreciation and depreciation treated alike. Nor can I conceive of a case
607 to which this procedure is more appropriate than the one at bar. The complainant by itself and some of its constituent companies has been continuously engaged in the gas business since 1823. A part of the land in question has been employed in that business for more than two generations, during which time the value of land upon Manhattan Island has increased even more rapidly than its population. So likewise the construction expense not only of buildings, but of pipe systems under streets now consisting of continuous sheets of asphalt over granite, has enormously advanced.

The value of the investment of any manufacturer in plant, factory or goods, or all three, is what his possessions would sell for upon a fair transfer from a willing vendor to a willing buyer; and it can make no difference that such value is affected by the efforts of himself or others; by whim or fashion; or (what is really the same thing) by the advance of land values in the opinion of the buying public. It is equally immaterial that such value is affected by difficulties of reproduction. If it be true that a pipe line under the New York of 1907 is worth more than was a pipe line under the City of 1827, then the owner thereof owns that value; and that such advance arose wholly or partly from difficulties of duplication created by the City itself is a matter of no moment.

Indeed, the causes of either appreciation or depreciation are alike unimportant, if the fact of value be conceded or proved; but that ultimate inquiry is oftentimes so difficult that original cost and reasons for changes in value become legitimate subjects of investigation, as checks upon expert estimates or bookkeeping inaccurate and perhaps intentionally misleading (cf. *Ames vs. Union Pacific R. R.,* 64 Fed. Rep., at 178, 179).

If fifty years ago, by the payment of certain money, one acquired a factory and the land appurtenant thereto, and continues to-day his original business therein, his investment is the factory and the
608 land, not the money originally paid; and unless his business shows a return equivalent to what land and building, or land

alone, would give if devoted to other purposes (having due regard to cost of change), that man is engaged in a losing venture and is not receiving a fair return from his investment, *i. e.,* the land and building. The so-called "money value" of real or personal property is but a conveniently short method of expressing present potential usefulness, and "investment" becomes meaningless if construed to mean what the thing invested in cost generations ago. Property whether real or personal is only valuable when useful; its usefulness commonly depends on the business purposes to which it is or may be applied. Such business is a living thing, and may flourish or wither, appreciate or depreciate; but whatever happens, its present usefulness, expressed in financial terms, must be its value.

As applied to a private merchant or manufacturer the foregoing would seem elementary; but some difference is alleged to exist where the manufacturer transacts his business only by governmental license, whether called a franchise or by another name. Such license, however, cannot change an economic law, unless a different rule be prescribed by the terms of the license; which is sometimes done. No such unusual condition exists here; and in the absence thereof it is not to be inferred that any American government intended, when granting a franchise, not only to regulate the business transacted thereunder, and reasonably to limit the profits thereof, but to prevent the valuation of purely private property in the ordinary economic manner; and the property now under consideration is as much the private property of this complainant as are the belongings of any private citizen. Nor can it be inferred that such Government intended to deny the application of economic laws to valuation of increments earned or unearned, while insisting upon the usual results thereof in the case of equally unearned, and possibly unmerited, depreciation.

609 I think the method of valuation applied by the report to land, plant, mains, services and meters lawful. To "Working capital, Coke & Coal Co. and Astoria," the above considerations are not applicable, and these items will be treated separately.

(*The Employment of Certain Items of Realty in the Manufacture and Distribution of Gas.*)

It is not doubted that all the meters, services, mains and plant possessed and enjoyed by complainant, and of the value already considered, are employed in complainant's gas business.

I am not able to arrive at the same result in respect of all the real estate. Ownership is asserted in land on Manhattan Island worth upwards of $15,000,000; some of it so obviously held for purposes other than the manufacture or distribution of gas; that no serious endeavor has been made to include the same in the property upon which the gas business should yield to complainant a fair return. There remains, however, properties included in the report, fairly to be described as large tracts of land, the inclusion of which is justified upon the ground that complainant is entitled not only to a return upon that which it presently uses, but also upon something more which it may require for similar use in the near future. How near that future may be is not shown, nor even intimated as to most of the disputed items, and it may fairly be said that in a suit such as this, proof of necessity near at hand should be required.

But there is one argument to me conclusive of the question raised by defendant's objections to the insertion in Capital account of the items termed in the report "Land leased, vacant and unimproved;" a phrase which includes most of the disputed items just referred to. Such argument rests upon a consideration of complainant's general business as explained by the testimony and briefs; of the necessities of its present situation; and of recent actual occurrences in respect of the Astoria plant (hereafter to be more fully 610 treated); which consideration convinces me that there is no intention on complainant's part to extend or enlarge its gas business on Manhattan Island in such manner as to require any substantial addition to the lands already actually applied to the necessities of that business. It is clear that for complainant to endeavor so to do would be unwise; it being apparent from any set of values propounded by any party hereto that a great, if not the greatest, obstacle to the cheaper yet profitable production of gas on Manhattan Island is the enormous value of the land already necessarily devoted to that purpose; and that any more island real estate will be so used the testimony does not compel me to believe. The folly, and therefore the improbability, of such a course is shown by one undisputed fact, viz., the present value of the real estate now confessedly devoted to gas making on Manhattan Island, is over $11,000,000 as found by the Master; yet at the present price of $1 a thousand the gross yearly income derived from the maximum production of everything on that $11,000,000 worth of land is less than $10,500,000. That the greatest product of which a plant is mechanically capable, is yearly worth less than the value of the land on which it stands, is a fact that speaks for itself, and needs no argument to prove that no man of business sense, will increase such a business misfortune.

Nor is it improper for the Court to take cognizance of contemporary local history, some details of which are in the evidence; and to recognize a determination on the part of the inhabitants of this island, to render difficult even the continuance, in so crowded a city, of a business which, in the language of one of complainant's witnesses, "renders us at best unpleasant neighbors."

For these reasons, I deem the plea advanced by complainant for the addition to its capital account of any Manhattan Island 611 land not now used for gas producing purposes legally invalid; and I exclude from the land valuation the present worth of leased, vacant and unimproved land, in the amount of $2,141,155. From the exclusion of these items, it necessarily follows that they should be regarded as no part of the complainant's Manhattan Island gas plant, and that therefore there must also be excluded from the legitimate expenses of the company the taxes upon these lands; and from its income, the rental derived from such as were leased at the time of inquiry. To this conclusion I am the more willing to arrive, on observing that the only yearly revenue produced to the complainant by this $2,000,000 worth of New York real estate was about $37,000.

It has not been overlooked that many of the pieces of land just considered are adjacent to portions of the plants of the complainant; that as to some a definite purpose of utilization is testified to; but the fact remains that they have been held for very considerable periods and not used; that they ought not to be used for the economic reasons above given, and that the testimony regarding their probable use falls far short of establishing that necessity which can be the only excuse for the utilization of such an expensive luxury as Manhattan realty in the gas business of the complainant.

(*Lands Alleged Not to be Owned by Complainant.*)

Defendants also object to complainant treating as part of its invested capital, certain lands and land under water of which its ownership is denied. It appears that complainant, many years ago, acquired possession of these lands under deeds which in terms obliged it to reserve certain portions therefrom as public streets; or to vacate said portions for street purposes, whenever thereunto required by The City of New York. At the time of the conveyances much of the land in question appears to have been under water; most has long since been filled in; the streets have never been
612 opened, nor has any demand for such opening ever been
made by the City; and most of the filled in property, affected by this objection, is not only in complainant's possession but is occupied by gas manufacturing establishments. It may be that complainant is liable to an action of ejectment; or that by process of condemnation, these pieces of property could be taken from it without compensation, upon the street opening being duly declared; but in my judgment it has given *prima facie* proof of title. If it were not occupying this debatable property, it would have been occupying either some of the lands already excluded as not employed in the gas business, or other lands of substantially equal value in the vicinity of its plants; for there is no contention that the land in question, however indifferent the title thereto, is not necessary for and actually used in complainant's business. The case is not different from what it would have been had defendants shown, not that the City threatened complainant's title or claimed that it had none, but that any third person had better title to the premises than the complainant, and might at any moment bring a successful action of ejectment therefor. It seems to me that in a proceeding of this kind such evidence would have been wholly immaterial.

But these considerations are not relevant to certain land under the East river in the neighborhood of Tompkins street. The title to that land under water may be as good or bad as that to the region intended, more than forty years ago, to be devoted to streets and not yet used for that purpose. But I cannot think that the land now in question, and under water, is employed in the complainant's gas business, in any proper sense. If it be assumed that the land is

owned in fee, it can be used for no other purpose than as a river bed, upon the surface of which water-borne freight approaches complainant's yards. The land under that river is of no more use to the complainant, because it is owned by it, than it would be
613 were it owned by the City or by the State of New York. It is the privilege of transportation over the river—which is open to all—that is valuable; and not the alleged ownership of the mud thereunder. I therefore exclude from the reported real estate valuation, the value of said land under water, viz.: (average valuation of complainant's witnesses) $160,000.

Subtracting these deductions, aggregating $2,301,155, from the reported value of the realty, viz., $13,461,000, I find the value of complainant's real estate actually used in the business under consideration to be $11,155,845.

(*Working Capital.*)

Upon this subject I am unable to agree with the report, further than to express my belief that the complainant usually has on hand about $3,000,000 worth of bills receivable and cash, and some $616,000 worth of bills payable outstanding. But it does not follow that so large a proportion of its capital account should be entered as working capital. That phrase means the amount of cash necessary for the safe and convenient transaction of a business, having regard to the owner's ordinary outstandings, both payable and receivable; the ordinary condition of his stock, or supplies in hand; the natural risk of his business and the condition of his credit; and unless these matters, and perhaps others, be looked into, no comparison can be drawn between one business and another, or even between those of the same general nature. The security of complainant's business is fairly shown by the fact that for the time of inquiry, in a gross business of over $13,000,000, bad and doubtful debts amounted to less than $83,000, and final profit and loss adjustment less than $30,000.

Complainant's credit is of the highest, and its own Comptroller should, I think, be the best judge of its own necessities; and his measure of working capital in the sense of cash is $1,000,000.
614 Six hundred and sixteen thousand dollars is taken as a fair average of outstanding bills payable, and the aggregate of these two sums is as much as the Comptroller claimed, until, on suggestion, he added $2,000,000 thereto to represent the average amount of outstanding bills receivable. To assert that a concern with such credit as complainant, with small percentage of loss, and a plant completed and paid for, needs as working capital not only the amount of its average outstandings payable, and $1,000,000 in cash, but enough more to make its average bills receivable equal to cash, is going too far. A fair working capital for complainant is $1,616,000, and that figure is adopted.

(*Coal & Coke Company and Astoria Establishment.*)

The first of these items denotes complainant's method of disposing of coke and some other by-products. Such disposition is made through a corporation legally independent, but whose entire stock is owned by complainant. The by-products in question are sold to such corporation, whose capital stock is the $50,000 reported, and on that capital stock complainant receives a 10 per cent. dividend, which is entered in the income account.

The second item represents a method of capitalizing, for the purposes of this case, the gas heretofore purchased by complainant from other manufacturing gas companies in or near Manhattan. It appears that, for the period of inquiry, the maximum product of complainant's own works was about ten and a half billion feet per annum. It has sale for about three billion feet more, and this additional quantity it bought from other gas companies, whose stock was, at the time of purchase, and still is, either wholly or partly owned by complainant. This condition was looked upon both by complainant and the vendors of the gas (so far as the latter had any independent view at all) as temporary; and, while this cause proceeded before the
Master, complainant was erecting on Long Island a plant of
615 the most modern construction, capable of furnishing not only
the annual three billion feet of gas purchased from other producers, but a billion feet more. Such projected addition to the gasmaking equipment of New York and vicinity was to be, and was while in process of construction, the property of the Astoria Light, Heat and Power Company, all of whose stock was and is owned by the complainant, and whose works will, when completed, be as completely identified with complainant's enterprises, as is the comparatively insignificant Coal and Coke Company.

Complainant therefore claims that because the Coal and Coke Company is no more than its "cartage department," and the Astoria company will be no more than a gas plant capable of supplying it with what it has hitherto been obliged to buy from others, therefore both should be here regarded as much a part of complainant's assets as any retort or holder of its plant.

To me it is clear this procedure is without warrant of law. Complainant does not employ in its gas manufacturing business a single tool of the Coal and Coke Company, nor a single machine of the Astoria Company. Its investment in those companies is represented legally by so many certificates of stock; its relation to them is that of a stockholder only; each is bound by law to maintain a separate existence and conduct a separate business.

The argument *ab inconvenienti* is often strong, and it has been inquired here, why should complainant be bound to go through the idle form of taking money out of one pocket merely to put it in another, and treating (for example), the Astoria Company as an independent organization when it really is not. The sufficient answer to this argument is that the law does not permit this species of con-

venience; and while it still does permit the existence of many
616 controlled corporations, it is highly necessary for the proper
investigation and possible regulation of all corporations, affected by a public use or engaged in interstate commerce, that the affairs of the controlling and controlled organization shall be kept distinct. And just what complainant, doubtless from very good business motives, is endeavoring here to have recognized by the Court is in my judgment plainly against public policy.

In the case of the Astoria Company, it is also I think a sufficient answer to the capitalization proposed, that there was no such company actually doing any business during the period inquired into. It had a legal existence, and the complainant was in effect subscribing to its stock; but it had no manufacturing agreement with complainant and was an enterprise incomplete and merely projected.

Further, there is no better reason for this suggested capitalization than there would have been had the Astoria plant never been planned, and complainant looked forward to permanent purchasers from its other controlled corporations. In the New Amsterdam Gas Company complainant is almost the only shareholder, and from that corporation much of complainant's extra gas was obtained. It might just as well be asked that some portion of the plant of the New Amsterdam Company (*i. e.,* that part which by hypothesis was sufficient to manufacture the gas sold by it to complainant) should be capitalized, as representing something upon which complainant was entitled to a fair return from its gas manufacturing and distributing business.

Because, therefore, the proposed capitalization of the two items now under consideration is contrary to law; is not, in the case of the Astoria Company, based upon any actually existing investment at the time of inquiry; and because it is misleading, in not truly
stating the facts; those capital items are excluded.

617 It results, from these findings, that the value, as of the
time of the beginning of this suit, of complainant's tangible property, invested in and representing the business sought to be regulated by the statutes and order in question, is as follows:

Real Estate	$11,155,845
Plants	15,500,000
Mains	12,636,000
Services	1,994,000
Meters and miscellaneous	4,100,000
Working capital	1,616,000
Total of tangible assets	$47,001,845

In seeking an answer to the ultimate question in litigation such as this, *i. e.,* what is the capital (in the sense of assets not share capital) upon which the complainant is entitled to a fair return, the other inquiries suggested by *Smyth vs. Ames, supra,* have not been forgotten. But in this cause I do not find that the original cost (where ascertainable) of complainant's tangible property affords any assistance. The time of acquisition is too long ago, and condi-

tions have so wholly changed, as to render comparisons useless. Nor is any consideration of share capital advantageous. Were the complainant engaged in no other business than manufacturing and distributing gas on Manhattan Island, the extent, value, time and cause of issue of its share capital would be material and relevant inquiries. But its holdings of the stocks of other companies (both those engaged in gas lighting and heating, and in other pursuits) are so extensive, that it is impossible to say more than that its entire capitalization does not seem disproportionate to its entire business; how much of said capitalization is represented, or should properly be represented, by its own gas manufacturing business, can only be ascertained by a valuation of its assets, and the only
618 portion thereof that has been, or can be, valued herein, is so much as is affected by the regulation complained of.

Nor do I think the price, as shown by recorded quotations, paid for the stock and securities of complainant during the last twenty years is of the slightest value. The stock has apparently been at times the subject of speculation; the recorded prices have varied so widely as to render any safe conclusion impossible; and the only result I can reach, from the consideration of these figures, is that at times the recorded prices are out of all proportion to the possibilities of the gas business, and at other times have reflected unwarranted lack of confidence in the possibilities of the same.

Having pursued, therefore, as did the Master, what I believe to be the only method of investigation practicable in this case, I conclude that complainant is entitled, as matter of law, to a fair return, from the business of manufacturing and selling gas, on $47,000,000 worth of tangible property.

(*The Second Question of Fact Tried Before the Master, i. e., Cost to Complainant of Production and Distribution of Gas.*)

Complainant's method of proving expense of manufacture and operation is to show actual disbursements for the year ending October 31, 1905, and for the calendar year 1905. The items in detail are shown in the report. No reason appears to doubt that these disbursements were made during the times specified and for the purposes set forth. Whether the purpose for which any particular sum was expended related solely or partly to the gas business, is not wholly a question of fact, when the circumstances are known; and it is always to be remembered that the ultimate use of this cost statement is *not* to prove what it cost complainant to make and distribute gas in 1905, but what, under ordinary circumstances, and
619 with a reasonable allowance for contingencies, will be such expense in the near future.

To the method pursued, it is objected that the investigation covered too short a period. If the statement propounded had not been compared, as to its most important items, with the experience of former years, and with that of other companies in other cities, there would be more force in the argument; but as matters are, I think the Court has been furnished with sufficient facts. A summary of what complainant deems its ordinary annual operating expenses may be condensed from the report, as follows:

Cost of gas at station (*i. e.*, ready for delivery to holder)	$3,445,091 37
Net cost of gas purchased from other companies	893,432 49
Cost of distribution (*i. e.*, from factory to consumer)	1,589,700 67
General expenses	2,807,040 66
Total	$8,746,265 19

It appears to me that this method of statement is in one respect misleading, and that some of the objections to the general expense account are well founded.

(*The Method of Statement.*)

The item "Cost of Gas purchased from other Companies" is not, in any way, an expense of operating complainant's gas factories or distributing its own gas. Much time was spent in showing the amount of each sub-item of station, distribution and general expense per thousand feet of gas manufactured and sold. In making these computations complainant has apportioned its distribution and general expenses, not to the gas it manufactured, but the 620 gas it sold, including that bought (as hereafter more fully stated) at bare station cost from other companies. This procedure apparently reduces the price per thousand cubic feet, by increasing the number of units to which expenses other than station cost are apportioned, and conceals the actual cost of manufacturing and distributing the ten and a half billion feet, which represent the maximum capacity of complainant's own works.

It is hardly too much to say that this procedure was the excuse for attempting to increase the tangible assets of the caiptal account, by adding the Astoria plant; and there is an apparent injustice or illogicality in considering income and receipts and disbursements, unrelated to any item of capital. Something seemed necessary to represent the investment from which flowed the profits of selling purchased gas. It appears, however, that it would have cost substantially as much to distribute the ten and a half billion feet, which complainant made, as it did to distribute the thirteen and a half billion feet sold during the period of inquiry; it entailed no measurable expense to pass the additional three million feet through holders, mains and services; and the fact is that the business of selling purchased gas was proportionately far more profitable than that of selling gas of the vendor's own manufacture. The two operations should be regarded as separate, though related, businesses; and having ascertained the tangible assets engaged in both manufacture and distribution, it is logical next to discover the normal expense of distributing the product of those tangible assets, before taking up any other branch of business. From the statement of complainant's operating cost, therefore, I think the item of "Gas purchased from other Companies" should be eliminated.

(Specific Objections to Items of General Expense.)

Interest on taxes, $94,506.29.

621 Doubtless this expense was incurred in 1905, and as a penalty for withholding certain taxes laid by the State of New York, which have been and still are being contested either as to amount or validity. The propriety of complainant's action in withholding payment has been attacked; but I think without success, considering the present condition of the tax laws of this State, and the results flowing from a voluntary payment of contested taxes.

But in such litigation as this there is an insuperable difficulty in allowing this item, viz.: it is not and cannot be a permanent expense. The effect of allowance would be to regard this sum as a part of the usual running expenses of the business, and, whether in the future taxes were or were not paid when due, to fix this disbursement as a permanent item of expense in the manufacture of gas for an indefinite period.

Of the same nature is the cost of a legislative investigation into the gas business; a sum expended in 1905 and amounting to $25,671.74.

A third and similar item is the expense of litigation over franchise taxes during the same year, being the amount ($63,401.65) expended in attacking the validity of chapter 712 of the Laws of New York for 1899, and the propriety of taxes laid thereunder. In twenty years legislative investigations have been few, and the validity of the Franchise Tax Law has been established by the Supreme Court of the United States.

The effect of allowing the last three items is to capitalize them, and the statement of that result is enough to require their disallowance.

As pointed out while considering the real estate item of capital account, complainant cannot treat as property employed in its gas business real estate not actually used, nor clearly shown to be 622 intended for immediate use in such business. It follows that the expense of property not so employed cannot be treated as a permanent item of expense of manufacturing and distributing gas. For this reason the general expense account must be further lessened by the proportion of taxes paid upon such realty, computed as $29,071.00.

(The Principal Objection to Complainant's Statement of Operating Cost.)

This may be conveniently called the "Ten cent item."

It is admitted that some allowance must be made for the accidents and contingencies of this, as of any other business; and complainant therefore demands that in addition to treating as permanent disbursements what it actually paid out during the period of inquiry for repairs and renewals to its plant, mains, services and meters, there should be allowed to it a reserve or contingent fund of ten cents per thousand feet of gas sold, or, at the existing price of a dollar a thousand, substantially ten per cent. of its gross income.

This method of stating the ten per cent. reservation is misleading, and I think unjust to the State. The more gas complainant buys from other companies the greater its volume of sale; but, as pointed out, the expense of maintenance does not increase *pari passu* with increased sales; and the allowance, if granted at all, should be upon the sale price of the maximum production of complainant's own works. This deduction alone would amount to more than $150,000.

The nature of this "ten cent item" may be seen by observing that during 1905 there was actually expended for repairs and renewals, and included in station and distribution cost, the sum of $685,077.47; and this item is to be considered as a permanent allowance for repairs and renewals, amounting, according to the report, to 5.58 cents for every thousand feet of gas sold, including, of course, the gas purchased from other companies. 623

Yet in addition to this allowance there is demanded, in permanence, an additional ten cents per unit sold, amounting to $1,328,316.37, to cover the probability of annual repairs and renewals in excess of $685,077.47, and depreciation mediate and ultimate: by which it meant the final replacement of plant and apparatus owing to irreparable decay. This item has been the subject of bitter contest, and after much hesitation I am unable to concur in the report.

It appears upon a review of sales of gas and cost of repairs and renewals actually made betwen 1885 and 1905, that the average expenditure for such purposes during that time was 10.89 cents per thousand feet of gas sold. Since 1899 the product of complainant's factories has not been sufficient to satisfy its consumers, and the average if computed only upon gas manufactured, is somewhat higher, but not over 11 cents per thousand. This average of repairs and renewals has for twenty years been sufficient, not only to maintain the plant in a condition of ordinary excellence, but to enable complainant to-day to make more and better gas than ever before, while owning a better plant than ever. The actual payments for these purposes, have often, as in 1905, fallen far below this average. This shows that the expenditure is not constant, while the retention of the large percentage demanded would be so under the plan urged on the Court.

There are certainly legitimate and gainful purposes to which temporarily unexplained balances can be put; and if they are so used an 11-cent reservation on gas manufactured will mean, during the years, much more than 11 cents kept, pending larger demands from the works, without profit from its use.

Again, the 10-cent item may be thus analyzed: In 1905 there was charged to depreciation $282,219.67, while there was expended on new construction $621,264.36, a difference of $339,044.69. 624 Construction represents actual outgo, is chargeable to principal, and must be provided for either by new capital or, what is the same thing, a capitalization of earnings, or by borrowed money. It is not pretended that, as against a regulatory statute, new construction must be allowed for out of current earnings. Yet under the system of bookkeeping above outlined and shown in the evidence, what happened in 1905 was this: the $621,264.36 was expended; then a year's depreciation was fixed by estimate at $282,219.67; and that amount of construction expenditure was charged to income as depreciation, and is sought to be covered in this 10 cent allowance. The distinction between depreciation of that kind and new construction seems to me very shadowy.

On considering the twenty year average of repairs and renewals, it is observable that the consumption of gas has in that time nearly quadrupled, and the capacity of complainant's own works very largely increased. It follows that the 10.89 percentage, if computed upon the sales for 1885, represents a much smaller sum than does the same percentage on the product of 1905. Yet the number of plants has not increased with increased production. Neither, proportionately, have miles of mains and most other parts of distributing property. Each plant turns out more gas, through interior enlargement and improved methods of production; and there is nothing in the evidence to compel the belief that the same proportion of repair and renewal expenditures to volume of product existed in 1905 as did in 1885; or that the proportion of earlier years is legitimately to be required in the future. And this is true, although the amount of money lately expended, and to be expended, is much larger than twenty years ago.

625 The actual result of this demand, as applied to the facts of 1905, is as follows:

If the ten per cent. reserve were computed only on gas manufacture, it amounted to $1,065,781.03 of cash in hand.

Of this $282,219.67
passed to depreciation and was actually used to lessen expenditure for new construction; and the balance of $783,561.36

should have been credited to reserve against future contingencies. This means that if repairs and renewals could be kept at the figure of 1905, and no more be called depreciation than was used to aid in construction in that year, there would be produced without the aid of investment at interest a fund sufficient to reconstruct complainant's entire plant in twenty years.

No such thing will probably happen, and counsel have argued that this apparent surplus is prospectively dissipated by future increased expenses, and losses of many kinds. Increased expenses are likely to be incurred. The constant rise in the price of most materials and most kinds of labor is something of which even judicial cognizance may be taken; but this inquiry is solely into the reasonableness, and therefore the legality, of the regulatory action in 1906. It is not to be presumed that if circumstances change the regulation will remain unchanged. And if such regulation does remain unchanged, there is nothing in the law as developed down to this time to prevent application to the courts, years after the passage of the regulative statute, upon the ground that what was just when the statute was passed has become unjust by lapse of time and change of circumstances.

As to future losses of a kind not known in the past, such may well be encountered; it is said, probably with truth, that the crowded condition of underground New York increases for the future the danger of explosion, and introduces a new peril in elec- 626 trolysis resulting from the multiplication of underground electric currents. These are dangers possible; so, somewhat more remotely, are lightning and earthquake. But it cannot be said, as matter of law, that a corporation, even as against its shareholders, has the right to horde income for the sake of maintaining dividends in years when extraordinary disasters may occur. If a prosperous private corporation chooses to set aside for such contingencies an annual fund of ten per cent. of gross earnings, discontented minority stockholders might not be able to coerce the discretion of the directors by judicial proceedings; but their complaint would be entitled to a hearing, and the alleged abuse of discretion strictly inquired into. The case of the company or its directors is far weaker where the endeavor is to capitalize a large proportion of yearly earnings against the undoubted regulatory power of the State.

I am of opinion that some such capitalization of income is proper; but can it be said in this case that a ten per cent. reserve is so universally or even generally approved in manufacturing circles, so necessary for this corporation in the light of its past history, and so clearly shown to be all these things by the evidence herein, as to require the Court to uphold the claim and accordingly seek to limit the regulatory power?

In my view the statement of this proposition is a sufficient answer to it; and I find that complainant has not sustained the burden of showing the general acceptance and reasonable necessity, and therefore the legality of the reserve demanded.

An allowance of eleven cents per thousand feet on the maximum production of complainant's own works to cover repairs, renewals and depreciation mediate and ultimate is in my judgment sufficient.

Making the deductions above discussed, I find complainant's operating cost, for the manufacture and sale of its own product to be $6,799,147.28.

627 *Note.—Summary of Deductions.*

Net cost of gas purchased from other Companies...	$893,432	49
From General Expense Account:		
Interest on Taxes	94,506	29
Taxes on lands not employed in gas business (estimate)	29,071	00
Legislative Investigation expense	25,671	74
Franchise Tax Litigation expense...............	63,401	65

Contingent Fund, computed thus:

Repairs and Renewals of 1905 stated in Station and Distribution Cost	$685,077 47	
"Ten cent item" of report	1,328,316 37	
Total	$2,013,393 84	
"Eleven cent fund" allowed in opinion	1,172,359 10	
Difference to be deducted		841,034 74
Total deductions		$1,947,117 91
Which sum subtracted from		$8,746,265 19
Leaves		$6,799,157 28

as the reasonable cost of manufacturing and distributing complainant's own product.

628 *(Complainant's Income.)*

From the income as reported	$13,730,193 50
There must be deducted for reasons explained above, Dividend on Coke & Coal Co.	$5,000 00
Rental of leased land	37,408 88
Proceeds of sale of purchased gas (2,863,702,341 ft. at 99.967 average price)	2,862,757 32
Total	$2,905,166 20
Leaving as income from complainant's own products	$10,852,027 30

This sum is more than could be obtained from selling the company's entire product at $1 per thousand, the present price to private consumers, although for some years The City of New York has paid but 90 cents per unit.

The excess arises from the fact that much of the gas sold the City is unmetered, and furnished under contracts requiring complainant not only to furnish the gas but to maintain and repair the lamps, so that the amounts paid for street lighting largely exceeds 90 cents per thousand for the gas consumed.

(Income from Purchased Gas.)

The sale price was	$2,862,757 32
Cost at 34.04 c. per M	997,039 89
Profit	$1,865,717 43

Not all the gas, either purchased or made during the period of inquiry was sold during the same period, but the unsold residue is too small to render the calculations erroneous for the purpose 629 of this case, and much less than enough to constitute a proper reserve according to complainant's evidence.

This is the income sought by complainant to be capitalized or represented by the insertion in capital account of the Astoria plant. That is, because the Astoria factory would when finished furnish annually four billion feet of gas, and ultimately do so more cheaply than has yet been done, therefore the cost of the prospective works should be considered as an investment of complainant, employed in its gas business.

The inadmissibility of this contention on legal grounds, has been pointed out already. It remains to consider how the net income from purchased gas is to be treated, in ascertaining the probable entire income of complainant, derivable in the near future, from all its gas business.

The three billion feet purchased in 1905 were obtained from companies all but one of which are almost as completely dominated by complainant as is the Astoria Light, Heat & Power Company, and in that one it owns a majority of the stock. It has used that control or ownership to obtain gas at about holder cost plus ten per cent., such holder cost being slightly below the corresponding figures for complainant's own product.

With the inequity or illegality of this arrangement, as against a minority—however small—of stockholders, we are not concerned, and possibly it has afforded to the selling companies a method of disposing of surplus product. The inquiry here is, whether this business is to be regarded as permanent, and at what figure the purchase price of gas shall be fixed.

That the business is permanent I think obvious. The consumption of gas on Manhattan Island has outstripped the capacity of the factories there situated, and I have already expressed 630 my belief in the unlikelihood of any new factory being there built, and the bad judgment of attempting to do so.

I cannot, however, think it equitable to charge against complainant all the profits derived during the period of inquiry from a method of business, that in its present form cannot and ought not continue. The agreements under which complainant's controlled companies have furnished gas are now expiring; at what price should it be now obtainable from the factory, and by a purchaser which bears every cost of distribution?

It would perhaps be possible to hold complainant to present figures for mere lack of proof—the case having been presented to the Master and Court as if stock ownership produced a merger of the controlled and controlling companies. From a denial of that doctrine it might follow that existing profits, however obtained, should be the basis for measuring the future.

This does not seem quite fair, and I think there is a basis of computation inferrible from the evidence, though not directly testified to.

The three billion feet purchased in 1905 was not enough for complainant's wants. The Astoria plant was calculated for four billion feet, without any reference to a decrease in the price of gas. The increase in consumption during the years when prices were steady at a dollar per thousand was such as reasonably to justify this provision; entirely apart from the necessity for a reserve—which the demands of the consumer have lately made impossible.

The ascertained cost of Astoria is twelve million dollars, and if the expectation of lessened holder cost at that factory be only partially realized, 30 cents per unit is a high figure. If four billion
feet be sold annually at 50 cents per unit, and disposed of at
631 a dollar, the profit to the seller represents over six per cent.
on the investment, and that to a purchaser who disposes of it by mingling his purchase with his own product, is two million dollars.

Here may be considered the natural imminent increase in consumption; not due to prospective decrease in price, but to advancing population and industrial demands. It is prophesied by complainant's counsel, that electricity is supplanting gas, so that as an illuminant gas is passing away; that the near future will produce light without heat, and that for heating and cooking purposes electricity will soon be a formidable rival, if not a victorious opponent. In some of this there may be truth, yet nothing but time can furnish demonstration; and if the industrial development of the past be any guide, new inventions create new demands, and permit the old and new to flourish side by side. Such has been the history of steam and electricity—the telegraph and the telephone—and thus far, of telegraphy with and without the wire.

For changed circumstances, either of production or consumption, there must be new applications for relief; the business of the Court is to deal with circumstances discoverable in the present, and by evidence. On the evidence, I believe that complainant reasonably could, and did expect when this bill was filed, an annual income from purchased gas bought at a fair price as large as that admittedly shown for 1905.

It follows that income from the gas business for the purposes of this case should be thus computed:

Income from complainant's own product, gross....	$10,825,027	30
Expenses	6,799,147	28
Net..................................	$4,025,880	02
Net from purchased gas....................	1,865,717	43
Total net income.....................	$5,891,597	45
632 On the volume of sales for 1905, the loss through reduction of price by 20 cents per M. is as reported..........................	$2,656,600	00
Net income under legislation here attacked......	3,234,997	45

It is true that in considering probable income from gas purchased, I have assumed a consumption of the full product of the Astoria plant, or its equivalent; and therefore a total sale of about a billion feet a year over the business of 1905, and that the reduction of price must be considered as to that quantity. Such reduction would amount to approximately $200,000.

I find that from the gas business humanly certain to be done by complainant, under the acts of Assembly in question, its net annual income would not be less than $3,030,000, upon a capital of tangible assets of $47,000,000. This finding allows nothing for increase of sales due to cheaper prices.

(*The Rate of Return.*)

It thus appears that complainant, under the legislative reduction ordered, can earn over six per cent. upon the present value of its investment in tangible property.

If such property only is to be considered, I think this return sufficient to satisfy the law—though the reported decisions do not furnish a plain legal measure of the rights of a party in complainant's situation.

The admitted doctrine (*Covington, &c., Turnpike Co. vs. Sanford,* 164 U. S., 578) that a corporation subject to regulation has no right to earn any definite devidend upon its share capital has no application here, on account of the diversity of reasons for issuing complainant's stock, and the variety of its corporate interests.

633 It is only by ascertaining what complainant has in its gas business, that even an estimate can be made of how large a part of its share capital, represents that business.

Nor can I think that the legal rate of interest in the State of complainant's incorporation or operation affords any light on the subject, merely because it is established by law. As was observed by counsel, equally learned in law and politics, it would be easy to amend the legal rate; and judicial dependence upon an interest rate susceptible of change, by the same Legislature, that regulates the rate of earnings, would be, to say the least, inadvisable.

There is, however, evidential value in the established rate of usance for money, in so far as it expresses the settled conviction of the business community as to the worth of capital invested in enterprises not usually regarded as hazardous.

Neither is the market price of the stock of a corporation in complainant's situation, nor the dividends paid thereon, ordinarily of value to the Court. This company has for twenty years paid dividends averaging over six and under seven per cent., while the price of its shares has at times so risen as to yield but three per cent. to the purchaser at highest rates, and in other years has been below par, although dividends were maintained as usual. These are the vagaries of speculation, or reflections of the necessities of borrowers on collateral and not facts useful in an investigation such as this.

Difficulties of this kind are encountered in every case of rate earning regulation, and I believe the decisions end to-day about

where they began—declaring only that "each case must depend upon its own special facts" (*Covington, etc., Turnpike Co. vs. Sanford, supra*) for discovering whether a rate "prescribed by a
634 legislature or a commission is unjust and unreasonable and such as to work a practical destruction to rights of property" (*Regan vs. Farmers' L. & T. Co.*, 154 U. S., 362).

The question then becomes largely local, and decisions from one part of the country may be of small value in another, where conditions of business life are different. The true note was, I think, sounded in *Milwaukee &c., Co. vs. Milwaukee*, 87 F. R., at 586, where the local rate for approved and non-hazardous securities was taken as the final criterion.

In respect of gas and electric companies, the conditions for the State of New York are, I think, well summarized in the prevailing opinion in *Trustees of Saratoga Springs vs. Saratoga Gas &c., Co.* (Sup. Ct. N. Y., App. Div., Third Dept., Nov. Term, 1907), but they must be further localized in the case of a corporation monopolizing the gas service of the most crowded portion of the largest city in America.

Such a business situation is secured against competition, because the monopoly is beneficial. To have the streets of the Borough of Manhattan torn up to afford room (if room exists) for the mains of a rival, is unthinkable. For the same reason, and because the population and its wants will increase—so far as human foresight can perceive—the amount of business will also increase. So that the inquiry here is, what is a fair and reasonable rate of return upon the most favorably situated gas business in America, not forgetting that all gas businesses are inherently subject to many of the vicissitudes of manufacturing?

Much testimony has been introduced to show that certain investors in gas works well known throughout the country expect to obtain from eight to fifteen per cent. upon the price of what they can buy. Such testimony is not relevant. It must be admitted that investors are entitled to reap large rewards, if they can, from the haz-
635 ards of a new business, or the rebuilding of a broken one. Such ventures are for exploitation, and the day for exploiting the business of selling illuminating and fuel gas in New York City is past—or certainly ought to be.

The exploitation value in this case is represented by the enhancement over cost of land, mains and services; arising from local conditions beneficial alike to this complainant and many other New Yorkers, who by judgment or luck purchased or constructed—perhaps generations ago—what many men desire.

An interest in the gas business of this City is as nearly a conservative investment, as any private manufacturing enterprise can furnish, and although each case depends upon its special facts, there is, after problem conditions are ascertained—one question that can always be asked. What would that prudent man acquainted with business (so familiar to the readers of legal literature) do regarding such an investment, if it were offered to him? I think he would take it, not with enthusiasm—but as fairly safe local property, promising a rate of return sufficiently above the local mortgage market, to compensate for the additional and non-insurable hazard. He would expect, and have just and reasonable right to expect, a return of six per cent., not because that happens to be the interest rate by law established in the State of New York, but because it is the return ordinarily sought and obtained on investments of that degree of safety in the City of New York.

(*Complainant's Intangible Property.*)

My conclusion that the legislation in question leaves complainant a return of over six per cent. upon the reproductive value of its tangible property in the gas business, renders it necessary to consider the intangible assets of that business and their effect, if any, upon the ascertained return.

636 The Master's report finds it impossible to assign separate values to the two items of intangible assets claimed by complainant, viz.: good-will and franchises, but declares their combined values to be not less than $20,000,000. No more definite findings seemed needful, because the tangible assets found by the report were so large and the expenses of operation so great that the resultant income under the reduced gas rate was less than 4 per cent. upon tangible property alone.

The testimony, however, is sufficiently full to enable the Court to ascertain facts and render it unnecessary to remit the case.

(*Good-will.*)

By the definition of this species of property adopted in *Washburn vs. National Wall Paper Co.* (81 Fed. Rep., at p. 20) good-will is "all that good disposition which customers entertain towards a house of business identified by the particular name or firm, and which may induce them to continue giving their custom to it."

I cannot perceive how this complainant can possess a good-will answering that description. There is nothing in the nature of its business enabling it to acquire good-will in the property sense or indeed in any other. It is required by law to furnish gas to all demanding it with a certain distance of the mains; and it owns the mains, service pipes and meters. What induces a customer to remain with this company, its successor or vendee? Nothing that I can imagine, except a desire to avoid the nuisance of street digging in front of his house, a digging, however, entailing no expense upon him. Yet even this nuisance is in all human probability impossible of occurrence because of the beneficially monopolistic character of defendant's present occupancy of the streets of this City.

637 Nor is there proof in the case of the value of what complainant calls good-will—on which point I agree entirely with the Master.

From the testimony I think it apparent that what is here meant by good-will is the organization of complainant, long established and doubtless well manned and equipped. Such organization is clearly of value, because without it neither its tangible nor intangible property can be profitably managed. Yet the organization itself is but a method of utilizing that which is invested. It is really dependent for its existence and continuance upon the franchise, without which there can be no useful organization.

Tangible property has a certain value entirely apart from franchise, or right to continue business, or method of transacting business; but good-will in the sense or organization for the business of furnishing gas can have no existence whatever apart or detached from the franchise conferring the necessary privilege.

Would anyone think of capitalizing good-will of this kind and distributing its assumed value in the shape of new shares among shareholders new or old? I think the most ingenious financier could not imagine such a proceeding; and if this good-will be not property capable of such capitalization and distribution I do not think it property capable of capitalization as against the State.

Finally this claim of good-will seems to forget that for many years the price and distribution of complainant's gas has been regulated by law. A citizen is entitled to have a clean street before his house because he pays taxes *inter alia* for that purpose; he is much more plainly entitled to have complainant's gas in his house because the Company must give it to him if he pays for it. I think it apparent that the conceivable good-will of a gas company in this City is about equal to that of the Street Cleaning Department of the Municipal Government.

638 (*Franchises.*)

Under this branch of the discussion the most important and novel question is whether a public service corporation is entitled to add the value of its franchise to the assets from which a fair return may be lawfully demanded.

In this case complainant's proposition may I think be accurately stated thus—the right to place gas mains in the streets of New York and maintain them for private profit is in and of itself something upon or from which an income return may be justly and lawfully demanded; a return different and separable from that derived from all the Company's tangible property or any part thereof.

It is not asserted that any right such as above described was ever bought by complainant from either State or City or that for such right any valuable consideration was ever paid in the usual legal sense of those words.

Indeed the asserted rights all date from that time in American economics when those promoting public works were regarded as public benefactors and the right to serve the public was something thought to be sufficiently paid for by the act of service.

In these later days, however, complainant, finding itself treated rather as a malefactor than a benefactor, brings this action to ascertain *inter alia* whether the latest statutory rate leaves it a fair return not only upon its tangible property, but upon the right to use that property in the gas business, which right is commonly called a franchise.

An an original proposition I believe this claim unsound. Return can be expected only from investment, and he that invests must part with something in the act of investing. He that hath not sown shall not reap; and can it be said that complainant here or any other corporation similarly situated has invested its franchise in its business It did not invest *in* its franchise because it did not pay for it; it did not invest its franchise because it did not part
639 with it in the same way that it parted with money or money's worth in acquiring or creating mains or plants. The investment of property was made not *in* the franchise, but *under* the franchise and on the faith thereof. The franchise is but a part of the power or privilege of sovereignty, allotted to a private person for the benefit of all and only incidentally given for private emolument.

If all franchises so allotted are private property for the purposes of rate regulation, as fully as land or money is private property—the nature of the doctrine is best seen by considering the case of a franchise just granted under which no capital has yet been invested—or one the use of which demands or permits no investment other than personal service or labor.

Thus if a private citizen be now granted the franchise here claimed by complainant, *i. e.*, the right to establish and maintain gas mains in the streets of this city—what is the nature of the property right in such citizen before a main is laid or a foot of gas manufactured? What is its worth apart from performance under it, and how can it be valued at its birth? Yet unless it can be seen to possess inherent value entirely apart from the earning capacity of the subsequent investment or from the actual earnings resulting from such investment the value asserted or claimed is but a duplication of that derived from the use of the tangible property when so invested.

Again, let it be supposed that a citizen be granted a franchise to perform personal service only. The franchise of being a town crier or herald is an historical illustration. Such franchise is not different in kind from that here under consideration. Is there any value attached to that franchise beyond the right of working under its protection for a fair wage? And would the herald be justified in charging two prices for his proclamation—one for his service and the other as return or income on his franchise?

640 I believe the concepts of the nature and value of franchises are seen dimly and confusedly because of the failure to distinguish between productive and non-productive property. Land, money, chattels, may be industry, and intelligence be made productive without a franchise, but no excellence in these desirable qualities can ultimately render a franchise productive without the use of money, chattels and land in conjunction therewith; and when the juncture is made the earning capacity of the real and personal property plus the franchise and plus intelligence and industry is really no greater than it would be without the franchise, for the franchise has added no producing power to the realty or personalty—it has but authorized their employment in a particular way and protected the owners while so employing them.

I can imagine no more than three ways in which the value of a franchise can be stated; it is valuable, 1st, because it authorizes the gainful use of private property in a particular manner; 2d, because once obtained it is often difficult or impossible to get another like it, and 3d, because it may be used to injure or hinder another enterprise, although itself conferring or securing nothing of value.

The third method of statement has been accurately, though colloquially described as "nuisance value," and is so obviously illegitimate as to require no discussion.

The second method of statement when carefully considered, asserts that because the sovereign has deemed it advisable to entrust a public work to one citizen or body of citizens such *quasi* monopolistic grant confers the right to charge for the service more than would be just or lawful were the occupation open to all.

Nor does it change the truth of the last statement that the difficulty of procuring franchises produces and long has produced a traffic in them. On every private sale of franchise property the price paid is so much money lost to the public by official incompe-
641 tence or worse, and such sale can confer on the vendee no right to compel the consumer to repay him a price which should have been paid to the State.

For these reasons I believe that on principle a franchise should be held to have no value except that arising from its use as a shield to protect those investing their property upon the faith thereof, and that considered alone and apart from the property which it renders fruitful, it possesses no more economic value for the investor, than does an actual shield possess fighting value, apart from the soldier who bears it.

The very able counsel who have argued this cause unite in declaring that the exact question here presented makes this litigation a "pioneer case"; and those for defendant have, for reasons as different as counsel were numerous, demanded that the matter be disposed of as one of first impression. It often occurs, however, that upon the presentation of a question absolutely novel in its exact form, the decision of the Trial Court is guided, in the absence of directly controlling authority, by the trend of decision, and methods of reasoning pursued in well considered cases dealing with kindred topics, and even by the dicta of Courts of approved authority, where such dicta indicate, as they often do, a train of thought necessarily suggested by the exact matter in hand. It is this course I must pursue in respect of the broad question of valuing franchises for purposes of rate regulation. How novel it is, exactly as presented, is shown by the silence of most of the text books concerning regulatory rates, and the summary and insufficient treatment accorded the question in the valuable treatise of Messrs. Beale and Wyman, sec. 362.

It is familiar doctrine that private citizens may acquire vested property rights through a series of even erroneous decisions—
642 rights so firmly vested that it becomes unconstitutional for the Court which persisted in error, suddenly to rectify its mistakes to the detriment of those who had securely rested upon

the decisions sought to be invalidated. A Trial Court is in somewhat such a case when confronted with a proposition concerning which as *res nova* it entertains no doubt, but finds it impossible to enforce the opinion entertained, without doing violence to theories of law and habits of legal thought fairly discoverable in preceding decisions of superior jurisdictions. In this case I am compelled to the conclusion that it is necessary to allow the discoverable value of complainant's franchises as part of that capital upon which a fair return must be allowed, because to refuse would disregard views expressed by higher courts regarding the general nature of franchises and regulation proceedings. Instead of attempting to minimize and distinguish the decisions to which I have been referred and many others, it is my duty to follow the method of reasoning there clearly indicated, leaving it to the higher tribunals to make distinctions which, if drawn by the lower court, would in my opinion savor of presumption.

It is not to be denied that such a franchise as that to place and maintain gas mains in city streets is (though secondary in its nature and inferior to the primary franchise of corporate existence conferred by the supreme authority), property "taxable, inheritable, alienable, subject to levy and sale under execution, to condemnation under the exercise of the right of eminent domain and invested * * * with the attributes of property generally" (*People vs. O'Brien*, 111 N. Y., at p. 41); and the same doctrine in language almost as forceable is laid down in *Monongahela Navigation Co. vs. United States* (148 U. S., 312), which case particularly and especially applied it to an instance of condemnation for a public use of the highest order.

643 If franchises are to be reckoned with and paid for in condemnation proceedings, must they also be reckoned with and allowed for in cases of rate regulation? The rights of condemnation and regulation are both confessedly exercises of police power. If regulation is to be regarded as *pro tanto* condemnation, then the same train of reasoning which requires compensation for franchises when all the property protected by the franchise is taken away, requires that some compensation shall be left when the earning power only is reduced. This is the crucial point of inquiry, and the highest tribunal has not yet encountered the necessity of answering.

Yet it was said in *Smyth vs. Ames, supra* (p. 544), that the "apparent value of the property and *franchises* used by the corporation" was *inter alia* to be considered when determining the rates that might reasonably be charged; and in the same case it was asserted as a general proposition that a "corporation may not be required to use *its* property for the benefit of the public without receiving just compensation for the services rendered (p. 546). And there can be no doubt that in the schedule of "its property" the corporation may justly include its franchise. And in the same spirit are the remarks in *Reagan vs. Farmers' Loan & Trust Co.* (154 U. S., at 410), although the word "franchise" is not there used. In that case the proceedings of the Texas Railway Commission were under

review, and how careful those commissioners were in valuing tangible property to the exclusion of franchises, may be seen by the remarks of the Interstate Commerce Commission (I. C. C. Rep., 264). *San Diego Water Co. vs. San Diego* (118 Cal., at 567), was purely a case of rate regulation; and it is there declared that "the question of what is just compensation in such a case is, we think, in all respects analogous to the question which arises in every case of appropriation under the power of eminent domain, and it may be reduced to the formula that the public must pay the actual value of that which it appropriates to the public use." And in
644 the same spirit are the remarks of Morrow, J., in *Spring Valley Water Works vs. San Francisco,* 124 Fed. Rep., at 594, which was also a case wholly of rate regulation. And this identity of spirit in the two proceedings has been explicitly recognized by this Court upon an application for preliminary injunction in this case (reported 146 Fed. Rep., 150). I think these cases reveal a line of reasoning which may be summed up thus: It is admitted that if property protected by a franchise is condemned and wholly taken away from its owner the franchise must be paid for. If its earning power be reduced by regulation the value of the property is *pro tanto* reduced and since the franchise is property the value of the franchise is also reduced. Therefore in some way the value of the franchise at the time of the proposed reduction must be ascertained, in order to discover how much it contributed to the earnings before reduction, and how much it suffers in common with other property by reason of the reduction. Indeed, it has been asserted, that when the condemnation is absolute the owners may take the value assessed, reinvest it and take their chances of gain elsewhere, while if the condemnation be but partial and through rate regulation, such owners have no option but to continue to own the property and receive the reduced rates; with the result that should no allowance be made for the franchise, owners are in a worse position when regulated than when their property is condemned outright (*Ames vs. Union Pacific Ry. Co.,* 64 Fed. Rep., at 178). It is obviously true that if franchises have inherent value and yet may be disregarded in regulating rates, it would be an easy matter to regulate profits as near the vanishing point as might be necessary and then condemn property whose franchises had been so practically destroyed by regulation, at a price far below its worth were condemnation instituted without antecedent regulation; and this thought is prominent in 146 Fed. Rep., at 157-8.

645 I conclude, therefore, that I am compelled to consider franchises not only as property, but as productive and inherently valuable property, and to add their value if ascertainable to complainant's capital account, before declaring the rate of return permitted complainant by the statutes complained of (See an endeavor to deliminate these two species of property in *Kennebec Water District vs. Waterville,* 97 Me., at 220).

(*The Method of Valuing Franchises.*)

Upon this point, again, the diversity of view manifested by counsel on the same side, reflects the difficulty of the problem; a difficulty accentuated in this State by the existence of the Franchise Tax Law (chap. 712 of 1899). By that act the special franchise or privileges possessed by corporations such as complainant, together with certain kinds of property not taxed either as realty or personalty before its passage (*e. g.,* mains and services), are subjected to taxation. The method of assessment followed in practice is to ascertain the value of all tangible property of a given corporation and the amount of its net earnings, allot to the tangible property a fair return out of earnings, and capitalize the residue thereof, if any, at the same fair rate to ascertain the value of the special franchise. This is undoubtedly an easy and convenient method of assessing the tax, but as a scientific method of ascertaining the value of the franchise it is open to the obvious objection that as long as the tangible property earns anything and the franchise exists, the franchise contributes to the earning power, because it is only by virtue of the franchise that anything at all is earned.

Again, as a method of valuation applied not to taxation, but to rate regulation, the system is reducible to an absurdity, for at what point of time is the inquiry to be made? Clearly before the reduced rate goes into effect. Yet by this method, since the
646 fair rate of return upon tangible property is a constant figure,
the capitalization of the residue at the same figure will always give a valuation for the franchise rendering reduction impossible.

As a result of this obvious absurdity, counsel have submitted the argument, equally ingenious and ingenuous that, although the franchise tax law remains unrepealed, New York has by the regulatory statutes here in question abandoned the idea of taxing complainant's franchise, and substituted the scheme of regulating price of output. It should therefore be held, first that no future allowance be made for the payment of any franchise tax, because under this scheme of regulation, value in the franchise disappears and there can be no tax thereon, and second, for the same reason franchises should be excluded from capital account, because by the regulatory statutes their value is altogether extinguished. As an illustration of the difficulty of the subject, the argument is admirable; but to ask the Court to remove from the operating expenses of the company a tax lawfully laid in pursuance of existing statute, on the ground that a subsequent statute extinguished that upon which the tax operated, notwithstanding that the only apparent effect of the Eighty-cent Tax Law was to increase the franchise tax, is a considerable demand upon credulity.

The Master reports that the record contains little direct evidence as to the value of the franchises, and he might have added that if by direct evidence is meant testimony of the same kind regarding their value, as has been offered regarding every item of tangible property, there is none at all.

I think it obvious, as I have endeavored heretofore to point out, that either for the purpose of condemnation or regulation the value of a franchise depends wholly upon what is earned under it; and I believe the best way of finding out how much a franchise separately considered is worth, is to ascertain what those persons desirous
647 of continuing operation under it consider it to be worth.

In a corporation whose stock is freely bought and sold, such value is measured by the success attending the sale of stock based entirely upon capitalization of franchise; yet the value of stock issued only in consideration of the franchise, is obviously dependent on earnings, after the stock based on tangible property has received a satisfactory dividend. This is really the same measure of value that the New York Franchise Tax Commissioners are using, except that instead of that reasonable return upon the tangible assets deemed by the Commissioners sufficient, there is substituted the opinion of the investing or speculative public as to what constitutes a satisfactory rate of return upon all the stock. Thus, if the investment of $100,000 in a franchise protected business, authorized in the opinion of the promoters the issue of $200,000 worth of stock, and such stock for a number of years maintains itself at par, paying satisfactory dividends, it would be obviously fair to assert that in the opinion of the shareholders the franchise is worth $100,000, assuming no appreciation of tangible assets. Yet it will always be true that unless the whole net return, compared with the value of tangibles, is above a satisfactory return on tangible investment alone, the addition of stock issued for franchise will be regarded as "water," and detract from the value of the entire issue, and I think this conclusive proof that value in a franchise depends wholly on what actual investment can earn.

I consider the real reason for that identification of regulation and condemnation proceedings which compels me to consider the value of franchises to be, that for generations it has been the universal practice of American corporations, supported by the opinions of courts and counsel, to capitalize their franchises for all it was thought the traffic or business would bear; until the country is full of shareholders whose certificates of stock are based upon the belief
648 that in some way or other such certificates were legally created pieces of property, and would like other property, be protected by Federal and State Constitutions.

These considerations applied to the testimony herein enable me to find that this complainant did at the beginning of its career measure the value of its franchises. It does not appear how it was done, nor why the figures selected were chosen; but it is true as matter of fact that when complainant was organized in 1884 under a statute which in terms permitted it to acquire the property and franchises of the older gas companies consolidating to form it, it then issued stock of the par value of $7,781,000, representing the franchises it then acquired and nothing else; and this stock is still outstanding and has since 1884 been in the hands of purchasers, who I am compelled to think have a right to rely upon legal protection for legally issued stock.

There is no direct evidence that complainant's franchises in 1884 were worth $7,781,000, or are worth that much to-day. I do not see how such evidence can exist; but because complainant made an arbitrary valuation so long ago, issued stock on the faith thereof, did that lawfully, and has maintained dividends upon that stock ever since, I find it *presumptio juris* that complainant's franchises in 1884 were worth $7,781,000; and to that extent it is certainly entitled to protection against confiscatory regulation.

No capital stock has since been issued upon the faith of franchises only. If, however, complainant's franchises were worth $7,781,000 in 1884, and its tangible property at the same time was appraised (as appears in evidence) at $30,000,000 (in round figures), then since complainant's business (in sales volume) has in twenty-three years almost quadrupled, and its tangible assets grown to $47,000,000, it appears to me that a fair method of fixing value 649 of the franchises in 1905 is to assume the same growth in value for the franchise as is demonstrated by the evidence in the case of tangible property. If, therefore, the franchise valuation of 1884 was proportioned to personalty and realty of $30,000,000, a franchise valuation similarly proportioned to $47,000,000 in 1905 would be over $12,000,000.

This I think a logical result from the assumption I am compelled to start with, *i. e.*, that franchises have a separable and independent value. But there is, however, no method of valuing franchises except by a consideration of earnings; earnings must be proportioned to assets; and both kinds of assets, tangible and intangible, must stand upon the same plane of valuation; having therefore a measure of growth of tangible assets from 1884 to 1905, the franchise assets must be assumed to have grown in the same proportion. I find that the value of complainant's franchises at the date of inquiry was not less than $12,000,000, making a total valuation of $59,000,000, upon which the probable return is $3,030,000, or very considerably less than 6 per cent.

This return is neither fair nor reasonable. It is, however, asserted that it is not confiscatory. That it does not confiscate all the income is admitted; but in so far as there is any difference between the promised return and a fair return there is a confiscation of that difference. Authorities need not be cited to show that the Court can neither increase nor diminish the statutory price. It can only judicially decide whether the return is fair, and if it is not fully fair and wholly reasonable there is a confiscation of something, it makes no difference how little. On this point there is nothing to be added to the remarks in *Spring Valley Water Works vs. San Francisco*, 124 Fed. Rep., at 602.

650 (*Existence of the Franchises.*)

It has been strongly urged in this cause that even if franchises are property, and property to be taken into consideration in cases of rate regulation, this complainant does not own any franchise whatever. The arguments on this subject depend upon a careful examination of the rights conferred both by charter, and contracts with the City, upon the companies which in 1884 united to form complainant. No federal question is involved in this contention. It is one on which it would be the duty of the Federal Courts to follow implicitly the rulings of the State Courts, and I am therefore very loath to express any opinion on the matter. It is sought by complainant to avoid the discussion by stating that this is a collateral attack upon its franchises. I do not think so. If complainant is entitled to have its franchises considered, it is only because the franchise is an item of property, and therefore it must be shown to be at least in the possession of the complainant and actually enjoyed by it at the time of inquiry.

In the case of the land said to be a portion of the street occupied by one of complainants' factories, it was easy enough to prove possession, but whether one can be said to be in possession of a piece of intangible property because he is apparently enjoying some of the earnings therefrom is not so easy to assert.

I do think, however, that the possession of the secondary franchise or right to lay and maintain mains in the major portion of The City of New York can and should be inferred in complainant from the undisputed fact that it long has been and still is being taxed upon these very rights. Of course it is not proof of ownership, any more than paying taxes upon real estate is proof of title to land, but where the tax is laid *in personam* and not *in rem* and by the same authority which now questions the existence of the franchise, it
651 is, I think, conclusive proof of complainant's actual enjoyment of the rights secured by the alleged franchises.

Under the decisions of the highest Court of this State, however, I incline to the opinion that complainant is not only in possession, but in legal enjoyment of, rights enabling it to lay and maintain mains on Manhattan Island. I believe *People vs. O'Brien, supra,* has definitely established the proposition that a franchise survives the legal death of the corporation to which it is granted, and that *Matter of Longacre Electric L. & P. Co.,* 188 N. Y., 361, necessarily holds that a secondary franchise may be assigned and the title thereto may pass from one corporation to another through an individual.

Under these cases complainant is in the possession, enjoyment and ownership of the franchises originally granted to the Harlem Gas Light Company, the Knickerbocker Company and the Anthracite Gas Lighting & Heating Company; and these franchises are sufficient to cover all that complainant does, and permit all it requires for Manhattan Island. Without expressing any opinion as to the other alleged franchises, I consider this finding sufficient to support the value heretofore stated.

It has not been overlooked that according to one of complainant's witnesses $7,781,000 "was considered to represent in 1884 the franchises and business and contracts and patents and good will—everything, in fact, except the tangible property." I consider this undoubtedly true statement immaterial, except as tending to show the difficulty of appraising franchises at all, and the laxity with which all items of intangible property are usually regarded in corporation management. The overruling consideration is that in 1884 there were issued shares of stock of the par value of $7,781,000; that that stock is outstanding yet, and that it represents a certain fractional part of a business which has enormously increased. Inasmuch as everything in that business is accounted for except 652 the franchises, I have taken that figure as indicating the nearest approach to franchise value, given by the evidence, and a proper starting point for computation.

(*The Question of Pressure.*)

On this point I think the testimony amply supports the Master's finding, which is in substance that the pressure required by law is not physically impossible if the entire system of gas distribution in this city be reconstructed. It is a scientific fact incapable of change even by legislation, that pressure in a gas pipe varies with altitude. By the expenditure of about $4,000,000 for construction of mains and valves alone, exclusive of any pumping stations or other apparatus, it might be possible to establish and maintain the pressure called for by these acts. Such a thing is commercially impossible, and even if it were done (of course at complainant's expense), it remains commercially impossible since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible, because when made it would not add a dollar to income.

(*Penalty Clauses.*)

The Master enters upon a computation of the effect of these penalty clauses in the case of a corporation having about 390,000 customers, and concludes that "said penalties, so far as the evidence shows, are unexampled in extent and severity." This is but confirmation of the finding based on affidavits made when the preliminary injunction herein was granted. I think there is nothing to add to the statements of facts and law set forth at 146 Fed. Rep., page 154. I am of the opinion that the penalty clauses in both statutes are clearly obnoxious to the remarks of Brewer, J., in *Cutting vs. Kansas City Stock Yards Co.*, 183 U. S., 79.

653 (*The Remaining Contentions of Complainant.*)

It does not seem necessary to express any opinion as to whether the statutes under consideration, taken together, are unconstitutionally discriminatory. The findings already made dispose of the case.

This is also true of the contention that the statute creating the Gas Commission unlawfully delegated to that body legislative power. It is enough for the purposes of this case that the order of that Commission laid down and sought to enforce a confiscatory rate for the sale of gas, and the larger question raised in argument is now about to go before the highest Court of this State in *Trustees of Saratoga Springs vs. Saratoga Gas., etc., Co.* (*supra.*)

The pendency and approaching final disposition of that litigation is an additional reason for withholding comment here.

(*The Jurisdiction of the Court.*)

Defendant's objections under this head may be divided into three:

First, that the question propounded cannot be reviewed because the reduced rate was established (apart from the action of the Gas Commission) by direct legislative act.

Second, that the action as against the Attorney-General of this State is in violation of the 11th amendment; and,

Third, that the action is not well brought in equity.

The proposition (to quote from a brief) that "the reasonableness of a rate regulation is a judicial question only when prescribed by a subordinate body" is, to say the least, somewhat astonishing. As argued, the doctrine is that while a legislature cannot abso-
654 lutely confiscate, it can, under the guise of regulation, go
just short of that point, provided only that such point be reached, not by the action of a commission or subordinate, but by direct legislative fiat.

When this is the law representative government as prescribed by constitutions, both Federal and State, is at an end; and so far as the judicial department of the government is concerned it is sufficient to cite the ruling that it is "both the power and the duty (of the courts) to inquire whether a body of rates prescribed by a legislature *of* a commission is unjust or unreasonable and such as to work a practical destruction to property, and is found so to be to restrain its operation" (*Reagan vs. Farmers' Loan & Trust Co.,* 154 U. S., 362).

As to the argument that this action as against the Attorney-General is in violation of the eleventh amendment, I think it sufficient to observe that it is not sought herein to restrict or enjoin the operation of the criminal law of the State of New York, nor to obtain an injunction against the law officers of State or county preventing them from doing not only what they have not done, but what they are not bound to do. The penalty clauses in the act under consideration *must* be enforced by civil actions and by the defendants, pursuant to section 1962 of the Code of Civil Procedure.

Whatever may be the law, if a legislature first prescribes an obligatory contract for a public service corporation, then makes a violation of that contract a crime, and entrusts the indictment for the punishment thereof to its Attorney-General, the questions suggested by such modern procedure are not here involved; and I think the doctrine of *Smyth vs. Ames* (*supra*), that "a suit against individuals for the purpose of preventing them as officers of a State from enforcing an unconstitutional enactment to the injury of the rights of the complainant is not a suit against the State," still 655 obtains, and has been frequently affirmed, as in *Prout vs. Starr* (188 U. S., 537), and *Mississippi Railroad Commission vs. Illinois Central Railroad* (203 U. S., 335).

The title of Attorney-General makes no difference; there are occasions when he represents and embodies the majesty of the State, and is therefore as secure from suit as is the State itself. But when he is unconstitutionally directed, even by the State, to injure a private citizen or corporation in a proceeding in which the State has no pecuniary interest at all, I am referred to no authority to show that the title he bears permits him to violate the supreme law of the land.

As to the equitable remedy sought being improper, I cannot think it necessary to review the decisions, most of which have been cited already in this opinion. If there was ever an action brought to which the remarks of Harlan, J. (169 U. S., at 517), regarding multiplicity of suits are applicable, this is that case; and a much more difficult and successful application of the remedy by injunction in anticipation of injury by public officials is furnished by *Raymond vs. Chicago Union Traction Co.* (Supreme Ct. U. S., decision October 21, 1907).

It results that the first prayer of the bill must be granted, upon the ground that both of the statutes involved as well as the order of the Commission of Gas and Electricity are in contravention of the 14th amendment of the Federal Constitution; and that the relief asked in the second and third prayers of the bill must also be granted.

December 19, 1907.

CHAS. M. HOUGH, *D. J.*

Endorsed: Circuit Court of the United States, Southern District of New York. Consolidated Gas Company *vs.* City of New York, *et al.* Opinion of the Court. Filed Dec. 20, 1906. John A. Shields, Clerk.

656 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
CITY OF NEW YORK ET AL., Defendants.

On application by all parties for sundry additional findings or expressions of opinion, and by some of the parties for modification of the figures found in the opinion of December 19th, 1907.

HOUGH, *D. J:*

I.

It is admitted by all that in making deductions from the value of complainant's real estate as reported by the Master, some items were deducted which already had been eliminated by the Master,

and also that in making such deductions the values of Mr. Wheelock,
one of defendants' experts, were used by the Court, whereas
657 the Master adopted throughout the values of Mr. Preiss, one
of complainant's experts.

Through these mistakes the figure given for complainant's realty	$11,155,845.00
is too small by	829,590.00
so that complainant's realty employed in its gas business at values found by the Master, amounts to	$11,985,435.00
This correction increases complainant's tangible assets by the addition of the same sum, and makes the total of such tangible assets	$47,831,435.00
It also correspondingly lessens the deduction of estimated "Taxes on lands not employed in gas business" by (say)	10,405.00
Therefore in the "Summary of deductions" in the Court's opinion the deduction for Taxes on lands not employed in the gas business should not be	29,071.00
but	18,666.00
This correction also increases the "Reasonable cost of manufacturing and distributing complainant's own product" to the sum of	6,809,552.28
For the same reason complainant's net income from the sale of its own product becomes	4,015,475.02

II.

Complainant seeks to have included in the real estate actually
used in its gas business, certain premises reported as being worth
$338,500, used for the storage of material, for stables and wagon
yard; while defendants apply for further deductions from the real
estate valuations on the ground that certain of the premises
658 found both by the Master and the Court to be employed in
the gas business are only so employed in the sense that certain unused, if not dismantled, machinery, is there situated, or that
too much ground has been allowed as being required for certain
of complainant's manufacturing plants.

Both of these requests I must decline. Absolute accuracy in such a matter as this is impossible. It is true that complainant must maintain storage arrangements, and have a place to keep wagons and horses; but it is also true that very serious doubts are entertained as to the present utility or future advantage of some of the parcels of property as to which the defendants complain, particularly the so-called 111th Street plant. In the original opinion an endeavor was made to reach an average favorable to the complainant, and after reading the elaborate briefs submitted on this application, and re-reading the testimony concerning the 111th Street plant, I remain of the opinion that the figures reported as now corrected, represent all that complainant can justly ask. Probably these figures cannot be translated into an exactly accurate statement by metes and bounds of just what pieces of real estate are severally and in all their parts employed in complainant's gas business; but I am convinced that they do represent the present money value of all the land so necessarily employed:—and at very full values.

III.

The Master reported that while by complainant's Exhibit 94 the cost of gas production in 1905 was fully shown, such cost only covered the expense of enrichment from 20 to 22 candle power for the last six months of that year, "while for a full year (there would be required) the addition of 1.83 cents per thousand feet to the cost as stated."

Complainant now urges that by the Court's treatment of the "Ten cent item" in the opinion, this cost of additional enrichment has been taken away from it, inasmuch as the Master did not specifically allow said 1.83 per thousand, but permitted it to be included
659 in the ten cent reserve for future contingencies.

It also appears, that during the last six months of 1905 complainant's gas was maintained at a tested candle power of 24.19, and for the whole year the average was 23.1. Yet complainant declares that inasmuch as the statutes attacked in this litigation require that 22 candles be maintained not only at the testing stations so long used, but at any point on the line and at all times, it became necessary for it to maintain an initial strength of much more than 22 candles in order to meet the requirements of the law. Upon this, as upon all other points involved in this litigation, the burden of proof is upon it; and for the purposes of this application I must regard the penalty clauses regarding pressure, of the acts in question as unconstitutional and void. The question therefore is whether complainant has shown, 1st, that 1.83 is the certain necessary expense of the required enrichment, and 2d, whether remembering the unconstitutionality of the penalty clauses, an average of 23.1 candle power be not sufficient for its purposes and reasonably satisfactory to the law. On both of these points my opinion is adverse to the complainant. I do not think that complainant satisfactorily proved that 1.83 cents was the necessary cost of additional enrichment, and do think that the average candle power of 1905 will be found sufficient to satisfy both the law and commercial requirements. The complainant's request for modification of the opinion in this regard is denied.

IV.

Defendants moved that in conformity with the fact, the testimony of Dr. Humphreys on page 3025 of the record be corrected to read five per cent. instead of six per cent. It is admitted by counsel that five per cent. was actually sworn to by Dr. Humphreys, and this correction is noted on such consent.

660

V.

Defendants move to correct the franchise valuation expressed in the opinion and to have it declared either that the only franchises to be valued are those asserted by the Court to be owned by complainant, and have the valuation decreased accordingly to some $4,000,000; or to have it declared that the $7,781,000 valuation of 1884 was fixed by ascertaining the then market value of the share capital of the constituent companies and deducting therefrom the appraised valuation of the tangible property of the same, with the result that the franchise valuation of $7,781,000 was based upon nothing more substantial than the residuum of current quoted stock values.

It is not difficult to detect flaws in a finding opposed to the settled opinion of the Judge who happens to constitute the Court; and as to the history of the stock whose par value is $7,781,000, I think enough has been said in the opinion already filed, to give the higher Court a fair view of the way in which it was issued and the manner in which it was viewed by those who created it.

But it does not advance the discussion at all to elaborate the history of such creation and issue. For all that I can see the franchises of 1884 might as well have been valued at twice the amount of the stock then issued on the faith thereof. It was nothing but an attempt to capitalize expected profits; but the attempt now has twenty years' success to justify it.

The fact that I incline to the view that three specified franchises are validly existent, has caused a misconception in the mind of counsel. I expressed, and intended to express, no opinion at all as to other grants made to complainant's predecessor; and little value is attached to the inclination in favor of the three enumerated franchises. It is enough that such grants were made, and complainant is in possession of them for what they may be worth, and under such original grants (to speak of no others), complainant is maintaining mains and services, and distributing gas through the
661 same. Whether the privilege originally granted still exists in its original nature is immaterial. The so-called franchises may be denominated licenses, or tenancies at will or continuing trespasses,—yet what is being done under them is a fact, a profitable thing, and taxable property by the law of this State. The State of New York is estopped from continuing to tax that property by one set of servants, and denying it all value through the instrumentality of another.

VI.

Success has not attended my effort to make clear the view entertained of the Astoria investment.

If the evidence had been regarded only in the same light as was done by those gentlemen who introduced it, the Court would have been fully justified in fixing upon complainant for all purposes of this case, the profit derived from the sale of purchased gas, while excluding from principal account the Astoria investment. And this because it was and is obvious, that for reasons not clearly shown before the Master, complainant was able to purchase nearly one-quarter of its sales volume at 34 cents per unit and sell it at a dollar. It was solely because it seemed equally clear that gas could normally be obtained only at a higher cost than 34 cents that any computation was entered on.

Complainant now urges that accepting the view of the Court that the Astoria enterprise must be regarded as an independent legal entity, the assumed cost of gas at Astoria is much too small, or, what is the same thing, the profits derivable from the Astoria investment are grossly over-stated.

The inquiry is preliminary and important,—if it was not expected that Astoria would furnish gas at lower rates than either complainant's own Manhattan factories or those of its controlled companies, why was Astoria built? For so far as the capacity of the
first unit is concerned, it is also clear that the productive
662 capacity of existing plants owned or controlled would have
furnished the additional gas needed.

Yet it was deemed advisable, and could have only been advisable if profitable in expectation,—to borrow $12,000,000 at 6% in order to put up the Astoria plant.

To re-state the problem, adopting in part complainant's present figures: If the annual capacity (four billion feet) of Astoria first unit were sold at a dollar per thousand, gross sales would amount to $4,000,000. If the cost of production at holder be 32 cents per thousand, such cost annually would amount to $1,280,000.

Interest on price of plant at 6% would amount to.... $720,000.
Leaving .... $2,000,000.

for profit and general expenses.

Repairs to apparatus, buildings, tools and implements are included in holder cost; if Astoria sold its entire product to complainant, the expense of distributing three billion feet annually is already included in cost of gas to complainant as allowed by the Master and the Court, and there is no evidence requiring the belief that the distribution of a billion feet more, would appreciably increase such distribution expense.

It is asserted in the opinion (in effect) that whereas from the purchase at about 34 cents and sale at a dollar, of three billion feet of gas complainant in 1905 reaped a net profit of $1,865,717.43, it is the Court's belief that the sale of four billion feet procured from the Astoria plant, would yield as large a net profit.

As shown above, such net profit is $2,000,000 subject to deduction for general expenses and taxes.

In other words there is a difference between the probable profit charged against complainant in the opinion, and the $2,000,000 above stated of, $134,282.57 and the real question raised by the application now made is whether this sum is sufficient to cover the
taxes and general expenses of a controlled corporation which
663 has but one customer, distributes no gas, and requires no
actively employed officials other than those directly concerned with manufacturing.

The estimated annual taxes of the Astoria Company are $90,000, and the question then remains whether some $44,000 be a sufficient annual reservation to pay general expenses. It is to be remembered that the plant is new, that the repair items already included in holder cost of gas ought not for some years to be as large as they normally are in older establishments; and that the Court is not required to decide what is legally fair for all time, but only for the present, and some reasonable period of the immediate future. I can only reiterate my relief, after a painstaking reading of complainant's able argument, that unless the expectation of the builders of Astoria be falsified, the sale of four billion feet derived from that plant will yield as large a profit as did the sale of three billion feet purchased in 1905. If such expectation be not realized under careful management, there must be a new application. The Court is bound to apply to the conditions of 1906 not only the facts of that time, but the reasonable expectations then entertained and expressed by men of business sagacity; and while it is impossible to assert that the fears expressed by complainant and reproduced in the figure submitted in argument may not come true, complainant cannot expect any Court to hold back the hand of the legislature because of fears of what the future may bring forth.

VII.

It has been also argued that no justification exists for the assumption made in the opinion that an additional billion feet of gas will or can be sold by complainant in the near future. Reason for this view was found in the past history of gas sales in this City, and I remain of the belief originally expressed, and do not perceive any necessity for further elaboration thereof.

But defendants inquire why should an increase of sales
664 due to a reduction of price be excluded from consideration.
It was not intended to exclude this probability from consideration; it did not seem necessary to enter upon it. I perceive no reason why sales of an additional billion feet may not be easily accounted for by a prospective diminution in price; but I preferred to rest the assumption upon normal increase of population and advance of business as being better justified by the evidence before the Court.

VIII.

The statement in the opinion of the effect of a reduction of price upon the assumed additional sale of a billion feet was evidently not clear. The Master reported the effect of a reduction of price upon the volume of sales for the year 1905, and in his computation the expense of production, and amount of income, gross and net, were all computed upon the same sales volume, *i. e.,* about thirteen billion feet.

By the Court's finding the net income from Astoria gas is the same as that from purchased gas, but in order to produce that identical amount complainant would have to sell an additional billion feet of gas; so that although its income by hypothesis remains constant, the sales of gas required to produce the same have increased by a billion feet. Therefore the reduction of gross income must be measured by a greater sales volume than is set forth in the

Master's report. Such additional sales of a billion feet at a dollar a thousand would produce $1,000,000, and a 20 per cent. reduction in price would amount to $200,000; and this $200,000 must be subtracted from the net income computed on the Master's figures (as modified) before it appears what complainant's net income at 80 cents per unit would be on a volume of sales of fourteen, instead of thirteen billion feet.

IX.

The proper treatment of the amount paid in 1905 by the
635 City of New York to complainant for the care and repair of gas lamps has been again raised in argument. In the Master's report and the opinion the whole amount received from the City is treated as income, and the amount paid for repairs and maintenance of city lamps is treated as an expense.

So far as complainant's Exhibit 94 is concerned I agree with defendants' counsel that there is error in carrying the expense of maintenance and repair of city lamps into the column of cost per unit of gas either manufactured or sold, because such expenditures for maintenance and repair have nothing to do with the cost of the gas that flows through those lamps or any others, and it is largely for this reason that I have preferred to use as the basis for computation, not the cost per thousand of gas, but the cost per annum of complainant's whole gas business.

When so regarded what was paid by the City is charged against complainant, and what was paid out by complainant for the City's account is credited to complainant. As long as that method of dealing with the City continues, such method of statement shows the truth, and shows also complainant's net profits from its whole business. If that kind of business with the City ceases, then both items disappear from the account; but the method of statement remains constant and in accordance with the facts.

X.

Defendants urge that under *Milwaukee etc. Co. vs. Milwaukee,* 87 Fed. Rep., 577, and *Spring Valley Water Works vs. San Francisco,* 124 Fed. Rep., 574, the rate of return should be fixed at 5 per cent. instead of 6 per cent. Beyond stating my belief that such is not the necessary result of these cases, nothing need be added to the discussion of this subject in the opinion already filed, wherein I believe the reasons for the conclusion arrived at are plainly set forth. It is, however, fair to add, as suggested by some counsel, that the 6 per cent. rate has been arrived at in part by taking judicial cognizance of local business conditions.

666 It has not been asserted, and is not believed, that 6 per cent. is a profitable, satisfactory or attractive rate for the investment of capital in a gas business. In my opinion it is none of these things, but it is the lowest rate which in the City of New York can be considered legislatively fair to those who are already engaged therein and cannot readily escape.

XI.

The defendant Public Service Commission moves that the final decree herein "shall require the complainant to do equity by voluntary reducing as of May 1st, 1906, the price of gas furnished the private consumer, to the lowest rate which would be constitutional under the ruling of the Court; and that if complainant should refuse to do equity as aforesaid no injunction be granted by the decree except as against the enforcement of the pressure provision and of the penalties."

It is an attractive suggestion to urge upon a Court desirous of ending litigation, some method of preventing the lack of definite result which characterizes rate litigation. The work of the judiciary has seemed for the most part destructive rather than constructive, and when at the end of a protracted and expensive contest there is but a negative proved, viz: that a certain rate is not fair and reasonable,—it is left for all parties to begin over again to do something concerning which all the facts were shown in the litigation just ended.

Yet this is not necessarily the case. It may be true, and I believe it is true in this instance, that facts may be shown from which a fair and reasonable rate can be deduced,—but that was not the issue. The question made by the pleadings was not what would be a fair rate, but whether a certain particular rate was fair, and whether under the limitations of legal evidence it is ordinarily possible in judicial proceedings, and under such issues as were framed in this case, to ascertain what is a fair rate, may I think well be doubted.

667 Also in this case (assuming the right to grant defendants' motion), I am not inclined to exercise discretion in favor thereof. If the Court were to name a fair rate it would necessarily be based upon the sum of the values of the tangible and intangible properties of complainant. The making of the motion presupposes the possibility of complainant yielding to the proposed pressure, and this would prevent a settlement in the only Court which can settle it, of the question concerning the nature of franchises as property—a question on which I respectfully intimated my own view; and the correctness of error of that view is more important than the private rights of any party hereto.

Finally it appears the more plainly for discussion that the practice suggested by the motion is but an indirect method of doing, or trying to do, that which the Supreme Court has frequently said no Court can do, *i. e.*, make a rate. If one be invited to do that which he cannot lawfully be compelled to perform, and the invitation be coupled with a threat, the distinction between such invitation and illegal compulsion, is too refined to be sound. This motion is therefore denied.

It results that the modifications or changes in the original opinion may be summarized as follows:

The value of complainant's tangible assets is......	$47,831,435.
That of its intangible assets not less than.........	12,000,000.
Total	$59,831,435.
Upon which there may be expected a net annual income under the legislation attacked herein of..	$3,024,592.45

C. M. HOUGH, *D. J.*

March 10, 1908.

Endorsed: United States Circuit Court, Southern District of N. Y., Consolidated Gas Company of New York, *vs.* City of New York *et al.*. Opinion supplementing that filed December 9, 1907, Hough, D. J., March 10, 1908. U. S. Circuit Court, Southern District of N. Y., Mar. 11, 1908. John A. Shields, Clerk.

668 At a Stated Term of the Circuit Court of the United States, for the Southern District of New York, in the Second Circuit, held at the United States Court Rooms in the Post Office Building, in the City of New York, on March 31, 1908.

Present: Hon. Charles M. Hough, District Judge.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILLCOX, WILLIAM MCCARROLL, EDWARD M. BASSETT, MILO R. MALTBIE, and JOHN E. EUSTIS, Constituting the Public Service Commission of the State of New York for the First District, and THE CITY OF NEW YORK, Defendants.

Final Decree.

This cause came on to be heard at the stated October 1907 term of this court and was argued by counsel; and thereupon, upon consideration thereof, it was ordered, adjudged and decreed as follows, viz:

I. The report of the Master herein is confirmed except in the following particulars, as to which the exceptions to said report are sustained and its findings modified:

(*a*) The real estate valued by the Master at $13,461,000 included certain parcels held by Complainant for future use but not at the date of the beginning of this action actually in use by it, and its gas business; and omitting from the capitalization of Complainant for the purposes of this suit such unused parcels, the valuation of the portion of such real estate actually and necessarily employed by it in its gas business at said date is hereby fixed at $11,985,435. 669

(*b*) The valuation of the "Working capital" must be reduced from $3,616,000, at which it was fixed by the Master, to $1,616,000, at which amount it is hereby fixed.

(*c*) The capitalization as fixed by the Master must be further reduced by striking out therefrom the item "Coal & Coke Co. $50,000;" and from the statement of net earnings for the year 1905, as contained in the Master's Report, there must be correspondingly deducted the "National Coke & Coal dividend $5,000.00."

(*d*) The capitalization as fixed by the Master must be further reduced by striking out therefrom the item "Astoria, *i. e.* capital invested in production of gas secured from other Companies $12,000,000."

(*e*) The capitalizaton as fixed by the Master must be further reduced by striking out therefrom the item "Franchises and good will $20,000,000;" and for said item there should be substituted the sum of $12,000,000, the Court finding that the valuation of the intangible special franchises of the Complainant is at least that sum.

(*f*) The following items allowed by the Master in his estimate of the Complainant's operating cost must be disallowed:

Interest on taxes	$94,503.29
Legislative Investigation expense	25,671.74
Franchise Tax Litigation expense	63,401.65

(*g*) The following items amounting in all to $2,013,393.84 were allowed by the Master in his estimate of the Complainant's operating cost, to-wit:

Repairs to	Apparatus	$169,197.39
do	Buildings	24,900.69
do	Tools and Implements	16,228.48
do	Gas Stoves	55,954.35
do	Mains	126,110.31
do	Services	89,033.46
do	Meters	172,925.52
do	Buildings	15,116.68
do	Tools and Implements	15,610.59
Contingent	Expense (includes renewals)	1,328,316.37
	Total	$2,013,393.84

The fact and propriety of said expenditures for "repairs" 670 is not questioned, but the final item of $1,328,316.37 is believed to be larger than required; and in place of said aggregate sum of $2,013,393.84 there should be an allowance of eleven cents per thousand cubic feet on the actual production of Complainant's own works to cover repairs, renewals and depreciation mediate and ultimate, amounting to $1,172,359.10.

(*h*) The Court finds the gross income, operating expense and net income of Complainant's gas business for the calendar year 1905, upon the basis of the prices charged for gas during that year, to be as shown in the following tabulation in lieu of the Master's tabulation of "net earnings for the year 1905" resulting in the figure $4,983,928.31:

Income from Complainant's own product, gross...	$10,825,027.30
Expenses	6,809,552.28
Net	$ 4,015,475.02
Net from purchased gas........................	1,865,717.43
Total net income	$5,881,192.45

The Court finds that said sum of $1,865,717.43 represents more than a normal profit upon the volume of purchased gas, in that the amount paid by Complainant to other companies for the same ($997,039.80) was paid under temporary and expiring agreements and did not include any reasonable recompense or return upon the value of the investment required to produce said gas.

The Court estimates that owing to a probable increase in sales of gas and in cost of gas obtained from other companies, and probable change in the source of manufacture of some portion of such gas, while the total net income for the year beginning May 1, 1906, (being the date when chapter 125 of the Laws of 1906 of the State of New York took effect, and when this action was begun) would remain the same upon the basis aforesaid, yet if the price of gas were reduced as provided by chapter 736 of the Laws of 1905 and chapter 125 of the Laws of 1906, both of the State of New York, the net income of Complainant for said year beginning May 1, 1906, would be reduced to the sum of $3,024,592.45.

The Court deems it unnecessary to make express findings as to the present existence of the franchises claimed by Complainant by derivation from the New York Gas Light Company, the
371 Manhattan Gas Light Company, the Municipal Gas Light Company and the Metropolitan Gas Light Company, and therefore does not pass upon the Master's findings as to the same but finds that those claimed by it by derivation from the Knickerbocker Gas Light Company (including the Anthracite Gas Lighting and Heating Company and the so-called State Grant) and the Harlem Gas Light Company exist and are owned by the Complainant, and are sufficient to meet all its requirements.

II. The true valuation, as of the time of the beginning of this suit, of the Complainant's property actually employed in its business of manufacturing and supplying gas is as follows:

Real estate	$11,985,435
Plants	15,500,000
Mains	12,636,000
Services	1,994,000
Meters and miscellaneous	4,100,000
Working capital	1,616,000
Total of tangible assets.....................	$47,831,435
Special franchises	12,000,000
Total.......................................	$59,831,435

The foregoing items do not include the amount of Complainant's investment in the securities of other gas companies, from which companies it was obtaining a large part of the gas which it delivered to its customers, nor the value of the property of such other companies or any part thereof employed in the production and delivery to complainant of such gas.

III. The lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by Complainant in the business of manufacturing and supplying gas, is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in the City of New York; and under the two Acts and the order, copies of which are annexed to the bill of complaint as Exhibits A, D and C, to wit Chapter 736 of the Laws of 1905 of the State of New York, Chapter 125 of the Laws of 1906 of said State and the order of the Commission of Gas and Electricity of the State of New York, made on the 23rd day of February, 1906, and directed to the Complainant, the net annual income which the Complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent.

IV. The pressure required by said two Acts and the order aforesaid is not physically impossible if the entire system of gas 672 distribution in the City of New York be reconstructed; but compliance with such requirement is commercially impossible under the rates for gas prescribed by said two Acts and order.

V. Complainant has no adequate remedy at law for the injury which would result from the threatened enforcement of either of the aforesaid acts or of the aforesaid order, and such injury would be irreparable; and this suit is not a suit against the State of New York, either as against the defendant Attorney General or as against the defendant District Attorney, or as against the defendants the Public Service Commissioners aforesaid.

VI. The two said Acts and the order mentioned in the bill of complaint, viz: Chapter 736 of the Laws of 1905 of the State of New York, entitled, "An Act in relation to the price of illuminating gas furnished or sold to The City of New York, and providing a penalty for violation"; Chapter 125 of the Laws of 1906 of said State, entitled, "An Act in relation to illuminating gas in the City of New York and regulating the quality and pressure thereof and the price to consumers, other than said City, and providing a penalty for violation"; and an order of the Commission of Gas and Electricity of the State of New York, made on the 23rd day of February, 1906, and directed to the Consolidated Gas Company of New York, copies of which were annexed to the bill of complaint herein, are each of them hereby declared and adjudged to be illegal and void, because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that they take Complainant's propstitution of the United States, in that they take Complainant's property without due process of law and without just compensation and deny to Complainant the equal protection of the law.

VII. The defendant the City of New York and each of its officers, agents, servants and employees are perpetually enjoined and restrained from suing for the penalty or forfeiture described in said chapter 736 of the Laws of 1905 or in any other way enforcing or attempting to enforce the said Act against this Complainant.

VIII. The defendants William S. Jackson as Attorney General of the State of New York and William Travers Jerome as District Attorney of New York County and each of them, and each of their agents, servants and employees, are perpetually enjoined and restrained from suing for the penalty or forfeiture described in said chapter 125 of the Laws of 1906 or in any way enforcing or attempting to enforce the said Act or the order of the Commission of Gas and Electricity aforesaid against this Complainant.

673 IX. The defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District and each of them, and each of their agents, servants and employees, are perpetually enjoined and restrained from applying for a mandamus or injunction to compel compliance with said chapter 125 of the Laws of 1906 or with said order of the Commission of Gas and Electricity or in any other way enforcing or attempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this Complainant.

X. It is further adjudged that the Complainant recover of the defendants its costs and disbursements, to be taxed by the Clerk, one-half thereof to be paid by the City of New York and one-half thereof to be paid by defendent William S. Jackson, as Attorney General of the State of New York; and that said costs, so to be taxed, include the repayment to the Complainant of the amount of fees and disbursements of the Special Master paid from a fund heretofore directed to be paid into Court by Orders dated May 18, 1906 and June 16, 1906.

XI. Any party hereto may make application at the foot of this decree; making such application by supplemental bill or otherwise as such party may be advised; for any relief to which such party feels lawfully entitled, by reason of change of circumstances since the beginning of this suit.

C. M. HOUGH, *D. J.*

The public Service Commission, is so far as costs are concerned, but another name for the City. This suit has been Defended in equal parts by representatives of the State and City and the costs should be divided accordingly. If the Atty. Gen. can be sued as such, costs can be awarded against him also as such. This question had better be settled.

C. M. HOUGH, *D. J.*

3/31/08

Endorsed: Hough, J. United States Circuit Court Southern District of New York. Consolidated Gas Company of New York, Complainant, against William S. Jackson, as Atty. Gen'l *et al.*, Defendants. Final decree. Shearman & Sterling, Solicitors for Complainant. 44 Wall Street, N. Y. U. S. Circuit Court Southern District of New York. Filed April 3 1908. John A. Shields, Clerk.

674 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York, and Others.

Petition for Appeal.

Come now the defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, conceiving themselves aggrieved by the final decree heretofore made and entered by this court against them and in favor of the complainant; and having filed with the clerk their assignment of errors, pray this court to allow an appeal to the Supreme Court of the United States from said decree, and that a certified transcript of the record upon which said decree was made be transmitted to said court.

Dated April 14, 1908.

GEO. S. COLEMAN,
Solicitor for said Appellants.

Allowed this April 14, 1908.

C. M. HOUGH,
Dist. Judge.

675 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York, and Others, Defendants.

Assignment of Errors by Defendants William R. Willcox et al.

And now on the 14th day of April, 1908, come the defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, and say that in the record and proceedings in the above-entitled cause there is manifest error in each and every one of the following particulars, to wit (the statute of 1906 hereinafter referred to being the statute known as chapter 125 of the Laws of the State of New York for 1906, and the paragraphs hereinafter referred to being the paragraphs of the final decree as numbered and lettered therein):

I. In adjudging that said statute of 1906 is illegal and void and enjoining these defendants from enforcing the same, said adjudication being erroneous for the following reasons:

676 (*a*) Because the record does not contain sufficient evidence to show whether or not the price of eighty cents per thousand cubic feet for gas, permitted by said statute, afforded a sufficient rate of return upon the capitalization of any of the other companies doing business in the same territory with the complainant, or upon that of a company well located and equipped, economically managed and not over-capitalized, but the case was decided on the theory that if a statutory maximum price does not afford in the opinion of the court a sufficient rate of return upon the present capitalization of a particular company doing business in the territory, the statute is void as to that company, irrespective of its effect upon the other companies doing business therein, or upon a company well located and equipped, economically managed and not over-capitalized.

(*b*) Because the record does not contain sufficient evidence to show the reasonable and necessary operating expenses of the complainant, evidence of its actual disbursements during the period from November 1, 1904, to December 31, 1905, inclusive, supplemented in part only by experience of other periods, being insufficient for that purpose.

(*c*) Because the capitalization upon which the court's calculation is based is an estimate of present value, or of cost of repro-
677 duction, or of partly present value and partly cost of reproduction, not limited to the cost of complainant's property, or to the amount actually invested as capital by complainant and its predecessor companies.

(*d*) Because, it is accompanied by no condition that the complainant reduce its rate to such sum as the court finds to be constitutional.

(*e*) For the further reasons hereinafter stated.

II. In fixing (Paragraphs I*a*, II) the valuation of the portion of complainant's "real estate" actually and necessarily employed by it in its gas business at $11,985,435 (it appearing that its plants, mains, services, and special franchises are not included in its real estate as such term is used in the decree); said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such real estate to the complainant and its predecessor companies.

(*b*) It is in excess of the amount required for complainant's gas business upon the basis of cost of reproduction.

(*c*) It duplicates in part the valuation given by the court to the plants, since it could not be realized until the plants thereon were removed.

678 (*d*) In estimating value the court adopts valuations given by testimony for the complainant, whereas the valuations testified to by unimpeached expert witnesses for the defendants, as well as complainant's own book values, and those stated by it in its Tax reports, were lower.

III. In finding (Paragraphs I*e*, II) that the valuation of the intangible special franchises of the complainant is at least the sum of $12,000,000, whereas (*a*) The complainant owns no special franchises not terminable at the will of the State of New York or of the City of New York.

(*b*) The franchises claimed by it, if owned, are not proper subjects of valuation for the purpose of ascertaining its capitalization.

(*c*) The record does not sustain the valuation given.

IV. In finding (Paragraph I*h*) that the sum of $1,865,717.43, therein stated, represents more than a normal profit upon the volume of purchased gas, and in particular

(*a*) In finding that the amount paid by complainant to 679 other companies for the same was paid under temporary and expiring agreements, whereas only a part of said gas was supplied under said agreements, and whereas said agreements did not expire until after the termination of the year beginning May 1, 1906; and

(*b*) In finding that said amount did not include any reasonable recompense or return upon the value of the investment required to produce said gas, which finding is not supported by the record.

V. In finding (Paragraph I*h*) that while the total net income for the year beginning May 1, 1906, would remain the same upon the basis of the prices charged for gas during the calendar year 1905, yet if the prices for gas were reduced as provided by the statute of 1906 and by chapter 736 of the Laws of 1905 the net income of complainant for said year would be reduced to the sum of $3,024,592.45, on the ground that such finding is speculative and not supported by the record; and, in particular also

(*a*) In finding a probable increase in sales of gas tending to a reduction as aforesaid.

(*b*) In finding a probable increase in cost of gas obtained from other companies, leading to such reduction.

680 (*c*) In finding a probable change in the source of manufacture of some portion of such gas, leading to such reduction.

(*d*) In overlooking the decrease in "Expenses" due to the reduction in the complainant's special franchise tax, payable to the State of New York, which would result from the diminution of its net profits through reduction of its rate for gas, said special franchise tax item being included by the court in the "Expenses" of 1905 to the amount of $406,909.23, as shown by the Master's report.

VI. In failing to make an express finding as to the present existence of the franchises claimed by complainant by derivation from the following corporations respectively (such failure in the case of each of such companies being separately assigned for error), whereas the court should have found that as to each of said franchises the complainant is no more than a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York;

(*a*) The New York Gas Light Company.

(*b*) The Manhattan Gas Light Company.

(*c*) The Municipal Gas Light Company; and this alleged franchise was at all times invalid on account of lack of authority 681 in the Mayor, Comptroller and Commissioner of Public Works to grant it.

(*d*) The Metropolitan Gas Light Company.

VII. In finding (Paragraph I *h*) that the following franchises claimed by complainant exist and are owned by it and are sufficient to meet all its requirements (such finding in the case of each of such companies being separately assigned for error), whereas

(*a*) The alleged franchise claimed by derivation from the Anthracite Gas Lighting and Heating Company through the Knickerbocker Gas Light Company was invalid on account of lack of authority in the Board of Aldermen to grant it, and the alleged assignment thereof to the Union Gas Light Company was also invalid for lack of authority to assign it, and said alleged franchise in any case expires on September 17, 1913.

(*b*) The franchise claimed by derivation from the so-called State Grant through the Knickerbocker Gas Light Company was not assignable to, and did not even purport to be assigned to, complainant or either of its alleged predecessor corporations, and said franchise did not cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

682 (*c*) The franchise claimed by derivation from the Harlem Gas Light Company expired February 1, 1905, and as to that franchise complainant is but a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York, and said franchise did not cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

VIII. In finding (Paragraph II) the valuation of the complainant's plants actually employed in its business of manufacturing and supplying gas to be $15,500,000; said valuation being excessive, being based upon an estimate by complainant's witnesses of the cost of reproducing the plants as they now stand, instead of the lesser cost of replacement with plants of more modern character, which would perform equal service, and being greater than the cost thereof, and than the value thereof as stated by it in its tax reports.

IX. In finding (Paragraph II) the valuation of complainant's mains to be $12,636,000, said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such mains to the complainant and its predecessor companies.

683 (*b*) In estimating value the court adopts the highest valuations given by complainant's witnesses, which valuations are greater than other valuations previously given by said witness and than complainant's own book valuations, and than the valuations stated by it in its tax reports.

X. In finding (Paragraph II) the valuation of complainant's services to be $1,994,000, said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such services to the complainant and its predecessor companies.

(*b*) In estimating value the court adopts the highest valuations given by complainant's witnesses, which valuations are greater than other valuations previously given by said witnesses and vastly greater than complainant's own book valuations, and than the valuations stated by it in its tax reports.

XI. In finding (Paragraph II) the total value of complainant's tangible assets employed in its business of manufacturing and supplying gas to be $47,831,435 and of its total property so employed to be $59,831,435.

XII. In finding (Paragraph III) that the lowest rate of
684 return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent.

XIII. In finding (Paragraph III) that the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent.

XIV. In finding (Paragraph IV) that compliance with the requirement in the statute of 1906 and in chapter 736 of the Laws of 1905 as to pressure is commercially impossible under the rates for gas prescribed therein.

XV. In finding (Paragraph V) that complainant has no adequate remedy at law for the injury which would result from the threatened enforcement of the statute of 1906 and that such injury would be irreparable; whereas complainant would have an adequate remedy at law as against the enforcement of said act by these appellants, the members of said Public Service Commission, by defense to any application brought by them in the courts of the State of New York for a mandamus or injunction to compel com-
685 pliance; complainant's remedy as against the enforcement of penalties (as to which these appellants have no right, duty or interest), if said penalties are so great as to render proceedings for their enforcement at present inequitable, being by injunction against the enforcement of the clause concerning penalties, said clause being separable.

XVI. In finding (Paragraph VI) that the statute of 1906 is illegal and void.

XVII. In enjoining and restraining (Paragraph IX) these appellants, the members of said Public Service Commission, and each of them, and each of their agents, servants and employees, from applying for a mandamus or injunction to compel compliance with said statute of 1906, or in any other way enforcing or attempting to enforce the same.

GEO. S. COLEMAN,
Solicitor for said Appellants.

Endorsed: United States Circuit Court, Southern District of New York. Consolidated Gas Company, Complainant, against William S. Jackson *et al.*, Defendants. Petition for Appeal and Assignment of Errors. George S. Coleman, Solicitors for Appellants William R. Wilcox *et al.* U. S. Circuit Court, Southern District of New York. Filed April 14, 1908. John A. Shields, Clerk.

686 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILLCOX, WILLIAM MCCARROLL, EDWARD M. BASSETT, MILO R. MALTBIE, and JOHN E. EUSTIS, Constituting the Public Service Commission of the State of New York for the First District, and THE CITY OF NEW YORK, Defendants.

Bond.

Know all men by these presents, that we, the Public Service Commission of the State of New York, for the First District, as principal, and the Fidelity and Deposit Company of Maryland, a corporation of the State of Maryland, as surety, are held and firmly bound unto the Complainant above-named in the above-entitled action, in the sum of Five Hundred Dollars ($500.00), lawful money of the United States; for the payment of which sum, well and truly to be made, we bind ourselves, and each of us, and our successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals, and dated this 14th day of April, Nineteen hundred and eight.

Whereas, on the 3rd day of April, 1908, a decree was entered in the above entitled case in the Court aforesaid, in favor of the Complainant and against the Defendant on the merits in said cause; and

Whereas, the Public Service Commission of the State of New York for the First District, is prosecuting an appeal from said decree to the Supreme Court of the United States, and this bond is executed for the purpose of perfecting said appeal.

Now, therefore, the condition of the above obligation is such, that if the said Defendant and Appellant, the Public Service Commission of the State of New York, for the First District, shall prosecute its said appeal to effect, and answer all costs that may be awarded against it if it fails to make its plea good, then this obligation to be void; otherwise to remain in full force and virtue.

PUBLIC SERVICE COMMISSION OF
THE STATE OF NEW YORK,
[SEAL.] By WM. MCCARROLL, *Acting Chairman.*
FIDELITY AND DEPOSIT COMPANY
OF MARYLAND,
By HUGH M. ALLWOOD, *Attorney-in-Fact.*

Attest:
[SEAL.] JAMES R. KINGSLEY, *Attorney.*

687 STATE OF NEW YORK, *County of New York ss:*

On this 14th day of April 1908 before me personally came William McCarroll the acting Chairman of the Public Service Commission for the First District to me known and known to me to be such acting chairman and the individual described in and who executed the foregoing instrument and he acknowledged to me that he executed the same, as acting chairman aforesaid.

[SEAL.] LE ROY T. HARKNESS,
Notary Public, Kings Co.

Cert. filed in N. Y. Co.

688 STATE OF NEW YORK, *County of New York, ss:*

On the Fourteenth day of April, in the year 1908, before me personally came Hugh M. Allwood, to me known, who, being by me duly sworn, did depose and say, that he resides in the City of New York; that he is the Attorney-in-Fact of the Fidelity and Deposit Company of Maryland, the corporation described in and which executed the within instrument; that he knows the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order; and that the Fidelity and Deposit Company of Maryland has been duly authorized to transact business in the State of New York, in pursuance of the statutes in such case made and provided; and that the liabilities of said Company do not exceed its assets as ascertained in the manner provided in Section 3, of Chapter 720 of the Session Laws of the State of New York, for the year 1893. And the said Hugh M. Allwood further said that he is acquainted with James R. Kingsley, and knew him to be the Attorney of said Company; that the signature of the said James R. Kingsley, subscribed to the within instrument, was in the genuine handwriting of the said James R. Kingsley, and was subscribed thereto by like order of the Board of Directors, and in the presence of him, the said Hugh M. Allwood.

[SEAL.] ERNEST L. HICKS,
Notary Public, New York County.

At a regular and lawful meeting of the Board of Directors of the Fidelity and Deposit Company of Maryland, at which a quorum was present, held at the office of the Company in the City of Baltimore, State of Maryland, on the seventh day of February, A. D., 1906, on motion, it was unanimously

"*Resolved,* That Henry B. Platt, Vice-President, or James R. " Kingsley, Attorney, or Frank H. Platt, Edward T. Platt, Joseph " A. Flynn, and Hugh M. Allwood, Attorneys-in-Fact of this Com- " pany, in the State of New York, be, and each of them is, hereby " authorized and empowered to execute and deliver any and all " bonds or undertakings for or on behalf of this Company, in its " business of guaranteeing the fidelity of persons holding places of " public or private trust and the performance of contracts other than " insurance policies, and executing or guaranteeing bonds and other " undertakings required or permitted in all actions or proceedings " or by law required, and to attach thereto the seal of the Company, " the same to be attested by the said James R. Kingsley, Attorney of

" the Company, or by either one of the other persons above named,
" as occasion may require."

COUNTY OF NEW YORK, *ss:*

I, James R. Kingsley, Attorney, of the Fidelity and Deposit Company of Maryland, has compared the foregoing Resolution with the original thereof, as recorded in the Minute Book of said Company, and do hereby certify that the same is a true and correct transcript therefrom, and of the whole of the said original Resolution. Given under my hand and the seal of the Company, at the City of New York, this 14th day of April, 1908.

[SEAL.] JAMES R. KINGSLEY, *Attorney.*

Fidelity and Deposit Company of Maryland.

Statement, March 31, 1908.

Resources.		*Liabilities.*	
Real Estate	$757,000 00	Capital Stock	$2,000,000 00
Stocks and Municipal Bonds	2,842,990 00	Surplus	2,421,185 45
U. S. Government, Railroad and other Bonds	1,467,750 00	Premium Reserve	799,509 62
British Consols	222,750 00	Reserve for Taxes (Accrued)	13,774 46
Net Premiums Due	218,638 81	Reserve for Contingent Claims	492,718 60
Cash in Bank, etc	191,879 11	Reserve for Claims Adjusted (Checks out)	2,764 09
Plant, Equipment and Material, Contract at Amsterdam, N. Y.	28,944 30		
Total	$5,729,952 22	Total	$5,729,952 22

STATE OF NEW YORK, *County of New York, ss:*

James R. Kingsley, being duly sworn, says that he is the Attorney of the Fidelity and Deposit Company of Maryland; that the foregoing is a true and correct statement of the financial condition of said Company, as of March 31st, 1908, to the best of his knowledge and belief, and that the financial condition of said Company is as favorable now as it was when such statement was made.

JAMES R. KINGSLEY.

Subscribed and sworn to before me, this 14th day of April, 1908.

[SEAL.] ERNEST L. HICKS,
Notary Public, New York County.

689 [Endorsed:] 10245. U. S. Circuit Court, Southern District of N. Y. Consolidated Gas Company of N. Y., Complainant, against William S. Jackson, as Attorney General of the State of New York, *et al.*, Defendants. Bond. I approve of the within Bond and of the sufficiency of the security therein. Dated Apr. 14, 1908. C. M. Hough, D. J. Fidelity and Deposit Company of Maryland, 2 Rector Street, New York. U. S. Circuit Court, Southern District of N. Y. Filed Apr. 14, 1908. John A. Shields, Clerk.

690 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILLCOX, WILLIAM MCCARROLL, EDWARD M. BASSETT, MILO R. MALTBIE, and JOHN E. EUSTIS, Constituting the Public Service Commission of the State of New York for the First District, and THE CITY OF NEW YORK, Defendants.

To the above named complainant and all defendants other than the appellants below named, Greeting:

You are hereby cited and admonished to be and appear at a Term of the Supreme Court of the United States to be holden in the City of Washington, District of Columbia, on the 12 day of May, 1908, at 12 o'clock M. of said day pursuant to an appeal filed in the office of the Clerk of the Circuit Court of the United States for the Southern District of New York, wherein William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, are appellants, to show cause, if any there be, why the decree entered in the above entitled 691 court and cause on the 3rd day of April, 1908, should not be reversed and set aside and speedy justice done to the parties in that behalf.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, this 14 day of April, 1908.

C. M. HOUGH,
U. S. Dist. Judge.

Service of above citation and of petition of appeal and assignments of error this day admitted.

SHEARMAN & STERLING,
Solicitors for Complainant.

Apr. 15, 1908.

Service of above citation petition and assignment of error this day admitted.

W. S. JACKSON,
Attorney General of the State of New York.

April 16, 1908.

ROBT. C. TAYLOR,
Solicitor for William Travers Jerome,
As District Attorney of New York County, Defendant.

FRANCIS K. PENDLETON,
Solicitor for The City of New York, Defendant.

692 [Endorsed:] E. & A. C. 2720. United States Circuit Court, Southern District of New York. Consolidated Gas Company, Complainant, against William S. Jackson, as Attorney General of the State of New York, and Others, Defendants. Citation. U. S. Circuit Court, Southern Dist. N. Y. John A. Shields, Clerk. Filed Apr. 20, 1908.

693 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney-General of the State of New York, and Others, Defendants.

Petition for Appeal.

Now comes the defendant, The City of New York, conceiving itself aggrieved by the final decree heretofore made and entered by this Court against it and in favor of the complainant on the 3d day of April, 1908, and having filed with the Clerk its assignment of errors, prays this Court to allow an appeal to the Supreme Court of the United States from said decree, and that a certified transcript of the record upon which said decree was made be transmitted to said court.

Dated May 11, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel, Solicitor for Appellant, City of New York.

Allowed, May 12, 1908.

C. M. HOUGH,
U. S. D. Judge.

694 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney-General of the State of New York, and Others, Defendants.

Assignments of Errors by Defendant, The City of New York.

And now on the 11th day of May, 1908, comes the defendant, The City of New York, and says that in the record and proceedings in the above-entitled cause, there is manifest error in each and every one of the following particulars, to wit (the statute of 1905 hereinafter referred to being the statute known as chapter 736 of the Laws of 1905 of the State of New York, the statute of 1906 hereinafter referred to being the statute known as chapter 125 of the Laws of 1906 of the State of New York, and the paragraphs hereinafter referred to being the paragraphs of the final decree as numbered and lettered therein):

First. In adjudging and decreeing in paragraph VI. of said decree that said chapter 736 of the Laws of 1905 of the State of New York, entitled "An Act in relation to the price of illuminating gas furnished or sold to The City of New York, and providing a penalty for violation," is declared and adjudged to be illegal and void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that it takes complainant's property without due process of law and without just compensation, and denies to complainant the equal protection of the law. Said paragraph of said decree being erroneous for each of the reasons and causes set forth in the Assignments of Errors from fifth to 695 one hundred and seventh, inclusive, one hundred and fifteenth to one hundred and twenty-second, inclusive, hereinafter enumerated, each of which is separately alleged as a ground of error in said paragraph VI. of said decree.

Second. In adjudging and decreeing in paragraph VI. of said decree that said chapter 736 of the Laws of 1905 of the State of New York, entitled "An Act in relation to the price of illuminating gas furnished or sold to The City of New York, and providing a penalty for violation," is declared and adjudged to be illegal and void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that it takes complainant's property without due process of law and without just compensation, and denies to complainant the equal protection of the law, because the rate fixed as the price to be paid by The City of New York for gas by said act does not allow to the complainant a just and proper return upon its properties employed in the production and distribution of such gas, said paragraph of said decree being erroneous for each of the reasons and causes set forth in the Assignments of Errors from fifth to one hundred and seventh, inclusive, one hundred and fifteenth to one hundred and twenty-second, inclusive, hereinafter enumerated, each of which is separately alleged as a ground of error in said paragraph VI. of said decree.

Third. In adjudging and decreeing in paragraph VI. of said decree that said chapter 125 of the Laws of 1906 of said State, entitled "An Act in relation to illuminating gas in The City of New York and regulating the quality and pressure thereof and the price to consumers, other than said City and providing a penalty for violation," is declared and adjudged to be illegal and void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that it takes complainant's property without due process of law and without just compensation, and denies to complainant the equal protection of the law. Said paragraph 696 of said decree being erroneous for each of the reasons and causes set forth in the Assignments of Errors Nos. fifth to one hundred and seventh, inclusive, one hundred and fifteenth to one hundred and twenty-second, inclusive, hereinafter enumerated, each of which is separately alleged as a ground of error in said paragraph VI. of said decree.

Fourth. In adjudging and decreeing in paragraph VI. of said decree that said chapter 125 of the Laws of 1906 of said State, entitled "An Act in relation to illuminating gas in The City of New York and regulating the quality and pressure thereof and the price to consumers, other than said City, and providing a penalty for violation," is declared and adjudged to be illegal and void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that it takes complainant's property without due process of law and without just compensation, and denies to the complainant the equal protection of the law, because the rate fixed as the price to be paid by said act does not allow to the complainant a just and proper return upon its property employed in the production and distribution of such gas. Said paragraph of said decree being erroneous for each of the reasons and causes set forth in the Assignments of Errors Nos. fifth to one hundred and seventh, inclusive, one hundred and fifteenth to one hundred and twenty-second, inclusive, hereinafter enumerated, each of which is separately alleged as a ground of error in said paragraph VI. of said decree.

Fifth. In adjudging and decreeing in paragraph II. of said decree that the true valuation as of the time of the beginning of this suit, of the complainant's property actually employed in its business of manufacturing and supplying gas is as follows:

Real estate	$11,985,435 00
Plants	15,500,000 00
Mains	12,636,000 00
697 Services	1,994,000 00
Meters and miscellaneous	4,100,000 00
Working capital	1,616,000 00
Total of tangible assets	$47,831,435 00
Special franchises	12,000,000 00
	$59,831,435 00

whereas said paragraph of said decree should have found and decreed that the amount and value of the complainant's properties so used by it was $30,949,327, as stated in the report of said Master, made up as follows:

I. Real estate	$10,587,685 00
II. Plants	9,348,692 00
III. Mains	6,529,035 00
IV. Services	1,222,228 00
V. Meters and miscellaneous	3,261,687 00
	$30,949,327 00

and in sustaining in this respect and to this extent the report of the Master in Chancery herein and in overruling this defendant's first exception in this respect and to this extent to said Master's report. Said paragraph of said decree being erroneous for each of the reasons and causes set forth in the Assignments of Errors Nos. sixth to sixty-ninth inclusive, hereinafter enumerated, each of which is separately alleged as a ground of error in said paragraph II. of said decree.

Sixth. In assigning to the properties of the complainant employed by it in the production and distribution of gas, in reaching the valuations set forth in paragraph II. of said decree, upon which a return is to be allowed, their present values based on the cost of duplication, less depreciation, instead of their present values based on their actual cost, less depreciation, the former admittedly
698 exceeding the latter, and such excess representing money
never actually expended; and in sustaining the report of the Master in Chancery in this respect and to this extent and in overruling in like respects and extent the exceptions of this defendant to the report of said Master in Chancery, said finding and assignment of values being erroneous for each of the reasons and causes specified in Assignments of Errors Nos. ninth to thirty-fifth inclusive, hereinafter set forth, each of which is separately assigned as grounds of error in this respect.

Seventh. In assigning to the properties of the complainant employed by it in the production and distribution of gas in reaching the valuations set forth in paragraph II. of said decree, upon which a return is to be allowed, their present values based on the actual cost of reproducing the identical plant at the present time, without regard to whether the same was economically worth reproducing or was obsolete or inadequate, instead of taking the reproduction cost of a modern plant, capable of producing and distributing the same kind, quantity and quality of gas, taking cognizance of the advancement of the art and the benefits to be derived from modern construction, which would be taken advantage of by a competitor entering the field; and in sustaining the Report of the Master in Chancery in this respect and to this extent and in overruling in like respects and extent the exceptions of this defendant to the Report of said Master in Chancery, said finding and assignment of values being erroneous for each of the reasons and causes specified in Assignments of Errors Nos. Ninth to Thirty-fifth inclusive, hereinafter set forth, each of which is separately assigned as grounds of error in this respect.

Eighth. In assigning to the properties of the complainant employed by it in the production and distribution of gas, in reaching the valuations set forth in paragraph II. of said decree, upon which a return is to be allowed, their present values based on the cost of reproducing the identical plant at the present time without
699 regard to whether the same was economically worth repro-
ducing or was obsolete or inadequate, instead of taking as a basis a sale value of such plant at the present time from the standpoint of an intending purchaser, giving due regard to inadequate, insufficient and obsolete plant, and the value of the complainant's plant to an intending purchaser who has as an alternative an opportunity of entering as a competitor and constructing a new up-to-date plant, advantageously located, with all the benefits to be derived from modern construction, and in sustaining the Report of the Master in Chancery in this respect and to this extent and in overruling in like respects and extent the exceptions of this defendant to the Report of

said Master in Chancery, said finding and assignment of value being erroneous for each of the reasons and causes specified in Assignments of Errors Nos. Ninth to Thirty-fifth inclusive, hereinafter set forth, each of which is separately assigned as grounds of error in this respect.

Ninth. In sustaining the Report of the Master in Chancery finding:

"The amount of the capital and assets of the complainant as of June, 1884, exclusive of working capital in the shape of cash, accounts receivable and current supplies, was made up as follows:

Real Estate	$10,332,000 00
Plant	12,175,000 00
Mains	5,217,000 00
Services	1,005,000 00
Meters	1,195,000 00
Office Furniture and Fixtures	70,000 00
	$29,994,000 00
Franchises and Rights	7,781,000 00
	$37,775,000 00

700 "The figure at which these assets were acquired by the complainant company and upon which its books were opened was accordingly $37,775,000;"

whereas said Master should have found that the figure at which these assets were acquired by the complainant company was $20,942,632.85, and in overruling in this respect this defendant's second exception to said Master's Report.

Tenth. In sustaining the Report of the Master in Chancery allowing the complainant's amendment 1., page 146, of Report, and in finding:

"As regards mains and services, therefore, as well as real estate, plant and other tangible property, it does not appear that any sufficient ground exists for the suggestion that the appraised value of 1884 was materially, if at all, in excess of the aggregate cost of the tangible property to the constituent companies;"

whereas he should have found that by said consolidation in 1884 the capital of complainant was arbitrarily written up over the capital of the six constituent companies, by the amount of over $17,000,000 on the basis of the market valuation of the stock of the constituent companies, without any expenditure of cash for such increase; that the appraisal of 1884 exceeded the then value of the property as carried on the books of the constituent companies by taking the duplication value as estimated by themselves as distinguished from the cost less depreciation as the basis; that such transaction cannot in equity be considered a purchase of the property by the complainant from its six constituent companies; and if so considered, said complainant paid in excess of its real value therefor, and such excess cannot be included in an investment on which a return is to be allowed, and in overruling the second exception of the defendant to said Master's Report in this respect.

701 *Eleventh.* In sustaining the Report of the Master in Chancery allowing the complainant's amendment XI., and in finding

"XI.—Page 141, following line 12, insert: 'Although in my view, as above expressed, of the basis of valuation upon which the complainant is entitled to a return, no additional findings on that subject are necessary, for the further information of the Court I find upon the evidence that the *actual cost* to complainant of the tangible property and franchises employed in its gas business (including the amount found by me to be the capital invested in production of gas for complainant outside complainant's Manhattan works) is at least $60,214,000, made up as follows:

I.	Real estate, at least	$9,322,000 00
II.	Plants (Manhattan), at least	14,579,000 00
III.	Mains, at least	7,852,000 00
IV.	Services, at least	1,212,000 00
V.	Meters and miscellaneous, at least	3,802,000 00
VI.	Working capital, at least	3,616,000 00
VII.	Coal and Coke Co.	50,000 00
VIII.	Astoria unit (*i. e.,* capital invested in production of gas sold by complainant, made outside complainant's Manhattan works)	12,000,000 00
IX.	Franchises and rights	7,781,000 00
	Total	$60,214,000 00

If franchises and good will be included together at the aggregate value of $20,000,000, above found by me, in lieu of the item of "Franchises and Rights," the actual cost to complainant of its
702 tangible property, plus the value of its franchises and good will, is at least $72,433,000,'"

and in overruling in this respect this defendant's second exception to said Master's Report.

Twelfth. In sustaining the report of the Master in Chancery allowing the complainant's amendment XII and in finding

"There is no satisfactory evidence that the cost to complainant of said property was unreasonable or excessive; or that the cost of production of said property was enhanced through faulty construction or waste; or that the various sums expended from time to time by complainant or its predecessor companies in permanent improvements and betterments were not intelligently and properly expended, or that any such expenditure was made otherwise than providently and honestly.

"'Nor is there any satisfactory evidence that any of the expenditures of the complainant for material, labor or otherwise, in the manufacture and distribution of gas, have been improper, unnecessary or unreasonable;'"

and in overruling in this respect defendant's second exception to said Master's Report.

Thirteenth. In sustaining the report of the Master in Chancery, refusing to find, in accordance with the written request of the defendant, the Attorney General and adopted by this defendant, as follows:

"That the cost to the constituent companies of its several classes of property, without appreciation or depreciation, was as shown by the books of the constituent companies, $20,942,632.85, and that the item of $7,781,000.00 did not represent anything of value, but was an arbitrary figure used for the purpose of equalizing stock values, as shown by the market prices between the constituent companies;"

703 and in overruling in this respect this defendant's second exception to the Master's Report.

Fourteenth. In sustaining the report of the Master in Chancery finding that the complainant is entitled to a return on the present value of its real estate, as distinguished from its original cost, that although

"By far the greater part of the real estate belonged to the constituent companies before the consolidation and was purchased many years ago at prices much below its present value"

still complainant was entitled to a fair return upon the amount of the increase in value of its real estate holdings or of the unearned increment thereof.

Whereas, he should have found that the value on which the complainant was entitled to a return was such cost value to the six constituent companies up to consolidation and to the complainant since then for such land acquired since, less the amount received for sales of any real estate; that the difference between such cost and such present value represents the appreciation thereon, due to local conditions in Manhattan, and not to any incr-ase in investment by the complainant, and amounts to an unliquidated surplus which can be determined as soon as the property is sold, and both before and after such sale cannot be treated as other than a surplus, and it is not proper to allow a return thereon as against the consumer; and in overruling in this respect and to this extent this defendant's Fourth Exception to said Master's report.

Fifteenth. In sustaining the report of said Master in Chancery finding that there was no competent proof showing that the original cost of the real estate owned by the complainant was as stated, only the sum of $4,118,267.38, and that so far as the record discloses it is quite evident that the actual cost was in excess of that sum.

704 Whereas he should have found that said sum did represent substantially the cost of such real estate as carried on the books of the constituent companies; and in overruling in this respect the Fifth Exception of this defendant to said Master's report.

Sixteenth. In sustaining the report of said Master in Chancery finding

"In the second place, if the question of original cost is to be considered, it should be the cost to the complainant, the Consolidated Gas Company, and not the cost shown on the books of its constituent companies, some of which had acquired their property fifty years and more before the complainant was organized. The cost to the Consolidated Company was represented by the amount of stock it issued to the constituent companies for their real estate, which, as already stated, was $10,332,000. It may possibly be that this amount was in excess of the fair market value of the property at that time, but the record indicates that the discrepancy, if any, was by no means as large as the defendants have argued."

whereas he should have found that such value did not represent the true cost of the real estate on which if at all the complainant was entitled to a return, but that such true cost was the original cost to the constituent companies of the real estate acquired before consolidation; and as to real estate acquired since consolidation the cost to the complainant. That by the mere act of consolidation in 1884 the complainant was not entitled to increase its real estate investment on which a return is demanded, without any additional outlay of cash; and in overruling this defendant's Sixth Exception to the report of said Master in Chancery.

Seventeenth. In sustaining the report of the Master in Chancery finding

"Whatever enhancement there may have been in its value
705 since the date of purchase was the result of no efforts on the
part of consumers of gas, and they are not equitably entitled to a return thereon. Whether it was the result of mere good fortune or was due to the shrewdness and foresight of the management of the company is immaterial; in either case, the justice of permitting the general public to share its benefits at the expense of complainant's stockholders is not apparent."

whereas he should have found that whatever enhancement there may have been in its value since the date of purchase was the result of no effort on the part of the complainant, but, according to complainant, was due to "Divine Providence and the growth of The City of New York" for the reason that the complainant is not entitled to include such enhancement in the gas investment on which the consumer must provide a return, but may get the benefit of such enhanced value upon the sale of such property when it will be treated as a surplus and it must be so treated prior to liquidation, that to do so imposes no burden upon the complainant, as the taxes are paid by the consumer during the time the property is held, and that to do otherwise would be to impose a greater burden upon the consumer, which would in time enable even a dollar rate to be held confiscatory, since the investment on which the return is figured would be continually enhancing; and in overruling this defendant's thirteenth exception to said Master's report.

Eighteenth. In sustaining the report of said Master in Chancery finding

"In this instance, as well as regards the three items next to be considered, such reproductive cost affords the only practicable basis

of present valuation. While the real estate has a substantial value irrespective of the purposes for which it is now held, the plants, mains, etc., are of value only when used by a going concern.
706 For any other purpose they are merely scrap, or second-hand machinery, and their intrinsic worth is inappreciable. As to their market value, there is no means of judging. Dr. Marks, it is true, testified that his valuations were made from the standpoint of an intending purchaser desiring to take over the plants and operate them as a whole. But any such purchaser in order to continue business must own complainant's franchises in addition to its tangible property, else the tangible property would have no substantial value (People *ex rel.* Consolidated Gas Co. *vs.* State Board, etc., 174 N. Y., 417, 440).

"There is no evidence as to the market value of any of complainant's property taken in connection with its franchises, and disposed of as part of a going concern. Furthermore it is clear that a valuation that might be proper as between purchaser and seller would not necessarily be a fair one for the purposes of the present case. The evidence shows without contradiction that capitalists purchasing entire gas properties expect a return on their investment of at least 10 or 15 per cent., which much exceeds any rate conceded by defendants to be a proper return to complainant. On the other hand, a capitalization on the basis of reproductive cost, seems fair to all parties. Complainant receives a return on the present value of its property as used, while the consumer pays no more than he would be required to pay had complainant abandoned business, or a new company entered the field as its competitor."

whereas he should have found that the only practicable basis of the persent valuation (if such present valuation is to be taken), is the standpoint of the intending purchaser, and not the reproductive cost view, that the former is the fairer method, as between the par-
707 ties, as does not enable the complainant to burden the consumer with increased cost for depreciated, old-fashioned or inadequate machinery, but gives such machinery a fair value only; that other franchises than the complainant's can be obtained from the proper authorities upon application, that nothing appears from the record that such a new franchise would require any original outlay; that no franchise would in fact be required for the manufacture, as distinguished from the distribution of gas; that a return on the present value of complainant's property as used, based on cost of duplication, burdens consumer by requiring him to pay a return on a value in excess of complainant's real investment, that such consumer would then pay more than if a competitor entered the field, as such competitor would not duplicate the antiquated and old-fashioned plants of complainant, but would construct an ideal plant to meet the given output; that the taking of duplication cost of complainant's plants as basis, imposes upon the consumer all the burdens without giving any of the benefits of the competition theory; and in overruling this defendant's Fourteenth Exception to the report of said Master in Chancery.

Nineteenth. In sustaining the report of said Master in Chancery finding that the complainant is entituel to a return on the present value of the plant, based on the cost of reproduction, and not on the original cost less depreciation, whereas he should have found that where such present value based on the original cost less depreciation, is less than the present value based on the reproduction cost, that the complainant is entitled to a return as against the consumer only on the smaller amount. Otherwise the consumer is burdened with paying a return on money never spent, and deprived of benefits accruing from duplication by an ideal plant, while no injustice can accrue to complainant in allowing a return on its actual investment at its present condition; and in overruling this defendant's Fifteenth Exception to said report of said Master in Chancery.

708 *Twentieth.* In sustaining the report of said Master in Chancery finding the value of the mains of the complainant on which it is entitled to a return as against the consumer, to be the replacement value based on the cost of reprouction of the same.

whereas said Master should have found said value of the mains to be the actual cost of investment therein by the complainant, less the depreciation, as the only fair basis between the complainant and the consumer, otherwise the consumer is charged with the burden of providing a return on an amount in excess of the actual investment of the complainant due to increased cost resulting from modern conditions, pavements, etc., without the consumer receiving the benefits which replacements, at the present time, under the present conditions, would give. That in no sense can the mains of the complainant, many of which have been in the ground for fifty years, be said to be at the present time of a greater value than the actual cost, merely because modern conditions would not permit duplication of such identical mains at the same cost at the present time; and in overruling this defendant's Eighteenth Exception to the said report of said Master in Chancery.

Twenty-first. In sustaining the report of said Master in Chancery refusing to find that the appraisal value of both mains and services at the time of consolidation in 1884, was far in excess of their cost; and that the value of mains and services devoted by complainant to the public use was as of December 31, 1905, $6,359,324.46, which represents the original cost of mains and services transferred by the constituent companies to the complainant plus the expenditures of the complainant since 1884 on account of new construction thereof.

whereas he should have found that such figures represented the then value of such mains and services on the basis of cost 709 less depreciation, as carried on the books of the constituent companies, and that any figure in excess of such amount which the complainant claimed therefor at that time was in excess of the real value of such mains and services and such excess should not be included in the investment on which a return is to be allowed, for the reason that it does not represent a cash outlay by the complainant, and any capital stock issued for such excess by complainant was unwisely and wastefully issued; and in overruling the

Twentieth Exception of this defendant to the report of said Master in Chancery.

Twenty-second. In sustaining the report of said Master in Chancery finding that the complainant is entitled to a return from the consumer on an amount for services based on the cost of reproduction at present prices; whereas he should have found that if the basis of present value is to be taken, no amount at all could be charged by the complainant, as such services are no longer owned by such complainant, inasmuch as so much thereof as are in the public streets are considered as separate from the franchises, and the balance thereof are on private property and belong to the owners of said property, and that it is only when the basis of actual cost, less depreciation, is adopted that any amount for services can be included by the complainant in the amount on which a return is to be provided by the consumer; and in overruling this defendant's Twenty-second Exception to said report of said Master in Chancery.

Twenty-third. In sustaining the report of said Master in Chancery fixing the value of the services on which the complainant is entitled to a return at $1,994,000, that such amount is based on the cost of reproduction and is excessive in that it capitalizes pavements and allows no depreciation, that complainant has claimed such services depreciate to the extent of 25 per cent., that the proper present valuation is the cost less depreciation, and such value
710 does not exceed $1,222,228.37, as shown on the books on December 31, 1905; and in overruling in this respect this defendant's Twenty-third Exception to said report of said Master in Chancery.

Twenty-fourth. In sustaining the report of said Master in Chancery finding that the amount on which the complainant is entitled to a return as against the consumer for meters and miscellaneous personal property is based on the reproduction value thereof at $4,100,000, adopting the estimate of Mr. Carter, and he carries such figures into the total.

whereas he should have found that such reproduction value was excessive; that such reproduction value is not a fair basis as between the complainant and the consumer in that it burdens the consumer with providing returns on an increase over the actual investment of the complainant, which increase is due to modern conditions, without allowing the consumer any benefits which reproduction by an ideal plant at the present time would give; that the only fair method between complainant and the consumer of determining the present value is to take the actual investment of complainant less depreciation, and such value should not exceed the figures of $3,261,687; and in overruling this defendant's Twenty-fourth Exception to said report of said Master in Chancery.

Twenty-fifth. In sustaining the report of said Master in Chancery including in the property on which the complainant is entitled to a return the present value of its franchises.

whereas he should have allowed only the actual investment therein or cost thereof; and in overruling this defendant's Thirty-ninth Exception to said report of said Master in Chancery.

Twenty-sixth. In sustaining the report of said Master in Chancery overruling and refusing to find the Fourteenth Amend-
711 ment and Request to Find made by the defendant the Attorney General of the State of New York and adopted by this defendant, as follows:

"*Fourteenth.* To the finding on page 39 of the draft report, that the present value of the mains to be $12,636,000, on the ground that the same were carried on the books of the company at the value of $7,852,151.03, as the actual cost thereof, and that the allowance of $4,783,849 for an estimated increase in the cost of laying the same to-day because of the change of pavements, over that which it actually cost the company, is not the proper allowance, representing no outlay of cash on the part of the company and representing the value of no property devoted by it to the public use."

whereas the same should have been allowed; and in overruling this defendant's Sixty-seventh Exception to the report of said Master in Chancery.

Twenty-seventh. In sustaining the report of said Master in Chancery overruling and refusing to find the Amendment and Request to Find made by the Attorney General of the State of New York and adopted by this defendant, as the first sub-head of the Twenty-ninth Amendment and Request to Find of said Attorney General of the State of New York, in each particular in which the same was so overruled or disallowed as follows:

"The said defendants hereby request the Master to find the further facts and embody them in his final report:

"I. That of the real estate of the constituent companies transferred to the complainant in 1884 the following parcels have either been sold or are not now used by the complainant in its gas business.
712 That the said parcels were valued in the appraisal made at that time at the figures set opposite each parcel respectively:

1. Deeded to Standard Gas Light Company (Ex. p. 233 and Ex. 48):

8 lots, Avenue A, Sixty-second to Sixty-third streets, with corners..............................	$68,000 00
115 feet on Sixty-third street, 4 3/5 lots, at $6,000...	27,600 00
115 feet on Sixty-second street, 4 3/5 lots, at $5,000..	23,000 00
	$118,600 00

2. Deeded to New Amsterdam Gas Company (Ex. 48, Ex. pp. 200, 201):

10 lots, Fifteenth street, between Avenues C and D, at $7,000...............	$70,000 00	
10 lots, Sixteenth street between Avenues C and D, at $6,000...............	60,000 00	
		$130,000 00

3. One Hundred and Eleventh Street Station (Ex., p. 318)	604,000 00
4. Bulkhead (Ex., p. 319)	100,000 00
5. Eighteenth Street Station (Test., p. 203)	1,823,000 00
6. East Twentieth to Twenty-second street, bulkhead taken by the City	250,000 00
7. Sixtieth to Sixty-first street, Avenue A, wooden buildings, rented (Test., p. 30, Ex. 232)	158,500 00
8. Shadyside (Test., p. 50., Ex. 235)	50,000 00
713	
9. South side Fifteenth street, between Avenues A and B, well property	12,000 00
10. Sixty-fifth street and West End avenue, west side vacant (Test., p. 107, Ex. p. 234)	115,000 00
	$3,361,100 00

which, deducted from the appraisal value of the real estate, $10,332,000 would leave the amount of real estate taken over and now in use of the appraised value in 1884 of $6,970,900. If the Master shall refuse to find that all of said parcels should be excluded, he find specifically as to each item from 1 to 10, above set forth."

Disallowed, excepting that it is the fact, and I so report, that (1) the several parcels numbered 1 to 10, inclusive, were appraised in 1884 at the figures respectively indicated, amounting in the aggregate to $3,361,100; (2) parcels 1 and 2 have been sold; (3) a portion of parcel 3, representing, according to the appraisal of 1884, a valuation of $84,000, has been taken in condemnation proceedings; (4) a portion of parcel 5 has been similarly taken, amounting, according to 1884 valuations, to $1,101,250, and (5) parcel 6 has been similarly taken. I decline to find that the remaining portion of parcel 3, or that parcels 4, 7, 9 and 10 are not now used by complainant in its gas business, for the evidence shows the contrary to be the fact, I similarly decline to find as regard the land remaining in parcel 5, excepting one block, valued at $400,000, which I have already excluded in my report (ante, p. 23).

> Parcel 8 (Shadyside), has also already been excluded (ante p. 23).

whereas the same in said particulars should have been allowed; and in overruling this defendant's Sixty-ninth Exception to the said report of said Master in Chancery.

714 *Twenty-eighth.* In sustaining the report of said Master in Chancery overruling and refusing to find the Amendment and Request to Find made by the Attorney General of the State of New York and adopted by this defendant as the III. sub-head of the Twenty-ninth Amendment and Request to Find of said Attorney General of the State of New York as follows:

"That deducting from 'the amount of capital and assets of the complainant as of June, 1884, (as found by the Master at page 6 of the draft report), $27,649,060, would leave the cost to the complainant of the assets now used by it to $21,845,850 as the proper cost price, in accordance with said findings of the Master."

whereas the same should have been allowed; and in overruling the Seventy-first Exception of this defendant to the said report of said Master in Chancery.

Twenty-ninth. In sustaining the report of said Master in Chancery overruling and refusing to find the Amendment and Request to Find made by the Attorney General of the State of New York and adopted by this defendant as the IV. sub-head of the Twenty-ninth Amendment and Request to Find of said Attorney General of the State of New York as follows:

"That the complainant has invested, in addition to real estate, plant and property, since the appraisal in 1884, to October 31st, 1905 (Ex. 79, p. 347*a*), $9,693,565.90, making the total cost of the real estate, plant and property used by the complainant in its gas business $31,539,415.90, to which should be added the value of material and supplies on hand, $616,470.08 (draft report 42), or a total of $32,155,885.98."

whereas the same should have been allowed; and in overruling the Seventy-second Exception of this defendant to the said report of said Master in Chancery.

715 *Thirtieth.* In sustaining the report of said Master in Chancery disallowing and refusing to find the Fifth Special Finding of Fact requested by the Attorney General of the State of New York, and adopted by this defendant as follows:

"That the properties of the constituent companies, so as aforesaid transferred to complainant as of the value of $29,994,000, cost the constituent companies new, without allowance for either appreciation or depreciation of its several classes of property, the sum of $20,942,632.85 as shown by the books of account of the several companies."

whereas the same should have been allowed, and in overruling this defendant's Seventy-fifth Exception to said report of said Master in Chancery.

Thirty-first. In sustaining the report of said Master in Chancery disallowing and refusing to find the Sixth Special Finding of Fact requested by the Attorney General of the State of New York and adopted by this defendant as follows:

"That the constituent companies, for the purposes of the consolidation aforesaid, by appraisers selected by them, appraised their land in excess of the then market value thereof and appraised their buildings, plant, mains, services and other tangible property at what it would then cost to produce the same new, as a part of a going concern; and that, if the Master should find the facts to be otherwise, he find and state the basis and method of such appraisal;"

whereas the same should have been allowed; and in overruling this defendant's Seventy-sixth Exception to said report of said Master in Chancery.

Thirty-second. In sustaining the report of said Master in Chancery disallowing and refusing to find the twelfth special 716 finding of fact requested by the Attorney-General of the State of New York and adopted by this defendant as follows:

"That complainant's constituent companies paid for the real estate used by it in its gas business, including additions and improvements, to November 11, 1884, the sum of $3,317,791.10, and that complainant paid for the real estate purchased by it, including improvements and additions thereto, from November 11, 1884, to December 31, 1905, the sum of $740,296.28; that complainant's constituent companies wrote up the value of its real estate, prior to November 11, 1884, on account of appreciation, in the sum of $1,584,963.37, and that the complainant has written up the value of its real estate on account of appreciation since November 11, 1884, in the sum of $5,369,065.53, or a total of $6,954,028.90; that complainant has realized a profit of $142,378 on real estate sold by it since November 11, 1884; but that, if the Master find the fact to be otherwise, as to amount, that he find and report the cost value of complainant's real estate, as above, and the several amounts written up on account of appreciation in the value thereof, and the profits realized on sales thereof, during the periods stated."

whereas the same should have been allowed; and in overruling this defendant's Seventy-seventh Exception to said report of said Master in Chancery.

Thirty-third. In sustaining the report of said Master in Chancery disallowing and refusing to find the Thirteenth Special Finding of Fact requested by the Attorney-General of the State of New York and adopted by this defendant as follows:

"That the cost of the plant of the constituent companies new, transferred to complainant, did not exceed the sum of $6,133,- 717 690; that the same was appraised for the purposes of consolidation at the sum of $12,283,403.75, of which about $6,049,101.41 was pretended appreciation in the value thereof, arbitrarily written up; that the value of the plant of complainant on December 31, 1905, did not exceed the sum of $9,348,692; but, if the Master find the fact to be otherwise, that he find and report the cost of the plant transferred by the constituent companies to complainant in 1884, with the additions and improvements thereto; the value thereof as appraised for the purposes of consolidation, and the cost of the plant purchased by complainant from November 11, 1884, to December 31, 1905, with the additions and improvements thereto."

whereas the same should have been allowed; and in overruling this defendant's Seventy-eighth Exception to said report of said Master in Chancery.

Thirty-fourth. In sustaining the report of said Master in Chancery disallowing and refusing to find the Fourteenth Special Finding of Fact requested by the Attorney-General of the State of New York and adopted by this defendant as follows:

"That the mains and services of the constituent companies transferred to complainant in 1884, cost, new, not to exceed the sum of

$3,563,315.83; that they were transferred to the complainant at an appraisal valuation of $6,222,000; that, from November 11, 1884, to October 31, 1905, the complainant expended $2,618,188.93 for construction of new mains and $177,829.68 for construction of new services, or $2,796,008.61; that the value of complainant's mains, as shown by its books on December 31, 1905, was $7,498,526.15, and that the value of its services, as shown by its books on said date, was $1,222,228.37, which includes the appraisal value afore-
718 said; that complainant reported the value of its mains and services, upon the basis of reproduction new, to the State Board of Tax Commissioners, as of date June 30, 1905, to be $5,801,463.10; that the difference between the cost value of complainant's mains and services and the value thereof as returned in the appraisals of the experts employed to inventory the value of the same in 1906, was upon the basis of the increased cost to install the same under conditions at present existing, under pavement that has been laid since their original installation, etc., and the difference between the expense of the cost of labor and materials in laying them at the present time, as compared with the cost thereof at the time of their installation."

whereas the same should have been allowed; and in overruling this defendant's seventy-ninth exception to said report of said Master in Chancery.

Thirty-fifth. In sustaining the report of the Master in Chancery disallowing and refusing to make in part the special request to find an amendment proposed by the Attorney-General of the State of New York and adopted by this defendant numbered as sub-head VI. of the Twenty-ninth special request to find as follows:

"That a similar plant with a daily capacity of 10,000,000 cubic feet could be constructed at a cost of $2,441,014.51 (test of William H. Bradley, pp. 1966-1978), exclusive of real estate and holder or a unit of $244.00 per thousand of capacity. On this basis a modern first-class coal-gas plant of 9,500,000 cubic feet daily capacity could be produced for $2,318,000,"

whereas the same should have been allowed; and in overruling in this respect the Seventy-third Exception of this defendant to the said report of the said Master in Chancery.

719 *Thirty-sixth.* In sustaining the report of the Master in Chancery finding that the present values of the properties of the complainant used by it in the production and distribution of gas and upon which it is entitled to earn a return as fixed in paragraph II. of said decree are sustained by the weight of competent evidence, whereas he should have found that such values were not sustained by the weight of the competent evidence in the case; said findings being erroneous in each of the particulars enumerated as Assignments of Errors Nos. Thirty-eighth to Forty-fourth inclusive, hereinafter set forth, each of which is separately alleged as a ground of error in this respect.

Thirty-seventh. In sustaining the report of the Master in Chancery finding that the present values of the properties of the complainant used by it in the production and distribution of gas and upon which it is entitled to earn a return as fixed and adjudged in paragraph II. of said decree, are sustained by the weight of competent evidence in the case, whereas he should have found that the burden was on the complainant to establish such values and that it had failed to do so by any competent evidence whatsoever, said finding being erroneous in each particular enumerated in Assignment of Errors Nos. *a*Thirty-eighth to Forty-fourth inclusive, hereinafter set forth, each of which is separately alleged as a ground of error in this respect.

Thirty-eighth. In sustaining the report of the Master in Chancery finding that the valuation of the real estate used by the complainant in the production and manufacture of gas upon which it is entitled to earn a return as claimed by it was sustained by the weight of competent evidence, whereas he should have found to the contrary, and in overruling in this respect the Third Exception of this defendant to the said report of the said Master in Chancery.

720 *Thirty-ninth.* In sustaining the report of the Master in Chancery finding that the values of the plant of the complainant used by it in the production and distribution of gas upon which it was entitled to earn a return claimed by it, is sustained by the weight of competent evidence, whereas he should have found to the contrary, and in overruling in this respect the Fourteenth Exception of this defendant to said report of the said Master in Chancery.

Fortieth. In sustaining the report of the Master in Chancery finding that the values of the plant of the complainant used by it in the production and distribution of gas upon which it was entitled to earn a return claimed by it, is sustained by the weight of competent evidence, whereas he should have found to the contrary, and in overruling in this respect the Sixteenth Exception of this defendant to said report of the said Master in Chancery.

Forty-first. In sustaining the report of the Master in Chancery finding that the values of the mains of the complainant used by it in the production and distribution of gas upon which it was entitled to earn a return claimed by it, is sustained by the weight of competent evidence, whereas he should have found to the contrary, and in overruling in this respect the Nineteenth Exception of this defendant to said report of the said Master in Chancery.

Forty-second. In sustaining the report of the Master in Chancery as modified by said decree finding that the value of the franchises claimed by the complainant and adjudged and decreed to be included in the properties upon which it is entitled to earn a return, is sustained by the weight of competent evidence, whereas said Master should have found and said Court should have decreed that there was no evidence in the record either as to the original cost or the present value of said franchises and in overruling in this respect the Thirty-eighth Exception of this defendant to the 721 said report of said Master in Chancery.

Forty-third. In sustaining the report of the Master in Chancery failing to give proper weight or binding effect to the complainant's tax reports offered in evidence in this case, and in overruling in this respect this defendant's Forty-third Exception to the said report of the said Master in Chancery.

Forty-fourth. In sustaining the report of said Master in Chancery overruling and refusing to make the twelfth amendment proposed by the Attorney-General of the State of New York and adopted by this defendant as follows:

"To the finding of the value of the manufacturing plant of the complainant to be $15,500,000 on the ground that the complainant has failed to give any correct and true value of the plant used by it, and that the Master should have found a failure of proof on the part of the complainant in this behalf"

whereas he should have allowed the same, and in overruling in this respect this defendant's Sixty-sixth Exception to the said report of the said Master in Chancery.

Forty-fifth. In adjudging and decreeing in paragraph II. of said decree that the present value of the real estate of complainant actually employed by it in its business of manufacturing and supplying gas is $11,985,435 and in sustaining as thereby modified and as modified by subhead (*a*) of the first paragraph of said decree the report of said Master in Chancery, said finding and decree being erroneous in each of the particulars enumerated in assignment of errors Nos. Forty-sixth to Forty-eighth inclusive, hereinafter set forth, each of which is separately alleged as a ground of error in this respect.

722 *Forty-sixth.* In including in the real estate of the complainant as used by it in the production and distribution of gas and upon which it is entitled to earn a return certain tracts of real estate not shown by the evidence to be owned by it, and in sustaining in this respect the report of said Master in Chancery and overruling this defendant's Tenth Exception to the report of the said Master in Chancery.

Forty-seventh. In including in the real estate of the complainant as used by it in the production and distribution of gas and upon which it is entitled to earn a return of certain tracts of real estate not shown by the evidence to be owned by it, and in sustaining in this respect the report of said Master in Chancery and in overruling this defendant's Eleventh Exception to the report of the said Master in Chancery.

Forty-eighth. In sustaining the report of the Master in Chancery valuing the real estate of the complainant claimed to be used by it in the production and distribution of gas upon which it is entitled to earn a return as vacant land, whereas he should have deducted the cost and expense of tearing down and removing such buildings as were located thereon which would be unavailable for an ordinary purchaser, and in overruling in this respect the third sub-head of this defendant's Third Exception to the said report of the said Master in Chancery.

Forty-ninth. In adjudging and decreeing in paragraph II. of said decree that the valuation of the complainant's plant used by it in its business of manufacturing and supplying gas is $15,500,000, and in sustaining in this respect the report of the said Master in Chancery and in overruling the Sixteenth Exception of this defendant to said report of the said Master in Chancery; each of the grounds alleged in the said exception being separately assigned as a ground of error in this respect and in sustaining the report of the said Master dis-

allowing and refusing to find the amendment and request to find made by the Attorney-General of the State of New York and
723 adopted by this defendant, numbered I. and II., whereas the same should have been allowed, and in overruling in this respect this defendant's Seventieth Exception to the said report of the said Master in Chancery.

Fiftieth. In adjudging and decreeing in paragraph II. of said decree that the valuation of the complainant's plant used by it in its business of manufacturing and supplying gas is $15,500,000, and in sustaining in this respect the report of the said Master in Chancery in overruling the Seventeenth Exception of this defendant to said report of the said Master in Chancery, each of the grounds alleged in the said exception being separately assigned as a ground of error in this respect and in sustaining the report of the said Master disallowing and refusing to find the amendment and request to find made by the Attorney General of the State of New York, and adopted by this defendant, numbered I. and II., whereas the same should have been allowed and in overruling in this respect this defendant's Seventieth Exception to the said report of the said Master in Chancery.

Fifty-first. In adjudging and decreeing in paragraph II. of said decree that the value of the mains employed by the complainant in its business of manufacturing and distributing gas is $12,636,000, and in sustaining in this respect the report of the Master in Chancery, and in overruling in this respect the Nineteenth Exception of this defendant to the said report of the said Master in Chancery; each of the grounds set forth in said exception being separately alleged as a ground of error in this respect.

Fifty-second. In sustaining the report of the said Master in Chancery in refusing to find that owing to the consolidation of the six constitutent companies in 1884, forming the complainant, there exists to-day under one system considerable duplication of the
724 mains in the City streets which would not have existed had not these companies attempted to consolidate, and that the consumer should not be required to provide a return on the value of this duplication, whereas he should have so found, and in overruling in this respect this defendant's Twenty-first Exception to the said report of the said Master in Chancery.

Fifty-third. In adjudging and decreeing in paragraph II. of said report that the value of the services employed by the complainant in its business to manufacture and supply gas is $1,994,000, and in sustaining in this respect the report of the said Master in Chancery and in overruling this defendant's Twenty-third Exception to the said report of the said Master in Chancery, each of the grounds in the said exception being separately alleged as a ground of error in this respect.

Fifty-fourth. In adjudging and decreeing in paragraph II. of said decree that the value of the meters and miscellaneous personal property employed by the complainant in its business of manufacturing and distributing gas is $4,100,000, and in sustaining in this respect the report of the said Master in Chancery and in overruling this defendant's Twenty-fourth Exception to the said report of the said

Master in Chancery, each of the grounds stated in the said exception being separately alleged as grounds of error in this respect.

Fifty-fifth. In alleging and decreeing in paragraph II. of said decree that the complainant was the owner of certain special franchises used by it in its business of manufacturing and distributing gas and in sustaining in this respect the report of the said Master in Chancery, said finding and decree being erroneous in each of the respects enumerated in assignment of errors Nos. Fifty-sixth to Sixty-first, inclusive, hereinafter set forth, each of which is separately alleged as a ground of error in this respect.

725 *Fifty-sixth.* In sustaining the report of the said Master in Chancery finding that the Statute of 1884 under which the complainant was organized, cured defects in the franchise of the Harlem Gas Light Company, whereas he should have found that said Act did not authorize nor apply to the consolidation effected by the complainant or in any manner revive or validate any of the franchises of the six constituent companies.

Fifty-seventh. In sustaining the report of the said Master in Chancery finding that complainant was the owner by virtue of the consolidation whereby it was created, of the franchises to carry on a gas business in The City of New York, and to use the streets, avenues and public places thereof for that purpose claimed by the Knickerbocker Company by and under chapter 944 of the Laws of 1871, and that the objections to the Knickerbocker Gas Light Company franchise under chapter 944 of the Laws of 1871, and by assignment from the Anthracite Company, are technical, and many of them could obviously be cured.

whereas said Master should have found that the said Knickerbocker Company never owned or had the legal title to the franchises, if any, conferred thereby, and that complainant never held or owned and has never been entitled to and is not now entitled to use the same, and that such assignments not having been recorded and not having seen the light of day since their execution until this action was brought, that all objections and irregularities noted, or the great majority of them, were important or material, and at least until such defects were cured or explained the records relied on had no probative force whatever; and in overruling in this respect this defendant's Thirty-fourth Exception to the said report of the said Master in Chancery.

Fifty-eighth. In sustaining the report of the said Master in Chancery finding that the said complainant owned by virtue of 726 the consolidation whereby it was created, the franchises to carry on the gas business in The City of New York and to use the streets, avenues and public places thereof for that purpose, granted to the Harlem Gas Light Company and that the same was an assignable franchise in perpetuity at the time of the enactment of the statutes and the making of the order complained of, and property of the complainant devoted by it to public use.

whereas, he should have found that the said franchise granted to the Harlem Gas Light Company ceased and expired on May 26th, 1905, and was not at the dates aforesaid property devoted by the complainant to public use; and in overruling in this respect this defendant's Thirty-fifth Exception to the said report of the said Master in Chancery.

Fifty-ninth. In sustaining the report of the said Master in Chancery finding that under the charter of the City of New York the municipal authorities have been permitted to grant franchises only on conditions requiring a substantial return to the City.

whereas said finding is not justified as there is no evidence in the record to support the same; and in overruling in this respect this defendant's Thirty-sixth Exception to said report of the said Master in Chancery.

Sixtieth. In sustaining the report of the said Master in Chancery finding "In short, so far as the present record shows, the municipal authorities have fully acquiesced in the continued use and occupation of the streets by complainant.

"These considerations would appear to be sufficient for the purposes of the present case, and render unnecessary a discussion of the elaborate arguments submitted by counsel."

whereas said Master should have found that the complainant cannot and has not gained any franchise by any omission of the 727 City or by adverse possession, nor is the City estopped by any acquiescence on its part in the unlawful use of the streets. That the defendant The City of New York, though the largest single consumer of the complainant, does not represent all the consumers, and that the remainder of such consumers should not be prejudiced by any acquiescence or omission of the City; and in overruling in this respect this defendant's Thirty-seventh Exception to the said report of the said Master in Chancery.

Sixty-first. In sustaining said report of the said Master in Chancery in refusing to find a consolidation of the constituent companies was not authorized under chapter 367 of the Laws of 1884, and was against public policy, as such act could not be construed to cover gas companies and that said complainant did not thereby acquire any title to any franchises of said constituent companies, whereas he should have so found; and in overruling in this respect this defendant's Second Exception to the said report of said Master in Chancery.

Sixty-second. In adjudging and decreeing in paragraph II. of said decree that the special franchises claimed by the complainant and held to belong to it were property employed by it in its business of manufacturing and distributing gas on the value of which it was entitled to earn a return, and in sustaining in this respect the report of the said Master in Chancery.

whereas he should have found that even if such franchises were valid and existing, they did not constitute property properly included among the assets upon which complainant is entitled to a return. That there is no evidence in the record showing the original cost of

such franchises to the complainant, and that in the absence of any evidence of the sum originally invested therein, whatever value such franchises may have at the present time, is entirely a resultant
728 value depending on the possibilities of the business which the franchise covers. That the greater profits the complainant can make in such business the greater becomes the value of the franchise. That as the value of the franchise deepends upon the profits and therefore upon the rate, any change in the rate affecting the profits must affect the value of the franchise, and therefore to include the present value of the franchise in the assets on which a return is to be allowed in fixing a rate, is to reason in a circle and to enable the complainant to lift itself by its boot straps, *i. e.,* the higher the rate the higher the value of the franchise, and as the complainant claims, the higher the value of the franchise the greater must be the rate to allow a return thereon. That in time, under such conditions, with only the normal increase in business augmenting the value of the franchise, any rate would become confiscatory and rate regulation impossible; and in overruling in this respect the Thirty-eighth Exception of this defendant to the said report of the said Master in Chancery.

Sixty-third. In adjudging and decreeing in paragraph II. of said decree that the value of the franchises of the complainant employed by it in the manufacture and distribution of gas was the sum of $12,000,000, said decree being in this respect erroneous for each of the causes and reasons set forth in assignment of errors Nos. Sixty-fourth to Sixty-ninth, hereinafter set forth.

Sixty-fourth. In adjudging and decreeing in paragraph II. of said decree that the value of the special franchises of the complainant employed in its business of manufacturing and distributing gas is the sum of $12,000,000, and in the sustaining as modified by subhead E of paragraph I. of said decree and by said paragraph II. of said decree, the report of the Master in this respect and in overruling the Fortieth Exception of this defendant to said report of said Master in Chancery.

Sixty-fifth. In holding and finding that the value of $7,781,000, held to be the value of said franchises in the year 1884, had
729 increased to the sum of $12,000,000 at the time of the commencement of this suit, said increase being based upon a proportion of the claimed increase in the value of the tangible properties of the complainant.

Sixty-sixth. In holding and finding that the value of the franchises of the complainant in the year 1884 was $7,781,000, whereas the Court should have found that there was included in that value certain patents, contracts and other rights of at least a value of $2,500,000, and in failing to proportionately decrease the present value assigned to such franchise-, the said patents, contracts and other rights having expired.

Sixty-seventh. In holding and finding that the value of the franchises of the complainant in the year 1884 was $7,781,000, whereas the Court should have found that there was included in the franchises claimed to be owned by said complainant at that time and acquired by it through its constituent companies also the franchises of the

New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company and the Municipal Gas Light Company and the value of $7,781,000 fixed at that time by said complainant as the value of the franchises and other rights of said constituent companies and taken by the Court as the basis of value in 1884, for the franchises of said complainant included the value of the franchises of the said four constituent companies last named, and the Court should have made a proportionate reduction for the value of the franchises of the said four companies, it having failed as stated in paragraph II. of said decree to pass in any way upon the question whether said complainant owned said franchises, or upon the validity of such franchises, and having based its finding of $12,000,000 as the value of the franchises held to be owned and used by said complainant solely upon an alleged increase of the
730 said sum of $7,781,000 so fixed by the complainant in the year
1884 in proportion to the increase of the tangible properties of said complainant.

Sixty-eighth. In adjudging and decreeing in paragraphs I. and II. of said decree that the value of the franchises owned and used by said complainant in the manufacture and distribution of gas upon which it is entitled to earn a return is $12,000,000 without any evidence in the record whatsoever as to the specific value at the time of the commencement of this action or at any other time of the franchises derived, or claimed to be derived by said complainant from the Knickerbocker Gas Light Company including the Anthracite Gas Lighting and Heating Company and the so-called State Grant, the Harlem Gas Light Company, under which franchises alone the Court finds in paragraph I. of said decree said company is operated, the said figure of $12,000,000 being arrived at by the Court on the mere assumption of an increase in the value of franchises proportionate to that of tangible property and from a calculation based upon an erroneous original valuation, said original valuation having concededly included items as pointed out in the two preceding assignments of error in addition to the franchises which the Court alone finds the company is operating under.

Sixty-ninth. In failing to make an express finding as to the present existence of the franchises claimed by complainant and derived from the following corporations, respectively, such failure in the case of each of such companies being separately assigned for error, whereas the Court should have found that as to each of said franchises the company is no more than a holdover occupant whose right of occupancy is terminable at the will of the State of New York or The City of New York, namely:

1. The New York Gas Light Company;
2. The Manhattan Gas Light Company;
731 3. The Municipal Gas Light Company;
4. The Metropolitan Gas Light Company:

said municipal franchise being at all times invalid on account of lack of authority of the Mayor, Comptroller and Commissioner of Public Works to grant it, and in failing to pass upon this defendant's Thirty-third Exception to said Report of said Master in Chancery.

Seventieth. In adjudging and decreeing in sub-head (*h*) of paragraph I. of said decree that the operating expenses of the complainant in the production and distribution of the gas manufactured by itself was the sum of $6,809,552.28 and in the cost of gas purchased the sum of $997,039.80 and in sustaining the Report of the Master in Chancery in this respect except as modified by sub-heads (*f*) and (*g*) of paragraph I. of said decree and in overruling in this respect the Forty-fourth Exception of this defendant to the said Report of the said Master in Chancery, said decree in this respect being also erroneous for each of the causes and reasons specified in assignments of error enumerated Seventy-first to Ninety-fifth inclusive, hereinafter set forth, each of which is assigned as a separate ground of error in this respect.

Seventy-first. In adjudging and decreeing in sub-head (*g*) of paragraph I. of said decree that there should be an allowance of 11 cents for a thousand cubic feet in the actual production of its own works to cover repairs, renewals and depreciation, immediate and ultimate, as part of the actual operating expenses of said complainant and in sustaining as modified in said sub-head (*g*), paragraph I., of said degree, Report of said Master in Chancery in this respect, and in overruling in this respect and to this extent the Forty-fifth and Fifty-third Exceptions of this defendant to said Report of the said Master in Chancery.

732 *Seventy-second.* In sustaining the Report of said Master in Chancery allowing complainant to include in the cost of its gas the sum of $289,259.09 for street lamps, whereas the Master should have found that such item forms no proper part of the cost of complainant's gas and should be excluded therefrom, and in overruling this defendant's Forty-sixth Exception to the Report of the said Master in Chancery.

Seventy-third. In sustaining the report of the said Master in Chancery allowing the complainant to include in the cost of its gas the sum of $42,674.71 for real estate rents, whereas he should have found that there was no evidence tending to show that the property so leased was necessarily used in the business of manufacturing and distributing gas and that such items form no proper part of, and should not be included in, the cost of gas, and in overruling this defendant's Forty-eighth Exception to the report of said Master in Chancery.

Seventy-fourth. In sustaining the report of the said Master in Chancery, including in the cost of complainant's gas the sum of $62,034.61 for taxes on stock, whereas he should have found that such amount did not represent expenses likely to recur in future periods, and to include them in the cost of gas for the purposes of this suit would be prejudicial to consumers in the future, and that the same forms no proper part of the cost of gas and should be excluded therefrom, and in overruling in this respect the Forty-ninth Exception of this defendant to said report of the said Master in Chancery.

Seventy-fifth. In sustaining the report of the said Master in Chancery, including in the cost of gas taxes on special franchises to the

amount of $406,909.23, whereas such amount has not yet been paid, is being litigated and may never be paid, is based on the value predicated on the rate of one dollar per thousand feet of gas, that such tax was intended to reach the surplus earning capacity of the business after a fair return was provided on the tangible investment and therefore to burden the stockholders and not the
733 consumers. That a fixed rate is not required to produce a surplus net earning that is not confiscatory, and not producing such surplus net earnings, no taxable basis would be provided, and in overruling in this respect the Fiftieth Exception of this defendant to the report of the said Master in Chancery.

Seventy-sixth. In sustaining the report of the said Master in Chancery failing to deduct from the cost of gas the amount of taxes on real estate which defendants claim is not owned by the complainant but which is included in paragraph II. of said decree among the properties covered by the valuation fixed for the property there used by the complainant in the production and distribution of gas, whereas such amount should be deducted from the cost of gas in the same manner as the value of such real estate should be deducted from investments, and in overruling in this respect the Fifty-first Exception of this defendant to the said report of the said Master in Chancery.

Seventy-seventh. In sustaining the report of the Master in Chancery overruling and disallowing this defendant's amendment and correction to the Master's report No. Sixteen, asking for a correction in the cost of gas by deducting the sum of 3.6 cents from the apparent cost of gas per thousand cubic feet as found by the Master, whereas the said Master should have allowed said correction, and in overruling in this respect the Fifty-second Exception of this defendant to the said report of the said Master in Chancery.

Seventy-eighth. In sustaining the report of the said Master in Chancery overruling and refusing to allow the request for a reduction in the cost of gas to complainant made by this defendant under the heading of "Suggested Economies," and allowing and finding complainant's amendment and request XII. as follows, "nor is there any satisfactory evidence that any of the expenditures of the
734 complainant for material, labor or otherwise in the manufacture and distribution of gas had been improper, unnecessary or unreasonable," whereas he should have found as follows:

Oil. That the cost of gas to complainant is increased unnecessarily by injudicious use and purchase of oil; that it is unnecessary for the complainant to make one contract for all its oil, where it claims that there is only one company which can supply the total amount required that separate contracts could be made for the separate stations in the same manner as with the Mutual Gas Light Company; that the complainant abandoned in 1905 a contract more advantageous that the one subsequently entered into; and by the proper use of modern machinery complainant would not be restricted to homogeneous oils; that the prices paid by complainant are excessive and above the rates paid by other companies.

Coke and Other Residuals. The residuals from the manufacture of gas are handled by middlemen with poor results to the company That the yield of salable coke is insufficient, that the coke sales of the company are stated by the Master to have averaged $4.71 per short ton (2,000 pounds) to the "inside" company handling the coke, while but $2.35, or one-half is realized by the gas company. Although the stock of the company which handles the coke is owned by the Consolidated Gas Company, the returns to the gas company amount to but four one-hundredths (.04) cents per 1,000 cubic feet of gas sold. That the other residuals are not handled to the best advantage. Coal tar is handled by an outside corporation on still better terms to itself. When the market price of tar products is 7 cents per gallon, the gas company's share by contract is a trifle over 2 cents.

Ammonia liquor is treated on somewhat similar lines; the complainant receiving for its share about one-half the market price.

735 That the other residuals are not handled to the best advantage, and that all the residuals which the present state of the art returns, are not made use of.

Candle Power. That the average candle power maintained was unnecessarily in excess of the legal requirements.

Real Estate. That the complainant holds, claims a return and pays taxes on considerable real estate in excess of the amount actually or necessarily in use in its business.

That by all of the above the cost of gas to the complainant is increased; that by proper management the cost to complainant could be reduced and such wasteful methods should not be permitted to increase the cost as against the consumer.

And in overruling in this respect the Fifty-fourth Exception of this defendant to the said report of the said Master in Chancery, each item and detail of said "Suggested Economies" and findings being alleged separately as the specific ground of error in this respect.

Seventy-ninth. In sustaining the report of the said Master in Chancery finding that an examination of the figures as to the cost of gas of other companies does not sustain the contention that the complainant's operating cost is excessive; whereas he should have found that such figures show that the cost to the complainant is excessive and that the complainant finds it is cheaper to buy gas than to manufacture it and buys considerable of its output from other companies that its plants are not so advantageously arranged or employed to produce gas as cheaply as such other companies and that it is not justified in charging the consumer with such excess cost; and in overruling this defendant's Fifty-fifth Exception to said report of the said Master in Chancery.

736 *Eightieth.* In sustaining the report of the said Master in Chancery allowing complainant's Amendment VII., as follows:

"That the propriety of an allowance sufficient to bring the amount expended for current repairs and renewals for any one year up to the average covering a period of years, is fully established by the evidence."

whereas, he should have found that such addition should not have been allowed without allowing the average of other items entering into the cost, concerning which, for years other than 1905, defendants were denied access to the books of complainant; and further that the repairs for past years are no criterion for the present, owing to the improvements in the manufacture of gas during the past thirty years; and in overruling this defendant's Sixtieth Exception to the report of the said Master in Chancery.

Eighty-first. In sustaining the report of the Master in Chancery allowing complainant's Amendment VI. where he should not have allowed the same but have found that such amendment ignores the progress made in the last thirty years in the manufacture of gas and in overruling this defendant's Sixty-third Exception to the report of the said Master in Chancery.

Eighty-second. In sustaining the report of the Master in Chancery allowing complainant's Amendment VIII., so far as regards items not included in 65.84 cents per thousand feet for gas found by the said Master; whereas he should not have allowed the same but should have found that the figures of 65.84 cents including as it does an unexpended amount of $1,328,000 of surplus earnings more than covers all assumed and problematical expenses injected into the business of gas manufacture and distribution and not warranted by complainant's past practice nor by any correct method of book-
737 keeping and in overruling this defendant's Sixty-fourth Exception to the said Master's report.

Eighty-third. In sustaining the report of the said Master in Chancery allowing complainant's Amendment IX., that oil is cheaper in Chicago than in New York, whereas he should have found that the complainants have raised the price of oil in New York by a specification in regard to its quality and therefore there is no basis for comparison with New York nor is the kind or degree of oil used in Chicago specified, and in overruling this defendant's Sixty-fifth Exception to the said report of the said Master in Chancery.

Eighty-fourth. In sustaining the report of the said Master in Chancery overruling and refusing to make the amendment and request to find of the Attorney-General of the State of New York adopted by this defendant's Numbered Twenty-fifth; whereas the same should have been allowed, and in overruling in this respect this defendant's Sixty-eighth Exception to said report of the said Master in Chancery.

Eighty-fifth. In sustaining the report of the said Master in Chancery disallowing in part and refusing to find the Thirty-third Special Finding, requested by the Attorney-General of the State of New York and adopted by this defendant; whereas the same should have been allowed and made, and in overruling in this respect this defendant's Eightieth Exception to the report of the Master in Chancery.

Eighty-sixth. In sustaining the report of the said Master in Chancery disallowing in part and refusing to find the Thirty-fourth Special Finding, requested by the Attorney-General of the State of New York and adopted by this defendant; whereas the same should have been allowed and made, and in overruling in this respect this defendant's Eighty-first Exception to the report of the said Master in Chancery.

738 *Eighty-seventh.* In sustaining the report of the said Master in Chancery disallowing in part and refusing to find the Thirty-fifth Special Finding, requested by the Attorney-General of the State of New York, and adopted by this defendant; whereas the same should have been allowed and made, and in overruling in this respect this defendant's Eighty-second Exception to the report of the said Master in Chancery.

Eighty-eighth. In sustaining the report of the said Master in Chancery disallowing in part and refusing to find the Thirty-sixth Special Finding, requested by the Attorney-General of the State of New York, and adopted by this defendant; whereas the same should have been allowed and made, and in overruling in this report this defendant's Eighty-third Exception.

Eighty-ninth. In sustaining the report of the said Master in Chancery disallowing in part and refusing to find the Thirty-seventh Special Finding, requested by the Attorney-General of the State of New York, and adopted by this defendant; whereas the same should have been allowed and made, and in overruling in this respect this defendant's Eighty-fifth Exception.

Ninetieth. In sustaining the report of the said Master in Chancery disallowing and refusing to find this defendant's Eleventh Amendment, as requested to find, whereas the same should have been allowed, and in overruling this defendant's Eighty-eighth Exception to the report of the said Master in Chancery.

Ninety-first. In finding and decreeing in sub-head (*h*) of paragraph I. of said decree that the sum of $1,865,717.43 represents more than a normal profit upon the cost of purchased gas, in that the amount paid by complainant to other companies for the same ($997,039.80) was paid under temporary and expiring agreements and did not include any reasonable recompense of the return upon the value of investment required to produce said gas, said finding and 739 decree being erroneous in the particulars enumerated in the Assignments of Errors Nos. Ninety-second to Ninety-fifth inclusive, hereinafter set forth, each of which is alleged as a separate ground of error in this respect.

Ninety-second. In finding and holding that the probable cost of gas assumed by the Court as required and furnished by other companies would be 32 cents per thousand at the holder, instead of about 28 cents.

Ninety-third. In finding and holding that in determining the probable profit on the gas assumed by the Court as required and furnished by other companies 6 per cent. interest, amounting to $720,000, should be allowed in addition to the 32 cents per thousand referred to in the Ninety-second Assignment of Error.

Ninety-fourth. In finding and holding that the probable profit on the four billion cubic feet, which the Court assumed would be required and furnished by other companies in the near future would be no greater than the profit on the three billion cubic feet of gas made and furnished by other companies and purchased by complainant under existing agreements at the present time.

Ninety-fifth. In fixing and determining said probable profit from purchased gas at the sum of $1,865,717.43 upon the basis of a capitalization of $12,000,000, whereas he should have found that a company with a capitalization of less than $4,000,000 would be able to furnish the four billion feet of gas so assumed and estimated upon by the Court in reaching that figure.

Ninety-sixth. In sustaining the report of the said Master in Chancery that the maximum daily output of the complainant during the year 1905 is about 70,000,000 cubic feet, and overruling in this respect this defendant's Twenty-ninth Exception to the report of the said Master in Chancery.

740 *Ninety-seventh.* In sustaining the report of the said Master in Chancery that the maximum daily capacity of the complainant's plants was but 51,000,000 cubic feet.

whereas he should have found such maximum daily capacity was at least 58,500,000 cubic feet as appears from the calculations based on complainant's exhibits, and overruling in this respect this defendant's Thirtieth Exception to the report of the said Master in Chancery.

Ninety-eighth. In sustaining the report of the said Master in Chancery that the 20 per cent. reserve of the complainant's manufacturing capacity is necessary in a large city like New York, and that the complainant to cover such reserve was justified in buying gas from other companies.

whereas he should have found that ample reserve capacity existed in the complainant's works at the present time as shown from their own exhibits unless complainant's plants must be admitted to be in a greatly depreciated state and incapable of approaching their maximum output; and in overruling this defendant's Thirty-first Exception to the report of the said Master in Chancery.

Ninety-ninth. In sustaining the Master's report allowing complainant's amendment IV., whereas he should not have allowed the same, but have found that such figure omits several important items, the most important being surplus fund of $1,328,000 and therefore was not the net earnings from the gas estimated; and in overruling this defendant's Sixty-second Exception to the report of the said Master in Chancery.

One-hundredth. In sustaining the said Master's report holding that the complainant was entitled to and allowing it a return on the present value of its real estate, whereas he should have found that where the taxes for such real estate are included in the cost 741 of gas in estimating the net returns from complainant's business and the complainant on the sale of such real estate will concededly be able to realize a considerable surplus above the original investment therein, and that said surplus represents an ample and sufficient return thereon inasmuch as it is customary in localities where such increases in real estate values occur for investors to hold real estate without return other than sufficient to pay taxes relying merely on the profit to be made from such advances in value at the time of sale, and therefore complainant is not entitled to a return against the consumer on any real estate investment over and above the amounts charged for fixed charges in estimating complainant's net return and in overruling this defendant's Seventh Exception to the said report of the said Master in Chancery.

One hundred and first. In adjudging and decreeing in sub-head (*h*), paragraph I. of said decree that owing to a probable increase in the sales of gas and in the cost of gas obtained from other companies, and probable change in the source of manufacture of some portion of gas, while the total net increase for the year beginning May 1st, 1906, would remain the same on the basis aforesaid, yet if the price of gas were reduced as provided in chapter 736 of the Laws of 1905, and chapter 125 of the Laws of 1906, both of the State of New York, the net income of complainant for said year beginning May 1st, 1906, would be reduced to the sum of $3,024,592.45.

One hundred and second. In sustaining the report of the said Master in Chancery refusing to find on the request of the Attorney General of the State of New York, and of this defendant that a reduction in the price of gas leads to a proportionate increase in the *per capita* of consumption in The City of New York of about 46.46 cents for each one cent of reduction, and that on such basis the estimated sales of complainant in 1907 would be about fifteen billion three hundred million (15,300,000,000) cubic feet; whereas he should have so found and have further found that such an

742 increase should be considered by determining the net earnings from the reduced rate and not by the method of deducting 20 cents per thousand on the output for the year 1905 on the basis of the old rate, as was done by the said Master in his report and by the Court in its decree referred to in the One Hundred and First Assignment of Error and in overruling in this respect this defendant's Fifty-ninth Exception to the said Master's report.

One hundred and third. In adjusting and decreeing in paragraph III. of said decree that the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in The City of New York; and under the two acts and the order, copies of which are annexed to the bill of complainant as Exhibits A, D and C, to wit, chapter 736 of the Laws of 1905 of the State of New York, chapter 125 of the Laws of 1906 of said State, and the order of the Commission of Gas and Electricity of the State of New York, made on the 23d day of February, 1906, and directed to the complainant, the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent.

One hundred and fourth. In sustaining the report of the said Master as modified by paragraphs I. and II. of said decree, finding that the rate of 80 cents per thousand cubic feet of gas sold by complainant would not constitute a fair and reasonable return on the value of the property, and on pages 141 and 151, complainant's Amendments XIII., that such a fair and reasonable rate is not less than six per cent.

whereas he should have found that the rates as modified were fair and reasonable; that the records show that both the public and the complainant are content with similar investments bringing 743 no greater return; that complainant is not entitled to a six per cent. return; and in overruling this defendant's Fifty-sixth Exception to the Report of the said Master in Chancery.

One hundred and fifth. In sustaining the report of said Master in Chancery finding that the 80 cent rate does not allow the complainant a reasonable return upon the fair value of the property actually and necessarily used in the business of making and distributing gas. whereas he should have found that with net earnings of $6,807,455.15, based on a cost of 52.50c. (see Forty-Fourth Exception), after deducting 20c. per thousand on 13,283,000,000 feet of sales, or $2,656,600, would leave a balance of $4,150,855.15, which would provide a return of 4.97 per cent. on a valuation of $83,357,000 and a return of 6.55 per cent. on a valuation of $63,357,000 and a still higher return on a valuation based on a fair present valuation of the property; that none of such rates are unfair or unreasonable, and in overruling this defendant's Fifty-seventh Exception to the said report of the said Master in Chancery.

One hundred and sixth. In adjudging and decreeing that the pressure required by said two acts and the order aforesaid is not physically impossible if the entire system of gas distribution in The City of New York be reconstructed; but compliance with such requirement is commercially impossible under the rates for gas prescribed by said acts and order.

One hundred and seventh. In sustaining the report of the said Master in Chancery that modern appliances such "as Welsbach burners, gas logs and gas ranges require a much higher pressure for service to consumers than was the case some years ago," and has also found (pp. 143 and 151-152, complainant's amendment) that the method suggested for overcoming at moderate cost the deficiency of complainant's mains, is subject to "some doubt suggested by the evidence as to the feasibility of the system," and "it appeared that the cost of the new construction necessary to carry out the 744 plan as described would be in the neighborhood of $4,000,000 for main and valve construction alone; in addition to which would be required pumping stations and apparatus, the annual charges and operating expenses in connection with which Mr. Addicks testified would amount to several cents per thousand feet of gas sold, and which would involve a corresponding increase in operating cost or proper selling price of such gas," and on page 144 has found

"Under the distributing system as now existing and in operation, it is not possible to fulfil the statutory requirements as to pressure. It would, however, apparently be possible to remedy this condition, at least to some degree, by dividing the City into different districts according to the varying levels and by regulating the pressure in each by district governors. The efficiency and safety of such governors is not free from doubt, and the evidence affords no sufficient basis for an estimate of the cost of their installation or the expense of making the necessary changes in the system of mains."

whereas he should have found that the distribution system as now existing is inadequate for the output of complainant; that by a proper increase of capacity in such system gas could be furnished at pressures within the limits of the statute; that the Welsbach burner gave as high an efficiency at 1½ pressure as at any other within reasonable bounds, and that heating appliances, requiring large volumes of gas, did not require higher pressure, but more adequate piping, as demanded in complainant's house piping rules and regulations; also that such cost for new construction was grossly exaggerated, being based on a rate of piping four times greater than the cost of complainant's mains laid under asphalt according to complainant's highest "or not for taxation purposes" estimate. Also that it appears both from the testimony and exhibits that 745 such governors have been in use throughout the stations of the complainant day and night, and when piping is adequate, with perfect success, and in overruling this defendant's Fifty-eighth Exception to the report of said Master in Chancery.

One hundred and eighth. In adjudging and decreeing, in paragraph V. of said decree, that the complainant has no adequate remedy at law for the injury which would result from the threatened enforcement either of the acts of the State of New York mentioned in the first and second, or in the Third and Fourth assignment of errors above, and that such injury would be irreparable, whereas complainant would have an adequate remedy at law as against the enforcement of either of said acts by defense to any application brought by this defendant or any other person in the courts of the State of New York for a mandamus or injunction to compel the compliance with said acts or for any other proper remedy, and complainant's remedy against the enforcement of penalties being by injunction against the enforcement of the clause concerning penalties, said clause being separable.

One hundred and ninth. In entering and making, in paragraph VIII. of said decree, a separate order and decree only as against William S. Jackson, as Attorney General of the State of New York, and William Travers Jerome, District Attorney for New York County, and each of them; whereas, said paragraph of said decree should have been a joint decree against this defendant also.

One hundred and tenth. In making and entering in paragraph IX. of said decree a separate decree against William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, and each of them; whereas, said paragraph of said decree should have been entered and made as a joint decree against this defendant also.

746 *One hundred and eleventh.* In adjudging and decreeing in paragraph VII. of said decree that the defendant, The City of New York and each of its officers, agents, servants and employees, are perpetually enjoined and restrained from suing for the penalty or forfeiture described in said chapter 736 of the Laws of

1905, or in any other way enforcing or attempting to enforce the said act against this complainant.

One hundred and twelfth. In adjudging and decreeing in paragraph VIII. of said decree that the defendants William S. Jackson, as Attorney General of the State of New York, and William Travers Jerome, as District Attorney of New York County, and each of them, and each of their agents, servants and employees, are perpetually enjoined and restrained fram suing for the penalty or forfeiture described in said chapter 125 of the Laws of 1906, or in any way enforcing or attempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this complainant.

One hundred and thirteenth. In adjudging and decreeing in paragraph IX. of said decree that the defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo B. Maltbie, John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, and each of them and each of their agents, servants and employees, are perpetually enjoined and restrained from applying for a mandamus or injunction to compel compliance with said chapter 125 of the Laws of 1906, or with said order of the Commission of Gas and Electricity, or in any other way enforcing or attempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this complainant.

One hundred and fourteenth. In adjudging and decreeing in paragraph X. of said decree that the complainant recover of the
747 defendants its costs and disbursements, to be taxed by the Clerk, one-half thereof to be paid by The City of New York and one-half thereof to be paid by defendant William S. Jackson, as Attorney General of the State of New York; and that said costs, so to be taxed, include the repayment to the complainant of the amount of fees and disbursements of the Special Master paid from a fund heretofore directed to be paid into Court by orders dated May 18, 1906, and June 16, 1906.

One hundred and fifteenth. In sustaining the report and action of the Master in Chancery in not allowing to this defendant sufficient opportunity to examine the complainant's properties, plant, books and papers in order to ascertain the cost of its properties, plant, etc., and other facts necessary to the proper conduct of its defense whereby this defendant was deprived of the opportunity of having a full, fair and impartial trial and in overruling in this respect this defendant's Second Exception to the report of the said Master in Chancery.

One hundred and sixteenth. In sustaining the report of the said Master in Chancery disallowing and refusing to make amendment V. requested by this defendant; whereas the same should have been allowed and in overruling this defendant's Eighty-sixth Exception to the report of the said Master in Chancery.

One hundred and seventeenth. In sustaining the report of the said Master in Chancery disallowing in part this defendant's Eighth Amendment and finding that by proper diligence it could have secured inspection of the plant at a much earlier date than it was in fact secured and this fact was repeatedly brought to the attention of

the defendants during the progress of the hearings; whereas he should have found as requested that the defendants made every effort to have the Master pass on their application for leave to examine the books, accounts and plants of the complainant, and failing to do so, finally sought relief by applying to the courts and in over-
748 ruling in this respect the defendant's Eighty-seventh Exception to the report of the said Master in Chancery.

One hundred and eighteenth. In sustaining the report of the Master in Chancery denying the motion made by this defendant at the end of complainant's case, to strike out the testimony of the complainant's witnesses, Bradley, Carter, Simpson, Addicks and Humphreys, and overruling the exception of this defendant to such denial.

One hundred and nineteenth. In sustaining the report of the Master in Chancery denying the motion of this defendant at the end of complainant's case to dismiss the bill of complaint and overruling the exception of this defendant to such denial.

One hundred and twentieth. In sustaining the report of the Master in Chancery denying the motion made by this defendant at the end of the whole case to dismiss the bill of complaint and overruling the exception of this defendant to such denial.

One hundred and twenty-first. In sustaining the report of said Master in Chancery denying the motion of this defendant for leave to introduce evidence in rebuttal and overruling the exception of this defendant to such denial.

One hundred and twenty-second. In sustaining the report of the said Master in Chancery denying the motion of this defendant for leave to examine the books and accounts of the complainant for the years 1903 and 1904, for the purpose of comparison with the books and accounts of the complainant for the year 1905, and overruling the exception of this defendant to such denial.

Dated New York, May —, 1908.

FRANCIS K. PENDLETON,
Corporation Counsel, Solicitor for
Defendant City of New York.

749 Service of a copy of the within Petition for Appeal, Allowance and Assignments of Error is hereby admitted.

Dated New York, May 12th, 1908.

SHEARMAN & STERLING,
Solicitors for Complainant, 44 Wall Street, New York City.
W. S. JACKSON,
As Attorney General of the State of New York, in Person.
ROBERT C. TAYLOR,
Solicitor for Defendant William Travers Jerome,
as District Attorney.
GEORGE S. COLEMAN,
Solicitor for Defendants William R. Willcox, William McCorroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District.

U. S. Circuit Court Southern District of New York. Filed May 13 1908. John A. Shields, Clerk.

750 United States Circuit Court, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
against
William S. Jackson, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District, and The City of New York, Defendants.

It is hereby stipulated that the giving of a bond by The City of New York on the appeal taken in the above entitled action from the decree therein is hereby waived.

Dated New York, May 13th, 1908.

SHERMAN & STERLING,
Solicitors for Complainant, 44 *Wall Street, New York City.*

—— ——,
As Attorney General of the State of New York, in Person.

—— ——,
Solicitor for Defendant William Travers Jerome, as District Attorney.

GEO. S. COLEMAN,
Solicitor for Defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District.

751 [Endorsed:] 10307. United States Circuit Court, Southern District of New York. Consolidated Gas Company, Complainant, against William S. Jackson as Attorney General of the State of New York and others, Defendants. (Copy.) Stipulation Waiving the giving of a bond by the city. Francis K. Pendleton, Corporation Counsel, Hall of Records, Borough of Manhattan, New York City. U. S. Circuit Court, Southern District of N. Y. Filed May 13th, 1908. John A. Shields, Clerk.

752 United States Circuit Court, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
against
William S. Jackson, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District, and The City of New York, Defendants.

Citation.

To the above named complainant and all defendants other than the appellant below named, Greeting:

You are hereby cited and admonished to be and appear at a term of the Supreme Court of the United States to be holden in the City

of Washington, District of Columbia, on the 18th day of May, 1908, at 12 o'clock M. of said day pursuant to an appeal filed in the office of the Clerk of the Circuit Court of the United States for the Southern District of New York, wherein The City of New York is appellant, to show cause, if any there be, why the decree entered in the above entitled court and cause on the 3rd day of April, 1908, should not be reversed and set aside and speedy justice done to the
753 parties in that behalf.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, this 12 day of May, 1908.

C. M. HOUGH,
U. S. Dist. Judge.

Service of a copy of the within Citation is hereby admitted.
Dated New York, May 12th, 1908.

SHEARMAN & STERLING,
Solicitors for Complainant, 44 Wall Street, New York City.
W. S. JACKSON,
As Attorney General of the State of New York, in Person.
R. C. TAYLOR,
Per WOLFF,
Solicitor for Defendant William Travers Jerome, as District Attorney.
GEORGE S. COLEMAN,
Solicitor for Defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District.

754 [Endorsed:] E. & A. C. 2737. 10310. United States Circuit Court, Southern District of New York. Consolidated Gas Company, Complainant, against William S. Jackson as Attorney General of the State of New York and others, Defendants. (Original.) Citation and admission of service. Francis K. Pendleton, Corporation Counsel, Solicitor for def't, City of New York, Hall of Records, Borough of Manhattan, New York City. Received District Attorney's office 7 p. m. U. S. Circuit Court, Southern District N. Y. Filed May 13, 1908. John A. Shields, Clerk.

755 Circuit Court of the United States, Southern District of New York. In Equity.

CONSOLIDATED GAS COMPANY, Complainants,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York, and Others, Defendants.

Petition for Appeal and Allowance.

The above named William S. Jackson, as Attorney General of the State of New York, conceiving himself aggrieved by the final decree entered on the 3rd day of April, 1908, in the above-entitled cause, doth hereby appeal from said decree to the Supreme Court of the United States; William Travers Jerome, as District Attorney of the County of New York, having declined to join in this appeal as will appear from his letter hereto attached; and said defendant prays that this his appeal may be allowed; and that a transcript of the record and proceedings and papers upon which said final decree was made, duly authenticated, may be sent to the Supreme Court of the United States.

Dated, New York, April 14th, 1908.

(Signed) WILLIAM S. JACKSON,
Solicitor for the Defendant and Appellant, William S. Jackson, as Attorney General of the State of New York, Albany, N. Y.

And now to wit: on the 12 day of May, 1908, it is ordered that the appeal be allowed as prayed for.

C. M. HOUGH,
District Judge.

756 Copy.

District Attorney's Office,
County of New York, *April* 13, 1908.

Wm. Travers Jerome, District Attorney.

U. S. C. C., S. D. N. Y.

Cons. Gas Co.
v.
Jackson, Attorney General, etc.

Honorable William S. Jackson, Attorney General, etc.

My Dear Sir: I have consulted with my client, Mr. William Travers Jerome, the District Attorney, Etc., who is one of the defendants in this case. He informs me that he sees no necessity for his either taking any appeal, or joining in any appeal from the final decree entered in this proceeding upon April 3rd, 1908.

I transmit this letter to you through Senator Page, with whom I have discussed the matter over the telephone.

Respectfully yours,
(Signed) ROB'T C. TAYLOR,
Solictor for Wm. Travers Jerome, as District Attorney of New York County.

Endorsed: U. S. Circuit Court Southern District of New York. Consolidated Gas Company, against William S. Jackson, as Attorney General of the State of New York and others. Petition for Appeal and allowance. William Schuyler Jackson, Attorney General, Capital, Albany, N. Y. Due and personal service of a copy of within Petition for Appeal and allowance is admitted this 13th day of May 1908. Francis K. Pendleton, Solicitor for Defendant The City — New York. Geo. S. Coleman Solicitor for Wm. R. Willcox and others, constituting Public Service Commission for First District, Defendants. U. S. Circuit Court Southern District of New York. Filed May 14 1908. John A. Shields, Clerk.

757 United States Circuit Court, Southern District of New York. In Equity.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney General of the State of New York, and Others, Defendants.

Assignment of Errors by the Defendant William S. Jackson, as Attorney General of the State of New York.

And now on the 14th day of April, 1908, comes this defendant, William S. Jackson, as Attorney General of the State of New York, and says that in the record and proceedings of the above-entitled cause there is manifest error in this, to wit: (The statute of 1906 hereinafter referred to being the statute known as Chapter 125 of the Laws of the State of New York for 1906, and the paragraphs hereinafter referred to being the paragraphs of the final decree as numbered and lettered therein).

I. That the matters and things charged in the bill of complaint show that the complainant has a complete and adequate remedy at law, by way of defense to any action that this defendant might bring to enforce the statute of 1906.

758 II. That the allegations in the bill of complaint and the facts disclosed by the record show that this suit, although in form brought by a citizen of the State of New York against this defendant as an officer of the State of New York is in fact brought against the State of New York, to test the constitutionality of the statute of 1906.

III. That the record does not contain sufficient evidence to show that the rate of eighty cents per thousand cubic feet for gas sold in the City of New York does not afford a fair and reasonable return to the companies doing business in the said City, the evidence being limited to the valuation of property and operations of the complainant alone and further that the record does not show but that the said rate would afford a fair and reasonable return upon the value of property employed in the making and distribution of gas by a company in same territory with the complainant, well located and equipped, and economically managed, but that the case was decided on the theory that if the statutory maximum price does not afford, in the opinion of the court, a sufficient rate of return upon the value of the property employed in its business of making and distributing gas by the complainant, the statute is void as to that company, irrespective of its effect upon other companies doing business in the same territory.

IV. That the record does not contain sufficient evidence to show the reasonable and necessary operating expenses of the complainant. The evidence being limited to its actual receipts and disbursements during a period from November 1, 1904 to December 31, 1905, in-

clusive, supplemented in part only by experience of other
759 periods and being entirely insufficient for that purpose.

V. That the valuation of the complainant's property upon which the court's calculation is based is an estimate of present value, arrived at by a valuation of the reproduction cost of complainant's identical plant and each part thereof, without regard to whether the same was originally economically produced or commercially and economically worth reproducing, or as to obsolescence of type and the advancement of the art. And not either upon the cost thereof, or the reproduction of a plant that would produce the same kind, quantity and quality of gas, in an economically constructed, modern plant.

VI. That in finding the valuation (paragraphs I and II) of complainant's real estate actually employed in its business of manufacturing and supplying gas at $11,985,435, is erroneous as being

(*a*) in excess of the original cost of such real estate to the complainant and its predecessor companies.

(*b*) in excess of the true valuation thereof, having been valued as vacant lots and not in conjunction with the buildings thereon, and for the uses and purposes to which it was devoted.

(*c*) in excess of the value at which it was carried on complainant's books.

VII. That the valuation (paragraph II) of the real estate, plants, mains and services and each of them are in excess of the valuation sworn to by the officers of the complainant in the return to the State Board of Tax Commissioners for the assessment of the franchise tax and the testimony of its officers before the joint committee
760 of the Senate and Assembly of the State of New York and are based entirely on the complainant's testimony and its experts.

VIII. That in finding (Paragraphs Ic and II) that the valuation of the intangible special franchises of the complainant is at least the sum of $12,000,000, whereas

(*a*) the complainant owns no special franchises not terminable at the will of the State of New York or of the City of New York.

(*b*) the franchises claimed by it, if owned, are not proper subjects of valuation in ascertaining the value of the property upon which it is entitled to earn a return,

(*c*) the record does not sustain the valuation.

IX. That in finding (Paragraph I*h*) the sum of $1,865,717.43, therein stated, represented more than a normal profit upon the volume of purchased gas, and in finding that the amount paid by complainant was paid under temporary expiring agreements, and did not include any reasonable recompense or return upon the value of the investment required to produce said gas, which findings are not supported by the record.

X. That in finding (Paragraph I*h*) that while the total net income for the year beginning May 1st, 1906, would remain the same upon the basis of the prices charged for gas during the calendar year 1905, yet if the prices for gas were reduced as provided by the statute of 1906 and by Chapter 736 of the Laws of 1905 the net income of complainant for said year would be reduced to the sum of $3,024,592.45, on the ground that such finding is speculative and not supported by the record; and, in particular also

(*a*) In finding a probable increase in sales of gas tending to a reduction as aforesaid.

(*b*) In finding a probable increase in cost of gas obtained
761 from other companies, leading to such reduction.

(*c*) In finding a probable change in the source of manufacture of some portion of such gas, leading to such reduction.

(*d*) In overlooking the decrease in "Expenses" due to the reduction in the complainant's special franchise tax, payable to the State of New York, which would result from the diminution of its net profits through reduction of its rate for gas, said special franchise tax item being included by the court in the "Expenses" of 1905 to the amount of $406,909.23, as shown by the Master's report.

XI. In failing to make an express finding as to the present existance of the franchises claimed by complainant by derivation from the following corporations respectively (such failure in the case of each of such companies being separately assigned for error), whereas the court should have found that as to each of said franchises the complainant is no more than a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York;

(*a*) The New York Gas Light Company.

(*b*) The Manhattan Gas Light Company.

(*c*) The Municipal Gas Light Company; and this alleged franchise was at all times invalid on account of lack of authority in the Mayor, Comptroller and Commissioner of Public Works to grant it.

(*d*) The Metropolitan Gas Light Company.

XII. In finding (Paragraph 1*h*) that the following franchise claimed by complainant exist and are owned by it and are sufficient to meet all its requirements (such finding in the case of each of such
companies being separately assigned for error), whereas
762 (*a*) The alleged franchise claimed by derivation from the
Anthracite Gas Lighting and Heating Company through the Knickerbocker Gas Light Company was invalid on account of lack of authority in the Board of Aldermen to grant it, and the alleged assignment thereof to the Union Gas Light Company was also invalid for lack of authority to assign it, and said alleged franchise in any case expires on September 17, 1913.

(*b*) The franchise claimed by derivation from the socalled State Grant through the Knickerbocker Gas Light Company was not assignable to, and did not even purport to be assigned to, complainant or either of its alleged predecessor corporations, and said franchise did not even cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

(*c*) The franchise claimed by derivation from the Harlem Gas Light Company expired February 1, 1905, and as to that franchise complainant is but a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York, and said franchise did not cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

XIII. In finding (Paragraph II) the total value of complainant's tangible assets employed in its business of manufacturing and supplying gas to be $47,831,435 and of its total property so employed to be $59,831,435.

XIV. In finding (Paragraph III) that the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent.

763 XV. In finding (Paragraph III) that the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent.

XVI. In finding (Paragraph IV) that complaince with the requirement in the statute of 1906 and in Chapter 736 of the Laws of 1905 as to pressure is commercially impossible under the rates for gas prescribed therein.

XVII. That in finding (Paragraph V) that complainant has no adequate remedy at law for the injury which would result from the threatened enforcement of the statute of 1906, and that such injury would be irreparable. Whereas, the complainant would have a complete and adequate remedy at law as against the enforcement of said act by this defendant by defense to any action for penalties brought in the courts of the State of New York, and whereas the penalty clauses of said statute of 1906 were misconstrued by the Circuit Court, and the penalties imposed thereby are neither unconstitutional in themselves nor so heavy as to justify the interposition of a court of equity and are severable.

XVIII. That in finding (Paragraph VI) that the statute of 1906 is void because in contravention of the fourteenth amendment to the Constitution of the United States in that it takes the complainant's property without due process of law and without just compensation, and deny to the complainant the equal protection of the law.

XIX. That in enjoining (Paragraph VIII) the defendant from suing for the penalty or forfeiture described in the statute of 1906.

764 XX. That in adjudging (Paragraph X) that the complainant recover one-half its costs from this defendant as Attorney-General of the State of New York.

WILLIAM S. JACKSON,
Attorney-General of the State of New York,
Albany, New York.

Endorsed: U. S. Circuit Court, Southern District of N. Y., Consolidated Gas Company against William S. Jackson, as Attorney General of the State of New York and others. Assignment of Errors by the Defendant William S. Jackson as Attorney General of the State of New York. William Schuyler Jackson, Attorney General, Capitol, Albany, N. Y. U. S. Circuit Court, Southern District of N. Y., Filed May 12, 1908, John A. Shields, Clerk.

765 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY, Complainant,
against
WILLIAM S. JACKSON, as Attorney General, and Others, Defendants.

It is hereby stipulated and agreed that the giving of a bond on appeal herein by the defendant, William S. Jackson, as Attorney General of the State of New York, be and the same hereby is waived.

Dated, New York, March 13, 1908.

SHEARMAN & STERLING,
Solicitors for Complainant.
WILLIAM S. JACKSON,
Attorney General.

Endorsed: U. S. Circuit Court Southern District of New York. Consolidated Gas Company *vs.* William S. Jackson as Attorney General *et als,* Waiver of Bond on Appeal. William Schuyler Jackson, Attorney General, Capitol, Albany, N. Y. U. S. Circuit Court Southern District of New York. Filed May 14, 1908. John A. Shields, Clerk.

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766 United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant.
against
WILLIAM S. JACKSON, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILCOX, WILLIAM MCCARROLL, EDWARD M. BASSETT, MILO R. MALTBIE, and JOHN E. EUSTIS, Constituting the Public Service Commission of the State of New York for the First District, and THE CITY OF NEW YORK, Defendants.

To the above named complainant and all defendants other than the appellant below named, Greeting:

You are hereby cited and admonished to be and appear at a Term of the Supreme Court of the United States to be holden in the City of Washington, District of Columbia, on the 25th day of May, 1908, at 12 o'clock M. of said day pursuant to an appeal filed in the office of the Clerk of the Circuit Court of the United States for the Southern District of New York, wherein William S. Jackson, as Attorney General of the State of New York, is appellant, to show cause, if any there be, why the decree entered in the above entitled court and cause on the 3rd day of April, 1908, should not be reversed and set aside and speedy justice done to the parties in that behalf.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, this 12 day of May, 1908.

C. M. HOUGH,
U. S. D. Judge.

767 [Endorsed:] E. & A. C. 2738. 10323. U. S. Circuit Court, Southern Dist. of N. Y. Consolidated Gas Company against William S. Jackson, as Attorney General of the State of New York and others. Original. Citation on Appeal. William Schuyler Jackson, Attorney-General, Capitol, Albany, N. Y. Service of a copy of within Citation on Appeal is admitted this 13th day of May, 1908. Dated. Francis K. Pendleton, Corporation Counsel, Solicitor for defendant, The City of New York. Shearman & Sterling, Solicitors for Complainant. Filed May 14, 1908. U. S. Circuit Court, Southern District N. Y. John A. Shields, Clerk.

Sir: Take notice that the within is a copy of — duly filed and entered in the office of the Clerk of —— County, on the — day of ——, 190—.

Yours, etc., WILLIAM SCHUYLER JACKSON,
Attorney-General, Attorney for ——.

To —— ——, Attorney for ——.

City and County of Albany, *ss:*

—— —— being duly sworn, says that he is — in the office of the Attorney-General of the State of New York; that said Attorney-General is the attorney for —— ——. Deponent further says that he did upon the — day of ——, 190—, serve upon the following named persons: —— ——, Attorney in the within entitled action, a copy of the annexed — by depositing the same, properly enclosed in a post-paid wrapper, in the post-office at Albany, N. Y., the post-office of the Attorney-General of the State of New York, directed to said Attorney, as aforesaid, the address within the State designated by — for that purpose upon the preceding papers in the action.

—— ——.

Sworn and subscribed before me, this — day of ——, 190—.

768 United States Circuit Court.

CONSOLIDATED GAS COMPANY
against
WILLIAM S. JACKSON ET AL.

It is stipulated that a single transcript of record be filed upon the three appeals from the final decree in the above entitled suit.

New York, May 13, 1908.

WILLIAM S. JACKSON,
Attorney General.
GEORGE S. COLEMAN,
Solicitor for Defendants Willcox et al.
FRANCIS K. PENDLETON,
Solicitor for City of New York.
SHEARMAN & STERLING,
Solicitors for Complainant.

Endorsed: U. S. Circuit Court, Southen District of N. Y. Filed May 13, 1908. John A. Shields, Clerk.

769 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages, numbered from 9537 to 10324 inclusive, contain a true and complete transcript of part of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant-Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office.

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

770 Supreme Court of the United States, October Term, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., Constituting the Public Service Commission of the State of New York for the First District, Appellants,

against

CONSOLIDATED GAS COMPANY OF NEW YORK.

It is hereby stipulated and agreed by and between the Solicitors and Counsel for the parties to the above entitled appeal, that James

H. McKenney, Esq., Clerk of the Supreme Court of the United States, be, and he hereby is authorized when printing the record of said appeal to print the pleadings therein in their proper chronological order in the front of said record.

Dated June 26, 1908.

F. K. PENDLETON,
Corporation Counsel and Solicitor and Counsel for Appellant The City of New York.
JOHN A. GARVER,
Solicitor and Counsel for Appellee,
44 Wall Street, City of New York.
JAMES M. BECK,
Solicitor and Counsel for Appellee,
44 Wall Street, City of New York.
771 WILLIAM S. JACKSON,
Attorney-General of the State of New York and Appellant and Solicitor and Counsel, in Person, 309 Broadway, City of New York.
ROBT. C. TAYLOR,
Solicitor for Defendant and Appellant William Travers Jerome, as District Attorney of the County of New York, Criminal Court Building, White and Centre Streets, City of New York.
GEO. S. COLEMAN,
Solicitor and Counsel for Appellants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District, No. 154 Nassau Street, City of New York.

772 [Endorsed:] 396. 21176. Supreme Court of the United States, October Term, 1908. William R. Willcox, *et al.*, constituting Public Service Com. of the State of New York for the First District, Appellants, against Consolidated Gas Company of New York. No. 396. (Original.) Stipulation that pleadings be printed in front of record. Francis K. Pendleton, Corporation Counsel, Hall of Records, Borough of Manhattan, New York City. Due and timely service of a — of which the within is a copy, is hereby admitted. New York, ——, 190—. —— ——, Attorney for the ——. To —— ——, Esq., Attorney for the ——. Received Jun. 29, 1908. Office of the Clerk, Supreme Court U. S.

773 [Endorsed:] File No. 21176. Supreme Court U. S. October Term, 1908. Term No. 396. Wm. R. Willcox, *et al.*, &c., App'ts, *vs.* The Consolidated Gas Co. of New York. Stipulation as to printing record. Filed June 29, 1908.

774 Supreme Court of the United States, October Term, 1908.

No. 397.

THE CITY OF NEW YORK, Appellant,
against
CONSOLIDATED GAS COMPANY OF NEW YORK.

It is hereby stipulated and agreed by and between the Solicitors and Counsel for the parties to the above entitled appeal, that James H. McKenney, Esq., Clerk of the Supreme Court of the United States, be, and he hereby is authorized when printing the record of said appeal to print the pleadings therein in their proper chronological order in the front of said record.

Dated June 26, 1908.

F. K. PENDLETON, *C. C.*,
Corporation Counsel and Solicitor and Counsel for Appellant The City of New York.

JOHN A. GARVER,
Solicitor and Counsel for Appellee, 44 Wall Street, City of New York.

JAMES M. BECK,
Solicitor and Counsel for Appellee, 44 Wall Street, City of New York.

775 WILLIAM S. JACKSON,
Attorney-General of the State of New York and Appellant and Solicitor and Counsel, in Person, 309 Broadway, City of New York.

ROBT. C. TAYLOR,
Solicitor for Defendant and Appellant William Travers Jerome, as District Attorney of the County of New York, Criminal Court Building, White and Centre Streets, City of New York.

GEO. S. COLEMAN,
Solicitor and Counsel for Appellants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District, No. 154 Nassau Street, City of New York.

776 [Endorsed:] 397. 21177. Supreme Court of the United States, October Term, 1908. The City of New York, Appellant, against The Consolidated Gas Company of New York. No. 397. (Original.) Stipulation that Pleadings be Printed in Front of Record. Francis K. Pendleton, Corporation Counsel, Hall of Records, Borough of Manhattan, New York City. Due and timely service of a — of which the within is a copy, is hereby admitted. New York, ——, 190–. —— ——, Attorney for the ——. To —— ——, Esq., Attorney for the ——.

777 [Endorsed:] File No. 21177. Supreme Court U. S., October Term, 1908. Term No. 397. The City of New York, Appt., *vs.* The Consolidated Gas Co. of New York. Stipulation as to printing record. Filed June 29, 1908.

778 Supreme Court of the United States, October Term, 1908.

No. 398.

William S. Jackson, as Attorney-General of the State of New York,
Appellant,
against
Consolidated Gas Company of New York.

It is hereby stipulated and agreed by and between the Solicitors and Counsel for the parties to the above entitled appeal, that James H. McKenney, Esq., Clerk of the Supreme Court of the United States, be, and he hereby is authorized when printing the record of said appeal to print the pleadings therein in their proper chronological order in the front of said record.

Dated June 26, 1908.

F. K. PENDLETON, *C. C.*,
Corporation Counsel and Solicitor and Counsel for Appellant The City of New York.

JOHN A. GARVER,
Solicitor and Counsel for Appellee, 44 Wall Street, City of New York.

JAMES M. BECK,
Solicitor and Counsel for Appellee, 44 Wall Street, City of New York.

779 WILLIAM S. JACKSON,
Attorney-General of the State of New York and Appellant and Solicitor and Counsel, in Person, 309 Broadway, City of New York.

ROBT. C. TAYLOR,
Solicitor for Defendant and Appellant William Travers Jerome, as District Attorney of the County of New York, Criminal Court Building, White and Centre Streets, City of New York.

GEO. S. COLEMAN,
Solicitor and Counsel for Appellants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie, and John E. Eustis, Constituting the Public Service Commission of the State of New York for the First District, No. 154 Nassau Street, City of New York.

780 [Endorsed:] 398. 21178. Supreme Court of the United States, October Term, 1908. William S. Jackson as Attorney-General of the State of New York, Appellant, against The Consolidated Gas Company of New York. No. 398. (Original) Stipulation that pleadings be printed in front of record. Francis K. Pendleton, Corporation Counsel, Hall of Records, Borough of Manhattan, New York City. Due and timely service of a —— of which the within is a copy, is hereby admitted. New York, ——, 190–. —— ——, Attorney for the ——. To —— ——, Esq., Attorney for the ——.

781 [Endorsed:] File No. 21178. Supreme Court U. S., October Term, 1908. Term No. 398. Wm. S. Jackson, as Att'y Gen'l., App't., *vs.* The Consolidated Gas Co. of New York. Stipulation as to printing record. Filed June 29, 1908.

(20, 554)

SUPREME COURT OF THE UNITED STATES

No. 217

THE MAYOR AND ALDERMEN OF THE CITY OF KNOXVILLE, APPELLANT

VS.

THE KNOXVILLE WATER COMPANY

Appeal From the Circuit Court of the United States for the Eastern District of Tennessee.

BRIEF FOR THE KNOXVILLE WATER COMPANY, Appellee.

Sketch of the Knoxville Water Company.

About the year 1879 the City of Knoxville, which up to that time had no public water supply, began to consider the subject of securing one. The plan first considered was for the City to build its own water works, but the expense of such an undertaking was greater than the City was willing to bear, and it was determined, finally, to secure the construction of such works through a private corporation, and on the 1st day of July, 1882, the City entered into a contract with the Knoxville Water Company, the plaintiff in this cause.

See copy of contract, Printed Record, p. 602-606.

Certain parts of said contract should be mentioned. It was stipulated therein that the Water Company should erect, upon the land acquired by the City for that purpose, a system of water works, with reservoir and all other necessary appointments, to supply the City with water to be taken from the Tennessee River at the site furnished by the City. The plant was to be of the best material, constructed in a good and workmanlike manner, and of the dimensions contemplated by certain specifications prepared for the City by one Moses Lane. It was required that the reservoir should be built on the site indicated on a map prepared by said Lane, and should have a capacity of 3,200,000 gallons as specified by Lane. The reservoir was established and remains at this place. The water works as originally designed, were completed in the latter part of the year 1883 or early in the year 1884. The water was turned on June 4th, 1883, but the work of original construction seems to have continued into the year 1884.

In the early history of the Company there was a dispute between it and the City as to whether or not the Company had complied with the so-called Moses Lane specifications in the construction of the plant. On the

15th day of June, 1885, a bill was filed in the Chancery Court of Knox County, by the Water Company against the City.

See Transcript of said bill, Printed Record, p. 142.

In said bill it was alleged that the water was turned on the 4th day of June, 1883, and that the Water Company had complied with its contract and had been furnishing the City with water from seventy-five hydrants, and that the City was refusing to pay rent for the same. To this bill there was first a plea, which was overruled, and thereupon the City on the 3rd of August, 1885, filed an answer, in which it denied that the plaintiff had erected a system of water works pursuant to the contract. It is further averred in the answer that the City had employed one Moses Lane to prepare plans and specifications for water works for it, and that said Lane had prepared such plans and specifications, and that all agreements made by the City with the Water Company were based upon the Lane plans and specifications; that on or about June 12th, 1882, S. H. Cooke, Manager for the Knoxville Water Company, submitted a proposition to the City to build water works; that similar propositions were made by "different parties;" that the proposition of said Cooke was to build water works equal to that contemplated by the Lane plan as supplemented by one S. H. Lockett; but that the proposition finally voted upon and accepted by the City was that the Water Company should adhere strictly to the Lane plan and ignore the Lockett supplement.

Transcript Jan. 14, 1904, *Printed Record, pp.* 146-147.

The contract, as finally drawn, bound the Water Company to the construction of a plant in accordance with the Lane plan, with a single exception; that is to say, instead of the standpipe for fire purposes at the reservoir, as contemplated by the Lane specifications, the Company was to construct at the reservoir a system of by-pass pipes, by means of which the water, in case of fire, might be directed into the proper main by the direct pressure of the engine at the Pump Station.

Transcript of Jan. 14, 1904, *Printed Record, p.* 147.

In the answer of the City in said cause it was specifically averred against the Water Company:

"1. It had not built water works according to the Moses Lane plans, specifications as contracted.

"2. The said works and every part thereof are not the best standard material.

"3. The pipes are of less capacity than those required and contemplated by Lane's plan.

"4. The said works, and every part thereof, are not as good, ample, substantial, and of equal dimensions as contemplated and required by the specifications, schedules, drawings, maps and details prepared for the City by one Moses Lane, nor are the mains, pipes, hydrants, buildings, machinery, pumps and other appurtenances of quality equal to, but are inferior to that contemplated by said plans, specifications, schedules, drawings, maps, and details.

"5. Complainant never has built or erected a reservoir as required by its contract, of capacity and in manner and of material as required by contract.

"6. Complainant has not and cannot now furnish good and wholesome water for use of inhabitants of Knoxville as contemplated by said contract.

"7. Complainant has never built or erected a reservoir, or furnished water through or out of reservoir as contemplated by contract, but such water as it has furnished has been almost at all times muddy and not wholesome, and has not passed into or out of the reservoir, but direct from the river, whether muddy and unclean or otherwise.

"8. The pipe put down has been, and is, of less weight, less capacity, of inferior material than those contemplated by contract, and were not put down and placed on streets as contemplated and shown by map of city prepared by Moses Lane.

"9. Hydrants or fire plugs were not placed and located as required by contract.

"10. The Water Company had failed to repair streets according to contract.

"11. The Water Company had assigned its contract and all accounts and profits, and mortgaged its property.

"12. That the workmanship, material, and the water furnished the City are all bad, and the water inferior to that contracted for, etc."

Transcript filed Jan. 14, 1904, *Printed Record, pp.* 148-149.

In the progress of the cause in which said answer was filed, thirty-one depositions were taken. The cause was heard in the Chancery Court of Knox County on the 4th of August, 1886, and the Water Company was given a decree for the entire amount sued for as hydrant rental, to-wit: $8,775.86, including interest.

Transcript Jan. 14, 1904, *Printed Record, p.* 151.

From this decree there was an appeal to the Supreme Court of Tennessee, wherein, on the 7th day of September, 1887, counsel for the City filed assignments of error, in which they insisted on substantially all the grounds of objection to the contract that had been set out in their answer already quoted herein. In the 8th assignment of error it is specifically insisted that:

"Complainant had not, at the time of bringing suit, and has not since, complied with its part of contract in this: that it never built works according to plan agreed upon; never built works in workmanlike manner; nor used proper materials; and had not finished work even as built within period required by contract, but used a wholly different plan, different weight and size of pipes, and built works of a greatly inferior kind to that required by contract, and never having complied with its contract, cannot call upon or compel defendant to do so."

Dep. William Wheeler, Printed Record, p. 2186.

The decree of the Supreme Court in said cause was rendered on the 21st of October, 1887, and a copy of it is filed in this cause. A petition to rehear was filed in the Supreme Court, upon which that Court rendered a decree October 26, 1887, which is in part the following words:

"Be it remembered that this cause came on to be further heard before the Supreme Court of Tennessee upon all the proceedings heretofore had in this cause, but more especially upon the petition filed by the defendant to rehear this cause and the answer thereto. And the Court being of the opinion that there is no merit set up in the defense made by defendant to the suit of complainant, and that this is for that reason not a proper case to rehear, the Court is pleased to so decree, and to decree that said petition to rehear be, and the same is hereby dismissed."

S[illegible] copy of decree, Printed Record, p. 278.

We have set out these details as part of the history of the Water Company, and for the purpose of meeting and refuting, at the outset, any charge that may be made to the effect that the Water Company did not in the beginning comply with its contract. It will appear, from what has been stated that every possible objection that could have been made to the claim of the Water Company was set up in said answer, and that all were overruled upon ample proof. At the time when said suit in the Chancery Court was brought, and when it was determined, the present owners of the Knoxville Water Works had no connection with it. The purchase of its stock by Messrs. William Wheeler and Chas. F. Parks occurred in December, 1890. In the year 1891 Messrs. Wheeler and Parks built for themselves the North Knoxville plant, which was conveyed by them to the Knoxville Water Company Nov. 17, 1893.

See copy of contract between Wheeler and Parks and Knoxville Water Company, being Exhibit 6 1-2 *to Dep. William Wheeler, Printed Record.*

Enlargements of the plant of the Knoxville Water Company were made by Wheeler and Parks as independent contractors, beginning in February 1894, and running through 1894 and 1895. The filter was built in the year 1894. The improvements at the Pumping Station were made in the latter part of 1894 and during 1895. The standpipe on Reservoir Hill was erected in the early part of 1894. All these improvements were made under the Wheeler and Parks contract above referred to.

In the month of May, 1899, negotiations were begun by Elbert Wheeler, acting for the Knoxville Water Company, for the purchase of the plant of the Lonsdale-Beaumont Water Company, and the actual consolidation of the Lonsdale-Beaumont Company with the Knoxville Water Company, as a result of these negotiations, occurred on the 1st day of January, 1900. But prior to the actual consolidation, the City of Knoxville, by an ordinance passed Oct. 20, 1899, had agreed to the consolidation.

Dep. Kimball, Printed Record, p. 2208, Exhibit No. 7 to the bill in this cause, Printed Record, p. 60.

The last large improvement, except in the laying additional pipe, occurred in the year 1900, and was the erection of the Intake Tower at the Pumping Station and the installation of new pumping machinery, including boilers, and extension to the Pumping Station.

As late as the year 1899, the City of Knoxville was content with the rates charged by the plaintiff, for in the consolidation ordinance and contract of that year, it was stipulated that the plaintiff should continue to furnish water at rates not exceeding those fixed by its existing rates and rules.

Exhibit 7 to bill in this cause, Printed Record, p. 60.

By Chapter 323 of the Acts of the General Assembly of the State of Tennessee, for 1897, the City of Knoxville and the towns of West Knoxville, and North Knoxville, were consolidated, and by this Act of consolidation, it was provided that all valid and legal contracts of North and West Knoxville should be carried out and performed by the City of Knoxville, and this provision applied to the contract of North Knoxville with Wheeler and Parks, dated April 18, 1891, and to the contract between the town of West Knoxville and the Lonsdale-Beaumont Water Co., dated September 17, 1892, which contracts are on file in this cause as Exhibit No. 3 and No. 5 to the original bill.

Prior to the consolidation of the three towns, and on the 1st day of April, 1895, the Water Company had published and put in operation a schedule of water rates. Subsequent to the publication of these rates, and on the 17th of May, 1895, the City of Knoxville passed an ordinance dealing with meter rates to be charged by the Water Company, but in fact adopting the meter rates already in force by the voluntary act of the Company. Water rates were limited under the original contract, by meter, and have been further limited under each succeeding contract by each of said three towns. In the ordinance contract permitting the consolidation with the Lonsdale-Beaumont Company passed Oct. 20, 1899, it was stipulated that the rates provided in the contract between the Lonsdale-Beaumont Company and West Knoxville on Sept. 17, 1892, should continue in effect as to the original territory of West Knoxville, which then became the 10th Ward of the City, and that the water supplied said 10th Ward should be equal in quality to that then supplied by the Knoxville Water Company. It was further stipulated in said ordinance contract, that the Knoxville Water Company should continue to furnish the inhabitants of the other Wards of the City, than the 10th, filtered water at a maximum rate not to exceed the schedule of rates then in force. This was the first provision requiring the Water Company to furnish filtered water that appears in the legislation of the City of Knoxville, although there had been a similar provision in the North Knoxville contract. By said ordinance contract, the right of the City reserved in its contract of July 1, 1882, to purchase the property of the Water Company was extended so as to include, not only the plant in the old City, but all property which the Company then owned or might thereafter acquire.

In January, 1900, an ordinance was introduced in the City Council of Knoxville to regulate and reduce water rates of the plaintiff, but was not passed.

See bill in this cause, Printed Record, p. 8.

Thereafter, on the 15th day of June, this ordinance which had failed in January, was again introduced, and after amendments was passed on the 27th day of July, 1900. It provided a heavy penalty, to-wit: not less than $10 nor more than $50 for any violation of it, and certain prosecutions thereunder were begun against the plaintiff which continued to charge the rates under the ordinance contract of 1899. These prosecutions were tried before the Recorder of the City, and plaintiff was fined $50 in each case and sentenced to the workhouse of Knox County in default of payment of said fines. The plaintiff appealed to the Circuit Court of Knox County, where the defendant was proceeding to prosecute said cases when it was discovered that said ordinance was defective. Thereupon, on March 30, 1901, the City passed another ordinance by which it attempted to cure the defects in the earlier one, but re-enacted therein the same rates. A copy of said ordinance of March 30, 1901, is filed as Exhibit 8 to the bill in this cause.

About the 1st day of May, 1901, the City brought suit before its Recorder against the Water Company, which had still continued to charge the rates approved in the ordinance contract of Oct. 20, 1899, charging the Company with violation of the ordinance of March 30, 1901, in charging one W. K. McClure, for water at rates in excess of those allowed by said ordinance. This suit was tried before the Recorder and another work-house judgment rendered against the Water Company. The case was appealed to the Circuit Court of Knox County and tried there by the Judge without the intervention of a jury, and a judgment rendered declaring the ordinance of March 30, 1901, invalid because it had been passed at two special meetings not held as required by law. The City appealed to the Supreme Court of Tennessee, where the Water Company not only insisted that said ordinance of March 30, 1901, was invalid because passed at irregular special meetings, but also because it impaired the obligations of contracts existing between the City and the Water Company, and deprived the Company of its property and liberty without due process of law, and was, therefore, in contravention of the Constitution of the United States and of the State of Tennessee. The Supreme Court of Tennessee held the ordinance valid, and entered judgment against the Water Company for $10 and costs, but the Supreme Court of Tennessee did not pass upon the question of the reasonableness of the water rates charged by the Company, but upon that point said, in its opinion:

> "No such case is before us now, as the question of the income and profits of the Water Company has not been opened up nor considered, and the naked question here, being the power to regulate the rates as the City in its judgment may deem right and just."

Printed Record, Cause 212, *Supreme Court of the United States, pp.* 265-266.

See also the following, from the judgment of the Supreme Court:

> * * * "Judgment will be entered here in favor of plaintiff but without prejudice to the defendant's right to litigate and show in such way as it may be advised, that the rates prescribed by said ordinance of March 30, 1901, are unreasonable and oppressive—that question not having been considered by the Court in deciding this case."

Printed Record, Cause 212, *p.* 282.

The case was then appealed to the Supreme Court of the United States.

It is stipulated in this cause that the decree of the Supreme Court of Tennessee was affirmed by that Court.

See stipulation of Counsel, Dep. Kimball, Printed Record, p. 2250.

While the case just referred to was pending in the Supreme Court of Tennessee, the defendant passed a third ordinance on the 4th of October, 1901, which is in all respects similar to the one passed March 30, 1901. Said ordinance of October did not repeal the March ordinance, but was passed to meet the probable holding by the Supreme Court of Tennessee that the March ordinance was void because not passed at legal meetings.

At this point it becomes necessary to revert to an earlier period in the history of the Company. The contract between the City and the Water Company extended, by its terms, for the period of thirty years from January 1, 1883, unless the City should become the owner of the plant within that period in the manner stipulated in the contract.

Printed Record, Cause 212, *p.* 25.

By the 11th Section of said contract, it was stipulated that the Water Company should forthwith take steps to amend its charter so as to prohibit it from issuing bonds in excess of $125,000 for the period of five years from the date of the contract, and after that time from issuing additional bonds in excess of $25,000. Said Section stipulated that the indebtedness of the Company, by bond, should not exceed the amount of $150,000.

Printed Record, Cause 212, *p.* 25.

In this connection it is proper to state that in the ordinance contract of Oct. 20, 1899, the following provisions relative to bond issues of the Company occur:

"Sec. 5. That in order that the consolidation hereinbefore provided for may be effected and to enable the Knoxville Water Company and the Lonsdale-Beaumont Water Company to fund their existing debts and obligations and to provide funds to improve the consolidated plant and make extensions thereto, and in consideration of the benefit to be derived therefrom by the City of Knoxville and its inhabitants, the Knoxville Water Company shall guarantee or fund the existing debts of said Companies, and said Knoxville Water Company is hereby released from that provision of its contract with the City of Knoxville, dated July 1, 1882, as aforesaid, limiting its indebtedness to $150,000, and such provision or limit in said contract is hereby abrogated and annulled.

"Provided, however, that not more than eight hundred thousand dollars ($800,000) of bonds shall be issued prior to the 1st day of January, 1901, and provided further that no bonds in excess of eight hundred thousand dollars ($800,000) shall be issued except to provide funds for additions to or improvements of plant and property of said Knoxville Water Company, and for any bonds to be issued, said Knoxville Water Company shall file with the Recorder of the City of Knoxville a sworn certificate showing the actual cost of such addition or improvements, for which bonds may be issued."

Printed Record, Cause 212, *pp.* 61-62.

By this ordinance contract, therefore, the City, not only removed the original bond limit of $150,000, but by necessary implication approved all actions of the Water Company creating debts against its property, and in effect agreed that the plant already constructed by the Company was sufficient to support a bond issue of approximately $800,000.

It was demonstrated early in the history of the Company that the limitation of the bond issue to $150,000 would be fatal to efficient management and would render it impossible for the Company to carry out its contract with the City. The first result of this unreasonable limitation was that, prior to the time when Messrs. Wheeler and Parks acquired control of the property, at the end of the year 1890, the Company had issued $85,000 of "debenture certificates" bearing 6 per cent. interest.

Dep. Elbert Wheeler, Printed Record, p. 721

All of these debentures, however, have now been retired.

Dep. Elbert Wheeler, Printed Record, p. 781.

These debentures were printed notes with coupons attached, and had no security except the note of the Treasurer, authorized by the Directors, and were not an encumbrance on the property in the nature of a mortgage.

Dep. William Wheeler, Printed Record, p. 460.

It is stated in our bill in this cause, and is not denied, that in 1890 and again in 1893, the Water Company asked for permission from the City to issue additional bonds to build a new Pumping Station, a new Reservoir and Filtering Plant, and to make other improvements to meet the growing needs of the inhabitants of the City, but two different ordinances granting such permission, after having been passed by the City Council, were vetoed by the Mayor.

Bill, Printed Record, p. 11.

It is further alleged that in consequence of this unjust and unreasonable refusal, the Company was compelled in 1893 and 1894 to issue and sell $295,000 of what has been called preferred stock, which was issued by consent of all stockholders, and bears the same relation to the Company as a bond, in that it entitles the holder to receive interest at the rate of 6 per cent. per annum before the stockholders receive anything on their stock. The money thus realized was spent in improvements and enlargements of the plant.

Bill, Printed Record, p. 11.

The so-called preferred stock is, therefore, in legal effect and in fact, a part of the bonded debt of the Company.

Of the effort to enlarge the bond limit William Wheeler says:

"When we became interested in this property in 1890" * * * * "there was no auxiliary pumping machinery to use in case the main machine fell down for any reason; the capacity of that pumping machinery had already been reached by the consumption of water at that time. The water itself was in a very unsatisfactory condition, being river water without purification or clarification. There was an active demand for the extension of the service which it was the policy of the Company to avoid so far as it could possibly do so without running counter in an excessive degree to public demands. There was need of various other improvements, none of which could have been made without the investment of substantial amounts of additional capital. The Company had endeavored, I was advised, to secure an increase in the limit of bonds which it might issue, in order that it might avail itself of the usual resources of obtaining capital, that is upon a pledge of the security of its property, but that effort had failed. Immediately after Wheeler and Parks became interested in the property, they renewed the effort to interest the City in the removal of that limitation as to the amount of bonds which could be issued, and submitted a draft for an ordinance to the City Council, within three months after they became interested in the property, in the month of February, 1891, but that ordinance as I stated, while passed by the City Council was vetoed by the Mayor."

Dep. William Wheeler, Printed Record, pp.
705-706.

Mr. Wheeler further says:

"When the next City Council came in in 1893, they" (Wheeler and Parks) "renewed their negotiations, and I personally (on behalf of the Company at that time as were the negotiations of 1891 in behalf of the Company) submitted a draft for an ordinance to the City of Knoxville, which was first made acceptable to the Committee on Water before its presentation to the City Council, and was passed by the Council. That ordinance was vetoed by the Mayor and was withdrawn by us from action by the Council upon the Mayor's veto, because in the meantime the Legislature had cut out the 10th Ward, in which a substantial part of the extensions specifically provided for in that ordinance were to have been made."

Dep. William Wheeler, Printed Record, p.
706.

Thereupon, it became necessary to issue preferred stock above referred to, and following that issue, the contract was made with Wheeler and Parks under which that firm made the large extensions of the plant above referred to.

Dep. William Wheeler, Printed Record, p.
707.

These improvements included, as we have shown, the large, expensive and efficient Filter Plant, which was thus voluntarily constructed by the Company, which was under no legal or contract obligation to build the same.

These statements show the extraordinary facts:

1st. That the bond limit fixed by the City was so low that it was impossible for the Company to make any extensions of its plant or to maintain the existing plant in a state of efficiency.

2nd. That with persistent injustice the City refused, until the end of the year 1899, to enlarge this bond limit, although it was known at the date last mentioned that the value of the plant of the Water Company exceeded many times over the amount of bonds authorized.

3rd. That in its answer filed in the Chancery Court in 1885, the City objected to the quality of the water and of the plant, and the Supreme Court held that none of the objections were well taken.

4th. That when, in 1891, it was apparent that the needs of the City required improvements and extensions of the plant, the City refused to enlarge the bond limit, and two years later in 1893, repeated its refusal, both refusals resulting from the act of the Mayor when the proposed policy of the Water Company had been approved by the votes of the majorities of two successive City Councils.

5th. That the City in this litigation attacks the quality of the plant, despite the fact that after sixteen years it persisted in a policy of unreasonable obstruction of all improvements of it.

6th. That while the City feebly and unsuccessfully attempts in this cause to show that the water furnished is infected by reason of the drainage from White Spring Branch, the Reservoir and Pumping Station are placed where the Water Company was compelled, by its contract with the City, to place them, and where it was compelled by the City's action to allow them to remain when it desired and attempted to locate them differently.

In view of the fact that the Reservoir and the Pump Station were thus located by contract, and that the City has refused to permit their removal and thereby required the expensive Filter Plant, Intake Tower, and Pumping Station to be erected where they are, it is submitted that the city, would be estopped by its own conduct to complain of anything resulting from so locating and maintaining these parts of the plant. But there is no foundation for the criticisms attempted by the City's witness.

GENERAL STATEMENT.

This case is before the Court upon an appeal by the original defendant, the Mayor and Aldermen of the City of Knoxville, from a decree in equity, of the Circuit Court for the Northern Division of the Eastern District of Tennessee. The original bill in the cause was filed at Knoxville, Tennessee, December 7, 1901, for the purpose of enjoining the Mayor and Aldermen of the City of Knoxville from enforcing a certain ordinance of said Board, passed March 30, 1901, to regulate the rates charged to consumers by the Complainant, the Knoxville Water Company, on the ground that said ordinance was confiscatory and in violation of the Fourteenth Amendment of the Constitution of the United States, in that it undertook to deprive the Complainant of the right to charge such rates as would afford a fair and reasonable return on its investment, thereby depriving it of its property and liberty without due process of law.

Printed Record, pp. 15-16.

Thereafter, by leave of the Court, the bill was amended by the following allegation, to-wit:

"That the fair value of the property of plaintiff within the City of Knoxville, as of date March 30th, 1901, exceeds $1,000,000, and has constantly increased in value at all times since said date, which said property of said value was at said date and at all times since used in the public service for the purpose of supplying said City with water, and that the effect of the ordinance of March 30th, 1901, of defendant reducing the water rates of plaintiff, if enforced, is to deprive the plaintiff of a fair and reasonable return upon its said value of said property so used, and for that reason said ordinance is unconstitutional and void.'

Printed Record, pp. 279-280.

There was a demurrer to the original bill.

Printed Record, p. 70.

and also a demurer to the amended bill

Printed Record, p. 200.

These demurrers were overruled by the Court but no exceptions were reserved to the action of the Court in overruling them, and no question is made thereon in the assignments of error herein, for which reasons no further mention need be made thereof.

Printed Record, p. 281.

It is charged in the bill that the effect of said ordinance of March 30th, 1901, for the fiscal year ending on that date, would be to reduce the income of the Water Company from $88,649.41, the amount realized from existing rates, to $68,481.67; a reduction of almost 23 per cent.

Printed Record, p. 12.

The answer admits that the average reduction of rates, as prescribed by said ordinance, would be about 20 per cent.

Printed Record, p. 84.

The answer denies generally, the other allegations of the bill.

Printed Record, pp. 73-92.

The answer and exhibits thereto were filed January 14, 1902.

Printed Record, p. 108.

The replication of Complainant was filed January 16, 1902.

Printed Record, p. 108.

Nine months thereafter, or on the 6th day of October, 1902, the cause was referred to a Special Master, who was ordered to report:

"First.

The amount invested by plaintiff in its entire plant and property.

Second.

The amount invested in the corporate limits of the City of Knoxville, including machinery, apparatus, and all appliances and property of every kind used in the operation of the water plant within said corporate limits.

Third.

The amount and character of plaintiff's indebtedness and the property covered by it March 30th, 1901.

Fourth.

The value of plaintiff's entire plant and property at the time of the passage of the ordinance of March 30th, 1901.

Fifth.

The actual value of the plant and property within the corporate limits of the City of Knoxville, including the machinery, apparatus and all appliances and property of every kind used in the operation of the plant within said corporate limits when the ordinance of March 30th, 1901, was passed.

Sixth.

The gross revenue derived by plaintiff from its entire water plant and property under the rates in effect prior to March 30th, 1901, and how much same would be reduced by said ordinance of March 30th, 1901.

Seventh.

The total revenues derived by plaintiff from water supplied within the corporate limits under rates in effect prior to March 30th, 1901, and how much same would be reduced by said ordinance of March 30th, 1901.

Eighth.

An itemized statement of plaintiff's expenses per annum and what part of same pertains to the property within the corporate limits of the City.

Ninth.

The extent and kind of investigation made by defendant before the passage of the ordinance of March 30th, 1901, the notice given to plaintiff, when and by whom.

Tenth.

What would be a fair amount to allow annually for depreciation of the water plant and property of plaintiff from natural causes and by wear and use and depreciation accrued to March 30th, 1901.

Eleventh.

Whether or not the rates fixed by Defendant's ordinance of March 30th, 1901, are reasonable and would afford or permit a reasonable income on the capital invested in the plant and property by plaintiff.

The Master will take proof with all reasonable dispatch and will, if possible, file his report in time for action at the next term of this Court.

Twelfth.

The Special Master will report on any other special matter or question about which he is specifically requested to report by either side in writing within ten days after entry of this order, said requests to be filed and made part of the record. In case an irrelevant or unnecessary inquiry is opened up by such a request the cost thereof will be taxed against the party making such request and the Master will report what, if any, needless costs are thus caused."

Printed Record, pp. 122-123.

It is recited in the caption of said Order of Reference, as follows:

"This cause by consent of parties and for special reasons appearing to the Court is referred to H. O. Ewing as Special Master, who is ordered to hear all proof offered by plaintiff and defendant and to report to this Court as follows:"

Printed Record, p. 122.

It will be observed by the Court that to this order and action of the lower Court no exception whatever was taken at the time, nor thereafter, as will more fully appear. It further appears that the form and substance of this Order of Reference, as to the matters referred, was adopted by the Court after suggestions from both the Complainant and the Defendant.

Printed Record, p. 117.

Complainant made certain suggestions as to matters to be referred, which are not material to the matters here presented, but Defendant, at pages 196 to 197 of the Printed Record, presented 24 items of reference with a request that they be submitted by the Court to the Special Master. After consideration of the suggestions of Complainant and Defendant, the Court adopted the Order of Reference as set out above from the 1st to 12th inclusive. It will be noted by the Court that Sec. 12 of the Order of Reference, as adopted by the Court, directs the Master to report upon any other special matters or questions about which he may be specifically requested to report by either side, in writing, within ten days after this order, such requests to be filed and made part of the record. In obedience to the suggestion of the Court, in item 12, the Defendant, at pages 124, 125 and 126 of the Printed Record, presented 13 additional matters to be referred and reported on by the Master. The paper containing these requests of Defendant is as follows:

"The Court having ordered and directed the Special Master, H. O. Ewing, appointed in this case, to report upon any special matters or questions, that either party shall request him to report upon, in writing, the defendant, the Board of Mayor and Aldermen of the City of Knoxville, hereby in compliance with said order, request the Special Master to report upon the following matters or questions in addition to those specifically set out in the II Section of the Order of Reference."

Printed Record, p. 124.

The first item covered by these requests of Defendant is as follows:

"Whether the rates fixed by the defendant's said ordinance of March 30th, 1901, was reasonable and would afford or permit a reasonable income on the fair value of the Complainant's property, actually being applied to and in use for public purposes, at the date of the passage of said ordinance, taking into consideration the rights of the public as well as the rights of the stockholders of said Company; and in this connection he will report the relative values of that portion of the property applied and used within the City limits, and of that portion lying outside of the limits of said City of Knoxville."

Printed Record, p. 124.

The 12th item is as follows:

"Whether the amount invested by the Complainant Company in its plant and property was reasonably and necessarily required in its construction and operation."

Printed Record, p. 125.

To certain items in the original draft of form of Order of Reference by Defendant, Complainant filed written objections, to wit: To Nos. 12 to 24 inclusive, the first 11 items of Defendant's proposed draft being embraced already in Complainant's proposed draft of said Order of Reference.

Printed Record, pp. 114-115-116.

On objections being made by the Complainant to the investigation before the Master of certain matters called for in the additional requests of Defendant,

Printed Record, pp. 119-120-121,

the Court ruled:

"In taking the evidence and directing the inquiry before him, the Special Master possesses the usual powers of Masters in Chancery, and is hereby expressly invested with power and authority to determine what subjects are relevant and pertinent matters of inquiry under the foregoing Order of Reference, and also the proper method of proceeding, or requiring the production of evidence, and of what is the primary or best evidence of any disputed fact, and in any and all questions arising in regard to the relevancy of any subject of inquiry, and the right to call for, or introduce, any part of evidence. The Master will, of course, determine such issues, and for that purpose will hear such arguments as satisfies him in regard to these matters.

"Ordered that this may be substituted for paragraph No. 12 in the Order of Reference heretofore made, which paragraph is hereby vacated."

Printed Record, p. 289.

The said final order of the Court, giving final instructions as to the scope of the reference, was made Nov. 21, 1902.

Printed Record, p. 289.

On the 5th day of December, 1904, Printed Record, p. 199, the Defendant by petition raised, for the first time, an objection to the fact that the original Order of Reference appears on the record to have been granted by consent, though as appears from said original Order and the action of Defendant thereunder, no exceptions ever had been taken either to the fact of the Reference, or to the form in which the Reference had been finally ordered. Said petition of Defendant, filed on the date above mentioned, is found on pp. 192-193 et seq., Printed Record. And acting upon said petition, the final order of the Court, made *nunc pro tunc,* and entered of date December 10, 1904, was as follows:

"In this cause it appears that the order of reference erroneously states that it was made by consent of parties, and it is ordered that the same be and is corrected, by striking out and annulling the phrase 'by consent of parties,' as having been inadvertently inserted.

It is further ordered that the record show that the parties waived objection to the appointment of the Clerk as Special Commissioner to state the account, which is accordingly done.

It is further ordered that the record show that when the case was called for hearing the defendant announced ready for trial, and that the order of reference embracing the eleven propositions was thereupon submitted by the Plaintiff, before any proof had been taken, and that the Defendant took exception to some of the propositions submitted, and submitted other and additional propositions, all of which were submitted by the parties for the

Court's action, who thereupon added Section 12 to the original Order of Reference.

And thereupon the Defendant, pursuant to said section 12, filed the additional sections to the order which are found in the record.

Upon a controversy arising as to the admission of evidence the Court struck out Section 12 of the order of reference, and substituted in its place the order found on file in the record.

This order is made *nunc pro tunc*, for sufficient reasons appearing to the Court."

Printed Record, p. 280.

It will be observed likewise that no exception is here taken to the form nor fact of the order granted by the Court referring the matters in controversy in this case to a Master for report thereon, nor is it claimed by Defendant in said petition that it had ever excepted to the fact or form of said order, so that, from these facts, it will appear that, while formal consent was not given to the Court's action in referring certain matters deemed proper by the Court to be reported on by the Master, no legal objections nor exception was taken thereto, and the question whether the Court should have made such reference at all is manifestly not open to examination in this Court, and the order which was actually entered, under the circumstances above set out, must have all the force and effect of a consent order, and for that reason, to the extent that the Master has reported upon matters of fact and his conclusions thereon which have been concurred in by the Court, such concurrent action of the Court and Master upon such matters of fact, under the decisions of this Court, must be binding to the extent now to be stated.

The taking of the testimony in the cause, before the Master, began on the 10th day of November, 1902.

Printed Record, p. 321.

The last deposition was taken January 25, 1904.

Printed Record, p. 2249.

and the testimony covers 1928 pages of the printed record now before the Court. The Record will show that the Master gave diligent attention to the taking of testimony, and that the nature of the proceedings was such as to require him to pass frequently upon the admissibility of evidence, and upon many questions of law, raised during the long investigation. These facts are mentioned in order to show the extent and thoroughness of the investigation made by the Master, and his competency to determine the questions involved. After this long and thorough investigation by the Master, and a comprehensive and perspicuous report by him, the case was presented to the Circuit Judge, who, in an elaborate and carefully prepared opinion, concurred in the report of the Master in all material respects. It is stated several times in Defendant's brief that the Special Master was not a lawyer. The record is silent on this question, but in view of the statement of Defendant's counsel, we state that the Special Master was a member of the Bar of Tennessee and of the United States Courts, of high standing, when he was appointed Clerk of the United States Circuit and District Courts.

We have, in the case at bar, not only, as hereinbefore shown, a reference, in effect by consent, in the absence of objection, but the special request of the Defendant for a finding upon an issue which was determinative of the case, and within which issue as submitted, are comprised all the other material issues submitted to the Master for determination by the Court and regarded by the Court as determinative of the question whether or not the ordinance of Defendant is unconstitutional. This special matter so to be reported on at the request of the Defendant was in fact answered by the Master, the same being request No. 1 of Defendant, which is as follows:

"Whether the rates fixed by the Defendant's said ordinance of March 30th, 1901, was reasonable and would afford or permit a reasonable income on the fair value of Complainant's property, actually being applied to, and in use for public purposes, at the date of the passage of said ordinance, taking into consideration the rights of the public, as well as the rights of the stockholders of said Company and in this connection he will report the relative values of that portion of the property applied and used within the City limits, and of that portion lying outside of the limits of the said City of Knoxville."

Printed Record, p. 117.

The Master answered this question in the negative.

Printed Record, p. 187.

The Court will observe, from what has been stated, that no objection was made on the trial, nor presented to the Court below to the reference of the case to the Master, and that there was a positive request by Defendant for certain specific findings, and the general rule in such cases is that objections not made on the trial of the case or presented to the Court below for decision, cannot be entertained in the Appellate Court.

Taylor on Jurisdiction and Procedure of the United States Supreme Court, Sec. 426, *citing numerous decisions of this Court in the text.*

This principle is also illustrated by the well known rule of this Court that where the Circuit Judge has charged the jury in the trial Court, and has committed affirmative error, such error will receive no attention in this Court unless an exception thereto was taken at the time given.

Baltimore and P. R. Co. vs. Mackey, 157 *U. S.,* 92. *Anthony vs. Louisville & Nashville Railway Co.,* 132 *U. S.,* 173.

and numerous other cases cited by Taylor, in the work above referred to, at Section 429.

In addition to these general observations we note that this Court has said in a case of this kind that:

"We are all of opinion that a better practice is to refer the testimony to some competent Master, to make all needed computations, and find fully the facts. It is hardly necessary to observe that in view of the difficulties and importance of such a case it is imperative that the most competent and reliable Master, general or special, should be selected, for it is not a light matter to interfere with the legislation of a State in respect to the prescribing of rates, nor a light matter to permit such legislation to wreck large property interests."

Chicago, Milwaukee, &c., Ry. vs. Tompkins, 176 *U. S., p.* 180.

As to the effect then of a finding by the Master, confirmed by the Court in a case thus referred, and without exception taken by defendant, and in fact with the questions referred at Defendant's special request, this Court has said:

"As the case was referred by the Court to a master to report, not the evidence merely, but the facts of the case, and his conclusions of law thereon, we think that his finding, so far as it involves questions of fact, is attended by a presumption of correctness similar to that in the case of a finding by a referee, the special verdict of a jury, the findings of a Circuit Court in a case tried by the Court under Rev. Stat. Sec. 649, or in an admiralty cause appealed to this Court. In neither of these cases is the finding absolutely conclusive, as if there be no testimony tending to support it; but so far as it depends upon conflicting testimony, or upon the credibility of witnesses, or so far as there is any testimony consistent with the findings, it must be treated as unassailable."

Davis vs. Schwartz, 155 *U. S.*, *p.* 636.

We therefore insist, under this record and the law applicable thereto, that the concurrent finding of the Court and Special Master in this case is unassailable if there be any evidence to support the same.

ASSIGNMENTS OF ERROR

In view of the form and substance of the brief filed herein by Appellant, we desire to refer to the rule of this Court which provides with respect to briefs filed for Appellant as follows:

"This brief shall contain in the order here stated,

1.

A concise abstract, or statement of the case, presenting succinctly the questions involved and the manner in which they are raised.

2.

A specification of the errors relied upon, which, in cases brought up by writ of error, shall set out separately and particularly each error asserted and intended to be urged, etc."

In the case at bar counsel has entirely ignored this rule of the Court; the first nine pages of the brief are taken up by an inaccurate statement of the case, and under the heading on p. 9, "Statement and Discussion of Assignment of Errors," no reference whatever is made to the assignments of error which were made on the appeal in the Court below to the action of the Circuit Judge, but on the contrary, pages 9 to 39 inclusive of defendant's brief is taken up with the discussion of the question whether or not there is any contract forbidding the City's regulation of the Water Company's rates to consumers, which above question is not in the case at this time, as likewise the question next discussed from pages 11 to 39, without reference to any assignment of error to that effect, that the said ordinance of the city regulating rates was not void for want of notice, hearing or investigation before or on its passage. It was known to counsel for Appellant that upon the hearing below no insistence was made by counsel for Complainant that said ordinance was not valid because of the want of notice, hearing or investigation before or upon the passage, although it is charged to that effect in the original bill following the line of the case of New Memphis Gas Company vs. City of Memphis. It was realized and conceded by counsel for complainant that, since the decision of the above case, in many of the decisions of this Court it has been recognized that a Legislature or Municipal Board may fix rates without a hearing upon the same and that the hearing as to the reasonableness of said rates in the constitutional sense is a judicial question and must be determined without reference to hearing or lack of hearing on the part of the regulating legislative power. When the City sought to regulate Complainant's rates, the latter was most earnestly insisting in good faith, that its contract with the City could not be impaired as to its obligation by a reduction, which claim, however, was not sustained by this Court, but this *bona fide* claim refutes the argument that the Company continuously refused to furnish the information asked on which to base a reduction. Following the discussion of the above question, counsel for Appellant without reference to the assignment of errors has gone into a general discussion from pages 40-195 of the entire record, discussing matters not at all relating to any questions made by the assignment of errors and apparently intended to take the mind of the Court away from the real questions presented by the assignment of errors, which questions alone under the rule of this Court are the matters calling for action herein. Counsel does, however, from pages 195-231 attempt to go into the questions presented by the assignment of errors, but in so doing has confused rather than elucidated the issues before this Court by attempting to assign and discuss alleged errors not assigned below. It cannot be expected in this reply brief that we shall discuss anything in the case except the questions before this Court raised by the assignment of errors below, and for that reason we go into the discussion of the assignment of errors *seriatim*, believing that we can render assistance to the Court upon the only questions now before it. It is true that in the voluminous brief prepared by counsel for Appellant many of the subjects referred to in the previous assignments are treated, but the same are treated without reference to the assignment of errors and is so commingled with treatment of matters not embraced in any assignment of error as to be absolutely misleading to the Court. In preparing this brief we have taken up the assignment of errors in the order in which they appear, as presented to the Court below as nearly as possible. We do not regard the arrangement as logical but have felt constrained to adopt it in order to avoid confusion. It will appear that certain matters are covered by more than one assignment of error, and where this is the case we have endeavored to dispose of the subjects where it first appears in the assignment of error.

FIRST ASSIGNMENT.

"The Court erred in sustaining the bill, and in adjudging thereon that the Defendant's ordinance of March 30th, 1901, was unconstitutional and void for any reason, and that the same should be perpetually enjoined, and Defendant taxed with any part of the costs of this cause. Said ordinance was not in conflict with any contract between the Plaintiff company and the Defendant, nor was schedule of rates therein prescribed unreasonable or confiscatory, or for any other reason illegal, unconstitutional and void."

This assignment goes to the whole case and calls for an examination of the law applicable to a case of this character, and makes it necessary to inquire whether or not the facts of the case, found by the Court and Master concurrently bring the case under the rule announced by this Court with respect to legislation, by act or ordinance, in violation of the 14th amendment. The rule applicable to a case of this character is now well settled by this Court, and is thus stated:

"What the Company is entitled to demand in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public."

San Diego Land & Town Co. vs. National City, 174 *U. S.,* 757.

The principle is also announced in this language:

"Each case must depend upon its special facts; and when a court, without assuming itself to prescribe rates, is required to determine whether the rates prescribed by the legislature for a corporation controlling a public highway are, as an entirety, so unjust as to destroy the value of its property for all the purposes for which it was acquired, its duty is to take into consideration the interests of both the public and the owner of the property, together with all the circumstances that are fairly to be considered in determining whether the legislature has, under the guise of regulating rates, exceeded its constitutional authority, and practically deprived the owner of the property without due process of law. * * * The utmost that any corporation operating a public highway can rightfully demand at the hands of the legislature, when exerting its general powers, is that it receive what under all the circumstances is such compensation for the use of its property as will be just both to it and to the public."

Covington & Lexington Turnpike Co. vs. Sanford, 164 *U. S.,* 578-597-598.

As said in a later case than either of the above:

"The main object of attack is the value of the plant.

It no longer is open to dispute that under the constitution, what the company is entitled to demand in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public."

San Diego L. & T. Co. vs. Jasper, 189 *U. S.* 442.

The language of this Court in the above cases would seem to be a conclusive answer to the contention of defendant presented in the court below with much earnestness, to the effect that the limit of complainant's right is to demand some compensation rather than "just" compensation measured by "fair return." For the proposition that some compensation is all that is necessary to be returned in rates, counsel has relied on the case of Railroad vs. Dey, 35 Fed. Rep. 866, an opinion by Justice Brewer, and upon Cotting vs. Goddard, 79 Fed. Rep. 684. The contention of counsel, however, may be said to be supported by the first case mentioned, so far as the literal language used is concerned, but the word "compensation" there referred to is stated by Judge Brewer to imply three things: "Payment of cost of services, interest on bonds and then some dividend. Costs of service implies skilled labor, the best appliances, keeping of road-bed, and the cars and machinery and other appliances in perfect order and repair." So that the "some compensation" referred to by Judge Brewer was some dividend in addition to the cost of service and interest on its bonded indebtedness. However, this view of Judge Brewer, as expressed in the Dey case, was expressly retracted by the same Judge in the latter case of Ames vs. Union, &c., Railway, 64 Fed. Rep. 165. It was said in a later case by Mr. Justice McKenna:

> "This is claimed to be established by authority. I do not think so. It seems to have been decided in Chicago Railway vs. Dey, 35 Fed. Rep. 165, but the same learned Judge who expressed that view in the Dey case, retracted it in Ames vs. Union, &c., Railroad Co., 64 Fed. Rep. 165, and it has received no judicial sanction since. This was inevitable since it came to be seen that the regulation of rates could not be an absolute legislative prerogative. When the power of judicial review was assured and entertained, the 14th amendment of the Constitution was bound to be firmly and accurately applied. There could be no middle ground. Middle ground would satisfy neither legislative prerogative nor judicial prerogative, that must apply justice as it is understood of men, and in its clear light it was inevitable that it would come to be seen that the 14th amendment of the Constitution would be a composition of delusive words if it forbade only the taking of the physical property, while it permitted the taking of its value—after its guarantees of the equal protection of the law to all persons, would be satisfied as to railroads, by leaving them a microscopical profit."

Southern Pacific Co. vs. Board Commissioners, 78 *Fed. Rep.* 261.

Likewise the other case of Cotting vs. Goddard, 79 Fed. Rep. 684, does not support defendant in its application to the facts of this case. It is said:

"But it seems to be clearly established by most recent interpretations of the Constitution, that legislation, which prevents a fair and reasonable return for capital engaged in legitimate business, is obnoxious to the Constitution."

It is said, however:

"It is not every public enterprise or investment, however unwisely undertaken or extravagantly maintained, that can claim a fair return on its property. The public have rights to be considered. If a company should build a railroad across the great desert of Sahara and carried but one passenger or one car of freight a day, it would be absurd to say that its rates should be fixed so as to make a fair return on the investment."

Cotting vs. Goddard, 79 *Fed. Rep.* 684.

The above case quotes approvingly from the opinion in the New Memphis Gas & Light Co. vs. City of Memphis, 72 Fed. 952, Judge Clark being the same Judge who tried and decided the case at bar:

"If the Company is deprived of the power of charging reasonable rates for the use of its property, and such deprivation takes place in the absence of an investigation by judicial machinery, it is deprived of the logical use of its property, and thus in substance and effect, of the property itself without due process of law and in violation of the Constitution of the United States, and in so far as it is thus deprived, while other persons are guaranteed to receive reasonable profits upon their invested capital, the Company is deprived of the equal protection of the laws."

As applicable to the present case it may be admitted that if complainant company had built its present plant capable of supplying a city of the present population of Knoxville twenty years ago, when the town had a population of only 10,000, a rate could not have been maintained at that date sufficient to realize to it a fair return on its original investment, or upon its fair value as of said date, because such rate would have been entirely disproportionate to the value of the service rendered, and the investment at that time would have represented not a proper response to the public need of such service, but rather the folly of the original investors, just as the building of a railroad across the Sahara, as instanced in the above opinion, would not entitle the railroad to charge such rates to an occasional passenger as would realize a fair return upon the fair value of its property. Such was the view of this Court in Reagan vs. Farmers' Loan & Trust Co., 154 U. S. 38; Covington, etc. vs. Sanford, 164 U. S. 578.

It has never been insisted in the case at bar that the service in itself is not worth the price charged, either with respect to the quality of the water furnished, or in any other respect, nor is it insisted that there is a larger investment or value in the property used for the public than the public uses require, so that this case, in its last analysis, depends simply upon the question, what was the fair and reasonable value of the Company's property devoted to the public service, when said ordinance was passed undertaking to reduce its rates, and what would be a fair return on that value?

With respect to the date at which the fair value of the property of complainant devoted to the public service should be ascertained as a condition precedent to the ascertainment of what is a fair return thereon, it may be stated that no controversy has arisen in this case, so that said date was approximately March 30, 1901, the date of the passage of the ordinance attacked, though, as a matter of fact, the real date adopted was March 31, 1901, for the reason that March 31 was the close of the fiscal year of the Company, and both valuation and income could more readily be arrived at by assuming that as the date of the inquiry. To show that the above date is correct we refer to Sec. 1 of the reference requested by defendant, in which it is asked that the Master find whether or not defendant's said ordinance of March 30, 1901, was reasonable and would afford a reasonable income on the fair value of the Company's property actually being applied to public purposes at the date of the passage of said ordinance.

Printed Record, p. 117.

And we need only say further that no assignment of error is made in this Court controverting the proposition that the fair value of the property of complainant should be ascertained at the date when it was in fact ascertained in this case. The decisions of this Court likewise support this contention.

Smyth vs. Ames, 169 *U. S.* 466.

As said by this Court in the Sanford case, 164 U. S. 578, each case must depend upon its special facts, but as to the elements to be considered in the ascertainment of the fair value of the plant devoted to the public service, this Court has said:

"And in order to ascertain that value the original Cost of Construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original Cost of Construction, the probable earning capacity of the property under the particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in such case."

Smyth vs. Ames, 169 *U. S.* 547.

In this important case then it is suggested that the basis of calculation in a rates case is: "the fair value of the property being used for the public convenience," and that in ascertaining that fair value we may consider:

1. The original cost of the plant. 2. The cost of permanent improvements. 3. The amount of bonds. 4. The market value of bonds. 5. The amount of stock. 6. The market value of the stock. 7. Present Cost of Construction. 8. Earning capacity under the ordinance. 9. Operating expenses.

After mentioning these things the Court adds: "We do not say that there may not be other matters to be regarded."

We call attention also to the case of San Diego Land & Town Co. vs. National City, 174 U. S. 739, in which the opinion was by Mr. Justice Harlan, who said:

"The contention of the appellant in the present case is that in ascertaining what are just rates the Court should take into consideration the cost of the plant; the cost per annum of operating the plant, including interest paid on money borrowed and reasonably necessary to be used in constructing the same; the annual depreciation of the plant from natural causes resulting from its use; and the fair profit to the company over and above fixed charges for its services in supplying the water to consumers, either by way of interest or the money it has expended for the public use, or upon some other fair and equitable basis. Undoubtedly, all these matters ought to be taken into consideration and such weight be given them when rates are to be fixed, as under all the circumstances will be just to the company and to the public."

San Diego Land & Town Co. vs. National City, 174 *U. S.* 739.

In this opinion, referring to bonds of the company, the Court said:

"So that it cannot be said that the amount of such bonds should in every case control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just both to the company and to the public."

174 *U. S.* 757-758.

The opinion last quoted from was delivered by Mr. Justice Harlan, who had delivered the opinion in Smyth vs. Ames, and it will be noticed that the considerations recited as entering into the question of reasonableness vary somewhat, although there is no inconsistency. Interest paid on money is specifically mentioned in the last case but not in the first; in the last it is said, in effect, that the company is entitled to a fair profit either by way of interest on the money it has expended or upon some other fair and equitable basis.

The question of valuation is covered by the 4th item in the Order of Reference in the following language:

"4th. The value of plaintiff's entire plant and property at the time of the passage of the ordinance of March 30, 1901."

Printed Record, p. 165.

In response to this inquiry the Master said:

"I find and report the value of the plaintiff's entire plant and property on March 31, 1901, to be as follows."

Printed Record, p. 171.

This statement is followed by details leading to a valuation of $608,427.95.

Printed Record, p. 171 *to* 175 *inclusive.*

We insist that if this finding of the Master as to the value of complainant's plant, as of the date of the passage of said ordinance is supported by evidence in the case, then such finding, affirmed by the Court, as is the case here, is unassailable in this Court. We understand from the cases already quoted that it was the duty of the Master and of the trial judge to consider the following elements in arriving at a conclusion as to the value of the complainant's plant:

1. THE ORIGINAL COST OF THE PLANT.

In regard to this it is necessary to say, by way of premise, that it is admitted by both parties, though the fact is not mentioned in appellant's brief, but the contrary is intimated, that certain of the books of the Company have been destroyed by fire, and therefore, it became necessary to determine the original and proper cost by the testimony of witnesses familiar with the facts and thoroughly familiar with the plant in all its parts, and with the prices of material, etc., entering into said construction at the various stages thereof. The most important of these witnesses are William Wheeler and Frank C. Kimball. In the absence of sufficient data in the books by which it might be accurately determined as to what the cost of the plant, as it was being constructed, was, the experts in the case have adopted the only method by which they could reach a satisfactory conclusion with respect to the proper construction cost, and in this way they have taken the dates, as near as they could be arrived at, when the various parts of the plant were constructed, and from the knowledge of the witnesses as to the proper prices of such material and labor at those several dates, have reconstructed a proper cost of the plant, in all its parts, according to the experience and best judgment of the witnesses, and in this way have arrived at a proper cost or what might otherwise be termed the investment value of the plant. The witness William Wheeler states the investment value at $853,655.41.

Printed Record, p. 388.

In this result the witness Frank C. Kimball concurs, adopting the same figures.

Printed Record, p. 814.

It appears from the record that the witness William Wheeler and the witness Frank C. Kimball jointly prepared the statement or analysis of the property from which these figures are taken.

Printed Record, p. 811.

The following experts of long experience and of the highest standing as construction engineers, approve the method adopted by William Wheeler and Frank C. Kimball in determining the investment value.

Witness J. L. Ludlow says:

"I think the method pursued in this analysis of Mr. Wheeler to be the most rational, direct and accurate way of determining the investment value of the plant. In fact, I think it is practically the only way that investment value could be determined."

Printed Record, p. 934.

The witness Arthur Hider also approved the method.

Printed Record, p. 983.

Witness T. T. Johnston says of the method adopted by Messrs. Wheeler and Kimball:

"It would be proper, because in my opinion it is the only way to arrive at a fair valuation of the plant."

He adds:

"It seems to me that it is the method of procedure that should be pursued in discovering what is a fair value of any construction, under general ruling conditions as to prices of labor, prices of material and various conditions that concern the making of a construction, and that that is the only way in which you can get at the fair valuation of a piece of property. It occurs to me it is fundamental; because a piece of property may be made cheaply under certain conditions, or expensive under other conditions."

Printed Record, p. 1007.

From an examination of the record it will be seen that Messrs. Wheeler and Kimball, in making the analysis referred to and so strongly approved by the three witnesses last quoted, took into consideration every item and article entering into the construction of the plant, fixing the valuation of every article as of the date when it entered into the plant, and this analysis covers pages 333 to 394 inclusive of the Printed Record.

Upon the facts just stated we submit that, not only is there testimony in the record to support the cost of construction as stated, but that there is no substantial testimony anywhere to controvert it.

In this connection we call attention to the qualification of the several persons who testify as experts in this cause, and submit that the City's, so called, expert witnesses do not, under the established rules upon the subject of opinion evidence, entitle themselves to testify as expert or opinion witnesses. The "expert" principally relied upon by the City is William Nixon, who in the opening of his testimony in chief states his qualifications as follows:

"I first started out in life as a shipping clerk—a steam boat clerk, then into the wholesale grocery business as bookeeper, wholesale grain business, iron ore mining business, then United States Marshal during Cleveland's first term, and then mining and iron manufacturing business, then I was income tax collector for a few months for the Government for East Tennessee, then I was appointed Prison Commissioner for the state of Tennessee in 1895 and was engaged for six years in the building of the new Penitentiary for the State, and in the opening of the mines, equipment and operation of the same and the taking over the convict system of the State and arranging systems of accounts, bookkeeping and reports and methods of handling, keeping and reporting the business of that institution. The last two or three years I was General Manager for the Cumberland Coal and Coke Company, engaged in the opening and equipment of mines, and to some extent the systematizing of the accounts and records of that company."

Printed Record, pp. 1304-1305.

These vocations of the witness are very various, and indicate considerable versatility, but it will be difficult to find from them a reason for allowing Mr. Nixon to testify as an expert witness in water works construction and valuation. The periods of his service in the several capacities to which he has referred appear to be as follows, to wit: Steam boat clerk, one year; clerk in a wholesale grocery house, one year; partner in a wholesale grocery business, four years, dealer in grain about ten years; United States Marshal, two years; iron ore mining, five years; income tax collector, three months; Prison Commissioner, six years.

Printed Record, pp. 1400-1401.

Mr. Charles S. Brown, the other expert witness for the City, is a mechanical engineer and professor of mechanical engineering in Vanderbilt University at Nashville, Tennessee. In his testimony in chief he states his qualifications as follows:

"My engineering education began previous to entering college, in the machine shops, where I learned the trade of machinist. I then entered Yale University in the Sheffield Scientific School, and graduated from that institution in 1883, after taking a course in mechanical engineering, with special work in mining engineering.

with the idea of qualifying as a mining engineer. I then began work in my profession as a mechanical mining engineer, or mill engineer more particularly, and was engaged for three or four years in mining mill buildings, in which time I put up several very large plants in various parts of the country. I then went into cable railroad engineering in Kansas City, and during that time designed, besides special appliances for cable railroad construction and details, several large power plants for the several lines that were under construction at that time in Kansas City and St. Louis."

*Printed Record, pp.*1835-1836.

After this he managed a coal mining property in Indiana; then became professor of steam engineering, etc., at a school in Indiana; then became a consulting engineer; went to Nashville in 1896 as Professor of mechanical engineering; has had a consulting practice in the South in designing and supervising the construction of water works, sewerage, filtration plants, electric light and power stations, etc; was consulting engineer for the Board of Prison Commissioners while the witness Nixon was Chairman, and designed the water works for the new penitentiary; has designed a municipal electric light plant for Nashville recently, and at the time of testifying was engaged as consulting engineer for a company of Nashville contractors in the construction of water works and sewerage at Chickamauga Park, Georgia.

Printed Record, pp. 1835-1836.

It will be seen that in the above statement reference was made to the designing of a water works system by this witness. On cross-examination he was asked the following questions:

"Q. Mr. Brown, where did you ever build any water works?

A. My only experience in the actual construction of water works is at the Prison in Nashville.

Q. What was the extent of the system there?

A. The system consisted of an electrically operated pump driven from the power station of the Prison; a pneumatic system of pumping also operated from a compressor at the power station, a pair of settling reservoirs, a storage reservoir, a filter plant and the connecting pipe lines."

Printed Record, p. 1865.

"Q. Have you designed a system of water works anywhere else?

A. Yes sir, I have designed two other systems; one for Morrillton, Arkansas, and the other for Dickson, Tennessee.

Q. How big a town is Morrillton?

A. About 2500, I think.

Q. And how big a town is Dickson?

A. About the same.

Q. Did you estimate the cost of those systems in advance?

A. I made estimates of cost, yes sir.

Q. Were the systems built?

A. They were not."

Printed Record, p. 1865.

Asked if he had ever given testimony in a water rates valuation case, he answered no.

Printed Record, p. 1865.

If Mr. Brown is entitled to be treated as an expert witness it is nevertheless reasonably certain that he is only moderately expert.

Upon the other hand the qualifications of the expert witnesses for the complainant, the Water Company, are indisputable and of the highest order.

The President of the Company, Mr. William Wheeler, has been engaged in designing and constructing works since 1873, and has designed and constructed such works at Concord, Massachusetts; Canton, Massachusetts; Somerworth, New Hampshire; Belfast, Maine; Exeter and Derry, New Hampshire; Watertown, Massachusetts; Cottage City, Massachusetts; Baintree, Massachusetts; Putnam, Connecticut; Danielson, Connecticut; Stonington and Groton, Connecticut; Portland, Connecticut; Palatka, Florida; Paris, Kentucky; Winchester, Kentucky; upon the extension of works at Ashland, Wisconsin; and the water works and irrigation works of the Lewiston Water & Power Co., in the state of Washington.

It appears also that Mr. Wheeler has been engaged in the management of water works at a large number of the places mentioned above.

Printed Record, pp. 322-323.

Frank C. Kimball, manager of the complainant's plant for a good part of his life, has been engaged since 1885 almost continuously in constructing and operating water works. He has had charge, in whole or in part, of building works at Belfast, Maine; Somersworth and Exeter, New Hampshire; Baintree and Cottage City, Massachusetts; Putnam, Danielson, Stonington, Mystic and Portland, Connecticut; and Paris and Winchester, Kentucky; and at Knoxville, Tennessee.

Printed Record, p. 803.

J. L. Ludlow, expert witness for the Water Company, has been engaged continuously in this line of work since 1885. He has been connected with water works at Raleigh, North Carolina; Charlotte and Goldsboro, North Carolina; and has designed and constructed or been connected with the construction of water works at Rocky Mount, Wilson, Tarboro and Statesville, North Carolina; at Huntsville, Alabama; and Eufala, Alabama; at Columbus, Mississippi; and Charleston, South Carolina.

Printed Record, p. 931.

Arthur Hider, another expert witness for the Water Company, has had charge of sewer construction, streets, bridges, railroad connections, etc., in the city of Louisville, Kentucky, and has done work in connection with the plant of the Louisville, Kentucky, Water Company; was one of a committee of three engineers to value the water plant at Memphis, Tennessee, which committee made a report which was accepted by the city authorities and resulted in the purchase of the water plant by the city at a valuation of over $2,000,000. At the time of testifying this witness was employed by the United States Government as principal assistant engineer in charge of 220 miles of river improvements upon the Mississippi river.

Printed Record, pp. 981-982.

T. T. Johntson, expert witness for the Water Company, had his first experience in the purchase of a water supply at Joliet, Illinois, in 1888; was engineer for the water supply of Memphis and designed the system which now serves that city; designed the works which now supply the city of Savannah, Georgia, and supervised the construction of the same; has been employed in connection with water works litigation and construction at Rockford, Illinois; Racine, Wisconsin; Greenville, Mississippi; and Waco, Texas; was connected with the Chicago Drainage Canal, and designed important parts of the construction of it. At the time of testifying he was connected with the American Falls Power Company, of Idaho, with development of a water power plant at Marseilles, Illinois, and of another at Wilmington, and was employed by the state of Illinois in the matter of a pumping station for feeding the Summit Level on the Illinois and Michigan canal. At the same time he had charge of the water supply at Memphis.

Printed Record, p. 1005.

Perhaps even better qualified than any of these witnesses is the Water Company's expert, Nesbit Wingfield. It appears that this witness has been in constant engineering practice for twenty-three years; that he planned and constructed complete water works plants at Chattanooga, Tennessee; Lookout Mountain, Tennessee; Meridian, Mississsippi; Forsyth, Georgia; Augusta, Georgia; Greenwood, South Carolina; Algiers, Louisiana; and North Augusta, South Carolina; has planned and constructed additions to water works plants at New Orleans, Louisiana; Summerville, Georgia; Rome, Georgia, and Little Rock, Arkansas; has made complete plans and specifications for works at Bay St. Louis, Mississippi; Greenville, Mississippi; Cleveland, Tennessee; Montgomery, Alabama; Canton, Mississippi, etc; has made estimates of valuation of existing plants at Lexington, Kentucky; Birmingham, Alabama; Montgomery, Alabama; Macon, Georgia; Washington, Georgia; Clarksville, Tennessee; Knoxville, Tennessee; Norfolk, Virginia; Suffolk, Virginia; Memphis, Tennessee; Portsmouth, Virginia; and Berkley, Virginia. He has had actual experience in the operation of plants at Chattanooga, Tennessee; Augusta, Georgia; Meridian, Mississippi; and Little Rock, Arkansas; has had actual experience in filtering the waters of the Tennessee, Coosa, Arkansas, Savannah, Cumberland, and Ocomulgee rivers, etc.

Printed Record, pp. 1949-1950.

From this statement of the qualifications of the expert witnesses which we have thought it best to set out in some detail, we submit that in so far as expert testimony is to be given any effect in this case, the overwhelming weight of such testimony is upon the part of the Water Company, and we repeat our proposition that the City's witness, William Nixon, is not entitled, in any respect, or to any extent, to be called an expert for the purposes of this case; and that the witness Charles S. Brown, for the City, if an expert at all, is one of a most inconsiderable extent.

In regard to the experts the Master's statement and comparison will be found on page 166 of the printed record, and his conclusion is in the following words:

"The Master must rely largely upon the cross-examination of the witnesses, and in this test the expert knowledge of complainant's witnesses gives them superiority, not, however, to be exaggerated to the exclusion of any material facts."

Printed Record, p. 167.

2. THE AMOUNT OF BONDS.

Before passing the ordinance of March 30, 1901, the Board of Mayor and Aldemen of the City of Knoxville, by an ordinance passed in pursuance of a contract with the Water Company, expressly released the Water Company from a contract provision theretofore existing, limiting its bond issue to $150,000, without fixing a new limit, but providing that not more than $800,000 of bonds should be issued prior to the 1st day of January, 1901, and further that no bonds in excess of $800,000 should be issued except to provide funds for additions to or improvements of the plant of the Water Company.

Printed Record, p. 62.

We assume that the bonds issued by the Company should be considered in arriving at a valuation, because they are supposed to represent the indebtedness of the Company legitimately incurred for the construction and the improvement of the plant. It seems to be clear, therefore, that any indebtedness of the Company of the kinds usually represented by bonds ought to be considered and given the same effect, if in actual existence, though not funded into bonds. On March 30, 1901, the Knoxville Water Company was indebted as follows:

First Mortgage Bonds	$150,000.00
Debenture Certificates	85,000.00
Capital Stock, Preferred	295,000.00
Notes. Payable	251,500.00
Elbert Wheeler, Treasurer	43,000.00
Accounts Payable	44.74
Making an aggregate of	$824,544.74

All these items were bearing interest except the account for $44.74.

Printed Record, p. 721.

That the preferred stock was intended to be, and actually was, a substitution for an equivalent amount of bonds, and that it was an interest bearing obligation of the Water Company created for the sole reason that the appellant in this cause refused to allow the Water Company to issue bonds to make the necessary improvements and extensions, fully appears from the testimony of William Wheeler.

Printed Record, pp. 705-707.

3. THE AMOUNT OF COMMON STOCK.

The amount of common stock outstanding March 30, 1901, was $645,000.

Printed Record, p. 720.

4. EARNING CAPACITY.

The earning capacity of the plant, that is, gross income, March 30, 1901, was $88,481.39.

Printed Record, p. 714.

5. OPERATING EXPENSES.

The operating expenses, March 30, 1901, amounted to $35,775.89.

Printed Record, p. 715.

Both the earning capacity and the operating expenses here stated relate to the entire plant.

6. COST OF REPLACEMENT.

The two experts, J. L. Ludlow and Nesbit Wingfield, testify to a joint calculation of replacement value as of March 31, 1901, of $618,100.24.

Printed Record, pp. 1954-1961, *inclusive.*

It appears that, as to all the material elements which it was proper for the Master to consider in making his report, there is abundant evidence to support his findings of fact, that the fair value of this plant was the sum fixed by him, to wit: $608,427.95, and if the evidence which we have cited above on which the Court has made a valuation, constitutes some evidence in support of the finding of the Master as to the value, this finding, confirmed by the Circuit Judge, must, under the rulings of this Court, be unassailable.

Logically, having found the fair value of the property of complainant as of the date of the passage of the ordinance March 30, 1901, we should include in the discussion of the first assignment of error the specific assignments with respect to the action of the Master in allowing certain elements as part of the value and of fair return; but these specific assignments are made under various sub-divisions under assignment No. 8, so that we digress at this point in order to notice the assignment between numbers I and VIII.

SECOND ASSIGNMENT.

This assignment raises the question that the Court erred "in over-ruling the defendant's petition to rehear. The several grounds therein set out, each and all afford good and sufficient reasons for the rehearing of this cause and dismissal of plaintiff's bill. The said grounds for rehearing are fully set out in the petition, which is hereby referred to, and incorporated herein and made part hereof in as full and ample a manner as if specifically copied and set out herein." This assignment is manifestly bad, as it points out no specific error but refers the Court to a voluminous petition, somewhere in the record, which petition embraces in all of its substance the specific assignments of error thereafter made in the Circuit Court. Therefore if this assignment of error should be treated as a sufficient one, under it alone would be opened up all the questions in the case, and that this should not be the effect of such general assignment is manifest from an examination of the rules of this Court. For that reason we make no further reference to this second assignment.

THIRD ASSIGNMENT.

This assignment raises the question that the Master should have looked to and reported upon the value of the plant, income and operating expenses subsequent to the passage of the ordinance of March 30, 1901, and says that the Court was in error in dismissing defendant's petition to rehear the question to a special master to ascertain whether with reference to these matters subsequent to the passage of said ordinance, complainant would have received a fair return.

The question made by this assignment is subsequently raised in the ninth assignment, more specifically, and we therefore defer discussion of the third assignment until the ninth and more detailed assignment is reached.

FOURTH AND FIFTH ASSIGNMENTS.

These assignments raise, practically, the same question—that the Court erred in making any reference whatever of this cause to a special master, at the time the same was made, and in the matter and manner of the reference made. These two assignments of error have been replied to by us in giving a history of the case, and by showing that the reference was made without any exception and, in effect, by consent.

SIXTH ASSIGNMENT.

This assignment is directed to the action of the Court in sustaining Plaintiff's exceptions to the Master's report, especially that one with reference to the allowance of blind services on the part of the value of the plant. This assignment is likewise raised under sub-division "c" of Assignment VIII, so far as blind services are concerned, and no other exception of plaintiff was sustained.

SEVENTH ASSIGNMENT.

This is a general statement of error in the action of the Court for overruling defendant's voluminous exceptions to the Master's report, without setting out any of them, when all of them that are material, are made in subsequent assignments of error and are treated by us.

EIGHTH ASSIGNMENT.

This assignment probably should be treated as directly related to Assignment No. 1, and growing up under it, in as much as said assignment presents, specifically, a claim of error entering into the Special Master's report and finding as to the fair value of Complainant's plant as of date March 31, 1901. The first error assigned under general Assignment VIII., is that the Court erred, as follows: (a) In adopting the Special Master's basis of cost of reconstruction of an entirely new plant as the value of the existing plant which had been in existence and use for more than twenty years. This assignment of error is based upon an entire misapprehension of the Master's finding. The Master does not adopt as the basis for his finding of the value of the existing plant the cost of reconstruction of an entirely new plant as assumed by said assignment of error. It is true the Master in setting out the details by which the value is made up, adopts many of the figures used by the witnesses Wingfield and Ludlow in their replacement estimate. But the Master did not adopt the replacement estimate as the criterion or basis of his determination of the true value, but as stated by him in his report, found the true value from consideration of all the elements entering into the valuation of the plant, including the replacement value as one element, and this actual finding of the Master must be held to refute the assumption of appellant that he adopted as his basis the cost of reconstruction. On the contrary the Court will look, in opposition to appellant's contention, to the fact that the Master has reported the actual value of the property and not the replacement value, at the sum by him fixed. Appellant, however, insists that because Mr. William Wheeler estimates, in his statement of investment values or proper cost of the plant, the incomplete depreciation at about $77,000, therefore the finding of the Master as to the value of the plant, as of date March 30, 1901, should be reduced by the amount of the assumption as to incomplete depreciation, incomplete depreciation in this record, meaning that depreciation of the physical plant resulting from its use, but such parts of the plant so used and depreciated being still component parts of the physical plant. Therefore defendant makes an erroneous application of the testimony of Mr. William Wheeler. The Court will see, from the statement of value amounting to large sums in the Master's report, such as rock and in some cases earth excavation, etc., that no depreciation can be represented in these items, even using the figures of Wingfield as to the replacement value thereof, it being manifest that where rock and earth excavation and matters of that kind have been accomplished, in construction, the work is in its nature permanent, and in such case replacement value will in fact represent the true value of such construction. It will be remembered that Mr. William Wheeler makes no computation or estimate of the fair value of the property, as of date March 30, 1901, therefore his statement as to incomplete depreciation in the plant is relative to his statement as to proper cost of construction as in fact accomplished, and of course, being on a basis of $853,000 in round numbers, if his figures had been reduced to the fair value found by the Master there would be a much less sum referable to incomplete depreciation than the sum of $77,000, and therefore, the amount of $77,000 used by Complainant as an item to be deducted from the Master's finding as to true value is erroneous in its assumption that there is any proof in the record from which it may be argued that there is $77,000 of incomplete depreciation in the fair value of the plant found by the Master, as of date March 30, 1901; and however this fact may be, we think it will be manifest to the Court that incomplete depreciation or some degree of impairment of value of the plant is a necessity incident to its age and operation. In this case not only is there incomplete depreciation, but in the operation of this plant there necessarily occurred what is known as complete depreciation, or such removal of machinery adequate and proper for the needs of the city when placed in construction, but which, with the growth of the city and the increased uses of water, became obsolete and were removed entirely from the physical plant. All this class of depreciation, being a necessity incident to the operation of a water plant when such plant is to valued at a given date, it certainly should be considered that the plant has gone through this strain of depreciation, and having survived it and being in operation, a certain value thereby has been added to the entire physical structure. In valuing one particular part of the plant, as separate from the entire structure it might be said that with incomplete depreciation there was some loss of value in that particular part, but when valuing a structure as a whole, as must be done in this case, there must be less reduction of the value of the entire plant. The reduction must be less than the entire amount of incomplete depreciation, and the value must be something at least in addition to the aggregate valuation of the single items of that plant separate from their position in the system. This was Judge Clark's view in this case, and in speaking of this depreciation he uses this language:

> "So that according to the contention of the City by its able counsel, this company is under the necessity, as towards the city, of losing absolutely and finally the culminated depreciation down to the time of the ordinance, by its deduction from the otherwise reasonable value of the plant, and that it is not entitled to a rate of income which will afford any compensation in the way of a sinking fund, or a depreciation fund, or interest on the lost capital which would represent this depreciation; in other words that the company is not entitled to be reim-

bursed for this loss in the form of repayment of the loss, or of an income on the sum which represents this loss.

If this position is sound it seems to me too manifest to require argument that such a doctrine leads to results that are already unjust and inequitable, and if any principle can be found on which this Water Company, by reason of its relation to the City, is under obligation to sustain this large loss, with no form of repayment of the capital, and without its at all adding to the value of the plant, and without any return on the same in the form of a dividend or a rate of charge, I am not aware of such principle, and after a most careful study of this point I am unable to perceive grounds on which such a proposition can rest and command approval." * * * "Now, does this Water Company sustain any such relation toward the City, and is its ownership of this plant and its operation subject to any just or legal demand on the part of the City that it shall permit this large loss?" * * "If this is capital lost necessarily, and if the age and growth of the company, when such losses must be sustained has been passed, does it not add to the value of the plant and property that it has gone through this hazardous and experimental evolution? To the extent that these losses have been sustained they will not be sustained again, but only new losses in the form of future growth of the City and population, which it was the purpose of this plant to serve and supply. It must be that the evolution through so disadvantageous a stage must add something to the value of what is left. If this is not so we have a striking lesson of the disadvantage of an investment of capital in this form, as contrasted with its investment in safer forms, with entire freedom from care and anxiety, and from depreciation of capital and from constant attention and energy to prevent such depreciation and secure a reasonable return."

Printed Record, pp. 303-304.

Therefore, we most earnestly insist that, the Master having found upon the evidence in this record, a part of which we have brought to the attention of the Court, that the fair value of this plant, as of date March 30, 1901, was in round numbers, $608,000, and this finding having been confirmed by the Circuit Court, this Court should not disturb that finding.

Sub-section b, Assignment 8, is as follows:

"In estimating or confirming the estimate of the Special Master as a part of the value of the plant upon which a fair return should be made to this Company, such parts or incidents thereof as were contributed or donated to the Company by the public or the City, to wit: services put in at the cost of consumers, about $35,000 to $40,000.00 and 'going concern' or good will $60,000.00 arising from the generous patronage of the Company by the public."

Printed Record, p. 325.

This assignment divides itself into two parts: 1st, as to the allowance to the Water Company of the fair value of such part of the plant as is claimed to have been donated to the Company by the public, this having reference to the question of services. The assignment itself admits on its face that the services referred to are such "as were contributed or donated to the Company by the public or the City," which admission is in acordance with the facts proven in the record.

Testimony of William Wheeler, Printed Record, pp. 2152-2153.

While we might content ourselves with the admission of counsel in said assignment of error that these services are now, or were at the date of the passage of the ordinance, the property of the Company, yet counsel is inaccurate in saying that the title to these services is derived from contribution or donation of the public exclusively, although the question is immaterial as we insist, in this case, as to how the Company acquired the right and title to the property. Mr. William Wheeler states in his testimony, which is uncontradicted:

"As a matter of fact very many, perhaps a large majority or nearly all of these original services laid in that manner have since been renewed by the Company and at its sole expense."

Printed Record, p. 2153.

So that the exception above referred to is answered by the reply to the question whether or not property acquired by gift or otherwise, by a corporation can be taken away either by way of reduction of rates or condemnation, except after the payment of just compensation. This question is answered in favor of the Water Co., by the decision of this Court in the case of Monongahela Navigation Co., vs. U. S., 148 U. S. 312. In this case it appeared that condemnation proceedings had been brought in the Circuit Court of the United States for the Eastern District of Pennsylvania, under an Act of Congress providing for the condemnation of a lock and dam in the Monongahela River. It was provided in the Act of Congress, that, in estimating the sum to be paid by the United States, the franchise of the said corporation to collect tolls should not be considered or estimated. Upon the trial in the Circuit Court, evidence of the value of the franchise was rejected. This Court in considering the correctness of this rule, said:

"The power to regulate commerce is not given in any broader terms than to establish post-offices and post-roads, but if Congress wishes to take private property upon which to build a post-office, it must either agree upon a price with the owner, or in condemnation, pay just compensation therefor, and if that property be improved under authority of a charter granted by the State, with a franchise to take tolls for the use of the improvement, in order to determine the just compensation, such franchise must be taken into account. Because Congress has power to take the property it does not follow that it may destroy the franchise without compensation. Whatever be the true value of that which it takes from the individual owner must be paid to him before it can be said that just compensation for the property has been made, and that which is true in respect to a condemnation of property for a post-office is equally true when condemnation is sought for the purpose of improving a natural highway. Suppose, in the improvements of a navigable stream, it was deemed essential to construct a canal and lock in order to pass around a rapids or falls; of the power of Congress to condemn whatever land may be necessary for such canal there can be no question, and of the equal necessity of paying full compensation for all the private property taken, there can be as little doubt. If a man's house must be taken, that must be paid for, and if the property is held and improved under a franchise from the State, with power to take tolls, that franchise must be paid for because it is a substantial element in the value of the property taken; but coming to the case before us, while the power of Congress to take this property is unquestionable, yet the power to take is subject to the Constitutional limitation of just compensation. The theory of the Government seems to be that the right of the navigation company to have its property in the river, and the franchises given by the State to take tolls for the use thereof, are conditional only, and that whenever the Government, in the exercise of its supreme power, assumes control of the river, it destroys both the right of the company to have its property there and the franchise to take tolls, but this is a misconception; the franchise is a vested right—the State has power to grant it—it may retake it as it may take other private property for public uses, upon the payment of just compensation. A like, though a superior power, exists in the National Government. It may take it for public purposes, and take it even against the will of the State, but it can no more take the franchise which the State has given than it can any private property belonging to an individual."

This was the view also of the Circuit Judge in the case of the Spring Valley Waterworks vs. City of San Francisco, 124 Fed. 574, a rates case, in which it was said:

> "It is true this was a condemnation proceeding, and the question was to determine what was just compensation for the appropriation of corporate property to a public use, while the case before this Court relates to the fixing of water rates which shall be a just compensation for the appropriation of complainant's property to a public use. It is not perceived that there is any difference in the principles applicable to the two cases, and this appears in the view of the Supreme Court in the case of San Diego Water Co. vs. San Diego, supra."

We submit that this must necessarily be the rule, in a rates case as in a condemnation case, because the source of the title of the property owned by a public service corporation is not material. It can make no difference whether it is derived by purchase out of the income or by contributions of its stockholders, or is given direct by the public to the company. It is manifest that a public service corporation derives all of its property, except that contributed by its stockholders, from the public, and whether this is so derived from income directly contributed by the public, by way of rates or otherwise contributed by the public in consideration of service rendered, is immaterial. It is the public's contribution in either case, and if for value, as in this case, it only makes the equity stronger.

The second point made by appellant under paragraph (b) of the 8th assignment of error,

Printed Record, p. 235,

is that the Master and the Court below were in error in allowing for what is termed "Going Concern or good will" to the extent of $60,000. It does not appear to be contended that the allowance of $60,000 is in excess of what the proof shows to be the fair value of the "Going Concern," or disputed that "Going Concern" has a value, and to this extent enhances the fair value of the plant as a whole. These conclusions cannot be disputed from the testimony in this case. Mr. William Wheeler, in his testimony, says:

"The consideration of the value of what is known as going concern, consists of the difference in value and the difference in cost between a plant that had attained to an established business and identically the same kind of a plant in the same place that has just been completed and has yet to build up its business. That value consists chiefly in the fact that the owner of the plant with the going value starts out at once with an income affording a return upon the capital invested in it, while the owner of the plant which is at the beginning of its operation has not that return—has a business that is small at the beginning and increases rapidly. The going value of the established plant consists very largely of the excess of its net income during a certain period with the business established above the income which would be obtained during the same period upon starting anew in the business. Or in other words, it is substantially equivalent to a deficiency account—to a summation of the deficiency of earnings in the first years of business to provide for a fair return on the capital invested therein. It is in a sense comparable with the allowance of interest during the year of construction before the plant is ready to operate. I consider 15 per cent of the construction cost a conservative valuation of the going concern. It is also a conservative valuation or summation of the arrears of interest which such a property would afford during the period of the development of its business to provide a fair return upon the capital invested therein. That is, upon the assumption, of course, that the investors are to have rates such as to provide a fair return upon the capital from the inception of the enterprise onward. This allowance of 15 per cent is based upon my analysis and experience of numerous other water plants in going through the period of business development. I have also compared it with the awards and findings that have been made by agreement and by arbitration, and it is within the average results of such findings or agreements, as well as of the conclusions which I draw from experience in the cases to which I referred."

Dep. William Wheeler, Printed Record, pp. 398-399.

It will be noticed that in this statement of the principle or rule of "going concern," Mr. Wheeler relies upon observation and experience, and from these deduces the general rule that 15 per cent of the construction cost is a fair allowance on this account. As it is apparent that there is a logical connection between income and going value, when Mr. Wheeler was recalled he was asked:

> "Q. What, if any, relation has the going value to the income of a plant like this?
>
> A. I think it has a very direct relation to the income as of the time when the "going concern" is to be valued—a necessary relation."
>
> *Dep. William Wheeler, Printed Record, p.* 2137.

He further said:

> "Q. Have you made a computation and statement of the value of the "going concern" in this case as related to the income of the Company?
>
> A. I have.
>
> Q. If so, I will ask you to state in detail?
>
> A. I will first state that my statement and estimate is based as directly as I am now able to base it, upon my understanding of the nature of the element of "going concern" as judicially determined in other cases; that is, that in effect it is the value of an established business as a component part of the property; that is to say, of a water works property as compared with a similar or identical property, conceived to be situated in the same place, considered as of the same time, that has no business, but that is in a position to begin to acquire a business; it would therefore, it seems to me, consist directly of any excess of income above operating expenses, which

the plant with its business already established, say this plant as of March 31, 1901, would have, beginning at that time and from that time onward, above the income of an identical plant, or assumptive plant if you please, which at that time is starting with no business, but which has its business yet to acquire, it being assumed however that such plants are not to be considered in competition, but that each is occupying the field independent of the other, one with the business and the other without the business at the time of starting."

Dep. William Wheeler, Printed Record, p. 2138.

Mr. Wheeler then inserts in his deposition a table entitled "'Estimate of 'Going Value' or 'Going Concern,' March 31, 1901," with the result of fixing the value of going concern in this case at $133,338 or 18.74 per cent of the estimated construction cost.

Dep. William Wheeler, Printed Record, p. 2139.

His former estimate of 15 per cent determined the going value at $106,706.92.

Dep. William Wheeler, Printed Record, p. 388.

A comparison of these two results, the one based upon observation, to wit: 15 per cent, and the other upon a mathematical calculation related to income, demonstrates the general accuracy of both methods, and more particularly proves that the first estimate of 15 per cent was too small. Each method, however, supports the other, although it is obvious that the calculation based upon income is the more logical and satisfactory of the two. The adoption of the second method would increase the total cost of the physical property, as set out in the analysis, from $853,000 to about $880,000, and would proportionally increase all allowances and calculations hereafter referred to, and based upon this amount of $853,655.41.

The ground on which counsel for appellant insists that "going concern," though admitted to be an element of value, should not be allowed in a case of this character, is that the public has made the value of "going concern," and even if this contention of fact be correct, and it is not admitted that it is correct in the sense in which the claim is made, still the principle of the Monongahela case, supra, is decisive of this contention against appellant, and the question before this Court is, finally, whether or not the value of "going concern," where it exists as a part of the value of the plant, as a matter of law, should be disregarded. The Master has not followed the proof as to the amount of the value of the "going concern," but has reduced the same from a value fixed at more than $100,000 in the testimony, to the sum of $60,000. Many cases are found wherein the principle of going concern is discussed and allowances made therefor. In the case of National Waterworks Co. vs. Kansas City, 62 Fed. Rep. 853, Mr. Justice Brewer said:

"A completed system of waterworks, such as the Company has, without a single connection between the pipes and the streets and the buildings of the city, would be a property of much less value than that system connected, as it is, with so many buildings, and earning, in consequence thereof, not only with the capacity to supply the city, but actually supplying many buildings in the city—not only with the capacity to earn, but actually earning—makes it true that 'the fair and equitable value' is something in excess of the cost of reproduction."

62 *Fed. Rep.* 865.

The above quotation is incorporated in the opinion by Judge Morrow in the case of Spring Valley Waterworks vs. The City, etc., of San Francisco, 124 Fed. 574, and is there adopted and approved.

The principle is also approved in the case of Kennebec Water District vs. the City of Waterville, et al., 96 Maine 185, 60 L. R. A. 856. See also Newburyport Water Co. vs. Newburyport (168 Mass.) 47 Northeastern Rep. 533, and Brunswick & Topsham Water District vs. Maine Water Co., 99 Maine 371.

It was insisted by Defendant that the value of the "going concern" "should not be based upon the value of the plant at the end of twenty years of its business, but upon the value of the initial plant. Other portions of the plant are mere replacements of part of the plant, having already become 'going concern' or additions or extensions of an existing plant and 'going concern' made in compliance with an existing public demand."

Our insistence is that what the Court is called on to determine in this case is the value of complainant's plant as of the date of the pasage of the ordinance, March 30, 1901, and as the going concern was a part of that value at that time, the same must necessarily be valued as of that date. It is not the going concern estimated upon the value of the plant twenty years ago, as it then existed, but the going concern of Plaintiff's plant as it was March 30, 1901. Defendant's contention seems to be that the going concern of a plant which might be valued at $500,000 or $600,000 March 31, 1901, and earning $85,000, is the same as the value of the going concern of a plant valued at $125,000 and earning $25,000. What we are entitled to is the value of the going concern for Plaintiff's plant, as of date March 31, 1901, and not the value of going concern of any earlier or different plant, and it is manifest that this is the only true and logical method of arriving at the value of the going concern of this particular plant, and is the method by which Mr. William Wheeler arrives at that value, and this certainly is the view which Mr. Justice Brewer had, as presented in the case of National Waterworks Co. vs. Kansas City, 62 Fed. Rep. 853, in which he said:

"A complete system of waterworks such as the company has" (not had) "without a single connection between the pipes and the streets and the buildings of the city, would be a property of much less value than that system connected as it is" (not was) "with so many buildings and earnings, in consequence thereof, the money which it does" (not did). "Again the fact that it is a system in operation, not only with a capacity to supply the city, but actually supplying many buildings in the city, not only with a capacity to earn, but actually earning, makes it true that the fair and equitable value is something in excess of the cost of reproduction."

From this statement it is manifest that the Court meant that the going concern must be calculated with respect to the plant as it was at the date of the inquiry, and in this way it has been handled by the Master and by the Court herein.

In this case the Master, on the value of the plant, exclusive of the value of the going concern, has allowed about 11 per cent.

The results reached, and the discussion of the method of reaching the same, in other well considered cases, are of importance in the consideration of going value as related to the physical plant in this case. A well considered case upon that question is the case of Newburyport Water Co. vs. Newburyport, supra, 168 Mass., 541, the opinion in which case was delivered by Chief Justice Holmes, now a member of this Court.

The fair value of the property for the purposes of its use by the city upon Jan. 29, 1895, was $275,000, with interest, Id. Id. p. 546. The Act under which the Newburyport Water Company's plant was valued prescribed that the value of the plant "shall not be enhanced on account of the future earning capacity or good will, or of the franchise of the company." Id. Id. 544. The report of the commissioners therein, at Sec. 7 thereof, states:

"We further find that the plant was a going concern and in full operation at the time of the transfer—one that had been tested by experience and with which the city could begin the immediate prosecution of the business of supplying water to the established connections for domestic use and municipal purposes (including in the latter hydrant service)—and upon an examination of these facts are of opinion that the property had a greater value for the purpose of its use by the city by reason thereof, than if the plant had not been in full operation, and that this should be considered in passing upon the value of the entire plant. This enhancement we have fixed upon as adding to the value of the property the sum of $40,000. In passing upon the same, we have not made the income derived from the business its element or basis, or any other factor than that above stated."

Id. Id., 545.

With respect to this phase of the case, the Supreme Court of Massachusetts, speaking through Chief Justice Holmes, says:

"The commissioners state the elements of valuation which they have taken into account. In addition to the value of the tangible property and easements, they have allowed forty thousand dollars for the fact that the plant was a going concern and in full operation. They have allowed for everything for which the petitioner was entitled to be paid. They have approached the question in a manner in which it was within their discretion to approach it. National Waterworks Co. vs. Kansas City, 62 Fed. Rep. 853."

Id. Id. 555.

The comimssioners award was accepted by the Court.

Id. Id. 556.

So that this well considered case was authority for the allowance of going concern, and the ratio of going value to the value of the physical plant, in said case, was 17 per cent, or that proportion which $40,000 bears to $235,000, and it will also be noted that in the case above referred to, the commissioners were expressly prevented from valuing good will in its relation to profits or the value of the franchise.

Another instructive Massachusetts case was that of the Gloucester Water Supply Co. vs. Gloucester, 179 Mass. 365, in which case the value of the going concern was fixed at $75,000,

Id. Id. 380,

and the valuation allowed for physical plant, not including a special value of water in excess of construction cost, $380,500; thus the proportion of the value of going concern to the valuation of the physical plant was 19.7 per cent. If the special value of water in excess of value of the land and reservoir be included in said case, the award of the physical plant, plus water, was $600,500, and the ratio of such going concern to such total physical value was 12.5 per cent, and in treating of said question of going concern, it is said in this case:

"The only doubt as to the propriety of the allowance of a sum in addition to the cost of duplication, less depreciation, of the water company's plant is whether the principles on which the commissioners proceeded were sufficiently favorable to the water company.

It is plain that the real, commercial, market value of the property of the water company is, or may be, in fact, greater than 'the cost of duplication, less depreciation, of the different features of the physical plant.' Take, for example, a manufacturing plant: Suppose a manufacturing plant has been established for some ten years and is doing a good business and is sold as a going concern; it will sell for more on the market than a similar plant reproduced physically would sell for immediately on its completion, before it had acquired any business."

"We think it is plain that there is nothing in the provisions of Sec. 16 of the act in question, St. 1895 c. 451, forbidding the comissioners considering this element of value which, as we have seen, in fact exists. The provisions of the act are that the 'fair value * * shall be estimated without enhancement on account of future earning capacity, or future good will, or on account of the franchise of said company.' Whether that would allow present earning capacity and present good will, apart from the franchise, to be taken into account, as distinguished from future earning capacity and future good will, need not be considered. It is plain that the element of value, which comes from the fact that the property is sold as a going concern, in which case it has, or may have, in fact, a greater market value than the same property reproduced in its physical features, is not excluded from consideration by that provision of the statute."

Id. Id. pp. 382-383.

With certain modifications, immaterial to be considered, the report of commissioners was confirmed in said cases, with the result that upon the actual physical value a percentage of going concern was allowed, amounting to 19.7 per cent.

In the leading case upon this question a decision by the Circuit Court of Appeals, in an opinion by Mr. Justice Brewer, in the case of National Waterworks Co. vs. Kansas City, 62 Fed. Rep. 653, it appeared that the Circuit Judge below had valued the property of the waterworks company at the sum of $2,714,000. The commissioners' valuation of the physical plant, (Kiersted and Moore), was $2,546,112. The valuation as found by the Circuit Court of Appeals, was $3,000,000.

Id. Id., p. 866.

If the commissioners' valuation of the physical plant is deducted from the award as to the fair value of the plant finally found by the Circuit Court of Appeals, a difference results of $453,888, as the difference between the entire value of the plant and the valuation of the physical plant, thus making said sum represent the value of the going concern and the ratio of the going value to the value of the physical plant would be 17.8 per cent. If, on the other hand, the action of the Circuit Court as fixing the value at $2,714,000 be treated as the valuation of the physical plant instead of the amount fixed by the commissioners this would leave the sum of $286,000 as the value of the going concern, or a percentage of going value to value fixed by the Circuit Judge of 9.53 per cent. In speaking of this matter of going concern in said case, it is stated:

> "Nor would the mere cost of reproducing the waterworks plant be a fair test, because that does not take into account the value which flows from the established connections between the pipes and the buildings of the city. It is obvious that the mere cost of purchasing the land, constructing the buildings, putting in the machinery, and laying the pipes in the streets—in other words, the cost of reproduction—does not give the value of the property as it is to-day. * * * The additional value created by the fact of many connections with buildings, with actual supply and actual earnings, is not represented by the mere cost of making such connections. Such connections are not compulsory, but depend upon the will of the property owners, and are secured only by efforts on the part of the owners of the waterworks, and inducements held out therefor. * * * It steps into possession of a property which not only has the ability to earn, but is, in fact, earning. It should pay therefor not merely the value of a system which might be made to earn, but that of a system which does earn."

Id. Id., 865.

The above cases were cases wherein, for the purpose of purchase, cities were determining the fair value of plants. It is submitted that the purpose of the valuation can make no difference with respect to the elements that enter into and result in the determination of fair value. The fair value must be the same, regardless of the purpose for which it is ascertained. If we go beyond the cases and look, historically, to the question of going concern, as to which we do not know whether this Court can consider, we find a uniform concurrence in principle and in practical result with what was determined as the ratio, approximately, of going concern to the value of physical plant noted in the above cases. For instance, referring to Ch. 307 of the Acts of Massachusetts for the year 1902, and to the published report of Selectmen of Milton, Mass., upon the subject of water supply for that town for the year 1902, the town engineer therein, Mr. Allen, says: "The value of the physical plant, without taking into account its value as a going plant, is $265,000."

The Selectmen, after discussing the elements and facts affecting the going value in said case, say:

"These facts indicate that the company, after twelve years, for the first six of which it paid nothing to its stockholders, and for the last six 2 per cent. per annum, has reached a point where it is just about to receive an equivalent for the time and money that it has put into the plant. In passing upon its value, we must take that into account, and consider how much more it is worth, having reached a profit paying basis, than as if the town had just built a plant and had to go into the market and wait for its customers for years. Upon these considerations, it would seem to us after a close examination, and taking the judgment of our experienced engineer and counsel, that the sum of $50,000.00 is not in any sense an exaggeration to be added to the value of this plant; and that carried its value up to $315,000."

The ratio of going value, $50,000, to the value of physical plant, $265,000, in this determination was therefore 18.9 per cent. In pursuance to these valuations enabling legislation by the State was procured, and the property was purchased by agreement upon the basis of the above mentioned report.

Ch. 307, *Acts Mass.* 1902.

Likewise in the case of valuation made in November, 1902, of the water plants of the towns of Dover and Foxcroft, Maine, the award of the commissioners was $135,659, which included the valuation of the going concern which had been fixed by the experts at $25,000 and $30,000 respectively, so that the excess of the total appraisal above the value of the physical plant was, approximately, $30, 658, thus making the ratio of excess of appraisal considered as a going concern, above the average of the valuation of the physical plant, 29.2 per cent.

Taking an average of all the above cases, we find the same to be as follows:

Kansas City	17.8
Newburyport	17.0
Gloucester	19.7
Milton	16.8
Dover and Foxcroft, approximately ..	29.2
Average of all	20.5
Av. excluding Dover and Foxcroft ..	18.4

In the present case the Master has allowed a little less than 11 per cent. upon the valuation of the physical plant, exclusive of the valuation of going concern therein included.

We, therefore, insist that the principle of allowance of going concern is supported in reason and by authority, and the only question for the determination of the Court, therefore, of any difficulty being the amount for which an allowance should be made, and in the absence of any other testimony, which testimony is heretofore shown to be well within the allowance upon that question, such allowance as is made in this case being half of the allowance as supported by Complainant's witnesses, should not be in this Court disturbed, unless it be to raise it to approximately the amount testified to by Mr. William Wheeler, $133,000, (Printed Record, Page 2139) or to an amount measured by percentages found to be just and equitable in the cases above quoted.

Appellant, in the 8th pargraph of its assignments of error, with respect to valuation fixed by the Master and Court below, assigns as error (c) as follows:

"In estimating or confirming the Special Master's estimate as part of the value of this plant, unused portions of the plant, such as blind services, etc."

We doubt whether or not, under the rules of this Court, this assignment is in proper form, as it does not point out the amount, or principle, upon which the report of the Master and the action of the Court is excepted to with respect thereto. We will state, however, in explanation of the assignment that it involves the question of allowance for that part of a service which Complainant has put into its system as required from time to time in such district so that it may be ready when its use shall be called for, but which at the time is not used; in other words, it is a service which when constructed has no connection with private service or other premises, and for that reason is called blind. The principle, doubtless, upon which this exception is intended to be taken is that this service is not being actually used for the public service. But it appears from the testimony that the City very properly requires these blind services at the time to be constructed so as to save the streets from injury by taking up asphalt, brick, or other street paving thereafter.

We insist that outside the special requirements of the City for blind services in this case, it would be well within the rights of the Water Company to provide these blind services as a part of its general plant in use for the public service, and the same would be justified upon that ground as property owned and used in a broad sense for the public service, but that question does not arise with respect to these particular blind services, for the reason that appellant actually required complainant to install these blind services at the time and in the manner in which they were installed, and for which they are to be valued herein.

As to these blind services, William Wheeler testifies as follows:

"A. Yes sir, the city passed an ordinance requiring the Water Company to move its pipes where needful from their then existing location so that the sewers might be laid along the middle of the street, and also to lay service pipes from the street mains to the curb lines in advance of the paving of the streets, and all at the cost of the Water Company.

"Q. Were the service pipes referred to in the last question and answer laid by the Company?

A. They were.

Q. And in compliance with the ordinance?

A. They were."

Printed Record, pp. 445-446.

From this it is obvious that the city, in undertaking to regulate the rates of complainant, is now estopped from claiming that the pipes laid at the city's direction should not be valued as a part of the company's property. It will be observed by the Court, however, that in the Master's finding as to the fair value of complainant's plant, as of date March 30, 1901, the value of blind services was excluded, and complainant, by its 10th exception, assigned that exclusion as error.

Printed Record, p. 191.

The Court, after considering all the exceptions filed both by plaintiff and defendant, sustained only this 10th exception, thereby adding to the valuation fixed by the Master the value of the blind services.

Printed Record, pp. 300-301.

The number of these blind services, March 31, 1901, was 206.

Printed Record, p. 446.

As it appears that these blind services are laid from the street mains to the curb lines, they are of the same value as were services laid complete in the paved streets, less the cost of extending them from the curb line across to the property line and putting on a stop and waste. The ordinary cost of this last work is about $1.50 for each service.

Printed Record, p. 2066.

We have shown that the services under paved streets, completed, are valued at $19.50. Deducting the cost of running the pipe from the curb line into the property and allowing an equal amount for replacing pavement, these blind services should be valued at about $16.50 each. or not quite $3,400 for the 206 that were in existence March 31, 1901.

A further assignment of error by appellant with respect to the valuation of complainant's plant is under sub-section (d) of Assignment VIII, and is as follows:

"In estimating or confirming the Special Master's estimate as part of the value of this plant of such things as did not enter into the original construction of the plant, though they might be necessary in a reconstruction of the same at the present date, such as the restoration of pavement or macadam on the streets over the pipes. This amounts to some $15,000.00."

Printed Record, p. 235.

The error of appellant in this assignment arises out of the idea that because the Water Company did not restore the pavement or macadam on the streets over the pipe, the cost of this replacement is not to be added to the valuation of plaintiff's plant, and especially to the valuation of the pipes under said paved or macadamized streets. The value of this plant must be determined under conditions existent on March 30, 1901, when the ordinance was passed. If consideration be given to the fair original cost of any part, it should be in *toto*, or for the whole property as well.

Brunswick & Lopsham vs. Maine Water Co.,
99 *Maine* 371.

It may be that the iron pipes used for the transmission of water may have originally cost $30 or $35 per ton, and yet the Master in his report following prices as they prevailed on March 30, 1901, placed the value of the piping at only $23.50, the prevailing price at that time. If complainant must submit to a valuation at the price fixed as of March 30, 1901, there certainly must be taken in consideration in favor of complainant, conditions affecting said pipe as of date March 31, 1901, and while the pipe under ground, taken as an independent proposition, should be properly valued by the Master as an item entering into the valuation of the entire plant, yet as the system of the complainant is composed largely of pipe under macadamized and paved streets, so also should be added to the value of the plant what it would cost, as of that date, March 31, 1901, to place pipe in that condition under paved and macadamized streets;

in other words, the Master has valued the pipe correctly as though it were upon top of the ground and at the prices prevailing in the market at that time, and this pipe being in fact not upon the top of the ground but under paved and macadamized streets, and no additional valuation being given to the pipes on that account, it seems to us obvious that the Master is right in ascribing to the general value of complainant's plant what is due to the condition then prevailing, and which would be necessary to usefully place said pipes; that is, the sum necessary to excavate and restore said paved or macadamized streets in order to utilize said pipe as a part of the system of complainant and to replace, therefore, the streets in the condition in which they were before the laying of such pipes; in other words, we insist that by placing these pipes before the streets were paved and macadamized, the Company has acquired for itself the value of pipes placed in the ground without the burden of removal of paved or macadamized streets, although some of the pipes were laid in streets which were macadamized at the time; that is to say, on March 31, 1901, the value of complainant's plant consisted in the paved districts of not only the pipes under the ground, but also of the cost of removing said pavements, and placing said pipes under them, and therefore the value of complainant's plant was enhanced in this way as properly held by the Master.

The only other exception that need be noticed in connection with the value of complainant's plant, as fixed by the Master and the Court, is that contained in subsection (f) of Assignment VIII, in which appellant assigns as error the alleged refusal of the Master and the Court to consider alleged serious defects in the construction of plaintiff's plant, in its intake tower, etc. With respect to this assignment it is only necessary to say, that it is shown conclusively in the record that the alleged defects are purely imaginary. They have not affected the water furnished to the public or the value of complainant's plant. They were considered by the Master and rejected, not because they should not be considered, but because the Master decided that the claim of the City with respect to the improper location of the intake tower, among other imaginary and trifling defects alleged, was without effect upon the value of the plant.

"In connection with this intake tower, defendant claims that it is of no value, because it is below the mouth of White Spring Branch, which empties into the river some two hundred yards above. Drs. Deaderick and Miller testify that this small stream comes out of a hollow some three-quarters of a mile long, inhabited by the poorer class of people, who have no sewerage, and that when a hard rain comes all refuse goes into the river immediately above the intake tower. No analysis of the water is shown, and complainant relies upon the fact that its franchise compelled it to build its pumping station at that point, which is undoubtedly true.

If good cause exists why the water should not be taken here, the city has its remedy by proper legal steps. Until this is done I certainly think the intake tower should be given its full valuation. It is there serving its purpose, and may be for many years yet."

Report of Master, Printed Record, p. 177.

The article of agreement for the construction of complainant's waterworks with the City of Knoxville, requires the water "to be taken from the Tennessee river at the site purchased by the city for that purpose."

Printed Record, p. 23.

It is undisputed in the proof that the intake tower was established at the very point required by said agreement, and upon the site which the city itself had purchased and had sold to the complainant company under the agreement above set out.

Testimony William Wheeler, Printed Record, p. 2180.

So that it is manifest the City is estopped in this case to raise such question, especially in the absence of any proof whatever that the grievance on that score is anything but imaginary. It is admitted that there is no proof to the effect that the location of the intake tower as required by the City has reduced to any extent the fair value either of the intake tower or the plant of complainant, and no claim to this effect is now made in appellant's brief.

This disposes of all the assignments of error which appellant makes to the value as found by the Master, and we insist that this Court, after consideration of all of them, will find that the Master, confirmed by the Court, has found the fair value of this plant correctly to be not less than the sum of $608,000. And it will be noticed that in the above value is included $60,000 for going concern, while the reproduction estimate of Wingfield & Ludlow, at $618,000, does not include, of course, going concern; thus the Master's found value is really exclusive of going value some $70,000 less than the replacement value.

NINTH ASSIGNMENT OF ERROR.

The Ninth Assignment of Error is to the action of the Court in refusing to have the Master report upon the actual income of complainant's plant under its own rates for any period subsequent to the passage of defendant's ordinance of March 30, 1901.

It is insisted by counsel for appellant that:

"As the city ordinance makes a horizontal reduction of about 20 per cent of the company's rates, the Court, by reducing the actual receipts of this company, after the pasage of the ordinance, by 20 per cent, could have ascertained with almost mathematical certainty what would have been the plaintiff company's income under the city's ordinance. Instead, the Court erroneously had the Special Master to report upon the income of the preceding year only, and speculated from that standpoint as to what would have been the income for the next year, and what would have been probably realized under the ordinance."

Printed Record, pp. 235-236.

This assignment of error is not well taken, for the reason that it has been well settled that the proper method of determining the effect of a given rate regulation upon income is to take the effect of such regulation for a term preceding the date of its enactment, and not for a time subsequent thereto.

In the case of Chicago and N. W. Ry. Co. vs. Dey, 35 Fed. Rep. 881, Judge Brewer said:

"Again it is said that it cannot be determined in advance what the effect of the reduction of rates will be, oftentime it increases business, and who can say that it will not in the present case so increase the volume of business as to make it remunerative, even more so than at present, but speculations as to the future are not guides as to judicial action. Courts determine rights upon existing facts. Of course there is always a possibility of the future; good crops may increase transportation business, poor crops reduce; high or low rates may likewise affect, but the only fair judicial test is to apply the rates to the business that has been done in the past and see whether, upon that basis, such rates will be remunerative, or to compel the transaction of business at a loss."

Chicago, etc., vs. Dey, 35 Fed. Rep. 881.

In the case of Smyth vs. Ames, 169 U. S., the question was presented whether or not it was proper to apply the law reducing rates to the past business of certain railroads in Nebraska. In that case the test was made by taking the income for the three years preceding the date of the passage of the law reducing the rates, and in discussing that matter the Court said:

"The first and most important contention of the plaintiff is that, if the statute had been in force during any one of the three years preceding its passage, the defendant companies would have been compelled to use their property for the public substantially without reward and without the just compensation to which it was entitled. We think this mode of calculation for ascertaining the probable effect of the Nebraska statute upon the railroad companies in question is one that may be properly used."

Smyth vs. Ames, 169 *U. S.* 528.

Thus the properties of the several railroads were valued as of the date of the passage of the rate regulation statute, and the incomes were taken for the three years immediately preceding that date and the reduction made by the act applied to the income for said preceding years. The Act of Nebraska in question took effect Aug. 1, 1893. The suits were brought July 28, 1893. The three years for which the income of the several roads was taken were the years ending the 30th day of June, 1891, 1892 and 1893, respectively. Id. 533.

The case of Smyth vs. Ames was tried at the October term, 1897, of this Court, and was decided in March, 1898, affirming the judgment of the Circuit Court. It was provided in the judgment of the Circuit Court that: "When the circumstances have changed so that the rates fixed in the said act of 1893 shall yield to the said companies reasonable compensation for the services aforesaid," the defendants might apply to the Court, by bill or otherwise, as they might be advised, for a further order in that behalf, it being provided in the Nebraska Act, Section 6:

"That the Board of Transportation is hereby empowered and directed to reduce the rates on any class or commodity in the schedule of rates fixed in this act, whenever it shall seem just and reasonable to a majority of said Board so to reduce any rate; and said Board of Transportation is hereby empowered and directed to revise said classification of freight as hereinbefore in this act established, whenever it shall appear to a majority of said Board just and reasonable to revise said classification."

Id. p. 474.

From the above it will be seen that the Court below in its decree with respect to the years for which the income should be taken, and to which the reduction of rates should apply, followed the decision of this Court in the case of Smyth vs. Ames, for which reason there can be no error in its action.

Is there any more reason why Judge Clark should have said, in the case now upon trial, that he would require testimony with respect to the income of the Water Co. for the years 1902 and 1903 than that this Court, acting upon case of Smyth vs. Ames in 1898, five years after the passage of the Nebraska Act of 1893, should have sent that case back in order that proof might be taken to show the effect of the act as tested by the incomes of the railroad companies for the years between 1893 and 1898?

It is further insisted in this connection, by appellant, in its assignment of error and brief that as the original bill in this case was not filed until eight months after the passage of the ordinance, and proof was at first allowed by the Master under a misconstruction of the Court's ruling for a period beyond twelve months after the passage of the ordinance, the year subsequent to the passage of the ordinance is the year for which income and expenses should be taken, and with respect to which the effect of the ordinance should be decided; but at the same time the appellant insists that the basis of the valuation on which a fair return must be had is of the date when ordinance was passed. This proposition is negatived by the case of Smyth vs. Ames, supra, but aside from that it is fallacious, for if the income and expenses for the year or years succeeding the passage of the ordinance must be the basis of comparison, the Company must be entitled to a fair return upon the value of the plant during the time that income is realized on it, for the reason that the property produces the income, and it is the fair value of the property in use for the production of a given income which is the basis for the determination of rates. In other words, suppose that this Company, on March 31, 1901, had property in use for supplying water, to the fair value of $1,000,000, and that taking the average of the year succeeding, its property, at a fair value, was worth $1,500,000 by either increase in value or additional construction, and the income calculated as of the conclusion of the succeeding year was a certain amount, it is manifest that in such a case the Company is entitled to receive a fair return on its entire investment during said year, and in this case, if the Master, instead of taking the income and expenses of the year before the ordinance was passed, as in the case of the Railroad against Dey, should have taken the succeeding year where there was an increase of $5,000 to $7,000 in income, it would have been necessary to allow for the increased construction and increased value of the succeeding year. There was additional construction alone during the year from March 31, 1901, to March 31, 1902, of $73,486.01.

Testimony William Wheeler, Printed Record, p. 645.

Assuming, therefore, that if the year subsequent to March 30, 1901, i. e., up to March 30, 1902, were taken as the basis for the earning of income for that year, it must be admitted that there is no certain proof in the record for the ascertainment of the value of the plant for that specific year. However, from the testimony it can readily be approximated. The replacement estimate of Wingfield and Ludlow as of March 31, 1901, is $618,100.24

Testimony Wingfield, Printed Record, p. 1961; *Testimony Ludlow, Printed Record, pp.* 2077-2078.

Mr. Ludlow also gives a replacement valuation of the plant, as of date Sept. 30, 1902, or for a period of one year and six months after the passage of the ordinance, of $740,068.36.

Printed Record, p. 941.

Thus showing that, including additional construction, the difference between the two replacement statements represents approximately the increased value of the plant as of Sept. 30, 1902; or in other words, the replacement value of the plant of Sept. 30, 1902, was worth more than the replacement valuation of the plant as of date March 31, 1901, by the sum of $121,968.12.

So that, as bearing upon the question of fair return measured by the value of the property and its increased income for the year subsequent to the ordinance, there could be no material change, as affecting the question of fair return, upon the fair value of the property during the time it was used for the public, it being manifest that where both replacement estimates are used, as of March 31, 1901, and Sept. 30, 1902, the relative difference between said amounts represents, not only the difference between said replacement estimates, but also the difference between the real values of the plant or its increased value Sept. 30, 1902. The same allowances made in this case as a fair return on the value of the plant, as of date March 30, 1901, if applied to the additional value as of date Sept. 30, 1902, would more than equal the additional income derived from the plant the year subsequent to the passage of the ordinance, even under existing rates.

Appellant states in its Assignment of Error, subsection (a) of general assignment IX, that the "income of the year succeeding the passage of the ordinance exceeded that of the preceding year by about $13,000.00."

Printed Record, p. 236.

when, as a matter of fact, according to the uncontradicted testimony in the case, it is the difference between $88,481.39, the income of the year ending March 31, 1901,

Printed Record, p. 714,

and $95,452,12, the income for the year ending March 31, 1902,

Printed Record, p. 716,

or an additional income of $6,970.73, excluding expenses in both instances. The increase of expenses, however, for the year subsequent to the passage of the ordinance was $1,227.36, the expenses for the year ending March 31, 1901, being $35,775.89,

Printed Record, p. 715,

and for the year ending March 31, 1902, $37,003.25,

Printed Record, p. 717,

When the defendant first called for testimony in regard to the value of the plant at a date later than March 30, 1901, the plaintiff objected, on the ground that any testimony in regard to the business affairs or condition of the plaintiff after March 31, 1901, was irrelevant and incompetent. This exception was overruled,

Printed Record, p. 498,

and the evidence objected to was admitted. Subsequently, however, the Master changed his ruling upon this point and held that he should not have admitted proof "on any period after March 31, 1901,"

Printed Record, p. 169,

and he stated expressly in his report that he thereafter excluded such proof and had not considered it in his report.

Printed Record, p. 169.

After this final ruling of the Master excluding this testimony, it was, therefore, not necessary for the plaintiff to except.

The Master further states that he had at first admitted testimony as to later periods because of a misapprehension of the ruling of the Judge on the point.

Printed Record, p. 169.

The question as to the amount of gross income found by the Master for the year ending March 31, 1901, is raised by appellant's assignment of error, sub-section (b) under general assignment IX,

Printed Record, p. 236,

and it is contended therein that the Master was in error in not allowing "$208.00 excess of accounts carried out at the end of the year over the amount of accounts carried in at the beginning of the year; and that about

$2,300.00 or $2,400.00 for taps and supplies which are likewise income accounts." This, of course, raises a question in the main of fact, and the action of the Master is abundantly supported by the record. On its face it would seem to be absurd that items such as these, which do not represent profit at all, should be claimed as a part of the income of the Company. The action of the Master upon these items is shown at page 181, Printed Record.

The argument on this point by the appellant is that as the charge for the taps was paid, in the first instance, by the consumer it is not, therefore, a proper construction cost. The fact that it was paid principally by the consumer does not alter the fact that it is essentially a construction item. If the entire distribution system of the Company had been laid by it, principally at the cost of consumers, who were to receive the services of the Company in return for their contribution to the extent of the cost of laying such mains, that would not alter the fact that the contribution so made by consumers was a part of the construction cost of the plant.

Upon the question of "supplies" the Master said in his report "I may not understand this question, but cannot see under what aspect defendant claims this to be income."

Printed Record, p. 181.

The transactions upon which the appellant bases its claim upon this point are entirely internal transactions of the Water Company dealing with itself, and no money passes, and no profit or loss, as the case may be, accrues to the Water Company.

The witness Frank C. Kimball testifies as follows on this subject:

> "I will state as an example that all pipe and pipe supplies, gates, hydrants, lead, etc., when they are purchased are charged to an account called the 'supplies account,' and placed in stock. When an extension is made—a few hundred feet of pipe laid—the material is taken from stock and charged to that particular extension at as near cost prices as we can get at it, but these cost prices may vary somewhat, so that it is impossible for the books to show the direct unit price for these particular pieces of work."

Printed Record, p. 816.

Sub-section (c) under general exception IX, Printed Record, p. 236, is as follows:

> "In refusing to take into consideration, for any purpose whatever the fact or proposition that a reduction of rates is calculated to increase in some measure at least the business, and possibly the income, of the Company."

It will be noted by the Court that in sub-section (a) of this same general exception appellant says:

> "As the city ordinance makes a horzontal reduction of about 20 per cent of the company's rates, the Court by reducing the actual receipts of this company, after the passage of the ordinance, by 20 per cent, could have ascertained with almost mathematical certainty, what would have been the plaintiff company's income under the city's ordinance."

This is an admission that if the Water Company's rates had been reduced by the application of the ordinance during the year subsequent to the passage of the ordinance, the amount of income thus received would have been reduced to a mathematical certainty, by the percentage of said reduction.

The first proposition raised under the assignment of error now under discussion is that it should not be assumed, under the facts in this case, that the rate ordinance, if applied, would have reduced the income by the amount of reduction made by the ordinance. This same question was discussed in the case of Smyth vs. Ames, supra, and in that case for the three years prior to the date of the Nebraska Act the reduction made by said Act was applied to the income actually earned, which is the same method of treatment that was adopted in this case by the Master and by the Court.

Smyth vs. Ames, 169 *U. S.* 534 *et seq.*

The same rule was announced in the case of Railroad vs. Dey, wherein Judge Brewer said:

"The only fair judicial test is to apply the rates to the business that has been done in the past and see whether, upon that basis, such rates will be remunerative, or to compel the transaction of business at a loss."

Chicago and N. W. Ry. Co. vs. Dey, 35 *Fed. Rep.* 881.

And this was so stated in answer to the contention, "that it cannot be determined in advance what the effect of a reduction in rates will be."

So that the Court below manifestly could not be in error in following the practice which has been adopted by this Court in the case of Smyth vs. Ames, supra.

Appellant in this case relies, as supporting its contention, upon the case of Railroad vs. Wellman, 143 U. S. 339. This was a case where, in 1889, the Michigan legislature had passed an act, which took effect Oct. 2, 1889, reducing passenger rates, and on which day a friendly suit was brought by Wellman against the railroad for the violation of the statute. The case was tried Nov. 22, 1889, and a judgment rendered in favor of Wellman on an agreed statement of facts, and the only question presented in this Court was whether or not the Court below should have, on request, peremptorily charged the jury that the law fixing the passenger rate was unconstitutional. This Court stated that the question was not submitted to the jury as to whether they believed that an increase of freight rates would work a reduction of income from freight, nor even whether they believed that a reduction of the passenger traffic between Battle Creek and Port Huron, would not so increase the travel as to increase the earnings therefrom. On this state of facts and pleadings this Court, speaking through Justice Brewer, said:

"Can it be, under these circumstances, that the Court erred in peremptorily refusing to instruct the jury that an Act fixing the maximum rate of two cents per mile is unconstitutional? Is the validity of the law of this nature dependent upon the opinion of two witnesses, however well qualified to testify? Must Court and jury accept their opinions as a finality? Must it be declared as matter of law, that a reduction of rates necessarily diminishes income? May it not be possible, indeed does not all experience suggest the probability that a reduction of rates will increase the amount of business, and therefore the earnings?"

Railroad vs. Wellman, **143** *U. S.* **339.**

If the opinion in the Wellman case is to be construed as holding that it is error for the Court to apply the rate fixed by statute to past business of the company, it is in manifest conflict with the later case of Smyth vs. Ames, supra; but however the case of Railroad vs. Wellman may be regarded as applying to railroads, the very argument advanced by counsel as to the character of business done by the Water Company precludes this Court from saying that, in a case of this character, a reduction in rates would not affect a corresponding reduction of income, for counsel argues that a water company is a monopoly, and quotes from the case of Bristol vs. Bristol Waterworks, 49 A. R. 975, as follows:

"A monopoly has no good will, for its customers are retained by compulsion, not by their voluntary choice."

Now, admitting for the sake of the argument, that this is true, as this Company has exclusive water privileges within the City of Knoxville, as against every one but the city, it certainly must be admitted that water is an absolute necessity to all the inhabitants of the city, and that practically, in a city with large manufactories, as is the case at Knoxville, it is exceedingly improbable that any consumers of water in the city will or can use water except that which is furnished by the Knoxville Water Company, and so the Knoxville Water Company, being a monopoly controlling all the supply and supplying all the demand, covers all the territory, and the consumption of its product is dependent alone for its increase upon the increase of the business and population of the town. It is charged repeatedly by counsel for appellant that complainant is not dependent for its business upon good will, and in view of the assertion of this proposition, it is difficult to see how it can be assumed that in case of a water company, unlike the case of a railroad company, income can be materially enlarged by a reduction of rates, for the reason that water, being a necessity, and the rate being low, the quantity consumed is dependent very remotely on a difference of rate, and the only thing, practically, which makes the difference, a fairly reasonable rate being charged, is the additional business and uses growing up dependent on the increase of business of the city and increase of its population. All services at fixture rates if stimulated to greater use of water by a reduction of rates, would produce loss and not profit to the Company. In the case of railroad traffic from one place to another, income is dependent, to a considerable extent, on the freight rates—to such an extent that a high rate may absolutely prohibit profitable commerce, but we submit that the same condition does not, and cannot, prevail within the limited area supplied by a water company in the furnishing of a necessity. The rule here being contended for as to the application of rates to the business which has been done was likewise sustained in Spring Valley Waterworks vs. City of San Francisco, 124 Fed Rep. 599.

In reference to this contention we think the Master has well said in this case:

"Defendant contends that reduction in price will so increase consumption as to cause no diminution in income. This may be true; the world has been frequently astonished by such results, but evidently complainant represented by parties of great experience thinks otherwise, or the rates would be reduced without this expensive litigation.

In the matter of water consumption, small consumers and the poorer people do not often use as much as their minimum rate would allow, and with large consumers and wealthier people it is not reasonable that a 22 per cent reduction would cause them to use any more water They will use all they require at the higher rate.

A reduction in railroad rates is not comparable to a reduction in water rates, in this respect; the former may gain business from competing lines, cause people to travel, or enable shippers to reach more distant markets, and still leave them a profit."

Printed Record, pp. 181-182.

Relying, therefore, on the practice adopted in the case of Smyth vs. Ames, supra, and the revenue applicable to a company of this kind and the admissions of appellant herein, we insist that the Master has correctly estimated the effect of the ordinance by a horizontal reduction thereby in the income of the Company for the year preceding the passage of said ordinance.

The next assignment of appellant, sub-section (d) under general assignment IX, is that the Court erred:

> "In adopting the Master's division of income between city and outside city, while at the same time holding that such division was immaterial. The Court adopts the general result obtained though this unnecessary division, though not approving the principle of making such division. In other words, the 3.35 per cent return, which is calculated by the clerk and adopted by the Court as the return that could be realized under the city ordinance, is the result of a calculation made by the clerk, in which he assigns 11 per cent of income outside the city, and only about 5 per cent of operating expenses outside the city, thus depriving the city proper of its due proportion of income, and making it bear an undue proportion of operating expenses, and in this manner, after assignment, an undue proportion of the value of the plant to the city, the conclusion is reached that only 3.35 per cent can be realized as a return to the plaintiff company."

Printed Record, p. 236.

Under this assignment it is doubtful whether the appellant means to except to the fact that a division of income and operating expenses at all is made as applicable outside and inside the City, or whether it means simply to except to the relative per cents applicable inside and outside the City as found by the Master. If the first proposition is insisted on by appellant, then the same is decided adversely in the case of Smyth vs. Ames, supra, in which case the argument was made:

"That the reasonableness of the rates established by the Nebraska statute is not to be determined by the inquiry whether such rates would leave a reasonable net profit from the local business affected thereby, but that the Court should take into consideration, among other things, the whole busines of the company, that is, all its business, passenger and freight, interstate and domestic."

The Court answered:

"If it be found upon investigation that the profits derived by a railroad company from its interstate business alone are sufficient to cover operating expenses on its entire line, and also to meet interest, and justify a liberal dividend upon its stock, may the legislature prescribe rates for domestic business that would bring no reward and be less than the services rendered are reasonably worth? Or must the rates for such transportation as begins and ends in the state be established with reference solely to the amount of business done by the carrier wholly within such state, to the cost of doing such local business, and to the fair value of the property used in conducting it, without taking into consideration the amount and cost of its interstate business, and the value of the property employed in it? If we do not misapprehend counsel, their argument leads to the conclusion that the State of Nebraska could legally require local freight business to be conducted even at an actual loss, if the company earned on its interstate business enough to give it just compensation in respect of its entire line and all its business, interstate and domestic. We cannot concur in this view. In our judgment, it must be held that the reasonableness or unreasonableness of rates prescribed by a state for the transportation of persons and property wholly within its limits must be determined without reference to the interstate business done by the carrier, or to the profits derived from it. * * * It is only rates for the transportation of persons and property between points within the state that the state can prescribe; and when it undertakes to prescribe rates not to be exceeded by the carrier, it must do so with reference exclusively to what is just and reasonable, as between the carrier and the public, in respect of domestic business."

Smyth vs. Ames, 169 *U. S.* 541.

But also it is said in the case of San Diego Land Co. vs. National City, 174 U. S. 758:

"One of the points in dispute involves the question whether the losses to the appellant, arising from the distribution of water to consumers outside of the city, are to be considered in fixing the rates for consumers within the city. In our judgment the Circuit Court properly held that the defendant city was not required to adjust rates for water furnished to it and to its inhabitants so as to compensate the plaintiff for any such losses. This is so clear that we deem it unneccessary to do more than to state the conclusion reached by us on this point."

San Diego Land Co. vs. National City, 174 *U. S.* 758.

This being true, it necessarily follows that if the losses outside the city, as affecting income, cannot be considered, then the profits outside of the city, which also enhance the income, must necesarily be excluded. Losses and profits bear the same relation to income to the extent that one diminishes while the other, in the same proportion, enhances, so that the only proper use that can be made of the property, income or expenses outside the city is that use which is made of it by plaintiff in this case; i. e., to determine what part of the income is in fact without the city and what part of the expense incident to the operation of the business should be borne by the rate payers within the city and those without.

The division of percentages determined by the Master in this case, are not controverted. In fact the Master upon that question says:

"I fail to find any estimate in figures by defendant, it being content to claim that no division is made. If division is to be made at all, I have no alternative except to adopt the percentage furnished by complainant."

Printed Record, p. 183.

"A. The several subdivisions of operating expenses are the ordinary subdivisions as kept upon our books, and the sum total of such expenses, to wit, $35,775.89, is made up of the following items:

	Entire Plant	City Proper
Alum	$1,310.78	$1,157.68
Expense	2,976.16	2,916.64
Fuel	5,431.15	4,796.79
Insurance	564.43	547.17
Filter Station	2,270.28	2,247.58
Pump Station	3,948.19	3,908.71
Repairs	3,287.82	3,074.11
Salaries	7,805.06	7,024.55
Taxes	8,182.02	8,161.73
Totals	$35,775.89	$33,834.96

My computation of the several items entering into aggregate expense in city proper is made up as follows:

The cost of alum is assumed to be proportional to the revenue derived from water (all of which is filtered) paid for within city limits, namely, 88.32 per cent, and by such computation the alum charged for used in the city proper is $1,157.68, as shown on the list. The cost of fuel is computed in the same way and by the same percentage.

The proportion of "expense" charged to operations within city limits, 98 per cent, is based upon the fact that no greater reduction than 2 per cent of the total would be saved if the outside business were cut off. The extra expenses chargeable under this head of doing outside business, being nothing material beyond percentage, stationery, and printed bills incident to the number of services outside of city limits, viz: 311 on this date.

All of the disbursements for insurance were incident to the property within the city limits, excepting approximately 10 per cent. of items, $172.61 paid for casualty insurance upon the construction of new mains, services, etc., said 10 per cent being a fair estimate of such work outside of city limits.

"Filter Station" item charged to city proper (99 per cent) would not be reduced beyond 1 per cent if outside business be cut off, said 1 per cent being ample to cover cost of oil waste and reduced period of artificial lighting incident to reduced pumpage and filtration.

In regard to "Pumping Station" account, the same statement is applicable.

"Repairs" account, chargeable within city limits, 93.5 per cent is determined by charging thereto the same percentage of total repairs account as the property used for the operation of the plant within the city limits, viz: 93.83 per cent, bears to the total property used in the operation of the plant. For convenience, 93.5 per cent is made the basis of such division.

Salary account, chargeable within the city limits, is determined by deducting from administrative salaries the amount of $271.94, determined by the percentage derived from income for water outside the city limits, and the further deduction of salary paid one clerk in the Knoxville office of $469.50. These two items approximate 9.5 per cent of the entire salary account. 10 per cent is deducted for convenience and to amply cover any other proper deductions.

Taxes properly chargeable within city limits, are the entire amount paid excepting $20.29 paid upon real estate outside the city limits not used for the operation of the plant within said city limits, because the valuation by the county assessor is taken as the basis of the city assessment without deduction, except for real estate outside of city limits as above set forth.

"Q. General Wheeler, what was the amount of interest on its debt of all kinds, paid during the year from April 1, 1900, to March 31, 1901, and chargeable against the entire plant?

A. Interest on bonds and floating debt, not including preferred stock, was $30,651.89.

Q. How much was the interest for that period on the preferred stock?

A. $17,700.00.

Q. What was the amount of interest for the same year which is chargeable to that part of the plant within the city proper?

A. As 87.71 per cent. of the property of the company was located within the city limits, I would say that that percentage of the entire interest disbursements was properly chargeable upon the property within the city limits, viz: $26,884.77, interest on bonds and floating debt."

Printed Record, pp. 714-715-716.

The above testimony establishes the proper percentages allowed and presents the reasons in support thereof, and, as the Master states: "There is no tangible, definite evidence in the record denying the percentages stated by complainant.

Printed Record, p. 182.

Another objection made by appellant under this same assignment of error is based on the fact that the rates prescribed by the ordinance make no provision for a discount of 5 per cent. for prompt payment of water rents, while the Water Company allows such a discount.

Printed Record, p. 237.

No insistence on this point is made in appellant's brief.

It will be noted that there is no double allowance to the Water Company for this 5 per cent.; in other words, there is no addition of the 5 per cent., which is allowed as a deduction for prompt payment, to the expenses of complainant; on the contrary, where prompt payment is made, there is a deduction in such case of 5 per cent. from the water charge. The Water Company might well have been allowed this 5 per cent, which its experience dictated to it, as business prudence, to be allowed for prompt payment, as part of the expenses of collection, which would have reached the same result as reached by the Master in permitting a reduction of the actual net income by the amount of 5 per cent. upon such rates as have been promptly paid. Upon this question the Master says:

"Defendant has claimed that 5 per cent. discount for prompt payment is not required under the ordinance. This makes up the greater part of what is called abatement. The business is by nature a credit business, and with many persons not financially responsible. Such a discount is common to most, if not all gas and water companies. They have not done this from generosity. It must be that it 'pays' to allow the discount, and I cannot agree that this does not of necessity apply under the reduced rates."

Printed Record, p. 182.

If the rates prescribed by the ordinance were applied, while no deduction of 5 per cent. for prompt payment is mentioned in such ordinance, yet good business prudence, as suggested by the Master, would require that some discount should be allowed for prompt payment, because, otherwise some expense would necessarily be incident to the collection of rates, and such expense might very well be greater than the 5 per cent. allowed for prompt payment under the present rules of the Water Company; but the fact, in any event, remains that it cannot be said to be unreasonable that the same percentage of discount would be a proper allowance under the new rates, as well as under the old, with beneficial results to the Company.

It is manifest that the Water Company is not, except for business reasons, donating any 5 per cent. of its rates to water consumers, and the inference therefrom is irresistible. We insist that such reduction has been found, from the experience of the Company, to be expedient.

TENTH ASSIGNMENT OF ERROR.

Subdivision (a) of Section X, has been already considered in this brief. Sub-section (b) of Section X makes objection to the finding as to expenses of complainant because of this water rates litigation between the city and the Company have been included therein, and also such items as expenditures for cigars, etc.

With respect to the first proposition we desire to state that the cost of water rate litigation has not been included in the expenses for the year ending March 31, 1901, as assumed by said exception, and therefore, there can be no error on this point in the Master's report. Said expenses are shown for the year ending March 31, 1902, and set out in detail on page 715, Printed Record. The item for expense of water rate litigation is in the subsequent year to the passage of the ordinance.

Printed Record, p. 717.

The exception for allowance of cigars, $3.25, this Court probably will pass over as beneath its notice. It is mildly described as trivial. However, upon this subject the Master says:

"The next four items rejected were $25.00 for fire and police souvenir and $5.00 contribution to the testimonial to C. L. Ewing, Superintendent Southern Railway, $2.00 due the Chamber of Commerce, and $3.25 for cigars. I do not think that a Company like complainant, deriving a large income from purely local sources, and dependent for its future upon the growth of the City of Knoxville, would be expected to refuse the ordinary voluntary contributions for public purposes expected of all good citizens, upon the grounds that it is a corporation. Such a policy would be very unprofitable to the Company, on account of the unpopularity which would ensue.

As to all of these four items, except the cigars, the motive of the Company cannot be questioned. Surely it cannot be presumed that they gave away money for the purpose of increasing their expense account for this year. The matter of $3.25 for cigars for the whole year proves that it is not the custom of the officers of this Company to smoke at its expense. I have not taken the trouble to see if the record discloses the exact occasion for which these cigars were purchased. I felt safe in assuming that it was an expenditure strictly in the line of the ordinary course of business men."

Printed Record, pp. 185-186.

As to the questions raised in said assignment as to the division of the salaries of officers between operating expense account and construction account, we adopt what is said by the Master:

"We have as a result $3,328.24 charged by this Company for the salaries of its President, Treasurer and

Superintendent; certainly no one could ask that a business of this magnitude and requiring as much ability should be administered for any less."

Printed Record, p. 185.

ELEVENTH ASSIGNMENT OF ERROR.

The XI Assignment of Error is:

"The Court erred in its determination that the horizontal reduction of the company's rates by the city's ordinance was 22.88 per cent. It was at least 5 per cent. less than this or about 18 per cent.

Printed Record, p. 237.

This Court will find that this claim is contradicted by other parts of Assignments of Error by appellant. For instance, in Assignment IX, appellant admits that the "City ordinance makes a horizontal reduction of about 20 per cent. of the Company's rates." This also is in harmony with appellant's original answer, in which it is stated: "The average reduction of rates as prescribed by said ordinance is about 20 per cent.

Printed Record, p. 84.

Upon this question the Master says:

"Coming to the reduction in income consequent upon the ordinance, the first issue is the per cent. claimed by complainant to be 22.88 per cent., and by defendant 18 per cent. The method adopted by complainant for this result is an actual demonstration; that by defendant more or less of an estimate. Complainant's demonstration method was before witness Nixon, and if erroneous he should have shown wherein."

Printed Record, p. 181.

The method by which complainant determined the reduction by application of the city's rates to be 22.88 per cent is fully shown by the testimony of the treasurer of the Company, Mr. Elbert Wheeler, and is as follows:

"A. We rated every service in use March 31, 1901, and charged therefor at the city's ordinance rates, then multiplied the amount thereof by "4" to determine the total annual charge under the city's ordinance rates. The amount derivable from metered services, was determined by taking the quantity of water charged for on each bill rendered March 31, 1901, and multiplying this quantity by either "4" or "12" as the bill may have been rendered for a quarter or a month, by which to determine the quantity of water for a year and applying the city's ordinance rate thereto, respectively. Charges for meter rental were likewise made by charging the yearly rate against each meter according to its size, in accordance with the rate prescribed by the city's ordinance.

Printed Record, pp. 713-714.

The result reached by said method, to wit: 22.88 per cent., is shown at page 713 of the Printed Record.

This is an actual demonstration, as stated by the Master, because it applies the city's rates to every service that was in use at the date of the passage of said ordinance, both fixture and meter.

The same is corroborated by the testimony of Mr. Frank C. Kimball, Superintendent of the Company.

Printed Record, p. 822.

TWELFTH ASSIGNMENT OF ERROR.

THE XII Assignment of Error is:

"The Court erred in its decision that the income realized under the city's ordinance would not afford a fair return to the plaintiff company, and erred in not deciding that 4 per cent. would be ample income to rescue the ordinance from the category of a confiscatory ordinance, but in point of fact, upon consideration of the Company's income after the passage of the ordinance instead of before its passage, the income of this Company under the ordinance would be sufficient, after paying operating expenses and providing 2 per cent. for depreciation, to allow the plaintiff company 6 per cent. return in addition to its taxes, which is more than sufficient to satisfy the demand of the law.

Printed Record, p. 237.

This is divisible into several logical sub-divisions, as follows:

1. What is, in law, a fair return to the Company?

2. Is 4 per cent. a fair return?

3. Whether or not that return should be based upon the Company's income after the passage of the ordinance?

4. The effect of the questions set out.

The third sub-divison of this Assignment of Error, i. e., whether the income after the passage of the ordinance should be considered as the basis of fair return, has been discussed and need not be further considered, and it would seem that the question of the propriety of allowing 2 per cent upon the fair value for depreciation hardly needs to be considered, the exception assuming that in addition to operating expenses no error is assignable to the action of the Master in allowing to the Company to be repaid out of income 2 per cent. for depreciation of the plant.

This brings us logically to the discussion of the question, as to what is a fair return on the fair value of the property devoted to the public service herein. As before shown, the Master has found the fair value of the entire plant of complainant at $608,427.95.

Printed Record, p. 175.

The Court has added to that valuation, the value of blind services, which the proof in the record shows to be of the fair value of $3,390.00, as before shown, but for convenience in treating the results of the application of the ordinance in this case, we will treat the finding of true value at the sum fixed by the Master, to wit: $608,427.95. Of this amount the property of complainant within the city as fixed by the Master, is $570.887.95.

Printed Record, p. 187

or 93.83 per cent. of the entire plant of complainant. To the action of the Master in thus determining the proportionate value of the entire plant in use in supplying the city proper, no assignment of error is made and it may be treated as conclusive, despite what is said in appellant's brief.

Report of Master, Printed Record, p. 181.

The gross revenue derived by complainant from its entire plant and property under rates in effect prior to March 31, 1901, as found by the Master, was $88,481.39.

Report of Master, Printed Record, p. 181.

After the reduction of 22.88 per cent. that would have been made by the ordinance of March 30, 1901, the income would have been $70,857.75.

Report of Master, Printed Record, p. 181.

The total revenue derived by complainant from water supplied within the corporate limits under rates in effect prior to March 30, 1901, for business year ending on that date, as found by the Master, was $78,148.31, and the ordinance would have reduced the income inside the city to $63.342.40, there being no reduction of hydrant rentals, which amount to $11,455.00.

Printed Record, p. 182.

So that the Master has found the fair value of the plant at the time in use for the city, as of date March 31, 1901, to be the sum of $570,887.95, the income under the ordinance, $63,342.40, the expense within the city, $32,809.98, and the net income would have been, therefore, $30,532.42, the amount which would have been realized by complainant by the application of the city rates to the income of complainant, as of date March 31, 1901.

Report of Master, Printed Record, p. 187.

The Master has allowed, under the proof, 2 per cent. as a fair allowance to complainant for depreciation, and no exception by way of assignment of error in this Court is made as to the amount or fact of such allowance, and the amount is obviously fair and reasonable and is supported by the testimony.

Report of Master, Printed Record, p. 187.
Testimony William Wheeler, Printed Record, p. 634.
Testimony J. L. Ludlow, Printed Record, p. 938.
Testimony Arthur Hider, Printed Record, p. 992.
Testimony T. T. Johnston, Printed Record, p. 1010.

The principal witness for appellant, William Nixon, approves the principle and amount of depreciation allowed in this case; see also Chas. S. Brown, expert witness of appellant.

Testimony W. M. Nixon, Printed Record, p. 1382.

Testimony Chas. S. Brown, Printed Record, p. 1855.

The Court is familiar with the principle on which this allowance is made and needs no discussion of the testimony going into the rationale thereof, and there being no assignment of error questioning the propriety of the allowance or the amount thereof, we hardly need to cite any authorities. However, on account of its importance it may be not out of place to refer to some of the cases.

In the case of San Diego vs. National City, 174 U. S., 757, it was held that one of the things to be taken into consideration when rates are being fixed which under all the circumstances shall be just to the Company and to the public, is "the annual depreciation of the plant from natural causes resulting from its use." This case is not out of harmony with the case of San Diego Land and Town Co., vs. National City, 174 U. S., 739, wherein it was declared that annual depreciation was to be considered with other things, but using this further language:

"We will say a word about the opposite contention of the appellant that there should have been an allowance for depreciation over and above allowance for repairs. From a constitutional point of view, we see no sufficient evidence that the allowance of 6 per cent. on the value set by the supervisors, in addition to what was allowed for repairs, is confiscatory. On the other hand, if the claim is made under the statute, although that would be no ground for bringing the case to this Court, it has been decided by the Supreme Court of California that the statute warrants no such claim."

San Diego Land and Town Co. vs. Jasper,
189 *U. S.*, 446.

So that it is seen that the Jasper case was decided under the California statute, which had been construed by the Supreme Court of California to warrant no claim for depreciation beyond 6 per cent. and repairs. In this case, if an allowance had been made sufficient to cover all repairs and 6 per cent. interest, it would have exceeded largely the allowance which the Master and the Court decided will be the return upon the fair value of the property of complainant as established by the application of the ordinance of the city, and this notwithstanding the fact that we are not limited by any statute which forbids this Court to take into consideration what the evidence shows to be a proper allowance to be added to the 6 per cent. by way of annual depreciation.

In the case of Spring Valley Water Works vs. City, etc., of San Francisco, 124 Fed. Rep. 599, Judge Morrow says:

"The complainant asks that an allowance be made of $196,000.00 for the element of deterioration of the perishable part of the plant during the year. It seems just and proper that such an allowance should be made. It is sanctioned by authority, but I do not think it necessary to take that element into consideration at this time."

It may, therefore, be assumed that the allowance of 2 per cent. on the fair value of the property as made by the Master and approved by the Court is unquestionable. It is established by the testimony of the complainant and of the defendant herein, and is not called in question in this Court. Two per cent. upon the fair value of the plant at the time in use for the city as found by the Master, viz: $570,887.95, is $11,417.76. Deducting this from the net income as found by the Master for the city proper after the application of city rates, of $30,532.42, leaves as applicable to the fair return upon the property, the sum of $19,114.66, which is 3.35 per cent. upon the fair value of the plant as found by the Master at the time in use for the city, as of date March 31, 1901, and without the addition thereto of the value of the blind services as allowed by the Court.

Then, under all the facts and circumstances of this case, is a return of 3.35 per cent. upon the fair value of the property devoted to the public service, a fair return thereon at the time, place, and under the conditions surrounding said property.

Upon the question of the allowance necessary to constitute a fair return outside of the payment of expenses and fair allowance for depreciation, the Master in this case says:

> "The legal rate of interest in Tennessee is 6 per cent. No lower rate is known, except with mortgages on improved property, and the amount limited to much less than the value of the property. There is practically no risk in this. It is clear that no one in this State would think of giving par for stock in this kind of company, subject to the risks of litigation and competition if it paid less than 6 per cent. Fair income or interest is a local question, not controlled by cases from other States. The Chattanooga case fixed 6 per cent. Clearly this is fair; it follows that with 6 per cent. and 2 per cent. for depreciation making 8 per cent. on the above, we have $45,671.03, which is $15,138.61 more than I have found would be the net income under the ordinance. The ordinance rates would not yield a fair income to complainant."

Printed Record, p. 187.

The Court below in passing upon this phase of the question, says:

> "If we contrast such an investment as this with the usual commercial forms of loan on good security, or again, investments in United States bonds, at a very low rate of interest, the desirableness of the one form of investment, its safety and certainty, as against the other, it is too impressive and important in its bearing on the question here to remain unacknowledged. Well secured loans of capital begin to repay the stipulated income from

the very day of the loan. The capital is not subject to depreciation or loss, except as would be involved in a condition of insolvency, and if secured by real estate or other property, or collateral, insolvency would not affect the loan. The rate of income is uniform.

As I have said from the beginning, in a plant like this it takes time, effort, close attention, constant watchfulness, etc., to secure any return, and the returns in the earlier years are very small, if any, and the difficulty of guarding against depreciation and loss is very great. * * That capital invested in an enterprise of this kind, owing to the less desirable and less satisfactory conditions under which it is invested and maintained, is entitled to a larger income than would be regarded as fair and just on money put out on loans, well secured, is too evidently plain not to be acknowledged." * * * "It is agreed by counsel that the ordinance in question and the rates established thereby, on the reasonable value of the plant as found by the Special Master, would give to the Company a return thereon of only 3.35 per cent. annually.

The Water Company is not necessarily entitled to the rate of interest establised by the statute of the State, nor to any other fixed rate of income, but only to what, under all the circumstances of the situation, is a fair and reasonable return on its property devoted to the public use.

The Courts are always justly reluctant to strike down an ordinance of a municipal legislature, or a similar enactment by the legislature of the State, or of the United States, but it becomes necessary now and then to do so in order to afford that constitutional protection which is guaranteed to every citizen under our government, and which guarantee furnished a powerful encouragement to investment, to developing the natural wealth of the country, and to the free enjoyment of all other rights of persons and of property.

Under all the facts and circumstances of this case, and after much deliberation, I conclude that the return which this ordinance permits on capital put into this form of investment, and subject to the hazards which pertain to such investments, managed at the best, does not permit a fair and reasonable income on the value of the property.

It seems to me also that I must take into consideration that as a matter of law the City of Knoxville is at liberty, if it chooses to do so, to establish and operate a water plant of its own, and in that way come in direct competition with the business of this plaintiff, and in that way it would be rendered much more difficult for the plaintiff to maintain and operate its plant and obtain any reasonable return on its property devoted to public use. Indeed such a condition might become destructive. The adjudged cases show that just such a thing has occurred in the history of our country. And it is a fact, though perhaps not technically before the Court, but still disclosed by the records, that the Water Company recently undertook by the bill filed in this Court to enjoin the city from taking just this step,as being in violation of its vested contract rights, and upon full consideration of the question, this Court decided that the city possessed the right and power to build and operate such a plant, and the existence of such a right in the city, liable at any time to be availed of in practical use, is a circumstance showing that investments in property like this water plant is much less secure against permanent loss and against legal return on the investment than other forms of capital, like well-secured, interest-bearing loans, or commercial or industrial establishments not maintained under similarly uncertain conditions."

Opinion of Court, Printed Record, pp. 304-305-306-307.

As reenforcing the observations of the Court just quoted, we state that it is shown without contradiction in this record that in the history of complainant's plant the Company has never been able to pay any dividend whatever upon its common stock, but that its income has been practically exhausted with an exception, which will be stated, in the payment of operating expenses and interest upon its bonded indebtedness and preferred stock, which last in this case is really indebtedness.

Testimony of William Wheeler, Printed Record, p. 531.

Testimony Elbert Wheeler, Printed Record, pp. 722, 797.

It is likewise shown that it has never been able to make any allowance out of income to cover, to any extent, depreciation, either complete or incomplete, although there is a balance of $19,344.94, which has been recorded on the books of the Company as of date March 31, 1901, as applicable to depreciation.

Testimony of Elbert Wheeler, Printed Record, p. 720.

According to the analysis of William Wheeler of the investment cost of the plant from time to time as material and labor entered into the construction, there was completed depreciation, caused by parts of the plant taken out and replaced by machinery more effcient for the increased needs of the plant, aggregating approximately $95,000. He also shows incomplete depreciation, which represents the depreciation, according to his method of reaching the investment cost of the plant, of approximately $77,000.

Testimony William Wheeler, Printed Record, p. 433.

While these figures, as hereinbefore shown, are not logically applicable to the estimate of fair value of the plant fixed by the Master, yet they illustrate the hazards attending the operation of a plant of this character as distinguished from ordinary business enterprise, and thus bear upon the question of a fair return, just to the public and to the Company, for it is admitted in this record that the $95,000 of complete depreciation has received no allowance whatever at any stage of the company's development, and is an absolute loss to the Company, except to the extent that the $19,000 set aside after the payment of interest and expenses may be treated as applicable to the complete or incomplete depreciation. No such hazard attaches to ordinary investments nor ordinary business enterprises which are not dependent on public rates for income.

As stated by the Master and by the Court, the legal rate of interest at which money shall be loaned and the rate applicable to judgments, etc., is 6 per cent. in Tennessee. It might be true that 6 per cent. for simply the loan of money where no further trouble or risk is had or on a judgment might be entirely adequate, and yet that 6 per cent. would not be the fair measure of return upon an uncertain, hazardous business venture such as that of the Water Company. In the case of New Memphis, etc., Co. vs. City of Memphis, 72 Fed. 955, an opinion by Judge Clark, it is said:

"And the very use of the term regulation implies that an investigation shall be made; that an opportunity to present the facts should be furnished; that when the facts are established they shall, by the regulating power, be given due consideration, and that such action as shall be taken, in view of these facts thus ascertained, shall be just and reasonable, and such as enables the Company to maintain its existence, to preserve the property invested from destruction, and to receive on the capital actually and *bona fide* invested in the plant, a remuneration or dividend corresponding in amount to the ruling rates of interest. The Company has a right to such gross income from the sale of gas as will enable it to pay all legitimate operating expenses, pay interest on valid, fixed charges, so far as bonds or securities represented and expenditure actually made in good faith, and also to pay a reasonable dividend on stock, so far as this represents an actual investment in the enterprise.

Memphis, etc., Co. vs. Memphis, 72 *Fed. Rep.* 955.

As stated by the Supreme Court of California:

"What the Company has parted with, what the public has acquired, is the money reasonably and properly expended by the Company in acquiring its property and constructing its works. The State has taken the use of that money, and it is for that use that it must provide just compensation. What revenue money is capable of producing, is a question of fact, and theoretically at least, susceptible of more or less exact ascertainment. Regard must be had to the nature of the investment, the risk attendant upon it, and the public demands for the product of this enterprise. It would not, of course, be reasonable to allow the Company a product equal to the greatest rate of interest realized upon any kind of investment, nor, on the other hand, to compel it to accept the lowest rate of remuneration which capital ever obtains. Comparison must be made between this business and other kinds of business involving a similar degree of risk, and all the surrounding circumstances must be considered." * * * "In ordinary cases where the management is fair and economical, it would be unreasonable to fix the rates so low as to prevent the Company from paying interest on borrowed money at the lowest market rate obtainable, and even then some allowance or margin should be made for any risk to which the Company may be exposed, over and above the risk taken by a lender."

San Diego vs. City of San Diego, 62 *Am. St. Rep.* 271-272.

Now it is shown that a few of the bonds of the plaintiff were floated at much lower than their face value, at a smaller rate of interest than 6 per cent, but all the capital otherwise used is at 6 per cent. and excess, and it is a matter of which the Court would take judicial knowledge that in the section where complainant's plant is operated, it is almost impossible to get any money without paying 6 per cent. interest, and that no one would embark in even what is regarded as a safe business with an assurance of only 6 per cent. interest. If that be true, then it is readily seen by the Court that in a risky business, such as that of the plaintiff, subject to municipal and legislative control as to rates, and a plant which has in its whole history only recently paid anything above its fixed charges, 6 per cent is a very low return indeed upon the value it actually has in the property devoted to the public use, and if the Court should to any extent disallow, either as expenses or as part of the fair value, the depreciation, incomplete, it is seen that the risks of the business then have resolved themselves almost into a certain loss, even on an allowance of 6 per cent. interest and 2 per cent. depreciation.

It is also stated in the opinion of Chief Justice Batty, in the case of San Diego Water Company vs. City of San Diego, 62 Am. St. Rep. 288, as follows:

"Rates ought to be adjusted to the value of the service rendered, and this means that the water companies should be allowed to collect annually a gross income sufficient to pay current expenses, maintain the necessary plant in a state of efficiency and declare a dividend to stockholders equal to at least the lowest current rates of interest, not on the par or market value of the stock, but on the actual value of the property necessarily used in providing and distributing water to consumers."

San Diego Water Co. vs. City of San Diego,
62 *Am. St. Rep.* 288.

The view here expressed by Chief Justice Batty was in harmony with the views of the majority of the Court in that case, and is approved by Judge Morrow in the case of the Spring Valley Waterworks vs. City, etc., San Francisco, 124 Fed. Rep. 590.

In the Spring Valley case Judge Morrow says:

"In view, therefore, of all the circumstances, the Court is of the opinion that the complainant is entitled to receive at least 5 per cent as the net compensation it is entitled to receive on the value of its property."

Spring Valley Waterworks vs. San Francisco, 124 *Fed. Rep.* 599.

It was not necessary in the case last cited, to determine whether complainant would have been entitled to receive 6 per cent, even though in as large a city as San Francisco, because a 5 per cent allowance resulted in the Court's holding that the rates fixed were confiscatory, and therefore void.

Appellant's counsel in this case argued that the rates of the Water Company were not only excessive on March 31, 1901, but had always been excessive, and yet from 1883, when the plant was constructed, up to March 31, 1901, the Company only realized, above operating expenses and fixed charges, in round numbers, $19,000, without any allowance whatever for depreciation.

It is said in appellant's brief, page 166, that: "The Water Company at all times fixed its own rates with a free hand." This statement is incorrect, and upon the contrary the right of the company in this respect has been distinctly limited at all times. The original contract made in 1882 between the Water Company and the city provides that the Company shall not charge private consumers more than "five cents per one hundred gallons" of water.

Contract, Printed Record, p. 24.

This contract of 1882 remained in force until the 20th of October, 1899, when it was superseded by the ordinance contract, permitting the consolidation of the Knoxville Water Company, with the Lonsdale-Beaumont Company, which ordinance contract is still in effect and directly operative upon the Water Company and its rates. Under this instrument the Water Company assumed the obligation of the Lonsdale-Beaumont Company to furnish water to the people of the town of West Knoxville. These West Knoxville rates are prescribed by an ordinance of the town of West Knoxville which is in this record, and the Court will see from an examination of said ordinance that it contains an itemized schedule of rates, being, in this respect, a rate regulating ordinance, just like the one contested in this case.

Printed Record, pp. 48-49.

By the ordinance contract of 1899 these rates were assumed by the appellee, and it is not charged that it has not observed them.

Printed Record, p. 61.

Also in the ordinance contract of 1899 the appellee renewed its agreement to furnish to private consumers in the territory of the old City of Knoxville water at a rate not exceeding "five cents per one hundred gallons."

Printed Record, p. 61.

It thus appears that in the territory affected by the original contract of 1882 between the Water Company and the city, there has been at all times, and now is, a contract limitation of the right of the Water Company in the matter of rates to private consumers; and that the territory of West Knoxville has had, since the consolidation of 1899, a rate regulating ordinance; this West Knoxville rate ordinance was passed September 17, 1892,

Printed Record, p. 51.

and controlled the rates of the Lonsdale-Beaumont Water Company until the consolidation of that company with the Knoxville Water Company in 1899, and still controls the rates of the Knoxville Water Company in the territory designated as West Knoxville, which territory is now the tenth ward of the City of Knoxville. Likewise as to North Knoxville, where limited rates were specifically fixed by ordinance contract.

Printed Record, p. 32.
Printed Record, p. 61.

The question finally before this Court to be determined is whether, under circumstances surrounding this plant, the income of the Company affords a fair return, or in other words, a return which is just, under all the circumstances, to the Company and to the public, and this makes it necessary for the Court to understand the circumstances and conditions, established by contract and otherwise, surrounding this plant, as of March 30, 1901, when said rate ordinance was passed.

Under the original contract between appellant and complainant, under the terms of which complainant's plant was constructed, it was provided:

"The city shall have the right, upon giving one year's notice of such purpose and intention, to purchase from said Company, the water works herein provided for and all the property rights, franchises and privileges thereto belonging by negotiations if thus the terms can be agreed upon, or if not, then at any time for a consideration to be fixed and determined by appraisers, and if not purchased at the end of fifteen years, the said works, property and franchise rights, privileges, etc., may upon the same terms and conditions and in the same way be purchased by the city at the expiration of each and every year thereafter. But in no case shall such right of purchase exist, or be exercised unless due notice thereof be given by the city to the Company one year before the expiration of the period aforesaid, or either of them. And in the event of such notice and the failure of the parties hereto to agree upon the terms and condition of sale the price to be paid, and other matters necessary to close the sale, then, in that event, each party shall choose two disinterested persons, non-residents of said city, and also of the County of Knox, in the State of Tennessee, and the four thus chosen shall select a fifth person, likewise disinterested and a non-resident of Knox County, and said five persons thus chosen shall constitute a Board of Appraisers, and having accepted their appointment each shall take and subscribe to an oath to act fairly, honestly and impartially in the premises, and having so done shall proceed to value and appraise the water works aforesaid, and all the rights, privileges, franchises, easements and other property appurtenant to said water works belonging to said Company, or for which its successors or assigns would become liable, and in view of such indebtedness shall decide, determine and award the net value of said water works, and all other property of said Company appurtenant thereto aforesaid.

And such award of said Board of Appraisers, or that of a majority thereof, shall be final and conclusive upon the parties.

And when the purchase price so fixed and determined shall be paid to said Company by the city, then said Company shall and will forthwith by proper deeds of conveyance, assign, transfer, set over and convey to said City of Knoxville, said water works, and all the rights, franchises, easements, privileges and other property appurtenant thereto owned by said Company at the date of such appraisal and award."

Printed Record, *pp.* 27-28.

Notwithstanding the power of purchase, either by negotiation or at the price fixed by disinterested appraisers, the appellant caused to be passed an Act of the legislature of Tennessee "authorizing the City of Knoxville to issue bonds to purchase and equip the plant and property of the Knoxville Water Company, build extensions thereto, maintain and operate the same." This is the language of the caption of said Act of 1903, p. 31 Ch. 12. A copy of the Act is printed as appendix A to this brief.

It will be noted by the Court that this Act was passed while the testimony was being taken in the present case.

Later in the same session the City of Knoxville procured the passage of another bill, the caption of which is as follows:

"AN ACT to authorize the City of Knoxville to own and operate a system of water works, and to issue bonds for that purpose, and to amend House Bill No. 28, being an Act entitled 'An Act to authorize the City of Knoxville to issue bonds to purchase and acquire the plant and property of the Knoxville Water Company, build extensions thereto, and maintain and operate the same,' passed January 29, 1903, and approved February 2, 1903, so as to read as follows:''

Acts 1903, *p.* 328 *Ch.* 153.

Said Act is printed as appendix B to this brief.

It wil be noted by the Court that the first Act in question simply authorized the issuance of bonds to enable the city to comply, if it desired to do so, with the clause of the contract hereinbefore set out for the purchase of the plant of the Knoxville Water Company, but the city, not satisfied with that provision, procured additional legislation to authorize it, not only to acquire the plant, if it saw proper to do so, but also to build a plant to compete with the Knoxville Water Company. Suit was brought by the Knoxville Water Company to enjoin the city from the construction of a competing plant, claiming that such construction, if permitted, would be an impairment of the obligation of the city's contract with the Water Company, the city meanwhile having voted to issue bonds for the construction of the plant. These Acts were passed while the proof in the present case was being taken. The suit last referred to was decided adversely to the Water Company by the Circuit Judge, and his decision was affirmed by this Court in the case of the Knoxville Water Co. vs. Knoxville, 200 U. S. 22, upon the ground, that, while the city may have been under an implied contract not to construct a plant within the city for supplying the city and its inhabitants with water, it was under no express contract, and for that reason the Act did not impair the obligation of a contract. So that one of the conditions rendering precarious the life and business of complainant Water Company, and affecting a fair return upon the fair value of its property devoted to the public service, is the adjudged right of the city to destroy or to impair greatly the income of the Water Company by constructing a new plant, and in this suit the city, a contemplated competitor, is in the position of undertaking to regulate the income of its competitor. This actual condition now confronting complainant, of course, was not presented at the date of the actual passing of the ordinance now contested, but subsequent developments are shown to the Court to illustrate the precarious nature of an investment of the character, the fair return on which, just to the Company and to the public, is now under consideration by this Court; these should be considered herein, because it is before this Court, that, while the city had the right to purchase the plant of complainant, upon fair and equitable terms, it caused an Act to be passed whereby it became vested with the right to actually construct a competitive plant within the city in violation of the implied contract entered into between the parties.

On this record, then, we present the question whether or not a return of 3.35 per cent. on property situated as is the property of the Water Company, in the face of a threatened construction of a competitive plant, should, at the suit of the proposed competitor, be considered a fair return on the fair value of the property devoted to the public service at a place where the legal rate of interest is 6 per cent, and under conditions which do not make even such return uniform and certain. In the language of the cases, is such a return under such circumstances, one which is fair and just to the Company and to the public? We assumed, in treating of this question, that the Court will take judicial knowledge of the legal rates of interest in the states surrounding Tennessee, where complainant's plant is situated, which are as follows:

	Legal rate.	Allowed by contract.
North Carolina	6%	6%
South Carolina	7%	8%
Georgia	7%	8%
Florida	8%	10%
Alabama	8%	8%
Mississippi	6%	10%
Arkansas	6%	10%
Kentucky	6%	6%
West Virginia	6%	6%
Missouri	6%	8%

We think it fair to be assumed by the Court that where the legal rate of interest, as in Tennessee, and in all of the states surrounding it, is not less than 6 per cent interest, this is a fair expression of the legislative will, and of the business sense of said states; that the rates represent a fair return to the investor on the amount of his investment, and yet the lending of money, for which the rate primarily is fixed, is within the absolute control of the money lender, and can be made, therefore, entirely secure, first, as to the principle, and second, as to the return, while in a business of the character now under investigation by the Court the principal may, and necessarily will, depreciate, and the return is subject not only to the natural fluctuation beyond the control of the owner, but to a diminution of revenue which may be caused by regulation or public competition.

Attached to this brief will be found appendix C, showing the result of the application of the ordinance rates to the income of the Water Company in its relation to a fair return upon the fair value of complainant's property.

In the opinion in this case, the Circuit Judge says:

"In the consideration of a case like the one at bar, or any similar case, the Court is not immediately concerned with a mere system of bookkeeping, nor by striking a balance debit and credit sheets in book-of-accounts methods."

Printed Record, p. 296.

Again he says:

"The case must be considered and must be decided along broader lines than these, and under such views as may be broadly considered fair and just to both parties, without necessarily applying any or many of the technical rules which would apply to an accounting between parties sustaining the relation towards each other of creditor and debtor, trustee and beneficiary, etc., as above suggested."

Printed Record, p. 297.

These quotations are nothing more than repetitions in substance of what this Court has said more than once upon the same subject. In a case like this it is almost impossible for a special master or for a judge or court to fix a value upon any of the various elements which must be considered, and say that such value is absolutely correct, and it is not possible for any court to say, in a case like this, that it has valued the entire property at a sum which is mathematically exact. All that any court can do is to consider the various elements, indefinite in number, and not yet fully declared even by this Court, which it is proper to consider in determining the fair value of the property. This Court has said that the various elements which it has mentioned in the cases which it has decided are to be considered, and has said in the case which perhaps mentions the largest number of these elements, that there may be others. The Court then is to take into consideration all the circumstances surrounding the property to be valued, and is to reach, by the exercise of its judgment, a determination of the fair value. It is submitted that if the Court should be of opinion that any one or more elements or parts of this property have not been accurately valued, that would not seriously affect its determination, provided it should still be of the opinion that the general result reached is fair to the public and to the complainant. The best that can be done in a case of this kind is to establish the fair value of the water plant, approximately, as exactness is clearly unattainable. These considerations apply even more forcibly to the determination of the question of fair return, and the Court in passing upon the question as to what is a fair return, just alike to the public and to the Water Company, certainly will not attempt to attain to mathematical exactness, but will consider the surroundings of the plant and everything that can reasonably affect the question.

In this case it would appear to be proper for the Court to consider, among other circumstances, the fact that the City of Knoxville, where this plant is located, is remote from the money centers of the country, and from the manufacturing centers; that the legislation of Tennessee and of all the states contiguous to it indicates that 6 per cent is the minimum fair rate upon money invested; that the attitude of the City of Knoxville is distinctly antagonistic; that the state has enacted legislation authorizing direct competition with the Water Company by the City of Knoxville, and all other circumstances that legitimately bear upon the question; reaching its determination by the consideration, not of one fact or circumstance or of a few, but by giving to all of them their proper and just effect.

It is sugested also that this is a case peculiarly appropriate for the application of the ruling established by this Court, that the concurrent finding of a master and trial judge upon a question of fact must be controlling when there is evidence to support it. It is especially true as to the subject of fair return that every case must be controlled by its own facts, and that no rule can be laid down which will be universally applicable. The Master very well says:

"Fair income or interest is a local question, not controlled by cases from other states."

It might be argued in behalf of the application of the rule just referred to, to this case, that the Master was upon the ground when the testimony in this cause was taken, had every opportunity to know the property; that he had some knowledge which it was proper for him to use in his judicial capacity, of general conditions prevailing in the locality where this plant is situated, and that he gave more than a year to the careful investigation of the questions involved in this case, with the aid of the most competent expert testimony and the most minute investigation of the construction and general condition of the plant. It seems to be entirely proper to say that after such an investigation by a special master and by a judge, both resident in the general locality where the plant is situated and familiar with financial, business and general conditions there, the concurrent findings in this case should be given the greatest weight.

Respectfully submitted,
S. G. SHIELDS, Of Counsel.
CHARLES T. CATES, JR.
J. W. CALDWELL,
R. E. L. MOUNTCASTLE.
Solicitors for Water Co.

APPENDIX "A"

AN ACT to authorize the City of Knoxville to issue bonds to purchase and acquire the plant and property of the Knoxville Water Company, build extensions thereto and maintain and operate the same.

Whereas, Under and by virtue of a certain contract dated July 1, 1882, executed by the authorities of the City of Knoxville (a municipal corporation) and the Knoxville Water Company (a corporation organized under Chapter 103 of the Acts of 1877), and an ordinance of said city passed October 20, 1899, and accepted by said Knoxville Water Company on the same day, said City of Knoxville has an option and the right to purchase all the property now owned or hereafter acquired up to the date of the purchase of said Knoxville Water Company, at a valuation to be fixed by an appraisement, if not agreed to, as provided in said contract of July 1, 1882, and carried forward and extended in the ordinance of October 20, 1899; and,

Whereas, The City of Knoxville desires to take up said option and purchase the plant and property of said Knoxville Water Company to the end that the same may be owned, operated and maintained by said city for the benefit of the people thereof,

Now, therefore, in order that said city may be enabled to purchase and acquire the plant and property of said Knoxville Water Company and build additions thereto that may be deemed necessary,

Section 1. *Be it enacted by the General Assembly of the State of Tennessee,* That the City of Knoxville, the corporate name of which is the Mayor and Aldermen of the City of Knoxville, be and hereby is, authorized to make the purchase of the plant and property of said Knoxville Water Company, and to make necessary extensions thereto, and for that purpose the said City of Knoxville is hereby authorized to issue bonds in such amount, number and denomination, and to run such length of time as may be determined by the Mayor and Aldermen of said city, at a rate of interest not exceeding 4 per cent, payable semi-annually, for such time as said Mayor and Aldermen of said city may determine, to enable it to acquire the plant and property of the Knoxville Water Company in accordance with the terms and provisions of the aforesaid contract of July 1, 1882, and the aforesaid ordinance contract of October 20, 1899.

Sec. 2. That authority is hereby conferred upon said corporate authorities of the City of Knoxville to issue such an amount of bonds as may be necesary to purchase and acquire the said plant and property of the said Knoxville Water Company upon the agreed valuation between the contracting parties, or in default of same, upon a valuation to be ascertained and fixed by appraisers in accordance with the provisions of the aforesaid contract of July 1, 1882, and the ordinance of October 20, 1899, between said city and said Water Company.

Sec. 3. That in addition to the bonds necessary to enable said city to acquire the plant and property of said Water Company, said city is hereby authorized to issue additional bonds in an amount not exceeding 10 per cent of the amount of bonds necessary to purchase said plant and property of said Water Company, to be used in making additions to said plant, including acquisition of such real estate or other property necessary in making such additions.

Sec. 4. The bonds shall be payable in gold coin of the United States, of standard weight and fineness, provided, however, that the city may either issue its own bonds in exchange for outstanding bonds of the Knoxville Water Company as part of the purchase price of said plant and property, or the said city may assume, as part of the purchase price, the bonded indebtedness now upon the plant and property of the Knoxville Water

Company, or any part thereof, in lieu of the issuance and sale of a proportionate amount of its own bonds under the power herein granted.

Sec. 5. Before notice shall be given or an appraisal had in pursuance to the contract of July 1, 1882, and the ordinance of October 20, 1899, or issuance of bonds, an election shall first be called throughout the City of Knoxville under the general laws governing municipal elections in Knox county, and if two-thirds of the qualified voters of said city voting in sad election shall vote in favor of the purchase of the property and plant of the Knoxville Water Company and the issuance of the bonds for the purposes of this Act, or exercise of other powers herein given, then the Mayor and Aldermen of the City of Knoxville shall forthwith give notice of the acceptance by the city of the option to purchase said plant, whereupon, unless the valuation of said plant is agreed upon by the contracting parties, an appraisal shall be had of all the property of the Knoxville Water Company, as provided for in the contract of July 1, 1882, and in the ordinance of October 20, 1899, after which bonds sufficient shall be issued as may be necessary under this Act for the purchase of said property and plant. The said bonds to be under the management and control of the Commissioners to be hereinafter appointed, and to be sold, if sale is necessary, at not less than par; provided, however, that the city may exercise the power herein given to assume the bonds of the Knoxville Water Company to be credited at par upon the appraisal value of said property.

Sec. 6. That the Commissioners of Election shall furnish according to laws now existing and regulating elections in this state, tickets to be used in said election, and upon said tickets shall be printed, first, "Bonds;" second, immediately below, "No Bonds," and persons voting for the issuance of bonds and for the purchase of the property and plant of the Knoxville Water Company and for the extension of same and the other provisions of this Act, shall mark their tickets with a cross opposite the word Bonds, and those voting against the same shall in like manner mark their tickets opposite the words, No Bonds.

Sec. 7. That the Mayor and Aldermen of the City of Knoxville shall have the power of eminent domain to take and appropriate in making extensions to said plant the grounds and other real property in the same manner as are now provided for condemnation in laying out streets, etc., in sub-section 30 of section 18 of the charter of the City of Knoxville.

Sec. 8. That for the purpose of controlling, managing and operating said water plant and for the disposal of the bonds or money realized therefrom, as provided in this Act in the event of a favorable election for the issuance of bonds, as hereinbefore provided, there is created a Waterworks Commission for said city, which shall be composed of three members, all to be reputable citizens and taxpayers of the city without any other official connection with the city, and without any connection whatever with the Water Company. Said Commissioners shall be elected by the City Council at its next regular session after it has been determined that the city has voted in favor of the issuance of bonds for the purchase of said plant, etc., by the majority herein designated.

The said Commissioners so elected shall hold for a period of one, two and three years respectively from the date of their election and qualification, and until their successors are elected and qualified.

The Mayor and Aldermen of the City of Knoxville shall have the power to fill all vacancies in said Waterworks Commission at any regular session of said Board after which vacancy occurs.

Said Commissioners shall take an oath of office to faithfully perform their duties before the City Recorder, who shall file in his office said oaths and preserve the same, and they shall likewise give bonds in such sums as the Mayor and Aldermen of the City of Knoxville may prescribe, conditioned for the faithful discharge of their duties, which bond shall likewise be filed and preserved in the office of the Recorder of said city.

Said Commissioners are forbidden to have or take any interest, direct or indirect, in any contract or transactions relative to the purchase, extension or operation of said plant.

The compensation to be paid said Commissioners shall be determined by the Mayor and Aldermen of the City of Knoxville in such sum as said authorities may deem adequate, the same to be fixed before said Commissioners are elected. Said Commissioners will elect a Chairman and Secretary, and also such clerks as may be necessary for the work to be done, and also a Treasurer of the Commission, whose salary shall be fixed by the Mayor and Aldermen of the City of Knoxville.

The said Commission shall require of such Clerks and Treasurer an adequate bond for the faithful discharge of their duties, which bond shall be approved by the Board of Mayor and Aldermen, and shall be filed and preserved in the Recorder's office of said city.

The powers and duties of said Commissioners shall be full and ample to make all contracts for the extension of said plant or the operation and maintenance of the same, but all contracts involving an expenditure of more than five thousand dollars ($5,000), shall be reported to the City Council, and approved by it before the same shall be final. The said Commissioners shall also have the power, subject to the foregoing limitations, of making all needed repairs deemed by them necessary to the proper operation and maintenance of said plant. Upon due notice any Commissioner guilty of misconduct or misfeasance in office shall be removed by the Mayor and Aldermen of the City of Knoxville.

Sec. 9. *Be it further enacted,* That this Act take effect from and after its passage, the public welfare requiring it.

Passed January 29, 1903.

L. D. TYSON,
Speaker of the House of Representatives.

ED. T. SEAY,
Speaker of the Senate.

Approved February 2, 1903.

JAMES B. FRAZIER,
Governor.

APPENDIX "B"

AN ACT to authorize the City of Knoxville to own and operate a system of water works, and to issue bonds for that purpose, and to amend House Bill No. 28, being an Act entitled "An Act to authorize the City of Knoxville to issue bonds to purchase and acquire the plant and property of the Knoxville Water Company, build extensions thereto, and maintain and operate the same," passed January 29, 1903, and approved February 2, 1903, so as to read as follows:

Section 1. *Be it enacted by the General Assembly of the State of Tennessee,* That it shall be lawful for the Mayor and Aldermen of the City of Knoxville to acquire, own and operate a system of waterworks for said City and adjacent territory, either by purchase or construction, and for that purpose it is authorized to issue its interest bearing coupon bonds to an amount not exceeding $750,000 in the manner and under the restrictions hereinafter provided.

Sec. 2. *Be it further enacted,* That said bonds shall be issued under rules, regulations and restrictions to be provided by ordinance, by the Mayor and Aldermen of said city, which bonds shall be in denomination of $1,000 each, and shall bear a rate of interest to be fixed by said ordinance, not exceeding four per cent per annum, and shall run for a period not longer than forty years, the interest on the same to be payable semi-annually on the first of January and July, respectively, said interest and principal to be paid in gold coin of the present standard and fineness, and which said bonds shall be provided with coupons for each semi-annual interest payment, and said bonds shall be known as the "Waterworks bonds" of the City of Knoxville, and shall not be sold for less than par. No commission whatever shall be allowed for the sale of said bonds.

Sec. 3. *Be it further enacted,* That the proceeds of said bonds shall be paid into the city treasury and be there kept and preserved as a separate fund to be used exclusively for the purchase or construction of a system of waterworks for said city, and adjacent territory, and in making such alterations, extensions, additions and improvements as may be necessary, and in maintaining the same. Said bonds, and all coupons attached to said bonds, shall at maturity be and remain until fully paid, a lien on said waterworks property, appurtenances, rights, franchises and privileges, acquired by the corporate authorities of said municipality. Said lien shall include and extend to all improvements, extensions and additions which the corporate authorities of said municipality may make, and shall be in addition to the corporate liability for the payment of said bonds. Said bonds and coupons attached thereto, shall be exempt from municipal taxation.

Sec. 4. *Be it further enacted,* That there is hereby created for said City of Knoxville, a waterworks commission, to be composed of five citizens and freeholders of said city, who shall be elected by the City Council of said city, as herein provided. One member shall be elected for one year, one for two years, one for three years, one for four years and a fifth for five years, who shall hold their office for the time for which they shall be elected and until their successors shall be elected and qualified; which successors shall each be elected at the conclusion of the several terms aforesaid for the term of five years thereafter; provided, that election to fill vacancies in said commission shall only be for the unexpired term in which the vacancy occurs. Said commissioners shall not be related to the Mayor or any member of the City Council, or any department official of said city within the fourth degree, either by affinity or consanguinity. The first Board of Commissioners shall be elected not earlier than sixty days after the passage of this Act, which election and all subsequent elections, including elections to fill vacancies, shall be upon thirty days' public notice, and at a regular meeting of said City Council.

Sec. 5. *Be it further enacted,* That before entering upon their duties said commissioners shall each file with the City Recorder a bond with solvent sureties in the penalty of one thousand dollars, payable to the State of Tennessee for the use of the City of Knoxville, conditioned that said commissioner shall honestly and faithfully perform all the duties devolving upon him as such commissioner, which bond shall be approved by the Mayor and Aldermen of said city, and said commissioners shall, before entering upon their duties, take and subscribe to the following oath:

"I, ————, do solemnly swear that, as a member of the waterworks commission of the City of Knoxville, I will honestly and faithfully perform all the duties devolving upon me as such commissioner, and that I am not related to any of the parties forbidden by law within the prohibited degree, and that I am not, and will not become during my term of office, interested in any contracts relating to the construction or operation of said waterworks, as prohibited by law, so help me God."

Sec. 6. *Be it further enacted,* That said commissioners are hereby prohibited from having any interest, direct or indirect, in any contract in anywise relating to the construction, purchase and operation of said waterworks, and are also prohibited from awarding contracts for the construction or operation, or for any materials for use in the construction, extension and operation of said water plant, to any person or persons related to any of the members of said commission within the fourth degree, either by affinity or consanguinity, or to any member of the City Council, or to any department official of said city, or in which any such person, member or department official, or any assistant, clerk or deputy under them, has any direct or indirect interest.

Sec. 7. *Be it further enacted,* That the entire work of the supervision of the purchase or construction and operation and maintenance of said system of waterworks shall be vested in said Board of Commissioners as above provided within the limitations hereinafter provided.

Sec. 8. *Be it further enacted,* That said commissioners are authorized and directed to obtain from the Knoxville Water Company a written proposition for the sale of its plant, franchises, etc., to the City of Knoxville, giving the price and terms of payment, together with the opinion of competent, disinterested experts as to the cost and present value of said plant; said commission is also authorized and empowered to secure plans, specifications and estimates of the cost of the construction of a new system of waterworks, and to report all matters called for in this section to said City Council for its consideration, and to accompany said report with its recommendations in the premises, which recommendations shall be accompanied with all facts, testimony and opinions upon which the same are based. Provided, that said commission shall not close any contract for the purchase or construction of waterworks until it has been duly authorized to do so by said City Council, after the proposition shall have been ratified by a vote of the people as herein provided; and provided, further, said commission shall not incur any expense in any of said matters until authorized to do so by said City Council, and until there has been appropriated out of the city treasury and placed to the credit and at the disposal of said commisison, a sufficient amount of money to cover such expense.

Sec. 9. *Be it further enacted,* That said commission shall organize by electing one of their number chairman, and by electing a secretary and treasurer, who need not be a member of said Board of Commissioners, but who, before entering upon his duties, shall execute bond in a penalty to be fixed by the Board of Mayor and Aldermen, and with good and sufficient sureties to be likewise approved by said Board. Said waterworks commissioners shall have regular meetings and may have special meetings under rules and regulations adopted by themselves. They shall keep a true and faithful record of all their actions and proceedings, and of the waterworks plant purchased or constructed by them, and of all extensions, alterations and improvements made by them. A copy of said record on any subject, certified by said chairman and secretary, shall be evidence in the courts of this state. They shall be authorized to make contracts, employ clerks, engineers, firemen, superintendents, inspectors, water meter readers, plumbers, laborers and other persons, and purchase materials such as may be necessary in the construction or operation of said waterworks plant. They shall fix the compensation of all employes, except that of the secretary and treasurer, whose salary or compensation shall be fixed by the Board of Mayor and Aldermen. Said secretary and treasurer, when elected shall not be related to any member of said waterworks commission, or to any department official of said city within the fourth degree. They are authorized to make and enforce reasonable rules and regulations, and to fix water rates, tolls, or the price for the use of water, and they may for said purposes, enter upon premises where water is used or desired for purposes of inspection, repairs, or other work in introducing or regulating the use of water. They shall have full power to collect and enforce collections of all moneys due for the use of water or arising out of the operation of said plant. They shall also have power to grant the use of water free of charge to persons who are objects of charity and to charitable institutions. But the rules and regulations and water rates made by said commissioners shall be subject to ratification by ordinance by the Board of Mayor and Aldermen.

Sec. 10. *Be it further enacted,* That no contract made by said waterworks commissioners in the construction, alteration or extension of said waterworks, involving more than one thousand dollars, shall be binding upon the city, until submitted to the Board of Mayor and Aldermen and approved by them.

Sec. 11. *Be it further enacted,* That said waterworks commissioners shall submit to the Board of Mayor and Aldermen at their last regular meeting in January of each year, a full detailed report of the work, income and expenditures for the preceding year, showing sources of income, items of expense, names of all salaried employes, improvements, extensions and alterations made, and such other matters as they may deem material and as the Board of Mayor and Aldermen may call for. And their report and books shall be subject to examination and correction by the Board of Mayor and Aldermen. Said report shall also contain an estimate of cost, expenses, improvements, extensions and alterations necessary for the succeeding year.

Sec. 12. *Be it further enacted,* That the Board of Mayor and Aldermen of the City of Knoxville shall have and are hereby given and granted powers of authority to determine by ordinance whether or not members of the waterworks commission shall be compensated for services rendered or shall render same without compensation, and if compensation is determined to be allowed them, then the amount of such compensation and manner and time of its payment shall be fixed by ordinance.

Sec. 13. *Be it further enacted,* That in the event it shall be determined to purchase or construct, equip and maintain a system of waterworks by the city, then for the purpose of securing sites for pumping stations and other necessary purposes, including the laying of mains and water pipes, and sites for reservoirs and filtering galleries, extensions, improvements and alterations, the city shall have and is given the right of condemnation of grounds within and without its corporate limits, as already given in sub-section 30 of Section 18 of its charter, as well as by proper proceeding in the circuit court for Knox county, as provided by law.

Sec. 14. *Be it further enacted,* That any member of said Board of Water Works Commissioners shall be subject to removal by the Board of Mayor and Aldermen for incompetency or official misconduct, upon specific charges in writing and after due notice to the members against whom charges are made, and after trial, or opportunity for trial, before the Board of Mayor and Aldermen. But two-thirds of said Board of Mayor and Aldermen shall vote for said removal before the same can be made.

Sec. 15. *Be it further enacted,* That after said commissioners shall have made their report to the City Council as provided in Section 8 of this Act, said City Council shall call an election to be held in the said City of Knoxville by the regularly constituted authorities, after thirty (30) days' advertisement in two city papers, at which all persons legally qualified to vote for Mayor and Aldermen of said city may vote for the purpose of ascertaining the will of the people upon the following question:

First: Whether or not the City shall be authorized to issue bonds as provided in Section 1 of this Act, and

Second: To determine whether the city shall purchase the plant of the Knoxville Water Company, or construct a new water system. The election commissioners shall cause to be prepared ballots to be used and voted at said elections on which there will be printed the following:

"Vote for one"
"For Waterworks Bonds,"
"Against Waterworks Bonds,"

"Vote for one"
"For Construction of Waterworks."
"For Purchase of Waterworks."

At said election those who favor the issuance of bonds shall place a cross (X) mark opposite the words "For Waterworks Bonds," and those who oppose the issuance of bonds shall place a cross (X) mark opposite the words "Against Waterworks Bonds," and those who favor the construction of waterworks shall place a cross (X) mark opposite the words "For Construction of Waterworks," and those favoring the purchase of the Knoxville Water Company's plant shall place a cross (X) mark opposite the words "For Purchase of Waterworks."

Provided, that if said waterworks commissioners are unable to obtain from the Knoxville Water Company a written proposition for the sale of its plant, franchise, etc., to the City of Knoxville, giving the price and terms of payment, then said election shall be held to determine whether bonds shall be issued for the construction of waterworks and the tickets shall contain only the words, "Vote for one," "For Waterworks Bonds," "Against Waterworks Bonds," and those who favor the construction of waterworks by the city shall place a cross (X) mark opposite the words "For Waterworks Bonds," and those who oppose the construction by the city, place a cross (X) mark opposite the words "Against Waterworks Bonds." Said election shall be held under existing laws and the returns shall be duly certified to the Board of Mayor and Aldermen of said city; provided, there shall also be returned to said Board of Mayor and Aldermen all the ballots voted at said election, together with one set of poll books and one set of tally sheets. The remaining poll books and tally sheets shall be filed in the office of said Commissioners of election, there to be held subject to the inspection of any citizen of said city. Provided that the election authorized by this Act may be called and held by the election commissioners of the county under the general election laws and held at any time within two years after the passage of this Act.

Provided further, that after one election has been held under this Act, no such election shall be held until the expiration of at least twenty-four months after a previous election.

Sec. 16. *Be it further enacted,* That it shall be the duty of said City Council, when it shall be convinced that two-thirds of all those voting on the question of the issuance of bonds have voted in favor thereof, to declare the result by ordinance, and in that event and no other, to cause said bonds to be issued as provided herein, and cause the same to be converted into cash under such rules and restrictions as it shall deem necessary to provide by ordinance. Provided, that said bonds shall not be issued until after a contract for the construction or purchase of said waterworks shall have been lawfully made and concluded.

Sec. 17. *Be it further enacted,* That said City Council shall also canvass and by ordinance declare the result of said election on the question of purchase or construction of a system of waterworks, and shall cause to be carried into effect the will of the people, as expressed at said election. Provided, that if the said Knoxville Water Company submit a written proposition as shown in section 8 of this Act, a majority of those voting on said proposition for purchase or for construction in favor of either proposition, shall be sufficient and shall decide the question.

Sec. 18. *Be it further enacted,* That the net annual income and revenues derived from the operation of the waterworks system, after payment of operating expenses, extensions and improvements, or as much thereof as shall be necessary for that purpose, shall be set apart and applied first to the payment of the interest coupons of said waterworks bonds, as such interest coupons shall mature.

Sec. 19. *Be it further enacted,* That all laws and parts of laws in conflict with this Act are hereby repealed, and that this Act take effect from and after its passage, the public welfare requiring it.

Passed March 31, 1903.

ED. T. SEAY,
Speaker of the Senate.
L. D. TYSON,
Speaker of the House of Representatives.

Approved April 3, 1903.

JAMES B. FRAZIER,
Governor.

APPENDIX C.

Value of Water Company's Entire Plant and Property, on March 31, 1901, as found by the Special Master	$608,427.95
(*Printed Record, p.* 171-175.)	
Fair Value of the plant at that time, in use for the purpose of supplying the city proper, as found by the Special Master, being 93.83 per cent. of entire plant............	570,887.35
(*Printed Record, p.* 181.)	
Gross Revenue derived by Water Company from its entire plant and property under the rates in effect prior to March 30, 1901. as found by the Special Master for the year ending March 31, 1901.............	88,481.39
(*Printed Record, p.* 181.)	

Revenue to be derived under the Ordinance of March 30, 1901, for the same period, as found by the Special Master............	70,857.75
(*Printed Record, p.* 181.)	
Revenue derived from water supplied within the corporate limits, under rates in effect prior to March 30, 1901, for business year ending on that date, as found by the Special Master	78,148.31
(*Printed Record, p.* 182.)	
Revenue to be derived under the Ordiance of March 30, 1901, within the *corporate limits* for the same period, as found by the Special Master (No Reduction on Hydrant Rentals)	63,342.40
(*Printed Record, p.* 182.)	
Expenses of complainant in operating its entire plant for the year ending March 31, 1901, as found by the Special Master.....	34,750.91
(*Printed Record, p.* 183.)	
Expenses of complainant in operating that portion of its plant within the city proper, as found by the Special Master......	32,809.98
(*Printed Record, p.* 183.)	
From the above it appears that the *net income,* to be derived from the *entire plant,* under the operations of the Ordinance of March 30, 1901, is $70,857.75—$34,750.91 or.....	36,106.84

And the net income to be derived from that portion of the plant within the corporate limits, under the operations of the Ordinance of March 30, 1901, is .... $63,342.40—$32,809.98 or 30,532.42

Therefore applying the *Net Income* of the *entire* plant under the operations of the ordinance of March 31, 1901, to the *ascertained value* of the *entire plant* as above, we have $36,106.84×100—$608,427.95, or a per cent. of income of 5.94

Applying the *Net Income* to be derived from the operation of the ordinance of March 30, 1901, and from that portion of the plant within the corporate limits, to the ascertained value of that portion of the entire plant in use for the purpose of supplying the city proper, we have $30,542.32×100—$570,887.95, or a total per cent. of income of 5.35

The Special Master finds that 2 per cent. per annum is a fair allowance for depreciation.

(*Printed Record*, *p.* 187.)

Deducting the 2 per cent. allowance for depreciation, it leaves as the net return to be realized upon the *entire plant*, by aid of the entire net income of the Company, under the operations of the Ordinance of March 30, 1901 .... 3.94

And the net return to be realized upon that portion of the plant used in supplying water within the corporate limits of the City of Knoxville, by aid of the entire net income collected from within the city limits under the operation of the Ordinance of March 31, 1901, as 3.35

APPENDIX D.

Effect of applying the Ordinance of March 30, 1901, to the business of the Water Company for the year subsequent to the passage of said Ordinance. The application of the Income and expenses for the year ending March 31, 1902, to the fair value of the plant in use for supplying the city with water, must of necessity carry with it the fair value of the plant at the date the ordinance is to be tested by. The Special Master does not find this value at any other date than that of March 31, 1901. The city offers very little proof as to values later than the date of the Ordinance. The Water Company introduces, by its President and Supervising Engineer, an estimate of "Additions to March 31, 1902," (from March 31, 1901 (amounting to.......... 73,486.11

(*Printed Record, p.* 645.)

He also submits an estimate of "Additions, 6 mos. to Sept. 30, 1902," amounting to.... 26,907.51

(*Printed Record, p.* 645.)

The Treasurer of the Water Company gives in a table showing the yearly additions to the construction cost, for the year ending March 31, 1902, an amount of	79,281.31
(*Printed Record, p.* 727.)	
One way of obtaining the fair value, as of March 31, 1902, would be by taking the amount found by the Special Master as the fair value of the entire plant as of March 31, 1901..............................	608,428.00
(*Printed Record, p.* 175.)	
To which add the estimated net cost of extensions for the year ending March 31, 1902, by William Wheeler, as above...........	73,486.00
(*Printed Record, p.* 645.)	
Would give an indication of the fair value, March 31, 1902, as.....................	681,914.00
If the actual book construction cost during this year, of	79,281.00
(*Printed Record, p.* 727.)	
is added to the Special Master's findings of fair value for the preceding year, it would give the fair value, as of March 31, 1902	687,709.00

An objection to using either of these methods is that the Special Master's estimate of fair value as of March 31, 1901, is of necessity based upon the ruling prices as of that date. Price of Cast Iron Pipe, the largest factor in water works construction, was "at one of the lowest notches it has reached in a long time" on March 31, 1901,

(*Printed Record, p.* 1,977.)

and "since this case has been under discussion the price has gone as high as $32.75 (from $24.00 March 31, 1901) from that date of March 31, to the present day" (Jan. 5, 1904). It attained that price about September 30, 1902.

(*Printed Record, p.* 1,977.)

Price of Cast Iron Pipe, on March 31, 1902, as shown by diagram giving prices of Cast Iron Pipe covering a series of years, is given at about $27.00 per ton.

(*Printed Record, p.* 2,062.)

It can therefore be readily seen that no comparison, made upon the Special Master's report of value, as of March 31, 1901, would produce a fair value of the plant as of March 31, 1902, unless the increase in the value of labor and material is also considered.

J. L. Ludlow made an estimate of the "Cost of Building Works of the Knoxville Water Company as of Sept. 30, 1902," amounting to 740,068.00

but disregarding certain items of Real Estate, Office Fixtures, Supplies on hand as well as certain Contractor's Profits.

(*Printed Record, p.* 941.)

If from this we deduct William Wheeler's estimate of "Additions," 6 mos. to Sept. 30, 1902," 26,908.00

(*Printed Record, p.* 645.)

It would leave as the fair value as of March 31, 1902 .... 713,160.00

This amount probably is high, as Cast Iron Pipe is estimated in Mr. Ludlow's values at $32.00 per ton, the price in September, 1902, instead of at $27.00, the price in March, 1902, but on the other hand certain material items are left out which would still further enhance its value.

Arthur Hider made an "Estimate of the Cost of Duplicating the Knoxville Water Company's Plant as it existed September 30, 1902," amounting to 799,389.00

(*Printed Record, p.* 991.)

He used as an average price of Cast Iron Pipe, $31.57 per ton,

(*Printed Record, p.* 989.)

Deducting the "Additions, 6 mos. to Sept. 30, 1902,".... .... 26,908.00

Leaves as his Value, without Real Estate, of.. 772,481.00

T. T. Johnson made an Estimate "Knoxville Water Works Plant, Sept. 30, 1902," but not including Real Estate or Stock on Hand, and amounting to 808,733.00

(*Printed Record, p.* 1,013.)

Deducting the "Additions, 6 mos. to Sept. 30, 1902," 26,908.00

Leaves as his fair value without Real Estate or Stock on Hand as of March 31, 1902... 781,825.00

He uses $32.00 per ton as the price of Cast Iron Pipe.

(*Printed Record, p.* 1,013.)

William Wheeler also made an "Estimated Cost of Replacement of the Physical Plant and Property which was in use September 30, 1902," which included Real Estate, Stock and Supplies on Hand, etc., left out of the other replacement estimates, as of that date, and with pipe at prices ranging from $36.60 for 3-inch to $31.00 for 10-inch to 20-inch pipe per ton, reached a value of 819,487.00

(*Printed Record, p.* 670.)

Deducting the "Additions, 6 mos. to Sept. 30, 1902," 26,908.00

Leaves as the fair value as of March 31, 1902, 792,579.00

As this includes all the elements of the Plant and Property, it may be nearer the fair value as of the dates in question than are the others.

The fair value of the entire Plant in use as of March 31, 1902, would therefore appear to be, from the above, somewhere between $681,914.00, the lowest of these determinations, and $792,579.00, the highest. For the purposes of this calculation and for conservative reasons, but without admitting it as a fact, adopt as the fair valuation as of March 31, 1902, ... 685,000.00

And further, still for lack of a finding by the Special Master on these points, taking the evidence of the Treasurer, as to the "Annual Income on Basis of Ordinance of March 31, 1901," for the fiscal year ending March 31, 1902, ... 76,233.58

(*Printed Record, p.* 716.)

And likewise his estimate of "Expenses in same period, entire plant," 37,003.25

(*Printed Record, p.* 716.)

It would leave a net income due to the entire plant, of 39,230.33

Applying this net income to the value above deduced, we have, 39,230.33×100—685.000.00=5.73%

From which, after deducting 2 per cent. allowance for depreciation, as found by the Special Master	
(Printed Record, p. 187.)	
leaves as a net return upon the fair value of the Plant, as of March 31, 1902, based upon the operations of the Ordinance of March 31, 1901, of	3.73%
Again, dealing only with the Plant and Property within the city proper, and applying to the above deduced value of $685,000 the percentage found by the Special Master, of the entire plant of the Water Company, used in supplying the city proper, to-wit,	93.83%
(Printed Record, p. 181.)	
we have, as the value on March 31, 1902, of the plant and property of the Water Company, used in supplying the city proper..	642,735.00
From the Treasurer's statement of Income and expenses for the Fiscal year ending March 31, 1902, we find,	
(Printed Record, p. 716.)	
City proper, collections, per city ordinance	65,574.05
Expenses in same period, city proper....	34,962.02
Leaving as net income, city proper, under operations of city ordinance of March 30, 1901	30,612.03

Applying this net income to the above deduced value of the Plant and Property within the city, we have, ...30,612.03×100—642,735.00=4.77%

From which, after deducting 2 per cent. as above, allowance for depreciation, as found by the Special Master, leaves a net return upon the value of the plant, as used to supply the city proper, as of March 31, 1902, based upon the operations of the ordinance of March 31, 1901, of 2.77%

The above is, for lack of evidence in the record, of material facts, not conclusive, in fact the valuation used, being substantially based upon the low prices of 1901, is below any real value that would in all probability be placed upon the Plant as of March 31, 1902, Other considerations also entering into the calculations, not having been judicially passed upon, make the conclusions at best, only an approximation. It is,however, we think, well within the results which would be ascertained by a thorough examination of the questions involved, for any increase in the value of the Plant, either taken as a whole, or as applying to the city proper, would result in proportionately decreasing the per cent. of net return to be obtained therefrom.

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No. 17

IN THE

SUPREME COURT OF THE UNITED

MAYOR AND ALDERMEN OF THE CITY
KNOXVILLE, APPELLANT

vs.

KNOXVILLE WATER COMPANY, APPEL

APPEALED FROM THE CIRCUIT COURT OF THE
STATES FOR THE EASTERN DISTRICT OF

REPLY BY APPELLANT TO THE ADDI
BRIEF FILED BY THE APPELLEE

J. PIKE POWERS
Counsel.

G. W. PICKLE,
W. R. TURNER,
W. T. KENNERLY,
Of Counsel.

(20,554).

In the Supreme Court of the United States,

No. 217.

MAYOR AND ALDERMEN OF THE CITY OF
KNOXVILLE, APPELLANT,

vs.

KNOXVILLE WATER COMPANY, APPELLEE

APPEALED FROM THE CIRCUIT COURT OF THE UNITED
STATES FOR THE EASTERN DISTRICT OF TENNESSEE

REPLY BY APPELLANT TO THE ADDITIONAL BRIEF FILED BY THE APPELLEE

I

REPLY TO CONTENTION THAT ORDINANCE IS INVALID BY REASON OF ITS EXCESSIVE PENALTIES

The contention of the appellee, made for the first time on the oral argument of this cause in this Court, and now reinforced by an "additional brief", to which this is a reply, to-wit, that appellant's ordinance of March 30, 1901, regulating the appellee's water rates is "unconstitutional and void because by reason of the excessive penalties imposed thereby it operated as a practical denial to the appellee Water Company of the equal protection of the laws", is clearly untenable upon this record for several reasons. There is no distinct averment in the bill that said ordinance was void upon its face for this reason. The two clauses quoted from the bill on page 3 of the "additional brief" do not and were not intended by the pleader to raise this special question for adjudication as will clearly appear by reading those clauses in connection with the other portions of the bill. Before the bill in this case was fiiled, the case of the Knoxville Water Co. vs. the Mayor and Alderman of the City of Knoxville, which was a suit by the City to recover of the Water Company the penalty prescribed for violation of this ordinance of March 30, 1901, had been finally dceided by the Supreme Court of Tennessee in favor of the City of Knoxville, and the Water Company had prosecuted writ of error to this Court, which was then pending for argument and determination. These facts are averred in the bill in this case, and the hope expressed therein that the Water Company would secure a reversal of the judgement of the Supreme Court of Tennessee in this Court, and a decree declaring said ordinance null and void.

Printed Record, Vol. 1, *page* 9, 10, 16, 17.

The prosecution of that suit by writ of error in this Court was excepted from the injunction prayed in this case.

Printed Record, Vol. 1, *page* 17.

There can be no doubt that the identical question sought to be made by the appellee in the oral argument and in this "Additional Brief" was distinctly and unmistakably made and fully considered and decided both by the Supreme Court of the State of Tennessee and by this Court in said case, involving the recovery of a penalty for the breach of said ordinance. That case could not have been decided in favor of the City, as it was by both courts, without an affirmance of the validity of the ordinance. It was agreed by written stipulation that the decision of the Supreme Court of Tennessee was affirmed by this Court after the bill was filed in this case.

> See Appellee's Original Brief, page 13 and 14, referring to printed record in Cause No. 212 of this Court, a printed copy of which record is filed for the convenient reference of the Court with this brief. The stipulation in reference to this matter will be found on page 2250 of the printed record.
>
> See also stipulation as to use of record in Cause 212 (18354) on page 1946-1948 of printed record.

The appellant in its answer in this case pleads and relies upon the decision of the Supreme Court of Tennessee in said former case, which was then in full force and effect, and which has been affirmed by this Court. That decision was relied upon, not only as *res adjudicata* as to the valadity of the ordinance in question, but when affirmed by this court, as the settled law affecting this case and ordinance so far as that law could be made certain by the decision of both courts.

Printed Record, Vol. 1, 88-91.

By examination of the record of Case No. 212 (18,354) decided by this Court, it will be found that the Water Company raised by written plea, among others, this identical question, averring that

> "Said ordinance of March 30, 1901, is further oppressive and unreasonable, because, under its terms and provisions, defendant will be deprived of its property and liberty without due process of law. Wherefore said ordinance is void, and not enforceable against this defendant."

And further averring in another distict plea, that

> "Said ordinance of March 30, 1901, is excessive and repugnant to the Constitution of the State of Tennessee and the United States, in that it permits plaintiff to arbitrarily asses against the defendant a penalty of $50.00 for every charge, demand and collection by defendant from the consumers of water furnished by it in excess of the schedule of rates prescribed in the first section of said ordinance." etc.
>
> *Printed Record* (212), *pages* 3-5.

There were other pleas denying the validity of this ordinance upon other and every conceivable ground.

In its reply brief in the Supreme Court of the State, the appellee insisted upon the invalidity of said ordinance as follows, to-wit:

> "That said ordinance is oppressive and unreasonable in that, * * * * * *
>
> 5th. That the penalty prescribed by said ordinance is excessive."
>
> *Record* (212), *pages* 138, 157, 178.

The Supreme Court of the State determined that,

> "The ordinance of March 30, 1901, upon which this suit is based, is not in contravention or violation of the Constitution of the United States, Article I, Section 10, or of Section 1 of the 14th Amendment of said Constitution, but that said ordinance is a valid and legal ordinance, and was properly passed under the power and authority invested in plaintiff." etc.

And judgment was entered accordingly in favor of the City, and the Water Company saved exceptions to the ruling of the Court to the effect that the ordinance was not in contravention or violation of the Constitution of the United States.

Record (*No.* 212), *pages* 228-230.

There was a reservation in the opinion and judgment of the Supreme Court of the State of a right to the Water Company "to litigate and show in such way as it may be advised that the *rates prescribed by said ordinance of March 30, 1901, are unreasonable and oppressive*—that question not having been considered by the Court in deciding this case." This reservation was not as to the *validity of the ordinance on its face*, but as to the *reasonableness of the rates* that it prescribed.

The assignment of errors by the Water Company, upon which said cause was brought to this Court on writ of error was as follows, to-wit:

> "The defendant, Knoxville Water Company, by its attorney further excepts to the action and judgment of the Supreme Court of the State of Tennessee sustaining the validity of the ordinance

> of plaintiff passed March 30, 1901, being the ordinance in controversy in this cause, and holding that the same is in contravention and violation of the Constitution of the United States, Article 1, Section 1, and Section 1 of the XIV Amendment of said Constitution as contended by defendant in its pleas, in its reply to plaintiff's assignment of errors to the Supreme Court of Tennessee, and in the oral argument of its counsel before said Supreme Court, all of which defendant assigns as error upon said julgment."

Record (*No.* 212), *page* 230.
Printed Record Vol. 1, 283.

On the 23d of March, 1903, this Court affirmed in all respects the judgment of the Supreme Court of Tennessee, thereby overruling said assignment of error and affirming the validity of said ordiance.

Knoxville Water Co. vs. The City of Knoxvillee,
189 *U. S.*, 434;
47*L. ed.*, 887.

The opinion and judgment of the Supreme Court of Tennessee, which were thus approved and affirmed by this Court had in express terms considered the objection now made to said ordinance and overruled the same, and affirmed the validity of the ordinance. In its opinion, the Supreme Court of Tennessee said:

> "The rates adopted by the ordinance are not shown by the proof to be unreasonable, and the ordinance is not shown to be oppressive, and its violation subjects the defendant to the penalties imposed."

Printed Record, 247, 267;
Knoxville Water Co. vs. Knoxville,
107 *Tenn.*, 647.

The language, equally explicit, of the judgment of the Supreme Court of Tennessee has already been quoted as well as that of the assignment of errors.

It becomes apparent from this statement of facts why the question under discussion was not made in the lower court and is presented for the first time in this Court on the oral argument of the case. The bill shows that the Water Company contemplated this question would be settled and settled finally between itself and the City by the decision that should be rendered on the writ of error prosecuted to this Court to reverse the decision, in the former case, of the Supreme Court of Tennessee. The City relied upon the decision in its answer as an adjudication as well as a settlement of the law of the case unless the same should be reversed by this Court. It is stipulated distinctly that the decision of the Supreme Court of the State of Tennessee was affirmed, and it was never thought or suggested by either party that the question now presented on the oral argument and by this "Additional Brief' was any longer in controversy between the parties. It did not occur to appellee's counsel that it could possibly be involved until after the preparation of their original brief in this case. There was no decision of this question invoked in the lower court, and no exception on that account made.

It is a most significant fact that the Water Company on the 15th of May, 1902, about seventeen months after the filing of its bill in this case, applied to the lower court by petition to have the proceedings in this case stayed until a decision should be reached in the former case. This petition avers the pendency of the former case on writ of error in this Court, and avers further that it involves the identical question which it is sought now to raise in this Court, and prayed for an order staying further proceedings in this case "until the final determination of the suit between the Mayor and Aldermen of the City of Knoxville and the Knoxville Water Company now pending in the Supreme Court of the United States above referred to." etc.

The reason for the granting of this stay order is thus stated in the petition:

> "Petitioner is advised and respectfully avers, that before this Court would or ought to order a reference in this cause to determine the question of the reasonablness of the rates prescribed by said ordinance, it must first be determined by Your Honors in this cause, or upon a proper proceeding in some other forum having jurisdiction, whether or not the contention which is now made herein and is also made in said suit in the Supreme Court of the United States, to-wit, whether or not the defendant, The Mayor and Aldermen, had power under the circumstances to pass said ordinance is well taken. Said question of the power of the defendant to pass the ordinances was pending in said suit in the Supreme Court of the United States before the bill was filed in this cause, and is still before that Court for determination; and the decision which may be reached in the Supreme Court in regard thereto, *must, of course, be controlling in this case.* Petitioner again averring, that *said question now before the Supreme Court is fundamental and controlling in the entire controversy between the parties to this suit,* says, that if that case should be decided in petitioner's favor, as petitioner believes it will be decided, in view of the many decisions of that Court, one being the recent decision in the Detroit,

> Michigan, Street Railway cases, then the determination of the question of the reasonableness of the water rates raised in this cause would become wholly immaterial. In other words, if the Supreme Court of the United States should hold that said Mayor and Aldermen had *no power*, in view of the existence of contracts between it and petitioner, or *for any other reason*, to pass said ordinance of March 30, 1901, or said subsequent ordinance, there can be no reason for inquiring as to the reasonableness of the rates prescribed in said ordiance. Petitioner is advised and says, that it is the fixed practice of Federal Courts, where two causes are pending in different courts and between the same parties, *that the decision of the one first instituted will be conclusive of the second* to stay proceedings in the second until the first shall have been determined, and petitioner believes that all the reasons,—or all the important reasons,—which support this well established practice exists in this instance. And it is advised that the Court has the power, and prays that it will exercise the same, to stay the present proceedings until the termination of said supreme case. If petitioner should fail in the Supreme Court, then the present cause can proceed after the delay of about eight months. If petitioner should succeed therein, then the bill before this Court would become unnecessary."
>
> *Printed Record, Vol.* 1, *p.* 108-113.

It was the opinion of appellee's counsel before the decision of this Court upon said writ of error that the decision, when made "must, of course, be controlling in this case." Appellee's counsel seemed to have been of the same opinion after the decision upon the writ of error until the question now insisted upon was sprung on the oral argument of this cause in this Court for the first time.

It is seldom that a case or a question of law has received at the hands of the courts a more thorough consideration than has this question of the validity of this City ordinance upon its face. If opinions and adjudication of courts can put a question at rest at all this question ought to be treated as a settled one in the present suit.

The single reservation made in the opinion and judgment of the Supreme Court of Tennessee was the right of the Water Company to litigate and show by evidence that the *rates* prescribed were *unreasonable.* The question of the invalidity of the ordinance upon its face was not reserved, and the Courts would probably not have permitted the reservation of such a question. The Court necessarily determined the validity of the ordinance on its face. Unless the Court decided this question they decided nothing in the protracted litigation over the ordinance. The counsel for appellee were induced to raise this question at this time by the decisions of this Court in the cases of

Ex Parte Young,
209 *U. S.,* 448; *and*
Hunter vs. Wood,
209 *U. S.,* 472.

We submit, that the legislation considered in those cases was not of the same character as the ordinance involved in this case. The penalties prescribed by the legislation considered in those cases were extreme in amount and severity and were cumulative for the most part. The principle applied in those cases is stated in the majority opinion as follows:

> "It may therefore be said that when the penalties for disobedience are by fine so enormous and imprisonment so severe as to intimidate the Company and its officers from resorting to the courts to test the validity of the legislation, the result is the same as if the law in terms prohibited the Company from seeking judicial construction of laws which deeply affect its rights."
>
> *Page* 449.

In the case at bar, the ordiance prescribes a penalty of "not less than $10.00 nor more than $50.00 for each offence." If this very moderate penalty for the violation of a City ordinance regulating water rates renders the ordinance void, then it will not be possible for the City to prescribe any penalty for violation of its ordinance. The penalty here prescribed is one that is common to nearly all classes of misdemeanor or small offences. This penalty is not made cumulative by the ordiance. It is true that one choosing to persistently and continuously violate the ordiance may bring upon himself very serious consequences, but this is true of any offender who chooses to violate rather than to obey the laws of the land. A citizen, by persistently uttering oaths in public places, can bring upon himself an immense and ruinous accumulation and burden of fines and costs, just as this Company, by persisting in repeated violations of a very reasonable ordinance may bring like consequences upon itself.

The public are entitled to at least equal consideration with this Water Company. The City, representing the public gave this Water Company the fullest hearing upon the question of the reasonableness of the rate fixed before establishing that rate. The Water Company showed scant courtesy to the City Authorities. It refused such assistance as it could have rendered and in good faith should have rendered to the City Authorities in arriving at a just conclusion as to rates. The City Authorities used great diligence in establishing the rates in question and reached a surprisingly just result. This Water Company has not been deprived of a hearing, and that is the distinct ground upon which excessive and cumulative penalties are held to render legislation of this character void.

After this ordinance was passed, the City and its inhabitants showed no disposition to oppress this Company. The Water Company, for eight months, ignored and daily violated the ordinance, and yet encountered only enough of suits for penalties to bring about a settlement of the controverted question of the validity of the ordiance. During this eight months, there was no injunction against suits. No frivolous or oppressive litigation was instituted. Although this ordiance has been passed and should have been in force for more than seven years, only one suit, in which a penalty of $10.00 was inflicted, has been prosecuted to a final result against the Water Company. It has been able to arrest the enforcement of this ordinance and the bringing and prosecution of all suits looking to that end for the term of more than seven years. It has litigated the questions by piecemeal and thereby secured this extraordinary delay. Certainly it cannot be reasonably contended that an ordinance which can be thus arrested and evaded for such a term of years is one that should be declared void for the severity of its penalties. Surely this Water Company has not by this ordinance been deterred from appealing repeatedly to the Courts, or deprived of the right to have full and repeated hearings, extending over seven years. On this question, we call the Court's attention to the opinion in the case of

> *San Diego L. & T. Co. vs. National City*,
> 174 *U. S.*, 739;
> 43 *L. Ed.*, 1155.

If therefore the question of the invalidity of this ordinance upon its face was an open one in this case, it should be resolved in favor of the validity of the ordinance. There can be no serious loss or peril to result to a corporation from the putting into effect for a brief period and as a test of an ordinance such as the one involved in this case, where the ordinance, as was done in this case, is passed after due notice to the corporation and full hearing, and after an exhaustive examination as to its reasonableness. There can be scarcely any satisfactory answer as to the reasonableness of such ordinance except an actual test for some period of the results of operationsunder the ordinance. Some of the courts have required such test to be made before undertaking to enjoin the enforcement of the legislation.

II

CORRECTION OF ERROR AS TO INCOME IN APPELLANT'S FORMER BRIEF.

The presentation of this reply brief affords counsel for the City an opportunity, of which they will avail themselves, to correct an error,—or rather errors,—contained in their original brief in relation to the estimated income of the Water Company under the ordinance and the per cent that such income would pay upon the value of the Water Company's plant. This error occurs in the original brief as to the year 1900-1, on pages 112, 113, and as to the year 1901-2 on pages 154 and 155. There is and can be no controversy but that the ordinance of March 30, 1901, a copy of which is made Exhibit No. 7 to the bill, and found on pages 64-68 of Volume 1 of the printed record, affects and reduces only the rates of water consumers who are inhabitants of the City. It does not reduce or in any way affect hydrant rentals, amounting to $11,455.00, due from the City to the Water Company. It does not reduce or in any way affect the rates of water consumers who are not inhabitants of the City of Knoxville. The City's scheme of regulation it seems contmplated reduction of water rates only to the inhabitants of the City, leaving, for obvious reasons and equitable considerations, the rates of water consumers living outside of the City unchanged. In the calculations submitted in appellant's former brief as to the year 1900-1, and found on pages 112, 113 the estimated income under City ordinance rates for that year were placed upon authority of the Water Company's Treasurer, at $70,857.75. A simple calculations will show that this is too small by the amount of $2,364.28,—an amount which would increase the percents that estimated income under the ordinance would pay upon the values of the plant found on page 113 of brief by nearly four-tenths of one per cent. The statement of Elbert Wheeler, the Treasurer of the Water Company, as to this year will be found on page 713, Vol. 1, of the printed record, and a calculation will show that after deducting the hydrant rental from actual water collections of that year, the Treasurer proceeded to reduce the entire balance realized from fixtures and meters, to-wit, $77,026.39 by 22.88 percent. In a subsequent portion of this statement, it appears that $10,333.08 of this balance was realized from fixtures and meters outside of the City, and no reduction of 22.88 per cent should have been made on this sum, as was done by the Treasurer in getting at the result of $70,857.75. There was no reduction on the fixtures anl meters rates outside of the City, and none should have been made by the Treasurer in his estimate of the revenue that would have been produced under the City ordinance. The latter part of the Treasurer's calculation shows that only $66,693.31 of this year's revenue arose from fixtures and meters within the City, and this sum only was therefore subject to reduction under the ordinance. The excessive rduction on account of the $10,333.08, which, under the ordinance, was subject to no reduction, having been raelized fro fixtures and meters outside of the City, amounts to the above sum of $2,364.28. This sum should be added to the $70,857.75 to get the revenue realizable under the ordinance according to the Treasurer's own theory.

The mistake as to the year 1901-2 is larger in amount than for the preceding year. The Treasurer's statement as to this year will be found on page 716 of Volume 1 of printed record. The estimated annual income on the basis of the ordinance as fixed by the Treasurer for this year, and as adopted in our former brief, is $76,233.58. This sum is arrived at by the Treasurer by deducting from actual water collections, first, hydrant rentals, $11,455.00, which were not reduced by the ordinance, and secondly

22.88 per cent of the entire balance of $83,997.12 realized from fixtures and meters. This sum included all revenues from fixtures and meters both inside and *outside* the City, This same statement shows that there was realized from fixtures and meters outside of the City $14,435.36, and the Treasurer's reduction of 22.88 per cent on this amount is erroneous, and the sum of this erroneous reduction, to-wit, $3,292.72, should be added to the $76,233.58 in order to get the correct estimated amount realizable under the ordinance, which would increase the per cent that income of this year would pay on value of plant by about fifty-five hundredths of one per cent. These errors also enter into estimates made in appellee's brief.

All of which is respectfully submitted.

J. PIKE POWERS,
City Attorney.

G. W. PICKLE,
W. R. TURNER,
W. T. KENNERLY,
Of Counsel.

(20,554)

IN THE

Supreme Court of the United States

No. 217

THE MAYOR AND ALDERMEN OF THE CITY OF KNOXVILLE,
APPELLANT,
VS.
THE KNOXVILLE WATER COMPANY,
APPELLEE.

Appeal from the Circuit Court of the United States for the Eastern District of Tennessee.

ADDITIONAL BRIEF FOR THE KNOXVILLE WATER COMPANY.

May it please your Honors:

This case was heard by this Honorable Court in April and in the oral argument of counsel for appellee it was insisted that the ordinance assuming to regulate the rates charged by appellee was unconstitutional and void because, by reason of the excessive penalties imposed thereby, it operated as a practical denial to the appellee Water Company of the equal protection of the laws. This point was not presented to your Honors in the original brief sumbitted on behalf of appellee, because the same was prepared prior to your Honor's decision in Ex Parte Young (the Minnesota Rate Case) and the companion case of Hunter, Sheriff, vs. J. H. Wood (the North Carolina Rate Case), and now on account of the lapse of time since the oral argument, it is deemed proper to present the substance of said argument on this point, with citations from the record sustaining the same, in the way of an additional brief.

Now, therefore, we respectfully submit that the decision of this Court in ex parte Young is controlling against the validity of the ordinance attacked by appellee in this case, on the ground that the penalties provided by the ordinance in question for violation of its provisions are so drastic and excessive that the Water Company is denied the equal protection of the laws, in that it is either compelled to acquiesce in the confiscatory rates prescribed by the City or subject itself to confiscatory penalties if it violates the provisions of said ordinance and appeals to the courts for protection. Either course means ruin to the property of appellee. We will now briefly refer to the pleadings and record pertinent to this point.

It was averred in the original bill filed by the appellee in the United States Circuit Court below, after setting out the terms of said ordinance, as follows:

"And now your orator shows that it is informed and so charges that it is the declared purpose of the defendant within the near future and without regard to the pendency of the aforesaid cause in the Supreme Court of the United States, to institute a large number of suits and criminal prosecutions against your orator to compel it to obey the aforesaid unjust, unreasonable and illegal ordinance, and by reason of the excessive penalties therein provided, replenish the depleted treasury of defendant. * * A number of consumers of water have paid their bills under protest and your orator is informed that when the next payment becomes due a larger number will so pay their bills, either with a view of suing your orator for the difference between your orator's present just and reasonable rates and those fixed by the aforesaid unreasonable and illegal ordinance, or enforcing against your orator the harsh and unreasonable penalties provided under said ordinance."

"Your orator further charges that, if its consumers and defendant are permitted to institute the suits they are prepareing to have instituted against your orator, the defense of said suits will entail a grievous burden of expense upon your orator; that the existence of said illegal ordinance operates as a constant menace and disturbance against your orator's business, and to its rights to charge and collect its reasonable rates, and the income necessary to hold and save its property and franchises; that if it is compelled to furnish water at the rates fixed by said illegal ordinances, your orator fears that it will be driven to insolvency, default on its indebtedness and loss of its property and franchises."

Printed Record, Vol. 1, pp. 16, 17.

The penalty clause of the ordinance in question is contained in section 3 and is as follows:

"Be it further ordained, That it shall be unlawful for any person, company, firm or corporation, or their officers, agents, servants or employees, supplying water to the inhabitants of the city of Knoxville, to charge, demand or collect for water so supplied more than the rates hereinbefore set forth in section 1 of this ordinance, and it shall also be *unlawful for any person, firm or corporation, or other officers, agents, servants or employees* to cut off or otherwise interfere with the supply, or *refuse to furnish a supply of water to any consumer* for failure to pay for same, provided such consumer tenders in lawful money the charge for such water at the rates aforesaid, and any violation of the provision of this section of this ordinance shall be a misdemeanor, and upon conviction thereof before the recorder, the offender shall be *punishable by a fine of not less than Ten Dollars nor more than Fifty Dollars for each offence.*"

Printed Record, vol. 1, pp. 67, 68.

It is stated in the Minnesota case that, "the sale of each ticket above the price permitted by the Act would be a violation thereof." So also with respect to this ordinance, any bill collected above the rate required by said ordinance is a violation of said ordinance and is made a misdemeanor that subjects the company, upon such charge, to a fine of not less than $10.00 nor more than $50.00 for each offence; and also imposes the same penalty upon every officer, agent, servant or employee of the company who charges and collects, or for failure to pay, cuts off the water supply to the same extent.

Now the number of services approximately in the Knoxville water plant on March 31, 1901, when said ordinance took effect, was forty-five hundred.

Printed Record, vol. 1, p. 745.

Therefore, for one month's violation of the ordinance in question, by the terms thereof, the Knoxville Water Company, if fined only the lowest fine of $10.00, was capable of being mulcted in the sum of $45,000.00; or at $50.00, in the sum of $225,000.00 for one month and for two months the sum of $450,000.00. If two months should elapse and said law be violated, the company would make itself liable for approximately $500,000.00, nearly two-thirds of the value of its entire plant, according to the valuation fixed by the Court and the Master herein; and at the same time, for each of said offences, some officer or officers of the company were likewise subject to a penalty for an equal amount, it thus being within the power of the city, by the enforcement of the terms of its own ordinances, to virtually confiscate all of the property of the appellee company in two or three months time, if said company chose to violate said Act. This was the power vested in the statutes of the State of Minnesota and of the State of North Carolina, which destroyed said statutes under the Minnesota and North Carolina cases above referred to.

Section 6 of the Act of the 18th of April, 1907, passed by the Legislature of Minnesota, directed, as stated by this Court:

"That every railroad company in the State should adopt and publish and put into effect the rates specified in the statute, and that every officer, director, traffic manager or agent or employee of such railroad company should cause the adoption, publication and use by such railroad company of rates not exceeding those specified in the Act, and that 'any officer, director, or such agent or employee of any such railroad company who violates any of the provisions of this section or who causes or counsels, advises or assists, any such railroad company to violate any of the provisions of this section, shall be guilty of a misdemeanor and may be prosecuted therefor in any court into which its railroad extends and in which it has a station, and upon conviction thereof be punished by imprisonment in the county jail for a period of not exceeding 90 days.' "

And the penalty of another Act attacked, which was the two cents a mile passenger rate Act passed on the 4th of April, 1907, provided:

"That any railroad company, or any officer, agent or representative thereof, who shall violate any provision of this Act, shall be guilty of a felony, and, upon conviction thereof, shall be punished by a fine not exceeding five thousand dollars ($5000.00), or by imprisonment in the State prison for a period not exceeding five years, or both such fine and imprisonment."

In discussing said Act and the penalties provided, this Court said:

"Another Federal question is the alleged unconstitutionality of these Acts because of the enormous penalties denounced for their violation, which prevent the railroad company, as alleged, or any of its servants or employees from resorting to the courts for the purpose of determining the validity of such Acts. The contention is urged by the complainants in the suit that the company is denied the equal protection of the laws and its property is liable to be taken without due process of law, because it is only allowed a hearing upon the claim of the unconstitutionality of the Acts and orders in question, at the risk, if mistaken, of being subjected to such enormous penalties resulting in the possible confiscation of its whole property, that rather than take such a risk, the company would obey the laws, although such obedience might also result, in the end, though by a slower process, in such confiscation."

"The sale of each ticket above the price permitted by the Act would be a violation thereof. * * The Company, in order to test the validity of the Acts, must find some agent or employee to disobey them at the risk stated. The necessary effect and result of such legislation must be to preclude a resort to the courts, either State or Federal, for the purpose of testing its validity. The officers and employees could not be expected to disobey any of the provisions of the Acts or orders at the risk of such fines and penalties being imposed upon them, in case the court should decide that the law was valid. The result would be the denial of any hearing to the company."

The court then quotes from an opinion handed down by

Mr. Justice Brewer for this Court in the case of Cotting vs. Kansas City Stock Yards Co., 183 U. S., 79, wherein it is said at p. 100:

"Do the laws secure to an individual an equal protection when he is allowed to come into court and make his claim or defence subject to the condition that, upon a failure to make good that claim or defence, the penalty of such failure either appropriates all of his property or subjects him to extravagant and unreasonable loss?"

And from p. 102, as follows:

"It is doubtless true that the State may impose penalties such as will tend to compel obedience to its mandates by all, individuals or corporations, and if extreme and cumulative penalties are imposed *only after there has been a final determination of the validity of the statute*, the question would be very different from that here presented. But when the legislature in an effort to prevent any inquiry of the validity of a particular statute, so burdens any challenge thereof in the courts that the party affected is necessarily constrained to submit rather than take the chances of the penalties imposed, then it becomes a serious question whether the party is not deprived of the equal protection of the laws."

The question thus reserved by the Supreme Court in the Cotting case is the question directly passed upon by the Court in the Minnesota and North Carolina cases as against the validity of Acts containing such penalties.

209 U. S., p. 448.

The penalty in the North Carolina statute was $500.00 for each violation, payable to the person aggrieved, and that any agent, servant, etc., of the company should be guilty of a misdemeanor to be punished by fine or imprisonment or both in the discretion of the Court. And with respect to freight, the penalty was that the company should be guilty of a misdemeanor, and, upon conviction, fined not less than $100.00, and the officer or agent fined or imprisoned, or both, in the discretion of the court.

Hunter vs. Wood, 209 U. S., 473.

So that, with respect to the ordinance here questioned, the penalties denounced are as surely destructive to the company, if enforced, and within a period of two or three months, as the penalties imposed in the statutes of Minnesota and of North Carolina, and the words of the court in said cases are directly applicable to the situation of appellee herein, except that the appellee in this case has been so sure that the rates were confiscatory that it braved all the risk of destruction and confiscation by the enforcement of the penalties rather than be subjected to the slower process of confiscation by submission to the terms of the Act.

As suggested by Justice Brewer in the Cotting case, the ordinance here could have been saved, by providing that the penalties therein named should only be imposed after a reasonable length of time, or only after there has been final determination of the validity of the ordinance or statute in question.

Applying such principles to the case at bar, it is manifest that, if one challenges the validity of such an ordinance as the one here attacked and fails, the consequence is or may be the utter confiscation of the entire property sought to be conserved by the interested company. Such a result following the enforcement of an Act or ordinance, as decided in the two cases above mentioned, renders said Act or ordinance unconstitutional, regardless of the effect of the rates mentioned upon a fair return upon the value of the property devoted to the public service.

Respectfully submitted,

J. W. CALDWELL,
R. E. L. MOUNTCASTLE,
CHARLES T. CATES, JR.

SAMUEL G. SHIELDS,
Of Counsel.

Office Supreme Court, U. S.
FILED.
FEB 3 1908
JAMES H. McKENNEY,
CLERK.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1907.

No. [redacted] 17.

MAYOR & ALDERMEN OF THE CITY OF KNOXVILLE,
Appellant

vs.

KNOXVILLE WATER COMPANY,
Appellee.

ASSIGNMENTS OF ERROR, BRIEF AND ARGUMENT ON BEHALF OF APPELLANT.

REASONABLE RATES CASE.

J. PIKE POWERS, JR.,
City Attorney,
For Appellant

G. W. PICKLE
W. R. TURNER
W. T. KENNERLY
Of Counsel

S. B. NEWMAN & CO., KNOXVILLE.

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In the Supreme Court of the United States

OCTOBER TERM, 1907.

No. 217

MAYOR & ALDERMEN OF THE CITY OF KNOXVILLE,
Appellant

vs.

KNOXVILLE WATER COMPANY,
Appellee.

ASSIGNMENTS OF ERROR, BRIEF AND ARGUMENT ON BEHALF OF APPELLANT.

REASONABLE RATES CASE.

I.

STATEMENT OF CASE.

This cause is brought by appeal from a decree of the Circuit Court of the United States, for the Eastern District of Tennessee, enjoining as unconstitutional and void a city ordinance, regulating the rates of a water company.

Both parties are citizens and residents of the same state, and the jurisdiction of the Court is dependent upon the Federal questions involved.

The bill was filed December 7th, 1901, by the Knoxville Water Company (hereinafter called "The Water Company") against the Mayor and Aldermen of the City of Knoxville (hereinafter called "The City"), and seeks to enjoin the enforcement of an ordinance of the city, passed March, 30th, 1901, regulating and reducing the rates charged consumers (other than the city, itself), upon the ground that the ordinance is unconstitutional and void, for certain reasons therein stated.

The objections to the constitutionality and validity of the ordinance set up by the bill, stating them in a general way, are:

First: That the regulation of the rates of the water company, made by the city ordinance, constituted a violation of the contract between the water company and the city forbidding such regulation.

Second: That said ordinance was enacted by the city arbitrarily, without notice to the water company, and without affording it an opportunity to be heard, and without hearing or investigation.

Third: That the rates fixed and prescribed by said ordinance were unreasonably low and confiscatory.

Record 2—68.

The answer of the city filed 4th January, 1902, denied and put at issue all material averments of the bill. It likewise interposed defenses of estoppel and *res adjudicata.* Replication was filed, and the cause put at issue January 16th, 1902.

Record 73—108.

Restraining order, forbidding the city to enforce said ordinance and enjoining the city from instituting or prosecuting suits for its violation, was granted December 10th, 1901. Preliminary injunction to the same effect was granted February 1st, 1902.

Record 69, 241-246. 284.

The water company had, during the period of eight months elapsing between the date of the ordinance and the filing of its bill, defied the city ordinance and refused to put it into effect. During that period prosecutions had been instituted by the city against the water company for the penalty provided by the ordinance for its violation, and one of these suits had already, before the filing of the bill, been decided, and the ordinance sustained by the Supreme Court of this state.

Record 9-10, 247-267.

This ordinance, therefore, which was passed the 30th of March, 1901, has not for a single day ever been complied with by the water company. Although the city has been engaged in continuous efforts during that period to enforce the ordinance, it has never been able to do so. The effect of the ordinance has never, on account of the obstructions interposed to its enforcement by the water company, been subjected to actual test of its effect upon the company's business and rates.

This cause was reached for hearing in the Circuit Court, October 6th, 1902, eight months and twenty days after it had been put at issue and at the second term of the Court thereafter. The water company had not taken a syllable of evidence at that time. The city insisted upon a trial of the case. The Court, however, without hearing the case, or settling any of the issues, questions or principles involved, ordered a reference to a Special Master, which was submitted by the water company's attorneys. This order, by mistake or inadvertence, recited that it was made "by consent." The Court, by subsequent order, corrected this mistake.

Record 192—203. 280.

The manner of making this order of reference and its terms, will be the subject of comment in a subsequent part of this brief.

The Special Master made report covering a very wide field, both upon the law and the facts of the case, being of necessity "a law unto himself," for want of any specific directions by the Court.

Record 165-187.

Pending the consideration of this report and exceptions thereto the water company amended its bill, whereupon the city renewed and interposed its demurrer, which was overruled.

Record 279-281.

Both parties filed exceptions to this report, those of the city being largely to the Special Master's erroneous views of the law, and to his application of such erroneous views of the law to the conceded and undisputed facts of the case.

Record 152-164. 188-191.

All of the city's exceptions to the report, and all but one of the water company's exceptions were overruled, as shown by the final decree.

Record 289-291.

The Court, in disposing of the exceptions and other issues in the case—no hearing of the case having previously taken place—delivered an exhaustive written opinion, stating distinctly the principles of law upon which he proceeded to sustain the bill and the Special Master's report alone upon the ground that the rates prescribed by the city ordinance were confiscatory.

Record 295-308.

The city filed petition to re-hear, setting out at length the propositions of law stated in the Court's original opinion and applied in the decision of the case, which it deemed erroneous. The re-hearing was denied by the Court and the rules of law declared and applied in the original opinion were re-affirmed and emphasized by an opinion that was likewise written.

Record 291-2.

In these opinions the Court affirmed the Special Master's views and application of the law found in his report. Inasmuch as the Special Master had, over the city's protest and objection confined his report of the income and operating expenses of the water company to one year, and that year the one immediately *preceding* the passage of the ordinance, the city presented and filed another petition, asking a recommittal of the cause to the Special Master, to report upon the income and operating expenses of the water company for at least *one year following the passage of the ordinance,* averring that the ordinance had been passed and should have been in force but for the water company's defiance of it more than eight months before the bill was filed, and for a period of nearly two years at the date of filing its petition, that proof had been taken by the Special Master on the hearing before him showing the actual income and operating expenses of the water company for a year, and more than a year after the passage of the ordinance, and that by the proof, as well as by the admissions of the water company, it appeared that the actual income of the water company for the year subsequent to the passage of the ordinance was $8,000.00, and possibly as much as $13,000.00 in excess of the income for the year preceding its passage, and that the actual operating expenses incurred and paid by the water company, were about the same for both years. This petition sought to have the Court ascertain from the proof already taken, the actual income and operating expenses proved and admitted by the water company, as the same appeared from the books of the water company, which were collected, incurred and paid under the company's own rates during the year immediately following the passage of the ordinance, and to consider these facts occurring after the ordinance was passed and when it should have been in force in determining the question of fair return. This petition was likewise dismissed.

Record 226-230; 293-294.

The city, at the same time, made application to have a reservation inserted in the final decree, permitting it at any time thereafter it might deem advisable, to have a reference to a Special Master to ascertain whether, on account of changed conditions, increase of income, or from other cause, the ordinance could be applied to the rates of the water company, and still afford a fair return. This application was likewise denied.

The two objections urging absolute grounds of unconstitutionality against the ordinance, were overruled by the Court, and its decree placed upon, and solely upon, the ground of conditional unconstitutionality, towit: that the ordinance fixed rates that were confiscatory, and that would not afford the water company a fair return. The effect of the Court's action, as well as that of the Special Master was to determine the case upon the basis of income and operating expenses existing during the year prior to its passage, and to ignore the actual admitted facts as to income and operating expenses that occurred under the ordinance after it was passed. The objection that the ordinance was invalid, on account of the rates therein fixed, being confiscatory, is one of conditional unconstitutionality. This ground of objection does not destroy the ordinance, but only prevents its operation so long, and only so long, as the conditions as to the value of plant, amount of income and operating expenses, shall be and remain such as to confiscate the water company's property if the ordinance is put into effect. If at any time after the passage of an otherwise valid ordinance conditions are so changed as to render its operation just and fair, the courts would not continue to enjoin that operation upon this ground.

The city assigned numerous errors to the action of the Court and prayed and obtained an appeal.

The questions raised by the assignments of error are largely, if not wholly, questions of law. These assignments of error will be set out and discussed in order, and the facts pertinent to each assignment will be stated in the proper connection.

II.

STATEMENT AND DISCUSSION OF ASSIGNMENTS OF ERROR.

(1)

No Contract Forbidding City's Regulation of Water Company's Rates to Consumers.

The Circuit Court properly overruled the contention of the water company, that the city's ordinance of March 30th, 1901, *was unconstitutional and void, for the alleged reason that it violated any valid contract between the city and the water company in regard to the latter's rates.*

This ordinance, it will be observed, does not undertake to change the contract as to rates between the water company and the city itself, but only to regulate the rates charged by the water company to other water consumers than the city. That the city possessed the power to regulate by ordinance the rates of this water company, and that there existed no contract between the city and the water company that could or did curtail or prevent the full and free constitutional exercise of this power by the city, has been fully considered and finally settled by adjudications, both of the Supreme Court of Tennessee and of the Supreme Court of the United States.

Knoxville Water Co. vs. Knoxville, 107, *Tenn.* 647.
Same case, 189 *U. S.,* 434. .(47 *L. Ed.* 887.)

These decisions were rendered in a suit between the parties to this cause, whereby the city sought to recover of the water company the penalty provided by the ordinance of March 30th, 1901, for its violation. Every objection that is or can be made to the constitutionality and validity of said ordinance in this cause, was made in that case. By both of said courts, the power of the city to regulate the rates of the water company was unequivocally declared. By both courts the contract between the city and the water company, with reference to the latter's rates, was declared insufficient to curtail or prevent the free constitutional exercise by the city of its power to regulate the rates of this company. In both the bill and the answer in this case, the decision of the Supreme Court of Tennessee is set up by averment, and in the answer, this decision is relied upon as an estoppel or *res adjudicata.*

The decision of the Supreme Court of the United States upon the writ of error, had not been rendered when the bill and answer in this cause were filed, but that Court affirmed the judgment of the Supreme Court of Tennessee. This question, we insist, is not an open one, on this record, but if it were an open one, there is no such probability that both of said Courts erred, or that this Court will desire to overrule its former decision, to justify a re-argument of the question upon its merits in this cause. The fullest discussion of the question will be found in the opinions of the Courts above referred to. The action of the Circuit Court, therefore, in refusing to sustain the bill and grant relief on this ground, was unquestionably correct, and should be sustained.

(2)

Ordinance Not Void for Want of Notice, Hearing, or Investigation Before or Upon Its Passage.

The city's said ordinance of March, 30th, 1901, *is not unconstitutional and void for the alleged reason that it was passed arbitrarily without notice to the water company or without giving it a hearing or an opportunity to be heard or without an investigation of its business, because: (a) This contention is not supported by any proof. (b) But if the facts averred were proved, that would not, as a matter of law, invalidate the ordinance. (c) This question is precluded by the decisions hereinbefore cited.*

The material averments of the bill upon which this contention is based, are as follows:

"Your orator charges that said ordinances of March 30, 1901, and October 4, 1901, were passed, enacted and ordained by defendant *arbitrarily without any effort* to show that the rates charged by your orator were unreasonable, and regardless of the *burden in any event upon defendant to show that your orator's rates were unreasonable,* without *due and legal notice* to your orator and

NOTE.—Italics in this brief are our own.

without *proper and legal investigation of your orator's condition or the effect of the rates sought to be enforced by said ordinance.*

"Your orator charges that defendant did not *know,* nor did it *seek to ascertain* what would be the effect of the meter rates prescribed in its ordinances, some of which are much *below the actual cost of furnishing the consumers with water* and which on an average are between thirty and thirty-three per cent. lower than the meter rates provided in the schedule set forth in Exhibit No. 6 hereto, which were approved and adopted by the ordinance contract of October 20, 1899.

"Your orator charges that defendant did not *know* and did not *seek to ascertain* the effect which the reduced fixtures rates prescribed in its aforesaid ordinances *would have upon the revenues of your orator,* although the number of fixtures in the city of Knoxville to which said rates would be applicable could have been easily counted and ascertained.

"Your orator further charges that prior to the passage of defendant's aforesaid ordinance of July 27th, 1900, said defendant and its proper officials were duly *notified* and *warned* that the rates then being enforced by your orator under its contracts as aforesaid, did not produce to your orator revenue sufficient to meet its necessary fixed charges and necessary operating expenses, including all salaries, which to the higher officials of your orator were merely nominal; and prior to the passage of the aforesaid ordinance of March 30th, 1901, defendant, and its proper officials, *were informed as to the approximate gross revenue of your orator, its operating expenses and fixed charges,* and defendant and its proper officials were *notified* and *warned* that said revenues were wholly inadequate to meet and satisfy said operating expenses and fixed charges, and no dividend had ever been paid upon the stock of defendant (other than the so-called preferred stock) which was held and owned by about two hundred different people who had invested their money in your orator and had received no sort of return therefrom. * * * *

"Your orator is advised and therefore further charges that the aforesaid ordinances of the defendant, Mayor and Aldermen of the City of Knoxville, passed on March 30th, 1901, and October 4, 1901, are void because: 1st. By said ordinance defendant attempts to exercise judicial powers *without notice* to the parties affected thereby, without a *hearing of the controversy* and *without any investigation* of the matter to be determined. * * * *

"3rd. The rates as prescribed by said ordinance were fixed without any *legal notice* to your orator and without *proper hearing or investigation* as aforesaid, and if enforced will operate to deprive your orator of its property without due process of law."

Bill, Record 13, 14, 15.

This bill was signed and no doubt drafted by the attorney and *verified by the oath of the General Superinten-*

dent of the water company, who had been in charge of the water company's business for several years.

It will be observed that the water company avers that the burden of proof is upon the city to show that the company's rates are unreasonable, and that it further avers that its own rates were discriminatory and that it was furnishing water to a certain class of consumers below the actual cost of the service. The denials of the answer of the city of the above recited averments of the bill is direct and positive and accompanied by a full explanation of the whole matter of notice, hearing and investigation.

Answer, Record 80-84.

And the plea of *res adjudicata* to this as well as other aspects of the bill is set up and relied upon.

Answer, Record 88-91.

The averments of the bill in this regard, if proved to be true, are and should be very prejudicial and damaging to the city's case, and discrediting to the rates fixed by said ordinance. On the other hand, if said averments are false, or made recklessly and in bad faith, they are and should be seriously prejudicial to the case of the water company. The bill, it should be borne in mind, is one whose sole object was to obtain the extraordinary process of injunction from a court of conscience for the extraordinary purpose of staying an arm of government against the enforcement of a law or ordinance enacted by public authority for the protection of the people. In such a case, if in any, the requirement of courts of equity that a complainant, asking relief must come into court with clean hands, should be rigidly applied. The averments of such a bill must be candid and honest or at least believed to be so by the complainant making them. If it should appear that the complainant in such a case seeks, not lawful redress, but undue advantage of his adversary, by an abuse of the extraordinary process of the Court, he ought to be repelled. These averments of the bill are not only not proved, but, on the contrary, utterly disproved by the evidence in this case. It should be borne in mind that the city ordinance of March 30, 1901, which is assailed in this case, is but a re-enactment of the ordinance of July 27th, 1900, to cure a technical defect in the latter ordinance, which had on that account been assailed by the water company in the courts. The same is true of the ordinance of October, 1901. For a period of 17 or 18 years, covering the entire existence of this water company, prior to the passage of the ordinance of the 27th of July, 1900, of which the ordinance of March 30, 1901, was a re-enactment, the water company had, with a perfectly free hand, and without interference on the part of the city, fixed and prescribed its own schedule of rates for its consumers. It may be safely stated and assumed under these circumstances that the water company had maintained rates sufficiently high and remunerative to itself. During this period there had been no change of the water company's rates except that, in 1895, some readjustment of the rates, which was probably favorable to the company rather than to the city, was made. This was five to six years before the ordinance in controversy was passed. During this period of seventeen or eighteen years the population of the city of Knoxville had rapidly increased. Its population in 1880 was about 11,000; in 1890, 22,000 to 23,000; in 1895, 27,000; in 1897 North Knoxville and West Knoxville, adjoining corporations, with something over 4,000 population, were added to the city limits, and in 1900 and 1901 the population of the city had advanced to some 35,000 or 40,000. The city was prosperous and rapidly growing in population and business. During the period from 1894-5 to 1901-2 the income of the water company had about doubled, increasing during that period from about $50,000 to about $100,000. Its operating expenses had not increased during this period in the same ratio. These facts are shown by the statement of the Treasurer of the water company, whose estimates of income, as we shall see later, were too low, and whose estimates of operating expenses were too high, by a table found on page 738 of the record. During the period following the year 1890 there was a marked increase in the number of water consumers in the city. In December, 1890, there were 1800 consumers; in 1895, 2220; on March 31, 1900, 3,896; March 31, 1901, 4,323; March 31, 1902, 4,734.

William Wheeler, Rec.
Elbert Wheeler, Rec. 745.

During this period it appears that the cost of furnishing water to consumers had, in a general way, diminished. It would seem that the desire of the people of the city expressed in the action of their representatives to know something about the reasonableness of the rates that they had been for over 17 years and were still paying for water, was not under these circumstances at all unnatural. Nor was the suspicion wholly without foundation that water rates fixed and maintained alone at the will and pleasure of the water company had become unreasonably high and oppressive. The city had a right and the power and it was its plain duty under these circumstances to investigate and know something of the reasonableness of the water company's rates. And it was the plain duty of the company, on the other hand, to disclose such pertinent facts, as were wholly within its knowledge, to the city authorities. There was certainly nothing arbitrary, unreasonable, or illegal upon the part of the city in entering upon the investigation and if necessary the regulation of the rates of this water company after its long indulgence of the company in fixing its own rates and after such marked changes in population, and income, etc., of the company.

It is averred, however, that the city took action upon this matter without notice to the water company and without giving it a hearing or an opportunity to be heard. If these were the facts the city undoubtedly committed a wrong. These, however, are not the facts. There is no evidence whatever, to sustain this averment. It is utterly disproved. Upon this point the water company examined seven of the eleven aldermen who composed the board that passed the ordinance in question, being the same board that passed the ordinance of July 27th, 1900. On behalf of the city, the mayor and one of the remaining aldermen, who was chairman of the water committee of city council, testified.

Record, 1029—1083.

There is absolutely no conflict in the evidence which shows that the discussion and negotiations that led up to the passage of the ordinance regulating rates first on the 27th of July, 1900, and again re-enacted to cure a technical defect on the 30th of March, 1901, covered a period of from one to two years. During that period there was accorded to the president, general manager and attorney of the water company by the city council and by the chairman of the water committee frequent and repeated hearings both formal and informal, and sometimes at great length. Reports of all the proceedings had during this period appeared in the newspapers of the city and came to the knowledge of the officers of the water company. Information on the pertinent and vital points were demanded by the city authorities of the officers of the water company and this was curtly refused. The position assumed and maintained throughout by the water company and its officials was that the city had no right or power to regulate its rates, and therefore no right to inquire into its business, and that it was impertinent for the city to do so. The chairman of the water committee was refused an annual report of the company. The city council were told that the attorney of the water company could drive a four-horse wagon through their proposed ordinance. These facts are substantially admitted by the general superintendent of the water company, the same person *who made affidavit to the truth of the averments of the bill.*

F. C. Kimball, 888-893.

And they are not denied by any of the officials of the water company.

While the ordinance of the 27th of July, 1900, of which that of March 30, 1901, is a mere re-enactment, was pending for passage before the city council, and after it had been referred to the water committee, and after the extensive discussions and hearings already referred to had been accorded the water company by the city council and water committee, the Mayor of the city on the 16th of July, 1900, addressed to the water committee of the city council the following letter:

"Knoxville, Tenn., July 16, 1900.

"Messrs. A. S. Birdsong, J. J. Conner and G. B. Davis,
Water Committee.

Gentlemen: The ordinance regulating rates to be charged by the Knoxville Water Company has passed two readings and been referred to your committee for investigation and report prior to its third reading.

In view of the great importance of the subject and of the fact that the City of Chattanooga has had some experience connected with the regulation of water rates, I thought it advisable to make the following suggestions:

The law holds that the rates fixed by municipal corporations for *quasi* public corporations, such as water companies, gas companies, electric light companies, etc., must be reasonable, but unfortunately, in this state no decision has fixed a standard of just what is a reasonable rate and what is not a reasonable rate. It is unquestionably true that there is a great complaint among the citizens that the water company's rates are too high.

I suggest in order to have some way to arrive at a decision as to what is a reasonable rate, that your committee ascertain from the water company:

First. As to its bonded debt and interest thereon.

Second: Its gross income.

Third. Its operating expenses including all salaries.

Fourth The valuation it fixes upon its plant.

Fifth. The original cost to the present owners, Messrs. Wheeler & Parks.

Sixth. The kinds of improvements and the cost of the same since Messrs. Wheeler & Parks have been the owners.

The Mayor and Aldermen of Chattanooga in 1897 passed an ordinance regulating the rates of the City Water Company for the city. The City Water Company filed an injunction bill in the United States Federal Court, Judge C. D. Clark presiding, and procured an injunction against the Mayor and Aldermen from carrying the rates fixed by the ordinance into effect. That suit is now pending in the Federal Court at Chattanooga, and Judge Clark has referred the question of what is a reasonable rate to a special master, Joshua W. Caldwell, of this city, to take proof and make report. Mr. Caldwell has not yet made his report because the proof on the part of the city is not all in. The proof on the part of the water company has been taken. In its bill, the City Water Company alleged as one of its charges that the rates fixed by the Mayor and Board of Aldermen were fixed without due investigation on their part, and that they did not know anything about the cost or the financial condition of the Water Company when they fixed the rate. The Water Company further claimed that it would be necessary for the Mayor and Aldermen to know its financial liabilities before it could fix rates that would be reasonable and that the Company had no opportunity to be heard before the Committee to which the ordinance had been referred for investigation.

Now it is in order that no such charge shall be made against the City Council of Knoxville that *I suggest to your Committee to get at the different items of the financial condition of the water company as above set out.*

I further suggest that your committee grant a full hearing to any representative of the water company who may desire to appear and to all citizens of Knoxville who want to be heard upon this subject.

In the testimony taken by the City Water Company in the Chattanooga case a full statement of its financial condition was set out, and in the event that litigation should ensue from the passage of the Knoxville ordinance on its third reading, *it would be necessary for the water company to show up the financial condition; so that I take it that the water company would not hesitate to give the information that your committee might request.*

It is unnecessary to say that the regulation of water rates in Knoxville is a matter of the greatest and most universal importance, and that your committee should procure all the information in your power upon the subject by the fullest and most painstaking investigation and it is in view of the importance of the subject that I have thought it proper to call your attention to the matters herein, and especially that the ordinance will stand the test in the courts.

Respectfully,
S. G. HEISKELL, Mayor."

This letter of the mayor was, on the 16th of July, 1900, forwarded by Alderman Birdsong, Chairman of the Water Committee, with the following letter written by Mr. Birdsong, to the water company:

"Knoxville, Tenn., July 16, 1900.

Knoxville Water Company,
Frank C. Kimball, Supt.,
Knoxville, Tenn.

Dear Sir:—An ordinance regulating your rates for the furnishing of water to the citizens of Knoxville has passed *two readings* in the City Council, and has been *referred to the Water Committee for investigation and report prior to its passage upon its final reading.*

In order that the City Council may have full information upon which to act in its effort to fix a rate that is reasonable for water, I respectfully request that you send me the following statement:

First. The amount of the Water Company's bonded debt and the interest thereon.

Second. Its gross income.

Third. Its operating expenses, including all salaries.

Fourth. The valuation it fixes upon its plant.

Fifth. The original cost to the present owners, Messrs. Wheeler & Parks.

Sixth. The kind of improvements and the cost of the same since Messrs. Wheeler & Parke have been the owners.

This request for information is not based upon any improper motive or desire to pry into or meddle with the financial affairs of your Company, but in order that the City Council may have as full information as possible in passing upon the question as to what is a reasonable rate to be fixed for the furnishing of water by your Company in this City.

An immediate reply will be greatly appreciated.

A. S. BIRDSONG,
Chairman Water Committee."

Answers to these questions would have furnished all the data essential to fixing just and reasonable rates. The questions would serve admirably for framing an order of reference. If the water company could not or would not answer these questions, then the city could not obtain the information desired.

On July 17th, the water company, through its general superintendent, Mr. Kimball, replied that he was not in possession of the information desired, and that he had forwarded to the treasurer of the company, Mr. Birdsong's communications. The water company, through its treasurer, Mr. Elbert Wheeler, replied to these letters of the Mayor and of the Chairman of the Water Committee under date of July 20, as follows:

"Boston, Mass., July 20, 1900.

Mr. A. S. Birdsong,
Chairman of Water Committee
Knoxville, Tennessee.

Dear Sir:—

Yours of the 17th inst. to our Superintendent at Knoxville is referred to us for reply, as stated in his acknowledgement thereof to you of the same date.

Presuming that your letter was prompted by the communication of the 16th inst. from his honor, the Mayor, recommending for reasons enumerated by him, the specific inquiries contained in your letter to us, you will permit us to say, that even should we concede the right of the city to change the rates charged by us for water *(which we do not, but, on the contrary maintain that these are fixed by existing contract stipulations, between the City and us, and are, therefore, not subject to change, except by mutual agreement),* the Committee would have no *adequate basis for reaching equitable conclusions* by having the information asked for in interrogatory number 1 (which information is, of course, available to the City from the County records), as the amount of the Company's bonded debt represents only one of several classes of capital invested in the works, all of which are fairly entitled to reasonable *investment return* before any reduction of rates or of income can properly become operative.

We suppose, however, that the City desires to avoid taking any action which would result in preventing such reasonable income return upon the monies invested from time to time, which investments have been necessitated by the continued growth of the City, the demand for filtered water and numerous other additions to and improvements of the Company's plant, resulting in a system necessarily of large cost, but giving the City a supply proportionate to its requirements, with water of a quality hardly to be equaled in any city of the South or West.

As to the single purpose of his Honor, the Mayor, in addressing your Committee, *was unreservedly stated to contemplate determination of the financial condition of the Water Company in order that the City may be informed whether or not the present rates are reasonable in view of the cost or of said financial condition, and as your letter likewise unreservedly declares this to be the purpose of* your inquiry we may and do *answer interrogatories* 2 and 3 *by saying that the gross income of the Company is not sufficient, after paying necessary operating expenses, including salaries,* (which are merely nominal in amount to its executive officers) *to afford or pay a reasonable return upon all of its several forms of capitalization;* but on the contrary not a little of the money invested by its shareholders has been absolutely without return. Any reduction therefore of its net income through reduction of rates would necessarily and correspondingly postpone the time when such reasonable return could be obtained.

Any reply to question 4 could be *only an expression of personal opinion, to which anyone might and doubtless with great propriety, well take exception.*

The 5th question, it is impossible for me to answer, having no knowledge thereof. We may, however, say that Wheeler & Parks never owned works, title to them always resting in numerous stockholders, the present number approximating 200.

The 6th inquiry is practically answered by the preceding statements, except as to the cost of improvements which we *respectfully submit is immaterial, in view of the declaration, made in answering interrogatories* 2 *and* 3; said cost being included in capitalization from which no adequate or reasonable return has thus far been possible of realization.

We have no desire to withhold from the City *any information which is its due;* but the statement above made, should *clearly indicate that any lower rates than those now existing, may not be deemed reasonable,* when account is taken of the *cost of construction* and operation of the plant, as above set forth.

If *further information* is wanted or if it is desired to equitably adjust this or any other matter of mutual interest we beg to assure you we will gladly take it up with you, being confident that when a full understanding of essential details is reached, there cannot only be no reasonable grounds for complaint, but an adjustment reached to our mutual satisfaction.

Very respectfully,
(Signed) KNOXVILLE WATER COMPANY,
Elbert Wheeler, Treas."

This correspondence appeared at the time in the newspapers. On the 20th or 21st of July, 1900, the general superintendent and the attorney of the water company appeared before a meeting of the city council at which the mayor and seven aldermen were present, and as the general superintendent admits in this case the water company's attorney discussed the ordinance at great length. Notice of this meeting appeared in a newspaper of the city which came to the attention of the officials of the water company who were present at the meeting.

Record 890, 1069-70.

The public notice of this meeting that appeared in the newspaper, was as follows:

"TO HEAR CATES.

CITY COUNCIL WILL MEET THIS AFTERNOON.

WATER COMPANY'S SIDE WILL BE PRESENTED.

Against Alderman Birdsong's Rate Ordinance—Will Not Pass Third Reading To-night.

A special meeting of the City Council will be held in the Council Chamber at 4 o'clock this afternoon. The meeting will be held for the purpose of hearing Chas. T. Cates, Jr., Attorney for the Knoxville Water Company, speaking in behalf of the Company concerning Alderman Birdsong's Water Rate Ordinance. Mr. Cates has intimated a number of times that he would be pleased to appear before the Council, or the Water Committee, and explain the Water Company's situation in the matter. The opportunity will now be given him. Alderman Birdsong returned to the City this morning and formally invited Mr. Cates to appear before the Council this afternoon. Mr. Cates accepted the invitation. The Water Rate Ordinance, contrary to expectations, will not be brought up for final reading and passage at the regular meeting to-night. At least that was the program announced to-day at noon. *The final reading has been postponed in order that additional information desired may be obtained. Alderman Birdsong is awaiting the reply of the 'Home Office' of the Water Company in regard to information asked as to the general financial condition of the company. Upon* *receipt of this information, a called meeting may be held at which the ordinance may be brought up for final reading and passage.* The ordinance, after passage, will doubtless be contested by the Water Company, and it is expected the courts will be resorted to.

Alderman Birdsong claims that the city has a right to, and will regulate the rates. 'The only question to be laid before the courts,' he says, 'is whether or not the rates as regulated are reasonable. That is the only question for decision, and as the rates are undoubtedly reasonable, the ordinance will be made effective. *We do not wish to impose upon the Water Company, but merely want cheaper and more reasonable rates, and intend having them.* After this ordinance we will probably take up the other phases of the water question, which have claimed the attention of the Board of late. These questions at issue are the change of location of the intake tower, the increase of pressure and size of mains in East Knoxville. On recent inspection I also found that the water supplied West and North Knoxville is so muddy as to be unfit for use. I will bring these different matters before the Council, one at a time, and intend the City shall have a better water service, if it is in my power to get it.'

In regard to the hearing to be given Mr. Cates, Alderman Birdsong said: 'In accordance with the desire of Mr. Cates, we have invited him to appear before the Council in behalf of his Company, *and we will listen readily to any statement he wishes to make. I think this is nothing but just and fair. The Council does not wish to impose upon the Water Company or any other corporation and will not do so.'* The Council will hold its regular meeting tonight but what is likely to come up before it, is not yet known."

As stated, the attorney of the water company who signed and *the superintendent who made affidavit to the truth of the bill were present and the former made extensive argument on the occasion referred to in this newspaper notice which the superintendent admits he had seen.* All of this correspondence which we have above quoted was known to the officials of the company when the bill was filed. The ordinance was not passed finally until the 27th of July, 1900. It will be thus seen that the water company not only had opportunity to be heard but had abundant hearings and that it refused to answer and give information as to specific and pertinent questions that would have enabled the city council to proceed more intelligently. It would give no information as to its gross income or its operating expenses or the value of its plant. In fact it fails to aver in its original bill in this case the *actual value* of its plant, contenting itself with the averment that the construction of the plant had *cost* the water company more than a million of dollars.

Record 11.

Mr. Birdsong was asked by the water company's attorney on cross-examniation, apparently in a facetious vein: "Q. What was the reason that you did not *persist* in your effort to get information from the Knoxville Water Company?

A. Why, they refused to give it to us as that letter states there. That letter there answers the whole thing."

Record 1077.

The finding of the Special Master upon this point is as follows:

> "I find and report that the extent and kind of investigation made by the defendant consisted of a formal communication from A. S. Birdsong, Chairman of the Water Committee, of date July 16th, 1900, Exhibit 4 to answer. *the investigation of other plants and their rates stated in the deposition of Birdsong and perhaps other parts of the testimony not necessary to point out here.* To this letter complainant made reply July 20, 1900 (Exhibit 6 to Answer). This *reply would convey to my mind the impression that the complainant did not intend to expose its business to the Committee and would justify the City in proceeding independently of complainant without further negotiations,* and the proof shows that witness Birdsong and others *made diligent efforts to inform themselves.*"

Record 187.

And the Circuit judge, confirming this aspect of the report, says:

> "Now the plaintiff water company, *it is quite evident, denied the right and power of the city to regulate its charges,* and in upholding that right *it refused, on request, to furnish* the Mayor and Aldermen of the City of Knoxville *any evidence or data on which that legislative body might have proceeded more intelligently to determine what rate or charge would be fair and reasonable, as permitting a just return on the real value of the property.* Such an inquiry involved the two questions here

involved, namely, of fair and reasonable value and fair and just return on that value.

"It seems that the Mayor and Aldermen were, *to a large extent, therefore, under the necessity of making a strike in the dark, if they did anything.*"

Record 307.

Again, it is averred in the bill that the city council proceeded without investigation or information essential to determine the reasonableness of the rates fixed in the ordinance. The special master has found that the city officials "made diligent efforts to inform themselves." The Circuit Judge finds that the water company refused on request to furnish the city any evidence or data on which that body might have proceeded more intelligently to determine what rate of charge would be fair and reasonable and thereby left the city "under the necessity of making a strike in the dark if they did anything." The proof shows that the chairman of the water committee with the assistance of other members of that committee had been industriously engaged for many months in gathering facts from other sources than the water company upon which to determine the reasonableness of the rates to be prescribed by ordinance. The city officials whose plain duty it was to inquire into and regulate the rates of the water company, being thus confronted on account of the water company's default in failing to furnish data and evidence which it alone could furnish, of making a strike in the dark or doing nothing, did nevertheless before fixing the rates, resort to every possible source of information before acting. They had before them, not indeed the satisfactory evidence which they attempted to elicit from the water company, but a body of convincing facts which justified or at least seemed to justify their action. In the first place the full terms and rates of the proposed ordinance were laid before and were known to the water company. That company deliberately determined to submit to those rates rather than furnish evidence which it was their duty to furnish, to convince the city council that the rates were unjust. This fact afforded at least some presumption that the proposed rates were better and more favorable to the water company than any rates that could or would be fixed by the city upon a full disclosure of the pertinent facts in reference to its business. Among the numerous evidential facts before the city council that entered into their consideration in fixing said rates were the following:

The Water Company had paid to the State of Tennessee and the City of Knoxville for a series of years taxes (embracing its entire properties) upon the following valuations:

1896	$150,000.00
1897	$160,000.00
1898	$165,000.00
1899	$165,000.00
1900	$200,000.00
1901	$275,000.00

Record 101.

Assessments for taxes in Tennessee are required both by statute and by the constitution to be at actual cash value. The proof shows, however, that in fact and in practice, property is assessed at about 70 per cent. of its value.

Record 1056-1058, 1067.

Assessments are made as of the 10th of January of each year. The water company's property, upon this basis, would have been worth at its actual cash value, in 1901, $347,500.00. It would seem that the company ought to be content if it is permitted to pay taxes to the state and the city upon the basis of $275,000.00 and is allowed to exact from the people of the city a fair return upon the same property at a valuation of $347,500.00. Taxes are the price paid by the taxpayer for the benefits of government and the protection of the laws and are or should be proportioned to the value of property protected. In addition the chairman of the water committee corresponded extensively and obtained the water rates of other cities for comparison with the water company's rates charged to the people of Knoxville. The effort was to obtain the rates of cities similarly situated with the city of Knoxville and such as were not similarly situated were excluded from consideration. The result of this comparison of rates which were published in the newspapers and known to the officials of the water company before the passage of the ordinance, and not controverted by any one, was as follows:

Knoxville, net family per year, $6.00; net family per 1,000 gallons 25 cents; factory rate per 1,000 gallons, 7 cents.

Allentown, Pennsylvania. Net family per year, $3.50.

Aurora, Illinois. Net family per year, $4.00. Net family per 1,000 gallons 8 cents; factory rate per 1,000 gallons 5 cents.

Augusta, Georgia. Net family per year $5.00; net family per 1,000 gallons 10 cents; factory rate per 1,000 gallons, 10 cents.

Akron, Ohio. Net family per year, $5.00.

Canton, Ohio. Net family per year $4.50; net family per 1,000 gallons 15 cents; factory rate per 1,000 gallons 3 1-2 cents.

Elgin, Illinois. Net family per year $4.00; net family per 1,000 gallons, 14 cents; factory per year $4.50.

Des Moines, Iowa. Net family per year, $4.00. Net family per 1,000 gallons 30 cents; factory rate per 1,000 gallons 15 cents.

Evansville, Indiana. Net family per year $4.50.

Jackson, Tennessee. Net family per year $6.00. Net family per 1,000 gallons 10 cents; factory rate per 1,000 gallons 5 cents.

Louisville. Net family per year $2.40; net family per 1,000 gallons 14 cents; factory rate per 1,000 gallons 6 cents.

Lima, Ohio. Net family per year $5.00; net family per 1,000 gallons 20 cents; factory rate per 1,000 gallons 8 cents.

Saginaw, Michigan. Net family per year $4.00; net family per 1,000 gallons 11 cents; factory rate per 1,000 gallons 6 cents.

St. Joseph, Missouri. Net family per year $5.00.

Ft. Wayne, Indiana. Net family per year $3.60; net family per 1,000 gallons 10 cents; factory rate per 1,000 gallons 6 1-2 cents.

Newport, Kentucky. Net family per year $5.00; net family per 1,000 gallons, 10 cents; factory rate per 1,000 gallons 7 cents.

Roanoke, Virginia. Net family per year ———; net family per 1,000 gallons 25 cents; factory rate per 1,000 gallons 15 cents.

Davenport, Iowa. Net family per year $6.00; net family per 1,000 gallons 20 cents; factory rate per 1,000 gallons 15 cents.

Atlanta, Georgia. Net family per year $7.20; net family per 1,000 gallons 10 cents; factory rate per 1,000 gallons 8 cents.

Mobile, Alabama. Net family per year $10.00; net family per 1,000 gallons 50 cents (which has since been greatly reduced).

Quincy, Illinois. Net family per year ———; net family per 1,000 gallons 20 cents.

Indianapolis, Indiana. Net family per year $2.20; net family per 1,000 gallons 5 cents; factory rate per 1,000 gallons 5 cents.

Chattanooga, Tennessee. Net family per year $6.00; net family per 1,000 gallons 20 cents.

Record 82-3; 1064-1067.

The facts thus gathered clearly indicated the excessiveness of the water company's rates. In addition, the city of Knoxville is favorably situated for the cheap operation of a water plant. It is situated on a river of sufficient capacity to afford an abundant water supply. It is compactly built. There are within the city and near it suitable and convenient elevations for stand-pipes, etc. It is in the immediate vicinity of an abundant fuel supply. There were other facts developed by the investigations made. If the water company has suffered injustice in the fixing of rates by the city ordinance it is an injustice that it deliberately and voluntarily assumed to bear. It knew what rates were proposed and upon what evidence and grounds they were supported. It was requested to furnish the city council, to enable it to act with perfect justice and intelligence, its estimate of the value of its plant and the amount of its income and operating expenses. That information could have been ascertained with accuracy from no other source, and the water company arbitrarily refused to give it. What single fact of the slightest value did the letter of its Treasurer disclose in answer to the pertinent interrogations of the Chairman of the Water Committee? The Treasurer assumes the attitude of judge, both of law and facts, and of a judge who merely states his conclusions without justifying them. Its appeal to a court of conscience under these circumstances to enjoin as arbitrary and illegal the exercise of discretion by the city council in fixing rates and thereby to disarm the city government of the power to protect the citizens from oppressive rates, has no equity to support it. If it has suffered injustice, that injustice is self-inflicted. If it has compelled the city to strike in the dark when it was the right and duty of the city to strike and of the water company to afford light in order that it might strike safely, it must take the results of the blow even though the blow be misdirected. The result, however, reached by the city authorities, was not unjust to the water company. They fixed the value of the water company's plant at $500,000.00—a sum which as we shall see hereafter was more than adequate. The Special Master, including several matters that we insist cannot enter into the fair value of this company's plant, fixed the value at only a little more than $100.000.00 in excess of said amount; and he admits that in several respects his valuations are high. His estimate was moreover of the value of an entirely new plant. They estimated the income of the plant at from $75,000.00 to $80.-000.00, whereas the water company's treasurer admits an income from water rates alone of $88,000.00 for the year preceding the passage of the ordinance.

Record 1079.

This income was increased from $8,000 to $13,000 for the next year.

In point of fact the income was considerably in excess of $88,000.00. They figured, after careful investigation, the operating expenses at from $15,000 to $20,000.

Record 1079.

While this is considerably less than that claimed by the company, the amount claimed by the company is very much reduced by the special master by the exclusion of improper items, and is subject to further reduction. And if there be added to the amount estimated as operating expenses, the sum by which the city officials under-estimated income, the allowance for operating expenses would be thereby increased to nearly the amount allowed by the Special Master. It thus appears that the action of the city officials was not only painstaking and conservative but entirely just, though performed under great difficulties, to the water company that unjustly, almost contemptously, refused to afford the city officials any aid in getting to a correct conclusion. They did the best that could be done under the circumstances without the aid from the water company that they were entitled to receive and requested, and this court should not enjoin their discretionary action, done in good faith and with perfect diligence, at the instance of the party who has been in fault in every particular and if it has suffered injustice has suffered it at its own hands. But if the averments of the bill upon this point had been sustained by the proof, still the ordinance would not have been on that account unconstitutional and void. The law under which the rates were fixed does not require notice or investigation, nor does it declare the action of the city council final. Unless the action of the city council had been made final and conclusive upon the water company, or the law had required notice and investigation and hearing, the ordinance fixing the rates remains open for inquiry of the character that is made in this case, and if the court finds that the rates are reasonable, or that there is any doubt of it, the same will be sustained.

San Diego, etc., Co. vs. Jasper, 189 *U. S.,* 439; 47 *Lawyers Ed.* 892.
Same case, 38 *L. R. A.* 460.
San Diego L. & P. Co. vs. National City, 174 *U. S.,* 739; 43 *Lawyers Ed.* 1155.

The Supreme Court of Tennessee has held that the rates fixed by this ordinance are not made final and conclusive but remain open to judicial investigation.

Knoxville vs. Knoxville Water Co. 107 *Tenn.* 688-9.

We submit, moreover, that the plea of *res adjudicata* and estoppel is conclusive of this question for reasons that have been stated heretofore in this brief. On all of the grounds stated, the action of the Circuit Judge in dismissing this aspect of the case should be sustained.

For its arbitrary conduct in this regard and the unfounded statements of its bill, by which the extraordinary process of the Court has been grossly abused, the Water Company ought to be repelled.

(3)

The Rates Prescribed by the City's Ordinance of March 30th, 1901, are not Confiscatory.

A

Statement.

The material averments of the original bill upon this aspect of the case are as follows:

"The construction of this plant has cost your Orator more than $1,000,000.00, and on March 31st, 1901, (the day succeeding the passage of defendant's aforesaid ordinance of March 30, 1901) which was the end of your Orator's fiscal year, it had outstanding $150,000.00, first mortgage bonds bearing six per cent. interest and payable in 1913; $85,000.00 of 'Debenture Bonds' so-called, bearing six per cent. interest, and likewise payable in 1913; $295,000.00 of 'Preferred Stock,' so-called, bearing six per cent. interest, or calling for a cumulative dividend of that rate; about $300,000.00 of floating indebtedness bearing six per cent. interest, making an aggregate of $830,000.00, upon which your Orator was compelled to pay interest during the year ending March 31st, 1901, amounting to $48,127.78.

"The outstanding stock of your Orator, exclusive of the aforesaid 'Preferred Stock' on March 31, 1901, amounted to $654,000.00, which represents large amounts paid into your Orator by the holders of the shares of stock which *have cost many of the holders of the principal part of the stock from* $40 *to* $50 *per share.* * * * *

"Your Orator shows and charges that its necessary operating expenses during the year ending March 31, 1901, amounted to $35,775.89, exclusive of the sums allowable on account of ordinary depreciation of plant amounting to about $20,000.00, *and special depreciation or replacement amounting to about* $30,000.00 during the current year the necessary operating expenses will be heavily increased, resultant upon an increase of about $100,000.00, in the assessment for taxation of the property of your Orator, and other causes: the amount required on account of ordinary depreciation will be about the same, and another large outlay on account of special depreciation in or replacement of machinery, etc., will be necessary.

"Your Orator further shows and charges that in the operation of its business it has only sought to enforce the rates prescribed by its contracts with defendant, and particularly the rates prescribed in the aforesaid ordinance contract of October 20, 1899, yet with the most careful management and closest attention your Orator's total revenues for water from all sources, both in and out of the City of Knoxville, during the aforesaid fiscal year, ending March 31, 1901, amounted to only $88,649.41, of which $10,540 22 was collected on services wholly outside of the territorial limits of defendant, leaving a balance of $78,109.19 for services within the City of Knoxville.

"Your Orator charges that the schedule of rates prescribed in defendant's ordinances of March 30, 1901, if applied to the same services producing, under your Orator's and defendant's contract rates, the sum of $88,649.41 as aforesaid, would have produced a revenue of only $68,481.67, or a sum wholly inadequate to meet your Orator's necessary operating expenses and fixed charges of interest. * * * * * * * *

"Your Orator charges that the enforcement of the rates prescribed in the said ordinance of March 30, 1901, would have reduced the revenues of Orator for the fiscal year ending March 31, 1901, about $20,167.74, and that for the current year the reduction will be increased by reason of the larger number of services that are bcoming metered."

Bill, Record 11, 12, 14.

It will be observed that the bill avers not the *value* but the *cost* of the plant, and that it avers that the reduction of revenue by the city ordinance will operate not to deny the complainant a *fair return*, but a *sum adequate to meet "necessary operating expenses and fixed charges of interest."*

It is proper to state in this connection that the bill was amended after the Master's report had been made and had been excepted to, on the hearing of those exceptions, "so as to charge that the fair value of the property of complainant within the City of Knoxville as of date, March 30th, 1901, exceeds $1,000,000.00 and has constantly increased in value at all times since said date, which said property of said value was at said date and at all times since used in the public service for the purpose of supplying said city with water, and that the effect of the ordinance of March 30, 1901, of defendant, reducing the water rates of complainant if enforced is to deprive plaintiff of a fair and reasonable return upon its said value of said property so used, and for that reason said ordinance is unconstitutional and void."

Record 279-80.

This amendment was not verified by affidavit.

The material averments and denials of the answer will be found upon pages 84 to 88 and 91 of the record.

All of the material averments of the bill are denied and put at issue. After denying that the ordinance rates are unreasonable and insisting that the water company is estopped to deny their reasonableness, and after denying that said ordinance rates would have the effect of reducing the pre-existing rates from 30 to 33 per cent., and after denying that it was necessary that the ordinance rates in order to be reasonable should afford an income sufficient to meet operating expenses and two per cent. for depreciation and six per cent. upon the amount that complainant had invested in the plant, it proceeds as follows:

"It is worthy of remark in this connection that the plaintiff, not only refuses to express an opinion as to its property and its *value* in the correspondence with the Chairman of the Water Committee, already quoted, but has utterly failed to suggest the value of the same in its bill in this case.

"This is the controlling fact in ascertaining the reasonableness of rates, and is entirely omitted from the bill. The Court and Council are left to guess at this value, or to compute it upon the incidental statements of the bill. It is stated in the bill that the plaintiff's plant cost more than $1,000,000.00. Defendant denies this statement with emphasis. This is not equivalent to stating that the property is *worth* $1,000,000.00. From other allegations of the bill it seems to be conceded that there has been much loss and depreciation of the property in value, and that much of the investment has been lost in that way. It does appear from the exhibits to this answer that the property produced by this alleged investment of $1,000,000.00 has paid taxes on a valuation ranging from $150,000.00 in 1896 to $275,000.00 in 1901. One of two things must be true, that the company is getting the protection of the laws of the State of Tennessee and of this defendant, without paying for the same, or its property is worth much less than the amount that it has invested in it—in fact, only 25 per cent. of the amount.

"Taking the tax assessment as a basis of value of plaintiff's property, and inasmuch as plaintiff complains of this assessment as being oppresive it would seem to be a just basis, we have this result on the figures found in plaintiff's bill in this case:

For year ending March 31, 1901, ... Receipts		$88,649.41
Operating expenses	$35,775.89	
2 per cent. Sinking Fund, and 6 per cent. interest on the value thus fixed, the rule adopted in the Chattanooga case, 2 per cent...	4,000.00	
6 per cent.	12,000.00	
Making a total for operating expenses interest and sinking fund of.....		51,775.89
Leaving a net balance of		$36,873.52

"If the property be placed at double the assessment for that year, still there would be a net balance of $20,873.52. And placed at tripple the assessment of that year there would still remain a balance of the company's earnings amounting to $4,873.52.

"It needs no argument to show that rates which produce this result are not just and reasonable to the consumers and tax payers.

"Defendant, however, denies the statements of the bill that the necessary operating expenses of the plaintiff company amount to $35,775.89;—said sum in defendant's opinion is largely in excess of the actual sum required. Defendant denies that statement of the bill that plaintiff only derived $88,649.41 annually as revenue from the operation of its plant. It avers that a sum largely in excess of said amount is realized.

"Defendant denies the statement of the bill that $20,000.00 per annum is required to restore the ordinary depreciation of the plant, and denies the further statement that $30,000.00 per annum is required to restore special depreciation or replacement. Defendant does not understand what is meant by special depreciation or replacement, but assumes that it means some sort of permanent improvement of the plant, and does not in any case come out of the earnings, but goes to the account of investment.

"Defendant not only denies the statement that $1,000,000 has been invested in said plant, but it denies that the sum realized from the sale of bonds, stock subscriptions, and from the creation of a floating indebtedness, as alleged in the bill, was invested in the plaintiff's plant, and avers that a large amount of it was diverted directly or indirectly to the benefit of Wheeler & Parks, and perhaps other majority stockholders in the plaintiff company.

"It appears, as before stated, that the plaintiff company was capitalized at $1,250,000.00. This stock should have been subscribed and paid in, and was ample in amount to meet every obligation of the company, without creating any mortgage or debenture bonds, or for the sale of any preferred stock, or the creation of any floating indebtedness. It has been only in consequence of gross, and as defendant believes, fraudulent mismanagement, that it has been necessary to create any indebtedness of said company." * * * "In fact defendant doubts whether the majority stockholders of the plaintiff company have ever paid any considerable sum into its capital, and that what constitutes the assets of the company today, consists of the valuable franchises donated to it by the City of Knoxville, and such funds as have been paid in by minority stockholders or borrowed upon mortgages of the company's property.

"Defendant denies that the sale of bonds, either debenture or mortgage bonds, or the sale of preferred stock, was necessary at any time. Defendant further denies that losses incurred in such sales are chargeable to the investment account in considering the question of reasonableness of the rates charged, or prescribed by the defendant.

"These losses have been very considerable, as will appear from the following statements: It is only claimed that about $1,000,000.00 was paid into the investment. The bill and tax schedules show that the following assets were received by the company. $940,000.00 on stock; $150,000.00 on mortgage bonds; $85,000.00 on debenture bonds; $300,000.00 on floating indebtedness, making in all $1,475,000.00, leaving unaccounted for, $475,000.00. In addition to this there was $310,000.00 of the capital stock that seems never to have been paid in.

"Defendant denies that Wheeler & Parks, the majority stockholders, have paid for their stock in said corporation, and it bases this denial largely upon the following evasive statement of the bill, to-wit: 'The outstanding stock of your Orator, exclusive of the aforesaid preferred stock, on March 31, 1901, amounted to $654,000.00, which represents large amounts paid into your Orator by the holders of the shares of stock, which have cost *many* of the holders of the *principal* part of the stock from $40.00 *to* $50.00 *per share.*"

Answer, Record 84-87.

It is further said: "The plaintiff has failed, and it seems purposely failed, to aver the one fact, which is most essential in a bill of this character, to-wit: *reasonable value* of the property which it is employing for the public use. Its averment of the *cost* of the property is not equivalent to the averment of its value. Without this averment the Court is not sufficiently informed to act upon the question attempted to be presented.

"It is especially remarkable that this averment should have been omitted from the bill, and that the plaintiff should have failed to offer proof upon this question of reasonableness of rates, after pleading it in the suit at law, and that the plaintiff company's officers should have refused to express even an opinion as to the *value* of the property devoted to the public use, at the request of the City Council and its Committee."

Answer, Record 91.

After the operation of the city's ordinance had been either defied or enjoined by the defendant for eighteen months, and after this cause had been at issue for more than eight months, and at the second term after the cause had been put at issue, it was reached for hearing and the city announced itself ready for trial. The averments of the bill on this aspect of the case had been denied by the answer and the water company had taken no proof.

Record 108, 287.

Upon this state of the record the bill should have been dismissed.

Remine vs. Vance, 11. *Heiskell*, 229.

This error, however, may be, and perhaps under the circumstances of this case ought to be overlooked, in view of the large amount of labor and expense that has been incurred in the preparation of this case and of the importance of having the question speedily settled as to whether the city's ordinance, the operation of which has been so long suspended, is valid and enforcible. The practice and procedure adopted and pursued by the Court, no doubt with the laudable purpose of saving labor and expense, in the subsequent preparation and disposition of the case, is not only without precedent but contrary to the well-settled rules of practice and procedure in courts of equity. The Court proceeded on motion of the water company, upon the state of the record above indicated, to order a reference to a special master without hearing the case or settling any of the questions or principles involved and controverted between the parties, and without giving any direction as regards the law of the case for the statement of the account. This action of the Court was likewise erroneous, and so far from saving labor and expense has added to both, and likewise been productive of much confusion. "*It is not within the general province of a Master to pass upon all the issues in an equity case, nor is it competent for the Court to refer the entire decision of a case to him without the consent of the parties. It cannot of its own motion or upon the request of one party abdicate its duty to determine by its own judgment the controversy presented and devolve that duty upon any of its officers.*"

Kimberly vs. Arms, 129 *U. S.*, 512; 32 *L. ed.* 764, 768.
Patton vs. Cone, 1 *Lea*, 19.
Carey vs. Williams, 1 *Lea*, 54.

Jones vs. Douglass, 1 *Tenn. Chy.*, 357.
Remsen vs. Remsen, 2 *Johnson's Chy. Rep.*, 501; 2 *Daniel Chy. Prac.*, 1004, *Note* 7; 1221 *Note* 2, (*4th ed.*)

Of this practice Judge W. F. Cooper, an eminent equity lawyer, the author of a series of Chancery Reports, a judge for many years of the Supreme Court of Tennessee and annotator of an edition of Daniel's Chancery Practice, says, in *Carey vs. Williams, supra*:

"It is proper to state here that this case furnishes a striking illustration of the evil of the practice of referring a case to a Master without any adjudication of or ascertainment of the rights of the parties to guide him as to what is properly to be inquired into. Much trouble and expense could have been saved by first submitting the issues between the parties to the Chancellor, having his judgment upon them, and definite directions given the Master for his guidance in the investigation he was required to make. No such practice ought to be tolerated by the Chancellor as it can serve no good purpose, and in most cases leads to complication and expense."

And in *Patton vs. Cone, supra*, the same eminent judge says: "A general reference which settles nothing where there are questions of law involved must be necessarily confusing to the clerk who confines himself to his own province, the finding of facts. It is impossible for him to act intelligently unless he assumes in connection with his own functions, the functions of the judge. He has no guidance as to what he shall omit or insert or as to how he should arrange his material. By far the easiest and best mode of conducting such a case is to have a hearing upon the merits before the reference."

It is true that by *express consent of parties* the entire case, including questions of law as well as of fact, may be referred to a Master. It is held by this Court that such reference may be made.

Kimberly vs. Arms, 129 *U. S.*, 512, 530; 32 *L. ed.* 764.
Davis vs. Schwartz, 155 *U. S.*, 631; 39 *L. ed.*, 289.

In the cases cited there was express consent of both parties for the reference of *questions of law* as well as questions of fact. There was no such consent in this case. By inadvertence of the draftsman the words "by consent" were inserted in the original order of reference, but this mistake was corrected by a subsequent order of the Court.

Record 280.

But even as originally drafted this order of reference contains no consent that the Special Master should settle *questions of law* as was done in the cases above cited. But whether the order of reference is made with or without consent, the Master's report is open to exceptions even as to the facts, and certainly as to questions of law arising upon the introduction or rejection of evidence or the misapplication of the true principles of law in a statement of the account. The objections to the Master's report in this case go almost wholly to questions of law, as will be seen in the discussion of those questions. As to the weight of the findings of the Master, see

> *Kimberly vs. Arms,* 129 *U. S.,* 512; 32 *L. ed.* 764.
> *Davis vs. Schwartz,* 155 *U. S.,* 631; 39 *L. ed.,* 289.
> *Tilghman vs. Proctor,* 125 *U. S.,* 136; 31 *L. ed.,* 664.
> *Calligham vs. Myers,* 128 *U. S.,* 617; 32 *L. ed.,* 547.

The Special Master's findings as to matters of law have no weight, and his finding of facts based upon misconception or misapplication of law will be reviewed without prejudice to the injured party.

The method pursued in ordering the reference in this case was as follows: The water company presented a draft of the order that it desired to have entered, containing eleven propositions. Objection was made by the city to this order, and thereupon counsel for the city presented the draft of an order such as they desired containing thirteen propositions or items. The Court, without passing upon or undertaking to pass upon the matters of controversy and difference between the parties and their proposed orders of reference, added to the eleven propositions submitted by the water company a twelfth proposition in these words: "The Special Master will report on any other special matter or question about which he is specifically requested to report by either side in writing within ten days after entry of this order, said requests to be filed and made part of the record. In case an irrelevant or unnecessary inquiry is opened up by such request, the cost thereof will be taxed against the party making such request and the Master will report what, if any, needless costs are thus caused."

Thereupon and within the ten days' limit allowed by the Court, the city filed, pursuant to the Court's leave, its thirteen propositions, contained in its original draft of the order of reference, thereby placing before the Master both orders of reference, differing in material respects, and making it his duty to report upon the items of both orders without any effort on the part of the Court to settle any of the differences between the orders or to give any direction to the Master as to what were or what were not material matters for him to report upon. These orders of reference prepared by the respective parties are in many respects different. According to the correct practice the Court should have taken both orders and have settled what were the material questions of fact to be ascertained and reported upon instead of leaving this for the parties themselves or the Special Master to settle. As might have been anticipated, the taking of the evidence had not progressed very far until serious differences arose between counsel as to whether certain evidence was material and competent. Thereupon the water company presented a petition to the Court seeking to have the twelfth clause, added by the Court himself, to its order of reference stricken out, and to have the draft of the order of reference presented by the city pursuant to said section either stricken out or construed and amended, insisting among other things, that the city should not be permitted to inquire into the extent of services and revenues of the water company subsequent to the date of the passage of its ordinance on March 31st, 1901, averring that any inquiry as to the revenues of the company subsequent to that date was impertinent and irrelevant, and praying that the Court "revise said twelfth clause of the original order of reference and the thirteen supplemental requests of the defendant, for the reasons hereinbefore stated, and for such other reasons as may be presented in the argument."

Record 119, 121.

Thereupon the Court, without undertaking to settle any of the controversies over the orders of reference as he was invited to do by the petition of the water company, struck out section twelve and substituted in lieu thereof, and upon his own motion, the following paragraph: "In taking the evidence and directing the inquiry before him, the special master possesses the usual power of masters in chancery, and *is hereby expressly invested with power and authority to determine what subjects are relevant and pertinent matters of inquiry under the foregoing order of reference,* and also the proper method of proceeding or requiring the production of evidence, and of what is primary or best evidence of any disputed fact, *and any and all questions arising in regard to the rele-*

vancy of any subject of inquiry and the right to call for or introduce any part of the evidence. The master will, of course, *determine such issues, and for that purpose will hear such arguments as satisfies him in regard to these matters.*"

Record 289.

The effect of this paragraph seems to have been to leave the whole matter, both as to law and evidence, to the discretion of the special master, without consent of parties and over city's objection. Whether it had the effect of striking out the propositions that the city had submitted and filed under section twelve, is not quite clear.

The effect of these proceedings was to transfer the hearing of this cause from the Court to the Special Master upon all questions of law, as well as of fact, without the consent of the city, and as a consequence, to leave the whole matter of law, as well as of fact, at large and in utter confusion, as will appear from an analysis of the so-called order of reference, and a comparison of the propositions contained in the plantiff's draft with those contained in the supplemental draft of the defendant. The Special Master, upon whom was imposed the burden of deciding this case, both as to matters of law and fact, was not himself a lawyer—a fact easily discoverable from his rulings on evidence and from his report. The fourth item of the plaintiff's draft of the order of reference is perhaps the only proper and pertinent one of the eleven, as follows: "The value of plaintiff's entire plant and property at the time of the passage of the ordinance of March 30th, 1901." This item, however, was not justified under the averments of the original bill, which did not allege *value*, but *cost* of plant. And it omitted to confine the value to the property of the water company actually being applied to, and in use for public purposes at the date of the passage of the ordinance.

The defendant sought, by the first and third items of its supplemental propositions, to remedy this defect, and to have excluded from the valuation such property as was not being used or applied to public purposes at the date of the ordinance, and such as had been abandoned, or had become unfit or unsuitable,or inadequate for public use, or had become depreciated in value. But as it turned out on the statement of the account and decision of the case, this value of March 30th, 1901, was not at the *beginning of the year*, but at the *end of the year*, whose income and operating expenses were alone considered in testing the validity of the ordinance, and it appears that considerable additions had been made to the plant during the year preceding the 30th of March, 1901, that could not, during the year, have been productive of income or of operating expenses. Besides, interest was allowed during the construction period upon the money employed therein, and it does not appear what time in the year these additions to the plant were made. These conflicting propositions presented matter of law that the Court should have settled before the reference.

Record 122, 124.

As regards the income and operating expenses of the plant, the draft of the order of reference presented by the plaintiff and adopted by the Court, confines the inquiry to the time prior to March 30th, 1901. The defendant, by one of its additional and supplemental propositions, sought to have this inquiry extended to the period after the passage of the ordinance—its ninth propositions being to what extent the services, expenses and revenues of the complainant company have been increased since the passage of said ordinance of March 30th, 1901, stating the same annually. The Court should have settled the law as to these propositions, but it did not; but, when the defendant proposed to prove income and operating expenses of the water company under its own rates subsequent to the passage of the ordinance, it was objected to by defendant's counsel as it had been on making the original reference. The objection to the supplemental proposition was in these words:

> "This inquiry is as to extent that the services and revenues of plaintiff have been increased since the passage of the ordinance of March 30th, 1901. *This is clearly and grossly incompetent.*"

This objection was repeated in plaintiff's exceptions to evidence and in its petition to the Court to have the order of reference revised and construed, as follows:

> "The petitioner calls the attention of the Court to the fact that the ordinance contested in this cause was passed on the 30th of March,

> 1901, and that said ninth supplemental inquiry is directed exclusively to facts arising since the 30th of March, 1901. Petitioner is advised and alleges that any matter arising since said date, cannot properly be inquired into in this case, the investigation being limited both by order of the Court and by the law of the case to conditions that existed on or before March 30, 1901."
>
> *Record* 123, 125, 115, 120, 127, 129, 132.

The Master in a written opinion filed during an early stage of the taking of the plaintiff's evidence, made the following ruling, to-wit:

> "I have ruled that the most rigid examination of the expense account, and the vouchers thereof, *will be permitted for the year in which the ordinance attacked was passed, for all subsequent and for one year previous, in all, three years and six months. I do not consider that the expenses of complainant for any year previous to passage of the ordinance, have any bearing, as the question is, will the rates fixed by the ordinance yield a fair income on the investment after paying expenses. What happened in the previous years is not material. For comparison of expenses to test complainant's figures, the items of one previous year have been required.*"
>
> *Record* 275.

What the Master means by "the year in which ordinance was passed" is the year immediately preceding its passage. Notwithstanding this ruling and the further fact that evidence as to the income and operating expenses for one and a half years after the passage of the ordinance was taken and admitted, the Master refused to report "income" and "operating expenses"' for any year except that immediately preceding the passage of the ordinance, and applied these to the value of the plant at the end of that year, and the Court sustained this action. It will be borne in mind that this ordinance had been passed more than eight months before the filing of the bill, and should have been in operation about eighteen months before the order of reference was made.

Upon the subject of "fair return" or sufficient income to permit or afford a fair return to stockholders, the plaintiff's draft of the order of reference in its eleventh section directed an inquiry as to whether the rates under the City Ordinance "would afford or permit a reasonable income on the *capital invested in its plant and property.*" The defendant's supplemental draft sought to have the inquiry made as to whether the rates under the City's Ordinance "were reasonable and would afford or permit a reasonable income on the fair value of the complainant's property actually being applied to, and in use for public purposes at the date of the passage of said ordinance, taking into consideration the rights of the public, as well as the rights of stockholders of said company;" and in its ninth section, it sought to have the Special Master report the increase in the revenues of the company since the passage of the ordinance.
Record 123, 124.

The Court should have settled the question whether the fair return should be upon the amount invested, or upon the value of the plant, but did not do so.

As to depreciation: The plaintiff's draft in its tenth proposition sought to have the Special Master report the amount to be allowed annually to the water company for depreciation from natural causes, and by wear and use and depreciation accrued to March 30, 1901. This inquiry should have been extended to the year and a half after the passage of the ordinance, if proper at all, which is not conceded.

The other propositions in the plaintiff's draft were as to mere matters of evidence wholly immaterial. Of the latter class is the inquiry as to the parts of the plaintiff's plant that were situated inside and outside the city, which should have been entirely stricken out.

In the execution of an order of reference of this character, it was to be expected that the Special Master, who was not a lawyer, should fall into many errors, and that much confusion should ensue in the taking of evidence, as well as in the consideration of the case by him.

The Special Master made a report covering the whole field of law and evidence, to which both parties filed exceptions, raising many questions, chiefly of law, to be disposed of.

The Court over-ruled all of the city's exceptions, and the action of the Master was sustained by the Court, both on the hearing of the exceptions, and on the petition for rehearing and other subsequent applications and proceedings, and this is assigned as error on this appeal.

It is proper in this connection to state, in a general way, the evidence offered on the hearing before the Master, being the only evidence heard in the case.

Under the order of reference, if it may be called such, the Special Master had freedom of choice as to which of the two dozen issues, or propositions submitted by the parties, he would hear evidence and report upon, if any of them, and the right, if he chose to do so, to ignore all of the issues and propositions submitted by the parties, and proceed upon his own ideas of what were, or should be the material issues to hear evidence and report upon. It was not known in advance, even to the Special Master, as shown by his conflicting rulings, and much less known to the parties themselves, what would be regarded as the controlling questions in the case. The city and its counsel were under the same necessity of "striking in the dark" in defending the ordinance, as it had been in passing it, and from the same cause. Unquestionably the burden of proof, and the heaviest burden imposed in any class of civil case, rested upon the water company to make out its case by competent and satisfactory proof of every pertinent and material fact essential to its obtaining relief, and as the Court is called upon to set aside, as invalid, on account of its unreasonable and confiscatory character, legislative action fixing rates, after the water company had been heard before that body, and after a full and fair investigation of the facts had been made by that body, it is not sufficient for the water company to show a state of facts merely upon which the Court might decide the matter diferently from the legislative body, especially where the water company has been in default, and has itself induced the mistake, if any was made by the legislative body, by its own misconduct. It is not sufficient, under the cases to be hereinafter cited and reviewed, for the Court to conclude that there is a conflict in the evidence, or that there is a mere preponderance in favor of the water company, or that the water company supports its case by opinions of two or more witnesses. The evidence must go beyond this to justify the Court in setting aside, as invalid, the action of the legislative body.

The Special Master has found in his report that there is a "wide variance" that "admits of little reconciliation" between the evidence offered on behalf of the water company and that offered on the part of the city. He admits that the witnesses on both sides are reputable, and as to the pertinent and controlling facts, the numbers are about equal.

Record 166, 167.

He determines the case upon expert opinion evidence, giving, as we think, undue weight and significance to this character of evidence, and erroneously following the opinions of the water company's experts, which, on the pertinent issues, was opposed by an equal number of experts on the part of the city.

Upon this state of the record, as found by the Special Master, there being conflicting evidence—evidence of about equal value on both sides—the bill should have been dismissed.

As will appear from the evidence that was introduced on behalf of the water company, this case has been investigated along wholly erroneous lines. Most of the evidence offered by the water company, as will appear from what follows, was clearly incompetent and irrelevant. The water company offered only the following evidence in chief as to the value of its plant, the crucial question in the case:

First: An estimate of "invested value," consisting, not of a statement of what had actually been paid into the treasury of the company, and used in the construction of its plant, but *an estimate* by its officers, made without consultation of its books, and without knowledge of the facts, of what the plant should have cost.

Second: An estimate of the replacement cost of the plant as it existed on the 30th of September, 1902, eighteen months after the date of the passage of the ordinance. The whole of the evidence in chief as to the value of the plant, consisted of these two statements.

The purpose of the "invested value" statement, was to show by *estimate* merely, not by actual facts, what the plant had cost; that is, an estimate of what had been invested in it from time to time in the construction of its several parts at the dates such parts were created, and at the prices then prevailing, and including therein, the estimated cost of parts that had been abandoned for public use, or had utterly perished and been replaced, and duplicating the cost of such parts, by including estimated cost of such replacement.

It was contended by the officers of the company, who made and furnished this "invested value" statement, that it afforded the basis of value, upon which a fair return should be computed. Of this "invested value" statement, the Special Master says:—

> "The manner in which this is presented, shows great ability, care and thought. Complainant's counsel have devoted much of their able brief to this subject. Still, I can see no aspect of this case in which it is material. In some views, the theory would seem to be 'exact justice' but to hold to it would make a precedent, whereby the regulation of rates would become impossible."

Record 169.

This "invested value" statement, which is misnamed "Classification and *Fair Construction Cost* of the Physical Plant of the Knoxville Water Company to March 31st, 1901," covers more than fifty pages of the printed record.

Record 332-394.

As will appear from an inspection of it, it purports to give, in great detail, the cost of construction of all parts of the plant, whether in existence at the date of the ordinance or not, from the inception of the plant until the 31st of March 1901, lumping the period from 1883 to

1891, and giving the estimated cost of construction by the year from 1891 until 1901. Such a statement, if made from the books of the company or after the ascertainment of actual facts, while it would fall far short of showing the value of the plant on the 31st of March 1901, would have been of some, though very slight, evidential value; but when made up, as this was, by officers of the company, without consulting, and refusing to consult the books of the company, from their general experience as experts, without knowing, for the most part the facts, or making any effort to ascertain them, it is scarcely worthy of consideration upon the real issue in this case.

This "invested value" statement was made up by William Wheeler, President, and F. C. Kimball, Superintendent of the water company, who testified as experts.

Of the nature of this "invested value" statement, the Special Master says: "The values are *estimates* by experienced hydraulic engineers."

Record 166.

Mr. Kimball says: "*Everything in this analysis is an estimate.*"

Record 868.

He further testifies as follows:

> "Q. Have you, at any time, joined with Mr. William Wheeler, the President of the Knoxville Water Company, in preparing a statement or analysis of the property of that company, for the purpose of ascertaining its fair invested value?

A. Mr. William Wheeler and myself worked together over an analysis of that description last summer and fall, covering perhaps eight or ten weeks.

Q. In preparing that analysis, did you follow the books of the company, or make an independent analysis?

A. The analysis was made independent of the books of account of the company.

Record 811.

Mr. William Wheeler says that in making this "invested value" estimate he "carefully avoided making use of, or referring to account books," and that he made this analysis upon "information and experience as water works engineer and expert generally."

Record 470, 472, 682, 683.

These witnesses—officers of the company—admit that the books of the company, or of Wheeler & Parks, Contractors, were in the possession of William Wheeler in the very building where this analysis was made up, and that they showed prices of pipe and other material entering largely into the construction of this plant, and that they did not, on a single occasion, avail themselves of the aid of these books in fixing unit prices, or for any other purpose, but carefully avoided doing so.

Record 837, 838, 470, 472.

These interested witnesses purposely and deliberately shut their eyes to actual facts, in order to make mere estimates of prices, having the actual prices available in these books. Not only did these witnesses refuse, on making this analysis, to look to these books, but they refused persistently, during their cross-examination in this case, to produce the books to enable counsel to test, by actual facts, the accuracy of their estimate of prices. Mr. Wheeler is asked on cross-examination: "Do you think that actual cost is better than *estimated cost?* A. I *do not.*" He further says: *"Actual value is a vague term to my mind."*

The officers of the company, it seems, had radically changed their minds with reference to estimates, or opinion evidence, subsequent to the request, made by the Chairman of the Water Committee when fixing rates by ordinance, for the valuation it fixed upon its plant, to which the water company replied that any answer that it could make "would be only an *expression of personal opinion, to which any one might, and doubtless with great propriety, well take exception.*"

Record 823, 1070.

This "invested value" statement of the value, or supposed value of the physical plant of the water company, including its real estate, aggregated $711,379.51. After this statement had been made up by the officers of the company and testified to by them, or at least one of them, three expert engineers were secured by the water company for the purpose of giving their endorsement to the same, and to the methods pursued in making it up. These were Hider, Ludlow and Johnston. These gentlemen were furnished with copies of this statement of the officers of the water company. They were all strangers to the situation at Knoxville. They came to Knoxville, and after spending a few days, from a week to ten days in investigation of the situation, with the aid of the officials who made up the statement, they took the stand and in a general way gave a half-hearted approval, suggesting no changes therein. Hider says that he understood that the prices had been taken from the water company's books, which was not a fact.

Record 996.

Ludlow thought it was unnecessary that prices should be estimated where there existed books that showed actual prices.

Record 559.

On cross-examination Ludlow says that he didn't understand that he was approving the statement as a whole. These witnesses to a very large extent took the word of the water company's officials as to quantities and prices. Not only the officials of the company, but these experts likewise testified as to the law of the case, and all agreed that this *invested value*, and not *actual value*, is a proper basis for ascertaining reasonable rates.

In order to ascertain what weight should be attached to this "invested value" statement, as showing the true basis of value, to-wit, actual value as of March 31, 1901, it is only necessary to observe: In this invested value statement is included, according to Mr. Wheeler's own statement, $95,987.04 of consummated depreciation; that is, the value of such property or its estimated value entering into the statement, such as buildings, pipe, pumps, etc., as had utterly disappeared from the plant on the 31st of March, 1901; $77,726.51 incomplete depreciation; that is, such value as had gone out of the existing parts of the plant by reason of the fact that they had been in use for many years, such as pipe, pumps, filters, etc.; and $2,000.00 on account of the Tillery tract of land that had ceased to be used for the benefit of the plant, making in all $175,713.55 of the estimate that had wholly gone out of the value of the plant for public use. This would reduce the amount to $535,665.96. But, in addition to this, the estimate was at prices based upon the opinion of the company's officials at the time the construction work was done. In nearly every instance, these prices were in excess, and largely in excess, of actual prices prevailing on the 31st of March, 1901. For example, the cast iron pipe entering into the original construction of this plant, and into the construction for several years after it was established, is put into this estimate at $35.00 per ton, with 20 per cent. added for contractor's profits, engineering and interest on money during construction period, making it $42.00 per ton. There was a large quantity of this pipe that enters into this estimate at this price. The price of pipe at the date of the passage of the ordinance was little, if anything, in excess of $20.00 per ton. The reservoir enters into this estimate at $33,000.00, including the 20 per cent. above noted. The proof shows, beyond all question, that its actual cost could not have exceeded one-half this amount.

An item of $2,000.00 for tools, etc., inserted in this estimate, was based upon no fact or knowledge of facts as admitted by the water company's officials that made the estimate.

Record 846-848.

And throughout this entire estimate the proof shows that the prices assumed from general experience of these experts are largely in excess of the actual prices prevailing at the time.

Entering into this estimate is an item of over $32,000.00 for engineering, and an item of over $65,000.00 for contractor's profits. The general effect of this statement is to corrobate strongly the evidence of the city's experts, fixing the cost of this plant at about $400,000.00 on the 31st of March, 1901.

As to the replacement cost of the plant as of September 30, 1902, it is difficult to discover or suggest any reason why it should have been made to encumber this very large record.

The true date of inquiry as to actual value of this plant was, of course, March 31, 1901, eighteen months before the date of this estimate of replacement cost. At or about September 30th, 1902, the highest prices ever known prevailed as to cast iron pipe, the chief element of cost in the construction of a water plant. If it was not for this reason that this replacement statement was made of this date, it is difficult to suggest any. At the time that this replacement statement was made the question was mooted among the experts of the water company as to whether one should be made as of the true date, March 31, 1901. A tentative replacement statement of that date was made up, but was not put in evidence.

Record 960-61; 2119-2120.

It happened that prices were normal, if not low, at the true date. Eighteen months later they were the highest ever known either before or since the true date. This may suggest a reason for the failure to put in a replacement statement of the true date.

This replacement statement of September 30th, 1902, was made up like the "invested value" statement, by *estimates of experts,* and without consulting the books for actual facts. It is open to the same criticisms, and even more serious criticisms than the "invested value" statement. The prices were all excessive. It included many things that were not in the original plant as constructed. It included a large amount of construction made after March 31, 1901. It included some things like service pipes that had been put in by the consumers themselves, or at their cost, and is objectionable in many other respects; but, it is sufficient to say that it is utterly without value in this case. It was made up by the same officials who made up the "invested value" statement, and approved substantially by the same expert witnesses who were furnished with a copy in advance of giving their testimony.

They likewise had knowledge that the officials of the water company had given evidence approving this replacement statement before they were called to testify.

There was little evidence, in addition to the above, introduced by the company in chief, except that a table of its indebtedness, of which something will be said later, was put in evidence by its treasurer, who likewise furnished tables of income and operating expenses, very ingeniously endeavoring in his testimony to transport as large amount as possible of the company's income to that portion of the plant lying "outside" of the city, and as large amount as possible of the expenses into the city.

The city presented as evidence in chief, a statement of the replacement cost of the existing plant as of the 31st of March, 1901. This was made by W. M. Nixon and C. S. Brown, two disinterested expert witnesses, after several weeks of investigation and calculation, going into the minutest details of cost and value. These experts fixed the replacement value, as of March the 31st, 1901, at about $400,000.00, which by reason of depreciation of the value of the material in the existing plant, was considerably reduced by the application of Mr. Wheeler's rules of depreciation.

There was proof likewise of the assessment value of this plant for taxes, which indicated an actual value of $357,500.00. The prices fixed by these experts were sustained by contractors and other persons familiar with the situation in Knoxville at the time of the original construction of this plant and ever since. Several witnesses were examined who participated in the actual work done on this plant, or furnished material for its construction.

In rebuttal, the water company, presented a replacement statement of March 31st, 1901. This replacement statement contemplated an entirely new plant, composed of new material in all of its parts. This belated replacement statement was made up by Mr. Ludlow, who had figured in making former statements, and Mr. Wingfield, and without including real estate, amounted to over $618,000.00. These witnesses were furnished in advance of testifying an itemized statement with prices set opposite the items, of the estimated quantities of material at estimated prices that had entered into the construcion of the water company's plant. Mr. Wingfield, after three or four days investigation at Knoxville, was ready to take the stand and testify substantially to the correctness of this statement. He made all his investigations inside of a week. Mr. Wingfield says there is no difference between a *new* and an *old* plant, as to its *value*.

Record 1984.

Much of the material in this plant had been in use for fifteen to eighteen years, as will appear from the examination of these witnesses. They had no knowledge of prices of materials and labor at Knoxville. They drew upon their general experience. They took the statement of the water company implicitly as to quantities, and as to much of the statement, as to prices. Their examination of the plant was wholly perfunctory. While Ludlow differed from Wingfield and thought there was a difference between the value of a new and old plant, he does not undertake to fix the value of the existing plant.

Record 2129, 2131.

It happened that both of these experts, Ludlow, on behalf of the city, and Wingfield, on behalf of the water company, had testified in a reasonable rates case, known as the "Chattanooga case" about six months prior to the 31st of March, 1901. At the date of giving that testimony, prices were lower than on the 31st of March, 1901. These two experts had differed in fixing the value of the Chattanooga plant by the sum of nearly $400,000.00.

Record 1988-2082.

They, however, had no difficulty in getting together on the estimate in this case.

Record 2083.

Both of them testified on their cross-examination that as to very many of the matters involved, they took the statement of the officers of the water company. Almost without exception the prices fixed by these two experts in this case, were in excess of the prices fixed by them in the Chattanooga case, when prices were lower than in 1901. They were confronted on cross-examination with their depositions in that case and compelled, not without some humiliation, to acknowledge this. This was especially so of Ludlow. We can only refer the Court to the cross-examination of these witnesses in support of our criticism of their evidence, and we submit that the effect of their evidence is to place the actual value of this plant, on the 31st of March, 1901, at about the same figure that was placed upon it by the city's experts.

It will appear from their statements and evidence that in several instances they put prices higher than was claimed by the water company, and included in their estimate many thousands of dollars for things, such as services, laying pipe under brick pavement, etc., as did not enter into, and was not claimed by the officials of the water company in their "invested value" statement to have entered into this plant.

It is proper to add that the water company claimed certain per cents for administration, for discounts on sales of bonds, for "going concern," applying these per cents to estimated value of entire plant, but these will not be further noticed on this occasion.

Taking the whole evidence together, we confidently assert that the value placed by the City Council upon this water company's plant, to-wit, $500,000.00, when it was investigating the matter of rates, without the assistance of the water company, was about $100,000.00 in excess of its true value.

B

When and to What Extent Courts Will Interfere With Rates for Public Utility Companies Fixed by a Legislative Body.

The power of the city to regulate the rates of this company has been fully settled by adjudications, and is not now in question. This Court has uniformly held that the fixing of rates for public utility companies, is primarily a legislative function, but it has declared that rates thus fixed may nevertheless, in certain extreme cases, be enjoined by the courts as unreasonable and confiscatory. This jurisdiction of the courts is not based upon any theory that the courts have a general revisory power over such rates when fixed by legislative action, but upon the idea that the courts may interfere when, and only when, the legislative body has proceeded in fixing such rates in violation or excess of its power, or has acted arbitrarily, fraudulently, or merely under guise and pretence of exercising its legitimate function, and thereby accomplished, practically, confiscation of private projerty. This Court has, by its decisions, carefully guarded and limited the exercise of this extraordinary and dangerous jurisdiction of the courts affecting legislative action, and has thus far permitted the most sparing use of it.

In three cases, and three cases only, so far as we have discovered, has this court sustained the exercise of this power and jurisdiction. In these three cases *the facts were either admitted or not seriously controverted in the* *evidence.* In the first of these cases, Reagan v. Farmers Loan & Trust Company, 154 U. S., 362, 38 L. Ed. 1014—the pioneer case—this Court, on final hearing, enjoined the Texas Railroad Commission from enforcing rates, which upon the *admitted facts*, were clearly confiscatory in their character, and which the Railroad Commissioners, who were parties to the cause, did not undertake to defend, justify or palliate. The opinion of the Court in that case, delivered by Mr. Justice Brewer, leaves no doubt as to what the Court intended to decide, and did decide. It is as follows:

> "But we do hold that a general averment in a bill that a tariff as established is unjust and unreasonable, is supported by the *admitted facts* that the road cost far more than the stock and bonds outstanding; that such stock and bonds represent money invested in its construction; that there has been no waste or mismanagement in the construction or operation; that supplies and labor have been purchased at the lowest possible price consistent with the successful operation of the road; that the rates voluntarily fixed by the company have been for ten years *steadily decreasing* until the aggregate decrease has been more than *fifty per cent.;* that under the rates thus voluntarily established the stock, which represents *two-fifths of the value,* has never received anything in the way of dividend, and that for the last three years the earnings, above operating expenses, have been insufficient to pay the interest on the *bonded debt,* and that the proposed tariff as enforced, will so diminish the earnings that

> they will not be able to pay *one-half of the interest on the bonded debt above operating expenses*, and that such an averment, *so supported*, will in *the absence of any satisfactory showing to the contrary*, sustain a finding that the proposed tariff is unjust and unreasonable, and a decree restraining it will be put in force."

The Court carefully guarded its decision upon these facts, saying:

> "It is unnecessary to decide, and we do not wish to be understood as laying down as an absolute rule that in every case *a failure to produce some profit* to those who have invested their money in the building of a road, is conclusive that the tariff is unjust and unreasonable, and yet justice demands that every one should receive some compensation for the use of his money or property, if it be possible, *without prejudice to the rights of others.* There may be circumstances which would justify such a tariff; there may have been *extravagance and a needless expenditure of money;* there may be *waste in the management of the road;* enormous salaries, unjust discriminations between individual shippers, resulting in general loss; the construction may have been *at a time when material and labor were at the highest price*, so that the *actual cost* far exceeds the *present value;* the road may have been unwisely built in localities where there is not sufficient business to sustain a road. Doubtless, too, there are many other matters affecting the right of the community in which the road is

> built, as well as the rights of those who have built the road."

The reductions made by the Commission in that case, ranged from five per cent. to nearly fifty-seven per cent. on the various classes of articles.

In the next case, *Covington & L. etc., Company, vs. Sandford* 164 *U. S.*, 578, 41 *L. Ed.*, 560, this Court restrained, *temporarily*, the enforcement of rates prescribed by statute for a turn-pike company, as unreasonable and confiscatory upon the facts stated in the pleadings, the truth of which was *admitted*, showing that the enforcement of the rates would have disabled the company from performing its duties to the public, and from paying dividends to its stockholders, whose money had been legitimately used in the construction of its road, and would *entirely destroy the value of its property* and of its shares of stock, and would not afford an income sufficient "*to maintain the road and provide for its ordinary expenses without taking into consideration any extraordinary expenses.*" No defense of these rates against these serious charges was attempted,—the case having been disposed of upon the pleadings, *whose averments were admitted.* The case was, however, remanded for proof, the Court saying:

> "We decide, however, nothing more on this hearing than that upon the facts alleged, the demurer to the answer should have been overruled, and upon the completion of the pleadings,

> unless the plaintiffs elect to stand by their demurer, the parties should be allowed to make their proofs touching the issues involved."

The opinion in this case, rendered by Mr. Justice Harlan leaves no doubt as to what the Court intended to decide. The Court says:

> "The statute, which by *its necessary operation,* compels a turnpike company, when charging only such tolls as are *just to the public,* to submit to such further reduction of rates as will prevent it from *keeping its road in proper repair* and from *earning any dividends whatever* for stockholders, is as obnoxious to the constitution of the United States as would be a similar statute relating to the business of a railroad corporation having authority under its charter to collect and receive tolls for passengers and freight."

It is further said that the allegations of the bill:

> "Made a *prima facie* case of the invalidity of that statute."

The opinion was carefully guarded in this case by the language:

> "It is proper to say that if the answer had not alleged in substance that the tolls prescribed by the Act of 1890, were wholly *inadequate for keeping the road in proper repair and for earning dividends,* we could not say that the Act

was unconstitutional, *merely because the company, (as was alleged, and as demurrer admitted) could not earn more than 4 per cent. on its capital stock.* It cannot be said that a corporation, operating a public highway, is entitled, *as of right, and without reference to the interests of the public, to realize a given per cent. upon its capital stock.* When the question arises whether the Legislature has exceeded its constitutional power in prescribing rates to be charged by a corporation controlling a public highway, stockholders *are not the only persons whose rights and interests are to be considered; the rights of the public are not to be ignored.* It is alleged here that the rates prescribed, are unreasonable and unjust to the company and its stockholders, but that involves *an inquiry as to what is reasonable and just for the public.* If the establishing of new lines of transportation should cause a diminution in the number of those who need to use a turnpike road, and consequently a diminution in the tolls collected, that is not in itself a sufficient reason, that the corporation operating the road should be allowed to maintain rates that would be *unjust to those who must, or do use its property. The public cannot properly be subjected to unreasonable rates in order simply that stockholders may earn dividends.* The Legislature has the authority in every case where its power has not been restrained by contract, to proceed upon the ground that the public may not rightfully be required to submit to unreasonable exactions for the use of a public highway, established and maintained under legislative authority. *If a corporation cannot maintain such a highway, and earn dividends for stockholders, it is a misfortune for it and one which the constitution does not require to be remedied by imposing unjust burdens upon the public.* So that the *right of the public* to use the plaintiff's turnpike upon the payment of such tolls as, *in view of the nature of the service rendered* by the company, *are reasonable, is an element in the general inquiry, whether the rates established by law are unjust and unreasonable.* That inquiry also involves other considerations, such for instance as the reasonable cost of maintaining the road in good condition for public use, and the amount that may have been really and necessarily invested in the enterprise. In short, each case must depend upon its special facts, and when a court without assuming itself to prescribe rates is required to determine whether the rates prescribed by the Legislature for a corporation, controlling a public highway, are, as *an entirety* so unjust as to destroy the value of its property for all the purposes for which it was acquired, it is its duty to take into consideration *the interests of both the public and the owner of the property, together with all other circumstances that are fairly to be considered* in determining whether the Legislature has, under the *guise of regulating rates, exceeded its constitutional authority* and practically deprived the owner of the property without due process of law. What those other circumstances may be, it is not necessary now to decide. That can be done after the parties have made their proofs."

In that case it may be observed there was no bonded indebtedness, and we submit the fact that the company is, or is not indebted, is wholly immaterial upon the question of a "fair return."

San Diego, etc., vs. National Cit, 74 *F. R.* 87.
San Diego Water Co. vs. San Diego, 62 *A. S. R.* 272.

In the remaining one of the three cases in which this Court has granted affirmative relief against rates alleged to have been confiscatory, to-wit: *Smith vs. Ames,* 169 *U. S.,* 466; 42 *L. Ed.,* 819, it was decided by this Court upon facts that were not, *and could not be seriously controverted,* that the state officials of Nebraska were properly enjoined from enforcing prescribed rates that would have denied to all of the railroads of the state, except two, an income sufficient to have saved them from actual loss in operation, and as to the two excepted roads, permitting an income only slightly in excess of operating expenses.

In that case the proceedings to enjoin the enforcement of rates were instituted before the rates had been put into effect. The opinion in that case, delivered by Mr. Justice Harlan, is likewise carefully guarded. After reciting the facts upon which the plaintiff's contentions were based, the court proceeds:

"Do these facts affect the general conclusion as to the probable effect of the Act of 1893? In the discussion of this question, the plaintiffs contended that a railroad company is entitled to exact such charges for transportation as will enable it, *at all times, not only to pay operating expenses, but also to meet the interest regularly accruing upon all its outstanding obligations* and justify a dividend upon all its stock; and that to prohibit it from maintaining rates or charges for transportation *equal to all these ends,* will deprive it of its property without due process of law, and deny to it the equal protection of the laws. This contention was the subject of elaborate discussion, and as it bears upon each case in its important aspects, it should not be passed without examination. In our opinion the broad proposition advanced by counsel involves some misconception of the relations between the public and a railroad corporation. It is unsound in that it practically excludes from consideration the *fair value of the property used,* omits altogether any consideration of *the right of the public to be exempt from unreasonable exactions,* and makes the interests of the corporation maintaining a public highway, *the sole test* in determining whether the rates established by or for it, are such as may be rightfully prescribed as between it and the public. A railroad is a public highway, and none the less so because constructed and maintained through the agency of a corporation, deriving its existence and powers from the state. Such a corporation was created for *public purposes.* It

> performs a *function of the state.* Its authority to exercise the right of eminent domain and to charge tolls, was given *primarily for the benefit of the public.* It is under *government control,* though such control must be exercised with due regard for the guarantees for protection of its property. (Citing cases.) It cannot, therefore, be admitted that a railroad corporation maintaining a highway under the authority of the state must *fix its rates with a view solely to its own interests and ignore the rights of the public.* But the rights of the public would be ignored if the rates for transportation of persons or property on a railroad are exacted without reference to *fair value of the property used for the public, or the fair value of the services* rendered, but in order simply that the *corporation may meet operating expenses, pay the interest on its obligations and declare a dividend to stockholders. If a railroad corporation has bonded its property for an amount that exceeds its fair value, or if its capitalization is largely fictitious, it may not impose upon the public the burden of such increased rates as may be required for the purpose of realizing profits upon such excessive valuation or fictitious capitalization.*"

In that case, the Court was unwilling, while enjoining the operation of the statute upon the facts existing at the date of the passage of the statute fixing the rates, to make its decision final, and conclusive of the invalidity of the statute, and remanded the cause for further inquiry, saying:

"But it may be added that the *conditions of business*, so far as railroad corporations are concerned, *have probably changed for the better since the decree below*, and that the rates prescribed by the statute of 1893 may *now afford all the compensation to which the railroad companies in Nebraska are entitled*, as between them and the public. In anticipation, perhaps, of such a change of circumstances and the exceptional character of the litigation, the Circuit Court *wisely provided* in its final decree that the defendants, members of the Board of Transportation might *when the circumstances have changed so that the rates fixed* in the said Act of 1893, *shall yield to the said companies reasonable compensation for the services aforesaid, apply to the Court, by Bill or otherwise, as they might be advised for a further order in that behalf*. Of this provision in the final decree the State Board of Transportation, if so advised, can avail itself. In that event, *if the Circuit Court finds that the present condition of business is such as to admit of the application of the statute to the railroad companies in question, without depriving them of just compensation, it will be its duty to discharge the injunction heretofore granted, and to make whatever order is necessary to remove any obstruction placed by the decrees in these cases in the way of the enforcement of the statute.*"

See same cases, 64 *Fed. Rep.* 165; 35 *Fed. Rep.* 878.

It may be observed that in the case at bar, the city was denied, upon its application, by petition showing material changes in its favor since the passage of the ordinance, any consideration of any matter occurring subsequently to the passage of the ordinance, and this in the face of the facts that the ordinance had then been in force more than eighteen months, and that the bill was filed more than eight months after the passage of the ordinance. It was likewise denied on its application, a reservation similar to that declared proper in the Court's opinion above cited. There is full proof in this record showing the conditions for one and one-half years after the passage of the ordinance, and showing affirmatively a very large increase during that period of the income of the water company.

The same rules have been applied by the inferior courts in granting injunctions of this character in *Cleveland, etc., Co. vs. Cleveland,* 71 *Fed. Rep.* 610; *New Memphis, etc., Co. vs. Memphis,* 72 *Fed. Rep.,* 952. In these two latter cases the facts were *admitted* to be as stated in the bill, and the rates temporarily enjoined were, upon those facts, clearly confiscatory.

In a note to the case of *San Diego Water Co. vs. San Diego,* 62 *Am. St. Rep.,* 302, we find the following:

> "In Reagan v. Farmers etc. Co. 154 U. S. 400; Covington etc. Co. v. Sandford, 164 U. S. 589; Cleveland etc. Co. vs. Cleveland, 71 Fed. Rep., 610; New Memphis etc. Co. vs. Memphis, 72 Fed. Rep., 952; Indianapolis etc. Co. vs. Indianapolis, 82 Fed. Rep., 245, and Smith vs.

Ames, 169 U. S. 528, *it appears either by admissions or by testimony of witnesses whom there was no attempt to contradict,* that the charges assailed were not merely unreasonable, but that *they were so extreme in character as to leave the corporation assailing them without any net profit for their services,* if such rates and charges were enforced. While we do not doubt that ultimately, when the question shall necessarilly arise, that the Court will, to some extent, undertake to require that the charges be adequate as well as reasonable, the inherent difficulties in determining what charges are to be deemed adequate are such that we can very rarely expect judicial interference against rates or charges *where there is any substantial effort made to defend them.* Even some of the general suggestions which have been made upon this subject must, we think, be abandoned. Thus, in several of the decisions, the amount of the bonded indebtedness of corporations was spoken of, and the courts seemed inclined to the view that such indebtedness and the interest agreed to be paid thereon, ought to be taken into consideration in fixing the rates of charges, but we think this suggestion is sufficiently answered by the opinions in the principal case, as well as that of *San Diego, etc. Company vs. National City,* 74 *Fed. Rep.* 87. It certainly cannot be material whether the corporation has used its own money or that which it has borrowed from others, nor can those who have loaned money be necessarily entitled to interest thereon if it has been injudiciously expended. To say, as is sometimes said,

> that the present value of the property should be taken as a basis for the adjustment of rates, is but to reason in a circle, *for it is clear that its value is dependent upon the rates established, and must be high or low according to such establishment,"* etc..

Thus far, and thus far only, has this Court gone in its decisions granting affirmative relief in this class of cases. As indicated by its opinions, it has proceeded thus far with great caution and solicitude to prevent abuse of this jurisdiction by the Courts.

On the other hand the cases are numerous in which relief in cases of this character has been denied by this Court and by other courts.

In *San Diego, etc. Co. vs. National City*, 174 *U. S.*, 739, 43 *L. ed.*, 1144, this Court, Mr. Justice Harlan delivering the opinion, refused to enjoin rates prescribed by ordinance for a water company, saying:

> *"There is no ground to say that the appellant did not in fact have, or was denied an opportunity to be heard upon the question of rates. On the contrary, it appears in evidence that the subject of rates was considered in conferences between the local authorities and officers of the appellants. Those officers may not have been present at the final meeting of the City Board when the ordinance complained of was passed. They were not entitled of right to be present at that particular meeting. They were heard, and there is nothing to justify the conclusion that the*

case of the appellant was not fully considered before the ordinance was passed."

The facts of the case at bar bring it strictly within this opinion. Again the Court says:

> "But it should also be remembered that the judiciary ought not to interfere with the collection of rates established under legislative sanction, *unless they are so plainly and palpably unreasonable as to make their enforcement equivalent to the taking of property for public use without such compensation, as under all the circumstances is just, both to the owner and the public.* That is, *judicial interference should never occur unless the case presents clearly, and beyond all doubt, such a flagrant attack upon the rights of property under the guise of regulation as to compel the court to say that the rates prescribed will necessarily have the effect to deny just compensation for private property taken for the public use.* In view of these principles, can it be said that the rates in question are so unreasonable as to call for judicial interference in behalf of the appellant? Such a question is always an *embarrassing one to a judicial tribunal, because it is primarily for the determination of the Legislature, or of some public agency designated by it;* but when it is alleged that a state enactment invades or destroys rights secured by the constitution of the United States, a judicial question arises, and the courts, Federal and State, must meet the issue, *taking care always not to entrench upon the authority belong-*

> *ing to a different department, nor to disregard a statute unless it be unmistakably repugnant to the fundamental law.''*

It is a significant fact in that case that the evidence was conflicting, and that the Court in view of the presumption that obtains in favor of the reasonableness of rates prescribed by public authority, and of its reluctance to assail a statute as unconstitutional, says:

> ''It is sufficient to say that upon a careful scrutiny of the testimony, our conclusion is that no case is made that will authorize a decree declaring that the rates fixed by the defendant's ordinance, *looking at them in their entirety, and we cannot properly look at them in any other light,* are such as to amount to a taking of property without just compensation, and therefore to a deprivation of property without due process of law. *There is evidence both ways,* but we do not think we are warranted in holding that the rules, upon which the defendant Board proceeded, were in disregard of the principles heretofore announced by this court in the cases cited. *The case is not one for judicial interference with the action of the local authorites, to whom the question of rates was committed by the State.''*

> The Court quotes with approval this language:

> ''When the constitntion provides for the fixing of rates for compensation, it means 'reasonable rates' and 'just compensation.' To fix such rates and compensation is the duty and within the jurisdiction of the Board. To fix rates

> not reasonable, or compensation not just, is a plain violation of its duty. *But the courts cannot, after the Board has fully and fairly investigated and acted, by fixing what it believes to be reasonable rates, step in and say its action shall be set aside and nulllified because the courts upon a similar investigation have come to a different conclusion as to the reasonableness of the rates fixed. There must be actual fraud in fixing the rates, or they must be so palpably or grossly unreasonable and unjust as to amount to the same thing.*"

This case is peculiarly in point.

In *Railroad vs. Wellman,* 143 *U. S.,* 399, 36 *L. ed.,* 176, this Court refused to interfere with rates shown by agreed facts *supplemented by the opinion of two witnesses "well informed and worthy of credit"* proving that the rates would not yield an adequate income. Mr. Justice Brewer in delivering the opinion of the Court, said:

> "Can it be, under the circumstances, that the Court erred in peremptorily refusing to instruct the jury that an act fixing a maximum rate of two cents per mile, is unconstitutional? *Is the validity of a law of this nature dependent upon the opinion of two witnesses, however well qualified to testify? Must court and jury accept their opinions as a finality? Must it be declared as a matter of law, that the reduction of rates necessarily diminishes income? May it not be possible, indeed, does not all experience suggest the probability that a reduction of rates*

> *will increase the amount of business, and therefore the earnings? At any rate, must the court assume that it has no such effect, and ignoring all other considerations, hold as a matter of law that reduction of rates necessarily diminishes the earnings?"*
>
> See also *Atty. General vs. Railroad,* 35 *Wis.,* 583.

In the case at bar, the special master and the Court, not only held, as a matter of law, that a reduction of rates would not result in an increase of business or income, but held this in the face of uncontradicted evidence to the contrary.

In *Stanislaus County vs. San Joaquin Company,* 192 *U. S.,* 201, 48 *L. ed.,* 406, this Court reversed the decision of the Circuit Court sustaining a bill by a water or irrigation company enjoining rates as unreasonable and confiscatory, which had been prescribed by the supervisors of a county. Mr. Justice Peckham delivering the opinion of that Court, says:

> "It is not confiscation, nor a taking of property without due process of law, nor a denial of equal protection of the laws to fix water rates so as to give *an income of six per cent of the then value of the property actually used for the purposes of supplying water as provided by law, even though the company had prior thereto, been allowed to fix rates that would secure to it one and one-half per cent a month income upon the capital actually invested in the undertaking.*

> If not hampered by an unalterable contract providing that a certain compensation should always be received, we think that a law which reduces the compensation theretofore allowed to *six per cent* upon the *present value of the property used for the public,* is not unconstitutional. *There is nothing in the nature of confiscation about it.*"

Again:

> *"Much of the capital was invested between twenty and thirty years ago, and to be able still to realize six per cent on the money originally invested, is more than most people are able to accomplish in any ordinary investment, and more than is necessary in order to give just compensation for property at the time it is used for the public purpose originally intended."*

The bill was dismissed.

In *Dow vs. Beidleman,* 125 *U. S.,* 680, 31 *L. ed.,* 84, this Court held rates not confiscatory upon the proof, which, it was insisted, would not yield a net income sufficient to pay as much as one and one-half per cent on the original cost of the road, and only a little over two per cent on its bonded debt.

In *Railroad vs. Gill,* 156 *U. S.,* 649, 39 *L. ed.,* 567, this Court, Mr. Justice Shiras delivering the opinion, sustained the judgment of the Supreme Court of Arkansas, refusing to interfere with rates as being unreasonable and confiscatory, saying:

> "It therefore appears that the allegations made and the evidence offered did not cover the

company's railroad *as an entirety,* even in the state of Arkansas, but were made in reference to that portion of the road originally belonging to the St. Louis, Arkansas & Texas Railway, and extending from the northern boundary of Arkansas to Fayetteville in said state. In this state of facts, we agree with the views of the Supreme Court of Arkansas as disclosed in the opinion contained in the record, and which were to the effect *that the correct test was as to the effect of the act on the defendant's entire line, and not upon that part which was formerly a part of one of the consolidating roads. That the company cannot claim the right to earn a net profit from every mile, section or other part into which the road might be divided,* nor attack as unjust a regulation which *fixes a rate from which some such part would be unremunerative, that it would be practically impossible to ascertain in what proportion the several parts should share with others in the expenses and in the receipts in which they participated and finally that to the extent that the question of injustice is to be determined by the effects of the act upon the earnings of the company, the earnings of the entire line must be estimated as against all its legitimate expenses under the operation of the act within the limits of the state of Arkansas.*"

In the same case it is said:

"The theory, apparently, upon which this suit is brought, is *that the parties have an appeal from the legislature to the courts, and that the latter are given immediate and general supervision of the constitutionality of the acts of the*

> *former. Such is not the case.* Whenever, in pursuance of an honest and actual antagonistic assertion of rights by one individual against another, there is presented a question involving the validity of any act of the legislature, state or federal, and the decision necesarily rests upon the competency of the legislature to so enact, the Court must, in the exercise of its solemn duties, determine whether the act be constitutional or not; *but such an exercise of power is the ultimate and extreme function of the courts. It is legitimate only in the last resort and as a necessity in the determination of real, earnest and vital controversies between individuals.*"

In the case at bar, the special master and the Court, divided the plant of the water company between "inside" and "outside" city, and assigned to "outside" city a far less per cent of operating expenses than to "inside" city as compared with the value of the plant assigned to "outside" city and "inside" city.

In *San Diego L. & T. Co. vs. Jaspar,* 189 *U. S.,* 439, 47 *L. ed.,* 892, this court, Mr. Justice Holmes delivered the opinion, denied relief to a water company seeking to enjoin, as unreasonably low and confiscatory, rates prescribed by the supervisors of a county, saying, among other things:

> "There is no allegation or suggestion *that the Board is corrupt, or that it purposes or intends without regard to evidence to adhere to the unjust rates so as to destroy or impair the value of appellant's works.*"

In the case at bar, should not the water company have made an appeal to the city, making full disclosure of the facts originally demanded by the city and refused by the water company, before appealing to the courts? The city acted fairly and endeavored to do right and invited cooperation of the water company, which was refused.

And again:

> "In a case like this we do not feel bound to re-examine and weigh all the evidence, although we have done so, or to proceed according to our independent opinion as to what were proper rates. *It is enough if we cannot say that it was impossible for a fair-minded Board to come to the result which was reached.*"

And again, speaking of the value of property, it is said:

> *"If the supervisors were convinced by it (the evidence), we certainly could not say as a matter of law that they were wrong."*

And again:

> "The valuation of property for purposes of taxation may not be technically evidence in a court of law, yet it may be considered in coming to a decision whether the action of the supervisors was unfair, especially if, as testified, it was sworn to by the officers of the company."

And again:

> *"We do not sit as a general appellate board of revision for all rates and taxes in the United*

> *States. We stop with considering whether it clearly appears that the constitution of the United States has been infringed, together with such collateral questions as may be incidental to our jurisdiction over that one."*

In *Railroad Company vs. Minnesota*, 186 *U. S.*, 257, 46 *L. ed.*, 1151, this Court sustained the schedule of rates attacked. So in the Florida cases, 203 *United States*, 256, 270 and in the Mississippi Railroad Commission case, 203 *United States*, 496, 51 *L. ed.*, 289.

In *Railroad Company vs. State*, 25 *Florida*, 310 *(S. C.*, 3 *L. R. A.* 661,*)* it is held that rates will not be interfered with by courts if there is room for *difference of intelligent opinion as to their reasonableness*, and that they will, in such case, be left to *the test of actual experiment.* To the same effect, see *Railroad Company vs. Dey*, 38 *Fed. Rep.*, 657; *Tilley vs. Railroad Company*, 5 *Fed. Rep.*, 662.

So this Court has refused to sustain the action of inferior courts restraining rates as unreasonable and confiscatory where the investigation reaching that result has been made in the lower courts *along improper lines.*

Railroad Co. vs. Tompkins, 176 *U. S.*, 167*;* 44 *L. ed.*, 417.
Railroad Co. vs. Inter-State Commerce Com., 162 *U. S.*, 197; 40 *L. ed.*, 940.
Cotting vs. Goddard, 183 *U. S.*, 90*;* 46 *L. ed.*, 101.

As a fitting conclusion to the discussion of the law in this case, we quote from the opinion in the case of *Cotting vs. Goddard, supra,* the following:

> "Now in the light of these decisions and facts, it is insisted that the same rule as to judicial interference must apply in cases in which a public service is distinctly intended and rendered, and those in which without any intent of public service, the owners have placed their property in such a position that the public has an interest in its use. Obviously, there is a difference in the condition of these cases. In one the owner has intentionally devoted his property to the discharge of a public service; in the other, he has placed his property in such a position that willingly or unwillingly, the public has acquired an interest in its use. In the one he deliberately undertakes to do that which is a proper work for the state, in the other in pursuit of merely private gain he has placed his property in such a position that the public has become interested in its use. In the one it may be said that he voluntarily accepts all the conditions of public service which attach to like service performed by the state itself; in the other that he submits to only those necessary interferences and regulations which the public interests require. In the one he expresses his willingness to do the work of the state, aware that the state in the discharge of its public duties, is not guided solely by a question of profit. It may rightfully determine that the particular service is of such importance to the public that it may be conducted at a pecun-

iary loss, having in view a larger general interest. At any rate it does not perform its services with the single idea of profit. Its thought is the general public welfare. If, in such a case, an individual is willing to undertake the work of the state, may it not be urged that he, in a measure, subjects himself to the same rules of action, and that if the body which expresses the judgment of the state, believes that the particular services should be rendered without profit, he is not at liberty to complain. While we have said again and again that one *volunteering* to do such service cannot be compelled to expose his property to confiscation, that he cannot be compelled to submit its use to such rates as do not pay the expenses of the work, and therefore create a constantly increasing debt, which ultimately works its appropriation, still is there not force in the suggestion that as the state may do the work without profit, if he voluntarily undertakes to act for the state, he must submit to a like determination as *to the paramount interests of the public.*

Again, wherever a purely public use is contemplated, the state may, and generally does bestow upon the parties intending such use, *some of its governmental powers.* It grants the *right of eminent domain* by which property can be taken, and taken not at the price fixed by the owner, but at the market value. It thus enables him to exercise *the powers of the state,* and exercising those powers and doing the work of the state, is it wholly unfair to rule that he must submit to the same conditions which the state

> may place upon its own exercise of the same powers and the doing of the same work? It is unnecessary in this case to determine this question," etc.

Water companies, under the laws of Tennessee, exercise the power of eminent domain. It is only by permission of the city first obtained that a city water company can obtain a charter. It can no longer be questioned that the water supply of a city is a matter of such public interest that the state, through its proper instrumentalities, may provide for and assume control of it. Companies undertaking to supply a city with water, as much as common carriers undertaking to supply transportation, must consult first the public interests, and secondly, their own.

We do not, and it is not necessary for us, to contend for the extreme, though entirely just, view contained in the above quoted language. The city in the case at bar, undertook, through its public authorities, after giving notice to the water company and affording full hearing, and after making for itself all possible investigations, and asking all necessary information from the water company, to fix just, fair and reasonable rates. It acted with due consideration for the interests of the water company as well as for the interests of the public. If it has failed to fix entirely adequate rates, which we insist it has not done, the entire fault of its mistake, or error of judgment, lies at the door of the water company, which failed, upon the city's demand, to furnish necessary information about its business, which it was entirely competent and proper for the city to demand, and which it did demand. This we submit is not a case where the rates fixed by the city should be interfered with by the courts.

Another consideration which it seems ought to have some weight in determining cases of this character, should be noticed in this connection. In some of the cases it seems to be assumed that the "just compensation" to which public utility companies are entitled, as a "fair return," is synonymous with the "just compensation" to which the owner is entitled, where his property is condemned and *taken* for a public use, and that the mere *denial of reasonable profits* to a public utility company, is the same thing as the *taking* and appropriation of the *corpus* of the property for the public use. We submit that there are essential differences between the two cases, and while the same rules are, or may be applied in both cases, these rules do not apply to the same extent in the cases of *denial of "fair return"* as in cases of absolute *taking* and *appropriation* of property.

The owner's right to "just compensation" where his property is *taken and appropriated* for a public use, is absolute and well defined. "Just compensation," in that case, is full and fair market value of the property taken. The "just compensation" to which he is entitled is fixed by the uniform standard of fair market value, and the owner's right to this compensation is absolute and unconditional. It is susceptible of easy proof and ascertainment. The public takes and acquires title to the property. In cases where the property itself is not taken but merely subjected by the public utility company to the use of the public, while it remains the owner, and controls the use of the property, the claim for "just compensation" is of an entirely different nature. The right to "just compensation" in such case is not absolute and unconditional, but dependent upon many contingencies. In some special cases it has been, or may be denied, altogether. It is not susceptible of exact ascertainment by any fixed standard, even in cases where it is allowable. In its ascertainment, the rights of the public, as well as of the owner, are to be consulted, and the rights of the public to service at reasonable rates, is considered as paramount to the rights of the owner to earn dividends or profits. The courts consider, not merely the value of the property in such cases, but the nature and value of the services rendered. In such cases the public acquires no title to, nor interest in the property, and only a limited control over its use or the price of its use by the owner for the public benefit.

The same considerations distinguish appraisement cases for the purpose of sale, from reasonable rates cases. To illustrate our meaning, take the plant involved in this case: If a sale of the plant were proposed to a purchaser, the price should be fixed at the full value of the plant, including its franchise, right to use the streets, and all its properties, whether used for the public benefit or not, or whether actually bought by it or donated to it by the city, or by the inhabitants of the city. But, in fixing rates under the contract between the city and the water company, and ascertaining their reasonableness as between the inhabitants of the city and the water company, we submit that there are elements of value actually in the salable value of the plant, which ought to be excluded from its valuation for this purpose. For example, reasonable water rates as between the city and consumers who are inhabitants of the city, cannot justly be burdened with the value of the water company's franchise and use of the streets, which were granted and donated to the water company for the purpose of enabling it to furnish water cheaply under its contract. It appears in this case that many thousands of dollars entering into the salable value of this plant, consist of property that has never been used for the public benefit, or its use for that purpose utterly abandoned. Manifestly the value of this class of property, while properly entering into the salable value of the plant, can have no place in a valuation of the plant made for the purpose of fixing reasonable rates.

Again, under the water company's contract with the city, it had the option to impose or not to impose upon the water consumers the burden or expense of putting in connections, known as "services," between the mains of the company and the consumers premises. Under the election and rules and requirements of the water company, the water consumers of the city put in these services at their own expense, that expense aggregating more than $30,000.00. Whether these services are the property of the water company, or of the consumers who paid for them, is a controverted question in this case—the water company insisting that their cost or value shall enter into the valuation of the plant, upon which a "fair return" to the stockholders must be made, while the city maintains the contrary. But, regardless of this question, and of the question whether these services enter into the salable value of the plant, it seems clear that they should not enter into any valuation of the plant made for the purpose of fixing reasonable rates, except so far as it may be necessary to provide for their maintenance. It would be inequitable and unjust to burden the water consumers with the value of any element, even belonging to the plant, which they themselves have wholly contributed. The element of value contributed to the plant, commonly known as "going concern" affords another illustration, and especially so under the facts of this case. Undoubtedly "going concern" enters into the salable value of a plant, and should be considered in fixing price, either by agreement or appraisement for a sale. It is, however, in any case an intangible value, and a very uncertain and difficult matter for consideration. In this case, water consumers made their applications for water service at the office of the company. Little, if any expense was incurred by the company in securing patronage, but such as was incurred, was paid as an operating expense out of the income of the company, contributed by consumers. It was the voluntary and liberal patronage of the public that gave this plant any value on account of "going concern." The cost of "going concern" has been paid by the people, or contributed by public patronage. Is it just or equitable that rates of consumers should be further increased and burdened on account of their liberal patronage of the company? Moreover, the value of "going concern" depends upon, or largely upon the fact whether the company is able to command a profitable business. It may, without fault of the public, be unable to do this, and then its "going concern" is wholly without value. "Going concern" or its value depends upon the rates charged, without regard to their reasonableness. The higher the rates ordinarily, the more valuable is the "going concern." Thus consumers may be compelled to pay higher rates by reason of the fact that existing rates are and have been excessive. It would seem that "going concern," beyond its actual cost to the company, should not be capitalized for the purpose of increasing rates. If "going concern," or its value, is capitalized for the purpose of determining reasonableness of rates to be charged, without regard to the reasonableness of the rates that creates its value, then the city in its effort to regulate rates, is in the situation of the man who endeavors to lift himself over a fence by tugging at his boot-straps. The water company has only to increase its rates—make them more excessive, and thereby increase the value of "going concern" and thereby augment the value of its plant, to defeat proposed reduction of rates, however just and necessary.

C

Discussion of Questions Relating to Fair Return—Facts and Law.

To determine whether the rates prescribed by the City ordinance, and the income that has been, or probably will be derived thereunder, are of such character and amount that the Court must interfere to set them aside as confiscatory, it will be necessary to determine, if not with mathematical, at least with approximate certainty, the following questions:

(a-1) The earnings or income that have been, or probably were, or will be realized from the operation of the water company's plant under the ordinance:

(b-1) The amount of operating expenses that have been, or probably were, or will be necessary and legitimately incurred in the operation of the water company's plant under the ordinance:

(c-1) What amount or per cent, if anything, has been or will probably be necessarily and legitimately required or expended for the maintenance of the plant in such aspects as are not properly chargeable to construction account as permanent extensions, additions or replacements, or to operating expense account.

(d-1) The fair and reasonable actual value of the plant at the date of the passage of the city ordinance, to-wit, March 30th, 1901.

(e-1) Whether the rates fixed by the ordinance, and the earnings and income yielded thereunder, have been, or probably will be "clearly and beyond all doubt" so low, unreasonable and insufficient, as to indicate such "flagrant attack" upon the property of the water company, as constitutes its confiscation—looking in the settlement of this question, not merely to the mathematical results, but to all the circumstances shown in the evidence, the value of the services rendered as well as the value of the plant, and to the interests of the public, as well as to the interests of the water company; and whether, in view of the situation thus disclosed, the court will be compelled in order to prevent confiscation of the water company's property, to set aside as unconstitutional and invalid the ordinance passed by the city council in the exercise of its conceded legislative authority, exercised conservatively and deliberately after notice and full hearing and investigation. These are the chief issues to be determined, but other questions may be incidentally involved in the determination of this case. These questions should be considered by the court as of the same date, to-wit, March 30th, 1901, and from the same point of view that the city council had to consider them in passing the ordinance.

The water company has persistently refused to put the city's rates to the test of actual experiment—a test that would have conclusively settled all questions as to income and operating expenses thereunder. This court is therefore under the necessity, as was the city council, to make a "strike in the dark" and to settle these matters by speculation and probabilities, to some extent at least, based upon the uncertain and conflicting evidence and opinions of expert witnesses.

Inasmuch as the *bill avers,* and the Special Master seems to have *understood,* as indicated by his report, that the burden of proof is not upon the water company, but upon the city in settling these matters, it will not be improper to repeat in this connection that the burden of proof upon all material questions and issues in the case, undoubtedly rests, under the decisions of this court, upon the water company.

This burden is the heaviest that rests upon any litigant of a civil case. The court indulges, for obvious reasons, the strongest presumption in favor of the validity of legislative action, and will not lightly interfere to annul or set aside such action as unconstitutional. It is held in "reasonable rates" cases that "such a question is always an embarassing one for a judicial tribunal, because it is primarily for the determination of the legislature, or some public agency designated by it" and that the courts will take care "always not to entrench upon the authority belonging to a different department, nor to disregard the statute, unless it be unmistakably repugnant to the fundamental law."

San Diego &c. Company vs. National City, supra.

It is further held that the courts will not, and should not review the action of a legislative body, as upon an appeal. "It is enough, if we cannot say that it was *impossible* for a fair-minded Board to come to the result which was reached."

San Diego &c. Co. vs. Jasper, supra.

> "But the courts cannot, after the Board has fully and fairly investigated and acted, by fixing what it believes to be reasonable rates, step in and say its action shall be set aside and nullified, because the courts, upon a similar investigation, have come to a different conclusion as to the reasonableness of the rates fixed. There must be actual fraud in the fixing of the rates, or they must be so palpably or grossly unreasonable and unjust, as to amount to the same thing."

San Diego &c. Co. vs. National City, supra.
San Diego &c. Co. vs. Jasper, supra.

It will be helpful, before entering upon the discussion of the specific errors assigned on this branch of the case, to state the result that must be reached, assuming the correctness of the Special Master's findings as to value of plant, amount of income, and operating expenses, and of the per cents of reduction of income by the city ordinance, and the per cents for maintenance, depreciation, and fair return.

The Special Master treated this case as one to be settled my mere mathematical calculations of amounts and per cents. The findings as to these are as follows, to-wit:

Value of plant, March 30th, 1901, being the date of the passage of the city ordinance	$608,427.95
Entire income of plant realized under the water company's rates, for the fiscal year beginning March 31st, 1900, and ending March 31st, 1901—the year *preceding* the passage of the ordinance	$ 88,481.39
Estimate of income that would have been realized during the fiscal year 1900-1901, under the rates prescribed by the city ordinance	$ 70,857.75
Operating expenses for the fiscal year 1900-1901 which accrued under the water company's rates without any reduction for the difference in rates	$ 34,750.91

The per cents that he fixes are as follows, to-wit:

For reduction of water company's rates by the city ordinance rates ....22.88 per cent

For maintenance of plant, commonly called "depreciation fund" ....2 per cent of value of plant

For "fair return" ....6 per cent on value of plant.

These are likewise the figures insisted upon and proved by the officers of the water company.

The Special Master refused to report, or in any way consider the income and operating expenses of the plant for the fiscal year 1901-1902, the first year of operation after the date of the city ordinance, although the same had been fully proved. He does not report whether operation under the city ordinance would have had the effect to reduce to any extent, operating expenses.

Report, Record 165-187.
E. Wheeler, 712-717.

Taking, but not conceding, that these findings of the Special Master as to amounts and per cents are correct, and that it was proper to test the validity of this ordinance by the amounts of income and operating expenses that accrued in the operation of this plant under the water company's rates for the year *preceding the passage of the ordinance,* ignoring utterly the amount of income and operating expenses that accrued in the *year next succeeding the passage of the ordinance,* the results that must follow can be ascertained by a calculation, so simple and easy that a school-boy, who has learned to cipher to the "Rule of Three," could ascertain them without difficulty. These results are as follows, to-wit:

Income of entire plant at the water company's rates, for the fiscal year 1900-1901—the year *preceding the passage of the ordinance*	$ 88,481.39
Estimated income under city ordinance rates for the same year	$ 70,857.75
Operating expenses for the same year under the water company's rates—no reduction being made on account of the reduction in income by the city ordinance	$ 34,750.91
Net balance, after deducting operating ex-	

penses from the amount *estimated as being realized under the city ordinance,* leaves for allowances for maintenance or depreciation, fixed by the Special Master at 2 per cent, and for fair return, fixed by the Special Master at 6 per cent of the value of the plant ....$ 36,106.84

This net sum of $36,106.84 estimated as resulting from the operation of this plant, during the year *preceding the passage of the ordinance,* at city ordinance rates, will pay upon the several valuations of the plant *as of the end of that year, 30th of March* 1901, the following per cents, to-wit:

On the Special Master's estimate of value—
to-wit: $608,427.95 ....5.948 per cent.

On the city's estimate of the value of the
plant, made at the date of the passage
of the ordinance, to-wit: $500,000.00..7.158 per cent.

On the replacement estimate of the city's
experts, Brown and Nixon, to-wit:
$400,000.00 ....9.027 per cent.

On the replacement estimate of the water
company's experts, Wingfield & Ludlow, to-wit: $618,000.00 ....5.841 per cent.

Can it be said, that even upon the Special Master's figures and findings, waiving all question as to their correctness, and as to whether the ordinance should be tested by the income and operating expenses of the plant during the year *preceding,* or the year *succeeding its* *passage,* the City Council prescribed rates so "palpably and grossly unreasonable and unjust" as to indicate fraud or bad faith on their part; or that it prescribed rates of a character that would operate to confiscate the property of this company? Can it not be justly said, upon these findings and figures, as was said by this court in one of the cases cited, that "there is nothing in the nature of confiscation about it?"

Stanislaus County vs. San Joaquin Co., supra

In fact, do not these figures and findings show that the City Council made a surprisingly conservative and just estimate, not only of the value of this company's plant, but of the rates that would yield it a fair and reasonable income, under the circumstances, especially in view of the action of the water company, in refusing to afford that body any assistance whatever, in arriving at the value of its plant, the amount of its income, or operating expenses or other essential facts? There is nothing in these facts to indicate hasty, fradulent or prejudiced action on the part of the City Council—nothing to indicate fraud or bad faith.

In the matter of income the City Council estimated it, when passing the ordinance, at $75,000 to $80,000. The Special Master reports that the water company's receipts from water collections alone for the year *preceding* the passage of the ordinance was $83,481.39, and this was not the full amount. The bill admits $88,649.67, and that falls short of the entire amount.

Bill Record 12.
A. S. Birdsong, 1079-80.

The simple and obvious result, above indicated, that inevitably follows from the Special Master's findings of the material facts in the case, was missed by him in consequence of his adoption of certain methods suggested and used by the president and treasurer of the water company and followed by him in dividing the *invested value* of the plant and the amounts of its income and operating expenses between "city proper" and "outside city."

These methods afford convincing evidence of the ability and ingenuity of their inventors and discoverers as water works experts, and it is not at all surprising that the Special Master, busy as he must have been, settling with the aid of the water company's experts, the law of the case, framing new orders of reference from time to time and revising his rulings on evidence, etc., should have committed the error of following the methods suggested by such eminent authority.

It may be doubted whether any division of the value, income and operating expenses of this company's plant or of its income and operating expenses between "city proper" and "outside city" should have been made unless it should have been done, as was done in the Chattanooga case, for the purpose of placing a heavier burden of expense upon the more expensive service rendered to water consumers outside the city than upon "city proper" consumers. They should probably have been considered as an entirety as the most equitable and reasonable disposition of these matters. The water company had never made or kept any such separation until one was made for the purposes of this case. Such separation is in fact an impracticable thing, involving, to make it now, an amount of detail work that makes verification of the water company's figures impracticable, if not impossible. Having commingled these practically inseparable matters, the water company is in the situation of one who commingles his goods with those of another. The separation of income is not proved by the persons who actually did the work, but by the statement of the treasurer who testified without personal knowledge and upon the information of others. And his statements are supported, in some measure, by like statements of the general superintendent of the company, the value of whose testimony may be determined by the fact that he verified the bill filed in this case by his oath. It may be, though it is not conceded, that the city cannot regulate rates of consumers to whom water is delivered "outside city." But this fact cannot be availed of for the purpose of increasing burdens upon water consumers in the "city proper" for the benefit and advantage of either the water company or its outside consumers. It would seem under the special circumstances of this case that the entire rates of this company, whether for water furnished "outside city" or in "city proper" are subject to regulation by the city. Before obtaining its charter the water company was compelled to obtain the consent of the city, and it did so.

Acts 1877, *Chapter* 104, *Record* 104-5.

Consent to use the streets was likewise required and obtained.

Acts 1877, *Chapter* 104.

Its charter upon its face contemplates furnishing water "to the inhabitants of said city and the environs thereof."

Charter, Record 103.

With the exception of one stand-pipe and a portion of the distributing pipes the entire plant of this company is situated within the "city proper" and has at all times been used to supply water to all consumers whether within the "city proper" or "outside city." Its reservoirs, pumps and pumping station, filters, engines, etc. are inside the "city proper." The city donated to the company the use of its streets for the laying of its pipes and other purposes to supply consumers both within the "city proper" and "outside city."

Under these circumstances the water company should not be permitted to make use of the fact, that it furnishes water to consumers "outside city," to the prejudice of consumers within the "city proper." If any division of its plant, income and operating expenses should, under these circumstances, be made, which we do not concede, it must be such division as is fair and equitable to consumers within the "city proper." Such division cannot be made a pretext to maintain unjust rates in the "city proper." The subtle and ingenious methods by which the Special Master, following the lead and suggestion of the water company's officials and the results thereby reached will now be analyzed. The value of the plant as of 30th of March, 1901, was fixed by the Special Master as an entirety at $608,427.95. In dividing its value by the per cents fixed and ascertained in William Wheeler's "invested value" estimate, the Special Master assigns of this value 93.83 per cent.—$570,887.95 to "city proper," and 6.17 per cent.—$37,540.00 to "outside city." It might be supposed that this division of the value of the plant was made for the purpose and as a basis for the division of income and operating expenses between "city proper" and "outside city;" but as will appear these per cents were not used for either of these purposes. The division between "city proper" and "outside city" of income and operating expenses was made by other but not uniform methods. The purpose for which this division of the value of the plant was made will be disclosed in the sequel. The Special Master fixed the entire income of the plant at the water company's rates, for the fiscal year 1900-1901—the year *preceding* the date of the passage of the ordinance, at $88,481.39. It would seem that a fair and equitable basis for the division of this income between "city proper" and "outside city" would have been effected by the use of the same per cents. that were used in the division of the value of the plant. However, that was not done. Another method was adopted. If the per cents. used in division of value of plant had been used in the division of its income "city proper" would have received 93.83 per cent—$83,022.09 and "outside city" would have received 6.17 per cent.—$5,459.30. But as the division was actually made by the officials of the water company and accepted by the Special Master the "city proper" gets $78,148.31—88.322 per cent, and "outside city" gets $10,333.08—11.678 per cent.

E. Wheeler, Record 713-741.

It is obvious that this division of income was grossly unjust to "city proper," carrying out of "city proper" and conferring upon "outside city" $5,073.78 of income in excess of its due proportion according to value. This was done upon the theory that an actual calculation had been made of the receipts on water collections from "outside city" and that these amounted to $10,333.08. This sum, thus illegally carried out, bears none of the burdens laid upon "city proper" rates.

The treasurer of the water company who presented the statement of receipts from consumers "outside city" admits that he did not personally make it up and that he does not know who did that work. He admits that he knows nothing of its correctness and says it would take months of detailed work to get its items together or to verify it.

E. Wheeler, Record 743-4.

The general manager who made oath to the bill in this case, gives like testimony upon this point. The persons who actually made up this statement are not put upon the stand. The Special Master, however, accepted it as the basis of his report, intimating that the burden was upon the city to show its incorrectness. It will be found a little difficult to believe that the scattered consumers in "outside city" actually contributed such a disproportionate amount to the revenues of this company unless, as sometimes happens, the consumers "outside city" were manufacturing plants located just outside the city limits to avoid city taxes, and in that case almost the entire expenses of delivering the water is incurred and the work done within the "city proper." Is this method of dividing income between "city proper" and "outside city" equitable or fair?

The entire operating expenses of the plant, at the water company's rates, for the same year was fixed by the Special Master at $34,750.91. He does not suggest, and possibly there may not have been, any considerable diminution of operating expenses on account of the reduction in rates. It would seem fair and equitable, certainly so as to outside consumers, that operating expenses should have been divided between "city proper" and "outside city" either upon the basis of per cent adopted for the division of the value of the plant or of the division of income. This, however, was not done. It must be conceded that the able and experienced officials and experts of the water company have shown no disposition to deprive the "city proper" of its full and liberal share of operating expenses.

Departing from the per cent. method by which division of the plant between "city proper" and "outside city" was made, and also departing from the method of ascertaining by actual division of amount received in "city proper" and "outside city" as was done with reference to income, the treasurer of the water company found or invented a new method for the division of operating expenses. To have adopted a per cent might have invited invidious comparisons. The separation of operating expenses by the method pursued as to income, was impracticable as it was with reference to income. But it was more objectionable, no doubt, to the treasurer because it would have carried "outside city" too large an amount of operating expenses. His object when dealing with income was to give the largest possible sum to "outside city;" his object in dealing with operating expenses was just the opposite, to-wit: to relieve "outside city" of as large a sum as possible and lay it upon the "city proper." The method actually adopted, differing from the method pursued in any other instance, though somewhat arbitrary, was not on that account less effective. In the division of operating expenses he assumed and exercised as the rule of division and the only rule applied, his own free discretion. He reasoned that as the plant had already been created and had to be run, in order to supply consumers within the "city proper," and that consumers "outside city" could, in view of this situation, be supplied at small additional cost, that therefore "outside city" should bear only such additional cost as might be entailed in supplying them with water, leaving upon consumers in the "city proper" the burden of maintaining the plant that was used for this joint purpose. It was not overlooked, of course, that this method would result in giving "outside city" for the benefit of the water company or for the benefit of outside consumers a very large per centage of profit at the expense and to the prejudice of water consumers in the "city proper." The Special Master adopted the views of the treasurer and applied them in his disposition or division of operating expenses. If the same per cent. or proportion of operating expenses had been assigned to "outside city" as had been of income, the amounts would have been "city proper" 88.322 per cent—$30,692.69; "outside city" 11.678 per cent—$4,058.21. But the Special Master pursuing the treasurer's method assigned to "city proper" $32,800.98, and to "outside city" the remainder of the $34,750.91 allowed by him as operating expenses of this year, making $1,950.93.

The Special Master finds in accordance with the treasurer's estimate that 5.4 per cent of operating expenses should be assigned to "outside city" and the remainder to "city proper," and refers to the table put in evidence by the treasurer as illustrating the manner in which this result is reached. We quote from the treasurer's testimony the following on this point:

"Q. Please say whether or not you have distributed the expenses under the different headings under which the accounts are ordinarily kept, and if so state the expenses for the year from April 1st, 1900 to March 31st. 1901 under said several items first for the entire plant and then for the city proper?

A. The several sub-divisions of operating expenses are the ordinary sub-divisions as kept upon our books and the sum total of such expenses, to-wit:

$35,775.89 is made up of the following items:

	ENTIRE PLANT	CITY PROPER
Alum	$ 1,310.00	$ 1,157.68
Expense	2,976.16	2,916.64
Fuel	5,431.15	4,796.79
Insurance	564.43	547.17
Filter Station	2,270.28	2,247.58
Pump Station	3,948.19	3,908.71
Repairs	3,287.82	3,074.11
Salaries	7,805.06	7,024.55
Taxes	8,182.02	8,161.73
Totals	35,775.89	$33,834.96"

E. Wheeler, Record 714-15.

He explains that he assigns 99 per cent. to "city proper" and 1 per cent. to "outside city" under the head of filter station, being "ample to cover cost of *oil waste and* *reduced* (increased) *period of artificial lighting incident to reduced* (increased) *pumpage and filtration."* He applies the same rule to pumping station for the same reason. He explains that he charges of expense 98 per cent to "city proper" and 2 per cent. to "outside city" because not over two per cent. would be saved if outside business where *cut off* and that the *extra expense of doing outside business was nothing material beyond per centage of stationery and printed bills incident to the number of services outside city limits.* The entire taxes, except about $20.00 on real estate outside city which had been abandoned by the water company, were assigned to "city proper." These serve to illustrate the treasurer's methods. While "outside city" contributes one per cent only to the large items for maintaining and operating filter and pumping stations, and nothing to taxes, it takes under these divisions 11.7 per cent. of the income amounting to $10,333.08. It needs no argument to show that such division and distribution of income and operating expenses is grossly unjust. Having thus divided income and operating expenses, withholding from the "city proper" its due proportion of income and onerating it with an undue proportion of expenses, the Special Master reached the conclusion that there would remain to the "city proper" after disposing of income and operating expenses according to the foregoing divisions, a net income of $30,532.42. At this point the Special Master found his only use for the per cents and amounts by which he divided the plant between "city proper" and outside city." Out of this net fund the city was required to satisfy the demands of depreciation fund and of fair return upon $570,887.95 or the whole value of the plant except the $37,540.00 assigned under the division to "outside city." For no other purpose in his report did he use the per cent. or amounts by which the plant was divided. The result was that the net income thus assigned to the city yielded only 5.35 per cent on the value of plant assigned to "city proper" for depreciation and fair return, while under the method of treating the entire plant and its value, income and operating expenses as a unit, there would be a sufficient net income to pay 5.948 per cent upon the value of the whole plant. The Court erroneously assumes that counsel agreed that the net income, even as found by the Special Master, would pay only $3.35, unless he thereby means to say this per cent is left after deducting 2 per cent. for depreciation. Another result of the Special Master's methods was that the water company while receiving only 5.35 per cent. for depreciation fund and fair return on the valuation of the plant, assigned to "city proper" it received about 23 per cent. on the value of the plant assigned to "outside city."

We submit that the fairer, simpler and more equitable treatment of the matter was to consider the plant, its income and operating expenses as an entirety. That certainly would be a basis of which outside consumers could not complain, as the delivery of water to them must of necessity be somewhat more expensive as a rule, than like delivery to consumers within the "city proper."

Nesbit Wingfield, 2052-2053.

There is nothing equitable or just in permitting the water company to receive 23 per cent on the value of its plant "outside city" and at the same time to demand 8 per cent. to satisfy depreciation fund and fair return on value of its property in "city proper," especially as the water company owes its charter and existence to permission granted by the city without compensation and to the use of the streets of the city which were donated to it. The statement may be challenged that the water company receives nearly 23 per cent. on the value of its property assigned to "outside city" but the assertion can be verified by attention to these figures to-wit:

Value of plant "outside city"........	$37,540.00
Income "outside city"..............	10,333.08
Operating expenses "outside city"...	1,950.93
Net revenue after deducting operating expenses "outside city"..............	8,382.15

which pays precisely 22.35 per cent on the value of the plant "outside city."

In the Chattanooga case where division between "city proper" and "outside city" was made, "outside city" was assigned 15 per cent of income and burdened with 20 per cent of operating expenses. There is an equity in favor of "city proper" consumers as against "outside city" consumers.

Nesbit Wingfield 2052-3.

The position and claim of the water company in this case is well illustrated by an anecdote. Two Tennessee lawyers collected a joint fee, by taking, in payment, a horse. One of them kept and fed the horse several months before it was sold and demanded payment therefor out of the proceeds of the sale before division. He was gravely informed by the other lawyer that *his end* of the horse had not eaten anything.

In the discussion thus far we have assumed the correctness of the Special Master's findings of value of plant and of amounts of income and of operating expenses for the fiscal year 1900-1901, the only year for which he reports income and operating expenses. It is not our purpose to question any finding of fact as unsupported by evidence unless the result has been reached by the application of erroneous principles of law or is contrary to the solemn admissions of the water company or its higher officials found in the pleadings or the evidence. The court will not be asked to settle mere conflicts of evidence upon any point. It is admitted that the proper date for fixing value of the plant is the date of the passage of the ordinance, to-wit, 30th of March, 1901. The value of the plant at that date was the highest that it had ever attained and was the value contemplated by the city council in the passage of the ordinance and in its investigation looking to its passage. Value of plant at an earlier date must have been less and therefore unjust to the water company. Value of plant at a later date could not be known or anticipated by the city council, and there were no data by which it could be fixed. The water company could change value of plant at its will by extensions and additions. These the city council was under no obligation to anticipate. Additions and extensions judiciously made are supposed after their completion to take care of themselves by earning a sufficient revenue. During the period of construction they are provided for by an interest allowance on the cost of construction in the construction account.

The objection to the Master's report is not, that he fixed an improper date, but that he reported not the value of the existing plant but replacement cost of an entirely new plant, and that he applied this replacement cost not to the income and operating expenses of the year *succeeding* the passage of the ordinance, but to the income and operating expenses of the year *preceding* its passage—a very important matter, as about $79,000.00 of construction was done during the preceding year that yielded no revenue, or little revenue, during that year, and the income of the plant for the succeeding year was something over $8,000.00 in excess of the income of the preceding year.

There is and must be an essential difference between the value of the existing plant composed of material, machinery etc. which had long been in use and much deteriorated, and the replacement cost of an entirely new plant of the same character composed of new and fresh material, although Mr. Wingfield, the water company's chief expert, says there is no difference between the value of the old plant and the replacement cost of the new, and in this view the Special Master seems to have concurred.

That the Master's report is not of the *value* of the old plant, but of *replacement cost of a new plant*, distinctly appears. He follows closely, if not literally, the items and in most instances the prices of Mr. Wingfield's statement of replacement cost, as will appear by comparison of the two statements. He embraces such items as "cleaning door and frame" and "contingent allowance for bad bottom," a mere hole or the contingency of a hole in the bottom of the reservoir, and both he and Wingfield figure into their statements as the probable cost or value of this hole, or contingency of a hole, the sum of $2,000.00. These items serve to indicate the character of the Special Master's statement. There are, however, others of the same kind.

Report, Record 170-175.
Nesbit Wingfield, 1954-1961.

As a result of his failure to distinguish between *value* of the *existing plant* and *replacement cost* of an entirely *new plant* of a similar character, the Special Master figures into his statement, mis-named valuation of $608,427.95, several items, which though entirely proper in an estimate of replacement cost at the date of the passage of the ordinance, are yet not entitled to consideration in fixing the actual value of the existing plant for the purpose of determining the reasonableness of rates to be charged to the water company's consumers under the contract between it and the city. Some of the larger of these items will be noticed. There are two items aggregating over $12,000.00 for the restoration of brick paving in laying pipe and putting in "service connections."

At the time the existing plant was constructed and its pipe and service connections put in there was no brick paving or no substantial amount of brick paving in the city, and no expense or very little expense was actually incurred or paid by the company in laying pipe or putting in service connections under brick pavement. To restore the plant or rebuild it on the 30th of March, 1901, a considerable amount of brick pavement would have been encountered and considerable expense on that account would have been incurred in the replacement of the plant. The pipe laid under brick pavement would cost more, but would be little, if any, more valuable than when laid under macadam or soil. In fact the cost of maintenance would be enhanced. It is conceded that in the estimate of replacement cost this item was properly included, but as no such thing, at least to any great extent, entered into the construction or cost of the existing plant, it should not enter into the value of this plant or be accepted as evidence to the extent of this item of the value of the plant for the purpose of testing the reasonableness of rates. Replacement cost is but evidence tending to show value of an existing plant. It is not itself value. Its weight as evidence depends upon circumstances, and where the replacement cost embraces items not in the construction cost of the original plant, though proper in the replacement cost, its weight as evidence of value is to that extent impeached. Any other view of this item would compel the city to pay a penalty to the water company for the improvement of its streets in advance of the city's inflicting any damage thereby upon the water company.

Another item of like character, aggregating $38,724, estimated cost of putting in service connections between the mains of the water company and the property of consumers, though properly placed in the estimate of replacement cost, is fictitious when placed in the value of the existing plant to the extent of over $31,000.00. There is no controversy over the fact that all of the cost of service connections except about $8,574.00 was borne and paid by the water consumers themselves. The water company put in the service connections and was paid therefor to the extent above indicated by the water consumers.

Waiving as immaterial the question whether these service connections paid for by the water consumers become a part of the water company's plant and its property, we submit that this donation by the water consumers of $31,000.00 cannot be capitalized by the water company and be made the basis of value of its plant upon which it can demand of the water consumers who made the donation a fair return. In his estimate of invested value of this plant Mr. William Wheeler, with whom Mr. Kimball concurred, excluded from that estimate the cost of service connections put in by consumers.

Wm. Wheeler, 332, 493-498.

They fixed as the amount that the water company was entitled to claim for service connections put in at its own cost the sum of $8,574.00

Mr. Wingfield in his estimate of replacement cost of plant in the Chattanooga case excluded service connections entirely as having been put in at the cost of consumers and says the same should be done in this case. He represented the water company in that case as he does in this.

Nesbitt Wingfield, 1994.

It would seem questionable even whether the water company having put in service connections for a part of its consumers could justly require other consumers who had put in their service connections at their own cost, to contribute fair return upon the cost actually incurred by the water company in putting in service connections for favored consumers. It constitutes a palpable discrimination and operates unjustly and to the prejudice of consumers who have been compelled to pay the cost of their own service connections.

Under the rules and regulations of this company, a copy of which is made exhibit to the bill, consumers are required to pay $10.00 for each service connection put in and the expense of keeping the same in repair.

Record 56-59.

Another item, to-wit, "going concern" estimated by the master at $60,000.00 and entering into his statement of value or replacement cost of plant is of similar character. Undoubtedly going concern constitutes an element of salable value. The question here is, can going concern under the circumstances of this case, be capitalized and enter into the value of the plant as a basis for determining the reasonableness of rates, and if so to what extent. If going concern can be considered at all in a case of this character, it must be the "going concern" of the plant while receiving, not excessive, but reasonable rates. To capitalize the "going concern" of a plant that has been and still is exacting excessive rates, thus making the value of going concern greater, would be manifestly unjust. That would enable the company to take the benefit of its own wrong and to make heavier the present burdens of water consumers by reason of the fact that they are and have been in the past paying excessive rates.

The actual cost to the water company of creating "going concern" would seem to be a just and reasonable basis for fixing the amount at which it should enter into an estimate of value of plant upon which to determine reasonableness of rates. In this case "going concern" has cost the water company little or nothing; having a monopoly in furnishing water to the inhabitants of the city it has never been under the necessity of resorting to advertisements or agents to secure patronage, and having under the decisions of this state the effective means of collection by cutting off water when payment is not made, it has been at no expense in securing business or making collections. But whatever expense it has incurred or paid has been returned to the water company in the annual allowance of operating expense which has already been contributed by the people. The basis of "going concern" in this case is the voluntary patronage of the city under its contract and of the people. From the first, the city contributed toward "going concern" in hydrant rental $3,750.00 per annum, which has been increased until now it amounts to $11,455.00 per annum.

Record 26, 713.

Let us suppose as an illustration that the city had contracted originally and had at all times maintained such income to this company as would afford a fair return, would the water company in such a case be entitled as against the city and its inhabitants to have its "going concern" capitalized and enter into the value of its plant for the purpose of determining the reasonableness of its rates? But if the value of going concern is to be considered and there is to be a division of this plant and its income and operating expenses between "city proper" and "outside city," then should not the value of "going concern" be assigned almost wholly to "outside city" where the water company received nearly 23 per cent upon the estimated value of its plant. "Going concern," or its value, is dependent very largely upon the rates that the company actually charges, whether reasonable or unreasonable, and upon the amount that the company earns or is capable of earning at such rates.

Mr. Wm. Wheeler makes two efforts to fix value of "going concern." The first estimate is an arbitrary per cent based upon his "invested value" statement and based upon the estimated cost of every thing that had ever gone into the plant—including the $175,000.00 that had gone out of the plant and many gross over estimates. This is an entirely arbitrary per cent. His other estimate is even more arbitrary, being made without reference to value of plant, or its operating expenses. Both estimates omit any consideration of the fact that the city under its contract as to hydrant rental, and the people by their patronage contribute to "going concern."

Wm. Wheeler, 329, 398-9, 443, 534, 2137-2142, 2174-2178.

But if "going concern" is what he defines it to be, the claim has been paid and satisfied by the city and the public.

W. M. Nixon 1388-9, 1814-15, 1827-8, 1831-1836.

Another item entering into the Master's estimate of value which is wholly fictitious is the allowance of $2,000.00 for a hole or a contingency of a hole in the reservoir. The Special Master by reason of his misconception of the law that the burden of proof is not upon the city but upon the water company, has fallen into very serious errors in making up his statement of value or replacement cost, which he seems to have regarded as synonomous. He admits on the face of his report, in several instances, that the prices at which he places certain items were high but he nevertheless allowed them. For example, he places cast iron pipe, the largest item of cost entering into the plant, at $23.50 per ton, admitting that the evidence showed, as it did, that the water company at that time was paying for pipe in small purchases only $22.60 per ton, and the evidence in the record showed incontestably that the fair average price of pipe for several years prior to the 30th of March, 1901, did not exceed from $20.00 to $22.00 per ton and that its price at that date did not exceed $18.00 to $20.00 per ton.

J. S. Brown, 1936, 1939, 1945, 2058.
W. M. Nixon, 1341-1344, 1407-1412, 1432, 1436.
Nesbitt Wingfield 2062 *(chart.)*
J. L. Ludlow, 952-53.

Another item of "excavation and embankment" for reservoir he estimates at 13,000 yards at 40 cents per yard, $5,200.00, when the contractor who did the work shows that there were only 10,000 yards for which he was paid at the rate of 12 1-2 cents per yard, and in this he is confirmed by the books of the water company.

Lawson Irwin, 1210-1214.
W. M. Nixon, 1319, 1320, 1418, 1482, 1488, 1820.

And several contractors and mechanics living at Knoxville and familiar with prices, and who had measured the reservoir, prove that the yardage at 10,000 was correct and the price of 12 1-2 cents reasonable. The Special Master followed Wingfield and Ludlow in this matter, who were not familiar with prices at Knoxville and did not make a very thorough examination of the plant before testifying. Mr. Ludlow put in two statements, at different dates, in regard to this reservoir, estimating in one of them 16,000 yards at 50 cents and in the other 13,000 yards at 40 cents, showing the loose character of his estimates.

The concrete lining for reservoir which did not exist in the original construction at all is estimated at an equally, if not more excessive, price.

The intake tower is estimated by the Special Master at $10,723.25. This work was constructed by the company and an itemized statement of its costs on the books of the company shows that it cost $8,855.33. To this amount the Special Master adds $2,185.75 as the contractor's profits, although the work was done direct by the company under the supervision of its salaried officers and paid employees.

Report, Record 172, 176, 177.

If this item of contractor's profits is added to actual cost of the work done by the company through its salaried officers and paid employees, should not the same amount be added to income account of the company?

The excess of the Special Master's allowance for stand-pipes is even more striking. He admits that the price fixed by him seems high, but nevertheless adopted it. His estimate for laying pipe was clearly excessive and he admits that his figures were full and high, but he nevertheless adopted them.

For engineering he allows $23,820.97. The evidence shows that not exceeding one-half this amount was actually paid for engineering in the construction and extensions of this plant. Much of the engineering was charged to operation and paid as operating expenses and in this way engineering is made to play a part both in swelling the construction account or cost and in swelling the operating expense account. This method makes engineering perform a double duty for the water company.

The item of $10,000.00 for promotion and organization is a very questionable one. There was considerable proof as to defects in this plant. The Special Master refused to consider such evidence in making his estimate of the value of replacement cost of the plant. We submit that the Court could not say, upon this state of the record, if it were trying the case as upon appeal that the estimate of the value of this plant by the city council at $500,000.00 was too low. Certainly there is nothing in this evidence of value of plant calculated to raise any presumption that the city council acted fraudulently or in bad faith in fixing the value of the plant at $500,000.00 for the purpose of regulating rates. But even if the Court should find that the city council had made a mistake of judgment in this respect, that would not afford any reason for setting aside this ordinance, and such mistake would be entirely excusable, and one of which the water company would not be permitted to complain, by reason of the fact that it refused even an estimate or opinion as to the value of its plant, either in its original bill or in answer to the demand of the city for information.

The Special Master reported as income of the plant for the fiscal year 1900-1901, the year *preceding* the passage of the ordinance, the sum of $88,481.39. The bill admits the sum of $88,649.41. He refused for reasons hereinafter examined to report or consider for any purpose the income of the fiscal year 1901-1902, the year immediately succeeding the passage of the ordinance. What he does report is not the *earnings,* but the net *water collections* made within the year 1900-1901. He omits from the amount that part of the earnings for that year represented by the excess of uncollected water accounts carried out at the end of the year over the amount brought in at the beginning of the year amounting to $208.79. The amount of this excess carried out at the end of the year 1901-1902 is $1065.93. These amounts were not as the Master supposes, old and uncollectible accounts, but monthly or quarterly water accounts falling due on the 1st of April, 1901.

E. Wheeler 713-714.
W. M. Nixon 1385-1387, 1811-1812.
F. C. Kimball 906, 2216, 2229-2232.

There were undoubtedly other revenues for both of said years that were not disclosed or included. Mr. Nixon, the city's expert, found on the books of the water company two accounts carried as income accounts, to-wit, "taps" and "supplies." On the taps account there were balances showing profits for the year 1900-1901, $878.45, and for the year 1901-1902, $2,395.00; and on the supplies account there were like balances for the year 1900-1901 of $1,503.91, and for year 1901-1902, $2,646.89.

W. M. Nixon 1320-1321, 1834-1835, 1810-1812.

No satisfactory explanation of these "taps" and "supplies" accounts was made by the officials of the water company. Mr. Kimball undertakes to make an explanation, but as usual without examination of the books. His statements are general and indefinite. That there were revenues other than water collections for both of said years that were not disclosed by the officials of the water company is apparent from their statements. William Wheeler, president of the company, being interrogated in regard to this matter stated "There may be some receipts repaying the company for disbursements on account of installation of service or meters or for rents thereon which are intended to support such investment, but such information will have to be obtained through the treasurer."

Record 557.

As disbursements for the purpose stated are carried into the operating expense account, the receipts referred to in Mr. Wheeler's answer ought to be carried into income account.

Elbert Wheeler, the treasurer of this company, replying to the questions whether the average expense or income per meter or "service" could be ascertained by dividing income or operating expenses by the whole number of meters and services, replied: "It may be, but this does not give a fair average of domestic services, because the city's hydrant rental is included in the aggregate income, and there are very *large items of income* which should not affect any statement of the average income derived from ordinary domestic or manufacturing services."

Record 745.

What are the other large items of income referred to in the above answer of the treasurer?

F. C. Kimball admits that the income reported was not the amount of earnings but "the actual *water collections.*"

Record 906.

Mr. Kimball further states in reply to a question, as to the sources of the water company's revenue, as follows:

"The revenue of the company, so far as it passes through my hands, is from water rents, from occasional sales of material on hand, from the charges for service pipes put in, in one case, for the rent of land owned by the company, and such other moneys from sundry sources, the nature of which in addition to what I have already stated I cannot now recall, that may be paid into the local office."

He was then interrogated and answered as follows:

"Q. Well, you qualified your statement by saying, 'so far as it passes through my hands.' Are there any revenues of the company that do not pass through your hands?

A. I cannot state what revenues the company have that pass directly to the treasurer, but I am satisfied that no revenues from water or the local operation of the plant come to him through me.

Q. Well, have you a knowledge of any other revenues that go to the treasurer?

A. If by revenues you mean money in any form whatever obtained, he undoubtedly does have revenues of which I am not conversant, but nothing that I know of in shape of direct earnings.

Q. Well, is there anything in the way of indirect earnings that you know of?

A. Nothing unless—nothing that I know of.

Q. Well, what do you mean in this last answer?

A. Nothing that I know of is my answer to that question.

Q. What did you have in mind when you said "*unless?*"

A. *I cannot analyze my mind to that extent at present, General Pickle.*

Q. Haven't you some knowledge or information that there are other matters that go into the hands of the treasurer that do not pass through your hands, and didn't you have such a source of revenue in mind when you used the word "*unless*" up there?

A. I have answered that question to the best of my ability."

Record 898-899.

It is just to Mr. Kimball, however, to say that he subsequently discovered and testified that he had nothing in mind when he made the above answer.

Unless the balances on "taps" and "supplies" accounts found on the books and proved by Mr. Nixon constitute the revenues other than actual water collections referred to in the foregoing answers of the water company's officials, such additional revenues are not disclosed in this record. The Special Master treated this case as one to be settled by mere mathematical calculation, using income and operating expenses, incorrectly ascertained, of the year *preceding the passage of the ordinance* as the *sole test* of its validity, refusing to consider or report whether a reduction of rates might or might not increase the consumption of water and possibly earnings of the plant, although the fact that such would be the result was abundantly shown by the evidence.

S. G. Heiskell, 1059, 1287.
A. S. Birdsong 1083.
W. M. Nixon 1398.

And the principle has the endorsement of William Wheeler 704, 2159; J. L. Ludlow, Record 970-971, and was approved by the Special Master himself in one of his rulings in which he said:

> *"Well it is a well recognized fact that the cheaper the quality the more is used."*

Record 1398.

And has received the endorsement of this Court, in *Railroad vs. Wellman, Supra,* wherein it is said:

> "Must it be declared as a matter of law that a reduction of rates necessarily diminishes income. *May it not be possible—indeed does not all experience suggest the probability that a reduction of rates will increase the amount of business and therefore the earnings.* At any rate must the Court assume that it has no such effect; and *ignore all other considerations and* hold as a matter of law that a reduction of rates *necessarily diminishes the earnings.*"

It may be said that the evidence on this question consists of mere opinions or estimates, but what proposition in this case advanced by the water company is not supported by that character of evidence? The water company having refused, and alone having the power, to subject the city's rates to the test of experiment is not in a position to complain of opinion evidence of this character.

The Special Master reported operating expenses of the plant for the year 1900-1901 at $34,750.91, but refused to report or consider them for the year 1901-1902. The water company claimed an aggregate of $85,775.89 as operating expenses for this year. Two and only two items embraced in the amount claimed were disallowed. One, a small item for tax on real estate whose use had been abandoned, and a larger one for expense incurred in the consolidation with the L. B. plant, an expense clearly referable to construction account.

Report, Record 183-184.

The city, through its expert, Nixon, eliminated a large number of the remaining items aggregating several thousand dollars. These contested items are in part set out in the Master's report and all of them in the testimony of expert Nixon.

Report, Record 182-186.
W. M. Nixon 1363-1366.

By Mr. Nixon's deductions and eliminations the amount of operating expenses for this year was reduced to $30,827.52.

Record 1363-1366, 1811-1812.

Without undertaking to sustain all of expert Nixon's eliminations from this account it will appear at a glance that many of them must and should be sustained. The items are too numerous to be considered individually and can only be referred to by classes.

The operating expense account and its proper separation from construction account and maintenance or depreciation account is one of the most vital and important questions in cases of this character. The operating expense account affords the most inviting field for ingenious manipulation. The lines of demarcation between this account and the construction account and maintenance and depreciation account are obscure and not very well defined. Items properly assignable to construction and items covered by the allowance for depreciation or maintenance may be easily and often are placed or rather misplaced in the account of operating expenses without losing their place in their proper accounts, and thereby perform double duty and at the same time impose largely increased annual burdens upon rates. For example, the rates must pay annually only six per cent, or some less per cent. on the value created by construction account as a "fair return," but if an item of construction finds its way into the operating expense account it must be paid in full. The same item is often embraced in both accounts and paid in full as operating expenses, and at the same time made to swell the construction account thereby created. So it may happen that an item of such character that it should be taken care of by the per cent. allowance for depreciation may find its way into the operating expense account and be there paid in full and notwithstanding this fact there would be no reduction of the per cent. for depreciation.

The rules of law applicable to operating expenses are well settled. It is held to be the duty of the Courts "To allow no item of expenditure which is not satisfactorily shown to be an actual and proper charge in the actual conduct of the business of supplying water, and when legal or other general expenses are claimed they must be shown to have had a proper relation to that business."

San Diego Water Co. vs. San Diego, 62 *American State Reports* 275.

Again it is said by this Court: "While the protection of vested rights of property is a supreme duty of the Courts, it has not come to this that the legislative power rests subservient to the discretion of any railroad corporation which may by unreasonable and exorbitant salaries, *or in some other improper way transfer its earnings into what it is pleased* to call "operating expenses."

Railroad vs. Wellman, Supra.

Again it is said: "It would seem as if expenditures for additions to construction and equipment as expenditures for original construction and equipment should be reimbursed by all of the traffic they accommodate during the period of their operations, and *that improvements that will last many years should not be charged wholly against the revenue of a single year.*"

Railroad Co. vs. Interstate Commerce Commission 206 *U. S.* 441, 51 *L. Ed.* 1128.

In the same case it is said of the right of a shipper: "His right is immediate. He may demand a service. He must pay a toll, but a toll measured by the *reasonable value of the services.* The elements of that value may be *many and complex,* not always determinable as we have seen, with *mathematical accuracy,* but we think it is *clear that instrumentalities which are to be used for years should not be paid for by the revenues of a day or year,* and this is the principle for returns upon capital which exists in durable shape."

A public utility company must confine its expenditures to such as are legitimate for carrying on its business. It may not as between itself and the public take the same liberties as a corporation may assume as between itself and stockholders. Even between the company and its stockholders subscriptions to charitable objects, though calculated to advance the interest of a corporation, are not permissible.

McCreary vs. Chambers 48 *Ill. Appeals* 445.
Winfield vs. Bank 25 *Official Rep.* 812.
Davis vs. Railroad 131 *Mass.* 258 *(S. C.)*
41 *American Reports* 221 *and other cases.*

There are in the operating expense account of this year many items which should have been eliminated by the Special Master but were not. Such are the items of contributions to charitable purposes; the allowance of $30.00 each to officers or stockholders of the company for signing the bonds of officials; items of construction of a permanent nature, such as painting buildings, stand pipes, etc., that lasts for a number of years; items of expense incurred in the litigation between the city and water company over the ordinance in question; items of insurance where the policy covers several years; items for salaries of engineer for whose services a full allowance is made in construction account; items based upon ingenious bookkeeping showing deceptive balances, etc.

If all improper items were eliminated from this operating expense account the estimate of the city council at $15,000.00 to $20,000.00 would not be far amiss, but if that estimate were too small it was the result of the fault of the water company in refusing to the city information demanded, and is more than made up by the excess of the company's income as found by the Special Master, over the city's estimate, to say nothing of the large advantage that accrued to the water company by reason of its failure to pay taxes to the city on a fair valuation of its property.

The contention of the city is not, that results of the preceding year cannot be looked to at all, but that they can be looked to, not as the *sole test* of the city's rates, but as evidence, tending to some extent, though remotely, to show what results would probably be attained in the subsequent year. This evidence is of considerable value when there has been no results from operation after the date of the ordinance, but of little or no value where the results of the subsequent year are, as in this case, actually known, and accurately ascertained.

The Special Master, in his somewhat lengthy report, disposes of the fiscal year 1901-2—the year *succeeding* the passage of the ordinance and the year whose income and operating expenses must afford, when ascertained, the crucial and only satisfactory test of the reasonableness and adequacy of the city's rates—by a single brief paragraph in these words:

"The ordinance was passed March 30th, 1901, and the business year of complainant ends March 31, 1901. The bill was filed December 7th, 1901. It appears when the bill was filed no complete year of business had elapsed after March 30th, 1901. The order of reference clearly contemplated the year ending March 31, 1901, *not subsequent periods,* and it was not objected to on that account. I did not, and do not think, I should have admitted proof on any period *after March* 31, 1901. I so held, and defendant thereupon petitioned the Court as to the ruling of the Master. I was not present but was informed that on said petition the Hon. C. D. Clark said (not written) that he would not instruct the Master, but intimated a different view from that of the Master, and I thereupon admitted proof of the subsequent period and much of it is in the record. It seemed to be a misunderstanding as to the view of the Court though in the best of good faith. Upon learning this I thereafter excluded proof as to later periods and *have not considered it in this report.* I am quite of the opinion that an ordinance is supposed to fix rates upon facts then existing. 'The only fair judicial test is to apply the rates to the business that has been done in the past.' (35 F. R., 881)."

What was contemplated by the order of reference as that order was or may have been finally determined and formulated in the mind of the Special Master under the plenary powers conferred upon him by the Court to settle for himself and report upon any questions that he deemed material and pertinent, counsel are unable to state. It is certain, however, that no order of reference contemplating that no inquiry should be made subsequent to March 31, 1901, was ever made or published by the Court or Special Master and in any way brought to the attention of counsel for the city without meeting with strenuous objection. In an effort to settle upon the original order of reference counsel for the city objected to the draft offered by the water company's attorneys, and by leave of the Court filed additional propositions that were made a part of the order of reference contemplating inquiry as to subsequent periods.

Record, 125.

And throughout the record it appears with possibly one or two variations that the Special Master by his rulings and once by written opinion admitted evidence over objection as to subsequent periods.

Record, 127-8; 263; 275; 698-9; 567-8; 743; 1320-21; 1473; 1685.

In fact the fullest evidence was admitted and is found in this record as to the year 1901-2 and the six months thereafter. If the Special Master had, as he insists in his report, refused to admit evidence as to subsequent periods, or if the Court had, as he insists, limited the order of reference so as not to admit of such evidence, that of itself would have been palpable error. At all times wherever the question has arisen throughout these proceedings counsel for the city have insisted that the investigation should cover and be extended to at least the subsequent period of one year after the passage of the ordinance. The above statement of the Master was excepted to and challenged when brought to the attention of counsel by the filing of the report.

Record 159-60.

The same question was presented on the hearing, on petition to re-hear, on petition to recommit and by motion for reservation in final decree.

Record 204-208; 226-230; 293.

And was overruled by the Court in every instance upon the erroneous grounds stated in the Special Master's report.

Record 295; 308; 291; 289.

We assume that the proposition could not be controverted, that if it appeared that the water company had yielded to the city ordinance rates and thereby made actual test by experiment of their effect, and that it appeared from such test that the water company had realized from its operation under the city rates, for the period of a year after the date of the ordinance, a sufficient income to satisfy the demands of the law as to fair return, that such facts would put an end to this case, no matter what would have occurred or how inadequate these rates would have been when applied to the preceding year and conditions existing at that time. This actual test by experiment was not made. The water company alone could have made it and refused to do so. We have never contended, as the Circuit Judge seems to have understood us, that it was necessary for the water company to make this test before resorting to the courts, though it very clearly appears that it could have done so, without injurious consequences and at much less loss, than is entailed by this litigation. The next best evidence tending to show the effect of the city rates upon the income of this company is secured not by taking the income realized by the company under its own rates, in the year *preceding* the passage of the ordinance, during which $79,000.00 worth of construction was done *that yielded no revenue during that year,* but by taking the earnings of this company at its own rates during the year *succeeding* the passage of the ordinance and reducing such income by the most available method to the plane of the city rates. This can be easily done from the evidence in this record and from results of operation proved in the main by the officials of the water company. And these results will show beyond doubt that the city rates did yield to the water company a fair and adequate income. The field of speculation, to which the Circuit Judge objects, is certainly narrower under this method, than under the one he adopts of speculating as to results of a former year and then speculating again as to the effect of the speculative results of that year upon the following year. By the method we maintain as the proper one there is but one step in the speculation, by the Court's method, a speculation is based upon a speculation.

Taking as a basis of calculation for the year 1901-2 the value of the plant at replacement cost fixed by the Special Master and the income and earnings of the plant and the per cent. of reduction by the city rates, *proved by the treasurer of this company,* without making any change or correction whatever in the figures, it will appear that the water company's income was entirely adequate to protect this ordinance against the charge of confiscation. The figures upon which this calculation should be made are as follows:

Value of plant March 30th, 1901, as fixed by the Special Master	$608,427.95
Entire income of plant for the year 1901-2 for actual water *collections only,* at the water company's rates, proved by the treasurer	95,452.12
Estimated income for the same year under the city ordinance rates *ascertained by the treasurer* by reduction of revenue derived from meters and fixtures, omitting hydrants, by 22.88 per cent	76,233.58
Entire operating expenses for the same year under the water company's rates without any reduction whatever, *as proved by the treasurer*	37,003.25

E. Wheeler, 716.

Deducting operating expenses, as proved by the treasurer from the revenue realized under the city's rates estimated by the treasurer at	76,233.58
Leaves a balance of	$ 39,230.33

a sum sufficient to pay 6.448 per cent on the Special Master's estimate of the value of the plant, to-wit: $608,427.95, and sufficient to pay 7.846 per cent. on the city council's valuation of the plant at the time of passing the ordinance to-wit, $500,000.00. This latter per cent is within .154 of one per cent of the full demand of two per cent. for depreciation and six per cent. for fair return as claimed by the water company and reported by the Master.

We have hereinbefore expressed our views of the Special Master's valuation of the plant and will not repeat them here. It is safe to affirm that it is questionable, to say the least of it, whether the city council's estimate of the value of this plant was not more reasonable under the facts of this record than that of the Special Master. Absolute certainty, of course, is not attainable on a question of this sort. The treasurer's aggregate of income, actually realized for this year, from operation of the plant at the water company's rates, to-wit: $95,452.12, is based on *actual collections for water only.* It does not correctly represent the *earnings* of the plant even from *water.* Undoubtedly this sum should be increased by the sum of $1,065.13, the difference between the *actual collections* and the *actual earnings* of the plant for water only during the year, shown by the difference in amount of uncollected, but collectible water accounts, carried into and out of this year——the excess of those carried out at the end of the year over those carried in at the beginning of the year being the above sum of $1,065.13. This sum did not, as the Special Master supposed, consist of old and doubtful accounts but fresh accounts for the past month or quarter that fell due first of April, 1902.

F. C. Kimball, 906; 2216; 2229-32.
W. M. Nixon, 1385-87; 1811-12.

It is the *actual earnings,* that are collectible, not the *actual collections,* made within the year, that must be the basis for calculation, otherwise the water company could by manipulation of its books and collections defeat regulation altogether. Adding this sum of $1,065.13 to the treasurer's statement of actual *collections* for this year from water, at the water company's rates, gives as the *entire earnings* of this year $96,517.25 (an increase of over $8,000.00 over the income of the preceding year) which sum when reduced by 22.88 per cent. of receipts from meters and services (omitting hydrants which were not reduced by the ordinance) gives as the estimated *earnings* of the plant for this year at the city's rates, $77,055.42—a sum which, after deducting the entire operating expenses, leaves a balance of $40,052.17—a sum that will pay 6.583 per cent on the Special Master's valuation of the plant, to-wit: $608,427.95, and 8.01 per cent on the city council's valuation, to-wit: $500,000.00. This is the result upon incontestable figures proved by the officials of the water company. It is the claim of the water company that rates producing these results must be raised 50 per cent to make them adequate.

Wm. Wheeler 703-4.

"Taps" and "supplies" accounts or other sources of revenue than actual water earnings have been entirely eliminated from this calculation. No corrections of the Master's report as to value or of the treasurer's report as to income and operating expenses has been taken into consideration except to add the $1,065.13, a conceded item, to earnings. That the water company had other sources of revenue than water collections which its officials did not disclose, is rendered highly probable from their statements already quoted. The per cent of reduction of earnings by the city ordinance, to-wit: 22.88 per cent on the water collections from meters and services (omitting hydrants) though used in the above calculations, is excessive and not supported by evidence. The treasurer in arriving at this per cent acted upon a statement furnished him by some employee of the company whose name he could not remember and whose testimony is not taken in this case. The treasurer admits that he did not make the investigation and knew personally nothing of the facts or of the accuracy of the statement.

E. Wheeler, 713-14; 746-7.

Mr. Nixon, on the other hand, after making extensive investigations of the matter personally, taking into consideration all the aspects of the question, fixes 18.5 per cent upon the *entire earnings* of the company, including hydrants, as the proper basis of reduction by the city ordinance. And his testimony as to this per cent is strongly corroborated by comparison of the two schedules of rates, the city's schedule making horizontal reductions of the company's rates in all but the large item of hydrants. It will appear that in most items the reduction was precisely 20 per cent. In a few items it was larger. But the large item of $11,455.00 derived from city hydrants was not reduced at all.

W. M. Nixon, 1397-8; 1829-30.

The difference between the per cents fixed by these witnesses is accounted for in part by the fact that Mr. Wheeler applies his per cent of 22.88 to receipts from meters and fixtures only, omitting hydrants which were not reduced, while Mr. Nixon applies his per cent of 18.5 to the entire earnings of the company including hydrants. The question in this case is not as to the effect of the city rates upon a part of the business of the company but as to its effect upon the whole revenue or income of the company. The difference of results in *dollars,* between the application of these per cents in the manner stated, is that the reduction under Mr. Wheeler's per cent of 22.88, applied to receipts from meters and fixtures only amounts to $19,462.13 and the reduction under Mr. Nixon's per cent, 18.5 on the entire earnings of the plant, is $17,855.69, making a difference in favor of the city of $1,606.44 which should be added, if Mr. Nixon's view is correct, to the estimate of earnings under the city's rates, and this would increase the estimated earnings under the city's rates for the year to $78,661.00. As regards operating expenses fixed by the treasurer at the entire amount incurred in operating the plant at the city's rates, to-wit: $37,003.25—the amount used in the above calculations—there should be, as will appear at a glance, large reductions. One of the items included in the above amount reads:

"Water rates litigation, $1,156.34." The treasurer explains that this item is for "cost of litigation which has resulted from the passage of the ordinance."

E. Wheeler, 747-8.

This item should be rejected *in toto.* It is true there has been much litigation over this ordinance in all of which, that has been finally determined, the water company has been unsuccessful. Both the city and the water company have been put to great expense by this litigation. The city has been correct at all times and has been sustained by the courts in its view of its and the water company's rights under their contract. The water company has been wrong as determined by the courts uniformly. The water company, not the city, was to blame if the ordinance rates were not reasonable. They appear to have been reasonable from the facts that we have recited. The questions at issue between the city and the water company were made and could and should have been settled in former litigation. The city has been held up, in the enforcement of its rates, for nearly seven years upon a bill some of whose averments are shown, to put it mildly, to have been utterly unfounded. The city has been put to vast expense by this litigation which it has paid or must pay. We submit that under these circumstances the city's water rates and its water consumers cannot be onerated with the water company's expenses of maintaining this sleeveless and injurious litigation. If this can be done for the purpose of defeating this ordinance, then the water company has the power by subsequent and sleeveless and vexatious litigation, had for the purpose of holding up the enforcement of the city ordinance, to render that ordinance invalid—a method of invalidating an ordinance so natural and easy that it will often be applied.

"Of course the items of expenses in the present action should be disallowed."

San Diego Water Co. vs. San Diego, 62 *Am. Rep.,* 275.

Mr. Nixon, the city's expert, examined this account and eliminated items that reduce it to $30,279.24.

W. M. Nixon, 1811-12; 1368-1372; 1736-58.

This account was made up pending this litigation. Without undertaking to defend all of the eliminations made by Mr. Nixon, we shall merely state a few of them that unquestionably ought to be stricken out, to-wit: $88.25 for "Christmas remembrances;" $20.29 tax on real estate "outside city" and abandoned for use; $4.94 expended in entertaining a Mr. Payson; $10.00 contributed for flood sufferers; $30.00 paid William Wheeler for signing his brother's bond as treasurer; $30.00 paid Charles F. Parks (of Wheeler & Parks) for a like service. There are large items contained in this account for traveling expenses of the officials of the company on trips to various cities, some of which are in no manner explained, though the officials were on the stand after the items were challenged. Several items were eliminated as having resulted from ingenious book-keeping. Salaries of officials doing the engineering work on construction were paid and charged to this account and at the same time full engineering estimates are also placed in the construction account making up the value of the plant. It is safe to affirm that this operating expense account of the treasurer must be, upon any fair consideration of its items, largely reduced though the full amount has been used in our calculations. Upon this state of the record we submit that this case should be finally heard and dismissed without recommittal to a Master. The figures that show that the city's rates are reasonable, and even liberal, are few and proved in the main by the officials of this company. The enforcement of the city's rates, though entirely reasonable, has been arrested for nearly seven years, and during that period this water company has been receiving an income from the water consumers of the city of Knoxville and environs which is clearly excessive to the amount of $20,000.00 to $25,000.00 per annum. Even the circuit judge admitted that its rates were excessive. That the company will continue to receive an adequate income under the city's rates is shown by the *ex parte* report of the treasurer for the six months beginning March, 1902, and ending September 30th,1902. There had been a continued and decided increase in revenue during that period over the former year. This condition of affairs, inflicting irreparable injury upon the people of the city should not be permitted to continue in view of the fact that the city has been blameless in its conduct toward the water company and the water company has been arbitrary in its treatment of the city. It should not be forgotten that in one of its aspects, and a material one, the statements of the bill verified by the affidavit of the general manager to whom the actual facts must have been known, were utterly groundless. No attempt has been made to divide the plant or its income or operating expenses for this year between "city proper" and "outside city" as was done by the treasurer and the Special Master in dealing with the year 1900-01. We have assumed that it has been settled by this court that in cases of this character the plant and its income and operating expenses should be dealt with as an entirety. If any division was proper it should have been made as it was made in the Chattanooga case, to enforce the equities of the "city proper" against "outside city." In that case, in order to satisfy these equities, fifteen per cent of income was assigned to "outside city" and twenty per cent of operating expenses. The "city proper" has equities as against "outside city." By the city's consent and by that alone the water company could and did obtain its charter and existence. The "city proper" donated to the water company the use of its streets. The service and expense of delivering water to outside consumers is greater than that of delivering it to consumers living in the city and nearer the plant. If any division is made it should be a fair one, not such as was made for the year 1900-01, and for the purpose of meeting these equities. Such a division should not enure to the benefit of the water company or outside consumers though such division was made to perform that office in a very effective way in regard to the year 1900-01. It is by no means conceded that the water company is entitled to receive two per cent depreciation and six per cent fair return out of the net earnings of this plant in order to sustain this ordinance although we have demonstrated that it does receive those per cents upon a fair and conservative valuation of the plant. Two per cent for depreciation is the highest fixed by any witness in this case. The evidence shows that it ranges from one-half per cent to two per cent. The denial of any per cent for depreciation under some circumstances would not affect the validity of the ordinance, especially in a case like this where the items that should be covered and provided for by that per cent have been carried into operating expense account, many of them at least, and actually paid out of earnings of the company. It would place a double burden upon the rates to allow this per cent after the items that it is intended to provide for, have been paid as operating expenses. In this case the taxes of this company amounting to about 2.65 per cent on the assessed value of the property were paid as operating expenses. Six per cent, with taxes paid, is about double what the ordinary investors are able to realize. The *wards* of the state upon whose funds six per cent only can be realized must pay taxes out of that amount. The water company is carrying, at this time, $411,000 of its bonded indebtedness at not exceeding five per cent. If six per cent is allowed it as fair return, it makes a net profit, in this transaction of, at least $4,110 per annum. Should not this profit enter into income account? This court has held in the Standford case that the mere denial of four per cent would not render an ordinance necessarily invalid. But in cases of this character the return to which the company is entitled is not to be determined by mere mathematical calculation of amounts or arbitrary per cents, though the city's rates are sufficient even on that basis, but is ascertained by looking to all the circumstances and the equities surrounding the case. A fair return may be, under differing circumstances, none or some or three or five or possibly a larger per cent. Under the circumstances of this case, wherein it appears that the city council acted fairly, conservatively and conscientiously in the performance of a public duty and one of great difficulty, and were deprived by the water company of the assistance to which they were entitled in the performance of that duty, the court should not set aside their action of a legislative character upon slight grounds. Certainly it should not be done upon mere difference of opinion between the court and the legislative body as to the results reached. To establish a rule of interference on the part of the courts with legislative action in such case would render regulation of rates of public utility companies practically impossible.

Any statement of this case would be incomplete that failed to notice the water company's appeal for favor and sympathy, on account of the "hard conditions" that have compelled it to incur an indebtedness so greatly in excess of the cost and value of its plant and, especially, on account of the city's harsh treatment, in refusing to permit it to exceed its charter and contract limit, in mortgaging its plant.

It is averred, and the proof shows, that its indebtedness aggregated, on 31st March, 1901, the sum of $1,488,889.68—of which $830,000 was interest bearing, upon which it actually paid $48,127.78 interest for the year 1900-1. Mr. Kimball verified the averments of the bill by his oath.

Bill, Record 11-12.
E. Wheeler, 712.

The entire cost of the plant, wholly new, is estimated by the Special Master at $608,427.91; and by the water company's experts, Wingfield and Ludlow, at about $618,000.00; and by the city's experts, Nixon and Brown, at about $400,000.00; and by Wheeler and Kimball's "invested value" statement at $711,000.00. The nature and excessiveness of most of these estimates has already been explained. The indebtedness of the water company therefore exceeded more than two to three times these estimates of cost of the plant when entirely new. The interest that the water company paid on this indebtedness for the year 1900-1901 was largely in excess of interest on any of these estimates of cost.

While it is true that the water company abandoned all claim to have its rates fixed with reference to its indebtedness, and while the Master concurred in that view, still the facts above recited, if true, are calculated to impress the Court with the notion that the water company's rates must be inadequate. We shall inquire therefore what caused this wide discrepancy between the cost or value of the water company's plant and its alleged indebtedness. It is inconceivable that the building and operation of this plant could have been an ill-advised and unfortunate venture. The city had 11,000 population when the plant was constructed in 1883-4. Its population had increased in 1901 to 35,000 or 40,000. The city is favorably situated for furnishing water cheaply. The water company at all times fixed its own rates with a free hand. The earnings of the plant for its first seven years of operation amounted to $209,000.00, though it is admitted by its present officers that the management during that period was wasteful and incompetent.

Wm. Wheeler 659; 692-3.
E. Wheeler 775-6
F. C. Kimball 2219-20.

Moreover it appears that two water plants in adjacent municipalities existing and operating under like conditions with this company during the same period were self-sustaining and profitable, although the municipalities had only about 2,000 population each.

Wm. Wheeler 473; 476; 483-4; 550.

But if the building and operation of this plant was an unfortunate business venture on the part of its promoters, then the water company, and not the public, must bear the loss. This is true both under the law and under the contract between the city and the water company. But the reasons for this company's alleged misfortunes are not obscure or far to seek. Its charter was obtained in 1882 by a band of promoters and exploiters to whom the Special Master allows in his estimate of the replacement cost of the plant $10,000.00 for services. The city donated to this company the plans for the plant and the use of its streets. By the contract between the city and the water company for the construction and operation of this plant as well as by the water company's charter, its power to mortgage the plant was limited for five years to $125,000.00 and thereafter to the additional sum of $25,000.00. The water company fixed its capital stock at $200,000.00—not one dollar of which was ever paid into the treasury of the company. It mortgaged its plant promptly, to the full limit of its power, to secure a bond issue of $125,000.00—a sum entirely adequate to build the plant required by the contract. The usual artifice was resorted to in order to get the stock into the hands of the original promoters and exploiters, without their paying anything for it. This desirable end could not be accomplished by a direct proceeding, for the charter of this company provided that "the amounts of any unpaid stock due from a subscriber to the corporation shall be a fund for the payment of any debts due from the corporation" etc. Hence it was necessary that the stock should issue, in the first instance, to some irresponsible party as "paid up and non-assessable." Hence a so-called contract between the water company and one F. M. Lowry was made whereby Lowry contracted to construct the plant and receive therefor $200,000.00 of paid up non-assessable stock and the $125,000.00 of bonds. Mr. Lowry was a charter member of the company and at the time of this contract must have been the sole subscriber to the original stock of the company. He therefore made the contract with himself.

E. Wheeler 728-9.
Wm. Wheeler 602-606.

By this contract Mr. Lowry was required "forthwith" to sell the stock and bonds for enough to build the plant, to purchasers approved by one or more of the promoters and exploiters, and upon such sale the money was to be paid into the Mechanics National Bank subject to the joint check of Lowry and the water company. Only $47,170.00 was ever so deposited in bank and a considerable part of that was drawn out for other than construction purposes.

E. G. Oates 1237-1245.

The plant was constructed, not by Lowry under this contract, but by the water company itself—Lowry being employed and paid a weekly salary for his work amounting in all to $3,668.00

W. M. Nixon 1319.

The amount of the $125,000.00 original bond issue was ample to build the original plant and was all and probably more than all that was ever paid into the original construction. The "invested value" statement of Wheeler and Kimball, with all its gross over-estimates, puts the cost of original construction in 1883-1884 at less than $128,000.00. This includes reservoir at $33,000.00, more than twice its actual cost; cast iron pipe at $42.00 per ton; and engineering at about $6,000.00, when plans were donated by the city and only $1,856.00 was actually paid for engineering.

W. M. Nixon 1760.

Mr. Nixon makes a careful estimate of the original cost of construction at from $110,000.00 to $112,000.00.

W. M. Nixon 1450; 1527; 1530; 1802-04.

So it is clear that the bond issue of $125,000.00 was ample to construct the original plant. The capital stock alone would have afforded, if paid in, nearly double the amount required for original construction. It is clear, therefore, that there was no necessity to bond the plant, and that nothing whatever was paid into the treasury of the company for the original stock. The original promoters and exploiters of this plant and company, possibly with some unimportant changes, retained the ownership and control of the plant and its operations until December 1890. Mr. Wheeler says these owners "were not waterworks people," and were inexperienced in the business and admits that the management had been bad and wasteful.

Wm. Wheeler 659; 692-3.

During the period from 1884 to December 1890, these promoters and exploiters increased the indebtedness of the water company by the following sums, to-wit:

Additional issue of first mortgage bonds	$25,000.00
Issue of 6 per cent debenture bonds ...	$85,000.00
Additional issue of stock	$50,000.00

As shown by the company's books, nothing was paid into the treasury for this additional issue of stock. It further appears that only $23,750.00 was paid in on the $25,000.00 issue of additional first mortgage bonds, and the full amount on the debentures was not paid in. The books show much scratching and erasures.

W. M. Nixon 1379.

There had therefore been created up to December 1890 a total indebtedness of $485,000.00. Under the "invested value" estimate of Wheeler and Kimball, a grossly exaggerated estimate, there had entered into the construction of this plant up to December 1891, a year later than the above estimate of indebtedness, only $221,000.00 or $222,000.00. According to Mr. Nixon's estimate there had entered into the construction of this plant at the above date only $150,000.00 to $155,000.00.

W. M. Nixon 1450; 1802; 1808.

There was therefore between $263,000.00 and $330,000.00 of *water* at this date in the indebtedness of this company—a sum in excess of the entire capital stock at that date. In December 1890 Wheeler & Parks, a firm owning, operating and exploiting water-works in a dozen or more cities, purchased, at fifty cents on the dollar, a majority and controlling interest in the original stock of the water company, paying therefor to the former owners over $100,000.00.

Wm. Wheeler 540-41; 455-56.

This transaction was not as the court and Special Master assumed, one between an "old" and a "new" company, for there was no change of company, but only of majority control of its stock. The city dealt, at all times, with the corporation, the water company, not with the majority control of its stockholders, at any particular date, and the corporation is responsible for mismanagement of the corporation, alike, whether it occurred under one or another management. It was a transaction wholly between the *stockholders* of the water company. Not one dollar of this amount ever went into the treasury of the water company. Every dollar of it went into the pockets of the former stockholders who had mismanaged and manipulated the business of this company and who had not paid anything for their stock. It was the price paid by Wheeler & Parks, not so much for any value in the plant itself, as for the opportunity that they supposed to exist of exploiting an inviting field of operation and fleecing what appeared to be a helpless and submissive victim. The series of transactions that followed the advent of these new owners and exploiters of the water company and its plant affords additional and convincing evidence that they were (unlike their predecessors,) "water-works people." Evidence is not wanting of their *ability* and *ingenuity*. Evidence is wholly wanting to show any sense or recognition of duty or obligation on theirpart to the public. The first act of this new management was an effort, made in the spring of 1891, to have the city pass an ordinance releasing the charter and contract limit on the power of the company to mortgage its plant. The mayor's veto defeated this measure. It is not disclosed in this record what was the *cost* to the water company of its effort to secure the passage of this ordinance. The date of this action precedes the date of the first item on the "franchise account." About the same date, to-wit, in April, 1891, Wheeler & Parks, the purchasers and owners of the Knoxville Water Company made a contract, with the adjacent municipality of North Knoxville, to erect for that town a water plant. Having constructed this plant in part only, Wheeler & Parks by an arrangement made between themselves and with themselves as the owners of both plants, without the knowledge or consent of the city of Knoxville, turned over the North Knoxville plant to the Knoxville Water Company to be run for its revenue, less hydrant rental, during the initial years.

Wm. Wheeler 463-468; 473-478; 487-488;444-45; 708.
F.C. Kimball 805-6; 872; 877.

If the water company could without loss operate this incomplete plant in its initial years for its revenues, less hydrant rental, in a town of 2,000 inhabitants, its business in a city of 35,000 to 40,000, with large hydrant rental, must be enormously profitable.

This arrangement, it is clear, could not have resulted otherwise than in loss to the Knoxville Water Company and in adding additional burdens to the rates of the city's consumers. It was continued between one and two years.

In 1893 Wheeler & Parks, owners and exploiters of the Knoxville Water Company made a second effort to secure the passage of an ordinance releasing its bond limit. This effort was likewise defeated by the mayor's veto.

Bill, Record 11.
Wm. Wheeler 481-2; 489.

This effort seems, from entries made on the "franchise account," which neither the president nor the treasurer are able to explain, to have been rather expensive to the water company. The first item on the franchise account (improperly dated 1898) and perhaps the second one, represents the probable amount of this expense. This "franchise account" will be reviewed later. Having failed in their second effort to secure from the city the release of their charter and contract bond limit upon the power to mortgage the plant, the water company resorted to another expedient. Possibly the reason for the mayor's refusal was some notion that the stockholders of the water company should pay, at least *something* upon their stock and the full amount of the proceeds of bond sales, into the treasury of the company. Soon after this last effort the water company increased its capital stock to $1,250,000.00—$500,000.00 of which was declared to be preferred stock

Wm. Wheeler 454.

At this date, Sept. 6, 1893, Wheeler & Parks voted 2417 out 2435 shares of the water company's stock.

Wm. Wheeler 591.

The necessity for funds, so strongly stressed at this meeting was created by the requirements of theWheeler & Parks contract with North Knoxville, which they contemplated then unloading upon the city company.

And thereupon Wheeler & Parks, as the Knoxville Water Company, made a contract with Wheeler & Parks, owners of the North Knoxville plant, whereby Wheeler & Parks conveyed to themselves under the name of the Knoxville Water Company, their North Knoxville plant. The Knoxville Water Company was required to assume and did assume by the terms of this contract all of the obligations that Wheeler & Parks had entered into with the town of North Knoxville. This contract was likewise made without the knowledge or consent of the city of Knoxville.

Among other things the contract of Wheeler & Parks with North Knoxville required filtered water, high service and some other things that the city of Knoxville was not in a condition to perform without large expenditure for extensions, additions or improvements of its plant. It was necessary for the water company to make these additions and improvements and they were made *primarily* for the purpose of performing Wheeler & Park's obligations with reference to the North Knoxville plant. This is admitted by Mr. Wheeler and Mr. Kimball.

F. C. Kimball 805-6; 872; 877.
Wm. Wheeler 463; 468; 473; 478; 487-8; 708; 444-5.

A large amount was expended by the water company *primarily* for the purpose of meeting these obligations of Wheeler & Parks to North Knoxville which had been thrust and unloaded upon the water plant of the city without the city's knowledge or consent. This necessarily resulted in unduly burdening, undoubtedly to some extent, the rates of city consumers. At the same time Wheeler

& Parks, owners and in absolute control of the Knoxville Water Company, made another contract with themselves by which they were to do a very large amount of construction for the water company. The prices fixed for such construction were very excessive in the first place and Wheeler & Parks were to be paid at the rate of $1.00 in preferred stock with an additional $1.00 in common stock, for every dollar's worth of construction done at these excessive prices. This was the contract of November 17th, 1893, or about that date.

All the preferred stock and all of the common stock, ever issued (except the $250,000.00 of original common stock) was issued to Wheeler & Parks under this contract.

E. Wheeler 739-40.
Wm. Wheeler 456-7; 459.

Under this contract there was issued to Wheeler & Parks about $295,000.00 of preferred stock and about $390,000.00 of common stock for construction work, estimated by Wheeler and Kimball in their "invested value" statement at about $164,977.91 after eliminating such items as were paid for in cash, and the cost of the North Knoxville plant, from which it appears that the amount of preferred and common stock exceeded the estimated cost of construction at grossly excessive prices by more than $500,000.00, and the issue of preferred stock alone exceeded the estimated cost of construction by more than $100,000.00.

W. M. Nixon 1343-4; 1377; 1379; 1476-77; 1800-01; 1819.
E. Wheeler 739-40.
Wm. Wheeler 456-7; 459.

The effect of this transaction was to increase the nominal indebtedness of this company by more than $500,000.00 for which no consideration whatever accrued to the company.

Mr. Wm. Wheeler returned to the witness stand and was examined touching "going concern" and other matters after this transaction had been laid bare by the testimony of Mr. Nixon and did not undertake to justify or even explain this matter. What is more remarkable Mr. Kimball did the same thing.

In view of the above facts, the strenuous and persistent objections of the water company to the production of the books of Wheeler & Parks, for use on the cross-examination of William Wheeler and F. C. Kimball, with reference to the prices and quantities used in their statement of "invested value" can be understood. The books of the water company contain no items or quantities or prices of material and labor actually paid and used in the construction of the North Knoxville plant, and the extensive additions made to the plant of the Knoxville Water Company by Wheeler & Parks under the contract of November 17th 1893. The only information afforded by the water company's books, was a lumping statement of amounts paid in stock or cash to Wheeler & Parks, the so-called contractors, for construction work done under the contract. The books of Wheeler & Parks, who were in fact the Knoxville Water Company, did show the items indicating actual quantities and prices of materials in said construction. These books were in the same building in which Wheeler and Kimball made up their so-called "invested value" statement. They declined to look to these books for actual prices and quantities, and instead estimated upon their general experience, the prices and quantities used in making up this estimate. These Wheeler & Parks books were at the time, in the possession and under the control of William Wheeler. It is admitted by Mr. Wheeler that the prices used by himself and Mr. Kimball, in making up their "invested value" statement were not the prices actually paid.

On the cross-examination of Mr. Wheeler and for the purpose of testing the accuracy of the prices and quantities upon which he based his estimate, these Wheeler and Parks books were called for, and their production refused repeatedly. Mr. Wheeler even refused to look at the books when asked to do so, and ascertain the actual prices which the city claimed were much less than the estimated prices.

The city appealed to the Special Master and to the court to compel the witness to produce these books for inspection, and to be used in the cross-examination of Wm. Wheeler and F. C. Kimball in reference to their "invested value" statement. The witness was examined at Knoxville, and within the jurisdiction of the court. Both the court and the Special Master refused to compel the production of these books for these purposes.

William Wheeler 470-473; 503-4; 572; 589; 608; 625-7; 708-9
F. C. Kimball 2219.
E. Wheeler 728-9.

See also the proceedings consisting of petitions to the court and Special Master and opinions rendered thereon, Record 128-141; 168-276.

We insist the action of the court and Special Master in this regard was erroneous, and have cited the cases in the petitions that were filed.

In 1895, the water company, under its new management took under consideration the re-adjustment of its schedule of rates, and in some way disarmed opposition by the city council, to a schedule of rates dictated by itself, and which of course, was reasonably high.

Bill Record, 6-7; 51-2.
William Wheeler 446-7.

It may be noted as a singular coincidence that items aggregating nearly $10,000.00 contemporaneous with the above action of the city council, are found entered in that mysterious account, known in the record as "franchise account."

Elbert Wheeler 777.

William Wheeler's attempted explanation of these entries upon the "franchise account" is hardly to be deemed satisfactory, since this transaction was not conducted by himself, but by his attorney, as indicated by the entries upon the "franchise account," and besides, Mr. Wheeler's memory about these franchise matters, cannot be wholly trusted, as both he and his brother, the treasurer, are utterly unable to give the slightest explanation of the large item of $4,741.87, entered on said account as having been expended by himself on account of litigation. This item is dated, by mistake, 1898, (which should be 1893.)

E. Wheeler 777, 786; *William Wheeler* 2179-80.

It would be interesting to know the purpose for which this sum of $4741.87 of the water company's funds was expended, but unfortunately neither the president nor the treasurer of the company, is able to give the slightest clue.

Another transaction: In 1892-3, the Lonsdale Beaumont Water Company erected a water plant in the small town of West Knoxville under a contract with that municipality for its erection and operation. West Knoxville adjoined the city of Knoxville, and in 1897 the two municipalities were consolidated. This L-B plant was a competing one with the Knoxville Water Company.

H. P. Coile 1297-8.
William Wheeler 696; 2173.
E. Wheeler, 794.
F. C. Kimball 1270.

This competition was a menace to the water company's rates. The water company had competed with the L-B Company for the contract to build and operate the plant in West Knoxville. In 1899-1900 the water company made its third effort, which was successful, to get the city council to release the limit upon its power to mortgage its plant, prescribed by its charter and by its contract with the city, and at the same time to rid itself of the competition of the L-B plant, and to obtain the city's consent to this transaction. Accordingly an arrangement was made in 1899 by the treasurer of the water company for the purchase of the stock and bonds of the L-B company at the price of about $120,000.00

E. Wheeler 791-3.

This purchase was made with the distinct purpose of wrecking the L- B plant.

William Wheeler 542-546; 581-2; 2156-7.

Accordingly soon after its acquisition, portions of the L-B plant worth more than $54,000.00 were wrecked and put out of business of furnishing water to the public. This wrecking was done at considerable expense to the water company, as indicated by the fact that the operating expenses of the company for the year 1900-1, exceeded those of the previous year by more than $4200.00. This purchase and wrecking of the L-B plant was for the sole benefit of the water company. It was antagonistic to the interests of the city and its water consumers. Furthermore, it was done in violation of the statutes of the State. A water company may, under the statutes of Tennessee, purchase or otherwise acquire "the property and working franchise of another water company, when the two companies are not being operated and run in competition with each other."

Shannon's Code, Sec. 2506.

The consent of the city to the acquisition of the L-B plant by the water company does not validate the transaction.

New Albany Water Works vs. Louisville Banking Co. 122 *Fed. Rep.* 777.

The act, both as to the city and as to the water company is *ultra vires* and void.

Contemporaneous with these transactions, there was added to the "franchise account" several thousand dollars, and it appears in the proof that the treasurer of the company, who was upon a salary, received $4,600.00, and the attorney of the company likewise upon a salary, received $7,000.00 for extra services in effecting this transaction. These accounts seem to be additional to those entered upon the "franchise account."

E. Wheeler 777; 791-3.

We submit that it is not just or lawful to burden the rates of the city's water consumers with any part of the indebtedness, or alleged indebtedness, created by this illegal transaction, made for the sole interest of the water company, and in antagonism to the interests of the city and its water consumers. The water company, at last successful, on the third effort in securing the release of this bond proceeded to bond its plant for $1,000,000.00. It would be interesting to see the prospectus put forth to induce purchasers to invest in these bonds. It succeeding in floating $411,000 of these bonds at 4½ per cent interest. It complains that the sale of the remainder was prevented by the city's action in asking to know something about the reasonableness of the rates its water consumers have been paying for about 17 years. Is it not more probable that investors were unwilling to take $1,000,000 issue of bonds secured by a plant whose value did not exceed $500,000?

The "franchise account" already adverted to, will serve, in a measure, to explain the large discrepancy between the indebtedness of this company, and the cost or value of its plant. This matter can be best explained in the language of the treasurer, which we quote:

> Q. "To what extent does this franchise item enter into your accounts, General Wheeler?
>
> A. "It is as follows:

June 1, 1898 (1893), Wheeler & Parks, expenses at Nashville and Knoxville acc't of litigation, etc.	$4741.87
Apr. 9th, 1894, legal account	$2575.00
Feb. 28th, 1895, William Wheeler, services and expenses, various legal matters	$ 178.11
Mch. 31st, 1895, legal account	$3092.75

Dec. 26th, 1895, C. T. Cates, legal acc't. .	$ 700.00
Feb. 10th, 1896, William Wheeler, telegrams from February to April 30th. .	$ 10.88
Mch. 23d, 1897, C. T. Cates, extra services in 1895 (paid with 50 shares of stock) .	$5000.00
Feb. 28th, 1899, "franchise account". .	$1385.00
Apr. 5th, 1899, expenses to Nashville to look after question of privilege taxes .	$ 25.25
Apr. 28, 1899, International Trust Co. . .	$ 725.00
Oct. 24th, 1899, Elliott National Bank. . .	$3015.00
Jan. 30th, 1900, International Trust Co. .	$ 535.00
Apr. 5th, 1900, C. T. Cates, expenses to Knoxville to look after sundries.	$ 26.75
Mch. 31st, 1900, certified copy of consolidation ordinance	$ 1.20"

E. Wheeler 776-7.

This account terminates March 31, 1900, one year prior to the date of the passage of the ordinance, though similar items subsequent to this date are shown in the proof.

The treasurer further testifies as follows:

> "Q. General Wheeler, you have handed me this morning a paper, denominated franchise account, which is produced in answer to a former question propounded to you on this cross-examination. Is this franchise account kept on your

books as a separate account, or is this statement made up from items gathered from an inspection of other accounts?

A. It is kept as a separate account during the period indicated by the account, but not before nor since, and the account is a transcript of the entries in my books.

Q. Now what book and at what page will this account be found, General?

A. Ledger, page 254.

Q. This account runs from June 1st, 1893, to March 31st, 1900, and aggregates about $22,000.00, beginning with the item June 1st, 1893, purporting to have been made to Wheeler & Parks for expenses at Nashville and Knoxville, account litigation, etc., $4,741.87. What are the items that make up this account, General?

A. I have no itemized statement of it. I entered in this account all the records that my books showed of the matter.

Q. Is there no voucher in your possession showing what this lien (item) is for?

A. Undoubtedly there is a voucher, but the copy furnished was taken from the books herewith presented, and is undoubtedly word for word a copy of the item on the voucher, in full detail.

Q. Was there a statement rendered of the particular items of service and expense?

A. No sir, not beyond what is shown on the statement itself.

Q. Do you know what the litigation and other matters were by which this item was incurred?

A. I do not remember, but I suppose the larger part of it was extra legal expenses paid our counsel by Wheeler & Parks, and by them charged to the company, but I do not recall and cannot state what circumstances may have caused settlement with our counsel to have been made by Wheeler & Parks instead of myself directly.

Q. To whom was this amount paid?

A. Wheeler & Parks.

Q. You had, at the time, regular counsel employed by the company on a salary, hadn't you?

A. We had, but always with the understanding that such regular salary covered ordinary legal advice and service for the benefit of the superintendent locally and for ourselves—extraordinary services were not considered to be covered by the annual retainer or salary.

Q. Did you have any litigation at Nashville at any time?

A. Not that I know of sir, I don't recall any.

Q. Your regularly retained counsel was employed to attend to all litigation you had at Knoxville, wasn't he?

A. He was employed to attend to it wherever it occurred.

Q. The next item, "April 9th, 1894, legal account $2,575.00," to whom was this paid?

A. To Mr. Cates probably.

Q. This is in addition to his regular salary?

A. Yes, sir.

Q. Was there an itemized account rendered to you for the services?

A. No sir.

Q. On account of what services was that paid?

A. I do not know; we have never been in the habit of requiring counsel, either in this company or any other with which I have had to do, to render itemized bills of account, assuming that attorneys of good and regular standing will render no accounts which are not proper, and I think that this practice is usual. It certainly is, so far as my observation has gone.

Q. You paid the account without knowing what it was for, did you?

A. Yes sir, in detail.

Q. You asked no explanation?

A. No sir.

Q. How was it paid, by draft upon you from time to time?

A. I cannot say, sir; probably in the single amount, as the entry so indicates.

Q. The next item is, "Feb. 28th, 1895," an item paid "William Wheeler, services and expenses various legal matters,..$178.11." Can you furnish any itemized statement of this amount?

A. No sir, nothing beyond what is indicated by the account itself.

Q. Was there any rendered to you?

A. No sir.

Q. Do you know what the services or expenses were?

A. I do not. We think we have rightly grounds for concluding that no improper charges will be made.

Q. The next item is "March 31st, 1895, legal account..$3092.75." To whom was that paid?

A. Probably to Mr. Cates.

Q. Was that in addition to his regular salary?

A. Yes sir.

Q. Was any itemized statement of this account rendered to you?

A. There was not.

Q. Do you have any idea what the services were?

A. I have not.

Q. You made no inquiry, but paid it without inquiry?

A. So far as I recollect, I did.

Q. The next item is "Dec. 26th, 1895,C. T. Cates, legal account..$700.00. Is the same true of this item as the last one inquired about?

A. It is.

Q. The next item "Feb. 10th, 1896, William Wheeler, telegrams from Feb. to April 30th, $10.88." Do you know what those telegrams were about?

A. I do not.

Q. The next item "Mch. 23d, 1897, C. T. Cates, extra services in 1895..$5,000.00. (Paid with 50 shares of stock.)" Is this item explained in the same way as the preceding items, paid to Mr. Cates?

A. It is, with the further notation made in the account that it was paid in fifty shares of stock—that is, common stock of the company. It was paid in common stock instead of cash.

Has that stock been redeemed?

A. No sir.

Q. Was it guaranteed?

A. I do not know. What do you mean by guaranteed? It was the usual and ordinary stock of the company.

Q. The next item Feb. 28th, 1899. "Franchise account, $1385.00." To whom was that paid?

A. Undoubtedly to Mr. Cates.

Q. Is that explained in the same way as the preceding items that were paid to Mr. Cates?

A. I think it is.

Q. The next item "Apr. 15th, 1899. Expense to Nashville to look after question of privilege taxes, $25.25." What question about privilege taxes had you at Nashville?

A. I am not speaking with positiveness but I think I raised the question whether or not the water company having a right to do business in Knoxville by its charter, could properly be assessed by the city for the privilege of doing business, but as I stated, I have no definite recollection as to the immediate necessity for that expenditure.

Q. You had no litigation there about the matter, did you?

A. No sir.

Q. The next item is "Apr. 28th, 1899, International Trust Company, $725.00," to whom was that paid?

A. That was probably a draft in favor of Mr. Cates.

Q. Is it explained in the same way as the other items paid to Mr. Cates?

A. It is.

Q. The next item is "Oct. 24th, 1899, Elliott National Bank, $3015.00." To whom was that paid?

A. Probably a draft to Mr. Cates, with the same explanation.

Q. The next item is "Jan. 30th, 1900, International Trust Company, $535.00," to whom was that paid?

A. Undoubtedly it is a draft in favor of Mr. Cates, with the same explanation.

Q. The next item is "Apr. 5th, 1900, C. T. Cates, expenses to Knoxville to look after sundries, $26.25." What was that about, General?

A. I don't recollect sir.

Q. Mr. Cates lived at Knoxville, didn't he?

A. He does, but the entry on the books reads thus, and therefore the transscript was made. Whether or not it is a clerical error, I don't know.

Q. Now, you have not given this "franchise account" except one small item—I mean subsequent to April 5th, 1900. I will ask you to continue it down to date, September 30th, 1902?

A. I have already testified that the account ceased with the item of March 31st, 1900, which item was for certified copy of consolidation ordinance, $1.20."

E. Wheeler 786-9.

Other items of a like character with those found on this "franchise account" are found scattered through this record, notably one for $500.00 and another for $300.00, and the sum paid the water company's treasurer and attorney, aggregating $11,600 on the L. B. purchase.

F. C. Kimball, 2129, 2224-5, 2227.
W. M. Nixon, 1365; *E. Wheeler* 772.

Upon the recall of Mr. William Wheeler, who had stated on his first examination that he did not remember of any amounts that had been paid on "franchise," he was asked on cross examination to explain this item of $4,741.87 shown on the "franchise account," which had then been introduced by the treasurer, and he was unable to state on what account a single dollar of that item was expended.

William Wheeler, 2179-80.

When the books of the water company were submitted to the examination of the city's expert, W. M. Nixon, it appeared that the original explanation of most of the items of this franchise account had been scratched and completely erased and over that erasure written the explanation appearing in the account, as presented by the treasurer.

W. M. Nixon, 1310-11.

The original explanations had been so completely erased that they were illegible even with the aid of a glass. This book came from the possession of the treasurer, and these erasures are not denied or explained. It is a significant fact that in an entry dated March 23rd, 1899, showing payment of a fee to Webb & McClung, attorneys, a full explanation of the service rendered appears upon the book, and without erasure. No official of the water company could remember any litigation or other services for which these sums could have been paid to Wheeler & Parks and the attorney of the company in addition to regular salary.

The Special Master reports this indebtedness without comment. He reports further that since 1891 the water company "has had exceptionally intelligent and experienced managers" and had been "represented by parties of great experience," who thought that earnings or income would not be increased by reduction of rates or they would have reduced them "without this expensive litigation."

Report, Record, 167, 181.

The experience of the management of the water company, especially since 1891, is conceded. It would seem, however, that officials of such ability and experience as those having charge of its affairs since 1891, should not have paid such large sums as those appearing in "franchise account" without knowing what benefit was to result to the company from the expenditure.

Misconduct in the management of the water company's affairs, it must be conceded, was not the result of ignorance or mistake.

The methods of this company, while they would not perhaps have the effect of repelling it entirely from a court of conscience, have nevertheless, placed its financial and other affairs in a condition of confusion, from which it is impossible to determine, with any degree of accuracy, any one of the material questions that must be ascertained to enable the court to determine the question of the reasonableness of the city's rates.

Another matter that contributed to increase the discrepancy between this company's indebtedness and the value of its plant is its excessive and unnecessary expenditure for interest and discounts.

In the first seven or eight years of its existence, it is admitted, as shown by its books, that it paid on interest $715,849.30 interest, although it had expended upon its plant, little if anything in excess of its $200,000 of capital stock. There was no necessity for the payment of one dollar of interest if its capital stock had been paid in.

F. C. Kimball, 2234-5, 2237.

At the date of filing its bill it was paying interest on $830,000 of indebtedness, with a plant estimated by the Special Master as costing when new, only about $608,000, and actually worth much less.

During the period from 1883 to 1891 the plant yielded an income of about $209,000, upon an investment of not over $150,000 to $175,000 on an average.

(4)

Re-Statement and Recapitulation of Errors Assigned.

FIRST.

The Court erred in sustaining the bill and declaring the city ordinance of 30th of March, 1901, unconstitutional and void upon any of the grounds urged against its validity. The Court should have sustained the ordinance and dismissed the bill, without any reference to the Master as to the reasonableness of the city's rates, and should have done so likewise upon consideration and correction of the Master's report.

Assignment of Errors, Record 312-313.

This Court has determined in another case that the city council had power and authority under the law, which had not been impaired by any contract with the water company, to pass an ordinance regulating in a reasonable manner the rates of the water company.

Ante pages 9-11.

By the findings of the Special Master, approved by the Circuit Judge, the city council proceeded in the passage of its said ordinance in a fair and conservative manner after due notice to and hearing of the water company and after diligent investigation. This finding is not excepted to or complained of by the water company.

Ante pages 11-40.

By like finding of the Special Master approved by the Circuit Judge and not excepted to or complained of by the water comapny, it appears that the water company refused, upon request of the city while engaged in investigation looking to the passage of said ordinance, to furnish to the city council information as to the value of its plant , the amount of its income and of other material matters. This refusal on the part of the water company was arbitrary and unreasonable.

Ante pages 30-31.

It further appears that material averments of the bill in this case upon which the extraordinary process of injunction was sought and obtained are untrue and must have been known to be untrue by the official making affidavit to the bill. This places the water company in the attitude of abusing the extraordinary process of the court and thereby obtaining an advantage over its advisary.

Ante pages 22-31.

Other than the averments that the city failed to give notice and hearing to the water company and to make investigation before the passage of the ordinance—averments that are found by the Special Master and the Circuit Judge to be untrue, there is no averment in the bill, original or amended, supported by a scintilla of evidence that the city council acted otherwise than fairly and in good faith—certainly none that imputes to it fraud or bad faith of any kind. The finding of the Court and Special Master is to the contrary and not excepted to. There is no averment or charge in the original bill and no direct or positive charge in the amended bill that the water company had not received an income subsequent to the passage of said ordinance sufficient, when reduced to the level of the city's rates, to have afforded it a fair return upon the value of the plant. It appears that the City Council estimated value of plant at $500,000 —midway between the estimates of the water company's and the city's experts of replacement cost, and it estimated the income at $75,000 to $80,000, when the treasurer of the water company admits an income of $95,452.12, for the first year after the passage of the ordinance, and the evidence shows it in excess of that amount. Upon this state of the record the bill should have been dismissed without any reference at all as to the reasonableness of the rates, and the same result should have followed upon consideration of the Special Master's report, even without correction of any of the numerous errors of law, by which the Special Master reached the conclusion that the income of the company reduced to the level of the city's rates was sufficient for the *year preceding* the date of the passage of the ordinance to pay, (after deducting operating expenses and 2 per cent for depreciation,) 3.35 per cent on the value of the plant fixed by him upon the basis of the cost of replacement. This was the result reached by the Special Master after reducing the revenue to the basis of the city rates and dividing the value of the plant as well as its income and operating expenses most inequitably between "city proper" and "outside city" and reducing the revenue under the water company's rates by an excessive per cent of 22.88 so as to bring it to the level of the city's rates. The Special Master's report by which he reaches said result is open to many other just exceptions, but even upon the result as shown by that erroneous report, there is no sufficient evidence to impeach as confiscatory the rates fixed by the city council in good faith by proper proceedings without the necessary assistance demanded of the water company, whose arbitrary and unreasonable refusal must have brought about the mistake in fixing rates, if any was committed. There is nothing in the results reached by the Special Master to convict the city council of fraud or any sort of misconduct in the fixing of the rates. This is not a mere review of the case as on appeal. It is not a question whether the court upon this hearing would decide the question differently from the decision reached by the city council upon its investigation. Legislative action will not be set aside upon any such ground. But we have shown in a former part of this brief, and will further point out in the course of these assignments of error, that the result reached by the Special Master was wholly erroneous. He applied the income and operating expenses of the wrong year to the value of the plant and committed very gross errors, even in doing that.

Upon another but more technical ground this case should have been dismissed. It was heard without proof upon the bill and answer—the answer having denied all the material averments of the bill. Upon this state of the record there should have been a dismissal.

Ante pages 48,49.

Moreover it is doubtful whether the bill even after its amendment contained allegations sufficiently specific and positive to sustain it against the demurrer.

SECOND.

The Court erred in making any reference of the cause to the Master. He likewise erred in the method and manner of making the reference and in the matters referred, and in giving erroneous directions, and in failing to give full and proper directions to the Special Master for executing the reference, thus inducing serious errors and much confusion on the part of the Special Master to the prejudice of the city.

Assignment of Errors 312-313.

For reasons stated in the first assignment of error, no reference at all should have been made, but if a reference was proper the Court erred in ordering it without and before hearing the cause and settling controverted questions between the parties as to the points of reference and in failing to settle the principles that should have guided the Special Master in executing the reference.

Ante pages 48-60.

It was a palpable error for the Court to refer to the Special Master without consent of parties, the law as well as the facts of the case, conferring upon the Special Master autocratic power to settle the law. There was no consent on the part of the city to this order of reference and to this abdication by the Court of his functions as a judge and thus conferring the same upon the Special Master. This case was one of extreme difficulty, especially as regards matter of law, and it was highly improper to have referred the law of the case to a Special Master who was not himself a lawyer.

Ante pages 48-60.

The particulars in which this action of the Court proved prejudicial and injurious to the city will be pointed out in other assignments of error.

THIRD.

The Court erred in its rulings and decisions in reference to the valuation of the water company's plant, especially in the following particulars, to-wit:

(a)

The Court erred in adopting the Special Master's basis of value of the existing plant at the replacement cost of a new and similiar plant. The existing plant had been long in use and had been much depreciated in value.

Ante pages 62-75; 127-138.
Assignment of Errors, Record 314.
Report, Record 168; 175.
Opinion 305.

While the Court did not specifically approve the action of the Special Master in every particular, still he adopted the result reached by the Special Master. Replacement cost is not value but mere evidence of value, depending for its weight or significance upon many circumstances, e. g., whether the prices used in making it up are high or low or normal; or whether it contains more or less or different things from those used in the original construction; or whether the replaced plant is new or old and deteriorated, etc. The Special Master admits that he, in many instances, used prices that were high in his estimate of replacement cost of the new plant which he treated as value of the existing plant. He also reports that he included in the plant some things that were not in the original plant and other things that were donated by the city to the water company, and still others that were donated by the water consumers themselves.

Ante pages 62-75.

(b)

The Court erred in estimating, or confirming the action of the Special Master in estimating, as part of and contributing to the value of the plant, as a basis for fixing rates, such things as service connections, amounting to over $30,000.00, that were put in by the consumers or at their cost and expense; and "going concern" estimated at $60,000.00, which was contributed by the city in hydrant rental and by the patronage of the water consumers and paid for annually as an operating expense; and restoring brick pavings, none or little of which entered into the construction of the original plant or was of any cost or expense to the water company or of any benefit to its plant.

Ante pages 127-138.
Opinion 300.
Petition to rehear 209.
Report 179-180.
Exceptions 156-7.
See 62 *F. R.* 866; 22 *F. R.* 921.

(c)

The Court erred in refusing to consider, and in sustaining the Special Master's refusal to consider, as affecting the value of the water company's plant serious defects shown to have existed in the same, such as insufficient size of pipe, failure of plant to afford fire protection, etc. The reasons for this refusal are stated in Report, Record 176-7; Opinion, Record 298; and the reasons for the contrary view are stated in the city's petition to rehear.

Record 208.

Certainly age, condition as to use and wear, suitableness and sufficiency etc. of the plant must and ought to be taken into consideration in ascertaining its value for a particular purpose.

(d)

The Court erred in refusing to correct or even to consider the over-valuations of portions of the plant by the Special Master. These valuations were of new material at high prices, as shown by the Special Master's report, without abatement of price for age or wear. These over-valuations are numerous, amounting to many thousands of dollars.

Ante pages 135-138.
Report, Record 168-180.

The items are set out in the city's exceptions to the Special Master's report.

Record 157-159.

(e)

The Court erred in adopting the Special Master's value of about $608,000.00, estimated at replacement cost of a new plant, as a basis for fixing rates in disposing of this case. It was an excessive valuation reached by erroneous application of the principles of law. Two experts on each side made estimates of replacement cost of plant 30th of March, 1901. The water company's experts placed this replacement cost at about $618,000.00. The city's experts placed replacement cost at about $400,000.00. The taxable value of the plant was $275,000.00. The city's experts, admittedly of good reputation and well qualified, spent several weeks in investigation of the plant, going into every detail, examining the books of the water company, obtaining and considering local prices, while the water company's experts made a most superficial investigation of the plant, spending only from five to ten days in that work, not inquiring as to local prices, and for the most part accepting the water company's statement as to quantities and prices, and besides their testimony is badly broken on cross-examination by contradictions of their depositions given in another case only a few months before testifying in this case, wherein they had almost universally fixed different and lower prices than in their present estimate.

Under these facts the value of this plant, in testing the reasonableness of the city's rates and the validity of its ordinance, should not have been placed in excess of the $500,000.00 estimate made by the city council at the date of passing the ordinance. Certainly it was not impossible for a fair minded board to reach the conclusion that the city council did reach, and be convinced of its correctness, even if they had had the opportunity and the evidence before them upon which the Special Master based his report.

FOURTH

The Court erred in its action and rulings, with reference to, and in its ascertainment of, the income of the water company for the purpose of testing the reasonableness of the rates in this case in the following particulars, to-wit:

(a)

The Court erred in refusing to look to, or to in any manner consider, or to have the Special Master to consider and report upon, the actual income realized by the water company at its own rates at any period subsequent to the date of the passage of the city ordinance, to-wit, March 30, 1901. The income actually realized by the water company, at its own rates for one and a half years after the date of the passage of the ordinance, had been proved by the water company itself and by Elbert Wheeler, the treasurer of the company, on his examination in chief. The Court refused to look to this proof of the actual income of the company realized upon its own rates, and proved by the treasurer of the water company, for the year 1901-2, or for any other period subsequent to the passage of the ordinance, for any purpose whatever in this case. He refused to require the Special Master to report thereon, treating the fact as entirely irrelevant. The Special Master who had improperly been empowered to settle for himself, the relevant and material issues, closed his eyes to this proof and refused to report income and operating expenses of the water company for any period subsequent to the date of the passage of the ordinance.

Report, Record 169.

The city excepted to this action of the Special Master.

Exceptions, Record 159-160.

The Court overruled the city's exceptions by written opinion in which he states the grounds of his action.

Opinion, Record 297-8.

The city presented the question a second time by petition to rehear.

Petition to rehear. Record 205-6.

And likewise by another petition for re-committal of the case to the Special Master with direction to report income and operating expenses for the year 1901-2.

Petition for Recommittal. Record 226-230.

This latter petition sets out fully the grounds of the city's contention. Both of these petitions were disallowed by the Court.

Record 291-294.

Thereupon the city entered a motion for a reservation in the final decree allowing it to make application at any time it might be so advised, to have inquiry made as to whether changed conditions would justly admit of operation under the city's ordinance rates.

Record 293-4.

Under the views of the Special Master, confirmed and adopted by the Court, the income and operating expenses of the water company for the *year preceding the passage of the ordinance,* to-wit, 1900-1, were made the *sole and exclusive test* —a mere mathematical one—of the reasonableness of the city's rates. The income of that year, at the water company's rates when reduced by the estimated per cent of 22.88 to the level of the city rates, is the *mathematical test* that is applied and *the only test that was applied by the Court* in passing upon the reasonableness of the city's rates. All other considerations were excluded from view. When the bill was filed the water company had operated for more than eight months, under its own rates, after the passage of the ordinance. Two quarters of the fiscal year had elapsed. The water company knew precisely what its earnings and operating expenses had been for these two quarters. When the bill was amended in vital matters, December 1st, 1904, in order to aver *value* instead of *cost* of plant and to state that the city rates had, or would continue, after and under the ordinance to deprive the water company of a fair return, it had operated under its own rates for *more than three and a half years after the date of the ordinance* and knew precisely what its income had been during those years, and whether it was sufficient when reduced to the level of the city's rates, to afford it a fair return. The original bill had confined its averments to the year or period prior to the passage of the ordinance. The amended bill, by its averments covered by general but not specific allegation, the period subsequent to the passage of the ordinance. There was no averment in the original bill, filed more than eight months after the passage of the ordinance, denying that the water company was actually realizing an income sufficient, when reduced to the level of the city's rates, to afford it a fair return. There was no averment in the amended bill stating any facts that would indicate that the water company had not actually received an income after the passage of the ordinance which, when reduced to the level of the city rates, afforded it a fair return.

The amendment, it will be observed, is very general in its terms and states no amounts of income or operating expenses or any other specific fact. The injustice, resulting from this action of the Special Master and of the Court in refusing to consider the income and operating expenses of the plant for any period subsequent to the passage of the ordinance is glaringly apparent when it is stated, as the treasurer of the water company proves, that the income of the plant for the year subsequent to the date of the passage of the ordinance showed an increase of over $8,000.00 over the income of the preceding year, and there is proof tending strongly to prove that the actual increase was much larger. The operating expenses had increased only slightly, if at all, after eliminating the unusual and notorious illegal item of $1,156.00 for water rates litigation included in the year 1901-2.

Ante pages 149-165.

And this injustice is further emphasized by another fact, that there was during the year preceding the date of the passage of the ordinance about $79,000.00 of construction work done which is embraced in the valuation of the plant as of 30th of March, 1901, but which was not completed and in condition to yield revenue during the year 1900-1. Upon the cost of this construction work done during that year, the Special Master allows interest which enters into his estimate of the value of the plant. By placing this $79,000.00 worth of construction work done during the preceding year, (which was not revenue producing during the year) into the value of the plant, the burden upon the rates of that year, in order to provide 2 per cent for depreciation and 6 per cent for fair return, *was increased the sum of* $6,320.00—that is, 8 per cent upon $79,000.00, for which there was no corresponding earnings.

Report, Record 175.

There is no proof that any part of this construction aggregating $79,000.00 and included in value of plant, done in the year 1900-1, was in a condition *during that* *year* to produce one dollar of revenue. It was nevertheless, under the methods adopted, made to burden the revenue of that year and at the same time to increase the value of the plant by an interest allowance as above indicated. On the contrary Mr. Wm. Wheeler admits that the Worthington pump, entering into the cost of that construction at $16,038.00, was not put into use for supplying water and earning revenue until after 30th of March, 1901.

Wm. Wheeler 583.

It is not the city's contention that the income and operating expenses of the year preceding the passage of the ordinance cannot be looked to as evidence, for what it is worth, tending to prove the former revenue producing capacity of the plant, and as a circumstance indicating the amounts that would or should be realized during the succeeding year or years. It would not be improper for the Court and Special Master to look to the income and operating expenses of the plant for any number of years preceding the passage of the ordinance for that purpose, but such evidence would be of little value, especially where, as in this case, the actual earnings during a long period after the passage of the ordinance are accurately known and proved. The city's contention is that the income and operating expenses of the plant for the year preceding the passage of the ordinance, and to which the ordinance does not apply and was not intended to apply, cannot be made the *sole* *and exclusive test by mere mathematical calculation* of the reasonableness of the city's rates and the validity of its ordinance, and especially so where the conditions as to earnings and operating expenses for the year have been greatly changed in the succeeding year. The operating expenses for the year 1900-1—the year adopted for test of the city's rates, were abnormally high, growing out of temporary conditions, that did not exist before or after that year, being, in the matter of fuel alone, $2,000.00 in excess of the other years. Another cause of increase of $4,200.00, in operating expenses for this year over the preceding year, was the cost of wrecking the L. B. plant.

F. C. Kimball 2223
E. Wheeler 761-763; 769-70.

The true question is, what was, if test has been actuallly made, or what probably will be, if test has not been actually made, the income of the plant under conditions existing at and after the passage of the ordinance. The court must consider the actual or probable income realized or realizable after the passage of the ordinance and under its rates. If test has been actually made by operation at city's rates, and in some cases tests have been required as a condition precedent to the Court's interference, the question is one of easy solution. If actual test has shown that an adequate income was realized, there could be no possible reason for the Court's interference. If the test is not made—that being a matter optional with the water company—the question must necessarily be determined by less satisfactory evidence. The Court in its opinion fails to distinguish between causes of unconstitutionality arising from inherent defects in legislation, such as entire want of power to pass any regulating ordinance, and causes of unconstitutionality arising from the *operation* of an otherwise valid ordinance or law. The objection made to the ordinance in this case, so far as it rests upon the confiscatory character of the rates fixed by it, is of the latter character. In cases of former class the legislation is void *ab initio* and is never valid for any purpose. It cannot be vitalized by proof of any character. In cases of the latter character the unconstitutionality or invalidity of the legislation is conditional and depends upon the *operation* of the legislation and its effect upon conditions. It can be invalidated, if at all, by proof that its *operation* produces results of such an extreme character as to confiscate private property. It is and remains valid and ready to take effect whenever conditions will justly admit of its operation. The extent of the Court's interference in such cases is to arrest the operation of the statute until conditions are so changed as to admit of its just and legal operation, but no longer. Both the Special Master and the Court held that this ordinance must be tested as to the reasonableness of its rates (to quote the language of the Court), "Must be determined upon the situation as it was at the time of the enactment of the ordinance into a law. It was at this time and in view of the facts then existing valid or invalid, and its validity or invalidity cannot be made to depend upon the changes in the situation which might or probably would have resulted during the year subsequent to the passage of the ordinance.''

Opinion, Record 297.

Conceding the correctness of this rule as to causes of absolute unconstitutionality, can it be justly and literally applied in cases of conditional unconstitutionality like this one? The ordinance could not lawfully, and did not in fact or by its terms, apply to any period before its passage. It applies and was intended to apply only to conditions to be anticipated as happening ''during the years subsequent to the passage of the ordinance.'' It could not lawfully operate retrospectively and does not purport to do so. But what does the Court mean by conditions existing at the date of the passage of the ordinance? As to the value of the plant the Court's rule is practicable and correct.

Ante pages 127; 128.

But as to the income and operating expenses of the plant it is wholly impracticable and the Court does not in fact apply the rule to these matters. He does not confine his attention to the income and operating expenses of the plant on the very date of the passage of the ordinance, and he should not have done so. That would have been absurd and impracticable. But he took as the situation existing at the date of the passage of the ordinance, so far as income and operating expenses are concerned, the income and operating expenses of an entire year preceding its passage and made that the sole and exclusive test of the reasonableness of the city's rates, although these rates did not apply and were not intended to apply to that year. But was the year before the passage any nearer the date of the ordinance than the year after its passage? The latter year, not the former, was contemplated for the operation of the city's ordinance rates. The conditions existing in the two years were radically different as regards income and earning capacity of plant. The Court likewise objects to the consideration of facts occurring after the passage of the ordinance as being "merely speculative," but speculation is entirely eliminated if the water company's proof introduced by itself through its treasurer showing actual receipts of the water company for the year 1901-1902 is to be considered. Is not proof of actual receipts under the company's rates for the year 1901-1902 better evidence than like proof for the year 1900-1, to show the reasonableness or unreasonableness of the city's rates? The income of 1901-2, as well as that of 1900-1, is proved in this case by the treasurer of the water company. Why indulge in speculation as to the income of the year 1901-2, when the fact is thus proved? Even counsel for the water company did not entertain the Court's views on this subject, as shown by their amendment of the bill, so as to embrace the period after the date of the passage of the ordinance.

The Court himself and the Special Master did not in the Chattanooga case adopt or apply the rule by which this case is disposed of. In that case the income and operating expenses of the year succeeding the passage of the ordinance was made the test of the reasonableness of the city's rates so far as that question was one of mathematical calculation. The Court in the Nebraska cases already cited approved and applied the rules here contended for by the city. In those cases the bills were filed before there had been any operation or earnings after the establishment of the rates. In such case the Court had no other data for estimating income and operating expenses for the future than such as had been earned or incurred in the past *up to the date of the filing of the bill.*

In the case at bar there had been more than eight months of operation and earnings before the bill was filed, after the passage of the ordinance, and the amounts of the earnings and operating expenses for that period were known. And if this had been insufficient to produce an adequate income under the city's rates, the fact should have been stated and the amounts shown that indicated that result in the amended bill. When the amended bill was filed the earnings and operating expenses were known for three and a half years after the passage of the ordinance. But in the Nebraska cases the Courts did not declare the law and regulations invalid for all time, but only arrested their enforcement until conditions should change so as to admit of their just and reasonable operation. This Court likewise took care in those cases to reserve to the public authorities the right at any time, even after final decree, to show such changes in conditions had occurred as to admit of the operation of the law and the rates and to have any obstruction arising from the Court's injunction removed. There is no distinction, as is suggested by counsel in their answer to petition to rehear, between those cases and the one at bar, by reason of anything contained in the Nebraska statute. They were not proceedings under the statute, but bills brought in Federal Court, as is this case, to enjoin rates as being confiscatory. The power of the city in this case was greater even than the power of the commission in those cases. The city can under the law take up the matter of rates and consider and change them at any time and as often as it deems necessary.

In conclusion on this Assignment of Error, it appears from the evidence that at the date of the filing of the bill in this case, and before and after that date, the water company was undoubtedly receiving an income, which after being reduced to the level of the city's rates, did afford to it a sufficient sum to pay operating expenses, and a fair return upon the actual value of its plant.

Ante pages 149-165.

Suppose the fact admitted or proved that the water company actually tested the city rates by putting them into effect for the year succeeding the passage of the ordinance and that, during that period, it received an income, at the city's rates, entirely adequate to satisfy the demands of a full and fair return, would that be a good and complete defense to this bill?

If not, then what would constitute a good defense? What defense is possible? It is true the fact occurred after the ordinance was passed, but it is also true that it occurred, for eight months before the *bill was filed.* The question in this case is as to the *operation* of the ordinance, and it could not operate until it was passed.

But the burden is on the water company to show clearly and beyond all doubt that the city rates were confiscatory in their operation. It so avers in its amended bill. What support, in the evidence, is there for this amended bill, if proof of the results of actual operation for the period after the date of the ordinance is wholly excluded? The law presumes the rates reasonable and the income adequate.

Now if it is a defense that the water company received, on actual test, an adequate income under the city rates, can it be met and incontrovertibly rebutted by showing that it would not have done so in the preceding year, when there was $8,000 less income, $79,000.00 worth of plant idle and not earning any revenue, and operating expenses practically the same as in the year succeeding?

If no actual test of the city's rates has been made, but the water company has operated under its own rates, what method of ascertaining income under the city's rates is better than to take the income realized under the water company's rates, for some period after the ordinance went into effect and reduce it by the per cent of difference between the two schedules? Is not this more probably accurate than to take the income of a preceding year, when conditions were wholly different?

It is the truth that the Court wants known. Is it possible that the law is such that it compels the Court to close its eyes to the truth of the transaction, and to strike down, as confiscatory, rates that are in fact yielding a full and fair return, at the very instant that the Court is pronouncing the death sentence against them?

(b.)

The Court erred in failing and refusing to take into consideration for any purpose whatever the fact fully proved that a reduction of rates will necessarily increase consumption and possibly increase earnings or income. The presumption of law is that an increase of consumption and possibly of income may result from a reduction of rates. But the uncontradicted evidence in this case shows that such will be the result.

Ante pages 143; 144.

It may be true that this matter cannot be reduced to dollars, but it is an equitable consideration and one of the circumstances that the Court should have taken into consideration in determining the reasonableness of the city's rates. It is a matter which any legislative body would take into consideration in fixing rates and was no doubt taken into consideration by the city council. This error is one of the natural results of the Court's confining his attention to the date of the ordinance and the year preceding its passage.

Assignment of Errors, Record 314-15.

(c.)

The Court confirming the Special Master's report erred in refusing to add to the amount of actual collections from water reported by the Master the sum of $208.00, the excess of solvent accounts carried out at the end of the year 1900-1 over the amount of like accounts carried in at the beginning of the year. These accounts were unquestionably a part of the earnings of the year 1900-01.

Ante pages 138; 139.

He erred in like manner in refusing to add to the amount of water collections reported by the Special Master, the income and profits shown by the taps and supplies accounts aggregating for said year $2,300.00 to $2,400.00.

Ante pages 139-143.
Assignments of errors, 315.
Report, Record 181.

(d.)

The Court erred in accepting the result reached by the Special Master through his erroneous methods of dividing the value of the plant and its income and operating expenses between "city proper" and "outside city" whereby the "city proper" was deprived of its due proportion of income, burdened with an undue proportion of operating expenses and required out of the net earnings thus assigned it to bear the burden of depreciation fund and fair return upon a disproportionate valuation of the plant. While the court does not approve these arbitrary methods of division between "city proper" and "outside city," he does accept the result and per cent reached thereby in the determination of the case. There should have been no division at all of the plant or its income and operating expenses. These should have been considered as an entirety for the purposes of this case. But if any division was proper it should have been made for the purpose of assigning to "outside city" a less proportion of income and a greater proportion of operating expenses than was or should be assigned to the "city proper" for obvious reasons. The division made was, moreover, arbitrary, unjust and prejudicial to the "city proper" and its water consumers. This is apparent from the fact that while the net income assigned to "city proper" affords only 5.35 per cent for payment of depreciation fund and fair return upon the value of that portion of the plant assigned to the "city proper," the amount assigned to "outside city" pays nearly 23 per cent of the value of that part of the plant assigned to "outside city."

> *Ante pages* 115-127.
> *Assignment of errors,* 315-16.
> *Opinion* 299.

(e)

The Court erred in fixing 22.88 per cent as the basis of reduction of income realized during the year 1900-01, at the city's rates in order to ascertain the income at the city's reduced ordinance rates. The true basis for reduction as shown by the proof is 18.5 per cent.

> *Ante pages* 157-159.
> *Assignment of errors,* 316.

FIFTH.

The Court erred in its rulings and decision of questions affecting operating expenses in the following particulars, to-wit:

(a.)

The Court erred in failing and refusing to have the Special Master report and in failing and refusing to look to and consider, for any purpose whatever, the income and operating expenses for the year 1901-02, or any other period subsequent to the passage of the city ordinance.

Ante pages 149-165.
Assignment of errors 316.

There is full proof on this subject in the record.

Ante pages 149-165.

(b)

The Court erred in failing and refusing to exclude from the category and account of operating expenses as reported and allowed by the Special Master for the year 1900-01, many items such as water rates litigation, cigars, contribution to charitable purposes, to carnivals and to many other purposes not connected with its business. Also the salaries of officers in engineering or construction work while at the same time a liberal allowance is made for engineering in the Master's report of the value of the plant.

Ante pages 144-149.
Assignment of errors, Record 316.
Report 183-185.
Exceptions 161.

SIXTH.

The Court erred in his calculation and decision that the income realizable for the year 1900-1901 under the city ordinance would be of such inadequate character as to render the city ordinance confiscatory and void. He refused to consider the income and operating expenses of the year 1901-02. The error of the Court in this regard is the result of the Court's erroneous findings and holdings in several particulars, to-wit:

(a.)

In assuming as value of plant its replacement cost and thereby adopting as a basis of value an excessive sum.

Ante pages 127-138.

(b.)

By adopting as the sole and exclusive test of the reasonableness of the rates of the water company the income and operating expenses of the year preceding the date of the passage of the ordinance, refusing to look to or consider the income and operating expenses of the plant for the year after the date of the passage of the ordinance or any other subsequent period. This holding of the Court was very prejudicial for the reason that there had been during the year preceding the date of the passage of the ordinance, construction work done estimated at $79,000.00, which produced little or no revenue during that year, and the year succeeding the date of the ordinance showed an increase of revenue of more than $8,000.00—operating expenses being about equal in both years.

Ante pages 149-165.

(c.)

In adopting as the full income or earnings of the plant for the year 1900-01 the actual water collections made during that year, refusing to add thereto the sum of $208.00 of solvent accounts collected during the following year, though earned in the year 1900-01. The bill admitted a larger sum of revenue than that adopted by the Court and there were other items of earnings than from water that should have been added to water collections.

Ante pages 138-143.

(d.)

In finding that the net earnings of the plant would pay the water company as fair return only 3.35 per cent, and that this per cent was so inadequate as to render the city ordinance void. This per cent was reached by the erroneous and arbitrary methods adopted by the Master in making divisions of plant and its income and operating expenses and was based upon the amount remaining after two per cent had been deducted for depreciation fund. Treating the plant as an entirety as should have been done, the per cent of fair return is much larger.

Ante pages 112-127, 82, 91, 94-5.

The Court doubtless had in mind a ready-made statement put in by the treasurer of the company tending to show the result stated by him.

E. Wheeler 723.

But when the city undertook to investigate the years covered by this statement objection was interposed by the water company and no investigation of accounts for any year prior to 1899 was permitted and one of the tables that the treasurer had introduced as to former years was excluded. In this situation it must be presumed that the water company received all that it was entitled to in the former years as to which it objected to an investigation. Moreover it appears that this company had from its inception unnecessarily and illegally diverted large sums to other than legitimate purposes. During the first eight years of its existence it paid more than $115,000.00 on interest, although it had expended not over $200,000.00 in the construction of its plant, and its original stock subscription was $200,00.00. There was no necessity to have paid $1.00 of interest if its stock had been paid in. During this period it earned about $209,000.00, as shown by its badly kept books, a sum entirely adequate to have paid its operating expenses and all charges for fair return and depreciation upon any reasonable estimate of the value of its plant. At the date of filing its bill, as shown therein, it was paying interest on $830,000—a sum that is $221,000 in excess of the value of its plant as reported by the Special Master. And it seems to have had ample funds as shown by the "franchise account" to pay out large sums without inquiry for purposes that its officials are unwilling to avow and unable to explain. But the water company having fixed its own rates with a free hand, must be held to sustain the loss if it fails to make them sufficient to earn an adequate revenue. The loss must be borne by itself and not laid upon the public in such case.

> *San Diego Water Co vs. San Diego,* 62 *Am. St. Rep.*262.
>
> *San Diego etc. Co. vs. San Diego, L. & P. Co.,* 174 *U. S.,* 754; 43 *L. ed.* 1160.

But a deficiency of revenue to provide this depreciation fund for a particular year constitutes a loss to the company and is not an element of value. Losses do not put value into a plant but take it out. It is the value of the plant that is the basis for fixing rates. If the company should capitalize its losses as a basis for fixing rates, the greater the company's losses the more excessive its rates would be. Under such a rule, rates would soon get beyond the reach of regulation and at the same time become intolerably high for the water consumers. The proposition that such losses can be capitalized and made to burden the water consumers of a succeeding year or of a succeeding generation seems to need no answer. The Court had much trouble over this question of depreciation by reason of his failure to distinguish between this depreciation fund and the depreciation complete and incomplete which represents the difference in value between a new and an old plant.

Opinion 301-304.
Petition to Re-hear, 210-212.

(e.)

In failing to give sufficient weight and effect to the circumstances under which the city's ordinance was passed and its rates established. It appears that the city council acted in perfect good faith with due diligence, and after giving notice to and affording ample hearing to the water company, and after having made the fullest possible investigation. On the other hand the water company acted arbitrarily and refused aid or information in the fixing of its rates. Rates thus fixed are entitled to the highest consideration and should not upon slight grounds be set aside as unconstitutional and void on the ground of unreasonableness.

Ante pages 11-39, 89-92, 95-98.

(f.)

In refusing to consider the question for any purpose as to whether reduction of rates would increase consumption or revenue.

Ante pages 143-144.

SEVENTH.

The Court erred in sustaining the Special Master's rulings on questions of evidence and refusing to overrule and correct the same in the following particulars:

(a.)

Both the Court and Special Master erred in refusing to compel witness William Wheeler to produce on his cross-examination the Wheeler & Parks books which were in his possession showing actual prices and quantities of material used in a large portion of the construction of the plant.

Ante pages 177-179.
Assignment of errors 1313.
Exceptions 161-2.
San Diego Water Co. vs. San Diego, 62 *Am. St. Rep.,* 274.

The city demanded these books for the purpose of attacking the quantities and prices estimated from general experience by Wheeler and Kimball in making up their invested value statement. It may be said that this error is immaterial as the Special Master gave little consideration to this invested value statement. But this statement afforded valuable evidence for the city as it tended even with its over-estimates strongly to confirm the city's experts in fixing the replacement cost of this plant at about $400,000.00 and as tending to show that the city's estimate of $500,000.00 was not only conservative but high. This estimate aggregated about $711,000.00, but it included, as Mr. Wheeler admits, $175,000.00 of depreciation, thus reducing, even on the basis of his excessive estimates, the original cost of the plant to about $536,000.00. The purpose of securing the Wheeler & Parks books was to show the excessive character of the estimates as to prices and quantity, and the persistent and successful effort to withhold these books indicates very clearly that they would have afforded evidence and valuable evidence, of the excessiveness of Wheeler & Kimball's estimated prices and quantities used in making up their invested value statement.

(b.)

The Court and Special Master erred in attaching too great weight and importance to the opinions of the water company's experts, hastily made up on scant information and slight investigation, without information as to local prices or conditions, and by adopting without material change the statements of the water company's officials as to quantities and prices. In doing this they set up the opinions of two experts, contradicted by two others, to overrule the opinion of the eleven aldermen and the Mayor, deliberately expressed after full investigation.

Exceptions, Record 161.
Railroad vs. Gill, supra
San Diego Water Co. vs. San Diego, 62 *Am. St. Rep.,* 274.

(c.)

The Court and Special Master erred in their application of the law as to the burden of proof in cases of this character. "All doubts as to facts should be resolved in favor of the defendant."

Ante pages 109-110.
Spring Valley, etc., Co. vs. San Francisco, 124 *Fed. Rep.* 599.
San Diego Water Co. vs. National City, supra.

(d.)

The Court and Special Master erred in excluding or refusing to consider the evidence as to income and operating expenses for the year 1901-02.

Ante pages 149-165.

The income and operating expenses of this year were or should have been the crucial test of the reasonableness of the rates prescribed by the city ordinance so far as that question is one of mathematical calculation.

(e.)

The Court erred in rejecting and refusing to consider the evidence showing that reduction of rates would increase consumption and income, and especially in rejecting evidence tending to show the amount of such increase.

Ante pages 143, 144.

(f.)

The Court erred in refusing to consider, in estimating value of plant, serious defects existing in the plant and calculated to affect its efficiency and value.

(g.)

The Court erred in not giving consideration and effect to the fact that the water company withheld information and refused to produce books that would have been of material aid in ascertaining the reasonableness of the city's rates.

(h.)

The Special Master and the Court erred in considering the water company's indebtedness to the city's prejudice.

Ante pages 165-188.

EIGHTH.

The Court erred in other particulars of minor importance set out in the exceptions found on pages 162-164 of the record, all which are relied upon but will not be further discussed in this brief.

Exceptions 162-164.

The water company's exceptions to the Master's report have been sufficiently covered by this brief and will not receive further notice. All of them except one were over-ruled and the one that is sustained involves no considerable amount.

The conclusion is inevitable upon the facts of this record that the water company is receiving annually from the city and its inhabitants from $20,000.00 to $25,000.00 under its own rates in excess of the maximum fair return to which it is under the law entitled. For seven years it has been able to maintain itself in this advantageous position by the injunctive process of the courts, which was obtained upon allegations which as to some branches of the case there is no effort to sustain. In other words it is in the attitude of having abused the extraordinary process of the Courts.

We submit that the final disposition of this case should not be delayed under the circumstances for the purpose of having another report from a Master. Upon almost any possible view of this case the water company has failed to establish the facts that would justify the interference of the Court to set aside legislative action, especially legislative action enacted under the circumstances that attended the passage of the city's ordinance. But if the case should be reversed and the Court should be of the opinion that it should be remanded for a Master's report, we submit that the Court should upon the facts of this record direct the dissolution of the injunction and put the city's rates into effect. It should be remembered that no form of unjust and illegal exaction or taxation of the public is more odious and oppressive than that resulting from excessive water rates. Such exactions are for water, a prime necessity for poor and rich alike. It is made not for a public but for a merely private end or benefit. It bears as heavily upon the abject poor, as upon the well-to-do, while public taxation rests only upon those who have the means to pay. Inability to pay public taxes does not deprive the citizen of the benefits of government, but inability to pay for water cuts it off from the home and the family. These are considerations that should make the court solicitous to confine taxation by water rates within legal bounds. The exaction by a single company of $20,000.00 to $25,000.00 or more per annum, to which it is not entitled, from the people of the city, and largely from the needy classes, for a prime necessity like water, is not a small grievance and should not be perpetuated longer than is absolutely necessary for its proper consideration by the Courts. We submit that the bill in this case should be dismissed.

J. PIKE POWERS, JR.
City Attorney.

G. W. PICKLE,
W. R. TURNER,
W. T. KENNERLY,
of Counsel.

VOL. II.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING THE PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

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1 U. S. Circuit Court, Southern District, N. Y. Filed June 24, 1907. John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before: Arthur H. Masten, Special Master.

NEW YORK, *July* 16, 1906.

Appearances.

Shearman & Sterling, Esqs., for complainant; John A. Garver, Esq., and Carl A. Mead, Esq., of counsel.

2 Hon. Julius M. Mayer, Attorney General of the State of New York, solicitor for defendants Mayer and Gunnison, Davies and Shedden, as the Commission of Gas and Electricity; Alfred R. Page, Esq., and Howard S. Gans, Esq., of counsel.

Robert C. Taylor, Esq., solictor for William Travers Jerome.

Hon. John J. Delany, Corporation Counsel, for the City of New York; William P. Burr, Esq., of counsel.

Mr. GARVER: I do not intend to make any formal opening in this matter, but I think possibly it may be helpful to state generally what we consider as the problem before us on this hearing. The suit that we have brought in this case is a rather novel one in this jurisdiction, and I do not think this rate question has ever before been raised in the courts of this State in connection with a public service corporation of this kind. Those questions have been raised largely as the result of the Granger legislation in the West, and they nearly all have been considered and passed upon by the Federal Courts in the western jurisdiction. While the question involved here is a new one, as far as this circuit is concerned, it seems to me that the principles upon which we shall have to proceed on this hearing are comparatively simple, and they are very much such as Masters in Chancery are entirely familiar with. As I look at it, it is largely a question of principal and income on one side; the burden is upon us to show what is the reasonable value of the investment which we have employed in this gas manufacturing business; that is really our principal account. Following that we shall be obliged to show what our income is and what expenses are legitimately chargeable against the income in the manufacture of this product, the price of which the Legislature has sought to regulate. The cases hold 3 that in estimating the value of the property invested in the business the present value must be taken into consideration;

that seems to be the general conclusion reached by the Supreme Court of the United States in the leading cases and we are prepared to stand generally on that ground, although in arriving at that question of value the evidence that has to be given is allowed with a good deal more latitude than is the case in ordinary condemnation proceedings. As you know, in condemnation proceedings very little evidence usually is allowed to be put in on the question of cost; but in these proceedings the Supreme Court of the United States has expressly held that that is a proper element to be considered. Of course, everything depends upon the peculiar facts in each case. If a corporation had recently been organized so that its manufacturing plant was a comparatively new one, why, the question of cost would be the primary one, probably, to be taken up, the question of cost in installing that plant. Where a business has been running as long as the business of this complainant, which was originally established in 1825, we cannot of course go back to the original sources, but we shall have to content ourselves with showing the present value of the property invested in that business and then such other elements as it is proper for the Court to take into consideration in fixing the price to be charged for the product which we manufacture. And, of course, there are a good many considerations that have to be considered there that do not enter into the ordinary condemnation proceeding, and the general principle is stated in the leading case of Smyth *v.* Ames, 169 U. S. In that case the Supreme Court said that in order to ascertain that value, that is the value of the investment in the business, "the original cost of construction, the amount 4 expended in permanent improvements, the amount of market value of its bonds and stock, present, as compared with the original cost of production, the probable earning capacity of the property under particular rates prescribed by statute and the sum required to meet operating expenses, are all matters for consideration and are to be given such weight as may be just and right in each case."

Now, included in the value of the property invested in the business in the case of a public service corporation of this kind, will be the value of the special franchises of the company, and also included in that value will be, as we shall maintain, the value of the good will of a business which has been established as long as this has, and which is operated in one of the great commercial centers of the globe, and that has been recognized by the courts, and in fact has been commented upon by Judge Lacombe in his recent opinion. They have never shown what the value of all our property is, taking into consideration, as the courts have held in a number of cases, the market value of the stocks and bonds. That may not have any direct bearing, but it has an indirect and very helpful bearing upon the general problem to be considered—that is, whether, taking all the circumstances and conditions into consideration, the rate fixed by the Legislature is a reasonable one.

In showing what the income from our business is, we shall not attempt to go back beyond the last year for which we have the accounts made up. Evidently, if the present value of the plant and investment is to be taken into consideration, the court must be limited to the present revenue received at the old rate from the operation of the company. I do not mean to say that if, for instance, we show what the cost has been during the year 1905, or during the period 5 that was selected before the Legislative Commission, that that could not be supplemented by showing any changes that have taken place since that particular account was made up; I only mean to indicate generally the limitation that we cannot go back indefinitely to see what the operating expenses were, because, of course, the court must be limited by the conditions which prevail at the present time.

We had hoped in reading our evidence in, our formal evidence, that we should be able to read in evidence the testimony that was taken before the Legislative Commission; that has been printed and we have it here now in bound volumes, and there was some negotiation to that end, but counsel for the defendants think we ought to present our case in a legal manner, and I shall therefore not attempt to make our record from the Gas Commission record, though I think probably we can save a good deal of time as we go along in the mere formal matters that were contained in that record.

I offer in evidence the consolidated agreement of September 29, 1884, by which the present company was formed. This was an agreement between the New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company of the City of New York, the Municipal Gas Light Company of New York, the Knickerbocker Gas Light Company and the Harlem Gas Light Company.

Received in evidence and marked Complainant's Exhibit 1.

Mr. Garver: I offer in evidence Chapter 85 of the Laws of 1823, being an act entitled "An act to incorporate the Gas Light Company of the City of New York.

6 Received in evidence as Complainant's Exhibit 2, but not marked.

Mr. Garver: I offer in evidence Chapter 313 of the Laws of 1837, being an act entitled "An act to amend an act entitled 'An act to incorporate the Gas Light Company of the City of New York,' passed March 26, 1823."

Received in evidence as Complainant's Exhibit 3, but not marked.

Mr. Garver: I offer in evidence Chapter 424 of the Laws of 1855, being an act entitled "An act to amend an act entitled 'An act to incorporate the Gas Light Company of the City of New York,' passed March 26, 1823."

Received in evidence as Complainant's Exhibit 4, but not marked.

Mr. Garver: I offer in evidence Chapter 59 of the Laws of 1830, being an act entitled "An act to incorporate the Manhattan Gas Light Company."

Received in evidence as Complainant's Exhibit 5, but not marked.

Mr. Garver: I offer in evidence Chapter 163 of the Laws of 1847, being an act entitled "An act to provide for increasing the capital stock of the Manhattan Gas Light Company of the City of New York."

Received in evidence as Complainant's Exhibit 6, but not marked.

Mr. GARVER: I offer in evidence Chapter 89 of the Laws of
7 1852, being an act entitled "An act to increase the capital stock of the Manhattan Gas Light Company of the City of New York."

Received in evidence as Complainant's Exhibit 7, but not marked.

Mr. GARVER: I offer in evidence Chapter 543 of the Laws of 1855, being an act entitled "An act to increase the capital stock of the Manhattan Gas Light Company of the City of New York."

Received in evidence as Complainant's Exhibit 8, but not marked.

Mr. GARVER: I offer in evidence certified copy of the certificate of organization of the Manhattan Gas Light Company, dated December 31, 1867. This is a reincorporation of the company under the general laws of 1848, Chapter 37, pursuant to privilege conferred by Chapter 480 of the Laws of 1867.

Received in evidence and marked Complainant's Exhibit 9.

Mr. GARVER: I offer in evidence Chapter 545 of the Laws of 1855, entitled "An act to incorporate the Metropolitan Gas Light Company of the City of New York."

Received in evidence as Complainant's Exhibit 10, but not marked.

Mr. GARVER: I offer in evidence Chapter 476 of the Laws of 1881, being an act entitled "An act to provide for the payment of certain certificates of indebtedness of the Metropolitan Gas Light Company of the City of New York."

Received in evidence as Complainant's Exhibit 11, but not marked.

8 Mr. GARVER: I offer in evidence from page 1736, volume
3, of the preceedings before the Gas Commission, certificate of reorganization under the general laws of 1848 of the New York Gas Light Company, dated May 1, 1871.

Received in evidence as Complainant's Exhibit 12, but not marked.

Mr. GARVER: I offer in evidence from page 1745 of the same volume certificate of incorporation of the Harlem Gas Light Company, dated February 1, 1855.

Received in evidence as Complainant's Exhibit 13, but not marked.

Mr. GARVER: I offer in evidence from page 1747 of the same volume, certificate of increase of capital stock of the Harlem Gas Light Company, dated July 21, 1869.

Received in evidence as Complainant's Exhibit 14, but not marked.

Mr. GARVER: I offer in evidence from page 1787 of the same volume, certificate of incorporation of the Municipal Oxygen Gas Company of the City of New York, dated May 29, 1874.

Received in evidence as Complainant's Exhibit 15, but not marked.

Mr. GARVER: I offer in evidence from page 1789 of the same volume, order changing the name of the Municipal Oxygen Gas Company to that of the Municipal Gas Light Company, dated June 5, 1876.

Received in evidence as Complainant's Exhibit 16, but not marked.

9 Mr. Garver: I offer in evidence from page 1791 of the same volume, certificate of increase of capital stock of the Municipal Gas Light Company of New York, dated March 3, 1880.

Received in evidence as Complainant's Exhibit 17, but not marked.

Mr. Garver: I offer in evidence from page 1803 of the same volume, certificate of incorporation of the Knickerbocker Gas Light Company, dated June 24, 1876.

Received in evidence as Complainant's Exhibit 18, but not marked.

Mr. Burr: It seems to me there is a practical difficulty which exists here at this present moment that we ought to have understood and arranged about so as to save time. I understand that the Stevens Commission had during the examination an expert accountant making an examination of the books. Might not we be doing the same thing? Without an examination of these books and without an inspection of the plants by the engineers, we are not in a position to show exactly what the cost of the production and distribution of gas is in the City of New York. Now, if while we are conducting the examination we could have that done, it would facilitate matters.

The Master: That is a matter for the complainant to decide upon. If the complainant is willing, for your accommodation, to make such an arrangement, that is its affair; but as a matter of absolute right, of course, I have got nothing to say about it. You would have to prove your case in the ordinary way, getting evidence from the——

10 Mr. Burr: Well, I don't know, that was the reason we make the application here to examine the books and inspect the property, and whether we can do that before you or make the application before the court, or whether the complainant will be willing to facilitate matters without——

The Master: As far as I am concerned, I would have no power to require them to let you examine their plant or go through their books.

Mr. Burr: I merely call attention to it now at this early hour, because I can see some difficulty arising later on unless we are afforded an opportunity to make the examination I speak of.

Mr. Garver: The complainant has been required to prove its case by formal and legal evidence, and the complainant's counsel does not feel called upon at this stage of the proceeding to enter into any stipulation or suggest any stipulation. It seems to me that when the defendants consider the method of putting in their evidence, they must adopt such plan for securing that evidence as seems to them advisable.

The Master: We will adjourn now till 2 p. m.

After Recess.

Gilbert Francklyn, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. Garver:

Q. You are employed by the Consolidated Gas Company?
A. Yes, sir.
Q. And you have charge of the real estate of that company?
A. Yes, I have.
Q. For how long have you had charge of the real estate?
A. Since, I think, 1901 or 1900; 1901, to be sure.
11 Q. Are you familiar with the real estate which that company holds in this city?
A. Yes.
Q. Have you attended personally to the payment of the taxes of that real estate during the past few years?
A. I have.
Q. Have you produced the deeds to the Gas Company of the land held by it?
A. Have I produced them? Yes, I have them here.

Mr. Garver: I offer in evidence deed from the New York Gas Light Company to the Consolidated Gas Company of New York, dated November 10, 1884, the consideration stated being one dollar and other valuable considerations, recorded in the office of the Register of the County of New York, in Liber 1863 of Conveyances, page 22, on January 30, 1885.

Mr. Gans: I want to object to the introduction of any evidence of real estate owned by the Gas Company, except in so far as it shall be proved that that real estate is actually and necessarily used in the gas making business. I object to it on the ground that it is incompetent, irrelevant and immaterial.

Mr. Burr: I join in that objection.

The Master: I will allow it.

Exceptions taken by Mr. Gans and Mr. Burr.

The Master: It is understood that the foregoing objection, ruling and exception shall be deemed applicable to all subsequent deeds offered, without the necessity of repeating the same.

(The foregoing deed was received in evidence and marked Complainant's Exhibit 19.)

Mr. Garver: I offer in evidence a deed from the Manhattan Gas Light Company to the Consolidated Gas Company of New York, dated November 10, 1884, the consideration stated being one dollar and other valuable considerations, recorded in the office of the Register of the County of New York in Liber 1863 of Conveyances, page 27, January 30, 1885. 12

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 20.

Mr. Garver: I offer in evidence deed from the Municipal Gas Light Company to the Consolidated Gas Company of New York, dated November 10, 1884, recorded January 30, 1885, in the office of the Register of the County of New York in Liber 1863 of Conveyances, page 44, the consideration being one dollar and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 21.

Mr. **Garver**: I offer in evidence deeds from the Knickerbocker Gas Light Company to the Consolidated Gas Company of New York, dated November 10, 1884, recorded in the said Register's office on January 30, 1885, in Liber 1863 of Conveyances, page 46, the consideration being one dollar and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 22.

Mr. **Garver**: I offer in evidence deed from the Harlem Gas Light Company to the Consolidated Gas Company of New York, dated November 10, 1884, and recorded in the said Register's office on January 30, 1885, in Liber 1863 of Conveyances, page 49, the consideration being one dollar and other valuable considerations.

The same objection, ruling and exception.

13 Received in evidence and marked Complainant's Exhibit 23.

Mr. **Garver**: I offer in evidence deed from the Metropolitan Gas Light Company of the City of New York to the Consolidated Gas Company of New York, dated November 10, 1884, recorded in the said Registter's office January 30, 1885, in Liber 1863 of Conveyances, page 33; the consideration being one dollar and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 24.

Mr. **Garver**: I offer in evidence deed from Philip Wagner and wife to the Consolidated Gas Company of New York, dated March 16, 1892, and recorded in said Register's office on March 17, 1892, Block Series of Conveyances, Section 6, page 450; indexed under block number 1643 on the land map of the City of New York; the consideration stated being one dollar and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 25.

Mr. **Garver**: I offer in evidence deed from same to same, bearing date the same day, recorded in same liber on the same date at page 451, the consideration stated being $65,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 26.

Mr. **Garver**: I offer in evidence deed from Jacob A. Weil to the Consolidated Gas Company of New York, dated January 7, 1893, recorded in said Register's office in Block Series of Conveyances,
14 Section 6, Liber 12, page 394, indexed under block No. 1643, the consideration stated being $25,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 27.

Mr. **Garver**: I offer in evidence deed from Emma Wood to the Consolidated Gas Company of New York, dated April 11, 1885, recorded in said Register's office in Liber 1870 of Conveyances, page 446, on May 5, 1885, the consideration stated being $25,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 28.

Mr. **Garver**: I offer in evidence deed from Silas B. Brownell and wife to the Consolidated Gas Company of New York, dated March 3, 1902, and recorded in said Register's office on the same day in Block Series of Conveyances, Section 3, Liber 77, page 355; indexed under Block No. 70, consideration $1,000 and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 29.

Mr. **Garver**: I offer in evidence deed from Benjamin Weed to the Consolidated Gas Company of New York, dated March 17, 1899, recorded in said Register's Office on June 23, 1902, in Block Series of Conveyances, Section 3, Liber 83, page 320, indexed under Block No. 952; consideration $30,000.00.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 30.

Mr. **Garver**: I offer in evidence deed from Henry Fuldner to the
Consolidated Gas Company of New York dated September 27,
15 1899, and recorded in said Register's Office on October 5,
1899, in Block Series of Conveyances, Section 3, Liber 64,
page 348; indexed under Block No. 978; consideration $31,000.00.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 31.

Mr. **Garver**: I offer in evidence deed from Michael John Farrell to the Consolidated Gas Company of New York, dated March 31, 1902, recorded in said Register's Office April 4, 1902, Block Series of Conveyances, Section 3, Liber 82, page 80; indexed under Block No. 978; consideration $1.00 and other valuable considerations.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 32.

Mr. **Garver**: I offer in evidence deed from Frederic P. Forster, Referee, to the Consolidated Gas Company of New York, dated March 31, 1888, recorded in said Register's Office on April 4, 1888, in Liber 2134 of Conveyances, page 31; consideration $11,100.00.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 33.

Mr. **Garver**: I offer in evidence deed from Ezra W. Miller and others as Executors to the Consolidated Gas Company of New York, dated April 8, 1897, recorded in the Clerk's Office of the County of Bergen, New Jersey, April 14, 1897, in Block No. 444 of Deeds, page 568; consideration $2,500.00.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 34.

Mr. **Garver**: I offer in evidence deed from Henry Murray
16 to the Consolidated Gas Company of New York, dated February 7, 1898, recorded in the Office of the Register of New York County, on February 7, 1898, in Block Series of Conveyances, Section 4, Liber 58, page 383; indexed under Block Nos. 1071 and 1070; consideration one dollar and other valuable consideration.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 35.

Mr. **Garver**: I offer in evidence deed from Eugene Higgins to the Consolidated Gas Company of New York, dated April 23, 1891, recorded in the office of the Register on September 4, 1891, in Block Series of Conveyances, Section 4, Liber 7, page 315, indexed under Block No. 1093, consideration $18,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 36.

Mr. **Garver**: I offer in evidence — from Charles V. Lamb to the Consolidated Gas Company of New York, dated September 30, 1892, recorded in said Register's office on November 2, 1892, in Block Series of Conveyances, Section 4, Liber 17, page 406, indexed under Block No. 1093, consideration $7,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 37.

Mr. **Garver**: I offer in evidence deed from Mary Behan and others to the Consolidated Gas Company of New York, dated January 27, 1892, recorded in said Register's office on the same date in Block Series of Conveyances, Section 4, Liber 1274, indexed under Block No. 1092, consideration $6,600.

The same objection, ruling and exception.

17 Received in evidence and marked Complainant's Exhibit 38.

Mr. **Garver**: I offer in evidence deed from Catarine Diercks to the Consolidated Gas Company of New York, dated December 7, 1891, and recorded on the same date in Block Series of Conveyances, Section 4, Liber 8, page 308, in the office of the Register of the County of New York, indexed under Block No. 1092, consideration $6,600.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 39.

Mr. **Garver**: I offer in evidence deed from Robert Auld to the Consolidated Gas Company of New York, dated May —, 1888, and recorded in said Register's office on May 23, 1888, in Liber 2140 of Conveyances, page 269, consideration $8,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 40.

Mr. **Garver**: I offer in evidence deed from Edward Cooper and others, as executors of Peter Cooper, deceased, to the Consolidated Gas Company of New York, dated April 30, 1887, and recorded in said Register's office on May 11, 1887, in Liber 2059 of Conveyances, page 159, consideration $35,000.

The same objection, ruling and exception.

Received in evidence and Marked Complainant's Exhibit 41.

Mr. **Garver**: I offer in evidence deed from Rosa Docter to the Consolidated Gas Company of New York, dated December 1, 1904, recorded in said Register's office the same day, in Block Series of Conveyances, Section 4, Liber 100, page 410, indexed under

18 Block No. 1156, consideration $100.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 42.

Mr. Garver: I offer in evidence deed from Mary T. Constant and others as executors, to the Consolidated Gas Company of New York, dated September 2, 1890, and recorded in said Register's office on October 1, 1890, in Liber 2363 of Conveyances, page 71, consideration $7,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 43.

Mr. Garver: I offer in evidence deed from Peter Reilly to the Consolidated Gas Company of New York, dated February 2, 1891, and recorded in said Register's office on February 5, 1891, Block Series, Liber 2, Section 6 of Conveyances, page 49, and indexed under Block No. 1683, consideration one dollar.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 44.

Mr. Garver: I offer in evidence deed from Giuseppe Molea to the Consolidated Gas Company of New York, dated September 1, 1905, recorded in said Register's office on September 16, 1905, Block Series of Conveyances, Section 6, Liber 1, page 149, indexed under Block No. 1683, consideration one dollar and other valuable consideration.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 45.

19 Mr. Garver: I offer in evidence deed from John D. Crimmins to the Consolidated Gas Company of New York, dated December 24, 1892, recorded in said Register's office December 28, 1892, Block Series of Conveyances, Section 7, Liber 13, page 4, indexed under Block No. 1999, consideration $235,000.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 46.

Mr. Garver: I offer in evidence deed from the Mayor, Aldermen and Commonalty of the City of New York to the Consolidated Gas Company of New York, dated December 29, 1897, recorded in said Register's Office on December 31, 1897, in Block Series of Conveyances, Section 6, Liber 40, page 312; indexed under Block No. 1692; consideration $27,500.00.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 47.

Q. Have you made a map or chart showing the various pieces of real estate described in these deeds?

A. I have had such a map made, yes, sir.

Q. Is the map now shown you such map?

A. That is a blueprint; yes.

Mr. Gans: I think we ought to object to that on the grounds that Mr. Francklyn has not shown qualifications to prove that that is a correct map, unless we allow it to go in, subject to further proof.

Mr. Garver: I have not proved it yet.

Mr. Gans: He is not competent to prove that.

The Master: I assume that is a preliminary question. I overrule the objection.

Exception taken by Mr. Gans.

Q. Have you compared this blue print, showing the various parcels of real estate here, with the deeds which have been offered in evidence? 20

A. Yes; I have.

Q. Have you added the reference to the deeds yourself, or was that done by some one else?

A. It was done in my presence; it was done by some one else.

Q. And you have verified the reference in each case?

A. I have verified that twice.

Q. Can you state, from comparing the deeds with this blue print, that the diagrams shown on the blue print of the various parcels of real estate correctly represent the descriptions contained in the deeds respectively offered in evidence to-day?

A. Yes; I can.

Q. With the reference in each case to a particular deed?

A. Yes, the reference on that map to the deed which covers it.

Q. That runs through how many pages of this blue print?

A. 12 pages of blue prints that have been already referred to. There is one page that has not been referred to.

Q. The pages Nos. 1 to 12, inclusive, you mean?

A. Pages 1 to 12, inclusive.

Q. Take page No. 1, for instance. What does this first part of the real estate at the top represent?

Mr. Gans: I object to that, if your Honor please. I do not think this witness is qualified to testify as an expert draughtsman with respect to the accuracy of this paper, or what it represents. It may be that we can come to an agreement that will permit this diagram to go in but it ought not to go in in this way until we have had some opportunity to examine it and waive, if we choose to waive, the proper technical form of proof.

Mr. Garver: If this is not proper technical proof, I do not know what is.

The Master: I will allow it.

Exception taken by Mr. Gans.

21 A. It represents a piece of property at the corner of Lexington Avenue and 116th Street.

Q. Conveyed by whom to whom?

A. Philip Wagner and wife to the Consolidated Gas Company of New York.

Q. Is that the property that is described in the deeds Exhibits No. 25 and No. 26?

Mr. Gans: I make the same objection.

The same ruling and exception.

A. It is the property described in a deed which was handed in just now; I do not recall the number.

Q. Take the next piece lower down. What does that represent?

A. The next represents an L-shaped piece of property at the corner of Third Avenue and 114th Street.

Q. Conveyed by whom to whom?

A. Part of it was conveyed by the Harlem Gas Light Company to the Consolidated Gas Company of New York, and part of it was conveyed by Jacob Weil to the Consolidated Gas Company of New York.

Q. That is one of the deeds offered in evidence to-day?

A. One of the deeds offered in evidence to-day.

Mr. Gans: I presume my objection holds good to this line of questions.

The Master: Yes, the same objection holds good to all these questions, and the exception.

Q. And that is true to all other parcels of real estate on that page?

A. Do you wish me to go into detail about them?

Q. No.

A. These are deeds that have been handed in to all these pieces of property.

Q. And they correctly represent the property as described in these deeds?

A. They correctly represent the property as described in these deeds.

22 Q. And that is true as to all the parcels represented?

A. Yes, sir.

Q. On the other pages, through to page 12, inclusive?

A. It is true that the deeds cover all that property, but the deeds cover a little more than that property. There are some cases where the company does not now own all the property covered by the deeds.

Q. Then on this chart you have placed only the land included in these deeds which the company at present owns?

A. Exactly.

Q. Some portions of the land described in these various deeds have been sold and conveyed by the company?

A. Some portions have, yes, sir.

Q. And this chart represents accurately the parcels of land that still remain and are at present owned by the Consolidated Gas Company?

Mr. Gans: I object to that as not the best method or the proper method of proving that claim.

The Master: As to whether they are at present owned?

Mr. Gans: Yes.

The Master: I will allow it.

Exception taken by Mr. Gans.

Mr. Garver: I offer in evidence pages 1 to 12, inclusive of this blue print, for the sake of convenience in referring to this property.

Mr. Gans: I object to the introduction of this Exhibit as not properly establishing what it purports to set forth, the witnesses not having been properly qualified.

Objection overruled; exception taken by Mr. Gans.

Pages 1 to 12 are received in evidence as Complainant's Exhibit 48, and so marked.

23 Q. Have you obtained the appraised values of the parcels of land included in this blue print, Exhibit 48, from the official records for the present year, 1906?

A. I have; yes, sir.

Q. Taking this blue print, can you say, following the parcels in their order, and beginning at the top of page 1, what is the appraised value of those respective parcels for the year 1906?

A. I can do so.

Mr. Page: Appraised by whom?

Mr. Garver: The official appraisal for the purpose of taxation by the City of New York.

Mr. Page: Do you mean the rate at which this is assessed for taxation?

Mr. Garver: Yes, the assessed value for taxation.

Mr. Gans: I object to it as incompetent, irrelevant and immaterial.

Mr. Garver: Of course it is not conclusive evidence, but it is some evidence of value. Under the present system the property is supposed to be assessed at its full value. Of course, we know as a matter of fact, and I think as a matter of fact we have judicial knowledge that that may not be quite true in New York County, it is perhaps a little less than the full value, placed for the purpose of appraisal for taxation, but we do not intend to stop with this. We merely offer this as some evidence of the value of our real estate.

The Master: Ordinarily, of course, assessed valuation is no evidence of the value of real estate. I will exclude it, Mr. Garver, and he can answer the question so that it will go on the record.

(After argument.)

Exception.

The Master: The answer will have to be taken, of course; you will get the fact on the record.

24 A. (Continuing:) This first piece of land on the map, at 116th Street and Lexington Avenue, is assessed under three different lots, Block No. 1643, Lots 56, 57 and 58. The total of these three lots is $53,500.

By Mr. Burr:

Q. The total assessment you mean?

A. Yes, land with improvements; total assessment. The next piece is at the corner of 114th Street and Third Avenue. That is assessed under two different lots, Block No. 1642, lots 32 and 33, amounting to $95,000. May I ask as to whether you want the total of the land with improvements? The City values it in two ways, land alone and land with improvements.

By Mr. Garver:

Q. I do not care anything about improvements in taxation; you had better give the land values alone.

Mr. Page: I think that if this witness is allowed to testify as to copies of official figures, we had better have both of them. I do not see how it is competent to prove city assessments by putting a witness on the stand who says that he has been up there and has made his calculations, and they are thus and so. If they are going to offer evidence as to assessed valuation, the best evidence is the books from which the valuations are taken.

Mr. Garver: A sworn copy is perfectly good evidence, and this is a sworn copy.

Mr. Page: Of an official document?

Mr. Garver: Certainly; there are various ways of proving official documents. It is very rare that the original is produced; we
25 can produce a certified copy, or we can produce a verified
sworn copy, or produce the witness who has examined it and can state that it is a true copy. I have no objection to your putting the rest in evidence.

Mr. Page: I shall object to any partial statement.

Mr. Garver: This is no partial statement. It is a statement of the land values. I have not said anything about improvements thus far. If you want to put in the others, it is for you to do.

Mr. Page: No, I will not; if you are offering a record of the valuation——

Mr. Garver: No, I am not offering a record of the valuation. I am examining a witness, and am not asking him as to particular parcels. I am not offering any record in evidence.

Mr. Gans: A moment ago Mr. Garver was offering a sworn copy of a record; now it turns out that he has been examining a witness.

Mr. Garver: I have been examining a witness.

The Master: Why do you not allow Mr. Garver to examine his witness or put in his abstract showing these facts subject to verification. What is the point? In an action of this kind, proceeding in this way in a Master's Office, being technical about these rules of proof, who gains anything by it? It is not to be presumed that Mr. Garver falsifies these records from the office of the Commissioners of Taxation and Assessments. If he is wrong it is easy enough for you to show it. Why should we go to the expense and delay and trouble here of bringing down a cab full of these enormous books simply for the purpose of seeing if Mr. Garver has made a legal proffer
26 of the assessed valuations of the company's property in the
City of New York?

Mr. Gans: I do not think your Honor gets the point of our objection. The point is not in regard to the method of proof in evidence, where it is subject to correction, but the point is that he is not to be permitted to put in part of the record; if he is to put in a record he is to put in the whole of it.

Mr. Page: We do not wish to be charged with the duty of putting in the value of these lands with the improvements. He ought not to be allowed to put in the value of this land alone, he should put in the whole record as it stands. There are two assessments; the first is one the land alone, and the other is with improvements; that is, the entire property.

Mr. Garver: I think I ought to be permitted to put this in in my own way. If you want to put it in, there is the witness on cross-examination, and it is easy enough to put it in. I do not think I ought to be forced to put it in in a way to suit you.

Mr. **Gans**: Your Honor catches the point? It is a record he is putting in.

Mr. **Garver**: It is not a record. The witness has a right to refresh his recollection by referring to a memorandum.

Mr. **Gans**: But it is an incompetent way of proving a record.

Mr. **Garver**: I insist that it is a perfectly competent way of proving it. So far as that is concerned, there is nothing incompetent about that method of proof.

Mr. **Page**: If you insist that it is competent, I will object then on the ground that it is not the best evidence.

27 The **Master**: Does this memorandum here show both the valuation of the land alone and the land with improvements?

Mr. **Garver**: Yes.

The **Master**: What is the objection to putting in both of them?

Mr. **Garver**: I don't like to be forced to put in something out of order and which I don't think it is advisable to present in that way.

Mr. **Gans**: Our point is this: If he had the original record here he could not put in part of that record without putting in the rest of it. When he puts in a sworn copy of a record, he cannot be in any better position than offering the original.

Mr. **Garver**: Certainly, if the original were here I would proceed to offer that—one column of land values; that is exactly what I would have a right to do and you could proceed to offer in evidence the next column, if you so desired. I can offer in evidence one sentence from a paper, if I wish to, the same as I could the whole paper. I am not required to put in the entire document every time I produce a document. I put in what I consider to be relevant to the issues.

The **Master**: I do not see what difference it makes, because it is all a matter of record that either side can get at. As this evidence has been excluded on your objection, I will allow Mr. Garver to proceed and develop it.

Mr. **Gans**: Exception.

The **Witness**: The next parcel is land at the corner of 114th Street and Third Avenue, conveyed to the company by the Harlem Gas Light Company and Jacob Weil; the assessed value of this in 1906 is $49,000.

28 The next parcel is at the corner of Irving Place and 15th Street, conveyed to the company by the Manhattan Gas Light Company, M. L. Wood and Silas B. Bromwell; the assessed value is $175,000.

The next parcel is at the corner of Elizabeth and Hester Streets, conveyed to the company by the New York Gas Light Company; the assessed value is $107,100.

The next parcel is between 17th and 18th Streets, between Avenues B and C (that was on page 2 of the map), conveyed to the company by the Manhattan Gas Light Company; the assessed value is $179,000.

The next parcel is on the south side of 15th Street, between Avenues A and B, conveyed to the company by the Manhattan Gas Light Company; the assessed value is $20,000.

The next parcel is between 14th and 15th Streets, west of Avenue C, conveyed by the Manhattan Gas Light Company; the assessed value is $275,000.

The next parcel is between 14th and 15th Streets, Avenues C and D, conveyed by the Manhattan Gas Light Company; the assessed value is $350,000.

The next parcel is between 15th and 16th Streets, east of Avenue C, conveyed by the Manhattan Gas Light Company; the assessed value is $155,000.

The next parcel is between 15th and 16th Streets, west of Avenue D, conveyed by the Manhattan Gas Light Company; the assessed value is $90,000.

The next parcel is between 14th and 15th Streets, from Avenue D to Tompkins Street, conveyed by the Manhattan Gas Light Company; the assessed value is $180,000.

The next parcel is between 15th and 16th Streets, Avenue D to Tompkins Street, conveyed by the Manhattan Gas Light Company; assessed valuation is $115,000.

The next parcel is the bulkhead between 14th and 15th
29 Streets, East River, conveyed by the Manhattan Gas Light
Company; the assessed value is $35,000.

The next parcel is the bulkhead between 15th and 16th Streets, East River, conveyed by the Manhattan Gas Light Company; the assessed valuation is $35,000.

On page 3. The first parcel is between 19th and 20th Streets, west of the marginal street, conveyed by the Manhattan Gas Light Company; assessed value is $95,000.

The next parcel is between 18th and 19th Streets, Tenth Avenue and the marginal street, conveyed by the Manhattan Gas Light Company; the assessed value is $332,000.

The next parcel is between 17th and 18th Streets, Tenth Avenue to the marginal street, conveyed by the Manhattan Gas Light Company; the assessed valuation is $285,000.

The next parcel is between 16th and 17th Streets, Tenth Avenue to the marginal street, conveyed by the Manhattan Gas Light Company; the assessed value is $225,000.

The next parcel is on the north side of 18th Street between 9th and 10th Avenues, conveyed by the Manhattan Gas Light Company; the assessed value is $32,000.

The next parcel is on the south side of 18th Street, between 9th and 10th Avenues, conveyed by the Manhattan Gas Light Company; the assessed value is $90,000.

On page 4. The first parcel is between 21st and 22nd Streets and First Avenue and Avenue A, conveyed by the New York Gas Light Company; the assessed value is $500,000.

The next parcel is between 20th and 21st Streets, west of Avenue
A, conveyed by the New York Gas Light Company and by
30 Benjamin Weed; the assessed value is $340,500.

The next parcel is on the south side of 20th Street, between First Avenue and Avenue A, conveyed by the New York Gas Light Company; the assessed value is $50,000.

The next parcel is between 21st and 22nd Streets, Avenue A and the marginal street, conveyed by the New York Gas Light Company; the assessed value is $351,500.

The next parcel is between 20th and 21st Streets, from Avenue A to Avenue B, conveyed by the New York Gas Light Company, by F. P. Foster, Referee, by Henry Fuldner and wife and by Michael John Farrell; the assessed value is $369,000.

The next parcel is between 20th and 21st Streets, Avenue B and the marginal street, conveyed by the New York Gas Light Company; the assessed value is $86,000.

On page 5. The next parcel is on the north side of 42nd Street, between 11th Avenue and the Hudson River, conveyed by the Metropolitan Gas Light Company; the assessed value is $50,000.

The next parcel is between 41st and 42nd Streets, from 11th Avenue to the Hudson River, including the bulkhead of the pier; the assessed value is $600,000.

The next parcel is on the north side of 42nd Street, between Tenth and Eleventh Avenues, conveyed by Henry Murray and wife to the Consolidated Gas Company; the assessed value is $38,000.

The next parcel is on the north side of 41st Street, between 10th and 11th Avenues, conveyed by the Metropolitan Gas Light Company; the assessed value is $58,000.

The next parcel is property at Shadyside, on which I have no valuation in the city, and I don't think I have any assessed value
31 of that, so I will leave that out.

Mr. **Burr**: You spoke of a piece of property containing bulkhead and pier.

The **Witness**: From 41st Street to 42nd Street, and from 11th Avenue to the Hudson River.

Mr. **Burr**: Was that acquired through the deed you have offered here?

The **Witness**: Yes, sir; acquired through deed of the Metropolitan Gas Light Company, and while the pier is assessed separately by the city from the land, it is all in one piece in the map, and I have added them together. If you prefer them separately, I will give you that.

Mr. **Garver**: I have no objection to giving them separately.

Mr. **Gans**: It might be well to mark that paper for identification when the witness is through, and it will have everything on it.

The **Witness**: I don't think you could understand it.

Mr. **Burr**: I would like to have that particular piece of property divided.

The **Witness**: The land in that property between 41st and 42nd Streets, from 11th Avenue to the Hudson River is $525,000; the bulkhead and pier is assessed in a separate lot at $75,000. I have not given the block and lot numbers in each case; if it would be more convenient I can do that.

Mr. **Garver**: No, proceed as you have been doing.

32 The Witness: Page 6. The next parcel is between 45th and 46th Streets, from 11th Avenue to the Hudson River, conveyed by the Municipal Gas Light Company by Edward Cooper, Executor, etc., and by Eugene Higgins and by Charles V. Lamb; the assessed value is $250,000.

The next parcel is between 44th and 45th Streets, from 11th Avenue to the Hudson River, conveyed by the Municipal Gas Light Company, by M. Behan, Catharine Diercks and by Robert Auld; the assessed value is $315,000.

The next parcel is the bulkhead between 45th and 46th Streets on the Hudson River, conveyed by the Municipal Gas Light Company; assessed at $75,000.

The next parcel is the bulkhead between 44th and 45th Streets and Hudson River, conveyed by the Municipal Gas Light Company; assessed at $75,000.

Page 7. The next parcel is between 62nd and 63rd Streets, between First Avenue and Avenue A, conveyed by Metropolitan Gas Light Company; the assessed value is $125,000.

The next parcel is between 60th and 61st Streets, on the west side of Avenue A, conveyed by the Metropolitan Gas Light Company; the assessed value is $156,000.

The next parcel is on the northwest corner of Avenue A and 60th Street, conveyed by the Metropolitan Gas Light Company; the assessed value is $15,000.

The next parcel is between 65th and 66th Streets, Amsterdam Avenue to West End Avenue, conveyed by the Metropolitan Gas Light Company; the assessed value is $500,000.

The next parcel is on the south side of 65th Street, between West End and Amsterdam Avenues, conveyed by Rosa Docter; the assessed value is $21,000.

The next parcel is between 65th and 66th Streets, from West End
Avenue to the New York Central Railroad tracks, conveyed
33 by the Metropolitan Gas Light Company; the assessed value
is $140,000.

Page 9: The next parcel is from 98th and 99th Streets, from 1st to 2nd Avenues, conveyed by the Knickerbocker Gas Light Company; the assessed value is $365,000.

The next parcel is from 98th to 99th Streets, from First Avenue to the marginal street, conveyed by the Knickerbocker Gas Light Company and by the City of New York; the assessed value is $130,000.

Page 10: The next parcel is between 110th and 111th Streets on the west side of First Avenue, conveyed by the Harlem Gas Light Company and by Mary T. Constant, as executrix; the assessed value is $282,000.

The next parcel is between 110th and 111th Streets from First Avenue to Pleasant Avenue, conveyed by the Harlem Gas Light Company; the assessed value is $285,000.

The next parcel is the pier and bulkhead between 110th and 11-th Streets and the Harlem River, conveyed by the Harlem Gas Light Company; the assessed value is $30,000.

The next parcel is between 111th and 112th Streets west of First Avenue, conveyed by the Harlem Gas Light Company; by Peter Riley, and by Guiseppe Molea and wife; the assessed value is $67,000.

Page 11: The next parcel is between 132nd and 133rd Streets, east of 12th Avenue, conveyed by John D. Crimmins; the assessed value is $265,000.

The next parcel is on Broadway or Kingsbridge Road and Jerome Avenue, conveyed by the Harlem Gas Light Company to the Consolidated; the assessed value is $91,000.

Q. What is the total assessed value for the year 1906 of those parcels of land, exclusive of the land improvements?

A. $8,508,100.

34 Q. Do you know what was the assessed value of the special franchises of the Consolidated Gas Company for the year 1906?

Mr. Gans: That is objected to as incompetent, immaterial and irrelevant.

Mr. Burr: Same objection on behalf of the City.

Mr. Gans: Assessed value of special franchises if your Honor please——

Mr. Garver: For the purposes of taxation.

The Master: That I will also exclude, Mr. Garver.

Exception to Mr. Garver.

Mr. Gans: I want to add to the grounds of my objection that there is no proof of the existence of any special franchises, and therefore no foundation for that question.

Mr. Garver: That may be.

The Master: As regards the special franchises, I may say now to a certain extent they stand upon a different footing than the real estate, and as the case develops later and you put in your proof, whatever it may be, I don't know, it may be it would be quite proper, in my judgment, for Mr. Garver to put in his own proof, if you did not, of what these franchises were assessed at. That may or may not be so; however, for the present I will follow the ruling made in the case of the real estate and exclude it, and then the witness will answer it and it goes on the record.

The Witness: The amount assessed against the Consolidated Company for special franchises in 1906 was $31,900,000.

35 & 36 Q. Do you know what portion of that represented mains and services in the streets, that is, represented tangible property?

Mr. Gans: Do you mean assessed as tangible property?

Mr. Garver: Yes.

The Witness: I don't know. There was another figure of $1500 in the column under mains, services, and so on.

Q. This was the total?

A. This is against the Consolidated Company.

Q. Which included the mains and services?

A. There is a note under that referring to other companies.

Q. But this total of $31,900,000 represented the total amount assessed by the State Board for the year 1906 for special franchises of the company?

A. Yes, sir.

Q. Now, in those special franchises are included the tangible property in the streets; that is, the mains and the services. Do you know what portion of that $31,900,000 was included, or were they not separated?

A. I don't know, sir; they were not separated; that is simply the one figure.

Mr. GARVER: I think that is all with this witness now. There is one question open, but it is now 4 o'clock. Perhaps we had better suspend here. Is there any cross-examination of this witness?

Mr. PAGE: Oh, yes, we will have some.

Mr. GANS: We might wait, then, until the next session.

Hearing adjourned to July 17th, 1906, at 11 A. M.

Last Exhibit:

Complainant's 48.

37 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before: Arthur H. Masten, Special Master.

TUESDAY, *July* 17, 1906, 11 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

38 GILBERT FRANCKLYN resumes the stand for further examination:

Direct examination by Mr. GARVER:

Q. Mr. Francklyn, I call your attention to page 3 of the blueprint, Complainant's Exhibit 48, showing certain real estate west of Tenth Avenue, between 16th and 20th Streets, bounded on the west by a marginal street. That is where the 18th Street plant is located, is it not?

A. Yes, sir, it is.

Q. And this marginal street is the new street that is being opened by the city there?

A. It is.

Q. The deeds that were offered in evidence yesterday, the Consolidated Gas Company, showed land between 10th and 11th Avenues, did it not, comprising——

A. (Interrupting.) Tenth and Eleventh Avenue, and west of Eleventh Avenue.

Q. West of Eleventh Avenue, between 11th and 13th Avenues?

A. Between 11th and 13th Avenues and the bulkheads.

Q. Have you a blueprint showing what was conveyed by that deed?

A. Yes, sir (producing same).

Q. Does the paper now shown you correctly represent the land that was conveyed to the Gas Company and that was included in that 18th Street plant?

Mr. **Gans**: We make the same objection as made before, on the ground that the witness is not qualified to testify to that.

Objection overruled; exception.

A. Yes, sir; that represents the property.

Q. The portion tinted blue?

A. The portion tinted blue. The bulkheads are not tinted, but they were also conveyed in that deed.

Q. The bulkheads between 16th and 18th Streets?

39 A. Between 16th and 17th Streets and 17th and 18th Streets; I don't think the bulkheads at the foot of the street were conveyed.

Q. And the portion of the land included there west of the easterly line of the marginal street is the portion that the city is taking in the condemnation proceedings now pending?

A. Yes, sir.

Q. Do you happen to know whether the city has paid for that land, paid the company for that land which it has taken in this proceeding?

A. I understand it has not paid.

Mr. **Garver**: I offer that blueprint in evidence.

Received in evidence and marked Complainant's Exhibit 49.

Q. Those condemnation proceedings are still pending before the Commissioners, are they not?

A. I am not familiar with that, Mr. Garver.

Q. Have you the deeds conveying the land at Astoria?

A. Yes, sir.

Q. Will you produce them?

The witness produces certain deeds.

Mr. **Garver**: I am anticipating a little; perhaps it is not strictly in order to offer these deeds now until we show the connection between the Astoria Company and the Consolidated Company, but that we shall do later, and I thought it would be more convenient while Mr. Francklyn was on the stand to prove these instruments.

I offer in evidence deed from John D. Crimmins to the Astoria Light, Heat & Power Company, dated January 21, 1899, and recorded in the Queens County Clerk's office on January 24, 1899, in Liber 1211 of Deeds, page 112; the consideration being $750,000.

Mr. Burr: The same objection is made to that that was
40 made yesterday, because we object to the introduction of any
evidence regarding any real estate which is not actually in use for the production and manufacture of gas; it is not claimed that the property in Astoria is used for any such purposes.

Mr. Page: It is further objected to; this is a deed to the Astoria Light, Heat & Power Company, a separate and distinct corporation from the complainant; it has no connection with any of the issues.

The Master: I assume those matters will all be connected later; I will overrule the objection.

Messrs. Gans, Page and Burr except.

Mr. Gans: The same objection, ruling and exception will apply to all these deeds, I presume?

The Master: Certainly.

Received in evidence and marked Complainant's Exhibit 50.

Mr. Gans: As to the connection being shown later, I think it will not be shown there in any other connection between the Astoria Light, Heat & Power Company and the complainant here than that the complainant owns all or a controlling interest in the stock of the Astoria Light, Heat & Power Company and has financed the latter with the funds with which its plant has been built, so that the only relation which the Astoria Light, Heat & Power Company will be shown to bear to the complainant here is that the complainant has as part of its investment the ownership of the stock and bonds of this
company, and possibly some notes. In other words, from our
41 point of view it would be quite as pertinent to foreshadow
that they were going to prove that they owned United States bonds and then prove the ownership by the United States of the site on which a custom house was located and the value of that custom house.

The Master: Possibly if the United States were engaged in making gas in the custom house it might be relevant.

Mr. Gans: If your Honor bases the ruling on that ground, we have no objection to make.

Mr. Page: Would your Honor hold the offer in evidence of deeds of the Standard Gas Company to be competent here to show what this company owns?

Mr. Garver: We shall show a much more intimate connection than that; we shall show that this plant is put up for the purpose of supplying gas to the Consolidated Gas Company, and that the connections are being made for that express purpose.

The Master: I will allow the testimony. In a proceeding of this kind I will say at the outset that no narrow or technical rule will prevail, and it is customary, at least in my practice in equity cases, to take anything that apparently has any reasonable bearing on the questions at issue.

Mr. Page: I wish to state on behalf of the State that this is not a narrow and technical objection, but in my opinion a substantial one.

Mr. Burr: And I say on behalf of the City that the objection is a substantial one to the introduction of any testimony regarding any property not used in the production and distribution of gas.

Mr. Garver: We cannot prove everything in a minute. Now, I
offer in evidence deed from Daniel Mashin to the Astoria
42 Light, Heat & Power Company, dated February 16, 1899,
and recorded in the Queens County Clerk's office on February
20, 1899, in Liber 1212 of Deeds, page 65; the consideration being
$1 and other valuable considerations.

Same objection as to the prior deed offered in evidence.

Same ruling and exception.

Received in evidence and marked Complainant's Exhibit 51.

Mr. Garver: I offer in evidence deed from Hans Peterson to the Astoria Light, Heat & Power Company, dated March 7, 1899, and recorded in the Queens County Clerk's office in Liber 1213 of Deeds, page 14, on March 13, 1899; consideration $1 and other valuable considerations.

Same objection, same ruling; exception.

Received in evidence and marked Complainant's Exhibit 52.

Mr. Garver: I offer in evidence deed from Patrick Ward to the Astoria Light, Heat & Power Company, dated March 23, 1899, and recorded in the Queens County Clerk's office on March 25, 1899, in Liber 1213 of Deeds, page 281; consideration $50,000.

Same objection, same ruling; exception.

Received in evidence and marked Complainant's Exhibit 53.

Mr. Garver: I offer in evidence letters patent from the People of the State of New York to the Astoria Light, Heat & Power Company, dated December 12, 1899, and recorded in the Book of Patents No. 50, page 381, and in the Queens County Clerk's office on December 28, 1899, in Liber 1227 of Deeds, page 2423; consideration, for the promotion of commerce.

43 Same objection, same ruling; exception.

Received in evidence and marked Complainant's Exhibit 54.

Mr. Garver: I offer in evidence deed from Clarence N. Platt to the Astoria Light, Heat & Power Company, dated July 30, 1900, and recorded on July 31, 1900, in the Queens County Clerk's office, in Liber 1239 of Deeds, page 266; consideration $1.

Same objection, same ruling; exception.

Received in evidence and marked Complainant's Exhibit 55.

Mr. Garver: I offer in evidence deed from Edwin North to the Astoria Light, Heat & Power Company, dated September 30, 1901, and recorded in the Queens County Clerk's office on October 31, 1902, in Liber 1289 of Deeds, page 300; consideration, $1 and other valuable considerations.

Same objection, same ruling; exception.

Received in evidence and marked Complainant's Exhibit 56.

Mr. Garver: I offer in evidence deed from William V. Clark to the Astoria Light, Heat & Power Company, dated December 24, 1901, and recorded in the Queens County Clerk's office on July 25, 1902, in Liber 1282 of Deeds, page 390; consideration, $1 and other valuable considerations.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 57*a*.

Mr. Garver: I offer in evidence deed from the Consolidated Gas Company of New York to the Astoria Light, Heat & Power Company, dated July 18, 1902, and recorded on July 23, 1902, in the Queens County Clerk's office in Liber 1282 of Deeds, page
44 341; consideration $1 and other valuable considerations.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 58.

Mr. Garver: I offer in evidence deed from Alexander S. Williams to the Astoria Light, Heat & Power Company, dated March 10, 1904, recorded in the Queens County Clerk's office on August 11, 1905, in Liber 1383 of Conveyances, page 257; consideration $1 and other valuable considerations.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 59.

Mr. Garver: I offer in evidence letters patent from the People of the State of New York to the Astoria Light, Heat & Power Company, dated May 12, 1904, and recorded in the Book of Patents No. 54 page 28.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 60.

Mr. Garver: I offer in evidence deed from Edwin S. Bennett to the Astoria Light, Heat & Power Company, dated December 21, 1904, and recorded in the Queens County Clerk's office on January 25, 1905, in Liber 1381 of Conveyances, page 84; consideration $1 and other valuable considerations.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 61.

Mr. Garver: I offer in evidence deed from Frederick N. Gilbert to the Astoria Light, Heat & Power Company, dated March 24, 1903, and recorded in the Queens County Clerk's office on April 27, 1903, in Liber 1301 of Conveyances, page 238;
45 consideration $1 and other valuable considerations.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 62.

Mr. Page: I move to strike out all the exhibits from 50 to 62, except Exhibit 58, on the grounds already stated in our objections to their reception in evidence.

Motion denied; exception.

Q. Does the preliminary page of Complainant's Exhibit 48, the blue prints, show the property which is conveyed to the Astoria Light, Heat & Power Company?

Mr. Gans: Objected to on the ground that the witness is not competent to testify to the fact.

Objection overruled; exception.

A. Yes, sir; it shows the property conveyed.

Mr. Garver: I offer that in evidence.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 63.

Q. Did you personally compare the descriptions in the deeds with this diagram?

A. Yes, sir.

Q. What is the total acreage included in the deeds that have been offered in evidence, the deeds to the Astoria Light, Heat & Power Company?

Mr. Gans: Same objection as to the competency of the witness to testify to that fact.

Same ruling and exception.

A. 376 acres is the total of upland and land under water.

46 Cross-examination by Mr. Page:

Q. How long have you been in the employ of the Consolidated Gas Company?

A. Since 1895.

Q. And your present position is what?

A. I have charge of their real estate.

Q. What is your title? Have you any?

A. I haven't any.

Q. When you say you have charge of their real estate, what do you mean by that?

A. I attend to such matters as buying and selling, and any small pieces of property rented I attend to, I have charge of the renting of offices for the Company, and general supervision of all their real estate matters, especially tax matters in regard to real estate.

Q. You have introduced a number of deeds here from various corporations to the Consolidated Gas Company dated on November 10th, 1884. That was the date of the organization, was it not, of the Consolidated Gas Company?

A. I believe it was, yes, sir.

Q. Have you introduced in evidence deeds of all the real estate that was conveyed by the constituent companies to the Consolidated Gas Company at that time?

A. Yes.

Q. Has some portion of that property been sold that was deeded to the company at that time?

A. Yes, certain portions have been sold.

Q. Those portions that have been sold do not appear upon this diagram, Complainant's Exhibit 48, do they?

A. No, sir.

Q. Have you anything that will show such real estate as was conveyed by the constituent companies to the Consolidated Gas Company at the time of the organization, that has since been sold?

A. That map, Exhibit No. 48, shows some of it; it shows certain portions.

47 Q. You may take Exhibit 48, if you will, and indicate such portions as were conveyed by the constituent companies and have since been sold?

Mr. **Garver**: The witness testified yesterday that Exhibit 48 shows the lands now held by the Gas Company, after conveyances made since 1884.

The **Witness**: But there are some portions here designated, of property that has been sold; for instance there. (Indicates on page 2.)

The **Master**: Describe it so that it will appear on the record.

Q. A portion of the block between East Fifteenth and East Sixteenth streets and Avenues C and D, that is not colored; that has been sold by the Consolidated Gas Company.

A. That is right.

Q. To the New York Edison Company?

A. Yes.

Q. Can you give us the date of that sale?

A. I think it was in 1904 or 1905; I could not be sure of that, but I can get you the exact date.

Q. Is there any other property shown upon the map, Exhibit No. 48, that has been sold by the Consolidated Gas Company?

A. There are several portions that have been taken in condemnation proceedings by the city.

Q. They are not shown on this map?

A. Yes, they are shown on the map in a way; there is a note on the map to that effect.

Q. Will you indicate just what portions?

A. On page 3 there is a note to the effect that the property west of the line on the marginal street was taken by the city in condemnation proceedings, and this exhibit, No. 49, shows the property as deeded by the Manhattan Gas Light Company to the Consolidated Gas Company.

Q. Is there any other portion?

48 A. On page 4 of Exhibit 48 there is a note "bulkhead taken by city in condemnation proceedings." That is part of the property which was deeded by the New York Gas Light Company to the Consolidated Gas Company. On page 7 there is a note "deeded by the Consolidated Gas Company to the Standard Gas Light Company."

Q. That is the property in the blocks bounded by East 62d and East 63d Streets, between First Avenue and Avenue A?

A. Yes. That property was conveyed to the Consolidated Gas Company by the Metropolitan Gas Light Company. On page 10 of Exhibit 48 there is a note, on the block between 111th and 112th Streets, First Avenue and Pleasant Avenue, "Taken by the City in condemnation proceedings." This property was deeded by the Harlem Gas Light Company to the Consolidated Gas Company. On page 10 again there were some portions of land deeded on blocks between 111th and 112th Streets, First Avenue and Second Avenue; there were some small pieces of property sold to the Consolidated Gas

Company in exchange for other property. Those sales were made to Peter Reilly and Giuseppe Molea and wife. That was done to straighten out a line.

Q. One would offset the other?

A. Just about.

Q. That is all that is shown by Exhibit 48?

A. Yes.

Q. Could you prepare for us a statement showing what properties have been sold by the Consolidated Gas Company that were originally purchased by the constituent companies and that do not appear upon Exhibit 48?

A. I can. Do you mean a map or a statement such as I have given it here?

Q. A statement will do.

A. Is this not a sufficient statement?

Mr. PAGE: I suppose we can check it.

The WITNESS: Or I can have one made.

49 Q. This property was taken by the city for the purpose of a marginal street at Eighteenth street, that was the Eighteenth street plant which was conveyed by the Manhattan Gas Light Company, was it not?

A. It was part of it.

Q. The company does not operate that Eighteenth street plant at this time, does it?

A. No, sir.

Q. And therefore the remaining portion is not at present in use by the company?

A. Some of it is.

Q. What part of it?

A. All the parts that contain gas holders.

Q. Will you indicate upon the map, page 3 of Exhibit 48, just what portion of that is now in use?

A. The portions between Nineteenth and Twentieth streets east of the marginal street is in use.

Q. Being 190 feet and 8 inches on Twentieth street and 119 feet on West Nineteenth street?

A. Yes, sir.

Q. Extending across the block?

A. Yes.

Q. And that is all the property that is now used by the company in its business?

A. That is all of that particular piece. Then the piece between Eighteenth and Nineteenth streets west of Tenth avenue.

Q. How much of that block is used?

A. There are holders there. It is difficult to divide off exactly how much is in use there and how much is not; there are two gas holders there on the Tenth avenue front.

Q. How many gas holders are there on the marginal street front?

A. Two.

Q. What other holders have you there?

A. There are two holders in the property on the south side of

Eighteenth street between Tenth and Ninth avenue; that I think is all the holders that are in use. There are other portions of the property used for various purposes.

50 Q. Can you indicate for what purposes, and what portions are used?

A. There is a stable on the north side of Eighteenth street between Ninth and Tenth avenues, which is used as an automobile garage and stable.

Q. To store the automobiles belonging to the company?

A. I believe so.

Q. I mean, it is not rented for that purpose?

A. No, sir; there are various buildings on the block 17th and 18th Street west of 10th Avenue, used as machine shops, and for various other purposes, which I could not designate more particularly as I am not familiar enough with them.

Q. Will you turn to the property at 60th and 61st Street, between Avenue A and 1st Avenue; you have already testified about that?

A. Yes, that is sold.

Q. What is the property between 60th and 61st Street- used for?

A. At present, there are wooden houses standing on that property which are rented.

Q. Then there is no manufacturing gas plant there now?

A. There is not.

Q. That was originally the manufacturing plant of the Metropolitan, was it not?

A. I think not, sir.

Q. Well, that in connection with 42nd Street?

A. It was owned by the Metropolitan.

Q. And the only use that is put to is for renting some of the buildings?

A. At present, yes, sir.

Q. What is the property at Shadyside?

A. That is a piece of property that was deeded by the Metropolitan to the Consolidated Gas Company; it was used for a great many years for getting rid of the refuse and ashes of the various companies; there was a large amount of land built out in that way that is now rented.

Q. It is not used now in any way?

A. Not by the Consolidated Company.

51 Q. Now, there was some property conveyed by the Harlem Gas Light Company to the Consolidated Gas Company; is that shown on Exhibit 48?

A. Yes.

Q. As far as you know, except the small portions that you have testified to, has any of that property on 110th and 111th Street- been sold by the Consolidated Gas Company, except these little portions that you have spoken of, and that which was taken by the City?

A. So far as I know, no sir. None has been sold except those portions that I have mentioned; certainly none has been sold since I have had anything to do with them.

Q. Have you shown the property at Kingsbridge Road near Inwood on this Exhibit 48?

A. Yes, sir.

Q. What use is that put to?

A. There is a small gas-holder on one portion of it, and there is a house occupied by the man in charge and used as a valve house.

Q. The bulkhead at Avenue A and East River as specified here has been taken by the City, has it not?

A. No, sir; the bulkhead between 110th and 111th Streets still belongs to the Consolidated Gas Company.

Q. There has been one bulkhead taken there?

A. I think not.

Q. Does the bulkhead belong to you, between 111th and 112th Streets, which originally belonged to you?

A. I think not, but I would not like to be quite sure of that without referring to the deed.

Q. The tunnel of the New Amsterdam Gas Company is on this property, is it not?

A. No, sir.

Q. What tunnel is that?

A. There is no tunnel there.

Q. I call your attention to Exhibit 48, page 10, the tunnel between 110th and 111th Streets and Pleasant Avenue, tunnel shaft, radius
twenty feet, and then on the margin, "Easement of property
52 granted to the East River Gas Company;" what do you call
that?

A. There is no tunnel there. There is an easement of property granted to the East River Company, but there is no tunnel.

Q. Can you state when the 18th Street plant ceased to operate?

A. No, sir; I could not tell you.

Q. Yesterday when you testified to certain assessment valuations you had with you a memorandum, had you not?

A. I had.

Q. Have you it with you now?

A. Yes. (Produces memorandum.)

Q. Was this memorandum prepared by you from the official tax records of the city of New York?

A. Yes, it was.

Q. And is a correct transcript of the figures appearing upon the records?

A. Yes.

Q. You testified yesterda [illegible] to the valuation in the first column, land alone?

A. I did.

Q. Was there also upon the record another column, land with improvements?

A. Yes, sir.

Q. Did you copy from the record the figures appearing in that column?

A. I copied both.

Q. And as they appear upon this memorandum they are correct?

A. They are correct.

Mr. **Page**: I would like to have this marked for identification, or the witness might read it in evidence. I am willing to offer it at this time.

Mr. **Garver**: I should not object to the order, but I have another objection.

The **Master**: How do you wish it designated; how do you wish to distinguish between the parties interested?

Mr. **Gans**: For convenience we might say "State" and "city" exhibits.

Mr. **Garver**: If you offer it in evidence I want to take a formal objection.

53 Mr. **Gans**: Of course it is offered subject to objection, as to the competency and propriety of this whole line of proof. Your Honor will remember that the testimony was excluded but read in evidence, it seems to me, in view of the fact that the Court might decide otherwise than your Honor.

The **Master**: All that disposition of the case, of course, is tentative, and all I meant to say was that as the case stood yesterday at the outset, it did not seem to me that was a proper method of proving value, not, *non-constat*, but that later it may be perfectly proper for Mr. Garver to offer in evidence these assessed valuations; so any ruling is without prejudice to his application to renew it, and the same is true of you.

Mr. **Gans**: Therefore, it seems to me that we are entitled to the same privileges of cross-examination, to introduce as proper cross-examination the same matter that we would have been obliged to introduce had the evidence been admitted, and without any greater prejudice to our rights than would have been involved under the same circumstances. Therefore we offer it in that way.

Mr. **Garver**: I cannot concede that proposition.

Mr. **Matthewson**: You offer it under your own objection, you mean?

Mr. **Gans**: Subject to our rights, under our own objection.

Mr. **Garver**: Make your offer and we will make our objection.

Mr. **Gans**: The offer is of this paper in evidence subject to our rights under the objection (and the ruling of the Master), that this line of evidence is not admissible.

54 Mr. **Garver**: I object to it on the ground that it is offered conditionally and hypothetically, and also on the ground that it relates to subject matter which has been excluded on the direct evidence of this witness.

The **Master**: I will receive it, and without any conditions at all attached to it. The gentleman cannot offer it with strings tied to it; he offers it and it is admitted, but the record shows for itself what the conditions are.

Exception taken by Mr. Garver.

The assessment valuation paper, three sheets, is received in evidence and marked State Exhibit A.

Cross-examination by Mr. Burr:

Q. Will you be good enough to state, referring to the first page of Exhibit 48, how much of the 576 acres is under water, and how much is upland?

A. I think I stated 376 acres.

Q. I understood you to say 576?

A. No, sir; there are 376.09 acres; the up land acreage is 264.20 acres and the land under water 111.89.

Q. Referring to deed offered yesterday, from the Mayor, Aldermen and Commonalty to the Consolidated Gas Company of the City of New York, dated December 29, 1897, being the deed which was referred to yesterday and the conditions contained, which were read into the record, have you knowledge as to whether the conditions contained in that instrument have been complied with by the Consolidated Gas Company?

A. As far as I know, the city has never taken steps to have them complied with.

Q. That is not an answer to the question I asked you?

A. I do not think there were any conditions.

Mr. Burr: Will you allow me to look at the deed?

55 Mr. Garver: You had better ask him for the fact instead of asking for a conclusion.

Q. This deed provided that the party of the second part, being the Consolidated Gas Company, was to, within a certain period, construct, build, erect, make and finish, or cause to be constructed, built, erected, made and finished, according to any resolution or ordinance of the party of the first part, the said Common Council or its successor, or the Board of Department of Docks, a good and sufficient street which shall form the northerly one-half part of 98th Street, and another good and sufficient street which shall form the southerly one-half part of 99th Street, said street lying contiguous to the premises hereinbefore described, and extending from the original line of high-water mark to the westerly side of the exterior street, wharf or place determined upon by the Department of Docks, and will fill in the same with good and sufficient earth, and regulate and pave the same and lay the sidewalks thereof, and also, by the terms of this deed, the party of the second part, the Consolidated Gas Company, agrees to keep and maintain in good order and repair such street and sidewalk. Do you know whether the Consolidated Gas Company did comply with those provisions contained in that deed?

Mr. Garver: Objected to on the ground that it is shown that no such resolution as referred to in the deed has ever been adopted, and that therefore it is not shown that any duty was thrown upon the Gas Company.

Mr. Burr: I am asking him if he knows the actual fact, whether the company has ever complied with those conditions or not.

56 Mr. Garver: Do not ask whether it has ever complied with them; you can ask whether it has ever done that.

Mr. Burr: He can say if he knows.

Mr. Garver: I object to it as calling for a conclusion.

Objection overruled. Exception taken by Mr. Garver.

A. I do not know. I know that 99th Street is a street used and paved; whether it was made in compliance with that deed or not I do not know.

Q. You have no personal knowledge on the subject?

A. No, sir.

Q. Is it part of your duty as head of the real estate department of the Consolidated Gas Company to see that whatever terms and provisions are contained in a deed or grant of property to the company are complied with?

A. Yes.

Q. Have you taken any special pains to ascertain whether those provisions have been complied with by this company, as stated and set forth in this deed, Exhibit 47?

A. I do not know that there are any conditions to comply with.

Q. Will you give us the fullest information that you have upon the subject?

A. As far as I know, and I think I am correct in saying so, there has been no order from the Department of Docks, or the Aldermen, or any other city department causing those conditions to be complied with.

Q. Your understanding is that if a resolution is passed calling upon the company to carry out those conditions, that the company is obligated to carry them out?

Mr. Garver: That is objected to on the ground that the witness is asked for the construction of a written instrument.

The Master: I will allow it.

Exception taken by Mr. Garver.

57 A. That would be my understanding, subject to the advice of counsel.

Q. And your best information is that no such resolution has been adopted by the Board of Aldermen or other municipal authorities?

A. That is my best information, yes, sir.

Q. You are the head of the real estate department?

A. I think so; there is nobody else that I know of.

Q. All the real estate owned and controlled by the Consolidated Gas Company is under your supervision?

A. All the real estate owned by the Consolidated Gas Company is.

Q. You draw a distinction between that owned and controlled; do you know of any controlled by the Gas Company that you have no control over?

A. I know of no real estate controlled but not owned by the Consolidated Gas Company.

Q. You have no knowledge of any real estate controlled but not owned by the Consolidated Gas Company?

A. No, sir, not unless you consider Astoria; you might draw that distinction between Astoria.

Q. How do you regard the Astoria property, as owned or controlled by the Consolidated Gas Company?

A. I should regard it as owned by the Consolidated Gas Company.

Q. To what do you refer by the distinction which might be drawn?

A. I thought you were trying to draw a distinction; I was not. You said "owned or controlled."

Q. You are quite positive that the Astoria property is owned by the Consolidated Gas Company?

A. I should consider it so, yes, sir.

Q. Upon what do you base that consideration?

The **Master**: How is that material? I do not wish to curtail your cross-examination in any way, but did it not appear here
58 yesterday that they owned all the stock of the Astoria Gas Company?

Mr. **Matthewson**: All the stock, all the bonds and all the notes.

Mr. **Burr**: That was my understanding, but I wanted to get at what the witness knows about it.

The **Master**: How is it material what the witness thinks about it? he may be wrong. My object is to save time.

Mr. **Burr**: Very well.

Q. In your department do you keep a record or a book containing a list of property owned by the Consolidated Gas Company?

A. Yes.

Q. With the conveyances made by the Consolidated Gas Company of its real estate to other parties?

A. Such a record is kept; I have not any record of the real estate that has been conveyed away.

Q. Who keeps that?

A. It is hard to say that anybody keeps it, since there have been very few.

Q. No record is kept of the conveyances made by the Consolidated Gas Company to other corporations or individuals?

A. There have only been about three in my knowledge.

Q. Have you got a record of those three?

A. I can tell you what they are; I have not a record of them at present, no, sir.

Q. When was the conveyance to the Edison Light Company?

A. What is that?

Q. Can you recall offhand when that was made?

A. I think I testified that was made in 1904, or 1905; I am inclined to think it was 1905.

Q. Can you recall the consideration stated in the deed?

A. No, sir.

Q. Did you testify in the 18th Street condemnation proceeding?

A. No, sir.

59 Q. Have you testified at any of the proceedings brought to acquire any of the property in the Consolidated Gas Company?

A. No, sir.

Q. Do you buy property for the Consolidated Gas Company, or merely attend to the transferring of it to the company?

A. The company does not as a rule buy property; instances of buying property have been very few. I have attended to some few instances; they have been mostly small exchanges.

Q. You bought the property at Astoria?

A. I did not attend to that.

Q. You did not attend to that?

A. Except that I attended to the technical matter of checking over the deeds.

Q. Is there anybody else associated with you in the real estate department?

A. No, sir.

Q. You have read over the papers showing the assessed valuation of these various pieces of property?

A. Yes.

Q. In your testimony yesterday you referred to that paper?

A. Yes.

Q. That was a paper that was handed to you this morning by Senator Page?

A. That is the same one.

Q. The assessed valuation of that property, if I remember rightly, was given by you yesterday, was some $8,500,000, was it not?

A. I am sure it was $8,000,000; I am not sure about the odd amount.

Q. $8,508,000, is that right?

A. $8,508,100.

Q. Has the company made application to the tax Commissioners, to your knowledge, to reduce the assessment?

Mr. Garver: That is objected to as irrelevant.

Objection overruled; exception taken by Mr. Garver.

A. I think there were some applications to the Commissioners in certain instances.

60 Q. Can you give us a list of those instances in which applications were made by the Consolidated Gas Company to the Tax Commissioners for reduction of the assessments to which you have testified, on the ground that such assessments were excessive?

The same objection, ruling and exception.

A. I have no such list.

Q. Where is such a list to be found?

A. I don't know, sir

Q. By whom were such applications instituted?

A. They were instituted by counsel.

Q. Did they come to your knowledge, as being in charge of the real estate department?

A. Yes, I saw a good many applications; some were put in; some not.

Q. Did you sign them?

A. No, sir; I did not.

Q. Who signed them?

A. I think Mr. Gawtry signed them.

Q. Who is Mr. Gawtry?

A. Mr. Gawtry is Vice-President.

Q. Can you state now, without refreshing your recollection by examination of the books, how many such applications for reduction have been made by the company through Mr. Gawtry?

A. No, sir; I could not state.

Q. Mr. Gawtry is Vice-President of the Consolidated Gas Company?

A. Yes, sir.

Mr. **Garver**: He has already testified to that.

Q. Can you procure and produce here a list of such applications, or give us copies of the applications, showing the property referred to, and when they were made?

A. I have no such copies, sir.

Mr. **Burr**: Will you produce them, Mr. Garver?

61 Mr. **Garver**: I have no personal knowledge that any such exist. If you want to have any documentary evidence produced in this proceeding you must require its production in a legal manner.

Mr. **Burr**: I am glad to hear that; we know just exactly where we stand.

Q. Have you given any testimony, Mr. Francklyn, in these proceedings, or made any affidavits or statements whatever?

A. No, sir; I never have.

Q. This list which has been read over by you yesterday and today—was that made up from an examination of your books or from an examination of the books in the Tax Department?

A. It was made from an examination of the books of the Tax Department, coupled with an examination of *the* our books, to show which properties we owned; but the value figures are from the books of the Tax Department.

Q. And you mean to be understood as saying that at the same time you have no knowledge as to which of these parcels appearing upon that list are now subject to application for reduction of assessments?

A. No, sir; I have no knowledge.

Q. Are these the 1906 assessments?

A. 1906.

The **Master**: All such applications of necessity would be on file in your Department of Taxes and Assessments.

Redirect examination

By Mr. **Garver**:

Q. You are not a lawyer, are you?

A. No, sir.

Q. Did the total of the assessed value of the lands which you gave yesterday, namely, $8,508,100.00, include the portion of the 18th Street plant west of the easterly line of the proposed marginal street?

62 A. No, sir, the figures I gave yesterday included what the company now owns; that is all east of the easterly line of the marginal street.

Q. It did not include anything west of the easterly line of the marginal street?

A. Nothing west of the easterly line of the marginal street.

Q. And did it include the bulkheads?

A. It did not include the bulkheads.

Q. This Exhibit No. 48—does that show the bulkhead property owned by the Consolidated Gas Company?

A. It does not show it very clearly.

Q. Does it show any of the bulkhead property owned by the Consolidated Gas Company, Exhibit 48?

A. I do not think that anybody who did not know what the company owned in the way of bulkheads would be able to find out by this exhibit; in other words, it is not clearly marked.

Q. Can you take that, page by page, and state what bulkheads, if any, the company owns?

A. Yes.

Q. Which were included in the deeds offered in evidence yesterday?

A. Yes, on page 2 of Exhibit 48, the bulkheads from 14th to 15th Street, and from 15th Street to 16th Street on the East River, are both owned by the Consolidated Gas Company.

By Mr. **Matthewson**:

Q. Are they colored blue on that map?

A. There is just a line; it is hard to color a bulkhead.

Q. They are not colored?

A. No, sir.

By Mr. **Garver**:

Q. There is merely a line there; it is the bulkhead rights that the company owns?

A. It does not show here whether the company owns them or not. I testified to them yesterday as being deeded by the Manhattan Gas Light Company to the Consolidated Gas Company. On page 5, the bulkhead between 41st and 42d Street on the North River is
63 owned by the Consolidated Gas Company and was deeded by
the Metropolitan Gas Light Company. On page 6, the two bulkheads, from 44th to 45th Street, and from 45th to 46th Street, are both owned by the Consolidated Gas Company and were deeded to it by the Municipal Gas Light Company. On page 10, the bulkhead between 110th and 111th Streets, is owned by the Consolidated Gas Company, and was deeded to it by the Harlem Gas Light Company. That I think is all in Manhattan. Perhaps I might mention that the Shady Side bulkhead is owned by the Consolidated Gas Company; that is, the bulkhead in New Jersey, at Shady Side, is owned by the Consolidated Gas Company.

By Mr. **Gans**:

Q. When you stated the bulkheads not being included in the assessments, in response to Mr. Garver's question, you meant merely the 18th Street bulkhead?

A. Yes, I meant merely the bulkhead which the City has already taken from the Company, at 18th Street.

By Mr. **Page**:

Q. Were the other bulkheads included in this assessment?

A. Yes.

By Mr. **Burr**:

Q. Do you rent any of these bulkheads?

A. Do we rent any of them? No, we use them all. You mean, do we rent any of the bulkheads which belong to us? We are renting other bulkheads from the city.

Q. I am asking, do you rent any bulkheads, or your rights over the bulkheads?

A. No, sir.

The **Master**: As lessor, you mean; you are not renting them out?

64 The **Witness**: No, we are not.

By Mr. **Garver**:

Q. Do you lease any bulkheads from the city which are not included in Complainant's Exhibit 48?

A. We do.

Q. What bulkheads?

A. The bulkheads from 20th to 21st Street on the East River, and from 21st to 22nd Street on the East River; from 98th and 99th Street on the East River, and the bulkhead at the foot of East 15th Street on the East River; that is between our own two bulkheads, from 14th to 15th Street, and from 15th to 16th Street. I think that is all.

Q. Does the company rent any piers from the city?

A. They rent the north half of the pier at the foot of East 21st Street.

Q. Have you those leases with you, of those bulkhead rights, and piers?

A. No, sir.

Q. Can you obtain them?

A. Yes.

Q. On page 7 of Exhibit 48, in answer to a question by Senator Page, you refer to a piece of property deeded by the Consolidated Gas Company to the Standard Gas Light Company. That piece is not colored blue, is it?

A. No, sir; it is not colored blue.

Q. And that is true also of the property between 15th and 16th Streets, page 2, which is marked as deeded to the Edison Company?

A. The property sold is not colored blue.

Q. And is that true in every instance in this exhibit, where property has been sold, it is not colored blue?

A. That is true in every instance.

Q. Or where it has been taken by the city?

A. Or where property has been taken by the city; the blue coloring, in other words, shows all we own.

Q. At the present time?

A. Yes, sir.

65 Q. And only the part that is colored blue in Exhibit 48, is owned at present by the Consolidated Gas Company?

A. All owned at present by the Consolidated Gas Company; the part colored white is not, with the exception of those bulkheads, about which it is difficult to say as to whether they are colored or not colored.

Q. The tunnel referred to on page 10, between 110th and 111th Streets has never been constructed, has it?

A. No, I do not think anything has been done on it.

Q. There is a tunnel under the East River which is used for sending gas from Long Island City across to New York, is there not?

A. Yes.

Q. Where is that located?

A. That comes out at 71st Street, I think it is.

Q. And that extends across to the Ravenswood works?

A. That extends across to the Ravenswood works.

Q. Referring to page 3 of Exhibit 48, is not that portion of the property indicated there in blue, between 16th and 17th Streets and Tenth Avenue and the marginal street, used for a coal yard?

A. I do not think it is at present, but I have not been up there for some little time.

Q. Referring to Complainant's Exhibit 49, the bulkheads between 16th and 17th Streets and between 17th and 18th streets are not colored blue, either, are they?

A. No, sir; they are not colored blue. They did belong to the Consolidated Gas Company before these condemnation proceedings were started.

Q. The figures that you gave for the upland and for the land under water, at Astoria, do those represent the area at the time of the conveyances of the property to the Astoria Company, or does that represent the present physical condition of the property?

66 A. They were worked out by our drafting department; and I suppose that the upland and land under water are continually changing, so that I would not say that represented it exactly as it is at present; they are the latest data I have at present.

Q. Are they filling in the land under water?

A. Yes.

Q. All the time? Is that going on constantly?

A. Yes.

Mr. Garver: I want to offer in evidence sections 889 and 892 of the City Charter as amended by Chapter 454 of the laws of 1903.

Received in evidence as Complainant's Exhibits 64 and 65, respectively, but not marked.

(Here a recess was taken until 2 o'clock P. M.)

Afternoon Session.

Gilbert Francklyn resumed the stand for further examination.

Direct examination by Mr. **Garver**:

Q. Have you produced the leases to which you referred this morning?

A. Yes, sir.

Mr. **Garver**: I offer in evidence lease from the city of New York to the Consolidated Gas Company of bulkheads between Twentieth and Twenty-first streets and Twenty-first and Twenty-second streets, East River.

Mr. **Gans**: That is objected to as irrelevant and immaterial.

Mr. **Burr**: Same objection.

Objection overruled. Exception.

Received in evidence and marked Complainant's Exhibit 66.

67 Mr. **Garver**: I offer in evidence lease from the city of New York to the Consolidated Gas Company to the northerly half of the pier at the foot of East Twenty-first street.

Mr. **Gans**: Same objection.

Same ruling; exception.

Received in evidence and marked Complainant's Exhibit 67.

Mr. **Garver**: I offer in evidence privilege granted by the Department of Docks to the Consolidated Gas Company to use and occupy the bulkheads at the foot of East 15th street, East River.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 68.

Mr. **Garver**: I offer in evidence privilege granted by the Department of Docks to the Consolidated Gas Company to use and occupy the bulkhead between 98th and 99th streets, East River, dated April 26, 1906.

Same objection; same ruling; exception.

Received in evidence and marked Complainant's Exhibit 69.

Q. The Consolidated Gas Company is in possession of all this property included in those leases just offered in evidence?

A. Yes, sir.

Q. And is that true also of the property in Complainant's Exhibit 48, marked blue?

A. It is true with some slight exceptions where there are small pieces of property temporarily leased.

Q. That is the only exception?

A. That is the only exception. There are a few tenement houses and a few minor pieces of property of that kind.

Q. Where the Gas Company made a lease?

68 A. Yes. You would hardly call it a lease, they are occupied from month to month, and the Shadyside property which I mentioned, that was leased.

By Mr. **Page**:

Q. What else is there besides the property at 110th Street which you state was leased?

A. 110th Street?

Q. 110th Street or 111th Street, that that was formerly used by the Harlem Gas Light Company?

A. I don't remember saying there was anything leased there, sir.

Mr. GARVER: I think it was 98th and 99th Streets.

Q. Where was it you stated there were some frame buildings that were leased?

A. 60th and 61st Street, there is the piece (indicating map); there are two frame buildings leased there, at least they are occupied from month to month.

Q. What other properties are there on that Exhibit 48 that are leased by the Consolidated Gas Company to other persons, either leased or now in the occupancy of other persons?

A. There are 4 or 5 lots between 17th and 18th Streets, between Avenue B and C, and which are leased to contractors for storing material. All these leases are so arranged that the property can be taken back in 60 days' notice; sometimes on 30 days' notice.

Q. Is it the property which is shown at the top of page 2?

A. Yes, sir.

Q. All of that?

A. No, sir; only a small portion of it.

Q. What is there on the balance, anything?

A. There are two gas-holders, and there is a storage yard occupied by our street department for storing pipe and fittings.

Q. What else is there there?

69 A. There are 4 or 5 lots on the plot between 18th and 19th Streets, Tenth Avenue and marginal street, leased in the same way; those leases are for one year with the privilege of cancelling them at 60 days' notice. On page 4 there is a lot at the northeast corner of 20th Street and Avenue A, leased in the same way.

Q. By a lot do you mean 25 by 100 feet?

A. I think it is 70 feet deep, by, I think, 20 feet. It is a short lot; and on the east side of Avenue A, corner of 20th Street, northeast corner of 20th Street and Avenue A there are three tenement houses all of which are let out, the different floors are let out to tenants.

On page 6, the property between 44th and 45th Streets, 11th Avenue to the river, there are four tenement houses, all of which are let.

Q. Are they indicated on——?

A. No, one of them is here.

Q. Oh, is it on that side?

A. One of them is, and three on that side, that is three towards the easterly end of the property. They are 16 feet and a few inches in frontage, each of them on 45th Street and one on 44th Street is 25 feet. There is a tenement house on the south side of 65th Street, between Amsterdam Avenue and West End Avenue, 25 feet front, rented to various tenants.

There is a small house on the block between 98th & 99th Street, east of First Avenue, rented to one of our own workmen. I have omitted two small tenement houses, on page 4, westerly side of Avenue A, between 20th and 21st Street; there are two small tenement houses rented to various tenants.

Q. Would you take Defendant's Exhibit A and mark on that the properties that are under rental. Mark on that in some way so that we can distinguish them.

(Question withdrawn for the present.)

70 The WITNESS: On the south side of 112th Street, between First and Second Avenue, there are two city lots rented to an Italian for storing push cars, also on 60 days' notice. That is all that I can remember.

By Mr. BURR:

Q. Can you give us the rentals, a statement of the rentals that are derived from the property that you speak of as having been rented or leased?

A. I cannot give it to you, no, I cannot remember it.

Q. Can you get a copy of it or list of the rentals?

A. Yes.

Q. And furnish them here?

A. Yes, sir.

Q. Is there any vacant and unimproved property outside of the property you have described as leased?

A. Yes, there is.

Q. Will you let me have a list of the property from Exhibit 48?

A. There is a vacant piece of property at the corner of One Hundred and Sixteenth street and Lexington avenue, a considerable amount of property of what was formerly the Eighteenth street station which is not in use now. It used to be used for coal storage and coke storage, and various other things, and now the works are discontinued and it is not in use.

Q. That is outside of the property that has been taken by the city.

A. Outside of the property that has been taken by the city. And this property between Sixtieth and Sixty-first street, where there are two frame houses that I spoke of; it is a large piece of property and they only occupy a small portion of it, the rest of that is unoccupied, unimproved.

Q. On what page is that?

A. That is on page 7, and on the northeast corner of Avenue A and Sixtieth street there is a triangular piece of property which is unoccupied and unimproved.

71 There is a piece of property alongside of the tenement house in Sixty-fifth street, on page 8, which I do not think is yet occupied; there is a valve house being built there, but I think it has not yet been built.

There is a piece at the corner of First avenue and One Hundred and Eleventh street, on page 10, annexed to the stable, which is unoccupied; it is used for turning horses out in.

Between One Hundred and Thirty-second and One Hundred and Thirty-third streets, a piece of property there, there has been a holder built on one end of it, the rest of it is now unoccupied. And a part of the property at Sherman avenue and Broadway where there is a small holder and a valve house; portions of that property are unoccupied.

Q. Would you say that all the property outside of those mentioned now are occupied and used by the Consolidated Gas Company in manufacturing gas?

A. I would say so, yes.

Q. Will you give us an account of the use of each particular piece of property?

A. Corner of One Hundred and Fourteenth street and Third avenue, I have mentioned the corner of One Hundred and Sixteenth street and Lexington street as being occupied—One Hundred and Fourteenth street and Third avenue.

By Mr. GARVER:

Q. Just a moment. That property at One Hundred and Sixteenth street and Lexington avenue, isn't that held for an office?

A. I have always heard that was the intention of the company, to build an office there.

By Mr. BURR:

Q. We are not dealing in intentions now but in actualities. The question is what is it at present being used for? 72

Mr. GARVER: The question is what property we have and for what purpose we hold it. If we bought a piece of property yesterday for the purpose of building a holder on, I imagine the Court would hold that we bought it for gas manufacturing purposes.

Mr. BURR: Not if the holder was not needed for a series of years to come.

Mr. GARVER: That would be a question of law.

The MASTER: Proceed, gentlemen.

The WITNESS: The corner of 114th Street and Third Avenue, the Harlem office of the company is there, and behind it on 114th Street is the shop, fitting shop, and the next piece is the corner of Irving Place and 15th Street, that is the general office of the company and occupies the whole portion there. In the corner of Hester and Elizabeth Streets, that is occupied by the downtown office of the company and a shop, fitting shop and street department.

By Mr. BURR:

Q. What do you mean by fitting shop?

A. I mean a shop where the gas meters are sent out from and where the complaint work is attended to. And on page 2, the piece between 17th and 18th Streets is occupied by two gas-holders and by the street department; they have a storage yard there. A small piece here on the south side of 15th Street, I think it might be classed as unoccupied, it contains an old well which used to be used to get water from, I do not think it has been used of late, there is nothing else on the property except a pump house and well, 73 it is on the south side of 15th Street, between Avenue A and Avenue B; a piece betwen 15th Street and 16th Street, east of Avenue C, has a large gas-holder on it; the piece between 15th and 16th Streets, west of Avenue D, is generally used for storing coke and other material. The same applies to the piece between 15th and 16th Streets, east of Avenue D. The piece between 14th and 15th Streets on the east side of Avenue C, which has gasholders and a meter house and a purifying house. Between 14th and 15th Streets, Avenues C and D, is the main block of the 14th Street works where the gas is made. Between 14th and 15th Streets, from Avenue D to Tompkins Street is for storing coal; then there are two bulkheads there in that station that are used for loading coal. On the 18th Street station, I think that is on the west side, that has been covered already by what I have said of that.

On page 4, 21st Street station, the block between 21st and 22nd Streets, First Avenue and Avenue A contains several gasholders, I think six, and a meter repair shop.

The piece between 21st and 22nd Streets, from Avenue A to the marginal street is the main block of the 21st Street works where the gas is made.

From 20th to 21st Streets, east of Avenue A, there is one holder and a large amount of coal stored. There is a shop, meter shop, the same kind of shop as I spoke of before—fittings; and there is a valve house, that is at the corner of 20th Street and Avenue A, southeast corner. The northeast corner of 20th Street and Avenue A I have mentioned already as being unoccupied; one small city lot there.

The block between 20th and 21st Streets, from Avenue A to
Avenue B, contains purifying houses and coal sheds and a
74 meter house, besides three tenement houses I spoke of; and
the piece between 20th and 21st Streets, from Avenue B to
the marginal street is used for storing coal.

The piece on the south side of 20th Street, between First Avenue and Avenue A is a stable.

Q. A company stable?

A. A company stable; yes.

The piece from 41st to 42d Street from Eleventh Avenue to the river is the 42d Street works, contains holders and works, purifying houses and coal sheds.

—. The coal sheds there extend out on the pier, don't they?

A. They don't extend out on the pier, the coal sheds do not; there is some coal outside the sheds.

Q. That is where the Sandy Hook boats land, do they not?

A. They land at the pier at Forty-first street; they have a right of way there.

Q. They have a right of way over your place?

A. Yes.

Q. Well, don't you rent that to them?

A. That right of way, I don't think so.

Q. Did you give it to them free?

A. I think that we had an injunction, I believe, against their building a pier at Forty-first street and we waived that injunction; that is a legal question that I don't feel qualified to pass on.

Q. You don't know whether any rental is derived from that place or not?

A. I think not; no, I think there is no rental derived from that. And the piece on the north side of Forty-first street east of Eleventh avenue is used as a stable and also for storing material.

By Mr. Garver:

Q. A company's stable?

A. Yes, sir. On the north side of Forty-second street west of Eleventh avenue is used for storing coke, made at the Forty-
75 second street works; and the same applies to a piece on the north side of 42d Street between 10th and 11th Avenue- for storing coke.

A piece from 44th to 45th Street and from 11th Avenue to the river, is the 44th Street works, where the gas is made, with the exception of the four tenement houses which I mentioned. It has five gas holders and also a coal shed.

The piece between 45th and 46th streets has two holders, a purifying house and a shop connected with the works, blacksmith shop and so on, and the company has a stable and a place for storage of material.

A piece of land between 62d and 63d streets and First avenue and Avenue A is occupied by a holder, a gas holder.

The piece between 60th and 61st street, as already mentioned, also the piece east of Avenue A at the corner of 60th street——

By Mr. Garver:

—. That piece between 60th and 61st street- to which you referred is held for the purpose of placing holders on it?

A. I have always supposed it was held for that and always heard it so spoken of.

Page 8, a piece between 65th and 66th Street-, from Amsterdam to West End Avenue, is occupied by gas holders.

A piece on the south side of 65th Street I have already spoken of; it has a tenement house on it, and the rest of it is being prepared for a valve house.

The piece between 65th and 66th Street-, west of West End Avenue, is occupied by the Street Department for storing material, storing pipe, &c., and there is a fitting shop built on 66th Street.

76 By Mr. Burr:

Q. Do you get any pay from the Street Department?

A. I do not speak of the City Street Department, but of our own gas street department.

The piece between 98th and 99th Street is the main block of the 99th Street works and the piece between 98th and 99th Street east of First Avenue is used for those works for storing coal and other material.

The piece between 110th and 111th Streets, west of First Avenue, is occupied by two large gas holders and a valve house.

The piece between 110th and 111th Streets, east of First Avenue, is occupied by the Street Department, who use it for storing material; and the piece on the northerly side of 111th Street has the company's stable on part, and as I said before, part on the corner is vacant, and is used for turning horses out in.

By Mr. **Garver**:

Q. Is that adapted for further extending the stable?

A. It is adapted for that; I think a new stable is in contemplation there, the old one has nearly fallen down; the two lots on 112th Street I have mentioned as being rented out for storage of push carts.

The piece between 132d and 133d Streets, on 12th Avenue, a large holder has just been completed there and the rest of it I have mentioned as being vacant.

Q. Is that adapted for extensions?

A. Yes, sir; there is room for two more holders, the same as the one put up there, and I believe it is being held for that object.

And the property at Broadway and Sherman Avenue, which we call Innwood, I have already spoken of. That completes it.

77 By Mr. **Burr**:

Q. Are any of the holders you have referred to not used?

A. I think they are all in use, sir.

Q. Can you furnish us with a map showing the dimensions of the property that is actually occupied as you have so described it?

A. I suppose I can, yes.

Q. Showing the buildings and holders?

A. I haven't any map showing buildings and holders, no.

Q. Well, have you maps at your office showing that?

A. We have maps showing it to a certain extent, I don't know that we have any maps that are absolutely accurate as to that.

Q. Well, they are as accurate as you could get them to be?

A. I don't think so at all. I mean they have not been brought up to date.

Q. Will you furnish us a map, Mr. Francklyn, giving that information as fully as you may be able to?

Mr. **Garver**: Counsel objects to this.

The **Witness**: I can designate on these maps which are tenement houses and which are rented.

Q. And the size of the houses, can you do that?

Mr. **Garver**: We will show that by another witness, do not take any more time with Mr. Francklyn.

Mr. **Burr**: Very well, if you will do that.

William H. Bradley, a witness called on behalf of the complainant, being first duly sworn, testified as follows:

Direct examination by Mr. **Garver**:

Q. What is your age and occupation?

A. I am sixty-seven years old, sixty-eight next month. I
78 am chief engineer of the Consolidated Gas Company.

Q. How long have you been the chief engineer of the Consolidated Gas Company?

A. Since the first of January, 1886.

Q. And prior to that, what did you do?

A. I was an engineer with the Consolidated Gas Company for two years previous at the 44th street station, and for ten years previous to that time I was the engineer of the Municipal Gas Company, one of the companies that went in forming the consolidation.

Q. And you have been actually engaged as a gas engineer in the City of New York since about 1876?

A. About 1876.

Q. And prior to that time were you engaged in the same business?

A. Prior to that for many years I was engaged in the construction of gas works and gas machinery.

Q. Since your connection with the Consolidated Gas Company in 1884, have you had general charge and supervision of the construction and maintenance of the work of your company?

A. Since I took charge as chief engineer in 1886. From 1884 to 1886 I still remained with what is now known as the 44th Street station, but in January, 1886, I took charge of the entire Consolidated Gas Company, and since that time I have had entire charge of it.

Q. You are then familiar with the plans of the manufacturing plants of the company and the holders and the capacity of the various plants and their physical condition?

A. I am.

Q. Will you state what manufacturing plants the Consolidated Gas Company has, where they are located and the character of the plants and the capacity generally?

A. At the foot of 14th street, East River, is what is known as the 14th street station, and that is a coal gas manufacturing plant of the capacity of five million five hundred thousand feet per day. At the foot of 42d street, North River——

79 Q. Just a moment. Is that plant now in active use?

A. In active operation.

Q. And is gas being manufactured there at the present time as economically as it has ever been manufactured there?

Mr. **Burr**: That is objected to as calling for a conclusion.

The **Master**: The form of the question is objected to. Do you wish to press it in that form?

Mr. **Garver**: Well, I will proceed a little further before coming to that exact point. Question withdrawn.

Q. What is its present physical condition?

A. It is in good condition, as good as I know how to make it.

Q. Has it been kept in repair during all the time that you have had supervision of it?

A. Thoroughly, completely.

Q. Have the expenditures been made upon that for that purpose from year to year?

A. There have been.

Q. Can you state generally to what extent that has been done?

A. The amount of repairs?

Q. Yes, just give us a general idea of the extent and character of the repairs, what has been done to maintain the plant and to keep it in efficient condition.

A. From November 11, 1884, to October 31, 1905, there has been expended in additions on the 14th street plant——

Mr. Gans: We object to that until it has been shown he actually knows of his own knowledge that those expenditures have been made.

Mr. Garver: I will ask that question.

Q. With reference to these expenditures that have been
80 made, were they made under your personal supervision and
with your personal knowledge?

A. Absolutely all of them, on my recommendation and on my plans and under my supervision.

Q. And you knew the amounts that have been paid in carrying out your plans and directions?

A. Yes, sir.

Q. Now proceed.

A. On additions to plants——

Mr. Page: One minute. Where did you get those figures?

A. These come from the books of the company at No. 4 Irving Place.

By Mr. Page:

Q. The books of the company are not kept by you?

A. Not kept by me, but I furnish the figures that go in the books.

By Mr. Garver:

Q. And by reference to the books, can you refresh your recollection sufficiently to testify accurately to the figures?

A. Yes, sir; the figures in the books come from the engineering department; made up there.

Q. And you have been familiar with those during the period in question?

A. Yes, sir.

Mr. Gans: We press our objection.

The Master: State the ground of the objection.

Mr. Gans: It is objected to as incompetent, irrelevant and immaterial, that the witness is not qualified to testify to these figures, on the ground that it is shown that these figures were taken from the books of the company, the ledgers of the company, which are a
compilation of figures that have been furnished in past years,
81 and it is on its face impossible that those books and those
figures can refresh his recollection so as to enable him to speak
from memory.

Objection overruled; exception.

Mr. Burr: We object on the ground it is not the best evidence.

The Master: I see the force of your objection, but of course all this is, for all we know, liable to be connected with other or more formal proof; I think it it proper to admit it at this stage.

Mr. Page: I think we should have the production of more formal proof.

Mr. **Garver**: If we went into the production of our books, we would never get through, we have so many of these plants and books.

The **Master**: Any discrepancy in the strict competency of the proof Mr. Garver will have to take the risk of. I will allow it and give an exception.

The **Witness**: During that period there has been expended on the 14th Street plant $1,683,028.17. Of that $693,708.50 was for additions; $9,038 for replacements; $980,281.67 for repairs.

Mr. **Gans**: We object to this last statement sub-dividing these items under the various accounts, for the reason that it involves a conclusion of the witness, a conclusion both of fact and of law, and upon that ground we move to strike out that testimony and also move to strike it out as not responsive.

Motion denied; exception.

The **Master**: Of course, any ruling of this kind is without prejudice to your right to renew a motion to strike out at any time later before the final submission of the case.

82 Mr. **Gans**: I thought we should make the objection now in order to preserve our rights in regard to the matter of the subdivision of expenditures. I presume that the witness is going on now and the same objection will be noted to each.

The **Master**: Yes, the same objection, same ruling and exception to all question- that are identical in purport to that.

Mr. **Burr**: The same objection and exception on behalf of the city.

Q. Go on to the next plant.

A. 42nd Street, North River, between 41st and 42nd Street-, there has been a total expenditure——

Q. No, what is there there?

A. Oh, a coal gas plant complete, in working order, of a producing capacity of four and one-half million feet per day.

Q. Is that in active and effective operation?

A. In active and effective operation.

Q. What is the present physical condition of the property?

A. In good condition all through.

Q. Has that been kept in constant repair during the period that you have had charge?

A. Yes, sir.

Q. Can you state generally to what extent expenditures have been made upon that plant during the period in question, in repairs and maintenance?

A. There has been expended a total of $987,814.21, sub-divided into, additions, $42,788.01; replacements, $20,535.72; repairs, $924,490.48. Those are the two coal gas plants.

Q. Next?

A. At the foot of 21st street, East River, east of Avenue A, is what is known as the 21st street station of the Consolidated Gas Company; that is a water gas plant, of a capacity of water and oil gas of 27,500,000 feet per day.

Q. What is the present physical condition of *the* that plant?

A. It is in good order. Two years ago it was almost entirely
83 rebuilt in the generating house.

Q. What has been done toward keeping that plant in repair?

A. The amount spent there for that period is $3,170,559.78, made up of: additions, $778,019.65; replacements, $643,740.54; repairs, $1,748,799.59.

Q. Next?

A. The next is, the 44th street station, North River, that is a plant that occupies almost the entire block between Eleventh avenue and the river between 44th and 46th streets.

Q. What kind of a plant is that?

A. That is a water gas plant.

Q. It has a capacity of how much?

A. 8,500,000 feet per day. I speak entirely, whenever I give capacities, per day.

Q. What is the present physical condition of that plant?

A. It is in excellent order; the entire generating house and part of the remainder of it was rebuilt at the same time 21st street was, about two years ago.

Q. What has been done, within your knowledge, towards keeping that plant in repair and good condition?

A. There has been expended a total of $1,108,487.35, subdivided into: additions, $147,396.70; replacements, $203,987.50; repairs, $757,103.15.

Q. The next?

A. The next is 99th street, which is also a water gas plant of five and one-half million capacity.

Q. 99th street and what river?

A. 99th street and East River, between 98th and 99th streets and Second avenue and the river.

Q. You said that was a water gas plant?

A. Yes, sir; five and one-half millions capacity, in good order, also extensively rebuilt within the last two or three years. At the same time the other water gas plants were rebuilt this was.

84 Q. What is the present physical condition of that plant?

A. In good condition, doing its work every day, all the time.

Q. What has been expended in the maintenance of that plant and extension?

A. $631,656.66; subdivided into: additions, $124,864.08; replacements, $72,831.95; repairs $433,960.63. That is a manufacturing plant.

Q. And the next—are those all of the manufacturing plants?

A. That is all, in operation.

Q. Then there was a plant at 18th street on the North River?

A. There was.

Q. What kind of a plant was that?

A. That was a coal gas plant and was in operation up to August 1, 1903, I think, but I am not sure whether it was 1903 or 1902; I think it was 1903.

Q. What was the capacity of that plant?

A. That was three and one-half millions.

Q. Was that plant operated up to the time that the city took possession for the purpose of improving that property?

A. Up to the time and after the city took possession they turned us out.

Q. What was the physical condition of the property at that time?

A. In good order, kept in good repair.

Q. Had considerable amounts been expended in the maintenance of that plant?

A. Up to the time there was $1,292,323.33 expended on it, subdivided into: additions, $424,173.09; replacements, $1,500; repairs, $866,650.24.

Q. Those condemnation proceedings instituted by the city to acqquire that property are still pending, are they not?

A. Yes, sir.

Q. That completes the plants. What holders do the Consolidated Gas Company own?

A. All through?

Q. Yes, go right through.

A. Shall I read the sizes of each group of holders or just——

85 Q. Just state in any order that is convenient where the holders are located and their sizes?

A. At the 14th Street station there is one holder of 3,200,000 feet capacity; there are six holders of 350,000 feet each, and two holders of 250,000 feet each, making nine holders of an aggregate capacity of $5,800,000 feet; at the 18th Street station.

Mr. GARVER: Perhaps it would be better to take them in the same way you gave the others—but never mind, go on.

Mr. BURR: You asked for the sizes.

Mr. GARVER: Yes, he gave it.

The WITNESS: I cannot give you offhand the diameter; I can to-morrow. The cubical capacity is really the measure of size.

Q. That is always the way engineers refer to the size?

A. Yes, sir; simply the capacity. Eighteenth Street has two holders of 205,000 capacity each, and four of 250,000 capacity each; six holders of an aggregate capacity of 1,410,000.

By Mr. PAGE:

Q. Those are still in use?

A. Those are still in use and are not involved in the condemnation proceedings. Twenty-first Street has four holders—shall I describe the location of the place again?

By Mr. GARVER:

Q. If you can, as well as you can.

A. Twenty-first Street, East River, between First Avenue and Avenue A, between 20th and 22nd Streets, there are four holders of 400,000 capacity each, and one holder of one and one-half million capacity; five holders of 3,100,000 feet capacity.

86 42nd Street, North River, on the block between 11th Avenue and the river, and between 40th and 41st Streets, are four holders of 250,000 each, making 1,000,000.

44th Street, North River, on the two blocks between 44th and 46th Streets, and between 11th Avenue and the river, are four holders of 375,000 each, and one of 2,000,000, an aggregate of 3,500,000 for the five holders.

At 63rd Street, east on the block between 62nd and 63rd Streets, and between First and Second Avenue-, is one holder of 3,000,000 capacity.

At 65th Street, North River, on the block between Amsterdam and West End Avenue, are two holders of 4,000,000 each, four holders of 325,000 each, and two holders of 300,000 each, making an aggregate capacity for the eight holders of 9,900,000.

At 99th Street, on the block between 98th and 99th Street,- between Second and First Avenues, are two of 600,000 and one of 300,000, a total for the three holders of 1,500,000.

At 111th Street, east, between Second and First Avenues, and between 110th and 111th Streets, are two 5,000,000 holders.

Q. Those are the largest holders on Manhattan Island, aren't they?

A. Those are the largest on Manhattan Island; there are others of the same size.

By Mr. **Mathewson**:

Q. It makes a total of 10,000,000 for the two holders?

A. A total of 10,000,000 for the two holders. At Inwood we have one holder of 60,000 capacity.

By Mr. **Garver**:

Q. Does it cost more relatively to construct a small holder than a large holder?

A. Very much more.

Q. Why is that?

87 A. Because of more—well, I don't know as I could put it in language exactly—it costs more because of the extra amount of work per unit of capacity when finished; there has to be a certain amount of labor performed, and on a small holder the labor is more per unit than it is on the large ones, that is, on a large holder; also the same in the tank built to contain the holder; you can build a large tank per unit much cheaper than you can build a small tank.

Mr. **Page**: He has not given all the holders.

A. (Continuing:) The 132*th* Street holder is complete and is ready for use; that is, I don't know but it is already in use. That I have here is under construction.

Q. Are there any other holders?

A. One at 132d Street and North River, on the block between 132d and 133d.

Q. That is the large holder there by the new viaduct?

A. By the viaduct that we heard about in the papers awhile ago; that is one of holder of 5,000,000 capacity.

Q. That has how recently been completed?

A. Within ten days. I gave orders to have gas put in it yesterday; whether it was or not I don't know.

Q. What was the total cost of construction of that holder?

Mr. **Gans**: I want to note an objection to that as not the best evidence as to cost.

Mr. **Garver**: The Supreme Court has said that is pretty good evidence.

Mr. **Gans**: He is asking what the total cost of construction of the holder was, and there is no proof that he has checked all the bills and knows all about it.

The **Master**: I will take it.

88 Mr. **Gans**: The objection, of course, is that he is not competent to testify to that fact, that he has not been proved to be competent.

Objection overruled. Exception taken by Mr. Gans.

A. About $460,000; the exact amount I cannot give you. I made the contract for the holder.

Q. You have had the supervision of its construction?

A. I have had supervision of it entirely during its erection.

Q. And you have been familiar with the amounts expended?

A. Yes.

Q. Have you had charge of the construction of the new works at Astoria?

A. Yes.

Q. What is the present condition of those works?

Mr. **Gans**: I object to that as incompetent, irrelevant and immaterial.

Mr. **Burr**: The same objection.

The **Master**: I will allow it.

Exceptions taken by Mr. Burr and Mr. Gans.

Mr. **Gans**: Of course you are referring to the works of the Astoria Power Company?

Mr. **Garver**: The works that nominally stand in the name of the Astoria Light, Heat & Power Company.

Q. (Continuing:) I refer to the works on the lands shown on Complainant's Exhibit 63. What is the condition of those works?

A. They are in process of erection and will be completed to a point to produce gas probably in October of this year.

Q. State a little more in detail what you mean by saying that they are in process; how long has that process been going on, and what is the extent of the improvement that has been made?

89 A. About three years from the first inseption. There are two retort houses built, almost entirely completed. One is an installation of inclined retorts, the other is an installation of horizontal retorts; they are designed for a capacity to produce 10,000,000 feet each a day.

Q. That is a total of 20,000,000?

A. A total of 20,000,000 for the two houses. The purifying houses are completed, both of them. I might say by way of explanation, which will save a little time afterwards, that each house is connected as an independant gas works; that is, there are two retort houses and two purifying houses—duplicates of everything right through, so when I speak of the two houses I mean one unit. It is all one plant.

Q. It is a duplicate manufacturing plant?
A. Yes.

By Mr. PAGE:

Q. It is all coal gas?
A. Yes.

By Mr. MATTHEWSON:

Q. That is what you call the first unit?

A. I call it one unit, but it is divided into two parts, and each part is a complete gas works.

Q. But your first unit has a capacity of 20,000,000 feet per day?

A. Yes; the two have a capacity of 20,000,000 feet a day, two houses, each capable of producing 10,000,000 feet each day, or an aggregate of 20,000,000 from one unit. The purifying houses are completed with purifying boxes and connections, all ready for use. The boiler plant is completed and was in use last winter, furnishing steam for the various operations around there. The tar extractors, condensers and ammonia washers—I should say they are about 85 per cent. complete, leaving but very little to be done. The meter house is practically complete. The 15,000,000 feet holder that is being erected in conjunction with this plant has just about got started on the iron work. The tank is completed, but the holder is in process of erection.

90 By Mr. GARVER:

Q. How about the exhauster house?

A. The exhauster house is complete.

Q. I think it would be rather desirable if you could state briefly what constitutes a gas manufacturing plant?

A. In connection with the process of manufacturing gas, a coal gas plant, in the manufacture of coal gas, the first operation is to get the coal into the retort house. It is customary in New York that coal comes by water almost entirely. We have no railroad connections on Manhattan Island, and over there none as yet. It is taken out of the barges and put into storage or carried direct to the retort house as the case may warrant by means of conveyors and elevators and all sorts of different machinery for the purpose. In the retort house it is placed in the retorts. These retorts are built in what is technically called benches, or ovens, containing in this case, of the inclined retorts, nine retorts in one oven or in one bench, and in the case of the horizontal house eight retorts in one bench. Those are heated up to the proper heat coal is charged into the retort and the gas is driven off by the heat; the coal is distilled, you might say. The gas as driven off passes from the retort through the standpipes into what is called a hydraulic main. The hydraulic main runs along the top of the benches and is a collector for the gas as it comes from the retorts. The mouth of the standpipe is sealed in liquid in the hydraulic main so as to prevent the gas from backing out when the door of the retort is opened.

The pipe stands vertically, turns over and comes down into the hydraulic main and is there sealed in this liquid, so that when the
retort mouth is opened the liquid holds the gas from backing
91 out. Otherwise you could not open the door to put in fresh
coal. After the gas is worked off the retort mouth is opened and the coke is discharged and a fresh charge put in. That is a continuous operation night and day for twenty-four hours in the day and 365 days in the year, as is the case with all gas works. From there the gas goes across into the condensers, tar extractors, ammonia scrubbers, each of which have their duty to perform. The condensers simply cool the gas, and in process of cooling the tar and condensible vapors drop out. The ammonia scrubbers, where the gas is brought into contact with the water, which has an affinity for ammonia, effect the office of extracting the ammonia gas from the gas in its passage. In the case of Astoria the gas will then pass—this is a new thing and has never been done before in this country, and we cannot tell what it will be—but the gas will pass into cyanogen washers. That is for the purpose of extracting the cyanides from the gas, with a possible deposit of prussiate of potash and prussiate of soda. That is used in the ore refining business, the cyanide process. This, as I said before, has never been accomplished in this country. There are no works in this country using it, and we are simply trying it to see what it will do. It is used in England and Germany and various other places. From there the gas goes into the purifiers, large boxes—in the case of Astoria, forty feet square by seven feet deep—filled with a mixture of oxide of iron, shavings and a little lime. The gas passes through this mixture and there leaves its sulphur, which is always present in gas, and which passes along with it up to that point. These boxes are emptied and filled periodically, as the material in the box becomes saturated with sulphur and inactive. When that happens it has to be taken out and renewed.
From there the gas goes to the station meters, where it is
92 registered in quantity, and then to the holder, ready for dis-
tribution.

Q. Did you mention the exhausters?

A. I seem to have some reason for not saying anything about exhausters to-day. I do not know why. The gas is drawn from the retort house and through the condensers and washers by means of exhausters. These are simply gas pumps that draw the gas along the same as a water pump would draw water, draw it along from the retort house and through various parts of the apparatus, and force it through the purifiers and into the holders. That I should have stated.

Q. Then, from the holder the gas is distributed?

A. The gas goes from the holder to the street mains.

Q. Are these holders, at the various points as you have described them, connected by the street mains?

A. Every holder is connected with a street main, yes.

Q. I mean, are the various holders connected with each other through the street mains?

A. In New York we have a system of independent piping, connecting each station and each works together, and at each station and at each works are provided pumping apparatus, engines and exhausters and pumps to send the gas rapidly and in large volumes from one station to another, to be used in case of emergency or shortage in any particular district.

Q. If you should have an accident that prevented your getting a supply of gas from one station you can draw it from some other station through these pipes?

A. Yes, we have done it many times.

Q. What connection will there be between these works at Astoria, to which you have referred, and Manhattan Island when these works are completed?

Mr. Gans: Objected to as incompetent, irrelevant, immaterial and hypothetical.

93 Mr. Burr: The same objection.

The Master: I will allow it.

Exception taken by Mr. Burr and Mr. Gans.

A. We have laid already in the ground now a gas main, sixty inches in diameter, from the works in Astoria through Van Alst Avenue, and through two or three other streets that I do not exactly remember now, in Long Island City, to the works in Ravenswood.

Q. That is a distance of about three miles?

A. A distance of three miles. That main is laid and in place.

Q. That is a through main?

A. A through main.

Q. Can it there be connected with the tunnel under the East River?

A. Yes; right direct, right through the works. That is the purpose.

By the Master:

Q. What is the size of that main?

A. 60 inches; five feet in diameter.

By Mr. Garver:

Q. Is that an unusually large main?

A. That is the largest gas main I know of; I guess it is the largest in the world; it is the largest in this country, anyway.

Q. That fifteen-million-foot holder up there is the largest in the world, at Astoria?

A. It is the largest in the world. There are two tanks being built, although only one holder has been contracted for. Another will be put in.

Q. Of the same capacity?

A. Of the same capacity.

Q. You spoke of these as the first unit. As it is completed your additional units will be added?

Mr. **Gans**: I object to that as incompetent, irrelevant, immaterial and hypothetical.

94 The **Master**: I will allow it.
Exception taken by Mr. Gans.

A. I laid out myself the entire plans for the property, and it involved the construction, when it was completed, of works capable of producing, or a series of works capable of producing 240,000,000 feet a day.

By Mr. **Matthewson**:

Q. How many units would that make?
—. Twelve units of the size I have described.

By Mr. **Garver**:

Q. What is the present total capacity of the works on Manhattan Island to which you have referred?
A. 51,000,000 feet.
Q. Does that exclude the 18th street plant?
A. Yes.
Q. Is that sufficient to supply the present demand?
A. No.
Q. To what extent is it deficient, if you know?
A. I cannot tell that exactly. There is a deficiency, but I would have to refer to our records for that. I could not give that offhand.

Mr. **Page**: It is ten billion feet that you manufacture and three billion feet that you buy, per annum?
The **Witness**: Yes.

Q. That is approximately correct, approximately you buy three billion feet a year?
A. Yes, approximately that is correct.

By Mr. **Matthewson**:

95 Q. That is the production of the Manhatfan plants below sales of the Consolidated Gas Company, a deficiency to that extent?
A. Yes.

By Mr. **Garver**:

Q. You spoke of a total capacity of twenty million cubic feet for the first unit of the new Astoria plant. What would that mean for the annual capacity of that plant?
A. Twenty million multiplied by 200—four billion.
Q. Why do you not multiply the twenty by 365?
A. Because we cannot produce our daily maximum capacity every day in the year. We have to have capacity of works sufficient to supply gas in the winter at the time of maximum consumption. In the summer there is 60 per cent. less gas used than in the winter, but still we have to have the apparatus to provide the maximum. Therefore, taking the maximum daily average and multiplying that by 200 days, it gives about an average for the entire year.

Q. And that you have to provide for?

A. That we have to provide for.

Mr. GANS: If you had winter all the year round, with the same consumption of gas, you could go on manufacturing at your maximum all the year round?

A. We would have all the business that we wanted.

By Mr. GARVER:

Q. But you would have to stop for repairs?

A. Yes, or the plant would wear out.

Q. Don't you shut down some for repairs?

A. We make our repairs in the summer, and we endeavor to get everything ready for the winter's business.

93 Q. Is every plant shut down every year for repairs?

A. No, we do not shut them down; every plant is slacked off, as we term it.

Q. So that repairs may be made?

A. Yes, if we are making five million feet of gas in winter per plant, and during the summer we only have three million, that leaves us two millions to enable us to make repairs and put the plant in order for the next year's business.

Q. You shut them down part by part and continue the manufacture of gas to the extent that is required, without interfering with the repairs?

A. Without interfering with the repairs.

Q. During the course of the season you can repair the entire plant in that way?

A. If it is required, we make such repairs as may be required; we repair the entire plant if it requires it, or such portions as do require it.

Q. And your capacity has to be sufficient for some reserve, does it not?

A. Oh, yes, we have to have reserve capacity.

Q. In other words, there is an unequal demand on the part of the consumer, and you have to be ready at all times to supply the maximum?

A. Yes, I have seen it within a year, a variation of six million feet between one day and another.

Q. And you have to have capacity sufficient to supply that?

A. Yes, to make up these irregularities.

Q. Take an afternoon like this, with a heavy thunderstorm; the lights of this office have been turned on; would those conditions require an unusual supply of gas?

A. We would send out a couple of million more feet of gas this afternoon than we would if it remained pleasant. That is why people complain of their gas bills, when we have an unusually dark
month; they say "they have not been burning any more gas,
97 but the gas bills are just as high." They do not know it, but
they use it.

Q. What you have stated as to the Astoria plant would be true of all the plants on Manhattan? That is, the maximum capacity would not apply to every day in the year, but only to about two hundred?

A. Yes, that is always the rule; multiply the daily maximum capacity by two hundred and you get the yearly production.

By Mr. Matthewson:

Q. What you might call the yearly capacity?

A. Yes, what we might call the yearly capacity.

By Mr. Garver:

Q. If you were confined to the winter season alone, the case would be very different from that?

A. Then we would have to double our works, because we could not run them all the time.

Q. At that 18th Street plant there were five of the holders which have been taken by the city and which no longer stand. What was their capacity?

A. The four small ones—the capacity was 250,000 feet each, and the large holder 3,200,000.

Q. That would make about 4,200,000?

A. Whether it was 3,200,000, or exactly 3,000,000 I am not exactly clear now.

By Mr. Page:

Q. That is in addition to those you have given?

A. That is in addition to those I have given; I think it was 4,000,000. I think it was 3,000,000 and 1,000,000.

By Mr. Matthewson:

Q. Those have all been taken by the city?

A. Those are taken away entirely, removed, gone.

98 Q. The proceeding in regard to their condemnation is also pending?

A. Yes, I understand so. Nothing has been settled yet, I understand.

By Mr. Garver:

Q. Are all these holders, except the five taken by the city, in actual use at the present time?

A. Yes.

Q. What is their physical condition?

A. They are in good condition.

Q. What do you mean by that?

A. Well, they are in good physical working condition; there is nothing wrong with them, and they require no special repairs, care or attention.

Q. Do these holders deteriorate rapidly?

A. No, sir.

Q. Have you ever known a holder to wear out?

A. I do not think I ever did. I have taken out a good many holders because they were too small, but never one because it was worn out.

Q. Does not the gas tend to act as a preservative?

A. The gas acts as a preservative on the interior, and the paint that we apply on the outside takes care of the exterior.

Q. Chapter 125 of the Laws of 1906 provides that the pressure of gas in the City of New York shall not be less than one inch nor more than two and a half inches. What does that mean?

Mr. GANS: Is not that rather a striking question? I object to that as asking the witness to construe the law.

The MASTER: Do you understand that he is asking him to construe the law? I understood that he was asking him what that meant.

Mr. GARVER: I want to know what that means, as an engineering expert.

Mr. GANS: What the pressure is?

Mr. GARVER: Yes.

99 Mr. GANS: Then I will withdraw the objection.

Mr. GARVER: I will quote it exactly as it is: "The pressure of illuminating gas in any service main in the city of New York, at any distance from the place of manufacture, shall not be less than one inch, nor more than two and one-half inches." What do you undertsand that the company is required to do in order to comply with that provision?

A. To supply gas to its consumers and to the city of New York over the whole surface of Manhattan Island with a variation, an allowable variation, of only one and a half inches of water. That is, a pressure that will sustain a column of water one inch and a half out of level. (Illustrates by diagram.)

Q. Is it, in your judgment as an expert, physically possible for the company to comply with this requirement of the statute?

A. It is absolutely impossible.

Q. Why do you say that?

A. Because of the physical conditions and the action of the gas in the mains over which the company has no control, the variations of pressure caused by the consumers, opening up and shutting off gas; all this we cannot control.

Q. Do atmospheric conditions affect it?

A. Atmospheric conditions affect it, they are apt to interfere with it, and I say further that we cannot control it because I have tried faithfully for over a year to do it and have not succeeded.

Q. Did you mention variations in elevation?

A. Variations in elevation, of course they have their effect.

Q. In what way?

A. The gas pressure increases in proportion to the altitude. 100 That is, there is more pressure at the top of a gas main at a high elevation than there is at the bottom; more apparent pressure, not more actual pressure but more apparent pressure; pressure as we use it.

Q. That is according to the gauge registers?

A. According to the gauge registers.

Q. Are there such conditions in altitude here in New York?

A. Yes, sir.

Q. Will you mention some of them?

A. All the way from one hundred and fifty feet to in the neighborhood of two hundred and fifty feet I should think.

Q. What difference would there be between tide level?

A. At 250 feet it would be about an inch and a half, our limit, taking the specific gravity of the gas that we make.

Q. What effect if any would a thunder storm, such as we have had this afternoon have upon the pressure?

A. The thunder storm, except as a cause, would not have any effect. The city getting dark, by heavy clouds going over it, would of course make it necessary for everybody to light up their gas and use it, and the pressure would immediately reduce, except it was kept up by attention at the works.

Q. Does not barometric pressure affect it?

A. Yes, barometric pressure affects it also, but that is a small item. I have put in during the past year seven electrical pressure devices, with the endeavor to, as far as possible, regulate the pressure within the limit of the law.

Q. And has that been successful?

A. Not yet, no, sir.

Q. At the intersections of the streets, how are the mains arranged for the purpose of equalizing pressure?

A. The mains are connected together at the cross-streets by running through by what is technically termed a cross into the
101 main. That is, with four openings, and the gas mains are
simply common; they are all commonly connected.

Q. Does the effect of that tend to equalize the pressure?

A. Yes, only for that we could not supply the gas.

Q. You have had charge of the pressure of the gas, have you not?

A. Yes.

Q. Ever since you became chief engineer?

A. Yes, ever since I became chief engineer.

Q. And have you maintained any greater pressure than has been necessary to supply the demands of consumers?

A. No, sir.

Q. Has not the complaint been the other way, that the pressure has not been sufficiently great to supply the demands?

Mr. Gans: I object to that as hearsay.

Mr. Garver: That is part of the business of the company.

The Master: In so far as it calls for anything that he knows about he can answer. I do not know what the materiality of it is, but I allow him to answer.

Mr. Gans: I object to it as hearsay and incompetent.

Objection overruled; exception taken by Mr. Gans.

A. I have known of complaints, hundreds of complaints, from consumers that they did not get gas enough, and we always try to supply them the best we can.

Q. Take an afternoon like this, where the office buildings in the lower part of the city are lighted up; does that have any effect upon the pressure of the gas in the other parts of the city?

A. It draws it away from the lower districts, and that was the reason for my adopting these electrical signalling machines, to supply the gas as fast as it was drawn down, and to maintain a steady, uniform pressure. 102

Q. Suppose you should never exceed the pressure of two and a half inches; what would be the effect of that?

A. I would not like to say what the effect would be. There would be an absolute loss of business; we would get out of business.

Q. I mean, would there be sufficient pressure in that case to supply the consumer?

A. No, sir; we could not supply the consumer; absolutely no.

Q. Would there be any danger to life from that cause?

A. Yes, if we should reduce the pressure to that point, at no point in the mains to more than two and a half inches, there would be a great many other points where there would be absolutely no pressure at all, and, the burners being opened, the supply would come on again, and it would probably result in the death of a great many people.

Q. How is the pressure affected by the manner in which the gas is consumed? For instance, through gas ranges and Welsbach burners, and gas logs, &c.?

A. Welsbach burners and ranges require a higher pressure than the ordinary old-fashioned flat flame burners, open burners.

Q. The services in many cases are still these small services?

A. In many cases; we have renewed a great many. The chief difficulty lies in the house piping. In many of the houses which were built a great many years ago, and in fact some not so many years ago, the pipes were put in of small size, and now those houses are supplied with gas ranges and gas stoves and all manner of gas appliances, and the pipes in the house are too small to deliver the gas to them. Then they call on us to increase the pressure and give them the gas.

Q. And you have changed the services largely?

A. Yes, we have changed a great many, thousands, under our control.

103 Q. Do you know of any requirement anywhere of a maximum pressure?

A. I have never heard of one. I have made inquiry and I have traveled all over this country and all over Europe, and I never heard of a case where a maximum gas pressure was made.

Mr. Gans: I move to strike that out, if the Master please. I did not understand that he was asking for laws of other countries.

Mr. Garver: I was not asking for laws of other countries, but the practice in connection with the requirements of the business.

The Master: I do not see how it is material, but I will allow it to stand. He asked him if he had ever heard of a maximum pressure, and he says he never did.

Mr. Gans: Then may I have my objection noted to the question itself?

The MASTER: Yes, and the ruling.
Exception taken by Mr. Gans.

Q. In connection with the business of manufacturing and distributing gas, it has been generally recognized that it is wise to have a minimum pressure, has it not?

Mr. GANS: I object to that.
Objection overruled. Exception taken by Mr. Gans.

A. Yes, there is no objection to that, and no reason why there should not be. There are a number of places where they have those regulations. In London, for instance, they have a minimum.

I might say by way of further explanation in regard to the one inch and two and a half inch pressure (quoting): "When it is considered that gas must be delivered to the consumer, under the
104 existing law, between a minimum of one inch and a maximum of two and a half inches water pressure, over the entire city, and that one inch water pressure is but 36 one thousandths of a pound, where the maximum, or two and a half inches, is but 91 one thousandths of a pound, the impossibility of regulating the supply of gas under any atmosphere, or pressure, as stated is at once manifest."

Q. You heard Mr. Francklyn testify to the fact that some of this real estate of the Consolidated Gas Company was used for tenant purposes?

A. Yes, sir.

Q. Do you know whether any of that is used by any of the employees of the Gas Company?

Mr. GANS: I object to that as incompetent, irrelevant and immaterial.
Objection overruled; exception taken by Mr. Gans.

A. I know that it is. I know that our employees in many cases live in the company's houses, adjacent to the works.

Q. Is that in connection with the operation of the works?

A. They are employed in connection with the operation of the works, yes.

Q. Is there any reason why they should live adjacent to the works? Is it desirable to have them?

A. We like to have them, yes, because we know where to find them in case of accident, or if they are wanted.

Q. Mr. Francklyn referred to some property between 60th and 61st Streets that was vacant, although I think he said it was proposed to use that property for holders. Do you recall that property?

A. Yes, I know it.

Q. Do you know whether the property is held for that purpose?

Mr. BURR: I object to that because it is not competent at
105 all. The question is what property is now being used in the manufacture and distribution of gas, and not what may be contemplated for use in the future, and upon the present use now the valuation and the cost is to be based. They might have in their mind's eye ten years from now, with the growth of a particular

district, that they would use that for a holder, or for some other branch of the business. That is not the question before your Honor to-day. The question is what property is now used, and the value of the property, and how far does the value of that property in use go to produce the cost of manufacture and distribution of gas in New York.

Mr. **Garver**: There is no law requiring a gas company to live from hand to mouth. It does not have to wait until it needs a piece of property for a holder in order to acquire it in connection with its business.

Mr. **Gans**: We join in that objection.

The **Master**: Suppose they had bought a lot, and it is vacant to-day, and it should appear here on this hearing that they had filed a plan before the building department for that purpose, or some other purpose connected with their business; ought that not to be taken into account?

Mr. **Burr**: Well, I suppose it would.

The **Master**: How can I tell at this stage? I overrule the objection.

Exception taken by Mr. Gans and Mr. Burr.

Mr. **Garver**: The company not only may, but it is bound to make a reasonable provision. The building of a holder is not a matter of a day, but it is a matter of months or years.

A. That property has been held for that purpose.

106 Q. That property is near the terminus of the present tunnel, is it not?

A. Yes, sir.

Q. And it is conveniently located for the purpose of holders?

A. Yes, we have laid mains, now, from the terminus of the tunnel to the holders. They are being built there at present for the purpose of supplying gas.

By Mr. **Gans**:

Q. The Astoria tunnel?

A. No, at 71st Street where the tunnel crosses under Blackwells Island, and comes in between 70th and 71st Street.

By Mr. **Garver**:

Q. About how long does it take to construct a gas holder say of the capacity of 3,000,000 cubic feet?

A. Without undue delay from strikes or difficulties, or being unable to get material, it would take ordinarily about one year.

Q. But taking the ordinary chances, it might require a longer time?

A. Taking the usual chances of strikes and difficulties with material it will take longer than that.

Q. If it was a masonry tank, how long would it require?

A. If it was a masonry tank it would probably require a year and a half.

Q. You referred to the holder at 132d and 133d Streets, which has just been finished; there is some vacant land there to which Mr. Francklyn referred?

A. There is room for two more holders.

Q. Is that being retained for the same purpose, that land?

Mr. GANS: I make the same objection.

The same ruling and exception.

A. Yes, the property has been bought for that purpose and held for that purpose ever since we have had it. 107

Q. Mr. Francklyn referred to the triangular piece of land on the corner of 60th Street, which I think he said was vacant. Do you recall that? Is that held for any particular purpose, do you know?

A. No, sir.

Q. How about the 65th Street property on the west side, near the large holders?

A. That is not used.

Q. Did you not say that that was used for an exhauster house?

A. Oh, on the south side of 65th Street, yes—that was about a year and a half ago, and I prepared drawings and plans for a valve, boiler and exhauster house, to be located on these premises, but we did not get to work at it this year.

Q. You intended to but did not?

A. We intended to and did not; the plans are all ready.

Q. You intended to have them constructed there on that property?

A. Yes.

By Mr. BURR:

Q. Have the plans been filed?

A. I cannot tell now whether plans have been filed or not. I hesitated; I think they have, but I am not sure. My assistant files those things sometimes when I am away, and sometimes I do not know.

Q. Reference has also been made to the southwest corner of 116th Street and Lexington Avenue. Mr. Francklyn stated that that was intended for an office.

Mr. GANS: That we object to, of course.

Objection overruled; exception taken by Mr. Gans.

A. That was bought for the purposes of an office, but the office has never been erected yet. I do not know what the chances are for that.

108 By Mr. BURR:

Q. That is a vacant lot, is it not?

A. That is a vacant lot, I think it is. At one time we used it for the storage of pipe, but whether that has been taken out or not, I do not know; it was used for that purpose at one time.

Q. In your opinion, as to all this land which is marked in blue on Plaintiff's Exhibit 48, it is either in use or likely to be required for the use of the gas company in connection with its business in the immediate future?

Mr. **Gans**: Objected to as immaterial, irrelevant and hypothetical, and as calling for an expert opinion on a question on which an expert opinion may not be given.

Mr. **Burr**: We join in that objection; and further than that, not warranted by any facts which have been presented up to the present time. Further, that the witness is incompetent. He is identified with the company and interested.

The **Master**: I think there may be some force in some few of these objections, but I will allow it and give you an exception. Of course his opinion as to whether it is in use is not exactly what you mean. I understood the question to be as to whether in his opinion this land not in use was likely to be required in the immediate future?

Mr. **Garver**: Yes; I will put it that way.

Mr. **Gans**: That was the part to which we objected.

The **Master**: Yes, that was the part to which you objected, but I assume that having been in the gas business for thirty or forty years, he may testify as an expert.

Exception taken by Mr. Gans.

109 & 110 A. Much of it will be used, dependent to some extent upon the Astoria project.

The **Master**: That was not the question, it was whether it would be reasonably necessary, as I understand it.

Mr. **Garver**: Whether as a matter of business caution you think it is reasonably necessary that the company should retain this property which is not now actually used in connection with the gas manufacturing business, for the business of the company in the immediate future?

A. (Continuing:) Under present conditions, yes, sir.

At 4.20 o'clock P. M., adjourned to to-morrow, Wednesday, July 18th, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 69.
State's "A."

111 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *July* 18, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Matthewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr.

112 William H. Bradley—Further examination continued.

By Mr. Matthewson:

Q. You were asked yesterday whether plans had been filed for the valve house which the company was to erect on the 65th Street plot, west of Amsterdam Avenue. Are you able to say this morning whether they have been filed?

Mr. Page: Objected to as immaterial and irrelevant to the issues in this case; as to what plant is actually in use an inquiry I suppose may be directed to ascertain the value of the plant, but not what future plants may be built or constructed by the company.

Objection overruled; exception.

A. Yes, sir; plans were filed with the Building Department for the building.

Q. How long ago?

A. Dated November 1, 1905, and received the approval of the Building Department on November 21, 1905.

Q. You also yesterday in illustration of the difference in the demands of consumers referred to the fact that being a dark day yesterday more gas would be required than on a light day. Do you know this morning how much more gas was sent out by the Consolidated yesterday than was sent out the day before?

Mr. Burr: Objected to; that has no bearing whatever upon this situation, it seems to me, while it may be very interesting as an incident in the operation of a gas plant.

Mr. Matthewson: It shows the necessity for reserve.

113 The Master: I assume it will be further connected; I will take it.

Exception.

A. We sent out yesterday as compared with the day previous five million feet in excess.

Q. You stated that the construction at Astoria had been under your supervision from the outset. Can you say how much has been expended to June 30, 1906, at Astoria, in connection with the plant there?

Mr. BURR: Objected to.

Mr. PAGE: This will be taken subject to the same objection that we made as to all this Astoria testimony.

Objection overruled; exception.

Mr. GANS: Further objected to on the ground that this is not the proper method of proving these expenditures, unless it is shown the witness knows; there is no evidence he knows what expenditures have been made, there is no evidence he knows the details, even though he may have some hearsay evidence as to the gross sum that has been expended.

The MASTER: I understood him to say yesterday that all these expenditures had been made with his personal knowledge, and were reported by him to the bookkeeping department. I do not suppose that that alone would make it competent evidence if objected to, at the same time it is a link in the chain, I think, and I will allow it.

Mr. BURR: This is all taken subject to a motion to strike out if not plainly apparent that this witness has knowledge of the facts that he is testifying to.

114 The MASTER: I assume they intend sooner or later to make proof that will satisfy technical objections as to that, and I will let them put this in preliminary.

Exception.

A. The total investment to date, that is to June 30th, is $8,522,490.01, deducting from that the land——

Q. Just state how much of that represents land?

Mr. GANS: All subject to the same objection, I assume.

The MASTER: Certainly.

A. $1,132,558.28.

Q. Does that include amounts due on outstanding contracts, uncompleted?

A. It does.

Q. How much is that?

A. There are amounts due on outstanding contract uncompleted and in process of completion of $1,460,974.97.

Q. With the exception of the last mentioned amount the entire total which you specify has been expended in cash, has it?

A. Yes, sir.

Q. Up to June 30th, 1906?

A. Yes, sir.

Q. Were these expenditures made through your department in the construction of the plant?

A. They were.

Q. The contracts made through your department?

A. The plans were drawn in my department and the contracts made and specifications made in my department and the accounts kept.

Q. So you are personally familiar with these matters yourself?

A. Yes, sir.

Q. Are not all the payments certified to by your department before payment?

A. By either me or one of my assistants under my direction.

Q. Will this total of $8,522,490.01 complete the first unit at Astoria, or will further construction be required in addition to

115 that?

A. No, sir, further construction will be required.

By Mr. PAGE:

Q. Besides these outstanding contracts?

A. Besides these outstanding contracts.

By Mr. MATTHEWSON:

Q. What is the estimate excluding land and tunnel, of the cost of this first unit at Astoria, when fully completed?

A. (No answer.)

Q. If you are not able to say at the moment I will not press it; do not stop to look it up.

Question withdrawn.

Q. Have you in mind your estimate of the total cost of the first unit, including land and tunnel, or would you wish to refresh your recollection on that?

A. I would have to separate in my mind some of the items. Including land and tunnel?

Q. Yes.

A. Approximately, $13,000,000.

Mr. MATTHEWSON: That is all.

Cross-examination by Mr. PAGE:

Q. You state that the accounts, books of account relating to the construction of the Astoria plant are in your possession?

A. No, sir.

Q. Were the payments made by you?

A. The actual physical payments were not made by me; they were made on my certificate, by check from the Treasurer.

Q. Have you the contracts in your possession?

A. Yes, I have all the contracts, I think, that have been made already.

Q. Just state the method of business between you and the accounting department in respect to these matters.

116 A. Well, I will have to start a little further back than that. Drawings are made, the portion of the plant under consideration is designed, examined and approved, then the specification is drawn, then proposals are asked for—bids, from various contractors who are operating in that line.

Q. This is all done by you, I understand?

A. This is all done in my office, yes, sir. The bids are received, tabulated—examined, considered and tabulated and then recommendation is made by me to the executive committee that certain contracts, certain work be awarded to certain people—contractors.

If that is passed, and it usually is, the contractors are notified to go on with the work. As they go on with the work, the contract provides for the payment made as the work progresses proportionately to the amount of work done. When the inspecting engineers report that a certain percentage of the work has been completed, or when in my judgment I am satisfied that a certain proportion of the work has been done, a certificate is made out for the amount of money due the contractors on that work.

Q. Do you sign the certificates yourself?

A. Sometimes; sometimes my assistant does; if I am present, I sign it. All of these accounts—I am a little ahead of my story because all of these accounts are turned over previous to this last act to the accounting department, and a record made there of all the transactions in connection with the work. A copy of the contract is also filed in the accounting department, and when the certificates are made out they are sent downstairs to the accounting department, compared with the contract, with the specifications to see if the contract has been complied with, and checks drawn for the amount.

Q. These certificates that are issued by you are copies of them kept by you? 117

A. Oh, yes, we have copies.

Q. And the original certificate is filed in the accounting department?

A. In the accounting department.

Q. And I suppose is kept there?

A. Kept there. I assume it is kept there.

Q. When you refer to the accounting department, of what company is it?

A. Consolidated Gas Company, in my case.

Q. I mean where you have used the term?

A. At 4 Irving Place.

Q. And the accounts that are kept as to the expenditures of the Astoria plant are kept in the accounting department of the Consolidated Gas Company?

A. They are.

Q. Some of them have not been built as yet?

A. Not yet.

Q. Can you give us the amount of your estimated cost of the tunnel?

A. The tunnel itself?

Q. Whatever it was that you stated, including land and tunnel, would cost approximately $13,000,000; whatever you meant by that tunnel account, what you had in your mind?

A. $2,650,000.

Q. I suppose that is a tunnel of sufficient size to carry the product of twelve units?

A. Very likely; I would not like to say absolutely that I know that to be the fact. I have not gone into that subject yet fully.

Q. You prepared the original plans and estimates with an idea of having twelve units, did you not?

A. Oh, yes, twelve units.

Q. So that whether it would carry the twelve units would depend upon whether you had made the proper calculation at first, would it not?

A. Yes.

118 Q. So that your estimate was based upon a tunnel of that size?

A. My estimate was based upon a tunnel of that size. I may say that I designed the tunnel for the purpose of putting into it five sixty-inch gas pipes or mains. I had not considered that to be of especial interest right at this time, because it will be a great many years, or a number of years, before the tunnel will be required to its full capacity, and what changes might take place in the meantime I cannot foresee.

Q. How long is that tunnel?

A. It is six thousand and thirty odd feet; I cannot be sure of that.

Q. What amount of gas would a main sixty inches of that length deliver in the course of a day?

A. It depends upon the pressure applied to it.

Q. Yes, I know that. What pressure would you apply to get the full efficiency?

A. I might apply ten pounds or ten inches; it depends upon conditions.

Q. Ten pounds would be how many inches?

A. Ten pounds would be around 280 inches.

Q. Would your holder stand that pressure?

A. No, sir.

Q. Then you would not apply that pressure, would you?

A. Yes, by the intervention of a pump between the holder and the main.

Q. Would your pipes stand it?

A. Oh, yes.

Q. Do you think you would use ten pounds pressure?

A. Not unless I was obliged to.

Q. Well, if you were obliged to, take that, then; how much gas at that pressure would a pipe of sixty inches, and the length of that tunnel, deliver?

A. Without an opportunity to make a long calculation on the subject, I should say it would deliver approximately ten million feet in an hour.

Q. That is one pipe?

A. One pipe; that is an approximate figure.

119 Q. Then you could deliver fifty million feet per hour through that entire outfit?

A. Through the entire outfit, yes.

Q. If you delivered it at that pressure, what would be the effect upon the holder to which you delivered it?

A. It would have no effect whatever, because when the delivery end of the pipe was opened into the holder there would be no more pressure on the holder; the gas would instantly expand and lose its pressure.

Q. That would be up to the capacity of the holder?

A. Up to the capacity of the holder.

Q. And if you exceeded that?

A. Then I should change the valves and change the gas into another holder.

Q. Have you holders sufficient to receive gas to that amount?

A. Not now; we were speaking about twenty-five years from now when the plant is finished.

Q. Do you contemplate delivering gas at any such pressure on your 60 inch main that is now constructed to run through the river tunnel?

A. We have not contemplated that as yet, but it is perfectly feasible to do so if we so decide.

Q. Now, we have had the possibilities. What would be the usual pressure at which you would deliver gas, what have you calculated you would ordinarily use?

A. The usual practice is, and will be, to deliver at holder pressure.

Q. What is that?

A. About 12 inches.

Q. And delivering it at 12 inch pressure, can you state without a long calculation, how much gas per hour a main of 60 inches in diameter, the length of feet that that tunnel is long, would deliver?

A. Perhaps 3,000,000 feet; these figures are all approximations.

Q. 3,000,000 feet per hour?

A. Per hour.

120 Q. The cost of the plant at Astoria then would be about $9,217,441.72, excluding the land and tunnel?

A. If that is the figure; I have not made that calculation. (Calculates) $9,217,441.72.

Q. Now, can you give us the items that go to make up this cost of the plant of $9,217,441.72?

A. I can give you the items; whether they will absolutely balance or not I do not know. No, I cannot give you those items without a little time for preparation, and to pick them out.

Q. Then we will not trouble you at this time. All of the items, however, that go in to make up this cost, are collected in the books of the company at 4 Irving Place?

A. Yes, they are accessible.

Q. And also filed there are the original contracts and certificates that have been given by you?

A. Yes.

Mr. MATTHEWSON: Except that he stated there were some new additional constructions which were not under contract; of course there would be no contracts for those, and they would not be on file anywhere.

Q. What is the additional construction that is not included in the total expenditure up to date?

A. I do not think I understand the term "additional construction."

Q. You have stated that there were some things that were not included in this; I mean that, just what it is—whether it is some particular machine or building?

A. No, it is a number of contracts that are still unfinished.

Q. And on which the work has not been commenced?

Mr. MATTHEWSON: I do not think you understand Senator's Page's question, or else I did not. Don't you mean the total expenditure on contracts actually made?

121 Mr. PAGE: Exclusive of the $8,522,000, which includes some outstanding liabilities not yet paid.

Mr. MATTHEWSON: On contracts?

Mr. PAGE: Precisely.

Mr. MATTHEWSON: You asked what would be required beyond those payments made on existing contracts?

A. The allowance I gave for those I think was $1,460,000. There are 35 contracts yet pending and under construction.

Q. And the total of the amount outstanding on those is the $1,460,974.97 that you spoke of?

A. That is correct, sir.

Q. That was included in $8,522,490.01, was it not?

A. That was included in that, yes.

Q. Now, is there any additional construction that is not under contract, and is not included in that amount?

A. Yes, there are contracts to be made yet for further construction, to come yet, before completion.

Q. What I want to know is, what particular building or machine that would be, that is still to be constructed and contracted for, or pipes, or whatever it is?

A. One further construction must be a water works, for supplying water to the plant. Then there must be additional electric plant put in to supply electricity for power; then there are a great many connections, pipes and sewers, steam and water and a large amount of small work, as we call it, work small in itself, but important, to be still provided.

Q. You have done considerable filling in of land at Astoria?

A. Yes, we have.

Q. Is that included in the expenditure of $8,522,490.01?

A. Yes, the grading and filling is part of the expense.

122 Q. And I suppose at the office at 4 Irving Place, we could get at the amount of the expenditures for grading and filling?

A. Yes, you will find it there separated.

Mr. PAGE: I would like to ask the other side to produce the books of accounts, contracts and certificates relating to the construction at

Astoria for the purpose of further cross-examination of this witness. Are you going to sit mute?

(Mr. Matthewson nods.)

Mr. PAGE: Mr. Matthewson states that he sits mute. I have made a request of the other side and I suppose that the plea must be taken that Mr. Matthewson stands mute. I ask the Master to direct the production of those books and papers for the purpose of further cross-examination of this witness.

The MASTER: I do not see that there is any application pending before me.

Mr. PAGE: I made one.

The MASTER: You ask Mr. Matthewson to produce his books.

(Mr. Page's request is read by the stenographer.)

The MASTER: Have you any objection to doing that, Mr. Matthewson?

Mr. MATTHEWSON: Mr. Garver stated the position of the company in reference to the production of those matters yesterday, as I understand it, and I would not feel justified in saying that I would furnish them until I had had an opportunity to consider the subject.

Mr. PAGE: I would suggest that upon this branch of the cross-examination of this witness that be suspended until such time as Mr. Matthewson can consult with Mr. Garver and give us an answer.

123 The MASTER: You can proceed with the cross-examination, and if it is not finished or you want any further information on this matter you can recall him. You can suspend and take it up later subject to the convenience of the witness.

Mr. PAGE: Yes, I was going on with other branches.

Q. One other question on this branch before we leave it, suggested by Mr. Gans. The water works which you are to construct—will they be sufficient for the entire plant of twelve units, if you complete it?

A. If we can find sufficient water. Up to this time we have not been able to find it.

Q. You have some water works there now, have you not?

A. We have a well that we put down experimentally, for the purpose of getting water for boilers, such as we use, but nothing like the capacity that will be required f[illegible]he works.

Q. That is for the one unit?

A. Yes, for the one unit.

Q. Then you may not be able to get sufficient water to justify you in building those water works; is that right?

A. No, sir, I do not recognize that possibility at all. It is simply a matter of must get the water. It is undoubtedly in the ground and we can find it.

Q. Yesterday you gave testimony concerning certain disbursements for repairs, additions and replacements, at the various operating plants of the company. From what source did you derive information to enable you to give those figures?

A. From the accounting department?

Q. You testified from a paper. Was that paper made up by the accounting department?

A. Made up for me by the accounting department.

Q. And was not prepared by yourself?

124 A. I did not make the figures; no, I went over and revised them after they were made.

Q. Have you that memorandum with you?

A. Yes, here it is.

Q. The testimony that you gave related to the repairs, additions and replacements that had been made for the various plants, from 1884 to October 31, 1905?

A. Yes, sir.

Q. Were the segregations of the items applicable to replacements, additions and repairs made by you?

A. They were made under my direction, not by my hands. They were made by the returns sent in from the engineer's department to the accounting department.

Q. The returns that were sent in by the engineering department, would they specify how much was expended for repairs, how much for additions and how much for replacements?

A. Precisely.

Q. That is, you made those calculations?

A. Yes, the accounting department has no way of getting the figures except from the engineering department.

Q. So they get the figures from the engineering department?

Mr. MATTHEWSON: There is no way of subdividing except by the engineering department. The accounting department would not know.

Q. Where are the original bills upon which those entries were based. Are they in the accounting department or the engineering department?

A. They are in the accounting department.

Q. Have you any books of account or other records in your department that would show those respective items?

A. I do not keep them, no, sir.

Q. You do not keep any books of account in your department?

125 A. That is, accounts of this character. I keep accounts relating to the making and sending out of gas and all those accounts, but not financial; that is turned over entirely to the financial department.

Q. Of course it would be impossible for you to give any of the items that go into these totals, without going to the books of the company?

A. Except in the most general way.

Q. You have no independent recollection—— I mean by independent recollection, recollection independent of the memorandum that has beeen prepared for you by the accounting department of those various items, have you?

A. No independent recollection? I don't quite understand that.

Q. Well, you could not have prepared that statement from your own recollection?

A. No, sir.

Q. And all you have had before you or in your mind are the separate independent items that you have from time to time sent to the accounting department, and which have been by them entered and brought together in these totals?

A. Yes.

Q. So you would have no means of stating how much has been expended at the 14th Street plant, for instance, for either additions, replacements or repairs?

A. Not in detail.

Q. Nor in aggregate?

A. In a general way. I can state what work has been done chiefly in the way of additions or replacements, but not going into it to the extent of endeavoring to bring the figure up to this amount, because there would be undoubtedly many things I would leave out and forget.

Q. Well that covers a period of 22 years.

A. Yes, my memory——

Mr. Matthewson: It is not equal to that.

The Witness: It is not equal to that.

Q. Therefore what you are testifying to in regard to these items
of additions, replacements and repairs and the total of them
126 is derived entirely from the statement prepared for you by
the accounting department?

A. Precisely so, yes, sir.

Mr. Page: I would now make the same request of the attorneys representing the complainant for the books, contracts, and certificates from the engineering department that enter into the items of additions, replacements and repairs, as testified to by this witness.

Mr. Matthewson: For 22 years?

Mr. Page: Yes.

Mr. Gans: We will take them year by year.

Mr. Matthewson: You might as well apply to the Court at once for an extension of time, if you are going into it to that extent. There are millions of them. I make the same reply that I did to your other request.

Q. How is the pressure that is delivered from your gas holder to the mains, or distributing system regulated?

A. Regulated by means of a valve or valves at the outlet of the various holders where the gas is admitted into the mains from the holders.

Q. Does that valve work automatically?

A. No, sir; not in all cases; in some cases we have what are termed governors, which do work automatically, but the valve is much the best arrangement.

Q. Well, the automatic governor can be set at a certain pressure, and will deliver gas continuously at that pressure, will it not, no matter what the consumption may be?

A. That is, if the consumption increases.

Q. Well, the automatic governors can be set at a certain pressure and will deliver gas continuously at that pressure will it not, no mat-

ter what the consumption may be? That is, if the consumption increases, the valve is opened by the governor sufficient to
127 keep the pressure equal?

A. It maintains a uniform pressure at a given point.

Q. Well——

A. That point is where the governor is situated.

Q. That is what I mean.

A. The pressure may vary a mile or two miles from there; it may vary considerably and the governor never would know it unless it varied sufficiently to draw the pressure down—I am speaking of pressure going down now—unless it varied sufficiently to draw the pressure down back down the line to the governor.

Q. How far is the governor efficient?

A. My personal opinion is that a governor is not an efficient instrument in any case, and while I say we have some governors that work, I never allow them to work without a man standing alongside of them to watch it.

Q. Well, the valve is operated how?

A. The valve is operated by hand, by a man—the same man whom I say watches the governors.

Q. Then you have both do you, the governor and the hand valve?

A. Yes.

Q. At all of your distributing stations?

A. Not at all of them; we have at some. A very much—may I go on?

Q. Certainly.

A. A very much better arrangement is the one that I spoke of yesterday that I put in seven of them during the past year in the endeavor to find a way to better regulate pressure. That consists of a float which is set, which indicates pressure at a point at any distance you may elect to put it from the source of supply, preferably where the pressure is low. Those are the points we aim to look out for, because we do not wish the pressure to go down to the dangerous point. This machine located at that point is connected by wire with another similar indicator in the room where the man is en-
128 gaged supplying the gas. He regulates his pressure there to maintain a given pressure here (indicating).

Mr. Matthewson: What do you mean by here?

The Witness: At the end of the line, at the first described instrument, a mile or two miles, as the case may be, from the plant. He gets back every minute or every half minute or as often as he likes the exact registry of the pressure at this distant point, and he admits sufficient gas into the mains to maintain the pressure at that point.

Q. I understand that you have mains practically in every street in the Borough of Manhattan?

A. I think every open street in the Borough of Manhattan.

Q. And in some streets more than one?

A. In some streets several, yes, sir; in some streets ten.

Q. And probably in all streets more than one?

A. No, not in all streets, but perhaps in a majority of the streets, I may say, more than one.

Q. And this entire system as I understand it is connected and interlocked at the corners?

A. They are, so far as it is possible to accomplish it. The gas from different stations is supplied in different districts, and those mains are connected together fully and completely. They are also connected to the mains in other districts where it is necessary to supplement or increase the supply in certain localities which we have found to be deficient or unsatisfactory in the supply, and there we connect them together for that purpose.

Q. Then, as I understand it, the city is divided into districts, a certain district being furnished from a gasholder in that district?

A. No, sir. For instance, one district is from Grand Street to the
Battery.
129 Q. Yes.
A. From Grand Street to the Battery, south. The plant that supplies the majority of the gas in that district is the 21st Street plant, situated at 21st Street and East River.

Q The holder is there?

A. The holder is there.

Q. And the gas is brought down in a trunk main from Grand Street?

A. From Grand Street, in several trunk mains. There are four or five large mains that supply no gas from there to Grand Street.

Q. Until it reaches Grand Street?

A. Yes.

Q. You would call that the trunk main, would you?

A. Yes; the feed main or supply main, yes, trunk main.

Q. Well, I am not a gas expert and I wanted to get the technical phrase?

A. A trunk main is as good as any.

Mr. MATTHEWSON: It is sometimes called a pumping main?

The WITNESS: No; that is distinct from that.

Q. Then the trunk main at Grand Street is connected with the distributing mains?

A. Yes, sir, and some of the trunk mains run below Grand Street as far as Canal Street to deliver the gas further down.

Q. How many trunk mains have you running from the 21st Street station into this territory south of Grand Street?

A. There is a 16 inch and a 20 inch—I am speaking now from memory, I have not the record with me—a 16 inch, a 20 inch, an 18 inch and a 24 inch; there are three or four, I cannot recall them now, perhaps five.

Q. Those are the dimensions of the pipe?

A. Yes. And in addition to that we have a 24-inch main which
runs from the plant down through the various streets and de-
130 livers gas at Beaver and Whitehall Streets—you know this is
all under ground and I have not seen it for a great many
years. Those figures that I was recalling are the inches. That main is intended to deliver gas into the lower end of this same district.

Q. Now at the point where the trunk main is connected with the distributing system for that particular district, have you any governor or pressure regulator?

A. No, sir; there is none required there.

Q. Why not?

A. Because we have some difficulty in getting gas down there at sufficient pressure without attempting to regulate it after it gets there.

Q. Well, it would be perfectly practicable and feasible, would it not, to send gas through this trunk main at a high pressure, and reduce it where it is connected with the distributing system by a district governor or regulator to the pressure desired in the distributing system?

A. We do that now.

Q. Where?

A. This 24-inch main that I just spoke of, we have at times as high as three and four pounds pressure in that main.

Q. And that is reduced when it is connected with the distributing system at Beaver Street, and——

A. It reduces itself; we do not get any more pressure down there than we require with that initial pressure at 21st street.

Q. That is the friction.

A. The friction.

Q. And the gas passing through the pipe?

A. Yes, sir.

Q. Reduces the pressure from four pounds at 21st Street to what at Beaver Street?

A. To two or three inches at Beaver Street. If I may be permitted to say something right here——

Q. Yes.

A. There are other gentlemen who will probably be called as witnesses who can give the facts and figures absolutely in detail, better than I can. I am familiar with them in a general way.

131 Q. And my questions are intended to be general, largely as addressed to you?

A. Yes. All these things are capable of being absolutely demonstrated by those who have them in direct charge.

Q. Yesterday you spoke of a difference in altitude, making a difference in pressure?

A. Yes, sir.

Q. Do you know what difference it makes?

A. What difference?

Q. Well, an increase of ten feet in altitude will increase pressure how much?

A. An increase of ten feet in altitude. I have a table here which I prepared on that subject (producing book). With a specific gravity gas of 600, an increase of ten feet in altitude will make an increase in pressure of 59 one-thousandths of an inch, or an increase of one-tenth of an inch in every seventeen feet.

Q. In every seventeen feet one-tenth?

A. Yes, that is easier to get at.

Q. That is, with gas a specific gravity of 600?

A. 600, or 6/10.

Q. Taking air at one?

A. Yes.

Q. Gas of that gravity would be what candle power?

A. Well——

Q. What I am getting at, put it this way——

A. Gas of that specific gravity may be any candle power.

Q. Is not there any relation between the specific gravity of gas and the candle power?

A. Well, some, but not to any extent. If the specific gravity is due to carbonic oxide it will be a very low candle power, and if it is due to illuminants, a very high candle power, and all those are due to different constituents of the gas, as the greater or less proportion lessens or increases. Gas of 600 specific gravity might be 20 or might be 50.

Q. Is 600 about the usual specific gravity of your gas?

A. Yes. Of course it varies from time to time, but it is about that.

132 Q. Now you state that in certain parts of the city you deliver gas at an altitude of 250 feet, I believe you said, above the works?

A. Yes, about that.

Q. Where is that section?

A. That is up in the vicinity of Fort George and around on Lafayette Boulevard and Fort Washington, Washington Heights. I cannot give the exact locality without referring to books.

Q. Well, practically it is that part of the city that is on the ridge beginning at about 130th Street on the West Side?

A. Yes, sir.

Q. And extending up to Inwood?

A. Yes.

Q. Don't you carry a separate trunk main to that section of the city to deliver gas at that higher altitude

A. Yes.

Q. And if you were to deliver gas to any section of the city that was in a higher altitude than another section you would carry a separate trunk main, would you not?

A. No, sir, not necessarily.

Q. Well, would not that be the most effective manner of doing it?

A. It would be a very expensive way of doing it and I doubt whether it would be considered an efficient way.

Q. You are familiar with Newbigging's book, a handbook for gas engineers and managers?

A. Yes, sir. I have it, I have a copy of it in my office.

Q. That is considered one of the authorities, is it not?

A. For English practice. English and American practice are different in a great many respects.

Q. No, the laws of gravitation are the same in England as in America?

A. Pretty near.

Q. And the general physical laws are the same which regulate and cover the delivery of gas?

A. Yes.

Q. There is no American work on gas engineering, is there, or handbook for gas makers?

A. Well, perhaps not exclusively devoted—let me see—yes, there is a book which was pubished a number of years ago by a
133 man named Mooney who died a number of years ago, William Mooney.

Q. But all of the standard works on gas engineering are English works, aren't they?

A. With the exception of the various engineer's handbooks, that touch and treat on gas in accordance with American practice, where gas is a part of the general make-up of the book.

Q. That is, those would be general works that would treat on the subject of gas engineering in a general way?

A. In a general way.

Q. With other branches of engineering science?

A. Yes.

Q. Now I will read you what Newbigging says on that subject of delivering gas at different levels: "For the supply of gas to varying levels, therefore, separate leading mains with the station——

Mr. Mattewson: Just a second. Will you allow me Senator——

Mr. Page: I have not finished my question yet.

Q. (Continuing:) With a station governor upon each are highly advantageous and should be employed wherever practicable." Do you agree with that?

A. Yes, if we make special emphasis—if we place emphasis on the word "practicable."

Q. Well, does not that entirely overcome the objection that you raised here yesterday that it was absolutely impossible to control pressure in your distributing system, because you delivered at various levels, with sometimes a difference of 250 feet?

A. No, it does not.

Q. If you carry your trunk main to the level of the 250 foot plane, it would not affect the distributing system of another trunk main which was 250 feet below, would it?

A. But if there were streets and houses and consumers at
134 different levels all the way up this incline, as there is in New York, it would be a matter of a little difficulty to place this governor so that all hands would be regulated properly and correctly and within the law.

Q. Then except to the streets that are on the side hill, going up to this plane, you could do it?

A. If there was too much difference of elevation between the consumers on the streets on the side hill, and the consumers at the top of the hill, I would still be violating the law between the narrow limit of one-half and one inch pressure. When I gave the consumers half way up the hill sufficient gas for their needs, the consumers at the top would probably get more than the law would allow me to give, even with the governor.

Q. Well, you say the pressure varies one-tenth for every 17 feet?

A. Yes.

Q. That would be an inch for 170 feet, would it not?

A. Yes. But I must start out with my low level pressure, at pretty close up to two inches, probably, then I only get a very small leeway for the additional distance. My consumers half way up the hill must be supplied properly, and then I am only left perhaps half an inch for the balance.

Q. How much is the loss in pressure, by friction have you any tables that show that?

A. Well, it depends—yes, there are tables of that kind, but I have not any with me. It is very considerable, but very much less with gas than with water.

Q. Is not that one reason that gas works are always situated in the lowest part of a section in which it is to distribute to allow this increase in the pressure to offset the friction?

A. It is considered the best practice, to situate gas works at low levels.

Q. And it is for that purpose, is it not?

135 A. For that purpose, and the works are benefited thereby in that they do not have to carry such heavy pressure.

Q. And it also gives a more equal distribution of pressure, does it not, throughout the distributing system?

A. Yes.

Q. Now it is perfectly practicable, is it not, to divide your city into districts and place district regulators or governors at different places throughout the city?

A. Theoretically it is practicable. Practically there are serious objections to it.

Q. Well, what are they practically?

A. The defendants are forcing the consumers in a great city like New York to depend upon the automatic action of an automatic governor buried somewhere in the street, or an automatic governor situated in the basement or on the first floor of a building. If the city was districted off in that way and each district supplied through a governor, it would be a matter of very grave doubt whether at times this governor would not fail to operate, like all automatic machinery, and with an important, and I might state a dangerous element, as gas is, it is not wise to introduce any element that adds to the danger. And in my opinion district governors do add to the dangers of interruption and difficulty with gas supply.

Q. Well, are they used in many cities?

A. They are used in many cases. Perhaps where they have more nerve than I have.

Q. Do you know of—well, you speak individually, of course?

A. Individually, yes.

Q. Not more than the company has. The lower the pressure of the gas so that it is delivered with efficient pressure to burn at all, the more efficiency you get out of it?

A. No.

Q If the gas is sent to the tip at a low pressure, you get more illumination from it, do you not, than if it is fed to the tip at a high pressure?

A. If the tip is constructed for that purpose to deliver the 136 best results at a given pressure, at that pressure the tip gives the best results.

Q. Is that a matter which is regulated by the tip, or is it matter which is regulated by the physical laws of the combustion of the gas?

A. It is a matter that is regulated by the tip, by the burner through which the gas issues, to burn.

Q. I would like to have you explain that, if you do not mind taking the time.

A. I can explain that perhaps better, by way of illustration. If you have a chandelier in your house with two burners, you put on *on* one end of the arm a burner that is calculated to give the best efficiency to a certain gas at a certain pressure; you get that from it, whatever that pressure may be, whether it is half an inch or two inches. If, on the other end you put another burner alongside of it that is not calculated to do that, you get very inefficient service. The efficiency of the gas in the consumer's house, given a gas that is properly made, is regulated almost entirely by the consumer's fixtures and the way he uses them.

Q. And is not affected at all by pressure?

A. Not to any appreciable extent. I mean to say within reasonable limits. I do not mean to say if I put on 10 lbs. pressure it would not be affected, but I mean to say within the reasonable limit of gas pressure supply.

Q. When you test the candle power of gas, at what pressure do you deliver the gas to the burner?

A. We deliver five feet through the burner and use any pressure that is necessary to put the five feet through. The burners are usually designed to burn that five feet with a half-inch pressure. But that is not——

Q. Is not that the same pressure that you give out to your consumers?

A. That was many, many years ago. In these days of new 137 burners and water gas of the higher candle power that requirement of pressure of half an inch is obsolete and has been for many years.

Q. You mean to say then that in testing the candle power of gas at your works that you pay no attention whatever to the pressure at which the gas is delivered?

A. Except to get such pressure as produces a consumption of five cubic feet of gas through the burner. Now I will qualify that a little bit by saying this, if for any reason it was necessary to put an uncommon and unusual pressure on, that would be looked into and corrected. It is within the reasonable limits of pressure.

Q. If you took that same burner that would burn five feet and give 22 candle power at a pressure of one inch and you should increase that pressure to, say three inches, what would be the result?

A. If the additional pressure did not cause the burner to flare or to shriek or to make an uneven, ragged flame, you would get a candle power due to the increased quantity that you burned.

Q. That is, the increased pressure would give you increased candle power?

A. An increased illumination in direct proportion to the amount of gas burned, provided the flame was maintained in proper shape. If it got out of order, why——

Q. Frequently, before the flame flares or shrieks you see a very large increase in the dark portion of the flame, so to speak?

A. Yes.

Q. And no particular increase in the illuminating part of the flame?

A. The reason of the dark centre of the flame is because as it issues from the burner it is not inflammable and it requires a sufficient time to become mixed with air from the outside before it will become inflammable, therefore, the particles of carbon in the gas do not get heated up in this blue part until they get to the higher zone, 138 where it is mixed with sufficient quantity of air to burn.

Q. Does not that also show an imperfect combustion?

A. No, not necessarily. It would show perhaps an imperfect burner, a burner that was not efficient. that was not properly designed for the quantity of gas being used.

Q. These burners were adjusted to the same standard, were they?

A. The burner department, Senator, is not under my charge, I don't know that. That is foreign to my end of the business. I cannot answer that.

Q. You did not hear Professor Chandler testify before the Stevens Committee, did you?

A. I heard a portion of it.

Q. In which he gave a table showing the increased amount of gas consumed, and increased illuminating power under different pressures?

A. I am not sure; I know I heard part of his testimony, I don't recall it, anyway.

Q. Well, you can take a five foot burner, and by increasing the pressure, you can consume through that burner eleven feet per hour, can't you?

A. Yes, sir, but not satisfactorily to the consumer.

Q. No, not satisfactorily to the consumer; and why not?

A. In the line of illumination he would not allow it, because if he did he would immediately turn off until he got some light; he would get very little light at that. If I could go into every consumer's house in New York, and regulate the burners, I could settle all this business, but I cannot do it.

Q. Yes, I suppose you would settle it by turning the valve at the meter or by turning——

A. (Interrupting.) I would use common sense to regulate the supply the same as a man does when he goes in the bathroom 139 in the morning and the water flies all over the floor. He don't cuss the water, he turns it off.

Q. Yes. Then there is another part to that, isn't there, and that is that the gas should be delivered at such pressure as to produce the best results without the consumer having to be a gas engineer to regulate it?

A. That we endeavor to do, Senator, to deliver the gas at a pressure that will produce the best and most satisfactory results to the consumer.

Mr. Matthewson: You do not deliver water at a pressure at which you must keep the faucet fully open in order to get the best result.

The Witness: I don't know why I should be expected to regulate the pressure of gas all over the area of New York City any better than the City of New York regulates the water pressure. The same principle underlies it.

Q. The principle is entirely different, isn't it?

A. Not at all. The principle is entirely the same, except in the matter of reversing it; at the high point you get a low pressure, and at the low you get a high pressure with the water. There is the only difference in it.

Q. There is no variation in the pressure to water?

A. Variation in the head, whether the reservoir has more or less water in it, but you will never find at the lower part of the city the same pressure you will find in the upper part of the city, and it cannot be regulated any more than I can regulate the gas.

Q. Well, as you get farther from the works the pressure diminishes?

A. The pressure diminishes.

Q. Could a trunk main be carried up to a certain point and there locked in to the distributing main to give a uniform pressure.

A. That is done in a great many cases to-day in New York.

Q. So it is a practical and feasible thing to do?

140 A. We have that system in operation and have had it for years, there is nothing in this high pressure distribution that I don't thoroughly understand.

Q. Yes, I think that is generally conceded, that the high pressure distribution has been pretty fully studied and developed by the company.

Mr. Matthewson: Do you want this to go in the testimony?

Q. Do you deliver gas as high as four-inch pressure in the distributing mains?

A. Yes, higher than that.

Q. To the consumer?

A. At the point where the pressure is applied; it of course loses as it gets toward the consumer and that four inches pressure by reason of friction and a draught on the mains is reduced at distant points to perhaps one inch.

Q. But the consumer that lives near the point of distribution gets his gas at the four-inch pressure, does he?

A. No, very few of them get their gas at four inches pressure; the pressure is drawn down almost immediately after it leaves the works, the draught on the mains. I tried one experiment at one of our plants where we had six inches pressure registered on the gas in the house, in the valve house, and 500 feet from there we only had three.

Q. Was that point 500 feet distant lower than the gas house?

A. No, sir; level. That is, practically level with the continuation of the main right out of the works.

Q. That would not obtain generally, that there would be such a loss as that, would it?

A. I am rather under the impression there may be some stoppage in the pipes, but that I am not certain of. I never found it. But the pressure does reduce very rapidly from the valve, that we know.

141 Q. You stated that one reason you had to have an increased pressure was from the fact of insufficient piping in the house and of service pipes, and that it was necessary to maintain a heavy pressure in the street main to deliver the quantity of gas desired in the house?

A. Insufficient house pipe. I except the services because they are under our control and when they are insufficient we renew them and make them good.

Q. Now in some sections of the city you have pipes that were laid a number of years ago, haven't you?

A. Yes, sir.

Q. When the consumption was very much smaller and in order to force the quantity of gas that is now delivered in that section through those pipes the same argument would apply, wouldn't it, that you use a heavier pressure?

A. If the pipes had remained in the same condition, but we have spent a great many thousand dollars amounting to up over the hundreds in New York City, which can be demonstrated by some other witnesses better perhaps than I, in taking up and relaying small pipes. We lay nothing now less than one-eight-inch pipe; in the old days three and four was common, and where the streets were repaved, where they have been repaved in the past by asphalt, wherever we found a street to be repaved we make an examination and if the mains are small take them out and put in larger ones. That has been our universal practice for years.

Q. Then one of the reasons for maintaining this high pressure that was given before the Stevens Committee would not obtain now, and that was the increased consumption on these inadequate pipes requiring a heavier pressure to deliver gas.

A. I do not recall any such testimony. I gave none. Houses were originally piped for light and light only; now they are 142 using gas ranges and all manner of gas heating and cooking appliances; necessarily the pipes are too small in the houses and we have to supply gas sufficient to supply their wants.

Q. What pressure does a gas holder ordinarily give?

A. I would have to take some particular gas holder, because every gas holder differs in pressure, dependent entirely upon the weight of the metal from which it is made. The modern gas holders that are being built now give with all sections hooked—inflated to the full extent—about 12 inches pressure.

By Mr. Matthewson:

Q. You refer to the large five million feet holders or smaller holders?

A. The large holders. Smaller holders generally give less. There has been more change perhaps in the construction of gas holders in the last ten or fifteen years than in almost anything else connected with a gas plant.

By Mr. PAGE:

Q. Well, they are generally calculated by the weight of the holder and the number of cubic feet, so as to produce about a standard pressure?

A. No, they can be, but that is not ordinarily done.

Q. Well, as a matter of fact——

A. Yes, if a man is to make a contract for a holder that he wants to give—that he requires to work at a certain pressure, it is a very simple mathematical calculation to find out what it shall be and the weight of the metal, the producing pressure.

Mr. PAGE: That is all I have to ask on the subject of pressure.

The MASTER: Recess until two o'clock.

143 After Recess.

GILBERT FRANCKLYN, recalled and further examined, testified as follows:

On page 2 of Complainant's Exhibit 48, as presented heretofore by me, is a plot marked "Deeded by Consolidated Gas Company to the New York Edison Company." This should have read to "New Amsterdam Gas Company." I desire to correct my testimony accordingly, and, with the consent of counsel, have written "New Amsterdam Gas Company" in Exhibit 48, in place of "New York Edison Company" at that point.

Cross-examination of WILLIAM H. BRADLEY continued by Mr. PAGE:

Q. I show you Complainant's Exhibit 48, and ask you whether page A, which is devoted to the Astoria Light, Heat & Power Company, shows that property in its present condition, or the condition it is contemplated it will be in when the work is completed?

A. It is shown there as it will be when the filling, grading and docking is completed, not as it exists to-day.

Q. Does the estimated cost as you expressed it this morning include the filling, grading and docking of this property to the condition shown on page A of Complainant's Exhibit 48?

A. It does not.

Q. That merely had reference then to the work which had been done along those lines up to date?

A. To the work that has been done and is projected, which will be the completion of this portion (indicating on map) to some point beyond the easternmost dock shown on the exhibit.

144 Q. You are referring to the northernmost portion of what would be called the bulkhead line; that is what this would be called, would it not?

A. We have named that the Inshore Bulkhead.

Q. We will call it that then, which is a good name for it—the inshore bulkhead line west of Berrian's Island?

A. About one-half of the area covered by the Inshore Bulkhead, up to this point here (indicating). I cannot designate it exactly.

Q. Up to a point of the Inshore Bulkhead line that is opposite the northwesterly edge of Berrian Island, as it is contemplated to be filled, shown on the exhibit?

A. Yes.

Q. Can you state approximately how many acres you have filled in already?

A. I cannot; I have never made an estimate or thought about it.

Q. I suppose a tunnel that would carry the product of the one unit that is now built would be a much smaller tunnel than the one you contemplate building?

A. A tunnel much smaller would carry the product of the single unit, undoubtedly.

Q. And if that was all that you were going to build, you would have built a much smaller tunnel?

A. Yes, sir.

Q. Can you tell about what such a tunnel would cost?

A. A small tunnel?

Q. Yes, capable of carrying the product of the present unit.

A. I have never estimated on a small tunnel, one of that size; I should say about one-half the cost of the present projected tunnel, $1,325,000.

Q. What would a three-unit tunnel cost—that is, I mean by that a tunnel of the capacity to carry off the product of three units?

A. Possibly fifty per cent. more.

Q. Fifty per cent. more than one unit?

A. Yes.

Q. The product of three units would exceed the production of your entire plant on Manhattan Island now, would it not?

A. Yes, it would.

145 Q. And a twelve-unit works would exceed very largely the entire production of gas on Manhattan Island and the Bronx at the present time?

A. It would.

Q. It would be more than double, would it not?

A. About double.

Q. What is the purpose of preparing works of that size?

A. The purpose that I originally started out with was the transfer of all the gas manufacturing establishments from Manhattan Island to this Astoria plant shown on this exhibit.

Q. And also to allow for the increase in production?

A. (Continuing:) That would take a good many years to do, and the gas consumption or use in New York City doubles about every twenty years.

Q. Now, the engineering force that has been used for the production of this plant, is that paid for by the Astoria Light, Heat & Power Company or by the Consolidated Gas Company?

A. That is a question for the financial officers of the company to answer; they can more readily answer it than I can.

Q. What is your official position to the Astoria Light, Heat & Power Company?

A. I am chief engineer of that as well as of the Consolidated Gas Company.

Q. As chief engineer of the Astoria Light, Heat and Power Company do you receive additional compensation to that which you receive as engineer of the Consolidated Gas Company?

A. That is also a matter of book keeping; whether a portion of my salary is charged to the Astoria Light, Heat and Power Company, as a matter of finance or bookkeeping, I do not know.

Q. As far as the results to your pocket is concerned, there has been no appreciable increase?

A. No, it is all the same.

Q. It has been necessary to increase the engineering force, has it not?

A. Very materially; yes, sir.

146 Q. To what extent, over the force that had been maintained by the Consolidated Gas Company prior to your taking this work?

A. I had to double it, at least.

Q. Can you state what amount would represent that?

A. I cannot without going over the payrolls, books and records.

Q. You testified yesterday to the manufacture of coal gas. What do you use under the retorts?

A. Under the furnaces, for heating the retorts?

Q. Yes..

A. Coke.

Q. And you use the coke that is produced by the plant itself?

A. By the distillation of the coal.

Q. Can you state how much coke you use under a retort for a thousand cubic feet of gas produced?

A. I have access to all those figures in my office, but I have not them with me. In good practice it is perhaps 12 to 15 pounds of coke to 100 pounds of coal.

Q. How many thousand cubic feet of gas will a ton of coal produce?

A. Slightly varying quantities, generally estimated at 10,000 feet.

Mr. Matthewson: You mean coal gas?

Mr. Page: Yes.

A. (Continuing:) Coal gas entirely; that is what we have been speaking of. Some coals produce more, some less.

Q. At your 14th Street plant it averages between ten and eleven, does it not?

A. It might be slightly over ten, but ten thousand is the usually accepted figure for estimating; I say for actual work I will have to go to my data in the office.

Q. After the gas is distilled from the coal you have a by-product of coke?

A. Yes.

Q. And how much coke is produced by a ton of coal, I mean a gross ton of 2,240 pounds?

A. About 1,500 pounds.

147 Q. That is what is called a caldron of coal?

A. Yes, what the English usually term a chaldron; it is not used in this country.

Q. Then as the gas passes into the hydraulic main, what by-product do you recover there?

A. Tar and ammonia, ammoniacal liquor.

Q. In the hydraulic mains?

A. Some is deposited in the hydraulic mains, and some goes on and is found in the washers, scrubbers and condensers.

Q. How much coal tar do you produce from a ton of coal?

A. About twelve gallons to the ton, varying according to the heats of the retorts.

Q. That is about the lowest, isn't it?

A. It is a variable quantity, we may get fifteen, we may get twelve. As I say, Senator, I am answering these questions without any data whatever. If I had known you were going into this line I would have had some things with me.

Q. How many pounds of ammonia; can you state that from memory?

A. Ammoniacal liquor to the equivalent of about 22 pounds of ammonia, if my memory serves me right. Ammonium sulphate that should be, not ammoniacal liquor.

Q. That is after it is treated with the salt?

A. After it is made.

Q. Sulphate of ammonia?

A. Sulphate of ammonia.

Q. That is all the by-products that you produce, isn't it, at your coal plants?

A. That is all.

Q. I understand at your plants at Astoria you expect to recover cyanogen?

A. That is the present intention.

Q. How much cyanogen do you expect to produce from a ton of coal, about?

A. That is pure speculation. There is no data in the United States for cyanogen that has ever been recovered as a by-product in a gas works. In England and in Germany they produce 148 from three to five pounds of prussiate of potash per ton of coal, but whether the American coal will yield that quantity or what it will yield is simply absolute speculation.

Q. Have you made any experiments at all to ascertain?

A. I have not.

Q. What additional plant would you have to use for the recovery of the cyanogen?

A. We have to put in what are termed the cyanogen washers; they are vessels similar to the ammonia scrubbers, but used with different material.

Q. You make no effort to recover the sulphur from your purifiers or to utilize the——

A. We have made a great many efforts to sell it to people, recover it, but we cannot find a market for it.

Q. Well, the spent oxide is used very largely, isn't it, in the production of sulphuric acid?

A. For an inferior quality of sulphuric acid. Our chemical manufacturers with whom I have corresponded and talked and given—I gave away 100 tons here some time ago for the purpose of trying to establish a market and they reported back that the resulting sulphuric acid that they obtained was so discolored that they could find no use for it.

Q. You know that in England the mass, after it becomes spent oxide is sold at a profit?

A. We have sold some in these parts; perhaps ten or twelve years ago we sold some, but we cannot find any market for it now, for what reason I cannot say.

Q. Do you know whether the U. G. I. of Philadelphia sell their spent oxide?

A. I do not; it is very likely they have a small market and do dispose of some small quantity, but we are unable to do so in New York. Local conditions many times govern those things.

Q. What candle power is your coal gas before it is enriched?

A. It varies from 12 to 16, rarely above 16.

149 Q. And that is enriched by you up to the legal requirement in what manner?

A. Either by the introduction of gas made from oil or by mixture with a high candle power water gas.

Q. Well a mixture of the high-candle-power water-gas is the more economical of the two, isn't it?

A. No.

Q. What?

A. I don't know that there is any particular difference, any special difference in the absolute cost of enriching.

Q. What do you do at your 14th Street works, how do you enrich the gas there?

A. We produce coal-gas there without any enricher. We manufacture oil-gas at the 21st Street station and send it down there to be mixed in the holders. We also send water-gas down there.

By Mr. MATTHEWSON:

Q. When you say "send it down there" you mean 14th Street?

A. To the 14th Street station, and the 14th Street station sends a portion of their gas away to be mixed at other stations.

By Mr. PAGE:

Q. How many candles per gallon of oil do you figure that you get?

A. The oil that we are producing now, we should get about five candles.

Q. That would give five candle-power to how many cubic feet of gas?

A. That is an abstruse calculation. It would give five candle-power to probably—well, I couldn't get it into figures. Five candle-power to a mixture of the oil gas and about 60 per cent. of coal gas, that is to say 60 per cent. of coal gas and 40 per cent. of the oil gas in volume, if we get that mass out of it. That is an awful calculation to make without the figures.

150 Q. That isn't the usual way of figuring it?

A. No, sir.

Q. Could you state how much oil is necessary to use to raise a 16 candle-power of coal gas to 22 candle-power per thousand cubic feet?

A. I would not like to try and state that offhand.

Q. There is some way, I suppose, of arriving at the cost of the enrichment per candle-power, isn't there?

A. Yes; it takes more oil to bring the candle-power of gas up from 20 to 22 than it does to bring it from 16 to 18.

Q. What grade of oil—you said the grade of oil now used was five candles per gallon?

A. We are using now what is known as gas oil of a specific gravity; that is the only way I can describe it—of from 28 to 29 Baumé Hydrometer.

Q. Now you may describe the method of manufacturing water gas.

A. First is the coke, that is similar to what I described yesterday for the coal gas; it is brought to us in barges, unloaded from the barges, conveyed to the works, to the coal storage sheds or to the works direct as the case may be.

Q. Is that coal or coke?

A. Coal. We make water gas almost entirely by coal. Did I say coke?

Q. Yes.

A. Just make it coal. It is anthracite coal. In the generating house, so-called, are what is known as water-gas generating sets. They comprise three—each generating set comprises four pieces of apparatus, the first is known as the generator, the second is known as the carburetor, the third is the super heater and the fourth is known as the wash box or seal box. The generator is filled with coal to a proper suitable depth, usually full, an air blast is introduced into the bottom and the coal heated up to a state of incandescence, white hot. When it arrives at that point the air blast is shut off, the air blast is obtained from blowers and engines in the engine room, the

151 blast shut off and the steam is turned into the generator and made to pass through the coal, through this incandescent white hot coal. In passing through the coal the steam becomes decomposed and the resultant gas, with perfect theoretical perfection, would be fifty per cent. hydrogen and fifty per cent. of carbonic oxide. I might say that the first result of the introduction of the steam is the formation of hydrogen and carbonic acid. This carbonic acid in further progress through the incandescent coal takes up another atem of carbon and becomes carbonic oxide. The carburetor is composed of round cylinders lined with firebrick and in the interior of the lining is put up a mass of checkered brickwork, that

is brick piled on each other, leaving interstices between. The water gas so-called passes into this carburetor and is there met with a jet of oil. They pass along together and the oil becomes decomposed, cracked up, and turned into gas in the presence of the water gas that it is carrying through. It passes then through the super heater, which is of the same general construction, and is there further mixed and from there into the seal or wash box and from there to what is called the relief holder. That is a gas holder, usually small, that is placed in the line to act as a governor to take up unequal periods of production. In case the gas is being produced in the generating plant faster than being taken care of through the remainder of the plant it fills the holder; if the remainder of the plant is working faster than the generator it is taken from the holder; it is simply a cushion or governor holder. From there it is taken by the exhausters and passed through the condensers, washers, to the shaving scrubbers, the purifiers and station meters to the holder.

Q. The process after it leaves the seal box is very much the same as in coal gas?

A. It is very similar. We have what is known as shaving
152 scrubbers in the water gas works that have never to my knowledge been used in the coal gas process; they are an evolution of water gas manufacture.

Q. The carbureted water gas before the adding of the oil has no illuminating power, has it?

A. It is not carbureted water gas before the addition of the oil, the oil makes it carbureted.

Q. Yes, that is a misnomer. And the oil is added to give the illuminants?

A. To give the illuminating properties.

Q. How much oil do you use to enrich 1,000 feet of gas?

A. Between four and five gallons, varying constantly from day to day.

Q. Do you use the same oil that you use for the oil gas to enrich coal gas?

A. The same.

Q. That is a gas of lower candle power and requires the use of more gallons of oil per thousand cubic feet than that which was formerly used, isn't it?

A. Slightly more; there is not a great difference.

Q. It is stated by Newbigging that there are seven candles per gallon of oil and it is necessary to use 3.43 gallons to enrich carbureted water gas to 24 candles; that would be a higher grade of oil than you use?

A. Yes, sir.

Mr. Matthewson: It would also be English gallons which are larger than our gallons.

The Witness: The English gallon *in* substantially larger than the American; it is 231 cubic inches in the American gallon and 270 in the English, you will find it in that book.

By Mr. Matthewson:

Q. The English are substantially larger?

A. They are much larger.

153 By Mr. PAGE:

Q. Do you know whether in the use of oil in England that they use the English gallon or the American gallon as the standard?
A. I can't give that.

Mr. MATTHEWSON: The question is rather Newbigging uses it, isn't it, Senator? He uses the English gallon, I am very sure.

The WITNESS: The English gallon weighs ten pounds and ours weighs eight.

Q. What by-products do you recover from the manufacture of water-gas?

A. Water-gas tar. There is no ammonia and no coke.

Q. The amount of sulphur produced is higher, isn't it, in the water gas than it is in the coal gas?

A. Dependent on the class of coal, some coal produces more sulphur than others; that is entirely dependent on the coal used.

Q. But that is something that you do not recover in any way?

A. No, sir, I have never been able to find anybody who would recover it from the water gas mass. As I said, some years ago we sold mass from the coal gas and the water gas and it was expressly stipulated we should give them no more water gas mass because it was of no value.

Q. How many thousand cubic feet of carbureted water gas do you produce with the use of a ton of anthracite coal? Or, if you are in the habit of stating it in any other way, state it that way.

A. The production is about forty pounds to the thousand feet, forty pounds of coal, that is the way we always figure it.

By Mr. MATTHEWSON:

154 Q. Does that include coal used both in the generators and under the boilers?

A. No, that is about forty-five including the boilers.

By Mr. GANS:

Q. That includes the coal used under the boilers?
A. Under the boilers.

By Mr. PAGE:

Q. The coal you use under the boilers is largely screenings and coke breeze, isn't it?

A. No, sir, we use good coal under the boilers and in a great many cases we use tar; we are obliged to because we cannot get rid of it—water gas tar.

Q. The initial cost of production of coal gas is greater than water gas, isn't it, but is reduced by the greater amount of by-products that you sell?

A. Yes.

Q. In Astoria, the unit you have built over there, being two plants, are both coal gas plants, are they not?
A. Entirely.

Q. Do you contemplate building there also a water gas plant in some of the units?

A. It has been considered. I don't know that I may say it is contemplated. I have canvassed that idea in my mind and also talked with our officials about it.

Q. What amount of oil tar do you get, or whatever the standard is I don't know——

A. One thousand cubic feet of gas would be—I am sorry you ask me all these questions without giving me a chance to get something to answer them with. I have so many other things in my head besides that. It is about a gallon, approximately.

Q. From what?

A. It is about ten per cent. of the oil used, that is as near as I can tell you.

Q. You are chief engineer of the company, are you not?

A. I am.

155 Q. And the production of gas is in your department, and under your supervision?

A. It is.

Q. You have been engaged in the production of gas for how many years?

A. Between 35 and 40.

Q. Do you supervise the purchase of materials that go to the production of gas?

A. I do not.

Q. It is only that which goes to the production of plants that you supervise?

A. Yes. I make requisitions for so many hundred thousand tons of coal, or something of that kind, but it is purchased by the purchasing department.

Q. But the payrolls for the help and other expenses, that go into the production of gas, is that under your charge?

A. Not directly. The payrolls at the station are made out at the station by the superintendent in charge; they are sent down to the general office and into the finance department, and unless there is something making it necessary for me to pay attention or look at it, I do not look at it; and if there is something that they wish to call to my attention, they do so.

Q. You say that you have data at your office that would show the accurate answers to these questions, to which you have given answers approximately?

A. Yes, sir, I think so.

By Mr. Burr:

Q. You have nothing to do with the financial department of the Consolidated Gas Company?

A. No, I should say, no, sir.

Q. Your sole business is looking after the plants and holders?

A. The holders and plants, yes.

Q. You might state for the benefit of the Court and Counsel, just what your duties are, Mr. Bradley.

A. They are to exercise the general supervision over the entire manufacturing plant of the company; to see that the gas is made

or produced in proper quantity and quality; to have a gen-
156 eral supervision also over the main laying and to deliver the
gas up to the consumers' meters. After the gas arrives at the consumers, I have no further concern over it.

Q. Can you state the elements that go to make up the cost of manufacture of coal gas?

A. Only in the most general way.

Q. Will you state it in that way?

A. If I want to make a comparison between stations, which is the only reason that I have for making up the cost, I have no possible reason otherwise, I simply take the elements which I wish to compare which may be labor, may be coal, may be water, and put them together and compare them; it may be repairs.

Q. So that the elements you say, would differ at the various stations?

A. Would differ at the various stations, and differ entirely from the ultimate wind-up of the account.

Q. You appeared before the Gas Commission and gave your testimony on behalf of the Consolidated Gas Company, didn't you?

A. I did.

Q. And you also appeared before the Stevens so-called Investigating Committee?

A. I did.

Q. And you have appeared on a number of occasions as representative of the Consolidated Gas Company to give testimony as to the values of its various plants and properties?

A. I have; yes, on two occasions.

Q. Do you recall them specifically?

A. Two is all that I recall just now. One was in the case of the Harlem condemnation proceedings, whether or not it is the proper name I don't know, the Little Italy Park, the other was the 18th Street station that is now abandoned.

Q. A large element in the manufacture if not the largest element in the manufacture of coal gas is the coal, is it not?

A. That is the chief item.

157 Q. That even exceeds labor?

A. Oh, yes.

Q. Here in this territory you receive your coal at tidewater, don't you?

A. We do, yes, sir.

Q. Which is the most favorable condition under which you could receive it?

A. Most favorable condition under which we could receive it here, yes.

Q. Yes, I am speaking of here?

A. Yes.

Q. You have been a gas engineer for over twenty-five years?

A. Yes, sir.

Q. And you have seen the growth of this city and the increase of the consumption of gas during that time?

A. I have.

Q. Would you not say now as the result of your experience and observation that this is the most favorable territory in the United States for the production of gas and realizing a profit thereon?

Mr. **Matthewson**: I object to that as entirely too general a question and irrelevant.

Mr. **Burr**: If he does not know, he may say so, but with the experience that he has had, I think he may give us the result of that here.

The **Master**: I will allow it.

A. There are many places in the United States where gas may be produced very much cheaper than in New York.

Q. Has the growth of population anything to do with the favorable and profitable sale of gas?

A. The growth of population if it is concentrated, closely concentrated, has an influence on distribution, not on manufacture.

Q. Do you mean then that there is more distributed than manufactured?

A. No, sir, I mean that it costs less to distribute a given quantity of gas through a small main mileage system than it does to distribute the same quantity of gas through a very large main mileage.

158 Q. Take the lower end of New York here where we sit, for instance, is there any more crowded territory to your knowledge than exists right here?

A. No, sir.

Q. And is not the distribution of gas in this territory here in the lower end of New York most favorable and profitable?

A. It is generally supposed so. I think not.

Q. Will you give us your reasons for thinking that it is not?

A. Because the growth of the gas consumption in this lower part of the city is *nil*. In fact some two years past it has showed a decrease.

Q. To what is that due?

A. Electricity.

Q. Is that due to the fact that electricity can be obtained cheaper than gas?

A. The people like electricity better than gas. I doubt very much whether electricity in dollars and cents, light for light can be supplied as cheaply as gas, but there are a great many buildings, and I think this is one of them, which are built without any reference to gas, where they could not use gas if they wanted to.

Q. Has your business in the lower part of the City of New York increased during the years 1903, 1904, 1905?

A. In one of those years my impression is it showed an actual decrease; I am not positive of that unless I have reference to the accounts, but that there was one year that showed a decrease I am positive.

Q. You have ten plants, have you not, in the City of New York?

A. The Consolidated Gas Company has five working plants?

Q. Will you name them again, Mr. Bradley, please?

A. The 14th Street—I am simply giving you the location, without describing it particularly——

Q. Yes.

159 A. 14th Street and East River, 21st Street, East River, 99th Street and East River, 44th Street, North River, 42nd Street, North River.

Q. And the other stations, 18th Street, 63rd Street, 65th Street and 11th Street, 132nd Street, and Innwood, are operated by whom?

A. 18th Street is not operated at all; I eliminated that. I am talking about going works. 65th Street station is not a manufacturing plant, simply a holder, or distributing station; 63rd Street is of the same character; Innwood is of the same character; 132nd Street is of the same character; simply outlying holders, where the gas is sent from the station and distributed there. Those are not classed as manufacturing stations.

Q. So that the property of the company consists of the plants and these holders?

A. Yes.

Q. That property is used in the business of the company?

A. Exactly.

Q. Outside of the main offices?

A. Yes. In addition there are shops that I have not under my direct control. I am simply speaking of what I am controlling.

Q. I am now thinking of property that is actually used in the manufacture of the gas. Of course there are shops and stables and storage yards for coal, &c.?

A. These stations I have enumerated are where the gas is actually manufactured. The shops are in many cases adjuncts to those stations where work is done.

Q. Since 1884, when you became engineer for the Consolidated, how many new plants or holders have been erected by the Consolidated?

A. There have been no new plants, *per se.*

Q. And isn't there a plant or holder——

160 A. When I say plant, I intend to convey the idea of manufacturing plant. A holder is a holder, and while it is part of a plant, still its usual designation is plant and holder. The holders that have been erected——

Mr. Matthewson: What is the question, how many holders have been erected since 1884?

Mr. Burr: Yes.

The Witness: Shall I call them off separately, or say so many?

Q. Yes, designate them.

A. One at 14th Street station. Shall I state the capacity?

Q. Yes.

A. 3,200,000 cubic feet capacity. One was erected at the 18th Street station of the same capacity, and has since been taken by the city and is no longer in existence, but it was erected during my connection with the company. At 63d Street one of 3,000,000 cubic feet capacity; at 65th Street, two of four million cubic feet capacity each; at 111th Street two of five million cubic feet capacity each; at 132d Street one of five million cubic feet capacity. That I think comprises the list.

Mr. Matthewson: How about Inwood and 21st Street? Were they put up since 1884?

The Witness: Inwood was erected. A small one at Inwood.

Q. What is the capacity there?

A. 60,000 feet.

Q. What is the life of a holder, from your experience?

A. I have no information as to the life of a holder. There are holders in New York older than I am, still working in good shape.

Q. There are also mains?

A. Yes.

Q. Now in your department I suppose you have a complete list of all the mains that are laid in the public streets of the city of New York?

A. In what might be called an annex to my department, yes; in what we call the street department.

161 Q. Well, it is a branch of your department, is it not?

A. Yes, sir.

Q. Because necessarily you must know where the mains are?

A. I know from the maps and books and data, but I cannot say what main there is here in Wall Street, for instance.

Q. No, I do not understand that you can.

A. No.

Q. But you have books and maps and data, from which that can be done?

A. Yes, sir, which are complete as it is possible to make them.

Q. Has the size of mains anything to do with the proper distribution of the gas in the streets?

A. Very much to do with it.

Q. So that a main which was put down years ago before present conditions existed, and is now being used, might not be able to carry on the business successfully, that it is now being used for?

A. If it was used exactly as it was within twenty-five years ago, yes.

Q. The capacity or the size of the mains has considerable to do with the pressure of the gas?

A. Yes.

Q. And the regulation of that pressure, has it not?

A. Yes.

Q. In this work which has been referred to I find a short statement with regard to that, Mr. Bradley, and I read it and ask you whether you approve of it or not.

Mr. Matthewson: What work is that?

Mr. Burr: Mr. Newbigging.

Q. He says there can be no doubt that much of the success of the coal gas industry is due to the adoption of enlarged mains and service pipes as compared with the restricted sizes in use from
twenty-five to thirty years ago, admitting as they do in the
162 reduction of the pressure with the consequent reduction of
loss by leakage and increased illuminating value. Is that statement true from your experience?

A. In a general way, yes. I do not know why the illuminating value is brought into it. I cannot see any gain in illuminating value from passing through a large pipe.

Q. I notice you have a smile on your countenance, and Mr. Addicks has, but this is from Mr. Newbigging, who I understand is a very competent engineer.

A. He is a very competent man, but Mr. Newbigging, like all of us, says some things which are not so.

Q. Does that apply to yourself?

A. I suppose I have made statements at times which are not so.

Q. Do you remember testifying with regard to the 14th and 18th Street works in an effort to have the taxes wiped out on the ground that they had no market value?

A. I don't recall testifying on the tax question at all, sir.

Q. In each one of those stations that you have referred to there is a man in control under your supervision?

A. A superintendent, yes, sir.

Q. And in that station there is a record made and maintained of the amount of coal and oil that may be used year by year?

A. Day by day.

Q. Would you be good enough to give me the names of the men in charge of the stations to which you have just referred?

A. At the 14th Street station the superintendent in charge is named Albert Riblet; at the 21st Street station the superintendent in charge is Charles Keegan; at the 99th Street the superintendent in charge is Mr. Frederick Bradley, my brother; at the 44th Street station the superintendent in charge is William Hawthorne; at the 42d Street station is Mr. Frederick Down. Mr. Down also has charge of the 65th Street and 63d Street holder stations, not manufacturing stations, but holder stations.

163 Q. Yes, I understand, and who are the other men who have charge of the holder stations?

A. Mr. Bradley at 99th Street has charge of the 111th Street holder station; at 132d Street, that is only a new holder just put into use, and it is in, I might say, my direct charge just now for the time being, until the superintendent is designated who shall look after it. Inwood is in charge of Mr. Rowland, I think it is Charles.

Q. I understood you to say that as fast as you possibly could you were putting down eight-inch mains in the street?

A. Eight-inch mains were the smallest we were putting down. We are putting down large mains in quantities, but eight inches was the smallest, was my statement.

Q. Well, how large are they, how large are they above eight inches, twelve inches?

A. Oh, as high as 36.

Q. And do you wish to be understood as saying that the pressure fixed by the law could not be carried out by proper mains placed in the street?

A. I do.

Q. Do you make tests for specific gravity every day?

A. Tests are made for specific gravity. I do not make them personally, but they are made and I see them occasionally, when I have occasion to see them.

Q. Who makes those tests?

A. They are made by the works superintendent, and by the chemist.

Q. Is a record kept of them?

A. A record is kept, yes.

Q. Where is that record kept?

A. At the stations, I think, and also sent down to the Irving Place office.

Q. When a new holder is to be built, is it built on your own initiative or in recommendation?

A. Yes, sir.

164 Q. Has that been the practice heretofore.

A. Yes.

Q. And you have at present and have had for a number of years ten distinct holders and plants, five plants and five holders or five plants and six holders?

A. Yes, that is correct.

Q. A more economical way is to have the plants and holders all together, isn't it?

A. More economical in one way and more wasteful in another.

Q. In what way is it more economical?

A. More economical because the more holders are grouped together, the less number of superintendents and the less number of men are required to look after them.

Q. In what way is it more wasteful?

A. Because in grouping the holders together where you are supplying long distances like in New York, it would very much increase the cost of distribution system of mains.

Q. Does that apply to the proposed construction in Astoria?

A. No, sir.

Q. Why not?

A. Because we propose to retain the holders where they are in New York, and also build others when the time comes.

Q. Then I understand you to say that the Astoria plant is not meant to supplant the properties, the holders and plants in the Borough of Manhattan, but is to be in addition?

A. I have never said in any possible way, in any testimony, or in any conversation, that the gas holders would be dispensed with; on the contrary I have always said that they would remain and that others would be built.

Q. So that necessarily the proposed construction in Astoria is to take care of the contemplated increase in business?

A. It is in addition to the present plant.

Mr. GANS: I think we will have to move to strike out that answer as not responsive.

Mr. MATTHEWSON: Do you think a motion lies to you?

165 Rather to the examining counsel, I should say.

Mr. GANS: I think we have certain rights.

Mr. MATTHEWSON: Yes, certain rights.

Mr. **Gans**: We would have a right to object to the question, and I think we have the same right to move to strike out the answer as not responsive.

The **Witness**: It was an exact answer as I understood it.

(Question and answer read.)

The **Master**: I will let it stand.

Mr. **Gans**: Exception.

Q. And the present plants in the city of New York are to remain just as they are and to be maintained?

A. They will remain, and undoubtedly must remain until we can produce in Astoria sufficient manufacturing capacity to replace them.

Q. Will that be when the Astoria plant is in operation?

A. Not when this Astoria plant is in operation, not when the first plant is in operation, no sir.

Q. Then to all intents and purposes, for first consideration, the Astoria plant is to be maintained in addition to the plant already here and now existing?

A. I do not see how we can do anything else, sir.

Q. You have charge also of the city lighting, of the city lamps, Mr. Bradley?

A. No, sir.

Q. Is that in another department?

A. That is in another department entirely. I have no connection with that.

Q. You do not know of your own knowledge, the amount of gas which the city consumes per annum?

A. Not of my own knowledge; I have never looked it up.

166 Q. And the same applies with those items that you gave us as to maintenance and repairs, does it not? You have no knowledge yourself of the payments of these amounts?

A. I did not see the checks passed for the amounts, no, sir.

Q. Will you be good enough to tell us how these bills are incurred? Do you take the initiative in that respect also?

A. I do.

Q. Then you make a requisition upon the main office?

A. I will state it in a few words, if you please.

Q. Yes.

A. The superintendents of the stations are called upon by me every year to make recommendations as to what they require in the way of repairs, additions or improvements. I take those recommendations, go over them and decide as to their practicability or necessity and report to the Directors or Executive Committee that I want an appropriation of so much money for each station; whatever the sum may be. If that is passed and agreed to by the Executive Committee I then go on, through my assistant engineering staff and make the plans and see that the apparatus is ordered and contracted for and put into operation.

Q. Well, therefore you must keep a record of all these matters for your own protection, don't you?

A. I—yes, I have a record, but it is not an absolutely complete record.

Q. Is it not as complete as the record that is in the main office?

A. No, sir, because everything is rounded up into the main office. There are often times expenses that are incurred foreign to my department that are brought in necessarily, and they are collated and brought together in the main office, to which I have access at any time if I want to find out anything, so I have no reason for burdening myself or my staff with accounts which are unnecessary.

167 Q. I understood you to say in reply to a question by Senator Page that the papers which you produced here from which you testified were statements given to you by someone as extracts from the books containing this information of which you are now speaking?

A. Exactly.

Q. They are not original entry by any means?

A. This paper that I produced here was not an original entry. It was taken from the book.

Q. Do you know who has charge of these books?

A. Mr. Carter, I think, is the head of the department. It is to him that I apply if I want any information, and he sets his clerks to work to furnish it to me.

Q. Do you figure out for the year the number of tons of coal that will be required in the same way and make a requisition upon the main office?

A. I do.

Q. Do you attend to the making of a contract for the delivery of that coal?

A. I do not.

Q. The variation of ten cents in the price of a ton of coal would affect to a degree each thousand feet of gas, would it not?

A. Yes, sir.

Q. And that also applies to oil, doesn't it?

A. Exactly the same.

Q. The variation of a cent in a gallon, or half a cent, or quarter of a cent, or an eighth of a cent, in a gallon of oil, would affect the cost of the production of a thousand feet of gas?

A. It makes the material dearer.

Q. Therefore the gas engineer would seek to buy his commodity as cheaply as possible?

A. Exactly; yes, sir.

Q. And if open competition would result in getting the most favorable prices, it would be his business to seek open competition, would it not?

A. It would.

168 Q. Do you know what the method is that is pursued by your company?

A. I do not.

Q. Now, after the gas is made, you have stated there are residuals. Do you have charge of the disposal of those residuals?

A. Not except to deliver them under the contract.

Q. You do not make any bargain as to the price to be paid for them?

A. I make no bargain, absolutely. The bargain is made by the financial officers of the company.

Q. Did you read the affidavit which was submitted by the city on the motion made for an injunction in this case, the affidavit of Dr. Marks, containing the record of the test made by Dr. Love and himself in the Syndicate Building, otherwise known as the Park Row Building?

A. I did not.

Q. To ascertain the pressure?

A. No, sir; I saw the doctor's affidavit, but I never read it in its entirety. I simply skimmed over it.

Q. You have made a very careful study of this subject of the pressure?

A. I have.

Q. And you did not read that statement of Dr. Marks, with regard to this matter of pressure?

A. I did not; in fact, I do not think I was ever in possession of the affidavit more than to take it up and look it over and lay it down again; I was never furnished with a copy of it.

Mr. Burr: We also join in the demand of counsel for the complainant to produce the books of original entry here, so that we may have an opportunity to fully cross-examine this witness with regard to these various matters to which reference has been made, and as to which he has testified that his sole source of information was these extracts furnished to him from the books of original entry.

I also apply and make a demand upon them for the production of the contract for the supply of coal during the years 1903, 1904 and 1905, and the contract for the supply of oil during the same years. 169

Q. I understood you to say that you contemplated in the future constructing water plants in Astoria.

A. No, sir; you misunderstood me. I do not think I said that. I said that I had had the matter under advisement, under contemplation, but had not decided as to the practicability or feasibility of it; that is what I intended to be understood as saying.

Q. This unit which is now far advanced is to be used in the manufacture of coal gas solely?

A. Coal gas entirely.

Q. What are the merits or demerits of water gas as compared with oil gas and coal gas?

A. In what respect?

Q. In any respect.

A. I do not know that I know how to answer that—merits or demerits; they are both gases, and both used for illumination, both singly and mixed together.

Q. I am trying to arrive at an explanation from you as to why any other kind of gas is manufactured than coal gas?

A. Oh; the manufacture of water gas was started in 1876 and

1877, at the Municipal works, where I was in charge; that was the first water gas manufacturing plant in the country of any size. It was then manufactured or then adopted, because it was claimed, and properly at the time, that gas of a higher illuminating power could be made at a less cost than coal gas. That went on for a term of years, for some years, and proved to be the correct theory. Then the coal gas advocates and manufacturers woke up, I might say, and began to make improvements and pay more attention, perhaps I might say, to the manufacture of coal gas, as it was an active
170 competition then with water gas which they feared. That being the case, the manufacture of water gas was gradually extended and adopted, and prices began to go up. When we first made water gas we used naptha as an enricher. That finally got to a price where we could not afford to use it any more, and we finally went to gas oil. Then gas oil became hard to get and scarce, that is, the grade of gas oil. Then we went down to even a lower grade, which we are using now; so that as to the relative difference between the cost of manufacturing water gas and coal gas, not to include, perhaps, the candlepower, the result is that the cost to manufacture has gradually drawn together nearer to the same point.

Q. Does that also apply to oil gas?

A. Yes, oil gas is under the same general category as water gas; they are made in conjunction and connection, and one is practically a part of the other.

By Mr. Matthewson:

Q. You make no oil gas except for the purpose of enriching your coal gas?

A. We make no oil gas except for the purpose of enriching our coal gas.

By Mr. Burr:

Q. There is no difference then in the price or cost of manufacture in these cases? One cannot be manufactured cheaper than the other?

A. Water gas can still be made a little cheaper than coal gas.

Q. How much cheaper?

A. I cannot state; I do not know. I know there is a difference, but, given a favorable market for coke, tar and ammonia under the best possible conditions, there will be but little difference in New York.

171 Q. Under prevailing conditions, I suppose the difference could be ascertained from an examination of your books, could it not?

A. Undoubtedly.

Q. Now, as a gas engineer of so many years' standing, you would say that the successful and profitable manufacture and distribution of gas depends largely upon the skill and economy with which the business is carried on?

A. It has very much to do with it.

Q. As with any other business?

A. As with any other business.

Q. And that unnecessary expenditures of money would necessarily enhance the cost of manufacture and distribution of gas.

Mr. Matthewson: That would almost go without saying.

Mr. Burr: I thought it might be a little different theory in the gas business.

Mr. Matthewson: No, I think not; we are not paying high prices for articles that we do not have to, for the purpose of reducing our own profits.

Q. Have you a map in your engineering department showing the dimensions of these various plants and the holders?

A. We have drawings and maps of all the various stations; not on any one map.

Q. But you have a series of maps showing that completely and in detail?

A. Yes.

Q. And not only that, but you must necessarily have an inventory of each piece of property in connection with each plant and holder?

A. Every piece of land?

Q. Of machinery?

A. No, not necessarily; we have drawings that show all this various machinery, but I do not know that I have in any case a complete inventory of it.

172 Q. How could you make up the value of any given plant unless you had an inventory of all that went to compose it?

Mr. Matthewson: I object to this. The witness has not testified to the value of any plant. This is not cross-examination, and counsel will be making the witness his own, if it were allowed.

Mr. Burr: I am asking if such an inventory is in existence.

Mr. Matthewson: He says no.

Mr. Burr: Is that your answer?

The Witness: I said no.

Q. Then I understand you to say that the Consolidated Gas Company has no inventory of the property going to make up its plant in the Borough of Manhattan and the City of New York?

A. As far as my knowledge goes it has none; if the financial department has one I have never seen it.

Q. Haven't you made an affidavit in this very proceeding stating that to your knowledge the value of the plants and property of the Consolidated Gas Company was such and such a figure?

A. I did.

Q. Can you tell me the source from which you derived the knowledge upon which you based that statement?

A. From my own knowledge, my own information in regard to the business, the requirements, and knowledge of the business.

Q. Did you make that statement without having any inventory before you, or without making any examination of this property that I refer to?

A. Without making any special examination for the purpose.

Q. Is that the rule of gas engineers in making the estimated value of gas property?

173 A. It is the rule for making approximate estimates, adopted by many engineers, myself included.

Q. Then, a man would be able to give an opinion in regard to the value of property without knowing anything about it practically?

A. No, he must know about it.

Q. If he must know about it he must have an inspection of it, must he not?

A. It must perhaps be understood that the works, having been under my charge for twenty years, I have made various inspections of them from time to time during that twenty years.

Q. What I am getting at is: It was from such inspection that you based your opinion that the property was of that value, as stated by you?

A. It was from such inspection and my knowledge of the producing capacity and operation of the plant.

Q. No other engineer could give a sensible and fair estimate of the value of that property without having a similar inspection, could he?

A. No, sir.

Q. And it would be necessary for him to have an inventory of all the property used at these various plants?

A. In making a valuation of any other character it would be necessary to inspect and inventory the value of each separate piece of apparatus.

Q. Of any other character but gas property.

A. Of any other character but the valuation that I gave. In making a valuation of any other kind, I intended to say.

Q. By any other engineer, you mean to say?

A. Yes.

Q. It would be necessary to what?

A. To make a thorough inspection and arrive at his own conclusions by his inspection and by his inventory and measurements and calculations.

174 Q. Are you familiar with the process and practice adopted by the gas companies of Massachusetts in that regard, in making their annual reports?

A. Only generally familiar, from what I have seen in looking over their reports.

Q. You have also stated, if I remember rightly, in this proceeding, that the plants and holders of this company are now in the best possible physical condition?

A. I believe them to be so, yes.

Q. And that gas is manufactured and distributed under the most favorable conditions in the city of New York?

A. So I believe.

Q. And notwithstanding that I understand you to say that the Consolidated Gas Company had invested some nine millions of dollars in this company in Astoria already?

A. Yes, it is necessary to invest it here or there.

Q. Why not here?

A. Because it is more expensive to manufacture gas in New York, on account of the fixed charges and the troubles and difficulties with the Board of Health and the Building Department, and with the city bureaus.

Q. You think that when you get over to Astoria you will be free from the observation of those departments?

A. I do not think that we will be free from observation, but we will probably be free from a good many of the annoyances, which are real annoyances now, but they will not be noticed over there.

Q. What reason have you for making that statement?

A. If for instance we take a gas plant in a crowded residential locality, surrounded entirely by dwelling houses, and there is a little smoke or a little smell or a little noise emanates from the gas works, the Board of Health are after us at once. Over there we are in open country, out of the way, with nobody to bother and nobody to annoy.

Q. Then this belief that has been cherished by so many, that the places occupied by your holders were to be turned into public 175 parks, is a myth? It does not exist in actuality?

A. Any one who had that idea about the holders was very badly mistaken.

Q. Of course the stock has been issued for this investment in Astoria, by the Astoria Light, Heat & Power Company?

A. That I cannot answer, sir, that I do not know.

Q. You do not know about that?

A. No, sir.

Q. I understood you to say a moment ago that you took the initiative about the construction of the plant in Astoria.

A. Certainly; that is, as far as the engineering part of it went; I made no initiative as to stocks, bonds and payments.

Q. But as a practical proposition, and as a proposition for the construction of a great plant, possibly the largest in the United States, you took the initiative in suggesting that and devising the ways and means for its construction, did you not?

A. From an engineering standpoint, yes, not from a financial standpoint.

Q. Did you make a report to the officers of your company upon the advisability of the construction of that plant at Astoria?

A. I did.

Q. You recall the date of that report?

A. No, not the special report. I have recommended consistently, in, I think, every annual report I have made since 1876, that we should take measures to move out of the city, but as far as a general absolute recommendation is concerned, I do not know that I recall it now; I have done so much in connection with it.

Q. You were here yesterday when Mr. Francklyn testified?

A. I was.

Q. You heard him testify as to the extent of the vacant and unused property owned by the Consolidated Gas Company in the City of New York?

A. I did.

176 Q. In the Borough of Manhattan?

A. Yes.

Q. Did it occur to you that that vacant and unoccupied and unused land could be used to the advantage of the company in extending its plants and holders?

A. No, sir.

Q. When was the report that you finally made in regard to the Astoria proposition acted upon?

A. I cannot say that sir; that was an action by the Board of Directors or the Executive Committee; that I do not remember, if I ever knew.

Q. Can you not recall the year?

A. It must have been four or five years ago.

Q. When were the works first started in Astoria?

A. About that time; that I cannot say without referring to data.

Q. Are the holders and plants to which you have testified just now in the same condition, practically, as they were when you testified before the Stevens Committee?

A. Before the Stevens Committee—that was a year and a half ago. Oh, we have made additions and repairs constantly since, and are building holders.

Q. They were in good physical condition at that time, were they not?

A. They were.

Q. And they are in good physical condition today?

A. They are.

Q. Would you say that they were in better physical condition to-day than they were three years ago?

A. I think so.

Q. Now, when you get the authority to make repairs, do you go out and make a contract for the repairs?

A. I do not.

Q. Are these holders, which you have referred to as having been constructed since 1884, constructed under your direct management by the company itself, or are contracts let out for the construction to different firms?

177 A. All of the holders are constructed by contract; the company cannot undertake that work of constructing holders.

Q. These contracts I presume are let at public bidding?

A. Not let at public bidding; competitive bidding.

Q. Does that also apply to repairs?

A. In some cases, where repairs are of sufficient magnitude to warrant it.

Q. To repairs, I presume, of over $1,000?

A. $1,000 or $2,000, as in my judgment are right and proper.

Q. These contracts are in writing are they?

A. The contracts with outside builders or manufacturers are in writing.

Q. Who has charge of those contracts?

A. Those contracts are in the financial department, under Mr. Carter's jurisdiction, I think.

Q. I presume the holder which is now being constructed, or has been practically constructed at 111th Street, is the largest holder in the city?

A. 132d Street, don't you mean?

Q. I mean the one at Grant's Tomb.

A. That is 132d Street. The 111th Street holder was constructed some three years ago. That is only one of three or four of the same size.

Q. Was that built by a private firm?

A. That was built by the firm of Bartlett, Hayward & Company, of Baltimore.

Q. I think in previous examinations you have made up from your records a statement of the output for the past five years from each of the stations you have referred to. Will you supply us with a statement of that kind?

A. I do not remember that. I do not recall that. (To Mr. Matthewson.) What does he refer to?

Mr. **Matthewson**: I do not remember that. You mean the output for what?

178 Mr. **Burr**: The gas that is produced by each plant.

The **Witness**: I did not produce it here; did I?

Mr. **Burr**: No; but I say you have heretofore produced it in some other hearing, have you not?

The **Witness**: I do not recall it now. It may be.

Mr. **Matthewson**: I think you are mistaken.

Q. Can you produce it?

A. The output for the last five years, from all the manufacturing stations? I do not recall that I have produced it. If I did I have forgotten it.

Q. And a statement showing the amount of coal and oil that has been consumed during the same period?

A. Yes, that can be produced.

Q. And a statement showing the residuals that have been sold and disposed of during the same period?

A. Yes, that can be produced, but not absolutely from my records. I should have to go to the financial department to get it.

Q. A large item of expense that enters into the cost of mannufacture and distribution of gas is the question of meters, is it not?

A. Yes.

Q. Could you say off-hand about how much the company has had to expend on meters up to the present time?

A. No, sir; I know absolutely nothing about the meter department.

Q. But you know it does constitute a large item of expense?

A. I know that there is a large amount of meters used, and cost a large amount of money, but as I said a few moments ago, when I produce the gas and put it into the meters, it is up to them; I am done with it.

179 Q. That is not necessary in supplying the city with gas?

A. The public buildings, yes.

Q. I am speaking of the public lighting, street lighting.

A. There are no meters on the street lamps, no, sir.

Mr. Burr: I have not heard as yet, Mr. Master, whether the other side intends to produce the statements which the witness testified, and may be had.

(Counsel for complainant makes no reply.)

Then I am to understand from Mr. Matthewson's silence that he refuses to produce statements which may be produced.

Q. You can get up a statement of all the items going to make up the total each year of these expenditures that you have testified to here as having been made with regard to each particular plant and holder?

A. I shall have to be guided entirely by counsel.

Q. But I say, you have the physical means, if advised by them, to make up such a statement?

A. I can have it made up for me by the financial department; I cannot make it myself.

Q. I want to ask you, Mr. Bradley; do you act as engineer for all the constituent companies of the Consolidated Gas Company?

Mr. Matthewson: Just a minute. I object to that question on the ground that there is no evidence that there are any constituent companies, and I do not know what that term means as counsel employs it.

The Master: If Mr. Bradley does not know what that means, he will probably say so. I think he can answer it. I overrule the objection.

Exception taken by Mr. Matthewson.

180 A. There are several other companies in the City of New York, and on occasion I act as consulting engineer for them; when they want any advice they ask me, and when I think they need any advice I give it.

Q. Are you paid for your advice by them or by the Consolidated Gas Company?

A. By the Consolidated Gas Company.

Q. You were here when Mr. Francklyn produced the deeds of the various companies to the Consolidated Company of their property, were you not?

A. I was here when he produced the deeds; I do not know which particular ones you refer to.

Q. Exhibit No. 48, which has been offered in evidence here by the company, shows the various pieces of property conveyed by different companies to the Consolidated Gas Company?

A. Yes, sir.

Q. By the New York Gas Light Company, by the Manhattan Gas Light Company, the Metropolitan Gas Light Company, the Harlem Gas Light Company, the Municipal Gas Light Company and the Knickerbocker Gas Light Company?

A. Those are the six companies that formed the consolidation in 1884.

Q. Those are the companies for whom you act as engineer?

A. Yes. Well, I do not know that they are the companies for which I act as engineer; I do not know that there are any such companies any more.

Q. Well, that will take care of itself. Do you use any gas other than that manufactured by you? In other words, do you buy gas from other companies?

A. We buy gas from other companies on occasions.

Q. From what companies have you bought gas during the past five years?

A. We have bought some from the Mutual Company, we have
bought some from the Standard Company, and we have
181 bought some from the East River Company, and whether
we have bought gas from the Central Union Company or not
I do not know; I am not clear on that; we may have or may not;
but the other three I know we have bought from.

Q. Did you say you have bought from the New Amsterdam?

Mr. Matthewson: You meant the New Amsterdam Company instead of the East River Company, did you not?

A. If I said the East River Company I meant the New Amsterdam.

Q. Have you an account showing the amount so bought by your company from the companies that you have named, each year since 1901?

A. I have not.

Q. That account is with the company, however?

A. It is with the company, I assume; in fact, I know it.

Q. And how is that gas that is so procured by your company delivered to your company?

A. Delivered into our holders or into our mains, as the case may be, as the requirements may be.

Q. Is there any particular point or place at which that gas is delivered to your holders?

A. No, it is delivered to any gas holder in the city, wherever it may be required.

Q. Take last year, for instance; do you know what holders received gas so bought by the Consolidated Gas Company?

A. I should say at a venture that all of them did.

Q. Can you give approximately the proportion of gas bought to the amount of gas manufactured by your company?

A. No, sir.

Q. Would you be able to say that it amounts to as much as one-
half of the total gas sold and distributed by the Consolidated
182 Gas Company?

A. No, sir, I would not be able to make any guess at that, without going to the books.

Q. Do you mean to say that you are not entirely familiar with the actual amount of gas distributed last year?

A. Except by reference to the books, no, sir, it is impossible for me to carry all the details of this business in my head; I am not able to do it.

Q. Could you give us within a billion feet the amount of gas manufactured and distributed by your company last year?

A. About thirteen thousand million I think, but I do not know exactly.

Q. Can you say what proportion of that you manufactured?

A. No, sir, not without access to my books to find out; I do not wish to make statements here that will be brought up against me afterwards—that I said so and so.

Q. I appreciate that, but what I want to get at is; there is a book showing the amount of gas that is purchased by the Consolidated Gas Company?

A. Most undoubtedly.

Q. Is that book in your control or in the Cashier's Department?

A. It is not in my control; it is in the Financial Department, or the Cashier's Department or the Bookkeeping Department, whatever it may be.

Q. Is that the same kind of gas, which is manufactured by you, as the gas which is purchased?

A. It is all water gas, with the exception possibly, as I said, that if we bought any gas from the Central Union that was also a mixture of coal and water gas, but whether we did buy from the Central Union or not I am not clear.

Q. Water gas which you purchase you must place in holders that are used for water gas, or do you mix it with the coal gas?

A. Not necessarily, because we mix them all over the city; it is absolutely impossible for me or anybody to tell where the gas at a given point in New York City is manufactured, absolutely impossible for me or anybody else. 183 & 184

Q. But what amount is actually manufactured by your company is shown by your books?

A. Yes.

Q. And what amount is actually purchased by your company is also shown by your books?

A. Yes, the amount of gas manufactured can be very readily determined, and the amount purchased can be very readily determined, I assume, from the books of the company; but in the distribution, where gas from a given point goes to or where it is distributed, or where it is from, nobody can tell.

Q. Given a certain amount of gas sold and distributed by the Consolidated Gas Company last year, are you able, in response to the question of Senator Page, to say how many cubic feet of gas can be obtained from a ton of coal, if you do not know how much of that gas was manufactured by you and how much of it was bought?

A. I can tell how much gas comes from a ton of coal if I only make a million feet; it is not necessary to make thirteen thousand million to find that out.

Q. But the portion of gas that is bought by the Consolidated Gas Company cannot be affected by the expenses of the Consolidated Gas Company in the manufacture, can it, of its own gas?

A. The gas that is bought is made and delivered to us. There is a certain amount of expense attached to the distribution of that gas by us afterwards.

Q. But the expense of its manufacture is a matter that relates to the company from whom it is bought?

A. The plant that it comes from.

At 4:15 o'clock P. M., adjourned until to-morrow, Thursday, July 19th, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 69.
State A.

185 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *July* 19, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

186 WILLIAM H. BRADLEY—Cross-examination continued by Mr. BURR:

Q. You say that you have made a special study of the question of pressure?

A. Yes.

Q. Will you tell me what relation, if any, pressure has to the consumption of gas?

A. I assume that you refer to the quantity.

Q. Yes.

A. I cannot think now of any other relation than that.

Q. Well, let me clear your mind on the subject. The point is: I find in Thomas Newbigging's "Handbook for gas engineers and manufacturers," seventh edition, published in London in 1904, this statement:

"By doubling the amount of pressure, the consumption of gas is increased by about one-half."

Is that true from your experience?

A. That is generally accepted as being the fact. I do not know that I can say that I ever made any definite experiments to prove the fact, but it is generally accepted as being correct.

Q. Can you tell me how many miles of main you have in the City of New York?

A. The Consolidated Gas Company has between eight hundred and nine hundred miles, I think.

Mr. **Matthewson**: We will have another witness who knows all about that, Mr. Burr, in detail.

Q. Do you attend to the laying of mains in the street?

A. In a general way. There is a general superintendent of mains who attends to the details. I confer with him and he confers with me on that subject.

187 Q. Do you notify the company when mains are needed, extra mains?

A. The general superintendent usually, in fact always, comes to me with the statement that certain mains are needed or required in certain localities. I look the matter over and approve his recommendation.

Q. Well, do you make any special investigation to ascertain the character or kind of mains that are needed?

A. The investigation is made by the superintendent of mains before it comes to me, and I simply take his statement of what he has done and what is required; if I think it is incorrect I alter it, and if it is correct I do not.

Q. You have no experience as an expert regarding pressure other than with the mains laid down in the streets of the City of New York by the Consolidated Gas Company or its constituent companies?

Mr. **Matthewson**: I would like to have Mr. Burr define what is meant by constituent companies?

Mr. **Burr**: I refer to the affidavit made by Mr. Bradley in which he says—his language—so that we may be clear about it.

Mr. **Matthewson**: Very good.

Q. I call your attention to the affidavit made by you in this case presented before Mr. Justice Lacombe, verified by you on the 4th day of May, 1906, on page 35 of the printed affidavits and notice of motion in this case, in which this language is used by you:

"The manufacturing plants of several of the six constituent companies which formed the Consolidated Companies in 1884 were originally coal gas plants."

188 To what companies did you refer when you made that statement?

A. To the companies which formed the consolidation, the consolidated companies, the companies which formed the Consolidated Gas Company.

Q. So that we may have no misunderstanding, will you be kind enough to name them?

A. Harlem, the Knickerbocker, the New York, the Metropolitan, the Manhattan and the Municipal.

Mr. **Burr**: Are those the constituent companies that you refer to, Mr. Matthewson?

Mr. **Matthewson**: Are those the ones you refer to in your questions?

Mr. **Burr**: Yes, those are the ones I refer to.

Mr. **Matthewson**: Very good. I merely raise the question, if the Master please, because on the formation of the Consolidated Gas Company in 1884, these six companies disappeared, and it has always since been the Consolidated Gas Company. So, of course, Mr. Bradley has had nothing to do with the mains of the constituent companies, technically speaking, since that time. It is all the Consolidated Gas Company, of course; nor has he been employed by them, because they have been out of existence since that date.

Mr. **Burr**: Mr. Bradley's testimony was yesterday that he had worked for them and supervised their plants and looked after their affairs.

The **Master**: Did he not say at one point that he was not sure whether or not they were in legal existence still?

Mr. **Page**: Mr. Bradley was general engineer of the Municipal before the consolidation.

Mr. **Burr**: Yes, in 1884.

189 Mr. **Page**: And since that time he has been engineer of the Consolidated Gas Company, and consulting engineer with the Standard and the New Amsterdam.

The **Witness**: That is what I referred to, the companies outside of the Consolidated, where I act as consulting engineer.

Mr. **Matthewson**: The present companies?

The **Witness**: The present existing companies outside of the Consolidated.

Mr. **Matthewson**: Mr. Bradley supposed that you meant by your question——

Mr. **Burr**: Suppose you let him state what he means.

Mr. **Matthewson**: He has already stated it—the companies in which the Consolidated owns and holds certain stock, but not the six companies.

Q. These constituent companies which you referred to in your affidavit, to which I have called your attention, are the companies you have just named?

A. Are the companies which formed the present Consolidated Gas Company.

Q. And which you have just named?

A. Which I have just named. I will name the Standard, which I eliminated from those I just named. The six I have named, or the six referred to in that affidavit as constituent companies, were the constituent companies which formed the consolidation, and no others.

Q. And united together in 1884 by the Act of Consolidation and Incorporation of the Consolidated Gas Company; is that right?

A. That is correct.

190 Q. Now then, what other companies outside of those are operating in the city of New York?

A. Now operating outside of the original six?

Q. Yes.

A. The Standard, the New Amsterdam and the Mutual, on Manhattan Island.

Q. And in the Bronx?

A. The Central Union in the Bronx, and the Northern Union in the Bronx.

Q. Do you act as consulting engineer for those companies?

A. I do.

Q. And you are employed by them, or are you employed by the Consolidated Gas Company to act as consulting engineer for them?

A. I am employed by the Consolidated Gas Company.

Q. Now, are these last named companies the companies from whom you purchase gas?

A. Some of them. I do not know as "purchase" is exactly right; they make gas for us. Yes, purchase. We pay for it. That makes it purchased.

Q. Take last year. I did not get this quite clear in my own mind, and you will pardon me if I repeat it a little. Can you say offhand how much gas was manufactured by the Consolidated Gas Company last year?

A. I stated yesterday, perhaps, if you remember right, that my mind was not quite clear as to absolute figures. It did not occur to me to refresh my memory on that subject, and it was my impression that it was about thirteen thousand million.

Mr. Matthewson: Manufactured by the Consolidated Gas Company?

The Witness: No. I am wrong about that. I cannot answer that question.

Mr. Matthewson: You said the Consolidated Gas Company sold about thirteen thousand million.

The Witness: Yes, sold about thirteen thousand million,
191 and that included the gas purchased; but the separation I
cannot make any better than I did yesterday. If I had suspected that it would come up again I would have made the necessary investigation.

Mr. Mathewson: We will put witnesses on later who will know all about that. Mr. Bradley does not know.

Q. I want to find out from the engineer who has special charge of the production of the gas what amount of gas he purchased last year. Is that the best answer you can give?

A. That is the best answer I can give this minute.

Q. That is the same answer that you gave yesterday?

A. Yes, and if you had asked me yesterday to bring that information I would have done so gladly, but I did not think you would refer to it again.

Q. Since I have had to refer to your affidavit, I find further on the same page—the paragraph I have just read continues:

"The manufacturing plants of the six constituent companies which formed the Consolidated Gas Company in 1884 were originally coal gas plants, but at the present time they have been so far replaced with water and oil gas plants of the latest and most improved methods that the maximum daily capacities of the water and oil gas plants of the company is 45,100,000 cubic feet out of a total manufacturing capacity of the company's plants in operation amounting to 51,000,000 feet."

I understood counsel to say yesterday that there were no oil gas plants—that there was no oil gas manufactured by the Consolidated Gas Company.

192 Mr. MATTHEWSON: You made a mistake. What I said was that there was no oil gas manufactured except that manufactured to enrich the coal gas at the 14th Street station. No oil gas, as oil gas, is sent out to consumers.

Q. I call your attention to another statement in the same affidavit, another paragraph.

"I am and for more than twenty years past have been familiar with all the manufacturing plants of the Consolidated Gas Company. All of them have been modified or enlarged or renewed during my administration, and I am able to make a very close estimate of their value and I am equally familiar with the said holders. As above stated, much of the greater part of such plants or capacity are up to date water and oil gas plants."

What did you mean by that statement?

A. By what part of that statement? There are several statements contained in the statement you have read.

Q. I mean, as to whether you are engaged in producing oil gas?

A. I think I can clear up that matter in a moment. The oil gas plant—what is known and called there an oil gas plant—is a part of the plants engaged in the manufacture of water gas. As I testified yesterday, the oil is used in the manufacture of water gas, and mixed with it, to give it its illuminating properties, and the oil gas plant spoken of in that affidavit is a plant that was used for that purpose, and it was stated to be *a* water and oil gas plants in order to cover the entire plant. That is all that means. There is no oil gas sent out in the City of New York other than a mixture.

Q. Water gas, then, in which this oil is used, is manufactured cheaper than coal gas, as you testified yesterday?

193 A. Water gas is manufactured cheaper than oil gas, as I testified yesterday, in connection with oil gas, to give it its illuminating properties. When I say water gas, I mean water gas and oil gas. I include the whole.

Q. Water gas in connection with oil——

A. (Interrupting.) Produces the illuminating gas.

Q. Produces the illuminating gas, and that gas is manufactured cheaper than the purely coal gas?

A. Yes, at times; at other times not.

Q. Then you modify the statement that you made yesterday in regard to that, the unqualified statement that it was manufactured cheaper than coal gas, by now saying it is at times.

A. In general it is in New York City.

Q. I am speaking now of New York City.

A. That is correct.

Q. Can you state about how much oil you used last year in the manufacture of such gas?

A. No, sir.

Q. Can you state whether or not year by year for the past five years the amount of oil used by your company has not increased?

A. Not per thousand feet.

Q. I mean in bulk.

A. The use of oil has increased because we are making more gas and have necessarily used more oil.

Q. You are making more water gas in connection with the use of oil, or using more oil in connection with the manufacture of water gas?

A. The use of oil is and has remained nearly steady with the variations due to temperature changes and to slight variations in the quality of oil. The increased quantity of oil used is due to the fact of the increased quantity of gas produced.

Q. Do you know from whom the oil is purchased?

A. To the best of my information it is purchased from the Standard Oil Company of New York.

194 Q. I call your attention to a further statement in the same affidavit, Mr. Bradley. Continuing, you proceed to say: "And all the plants (both coal and water gas) are in the highest state of efficiency at which they can be kept, and they have within the past year produced more gas at lower cost than ever before in their history." Is that statement still true?

A. That is correct, as to the first part, and correct from my standpoint as to the second part.

Q. What causes the cheapening of gas?

A. Improved methods of working.

Q. Does increased consumption?

A. Increased consumption has very little to do with the decreased cost except so far as a certain relation that might be had between a large quantity manufactured and a small quantity manufactured, but the difference in the quantity manufactured between last year and this year is not of sufficient moment to make any probable decrease in cost.

Q. When you first started before 1884, while acting as engineer for the Municipal Company, the price of gas was about how much per thousand cubic feet?

A. $2.50, I think, selling price.

Q. It has been as high in this city as $7 a thousand feet, has it not?

A. Yes, sir; $10.

Q. Ten dollars?

Mr. Matthewson: In 1825 it was $10.

The Witness: Yes, sir.

Q. Do you know how long gas as an illuminant has been in existence, the use of it?

A. Oh, in this city, this was about the first start in this city, in this country, I think somewhere about 1823 or 1824 was the first works.

Q. That high price was at the very inception of its use in this community and in this city?

A. Yes, sir. At that time gas was made from resin or shale oil.

195 Q. From whom do you purchase your coal?

A. The coal is purchased from several different—the coal is purchased on my recommendation or requisition in gross for so many hundred thousand tons for the year's supply. I designate in my requisition the coal that I prefer and the quantity; I divide my gross amount into the quantities that I prefer of each particular kind of coal. The purchasing department or the officials then make the purchases according to my requisition in most cases; sometimes they change it as to the sub-division of kind and quantities. My knowledge of who are the sellers or operators from whom this coal is purchased is a matter of knowledge gathered by me from conversation with the officers of the company. I do not purchase it.

Q. You purchase the other materials going to make up the plants and holders, don't you?

A. I purchase with the approval of the officials of the company, I make contracts.

Q. You purchase coal in the same way with the approval of the officers of the company?

A. I never have, no, sir.

Q. The kind of coal that is used in the manufacture of gas is a very important item, is it not?

A. It is.

Q. And plays a very important part?

A. And plays a very important part.

Q. And requires the engineer's most serious consideration, does it not?

A. It does.

Q. Do you inspect the coal before you purchase, do you make an effort yourself to get the best coal most suitable for the purposes for which it is to be used?

A. As I explained before, counsellor, I make a requisition for the kind of coal which I prefer, which goes without saying is the best coal: I prefer the best coal to do my work. If the officers or purchasing officials or the Directors or the Executive Com-
196 mittee of the company see fit to alter my recommendation as to the kind of coal to be purchased, it is not, to use a common expression, up to me to find fault with it. I use what they give me, and they must take the consequences.

Q. Have you always received the kind of coal you called for?

A. Not always; sometimes—well, most always, I will say, but not always.

Q. Have you received the same kind of coal, say, during the past five years?

A. Oh, no, there have been many changes in kinds of coal during the past five years, both by my recommendation and by action of the officials.

Q. Will you tell the kinds of coal you have used during the past five years?

A. I can tell you some of them and some I may skip, I don't know, because there are a number of them.

Q. I am speaking of the coal that is actually used in the manufacture of the gas as distinguished from the coal that is used for heating the boilers?

A. Exactly. That was my understanding of the conversation we have had.

Mr. Mathewson: You mean the gas coal?
Mr. Burr: Yes.

The Witness: Do you mean the coal used for water gas or coal gas?
Q. Both.
A. Very well. We have bought coal and are using coal now from the Pittsburg Coal Company——

Mr. Mathewson: Just give the character of coal, that is what the question asks for, what kind of coal?
Mr. Burr: Give us all the information you can upon the subject.
197 Mr. Matthewson: I hardly think—don't give the names of the sellers to us.

The Witness: We use the Pennsylvania bituminous coal from different collieries; we use also coal from West Virginia, from different collieries. The anthracite coal is all of it from the Pennsylvania anthracite coal region.
Q. What company do you purchase that last-named coal from?

Mr. Matthewson: I think the witness had better not answer that. I do not think you really want that, Mr. Burr, when you know the facts.
Mr. Burr: I am trying to get at the facts.
Mr. Matthewson: I understand, but I do not think it is necessary to spread upon the records the names of the people who sell coal to us. That subject was gone over very carefully before the investigating committee, and again before the Commission, and it was decided both by Mr. Shearn and Senator Page that it would be prejudicial to the interest of the company if the names of the parties with whom they dealt were spread out, and would add nothing to the knowledge of the character of coal, or the price paid. But a statement was put upon the record, stating the amount of the coal and the price at which it was delivered, &c., omitting the names.
Mr. Burr: I will ask Mr. Bradley this question.

Q. The coal you refer to as being bought from the anthracite region of Pennsylvania, that coal is bought in pursuance of a written contract, isn't it?
A. I so believe. I may say positively and without reserve
198 that if there is such a contract, I have never seen it. My r-quisition is made for so many hundred thousand tons of coal, divided up into the kind and character of colliery I wish to receive the coal from. That is turned over to the purchasing department, and if the contract is made, they make it and I do not.
Q. You have already stated that the element of the cost of coal, goes more into the fixing of the cost of the manufacture and production of gas, than any other element, have you not?
A. Yes, sir.
Q. So it is most important that we should get the exact kind of

coal and the exact price you pay for it in arriving at a determination as to how far it goes to make up the cost of the manufacture and production of gas. Is not that so?

A. I think that information can be had, sir, but I must respectfully ask to be relieved from telling that, because you would ask me at once if I made the contracts, and knew it was a fact, and I should say "no."

Mr. Mathewson: The original contracts were presented to the Gas Commission in order that there would be no question about it, and they were gone over by them and then an abstract put upon the record, stating the price and quantity, omitting the names. You will find that on the record.

Mr. Page: That is not in this record, though.

Mr. Burr: This is an entirely different proceeding.

Mr. Matthewson: I understand, but I am merely pointing out to you the method that was pursued, which I think will commend itself to your own good judgment.

Mr. Page: Will you make the same arrangement here in this proceeding?

Mr. Burr: Will you produce the contracts here before the Master?

199 Mr. Mathewson: I think so, under the same understanding.

Mr. Burr: With that understanding I will not ask for it now from the witness.

Mr. Mathewson: I will say this, I have not gone into the cost of gas, and we have asked this witness no question, and you have made this witness your own witness and are doing so now.

Mr. Burr: I fully appreciate that, and am getting all the information I can from the chief engineer.

Mr. Mathewson: And the chief engineer has not the custody or making of the contracts, and is utterly unable to give you the information you ask for.

Q. I will not press you to give the names of the companies from whom the coal is purchased, upon assurance of counsel that the contracts will be produced. If they are not produced I reserve the right to ask you further in regard to that matter. Now the holders that you have spoken of, are they single or double holders, or are they single telescopic or——

A. Some are single lift, and some have two lifts, some have three, some have four and some have five.

Q. Will you give those which are single lifts?

A. I will have to ask to modify that statement. There are no single lifts. Looking at my memorandum I find that to be so.

Q. Give us the location of the double lifts.

Mr. Mathewson: Is not Inwood a single lift?

The Witness: No, that is the one I had in mind when I said single lift. There are eight at 14th Street.

200 Q. At West 14th Street?

A. East 14th Street. There are——

Q. One moment, Mr. Bradley. Can you tell me the pressure which each of these holders will stand, or will give, I mean?

A. No, I cannot give that off-hand.

Q. Have you ever sought to ascertain that information?

A. No, not as a matter of record. I have never sought to ascertain it. We have pressure gauges in the valve houses on the holders, and it can be readily told by inspection at any time, and is perfectly accessible and was never considered of sufficient importance to make a record of it.

Q. Has it not some bearing upon the pressure at which gas is delivered?

A. No.

Q. No?

A. No.

Q. But the pressure which each holder will give, by a well known formula, can be easily ascertained, can it not?

A. Absolutely, yes, sir.

Q. Give us the other double lifts.

A. There are six at 18th Street; this record as to whether they are double or single lifts is not here, I am simply going now from my best recollection of each lot, as I see them here; I may make a mistake of a holder or two, but not intentionally. 21st Street there is one; 42d Street we have four—these are double lifts. 44th Street, 5; 65th Street, 6; 99th Street, 1; Inwood, 1; I think that, to the best of my recollection, is all of them.

Q. Can you give us the diameter of each of those holders?

A. That I cannot give you; I can give you the cubical contents, but not the absolute feet and inches of diameter, I haven't it.

Q. Has that ever been ascertained by you?

A. Most undoubtedly. I could not get this if I did not get that.

Q. There is, therefore, a record of it?

201 A. There is an absolute record of diameters, yes, sir; but I have not it with me.

Q. Will you furnish me with a statement regarding it?

A. If there is no objection on the part of counsel, yes, sir.

Mr. Burr: Is there an objection on the part of counsel?

Mr. Mathewson: I think not.

The Witness: Is there any other information you would like there besides diameter?

Q. Well, is there any difference in the formation of these holders? I mean in their structural formation, as to material, for instance?

A. Oh, yes and no; they are an iron shell with a roof to confine the gas.

Q. Do they vary in height?

A. They vary in height.

Q. Can you furnish me also a statement as to the height of these holders?

A. Now I have written here diameters of holders; what I should say was dimension of holders.

Q. Yes.

A. Very well, sir.

Q. Are the tanks you have referred to masonry tanks or iron tanks?

A. Some of them are masonry and some are iron.

Q. Will you tell us which are masonry and which are iron?

A. Now, or with this other information?

Q. If you can give it now it will be acceptable; if not, we will take it with the other.

A. Do you refer now to just these holders I have enumerated, or all of the holders?

Q. All of the holders.

A. Very good. There is one at 14th Street.

Q. One what?

A. One holder in a steel tank, or iron tank as you term it. One at 63rd Street——

202 Q. Iron tank?

A. Iron tank, or to be more exact, a steel tank. Two at 111th Street.

Mr. Mathewson: Are you sure that is a steel tank at 63rd Street? Is not that masonry?

The Witness: I beg to be excused on that. 63rd Street is a steel tank, yes, sir. You know more about it than I do. Please correct that. One at 132nd Street. I think that is all of them, three.

Q. Then to resume, there are how many masonry tanks?

A. There are 45 in all.

Q. And how many steel tanks?

A. 3. 42.

Q. 42 masonry?

The Witness: 42 masonry.

Q. The city is the largest consumer by all odds of gas manufactured by your company, is it not?

A. It is a very large consumer; whether the largest or not I cannot say.

Q. Have you any doubt about it?

A. We have other very large consumers. I do not think there is any question about it, but I cannot say positively.

Q. Have you any other consumers that take as much as five hundred million cubic feet a year or near that amount?

A. Very probably not, I do not check the meters and do not make up the bills, I do not collect the bills, or look at the sales books; therefore I——

Q. You must have some information on the subject when you say you have other very large consumers. Will you tell us the largest consumer of which you have knowledge outside of the City of New York?

A. The National Biscuit Company is one of them.

Q. What is the total consumption of gas by that company per year?

A. I cannot tell. I have simply been told it is a very large consumer and I know we laid an 8-inch service pipe to supply

203 them with gas. Those are the facts I rely upon when I say they are very large consumers.

Q. Do you supply any other gas companies with gas?

A. We have done so. At this moment we are not doing so.

Q. How recently?

A. Two years ago we supplied the Mutual Company with some gas.

Mr. Mathewson: And they also supplied you with gas in the same year did they not?

The Witness: They also supplied us.

Q. That reminds me, Mr. Bradley. How do you keep track of the gas that is furnished by other companies? Where is the check showing the actual amounts that you received?

A. That is a matter of bookkeeping, sir, that is attended in the general office.

Q. Is it not a matter of mechanical engineering?

A. No, sir.

Q. Is it not part of the business of the station receiving the gas?

A. It is when it is received in the station. If it is turned directly into the main no station has any business with it.

Q. Well what method do you, the chief engineer of the company, resort to to ascertain that the amount that is charged by the companies is the correct amount which has been received by your company?

A. I don't know that I adopt any method for that purpose.

Q. So that there is no supervision over the delivery of the gas by these companies to your company of which you are chief engineer?

A. Yes, sir, there is.

Q. What is that supervision?

A. Any station, by the indications of the station records, manufactures a certain number of million feet or other number of cubic feet
per day. They also send out a certain number of cubic feet
204 per day, which is very readily ascertained from that station.
If at the end of the month it is shown by the consumers' meters that a larger quantity of gas has been consumed or has been registered than is called for by the manufacture and send-out at this station and at the same time we know that another company has been sending gas into those mains, we know how much has been received.

Q. How about the leakage?

A. The leakage is accounted for on a theoretical basis, which is the only way it can be.

Q. You don't know how much of the gas that is purchased by your company leaks, nor do you know how much of the gas that you manufacture leaks, is not that so?

A. We know how much the difference is between the make and the send-out.

Q. Therefore it is very important that you should know how much the company has agreed to deliver to you?

A. We do know as nearly as possible.

Q. How are you going to ascertain the leakage, unless you know how much they have agreed to deliver to you?

A. The only way I can ascertain in any event it to take the difference between the make and the send-out. In any event, either without gas being purchased or with gas being purchased, there is no other known method of ascertaining it.

Mr. MATHEWSON: Don't you mean the difference between the make or send-out and the consumers' meters?

A. The make and send-out and the sales, of course. If we send out a million feet of gas and our consumers' meters register 900,000, we have lost 100,000 feet, and that is the only way that it can be told what the leakage is, by the difference.

205 Q. In ascertaining the value of a ton of coal, it is very important to know the amount of gas as the result of the use of a given number of tons, is it not?

A. Yes, sir.

Q. So it is very important for you, as a very careful engineer, to ascertain exactly the amount of gas that you manufacture yourself, is it not?

A. That is a matter that is very easily ascertained and is ascertained every day. That has no bearing whatever on leakage.

Q. I probably may be a little confused about this, but I gathered from you that in some way the gas that is purchased from other companies is mixed up with your gas in the mains?

A. Certainly, that is what we purchase it for, to mix it up and use it.

Q. I am anxious for my own information to ascertain in what careful manner you go about ascertaining exactly what amount of gas is delivered by these companies under contract to supply you with gas in addition to that manufactured by your company?

A. That is what I endeavored to explain. If I did not make myself clear I will try again. We make a certain amount of gas in a station per day or per month or per year. That amount is registered accurately by the station meters. From the gas holders we get a record——

Q. Pardon me a moment? Do you mean by the station meters and then entered into the book kept at each station?

A. Kept at each station daily.

Q. Do those books show the daily receipts, the amount daily received at that station?

A. It would show the amount daily manufactured, not received; manufactured. That gas is delivered into the gasholders. A record of the height of the gasholders, or the contents of gasholders shows at seven o'clock in the morning so much gas has been manufactured, the height of the holders shows so much gas on hand, the balance has gone out, the difference between the manufacture and the quantity on hand has gone out to the consumer; 206
that disposes of that. Another company makes gas for us, that is turned into the holders. When it is turned into the holders it can be measured in the same manner by the known dimensions of the holders and the capacity per foot or per inch as to how much is contained in that holder. In the case where it is turned into the mains direct, in the case of the Mutual Company, they turned the gas into our mains from a single isolated holder, and could measure

the quantity sent into our mains, as well as we could measure it by the station meter, as accurately.

Q. That is, the seller could measure it as accurately as the purchaser?

A. Exactly.

Q. Do you rely entirely upon the measurement of the seller in that instance?

A. Not entirely, no; we have the right to send and verify it, and do verify it as far as possible.

Q. Do you know as a matter of fact that you have verified the——

A. Yes.

Q. Where is the result of the verification contained?

A. Somewhere in the books; the original papers of the verification were probably destroyed, the entry simply made and the papers destroyed.

Q. Do I understand you to say that such important information as the exact amount of gas delivered from that one Mutual Company, was destroyed?

A. I say yes, those papers were destroyed. None of us think that those are very important records to keep, the papers; when the papers are turned in and the record made on the books—the papers containing the slips, the papers showing that, never were important records.

Q. You mean to say that the original memoranda has been destroyed, although their contents have been duly entered in the books of the company?

A. Certainly.

Q. Those books are still in existence?

A. Yes.

207 Q. They have not been destroyed?

A. No, sir.

Q. Can you tell us what is the utmost capacity of their present plant in the City of New York?

A. The Consolidated?

Q. Yes, sir.

A. Fifty-one millions.

Q. How much more can you produce than the fifty-one million if required?

A. Oh, we might on an emergency for a few days produce slightly more, perhaps two or three millions, but I would not like to undertake to do that for a month steadily.

Q. How much can be produced from the plants of these other companies that you have made reference to here to-day?

Mr. MATHEWSON: Objected to as immaterial, irrelevant, not cross-examination.

Question allowed; exception.

A. 62,078,000.

Q. Is that the utmost of their capacity?

A. That is the rated capacity and the utmost capacity, with the exception as I said of the Consolidated, that in an emergency they might produce a million or so more. It is not considered capacity, being able to crowd a works for an emergency case.

Q. How do you arrive at that conclusion?

A. From memoranda that I have, from general knowledge of the plants.

Q. Will you give us the details of the memoranda that you have and from which you have made up that conclusion?

Mr. MATHEWSON: Objected to, as irrelevant and immaterial, not cross-examination, relating to these other companies.

Question allowed; exception.

A. Detailed by companies?

Q. Yes.

208 A. New Amsterdam Company thirty million; Standard Company, ten million; Mutual Company, twelve million; Central Union Company, nine million—my memoranda shows 9,300,000, but I think it is incorrect, sir.

Q. In what respect, more or less?

A. I think it should be 7,500,000, as my memory serves me.

Q. But your memorandum shows nine million?

A. Yes, but it is like other memoranda, not infallible.

Q. From what sources do you procure that information?

A. From an inspection of the works and from companies' engineer information.

Q. From companies' engineer information?

A. Engineers.

Q. Is there a peculiar kind of information supplied to the company's engineer?

A. Perhaps I should say information derived from the company's engineer.

Q. Statements made to you by him?

A. To me by him.

Q. What is his name?

A. Elliott C. Spencer.

Q. What company are you speaking of?

A. Central Union Company.

Q. And you think your information is better than his memorandum is?

A. The memorandum is my memorandum made by a typewriter and the typewriter may have made an error; I am suspicious that it is wrong.

Q. Well, proceed.

A. Northern Union, 778,000 cubic feet.

Q. Is that station going?

A. It is not operating at present.

Q. How long has it ceased to operate?

A. Oh, for several years past, I can't say how long because I was not connected with it.

Q. Five years, or longer than that?

A. I think it was operated once within five years.

209 Q. Now these latter companies that you have just named are companies that are owned or controlled by the Consolidated Gas Company, are they not?

Mr. Mathewson: That is a conclusion and I object to it as such, and as not cross-examination. If the Consolidated owns their stock, that fact, I suppose, can be shown, or how much the Consolidated owns, and it carries its own conclusion.

The Master: That is not the best evidence, of course, but I think under the circumstances I will allow it for what it is worth.

Exception.

A. As far as any personal knowledge goes I may say I do not know.

Q. You do not know?

A. I don't know.

Q. Do you draw a distinction between personal knowledge and any other knowledge?

A. I draw a distinction, I have been taught to right here, as between what I know and what has been told me.

Q. But you know so much that you supervise the workings of those plants, do you not?

A. If requested or if I think it is desirable. I have been told by the officials of the company that they owned stock in certain of those companies, and as chief engineer of the Consolidated Company it is my business to do whatever may be done to further—to safeguard the value of the property of the company.

Q. And in safeguarding the interests of the company and its property, you have exercised a supervision over these companies?

A. A general supervision, most general in its character.

Q. A careful supervision, I presume?

A. Most general in its character, I said, sir.

Q. Would you say it was a careless supervision?

210 A. Not careless, but particular so far as the particular things I was engaged in supervising.

Q. Let us have an instance of what that supervision consists of. Do you seek to ascertain the amount of gas made by them?

A. Personally I do not. It is sent to my office every day.

Q. Is it furnished to you every day?

A. It is, the amount of gas made.

Q. Do you require that that information should be sent to your office every day?

A. Yes, sir.

Q. If you find that an engineer in charge of any station is incompetent, do you discharge him?

A. I do not.

Mr. Mathewson: He has no power to, Mr. Burr, not the slightest.

The Witness: I would not consider I had the power to do that. I have never tried to exercise it, but would not attempt to exercise it.

Q. Would you knowingly permit an incompetent engineer to have charge of one of those plants?

A. If I had reason to think an engineer was incompetent, I would refer it to the officials of the company.

Q. You would feel it to be your duty to bring that knowledge home to the officials of your company?

A. Yes, sir, and they could act as they saw fit.

Q. In 1905 your company manufactured 8½ billion cubic feet of gas, did it not?

Mr. Mathewson: What year was that?

Q. Is it not true that in 1905 the Consolidated Gas Company manufactured 8½ billion cubic feet of gas?

A. I should say that was nearly correct. As to absolutely saying yes, that I know it to be a fact, I cannot, because I haven't the record before me.

211 Q. The record is in existence, showing the exact amount?

A. Yes, sir.

Q. And in 1905 did not the Consolidated Gas Company purchase 4½ billion cubic feet of gas?

A. The answer to the last question is the one I shall have to make to this also.

Q. Please repeat it?

A. I should say that the figures were approximately correct, but not having the record before me I cannot say.

Q. And the record of the purchases is in existence?

A. The record of the purchases is in existence.

Mr. Mathewson: As a matter of fact, it is not approximately correct.

Q. Are you the owner of stock in the Consolidated Gas Company?

A. I am.

Q. Are you the owner of stock in these other companies that you have mentioned here to-day?

A. I am not.

Q. How long have you been an owner of stock in the Consolidated Gas Company?

A. With a slight interruption, ever since the consolidation.

Q. In 1884?

A. 1884.

Q. Are you an owner of stock in the Astoria Light, Heat and Power Company?

A. One share, yes.

Q. Are any shares held in trust for you?

A. No, sir.

Q. Did you select the site for the building of the Astoria Light, Heat and Power Company plant?

A. That involved two things, sir.

Q. Separate them.

A. So far as selecting the property originally, I did not.

Q. Who did?

A. Mr. John D. Crimmins.

212 Q. He is the gentleman who sold property to the company, a deed of which was introduced here, for $750,000?

A. Mr. John D. Crimmins knew we were looking for property for that purpose; he discovered it, brought the information to us, I went over and looked at it and approved of it; that was the entire history of my connection with the transaction.

Q. Did you notice the amount of land under water?

A. I didn't see it at that time, no, sir.

Q. Did you figure as an engineer upon the amount of cost of filling to make that land available?

A. No, sir, that was long after, that was done.

Q. But you did long afterwards take that into consideration?

A. Long afterwards it was taken into consideration, yes sir.

Q. But in the selection of the site, its availability, practicability and economy, those considerations did not enter into your mind at the time?

A. That was the only consideration I had in my mind at the time.

Q. What was it?

A. That it was a well situated piece of property.

Q. Economical?

A. Economically situated and in just about the place we wanted it.

Q. Then you must have given some consideration to the fact that there was a considerable quantity of this land under water?

A. How much of it there was under water at that time I had no means of knowing, I simply examined the site as to its fitness, as to location, situation, and as to whether it was a good place for a gas plant.

Q. Therefore you must have gone over the ground very carefully and with a technical idea to its advantages as a place for the construction of the greatest gas plant in the United States, didn't you?

A. No, sir; it does not require any very great engineering knowledge to look at a piece of ground and see whether it is a good place to build a gas works.

Q. Any piece of ground would do then?

A. Almost any piece would do.

213 Q. The cheapness or dearness would have nothing to do in the result of the ultimate production of the gas?

A. No, sir.

Q. Didn't you consider anything as to the accessibility of the plant and the ground upon which it was to be placed, the depth of water and so forth?

A. I made general inquiry as to that fact, yes, sir.

Q. When did you do that, after the talk with Mr. Crimmins?

A. When I made the examination of the property.

Q. You must have observed then the land that was under water?

A. I could not observe the land under water because it was under water.

Q. You heard the testimony of Mr. Francklyn here sub-dividing 376 acres which were purchased into upland and land under water?

A. Yes, sir.

Q. So it must have occurred to you as it did to him that there was that distinction to be made?

A. It did not occur to me because at that time there wasn't anything like that quantity of land under water.

Q. How much was there under water at that time?

A. Perhaps half of it, I am not sure as to details of the figures.

Q. How can you say there wasn't so much under water at that time?

A. Because since that time the United States Government has established new bulkhead lines and inclosed more property of land under water.

Q. And that is added to the holdings of the company, an unearned increment, so to speak?

A. Added to the amount of land under water which at that time was outside bulkhead lines but is now inside.

Q. Then did you talk with other officers of the company after you talked with Mr. Crimmins?

A. I talked chiefly with the president of the company, yes, sir, that was my--he was the gentleman that I talked to more more particularly. I talked with all of them. 214

Q. What was his name?

A. His name was Mr. H. E. Gawtry.

Q. That is the same gentleman that is vice-president?

A. No, sir, father of the present vice-president.

Q. You talked with Mr. Gawtry and with Mr. Crimmins?

A. I did.

Q. Did the president ask you to prepare a report from an engineering standpoint, upon the availability of the proposed location at Astoria?

A. I do not recall now that he did.

Q. Do you mean to say that they did not ask you to go over there and look the ground over and report to them upon its availability as a site for a gas plant, the greatest in the United States?

A. They did, and I not only went over there, but went over there with them.

Q. Did you make a report on it?

A. I made a verbal report.

Q. No written report?

A. No written report, not that I recall now. The conditions did not require a written report.

Q. The officials did not require a written report?

A. The conditions, I say, did not require it.

Q. Then no report was ever submitted by you to the Board of Directors of the Consolidated Gas Company?

A. Not that I recall now as a separate, independent report that certain things should be done, and might be done, and may be done.

Q. Well, you were quite clear a moment ago you did not make any report in writing, that it was merely a verbal report made by you to Mr. Gawtry and Mr. Crimmins when you went over there in their company?

A. I said I made a verbal report; I did not say I made no other report and I did not care to be so understood, and I do not wish to be told that I said so. 215

Mr. Mathewson: He said he could not remember it now.

Q. Is that your answer, that to the best of your recollection, you did not make a written report?

A. As to a separate, distinct, written report on the land in question at Astoria, whether I have made such a report, I cannot now state; that I have made any incorporated in other reports, different reports regarding Astoria, is true; whether any formal, absolute layout of my intentions or recommendations to the company, I cannot say.

Q. Were those that you believe you made, these recommendations embracing incidentally some recommendations about the Astoria plant, subsequent to your visit to that place with Mr. Gawtry and Mr. Crimmins, or before?

A. Subsequent.

Q. What year was it you made the visit with Mr. Gawtry and Mr. Crimmins?

A. The date can be fixed by a reference to the record of the deed a little better than I can fix it. I should say six years ago.

Q. That was 1900?

A. About 1900.

Q. Did you ascertain at the time that you went over there to look at the ground, what it was going to cost?

A. No, sir.

Q. Didn't the element of its cost to the Consolidated Company have any point in any amount to be discussed with them?

A. I was not asked to give any opinion as to the cost as I am not a real estate expert, I was simply asked to give my opinion as an engineer as to whether it was an available site for a gas plant.

Q. Now is this plant expected to reduce the cost of the production of gas here to the consumer?

A. Perhaps so. It is hoped so.

216 Q. Was it expected to reduce the cost of production and distribution to the company?

A. One goes with the other.

Q. Not necessarily.

A. It seems so nowadays.

Q. And as an engineer of over twenty years' standing, were you not anxious to find out what the cost of this whole outfit was to be, this whole plant?

A. That I found out subsequently; not at that time.

Q. I understood you to say a moment ago that the cost of the land upon which a gas plant is constructed does not enter into consideration when it comes to the question of how cheaply gas can be manufactured.

A. When it comes to making an estimate, yes, but when I am asked as to whether or not a certain piece of ground is suitable ground on which to erect a gas plant, I do not consider that it has anything to do with the cost of the gas plant; that is something I have not anything to do with.

Q. And have you since 1900 made any formal written report upon the subject of the Astoria Light, Heat & Power Company's plant at Astoria?

A. That question I have already answered several times within the last fifteen minutes, that so far as any absolute written report as to practicability or possibility or probability of erecting a gas plant there was concerned, I could not say that I have.

Q. What was the first thing you did after the visit with Mr. Gawtry and Mr. Crimmins toward the construction of the plant over there?

—. The next thing I did was to lay out the plant.

Q. To lay out the plant; by that you mean what?

A. Decide upon the arrangements of the buildings, and what the plant should be.

Q. And the sizes of them?

A. And the sizes of them.

217 Q. And with that in view, you have to keep constantly in mind the availability of the situation for the manufacture of gas, have you not, the availability of the location for the successful and economical manufacture and distribution of gas?

A. That question was disposed of before the time the property was purchased.

Q. Was it disposed of in the interim between the date of your visit there with Mr. Gawtry and Mr. Crimmins and the time you were asked to lay out the plant?

A. I certainly was not asked to lay out the plant until the property was purchased.

Q. You had nothing to do in regard to that?

A. No, sir.

Q. When you were called to lay out the plant, your attention was called to the upland and the land under water, was it not?

A. That came into my consideration.

Q. Then you must have made some investigation as to the availability of that particular location, as far as access was concerned?

A. No, I made no special investigation as to that, because I knew perfectly well how access was to be obtained to it, and there had been no changes in the conditions, and there is not to-day.

Q. The access was by water, was it not?

A. The same as it is now.

Q. You made some inquiry to ascertain whether the proper depth of water was there, did you not?

A. I made soundings to ascertain that the proper depth of water was there.

Q. And you satisfied yourself that you had the proper depth?

A. Yes, sir.

Q. Much of the land under water was filled in, was it not?

A. A large portion of the land was filled in, and there remains still a large portion to fill in.

218 Q. The contract for the construction of these units, the single units that you have over there—was that let out at public bidding?

A. No, sir, we never let out anything at public bidding.

Q. Was it private bidding?

A. Private bidding.

Q. What concern had the contract for that?

A. About forty concerns.

Q. A plant having forty component parts, each part let to a separate contractor, is that it?

A. No, sir; I say from thirty to forty different contractors. Some two or three contractors worked on the same building, in the steel construction, in the brick construction and in the roof construction, and the interior apparatus.

Q. I thought it possibly might be, as you testified yesterday, that this concern in Baltimore took the contract to build the whole plant?

A. I do not remember so testifying. I testified that Bartlett & Heyward took the contract to build the gas holder for us, which is not a gas plant.

Q. Did they take a contract to build the gas holders over there at Astoria?

A. They took the contract to build *a* gas holder at Astoria.

Q. What is the size or the dimensions of that gas holder?

A. 300 feet in diameter, and 49 feet deep, I think, with a capacity of 15,000,000 cubic feet.

Q. Is that the only holder there?

A. That is the only holder so far in process of construction. There is another tank building alongside of that which will ultimately contain another holder, of the same size.

Q. What is the difference between a tank and a holder?

A. The tank is the tank that holds the water, and the holder is the holder that holds the gas. The same difference that there is with a barrel that has a pail in it. What is the difference between a barrel and a pail?

Q. When did work first start there?

A. Some three or four years ago.

219 Q. When did they complete the holders?

A. The holder is just barely commenced. When you say "When did you start work there" do you mean on the holder?

Q. Yes.

A. They only started the field work on the holder—excuse me; I thought you said when did we commence work on the plant—we commenced work on the holder about two months ago.

Q. Prior to that, the work on the plant, as distinguished from the holder, had been progressing for how long?

A. Three or four years.

Q. How long will it be before that plant is finally completed?

A. Which plant do you refer to now. The one unit or the entire plant?

Q. I speak now of the first unit?

A. The work we are engaged in now?

Q. Yes.

A. I will answer your questions when I get them clearly. My present intention is, if I am not interrupted or delayed, to produce gas there this coming fall, perhaps in the latter part of October, or in November.

Q. Are these thirty or forty contractors that you have referred to still working over there?

A. Many of them are, but I will say now that I do not wish to be absolutely quoted as saying that the plant will be completed at that time; that it will be sufficiently completed to go on and make gas. There are many other things to be done.

Q. How many units do you hope to establish there or intend to establish there?

A. The plans as laid out are for twelve units, but it will take a number of years probably beyond the time of my allotted life to do that——

Q. How many years?

A. Perhaps ten or fifteen years—(continuing former answer)—to absolutely complete the whole thing. There may be changes in the art of manufacturing gas and changes in conditions that 220 will make those plans absolutely useless, to be changed and altered as we may, or as my successor may, find desirable or proper. I will not confine myself to saying that that work will be completed exactly as I have laid it out.

Q. The production of gas is in a state of progress and improvement, is it not?

A. Yes, many changes have been made in my time, and many more will undoubtedly be made.

Q. There is room on your vacant land in the City of New York for the construction of some other plants and some other holders, is there not?

A. We might make a piece of patchwork gas plant; there is room for holders, and we might continue to patch, and keep patching up indefinitely, but it will be more expensive both to the company and to the consumer to undertake to do that.

Q. You do not call "patching up" the construction of a new plant, do you?

A. When I say "patching up" I mean patch on to some other works. Where the site is not desirable, or the site is too valuable, or to much surrounded by dwelling houses.

Q. Then the value of the site does have something to do with the question. You say the site might be too valuable?

A. Yes, in that respect.

Q. What do you mean by that?

A. Because where a site is sufficient to build one plant in the City of New York, it is probably worth more than the whole Astoria plant, where there will be twelve plants.

Q. Then it is a question of economy to the company to move to Astoria; is that it?

A. I have always considered that, sir, as a question of necessity.

Q. For the reasons stated by you yesterday?

A. For the reason that it has been rendered almost impossible to carry on the manufacture of gas in the City of New York.

221 Q. I understood you to testify yesterday that you still intended to continue the plant in operation here now?

A. We intend to continue manufacturing gas here until we can get some other place to manufacture it, and must necessarily do it.

Q. Didn't you say yesterday that the Astoria plant was merely supplementary to the plants in existence here?

A. As it stands to-day, it is an extension of the present plant.

Q. Supplementary?

Mr. Mathewson: He said the first unit was.

The Witness: The first unit.

Mr. Mathewson: Four billion feet a year.

The Witness: We cannot supply our consumers with a twenty million plant, and we must of necessity continue to manufacture gas in New York until we get plant enough to do so somewhere else.

Q. Would you describe as patching the process of building a new extension to a plant already in existence here in the city of New York, for the purpose of enlarging its capacity to manufacture and distribute gas?

A. In general terms I should characterize it as patch-work.

Q. There is room for several such patch-works here in the City of New York, on the grounds already owned by the Consolidated Gas Company, is there not?

A. I should like to be informed, sir, where it is.

Mr. Burr: I refer to Complainant's Exhibit 48, produced here by Mr. Francklyn.

The Witness: Where is Exhibit 48?

(Mr. Gans hands Exhibit 48 to the witness.)

The Witness: What page?

222 Q. Just glance your eye over the map there and see where Mr. Francklyn has marked the land vacant and unoccupied?

A. I do not know whether I have got the right one, sir. I do not see anything marked vacant here, anything at all. I fail to see any marked vacant on this exhibit.

Q. Is that because the exhibit does not show it, or because you have made investigation on that subject?

A. I understood you to say, sir, that it was marked vacant.

Q. I understood so too, sir?

A. I am looking for it and I cannot find it.

Mr. Burr: However, the testimony of Mr. Francklyn speaks for itself on the subject.

Q. What do you mean by replacement?

A. Where apparatus is for any reason superseded by new apparatus.

Q. That is where the structure is made new, as distinguished from repairs?

A. Yes.

Q. What do you understand by repairs?

A. Repairs is where an existing piece of apparatus is broken down or is in need of repairs, as for illustration, I will say a pump. If a pump breaks down or breaks any of the parts, it is repaired. When the benches are burned out they are repaired. Anything of that kind. I need not go on.

Q. Replacements can be divided into two subheads, new construction and repairs?

A. No, I do not consider that to repair a thing replaces it.

Q. What is the difference between new construction and replacement?

A. New construction is addition. If I have a plant making 5,000,000 feet a day and I increase it to 10,000,000 feet a day, that is chargeable to construction, because it is additional plant, additional to what I have already. If I repair my 5,000,000 plant and
223 still get the 5,000,000 out of it, it is repairs. If some of the pieces or apparatus are replaced in this 5,000,000 foot plant, it is replacement.

Q. Is replacement charged to construction?

A. No, sir, if it was it would show in the construction account. I would not be able to testify, as I said here the other day, what was replacement and what was construction.

Q. Then when you speak of additions, you mean new construction?

A. I mean new construction. It is new construction, which is an increase in capacity of any plant.

Q. The 21st Street plant and the 44th Street plant were entirely rebuilt, were they not?

A. They were not; no, sir.

Q. Didn't you testify that they were entirely rebuilt in 1904?

A. I did not.

Q. The 99th Street plant has been extensively rebuilt or added to in the last two years, has it not?

A. Yes, there has been a considerable amount of construction there.

Q. I call your attention to the question appearing upon page 82. You said:

"A. At the foot of 21st Street, East River, east of Avenue A, is what is known as the 21st Street station of the Consolidated Gas Company, that is a water gas plant, of a capacity of water and oil gas of 27,500,000 feet per day."

Then I asked you:

"Q. What is the present physical condition of that plant?" To which you replied: "It is in good order. Two years ago it was almost entirely rebuilt with a generating house."

A. Rebuilt *in* the generating house. The plant *in* the generating house was almost entirely rebuilt. That is the only portion
224 of the plant that was rebuilt.

Q. Do you want to change your testimony in that regard?

A. I do not think that I want to change it. I think that the stenographer or the printer want to change it.

Mr. Mathewson: The minutes are wrong, because I know particularly what he stated at the time, and I knew that was not the fact, as it reads there. It should be "in the generating house."

Mr. Burr: Then it ought to be changed, at the top of page 83, his statement beginning on the last line of page 82?

Mr. Mathewson: Yes.

(The first line on page 83 of the record is changed to read, "It was almost entirely rebuilt, I mean in the generating house.")

By Mr. **Mathewson**:

Q. While you are on that point, may I ask this one question—whether you meant the house itself, or the machinery in the generating house?

A. I meant the machinery *in* the generating house. The house itself was not rebuilt. The house itself was just the same. The machinery was rebuilt inside of the house. We speak of the apparatus as a generating house or purifying house or exhauster house or condenser house. I do not mean the actual bricks or mortar or roof which form the house. I mean the plant inside.

By Mr. **Burr**:

Q. You do not know, as a matter of fact, how much of that rebuilding was charged to new construction and how much to repairs, do you?

225 A. As a matter of fact I cannot subdivide that. I believe it was charged to replacement, because there was apparatus taken out which this replaced. When I say this I mean the plant in the generating house that we have under discussion.

Q. In devising ways and means for the construction of the Astoria plant, and in advising its construction, you took into consideration, undoubtedly, the probable increased consumption of gas in the City of New York?

A. I am always looking into the question of the increased consumption of gas in the City of New York and have been for twenty years. That did not necessarily come in with the Astoria plant. There is a constant increase, and has been every year.

Q. I understood you to say yesterday that owing to the competition of electric lighting it was decreasing?

A. I seem to be very unfortunate in making myself understood here.

Q. Didn't you say it had decreased in certain years?

A. What I said was that in one district downtown, between Grand Street and the Battery, there had been a constant decrease. But in other parts of the city there has been a constant increase.

Q. What is that due to?

A. To the increase in population.

Q. Can you tell the amount *per capita* of gas that is consumed in the City of New York?

A. No, not off-hand.

Q. You have not made a study of that?

A. I have seen it and I have considered it and figured it and thought of it, but never with any idea of making a very important matter of it or charging my mind with it.

Q. Are you acquainted with Professor Humphreys?

A. I am.

226 Q. Did you hear him testify before the Gas Commission?

A. I was not there when he testified and did not hear him.

Q. In your opinion, has the point of saturation, as expert engineers speak of it, been reached in the City of New York?

A. No, sir.

Q. Let me read you the testimony of Professor Humphreys, called as a witness on behalf of your company.

"In considering the question of increase in sales a good many points have to be considered, and certainly what I should call the point of saturation has to be considered to-day. If my information is correct, and I believe it is, New York is selling more *per capita* than any other city in the world. It is selling 9,200 feet annually *per capita*—a little less, about 9,000 feet, I think it is. London is selling somewhere between 8,000 and 8,500."

Do you agree with that statement of Professor Humphreys?

A. In what respect? There are several statements there. Which one?

Q. In respect to the statement that New York is selling more gas *per capita* than any other city in the world?

A. Professor Humphreys is an able engineer, and if Professor Humphreys makes that statement I should say he was correct. I should be willing to accept it as being correct, without question.

Q. Then will you explain the reason for the construction of a coal gas works at Astoria with a capacity of two hundred and forty million cubic feet?

A. Will I explain it?

Q. Yes, can you give any good reason for its construction?

227 A. When that first works, or plant, was in its inception, as I testified yesterday, and as I now repeat, it was intended to transplant the gas works in New York City over there, which would take up a considerable portion of the first construction for the first years. During the coming years there is undoubtedly going to be more gas used, and we must not only increase, must not only provide for our present needs, but we must also provide for the future. If you will consider that an eight or ten per cent. increase in gas consumption per annum is considered among engineers not to be anything extraordinary—it is a very common thing—you must consider what that increase means to us; it means a gas works of eight or ten million feet a year to be provided for, for the increase.

Q. You stated yesterday that if the investment was not made over there it would have to be made over here?

A. Undoubtedly we have to supply the gas, and we must be in a condition to supply the gas. If our works here are inadequate, and we have to provide means, we must make it either in Astoria or in New York.

Q. But you are supplying it now to the utmost requirement?

A. Exactly, but we are looking to the future.

Q. You have so much money over and above your immediate necessities that you can invest it in this great plant at Astoria?

A. Personally I have not.

Q. I am speaking of the company.

Mr. MATHEWSON: I object to this as calling for a conclusion and as hypothetical.

The MASTER: Does that add anything to the material upon which I am supposed to report in this case?

Mr. Burr: I think so. I think the whole question as to the advisability of this plant in Astoria has a great deal to do with
228 it, where they seek to charge the cost of it to the consumers.

The Master: Unquestionably.

Mr. Burr: And it is a question whether it is needed by gas necessities or needed by stock requirements or stock flotations.

The Master: Unquestionably, but is not that better gotten at from the office, rather than taking the chief engineer of the plant and asking him the question in that form, as you have put it?

Mr. Mathewson: We will subsequently produce here men who will testify with knowledge.

Mr. Burr: In view of the fact, may it please you Mr. Master, that this gentleman has been for twenty-six years so closely identified with this company that there is scarcely anything pertaining to it, I am satisfied, that he is not somewhat familiar with?

The Master: I am not disposed to curtail your cross-examination, but it seems to me that that form of question is not calculated to add very much to my information.

Mr. Burr: The form may be inartistic, I will admit.

Q. Have you familiarized yourself within the past day with the details of these items of additions, replacements and repairs regarding which you testified when you were examined by Mr. Garver?

A. No, sir; I have given them no further consideration.

Q. So that there may be no mistake about it. You have testified here from a statement furnished by the company, or some officer of it, or some employee, from the original books of entry?

A. Yes, that is correct.

Q. And you do not know whether those entries are cor-
229 rectly transcribed from the original books, to your knowledge?

A. To my knowledge, no, sir. I believe them to be correct, of course.

Mr. Burr: And therefore, I ask now to move that his testimony with regard to the amounts expended for replacements, repairs and additions from 1884 to 1905, be stricken out as secondary evidence, not the best evidence, it clearly appearing from his own testimony, as he stated yesterday, that he testified from a transcript from the original books of entry, regarding the correctness of which he is not prepared to swear.

The Master: I will deny that motion without prejudice.

Exception taken by Mr. Burr.

(Here a recess was taken until 2 o'clock P. M.)

After Recess.

Mr. Mathewson: Mr. Master, in order that there may be no misunderstanding, I wish to draw your attention again to the fact that counsel for the city is confessedly going out of the realm of cross-examination and examining the witness as his original witness, and upon some matters which I assume he supposes to be valuable, thereby consuming part of the thirty days assigned to the complain-

ant for its own evidence; in other words, virtually transferring part of the forty-five days assigned to the defendants into our thirty days. It is a situation which it seems to me should be taken into consideration, and it also interferes to a certain extent with the presentation
of our own case in the order in which we had determined,
230 and when the examination of the witness is made by the
counsel for the city, it follows that we must make our cross-examination consecutively with it, which cross-examination would also naturally fall inside the defendant's time. I merely make the statement so that as your Honor sees fit to allow it, it may be clear that it is not with the acquiescence of the counsel for the complainant.

Mr. **Burr**: That statement is not strictly in accord with the facts, if your Honor please, because I am entitled to examine this witness very fully. When it is brought to your mind that the injunction which now exists restraining the State and the City was granted largely upon the affidavits and statements contained in the affidavits made by this gentleman, I am entitled to find out from him here and now the sources of his knowledge upon which he bases his positive statements which were presented to Mr. Justice Lacombe, and I have not traversed outside the regular and ordinary line of cross-examination, in a case involving such a momentous question as is involved in this one. And more than that, I have been hampered, as I have called to your Honor's attention several times, by the refusal of counsel on the other side to afford the facility that the examination of the books or the production of the various books would have given me. They protested before High Heaven and the Federal Court that they had nothing to conceal, and would throw open all of their books to the City and to the State, and the moment we ask for their production, they refuse, and we are told that we must proceed according to legal procedure if we want any testimony
or evidence from them. And I have been endeavoring under
231 those circumstances, so circumscribed, to get all the knowl-
edge I possibly could from Mr. Bradley now. And I want to say in passing that I will not be able to finish with Mr. Bradley, and I merely suspend my examination of him when I do suspend, until we have come to some understanding or have taken some action with regard to the production of the books to which he has made so frequent reference.

Mr. **Mathewson**: You will remember that you stated yesterday, Mr. Burr, that you were examining upon new matter and were making the witness your own witness. When the question arises as to the suspension, I suppose it can be met; but these protestations that you say have been made, I do not think you will find on any record. We shall observe all that we make.

The **Master**: I do not think further discussion is necessary. It seems to me, as regards the question of cross-examination outside the lines of the direct, that you are sufficiently protected, Mr. Mathewson, by your objection that you took at the time, and by your present statement. And if it should transpire later that you are suffering any hardship by reason of the shortening of your time, that can be made the subject of some appropriate application. We can tell better about that later.

Mr. Mathewson: I do not wish to object to each question, of course, but I desire, if you will permit it, to have it stand as a general objection to a cross-examination which is not properly cross-examination, without raising it as to each question.

The Master: Regarding the question of the books, I notice by
the record yesterday that it appears that a request was made
232 of me to make some direction to the production of those
books. I did not so understand that at the time. I understood Senator Page's request to be made to Mr. Mathewson.

Mr. Page: I tried to point out that it was made to you, sir, and asked the stenographer to read it.

The Master: I did not appreciate that a request had been made of me for any ruling upon the subject. With regard to that, I can simply say that I am prepared to entertain an application in the proper manner for the production of any books or papers material to the issue that counsel desire to have. It is to a certain extent a question of the order of proof. If it is desired to use those books and papers now for the cross-examination of the witness on the stand, of course the ordinary order of proof would have to be somewhat interrupted. Before I should direct the production of any such books or papers I should require it to be made, either by this witness or by some other witness, clear, exactly what books and papers are required. Such a demand as was made here yesterday, a wholesale demand for the production for contracts, books and papers covering a period of years is of course unreasonable and out of the question, and it cannot be permitted at all. But it is quite proper that if the counsel desire to see the books of the company showing for instance the amount expended for certain purposes at a certain plant that, subject to such proper regulations as will protect the company from a fishing excursion, those books should be produced here under the direction of the Master and should be used
for cross-examination.

233 Mr. Burr: May I make a suggestion in that connection,
Mr. Master? It would facilitate, it seems to me, the orderly progress of this hearing and bring about a quicker conclusion; it was done in the Stevens Investigating Committee, and done, I believe before the Gas Commission, and it was done in the hearings before the State Commission at Massachusetts, where an inspection of the property was allowed by well known experts so they could testify—if there is nothing to conceal, we have a right to look at these properties which Mr. Bradley has testified regarding and about the value of which he could not make up his own mind, unless he had made a very thorough examination, and he has testified yesterday, that no other man could unless he made a thorough examination—why should we not be permitted, in behalf of the State and City, to go with our experts along with their experts, and view this property, so that when the time comes they may be prepared to state what their opinion is as to the value. The same way as to the books, if we want to have some accountant to examine them, why should we not be

permitted to leave them here with you at the convenience and comfort of the complainant, so we may make such examination as may be necessary?

The MASTER: Well, that is a matter of stipulation and agreement between counsel. I am not aware that the equity rules provide any method for my authorizing an inspection of the plant. I assume with regard to all these matters that counsel can, by waiving technicalities, upon both sides, and being mutually accommodating, save much time. And I dare say that on either side counsel would 234 be met in the same spirit that they show themselves to the other side.

Mr. BURR: If we have to compel them to give their proof in legal form and technically and they compel us to do the same, it cannot be done in ninety days nor in six months.

Mr. MATHEWSON: We understood you wanted us to prove it in legal form and not use the testimony which has already been taken and which Judge Lacombe suggested might be adopted. I do not wish to take time in this discussion, but I will say here that I will talk the subject over with Mr. Burr and this material that he wants, and I think we can arrive at some understanding. We were able to before the Commission, and before the Commission considerable time was spent by my learned friend Senator Page and his associates in getting the detailed books, and they verified them and checked them up and they virtually came to the conclusion that the only way to do was to get the summary papers and prepare general statements which were checked in one detail and another to test them, and that that disposed of the subject absolutely. There is no question as to how much we have paid out in connection with our gas manufacturing business at all. It can be stated and is stated in a large number of classifications, and the simple question remaining before the Commission was whether some of these items ought to go into the cost of gas production. I do not think it is a question at all of special details or doubtful payments, I mean the question as to whether payments have been made of money or what property we have. The question is a broad question, much broader, and if we proceeded in this technical way to produce one memorandum 235 after another, accumulating thousands perhaps, and finally reaching a result which has been transcribed by labor of the company already upon its books in total, we never would, as Mr. Burr has said, get anywhere in any reasonable time. It would take us months or years to do it. I will confer with Mr. Burr. I have already conferred a moment with Senator Page and Mr. Gans as to their request and I believe we can make certain suggestions that will virtually meet with their approval. At any rate, I will endeavor to do so, as to the books. As to the plants, that is something I cannot speak of at this time.

Mr. BURR: While we are on this subject, I spoke to Mr. Garver the other day in regard to experts on the real estate. He proposes to give evidence, naturally, as to the value of this real estate. I suggested that he might permit our experts to view the real estate with theirs, and be prepared to reply to the testimony that will be given by his experts.

Mr. **Mathewson**: That is a subject over which I suppose the Master has no jurisdiction.

Mr. **Burr**: Of course the question as to what constitutes the actual cost of manufacture and distribution of gas is a question of infinite detail and cannot be summarized.

Mr. **Page**: I think a good deal of this trouble that we are now apparently laboring under will be shortly eliminated. The request was made pursuant to the ruling made by Mr. Justice Lacombe upon us *was* that we should stipulate that any portion of the record that had been produced before the Gas Commission might be read in evidence here, and subject to the right of producing witnesses for further cross-examination. We replied that as to that we
236 could not consent, and that seemed to have excited the counsel for the complainant to the extent that they were going to stand on the absolute demand that everything be done here entirely under the rules and nothing more would be produced or given than that the absolute rules of law required. When we were met in that spirit, of course, it was the only spirit we could act in, and that might explain some of our objections that might not otherwise have been made. But I think when the little irritation which was occasioned by the first refusal has worn off, that we will arrive at a satisfactory method of procedure.

The **Master**: Let us trust so. Can we go on now with Mr. Bradley?

By Mr. **Burr**:

Q. Are you a director in the Astoria Light, Heat and Power Company?

A. Yes, sir.

Q. Are you a director in the Consolidated Gas Company?

A. No, sir.

Q. Outside of Mr. Gawtry and Mr. Crimmins, did you discuss the purchase of the Astoria plant with any other director *of* officer of the company?

Mr. **Mathewson**: Mr. Master, is this really valuable at all? The question is, if we have the Astoria plant, what is our expenditure and is it extravagant. There it is and it is bought. It does not seem to me material as to whom the purchase of this plant or property was discussed with, and points of that kind. I do not wish to seem discourteous to my friend on my left, but it does seem to me that we are using up time on things which do not touch the point.

Mr. **Burr**: The question is under the conditions which have been revealed here whether the purchase of this plant and proposed construction of this plant was a wise or unwise move
237 or a necessary move, because all that they can have passed upon here is the property which is actually and necessarily used for the manufacture and distribution of gas. And if this whole plant, this immense plant which has been planned in Astoria and upon which so much money of this company is to be spent is an unwise

investment and is an unnecessary investment, it is quite material to the conclusion to be arrived at.

The MASTER: Very possibly, but how do you get at that by showing to what extent it was discussed back and forth by the officers of the company?

Mr. BURR: If it was not discussed at all, but was done haphazard, certainly it could not be called a wise corporate move. If it was done after careful consideration by the directors, and consultation with their chief engineer, it might show that they gave great attention to the possibilities of it.

The MASTER: Suppose they discussed it a month; if it was improvident, it would be none the less improvident by reason of that discussion.

Mr. BURR: This being cross-examination, I want to show——

The MASTER: I am not disposed to curtail the examination, but it does not seem to me it will be of great assistance to me in reaching a conclusion. I see your point as to the Astoria plant, and of course that is an open question on which there is a great deal to be said, but I do not myself at this moment, see exactly how I am to be facilitated by going into this question, for instance, of the discussions between the directors or the questions you were asking this morning
238 about the reports made by Mr. Bradley. I do not feel inclined to cut it off, but simply throw out the suggestion that it seems to be going rather far afield.

Mr. BURR: I will ask that one question and finish with it.

Q. (Question repeated as follows: Outside of Mr. Gawtry and Mr. Crimmins, did you discuss the purchase of the Astoria plant with any other director or officer of the company?), and if so, with whom?

A. I cannot say definitely now that I did discuss the question with any of the directors. I met individual members of the directors often in the past and have talked with them generally on the subject of gas manufacture, etc., but as for any absolute detailed conversation or discussion on that subject, I don't know that I can now recall it.

Q. I have only reference to the time you spoke of when you went over there with Mr. Gawtry and Mr. Crimmins; I refer to that time. Did you then discuss the matter with any other directors of the company, and if so, whom ?

A. Not at that time, because so far as my memory serves me there was no one else with us.

Q. Well, not on that occasion, but I mean about that time?

A. I never meet with the directors and what discussions were had in the board of directors I cannot say; I can only speak personally as to what I did.

Q. I am not asking for the other.

A. And not having any direct communication with the Board of Directors as a Board of Directors—I may have talked with individual members in ordinary conversation and do not recall it, you know.

Q. You do not recall it?

A. No, sir.

Q. The total production of gas is 36,000,000 cubic feet a day, is it not?

239 A. Of the Consolidated Company? I cannot answer that without having the figures.

Mr. Mathewson: Do you mean the average per day?

Mr. Burr: Yes, the average.

Mr. Matthewson: Or the average per day throughout the year.

Q. You testified to that, didn't you?

A. Something to that effect, I don't remember now what it was, I don't know what it was.

Q. And the capacity of the companies of the Consolidated is 51,000,000 cubic feet a day?

A. Fifty-one million.

Q. And the capacity of the other companies is sixty-one million cubic feet a day?

A. The figures that I gave this morning were 62,078,000. In the case of the Central Union that I gave there as nine million and something, you will remember I said I thought there was an error. That should be 7,500,000, which is correct. I have refreshed my memory since by looking at the affidavit of the engineer of the company and found that it was 7,500,000 instead of nine million and something.

By Mr. Mathewson:

Q. That would make the total about 60,000,000 instead of 62,000,000, wouldn't it? You had 9,500,000 for the Central Union and it is 7,500,000.

A. That is correct.

By Mr. Burr:

Q. Then the total output or capacity would be how much?

A. Approximately 60,000,000 cubic feet. I don't like to make mistakes, but you will remember I was a little undecided this morning when I testified.

240 Q. Making a total output of 111,000,000 cubic feet of gas per day?

A. About.

Q. And the utmost required is 36,000,000 per day?

A. Oh, no, in the winter season we send out nearly 100,000,000 now—last year.

Q. Well, you have the Northern Union lying idle?

A. Yes.

Q. Capable of producing nearly one million feet per day?

A. About three-quarter million.

Q. Between three-quarter million and a million you testified?

A. Well, the actual amount is between 750,000 and 778,000.

Q. That is lying idle?

A. Yes.

Q. And lying idle because not needed?

A. Because it is not needed just now; it is a reserve plant that would have to be used.

Q. And the Astoria plant contemplates an output of 240,000,000 cubic feet a day, does it not?

A. No, sir.

Q. How much?

A. 20,000,000.

Q. I am referring to the twelve units?

A. Oh, that may be in the next twenty-five years.

Q. I have asked you the question. I say it is contemplated and provided in your plan for the construction of the Astoria works to provide for a capacity capable of making 240,000,000 cubic feet of gas a day?

A. That is the ultimate capacity, but there has been no money spent——

Q. That is the capacity on which you are now figuring?

A. But there has been no money spent on that capacity—anything beyond the present 20,000,000, with the exception of the purchase of the land.

Q. Then the land was taken into consideration in the desire to produce 240,000,000 cubic feet a day?

A. The entire tract was purchased.

Q. How many acres does each unit occupy?

241 A. I don't know, I can't answer that without measuring up and figuring.

Q. About how many?

A. Well, there are 367 acres, I think Mr. Francklyn testified the other day, and about less than one-twelfth of that will give the acreage—one-fifteenth perhaps would give the acreage of one plant.

Q. I did not catch what you said.

A. I said take the 367 acres, if that is the correct amount, and dividing it by 12 gives the acreage for one plant less other vacant property that is left.

Q. Would you say that you would require more than four acres for one unit?

A. Yes, in that case.

Q. I am not speaking in that way. I want you to say positively from your experience and knowledge of the plant and your knowledge and experience as chief engineer, will it require more than four or five acres to accommodate each unit which is contemplated to be built on the Astoria ground?

A. I suppose a plant can be built on four or five acres; it is a question whether it would be properly disposed of.

Q. How many acres does the present unit occupy?

A. That is what I say, divide the present acreage by 12. If 367 are the whole 12 plants, it is one-twelfth of 367, isn't it?

Q. Then you figure because 367 acres have been purchased that the twelve units will occupy 367 acres?

A. With other things there composing component parts of a gas plant.

Q. That is what I want to find out from you. How many acres will each unit occupy?

A. I have never made the computation.

Q. Have you got the dimensions of the present units?

A. No, sir, not in detail, I have not.

Q. Could you give it roughly?

A. The present unit occupies a strip of land approximately 2,000 feet long by perhaps 350 feet wide.

242 Q. That would be about 12 acres, would it not, Mr. Bradley, for each unit?

A. Possibly; I don't know, I never made the calculation.

Q. Isn't it a fact that about half, more than one-half of the acreage that is purchased over in Astoria is unnecessary for the purposes for which it was purchased?

A. No, sir.

Q. Well, now, will you give us your reason for saying no, sir?

A. Because in my judgment as an engineer it is not. That I consider a very good reason.

Q. And that is the best answer you can give as to that?

A. Yes, sir.

Q. You have agreed to produce the dimensions of the plants in the city here?

A. No, sir.

Q. I understood you to say that you would furnish us with the dimensions of those plants.

Mr. Mathewson: You asked the dimensions of the holders.

The Witness: You asked the dimensions and capacities of the holders, but not the plants, I have not been asked for them.

Q. You can furnish all that information; you can do that, Mr. Bradley?

A. I shall have to consult counsel on that, with due respect to you.

Q. I will always assume you will not go contrary to the advice of counsel, but if counsel allow you to do so and you have the means of furnishing that information, will you do so?

A. If advised by counsel.

Q. And if advised by counsel and you have the means of doing so you will furnish us with the same information regarding the Astoria plant and holders?

A. That is the dimensions?

Q. And space occupied?

A. May I ask a question?

Q. Yes.

A. Do you want that in the shape of drawings or in the shape of a written description?

243 Q. Drawings.

A. Drawings I should prefer to furnish if obliged to, because they are more easy to get up.

Q. How many miles of pipe are you laying from the Astoria plant?

A. We have laid approximately three miles.

Q. Is that sixty-inch, five-foot mains?

A. Yes, sir.

Q. And that connects with the tunnel, does it, at the New Amsterdam works?

A. Yes, sir.

Q. And then do you lay further mains to continue from those works?

A. Not at present.

Q. But you contemplate making a continuation of those mains through the tunnel, do you not?

A. Yes, sir.

Q. How long will those mains be, what is the size of them—the same, sixty inches?

A. The present tunnel you speak of now?

Q. Yes.

A. Not the contemplated tunnel?

Q. The present and the contemplated tunnel.

A. The present tunnel is about 2,750 feet long, I believe. You know, Mr. Burr, I am carrying all these figures in my head and it is rather awkward for me.

Q. That shows the advisability of having the books, doesn't it?

A. And I want to — absolutely surely of what I am talking about. I think it is 1,750 feet long; it contains now two 36-inch mains.

Q. Those are the largest mains in the United States, are they not—supposed to be?

A. No, they are not so large as our 60-inch.

Q. I am speaking now of the 60. Those mains are the largest that have up to the present time been laid for gas purposes in the United States?

A. So far as I know.

Q. Is there anything, from an engineering standpoint, to prevent you from connecting, say the plant of the Northern Union Gas Com-
pany by means of mains 60 inches along the marginal streets
244 of the City of New York, to connect with your other mains?

A. In connection with what works?

Q. Say the Northern Union works?

A. Oh, the Northern Union?

Q. Yes.

A. There is no special difficulty in the way up in the Northern Union territory, so far as I know, of laying a 60 inch main, with the exception that it is almost all entirely rock blasting work and very expensive.

Q. Could not a 60 inch main be laid around the City of New York and the marginal streets, all around, for one quarter of the amount of money that is contemplated to be expended at the Astoria plant?

A. Oh, no; no, sir. I don't think there is a place in the world where it is so expensive to lay pipes as it is in New York.

Q. If such a pipe could be laid it would obviate the variation in pressure, wouldn't it?

A. No, sir.

Q. Do you know what is the cost to lay the mains there of this pipe we are speaking of?

A. I know—I say I know from what has been told me, but I don't think you care to hear it, because you would ask me at once if I made the figures, and I did not.

Q. Well, of course the cost of those mains appears upon the books of the company?

A. They do; yes, sir.

Mr. **Burr**: I think that is all I want to ask Mr. Bradley at this time; and I want to reserve the right to move again at the proper time to strike out his testimony with regard to the repairs and replacements, on the grounds already stated.

Cross-examination by Mr. **Page**:

245 Q. You state in your examination that a large holder was more economical than a small holder. Will you give us the reasons why?

A. Yes, sir, I should be very glad of an opportunity to explain that because I was rather upset at that time somehow or other, and it did not occur to me. Take for illustration two circles—take a small holder 100 feet in diameter, and another of 200 feet in diameter, the holding capacity of the holder increases for times. Take a circle of a given diameter and a circle of another diameter, one of double diameter will hold four times the quantity; it increases as the square of the diameter; that is to say, if you take one holder of 100 feet in diameter the circumference of the tank of that holder will be 314 feet, four times 314 will be 1256; one holder of 200 feet in diameter the circumference is 628 feet, that is 628 feet the tank to be built for that 200 foot holder, with a 1200 tank, lineal feet of tank to be built on four small holders. The four small holders built in that way with double the quantity of tank surface will hold about 2,000,000 feet; the large holder will hold 5,000,000 feet, and occupy the same ground space, therefore it is much more economical to build large holders than small ones; for those reasons the cost of construction is the chief thing and the ground space occupied.

Q. I suppose the more lifts a holder has also makes it more economical?

A. With the large holder there are five, and with the small holders it is impossible to put more than two or three on on account of the disproportion between the diameter and the height.

Q. The more expensive part of the gasholder is really the tank?

A. The tank, in some cases.

Q. That is where you build a masonry tank?

A. Yes.

246 Q. The holder at 132d Street that you testified to as having been recently completed and put in operation, is that to take the place of some old holders abandoned?

A. No, sir, that is to supply the increased consumption in the upper part of the city, making it practical to send out gas there without carrying so much pressure.

Q. On page 174 of the record you gave certain reasons why the manufacture of gas at Astoria would be more economical than in Manhattan. Are those the only reasons?

A. Will you read them, please, I don't recall them now, or let me read them.

Q. You stated that the method is more expensive to manufacture gas in New York, on account of the fixed charges and the troubles and difficulties with the Board of Health and the Building Department and with the city bureaus. Then you were asked: "You think that when you get over to Astoria you will be free from the observation of those departments? A. I do not think that we will be free from observation, but we will probably be free from a good many of the annoyances which are real annoyances now, but they will not be noticed over there. Q. What reason have you for making that statement? A. If for instance we take a gas plant in a crowded residential locality, surrounded entirely by dwelling houses, and there is a little smoke or a little smell or a little noise emanates from the gas works, the Board of Health are after us at once. Over there we are in open country, out of the way, with nobody to bother us and nobody to annoy us."

Mr. MATTHEWSON: He said nobody to be annoyed.

The WITNESS: Nobody to be annoyed, I should have said. We are not annoyed, we annoy other people. May I now have the question read?

Q. (Question repeated by stenographer as follows:) On page 174 of the record you gave certain reasons why the manufacture 247 of gas at Astoria would be more economical than in Manhattan. Are those the only reasons?

A. I don't know whether those are the only reasons. Every one of the reasons given is a source of expense, any expense that can be saved is a consequent reduction in the cost of operation and making gas and running the works.

Q. Well, the concentration of the works in a large plant would also eliminate the question of superintendence, wouldn't it?

A. That will probably be an ultimate source of reduction in the cost of manufacturing gas when the plant reaches such a size that it can be called concentration.

Q. And the method of construction of your Astoria plant enables you to do a great deal more work by machinery which in other plants you have to do by hand?

A. I have endeavored, in the designing of the Astoria plant, to put in everything that in my judgment would be advantageous to bring about a decreased cost of gas. There is some machinery put there that is not in any of the other plants; some will be in there that is not in any other plant in this country, and my endeavor has been to build an up-to-date plant and the best plant possible to be produced.

Q. Have you made any computations as to what saving will be made in the manufacture of gas at Astoria by these present methods?

A. Nothing except in the way of general estimates, nothing that I would be willing to say, or that I would say absolutely I knew would be the result.

Q. Did you make such an estimate for the officers of the company at that time?

A. No, I have not; I have never been asked for it.

Q. Did you make any estimate which you put in writing as to that?

A. No, sir.

Q. It has just been your mental calculation?

A. Yes, except that sitting at my desk I might have made 248 a memorandum that was afterwards torn up; nothing that I made for any preservation.

Q. You made some statement, did you not, to the Joint Committee of Senate and Assembly, as to what you expected to save over there per thousand?

A. Yes, I believe there was something in the testimony there.

Q. Do you recall what that was?

A. I said, I believed that the gas was costing, as I recall the testimony now, in the neighborhood of 35 cents, but that by various economies, I might save four or five cents on that; that is as near as I can recall it at this moment; saying at the time that it was the merest approximation, and that I had no knowledge as to what the absolute result would be.

Q. Did the figures that you gave the other day, as to repairs and replacements, include repairs and replacements to holders, or manufacturing plants?

A. Yes, sir.

Q. It included also holders?

A. Yes.

Q. You have stated that the consumption of gas in the summer is reduced about 60 per cent. from the consumption of gas in the winter?

A. That is the general average.

Q. Do your expenses continue at the same rate in the summer as they do in winter?

A. No, sir, but they are proportionately higher in the summer than in the winter; not in that ratio, but they are a little higher in the summer than in the winter.

By Mr. MATHEWSON:

Q. Per thousand feet?

A. Per thousand feet; I am speaking entirely of per thousand feet he asked the question as to the quantity of gas made.

249 By Mr. PAGE:

Q. What expenses do fall in the summer?

A. Chiefly the labor.

Q. Now, in estimating the capacity of a plant, you say you multiply the daily capacity by 200?

A. Yes, that is the annual capacity.

Q. Yes, to get the annual capacity you take the daily capacity, full capacity, and multiply that by 200?

A. Yes, sir.

Q. I believe you stated that that was caused by the reduced demand in the summer time for gas?

A. Yes, sir.

Q. Now, if you were given a condition where there is a demand for the entire product of the plant the year round, that estimate would not be a proper estimate as to capacity, would it?

A. I do not think I grasp that entire question.

Q. Given a condition that there is a demand for the entire capacity of the plant during the summer, I say then you would not estimate the same way?

A. If the plant made its capacity for 365 days in the year, then it would be a proper thing to multiply the daily capacity by 365.

Q. And there is no reason, except the falling off of the demand in the summer time, for your not being operated to your full capacity, the plant?

A. Yes, the reason is because all things wear out, and we must have opportunity to lay off our plant, our apparatus, at times, to effect those repairs and replacements.

Q. Now, how much time would you estimate was necessary for the discontinuance of a plant for the purpose of making repairs and replacements?

A. I should not attempt to estimate that at all without I saw the plant and knew the condition it was in and knew what was to be done, I could not do that.

250 Q. I am talking about the plants that are operated by the Consolidated Gas Company?

A. One year it might take a plant laid off for six months, another year all the repairs might be accomplished in three months, and another year it might take even longer. That is a thing that I cannot form any opinion on whatever. It is entirely too broad a question. You might as well ask me how much repairs are going to be necessary on a certain plant next year, and that I cannot say.

Q. I am speaking of your experience in operating these plants of the Consolidated Gas Company for the last twenty-two years, eliminating the lack of demand in the summer time?

A. I shall have to say, in answer to that question, that all my experience, and all the experience of any other gas engineer that I ever knew, would not enable me to answer that question.

Q. Can you not now make all the repairs necessary to this plant in the summer time, and still continue to meet the demands for summer business?

A. Which plant?

Q. I am speaking of the plants of the Consolidated Gas Company.

A. Well, yes; that is what we are doing.

Q. And at no time do you shut down an entire manufacturing plant to make repairs, do you?

A. No, except some repairs that become necessary that make it necessary to shut down.

Q. Then, in your experience during the past twenty-two years you have never shut down any one of your plants entirely, have you?

A. They have been shut down at various times for a short time, for a day or two days, when such repairs as were necessary as were impossible to make otherwise, were made. I think I see what you mean, if I might make a little statement along that line: It is in my opinion more expensive to shut a plant down than it is 251 to keep it running, for the reason that we use a great many skilled men, mechanics, men whom we are obliged to keep, and when the works are shut down and are producing nothing we have to keep those men, and it is an item of running expense with nothing produced to compensate for it. It is more expensive to absolutely shut a plant down than it is to run it at short capacity.

Q. Can you give the percentage of labor that is laid off during the summer?

A. The percentage of labor laid off during the summer might run perhaps from 20 per cent. to 30 per cent., but it is almost entirely among the cheaper laboring class of people, not the mechanics or the skilled men; those we retain and use them for our repairs and in our work.

Q. Did you refer, then, by percentage, to the percentage of the number of laborers employed or the percentage of the expense?

A. The number of men employed.

Q. Could you tell what that would be in percentage of expense for labor?

A. No, not offhand.

Mr. Page: I will reserve any further cross-examination of Mr. Bradley, as indicated.

The Master: Have you anything, Mr. Gans?

Mr. Gans: No, I think not.

Redirect examination by Mr. Mathewson:

Q. You stated the other day from recollection that the total cost of the items which you had in mind representing this first unit, including land and tunnel, amounted to about thirteen million dollars, deducting land and tunnel, to about $9,217,441.42?

A. That is correct.

Q. The latter amount, being a reduction made from the thirteen million, being represented by the amount of land and tunnel?

A. Yes.

252 Q. Are you able to say now whether that $9,217,441.42 represents the exact amount of the items that you had in mind, or how closely it represents it?

A. It is not the exact amount.

Q. How close is it?

A. Maybe within one hundred thousand dollars.

Q. Let me ask you whether in building this tunnel under the river, with the capacity which you have stated, it would in your judgment be business prudence, under the circumstances, to have built a smaller tunnel?

A. I should consider that I had forfeited my reputation as an engineer if I did.

Q. Is it possible to enlarge a tunnel when once constructed?

A. It is very difficult, and in the case of a tunnel containing gas pipes, very dangerous to do so. If it required enlargement it would probably mean the construction of a new tunnel rather than an enlargement.

Q. In this item of $9,217,441.42 did you include any gas main, even one main through the tunnel?

A. No, sir, I did not.

Q. Your first main would be a matter of quite large expense, would it not?

A. Yes, sir.

Q. Did you include the entire holder capacity, or simply one holder and a tank?

A. The one holder and two tanks.

Q. Then to complete the holder capacity to the capacity of your first unit, you would require the construction of a second holder in that tank, would you?

A. A second holder must be put into that tank.

Q. That would involve a large expense additional?

A. That would require an additional expense of $750,000.00, if my recollection is right.

Q. Did you include any office building in that $9,217,441.42?

A. No, sir.

Q. Taking those items which I have mentioned, and which you
say are not included in the $9,217,441.42 to complete the
253 first unit, would you say that one million dollars was an
excessive allowance for that?

Mr. Gans: I think we will object to that, if Your Honor please, on this ground, that as we understand it, the contracts have been made.

Mr. Mathewson: No, these are additional.

Mr. Gans: I understood that the contract had been made.

Mr. Mathewson: No, these are additional contracts which were not included in the $9,217,441.42 at all. Is that right, Mr. Bradley?

A. The $9,217,441.42 represented what had been under contract or completed. There are other things, this holder and the office, and various other things which Mr. Mathewson speaks of that are not under contract, nor I might say, laid out yet.

Q. But they are requisite, are they not, to the completion of the first unit?

A. They are.

Q. I will repeat the question, whether a million dollars additional for those items would be excessive?

A. No, sir.

Q. So, that the total cost of the first unit, excluding land and tunnel entirely, would amount then, according to your estimate, when completed, to over ten million dollars?

A. About $10,800,000, if I remember the figures.

Q. Will there be more grading and filling in connection with those structures at Astoria?

A. Yes, grading and filling is going on there now, and more in prospect.

Q. Did you inspect or examine any other pieces of land around the City of New York before this Astoria purchase, with a view to its availability?

A. Several.

Q. Were you able to find any as available as this?

A. No.

254 Q. Has the company ever received complaints from neighboring residents of the city in respect to the plants now in operation in New York?

Mr. Gans: I object to that as incompetent, irrelevant and immaterial.

Mr. Burr: The same objection.

Mr. Mathewson: You have asked him these very questions, why he thought of moving to Astoria.

Mr. Burr: No, he volunteered that statement.

Mr. Page: He volunteered that statement on direct-examination, and I asked him if there were any other reasons which he wished to give.

The Master: I do not see that it is very material.

Mr. Mathewson: I do not see that it is myself.

Mr. Burr: That was a most marvelous explanation he gave, that it was to escape the persecutions of the city departments.

Mr. Mathewson: No, I think if we proposed to put any further manufacturing plants up in the city of New York, there would be a much greater cry.

Mr. Burr: The only reason for Astoria was that they were going to move their present gas plant over there.

The Witness: We are trying to.

Q. Considering the extent of this plant, and the character of a gas plant, and the character of the City of New York and its structures about the land which the Consolidated Gas Company owns in the City of New York, would you consider it feasible or practicable to construct a great gas plant in the City of New York in addition to those you now have, I mean on Manhattan?

255 Mr. Gans: I object to that on the ground that it is too vague. Would it be feasible to construct a great gas plant in the City of New York? That is about as vague a proposition as I ever heard put to a witness, with all due respect to Mr. Mathewson.

The Master: Perhaps Mr. Mathewson will withdraw the "great." I will let him answer it.

Exception taken by Mr. Gans.

A. As an engineering proposition I should dislike very much to recommend to our directors, or be on record as having recommended, the erection of a gas plant in any part of the City of New York on Manhattan Island.

Q. Would you have the same opportunity for extension in Manhattan, of additional units, that you have at Astoria?

A. No; one of the great difficulties in building gas plants or any manufacturing concern on Manhattan Island is the fact that we are limited by the size of the blocks. The blocks on Manhattan Island are only 200 feet wide, and we cannot get on the gasholders of modern construction, or the buildings that go with them, without closing streets, and that we are not permitted to do.

Q. Have you any marginal street in Astoria between your plant and the water?

A. No, sir.

Q. What effect have the marginal streets in New York, between any plants that you have constructed or might construct, upon the desirability of constructing a plant here, as compared with Astoria?

A. It is conceded that the only proper place to construct a gas plant is, in the case of water facilities, where you can receive supplies by water. Of course I do not refer now to the back country where there is no water, but where water facilities are available it is conceded that that is the proper place to construct a gas plant.

256 Mr. Burr: I ask to have that answer stricken out unless the witness testifies by whom it is conceded. It cannot be a concession binding on the defendants.

A. (Continuing:) Then I would say it is my opinion, and in that opinion I am borne out by everybody. The construction of this marginal street around the city has had the effect of cutting us off absolutely from our water front facilities, making it necessary to cart at increased expense all of our coal and all of our materials that come by water, increasing the cost of manufacture by increasing the cost of materials.

Q. When you say that the field work now in process of erection at Astoria was begun two months ago, what do you mean?

A. That is a technical term which perhaps I should not have used. Field work is known in distinction from shop work; the materials have all been gotten out in the shop and sent to the place for erection and the erection is commenced; that is what we call field work.

Q. In other words, the holder is constructed?

A. Is being constructed.

Q. And the work of construction began long ago, didn't it?

A. The shop work, the procuring of the material and getting it out into shape, getting it ready for erection, was commenced two years ago in the shop.

Q. You have stated that you testified before the Stevens Committee, or made an estimate, that the cost of gas at Astoria might be perhaps five cents less than the cost of gas as manufactured by the company in Manhattan?

A. Yes, sir.

Q. Was that comparison for the year 1904, do you remember?

A. The year previous to the Stevens Commission.

Q. The investigation of that was in April, 1905?

257 A. In 1905; then that was in comparison with 1904.

Q. Had you in mind at that time the requirement of two additional candle power?

A. No, sir, that requirement was not imposed upon us until afterwards.

Mr. Gans: I think we will move to strike out the answer of the witness as a conclusion of law. I believe the requirement was imposed before that time, and the conclusion is wrong.

Mr. **Mathewson**: No penalty was imposed except for anything lower than 20 candle power.

Mr. **Gans**: May that be stricken out?

The **Master**: I will let it stand. His understanding of the law does not do any harm.

Exception taken by Mr. Gans.

Q. Prior to the passage of the recent act passing or imposing 22 candle power on the company, what candle power as a minimum was maintained or attempted to be maintained by the Consolidated Gas Company, according to city tests, at least a mile from the works?

Mr. **Gans**: I do not wish to be over technical, but I will object to the form of that question because it involves that conclusion of law. If he will mention the act and say, "Prior to the passage of the last act what candle power was in fact maintained by the company?" that will obviate the difference.

Mr. **Mathewson**: That is almost my question word for word. Is there any objection to his answering that question?

A. Twenty.

The **Master**: He says twenty.

Exception taken by Mr. Gans.

258 Q. What candle power is the company now maintaining or has it maintained since July 1st last?

A. A minimum of 22.

Q. When you spoke of the cost to the Consolidated Gas Company of gas in 1904 as being about 35 cents, and possibly being reduced 5 cents at Astoria, did you mean holder cost or cost of production, as it is called, including only labor and material?

A. Cost of production.

Q. How much would holder cost be beyond the cost of production, adding the items of repairs, etc., that come in between?

A. That is something that is entirely variable and very seldom comes to my notice. If I want to get any figures of that kind I go to the accounting department and get them. I do not ordinarily use them in my own business or practice.

Q. The cost in the holder is somewhat larger than the cost of production, is it not?

A. Yes.

Q. Assuming that the cost to the Consolidated Gas Company in 1905, based on 20 candle power, was about five cents less than in 1904, would you undertake to say that at Astoria you can make any reduction below the cost in 1905?

A. No, sir, I have already made it.

Mr. **Burr**: The statement or the reduction?

A. (Continuing:) No, I have already made it by actually producing gas at less cost, made the reduction that I contemplated making in Astoria; made it in New York.

Q. The greater part of the gas produced in New York City is water gas, is it not?

A. Yes, sir.

Q. And what effect, as to the cost of gas, will this extra two candle power have?

A. I believe at least three cents, one and one-half cents per candle power.

259 Q. In reference to the quality of oil which the company uses, is it necessary to use as high a grade of oil in the summer, to maintain the illuminating power, as it is in the winter?

A. No, sir.

Q. Did the raising of the candle power by two candles make any difference in the quality of oil which you require in winter for the purpose of maintaining that candle power?

A. We had to use a higher grade of oil to maintain the required legal candle power.

Q. Would there be any difference on the score of cost of oil between a mild winter, such as last winter, and a severe winter?

A. We would be required to use more in a severe winter than we would in a mild winter; in fact we were caught last winter once by the temperature dropping down twenty or twenty-five degrees over night; and we got way below twenty-two.

Q. Last winter was a mild winter, was it not?

A. Yes, it was a mild winter with the exception of an occasional cold snap which kept us busy.

Q. When you said you did not think the saturation point in the City of New York had been reached in the sale of gas, will you explain more fully what you had in mind?

A. Because I do not think that the City of New York has ceased growth.

Q. Do you disagree with the conclusion of Dr. Humphreys, as quoted to you, that the *per capita* consumption has been virtually reached, the maximum *per capita* consumption of gas has been reached in the City of New York?

A. Yes, entirely so.

Q. I asked you whether you disagreed with that?

A. Oh, no; I agree with him entirely.

Q. Then your expectations as to the output of gas depend upon increase in the population?

A. On future growth, yes.

260 Q. May I ask further whether your estimate as to future increase depends on the increased use of gas as an illuminant or as fuel largely?

A. The great increase in the future will be as fuel, rather than as an illuminant.

Q. Is it possible for you to estimate what the rate per cent. of increase in New York will be for gas sales?

A. Not with absolute accuracy. I should say that we might expect and believe that we should expect not less than 2½ or 3 per cent. steady increase per annum.

Q. You do not expect an 8 or 10 per cent. increase with electricity in use?

A. Oh, no; in the old days of lighting when gas was used exclusively for lighting, a 10 per cent. increase was not abnormal.

Q. Was your statement of replacement in the plants and holders brought down to June 30, 1906, or to October 31, 1905, if you remember?

A. October 31, 1905.

Mr. Burr: May I inquire what book it is you are referring to now.

The Witness: It is not a book, it is a memorandum of the additions and replacements and repairs that we have had under consideration that I testified to.

Q. When you spoke of the increase of pressure being one-tenth of an inch for each 17 feet you said you referred to gas of what specific gravity?

A. Six-tenths, air being one; six-tenths of the weight of air.

Q. How does coal gas compare with that?

A. Coal gas is about 45/100.

Q. And would the increase be greater or less or would the number of feet elevation for an increase of one-tenth in the pressure, be more or less in the coal gas?

A. The lighter the specific gravity of the gas the more apparent increase there is in pressure by elevation.

261 Q. So that when the proportion of coal gas used by the completion of this first Astoria unit increases, the specific gravity of your entire gas taken as whole, would be less, would it not?

A. It would be less.

Q. And then the difference in pressure would be greater?

A. Yes, sir.

Q. For any given number of feet?

A. For any given elevation.

Mr. Page: May I ask a question just there.

Mr. Mathewson: Certainly.

By Mr. Page:

Q. Would that be coal gas at 20 candle-power, or coal gas not enriched, of that specific gravity?

A. I am speaking now of the gas sent out. It must be 22 or we could not send it out.

By Mr. Mathewson:

Q. Are the elevated points in New York City confined to one locality, or are they scattered over the city at one point and another?

A. Tnere are differences in elevation all over the city.

Q. Would it be practicable from an engineering standpoint within any reasonable cost to run a separate trunk main to each distinct elevation?

A. No, sir.

Q. Quite aside from the question of increased pressure due to increased elevation, would it in your judgment be possible to maintain a pressure between two and a half inches and one inch and deliver gas to your customers throughout the city?

A. No, sir, it is absolutely impossible.

Q. What effect has the varying consumption of the consumers along your mains upon the pressure in the main?

262 A. There are cases where the variations caused by the consumers without any change of pressure at the station has caused variations of half an inch in the mains.

Q. Is the pressure inside the house pipes as high as the pressure outside the house?

A. No, sir.

Q. Is it possible to have any single pressure which will operate equally well a Welsbach, which you said required at least two inches, and a flat flame burner which can be operated with one or less?

Mr. GANS: Objected to as immaterial and irrelevant. The question is not as to the wisdom of the legislation, but as to its practicability.

The MASTER: I will allow it.

Mr. GANS: I except.

A. No, sir.

Q. Speaking of the trunk mains, what is the condition of the streets in the City of New York, with respect to their capacity to carry more mains?

A. It has come to the point in New York City where it is almost impossible to lay mains of sufficient size, of the size that is demanded nowadays. Between the gas mains, the water mains, the telephone subways, the railway subways and all the sub-surface structures, the streets of New York are pretty well congested. The City of New York now is laying a most extensive system of high pressure salt water mains for fire purposes, and they are requiring us to move our mains in almost every street they go into, simply because they have not room to get in. We could not do that because we have not the power to make anybody move. We cannot find room to put large mains in the City of New York.

Q. If you started out to endeavor to equalize pressure so far as possible in different sections of the city, would there be any assurance that the rate of consumption in different parts of the city 263 would continue uniform?

A. No, sir. A district that we might try to strengthen up now, after a long time of main laying, and ripping pavement and getting mains in for the purpose, we would find perhaps when we got there that the centre of consumption had shifted to some other place, and our work was of very little value.

Mr. BURR: I ask to have that answer stricken out as being purely speculative.

The WITNESS: It is not speculative, sir, for I know the fact.

The MASTER: I will let it stand.

Mr. BURR: I except.

Q. Take a certain district on the East Side where the consumption showed the smallest increase in 1900 for the previous five years, was there such a district?

A. There was.

Q. What appeared in 1905 as to that district for the previous five years?

A. It was the point of largest increase

Q. Was there any way in which that difference could have been foreseen?

A. Absolutely no way to foresee that whatever.

Q. And if you had laid a trunk main in order to equalize so far as possible pressure in that district on the basis of consumption as it appeared in 1900, would it have met the purpose in 1905?

A. No, sir.

Q. Referring to burners, are there not what are called high-pressure burners as well as low-pressure?

A. There are burners called high-pressure, Bray, if I am not mistaken.

Q. And under a high pressure they burn better——

A. They are calculated to burn gas under a high pressure.

264 Q. Is there any way in which you know that the pressure upon consumers nearest the distribution system can be equalized with the pressure upon consumers some distance from the station?

A. No, sir, I don't know of any way.

Q. Is it in your judgment a physical possibility?

A. A physical impossibility.

Mr. MATHEWSON: Will you let me see Exhibit 48, Mr. Burr?

(Paper produced.)

Q. Referring to the preliminary page of Exhibit 48, page A, there appear to be four piers indicated at the northeasterly part of this section?

A. Yes, sir.

Q. Those four piers are not built, are they?

A. Partially built.

Q. Are there more than two piers built there now?

A. I think the foundation, underwater work, is built for some of the others; they are not brought up above the surface.

Q. How many piers are completed?

A. Two.

Q. You note that two of these piers are indicated by dotted lines, Mr. Bradley. Does that indicate that they are projected but not constructed?

A. Indicated, but not constructed.

Q. Do you know that those two piers are contracted for at all?

A. Not yet.

Mr. GANS: Are those piers for which he says foundations are laid?

Mr. MATHEWSON: He says he thinks so.

Q. Do I still understand you to say that the foundations are laid for those two extra piers?

A. Not to any extent. Soundings have been made and dredging has been made preparatory to building them; it was done 265 while the other operations were going on. That is what I mean by under-water work.

Q. Assuming that the capacity of the company's Manhattan plants now equals an actual output of about ten billion feet or a little over, and that the sales of the Consolidated Gas Company amount to over thirteen billion feet, practically the entire first unit at Astoria would be required to bring the manufacturing capacity of the company up to its sales, would it not?

A. Yes, sir.

Mr. GANS: I object to the witness testifying to that. It is a mathematical calculation. The witness cannot add anything to his testimony.

The MASTER: I will allow it.

Exception.

Q. When you spoke of acting in an advisory capacity in connection with certain matters of other companies than the Consolidated in the Island of Manhattan, does the Consolidated pay you anything additional for that work?

A. They do not.

Q. Do you consider it simply as part of your duty as chief engineer of the Consolidated to keep your eye on property in which it has an interest?

A. I do.

Q. You do not mean to say that you are paid by the Consolidated for services rendered to these other companies?

A. I receive no salary for that to my knowledge.

Q. Well, you would be likely to know it if you received checks from these other companies?

A. I would be likely to find it out.

Q. In reference to the purchase of materials that go to the production of gas, such as coal and oil, are not those purchases made on your recommendation or at your suggestion?

266 A. Those purchases are made as I explained. If I did not make myself clear, I make requisition for coal and for such supplies as are required, designating in that requisition what I wish to get. That is submitted to the purchasing department and it is purchased by them on my recommendation.

Q. After you reach an output of six hundred or seven hundred million feet, is there any economy in the production of an additional amount of gas beyond that in the cost per thousand?

Mr. GANS: I think I must object to that unless we are going to define precisely what is meant by cost. If he means merely manufacturing cost——

Mr. MATHEWSON: That is just what I mean, manufacturing cost of gas.

A. There is very little reduction in the manufacturing cost of gas after you might say a maximum has been reached.

Q. There would be some difference between a small output and a large output such as I have stated?

A. Yes, sir.

Q. But after you have acquired a large output there is very little economy?

A. There is very little chance for reduction because of the larger quantity manufactured.

Q. Now in reference to the expenses of distribution——

Mr. PAGE: Well, you adopt Mr. Mathewson's statement as to the maximum consumption? He stated——

The WITNESS: I did not hear that statement.

Mr. PAGE: Read that question.

(Question repeated as follows.) "After you reach an output 267 of six hundred or seven hundred million feet, is there any economy in the production of an additional amount of gas beyond that in the cost per thousand?

The WITNESS: And I said no.

Q. And would that be true even of a smaller total?

A. Some smaller, yes, sir.

Q. In reference to the expenses of distribution I think you said that the expense per thousand would tend to be lessened by a large output, Mr. Bradley. Now how is the expense of distribution affected by the congestion of travel in a great city like this?

A. The expense of distribution when the item of repairs and laying mains is concerned is very much increased in a congested district.

Q. Well, repairs and replacements of main is one of the items in distribution, is it not?

A. It is part of the distribution, most undoubtedly.

Q. And what, too, is the effect of the sub-surface structures and pipes which you meet in a metropolitan city like New York upon the cost of distribution?

A. Those things add very much to the difficulty of distribution and also to the expense.

Q. In what way?

A. By making it more difficult to lay mains, and I might say perhaps in short, that it would cost more to lay a main in Wall Street than it would in 150th Street by reason of the difficulties encountered, and the congested conditions of the streets.

Q. What effect on the cost of distribution has the asphalt pavement or this new pavement of concrete laid in cement?

A. Very greatly, because we have to pay very largely for the replacement of asphalt pavements. We do not replace it ourselves; we are not allowed to do that, but the city replaces it, and they charge us what we consider a very high price for it.

Q. So that may not the advantage which comes from an in- 268 creased output be neutralized in a great city like this by the metropolitan exactions and conditions which increase the cost?

Mr. GANS: I object to that as being entirely too speculative.

Mr. BURR: I join in that objection.

The MASTER: I will take it for what it is worth.

Mr. GANS: Exception.

Mr. BURR: Exception.

A. It has been shown, I think, in Massachusetts, where the expenses of distribution were greater in Boston, on account of metropolitan conditions than they were in other adjoining towns, where there was less consumption and less disturbance.

Mr. Gans: I object to that answer, and move to strike it out, as not responsive.
The Master: I will let it stand.
Mr. Gans: Also as hearsay. Exception.

Q. What is the effect on unaccounted-for gas or leakage by a high pressure in the mains?
A. The effect of high pressure in the mains is to increase the unaccounted-for gas or leakage.
Q. And that means a loss to the company, doesn't it?
A. That means a loss to the company.
Q. Have these holders which you refer to as having been erected upon your requisition within the last fifteen or twenty years been located by you?
A. Yes, sir, located by me having in mind the location of the company's property.
Q. And for what purpose in reference to pressure if any?
A. For the purpose of effecting the most economical distribution of gas that in my judgment it was possible to accomplish.
269 Q. Would it be possible to distribute gas in the city of New York manufactured at Astoria with pressure holders located only at Astoria?

Mr. Burr: I object to that if your Honor please unless he gives some reason.
Mr. Mathewson: Well you can ask him the reason.

Mr. Burr: He asked him several times is it possible or impossible, and so forth, and these are merely conclusions and I object to them because they are conclusions.
The Master: I assume that he is being asked in such a question as that, practically, whether in his opinion as an expert such a thing is possible or practicable, and I suppose that is the meaning of the question and in that respect I will allow it.
Mr. Mathewson: You will remember that Mr. Burr asked questions in reference to these holders, and whether or not they were to be disposed of; the question was raised by him.

A. It is impossible to distribute gas over long distances without intermediate storage holders in order to lessen the pressures at which it is forced through the mains. It would be a very difficult matter to distribute gas to the consumers from holders located at Astoria and no holders in New York, in any satisfactory manner.
Q. Or within any reasonable limits of pressure?
A. Or within any reasonable limits of pressure.
Q. Was the question of the establishment of a water gas plant as distinguished from a coal gas plant at Astoria considered by you, Mr. Bradley?
A. It has been considered in a way to the point, or so far that I have a little diagram made of where I would probably locate the water gas plant in the Astoria property and——

270 Q. I am referring to the present first unit.

A. No, no, not in connection with the first unit.

Q. You considered that a coal gas plant was better for the interest of the company at the present time?

A. It is better for the present interests of the company.

Q. Were you influenced in that by the constant increase in the price of oil to which you have referred?

A. The constant increase in the price of oil and the equally constant decrease in the quality of oil.

Q. You spoke of the gas acquired by this company from certain other companies. Do you or do you not recall that gas is furnished under certain agency agreements by which it is manufactured by these companies for the Consolidated?

A. There is some such agreement I have heard spoken of, but I am not familiar with it.

Q. But what the terms of the agreement are you do not know?

A. No, I do not know.

Q. Your attention has been called to a statement of Newbigging that by doubling the pressure you deliver half as much gas again. Does it follow that it will be necessary to consume half as much gas again in the case of the apparatus of any consumer, if you double the pressure?

A. No, sir. They need not consume any more than they want to.

Q. That would be so only in case the meter cocks were left at the same aperture and also all the burners at the same aperture, would it not?

A. The meter cock need not necessarily be changed, if the burner cocks are taken care of.

Q. Either one?

A. Either one; I do not now recall exactly in what connection that statement was made by Mr. Newbigging. I think it was made in connection with the passage of gas through mains rather than with regard to the burning of gas.

271 Mr. Mathewson: Can you find that reference to the doubling of the pressure resulting in the delivery of 50% more gas?

Mr. Burr: Yes, page 225.

Q. (Handing book to witness.) Look at it and see if you have anything further to say, Mr. Bradley?

A. Yes, it does refer to the consumption of gas. I was not quite clear whether it referred to the consumption or the amount of gas passing through mains by varying pressures.

Q. You gave a list yesterday of the holders of the company, and you have been questioned respecting them to-day. I want to ask you whether in that list of holders you included the relief holders at the manufacturing stations, which are perhaps properly part of a manufacturing plant?

A. No, sir, they are excluded entirely.

Q. So that there are relief holders at the station not included in that list you gave?

A. There are holders at all the water gas stations which are not included in that list, for I do not include those holders as being part of the distributing system; they are part of the plant.

Q. These holders which you have defined, then, might be designated as distributing holders?

A. Distributing holders or storage holders.

Q. As distinguished from those at the works?

A. As distinguished from what we call the relief holders.

Q. In your testimony yesterday in reference to replacements, you referred to receipts or certificates or some memoranda that were delivered by you to the accounting department. Do I understand that in those you separate the items of replacements as to money value from the items of new construction, or is that done in the accounting department, by reference to their books? 272

A. That is done in the accounting department.

Q. So far, however, as the pay rolls go, do they not show whether or not it is on repair, replacements or new construction?

A. The pay rolls show that fact.

Mr. Gans: Do you mean by that that the pay rolls are certified by him?

Mr. Mathewson: Yes, by his department.

Q. Are you able to say how the use of the flat flame burners, the old burners, compares relatively to the use in former years, whether it is increasing or decreasing?

A. The use of the flat flame burner is decreasing uniformly and steadily.

Q. They are the burners that require small pressure, or that can be operated by small pressure?

A. Yes, sir.

Q. Referring to the Northern Union works, to which reference has been made, and other works of the various companies, would it, in your judgment, be prudent business to have no reserve capacity for manufacturing?

A. No, sir; I should dislike very much to have all my works in winter running up to the full capacity and know I had nothing in reserve in case of an explosion or breakdown.

Q. In speaking of the surface covered by the first unit at Astoria, which you roughly thought to be 2,000 by 350 feet, does that include any land for coal storage—coke storage?

A. I intended to include the land from the inshore bulkhead back to Winthrop avenue, whether I gave it sufficient length or not I don't know.

Q. Would that leave room for the coal or coke storage?

A. A certain amount of room at the rear of the retort houses.

273 Q. Would it leave any room for the water plant to which you referred?

A. No, sir; that would be outside.

Q. Would that leave any room for an office building?

A. Not at all.

Q. Or electric light?

A. No.

Q. Or any other space about the building such as might be required?

A. No room for the shop or necessary adjuncts of a gas plant.

Q. So that the area which you have mentioned would not be adequate for the reasonable operation of the works, would it?

A. As I understood the question he asked me the room now occupied, and I gave it in that way, but that does not include the entire plant.

Q. In reference to the construction at Astoria, do you know whether few or many bids were invited for the construction of the various parts?

A. A great many bids were invited on each and every contract.

Q. Who indicated the contractors who should be entitled to bid?

A. I did in some cases, my assistant did in some cases, in other cases some of the directors indicated who should be asked to bid.

Q. Did you omit anyone whom you thought likely to present a favorable bid to the company?

A. No; I omitted no one who I thought was in a position to do satisfactory work in case the work was awarded to them.

Q. Referring to the small holders of the company, have these great holders to which you have referred, say five million feet holders, been built until within the last few years?

A. Very few except within the last—you might say ten years.

Q. How about the small holders, were they built earlier than that?

A. Some of the small holders were built forty years ago.

274 Q. Was the requirement of the business or the state of the art such that it was practicable to build the large holders thirty or forty years ago?

A. No, sir; holders built now would have been considered the dream of a lunatic years ago.

Q. How about the steel tanks?

A. Steel tanks have only been built within the last ten or fifteen years perhaps—I don't know, it may be twenty years.

Q. Due to the advance in the art of steel construction?

A. Due to the advance in the art of steel construction.

Mr. MATHEWSON: That is all.

By Mr. BURR:

Q. When you say that you believe that three cents additional in the cost of gas will be required by reason of the additional candle power made necessary by the present law, upon what do you base that opinion?

A. On a mental calculation of what, in my opinion, quantity of oil would be required to produce the extra quantity.

Q. Did you make that mental calculation here?

A. Right here.

Q. Will you repeat it orally?

A. The mental calculation, it would be about two-thirds of a gallon of oil.

Q. Two-thirds of a gallon of oil?

A. Excuse me, that is wrong; I calculated at one and one-half cents a candle power, that was my basis of calculation.

Q. Upon what do you base the cent and a half per candle power?

A. With a gallon of oil giving say five candle power, and all things in consideration I just simply jumped at the cent and a half per candle power.

Q. Well, it is a guess on your part?

A. It is a pretty solid guess, yes, sir.

Q. Would you guess that it would cost one million dollars
275 to put up these additional improvements that are now in
course of construction at Astoria but not yet built; upon what do you base that?

Mr. MATHEWSON: They are not in course of construction.

Q. They are contemplated, assuming that to be the fact, upon what do you base that statement?

A. Upon the construction of similar apparatus right on the same ground.

Q. The apparatus consisting, for instance, of what?

A. Of buildings and pipe.

Q. What building?

A. The office building.

Q. How much would it cost, the one you have in your mind's eye now?

A. About $50,000.

Q. About how many such buildings are contemplated?

A. There will be one at present; if there are more in the future——

Q. That is $50,000?

A. Yes, sir.

Q. What else?

A. The pipe across the river.

Q. How much is that going to cost?

A. About $500,000.

Q. How do you make that total up?

A. By knowledge and experience in the general cost of laying pipes.

Q. What is the general cost of laying pipes?

A. About $500,000, for that length of pipe.

Q. Is it so much per yard, or what?

A. It is ordinarily put in at so much a foot.

Q. Well you are speaking now of it being put in ordinarily?

A. Yes, sir.

Q. And that ordinary price will be paid for it?

A. That ordinary price will be paid for it.

Q. What is the ordinary price?

A. That I cannot give you, sir, without getting my—getting to my estimate and data that I have on that subject.

Q. How can you arrive at the conclusion it will cost $500,000 without knowing the unit price?

276 A. A general conclusion from my long and intimate connection with the business.

Q. Without regard to figures?

A. My opinion is worth something.

Q. I will admit that?

A. Yes, sir, thank you.

Q. But I would rather have the figures?

A. I would give you the figures if I had them here, but I haven't them.

Q. So that is a mere guess, is it not?

A. No, sir, it is not a guess, it is an opinion.

Q. The same thing practically?

A. A legal opinion is a guess just as much.

Q. What else is in contemplation, the construction of which enters into this million dollars which you think will be additionally required?

A. We require shops, the machine shops, carpenter shops, and additional coal handling and conveying apparatus.

Q. And those buildings you think will cost the balance of the million dollars?

A. I have already made a general computation, not a guess, but a general computation, that the sheds that will be required for covering the coal, will be $400,000.

Q. That is $950,000?

A. Yes, sir.

Q. What else?

A. Well we have not yet put any price on the machine shop, and carpenter shop, which I should say would easily cover another $200,000.

Mr. Mathewson: You have not included the second holder, the tank of which is constructed or under construction.

The Witness: No, sir; that is about $750,000.

Q. Upon what do you base the statement that the first unit is to cost thirteen million and some odd hundred thousand dollars?

A. On my estimate.

Q. When did you make the estimate?

A. Over a year ago.

277 Q. And that estimate you submitted to the directors?

A. Not in its entirety.

Q. Was it a written estimate?

A. It was a written estimate.

Q. And it is part of the——

A. Part of the records of the company.

Q. You said because of improvements made by the city along the river front that the cost of the transportation of coal had been increased?

A. Yes, sir.

Q. To what special point did you refer?

A. I referred particularly to 21st Street, to 99th Street, and in the immediate near future I think to 14th Street.

Q. Do you mean to be understood as saying that you have removed your coal yard from those points—you have no coal——

A. No, sir.

Q. You have no coal yards there now?

A. It necessitates increased expense in handling the coal on account of the intervention of the marginal street. In a case where we had a railroad, where the coal was brought to a dock, in the case of 21st Street, and immediately under the coal sheds, you might say, and the coal was delivered from the barges into the coal shed, instead of that we now have to transport it by conveyors and cars and by other means to get it to where it was delivered previously to the marginal street being constructed, at an increased expense.

Q. Now I understood you to say that for the purpose of distribution of gas in the city it is absolutely necessary to have the holders distributed at various points?

A. Yes, sir.

Q. I understood you to testify yesterday as follows:—I said this to you: "Then this belief that has been shared by so many that the places occupied by your holders were to be turned into public parks
is a myth?" and your answer was: "Anyone who had that
278 idea about the holders was very badly mistaken." I under-
stood you to testify yesterday that you were going to keep the holders here?

A. That is my intention, and I do not recall having said anything else.

Q. In your estimate you say that the cost of the unit alone will be $9,217,441, the total cost of the unit including real estate will be $13,000,000; is that correct?

A. I think the figures are $13,096,000, as I remember it.

Q. That is including real estate and the tunnel?

A. That is including real estate and the tunnel.

Q. Do you mean the real estate occupied by this unit, that will be occupied by this single unit or the real estate to be occupied by the general plant of 376 or 367 acres?

A. I mean deducting the cost of the land in order to arrive at the cost of the unit without the land, that is what I was asked for and I gave it.

Q. The cost of the land and of the tunnel will be the difference between $9,217,441 and $13,000,000, which you testified was the cost of both?

A. Yes, something of that kind.

Q. How much do you figure that the tunnel is to cost?

A. I think my testimony yesterday will show $2,600,000.

Q. And then the balance of the difference is for the real estate?

A. About $1,300,000 for the real estate?

Mr. Mathewson: The exact amount appeared and Senator Page made the deduction from the $13,000,000, by which the remainder of $9,217,000 was obtained.

Q. On what do you base your value of the land?

A. By a reference to the books of the company which show what was paid for it.

279 Q. Then you did refer to the books of the company?
A. I did.

Q. And you also, if I did not misunderstand you, referred to the extra cost still to be incurred for grading and filling as making up part of that million dollars additional, did you not?

A. No, in that amount the amount of grading and filling is the amount already shown in connection with the prosecution of the work of this first unit.

Q. How much filling has been done?

A. We have filled as much as we have been obliged to take off the surface, the number of cubic yards I cannot say, as I stated yesterday that same thing.

Q. How much does the filling cost per cubic yard?

A. In the neighborhood of 75 cents.

Q. Then before you had this talk with Mr. Crimmins and President Gawtry it seems you examined several other parcels of land in the City of New York, in the Borough of Manhattan, for the purpose of ascertaining their availability as a site for an additional gas plant?

A. As far as my recollection goes, I have not testified to anything of the kind.

Q. I may be mistaken, but I will ask you now whether you did not say to Mr. Mathewson a few moments ago that before the purchase of the Astoria site for the plant you had examined several other parcels of land in New York City?

A. No, sir, I didn't say so, and I would have been very foolish to say so, because my object was to get out of New York City.

Q. Have you found none as available as the Astoria location?

A. No, sir, I was not looking for land in New York City, I was looking for land with the object of getting out of New York City.

Mr. Mathewson: My question was about or in the neighborhood, Mr. Burr; not in the city.

280 Q. Then you looked at land about or in the neighborhood of the city?

A. That is correct, yes, sir.

Q. Can you give us the sites that you looked at?

A. I looked at one piece over on the Hackensack Meadows near Snake Hill, and I looked at another piece at Secaucus, New Jersey; I looked at another piece out in the vicinity of Little Neck, L. I., Oyster Bay; and another piece on the Sound called Hunt's Point.

Q. Did you get an option on any of the pieces you have named?

A. Yes, sir.

Q. Which one?

A. On the New Jersey piece and another one I have not named that I was to name directly, at a place called Barretto's Point; I had an option on that also.

Q. At what price did you get the option at Barretto's Point?

A. I don't know.

Q. You don't know?

A. I don't know. I was told we had an option there.

Q. And you did not get the option?

A. I did not get the option, no, sir. I don't do any of the financial business of the company.

Q. Do you know what the price was that the option was given at?

A. No, sir.

Q. Can you state the price at which the option was given upon any of the parcels of land you have just mentioned?

A. No, sir, I didn't examine them with regard to any option or price or anything of that kind, but simply examined them as practicable and feasible places for the construction of a gas plant, as an engineer, and not as a financier.

Q. And the question of price did not enter into your consideration?

A. Not at all.

Q. Did you find the Astoria site the most advisable to accept?

A. By all odds.

Mr. Burr: That is all.

281 By Mr. Page:

Q. The proper way to arrive at the cost of the unit candle power in the gas is to divide the cost of one gallon by five?

A. Exactly.

Q. To get one candle power?

A. Yes, sir.

Q. And multiply that by the number of candle power that you desire to produce?

A. Exactly.

Q. If oil costs 4.08 a gallon, then two candle power would cost only 1.63?

A. Yes.

Q. And it costs no more to enrich the gas at Astoria than it does cost to enrich the gas in Manhattan, does it?

A. It should not.

Q. Raising the gas to the additional candle power in Astoria would cost just exactly the same as raising the gas to the additional candle power in New York?

A. Yes.

Q. Of course the reductions which you say you have made in the cost of the manufacture of gas do not relate to the items of reduction that would arise from the concentration of the plant and the improved mechanical devices?

A. I have put in in some of the plants in New York improved mechanical devices that would make a reduction.

Q. But not to the extent you will have them in the Astoria plant?

A. Not to the full extent, but put them in a small plant to experiment with, to see if they would be adopted.

Q. This mat-er of handling of the material, the cartage in Astoria, will also lead to a reduction in the cost of manufacture, won't it?

A. In some cases that will probably be more than offset by the fact that we have to transport all our coke to New York which we have not got to do now; that will be a very expensive operation.

By Mr. **Mathewson**:

282 Q. Isn't coke a very brittle substance and hard to handle without difficulty?

A. Yes, sir; very brittle and easily broken.

By Mr. **Page**:

Q. With regard to regulating the pressure of gas by the meter, does not the pressure of gas as you deliver it now vary?

A. It necessarily varies; we cannot help it.

Q. Therefore a man to keep a uniform pressure at his tip would have to stand with his hand on the key all the time?

A. If the man wanted to keep it to one-tenth he would have to stand there, but those are things we cannot help. It is wrong that we should be held responsible for a thing we cannot control.

Q. You vary your pressure in an hour sometimes as much as three inches?

A. Yes, sir, at the stations, but an increase of three inches pressure at the station will probably result in no increase two miles from there.

Q. If the key at the burner is set when your pressure is one inch and you increase to three inches that burner is going to blow?

A. It should blow, and if it blows it will not consume any more gas than if it did not.

Q. Well, more gas will go through the meter, will pass out through that burner, whether it is consumed or not?

A. No, because when it blows the consumer will turn it down and therefore it won't pass any more.

Q. If he happens to be in the room he might turn it down?

A. If he is not he should turn the gas out, because he is wasting it.

Q. I believe the illustration was this in the Stevens Committee, that a boarding-house keeper would probably have to hire someone to run around and regulate the keys?

A. In a boarding-house they generally take a burner off and stuff it with cotton.

283 By Mr. **Burr**:

Q. Is it contemplated to supply gas to Queens County and the outlying territory over in Astoria?

A. That is not within my contemplation now, I have no knowledge that they will ever do that.

Q. But gas could be supplied from your Astoria plant to all the outlying districts there?

A. Yes, maybe supplied to Long Island City because Astoria is contiguous to Long Island City; whether that is in contemplation or not I do not know, it is not in my mind, and whether it is in the company's mind I don't know.

By Mr. Mathewson:

Q. Is it possible, whatever the pressure in the main may be, to have a uniform pressure at the burner in the house?

A. At the burner tip.

Q. Is it possible to have a uniform pressure there, no matter what pressure you try to keep in the main?

A. No, you cannot get a uniform pressure in a house under any circumstances.

Q. You cannot maintain a uniform pressure at every point of every main?

A. No, because every burner which is lighted and extinguished in a house alters the pressure within the house.

Q. Astoria is located about halfway between the northerly and southerly ends of New York City on Manhattan Island?

A. Yes, sir, about opposite 120th Street.

Q. When you speak of oil, the additional amount of oil required, there is also a certain additional amount of fuel required in order to render gaseous this additional amount of oil?

A. Yes, sir.

Q. In the aggregate that would amount to a considerable sum?

A. Yes, sir.

M-. Gans: I object to the statement about considerable sums, if the Referee pleases.

284 Mr. Burr: I join in that objection.

The Master: I think the question is objectionable as to form.

Q. Well, I will ask whether that would add to the expense?

A. That would add to the expense. The calculations of the Senator were very good and all right, still there are odd additions to be made to them.

Q. And you did not take into account in reply to Senator Page's question the higher priced oil which you would require under the new candle power?

A. Required in the winter.

Adjourned at 4.30 P. M. till to-morrow, July 20th, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 69.
State's A.

285 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *July* 20, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

286 COLIN C. SIMPSON, a witness called on behalf of the complainant, having been first duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Mr. Simpson, where do you reside?
A. Flushing.
Q. Are you connected with the complainant, the Consolidated Gas Company?
A. I am.
Q. In what capacity?
A. General Superintendent of mains and services.
Q. What is the difference between mains and services as used in the art?
A. Well, the main is the conduit of cast iron which takes the gas from the works to the streets; the services branch off from these street mains to the houses.
Q. The small pipe running from the main to the house meter?
A. Yes, sir.
Q. What is the difference between an inside and outside service?
A. An inside and outside service?
Q. Yes, if any.
A. Well, we qualify that, one is a service and one is a house pipe.
Q. Pipes in houses belonging to the customers are house pipes?
A. Yes.
Q. And pipes you run from the main to the meter are services?
A. Is the service.
Q. How long have you been superintendent of mains and services of the complainant?
A. I have been General Superintendent since May, 1889.
Q. And from the time of consolidation in 1884 until 1889, what position did you occupy?
A. I was branch superintendent.

Q. Had you any connection with the mains and services of any of the six constituent companies which formed the Consolidated Company prior to 1884?

A. Yes, sir.

Q. State?

287 A. I was superintendent of mains for the Municipal and Knickerbocker Companies from 1881 to 1884.

Q. Are you familiar with the mains and services of the complainant, the Consolidated Gas Company, as they exist?

A. I am.

Q. Are you familiar with the cost of the material and pipe going into the mains?

A. I am.

Q. And the cost of laying?

A. Yes, sir.

Q. And the character of the soil in the City of New York as rock or otherwise?

A. Yes, sir.

Q. And the other elements that enter into the value or cost of a main as in the ground?

A. Yes, sir.

Q. From 1884 down to date will you state how your time generally has been spent, whether indoors or out of doors, and in what manner?

A. Up to a little over a year ago, with the exception of an hour in the office in the morning and an hour in the office in the afternoon, I was out of doors altogether.

Q. Doing what?

A. Looking after the work and seeing how the work was carried on.

Q. Wherever the street was opened to lay new mains or expose old mains, was it your business to be there to see it?

A. It was my business to be there and see it.

Q. Have you seen personally a large proportion of the mains and services of the company?

A. You may say nearly every bit of it.

Q. What is meant by stripping a main?

A. Well, exposing the main entirely for its entire length. We strip a main on a block between 21st Street and 22nd Street on any avenue, and the main would be entirely exposed for its entire length, and the street dug up and main exposed up to the underneath part. I mean to say we do not only strip the top of it——

288 Mr. Page: Down to the underneath part, you mean?

The Witness: Down to the underneath part.

Q. Have you charge of the laying and care of mains and services?

A. Yes, sir.

Q. And you have had in the past?

A. Yes, sir.

Q. Do you know the condition of the mains of the complainant and its services?

A. I do.

Q. Will you describe the mains of the complainant company, giving the size and the feet, as they existed on October 31 last?

A. I will give these in feet. I will give the size and number in feet in each case.

1½	inch	1,407	feet.
2	"	3,365	"
3	"	222,741	"
4	"	557,469	"
5	"	1,799	"
6	"	2,129,088	"
8	"	528,040	"
10	"	71,286	"
12	"	321,536	"
16	"	98,901	"
18	"	29,633	"
20	"	178,803	"
24	"	45,956	"
30	"	131,583	"
36	"	22,242	"

Q. A total of how many feet?

A. A total of 4,344,849 feet, which is 822 miles and a slight fraction; 822.2 I think it is.

Q. Have any of the mains which the company took over in 1884 been replaced by new mains since?

A. Yes, quite a number. Do you mean under replacement, new mains laid?

Q. Yes, in place of smaller mains taken up.

289 A. Well, at the time of the consolidation we had 710 miles. Out of that 710 miles we have laid in the—we have to-day 822 miles. Out of that 822 miles, 468 miles are new mains which have been laid since the consolidation. We took up or abandoned, as the case may be, over 222 miles of small sizes, 2's, 3's and 4's.

Mr. Burr: New mains?

The Witness: No, we laid 468 miles of new mains and 222 miles of old mains we took up.

Q. Then over half or about one-half of the total mileage of all mains at present are new mains laid since 1884 either by way of new construction or replacement of existing mains?

A. More than one-half.

Q. What percentage of the total mileage of mains of the company would you say is thus either new or that has been stripped, examined, recaulked or otherwise gone over by you?

A. Between 90 and 95 per cent.; I think it would be nearer 95 per cent. than 90 per cent. I will qualify that; the mains stripped and gone over would not total 90 per cent., but the mains stripped and examined and gone over plus the mains laid on new streets would be between 90 and 95 per cent., nearer 95 than 90 per cent.

Q. And have you personally seen this mileage, substantially all of it?

A. I have, sir.

Q. What is the condition of the mains which are not new but which have been stripped and examined, recaulked, and otherwise put in order?

A. They are absolutely physically as good as the day they were laid.

Q. Have you found any physical deterioration in any of the mains?

A. Not in a single instance.

Q. Of what material are they constructed?

A. Cast-iron.

290 Q. Are you able to state the value of these mains as they exist to-day in the ground?

A. I am, sir.

Q. Will you state it?

A. Well, do you mean the——

Q. The value to-day——

A. If I had to relay them to-day under existing conditions?

Q. The present value to-day if they were relaid?

A. $12,636,150.

Mr. Burr: I object to this question and ask that the answer be stricken out, because it does not appear that this is the best evidence with regard to the expenditure about which he is now testifying.

Mr. Mathewson: It is not an expenditure he is now testifying to.

The Master: He was asked as to the value.

Mr. Burr: I misunderstood you. Objection withdrawn.

Mr. Page: I would like to have the question or the answer made a little more definite, because I think the question called for one thing and the answer gave another. Mr. Mathewson asked for the value of the mains and the witness said the value to replace under existing conditions now was so much. We would like to know just which this value is, whether it is the value of the mains in the ground——

The Master: Is not that a matter for cross-examination?

Mr. Page: No, I think the question calls for one thing and the answer gives another. It is not responsive to the question. I would like to have it cleared up now, if I can.

Mr. Mathewson: I will ask another question which will clarify it, I think.

Q. I refer, Mr. Simpson, to the present value of the mains in the ground including cost of material, the expense of laying, and 291 other items that enter into their value if reproduced to-day?

A. That is the figure I have given.

Q. In equally good condition?

A. Yes, sir.

Q. Will you state how many services the company had on the 31st of October, 1905?

A. 86,338.

Q. And are you also familiar with the services and their value and the cost of replacing them?

A. I am.

Q. On the same basis as my question as to mains what would be the present value of the services of the company?

A. $1,994,034.35.

Q. What proportion of these services have been installed since 1884?

A. Over 90%—either installed or replaced.

Q. That is at least that proportion of the old services——

A. It would be nearer 95%, 90% would be a very conservative estimate.

Q. How do the new services, this 95%, compare in size or capacity with the old services?

A. They average in size, three times the capacity. That is, the general size of services, most services at that time were three-quarters or one and one-quarter inches. At the present time we install nothing less than one and a half inches.

Q. An inch and a half service has three times the capacity of a service of what diameter?

A. It is about two and a quarter times the capacity of an inch service.

Q. You did not understand the question.

A. You want to know how the capacity of an inch and a half service compares with the capacity of an inch and a quarter or an inch service?

Q. Yes, put it in that way.

A. An inch and a half service is equivalent in carrying capacity or delivering capacity to 5.66¾ inch services, 2.75 one inch services and 1.58 inch and quarter services.

292 Q. In the value of the service and in the service do you include a box and valve?

A. I do.

Q. About what is the cost of the box and valve?

A. They average about $3.50.

Q. In what condition are the services kept?

A. They are kept in perfect condition. We do not allow them to deteriorate at all; any service that shows any sign of deterioration is replaced at once, and that has been the policy for the last 17 years.

Mr. Burr: I move to strike that out.

The Master: Strike it out if you like. It will necessitate asking another question, that is all.

Q. Has that been the practice for many years past?

A. Yes, sir.

Q. Ever since you have been connected with the company?

A. Ever since I have been general superintendent.

Q. What proportion of these services is under asphalted streets in the City of New York?

A. About 90%.

Q. When I use the word "asphalt" I mean either the asphalted streets or streets with this new pavement.

A. With the new pavement, about 90%.

Q. What is this new pavement?

A. Some of it is asphalt, some granite block on concrete, a very small proportion is granite on sand, and some wood blocks and asphalt blocks.

Q. What proportion of the streets of New York are covered by this pavement?

A. Close on 90 per cent., about 88 per cent.

Q. Prior to the covering of the street with the new pavement was it the custom of the company when it had occasion to open the street either to lay new mains or repair old mains or services, to do its own replacing of the pavement?

A. Yes, sir.

293 Q. What was the cost to the company of replacing it per square yard under those conditions?

A. Twenty-five cents; that is what it costs to-day; it would not be any more then; it was not as high then.

Q. That perhaps would be an average?

A. We contract for our paving at that price; for small openings, scattered openings, twenty-five cents a square yard and for extended openings fifteen cents a square yard.

Q. Take now the asphalt pavement when that is done, does the company itself replace the pavement?

A. No, sir, we are not allowed to.

Q. The asphalt company guaranteeing the pavement, you are compelled to employ them?

A. We can only get a permit under the condition we employ the asphalt company to replace the pavement.

Q. What is the cost, or what do you have to pay the asphalt company to replace the asphalt pavement?

A. The cost ranges from $2.70 to over $7.00 a yard on Broadway.

Q. How about on other streets?

A. The average price is about $3.25 a yard for asphalt.

Q. Now, taking the new pavement known as block——

A. Granite block?

Q. Yes, granite block, on concrete?

A. That is replaced by the city employees. We are charged for that for the first square yard $8.00 and $4.00 for each additional yard.

Q. All as against twenty-five cents a square yard under the old pavement?

A. Yes, I can contract for the same pavement for $1.90 a yard.

Q. Are you permitted to?

A. We are permitted now this last year; if an opening is over 250 feet long we are permitted to contract with the contractor to replace the pavement for us, but we have only just started on that.

294 Q. For any smaller jobs you are still——

A. Paying $8.00 for the first yard and $4.00 for the additional yards; in small openings it is generally only one yard.

Q. What is the condition of the streets of New York as to subsurface construction pipes and one thing or other with which you have to deal in laying gas mains.

Mr. Gans: Objected to unless shown that the witness knows the condition with respect to other pipes and other things that are in the streets of New York. We have had a lot of general hearsay testimony from Mr. Bradley and it got us into a lot of trouble and it is going to mean a lot of trouble in the way of cross-examination, and I think we are going to be very much better off and we are going to save a lot of time if nothing is put in except what the witnesses actually know.

Mr. Mathewson: Very well.

Q. I will ask you a further question before asking your answer to that. Are you familiar with the condition of the streets of New York, the sub-surface conditions as to pipes and other sub-surface structures belonging to other concerns than the complainant?

A. I am, sir, thoroughly.

Q. Is it your business to keep familiar with those in order that you may know what may be done with the pipes of the company?

A. It is a very important part of my business.

Q. Now will you answer my original question as to what the condition under the surface is in reference to pipes, etc.?

Mr. Gans: Objected to as calling for the witness' conclusion; if the witness knows about these conditions he can describe 295 specifically and directly the number of pipes in a street in the city of New York through which they have to operate their mains, or he can save time on that by producing a drawing or diagram which he can testify to be accurate, but to say, as was said yesterday by Mr. Bradley, that the streets of New York were so congested that you could do this or you could not do that simply means we have got on our cross-examination to drag out what ought to be brought out directly and specifically on the direct examination.

Mr. Mathewson: You are entitled to cross-examine if you wish to, I presume. I do not propose in my examination to begin with the details which you may desire on cross-examination.

Mr. Gans: Therefore I object to the witness' conclusions as to facts.

The Master: It seems to me perfectly proper for a witness whose daily business, as he has testified, takes him through all the streets of the city of New York, one who has personally examined excavations made throughout the city, to testify regarding general conditions, leaving it to be developed on cross-examination as to any deficiencies in his knowledge. I will allow it.

Mr. Gans: It is objected to on the ground that it is not the proper subject of opinion evidence of any sort, and this question calls for the witness' conclusions and opinion evidence.

Objection overuled; exception.

Q. I ask for your own knowledge, Mr. Simpson.

A. Do you wish me to state any certain streets or anything?

Q. Any way you please to answer the question.

296 A. Well, on Third Avenue, between Grand Street and 125th Street or 127th Street, you might say——

Mr. Mathewson: Speak more distinctly, I don't think the stenographer can hear you.

The Witness: Take Third Avenue, between Grand Street and 129th Street—shall I give the pipes there?

Q. No, I don't ask you for that, but as to the condition as to sub-surface constructions other than our own pipes?

A. Well, it is so crowded that it is practically impossible to-day to lay anything—I will guarantee even nobody could lay even a 4 inch main.

Mr. Gans: I move to strike that out as expressing a conclusion and opinion of the witness upon a matter that is not the subject of opinion evidence.

The Master: I will let it stand.

Mr. Page: Exception.

Mr. Gans: Exception.

The Witness: Eighth Avenue is the same way, there isn't room for any gas pipe of any size unless the whole thing was altered over—water pipes and gas pipes, the subways and everything else.

Mr. Gans: The same motion with respect to that answer.

Motion denied; exception.

The Witness: Second Avenue, First Avenue, Lexington Avenue, Fifth Avenue, Seventh Avenue, Eighth Avenue I gave, Ninth Avenue—the conditions are the same, there is no room for another
gas pipe in the avenue; it might be possible to lay a gas main
297 for one block and then you would have to skip three or four
blocks before you could get another where it was possible.

Q. How about Broadway?

A. Broadway is the same. That is the worst probably of the lot.

Mr. Page: That is, you have to take up some pipes?

A. On Third Avenue——

By Mr. Mathewson:

Q. Would it be possible by going deep enough under the present structures to lay a main in these avenues?

A. No, sir, it would not, because we would interfere with the sewers, to go under the sewers, that would be an impossibility.

Q. If it were possible, what effect would that have upon the expenditure necessary to lay the mains and the expense of caring for it thereafter?

A. The expense of laying would be enormous, and the expense of repairs would be enormous when they were needed.

Mr. Gans: I presume my objection will apply to all this testimony with regard to this condition of the streets, also my motion to strike it out.

The Master: Well, your motion to strike out that last is a little better than the other one, in my judgment. I will allow it to stand though, for what it is worth. Enormous is a very broad term.

Exception.

Q. Would it be possible, in your opinion, to lay through these streets in the city of New York a line of trunk mains for the purpose of endeavoring to equalize the pressure, or for any other

298 purpose—an additional line of trunk mains?

A. Under present conditions, no.

Q. You said that up to date no physical deterioration had been observed in the mains of the company. Are you now observing any effects or recent effects, from electrolysis or electricity coming from the traction systems or otherwise?

Mr. Gans: Objected to unless shown that he knows that is the cause.

Mr. Mathewson: I said "or otherwise." I don't think you listened to my question.

Mr. Gans: I listened very carefully. If he knows what the cause of it is he may testify.

Question allowed; exception.

A. We are commencing to notice it now.

Q. Have you made any tests in connection with that subject?

A. I have had the electricians make tests.

Q. Have you observed any difference since the elevated railway has been in operation by electricity, and the rapid transit subway systems?

A. I have not myself; the electrician has.

Mr. Burr: I move to strike out what the electrician has noticed; that is clearly incompetent.

Mr. Mathewson: I accept that, yes.

Q. Is the electrician to whom you have referred, an employee of your department?

A. No, sir.

Q. So that your information as to the effects of electrolysis to which you referred is second-hand, so to speak, is it, or is it your investigation?

A. He was engaged by us to make the investigation and reported to me on the subject.

Q. And what you had stated was rather from his report than from your own investigation?

Objected to, unless the witness is produced.

299 A. I saw the trouble.

Q. Well, did you see any effect yourself?

A. I did.

Q. What?

A. I saw the main being pitted at the corner of Church and Spring Streets.

By Mr. Gans:

Q. You saw that it was pitted or that it was being pitted?

A. I saw it was pitted. The pitting goes on continuously when it once starts.

By Mr. **Mathewson**:

Q. What danger in your opinion, if any, exists in future from the openation of these electric systems?

Objected to as purely a matter of opinion; this witness is not an electrical expert.

Mr. **Mathewson**: He knows the effect of electrolysis.

Mr. **Gans**: No, he can see it is pitted, but what does it and whether it is liable to continue I do not think he is competent to testify to.

Mr. **Burr**: Objected to. It does not appear by this witness what the effect of electrolysis is upon the mains, he has no knowledge of its effect, therefore he is in no position to testify as to what its future effect will be.

The **Master**: I do not think you have qualified him as an expert on that branch of it. At the present stage of the case it seems that all he knows is what he derived from a report made to him, except his observation, and I do not think that qualifies him.

Mr. **Mathewson**: I will ask two or three questions to see whether he is qualified.

Q. Are you familiar with the effects of electric currents on mains?

A. Yes, sir.

300 Q. How have you gained that familiarity?

A. By experience and reading.

Q. Have you made a study of that subject, among others in connection with your duties?

A. Yes.

Q. Do you know how tests are made as to the effect of electric currents on mains?

A. I am not thoroughly familiar, I could not give a very good description of it, only in general.

Q. Are you sufficiently familiar with the effect of electrolysis so that you feel able to express a reasonable opinion as to the effect of the electric currents on the mains?

A. I am, sir.

Q. Have you observed any of this pitting before the elevated railway and subway were put in operation by electricity?

A. In one instance, yes.

Q. Where was that?

A. Brooklyn Bridge.

Q. And that system had been in operation by electricity for some time theretofore, had it not?

A. Yes.

Q. Will you state if you can, generally, what the effect on the mains is from an increased amount of electric current in the streets?

Mr. **Burr**: Objected to unless a better foundation for the testimony is laid than has been laid; it does not appear from anything Mr. Mathewson has extracted from this witness that he is an expert on the effect of electrolysis upon the mains, and if I have permission, I would like to ask a question or two as to his experience in this regard.

The **Master**: You may.

By Mr. **Burr**:

Q. I understood you to say, Mr. Simpson, that the company had employed an expert electrician to ascertain the effect of electrolysis on the mains that you have been testifying regarding?

A. Yes, sir.

301 Q. You were not employed by the company to make an examination?

A. No, sir.

Q. Was that because you did not have the experience sufficient to make the examination thoroughly and effectively?

A. Yes, sir.

Mr. **Mathewson**: Objected to as a conclusion.

Mr. **Burr**: He has answered it and said that it was——

Mr. **Mathewson**: I suppose that was so.

Q. When was the expert employed by the company?

A. We employed one first three years ago, then the following year—three successive years, and again then this year we employed one twice.

Q. Isn't it a fact that the only experience you have with regard to this particular matter of the effect of electrolysis on the mains of the Consolidated Gas Company in the streets of the City of New York is derived from information which you have received from experts when employed by the company?

A. It is.

Mr. **Burr**: Then I object to the question.

Mr. **Mathewson**: I did not ask what the effect had been, I asked what the effect would be of an increased current of electricity in the streets of the City of New York, as compared with the past.

Mr. **Page**: If he does not know what it has been in the past, I don't think he is qualified now to answer the question.

Mr. **Mathewson**: Yes, I think he is. I think where a man has made a study of that subject and it is part of his business as superintendent, that he is entitled to state what the effect will be, whether it will be to increase the deterioration of mains or not, by the presence of the increased number of electric currents.

302 Mr. **Burr**: It is on the record here, now, if the Master please, by this witness himself, that these mains are in perfect physical condition, just as good as they were the day they were laid, so that apparently from his own observation there has been no bad or deleterious effect upon the mains from any electrolysis; and as he has testified he has no knowledge which would justify him, in the opinion of the company, acting as an expert, since they employed these other experts, and whatever information he has upon the subject is derived from the experts so employed, I therefore submit he is not qualified as an expert, and cannot express with

any certainty any opinion with regard to the possible or future effect of electrolysis upon the mains.

The MASTER: I am inclined to think you have not qualified him, Mr. Mathewson. I will sustain the objection, but you will have to take his answer, of course.

The WITNESS: Will the stenographer read the question.

Q. (Question read by stenographer:) Will you state, if you can, what the effect on the mains is from an increased amount of electric current in the streets?

The MASTER: That particular question involved to a certain extent a matter of fact, as well as a matter of opinion; it is susceptible of an answer as to a point of fact, and to that extent I think it is proper the witness should answer it, but one of the earlier questions called for simply a matter of opinion, and as to that I think the objection was perfectly good, but I will allow the witness to answer as to his own observation about the increase, as to what he has actually observed himself as to the increase of conditions in
303 the gas mains which he supposes to be the result of electricity or the growth of electricity.

Mr. GANS: That if your Honor pleases, involves a technical knowledge that he has not been proved to have. It may be due to a thousand causes.

The MASTER: I consider he has been qualified as an expert in gas mains, but not as an expert in electricity or electrolysis, but he can state the result of his own observations, as to the conditions of gas mains.

Mr. GANS: Doesn't he state that when he says what he has already said here? He said lately he found some of the mains to be pitted.

Mr. PAGE: In two instances, at the Brooklyn Bridge and in Church Street.

Mr. GANS: That, it seems to me, is all he is qualified to testify to.

The MASTER: All this discussion is immaterial because his answer goes on the record.

Mr. GANS: Exception.

Q. (Question again read by the stenographer as follows:) Will you state, if you can, generally, what the effect on the mains is from an increased amount of electric current in the street?

A. It destroys the mains.

Q. Did you observe any pitting in the mains at the Brooklyn Bridge, before the installation of the electric system on the bridge?

A. No, sir.

Q. Does the elevated railway run through Church Street?

A. Yes, sir.

Q. Did you observe any pitting in the mains at the corner of Church Street before the installation of the electric system on the elevated road?

A. No, sir.

304 Q. These figures of mains and services were made up to October last by you for presentation to the State Gas Commission?

A. Yes, sir.

Q. And you made these computations?

A. Yes, sir.

Mr. Burr: I should prefer to have you ask how he made them up instead of suggesting the matter to him.

Mr. Mathewson: This is such a formal matter.

Mr. Burr: Yes, but continued very long it becomes a little tiresome.

Mr. Mathewson: I do not think it will.

Q. Has there been any substantial change in the mains and services since that time?

A. Scarcely any.

Q. Were these mains of the constituent companies which were replaced removed because they were physically deteriorated or because they became too small to meet the requirements of the company?

A. You mean the six original companies?

Q. Yes.

A. Oh, yes, because they were too small.

Cross-examination by Mr. Page:

Q. Are you able to state the book value, the value on the books on which those mains and services are carried by your company?

A. Yes.

Q. What is it?

A. It is $7,852,151.03.

Q. In 1902 it became necessary for the first time to make a report to the State Tax Commission, did it not?

A. I believe so.

Q. Were you requested at that time to get up a statement of the mains and services of the company and their valuation, for the purpose of making that return?

A. I was requested to give values of each size of main per foot.

305 Q. Was the purpose for which you were to give those values disclosed to you?

A. It was.

Q. Were the blank that was to be filled out and the questions that were to be answered exhibited to you at that time?

A. No, sir.

Q. Or read to you?

A. No, sir.

Q. If Mr. Carter has so testified on any occasion, he was in error?

A. Yes.

Q. From whom did you receive instructions to prepare this list?

A. A request from Mr. Carter. Mr. Carter came to my office and told me that he had to report to the Tax Commission the value of our mains and services, and asked me to give him some figures as to the value. I gave him the figures from which he computed his total.

Q. He asked you to give him figures as to the value of those mains and services?

A. Yes.

Q. In order that he might make a return to the State Tax Commission; is that right?

A. Yes, sir.

Q. And you prepared such value, did you?

A. Yes, sir.

Q. Did you prepare just one statement of valuation, or did you prepare two?

A. I prepared one; I gave him one set of figures.

Q. The reports contained two valuations, did they not, one of the value of reproduction new, and one the value with depreciation?

A. I really do not know, sir.

Q. You have never seen them?

A. No, sir.

Q. And if it contained a valuation of the depreciation, that was not prepared by you?

A. No, sir.

Q. Is that right?

A. Yes.

Q. Have you the figures that you gave at that time?

A. I think I have; not the total, I do not think I have. I have the figures. The total was made up for me, I think.

Q. Well, was it $4,829,925.82?

306 A. I am not familiar with the total, because, as I say, I did not give him any statement of values on which to base his calculations. I gave him a price per foot for each size of main, and he from his own books took the mileage of mains and multiplied the number of feet by the price per foot, and made his calculations from that.

By Mr. MATHEWSON:

Q. You suppose that is what he did?

A. I suppose so, yes; all I gave him was a price per foot.

By Mr. PAGE:

Q. You did not make the final computation at all?

A. No, sir.

Q. Have you the figures that you gave him, as to the miles of mains or the number of feet of each particular main, with you now?

A. No, sir, I did not give him any figures. As I stated, all I gave him was the price per foot and he made his computation on that price per foot from his own figures, I suppose. Of course he had charge of the books of the company and he had the number of feet in his possession.

Q. Did he ask you merely for the price at which you could buy pipe, or did he ask you for the value of the mains?

A. The value of the mains.

Q. And services?

A. Yes.

Q. And in response to that request you gave him certain information as to value, did you?

A. I do not think I gave him any value as to services; mains only.

Q. Now, you may state what you gave him at that time as to the value of each class of main?

A. Each size?

Q. Yes, each size.

307 A.—

1½	inch	20	cents a foot.
2	"	23	"
3	"	30	"
4	"	48	"
5	"	60	"
6	"	64	"
8	"	92	"
10	"	$1.10	"
12	"	1.35	"
16	"	1.95	"
18	"	2.30	"
20	"	2.78	"
24	"	3.70	"
30	"	5.65;	"

those are all per foot.

Q. You have given here this morning the number of feet of mains of each of those descriptions that are now in use by the company?

A. Yes.

Q. Where did you get that information?

A. Where did I get that information as to the number of feet?

Q. Yes.

A. From my books.

Q. Does your book correspond with the books from which Mr. Carter would have gotten his information?

A. Yes.

Q. Now, we will take the two inch mains; what did you state them to be; what number of feet?

A. How many feet?

Q. Yes.

A. 4,365.

Q. That was as of date October 31st, 1905?

A. Yes.

Q. I show you a report of your company to the State Board of Tax Commissioners for 1905, the year ending June 30, 1905, with a statement of the mains and services of the company brought down to November 1, 1905, and I ask you if you will read from that the number of feet of two-inch mains that were in the possession of your company? 308

A. 22,826.

Q. Now we will take up the three inch mains; what did you state that to be?

A. 222,741.

Q. Now will you read from the returns to the State Tax Commissioners the amount of these mains?

A. 374,336.

Q. And to bring it down to November 1st, will you make the addition that is indicated below, for three inch mains?

A. The total mains?

Q. No; are there not some more added between June 30th and November 1st?

A. 899 feet.

Q. And that 899 feet would have to be added.

A. Yes, 394,336 feet.

Q. Now we will take the four inch mains; you stated them to be how much?

A. 557,469.

Q. And on the tax returns, how much?

A. 695,632.

Q. And added?

A. 7,767 feet.

By Mr. Mathewson:

Q. What is the total now of four inch mains on the tax report?

A. 695,622.

By Mr. Page:

Q. Then add 7,767 to that?

—. 703,299, four inch total.

Q. Your five inch mains are stated by you to be how many?

A. 1,799 feet.

Q. And on the tax report?

A. 5,902 feet.

Q. Now we will take the six inch mains.

A. I have 2,129,088 feet. The tax report, 2,113,874, and 15,214, making a total of 2,129,088.

Q. Was not that 15,214 not laid, but taken up in that period?

A. No, sir, laid, according to this (referring to tax report).

Q. I know what it is according to that, but you will observe that
the difference between the amount stated in the tax report
309 and the amount stated by you is exactly 15,214; if you will
eliminate that 15,214 they will agree.

A. No, the amount in the tax report and the amount on my sheet tally exactly.

Q. It tallies if you do that?

A. Yes.

Q. And the eight inch mains are the same, and that tallies exactly?

A. Yes, I think you will find that the rest all tally. Shall I call off the rest?

Mr. Mathewson: Yes.

A. Eight inches, my list——

Mr. Mathewson: No, just see if they tally, unless the Senator wants you to give the figures.

A. Eight inches the same. Ten inches, I have 71,386.

Mr. Page: Your affidavit states it to be 71,286.

Mr. Mathewson: That is a clerical error, I think.

Mr. Page: If it is, your total is wrong.

The Witness: 71,386; it looks like that. I will look it up in my original records.

Q. The next, according to my figures, where there is a variation is in the twenty inch.

A. I have 178,803.

Q. In the tax report the figure is what?

A. 178,933.

Q. And additions?

A. 179,063, total; that is 130 additions.

Q. If you deduct the 130 instead of adding it to the 178,933, you will get the result that you have, won't you, 178,803?

A. Yes, sir.

Mr. Mathewson: In other words, the 178,803 represents exactly the amount that appeared on June 30th in the tax report,
310 does it?

Mr. Page: No, if they took up 130 feet of the main that was there on June 30th, then instead of adding 130 feet it would correspond with his statement.

Mr. Mathewson: What does the amount appear, June 30th?

Mr. Page: 178,933. They have laid since 130. If you deduct that from 178,933, you will get 178,803, which he gives as his statement.

Q. Did you take up 130 feet of 30-inch main?

A. I could not say.

Q. Now, take the 24-inch main?

A. Twenty-four inches, I have 45,956. On the tax report, 39,622, and laid 5,628; 45,241, against 45,956.

Q. Now, your 30-inch mains?

A. My list calls for 131,583. The tax report calls for 131,843.

Q. But if you deduct that 130 instead of adding it to the 131,713, you have the same result as you have in yours, haven't you?

A. Yes.

Q. Did you take up 131 feet instead of laying it in that period?

A. I could not say, sir, and I did not make up these figures in the tax report at all; I had nothing to do with them.

Q. Now, you have given the total number of feet of mains as 4,344,849?

A. Yes.

Q. The tax report gives a total of 4,641,666 as of June 30th, with additions, 43,998 feet?

A. Yes.

Mr. Mathewson: And the total?

The Witness: Which total do you want?

Mr. **Mathewson**: The total tax report to November 1st, adding 43,987 to what you had up to June 30th?

A. 4,685,664.

311 Q. Now, will you read from the tax report the present value, reproduced new, of the 4,641,661 feet, first?

A. Present value reproduced new $5,801,466.10.

Q. And the present value allowing for depreciation?

A. $4,398,160.82.

By Mr. **Mathewson**:

Q. That is the tax report of what date?

A. June 30th, 1905.

By Mr. **Page**:

Q. You say that you took your figures of the length of mains in feet from the books of the company?

A. Yes.

Q. Did you see any such figures on the books of the company as have been read off this morning from the tax report, as to the number of feet of mains?

A. I could not say.

Mr. **Mathewson**: His books or records are separate from the records which Mr. Carter keeps.

Mr. **Page**: I thought he said not.

Mr. **Mathewson**: No, he said they were; he said he had his own figures and that the office also had figures.

Q. Is that right, Mr. Simpson?

A. Yes.

Q. Then you have a set of figures as to the number of feet of mains that are in use, and the company or the general bookkeeper of the company has a set of figures?

A. Yes, sir.

Q. And whether they correspond within two or three hundred thousand feet, you do not know?

A. I do know.

Q. Well, do they?

A. Yes; they are compared every month.

312 Q. Now, in arriving at the value you have given this morning of the mains of the company you will state in the same manner that you did as to the value that you gave Mr. Carter, the value of each size of pipe?

A. I will have to give two values, sir, because I have made my calculation on the basis of 90% new pavement and 10% old pavement. Of course the pipe under new pavement is a good deal more expensive.

Q. I think it would be very interesting if we could get one or two more values of these things, so you may give it.

Mr. **Mathewson**: We have only one value.

Mr. **Page**: We have three now, one for taxation, another on the books of the company, and another for increasing the cost of gas. Now, if we can get another one, why let him give it.

The WITNESS: Inch and a half—the larger figure is for pipe laid in new pavement and the smaller one for pipe laid in old pavement.

1½	inches	$1.14	and	$ .29
2	"	1.19	"	.34
3	"	1.42	"	.42
4	"	1.53	"	.53
5	"	1.64	"	.64
6	"	1.74	"	.74
8	"	2.18	"	1.02
10	"	2.45	"	1.29
12	"	2.78	"	1.62
16	"	3.63	"	2.31
18	"	4.09	"	2.77
20	"	4.93	"	3.46
24	"	6.45	"	4.65
30	"	9.55	"	7.58

Q. Now, as I understand the first figure given by you or the first
column of figures is an estimated value based upon the suppo-
313 sition that 90% of the streets of New York have been laid
with asphalt, belgian block on concrete, belgian block on
sand, asphalt block or wooden block pavement?

A. Yes, sir.

Q. Is there any difference between the cost of laying a main in a street that has an asphalt pavement and a street that has belgian block on sand?

A. Is there any difference in cost?

Q. Yes.

A. No, it would be about the same, that is, in these pavements relaid by the city, the cost of paving would be about the same. The city charges $3 a yard for belgian block on sand. There is only one street in New York where they have it.

Q. What street is that?

A. Part of Ninth Avenue, from 59th Street North, Columbus Avenue. We pay there $3 a yard. That is for granite block on sand, not belgian block.

Q. Can you state the number of each kind of mains that are now in existence that were taken over by the Consolidated Gas Company from the constituent companies in 1884?

A. I cannot state offhand. I can get it from my notes, I suppose.

Q. You testified that more than half of the present mileage was new?

A. Yes, sir.

Q. That would refer to the additional construction which you have made, which would be 212 miles, and the two, three and four inch mains that you have taken up, which you state to be 222 miles?

A. Yes.

Q. The large pipes that are now in use were largely laid, were they not, before the consolidation?

A. No, sir.

Q. How many pipes have you on Third Avenue?

A. Consolidated?

Q. Yes.

A. On what part of Third Avenue?

Q. From Grand Street to 129th Street.

314 A. I will have to take it in sections, because it is in different districts.

Q. Give the number of pipes and the size of each pipe. Have you a map of your distributing system showing the number and size of the mains on each street?

A. Yes, sir.

Mr. PAGE: Why cannot we have that produced?

Mr. MATHEWSON: Perhaps you can. I do not see that it will do you any good, Senator, would it?

Mr. GANS: It might not do us any harm; we might try it.

Mr. MATHEWSON: We have testified already that we have pipes in every open street in New York City, but the mileage of pipes would not appear from that. You would merely see a picture. I do not know how bulky a thing it is.

The WITNESS: It would weigh about a quarter of a ton.

Mr. MATHEWSON: Mr. Simpson says it would weigh about a quarter of a ton.

The WITNESS: You know the insurance volumes? They are enormous volumes. There are twenty-two volumns and they are about that big square. (Indicating.) They have to be on a large scale, you know. Are you ready for my answer?

Q. Yes.

A. These are Consolidated Gas Company mains only.

Q. Yes.

A. Between Grand and 34th Streets, one 20 inch, one 16 inch and two 6 inch mains; 34th Street to 79th Street, two 16 inch, a 6 inch and an 8 inch; 79th Street to 129th Street, 16 inch part of the way and 12 inch part of the way, and an 8 inch and two 6 inch mains.

315 Q. On this same avenue are there mains of other companies controlled by your company?

A. Yes, sir—Oh, I don't know about controlled by our company. There are mains of other companies.

Q. Well, we will state, then, are there mains of the Standard?

A. There are on part of the avenue.

Q. And mains of the New Amsterdam?

A. There are; yes, sir.

Q. Any mains of the Mutual over there?

A. Yes, sir.

Q. Are you sufficiently familiar with that condition to state the number and size of the mains of these other companies that I have named on that street?

A. I can come very near it.

Q. Well, proceed.

A. I may not give you the exact sizes, but will come as near as I can to it.

Q. Well, you got it down to four inches on your direct-examination?

A. The Consolidated. I can give the number of mains, but whether I can give the exact size offhand or not, I don't know. The Standard have on each side one 10-inch and one 8-inch, from Thirteenth Street to 129th Street. The Mutual has a main on each side the entire length up to Sixtieth Street; nothing north of Sixtieth Street.

Q. From Grand Street to Sixtieth Street?

A. Yes, sir. The New Amsterdam has three mains all the way from Broome Street to 125th Street.

Q. How wide is Third Avenue?

A. Third Avenue is sixty feet from curb line to curb line.

Q. Are those mains of yours laid parallel to each other?

A. Yes, sir.

Q. Or are some above the others?

A. Some overlap.

Q. And do you say it would be impossible by any system of readjustment of those mains to lay a trunk main that would carry a quantity of that gas that is already carried in these small pipes?

316 A. No, I say it would be impossible without readjustment of pretty nearly everything down there, not only the gas mains but the water mains and subways and elevated railroad columns that take up a good deal of the street, and the sewers and underground trolley tracks taking up a great part of the streets and the subway ducts for the underground trolleys, besides the telephone and the electric light subways.

Q. What depth do you lay your gas pipes?

A. We try to lay at a depth between 3 feet 6 inches and 4 feet, and the pipes average between 2 feet and 4 feet. Very often we cannot go down as low as we want to.

Q. Do you know at what depth they lay the water mains?

A. They try to maintain a depth of six feet, but generally run them about five feet.

By Mr. Mathewson:

Q. Is there any municipal regulation as to the depth to which you must lay your pipes under-ground?

A. Only that they shall be laid at least 18 inches below the surface.

Q. How deep do you have to lay them to escape frost?

A. I say that we try to lay them from 3 feet 6 to 4 feet but we cannot do it except in very few cases in Manhattan.

By Mr. Page:

Q. Now, as I understand you, you testify that First, Second, Sixth, Seventh, Eighth, Ninth and Lexington Avenues are in a worse condition than Third Avenue?

A. Yes, sir—no, I did not say worse condition than Third Avenue. That is a mistake on your part.

Q. Well you said on Third Avenue there would not be room for a four-inch pipe and on Eighth Avenue and the rest you said there would not be room for any?

317 A. I said even for a four-inch main. I meant to express the idea there would not be room even for the smallest size pipe.

Q. As a matter of fact, Third Avenue is one of the most congested avenues so far as pipes are concerned outside of Broadway?

A. Not a bit more than Second Avenue or at the present time First Avenue or Broadway or Eighth Avenue or Ninth Avenue; in fact any avenue running north and south in the city to-day is entirely filled up with pipes, with the possible exception of parts of Eleventh Avenue and Tenth Avenue, and those avenues are broken up by the New York Central Railroad at 32nd Street; Eleventh Avenue is entirely cut off there at 32nd Street by the yards.

Q. Now, all of these mains that you have stated running from Grand to 129th Street, are they continuous mains?

A. Practically continuous.

Q. Do you draw for the services in each district from each of the mains?

A. Yes, sir.

Q. So that from Grand Street to 129th Street, on each block there is drawn from each of these mains that you have specified to supply consumers on that block?

A. Yes, sir.

By Mr. Mathewson:

Q. Are the mains all on one side of the street or on opposite sides?

A. On opposite sides. There are two mains of each system, one main of each system on each side of the street.

By Mr. Page:

Q. When did you make this observation at the Brooklyn Bridge where you said that you observed some effect from electrolysis?

A. About a year and two months ago.

318 Q. When was your last observation made of those pipes prior to that time?

A. At that particular place I could not really say.

Q. Just where was that?

A. It was right under the bridge, on, I think it is South William Street, that goes through right under the bridge under that arch. It was before the entrance of that wine store, in front of the doorway of that.

Mr. Burr: That is almost at Gold Street, is it not?

The Witness: Yes, sir. That is one case, and another case two years ago right in front of the Brooklyn Bridge, right in front of the Park Row entrance.

Q. And what was your idea as to where the electric current came from that caused that pitting of the pipes at that place, I suppose it was?

A. Yes, sir, I presume from the Brooklyn Bridge.

Q. Why do you presume it came from the Brooklyn Bridge?

A. Well, on account of the locality of the pipes to the bridge, in connecting with the bridge practically.

Q. And your idea is then that the electric current entering the pipes at that point caused the pitting, is that it?

A. No, the current leaving the pipe at that point caused the pitting.

Q. Well, you do not supply electric current to the bridge from your gas pipes, do you?

A. No, but electrolysis is not caused by the current going into the pipe, but is caused by the current leaving the pipe.

Q. That is the pitting is caused by the current leaving the pipe?

A. Yes, leaving the pipe.

Q. Where are the power houses that run the Brooklyn bridge cars?

A. I don't know, I have no idea.

Q. They are in Brooklyn, are they not, generally?

A. I think so.

319 Q. And don't you know that the electrolytic condition is caused by the current seeking to get back to the power house or to its source?

A. That is exactly what I said. It is the current leaving the pipe, going back to where it came from, that caused the pitting. The current was caught up by our pipe and went back to where it came from and jumped from our pipe to the structure.

Q. Is it your idea that the electric current then would leave the structure of the Brooklyn bridge, jump down into your pipe and jump up into the bridge again immediately?

A. No, sir; but the electric current can come across the river or from the bridge or some other place and follow along the ground and follow our pipe and then take the best place to go back.

Q. Do you know from observation as to the electric currents, the stray currents that come from the bridge, as to how they do travel? Have you made any study of that?

A. No, I have not, no particular study.

Q. Then the only other observation you have made is at Church Street, Church and where?

A. Church and Spring. In that case I was called to look at this place and told that our main there was being damaged by electrolysis, and I notified Mr. Maxwell, an electrical expert, who made a test there and found a current of over three volts leaving our——

Q. I think we will let Mr. Maxwell testify, if they will produce him.

Mr. Gans: I move to strike out what Mr. Maxwell found.

The Witness: Well, I found the pipe pitted.

Q. How thick are these pipes of yours?

320 A. It depends on the size entirely. They are in thickness all the way from three-eighths of an inch to an inch and a quarter and an inch and an eighth.

Q. Three-eighths of an inch would be the thickness of the inch and a half pipe, would it?

A. No, that is wrought iron.

Q. What?

A. The inch and a half.

Q. The inch and a half pipe, are they wrought iron?

A. Some are wrought iron and some are cast iron. The three inch pipe and four inch pipe would probably be about three-eighths of an inch in thickness; the six and eight inch would range about half an inch; the larger sizes up to 36 inches would range from one inch to an inch and a quarter and an inch and an eighth.

Q. Do you know whether there is any difference in the attraction for electricity in cast iron pipe or wrought iron pipe?

A. Do I know what?

Q. Whether there is any difference in the attraction for electricity in a cast iron pipe or wrought iron pipe?

A. No difference in the attraction, no, sir.

Q. That is, the electric current would seize on a cast iron pipe just as quick as it will on a wrought iron pipe?

A. A wrought iron and cast iron, one is as good a conductor as the other, I think; there might be a slight difference in favor of the wrought iron being a better conductor.

Q. Mr. Simpson, you remember testifying before the State Commission of Gas and Electricity.

Q. And do you remember that this question was asked you by Mr. Mathewson: "Will you look at Exhibit 165, at the bottom of which appears, 'for mains $4,829,925.82'?" And Exhibit 165 is shown you (handing book). Then this further question was asked: "Do you know whether you made up those figures or figures in the preceding report corresponding?" and did you answer, "I did"? 321

A. I don't remember. May I see the book?

Q. Certainly.

Mr. MATHEWSON: What page?

Mr. PAGE: 1554.

The WITNESS: You will find in another part of the testimony, Senator, the very question that was brought up this morning where Commissioner Shedden asked me that very thing, whether I made up the figures, and I told him I did not. I gave the computation to Mr. Carter.

Q. I am calling your attention to this particular time. Do you remember so testifying on direct-examination in response to Mr. Mathewson?

A. Was it the commencement of my examination?

Q. Yes, it starts there: "Colin C. Simpson, being duly sworn, testified as follows, Direct-Examination by Mr. Mathewson."

A. All I can say is that that statement—I meant there that I gave the figures from which Mr. Carter's total was computed, that is what I thought.

Q. Well, you so testified at that time, didn't you?

A. Before the Commission I testified that I gave Mr. Carter——

Q. Did you answer the question that I have read to you from the record in the manner you are set down in the record as having answered it, by stating "I did?"

A. I suppose I did if it is in the record.

Q. And as to the next question, "will you state what your method or upon what basis those figures were produced?

A. I took the mileage of the various sizes of mains we had at that time and computed the total amount, taking the cost of laying each size of pipe under the most favorable conditions. I did it for taxation purposes, and I thought those were the right kind of conditions to take. I did not figure any rock, city inspection, engineer- 322 ing expenses, clerk expenses, wear and tear of tools and plant, superintendence or any matters of that kind." Did you so answer?

A. I must have so answered, I guess.

Mr. Page: It is five minutes past one. I think I am through, but I would like to consult with my associates before stating that I am through.

Mr. Burr: May I call your Honor's attention to the fact that I omitted part of my motion in regard to striking out the testimony of Mr. Bradley yesterday. I move further to strike out all the testimony which he gave regarding the cost and expenditures and values of the Astoria plant for the reason that it appears that he was not testifying from the best evidence or books of original entry but from statements furnished him by the financial department of the company; and a further reason, that it appeared from the testimony of the witness that the expenditures stated by him as being made at the Astoria plant are unnecessary and uncalled for and the plant contemplated to be erected there will not be required or necessary to supply the demand in the Boroughs of Manhattan and the Bronx for from ten to twenty-five years to come.

Mr. Mathewson: I merely wish to state that I think Mr. Burr is in error in supposing that Mr. Bradley said that he did not know these figures and facts himself. On the contrary, he stated he did, according to my recollection.

Adjourned to 2:15 P. M.

323 After Recess.

Colin C. Simpson resumes the stand for further examination by Mr. Page:

Q. In the tax report the number of services are placed at 86,902, and then there is a decrease from June 30th, 1905, to November 1st, 1905, of 564; have the number of services decreased?

A. Yes, sir, they might have, I wouldn't say until I look in my statement here. We had on October 31st, 86,338.

Q. Well, that would be just the number, if you deduct 564 from 86,902?

A. Yes, sir.

Q. So there was a decrease in the services from June 30th, 1905, to November 1st, 1905?

A. Yes, sir; in our overhauling, you know, we cut off all unnecessary services.

Q. Are the services included in the valuation given of $5,801,466.10 in this tax report?

A. I really couldn't say, I don't know anything about that tax report or how it was made up.

Q. You will notice that schedule K of the tax report has the same figure, $5,801,466.10 in the column headed "Present value of property in streets, highways and public places, on the basis of cost of reproduction, new?"

A. Yes, sir.

Q. And there is no separate statement of the value of services?

A. No, sir.

Q. And that also under the heading of "Present value of property in streets, highways and public places, allowing depreciation," is the $4,398,160.82 that was contained on the last page of the tax report to which your attention has been heretofore directed?

A. Yes, sir.

Q. Now are you able to state whether the price of mains has decreased since 1884?

A. No, sir, it has increased. You mean the price of labor and material?

324 Q. No, I said the price of mains; I am not asking now for the value of mains in the ground but the price of mains, if you go to purchase them.

Mr. Mathewson: Pipes.

Q. Pipes, cast-iron pipes of the size of these mains?

A. Do you mean the cost of purchasing them has increased, or laying them?

Q. If you had to buy a main to-day, could you get it cheaper in the market than you could in 1884—the same main?

A. No, sir, we would have to pay more for it.

Q. Do you mean to say that a cast-iron main costs more to-day than it did in 1884?

A. Yes, sir.

Q. How much?

A. The price of pipe in 1884 was twenty-five dollars and something a ton—I will give you the right figures. In 1885, as near as I can get to it, the price of pipe was twenty-five dollars and fifty cents, and in December, 1905, it was twenty-eight dollars and ninety cents, a difference of three dollars and forty cents per ton of pipe. Labor has increased now close to 20 per cent., you might say 20 per cent., in some case 25 per cent.; 20 per cent. would be a fair round figure of the additional cost of labor.

Q. And in estimating the value of these pipes you took the price of to-day?

A. In estimating the value I gave to you before?

Q. Yes.

A. Yes, sir.

By Mr. Mathewson:

Q. That is, you mean the twelve million six hundred thousand dollars and over?

A. Yes, sir. Those prices I gave of pipe I would say are not the prices of the pipe delivered on docks, not the purchasing price of the pipe, but the cost of the pipe stacked in our yard. Of course
325 it is delivered on the docks and carted to the yard and then stacked up. Those prices are the prices stacked in the yard.

By Mr. Page:

Q. Do you have in your department a book or books that would show the mileage of mains when laid and the cost of laying?

A. No, sir, I have not.

Q. What have you got?

A. We have got books of record of all the mains that we have, but a great many of the mains were laid prior to consolidation and the different books were turned in to me and the new records made from these old books and of course there was no cost at all in them.

Q. You do not keep any books then that show the cost of the production?

A. I keep my own books, which show the cost of the mains, as far as my department is concerned; that is, the actual labor and material expended by my department.

Q. Where would you have to go to get the remaining portion of the cost of laying a main?

A. I don't believe there are any books at all which show the cost of the mains which were laid prior to consolidation.

Q. No, but I am talking about those you have laid since consolidation?

A. In the accounting department they have the cost of those, the total cost.

Q. But from the books you have you could tell how much of each size pipe was laid, the time when it was laid, and the amount expended by the company in labor and material, other than for the pipe itself?

A. I don't think I could, sir. I could give you the mains we laid since consolidation and the cost for the last few years, of those mains, but up to a few years ago I kept no cost record at all in my department, and keep it now only for my own knowledge; it is supposed to be kept in the accounting department.

326 Q. For how many years would such a record in your department cover?

A. I should think probably seven or eight years.

Q. Well, for the period then for the last seven or eight years it would show us the cost of the main in the ground, wouldn't it?

A. It would not; it would show the cost of the labor and material, and the cost of rock; outside of that it would not show the cost. The engineering expenses, supervision, clerical expenses, the cost of wear and tear on tools and plant are not included.

By Mr. Mathewson:

Q. How about inspecting?

A. That is not in there. The suits for damages, which are very frequent, you know, and all such things as that are not in there at all; I keep it for my own guidance, to see what my part of it is costing.

By Mr. **Page**:

Q. Well, you could produce such book or books as you have, showing whatever they do that you have in your department, couldn't you?

A. I could.

Q. Well, will you do so?

A. I will, sir, if counsel says so.

Mr. **Page**: He says he will if counsel says so.

The **Witness**: That is, I have those figures in that book, the figures all made up until December 31, 1904; the figures for 1905, the data has not been entered, but the mains are all entered up, and we concluded it would be better in the accounting department for my figures to be the same as the accounting department figures; that is, the cost should tally with theirs, my costs and their- should be the same. I want to have all the information as to what the total 327 cost was, and I can take their cost and add my cost to it, and therefore the year 1905 I do not think is all figured up yet.

By Mr. **Gans**:

Q. But you have the original entries in your department?

A. Yes, the original books are there, when the mains were laid and where and so on.

Q. And such items as you were accustomed to keep as to the cost of laying them?

A. Yes.

Q. And those can be produced from your department if counsel so advises?

A. Yes, sir.

Mr. **Page**: Now can we have the benefit of advice of counsel on this subject?

Mr. **Mathewson**: Oh, I think so. If you really think you want it, I think I can arrange for it, Senator. I want to see what they are, I don't know what the books are and know nothing about them, how bulky they may be or what they may contain.

By Mr. **Page**:

Q. Now, as to mains that were laid prior to consolidation, have you a record now in your possession which shows which of the mains in use were the property of each of the constituent companies?

A. Yes, sir, I think we have.

Q. Is that in your possession?

A. Yes, sir.

Mr. **Mathewson**: Of the mains now in use belonging to the constituent companies?

Mr. **Page**: Yes, we would like to have that produced also.

The **Witness**: It is not totalized at all, you know. We have a book of the mains, a record of the mains by streets. Now for in-

328 stance take Twenty-third Street, we keep a list of all the mains on East and West Twenty-third Street, and it would go according to the sides of the street, first the North side and then the South side of the street, and there would be a memorandum afterward as to which company it belonged to—the Metropolitan or Municipal or Manhattan or whatever it was; of course they will have to be picked out. We know how much each company turned in at the time of the consolidation but since that time we have taken up mains and we paid no attention whether they were Municipal or Metropolitan or otherwise.

By Mr. MATHEWSON:

Q. But the question addressed to you is whether you can state which of the mains in use belonged to each of the six original companies?

A. You can only do it by going through every item in the books.

Mr. MATHEWSON: I do not know how much of a job that would be, I am sure.

The WITNESS: I could not do it. I am familiar with that kind of work and I know I could not do it in less than a month of steady work, ten hours a day. You see at the time of consolidation they were all turned over to the Consolidated Company; the Manhattan turned over so many million feet of main and so many feet of each size, the Metropolitan turned over so many feet of each size, and they were all put together. Now since consolidation we take up a thousand feet of 6-inch main and we do not specify whether it is Metropolitan or Manhattan we take up; we simply take up one thousand feet of Consolidated main.

Q. You would have to pick back in each instance to ascertain whose they were and how many were left.

A. Yes, sir, and it is almost impossible.

329 Mr. PAGE: Until you can have for us the record which the witness has promised to give, I will suspend the cross-examination.

The WITNESS: What books am I to produce?

Mr. MATHEWSON: You were asked to produce the record of your department showing your expenditures for mains in the last few years. What they are I do not know; therefore, I cannot define them any more particularly.

The WITNESS: As I say, I have not the exact cost made up for the year 1905.

Mr. MATHEWSON: So I understand.

The WITNESS: Is that the only book then?

Mr. MATHEWSON: I understand so.

The WITNESS: That is the only book for the present?

Mr. PAGE: Yes.

Cross-examination by Mr. BURR:

Q. In 1884, where were you employed?

A. In what part of 1884?

Q. Well, we will take the month of September, 1884.

A. I was the Superintendent of mains for the Municipal and Knickerbocker Gas Companies.

Q. How long had you been such superintendent?

A. Since 1881.

Q. Prior to that time what had been your occupation?

A. I had been one year in the works of the company.

Q. And prior to that?

A. I was laying water mains in Vienna, Austria, for four years.

Q. You went to London from Vienna?

A. I went from London to Gratz and from Gratz to Trieste,
330 and from Trieste to Vienna; I was between that time in
Gratz and Trieste.

Q. Did you take control of the mains of this company when you arrived here?

A. No, sir.

Q. What did you do then?

A. I went into the works of the company.

Q. And after you had been there a year, you took charge of the mains?

A. No, I was in the works for a year and in the office for a few months, about 6 months, and then took charge of the mains.

Q. When the mains of the constituent companies of the Consolidated Gas Company were taken over, did you make an examination of them?

A. No, sir, I did not.

Q. Do you know who did?

A. I do not.

Q. Do you know if any examination was made of them?

A. I could not say.

Q. How soon after the date of the consolidation of the constituent companies into the Consolidated Gas Company did you take active control of the mains?

A. I took control in 1889, in May.

Q. And between 1884 and 1889, did you make any inspection of the mains which had been turned over to the Consolidated Gas Company by the constituent companies?

A. No inspection; I had control of the district between 23d and 79th Street and east of Fifth Avenue and I had charge of the mains in that district for the Consolidated Gas Company.

Q. You know, I presume, that mains had been laid by the Municipal as long ago as 1823?

A. By the Municipal? The Municipal only started in 1876.

Q. Well, by the New York Gas Light Company?

A. Yes, about that time.

Q. How many of those mains are still in existence and in use?

A. Really I could not say just how many; of course they commenced laying mains in 1823, and they had mains laid at the time
of the consolidation, but how much of it was laid prior or
331 as late as that I do not know; I have inspected some of the
mains that were taken up that had been laid in 1846.

Q. Well, you had occasion to examine mains laid as long ago as 1823, hadn't you?

A. I could not say as to the date the mains were laid. I had one case where a pipe was brought to my office, a main laid about 1846, as shown by the records; but any other specific dates I could not say anything about.

Q. Then you are unable to say how many miles of mains are now in existence and in use which were laid in the streets of the City of New York prior to 1823?

A. I am.

Mr. Mathewson: None were laid prior to 1823, Mr. Burr.

Mr. Burr: If the witness will say that, I will take that as his answer.

Q. Do you know that none were laid prior to 1823?

A. I will not say positively; I am not certain as to dates.

Q. Do you not know that there were mains laid by the New York Gas Light Company about that time?

A. I do not know; I could not say. I am not so old a man as that; I cannot state as to that time. I know from hearsay that the New York Gas Light Company was in existence and had mains in the ground about 1823; more than that I could not say.

Q. The Consolidated Gas Company took over the mains of the New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company, the Municipal Gas Light Company, the Knickerbocker Gas Light Company and the Harlem Gas Light Company; is that correct?

A. Yes.

Q. Then, in addition to the mains of these companies in the
streets of the City of New York, to your knowledge there are
332 still in existence and in use the mains of the Standard Gas
Light Company, the New Amsterdam Gas Light Company
and the Mutual Gas Light Company?

A. Yes.

Q. Is there any other company operating in the City of New York?

A. Yes.

Q. In the supplying of gas?

A. Yes.

Q. What company?

A. The Central and Northern Union.

Q. That is in the Bronx.

A. That is in the City of New York, is it not? Do you mean now Manhattan, by the City of New York?

Q. I said City of New York, and you stated that the Northern Union operates; and I say, in the Bronx?

A. In the Bronx, yes, sir. Then the Bronx Gas and Electric Company operates in the Bronx; those are all. Then in Brooklyn there are the Brooklyn companies, and in Staten Island there are the Staten Island companies. Then there is the East River Company of Long Island City, and there are a great many small companies all through the Borough of Queens.

Q. But in the Borough of Manhattan there are no companies for supplying gas other than the companies I have named, are there?

A. No, sir; that is the Consolidated, the Mutual, the New Amsterdam and the Standard.

Q. And the mains of all those companies are under your observation and you have the management of them?

A. Yes.

Q. Does the character of the sub-soil affect the mains?

A. I have never found it—do you mean a cast iron main?

Q. Yes.

A. I have never found it to physically affect a cast iron pipe.

333 Q. What is the character of the ground in the northern part of New York? I mean in the northern part of the Borough of Manhattan?

A. In what way do you mean—character?

Q. Well, is it of rocky formation or soil formation?

A. Yes, there is a great deal of rock in the northern part of the city.

Q. And you say that in Third Avenue the surface of the street, or just below the surface, from curb to curb, sixty feet, is practically occupied by the mains of the companies that you have named?

A. I said entirely occupied by the mains of the companies I have named and other sub-surface structures, such as telephone or telegraph subways, the ducts for the Metropolitan road, the water pipes, the sewers, and the columns of the elevated railroad, which take up a great deal of the ground underground, and the ducts of the trolley lines.

Q. And, as a matter of economy in the operation of the mains, if it could be done, one single large main to do the work of these various gas companies would be preferable, would it not, to the number of mains that are now in the streets?

A. Not as things are at present.

Q. What do you mean by that?

A. Because each main is on a separate system; there are not two mains on one side of the street going from one system.

Q. Do you mean that each of the constituent companies of the Consolidated Gas Company have different systems?

A. Yes.

Mr. Mathewson: I do not think that you should use the word "constituent" companies, because I do not think they are. I think it is confusing. The constituent companies of the Consolidated Company were the six companies which formed it, but those present companies are not the constituent companies, as I understand the term, of the Consolidated Gas Company. It owns stock in 334 some of them; I think in all of them.

Mr. Burr: Well, I am asking him now particularly with regard to the six companies which were originally consolidated into the Consolidated Gas Company.

The WITNESS: That is what I understand Mr. Burr was asking about, these companies.

Mr. MATHEWSON: I thought you were referring to the present companies.

The WITNESS: I am talking about the present companies.

Q. They have each a different system?

A. They have each a different system with the exception of the Harlem and the Knickerbocker systems north of Seventy-ninth Street, which are consolidated.

Q. What obstacle is there in the way of having the systems of these six companies made uniform?

A. It would take an enormous amount of tearing up the streets and it would take a great deal of time and would cause a great deal of expense.

Q. Which do you value most, the time or the expense?

A. Well, I don't know as to the time or the expense, or as to the inconvenience to the public, having the streets torn up from end to end for quite a long time.

Q. You would not have to tear up all the streets at one and the same time?

A. You would have to tear up a great many of them, and if I did not have a big force of men working I would never get finished.

Q. Such big force of men being conceded, and the discomfort, whatever it may be, conceded, it is preferable to have the systems made uniform, is it not?

A. Yes, unquestionably; it is possible, but I do not think it is practicable.

335 Q. And with regard to the Standard, the New Amsterdam and the Mutual, have they each a different system also?

A. Yes.

Q. Those are the companies that you understand are controlled by the Consolidated Gas Company?

A. I have not anything to do with that at all.

Q. You have nothing to do with their control, further than to manage their mains, as you have testified?

A. To look after their mains, yes.

Q. You have not, during all the time that you have stated, been engaged in any respect as an electrician, have you?

A. Never, sir.

Q. You do not claim to be an electrical engineer, do you?

A. No, sir.

Q. You do not claim to be able to say with authority the possible consequences of electrolysis upon any given body, do you?

A. I think I can, yes.

Q. Do you mean to say that you claim to be an expert in that regard?

A. I can have knowledge of a certain subject without claiming to be expert on it.

Q. So that you have no expert knowledge?

A. No, sir.

Q. Therefore the opinions which you have ventured to express are opinions such as might be given by any man who had made observation of the conditions of the mains?

A. No, sir, it would be the opinion of a man who knew something about it.

Q. About the mains?

A. About the effect of electrolysis on the mains.

Q. When do you proceed to repair or take up mains, and for what reason?

A. In the first place we strip, as I said, or overhaul, as we call it, every main on every street that is to be repaved, and every time it is repaved too. And if we think any main is too small for the supply on that block, or the supply on that street, it is taken up and replaced by a larger one.

336 Q. Who informs you as to the lack of proper size of mains to carry the supply?

A. I get that from the complaints about the pressure on that street.

Q. Does that go to the engineering department first?

A. It is reported sometimes to me direct and sometimes to the shops. The shops report any complaints that come in about lack of pressure. They are turned over to me for investigation, and if I find that the complaint is due to a main of insufficient size, I ask to have a larger main laid on that street.

Q. So that the size of the mains has all to do with the character of the pressure?

A. In a certain degree it has. If you have a block 800 feet long, and that block is entirely built up with buildings, with stoves and all that in them, a three-inch main will be too small, but if it was not so much built up, it would be ample. It depends on how much the main has to carry.

Q. Would you put it down as an engineering maxim—the larger the main the larger the pressure?

A. No, sir.

Q. Would you say it would be less variation in pressure?

A. No, sir; there is a difference between pressure and capacity of delivery. A larger main would deliver more gas than a small one.

Q. Where there are a number of mains of different sizes, I mean, you cannot regulate the pressure as well as you could if there was one large main, can you?

A. It would depend entirely upon the consumption off the large main, and other conditions, such as elevation, etc. On a large or a small main the pressure would increase or decrease just the same, as the pressure was taken off or put on.

Q. You made an examination, I understood you to say, of the mains at two certain points, one at Brooklyn Bridge and another at some place in Church Street, I think it was?

A. Church and Spring Streets.

337 Q. At what particular point did you make the examination near the Brooklyn bridge?

A. I said I think the street is North William Street. It is the street that comes under the bridge and goes into Luyties' wine cellar, opposite the door of his wine cellar.

Q. Will you describe at that particular point the location of the different pipes or mains you found there?

A. I only found one main there, because we only have one. That main was on the west side of the street, about—between four and five feet from the curb.

Q. What was the size of that main?

A. Four inches.

Q. When had that main been placed down in the ground?

A. I cannot say offhand, sir.

Q. Would that be shown by your books?

A. If it was laid prior to the consolidation it would not.

Q. Then you have no record of the age of the pipes laid before consolidation?

A. No, sir.

Q. And when you stated, in response to the question of Mr. Mathewson, that the mains were all in perfect condition, you embraced in that general statement all the mains that had been in existence in 1884 and that still remained?

A. Yes.

Q. And that you were able to make as a positive statement from the result of your observation?

A. From the result of my seeing. As I said before, since I have been General Superintendent of the company we have overhauled over 90 per cent. of our main system. We have also laid a great deal of new mains on streets newly paved, and every foot of those mains newly laid, or overhauled, I saw, or practically all. It has been part of my business to see what has been put down in the streets in my district, and I see to it from one end to the other, practically all day long, and have done it practically for seventeen years.

338 Q. I judge from what you have testified that there is a vast network of mains all over the City of New York under every open street in the City of New York?

A. What do I understand by an open street?

Q. Every street that is actually opened?

A. Yes, there is.

Q. Is not that the statement that you made, that every opened street is occupied by mains?

A. I did not make that statement, but it is so.

Mr. Mathewson: Mr. Bradley stated that he believed that there was a main in every open street in New York.

The Witness: There is, on every street in New York City, on Manhattan Island, with the exception, possibly, of a few unpaved or ungraded streets uptown in the far end of the Island.

Mr. Mathewson: And they are probably not open, as Mr. Burr uses the term.

Mr. Burr: I do not mean technically open, but actually.

Mr. Mead: Physically.

Mr. Burr: Yes, sir.

Q. And it is part of your duty, is it not, to keep a record of what work is done upon every main in every such street?

A. Yes, sir.

Q. And for that purpose you must have a very accurate record of the work that is done upon such mains?

A. It is not kept in detail in the way you mean. I get the pay rolls every week and it is entered up in the pay roll what is expended for new mains, repairs, overhauling and so on, subdivided under those headings.

339 Q. I understood you to say you had a map showing accurately the whole system of mains in the city of New York?

A. We have maps showing the entire system of mains on the Island of Manhattan belonging to the Consolidated Gas Company, one system of maps.

Q. And have you another system showing the mains of the other companies?

A. We have copies of maps of theirs, or of maps we made ourselves before the other companies were consolidated.

Q. So taken together for your proper information you have a complete record through these maps of every main in the streets of the city of New York?

A. Yes, sir, every gas main.

Q. Every gas main, that is the only main I am speaking of.

A. Yes, sir.

Q. Where is that series of maps?

A. In my office.

Mr. Mathewson: Those were the ones that weighed a quarter of a ton, that Senator Page asked me about.

Q. Does that map show the date of the putting down of each main since 1884?

A. No, sir, no dates at all.

Q. In order to understand that map one would have to possess the book which you have with this accurate record you spoke of?

A. No, not to understand it. If you wanted to get the distance from the curb and the depth you would have to have the book.

Q. Suppose one wanted to know what its present physical condition was, how old it was and how long it had been used, where would you seek that information?

A. That I really cannot say, the books would not even tell you that.

Q. By what are you guided then in seeking to ascertain if pipes are worn out or defective?

340 A. The general principle we have gone on is to take every street before it is paved and examine it, whether we know that they are new mains or old mains, mains and services; and in doing so in the last seventeen years we have covered 90 per cent. of the streets of New York. Added to that Second Avenue, which has never been newly paved, we overhauled that in its entire length, and Ninth Avenue we overhauled the greater part of it and that has never been newly paved. A great many of the streets, the few of the other streets that are not newly paved, on several of those we have taken up the mains and laid new mains, and so in reality there have been more than 95 per cent., I do not think there is 5 per cent. that we have not gone over.

Q. Certainly you must have encountered some of the mains that were laid at the time of the New York Gas Light Company?

A. Probably we did.

Q. From mere observation you would be able to tell that, wouldn't you?

A. Not at all.

Q. Then a main that was laid in 1823 might still be in perfect condition at the present time?

A. Certainly it might.

Q. And in this record that you have, does that contain the character of the subsoil in which the main is laid?

A. No, sir, nothing at all.

Q. How then do you arrive at the basis of expense or cost? Is the cost of laying mains uniform throughout the city of New York?

A. Oh, no.

Q. What causes variation in cost?

A. Well, a great many things can enter into it.

Q. Tell us some of them?

A. The kind of pavement; you might encounter rock; you might encounter bad soil, filled-in soil, which is loose and requires scraping and sheathing to keep the banks up. You might in one case have to go two feet and in another five feet. You might be laying mains up in Harlem where there is no traffic at all, or in Wall Street or Nassau Street, where there is a great deal of traffic, and it would cost a great deal more to lay it. A great many things enter into the difference in cost.

341 Q. Do you do the work yourself, I mean does the company do the work itself, or does it let it out in contracts to others?

A. In nearly every case except in a few cases of large jobs, as you may call them, we do the work ourselves; we lay all mains under 30 inches in diameter ourselves, practically all.

Q. Do you purchase the material?

A. The material is purchased by the purchasing agent .

Q. What does the material used in laying mains consist of?

A. Cast iron pipe, lead and yarn, principally.

Q. Pipe, lead and yarn?

A. Yes, sir.

Q. Is that all?

A. About all. Of course we have to use blocking, for blocking up the main, and use sand for repaving, and there is a little fire clay for snakes in making up the joints.

Q. In your testimony before the Commission you stated there were contracts made for such work, didn't you?

A. Yes, sir.

Q. And that these contracts were still in existence and in your custody?

A. No, sir; I never said they were in my custody. I might have said they were in existence; of course I don't recollect what I said, but I don't think I said they were in my custody. I might have said I had access to them.

Q. Well, who has these contracts?

A. I suppose they are in charge of the secretary of the company.

Q. Have you got blue print copies of the general map that you refer to as showing the location of all the mains in the city?

A. No, sir; the map that I refer to is a series of volumes, insurance volumes; there are twelve large volumes, and you could not possibly have prints of them. They are in book form, you know.

Q. Can you produce those books or maps here for the inspection of the engineers of the city?

A. If I can get a good truck I can.

342 Q. Or can they be inspected at the office where they are now by the engineers of the city?

Mr. MATHEWSON: I don't suppose the witness knows much about that.

Mr. BURR: I thought he would say "if so advised by counsel."

Mr. MATHEWSON: Perhaps he might say that.

Mr. BURR: I ask counsel to say whether the engineers of the city may have an opportunity to inspect those maps?

Mr. MATHEWSON: I cannot say. I suppose the city has a complete record of all the gas mains in the ground.

Q. Well, in your opinion then from this thorough knowledge you have of the mains there has been no depreciation in the physical condition of the mains?

A. Absolutely none.

Q. And practically the life of a gas main properly laid is eternal?

A. I won't say eternal, but it is so indefinite that I could not say how long it would be.

Q. So there would be no justification for setting aside a fund for depreciation of gas mains?

A. For physical depreciation, no.

Q. And have you got the record—I think you were asked this question by Senator Page, but I will venture to ask it again—have you got the record showing the amount paid out for repairs and replacements since 1884?

A. No, sir, I have not.

Q. You have testified here and elsewhere as to the value of these mains; will you tell us by what rule or by what formula you arrive at the valuation given?

A. I made careful, close calculation as to cost of reproducing the mains under present conditions.

Q. Well, will you let us have the process by which you arrived at that conclusion?

A. Am I to answer that?

343 Mr. MATHEWSON: He asked you the method you pursued, I suppose, in reaching that conclusion. I do not see any objection to your stating it if you have not already stated it.

The WITNESS: I took the cost of the pipes to start with first.

Q. Of what pipe?

A. Of the pipe to be laid, for each size; for instance, if it was a 6 inch main I was computing, I would take the cost of 6 inch pipe per foot. The cost of the lead that was necessary for each joint and divide that up into the feet; and the yarn and cartage of the pipes to the works; the digging of the trench and filling of the trench, repaving of the street; and I then——

Q. Before you go any further, what did you find the repaving of the street to be?

A. I figured the repaving of the street for old pavement or old style belgian blocks, that we repaved ourselves, at fifteen cents a square yard; and the asphalt block, what we call new pavements, at $3.25 a square yard.

Q. And the digging of the trench?

A. And the digging of the trench, it costs so much a foot, what we have paid for a number of years and I have kept the details for a number of years showing the actual digging cost per foot, and I have averaged that figure.

Q. Where did you keep those figures?

A. In my own handbook, memorandum book.

Q. Where is that memorandum book?

A. Am I to produce it?

Mr. MATHEWSON: You were not asked to produce it, you were asked where it was.

The WITNESS: I have it here.

Q. Will you let me see it?

A. Well——

344 Mr. MATHEWSON: Will you consent to its being offered in evidence?

Mr. BURR: After I have seen it I may.

Mr. MATHEWSON: No, not "may," but if it is produced to you it can be offered in evidence. I think you had better ask him any questions you want.

Q. Is this book you refer to a book of original entries or a book containing entries supplied to you from the financial department of the company?

A. No, sir, they are entries supplied to me from my own department only.

Q. And these are figures which you supplied in turn to the financial department of the company?

A. Yes, sir. They form part of the basis of the cost of the mains.

Q. The book you have contains no other information save as it concerns gas mains in the streets of the City of New York, does it?

A. There is a lot of information in it.

Q. On the subject of gas and gas mains?

A. It it a memorandum book that I have kept year after year on different things that I cannot keep in my head, and I use it for reference.

Q. Will you let me see it? Have you any objection to letting me see it?

Mr. MATHEWSON: I do not think you should call for it. I may ask to see all the books of your witnesses and experts possibly, I don't know. I do not know any reason why he should hand you the book and go over it, really. Any point you wish to ask, I suppose the pertinence of the question will be judged.

Q. How do you arrive at your general statement with regard to

345 cost and value? Are you basing that upon any particular point in the city or time of laying?

A. No, sir, I take an average. As I say, I took the average of costs that I have kept for a number of years, and struck what I thought was a fair average. I did not take a high figure or a low figure; I took the average figure.

Q. Then the data being known only to yourself, no one else could arrive at a definite or logical conclusion with regard to what the actual value or cost was?

A. No, sir, I gave it to the counsel in detail, the whole thing, how it was figured out.

Mr. **Burr**: Have you got that, Mr. Mathewson?

Mr. **Mathewson**: No, I don't think he means that he gave me anything in writing. Perhaps he is referring to oral conversation; and those I did not commit to writing myself that I knew of.

Q. The sole repository of the information upon which you based the positive statement as to cost or value is a little black book in your pocket?

A. I don't know. I really could not say that.

Mr. **Mathewson**: Mr. Burr, with the number of feet given and the size given, and with the knowledge of the conditions in New York such as your engineers have, it is perfectly feasible evidently, for them to estimate just as well, perhaps, as this witness to some degree what the cost of laying the mains was, as evidenced by the affidavit of your Mr. Marx, that he believed the estimate was moderate and correct, and that he had been over it and checked it up. It is not necessary that this witness's 2 and 2 should be presented to you so that your expert may decide whether he has reached a proper conclusion. I do not think it is called for, really.

346 Mr. **Burr**: This witness makes a positive statement as to the cost or value of a very important item in the manufacture of gas, the mains, and the laying and the maintenance of those mains.

Mr. **Mathewson**: And then you suggest that nobody can compute it unless they have just what he has, whereas your witnesses have already computed, and put it in evidence from less data than has already been presented on this record.

Mr. **Burr**: They replied to the affidavit given to Mr. Justice Lacombe. The witness here now gives data which I have a perfect right to cross-examine with regard to.

The **Master**: I have not heard as yet that you have found out what the allowance was that he made for opening the trench.

Mr. **Burr**: No.

Q. What was the allowance that you made for opening the trench?

A. For what size of pipe, Mr. Burr?

Q. Well, for, say, one and a half inch pipe.

A. 1½-inch pipe, the width of the trench necessary to lay a 1½-inch pipe is 2 feet 6 inches; the repaving of that trench per foot with asphalt, $3.25——

The **Master**: He is only asking you—you testified about the repaving before. He was only asking you about the opening of the trench.

Q. The expense of opening and digging the trench, that was one of the elements you said went to make up the sum total of the cost and value?

A. The digging of the trench and the cartage and refilling, 15 cents per foot.

347 Q. Those three items together, cartage, refilling and digging the trench, 15 cents per foot?

A. Yes, 15 cents per foot.

Q. And what other items go to make up the cost?

A. The cost of rock, which of course can be only estimated; I figured that of the sub-soil which has been handled in the city, ten per cent. is rock, and I added to ten per cent. of our total mileage, $1.75 per foot for rock excavation. That is a very conservative estimate.

Q. Where do you get the statement that ten per cent. is rock?

A. From my own personal knowledge. There has not been a street in New York that I have not seen dug up in the last twenty-four years, and I can judge pretty well.

Q. The operations from which you have deducted this average price extended over what period of years?

A. Twenty-three years—twenty-four.

Q. Has the price of labor varied in that time?

A. It has.

Q. Have you taken into consideration that variation in the price of labor?

A. I have at this time, and the variation at the time I made the computation.

Q. What was the cost of labor in digging trenches twenty-three years ago?

A. I could not say. The price of labor twenty-three years ago was $1.50 a day and the price of labor at the present time is $1.75.

Q. Has it only advanced 25 cents a day in that time?

A. That is all, for labor, unskilled labor. Skilled labor has advanced more than that.

Mr. **Mathewson**: That class of labor.

The **Witness**: That class of labor, the man that actually digs the trench.

Q. The cost of material has varied during that extended period, has it not?

A. It has. It has gone up a great deal.

348 Q. What was the cost of 1½-inch pipe twenty-three years ago?

A. 1½-inch pipe, it is such an unusual size—if you would go to six or eight inches, that I am more familiar with, I would rather have it. I have not laid any inch and a half pipe; it was laid before my time. An inch and a half pipe would weigh about five pounds, maybe 3½ pounds to the foot, possibly 4 pounds to the foot. Pipe has gone up about $3 a ton. Of course it would not make much difference in inch and a half pipes.

Q. How long has electricity been used as a means of transportation in the City of New York?

A. Electricity, well, since the doing away of the cable railroads, and starting of the Metropolitan Underground Traction system.

Q. How long ago was that?

A. I really cannot remember exactly when it was. It was about I should say 8 or 9 years ago, maybe 6 or 7.

Q. And in all that time the only instances of any direct or remote effect of electrolysis that you have observed was at Church Street and at the Brooklyn Bridge?

A. Yes, sir.

Q. So that would not seem to be a proper basis for putting aside a fund for the depreciation of gas mains for the injury through electrolysis, would it?

A. If those favorable conditions were going to continue, it would not be, but if the conditions are going to change as it seems to me they are changing now, it would be.

Q. But if you judge by the past, there is no danger of its changing?

A. How far back have you got to go if you go back to the time of the starting of the Metropolitan road? But the Manhattan Elevated road has only been in operation for the last three years electrically, and the subway in operation only for the last year and a half, and there are a great many roads yet to go into operation, and
349 we cannot tell what system they will use, and how much
current they are going to allow to escape.

Q. The condition at the two points, the Brooklyn Bridge and Church Street, will you swear was not found prior to the installation of electricity in any of the ways you have spoken of, by transportation underground or on the surface of the streets, or elevated railroads?

A. I don't understand your question. What am I to swear to?

Q. The pitted condition that you spoke of this morning, I understood you to say that you observed——

A. I cannot swear to that, but I can swear to this, there was no current leaving our pipes previous to the starting of electrical roads, and I can swear to it that the current is leaving our pipes now after starting the electrical roads.

Q. But you saw pitting in pipes or mains before ten years ago?

A. Not that kind of pitting, no, sir.

Q. Is it a special kind of pitting?

A. Yes, sir.

Q. What are the characteristics that distinguish it from the pitting observed prior to the introduction of electricity?

A. Well, you mean to distinguish between rusting or pitting from other causes, is that what you mean?

Q. Yes.

A. If a pipe is pitted from other causes than electrolysis it will be pitted over its entire length, that is, it will not be pitted in parts and the pipe perfectly solid in other places, whereas in this it is pitted here and there.

Q. How can you say that is due to electrolysis?

A. I do not say it is.

Q. There may be other causes contributing to that effect?

A. The report I got in this case at Church and Spring Street——

Q. Never mind about the report. You did get a report?

A. Yes, sir.

Q. I am only speaking now with regard to what you did yourself, and observed yourself, at these two particular points you testified with regard to. 350

A. We observed that there was an electric current leaving our pipe and returning to the power house, and where the current was leaving our pipe and returning to the power house the pipe was pitted, and where it was not leaving our pipes and was not returning to the power house the pipe was not pitted.

Q. In those two instances?

A. In that instance at Church and Spring Streets.

Q. You have a record showing the cost of laying, maintaining and repairing the pipes, by size and location in the different portions of the city?

A. No, sir, I have no such record. The only record I have, I have a record, of course, sent to me in my department, a weekly report of the moneys expended on different kinds of repairs and of the different branches, and the pay rolls are initialed by me after they go through, but I do not keep a record.

Q. That memorandum which you have here now in your possession, was that taken from other entries or books?

A. Taken from the pay rolls.

Q. Taken from the pay rolls?

A. Yes, sir.

Q. And are those pay rolls still in existence?

A. I presume they are.

Q. And all the information which you have and which you have given us with regard to the cost of laying and maintaining these mains is derived from an examination by you of the figures given in the pay rolls and which you have summarized in this book now in your possession?

A. No, sir, not as to new mains. You asked me before whether I kept account of all replacements, expenses and repairs, didn't you? And I said I did not. A new main is laid and a report is sent to me as to the cost of that as far as my department is concerned, and I keep that in my department, but what the other expenses are I know nothing at all about.

351 Q. Are you familiar with the mains of any other city in the United States outside of New York?

A. Familiar? No, I am not.

Q. Do you know, Mr. Simpson, that the ground around the Brooklyn Bridge has been very much disturbed, that it has been dug up and replaced time and time again?

A. No, sir, the only place that has been dug up for the last number of years is in front of the bridge at the subway.

Q. Do you know whether that is a natural soil or a made soil?

A. I should say it was filled soil, filled ground.

Q. Has that any effect upon the wear and tear of mains?

A. On cast iron mains, no, unless the case is very extreme.

Q. And on other kinds of mains?

A. It might on wrought iron pipes, yes.

Q. What would be the difference in effect on a wrought iron main of made soil and natural soil, or filled soil or natural soil?

A. A wrought iron pipe that is laid in poor soil and not coated, its life will be quite short.

Q. What should it be coated with?

A. Opinions differ very much as to that over the country. Some people think one thing and some another.

Q. Well, what do you favor?

A. We use asphaltum paint.

Q. What else is used by others?

A. Some use red lead, some use plain black paint, some use coal tar—there are any amount of different kinds of asphalt paint too, and B. & B. paint and paint of all sorts.

Q. Is asphalt paint more expensive than the other coating?

A. It is as expensive as any of them; I use it because I think it is the best.

Q. I want to get this clear. There are on Third Avenue, taking that as an illustration, five or six different service mains in that avenue?

A. Yes, sir.

352 Q. And to make repairs or to lay down new pipes, it is necessary to make five or six openings in the avenue?

A. Why should it be. Do you mean if I wanted—for each one of those five you have to make an opening for each one?

Q. Yes.

A. Of course I would.

Q. So that would be, as a matter of fact, you can readily see, five times as expensive as one opening would be.

A. Oh, no, because your one opening would be a great deal larger than each opening would make on each main.

Q. What I am trying to get clear in my mind is this, that if there was but one large main there, it would need but one opening to repair or replace it?

A. Yes, one very large opening, and that large opening would probably be nearly equal in size to five small ones.

Q. There being five or six mains, it needs five or six openings?

A. If they were all leaking at once, which is not very likely.

Q. If they were all leaking one after the other, or all needed to be replaced or repaired one after the other?

A. It would need an opening according to the size of the main.

Q. Now, when you are called upon to repair pipes of the Standard or the New Amsterdam or the Mutual, is that charged up against the Consolidated?

A. No, sir.

Q. You keep a separate book of account for those expenses?

A. We keep absolute account of all the expenses encountered for those companies.

Q. You keep separate accounts for those three companies, do you?

A. Yes, sir.

Q. Where are those accounts kept?

A. In the accounting department.

Q. Of the Consolidated?

A. Yes, sir. I may say that this was done at the request of the city.

353 Q. What is the width of ditch used for a 16 inch main?

A. Three feet six to four feet.

Q. What is the width of ditch used for a 1½ inch main?

A. Two feet six. You could put a 1½ inch main in a trench six inches wide, but you could not work in it; the reason we have to make it 2 feet 6 is to work in it.

Q. So you only make the ditch twice as wide for a 16 inch main as you do for a main 1½ inches wide?

A. Naturally, sir. If it was not required to work in it we would only make the trench 6 inches wide; since you have to have a man work in it it has got to start with 2 feet 6 inches.

Q. Now, if there was a main on Third Avenue from Grand Street to 129th Street of equal capacity with all the gas mains now in that avenue, how much of a saving could be effected in the maintenance?

A. Taking into account the cost of the new main?

Q. No, without that.

A. Without the cost of the new main? Do you mean if somebody gave us a new main?

By Mr. Page:

Q. If it were there, what would be the difference in the cost of maintenance?

A. If it was there without expense to anybody?

Mr. Mathewson: If you woke up and found it there some morning.

The Witness: Am I to answer that question?

Mr. Mathewson: Let us hear what the question is.

Q. (Question read by stenographer as follows:) "Now if there was a main on Third Avenue from Grand Street to 129th Street of equal capacity with all the gas mains now in that avenue, how much of a saving could be effected in the maintenance?" 354

Mr. Burr: We will assume that that one main is there. Don't you bother about who pays for it.

Mr. Mathewson: If you can, answer it.

A. Is that main to be a perfect main, tight and everything else?

By Mr. Burr:

Q. Yes, sir. Just as tight as the main there now.

A. There would be no difference in the maintenance at all.

Q. You have testified you have five or six mains there now?

A. Yes, sir, but those mains have all been put in the same condition that this main that you are talking about would be in and they are of no expense to us at the present time, practically none.

Q. Then these are now new mains, practically?

A. That is exactly what they are, practically new mains.

Q. What would be the effect of say over on Eighth Avenue, does that condition prevail on Eighth Avenue, new mains?

A. Yes, sir.

Q. Does that condition prevail on all the other avenues, First and Second Avenues?

A. Yes, sir. I may state that a cast-iron main consists of two things only, that is the cast-iron pipe and the lead used in caulking the joint. The cast-iron pipe does not deteriorate, and if you take that joint and make it perfect, recaulk the joints, the main is just the same as the day it is laid.

Q. In the affidavit made by you and sworn to by you on the 4th
day of May, 1906, in this suit, you say there is to-day no de-
355 preciation in the mains of the company; that is true, is it
not?

A. No physical deterioration, didn't I say?

Q. The language you used is, there is to-day no depreciation in the mains of the company?

A. Yes, sir.

Mr. Burr: That is all I am prepared to cross-examine Mr. Simpson on at the present moment, in the absence of the maps and the data, for which I believe we make a united request for their production on Mr. Mathewson, counsel for the complainant company.

Mr. Mathewson: Do I understand you request that quarter of a ton of maps?

Mr. Burr: We want to be afforded an opportunity to have our engineers inspect the maps.

Mr. Mathewson: I thought you wanted them for the cross-examination of this witness. We would like to have you state what you want the maps for, what use is to be made of them.

Mr. Burr: I want to have an opportunity for our experts and engineers to inspect these maps and if I deem it necessary upon the report made by them I am to have an opportunity to further cross-examine this witness.

Mr. Gans: I don't think Mr. Mathewson's attitude on this is quite fair, because it is for his convenience largely and for the convenience for the Court that the request is made that we be permitted to examine that quarter of ton of maps in their office rather than down here. Also, it will save time to have an expert go over those maps in the office of the company rather than that he should go over them piecemeal while the witness is on the stand. Of course the purpose is to check up what the witnesses testified to.

The Master: I should prefer that you try to arrange such
356 questions as that between counsel by means of some sort of
an agreement outside of the hearing. If that is not possible
I will have to take up that question and dispose of it.

Mr. Gans: If I may be permitted to define the situation a little, I will say that Mr. Mathewson has been permitted to examine by questions that covered the whole field and when I objected to those questions as somewhat too inclusive it was said that it was incumbent upon us on cross-examination to bring out the details. Now if we go to do that of course we have to take the burden that I think he should have assumed originally, and we have to go over those maps to ascertain whether what the witness says with regard to his conclusions from them is justified by the facts or whether he has committed error in any respect; that applies to accounts and everything else.

Mr. MATHEWSON: I don't think——

Mr. PAGE: I think it further appears that when statements differ to the extent of 64 miles as to the amount of their mains, and a difference in value of some seven millions of dollars, that such a further examination might be found necessary.

Mr. MATHEWSON: I don't think so, Senator. That will be so clearly apparent in a moment that I don't think you will repeat that question as to the mains. You virtually suggest that we are claiming credit for property in mains, several thousand feet less than we possess according to the tax report. We could not be presumed to have been guilty of any improper action in claiming less than the property which we owned and the fact is, as I will show, that these small sizes of mains which you have made reference to and 357 which we claim for here are the mains in use, while the tax report includes certain mains not in use which may be called abandoned and for which we claim no credit as assets. Secondly, as to these larger mains, where there is a difference if you examine the original tax report you will find those figures of difference are in red, and it indicates that is a reduction instead of an addition. It does not show on your map, it is black, it is not an addition at all, there is the whole explanation, and it is as simple as A, B, C.

Mr. PAGE: As I understand, the ruling is reserved now.

The MASTER: Well, it is reserved, as I understand Mr. Mathewson.

Mr. MATHEWSON: Yes, I will take it under consideration.

The MASTER: I understand Mr. Mathewson has it under advisement.

Mr. MATHEWSON: If I don't see fit to do it and you wish to press it we will argue the subject before the Master as to whether you are entitled to it.

By Mr. PAGE:

Q. You buy your pipe by the weight, do you?

A. Yes, sir.

Q. You have already given that inch and a half pipe as weighing 3½ pounds per foot. Can you give me the weight of the different sizes of pipe that you have in use, say two inch, three inch, four inch, five inch, six inch, eight inch, ten inch, twelve inch, sixteen inch, eighteen inch, and so forth?

A. The two inch I will have to guess at.

Mr. MATHEWSON: Do not make any guesses.

358 The WITNESS: Then I cannot tell you. We have never bought any two inch pipe.

Q. Well, you have bought three inch?
A. Yes, sir; 13 pounds to the foot.
Q. What is the length of the pipe?
A. Twelve foot.
Q. Are all the mains 12 foot?
A. Yes, sir.
Q. And what particular kind of pipe do you call it?
A. Cast iron pipe.
Q. What is it, flanged pipe?
A. Hub and spigot pipe.
Q. And that is so of all this pipe?
A. Yes, sir.
Q. Will you give me the weight of the four inch pipe?
A. Nineteen pounds to the foot.
Q. 5 inch pipe?
A. We do not buy it, it is not in use any more.
Q. 6 inch pipe?
A. 32 pounds.
Q. 8 inch?
A. 44 pounds.
Q. 10 inch?
A. That is a size we use very little to-day, it is an outside size, we have some of it, I can give you the—57 pounds.
Q. 12 inch?
A. 74 pounds.
Q. 16 inch?
A. 114 pounds.
Q. 18 inch?
A. 136 pounds.
Q. 20 inch?
A. 160 pounds.
Q. 24 inch?
A. 215 pounds.
Q. 30 inch?
A. 311 pounds.
Q. 36 inch?
A. 425 pounds.

By Mr. MATHEWSON:

Q. Are those exact weights or approximate?
A. Approximate; it will come very near it.

By Mr. GANS:

Q. Within about how near?
A. Oh, well, it might vary five per cent., possibly seven per cent. in some cases; it depends on the foundry making the pipe a 359 good deal. You understand it takes more than twelve feet of pipe to lay twelve feet of main, don't forget that.

By Mr. PAGE:

Q. Yes, you have to allow for the hub and spigot?

A. You have to allow for the depth of the hub. In nearly 5,000,000 feet it amounts to a great deal.

By Mr. GANS:

Q. How much allowance do you make?

A. Small sizes, 4 inches, large sizes, 6.

Q. Where does the large size begin?

A. 24 inches.

By Mr. PAGE:

Q. Below 24 inches you allow four?

A. 20 we allow four and one-half. Below that 4 inches.

Q. And above that?

A. That varies up to 36, we use 6 inches, and for 30 inch, 5 inches.

Q. And 24?

A. 24, 5 inches; 4½ inches for 20 inch.

Q. Now, I suppose in the actual laying of these pipes, there is more than one pipe in the trench, isn't there? You haven't dug a separate trench for each pipe you lay. You lay two pipes in a trench, don't you?

A. We never do lay two pipes together. These pipes we have in the street now have all been laid at different times.

Q. But you dig a new trench for each pipe entirely?

A. We have got to dig a new trench for each pipe.

Q. Why have you got to?

A. If you lay two pipes simultaneously you could use one trench, but none of these pipes were laid simultaneously, but were laid by different companies at different times.

Q. Well, you have laid some new pipes, haven't you?

A. Never have I laid two pipes in one trench, or two pipes
360 in one street at once, always have been single pipes.

Q. Haven't you laid pipes yourself, new pipe in a street already occupied by a pipe?

A. Oh, yes, many a time.

Q. And in that case you dig an entirely new trench?

A. You have to.

Q. Why do you have to?

A. What else could you do?

Q. You could enlarge the trench already there, couldn't you?

A. But when the pipe is in the street, they do not leave the trench open, when they get through laying the pipe, it is filled in; when I get there, I have got to open the street, haven't I?

Q. Yes. It might be cheaper to blast out one side of a rock than it would be to blast a trench through both, making an entirely new trench; that is the point I am getting at?

A. Well, we have never had cases of that kind. If a pipe is laid in the street we are always alone, we have to make our own trench, and anyone laying a pipe in a trench, has never to my knowledge been able to take advantage of anybody else's trench.

Q. But there is nothing in physical laws to prevent your laying two pipes close together?

A. No, but contractor laws and city laws. A contractor would not allow us to lay our pipe in his trench unless we paid him, and the city would not allow us to interfere with them.

Q. You own the trench, don't you?

A. We own the trench we make ourselves, the same as a contractor owns the trench he makes.

Q. After you pay the contractor, you own the trench, don't you?

A. How do you mean, own the trench? Own the ground the pipe is in? I don't think I quite understand what you mean.

Q. I don't see as it is very material anyway, but what I was getting at——

A. Do you mean that sometimes it is possible for two parties
361 to go in together and each lay their own pipe in one trench?

Q. No, I do not, but is it possible for one party to lay two pipes in one trench?

A. But I tell you I have never known of a case of two companies requiring two pipes in one street at one and the same time.

Q. But you have got four pipes in Third Avenue, two on each side of the street?

A. Yes, and probably those four pipes took thirty years to lay them. That is a pipe every seven or eight years; that is a long time apart.

Q. But with regard to your supervision of the mains of the Standard, the Mutual and the New Amsterdam Companies, those are the three you specified?

A. Yes, sir.

Q. Part of your engineering force is engaged in that work besides yourself?

A. The entire force, the superintendent, foremen, the men and all of them.

Q. And as to the work that is done, is that done by your men?

A. Yes, sir.

Q. On those parts?

A. Yes, sir.

Q. And that is paid for, as I understand it, by the Consolidated Gas Company?

A. No, sir, it is paid for—we pay the men but the respective company pays us the cost.

Q. That is the cost of the laborer?

A. The cost of everything, the entire cost.

Q. Does part of your salary go into that?

A. Not directly, but indirectly it does.

Q. How indirectly?

A. Because we have the actual cost of all the labor performed, the material used, and we then add a small percentage for clerical expenses and engineering expenses.

Q. Since what day have you had charge of the mains of the other companies?

A. Since 1890, or 1891.

362 Mr. Mathewson: No, no no; think a minute.

The Witness: No, I mean 1900, or 1901.

Q. And is this record that you refer to, the charge that is made against these companies, kept in your office or in the office of the accounting department?

A. It is kept in the accounting department on memorandum furnished by my department.

By Mr. GANS:

Q. Are those memoranda kept on file? Are they in the form of vouchers?

A. I suppose they are kept on file in the accounting department.

Q. Do you O. K. them; do you supervise the making out of those vouchers?

A. No, I think my assistants do.

Q. Do you personally audit these items of expense?

A. No, we only turn in the actual amount of labor and material furnished.

Q. Have you ever seen the bills that have been presented to the other companies?

A. Yes, sir, I see them; they come to me before they go out and I initial them.

Q. The accounting department does whatever apportionment is needed with regard to the engineering expenses, and clerical expenses?

A. Yes, sir.

By Mr. BURR:

Q. Can you state what increase in the expense of your department is shown since you took the control of the maintenance of the pipes of these other companies, the Standard, the Mutual and the New Amsterdam?

A. I couldn't say.

Q. There has been an increase, however?

A. I think there naturally would be, it is more work of course, and it would cost more to perform it.

363 Q. And you have the data showing that increased expense?

A. No, I have not, the accounting department has it.

Q. You had it originally?

A. No, I say it is all kept in the accounting department.

Q. From data furnished by you?

A. No, it is kept in the accounting department from the payrolls turned in from my department every week.

Q. Would the payroll kept by you show the increased expense since 1900, when you assumed the control of the maintenance of the pipes of these three companies?

A. Well, you could hardly say that because the payrolls might change in time from many other causes than that, that would not be an indication at all. You take the payroll, my payrolls this winter were 25% lower than they were last winter, a severe winter; or my payroll one month might be much lower than the next month, on account of doing less work.

Q. Where are you able to find the data showing the increased expenses of your department since you undertook the management of pipes or mains of these three companies, the Standard, the New Amsterdam and the Mutual?

A. All the expenses we undergo for these other companies is accounted for, taken care of and turned into the accounting department; that is charged up to these companies.

Q. Where is it, and in what form—special reports upon those mains?

A. Special reports every month or every two weeks in some cases of the amount of money expended, and the days in which it was done, and the amount of labor and material spent for the Standard, Mutual or New Amsterdam Company, as the case may be.

Q. As distinguished from the constituent companies, of the Consolidated?

A. Yes, sir.

Q. And that is turned in to the accounting or financial department of the Consolidated?

A. Yes, sir.

364 Q. Will you produce those vouchers or statements?

A. It would not be right to ask me to produce papers from the accounting department.

Mr. Burr: Will you produce them, Mr. Mathewson?

Mr. Mathewson: I don't know whether I will; I will take it under advisement.

Mr. Burr: That is all I want to ask.

Redirect examination by Mr. Mathewson:

Q. Has not the business of the Consolidated Gas Company increased since 1900, requiring more attention from its street force, additional mains and services?

A. Yes, sir.

Q. So that the increase in pay roll and in the expenses of your department from 1900 down would not necessarily be attributable to anything that you had done for these other companies operating in New York, would it?

A. No, sir.

Q. Do you consider it an economical arrangement for the Consolidated and these other companies to have the work done on the mains as you have indicated?

A. For all parties?

Q. For all parties concerned.

A. Yes.

Q. And will you say that any of the city authorities have ever suggested that course to you?

Mr. Gans: I object to that as incompetent, irrelevant and immaterial.

Mr. Mathewson: The city is one of the defendants here.

Mr. Gans: It does not make any difference what the city authorities have suggested.

Mr. Mathewson: We will see whether it has.

Mr. Burr: I also object to it as incompetent, irrelevant and immaterial.

Objection overruled; exception taken by Mr. Gans and Mr. Burr.

365 A. Yes, sir.

Q. State more fully.

A. The first person who spoke to me about it was Thomas F. Gilroy, when he was Commissioner of Public Works. He asked me if some arrangement could not be made to stop the repeated tearing up of the streets. For instance, if the Consolidated Gas Company got notice of a leak in a certain locality, we would go there and find a main of the New Amsterdam Company or the Standard Company or the Mutual Gas Company leaking. We would then fill the hole in and report it to the Mutual or the New Amsterdam, whichever it was, and they would go and tear the street up again and caulk the joint causing the leak, again. I told him I did not know if we could——

Mr. Burr: I object to his conversation.

The Master: Never mind about that.

Mr. Burr: I move to strike it out.

The Master: Strike it out.

A. (Continuing:) The next person that spoke to me about it was General Roy Stone, who was then general inspector of street openings.

Q. As to the possibility of one company's doing all the street opening?

A. Yes, sir.

Q. Did he say whether it was preferable to deal with a single company?

Mr. Burr: I object to that. We are not to be bound by conversations of that character.

The Master: Ask him to state what he said.

A. He asked me if we could not make some arrangement with the other companies to avoid the repetition of making these openings.

Q. And was this arrangement subsequently made?

366 A. Subsequently made to that, yes, sir. Then the next person was Wisner B. Martin—shall I go on?

The Master: You have answered the question.

Mr. Mathewson: I will ask him if there was any one else.

Q. Was there anyone else of the city authorities who spoke to you on the same subject?

Mr. Gans: I presume this is all subject to our same objection.

The Master: Yes. I will allow it.

Exception taken by Mr. Gans and Mr. Burr.

A. Wisner B. Martin, who was engineer of subsurface construction for the city, asked me repeatedly as to whether we could not make some arrangement to avoid the repetition of tearing up the street.

Q. You have been asked in reference to the placing of one pipe in Third Avenue in place of the various gas pipes of the complainant company there located. Is there space in Third Avenue, without a large readjustment of other pipes and sub-surface structures, to put a large pipe at present?

A. No, sir.

Q. In place of any one of the small pipes?

A. No, sir.

Q. Would it be a matter of large expense to make that substitution?

A. It would be, very large indeed.

Q. Would it be feasible to put it in the middle of the street, under the trolley tracks?

A. No, sir, it would not.

Q. What would be the effect on the length of your service if you had to run services from a single pipe to each side of the street?

A. It would depend upon where that pipe was placed.

367 Q. Suppose it was placed anywhere that you could think of in the street; would it not make very long services, from one side to the other?

A. If you had one pipe only, it certainly would.

Q. What effect would a pipe between this large pipe and the curbs, to which the service would run, have on the possibility of running a service without great expense?

A. It would interfere very materially.

Q. Would it render the installation and maintenance of the services an expensive matter?

A. It would the installation, I do not know whether it would make much difference in the maintenance.

Q. You have stated that you made up certain figures and gave them to Mr. Carter, the secretary of the company, in connection with the Tax Report of 1902?

A. Yes.

Q. Do you remember whether you gave him any figures after that, or whether he merely took those figures and added to them from his own data?

Mr. Gans: I think the latter part of the question is objectionable; the first part is all right.

Mr. Mathewson: Strike out the last part, if it is objectionable to you.

A. To the best of my recollection I gave him the values per foot, from which he computed, or I suppose he computed, his total.

Q. In 1902?

A. Yes.

Q. Do you remember whether you gave him any figures after that?

A. I do not remember, no, sir.

Q. Now, Senator Page has read from the testimony before the Gas Commission this reply of yours:

> "Q. Will you state what your method was, or upon what basis those figures were produced? A. I took the mileage of the
> 368 various sizes of mains we had at that time, and computed the total amount, taking the cost of laying each size of pipe under

the most favorable conditions. I did it for taxation purposes, and I thought those were the right kind of conditions to take. I did not figure any rock, city inspection, engineering expenses, clerical expenses, wear and tear of tools and plant superintendence or any matters of that kind. Q. Did you count any special difficulties on account of pipe construction in the street? A. No sir, I did not."

Did you, in your unit figures, include anything but the bare cost of material, and the labor for laying in soft dirt streets?

A. No, sir, I did not.

Q. So that those figures would not include the total cost of the main in the street?

A. No, sir.

Q. Now, in reference to the character of the figures that you gave to Mr. Carter, I ask you whether you later testified at the same hearing before the Gas Commission, two or three pages later, as follows:

This is page 1559 of the printed record.

"By Commissioner SHEDDEN:

"Q. Did you give Mr. Carter any figures as to cost of services? A. No, sir. Q. Did you give him any figures as to the cost of mains? A. No, sir. Q. Did Mr. Carter give you, and did you give him information as to the value of the property of the Consolidated Gas Company, the value of the mains in the streets of New York, on the basis of the company's reproduction for the year ending June 30, 1904? A. I gave him some figures, yes, sir. Q. What were those figures? A. Four million and some hundred 369 thousand dollars, but I did not give him any total; that is what I am trying to tell you. I gave Mr. Carter the cost per foot of the different sizes of pipe, and on that he computed the figures. Q. Then the total figures that went in to make up the property of the Consolidated Gas Company in the streets of New York, on the basis of cost of reproduction, were not your figures? A. Yes, they were. Q. The totals were not? A. No, sir," &c.

Did you testify to that?

A. I did.

Q. Is that correct?

A. It is.

Q. Now, referring to the tax report filed with the State Board of Tax Commissioners, for the year ending June 30th, 1905, to which Senator Page has called your attention, to the amount of $5,801,466.10, and $4,398,160.82, are you able to say of your own knowledge at all how Mr. Carter computed those amounts from the data that you gave him?

A. No, sir, I am not, I have not any idea.

Q. And do those figures in any way modify your testimony to-day, as to the cost to-day or the present value of the mains as they exist in the ground under present conditions?

Mr. GANS: I object to that. How can these figures modify his testimony?

Mr. MATHEWSON: Well, observation of the figures, if you please.

A. No.

Q. Since those figures were given to Mr. Carter, have labor and material increased or decreased in cost?

A. Increased.

Q. In reply to Senator Page's question you gave the cost per foot
of laying pipe of various sizes under the old pavement, and
370 under the new pavement; beginning with 1½ inches, $1.14
under the new, and 29 cents under the old pavement. That
was the cost of laying at what date, as you understood it?

A. October 31, 1905.

Q. Has there been any increase in the cost of labor or material since that time?

A. There has been increase in the cost of material, not of labor.

Q. Would that then represent the cost of laying the various sizes per foot to-day, the current prices?

A. No, sir.

Q. Would the cost be greater or less?

A. It would be greater.

Q. And do those prices include any allowance on account of rock cutting, which you say represents about ten per cent. of the mileage?

A. No, sir.

Q. And do those figures include anything for cost of city inspection, or engineering expense, or supervisory expense, or wear and tear of tools and plant, or special obstructions in the streets, or underground obstructions, clerical expense, or expenses of that character?

A. No, sir.

Q. When you stated your total cost to-day, or the total value today of mains in the streets, to be $12,636,150.04, did you include all those items, including the current cost of labor and material?

A. Yes.

Q. Referring to the differences in mileage between the mains from 1½ to 5 inches, as between your statement of mileage, upon which you made your computation as of September 21st, 1905, and the tax report as of November 1st, 1905, to which Senator Page has called your attention, were there not certain abandoned mains of those sizes which you did not include in your computation of values?

A. There were.

Q. And are you able to say, from the mileage which ap-
371 pears in the tax report, whether the tax report did include
those abandoned mains?

A. Whether it did include them?

Q. Yes.

A. It did include them, yes, sir.

Q. So that would include the difference between those two statements?

A. Yes, I did not take into account those abandoned mains at all.

Mr. Mathewson: I do not care to subpœna or bring down the original tax report, unless you wish; but Mr. Carter informs me that the differences between the larger sizes appearing on the tax report and Mr. Simpson's testimony appear in red ink on the tax report, and that they were to be deducted instead of added.

Mr. Page: That is just what I asked the witness.

Mr. Mathewson: This witness did not know. Mr. Carter, who has seen the report, does know. Are you willing to accept the testimony of Mr. Carter to that effect, or shall I bring down the original report?

Mr. Mathewson: Because it comes out exactly even every time, by the deduction.

Mr. Page: I think it speaks for itself, that it must have been deducted.

Q. Referring to the decrease of services from time to time in case several buildings are taken down and a large building, say a hotel or an apartment house, is placed upon that plot, what is the effect upon the number of services you require?

A. I did not catch that.

Q. If several smaller buildings are taken down and a large building is erected on the same plot, is not the effect to reduce the number of services and to increase the size?

A. Yes, reduce the number and increase the size.

372 Q. When you spoke of there being required no fund for physical depreciation of mains, did you mean to say that no fund should be allowed for the purpose of renewing smaller mains?

A. I understood that to apply to those that had to be replaced on account of physical depreciation.

Q. You make that distinction, between the replacement of smaller mains with larger mains, and physical depreciation?

A. Yes, sir.

Q. And are you able to say that as to the effect of electrolysis, it may or may not be necessary to have a fund to care for that?

Mr. Gans: I object to that as entirely too vague and hypothetical.

The Master: The witness has already testified to that.

The Master: I do not see that it adds anything. You have the facts, as far as he knows them. We can draw the inference as well as he can.

Mr. Mathewson: I merely asked if he thought there should be a fund set aside for that.

The Master: Well, that is a matter of inference.

Q. Is there any one and a half inch pipe now being laid by the company?

A. No.

Q. Is there any 2 inch pipe being laid by the company?

A. No.

Q. What are the lowest sizes which are being laid?

A. We lay nothing less than 8 inch on any blocks or any stretch over 600 feet long.

Q. Do you know whether the subway and the elevated road use the ground return system of electricity?

A. I do not know.

Q. Do you know as to the surface trolley systems? If you do not know, just say so?

A. I do not know from real knowledge.

373 Recross-examination by Mr. BURR:

Q. One question in regard to these abandoned mains. To what extent were these mains abandoned, and what number of mains were abandoned?

(At this point the witness asks for a paper which had been handed by one counsel to another.)

Mr. BURR: I ask that that paper be marked for identification; the paper produced by the witness.

Mr. MATHEWSON: The witness presented it to counsel. Counsel laid it on the table and other counsel picked it up—not a very objectionable proceeding—but when they proceed to pass it around to their experts, I submit that I do not know any authority for it.

Mr. GANS: I do not think that is quite fair; before I picked up the paper I asked you if I could see it.

Mr. MATHEWSON: And I said I had no objection, but this is rather another situation.

Mr. BURR: I now ask that it be marked for identification.

The MASTER: The word "it" does not convey anything on the record." You might ask what paper the witness has been using in the course of his examination on the subject of values, and get it in that way.

Q. What is the paper that I now hand you, Mr. Simpson?

Mr. MATHEWSON: You can say that it is a paper to which you have been making reference.

A. It is the paper from which I made calculations as to the value of mains.

Q. And from which you have been testifying to-day?

374 A. Well, I would scarcely say that. I have not been quoting from it.

By Mr. MATHEWSON:

Q. You have been referring to it?

A. Yes, I cannot carry all these things in my head.

By Mr. BURR:

Q. The figures you have been giving here to-day were taken partly from this paper?

A. Partly.

Q. And those figures upon which you based your calculations are on that paper?

A. Some of my calculations.

Mr. BURR: That is sufficiently clear, I think; I ask leave to have it marked for identification.

(Marked for identification City Exhibit 1.)

Q. I was proceeding to ask you one or two questions in regard to those abandoned mains. To what extent were those mains abandoned?

A. They were disconnected from the system and left in the ground.

Q. How many miles of such mains are left in the ground?

A. Oh, possibly seventy miles and more.

Q. Those seventy miles—do those mains still remain in the ground?

A. Yes, they do.

Q. Are they disconnected from the system?

A. Yes.

Q. If you desired, in order to increase the capacity of your supply, you could put new mains where those abandoned mains are, could you not, mains up to date and capable of aiding you in the extension of your service?

A. We might be able to.

Q. Would you not be able to?

A. In some cases we would, but not in all cases.

Q. Would you not, as a matter of fact, in all cases be able to?

A. No, certainly not.

Q. In what cases would you not be?

375 A. The reason some of those mains were abandoned was that they were where we could not get at them; for instance, that they laid subways on top of them, and we could not get at them to repair them, and we were compelled to put new mains in their places.

Q. Where are those abandoned mains located?

A. They are located all over Manhattan Island, from the Battery to 180th Street.

Q. Have you a list of those abandoned mains?

A. Not in detail, no, sir.

Q. What do you mean by "Not in detail?"

A. We have not the location of them in detail; we have a list of the number of feet or miles of mains that we have abandoned, each size; but just what locality they are abandoned in we have not got.

Q. Then you are able to carry out your present maximum supply of thirty million feet daily without seventy miles of mains that have been abandoned?

A. Not seventy miles of mains that are on our books. The seventy miles of mains abandoned are not on our books.

Mr. Mathewson: That is, not on your books as assets?

Q. I am not speaking of them as assets for the present. I am speaking of them simply as mains.

A. No, because those mains that have been abandoned were abandoned because there was another main laid in their place; do you see? The main was insufficient for the supply, and it was not worth while to take it out.

Q. So you laid another under it?

A. Under it, or alongside of it, as the case may be.

Q. What kind of mains were those?

A. Mostly 2 and 3-inch mains.

Q. That is an instance of where two gas mains were laid together, one abandoned and one new?

376 A. They were not laid together. The Senator was asking whether two mains were laid at the same time. One 6-inch main might have been laid thirty years ago, and a new one laid in its place afterwards.

Q. Do you wish to be understood as testifying that there is a new main for every abandoned main laid alongside of the abandoned main?

A. Not always laid alongside of it, but in almost every case there is a new main for every main that is abandoned.

Q. Where did you derive your knowledge? Do you carry that in your head or have you a record of that?

A. Well, no, I carry most of it in my head. I get orders to abandon mains and lay mains; I know what is the practice and what is being done.

Q. Does any record show when these new mains were laid in place of the abandoned mains, and when the abandoned mains were abandoned?

A. In some degree.

Q. What do you mean by "in some degree?"

A. The book I have there would very often state "6-inch main laid to replace 3-inch main." But it don't say whether that 3-inch main was taken up or abandoned, that record would not. The maps that you wish to see have marked on them, the mains abandoned, very often.

Q. Were any of those mains abandoned because of their age?

A. No, sir, not one of them.

Q. Can I be furnished with a diagram or map showing where those abandoned mains are, and their location in the street?

A. I do not think you could be furnished with an accurate one, because we have not kept the location of the abandoned mains at all. We have kept an account of the amount of mains abandoned, but not the location of them at all. That is to say, if in one branch there was abandoned 3,000 feet of three-inch, it would be reported to the office, but it would not show where.

377 Q. Then there is no record possessed now by the Consolidated Gas Company, showing where those abandoned mains are?

A. I do not think there is.

Q. Can you now say whether those mains belong to the six constituent companies, or whether they are mains belonging to either the Standard, the New Amsterdam, or the Mutual?

A. No, all mains belong to the Consolidated Gas Company.

Mr. Mathewson: There are no six constituent companies owning anything now; the Consolidated owns it all, and has since 1884.

Mr. Burr: I will accept that suggestion.

Mr. Mathewson: We do not care where those abandoned mains are. You can have them if you can dig them up, or anybody else.

Mr. Burr: You have made several little suggestions like that; I will ask the witness about it.

Q. Are those abandoned mains the property of the Consolidated

Gas Company or are they the mains of the Standard Gas Company, the New Amsterdam, or the Mutual?

A. The Consolidated Gas Company only.

Q. And yet you are not clear that the Consolidated Gas Company has any record of where those abandoned mains are located?

A. I did not say *no* record; I said probably it would be hard to get a perfect record.

Q. I am asking you if the company has any record?

A. I have a record, yes, I think it could be dug out.

Q. A record you think it could be dug out from?

A. Yes, it would have to be dug out, because we have been abandoning mains for 17 years; and they have been reported in different fashion from time to time, from three different branches; some years we abandon a good deal, and some years less.

378 Q. When you come here again, will you bring with you a statement in regard to the location of the abandoned mains belonging to the Consolidated Gas Company, and their location?

A. I will, if counsel directs me to; it would be a hard job to get it out.

Q. Well, you can do it if counsel directs you?

Mr. Mathewson: No, I do not think it could be done by the next session. It would be a long, arduous and useless proceeding to pick out all of these abandoned mains, scattered all through the streets of New York. It is not property for which we claim any credit, and it is not part of the capital upon which we are asking a return. It would be a long and arduous proceeding, and it is not pertinent at all.

Mr. Burr: It is pertinent to the correctness and fullness of your account.

Q. Can you remember now where any one of those abandoned mains is located, and the size of it?

A. Not offhand, I could not.

Q. But you have a record of the new pipes that you have laid down instead of the abandoned ones, have you not?

A. Certainly we have.

Q. So that by that record you would be able to show the location of the abandoned pipes?

A. No, when I lay a new pipe I do not always state that it was laid because another main was abandoned. I have a record of the new mains laid, of course.

Q. How is it able to be charged up on the books of the company, as to whether it is a new construction or replacement?

A. That is a thing I have nothing to do with, that part of it; that is in the accounting department.

379 Q. Do I understand you to say that if this new pipe or main is put down alongside of an abandoned main there is no record as to the cost of the putting down of that particular pipe, or no record showing that it is put down alongside of an abandoned main?

A. Whenever a main is abandoned it is reported to me, and I report it to the accounting department, and I note it on my map and on my books, but I would have to go through the entire set of maps and through the entire set of books to find out when all these 70 miles of mains were abandoned, and I think it would take me at least a month myself to dig it out.

Q. If you put down a six inch main instead of a three inch main, would you not have some record showing that it was alongside of a three inch main that that six inch main was put down?

A. Not of necessity at all, no. Why would we? If I put down a six inch main instead of a three inch main, or cut a three inch main off or take it out, I report it to the accounting department that I have taken it up, or that I have disused so many feet of three inch main, and report that I have laid so many feet of six inch main new.

Q. Instead of three inch main?

A. No; that has nothing to do with it.

Q. So that you have made such records in each case?

A. Always.

Q. When you put down those new mains instead of abandoned mains?

A. Every main that is taken up or disused, and every main that is laid is reported to the accounting department.

Q. Those reports will show the whole operation, will they not, in regard to abandoned mains and new construction?

A. Yes.

Q. And the size of the pipe abandoned, and the size of the new pipes put down?

A. It would, yes.

Q. Will you produce these reports?

A. They are not in my possession; they are in the accounting department. I could not produce them.

380 Q. You made them.

A. No, they were not made by me; they were made by my directions and sent into the accounting department. They go out of my hands and never come back to my hands.

Q. They are made by your direction for the information of the accounting department?

A. Exactly.

Q. And furnished by your department to the accounting department?

A. Yes.

Q. If you are advised by counsel, you can produce those records from the accounting department?

A. I suppose I could go to the accounting department and get them.

Q. And get them?

A. I suppose so.

By Mr. MATHEWSON:

Q. Are those mains which are abandoned of any size which are useful to the company at all?

A. None whatever; they could not be used.

Q. They would be valueless to the company, would they?

A. Absolutely; they could not be put into use by any one.

By the **Master**:

Q. You were asked regarding putting two pipes in one trench. Suppose it was in one of those cross streets like 50th Street, an old main of the Manhattan Company or the Municipal Company, that had been laid in a trench where there was rock that had been blasted out partly; do I understand that if you were now to lay a new main in that street you would start out entirely independent of the old trench and lay a new trench, or would you from your map find out where the old trench was located and put your new pipe in the old trench?

381 A. Certainly we would put it in the old trench; but the question Senator Page asked was if two mains were to be laid on one street at one time——

Mr. **Page**: Not at all.

Mr. **Mathewson**: That was my understanding. That was what I thought you asked.

The **Witness**: You did not mention anything about rock. Rock makes an entirely different proposition.

Mr. **Page**: I asked you whether you would blast an entirely new trench through rock, or blast out one side of it.

The **Witness**: I did not understand that at all.

Mr. **Mathewson**: I thought that is what you asked.

By Mr. **Burr**:

Q. That paper which was marked for Identification, City Exhibit 1, from which you testified, was that made up by you, or was it furnished to you by the financial department?

A. It was made up by me.

Q. From you own records?

A. Records as to quantities, number of feet, which were compared with the ac-ounting department before I took them to make my figures on.

By Mr. **Mathewson**:

Q. You have the figures still, you said?

A. Yes, the computations were made by me.

By Mr. **Burr**:

382 Q. Can you not make a direct answer? Was that paper made up from the records which you kept in your department, or was it a paper furnished you by the financial department?

A. No, the records were from papers kept in my department and verified by ones in the accounting department.

Q. And those records you still have?

A. I still have.

By Mr. **Mathewson**:

Q. I understand then that if you desire to replace a small main, for instance, with a larger main, you will relay it in the same trench if you can?

A. We certainly would; absolutely; we always do.

Q. And if two mains were to be laid in the street at the same time, you would dig one trench and lay those two mains in, would you?

A. We certainly would.

Q. In other words, you take advantage of an existing trench where you can, where circumstances permit it?

A. Yes, sir.

At 4:40 o'clock P. M. adjourned to Monday, July 23, 1906, at 11 o'clock A. M.

Last Exhibits:
Complainant's 69.
City's 1 for Identification.
State's A.

383 Circuit Court of the United States, Second District of New York

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Monday, *July* 23, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

384 Mr. Burr: I want to make a motion with regard to Mr. Simpson's testimony. I move to strike out the testimony of the witness Simpson regarding the cost of construction, maintenance, repairs and value of mains, on the ground that his testimony is based on statements purporting to be taken from the original entries entered in the books kept by the witness and by the company, and now in his and its possession; that such testimony is not the best evidence, and that the complainant is bound to produce such original books and not mere extracts therefrom; the witness, for instance, bases his testimony as to the average cost of repairs and new construction on entries in said books, of such work done for many years past, such entries or books not being produced, plaintiff's counsel remaining mute when called upon to produce the same.

The Master: I will deny that motion without prejudice.

Exception taken by Mr. Burr.

ROBERT A. CARTER, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Where do you reside?

A. 25 Clinton Street, Brooklyn.

Q. Are you an officer of the complainant, the Consolidated Gas Company?

A. Yes.

Q. What office do you hold?

A. Secretary.

Q. Prior to that, did you hold any office with the corporation? What was your position?

A. I had the title of Controller.

385 Q. During what period have you been in the employ of the company, either as Secretary, Controller or in other capacity?

A. Since November 11, 1884.

Q. Since the organization of the company?

A. Yes.

Q. Were you connected with any one of the six constituent companies before that date?

A. Yes; with the New York Gas Light Company.

Q. In whose charge are the books and accounts of the company?

A. In my charge.

Q. You are familiar with them?

A. Yes.

Q. Are there any mortgages covering the property of the company that you know of?

A. No, sir.

Q. You mean there are none?

A. No mortgages.

Q. What is the outstanding capital stock of the company?

Mr. GANS: I object to that as incompetent, irrelevant and immaterial, and no evidence upon any issue that is presented here.

Mr. BURR: I make the same objection, your Honor, and if the record of that outstanding capital is contained in the books of the company, I call for the production of the original books of entry.

The MASTER: I suppose as to the question of competency there is no doubt better evidence, but I will allow the question.

Exception taken by Mr. Gans and Mr. Burr.

A. Eighty million dollars.

Q. What is the authorized capital, if you know?

Mr. GANS: We make the same objection to all this whole line of proof.

Mr. BURR: The same objection.

The MASTER: Yes; I will allow it.

Exception taken by Mr. Burr and Mr. Gans.

The MASTER: I assume this will be connected later.

A. One hundred million dollars.

386 Mr. Mathewson: I will say, if your Honor please, that we thought it was proper to show what the capitalization of the company is, and how much is outstanding, and other details which may show the situation of the corporation. It is alleged in the Bill and also in the affidavits, and I am showing it for what it may be considered worth.

Q. Are you familiar with the agreement of consolidation of 1884, by which this company came into existence, Complainant's Exhibit No. 1?

A. I have seen it, yes.

Q. I observe that the proposed capitalization is stated on that exhibit to be Forty-five millions of dollars, and that the Mutual Gas Light Company is recited as one of the companies to consolidate. Did the Mutual Company become a party to the Consolidated agreement?

Mr. Gans: Does not the agreement speak for itself? I object to it on that ground.

Mr. Burr: The same objection.

The Master: Is not that agreement in evidence?

Mr. Mathewson: Yes, the agreement is in evidence. I merely ask that as preliminary to another question.

The Master: I will allow it.

Exception taken by Mr. Burr and Mr. Gans.

A. No, sir.

Q. Will you state what the amount of capital assigned by this agreement to the other six companies which did come into the consolidation aggregates, if you have computed it or will compute it?

Mr. Gans: Is this just a computation in the place of the agreement itself?

The Master: Yes.

387 A. $39,078,000.

Q. Do you know how that figure was reached, at the time of consolidation?

Mr. Burr: Is he speaking of his own knowledge?

Mr. Mathewson: He is speaking of his own knowledge, from information that he has.

Mr. Gans: I object to that as incompetent, irrelevant and immaterial. I do not see that it makes any difference how it was reached.

Mr. Mathewson: Perhaps not; we will see.

The Master: I will allow it.

Exception taken by Mr. Gans.

A. $39,078,000 was the market value in the first place by the appraisal of the property——

Q. No, I have not got to that point yet.

Mr. Burr: I ask that the answer of the witness be stricken out.

Mr. Mathewson: Just state how that was obtained, $39,078,000.

A. That represented simply the market value of the stock of the companies which were consolidated—the capital, whether in stocks or bonds or other obligations.

Q. Of the six constituent companies?
A. Of the six constituent companies.

Mr. Burr: I object to that, and ask that that answer be stricken out, there being no evidence as to this witness being competent to testify as to the market values of the stocks of those companies at that time.

Mr. Mathewson: That was twenty-one years ago. This witness was an employee of the company, and he said he knew at the
388 time, and I asked him to state. I do not know of any way of
proving it except by the statement of some man who has the information.

Mr. Burr: You cannot prove it by the statement of this witness.

Mr. Page: It states a conclusion.

Mr. Mathewson: That fact was reported to the Senate Committee of 1886, in so many words.

Mr. Burr: Then I submit that all his answer should be is that the Senate Committee has so reported.

Mr. Mathewson: That would not be half so good evidence as the testimony of this witness, who was in the company and who knew.

Mr. Burr: This witness cannot testify to values without first being shown to have possessed exact knowledge enough to enable him to testify.

The Master: Mr. Burr, at this stage of the case, is it not sufficient to let it go in as indicating that at all events it was on this basis that the market value was arrived at?

Mr. Burr: If he will so testify, yes; but he has asked him a different question.

The Master: As to the competency of proof of the market value, you were right, and if our friend does not make any better proof your objection may be good, but I think that these technical objections are all right so far as they go, but in a proceeding of this character they waste time. I will allow Mr. Mathewson to make a *prima facie* presentation of his case along these lines. If he fails in proof, or if his proof is not up to the mark, he takes the risk.

Mr. Gans: I may be wrong about these proceedings; I am not sufficiently familiar with them, but I understand that we
389 have to take our objections now or waive them for good and
all.

Mr. Mathewson: What is the use of taking objections on points that are perferctly understood and that have always been conceded.

The Master: It is quite proper to take an objection, but I think one objection to all this general line of testimony is sufficient.

Mr. Page: You do not claim, do you, that that has always been conceded, that 39,078,000—that that represented the market price of the stocks and bonds of the constituent companies?

Mr. Mathewson: Yes, I understand that to be so. I understand that the $39,078,000 was fixed as representing the market price at that time of the securities, generally speaking, of the six constituent companies.

Mr. Page: I think this is the first time that claim has been made in any proceeding that I have been connected with.

Mr. **Mathewson**: Have you a copy of the Senate Committee Report of 1886?

Mr. **Page**: I said any proceeding that I had been in.

Mr. **Mathewson**: In that proceeding that you have been in—both proceedings, that document was offered in evidence in full, both before the State Commission, and before your Investigating Committee.

Mr. **Burr**: There was a majority and minority report upon that subject.

Mr. **Mathewson**: Yes, this is the majority report, and it is a matter of fact that that is the way that sum was reached, by taking the market value of the securities of the six constituent companies. Then, what the various items of that were, I propose to show.

390 Objection overruled; exception by Mr. Gans and Mr. Burr.

Q. Under the Act of 1884, pursuant to which the consolidation was made, there is a provision that the capitalization of the consolidated companies shall not be in excess of the aggregate value of the property, franchises and rights of the six constituent companies. Do *not* know whether an appraisal was made at that time of the tangible property of the six constituent companies?

Mr. **Gans**: We also object to that on the same grounds.

Objection overruled; exception taken by Mr. Gans.

A. There was such an appraisal made, yes, sir.

Q. Has the company those appraisals?

A. Yes, sir.

Q. Do you remember what the aggregate appraisal was in June, 1884, or about that?

The same objection, ruling and exception.

A. $29,994,000.

Mr. **Page**: I think the appraisals will speak for themselves, and will be the best evidence.

The **Master**: Yes.

Mr. **Page**: Are you going to offer the appraisals?

Mr. **Mathewson**: Yes. I offer in evidence the appraisals in question. They are found in the printed record before the Gas Commission, at page 1820 to page 1963, inclusive.

Mr. **Gans**: We make no objection to their relevancy and materiality, and none as to the form of the proof, subject of course to correction if any errors should develop.

391 Mr. **Burr**: I have no objection if the witness will testify that those are correct copies of the originals.

Q. I ask you whether the papers I show you are copies of the appraisals?

A. I have not checked those in detail, but my belief is that they are correct.

Q. They were furnished for submission to the Gas Commission, were they not?

A. Yes.

Mr. **Mathewson**: Any objection to these on the ground that they are not correct?

Mr. **Gans**: Not if they are received subject to correction and comparison.

Mr. **Mathewson**: I will say that they are copies of the report of the Senate Committee of 1886.

The **Master**: They are received subject to verification and correction.

Mr. **Burr**: With that understanding, I make no objection.

Mr. **Mathewson**: They are subject to verification, of course.

The **Master**: They are admitted. Your objection is overruled, (To Mr. Gans) in so far that they show the fact that an appraisal was made in that manner, but not of course as evidence that the value was necessarily as set forth there.

Received in evidence as Complainant's Exhibit No. 70, but not marked.

Q. Mr. Carter, my computation in reference to these appraisals which are in evidence shows a total of a little over thirty million dollars. Do you remember whether that is correct or not? You did compute it?

A. The original appraisal was slightly in excess of thirty
392 million dollars, but some deductions were made which reduced it to the figure which was finally accepted and used, $29,994,000.

Q. Do you remember the figure at which the franchises of the companies were appraised or fixed?

A. $7,781,000.

Q. What is the total of those two sums?

A. $37,775,000.

Q. The authorized capital of these companies was, as you have stated, $39,078,000 by the consolidation agreement, or a difference of $1,303,000 between the total you have just stated and the total of $39,078,000. Do you know what that was employed for?

A. That was reserved as working capital.

Q. Taking the total of $37,775,000, which represents the appraised value of the tangible property and the franchises together as you have stated, was that amount of stock at once issued, and if so, state how much was issued and the reason why the balance was not?

A. There was issued at the time of the consolidation $35,430,060 of capital stock; the balance of the $37,775,000 representing the value of the tangible and intangible property of the consolidating companies was reserved to retire the outstanding obligations of those companies.

Q. In other words, the $37,775,000 was for the tangible property and the franchises free and clear?

A. Yes, sir.

Q. And as they were subject to certain obligations in the way of outstanding bonds, an equivalent amount of stock was reserved out of that to care for the obligations?

A. That is right.

Q. And when those obligations were cared for, then was the $37,775,000 outstanding, and the property free and clear?

A. Yes, sir.

Q. Now, between the time of this appraisal, which is commonly called of June, 1884, and the actual creation of the complainant company in November, 1884, can you tell what property, if any, was added, to that which had been appraised at $29,994,000? 393

A. There were additions to the appraisal of June, 1884, of property acquired from that date to November 11th, 1884, amounting to $196,419.01.

Mr. GANS: May it be noted on the record, first, that the witness testifies from a paper that he refers to, and in the second place may there be noted an objection to his testimony as to the money value of property added, on the ground that there has been no basis laid for any such testimony, and the witness is not shown to be qualified to speak as to the value of property. If the testimony is that upon the books of the company there appear items to that effect, it may be taken.

Mr. BURR: I make the same objection.

Mr. MATHEWSON: I understood it to be property acquired, valued by the company at that amount, of course.

The MASTER: It is received with that understanding.

Q. Have you prepared a statement, Mr. Carter, from your knowledge and from the records of the company showing the amount of the appraisal of June, 1884, as sub-divided into classes with the addition of this property which was valued at 196,419.01 showing the total of the 11th of November, 1884?

A. Yes, sir, I have such a statement.

Q. Let me see it.

(Witness produces paper.)

Mr. MATHEWSON: It is similar to the one before the Commission. I will offer in evidence the first three columns. I think that puts it in convenient form so you can see just what the additions were by classes, and then I will follow it down to date.

394 Mr. GANS: I think there should be an understanding, if this goes in in this form, that we are to have the privilege of going to the sources from which it is taken and see those sources and check this up by those sources whenever we so desire, for the purposes of cross-examination or otherwise; because obviously this is not a form in which the complainant is entitled to put in this.

Mr. MATHEWSON: I am not offering it as a statement of value on the part of this witness; I am showing the books of the company.

Mr. GANS: We are entitled to have the books themselves. I am not saying that we want them here now, but I think that should be understood, and ought not to be met by Mr. Mathewson with his sphinx-like attitude when we come to ask for their production.

Mr. BURR: I understand this is being offered as an extract from the original books of the company, and I object to it as not being the best evidence, and if it is received upon any grounds, we certainly should be entitled, as counsel for the State has said, to an examination of the books for the purpose of examining whether these are correct results which appear upon this extract.

Mr. **Mathewson**: They have been before two Commissions.

Mr. **Burr**: I was not before the other Commission.

Mr. **Mathewson**: I understand that, but they were accepted, and I understood they were correct. Still, you can compel me to produce the original books to prove that if you want to.

The **Master**: If you want to put that in evidence as the witness' calculation or resumé of certain figures appearing on your books, of course it is quite proper that the books on which it is based should be produced if required. 395

Mr. **Mathewson**: Yes.

The **Master**: If you can satisfy those gentlemen by allowing someone to go up there and check off those figures, that they are correct, without putting us to the delay and trouble of bringing down truckloads of books here, I suppose it will answer the purpose.

Mr. **Page**: Yes, that would be satisfactory.

The **Master**: But if you offer that in evidence and it is received and they ask me to require you to produce the books of which that statement is a summary, I shall have to rule that they are entitled to it and that you must do it, so that is the situation where the problem is to arrange it in the way that will save the most time and the most trouble for all of us. I assume all they want is to check that up, they do not want to put you technically to the trouble of bringing down a truckload of books.

Mr. **Page**: No.

Mr. **Gans**: We may not want him to do that, but we want to know if we will have the right to do that if we do want it.

Mr. **Mathewson**: I think that can be arranged.

(First three columns of the statement received in evidence and marked Complainant's Exhibit 71.)

Mr. **Burr**: With that understanding, as your Honor has brought it to the attention of Mr. Mathewson, we have no objection to the introduction of those three columns.

Q. Will you state when the first increase of stock beyond the original $39,078,000, which you have stated represented the tangible property, franchises, and the working capital, was made? 396

A. March, 1900.

Q. March, 1900?

A. Yes, sir. Now, pardon me, it was at that time that the increase was authorized, stock being issued subsequently to that date.

Q. Can you produce the resolution of the stockholders, authorizing the increase?

A. Yes, sir.

Q. Have you it here?

A. I have a certificate of increase, a certified copy of the certificate of increase.

Q. Have you a copy of the resolution of the stockholders authorizing the increase?

A. I have a copy of that (producing paper).

Mr. MATHEWSON: I offer this in evidence. Of course that may be checked by the original minute-book if you desire its production. It was in evidence before the Commission and before the Investigating Committee.

Mr. GANS: I simply object to it as immaterial and irrelevant.

Mr. BURR: I object to it as being incompetent, immaterial and irrelevant, and I submit that we are entitled to an examination of the original minute-book, and all the resolutions which preceded the adoption of this resolution and leading up to it.

The MASTER: I will allow it.

Mr. BURR: Exception.

Mr. GANS: Exception.

Received in evidence and marked Complainant's Exhibit 72.

Mr. MATHEWSON: I stated it was subject to verification from the original, and if you desire I will produce the original resolution.

Mr. BURR: What is the date of that resolution?

The WITNESS: March 9th, 1900.

397 Q. This resolution provides for an increase in stock, does it not, from $39,078,000 to $54,595,200?

A. That is the case, yes, sir.

Q. And states that it is to redeem the outstanding four per cent. debentures of the complainant company issued for stock of the New York Gas and Electric Light, Heat and Power Company aggregating $36,000,000?

A. That was the purpose for which the increase was authorized; yes, sir.

Q. Was a certificate filed in the public offices effecting this increase?

A. Yes, sir; of which I have a certified copy taken from our files.

Q. Will you produce it, please?

A. Yes (producing paper).

Mr. MATHEWSON: I offer in evidence certificate of increase of stock of the complainant from $39,078,000 to $54,595,200, dated March 9th, 1900. Is there any objection to our filing a copy of this subject to verification from the original?

Mr. GANS: I object to its relevancy but not to the form of it.

Mr. PAGE: It appearing on the face of the exhibit that the stock was issued for the purchase of stock of the New York Gas and Electric Light, Heat and Power Company, it has no relevancy to this inquiry.

The MASTER: I will allow it.

Mr. GANS: Exception.

Mr. PAGE: Exception.

Mr. BURR: I object to it as being incompetent, irrelevant and immaterial, and having no bearing upon the issues involved in this action.

Objection overruled; exception.

The paper was received and marked Complainant's Exhibit 73.

398 Q. Are you able to state the amount of the four per cent. debentures of the complainant company for which this increased stock was to be issued?

A. $36,000,000.

Q. Was this increase of stock so issued and those debentures retired by them?

A. Yes, sir.

Q. At what rate was that for the stock of the company?

A. $232 a share of $100 par value.

Q. When was the next increase of stock made beyond this total of $54,595,200?

A. Made or authorized?

Q. Authorized or made.

A. Authorized July 16, 1900.

Q. Have you a copy of the resolution of the stockholders authorizing that increase?

A. Yes, sir.

Mr. MATHEWSON: I will also offer this in evidence, Mr. Master, with the understanding that it may be subject to verification by comparison with the original minutes if desired.

Mr. GANS: Same objection as to relevancy and materiality.

Mr. BURR: Same objection on behalf of the State.

Same ruling and exception.

Paper received and marked Complainant's Exhibit 74.

Q. This resolution, provides for an increase from $54,595,200 to what sum?

A. To $80,000,000.

Q. Was any certificate filed in the public offices to effectuate such increase?

A. Yes, sir. Here is the certified copy of it (producing paper).

Mr. BURR: What was the date?

Mr. PAGE: July 16, 1900.

399 Mr. MATHEWSON: I offer in evidence certified copy of certificate of the complainant company dated July 16, 1900, increasing the stock to the total of $80,000,000 from $54,595,200.

Mr. BURR: I object to it as incompetent, irrelevant and immaterial and not bearing on the issues involved in this action.

Mr. GANS: Same objection.

Mr. PAGE: Same objection.

Objection overruled; exception.

(Paper was received and marked Complainant's Exhibit No. 75.)

Q. Does this $80,000,000 represent the entire outstanding stock of the company?

A. Yes, sir.

Q. When was the increase of the stock from $80,000,000 to $100,000,000 authorized?

A. June 2d, 1904.

Q. Have you a copy of the resolution of the stockholders for that increase?

A. Yes, sir. (Producing paper.)

Mr. MATHEWSON: I offer that in evidence.

Mr. **Gans**: Same objection as to relevancy and materiality.
Mr. **Burr**: Some objection on behalf of the city.
Objections overruled; exceptions.
Papers received and marked Complainant's Exhibit 76.

Mr. **Mathewson**: I call the Master's attention to the provisions of this Exhibit No. 76 which are in substance that the Board of Directors of the company be and are authorized to forthwith issue coupon debentures of the company to the extent of $20,000,000, payable July 1st, 1909, unless sooner converted into the stock of the company as hereinafter provided. These debentures were to be dated July 1st, 1904. This certificate was dated June, 1904.
400 And that the $20,000,000 increase was for the purpose of converting those debentures if the holders desired to convert them.

Q. Have you a certified copy of any certificate, if a certificate was filed in the public offices, to effectuate this authorization?
A. I have, yes, sir. (Producing paper.)

Mr. **Mathewson**: I offer in evidence certified copy of certificate dated June 2, 1904, authorizing the increase of the capital stock from $80,000,000 to $100,000,000.
Mr. **Gans**: Same objection.
Mr. **Burr**: Same objection.
Objection overruled; exception.
Papers received and marked Complainant's Exhibit No. 77.

Q. I merely ask you whether these three certificates, certified copies of which you have produced, were filed in the offices of the Secretary of State and the County Clerk of New York, respectively?
A. Yes, sir.
Q. At or about the date?
A. At or about the date, yes, sir.

Mr. **Mathewson**: There are two corrections to be made in Mr. Simpson's testimony of the session of July 20th. Page 367, my statement "Strike out the first part" should be "strike out the last part." Also on page 371, "Mr. Simpson's testimony" instead of "Mr. Carter's testimony."

Q. Can you state, Mr. Carter, at what rate the balance of the capital stock above the $54,595,200 was issued by the Consolidated Gas Company, whether it was issued at par or above?

401 Mr. **Gans**: You mean by that, what they got for it, what the proceeds were to the company?
Mr. **Mathewson**: Yes.
Mr. **Gans**: Of course, this is subject to our same objection that that would be shown best by the books of the company.
Mr. **Mathewson**: Well, he knows by recollection without reference to the books of the company, I think. I will ask him.
Mr. **Burr**: I object to it as incompetent, irrelevant and immaterial.
The **Master**: I will allow it.
Exception.

A. From my recollection, all of the stock issued was at a premium of from $150 per share, at which it was sold to shareholders by subscription to $193 and a fraction dollars per share, at which some was sold in the market.

Q. Are you able to recall from your own memory just how much was sold at each rate?

A. I would not like to depend on my memory for the exact figures I could give round figures, but if I may consult a memorandum, I could give the exact figures.

Q. Well, consult your memorandum if that will refresh your recollection.

A. In 1900 we issued to shareholders 136,448 shares at $150 per share.

Q. In cash?

A. For cash. February, 1901, we sold for cash 9,000 shares at 193⅝. From September, 1900, to August, 1902, we issued in exchange for debentures given for New Amsterdam stock, 37,736 shares at $190 per share. In 1903 we issued to shareholders 70,824 shares at $150.

Q. Was that cash?

A. For cash, yes, sir.

By Mr. Gans:

402 Q. These figures are all taken from the books of the company?

A. Are all taken from the books of the company, yes, sir.

Q. And that summary from which you have been reading, is a summary taken from the books of the company, is it not?

A. Yes, sir.

Mr. Mathewson: You do not mean it will be found on the books of the company in the shape of a summary?

Mr. Gans: No, sir, but it is a summarization of what you have found on the books of the company?

The Witness: Exactly.

Q. Were you familiar with the transaction at the times they took place?

A. Yes, sir.

Q. Do you know whether the record in the books in reference to them is correct?

A. It is correct, yes, sir.

Q. Does that account for all the stock of the company issued beyond the $53,595,200?

A. Yes, sir.

Q. Do you remember at what figure the premiums on stock now issued appear in the books?

Mr. Page: What do you mean by that?

The Witness: Something over $14,000,000.

Mr. Page: You mean the amount received over and above par value?

Mr. Mathewson: No, the premiums at which the various issues of stock were put on. I ask what the premium appears to be on the books.

The WITNESS: Something over $14,000,000.

Mr. GANS: Won't you explain just what the premium means there; does that mean the excess over par?

Mr. MATHEWSON: The excess over par.

403 Mr. GANS: As credited on the books?

Mr. MATHEWSON: Precisely.

Mr. PAGE: Ask whether this was stock issued for exchange at $190 and whether that is a part of that $14,000,000.

Mr. MATHEWSON: Yes, precisely.

The WITNESS: $14,322,217.95 is the amount of premium carried on the books of the company.

Q. Does that include the entire amount of premium realized on the issue of this stock?

A. No, sir; it does not, because in cases where we exchanged our stock for the debentures issued for the stocks of the New York Gas, Electric Light, Heat and Power Company and the New Amsterdam Gas Company we carried the stock acquired at the par value of the stock that we issued and did not carry it at the premium at which our stock was issued, which was 232 in the case of the New York Gas, Electric Light, Heat and Power Company and 190 in the case of the New Amsterdam Gas Company.

Q. In other words, you reduced your books to the par of that stock you issued and did not carry it into the premium account?

A. Precisely.

Q. Will you state how much additional premium account would have resulted had you carried it at the rate at which it was issued?

A. $23,879,183.06.

Q. So that the total premium received over par for the stock of the company so issued would amount to how much?

A. I will have to make a little computation to get that—$38,201,401.01.

Q. That represents the total premium on the issue of the entire $80,000,000 of stock, does it?

A. Yes, sir.

Q. Are any debentures outstanding issued by the company prior to the issue of July 1, 1904, of which I shall ask you later?

A. Yes, sir, a balance of $1,387,000.

404 Q. Do you remember when they were issued?

A. In 1888.

Q. About that time, at any rate.

A. About 1888.

Q. Have you a copy of the resolution—I think the resolution authorizing the debentures of July 1 is in, isn't it; or have you a separate one for that, Mr. Carter?

A. No, I have not.

Q. Is that a separate resolution?

Mr. PAGE: Yes, "Resolution for issuing debentures to be converted into stock."

Mr. MATHEWSON: That is a recital of it.

Mr. Page: I say, that is my recital of it; the resolution is Exhibit 76, and the certificate for increase is Exhibit 77.

Mr. Mathewson: The resolution authorizing the increase?

Mr. Page: That is Exhibit 76.

Mr. Mathewson: Quite right; that resolution covers both.

Q. Exhibit No. 76, Mr. Carter, covers both the debentures and the issue of the $20,000,000 additional stock above $80,000,000 for their redemption, does it?

A. Yes, sir.

Q. Will you tell what proportion of the $20,000,000 debentures which the July 1st, 1904 resolution authorized were actually issued?

A. $19,857,600.

Q. And issued at what rate?

A. At par.

Q. Do you know for what purposes those debentures were issued, or the purpose of issuing them; what particular matters were in mind, if any?

A. In a general way to pay for improvement and betterments, additions to the plant and property of the company, cancelling the company's obligations, purposes of that kind.

Q. Issued for betterments?

A. Betterments, yes, sir.

405 Q. Did it have any relation to the Astoria plant, if you know?

Mr. Gans: I object to that, the purpose for which these debentures were issued and what somebody had in mind when they passed a resolution issuing them.

The Witness: I think the purposes for which they were issued is very plainly indicated by the employment of the funds since.

Mr. Gans: That may be.

Mr. Burr: Is not the purpose for which they were issued specified by the resolution?

The Witness: Practically, as I have indicated.

Mr. Mathewson: In general, yes. I was asking what particular improvements he might have had in mind.

Objected to as immaterial, calling for the mental operation of the witness, or the mental operations of the minds of the Board of Directors.

The Master: It will be better to ask what they were used for.

Mr. Burr: I object to what he had in mind, and ask that the witness be confined as to what they were actually used for.

Mr. Mathewson: I ask for the purposes.

The Witness: The improvement at Astoria, the construction of the gas plant at Astoria was the particular purpose.

By the Master:

Q. Have they been used for that?

A. To a very considerable extent, sir. To the present 406 time we have expended several millions of dollars on the Astoria plant.

By Mr. MATHEWSON:

Q. The Exhibit 71 shows the total of property on November 11, 1834, as carried on the books of the company, including franchises of how much?

A. $37,770——

Q. No, no, November 11, 1884.

A. $37,971,419.01.

Q. Have you prepared the tabulation showing the amount at which those particular items were carried on the books of the company on each December 31 down to date?

A. Yes, sir; I have such a memorandum.

Q. Produce it.

A. This is brought down to October 31, 1905 (producing a paper):

Mr. MATHEWSON: I offer this in evidence.

Mr. GANS: Objected to as incompetent, irrelevant and immaterial, and we object to this form of the introduction of it unless it is to be understood, as I said before, that we may have the opportunity of checking it up by the books and disclosing it through the books.

Mr. MATHEWSON: All that I have asked is whether the amount of these items appears on each December 31 in the books of the company at those figures, not whether they are the values or how they are reached.

Mr. BURR: I object to it as not the best evidence.

Mr. GANS: Of course, it is subject to verification from the books of the company necessarily.

The MASTER: I will overrule the objection.

Messrs. Gans and Burr except.

Received in evidence and marked Complainant's Exhibit 78.

407 Q. Have you prepared a table, Mr. Carter, comparing the items of assets which are contained in Exhibit 78, as between November 11, 1884, and October 31, 1905, showing the increases or decreases of items, and, also, by the books of the company, the amount expended for repairs during that period?

A. Yes, sir; I have such a statement (producing a paper).

Mr. BURR: May I inquire here what counsel purposes proving by the introduction of these exhibits? Is it the original cost or present value of the property? If it is the original cost, does it not leave it liable to us to go into the cross-examination of the appraisals made at the time of the consolidation in 1884, which he claimed a few seconds ago we were foreclosed from examining into, they having been passed upon by the Legislature?

This purports to be a record of real estate, plants, property and works, as shown in the balance-sheets of the company from 1884 to 1905, that whole period. I think we are entitled to ask him what is the object of the introduction of these records beyond 1900, unless he is going into the original cost of the plants; and if he is going into the original cost, upon what is he basing his claim as to the price or cost, whether upon originally the cost or upon the present value as contemplated for reproduction, as it exists to-day, as these plants exist to-day.

Mr. MATHEWSON: You are raising a good many questions in that inquiry, Mr. Burr. I am introducing these now in order to show the progress of the company, if you please, from the time of its incorporation up to date, so that in two or three pages one may have a bird's-eye view of its development. I suppose it will appear how the total now compares with 1884. 408 The amount of renewals and repairs which appears in the statements in bringing up this total is some indication perhaps as to the condition in which the plant has been kept; and as to valuations we do claim that the value of the property to-day, the cost to reproduce it, is the value of the property devoted to the public service, including our intangible property, franchises and good-will, as well as tangible property, and that that is the basis upon which we are entitled to earn a return.

Mr. BURR: I object to it as incompetent, immaterial and irrelevant.

Mr. GANS: I make the same objection to the last exhibit as I did to the one before the last.

The MASTER: I will receive it.

Messrs. Gans and Burr except.

Received in evidence and marked Complainant's Exhibit 79.

Q. Have you prepared a balance sheet, a condensed balance sheet, of the company showing the assets and the liabilities on October 31st, 1905?

A. Yes, sir (producing a paper).

Q. I referred to another one.

A. What do you refer to?

Mr. PAGE: A balance sheet compared with November 11, 1884.

The WITNESS: Oh, no, I don't think I have that.

Mr. MATHEWSON: I think perhaps what you have in your hand will answer the purposes.

Q. This was the one similar to that which was called for by the Gas Commission, isn't it, and which was submitted?

409 A. Yes, sir, that was submitted to the Gas Commission (Exhibit 177 before the Gas Commission).

Q. Have you prepared a statement of assets and liabilities of the Consolidated Gas Company from its books as of October 31, 1905, showing the total book values of its assets and the sources from which derived?

A. Yes, sir (producing statement).

The paper is offered in evidence.

Mr. GANS: Same objection.

Mr. BURR: Same objection, and objected to on the ground that the books are the best evidence.

Same ruling; exceptions.

Received in evidence and marked Complainant's Exhibit 80.

Mr. GANS: By my objection I meant it was to be, if received at all, subject to our rights to verify it by the books and to examine the books.

The Master: Yes.

Mr. Mathewson: I don't know what you mean to examine, but I suppose to verify by the books would cover that; I don't think it includes the right to examine the books *ad libitum* on subjects not introduced.

Mr. Page: A balance sheet pretty nearly brings in the books, does it not?

Mr. Mathewson: At that time, yes.

Q. Does the $47,664,984.91 which appears in Exhibit No. 80 opposite the title "Plants and Property, Manhattan," include the franchises of $7,781,000?

A. Yes, sir.

Q. Deduc-ing franchises would leave a total for that item of how much—in order to get at the tangible property only there included?

A. $39,883,984.91.

410 Q. Now, Mr. Carter, for our convenience, have you prepared a tabulation showing the items making up such amount of $39,883,984.91 by general classes, and the other items shown on Exhibit 80 which the company claims at that time to be invested in its gas business?

A. I have a statement of that kind (produces statement).

Q. This statement which you have just handed to me contains in other respects the same items as Exhibit No. 81, does it not?

A. Yes.

Mr. Mathewson: I offer this in evidence.

Mr. Gans: We make the same objection.

Mr. Burr: The same objection.

The same ruling and exception.

Received in evidence and marked Complainant's Exhibit 81.

Q. Will you add to the items shown on Exhibit 81, the total of $61,823,949.63, the item of franchises, $7,781,000, at which it appears on the books, and see what the total is?

A. $69,608,949.63.

Q. That is the same total as appears on Exhibit 80?

A. Yes, sir.

Q. I will pass the item of real estate, $10,929,785.59, and plant, $16,087,428.72, and call your attention to the item of mains, $7,852,153.03. Did you hear the testimony of Mr. Simpson the other day on the subject of mains?

A. No, sir, I did not.

Q. He stated in substance that a certain mileage of mains of 5-inch size or lower was included in his total of 822 miles of mains, respecting which he gave value, but it appeared by the tax statement of November 1, 1905, that there was a greater mileage of mains of those sizes, or of some of those sizes, specified in the tax report. Can you explain that?

A. The figures that appear in the tax report were put there 411 in error or through a clerical inadvertence. We only should have reported, according to my understanding the mains that were in use.

Q. And carried on the books of the company?

A. Carried on the books of the company as in use, but through a clerical inadvertence the abandoned mains were included in that report.

Q. So that the statement of Mr. Simpson as to the mileage of mains of the company which it carries on its books as an asset, and for which it claims right to earn, was correctly stated, was it?

A. Yes, sir.

Q. It appeared too that compared with June 30th, 1905, the mileage given by Mr. Simpson in respect to one or two sizes of the larger mains was slightly less, as stated by him, for October 31st, 1905, and the difference between the mileage of mains in 1905, June 30th, and 1905, October 31st, in those cases, was stated in the Tax Report. Do you know whether that difference was stated in red ink or otherwise, and indicated whether it was an addition or a subtraction from the June 30th status?

A. My understanding was that it was indicated in red in the report to the State Commission, and should have been so indicated, as there were a certain number of feet of mains of the larger size taken up during that period from June 30th to October 31st, 1905.

Q. Then, is it your understanding that Mr. Simpson's statement of the mileage of mains is a true statement of the mileage of mains of the company?

A. Yes, it is a true statement.

Q. Carried on its books as an asset?

A. Yes.

Q. Passing the item of services on Exhibit 81, I find the item Meters, Meter-Cocks, and connections and miscellaneous property, $3,802,554.50. Are you familiar with the character of property included there?

A. Yes.

Q. Will you state what it is in further detail than it is here, if you are able to?

412 A. It includes scows owned by the company, pipes, and specials; meters and meter-cocks and connections; horses, wagons and harness; furniture and fixtures; gas stoves and property of that character. Tools and implements you might include also, as that is a rather important item.

Q. Have you had any supervision in reference to purchase of articles of this class for the past few years?

A. Yes.

Q. Under whose supervision is this purchasing department?

A. Under whose immediate supervision?

Q. Yes.

A. We have a purchasing agent who attends to the details and has charge of the clerical force.

Q. And under whose supervision is he?

A. Under my supervision.

Q. And when purchases are made or are to be made, by whom are they checked? Are they checked by you?

A. Not personally, no, sir.

Q. By whom?

A. Checked as to what?

Q. As to the prices paid?

A. As to prices paid, the correctness of the prices at which we are billed for supplies is checked by the purchasing agent. Extensions would be checked in the accounting department, extensions and footings of the bills.

Q. Do you go over the bills of purchases?

A. More or less.

Q. Are you familiar with the prices which are paid by your company for these various items included in this $3,802,544.50?

A. Quite familiar.

Q. How long have you been familiar with such items of cost?

A. Several years.

Q. Are you able to state what the value, based upon cost of reproduction to-day, would be of that property which is carried on your books at $3,802,544.50?

413 Mr. Page: I object to that as entirely incompetent.

Mr. Burr: The same objection.

Mr. Gans: The witness is plainly not qualified to testify to that.

Mr. Mathewson: He says he is familiar with the prices.

The Master: He is not asked to state it yet, is he?

Mr. Page: Yes, I think so.

The Master: He is asked whether he is able to state?

Mr. Mathewson: Yes, that is what I asked him.

Mr. Gans: That is his own conclusion. The Master is the best judge of that.

The Master: We will see what he thinks about it.

Exception taken by Mr. Gans and Mr. Burr.

A. I am able to state roughly what it would cost to reproduce that property which appears in this exhibit as of the value of $3,802,544.50.

Q. Will you state?

Mr. Page: That is objected to.

The Master: Mr. Mathewson, I do not think that evidence would be of the greatest value.

Mr. Mathewson: Very well. If the Master does not think it would be of the greatest value, I would not wish to introduce any evidence of that superlative character.

The Master: Here is a gentleman, secretary of the company, who has had a great mass of these details coming before him, and he says he is familiar in a general way—more or less familiar with it—I will allow him to answer it. It goes on the record in 414 either event, whether it is excluded or not. It goes on the record for what it is worth. I think there is force in the objection of the other side that he has not been proven qualified, but I will allow it.

Exception taken by Mr. Gans and Mr. Burr.

Mr. MATHEWSON: State, Mr. Carter.

A. The cost of reproducing the property comprised in that value given in this Exhibit 81, of $3,802,544.50, is approximately $4,100,000.

Q. Will you state how many meters there are in that item?

A. 441,223 meters, including ordinary meters and prepayment meters.

Q. Meter cocks and connections, how many?

A. I should say about 387,000 meter cocks and connections.

Q. Have you stated all the classes of property which are included in this $3,802,544.50 in your previous answer? If not, give a complete classification by headings, meters, meter cocks, connections, scows, etc.?

A. I think I have included everything already, except possibly the automobiles.

Q. Did you include gas stoves?

A. I included gas stoves.

Q. Do you know whether this property is purchased by contract, general contract, or is any of it so purchased?

A. Some of it is. The cast iron pipe which is included in the pipe and specials is purchased under a contract.

Q. How about your gas stoves?

A. The gas stoves—some are purchased under contract, or rather are made for the company.

Q. Under a contract?

A. Under a contract.

Q. In such cases are the contracts in your possession?

A. Yes.

Q. Do you not know the prices fixed?

A. Yes.

415 Q. In making this estimate to which you have testified, as to the cost of reproduction, have you gone over, carefully the purchases, the rates and schedules of prices charged by different concerns, and all other data which was available, which would make it possible for you to make a careful estimate?

A. That is largely done under my supervision.

Q. I mean under your supervision, even if not by your hand?

A. Yes, sir.

Q. And for the purpose of qualifying you to give an estimate?

A. Yes.

Q. Take the next item in Exhibit 81, Materials and Supplies, $616,470.08. Of what character is that?

A. It comprises what is strictly gas making material, and material employed in the distribution of gas.

Q. How much of it is gas making material?

A. $449,268.42.

Q. Consisting of what class of material, generally speaking?

A. Coal, coke, gas oil, iron mass, lime and supplies of that nature.

Q. Does this $616,470.08 represent what that material and supplies cost the company, or some other measure?

A. The cost.

Q. That is not an estimate of the present value?

A. No.

Q. Are you generally familiar with what the company has been paying for supplies *for* that character and with their value?

A. Yes.

Q. Did the actual value on October 31, as far as you are able to judge, differ from the book value? I mean the value or cost of reproduction new? Did it differ from the cost value?

Mr. Gans: I object to that; he is not qualified to testify as an expert on values.

The Master: I will allow it.

Exception taken by Mr. Gans.

A. No.

416 Mr. Page: Well, he says it does not.

Q. The next item is cash working capital, $1,000,000. Does that represent all the cash at that time in the possession of the company?

A. No, sir.

Q. Can you say how much cash the company had on hand at that time?

A. Altogether?

Q. Yes.

A. $7,200,423.64.

Q. And was that cash in part the product of the debentures of July 1, 1904?

A. Yes.

Q. And how much of the debentures, or the proceeds of the debentures, were then in temporary investments in addition to the cash to which you have referred?

A. Well, the total of cash and temporary investments?

Q. Yes.

A. $12,717,494.64.

Q. So that a little over $7,000,000—about $7,300,000—of the debentures had been, up to October 31, invested, or rather their proceeds had been invested?

A. Yes.

Q. Are you familiar with the requirements of the company with reference to working capital?

A. Yes, sir.

Q. Is a million dollars in cash, in your judgment, fair working capital, according to the requirements of the company.

Mr. Gans: I object to that as a question upon which opinion evidence cannot be given. I do not think the conclusion of the witness can be called for on that proposition.

The Master: I will allow it.

Exception taken by Mr. Gans.

A. I should consider a million dollars was a fair conservative amount of working capital, such as a company like ours would require for current purposes.

417 Q. The next item on Exhibit 81, Accounts Receivable, is $2,000,000. That does not represent all the accounts receivable of the company, does it?

A. No, sir.

Q. Do you remember, or can you state, what the accounts receivable were on October 31, 1905?

A. Well, including the item of temporary investments, &c., the amount would be $8,517,071. That includes what is due from gas consumers and from sundry debtors of the company.

By Mr. GANS:

Q. That is included in the Two million dollar item, whatever it is?

A. That is included in the Two million dollar item; they exceed the Two million dollar item as a matter of fact, those two items alone. There was due at that time from gas consumers and what are termed "sundry debtors," $2,336,000 in round figures.

Q. Do your accounts here show how much of that was due from gas consumers?

A. From gas consumers? $1,604,000 of that was from gas consumers.

By Mr. MATHEWSON:

Q. How often do you send in bills, ordinarily, for gas to consumers?

A. Monthly, most of them.

Q. Are they always collected monthly?

A. No, sir; sometimes they are a month or two in arrears from some customers, we would generally I think have something like—approximately a month's bills outstanding due from customers at any point, at any time in the month.

Q. What other accounts receivable are there in addition to these from consumers?

A. We have amounts due us from contractors for whom we do some work in the streets. We have amounts due us from 418 people to whom we sell our residual products. The city owes us money for work done in connection with street lamps; repairing, erecting and removing lamp posts. It is that class of items that make up the most of the amounts due other than for gas.

Q. Are you personally familiar with the character of the accounts of the company outstanding and with their amounts as they run along from time to time?

A. Yes.

Q. Do you consider Two million dollars as a fair amount of accounts which may be outstanding in your business and in that shape as capital?

Mr. GANS: That is objected to as a question upon which opinion evidence cannot be given, and as calling for the conclusion of the witness.

Mr. Burr: And we object to it as incompetent, irrelevant and immaterial.

Objection overruled; exception taken by Mr. Gans and Mr. Burr.

A. I think that would be the fair amount, or would be the usual amount, I might say, due to the company from various parties for that kind of service.

Q. Capital that is tied up?

A. Permanently tied up.

Q. Or included in the accounts?

A. Yes.

Q. Continuously tied up?

A. Yes, continuously would be better.

Q. It is always there; can never be paid out, can it?

A. No, sir.

Q. You have to have that margin?

A. Exactly.

Q. The next item is capital invested in gas manufacturing plant at Astoria, etc., $5,560,000. Will you state the securities of the Astoria Light, Heat and Power Company which the Consolidated Gas Company held on October 31, 1905, representing that total?

419 Mr. Burr: Objected to as incompetent, irrelevant and immaterial.

Mr. Gans: The same objection.

The Master: The same ruling.

Exception taken by Mr. Burr and Mr. Gans.

A. $500,000 of the capital stock, being the entire amount of the capital stock outstanding of the Astoria Light, Heat and Power Company, and $375,000 of the mortgage bonds of the company, the balance of their obligations to us being represented by notes.

Q. How much would that leave for notes?

A. $4,760,000.

Q. That total would aggregate $75,000 more, then, than the $5,560,000 stated on Exhibit 81. Will you explain that?

A. The bonds are included at 80 per cent., not at par.

Q. In other words, you took the bonds of the Astoria Company, $375,000, at 80 per cent., which meant $300,000 advanced by the complainant company on that account; is that right?

A. That is the case, yes, sir.

Q. Did the company advance to the Astoria Company the cash equal or equivalent to the entire amount of the notes that it held?

A. Yes.

Q. Did it take the capital stock of the Astoria Company, $500,000 at par, in cash?

A. Yes.

Mr. Burr: This is all subject to the same objection.

The Master: Yes, the same ruling.

Q. I will ask you in regard to this item, the situation on June 30, 1906, respecting which Mr. Bradley testified; will you state how much the Consolidated Gas Company holds in stock, bonds and notes of the Astoria Company, at that time?

A. $7,010,000.

420 Q. Does that count in the bonds at 80 per cent., that $300,000?

A. Yes, sir.

Q. And the capital stock, still $500,000?

A. Yes, sir.

Q. How much in notes?

A. $6,210,000.

Q. Now, do you know whether those moneys had been actually expended at Astoria?

A. I do know, yes, sir, that they have been expended.

Q. You have charge of the books and records with reference to those expenditures?

A. Yes, sir.

Q. Can you tell the amount unpaid as yet upon uncompleted contracts?

A. I would not like to trust my memory, Mr. Mathewson, and I have not a memorandum of it.

Q. Will you get that amount?

A. I will do so, yes, sir.

Q. You have the contracts in your control?

A. Yes.

Q. And you are able to compute and make a statement?

A. Precisely.

Mr. MATHEWSON: We desire to check Mr. Bradley's testimony on that subject to see whether he was correct.

The WITNESS: I will make it up and bring it to you. You do not want that to-day, do you, to-morrow will do.

Mr. MATHEWSON: Yes, unless you can get it during recess. If you can I wish you would.

The WITNESS: I will try to get it to-day then.

(Here a recess was taken until 2:15 o'clock p. m.)

421 After Recess.

Examination of ROBERT A. CARTER continued by Mr. MATHEWSON:

Q. Mr. Carter, do you know whether the Consolidated Gas Company owns all the bonds and notes of the Astoria Light, Heat & Power Company outstanding, as well as all its stock?

Mr. BURR: Objected to as incompetent, irrelevant and immaterial. Objection overruled; exception.

A. Yes, sir; the Consolidated Gas Company owns all the outstanding securities of the Astoria Light, Heat and Power Company.

Q. And has the Astoria Light, Heat and Power Company received any funds except those advanced to it by the Consolidated Gas Company through purchase of these securities?

A. None other.

Q. The next item on Exhibit 81 reads: "Invested in cartage plant (through ownership of the entire stock of the National Coal & Coke Company) $50,000." Is the National Coal & Coke Company a New York corporation, if you know?

A. That is my understanding.

Mr. MATHEWSON: I do not think the certificate of incorporation has been offered, has it?

Mr. PAGE: No, I do not think it was.

Mr. MATHEWSON: Nor of the Astoria Company?

Mr. PAGE: No.

Q. Will you make a note to secure those two certificates? What is the capital stock of the National Coal & Coke Company?

A. $50,000.

Q. Then the Consolidated Gas Company owns all the stock, does it?

A. Yes, sir.

422 Q. Are there any mortgages on that property, if you know?

A. None, sir.

Mr. BURR: This testimony with regard to these outside companies is taken subject to my objection.

The MASTER: Yes, that is right.

Mr. MATHEWSON: There are only two, the Astoria Company and this Coal & Coke Company.

Q. Will you state what the National Coal & Coke Company is, what its business is and the occasion for its incorporation?

A. Prior to the organization of that company the carting of coke was done by contractors. The company believed that by doing its own carting or having it done by a company of its own organizing that it could save something from the amount that was being paid the contractors for that service. And experience has confirmed that understanding, that they could economize.

Q. Do you know what was paid for this $50,000 of stock by the Consolidated Company?

A. $50,000.

Mr. GANS: When was that company organized?

Mr. MATHEWSON: The certificate will show, but can you remember?

The WITNESS: I would not like to trust my memory as to the date of it, but I should say in 1900; but I would not be perfectly sure of it.

Q. Does this company do all the carting for the Consolidated Gas Company?

A. No, only the coke carting.

Q. Coke and coal. Does it not act as a selling agent or company to dispose of the residuals of coke?

A. It does; it attends to the sales of the coke and deals with
423 the public and with all buyers of coke.

Q. Does it pay any return in the way of dividends back to the Consolidated Gas Company, do you know?

A. It has paid as high as 25 per cent. in dividends in one year.

Q. And this manner of handling coke has proved a measure of economy, has it not?

A. It has, yes, sir.

Q. Referring further to Exhibit 81, following the total of $49,110,454.99 appears a statement that from the proceeds of the debentures of July 1st, 1904, $6,200,423.64 in cash, and $6,517,071 in temporary investments pending investment in further construction then in progress remained. Those two last amounts aggregating $12,717,494.64 have changed as to amount somewhat since October 31st, say up to June 30th, 1906, I suppose?

A. They have changed, yes, sir.

Q. There has been a further investment at Astoria, as you have stated?

A. Yes, sir.

Q. Are you able to state at the moment just what change there has been in that regard?

A. I can state the amount.

Q. Very good.

A. Remaining of that original $12,717,494.64. On June 30th, 1906, it amounted to $11,794,354.02.

Q. Returning to the item in Exhibit 81, meters, meter cocks and connections and miscellaneous property $3,802,544.50, has that item increased since October 31st?

A. Yes, sir, it has.

Q. This, then, is not in excess of the present amount?

A. No, sir, it is less than the present value.

Q So, too. as to materials and supplies, $616,470.08?

A. Also a greater amount on June 30th, 1906, than on October 31st, 1905.

Q. The item Plant, manufacturing and holders, $16,087,-
424 428.72, Mr. Bradley has testified that recently the large holder at 132d Street has been completed. Then that holder or portion of it, I suppose, was not included in the $16,087,428.72, was it?

A. No, sir; possibly some of the cost is there but at the present time all of the cost is in the books.

Q. Could you tell what at the present time the plant equaled on June 30th, last?

A. Yes, sir.

Q. Including the holder as it now stands?

A. $16,319,811.69.

Mr. GANS: I assume all these questions mean book value, don't they, Mr. Mathewson?

Mr. MATHEWSON: Yes they do.

Q. That is the most substantial increase of any of these items except the increase in the investment at Astoria since October 31st, last?

A. Yes, sir.

Q. Referring again to your estimate of the cost of reproduction present of the item meters, meter cocks and connections on the books at $3,802,544.50, in what manner does the amount pay for the various items constituting that come under your eye?

A. The department which looks after the detail of issuing the orders for these materials and supplies is under my supervision; I am familiar with most of the dealers with whom they are transacting business, and I have occasionally to consult with the purchasing agent regarding prices and purchases. Some of the materials and some of the items covered by that statement are purchased under contract, and the contracts are in my custody and the bills before payment are submitted to me.

Q. And checked and entered in your department?

A. All checked and entered through the accounting department, which is under my supervision.

425 Q. And are these items, such as pipes and specials, meters, cocks and connections and things of that sort, and stoves, items which are being currently and constantly purchased by the company in one amount or another?

A. Come under my supervision.

Q. I say, are they being currently purchased by the company?

A. Yes, sir; constantly being purchased, stock renewed, and additions made to the stock. Of course in the meters, the number of meters that the company has in use and in the district are constantly increasing.

Q. And do you know from your record and from these bills that come under your notice and are you, and were you able to tell what is the current price which is being paid by the company for them?

A. Certainly.

Q. And in making up your estimate of four million dollars and such a matter for the reproduction of the items included in this $3,802,544.50, do you make use of such current quotations and prices?

A. Those are the figures that are used in arriving at the cost of reproducing that property.

Q. Take pipes and specials, for instance, can you tell how much of the $3,802,544.50 they constitute?

A. $113,259.64 on October 3[illegible] 1905.

Q. Are they purchased under [illegible]ract now?

A. Most of the material that is carried in that account is purchased under contract; that is, the cast iron pipe and the special castings because that is material that is used principally in extending and repairing the mains; and large pipe and large special casting.

Q. Are those contracts in your possession?

A. Yes, sir.

Q. Do you know what is being paid for those? Have you the record, and had you the record?

426 A. I have the records. I may say, in respect to the pipe for which we have contracted with the United States Cast Iron Pipe and Foundry Company, that it is purchased by weight and the prices vary with the different sizes of pipe.

Q. And did you use the current figures in computing your estimate?

A. The current figures. Now, with respect to the pipe and specials, that stock is carried on the books at its cost. As it employed either in extending mains or repairing mains, it is taken out of stock at its cost, and at its purchase it is added; so the book value of pipe and specials is its actual cost value in each case; there is no estimate about it whatever.

Q. As to meters, what proportion of that $3,802,544.50 is composed of meters?

A. $2,941,037.07.

Q. Is the company buying meters from time to time currently?

A. Yes, sir.

Q. And do you know from the meter bills and from the records which you keep as to what they are currently paying for meters?

A. Yes, sir.

Q. And from whom the meters are bought?

A. Yes, sir.

Q. And in making your estimate as to the present value of meters did you take the actual current cost to the company of meters, as they are now paying?

A. Exactly, yes, sir.

Mr. Gans: We should not have had any objection to the question if you had asked as to the cost; the objection I made was as to value.

Mr. Mathewson: Yes. He says in computing the present value he has taken the current cost. I assume that is the value plus, of course, some value for setting the meter in place; the value is the cost of the meter plus the cost of setting. You observe the meters take nearly $3,000,000 out of the whole $3,802,544.50.

Q. As to cost of connections, what proportion goes for that, of the total $3,802,544.50?

A. $313,714.47.

427 Q. And in making your estimate as to the present value or cost of reproduction of those, did you take the cost of the same character of material as the company is now purchasing?

A. Is now purchasing at the current rates, yes, sir.

Q. How about gas stoves, how much is included there for gas stoves?

A. $287,619.77.

Q. And would you make the same answer to the same question in reference to that item?

A. The same, yes, sir; with the exception of certain stoves that are carried in there which are stoves that are in stock and are carried at their actual cost and appear in a monthly inventory of stock, they are taken in that case at their actual cost. In the cost of rented stoves in the district, the value of those stoves is computed at the current prices that are being paid for the same kind of stoves.

Q. Plus the cost of installation?

A. Yes, sir.

Q. You mean in your estimate of present value?

A. Present value.

Q. Taking the items as they appear on the books making up the $3,802,544.50, book value, does that amount represent the cost of these various items to the company, less, of course, anything charged off for depreciation or replacements?

A. That is what is represented, yes, sir.

Q. The cost as distinguished from present value, in other words, on the basis of reproduction?

A. Precisely.

Q. As to the items in Exhibit 81, "Materials and Supplies, $616,470.08," can you conveniently say what that is on June 30, for our information, if there is any considerable increase?

A. $686,511.10 was the value on June 30.

Q. And are you, from your records and data and the bills that come under your notice, familiar with what is currently paid for items of that character?

A. Yes, sir.

428 Q. And from that you testify that these are the costs?

A. Exactly. In that case no estimate is made whatever, the book value there is the actual value at which they are carried on the books; that is, the actual value and the book value are identical.

Q. The materials and supplies, in other words, are those which have been bought very recently, have they not, in those cases?

A. Yes, sir.

Q. I ask you also as to the items "Real Estate and Plant" whether the book values there are the cost to the company?

Mr. BURR: Objected to as incompetent, immaterial and irrelevant. Question allowed; exception.

A. Yes, sir.

Q. Mains and services the same?

A. The same, yes, sir.

Q. Is it not the fact, Mr. Carter, that all or substantially all the materials and items included in the $3,802,544.50, as well as in the item of "Materials and Supplies," $616,470.08, have been purchased or acquired by the company since its formation?

A. All, yes, sir.

Q. While on the other hand certain of the real estate and of the plant and of the mains came over from the subsidiary companies?

A. Yes, sir.

Q. Mr. Simpson testified that the services had all or substantially all been renewed since 1884; do you know anything in reference to that, whether that is an accurate statement or not?

A. That is my understanding.

Mr. BURR: I ask to have that stricken out because he evidently does not know anything at all about it, this witness; what his understanding is, is not evidence.

The MASTER: Strike it out.

429 Q. What is your information?

A. My information is that the services have been almost entirely renewed since consolidation.

Mr. Burr: I ask to strike it out.

The Master: Strike it out. It does not add anything for my information.

Q. Referring to the item "Accounts Receivable," $2,000,000 of which you stated you considered a fair continuous working capital, in that shape, can you say whether the accounts receivable on June 30th exceeded those on October 31st, as shown?

A. They did, by nearly a million dollars.

Q. Can you tell us what the Accounts Receivable from sundry consumers and debtors, being the items respecting which one of opposing counsel asked you, amounted to on June 30th—the same ones I refer to as you said amounted to Twenty-three hundred thousand dollars.

A. $3,449,780.95.

Q. What is the effect of the increase of the company's business on the requirement for working capital in the shape of cash and accounts receivable?

Mr. Burr: Objected to as incompetent, immaterial and irrelevant; I believe that what we are trying out here is whether the rate fixed by the Legislature and by the Commission was justified by the facts represented and then existing at the time the case was tried before them. The conditions that have occurred since that time and are now existing, so far as increase of expenditures, the increase of the investment in property, I don't think is a proper consideration in this inquiry. Was the Legislature justified as the facts existed at the time they passed this legislation, in fixing this rate at 75 cents? Was the Legislature justified upon the facts presented in fixing their 430 rate at 80 cents? Was the State Gas Commission justified from the same state of facts presented before it, as they then existed, in what they did? What additional expenses or replacements or betterments have caused this company to spend more money since that time I do not think is proper inquiry.

Mr. Mathewson: I did not ask that. I merely asked what effect on the amount of working capital required in the shape of either accounts receivable or in the shape of cash the increase of the business of the company had.

Mr. Burr: You have been asking with regard to the differences in expenditures from October 31st, 1905, to June 30th, 1906.

Mr. Mathewson: That is not what I asked him.

The Master: As I understood the question, he wants to bring out and get on the record what I suppose is more or less of a truism, that the more business you do the more capital you have to have.

Mr. Mathewson: Yes, you have to look to the future and not to the moment in making a rate for gas.

The Master: I will allow it and give an exception.

Mr. Burr: Exception.

A. The increase in the volume of business of course has a very direct bearing upon the company's requirements of working capital, both in respect to the accounts receivable and the cash it has to carry.

Q. And when I asked in reference to the cash working capital

required and you answered One million dollars; and accounts receivable, and you said Two million dollars was fair, I intended of course to ask the amount which was required for the reasonable conduct of the business of the company, fairly required; 431
is that what you understood me to mean?

A. That is what I understood. Our present accounts receivable.

Q. Considering the present and the outlook for the immediate future——

A. We require more than that at present, but we consider the present conditions abnormal.

By Mr. **Gans**:

Q. That is by reason of this litigation—the people are not paying as promptly as they would otherwise, possibly?

A. Well, of course, as of October 31st that would not appear, that would not have affected those figures.

Q. No, but as of the present?

A. As of June 30th, yes, I think probably the accounts receivable have been augmented somewhat by that condition. The outstanding was probably larger than it would otherwise have been.

By Mr. **Mathewson**:

Q. Are the shares of the Consolidated Gas Company listed on the New York Stock Exchange?

A. Yes, sir.

Q. Are you able to say from your observation whether they are largely dealt in and have been in the past?

A. I don't feel so sure of that. They have been largely dealt in, yes. I have seen evidence occasionally of large sales in the market.

Q. You sign transfers of stock?

A. Transfers of Stock come before me, and in some cases they are very heavy. In 1905 we had over 4,000 transfers of stock.

By Mr. **Gans**:

Q. That does not mean 4,000 shares transferred?

A. No, sir, 4,000 transactions.

432 By Mr. **Mathewson**:

Q. Was a statement prepared for the State Commission showing the high and low price of the sale of stock on the Exchange for some years past, do you remember?

A. No, I am not aware of there having been a statement of that kind prepared, I don't recall it if there was.

Mr. **Mathewson**: There was one, I am pretty sure, yes, here it is, page 2180 of the proceedings before the Gas Commission.

Q. Well, are you able to say or have you ascertained what the average prices of the stock on the New York Stock Exchange was from the year 1901 down to date, say the past five years?

Mr. **Gans**: I do not think this witness is competent to testify to that.

Mr. MATHEWSON: Subject to your verification. The Federal Courts in some instances have said that that was one thing, among others, to be taken into consideration in determining the value of property.

The MASTER: The only point is, I assume that some of this objection is as to this method of proof, the competency of this witness. Unless counsel are strenuous about it, if there was a tabulation put in before the Gas Commission I should think it would be much better to allow that to go in now rather than compel Mr. Mathewson to summon the *Financial Chronicle* and some Wall Street man here to put in the average price.

Mr. GANS: I merely want it subject to verification.

Mr. MATHEWSON: It is so public you can ascertain it immediately.

433 A. The price in 1901 was about $214 a share; in 1902 it was $220 a share; in 1903 it was $193 a share; in 1904 it was $201 a share; in 1905 it was $191 a share; and during the week ending May 7, 1906, it was as low as $132 per share.

Q. Do you know where it is now?

A. It is about $140, I think.

Mr. MATHEWSON: Cannot we spread on the record here say five years? I do not think it is necessary to go away back unless you desire to.

Mr. GANS: We might as well put in the whole exhibit.

The MASTER: It being understood it is subject to verification and correction by any party.

Mr. MATHEWSON: I offer in evidence then paper entitled "Consolidated Gas Market Quotations on Capital Stock" which will be found on page 2180 of the proceedings before the Gas Commission.

Received in evidence as Complainant's Exhibit 82, but not marked.

Q. Can you tell how many stockholders there are of the company, approximately?

A. About 4500.

Q. Can you tell how many of them hold ten shares or less?

A. A memorandum of that was made a few weeks ago, which showed that the number of stockholders holding less than ten shares was about 838; from 10 to 25 shares, 765; from 25 to 50 shares, 675; from 50 to 100, 726 shareholders.

Q. Are any of the shareholders of the company non-residents of this city—are they scattered?

A. Yes, sir; a great many are non-residents, over 700.

By Mr. GANS:

Q. You say that simply from information from the books?

A. Information from the books.

434 By Mr. MATHEWSON:

Q. What rate of dividend has the company paid since its organization?

A. Average rate?

Q. Yes.

Mr. **Gans**: I object to the average.

Q. Well, give it——

Mr. **Gans**: Let us have it year by year.

The **Witness**: I have a statement showing it at the end of each year.

Q. That is better yet, I didn't know you had it; let us have it.

The witness produces a paper.

Q. Is this the statement which you produce, a statement of the rate of dividend paid each year by the company since its organization?

A. Yes, sir.

Q. Each calendar year?

A. Yes, sir, and for the six months ending June 30th, 1906.

Mr. **Mathewson**: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 83.

Q. Excluding the six months ending June 30, 1906, there appears by Exhibit No. 83 that the dividend has run from 3 per cent. to 8½ per cent., minimum and maximum?

A. Yes, sir.

Q. Have you computed the average rate?

A. Yes, sir.

Q. About what is it?

A. 6½ per cent.

Q. That is, excluding the last six months?

A. That is, excluding the last six months.

435 Mr. **Mathewson**: I offer in evidence a paper entitled "Consolidated Gas Company of New York Dividends Calculated at 8 per cent. and excess of 8 per cent. over dividends actually paid from 1885 to 1906."

Mr. **Burr**: Same objection as we made to the other papers.

The **Master**: Yes.

Exception.

Mr. **Burr**: I understand Mr. Mathewson says if we need to make an examination for the purpose of verifying the statements contained in that exhibit we may have that opportunity.

Mr. **Mathewson**: These amounts, if we do not let you examine the records yourself, I suppose you can compel the production of them for the purpose of your examination. In other words, I understand it is admited without precluding you from any rights which you have of verification.

Mr. **Burr**: I understand it is admitted, and, not being the best evidence, we will have an opportunity of verifying it from the books.

Mr. **Mathewson**: These amounts?

Mr. **Burr**: Yes.

Mr. **Mathewson**: Yes.

Objection overruled. Exception.

Received in evidence and marked Complainant's Exhibit 84.

Q. The column under "Dividend Paid" represents, I assume, the actual money that was paid in dividends on those dates?

A. Yes, sir.

Q. And the next column to the right represents the amount that would have been required for dividends provided dividend had been computed at 8 per cent.?

A. Yes, sir.

Q. And the fourth column the excess paid——

A. No, the excess calculated.

Q. Well, in some cases?

A. Yes.

436 Q. The excess paid over 8 per cent., or the amount paid less than 8 per cent. as indicated?

A. Yes, sir.

Q. What is the significance of the figures in red near the bottom of the last column, $400,000, and under that $400,000?

A. In the case of those two dividends the rate paid was in excess of 8 per cent. per annum.

Q. In all other cases?

A. The dividend was either 8 or less than 8.

Mr. **Gans**: May I suggest that the stenographer make the note that where it appear- in red ink the figures be in italics and a note to that effect be made on the page?

The **Master**: Yes.

By Mr. **Gans**:

Q. Can you tell me whether the dates on Exhibit No. 84 are the dates of declarations of dividends or the dates of payments?

A. The dates of payments.

Q. And is there any fixed relation between the dates of payment and the dates of declaration?

A. No, the declaration would simply be made early enough to provide for the closing of the books, in time for the making up of the lists, &c.

Q. The declaration is usually about a month prior to payment, is it not?

A. Usually a little more than that.

Q. A month or six weeks?

A. Yes, sir.

By Mr. **Mathewson**:

Q. Can you tell me how many consumers the Consolidated Gas Company has?

A. We have 289,000 consumers using ordinary meters and 97,000 consumers using prepayment meters; that would make 386,000.

437 Q. Has the number of consumers been increasing or decreasing?

A. The increase is a small percentage.

Q. Has there a statement been prepared showing the output of gas of the company from 1884 down to date, the cubic feet per year?

A. I think I have such a statement, yes (producing statement). I think this is probably what you want. Does your statement run below that point?

Q. No.

A. Is that it (producing statement)?

Q. Yes, haven't you it down to date?

A. No, sir.

Mr. **Mathewson**: Is there any objection to my taking this statement, and then letting the amount be added since 1904?

Mr. **Page**: You mean to bring it down to October 31st, 1905?

Mr. **Mathewson**: Yes, or if possible, down to June 30th.

The **Witness**: I can bring it down to June 30th or October 31st, just as desired.

The **Master**: Why not bring it down to both?

Mr. **Mathewson**: I think you had better bring it down to October 31st separately.

The **Master**: That is what I mean.

The **Witness**: And then fill in the other, and make a new total?

Mr. **Mathewson**: Yes. I offer in evidence this paper headed "Consolidated Gas Company of New York, sales by feet during each year from November 11th, 1884, to June 30th, 1906."

Mr. **Burr**: Same objection as before.

The same ruling and exception.

Received in evidence and marked "Complainant's Exhibit 85."

438 By Mr. **Gans**:

Q. Are these the calendar years that appear on Exhibit 85, except as specified for the year 1884, which seem to be somewhat different?

Mr. **Page**: And the year 1906, which is to be added.

A. Yes, sir; taking the ten months of 1905 and the six months of 1906.

Q. Can you not give us the whole year 1905?

A. Yes, it will show that.

Mr. **Page**: I think it will be well to put the nominal years and the actual years separately.

By Mr. **Mathewson**:

Q. Have you also prepared a table showing, from 1885 down to and including the calendar year 1905, or a statement showing the meters, sales per cubic foot, average sales per mile of main, sales per meter and unaccounted for gas?

A. I have such statement down to and including the nominal year ending October 31st, 1905.

Mr. **Mathewson**: You had better complete that down too, showing the calendar years also; I will offer that in evidence.

The same objection, ruling and exception.

Received in evidence and marked Complainant's Exhibit 86.

Q. Those records are in your possession, are they not?

A. Yes; from which this statement was made up, as appearing by the books.

Mr. **Gans**: As appearing in the books; we do not want to be bound by any such testimony that so much gas has been made and wated.

439 Mr. **Mathewson**: I have further evidence to present by this witness, but it will be on another phase of the case, in reference to the cost of gas, and I think I will recall him for that purpose, having dealt with the assets, and submit him to cross-examination on that point.

Mr. **Page**: We would like to reserve the cross-examination of this witness until we have time to study these questions, and become a little more prepared.

Cross-examination by Mr. **Burr**:

Q. I might ask you in regard to the books of the Company, and something as to the methods of accounting. How long have you had charge of the accounting department, prior to becoming secretary of the company?

A. Several years.

Q. About how many years?

A. I should say ten.

Q. And will you describe how the accounting department is formed? Is it sub-divided into departments having control of special subjects of the company?

A. No, there is but one department.

Q. Is the real estate department, for instance, part of the accounting department?

A. No, not at all, although the records of the value of real estate or the purchase and sale of real estate would be kept on the general books, and the entries would be made in the accounting department.

Q. Then there is a meter department, is there not?

A. A meter department, yes.

Q. Then there is a main department, or department of mains?

A. Department of mains.

Q. And then there is an engineering department?

A. Yes.

Q. There is a cartage department, is there not?

A. The company owns some horses and does some carting, independently of the National Coal & Coke Company's carting, 440 and the care of the stables and the care of the horses is under one individual particularly.

Q. Well, the whole business of the company is sub-divided into departments?

A. Absolutely.

Q. Are there any other departments than those I have just stated?

A. At the branch offices they have in turn their departmental organization. We have at the branch office the superintendent and his assistant, chief clerk, application department, cashier's department, collecting department, arrears department, and bookkeeping department.

Q. Do all these different departments send their statements to the accounting department?

A. Yes.

Q. And what is done with the statements furnished to the accounting department? For instance, by the engineering department, of which Mr. Bradley is the head?

A. The accounting department gets such data as it requires for its department from the records in the engineering department, these records being made up from daily reports made by the stations to the engineering department of their transactions. Those are aggregated at the end of the month and furnish us with such data as we require for the purpose of making up the accounts as to cost of material used at the stations.

Q. Do they render monthly accounts or yearly accounts?

A. The stations, to the engineering department?

Q. Yes.

A. Daily accounts.

Q. And how often does the engineering department render accounts to the accounting department of the company?

A. They do not render any accounts to the accounting department. The accounting department has access to their records and uses them.

Q. In what way—sends an examiner to inspect them?

441 A. It is right in the same building; only a floor dividing the two departments, and they get such data as they require from the engineering department's records.

Q. You send someone from your department to examine the books of some other department?

A. That is the case exactly.

Q. You do not examine them yourself?

A. No, sir, except occasionally for some specific reason.

Q. And the results of such examination, or entries, are taken from the books of the engineering department, we will say, and put in the books kept in the accounting department?

A. Precisely.

Q. You do not pretend to testify here to the accuracy of every statement that you have presented, do you?

A. I believe them to be correct. They are made under my supervision and direction. I have no reason to doubt their accuracy in any way, manner or shape.

Q. You do not make entries yourself in the books?

A. I do not.

Q. So that you must rely upon the accuracy of someone else who does make the entries?

A. I do have to.

Q. And that party has to rely upon the accuracy of the man who transcribes them from the books of the different departments?

A. It is not altogether a case of trusting to accuracy; there are always proofs and checks upon entries that are made that establish their correctness. An error made would disclose itself in the course of time. It is not left to chance.

Q. For instance, with regard to abandoned mains. Do you receive any special account with regard to those abandoned mains?

A. No, we take the street department's records of mains abandoned during the year, and that forms the basis of an entry upon the books, by which we take that value out of the mains account and charge it to replacement account.

442 Q. I understood you to say a little while ago that there were some inaccuracies in making up the report for the Tax Commissioners, and gas mains actually abandoned had been put in that account?

A. Rather not inaccuracies, perhaps. I did not describe it very well. Evidently the clerk did not understand, who furnished those figures, that the figures that were required for that report did not include abandoned mains. The figures that he gave were correct but they were not the figures that were required for that particular report, so it was rather a misunderstanding of what he was to furnish rather than an inaccuracy that led to that difference between the report and Mr. Simpson's affidavit.

Q. Well, you made up the report, I understand?

A. No, not personally. The report is made up under my supervision.

Q. By whom?

A. By—well, by anyone whom I might at any particular time have delegated to make it up. I should have to see the report now to determine that.

Q. I call your attention to Exhibit No. 169, page 2193 of the proceedings before the Gas Commission, and ask you to look at it and see whether that refreshes your recollection?

A. Are you referring to this or this? (Indicating.)

Q. Referring to that at your left.

A. This is something about the Boston Consolidated Gas Company. I don't know exactly——

Q. I am speaking now of this (indicating), page 2181, Exhibit No. 167.

A. What is the question?

Q. I call your attention to Exhibit 167, page 2181 of the proceedings before the Gas Commission and ask you to look at it and see whether that refreshes your recollection as to who made up the report under your supervision or helped to make it up.

Mr. Mathewson: That is a printed copy, Mr. Burr. I don't know whether it will help him or not. 443

The Witness: It does not give me much information, still I do recall that for that year 1904, the figures were filled in largely by our chief accountant.

Q. What is his name?

A. Mr. Brundage.

Q. What is his full name?

A. H. M. Brundage.

Q. And will you tell us, Mr. Carter, how the discrepancy arose between the number of miles of mains furnished by Mr. Simpson and the number of miles of mains as it appears in that report?

Mr. Mathewson: This is not the report, Mr. Burr, of June 30th, 1905, which was employed by Senator Page in his question. This is 1904 and Mr. Simpson has not testified——

Mr. **Burr**: I will amend my question, to June 30th, 1905.

Mr. **Mathewson**: As brought down by the supplemental report to November 1st, 1905.

Mr. **Burr**: I will accept that amendment also.

A. The difference arose from the fact that there was furnished to the clerk who made the report to the State Board of all the mains that the company had in the ground, including abandoned mains, which had been taken out of the books as to their value and as to the mains themselves, whereas Mr. Simpson's report dealt with the mains that were in use and certain disused mains that were not abandoned that were likely at any time to be put into use.

Q. Well, finally you got in your department an exact account of the mains that had been abandoned?

A. As to the feet, yes.

Q. As to the number of feet?

A. As to the number of feet and the size of the abandoned mains.

444 Q. And not as to their location?

A. No, not as to their location.

Q. Any particular reason for not having an account as to their location?

A. The only reason that we had no use for such information.

Q. When the main was abandoned you had not further use for knowing where it was?

A. None whatever.

Q. What was your position with the—what company was it that you state you were with before November, 1884?

A. The New York Gas Light Company.

Q. What territory did that company operate in in 1884?

A. The district south of Grand Street at that time.

Q. To the Battery?

A. To the Battery.

Q. Embracing all the southern part of the city?

A. All the southern part of the city south of Grand Street.

Q. How long had you been with that company?

A. I had been with that company since February, 1877, about 7 years.

Q. What was your business or occupation while with that company?

A. Well, I entered the service of the New York Company as a boy, an office boy, and at the time of consolidation I was keeping some of the records and some special accounts, such as the city accounts.

Q. So that your whole life practically up to the present time has been spent with that Gas Company and with the Consolidated Gas Company?

A. Yes, sir.

Q. You are the secretary of the Consolidated Gas Company?

A. Yes, sir.

Q. Are you a stockholder in the Consolidated Gas Company?

A. Yes, sir.

Q. Were you a stockholder in the New York Gas Light Company? A. No, sir.

445 Q. Did you take any active part in the consolidation of the New York Gas Light Company and the other companies into the Consolidated Company?

A. No, no particularly active part in it. I was simply aware of the consolidation transpiring. I had to do with the issuing of the stock of the Consolidated Company which was issued in exchange for stock of the companies which consolidated at that time.

Q. Did you make any report to the Consolidated with regard to any of the property that was absorbed by it?

A. No, sir.

Q. Were you acquainted with Mr. Rowland, the engineer who was employed by the Consolidated Gas Company at that time, November, 1884?

A. I had met him——

Mr. MATHEWSON: Just a minute. Mr. Burr will admit the correction that he was not employed by the Consolidated Gas Company. He made his appraisal some months before the Consolidated Gas Company came into existence. He appraised the plants of the constiuent companies before the Consolidated was created.

Q. After November, 1884, you became chief accountant of the Consolidated?

A. Subsequent to that date; not at that time.

Q. You know nothing yourself of the exact condition of the companies that were absorbed into the Consolidated Gas Company, do you?

A. Why, the exact condition with respect to what?

Q. Outside possibly of the New York Gas Light Company?

A. With respect to what?

Q. With respect to their financial condition?

A. I was familiar with their accounts, their books of accounts. After consolidation they were more or less in evidence.

446 Q. I am speaking now prior to November, 1884; you were not acquainted with the financial condition of any of these companies that were subsequently merged into the Consolidated Gas Company?

A. No, not prior to that time.

Q. After November, 1884, did you take up an examination of their books?

A. No.

Q. Did you take any active part, by an examination of the books of these companies, in ascertaining their exact condition financially?

A. No, sir.

Q. Who did?

A. I don't know positively.

Q. You only commenced to take an active part in the Consolidated after these figures had been arrived at that you have testified to with regard to the values which were placed upon the property of each company?

A. My knowledge practically started from that time, yes, sir.

Q. You had no part or participation in fixing those values, did you?

A. No.

Q. So far as you were concerned, that was the starting point of your accounting department?

A. Yes, sir.

Q. This thirty-seven million——

A. $37,775,000.

Q. And were the books of these companies that were merged into the Consolidated Gas Company turned over into the accounting department of the Consolidated Gas Company?

A. Yes, sir.

Q. Are those books still in existence?

A. Yes, sir.

Q. Do you still continue to keep a separate set of books for each of those companies?

A. No, sir.

Q. The use of those books was discontinued after November, 1884?

A. Yes, sir.

Q. Now, do you keep a separate set of books for the New Amsterdam, the Standard and the Mutual?

A. I do not keep any books for those companies.

Q. Do I understand, then, that they so far preserve their own entity that they have their own accounting department?

A. Decidedly, yes, sir.

447 Q. They have their own president?

A. Yes.

Q. And cashier?

A. Yes, sir. A complete organization.

Q. A complete organization?

A. Yes, sir.

Q. And are the books of these respective companies kept in their own offices?

A. Yes, sir.

Q. Where do you get your information from to enter into your books as to the amount of gas purchased during any given year from these three companies, or either of them by your company?

A. In the shape of a statement from them made monthly.

Q. Do you know the names of the companies that the Consolidated absorbed or had merged into itself?

A. Yes, sir.

Q. They were the New York Gas Light Company, the Manhattan Gas Light Company, the Metropolitan Gas Light Company, the Municipal Gas Light Company, the Knickerbocker Gas Light Company, and the Harlem Gas Light Company; is that correct?

A. Yes, sir.

Q. Do you know how much stock of the Standard Gas Light Company, the Consolidated Gas Light Company purchased, what percentage of its stock?

A. I would not like to say from memory; of course it is all a matter of record on our books.

Q. Was it not 92.28 per cent.?

A. I should say that that figure was substantially correct.

Mr. Mathewson: Mr. Burr, if you want that information, would it not be well for the witness to prepare a short memorandum to show exactly how many shares the Consolidated held in each company?

Mr. Burr: I have it right here, Mr. Mathewson.

Mr. Mathewson: If the witness knows, but he is merely saying that he thinks it is about that.

448 Mr. Burr: He may correct me from an examination of the books if I am not correct.

Mr. Mathewson: Very good.

Q. Does not the Consolidated Gas Company own 51.31 per cent. of the Mutual Gas Light stock?

A. I should say approximately.

Q. Does it not own one hundred per cent. of the Westchester Lighting Company?

A. I guess it owns all the capital stock

Mr. Mathewson: That is not a gas company; it is an electric company.

Q. Does it not own 99.63 per cent. of the New Amsterdam Gas Company?

A. It is very possible.

Q. No. I don't want possible. I want you to come as near your positive knowledge on that subject as you can.

A. I cannot tell you that percentage exactly, Mr. Burr. I should say that that would be approximately correct.

Q. Through the ownership of 99.63 per cent. of the New Amsterdam Gas Company it controls the Equitable Gas Company and East River Gas Company and New Amsterdam Gas Company, doesn't it?

Mr. Mathewson: Let us not enter into confusion, because the present New Amsterdam Gas Company was formed by the consolidation many years ago of the Equitable Gas Company of New York, the New York and East River Gas Company and the New Amsterdam Gas Company then existing, and of course they passed out of existence then, and they are not controlled by anybody. The New Amsterdam Company is it, it is the result of that consolidation.

449 The Witness: That is the case.

Mr. Burr: Is that your statement, that you want to have entered on the record, instead of his answer?

Mr. Mathewson: I understand that to be the fact.

The Witness: I did not make any answer to the question. I will accept Mr. Mathewson's statement.

Mr. Mathewson: Is that as you understand it?

The Witness: That is precisely as I understand it.

Mr. Mathewson: Of course you are asking about another corporation of which he is not an officer and the records of which he has no knowledge of except as he hears these things.

Q. The East River Gas Company controls the East River Gas Company of Long Island City, doesn't it?

Mr. Mathewson: I ask you not to answer these questions unless you know or have some accurate source of information.

Q. If you don't know, say so, Mr. Carter.

A. What is the question?

Q. I say the East River Gas Company controls the East River Gas Company of Long Island City, and in the East River Gas Company of Long Island City the Consolidated Gas Company owns 100 per cent. of the stock?

A. I cannot confirm that statement, Mr. Burr.

Q. You would have some record of what amount of stock it does own in that company?

A. Well, what company owns in what company?

450 The Master: That the Consolidated Gas Company owns.

Q. The Consolidated Gas Company.

A. Directly it owns no stock of any East River Gas Company or any East River Gas Company of Long Island City.

Q. Well, indirectly.

Mr. Mathewson: Well, that is a conclusion of law which I object to.

Mr. Burr: The witness qualifies the statement himself; he says indirectly. I want him to explain what he means by indirectly.

Mr. Mathewson: He did not say indirectly, but he said not directly.

Q. Does it own stock in that company indirectly?

A. I should say not. I don't think it would own it unless it owned every share of the stock of the company. We hold no stock of the East River Company.

Q. Does it hold any stock in the company, and if so how much to your knowledge in the East River Gas Company of Long Island City?

A. No, it does not.

Q. And in the East River Gas Company?

A. No, it does not.

Mr. Mathewson: I do not think there is any such corporation. I may be wrong.

The Witness: I have never heard of them.

Mr. Page: I think there are.

Mr. Mathewson: There was the New York & East River Gas Company, and that consolidated with the Equitable and the New Amsterdam Gas Company to form the present New Amsterdam Gas Company. Now the New York & East River Gas Company owned, my recollection is, some of the stock or all of the stock of the
451 East River Gas Company of Long Island City, which was a
wholly different corporation.

Mr. Burr: The East River Gas Company, is that right?

Mr. Mathewson: The East River Gas Company of Long Island City.

Mr. Page: The East River Gas Company of Long Island City now controls the tunnel and the rights in the streets in Long Island

City, and the New Amsterdam Gas Company owns all the stock of the East River Gas Company.

Mr. Mathewson: By reason of its being the result of the New York & East River Gas Company consolidation, the New York & East River Gas Company having owned the stock of the East River Company. Is not that right?

Mr. Page: I think that is right, and they preserve their right to the tunnel and the streets in Long Island City.

Mr. Mathewson: But Mr. Burr is referring to the East River Gas Company and the East River Gas Company of Long Island City, whereas there is but one corporation to my recollection.

Mr. Page: There was the New York & East River Company and the East River Company of Long Island City.

Mr. Mathewson: Yes.

Q. You don't know whether the Consolidated Gas Company owns 100% of the stock of the East River Gas Company of Long Island City, do you?

A. I know it does not own it.

Q. And you don't know whether it owns any stock of the company known as the East River Gas Company?

A. I know that it does not own any such stock.

452 By Mr. Mathewson:

Q. Do you know that there is such a company as the East River Gas Company, as distinguished from the East River Gas Company of Long Island City?

A. There is no such company that I know of.

By Mr. Burr:

Q. Do you know that such companies are controlled by the New Amsterdam Gas Company?

Mr. Mathewson: I think that is objectionable, Mr. Burr. I ask the Master if it would not be better to ask whether it owned stock of the East River Gas Company; whether it amounts to a control or not is a conclusion.

Mr. Burr: I press my question, he may answer yes or no.

The Master: He may answer what he knows about it. Manifestly it is not the best evidence.

Q. (Question repeated.)

Mr. Mathewson: I object to it as irrelevant and immaterial to the inquiry before the Master.

Objection overruled; exception.

A. "Such companies" do not help me out any. I ask for a repetition of the question. I want to know what companies.

Q. (Question repeated.)

A. I don't know of any such company, consequently I answered the second question, it seems to me.

Q. You don't know that the New Amsterdam Company controls the Equitable, the East River and the old New Amsterdam Gas Company?

A. No, I don't know that.

453 Q. In other words, you don't know what control of other companies the New Amsterdam Company has?

Mr. Mathewson: I object to that as a conclusion and as immaterial and irrelevant.
The Master: I will allow it.
Exception.

A. Will you repeat the question?
Q. (Question repeated.)
A. I know that the New Amsterdam Gas Company holds the stock of other companies.
Q. Well, of what companies?

Mr. Mathewson: Same objection.
Objection overruled; exception.

A. It holds the stock of the Central Union Gas Company.
Q. How much stock?

Same objection.
Objection overruled. Exception.

A. I cannot say exactly in shares; about 50 per cent. of the stock.
Q. 56 per cent., is it not?
A. No, of the Central Union it owns all the stock.
Q. And how much of the New Amsterdam?
A. Well, this New Amsterdam Company does not exist, as I understand your reference, if you refer to the original New Amsterdam Company, it does not exist, consequently there is no stock of such a company in existence.
Q. Well, of what other companies then?
A. The Northern Union Gas Company.
Q. How much of that?
A. That is the company of which it holds about 50 per cent. of the capital stock.

Q. What about the Central Union Gas Company?

454 A. I have just testified that it owns all of the capital stock of the Central Union Gas Company.

Q. And the Central Union Gas Company owns 66 per cent. of the Northern Union?
A. It owns the balance of the stock of the Northern Union Gas Company.
Q. What other companies does the Consolidated Gas Company hold stock in?
A. Does the Consolidated Gas own stock in?
Q. Yes, and to what extent?
A. Well, I can name the companies, but I could not offhand give you the number of shares. Mr. Mathewson just offered to have such a statement prepared, and if you wish it I can have it prepared.
Q. I will ask you, and you may state what you know about it? It owns 92.28 of the Standard Gas Light Company, doesn't it?
A. I have already testified that I think those figures are approximately correct.

Q. And of the Mutual Gas Light Company 51.31 per cent.?

A. About.

Q. And the Westchester Lighting Company——

Mr. Mathewson: That is of the outstanding stock, but not of the authorized stock.

Mr. Burr: He may distinguish it later on.

Q. The Westchester Lighting Company, 100 per cent.?

A. Yes, sir.

Q. The Astoria Light, Heat & Power Company, 100 per cent.?

A. Yes.

Q. What other companies does it hold stock in?

A. The New York Edison Company.

Q. How much stock does it hold in that company?

A. I would not like to say from memory. It holds a very large majority of the stock; very nearly all of it.

455 Q. And through the ownership of the stock of the New York Edison Company, what other companies does it control?

Mr. Mathewson: I object as a conclusion, and immaterial and irrelevant.

Objection overruled. Exception.

A. I can testify as to the ownership by the New York Edison Company of stock of the Yonkers Gas Light Company and of the Consolidated Telegraph & Electric Subway Company; to just what extent I would not like to undertake to testify from memory.

Mr. Mathewson: You have forgotten the National Coal & Coke Company, Mr. Burr.

Q. Now you can prepare for me, Mr. Carter, can you not, a statement showing the capital issued by these various companies you have named, showing the amount of that capital stock that the Consolidated Gas Company owns?

A. Yes, sir.

Mr. Mathewson: And while you are doing it, if counsel has no objection, will you state the amount at which each of them——

Mr. Burr: One moment. Not only the stocks, but the bonds of each company.

Mr. Mathewson: And the amount for which each of them is carried on the books of the company, and where they cost more than that and have been reduced, as you have stated the amount that they actually cost.

The Witness: And the cost to the Consolidated Company, including the premium on Consolidated stock?

Mr. Mathewson: Yes, as well as the present value at which they are carried on the books, reduced to the par of the Consolidated stock.

456 Mr. Burr: And please prepare a statement of the total investment of the Consolidated Gas Company in the securities of other companies.

The Witness: Well, this table would cover that.

Q. That would cover that, would it?

A. Yes, sir.

Mr. **Mathewson**: Except the National Coal & Coke Company, which as I said you had omitted, $50,000.

The **Witness**: I did not name all the companies in which we owned securities, because Mr. Burr referred to something else, but I understand this statement is to cover them all.

Q. Yes, I want to get all your stock investments as distinguished from your investments in the gas plants.

Mr. **Mathewson**: Mr. Burr, in this exhibit No. 80 that we put in appears the stock investments in the Astoria Company, which is our manufacturing department as we regard it, and the Coal and Coke Company which is the carting department. Now all the other stock appears in here, and what you want is for him to itemize that, virtually. There is the $38,643,590.14, that is what the other stock stands for on the books of the company.

Q. Is that correct, Mr. Carter, that the total amount of stock investment of every kind, nature and description of the Consolidated Gas Company are represented by this item on Consolidated Gas Company's Exhibit No. 80, of $38,643,590.14?

A. As being the book value of it?

Mr. **Mathewson**: Included in that item.

457 The **Witness**: Well, may I look at that a moment?

Q. Yes (handing a paper).

Mr. **Mathewson**: Is everything except the Astoria Light, Heat & Power Company and the National Coal & Coke Company, included in that?

The **Witness**: No, not by any manner or means.

Mr. **Burr**: That is what I thought.

The **Witness**: In the first place I do not see any thirty-eight million dollars on this sheet.

Mr. **Mathewson**: Down near the bottom.

The **Witness**: Oh, yes, the amount invested in the securities of other companies as shown here is $53,041,134.52.

Q. Does that include your investment in Government bonds?

A. That does not include our investment in Government bonds.

Q. Now I want a complete statement of all your investment in other companies and in all kinds of securities?

Mr. **Mathewson**: That is a further request, in all kinds of securities.

Q. You can furnish such a statement as that?

A. Yes.

The **Master**: As of what date, Mr. Burr?

Mr. **Burr**: As of the dates when acquired.

Mr. **Mathewson**: Well, you had better make it up to October 31, the same as all the others.

The **Witness**: October 31st, the same date as this.

458 By Mr. **Mathewson**:

Q. Let me see if I am not right. Am I right in assuming that all the securities in all the Gas Companies except the Astoria Gas Light, Heat & Power Company and the National Coal & Coke Company are included in the item, $38,643,590.14, and the following ones to the bottom of the page?

A. The two others aggregating $53,041,134.52.

Q. Everything above that represents what we consider to be directly or indirectly invested in the gas business at book value?

A. Yes, sir.

By Mr. **Burr**:

Q. Well, you understand that you are to state in that account that you are to make here the date of the acquirement of these stocks?

Mr. **Mathewson**: You cannot do it. That was all gone over, and I don't think you will want it if you look at the testimony before the Commission and the Committee. They were picked up, one share or five shares at a time covering quite a large period in some cases.

Mr. **Burr**: I know what I want, and I ask Mr. Carter to produce it if he will.

The **Witness**: It would be a very troublesome thing to make a record in the case of the acquiring of the New Amsterdam securities, a period of several years and almost every day in the year. Now you can see what a statement that would mean, probably 300 items a year for three or four years, would make a very bulky statement.

Q. Make it as full as you possibly can, and if I want to go into any further details I will call for them.

459 Mr. **Mathewson**: The same request was made before the Commission and the Committee, and it was finally shown that it would be impracticable without great delay to show it, I think more than, say, year by year, something of that sort.

The **Witness**: Yes.

Mr. **Mathewson**: You remember that such a statement was made up?

The **Witness**: Yes.

Mr. **Mathewson**: Supposing you make up a statement which covers that?

The **Witness**: I think that covers the stock of one company only.

Mr. **Burr**: If it is too much trouble for you, I will guarantee the Commissioners of Accounts will help you.

The **Witness**: That would be very kind of them, and if I find we are not able to make up a statement to your satisfaction, why, we may avail ourselves of your kindness.

Mr. **Mathewson**: Of *your* suggestion?

The **Witness**: Of your suggestion, yes.

By Mr. **Burr**:

Q. Do you keep a book showing the stock that you carry on hand of all sorts of material?

A. Well, would you mind referring to some particular material, because we deal with this material in different ways.

Q. Have you a separate book for each kind of material, for
460 instance, have you a book in which no entries are made except purchases of coal?

A. The purchases of coal are a matter of record on the general books, the origin being the bills rendered of coal companies for coal delivered. The engineering department would be furnished in connection with the daily report from the stations the information of the receipt or the delivery to them of coal; in that way the changes in that stock by reason of the receipt of coal from dealers and the employment of it in manufacture or for other purposes would be a matter of record, so that at the end of the month the total quantity of coal received during the month, the total quantity of coal used during the month and the balances on hand at the beginning and end of the month would be a matter of record in the regular records of the engineering department.

Q. Well, now, you do not appear to have experienced any difficulty in getting up a statement of expenses since 1884 of various items called for by Mr. Mathewson. Could you prepare a statement showing the amount of coal consumed each year since 1884 and the amount of oil consumed each year by your company?

A. It would be a very troublesome thing to make——

Q. And the amount and the price paid for it and the kind?

Mr. Mathewson: I should object to the production of any statement or going into any such subject at that length most strenuously.

Q. You are able, Mr. Carter, here in Exhibit 78 to place before us this afternoon a tabulated statement of the results or the totals for each year from 1884 to October 31st, 1905, of the real estate, plants, property and construction as shown in the balance sheet from
461 November 11th, 1884, and on December 31st of each of the following years?

A. That is a very simple and easy thing and stands out on the balance sheet on December 31st, and we simply had to go to twenty different pages on the record of the balances and take off those amounts. It was probably made up in fifteen minutes, and it would take fifteen months to make up such a report as you want.

Q. We don't want to have you bring all your books down here if we can possibly prevent it, but I think we are entitled to ask you to make up a schedule showing the number of tons of coal consumed from 1884 to date, and the prices paid for it, and likewise the number of barrels of oil consumed from 1884 to date and the prices paid for the same?

A. That is quite a different proposition.

Mr. Mathewson: I shall object to any such requirement as that, and it seems to me wholly unnecessary and uncalled for. The question before you is as to the value of the assets, the rate of return to be allowed and the cost of gas, so it can be determined what margin shall be allowed. What coal or oil cost in 1884 or what the cost of gas was in 1900, is absolutely no criterion of the cost to-day. The question is what the gas cost, we will say, the past year under current conditions, what is the cost of gas. No such request as this was ever submitted in any previous investigation, and it evidently was not thought of. We think it is wholly outside of any reasonable requirement.

Mr. **Burr**: Counsel fails to bear in mind that the other matters were investigations. This is an action in equity. It is an action in which he invokes the equitable powers of this court and brings in long statements here, refusing to allow us to look at the books.
462 And I am asking, as long as this general accountant who is now secretary has been able to make accounts from 1884 to date of particular things demanded of him by counsel for the Consolidated Gas Company, that he make these accounts that I ask for so we may have some means of testing the results he has produced here.

The **Master**: I think you are somewhat in error in your last statement, that he brings in these general tabulations and refuses to allow you to look at the books. The theory on which certainly most of those tabulations were admitted was that they were subject to verification from the books.

Mr. **Burr**: Yes. My statement was incorrect in that regard.

The **Master**: And there was to be some arrangement made between counsel before this witness would be regared as having finally left the stand by which for the purposes of cross-examination or otherwise if you wanted to verify or amplify any of these figures you would have ample opportunity to do so. Now, of course, I have got no right to require this witness to go off and prepare tabulations for you. If you lay the foundation by showing what particular books you want to cover this question of coal and oil, I will direct the production of those books and you can put in the evidence of the cost of the coal and oil in your own manner from those books. But in so doing you have got to take the risk that if it is unduly prolonged or prolix that you may be stopped by the court.

Mr. **Burr**: Yes, but your Honor, how are we to get any verifications of any statements made by this gentleman unless we have some right to examine their books for the purpose of verification.
463 They can come in here and say these are the figures which represent an outlay for twenty years, and we are foreclosed in examining them in regard to it, and must accept it unless we want to go into a tedious examination. I do not ask that, and I do not want the books here, but I want this gentleman to give us the same information that he does to his counsel.

The **Master**: You are asking for a tabulation. As I understand, you have a right to send your own men up there and satisfy yourself as to the prices, &c. if the other side consent. That is an entirely different thing from asking this witness to make up a tabulation, which he says will take months.

Mr. **Mathewson**: Of course, if we agree to his sending a man to check these—I do not understand he has a right to unless we do consent, he can ask for the production of certain books. But let me call your attention to the character of the statement that has been presented. That simply calls for the total amount of those particular items on those dates. The amount of oil and coal we used in that year in the making of gas or which went into the production of gas has absolutely no relation to this. They are not even stated by this witness to be the values. Whether these are the balance sheets at that time you can ascertain simply by looking at the balance sheet of the company as it exists; that is all there is to it—no coal and oil, and there is no foundation for it.

Q. Can you make up such a statement as I have asked you to make up without much difficulty for the past five years say, from 1900 up to date, or to October 31st, 1905?

464 Mr. Mathewson: I want to tell Mr. Burr now that we shall object to spending time going into the cost of gas for even five years. We think it is the present cost of gas, and not the cost of gas in 1900 with which the Master will have to deal. We think it will be a waste of time, and we shall not do it unless the Master or the Court directs us so to do.

Mr. Burr: The gentleman has just spent a whole day showing what has been done in regard to these things for a period of over ten years, and dividends that have been declared, and all the other things done with regard to the property of this company for a series of years past. I am willing to limit myself to getting information from this gentleman, who has control of it, and who can easily produce it for the past five years, from 1900 to October 31st, 1905.

(The question is repeated by the stenographer.)

The Master: Counsel says he will object to it.

Q. Then, will you produce the books containing that information for the past five years, so that we may look at them?

Mr. Mathewson: I shall say that the witness will not, if he accepts the advice of counsel.

Mr. Burr: Then I will ask the Master; will he direct the production of these books?

The Master: You will have to lay a better foundation than you have now. I must know exactly what books they are and what accounts you want, and you will have to cross-examine the witness until you find out.

465 & 466 Mr. Mathewson: I shall present a statement, if the Master please, showing the cost of gas, or elements of the cost, for the latest convenient period, which we think will meet all requirements, and we shall submit to the Master whether that does not cover all requirements, as far as the cost of gas is concerned. I may say that while the Gas Commission desired some information, perhaps, for a previous year, I think 1904, as well as for the year 1905, when they came to discuss the cost of gas they never mentioned it; nothing but the last year, 1905; and to go back to 1900 with this vast array of detail that would be required, it seems to us would be wholly unreasonable and would not assist this inquiry. If you will glance through the printed volume before the Gas Commission, upon the question of cost, station cost, and one thing and another, relating to but a single year, your Honor will appreciate more fully than you do now, I think, what a mass of in-

formation that would entail and what a waste of time it would be in arriving at a conclusion.

At 4.30 o'clock P. M. adjourned until tomorrow, Tuesday, July 24th, 1906, at 10.30 o'clock A. M.

Last Exhibits:

Complainant's 86.
State A.
City 1.

467 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, TUESDAY, *July* 24, 1906—10:30 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Br. Burr, Mr. Taylor.

468 MR. MATHEWSON: There are one or two corrections I would like to make in the record; on page 404 the record should read, "Will you tell what portion of the $20,000,000 of debentures which the July 1st, 1904, resolution authorized were actually issued."

Page 412: "Extensions would be checked," instead of "established."

Page 438: "Taking the ten months of 1905 and the six months of 1906" instead of "the ten months of 1906."

And the next question: "Can you give us the whole year 1905" instead of "1906."

Page 440: "These records being made up from daily reports," instead of "by daily reports."

Page 450: "We hold no stock" instead of "we hold that stock."

Page 453: "I know that the New Amsterdam Gas Company holds the stock of other companies" and "the" is out.

Page 457: "Does that include your investment in Government bonds" instead of "books."

ROBERT A. CARTER—Cross-examination continued by MR. BURR:

Q. Mr. Carter, have you the exhibit introduced yesterday showing the sales of gas year by year?

A. I have not, Mr. Burr, because it was sent back to the office to be brought down to a later period. I can have it later in the day or bring it in the morning.

Mr. MATHEWSON: You have a copy of it up to 1904, inclusive?

The WITNESS: I have a carbon copy of what was put in, up to 1904.

469 Q. Well, will you let me have that?

A. Yes (producing paper).

Q. I notice in this exhibit containing the sales during each year from November 11, 1884, to December 31st, 1904, and average price received per thousand cubic feet sold, that in the year 1884, November 11th to December 31st, the number of cubic feet is given at 559,957,000, and the rate per thousand sold 1.6854. Will you tell us by what process you arrived at that rate per thousand cubic feet sold?

A. By taking the gross amount received from the sales of gas, the quantity sold, and dividing one by the other and getting the average price received.

Q. And is that the formula that you adopted with all the years subsequently?

A. Yes, sir.

Q. And with regard to the dividends which you testified yesterday regarding and a statement of which was introduced in evidence marked "Complainant's Exhibit 83," I notice that for the year 1885 the rate is given at 7 per cent. Where did you ascertain that rate?

A. From the books of the company.

Q. What books?

A. The general ledger would show the amount of the dividend paid and would also show the amount of capital stock outstanding and, too, would indicate the rate; of course I might say that the rate would be a matter of record in the Transfer Department, Stock Transfer Department, where the amount of dividend due each shareholder is calculated; and the dividend lists would furnish similar evidence of the amount of dividend paid.

Q. You have a Stock Transfer Department?

A. Yes, sir.

470 Q. And you think you testified yesterday that the average dividend was something about 6½ per cent., was it?

A. 6½ per cent. from the period November 11, 1884, to October 31, 1905.

Q. This statement Exhibit 83 includes 1885 to 1906, six months, to June 30. Was it upon this statement that the average was based?

A. No, it was simply brought down to June 30 as a matter of record. An average has not been calculated since October 31, 1905.

Mr. MATHEWSON: The average will be slightly reduced?

The WITNESS: The average will be slightly reduced because of the lower rate of dividend in 1906 to date.

Q. I call your attention to the year 1886, the rate given as three per cent.; the previous year being seven per cent., in 1885. Will you state whether any reason to your knowledge existed in that year for that falling off?

A. Yes, sir.

Q. What was it?

A. The price of gas was reduced in that year as the other table that you have will indicate.

Q. That was reduced as the result of a legislative inquiry, was it not?

A. It was reduced by Act of Legislature.

Mr. Mathewson: Just a moment, Mr. Carter. Do you know whether that is so or not, that it was reduced by Act of Legislature? Was it not voluntarily reduced by the act of the company itself? Just think a moment.

The Witness: My impression is that it was reduced by the Act of Legislature.

Mr. Mathewson: Will you assure yourself on that point, for I think you are mistaken, if it is a matter of any importance.

The Witness: Yes.

471 Mr. Mathewson: It was reduced from $2.25 to $1.75 by the company voluntarily after the consolidation?

The Witness: That is the case but this was a reduction from that price to $1.25 per thousand cubic feet.

Mr. Mathewson: In 1886?

The Witness: In 1886.

Mr. Mathewson: Look that up, to be sure.

The Witness: I will do so.

Q. And in 1894 I notice the rate is given as eight per cent. Can you state any fact to your knowledge which was the cause of the increase to that rate from the former rate of four per cent., and three per cent.?

A. None other than that the earnings of the company warranted such a dividend.

Q. Well, I presume that answer applies to all these rates that are given for each year, that the earnings of the company warranted the dividend?

A. I am only making that answer with respect to that particular year.

Q. In 1898 I see that the rate is still 8 per cent. as it was in 1894, 1895, 1896 and 1897; and in 1899 I see it drops off to 5½ per cent. Can you give any reason for that reduction in the rate?

A. My recollection is that in 1899 there was some cutting of rates between the companies, and gas was sold at so low a figure that an 8 per cent. dividend was not a possibility.

Q. There was a cutting in the rate between what companies?

—. All the New York companies.

Q. In 1899 what companies existed in New York outside of the Consolidated Gas Company?

472 A. All the companies that exist now outside of the Consolidated Gas Company existed then.

Q. You mean then that at that time the Consolidated Gas Company did not own stock in the New Amsterdam, the Standard and Mutual Gas Light Companies?

A. I can say positively as to the New Amsterdam and Standard Companies. I will not be sure as to the Mutual at that time.

Q. Well, do you know whether the antagonism or competition which existed between the companies you speak of ended during the year 1900?

A. That is my recollection.

Q. And then the dividend rate went up to 6 per cent. in that year as appears by this statement?

A. Yes, sir.

Q. And the following year it was 8 per cent.?

A. Yes, sir.

Q. Was that due, should you say, to the lack of competition, or to the control that was by that time obtained in the Standard, the New Amsterdam and Mutual Gas Light Companies by the Consolidated Gas Company in acquiring stock in the three companies I have named?

A. I could not say positively, but I should think those facts may have contributed.

Q. And in 1904 the rate is given at 8½ per cent. Was there any special reason for the increase in the rate in that year, to your knowledge?

A. Not that I am aware of.

Q. How did you arrive at the average dividends for the years from 1885 to 1905, as you testified yesterday?

A. By adding them up and dividing them by the number of years.

Q. No other process?

A. No, sir.

Q. Now what relation has the dividend, Mr. Carter, to the sale of the commodity dealt in by your company, gas?

A. I am not aware that there is any relation between the two.

473 Q. Then the dividend on the stock of the company is not affected by the business that the company does in gas?

A. Presumably.

Q. Presumably not?

A. It is.

Q. What is the fact?

A. Well, as I do not control the payment of dividends, I do not feel that I can very well venture an opinion on the subject, Mr. Burr.

Q. Well, are not dividends commonly supposed to be declared out of the earnings of a company?

A. They are. Dividends may be declared this year, however, upon earnings of a preceding year remaining undistributed.

Mr. MATHEWSON: That is, out of surplus.

The WITNESS: Out of surplus.

Q. What was the fact with regard to your company as stated in this Exhibit 83; were these dividends out of the surplus, or were they out of the earnings, current earnings?

A. Out of both I should say.

Q. Now could you tell us with regard to 1901, for instance, whether that was for current earnings, or past earnings or surplus earnings?

A. Both.

Q. You are quite clear about that?

A. Perfectly clear.

Q. Does that apply to each year since 1885 to 1906, as stated on this Exhibit 83?

A. I should say that in every year that a dividend was declared there was a surplus that warranted the payment of such a dividend; that in each particular year the earnings exceeded the dividend, I could not testify.

Q. What are the earnings derived from?

A. Principally from the sales of gas and from the sale of residual products.

Q. Is there any other business that the Consolidated Gas Company engages in other than the sale of gas and residual products?

474 A. The company derives some revenue from the renting of gas appliances to its consumers.

Q. Do you mean by that meters?

A. No, sir.

Q. And stoves?

A. Stoves only.

Q. Is that stove business the subject of a separate and distinct department?

A. It is, sir. We have a department that is known as the Fuel and Appliance Department, the Fuel Appliance Department.

Q. It is not a subsidiary company, it is simply a separate department of the Consolidated Gas Company?

A. That is the case, yes, sir.

Q. By whom is that department managed?

A. It is under the management of Mr. William J. Clark.

Q. So you are quite clear that the number of cubic feet, 6,731,325,000 sold during the year 1894 has no relation to the dividend declared that year of 8 per cent.?

Mr. Mathewson: He did not say he was quite clear. He said he could not say, as he did not have the making of the dividends. Will you let him see the exhibits? There might be possibly something in those that would refresh his recollection. I don't know.

The Witness: I would like to have that question read and the previous question, because I don't know whether I gave the answer that I intended to.

(Previous questions and answers read by the stenographer.)

Q. That is all you know about it; because you do not control the dividends, you cannot give any better answer than you did previously?

A. No, sir. Well, what was the question, Mr. Burr?

Q. (Question repeated as follows: So you are quite clear that the number of cubic feet, 6,731,325,000 sold during the year

475 1894 has no relation to the dividend declared that year of 8 per cent.?)

A. The dividends paid that year were paid out of the surplus earnings for that year, and if they were not adequate for the dividend, out of the surplus for preceding years accumulated up to that time.

Mr. MATHEWSON: You do not remember now whether they were sufficient or not?

The WITNESS: No, I don't know whether the earnings and the dividend were on a parity that year or which exceeded which.

Q. How could we ascertain that fact, from what source?

A. From the general books.

Q. What general books?

A. Well, there is only one set of general books, Mr. Burr, our general ledger.

Q. I have not suggested that you have any other set, but I will ask you now, have you got a confidential set of books?

A. We have not.

Q. You have only one set of books?

A. One set of books.

Q. Now, the dividend rate of 1886, 3%, you say was caused because of the reduction in the rate for gas?

A. There was a reduction in the rate in 1886.

Q. Do you remember, Mr. Carter, that at that time the same claim was made that is made now that the reduced rate was a confiscatory rate, that the company could not manufacture gas and sell it at that price without confiscation?

Mr. MATHEWSON: I don't think that inquiry is very material at the present time, but still I do not think I shall object to it.

A. I am not able to answer the question. I have no knowledge.

476 Q. Now, Mr. Bradley testified here with regard to repairs, replacements and other expenses which were divided up among the various plants for a period extending also from 1884 to date. Did you furnish him or did your department furnish him with the information upon which the totals which he testified to were based?

A. I did, sir.

Mr. MATHEWSON: I think Mr. Bradley testified that was up to October 31st, 1905. I think you are in error as to your dates.

Mr. BURR: Well, I will accept that——

Mr. MATHEWSON: Is that correct, Mr. Carter?

The WITNESS: I have a memorandum about it. My understanding is that it ran to October 31st, 1905.

Mr. MATHEWSON: That is your recollection?

The WITNESS: That is my recollection.

Q. The totals which you testified to showing the total expended each year for repairs and replacements and new construction were furnished by your department?

A. Yes, sir.

Q. That you are quite clear on?

A. Yes, sir.

Q. Did you make up these totals from the books yourself, or did you direct some one of your subordinates to do that?

A. It was done under my supervision by my subordinates.

Q. Did you check them?

A. Yes, I checked the figures over.

Q. You had examined the books and found out the totals were correct?

A. I did not, I could not have told you the totals were correct by examining the books. I did not check off all the items, no; I assumed they were correctly taken off and I was more sure of it because the amounts shown by stations aggregated agreed with other statements that I had made up previously.

477 Q. Who was it that you designated to take these figures from the books?

A. The chief accountant.

Q. Do you know if he deputized someone to do the actual work?

A. I think he probably used two or three clerks.

Q. So then these figures were handed by these two or three clerks to the chief accountant and by him handed to you and by you handed to Mr. Bradley?

A. That is the case.

Q. Does that condition of affairs apply also to the statement made here by Mr. Simpson, regarding the mains, the cost of construction and maintenance and repair of mains from 1884 to October 31, 1905?

Mr. Mathewson: Mr. Simpson did not make any statement as to the cost of repairs and replacements of mains; I did not ask him that because he said he had not the information directly. Mr. Bradley was the only one who testified to that.

Q. Did you furnish Simpson with any information with regard to the cost of maintenance and repair of mains?

A. I furnished him such a statement.

Q. Mr. Simpson also testified here as to the average cost of construction as to the different sizes of mains for a period extending from 1884 to October 31, 1905, based upon the prices paid for labor and the other elements entering into the cost of construction. Did you furnish him with these various items of labor and the other elements of cost which the company had expended during the period in question, from 1884 to October 31, 1905?

A. I think he may have got some data from the accounting department, I do not recall just what; as it was an estimate I presume he used largely figures available in his own department and in his own records.

478 Q. Well whatever records or information he got from your department were prepared for him in the same manner as you have testified the information was prepared for the Engineer Bradley?

A. Any information he got from the accounting department was practically prepared in that way, yes, sir.

Q. Do the general books of the company show the income from the sale of residual products, as well as from the sale of gas?

A. Yes, sir.

Q. At the close of the fiscal year are inventories taken of all supplies and material on hand, of gas, coke, and all other manufactured products?

A. An inventory is taken of all material and supplies other than coal and coke and oil and material of that character.

Q. Why are they excepted?

A. It is a difficult matter to inventory a coal pile with a good many thousand tons of coal in it.

Q. But you do keep an exact record of the coal used?

A. Precisely. We know how much is there from our records of the quantities received and the quantities used, the balance on hand as shown by our records is the quantity in stock, and any variation would only be indicated when that stock would run so low that it would become very apparent.

Q. But you could readily find out if you were making up an inventory at the end of each fiscal year how much coal you had on hand by checking up the amount received and deducting from that the amount used?

A. That is done every month, sir.

Q. So at the end of the year you would be, without much difficulty, able to say how much coal was on hand unused?

A. We have such records, not only at the end of the year, but at the end of every month of the year.

Q. These records are contained in your general books?

A. Yes, sir.

479 Q. Does that apply also to oil?

A. Yes, sir.

Q. Now I suppose there is no one connected with the company who is more familiar than you are with the affairs of the company, particularly the financial affairs of the company, is that not true?

A. I would not like to make such a statement.

Q. Would you say you are as familiar as any other officer of the company with regard to the financial affairs of the company?

A. Well, I should like you to be a little more specific, if you can, in what particular affairs you are referring to.

Q. Well, there is a manufacturing department in your company and there is a financial department, are there not?

A. I should rather call it a commercial department; it attends to the billing to the consumer and receiving money, keeping general accounts and that sort of thing.

Q. For instance that department has control of all the money that is expended for improvements and purchases, and land and investments in Astoria and the acquirement of stock in other companies?

A. Those matters are in charge of the general officers of the company.

Q. And when they assume the shape that their action resolves itself either into money to be paid out or to be received, who then takes charge of the matter?

A. On a properly accredited voucher a check would be drawn by the cashier and signed by the treasurer and countersigned by one of the other officers.

Q. Would that be in your department?

A. Well not particularly in my department. It would be an official transaction of the company and might be carried out in my absence.

Q. Where would the record of that transaction be found?

A. The record of the payment would be found in the check book and in the cash book. The voucher itself would be filed as a voucher for that payment, whatever it might be; that would be filed in the accounting department. 480

By Mr. MATHEWSON:

Q. And if it resolved itself into a record would not those records generally be under your supervision?

A. The books ultimately would record the entire transaction, whatever it might be.

By Mr. BURR:

Q. I understood you to say yesterday you had entire control of all the books of the company?

A. I have, yes, sir.

Q. And inasmuch as these transactions that we are now speaking of are entered in the books, therefore the books that you have control of must contain a record of those transactions?

A. Every transaction of the company is recorded in the books under my control, yes, sir.

Q. And in the books under your control are contained records of all the investments of the Consolidated Gas Company in the stocks of other companies and in the stocks of any other character?

A. Yes, sir.

Q. I mean the stocks of other gas companies, or the stocks of any other companies as distinguished from gas companies?

A. Yes, sir.

Q. What year was it that the Consolidated purchased the stock in the Edison Light Company?

A. 1900. I presume you refer to the New York Gas, Electric Light, Heat & Power Company?

Q. That is the exact corporate name, yes. How much stock of that did the company acquire?

A. At that time?

Q. At that time.

A. $36,000,000 in capital stock.

Q. And what was paid for that stock?

A. Debentures of the Consolidated Company were exchanged for that stock and ultimately retired with capital stock of the Consolidated Company at $232 per share; that took place in April, 1900, the issuing of that stock being authorized by the shareholders in March, 1900. The certificate of that increase was presented yesterday. 481

Q. That was the second increase in stock, was it?

A. That was the first increase in stock from the $39,078,000 to the $54,595,200.

Q. And that increase of stock was used for the purchase of that stock in the Electric Lighting Company?

A. More directly for the retiring of the debentures that were given in exchange for that stock.

Q. That is $15,517,200 of stock was issued to retire $36,000,000 of 4 per cent. debentures?

A. Yes, sir.

Q. And who held those 4 per cent. debentures?

A. The stockholders of the New York Gas and Electric Light, Heat & Power Company.

Q. More than one stockholder?

A. Oh, yes.

Q. How many?

A. I don't know.

Q. More than five?

A. Yes, sir.

Q. Ten?

A. I couldn't tell you.

Q. Would your books show?

A. No books would show—the debentures themselves might—I don't know whether debentures were issued to anybody else—I am not prepared to say.

Q. Well, could you ascertain definitely with regard to that important point?

Mr. **Mathewson**: I suggest that the fact is not of importance. I do not see really that it is relevant at all whether there were five or ten or fifty stockholders; they got the property for a certain issue of consolidated stock, it is not worth any more or any less if owned by five or by twenty people.

Mr. **Burr**: It would be important if the stock of the company was being manipulated for private gain.

482 Mr. **Mathewson**: Oh, no, I don't think it would be. Secondly, the investment in the stock of that company, while shown to complete the record of capitalization of the Consolidated Company for general information, is not an asset upon which we claim the right to earn from the consumers of gas a dividend.

Q. That is all the information you can give in regard to that transaction?

A. In regard to that transaction, yes, sir.

Q. Can you find out more definitely about it?

A. I can endeavor to do so.

Q. Can you prepare for us a copy of the trial balance of the general ledger for each one of the months of 1905? Can you prepare and furnish that if Mr. Mathewson will allow it?

A. Yes, sir.

Q. I do not mean a condensed balance sheet, but one showing the balance of each account on the ledger?

A. I understand.

Mr. **Mathewson**: What kind of accounts do you mean, Mr. Burr? Consumers' accounts?

Mr. **Burr**: No.

Mr. **Mathewson**: Well, I don't think I quite understand you.

Q. On the general ledger.

A. From the general ledger, all right, sir.

Mr. **Mathewson**: I do not understand yet exactly what accounts the general ledger shows, I know some it contains, but whether I know all I do not know.

Q. Will you name all the electric light companies controlled by the Consolidated Gas Company?

A. I can name the electric light companies, some of whose capital stock is held by the Consolidated Gas Company.

483 Q. Well, I will be satisfied with that for the present. Please do so?

A. We hold capital stock in the New York Edison Company, United Electric Light & Power Company, and the Westchester Lighting Company, which is both a gas and electric company.

Q. How much stock does your company own in the New York Edison Company?

A. From memory I would not like to testify, and I might explain that at your request a statement is being made up showing the shares of stock owned by the Consolidated Company in all the gas and electric companies, which of course would cover that point.

Q. That has not yet been furnished?

A. No, sir; it is in preparation.

Mr. **Mathewson**: It is being made to-day.

Q. You have grown up, as I understand you to testify, in the gas business since you were a boy?

A. Yes, sir.

Q. You are entirely familiar with the gas conditions that prevail and have prevailed for twenty years past in the City of New York?

A. Passably so, I think.

Q. You know the name of every company operating in the Borough of Manhattan as a gas or electric light company?

A. I think I do; yes, sir.

Q. And you know the name of every company operating as a gas or electric light company in the Borough of the Bronx?

A. Yes, sir.

Q. Isn't it a fact that every company, both in the Borough of the Bronx and in the Borough of Manhattan, is controlled by the Consolidated Gas Company, every gas and electric light company?

A. I have named electric light companies in which the Consolidated Gas Company holds stock. I know of at least one company operating in the Borough of Manhattan or the Bronx— 484 in fact I know several companies that the Consolidated Company does not own a share of.

Q. Will you name the companies operating as gas or electric light companies in the Boroughs of Manhattan and the Bronx in which the Consolidated Gas Company does not own a share of stock?

A. Directly?

Q. Directly or indirectly.

A. The Borough of the Bronx Gas and Electric Company.

Q. That is the Bronx Gas and Electric Light Company?

A. The Bronx Gas and Electric Light Company. We do not own any stock of the Central or Northern Union Companies, although the stock of those companies is owned directly or indirectly by the New Amsterdam Company, most of whose stock is owned by the Consolidated Company.

Q. That is what I mean, Mr. Carter, and that is what I am trying to get fully informed about. Is it not a fact—you can state the fact just as it is—is it not the fact that directly or indirectly the Consolidated Gas Company controls every company operating as a gas or electric light company in the Boroughs of Manhattan and the Bronx, with the sole and single exception of the Bronx Gas and Electric Light Company?

A. I cannot say as to the word "control." We own stock in those companies and that is as far as I can testify.

Q. Then I will ask you is it not a fact that the Consolidated Gas Company owns a majority of the stock of every gas and electric light company operating in the boroughs of Manhattan and the Bronx, with the single exception of the Bronx Gas and Electric Light Company?

A. Directly or indirectly I think that is the case.

485 Q. Now, do you know what the capitalization of each of the companies merged into the Consolidated Gas Company was at the time of the consolidation in 1884?

A. The share capital?

Q. Yes, sir.

A. No, from memory I could not say what it was.

Q. I might refresh your recollection. The Manhattan Gas Light Company, $1,000,000.00, New York Gas Company——

Mr. Mathewson: Just a moment; I think perhaps it would be more in order, if I may suggest, to submit anything that you think might refresh the witness's recollection to him instead of reading it and asking him if from memory he can state.

Q. You have testified that you cannot state the capitalization of each of the companies merged into the Consolidated, from memory?

A. I have so testified.

Q. I hand you a statement and ask you if that statement correctly sets forth the amount of the capitalization of each of such companies, together with the aggregate of the same?

Mr. Mathewson: When you say the capitalization do you refer to the capital stock or to the capital in stock, bonds and other obligations, in the aggregate?

The Witness: I have never checked these figures, Mr. Burr, with records that I know to be correct, and I prefer not to testify that these figures are correct without making such a comparison. In other words, I would rather not do it from memory, as to the correctness of the figures.

Q. You would not be understood as contradicting the statements there appearing that the total stock capitalization was $17,000,000.00?

486 Mr. Mathewson: I object to that. There is really no testimony to that effect. He says he does not know and can-

not state, and those are not in evidence at all. Nobody has testified to them.

The **Master**: I do not know what they are. I presume they are the defendants' motion papers.

Mr. **Burr**: I want to show the exact condition of the companies as they were consolidated.

The **Master**: And if they are the defendants' motion papers, of course the papers in this suit are before me under this rule anyway. I assume that he is simply trying to get some basis for further information. I will allow him to testify as far as he can. He says that they do not refresh his recollection.

Q. Will you have prepared a list showing the issues of stock of the six constituent companies merged into the Consolidated Gas Company and the indebtedness of each company assumed by the Consolidated Gas Company?

Mr. **Mathewson**: I object to that request, and the proposed testimony, on the ground that it is immaterial and irrelevant. The act under which the Consolidated Gas Company was formed, the general Act before your Honor, provides that the Consolidated Gas Company may have a capital equal to the aggregate value of the property, franchises and rights of the constituent companies. What amount of capital stock the constituent companies had outstanding, or even what their property originally cost in 1823, under the terms of the Act of 1884, is not material, because the Act authorizes the consolidation at the then value of the property, rights and franchises, 487 so that I cannot see how it would aid this inquiry, or affect the capitalization of 1884, to produce this information.

The **Master**: Did you not ask some questions of this witness about the market value of the stock of those constituent companies?

Mr. **Mathewson**: Yes. That is to say, the stock of $39,078,000, which was issued in 1884, which was authorized to be issued for those companies, although only $37,075,000 was issued sooner or later, was equal to the aggregate market value, as it was said, of the stocks and securities of the six constituent companies.

The **Master**: It seems to me it is proper under those circumstances, on cross-examination, for them to go into the question of what the actual outstanding stock was, as long as you have brought up the question of market value.

Mr. **Mathewson**: It may be; quite likely. For instance, land in 1823 was much less valuable than its cost sixty or seventy years later, when the consolidation of 1884 took place. You rule that the witness may produce the papers?

The **Master**: I am not disposed to rule that he is to prepare statements and tabulations unless you want it, but I assume that where it is going to tend to save trouble and the producing of books——

Mr. **Mathewson**: If you hold that it is material and proper, the witness will prepare such a statement.

The **Master**: Yes, I overrule the objection.

Exception taken by Mr. Mathewson.

Mr. BURR: I might simply state; here are the figures as found by the Joint Committee of Senate and Assembly.

488 Mr. MATHEWSON: I would prefer to have the witness check them over so that he may be sure. That checking was not done by him, and it was not checked by them directly, but taken from another document. I have no objection to complying with your request under the ruling of the Master.

Mr. BURR: I want to examine him along that line.

Mr. MATHEWSON: He will be on the stand, or accessible for further cross-examination.

Mr. PAGE: I think these facts already appear from the testimony already offered by you, showing the incorporation of the various companies and the increases of capital stock.

Mr. MATHEWSON: No; not those. Those are the constituent companies. There is nothing in there about that at all.

Mr. PAGE: I know.

Q. If the total stock issues of the six companies merged into the Consolidated Company was $17,000,000, and the total indebtedness of such companies assumed by the Consolidated Gas Company was $3,415,150.76, making altogether $20,415,150.76, can you explain to the Court why thirty-seven millions of dollars was issued in payment for the property of those companies merged into the Consolidated Gas Company?

Mr. MATHEWSON: I object to that question as hypothetical, and furthermore as dealing with a subject the facts in regard to which have already been stated. The way that that $37,775,000 was made up has already been testified to—appraisal of the tangible property, about twenty-nine millions, plus franchises, $7,781,000, making $37,775,000. It seems to me that to ask the witness how it
489 was done is asking for a conclusion upon a hypothetical question, which cannot result in anything of value.

Mr. BURR: Of course it is very pleasant to have Mr. Mathewson recite these facts and figures which he has at his fingers' ends, but that is not the testimony that I am trying to bring out. I am asking the witness whether he knows, and if he does not know he can simply say he does not know, and if he does know, we are entitled to what he has to say in regard to any particular given subject which is pertinent here. I am simply asking him if he knows the reason why, if the total stock issues, including the indebtedness to be assumed by the Consolidated Gas Company, aggregated $20,415,150.76, there was issued for the same over $37,000,000 of stock of the Consolidated Gas Company.

Mr. MATHEWSON: But the Act provided that the consolidation should take place at the then value of property, franchises and rights of the constituent companies.

The MASTER: I will allow the question.

Exception taken by Mr. Mathewson.

A. I should say that the capital stock and other obligations of those companies outstanding at that time did not represent the then actual value of the properties of those companies.

Q. Well; that is an answer. Now, do you know how old each of those companies was at the time of the consolidation in 1884? Can you tell me when the Manhattan Gas Light Company was organized?

A. No, sir, I could not say from memory. I know that the date is from 1823 on. That would be the oldest company, but I have not in mind the dates of incorporation of the other companies.

490 Mr. Mathewson: The certificates of incorporation of these companies are in evidence here and show the dates.

Q. They were organized from 1823 and had been in existence a good many years before the consolidation in 1884, hadn't they?

A. Yes.

Q. What do you understand in the gas business is meant by appreciation?

A. It is not a term that we use very frequently in the gas business. There is appreciation in property constantly going on, I presume, real estate particularly. We know that it is going on, but we do not take any notice of it in our accounts. We do not use it in the sense of endeavoring to augment our values, the value of our property, by taking account of it.

Q. Is not that an element that enters into the business, the appreciation of its property, the gas company's property? Have you no separate entry in your books regarding appreciation of property?

A. Never.

Q. I have heard a great deal regarding depreciation. What is meant by depreciation, as applied to the manufacture of gas in this city under prevailing conditions?

A. It means actual renewal and replacement of property, destructible property. In the case of plant, depreciation would mean the renewal of parts of apparatus dismantled for some reason, either because of wear and tear or supersession. In the case of street mains it would mean the loss incident to the replacing of small mains by mains of larger size. The same would apply to services. In the case of meters, the condemning of a meter leads to the replacing of it with a new meter. The cost of the old one would appear as depreciation. That is what we understand by the term depreciation in the gas business. It might more properly be expressed as renewal and replacement.

491 Q. Well, would you say that six companies who are capitalized and represented an investment of $20,415,450.76, had appreciated or depreciated if for their purchase over $37,000,000 was paid.

Mr. Mathewson: I object to that question as hypothetical and not stating the facts in the hypothesis.

The Master: I will allow it.

Exception taken by Mr. Mathewson.

A. I should say that decidedly the value had appreciated.

Q. What do you understand by the franchises that you testified regarding yesterday, as being valued at $7,781,000?

Mr. Mathewson: I object to that as incompetent and immaterial.

The franchises have not yet been offered in evidence. They will be hereafter, the grants.

Mr. BURR: This witness was examined with regard to them.

The MASTER: I will allow it.

Exception taken by Mr. Mathewson.

A. My understanding is that that was the value placed on the franchises at that time; by what process of reasoning I do not know.

Q. As to the alleged franchises themselves, have you any knowledge what they consisted of? What is meant by franchises of those companies, for which that large amount of money was allowed or paid?

The same objection, ruling and exception.

A. It is a subject I am not familiar with and I would be loath to testify on it as to technically the franchises that were comprised in that valuation.

Q. Then you have no knowledge as to their value, yourself?

A. No, I have not.

492 Q. And you do not want to be understood here as testifying in any way as to the value of those franchises?

A. Not specifically.

Q. I have asked you; in any way.

A. I might have the opinion that in a general way their value was much greater than that figure.

Q. But, to have an idea as to their value, and their correct value, you must have some idea as to what is meant by franchises—what the franchises embrace?

A. The fact that the company was doing business at that time would itself indicate that they had some rights that possessed some value.

Mr. BURR: I submit that that is not responsive to my question. I am asking him, and I am seeking to ascertain from him, what is meant by franchises upon which he has some idea as to their value.

The MASTER: Well, that is responsive, as far as it goes.

Q. That is all you can say on that subject, is it?

A. I have no doubt that the fact that the Consolidated Gas Company had established business relations with the public, had succeeded in making gas installations in practically every building in New York, and had built up a certain amount of good will, was understood at that time to have a value.

Q. The Consolidated had not done that in 1884, had it?

A. The companies that were consolidated had done so.

Q. So that you regard the franchises as embracing good will?

A. I think so, yes.

Q. Did you have anything to do with the placing of the valuation on the franchises of these companies?

A. No, sir.

Q. I understood you to say that you had not anything to do with regard to the appraisals of the property of the company?

A. Nothing.

493 Q. And that the appraisals were done by a man named Rowland, is that right?

A. A great deal of it, yes.

Q. Can you name any other man who assisted in the appraisal of the property of those companies.

A. No, I cannot.

Q. Who was Mr. Rowland?

A. Mr. Rowland was a constructor of gas plants of world-wide reputation and very large experience, a man who enjoyed a high reputation commercially.

Q. Did you know him?

A. I had met him.

Q. How long had you known him?

A. At the time of the consolidation?

Q. Yes?

A. Perhaps two or three years.

Q. Where was he employed before 1884?

A. He was never employed by the company except for the purpose of those appraisals.

Q. And he was employed by the Consolidated Gas Company for the purpose of appraisals?

A. I think not; I think he was employed by the companies subsequently consolidated, for the purpose of making those appraisals.

Q. He was employed by the companies who were being purchased by the Consolidated Gas Company, for the purpose of making appraisals?

A. There was no purchase that I ever heard of, by the Consolidated Gas Company, of other companies.

Q. He was employed by the companies that were subsequently merged into the Consolidated Gas Company; is that right?

A. He was employed by the companies that subsequently consolidated and formed the Consolidated Gas Company.

Q. He was, to your knowledge, employed by the companies that were subsequently consolidated and formed the Consolidated Gas Company, is that right?

A. Yes, that is the case.

Q. Did you know William Farmer at that time?

A. No, sir.

494 Q. Wasn't he connected with the Consolidated Gas Company at that time?

A. Not that I am aware of.

Q. Who was secretary before you of the Consolidated Gas Company?

A. J. A. Bennett.

Q. Who was secretary before him?

A. L. B. Gawtry.

Q. Was there not a secretary named Zollikoffer, or some such name?

A. There was.

Q. What year was he secretary?

A. He held the position prior to L. B. Gawtry's incumbency.

Q. Is it the duty of the secretary to sign the tax reports?

A. They usually have been signed by the secretary.

Q. What position did you occupy when Mr. Zollikoffer was secretary?

A. I was controller at that time, part of the time, latterly; before that I was General Accountant.

Q. What year was that?

A. I will not be sure.

Q. Was it 1899?

A. I think in 1899 Mr. Zollikoffer was secretary, and I think I was controller.

Q. Do you recall that there was some discrepancy between the tax report and the other valuation of the company that year?

A. In 1899?

Q. Yes.

A. I do not know just exactly what you mean.

Q. I will not press that. Do you recall any episode in regard to a difference of a few hundred thousand dollars between the report made to the Tax Commissioners and the figures appearing upon the books of the company?

A. In 1899?

Q. Yes.

A. What particular property, Mr. Burr?

Q. Evidently you do not remember about it;—taxable property.

A. Well, I recall the 1899 report from having seen it, although I had nothing, to the best of my recollection, to do with making it up. I think it was made up under Mr. Zollikoffer's supervision by 495 the then general bookkeeper. My recollection is that with respect to the value of some of our property we made no report whatever; the report was blank, and so submitted to the State Board, with respect to the value of some of our property; it may be that that is what you have reference to.

Mr. Mathewson: He asked you if you remembered any episode in that connection. Do you remember any episode?

A. (Continuing:) No, I do not; the report was accepted by the State Board and the assessment levied against the company.

Q. And you remember that the company appealed from that assessment?

A. I do, very well.

Q. You stated yesterday, if I am not mistaken, and I think Mr. Mathewson also stated, there was no such company as the East River Gas Company of Long Island City?

A. Oh, no.

Mr. Mathewson: No, I did not say so. I said there was no company known as the East River Gas Company, as distinguished from the East River Gas Company of Long Island City.

Mr. Burr: I thought you stated that there were no such corporations.

Mr. Mathewson: Oh, no. There are. I have heard of them many, many times, and I have presented arguments in favor of the

East River Gas Company of Long Island City. It is impossible that I should have made such a statement. You used the term "East River Gas Company," and "East River Gas Company of Long Island City." I thought perhaps you thought there were two companies.

Mr. Page: On page 450 of the record I asked the question:

"Q. Does it own stock in that company indirectly? A. I
496 should say not. I don't think it would own it unless it owned
every share of the stock of the company. We hold no stock
of the East River Company.

"Q. Does it hold any stock in the company, and if so, how much to your knowledge in the East River Gas Company of Long Island City? A. No, it does not.

"Q. And in the East River Gas Company? A. No, it does not.

"Mr. Mathewson: I do not think there are any such corporations. I may be wrong.

"The Witness: I have never heard of them."

Mr. Mathewson: That should be "any such corporation," known as the East River Gas Company. I never heard of that. That is a mistake of the stenographer. There is an "s" in there, and the witness says he never heard of it, as distinguished from East River Gas Company of Long Island City. There is an East River Gas Company of Long Island City, and there was a New York and East River Gas Company, which was one of the three companies which consolidated and formed the present New Amsterdam Gas Company. Those are the only two of anything like that name that I know of or ever did know.

Q. Then I will ask the witness, so that we may have it straight on the record. Do you know that there is such a company known as the East River Gas Company of Long Island City?

A. Yes.

Q. Does the Consolidated Gas Company own stock in that company and if so how much?

A. No, sir.

Q. Does it indirectly own stock in that company?

A. The stock of the East River Gas Company of Long
497 Island City is owned by the New Amsterdam Gas Company.

Q. And you own the controlling shares of stock of the New Amsterdam Gas Company?

A. We own a majority of the stock of the New Amsterdam.

Q. And is that the company which has the tunnel under the East River?

A. Yes.

Q. The East River Gas Company of Long Island City is the company which has a tunnel, a small tunnel now in existence under the East River; is that right?

A. Yes.

Q. At the time of the purchase of the Astoria property who were the Board of Directors and the officers of the Consolidated Gas Company?

A. With one or two exceptions I think the organization was the same as it is to-day.

Q. Well, will you give me their names?

Mr. MATHEWSON: I object to it as immaterial and irrelevant.
The MASTER: I will allow it.
Exception taken by Mr. Mathewson.

A. From memory I would not like to say; it was back in 1898 or 1899, eight or nine years ago, and I should want to consult our records before I state positively who the officers and directors were at that time.

Q. You have stated that with one or two exceptions, they were the same as the present Board of Directors and officers?

A. That is the case.

Q. What are the names of the present officers and Board of Directors of the Consolidated Gas Company?

The same objection, ruling and exception.

A. The Board of Directors comprise——

498 The MASTER: Is not that all in one of these exhibits?

Mr. BURR: I thought he could rattle it off in a minute, I think it is.

Mr. MATHEWSON: Is it not in your 1905 tax report, Senator?

The MASTER: I think it is either in one of the exhibits or one of the answering affidavits read on the injunction motion.

A. The trustees in the company are: Harrison E. Gawtry, Samuel Sloane, William Rockefeller, M. Taylor Pyne, George F. Baker, James Stillman, Stephen S. Palmer, F. Augustus Schermerhorn, Anthony N. Brady, Thomas F. Ryan, Frank Tilford, John W. Sterling, A. H. Elliott. The officers of the company are: Vice-Presidents, Samuel Sloane, W. R. Addicks and L. R. Gawtry. Treasurer, James A. Bennett; Assistant Treasurer, Benjamin Whitely; Secretary, R. A. Carter; Assistant Secretary, Colin C. Simpson; Auditor, F. L. Lambrecht.

Q. Is that Assistant Secretary Simpson the same Simpson who testified here with regard to mains?

A. Yes.

Q. So that in addition to having special charge of the mains and doing outdoor work continuously, as he stated, he is also assistant secretary?

A. Yes.

Q. What are his duties as assistant secretary?

A. The duties of the secretary in the absence of the secretary.

Q. What are the duties of the secretary of this company?

A. The secretary has charge of the accounts, of the stock transfer department, the stock ledger, contracts and leases, the minute books and records of the company.

Q. To what accounts are the salaries of the chief engineer and his assistant charged?

499 A. To an account called general expense. I understand you to mean his assistant at the general office? Not referring to the superintendent at the works, whose salaries would be charged

to superintendence at that station, and would appear as an item of the cost of gas manufacturing.

Q. Well, where would their salaries appear?

A. As an item in the cost of gas manufacturing, called Superintendence.

Q. Have the Standard, the New Amsterdam and the Mutual each engineers separate and apart from Mr. Bradley?

A. Yes, sir.

Q. They have their own staff of engineers?

A. Their own staff of engineers.

Q. So that we have, with regard to those companies, three complete organizations?

A. Yes, sir.

Q. And therefore triple the expense in the production of gas?

Mr. Mathewson: I object to that—"triple the expense in the production of gas"—as a conclusion.

Mr. Burr: If he knows, I ask him what he knows about it.

The Master: I will allow it.

Exception taken by Mr. Mathewson.

A. I should say not triple expense; each one of our stations has a superintendent, and there is a superintendent at the stations of each of those companies, and would have to be under any circumstances.

Q. Then those companies, as I understood you to say yesterday, each one had a complete set of officers and complete accounting departments, just the same as you have in the Consolidated Gas Company?

A. Yes.

Q. And your knowledge of the gas business would lead
500 you to say that the expense of those departments is charged
up against the manufacture of gas by each of those companies?

A. To which departments do you refer?

The same objection, ruling and exception.

Q. The departments which you say are complete in the three companies that I have named, the Standard, the New Amsterdam and the Mutual, which they still keep up as separate entities, engineering department, financial department and auditing department, and full set of officers. Those are all expenses for each company, are they not?

A. Yes, decidedly.

Q. And the expense of maintenance of those departments of each company is charged up against the manufacture of gas by each company?

A. I would not say it was charged up against the manufacture of gas; I should say expense of operation.

Q. The expense of operation is charged against the manufacture of gas, is it not?

A. No, not against the manufacture of gas necessarily; it might be charged up against the cost of distributing gas.

Q. Well, it is charged up against the gas that is finally delivered to the consumer?

A. Yes, charged up against the revenues of the company, against the revenues.

Q. Have you got an inventory of the plant operated by the Consolidated Gas Company?

A. No, sir.

Q. How do you arrive at any valuation of the property of the company without having an inventory of it?

A. The accounts that the company keep indicate the amounts expended on the various plants from the time of consolidation in 1884 down to date; that is the value of course which appears in our statements, upon the balance sheet of the company.

501 Q. Are those itemized accounts?

A. Itemized accounts, yes, sir.

Q. Those itemized accounts show each piece of material or property that is purchased for each station or plant?

A. Yes.

Q. And if you wanted now to get up an inventory of that property where would you find the material for preparing such an inventory?

A. It could be taken out of the accounts by a long process. Perhaps an inventory of the physical property would be a shorter method than to attempt to dig it out of twenty odd years of itemized accounts.

Q. Well, I agree with you. Have you got such an inventory of the physical property?

A. You mean made from the physical property?

Q. From the physical property used in each plant and belonging to each plant?

A. No, there is no such inventory that I have any knowledge of.

Q. And therefore, to ascertain what property belongs to each plant you say would involve an examination, a laborious examination of a long series of accounts?

A. Either that or an inventory of the physical property.

Q. Either that or an inventory of the physical property?

A. Yes.

Q. Well, now, can you explain to the Court how Mr. Bradley is able to make up or give an estimate of the value of the property belonging to the Consolidated Gas Company in each of its plants, without such an inventory?

Mr. Mathewson: I object to that as incompetent and immaterial. You recall that Mr. Bradley stated that from his long experience in the business he was able to state that, that he had no inventory upon which he proceeded. I do not think this witness can answer such a question as that.

502 The Master: I do not see that it is material as explaining what Mr. Bradley was able to do. I think it is proper on cross-examination to ask a general question as to whether it would be possible to get at the estimated value in such a way.

Mr. Burr: I will adopt your Honor's suggestion.

Q. I will ask you to make up a valuation of the property of the company at each of its plants, it would be necessary to have this inventory of the physical property, either as you have stated, by going through this long process of searching out the bills of the same from the books of the company for the past twenty years; is that right?

A. No, I think that a gas engineer familiar with the construction of gas plants, given a plant of certain producing and holder capacity, would be able to estimate its cost or estimate its reproduction value very closely.

Q. Without any regard to what had been expended?

A. Why, yes; it might be better than its cost, because he probably would take into consideration variations in cost of materials that the books would not show, and that might very materially affect the cost of the plant.

Q. That would be merely ascertaining the cost of reproduction. It would not be absolutely the value of the property now on hand at each plant, would it?

A. Well, the cost of reproduction would be pretty nearly the value of the plant on hand, I should think.

Q. So that in the gas business it is not necessary to make an itemized inventory, putting a particular value against each particular piece of property, but you lump it all from observation, or else dig it out of the books?

A. Well, there are different ways of doing it. That is one way of doing it.

503 Q. Well, the other way you have described——

A. I have described two ways of doing it. One way, the value arrived at from the books would be the cost, which might be its present value; it might be less than its present value, and it might be considerably less than its present value based upon reproduction new.

Q. You were to tell me about the amount of coal that was used each year. Have you been able to get that data for me?

A. I did not understand that, Mr. Burr. I did not understand that that point was settled last night.

Mr. Burr: Do I understand that counsel refuse to produce the statement that I have asked for with regard to the amount of coal consumed each year since 1884?

Mr. Mathewson: Yes.

Mr. Burr: And the amount of oil that has since been similarly consumed each year, in the manufacture of gas by the Consolidated Gas Company?

Mr. Mathewson: Yes, counsel do refuse to produce that unless it is ordered by the Master, and they submit it is wholly unnecessary and unreasonable. I am having prepared, as I stated to Mr. Burr, in great detail, a statement showing the expenditures for gas within the last convenient period, showing the amount of coal used, the price paid for the coal, and I think substantially all the details that will be required. It seems to me when that is presented, the question which Mr. Burr raised, as to the details of that period, if that is not sufficient to satisfy him, might arise, but nobody yet has raised the

question of the price of gas. We did not go into it. We have not
reached it yet. But if we do, we certainly should not try to
504 cover a period from 1884 to date. What gas costs now is the
material point, not what it cost in 1884 or 1890.

Mr. Burr: Your Honor will recall that both Mr. Bradley and Mr. Simpson testified in detail with regard to these very large items of repairs and replacements and construction of plants and mains from 1884 right up to the present time. Now it seems to me that if they are permitted to present a summarized statement of that kind here, that at least we are entitled to have shown us what amount of coal or oil, which would figure very largely in going into the expense of operating a gas plant and manufacturing and distributing gas, was used. We are certainly at least entitled to the same sort of information that they have themselves, from 1884——

Mr. Mathewson: We have not submitted a word as to the cost from 1884. Here is a balance sheet of certain items of capital on certain dates. The amount of coal and oil——

The Master: It is not necessary to discuss it any further. I stated last night what I would do about it. I certainly shall not make any wholesale order for the production of books covering a period of twenty years showing the cost of coal and oil. The utmost that I would do at the outset would be after you had laid a proper foundation for it, to bring down the books showing in the first place the coal and oil account possibly for a period of a year past, and starting with that we will see what that amounts to. But as I understand Mr. Mathewson this morning, he says he is having a statement made up along that line. I think we had better defer the question of what books are to be produced until you get that statement.

505 Mr. Burr: You will remember some time ago when exam-
ining Mr. Bradley upon this subject I waived any question
of the production of the original contracts for the coal and oil on the understanding that we were to be furnished with either the original contracts or a statement regarding the same.

Mr. Mathewson: We will produce the original contracts here for your inspection in connection with this statement of the cost of gas, so you can see what our contracts call for, for coal and for oil, for that matter. And we concede your right to check in any proper manner the statement we present to see whether it is right, on the cost of gas. But I do not think you will have a particle of difficulty if you will wait until the statement comes in and let us take it up in order.

Q. I will ask you now offhand if you know what was the lowest and highest price paid for coal within the past five years?

Mr. Mathewson: I object to that as immaterial and irrelevant.

The Master: He may answer if he knows.

A. I don't know. From memory I would not undertake to give it.

Q. You don't know the highest or lowest price paid for oil, do you?

A. No, sir.

Q. Did you not testify before the Gas Commission that you did know?

A. Decidedly not. That I could tell from memory? I could find out. It is all a matter of record, Mr. Burr.

Q. Is not 4½ cents a gallon the average price that has been paid for oil to your knowledge for the past five years?

506 Mr. Gans: Unless the witness knows, I am afraid I will have to interpose an objection, because I think the question is too important. I do not want the witness to guess on this any more than Mr. Mathewson does.

The Witness: It would only be a guess, Mr. Burr.

Q. Well, if you don't know I don't want your guessing. That will all appear on this statement you are preparing?

A. Yes.

Mr. Mathewson: It will, the cost per gallon of the oil we use.

Q. Have you been allowed any rebates on the shipments of coal made to you?

Mr. Mathewson: I think the contracts themselves, Mr. Master, will show what they are when they are presented, and would not Mr. Burr be willing to postpone that until this statement is before us?

Mr. Burr: No, I will just ask that question in regard to rebates, if he knows.

The Witness: Well, what may have been the case many years ago, I don't know. I know at the present time there are no rebates on any coal that the company is purchasing.

Q. How long since they have ceased?

A. I don't know how long ago, I should say perhaps on one contract there was some allowance possibly three or four years ago, but from memory I would be reluctant to testify on the subject.

Q. Will the contracts show the rebates?

A. Any contract upon which there is any rebate, the rebate would show in the contract.

Q. Would not the rebate be the subject of a separate contract?

A. Well, the full information would be attached to the contract, any information respecting any rebate. 507

Mr. Mathewson: If there were any?

The Witness: If there were any.

Q. And has your company received any rebates from the shipment of oil for the past five years?

A. No, sir.

Q And has there been any reduction to the company from the price charged as billed?

A. No, nothing of that kind, unless for some error in the quantity. I think in one or two instances some allowance has been made because of some shortage of delivery.

Q. You stated here yesterday that the company needed a working capital of over a million dollars. Can you explain a little more fully why it is necessary to carry such a large amount of money in cash?

A. The expenditures of the company for current expenses, construction, etc., are very considerable every month, and anything less than a working capital of a million dollars would be, in my judgment, sailing too close to the wind. We are likely to be called upon at any time for perhaps a very considerable payment either for some construction in operation or something of that nature and we would have to have the cash to meet it.

Q. Is that capital that you have referred to of a million dollars used at any time in the purchase of stock or stock transactions?

A. Well no, I should say not. I had not that in mind in testifying that in my judgment that was a reasonable amount of working capital for the company to have.

Q. You claim and have stated here that the actual capital invested amounts to eighty million dollars?

A. The outstanding capital stock, share capital of the company, amounts to eighty million dollars, yes, sir.

508 Q. Sixty-seven million dollars of that is invested in stocks, is it not?

A. I should say decidedly not.

Q. How much is invested in stocks and bonds of all kinds and descriptions?

A. Of the eighty million dollars?

Q. Yes.

A. Well, there is a condensed balance sheet in evidence here, one of the exhibits, that would indicate that.

Mr. Mathewson: I think it is Exhibit 80. (Handing paper to witness.)

Q. How much, Mr. Carter, is invested in United States Government bonds by your company?

A. We have three million dollars of bonds, which cost us $3,087,000 and some odd. I can give you the exact amount if you wish.

Q. Did you not have eleven million dollars invested in United States Government bonds and city stock?

A. Well, I am speaking of the present time. I think at the time on October 31st, we had about that amount.

Q. October 31st, 1905, did you have $11,000,000 invested in United States bonds and New York City stock?

A. No, sir.

Q. How much did you have?

A. We had $3,087,500.

Q. October 31st last?

A. October 31st, 1905.

Q. And October 31st, 1904, did you not have $11,000,000 of the company's money invested in government bonds and New York City stock and bonds?

A. I don't recall the amount. We had quite a large amount invested at that time.

Q. Would you swear it was not $11,000,000?

A. I would not swear that it was not or that it was. Our records will show exactly what we had invested at that time and I prefer to testify from our balance sheet of that date.

509 Q. Will you bring down your balance sheet showing the amount you had invested at that date?

A. What date?

Q. October 31st, 1904?

Mr. Mathewson: December 31st, 1904.

Mr. Burr: Yes.

The Master: That will be covered by the other statement, will it not?

The Witness: The balance sheets of 1905 showing every year would indicate what was carried in that account.

Q. In 1904?

A. It will not in 1904.

Mr. Mathewson: January 1st, 1905, would be the same thing, would it not?

The Witness: But the January balance sheet would be as of January 31st, 1905.

Mr. Mathewson: Well, you can supplement it.

The Witness: I will put in the December 31st, 1904, balances.

Q. Is it not a fact, Mr. Carter, that the net return in the way of dividends or interest on $67,000,000 for the year 1904, invested by your company was no more than 1½%?

A. I have not any figures here from which to testify and I would not like to do so from memory.

Q. But you will incorporate that in the statement that you are to furnish?

A. Do you want the income from securities owned and the rate per cent. on the par value of securities owned, is that the question?

Q. Yes.

510 Mr. Gans: I thought what Mr. Burr asked for was the rate per cent. on the capital invested in those securities.

Mr. Mathewson: The rate per cent. on those securities as they are carried on the books of the Consolidated Gas Company.

The Witness: I want to give it to Mr. Burr, as he wants it.

Q. I may ask you—first I asked you whether $67,000,000 of the company's money was not invested in other securities?

A. You said $67,000,000 of the capital stock?

Q. Yes.

A. And I said that it was not.

Q. How much did you say was?

A. I did not say.

Q. How much is it or was it in 1904?

A. If I have the sheet I had a moment ago, I can testify.

Mr. Mathewson: Give the date.

The Witness: As of October 31st, 1905, $38,643,590.14 of the capital stock was invested in the securities of other companies, together with a premium on capital stock of $14,322,217.95; and sundry other resources, $75,326.43, or a total invested of $53,041,134.52, which amount does not include the investment in the city stock of $3,087,500.

Q. Would the figures vary, were they any larger in 1904? Did they not amount to $67,000,000 in 1904?

A. I would say also that that does not include the capital stock, the bonds or the amounts advanced to the Astoria Light & Power

Company, which may be included in the figure which you have in mind.

Mr. **Mathewson**: Or the National Coal & Coke Company.

The **Witness**: Or the National Coal & Coke Company.

511 Q. Figure those all up and see how much they amount to?

A. The amount invested as of October 31st, 1905, in the securities of other companies, or rather the securities and obligations of other companies which includes also the city stock and the National Coal & Coke Company and the Astoria Light, Heat & Power Company investment amounted to $61,738,634.52.

The **Master**: We will suspend until 2.15.

Recess until 2.15 P. M.

After Recess.

Robert A. Carter resumes the stand for further cross-examination:

Cross-examination by Mr. **Burr**:

Q. The dividends declared by the company have averaged something like 6½ per cent., you said?

A. Yes, sir.

Q. I call your attention to the affidavits made by Mr. McMillan and other gentlemen, contained in the printed book of affidavits and notice of motion in this case, in which it is stated that a rate should not be fixed which will necessitate a lower return than ten per cent. upon the investment in gas works in New York City, in order to sell stock of such company; do you agree with that statement?

Mr. **Mathewson**: Will you give me the names of the affiants besides Mr. McMillan to whom you refer?

Mr. **Burr**: Walton Clark, Emerson McMillan, Allen B. 512 Forbes, Charles S. Fairchild, Frank A. Vanderlip, Horace J. Morse and Wetmore Halsey.

A. I have no hesitancy in concurring in the opinion expressed in those affidavits.

Mr. **Gans**: I did not understand the question was completed.

Mr. **Mathewson**: Yes, he asked if the witness agreed with those conclusions.

Mr. **Gans**: I am put in rather an embarrassing position here because I am free to say if Mr. Mathewson had put that question to the witness I should have felt compelled to object to it on the ground that it was irrelevant and immaterial and not a subject for opinion evidence, and I make the same objection to that sort of inquiry now, even though put by counsel for another defendant.

Mr. **Page**: I suppose anything that Mr. Burr goes into outside of direct-examination in this cross, that we are not bound by as representing the State.

Mr. **Burr**: I am asking him if he concurs in that opinion and then will ask him upon what he bases such an opinion, in view of what he has observed himself.

The MASTER: I do not suppose the testimony on that subject is of any great value, and I suppose it is not the sort of matter which would really be covered or can be covered by expert testimony; at the same time it seemed to cut considerable figure in the case on the preliminary applications and I will allow the question. Of course you could multiply witnesses indefinitely on one side or the other on that proposition.

513 Mr. BURR: I do not wish to have that appear in that way. If the counsel for the State feel that that would be in the slightest degree injurious to their position I withdraw the question.

Mr. MATHEWSON: The question is already answered, I think. Is it not, Mr. Stenographer?

The STENOGRAPHER: Yes, sir (reading the answer).

Mr. GANS: May the answer be stricken out physically from the record?

Mr. BURR: I withdraw the question and ask that the answer be stricken out.

The MASTER: If there is no objection to it on the part of Mr. Mathewson?

Mr. MATHEWSON: I think I shall object. The witness answered the question. If he answered to the contrary I suppose it would not have been insisted that it be stricken out.

Mr. GANS: My request was made practically as soon as it could be made.

Mr. MATHEWSON: If the question had been withdrawn before the witness answered the question I should have assented, but it having been answered it does not seem quite fair, whatever the answer may be worth, to withdraw it now.

The MASTER: I will allow it to stand.

Mr. GANS: Exception.

Q. During all the years that the stock of this company has been sold from 1885 up to the present time, it has never had a 10% dividend declared, according to the exhibit which you have presented here?

A. The company has never paid 10% in any calendar year, no, sir.

514 Q. Notwithstanding which fact you have disposed of the stock which you have testified to as having been disposed of by the company during that term of years?

A. Yes, sir.

Q. You have had no difficulty in floating your stock, have you?

A. No, sir.

Q. It has commanded a great premium in the open markets of the city and of the country, has it not?

A. Yes, sir, it has.

Q. In your affidavit made in this case you say that the company has from the proceeds of its debentures of July 1st, 1904, $6,200,423.64 in cash and $6,517,071.00 in temporary investments. What do you mean by those temporary investments?

A. I mean that the investments are of such a nature that they could be liquidated in a very short time; in other words, that the company could realize cash on them without delay in the event of it requiring the cash.

Q. Are they investments in stocks?

A. They are not, no, sir; except possibly the case of the city stocks, which of course could be realized upon almost at an hour's notice.

Q. Well, that is practically of a fund of over $12,000,000 which you have waiting disposal in any manner that you think proper?

A. Awaiting disposal in a permanent form in the shape of construction at Astoria.

Q. Nothing to prevent your investing it in any stocks or in any manner that you think proper, is there?

A. There is, because investing it in any other form would render it perhaps extremely difficult to realize upon such investment when we required the cash.

Q. Then it is merely a matter of convenience with you?

A. Entirely so, the intent being to keep those funds in such shape that they will be available without any delay.

515 Q. There is nothing however to prevent you from using that $12,000,000 for investments in stocks, if you so desire.

A. Nothing to prevent us that I am aware of.

Q. And as you use any part of that $12,000,000 for the Astoria plant, that amount so used is deducted from this $12,000,000?

A. Yes, sir.

Q. How much money have you on hand deposited by consumers?

A. As of October 31st?

Q. As of October 31st, 1905.

A. $904,520.07.

Q. What is done with the money of the consumer; is it used in the business of the company?

A. Probably included in some of these temporary investments.

Q. You pay a rate of interest on the money deposited by the consumers, do you not?

A. More correctly speaking, I should say that it was at the present time invested in the plant and the property of the company. If not in cash or represented in accounts receivable, it is represented in some of the assets current or permanent of that period of that date.

By Mr. GANS:

Q. Not held as a separate fund?

A. Not held in a separate fund.

By Mr. MATHEWSON:

Q. He asked if you paid interest on these?

A. We do pay interest, yes, sir.

By Mr. BURR:

Q. You could not say in what particular fund or particular funds this money is placed?

A. No.

Q. What rate of interest do you pay on that money?

A. The legal rate, six per cent.

Q. So that in addition to the million and odd dollars which you have as cash capital you use also this nine hundred and odd thousand dollars additional in your business?

516 A. That is kind of a mixture of assets and liabilities. We have that amount that consumers have deposited represented in some of our assets. It is not in addition to anything else, it is there as an amount.

Q. I do not know what the technical term may be, but I ask you a plain, simple straightforward question: Is not nine hundred and odd thousand dollars deposited with you by the consumers used in the business of the Consolidated Gas Company?

A. It is.

Q. Is the million and odd dollars which you said you had on hand as capital also used in the business of the Consolidated Gas Company?

A. As working capital is engaged.

Q. So that both of those items are used in the business of the Consolidated Gas Company?

A. Not in the shape of cash.

Q. I want to know what is the fact.

A. Well, I have testified to the fact. I testified to our requiring a million dollars in cash as working capital; from what sources that might be derived, among other resources, I have not testified; it would be an impossible thing to do.

Q. Then do you want us to understand that the nine hundred and odd thousand dollars of the consumers forms part of the million dollars cash working capital?

A. No, not necessarily; it might; you can consider it so if you choose.

By Mr. MATHEWSON:

Q. It is not kept separately?

A. It is not kept separately.

By Mr. BURR:

Q. I do not choose anything, I want the fact.

A. We do not separate that fund from any other fund or any other investment or any other asset.

517 Q. Well, Mr. Carter, do you want me to understand that you cannot tell whether you have in addition to the million dollars cash working capital, nine hundred and odd thousand dollars deposited by the consumers engaged in your business?

A. Engaged in the business, but not as cash.

Q. In what way is it engaged in the business if it is not engaged as cash?

A. It might be.

Q. I am not asking what it might be; in what way is it?

A. Well, it would have to be one way or the other; it would have to be either in cash or have to be represented in some asset of the company.

Q. Can you tell me what other asset?

A. I cannot.

Q. Why not?

A. Because we do not keep track of it as a separate fund.

Q. Is there any reason why you do not keep track of it as a separate fund?

A. Because it would serve no purpose to do so.

Q. Is it a fact that the twenty million of six per cent. debentures was divided at par among the stockholders on or about July 1, 1904?

A. Not the entire amount; the exact amount has been testified to, I think it is $19,857,600.00, if my memory serves me.

Q. Was not the stock of the Consolidated Gas Company selling at $204.00 per share at that time?

A. No, sir, it was not. I don't remember the figure it was selling at at that time, but it was very much below 204.

Q. Well, can you get me the exact figure at which it was selling on July 1, 1904?

A. Why, we have a record kept, we have a record of the quotations, I can get it or get it from the daily papers.

Mr. **Burr**: Have you got that record, Mr. Mathewson?

Mr. **Mathewson**: No, sir, it is easily accessible, of course; 518 the *Financial Chronicle* will tell it. We can get it if you prefer us to do it; it is a simple proposition.

Q. Didn't you testify that the average was $204.00 a share for the past five years?

A. I think not; I don't recall doing so.

Mr. **Mathewson**: If you will read Mr. Bennett's affidavit towards the end you will see just what he did testify to. Mr. Bennett made the affidavit on that subject; Mr. Carter and he are both familiar with the facts; Mr. Carter has testified here on the subject. It is on page 46 of our affidavits—average price for 1901 was about 214 and so on; he didn't state for the five years.

Mr. **Gans**: Wasn't there an Exhibit which covered the average price?

Mr. **Mathewson**: The Exhibit shows the high and low in each year, not the average.

Q. Can you say what the rate was, Mr. Carter, at which the stocks sold on July 1, 1904?

A. No, sir, but I can ascertain it for you.

Q. Will you also ascertain what the average rate was at which it sold in the past five years?

A. Yes, sir.

Q. The result of this division of the $20,000,000 or thereabouts of six per cent. debentures, in the way you have stated, wasn't that equivalent to dividing a bonus among the stockholders instead of using it for construction.

Mr. **Mathewson**: I object to that; isn't that a particular kind of conclusion? The fact is these debentures were issued at par, sold stockholders at par, and the question is whether that was not 519 equivalent to dividing a bonus. Isn't that a conclusion from the facts? Is there any obligation in any law that you must issue securities and get more than a dollar of cash for each dollar of securities you issue? I do not know of any.

Mr. BURR: He can state what it was.

The MASTER: I will allow it.

Exception.

A. I cannot figure it out so.

Q. What do you figure it out to be if it was not a distribution of a bonus up to that extent among the stockholders?

A. To what extent?

Q. To the extent of the nineteen million and odd dollars?

A. That was not a distribution among the stockholders; the stockholders paid that amount of money into the company.

Q. I will show you the statement in the affidavit of Mr. James A. Bennett as it appears on page 46 of the affidavits and notice of motion made herein and ask you if it is not shown there that the average was 201 in 1904?

A. That might be the case and the stock might not have been selling at that price on the first of July, 1904.

Q. Well, that you will ascertain for us?

A. Yes, sir.

The MASTER: Would it not be better instead of lumbering up this record with all these questions about stocks and prices and dividends to stipulate that either party may use the *Financial Chronicle* files and put them in? I think that is customarily done in all references involving Wall Street matters, and then have the files here and use your figures from them whenever you want them; it would save considerable work, it seems to me.

Mr. BURR: Yes, that would be a good thing if we had 520 them here. I am trying to get a statement from the witness here on which I may base another question and not having the information it prevents me from continuing along that line.

Q. Did you have anything to do with the purchase of the Astoria plant?

A. No, sir, and, I might say, if the question applies to the purchase of the Astoria plant by the Consolidated Gas Company, there is no such transaction of record.

Q. The testimony is here that before that ground was purchased, and before it was accepted as a plant by the Astoria Light, Heat & Power Company, Mr. Bradley was sent over to view it and look at it, he being the chief engineer of the Consolidated Gas Company; but whether he made a written report in regard to the matter or not he is not quite clear in his mind; he has no exact remembrance of it, but he did consult with some of the directors, he is quite positive. I am asking you whether you were consulted in regard to the purchase of that ground, upon which it was proposed to construct the Astoria plant?

A. No, sir.

Q. You had nothing at all to do with the purchase of that land?
A. No, sir.

Q. And you are not a director in the Astoria Light, Heat & Power Company?

A. No, sir.

Q. Nor any other officer?

A. No, sir.

Q. Are you a director or officer in any other gas company outside of the Consolidated Company?

A. I am an officer of the Westchester Lighting Company.

Q. What position do you occupy in that company?

A. Secretary and Treasurer.

Q. Do you receive an additional salary as an official in that company?

A. Yes.

Q. Is that paid out of the funds of that company or out of
521 the funds of the Consolidated Gas Company?

A. Out of the funds of that company.

Q. Do you own stock in that company?

A. No, sir.

Q. Have you been able to get any further information as to the location of the seventy miles of abandoned mains that have been spoken of here?

A. I have not undertaken to. I understood that you asked Mr. Simpson to obtain some such information, if possible. We have no records in the accounting department whatever that would indicate the location of them.

Q. Who are the officers of the National Coke & Coal Company?

A. I think Mr. George W. Doane is the President of the company, and I think Mr. Lambrecht is the Secretary.

Q. Is that the same Lambrecht who is auditor of the Consolidated Gas Company?

A. The same.

Q. Are there any other officers of the Consolidated Gas Company who are officers or directors in the National Coke & Coal Company?

A. As directors, yes. Outside of Mr. Doane, all of the directors are connected with the Consolidated Gas Company.

Q. And that company simply does the trucking for the Consolidated Gas Company?

A. That is the case, carting of coke particularly; it handles the coke and sells it.

By Mr. Gans:

Q. On commission from the Consolidated Gas Company, or does it buy it from the Consolidated Gas Company and then sell?

A. It buys and sells.

Q. Buys from the Consolidated Gas Company?

A. It buys from the Consolidated Gas Company and sells to the customers.

Mr. Mathewson: And the profit comes back to the Con-
522 solidated Gas Company in the way of dividends.

Mr. Gans: I understood that.

Q. On page 33 of the affidavits and notice of motion in this case it says, "the investment of the Consolidated Gas Company in the stock of the National Coke & Coal Company above mentioned is $50,000." Is that correct?

A. Yes, sir.

Q. To whom was that paid?

A. It was paid into the treasury of the National Coke & Coal Company.

Q. What did the National Coke & Coal Company have when that was paid into it? What property had they?

A. I think they employed that in the purchase of property.

Q. So that it had no property other than an agreement, possibly, with the Consolidated Gas Company to do its trucking?

A. That is the case.

Q. And has that been a very profitable business since the formation of the company?

A. Quite profitable, yes, sir.

Q. Has it made as much as 25% per annum on its capital?

A. Yes, sir.

Mr. Mathewson: Mr. Carter so testified yesterday. There is a statement in the printed record, if you desire it, showing just what was paid.

Q. What officers or employees of any kind, other than the contractors, mechanics or laborers, engaged in erecting the Astoria plant, are employed by the Astoria Light, Heat & Power Company whose salaries or wages are charged to the cost of building that plant?

A. I should have to have their pay-roll to testify to that.

Q. Do you keep their payrolls?

A. Their payrolls are in our office, available.

523 Q. Is all engineering and accounting cost of such plant paid by the Consolidated Gas Company and charged to the cost of its operation.

A. Paid by the Consolidated Gas Company?

Q. Paid by the Consolidated Gas Company.

A. Nothing of that kind is paid by the Consolidated Gas Company. The Consolidated Gas Company advances money to the Astoria Light, Heat & Power Company, but they pay their own bills and settle their own payrolls. And, as it is not an operating company, there is no charge in the nature of an operating expense. The company is only engaged at present in constructing a plant.

Q. Are the salaries of the chief engineer, and his assistants, of the Consolidated Gas Company, doing work at Astoria, charged to the general expenses of the Consolidated Gas Company?

A. No, the chief engineer is not so engaged. We have an engineer—I am not sure at the moment whether he is on the Consolidated payroll or not. If so, his salary is charged against the Astoria Light, Heat & Power Company.

Q. Are you quite sure about that?

A. Perfectly sure.

Q. Then you do know that he does work over there?

A. Certainly, he does work over there.

Q. And that his salary is charged against the Astoria Light, Heat & Power Company?

A. Yes.

Q. And that is true of all his assistants?

A. Now, you are referring to whom? I am referring to the constructing engineer.

Q. I am referring to the general engineer, the chief engineer of the Consolidated Gas Company?

A. No; the salary of the chief engineer of the Consolidated Gas Company is not a charge against the Astoria Light, Heat & Power Company. The salary of the constructing engineer is a charge against the Astoria Light, Heat & Power Company.

524 Q. Who is the constructing engineer?

A. Mr. Bruce.

Q. Don't you know that the result of the work of Mr. Bradley at the Astoria plant, and his supervision of the work there, have necessitated the doubling of the number of employees that he had under him in his department?

A. No, if there has been any addition on account of the Astoria plant, the charge is to the Astoria Company, and not against the Consolidated Gas Company.

Q. The additional help that he would be compelled, per force, to employ would be charged against the Astoria Light, Heat & Power Company, and not against the Consolidated Gas Company?

A. That is the case, yes, sir.

Q. And his salary and the salary of his subordinates are not entered up in the general expense account of the Consolidated Gas Company?

A. I have testified that the salary of the chief engineer, or the engineer in chief, Mr. Bradley, of the Consolidated Gas Company, is an expense of the Consolidated Gas Company, but that any assistants that he has, made necessary by the operations at Astoria or by the construction at Astoria, is an expense or enters into the cost of that construction, and not into the expense of the Consolidated Gas Company.

Q. That of course will appear by your books?

A. Absolutely, yes, sir.

Q. And by your payrolls?

A. Yes, sir.

Q. Now, can you say offhand how much of your stock issued is used, or what percentage of your capital stock is used, in the manufacture of gas, as distinguished from an investment in other companies or corporations?

Mr. Gans: Before that question is answered, may I consult with Mr. Burr?

Mr. Burr (after conference): We will withdraw that 525 question for the present. That is all I will ask of this witness until he gets those statements that he has promised to prepare for us.

The Master: How about you, Senator Page?

Mr. PAGE: I would prefer to defer my cross-examination until Mr. Mathewson has completed with the witness. I do not care to examine him piecemeal.

Mr. MATHEWSON: We may not recall him.

Mr. PAGE: You stated that you would suspend with him until you could go on with another branch. I would prefer that you exhaust him.

Mr. MATHEWSON: Very well. I offer in evidence certified copy of certificate of incorporation of the Astoria Light, Heat & Power Company, dated January 19, 1899.

Mr. BURR: Objected to as incompetent, irrelevant and immaterial.

Mr. GANS: We make the formal objection that it is irrelevant and immaterial.

Objections overruled; exception taken by Mr. Gans and Mr. Burr.

Received in evidence and marked Complainant's Exhibit 87.

Q. I will ask you the question whether this certificate was filed in the public offices, the offices of the Secretary of State and the County Clerk, at or about the time of its date?

A. Yes, sir.

Mr. MATHEWSON: I offer in evidence certificate of incorporation of the National Coke & Coal Company, dated November 11, 1901.

Mr. GANS: We make the same formal objection, as to irrelevancy and immateriality.

Mr. BURR: The same objection.

526 Objections overruled; exception taken by Mr. Burr and Mr. Gans.

Received in evidence and marked Complainant's Exhibit 88.

Redirect examination by Mr. MATHEWSON:

Q. I will ask you the same question, as to whether this was filed in the office of the Secretary of State and the County Clerk's office, as prescribed by statute?

A. Yes.

Q. In what county is Astoria located?

A. Queens.

Mr. BURR: Is this the company that does the carting?

Mr. MATHEWSON: That is right.

Mr. BURR: It says here—organized to carry on the business of miners, engineers and coaling.

Mr. MATHEWSON: Yes, they can do almost anything; what they do do is carting and selling.

Q. Referring to the New Amsterdam, the Standard and the Mutual Gas Light Companies, the New York Edison Company, the New York Electric Light & Power Company and the Westchester Lighting Company, they include, I think, the companies some of the stock of which you said was owned by the Consolidated Gas Light Company?

A. Yes.

Q. Are there any others that you named?

A. The National Coke & Coal Company, and the Astoria Light, Heat & Power Company.

Q. Of the National Coke & Coal Company, and the Astoria Light, Heat & Power Company, as you have already testified, the Consolidated owns all the stock?

A. Yes.

527 Q. As to the three gas companies which I mentioned, the New York Edison Company and the United Electric Light & Power Company, does the Consolidated Gas Company own all the stock of any one of those corporations?

A. It does not, no, sir.

Q. Is not the Westchester Lighting Company the only lighting company all of whose stock the Consolidated Gas Company does own?

A. Yes, sir.

Q. The Mutual Gas Light Company was in existence, was it not, when the Consolidated Gas Company was formed in 1884?

A. Yes, sir.

Q. Do you know whether the Standard and the New Amsterdam were organized by the Consolidated Gas Company or its interests, or were they organized in hostility to it?

A. In hostility.

Q. Were the electric companies to which you referred organized by the Consolidated Gas Company or in hostility?

A. In hostility.

Q. In reference to your gas stove business, that is, the renting or putting out of stoves to consumers, was that done primarily for the purpose of selling stoves or increasing the output of gas?

Mr. Gans: We object to that as irrelevant and immaterial.

Mr. Mathewson: It is a subject that has been gone into.

Objection overruled; exception taken by Mr. Gans.

A. For the purpose of increasing the output of gas.

Q. Merely a means to that end, was it?

A. Nothing else.

Q. Referring to the books of the company and the statements
made therefrom, respecting which Mr. Burr asked you, are
528 you and have you for many years been familiar with the
books of the company?

A. Yes.

Q. And the methods of entry?

A. Yes.

Q. And the checks upon the books?

A. Yes.

Q. Have you from time to time and frequently had occasion to test the accuracy of the books in one way or another?

A. I have had occasion to, yes, sir.

Q. Have you found them correct?

A. I have, yes.

Q. Correct statements of transactions of the company?

A. Yes.

Q. Have you any hesitation in saying, from your knowledge of the character of the books, that the statements therefrom delivered to Mr. Bradley and Mr. Simpson were true statements of what they purport to be?

Mr. PAGE: That is objected to as being entirely irrelevant, immaterial and incompetent.

The MASTER: I do not see how that adds anything to the case.

Mr. MATHEWSON: Very good. Mr. Burr asked him about those statements, how they were prepared, etc.

Mr. BURR: They were probably in three or four hands before they reached his. That was his testimony. Is the question withdrawn, or what is the disposition of the question?

Mr. MATHEWSON: If the Master does not think it will add anything, I should hardly press it.

The MASTER: I will sustain the objection, and you can except.

Mr. MATHEWSON: No, I do not care to.

Q. I will ask whether these statements which were delivered or any of them, delivered to Mr. Bradley in this connection, were *vised* by you before they were delivered?

A. Yes, they were.

529 Q. You were asked with reference to the franchises of the company, and rights, which were included in the $7,781,000.00. I think you did not mention, as included therein, the rights of the company to operate in the streets, as acquired by the constituent companies. Do you consider that as part of the value of $7,781,000.00?

Mr. GANS: Objected to on the grounds that no foundation has been laid therefor, there being no proof that they have any right to operate in the streets.

Mr. BURR: And further objected to because this witness testified that he did not know anything in regard to it, that he was merely guessing.

Mr. MATHEWSON: You asked him what right or franchises he had in mind as included in that figure. I am merely asking him if those rights and franchises to operate in the streets were in his mind.

Mr. GANS: If he will state what he believed to be rights to operate in the street, I have no objection.

The Master: Never mind, it is of no great importance anyway. I will allow him to answer. If they do not show any rights in the streets, his testimony is of no value.

A. I intended to cover that point in my answer. I assumed that the rights to operate in the streets were included, and that they existed at that time, since the companies were exercising such a right.

Mr. MATHEWSON: Whatever they are, of course we will present in another form.

Q. Regarding your answers in respect to what was meant
530 by temporary investments; I show you Exhibit 80. Where
an investment is made in the stock of any other illuminating company, electric or gas company, such as stock that you have testi-

fied the Consolidated Company holds of that character, would you call that a temporary or permanent investment?

A. A permanent investment.

Q. Where funds are held in hand, as this $12,717,494.64 is, shown on Exhibit 80, for the purpose of payments on new construction, as it may be required, as to the items in there outside of cash, would you call it temporary or permanent?

A. Temporary.

Q. That is the distinction you make?

A. That is the distinction I make.

Q. In regard to the eight millions in Government bonds and three millions in City stocks, to which Mr. Burr referred, do you regard that as temporary or permanent?

A. Temporary investments.

Q. Were they not investments of a portion of the proceeds of this $19,857,000 of debentures of July 1, 1904?

A. They were.

Q. Pending their turning into permanent construction?

A. Yes.

Q. Referring again to Exhibit No. 80, there appear to be plants and property, Manhattan and Astoria, amounting to $53,224,984.91; materials and supplies $616,470.08; National Coal & Coke Company, $50,000; accounts receivable, $2,000,000; does that $2,000,000 refer to the accounts receivable which you stated were required as working capital?

A. I testified to a million dollars as working capital, and two million dollars accounts receivable was the amount that normally would be so tied up.

Q. In this entire statement comprising the total in the gas business and excluding the $12,717,494.64, which is stated to be in temporary investment, pending turning into construction, there is 531 only one item in the assets in cash, and that is one million dollars, is it not?

A. That is all.

Q. And in view of the fact that you do not keep consumers' deposits in a separate account, is it possible to say whether the $904,000 of consumers' deposits, forms part of that one million dollars, or whether it has gone into some other asset through accounts receivable?

A. Impossible to say.

Q. But the one item of cash that appears and that you claim in that statement as working capital is one million dollars in whatever form it appears?

A. That is so, yes, sir.

Q. Where is the exhibit showing the selling price of stock from 1884 down to date? Have you got it?

A. No, I don't think I have it. It is in that book and is to go into the case as an exhibit. But I made no statement.

Mr. Page: Page 2180.

Q. When are these debentures convertible into stock of the Consolidated Gas Company?

A. July 1st, 1907.

Mr. GANS: And at any time after that?

Q. I will ask you to look at the statement of dividends from 1885 down to 1905, in evidence, and say whether stock of this company in 1887 did not sell as high as $241.50 a share?

A. Yes, sir.

Q. And in 1897 it sold at exactly the same figure, didn't it?

A. Yes, sir.

Q. Those are the two highest figures at which it did sell, are they not?

A. Yes, sir.

Q. In between, in 1891, how low did it sell?

A. At $92.50.

Q. And are you able to say that between now and July 1st, 1907, the stock may not be selling below par before the date for conversion comes about?

532 Mr. PAGE: Objected to as incompetent, irrelevant and immaterial.

The MASTER: Cannot I answer that just as well?

Mr. MATHEWSON: I think you can. It seems to me there are a number of questions which could be answered that way.

Mr. GANS: About the debentures, so as to clear the matter up, are they convertible merely on the date you gave or on that date and any date thereafter?

The WITNESS: On any subsequent interest date down to and including January 1, 1909, and they are redeemable July 1st, 1909, at par.

Q. They are payable then?

A. Payable.

Q. Then the period of the possible conversion extends from what date to what date?

A. From July 1st, 1907, to January 1st, 1909.

The MASTER: The interest stops on that last date?

The WITNESS: Yes.

Q. At what low price did the stock sell in 1903, the year before these debentures were issued?

A. $164.

Q. Your attention has been called by counsel to the selling value of the stock in connection with the amount of dividends that it was paying. This was stock covering both the investment in the electric companies and in the gas business, was it not?

A. Yes, sir.

Q. Your attention has also been called to the affidavit of Emerson McMillan, submitted in this case, and counsel has stated generally as I recall it that Mr. McMillan spoke of ten per cent. dividends. 533 I will read you from this affidavit and ask you if that modifies your reply in any manner: "I am fairly familiar with the market values of the stocks and bonds of gas companies engaged in business in the city of New York and other cities in this and other States. Many of the securities here and elsewhere have in the past sold above par and have paid a low rate on the investment; but in such cases the prices have been based on the assumption of perpetual franchises or such consideration by public authorities as to warrant the belief that the property will continue to be treated with the same consideration and right and protection as is accorded to other classes of investments. Where these conditions do not apply, investors will not be satisfied with less than a ten per cent. basis of earnings even though a much lower rate of dividend may be paid. Even before the recent disturbances relating to public utility corporation securities, but few gas or electric company securities would sell at par when the net earnings were less than ten per cent. on the investment. Of some ten or more companies purchased through my direction since the year 1900 none were purchased on less than a nine per cent. basis of net earnings, and the average cost of all these companies was above a ten per cent. basis on net earnings." Do you understand that Mr. McMillan referred to the earning capacity or the dividends paid?

Mr. Page: This is objected to as incompetent, immaterial and irrelevant. If it is sought to introduce the testimony of Mr. McMillan in the shape of his affidavit it is incompetent, and Mr. McMillan should be produced here as a witness. If it is sought to ascertain the opinion of this witness as to Mr. McMillan's statements, it is entirely incompetent, irrelevant and immaterial.

534 Mr. Gans: Also it is not a question upon which opinion evidence may be given.

Mr. Mathewson: It was not I who introduced Mr. McMillan's affidavit or questioned the witness respecting his statement or whether he agreed with him or quoted the statement of Mr. McMillan.

Mr. Gans: Let me see if I am clear as to the condition of the record. The question was asked and I objected to it and counsel offered to withdraw it and the Master said he was inclined to sustain my objection to it; we then asked to have it physically struck from the record and Mr. Mathewson objected to it and the Master declined to physically strike it from the record; therefore as I understand the record of this proceeding, for the purposes of your examination, that matter is not in on the basis of Mr. Burr's question; it is just one of the matters that we left in because everything goes in although technically excluded.

Mr. Mathewson: The witness had answered the question and I took the chance of the answer to the question.

Mr. Burr: In the question proposed by Mr. Mathewson now he undertakes to recite the experience of Mr. McMillan in regard to certain companies he has had dealings with and asks the witness with regard to the experience of Mr. McMillan with regard to those companies. The sole object of referring to the affidavit on my part was to call the witness's attention to the statement made by Mr. McMillan in this affidavit used before Mr. Justice Lacombe, that investors would not be satisfied with anything less than ten per cent. dividends on properties of this character.

535 Mr. Mathewson: Yes, but he said earning capacity and not dividends.

Mr. Burr: And I asked in view of the statement made by this witness that dividends had been on the average in the past 24 years only 6½ per cent. on the Consolidated stock and that they had no difficulty in floating that stock in the market, whether that in his opinion was a true statement or not, borne out by the facts he had stated, so it was only in comparison with his statement, the facts in his statement disagreeing with the statement in Mr. McMillan's affidavit.

The Master: I sustain the objection and give Mr. Mathewson his exception. It may be that after I see the question written out in the record which you asked, I will conclude that I have no right to do that. If you have opened the door to it, no matter how improper this question may be on its face, I will allow this question.

Mr. Page: Only as against the City.

The Master: Yes, you have protected your rights.

Mr. Mathewson: Will you sustain the objection without prejudice to my raising the question hereafter?

The Master: Yes. I do not recall Mr. Burr's question now.

Mr. Mathewson: Mr. Burr used the expression "dividends of ten per cent."

Q. I will ask you to look at Mr. McMillan's affidavit.

The Master: He may answer the question.

536 A. My understanding is that Mr. McMillan's referred to the earning capacity of the companies that he had been concerned with.

Q. In view of the objection to that question, I will ask you to examine Mr. McMillan's affidavit, and to see whether in the statement he referred to dividends paid at ten per cent., or earning capacity, that is, earnings of ten per cent.

Mr. Gans: The record as to this will stand the same as to the previous question.

The Master: Yes.

A. He very clearly has reference to earning capacity, and not to dividends.

Q. Does he state——?

A. He states so clearly.

The Master: Mr. Mathewson, is that a matter for testimony?

Mr. Mathewson: Yes.

The Master: All these papers are before me under the rule, and counsel can refer to them in argument or brief, and what is the use in asking this witness that Mr. McMillan says in his affidavit, if it is before me on the final submission.

Mr. Mathewson: I submit that I was not aware——

The Master: It is not before me as proof of a fact, but it is before me as part of the record to which counsel refer.

Mr. Mathewson: But I did not wish it to appear as it might appear in the record in our State Courts that Mr. McMillan had stated that 10% dividends should be paid. That was the point.

The Master: No.

537 Q. Referring to Exhibit 79, showing the increases in different items of property included under "Real Estate, plant, property and construction" from November 11, 1884, to October 31, 1905, in what case is an addition to construction or a net addition to construction as it appears there inserted in your record? Does that mean additional property or construction, or what does it mean?

A. Well, in every case, if I understand your question, with the exception of one single item of furniture and fixtures.

Q. But office furniture and fixtures there appears to be less in 1905 on October 31st than in 1884, does it not, according to your books?

A. Yes, sir.

Q. There is an increase in every other item?

A. Yes, sir.

Q. Take for instance the matter of mains. If a six inch main is removed or replaced and a twelve inch main is laid in its place, what proportion goes to increase the capital of the main account and what proportion to the replacement of mains?

A. The portion that goes to increase the capital account is the cost of the twelve inch main less the cost of the six inch main with such an allowance as may be had for scrap value of the six inch main.

Mr. Gans: Is such an entry made upon the books of your company?

The Witness: Such an entry is made upon the books of our company.

Q. So that the net increase of plant in that regard would be the difference between the six inch main with the allowance for what it would bring as scrap and the cost of the twelve inch main?

A. Yes, sir.

Mr. Page: I do not exactly understand that. Is that allowance additional or is it allowance for the six inch main and scrap?

Q. Make that clear.

538 A. The six inch main would be taken out of the mains account at its full value, that is, at its cost, the value at which it appears in the mains account. The twelve inch main would go into the mains account at the cost of laying it. The charge to replacement would be the value of the six inch main less what might be recovered from any scrap value of the six inch main.

By the Master:

Q. Who makes that distribution?

A. With respect to the accounting?

Q. Yes, for your books?

A. It is a monthly function of the accounting department to take reports from the street department or mains and services department of operations of that kind. The replacing of a small main with a larger main and having the value of the small main that is taken out of the ground, the length of it at a given value forms the basis of the entry by which the mains account is credited, and the replacement account charged. Before the entry is finally made in the ledger the value of the main taken out as scrap, so much of it as has a scrap value is allowed for so that the net amount charged to replacement account is the difference between the original value of the six inch main and the value of the scrap. It is a matter of accounting and bookkeeping and is a monthly transaction in the bookkeeping department.

By Mr. **Mathewson**:

Q. The figures as to the cost of property replaced I assume are in the hands of the accounting department?

A. Yes, sir.

Q. And the expenditure that is made for new mains or new property is shown to them by some memorandum they get from the expending department?

539 A. They would get that report in the case of a new main being laid, whether it was an extension or replacement. They would get a report from the street department of the pipe employed and the castings and sizes, &c., and from the payroll they would get the cost of labor involved in laying that main.

Q. So that the accounting department has data for an exact assignment of these items to replacement or new construction, has it?

A. Precisely. I might explain that until used either for the extension of mains or for the repairing of mains, the pipe and the special castings are carried in the pipe and special account.

Q. Then the third figure column of this Exhibit 79 headed "Depreciation Renewals Since Consolidation" relates, does it, to actual replacements during that period?

A. Yes.

Q. At original cost of the articles replaced?

A. At original cost of the articles replaced.

Q. And the column headed Net Increase shows the exact increase in each class of items of plant, October 31, 1905, over November 11, 1884?

A. Precisely so, plant and other property.

Q. Will you state which one of the items in that column is in red ink and what that indicates?

A. Office furniture and fixtures account.

Q. Give the amount, and state what that indicates.

A. It indicates that the value at the time of consolidation of $70,000 has been reduced since November 11, 1884, to a value of $30,291.27.

Q. And the expenditure for repairs in the last column, is that in addition to the replacements and new construction?

A. Absolutely additional to the expenditures for replacements or for additions.

Q. Is that actual expenditures?

A. Actual expenditures.

Mr. **Mathewson**: That is all I have to ask for the present.

540 Mr. **Gans**: I think we ought to have an understanding on one subject. Mr. Mathewson foreshadowed yesterday that

there was another topic upon which this witness might be called upon to testify, namely the cost of the manufacture of gas.

Mr. **Mathewson**: He will present a statement to-morrow morning. Mr. Carter, I will say, has had a statement sent down from the accounting department, but for further assurance he desires to check it himself. Let me see it Mr. Carter, and I will show it to you, Mr. Gans.

Mr. **Gans**: I am not at all curious, but what I was getting at is whether he was to be recalled on that topic at some time in the future.

Mr. **Mathewson**: Yes.

Q. Can you have, also a statement for the calendar year 1905?

A. Yes, sir, I will bring it with me.

The **Master**: Is there any further witness that you can take up this afternoon?

Mr. **Mathewson**: I have not any. I assumed Mr. Page would proceed with his cross-examination.

At 4 P. M. adjourned to July 25, 1906, at 2 P. M.

Last Exhibits:

Complainant's 88.
State's A.
City 1.

541 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, Wednesday, *July* 25, 1906—2:00 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr.

542 **Robert A. Carter** further examined.

Redirect-examination continued by Mr. **Mathewson**:

Mr. **Mathewson**: I offer in evidence Consolidated Gas Company comparative condensed balance sheet as of October 31, 1905, and November 11, 1884, showing the variations, in the third column, of assets and liabilities.

Mr. **Burr**: Same objection to this as made to all these papers heretofore offered purporting to be statements from the books, on the ground that they are not the best evidence, and I understand you receive them subject to an opportunity being afforded to us to verify the statements contained in these summarized statements.

The **Master**: Yes, I understood that that was the arrangement.

Mr. **Gans**: That will apply to all summaries offered in this form, so I assume we need not in each instance state the conditions under which the paper is received.

The **Master**: No, it is not necessary.

Mr. **Mathewson**: The offer just made is from page 2213 and 2214 of the record before the Gas Commission.

Objection overruled; exception.

Received in evidence as Exhibit 89, but not marked.

Q. Under the column variation, I see that the items "in assets, $62,441.36, in liabilities $449,507.53," and "in bonds and mortgages $38,676.67," are starred respectively and referred to as printed in the exhibit in red ink. What is the significance of that red ink?

A. That indicates that there has been a decrease in the
543 balance of October 31st, 1905, as compared with November
11th, 1884.

Q. Any other items, none of which are starred and which are marked as in red ink, they are increases?

A. They are increases, yes.

Q. You were asked yesterday respectively the average market price per share of Consolidated Gas stock in certain years, and for five years, and the price on July 1st, 1904, and you stated to opposing counsel that you would answer the inquiry. Will you do so now?

A. Shall I read this memorandum or offer it as an exhibit?

Mr. **Mathewson**: I do not think it is worth while putting it in as an exhibit; it is very brief.

The **Witness**: The average price for the five years ending December 31st, 1905, at which the Consolidated Gas Company's stock was quoted on the New York Stock Exchange was 204⅛.

Q. How did you obtain that average?

A. By finding the average of each year and then averaging the averages. The price at which it was quoted on July 1st, 1904, was 193.

Mr. **Mathewson**: I offer in evidence the following papers: Grant to the New York Gas Light Company, being Articles of Agreement dated May 12, 1823, between the Mayor, Aldermen and Commonalty of the City of New York and the New York Gas Light Company, printed in the Gas Commission record on pages 736 to 741, inclusive. (Volume 2.)

Mr. **Gans**: I object to it at this time and in this way. Probably I shall be willing to agree that most of them go in later in this form, after I have had an opportunity to look at them.

Mr. **Burr**: Inasmuch as we have raised a special defense
544 as to the validity of the franchises we would require to inspect
the originals.

Mr. **Mathewson**: Very good; we will proceed in that way. I withdraw the offer in evidence for the present.

Q. Referring to the gas manufactured for the Consolidated Gas Company by other companies; was and is the gas manufactured under written agreements?

A. Yes, sir.

Mr. **Page**: Are you going into the gas manufacture?

Mr. **Mathewson**: No, merely to show the *the* agency agreements. I offer in evidence paper headed "Agency Agreement," being agreement dated the 31st day of December, 1902, between the Consolidated Gas Company of New York and the New York Mutual Gas Light Company, for a term of five years, and which is to be found in the printed record before the Gas Commission, page 489.

Received in evidence as Exhibit No. 90, but not marked.

Mr. **Mathewson**: I offer in evidence a paper entitled "Agency Agreement," being agreement dated 31st of December, 1902, between the Consolidated Gas Company and the New Amsterdam Gas Company, to be found on the Gas Commission printed record, page 491.

Received in evidence as Complainant's Exhibit 91, but not marked.

Mr. **Mathewson**: I also offer in evidence a paper entitled "Agency Agreement," being agreement made 31st of December, 1902, between the Consolidated Gas Company of New York and the Standard Gas Light Company, which will be found on page 495 of the same printed record.

545 Received in evidence as Complainant's Exhibit 92, but not marked.

Mr. **Mathewson**: I am informed that there is no written contract between the Consolidated Gas Company and the Central Union Gas Company, from which it receives a very small amount of gas. I am informed it is not furnished under written agreement.

Q. Have you prepared, Mr. Carter, a summary of the operations of the Consolidated Gas Company for the nominal year ending October 31, 1905, stating in detail the amount of material used and other items of manufacture and distribution?

A. Yes, sir.

Q. Is that the paper?

A. That is the paper.

Q. In the paper which I have shown you the next to the last column is headed "Cost per thousand c. f. made;" that means cubic feet made, does it?

A. Per thousand cubic feet made, yes, sir.

Q. And does that indicate the cents per thousand which each one of these items represents on the make of the company?

A. Yes, sir.

Q. While the final column is headed "Cost per thousand cubic feet sold?"

A. Yes, sir.

Q. And similarly that represents the cents per thousand on each of the items on sales?

A. Yes, sir.

Mr. Mathewson: I offer this in evidence.

Mr. Burr: Same objection as I have made to all these statements.

Mr. Gans: I join in that objection.

The Master: Same ruling; exception.

Received in evidence and marked Complainant's Exhibit 93.

546 Q. About half way down the statement, Exhibit 93, I find the words "station cost," and to the right of those words $3,483,562.20, and under "cost per thousand cubic feet sold" 33.70 cents. Does this refer to the gas manufactured by the Consolidated Gas Company itself?

A. Yes, sir.

Q. Under that is another heading, "Cost of gas manufactured under agency agreements." Is that a reference to the agency agreements which have just been put in evidence?

A. Yes, sir.

Q. And that then is manufactured by other companies for the Consolidated?

A. Yes, sir.

Q. Does $1,022,236.28 represent the cost of that gas?

A. To the Consolidated Company, yes, sir.

Q. And the 34.42 cents in the last column represents the cost per thousand feet sold to the Consolidated, of gas delivered to it by the other companies under such agreements?

A. Yes, sir.

Q. Under the heading to which I have just referred is the word "total," and in the final colu*nm* 33.85 cents; what does that represent?

A. The total expenditures, station expenditures in connection with the manufacture of gas and the station expenditures of the companies who manufacture it for the Consolidated Company under the agency agreements.

Q. Generally speaking, would that be the holder cost to the Consolidated of all the gas which it sells, in the aggregate?

A. Yes, sir.

Q. The average holder cost?

A. Yes, sir.

Q. Both that manufactured by itself and by other companies?

A. Yes, sir.

Q. Which it sends out, of course?

A. Yes, sir.

Q. About four-fifths of the way down the sheet marked Complainant's Exhibit 93, I observe the item "Contingent expense and depreciation." Does that represent contingent or reserve amounts or a contingent or reserve amount entirely, or does it include certain replacements and renewals actually made?

547 A. The statement covers the twelve months ending October 31, 1905. For the two months of 1904, that is to say, November and December, 1904, there were actual expenditures——

By Mr. PAGE:

Q. You mean ten months, don't you?

A. For two months of 1904.

Q. But it is ten months of 1905?

A. Well, I am speaking now of two months of 1904. During the two months of 1904 there was expended for replacements and renewals in distributing apparatus the sum of $35,990.11. The balance of that $1,114,236.38 accrued during the ten months of 1905 and was estimated upon the sales on the basis of ten cents a thousand cubic feet.

By Mr. MATHEWSON:

Q. During the ten months ending October 31, 1905, how much was actually expended which is ultimately charged into this account?

A. $107,104.40 was actually expended during the ten months.

Q. So that the $1,114,236.38 would include actual expenditures to the amount of the two amounts which you have just named, and which together aggregate what?

A. Before giving that total I would like to draw your attention to another item of actual replacements which occurred during two months.

Q. I understand, but I am now dealing with this $1,114,236.38?

A. $143,134.51.

Q. Can you tell whether the expenditures for repairs and replacements in this nominal year were up to the average of the preceding twenty years?

A. No, they were not.

Q. Were they less or more?

A. Considerably less; less than half of what it cost us in preceding years.

548 Q. Have you any material at hand from which you can state what the average repairs and renewals for twenty years are, which appear in your expenditures for the nominal year to October 31, 1905?

A. I have not those figures before me at the moment, but I can prepare such a statement.

Q. I wish you would make a note of it. I see near the end of the statement the item, "fixed charges, $936,883.24." What does that represent?

A. That is interest on the company's obligations accruing during the nominal year, net.

Q. What do you mean by "net?"

A. That is to say, from the interest the company had to pay was deducted any interest received on any temporary investments and loans existing during that period.

Q. Take the outstanding debentures of July 1, 1904, for example, which are a little less than twenty million dollars. In reaching this figure did you deduct from the amount which the company is obliged to pay on those debentures, in the way of interest, any amount which the company receives from investments that it has while it holds them?

A. Yes.

Q. Such as city and Government bonds?

A. Yes.

Q. Then that is a net, and not a gross charge?

A. That is the case.

The Master: How can it be a fixed charge in the ordinary acceptation of the term?

Mr. Mathewson: It really is not; it is less than the fixed charge as a matter of fact, but as these moneys are drawn into the Astoria improvement, as they are being turned all the time, the fixed charge rises nearer to what you would say was a fixed charge; but the allowance is made here because it was thought proper to credit the amount received from temporary investments upon what would really be a fixed charge, thereby reducing by so much the charge.

549 Mr. Gans: May I ask what other items of so-called fixed charges there are besides the interest on these debenture bonds?

Q. Are there any other items of fixed charges than the interest on debenture bonds of July 1st, 1904, and those old debenture bonds of 1888, which you said were outstanding to the extent of $1,000,000 and over?

A. I believe that covers all interest charges which the company had to pay during that period.

Mr. Gans: At what rate were those old debenture bonds?

Q. What was the rate of those old debenture bonds?

A. Five per cent.

Q. At the foot of this statement appears a statement of gas mains built by the Consolidated Gas Company and by other companies under the agency agreements, does it not?

A. Yes.

Mr. Mathewson: That is all I have to ask. I am informed that the original papers in place of these printed copies can be available within a half or three-quarters of an hour, but they may not all be here when they do come, so I do not think it best to enter upon that to-day.

Mr. Page: I understand that you have completed your examination now of Mr. Carter?

Mr. Mathewson: Yes, for the present. I shall offer those other papers when they come; there are some minor matters which I desire to ask him on later, but he has not the material yet.

Cross-examination by Mr. Page:

550 Q. As Secretary of the Consolidated Gas Company you have charge of the accounting department of the company?

A. Yes, sir.

Q. You have referred to a general ledger. What other ledgers are kept in your department besides the general ledger?

A. The operating ledger.

Q. Anything else in the way of ledgers?

A. No other ledgers.

Q. Is there a ledger of consumers' accounts?

A. Not considered as general office records; we have a great many consumers' ledgers; several hundred of them.

Q. You have consumers' ledgers at each branch of the company; is that right?

A. Yes.

Q. At each branch office?

A. Yes.

Q. How are those brought into the general books of the company at the central office, and into what ledger are they entered?

A. They are brought in through reports from the branch offices of gas sales for the month, as they are made up from the consumers' accounts, and those reports form the basis of the entries which are made in the general books, by which the consumers are charged with the amount of the bills rendered them for gas supplied, and the gas sales account is credited.

Q. In your department the item is brought in as gas sales at such a branch? They are not segregated as against the particular consumers?

A. No, decidedly; it is the aggregate sales at each branch.

Q. And into what particular ledger is that entry posted in your general books?

A. It is posted both in an operating ledger and in the general ledger. The operating ledger would show the sales by the branch offices, and the general ledger would show it in one amount.

Q. Just what accounts are carried into the operating ledger?

A. All of the accounts that the company has, practically, are in
the operating ledger. I might explain that the difference be-
551 tween the operating ledger and the general ledger is that in
the operating ledger we separate all our operations between
the different branches and stations. In the general ledger they are
shown in aggregates. The operating ledger is simply an elaboration
of what appears in the general ledger.

Q. In other words, the general ledger is a condensation of what appears in the operating ledger?

A. Put it either way.

Q. I suppose that you post the same details and then from that post the condensed form, rather than post in the condensed form and extend it into details?

A. The first entries are made in the operating ledger.

Q. That is just what I mean. Would the operating ledger contain the details of all the accounts that appear in the general ledger?

A. Yes. I might make an exception of some assets and liabilities that are grouped in the operating ledger under a single heading, and that appears in greater detail on the general ledger.

Q. By what method do you transfer your accounts from the operating ledger to the general ledger? Do you journalize them, I mean?

A. By journal entry, the journal entry being made up from a statement taken off from the operating ledger.

Q. What are the bases of entries in the operating ledger, in your department?

A. Entries in the operating ledger would arise from reports of the employment of material or from vouchers indicating the disbursement of funds.

Q. And from what sources do you receive those vouchers?

A. Vouchers indicating the employment of material come from every department, or offices, shops, street departments and stations, gas making stations. The vouchers for the disbursement of funds would come from the cash department after the checks had been drawn.

552 Q. What other records do you keep as to the details of manufacture of gas, beside the operating ledger?

A. Such statements as were exhibited before the Gas Commission.

Q. You refer by that to station records?

—. Station records and general office records of the receipt and employment of material at the different stations.

Q. How often do you receive those reports from these stations?

A. The stations make daily reports of their operations in detail.

Q. Into what book are those daily reports first entered, after being received from the stations?

A. A record is kept in the engineering department of the general office.

Q. And what is the particular title of that book?

A. I am not sure that it has a title, but if I were to give it one I would call it a station record.

Q. A station record of what?

A. Of operations.

Q. Into what account do you enter the record of gas made?

A. The record of gas made is included in the daily report that the station makes, which is sent to the engineering department, and entered into a record to which reference has been made, and aggregated at the end of the month, for the purpose of ascertaining the quantity manufactured each month.

Q. That is not carried into the operating ledger in any way, is it?

A. What, of gas made?

Q. Yes.

A. No, I do not think that it is; in fact I am quite sure that it is not, in quantity.

Q. Into what book are entered the items of gas sold, as reported by the various branches and the general office?

A. The quantity would be a matter of record in a small book kept for the purpose. Both quantity and amount would be shown in the journal every month, and posted in the operating ledger.

553 Q. Then the gross amount of gas sold is posted to some ledger account?

A. Yes.

Q. But the total of gas made is not?

A. Not the quantity; the cost would be.

Q. Is the cost carried in as a gross amount of so much gas made at such a cost?

A. Decidedly not; the cost would be made up from the records that have been referred to as kept in the engineering department, showing quantities of the various materials employed in manufacture, and the labor would be entered from the pay rolls themselves.

Q. As I understand, the reports from the various stations contain the details of the number of days of labor and the amount of material used, but are not carried out in the value of such expenses in dollars and cents; is that right?

A. The daily report you are referring to?

Q. The report that comes from the stations?

A. There is but one report, and that is a daily report and they would enter on there probably the number of days of labor employed at a station, every day, purely for statistical information; it would have no reference to the cost of gas whatever, and would not be used in any way.

Q. And is that the same in regard to the amount of materials used?

A. The amount of materials that are reported as used daily would be entered in the general office record, would be aggregated at the end of the month, and the quantity, at the average prices at which it stands upon the books as stock, would be charged to the manufacturing account and credited to the stock account.

Q. Is not, somewhere in the process of the keeping of these accounts, the labor treated in the same way?

A. The labor, as I have explained, appears in detail in the weekly pay rolls, which are in the nature of cash disbursements and dealt with as such.

554 Q. And when you deal with it, the labor, to what account do you carry it?

A. The labor is charged, Senator, to whatever account the pay roll indicates the labor was engaged in. The pay rolls are divided so as to show the labor in the retort house, the purifying house, the generator house, or repairing apparatus, or repairing buildings, handling stock or handling coke, and accordingly as the pay rolls indicate the nature of the labor, it is charged up in the operating ledger.

Q. The value of the materials used and the cost of labor are ascertained and computed in the accounting department, are they not?

A. Yes, sir.

Q. And the books in the engineering department would not show the cost either of material or the cost of labor?

A. No, they would not.

Q. Now, I suppose there are some general accounts in the general ledger that would not appear in the operating ledger, are there not?

A. No, as I have already explained, the operating ledger and the general ledger are identical, with this difference; that there are many accounts on the general ledger that in the operating ledger appear in much greater detail, showing the division of the accounts between the various branches and stations, and there are a few accounts upon the general ledger which appear in one combined account in the operating ledger.

Q. To what account in your operating ledger would you carry the income from dividends on stocks owned by the Consolidated Gas Company?

A. In the operating ledger.

Q. Yes.

A. It would appear in an account that would plainly indicate what it was.

Q. Not having the account before us, and not being able otherwise to find out, except from you, would you state what you call that account?

A. It would depend upon what item of income you have reference to.

555 Q. I said, dividends on stocks owned by the Consolidated Gas Company?

A. Which particular stocks?

Q. Take the Standard or the Mutual, for instance?

A. It would be a dividend on Standard stock or a dividend on Mutual stock.

Q. And that would be posted in the operating ledger, would it?

A. Yes.

Q. And how would that appear in the general ledger?

A. In precisely the same way.

Q. Then, as I understand it, the general ledger is a mere condensed operating ledger; is that right?

A. No, I should not call it a mere condensed operating ledger. I should call it what it is, a general ledger; the operating ledger is quite a different kind of book.

Q. Well, if the accounts are the same, and the entries are the same, except that the general ledger is the operating account condensed and several accounts brought into one, how are they entirely different books?

A. As I have explained, they only differ in respect to the degree to which the details of the accounts are shown.

Q. Does your plant and property account appear in the operating ledger?

A. Yes.

Q. And your main and service account?

A. In the operating ledger, in detail, not only as to the mains account—well, that is, in the case of mains, one account; in the case of property accounts, it would be divided between the stations or branches or departments, as the case might be.

Q. Is there a separate account on your books for mains and services?

A. A separate account for mains and a separate account for services, yes, sir.

Q. Are there two accounts of that kept, one in the operating ledger and one in the general ledger?

A. They are identical in each ledger.

556 Q. When you take a trial balance, from which ledger do you take it?

A. Both ledgers are balanced.

Q. That is, a trial balance is struck each month from each ledger?

A. Yes, sir.

Q. I understand, however, that at no time in the last twenty-two years has there been taken an inventory of your property?

A. What property do you refer to?

Q. Property of the Consolidated Gas Company?

A. I cannot reply affirmatively to that proposition, because I know there is property that is inventoried every year.

Q. What property is it that is inventoried every year?

A. We inventory the material and supplies; we inventory the pipe and specials; we inventory the stove stock every month. We inventory horses, wagons and harness.

Q. Every month you take such an inventory?

A. Once a year for horses, wagons and harness.

Q. Once a year for horses, wagons and harness and once a month for materials?

A. No, for stoves.

Q. How often for materials?

A. Once a year.

Q. Pipes and specials?

A. Once a year.

Q. Then you do inventory everything once a year except the manufacturing plant, mains and services, practically; is that right?

A. Well, I would not say that those six items comprise all our property, Senator. I have named four things that we inventory every year. There are other things that we do not inventory besides mains, services and plants.

Q. Then you do not rely entirely on the entries in your books for those details, but you do take an inventory; is that right?

A. We do in the case of stoves, to establish the fact that the stock is properly looked after and accounted for. In the case of materials
or supplies, which deal largely with wrought iron pipe, mal-
557 leable fittings, meter cocks, stove cocks, and brass goods and
materials at various branches and stations, that are inventoried every year to note any changes that may have taken place during the year, that would indicate that property of that kind had decreased or increased. As we buy that material it is charged to the operating account; we do not charge it to stock account, nor do we note its employment for any particular purpose. The purpose of the inventory is simply to see that we are getting into the year's expenses neither more nor less than belong there.

Q. As far as your oil and coal are concerned, is there any inventory of that or is that amount on hand estimated from the amount purchased, less what has been charged as used during the year?

A. We do not call it an estimate. We assume that we have on hand all that our records indicate, of stock of that character.

Q. Well, change it to assumption if you like that better than estimate. You assume to have all on hand that has been received less what has been used?

A. That is the case.

Q. And plus what was on hand at the beginning of the year?

A. That is the case.

Q. Then, when you state the value of materials on hand, it is a result arrived at in the method which you now state, is it?

A. Yes, sir.

Q. Now, will you tell me just exactly how you keep your mains and services account, where the mileage and footage is kept, and the other details in regard to it?

A. The mileage is kept in the mains and services department under Mr. Simpson's supervision, in records provided for the purpose. The value of the mains is a matter of record of the general books, and varies accordingly as mains are extended or as mains of a larger size are laid in place of those in the ground.

558 Q. Is there any record in your department of the number of miles or the number of feet of mains that are in use by the company? I mean in the accounting department?

A. No, there is none; not what I should call a record. We may inform ourselves occasionally, and I have no doubt that I have memoranda in my desk of the mileage of mains for every year from the consolidation to date; but the records in which the changes of mileage of mains are noted at first hand—and which therefore is the most desirable record, for anything else would be nothing but a copy of it or a reproduction of it—are kept in the mains and service department, which is one floor above the floor on which my office is located, and which I consider is as much in my department as any other record could be.

Q. Well, I suppose as secretary of the company in that position, all of the records of the company are in a measure under your department, but as head of the accounting department, as distinguished from the engineering department, is what I refer to.

A. We endeavor to avoid duplication of record as much as possible Senator, on the theory that they are extravagant and lead to error.

Q. Then the mileage of mains is kept in what would be called the street department?

A. Yes, sir; in the street department.

Q. And the value of mains is kept in your or the accounting department?

A. Yes, sir.

Q. Are the various items that enter into the mains account in your department carried in as so many feet of such a sized main and such a price?

A. Are you referring now to an extension of the system, a new main, for example?

Q. Yes.

A. The cost of a new main would reach the accounting department through a monthly report made by the street department, indicating the employment of material which would be neces-
559 sary for that new main, as to the material, and would reach the accounting department through the pay roll as to the cost of the labor of laying it.

Q. Will you name the various sources of income that would enter upon the books of the Consolidated Gas Company?

A. Principally from the sales of gas; also from——

Q. And that account is carried into a separate account?

A. Separate account called Gas Sales Account, an income account.

Q. And I suppose that is now footed year by year, appears on the books from year to year?

A. Yes, sir; appears on the books from year to year.

Q. And what other sources of income?

A. The rental of appliances is the source of some revenue.

Q. And that is carried into what account?

A. The stove rental account, an income account.

Q. And that is now stated on the books of the company from year to year is it?

A. Yes, sir.

Q. And what other income?

A. Income from securities owned which would appear under the title of the companies from which the income was received, as an income account.

Q. Then there is no general account of income of securities owned, to which all this would be brought together, all these separate accounts?

A. They are also separately.

Q. They are also separately but is there a general account into which they would be posted?

A. They would be posted into profit and loss account at the end of each year.

Q. Yes, as a general item, but I mean is there any account posted to that particular class of income?

A. No, Senator, they are not so numerous as to render it necessary to group them.

Q. Is there any other source of income to the Consolidated Gas Company?

A. The company receives some revenue from the sales of
560 residual products which, however, is not treated as an income
or shown as an income account but as you are aware appears
in our cost sheet as reducing the cost of manufacturing gas.

Q. Well that would be all, would it?

A. I don't recall anything else at the moment. We might and we do have some small revenue from the rental of property that we own; it is not a considerable amount.

Q. That would appear in what account?

A. Rent account, an income account.

Q. You say rent account and income account?

A. An income account.

Q. Could you without great difficulty prepare a statement showing the income from your gas sales and your income from other sources year by year since November 11th, 1884, for the calendar year except to October 31st, 1905—for the calendar year, in all years except 1884 and 1905?

A. I do not like to say I can do it without a great deal of trouble, but there is nothing impossible under the sun.

Q. Well it would be of no more trouble and not as much as it was to make up some other exhibits that you have produced here, would it?

A. Well, all of us think that the next one is the hardest of all.

Mr. Mathewson: Some of those took several weeks to prepare.

The Witness: Some of them involved a great deal of trouble. I don't think any of them would involve as much as the one you suggest, but I have no objection personally to making it.

Q. You say that each year has been carried out separately so that the total for each year is entered in the accounts?

A. Yes.

Q. So it would merely be copying one entry for each of the years?

A. Do I understand you want it in one amount?

561 Q. No, I want the separate amounts, I want the income from the gas sales stated each year and the income from each of the other sources; not necessarily that you should set out what you receive from each company in the way of dividends.

Mr. Gans: You can take that off of the balance sheet for each year in about five minutes, can't you?

The Witness: Always assuming that things were as carefully separated years ago as they have been kept latterly.

Q. From 1884 to 1900 you did not own stocks in other companies, did you?

A. So far as that particular detail is concerned I am not at all worried, but income from other sources—not from other sources but from what you might term miscellaneous sources, such as stove rentals and real estate rentals, income of that kind, it might be a little trouble; still I am not begging off from the proposition; if counsel approves of my making up such a statement I shall be very glad to do it.

Mr. Page: Does counsel approve?

Mr. Mathewson: Counsel does not quite see the pertinence of a statement of that kind covering twenty years, Senator. I do not say that counsel will decline outright but I think it is rather extreme.

Mr. Gans: In order to get this record straight we might ask now to have the general ledgers of the company for those years brought down at the next hearing and that the Master direct that those ledgers be brought down.

Mr. Mathewson: I do not think that that would meet the case if we determined to make objection to it because if the ledgers were
here the same objections would lie to going into that subject
562 in the ledgers back in 1885 and 1886 that would be with the
statements. We do not wish to give you trouble——

Mr. Gans: Yes, I understand, but that would give us a situation where we could keep the records straight, having made our request and having it ruled upon.

Mr. Mathewson: I will confer with the officers and see how much work it will be to prepare such a statement.

Senator Page: That is as far as I care to proceed to-day.

The Witness: There are several corrections that I wish to make in my testimony. They are as follows: On page 472 "I can't say positively" should be "I can say positively."

Page 477, "if that is the case" should be "that is the case."

Page 481, "sold to cover" should be "issued to retire."

Same page, "no books would show whether" should be "no books would show," striking out the "whether."

Page 487, "add to this inquiry, or even add to the capitalization of 1884" should be "aid this inquiry or affect the capitalization," &c.

Page 516, "from what sources" in place of "want of sources."

Page 527, "United Electric Light & Power Company" instead of "New York Electric Light & Power Company."

Page 529, "as acquired" instead of "required."

Page 530, "normally" instead of "nominally."

Page 536, "might appear in the record" instead of "may appear in the record."

Page 538, "accounting department" instead of "extending department."

563 & 564 Page 539, "and new construction" instead of "or new construction."

At 4:00 o'clock P. M. adjourned to Monday, August 6th, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 93.
State's A.
City's 1.

565 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, MONDAY, *August* 6, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Mead, Mr. Gans, Mr. Burr, Mr. Taylor.

At the request of Mr. Gans, on account of the absence of Senator Page, adjourned until tomorrow, Tuesday, August 7, 1906, at 11 o'clock A. M.

566 NEW YORK, TUESDAY, *August* 7, 1906—11 o'clock a. m.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

MR. MATHEWSON: Before you proceed, Senator Page, would you mind my putting in two or three papers that were in course of preparation at the last hearing but which the witness had not completed? Your cross-examination may deal with them.

Mr. Page: Certainly.

Robert A. Carter further examined:

Redirect examination by Mr. Mathewson:

Q. Have you prepared a summary of operations of the company for the calendar year 1905?

A. Yes.

Q. And that is the last calendar year for which the company is operating?

A. Yes.

Q. At what time are your books closed, as to general accounts?

A. Fiscal year? On the 31st of December.

Q. The 31st of December, calendar year?

A. Yes.

Mr. Mathewson: I offer in evidence the statement to which Mr. Carter has referred.

567 Mr. Gans: We make the same objection as was made to all offers in evidence of this character, as not the best evidence, and that if received it must be received subject to our right to examine the books of the company themselves, and to cross-examine at such length as we may desire, to ascertain the accuracy of the statements.

Mr. Burr: We make the same objection.

The Master: The same ruling.

Exceptions taken by Mr. Burr and Mr. Gans.

Received in evidence and marked Complainant's Exhibit 94.

Q. Referring to Exhibit 93, "Summary of Operations of the Company for the Calendar Year ending October 31, 1905," I asked you a question regarding the meaning of certain of the headings contained in Exhibit No. 93. Do the same explanations apply to the headings in this list, Exhibit No. 94, the corresponding items?

A. Precisely, yes, sir.

Q. I see here an item in Exhibit No. 94, "Contingent Expenses (includes renewals)," $1,328,316.37, which appears to be 10 cents per thousand on gas sold. Will you state how much of that item represents actual renewals, as distinguished from the contingent or reserve fund?

Mr. Gans: We make the same objection that we have heretofore made in regard to the introduction of other papers, as to the witness testifying from papers in regard to facts of this character.

Mr. Burr: The same objection.

The same ruling and exceptions.

A. The expenditures for renewals and replacements during the calendar year 1905 amounted to $282,219.67, or 2.12 cents per thousand cubic feet sold during that period.

568 Q. Does the word "renewals" as it is used in this Exhibit No. 94 include what you call renewals and replacements?

A. That is the case, yes, sir.

Q. Will you state what figures in Exhibit No. 94 are in red ink, and what the significance of the red ink is?

A. The red ink indicates that the balance in that particular operating account for the period was a credit balance and operated to reduce expenses in the aggregate.

Q. State what they are?

A. Profit and loss adjustment under station expense, $7,508.39. Profit and loss adjustment under distributing expense $29,683.92.

Q. And the figures at the right of those which you have just mentioned in the first instance are profit and loss adjustments. 7/100ths of a cent in the last column, and in the next to the last column; and after profit and loss adjustments, below, 00.22 in the final column; they are also in red ink?

A. Yes.

Q. And they have the same significance?

A. Yes, it was a credit balance and operated to reduce station expense or the expense of the distribution of gas, per thousand cubic feet of gas sold or made, as the case may be.

Q. Can you state what the average of replacements and repairs per thousand cubic feet were from the time of the formation of the company up to January, 1905?

Mr. Gans: I object to that on the same grounds as heretofore; it is evident that the witness can testify to that only from the books of the company, and that the books of the company should be produced.

Mr. Burr: The same objection.

Objection overruled; exception taken by Mr. Gans and Mr. Burr.

569 Mr. Gans: May we ask the question, in order to make the record clear?

The Master: Yes.

By Mr. Gans:

Q. You cannot testify to that except from the books of the company, can you?

A. I am very familiar with the figures; I made them up on two previous occasions.

Q. But you made them from the books of the company?

A. They were made from the books of the company.

Q. And you have no independent knowledge, except that derived from the books of the company, at one time or another?

A. Certainly not; the information is derived absolutely from the books of the company.

By Mr. Mathewson:

Q. And to be absolutely exact, you would have to go to the books of the company?

A. I should simply confirm my memory in this particular case; the figures have been used so often that I am perfectly familiar with them.

By Mr. GANS:

Q. You made them originally from the books of the company?
A. I made them originally from the books of the company.

Mr. GANS: I press my objection. I suppose there is the same ruling and exception?
The MASTER: Yes.

Mr. MATHEWSON: Now, will you state.
The WITNESS: The expenditures for repairs and replacements during the period from 1884 to 1904, inclusive, amounted to
570 10 89/1000 of a cent per thousand cubic feet of gas sold.
Q. Whenever you use the word "renewals" you mean renewals and displacements?
A. That is the case.
Q. And wherever you use the word "replacements," you mean renewals and replacements?
A. That is the case.
Q. In other words, the terms are interchangeable whenever you use them?
A. Precisely so.
Q. And as they are used in the exhibits which you have prepared?
A. That is the case.
Q. Please state what the repairs and renewals amount to for the nominal year ending October 31, 1905, actually expended?

The same objections, ruling and exceptions.

A. Six and sixty-one hundredths of a cent.
Q. How much is that less than the average of the previous period of the company's operations?
A. 4.28 cents.
Q. How much were the repairs and renewals, actually made by the company, for the calendar year of 1905, per thousand cubic feet sold?

Mr. GANS: Of course I understand this is all taken subject to our objection.
The MASTER: Yes, the same ruling and exception.

A. 7.34 cents.
Q. How much is that less than the average of the company from its organization up to January 1, 1905?
A. 3.55 cents.
Q. Have you prepared a statement of the income and expenses of the company for the nominal year ending October 31, 1905?
A. Yes.
Q. Is this the paper?
A. Yes, sir.

571 Mr. MATHEWSON: I offer it in evidence.
Mr. GANS: The same objection as heretofore.
Mr. BURR: The same objection.
Objections overruled; exception taken by Mr. Gans and Mr. Burr.

The paper is received in evidence and marked Complainant's Exhibit No. 95.

Q. Have you also prepared a similar statement of the income and expenses of the company for the calendar year 1905?
A. Yes.
Q. Is this it?
A. Yes, sir.

Mr. MATHEWSON: I offer it in evidence.
The same objections, ruling and exception.
The paper is received in evidence and marked Complainant's Exhibit No. 96.

Recross-examination by Mr. PAGE:

Q. Prior to the consolidation you were connected with the New York Gas Light Company?
A. Yes, sir.
Q. What was your position in that company, prior to the consolidation?
A. Bookkeeper.
Q. And what was your first position under the Consolidated Gas Company?
A. In the stock transfer department.
Q. You did not become the general accountant or bookkeeper of that company then, immediately?
A. No, sir.
Q. And you did not open the books of the Consolidated Gas Company?
A. No, sir.
Q. The amount of capital stock that was first issued by the Consolidated Gas Company, as you have testified, was $39,078,000?
A. Rather authorized than issued, I should say; it was not all issued at that time.
572 Q. How much was reserved?
A. I should like to refresh my memory by my previous testimony on that subject, or I may have some memoranda. I will see.
Mr. PAGE: I think you will find it at page 392. (Hands minutes to the witness.)
The WITNESS: There was reserved as working capital $1,303,000.
Q. That was the reserve as working capital?
A. Yes, sir.
Q. The consolidation agreement provided for a reserve of $1,500,000. Now, was a reserve made of $1,500,000, or was it this reserve of $1,303,000, which makes the difference between the addition of the $29,994,000 and $7,781,000, which was the appraisal of the property and the franchise and rights added together?
A. My understanding is that the value of the assets of the old companies, as appraised in 1884, tangible and intangible, aggregated $37,775,000. How the working capital *capital* was arrived at I am not quite sure in my mind.

Q. Was that figure of $1,303,000 that you arrived at by a deduction of the total that I have specified from the $39,078,000, or is it something based on entries in the books of the company?

A. No, it was actually reserved as working capital and so shown in the original books of the company. I think possibly the consolidation agreement originally included some of the companies which did not finally go into the consolidation. The probability is that that fact would explain the difference in the amount to be reserved for working capital.

Q. You refer then to the Mutual Gas Light Company?

A. Yes.

Q. Which was mentioned as a party to the consolidation agreement, but did not become a party?

A. That is the case.

573 Q. And your idea is that this $1,500,000.00 was scaled down to meet that condition?

A. That is the case, that is my understanding of it.

Q. You stated at page 392 that there was issued at the time of the consolidation $35,430,060.00 of capital stock. How much was reserved under the terms of the consolidation agreement to pay off the outstanding indebtedness of the consolidating companies?

A. $2,329,000.00.

Q. Was that the outstanding indebtedness?

A. That was the outstanding indebtedness of the consolidating companies.

Q. I show you a statement on page 10 of Senate document No. 30, being the report of the Joint Committee of the Senate and Assembly, as to the statement of the stock outstanding and indebtedness assumed, and ask you whether that is correct?

Mr. MATHEWSON: Is that of the six constituent companies, Senator?

Mr. PAGE: Yes.

Mr. MATHEWSON: I make the same objection to that question that I did to the previous question, that the Statutes of 1884 defined the basis of the consolidation and the then value of the franchises and rights of the companies and previous capitalization of the previous companies or even the cost of the constituent companies' properties is not material.

The MASTER: He may answer.

Exception.

A. Will you kindly indicate what figures you have reference to in this document?

Q. The table at the top of the page.

A. There is a statement at the top of the page in which there purports to be given the indebtedness assumed by the Con-
574 solidated Company of several companies given in the statement, including the Knickerbocker Gas Light Company. My understanding is that the debts of that company were not included. However, I am by no means sure about that.

Mr. MATHEWSON: Will this paper refresh your Memory at all? I don't know what you have in mind.

The WITNESS: I don't know anything about the figures in this statement, Senator. I am unable to confirm them or testify in regard to them at all. I don't know where they were procured from. I know that no such indebtedness as given in this statement was assumed by the Consolidated Company at the time of consolidation.

Q. The books of the Consolidated Company show the outstanding indebtedness of the constituent companies that was assumed?

A. Yes, any indebtedness of the Consolidating Companies would show if such indebtedness was assumed by the Consolidated Company.

Q. Now, the question is whether it does show, that is the question, without any ifs or buts.

A. There may have been some debts of the old companies which were a matter of cash adjustment as between the Consolidated Company and the old companies but for which no securities were issued by the Consolidating Companies comprised in the consolidation, I am not prepared to say. There may have been. If there were any such debts they were charged against the Consolidating Companies and paid by them.

Q. Well, but the consolidating companies went out of existence, did they not, as soon as the consolidated company was formed?

575 A. As companies, yes. I would not like to testify from my memory just what the transactions may have been in connection with other obligations of the old companies, and those which were covered by the stock issued on the Consolidated Gas Company. If there were any such, why, they are a matter of record.

Q. And the books of the company would show?

A. Would show.

Q. That is, the books of the Consolidated Company?

A. They would, because the Consolidated Company took them over and they would indicate the method by which they were settled.

Q. What particular book of the company would show that?

A. The journal and the ledger.

Q. For the year 1884?

A. For the year 1884.

Mr. PAGE: I would like to have the journal and ledger of 1884 that would show the account, that the witness has just testified to, produced.

Mr. GANS: Mr. Mathewson sits mute. Will the Master direct the production of those books?

The MASTER: Any objection, Mr. Mathewson?

Mr. MATHEWSON: I do not think there is any objection to producing the book, to show how the account was opened to which the witness has testified. I shall ask the witness to produce it for the purpose of your cross-examination, but I think the witness could probably inform himself in a moment so he could make it perfectly clear, and perhaps you would like to have him do so.

Mr. GANS: He may do that and then if we do not need the books we may dispense with it.

Mr. MATHEWSON: I think it is very simple.

The WITNESS: I will undertake to do that then and cover the questions asked by the Senator in a memorandum.

576 Mr. MATHEWSON: And if it is not clear you may produce the book.

The MASTER: Can you arrange it so as to do that during the recess?

The WITNESS: I think so, if the recess is long enough to give me the time to go up town and back. I think I can do it in an hour and a half probably.

Q. The outstanding capital stock of the constituent companies was as stated at this place in Senate Document No. 30, was it not?

A. May I look at your memorandum again, Mr. Mathewson?

(Paper handed witness.)

Q. They corresponded in amounts?

A. I presume it was, yes, sir.

Mr. MATHEWSON: I wish to make the same objections to this line of questioning, that I have already made to the previous question.

The MASTER: Same ruling.

Exception.

Q. And that was $17,000,000?

A. Yes.

Q. And made up as follows:

Manhattan Gas Light Co.	$4,000,000
New York Gas Light Co.	4,000,000
Metropolitan Gas Light Co.	2,500,000
Municipal Gas Light Co.	3,000,000
Knickerbocker Gas Light Co.	1,500,000
Harlem Gas Light Co.	2,000,000
Total	$17,000,000

Mr. GARVER: You read that from the Senate Report referred to?

Mr. PAGE: Yes, page 10.

577 Q. That is correct as to details, is it?

A. Yes, sir.

Q. The cost of the properties held by the constituent companies was shown on the books of those companies, was it not?

Mr. MATHEWSON: I object to that, Mr. Master, as a conclusion and upon the same ground, too, that I have objected to the previous questions.

Mr. PAGE: The form of question may be objectionable. I will ask whether it was shown——

Mr. MATHEWSON: I will ask if the witness has any knowledge on the subject.

Q. I will ask whether the cost of the constituent companies was shown upon the books of those companies?

Mr. MATHEWSON: I will ask the witness whether he has any knowledge as to whether any figures on the books of the constituent companies showed actual cost or not.

The WITNESS: I have no knowledge that they did show actual cost, and I have every reason to believe that they did not show actual cost.

Q. Then you have some information upon the subject. I suppose you have examined those books?

A. In a casual way.

Q. You are very familiar of course with the books of the New York Gas Light Company?

A. Not particularly.

Q. You were bookkeeper of that company,, were you not?

A. Not the general bookkeeper; I was keeping the consumers' accounts at that time.

Q. Have you the books of the constituent companies in your possession?

578 A. I could not put my hands on them at once, but I have no doubt they could be found; I have not had occasion to refer to them in a great many years, but I have no doubt they are very securely locked up somewhere, and I could find them if you desired.

Q. Well, you know, do you not, that the cost shown or ostensibly shown of the constituent companies was put in evidence before the Investigating Committee appointed by the Senate by resolution of May 15, 1885?

Mr. MATHEWSON: I object to that on the same grounds as previously stated, and the witness having no knowledge.

The MASTER: I will allow it.

Exception.

(Question read.)

Mr. MATHEWSON: Do you mean from any books of ours or of the six constituent companies?

Mr. PAGE: Well, it was stated on page 11 that it appeared from the evidence taken before the Investigating Committee, etc.

Mr. MATHEWSON: Do you refer to the committee which reported in 1886? There were two committees.

Mr. PAGE: Yes, I suppose so. It was appointed in 1885.

Mr. MATHEWSON: And it reported in 1886.

Mr. PAGE: To save time, would you be willing that that should be put in subject to your objection?

Mr. MATHEWSON: As to the cost of the six constituent companies?

Mr. PAGE: Yes.

579 Mr. MATHEWSON: No, I would not. If I believed it to be, I would not hesitate a moment, but I do not. Some figures on the books of the constituent companies may have aggregated those figures, but that those figures represented the actual cost of the constituent companies or were the actual cost, is not my information. That is the reason I do not feel free to consent to it.

Q. Now, of the first increase of capital stock of the Consolidated

Gas Company to $54,595,200, all went to the retiring of the debentures which were issued to purchase the stock of the New York Gas and Electric Light, Heat & Power Company?

A. Yes, sir.

Q. Now as to the second increase of $25,204,800 to bring the capital stock up to $80,000,000, $3,773,600 issued to retire the debentures which had been used in the purchase of the New Amsterdam stock, was there not?

A. Yes, sir.

Q. Did you subsequently buy more New Amsterdam stock?

A. We did, yes, sir.

Q. And can you state when?

A. Well, at various times, small amounts comparatively. I do not think we have made a purchase for a year or two.

Q. Can you state the aggregate amount of New Amsterdam stock that the company has purchased or holds?

A. Yes, sir, do you want it in shares, common and preferred and scrip? We hold of the preferred stock $8,991,475 par value, and of the common stock, $12,154,592.50 par value.

Q. At what value are those carried on the books of the company?

A. The memorandum is being prepared, Senator, for Mr. Burr, that gives that detail, and I do not happen to have it. It is coming down by messenger, and when it is here, I can answer the question very readily.

Q. Is it carried on the books of the company as the amount
580 that it has cost the company either in stock or cash?

A. It stands on the books at the par value of the stock that was issued and exchanged for part of it, and at the cash cost of the balance.

Mr. Mathewson: It was not carried into the books at an amount equal to the par of the stock of the Consolidated, plus the premium at which it was issued.

The Witness: No, the book value does not include any of the premium of the stock that was issued for it.

Q. That is of the $3,773,600 of stock issued to purchase New Amsterdam, it would be carried on the books of the company at that price, $3,773,600?

A. Yes, sir.

Q. And of the balance, how would that be carried?

A. It would be the amount of cash expended for the balance of stock acquired over that acquired by the issue of stock of the Consolidated Company.

Q. Will the statement which you are going to produce show the amount of the purchase for cash, separate from the other?

A. It would show the total amount of New Amsterdam stock which we hold, and the total cost of it.

Q. There was no other consolidated stock issued for the purchase of New Amsterdam, except this $3,773,600?

A. No other, that is right.

Q. So that whatever the difference would be, was purchased in cash?

A. That is the case exactly, yes, sir.

Q. Then after that issue there was $900,000 sold at 193⅜, was there?

A. $900,000 par value of stock sold, yes, sold for cash.

Q. If my figures are correct, that would amount in cash to $1,740,375.00. Will you verify those figures?

A. 193⅜, was that?

Q. Yes, sir, 193⅜.

A. Yes, that is correct.

581 Q. And the balance of that issue of $20,731,200 was sold to the stockholders of the company at 150, is that right?

A. Yes, sir; at different times.

By Mr. Mathewson:

Q. In cash?

A. In cash, to the stockholders, on subscription.

Mr. Mathewson: You had better verify that 193⅜.

The Witness: I will do so. I simply made a calculation on the figures the Senator gave me, assuming them to be correct.

By Mr. Page:

Q. Well, is that statement correct, that the balance of that issue was sold to the stockholders at 150, for cash?

A. Yes, sir, all the rest of the stock was sold to the stockholders at 150.

Q. Then the balance was $20,731,200, and at 150, that produced $31,096,800, according to my figures. Could you verify that?

A. The figures are correct, Senator.

Q. Is there any other stock of the Consolidated Gas Company that has been sold at a premium by the company?

A. You mean sold or issued at a premium?

Mr. Mathewson: He means sold for cash or something else, I suppose.

Mr. Page: For which the company got a premium in cash, is my idea.

The Witness: For which the company got a premium in cash, is that your question?

Q. Yes.

A. None, no, sir.

582 Mr. Mathewson: You mean beyond the $39,078,000 of stock originally authorized.

Mr. Page: They did not get any premium on that in cash.

Mr. Mathewson: I don't know about that.

The Witness: I am assuming the Senator only has reference to the sales of stock, for which $39,078,000——

Mr. Mathewson: That is of the increased stock.

The Witness: Of the increased stock. Between the $35,430,060 originally issued, there were sales at a premium, more or less, up to the $39,078,000.

By Mr. PAGE:

Q. Can you give us the details of those sales?

A. Yes, they could be made up.

Q. That $3,647,940——

Mr. MATHEWSON: Is that the difference between the $35,430,060 and the $39,078,000?

Mr. PAGE: Yes.

By Mr. MATHEWSON:

Q. I understand it to be the case, Mr. Carter, that that stock, or at least some of it, was sold at a premium, above par?

A. Yes, that is the case.

By Mr. PAGE:

Q. How soon could that be gotten up?

A. Why, I think I might be able to get that this noon, Senator, along with the other information.

Q. Did you say you were preparing for Mr. Burr a statement showing the details of the stock of other companies, and
583 stocks and bonds of other companies?

A. Yes.

Q. How soon will that be ready?

A. Probably have that this afternoon also.

At 12:22 P. M., to afford the witness an opportunity to prepare the statements requested, an adjournment is taken to 2 P M. this day.

After Recess.

Cross-examination of ROBERT A. CARTER continued:

Q. Have you been able to prepare any of the statements or gather any of the information which you were to get during the recess?

A. I have not completed my investigations relative to the statement which you questioned me about, but I expect to have the information complete by to-morrow morning.

Mr. MATHEWSON: With respect to the indebtedness of the constituent companies taken over?

A. (Continuing:) With respect to the indebtedness of the constituent companies taken over at the time of consolidation.

Q. Did you find what the treasury stock, if we can so call it, the difference between $39,078,000 and the $35,000,000, was issued for and at what price?

A. It was sold at an average price of $192.40 a share.

Q. That produced how much in cash?

A. $7,019,811.73.

584 Q. The amount of stock so sold was $3,000,000 and how much?

A. $3,647,940, par value.

By Mr. Mathewson:

Q. With that amount, would the stock issued to the constituent companies account for the entire $39,078,000 authorized capital?

A. Yes, sir.

By Mr. Page:

Q. And that had been all sold and issued up to September 30, 1899?

A. Yes.

Mr. Mathewson: All but $100.

The Witness: All but $100. Do you want me to make an explanation of the difference?

Mr. Mathewson: Yes, of the difference of $100.

The Witness: I should say the difference was fractions upon which dividends would not be paid. This is a statement of dividends paid upon the capital stock, but of course the dividends were only paid upon full shares.

Mr. Mathewson: The difference of $100 would be represented in outstanding fractions, upon which dividends were not declared?

The Witness: Yes.

Mr. Gans: As a matter of fact, stock has been issued?

The Witness: Stock had been issued, yes.

Mr. Mathewson: To what exhibit are you referring in your answer at this moment?

585 The Witness: Complainant's Exhibit 84.

Q. You have stated, have you, all the stock of the Consolidated Gas Company that was sold at a premium, in this amount of $3,647,940 and $900,000, and the $20,731,200?

A. That is all, yes, sir, that was sold at a premium for cash.

Q. That is what I mean?

A. Yes, sir.

Q. Now, were there some debenture bonds that were issued and sold for cash that were not converted into stock?

A. Are you referring to an earlier issue of bonds?

Q. Prior to the issue of the $20,000,000?

A. There were bonds which were not convertible into stock, some of which are still outstanding.

Q. And what was the amount of those bonds or the amount realized?

A. I am not able to say from memory the exact amount of those bonds originally issued; but I think they were issued in 1888 at a premium, and my impression is that a million and a half of those bonds were disposed of. At the present time there is outstanding a balance of $1,387,000.

By Mr. Mathewson:

Q. Is that the way it stood on October 31st last also?

A. Yes, sir.

Q. None have been redeemed since?

A. No, none have been redeemed since.

By Mr. GANS:

Q. What was the character of that bond issue, as to the term of the bonds?

A. They were twenty year bonds, expiring in 1908, August 1st, 5 per cent. bonds.

Q. Do you know what premium was realized?

A. I would not like to say from memory; I think $75,000.

586 Q. Can you make sure of that?

A. I can, very easily.

Q. You say some of those have been redeemed. Was that pursuant to a provision of the bond?

A. No, they have been redeemed as they were offered for sale.

Q. And bought in the open market?

A. Bought in the open market by the company.

Q. Can you tell whether by redeeming them you were compelled to pay a premium?

A. In every case.

Q. Can you give us the amount of premium that you paid in redeeming those bonds?

A. Yes, I can furnish a statement of that.

By Mr. PAGE:

Q. Have you a statement of the securities of other companies held by the Consolidated Gas Company?

A. Yes.

Q. And what was paid for them?

A. Yes.

Q. Would you produce it?

Mr. MATHEWSON: What they cost the company in stock of the Consolidated Gas Company, reckoned at par or cash.

The WITNESS: Yes.

Q. In this statement which you have produced, the column marked "total" is the total par of the several securities, is it?

A. Yes.

Q. And the book value is what?

A. The amount paid for the securities in Consolidated stock at par or in cash.

Q. The only stock which you obtained and which was paid for by Consolidated stock is the United Electric Light, Heat & Power Company and the New Amsterdam Gas Company?

587 A. Not the United Electric Light, Heat & Power Company, but the New York Gas, Electric Light, Heat & Power Company, at present the New York Edison Company, and the New Amsterdam stock.

Q. And the amount of the stock of the New York Electric Light, Heat & Power Company, or the amount that was issued for it, is $15,517,200.00. You carry that on your books as $18,202,969.63 as the stock of the New York Edison Company. Will you explain that difference?

A. The difference represents the amount of divisible surplus earnings of the Edison Electric Light Illuminating Company, to which the Consolidated Gas Company was entitled as holder of the stock of the New York Gas, Electric Heat, Light & Power Company, but which was invested in plant and property by the Electric Light Company, and which the Consolidated Company elected to allow to so remain, charging the cost of the stock with that amount.

Q. That is, there was a consolidation, was there, of some other companies with the New York Gas, Electric Light, Heat & Power Company, or a consolidation of the New York Gas, Electric Light, Heat & Power Company with the Edison Electric Illuminating Company, which became the New York Edison Company?

A. That is the case.

Q. And this increase was the stock that you received of the New York Edison Company, for that $15,517,200 of the New York Gas, Electric Light, Heat & Power Company?

A. Yes.

Q. And therefore does not represent the cash investment of any more than the $15,517,200, does it?

A. Well, we consider that to all intents and purposes, it was an additional investment to that amount, although we did not go through the process of taking the money out of their treasury and advancing it to them again as working capital, but choosing to leave it there as working capital, that amount having been invested 588 in plant and property, and showing in their surplus account a divisible surplus which the Consolidated Company was entitled to, which they disposed of in that manner.

Q. Then, to get at the actual cash transaction with the Consolidated Gas Company, the only cash invested was the $15,517,200, although you assume that that stock that you received of the New York Edison Company, had a value of $3,000,000 more?

A. Yes, approximately.

Q. And you carried it on your books at $3,000,000?

A. Yes, you are perfectly right; it was not a cash transaction, literally.

Mr. Mathewson: None of it was a cash transaction.

The Witness: None of it was a cash transaction in the case of the Edison Company.

Mr. Mathewson: Accounting for the stock at par.

Mr. Page: Yes, but there was no additional cash invested to bring that $3,000,000 amount up; so as to make that clear.

Mr. Mathewson: Exactly.

Q. Between what period was this additional stock of the New Amsterdam Company acquired by you, to make the amount $4,814,608.03 instead of $3,773,600, which was issued to retire the debenture bonds?

A. I should have to consult the records, Senator, to get the dates. My recollection is that they commenced acquiring New Amsterdam stock in 1900, about May, possibly, and that we discontinued issuing stock in exchange for debentures, I think in 1903, possibly 1904. I should say that the last stock we acquired—the latest date on which we acquired stock of the New Amsterdam Company—was in 1905, prior to October 31st.

589 Q. And the difference between the $4,814,608.03 and the $3,773,600 would represent the amount of cash that was invested in the purchase of New Amsterdam stock; is that right?

A. Yes.

Q. That is, you purchased stock for which you paid $1,041,008.03?

A. That is correct.

Q. In the purchase of this New Amsterdam stock, as I understand, your debentures were redeemable at $232 of debentures for $100 of stock?

A. In the New Amsterdam?

Q. Yes.

A. No, sir.

Q. I mean in the Light, Heat & Power Company case?

A. Yes, in that case it was at the rate of $232 per share of Consolidated stock issued.

Q. And the debenture was issued at par of debenture for par of stock of the New York Electric Light, Gas, Heat & Power Company?

A. That is the case.

Q. And in the New Amsterdam case, the debentures were issued at $100 of stock to take up $190, as I remember it, of debentures?

A. Of debentures.

Q. Par of debenture was issued for par of New Amsterdam stock?

A. No, New Amsterdam stock was at a rate considerably below par; I do not recall the figures at the moment, but it was not at par.

Mr. Mathewson: Was not it at $26 for common and $50 for preferred?

The Witness: I would not like to confirm that from my memory, but I know it was something approximating those figures.

Mr. Gans: Can you get that for us?

The Witness: I think I can.

590 Q. When did you acquire stock in the New York Mutual Gas Light Company?

A. We have been buying New York Mutual stock in the market for a number of years, dating back I should say as far as 1898 or 1899.

Mr. Mathewson: 1899?

The Witness: 1899 I think, possibly 1898.

Q. You hold now par value $1,186,200 of New York Mutual, for which you have paid $5,702,290.65?

A. That is the case, yes.

Q. What rate of dividend did that stock pay at the time you purchased it?

A. It has paid, to the best of my recollection, nine per cent. annually.

Q. Of the Standard Gas Light Company you hold $4,096,100 of the preferred, and $4,796,200 of common, and it is carried as having cost the company $14,587,495.23. That represents the cost to you of $8,892,300 for that stock?

A. Yes.

Q. What rate of dividend did that stock pay?

A. Until recently it has been paying at the rate of 6 per cent. per annum on the common and on the preferred. I might add in connection with the Mutual, that that 9 per cent. was paid up to 1905. The rate of 1906 is lower than 9 per cent.

Q. But at the time you purchased it you were paying 9 per cent.?

A. Yes.

Q. You have grouped together the holdings of the United Electric Light & Power Company, of stock preferred and common, mortgage bonds, notes and interest on loan; and the return on the investment is given as $301,648.78. Is any of that dividend on the stock?

A. No, sir.

Q. It is all interest, either on bonds or floating debt?

A. Or floating debt, yes.

Q. Is that the amount of interest that has been paid to the company, or is it merely charged as against the United Electric
591 Light and Power Company?

A. It has been paid up to recently, but owing to the fact that the company is getting no money from the city in payment of their bills, we are obliged to extend credit to them for the amount of that interest at the present time.

By Mr. **Mathewson**:

Q. Is that because you have not furnished light to the city, or because of this controversy, over the amount that you are to receive for it?

A. The light has been furnished; but there is some disinclination on the part of the city—for what reason I am not aware—to settle the bills. A very large part of the company's business is made up of this street lighting.

Q. All of the securities or obligations of other companies that are held by the Consolidated Gas Company, as set forth on this statement, except the Astoria Light, Heat & Power Company, were purchased from the increases of capital stock from the $35,000,000 originally issued up to the $80,000,000, were they? That is, has anything else been purchased out of the $20,000,000 of debentures?

A. This is a statement of securities of a more or less permanent kind; there are other investments of a temporary nature in City stock and in advances to some of the other companies that are not included in here, in which that $20,000,000, some of it, may be temporarily invested.

Q. My question was, though, that none of the stocks or securities upon this statement except those of the Astoria Light, Heat & Power Company were acquired from the $20,000,000 of debentures issued since 1904?

A. That is the case.

Mr. **Page**: I will offer this in evidence.

Received and marked State Exhibit B.

592 Mr. **Mathewson**: I will ask the witness, with your permission, whether the securities owned on October 31st are the same as they stand on this statement?

The WITNESS: With the exception of the Astoria Light, Heat & Power Company, to whom, of course, advances have been made prior to the 30th of June, 1906, the statement with that exception would be the same.

Q. Up to October 31st they would be just the same?

A. Up to October 31st they would be just the same.

Q. Well, you have already testified as to what securities the Astoria Light, Heat & Power Company held on October 31st?

A. Yes, sir.

Q. Besides the securities shown on this statement, have you made loans to the Edison Company and East River Gas Company and any others?

A. Yes, sir, we have.

Q. Are those loans still outstanding?

A. Yes, sir.

Q. And were they made prior to July, 1904?

A. I don't think any of them were made prior to July, 1904.

Q. Well, you loaned to the Edison Company $3,000,000, didn't you?

A. I think approximately that figure.

Q. And was that made out of the moneys received for the $20,000,000 convertible debentures or was it made prior to the issue of those debentures?

A. It was made since the issue and is a part of the $20,000,000, yes, sir.

Q. And the amount that you loaned to the East River Gas Company, which was $496,511?

A. No, I should think not any of that. I don't think that that loan has been augmented much, if any, since July, 1904.

593 Q. That was the amount that you had loaned that company as appeared on your balance sheet of December 31st, 1904, I believe?

A. I have it as October 31st, 1905. If you would like to have the amount as of that date——

Q. Well if it has been changed.

A. It may have been changed.

Mr. MATHEWSON: Was not that a temporary investment in a part of the $20,000,000 debentures?

Mr. PAGE: This he thinks not. This was the money you loaned them to increase their gas plant over there.

The WITNESS: October 31st, 1905, the advances to the East River Gas Company of Long Island City, amounted to $511,397.16; there was a slight increase over the amount as of December 31st, 1904, some $15,000.

Q. Is that $15,000 additional of loan or is it accrued interest?

A. Additional loan or advance.

Q. On December 31st, 1904, you had loaned $842,166.68 to the United Electric Light & Power Company. Was that made prior to July, 1904?

A. I should say most of it was. It represents an amount of—

well you might say offhand—I will say that it accrued mostly prior to July, 1904.

Q. And you had advanced to the Westchester Light Company $302,328.50. Does that investment remain the same?

A. No, that has increased. As of October 31st, 1905, that amounted to $710,000.

Q. The amount as it appearrs on December 31st, 1904, was that made prior to the sale of the debentures, of the $20,000,000?

A. The amount advanced to the Westchester Light Company?

Q. Yes.

A. No, I should say that that was made subsequent to the issuing of the debentures.

594 Q. Well it would be a very easy matter by reference to the books of the company to ascertain exactly whether these various items were advanced prior to the sale of the debenture bonds of $20,000,000 or subsequently, would it not?

A. Yes. I don't think it would signify much, but——

Q. It might not signify much, but——

A. From which standpoint—the advances as of December 31st, 1904, even though they might have been made as of December 31st, 1903, might have represented the employment of certain resources that in turn were converted into convertible bonds so that the convertible bonds might have been the form of resource that ultimately took care of that advance.

Mr. GANS: You mean the convertible bonds took up a part of your floating indebtedness.

The WITNESS: That might have been the case.

Mr. GANS: Well——

The WITNESS: I am not prepared to say that we did not cancel some floating indebtedness at that time. I think it is quite likely that we may have done so.

Q. Well, did the Consolidated Gas Company borrow money that was in turn loaned to any of these companies which I have just mentioned?

A. I don't know of any such direct transaction of money being borrowed by the Consolidated Gas Company for the purpose of loaning it.

Q. Referring to Complainant's Exhibit No. 79, that I believe was prepared by you or under your direction, Mr. Carter?

A. Yes, sir.

Q. And it states the value of the real estate as $10,929,789.57, and of the plant as $16,087,428.72?

A. Yes, sir.

595 Q. I now call your attention to the report of the Consolidated Gas Company to the State Board of Tax Commissioners, and ask you if that is your signature?

A. That is my signature, yes, sir.

Q. And that is the signature attached to the affidavit?

A. Yes, sir.

Q. And you swore to that before Wallace Young, Notary Public, on the 29th of November, 1905, did you?

A. Yes, sir.

Q. Now, turning to Schedule D, the real estate and plant is stated at a value of $19,678,612.76. Did that include the two items that I called your attention to in Exhibit 79?

A. It includes the same two items, yes, sir.

Q. Mains are stated in Exhibit 79 at $7,852,151.03, and services at $1,212,071.09. Referring now to Schedule D of the Tax Report, mains and services, $4,398,160.82, are those the same two items that are set forth in Exhibit 79, under the head of mains and services?

A. The same two items, yes, sir.

Q. Referring to Schedule K——

Mr. **Burr**: You mean Schedule K in the Tax Report.

Q. Schedule K in the Tax Report for 1905, in second column is: "Present value of property in streets, highways and public places allowing depreciation, $4,398,160.82," which is the same as in Schedule D under the head of mains and services. In the first column of Schedule K is the present value of property in streets, highways and public places on basis of cost of reproduction new, $5,801,466.10. That refers to the same items, that is, of mains and services, does it?

A. Yes, sir.

Q. And is the valuation on basis of reproduction new, is that right?

A. Yes, sir.

596 Mr. **Page**: I offer this report in evidence.

Mr. **Garver**: For what purpose is this offered. To impeach the witness?

Mr. **Gans**: I think it is competent both to impeach the witness and for the purpose of establishing an independent valuation put by the company itself upon its own assets, and an admission by the company of the value of its assets.

Mr. **Garver**: The courts have held in numerous cases that statements filed for purposes of taxation are not valuable as evidence to determine the value of property, and we have shown here the manner in which property is to be estimated for tax purposes under the city charter, that is the Commissioners are obliged to access the property for what it would sell under ordinary circumstances. Now, it is a very different proposition from the value that is to be placed upon property in condemnation proceedings or in proceedings of this kind, which are similar to condemnation proceedings.

Mr. **Mathewson**: Or of its value as an operating concern.

Mr. **Garver**: Yes. Therefore it does not seem to me that this tends to impeach the witness or that this is of any value in itself as evidence showing the assets of the company.

Mr. **Gans**: The Master will observe in one of those items there is a distinct statement that the estimate was based upon cost of reproduction new.

Mr. **Garver**: Yes, and cost of reproduction new means what it would sell for under ordinary circumstances if you had it produced new.

Mr. **Mathewson**: Mr. Simpson has already testified that he gave

597 the figures to Mr. Carter for the mains and services and that the figures he gave were merely cost of labor and material for laying in soft dirt, excluding rock excavation and all other services which go to the full value of the mains in the ground, and that it did not represent the full value of the services or of the mains in the ground.

Mr. Gans: After all that may go to the value of the exhibit and its effect in impeaching the witness and establishing what the value of the property was by the admission of the complainant. I do not think it can possibly go to its admissibility.

The Master: I will take it and give you an exception, Mr. Garver.

Received and marked State Exhibit C.

Q. Were these figures, Mr. Carter, as set forth in this tax report, State's Exhibit C, prepared by you after some consultation?

Mr. Gans: Yes or no we are entitled to have to that.

The Master: Yes.

Mr. Garver: I think it is proper to wait until the witness answers. He may answer yes or no.

A. I answer no; the report was not made up by me.

Q. The report was not made up by you or prepared by you?

A. No.

Q. Was it made up under your direction?

A. Made up under my direction, or by my direction would be more correct, possibly.

Q. Well, this was practically a continuation of a series of reports filed by you, beginning with the year 1902, was it, Mr. Carter?

A. Beginning with the year 1899, if my memory serves me.

598 Q. When was the first report sworn to by you, Mr. Carter?

A. It would be impossible for me to say until I saw all of the reports. It might have been 1902; it might have been earlier or later.

Q. I show you the report of 1904, which is signed by you. You remember you were examined at some length by Mr. Hughes before the Joint Committee of the Senate and Assembly in reference to this report?

A. I think that that was the year.

Mr. Mathewson: You refer to the Joint Committee of 1905, of course?

Mr. Page: Yes.

Q. And the item of real estate and plant in the report of June, 1904, was given as $19,673,075.42. Do you remember that you were asked by Mr. Hughes at that time:

"Q. Will you please take the item in that report, the first item "of real estate and plant, $19,673,075.42. Now, that is a statement "of the value of the real estate and plant of the Consolidated Gas "Company to June 30, 1904, is it not? A. That is exactly what "it is."

Do you remember so answering?

A. It is quite likely.

Q. Well, do you remember it or don't you?

Mr. Mathewson: If you let him see the testimony, perhaps he will be able to answer.

A. I think if the testimony reads to that effect I should reply affirmatively, yes.

Q.—.

"Q. That is exactly what it is?"

And you answered

"As near as we could determine.

599 "Q. That is what I am asking you? A. That was the "value of the property at that time."

Was that——

A. As nearly as we could determine for the purposes of that report.

Q. No, but did you answer these particular questions in that way?

A. Well I answered it there as nearly as we could determine it.

"Q. That's it exactly. In other words when you came to make "up the report to the State Commissioners for the year ending June "30th, 1904, you sought to ascertain fairly what the value of the "property of the company was? A. Precisely."

Q. Did you so testify?

A. Yes, sir.

"Q. And you took the various properties of the companies with "which you were familiar and you fixed what you decided to be the "fair value of the properties and stated these values in your report? "A. Preciselv."

Q. You so testified?

A. Yes, sir.

"Q. And under the head of Real Estate and Plant you put down "the figures $19,673,075.42 as the value of the real estate and plant "of the company? A. Yes, sir."

Q. Did you so testify?

A. Yes, sir.

Mr. Mathewson: What page is that?

Mr. Page: Pages 369 and 370 of the record.

"Q. Before you get to that as suggested, is that the value that "was arrived at after consideration of the matters by others besides "yourself? A. That is the case, Mr. Hughes."

Q. Did you so testify?

A. Yes.

600 "Q. And with whom did you advise in making the de"termination of value? A. The engineers of the company.

"Q. Who were they? A. Mr. Bradley and Mr. Woods.

"Q. And who else? A. The Assistant Secretary who has charge "of the distributing system of the company.

"Q. Who was that? A. Mr. Simpson, Mr. C. C. Simpson.

"Q. Anybody else? A. I think if we were in doubt I would "have consulted with the President from time to time with regard "to the figures that went into these reports.

"Q. Yes, sir, and probably with other counsel? A. Probably—

" always—always with counsel. Reports are always submitted to " counsel and fully approved before being filed.

"Q. You sought in this way to get from all persons connected " with the company who had expert information as to the value of " the property what would be a proper valuation thereof on that day? " A. Yes, sir."

Q. Now, did you so testify?

A. Yes, sir.

" Q. And the amounts which are stated in this Schedule B that " you have before you, and that report of 1904, were those arrived at " and stated? A. Yes, sir.

" Q. And with the concurrent judgment of these various men " familiar with the facts? A. Yes, sir."

Q. Did you so testify?

A. Yes, sir.

" Q. Taking then the first item of real estate and plant $19,673,-
" 075.42, and taking that as the value thus arrived at of the
601 " real estate and plant, state whether or not that covered all
" the real estate and plant of the company; that is to say, the
" land, the buildings thereon, and stoves, the holders and various
" apparatus which are connected with your business of gas making
" and apart from the items which are separately mentioned later on,
" such as mains and services and meters, stoves and personal prop-
" erty; is that correct? A. That is correct."

Q. Did you so testify?

A. Yes, sir.

Mr. Page: I offer this report of 1904 in evidence.

Same objection; same ruling; exception.

Received in evidence and marked State's Exhibit D.

Q. Is this report in your handwriting?

A. No, sir.

Q. Any part of it?

A. No part of it.

Q. Was the 18th Street plant included in the property that was valued in State's Exhibits C and D, a part of the value of the land and property?

A. I don't know what exhibit you are referring to.

Q. Exhibit C in the Tax Report of 1905, and Exhibit D is the Tax Report of 1904. In real estate and plant was the 18th Street property included in that value?

A. To the same extent that the plant at any other station was included in it.

Q. Well, it was included?

A. Eighteenth Street was included; yes.

Q. Did you, during the recess, try to inform yourself as to the cost of the properties that were carried on the books of the constituent companies in 1884?

A. No, sir; I did not.

Q. There is no way you could get at that except by going to the books of the constituent companies, is that right?

602 A. I don't know of any other way, Senator.

By Mr. **Mathewson**:

Q. Do you know that you could get it even in that way?

A. The value?

Q. The cost.

A. No, I would not expect to get the cost of the properties from those books. I don't think their books show the cost.

By Mr. **Page**:

Q. What would they show?

A. They would show the book value, which might be far from the cost. In fact I have every reason to believe it was much less than the cost and very much less than the value of the properties.

By Mr. **Gans**:

Q. I do not understand that you swear that you know that the book value is far less than——

A. That is my opinion. The Senator asked if that was my understanding, and I testified that it was.

Mr. **Mathewson**: He asked what they would show and you answered the question. I think your answer was fair.

Q. Well, let us see about it. I believe you testified you didn't know anything about the figures that appear upon those books?

A. Only in a very general way.

Q. Can you tell us within a million dollars what they are?

Mr. **Mathewson**: What do you mean by "what they are"?

Mr. **Gans**: What the figures as to the cost of the plant appearing upon those books are?

603 A. I should infer that the cost of those plants——

Q. No, can you tell us, not what you would infer, but can you tell us?

A. No, no way of knowing except to go through their books with very great care, as to what the cost was, and the book values in their books would not show—nothing but an appraisal made would show the value of that property.

Q. Then aren't you a little reckless in offering an opinion?

Mr. **Garver**: Objected to.

By Mr. **Page**:

Q. Have you ever gone through those books of the original companies to ascertain that?

A. No, but I have seen some statements made and contained in Senate Document 47 representing the book values of the properties of some of the consolidating companies, and I know the values there given as the values of the properties of some of the companies are simply absurd. It don't represent in one case, I think, ten per cent. of the value of the plants.

By Mr. **Garver**:

Q. What case was that?
A. That was the case of the Manhattan Gas Company. They were carrying on their books two plants at Fourteenth street and Eighteenth street at something like $60,000, and they were appraised at, I think, $3,300,000; two large stations with plants of an aggregate capacity of over 7,000,000 feet of gas a day.

By Mr. **Gans**:

Q. Then you are somewhat of an expert on values?

604 Mr. **Mathewson**: He doesn't have to be to state that.

A. I am not posing as that.

By Mr. **Page**:

Q. Then if Senate Document 47, which I believe was Senate Document 47 of 1886, stated the value, or that that property was carried on the books of the Manhattan Company at a cost of $4,872,999.49, it would be stating more than your estimate of what the property was worth?
A. I am referring to the station plant only of the Manhattan Gas Company, located at Fourteenth Street and Eighteenth Street, the foot of each street, East Fourteenth Street and West Eighteenth Street, and referring to no other property of that company; and that property I know was not carried on their books at anything like $4,000,000 or $1,000,000, nor even $100,000, according to the statement in Senate Document 47.

At 4.05 P. M. adjourned to August 8, 1906, at 1½ A. M.

Last Exhibits:

Complainant's 96.
State's, D.
City's, 1.

605 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, WEDNESDAY, *August* 8, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Mead, Mr. Page, Mr. Gans, Mr. Burr, Mr. Taylor.

606 ROBERT H. CARTER resumed.

Cross-examination by Mr. PAGE continued:

Q. Mr. Carter, have you any of the statements that we called for yesterday?

A. To which statements do you refer, Senator?

Q. Well, you were to prepare statements showing the details of the indebtedness, for instance, of the consolidating companies.

A. I have a memorandum showing the indebtedness of the consolidating companies as given on page 10 of the report of the joint committee of the Senate and Assembly in 1905 and a statement showing the indebtedness of those companies as they appear upon the books of the Consolidated Company under date of November 11, 1884, and the statement also shows the variations between the amounts given in the Senate report and in our books (producing papers).

Q. Where did you get these figures, Mr. Carter?

A. From the books of the Consolidated Gas Company, the journal and ledger.

Q. The first journal and ledger?

A. Yes.

Q. As originally opened?

A. Yes, sir.

Q. And according to that ledger the figures in the first column of this exhibit show the amount of outstanding indebtedness of each of the consolidating companies that was assumed by the Consolidated Gas Company; is that right?

A. Yes, sir.

Q. Was this the bonded indebtedness of those companies?

A. The total of $2,971,574.27 includes $2,329,000 of bonded and floating debt for which capital stock was reserved to retire, and miscellaneous liabilities in the shape of consumers' deposits, amounts due under contracts and other items aggregating $642,554.27, making a total of $2,971,554.20.

Q. The amount of capital stock which was reserved to meet these outstanding liabilities and subsequently sold by the Consolidated Gas Company amounted to $3,500,000, did it not? 607

A. No, it did not, Senator.

Q. What was the $3,500,000?

A. The total amount of capital stock reserved, being the difference between $35,430,060 and $39,078,000, being the total amount authorized, included the amount reserved for the retiring of these obligations of the consolidated companies, aggregating $2,329,000, and the working capital, amounting to $1,303,000 I think.

Q. Then the entire capital stock and outstanding indebtedness of the constituent companies amounted to $19,971,554.27, is that right—$17,000,000 added to that?

A. That is the case, yes, sir.

Q. Now I believe you were to ascertain how much of the different securities that were purchased by the company, as testified to at the last session, was purchased out of the proceeds of the $20,000,000 debentures, if any?

A. I am not aware that I was to prepare any statement of that sort, Senator. You may have asked me whether I knew about it at that time, and I don't think I did; and I certainly did not attempt to make any statement of it. I might say that we have in evidence now an exhibit which shows how the proceeds of the sale of the debenture bonds were employed as of October 31st, 1905, which I think would answer the question.

Mr. **Mathewson**: Do you remember the exhibit number?

The **Witness**: Complainant's Exhibit 80.

Mr. **Mathewson**: Page 348.

Q. Referring to Exhibit 80, can you state whether any of the proceeds of the debenture bonds of 1904 were employed in the purchase of securities of other companies besides the Astoria Light, Heat & Power Company? 608

A. No, they were not.

Q. Now I believe you were to prepare a statement showing what premium had been received upon the debenture bonds of 1888 and the premium that had been paid in redeeming a portion of that issue of bonds.

A. That statement is not completed. It involved going over the accounts for a number of years to pick out the amounts of premiums paid on the stock retired——

Mr. **Mathewson**: You mean on the debentures.

The **Witness**: On the debentures retired, I should say, and charged against bond premium account, and that is in preparation now and I shall have it completed this afternoon.

Mr. **Mathewson**: You were to prepare for Mr. Burr the balance sheets for the end of the year.

The **Witness**: I have them, if you want them now.

Mr. **Burr**: Yes I would like to have them. In fact if you have any statements which have been already called for, I would suggest that counsel for the complainant furnish them to us and give us a little time to go over them instead of handing them to us while the witness is on the stand.

Mr. GANS: I might suggest, if Mr. Burr concurs, in order that our rights may be preserved on the record, that where we ask for a statement in this form the request be understood to mean or be equivalent to a request on our part that the books containing those facts be produced and that the acceptance of the statement
609 be not deemed a waiver of our right to verify those statements from the books in any case. In other words where we put in a statement of this sort made up in this form, we put it in subject to our right to verify it from the books of the company. Otherwise, the Master will see, it is perfectly simple but very long-winded, instead of asking for the statement of these balances, we might ask for the books themselves; and in order to save time we try not to, but at the same time we do not want to buy a pig in a poke or accept anything with our eyes closed. Is that satisfactory to Mr. Mathewson?

Mr. MATHEWSON: No, I think where you call for a statement and a statement is made up you do not call for the books. You call for a statement because you do not want to call for the books at this particular time.

Mr. GANS: No, but we do not want to foreclose ourselves by putting in the statement.

Mr. BURR: As Mr. Mathewson has just said, we do not want the books at this particular time, but want the right to verify them subsequently.

The MASTER: It was understood that when summary statements were put in by Mr. Mathewson, it was subject to your right to verify the same from the books and also that would involve your right to use the books for purposes of cross-examination. Because if the books had been produced here by Mr. Mathewson in the first instance instead of presenting a summary made up from the books they would have been in court and you could have had the right to use them on your cross-examination; therefore, following out that theory, you are not foreclosed from the right to use the books in so
610 far as the statements may not be full or complete or not be satisfactory.

Mr. GANS: You see the precise point I wanted to cover was this. Of course when Mr. Mathewson produced evidence in that form, our rights were as you have defined them. If we call for something and then introduce it in evidence, unless we are to safeguard ourselves in the way I have suggested, it might be held that we had foreclosed ourselves from going into the books in respect to these particular matters, and I wanted it distinctly understood when we introduce evidence of this sort, it is simply in order to save time, and that we are introducing it in this way rather than to call for the books themselves, reserving our right to call for the books themselves if necessary to verify the statement.

The MASTER: It does not seem to me that you lose any rights under the circumstances, Mr. Gans.

By Mr. **Burr**:

Q. I would like to ask Mr. Carter in reference to the paper which has just been handed to me by Mr. Mathewson, purporting to be trial balances for each month during 1904 and 1905, whether these trial balances are made up from the operating ledger as well as the general ledger?

A. They are made up from the general ledger.

Q. Alone?

A. They are copies of the monthly balance sheets.

Q. They are not to be taken then as being made up from the operating ledger?

A. Not from the operating ledger; from the general ledger.

Q. I asked for the operating ledger.

611 A. The operating ledger would be identically the same thing, with those amounts divided into from a dozen to fifteen items each, and then multiplying those by 15 or 20, as the case might be.

Mr. **Burr**: That is what I am informed by the city's accountants they desire; that is what we asked for.

Mr. **Mathewson**: I don't think that is reasonable; certainly not at the present juncture.

The **Witness**: Those statements summarize what is in the operating ledger and are identical——

Mr. **Burr**: Is there any objection to having the balances, month by month for 1904 and 1905, made up from the operating ledger.

The **Witness**: The balances of the operating ledger would simply indicate a summary of the entries made each month.

Mr. **Burr**: That is not the question I asked. Is there any objection?

The **Witness**: Well, that is a statement——

Mr. **Burr**: Is there any objection to making up a trial balance sheet month by month for 1904 and 1905 from the operating ledger?

Mr. **Mathewson**: Yes, there is.

Mr. **Burr**: That is refused, is it?

Mr. **Mathewson**: Yes, we shall not make up any such statement as that, certainly not unless directed to, any more than we would be willing to go into all that detail unless ruled by the Master that it was material. We have presented a statement of the cost of gas for the nominal year and for the calendar year of 1905, ending October 31, 1905, which you are entitled to test, but these are of no value in doing that; and why we should make up a balance sheet with 612 a multitude of items for every month for two years Heaven only knows. I cannot conceive why we should.

Mr. **Burr**: Then I understand that counsel for complainant have made the balance sheets from the general ledger for each month during 1904 and 1905.

Mr. **Mathewson**: No, from October 31st, 1904, to October 31st, 1905, being thirteen balance sheets, that being the period covered by the statement.

Mr. **Burr**: And that you refuse to make up a monthly statement of the balance sheets from the operating ledger from the same period.

The **Master**: Does it appear it was called for?

Mr. **Burr**: Yes, sir; that is what the city's accountants desired to have. Without going back a number of years they want that explicit and detailed information for the years 1904 and 1905.

Mr. **Mathewson**: Two years?

Mr. **Burr**: Two years. That is what they have asked for.

The **Master**: Where does it appear you asked for it?

Mr. **Mathewson**: The Master can see what that means.

The **Master**: Where does it appear you asked for it.

Mr. **Mathewson**: Fifteen or twenty times what you have there would means for a single year from the operating ledger—those various accounts divided into a multitude of little accounts. It is not required for the cross-examination. I do not see that it is required at all at present, if at all.

613 Mr. **Burr**: If it is too much trouble to make up a statement from the operating ledger I shall have to ask for the production of the operating ledger itself.

Mr. **Mathewson**: When Mr. Burr gets through cross-examining the witness, if he has not completed already as I thought he had, I think it will be time then to say whether anything he wants is material to such cross-examination. Certainly no such mass of detail as is now required is material and I think I am quite correct in assuming that all this is desired for the purpose of the city's expert testimony in preparing their own case in advance.

Mr. **Burr**: You are quite mistaken. It is required so that we may intelligently cross-examine this witness. I have not finished my cross-examination of the witness by any means, and I call for these statements so we can fully cross-examine him.

The **Master**: Without further discussion will counsel refer me to the point in the record where these balance sheets were called for.

Mr. **Burr**: On page 482 you will find we asked for the general ledger. Later on before the close of the hearing I asked Mr. Carter to make that so it would be full from the operating ledger also. Previously Mr. Carter in differentiating between the operating and the general ledgers stated that the general ledger was a condensation of the operating ledger and I said to him very distinctly, I don't mean a condensed balance sheet but one showing each account on the ledger.

Mr. **Mathewson**: This is not a condensed balance sheet. A condensed balance sheet does not have a dozen lines, certainly not twenty. I have got a condensed balance sheet here I will show you and you can see what the difference is. That is a full account, not condensed. of the general ledger.

614 The **Master**: I find no other request for the production of a trial balance except the one on page 482, where the witness was requested to prepare a copy of the trial balance of the general ledger for each one of the months of 1905. This statement I understand he now produces, being twenty-five typewritten pages.

Mr. **Burr**: We won't ask him to make up any further statements if counsel will now stipulate we may have the operating ledger here for that year. It is not in use. So that we may verify any additional information we may want to ascertain from these trial balance sheets.

Mr. MATHEWSON: If counsel desires any further details than this, or the operating ledger, or a copy of the operating ledger for these months, for the purpose of cross-examination, isn't it proper for him to state in what connection he proposes to use it? Why we should produce these books or copies of them in the air I do not quite see.

Mr. BURR: I propose to use it for the purpose of intelligently cross-examining this witness as to what was the real cost of the production and manufacture of gas in New York during those years.

The MASTER: The entire question is simply in connection with Mr. Burr's right to use the book for the purpose of cross-examination, and I will pass upon it when he resumes his cross-examination after Senator Page has finished. But it is only fair to say, Mr. Burr, that I shall expect you to show me how it is material. I think when you cross-examine the witness on the stand, and ask him to prepare a statement for you, a tabulation, in the course of this hearing going on from day to day, and he comes in here with a statement 615 twenty-five pages long, which goes very much into detail, that before you insist on the production of something else right away you have got to show that this is not sufficient for the purposes of your cross-examination, and I do not think it is right that you or any other party here, with a lot of expert accountants, should in the course of cross-examination expect this complainant here to furnish the accountants material to work up your main case. That is not cross-examination.

Mr. BURR: This is not needed to work up our main case, Mr. Master. It is needed to test the witness's statements as they appear in these printed extracts or typewritten extracts from the books of entry.

The MASTER: That you are entitled to do and that I shall allow you to do, but I shall ask you to let me see how it is material in view of the length of this statement. I may be entirely wrong about its sufficiency, but it seems to me it is full enough to cover all your questions.

Mr. BURR: I hope it may be. I simply ask for the right to have it confirmed by the operating ledger, which is the main book.

The MASTER: And if it appears that it is not sufficient for your cross-examination why of course it is proper for you to apply for an order directing the production of the operating ledger, which they can produce.

Mr. BURR: That is the only thing I have in view, Mr. Master.

Mr. PAGE: It has reached one o'clock. I might state to Mr. Carter one or two things I am going to take up this afternoon so he can prepare himself on them, if he wants to. I would like the analysis or the segregation of the taxes, how much for local and for franchise and the other state taxes for the year as covered by Exhibit 93.

616 The WITNESS: I offer this as a suggestion only. Our taxes are assumed to cover the calendar year.

Mr. **Page**: Well there was a difference, I believe, between Exhibit 93 and Exhibit 94.

The **Witness**: With a statement that would cover a nominal year, we take the taxes of two years and split them up on some arbitrary basis, whereas if you will accept for the year 1905 the taxes as assessed that I can very readily give you, if that will be satisfactory to you.

Mr. **Page**: Oh, yes, that will be. Now, this other exhibit does not show your rentals received from gas stoves. Could you get that?

The **Witness**: Yes. There is another statement that gives the miscellaneous income in the gross, and we could just divide it up to show how much is real estate rent, stove rent, discount or any other source of income. I will have a memorandum of it down this afternoon to show how much of it is stove rentals.

At 1:05 P. M. a recess was declared until 2:15 P. M. this day.

After Recess.

Robert A. Carter—Cross-examination by Mr. **Page** continued:

Q. Referring to Exhibit 84, "Fixed charges, $972,423.44," what is that item?

A. That comprises the interest upon convertible debentures and upon the debenture bonds of the issue of 1888, less interest received upon temporary investments and loans.

617 Q. Well, would you carry into that the interest returns on bonds that you hold of other corporations?

A. No, sir.

Q. It is simply the interest then on such of the $20,000,000 debentures as have been issued and what is left of the issue of debentures of 1888 less the interest that is received on the funds realized from the debentures of 1904?

A. Yes.

Q. Under what account or accounts on your books would that item appear?

A. Under a single account called "Interest on Bonded Debt Account."

Q. Does that account show the details?

A. Yes; of course the charge, Senator, is made up monthly and the credits appear monthly, and it would require the canvassing of the account for the entire year to reach that aggregate and separate it into its component parts.

Q. Exhibit 93, "Fixed Charges $936,888.24," is that taken from the same account?

A. Yes.

Q. But for the calendar year of 1905 the account is $35,000 more than it was for the nominal year ending October 31, 1905?

A. That is the case, yes, sir.

Mr. **Mathewson**: As investment proceeds at Astoria, the amount of capital invested on which they can realize a return is diminishing.

Q. In which particular ledger would this account appear in the greatest detail, the operating ledger or the general ledger?

A. In the operating ledger in the greatest detail.

Mr. PAGE: We request the production of the operating ledger showing the details of this item in both Exhibits 93 and 94.

Mr. MATHEWSON: We will produce details of the items on which you are cross-examining.

Mr. GANS: When we make a request of this sort—and I 618 want it to apply to all the requests that we make, because I am trying to save time—when we make a request of this character it is for what we conceive we are entitled to, namely, the books; but for the purpose of facilitating matters, in most instances, unless we specify otherwise, we shall be willing to accept an extract from the books, subject to our right to verify that extract from the books themselves, and will put in evidence, as far as we do put in evidence, extracts from books subject to that same right.

Mr. MATHEWSON: You have requested the books. Perhaps Mr. Carter can make up an abstract covering the details which you desire which may assist you, and if you are entitled to examine the books, we will bring them down as you desire, showing those items. There is no difficulty about that.

Q. The next item is the matter of "Contingent expenses, including renewals and replacements, $1,328,316.37." That appears to be a charge of ten cents on the total amount of gas sold during that year; is that correct?

A. That is the case, yes, sir.

Q. Is that amount an estimated amount, based upon the number of cubic feet of gas sold?

A. Yes, sir.

Q. Is there such an account on the books?

A. There is, yes.

Q. When is that posted?

A. It is posted monthly. That represents the aggregate amount; the item in that statement represents the aggregate of the postings for the period of one year, monthly postings.

Mr. GANS: Each month you post ten cents on each thousand cubic feet of gas sold during the month, for that period?

The WITNESS: Yes, sir.

619 Q. When did you commence keeping such an account?

A. The account was opened, to the best of my recollection, in the spring of 1905.

Q. You do not remember the exact time, do you?

A. My impression is that it was in the month of May.

Q. Then for the time prior to May, 1905, this calendar year, how did you arrive at the amount?

A. The amount for the months of January, February, March and April, 1905—assuming the first entry to have been made in May—

was computed from the sales of those four months and entered in May.

Q. Prior to that time, for the twenty-one years that your company has been operating, have you carried such an account?

A. No, no part of that time.

Q. That account was opened subsequent to the sessions of the Investigating Committee of 1905?

A. I do not recall the date that the sessions terminated, so that I am not able to confirm that understanding.

Mr. **Page**: I will refresh your recollection by referring to the report of the committee.

Mr. **Mathewson**: They terminated in April, if there is any doubt about it.

Mr. **Page**: May 2d, 1905.

The **Witness**: The entries were made subsequently then, to the adjournment of the committee.

Q. At whose suggestion was this account opened at that time, if you remember?

A. I think the account was opened as the result of a general conference, canvassing the subject from the standpoint of the necessity for such an account, as a means of providing——

Mr. **Gans**: I think we asked at whose suggestion the account was opened, and for nothing else.

620 Mr. **Garver**: I object to counsel interrupting the witness.

Mr. **Gans**: I think I am distinctly within my rights, when the witness starts an answer absolutely irresponsive, and proceeds to give us a discussion on something that we do not want.

Mr. **Garver**: You can move to strike out the answer after he gets through. I do not think you have a right to interrupt him.

Mr. **Gans**: I insist that the question be answered, with due respect.

The **Master**: Had you finished your answer?

The **Witness**: No.

The **Master**: My understanding was that the question was at whose suggestion the account was opened, not for the purpose of it, but at whose suggestion was it opened. You stated that it was as the result of a general conference; that calls, as an answer to that question, for you to state who was present at that time.

The **Witness**: Then the question is answered.

Mr. **Gans**: I do not think we have had a single name.

The **Witness**: Have you asked who were present?

Mr. **Page**: The question was; at whose suggestion this entry was made, or at whose suggestion this account was opened.

Mr. **Mathewson**: He said it was the result of a general conference.

Mr. **Page**: That is not answer to the question.

Mr. **Garver**: It is, unless there was some particular person who directed him to open it. Your suggestion is a pretty broad suggestion in itself.

621 Q. Who was present at that general conference? What was that general conference—of the Presbyterian Church or of your company?

A. There may have been various conferences of the Presbyterian Church, but they were not particularly concerned in this.

Q. Now, this particular general conference as you call it——

A. Pardon me for interrupting. I did not say it was any particular general conference. I said nothing of any particular general conference.

Q. Was there any general conference held at which this subject was discussed, and if so by whom was it discussed and who was present at that general conference?

A. Preumably all the officers of the company.

Q. I do not care for your presumption. I want the facts.

A. I should be loath to testify positively as to who was present. Mr. Addicks was present, and I think the Vice-President, Mr. L. B. Gawtry was present; possibly the assistant secretary. I was present myself.

Q. Was counsel present?

A. Counsel was not present, no.

Q. Did you have any conference with counsel before opening this account?

A. I think not; I have no personal knowledge of any.

Q. Was it stated at that conference by anybody that this account was advised by counsel, or the opening of this account?

A. No.

Q. Now, on the books of the company, prior to the opening of this account, where were your renewals and replacements being kept, in what account?

A. They would be kept in an account which we call "Depreciation Account."

Q. Have you such an account still on the books?

A. We have such an account on the books at the present time.

Q. In addition to this contingent expense account?

622 A. It is not an expense account; it is an account, a suspense account, not included or comprised in the statement of operating expenses, but an account which at the end of the year we close out against the reserve created by this monthly charge of ten cents per thousand cubic feet of gas sold.

Mr. **Mathewson**: It is closed into that account and then forms part of the ten cents?

The **Witness**: Exactly so; it forms part of the ten cents.

Q. So that the actual depreciation for that year is shown in this account?

A. Yes.

Q. Now, you say that is closed into this account?

A. No, I beg your pardon; I did not say so.

Q. Your counsel did, then.

Mr. **Mathewson**: That is the way I put it; it may not be technically accurate, from a bookkeeping point of view.

Mr. **Page**: Probably it would be well to let Mr. Carter testify.

Mr. Mathewson: I merely asked the question; I did not so state.

A. As this entry is made monthly in the books an account is credited in the ledger called the "Renewal and contingency account," a reserve account designed to take care not only of the current loss from renewals and replacements but for any future contingencies which may arise. The amount that is charged into the depreciation account, as renewals and replacements occur at the end of the year, is closed into the renewal and contingency account, a credit account, thereby reducing the reserve for the year to that extent. To all intents and purposes, therefore, this ten cents 623 per thousand that we charge every month includes also the amount that is actually expended for renewals and replacements.

Q. Referring to Exhibit 79, I find "Depreciation and renewals since consolidation." That amounted to $4,770,982.72. Is that the account that was succeeded by this contingent expense account?

A. The contingent expense account has been opened in addition to the depreciation account, and as I have already explained, is carried into operating account or depreciation account, operating as an expense account until the end of the year, and it shows the actual expenditures for replacements and renewals during the year.

Q. Then this amount of $4,770,982.72 would show the amount of actual depreciation, if we may so express it, of your plant in the twenty-one years last past?

A. Yes, sir.

Q. And this aggregate is made up of the entries on your books appearing each year year by year?

A. That is the case.

Mr. Page: Now, we would like the production of the books that would show the details of depreciation since consolidation, as set forth in Complainant's Exhibit 79 at page 347*a* of Exhibits.

Mr. Gans: Or, we will accept the same kind of statement as we have specified.

Mr. Mathewson: What sort of statement?

Mr. Page: Year by year.

Mr. Mathewson: I think that was prepared for the Investigating Committee, was it not, or the Senate Committee?

The Witness: Yes, I think it was; I think I have such a statement already prepared, showing the amount expended annually.

624 Q. Have you figured the average of the depreciation for each year at any time?

A. The average of the depreciation?

Q. Yes, of this item.

A. What do you mean?

Q. Well if you get $4,770,982.72 for twenty-one years and you divide it by 21 you would get the average depreciation for each year, wouldn't you?

A. No. I have never done so.

Mr. Mathewson: You see the sales differ so much year by year that would hardly give much light on the amount of depreciation per thousand cubic feet sold. It would be merely an arbitrary result which I don't think would help you any, Senator.

Q. You never calculated then what the actual depreciation would be per thousand cubic feet?

A. Oh, always. We know every year what the actual renewal and replacement cost is per thousand cubic feet of gas sold.

Q. What was the actual depreciation for the year 1905 per thousand as shown by the books of the company?

A. 2.12 per thousand.

Q. Have you not stated somewhere that that was a certain amount less than the average depreciation for the last twenty years?

A. No, I made a statement the other day that the average cost for the period from November 11, 1884, to December 31, 1904, of renewals and replacements and repairs was 10.89. I testified that for the nominal year ending October 31, 1905, it was 6.61 and for the calendar year, I think, 7.34 cents, but I would not like to state that.

Mr. Mathewson: You testified to the exact figures yesterday?

The Witness: I testified to the exact figures yesterday and
625 showed the difference between the average for the twenty-
two years and the nominal year ending October 31, 1905,
and the calendar year 1905.

Q. Besides this item of depreciation or renewals since consolidation you have also made charges for repairs to the operators and to the buildings and to the mains and services, &c., have you?

A. Yes, sir.

Q. And the aggregate of that account of repairs, since consolidation purports to be set forth on Complainant's Exhibit 79, does it not?

A. Yes, sir, to October 31st, 1905.

Q. Yes, to October 31st, 1905?

A. Yes.

Mr. Page: I will ask the same question in regard to those repairs, that the books be produced showing the details year by year. Of course we will take a statement subject to our right to verify it.

Q. What particular contingency arose in May, 1905, that led you to change your method of bookkeeping in regard to depreciation?

A. I don't think there was any contingency that arose at that particular time except that the subject received very serious consideration at that time and the necessity for such a reserve was so apparent that it was thought well to reflect or recognize that necessity in the accounts of the company.

Q. Well, was there any particular or definite purpose that was considered at that time to make this necessary, in your estimation?

A. Only a consideration of the possible contingencies that might at any time arise that would require the employment of such a reserve as we undertook to create by that means. I might say that we took into account such considerations as fluctuation in the cost of material, liability to serious and expensive accidents, having in mind the case of a very grave one which occurred in Boston not long ago which cost the company there a great deal of money 626 to settle in the way of damages; the possibility of variations in the volume of the business might render the presence of such a fund very serviceable to the company; and many considerations of that sort were canvassed very thoroughly in determining the amount that we should reserve.

Q. Then, as I understand, you did this to accumulate your surplus earnings as against a change in the volume of business or some extraordinary occurrence; it had nothing to do with the ordinary operations?

A. Our intent of course was to cover by that ten cents such extraordinary loss as the company would sustain in the removal of the plant to Astoria, among other things, as well as to cover the cost of current replacements and renewals that would take place independently of any transfer of the plant to Astoria from New York.

Q. Was that the reason, to prepare for the depreciation of the plant by its removal to Astoria, or was it for fear that there might be an explosion here as there was in Boston at one time, or that the price of materials might change or the demand for gas might fall off?

A. All those considerations were carefully weighed and our attempt was to provide for all of those contingencies in that reserve.

Q. When do you expect to remove your plant to Astoria?

A. I am unable to say, Senator, when such removal might begin.

Q. I understand from the testimony that when you do remove you will not remove the holders?

A. No. Additional holder capacity will be installed at Astoria, and for distributing purposes the company will probably require all of its present holder capacity in the City of New York.

Q. All that you would remove would be the actual manufacturing plant?

A. That is my understanding, yes, sir.

627 Q. Was not the primary purpose, at the time that you held this general consultation as to the establishment of such a fund, the consideration of the removal of the plant to Astoria?

A. I would say it was one of the principal considerations, but not necessarily the primary one. We foresaw a loss incidental to the removal of our plant to Astoria of something approximating $10,000,000, which had to be taken care of. It was one of the purposes for which a portion of that fund would ultimately be used.

Q. Have you segregated the taxes as I have requested?

A. I have called for them, and I expected they would be here before this, but I have not seen anything of the messenger. If you will give me a moment to go to the telephone I will find out whether I can get them.

Q. Then you did not get that item of the street lamps, what you received?

A. No; I don't think that was mentioned.

The **Master**: Stoves he said.

Mr. **Page**: Stove rents, yes.

The **Witness**: If you will excuse me a moment I will see if they are ready.

Q. What did you find, Mr. Carter?

A. It is on its way down here.

Q. It will probably be here this afternoon?

A. Yes.

Q. Referring to Exhibit No. 94, I notice that you have a charge for street lamps, $289,259.09. Just what is that amount?

A. It includes among other things the cost of maintaining, lighting, extinguishing and glazing and so forth the public lamps.

Q. During the year 1905, did you have a contract with the City of New York in reference to street lamps?

628 Mr. MATHEWSON: Do you mean a written contract?

Mr. PAGE: Yes, a written contract.

The WITNESS: I am sure that we did supply the lamps and furnish the city with gas, and my impression is that a contract was duly signed and executed, but I would like to consult the records to make sure of that before replying to your question.

Mr. PAGE: Will you produce your copy of the contract?

Mr. MATHEWSON: Has not the City's counsel copies of the contract?

Mr. BURR: I have not the originals, I will produce them when the time comes if you want them.

The MASTER: Can you not use a copy?

Mr. MATHEWSON: The original is in the possession of the City, as I understand it, with the Comptroller's signature, and I do not think we have an original of their contract. I suggest that the City produce it.

Mr. GARVER: Why cannot we use a copy of it?

Mr. BURR: Mr. Carter might not be able to identify it, not having the original signatures.

Mr. PAGE: I will pass that matter that I was going to examine him on until we have an opportunity to examine the copy that the city has.

Q. Referring to Exhibit 94, under the head of residuals, I find coke, loads, 167,071.7 at a price of $2.02 amounting to $338,300.91. Can you state how that price is arrived at, Mr. Carter?

A. That price is arrived at by taking the total number of loads sold during the year and the amount received for them and dividing one by the other.

629 Q. A load mean- 1,500 pounds, doesn't it?

A. Approximately, yes, sir.

Q. Now, does the Consolidated Gas Company keep an account of the coke sold to the individual consumers or is that kept by the National Coal & Coke Company?

A. That is kept by the National Coal & Coke Company.

Q. Then this is the price at which you furnish the coke to the National Coal & Coke Company?

A. It includes what was delivered to them. It includes also the coke delivered to the water gas stations for use in the generators, which is carted by the National Coal & Coke Company but for which the water gas station is charged through the accounts.

Q. If you will look through this same exhibit further down you will find a charge for coke used, 19,892.54 tons. Is not that the coke which was used in your water gas station?

A. It is the coke that was used at the water gas stations during that year and is a part of the coke that is accounted for as residual disposed of during that year.

Q. But the question that I asked originally was if this coke, the loads above, does not include the coke that is used in your water gas station?

A. Yes, it is coke that is delivered to the water gas station, not as reported there, used. That is a credit to the coal gas station and accounts for the coke which they produce for sale and is treated as a residual. So much of that coke as was delivered to the water gas station and used is accounted for in this same statement as coke used in manufacturing.

Q. Then this coke used is included as I understand it in that 167,071.7 loads?

A. Yes.

Q. And is this item of cartage of $11,164.97 the cartage of the coke that is used in the water gas station?

A. That is the cost of carting that coke from the coal gas station to the water gas station and the item also includes some cartage at the coal gas station which is done by the coke company, but a very small amount. 630

Q. Well, to whom is this cartage paid, to the coke company?

A. Paid to the coke company.

Q. The $11,164.97?

A. Yes.

Q. The several items of cartage on this statement, do those all refer to the cartage by the company, or——

A. No, sir. Whatever other cartage appears in the statement is cartage done about the stations by the company's own carts.

Q. And the coke company only is paid for the cartage of the coke as between the stations?

A. Yes, sir, that is the case, and as I said, possibly some little carting of coke at the coal gas stations, but a negligible amount.

Q. Just what is the arrangement between the Consolidated Gas Company on the one side and the National Coal & Coke Company on the other with reference to the handling of the coke. Have you any written agreement?

A. No written agreement. The entire capital stock of the coke company is owned by the Consolidated Gas Company, and the coke company is operated by the officers of the Consolidated Gas Company almost exclusively. I should say that the Board of Directors and officers of the company perhaps with one exception are made up of officers of the Consolidated Gas Company. The arrangement provides that the coke company shall attend to the detail of selling the coke and carting it to the customers. The company charges them a certain price for coke or for screenings something less than they charge the customer. The difference is supposed to cover their cost of carting and leave them a margin of profit out of which they pay dividends to the Consolidated Gas Company. I might say that we have received back in dividends since the company was organized, a very few years ago, some $27,000 against the $50,000 which we invested in capital stock of that company.

631 Q. What is your office in the National Coal & Coke Company?

A. I haven't any.

Q. Well, are the books of that company in your possession?

A. No, sir; but they are subject to my inspection at any time.

Q. Could you produce the books of the Coke Company to show the operations of that company for the period covered by these two Exhibits Nos. 93 and 94?

A. I could do so very readily.

Mr. **Page**: We would like to have those books.

The **Master**: If Mr. Mathewson wants to produce them, all right. If he has any objections to producing them I should say that your method of getting them would be to subpœna them when it comes to putting in your case.

Mr. **Garver**: The objection would seem to be that we are getting so far afield in this inquiry.

The **Master**: I do not think it is part of the cross-examination of this witness.

Mr. **Gans**: I think I can show that it is, because he purports to know about these matters, and that it is legitimate cross-examination on the part of the case that they have put in. They have established the fact that instead of doing their own carting, doing their own business, they have preferred to organize a company to do that—to cart coke and to sell it, and instead of turning the profits in as one of the profits from residuals which reduces the cost of gas directly, they prefer to receive the profits in dividends and to credit them to other accounts. In other words, if you take the bill in this case and take the account submitted you will find this situation, that while the bill may charge as part of the investment in the gas-making business, $50,000 which they have invested in this National
632 Coal and Coke Company, if you examine these exhibits they have put in you will see they do not credit the profits which come from this business as a reduction to the cost of gas. Now they cannot face that situation in that way. I think they are right in charging the investment of the $50,000 to their gas-making business, because I conceive that the sale of residuals is part of that business. I think, on the other hand, we are entitled to examine into the operations of this business, seeing that all the stock is owned by this company, and it is merely a device I might say to carry the account in a little different way. In view of that fact we are entitled to examine into the affairs of this National Coal and Coke Company on the basis of what has been introduced in evidence already, to the same extent that we are entitled to inquire into the affairs of the Consolidated Gas Company.

Mr. **Mathewson**: The fact is, as has already been testified to, that the National Coal & Coke Company was organized as the cartage department of the Consolidated Gas Company, and by that means the Consolidated Company got its carting done at lower cost than when it was paying outsiders and, besides, the profit that the outsiders formerly made going to the National Coal & Coke Company was paid back to the Consolidated Gas Company, and therefore the whole arrangement was an economical one for the Consolidated Company. Now, Mr. Gans raises the point that the dividends which were received by the Consolidated Gas Company from the National Coal & Coke Company should go as a credit on the cost of the production of gas, in view of the fact that the capital of the National Coal & Coke Company, $50,000.00, we claim to be part of 633 our investment in the gas business. The proposition which he advances is one which is a fair one and legitimate argument.

We can show it perfectly well without going to the books of the National Coal & Coke Company, and we will show it if counsels desire, how much was paid back by the National Coal & Coke Company to the Consolidated Gas Company and how much therefore will be credited on the cost of gas, if that is a proper credit. Of course if it is 25 per cent. a year it is $12,500.00 and when you consider that our total expenses in manufacturing gas are something like $8,000,000.00 you can see it would be an insignificant fraction of a cent, but for what it is worth we have no objection at all to disclosing to counsel, if it is not already on the record, what return was made to the Consolidated Gas Company from the National Coal & Coke Company, and too, if you please, how much cash surplus or how much surplus the National Coal & Coke Company has earned since it was organized in addition to the dividend it has paid back above its capital. That it seems to me meets every possible inquiry that can be directed to that point, and isn't it a shorter way of getting at the very point which Mr. Gans is now arguing? That can be shown in two lines.

Mr. GANS: Our request for the books here has been made upon the same basis as the request for the books has been made in every other instance, that we are willing to take a statement subject to verification.

Mr. MATHEWSON: Yes, we will produce that statement just to let you have a statement of the dividends received since October 31, 1904.

Mr. GANS: Pardon me one moment. My argument goes 634 a little further. We are entitled to a credit on the cost of manufacturing gas not merely of the dividends but to the net earnings of the National Coal & Coke Company.

Mr. MATHEWSON (addressing the witness): Yes, and let us have at the same time the net earnings for the period when there were no dividends, if there were any. My impression is there were a few thousand dollars working capital above the $50,000 capital paid in which have been accumulated by way of surplus beyond dividends paid back, and we will show you the exact facts.

Mr. GANS: May we have a statement of the operations of that company, in connection with that?

Mr. MATHEWSON: I think so. I see no objection to it at the moment. I don't quite know what relevancy that may have, but

I will see what they are. If we never got any dividends from the National Coal & Coke Company the fact would be that the amount we paid would be a more economical way of handling this than it was when we were employing outsiders previously.

Mr. GANS: I do not doubt that, but it is your duty to the public——

Mr. MATHEWSON: Your argument is a fair one. You are entitled to that.

Mr. PAGE: Now, have you those details of the taxes?

Mr. MATHEWSON: Mr. Carter will have to do some figuring first and present them to you to-morrow morning.

Q. For the purpose of getting it on the record will you state how you arrived at these percentage figures, cost per thousand 635 made and cost per thousand of gas sold (referring to Exhibit 94)?

A. With respect to cost of gas made, the figures used in calculating such cost is the gas made at the company's own stations.

By Mr. MATHEWSON:

Q. Reduced to a uniform temperature of sixty degrees?

A. It is adjusted to a uniform temperature of sixty degrees as the station make.

By Mr. PAGE:

Q. You divide then by——

A. 10,657,810,000 cubic feet.

Q. And arrive at the other——

A. Then in arriving at the total holder cost, including cost of gas manufactured under agency agreements, we use as a factor the quantity made at the stations of the Consolidated Company plus the quantity manufactured for the Consolidated Company under the agency agreements, or, in other words, 13,587,020,322 cubic feet. In arriving at the cost per thousand cubic feet sold the same method is pursued, except that we use as a divisor the sales instead of the make.

By Mr. GANS:

Q. Now there are certain items on that exhibit in which you use as a divisor the total amount of gas made and sold, or, rather, the total amount of gas sold?

A. The total amount of gas sold would be used as a divisor in getting the cost per thousand cubic feet sold of the gas manufactured by the company, and manufactured for the company under the agency agreements, and all of the distributing expenses.

636 By Mr. PAGE:

Q. That is in all of the items down to station cost, $3,455,091.37, which is carried out under cost per thousand cubic feet made, 32.42 and 33.17, you use as the divisor the 10,657,810,000?

A. Yes, to get the cost per thousand cubic feet made.

Q. And to get the cost per thousand cubic feet sold down to that same place in the statement, you use the divisor 10,419,461,426 cubic feet?

A. Yes, sir.

Q. Now the items below total cost at the holders is obtained by using the divisor 13,283,163,767?

A. Yes, sir, that being the total volume of the company's sales for that calendar year.

By Mr. Gans:

Q. That same method has been employed with a slight change of the amounts in Exhibit 93?

A. Yes, sir.

By Mr. Page:

Q. How is the item cost of gas manufactured under agency agreement, $997,039.89 carried out at 34.04 and 34.82?

A. 34.04 cents is the cost per thousand cubic feet made, which is the amount we paid them for the gas manufactured under the agency agreement. The rate of 34.82 cents is the cost of that gas per thousand cubic feet, of the gas sold which they made for us.

By Mr. Gans:

Q. In other words, making an allowance for gas unaccounted for?

A. Making an allowance for gas unaccounted for. The next item is the total of the gas manufactured at our own stations, and manufactured for us at stations of other companies under the agency agreement. The cost per thousand cubic feet made in
637 & 638 that case is obtained by using as a divisor the total quantity made at the consolidated stations, plus the quantity made for the Consolidated Company.

By Mr. Mathewson:

Q. And dividing that into the total expenses both of our make and what we paid under agency agreements?

A. That is the case, and the cost per thousand cubic feet sold at that point is arrived at by dividing the total holder cost by the entire sales for the year.

Q. There appears upon this Exhibit 94 various items of labor, segregated into, for instance, under coal—labor handling—and under residuals—coke, labor handling, and a general item of labor which amounts to $382,000. Are those distributed to separate accounts in your books, as they appear here?

A. Yes.

Q. In which ledger?

A. In the operating ledger.

Q. How would they appear in the general ledger, if at all?

A. In the general ledger the entire expense of the month would appear in one account.

By Mr. Gans:

Q. Total labor expense for the month?

A. No, no total labor account. The labor is not shown in the general ledger at all. The operating ledger, in one account, would cover the entire operating expense.

At 4:05 o'clock P. M. adjourned to to-morrow, Thursday, August 9, 1906, at 11:15 A. M.

Last Exhibits:

Complainant's 96.
State's D.
City's 1.

639 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *August* 9, 1906—11:15 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Page, Mr. Mathewson, Mr. Gans, Mr. Burr.

640 ROBERT A. CARTER resumed.

Cross-examination by Mr. PAGE continued:

Q. Have you examined the books of the company so as to be able to testify to the amount of stove rentals received by the Consolidated Gas Company for the nominal year ending October 31, 1905?

A. Yes, sir.

Q. What was the amount received?

A. $120,768.60.

Q. Has that item of income appeared on any statement that you have prepared and submitted heretofore in this case?

A. It has not appeared as a separate item, but it is included in the item of miscellaneous income in a statement showing the gross earnings, expenses, net earnings, miscellaneous income, income from securities owned, total income, fixed charges, dividends paid and deficit.

By Mr. MATHEWSON:

Q. Being Exhibits 95 and 96?

A. Yes, that is the case.

By Mr. GANS:

Q. It was not, however, included in either Exhibits 93 or 94?

A. Those figures are not shown in either of the exhibits named.

Q. But on Exhibits 93 and 94, on the other hand, there was shown or charged to the expense of making gas the cost of repairs to gas stoves, is that so?

A. Included, yes, sir.

By Mr. PAGE:

Q. You state the loads of coke sold, or residual coke, were 171,400.32 loads, and that you received $343,526.94, and that the rate was $2 per load. How did you get that rate?

641 A. By taking the number of loads that were sold, the amount received for them, and dividing one by the other.

Q. That is, dividing the 343,526.94 by 171,400.32?

A. Yes, sir.

Q. Now, will you just multiply by two very rapidly and see if the result would correspond?

A. In the first place the exhibit is not correctly printed from the original copy (Exhibit 93).

Mr. MATHEWSON: Here is the carbon copy of the original copy.

Mr. PAGE: It seems to be the same here.

The WITNESS: Oh, pardon me, it is right. I have the calendar year before me. May I see the carbon?

Mr. MATHEWSON: Refer to the exhibit you are talking about.

The WITNESS: Exhibit 93. The average price is carried out in the decimal but two points. The average price if carried out further would have shown a fraction of a cent over the even two dollars.

By Mr. PAGE:

Q. A fraction of a cent?

A. Yes, sir.

By Mr. MATHEWSON:

Q. So the statement in the exhibit is correct so far as it is carried out?

A. Yes, sir.

By Mr. PAGE:

Q. You prepared for use before the State Gas Commission, a statement of the summary of operations of the Consolidated Gas Company for the nominal year ending October 31, 1905. That was prepared from the books of the company, was it not?

A. May I see it, Senator?

642 (The paper is handed to witness.)

The WITNESS: Yes, that was prepared from the books of the company.

Q. There is a slight variation in the amount of coke that was sold, being 4.15 loads between that figure state- in that exhibit and that figure stated in the exhibit to-day, is there not?

A. There appears to be such a difference, yes, sir, although the amount received is identical.

By Mr. MATHEWSON:

Q. The amount in dollars?

A. In dollars, yes, sir. It would not affect the average price or the average receipts per thousand cubic feet sold or per thousand cubic feet made.

By Mr. PAGE:

Q. Now, of this 171,400.32 loads, 22,738.25 tons were used in the water gas stations of the Consolidated Gas Company?

A. Yes, sir.

Q. And the remaining portion of that coke, how was that disposed of?

A. Most of it was sold to the National Coke & Coal Company. The quantity given as produced for sale under the residuals would include also a small quantity of coke used at the coal gas stations under the boilers, the boilers being used for operating distributing machinery or apparatus.

Q. You use a great deal of the coke in the manufacture of the coal gas itself, do you not?

A. Yes, sir, used under the retorts.

Q. Could you state how much?

A. I could not state the quantity in tons.

Q. Well, Mr. Bradley testified, didn't he, that you got fifteen hundred pounds of coke per ton of coal carbonized?

A. Approximately a load of coke for a ton of coal.

643 By Mr. MATHEWSON:

Q. Long or short ton?

A. For a long ton of coal.

By Mr. BURR:

Q. What is the meaning of a long ton?

A. 2,240 pounds.

By Mr. PAGE:

Q. Well, a ton of 2,240 pounds would give a little more, wouldn't it, than 1,500 pounds?

A. No. We do not use any but the long tons in our record and the coke so used amounts on the average to a load per long ton of coal carbonized.

Q. Well, the result of the operation is that 2/3 of the coal becomes coke, does it not?

A. About 2/3 of the coal becomes coke in weight, not in volume.

Q. In weight, yes, that is what I mean.

A. In weight.

Q. And a long ton, that would make 1,595 pounds, would it not?

A. Approximately.

Q. You have deducted the amount of coke that was used under the retorts to arrive at this figure of 171,400.32?

A. I would say it was not a deduction. We have not taken it into account at all. We deal in our coke records for the purpose of this report only with the coke that is produced for sale.

Q. Do you sell this coal to the National Coke and Coal Company?

A. Coal?

Q. Coke.

A. We do, yes, sir. Not all of it; as has been explained, some of it being delivered to the water gas stations and some of it used about the stations.

Q. I mean the coke you sell.

A. It is sold to the National Coke and Coal Company, yes, sir.

Q. At what price?

A. Varying prices.

Q. What is the lowest price for coke. I don't mean for
644 breeze or screenings, but for coke itself?

A. From memory I prefer not to testify. I can furnish those figures, if they are desired.

Q. You prepared for the Gas Commission a statement showing the prices charged for the coke and screenings, did you not?

A. I remember making such a statement, yes, sir.

Q. Does that refresh your recollection so that you would be able to testify now as to the prices (handing statement to witness)?

A. It would refresh my recollection so that I would be able to testify to the prices effective October 13, 1905, as shown by this statement. Would you like me to read it?

Q. And also what was charged previously during that calendar year.

A. Effective on September 11, 1905. Would you like me to read these into the present testimony?

Q. Yes, I think so. It will save you the trouble of looking them up again.

A. I have no doubt that these figures are correct and I will therefore state from this record that the price charged the National Coke and Coal Company for coke on October 13, 1905, was $2.25 per load wholesale in the yard; $2.65 per load in the yard.

Q. What does that mean?

A. Retail in the yard. $2.75 per load wholesale delivered outside, and $3.25 per load retail delivered outside. Previously to that date the price had been $2.25 per load wholesale in the yard; $2.40 per load retail in the yard; $2.50 per load retail in the yard [some sales]; $2.75 per load wholesale out of the yard and $3.00 per load retail out of the yard.

By Mr. MATHEWSON:

Q. Do you mean to put in the screenings at the same time?

A. The price of coke screenings which was effective Sep-
645 tember 11, 1905, and also on October 13, 1905, was 75 cents
per load delivered in the yard under contract; $1.60 per load retail delivered in the yard; $1.70 per load wholesale price delivered out of the yard, and $1.80 retail price per load delivered out of the yard. Prior to that the price had been 75 cents per load delivered

in the yard under contract; $1.40 per load delivered retail in the yard; $1.45 per load delivered at the work's dock on boats; $1.60 per load delivered wholesale out of the yard; and $1.70 delivered retail out of the yard.

By Mr. BURR:

Q. That is on the assumption that the weight of each load was 1500 pounds?

A. Yes, sir.

Q. The difference between 235,586.73, which the tons of coal carbonized would produce in loads of coke, and 171,432, would be the amount of coke that was used under your retorts, would it not?

A. Yes.

Q. And that would amount to 64,186.43 loads?

A. Yes, that is the case.

Q. What is a load of coke; what does it weigh?

A. It is 1,500 pounds.

Q. Then, if you produce from each ton 1,595 pounds there would be 95 pounds more to each ton to be accounted for, would there not?

A. I have not said that it would produce 1,595 pounds.

Q. You just did so state, I think.

A. You stated about two-thirds, and I think you figured that two-thirds was 1,595.

By Mr. GANS:

Q. Your statement, Mr. Carter, as I understand it, was that the amount of coke produced from a ton of coal represents approximately 70 per cent. of the weight of the coal?

A. Approximately 70 per cent.

646 Q. And I understood you to say that the amount of coke produced for sale amounted to that; is that right?

A. Yes, that is the case.

Q. Therefore the amount of coke produced from a ton of coal is somewhat in excess of 70 per cent. of the weight of the coal, is it not?

A. I am not speaking of weight now; I am speaking of loads and tons.

Q. Pardon me a moment. You spoke of weight very distinctly a little while ago, and you reminded the Senator that the way to measure in order to determine the proportion was with reference to weight.

A. The production of coke is a load of coke for a ton of coal, and of the load of coke that is produced in carbonizing a ton of coal we get about seven-tenths of a load for sale.

Q. That is a very different statement from the one you made some time ago?

A. I never had any other figures in my mind. I may have acquiesced in some statements of yours that conveyed some other impression, but those are the facts.

Q. Then your present testimony is that you only get 1,500 pounds of coke to a ton of coal, and that of that 1,500 pounds seven-tenths is available for sale?

A. Yes, and the 1,500 pounds of course is an approximate figure. Coke will average to weigh about 1,500 pounds to the load, and it is sold in loads and not by weight.

Q. I am getting at the product first. You mean by that that your tons of coal will average 1,500 pounds of coke approximately?

A. Approximately.

Q. That is, from some tons of coal you get less than 1,500 pounds and from some you get a little more?

A. Yes, I should think they might vary.

Q. How near would you say that approximation would be?

A. I should want to take at least a year's operations and canvass them very carefully to establish the exact percentages between 647 the coal carbonized and the coke produced in loads for sale, and the percentage of coke produced for sale of the entire coke produced, including what is used under the retorts.

By Mr. **Mathewson**:

Q. May I ask—it is a simple mathematical proposition, is it not. Having found out how much coal you carbonized and how much coke you produced, it would be an easy matter to figure out the ratio, would it not?

A. Yes.

Q. And you simply have not got it in your mind, and you would have to take the figures to compute it?

A. Yes.

Mr. **Gans**: It is obviously a simple proposition if you have the facts.

Mr. **Mathewson**: Yes, if it is considered material. The witness can take the figures and figure it out exactly; he stated that it is approximately 1,500 pounds of coke to a ton of coal carbonized; it may be 1,520 pounds, and it may be 1490.

Mr. **Gans**: The witness gave us two very radically different statements.

Mr. **Mathewson**: I think you misunderstood him.

Mr. **Gans**: No; we did not misunderstand him; he may have misunderstood us. He may not have intended to say what he did, but he has given us a very radically different explanation.

Q. You have stated now that coke is sold by the load and not by weight. Did you not, in answer to Mr. Burr some few moments ago, say very distinctly that a load meant 1,500 pounds. Not approximately, but just that?

A. I did not say it meant just 1,500 pounds. Well, the testimony will indicate that.

648 Q. Haven't you any recollection of it at the moment?

A. My recollection is that I have always qualified my remarks by using the term "approximately." I have used it often enough in the testimony to establish the fact that I meant approximately.

Q. I will agree with you as to that, that you have used it very often in your testimony. At all events, is that what you mean?

A. Most decidedly.

Mr. Gans: I simply want to get the fact clearly on the record.

By Mr. Page:

Q. Now, this matter of labor in handling coke; just what labor is that, $36,694.71?

A. It is the labor of removing coke from the retort house to the coke pile, loading and unloading it.

Q. Do you have separate men to attend to that part of the business, or are they the regular retort house men?

A. Regular men who attend to that—coke men.

Q. And are they carried on the pay roll as such?

A. As such, and while their employment as coke men would not prohibit their employment for some other purpose, if it was employed for some other purpose the pay roll would plainly indicate it, how it was employed.

Q. The cartage of $12,630.66; how is that charged in here, when you have testified that the National Coke & Coal Company attended to all the cartage of the coke?

A. The cartage that is charged in there, as testified yesterday, is the cartage from the coal gas station to a water gas station, coke that is delivered for use in manufacture at the water gas station. The carting is done by the National Coal & Coke Company; we pay them for it and charge it against the residual.

649 Q. Now, if you will look further down on Exhibit 93 you will find that the coke used, which you have testified was used at the water gas stations—there is a charge for cartage there?

A. That is an item amounting to $43.87, which is the cost of carting some small quantity of coke at the water gas station, possibly from some temporary storage place to the generator house, where it was employed in manufacture.

Q. You paid that cartage to the National Coal & Coke Company do I understand?

A. The $43.80?

Q. No, the $12,360.66.

A. Yes, that amount is paid to the National Coal & Coke Company.

Q. Now, referring to the item of expense in Exhibit 93, and which is below the total following "Station Cost" $583,278.52, I ask you to state what that is?

A. That item includes the expenses of the branch offices, salaries and incidental expenses.

Q. Is that carried as a separate account upon your books?

A. Yes.

Q. And what is the title of the account?

A. "Expense."

Q. Then, you have another item further down after total distribution, "Expense, general office, $276,823.22." What does that include?

A. That includes the general office expenses, including the salaries and incidental expenses.

By Mr. MATHEWSON:

Q. It also includes counsel fees?

A. I think there are no counsel fees in that, but there may be some counsel fees, some special fees in connection with the Senate Investigating——

Mr. MATHEWSON: No matter what they are; never mind that.

Mr. GANS: Yes, I think that is interesting—let us have that. In connection with what?

650 A. (Continuing:) Senate Investigating Committee.

By Mr. PAGE:

Q. Now, just above, in that total of station cost there is another expense account, $62,441.83. How does that appear on the books of the company?

A. That item includes the station expenses, salaries and incidental expenses.

Q. How does that appear on the books of the company—as it is here, "expense?"

A. Yes.

Q. Then you have two accounts on the books, each entitled "Expense," two separate accounts?

A. We have a separate account for the expense at each station, at each branch office, each street department office, and the general office.

Q. I asked you how the account was headed on the books?

A. It is headed "Expense," with the particular branch or station or office that is comprised in that account.

Q. Then, all these expense accounts are consolidated into some general expense account?

A. All of the accounts showing the expenses at the stations are consolidated in this one item, shown in station expenses, for instance, here, as $62,441.83.

Q. But I want to know whether they are brought together, these various expense accounts, into a general expense account?

A. They are not, except as one of the items they are included in a single item of operating expenses on the general ledger; in that way they are brought together. They are not brought together as a combination of expense items alone.

By Mr. GANS:

Q. That is, the operating expenses on the general ledger include other items besides those charged to expenses on this sheet?

651 A. Yes, includes all the items on this sheet.

Mr. PAGE: I would like to have, if the Master please, for the purpose of further cross-examination on Exhibits Nos. 93 and 94, especially with reference to those items of expense account, the production of the operating ledger and the journal from which the entries were made for the year 1905.

The MASTER: Mr. Mathewson, can you produce those?

Mr. MATHEWSON: Yes, if counsel desire it. I will say that the books are very large and the accounts are very extensive, and I hardly think they will be of much value. I had supposed that the statements which counsel asked for yesterday would cover some of the points, and to see whether he desired the books. They can be brought down; but I should suggest, if it is desired to check over the items, or any of them, to see if they equal what appears in this summary, Exhibit 93, that the shorter way would be to let a representative of counsel, an accountant, go over these with Mr. Carter and check them from the books, instead of taking them before the Master, if that is desired to be done. I had not supposed that you expected to check those books here.

Mr. Gans: But of course, the accountant is not to be limited to simply going over and looking at a footing on the ledger, and looking at the footing of this, and say that the footing is the same as this footing, and saying "I am satisfied." If they are going to do that only, it is a perfectly idle ceremony.

The Master: It is a question as to what the Senator wants for
his cross-examination. If he thinks he wants the books,
652 perhaps the best way to do would be to have the books. After
he has the books for two or three days, he may get tired of
them.

Mr. Page: Perhaps I may get tired of them, but we are put in an unfortunate position, conducting the cross-examination in this way. Here are several expense accounts. To any gas engineer the expense charged up in this account is enormous.

Mr. Mathewson: I do not think that need be taken down, that statement.

Mr. Page: And we must investigate the matter to see whether they have not duplicated; that is the point of the investigation. If we can do that up at the office of the company with an expert, well and good.

Mr. Mathewson: If counsel will look at the printed record before the Gas Commission, they will find that those items, or many of them, are set forth in great detail, at counsel's request; I think, Senator Page was the counsel.

Mr. Page: No.

Mr. Mathewson: Including director's allowances, and salaries of the general officers, advertising, canvassing, and the law expenses, &c.—all those things, and all the detail that could be required was set forth; at least all that was required was produced. If there is any question of duplication of these amounts, Mr. Carter, would not it be easier to check them up at the office, in order to determine that, than to produce them here.

The Witness: It seems to me so, and an accountant could do it in
very much less time than anybody unfamiliar with accounts.

653 Mr. Mathewson: We will produce them if counsel still
desires, although I wish to record my view that they will be
found of very little value before the Master.

Mr. Gans: If Mr. Mathewson were to consent to have a firm of expert accountants of our choosing go over these books, and make such a free-handed examination as a firm of expert accountants would naturally make in order to satisfy a client, as to the accuracy of these statements which have been presented here, that would answer our purpose.

The **Master**: I do not see that any party to a litigation is called upon to submit to an audit of his books by a firm of expert accountants for the benefit of the other side. It might be proper, if you want the books to cross-examine on, to have them here, but my own impression is that you will waste a lot of time, and I cannot compel, nor can anybody else compel, Mr. Mathewson to allow a firm of expert accountants to go up and audit his client's books.

Mr. **Burr**: I should think the operating ledger would be sufficient.

Mr. **Gans**: I think the Master will bear me out that I have not asked any such thing. I think the Master has mistaken our position. Mr. Mathewson suggested a substitute way of doing it, and I suggested how it could be done. I think that possibly you do not appreciate—if I am not anticipating the position you have taken—the situation presented here, which is very obvious. Here is a statement gotten up by the complainant here, which is gotten up very naturally to represent the best possible showing which the complainant can make.

654 Mr. **Mathewson**: Come, Mr. Gans; that has not the slightest influence on the conduct of our books or our business. They were kept in the same way long before any investigation was ordered.

Mr. **Gans**: Let me point out one or two things to the Master. We have here a statement which includes, as one of the items of the cost of making gas, an item of care of street lamps. You will observe that there is nothing appearing on this record, on the other side, of amounts that have been received from the City to balance that item. You will observe that there also appears on this statement an item such as cost of taking care of gas stoves, but you will observe that there does not appear on the record a corresponding item of rental of gas stoves, which would more than cover that. What I mean to say is that we have been offered for your inspection and for ours, as an exhibit, a statement purporting to show how much it costs this company to make gas, an exhibit which on its face before the cross-examination began was exceedingly misleading, because anybody would conceive that it cost this company 74 cents to make a thousand feet of gas this year, which would obviously lead one into an absurd misconception in regard to it. We have been presented here with what purports to be a statement of the cost of gas, and in view of the fact that that statement on its face is exceedingly misleading, I do not think it should be suggested that we are wasting time when we ask to scrutinize the books with regard to other items.

The **Master**: There is no suggestion that counsel were wasting time. My only suggestion was, based on my experience in similar proceedings, that when counsel brings down bulky voluminous books and starts to cross-examine a witness on them, they spend 655 days in getting at results that they could have got at in hours by adopting the course which has been suggested here—namely, that somebody go up with you and go over the books in the company's office outside of the hearings. That is all I intended to suggest, and that is based on considerable experience in these matters. But, if counsel want the books, I think the shortest and best way would be to bring the books down here and proceed with the cross-examination of the witness from the books.

Mr. **Mathewson**: I think, in view of what Mr. Gans has stated, that I am entitled to say that he is entirely mistaken in the statements he has made. The statement upon which the witness has been cross-examined has nothing at all to do with anything except the cost of production of gas; it does not deal with receipts at all. Exhibits 95 and 96, which were introduced following Exhibits 93 and 94, do show all the receipts of the company, both from gas stoves and the sales of gas and everything else. In this statement showing the cost of gas there is the expense of caring for city lamps. In another statement which was put in is a statement of the money received from the city for city lamps. It is not a fair statement to say that these are misleading. They were not intended to show the receipts from the company, but simply the expenditures of the company in the production of gas.

The **Master**: There is no use discussing the merits. It is simply a case of procedure, and my idea was to save time as much as possible.

Mr. **Page**: I have stated that I was willing to go up there or take an expert up there and inspect the books.

656 Mr. **Mathewson**: We will bring the books down and perhaps on seeing them we can tell.

Mr. **Page**: But I do not want the responsibility of bringing the books down and having any time lost charged up against me. I want it to appear on the record that I was willing to make that concession.

By Mr. **Page**:

Q. You have entered here an item of gas made by other companies under agency agreements. How do you arrive at the amount of that 2,970,384,026 cubic feet?

A. It was the amount of gas made by each company who was manufacturing for the Consolidated Company under an agency agreement in excess of what they manufactured for their own requirements.

Q. Have you any way of measuring their gas?

A. All the gas that they manufacture is measured both at the station meter and either at their consumers' meters or at our consumers' meters, allowing for unaccounted-for gas due to condensation and other causes.

Q. How is that gas delivered to your company?

A. Delivered in our mains, in our holders, whenever we require it

Q. Are your mains and the mains of the other companies interlocked?

A. I don't be sure that they are or are not. I think in some cases there may be a connection so that we get the gas from the other companies directly into our mains without its first going into a holder.

By Mr. GANS:

Q. Is it not a fact that almost all of it is delivered into your mains?

A. I don't know.

657 By Mr. PAGE:

Q. You don't know the physical means of receiving this gas then?

A. I know the physical means of receiving it and have testified to the physical means of receiving it; what portion is received in one way and what portion in another, I don't know.

Q. As I understand then this is an estimated amount, taking the total output of gas of the company that sells to you and the amount of gas that is shown by their meters to have been delivered to their customers; is that it?

A. I don't see that there is any estimate about it.

Q. And allowing for condensation and for leakage. Is there any estimate about that?

A. The leakage is a calculated quantity.

Q. Well what about condensation?

A. I say leakage. I should say the unaccounted-for gas rather than leakage, because we don't know tnat it was leakage. The unaccounted-for gas is a calculated quantity.

Q. How do you arrive at the unaccounted-for gas, for instance, of the Standard Gas Light Company, if you take the total of the gas delivered to their customers, and deduct it from the total of the gas produced by them and charge the difference to the Consolidated Gas Company?

A. Their sales are augmented by the quantity that we know or assume to be unaccounted for based upon their own experience at the time the agreement was made.

Q. Then the leakage is charged against them according to their experience, not in accordance with the experience of the Consolidated Gas Company, is that right?

A. According to their own experience.

Q. But the gas is delivered in the mains of the Consolidated Gas Company, isn't it?

A. It ultimately goes into the mains of the Consolidated Gas Company, all of it.

Q. Well ultimately——

658 Mr. MATHEWSON: He said some of it he thought was delivered in holders and some direct to the mains and that he could not give the proportion.

Q. Do you know where the point of connection between the Consolidated Gas Company and the Standard Gas Light Company is at which the gas is delivered by the Standard Gas Light Company to the Consolidated Gas Company?

A. I should say that there were several points.

Q. What do you mean by that?

A. I mean that they deliver gas to us at our Ninety-ninth street holder and I think they deliver gas to us at our 132d street holder, and they deliver the gas to us in our mains.

Q. Where does the New Amsterdam Gas Company deliver gas to you?

A. I should think some of their gas would get into the Sixty-third street holder and the Sixty-fifth street holder, possibly the Ninety-ninth street holder and the 111th street holder, and into our mains.

Q. Are there mains running from the works of the New Amsterdam Gas Company to each of these holders that you have specified, are they New Amsterdam gas mains?

A. Not directly. The New Amsterdam manufacturing plant is situated in Long Island City at Ravenswood, and their gas is conducted to New York through a tunnel under the river and conveyed to their holders in New York City; from their holders or from their mains in New York City the supply is furnished to the Consolidated Gas Company.

Q. You stated, I believe, that you do not know where these points of connection are?

A. No, I don't know all of them. I have named such of them as I believe to exist at the present time.

659 Q. Is it not a matter of fact that your mains and the mains of these other companies which are said to be manufacturing gas for you under an agency agreement are so interlocked that the gas of one flows into the main of the other?

A. I have already testified that there may be points at which the distributing mains of one of the companies manufacturing for us under that agreement may be connected with ours and the supply of gas furnished directly into our mains.

Q. Well, there may be. Now, is there?

A. My understanding is that there is such a connection with the New Amsterdam main from Ravenswood. I am not positive about it, however.

Q. Now, do these companies bill the gas to the Consolidated Gas Company each month?

A. Yes, sir.

Q. Does that specify the number of thousand cubic feet that are so delivered?

A. If the bill itself does not so specify, a memorandum accompanying it does.

Q. Is the cost of the production of that gas charged against the Consolidated Gas Company?

A. It is included in the charge against the Consolidated Gas Company.

Q. That is, there is a certain percentage allowed in addition to the cost, is that right?

A. Yes, sir.

By Mr. MATHEWSON:

Q. Just what do you mean by that? Is not this delivered under the agency agreements?

A. Yes, it is delivered under the agency agreements and we pay them for labor and materials that they employ in the manufacturing of it, and we allow them a percentage over and above the cost to them of manufacturing it.

Q. The point is, it is all defined in the agency agreement, isn't it?

A. All defined in the agency agreement of course.

660 Q. There is nothing in addition to what the agency agreements provide?

A. Nothing.

By Mr. **Page**:

Q. Who fixes the amount of gas that is chargeable against the Consolidated Gas Company? I mean the number of thousand cubic feet that have been delivered?

A. Their statement indicates the quantity that they have manufactured for us, and we have their original records to employ in confirming these figures if at any time we question their accuracy.

Q. Who is it that makes out these statements?

A. The individual?

Q. Yes, in each company.

A. I don't know.

Q. They are made out in the office of the other company, are they not?

A. They are made out in the offices of the other companies.

Q. That man would not have access to the books of the Consolidated Gas Company, would he?

A. No, sir.

Q. There is an item here of street lamps, $285,701.13. That item I believe you stated was for the care and maintenance of the street lamps?

A. No, I testified that the cost of the care and maintenance of street lamps was included in that item.

Q. Within the last two years there have been a great many mantle burners put on the street lamps, have there not, in the City of New York?

A. There have, yes, sir.

Q. As to the care of those, have you a contract with any company?

A. The maintenance of the Welsbach lamps is taken care of by the Welsbach Street Lighting Company.

Q. Under a contract with you?

A. If there is not a contract covering the present period, there is an agreement.

661 Q. An agreement extending the contract for some previous period?

A. Some previous contract.

Q. Will you produce that contract?

A. I can do so.

Q. Well, will you?

Mr. **Mathewson**: What is the materiality, Senator?

Mr. **Page**: It seems to me it is material on this very item you have put in here, street lamps, $285,701.13.

Mr. **Mathewson**: All right. Do you want it produced?

Mr. **Page**: Yes.

Mr. **Mathewson**: I will see what it is.

Q. What else is there in that besides the maintenance and repairs of street lamps in that item?

A. Well, you are naming the other thing that is in there; I have not named it before; that is the repairs of street lamps, the cost of any repairing that is done is charged against that account and the amount received from the city is credited to it.

Q. This is not a debit balance of that account.

A. That is the debit balance of that account.

Q. You mean you spent $285,701.13 more than you received from the city?

A. More than we received *for* the city for repairing lamp posts. The contract with the city for the maintenance of gas lamps and supplying gas is at so much per lamp per annum, and it does not include any repairs. There is a separate contract for the repairs, stipulating the amount to be charged the city for each class of repairs, and as that repairing is done the cost of the work and labor and material is charged against this account, and the bill that is rendered the city for such repairs is a credit to this account.

662 Q. And $285,701.13 is the amount you expended in the nominal year ending October 31, 1905, more than you received from the city or charged to the city for that service, is that as I understand your statement?

A. More than we charged to the city, for we received nothing.

Q. I suppose that account will be in the operating ledger that you are going to produce, will it?

A. Yes, sir.

By Mr. **Mathewson**:

Q. You mean by that that the street lighting has not been paid for for that period?

A. It has not been; no, sir. Nor for the repairing.

By Mr. **Gans**:

Q. There is a charge against the city that you hope to collect some day, isn't there?

A. Yes, we hope to collect it.

By Mr. **Mathewson**:

Q. And while I think of it, in the statement of receipts, Exhibits 95 and 96 have you included in your receipts money charged to the city on account of lighting, as though it had been actually received by you?

A. Yes, sir.

Q. So you have stated your receipts really much larger than the amount of cash that has actually come in?

A. We do not state it as receipts, which would be rather misleading. We state it as earnings which would include the bills rendered though not paid.

Q. That applies to Exhibits 95 and 96?

A. That is the case, yes, sir.

By Mr. **Page**:

Q. Have you the segregation of the item of taxes that I asked you for?

A. Yes, sir.

663 Mr. **Mathewson**: That was for the calendar year 1905, the segregation of taxes.

The **Witness**: Yes.

Mr. **Page**: The segregation of taxes of the item on Exhibit 94.

(Paper produced by witness.)

Mr. **Page**: I will offer that in evidence as a statement of the details of the $965,843.88.

Paper received and marked State Exhibit E.

Q. I notice an item of $94,506.29 as an item of interest on accrued taxes, is that right?

A. That is correct, yes, sir.

Q. What taxes are those?

A. Taxes accrued and unpaid as of December 31st, 1904, which remained unpaid December 31st, 1905; also the interest that accrued on the taxes that were due December 31st, 1904, and paid during 1905.

Q. Do you know to what particular tax that relates, or does it relate to all the taxes?

A. It relates to all taxes unpaid as of the 31st of December, 1904.

Q. Well, you don't remember what taxes were unpaid?

A. I could probably indicate the principal items as special franchise taxes and personal taxes.

Q. That was the interest that was charged as a penalty for nonpayment of the tax, wasn't it?

A. It is interest that——

Q. It is not part of the tax itself?

A. No, it is no part of the tax itself; interest that we will have to pay ultimately when the taxes are settled.

Q. The State tax, $195,795.50, is that tax imposed upon the rate of dividend paid?

A. And upon the gross earnings.

Q. And that is upon a capitalization of $80,000,000.00?

A. It has nothing to do with the capitalization.

664 Q. Well, that is that particular tax, is it not, the State tax that is imposed upon the corporation, based upon its amount of dividends and the gross earnings, you say?

A. Yes, sir.

Recess until 2:15 P. M.

After Recess.

Robert A. Carter—resumed.

Cross-examination by Mr. **Page** continued:

Q. The amounts stated on State's Exhibit E, "taxes for the year 1905, real estate $179,778.95, personal property," &c., are they the face of the bills or the face of the assessment against you?

A. The face of the assessment against us, yes, sir.

Q. Without any allowance for prompt payment if prompt payment had been made, or without any charge for penalties if penalties were incurred?

A. The face of the bill, yes, sir.

Q. Are these items that have been paid during the year?

A. The statement includes items that were paid during the year.

Q. I gathered from your statement before that the personal property and the special franchise taxes had not been paid.

A. They were not paid, nor was the state tax paid during the year. During the year we paid a state tax for the preceding year but the bills were not rendered early enough in the year to pay within the calendar year.

Q. Have those been paid since the first of the year, if you know?

A. The state tax is payable on or before the 15th day of January and was paid about that time. The real estate taxes, I believe, have all been paid. The personal property tax for the year 1905
665 was paid. The special franchise tax, I think, is the only tax for that year that has not now been paid.

Q. And you are testing that, are you, in the courts?

A. We are, yes, sir.

The Master: Let it appear of record that the witness has produced here the operating ledger for 1905.

The operating ledger for 1905 is marked for identification, Complainant's Exhibit 97.

By Mr. Mathewson:

Q. Are you right in supposing that in any year, say 1905, only the taxes are charged in the operating expenses for that year which were assessed and accrued for 1905?

A. That is the case.

Q. No 1904 taxes or 1903 taxes?

A. No. Although they may have been paid in that year they do not appear as a charge in that year against the expenses.

Q. They were charged in the year in which they accrued?

A. They were charged in the year in which they accrued.

Q. So, too, as to any amount of interest charged in the operating expenses of 1905, is that interest that accrued wholly within the year 1905?

A. Within the year 1905.

By Mr. Gans:

Q. Can you amplify this statement (referring to State's Exhibit E) by reference to your books, by showing the amount of interest which accrued upon each one of these items which go to make up the total amount of $94,506.29?

A. (No answer.)

Q. Can you tell us by reference to your ledger how that amount of $94,506.29 is to be apportioned among the various items
666 of taxes which go to make up the total of $871,337.59?

A. No, I cannot, because none of it applies to the taxes that were assessed during 1905 and paid during 1905, because no interest accrued upon them.

By Mr. MATHEWSON:

Q. That was interest which accrued within the year 1905 upon taxes of previous years before their settlement?

A. Precisely.

By Mr. GANS:

Q. Can you tell us how the item of State tax of $195,795.50 was arrived at?

A. It is the amount of the bill rendered by the State Comptroller, calculated to the best of my recollection on the basis of one-half of one per cent. of our gross receipts, and three per cent. upon the dividends paid during the year in excess of four per cent. upon the capital stock.

Q. Now could you tell us what the gross receipts were assessed at for the purpose of the fixing of that tax?

A. From memory I could not. The gross receipts upon which that tax was computed is a matter of record and was something in excess of any gross receipts shown in our statement here, because it included the receipts from the sale of residuals, which appear as credits in our operating expenses instead of as revenue.

Q. Did it include the receipts from securities?

A. My impression is that it did.

Q. Does the bill of the State Comptroller contain a statement of the gross amount upon which that was assessed?

A. I am not sure that it does. The information is obtained by the State Comptroller from the company. A report is made to the State Comptroller on or about the first of October of each year
667 of the gross receipts for the nominal year ending October 1st, and that furnishes the basis of the bill that they render us. We also inform them in that statement of the dividends that have been paid during the year, upon which also they calculate a tax of three per cent. upon the dividends paid in excess of four per cent.

Q. Can you tell us whether this dividend was assessed in conformity with the amount specified in your report?

A. It was.

Q. So if we got that report we would have the basis of that assessment?

A. Of that assessment, yes, sir.

By Mr. PAGE:

Q. Now will you kindly turn to the street lamps account for 1905?

A. There is the street lamp account for the Hester Street branch for the year 1905, being on pages 601 to 607 inclusive (of Complainant's Exhibit for Identification No. 97).

Q. The Hester Street branch for the year 1905 showed charges against the street lamp account of how much?

A. $48,259.67.

Q. And a credit of how much?

A. Well, that is the net debit for the year.

By Mr. **Gans**:

Q. What does this item of the same amount on the credit side of the account mean?

A. That is carried to profit and loss account.

By Mr. **Page**:

Q. It is entirely a debit account, then?

A. Yes, sir.

Q. And there are no credits in this?

A. No credits whatever.

Q. Where would the credits be?

A. Well, there are credits in there of course but not shown 668 separately. The credit would be an item—there for example (indicating on page 607 of Complainant's Exhibit for Identification No. 97) amounting to $1,465.34, which would represent the charge to the city for repairs made to the posts during the month of December.

Q. Now the debit side of this account, does that represent the moneys that you paid out on account of the street lamps?

A. Yes, sir.

Q. Does it represent the installation of new street lamps as well as repairs?

A. Yes, sir.

Q. Where would appear the money which you received, or, if you have not received the money, the credit of the amount paid by the city for this work?

A. In the gas sales account.

Q. And will you turn to that account and show me where that item appears?

A. It would not appear separately. It would be included in the total amount for each month. Here it is, one amount which represents our entire sales for the year (indicating on page 719 of Complainant's Exhibit for Identification No. 97). There may be some item of something more than one thousand dollars by which the total amount of sales, as shown by this account has been reduced from $13,553,802.97 to $13,552,482.97.

Q. Well, if there was any such item it would appear on that account, wouldn't it?

Mr. **Gans**: And it would appear on Exhibit 95 or 96.

A. (No answer.)

Q. Exhibit 97 for identification, under Gas Sales, is supposed to state the entire moneys received by your company for gas sales during the year 1905, isn't it?

A. Yes, sir.

Q. But on page 719 of Complainant's Exhibit 97 for 669 identification that amount is stated at $13,553,802.97; is that right?

A. There is a difference of $1,400 that I am not able to explain at the moment, and it would probably take a long time for me to hunt it up here, but I will make a note of it.

Q. Would your journal show the amount that was charged there as against the city for repairs and maintenance to street lamps as connected with any of the entries in your ledger?

A. No, sir, there is no such charge made against the city separately. The city is charged so much per lamp per annum, the price of the Welsbach lamp differing from that of the ordinary flat flame burners. That charge includes the maintenance and there is no division made of it.

By Mr. Gans:

Q. Is there any record of it under one thousand feet charged against the City?

A. No record other than a monthly estimate of what the lamps have consumed; the gas is not metered.

Q. Have you an account on the ledger with the City for street lamps, or gas furnished, or whatever shape the account is kept in?

A. The account against the city would be included in the account in this ledger called "Sundry Debtors."

Q. Well, will you turn to the Sundry Debtor account?

A. Yes, sir (turns to page 151 of Complainant's Exhibit 97 for identification).

Q. Turn to the Sundry Debtor account, page 151. Will you point out the items or charges against the city?

A. I am not able to do so, as the total amount charged against all sundry debtors is posted in here in a single entry.

Q. That is journalized, I suppose?

A. Not showing the individual sundry debtors, of whom I presume we may have a considerable number.

670 By Mr. Gans:

Q. Is there not some book in which it does appear?

A. The sundry debtor ledger would show it.

By Mr. Page:

Q. There must be a book somewhere or an account somewhere from which you make up your bill against the city?

A. The sundry debtor ledger would show the amount charged against the city every month. Their account would stand out in that ledger by itself.

Mr. Gans: In order to have that amount I suppose we will have to have the book.

Q. Where do you get the record of gas sold? Is that in the books, the amount of gas sold, as stated on Exhibit 94?

A. That is the amount sold (turns to page 719).

Q. That is the amount received for gas?

A. No, I beg your pardon.

Q. That is expressed in dollars, is it not?

A. It is expressed in dollars, but it is the amount of bills rendered to consumers.

Q. Where will you get the amount expressed in cubic feet, which is stated in Exhibit 94 as being 13,283,163,767?

A. The record of that is kept in a book designed for the purpose, which is written up from monthly reports from the various offices, from the amounts recorded in the consumers' ledger.

Q. If that amount is correctly stated the amount received would be a larger amount than at the rate of $1.00 per thousand cubic feet. Would that difference be the credit which would be received for the maintenance and care of street lamps, or what makes that difference?

A. Assuming that all the gas that we sell to consumers was sold for $1.00, the average price of all the sales would be $1.00.
671 If the total quantity sold, applied to the total amount of sales, indicated a higher rate, it would indicate, as it would, that the bill to the city includes this maintenance.

Q. Are there any of your consumers that you sell gas to at less than $1.00?

A. Yes, we sell gas to the city at less than a dollar.

Q. Outside of the City of New York?

A. No, none that we sell to at less than $1.00, outside of the City of New York.

Q. Then, could we arrive at the amount that would be received and properly applicable to the street lamp department by deducting 13,283,163,767 from $13,553,802.97?

A. No, I should say not.

Q. Why?

A. Because some of the revenue included in the amount named by you, $13,553,802.97, represents revenue from gas sales to the city at lower than $1.00.

Q. Except for that fact, your answer would be yes, would it?

A. No, it would not be yes, because that would assume that the amount that we paid for labor and material in repairing the street lamp-posts owned by the city exactly equals the amount which we charge them for that work at a given rate under our contract with them.

Q. I do not see how that would follow, Mr. Carter. I said that it would represent the amount that you received that would be applicable to that account, not that it would balance it?

A. I think you might so apply it. On the same theory, though, we might apply all our expenses against our revenue and say that the balance represented our revenue, instead of recording the revenue at the gross amount, as we are accustomed to do.

Q. But I understood you to testify that this account of gas sales on page 719 of your ledger included the gas sales and the amount charged against the City for maintenance and repairs of street
672 lamps; is that correct?

A. That is the case, and our bills against our other consumers include the cost of supplying them with gas; making it and selling it to them.

By Mr. Mathewson:

Q. And taking care of their apparatus, as far as you do?

A. Yes, taking care of their apparatus, furnishing them with burners, and clearing their services, and rendering such service as is necessary to maintain a good supply of gas.

By Mr. **Page**:

Q. Does that all appear in this account of Gas Sales?

A. All the expense that I have reference to appears in our expense account where it belongs, and where, we think, also belongs the expense of maintaining the lamp posts.

Q. Does the cost of maintaining the lamp posts appear in your expense account?

A. It does.

Q. Turn to it, please, and point it out.

A. It is included in the account entitled "Street Lamp Account."

Q. Now, do your other customers pay you, and is it entered in the account of gas sales, for tips, and for the care of and keeping the apparatus in order, that you have just spoken of?

A. No, there is no purpose in doing it. We call it the Street Lamp Account because it pertains to street lamps.

Q. But you stated that it would be just as proper to charge for tips and a number of other things that you did?

A. It seems to me it would be just as proper to divide the amount we charge our customers between certain expense account and the revenue account as to pursue that policy with respect to the bills we render to the city.

673 Q. I am not asking for a theoretical method of keeping books, or what would be a good way to keep books, but I would like to know and I would like an explanation of the difference between the total of your gas sales of $13,283,163.97 and the total of your gas made, 13,283,163,767.

A. You have these figures there; I dare say you can arrive at it; I do not know what it is.

By Mr. **Gans**:

Q. There is a difference there of $270,635.20.

A. I will accept your figures as being correct.

By Mr. **Page**:

Q. You can verify them if you wish.

A. I do not want to.

Q. And you do not know how that difference arises. Is that the way you wish it left in the record?

A. No, I have already testified as to how it might arise.

Q. It is not a question as to how it might arise. Do you know what makes that difference?

A. It is contributed to largely, if not entirely, by the bills to the city for lighting, maintaining and furnishing gas for city lamps.

By Mr. **Gans**:

Q. Is it not contributed to entirely by that?

A. I think perhaps it is contributed to entirely. I am willing to testify that it is contributed to entirely by that.

By Mr. **Page**:

Q. Outside of the Welsbach lamps is there not a charge based on the estimated amount of gas that is consumed?

A. A charge based on the estimated amount of gas?

Q. Yes.

A. Of what nature?

674 Q. Well, you assume that your ordinary flat flame burner burns four feet an hour, and that it burns a certain number of hours; if you multiply that certain number of hours by four feet you arrive at the amount that that lamp is supposed to consume; is that right?

A. Yes, that is no charge, but an estimate.

Q. And then you charge that against the city at the rate of 90 cents, don't you?

A. No, we do not; you are referring to lamp posts now, or supplying gas to posts, lamp posts?

Q. Yes.

A. No, we do not.

Mr. Mathewson: You are referring now to the year 1905?

The Witness: Of course.

Mr. Mathewson: The city, you know, recently adopted a method of metering certain lamp posts, I think, or something like that. It may be a little different.

By Mr. Gans:

Q. Is there not gas supplied to the city that is metered for which you charge ninety cents, or did you in the year 1905?

A. Yes, we did in the year 1905; we metered gas supplied to the city and billed it at ninety cents per thousand cubic feet.

Q. Is there any record from which the amount of gas so charged to the city can be definitely ascertained?

A. Yes.

Mr. Mathewson: That was in public buildings?

The Witness: That was in public buildings.

Mr. Mathewson: And not for lamps?

The Witness: Yes, I understand that.

675 Q. That is included of course in this gas sold, 13,283,163,767?

A. Yes.

Q. Have you the record with you from which it can be ascertained?

A. No, I have not.

Q. In what book would that be contained?

A. In our general office consumers' ledger, which is the ledger recording the bills rendered to the city departments.

Q. That ledger I suppose has headings for each customer?

A. Headings for each customer.

Q. And the city would appear there?

A. It would appear there as a customer.

Q. Under the headings of the separate departments?

A. The headings of the separate departments.

Mr. Gans: It is agreed that Mr. Carter will furnish us with a statement from the ledger showing the amount of gas billed to the city at ninety cents, which is to be taken subject to verification in the usual way?

Mr. MATHEWSON: Yes.

By Mr. PAGE:

Q. The amount of gas that goes into street lamps is included in this 13,283,163,767?

A. Yes, an estimated quantity.

By Mr. GANS:

Q. May I ask how you arrive at that estimate?

A. It is based upon an assumed supply of three cubic feet per hour for lamps burning 3,925 hours per annum.

By Mr. MATHEWSON:

Q. State why you make that assumption of three cubic feet per hour?

676 A. Because for a number of years the contracts with the city have stipulated that that quantity of gas should be supplied. We have reason to believe, however, that the quantity has exceeded that from 25 to 50 per cent.

By Mr. GANS:

Q. Then, does there appear anywhere the aggregate amount of that estimate for the year 1905?

A. Yes, sir.

Q. Have you the figure in mind?

A. No, not in mind; it is a matter of record.

Q. In what book is that contained?

A. In the record of sales.

By Mr. MATHEWSON:

Q. You can state that also, or you can procure it?

A. I can obtain that information, the amount of gas estimated which we have supplied to street lamps for the year 1905.

Q. At the rate provided by the city contracts?

A. Yes.

Q. Three cubic feet?

A. Yes.

By Mr. PAGE:

Q. Now, will you give me the totals of your street lamp account for the different stations, starting with Hester Street?

A. Hester Street department, $48,259.67; Sixty-sixth Street department, $49,025.03; 111th Street, $191,974.39; a total of $289,259.09.

Q. There seems to be in this account certain items of other gas companies; the Westchester Lighting Company, the Central Union and Northern Union; what is the explanation of that?

A. They supply gas to some street lamps which under our contract with the city we are obliged to light and maintain.

677 Q. And the repairs on those lights enter into part of the charge on this account?

A. No, repairs on those lamps are made by those companies and they bill for them direct.

Q. How do they get in your books?

A. They supply the gas and charge us for it.

By Mr. **Gans**:

Q. Is that gas so supplied to street lamps included in the amount of gas given on Exhibit 94 as the amount bought from those companies?

A. Yes, sir.

Q. Or is that in addition to that amount?

A. No, it is included. But one moment, I guess I will have to correct that testimony in respect to gas. Any gas furnished would be included in this gas purchased; it would be rather for labor performed in connection with the lamps for which we pay them, and inspecting and some other work which they do not recover anything from the city for doing; comparatively small charges.

By Mr. **Page**:

Q. Well, is the gas that is furnished to those street lamps billed by you against the city or by the Central Union, Northern Union and Westchester Lighting Company?

A. We bill the city for the lighting, cleaning and glazing, maintaining and furnishing gas for the lamps under our contract with the city.

Q. And then do you——

A. And we pay them for what gas they furnish and for any labor they may perform in connection with the lamps.

Q. And is that gas part of this gas sold and made at other stations made under agency agreements?

A. That is the case.

678 Q. Is that the amount of gas that is adjusted under the agency agreement or the amount that is adjusted on the fifty-cent basis?

A. Under the agency agreement.

By Mr. **Mathewson**:

Q. Do you remember whether there is any agency agreement with the Central Union?

A. I think there is. I may be wrong about that, but I am assuming that there is.

Q. Will you make a note about that and ascertain?

A. I will.

By Mr. **Gans**:

Q. I thought the testimony was that there was not any written agreement but there was an agreement?

A. A verbal agreement, I think that is the case.

Mr. **Mathewson**: I referred to a written agreement. I had in mind that there was not, but I may be wrong about it.

By Mr. Page:

Q. Now, the Welsbach Lighting Company figures here each month. What is that?

A. That is the bill they render us for the maintenance of the street lamps which are equipped with Welsbach mantel burners.

By Mr. Mathewson:

Q. And which Welsbach lights you furnish to the city under contract?

A. They are furnished by us to the city under contract.

By Mr. Page:

679 Q. Now, if you will turn to the account of expense which totals $490,855.36, that is just below total cost of holding on Exhibit 94?

A. One of the accounts, Senator, begins at page 349 and runs to page 357, inclusive.

Q. Now, will you give us the details of that by stations?

A. Yes.

Mr. Mathewson: What is this, station expense?

The Witness: This is branch office expense.

Hester St.	$78,362.23
Irving Place	115,500.35
42d Street	97,275.48
Third Ave.	132,801.16
Hester St., Meter Shop	9,969.00
Avenue A, Meter Shop	11,184.91
66th St., Meter Shop	11,544.86
114th St., Meter Shop	15,369.81
Meter Repair Shop	3,093.60
Hester St., Street Department	5,467.17
66th St., Street Department	4,879.41
111th St., Street Department	5,407.38

The total should be $490,855.36 to agree with the statement, Exhibit 94.

Q. What are those meter shops you refer to?

A. Fitting shops, each shop being equipped with a foreman and clerk and gang of men and material and supplies for looking after the requirements of customers, setting and bringing in meters, locking and unlocking them and attending to complaints and work of that nature and putting on burners, clearing consumers house pipes.

Q. Are those the shops at which the repairs are made to meters?

A. No, sir, they are fitting shops; the repairs are made at the meter repair shops.

Q. The expenses of some of the meter repair shops are included in this statement, aren't they?

680 A. Yes, one meter repair shop only is included in that statement; we have but one meter repair shop.

By Mr. Page:

Q. And the expenses of that shop are included in this expense account, is that right?

A. Yes, sir.

Q. Now, if you will turn to the expense, general office, $339,999.51?

A. The account begins on page 409 and runs to page 428, from which it is transferred to page 438 and runs to page 439 and transferred to page 441, where it closed for the year.

Q. And what is the total of that?

A. $248,986.23. The item in the expense statement Exhibit 94, under the head Expense general office includes besides the amount given the cost of new business carried on folios beginning with 429 and extending to 437 and transferred to 440 where it is closed, the total expenditures for the year aggregating $60,575.28. It also includes an item, claims for damages, which account appears on pages 162 and 163 of the operating ledger, and indicates an expenditure for the year of $30,438. Those three items combined amount to $339,999.51, being the item so called appearing in Exhibit 94.

Q. Now, will you explain what is the aggregate of these claims for damages that are brought in as a part of the general office expense account?

A. Settlement of damage proceedings, or settlements in anticipation of proceedings arising from personal injuries, or injury to property; accidents of some nature or other.

Q. And does that include also your lawyer's bills?

A. No lawyer's bills are included in there whatever. There may be payments there through lawyers to claimants, but no legal expense is included.

Q. What is this account for new business, what do you carry into that account?

A. Advertising and a variety of expenses of that kind. The oper-
ating of our fuel and appliance department, the paying of
681 canvassers for new business, or for the sale of appliances, and
any expenditures that are of a nature designed to bring additional business to the company are charged to that account.

Q. But you have also an advertising account, haven't you?

A. Well, there may be some special advertising, not of a new business kind particularly, I don't know what it may be, dividend notices or something different from the new business account. I should have to analyze the account to state just wherein they differ.

Q. This account for damages means the money is actually paid out for damages or are there any contingent liabilities included in there?

A. No, it is money actually paid out, Senator, in every case.

Q. Now, we have one other expense account I should like to have you turn to (indicating).

A. That is station expense.

Q. Well, I suppose so.

A. That item of expense included among the station disbursements in Exhibit 94 includes the salaries, the incidental expenses at the manufacturing stations. If you would like to check that I would be glad to turn the account and give you the totals for each year.

Mr. Mathewson: What is the amount?

A. The total amount shown in Exhibit 94 is $59,016.97.

Q. The pay roll as mentioned on this account at pages 293 is what, what pay roll?

A. It is the pay roll of that particular station, the Fourteenth street station.

Q. Does that include the men in the manufacturing department or is it only in the office?

A. Only in the office.

Q. It is the pay roll then of the office force?

A. Of the office force at the station.

Q. And the superintendent, does he come in there?

A. No, it would appear under the heading of Superintend-
682 ents, I believe, among the items of station expense independ-
ently of that. The item there is Labor, but Station Superin-
tendents is an item in there unless I am very much mistaken.

The Witness: Shall I call off the items, Senator?

Q. Yes, you might.

A. —

14th Street Station	$10,067.74
21st Street Station	20,733.99
42d Street Station	11,312.29
44th Street Station	8,580.55
99th Street Station	8,322.40
Total	$59,016.97

Q. Now will you turn to you- coke account?

A. Page 185 of Complainant's Exhibit 97 for Identification gives the coke account of the 14th Street station.

Q. Now will you explain this account. It shows gas production debited with $19,208.35?

A. No, gas production is not debited. The 14th Street station coke account is debited and gas production account would be credited with $19,208.35.

Q. What is the gas production account, what do you mean by that?

A. The gas production account is the account in this operating ledger in which we carry the cost of manufacturing gas.

Q. What has that to do with the coke account?

A. The coke account is a very important item in the manufacture of gas, whether it appears as a residual or whether it figures as an item of fuel.

Q. No, but this being the coke account why should gas production be credited with that? Is that the value of the coke?

A. That is the value of the coke that was produced at the 14th Street station for sale. The gas production account which is charged

with the coal that is used is credited with the coke that is
683 produced for sale and that is the entry by which it is done.
The gas production account would show a corresponding credit.

By Mr. GANS:

Q. Then the amount of credit to this account——

A. Would be through the sundry debtors for such coke as was delivered to the National Coke & Coal Company. They would be charged up as sundry debtors for the coke delivered to them, and through the journal this coke would be credited and they would be charged—or the sundry debtors' account would be charged with the amount of the bill against them for the month.

Q. Then am I wrong in this, that the gas production debit amounts practically to this, that instead of closing this account into profit and loss you close it into gas production?

A. This is a stock account, and shows the value of the coke on hand, in stock, at the end of each month. We started the beginning of the year, January, with a stock of coke valued at $8,553.75. We charged the coke account with the coke that was produced for sale during the month, credited it with the coke that was used, transferred to water gas stations and sold to the National Coal & Coke Company, and it left a balance of coke on hand at the end of the month, valued at $8,088.50.

By Mr. PAGE:

Q. What did I understand you to say the sundries were?

A. Transfers to water gas stations, I should say, without having the original here. The next item, $2,049.75, appearing as a credit item in the 14th Street coke account on page 185 of the operating
ledger, is coke used for other purposes than for gas manufac-
684 ture, but used by the company in other departments. The
$6,505.22, appearing in the same account as a credit item is the value of the coke which was transferred to the water gas stations in the month of January, 1905.

By Mr. GANS:

Q. Could you tell us whether that same explanation will apply to the corresponding items in each month? There seem to be corresponding items in each month, don't there?

A. (No answer.)

By Mr. PAGE:

Q. In all the months except the month of January there appears to be an item of coke; what does that mean?

A. The same would be here put in as sundries; that is, in January one of those items would be coke and might properly be so-called because it represents identically the same thing. The coke account at some other station is charged, and the coke account at the 14th Street station is credited. You will observe that that takes care of that credit. That means that that amount represents the value of coke transferred from the 14th Street station to the water gas station, and every month where that item appears coke is charged against the water gas station, and credited against the coal gas station. The sundries are the various other purposes than for manufacturing purposes for which the coke was used during the month, and the credit indicated in the coke account of the coal gas station.

By Mr. GANS:

Q. Take in January the first item which appears under Sundries is the item representing the amount of coke used for purposes other than gasmaking?

685 & 686 A. That is the case, unquestionably. The larger amount is the coke used in manufacture; the smaller amount being always the coke used for other purposes.

By Mr. MATHEWSON:

Q. What do you mean by "other purposes" when you say used for other purposes than manufacture?

A. Why, it is used under boilers for producing steam which is not used in connection with the manufacture of gas, it is used by the Street Department as fuel in preference to other kinds of fuel.

Q. My point is this, it is used in connection with the business of manufacturing and distributing gas somewhere?

A. Yes, if it is not used in connection with manufacturing it is used in connection with distributing gas.

By Mr. PAGE:

Q. Where is the account with the National Coke and Coal Company. Is it in this ledger?

A. No, it is not. The National Coke and Coal Company we figure as sundry debtors, and their account would appear in the Sundry Debtors' ledger. In this ledger their account would simply be lumped with others in a General Sundry Debtor account. If you want to know what amount we charge the National Coke and Coal Company with each month in the year, there is no other way of doing it.

The MASTER: You want that book also for the account against the City, didn't you say?

Mr. GANS: Yes, sir.

At 4:15 P. M. adjourned to August 10, 1906, at 11 A. M.

Last Exhibits:

Complainant's, 97.
State's, E.
City's, 1.

687 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERIC E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *August* 10, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Page, Mr. Mathewson, Mr. Gans, Mr. Burr.

688 ROBERT A. CARTER—Cross-examination continued:

The witness reads into the record a statement of the value of coke produced by the company other than used in coal gas works, subdivided into: Amounts sold, amounts delivered to water gas plants, and amounts used in departments of the company's works other than the manufacturing department.

The WITNESS: I take this statement from page 185 of Complainant's Exhibit 97 for identification. I suggest that the statement be divided into four columns: First, produced for sale; second, delivered to water gas stations; third, used in other than manufacturing departments; and fourth, sold.

Fourteenth Street Station.

	Produced for sale.	Delivered to W. G. stations.	Used in other than Manfg. Dept.	Sold.
Jan	19,208.35	6,505.22	2,049.15	11,118.63
Feb	16,570.19	4,070.32	1,938.70	10,557.17
March	16,802.76	7,141.18	1,125.60	11,521.73
April	17,165.43	9,399.59	544.59	8,425.50
May	14,361.35	3,871.77	520.27	10,505.56
June	13,745.49	3,121.78	141.75	10,955.21
July	12,666.44	2,023.92	105.32	9,986.20
Aug	11,616.22	2,327.82	107.32	10,396.83
Sept	12,152.34	2,208.49	104.23	9,412.87
Oct	13,360.30	2,252.95	142.50	9,476.10
Nov	13,621.43	2,182.77	151.61	10,681.80
Dec	14,059.01	1,390.52	572.00	12,791.74

Q. This account upon this book, at page 185 of Complainant's Exhibit 97 for identification, starts with an entry on the debit side of $8,553.75, does it not?

A. It does.

689 Q. That is, the entry is "Balance is $8,553.75"?

A. That is correct.

Q. And it is closed with an entry on the debit side which is also a balance entry?

A. A balance entry.

Q. Of $2,943.75?

A. That is the case, yes, sir.

Q. Now, will you turn to the account of the 42nd Street station in this same exhibit?

A. Yes (reads similar statement).

Forty-second Street Station.

	Produced for sale.	Del. to water gas stations.	Used in other than Manuf. Dept.	Sold.
Jan	16,784.55	1,629.97	965.25	13,149.83
Feb	14,189.76	1,486.01	963.00	13,390.00
March	16,350.45	1,602.40	1,341.00	13,508.30
April	14,338.38	3,224.29	202.75	11,737.09
May	12,589.71	2,324.79	150.75	12,132.42
June	12,102.11	1,927.44	220.75	10,770.67
July	11,382.24	2,345.04	163.12	10,820.33
Aug	12,452.84	1,973.81	128.25	11,743.53
Sept	13,080.82	1,256.22	247.50	11,979.85
Oct	14,101.30		204.75	13,893.35
Nov	13,236.40		229.50	13,006.90
Dec	13,473.04		1,023.75	11,450.29

Q. This account starts with a debit balance of $8,113.50, does it not?

A. It does, yes.

Q. And ends with a debit balance of $999, does it not?

A. Yes.

Q. And referring to each of the two accounts, namely, the account of the 14th Street station and the account of the 42nd Street station, the debit items are those comprising the first columns which you read off in each instance, and the balances as testified to, and the credit items consisting of the other columns; and, in the case of
690 the 14th Street station, the balance as testified to?

A. That is the case.

Q. Of course the credit and debit balances of these accounts should balance?

A. Taking into account the variation in the balance at the beginning and the end of the year.

Q. Now, will you turn to the coke account with the various water stations?

A. Yes (refers to page 187 of Complainant's Exhibit 97 for identification).

Q. The statement you are about to read is a statement of further distribution of coke received from coal gas stations and delivered to water gas stations, as shown by the accounts of the several water gas stations?

A. Yes, sir. The sub-headings will show.

Twenty-first Street Station.

1st. The value of the coke received from coal gas stations.
2nd. The value of the coke used as fuel in gas manufacture.
3d. The coke used for other purposes than gas manufacture at water stations or elsewhere.

January	6,505.22	5,694.77	797.98
February	3,893.98	3,855.73	
March	7,141.18	7,113.68	
April	9,070.40	8,969.15	
May	3,871.77	4,047.65	
June	3,121.78	3,122.16	
July	2,023.92	2,016.41	
August	2,327.82	2,334.57	
September	2,208.49	2,208.49	
October	2,252.95	2,250.70	
November	2,182.77	2,173.77	
December	1,390.52	1,381.52	

691 The debit balance at the beginning of the year is $5.53. The debit balance at the end of the year is $24.75.

Q. In each case a debit balance?

A. Yes.

Forty-fourth Street Station.

1st. The value of the coke received from coal gas stations.
2nd. The value of the coke used as fuel in gas manufacture.
3d. The coke used for other purposes than gas manufacture at water stations or elsewhere.

January	1,629.97	1,360.10
February	1,486.01	1,603.96
March	1,602.40	1,483.78
April	3,224.29	3,126.17
May	2,324.79	2,551.11
June	1,927.44	2,009.64
July	2,345.04	2,331.88
August	1,973.81	1,725.13
September	1,256.22	1,772.94
October	....	141.52

The balance at the beginning of the year is $336.26.

Q. This account covers the months from January to October, inclusive?

A. Yes.

Q. And there is no entry on it for November or December?

A. No entry for November or December.

Q. And no balance at the end of the year?

A. No balance at the end of that period.

Q. Is this account closed in any way?

A. It closed itself by the last credit of $141.72.

692 *Ninety-ninth Street Station.*

1st. The value of the coke received from coal gas stations.

2nd. The value of the coke used as fuel in gas manufacture.

3d. The coke used for other purposes than gas manufacture at water stations or elsewhere.

January	....	149.47	
February	176.34	98.31	
March	....	92.48	19.70
April	329.19	70.75	2.80
May	....	39.46	20.50
June	....	67.64	32.80
July	....	49.89	24.70
August	....	54.84	32.85
September	....	69.42	10.75

The account opens with a debit balance of $330.83 and closes without any balance.

Q. Now, will you take up the Eighteenth Street station?

A. Yes. Accounting for the value of the coke on hand at that station of January 1st, 1905, the station is not manufacturing gas, and each month shows a credit, accounting for certain loss in the value of the stock because of its being converted, in the course of handling and piling, to screenings. That simply decreases the value at which it was originally carried and at that amount it was carried to operating expense, and the loss involved in the storing of it at that point becomes a charge to the expenses. The three headings will, therefore, show the sales, the use of the coke in other departments than the manufacturing department, and the loss due to screenings.

Q. The account is, therefore, somewhat different from the others in that respect?

A. Yes.

Q. Was there any coke added to that account during the year?

A. No, sir.

693 *Eighteenth Street Station.*

1st. The value of the coke received from coal gas stations.

2nd. The value of the coke used as fuel in gas manufacture.

3d. The coke used for other purposes than gas manufacture at water stations or elsewhere.

January	2,502.25	530.75	391.50
February	2,849.70	545	519.17
March	2,508.25	442.50	272.38
April	1,675	239.75	181.12
May	292.90	220.75	145.60
June	113.05	173.75	176.70
July	131.05	161.75	139.20
August	646	909	170.75
September	1,793	217	511.13
October	1,909.23	240	106.39
November	1,827.20	399.25	169.80
December	572.95	521.50	275.80

The debit balance with which this account started on January, 1905, is $29,854.12, the debit balance with which the account was closed December 31st, 1905, is $5,373.

Q. Do I understand that the items which have entered into this third column as you have given them, have been charged off to expense account?

A. The second and third columns are charged off to expense account; the first column refers to sales of coke at that station.

Q. Now, have you covered all the water gas stations having coke accounts?

A. I have covered all water gas stations having coke accounts, and I will explain that the last station is not an operating station, and was formerly operated as a coal gas station.

694 By Mr. Page:

Q. In this coke account, the value of the coke is given in dollars and not by quantity?

A. That is the case.

Q. What is the factor or multiplier by which you produce the result?

A. The quantity at the price at which it is sold or delivered to the water gas station, or used in departments other than manufacturing departments.

The Master: He means what figures?

A. (Continuing:) I said the quantity, for one figure, and the rate at which those departments or the public would be charged for coke.

Q. Is that a varying rate?

A. Yes, for different grades of coke, and the different uses we make of it.

Mr. Mathewson: The witness said yesterday that the amount varied from 75 cents for coke breeze, or screenings, up to $2.00 and $3.00.

Q. But I understood this was the coke produced each month at those stations?

A. You refer now to coal gas stations?

Q. Yes, to coal gas stations.

A. The statements taken off from the 14th, 42nd and 18th Street stations show, with respect to the first two named, the value of the coke produced for sale, and the value of the coke disposed of by either being sold or by transfer to a water gas station, or by employment in some other than the manufacturing department.

Q. The detail of that would appear on the journal, would it?

A. Yes, it would appear on the journal of the operating ledger.

Q. Now, will you turn to the entry of the journal of that first gas production, $19,208.35, at the 14th Street station.

695 A. I find the entry "Coke debtor to gas production account," in which appears coke produced for sale at the 14th Street station, amounting to $19,208.35, as shown in the operating ledger of that station.

Q. That does not show the number of tons or loads, or by what you multiply?

A. No, sir.

Q. That is what I asked. Where do you get that?

A. That is all shown on the memorandum from which this entry in the journal is made, so as not to repeat it in the journal. The entry is made in the journal in the simplest form, and would refer of course to the memoranda of the coke produced at the station.

By Mr. **Burr**:

Q. That is, vouchers filed for them?

A. A memorandum rather than a voucher; a memorandum or statement giving quantity, &c.

By Mr. **Mathewson**:

Q. A statement from the 14th Street station?

A. A statement from the 14th Street station is the basis of the entry.

Q. Now, where is the other figure by which you multiply?

A. That would appear in the statement also.

Q. Well, from what source would you get that information?

A. From the engineering department, from the report from the station.

Q. Then, is there not any book in which these matters are journalized?

A. They are journalized here (referring to another book).

Q. I would hardly call that a journalizing of the account?

A. Yes, it is a journalizing of the account without giving in the journal all the detail as to quantity and price.

The **Master**: Note that when the witness says "here" he refers to the journal of the operating ledger, which he has produced.

696 The **Witness**: Yes, I will say, Senator, that if you would like to have a great deal of detail respecting that entry, I can furnish it without any trouble whatever. It simply avoids spreading what is already a matter of record and available all over this book again the second time.

By Mr. **Mathewson**:

Q. By "this book" you refer to the journal?

A. Yes.

By Mr. Page:

Q. With reference to that item in the journal, I notice that you have two sets of postings; that is, this 185 and 188 refer to the pages of the operating ledger. What are the others, 225 and 231; to what do they refer?

A. To the gas production account in the operating ledger. The item appears on page 225 of the operating ledger under the heading "Gas Production Account, 14th Street Station," $19,208.35, corresponding with the amount with which the coke account is charged on page 185 of the operating ledger.

Q. There is nothing on the books of the company then, which will show what price you received per unit, either a ton or load of coke?

A. Oh, yes, if we bill the National Coal & Coke Company for coke, we bill them for so many tons at a price, and the transaction is a matter of record on the company's books, the charge appearing against the National Coal & Coke Company in the sundry debtors ledger, and the detail under the number in the blotter which goes with that particular ledger.

Q. Do you have a blotter or day book which is journalized into the ledger? That is, is there another book prior to this journal on the operating ledger that has entries more in detail?

A. In respect to what?

697 Q. Right on this question of coke?

A. Our record contains full information on the subject of our coke transactions of every kind, and if you will indicate just specifically the information you would like to have I will undertake to furnish it.

Q. What I am trying to find out is: What you really get for your coke per unit, whatever it is?

A. The number of prices that I read off, varying from 75 cents for screenings to $3.00 for coke retailed.

The Master: As I understand it, what he wants to get at is: Is there any book of original entry which contains those prices, with respect to each transaction as it takes place? In other words, can he get at that by looking at any particular day book or journal or blotter instead of looking at loose memoranda from which those entries were made into the journal or the operating ledger.

The Witness: Yes.

Mr. Mathewson: Take one particular item; let him illustrate. Will not that be more specific?

The Witness: I think we might do it in this way. Of course the sale of coke would be indicated in the 14th Street station coke account, in the items shown on page 185 of the operating ledger, and in the item of sundry debtors, $11,118.63; that is found on page 17 of the journal of the operating ledger.

The journal of the operating ledger is marked Complainant's Exhibit 98 for Identification.

The Witness: There appears sundry debtors, Coke account, 14th Street station, $11,118.63. The records of the transaction of which

698 that amount forms the aggregate would appear in the sundry debtor blotter for the month of January, 1905, and that is here and I would be glad to pick out those items aggregating $11,118.63.

Q. Very well.

(Book produced by the witness is the blotter of the sundry debtors ledger and is marked Complainant's Exhibit 99 for Identification.)

The WITNESS: On page 662 of Exhibit 99 for Identification appears a copy of the bill rendered the National Coal & Coke Company for coke delivered at the 14th Street station, or at least some of the coke delivered at the 14th Street station during the month of January, 1905, that is to say 4,363.1215 loads of coke at $2.20 a load, making $9,600.38; 427 loads of screenings at 95 cents a load, making $405.65, a total of $10,006.03. On the same page in Exhibit No. 99 for Identification appears a charge against the Astoria Light, Heat & Power Company for coke delivered to that company from the 14th Street station, amounting to 234 loads, at $2.20 a load, $514.80. On page 652 of Exhibit 99 for Identification appears a charge against the Astoria Light, Heat & Power Company for coke delivered from the 14th Street station, 253 loads, at $2.20, $556.60. The total so far of the items I have called off is $11,077.43, and the item representing the difference $41.20 is some small bill which doesn't disclose itself immediately in the records of the bills rendered in the month of January, which cover a great many pages in the blotter; but during the noon recess I will undertake to have it located and point it out this afternoon.

Recess until 2.15 P. M.

699 After Recess.

ROBERT A. CARTER resumed.

Cross-examination by Mr. PAGE continued:

The WITNESS: During the lunch hour I have located two items in the Sundry Debtor Blotter, marked for identification Complainant's Exhibit 99; that is to say, on page 652, an item of $22.70, and on page 662, an item of $18.50, aggregating $41.20, which together with $11,077.43, the total arrived at in the morning session, makes the total amount shown in the Sundry Debtor Blotter, as the sales of coke at the 14th Street station during the month of January, 1905, $11,118.63, which agrees with the entry in the Sundry Debtor Journal and in the Operating Ledger as I have testified (fol. 185).

Q. The figures you just testified to are for labor and handling coke, and not for the coke itself?

A. The labor of handling these two particular sales of coke to the Astoria Light, Heat & Power Company.

Q. And therefore the amount, as far as the coke actually delivered is concerned, was correct as you have stated it before?

A. The charge for the coke to the Astoria Company included the labor of loading it for delivery to them.

By Mr. **Mathewson**:

Q. Are those the two small items to which you just testified?

A. Those are the two small items, yes, sir.

Q. I suppose what the Senator means is that that does not affect the amount in tonnage or loads of coke?

A. No, it does not.

Q. That is as you have testified?

A. Exactly, as to the price and the quantity.

700 By Mr. **Page**:

Q. Now, have you the account of the National Coke & Coal Company?

A. The account of the National Coke & Coal Company appears on page 124 of the Sundry Debtor Ledger, marked 100 for identification.

The Sundry Debtor Ledger is now marked Complainant's Exhibit for identification No. 100.

Q. According to that account, what was the total amount of coke sold to the National Coke & Coal Company, expressed in dollars, for the year 1905?

A. It would take a little time to pick out the items as shown by the ledger account of the National Coke & Coal Company. If you care to wait until morning I can have that done, and save the time of doing it here.

Q. Yes, we will pass that item for the moment then. Does the National Coke & Coal Company handle coke for any other concern than the Consolidated Gas Company?

A. No, sir.

Q. It does not handle coke for the Central Union Gas Company?

A. No, sir.

Q. So that the operations of the National Coke & Coal Company will show the sales of the coke of the Consolidated Gas Company which is charged as against them on this ledger?

A. Yes, sir.

Q. And would not be complicated by the sales of coke for any other concern?

A. For no other concern, no, sir. It would not comprise all the sales of the Consolidated Company.

Q. No, that is why I changed my question. The ledger, Exhibit No. 100 for identification, is the one that has in it the account for street lamps, isn't it?

A. The account with the City of New York?

Q. Yes, for street lamps.

A. For street lamps, yes, sir. The account appears on folio 93 of the Sundry Debtors Ledger, which is marked Exhibit 100 for identification. 701

Q. Now, will you explain this account, what the charges mean?

A. The charges that appear in the account refer to the charges for the repairs to the street lamps.

Q. And that item alone?

A. And that item alone.

Q. And will you see how much that amounted to for the year 1905?

A. $162,787.76.

Q. Is that a part of the item of "expenses, street lamps, $289,259.09" that appears on Complainant's Exhibit 94?

A. Yes, sir, the major part of it is. I observe that there are some charges included in here for naphtha and some for carting, furnished to the corporation of the City of New York.

Q. Well, that would be in connection with the repairs, wouldn't it?

A. I am not sure that that is the case. For example, naphtha, I don't know why we would charge the city with naphtha in connection with any work we did for them. I think more likely we have sold it to them for purposes of their own.

By Mr. Mathewson:

Q. It may be probably naphtha for thawing out the lamps in the winter time or something like that?

A. No, we would not charge them for naphtha used for that purpose.

By Mr. Page:

Q. Well, if there is any item in that account which should be deducted, will you indicate what it is and how much deduction?

A. Senator, after comparing these items with the sundry debtor blotter, I am of the opinion that every item here is properly a credit and applies to the street lamp account as shown in the operating ledger. I note, however, that after July——

702 Q. Do you mean properly a credit?

A. Yes, being a charge against the city and a credit to the operating account.

Q. But in this account it appears as a debit?

A. All charges appear in this account, of course, as debits. Every item here is properly a credit against the operating account, street lamps, and the aggregate for the year 1905, as already testified, is $162,787.76.

Q. Prior to July you seem to have an entry in each month of about $21,000, running from $20,743 in January to $21,757 in July, and after that period that item seems to be omitted from the account. Will you explain what that item was?

A. I think that it may reflect some change in the contract at that time or the fact that the price of gas to the city changed at that time, or at least the price of gas fixed by law to the city was changed at that time; what change we might have made in this account I am not able to say at the moment. If they were not charged here they were charged elsewhere for whatever service was rendered.

By Mr. Mathewson:

Q. The law reducing or purporting to reduce the price of gas from 90 cents to 75 cents to the municipality took effect July 1, 1905, Mr. Carter, and is that act which we are now contesting in this suit. Would that give any explanation, to your mind?

A. It may have had something to do with it.

By Mr. PAGE:

Q. What effect would the reducing of the price of gas have on repairs to street lamps. As I understand, this account was an account of repairs to street lamps?

A. That is my understanding. I know it is so at the present time.

703 Q. Well, is it that up to July, 1905, you had a contract for repairs and maintenance and after that time the Welsbach Lighting Company had it, or anything of that sort?

A. That might possibly have contributed. I would like to look at my ledger and give you the information later.

Q. What other accounts would enter into this $289,259.09 of street lamps on Complainant's Exhibit 94?

A. The charges against that account are made up from the pay rolls, from the reports of the employment of material in repairing or maintaining street lamps, any bills paid the Wellbach Street Lighting Company for maintaining mantle burners and charges of that kind, would appear to the debit of the street lamp account, the operating account to which you are referring.

Q. Is that brought into any ledger account, any single ledger account, those items that you speak of?

A. Yes, they are brought into the street lamp account that you were consulting yesterday in the operating ledger. The street lamp account for the Hester Street branch is shown on pages 601 to 607 of the operating ledger, marked Complainant's Exhibit 97 for identification.

Q. Now, where is that assembled and made a charge against the City of New York, in what account in your books?

A. Some of the charge against the City of New York, which would reimburse the company for expenditures that appear in this account, would appear in the sundry consumers ledger, where the city appears as a debtor for supply of gas to, and lighting and maintaining public lamps.

Q. Now, before we turn to that account, will you take your blotter of the sundry debtors account, and refer to one of those items of $21,000 and see just what it is?

704 A. The item in January, $20,743.33, the memorandum in the sundry debtor blotter marked Exhibit 99 for identification is a charge against the corporation of the City of New York, for lighting, extinguishing and maintaining public lamps for the month of January, 1905, at Hester Street, 66th Street and 111th Street, $20,743.33.

Q. Well, now, knowing what that item is, was there any reason that you know of for its disappearance after the month of July in the accounts?

A. Yes, sir, a very good reason. The reason that it was not based on anything more than an estimate and did not represent an actual expenditure on the part of the company for that service. As you will observe, the entry gives no detail or any particulars of any kind, and no information of that sort was then or is now available. Therefore the practice of arbitrarily making that division was abandoned.

By Mr. Mathewson:

Q. Do you get a lump sum for the gas and lighting and extinguishing, &c.?

A. Yes, sir, we do.

Q. Without any division at all?

A. Without any division of any kind.

By Mr. Page:

Q. And because this was merely a method of estimation and did not represent any financial transaction, you abandoned it afterwards, is that your statement?

A. Abandoned this particular method, and charged the city as a sundry consumer, as the books will indicate thereafter, for the full amount of their bill, not only the gas, but the maintenance, lighting, extinguishing and maintaining.

Q. Then the account up to July 31st, represents not alone repairs to street lamps, but also for lighting, extinguishing and maintaining?

A. At an estimated figure, yes, sir.

Q. At an estimated figure. To light and extinguish and
705 maintain public street lamps, you had to employ men, didn't
you?

A. Most decidedly.

Q. And their wages would be the cost, that much of it would represent an actual transaction wouldn't it, of which the value could be fixed and not estimated?

A. Yes, assuming the men were engaged exclusively in that line of work.

Q. Now after that time you say you adopted some other method of charging them. What is that?

A. The city appeared as a debtor in another account for the entire amount of the bill for the street lamp service including the gas and the maintenance.

Q. Will you turn to that account please?

A. The account would appear in the consumers ledger which I have not among the books that are here.

Q. You mean the consumers' ledgers at the different branches, or——

A. No, at the general office.

Q. Were you not to prepare us a statement of that amount?

A. Yes, that is being prepared today? I will have it in the morning.

Q. And that is the account to which you refer?

A. That is the account, yes, sir.

Q. Have you the ledger here in which appear the details of your transactions with the Welsbach Street Lighting Company of America for their care or service with reference to these street lamps?

A. We have not that ledger here. They appear as creditors of the company instead of debtors, and their account would appear in a sundry creditors ledger.

Q. What account would the credit be in when you debit them what you pay, where would the credit appear to offset the debit?

A. What are you referring to?

Q. Well, as I understand double entry bookkeeping, you must in some way get rid of that credit balance by entering a debit balance and to do that there has to be another credit to offset it.

A. To what account are you referring?

706 Q. The Welsbach Street Lighting Company account?

A. The Welsbach Street Lighting Company account would be credited with the amount of their bill for maintenance of the public lamps equipped with mantle burners and the street lamp account would be charged with that bill.

Q. You have the street lamp account here haven't you?

A. Yes, sir.

Q. So that that would appear as a part of the street lamp account segregated for these different stations that you have referred to in the operating ledger?

A. Yes, sir.

Q. And the total of that account would include that item as well as the other items of charge against the city, would it?

A. The street lamp account?

Q. Yes.

A. Yes, sir.

Q. This item which you have been testifying to on your sundry debtors ledger, corporation of the City of New York, is not included in any way, is it, in this $289,259.09, headed Street Lamps, on this exhibit?

A. No, those are the maintenance and the repairs which have been charged against the city and have been credited to that account.

Q. Credited to which account?

A. The street lamp account.

Q. And does that appear in the 160 odd thousand dollars?

A. No, not all as a credit to street lamp account. The repairs appear as a credit to street lamp account. I might be able to point that out.

Q. This sum of $289,259.09 set forth under the head of street lamps in Exhibit 94 is the total of your street lamp account for the Hester Street Department, Sixty-sixth Street Department and 111th Street Department?

A. Yes.

Q. Will you show on that account where there are any offsetting credits?

A. The offsetting credits in that account are the bills rendered the city for repairing the lamp posts.

707 Q. Well, this item of $289,259.09 represents, then, the entire debit side of the account?

A. The entire debit side, account for maintenance and repairs, less the amount billed the city for repairs.

Q. Show me where is the offsetting credit that reduces this amount to $289,259.09.

A. Well, this is a long account. I will have it all taken off and summarized if you desire. It is a pretty long account.

Q. Have you got it here?

A. I think it is all here. I can take up one and illustrate it.

Q. Let me look at it.

A. Here is an item for example, an offsetting charge to sundry debtors and crediting this account.

Q. Referring to a credit of the Hester street account?

A. That item represents charges made during the given month to the city and to any other parties for whom work was done in connection with the street lamps either in the nature of erecting or removing or resetting or repairing the lamp posts. It would be spread out perhaps in a number of items in the sundry debtor blotter for the month, and if you care to have me, I will summarize them.

Q. Is there a street lamp account in the general ledger in which all of these items are assembled relating to street lighting and lamps?

A. No, the general ledger account is a single operating expense account which brings all these operating accounts together in one single account.

Q. Now, when you have referred to this debit balance of $289,259.00, where do you charge that off?

A. To profit and loss account at the end of the year.

Q. As a debit item?

A. As a debit item, closing it into profit and loss account.

Q. Could you give us a detailed analysis of your profit and loss account?

A. I could.

Q. For the year 1905?

708 A. Yes; you have got it already, I think, comprised in the exhibits; that statement showing the gross revenue, the operating expenses, the net revenue, the miscellaneous income, income from owned securities, dividends and the deficit. With respect to the sales, they appear as one item in the operating ledger.

Perhaps this would be a good time to explain the slight difference of some thirteen hundred or fourteen hundred dollars that appeared in comparing this statement of sales with the operating ledger last evening.

By Mr. **Mathewson**:

Q. What statement of sales?

A. The statement of sales appearing in Exhibit 96.

By the **Master**:

Q. That difference about which the question was raised yesterday?

A. Yes, a statement of the gas sales for the calendar year 1905, on page 719 of the operating ledger, marked for identification Complainant's Exhibit 97; the gas sales are given as $13,553,802.97, that being the amount of bills rendered to consumers for gas supplied during the year.

By Mr. **Mathewson**:

Q. According to their meters, I suppose?

A. As shown by the meter reading, including also, however, the gas supplied for public lamps, which is not metered. On page 707 of the operating ledger referred to appears an account called Special Deductions which is charged with special allowances to consumers upon their bills, aggregating for the year $1,320.00. In making a statement of the sales for the year, as those deductions were made from the consumers' bills, the sales in the statement Exhibit 709 No. 96 were shown for the net amount; that is, for $13,553,802.97, less special deductions of $1,320.00, leaving the net sales as shown in Exhibit No. 96, $13,552,482.97.

Q. In other words, Exhibit No. 96 was a statement of income at that point?

A. A statement of gross income from sales of gas.

Q. And having made the allowances in question, it would not have been accurate had it shown the amount without those deductions?

A. No.

By Mr. **Gans**:

Q. Those deductions, do I understand it, are cases where people had established to your satisfaction that they had been overcharged and you made them an allowance?

By Mr. **Mathewson**:

Q. Not in the character of rebates in the ordinary sense?

A. Not in the character of rebates or donations.

By Mr. **Page**:

Q. When we referred to the details of the profit and loss account, you said you thought it had been given in Exhibit 96?

A. Substantially, yes.

Q. That is the exhibit to which you refer?

A. That is the exhibit to which I refer, and I was about to explain that while the operating expenses are given here in one item, they are given in Exhibit 94 in considerable detail. A statement is being prepared giving the gross fixed charges, the credit interest, and confirming the net amount charged for the year, $972,423.44. The income from securities owned, miscellaneous income and dividends paid are shown in this report, and appear to debit and credit on profit and loss account; and in fact, there is nothing in 710 this profit and loss account that does not show in this statement, according to my understanding. If you wish, however, I will check the statement and confirm that.

Q. You could show that by your final trial balance for the year? That shows a deficit, does it not?

A. The trial balance would scarcely indicate it. A comparison of the balance in the profit and loss account on the 1st of January, 1905, and the 31st of December, 1905, would show that. I will make such a comparison if you desire.

Q. Could you let us look at the final trial balance in which this deficit appears. After charging off the various items, I mean, to profit and loss, you take a final trial balance.

A. The trial balance would not indicate any deficit whatever.

Q. There is a suggestion to me that it would show in some way how the deficit fits in and is taken care of. Would it not?

A. No, it would not in any way whatever. It would simply show the balance in the profit and loss account at the date the balance sheet was made up.

Q. If you have a deficit that goes to reduce your profit and loss, and you have to draw from surplus, will there not be some entry or item on your trial balance that should correspond to that deficit? This is supposed to be a result of your year's business When you get through that, you find you have a deficit, which you had to make up from surplus. Where is your trial balance to show that deficit after that deduction is made?

A. The balance sheet as of December 31st, 1905, would show the surplus account after that deduction.

Q. That is what I want.

A. The amount of surplus on December 31st, 1905, was $920,476.64, as shown by profit and loss account on page 721 of the operating ledger, Complainant's Exhibit 97 for Identification.

711 By Mr. Gans:

Q. If we had the corresponding trial balance at the end of the year 1904 and compared the surpluses appearing thereon with the surplus appearing on your trial balance at the end of 1905, less dividends, &c., we would then be able to get at this figure of deficit which appears on Exhibit 96, would we not?

A. I would only make this statement in that connection; the trial balance or balance sheet could only be a copy of the books. We have brought the books here to confirm the balance sheets. Now, the account itself is before you, and the variation between the balance on the first of January and the 31st of December, 1905, is right here in this account. It does not take a balance sheet for two periods to show the variation in the profit and loss account when the profit and loss account is before you.

Q. It would show it, would it not?

A. Certainly such a balance sheet would show it the same as this ledger does.

Q. It would assist in proving the books, would it not, according to a bookkeeper's or an accountant's ideas of proving a book—that is, establishing the propriety and accuracy of the system of bookkeeping?

A. No, nothing of the kind.

Q. Would you give that as your opinion as a man used to handling books for many years?

A. No, not when the books are before you. The balance sheet would be of very little use when the books are before you.

Q. If you had a balance sheet, would it facilitate you in knowing what to look for in the books?

A. It would facilitate you to the same extent that the index in the front of the book I am now using would give you the folios of the accounts in the books; it would not even facilitate it as much as that, because the accounts in the balance sheet as they
712 have been exhibited here are not folioed; therefore it would not be as useful as the index in the ledger would be.

Q. Have you a book of trial balances?

A. We have a book of the trial balances.

Q. Have you that in your possession?

A. I have that in my possession.

Q. And it is a book which would contain the balance sheet that I refer to?

A. It would contain the balance sheets taken from the general ledger every month in the year.

Q. Is there a final balance sheet in addition to those made up at the end of the year?

A. There is a final trial balance sheet; a balance sheet as compared with the trial balances that are taken off monthly during the year.

Q. Is there a final trial balance sheet too?

A. There is a final balance sheet as of December 31st, and a balance sheet of December 31st.

Q. Each year?

A. Every year.

Q. Are those contained in separate books, or does one book cover a number of years?

A. I think they are contained in one book; or rather I think one book would cover two or three years. In some cases I think one book would contain one year's balance sheets.

Q. Is that such a book as this, a bound book, the same shape or form?

A. Not as large as anything here.

Q. But it is a bound book?

A. Yes, sir, a bound book.

Q. Not a loose leaf system?

A. No, sir.

By Mr. Page:

Q. Would that book contain the final balance sheet after the entries had been made to profit and loss at the end of the year?

A. Yes, it would give the balances that appear in this account before you.

713 By Mr. Gans:

Q. Have you no account called surplus account?

A. No, sir, we have not a surplus account.

Q. The only account in which surplus appears is the profit and loss account?

A. The profit and loss account.

Mr. Page: We make application for the production of the final balance sheets of 1903, 1904 and 1905.

Mr. BURR: The same application is made on behalf of the City as well as the State.

Here an informal discussion between counsel took place which the stenographer was directed not to take.

Mr. MATHEWSON: We object to the 1903 balance sheet on the grounds that I have stated. We put in two statements of operation, for two years; one beginning October 31, 1904, and terminating October 31, 1905, and the second one beginning December 31st, 1904, and terminating December 31st, 1905. I have no objection to producing the balance sheets for those periods, or allowing an inspection to confirm them at the company's office; but back of that for the reasons I have stated I do not think it is proper that we should be asked to do it.

Mr. PAGE: I call the Master's attention to the fact that the complainant has put in a condensed balance sheet, going back to 1884, for the purpose of comparison with October 31st, 1905, for the purpose of his case. Now, it seems to me that we are not going into any examination of the books or anything of that sort for those years; but it has quite a bearing on this question of their alleged surplus.

The MASTER: It seems to me that is so, Mr. Mathewson.
714 As I recollect it, you put in some tabulation that went back
for quite a period of years. Now, while of course the extent to which the details of that can be gone into is, I fancy, a matter of discretion, and ought not be allowed to extend to unreasonable allowances; still I think for the purposes of ordinary cross-examination these gentlemen are entitled, for the purpose of testing the accuracy of any statements that they may question, to get those documents.

Mr. MATHEWSON: The statement just referred to, the balance sheet, was of this character; the allegation of the bill was that the company was incorporated with a certain capital and took over property which was appraised at a certain figure. Then the allegation of the bill continues that the stock had been increased, and that the property meanwhile had increased to certain figures on the books of the company. This question which was presented here was merely to meet the requirements of the allegation, to show how the company stood in its stock and its assets, in this balance sheet in 1884, as increased to 1905. Merely to show the comparison of the two—not a comparison of the two so much as to meet the allegation of the bill, that the books of 1905 show certain things. If the Master thinks that the 1903 balance sheets would be instructive to December 31 as requested, in connection with those of 1904 and 1905, very well, but I do not see how it is material.

The MASTER: I do not know what these gentlemen have in their minds; still I can conceive that it may have some relevancy or materiality in regard to this issue raised by your bill, and I
715 should be disposed to let them go into it, at all events for the
purpose of developing what points they have got. As I understand it, you ask for the balance sheets of 1903, the end of 1903 and 1904.

Mr. **Page**: And 1905.

Mr. **Mathewson**: If the Master's ruling is that they be pertinent, we will except and produce them of course.

The **Master**: As I understand it, all these gentlemen want is an inspection; possibly after inspection they may find that they do not care to use it.

Mr. **Page**: That is all; we simply desire to use it, possibly to limit our cross-examination.

Mr. **Mathewson**: Has the Master ruled on the request?

The **Master**: Yes.

Mr. **Mathewson**: Then I except, and we will of course observe the requirement of the Master.

The **Witness**: That is to be presented here in the same way as these balance sheets are, as I understand it.

The **Master**: Let us have an understanding on that. There has been some informal discussion here to-day about the advisability of counsel attending with their experts at the office of the company instead of having this very slow and cumbersome method of proceeding here with the books, and if that suggestion is carried out I assume that an inspection of those balance sheets at the office is all that you want, Senator. You do not care about having those books brought down here, if you can get what you want up there.

Mr. **Page**: No.

Mr. **Mathewson**: We can produce a copy of them if it is required.

716 Mr. **Burr**: From the conversation I had with Mr. Page I was under the impression that Mr. Mathewson, counsel for the complainant, had agreed that the City's expert accountant, as well as the accountant for the State, might attend at the office of the complainant company and there make such an inspection as was agreed upon. This inspection I now understand is agreed upon to the extent of an examination of these balance sheets which the Senator has just described. Am I correct in that understanding?

Mr. **Gans**: It goes beyond that.

Mr. **Mathewson**: Well, so far as Mr. Burr has stated it, that is quite agreeable to us.

Mr. **Burr**: And so far as these accountants might observe anything else that might enlighten them as to the items in these balance sheets, that information would be extended to them and shown them by Mr. Carter.

Mr. **Mathewson**: Now you are going pretty far. I don't know quite what you mean. If they wanted a special examination on any question it might be we would prefer to have it before the Master. I cannot conceive that you will, but I wouldn't want to stipulate on the point that you raise at present.

Mr. **Burr**: No, I assume if they find there is any information which in their *po*inion they require and should Mr. Carter refuse to give us that, we may make such representation about it to the Master as we deem proper and have him rule upon the matter.

Mr. **Page**: Well, we can do that any way.

Mr. **Mathewson**: They are to have the inspection of the balance sheets requested, to see what they are, and even if the Master considers it pertinent we will allow a copy to be taken and an 717 examination, and if any questions arise they can be dealt with.

Mr. **Burr**: Very good.

Mr. **Gans**: Are they not also to have an inspection of the books of accounts for the calendar year of 1905?

Mr. **Mathewson**: Farther than that, the complainant is willing, instead of compelling counsel to check off this statement, Exhibit 94, to see whether the aggregation of items in that exhibit is an actual aggregation of those in the books of the company, to permit the accountants of the City and State, one from each, with Mr. Carter, to go over the items of the books of the company of which these various headings are the aggregate to see whether they are an accurate aggregate of those items, and whether the summary in Exhibit 94 is a true statement of the items as they appear upon the books of the company.

Mr. **Page**: And also Exhibits 95 and 96.

Mr. **Mathewson**: And also Exhibits 95 and 96.

Mr. **Burr**: Now, when is this examination to take place?

Mr. **Mathewson**: 8 o'clock to-morrow morning. We would be glad to have it go on then and proceed through to-morrow. Mr. Carter has consented to stay here so as to facilitate it, at the office of the company.

At 4 P. M. adjourned to Monday, August 13, 1906, at 11 A. M.

Last Exhibits:
Complainant's 100.
City's 1.
State's E.

718 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 1), pages, numbered from one to 717 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office. (Vol. 1.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of the U. S. Circuit Court, South. Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

719 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, MONDAY, *August* 13, 1906—2 p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Burr, Mr. Page, Mr. Gans.

U. S. Circuit Court, Southern District N. Y. Filed Jun- 24, 1907. John A. Shields, Clerk.

720 ROBERT A. CARTER—Cross-examination by Mr. PAGE continued:

Q. Have you produced any of the statements heretofore requested?

A. I produce a statement which you requested in reference to the debenture bonds.

Mr. PAGE: I offer the statement in evidence.

Received in evidence and marked State's Exhibit F.

The WITNESS (continuing): I produce a statement showing the amount of gas stove rents received during the year 1905, amounting to $122,322.60 (above statement not offered in evidence). I have also had prepared a statement showing the quantity of gas supplied to the city during the calendar year of 1905. The quantity includes the gas supplied public lamps, which is estimated. The statement also shows the amounts charged against the city for gas sales, for the maintenance of public lamps, and for repairing city lamps.

Mr. PAGE: I offer the statement in evidence.

Received in evidence and marked State's Exhibit G.

Q. Where did you say this item of gas stove rents appears in the preceding exhibit?

A. It does not appear in any particular exhibit except as included in the item of miscellaneous income. We made a similar statement respecting the nominal year ending October 31, 1905.

By Mr. MATHEWSON:

Q. But that appears in Exhibit 95 and this appears in Exhibit 96?

A. Yes, in Exhibit 96.

Q. It does not appear, then, in both Exhibits 95 and 96?

721 A. No, that is right. I thought the Senator was referring to both statements of rent.

By Mr. PAGE:

Q. Referring to State's Exhibit G, as I understand the first item "Metered service" refers to the gas furnished to public buildings at a rate of 90 cents, is that right?

A. Yes, sir, and in that connection, Senator, I should explain that while we have charged the City at that rate since the first of July, 1905, no bills have been rendered to the City. The price of gas supplied to the City was fixed at 75 cents by the act of the legislature going into effect July 31, 1905. We are contesting that act of the legislature, and in the meanwhile we are withholding the bills, although for the purposes of making up our accounts, completing our accounts, we are putting the charge through the books at the rate of 90 cents per thousand cubic feet.

Q. Then 127,746,300 cubic feet of gas at 90 cents is the actual measured cost that was sold?

A. With the exception of 33,600 cubic feet which, while charged for at the rate of 90 cents, is not metered because it is gas supplied some experimental lamps, the maintenance of which is attended to by the parties who own them. We furnish the gas to the lamps and the charge in our books appears at the rate of 90 cents per thousand cubic feet.

Q. And that is billed or charged on your books at $114,971.70?

A. That is the case, yes, sir.

Q. And the item of 270,779,678 cubic feet, which is estimated, I notice is charged on the books at $565,241.39?

A. That is the case.

Q. The difference between that 270,779,678 cubic feet at 90 cent, and $565,241.39 would be the amount charged for lighting and maintenance, would it not?

722 A. That assumption would be correct if the quantity shown there, 270,779,678 cubic feet were a metered quantity. It is an estimated quantity and estimated, we think, at a very low figure, being three cubic feet per lamp per hour. As a matter of fact, we have every reason to believe that the consumption is considerably more than that. If that is the case the amount furnished the city through public lamps calculated at 90 cents would amount to more money than the amount shown in that report, the difference between which and the total amount of the bill would be less than the figure you are assuming.

By Mr. GANS:

Q. Well, if the city maintained its own lamps and you charged them for nothing but the gas that you delivered and charged at the best basis at which you are able to justify under present conditions, you would receive 90 cents per thousand cubic feet on 398,525,978 cubic feet, wouldn't you?

A. Yes, we would, assuming that we made such a contract and accepted three cubic feet per lamp per hour as a fair basis for computing the gas supplied.

Q. Well, that is the best computation you are able to make at present?

A. No, I am inclined to think that the present contract stipulates three and a half cubic feet under existing conditions, and assumes that quantity supplied to the lamps. That is my impression.

By Mr. **Page**:

Q. Is that the estimate you have made here?

A. No, that estimate made there is upon the basis of previous contracts where the quantity of three feet per hour was stipulated in the contract.

723 By Mr. **Gans**:

Q. But as of present, I mean the time covered by this statement?

A. It would not make any difference. The same quantity of gas is supplied to the lamps now as last year. We are satisfied it is nearer four feet than three feet.

Q. But you haven't any method of proving that definitely, have you?

A. No, we have not.

Q. Upon the basis of charging the city these figures, charging the city for the amount of gas that here appears, and upon the basis of the gas otherwise accounted for by your meters, the amount of gas unaccounted for is only three per cent. of the total output, is it not?

A. That is the case, approximately three per cent. However, I might say that considerable variation in this amount, one hundred per cent., would affect the general sales I think hardly one per cent.

By Mr. **Page**:

Q. For the purposes of your company and for your own bookkeeping you take this amount of 270,779,678 cubic feet as the amount of gas that you deliver to the city at its lamps?

A. An estimated amount.

Q. Yes, an estimated amount. And that is the amount that enters into your books as the amount that is delivered?

A. Well, it is not the basis of any charge to the city. It is only an estimate made for the purpose of accounting for our output of gas for statistical purposes rather than any other purpose. We have not billed the city for any gas in connection with the supplying of street lamps, or did not during the period covered by that statement.

The **Witness** (continuing): I have a statement showing the entire gas sales for the year 1905, quantity, and amount of bills charged or rendered for same. 724

Mr. **Page**: I offer the statement in evidence.

Received in evidence and marked State's Exhibit H.

The **Witness** (continuing): I have also a statement showing a table of the interest on bonded debt account; that is, the debit and credit items appearing in that account for the year 1905.

By Mr. MATHEWSON:

Q. Did that produce the amount of net interest that we charge?

A. It produces the amount of net interest which appears as a charge in our statement of operations for the calendar year of 1905 (Exhibit 94), being $972,423.44.

Mr. PAGE: I offer the statement in evidence.

Received in evidence and marked State's Exhibit I.

Q. With reference to Exhibit I, the items of interest on debenture bonds refer to the outstanding debentures of 1888?

A. Yes.

Q. And the item of Interest on convertible Debentures refers to the debentures of 1904?

A. That is the case.

Q. Now, as to the items of Interest on Bills payable; what do they refer to?

A. We had some notes out that were canceled in 1905, upon which that amount of interest accrued, and they were canceled during that year.

Q. What was the amount of those notes?

A. My recollection is that they amounted to $900,000.

Q. To whom and for what purpose were they issued?

725 A. The notes were due to the National City Bank, and the purpose for which the money was originally borrowed I do not recall, if I ever knew. They had been outstanding for some time.

Q. What rate of interest did they bear?

A. My recollection is that the interest we paid upon those notes was 3¼ per cent. I presume it was because the rate of interest was so low that there was no haste in canceling that obligation.

Q. Now, in what account would those notes appear in the books?

A. Bills payable. The balance sheet that your expert took off of December 31, 1903, will show that amount as outstanding in that account at that time; not outstanding as of December 31, 1905.

By Mr. GANS:

Q. Can you tell us more definitely when those notes were made?

A. I cannot tell when they were made; it was prior to December 31, 1903, and they were canceled in 1905.

By Mr. PAGE:

Q. Can you state when those notes were issued?

A. No, I cannot.

By Mr. GANS:

Q. Can you get the information from your books?

A. Certainly.

Q. Will you have it in the next session?

A. I will.

By Mr. PAGE:

Q. On the credit side there is "Interest on special Deposits;" where were those deposits made?

A. At the City Bank; at one period during the year we had a sum on deposit there which was termed "special deposit," 726 upon which we received interest. Subsequently interest was allowed upon the total amount that we had on deposit in the bank; that is the reason for a division of it into two amounts.

Q. This, as I understand it, the credit side of this account, is income on interest from investments derived from proceeds of the sale of convertible debentures?

A. Not investments in the case that you refer to, or the two items that you refer to. Those items include interest received on cash balances and not on investments.

By Mr. **Gans**:

Q. Your distinction is, that you do not call an amount deposited in bank which bears interest an investment?

A. No; that is the case.

Q. At what rate do they bear interest?

A. I am unable to say at the moment; I do not know.

Q. Could you ascertain the amount of interest or the rate of interest that you received from those special deposits?

A. Yes; I know it varied at different times, and I will make up a statement to indicate what the variations were.

Q. The interest on bank balances is on deposits in other than the City Bank?

A. No, the same bank.

Q. That was afterwards consolidated do you mean?

A. Into a general balance.

Q. So that this is for a portion of the year?

A. Each is for a portion of the year.

Q. When you are looking up that matter of the notes and bills payable, could you find out for what purpose that money was borrowed?

A. I could make an effort to. It is not always very plainly indicated for what specific purpose a loan is negotiated. Presumably it was to restore the cash account to a reasonable balance when it had been depleted for one expenditure or another. I should 727 & 728 almost be willing to testify without examination that the money was borrowed, some of it at any rate, for Astoria construction, possibly. However, if there is anything that will plainly indicate what it was, I should be very glad to get the information.

At 3.30 o'clock P. M. adjourned until to-morrow, Tuesday, August 14, 1906, at 1 o'clock P. M.

Last Exhibits:

Complainant's 100.
State's I.
City's 1.

729 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Tuesday, *August* 14*th*, 1906—1 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Burr, Mr. Page, Mr. Gans.

730 Robert A. Carter—Cross-examination by Mr. Page continued:

The Witness: I produce the following papers, which Senator Page has requested:

A statement showing an analysis of the coke account for the year 1905, giving the quantities transferred to water gas stations, used for distribution, sold to other parties, &c., and the variations between the value of the coke on hand at the beginning of the year and the end of the year, and showing the total value of that produced for sale during the year to have been $338,300.91, agreeing with the item included among residuals in the statement of operating expenses for 1905, marked Complainant's Exhibit 94.

Mr. Page: I offer it in evidence.

Received in evidence and marked State Exhibit J.

Q. Is there any account kept of the coke that is manufactured at the coal gas stations and used at coal gas stations, in quantities?

A. No, sir; you mean used at coal gas stations under the retorts, and is not accounted for produced for sale?

Q. Yes.

A. No account of it is kept, no, sir.

Q. Nor any record of the total amount of coke produced at the stations that would show it?

A. The report to the Engineer's Department probably would show the estimated gross production or quantity used under the retorts, and the balance produced for sale, merely as a matter of statistical information, and necessarily purely an estimate, since the quantity that is used under the retorts is not weighed, but is shoveled from the retort itself right under the retort as it is discharged; it would be purely an estimate.

731 Q. It would be possible, would it not, to have a statement made showing that item?

A. The estimated quantity used under the retorts?

Q. Yes.

A. It would be possible; I have no doubt that could be tabulated from the records in the engineering department.

Q. Will you have such a tabulation made?

A. Gladly.

In State Exhibit J appears an item sold to outside parties, coke and screenings, aggregating $290,232.48. The detail of those sales is given in another statement which I have had prepared showing the quantities sold at the various prices to the National Coke & Coal Company and to the Astoria Light, Heat & Power Company, who are the only two parties to whom coke was sold during the calendar year 1905. (Produces statement.)

Mr. Page: I offer it in evidence.

Received in evidence and marked State Exhibit K.

Q. Is there anything else?

A. I have had a statement prepared at your request showing the cost of repairs and renewals during the period from November 11th, 1884, to December 31, 1905.

By Mr. Mathewson:

Q. This is a sub-division by years of the statement already in evidence, is it not?

A. Yes, there is a statement in evidence giving the aggregate.

Q. For the whole period?

A. Yes, and this is a sub-division showing the expenditures each year.

Mr. Mathewson: Show it to Senator Page and see if that is what he wants. That is a detail of the gross statement.

Mr. Page: We offer it in evidence.

732 Received in evidence and marked State Exhibit L.

Q. State Exhibit L, which is now produced by you, is the detail of Complainant's Exhibit 79 segregated into years?

A. Yes.

Q. Will you explain the column headed "Production?"

A. The column headed "Production" shows the expenditures for repairs and renewals in connection with manufacturing gas, or the production of it.

Q. That is, the manufacturing plant, is it?

A. The manufacturing plant, yes.

Q. And the distribution?

A. In connection with the distributing plant and apparatus.

Q. That would be services, mains, and would it be holders also?

A. No, sir. The repairs and renewals of holders would be included in the "Production" repairs and renewals.

Q. Then the distribution repairs would be repairs to mains, services and gas stoves also?

A. Yes, and replacement of horses, wagons and harness, office furniture and fixtures, and scows, automobiles and property of that character.

The explanation that I wish to make is that the item of "Production" repairs of 1905, amounting to $217,319.07, is the aggregate of the three items of station repairs shown in the operating statement for the calendar year 1905, Exhibit 94; and the repairs included in the item of "Distributing station expense," which item is also included in the operating statement for the calendar year 1905. I will give the two figures. The aggregate of the three items of repairs shown in Exhibit 94 is $210,326.56; included in the item of distributing expense is cost of repairing apparatus, tools, buildings, etc., at the distributing stations and amounts to $6,992.71,
making the total repairs in connection with manufacture
733 $217,319.07, as shown in State Exhibit L.

Q. What figure did you use as the divisor to obtain the cost per thousand sold?

A. The sales of the company's own make, in that case.

Q. In each instance?

A. No, pardon me; I thought you were referring to Exhibit No. 94.

Q. I mean on this Exhibit L?

A. On State Exhibit L the cost is calculated upon the entire sales.

By Mr. Mathewson:

Q. In every case?

A. In every case, in that exhibit, yes.

By Mr. Page:

Q. What year was it that you rebuilt practically the water-gas plant at Twenty-first Street, and—what was your other water-gas station?

A. I am not aware that we did that in any year.

Q. The time that you changed, taking out the gasogenes, and putting in your present system?

A. In the Twenty-first Street Station?

Q. Yes.

A. We substituted some Lowe apparatus for the apparatus that was then in use during the year 1904.

Mr. Mathewson: You remember that Mr. Bradley testified that the contents of the generator house were what was replaced, not the entire plant, nor anything like it. I suppose those are the gasogenes that you referred to.

Mr. Page: Yes, those being the two generators.

Q. Then, in 1904 you replaced the apparatus in the generator house at Twenty-first Street completely, did you?

A. No, not completely; some of it; some of the apparatus in use
at that station was of the type that was installed in place of
734 some of the other apparatus, Lowe machines. We were oper-
ating Lowe machines at the Twenty-first Street Station for
several years.

Q. And what did you put in place of them?

A. Nothing; I say that we did not replace all of the generating apparatus at the Twenty-first Street Station with new apparatus in 1904.

Q. Is the other apparatus that is used there the same as was installed before consolidation?

A. That I am not able to say. My impression is that none of the generating apparatus at present at use at the Twenty-first Street Station was in there in 1884, but that is only an impression, and I am not by any means sure of it.

Q. By these changes that was made was the total output of gas at that station increased, or the capacity?

A. My impression is that the capacity at that station was somewhat increased by the installation of the new apparatus.

Q. The cost of that would be found in the item of renewals under the column of production, $266,688.22?

A. Yes. Pardon me; I should say that that would not be the cost of the new apparatus; that would be the value, or would include the value at which the dismantled apparatus was carried upon the books, which was charged off to renewal account, called depreciation account.

Q. I find in 1901 you had a renewal account under your heading of production of $275.114.94. Can you state what that was?

A. My impression is that it represented the cost of some holders at the 111th Street Station which were dismantled to make room for two large five million feet capacity holders that were installed at that point or were erected at that point.

Q. In 1898 it was $214,880.86. Can you state what that was?

A. I think in that case the charge was for holders dis-
735 mantled at the Twenty-first street station to make room for
new holders that were to be constructed at that point.

Q. In 1901 I notice it is $186,365.42?

A. My impression is that represents the cost of holders at the Eighteenth street station which were dismantled to make room for a large holder that was subsequently erected at that point.

Q. Now, generally, I will ask you—under the heading of distribution, to explain the item of Renewals; how that charge is arrived at?

A. The item of Distribution and Renewals, as it appears in Exhibit L, represents for each year the aggregate of the renewals charged for during that year from the various property accounts that have already been enumerated, including mains, services, meters, stoves, horses, wagons and harness, furniture and fixtures, automobiles, scows and property of that nature.

Q. Would that be the value of the property as carried on the books, or would it be the value of the new property that was substituted?

A. It would be the value of the property as carried on the books. In no case did we charge any new property to the renewal account.

Q. That is, if you took out a three-inch main and substituted a six-inch main you would charge off on your books the value of the three-inch main?

A. That is the case, yes, sir.

By Mr. **Mathewson**:

Q. And the additional cost of the six-inch main would go to construction of new property?

A. It would go to construction account. In fact, by the process of entering the transaction in the books the entire cost of the new main would appear in construction account, and the construction account would be reduced by the value of the old main as
736 carried in the account prior to the laying of the new main.

Q. And the net would represent what?

A. It would represent the addition to the book value of the property.

By Mr. **Page**:

Q. As I understand the bookkeeping account, you have a renewal account which would be debited with the old pipes?

A. That is the case.

Q. It would be a credit, as against the plant and property, of that amount?

A. Yes.

Q. And a debit to plant and property of the cost of the new mains?

A. That is the case, yes. The loss by reason of the removal of the old main would be diminished somewhat, as a matter of record, by the value of the old pipe as scrap.

Q. Have you anything else there?

A. This paper divides the State tax for the year 1905, amounting to $195,795.50, between the revenue from the gas business and the income from securities owned, in so far as it is calculated upon revenue, and between the excess of dividends over four per cent. paid upon capital stock which is invested in the gas business, and which is invested in the securities of other companies, in so far as it applies to dividends in excess of four per cent. paid during the year. The division, I might say, is identical with that which was made in the statement of expenses covering the years 1900 to 1904, made to the Senate Investigating Committee.

Mr. **Page**: I offer it in evidence.

Received in evidence and marked State Exhibit M.

Q. For the purpose of identification, the item of $195,795.50
737 appears on Exhibit M as the detail of item of State tax for the same amount appearing on Exhibit E; is that correct?

A. Yes.

Q. The division into tax on excess dividends, on amount invested in securities of other companies, and tax on excess dividends on capital stock actually employed in the gas making business refers to the two items of Complainant's Exhibit No. 80, being in accordance with the division of Exhibit 80, $41,356,409.86, capital stock invested in the gas business, and of the item $38,643,590.14, which is capital stock, balance?

A. Being capital stock invested in the securities of other companies.

Q. This division or segregation of this item was made by you to correspond with Exhibit No. 80, and was not made by the State officials.

A. That is the case.

Q. Is that all you have produced?

A. Yes.

The statement is made as of October 31st, because the nominal year covered by the report of the State Board on which the tax is estimated covers the period from November 1st to October 31st; in this case from November 1st, 1904, to October 31st, 1905.

Q. Referring to Complainant's Exhibit 94 the item "Contingent Expenses Including Renewals," that is the item which you have used for depreciation as I understand, to cover depreciation?

A. It covers depreciation.

Q. $1,328,316.27.

A. Yes, sir.

Q. Will you state the theory on which that account is opened in that way, what depreciation was it intended to cover and for what period of years was it estimated.

By Mr. MATHEWSON:

Q. What is that, Senator, I don't quite catch it, this account?

738 Senator PAGE: Contingent Expenses Including Renewals.

Mr. BURR: What year?

Senator PAGE: 1904.

The WITNESS: The account was opened upon the theory that a reserve of not less than that amount was necessary in our case to provide not only for current renewals and replacements and other unforeseen contingencies that might arise, but serious accidents, explosions, variations in the cost of materials and supplies, variations in the volume of business, and extraordinary replacements over and above replacement for wear and tear in the nature of supersession and is designed to cover that item in that report, more particularly the removal of the plant of the company, the manufacturing plant of the company to Astoria; and that instead of allowing such ~~a~~ fund to accumulate in the surplus or reserve account it should be separated and carried in a separate account plainly indicating its character.

Q. Did you make a sinking fund of the money thus segregated?

A. No, no sinking fund has been established of that nature.

Q. In arriving at this amount what period of years was taken into consideration as necessary to provide against the depreciation?

A. What period of years in our own experience?

Q. Well, in making up this amount that it was necessary to lay aside——

A. Well our own experience was that we required approximately four cents per thousand cubic feet sold for twenty years to take care of ordinary renewals and replacements, and that beyond that provision should be made to take care of such extraordinary replacement as might occur, particularly the replacement of 739 the plant at Astoria; through the surplus account can be considered a reserve account, or might have been considered at that time, but it was thought better that such other contingencies as might arise, more particularly variations in the cost of material and the volume of business and such serious accidents as might occur, and did occur in Boston, costing them I believe for a period of several years, 5 cents per thousand feet to provide for——

Q. Do you know of any other gas company that carries an account of this sort upon the theory that you use here?

A. Well, I don't have access to the accounts of many companies. Those that I have had all do it. I am told all the Boston companies do it and I am told other companies in this State pursue the same plan. I understand it is becoming a very universal practice.

Q. To carry an amount of ten cents per thousand cubic feet sold on the theory that that must cover the fluctuations in their business as well as the depreciation of the plant?

A. And the other contingencies that I have enumerated.

Mr. MATHEWSON: The Senator asked you if it was ten cents. It was ten cents as I understood him.

The WITNESS: In no case less than ten cents, and in some I understood, more; in fact we debated for some time whether we should not make it a larger sum than ten cents before it was finally decided upon, as shown in our accounts.

Q. You have a plant that you value yourself at some $15,000,000, haven't you?

A. About $15,000,000.

Mr. MATHEWSON: $16,087,000, October 31st; I think that is it.

740 The WITNESS: $16,087,428.72 October 31, 1905.

Q. Did you take that figure as the value of your plant and estimate what would be necessary to reproduce that plant and the length of time that probably should be allowed for its final depreciation?

A. Personally I did not do it, no, sir. I don't know that that particular calculation was made. You mean in connection with this particular reserve.?

Q. Yes, in arriving at this reserve.

A. No, I am not aware that that was done.

Q. Well, who made the calculations necessary for the establishment of this?

A. The amount does not represent the aggregate of separate units, so far as my knowledge of it goes.

Q. (Repeated.)

A. The question implies that it is an aggregate of some amount, the result of some calculations, but I am not aware that it is.

Q. Well, you could state definitely, could you, that it was not; that it was an arbitrary estimate?

A. I could not say covering anybody else's opinion upon the subject. My understanding of it is that it was a round sum arrived at after considerable debate as being adequate and no more than adequate for providing for the contingencies that have been enumerated.

By Mr. **Mathewson**:

Q. And the actual expenditure for replacement?

A. The actual expenditures which occur from time to time, which it is always intended it should include.

By Mr. **Page**:

Q. Then, as I understand you, this was a bookkeeping charge that would segregate that amount of surplus, and not a separate account really; there was no investment of a fund or separa-
741 tion of a fund other than that?

A. Well, I should say that it was not strictly a segregation of such account, as it never appeared in surplus account; it was thought better to create such a fund than to have it accumulate in a surplus account; it does not represent any segregation of assets in the nature of a specific fund.

Q. But this amount would appear in your operating expenses, to be journalized as such a charge against Profit and Loss, wouldn't it?

A. Yes, sir.

Q. And to that extent would be a depletion of your surplus in Profit and Loss Account, wouldn't it?

A. It would certainly operate to diminish the surplus earnings for the year.

Q. On Exhibit M the two items of $5,257.48, being the tax rate of one-half of one per cent., is the tax on income from securities from other sources than from the gas making business?

A. Yes, sir.

Q. And the other item of $70,538.02 is the tax on income from the gas business?

A. That is the case, yes, sir; and by using the factor one-half of one per cent. and the amount of the tax it is evident that the tax was calculated upon the gross amount of $14,107,604.00. There are no other sources than income on securities from other companies included in the item $5,257.48.

By Mr. **Gans**:

Q. How about interest on loans to other companies, Mr. Carter; isn't that included?

A. I don't think there is anything of that sort included there; interest on loans to other companies figures as a credit to offset the bond interest. The income is all itemized there, in the statement that I made, whatever it may be, it plainly states that it is income on securities.

Q. What I am trying to get at is this: Whether in assessing your tax the State Comptroller did not assess you on income de-
742 rived from the interest paid by other companies to you on loans to them as well as on the dividends paid to you?

A. No. My impression is they did not.

Q. There is some interest included here, I see in the statement itself. I did not notice that when I first asked the question.

A. It is made up from the tax statement itself, so it is bound to be correct, and it is made up from the items from which the tax is calculated.

Q. Then, according to my understanding of the division as made by Exhibit M of the income derived from gas making business, and the income derived from other than the gas making business, and of the amount of capital invested in gas making, and the amount of capital invested in other than the gas making business, covers the amount of $5,275.48, and the amount of $57,965.39 was assessed upon items which were not involved in the gas making business, is that not so?

A. Yes, I think that is a fair statement.

Q. Making an aggregate of $63,222.87 out of a total of $195,795.50 of the item of State taxes?

A. That was the case, yes, sir.

Q. And have you figured how much that amounted to of your output in the year 1905?

A. Yes, I have made the calculation at Mr. Mathewson's request and it amounts to 47-100ths of one cent per thousand cubic feet sold during that year.

By Mr. PAGE:

Q. Referring to State's Exhibit H, Sales to Private Consumers, 12,884,637,789 cubic feet, the amount of the sales carried out in dollars is less than at the rate of $1 a thousand cubic feet, is it not?

A. Yes, $11,000 less than it would be calculated at $1 per thousand cubic feet.

743 Q. What is the explanation of that?

A. The explanation is that those sales include the prepayment meter sales, aggregating about a thousand million cubic feet of gas per annum, the sales through prepayment meters are reported as recorded. The collections are reported net, that is minus any bad coin that may be found in the meters and less any loss due to the burglarizing of meters, through the use of false keys, and to defective mechanism in some cases; this loss aggregates about one per cent. of the entire volume of sales. In this case it indicates about one and one-tenth per cent. due to these causes.

Q. Now, referring to Complainant's Exhibit 93, which was a summary of operations for the nominal year ending October 31, 1905, was Exhibit 145 of the hearing before the State Gas Commission a detail of that same period and made from the same books?

A. I believe it was, yes, sir.

Mr. MATHEWSON: Look at it and see. Haven't you a copy of it here?

The WITNESS: No, I haven't a copy of Exhibit 145 before the Gas Commission, but I remember that such a statement was made giving the operating expenses for the nominal year ending October 31, 1905, in some greater detail than given in Complainant's Exhibit 93 in this hearing.

By Mr. **Mathewson**:

Q. That was after they had been given in much less detail than in Complainant's Exhibit 93 and a request was made for the information in Exhibt 145 before the Gas Commission, wasn't it?

A. That was the case.

744 By Mr. **Page**:

Q. Have you records of the character of Exhibit 145 before the Gas Commission which would cover the calendar year of 1905?

A. No, sir, nothing of that sort has been made up for the calendar year 1905.

Q. Of course, you have the detail on the books of the company or in reports made to you from the different operation stations?

A. Yes, sir.

Q. So that such an exhibit could be prepared?

A. Yes, sir.

By Mr. **Gans**:

Q. You get practically those details, do you not, for each month from each one of the stations in a separate report?

A. Oh, yes, all spread out, every item, month by month.

Q. Do you not also get from the stations a yearly report to supplement the monthly report?

A. No, we do not.

Q. So to make up a report of this character you would have to have aggregated the figures of the monthly report from each station?

A. That is the case.

By Mr. **Page**:

Q. Well, you remember that you prepared Exhibit 145 which was put in evidence before the Gas Commission?

A. I remember it very well, yes, sir.

Q. And that was an accurate statement of the operations for the nominal year ending October 31, 1905?

A. That is the case, yes, sir.

Q. As appears from your books and records, I might say?

A. Yes, sir.

Senator **Page**: I will have this marked for identification.

Marked State's Exhibit N [illegible] identification.

745 Q. Does Mr. Bradley make an annual report to the Directors of the Company?

A. I think not. I think he may make a report to the Chief Executive of the Company. I have not seen anything of the kind for a year or two. I remember two or three years ago seeing such a statement or report.

Q. Does he make that report in writing?

A. Yes, in writing. I say he does for I have seen such a report two or three years ago, but I have not seen one lately.

Q. Is that report kept by you on file?

A. The report that was made two or three years ago?

Q. Yes.

A. No, I haven't it.

Q. Is there anyone else that would have that report, if you know?

A. Assuming it has been preserved the vice-president I presume now might have it.

By Mr. MATHEWSON:

Q. You mean Mr. Addicks?

A. Yes.

By Mr. PAGE:

Q. How long ago was the last report made by him?

A. I have no idea when the last report was made. I am just replying to what I have information of, and that was the last report that I saw.

Q. Was that report communicated to the Directors of the company at any meeting?

A. You mean read to them or——

Q. Yes.

A. I think not.

Q. Were you present at any meeting of the directors when Mr. Bradley made any statement, or when there was any discussion in which he took part relative to the removal of the plant from New York to Astoria?

A. No, sir.

Q. Or when any report of Mr. Bradley's favorable to the removal of the plant to Astoria was being discussed, whether he was present or not?

A. No, sir.

746 Q. Have you ever had any discussion with Mr. Bradley in reference to it?

A. I think very likely that I may have conversed with Mr. Bradley on the subject. I would be very sure to, in fact.

Q. Has Mr. Bradley ever presented any report to any officers of the company which has become a matter of record or which is now either in your possession or in the possession of any other officer of the company, with respect to the operations of the plant at Astoria, either saying it would be more economical or more expensive?

A. I have no knowledge of any such report, Senator.

Q. Is there any record of any resolution at a meeting of either the directors or stockholders of the company with respect to the establishment of this plant at Astoria?

A. I don't know, Senator, whether there is or not.

Q. You have the custody of the Minute Book, have you, as secretary?

A. Oh, yes, I have custody of the Minute Book but I never had time to read over the old minutes in the books before I was the secretary of the company. I don't know what they might contain with respect to the organization of the Astoria Light, Heat & Power Company, and outside of that I don't know that there would be anything that would appear there. I don't think that those things would be a matter of record on the minutes of the Consolidated Company, with respect to the acquiring of land or acquiring of plant. I have no recollection of anything of the sort appearing upon the Minute Book of the Board of Trustees and I know that nothing of that nature has appeared there for the last three or four years.

Q. Since you have been secretary?

A. No, nothing appears in the Minute Book of the Board of Trustees of that sort since.

747 Q. Could we trouble you to look back and see whether there is any such record?

A. Yes.

Q. And whether that refers to or is based upon any report of Mr. Bradley?

A. I will do so.

Q. At the same time that Exhibit 145 was put in evidence before the Gas Commission, which is marked Exhibit N for Identification here, there was prepared a statement showing the operations of all stations by months, was there not, being Exhibit 144 before the Gas Commission?

A. Yes, sir.

Q. And that was prepared by you?

A. Yes, sir.

Q. From the books of the company, and from the same books from which Exhibit No. 93 was prepared?

A. Yes, sir.

Q. Defendant's Exhibit 144 appeared in the printed volume of the proceedings before the Gas Commission at page 2082A?

A. Yes, sir.

Q. Were you familiar with the Knickerbocker Gas Light Company prior to the consolidation?

A. No, sir.

Q. Do you know whether that was operating as a separate company or whether that was controlled and operated by the Municipal Gas Light Company?

A. I don't know, only from hearsay.

Mr. Page: Now, with the exception, Mr. Mathewson, of examining Mr. Carter upon the accounts that are being prepared and tabulated by our accounts, and possibly upon the matter of the record that I have sent for, that would complete my cross-examination.

The Master: Are you ready to proceed, Mr. Burr?

Mr. Burr: I am ready to proceed with the cross-examination of Mr. Carter now, but I think that an adjournment till to-morrow morning would enable that cross-examination to be shortened,

748 after I have seen exactly what has been brought out by Senator Page, as I understood that Senator Page was to consume the balance of the day in his cross-examination, the cross-examination of Mr. Carter by Senator Page having extended now over the past week or eight days, but if counsel thinks that time is to be gained by it I will proceed now.

At 3.40 P. M. an adjournment is taken till to-morrow, August 15, 1906, at 1.30 P. M.

749 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, WEDNESDAY, *August* 15, 1906—
1:30 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Garver, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Gans.

750 ROBERT A. CARTER resumes the stand.

Cross-examination by Mr. BURR:

Q. Mr. Carter, did you prepare the statement for counsel upon which the complaint was based in this action?

Mr. MATHEWSON: What statement, Mr. Burr; there are so many statements in our complaint.

Mr. BURR: The statement of the financial condition of the Consolidated Gas Company.

Q. And purporting to show the necessity of a dollar charge instead of the 80 cents fixed by the statute?

A. If you will refer to some particular statement, Mr. Burr, I would be glad to say whether I prepared it or not; there may have been a number of them, and some of them I may not have prepared.

Q. Well, I presume there were no statements prepared for the information of counsel which were not submitted to you for your supervision or approval?

A. Oh, I would not like to reply to any general question of that kind.

Q. Did you prepare the statements which were submitted on behalf of the Consolidated Gas Company to the Stevens Investigating Committee?

A. Too general, Mr. Burr, I cannot answer that question negatively or affirmatively, for I don't know. There may have been statements that I did not prepare. I did prepare a great many.

Q. Did you prepare the statements that were presented on behalf of the Consolidated Gas Company to the Gas Commission?

A. To what statement do you refer, Mr. Burr?

Q. As to the finances of the company.

751 Mr. Mathewson: I suggest that counsel call the attention of the witness to the statements to which he refers, because they were multitudinous, hundreds of them.

The Witness: Too general.

Mr. Burr: The witness I understand says it is too general?
Mr. Mathewson: The question is too general.

The Witness: The question is too general, it may refer to any statement, I don't want to say I prepared every statement submitted to the Gas Commission, because I don't think I did. I think there were statements prepared by the Engineering Department, which I never even saw.

Q. Was any person other than yourself engaged in preparing statements for the Stevens Committee on behalf of the Consolidated Gas Company?

A. My impression is there were statements prepared by the Engineering Department—any number of prepared statements called for by counsel for the Commission——

Q. Before the Stevens Investigating Committee?

A. I understood you to refer to the Gas Commission.

Q. To both?

A. The Gas Commission?

Q. To both.

A. Well, both.

Q. Did Mr. Whitely prepare statements for the committee and for the commission?

A. I am sure he did for the committee. My impression is he did also for the commission.

Q. Did Mr. Bennett prepare statements for the committee and for the commission?

A. I think quite probably.

Q. You remember the balance sheet which was offered before the Stevens Investigating Committee for 1904. Who prepared that?

A. There was no balance sheet prepared as of that period for the committee. The balance sheet of that date was submitted to
752 the Senate Committee; and my impression is that the balance book itself was in evidence.

Mr. Mathewson: It was produced at any rate.

Q. Do you remember your attention being especially called to the balance book or balance sheet of 1904 before that Investigation Committee?

A. I think it very probable.

Q. Do you remember it more especially being called to your attention in connection with the statement, which was made of the tax report for 1904 before that Investigating Committee?

A. I do remember it.

Q. Now, does that refresh your recollection as to whether that balance book or sheet was prepared or presented by you?

A. As I have already stated, that was not a prepared balance sheet, it was a balance sheet of the company's general ledger, I think, and was not prepared for presentation to the committee. There may have been a copy made of it and put in evidence, of that I am not sure. I know that the balance was presented or produced rather, but there is no preparation of any balance sheet for that committee.

Mr. Burr: Have you got your complaint with you, Mr. Mathewson?

The Master: Here is a copy.

Q. When I speak of a statement in connection with the complaint, I mean a statement purporting to set forth the values of the plant?

A. If you will indicate the statement——

Q. And the details of the sales of gas?

A. If you will indicate the statement—it may refresh my memory, Mr. Burr.

753 Q. Well, I assume before the action was begun that statements were requested from you as to the actual financial condition of the company, as that actual condition would be affected if the new legislation fixing the price of gas at 75 cents to the city and 80 cents to the general consumer, was enforced?

Mr. Mathewson: I object to that as immaterial.

The Master: Question allowed.

Mr. Mathewson: I except.

The Master: Do you understand it, Mr. Carter?

The Witness: I don't recall that I was called upon to make up any such statement as that.

Q. Do you know who was called upon?

A. I do not.

Q. You testified before the Stevens Investigating Committee?

A. Yes, sir.

Q. You also testified before the Gas Commission, did you not?

A. Yes, sir.

Q. And you have made an affidavit in this case?

A. Yes, sir.

Q. In you supplemental affidavit in the book, "Complainant's Affidavits in Rebuttal," page 37, you refer to your familiarity with the reports of the Legislative Committees between 1885 and 1886, and you called attention to the fact that investigation of the Senate Committee of 1886 lasted nearly a year. Is that a fact?

A. Yes.

Q. That their investigations into the affairs of the Consolidated Gas Company lasted nearly a year, was that the fact?

A. That is my recollection.

Q. And in that affidavit you call attention to the haste with which the investigation before the Stevens Committee was conducted?

A. Yes. Attention was called to that in my affidavit.

754 Q. In consequence of which you say that the elements entering into the question brought before them could neither be fully presented nor deliberately considered by said committee?

A. That is my opinion.

Q. You further say you hazard nothing in saying the members of the committee themselves will concede the insufficiency of time at their disposal thoroughly and in detail to investigate and determine such important matters. The result was that upon some most material points no evidence at all was before the committee; upon other points evidence was in such incomplete shape that the situation was gravely misapprehended or misconstrued by the committee. That was your opinion then and that is your opinion now?

A. Yes, it was and is.

Q. Then you complain that the commission which was subsequently appointed to investigate this whole subject was harried and hurried by certain journals in the City of New York into a decision which was not a proper one?

A. That is the case.

Q. So that you conclude that at neither of these hearings did you receive that fair and unprejudiced hearing that your company was entitled to?

A. That was my belief as expressed in that affidavit.

Q. And in consequence you suffered grave injustice and grave prejudice?

A. Yes, sir.

Q. And that your company has never received that judicial consideration of its property rights in behalf of which it has sought the interposition of this honorable Court?

A. We were very sure of it.

Q. So that at this time that you speak of, your company desired a thorough investigation into all the affairs of your company?

A. Yes, sir.

Q. For the purpose of sustaining the contention which you make, that the fixing of the price of gas at 75 cents to the City and 80 cents to the general consumer is confiscatory.

A. Yes, that is the case.

755 Q. And in the affidavit to which I have referred, and which you submitted to Mr. Justice Lacombe, you quoted from the majority report of the Committee of 1886?

A. Yes, sir.

Q. To sustain your contention as to the proper valuation of the property then held by the constituent companies in 1884?

A. Yes, sir.

Q. Do you know whether you were previously asked, Mr. Carter, whether you took any active part in acquiring the properties of the electric light companies for the Consolidated Gas Company?

A. No, sir.

Q. Were you secretary of the Consolidated Gas Company when the first electric light company was acquired?

A. No, sir.

Q. Is Mr. Whiteley an officer of your company?

A. Yes, sir.

Q. What office does he hold?

A. Assistant Treasurer.

Q. Mr. Bennett is also an officer of your company?

A. Yes, sir.

Q. And what office does he hold?

A. He is treasurer of the company.

Q. Are either of these two gentlemen officers of the electric companies?

A. Mr. Whiteley held an office in the United Electric Light & Power Company.

Q. Did you know what the situation was between 1884 and 1894 as regards the gas companies in existence in the City of New York, I mean Manhattan and the Bronx, as to competition?

Mr. Mathewson: I object to that as immaterial and irrelevant, not affecting the issues before this tribunal.

Mr. Burr: It is simply apropos of the question asked by Mr. Mathewson of this witness whether the acquirement of these 756 gas companies and electric light companies was not caused through the hostility of these companies.

The Master: Question allowed.

Mr. Mathewson: I except.

The Witness: I was familiar at the time with the existence in New York of other gas companies who were competing with the Consolidated Gas Company, that is to say the Equitable Company, the New York, The East River Company and the Standard Gaslight Company, during that period.

Q. Have you any knowledge of the rate wars which prevailed at that time, during that period between the gas companies of the City of New York?

Mr. Mathewson: I make the same objection.

The Master: Same ruling.

Mr. Mathewson: I except.

The Witness: I know that because——

Mr. Mathewson: Between 1884 and 1894.

The Witness: I am not aware that there was any rate war or any cutting of rates by the companies during that period.

Q. Are you aware of any such rate war or cutting before 1884?

A. No, I am not.

Q. Are you aware of any such rate war or rate cutting subsequent to 1894?

A. Yes, sir. In 1899 the price of gas was reduced by all of the New York gas companies in their efforts to acquire each other's business.

Mr. Burr: I move to strike that out as being a conclusion of the witness. I am asking simply for the facts.

The Witness: Well, I know why we did it.

The Referee: I will let it stand.

757 Q. You know that it was an attempt of your company to secure the business of the other companies?

A. You had better say to retain our own. It was a defensive rather than an offensive measure, perhaps that would be too fine a distinction. I only know that the price was reduced more or less by all the companies.

Q. You have characterized it. I take your answer. Whether the rate war was to protect it or to absorb other companies——?

A. I don't know that I would care to indicate where aggression began and defense stopped.

Q. What was the result, the price of gas went down, didn't it?

A. The price was reduced temporarily.

Q. How low was it reduced?

A. I could not say accurately, I think from memory——

Q. To 55 cents or 50 cents?

A. No, I don't think it went as low as that. I don't recall any cases where gas was as low as that.

Q. How low was it sold at according to your best recollection?

A. My best recollection is 60 or 65 cents, something less than the cost of manufacturing and distributing.

Mr. Burr: I simply asked for the facts, and you have characterized it, I move to strike it out.

The Master: Motion granted.

Mr. Mathewson: I except.

Q. What companies were engaged in this competition or rate war, cutting prices?

A. All the companies in New York.

Q. Outside of the Consolidated Gas Company?

A. Outside of the Consolidated Gas Company. Do you want them named?

758 The Referee: Didn't he name them a moment ago, some of them. Ask him to name the others, if there are any more of them.

Mr. Mathewson: Some of these have disappeared by consolidation. They are no longer in existence.

Q. Can you name them, name all the companies engaged in this rate war, the cutting of prices at that time—can you do so?

A. Yes.

Q. Will you do so?

A. The New York, the East River, the Equitable, the Standard, and I think the Mutual Company.

Q. Were they combined against the Consolidated Gas Company?

A. No, not that I am aware of.

Q. Or was the Consolidated Gas Company combined against them?

Mr. Mathewson: You could not very well combine one company.

Q. Was the Consolidated Gas Company fighting these other companies, or were the other companies fighting between themselves?

A. Why, all the companies reduced the price of gas, and I think more or less uniformly without any reference to any relationship between themselves.

Q. How low did the Consolidated Gas Company reduce its rate, to 65 cents?

A. 65 I think.

Q. Now how long did that condition continue?

A. My recollection is that it continued for something like a year.

Q. And how was that rate war ended, if you know?

A. I don't know.

Q. Wasn't it by the absorption on the part of the Consolidated Gas Company of these other companies that you have named, through the procurement of a controlling interest in the companies, through the purchase of stock?

759 A. I presume that might have something to do with it, that is perhaps inferential.

Q. Well, you never heard of any rate war after the Consolidated Gas Company acquired the stock of these companies to which you have testified?

A. No, sir, I never did.

Q. As a matter of fact, wasn't it the Consolidated Gas Company which started the rate cutting?

A. As a matter of fact it was not.

Q. Which was it?

A. To the best of my recollection it was the New Amsterdam Gas Company.

Mr. Mathewson: You haven't mentioned that.

The Witness: It was the New Amsterdam Gas Company at that time, the Equitable and the New York, and East River companies were combined in 1898; the New Amsterdam was at that time in operation. In August, 1898, at the time of the reduction, it was the New Amsterdam which was operating, and it was that company which to the best of my recollection took the initiative in reducing the price of gas.

Q. So that after that there was practically no competition between the gas companies in the City of New York?

Mr. Mathewson: I object to that as calling for a conclusion.

Mr. Burr: I will ask him if he knows the fact.

Q. Was there any competition at the end of the year to which you have referred between any of the gas companies in the City of New York?

A. I should say there was, I should say there is to-day.

760 Q. You claim that to-day there is competition between the gas companies of the City of New York?

A. More or less of it, decidedly.

Q. Do you claim the same condition of competition exists to-day as existed at the end of the rate war to which you have just referred, in 1899?

A. The same conditions prevail as prevailed at the end of the period during which the price of gas was reduced, in the latter part of 1899 and the early part of 1900.

Q. Do you wish to be understood as saying that the New Amsterdam and the Standard and Union are in opposition and competing with the Consolidated Gas Company in the City of New York?

A. I don't know to what extent you can designate it as opposition, but there is always more or less competing for business.

Q. To-day?

A. To-day.

Q. There isn't any statement which has been presented at this hearing, Mr. Carter, which has not been presented in some form to the Senate Investigating Committee and to the Gas Commission——

A. I think the statements that have been presented here are almost identical with those that were presented to the Gas Commission, but there were a great many more presented to the Gas Commission than were presented to the Senate Committee.

Q. And a great many more have been presented than up to the present moment have been presented here?

A. To the Gas Commission?

Q. Yes.

A. I think not, having any particular bearing upon the cost of manufacturing or distributing gas, the value of the company's assets and the company's revenues.

Q. But there were other statements as to the affairs of the company presented than have been presented here?

A. A great many statements were made up, that were purely statistical, in regard to the details of the Engineer's Department,
761 in very great detail, very voluminous, which were simply
used, as I understand by counsel, for the purpose of confirming statements that were presented referring to the cost of manufacturing and distributing gas.

Q. That is your understanding of it, but they may have put it to other purposes?

A. I think that they very clearly indicated themselves that was the purpose for which they called for the statements.

Q. Do you recollect maps of the mains of the companies, being presented before the commission?

A. Being presented before the Gas Commission?

Q. Yes.

A. I don't think I do recall that. I don't recall it as a matter of fact. I did not present them myself and I was not present when they were presented.

Mr. Mathewson: If they were presented?

Q. Do you know whether they were presented or not?

A. I don't know whether——

Q. Do you know whether they were presented to the Senate Investigating Committee?

A. I don't know.

Q. Do you know where they are now?

A. I do not.

Q. When did you last see them?

A. I don't know that I have seen any maps indicating the mains of the Consolidated Gas Company for several years.

Q. Are you not an officer of any electric light companies?

A. No, sir.

Q. Do you know what territory is embraced in the borough of the Bronx by the Bronx Electric Light Company which is not controlled by the——

A. What is the name of the company?

Q. I was referring to the Bronx Gas Electric Light Company.

Mr. MATHEWSON: The Bronx Gas & Electric Company.

762 Q. I ask can you state what territory that company embraced in the Bronx?

A. No, I cannot.

Q. I call your attention to the balance sheet appearing upon page 86 of the Minutes of the Joint Committee of the Senate and Assembly, Senate Document No. 30——

Mr. MATHEWSON: In 1905.

Mr. BURR: 1905.

Q. —and ask you whether that is a correct transcript of the balance sheet of the Consolidated Gas Company for 1904.

Mr. MATHEWSON: If you don't know, don't say.

The WITNESS: I don't know that it is and would not be willing to say that it is without comparing it with the original balance sheet.

Mr. MATHEWSON: I merely make that remark, Mr. Burr, because this was printed from day to day in haste and we found in comparing that a great many errors have been made in transcription.

Q. Now, I call your attention to that statement appearing there on page 86. Does that refresh your recollection as to whether you prepared that statement there appearing?

A. I tried to make that very plain, Mr. Burr, if it is a balance sheet of the company it is not a prepared statement for that committee. It simply is or is not a correct copy of the company's balance sheet as of that particular date.

Q. It purports to be a correct copy of the company's balance sheet for that particular day.

A. It purports to be, I should say.

Q. Did you prepare, or did somebody else prepare or take it off the books?

A. Oh, it was taken off the books by our accountant, 763 checked by me, however, sir.

Q. As to those statements which you have presented here from day to day have they been prepared by your accountant?

A. And checked by me as that balance sheet was. And the balance sheet, which is a matter of record in our balance book, was compared by me with the ledger, and checked as to it being a correct transcription of the balance sheet shown in the general ledger.

Q. I understand you to say that that is a copy of a statement duly presented here and prepared by you or checked by you?

A. No, not in detail, no.

Q. In 1884, do you know at what rate the stock issued by the Consolidated Gas Company was exchanged for the stock of the various other companies that were absorbed by it?

A. No, I don't know.

Q. Do you know whether there was any variation in the rates of exchange, or was it equal with each company?

A. I don't think any two of them were alike, Mr. Burr. That is my recollection, although I don't recall the amount at which each was exchanged.

Q. Is there any record of the rate at which those stocks were exchanged for stocks in the Consolidated Gas Company?

A. I think quite likely.

Q. Where was that?

A. I would not like to say where it would be, referring to any special record, but I have no doubt there is a record of it. In fact the records of the stock that was issued of each company would appear upon the general ledger and the capital stocks of the companies. That is a matter of record and has been testified to at this hearing, and the application of one to the other would give the average rate at which they exchanged, so after all it is a mere matter of calculation that could be done here.

764 Q. While I have got the original contracts here I want to call attention to the item of lamps. In Exhibit No. 94 there is an item of street lamps, $289,259.09, and it appears by the Exhibit in the column headed "Cost per thousand cubic feet sold" that it is charged against the thousand cubic feet sold at 2.18 cents?

A. Yes, sir.

Q. I understood you to say yesterday or the day before that this item represented the work of the Consolidated Gas Company in maintaining and repairing the street lamps of the city?

A. Over and above the amount charged the city for repairing, erecting, removing and resetting lamp posts.

Q. This amount is charged over and above those items?

A. Over and above the amount charged for those items, which are a credit in this account.

Q. Is this for lanterns or lamps purely and simply?

A. It is not a charge for the lanterns, no, I don't think there is any charge of that nature in there. It includes the labor and material employed in the maintenance of the lamps; that is, the lighting, extinguishing, reglazing, painting and inspecting and work of that kind is included in that amount.

Q. Well, contracts have been made with the city for this work, have they not?

A. At the present time I don't think the contract with the city provides for a supply of gas and lighting and maintaining the city lamps. My impression is that the only contract we have with the city to-day covering the present period is a contract for the repairing of the lamps and for the maintenance of the lamps.

Q. Do you know how many lamps the company lights and maintains and repairs?

A. Between 22,000 and 23,000.

Q. In the Borough of Manhattan?

A. In the Boroughs of Manhattan and the Bronx.

765 Q. Is it not a fact that some of these public lamps are located on the mains of different companies?

A. Yes.

Q. Embraced by the Consolidated Gas Company?

A. Yes, sir.

Q. How do you regulate the supply of gas from each company to the public lamps?

A. Why, the gas that we are charged for by the other companies as being made for us under the agency agreements includes the gas that is supplied to these public lamps.

Q. But you have no record specially of the amount of gas supplied the lamps?

A. No.

Q. Is there any record any place showing what lamps are supplied by the particular mains of the particular companies?

A. I think there may be such a record.

Q. Well, do you know whether there is or not?

A. No, I do not.

Q. Who would know about that?

A. I think Mr. Simpson might, if there is a record of that kind.

Q. Now if the City as a matter of fact pays for all this work, then this 2.18 cents is not a proper charge against the cost per thousand cubic feet sold, is it?

Mr. Mathewson: Objected to on the ground it is purely a conclusion.

Objection overruled; exception.

A. We treat this expense of maintaining the lamps as an expense, as an operating expense, and it is included in our operating expenses upon the same theory that we would include in our operating expenses the cost of doing any work for any other consumer, and we consider that the revenue from the City is properly included in our gross receipts.

Q. Well, do you wish to be understood as saying that this repair work affects the cost of gas to your company?

766 A. The repair work would not affect the cost of gas unless the labor and material employed in the repair work exceeded the amount that we charge the City under the contract at so much per unit of work performed in connection with the repairing, erecting, resetting and removing of lamp posts. If the amount that we expended exceeded the amount we have charged the City, we would consider that that variation was an expense to the gas business.

Q. If a third party had a contract for repairing and maintaining the lamps as lamps, it would not affect your business at all?

A. It would not affect our business at all, decidedly not.

Q. If the city pays you in full for that work how is it charged up against the cost per thousand cubic feet of gas sold?

A. Assuming that the amount that we expend for labor and material in connection with the repairs and erection and removing and so forth of the lampposts is exactly offset by the amount that we charge the city for the work, then the balance in here would represent maintenance and nothing else.

Q. The contract will show the exact agreement I presume, won't it?

Mr. Mathewson: You have the contract. You are representing the party that has the contract. It seems to me that should be produced.

Mr. BURR: Yes.

Q. Will you glance at the paper I now show you and say what paper that is, and if you recognize the signatures attached to it, your own among the number?

A. The paper that I have before me is the bid or estimate of the Consolidated Gas Company for furnishing gas or other illuminating material for, and for lighting, extinguishing, cleaning, repairing and maintaining the public lamps (and supplying gas, etc., for 767 new lamps, when required) and for making certain repairs to lamp posts, and for furnishing burners and appliances of improved system on street-, public buildings, avenues, piers, parks and public places in the Borough of Manhattan in the City of New York, for the term of one year from March 16, 1904, to March 15, 1905.

Q. Signed by you?

A. It is signed by Mr. W. R. Addicks, the Vice-President of the company, and the seal of the company which is attached to the bid is attested by me as secretary.

Mr. BURR: I offer that in evidence.

Received in evidence and marked City's Exhibit 2.

Q. Will you kindly look at the paper I now hand you and say what that is, and if you recognize the signatures attached to it?

A. This paper is the bid or estimate for furnishing gas or other illuminating material for, and for lighting, extinguishing, cleaning, repairing and maintaining the public lamps (and supplying gas, etc., for new lamps when required) and for making certain repairs to lamp posts, and for furnishing burners and appliances of improved system of lighting on streets, public buildings, avenues, piers, parks and public places in the Borough of the Bronx in the City of New York, for the term of nine months and sixteen days from March 16, 1905, to December 31, 1905, both inclusive. This bid or estimate is signed by Mr. W. R. Addicks, vice-president, and the seal of the company, attested by Mr. Colin C. Simpson, the assistant secretary.

Mr. BURR: I offer that in evidence.

Received in evidence and marked City's Exhibit 3.

Q. Look at the paper I now hand you and state if you 768 recognize the signatures attached to it.

A. The signatures are those of Mr. W. R. Addicks, vice-president, and Colin C. Simpson, the assistant secretary of the company, and the seal of the company is affixed and attested by Mr. Colin C. Simpson, the assistant secretary. The paper is a bid or estimate for furnishing gas or other illuminating material for, and for lighting, extinguishing, repairing, cleaning and maintaining public lamps (and supplying gas, etc., for new lamps when required) and for maintaining certain lamps and lamp posts and for furnishing burners and appliances and approved system of lighting on the streets, public buildings, avenues, piers, parks and public places in the Borough of Manhattan, City of New York, for the term of nine months and sixteen days from March 16th, 1905, to December 31, 1905, both inclusive.

Mr. Burr: I offer that in evidence.
Received in evidence and marked City's Exhibit 4.

Q. Do you know as a matter of fact whether the contract which was made by the Welsbach Company for the Borough of the Bronx was assigned to and taken over by your company for that year?
A. Yes, sir, it was.
Q. For 1904?
A. Well, I wouldn't like to say for the exact period without the contract itself or the assignment. There was such an assignment to the Consolidated Company by the Welsbach Street Lighting Company of America, but without having the documents before me I would not like to testify as to the period it covered.

By Mr. Mathewson:

Q. Isn't it your impression that it covered from March 16, 1904, to March 15, 1905?
A. That is my impression.

769 By Mr. Burr:

Q. Do you recognize the signatures attached to the contract and specifications between the Consolidated Gas Company and the city of New York which I show you, Mr. Carter, which are annexed to City's Exhibit No. 2, and covering the same period and same territory?
A. Yes, sir, the signatures are familiar to me.
Q. Signed by the officers of the company? That contract and specifications are signed by the officers of the Consolidated Gas Company?
A. Yes, sir.

Mr. Burr: I offer the contract and specifications in evidence.
Received in evidence and marked City's Exhibit 2A.

Q. And signed by the United States Fidelity and Guaranty Company?
A. As bondsmen for the company under the contract.
Q. I call your attention to this paper and ask you to look at it and state whether or not that is not a contract made between the City and the Welsbach Company for the lighting of the Borough of the Bronx, which was subsequently assigned and taken over by the Consolidated Gas Company, and whether the assignment to the company is not attached to that paper, duly signed by the officers of the company?
A. It is the bid and estimate, and attached to it is the proposal and contract, both covering the Borough of the Bronx, for the period from March 16, 1904, to March 15, 1905, and attached to it is the assignment of the contract to the Consolidated Gas Company.

Q. That was with the consent of the city? The consent of the city is also attached there, is it not?

A. It is the consent of the city, signed by John T. Oakley, Commissioner of Water Supply, Gas and Electricity.

770 Q. And the other papers you have also identified were signed by Commissioner Oakley?

A. Yes, sir.

Mr. Burr: I offer those papers in evidence.

Received in evidence and marked City's Exhibits as follows: Bid and Estimate, Exhibit 5; Proposal and Contract, Exhibit 5A; Assignment of the Contract, 5B; Consent of the Commissioner, dated July 1, 1904, 5C; Contract, Exhibit 5D.

Q. Do you recognize the signatures attached to the contract and specifications between the Consolidated Gas Company and the City of New York which I show you, Mr. Carter, which are annexed to City's Exhibit 3, and cover the same period and same territory?

A. Yes, sir, the signatures are familiar to me.

Q. Signed by the officers of the company? That contract and specifications are signed by the officers of the Consolidated Gas Company?

A. Yes, sir.

Mr. Burr: I offer the contract and specifications in evidence.

Received in evidence and marked City's Exhibit 3A.

Q. Do you recognize the signatures attached to the contract and specifications between the Consolidated Gas Company and the City of New York which are annexed to City's Exhibit 4, covering the same period and same territory?

A. Yes, sir, the signatures are familiar to me.

Q. Signed by the officers of the company? That contract and specifications are signed by the officers of the Consolidated Gas Company?

A. Yes, sir.

Mr. Burr: I offer the contract and specifications in evidence.

771 Received in evidence and marked City's Exhibit 4A.

Q. Now, look at these two papers which I hand you and state what they are, if you know, and whether you recognize the signatures attached to them?

Mr. Mathewson: We will not ask you to prove their signatures if they are signed by the proper parties; we are willing to assume that the signatures are genuine.

A. These are proposals or estimates, the bid or estimate, and the contract and specifications for maintaining, furnishing and repairing gas lamps, &c., in the Borough of Manhattan.

Q. Between whom?

A. Between the Consolidated Gas Company and the City of New York, executed by W. R. Addicks, Vice-President, and attested by myself as Secretary.

Q. Covering what period and what territory?

A. Covering the period from February 1st, 1905, to December 31st, 1906.

Q. For what Borough?

A. Borough of Manhattan.

Mr. Burr: I offer them in evidence.

The papers mentioned by the witness were received in evidence as one complete document, and marked City's Exhibit 6.

Q. Now, will you look at the other paper I have handed you and state what that is, and whether you recognize the signatures attached to it.

A. These are the proposals for bids or estimates, the bid or estimate, and the contract, the specification being attached, for furnishing, maintaining and repairing of gas lamps, &c., the contract 772 being between the Consolidated Gas Company and the City of New York, which was executed by W. R. Addicks, Vice-President, the seal of the Consolidated Gas Company, which is affixed being attested by myself as Secretary of the Company. The bid or estimate covers the period from Feb. 1, 1906, to Dec. 31, 1906, both inclusive.

Q. For the Borough of the Bronx?

A. Yes.

Mr. Mathewson: How about the contracts?

The Witness: Reference has been made to it.

Mr. Mathewson: But you do not say that the contract covers that period; do not they all cover the same period?

The Witness: The contract also covers the period from February 1, 1906, to December 31, 1906.

Mr. Burr: I offer the papers in evidence.

The papers described by the witness were received in evidence as one complete document and marked City's Exhibit 7.

Q. I call your attention to the contract marked City Exhibit 7, reading "for furnishing gas lamps, &c., on the streets, &c., and for connecting, lighting, extinguishing, cleaning, repairing and maintaining the same, and also lamps belonging to the city, supplying new lamps when required, and for furnishing burners and appliances of improved system of lighting the streets, avenues, and public places in the Borough of the Bronx." Does that describe the charge represented by this item: "Street lamps, $289,259.09," in Complainant's Exhibit 94?

A. May I see it, please, the contract referred to?

The paper marked City Exhibit 7, being the proposals for bids and estimates or the estimate, and contract for furnishing, 773 maintaining and repairing of gas lamps, &c., in the Borough of the Bronx, in so far as the Consolidated Gas Company's bids were concerned, and the contract as ultimately executed was concerned, covered but one item only of the general heading, "Furnishing, maintaining and repairing of gas lamps," etc.; as far as open flame gas lamps are concerned, it covers the maintaining only; so far as the mantle lamps are concerned, everything as stipulated in the bid or estimate, as originally printed, was to be furnished by the company. All material and labor employed under this contract would be charged against the street lamp account as shown in Exhibit No. 94.

Q. Is there anything else embraced in Exhibit 94 besides the items that are stated in that paper from which you have been testifying, City Exhibit 7?

A. Yes, other things are included.

Q. Will you name them?

A. Any expenditures for material or labor made in carrying out the contract marked City's Exhibit 6 would be charged against that account.

By Mr. Mathewson:

Q. Do the same remarks as apply to Exhibit No. 7 also apply to Exhibit 6, as to what was covered by them, one being for the borough of Manhattan and the other for the borough of the Bronx?

A. Exhibits 6 and 7 are identical in that they are both copies of the original contract for maintaining and furnishing and repairing the gas lamps, etc., the only difference between the two is the matter of territory. There are two other contracts that have been put in evidence in addition to these, and all the material and labor employed under these contracts, which are for the repairing, erecting, removing and resetting of posts, is charged to this account in Exhibit No. 94.

774 Q. So far as it comes within the period covered by Exhibit 94?

A. So far as it comes within the period covered by Exhibit 94; that is, the calendar year of 1905.

By Mr. Burr:

Q. Now, you make a charge; where does the receipt appear?

A. If you say strictly receipts—if the City were paying for this service the receipt would be indicated in the account in which they are charged for the service.

Q. But I understood you to say the other day, and what you say now rather confirms my recollection, that the City paid nothing for this service; is that right?

A. This is the case, but, notwithstanding they do not pay, we go right on charging for the services just the same.

Q. And what is the idea of charging, if they do not pay?

A. Well, to get their obligation to the company on record in our books and in their own records.

Q. Would it make any difference if they paid?

A. Not a particle, except that the evidence of that obligation to us would be extinguished by their payment of the bills rendered.

Q. Don't you consider that the City is obligated to pay?

A. Decidedly I consider that the City is obligated to pay.

Q. For this work for which you make this charge in Exhibit 94?

A. Precisely. Let me explain that when we make a bill and charge the city we credit the street lamp account for the amount that we bill the City for the repairs and for erecting and removing and resetting lamp posts.

By Mr. MATHEWSON:

775 Q. If you did not, the $289,259.09 item would be a great deal larger, would it not?

A. Very considerably larger.

Q. In other words, you carry that in the amount you consider due to you from the city, as an earning in your books, the same as though it were paid, do you not?

A. As a receipt, as though it were being paid. As far as this street lamp account is concerned, it is credited there the same as though the city were paying the bills.

Q. And by that credit the amount is reduced to the $289,259.09 that appears in Exhibit 94?

A. Yes.

By Mr. BURR:

Q. Now, referring to City's Exhibit 2A, it was provided by the contract made between the Consolidated Gas Company and the City of New York for the Borough of Manhattan, running from March 16, 1904, to March 15, 1905, that the price for single incandescent mantle gas lamps would be $24.75 per lamp for a single order for 22,500 lamps?

A. Those are the terms of the contract, yes.

Q. Now, I think you have already testified that this charge in Exhibit No. 94 is an estimated one, based upon the amount of gas the city consumes?

A. No, I have not testified to anything of that nature whatever.

Q. Then, I ask you with regard to it particularly: Under the contract to which we are now referring, City Exhibit 2A, lamps were to consume three cubic feet of gas per hour and were to burn 3,925 hours; is that true?

A. That is the case.

Q. And the contract price included the cost of gas?

A. Yes.

Q. And on this basis would not the theoretical consumption of gas cost 10.59¾ cents per year, leaving 14.15¾ cents to defray the cost of supplying, maintaining, repairing, lighting, cleaning and extinguishing of the lamps? 776

A. I do not know how you arrive at those figures.

Q. In other words, did not this contract include the care of lanterns, and repay the Consolidated Gas Company for any expenditure they might have put out on that account?

A. The price that the city was to pay per lamp per annum was supposed to reimburse the company for the gas supplied the lamps, and for the labor and materials employed in the maintenance of the lamps.

By Mr. GANS:

Q. It did, didn't it?

A. It presumably did; as far as the amounts stipulated in the contracts are concerned. Of course the amount that we received from the city is another proposition.

By Mr. **Burr**:

Q. Did not this contract include the care of lanterns, and did it not by its terms repay the Consolidated Gas Company for any expenditure that your company may have put out on that account?

Mr. **Mathewson**: We object to this on the ground that the contract itself shows. This is a construction of the contract that the witness is called upon to make, and I do not think it is accurate anyway.

The **Master**: I will let him answer it as far as he can.

(The question is repeated by the stenographer.)

Mr. **Mathewson**: I would make a further objection. The contract does not provide, as you will observe, by its terms that it shall repay the Consolidated Gas Company for any expenditures that it has put out on account of lamps. It simply provides that it shall pay the Consolidated Gas Company $24.75 for lamps, including care and maintenance. 777 I submit that the form of that question is objectionable and that the conclusion asked of the witness is rebutted by the very terms of the contract itself. There is nothing like that in the contract. Is it fair, therefore, to ask the witness to characterize it in that way, with the written contract before us? If he said it is, it would not make it so. The contract shows precisely what it provides.

The **Master**: The question of course is objectionable as to form, for the reasons that you have stated; but in view of the point that Mr. Burr has been making here about this Exhibit No. 94, it seems to me that the witness can go on and answer it in such a way as to protect himself, explaining as far as he may desire the two items in the account to which his attention is called.

Exception taken by Mr. Mathewson.

A. All I can testify to in that connection is that the amount that we charge the city, $24.75 per lamp per annum, was supposed to reimburse us for the cost of the gas supplied to these lamps, and the cost of the labor and material employed in maintaining them.

By Mr. **Gans**:

Q. By cost of gas, you mean charged at your regular price to the city under the law?

A. I have said nothing about charging cost of gas. I said that it was supposed to reimburse us for the gas supplied to these lamps; I say it is supposed to do it; but whether it does or not, I confess I do not know.

778 By Mr. **Burr**:

Q. As I understand the distinction which you draw, if the city claims that this figure of $24.75 specified in this contract was to reimburse the cost of the supply, maintenance, repair, lighting, cleaning and extinguishing of the lamps, the city is mistaken?

A. Well, I think that if you consult Mr. Lacombe he can probably explain the difference between those two contracts. We made a contract with the city for supplying gas to, and the lighting, extinguishing and maintenance of the lamps, and we made a contract with the city for repairing, erecting, removing and resetting lamp posts. There are two separate and distinct things. The charge of $24.75 for mantle lamps was supposed to cover the gas supplied to the lamps and the maintenance of the lamps, the furnishing of mantles to the lamps and the care of the lamp heads, lighting, extinguishing, glazing, painting and work of that character, but it was not supposed to cover the cost of repairing the lamp post or removing it, or resetting it, or erecting posts.

Q. I call your attention to this section 7 in the contract marked City Exhibit A.

"VII. For repairs of lamp posts and erection of new lamp posts.

A. For each lamp post straightened, the sum of $1.50.

B. For each column releaded, the sum of $2.50.

C. For each column recaulked, the sum of $1.00.

D. For each column refitted, the sum of $3.50.

E. For each service pipe refitted, the sum of $5.50.

F. For each stand pipe refitted, the sum of $2.50.

779 G. For each lamp post removed, $3.50.

H. For each lamp post reset, the sum of $8.00.

I. For each new lamp used for gas lamps, fitted up completely and fitted with new lamps, $8.00; boulevard lantern additional, $6.00; total, $14.00."

Is there any other item embraced that has not been stated in this contract, as far as the repairs of lamps are concerned. I mean embraced in that item set forth in Exhibit 94?

A. No, the contract there covers all the charges against this street lamp account shown in Exhibit 94 for what I have been referring to as repairs, removing, resetting and erecting lamp posts.

Q. Is everything for which you charge in this Exhibit embraced in these items which I have just read off from this contract, City's Exhibit 2A, or is there still something further which you do to the lamps and which you charge up to the city?

A. Yes, decidedly; the maintenance of the lamps is a charge against the same account and does not appear among those items which you have read at all; it is covered by a contract to supply mantle lamps at $24.75 per lamp per annum.

Q. Yet, the contract and specifications which are signed by your company, and are City's Exhibit 2A offered now, and which you have identified, read "For furnishing gas or other illuminating material, and for lighting, cleaning and extinguishing and repairing public lamps, &c." How do you explain that if maintaining is not embraced in this contract, and in addition to what I have read in this contract you still charge over and above the items specified in this contract.

A. Maintaining lamps and repairing lamp posts are two different
things. Even in regard to repairing lamps, I presume the
780 city draws some distinction between the term "repairing
lamps" and "repairing lamp posts."

Q. Let us simplify this thing. The city owns the lamp posts, does it not, or doesn't it?

A. It does.

Q. Does the city own the lamps?

A. In the case of mantle lamps, no; in the case of flat flame lamps, yes.

Q. How many mantle lamps are there in the city owne- by the Consolidated Gas Company?

A. I think somewhere between 22,000 and 23,000.

Q. Owned by the company?

A. Lamps owned by the company, not the Consolidated; the Welsbach Street Lighting Co.

Q. Now, in this contract, the gas is provided to be supplied to these public lamps at 90 cents, is it not?

Mr. **Mathewson**: Is it, by that contract?

Mr. **Burr**: Public buildings.

Mr. **Mathewson**: That is just where you miss the distinction. The $24.75 is to furnish the gas and maintain the lamps, and specifies no rate per thousand feet for the gas. It is a lump bid to cover maintenance and gas furnished.

Q. Do you charge more than 90 cents to the City for gas under the contract?

A. You are referring now to the lamp contract?

Q. Yes.

A. We do not charge the City anything for gas directly; the contract covers the supply of gas in the charge of $24,75 per lamp per annum.

Q. Have you ever rendered any separate bill to the City for any work done which is not specified in this contract, City's Exhibit 2A?

A. I think it quite possible.

781 Q. As a matter of fact have you ever made any charge against the City over and above what the City has undertaken and agreed to pay under this contract, for that time and for that territory?

A. Yes, I think that we have.

Q. For the Borough of Manhattan, from March 16, 1904, to March 15, 1905?

A. Yes, I should say right during that period we made a charge to the City that is not in any way covered by the items enumerated in the contract referred to.

Q. What was it?

A. Well, I have in mind one item; I would not say there are not others. At the request of the City we removed all the lamp heads belonging to the City from the City's lamp posts, and took them to a designated place of storage, and for that service we charged the City, and I do not believe they ever paid us.

Q. That was paid off, was it not?

A. Mr. Simpson says it was; I did not know that they had paid anything.

Q. So that this could not be included in this charge on Complainant's Exhibit 94?

A. No; if it had ever appeared there as a charge it would have been offset by the amount of the bill rendered to the city for the service.

Q. I want to get this thing clear. Is this charge of $289,259.09, over and above any charge that you make against the city?

A. Why no, it is not, by any manner of means; it is over and above any charge that we make against the city for repairing lamp posts.

Q. Then this item should be for repairs to street lamp posts?

A. I do not know why.

Q. The city pays you for the gas, it pays you for maintenance, and pays you for repairs under the contract; now, what else is there to be charged against the city?

A. I do not want to be captious, and say that they do not pay for any of these. We charge the city for gas maintenance and repairs; the charge for maintenance and repairs appears as 782 a charge against this particular street lamp account; the credit to the account being the amount of the bills rendered to the city for repairs.

Q. So that I may get it clear, I want you to itemize it. There is a quarter of a million dollars that you make as a charge for street lamps, and the city is under the belief that the contract made with you for the street lamps covers everything?

Mr. Mathewson: It does; that is just the point. The charge is a lump charge of $24.75 to cover the furnishing of gas and the maintenance of the lamps, as far as the greater part of our city lighting goes.

Q. This is a charge, as I understand it, which they have not been paid? Is that your claim?

A. No, I have not testified to anything of the sort.

Mr. Mathewson: We are not claiming from the city anything more than the contract calls for.

Q. Has this amount been paid to you, $289,259.09, for street lamps?

A. No, it has not.

Q. It is still due, is it?

A. It is still due, though whether it were due or not would not affect this charge.

Q. We left off at the time of the rate cutting or the rate war between the companies, and I understood you to say that when in 1900 that cutting ceased there was no longer any trouble between the gas companies and the City of New York?

A. That is substantially the case, yes.

Q. Now, what year was it that that Consolidated Gas Company undertook to absorb the electric light companies?

A. The date of the purchase by the Consolidated Gas Company of the capital stock of the New York Gas, Electric Light, 783 Heat & Power Company is a matter of record in the testimony; my recollection is that it was in January, 1900.

Q. The meeting of the stockholders was in January, 1900. You were there, were you not?

A. Yes, sir, I was there.

Q. Was the Consolidated Gas Company solvent the year before that?

Mr. **Mathewson**: I object to that as irrelevant.

The **Master**: He may answer if he knows.

Exception taken by Mr. Mathewson.

A. Yes.

Q. Did it have a surplus?

A. It had a surplus.

Q. Had it a surplus the year before that?

A. Yes.

Q. And had it a surplus for several years before 1900?

A. Yes.

Mr. **Mathewson**: The same objection and exception to this line of testimony, I presume, if the Master allows it?

The **Master**: Yes.

Q. Do you know or can you state what the object was in acquiring the Electric Light Companies by the Consolidated Gas Company?

A. No.

Q. Was there any necessity for increasing the capital stock to improve the plants used in the production of gas in 1900?

Mr. **Mathewson**: I object to this as immaterial and irrelevant. The issue of the stock has been shown, and I think the application of it also.

The **Master**: I suppose that is a matter of argument. I will allow him to answer it as far as he can.

Exception taken by Mr. Mathewson.

784 A. Other necessities for the issuing of stock than the acquiring of stocks of other companies existed at that time.

Q. Before we dismiss the subject of street lamps, I ask for a detailed statement of that item. Can we have it?

Mr. **Mathewson**: You have the books showing the whole thing, showing the credit to the account and everything.

Mr. **Burr**: The operating ledger?

Mr. **Mathewson**: Yes.

Mr. **Burr**: Very well then.

Q. Calling your attention to Exhibit 93, the item "Profit and Loss Adjustment, $4,101.12," Exhibit 93 being the summary of operations for the nominal year ending October 31, 1905, and then calling your attention to Complainant's Exhibit 94, summary of operations for the calendar year 1905, "Profit and Loss Adjustment $7,508.39," can you give a detailed statement of these accounts?

A. I can tell practically what is in them. They are both credit items you will understand, and operate to reduce the cost shown in this statement and would include any profit arising from our gas stove transactions, any overrun in our distribution material and supplies, and other small items of credit that we do not apply to any particular operating account because they are so general in their nature.

By Mr. **Mathewson**:

Q. That is a credit and operates to reduce the operating cost?
A. That is a credit.

By Mr. **Burr**:

Q. I notice in Exhibit 93 another item of "Profit and Loss Adjustment, $8,260.96," and the same item in Exhibit 94 is
785 $29,683.92. Can you give me an itemized statement of these two accounts?

A. Yes, sir, very readily; they are both credits, you understand, operating to reduce the cost.

Q. But you cannot give me a statement now.

A. I could only say in a general way what is included. Our inventory of materials and supplies indicate we have more stock on hand at the end of the year than we had at the beginning, so it involved a credit to this account.

Q. I call your attention to another item of Automobile——

Mr. **Mathewson**: Do you still want the detail of that?
Mr. **Burr**: Yes.

Q. I call your attention to another item of automobiles, in Exhibit 93, $4,354.26, and in Exhibit 94, it is put down as $5,064.16. I would like to have a detailed statement of the use of the automobiles. What were they used for?

A. Well, we will make up a statement.

Q. I want to find out if they are used for the Astoria works or used for the gas works.

A. I can explain that they are used by our superintendents to facilitate their going to and from the different manufacturing stations and from different points in the street where the mains are being repaired or being extended, used exclusively almost for that purpose, and not at all in connection with Astoria.

Q. They do not use automobiles when they go to Astoria?

A. I doubt very much if they would more than go to a ferry in one. My impression is that the roads in Astoria prohibit the use of a machine.

Q. I call your attention to item in Exhibit 93, entitled "Advertising and legal, $62,861.02," and to the same item on Exhibit
786 94, being $105,800.02. Can you give me an analysis of these accounts?

A. Yes, sir.

Q. I call your attention to the item of "real estate rents, $51,558.12," in Exhibit 93, and in Exhibit 94 it is put down at $42,674.71. Can you explain the difference between the two items?

A. No, not from my recollection of the details of the account. I should have to check it up and I will do so and furnish you with a memorandum of just what it is.

Q. Here is a very large item in Exhibit 93, with simply the word "Expense" before it, amounting to $583,278.52, and in Exhibit 94 it is put down at $490,855.36. What do you mean by expense. What kind of expense?

A. Well, in this particular case it comprises the expenses of the branch offices, including salaries, incidental expenses and possibly some other expenses, although I am not aware of it. My understanding is that both accounts are identical and they include the branch office expenses and incidental expenses—salaries and incidental expenses. That is being taken off in some detail now, that particular amount, that $490,855.36 by the accountants for the State, and they have offered to furnish Mr. Hayward with a copy of the statement they are making up. Will that answer your purpose?

Q. I think so. That will contain a detailed analysis and items to show the account, will it?

A. Yes, sir.

Q. Now, take the item in Exhibit 93, "Distribution $285,273.04," and the same item appears in Exhibit 94 as $281,524.12. What is embraced in that word "Distribution"?

A. Setting of meters, the setting of gas stoves, jobbing, miscellaneous work performed by the fitting shops, including the material that is used, and putting on burners and work of that nature.

787 Q. Well, is that item which appeared also in Exhibit 93, Repairs to Gas Stoves, $52,063.05, embraced in that item of $285,273.04?

A. No, sir, I said nothing about repairing stoves. I said the cost of setting stoves. That is quite a different item from repairing.

Q. You mean by setting, supplying, placing them in the houses?

A. Placing them in the houses.

By Mr. Mathewson:

Q. So, too, setting meters is distinguished from repairing?

A. Yes, sir.

By Mr. Burr:

Q. Is the setting of meters a large item?

A. Well, that is rather a flexible term. I don't know how you might consider that.

Q. Does it cost more than repairing them?

A. I should venture to say no, that the cost of repairing meters is greater than the cost of setting them.

Q. There is a charge for the meters themselves as distinguished from setting them, is there?

A. Yes, sir. For the meters themselves?

Q. Yes.

A. The meters themselves are our property, they appear as property in our statement of assets.

By Mr. Mathewson:

Q. They would not appear in the operating account?

A. Not at all.

By Mr. **Burr**:

Q. Where would the money expense for meters appear?
A. In the property account.

Mr. **Mathewson**: Be very careful how you answer. The money expended on meters, do you mean for the purchase of meters,
788 Mr. Burr, or expended in the repair of meters for instance?

Mr. **Burr**: I was just about to proceed to distinguish with regard to the meters. There is a cost for the meters themselves, there is a cost for setting them and there is a cost for repairing them.

Q. So evidently there are three charges against meters?
A. Yes, that is the case.
Q. I have asked you with regard to the charge for meters themselves and you say that would appear in the property account?
A. Yes, sir.
Q. The other item, Repairs to gas stoves, in Exhibit 93, is $52,063.05, and in Exhibit 94 it is $55,954.35. Can you say offhand what is the operation charge against the company, for repairs to gas stoves?

Mr. **Mathewson**: You mean within this period, Mr. Burr, or some other?

A. We well say the calendar year of 1905?
Q. Yes.
A. Well, according to the statement of cost of repairing stoves during that period, the average monthly cost would be something like $4,675, something of that sort.
Q. Do you know how many gas stoves the Consolidated Company has in operation or rented out?
A. Yes.

The **Master**: That has been testified to before.

Q. Now I find an item on Exhibit 93, "Contingent expense and depreciation," and it is there stated as $1,114,236.38, and in Exhibit 94 it is stated to be $1,328,316.37. Can you explain that difference, Mr. Carter?
A. Yes, sir, the item in Exhibit 93, Contingent expense
789 and depreciation, $1,114,236.38, includes the estimated contingent expense for the ten months of 1905, included in this statement, calculated at 10 cents per thousand cubic feet, during that period. And also the actual expenditures for rental and replacement during the two months preceding the month of January, 1905.
Q. The contingent expenses alone are figured at 10 cents per thousand cubic feet sold?
A. Yes, sir.

By Mr. **Mathewson**:

Q. Including any renewals——
A. Including any renewals and replacements that occurred during the ten months of 1905.

By Mr. **Burr**:

Q. How much of that ten cents for instance is apportioned to renewals and replacements?

A. The amount of estimated contingent expense for the ten months ending October 31, 1905, includes the $107,144.40 of actual renewals and replacements during that period. The total expenditures during the nominal year ending October 31, 1905, for renewals and replacements were $194,666.87, or 1.46 cents per thousand cubic feet sold during the period.

By Mr. **Mathewson**:

Q. Included in the total item to which your attention has been directed?

A. Not all included there, because a part of it appears as an item under the production expense of $51,532.36, being the production repairs and renewals during the two months of November and December 1904.

By Mr. **Burr**:

Q. Now, in that item for the two months additional, as appears
on Exhibit No. 94, there is a difference of over $214,000
790 charged up against that account of contingent expense and
depreciation for those two months alone, isn't that so?

A. (No answer.)

Q. In Exhibit 93, being summary of operations for the nominal year ending October 31, 1905, the contingent expense and depreciation appear at $1,114,236.38, whereas the same item for the calendar year of 1905 in Exhibit 94 appears to be $1,328,316.37. As I figure it out, that makes a difference for the two months of November and December of over $214,000, isn't that so?

A. Well, it would not be fair to compare those two amounts, Mr. Burr. In one case we are dealing with the calendar year and a uniform charge of contingent expenses of 10 cents per thousand cubic feet sold during the year, in the other case we are dealing with the estimated contingent expense for the ten months, and two months of actual expenditure accruing for November and December, 1904, amounting to $87,522.47.

By Mr. **Mathewson**:

Q. And that is considerably less than 10 cents per thousand cubic feet for the gas sold in those two months?

A. Oh, very much less, yes, sir.

By Mr. **Burr**:

Q. But it would be a simple matter, would it not, to produce a statement showing the figures or method by which you arrived at that increased charge against the account for those two months from October to December, from October to the end of the calendar year. In other words, you could very readily figure up and give the exact figures whereby the item in Exhibit 93 for the contingent expense and depreciation is increased to the large extent of over $214,000 in Exhibit 94?

791 A. You will observe, Mr. Burr, that further up the column in Exhibit 93, under the heading of depreciation, there is——

Q. You mean that item of $51,532.36?

A. There is recorded an expenditure of $51,532.36. That was the cost of the actual renewal at the manufacturing stations during the months of November and December, 1904. That should be added to the $1,114,236.38, the amount that you have been referring to, to get the total for the year ending October 31, 1905.

Q. Then these two items of $51,532.36 which appear on Exhibit 93, and this item to which you have just referred of $87,522——

A. No, no. The $1,114,236.38, the total, would be the total amount charged in the statement for the nominal year ending October 31, 1905, for further contingent expense or actual renewals and replacements.

By the MASTER:

Q. And that deducted from this amount in Exhibit 94 would show the actual excess of one over the other?

A. Would show the excess of one over the other.

By Mr. BURR:

Q. Can you tell me all that is embraced in contingent expense, what you mean by contingent expense?

A. Accidents, among other things.

Q. Well, accidents and the loss of trade?

A. No, I don't think I mentioned loss of trade.

Q. Well, would you for the information of court and counsel for the City and the State make up a statement setting forth the reason and the figures going to make up that difference between Exhibit 93 and 94, for that item?

A. Yes, sir.

Mr. MATHEWSON: Nothing, Mr. Burr, will make it any 792 clearer than it is. I don't think you quite understand it.

The witness is a book-keeper. If you permit me to put it in lay language, as I understand it, it is this: Beginning the first of January, 1905, we charged 10 cents per thousand feet to cover contingent expenses and also replacements and renewals.

Mr. BURR: For how long?

Mr. MATHEWSON: Each month, ten cents a thousand, so that the statement for the year 1905, Exhibit 94, is simply the number of feet sold multiplied by the ten cents, and that includes in that ten cents the expenditure for the replacements and renewals made, and the balance of it you can call contingent. Now, for the nominal year ending October 31, 1905, we had only ten months of that ten cent rate to make up that item there, don't you see, and for the first two months of that nominal year, that is, November and December, 1904, instead of charging ten cents per thousand feet we charged the actual expenditures for the replacements which were considerably less than ten cents. Therefore that total would appear naturally considerably less than for the calendar year 1905, because we have ten months of the ten cent rate only in the nominal year ending October 31st, and for the calendar year we have twelve months at ten cents.

By Mr. Burr:

Q. Are you satisfied with that explanation?

A. Oh, yes, sir, it is very lucid, much better than I could possibly make it.

Q. In view of the statement which has just been made by Mr. Mathewson, I call your attention to the statement made by you on page 622 of the record, in which, speaking of this charge for 793 depreciation, you say to all intents and purposes, this ten cents per thousand that you charge every month includes only the amount that was actually expended for renewals and replacements?

A. It was a misprint. It should say "also," instead of "only." My statement has been corrected.

Q. That should me "also"?

A. "Also."

Q. Have you not stated here before that the actual expenditures for the twelve months for depreciation ending October 31, 1905, was $194,666.87, instead of being the $1,114.236.38 given by you in Exhibit 93?

A. Instead of being not only that, but also including the $51,532.36, itemized under the station expenses in the same Exhibit, No. 93.

By Mr. Mathewson:

Q. Have you ever testified that the $1,114,236.38 was all actual expenditure?

A. I never have so testified, because I knew that it was not.

By Mr. Burr:

Q. Is the difference between $194,666.87 and the $1,114,216.38 made up by adding the estimated amount to a fixed amount?

A. No, that is not the process by which that amount is arrived at at all. It is not the addition of a fixed amount to an estimated amount, excepting as the two months of this statement include actual replacements and ten months estimated replacements and other contingent expenses, calculated at ten cents per thousand cubic feet sold.

By Mr. Burr:

Q. Mr. Carter, look at page 1183 of the printed case before the Gas Commission and see whether the statement made by you and appearing there refreshes your memory in connection with 794 this item I am now speaking of, and if so, and that is a correct statement you may read it, using the number of the present Exhibit 93.

The Witness: This statement is correct and I will read it into the present evidence, Mr. Burr:

The item of $1,114,236.38, appearing in Exhibit No. 144, following the heading "Contingent Expense and Depreciation," is made up as follows: For November and December, 1904, that proportion of the replacement expenditure of $456,000 representing depreciation in distribution plant, amounted to $35,990.11. The estimated depreciation and contingent for 10 months ending October 31, 1905, estimated at 10 cents per thousand cubic feet sold, amounted to $1,078,246.27. The total of these two items appears in the summary of operations for the nominal year as $1,114,236.38. An additional item appearing as replacement at works for the months of November and December, 1904, and shown separately in the summary of operations for the nominal year ending October 31, 1905, amounts to $51,532.36.

The total of replacements in distribution plant and at works for the months of November and December, 1904, amounted to $87,522.47. The replacement in works and distribution plant actually occurring during the ten months ending October 31, 1905, amounted to $107,144.40, making a total of actual replacements during the nominal year ending October 31, 1905, of $194,666.87. The amount of $456,335.79 for replacement account for the year 1904 applicable to November and December, 1904, is $87,522.47 as appears by the second page of Exhibit No. 159.

795 This sum appears in Exhibit No. 144 as follows: $51,532.36 in the column following the heading "Depreciation." The balance of said sum of $87,522.47, to wit, 35,990.11, is part of the item in Exhibit No. 144 (Exhibit 93 in the present case), amounting to $1,114,236.38, following the heading, "Contingent Expense and Depreciation." The balance of said item, $1,114,236.38, after deducting said $35,990.11, to wit, $1,078,246.27, represents the amount charged on the company's books for normal depreciation accrued, but not paid—abnormal depreciation and contingencies.

Q. I notice, by the way, before I go further that in one of these exhibits you speak of Contingent Expenses and Depreciation. That is in Exhibit 93, and in Exhibit 94 you speak of it as "Contingent Expenses, Including Renewals" or includes renewals. Do both items mean the same?

A. Yes; although in the case of Exhibit 93, that method of designating that item is intended to indicate that it covers that depreciation item for the two months of 1904 during which there were no contingent expenses.

By Mr. MATHEWSON:

Q. During which period the ten cent charge was not made?

A. Yes.

Mr. MATHEWSON: That is the ground of the distinction.

Mr. BURR: Is this the item which I understood you to say some time ago was not charged and did not appear upon the books of the company prior to May, 1904?

A. Prior to May, 1905, Mr. Burr.

796 Q. This is the item regarding which your company held a conference——

A. What item do you refer to now, Mr. Burr? Assuming I understand you when you say prior to May, 1905, may I be told what item you refer to?

Q. The item writing off a certain amount for depreciation.

Mr. **Mathewson**: The ten cents written off.

Mr. **Burr**: Yes.

The **Witness**: I cannot say generally.

Q. I am referring to the ten cents you charge up against one thousand cubic feet, yes.

A. Yes, the first item was made in May, 1905.

By Mr. **Mathewson**:

Q. Wasn't it made as covering from January 1, 1905——

A. It was, as I plainly testified before. Mr. Burr asked the date.

Mr. **Burr**: Now, here is another large item which appears on Exhibit 93, $1,693,646.16, and it appears on Exhibit 94 as $1,769,968.42.

A. Yes, sir.

Q. The item on Exhibit 94 I take it means the extra amount charged for oil during the month- of November and December, 1905, over and above the amount stated in Exhibit 93?

A. That is the case, over the corresponding month in 1904.

Q. No, I didn't mean that, it shows the difference between the amount spent for this item, October 31 to the last of the year.

A. No, it would not mean that because they are both statements covering a year.

Q. I am speaking now of the difference between the two statements. The item of $1,693,646.16 which appears as a charge for gas oil in Exhibit 93 being a charge for that commodity for the ten months ending October 31, 1905, doesn't it? 797

A. No, it does not.

The **Master**: For the theoretical year.

Mr. **Burr**: For the nominal year.

A. Yes.

Q. As appears by Exhibit 93.

A. That is the case.

Q. To what time is the difference to be charged?

A. To what time?

Q. Yes. What period is the difference between the $1,693,646.16, which appears on Exhibit 93, and the $1,769,968.42 appearing on Exhibit 94?

A. I don't quite understand the question, Mr. Burr.

Q. Exhibit 93 is the summary of the operations for the nominal year ending October 31, 1905, on which appears the charge gas oil, $1,693,646.16. In Exhibit 94, for the calendar year 1905, the charge against that same item appears to be $1,769,968.42. Between what period was the difference between those two items incurred as a charge against this item gas oil?

A. Well, there are two things that contribute to that variation, according to the statements themselves, Mr. Burr. During the calendar year 1905 we used more oil and we used it at higher average cost per gallon than we did during the nominal year ending October 31, 1905; and it is due to the fact that we used a larger quantity of oil and paid a higher price for it during the calendar than during the nominal year, that there is that variation in the cost.

Q. That is what I wanted to find out. You had to pay more during the nominal year 1905 than you did during the calendar year 1905?

A. The average cost of the oil used during the calendar year exceeded the cost of the oil used during the nominal year.

798 By Mr. PAGE:

Q. It is just the opposite, isn't it?

A. No, that is not the case. During the nominal year the average cost of oil per gallon was 4 and 8/100 per cent., while during the calendar year the average cost per gallon of oil was 4 and 23/100 per cent.; not only that, but the quantity was greater during the calendar year than during the nominal year, that is, we used 41,876,670 gallons during the calendar year against 41,504,907 gallons during the nominal year. Both things contributing to the variation of the cost in oil during that period.

By Mr. MATHEWSON:

Q. In other words the 22 candle-power law went into effect July 1, 1905, so that the nominal year ending October 31, 1905, had only four months or one-third of its term, while the calendar year had six months or ½ of its term under the 22 candle power requirement. Is that right?

A. That is right with regard to the candle-power.

By Mr. GANS:

Q. Will that explain the increase in the cost of the price of oil charged you by the Standard Oil Company?

A. No.

Mr. MATHEWSON: No, we had to use higher grade oil.

By Mr. BURR:

Q. That didn't occur to you before, did it, Mr. Carter?

A. I knew that before.

Q. You said some time ago that we might have these oil contracts. Can we see them if we want them?

A. I don't know of any reason why you should not.

Q. And you were also, if I remember rightly, to look up
799 the item of rebates, if any existed in either the coal or oil?

A. Yes, there are no records of any.

Q. None of either?

A. Applying to this year?

Q. Yes, applying to this year.

A. None of any kind.

Q. I am speaking of the year 1905——

A. Or the nominal year.

Q. Or the year before.

A. Nothing.

Mr. Mathewson: Mr. Carter said if there were any they would appear on the face of the contracts.

The Witness: The only one I have any recollection of is one containing a small rebate.

Q. You did testify to some rebates before the Gas Commission, didn't you, coal or oil?

A. Coal, I think I did, and I think it is a matter of record on the contract, also when that was purchased.

Q. If there are any rebates they would appear in the contracts themselves?

A. Yes, absolutely.

Mr. Mathewson: Mr. Carter also testified you may remember, Mr. Burr, that in making up the cost of gas if any rebates were allowed they were deducted and that it was only the net cost of coal, not the gross charge which was included.

The Witness: That was the case.

Q. Then the items that go to make up this large sum you have supplied in another exhibit do I understand you to say, the one you have just read from, that is showing the number of gallons of oil consumed within the period to which these figures refer?

A. I don't know what you are referring to, Mr. Burr.

The Master: The number of gallons of oil is shown by this exhibit.

800 A. The number of gallons of oil is a matter of record on Exhibits 93 and 94.

By Mr. Gans:

Q. The totals are as they are on the exhibits put in yesterday, aren't they?

By Mr. Burr:

Q. You have a statement I suppose showing the amount of oil consumed by each station?

A. Yes, I can furnish a statement showing the number of gallons of oil used by each station if you desire it.

Q. We find another large item, Mr. Carter, "General Office Expenses," Exhibit 93, $276,823.22, and the same item in Exhibit 94 is stated to be $339,999.51. Will you explain the difference between those two amounts as they appear in these two exhibits?

A. Well, I would have to analyze the accounts to do that, and I would be very glad to do that if you wish.

Q. If you are going to give us that statement, Mr. Carter, will you give us an itemized statement of the items of which it is made up?

A.—

General Expenses	$19,872.42
Engineering Department	28,212.95
Incidentals	67,844.31
New Business	60,575.28
And Claims for Damages	30,838.00

Now your request is what, Mr. Burr?

Q. Give us an itemized statement of that?

A. Corresponding with that?

Q. Yes.

A. I will.

Mr. Mathewson: Do you mean to have him repeat that which he has just read off?

Mr. Burr: No, the items.

801 Mr. Mathewson: Singly item by item all the way through?

Mr. Burr: Yes.

Mr. Mathewson: I thought your accountant went up to check them over?

Mr. Burr: It was understood when we started to-day that this request might be unnecessary in view of what information you had supplied Mr. Heyward.

Mr. Mathewson: I understood Mr. Heyward went up for the purpose to see what the expenses were and what the classes were. Of course we will produce the books.

Q. Now Mr. Carter——

A. My understanding was that all these items were to be checked at the office by the accountant for the City and for the State, and every facility will constantly be afforded them to check these figures, and has been afforded them, and if they have not completed their work yet that is no fault of ours.

Q. If it is unnecessary to make out a statement in detail, for it would be a long matter, you have no objection to Mr. Heyward verifying these items?

A. Not at all. Every facility we could afford Mr. Heyward has been offered him and will continue to be offered him to check these figures in as great detail as he desires.

Mr. Page: That applies also to the accountant for the State?

The Witness: Yes, decidedly, and they are availing themselves of it; there was a man there with assistants this morning going over elaborately all the details of the accounts, very thoroughly.

Mr. Burr: I have not yet received the report from Mr.
802 Heyward, nor have I heard that Senator Page got a report
from his accountant. I have only had a chance to speak to
Mr. Heyward just now. I hope that matter will be satisfactorily
arranged and no necessity arise for requiring this detailed account.

Q. You have referred to serious accidents, and explosions as a contingency——

Mr. Mathewson: I would merely say to the Master so that there may not be any mistake about it, that I do not think we ought to be asked to prepare a detailed statement of every single item of that kind. I think rather than do that we would produce the books. It would be utterly useless to go to that trouble.

The **Master**: I suppose the accountants can do it so far as to satisfy themselves.

Mr. **Burr**: I think they can get all the necessary information if both sides exercise good temper about it.

Q. Now, can you furnish me a chronological statement of the accidents which have occurred to the Consolidated Gas Company, also with the cause of each accident, and a statement of every catastrophe——

Mr. **Mathewson**: I shall certainly object to any such thing as that and shall not direct the witness to produce or permit him to produce it, unless he is directed to do so by the Master. Here is a charge in 1905, for damages of over $30,000 as just read. You know what the nature of these cases *case* was, Senator. You cannot call upon us to go back to 1884——

803 The **Master**: Is it your idea that this item there in any way estimates what they actually paid out, showing what they had paid out for the year 1905?

Mr. **Burr**: I understand it that they made a charge of so much a thousand cubic feet, for something that had occurred heretofore; in other words, accidents and explosions occurring in the past, and which might occur in the future.

Mr. **Mathewson**: It means that this charge of thirty and some odd thousand dollars, that the ten cents is to meet possible experiences in the future like the one which occurred to the Boston Gas Light Company, which I think cost them ten cents a thousand feet per year for seven years and compelled them to suspend dividends. They got the subway earlier than we and they lost ten cents a thousand feet a year by doing it. This is for the future and not for the past, and our removal to Astoria——

Mr. **Burr**: Very well, Mr. Mathewson, I think your statement made before the Gas Commission is enlightening. What we do claim is this, that in fixing our charge for gas you must consider that we are entitled to a fair reserve over and above that, to meet contingencies and accidents in the mains, and we think that this is a fair figure. Now I am asking a little detail in regard to that point, what this arbitrary figure of ten cents a thousand cubic feet is based on. And why not make it 20 cents or 15 cents.

Mr. **Mathewson**: We never have had such accidents. We had no claim in connection with the subways here, but their building has increased the danger from that source very greatly, and it is evident by the experience of the Boston Company, where they had an explosion; and in view of our removal to Astoria, we are entitled to a contingent charge beyond that actually charged. It is to provide against this danger that this charge is made. 804 And if you should have a statement as to what had occurred in any previous year it would not be illuminating upon any statements we have made before the Commissioner. All that was made perfectly clear to the Gas Commission.

Mr. GANS: Why not make it perfectly clear here?

Mr. MATHEWSON: I think I have.

The MASTER: The question is objected to and if the witness can answer it I will let him answer it. Insofar as it involved going into the record and getting a statement of all the accident cases in the last 20 years, I am not going to require him to do it; and if you want it you will have to subpœna their books and put this in. It doesn't seem to me that it is beyond the inquiry perhaps what might have taken place in the last year or two, that is germane as cross-examination of anything in this statement in view of what Mr. Mathewson says.

Mr. GANS: I suppose it may be taken with the concession that they never had any experience on which to base such a charge.

Mr. BURR: I think the mind of the court should be fully informed upon this quite large item of ten cents which is charged up against each ten thousand cubic feet of gas by reason of this contingency, and I think we are entitled to get all the information we possibly can about the history of the gas company and what accidents or misfortunes or inherent dangers there are so far as they can be demonstrated from the actual things which have occurred in the gas business in the city of New York.

805 Q. So I understand you will not prepare that statement. If I want to go further into it, I will have to produce the books.

The MASTER: I said I would not allow the question insofar as it seemed to involve the witness preparing a statement or having one prepared for you. Under the previous agreements as to cross-examination I don't think your request is reasonable.

Mr. BURR: I don't want to be unreasonable in any request I make here.

Q. Is there any special book which you keep in which these matters I have just referred to are specially kept?

A. No, Mr. Burr, no book of that kind that I have any knowledge of.

Q. Are you insured against accidents?

A. Certain kinds, yes.

Q. What kinds?

A. Well, against accidents to employees, not against accidents to the public or general damage, particularly of the kind referred to by Mr. Mathewson as having occurred in Boston; not insured against anything of that nature, but against accidents to employees while in the performance of their duties. We have that insurance.

Q. Are you quite positive about that or would you need to refresh your recollection?

A. I am quite positive.

Q. You have no insurance to safeguard you against losses by explosion?

Mr. MATHEWSON: The public?

Mr. Burr: Yes.

The Witness: No.

Q. I see, Mr. Carter, on Exhibit 93, insurance is $55,525.90, making a charge against each thousand cubic feet of 42/100 cents.
806 What does that represent?

A. The cost of carrying insurance against fire, against accidents to employees, boiler insurance, and expenses of that nature.

Q. I suppose you could let us look at the policies, couldn't you?

A. I suppose so, yes, sir; I am willing to do so.

Q. Will you produce the policies at the next hearing, Mr. Carter?

Mr. Mathewson: Yes, we will if you desire. Don't you think you can check them up there better than to have us bring them down here.

Q. Are there many policies?

A. Yes, sir, quite some.

Q. At one per cent. that would represent an insurance of over five million dollars, wouldn't it?

A. At one per cent., yes, it would.

Mr. Mathewson: You can't get a gas plant insured at one per cent.

Q. I notice a very wide difference between the item which appears in Exhibit 93, Advertising and Legal, $62,861.02, being a charge against the thousand cubic feet of 47/100, and as it appears in Exhibit 94, the same item, Advertising and Legal is given at $105,800.02, and the charge against the thousand cubic feet is at the rate of 81/100 cents?

A. The variation in the amount of the item I think is due to the fact that at the end of the year we charged all legal expenses into the legal expense account which is entitled in that item up to that time. For the purpose of having it segregated and convenient for reference it was carried to Incidental Expenses; that is, if my recollection is correct, among the General Office Expenses. At the end of the year it was closed out of that account and put into the Legal Expense Account and formed a part of this item appearing in the calen-
807 dar year's statement. In the nominal year's statement the same expense was shown in bulk and was divided between legal expenses as to some of the legal expenses and Incidental General Office Expenses, to other legal expenses.

Q. Then the difference between the amount given in Exhibit 93 of $62,861.02, and the amount given in Exhibit 94, of $105,800.02 arose between the nominal year ending October 31, 1905, and the calendar year ending December 31st, 1905, didn't it?

A. No, I am trying to make it clear that it was on the nominal year that it appears, not the calendar year, but the nominal year. It was not until the end of the year that we closed legal expenses into one account; consequently the calendar year statement shows all the legal expenses in one item, whereas in the nominal year it was divided into two items.

Q. What do you mean by calendar year and nominal year?

A. Simply in making this statement that these two accounts happened to have been combined.

Q. You can show absolutely what you pay for advertising?

A. Absolutely.

Q. You spoke a moment ago in regard to insurance of the employees. Is that referred to here in your item "Gas Company's Mutual Aid Society," for which a charge of $6,413.99 is made in Exhibit 94, a charge against 1,000 cubic feet of gas sold, of 5-100ths of a cent? Is that item embraced in the insurance that you refer to?

A. No.

Q. What is that?

A. That is simply a contribution to a benefit fund of the employees belonging to it, made by the company as a matter of policy.

Q. And yet, that charitable disposition you charge against the cost of gas, do you?

808 A. Well, I am not sure that it is all unadulterated charity. I am inclined to think that there are other considerations that enter into the making of that contribution. We employ a great many people and we believe that the interest on the company's part that is expressed in that way is a very profitable investment of the amount involved.

By Mr. **Mathewson**:

Q. From a business standpoint?

A. From a business standpoint, a purely business standpoint.

Mr. **Burr**: Won't you kindly let this witness testify himself, Mr. Mathewson?

Mr. **Mathewson**: I have asked him whether that is so.

Mr. **Burr**: He is experienced enough to know whether it is a profitable investment from a business standpoint, without any suggestion.

The **Witness**: My impression about it is that it is an extremely profitable investment from a business standpoint.

Mr. **Burr**: I know you always fall into the same way of thinking as Mr. Mathewson. I would prefer that you do not suggest to him, Mr. Mathewson.

Mr. **Mathewson**: You will find that it was all gone into. And it was perfectly satisfactory.

By Mr. **Burr**:

Q. In Exhibit 93 the item appears "Contributions to Employees' Aid Society, $6,392.21." In Exhibit 94 the item appears "Gas Company's Mutual Aid Society, $6,413.99." That is the same item?

809 A. Identically the same item. They have slightly varied the title, but it is the same account.

Q. Do you make Christmas presents to the employees?

A. No, sir.

Q. This is the only contribution that you make to the employees for which this charge is made?

A. That is the only contribution, yes, sir.

Q. But you do look after them when they get a little old or superannuated?

A. We have an account that is called "Superannuation" there, the next item to the contribution to Mutual Aid Society, which represents the amount paid to superannuated employees, and I would say practically the same thing with respect to that disbursement as with respect to the contribution to the Mutual Aid Society, the Employees' Aid Fund.

Q. The item for "Superannuation" appears on Exhibit 93 as $14,803.57 and is a charge against 1,000 cubic feet of gas sold, of 11-100ths of a cent?

A. Yes.

Q. In Exhibit No. 94 the same item appears, $14,943.86, also a charge against 1,000 cubic feet of gas sold, of 11-100ths of a cent. Those figures are right?

A. That is the case, yes.

Q. Now, in what way is that total arrived at?

A. That is the total amount expended or disbursed in that way, charged to that account as the payment is made.

Q. I mean in what way do you arrive at the expenditure? Have you a system by which a man arriving at a certain age, who has been in your employ during a certain number of years, is retired or pensioned?

A. Yes, we have. We have a rule that governs the item of "Superannuation," and the amount.

Q. And if he is maimed, does he get a pension?

A. Yes, there are cases of that kind included.

810 Q. Well, is that pension included in this superannuation?

A. Yes.

Q. Well, have you an insurance for the employee to protect him against loss through bodily injuries?

A. Insurance to protect the company against loss.

Q. To protect the company against any claim of the employee?

A. Against claims.

Q. For bodily injuries received while in your employ?

A. Precisely so, and I have in mind more than one case where the question was so finely drawn as to the responsibility, whether on the part of the employee or on the part of the company, that the company would be forced into the position by the insurance companies of defending itself against a claim which it really considered was a perfectly good and fair one, and where from a business standpoint it would be extremely bad policy for the company to fight the case. In cases of that sort, one or two that I have in mind, the employee has been placed upon this superannuation roll and received an allowance.

Q. But you go still further than that superannuation charge, as I have already stated, against the cost of gas at the rate of 11-100ths of a cent; you go still further and have an item here "Vacation and Sickness," which appears in Exhibit 93 as $7,995.41, a charge against the price of 1,000 cubic feet sold at 6-100ths of a cent; it appears in Exhibit 94 as $8,175.20 against the price of 1,000 cubic feet of gas sold, at 6-100ths of a cent. What does that item mean, exactly?

A. Well, the title practically describes exactly what it is. I might elaborate it, however, and say that it is principally payments made to employees who are sick, instead of charging their wages to the particular operating account where it would be charged if they were at work, thereby, from the standpoint of careful scrutiny of the account, as to efficiency in this particular department, leaving 811 an entirely false impression as to the cost of operating that department. The charge is made against an account of this kind so that the charge in the particular operating account only bears the cost of labor actually performed, whereas the pay of the man while he may be sick, or for some reason allowed a leave of absence, is put into this account to eliminate from the operating account everything that does not absolutely represent labor.

Q. Yes, but the point is; from these Exhibits Nos. 93 and 94 it would appear that these expenditures which are made for philanthropic or political reasons——

Mr. **Mathewson**: Strike out "political reasons."

Mr. **Burr**: He said "matters of policy," as I understand it.

Mr. **Mathewson**: But I do not think you mean political, do you?

Q. (Continuing:) Did you not say it was a matter of policy, to make this payment?

A. Yes.

Q. Then I say that those expenditures which you make as matters of policy or philanthropy, vacations or sickness, superannuation, and your contributions to the gas company's mutual aid society, are all charged up against the cost of a thousand cubic feet of gas and are not taken out of the profits of the company or out of the pockets of the stockholders?

A. They most decidedly are taken out of the profits of the company and out of the pockets of the stockholders.

Q. In that way, by charging it against a thousand cubic feet of gas; is not that so?

A. No, a thousand cubic feet of gas is a rate that is arrived at by using the total expenses and the total output of gas, and 812 this is considered one of the item- of expense, and as such operates to diminish the profit from the sale of gas at any given rate.

Q. Is the item for superannuation increased from year to year or diminished?

A. I do not think it changes much from year to year.

Q. Do you know, roughly speaking, the number of employees engaged in the work of the Consolidated Gas Company?

A. The number of employees altogether?

Q. Yes.

A. All departments?

Q. Yes; I mean roughly speaking. Is it 7,000 or 8,000 men, about?

A. I would not like to attempt to give the number from memory.

I can inform you exactly of the number of men employed at any given time if you will name, if you will furnish me with the date.

Q. Now, I understand that you pay those companies that supply you with gas, or from whom you purchase gas, under the contract which has been offered in evidence, ten cents over and above the cost of production?

Mr. MATHEWSON: No, ten per cent.

The WITNESS: Ten per cent.

Mr. MATHEWSON: Ten per cent. on the cost of material and labor.

Q. Do you know whether those items of Superannuation, Gas Company's Mutual Aid Society, Vacations and Sickness, etc., enter into their accounts in making up their statements?

A. I am sure they do not.

Q. So that this is a unique expenditure with you, a charge against one thousand cubic feet of gas, is it?

513 A. No, if those companies have such expense—and I have no doubt that all of them may have it more or less in some form or other—it would not enter into the cost of manufacturing gas any more than it does into this statement of ours. We do not include it in our cost of producing gas, and they do not include it in the cost of gas which they manufacture for us. If it appears among their expenses at all it would appear as it does in our own exhibit, among the distributing expenses.

Q. By the way, that reminds me; how do you verify their accounts when they are rendered to you? How do you see that they only charge you in accordance with the terms of the contract?

A. Why, we have access to their books of account and records. In that way we are able to establish it at any time, both with respect to the quantity and with respect to the cost to them, of the gas manufactured for us.

Q. They render you monthly statements?

A. Yes.

Q. And those statements are always subject to your verification from their own books?

A. Yes.

Q. And you do verify them?

A. Yes.

Q. And you have the statements?

A. Yes.

Q. The item of labor is on record here as being a very large item, in making up the actual cost of production of gas, is it not, and distribution of gas?

A. I am not aware of its being on record as being a very large item, and that is another elastic term; it may be a question of opinion as to whether it was very large or very small, in proportion to the gas that we manufacture.

Q. But that labor and material make up a greater amount in the cost of a thousand cubic feet of gas than any other item that you can think of, don't they?

A. Kindly refer to the exhibit, so that I may know just what you are referring to.

814 Q. I want to know—is it not true that the cost of labor and the cost of material enter more prominently into the cost of the production and distribution of a thousand feet of gas than any other item or items?

A. Yes, indeed; there isn't much else except taxes and contingent expenses and bond interest and things of that sort.

Q. Have you ever figured up just what percentage the cost of labor and material does make in the cost of a thousand cubic feet of gas?

A. No.

Q. I did not know but that you would be able to state it offhand.

Mr. Mathewson: Each item appears on these statements before you. I suppose it would be simple to add them up.

Q. Now, that labor account is made up from the pay rolls, is it?

A. Yes.

Q. And those pay rolls, I think, you have testified, are supplied or sent to you at the main office from the stations?

A. Are you referring to some particular item of labor? We have labor distributed over all our accounts, and we have labor that does not appear on the pay rolls of the stations, a great deal of it.

Q. I suppose you refer to the labor on the mains, and on the pipes?

A. Yes.

Q. You do not call that skilled labor, do you?

A. Some of it is skilled, yes.

Q. What part of it?

A. We consider caulkers more or less skilled labor.

Q. What other kind of labor is used in putting down mains besides caulkers?

A. The man who superintends the job would have to be more or less skilled.

Q. What does he know; is he an inspector?

A. No, he is a foreman.

Q. What other kind of labor is there used?

A. In the street department are you referring to particularly?

815 & 816 Q. Yes.

A. How skilled they have to be I would not like to testify.

Q. I wanted to know from your own general observation. Does the rate of wages fluctuate, the rate paid. For instance, there is a caulker; now, he is a skilled laborer, is he not. His rate of wages is fixed, is it not?

Mr. Mathewson: By his union.

Q. I mean to say, is there a recognized price for such labor as a caulker? I am free to confess that I do not know.

Mr. Mathewson: Mr. Simpson knows all about that. He will doubtless be here so that you can ask him about that and he will know all about it, I am sure. He testified, you know, that labor has increased since 1885 about 25 per cent., I think it was. Now, in laying mains there is considerable machinery used, which requires a higher character of labor than when it was all done by hand, digging ditches and lugging the pipe on their shoulders.

At 5:25 P. M. adjourned to to-morrow, August 16, 1906, at 1:30 o'clock P. M.

Last Exhibits:

Complainant's, 100.
City's, 7.
State's, N.

817 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *August* 16, 1906—1:30 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Gans, Mr. Burr.

818 ROBERT A. CARTER resumed.

Cross-examination continued by Mr. BURR:

Q. Is it not a fact that the only gas companies operating in the Boroughs of Manhattan and the Bronx are the Consolidated Gas Company of New York, the New York Mutual Gas Light Company, The Standard Gas Light Company, The Central Union Gas Company and the Northern Union Gas Company?

A. Did you mention the New Amsterdam Gas Company? If you did not, it is operating in New York; also the Bronx Gas and Electric Company, which is in the Bronx.

Q. And the only electric companies doing business in the Boroughs of Manhattan and the Bronx are the New York Edison Company, The United Electric Light and Power Company, The Brush Electric Illuminating Company; is there any other company?

A. No, those are the only ones that I know of.

Q. And the only gas and electric companies operating in the Boroughs of Manhattan and the Bronx are the Westchester Lighting Company and the Bronx Gas and Electric Company?

A. That is the case, to the best of my belief and knowledge.

Mr. **Mathewson**: The Bronx Gas and Electric Company is a gas company; not an electric company alone.

Q. I am correct in the statement I have made as to the electric light companies, am I not?

A. Yes.

Q. The New York Edison Company, The United Electric Light and Power Company, The Brush Electric Illuminating Company; those are the only electric light companies operating in the Boroughs of Manhattan and the Bronx?

819 A. No, they are not. The Bronx Gas and Electric Company operates in the Bronx, and the Westchester Lighting Company perhaps has a few customers in the Bronx.

Q. Well, those are all the companies that are operating as gas or as gas and electric light companies or as electric light companies in the Boroughs of Manhattan and the Bronx?

A. The only ones I know of.

Q. The Consolidated Telegraph & Electric Subway Company and the Empire City Subway Company are engaged in the business of providing and maintaining conduits for electrical conductors in the Boroughs of Manhattan and the Bronx, are they not?

A. I am so informed. I have no other than hearsay information.

Q. Has the Consolidated Gas Company any interest in the Consolidated Telegraph & Electric Subway Company or the Empire City Subway Company?

A. Well, not directly that I am aware of.

Q. Well, have they through any of the companies that they control?

A. I think that some of the capital stock of the Consolidated Telegraph & Electric Subway Company is owned by the New York Edison Company.

Q. Can you say how much?

A. I cannot.

Q. And do you know whether any of the companies controlled by the Consolidated Gas Company has any interest in the Empire City Subway Company?

A. No, I don't know. I think possibly the Edison Company may hold some stock in the Empire City Subway Company.

Q. Does the Consolidated Gas Company receive any interest on the loans or advances made by it to the Astoria Light, Heat & Power Company?

A. No, it does not.

820 Q. I understood you to say the other day that there were certain notes that had been discounted—notes of the Consolidated Gas Company discounted by a bank in the city here, the proceeds of which notes you believed were used in the construction work of the Astoria Light, Heat & Power Company; is that the fact?

A. I think I stated in reference to certain bills payable showing on our balance sheet of December 31st, 1903, that they represented notes given to the City Bank for money advanced. I was asked what that money was required for. I said I didn't know, but I thought at least a part of it had been employed in the Astoria construction.

Q. Well, haven't you found out about that, whether that is a fact or not?

A. No, I have not. I haven't had time to do so, and I can't recall that I was to find that out.

Q. Yes, you were distinctly asked, Mr. Carter——

A. I don't know that it would be possible for me to find it out.

Q. (Continuing:) To give us a statement as to the dates of those notes and also what the notes were given for?

A. Oh, the dates of the notes? That I know. The notes were issued in March, 1903. They were issued for the purpose of procuring cash for our bank balance. Now, just exactly what that particular cash was employed for it would be impossible for me to say. It went into the general fund and was employed for general purposes, and I can only assume that some of it was used in connection with the Astoria construction, probably half of it or more.

By Mr. **Mathewson**:

Q. Some part of your general funds were advanced to the Astoria Company?

A. Yes, they were at that time.

821 · By Mr. **Burr**:

Q. You said at the hearing on August 13, referring to the proceeds of these notes, that some of it was used for Astoria construction possibly?

A. Yes.

Q. Do you wish to qualify that statement?

A. No. I just repeated it.

Q. Now, these notes were discounted by the Bank?

A. Well, I don't know as you call it discounted. We borrowed some money and gave notes for it. I thought the term discounting was not usually employed in connection with a transaction of that sort.

Q. Well, you paid interest on those notes, did you not?

A. Yes, sir.

Q. How much interest?

A. We paid 3¼ per cent., as testified at that time.

Q. In Exhibit No. 94 there is an item of "gas made at the Consolidated Company's station, 10,657,810,000; gas made at other company's stations under agency agreements, 2,929,210,322; gas sold—made at Consolidated Company's stations, 10,419,461,426; other companies stations, under agency agreements, 2,863,702,341;" the gas sales, total, 13,283,163,767, and the contingent expense on the same statement is stated at $1,328,316.37. That is based, as you explained yesterday, on the total number of cubic feet of gas sales?

A. Yes, sir.

Q. And that contingent expense then is based upon the gas manufactured by you and the gas purchased by you?

A. It is not based upon either. It is based upon the sales, Mr. Burr.

Q. Which embrace both.

A. Of course.

Q. Well, upon what theory did you charge that as against the sales of gas purchased?

A. Well, I can only venture the opinion that it is on the basis or upon the theory that our arrangement for the manufacturing of gas for us by other companies is merely a temporary one that we 822 hope to be able to terminate very soon, so that we would not make any variation in that rate, recognizing a condition that is, as I say, a temporary one.

Q. By temporary do you mean until the Astoria gas plant is completed?

A. We expect to manufacture all the gas that we sell when we have the Astoria plant operating.

Q. You heard the testimony of Mr. Bradley that he expected that event to occur in from 15 to 25 years.

Mr. Mathewson: Oh, no. He said he expected the first unit to be in operation this fall, and the first unit has a capacity of four billion feet per annum. Our sales of gas manufactured for us are now about three billion feet per annum, so the first unit would take care of all that is manufactured for us by other companies, with quite a margin over. Is that correct, Mr. Carter?

Mr. Carter: Yes, sir. That is correct.

Q. How was this ten cents per thousand contingent fixed upon. That is, I would like to have the basis in figures upon which it was calculated?

A. I am not able to give you any, Mr. Burr, in figures, other than the ten cents per thousand. I have explained several times what it is intended to provide for and that we think that that amount is adequate, although originally we thought it would not be—we calculated first that thirteen cents would be necessary to provide a sufficient reserve to take care of such contingencies as are likely to arise in our line of business.

Q. Does that embrace contingencies regarding the mains?

A. It would take into account such contingencies regarding 823 the mains as electrolysis, more particularly, which threatens to be a source of very considerable expense to us in the way of renewals of mains which are more or less seriously affected by electrolysis.

Q. That is the only item that would enter into this contingent fund regarding the mains?

A. Oh, no, it is not. The contingent fund would also provide for the cost of such replacements and such renewals as are occurring more or less all the time where we substitute a large main for a small one in the street where the growth of the business has renderd a larger main necessary.

Q. Mr. Simpson has testified that the mains that were laid forty or fifty years ago were in perfect condition to-day and Mr. Bradley on being asked what the life of a main was practically said that the main was immortal, and the testimony here is that the mains are in perfect condition?

A. Well, as I have said, we are threatened with the action of the electric currents in the sub-soil upon our mains. That is one thing we intended covering by this reserve fund. And then we have constantly the replacement of old mains of a small size with new mains, in the nature of supersession. That is not because of any depreciation in the old main but simply to provide additional capacity where it is required and where the small main at present in the street is not adequate for the demand.

Q. Don't you make an allowance for that in your charge for replacement?

A. The item of replacement and all our replacement is supposed to be covered by this ten cents.

By Mr. **Mathewson**:

Q. Is it not the fact that all our replacements both in the manufacturing and distributing system are included in this ten cents?

A. They are, yes, sir.

Q. And are intended to be?

A. Oh, yes, sir.

824 By Mr. **Burr**:

Q. Have any serious accidents occurred to the works of the Consolidated Gas Company involving large sums of money in damages since 1884?

A. Yes, there has been one serious accident. I do not know that I could say just how great a loss was involved by it because I don't think it has yet been settled whether the loss is one to be borne by the company or borne by the contractor, and that was the case of an explosion in one of the holders — the 21st Street Station, by which the holder then under construction and nearly completed was completely demolished as well as adjoining property, and the company's property damaged to a very considerable extent.

Q. Was that at 14th Street?

A. At 21st Street. I should say that the total amount involved in that accident, taking into account the amount of money expended on the holder in the course of construction, and other losses and damage suits of various kinds would run from four hundred thousand to five hundred thousand dollars, although I am really making a "stab" at it, because I haven't had occasion to canvass that subject for that information for several years.

Q. Well, is that question in litigation?

A. Yes, sir, it is.

Q. And the company claims that it is not responsible, but that the contractor is?

A. It makes that claim, yes, sir.

Q. And the Contingent Account in Exhibits 93 and 94, aggregating over one million dollars, is that a transcript into your books of actual vouchers, or merely an estimate?

A. Well, we canvassed the 1905 nominal year item very thor-

oughly yesterday and I would say with respect to that that actual
vouchers enter into the item for actual replacements and re-
825 newals for two months of 1904, which are included in that
nominal year. Now, with respect to the operation for the
calendar year of 1905, the amount is calculated at ten cents per thousand cubic feet sold, and as I have said, it is intended to cover among other things the actual cost of renewals and replacements made during that year.

Mr. **Mathewson**: Mr. Burr asked whether that is carried into the books, this ten cents?

The **Witness**: It is carried in the books not by any voucher but through a journal entry in which is set forth the quantity of gas sold during the month and the amount calculated at ten cents per thousand cubic feet sold.

Q. There are three items of expenses on Exhibit 94, also on Exhibit 93, and in Exhibit 93 expense is given at $62,441.83. Does that refer to the expense at stations? I see just above the word "Expense" the words "repairs (at stations)." Does the expense just below refer to expense at stations?

A. At the station offices, and, at the stations, I might say, because it would include in the winter time the shoveling of snow from the roofs of the station buildings and the clearing away of snow from around the entire plant and that sort of thing, and so I don't think I would care to limit it to office expenses. It is the expense at the stations.

Q. It is made up then of the office expenses and the other general incidental expenses at the stations?

A. Yes, the other general incidental expenses at the stations.

Q. What is that item made up from, reports from the stations?

A. Oh, no, that is made up, so far as labor is concerned, from the
pay roll, and so far as supplies are concerned, that would be
826 included in that item of expense are obtained from vouchers
representing the purchase of them.

Q. Would that item embrace repairs at the station?

A. Oh, no, repairs at the stations are separately accounted for and are shown in the three items proceding that item in Exhibit No. 93.

Q. So there is nothing but the salary and the shoveling of snow and general work around the stations of a minor character?

A. Of a minor character. Stationery and printing and office supplies and that sort of expense—salaries of the clerks, the bookkeepers.

Q. I suppose that is shown in an account of the five stations?

A. Yes, sir.

Q. And in what book would that appear?

A. In the operating ledger, and my impression is that the amount chargeable to each station is in the testimony and was read out of a book here the other day when the operating ledger was produced.

Q. And this other item of expense, $583,278.52, what particular expense does that refer to in Exhibit 93?

A. That is the branch office expense.

Q. How many branch offices have you?

A. We have four branch offices.

Q. Do you own the property upon which those offices are located or do you rent the property?

A. We own the property in which three of them are located and rent the property in which the fourth is located.

Q. Can you state where they are located?

A. Yes, sir.

The **Master**: Wasn't that all gone into before?

Mr. **Burr**: Where they are located?

The **Master**: Yes.

Mr. **Burr**: If it was I won't bother with it now. I don't recall it.

827 Q. Have you previously stated that?

A. I think so. The Hester street branch is located at Hester and Elizabeth streets, which property we own. The Irving place branch is located at Irving place and Fifteenth street, and the building is owned by the company; the Forty-second street branch is located on Forty-second street, near Sixth avenue, in premises that the company rent, and the Third avenue branch is located at Third avenue and 114th street in a building owned by the company.

Q. Now, that item of expense with those branch offices, does that embrace salaries?

A. Yes, sir.

Q. What else?

A. And incidental expenses.

Q. What is the nature of the incidental expenses?

A. Their name is legion. I can name some of the principal ones; there would be the stationery and printing which would be a very large item and would include all the ledgers and books of accounts and records kept at the branch offices; it would include such supplies as would be necessary in an office, telephone service, ice and things of that kind.

Q. At the branch offices you have bookkeepers and collectors and inspectors of meters, have you?

A. Yes, sir.

Q. Any other kinds of employees besides bookkeeping force and the inspectors of meters and the collectors?

A. Well, the bookkeeping force of course would include a number of clerks not specifically engaged in bookkeeping, general clerks engaged in the performance of various duties, and the men who do the indexing are rather connected with the shop than with the branch offices and their pay—yes, would be included. I might say also, Mr. Burr, that that item of expense includes the expenses of the fitting shops and the street department as well as offices. The expenses of the offices of those departments are also included in 828 that item both with respect to salaries and with respect to the incidental expenses.

Q. Do you have in connection with each office a repair shop for stoves?

A. No, we do not; we have one general repair shop.

Q. And have you an account with each of these branch offices?

A. Yes, sir.

Q. Do they render monthly statements to the general office?

A. They do; yes, sir.

Q. And those statements are transcribed into your general books of accounts at the main office?

A. Yes, sir.

Q. Who verifies the statements at the branch offices?

A. To which statements do you refer?

Q. The statements furnished by the branch offices to the main office. How do you arrive at the correctness of such statements?

A. We get such a large variety of statements that before indicating how we establish their correctness, I would like to know the particular statement to which you refer.

Q. For instance they render an account monthly of their expenses, do they?

A. No, sir, they do not, the pay rolls would indicate the expenses so far as labor is concerned.

Q. How about supplies?

A. And the supplies would be shown by the bills, which would be paid at the general office and charged against the particular branch where the supplies were received.

Q. Where are those vouchers or bills kept?

A. At the general office.

Q. In Exhibit 94, the corresponding item of expense is given as $490,855.36. What is the explanation of that difference in the amount?

A. Well, you asked me that question yesterday unless I am very greatly mistaken, and I am having a comparison drawn off and an explanation made of the variation.

Mr. Burr: It is not in evidence.

829 Mr. Mathewson: What is it?

Mr. Burr: I refer to the statement which you, Mr. Carter, furnished for the calendar year 1905, Expenses, General Office, $99,807.42; Engineering Department, $38,211.95. What items go to make up that item of General Expenses, $99,807.42?

The Witness: That is made up of salaries, salaries of officials, heads of departments in the general office, general clerks, stenographers and other employees of the general office.

Q. And you have a charge then for the bookkeeping department and collecting department?

A. I have not included them in my statement just made respecting that item.

Q. What particular department is the General Expense item confined to?

A. It is not any particular department, and that is why we call it general; if it were a particular department we would give its name as we did with the bookkeeping and the engineering departments.

Q. Were some other expenses embraced in the General Expense item?

A. No, sir.

Q. Then it must be outside of the other departments?

A. That is the case, it is general.

Q. Can you give me an analysis of that item?

A. General Expense?

Q. Yes; will you prepare an analysis?

A. The analysis will be the names of the people who appear there; that would be the only kind of analysis that could be made.

Q. Their salaries are separate from the payroll?

Mr. **Mathewson**: Of course the salary of the president, the vice-president or even Mr. Carter is not included on the payroll.

830 Q. I want to know whether these items you speak of are properly chargeable against the manufacture and distribution of gas; that is why I would like to have an analysis of the general item of $99,807.42.

Mr. **Mathewson**: I think you better bring the books, Mr. Carter, and see what they are.

Mr. **Burr**: Very well, bring the books.

The **Witness**: I should say it covers the salary of about 49 or 50 people, that $99,807.42, and includes the salaries of the officers of the company. I can bring the operating ledger; I don't know just how much that detail would show, but I think not much.

Q. What is the item of incidentals, $67,834 made up of?

A. What is the exhibit?

Q. The same exhibit to which I have referred, being Expense, General Office.

A. That is for the calendar year 1905.

Q. 1905?

A. $67,834.

Mr. **Burr**: I ask to have this paper marked for identification.

Paper marked for identification City's Exhibit 8.

Mr. **Mathewson**: Excluding the pencil portion?

Mr. **Burr**: Certainly.

Mr. **Mathewson**: Those items to which you refer, Mr. Burr, are a subdivision of what total?

Mr. **Burr**: On the total of $339,999.51.

The **Master**: That is a subdivision of Expense, General Office?

Mr. **Burr**: Yes.

Q. Now I will ask you to refer in City's Exhibit 8, marked for identification to-day to the item Incidentals, $67,844.31, which appears on that exhibit. What does that embrace? 831

A. A great many items of disbursements of various kinds, corresponding approximately with the same kind of expenses as branch offices, known as incidental expenses, taking in stationery and printing, cleaning up of the offices, telephone service and messenger service possibly.

Q. Is it made up of any items of expense at the different stations?

A. No. Nothing included there that belongs to any station.

Q. It is general office?

A. General office only, Mr. Burr.

Q. And the item "New business," $60,575.28, what is that made up of, of the expenses of procuring new business?

A. Of the expenses of procuring new business, and includes canvassers, commissions, commissions for the sale of appliances, the cost of publishing a small gas journal for the information of customers and expenses of that kind and the fuel appliance department pay roll.

Q. Then you have a department for drumming up new business, is that so?

A. Yes, sir, that is the case.

Q. Claims and Damages, were those chargeable as general office expenses?

A. Yes, sir.

Q. What kind of claims for damages are those?

A. They are claims for damages on account of injury done to employees principally or to the public possibly in some cases.

Q. Does that represent the amount of claims that were paid during the year 1905, or the amount of claims that were made during the year 1905?

A. The amount of claims that were paid.

Mr. MATHEWSON: The item would be considerably larger if it included two or three claims that were made.

Q. This item General Office Expense appears in the operating ledger?

A. Yes, sir.

832 Q. And the total of these various items appear in the journal?

A. No, because the journal would not be used in connection with the posting of items of labor, they are posted directly from the pay roll.

Q. Well in what book would the details of the item incidentals, $67,844.31 appear.

A. Every item entering into that aggregate would appear in the operating ledger.

Q. In Exhibit 93, there is an item Interest on Consumers' Deposits, $52,315.73, and the same item is given in Exhibit 94 as $51,391.52.

A. There is embraced in that item interests paid on deposits made by consumers to secure their accounts.

Q. How do you compute that interest?

A. At the legal rate, six per cent. I believe.

Q. Isn't it a fact that their deposits are absorbed in most cases by their last bills?

A. That has no bearing upon the interest, Mr. Burr. The interest is calculated upon the full amount of the deposit for the full period it remains with the company. Then it may be offset constantly by the amount due to the company from the consumers, which is usually the case.

Q. Well, you pay the interest in gas, not in cash; you give a credit to the consumer, don't you?

A. Not when the consumer closes his account. He presents his deposit receipt, and he gets the amount of his deposit plus the interest upon it that remains with the company, less any final bill he owes, naturally.

Q. Where he allows the deposit to be used in payment for the gas consumed——

A. We don't allow it to be used. The amount of the deposit is no more than he owes the company from time to time in the normal condition of the account.

833 Q. Do you want to be understood as saying that this item on Exhibit 93, Interest on Consumers' Deposits, $52,315.73, and the same item appearing on Exhibit 94, Interest on Consumers' Deposits $51,391.52, was actually paid out to your consumers?

A. Yes, sir.

Q. In 1905?

A. In 1905. In one case during the nominal year ending October 31, 1905, and in the other——

By Mr. Mathewson:

Q. At what rate?

A. The legal rate, six per cent.

By Mr. Burr:

Q. Do you recall, Mr. Carter, if there was an exhibit introduced in evidence before the Gas Commission showing the amount of gas sold each year and the rate at which it was sold since 1884?

A. I think there was such a statement prepared and presented before the Gas Commission; that is my recollection.

Q. Look at the paper I hand you, Mr. Carter, and say whether that is a copy of a statement furnished by you to the Gas Commission purporting to give the amount of gas increment and the rate per thousand cubic feet and the amount realized from the increment each year, from 1886 to 1905?

Mr. Mathewson: We did not prepare any such statement as that for the Gas Commission.

The Witness: I don't recognize it as any paper that I ever saw before, Mr. Burr.

Q. Will you look at it and say whether it correctly represents what it purports to represent and state?

A. It would be impossible to do that. I cannot say that this is correct, Mr. Burr, from simply scrutinizing it here. I should have to compare it with our records to establish its accuracy.

Q. Well, will you, with that as a basis, have prepared such a statement from your books?

Mr. Mathewson: Let's see.

834 The Witness: It goes back a long time.

Mr. Mathewson: The amount of gas sales each year is already in evidence. It will be a simple thing to give the average price at which gas was sold in each year; that is all made up excepting the year 1905, perhaps including that, and that will show simply by mathematical process exerything that is asked for by this exhibit, that is to say how much the increment one year over another is will appear simply by subtracting those two amounts. That first column is already in evidence.

The **Master**: Well, as appears in evidence——

Mr. **Mathewson**: No, but we have the price.

Mr. **Burr**: I inquired about the matter and I was informed that no such exhibit was presented.

Mr. **Mathewson**: You are quite right. No such exhibit has been presented.

Q. Have you made up a tabulated statement, Mr. Carter, of the taxes paid by the company and upon what——

A. For the year 1905?

Q. For the year 1905.

A. Yes, there has been such a statement made and it is in the evidence.

Mr. **Mathewson**: Don't you want to put that in in connection with your examination, Mr. Burr.

Mr. **Burr**: What?

Mr. **Mathewson**: That table Mr. Carter just gave you.

Q. What property is embraced in the item Taxes $803,127.46 appearing in Exhibit 93?

A. The company's real estate, its personal property and its special franchises.

Q. Does that represent the actual amount paid on the real estate and the personal property? 835

A. For 1905, yes. In testifying to 1905 I testified to the calendar year. It is the better year to take because it represents the tax calendar year instead of two years split up on some arbitrary basis.

Q. Are you familiar with the tax rate in New York, do you know what the tax rate is?

A. Why, I don't know from memory. For what year?

Q. For 1905.

A. 1.4/10 and a fraction, a long decimal fraction, some six figures long, I haven't a memorandum of that.

Mr. **Mathewson**: I think it is 1.49.0519. I am willing that the witness should so answer subject to correction if he so desires.

The **Witness**: I would testify that that is right.

By Mr. **Mathewson**:

Q. What is the rate of the tax assessment in the city of New York for local taxes, &c.?

A. For 1905?

By Mr. **Burr**:

Q. For 1905.

A. That was my understanding of what the question covered.

Mr. **Mathewson**: In the Borough of Manhattan. They differ somewhat in the different boroughs, don't they, Mr. Burr?

Mr. Burr: Yes.
The Witness: In the Borough of Manhattan.

Q. Have you got a statement showing the amount of gas supplied by each of the subsidiary companies from whom you purchased year by year or month by month?
A. For what period, Mr. Burr?
Q. Well, say for 1905.
A. I haven't such a statement, but I am having such a one
836 prepared for Mr. Heyward at his request.

Mr. Burr: Until these things are provided it is hard to cross-examine.

Q. There is a variation in the price charged by each of the companies, is there not?
A. They are not identical, but I think it is not considerable.
Q. For instance, what does the Northern Union charge?
Mr. Mathewson: Nothing. We get no gas from the Northern Union.
The Witness: The Northern Union Company does not manufacture gas.
Q. Can you say what is the lowest price and what is the highest price you pay any of these companies for gas which you purchase?
A. I could not do so, Mr. Burr, without the statement before me. I can say that the average price paid was 34.04 for the gas manufactured for the Consolidated Gas Company by other companies for the calendar year 1905. Now, we may have paid one or two companies over 34.04 cents, or one or two companies under 34.04 cents, but the average was 34.04 cents. I don't think there was a very considerable variation from that figure for the amount paid per thousand feet to any of the companies.
Q. That 34.04 cents embraces the ten cents you were obligated to pay them under your contract?
Mr. Mathewson: No, not ten cents.
The Witness: It includes ten per cent.
Q. Look at Exhibit 60, as it appears on page 459 of the printed record before the Gas Commission, and say whether that was
837 prepared by you and whether it correctly sets forth the
amount paid by the Consolidated Gas Company for the years stated?
A. I cannot say that it has been correctly copied into this book, Mr. Burr.
Q. That book at which you are looking is the book on appeal, is it not?
A. Yes. I think the figures are substantially correct. Of course there is no statement here of the price—or of the cost to the Consolidated Gas Company of gas manufactured for it by other companies later than 1904. The figures as contained in our Exhibits 93 and 94 cover the calendar year 1905, in one case ten months of the calendar year 1905, and in the other two months of 1904; and I think that the difference between the amounts paid the different companies were

less during those two periods than during the period shown in this Exhibit No. 60.

Q. Before the Gas Commission?

A. Before the Gas Commission.

Q. Where will the account with these companies be found in your books, showing the amount of gas produced and delivered from month to month by the companies to the Consolidated Gas Company?

A. The bills that are rendered for gas manufactured for the Consolidated Gas Company by other companies are a matter of record in the operating ledger.

Q. Well, those bills would appear in the voucher record, would they not?

A. Yes.

Q. That would show the amounts purchased and the prices paid?

A. Yes.

Mr. Mathewson: I do not wish to split hairs, but Mr. Burr constantly refers to the amount purchased. The fact is that all this gas is made by these companies under our agency agreements by which they make it in that manner and it is not a purchase and sale in the ordinary sense. As long as the distinction is understood, that is all I care about. 838

Mr. Burr: As I understand it, I have not yet seen the agreements, have they all been offered in evidence.

Mr. Mathewson: All have been offered in evidence.

The Master: I do not see that it makes any difference. It is referred to here in this report as gas made under agency agreements, and if Mr. Burr chooses to call it something else for his own amusement I do not see that it hurts you any.

Mr. Gans: The distinction is pretty fine between gas obtained from some other source and paid for.

Mr. Mathewson: Perhaps so.

Q. At the time the companies were consolidated in 1884, each of them had a certain defined territory in which they were operating at that time, did they not?

A. I think not; I think that the territory covered by each company had its limitations, if that is what you mean, but that every company operated in a territory of its own, I am sure was not the case.

Q. Each company had its limitations?

A. With respect to its distributing system.

Q. That is, they claimed certain rights in the streets to use that distributing system in the streets?

A. Most decidedly.

Q. If I remember rightly you testified that a valuation was placed at that time upon the rights which they had at that time in the streets, among other rights?

A. Yes, sir.

Q. And it was definitely ascertained at that time, in order to place a valuation upon it, where they were in the streets, and what 839 streets they were in, in November, 1884?

A. Not to my knowledge.

Q. Are you quite clear about it?

A. I am not at all clear about it because I do not know anything about it. I am clear about that.

Q. You do not know whether maps were made of the mains of each company at that time, as they then occupied the streets of the city of New York?

A. I think most undoubtedly that every company had maps of its mains at that time; I only assume that they had, I do not know anything about it.

Q. The valuation was placed upon those rights in the streets as they existed in November, 1884, at the time the consolidation agreement was executed, is not that the fact?

A. Presumably.

Q. Were not the maps purporting to show the location of the mains of these various companies produced before the Gas Commission?

A. Not that I am aware of.

Q. Mr. Simpson testified that when he takes up a main or puts down a main he makes a report to the main office and that goes to you. Have you any such reports?

A. Yes, sir.

Q. Has the Consolidated Gas Company got any maps showing the location of its mains in the City of New York?

A. It is more than likely; I do not know anything about it. It is out of my department and I do not concern myself about it. I presume the mains are indicated on some map, but I do not know what they are like or where they are or anything about them.

Q. According to one of the statements that you submitted here, the company has on hand about $6,000,000 in cash?

A. To what statement do you refer?

Q. Have you made any statement, or is it the fact, that the company has $6,000,000 in cash on hand?

A. At the present time?

840 Q. Yes.

A. I think not; my impression is that they have not $6,000,000 of cash on hand at the present time.

Q. How much cash have they on hand?

A. I don't know.

Q. How much cash had they on hand at the end of the year 1905?

A. You have a balance sheet that indicates it, one that has been copied from the balance sheet at No. 4 Irving place.

Q. Where is the cash of the Consolidated Gas Company deposited?

A. In several banks.

Q. In what books will the statement of securities and obligations of other companies acquired by the Consolidated Gas Company since 1904 appear?

A. I have a list of them in my desk, of the record that is made up.

Q. In what book will they appear?

A. In the operating ledger, summarized; I do not think they would appear there in much detail.

Q. Do you mean to say that the list in your desk is more complete than the entries in the books?

A. Yes, I think probably it is.

Q. And the book entries were made from the statement you have in your desk; the statement in your desk was not made from the books?

A. No, nothing of that kind. We purchase securities of other companies; it is a regular business transaction; they are paid for, and a charge is put into the books. It is not spread out in detail on the books, as it would not serve any purpose to do so.

Q. Have you the balance sheet of June 30, 1904, here?

A. No, I have not. You have it somewhere. 1904, June 30th.

Q. Yes.

A. No, I have not got it.

Q. Do you recall that balance sheet, the items of it, without having it before you?

A. No.

Q. Have you produced the contracts for coal and oil?

841 A. I do not think I have produced any contracts.

Q. You were asked to some few days ago.

Mr. Mathewson: I do not think he was. I told you we would produce them if you required them.

Mr. Burr: Well, will you produce them to-morrow?

Mr. Mathewson: Yes.

Q. Before the Gas Commission, you were asked this question?

Q. Now, if we take the balance sheet as it appears in the company's book under date of June 30, 1904, and look under the head of investments and these various amounts itemized as real estate, $11,163,537.08 and plant, $15,318,197.68, and a variety of other items, aggregating some forty-eight millions of dollars, tell me whether it is not the fact that all the items included in that $48,000,000, with the exception of the item of street mains, Manhattan, $7,524,358.46, and street Mains, Bronx, $47,450.37, are not represented in the statement of the value thereof by this item in the report of June 30, 1904, "Real estate and plant, $19,673,075.42?" A. Together with the value of the meters, etc., as given in the report and which appear there also.

Do you recall so testifying?

A. I think possibly I might have testified to that effect; I do not recall it very well.

Q. I am now reading and propose to read something further, from the "Printed papers on appeal from order made by the Commission on Gas and Electricity of the State of New York," 842 prepared by Messrs. Shearman & Sterling, attorneys for defendant-appellant, the Consolidated Gas Company of New York.

A. I think I testified exactly as you have read.

Mr. Mathewson: If the Master please, the tax report for June 30, 1904, has been offered in evidence and is part of the evidence in this case, and it shows how it appears; it shows just what it does show, and I do not think it is going to illumine the situation much by getting the witness to say that it does. The tax report figures differ from the cost or investment figures as they appear on the books of the company, and Mr. Carter has explained, or I assume he will before he gets through, explain the reason for the differences; but that they existed there can be no question and there is no dispute.

Mr. BURR: I wish to get at it in my own way, if you please. You can straighten that out on redirect. It is in the evidence here as brought out by Senator Page that a certain tax report was made and signed by Mr. Carter as an officer of the Consolidated Gas Company, and the details of that report were specified and mentioned by the witness to Senator Page. I will now proceed to call his further attention to the balance sheet which was referred to him and handed to him before the Gas Commission.

Mr. MATHEWSON: I am not going to object to it. I merely suggested that perhaps it was not throwing any additional light on the subject. If you think it is I have nothing to say.

The MASTER: There seems to be no question before me. You may proceed when you get ready.

843 Q. I am calling your special attention to the testimony given by you before the Gas Commission as it appears on page 371 on the record on appeal, to which I have just referred. You were asked:

Q. I wish you would take this balance sheet of June 30, 1904, and deduct from these figures under the head of "Investments" which totalize $47,880,470.32, whatever items are not included in the items in the report of June 30, 1904? "Real estate and plant, $19,673,075.42?" A. There is no item that is not included there. Every item is included there, Mr. Hughes.

Q. Are you not mistaken in that? A. I think not.

Q. Now, for example, we notice here in the report of June 30, 1904, Mains and Services as a separate item? A. As a separate item and given at a value which is explained in another part of the report to the Board.

Q. Pardon me. I do not think you follow me. Do you understand what I mean? A. I understand what is meant. That is given in detail in another part of the report.

Q. Undoubtedly? A. Stating the value of the mains based upon the cost of reproduction, less a reasonable depreciation, and it states——

Q. Do not anticipate me, because I am not inquiring as to that now. You have here June 30, 1904, a series of items under the head of investments, which totalize $47,880,470.32? A. Yes, sir.

Q. Now, you have as part of those items, an item here, "Street Mains"? A. Yes, sir.

Q. As part of those items? A. Yes, sir.

844 Q. You have also another item included in the title of meters. Now, in your report of June 30, 1904, Mains and Services are in separately? A. Yes, sir.

Q. The meters are given separately? A. Yes, sir.

Q. I want to know what the property is that is detailed in this balance sheet of June 30, 1904, and totalized there which you, in making up the report of June 30, 1904, valued as real estate and plant, $19,673,075.42? A. Oh!

Q. Now, then, if you will give that? A. Included in the value of real estate and plant, $19,673,075.42, what is itemized on the balance sheet as real estate, plant and construction. It would include the extraordinary additions at the generating stations.

Q. Just read on the record the items that are in the balance sheet with the values—not the value but the figure opposite the item as they appear by the balance sheet which you entered in this item in the report of June 30, 1904, as of the value of $19,673,075.42? A. I have read the names of the items.

Q. Just read that right on the record, if you will? A. That is all.

Q. I mean consecutively the items and the amount opposite them from the balance sheet? A. You want me to read those on?

Q. Yes. A. (Reading:)

Real estate	$11,163,537.08
Real estate "M"	50,588.65
Plant	15,318,197.68
Assessments	2,353.98
Construction	9,882.09
Extraordinary repairs, 21st St.	2,718.62
Ditto, 44th Street	3,424.26
Ditto, 99th Street	557.98
Generating apparatus, 21st St.	119,931.33
Ditto, 44th Street	42,241.34
Ditto, 99th Street	49,158.08

845 Down to that point, Mr. Hughes (indicating).

Q. Down to this point (indicating)? A. Down to this point (indicating).

Q. Now, will you totalize those, please? A. $26,762,591.09, I make it.

Q. Then the amount that you have read of Real Estate Plant which were carried in the books at $26,762,591.09, appear in the balance sheet of June 30, 1904, at that total, you decided were of the fair value of $19,673,075.42? A. Yes, sir.

Is there any correction that you wish to make in that answer or any of the other answers, or in any of that testimony as I have just read it. Did you so testify?

A. Yes, it sounds very familiar to me.

Q. Did you so testify?

A. I think I can reply affirmatively; I think I did, to the best of my belief and knowledge.

Mr. Burr: Do you wish to make any correction in that testimony, Mr. Mathewson?

Mr. Mathewson: Simply this, that "real estate" and "plant" should be separated by a comma, because there is no such item as real estate plant. There are two items, of real estate and plant. That is the case, is it not?

The **Witness**: That is the case.

Mr. **Burr**: The testimony continues:

Q. Now, the next item in the report of June 30, 1904, is Mains and Services, $4,261,156.39. What items in the balance sheet of June 30, 1904, in your books are embraced in the item just read. Just read, please, upon the record a description and the figures given in the balance sheet? A. Street Mains, two items,
846 $7,524,358.46 and $47,450.37; Services, $1,227,931.86.

Q. Will you give the total of those, please? A. $8,799,740.69.

Q. And then Mains and Services which appeared in the balance sheet of June 30, 1904, at the book value of $8,799,740.69, you decided to be of the actual value of $4,261,156.39, and so entered them under the heading 'Mains and Services' in the report to the State Board of Tax Commissioners? A. Based upon the cost of reproduction, less depreciation.

Q. Whatever it was based upon, you entered it as actual value? A. Yes, sir.

Q. Of those mains and services? A. Yes, sir.

Q. And as you stated a moment ago, in another part of your report you set forth the extent in feet of the pipes of your company, which appears in the separate schedule verified by you under date of November 30, 1904, annexed to said report, in which the total feet are given at 4,605,681? A. Yes, sir.

Q. And you would state the present value reproduced now would be $5,613,221.12, and the present value, allowing depreciation, was $4,261,156.39? A. Yes, sir.

Q. In other words, you decided after your conference with the parties who were acquainted with the facts, with your own experience and knowledge of the facts, that it would cost on June 30, 1904, to reproduce new the mains and services of the company the sum of $4,261,156.39? A. That was the estimate, yes, sir.

Q. Yes? A. Yes.

Q. And that considering the age and condition of the pipes of the Consolidated Company, there should be deducted from that for depreciation a certain amount, and that the present
847 value of your pipes, allowing for that depreciation, would be $4,261,156.39? A. Yes, sir.

Q. Did you so testify before the Gas Commission?

A. To the best of my recollection the testimony was as you have read it.

Mr. **Mathewson**: Mr. Burr, may I simply say this, Mr. Carter undoubtedly testified in that general line, and quite likely all those exact figures are correct, but as I said yesterday, in going over the record we found so many little errors in amounts, that I would hate without verification to have him say that that was exact as to figures.

The **Witness**: And I do not even know that Mr. Burr has read the figures rightly as they appear there. He may have read figures that are not there at all.

Mr. Burr: I am incapable of such a thing.

The Witness: I do not mean that you did it purposely.

The Master: I understand the witness to say that it being correctly printed and correctly taken by the stenographer, he so testified, but that he does not vouch for it; that he testified along those lines. All those figures are subject to correction of course. I do not see how any man could undertake to carry all those figures in his head and reply to such a question.

Mr. Burr: I am reading from the official book on appeal. The examination then continues:

Q. Now, the next item in the report of June 30, 1904, is
848 Bonds and Obligations of other Companies, $8,686,744.70,
and the next item is stocks of other companies, $46,674,034.27, making a total of $55,360,778.97, and in that balance sheet of June 30, 1904, I find the heading "Securities," Stocks and Bonds of Other Companies, $54,581,009.17. There is a small difference. Will you explain that? A. The amount there exceeds this, doesn't it, Mr. Hughes?

Q. Yes. A. I think it is quite possible there may have been something included. Let me glance through it a moment. Well, there were obligations of the United Electric Light & Power Company for coupons unpaid, amounting to $759,144.80, and there were coupons of the Brush Electric Illuminating Company due and unpaid, amounting to $20,625. There is $779,769.80 there. Probably that will make up the difference. It should be deducted from that—from that amount you have.

Q. Add that amount you have to the $54,581,009.17. Then what is included in the item of the report, Bonds and Obligations of other Companies and Stocks of other Companies making a total of $55,360,778.97? A. There were included in that amount, Mr. Hughes, such of the securities as we owned at that particular date as are shown December 30, 1901, on the schedule that you have been furnished with.

Mr. Mathewson: That should be June 30th, should it not?

Mr. Burr: Yes, it proceeds to correct it.

It continues:

Q. On June 30, 1904, you mean? A. I say June 30.
849 Q. You said December 30, 1901. You mean June 30.
You stated December? A. As of June 30, 1904.

Q. In other words, those securities and bonds and obligations and stocks of other companies were stated in the report as to the State Board at exactly the same figures as they appear in the balance sheet? A. Yes, sir, precisely. Yes, precisely so.

Q. Only there is one item and they are divided into two or three items? A. Divided because one is personal property and the other is not. That is the reason for the division. The bonds and bills receivable, notes and that sort of thing form one class of assets. They are personal property.

Q. Without going into that—— A. That is the reason for the division.

Q. —the assets. The point is that the bonds and obligations and stocks of other companies are stated in the report at the same valuation that they are carried in the balance sheet? A. Yes, sir.

Q. Now in the next item in the report of June 30, 1904, is material and supplies $697,014.92. Is there a corresponding item in the balance sheet. A. Well, there is something approximating it. There is $570,000 of gas making material and $126,000 of material used for distributing purposes. That would make a total of $696,000 approximately.

Q. $697,014.92. A. That is it. These two items contain the two.

Q. One hundred and twenty thousand what is the first? A. The two items are $570,891.56 and $126,123.36.

Q. One hundred and twenty-three thousand? A. It is $126,123.36.

850 Q. Yes. Then the item "Material and Supplies $697,014," in the report of June 30, 1904, is made up on the item "Material and Supplies $126,123.36," and gas making material totalized at $570,891.56 in the balance sheet of that date? A. Yes, both materials together used in the gas business.

Q. And both carried into the report of June 30 at the same valuation as they appear in the balance sheet? A. Yes, sir.

Q. Now the next item in the report of June 30, 1904, Accounts and Bills receivable $1,944,968.09. Will you give me the items which appear in the balance sheet of that date which make up the amounts stated in the report? A. What is that amount? May I look at the report a minute?

Q. Accounts and Bills receivable? A. I should have to get my original figures. I am not able to match that up from the items here. It would probably take a little time to just match that up.

Q. You cannot identify them? A. Not particularly.

Q. At the moment? A. Not at the moment. They do not stick out here plain. The amount given here is $1,911,619.60.

Q. That is given in the balance sheet? A. That is given in the balance sheet and I understand it is $1,944,698.09.

Q. Nine sixty-eight? A. The difference of $32,748.49, which is made up of probably two or three other small items here.

Q. Now, the next item in the report of June 30, 1904, is Cash on hand, $1,146,867. Is that item in the same amount in the balance sheet? A. No, it is not $1,146,000.

851 Q. Eight sixty-seven? A. There is $1,077,338.28, $20,700, and there is an item of $39,052.50.

Q. Then we have Unclaimed Dividends as separate items? A. All right.

Q. Leave that out? A. Oh, well, the other items $48,826.61, I think will make it up.

Q. Now the next item in that report is $39,052 Unclaimed Dividends. Have you that item there? A. Yes, sir; that agrees with mine.

Q. That has a corresponding item in the balance sheet? A. Yes, sir.

Q. Then the next item in the report, Metropolitan Fund $500. There is a corresponding item in the balance sheet? A. Yes, sir.

Q. The next item is Contract rights, etc., $7,781,000, and is there a corresponding item of that in the balance sheet? There is, is there not? A. Yes, sir.

Q. You are familiar with that item of $7,781,000, are you not, and its origin? A. No, I am not. I have seen it on the books a good many years.

Q. It has been carried on the books for a good many years in that way, and you are familiar with it? A. I am very familiar with the sight of it on the books.

Q. You know the amount for which stock was issued at the time of the consolidation of the company in excess of the appraised value of the tangible property of the various constituent companies were taken up? A. I guess perhaps I could.

Q. It was put down as Franchises, Rights, etc., and carried in your books in that way right along and that was inserted in the report in the same way it appears in your balance sheet? A. Yes, sir.

852 Q. Now, the next and last item under head of Assets in the report of June 30, 1904, is "Meters, Stoves and other personalty, $2,667,330." Now, what items of the balance sheet in 1904 are valued or were valued by you at $2,667,330 and put in your book as Meters, Stoves and other Personalty? A. It would be impossible for me to give the amount. I could compare that very easily from the original data from which that report was made. I could make that up.

Q. Now, name the items and the amount that appear opposite the items in the balance sheet of June 30, 1904? A. Scows. You want the name of the item?

Q. Yes, scows, and the amount? A.—

Scows	$22,017.95
Pipes and specials	99,309.35
Meters	2,786,193.91
Meters, cocks and connections	317,902.99
Office furniture and fixtures	33,863.87
Horses, wagons and harness	28,408.23
Tools and implements	62,152.11
Gas stoves on hand	40,037.83
On rental	237,723.66
On loan	3,162.22

That is all.

Q. Will you now give the total of those items as they appear in your balance sheet? A. I beg pardon.

Q. Will you please give the totals of those items as they appear in the balance sheet which you have read off as having been embraced by you in the item 'Meters, Stoves and other Personalty' in the report? A. $3,630,773.12.

Q. And that amount of $3,630,773.12 or the property represented

853 by that amount in the balance sheet of June 30, 1904, you adopted in the report to the State Board of Tax Commissioners under the head of 'Meters, Stoves and other Personal Property' as $2,667,329.77? A. Yes, sir.

Q. Now, it is a fact, is it not, that all the items of property embraced in the balance sheet of June 30, 1904, which aggregate under the head of investment the sum of $47,185,455.40 are included in the report given by you to the State Board of Tax Commissioners with a valuation placed by you thereon of $35,079,576? A. I would like to check those figures.

Q. Just check them right off? A. That is right, Mr. Hughes, $35,079,576.

Q. And the difference between $35,079,576 and $47,183,455.40 is what you deducted from the book value of the assets employed in the business of gas making in order to set forth what you believed to be the true value thereof, in the report of June 30, 1904, to the State Board? A. Yes, sir.

Q. Now, that $35,079,576 included $7,781,000 stated in the report, and having been carried, as you have stated, on your books from the organization of the company as Contract Rights, Franchises, etc. If you deduct that you have as the value of the rest of the property of the Consolidated Gas Company invested in the business of gas making on June 30, 1904, the sum of $27,298,576, have you not? A. No, sir.

Q. That is my deduction of seven—— A. Very erroneous, Mr. Hughes.

Q. — million, seven hundred and eighty-one thousand from $35,079,576. A. That is not so.

Q. That is an error? A. It is not an error, but we do not present it as an investment. We present is as actual value.

854 Q. We are not talking about presentments, we are talking about a certain mathematical calculation. A. You ask me that question. You ask me whether it represented the investment.

Q. We are talking about a certain mathematical deduction. I want to know whether I am not right in saying that if from the $35,079,576, you have mentioned as the value of the real estate, plant, mains, services, material and supplies, meters, stoves and other personal property of the Consolidated Gas Company, being all the assets of that company on June 30, 1904, outside of the bonds and obligations of other companies, accounts and bills receivable, cash on hand, unclaimed dividends, Metropolitan fund, $500, and the item of contract rights, etc., you deduct from that the $7,781,000, you have a balance of $27,298,576, have you not? A. We have a balance of actual value of the balance of the property of that amount, yes, sir.

Q. That is right.

Q. Did you so testify?

A. Substantially so I believe.

Q. But I am reading now from the record.

A. Assuming it to have been correctly taken and that you have read it correctly, I should, yes, sir.

Mr. MATHEWSON: The figures, I observe from reliable data that I have, are substantially correct, but there are slight variations in one or two cases, a dollar in one case and half a dollar in another, but they are substantially correct, I think. That is all that the witness means.

The WITNESS: Yes, that is it.

855 By Mr. GANS:

Q. You have no doubt that it is correct, except as to these minor details of figures?

A. No. That is the gist of the thing, the general drift of it.

By Mr. BURR:

Q. The testimony continues at page 381 of Volume 1:

By Senator GRADY:

Q. Let me ask right here—what distinction do you make between book values and the values reported to the State Board of Tax Commissioners? A. Senator, there is——

Q. Now, begin as to the real estate and plant? A. The property of the Consolidated Gas Company was acquired through—largely through the issuing of its stock to the companies that consolidated in 1884. The valuation that we have represents the stock issued for those companies together with additions made by the payment of cash from time to time until the present date, and the total value given here of $47,183,455.40 represents the value that the Consolidated—the cost to the Consolidated Company of those properties in its stock and in cash as distinct from its value upon a basis of the cost of reproduction, or less deterioration in value. You said there was something in the report that guided you in making your value—some statement in the report to the State Commissioners? A. That—not guided us, Senator, but that explained that the—that the balance—statement of assets and liabilities which appeared in that report did not purport to be a balance sheet of the company, 856 but a statement of the assets and liabilities at their actual value as nearly as we could ascertain it.

Q. Just take the report and read that statement? A. The statement calls for cost values and this note appears upon the statement "Cost in the above statement is not given for the reasons stated in the report for 1899." Now, if the report of 1899 is available I would be glad to read the reason that was given at that time.

By Mr. HUGHES:

Q. And has been read in evidence, Mr. Carter? A. May I read it at this particular juncture?

Q. As to your inability to state cost, I am not at all anxious, or how you endeavor to state cost. I am anxious, however, to ascertain, and I believe you have testified that the figures in there are the values on June 30, 1904, of that property. Is that not so? A. That is true.

Q. That is true? A. Yes, that is the value, as we estimate it.

Q. That is what I want to know? A. As of June 30, 1904, with depreciation taken off.

Q. I do not care what you took off in 1904. I want to know what it is worth? A. Shall I read this:

The CHAIRMAN: Yes, read that.

The WITNESS: "It is impossible to state the cost of the real estate, equipment, etc., for the following reasons: There are no records in the possession of the Consolidated Gas Company showing the cost to the constituent companies of the property which those companies transferred to the Consolidated Gas Company, which comprises the principal part of the property of the Consolidated Gas Company.

857 Much of the property was purchased by the constituent companies more than fifty years ago, and the officers of the Consolidated Company are ignorant of the terms on which such purchases were made. When the Consolidated Gas Company was organized its stock was issued for the property rights and good will of the constituent companies. Such properties, etc., we paid for in cash. Further a statement of the cost would furnish no information which would aid in assessing the franchise in question. Because the cost, if known and stated, would bear no relation to the value of the same at this date, and also because in making the assessment in question the law requires that each special franchise shall be assessed separately. It is respectfully suggested to the Commissioners that the form of account stated in Schedule D as prepared from the old form used in railroad accounting is applicable to railroads, because each railroad corporation has a single franchise with reference to which such accounts as those in Schedule D are usually kept, as appears by the Railroad Commissioners' Annual Reports. The form is not such as is applicable to gas companies, and is not such as this company has ever kept. The officers of the Consolidated Gas Company, although desirous of complying with every reasonable requirement of the State Tax Law, have been themselves unable to adopt a statement in the railroad form or to report in the form of Schedule D."

Q. I do not think, Mr. Carter, we are under any misapprehension as to the fact that your company was organized, 1884, by the consolidation of several companies; as it already appears here

858 there was this appraisal of the value of the properties of the companies, and stock of the Consolidated Gas Company was issued on the acquisition of those properties, and stock was also issued in excess of the appraised value of the properties of the constituent companies to the amount of $7,781,000, which, under the description of contract rights, etc., have been continually carried forward by your company in its statement of assets and are included in that Schedule D of the report of June 30, 1904, which has been shown you. Now, then what I want to have you state, if you will, without going into any argument about it, for I simply want the fact, that in the statement of assets of June 30, 1904, in the report which you swore to be correct of that date, eliminating accounts and bills receivable, cash on hand, the securities which you hold of other corporations, and also eliminating this item of $7,781,000 of Contract

Rights, Franchises, etc., whether the remainder is not stated to be worth $27,298,576? A. On the basis of cost of reproduction, less depreciation; yes, sir.

Q. On the basis of value, Mr. Carter? A. Well, valued in that way, Mr. Hughes.

Q. It was what you believed it to be worth? A. Yes, sir.

Q. That is what we mean by value, is it not? A. Practically.

Q. What we mean by actual value? A. I only want to make it very plain, Mr. Hughes.

Q. When you were trying to make up this statement, in consulting the other gentlemen who knew about the matter your effort was to make a statement of the actual value, was it not? A. Yes, sir.

859 Q. And you believed that was the statement? A. We believed that, sir.

Q. And that statement of the real estate and the plant—— A. Always.

Q. The meters and services and everything outside of the cash assets and securities foots up $27,289,576? A. Yes, cost of reproduction, less depreciation.

Q. Now, when you say—I do not want, Mr. Carter, to take any advantage of your statement, I will bring out your explanation—that was the actual value as you believed it to be? A. Yes.

Q. When you fixed that as the actual value and you did it on the idea that was what it would cost to reproduce your gas making material new? A. Not that value, Mr. Hughes. There is a depreciation taken off, not cost of reproduction. That is not the cost of reproduction.

Q. Let me see about that. There is an amount taken off for depreciation in mains and services? A. Yes, sir.

Q. Is that right? A. Yes, sir.

Q. Then you mean to say that your plant was worth less on June 30, 1904, than a new plant produced on that date would have been worth? A. Yes, sir.

Q. Well, now, what we are trying to get at is what your plant was worth, and that we have in these figures, and that is something less than a new plant; is not that right? A. Yes, sir.

Q. And that plant is $27,298,576. That is right, is it not? A. I don't say that; no, Mr. Hughes. I don't say it was worth that. I say that is the value that we placed upon it on the basis of cost of reproduction, less depreciation. Now, you can say that was 860 what it was worth, but I won't say that is what it was worth.

Q. Then what was its actual value? A. Estimated actual value, yes.

Q. Yes. In other words, you say a new plant would be worth, reproduced, what we have with our generating plants, our distributing plants, etc., our holders, our mains and meters—a new plant would be worth so much; ours is not a new plant, ours is worth so much, and what ours is worth is stated in these figures. That is right, is it not? A. If you want to pin me down to the question of worth, Mr. Hughes, why I would like to be excused.

Q. Do you draw any distinction between value and worth? A. For this purpose, the purpose of this report, I would say——

Q. State what the distinction is between value and worth? A. The value of that plant, based upon the cost of reproduction, less depreciation, would have some value possibly from an investment standpoint, Mr. Hughes, because of its use, application, good-will of the people with whom the company was doing business, its relation with the public. That would contribute somewhat to its worth, but that would not figure in its value on the basis of cost of reproduction, less depreciation.

Q. You mean it might have a value of more than it was worth? A. Yes, sir—I don't say of more than it was worth—no. I don't say a value of more than it is worth.

Q. Well—— A. I say it might have a worth more than its value of the cost based upon reproduction, less depreciation.

Q. Well, put it the other way. Worth more than its value? A. More than its value obtained in this way and for this purpose.

861 Q. Now, without taking into consideration whatever you value your relations to the public and good will and the other intangible assets of that description, and setting down to properties which you set forth in your statement of assets, I simply want to have it clearly understood that what you there set forth in your report as your assets and liabilities, and the actual value of your assets thus set forth as the value of your real estate and plant, mains and services, material and supplies, meters, stoves and other personal property an aggregate of $27,298,576, that is the fact, is it not? A. I have testified, Mr. Hughes——

Q. Just answer that question. I want you to say whether it is right or not? A. Well, I have stated a great many times that it is, and I will state it again if you put the question right.

Q. I will ask you to simply state whether that addition is right. I do not want any dispute about the correctness of my figures. We will argue about it later on. A. Those figures you are showing amounting there to $27,000,000, represented our estimated value of this plant on the basis of the cost of reproduction less depreciation.

Senator PAGE: That is not the question. The question is whether these figures total up a certain amount.

The WITNESS: They total up twenty-seven million.

Q. $27,298,576? A. That is the total, $27,298,576; yes, sir.

Did you so testify, Mr. Carter, before the Gas Commission? A. Assuming that the testimony was correctly taken and

862 has been correctly read, I should reply affirmatively.

Q. I have been reading, so that you may verify what appears upon the record, from the "Papers on appeal from the order made by the Commission of Gas and Electricity of the State of New York," in the matter of the complaint of Edward C. Keys and others, being upwards of 100 customers of the Consolidated Gas Company, and the complaint of R. H. and M. N. McGurrin and others, also being upwards of 100 customers of said company, in the New York Supreme Court, Appellate Division, First Department, Volume 1, pages from about 368 to 387, so that you may verify the testimony as I have read it. And that tax report of 1904, regarding which you are testifying, was the report which you had made up after consultation with counsel and after consultation with Mr. Simpson who is in charge of mains, and with Mr. Bradley, the chief engineer to the company, is it not?

A. You refer to what tax report?

Q. The tax report regarding which I have just read your testimony, the tax report of 1904.

Mr. Mathewson: Give the number of the exhibit; it is in evidence here, State's Exhibit D.

(The question is repeated by the stenographer.)

A. My best information is that while Mr. Simpson furnished me with the value of the mains and Mr. Bradley furnished me with the value of the plants, those figures were not given me in connection with that particular 1904 report. They were given to me in connection with a report to the local Tax Commissioners for 1902, the report that was made the Second Monday in January, 1902, and this report, as was the special franchise report for 1902 and 1903, was based upon that same information.

863 Mr. Mathewson: And the same is true of 1904?

The Witness: The same is true of 1904; I am testifying with respect to 1904.

Q. Before the Stevens Investigating Committee, as appears by the record of the testimony, page 213, Senate Document No. 30, referring to this same tax report of 1904, you were asked by Mr. Hughes:

Q. In other words, you decided after your conferences with the parties who were acquainted with the facts, with your own experience and knowledge of the facts, that it would cost on June 30, 1904, to reproduce new mains and services of the company the sum of $4,261,156.39? A. That was the estimate; yes, sir.

Q. Did you so testify before that committee?

A. Yes, and I said a moment ago that the figures appearing in the 1904 report were based upon the same information, given to me by Mr. Simpson and Mr. Bradley in 1902.

Mr. Mathewson: And you so testified before the Gas Commission?

A. I so testified before the Gas Commission.

Q. Did you sign the tax report of 1902 as secretary of the company?

A. Yes. Well, not in 1902, I will not be sure of that.

Q. Did you sign it in 1899 as secretary of the company?

A. No, I did not. I was not secretary of the company in 1899, nor was I secretary in 1902.

Q. Did you sign the tax report in any official capacity on behalf of the Consolidated Gas Company of 1900?

A. No, sir. I think that the first report I signed was 1903,
864 possibly 1904. It certainly was not earlier than 1903.

Q. Do you remember testifying, either before the joint committee of Senate and Assembly, or before the Gas Commission, that that report was made up by you and signed by you after consultation with eminent counsel, and upon the facts presented to you by Mr. Simpson and Mr. Bradley?

A. Well, I might before the Senate committee have conveyed that idea. I do not think I fixed the date of any conference or fixed the date when that information, or the information upon which that report was based, was given to me by Mr. Bradley and Mr. Simpson. I knew that I had obtained it from them and I must have made it clear in my testimony before the Senate committee when they gave it to me. It formed the basis, as I testified then and testify now, of the report for 1904, although it was furnished by them to me in 1902.

Q. Do you remember Mr. Mathewson's disavowing having any connection with the making up of that report at that time?

A. I do not remember it, and I think it would have been unnecessary; the matter was not referred to him at that time, to my recollection.

Mr. Mathewson: You stated that you had consulted counsel as to the construction of the law, or that you had been advised as to some construction of the law, did you not?

The Witness: I did state before the Gas Commission, and I think also before the Senate Committee, that the report was always submitted to counsel for their approval before it was filed with the State Board of Tax Commissioners.

By Mr. Gans:

Q. I think you testified that the counsel were Boardman,
865 Platt & Soley, and not Mr. Mathewson?

A. I think I testified that counsel in that particular case were Messrs. Boardman, Platt & Soley.

By Mr. Burr:

Q. I ask you to look at page 175 of the Senate Document No. 30, being the testimony taken before the Joint Committee of the Senate and Assembly, and say whether that is a correct copy of the balance sheet showing the assets and liabilities of the Consolidated Gas Company, June 30th, 1904.

A. I cannot say whether it is a correct balance sheet or not, or whether it is a correct copy of the balance sheet.

Q. It purports to be the record of the balance sheet showing assets and liabilities of the Consolidated Gas Company of New York, on June 30th, 1904, as they appear in the Balance Book No. 5, pages 59 and 60, being Exhibit 60A before the Joint Committee of the Senate and Assembly.

A. The total of the assets as they appear in this alleged copy of the balance sheet is $110,941,335.40. It is a trial balance sheet as of June 30th, 1904, and includes of course all the operating accounts.

By Mr. Mathewson:

Q. The balance sheet itself would not show that total?

A. The balance sheet would eliminate operating accounts and deal with what are strictly assets and liabilities. I have no doubt it is correct, barring of course the possibility of errors, in printing, but without making careful comparison between that copy and the balance sheet itself I should not like to testify that it is a correct copy of it.

Mr. **Burr**: I ask that it be marked for identification.

866 Marked City's Exhibit No. 9 for Identification.

Q. In that Exhibit 60A before the Joint Committee of the Senate and Assembly, as it appears on page 175 of the record, I find an item under the head of investments, "real estate M, $50,588.65." To what particular real estate does that refer?

A. Well, it refers to a parcel of real estate that we accepted in settlement of money that was due us from a man that we were doing business with, and for the purpose of keeping it separate, we called it "real estate M" and it showed in that account. It was real estate which consists of vacant lots. I don't think there are any improvements on it.

Mr. **Mathewson**: The testimony showed at that time, in some other place, that it was used for storing coal.

The **Witness**: Used for storing coke.

Mr. **Mathewson**: Yes, coke.

The **Witness**: At the 42nd Street station.

Q. Does the company still own that real estate?

A. It is still on the books, yes, sir.

Q. Are you quite sure about that?

A. Quite sure. Our balance sheet, Mr. Burr, will show that item if it is there. I am very sure it is, but you can confirm it with your own balance sheet, at least the balance sheet I had prepared for you.

Q. This is what I want to call your attention to, Mr. Carter, before I dismiss this matter of the tax report of 1904. Your testimony as it appears on page 370 of the testimony before the Gas Commission appears to be reported as follows:

> "Q. With whom did you advise in making this determina-
> 867 "tion of value? A. The engineers of the company. Q.
> "Who were they? A. Mr. Bradley and Mr. Woods. Q.
> "And who else? A. The assistant secretary who has charge of the
> "distributing system of the company."

Mr. **Mathewson**: That is all in evidence here already.

Q. Has the Consolidated Gas Company borrowed any money itself from any other companies or anybody else?

A. Do you mean to say does it now owe some other company money? It that what you mean?

Q. Yes.

A. You mean for supplies or material?

Q. For any purpose whatsoever.

A. Why yes, we owe money to a great many companies.

Q. I don't say owe money for material or for expenses; I say have you borrowed money?

A. No, there is no liability of that kind that I have any knowledge of or that appears on the books of the company.

Q. Referring to a loan of $350,000 borrowed by the Consolidated Gas Company from the New York Gas, Electric Light, Heat & Power Company in 1900, do you recall what that was for?

A. No, I do not, Mr. Burr. That loan was canceled in 1904 or 1905, I won't be sure which.

Q. You know nothing about that loan?

A. I know nothing about it.

Q. And were you secretary in 1900?

A. No, sir.

Q. You were chief accountant at that time?

A. I think I was comptroller at that time. I think the position I held at that time was that of comptroller.

Q. Where would that loan appear in the books of the company?

A. In an account entitled "The New York Gas, Electric Light, Heat & Power Company."

Q. Is there any record in the minutes of that loan, in the
868 minutes of the company?

A. Not that I am aware of.

Q. Will you look at the minute book and see if there is a record?

Mr. Mathewson: Mr. Master, I shall object to pursuing this inquiry further. I do not think it is instructive, the question Mr. Burr asked was——

The Master: I heard the question. What is the point, Mr. Burr?

Mr. Burr: I don't know why under the statement that is now before your Honor they should borrow money in 1900 and then not know what is was used for. I will ask Mr. Carter now—I understand you to say you do not know what it was used for?

The Witness: No.

Mr. Gans: Was that that City Bank loan?

The Master: That does not appear here as yet.

Mr. Mathewson: No.

The Witness: It might have been used for a great many purposes. It was borrowed unquestionably to replenish our cash account and I would defy anyone to say what it was used for. It was not applied to any particular purpose that I have any knowledge of.

Q. What evidence of indebtedness did you give for the money? In what form was it borrowed?

Mr. Mathewson: I renew the objection. This has nothing to do with what the assets of the company are here upon which we are entitled to earn, and has nothing to do with the cost of gas
869 upon the statement before you. It has nothing to do with the return that we are entitled to upon our assets. What earthly use is there to pursue this $350,000 which we borrowed and which has been paid off.

Mr. Burr: I want to know the operations of this company for the year 1900, and I find a large item of $350,000 borrowed from another company, the New York Gas & Electric Light, Heat & Power Company. I am now examining the secretary of the company, who was then the comptroller, and he says he does not know anything about that loan, he does not know what it was used for.

The MASTER: Conceding all that to be so, how is it material?

Mr. BURR: Then we may be able to show where other sums were borrowed and what was done with other large sums.

Mr. GANS: Was not the interest on that included in that statement of fixed charges?

Q. Was interest paid upon that loan?

A. I think it was.

Q. In what form was the indebtedness of the company presented or given? Was it in the form of a note?

A. Whether we gave notes for that sum I don't know. If we did, of course they were canceled when the amount was repaid. I think more than likely we gave notes for the amount, very likely.

Q. Have you any idea that that money was used for the Astoria plant?

A. No, I have no knowledge that it was. It would not surprise me if we might have used some of that for that purpose.

Q. How do you keep a record of what is done with any particular fund, how it is used?

870 A. If we set aside a particular fund for a particular purpose, why the books of account would show the employment of that fund for that purpose, but where we simply take cash and put it into our general fund, we do not attempt to identify the cash we take out of that fund for any particular purpose with any particular cash that went into the fund.

Q. If I remember rightly, in one of the statements that have been presented here there is an item of some $6,000,000 which, as I understand, is ready to be drawn upon for the purpose of the Astoria plant. Am I correct in that?

A. As of what date? because we have made several reports and I would not like to confuse the records.

Q. Well, as of the first of January, 1906?

A. I don't think that we made any report of that date. We have made a report as of October 31, 1905.

Q. Well, take it at that date.

A. Now, what is your question, Mr. Burr, please?

Q. (Question repeated by stenographer as follows:) If I remember rightly, in one of the statements that have been presented here there is an item of some $6,000,000 which, as I understand, is ready to be drawn upon for the purpose of the Astoria plant. Am I correct in that?

A. Yes, sir. We had at that time not less than that amount that we could employ for that purpose.

Mr. MATHEWSON: The proceeds of the debentures of 1904?

Mr. CARTER: That is the case.

Q. Is that a special deposit for that purpose, for the Astoria plant?

A. No, there is no special deposit for the Astoria plant.

Q. Well, you alluded I think the day before yesterday to some special deposit in the City Bank. What was that?

A. I alluded to the fact that for a while after the 1st of 871 January, 1905, the proceeds of the sale of the convertible debentures was carried in a special account which was ultimately merged in a general cash account of the company and it was carried at the present time and has been since that date.

Q. Was there any other money borrowed by the Consolidated Gas Company in 1900 to your knowledge?

Mr. Mathewson: I object to going further on this subject. There is no statement of operations in 1900 or anything of the sort here. It seems to me we are going far afield with no relevancy.

Mr. Burr: We have here in Complainant's Exhibit 86 a statement of the sales year by year and the number of customers.

Mr. Mathewson: Yes, sales of gas by the feet and the number of consumers. What has that to do with borrowing?

Mr. Burr: And the dividend that was declared that year appears on Exhibit 83 to have been 6 per cent. and the record in Exhibit 86 shows a great increase in 1900 both in customers and in sales over 1899. I want to know why it was necessary under those circumstances to borrow money in that year.

The Witness: You may recall, Mr. Burr, that during the latter part of 1899 and the first half of 1900 the price of gas was very low.

Q. You paid a dividend that year of 6 per cent.

A. In 1899?

Q. Yes.

A. I think not.

Q. In 1900?

A. In 1900 we paid a dividend of 6 per cent.

Q. And in 1899 you paid 5½ per cent.?

A. That is the case.

872 The Master: Now, what is the question that was objected to?

The Stenographer (reading): Was there any money borrowed by the Consolidated Gas Company in the year 1900, to your knowledge?

The Master: You may answer.

Exception.

Q. I don't know.

Q. Well, where will it appear in your books what money was borrowed that year, in that year?

A. Well, if there was any money borrowed during the year and carried over a month, it would appear in the balance sheet as a liability.

Q. Do you purchase your meters under contracts?

A. No, sir.

Q. How do you purchase them?

A. Principally from the American Meter Company.

Q. Do you buy as the result of competition, or do you buy these meters as you need them, without competition?

A. We buy them as a result of competition, I should say; the

American Meter Company giving us the best meter that is offered in the market and at as reasonable a price as we can obtain that meter, and they are doing a large enough business to supply our requirements, which no other company is.

Q. Is the price of meters the same from year to year or does it fluctuate?

A. Well, it don't remain the same indefinitely, but how often it fluctuates I should not like to say. There has been no change in price for several years.

Q. In the past ten years has there been any change in the price of meters?

A. Yes, I should say there had been.

Q. Do you recall what was the lowest price you paid for meters?

A. No, I do not.

873 Q. Or the highest price?

A. The lowest price we ever paid for meters is the price we are paying to-day.

Q. What is that?

A. Would you like to have the prices of the different meters?

Q. Well, I would like to know all about the meters, how many different kinds of meters are there?

A. I could give you that information. I suppose you don't expect me to carry that in my head. I have a memorandum of those things here. If you kindly say what information you desire I will try and give it to you.

Q. There is a large item of expense for meters——

A. Expense for meters? Meters are property. It is carried as an asset.

Q. You purchase them?

A. Yes, sir.

Q. There are three items of expense connected with meters, one for the purchase of them, the next is setting them and the other is the repairing of them.

A. We do not consider the first an expense. We consider it an investment.

Q. Well, call it an investment.

A. That is what it is.

Q. A variation of two dollars in each meter would mean a great deal of difference in that account, wouldn't it?

A. A difference of two dollars in the value of each meter or in the cost?

Q. In the cost.

A. It would make a difference in the value at which those meters would appear upon our books.

Q. Well, I suppose you know what you pay for the meters?

A. For what size?

Q. How many kinds of meters are there?

A. There are two kinds of meters, what we term ordinary meters and automatic pre-payment meters.

Q. The automatic meter is used where a person drops the money in the slot before getting the gas, is that right?

A. Yes, sir.

874 Q. And the other is the meter which regulates the amount of gas which the ordinary consumer who pays his monthly bills is supplied with?

A. It does not regulate it exactly; it registers it.

Q. Now, which is the more expensive of the two?

A. Why, the prepayment meter is the more expensive of the two because of the prepayment attachment on it.

Q. How long have you been using the automatic meter?

A. The automatic meter has been used by the Consolidated Company for a period I should say of not less than twenty years, possibly a little longer than that.

Q. What do you have to pay to-day for the automatic meter?

A. Well, what size, because we have three sizes of automatic meters.

Q. Well, the small size?

A. The small size, the 3-light prepayment meter, \$7.65½.

Q. Is that the same price you paid last year?

A. Yes, sir.

Q. And the year before?

A. And the year before.

Q. And the largest size of the automatic meter, what is the price of that?

A. The largest size is a 20-light meter, which costs \$12.70½.

Q. Is that the same price this year as it was last year?

A. Yes, sir.

Q. And the year before?

A. And the year before.

Q. And do you get those meters from the company that you have just named?

A. The American Meter Company, almost without exception, I think.

Q. Now, with regard to the other meter. What is the lowest cost of that meter?

A. The 3-light black meter, \$4.38.

Q. And are there two different kinds, did I understand you to say?

A. No; there are three sizes of prepayment meters, 3-light, 5-light and 20-light, the term being used to approximate the capacity 875 of the meter for supplying gas burners. Of the black meters, there are 14 or 15 or 16 sizes, running from a 3-light meter to an 800-light meter.

Q. Is that paper from which you are testifying a list of all the different kinds of meters which are used and are in operation by the Consolidated Gas Company?

A. It gives that information, yes, sir.

Q. And from what book is that statement taken?

A. A statement from our record at Irving Place.

Q. Any particular meter book?

A. Yes, the book in which we keep a record of the changes that occur from month to month in the meters.

Q. That shows the number of each kind of meters that are in use to-day?

A. Yes, sir.

Q. Did you make up that statement yourself?

A. No, sir.

Q. That was made up for you?

A. That was made up for me.

Q. Now, with regard to the coal and the oil contracts, you are going to produce those, are you? Mr. Mathewson I understood said that he had no objection. You will produce those to-morrow, will you?

A. Yes, sir.

Q. On page 595 of the printed record of the testimony before the Gas Commission you were asked this question:

"Q. Are the plants operated by the Consolidated Gas Company " efficient for the production of gas in this community as distributed " to its consumers? A. Up to their present capacity absolutely so, " yes. Q. In addition to the matter of preference on account of the " location, what are the gains by the creation of the new plant being " built by the Astoria Light, Heat & Power Company? A. Noth- " ing outside of location that, I think, could be predicated
876 " with any degree of certainty whatever; we trust some econo- " mies, but that is problematical, and it awaits development. " Q. So that the only reason that you offer for building that new " plant is the one resting upon preference in location and its desira- " bility from the standpoint of the residents of the City? A. That " is the sole ground."

Did you so testify?

A. Yes, sir, I did.

Q. In the bill of complaint, Mr. Carter, it is stated on page 11, folio 44, "Furthermore your orator has found it necessary to provide an extensive, additional plant in order to meet the increase in the consumption in gas in the City and county of New York." How do you reconcile that statement with the statement made by you before the Gas Commission which I have just read?

A. I don't see anything conflicting there, Mr. Burr. Assuming the necessity for the plant, the question would arise on location, and I testified that the advantage in going to Astoria was one of location. I didn't testify that we were constructing the plant at Astoria just simply because it was a good place to construct a gas plant. If I conveyed that impression I certainly conveyed a very incorrect one.

Q. Mr. Bradley has testified that the main reason in his opinion why the plant was being established at Astoria was to escape the persecution of the City departments.

Mr. Mathewson: I think you had better read Mr. Bradley's testimony. If he so testified, Mr. Burr, I do not remember it.

The Master: He mentioned that circumstance. I do not recall that he said it was the main reason.

Mr. Mathewson: Quite so.

877 Mr. Burr: Well, it is very important to ascertain what is the real reason and to get some reconcilement of the various conflicting statements, because it figures very largely in this ten per cent. depreciation.

Mr. Mathewson: There are no conflicting statements at all, Mr. Burr, as you will find by comparing them.

Q. On page 19 of the complaint it is stated, referring to the property owned by the company, "such property consists of the value of the connections between the pipes and mains of your orator and the various buildings throughout the City of New York, the value of various contracts owned by your orator in connection with its business. To what contracts do you refer in that complaint, contracts with consumers?

A. Oh, I presume reference is made to whatever contracts might be in force, or might have been in force at the time that contract was drawn.

Q. Do you know of any valuable contracts which the Consolidated Gas Company has outside the contracts with consumers for supplying gas?

A. I consider those very valuable, of course. The company has other contracts for the supply of material, that we think are advantageous.

Q. Those are the contracts for the disposal of the residuals?

A. For the disposal of the residuals, as well as for the furnishing of material required in our business.

Q. In the bill of complaint, page 23, it is stated "in the opinion of your orator and of persons familiar with the gas business in New York City, it is purely conjectural whether there will be any substantial increase in the sale of gas by reason of the said reduction in price; and any possible economies in the cost of production at Astoria will largely be offset by the increased cost of distribution, owing to the necessity of distributing the gas through a tunnel under the East River." Why didn't the Consolidated Gas Company build its plant itself in Astoria, do you know? 878

A. It is building it itself in Astoria.

Q. The Consolidated Gas Company?

A. Why, of course, it is using an organization that it has given a corporate title to for the purpose of doing the work in Astoria. The Astoria Light, Heat & Power Company is to all intents and purposes the construction department of the Consolidated Gas Company.

Q. Isn't the reason for incorporating the Astoria Light, Heat & Power Company that the Consolidated Gas Company has no authority to build over there for itself?

A. I don't think that the Consolidated Gas Company would require any more authority than the Astoria Light, Heat & Power Company has. The facts are as I stated them with respect to the relations of the Consolidated Gas Company and the Astoria Light, Heat & Power Company.

Q. In the bill of complaint it is stated further, describing the property of the company, "such property consists of the value of the connections between the pipes and mains of your orator and the various buildings throughout the City of New York, the value of various contracts owned by your orator in connection with its business, the value of the organization of your orator's business and good will, and various other elements of value which have been created and developed by your orator and its predecessors." What are those other elements to which reference is made, if you know?

A. May I see the bill of complaint?

879 Q. Yes. (Handing same to witness.)

A. Well, I don't see but what they have stated it very fully there. I don't know what may be referred to "as other things" strictly.

Q. As "various other elements of value"?

A. As "various other elements of value."

Q. You don't pretend that there is anything else besides what you have presented here in your statement as constituting elements of value to your company?

Mr. Mathewson: What statement, Mr. Burr?

Mr. Burr: Well, assets, and the testimony that has been given as to their business, &c.

Mr. Mathewson: There is no testimony at all as to the good will of an established business, which we consider of very great value, nor yet of the franchises.

Q. The complaint at folio 75 refers to the franchises and proceeds to say "In addition to its said franchise rights, your orator is possessed of a large amount of intangible property, which constitutes an integral and important part of its said business" and then continues as I have previously read; continues to speak of the various other elements of value. Now, I want to know what those various other elements of value are and were that appear upon the books of the company, and you cannot recall them so as to specify them at this time, is that right?

A. No, not in addition to the things enumerated in the bill of complaint, I don't think of anything at the moment.

Q. In addition to those things which are specifically enumerated in the complaint you don't think of anything else that can be embraced in this term "various other elements of value?"

A. At this moment nothing else occurs to me, Mr. Burr.

880 Of course, I assume there is included everything that appears upon our books and these other intangible assets which are not valued upon our books, so far as our book records are concerned, in addition.

Adjourned to Friday, August 17th, at 1:30 P. M.

Last Exhibits:

Complainant's 100.
City's 9.
State's N.

881 **Circuit Court of the United States, Southern District of New York.**

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *August* 17, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Gans.

882 ROBERT A. CARTER resumed the stand.

Cross-examination by Mr. BURR, Continued:

Mr. BURR: I would like to have it noted on the record that the title of the proceeding in which the rate of 80 cents per thousand cubic feet was fixed by the Gas Commission, and the decision of which by the State Commission is now here questioned, was in the matter of the complaint of Edward G. Keys and others, being upwards of 100 consumers of the Consolidated Gas Company of New York, and the complaint of R. H. & M. McGurrin and others, also being upwards of 100 consumers of the Gas Company, and the testimony read to Mr. Carter was from the papers on appeal from the order made by the Commission of Gas and Electricity of the State of New York and printed and prepared by the attorneys for the Consolidated Gas Company.

Mr. MATHEWSON: I don't know that that is entirely so, Mr. Burr. I think you questioned him as to certain answers from the record of the proceedings before the Stevens Investigating Committee, and not entirely from this record; and of course the record you refer to on appeal is one that is approved by the counsel both for the Consolidated Gas Company and for the complainants mentioned, otherwise it could not be filed.

Mr. GANS: Were not all your questions, Mr. Burr, either directed to testimony that was either taken directly before the Commission or read in evidence before the Commission?

Mr. MATHEWSON: No, he took that printed record before the Investigating Committee and asked certain questions as to that,
883 he asked whether the balance sheet as it appeared in there for
June 30, 1904, was correct, and all that.

Mr. PAGE: That same balance sheet was put in evidence before the Commission.

Mr. MATHEWSON: That may be, but the question does not indicate, nor is the witness' attention directed to the printed volume on appeal in that connection.

Mr. Burr: Do I understand that there is any question made as to the correctness of the testimony read by me from the printed record which I have just read?

Mr. Mathewson: I do not touch upon that point at all. I merely desire to correct the general statement you made at the outset, I think by inadvertence, which is not precisely accurate.

Mr. Burr: It is true that before the Gas Commission certain testimony given by Mr. Carter before the Stevens Investigating Committee was read.

Mr. Mathewson: Quite true.

Mr. Burr: And part of the testimony to which I called his attention yesterday as printed in these papers was evidence given by him before the Stevens Investigating Committee which was read in evidence before the State Gas Commission, and part I read from the record of the Stevens Investigating Committee itself.

Mr. Mathewson: Yes.

Mr. Burr: The testimony taken yesterday having been but this moment delivered and received by me, I cannot say definitely as to all the matters called for, or statements called for yesterday, but I will ask Mr. Carter to produce those statements which were called for and of which he made a memorandum yesterday, I believe. 884

The Witness: My understanding was, Mr. Burr, that the production of these statements was to depend in the first place upon what statements might be prepared by the accountant of the State that might cover the same line of inquiry, and in the second place it would be subject to Mr. Heyward's scrutiny of the account as to whether he wished the statement made up or whether he was satisfied from his scrutiny that it was unnecessary. Now, since these statements were referred to in yesterday's examination, of course I have not been interviewed by Mr. Heyward nor have we gone over the subject, because he in turn desires to await the termination of the investigation by the accountant for the State before beginning to make such investigation or do such checking as he desires to do.

Mr. Mathewson: Yes, that is quite right. You stated, Mr. Burr, that you understood when you made this request yesterday, that this might be unnecessary in view of what information might be supplied to Mr. Heyward.

Mr. Burr: Of course you (Mr. Carter) cannot be at the office with Mr. Heyward while you are here?

A. No.

Q. And Mr. Heyward informs me that he called up to your office, but that you were so busily engaged that you could not give the attention which he thought it necessary to give to him in order to go over the books?

A. That was when?

Q. The last day he was here.

A. I think it was rather the case that Mr. Heyward wanted

to talk with me about, rather than perhaps go into the
885 books themselves and check my statements and perhaps we were interrupted so much that he did not complete what he wanted to talk about.

Q. He informed me that he has had no such opportunity as he must have to get the information desired.

A. He desired to postpone pursuing the subject until the accountant for the State has completed his work.

Mr. Mathewson: Which I understand is to be at the disposal of Mr. Heyward, as it may answer his purposes.

Mr. Burr: The account?

Mr. Mathewson: Yes.

Q. Have you produced the contracts, Mr. Carter?

A. I think they come under the same category.

Mr. Mathewson: No.

The Witness: I can have them down here in a few minutes.

The Master: There is no question about that. All the contracts were to be produced here to-day.

The Witness: I might say, Mr. Burr, that I relied upon seeing the printed record this morning so as to get from that a list of anything that was to be absolutely presented here to-day, but the delivery of the printed record has not been made yet, at least I am not aware of it.

Q. They have just been delivered this moment.

A. That would explain my failure to bring the contracts down.

Q. And the voucher record, you haven't that, have you, that is at the office, is it, that was spoken of yesterday?

A. I don't know to just what record you are referring, Mr. Burr.

886 Q. You remember we spoke of the production of the voucher record yesterday?

A. I would like to refresh my memory by referring to the testimony where reference is made to the voucher record.

By Mr. Gans:

Q. What would the voucher record signify, Mr. Carter?

A. I would say that the operating ledger was the voucher record, the permanent voucher record of the company. Every voucher which represents a disbursement is a matter of record in the operating ledger.

By Mr. Burr:

Q. You testified yesterday that you had a separate book, being a voucher record.

A. I would like to see the testimony.

By Mr. Gans:

Q. I suppose you have a filing system whereby you file away all the vouchers?

A. The vouchers themselves, not a voucher record. The vouchers themselves we do not destroy.

Q. And they are indexed in some way?

A. No, they are not indexed at all, they are simply filed in alphabetical order.

Q. Filed by month by month?

A. Yes.

Q. Filed in the departments as well as alphabetically?

A. No, filed alphabetically according to the names of the people whose names appear upon the vouchers.

Q. Whether they are for something in the street department or something at one of your plants, one of your manufacturing stations?

A. There is no separation of that kind of the vouchers.

887 By Mr. **Burr**:

Q. Well, have you such a book known as the voucher record?

A. No, no such book as the voucher record. That was the reason I was interested in having my statement confirmed, that I said I would produce such a book.

Q. Have you a record of your vouchers?

A. As I have stated, the vouchers are all recorded in the Operating Ledger.

Q. And you have the original vouchers filed away?

A. Yes, sir.

By Mr. **Gans**:

Q. Are they numbered, Mr. Carter, the vouchers?

A. No, except that each voucher bears the number of the check drawn in payment of it; that is simply as a memorandum, however.

The **Master**: Pending the arrival of these contracts we will take up something else, Mr. Burr.

Mr. **Burr**: Yes.

Q. Mr. Carter on Complainant's Exhibit 79 there is an item of buildings, machinery and holders, valuation of October 31st, 1905, $16,087,428.72. In what way did you itemize the valuation, what is the valuation October 31st, 1905, of the buildings alone?

Mr. **Mathewson**: Take this. See what it refers to (handing witness paper).

The **Witness**: I know perfectly well what it refers to.

A. I don't know, the record is not in any such shape as to indicate the value of the buildings alone.

Q. And does that also apply to the machinery?

888 A. The value of the machinery is included in the item $16,087,428.72.

Q. Is there no separate valuation upon these three items buildings, machinery and holders?

A. No, sir, no record showing it.

Q. Well, how then did you arrive at the figures $16,087,428.72?

A. That is the total of the value as shown by the books, or the total of the company's investment, as shown by the company's general ledger, in that property.

Q. But you have no record of the valuation of either of these items alone?

A. Separately?
Q. Separately?
A. No, not separately. We don't carry them separately in our books.

By Mr. **Mathewson**:

Q. When you say "investment" I presume you mean cost and not present value of reproduction?
A. I mean cost and not present value.

By Mr. **Burr**:

Q. But that amount, $16,087,428.72, is given here as the valuation on October 31st, 1905?
A. It is the book value on that date, Mr. Burr.
Q. If you so desired, could you make up an estimate of the value of the buildings alone?
A. An estimate of the book value of the buildings alone?
Mr. Mathewson: That would be a matter——
The Witness: I doubt it. It would be very, very long. It would take a long time to do it.
Mr. Mathewson: It does not appear on the books of the company. Would be simply an expert's opinion as to division.
The Witness: Yes, sir, that is all.
889 Q. Then this valuation given in Exhibit 79, this total of $16,087,428.72, is an expert opinion of yours?
A. No, sir, it is the value of the property as appears on the books and represents the company's investment, Mr. Burr.
Q. Then you have no separate account for buildings, no separate account for machinery and no separate account for holders?
A. No.
Q. Now, you have previously testified that the total cost to the company would be $10,000,000 to remove to Astoria?
A. Yes, sir, we estimate the removal will involve that loss to the company.
Q. Do you intend to remove the holders?
A. We don't. No, sir.
Q. Did you not present on May 17, 1904, a statement to the corporation counsel giving the total valuation of the gas works excepting street mains at $8,593,694.54?
A. In connection with some tax report I presume?
Q. Yes.
A. I have already testified how those figures were reached, Mr. Burr, in 1902.
Q. Never mind, Mr. Carter, I am asking you whether this is the fact, did you or did you not testify on an examination before the corporation counsel——
A. In respect to our tax report, yes, that was the figure that we had placed the value at for the purposes of that report, that we placed upon the property in January, 1902, and continued it on subsequent reports.
Q. I am speaking now specifically of May 17, 1904?
A. That is the case, Mr. Burr.

Q. And did you not obtain this by subtracting real estate $11,213,301.16 from $19,806,995.70?

A. I am not sure about that, Mr. Burr. If the testimony indicates that I——

Mr. **Mathewson**: Supposing you let him see it.

890 The **Witness**: Well, I would be willing to testify quite positively, I think.

Q. I call your attention to your testimony as it appears upon pages 821, 822 and 823, volume 2 of the Papers on Appeal from the Order made by the Commissioner of Gas and Electricity of the State of New York, as follows:

"Q. Now that land value you carry at $11,213,301.16, represents the value of the land as you took it over from the constituent companies in 1884, doesn't it, with the addition of such apparatus at cost prices as you have made since? A. That is the case, yes, sir.

Q. Has there been any substantial purchase of land by the Consolidated Gas Company since the formation of the company in 1884? A. There have been some purchases, but I would not say that they were very substantial; I do not think we have added ten per cent. to the original value.

Q. You think then that the value of the land as carried on your books to the extent of ten million dollars would represent the value at which it was taken over in 1884, and that one million dollars about has been purchased since? A. I should say that in round figures; I would not be sure of it without consulting the balance sheet, but I do not think those figures would be very far astray.

Q. Mr. Carter, in 1904 you remember being examined before the Corporation Counsel on the question of the application for revision of the taxes of the Consolidated Gas Company for that year? A. I do not recall it very distinctly; I know that I did appear before the Corporation Counsel on several occasions.

Q. And that at that time you presented—this may refresh 891 your recollection some—at that time you presented an estimate of the value of the plant that had been prepared by Mr. Bradley? A. I do not recall what testimony I gave on that occasion, I do not recollect it.

Q. I will read a little from this, beginning at page 35 of your examination, unless Mr. Mathewson wishes me to prove this document, I subpœnaed it from the tax office?

Mr. **Mathewson**: Oh, no; may I look at it just a minute and see what it is?

Senator **Page**: Certainly.

Mr. **Mathewson**: I have no doubt it is genuine.

"Q." By Mr. **Rumsey**:

Q. Mr. Carter, I call your attention to the valuation of the plant which you have put in here, $8,593,694.54; is that your personal valuation? A. No, sir.

Q. What does that represent? A. The valuation placed upon the plant by the Chief Engineer.

Q. Who is he? A. Mr. William H. Bradley.

Q. Is this supposed to include all your machinery or gas tanks, everything which constitutes the plant for the manufacture and transmission of gas? A. Yes, except the mains.

Q. Everything except the mains? A. Except the mains and what would be calssified as personal property."

Then on page 37, on redirect-examination by Mr. Platt:

"Q. Mr. Carter, Mr. Bradley has been with the company a long time, has he not? A. He has been with the company as its Chief Engineer since it consolidated in 1884; prior to that he was connected with the Municipal Gas Company works, which he
892 constructed; prior to that he was Constructing Engineer and Constructor of gas works.

Q. Mr. Bradley has been the Chief Constructor of the Consolidated Gas Company ever since the company was organized, was he not? A. Yes.

Q. Do you know whether he has been frequently called in lawsuits and by various gas companies and others as an expert to pass on the values of gas property? A. That is my understanding, although I do not know any particular instance.

Q. Don't you know that in the Bay State gas case Mr. Bradley was called as an appraiser? A. I do recall that instance now you mention it." Now, when you move your works to Astoria you are going to keep your holders here, aren't you? A. Presumably, Senator, the larger ones, at any rate.

Q. So that it will not be necessary to scrap your holders? A. I should think not.

Q. Can you give the value of the holders as scrapped? A. I think I could have it made up approximately, the cost at any rate; I could give you the cost of the holders.

Q. Have you still in your possession this statement that was made by Mr. Bradley? A. No, I have not; I do not know that it was ever made more than verbally; I do not think that there was ever any statement made up; there may have been at the time, but it would only have been in the shape of a memorandum.

Q. Is that it (showing witness paper)? A. No, Senator; that is a statement of the assessed—that might be the memorandum; it is just the same figures; I did not think there was any detail given of it.

893 Q. That statement, as you remember it, was not so separated into items that you could separate the amount that was estimated as the value of the holders in arriving at that Eight Million Five Hundred and ninety odd thousand? A. Well, yes, I do not know what was included, or how it was valued, or what the basis of it was; I do not know anything about it."

Did you so testify?

A. Yes, sir, excepting that in the first question which you quote the term "apparatus" is used instead of 'real estate."

Q. It should be "real estate" instead of "apparatus?"

A. Yes, "real estate" instead of "apparatus."

Q. And did you not before the Gas Commission testify that the discrepancy between the company's alleged real value and the tax value, of 50 per cent. of the book value, was because you expected to dismantle plants in Manhattan?

A. I did testify that after talking the matter with Chief Bradley my recollection with respect to the method by which he arrived at the figures he gave me, was somewhat refreshed, and that to the best of my recollection, it was by that means, taking one-half of the value of the plant as representing the value of the holders, plus some scrap value of the plant which would be dismantled in connection with the removal of the Astoria.

Q. Did you not also testify before the Commission that you had omitted to charge premium account, $23,879,183.06, which amount was realized from premiums from the sale of stock above par?

A. No, sir, I did testify that by our method of charging ourselves on the books with some securities of some of the companies which we acquired, we did not show in our books the premium at which our stocks were issued in exchange for the stock which we
894 acquired, and that the premium at which our stock was exchanged amounted in the aggregate to some twenty-three million dollars.

Q. Did you not testify regarding that as follows, on page 1628 of the papers on Appeal from order made by Commission of Gas and Electricity of the State of New York:

By Mr. MATHEWSON:

Q. Now, referring to Exhibit 177, I see that *that* the premium on capital stock is stated there as $14,322,217.95; will you say whether that represents the premium reduced to par value of the Consolidated stock issued, or whether that is really the full premium received from the Consolidated stock sold? A. It is not the full premium receiped upon actual stock issued; it excludes an amount of premium, $23,879,183.06, which was received in excess of the amount stated in the balance sheet.

By Chairman GUNNISON:

Q. Why wasn't that included? A. As a matter of bookkeeping probably, I think.

Q. Why, if you received $23,000,000 more than you have got down, what manner of bookkeeping would keep it from being entered? A. When we acquired the securities of the New Amsterdam Gas Company we issued in exchange for them our debenture bonds for the extent—I would like to look at the memorandum, I don't remember the figures exactly—to the extent of several million dollars, we will say in round figures; we redeemed those debenture bonds by issuing our capital stock at a premium, 190; and the premium instead of being shown in a stock account was credited back against the cost of the securities, reducing the original
895 cost to the par value of the stock that was issued.

Q. What do you mean, that the investment in the properties of some of these constituent Companies was reduced by an amount equal to the premium on your own securities? A. That is the case.

Q. Then in reality these other Companies cost you whatever—was it the New Amsterdam? A. Yes, that was one particular case.

Q. Then in reality the New Amsterdam cost you some $23,000,000 in excess? A. No, in the case of the New Amsterdam Company the difference was some $3,000,000.

Q. All of the other Companies? A. All of the other Companies combined cost us $23,000,000 more than they are stated in the books, and the premium account would show that much greater.

Did you so testify?

A. Yes, sir.

Q. Now, if the proper entries had been made, according to the usual methods of bookkeeping, would not the premium account at that time have been between thirty-seven million or thirty-eight million or thereabouts?

A. I would not like to say at the moment that the method of recording these transactions was improper. In the judgment of the officials of the company, they were recorded very properly.

By Mr. MATHEWSON:

Q. If your premium had been recorded at which you issued that stock, it would make about thirty-seven million dollars, would it not?

A. Between thirty-seven and thirty-eight million dollars.

Q. You so testified to the Gas Commission, did you not?

A. I did, yes.

896 By Mr. BURR:

Q. Have you a different system of bookkeeping than the conventional methods agreed upon by accountants?

A. I am not aware that we have.

Q. Would it not be impossible for anyone not familiar with the transactions of the Consolidated Gas Company to learn from your premium account that the true amount of premium received amounted to between thirty-seven million dollars and thirty-eight million dollars?

A. Well, wherever there has been any occasion for anybody knowing it, we have endeavored to make it perfectly plain, in the testimony. In all other cases I do not know, perhaps, that it is anybody's concern.

Q. I am speaking of the manner or method of keeping the books themselves.

A. The books are kept for people perfectly familiar with the question. There are other records that plainly indicate the terms under which the securities of other companies were acquired. It is not necessary to spread it out on the books in the way you suggest.

Q. What other record would that account be kept in so that anybody could understand it?

A. Well, the record of the transaction, the purchase of these securities of the New Amsterdam Company, for instance, is recorded in the transfer department, when the debentures were issued in exchange for stock, and the record of the stock is kept as the debentures are surrendered and stock issued at a premium of $90 a share.

Those records plainly indicate the terms and conditions of exchange of our stock for the stock of other companies.

Q. Would all that appear in your stock ledger?

A. No, I do not think it would be in the stock ledger particularly. Are you referring to the Capital Stock Ledger?

Q. Yes.

A. No, there would be no particular detail there.

897 Q. Have you got any other stock ledger except the Capital Stock Ledger?

A. No. I thought possibly you were referring to other kinds of stock, such as material or supplies or something of that sort.

Q. I call your attention to the testimony of yesterday, on page 837. You answered:

"The bills that are rendered for gas manufactured for the Consolidated Gas Company by other companies are a matter of record in the operating ledger.

Q. Well, those bills would appear in the voucher record, would they not? A. Yes.

Q. That would show the amount purchased and the prices paid? A. Yes."

By that I understand you now to mean, not a separate book but the vouchers themselves?

A. The file, yes.

Q. Didn't you, as a matter of fact, sophisticate the premium account by $23,879,183.06, leaving about $14,000,000 of the $37,000,000 actually received as the apparent amount received from the premiums from the sale of them?

A. I do not know just how you use the term, Mr. Burr. It is a perfectly proper thing for the company to record upon its books as the cost to it of the securities of other companies, its capital stock at par or its capital stock at the premium at which it was exchanged, accordingly as they felt disposed. There is no rule governing it, and it was just purely a matter of judgment or preference in regard to it at the time. That is all there is to it.

Q. In other words, the books are kept to please the stockholders, not the consumers; is not that so?

A. I think that the books are kept by a very satisfactory and very efficient method.

898 Q. That is your best answer; from the standpoint of the consumer?

A. I do not know what you mean by that. It does not convey anything to my mind, that proposition.

By Mr. Mathewson:

Q. It does not make your assets any more or less valuable, that you acquired with this stock, does it?

A. Not at all.

Q. Before the Gas Commission, did you not contradict the estimate of Prof. Bemis, that the net earnings from 1900 to 1904, inclusive, amounted from gas alone to $24,067,225.45, and was not your own estimate the sum of $20,307,384.33?

A. I do not recall the figures exactly.

Q. On page 1726 of the record, the papers on appeal from the order of the Commission of Gas and Electricity and so forth, you were asked this question:

Q. Now, Mr. Carter, at page 1845 of the present record, Professor Bemis testifies that he finds the net earnings from gas for the last five years since 1900 were $24,067,225.45; are you able to identify those amounts or confirm them from any source? A. I am unable to do so; from the fact that he applies that amount of earnings for that period to the Capital Stock of $39,078,000, and calculates what 6 per cent. dividend would amount to, and then how much balance would be left of the earnings for that five years. I assume that he is undertaking to give the earnings from the gas business excluding income from securities; and after deducting the fixed charges, because it would be the balance that would be then applicable to the Capital Stock in the form of dividends.

899 Q. And you make a total of those items as you have just stated the five years since 1900, $19,114,202.98? A. That is the case, although I did not give the total for the five years.

Q. Mr. Carter, Professor Bemis obtained this sum of twenty-four million and something more on page 1845, which sum you cannot find; then computed at 6 per cent. a certain amount on the Capital Stock of the Company and made a deduction showing a balance left over; are you able to find where those computations came from at all except so far as the 6 per cent. on Capital Stock is concerned? A. I find nothing else than that.

Q. And do you think that is an error in the amount that he has taken. A. The $24,067,225 is absolutely in error to the extent of over $4,000,000, between $4,000,000 and $5,000,000.

Did you so testify?

A. Yes.

Mr. Mathewson: If the Master please, I was about to make an objection, that this is not in regard to the period which we are covering, going back over all these schedules.

Mr. Burr: I want to say in reply to that that this testimony is the testimony upon which the finding of the Gas Commission is based.

Mr. Mathewson: If you want to show that, it would seem to me that you had better offer the testimony taken before the Gas Commission. I merely do not wish to waive the right to object at any time to this procedure, when it has passed too far.

900 Q. You have furnished here a statement purporting to give the amount of money spent in new construction on each station since 1884. I now ask you to prepare a statement giving the manufacturing capacity of each station in 1884 or 1885, with a statement of how much was coal gas capacity in each station and how much was water gas capacity. If you cannot furnish that yourself I presume you can get that statement from the engineer, Mr. Bradley?

A. Well, I might get it from Mr. Bradley possibly, but he is at home sick as the result of a serious accident. I doubt whether I could get much information from him, but if there is any way by which I can prepare that statement I will be glad to do so.

Mr. MATHEWSON: If counsel advises.

The WITNESS: If counsel advises me to do so.

Q. Will you also please prepare a statement giving the cost and capacity of each of the 44 holders mentioned in the affidavit of Mr. Bradley presented before Justice Lacombe, separating the cost of foundations, valve houses, etc., for each holder. Do you know whether the construction of the holders by the Consolidated Gas Company is the subject of open bidding, and whether the contracts are awarded to the lowest bidder?

A. That is my understanding, that that is always so. I am very sure of it.

Q. Are the bids advertised for?

A. I think not; there are not so many people connected with that class of construction that it is necessary to advertise in order to get bids. Very few people undertake contracts of the magnitude of a gas holder.

Q. Will you produce the contracts and vouchers for the construction of those holders?

Mr. MATHEWSON: What holders. The 44 holders?

Mr. BURR: Yes.

Mr. MATHEWSON: We cannot do that; it is an utter impossibility. Some of them were constructed before 1884 even. The witness has already testified and in the tax report it is stated that he was unable to state the cost of this apparatus because the company had no records of the cost, great parts of it. 901

Q. Up to what period have you the records and vouchers for the construction of those holders, or since what period?

A. Well, I should not know without examining our files, how far back our vouchers have been preserved. I have only been interested in them personally for comparatively a few years. I should have to examine our files to find out just how far back they extended.

Q. Will you examine your files for the purpose of ascertaining how far back you kept the contracts and vouchers for the construction of holders which have been constructed since 1884?

A. Since 1884?

Q. Yes. Please also furnish a statement showing the number of services in use December 31st of each year since 1884; also a statement showing the number of new services laid from January 1st, 1885, to December 31st, 1905, by sizes; also a statement showing the total cost of all these services from January 1st, 1885, to December 31st, 1905, including cost of laying, and of valves, boxes, etc., connected therewith; also a statement of interest paid yearly on the bonds and debentures or other indebtedness, and the principal sum on which such interest was paid. Can you get the average annual quotations on the bonds or debentures of the company each year since 1884, as you have previously done in the case of stock, and if so will you produce such statement?

A. It would be impossible to do that. The debenture bonds, of

which there are some outstanding at the present time, some $1,387,000, were issued in 1888. They have never been listed on the stock exchange; therefore there are no quotations published respect-
902 ing them; so that with respect to those bonds it would be impossible for me to give you any information whatever.

Q. Now, with respect to the debentures of 1904?

A. (Continuing:) Respecting the convertible debentures issued in July, 1904, the prices at which they have been quoted on the stock exchange are a matter of public record, if counsel desires them. I have not any record of the quotations.

Q. The record of course could be procured; I did not know whether you kept a record of them yourselves.

A. No, we do not keep a record.

Q. By Complainant's Exhibit No. 90, Agency Agreement, it is provided that:

"That Consolidated Gas Company of New York hereby employs the New York Mutual Gas Light Company at and upon the terms hereinafter mentioned, to manufacture, produce and deliver for the term of five years such illuminating gas of the illuminating power required by the laws of the State of New York, as it may require during each year."

I asked you yesterday with regard to the amount of gas purchased, and you distinguished as to the gas purchased, and said it was gas manufactured under the agency agreement. You drew some distinction in that regard?

A. Yes.

Q. That is rather a distinction in terms than in substance?

A. We think there is quite a distinction. At any rate, we have agency agreements under which this gas is manufactured for us, and we prefer so to designate it.

Q. Now, does the Mutual Gaslight Company purchase its coal and oil from the same sources at which the Consolidated Gas Company purchases its coal and oil?

A. Not that I am aware of.

Q. Does it purchase its other material at the same sources
903 at which the Consolidated Gas Company purchases its materials?

A. I have no knowledge that it does so.

Q. And supplies the same way?

A. The same answer.

Mr. Mathewson: You do not know?

The Witness: I do not know; I have no knowledge about it whatever.

Q. You examine their books, don't you?

A. Whose books, the Mutual Company's?

Q. Yes.

A. No, I do not have any occasion to examine their books.

Q. Let me call your attention to the terms of the agency agreement:

"The New York Mutual Gas Light Company shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery, and employ in such manufacture, production and delivery its own plants and appliances."

Do you make any effort to ascertain as to whether the company purchases its materials at reasonable rates and pays reasonable prices?

A. We know of course at what rates they purchase their material and are satisfied that they are reasonable, but that they purchase from the same people we purchase from, we exercise no control over it, and I have no knowledge that they do purchase from the same people. I cannot say with respect to anything that they employ in manufacture.

Q. Do you examine their vouchers with regard to the purchases of coal and oil?

904 A. Not very frequently. We assume that their accounts are properly kept. We know that they are honest people, and we do not go very rigidly into original vouchers to find out whether they are charging us more for the gas they manufacture for us than it costs them.

Q. Well, I understood you to testify yesterday that you received monthly statements from them?

A. We do.

Q. You are not satisfied with those statements alone, are you?

A. As a general thing we are satisfied with them.

Q. Let me call your attention further to the agency agreement:

"The Consolidated Gas Company of New York shall have the right to examine at any reasonable time during business hours the manufacturing record, books and bills of cost of the said constituent materials and labor, and also any other books, bills and papers containing records of the total cost of gas manufactured under the terms of this contract."

Haven't you under the provisions of the contract, as I have just read them, examined the books of the New York Mutual Gas Light Company?

Mr. MATHEWSON: You mean this witness or the complainant corporation.

Mr. BURR: I am speaking now of the complainant corporation.

A. I think such examination may have been made for the purpose of checking their figures to some extent, but that is all.

Q. This provision was put into the agency agreement so that if you questioned the statements presented, you had the right to examine the books?

A. That is the case

905 Q. Because it was only by an examination of the books that you could get at the cost of the constituent material and labor; is not that true?

A. That is the case, yes.

Q. Now, if I have not previously asked you, and I think I have, I will ask you now to prepare a statement showing the gas received and the price paid for same under the agency agreement with each company for each month from January 1, 1904, to July 31, 1906.

Also please prepare a statement showing the cost of the gas made by the Consolidated Gas Company each month from January 1st, 1904, to July 31, 1906?

A. It would be impossible to do that. Our accounts are not even closed as of June 30th. The time of the clerks has been so employed in preparing statements for this hearing that our own work in a measure has had to be neglected, and in the absence of Mr. Brundage on account of sickness it is impossible to bring our exhibits down to that date, and I cannot undertake to do it.

Mr. Mathewson: As a matter of fact, if the Master please, the only statements which we have presented of the cost of gas, where we get any gas from other companies, are two, one from October 31st, 1904, to October 31st, 1905, and the other from December 31, 1904, to December 31, 1905. We have, I think, prepared somewhere a statement of the amount of gas obtained from each company per month for the nominal year, and we can add the two months of the calendar year, November and December, without great labor.

The Witness: Yes.

Mr. Mathewson: But I object to the requirement of counsel in that it covers a greater period than is necessary, and secondly because it is an unreasonable requirement in itself, in part.

906 Q. You have a record showing the cost of gas in the books of the company, have you not, somewhere?

A. Yes, it is shown in exhibits here just as it appears in the books.

Q. I want a statement showing the cost of the gas made by the Consolidated Gas Company each month from January 1, 1904, to July 31, 1906, for the same items of labor and material covered by the agency agreement, and without any allowance of ten per cent. additional or any such interest charge as is paid to some or all of the companies under the agency agreement.

A. A statement of gas made every month for the above period by the Consolidated Gas Company, January 1, 1904, to July 31, 1906? Of course we have not made any statement of operations that go back of October 31, 1904.

Mr. Mathewson: We shall decline to prepare such a statement on the grounds stated by the witness and by me.

The Master: I suppose, as already stated, you can have a statement prepared covering the period corresponding to the exhibits which you have put in evidence?

The Witness: Yes.

The Master: That is in my judgment all he can be reasonably expected to do. I do not think you can call on them to make up tabulations for you down to July 31, 1906, a period subsequent to anything that they put in on their main case. That is part of your case, if you want to show it.

Mr. Burr: That probably will be satisfactory.

The Master: I think he ought to give you what details you ask for, as they correspond with statements that he himself put in evidence on that head.

907 By Mr. **Burr**:

Q. Now in this last statement I have asked for, Mr. Carter, please use a uniform method of computing the number of feet of gas; that is, if you use the number of feet of gas made in one case, use it in the other; and if you use the number of feet of gas sold in one case, use it in the other. You have, I believe, produced the contracts for coal and oil?

A. Yes, sir.

Q. Please file a certified copy of the pay roll for the year 1905 for all the departments of the Consolidated Gas Company. Can you prepare such a certified copy, Mr. Carter?

A. Why, I will have to put that up to counsel, Mr. Burr. It means copying a thousand pay rolls.

Mr. **Mathewson**: No, we cannot do that. I don't quite understand what the purpose of the checking of the statements which were presented here showing the operating cost of the production of gas for the calendar year 1905, by the accountants, was intended to obviate, or how it was intended to shorten this proceeding if now we have got to present every item right here again, although they have checked them and found them to be correct.

The **Master**: If he wants the pay rolls, of course insofar as this item of labor is included in your main case here, he is entitled to have that and if he is not satisfied with his accountant's examination of that up there at the office, why I suppose you will have to get a truck and bring down your 1,500 pay rolls, but I certainly do not see that you are called upon to make a copy of them for his use.

Mr. **Mathewson**: It would be a vast labor.

The **Master**: You may produce them here before me and that is the end of it.

908 Mr. **Burr**: Well, in fact, I do not insist that they shall make the copies.

The **Master**: But you called for a certified copy.

Mr. **Mathewson**: In the street department alone the pay rolls cover over twenty pages a week.

Mr. **Burr**: If they do not care to present that evidence in this way, there is only one other way, and that is to examine them when brought down and put them on the record.

The **Master**: But for the purpose of saving our time I give you fair warning now I will not sit here and spend any amount of time going through details of cross-examination of fifteen hundred pay rolls.

Mr. **Burr**: We would not have any cross-examination probably. We would just introduce the amounts. I don't know. I couldn't tell until I saw them.

Mr. **Mathewson**: On the record will be found our offer to permit the accountants for the defendants to go to the office to check up and see whether the statements of labor, &c., on our statement of operation presented is correct or not, and we assumed they were in the process of doing that now.

Mr. **Gans**: Did that contemplate they were to be privileged to go to the original vouchers as well as the pay-rolls, &c.?

Mr. Mathewson: The stipulation is on the record, Mr. Gans.

Mr. Gans: I would like your construction of it because it is very pertinent to——

The Master: I certainly so understood it.

Mr. Gans: I did, too.

909 Mr. Mathewson: If you run across anything you have any question about I suppose the paper can be produced and the accountants can be satisfied; is that right, Mr. Carter?

Mr. Carter: Yes, sir; no trouble about it whatever.

Mr. Mathewson: When we pay men $1.50 a day I don't suppose you will want to see the voucher which they sign for that $1.50.

Mr. Burr: These offers sound pleasant, but they mean very little. The fact of the matter is as we all understand that while Mr. Carter is here every day testifying that he can not be up there with the accountants for the city or for the State. The accountants for the city say it is impossible to get an examination of the books such as they desire within the limited time that Mr. Carter can afford them, that they get a hurried and harried examination. They want a careful examination of the books and the original sources of these expenditures and receipts. If they cannot get that they want to get as nearly that as possible, by these certified statements.

The Witness: It is not my understanding, Mr. Burr. Mr. Heyward has been there with every opportunity to check the statements we presented with the books of the company that anybody could possibly desire.

Mr. Mathewson: And the opportunity is open now.

The Witness: It is open now.

Mr. Mathewson: And the State's accountants have been checking part of them.

910 The Witness: They have been, in considerable detail. Mr. Heyward himself checked them in some considerable detail.

Mr. Burr: Do I understand now counsel for the complainant to state that the books of the Consolidated Gas Company are open to the examination and inspection of the accountants for the City of New York?

Mr. Mathewson: I think I have made the statement perfectly clear.

Mr. Burr: Well, assuming that that means that I am correct in supposing that the books of account of the Consolidated Gas Company are open to the inspection and examination of the accountants for the City of New York to verify the various statements that have been presented here, I ask Mr. Carter now to designate a time when the accountants for the City may take hold of the books for examination.

The Witness: Did I understand you to say accountant or accountants?

Mr. Burr: The accountants.

The Witness: That was all settled, it appears to me that the City and State would be represented by an accountant each. It is a matter of record in the minutes.

Mr. **Mathewson**: That is right. That is the way it appears. If you get an army of them there they would be useless.

Mr. **Gan**: I suggest to the Master that of course one man can go up there and by spending a certain amount of time accomplish certain results, whereas two or three men working at the same time will probably produce greater results in a shorter time.

Mr. **Mathewson**: You have two men.

911 Mr. **Gans**: As far as we are concerned, it does not make any difference, and so far as the State is concerned, we are satisfied with the force we have there.

The **Master**: We are filling up this record with this discussion. I have decided the question about the payroll and the rest of this discussion is academic now. As far as I can see there is no complaint on anybody's part that I have heard this far that they are not getting what they want.

Mr. **Gans**: There was, sir, a very radical disagreement which has just been cleared up, so the discussion was valuable because Mr. Mathewson has stated repeatedly that he did not construe this agreement to be such as to permit us to go to the original sources except as an act of courtesy, and I understand that now to-day for the first time he concedes that that agreement entered into some days ago was an agreement which entitled us to the vouchers.

Mr. **Mathewson**: I don't think I have ever said that you should be excluded from the vouchers in any items that you desired to go further into. Most of them you would not want to go into any further.

The **Master**: It was my understanding that he had the right to look at the vouchers, because the object of this examination up there was to save time, and it was conceded that if counsel put in his strict detailed proof here instead of his tabulations you would have been entitled on cross-examination to call for the original vouchers.

Mr. **Gans**: That was my understanding.

Mr. **Burr**: That was my understanding also.

Mr. **Mathewson**: And mine, too.

912 The **Witness**: Mr. Cuthbert, the accountant for the State, has been told that several times, that if there was any item there in the operating ledger that he would like to have the original voucher for I would present it to him.

Mr. **Gans**: On the other hand I think Senator Page and I have been told an equal number of times by Mr. Mathewson that so far as we were going beyond the face of the books we were unduly inquisitive. I would not say it was said in those terms, but that was my understanding of what Mr. Mathewson was trying to convey.

Mr. **Mathewson**: I regret you understood it so.

Mr. **Gans**: And if we insisted on going on with the inquiry as we were, he would prefer to have the books brought here, I understood.

Mr. **Mathewson**: You utterly misunderstood me.

The **Master**: Let us proceed with the examination.

Mr. **Burr**: From the statements made by counsel for the company it would appear that an examination repeatedly called for of certain items involving the examination of numerous books is not feasible because of the multiplicity of the books that it would be necessary to examine. No two accountants could go up to the office of the Consolidated Gas Company and in a day or two satisfy themselves as to the correctness of these numerous accounts that have been presented here. What we are asking is whether we have the free and unlimited right to examine the books at the office of the company by the accountants representing the city or whether it will be necessary to ask as each statement is made that the book be produced to verify the statement made by the witness?

913 The **Master**: This has all been gone over time and again.

Mr. **Burr**: If it is conceded we have that right, then I will ask the counsel to designate a time when the city may take hold of the books of the Consolidated Gas Company for the purpose of such examination.

Mr. **Mathewson**: I do not understand, Mr. Master, that there has been requested or granted a free or unlimited right to go into our books, regardless of the pentinency of the inquiry.

The **Master**: No, it was expressly said that that would not be done.

Mr. **Burr**: It was expressly understood it should be done so far as related to the accounts presented here. That is my understanding.

The **Master**: There is no question about that. You do not draw the distinction.

Mr. **Burr**: Well, with that distinction I say we should have the free and unlimited right to verify and trace to their original sources every item.

The **Master**: We had this same question up with Mr. Gans and I said then there could not be a roving commission granted to the two sets of expert accountants to go up there and wander through those books. That would not be fair. But, on the other hand, if Mr. Mathewson desires to save himself the trouble and save us all the delay of bringing down cartloads of books here, he would have to give your accountants such facilities up there as would satisfy them of the correctness of the totals and figures which he introduced here by way of summary, and that involves, necessarily, if they want to look at a voucher, looking at it. Now that, it seems to me, is
914 perfectly plain and does not involve any misunderstanding,
but in the way you have put your request here and in the way it was first suggested by Mr. Gans it is altogether too broad. To have this proceeding going on here from day to day and two sets of expert accountants in the office of the company under a commission to do anything they chose, without any control, suggestion or advice from anyone, that is something far beyond the scope of any judicial inquiry.

Mr. **Gans**: Just to get the matter defined a little bit, isn't it true, sir, that everything relating to the transactions of the company during the period covered by Exhibits 93, 94, 95 and 96, and every book, paper and voucher pertinent to the transactions during that period, are pertinent to a cross-examination on those particular exhibits, and doesn't that come within the spirit of your ruling?

The **Master**: But it is assumed in all these things that they are to be within the bounds of reason and common sense.

Mr. **Gans**: I quite agree with you, sir.

The **Master**: Technically, counsel are entitled on the *prima facie* case made by the introduction of one of these statements, to examine hundreds of books and millions of vouchers going back twenty years; technically, I say; but this case has to be closed in ninety days under the equity rule——

Mr. **Gans**: I was not including those statements. I say having made statements on exhibits covering the nominal year and calendar year——

The **Master**: I have also assumed that counsel for cross-examining parties here are united in the desire to facilitate these proceedings and not protract them unduly.

915 Mr. **Burr**: That certainly is my idea.

The **Master**: And therefore it seems to me, laying down those general principles, that it ought to be possible to establish a *modus vivendi* and let those experts work as they have been doing and get all the information wanted. Now as I say, I understand that there is no Specific complaint presented here to me now. I have understood that Mr. Burr's accountant was being offered every facility he wanted, but intimated he would like to see to what extent the ground had been covered by the State's expert before he did any more. I do not understand there has been any situation presented here which requires Mr. Burr to make a demand as to the time and place or when and where he can have access to certain books. I had taken it for granted all had been going smoothly. If I am misinformed and counsel will show me the facts and exactly the occasion that arises for some further order, I will make it.

Mr. **Burr**: Well, with that understanding we will leave the subject for the present.

By Mr. **Burr**:

Q. I show you the comparative condensed balance sheet showing the assets and liabilities of the Consolidated Gas Company as of December 31st, 1904, and November 11th, 1884, and the decreases according to the books of the company as such balance sheet appears on page 8 of the report of the Joint Committee of the Senate and Assembly, dated April 29th, 1905, and ask you whether that is a correct and true statement or condensed balance sheet for that period?

916 A. I think I have a copy of that perhaps that I can use to refer to those figures. No, I do not happen to have it. Do you ask whether it is correct? I do not know.

Q. Can you say whether that is a true statement?

A. I cannot.

Q. Will you take the trouble to verify it at a later date?

A. I will be glad to do so.

Q. You have a copy of this report?

A. Yes.

Q. I would ask you also whether the statement purporting to give the original cost of the plant of the Consolidated Gas Company is shown by the books of the constituent companies at $20,942,632.85 and the increase since 1884 as shown by the books of the Consolidated Gas Company at $9,431,198.52, making a total book cost of $30,373,831.37, as the same appears on page 17 of the report of the Joint Committee of the Senate and Assembly dated April 29th, 1905, is a true and correct statement of such actual book cost?

A. Yes, sir.

Q. As shown by——

A. No, the books of the original companies, I know nothing about them. The books of the Consolidated Company——

Mr. Mathewson: Just listen while the stenographer reads the question.

The Stenographer (reading as follows): I would ask you also whether the statement purporting to give the original cost of the plant of the Consolidated Gas Company as shown by the books of the constituent companies at $20,942,632.85 and the increase since 1884 as shown by the books of the Consolidated Gas Company at $9,431,198.52, making a total book cost of $30,373,831.37, as the same appears on page 17 of the report of the Joint Committee of the Senate and Assembly, dated April 29th, 1905, is a true and correct statement of such actual book cost?

Mr. Mathewson: Do you know?

917 The Witness: I know it represents the cost to the Consolidated Company of that property. That it represents the original cost of all the property? I know that it does not—I feel very sure that it does not.

By Mr. Mathewson:

Q. Does this amount represent the original cost to the Consolidated Company?

A. As shown in that statement?

Q. Just look at the statement?

(The witness looks at the statement held by Mr. Burr.)

A. (Addressing Mr. Burr:) This is not the statement which you showed me. You showed me a comparative balance sheet.

By Mr. Burr:

Q. I am speaking of this statement of two or three lines?

A. No, decidedly not, is my answer.

Q. Which of the items does that refer to? Does it refer to the item purporting to give the increase since 1884, as shown by the books, $9,431,198.52?

A. I don't know what it purports to be. It is not a statement that I have any knowledge of or have anything to do with the preparing of, so I don't know anything about it.

Q. A statement was prepared by you showing the increased cost of the plant of the Consolidated Company from 1884, which was presented to the Stevens Investigating Committee, isn't that so?

A. Are you referring to a comparative balance sheet of November 11, 1884, and December 31st, 1904?

Q. I am referring to this simple item here, increase since
918 1884, as shown by the company's books, $9,431,198.52, and
referring to Exhibit 387 before the Stevens Investigation
Committee.

Mr. **Mathewson**: Suppose you let him see it. I shall ask the witness not to answer the questions until he informs himself.

Q. I will go to something else for the moment. Can you give me a statement of the amount of gas sold to the city each year during the past ten years?

A. It is a matter of record on our books. If counsel advise to do so, I can furnish a statement.

Mr. **Burr**: No objection to that, is there?

Mr. **Mathewson**: What is the object in going back ten years, so far as the present inquiry as to the present cost of gas is concerned?

Mr. **Burr**: The object is this. I want to couple another question with that and ask him if he can tell us at what rate such gas has been supplied to the city during each year during the past ten years.

Mr. **Mathewson**: The Act of 1897 provided that gas should be supplied to the City of New York at 90 cents. The charge where gas had been metered has since the 90 cent rate was established been 90 cents, and nothing else, and nothing different. Where lamps have been supplied upon a bid and it required a statement as to what the lamp would be supplied with, including both gas and maintenance, the contracts that you have yourself will show at exactly what rate the lamps are supplied. Now that covers absolutely the whole ground, so far as I can see, doesn't it, Mr. Carter?

The **Witness**: Excepting that my recollection is that the law was
1896 and not 1897. That provided for a reduction in the
919 price of gas to the city, from $1 a thousand fixed at that time,
to 90 cents, at the rate of two cents a year.

By Mr. **Mathewson**:

Q. I say at the rate fixed in the Act, it was furnished?

A. Yes, and that has been the rate charged since then. It became 90 cents in 1901, it was 98 cents in 1897, 96 cents in 1898, 94 cents in 1899, 92 cents in 1900 and 90 cents in 1901.

Q. Whatever it is, the Act itself shows?

A. The Act itself would show.

By Mr. **Burr**:

Q. Since 1896 then you have been supplying the City of New York at a lesser rate for the gas sold than to the general consumer?

A. As provided in that Act, yes, sir.

Q. And has your company competed to supply the City of New York for even a lesser figure during this period?

A. Not that I am aware of.

Q. Have you any means of informing yourself as to the number of lamps that are on the mains of each of the constituent companies of the Consolidated; I mean public lamps?

A. No, sir, I have not.

Q. Does the statement furnished by each company show the number of lamps lit by it. I mean the statements furnished monthly to the Consolidated Gas Company?

A. They do not, no, sir.

Q. Is there any way that you know of to ascertain how many lamps are lit by each constituent company?

A. None of them are lit by each constituent company; they are all lighted by the Consolidated Company.

Q. Well, do you know of any way by which you may inform yourself as to the number of public lamps lit by the subsidiary companies?

920 A. Why, I presume their records would show some few flat flame lamps which they supply with gas and maintain under contract with the city.

By Mr. MATHEWSON:

Q. What do you mean by subsidiary companies?

A. Well, I don't know. When he says the subsidiary companies, I presume he is referring to the companies in the City of New York other than the Consolidated Company.

By Mr. BURR:

Q. I mean the companies with whom you have agency agreements, for instance.

A. The companies with whom we have agency agreements.

By Mr. MATHEWSON:

Q. Now, will you look at that and see whether you want to correct your statement as to the cost price to the City (handing witness Chapter 385 of the Laws of 1897).

A. I would like to correct it with respect to the price charged the city under Chapter 385 of the Laws of 1897. It provides that such corporation, association, company, partnership or person shall not charge for illuminating gas for use of any such city sums to exceed per thousand cubic feet during the remainder of the year 1897, $1, during the year 1898, 97½ cents; during the year 1899, 95 cents; during the year 1900, 92½ cents, and during each year thereafter, 90 cents.

Q. In lieu of the two-cent graduation which you had in mind when you testified from memory?

A. Yes, sir.

By Mr. BURR:

Q. The number of lamps supplied and the rate charged will all appear in this account which you have stated is kept on file,

921 the Corporation of the City of New York account, will it?

A. Yes. The charge against the city will appear there. The copy of bill rendered the city would be the first source of information as to the number of lamps, etc., in which the charge is made each month.

Q. Your company has declared a dividend since this hearing started, has it not?

A. I believe it has declared a dividend of one per cent., but my attention has been so exclusively confined to this hearing that I don't know much about it.

Q. Yesterday you stated there was still competition between the companies forming the Consolidated Gas Company or between the Consolidated Gas Company and the New Amsterdam, the Standard and the Mutual?

A. Yes, sir.

Q. And I understood you also to say that the object of acquiring a controlling interest in them was to avoid competition?

A. I have no knowledge of having testified to that specifically.

Q. Well you have testified that the object in view in acquiring a controlling interest in each of those companies was because of the hostility of those companies?

A. I have no recollection of having testified to that effect.

Q. Didn't you testify in answer to Mr. Mathewson that the Consolidated invested these very large amounts of money in the securities of the electric light companies and of the gas companies because of the hostility of those companies to the interests of the Consolidated Gas Company?

A. No. I have no recollection of anything of the sort.

Mr. Mathewson: I asked him if they were not organized in hostility to the Consolidated Gas Company and he said they were. Not by the Consolidated Gas Company or its owners.

922 Q. Was it because they were organized in hostility to the Consolidated Gas Company that the Consolidated Gas Company spent the vast amounts to acquire a controlling interest in them?

A. I don't know.

Q. The company that you were identified with before the Consolidated was what company?

A. The New York Gas Light Company.

Q. Was that a member of the pooling agreement which existed before November, 1884?

Mr. Mathewson: That is objected to as immaterial and as too far back, whether the six constituent companies were at any time members of any pooling agreement before this present company was formed.

The Master: I do not see that it is very material.

Mr. Burr: I don't know what view Mr. Mathewson takes of the situation, so far as that is concerned. I understood him to say some time ago that we were bound by the report of the Committee of 1885.

Mr. Mathewson: 1886 you refer to probably.

Mr. Burr: There were two committees; one reported in 1885 and one in 1886. However, I shall not press the question at this time.

Q. I call your attention now to Exhibit 172 before the Gas Com-

mission, being Exhibit 385 in Senate Document 30, of 1905, purporting to be a statement of the Consolidated Gas Company of New York, showing status of real estate, plant and property as shown under the following headings on the books of the company, and which was read on behalf of defendant, giving as the total for real estate, plants, mains, services, meters, meter cocks and connections, pipe and supplies, office furniture and fixtures, horses, wagons and harness, tools and implements, gas stoves, scows,
923 franchise and rights, the increase since 1884 as $9,431,198.52, and ask you if that is a correct statement from the books of the company?

Mr. Mathewson: On those particular items?

A. I believe that to be a correct statement of the increase in the value of those particular assets as shown by the books of the company December 31st, 1904, as compared with November 11, 1884.

Q. The total increase shown on that exhibit, being the same in amount as stated on page 15 of the report of the Joint Committee of the Senate and Assembly, $9,431,198.52?

A. The figures are the same, yes, sir.

Q. And I show you on page 776 of the Senate Document No. 47, being the report of special committee of Senate to investigate lighting companies, dated March 1st, 1886, a statement of the cost of the property of the constituent companies, the Manhattan, New York, Metropolitan, Municipal, Knickerbocker and Harlem, and ask you if the total is not $20,942,632.85, as it appears by that table printed on page 776 of the proceedings before that Committee?

Mr. Mathewson: I do not think that is competent evidence. I think if it is material at all it could be offered by you in evidence, if it be proper and competent evidence. I don't think it is proper, if the Master please, to ask the witness such a question from a page of a book not in evidence at all.

Mr. Burr: I ask him as secretary of the company and as formerly the controller and formerly the chief accountant whether he does not know if that was the amount at which the original cost of the
924 constitutent companies appears as shown by their books?

The Master: That is proper enough if he can answer.

A. I cannot answer the question because I don't know that those figures appear upon the books of the original companies, and I am very sure the figures that did appear there did not represent the cost of the property to those companies.

Q. Do you wish to be understood as saying that you know of your own knowledge that the figures which appear upon the books of the constituent companies do not represent the true cost of the property of the companies?

A. I might say that in my opinion they did not.

Q. Now, when you speak of and when you present a statement purporting to give the income derived from other companies in which the Consolidated owns stock, do you speak of moneys actually paid, for instance, during the year 1905 from these other companies?

A. What particular statement do you refer to, so that I may know what is comprised in it? I ask that because there is a certain bond interest that we credit our income account with as income which is not actually paid at the present time for reasons that I have stated previously at this hearing.

Q. In your statement for 1904 as presented to the Stevens Investigating Committee, purporting to show the income received by the Consolidated Gas Company, did you not include under income from securities owned something that was due you that you had not got, particularly in reference to the amount paid or to be paid by the United and Brush Companies.

925 Mr. Mathewson: Supposing you show him the data and I think he may be able to answer. It is very difficult, I am sure, for him to do so accurately otherwise.

Mr. Burr: Well, I thought he might have some recollection about it.

Q. Will you show me the contracts?

Mr. Matheson: What contract do you mean, Mr. Burr? There are a lot of them.

Q. You have produced certain papers here, Mr. Carter, in response to a request made by counsel for the city. Have you among them the contracts for the coal and oil of the Consolidated Gas Company for the past ten years?

A. No, sir.

Q. For what years have you produced the contracts for coal and oil?

A. I have produced the contracts for coal and oil covering the periods comprised in our statements of operations for the nominal year ending October 31, 1905, and the calendar year of 1905.

Q. Will you let me see the contracts for oil for that period?

(Paper produced and handed to counsel.)

Mr. Burr: I offer it in evidence.

(Here a discussion took place which the stenographer was directed not to take.)

Mr. Mathewson: I do not object to these contracts being marked in evidence. I might suggest that it is unnecessary, however, to publish them in the records which go before the whole public for the reasons which I have stated and which are obvious.

Mr. Burr: I can see no obvious reason which should prevent them from being part of the public record.

926 Mr. Mathewson: I can. I ask that we be permitted to file a copy of this contract, to be compared under the direction of the Master, and to be retained by him as part of the record in the case, but that it be not copied in the minute book at length.

Mr. Burr: I object to any distinction being made in the exhibits. I may not want to use another one, but I want them printed as any ordinary exhibit.

The paper is received in evidence and marked City's Exhibit No. 10.

The MASTER: Now, if counsel cannot agree about this I shall have to make some disposition of it. Of course the original is not to be filed anyway.

Mr. MATHEWSON: I think that counsel on consultation outside of the hearing can probably arrange that. I want to add Mr. Burr, that there is another oil contract that has been omitted from the bundle sent down, which I will procure, beginning November 1st, covering oil of a higher grade, made necessary by the recent law requiring 22 candles. The higher grade is required for the winter months. We had a contract for that from November 1st, 1905. We will present that also.

Q. I observe by this paper, City's Exhibit No. 10, a letter from the Standard Oil Company of New York, signed by William P. Howe to H. E. Gawtry, President of the Consolidated Gas Company of New York, dated April 26, 1904, and attached to which is a letter dated April 27, 1904, purporting to be a copy of a letter sent by the President of the Consolidated Gas Company to William P. Howe, Esq., Assistant Treasurer of the Standard Oil Company, that the terms of payment shall be "cash as heretofore," as stated on page 2 of the letter from the Standard Oil Company of New York 927 by William P. Howe, to H. E. Gawtry, President of the Consolidated Gas Company. Do you know whether there was a contract prior to this which provided for the payment in cash of the amounts agreed upon for oil?

A. I do not know, I presume so.

Q. I understood Mr. Mathewson to say that there is a contract anterior to this.

Mr. MATHEWSON: Subsequent, not anterior.

Q. I mean subsequent. Now, is there a contract anterior to this?

A. I assume there was.

Q. Have you that here?

A. No.

Mr. MATHEWSON: This covers a period of all statements except the final two months of 1905.

The WITNESS: That is the case. I could have that telephoned for.

Mr. MATHEWSON: No; that is not necessary.

Q. Do you know anything about the manner in which this oil is delivered; where it is received, and who takes it in charge?

A. Yes, I know the manner in which it is delivered. It is delivered alongside our docks in tank boats and is pumped into our tanks.

Q. Have you oil tanks?

A. Yes.

Q. Where are they located?

A. At the various manufacturing stations.

Q. They are part of the plant at each manufacturing station?

A. They are part of the plant.

Q. Do you receive this 177 million gallons of gas oil at once, or do you draw it as you need it?

A. Draw as we need it.

Q. Do you know whether this rate of 4⅝ cents per gallon is the same rate as was paid the previous year?

A. I do not remember whether it was or not.

928 Q. I observe that there is a difference in the gravity of the oil to be supplied; one is to be of gravity not below 28 degrees. Do you know why that particular kind is required?

A. Only from hearsay. A lower grade than 28 degrees gravity would not be suitable for gas manufacture, using our apparatus; I do not know that it would be with any apparatus.

Q. There are two kinds of oil specified here; in one is 34 degrees Beaum, "or a higher gravity at our option, the other is to be of a gravity 28 degrees Beaum, or higher at our option, for which the price shall be 4.04 cents per gallon." Do you know where the higher grade is received, or are both kinds received at each station, or at special stations?

A. Both kinds are received at all stations.

Q. Is it not usual, in advertising or purchasing oil, to submit specifications as to the character of the oil required, to be supplied by the seller?

A. Well, I presume that proposition of the Standard Oil Company reflects their knowledge of what we required.

Q. Then the kind of oil required is not to be found, any of it, in the specifications submitted by your company to the Standard Oil Company, is it?

A. No, I think not; I presume that would be more or less the subject of verbal understanding, as to what the company wanted.

Q. I see this letter or contract says: "We beg leave to confirm our verbal sale to you to-day of 177 million gallons of gas oil." In that verbal sale, you think the specifications were made known to the Standard Oil Company as to what was required?

A. I have no doubt of it whatever.

Q. Do you know, as to the contract which was made prior to this, which is referred to in this present letter, whether written specifications were submitted to the Standard Oil Company or
929 whether that also was the subject of verbal arrangements?

A. I have no knowledge about it.

Q. I notice that this provides for the delivery to you in bulk by tank boats alongside of your works or alongside the works of such other gas companies in the City of New York as you may designate. Do you know whether any of this oil which is specified in this contract dated April 26th, and April 24th, 1904, was supplied to the Standard or the New Amsterdam or the Mutual by the Consolidated Gas Company?

A. I think very likely to the Standard and the New Amsterdam.

Q. Do you know at what rate it was supplied to them?

A. At the same rate as to the Consolidated Gas Company.

Q. So then in that respect these other companies did get their supplies from the same source as you got yours, as far as oil was concerned?

A. I do not know what you are referring to. If you are referring to some of my previous testimony, you were referring strictly to the

Mutual. I am referring strictly now to the Standard and the New Amsterdam.

Q. Then you do not know, or do you know whether any part of this oil agreed to be furnished under this contract was supplied to the Mutual?

A. I do not know, but my impression is that none of it was.

Mr. Burr: Then I will ask to have the question stricken out and will take your lack of information.

Q. I understand that this is the only oil contract you have to-day?

A. That is the only one that was sent down to me. There is another contract, as Mr. Mathewson has explained, which I will present at the next hearing.

930 Q. Have you the coal contracts?

A. Yes.

Q. Will you produce the contract for the time covered by the statements which you have presented?

Mr. Mathewson: What kind, anthracite or bituminous?

Mr. Burr: Anthracite.

Q. Do you know how much of this oil has been delivered already under this contract?

A. No, sir, I do not know.

Q. I notice in the paper which purports to be a copy of the letter written in answer to the letter from the Standard Oil Company, dated April 26th, which letter is dated April 27th, 1904, unsigned, leaving space for the president to sign:

"I would say, however, it is our understanding as expressed in the letter from Chief Engineer W. H. Bradley, under date of April 20th, to your Mr. W. H. Tilford, that we expect to receive and desire to be furnished with a uniform, homogen-ous, straight run oil, and not a product that is mixed and shows a similar gravity to a straight run oil."

Have you the letter of Mr. Bradley, referred to?

A. I do not know whether it is in my files or not. It probably is in Chief Bradley's own letter file. I presume it has been preserved.

Q. That is part of this contract?

A. Not necessarily; part of some correspondence, relative to the grade of oil that the company required or preferred to use, between the parties referred to. I do not think it is a part of the contract necessarily, although reference is made to the correspondence.

Q. I will ask you to produce that letter, the letter of Mr. Bradley under date of April 20, to W. H. Tilford, in reference to the kind of oil to be supplied under the contract of April 26, 1904,

931 between the Standard Oil Company of New York and the Consolidated Gas Company.

A. I will be glad to do so if I can find it.

Q. You have produced the contracts for coal, Mr. Carter, and the paper you hand me now is a contract for anthracite or bituminous?

A. Anthracite.

Mr. Burr: I offer that in evidence.

Received in evidence and marked City's Exhibit No. 11.

Mr. Mathewson: Before you proceed to examine on that I want to present something for the discretion of the Master and your courtesy and discretion. You will perceive that in regard to these contracts like the Standard, marked 118-A-2, for instance—those numbers were given by the Gas Commission to the exhibits and they were referred to in questions by their numbers, not by the name- of the contractors; the reason for that was, particularly in regard to these coal contracts, and also other contracts where we have several dealers, that the dealers compare; they know pretty well who are dealing, and the result, as I have said before, would be very seriously to embarrass us.

(Here Mr. Mathewson made a statement which the stenographer was directed not to take.)

Mr. Burr: Am I to understand, Mr. Mathewson, that your statements would apply to every case in any court, where any company which was a large consumer of ice or coal or oil was interested, that the contracts would be treated differently from any other exhibit in the case, if they were offered in evidence?

Mr. Mathewson: They are constantly, in my experience,
932 according to the discretion and courtesy of counsel. I will say that we have no objection to filing complete copies here with the Master and having them used by you in the process of checking, or your cross-examination, or anything else, as fully as possible, so far as testing your case is concerned, but I do ask that the names of contractors and the price of each individual contractor be not spread on the public record.

The Master: I do not see that there is any useful purpose to be served by spreading the names of the contractors and their prices on the public record. I think it would be a very proper thing to assent to Mr. Mathewson's request, if you are so advised. As I understand it, his position would naturally be that because the companies were paying too high prices for their supplies, or the fact that they got some of them cheaply, would not hurt them; but, of course, if he insists for any reason on having this exhibit treated like any ordinary exhibit and marked and put on the files, I do not see that I have any discretion in the matter.

Mr. Mathewson: In view of any decision here, it is part of the record; it merely is not printed, so that everybody can read it; that is all. That source was pursued and found to be perfectly satisfactory before the Commission.

Mr. Gans: How would it do to have it printed so that we can have it to read, with the names left blank, and, if you choose, with the amounts left blank, so that for our own purposes—I mean counsel—we could put in the names and amounts, and the Master could insert them in his copy for the benefit of the Court.

Mr. Mathewson: I will file a complete copy with the
933 Master here, so that you can refer to it, and it can be verified under the Master's directions.

Mr. Burr: Whatever I may conclude hereafter, I am not in a position to make any bargain with you on that at this moment. I have a public position which I do not intend to jeopardize in any way by making such a concession. If I alone were concerned it would be a different matter.

Mr. MATHEWSON: But whether we pay $3.50 for coal, and whether it is from James Johnson, or John Jackson, does not make any difference, and you can compare it with the market prices if you think it is too high.

Mr. BURR: In my opinion the Consolidated Gas Company does not occupy any better position here than James Jones & Company, and I do not think they should be specialized to receive any better treatment.

Mr. MATHEWSON: Nor any worse treatment. And if I should present the same proposition, appearing as counsel for James Jones & Company, I should expect it would be assented to by counsel, and accepted as cheerfully as it was by Senator Page and Mr. Jackson.

Mr. BURR: I have concluded to offer this paper in evidence. You ask me in regard to that to make some bargain to keep it off of the record. I cannot do that at this time. I do not see any good purpose to be served by it.

By Mr. BURR:

Q. I see this document for coal, dated March 8th, 1904, reads "as per our conversation with you over telephone to-day, we beg to offer you twenty thousand tons of Beaver Meadow broken coal." The point I want to ask you about, Mr. Carter, is whether you ad-
934 vertised for bids for coal, or whether as apparently in this case
there were no specifications submitted or advertised for; and it is the result of a verbal understanding between an officer of your company and an officer of some other company?

A. I don't think this exactly appears, Mr. Burr. My information is, my impression is, that the various coal companies that are in a position to fill our orders for coal, to our requirements, are all given an opportunity to present their bids for such supply, and those figures are convassed and I presume that there is more or less conversation at longer close range about them, and finally the contracts are made. I don't think there is any advertising for bids, however.

Q. Do you know if this contract of March 8th, 1904, is a continuation of a prior contract with the same people?

A. I have no knowledge that it is, unless it is plainly stated there. If it is a continuation of a prior contract I think the reference would be made.

Q. I see that reference was made——

A. Replying to your inquiries——

Q. What former contract did you have with these people for a prior supply of coal?

A. It was probably a prior contract.

By Mr. MATHEWSON:

Q. All you know is what the letter says?

A. Yes, sir.

By Mr. **Burr**:

Q. You have no knowledge about it yourself?

A. Nothing more than what is stated there.

Q. This letter of March 8th, 1904, has attached to it a copy of a letter of the Vice-President of your company, dated March
935 17, 1904, also letter acknowledging the receipt, dated March 18, 1904, acknowledging the receipt of the letter of the Vice-President, dated March 17th. Do you know whether any part of this coal was furnished to the subsidiary companies or the gas companies in which the Consolidated has a stock interest or owns stock?

A. I don't know, Mr. Burr.

Q. Do you know whether any was supplied to the New Amsterdam or the Mutual or the Standard?

A. I don't know.

By Mr. **Gans**:

Q. Otherwise there would be an item of that charge on your books?

A. No.

Q. If it were, would there be a charge on your books?

A. There would be.

By Mr. **Mathewson**:

Q. On whose books?

A. On our books against the other company. No, it would be billed by the coal company direct.

By Mr. **Gans**:

Q. Under what contract?

A. Under that contract.

By Mr. **Burr**:

Q. And would that be the same way with oil?

A. Precisely.

Q. So that you merely direct the delivery of the coal and the oil under these contracts to other companies without having them run through your books at all?

A. That would be the case.

Q. But you would keep track of it on the books, of the total of 177 million gallons of oil, for instance, wouldn't you?
936 A. We would be advised by the other companies of the delivery of oil and would record it.

Q. Then it would appear in some place in your records, what amount they had received of the coal or oil?

A. Yes, it would.

By Mr. **Gans**:

Q. Don't you keep a purchase book of some sort in which entries of that kind are made?

A. The purchase books would not record purchases made by other companies, Mr. Gans.

By Mr. BURR:

Q. I notice, Mr. Carter, that on Plaintiff's Exhibit 11, is stamped "Executive Committee, approved, March 15, 1904." Does that mean that this was taken up for consideration by the Executive Committee and formally approved by them and the seal of their approval stamped upon it?

A. I should presume so.

Q. Are you Secretary of the Executive Committee?

A. No, sir.

Q. Who is?

A. I think that the Chairman of the Executive Committee acts as Secretary, that is, he records what is done and signs the minutes.

Q. Does the Executive Committee sit every week or every day?

A. Yes, sir, every week.

Q. How often does the Board of Directors sit?

A. Monthly.

Q. What day of the week does the Executive Committee sit?

A. Unless it falls on a holiday, it sits on Tuesday.

Q. Every Tuesday?

A. Every Tuesday, yes, sir.

Q. And the Board of Directors sit on what day of the month?

A. The Thursday preceding the last Friday of each month.

937 Q. Do you know anything as to the distinctive qualities between the Beaver Meadow broken coal and the Cross Creek broken coal?

A. No, sir.

Q. And do you know whether one has a greater capacity for the better manufacture of gas than the other?

A. No, sir.

Q. Who selects the coal, the kind of coal?

A. Why, I think that most of the coal that is purchased is selected by the officers upon possible tests made at the stations of coal, that is my impression.

Q. Well, you know, as a man who has been identified with a gas company for a great many years, that one coal differs from another as to the resultant qualities in making gas, one makes a better gas with a less amount of coal than the other, doesn't it?

A. Coals differ.

Q. In that respect——

A. Are you referring to gas making coal, when you refer to the Beaver?

Q. I am speaking of gas making coal now.

A. Yes, they do differ some.

Q. This coal is used for the furnaces, isn't it?

A. No, sir, that is used for the generators.

Q. The generator.

A. Yes, sir.

Mr. MATHEWSON: That wouldn't be called gas making coal.

The WITNESS: No, we wouldn't call it gas making coal.

Q. What would you call it?

A. Fuel coal.

My Mr. MATHEWSON:

Q. The gas making coal is bituminous coal?
A. Yes, sir.
Q. And anthracite is not known as gas making coal?
A. No, sir.

By Mr. BURR:

Q. Is this coal delivered at once or is it delivered as you need it. Do you take it into your yards immediately after you order
938 it?
A. It is delivered as we require it.
Q. Delivered as required?
A. Yes.

Q. Have you a yard which is capable of holding 40,000 tons of coal?

A. I wouldn't like to testify as to the capacities of our yards, I don't know what they are. I know we don't pretend to make a contract for the delivery of coal and have it delivered at once upon the execution of the contract.

Q. This coal was to be delivered in cargoes of 500, 600, or 700 tons alongside the different works in the city of New York. Does this price embrace the price of delivery at your works, do you know. It is silent upon that subject in the contract?

A. My information is that it does.

Q. The rate given here embraces the entire cost up to its arrival at your different works, is that so?

A. On our docks.
Q. On your docks?
A. Yes, sir.
Q. Have you any other contracts for the same kind of coal?
A. Yes, sir.

(Witness hands Mr. Burr a paper.)

Mr. BURR: I offer this in evidence.

Received and marked City's Exhibit No. 12, August 17, 1906.

Q. This contract marked "City's Exhibit 12" also seems to be the result of a verbal arrangement, and was not the result of competitive bidding. Have you any knowledge on the subject, Mr. Carter, as to whether on or about March 15th, 1904, there was any public bidding or any competitive bidding for the supply of coal called for by this contract?

A. Oh, yes, I am sure there was a great deal of competitive bidding every year about the times we make our coal contracts for the supply of coal.

Q. Who does the competitive work. How do you manage to get it, how do you manage to get the competitive bids?

A. Why, we cannot get away from it, they would break
939 our doors down to get in and compete if we didn't offer them facilities for doing so.

Q. This contract appears to have been made up of four papers, one dated March 15, 1904, the other a letter to Mr. Cawtry, the vice-president of the Consolidated Gas Company, signed by J. H. Abbott, sales agent, another dated March 16, from the same to the same, another dated March 17, purporting to be a copy of a letter from the vice-president of the Consolidated to J. H. Abbott, sales agent; another March 24, 1904, acknowledging receipt of a letter from Louis B. Gawtry of the 23d day of March, which letter does not appear to form part of this contract; the other is a paper purporting to be a copy of a letter from Mr. Gawtry to J. H. Abbott, sales agent, dated December 88, 1904. In this latter paper the statement is made, "This is to confirm our verbal agreement made with you December 6 less the deducting of 6,000 tons," and refers to the details of the shipment being taken up by Mr. A. M. Smith as heretofore. Who is Mr. A. M. Smith?

A. One of the engineers in the general office.

Q. This also appears to have been approved by the executive committee March 15, 1904. Has all that coal been delivered, do you know?

A. I don't know, Mr. Burr, no, sir.

Q. This contract calls for 86,000 tons. Do you know how much of it has been delivered?

A. No, sir.

Q. What other contracts have you?

(Witness produces another paper and hands same to Mr. Burr.)

Mr. **Burr**: I offer this in exidence.

Received and marked "City's Exhibit 13, August 17, 1906."

Mr. **Burr**: This contract consists of two papers, one dated March 15, 1904, and a letter to Louis B. Gawtry, vice-president,
940 from the seller. The other purporting to be a copy of a letter dated March 17, 1904, from the vice-president to the seller and the other dated March 18, 1904, accepting the offer. Do you know if any part of that coal was delivered to the subsidiary companies, or to the Standard, the New Amsterdam or the Mutual?

A. No, I don't know, Mr. Burr, whether any of it was delivered or not.

Mr. **Burr**: This is a contract for 50,000 tons.

Q. Have you any other contracts, Mr. Carter?

(Witness hands Mr. Burr a paper.)

Mr. **Burr**: I offer that paper in evidence.

Received and marked City's Exhibit 14, August 17, 1906.

Mr. **Burr**: This contract is dated March 16th, 1904, and consists of a letter purporting to be written by the seller to the vice-president of the Consolidated Gas Company stating the terms and conditions for the sale and delivery of 80,000 tons of Wilkesbarre broken coal; also a second paper dated March 17, 1904, purporting to be a copy of a letter from the vice-president of the Consolidated to the seller agreeing to the purchase of 80,000 tons of Wilkesbarre broken coal.

Q. What other coal contracts have you, Mr. Carter?

(Witness hands Mr. Burr another paper.)

Mr. **Burr**: I offer this in evidence.

Received and marked City's Exhibit 15, August 17, 1906.

941 & 942 Mr. Burr: This contract consists of a letter from the seller to the vice-president of the Consolidated Gas Company offering 40,000 tons of coal to be shipped between April 1st, 1905, and April 1st, 1906, at a price stated; stating further "his offer does not include shipments to Astoria, but we would like to be advised as to whether you would wish any deliveries to be made to that point during the coming year." The second letter, dated March 25th, 1905, from L. B. Gawty, Vice-President of the Consolidated Gas Company, to the selling agent. In the second letter, dated March 25th, 1905, it is stated "they" (meaning the owners of the coal) "make a concession to you by paying the same," then they s-ate the price in force for points outside of these towing limits at 115th Street and 132d Street and Ravenswood, and they can make no less rates than above quoted. The third paper purports to be a copy of a letter from L. B. Gawtry, Vice-President, to the owners of the coal, addressed to their selling agents, and agreeing to purchase during the year ending March 31st, 1906, 40,000 tons of Old Company's Lehigh broken coal at price stated per gross ton alongside any of our docks, except those that are at Astoria; and another paper, a fourth paper, dated April 6th, 1905, being a letter from the selling agent of the owners of the coal, addressed to Louis B. Gawtry, Vice-President, acknowledging receipt of the letter of April 5th and informing the Consolidated Gas Company that their order for 40,000 tons of coal had been accepted.

Adjourned to Monday, August 20th, 1906, at 1:30 P. M.

Last Exhibits:

Complainant's 100.
State's N.
City's 15.

943 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Monday, *August 20th,* 1906—1:30 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Gans.

944 Mr. Burr: There is a correction I want to make on page 763. The question as it is written here is, "Do you know

whether there was any variation in the rates of exchange, or was it equal with that company?" It should read "with each company."

Also on page 768, the question as it reads is, "Do you know as a matter of fact whether the contract which was made by the Welsbach Company for the Borough of the Bronx was signed and taken over by your company for that year?" It should be "assigned to and taken over."

Also on page 782.

The Master: Unless these are vital to your cross-examination, Mr. Burr, I suggest that you leave the question of making corrections to some time outside of the hearing.

Mr. Burr: The question on page 782 reads, "We left off at the time of the rate cutting or the rate war between the companies, and I understood you to say that when in 1900 that cutting ceased there was no longer any trouble between the gas companies and the City of New York." It should be "between the gas companies and the Consolidated Company."

Also page 804 I am made to say "I think the mind of the Court should be fully informed upon this quite large item of ten cents which is charged up against each ten thousand cubic feet of gas." It should be "against each one thousand cubic feet of gas."

Robert A. Carter resumes the stand.

Cross-examination by Mr. Burr continued:

Q. When we left off at the last hearing I was asking you
945 with regard to the coal contracts, and the last contract that
was offered in evidence is City's Exhibit 15. What other
contracts have you produced.

(Witness produces paper and hands same to Mr. Burr.)

Mr. Burr: I offer that paper in evidence.

Received in evidence and marked City's Exhibit 16, August 20th, 1906.

Mr. Burr: This is a communication from the seller to the Vice-President of the Consolidated Gas Company dated March 29th, 1904, referring to a letter of Ernest S. Greene, Manager, dated March 17th and reads "Confirming my telephone communication of this morning I beg to advise that I desire to reduce my bid on your business to $3.10 per ton of 2,240 pounds alongside New York Harbor; all other terms being in accordance with my letter of March 17th last." Copy of letter from Vice-President Gawtry to the seller dated April 7th, 1904, acknowledging the receipt of letters of March 17th and 29th offering to sell and deliver to us 50,000 tons of three-fourths screened gas coal which we agree to purchase from you during the — ending March 31st, 1905, the price of this coal to be $3.10 per ton of 2,240 pounds delivered along side our docks in such monthly quantities as we might elect. This coal to be as far as possible from your — Mines, and is to be purchased subject to the agreements in your letters of April 29th, 1903 and March 17th, 1904, and March 29th, 1904." Letter dated April 8th, 1904, from the Manager of the seller to the Vice-President of the Consolidated Gas Com-

pany confirming the purchase from the seller of 50,000 tons
946 of three-fourth screened gas coal to cost you $3.10 per ton
of 2,240 pounds, all other terms being — accordance with my tellers to you under date of April 29th, 1903, March 7th, 1904, March 29th, 1904. The copy of letter signed Ernest S. Greene, Manager, dated March 17th, 1904, to L. B. Gawtry, Vice-President of the Consolidated Gas Company, confirming price $3.20 per ton of 2,240 pounds, alongside New York Harbor for 50,000 tons of three-fourths gas coal. All other terms being in accordance with our present agreement as covered by my letter of April 29th, 1903, and your acknowledgement of May 1st, 1903.

Q. Have you produced any of the letters that are referred to in any of these communications that I have just read, Mr. Carter?

A. If they are not presented with the papers that you have read, why, I have no knowledge of them.

Q. That contract appears to have been based upon communications which are referred to and which are not made part of this contract as it is presented here?

A. I dare say, possibly here, the first letter refers to the letter of March 17th, that is here, the second letter refers to the same letter of March 17th, which is attached hereto. The letter dated April 7th refers to letters of April 29th, 1903, March 17th, 1904, and March 29th, 1904, respecting the first of these letters, April 29th, 1903, it would probably be attached to the previous contract, and would have no particular bearing upon this except that some paragraph in a letter used in the previous contract has been referred to in the correspondence in this contract, that letter can be produced if you want it.

Q. Will you produce it?

A. The other one dated March 17th, 1904, is this letter
947 which is referred to very frequently, attached to this cor-
respondence. I do not find any letter—yes, the letter of March 29th, 1904, is also attached here.

By Mr. Mathewson:

Q. Now, what about that of April?

A. The only missing letter is that dated April 29, 1903, which is unquestionably attached to the contract for the preceding year. Do I understand you would like to see that letter?

By Mr. Burr:

Q. I would like to see that letter.

A. I would be glad to produce it.

Q. There are two letters that are referred to in this contract which are not attached, one is the letter of April 29, 1903, and the other of May 1, 1903. If you will be good enough to produce those——

Mr. Mathewson: This is Exhibit 16?

Mr. Burr: Yes.

The Witness: They both have reference to the 1903 contract, and would be attached to it.

Q. And that contract is stamped "Approved by the Executive Committee," and was approved by the executive committee?

A. Which are you referring to, the contract for the present year?

Q. Yes.

A. Yes, sir.

Q. Have you any other coal contracts?

(The witness hands Mr. Burr a paper.)

Mr. **Burr**: I offer this contract in evidence.

Received in evidence marked City's Exhibit 17, August 20, 1906.

Mr. **Burr**: This contract consists of a letter dated March 948 16, 1905, from the seller to L. B. Gawtry, Vice-President of the Consolidated Gas Company, in which the seller states that "We will deliver 200,000 tons of our broken —, such as you had last year, to your various stations at $4.40 per gross ton alongside in such quantities per month as you may designate, dividing it as equally as you can so that you always have stock on hand in case of an accident; so we will sell you the coal at $4.20 per gross ton f. o. b. on boats at our shipping wharf at Port Johnson, New Jersey. As I suggested to you yesterday, I think it is to your advantage to buy the coal alongside, for one reason it saves you the cost of insurance, and also because it puts on the coal company the responsibility of getting the coal alongside." Can you explain the meaning of the writing on the letter I have just read, Mr. Carter, "Ravenswood 438 A. L. G."

Mr. **Mathewson**: This is not part of the contract, is it, Mr. Carter?

The **Witness**: No, sir.

Q. I have asked you, can you explain those writings?

A. No, I cannot. I know nothing whatever about them.

Mr. **Burr**: Letter of April 6th, 1905, from Louis B. Gawtry, Vice-President of the Consolidated Gas Company to the seller "Confirming my conversation with you, we hereby agree to purchase from you to be delivered during the year ending March 31st, 1906, 30,000 tons of broken coal to be delivered alongside our docks in the City of New York. The price of this coal to be $4.20 per gross ton f. o. b. boats at Port Johnson, New Jersey. Letter dated April 11th 1905, from the Vice-President of the Consoli- 949 dated Gas Company to the sellers, "Kindly increase the order for broken coal sent you in my letter of April 6th, 1905, from 30,000 tons to 75,000 tons, all to be delivered under the terms and conditions as explained in my letter above referred to." Can you explain the writing upon that letter, Mr. Carter, at the bottom. Does that mean that the order was subsequently increased to 110,000 tons?

The **Witness**: Probably not, as it does not say so. I presume it means exactly what it says.

Q. Can you explain it?

A. I don't see that there is any explanation necessary. It is a memorandum. It was not a part of the contract.

Q. N. G. Company, are those the letters, Mr. Carter?

A. No, N. A.

Q. What does that mean?

A. It means New Amsterdam.

Q. N. A. Company is to order 35,000 tons direct, that making 110,000 tons for L. & W. B. Company?

A. Yes.

Q. Does that mean that 35,000 tons of this particular coal at the same price was delivered to the New Amsterdam Company?

A. I presume so from that memorandum.

Q. The other letter attached is dated September 9th, 1905, from the Vice-President of the Consolidated Gas Company to the general sales agent of the seller, modifying the contract so that the Consolidated Gas Company may receive 15,000 tons to be delivered during the months of September and October, 1905, under the terms of the contract. Letter of September 11th, 1905, from the seller to the Consolidated Gas Company, accepting the modification of the contract as proposed in the letter of the 9th inst. Letter of December 4th, 1905, from the Sales Agent to the Vice-President of the
950 Consolidated Gas Company, letter of December 6th, 1905,
from the Vice-President of the Consolidated Gas Company to the Sales Agent of the seller, reading, "In answer to your letter of December 4th, 1905, we beg to say that we will take from you 10,000 tons of broken coal in addition to and under the same terms of our present contract with you. This coal to be delivered as soon as possible, and confirms the order given you verbally on the 4th inst.," and at the bottom of that letter appears a memorandum in writing "Purchased by authority given on the enclosed 12.5.05 L. B. G."

Q. Have you any other contracts, Mr. Carter?

(Witness produces paper and hands same to Mr. Burr.)

Mr. Burr: I offer this in evidence.

Received in evidence and marked "City's Exhibit 18, August 20th, 1904."

Mr. Burr: This contract consists of a letter dated March 25th, "1905," typewriting, and later on changed in pencil to "1904." Do you know anything about that change, Mr. Carter?

A. It looks to me like a correction of a typographical error.

Q. Then you believe that the date here as written, March 31st, 1905, is the proper date?

A. No, I would leave it 1904 as the correct date of the letter.

Mr. Mathewson: I think that must be so. Read the next letter.

Q. The letter dated March 31st, 1905, typewritten 1905 and changed to 1904 in pencil, is from the seller to the Consolidated Gas Company:

"We hereby agree to deliver to you 25,000 tons of our gas coal, the same as previously shipped through the year, beginning
951 April 1st, 1904, and in about the line of previous schedules, at
the following prices; when delivered alongside your wharves at your works in New York City proper, $3.45 (2,240 pounds); when delivered alongside of your works at Port Morris, $3.48."

There is a second paper attached to it, dated 3/31/04. Will you explain what that paper is, a short memorandum in writing? Read it, if you please, if you can.

A. The memorandum reads:

"You are hereby authorized to make the same deductions from our prices this year on offer made you this date as you did on the contract just ending."

Q. Do you know to what deductions that memorandum refers?

A. My recollection is that it is a deduction of 25 cents a ton from the invoice price of the coal.

Q. This memorandum is addressed to L. B. Gawtry, Esq., Vice-President; do you know by whom it is signed?

A. No, I do not.

Q. Is it not signed by the same person who signed the letter of March 31st, purporting to be the signature of the Vice-President of the seller company?

A. I should say that it was, yes.

Q. And the figures in writing on that memorandum, $3.45 less 25, $-.20, and $3.48 less 25, $3.23, L. B. G.; those are the initials of Mr. Gawtry to those figures?

A. Yes.

Q. And it is a fact that the coal billed and sold at $3.45 was netted at $3.20?

A. Charged in our accounts at the net amount, yes.

Q. $3.20 a ton?

A. Yes.

Q. And the coal to be delivered under this contract at $3.48 was charged at $3.23?

A. That is my understanding, yes.

952 Q. The third communication attached to this contract purports to be a copy of a letter from the Vice-President of the Consolidated Gas Company to the seller, dated April 7th, 1904:

"We hereby accept your proposition to deliver during the year ending March 31st, 1905, 25,000 tons, ¾ screened—gas coal, to be delivered in such monthly quantities as we may require, the price of this coal to be $3.45 per ton of 2,240 pounds when delivered alongside our docks on Manhattan Island, and $3.48 per ton when delivered alongside our dock at the foot of 138th Street, Borough of the Bronx; this coal is purchased under the same general conditions as heretofore."

The fourth letter attached to this contract is dated April 11th, 1904, to L. B. Gawtry, Vice-President of the Consolidated Gas Company, from the Vice-President of the seller company, acknowledging receipt of the letter of the 7th inst. This is in evidence as Exhibit 18. That also is stamped "Approved by the Executive Committee," and I suppose was approved by it?

The Witness: Yes.

Mr. Burr: I offer this contract in evidence, being an agreement dated the 31st day of May, 1905, between the seller and the Consolidated Gas Company of New York, agreeing to deliver to the Consolidated Gas Company, alongside its docks in the City of New York, 20,000 tons of ¾ screened gas coal, to be taken at said docks, during the period beginning June 1st, 1905, and ending March 31st, 1906, at the net price of $2.90 per gross ton delivered, signed by the seller and the Consolidated Gas Company. This contract is for bituminous coal.

953 Received in evidence and marked City's Exhibit 19.

Mr. Burr: I offer this contract in evidence. It is headed "Contract for Bituminous Coal," dated the 25th of May, 1905, between the seller and the Consolidated Gas Company. The party of the first part agrees to deliver to the party of the second part, alongside of the docks of the party of the second part, thirty thousand tons of ¾ screened gas coal, during the period beginning June 1st, 1905, and ending March 31st, 1906, at the net price of $2.90 per gross ton. This contract contains the clause that the weight of said coal when delivered from time to time shall be as ascertained by the weighers of the party of the second part. It is signed by both parties to the agreement.

Received in evidence and marked "City's Exhibit No. 20."

Mr. Burr: The last exhibit and this one, No. 20, do not appear to have been approved by the Executive Committee; at least they do not appear to have been so stamped.

Q. Do you know whether they were so approved?

A. I have no doubt they were approved, although the evidence of it is missing from the contract.

Q. From that contract and also from the previous one offered in evidence, City's Exhibit 19, that is not approved by the Executive Committee, is it?

A. There is no doubt in my mind that the Executive Committee did approve of that contract either before or after it was made.

Mr. Burr: I offer this contract in evidence, being a contract or agreement dated the 22d day of May, 1905, between the seller and the Consolidated Gas Company, whereby the party of the
954 first part agrees to sell and deliver to the party of the second part alongside of the docks of the party of the second part in the City of New York, 75,000 tons of three-fourths screened gas coal, to be taken at said docks during the period beginning April 1st, 1905, and ending May 31st, 1906, at the net price of $3.10. It is signed by the party to the contract.

Received in evidence and marked City's Exhibit 21.

Q. This contract does not appear to have been approved on the face of it by the Executive Committee as the others were. Mr. Carter, have you any special knowledge on the subject of whether it was approved or not?

A. I can only say with reference to that contract—as in respect to the others—that my belief is that the contract was approved by the Executive Committee.

Q. What record is kept of the contracts approved by the Executive Committee, if any?

A. This is the record of the contract. The contract itself is its own record.

Q. Where it is not stamped approved by the Executive Committee, it does not carry that record with it, does it?

A. The record of the approval?

Q. Yes.

A. No, it does not carry it if it is not stamped on it.

Q. And you are simply expressing your belief that it was approved by the Executive Committee; you have no special knowledge on the subject of the approval of these particular contracts to which I have called your attention?

A. That is the case. I believe they were approved.

Mr. Burr: I offer this contract in evidence, being an agreement made between the seller and the Consolidated Gas Company 955 of New York whereby the party of the first part agrees to sell and deliver to the party of the second part and the party of the second part agrees to purchase 30,000 gross tons of—gas coal of 2,240 pounds each, equal in grade and quality to the sample quality of such coal recently purchased by the party of the second part from the party of the first part; to be delivered alongside of the docks of the party of the second part in the City of New York. The party of the second part hereby agrees to pay the party of the first part and the party of the first part hereby agrees to receive as full compensation for such coal the sum of $3.35 for each ton of—gas coal so delivered. This agrement is signed by the seller and the Consolidated Gas Company of New York by its president, and the seal of the Gas Company is at-ached by R. A. Carter, Secretary.

Received in evidence and marked City's Exhibit 22.

Mr. Burr: I offer in evidence contract made the 1st day of April, 1903, between the seller and the Consolidated Gas Company of New York whereby the party of the second part hereby agrees to

"Purchase and receive from the party of the first part upon the terms and conditions hereinafter stated, a certain quantity of three-fourths screened lump—gas coal, same to be delivered between April 1st, 1903, and April 1st, 1906, alongside the docks of the party of the second part, in the City of New York; in the year ending March 31st, 1904, 120,000 gross tons, as a minimum, and such amount in addition thereto, but not exceeding 30,000 gross tons, as the party of the second part may, by written notice given to it by the party of the first part, request; for the year ending March 956 31st, 1905, 150,000 gross tons as the minimum, and such amount in addition thereto as the party of the second part may by written notice request; for the year ending March 31st, 1906, 150,000 gross tons as the minimum, and such amount in addition thereto as the party of the second part may by written notice request. The party of the first part agrees to make shipments of the gas coal from their mines to St. George, Staten Island, and thence by lighterage to the City of New York, and deliver the same alongside the docks of the Consolidated Gas Company. The price of the coal is to be $3.50 per ton of 2,240 pounds, delivered alongside the docks of the party of the second part, as aforesaid. This price is based upon the present rates from the mines to St. George of $1.65 per ton of 2,240 pounds. Should the said freight rate advance or decline, the above price is to be advanced or lowered by adding thereto or deducting therefrom the actual advance or decline in said freight rate. This price is also based upon the mining rates fixed for the year ending March 31st, 1904, and it is understood and agreed that if there be during the continuance of this contract and subsequent to said date of March 31st, 1904, an advance or decline in the said mining rate, the price is to be advanced or lowered by adding to or deducting therefrom one and one-half times the advance or decline in the said mining rate."

This contract is signed by the seller and by the Consolidated Gas Company, and attested by R. A. Carter, Secretary.

Received in evidence and marked "City's Exhibit No. 23."

957 Q. Do you know whether this contract, Exhibit No. 23, was approved by the Executive Committee, it not having the seal of such approval stamped on it, as in the case of the other contracts?

A. My belief is that it was approved.

Q. But you have no special knowledge on the subject?

A. I believe they were approved, but I have no special knowledge on the subject.

Mr. MATHEWSON: I think every one of those contracts was approved by the Executive Committee.

Q. Calling special attention to this contract, City's Exhibit No. 23, do you know what the freight rate was during the year 1905, of this coal?

A. No, I do not.

Q. Do you know what the mining rate was during the years 1904 or 1905?

A. No, sir.

Q. Do you know whether the mining rate advanced or declined?

A. I do not.

Q. Do you know whether the freight rate advanced or declined?

A. I do not.

Mr. MATHEWSON: You have not got the whole of it. (Hands Mr. Burr another document.)

(The document produced by Mr. Mathewson consists of four papers, which were received in evidence and marked "Part of Exhibit 23.")

Q. This contract which I have been reading from, City's Exhibit 23, has attached to it four papers, one dated March 31st, 1904, purporting to be a copy of a letter from the Vice-President of the Consolidated Gas Company to the Seller, in which it is stated:

"Confirming our interview of March 31st, 1904, with your Mr. —— and Mr. ——, and in consideration of the reduction of the cost of mining, and for other reasons, the price of said coal to be during the year March 31st, 1905, *to be* $3.40 per gross ton alongside our docks." 958

Also a letter from the Seller to the Vice-President of the Consolidated Gas Company, dated April 22d, 1904, acknowledging receipt of the prior letter of March 31st.

"In confirmation of our interview of March 31st, 1904, agreeing to bill coal during the year ending March 31st, 1905, at the price of $3.40 per gross ton; this change is made upon the understanding, however, that the contract is to be intact in every respect except as to the charge (change) in price for the year mentioned."

Also copy of a letter dated May 17th, 1905, from the Vice-President, Mr. Gawtry, to the Seller.

"In accordance with the verbal agreement made with your Mr. —— and Mr. —— on May 12th, 1905, in which you agreed to modify the price specified in the contract dated April 1st, 1903, for 150,000 gross tons of gas coal to be delivered during the period, March 31st, 1905, to March 31st, 1906; all such coal shall be at the rate of $3.15 per gross ton delivered alongside the docks of the company; with the further provision that this company have an option to increase this tonnage should the needs of the company require it."

Also letter dated June 3d, 1905, from the Seller to the Vice-President of the Consolidated Gas Company, stating:

"We herewith confirm verbal understanding between you, Mr.—— and myself on the 3d ultimo, modifying the price
959 specified, so that the same shall be at the rate of $3.15 per gross ton; in no other respect, however, than the modification in price shall the terms of the agreement of April 1st, 1903, be changed or modified, and the contract shall remain wholly intact otherwise."

Mr. Burr: I offer in evidence a contract or agreement between the seller and the Consolidated Gas Company, dated the third of June, 1904, whereby the seller agrees to sell and deliver to the party of the second part, 25,000 gross tons of — ¾ screened gas coal of 2,240 pounds each, equal in grade and quality to the sample cargo of such coal recently purchased by the party of the second part. The party of the second part hereby agrees to pay to the party of the first part, and the party of the first part agrees to receive the sum of $3.06½ for each said gross ton of — ¾ screened gas coal." This agreement is executed by the seller and the Consolidated Gas Company, and the seals of both companies are attached, the seal of the Consolidated Gas Company being attested by R. A. Carter, Secretary. This contract is acknowledged by both parties to it. That is not the case with the other contracts.

Received in evidence and marked "City's Exhibit No. 24."

Q. The coal referred to in this contract is bituminous coal?

A. Yes.

Q. The contract, City's Exhibit No. 24, does not appear to have been approved by the Executive Committee?

A. The same opinion, Mr. Burr, that it has been approved.

Mr. Burr: I offer in evidence contract for bituminous
960 coal, dated the 25th day of May, 1905, between the seller and the Consolidated Gas Company. This provides for 25,000 tons of — ¾ screened gas coal to be taken at the docks of the Consolidated Gas Company, during the period beginning June 1st, 1905, and ending March 31st, 1906, at the net price of $3 per gross ton, delivered in the Borough of Manhattan, 14th and 42nd St. works,

at $3.05 per gross ton delivered in the Borough of the Bronx, Central Union works. The contract is executed by the parties, and has a letter attached dated February 8th, 1906, purporting to be a copy of a letter from the Vice-President of the Consolidated Gas Company to the seller, stating "Confirming my conversation of yesterday with you, I enclose herewith our order for 5,000 tons of — gas coal to be delivered prior to April 1st, next."

Q. This contract does not appear to have received the approval of the Executive Committee; it is not stamped?

A. My opinion is that the contract has been approved by the Executive Committee.

Received in evidence and marked "City's Exhibit No. 25."

Q. Do you know how much of this order was delivered at the Central Union Works?

A. I could not say without consulting our records how much was delivered there.

Q. Would your records show how much of this coal was delivered at the Central Union Works?

A. Yes.

Q. And your records would show, in regard to the contracts that have been up to this time offered in evidence, what part of the coal and oil was delivered to the various works?

A. Yes.

961 Q. In the City of New York?

A. Yes.

Mr. **Mathewson**: Of course, whatever was delivered to the Central Union we do not pay for and charge for.

Mr. **Burr**: I am going to object to statements of that kind to Mr. Carter. He can testify to that.

Mr. **Mathewson**: Mr. Carter has already testified to it.

The **Witness**: I testified to that Friday.

Mr. **Burr**: I object to your running a race with the testimony of the witness.

The **Witness**: Mr. Burr has asked for a record of the quantity delivered, and as I had already testified to the fact that no charge appears upon the books of the Consolidated Gas Company for coal delivered to other companies, I presumed there was no further occasion for testifying in that connection.

Mr. **Burr**: I know that, but I had asked you one question in regard to that subject, and I will now ask you another.

Q. How do you keep track of the receipt and disposal of these large amounts of coal that are embraced in these contracts; for instance, under this contract the delivery is made to the Central Union Works direct?

A. The Central Union Works advises us of the receipt of the coal, stating the shipper from whom it was received, the quality delivered and the date, etc., and that becomes a matter of record at the office of the Consolidateed Gas Company in connection with that particular contract, and that is the only record.

Q. And that is the case with regard to the Mutual, the Standard and the New Amsterdam?

962 A. The New Amsterdam, the Standard and the Central Union companies. I do not recall that the Mutual Company have availed themselves of any of our contracts for gas making supplies.

Q. Then there is a record in that form, showing how much coal and how much oil each of those companies received during the life of the contracts for coal and oil?

A. Yes, sir.

By Mr. MATHEWSON:

Q. How much they received under these contracts, perhaps?

A. Under the contracts, and during the life of the contract.

Q. They may receive other oil outside from other contracts?

A. They may, yes.

Mr. BURR: I object to that suggestion also.

Mr. MATHEWSON: That is not a suggestion; it is a fact, so that we may not confuse the record.

Mr. BURR: Then the witness himself will know it.

Mr. MATHEWSON: He has so testified. I asked him whether it was a fact. How does he know, or does the Consolidated Gas Company know if the Central Union make other purchases outside of these contracts of coal? They would not notify that to the Consolidated Gas Company, of course; there is no reason why they should. You will find, in the case of material for the Consolidated Gas Company, just the material that the Consolidated Gas Company uses and nothing else, and you will never find anything else, no matter how long you examine.

963 Q. That requires my asking you a question, in order to make it clear in my own mind. I understand from what you have said that if under these various contracts that have been offered in evidence, coal is shipped to the companies controlled by your company, they send a statement to your office of the amount of coal so received; is that so or not?

A. I presume you are referring to the companies, some of whose stock the Consolidated Gas Company holds?

Q. Yes.

A. With that modification in your question, I reply affirmatively.

Q. And the same applies to oil?

A. The same applies to oil, that is, deliveries made under our oil contracts; they are reported to us and noted on our record of deliveries under that contract.

Q. In other words, you have a record which shows how much coal and how much oil has been received by the Standard, the New Amsterdam and the Central Union Companies, from the amounts of coal and oil agreed to be purchased by the Consolidated under these various contracts?

A. That is the case, yes.

Q. Where is that record kept?

A. At our general office.

Q. In what book?

A. The contract book.

Q. In that contract book these various companies are charged with the amounts that they receive of coal and oil?

A. No charge made against them at all. The delivery to them under that contract is noted in it, but there is no charge in connection with it whatever, and I have testified to it often enough so that it should be perfectly understood.

Q. There is a record of the amounts received by them, without the amounts being charged against them?

A. Yes, sir.

964 Q. Exhibit No. 25 is not apparently approved by the Executive Committee, the stamp of your approval not being on it. Your answer to all these contracts which have not that stamp applies to this one as well?

A. Yes, sir.

Mr. Burr: I offer this contract in evidence.

Received in evidencee and marked City's Exhibit No. 26.

Mr. Burr: This contract is made up of six letters; the first being letter dated March 20th, 1905, from the Sales Agent of the seller to Louis B. Gawtry, Vice-President of the Consolidated, reading as follows:

"I beg to confirm verbal quotation given you for grate coal for the " coming year beginning April 1st, namely $4.40 per gross ton, " alongside your docks, to the extent of 50,000 tons, if desired."

Letter of April 5th:

"Confirming my conversation with you during to-day, we hereby " agree to purchase from you for delivery during the year ending " March 31st, 1906, 10,000 tons of broken coal at the price of $4.40 " per gross ton, alongside your docks," addressed to the seller by the " Vice-President of the Consolidated Company."

Letter dated 4/6/05, acknowledging receipt of the former letter.

Letter dated December 5th, 1905, from the Sales Agent of the seller to the Vice-President of the Consolidated:

"Replying to your telephone inquiry, I beg to advise that we will " be pleased to increase our sale to you of grate coal to the extent of " 6,000 tons, to be delivered in equal monthly proportions between " now and March 31st, 1906, at the same prices and conditions as the " previous sale of 10,000 tons."

965 Letter of December 6th, 1905, confirming the former letter.

At the bottom of the letter of December 6th is written:

"Purchased under authority given by the Executive Committee, " 12/5/05, L. B. Gawtry."

Letter dated December 8th, 1905, to the Vice-President of the Consolidated from the Sales Agent, acknowledging receipt of the favor of the 6th inst.

Q. That contract appears to have been approved by the executive committee March 28, 1905, the stamp of the executive committee appearing upon the face of it?

A. Yes, sir.

Mr. Mathewson (handing some further papers to Mr. Burr): Those last sheets, I don't know whether you would call them part of the contract or not; they are simply an explanation of an increase of the amount, as you may see when you come to them.

Mr. Burr: I offer this contract in evidence, the three sheets at the end as well as the first ones.

Received in evidence and marked City's Exhibit 27.

Mr. Burr: This contract just marked in evidence is made up of several letters, the first dated March 21, 1905, from the seller to L. B. Gawtry, Vice-President of the Consolidated Gas Company:

"Confirming our conversation of a few days since, we propose to
" furnish you with 15,000 tons of — broken coal at $4.55, and
" 30,000 tons of — broken coal at $4.40 alongside, consenting to
" furnish guy men for delivery in cargoes of 500 or 600 or 700 tons
" alongside your different works in New York harbor through
966 " the year from April 1, 1905, to April 1, 1906."

Letter purporting to be a copy of letter from the Vice-President to the Seller, dated April 5, 1905:

"Confirming our conversation over the telephone to-day, we hereby
" agree to purchase from you, for delivery at our various works on
" Manhattan Island, 15,000 tons of — broken coal at $4.55 per gross
" ton and 15,000 tons — pea coal at $2.45 per gross ton. The con-
" ditions of this purchase are made in accordance with the terms
" set forth in letter of March 21st, 1905. We to have the usual
" cash discount as heretofore."

Q. I will ask you, Mr. Carter, what this coal is used for, this pea coal?

A. Boilers, I think.

Q. What is the other broken coal used for?

A. Generator fuel.

Q. Do you know what cash discount is allowed on this contract?

A. May I see all the papers, please?

Papers handed to witness.

I think the reference is to a discount for prompt payment of the bill, and nothing else. That is my impression. I will be glad to confirm that, however, and let you know.

Q. Will you make a memorandum of that, Mr. Carter, and ascertain whether it is the case or not?

A. Yes.

Q. And also if a discount was made how much it was? Now, isn't it a fact that in the case of all the contracts that I have offered in evidence and called to your special attention, discounts have been allowed by the Seller to the Consolidated Gas Company either
967 as rebate or as discount for prompt payment in cash?

A. I think not.

Q. Well, have you any special knowledge on the subject?

A. My understanding is that there is no discount for payment unless stipulated in the contract. I will confirm that statement at the same time.

Q. As to all these other contracts?

A. As to the other contracts.

Q. Continuing with City's Exhibit 27, there is also a letter attached of April 5th, 1905, from the Seller to the Consolidated Gas Company, as follows:

"We have your telephone message of this date and enter your
" order for 15,000 tons of —— broken coal at $4.55 alongside, de-

"liverable in large cargoes throughout the year from April 1st, "1905, to April 1st, 1906; also about 15,000 tons of —— pea coal "to be delivered in cargoes of 600 to 700 tons at $2.45 alongside for "shipment, all previous to September 1st, 1905."

Q. Have you any other knowledge about this contract, Mr. Carter, specially as to whether the terms were changed under this letter of April 5, 1905?

A. I think perhaps if there were, the rest of the correspondence would indicate it.

Mr. Burr: Then there is a letter of April 6th, 1905, from the Seller to the Consolidated Gas Company:

"We have yours of April 5th, with contract for 15,000 tons of "—— broken, and 15,000 tons of —— pea, and our understanding "is the same as yours, except as per our conversation over the 'phone.

"The exchange from —— pea to —— broken is predicated
968 "upon our having the broken coal for use, and you desire to "make the change."

Letter from L. B. Gawtry, Vice-President, to the General Eastern Agent of the seller:

"In accordance with your request we beg to confirm our desire "expressed verbally and substitute —— broken coal for pea coal for "our July orders."

Letter dated December 1st, 1905, from the shippers to the Consolidated Gas Company:

"L. B. Gawtry, Vice-President. Referring to our conversation of "this afternoon regarding an additional quantity of broken coal, you "may if you wish draw eight to ten thousand tons in excess of your "contract for ——, subject to the same conditions and prices. Regarding the additional quantity from —— company for immediate "shipment, I am unable to bring this matter to a head at the present time. Can you not hold off on this until the 15th, when I hope "it can be brought up. I would thank you for an early reply under "personal cover." This letter is headed "Personal."

Copy of the letter from the Vice-President of the Consolidated Gas Company to the sellers, dated December 6th, 1905:

"We beg to say that we will take in excess of our present contract "with you, 10,000 tons of —— broken coal."

At the bottom of this letter appears in writing:

"Purchased under authority given by Executive Committee, 12/5/05, L. B. G."

969 Also a letter dated December 7th from the shippers to the Consolidated, to Louis B. Gawtry, Vice-President, confirming the receipt of the letter of the 6th of December.

Q. That contract appears to be stamped with the seal of approval by the executive committee, Mr. Carter?

A. Yes, sir.

Q. Do you know what rebates or discounts were allowed on that particular contract, City's Exhibit 27?

A. No, I do not. No reference is made to any rebates in the contract, as I understand, and my impression is that no rebates of any kind whatever were allowed.

Q. Well, we are trying to get the facts.

A. Well, I am going to give them, but if you are going to ask me about each one as I examine them I can only repeat that statement every time you ask me.

Q. Very well, I shall not ask you that again, with that understanding, that you are to ascertain and let us know what discounts or rebates were allowed on all these contracts for coal that have been or will be offered in evidence?

A. Yes sir, that I will do.

Mr. Burr: I offer this contract in evidence.

Received in evidence marked City's Exhibit 28.

Mr. Burr: The contract City's Exhibit 28 is embraced in several letters. The first is dated March 30, 1904, from the seller to the vice-president of the Consolidated:

"We hereby agree to confirm our verbal contract to-day by which
" it is agreed that your company will take from us, and we will de-
" liver to you between April 1, 1904, and April 1, 1905, 75,000 tons
" of our screened —— gas coal, to be delivered as nearly in equal
" monthly quantities as may be practicable and as usual to
970 " your company, the price to be $3.35 per ton of 2,240
" pounds, delivered alongside your pier."

Stamped "Executive committee approved April 5, 1904."

Letter of April 7, 1904, purporting to be a copy of letter from the vice-president of the Consolidated to the seller, as follows:

"We hereby agree to purchase from you 70,000 tons of three-
" quarter screened——gas coal. This is purchased in accordance
" with your offer of March 30th, 1904. Please note that this order
" is for 70,000 tons and not for 75,000 as mentioned in your letter
" of March 30th."

Letter of April 9, 1904, from the seller to the vice-president of the Consolidated, acknowledging the receipt of the former letter and noting change to 70,000 tons and not for 75,000 tons, signed by the President of the Seller Coal Company.

Mr. Mathewson: Now, those are all the contracts for material excepting the Standard Oil Contract to be produced, and here is a contract for the residuals which you did not call for but which I had prepared.

Mr. Burr: I understand you were to produce all the contracts?

Mr. Mathewson: For the purchases of material?

Mr. Burr: Yes.

Mr. Mathewson: There it is. That is for the sale of residuals. Whether that was understood or not there it is, and here are the contracts to which it refers as continued.

Mr. Burr: I offer these letters in evidence.

Received in evidence and marked City's Exhibit 29.

Mr. Burr: The first of these two letters marked City's Ex-
971 hibit 29, is dated June 12, 1903, and purports to be a copy
of a letter from H. E. Gawtry, President, to I. D. Fletcher,
Vice-President of the Barrett Manufacturing Company, as follows:

"We hereby agree to renew for three years from July 1st, 1903,
" the agreement with your company to purchase the coal tar, am-

"monia and oil tar produced by this company, on the same terms "and conditions as in our present contract."

A letter dated May 22d, 1903, to the Consolidated Gas Company from I. D. Fletcher, First Vice-President, as follows:

"We hereby confirm our offer to purchase from you for a period "of three years beginning the 1st of July next all of the coal tar, "ammonia and oil tar produced by the cupola process, on the same "terms and conditions as we are now paying you for these different "articles."

Q. What is meant by the oil tar produced by the cupola process, Mr. Carter?

A. Why, some people call a generator a cupola. I don't know just why.

Q. Well, it is the ordinary oil tar produced from the gas manufacture, is it?

A. That is the case, yes, sir.

Q. And these two papers that I hand you, are those the contracts referred to in the letters I have just read?

A. Yes, sir, although there is still another one, I think. Only the 42nd and the 111th Street stations are covered by this contract with respect to the coal tar. There is another contract for 14th and 18th Street stations, or there should be.

Mr. Mathewson: Referred to in that?

972 (Further papers are now handed to the witness.)

The Witness: They are complete now.

Mr. Burr: I offer these three contracts in evidence.

Received in evidence and marked City's Exhibits 29*a*, 29*b*, 29*c*.

Q. The contracts you have just handed me are dated respectively June 24th, 1898, June 27th, 1899 and July 10th, 1901; the first one dated June 24th, 1898, is between the Consolidated Gas Company, party of the first part, and the Barrett Manufacturing Company, being Exhibit No. 29*a*; the second one, Exhibit No. 29*b*, is between the Consolidated Gas Company and the National Coal Tar Company, and the third, being Exhibit No. 29*c*, is between the Consolidated Gas Company and the Barrett Manufacturing Company. Are you still selling your residuals to the Barrett Manufacturing Company under the contract of June 24th, 1898?

A. Yes, sir.

Q. The contract itself provides that it is to commence on the first day of July, 1898, at seven A. M., and to terminate on the first day of July, 1903, at seven A. M. Was there a renewal of that contract?

A. Yes, sir, you had it in your hands a few moments ago.

Q. Then this second contract with the Barrett Manufacturing Company is the continuation of the former contract?

A. No, sir, covered the same period, I guess. I am not referring to that paper that you have in your hand.

Q. But you are referring to the two letters?

A. I am referring to the two letters.

Q. Exhibit 29?

A. Yes, sir.

973 Q. This contract with the Barrett Manufacturing Company does not cover the tar produced by the distillation of naphtha. Have you a sepaarte contract for that?

A. No, we have not.

Q. How do you dispose of that?

A. The Barrett Company have been taking it.

Q. Without contract?

A. Without contract other than a verbal contract; they have been taking it under a verbal agreement. The letter from the Barrett Company marked Exhibit 29, however, practically engages them to continue for the ensuing three years to take the oil tar—and I presume that is what you are referring to—at the same price that they had been paying for it.

Q. The one is under a verbal contract and the other is under a written contract?

A. Up to the date of the letter included in Exhibit No. 29, it was a verbal contract, then it ceased to be because they made it a written contract.

By Mr. Mathewson:

Q. Is the oil tar and the tar which is a distillation from naphtha the same thing?

A. I don't know why we use the word naphtha at all. We are not using any naphtha and have not been for a great many years in the manufacture of gas. I should ask Mr. Burr to make that gas oil if he wanted me to answer it in respect to our present operations.

Q. I have simply read the contract, Mr. Carter, the language of the contract, which states that the tar which is produced by the distillation of naphtha is not included in the tar mentioned in this agreement?

A. At the time that contract was made in 1898, I understood you to say we possibly were using some naphtha.

Q. That was in 1898?

A. And of course with respect to that particular reference, it probably followed the form of a previous contract, which I think ran for a period of ten years.

974 Q. This contract provides for the payment to be on or before the tenth of each month of what you produce during the preceding month, as follows:

"At the rate of four cents per ton of coal carbonized for every one " cent or fraction thereof, average price obtained free on board in " New York City, per gallon of pitch and dead oil, when such aver- " age price is seven cents or less, and when the average price obtained " for pitch and dead oil exceeds seven cents per gallon, then at the " rate of four cents per ton carbonized for every one cent obtained per " gallon to and including seven cents, and at the rate of eight cents " for every one cent or fraction thereof in excess of seven cents, and " 25 per cent. added in both cases, that is, whether the average price " obtained be seven cents, more or less. The sales of pitch and dead “oil, free on board in New York City, would be the basis of the “price of tar for the same month.”

And those terms you understand were continued under a letter dated June 12th, 1903, City's Exhibit 29th?

A. Yes, sir.

Q. There was no other modification whatsoever in the terms of the original contract dated June 24th, 1898?

A. No, sir.

Mr. **Burr**: In the contract with the National Coal Tar Company, dated the 27th day of June, the same phraseology occurs, as I have called your attention to in the former contract, as follows:

“The tar which is produced by the distillation of naphtha is not “included in the tar mentioned in this agreement. This contract “provides for the sale and purchase of all the coal tar except-
975 “ing, however, so much thereof as the party of the first part
“may require for his own use for ordinary purposes, produced “at its works foot of West Forty-second Street and foot of East 111th “Street, in the City of New York, during the period of four years, “commencing on the first day of July, 1899, at seven A. M., terminating on the first of July, 1903, at seven A. M. And the rate of “payment to be made on or before the tenth of each month for the “tar produced during the preceding month is as follows: At the rate “of four cents per ton of coal carbonized for every one cent or fraction thereof, average price obtained free on board in New York “City per gallon of pitch and dead oil, when such average price is “seven cents or less. And when the average price obtained for pitch “and dead oil exceeds seven cents per gallon, then at the rate of four “cents per ton carbonized for every one cent obtained per gallon to “and including seven cents, and at the rate of eight cents for every “one cent or fraction thereof, in excess of seven cents, and 25 per “cent. added in both cases, that is whether the average price obtained “be seven cents, more or less.”

Q. Then there was another contract with the Barrett Manufacturing Company, dated July 10, 1901, for the purchase and sale of the ammoniacal liquor?

A. Yes, sir.

Q. This contract recites that for and in consideration of certain sums lawful money of the United States of America hereinafter specified to be paid by the party of the second part to the party of the first part, the party of the first part hereby covenants and agrees to deliver unto said party of the second part all the ammoniacal liquor it shall make at any or all its stations where coal gas is manu-
976 factured for a period of two years from the first day of July,
1901, to the 30th day of July, 1903; payment shall be made by the party of the second part to the party of the first part in cash on or before the 10th day of each month at the rate of 1.27 cents per pound of sulphate of ammonia which can theoretically be obtained from said liquor, to be determined by what is known as the distillation test by neutralizing with sulphuric acid containing 93.5 per cent. formula, H^2SO^4?

A. That is the formula, yes, sir.

Q. (Reading:) The price above named is based upon the wholesale market price of sulphate of ammonia of 2¾ cents per pound, and no reduction shall be made unless the price shall fall below 2½ cents, nor shall any advance be made unless the price shall exceed three cents, in either of which events there shall be a proportionate advance or reduction as the case may be, calculated on the basis of 2¾ cents per pound. What was the average price which you received under this contract?

A. For what particular period, Mr. Burr?

Q. Well, this contract only runs from July 1, 1901, to the 30th of July, 1903. For the year 1901.

A. I shall have to consult the records and the sales to the Barrett Company for that period before I can answer that question.

Q. Now how is the ammoniacal liquor presently disposed of? Is there a continuation of this contract?

A. The contract which is marked Exhibit No. 29 covers the ammoniacal liquor as well as the coal tar.

Q. Then will you tell me what the average price was which you received from ammoniacal liquor for the year 1905?

A. Yes, sir.

Mr. **Mathewson**: Exhibit No. 94 contains the amount sold and the amount received.

977 Mr. **Burr**: You may answer to that effect if you wish.

A. The average price received during the year 1905 was 1.34 cents per lb. of sulphate.

Q. What average price per gallon or per ton of coal carbonized did you receive for coal tar for the same period?

A. 28.59 cents.

Q. Per ton?

A. Per ton of coal carbonized.

Q. And what price for oil tar?

A. 1.93 cents per gallon.

Mr. **Burr**: Now, have you that oil contract?

Mr. Mathewson hands a paper to Mr. Burr.

Mr. **Burr**: Will you let me have the copies of the contracts?

Mr. **Mathewson**: Yes (handing some papers to Mr. Burr).

Mr. **Burr**: I offer this contract in evidence.

Received in evidence and marked "City's Exhibit No. 30."

Mr. **Burr**: This contract is dated November 1st, 1905, and is contained in two separate papers; one a letter written to W. B. Addicks, Vice-President of the Consolidated Gas Company, from the Standard Oil Company of New York, by C. M. Higgins, as follows:

"We hereby agree to sell you 255,000,000 gallons of gas oil to be " delivered in bulk by tank boats, alongside of the works of the Con- " solidated Gas Company, at New York, or alongside the works of " such other gas companies in the City of New York as you may des- " ignate, during the two years and eight months beginning Novem- " ber 1st, 1905, and ending June 30th, 1908. Of the foregoing oil

"40 per cent. is to be of a gravity which shall not be below 34
978 "degrees Baumé or of a higher gravity or part of it; the price "of such oil is to be 4.875 cents per gallon; the remainder of "the 255,000,000 gallons is to be of a gravity not below 28 degrees "Baumé or higher or part of it, for which the price is to be 4.29 "cents per gallon, the aggregate deliveries of both quantities to be as "stated, 255,000,000 gallons. This material is to cover your entire "supply of liquid gas making material during the period named and "is to be delivered and received as required by you during the said "period as follows:

"Al- of 34 gravity or above during the months of November, De- "cember, January, February and March of each year; and all of 28 "gravity or above during the months of March, April, May, June, "July, August, September, October and November of each year.

"It is understood that during April, 1906, and again in April, "1907, you are to have the privilege of electing and notifying us "whether during the succeeding twelve months you are to take 45 "per cent. or 50 per cent. of oil of a gravity of 34 degrees Baumé "and continue to take 40 per cent. as heretofore specified. In the "event of your requirement from November 1, 1905, to March 31, "1906, being for a greater quantity of 34 gravity oil than 18,000,000 "gallons we are to have the privilege of substituting for such excess "an oil of a lower gravity than 34 degrees but not lower than 28 "degrees.

"The gas oil we expect to furnish will be homogenous oil and of a "gravity as agreed upon. Notices shall be rendered and payments "made on gallonage certified to at loading points by properly certi- "fied New York Produce Exchange petroleum expert. The terms of "payment shall be cash as heretofore."

979 The second is a copy of letter purporting to be signed by W. R. Addicks, dated November 1, 1905, addressed to C. M. Higgins, at the Standard Oil Company, which letter accepts the agreement to supply the liquid gas making material, in the aggregate 255,000,000 *millions,* under the terms of the letter dated November 1, 1905.

Mr. BURR: Do I understand that you are not going to leave these originals with the Master?

Mr. MATHEWSON: I am going to leave exact copies of the originals, and take the originals with me. I understand that is to be it, Mr. Master?

The MASTER: Yes.

Mr. BURR: You have got the original contract?

Mr. MATHEWSON: No trouble about that. If the Master wants them verified, under his direction I am willing to have that done at any time.

Q. Referring to City's Exhibit 30, Mr. Carter, can you tell or state now how much of these 255 million gallons of gas oil has been delivered?

A. During what period, Mr. Burr?

Q. Since November 1st, 1905.

A. To what date?

Q. Up to date.

A. No, sir, I could not possibly. Deliveries may have been made this morning that I have no knowledge of.

Q. Well, can you tell us what deliveries have been made up to the first of July?

A. I will have a statement prepared of deliveries made from the first of November to the first of July.

Q. Will that statement show to what companies the oil was delivered under this contract?

A. Yes.

Q. I am referring for the moment to City's Exhibit No. 10.

980 Mr. Mathewson: Do Exhibits 93 and 94 show the amount of oil that was used in the production of gas for the two years ending October 31st, 1905?

The Witness: They do show the quantity used in manufacture during the two years covered by this statement, the nominal year and the calendar year.

Q. After and in addition to the suggestion made by Mr. Mathewson, I want to find out where the oil was delivered under both the contracts which were offered in evidence here, one being Exhibit 10 and the other being Exhibit 20. In other words, Mr. Carter, I would like to have a statement showing how much of all the oil, the contracts for the purchase of which have been offered in evidence at the previous hearing, and to-day has been delivered at the plants of the subsidiary companies, as well as at the plants of the Consolidated, by subsidiary companies I mean the New Amsterdam, the Standard, the Mutual and the Central Union.

Mr. Mathewson: These contracts cover some of them three years; say from April, 1903, to April, 1906, going back a year and a half before any period in which the cost of gas is before you; and further than that does it add anything to the inquiry to find out how much coal or oil was delivered to the New Amsterdam or to the Central Union when all this is charged to the Consolidated, as has been testified to and the cost of its gas was stated before, how does the coal which they received and used affect this inquiry, providing it appears that the New Amsterdam received 100,000 tons of coal last year?

Mr. Burr: Well, if we can show you that the New Amster-
981 dam and other companies are using the same materials at the same price that the Consolidated Gas Company is doing in the manufacture of gas, and that the gas of the subsidiary companies is one price, and the price of the Consolidated is another price, both using the same materials, I think it would have some bearing upon this inquiry.

Mr. Mathewson: I don't think it would have any bearing. The conditions of distribution are very different.

Mr. Gans: I think it would have a marked bearing.

The Master: It might have some bearing, Mr. Mathewson, I will receive it.

Mr. Mathewson: During the periods we cover by our statements?

The MASTER: That is what I understand he wants.

Mr. BURR: During the period covered by exhibits 93 and 94?

The WITNESS: Yes, sir.

Q. And will you procure and supply the same information with regard to the oil during the same period?

A. Yes, sir.

Q. Have you any contracts with meters, or do you obtain your meters under contract?

A. No, sir.

Q. Have you contracts for the water used by you?

A. With the City?

Q. Yes.

A. No, sir.

Q. I mean to say you pay for the water you use, don't you?

A. Most decidedly, a dollar a thousand feet.

Q. Is that shown in any of these statements that you rendered here?

A. Yes, sir, Exhibits 93 and 94 show the number of gallons used and the price—no, it doesn't show the gallons, it shows the 982 cubic feet—the number of cubic feet used and the price per thousand cubic feet.

Mr. BURR: I would like to have it understood, so we may have no misunderstanding, that with regard to this book from which I read the testimony of Mr. Carter the other day, it is conceded that an appeal was taken from the order of the Gas Commission. Is it not so conceded, Mr. Mathewson?

Mr. MATHEWSON: Yes, notice of appeal was given.

Mr. BURR: And that appeal being taken from the order made by the Gas Commission on the 23rd day of February, 1906, the appeal book was made up by the attorneys for the complainant and for the Consolidated Gas Company?

Mr. MATHEWSON: Yes, sir.

Mr. BURR: That appeal book is entitled: "Papers on Appeal from Order Made by the Commission of Gas and Electricity for the State of New York," and consists of three volumes, purporting to contain all the testimony given before the Gas Commission, and all the statements submitted to the Gas Commission, and it is from this record so made up and printed that I have read the testimony of Mr. Carter, given before the Gas Commission, upon which I have examined him. Is that so understood and agreed, Mr. Mathewson?

Mr. MATHEWSON: You asked Mr. Carter certain questions reading from this record to which you have just referred, and you asked him certain other questions, referring to the record before the Stevens Committee. Whereever you read from this record to which you have just now referred, that record is the record on appeal as you have just stated.

983 Q. Now, have you produced the analysis of accounts which I have called for, Mr. Carter?

A. I do not know what you are referring to, Mr. Burr.

Q. The exhibits which were previously put in evidence were received by me to-day, and were, I suppose, received by all of us at the same time, printed. Those are the State's Exhibits, and so marked. Well, what statements have you made up that you have been asked for?

A. Well, I have not made any statements up, Mr. Burr. All the statements that been asked for have been asked for conditionally upon Mr. Hayward requiring them. I mean the City's expert.

Q. You mean conditional upon the counsel for the City requiring them?

A. No, sir, I don't.

Mr. MATHEWSON: Mr. Burr said they might not be needed after Mr. Burr looked into the subject. That is about it, wasn't it, Mr. Burr?

The WITNESS: That was the substance of it, yes, sir.

Q. Then Mr. Hayward has not been making an examination of the books, has he?

A. As has been explained before, Mr. Burr, Mr. Hayward prefers to wait until the accountants for the State complete their scrutiny of our statement of operation as shown in Exhibits 93 and 94 before he proceeds with this inquiry.

Q. When will I get the information that I have asked for today. Will I get it to-morrow?

A. I can have everything ready excepting the statement showing the deliveries of coal and oil during the nominal year and the calendar year; during the nominal year ending October 31st, 1905, and the calendar year. It takes a little while to prepare those statements, possibly a day. I will endeavor, however, to have that report ready by tomorrow afternoon at 1:30.

984 Q. In your testimony at the last hearing you stated the record of the purchases of the securities of the New Amsterdam Company is recorded in the transfer department when the debentures were issued in exchange for stock. What particular department is that transfer department?

A. The stock transfer department.

Q. And who has charge of that department?

A. Mr. John B. Girard.

Q. I have asked for the pay-rolls, Mr. Carter, Have you produced the pay-rolls?

A. For what period, Mr. Burr?

Q. For the period embraced in your exhibits 93 and 94.

The MASTER: I did not understand that he was expected or required to produce any pay rolls. My understanding was, and the subject was gone into very thoroughly, that if the experts up there wanted to see any particular pay-rolls, they would have the opportunity to do so, but it was made very clear here that to bring down the pay-rolls of this establishment for the period of a year would be a useless waste of time to all of us.

Q. Have you produced the pay rolls? I asked for a certified copy of the pay rolls for a certain period.

A. No, sir.

Mr. Burr: I may not want to examine more than one or two of these pay-rolls for a certain period, but I would like to have an opportunity of looking at them. You said if he wants the pay rolls, so far as items of labor are included, in your main case, of course he is entitled to have them.

The Master: My recollection is that these could be and would be checked at the office of the company. That is a simple 985 matter compared with lugging them down here and taking up our time in that purely clerical work. It does seem to me that they could be verified in the company's offices without taking our time for it here.

If Mr. Burr wants some sample pay rolls for the purpose of interrogating the witness about, he has the right to them.

Mr. Burr: I haven't any idea, except a vague idea so far, from the testimony as how their pay-rolls are made up. I want to find out something about that.

The Master: Is there any branch or department you want to cover, Mr. Burr? Because you might indicate what it is, and it might make it easier for these gentlemen to give you what you want.

Q. On Exhibit 94, you have an item, Mr. Carter, Labor handling coal, $49,150.07.

Labor handling coke, $35,678.39.

Labor (just plain labor) $382,632.04;

And the labor embraced in expenses, $490,855.36;

And the labor involved in the item of distribution, $281,524.12;

And the expense item, $59,016.97;

And "Distribution," $31,855.34;

Also labor involved in the item "General Office," $339,999.51.

Now, can you give us the pay-rolls to show that information, or else you can make up a sumarized statement?

Mr. Mathewson: If you define the labor for the entire year of any single pay-roll, or any single department, but the present suggestion is virtually as broad as the original one.

986 Mr. Burr: Mr. Master, you remember what the testimony here is as to how large an amount or how large a figure labor cuts in making up the price per thousand cubic feet of gas. It is a very important inquiry in this investigation, in this case.

The Master: If it should appear after the State experts have finished their operations, and your expert has finished what he wants to do, that there is any reasonable ground for requiring the production of these pay-rolls, then I will entertain such an application, but I won't do it now, because I think it is unreasonable, and an unnecessary waste of time in a proceeding that has already dragged much more slowly than there is any occasion for, in my judgment.

Q. Have you made any analysis of the interest account?

A. Yes, there is an exhibit which shows such an analysis.

Q. Does that exhibit, State's Exhibit I, show all the interest received from other sources by the Consolidated Gas Company during the period of the calendar year 1905?

A. No, sir, it does not.

Q. Does it show all the interest paid out for any purpose by the Consolidated Gas Company during the calendar year 1905?

A. Yes, sir, except interest on Consumers' Deposits.

Q. Where would the account for the interest received from any other sources by the Consolidated Gas Company appear?

A. There wouldn't be any such account.

Q. I am not speaking of the account as such. I am asking where would that information appear, showing all the interest that the Consolidated Gas Company received during the calendar year 1905 and from each and every source.

A. We have made statements that include such interest as
987 we received on our investments in the securities of other com-
panies, that is independently of dividends on stock. We have
made this statement which shows the interest that we received from other sources, and that is all there is to it.

Mr. Mathewson: That you say is this statement you refer to?

A. State's Exhibit I.

Q. Well, you claim that both of the statements show all the interest which the Consolidated Gas Company received from each and every source during the calendar year 1905?

A. Yes, sir.

Q. And what is that other exhibit to which you refer?

Mr. Mathewson: I think that is 95 and 96. I don't know whether it is in 91 or not.

The Witness: I think it is.

Mr. Mathewson: 96, Exhibit 96.

The Witness: Exhibit 96. The item "Income from Securities Owned" includes such interest as we received on securities owned.

Q. Will you show me on Exhibit 96 the items stating all the interest received by the Consolidated Gas Company from each and every source during the year 1905?

A. The interest as such is not given separately, but as I have just testified, is included in the item "Income from securities owned."

Mr. Mathewson: That is to say, if you owned bonds of the Brush Company——

The Witness: Bonds of the Brush Company or of the Westches-
ter Lighting Company, the interest on those bonds would be
988 included in this item "Income from securities owned." And
I made for Mr. Burr a statement that I think—well, it does
not cover the same period possibly.

Mr. Mathewson: You can easily separate them?

The Witness: It can be very easily separated, if you want the information, Mr. Burr.

Mr. Burr: I would like to have that statement in detail. I would like to have a statement, Mr. Carter, if you please, showing all the interest from every source from which the Consolidated Gas Company received interest during the calendar year 1905.

The Witness: But we have separated the interest from dividends received. Both of them are included in this item "Income from securities owned in 1906." There will be before you then all the interest which the company receives from any source.

Mr. Mathewson: Taken in conjunction with State's Exhibit I?

The Witness: Taken in conjunction with State's Exhibit I, yes, sir.

Q. You did prepare a statement, did you not, before the Gas Commission "Interest on Bonded Debt"? Do you recall that, Mr. Carter?

A. I think quite likely.

Q. At page 886 of the printed papers on appeal from the order made by the Commission of Gas and Electricity of the State of New York, Volume 2, referring to such exhibit showing interest on bonded debt, you were asked by Mr. Mathewson:

"Q. I see the item 'Interest on New Amsterdam Construction, $56,132.72.' Will you explain what that Item relates to? A. It is a segregation of the amount paid the New Amsterdam Gas Company for gas manufactured by them for the Consolidated Company during that year. Represents an amount charged the Consolidated Company in connection with that transaction for interest on additional plant constructed by them at Astoria, in connection with the supply of gas to us." 989

Q. Did you so testify?

A. May I see the statement?

Q. You mean the book?

A. I mean the book in which the statement appears.

Q. I hand you the book (Book handed the witness).

A. I did so testify.

Q. Mr. Mathewson continues:

"Q. You mean at Ravenswood? A. At Ravenswood, I should say, and at that time was treated as interest rather than a gas cost; it is now included in the price paid them, or the amount paid them for the gas made for us."

"Q. In other words, they added to their plant for the purpose of enabling them to manufacture for you the amount of gas which you required, is that correct? A. That is the case, yes. Q. And the interest on that investment by them to this sum which has been mentioned? A. Yes"——

Mr. Mathewson: Was added?

Q. And the interest on the investment by them was added to this sum which has been mentioned?

Mr. Mathewson: That is paid under the agency agreement.

Mr. Gans: Is it included in these exhibits we have here?

Mr. Mathewson: I don't remember what exhibits you have.

990 Q. Continuing:

"Q. And you paid that as part of the cost of gas delivered to you? A. Exactly, yes, sir. Q. Instead of adding it to the cost of gas which they delivered to you in some other form? A. That is the case, it was a part of the amount that we paid them for the gas that they made for us. Q. And it is no longer carried in that shape? A. Not in identically that shape."

Did you so testify?

A. Substantially. I don't know why I should have said identically.

Mr. **Mathewson**: He said not identically.

The **Witness**: Not identically in the shape, not in that shape.

By Mr. **Burr**:

Q. Your answer is given here as "Not in identically that shape." Is that your testimony?

A. Well, it stands.

Q. Did you so testify?

A. I unquestionably did so testify.

Q. What shape is it carried in?

A. It is charged to the cost of the gas manufactured for us by other companies under the agency agreement. May I just amend that, by the New Amsterdam, made for us by the New Amsterdam under the agency agreement.

Q. And does that also refer to the other companies? Are they treated in the same way?

A. The other companies do not happen to have a similar charge against us.

Mr. **Gans**: May I ask, or will you ask, "Is that charge included in the total which appears on Exhibits No. 93 and 94?"

991 A. It is included.

Q. As money paid under the agency agreement?

A. It is.

Mr. **Mathewson**: Not as money paid under the agency agreement.

Mr. **Gans**: I asked that.

Mr. **Mathewson**: Because there is no such item included.

The **Witness**: I just testified to that.

Mr. **Mathewson**: Of course.

Mr. **Gans**: I am quite willing to accept your amendment, because it amounts to the same thing, doesn't it?

Mr. **Mathewson**: No, we didn't represent it as paid under the agency agreement as part of the cost of gas.

The **Witness**: It is all in the agency agreement.

Mr. **Gans**: All I wanted to know was whether it appeared on the face of this account.

Mr. **Mathewson**: It does.

The **Witness**: It does, yes, sir.

Q. The amount of interest was specified in the testimony I read to you.

A. For that particular period, yes, sir.

By Mr. **Gans**:

Q. Can we identify that period?

A. The year 1904.

Q. The nominal year?

A. The nominal year and the calendar year, 1904.

992 Mr. **Mathewson**: I call the Master's attention and your attention, Mr. Burr, to the agency agreement, paragraph 5, which reads as follows:

"The Consolidated Gas Company of New York further agrees that it will at the end of every period of six months during the term of this agreement pay to the New Amsterdam Gas Company, interest at the rate of five per cent. per annum, for the previous six months upon the amounts expended by the New Amsterdam Gas Company, in making additions to its Ravenswood Works since March, 1901, for the purpose of increasing or facilitating the manufacture of gas." Therefore this interest item was provided for in the agency agreement. The New Amsterdam Company offered to add to its facilities for the purpose of producing the gas which we received. Instead of being carried in a general memorandum under agency agreement for the period, Mr. Carter testified the amount was carried in the interest account, and of course paid under that agreement. That is the whole thing.

Mr. Burr: It is becoming more apparent to me every day that we would get along better if Mr. Mathewson were testifying.

Q. Have you got the contracts for the gas stoves?

A. We have contracts for the manufacture of a particular type of stove which we rent.

Q. That particular kind of stove is manufactured under contract?

A. I have so testified.

Q. Will you please produce the contract to-morrow?

A. Yes.

Q. Now, are there any other gas stoves that are made under contract?

A. No, sir.

Q. The others you purchase yourselves, do you, or the company purchases them?

A. Yes.

993 Q. Have you any place in the record which will give us any information as to the price you pay for gas stoves?

A. No, sir.

Q. Will you be kind enough to procure such information?

A. Yes, sir.

Q. The gas that is supplied to gas stoves is known as fuel gas, is it not?

A. No, sir, it is not.

Q. Do you supply the same kind of gas to stoves that you supply to lamps for illuminating purposes?

A. Identically the same, yes.

Q. Do you supply the same kind of gas for power purposes that you supply for fuel purposes?

A. Yes.

Q. Do you charge the same amount for gas supplied to large consumers as you do to small consumers?

A. Yes.

Q. Outside of the City of New York, I am speaking?

A. So I understood you to mean.

Q. Have you furnished any place here in the statement presented, a statement of the real estate of the company?

A. Have I? No, sir.

Q. You have been called upon to furnish a statement of rentals. Have you such a statement?

Mr. Mathewson: You asked that of Mr. Francklyn.

Mr. Burr: I am asking Mr. Carter now.

A. You have not asked me for anything of that kind.

Q. You have been asked for a statement of the rentals received from the Consolidated Gas Company's real estate?

A. I was not aware of it.

Q. You were not? Then, will you be kind enough to have such a statement as that prepared also?

Mr. Mathewson: I can give you such a statement now.

994 Q. While Mr. Mathewson is looking for that paper, can you state how many gallons of tar per ton you obtain from bituminous coal?

A. I can get you that information. For what period do you want it?

Q. For the period embraced in these Complainant's Exhibits 93 and 94.

Mr. Burr: I am handed a paper by Mr. Mathewson purporting to be a statement of rents received by the Consolidated Gas Company. There is no time or period stated.

Mr. Mathewson: For what period did you ask Mr. Francklyn. If you will refer to your question again, this is an answer to it, as far as I can give it to you now.

Mr. Burr: Well, I have a memorandum here of the exact request.

Mr. Mathewson: I think that is the calendar year.

Mr. Burr: As previously stated, Mr. Mathewson, if you would be good enough to hand the statements asked for as they are made, it would save a lot of time and would be a good deal more direct on the examination.

Mr. Mathewson: You have asked Mr. Francklyn to produce it. I suppose you wanted it, his testimony on it. I am merely handing it to you now as a matter of courtesy, because I thought you asked for it.

The Master: At page 70 you asked for the rentals, and no period appears to be there specified. It would refer back to Defendant's Exhibit A, I should judge.

Mr. Mathewson: That is the disadvantage of my presenting it. Mr. Francklyn would know precisely.

The Master: Let us drop it and go on with something else, so that we may make some progress.

995 A. This is a statement of the property we rent at the present time, the annual rental we receive for it. That is all it purports to be. It does not cover any particular period; it is simply a statement of the annual rentals of the company.

The Master: That is what the question calls for on page 70, a statement of the rentals that are derived from the property of the company.

Mr. Mathewson: In supplement to the paper I have handed you, Mr. Burr, I should add that the 41st street stable is used in part by the National Coal & Coke Company, one-half or a part of the 41st Street stable; that is used in part by the National Coal & Coke Company, for which they pay the Consolidated Gas Company $1,800, in addition to that statement; it does not appear on that statement because we have regarded this company as our cartage department and as part of the company, but for exact accuracy that should be added; part of the 41st Street stable, $1,800.

Mr. **Gans**: Do you know whether that is charged in the operating expenses of the Coal & Coke Company?

The **Witness**: Yes.

Mr. **Mathewson**: And the $1,800 appears in our receipts, and there is another item in that connection which may or may not be considered of value. Number 335 Avenue A, which is a short and narrow city lot adjoining our works, is occupied by the foreman of the works free, as part of his compensation. It is not rented. If you do not want that statement I would like to have it, because I intend to offer it myself later. But if you have put pencil figures on
996 it you may keep it, and I will get another copy later.

(Mr. Burr retains the statement.)

Mr. **Burr**: The paper you have handed me I understand is a copy of list of rentals derived from the property owned by the Consolidated Gas Company.

Mr. **Mathewson**: It is a statement of the rentals I believe, yes; I do not know that it is a copy of any other paper that has been presented. It may be.

Mr. **Burr**: I asked Mr. Francklyn "Can you get a copy of it or a list of the rentals," to which he answered "Yes." So, I assume that this is the list which is presented to answer that inquiry?

Mr. **Mathewson**: Undoubtedly. I made the additional statement about the 41st street stable so that you might have the whole facts before you.

Q. Have you, since I spoke to you about the matter, looked at the books of the constituent companies for the purpose of ascertaining whether the statement of their value, as contained in the report of the General Committee of Senate and Assembly, was correct?

A. I have no understanding that I was to do anything of that kind.

Q. You have the books of the constituent companies, have you not?

A. I do not know that I have, Mr. Burr; they are not books of reference. I presume it is 22 years at least since they have been opened, and I would not like to say that I could find the books at all.

Q. Will you find out so as you may be able to definitely answer the question as to the whereabouts of these books, by to-morrow, or the next hearing?

997 Mr. **Mathewson**: I do not know what special value the books would have if they were produced. They are not evidence as against us, and I do not know that there would be anything in them that would be valuable if it was evidence against us.

Mr. Gans: I should think they are of considerable interest on the cross-examination, in connection with the appraisal of the property.

Mr. Mathewson: All that has been presented in that record is that the property was appraised at a certain figure, and the books were opened on that basis, and the Act under which the consolidation took place provided that the companies should consolidate and might issue stock of the aggregate value of the property, franchises and rights of each company.

Mr. Burr: There was a finding by the Joint Committee of Senate and Assembly which resulted and is set forth in its report, to which I have called this witness' attention. That was a very material statement, and I have asked him what information he had upon the subject, and he has undertaken to say that the value given by the committee in that report is not the true value of the property of the constituent companies at the time they were consolidated, in November, 1884. I am asking him now this question for the purpose of ascertaining if I can go back to the original sources of information—the books of the constituent companies themselves—and I am now simply trying to ascertain from him, if possible, where those books are located. I have understood him to say heretofore that the books of the constituent companies were in the possession of the Consolidated Gas Company, and I am now asking him as secretary
998 of the Consolidated Gas Company if he can tell me whether the books are still in the possession of the Consolidated Gas Company and if they can be produced here.

Mr. Mathewson: That is all part of your cross-examination. There was no evidence whatsoever put in by us, and on your own cross-examination you cannot lay a basis for indefinitely piling one stone upon another, according to my understanding of it. You present here what purports to be a report of the Joint Legislative Committee of a year ago. You have not introduced it in evidence at all. You are endeavoring to get this witness to testify to facts by asking him if such and such a thing is not stated in the report of the investigating committee.

The Master: Do not let us spend any more time about it. The question calls for the witness to do something out of Court which he can do or cannot do. I shall not instruct him to do it. He will either be able to produce the books or he will not. If you want the books you can subpœna them *duces tecum* when the time comes, and if they are not produced you will know what the situation is.

Mr. Burr: I have made a request of him to make inquiry between now and the next hearing, to-morrow afternoon, to ascertain if possible where those books are. If he says to-morrow that he has made such inquiry and says that he cannot locate those books, that is a complete answer to my question.

Mr. Gans: I might ask for our own information, because it may become useful. Provided he cannot get those books, will you require the services of a subpœna *duces tecum?*

Mr. Mathewson: Let us not take that up. I think that is wasting time.

999 Mr. Gans: I thought possibly you would be willing to stipulate that you would produce them without subpœna.

Q. I understood you to say that you are not certain whether there was an agency agreement with the Central Union. Have you found out whether there is such an agency agreement in existence and in writing?

A. I have not been able to find such an agreement.

Q. Is there such an agreement in existence?

A. I have no knowledge of one, if there is, which is pretty conclusive evidence to my mind that there is not one in existence.

Q. Was there ever any written agreement between the Central Union Gas Company and the Consolidated Gas Company for the manufacture of gas?

A. I have no knowledge of any such agreement ever having been made.

Q. You would not swear that there was not?

A. No, I could not. There is no record of such an agreement of any kind in our record of contracts or agreements, so I think I am safe in saying there never has been such an agreement in writing.

Q. I call your attention again to the request which I made at the last hearing, for a statement as to the cost of holders, etc. Have you done anything in regard to that?

A. No, sir, I have not done anything in connection with the preparation of it.

Q. You have a statement at the office showing the amount of coal and oil consumed by each station, have you not, during the period covered by Exhibits Nos. 93 and 94?

A. Our engineering department records show the quantity of oil used daily, which are aggregated into monthly and yearly totals.

Q. That would not be in your department, but the engineering department? 1000

A. The engineering department.

Q. And that could be checked up by the accountant, could it not, if desired?

A. Yes, very easily.

By Mr. Gans:

Q. You do receive monthly reports, including those items, from the engineering department to the accounting department, do you not?

A. No, we do not. As I have already testified, we simply have access to the engineering department records.

Q. Am I mistaken in this; has it not been your habit to get from the engineering department a statement month by month of the cost of operation of each one of your plants, for the purpose of comparing that statement with a similar statement for the preceding year?

A. No, sir.

Q. Did you not so testify before the Commission?

A. Never.

Mr. Mathewson: No, he testified that there were certain items of cost which were compared, that he kept a record of certain items for purposes of comparison, but nothing showing a comparison of the total cost of gas at either station.

Q. At page 812 of the present record, you were asked the question: "Q. Now, I understand that you pay those companies that supply you with gas, or from whom you purchase gas under the contract which has been offered in evidence, ten cents over and above the cost of production?"

Mr. MATHEWSON: No, ten per cent.

1001 The WITNESS: Ten per cent."

Mr. MATHEWSON: Ten per cent. on the cost of material."

Now, which is it, the cost of production or cost of material?

A. The cost of production, which includes material.

Mr. MATHEWSON: Material and labor, and in my copy I have already made the change.

Q. You have referred to an accident to one of your stations or holders—in 14th street, was it—that you spoke of the other day, some accident which resulted in a lawsuit which is now pending?

A. The 21st street station.

Q. Was that accident caused by an explosion of gas, or was it caused through defective construction?

A. I do not know; I know that it was not gas; at least—I say I know; I feel quite sure it was not gas.

Mr. MATHEWSON: It was in process of construction, and no gas was turned into it.

Q. That is what I want to bring out; it was an accident that occurred while the tank was being constructed and before those tanks had been received from the contractors?

A. It was before the tanks had been received from the contractor; they had not been accepted, although payment had been made on account, as the construction progressed.

Q. It was not in any way due to gas, an explosion of gas or combustion of gas?

A. They contend that it was not due in any respect to defective construction; so there you are. I believe the courts have not decided what it was due to.

1002 Q. Do you know when gas stoves first came into use by the Consolidated Gas Company?

A. I do not think they first came into use by the Consolidated Gas Company. I think gas stoves were in use before the Consolidated Gas Company came into existence.

Q. Has not the use of gas stoves increased from year to year very materially?

A. Why, there has been an increase from year to year, not very material; I should consider it rather a normal increase in the use of appliances.

Q. Have you a statement showing the increase in the use of gas stoves for the supplying of gas from year to year?

A. At best it could be but an imperfect one, because there are a great many people selling gas appliances in the City of New York besides the Consolidated Gas Company.

Q. All the business of the gas stoves is done by your company? It is not let out or rented out to any other person or corporation, as in the case of the Coal & Coke Company?

A. Why, we have no monopoly of the gas appliance business; every dry-goods store and department store in the city handles gas appliances.

Q. Gas stoves?

A. Yes.

Mr. MATHEWSON: Do you mean every dry-goods store, or hardware store?

The WITNESS: Both dry-goods stores and hardware stores.

Q. And the*ir* are bargain sales of gas stoves?

A. Oh, there are bargain sales of gas stoves advertised by the different department stores occasionally.

Q. Is there any way of ascertaining the amount of gas that is used solely for fuel purposes?

A. I do not know of any means of arriving at it.

1003 & 1004 Q. Is there any record that would show the amount of gas that is used for power purposes?

A. I know of no such record.

Q. All that kind of gas comes out of the same tank?

A. It all comes out of the same tank and is registered by the same meters, in some cases.

At 5:30 o'clock, P. M., adjourned to to-morrow, August 21, 1906, at 1:30 o'clock P. M.

Last Exhibits:

Complainant's 100.
City's 30.
State's N.

1005 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, *August 21st*, 1906—1.30 p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Gans.

1006 **Robert A. Carter**, resumes the stand:

Cross-examination by Mr. **Burr**, continued:

Q. Have you produced the books of the constituent companies, as they existed in November, 1884?

A. No, sir.

Q. Have you ascertained their location?

A. I have not, no, sir.

Q. Have you made inquiry for that purpose?

A. No, sir.

Q. I understood yesterday that you were to ascertain where they were?

A. It was not my understanding.

Q. I call your attention to the record, page 996, 4th question: "Q. Have you, since I spoke to you about the matter, looked at the books of the constituent companies, for the purpose of ascertaining whether the statement of their value, as contained in the report of the General Committee of Senate and Assembly was correct? A. I have no understanding that I was to do anything of that kind. Q. You have the books of the constituent companies, have you not?"

The **Master**: Pardon me, Mr. Burr; is it necessary for your protection to waste any more time on that. You have made your point, and the matter was left open here yesterday. I gave no instructions about it, and the witness answered your questions about it, it seems to me that it is only unnecessarily using up time and putting him through it again.

Q. So that you don't know to-day any more than you did yesterday where the books of the constituent companies are?

A. No, sir.

Mr. **Burr**: I offer in evidence page 776 of Senate Document No. 47, being the report and testimony of the Senate Committee appointed to investigate lighting companies, dated March 1st, 1886. 1007

Mr. Mathewson: Which page do you offer?

Mr. Burr: Page 776.

Mr. Mathewson: I object to that as incompetent as evidence, also as immaterial and irrelevant. In addition to all else the paper appears to be a characterization of certain items which are not sustained at all by the testimony appearing in the book. That is a table appended to the report of testimony before the Senate Committee of 1885, reporting in 1886.

Mr. Burr: It is a table prepared from the books of the company by an expert employed by the committee and certified by him in that document.

The Master: Of course it is clearly incompetent.

Mr. Burr: I have asked for the original books, and if they produce the original books I will show the same figures that are there.

Mr. Mathewson: The original books would not be competent. The books of an assignor, or a statement by an assignor are not competent against an assignee.

Mr. Burr: You have offered in evidence the appraisal which is attached to the same document?

The Master: As I was saying they are clearly incompetent, and I do not know that they are very material on the question as to whether the value of this property as it stands to-day is proved by showing what the value was twenty years ago. It is not of very
great moment, but I am disposed to admit any such thing
1008 as this for what it is worth. I will give you an exception, Mr.
Mathewson, I will let it in. It may be useful in some aspect.
I will take it for whatever it is.

Mr. Mathewson: I except.

Received and marked City's Exhibit 31.

Q. Have you produced any of the statements called for Mr. Carter?

A. I have produced two letters, dated respectively April 29th and May 1st, 1903, and referred to in coal contract marked City's Exhibit No. 16.

Mr. Burr: I offer these letters in evidence as part of City's Exhibit 16.

Q. Wasn't it, Mr. Carter?

A. Yes, sir.

Received and marked City's Exhibit 16*a*, August 21st, 1906.

Q. The first letter is dated April 29th, 1903, and is addressed to Mr. L. B. Gawtry, Vice-President of the Consolidated Gas Company, by the Manager of the seller. "This will confirm our conversation of this date, whereby the —— company agrees to sell to the Consolidated Gas Company of New York, 50,000 tons of —— ¾ screened coal, to be shipped between date and April 1st, 1904, to be delivered in boats alongside the docks at your plants. The price to be $3.45 per ton of twenty-two hundred and forty pounds. It is understood that on this contract we will ship you coal from our —— and —— mines, or in the event of our inability to ship coal from these two mines, we will ship you coal equal thereto if not better, for gas making purposes." That letter is stamped "Executive Committee" approved May 5th, 1903. Letter same date, April 29th, 1903.

1009 The Witness: This is the original of the letter you have just read, that being a copy.

Mr. Burr: Letter of May 1st, 1903, from the Vice-President of the Consolidated Gas Company to the Manager of the Seller Company, acknowl'edging receipt of the letter of April 29th.

Q. You will have copies of this put in?

A. Yes, sir.

Q. What other papers have you?

A. You asked me, Mr. Burr, in connection with the coal contract marked City's Exhibit No. 18, to confirm my understanding that the deduction referred to in the contract amounted to 25 cents per ton. That I have done.

You also asked in connection with the coal contract marked City's Exhibit No. 27, that I ascertain what cash discount was referred to in the contract, and ascertain also whether I was correct in my statement that that was a discount for prompt payment of the bill, and that there were not similar discounts in connection with any other of the coal contracts. I have confirmed my testimony both with respect to the discount referred to in the contract marked "City's Exhibit No. 27," that it is a discount for prompt payment, also that there are no similar discounts in connection with any other coal contracts.

Q. No rebates either?

A. No rebates of any kind.

Q. Did you ascertain whether there had been any change in the freight rate or in the mining rate as specified in some of those contracts for coal?

A. None other than were referred to in the correspondence attached to the contracts. I will make an examination and confirm that statement.

1010 You also requested me to have statements prepared showing the deliveries under the contracts that have been offered in evidence of coal and oil to the Consolidated Gas Company and to other companies to whom deliveries were made under those contracts. That involved so much work, that acting on advice of counsel, I brought the record of deliveries under those various contracts to this hearing, and it is here for your inspection.

Mr. Mathewson: It will take some time to go over them all, Mr. Burr, and rather than delay——

Q. Is there any other statement that you have produced as I requested?

A. I don't recall anything else. Oh, yes, there was. You asked for the contracts for the ranges that are manufactured for the company, gas ranges. I present them.

Mr. Mathewson: All these papers?

The Witness: Relate to two agreements, Mr. Mathewson.

(Paper handed to Mr. Burr.)

Mr. Burr: I offer this in evidence.

Received and marked City's Exhibit 32, August 21st, 1906.

Mr. BURR: I also offer this contract in evidence.

Received and marked City's Exhibit 33, August 21st, 1906.

Q. I notice Mr. Carter, City's Exhibit 32, being a letter from the seller to the Chairman of the Executive Committee of the Consolidated Gas Company of New York, is headed "Proposal" and states "In response to your kind invitation to bid on your Phœnix
1011 cast iron rental ranges we beg to submit the following prices." This is the only contract that appears to be submitted in the form of a proposal, so far produced by you, is it not?

Mr. MATHEWSON: I think, Mr. Burr, that all these other contracts show what they are.

Mr. BURR: Well I won't ask you to qualify them.

Q. "On approximately 2,000 16-inch ovens and 5,000 18-inch ovens cast iron Phœnix Ranges we bid as follows, f. o. b. cars Baltimore, not crated: 16-inch ovens, four-burner c. i. Phœnix Gas Ranges $11.25 each net." I won't bother to read the balance of it, but I want to call your attention to the memorandum in writing on this proposal, "Less 10 per cent. cash ten days." What does that mean?

A. May I see the contract?

It refers to the conditons of payment stipulated in the following letter, dated November 3rd; it is not 10 per cent., but one per cent.

Q. In the letter from you to the Consolidated Gas Company dated November 3rd, 1905, it is stated:

"We will allow you one per cent. for cash within ten days from date of invoice."

The third letter is dated November 4th, 1905, and purports to be a letter from the Superintendent of the Consolidated Gas Company to the seller, regarding the patterns to be supplied for the ranges. City's Exhibit No. 33 quotes a net cash price of $11.63, 10 days, f. o. b. New York, on Phœnix Ranges No. 16, on an order for 4,000 ranges, with an option to you of taking an additional four thousand during the year 1906.

The letter of October 30th, 1905, to the Chairman of the Executive Committee of the Consolidated Gas Company, states in
1012 detail the prices at which these ranges are to be delivered, and states: "In presenting our proposal, we wish to call your attention to the fact that we have been manufacturing your range for the last three years, and have become thoroughly familiar with all your requirements."

The letter of November 3rd, 1905, addressed to the Consolidated Gas Company, states that it will be impossible for the seller to allow "a greater cash discount than that named in our quotation of the 30th ultim*ately*."

Both of these contracts appear to have been approved by the Executive Committee, and are so stamped.

Did you bring down the insurance policies?

A. No, I did not; I am free to confess. That in the rush of other things it escaped my mind. I can telephone for them and will do so and have them down here during the afternoon.

Q. Are these all the statements that you have produced?

A. No, I have a couple of others here, but first, while I have it in mind, I want to say that I confirmed my impression that all of the contracts that have been put in evidence were approved by the executive committee.

You ask me to state how much of the income from securities owned shown in Complainant's Exhibit 96, and amounting to $1,065,641.74 was in the nature of interest. During that period we received $357,345.74; that is, during the calendar year 1905. During the nominal year ending October 31st, 1905, we received $355,430.62, which forms a part of the item "Income from miscellaneous securities owned," in Complainant's Exhibit No. 95.

By Mr. MATHEWSON:

Q. Was that money all received, or does that include money due on bonds?

A. It includes money due; it was not all received, no, sir.

1013 Q. Some of those bonds were bonds of the electric companies to whom moneys were due from the city, were they not?

A. That was the case. They have not been able to pay their interest, but nevertheless we have shown it in our statement as income and charged them with it, and they stand on our books as debtors for that accrued interest.

By Mr. BURR:

Q. The first item that you speak of, $357,345.64, is interest on what?

A. On bonds.

Q. What kind of bonds?

A. Mortgage bonds of the United Electric Light & Power Company, the New York & Westchester Company and the Bush Electric Illuminating Company; the same with respect to both statements.

You also asked me to state the gallons of coal tar produced per ton of coal carbonized during the nominal year ending October 31st, 1905, and the calendar year 1905. During the nominal year ending October 31, 1905, we produced 13.56 gallons of coal tar per ton of coal carbonized, and during the calendar year of 1905 we produced 13.45 gallons of coal tar per ton of coal carbonized. That is all.

Q. The book which you have produced shows the amount of coal and oil that each of the subsidiary companies received and the periods in which they received it?

A. No, sir, it only shows the coal and oil that they received under contracts which have been put in evidence here, as made by the Consolidated Gas Company, and not coal or oil that they may have obtained under any contract of their own.

Q. That is what I understood. I was only asking you to give me a statement of the amount of coal and oil which the subsidiary companies used under the contracts that were made by the Consolidated Gas Company which have already been offered in evidence. Will you let me look at the book, please?

1014 Mr. **Mathewson**: Show him the period which we have under discussion here.

The **Witness**: Which particular contract? This book is full of things.

Mr. **Burr**: Let us take the two oil contracts.

The **Master**: What is that book you now produce?

The **Witness**: It is called "Vouchers audited, contracts."

The **Master**: Better mark it for identification.

(The book is marked for identification, City's Exhibit 34.)

The **Witness**: Here, for example, is a contract made November 1, 1905, running to June 30th, 1908.

The **Master**: Referring to what page?

The **Witness**: Referring to page 262 of City's Exhibit 34 for identification, calling for 102,000,000 gallons of 34 degree oil and above. The record indicates the date of deliveries, the point of deliveries, the gallons as per invoice, the barge number in which delivery was made, the price at which delivery was made, and the amount of the bill and the gallons as per the company's measurement.

Q. What column shows where the oil was delivered?

A. The column headed "Station."

Here for example the first delivery was at the 21st Street station; the next to the Standard Works, next to the Central Union Works, next to 21st Street, next to 42nd Street, next to 44th Street, next to the New Amsterdam Company, and so on.

1015 Q. In the column headed "Stations," what does the letter S stand for?

A. Standard.

Q. What do the letters NA stand for?

A. New Amsterdam.

Q. And the letter B?

A. I don't see any.

Q. What is that?

A. That is an S.

Q. That stands for the Standard?

A. Yes.

Q. CU, is that?

A. Yes, Central Union.

Q. And this (indicating)?

A. 21st Street.

Q. The figures in red ink under the column headed "contract," I call your attention to. What do those figures mean?

A. It means that the quantity delivered between the 1st of November and the 29th of November, which was the last day in November on which deliveries were made, and amounting in the aggregate to 6,190,868 gallons, has been summarized by the clerks keeping this record so as to show the quantities delivered to the Consolidated Gas Company, the New Amsterdam, the Standard and the Central Union companies.

Q. Will you read the amounts delivered to each, as they appear in red ink figures on page 262, in the column headed "Contracts."

Delivered.	Gallons.
To the Consolidated Gas Company	3,119,192
To the New Amsterdam Company	1,752,662
To the Standard	787,944
To the Central Union	530,870
Making a total of	6,190,868

gallons delivered during that period; that is, during the month of November, 1905.

Q. I call your attention to the figures in writing in red ink on page 264 of this book, in the column headed "Contract," and ask you what those figures and words refer to?

A. That is a statement of deliveries of oil to the different
1016 companies during the month of December, 1905.

Q. Will you please read the amounts?

A.

	Gallons.
To the Consolidated	4,751,708
To the New Amsterdam	2,543,172
To the Standard	1,192,056
To the Cen-ral Union	703,804
Total	9,190,740

Q. The total deliveries to the companies named in this column as they appear in red ink up to the date of January 1, 1906, appear to be 15,381,608?

A. That is the case, from November 1 to December 31, 1905.

Q. On page 265, in the column headed "Contract" the figures in writing in that column designate in the same manner the amount of oil that was consumed by those companies named, up to what date?

A. Up to January 31, 1906, but my understanding is that our tabulations of this account terminate with December 31, 1905.

Mr. Mathewson: Beyond that it has no relation to any statement which has been presented. Prior to that you will find the deliveries, I suppose, in the same shape.

Mr. Gans: It is relevant, I take it, up to the 31st of December, 1905?

Mr. Mathewson: Yes, and that has already appeared. Now you can show Mr. Burr where it appears for the time previous to December 31, 1905, the period covered by the two statements, October 30th, 1904, December 31st, 1905.

Mr. Gans: Didn't he start with the 1904 amount?

Mr. Burr: No, 1905.

1017 Q. You are now referring to page 260 of this book?

A. Yes.

Q. What appears on that page?

A. A statement of deliveries beginning March 28th, 1905, and extending to June 9th, 1905.

Q. In the column headed "Contract" on page 260, there are figures and words entered in red ink. Do those figures refer to the amount of oil under the contract in operation at this period, delivered to the companies named in that column during that period?

A. They do.

Q. And they appear to be what, the number of gallons?

A. The statement covers the period from April 1 to April 30; the deliveries in March are not summarized in the margin in red, but are for deliveries to each of the different stations, so that there was no occasion for making a red ink marginal summary. Deliveries in March were:

	Gallons.
To the Consolidated	326,268
To the Standard Company	100,578

During the month of April the deliveries were:

	Gallons.
To the Consolidated	2,525,497
To the New Amsterdam	1,413,951
To the Standard	876,631

Q. What is this amount of 426,000, odd?

A. It adds to the month of April the deliveries during the few days in March, amounting to 426,846 gallons.

Q. Making the total deliveries what?

A. Making the total deliveries up to April 31st, 1905, 5,242,925 gallons.

Q. Continue, if you please, with regard to the other figures appearing in red ink in that column? What do they represent?

A. The next statement indicates that the deliveries during the
month of May were all to the New Amsterdam Company;
1018 1,458,361 gallons. The net statement indicates that to June
9th.

Q. Excuse me; what did you say the total was?

A. 1,458,361 gallons delivered during the month of May.

Q. What are the other figures?

A. It simply brings down the total from above, 5,242,925 gallons, and establishes a new total to the 31st of May, 1905, of 6,701,286 gallons.

Q. Referring to the column headed "Contract" page 261, what do the figures in red ink there indicate?

A. During the few days in June during which deliveries were made, there was delivered to the New Amsterdam Company 506,696 gallons. To this amount is added the total previously shown of 6,701,286 gallons, making total deliveries to June 9th, 7,257,982 gallons.

Q. I call your attention to the entry in red ink in the column headed "Description," 229,039 gallons charged, 199,355 gallons received. What is the meaning of those entries?

A. That means that our measurements do not agree with the amount charged in the bill and that an allowance was made for the excess charge, amounting to 29,684 gallons, and operated to reduce the amount accounted for as delivered during that period.

Q. And that shortage appears, under the column headed "Amount" and "Gallons as per Gas Company's Measurement" to have been allowed as an equivalent to $1,372.89?

A. Yes, that is the amount of 29,684 gallons calculated at the price of 4.625 cents per gallon.

By Mr. Page:

Q. Just one moment before you leave that. Is that all oil of specific gravity of 34 degrees and over, Beaumé?

A. Yes.

1019 —. Do you wish to proceed further with this, Mr. Burr?

Mr. Mathewson: Wouldn't you rather have a statement tabulated, instead of going through it here in this way?

The Witness: This happens to be a very simple matter, Mr. Mathewson, with respect to these oil contracts, but when it comes to coal contracts it is quite another proposition. You see here there has been no such summary made from time to time of the deliveries to each company, and in that case it would mean a great deal of time to summarize these, showing the deliveries to each company.

Mr. Mathewson: How long would it take the company to do it?

The Witness: It would take a very long time; it looks very simple here because this has all been done with respect to these oil contracts, as a matter of record; the same record has not been kept with regard to coal contracts. As the record shows, here are deliveries during 1905, for example, of a certain kind of coal, but there is no summary made of it whatever; it means that somebody must get to work and pick all of this out and separate it and summarize it for each one of these contracts.

Now, as to the deliveries of coal to the Consolidated Gas Company, as has already been testified, it is a matter of record in the Engineering Department, the records being made from daily reports from the stations.

Mr. Page: Don't let us get away from this oil subject just now.

The Witness: Now, I can summarize this oil proposition for you in a very little time with respect to the operations for the year 1905.

1020 Mr. Burr: We can do that now, can't we?

The Witness: If you want to put in the time that way, this afternoon, I have no objection whatever.

Mr. Page: The statement was asked for, and this is Mr. Mathewson's idea of bringing it down.

Mr. Mathewson: The witness had not time to make this statement.

The Master: The witness was asked yesterday to make up a statement of this kind, whether he could have it here to-day. He said it would take some time to do it, but he would try to have it here at half past one to-day, and, as I understand the proposition, he found upon looking at the books that it meant too much of a contract, and he brings the book down to show counsel how great a task it would have been to have prepared the statement. That is correct, is it not?

The Witness: Yes, sir.

By Mr. Burr:

Q. Where does that account with the Standard Oil Company begin?

A. To what account are you referring?

Q. To the oil account.

Mr. Mathewson: Beginning with October 31st, 1904.

A. On page 230.

Q. Now, is there any way of ascertaining how much oil you had on hand at that time?

A. On October 31st, 1904?

Q. Yes.

1021 A. Why, it most decidedly is a matter of record. The balance sheet which you have of that date will show the value of the oil on hand.

Q. That is the number of gallons?

A. It will not show the number of gallons, but the records of the Engineering Department will give the corresponding number of gallons on hand on October 31st, 1904.

By Mr. Page:

Q. The figures in red ink just preceding November 1st, do they indicate the total oil that was bought on that contract up to that date?

A. Yes. Delivered would be a better term, under that contract.

Q. Let us have that figure?

A. 7,734,076 gallons.

By Mr. Burr:

Q. On page 232 I call your attention to the entries in red ink in the column headed "Contracts;" what do those figures refer to?

A. They state the deliveries made during the month of December, 1904.

Q. Will you please read them?

A.—

	Gallons.
To the Consolidated	4,507,562
To the Standard Company	1,457,053
To the New Amsterdam	3,057,500
To the Central Union	556,237
Making a total of	9,578,352

Q. The figures in red ink in the column headed "Description," refer to the degrees of the oil?

A. The degrees of the specific gravity.

Q. The degrees of the specific gravity of the oil delivered?

A. Yes, sir.

Q. To the stations and to the companies?

A. Yes, sir.

1022 By Mr. **Page**:

Q. And this relates to the quantity which should be delivered of 28 degrees Baumé and over?

A. Yes, sir.

By Mr. **Burr**:

Q. The entries in red ink headed "Contract," on page 234; what do they refer to?

A. To the deliveries during the month of January, 1905.

Q. Will you please read them?

A.—

	Gallons.
To the Consolidated	4,550,572
To the Standard Company	1,153,726
To the New Amsterdam	2,411,583
To the Central Union	308,818
Total	8,424,699

Q. And on page 235 the same entries appearing in the column headed "Contract," do those refer to the amounts taken by each company or delivered to each company named therein?

A. They indicate that during the month of February, 1905, there was delivered:

	Gallons.
To the Consolidated	3,750,861
To the Standard	1,111,198
To the New Amsterdam	2,269,486
To the Central Union	323,713
Total	7,455,258

Q. Is there anything on that page which indicates there has been a variation in the amounts billed and the amounts received, of oil?

A. Well, there are some pencil memorandums there by the clerk referring to some correspondence, but there is nothing there specifically as to measurements. I presume it noted some variation, or referred to some variation between their measurements and ours. There is nothing so stated. 1023

Q. There is an entry here, "44th Street report that they could not vouch for the accuracy of measurement." Do you know anything with regard to that?

A. No.

Q. Will you turn to page 236 and please explain the entries in red ink in that column headed "Contract," and state what they are?

A. The statement on page 236 indicates that during the month of March, 1905, there was delivered:

	Gallons.
To the Consolidated Company	3,468,106
To the New Amsterdam	1,720,720
To the Standard	951,340
To the Central Union	315,091
Making a total of	6,455,257

The Witness (continuing): The next statement indicates deliveries during the month of April, 1905:

	Gallons.
To the Consolidated Company	905,598
To the New Amsterdam	96,615
To the Central Union	252,868
Making a total of	1,255,081

The Witness (continuing): The next statement indicates deliveries during the month of May, 1905:

	Gallons.
To the Consolidated Company	3,034,082
To the Standard	890,094
To the Central Union	330,115
Making a total of	4,254,291

1024 The Witness (continuing): The next statement indicates the deliveries during the month of June, 1905, being on page 238:

	Gallons.
To the Consolidated Company	2,724,680
To the Standard	896,093
To the New Amsterdam	594,055
To the Central Union	329,266
Making a total of	4,544,094

Q. That brings it up to what date?

A. Brings it up to—well, I said it was during the month of June. It brings it up to June 30th.

The Witness (continuing): The next statement is on page 239, and indicates deliveries during the month of July, 1905:

	Gallons.
To the Consolidated	2,595,869
To the New Amsterdam	1,910,787
To the Standard	696,515
To the Central Union	535,837
Making a total of	5,739,008

The Witness (continuing): On page 240 the statement indicates that there were deliveries during the month of August, 1905:

	Gallons.
To the Consolidated Company	2,592,806
To the New Amsterdam	1,278,089
To the Standard Company	671,110
To the Central Union Company	429,733
Making a total of	4,971,738

The Witness (continuing): The statement on page 241 indicates deliveries during the month of September, 1905:

1025

	Gallons.
To the Consolidated	2,757,489
To the New Amsterdam Company	1,768,384
To the Standard Company	796,286
To the Central Union	516,098
Making a total of	5,838,257

The Witness: October doesn't seem to be summarized.

Q. That month can be summarized for this book, can't it?

A. Of course it can.

Q. Well, will you have it summarized?

A. Well, I brought the book down to avoid all this work.

Q. I will summarize it for you.

A. I will call the entries off for each month.

(The entries are called off to Mr. Gans, Mr. Heyward, and the stenographer and the following results obtained for the month of October:)

	Gallons.
To the Consolidated Company	4,023,398
To the New Amsterdam	2,530,037
To the Standard Company	984,257
To the Central Union	539,923
Making a total of	8,077,615

Q. Well, continue if you please and read the entries in the column on page 242. The total on page 242 appears to be what amount?

A. The total given there has no reference to any figures that have been read into the record. It is simply a total of deliveries under that contract and goes back or at least includes deliveries prior to October 31, 1904.

Q. I will ask you what the total 82,061,124 on page 242 of this book in colmun "Gallons as per invoice" refers to.

A. It refers to the total quantities of oil delivered from September 28th, 1904, to October 31, 1905.

1026 Q. Now, will you continue and tell us the meaning of the entries in the column headed "Contract" on page 243, in red ink?

A. There is a red ink marginal entry indicating that there were delivered during the month of November, 1905,

	Gallons.
To the Consolidated Company	782,771
To the New Amsterdam	306,570
To the Standard	199,626
To the Central Union	152,792
Making a total of	1,441,759

Q. At the top of this column headed "Contract" appear the words and figures "153,000,000 gallons, 28 and below;" what does that mean?

A. 28 degrees specific gravity and below.

Q. Does that refer to a contract for 153,000,000 gallons of that kind of oil?

A. It refers to a contract, 255,000,000 gallons of 28 degree and 34 degree.

By Mr. **Mathewson**:

Q. That is City's Exhibit No. 30?

A. That is City's Exhibit No. 30.

By Mr. **Burr**:

Q. Now will you turn to the column on page 243. Have you read all in the column on page 243?

A. No, sir. There was one delivery in December of 110,675 gallons to the Consolidated Company.

Q. Is that all that appears?

A. That is all.

Q. Now, turn to the next column?

A. Nothing more.

Q. Or to the next page?

A. Nothing more.

Q. I call your attention to an entry on page 239 in lead pencil as follows: "Mr. B. says not to take exception to the quantity billed;" what does that mean? 1027

A. I don't know other than that there may have been a small difference that the clerk was working at and that the engineering department—presuming this to be Mr. Bradley, thought we would not be able to establish.

Q. Are you speaking now of what you think Mr. Bradley thought?

A. I am trying to answer your question, Mr. Burr.

Q. Well, if you don't know what it means you can tell me that you do not know?

A. I am telling you what the entry indicates. There are entries all through here indicating credits where there has been evidence of a shortage in the delivery.

By Mr. **Page**:

Q. Have you given all the deliveries now of oil under the two contracts that have been put in evidence from the 31st day of October, 1904, up to the last day you have got in the book?

A. I should say from November 1st, 1904.

By Mr. **Mathewson**:

Q. To when?

A. To December 31st, 1905, both dates inclusive.

By Mr. **Burr**:

Q. I call your attention to an entry in lead pencil on page 237, in the column headed "Description," reading "H. N. B. says to pass quantity as billed, 6/21/05." Do you know anything regarding that entry?

A. H. N. B. is Mr. Brundage, the auditor of the company, who I presume investigated the same.

Q. I don't want your presumptions. If you know anything about it you may say what you know, otherwise not?

1028 A. Well, Mr. Brundage says in this memorandum to pass the quantity as billed. It indicates he investigated it and instructed the clerk to pass the bill.

Q. Is that his memorandum?

A. That is the memorandum of the clerk who keeps this record.

Q. And from that memorandum made by the clerk you infer that Mr. Brundage gave him the instructions to do as represented in this memorandum?

A. Yes, sir.

Q. What other entries does this book contain showing deliveries under the contracts with the Standard Oil Company, which are in evidence here?

A. Nothing further, Mr. Burr. I think we have got everything that relates to the period covered by Exhibits 93 and 94, for the nominal year ending October 31st, 1905, and the calendar year of 1905.

Q. Under both the oil contracts which have been offered in evidence, City's Exhibit No. 10 and City's Exhibit No. 30?

A. Yes, sir.

By Mr. **Burr**:

Q. Now this book also contains the account of the coal companies?

A. Yes, sir.

Q. And shows the amount delivered to each company and to each station and of the coal called for by the contracts now in evidence?

A. Yes, sir. What particular contract do you want to see?

Q. Well, take the first coal contract.

A. Exhibit 11?

Q. The first coal contract appears upon that book at pages 82 and 83?

A. No, page 83.

Q. What is shown on page 83 regarding that contract, City's Exhibit 11?

A. I want to establish positively that this is the contract. There is a record of a contract with the dealer for 20,000 tons of generator fuel at $4.45 alongside, Consolidated Company to furnish

1029 guyman, and records the deliveries under that contract.

Q. Are there entries on that page showing to what companies or to what plants that coal under that contract was delivered?

A. Yes, sir. The record indicates the points of delivery of each shipment.

Q. Well, you will either have these read from the pages here, or if you can furnish us with a statement from the books I will take a statement.

Mr. MATHEWSON: We can furnish a statement, Mr. Burr, much more quickly that it can be done here, and I would much prefer to do it. You see taking it month by month for eighteen months it would take an enormous time to do it.

Q. Who makes the entries in this book?

A. The clerk at the general office.

Q. A bookkeeper, is he?

A. Yes, he is a bookkeeper.

Q. I see an entry on page 83 in pencil, "Scale out of order," who supplies the information upon which that entry is made, do you know. The clerk doesn't know anything about it of his own knowledge, does he?

A. I should say he doesn't know of his own knowledge. He probably received information from that particular station to which that delivery was made.

Q. Will this book show whether there were changes in the freight rates or in the mining rates?

A. No, sir, it wil- show whether there were changes in the price of coal.

Q. I notice on page 86, under the column headed "Contracts"——

A. It has no reference to any contract in evidence.

Q. You say there is no contract in evidence with regard to this?

A. In March, 1903?

1030 Mr. MATHEWSON: Point out the period you want to cover.

Q. The contract you have testified to or referred to appears on page 83, March 8, 1904. I presume the others were after that?

A. You will find one on page 102.

Mr. BURR: Well, it is understood that statements are to be prepared of the deliveries under these coal contracts from this book.

Mr. MATHEWSON: Yes.

Mr. BURR: For the time embraced in your statement.

Mr. MATHEWSON: Only you must not expect it to-morrow morning. As speedily as it can be done.

Mr. BURR: And showing the companies to which deliveries were made?

Mr. MATHEWSON: Yes.

Q. Mr. Carter, Complainant's Exhibit 89, "Comparative Condensed Balance Sheets," shows in a condensed form the assets and liabilities of the Consolidated Gas Company as of October 31, 1905, does it not?

A. What is the number?

Q. 89, page 371?

A. Yes, sir.

Q. This statement which I hand you and which was furnished by you, Mr. Carter, purports to give in detail the balances for the accounts shown on your general ledger, does it not?

A. Yes, sir.

Q. Can you tell us what accounts were grouped together to produce the aggregate shown in Exhibit 89, and what accounts were eliminated from the trial balance, being the statement which you now have in your hand?

Mr. MATHEWSON: Is that trial balance in evidence?

1031 Mr. BURR: I haven't offered it in evidence. Yes, I want to ask something about it.

The WITNESS: It will take some time to do it.

Q. Can you ascertain that by to-morrow?

A. Yes.

Q. So as to explain the difference in the footings between the two papers?

A. Well, the two papers differ from each other, Mr. Burr, in this respect, that one is a statement of the assets and liabilities and the other is a trial balance sheet; the trial balance sheet shows all of our operating accounts, expense accounts and income accounts, which in a statement of assets and liabilities would necessarily be eliminated.

Q. I call your attention to State's Exhibit E. Taxes for the year 1905.

A. What page?

Q. 411. The item Real Estate $179,778.95. Does that embrace any taxes on the Astoria property?

A. No, sir.

Q. Now the item, Special Franchise, $406,909.23. Was that special franchise based upon the dollar rate or the 80 cent rate?

Mr. MATHEWSON: I object to that as a conclusion. It is in evidence as to when the tax rate was fixed, but the operation of the minds of the State Board of Taxation, we ought not to be expected to explain.

By Mr. BURR:

Q. You are charging against operation 80 cents as it existed prior to that, and under the conditions when you charged the dollar a thousand cubic feet, isn't that so, Mr. Carter?

A. I haven't any knowledge whether the price of gas was taken into consideration. I don't know what they had to do. The franchises were valued as franchises.

1032 Mr. MATHEWSON: The assessment of 1906 of $31,900,000, which is the highest valuation our franchises ever received was not announced until after the State Gas Commission had fixed the rate for gas at 80 cents, and until long after the Act which was finally passed had been introduced fixing the price at 80 cents to conform to the Gas Commission's report.

Q. The special franchise tax which you have here, $406,909.23, that was imposed during the year 1905, wasn't it?
A. Yes, it was imposed during 1905.
Q. And during 1905——
A. It was a lower assessment than was made in 1906.
Q. During 1906 you were charging at the rate of a dollar a thousand cubic feet of gas?
A. Yes.
Q. And your earnings were based upon that charge?
A. Yes; and I wish to confirm Mr. Mathewson's statement that the assessment in 1906 was increased from the figure in 1905.

Mr. Mathewson: From $27,300,000.
Mr. Burr: I object to Mr. Mathewson testifying. I ask to have that stricken from the record.
The Master: Motion granted.

The Witness: It was increased approximately $5,000,000 in 1906 over 1905.
Q. Wasn't this in fact made up on the second Monday of January, 1905?
A. No, sir. You are referring to the special franchise tax?
Q. Yes.
A. No.
Q. You are quite clear that was the tax that imposed for the year 1905?
A. Yes.
Q. For business done during the year 1905?
A. I don't know anything about that, what it was based on.
Q. Now, referring to the item "Tax on Income from Secu-
1033 rities, $5,257.48." Is that a tax on the securities of other
companies held by your company?
A. Other securities, no, sir.
Q. What particular securities does that refer to?
A. It is not a tax on any securities, but it is a tax——
Q. On income?
A. On income.
Q. Well, that is what I mean. It is a tax on income from securities of other companies?
A. It is.
Q. To what extent?
A. To the extent of the amount paid.
Q. Well, this item then of $5,257.48 is a tax on income from securities of other companies?
A. Yes, sir. May I see the statement and confirm that? I don't know what you are reading from.

Mr. Mathewson: Which exhibit is that, Mr. Burr? Which exhibit is it you are questioning about?

Mr. Burr: Exhibit M.

Q. The exhibit I have reference to, Mr. Carter, is on page 419, State's Exhibit M.

A. The State's Exhibit M shows the subdivision of the taxes for the nominal year ending October 31, 1905, so as to show the amount applicable to the income during that year on securities owned, and amounted to $5,257.48.

Q. I call your attention, Mr. Carter, to the item on State's Exhibit M, "Tax on Excess Dividends on Amount invested in Securities of other companies, $38,643,590.14, that being the amount invested in the securities of other companies,"—$57,965.39. I want to ask you upon what theory you charge a tax upon those securities against the cost of making gas?

A. We have presented a statement of our operations during the nominal year ending October 31st, 1905, and during the calendar year 1905; among our expenses and taxes we do not make any sub-
division of our expenses of any nature, and all our taxes are
1034 charged to tax account, and the taxes paid on our account
includes the tax on the revenue from securities that we own,
and our expenses including all taxes apply against our revenue of all kinds. A perfectly proper and correct statement.

Q. You have another statement on Exhibit M "Taxes on Excess Dividend on Capital Stock actually employed in Gas Business, $41,356,409.56?

A. What are you reading from, Mr. Burr?

Q. State's Exhibit M. And the tax appears to be $62,034.61. Now, I am asking you why you charge the tax on the securities of other companies against the cost of the manufacture of gas?

A. I have answered the question and I have also stated that there is no tax upon the securities of other companies, but some tax upon the revenue from the securities of other companies which is included in our statement of revenue and against which might very properly be applied that portion of the tax.

Q. Where did you arrive at the figure $41,356,409.86 as the capital employed in the gas business?

A. Well, there is an exhibit numbered, I think, 80——

Q. I notice on Exhibit 80, Mr. Carter, "Investments in the Gas Business" given as $41,356,409.86?

A. I think you are wrong, Mr. Burr. I don't see anything of that sort there.

Q. Look at Exhibit 80, Mr. Carter?

A. I have Exhibit 80 before me.

Q. "Capital Stock Part," does that refer to the $41,356,409.86?

A. Yes, sir.

Q. Now, "Capital Stock Balance," $38,643,590.14. That makes up the total of your $80,000,000, does it?

A. Yes, sir.

Q. Upon what basis did you make that division?

A. No basis in particular. It is a statement of our investments in the gas business, and the sources from which the funds were

1035 derived for making such investments, and that is our best judgment as to the division of our various resources between our various investments.

Q. Does that division appear upon your books?

A. No, it does not.

Q. Now, calling your attention to the item "Interest on Unpaid Taxes, $94,506.29." That I believe has reference to the taxes which you have refused to pay and which is now in litigation, or which was in litigation?

A. Which are still in litigation, I think, unless they were paid during the year 1905. In fact, I think some assessments were paid in 1905, upon which interest was calculated up to the date of their payment, as appears in the statement before you, and interest on taxes during the year 1905.

By Mr. Mathewson:

Q. You are referring now to State's Exhibit M, are you?

A. Not the State's Exhibit M, to State's Exhibit E.

Q. I have asked you heretofore, Mr. Carter, to produce a statement showing the quantity of gas and the price charged therefor, supplied by the subsidiary companies to the Consolidated. In other words, I want the highest and the lowest prices charged for gas by each of these companies to the Consolidated Gas Company during the period for which you have offered the statement now in evidence.

A. I am having such a statement prepared, Mr. Burr. I will probably be able to present that to-morrow.

Q. I have also asked you, at the request of Prof. Bemis, for the amount of work done at the different stations, and the amount of gas produced. I called your attention to that yesterday and you stated that you had not done anything about that.

A. I have not.

1036 Mr. Mathewson: I want to call your Honor's attention to the fact that these are requests of Prof. Bemis, for his own information, which is precisely the course taken by Prof. Bemis before the Gas Commission, and I shall object unless it is otherwise pertinent here.

Mr. Burr: Whatever information we have applied for or requested here is for the purpose of enabling our experts to verify the statements produced here by the Consolidated Gas Company, showing as they claim the actual cost of gas for its manufacture and distribution.

The Master: I think some of them go a little beyond that, Mr. Burr, don't they?

Mr. Burr: Some of the statements called for go beyond that?

The Master: Yes; don't they go a little beyond any cross-examination? I think there were several of them which called for independent information, like this question of coke and coal.

Q. The statements which you prepared and which were offered in evidence before the Gas Commission were true and correct statements I presume, were they not?

A. Yes, sir, everything that I prepared was. I don't know anything about the statements prepared by other people.

By Mr. GANS:

Q. That is true and correct according to the sources from which you took them?

Mr. MATHEWSON: They were true and correct.

By Mr. GANS:

Q. I would like to ask if that is not so?

A. I would testify to the statements that I prepared.

1037 Q. According to the sources from which you took them. That is all you know?

A. I will qualify it that way if you wish.

By Mr. BURR:

Q. The statements prepared for the Gas Commission were prepared in the same way as the statements offered before the Master here?

A. Yes, sir.

Q. That is, you gave instructions to have them prepared from the books, and your instructions were carried out, the statements delivered to you and you testified from the statements. Is that correct?

A. Yes, that refers to such statements as I produced and testified to.

Q. Now, will you take this volume of Printed Papers on Appeal from Order made by the Commission of Gas and Electricity of the State of New York and point out each of the statements therein appearing which were made out by you.

A. You want me to go through this book of exhibits?

Q. Yes, from the point I have indicated.

A. What particular exhibit are you referring to?

Q. Exhibit 98. Did you make out that exhibit?

A. I am of the opinion that it was made out under my instructions.

Q. That exhibit purports to be a statement showing the amount chargeable to Repairs Account of Distribution, month of December, 1904, 14th Street and 21st Street station?

A. Yes, sir.

Q. Is that a true and correct statement from the books of the company?

A. To the best of my belief and knowledge it is.

Q. Exhibit No. 97 appearing on page 38 of the Papers on Appeal, purporting to be statement showing the distributing station expenses for month ending December 31st, 1904, is that a true and

1038 correct statement from the books according to your knowledge?

A. It is to the best of my belief and knowledge.

Q. Exhibit 101 appearing on page 2030, purporting to be a statement of expenditures for replacements, 21st Street station during

December, 1904, is that a true and correct statement from the books of the company?

A. To the best of my belief and knowledge it is.

Q. Exhibit 102 on page 2131 purporting to be a statement showing cost of materials entering into production of gas, read on behalf of complainants, is that a true and correct statement from the books of the company, 14th Street station, year 1904?

A. To the best of my belief and knowledge it is a correct statement of what it purports to be.

Q. Did you compare this statement, also the engineer's statement with the operating ledger figures for the calendar year 1904, 14th Street station, appearing on page 2032 A, of Papers on Appeal marked Exhibit 103 before the Gas Commission?

A. Yes, to the best of my belief and knowledge it is a correct statement and I would like to say in explanation of it that it doesn't undertake to reconcile the figures appearing upon the different records of the company as its heading might indicate. It undertook to explain the difference between the actual cost for the period covered by the statement with the purely academic statement, if I may use that expression, made up from data furnished by Senator Page.

Q. Exhibit No. 104 appearing on page 2033 purporting to be a statement of operations of the Consolidated Gas Company for the nominal year ending October 31, 1905, is that a true and correct statement from the books of the company prepared by you?

1039 A. To the best of my knowledge and belief, yes. It was prepared by my directions, not by me personally.

Q. Exhibit No. 105, appearing on page 2034 A, purporting to be a statement of gas made——

Mr. MATHEWSON: Now, you know that that is precisely the statement that we are making up for you, with two additional months. Is this necessary?

Mr. BURR: I am simply asking him if it is a correct statement.

Q. (Continuing:) —gas made for the Consolidated Gas Company by other companies, net, for the nominal year ending October 31st, 1905. Was that a true and correct statement prepared from the books of the Consolidated Gas Company, prepared by you, and produced and offered in evidence before the Gas Commission?

A. I shall always have to qualify your statement, so far as it says "Prepared by me." It was under my direction, and is correct to the best of my belief and knowledge.

Q. And that applies to all the statements presented here by you, does it not, the same thing?

A. The same thing.

Q. Exhibit No. 110, at page 2035 of the papers on appeal, purporting to be labor account 14th Street station works, from November 1st, 1904, to October 31st, 1905?

A. I know nothing about it.

Q. That was prepared by the Engineering Department, was it?

A. I presume so; I do not know.

Q. And the same would apply to Exhibit No. 114, being the same statement regarding the 21st Street station works?

A. All I can testify is that it was not prepared under my direction; that is all I know about it.

Q. You do not know whether it is correct or not?

A. I do not.

1040 Q. The exhibit purporting to be a statement of assessed values for 1904, appearing at page 2047 of the papers on appeal, was that prepared by you, and is that a true statement from the books of the company?

A. I think that statement was prepared under my directions.

Q. And it is a true statement to the best of your knowledge, is it?

A. Yes, I assume that it is correct.

Q. Well, is there any one of these statements that you have absolute positive knowledge of, that you would swear positively that it is correct, or do you simply presume or assume that they are correct?

A. No, I have not enough confidence in typewriters and printers to swear to anything appearing on these pages as absolutely correct, not for a minute.

Q. Exhibit No. 124, appearing on page 2048, purporting to be a statement of additions to plant, property and construction for the ten months ending October 31st, 1905; was that a true and correct statement prepared by you, under your direction from the books of the company?

A. I have no doubt it was prepared under my direction, and to the best of my belief and knowledge it is a true and correct statement of the facts it purports to give.

Q. Apropos of your remark about mistakes, you are aware that this volume was prepared by the counsel for the Consolidated Gas Company, are you not?

Mr. Mathewson: That is all in evidence.

Mr. Burr: I asked him if he is aware of it.

Mr. Mathewson: I think it says so on the cover.

The Master: Is that the appeal book?

Mr. Burr: Yes.

The Master: You asked him about that the other day, in reference to some other matter, and that was put on the record then.

1041 Q. Exhibit No. 125, appearing on page 2061, purporting to be a statement of gas made at all stations for the nominal year ending October 31, 1905; was that prepared by you or under your direction, and is it a true and correct statement from the books of the company?

A. I have no doubt it was prepared under my directions, and to the best of my knowledge and belief it is a correct statement.

Q. Exhibit No. 126, appearing upon the same page, purporting to be a statement showing the station cost, 14th Street station, plus the *pro rata* share of the distributing expenses for the year ending October 31, 1905, was that also prepared by you or under your direction, and is it a true and correct record from the books of the company?

A. That was prepared under my directions I believe, and to the best of my belief and knowledge it is a correct statement.

Q. And the same applies to Exhibit 127, appearing upon page 2063, purporting to be a statement showing the station cost plus the *pro rata* share of distributing expenses for the 21st Street station?

A. Yes.

Q. Does that also apply to Exhibit No. 128, appearing at page 2065, purporting to be a statement of materials and supplies used at the 21st Street station December 31, 1904?

A. I will reply affirmatively to that; the same answer as with respect to the others.

Q. And as to Exhibit No. 129, appearing at page 2066 of the papers on appeal, purporting to be a statement of material and supplies used at the 14th Street station, December, 1904; is that a correct statement prepared by you or under your directions?

A. It was prepared under my instructions, and I have no reason to believe that it is not a correct statement.

1042 Q. I call your attention to Exhibit No. 130, appearing at page 2067, purporting to be a statement showing details of the production cost, 14th Street station. Did you prepare that statement, or was it prepared under your direction, and is it a true and correct statement from the books of the company?

A. I do not recognize that statement as anything emanating from the accounting department.

Q. It is apparently issued from the superintendent's office, isn't it?

A. From the superintendent's office at the 14th Street station.

Q. You have no knowledge of that statement?

A. I have no knowledge of that statement.

Q. You did not prepare it?

A. I did not.

Q. Did you prepare the statement purporting to be a summary of labor accounts, 42d Street station?

A. No, sir.

Q. Or any of those statements of labor account?

A. None of them.

Q. Did you prepare the statement purporting to be an analysis of the increase in cost of manufacturing coal gas, 4th Street station, September, 1905, compared with September, 1904, as it appears there marked Exhibit No. 143, on pages 2076, 2077, 2078, 2079, 2080, 2081 and 2082, embracing all the stations?

A. I think those statements were presented by me. I believe them to be correct so far as they go, but, as was very plainly testified to at that time, they are not complete and are of no value, I think, in arriving at the total cost of gas for the period they purport to cover.

Mr. Burr: I move to strike that out. I simply asked if they were prepared by him.

The Master: Strike it out if you like; it is not responsive, but if it is of any importance it only means that Mr. Mathewson will ask it on redirect, and there you are. I believe in saving time if you can.

1043 Mr. Burr: Let it go as it is then.

The Master: It is stricken out.

Q. Exhibit No. 144, appearing on page 2082A, purporting to be a detailed statement of operation of all stations by months and carried out to a total for the nominal year ending October 31st, 1905; was that prepared by you or under your direction, and is it a true and correct statement from the books of the company?

A. To the best of my belief and knowledge.

Q. Exhibit No. 145, purporting to be a summary of operations for the nominal year ending October 31st, 1905, appearing upon page 2083 of the papers on appeal; was that prepared by you also, and is that a true and correct statement from the books of the Consolidated Gas Company?

A. You confine your question to page 2083?

Q. To page 2083 and the following pages.

A. The statement was prepared under my directions and by order of the Commission, and I believe it is a true and correct statement.

Mr. Gans: You can compare the totals to see that they fit with the totals of Exhibit No. 93, which purported, I think, to be complete.

Mr. Mathewson: No, they were not made to fit all of them, this particular one that he is calling attention to.

The Witness: This statement is correct to the best of my knowledge.

Q. You have refreshed your recollection by looking at some memorandum?

A. No, I have not, because I have not been able to find any memorandum by which to refresh my memory.

Q. Exhibit 136, purporting to be a statement showing
1044 prices charged per load for coke and screenings, appearing
on page 2130, was that prepared by you?

A. Under my directions.

Q. And is a true and correct statement from the books of the company?

A. I believe so.

Q. Then does that apply also to Exhibit 147, appearing on page 2137, purporting to be prices of meters and discounts allowed?

A. Yes, that also; with this explanation—if I may be allowed to make it; at that time the prices given of the meters included what is considered a part of the meter, and that is the cap and swivel. In some figures that I have made up showing the cost of some of our property, in using a price per meter, I have used a price which eliminates the cap and swivel, because they are part of the connections which are carried in another account, and therefore between this price and some prices that I quoted you the other day you will find a slight difference amounting, in the case of a three light meter, to 12 cents; that is, cap and swivel at 6 cents each, making 12 cents. The price I gave for a three light meter was $4.38; in this case it appears as $4.50. In this case the cap and swivel is included.

Q. With that explanation, it is a true and correct statement, is it?

A. Yes, sir.

Q. Exhibit No. 148, purporting to be answers and questions asked before the Gas Commission on December 11th, 1905, was that prepared by you?

A. Under my direction.

Q. And they are true and correct answers, to the best of your knowledge and belief?

A. Yes.

Q. Exhibit No. 149, purporting to be a statement of plant and operations for the nominal year ending October 31st, 1905, appearing at page 2139 of the papers on appeal; was that also prepared under your direction and is it a true and correct statement from the books of the company?

1045 A. Those figures were obtained from the Street Department and I assume them to be correct.

Q. By whom were they prepared in the Street Department?

A. By a clerk in that department. At any rate, very full testimony has been given respecting the mileage of mains at this hearing.

Q. I am asking you now with regard to this, do you know whether it is a correct statement prepared from the books of the company?

A. It is, to the best of my knowledge and belief; I have no knowledge that it is not correct.

Q. Exhibit 150, appearing at page 2157 of the papers on appeal, purporting to be an index of maps of real estate of the Consolidated Gas Company; was that prepared by you, and is it true and correct, showing the block, lot and assessed valuations, land, 1905, and assessed valuation with improvements, 1905?

A. I do not recall whether that was prepared under my direction or not; I think it was.

Mr. Mathewson: What does it purport to do?

The Witness: It purports to divide our real estate as assessed between the different stations, locating it as part of East 18th Street tank yards, Irving Place office, and part of 21st Street station. I think quite likely it was prepared under my direction.

Q. I do not like to take an answer like that. Can not you state whether it was or not. It is quite an important paper here, and you must have some recollection in regard to it. It appears as an exhibit. Is it, to the best of your knowledge, information and belief, a correct statement made from the books of the company?

A. No, this is not made from the books of the company at all. It is a copy of the tax bills.

Q. Is it a true and correct copy of the tax bills?

1046 A. I believe so; the assessments levied upon the property, I believe it is, if it covers all the property. I take it that it does.

Mr. Mathewson: Do you know anything more about it than you have stated?

The Witness: No, I cannot add anything to what I have stated.

Q. Exhibit 151, appearing at page 2167, purporting to be trial balance of the National Coke and Coal Company, October 31st, 1905; was that prepared by you or under your direction?

A. I think not.

Q. Do you know by whom it was prepared?

A. As far as the preparation of the statement was concerned, I should surmise that it was prepared by one of the clerks of the National Coke & and Coal Company.

Q. Do you know whether it is a true and correct statement?

A. I do not.

Q. Does that also apply to Exhibit No. 152, purporting to be a statement of dividends paid by the National Coke and Coal Company, since its organization, January, 1901?

A. The same answer applies to it.

Q. It was not prepared by you?

A. It was not; I should say it was prepared by one of the clerks of the National Coke and Coal Company, but the $27,500, total amount of dividends paid to the Consolidated Gas Company, strikes me as a familiar figure.

Q. That would appear upon the Consolidated Gas Company's record?

A. That would appear on the company's records. I recognize the amount as the amount we have received in dividends from them, but as to the dates and when they were paid I cannot testify, as to their correctness.

Q. But they are correct to the best of your knowledge?

A. The total is correct.

1047 Q. And the dates?

A. I could not testify to them.

Q. Exhibit No. 156, purporting to be a statement of sales by feet each year from November 11, 1884, to December 31, 1904, of gas; is that also correct and was that prepared by you or under your directions?

A. Under my directions.

Q. And is it a true and correct statement from the books of the company?

A. To the best of my knowledge and belief.

Q. Exhibit No. 157, appearing on page 2172, purporting to be a statement showing the amount of repairs and depreciation from November 11, 1884, to December 31, 1904, inclusive, and the cost per thousand cubic feet sold; is that a true and correct statement prepared from the books of the company by you or under your direction?

A. Prepared under my direction and correct to the best of my belief and knowledge.

Q. Does that apply also to Exhibit No. 158, appearing on the same page, giving in detail the repairs and replacements and depreciation?

A. It was prepared under my direction and I believe it is correct.

Q. Exhibit No. 159, appearing at page 2175, purporting to be a statement of the Consolidated Gas Company showing construction work during the calendar year 1905, replacing dismantled apparatus; is that a true and correct statement prepared by you or under your direction from the books of the company?

A. It was prepared under my directions and it is true to the best of my knowledge and belief.

Q. Exhibit No. 160, appearing on page 2177, purporting to be

a statement of the sales during each year from November 11, 1884, to December 31, 1904, and average price received per thousand cubic
feet sold, is that a true and correct statement prepared by you
1048 or under your direction from the books of the company?

A. Prepared under my directions.

Q. And is a true and correct statement?

A. I believe so.

Q. Exhibit No. 162, at page 2179, purporting to be a statement showing the distribution expense, save taxes, and the feet of gas sold in the eight Boston companies, including the pipe lines; that was not prepared by you?

A. No, sir.

Q. Exhibit No. 170, appearing upon page 2196 of the papers on appeal, purporting to be summaries of the Consolidated Gas Company, years 1900 to 1904, inclusive; were those summaries prepared by you from the books of the company and are they true and correct?

A. They were summaries prepared under my direction, and they are correct to the best of my knowledge and belief.

Q. Exhibit No. 171, appearing at page 2208, purporting to be a statement of sales of gas made at the Consolidated Gas Company and outside companies for four months ending October 31st, 1905; is that a true and correct statement made by you or under your direction, from the books of the company?

A. Made under my directions, and I believe it to be correct. I would like to make one suggestion in regard to it. I do not like the way the heading is phrased; it looks to me as if there was a word left out. I think it should be "Sales of Gas Made at Consolidated and Outside Companies' Stations."

Q. That is what it purports to show, I guess?

A. Yes.

Q. Exhibit No. 172, appearing on page 2209 of the papers on appeal, purporting to be a statement of the status of real estate, plant and property of the Consolidated Gas Company, as shown under the following headings, on the books of the company, "As per
schedule, June, 1884, additions to 1884, total November 11,
1049 1884; status December 31st, 1904," and "increase." Was
that prepared by you or under your direction, and is it a true and correct statement made from the books of the company?

A. To the best of my knowledge and belief.

Mr. **Mathewson**: We have got that already in evidence.

Q. Exhibit No. 173 is a true and correct statement also, is it?

A. I believe it to be, yes.

Q. Exhibit No. 174, appearing at page 2210A of the papers on appeal, purporting to be a statement of the variation in real estate, plant, property and construction from date of consolidation, November 11th, 1884, to October 31st, 1905; was that prepared by you or under your direction, and is it a true and correct statement from the books of your company?

A. Prepared under my direction, and I believe is a correct statement.

Q. Exhibit No. 175, appearing at page 2211, purporting to be a statement showing amounts expended for repairs in the construction for the Consolidated Gas Company, November 11th, 1884; was that prepared by you?

A. That is my belief, yes.

Q. Exhibit No. 176, purporting to be a comparative condensed balance sheet of the Consolidated Gas Company, October 31st, 1905,—November 11th, 1884, showing variations; is that a true and correct statement prepared from the books of the company?

A. I believe it to be so.

Q. Was it prepared by you or under your direction?

A. Under my direction.

Q. Exhibit No. 177, purporting to be a statement of the assets and liabilities October 31st, 1905; was that prepared by you or under your direction?

A. Yes.

Q. And is it a true and correct statement from the books of the company?

A. To the best of my knowledge and belief.

1050 Q. This, I think, we have already, but I will ask you in regard to it: Exhibit No. 179, dividends calculated at 8%, was that prepared by you?

A. Under my direction.

Q. And is true and correct, is it?

A. To the best of my knowledge and belief.

Q. Complainant's Exhibit No. 94 is headed "Summary of Operations for 1905." Is not every item of expenditure on that exhibit applied to the quantity of gas made and gas sold, producing in detail the cost of gas sold, apparently, of 74.81 cents per thousand cubic feet of gas?

A. That is the case.

Q. From that statement on Exhibit 94 will you prepare another one showing the cost of making and selling gas by your company independently of its other operations? By that, I mean independently of its relations to other companies or its investment in the securities of other companies.

Mr. Mathewson: That does show it; there is no investment in the securities of other companies there; you cannot make up such a statement as you have presented, if I understand what you have in mind.

Mr. Burr: Every possible item that can be charged to the operations of the Consolidated Gas Company is charged on Exhibit No. 94 as against the cost of a thousand cubic feet of gas.

Mr. Mathewson: Oh, no.

Mr. Gans: I think what Mr. Burr means is this. The witness has testified that there is an item in Exhibit 94 which he concedes is not a part of the cost of making gas.

Mr. Mathewson: That is a matter of argument.

Mr. Gans: I think what Mr. Burr wants him to make up is a statement of the items which he claims do not enter into the cost of making or distributing gas.

1051 Mr. Mathewson: We shall not do that unless instructed; it would create a false impression and one which might be quoted against us. If Mr. Burr wants that done it seems to me it is a matter of argument—but if Mr. Burr's proposition is to make up a statement of the cost to the Consolidated Gas Company only the cost of making and distributing gas, we cannot do it, because the gas acquired from other companies passes through the distribution, and it is in there and you cannot get it out. You have got to divide your distributing expenses by the total cost of distribution.

Mr. Burr: I think I might simplify this if I might be allowed to put one question:

Q. Do you claim that every item on Exhibit No. 94 is a proper charge against the cost of manufacturing a thousand cubic feet of gas?

A. I presume you are referring to the matter of taxes, and that is a matter of argument, that I think is generally conceded, as to whether we ought to make some division of our taxes.

Q. You stated a while ago that this exhibit only shows the summary of operations, didn't you?

A. I do not remember making any statement of that kind.

Q. Can you prepare an itemized statement from your summary of operations, as shown by Exhibits No. 93 and 94, in support of the contention of the bill of complaint, at page 21, that during the year 1906 a sum in excess of 70 cents per thousand cubic feet should be allowed as the annual reasonable cost of manufacturing and distributing gas.

Mr. Mathewson: We shall not present such a statement unless we are instructed to. That also is a matter of argument which on facts may be presented to the Master.

1052 Mr. Burr: I would like to get a statement of facts upon which the claim is made, or the figures.

Mr. Mathewson: I think when we get through here you will have all the facts you are looking for.

The Master: This is premature anyway; the witness has not yet said that he could make such a statement.

Q. Can you, Mr. Carter?

A. I do not know just what you want, I am sure. We have made a statement here, and are rather pinning our faith to the statement we have made. If you want it rehashed in some other form, I shall be very glad if you will get one of your accountants to do it.

Q. We are anxious to get the statement in a different form?

A. You have the figures there. I cannot prevent your reconstructing them in any form you like.

Q. But you made the claim and I should like to see what you have to support it.

Mr. Mathewson: Why do you insist upon our proving our case?

Mr. Burr: Because that is your duty, I think.

Mr. Mathewson: Well, we shall in due course.

The Master: Proceed, gentlemen; let us take up another subject.

By Mr. Gans:

Q. Possibly I might clear this up by asking one question, and that

is, whether Exhibit No. 94 purports to be a statement of the items which according to your contention, enter into the cost of manufacturing, distributing and selling gas, and all of the items which enter into it. You may be able to answer that question. I
1053 do not know whether you can or not.

A. It is a statement of all our expenses, I have already stated so, as they appear in our books, and the statement has been subject to the confirmation of the City's expert and the State's expert, and you have got all the information then that we have got on the subject.

Q. It is a statement of all your expenses, divided by the cost of manufacturing and selling?

A. That is what it is.

Mr. **Mathewson**: If it is not, we shall show what the others are before we get through.

Mr. **Gans**: I wanted to know whether we had them all now.

Q. In addition to "expense" it includes one charge on your books at least which does not represent money paid out, does it not?

A. An anticipated item of expense.

By Mr. **Burr**:

Q. Have you a statement anywhere showing in detail the acquisition of the stocks of the electric light companies and the subsidiary gas companies?

Mr. **Mathewson**: Has not that all been covered in great detail? My recollection is that it so appears.

The **Master**: I do not know how much detail; I know it was gone into.

Mr. **Burr**: I want to investigate into it particularly. It is a very important item here, of many millions of dollars charged up against the cost of gas.

Mr. **Mathewson**: No, not a dollar is charged against the cost of gas, and not a dollar of our investment in the securities of
1054 other companies, except the Astoria and the National Coal and Coke Company, do we claim the right to earn a dividend upon.

Mr. **Burr**: You are asking the community to pay a dividend upon your total capitalization, basing it upon your interest in these electric light companies.

The **Master**: This is all very nice, but premature. I will forget it before I come to decide the case. You may as well defer it and put it in your briefs. If this matter has been gone into before, the issue of these stocks, as my recollection is that it has, it is not necessary to amplify it.

(Here Mr. Mathewson refers the Master to page 408 of the Book of Exhibits.)

Mr. **Mathewson**: Just what stock was issued for each, and at just what premium it was issued; all that appears.

Mr. **Burr**: This is merely a summary or a general statement. I want to cross-examine this witness in regard to the business of dealing in investments of other companies. This company is engaged in three businesses. One is the gas business, another is dealing in securities of other companies, and the other is construction business. I desire to proceed to cross-examine him in regard to the securities of other companies, the acquisition of its securities, the manner in which they were acquired, why they were acquired, and of what benefit they are to the Consolidated Gas Company as a gas company, and in what respect they affect the consumer of gas in the City of New York.

Mr. Mathewson: There is a more extended statement to which I did not call his attention.

The Master: Counsel calls my attention to a further state-
1055 ment at page 382A of the book of exhibits. Is that sufficient
for your purposes, Mr. Burr?

Mr. Burr: We have before us this situation. You remember some little while ago I asked Mr. Carter, the Secretary of this company, if he knew why this company had gone into the business of acquiring securities of other companies, electric light companies. He said he did not know why. Now, I purpose showing, if I may, by this witness, that this was an entirely new business that the gentlemen who had been connected with the Consolidated Company embarked in, that it was not a necessary part of the gas business, and it did not add anything to the gas making qualities of this company, but enabled them simply to go into a stock speculation; interest upon the stocks and bonds being charged up directly or indirectly against the gas business and where the money was invested. In other words, that the gas making plant or gas business—the money that is actually invested, whatever it may be, in the gas business—is compelled to pay dividends upon the stocks of these other companies. Here we have a situation where the gas making business pays 6 or 8 or 10 per cent. and the stocks and securities of the other companies realize admittedly but 1½ to 2 per cent.

The Master: Cannot you make your argument along those lines based on the facts already in evidence to which I have called your attention? You have got the figures here, the different issues, and I suppose somewhere or other in the other exhibits the amounts of dividends on these various stocks also appear. What I want to avoid is this undue prolixity. It seems to me on a question of that kind
you could present your argument just as well on the totals
1056 as you could by spending two or three days here on matters
of detail. I want to call counsel's attention to this fact: up
to and including last night out of about 1,000 pages of this record over 33 1-3 per cent. of them have been occupied by Mr. Burr's examination of Mr. Carter. The same proportion obtains as regards the number of hours. Over one-third of the time actually spent in this reference thus far has been taken up by counsel for the city's cross examination of Mr. Carter. Now one of these days there will be a day of reckoning. There are other counsel in this case who have further witnesses, I assume, to cross examine, and I want to throw out a note of warning to the effect that some time when an application is made by somebody or other to the court for an extension of time, the matter will be gone into, I will be required

to certify about it and somebody's time will be cut down. The Court will cut out somebody and say, Gentlemen you have had Mr. So and So on the stand, his direct examination was finished in one day, you have been four days cross-examining, you must finish your cross-examination in one more hearing. That will work injustice to some one or the other of you. I merely call attention to that fact now so counsel can arrange among themselves to apportion this time, because it seems to me to take over one-third of the entire time of this hearing thus far in the cross-examination of one witness on matters of statistics where the argument is based on figures is an undue expenditure of time.

Mr. Burr: Permit me to say, Mr. Master, in that connection, that this is a most unusual case and cannot be judged by the rules of procedure in any other case that I know of. They present
1057 here elaborate statements covering a whole year or a nominal year showing items aggregating probably 100 or more which enter into, or are alleged to enter into the cost of the distribution of gas. A proper subject of cross-examination is every item that they allege goes to that end, which tends to add the smallest fraction of a penny to that, and if my cross-examination has wandered outside of that, my time should be limited, but if I have confined myself to an examination along that line, trying to ascertain what are the real facts and true situation in that regard, I don't think the Court will limit my time because of that. I have tried to hew strictly to the line, but the difficulty has been, as your Honor will know and will realize if called upon to make a finding, that from time to time our cross-examination has had to go over because we were obliged to call for statements from time to time in order——

The Master: Yes, and a great many of those statements they were not called upon to prepare, in my judgment. They were for your information.

Mr. Burr: On the contrary, I think it was for their accommodation that we asked for the statements instead of the original books.

The Master: To some extent, but when you call upon a witness on the stand to examine the minutes with a view to finding out whether Mr. Bradley ever made a report on a certain subject, after he says he does not know. That is not in my opinion, cross-examination. You have exhausted your cross-examination when you find out that he does not know. And the same is true of a number of other questions. The witness as a matter of courtesy has devoted time outside to preparing these statements. This afternoon,
1058 for instance, we have spent nearly an hour in getting identified these various tabulations from that other record.

Mr. Burr: I am entitled to do that for the purpose of comparison.

The Master: I understood there was no objection on the part of counsel on the other side, at least to stipulating those in and that it was counsel for the defendants who objected to so doing. If you wanted the correctness of them admitted, they could have been admitted in a bunch, I have no doubt, because I so understood, and Judge Lacombe so assumed in his opinion.

Mr. **Burr**: I call your attention to this, that I asked Mr. Carter if these statements were prepared by him and he said "you must be more specific, I can't answer a general question like that," and I was obliged to call his attention particularly to which exhibit or statement was meant.

The **Master**: Possibly his counsel would have made a stipulation that would have answered that same purpose. You of course have the right to examine fully along the lines you have indicated. I do not intend to restrict you in that right; you are entirely within your rights. My only suggestion is I don't think the cross-examination has been made as concise as it might have been and I think the time has been unnecessarily consumed. I merely call attention to that fact, not for your account especially, but because it affects the rights and interests of the other parties to the cause; it will very shortly, as I understand Mr. Mathewson has obtained an extension of his time.

Mr. **Mathewson**: Ten days.

The **Master**: I was required to make a certificate on that 1059 point; it expires the 25th. Undoubtedly there will be a question of a further extension and further time for the complainant's case, and this matter of cross-examination as it appears here may be embarrassing to other counsel.

Mr. **Mathewson**: Mr. Master, I wish you would permit me to say just a word in response to what Mr. Burr said in reference to this particular line. The laws of the State of New York expressly authorize this company to acquire the stocks and securities of other companies. We have done so. It is not a stock jobbing business. Secondly, on Exhibit No. 80, which you have before you, is stated what we have invested in the gas business and, separately, that which is invested in other securities. The amount invested in other securities we do not claim a right to earn upon from the consumer of gas. We merely claim a right to earn upon our investment in the gas business, the value of the property we have invested in the gas business, properly invested. What the securities of these other companies may produce is something entirely aside. We are claiming on values, not on pieces of paper at all.

Mr. **Burr**: You have increased your capital from $39,000,000 to nearly $100,000,000 by the acquisition of these other companies.

Mr. **Mathewson**: Supposing we have, that does not give us a right to earn on it unless this property is invested in the gas business and we do not claim a right to earn on it unless it is so invested. It will be simply wasting time because you are setting up a windmill and then fighting it, to say we do that. Let me show you, Mr. Master, Exhibit No. 96 in evidence. That shows that we drew 1060 from surplus to pay our dividends last year $1,946,000, and that we did not earn out of the consumers of gas, even if we did pay on a par of $80,000,000; but whether we did or not our claim is that we are entitled to earn upon the investment, the value of our property investment in the gas business.

The **Master**: Those are all matters of argument and may or may not be so. My point is that it does not appear to me now why any argument that you have on that subject cannot be based on these totals here. I do not see any point in going into further details about it because it appears here exactly what they have got invested in the securities of other companies and they either are or are not entitled to pay any attention to them in figuring on the cost of gas.

Mr. BURR: I hope you do not think, Mr. Master, for a minute that I have been sitting here in this extremely hot weather asking unnecessary questions voluntarily or intentionally.

The MASTER: No, I do not, but I don't think you have made as good time as Senator Page did with his cross-examination.

Mr. BURR: The Senator has not finished.

The MASTER: Then I may withdraw that remark.

At 5:25 P. M. adjourned to August 22, 1906, at 1:30 P. M.

Last Exhibits:

Complainant's 100.
State's N.
City's 34.

1061 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, WEDNESDAY, *August 22nd*, 1906—
1:30 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Gans.

1062 Mr. BURR: There is a correction on the last page of yesterday's hearing. The word "unintentionally" should be "intentionally."

The statement made at yesterday's hearing by counsel for the complainant Gas Company, that as to the amount of capital it had invested in securities of other companies, it did not claim a right to earn upon from the consumer of gas is a tribute to his common sense and legal acumen; if he and his witnesses will be equally frank and open with regard to the expenditures and disbursements of his company, it will simplify this inquiry to a very great extent.

In view of the fact that the Bill of Complaint emphatically states that the actual cost to the complainant of making and distributing gas was more than 70 cents per thousand cubic feet, and that Exhibits 93 and 94 were so made up as to show in detail the items of disbursements, to each one of which, the factors of gas made or gas sold, was applied, producing in the totals an "operating" cost of 72.12 cents on Exhibit 93, and an "operating" cost of 74.81 cents per thousand feet of gas sold on Exhibit 94, we did suppose, and think we had a logical right to suppose that it would be the contention of the complainant that those figures represented the true cost of vending gas in New York during the periods embraced in the exhibits named.

As the complainant denies any right to earn from gas consumers any dividends on its capital invested in the securities of other companies, it follows as a matter of course that any disbursements made by it which were made in whole or in part by reason of such investments, must be eliminated from any exhibits which upon
1063 their face purport to show, by fair implication, the cost of gas.

Exhibit 80 shows the complainant's view as to the proper division to be made of its assets between those invested in the gas business and those invested in the securities of other companies, and Exhibit 81 shows from its point of view, its investment in the gas business alone, with the conclusions arrived at by these exhibits, we are by no means in accord, but they do clarify the situation to this extent, that as to a certain large portion of its assets, they have been eliminated from the controversy, considering the statement made by counsel yesterday.

All that we now ask is that the same process of elimination be made as to items of expenditure shown in Exhibits 93 and 94, which counsel must be aware must be eliminated in arriving at the true cost of selling gas.

We are aware of the fact that we will not be able to agree with counsel as to the propriety of all the items he decides to contend are applicable solely to the cost of gas, but there will of a certainty be no controversy over those he decides to eliminate, if any.

We have a right to inform ourselves, and in the performance of our duty we are bound to inform ourselves as to every item of operating charge shown in Exhibits 93 and 94 on two points:

1st. That the expenditure was actually made and

2nd. The precise nature of the expenditure to the end that we may determine from our point of view, whether as a whole or in part it should not be charged against the investment in other
1064 securities, rather than against the cost of gas.

This is the information we must surely possess, and it depends very largely upon the complainant's counsel and witnesses whether we get it speedily and clearly or are obliged to get it piecemeal, and at the end of a tedious cross-examination.

It must be apparent that the only source of information as to the nature of the expenditures made by the complainant, and shown in some detail on Exhibits 93 and 94 are contained in the books of account and vouchers of the complainant, and it is from that source that information must come to properly defend this suit. From that source the complainant compiles such statements and presents as exhibits such an arrangement of the figures as it believes will support its contention. With this we have no quarrel, but merely seek the same source of information for the purpose of preparing our own statements to support our own contention, and with that the complainant should consistently have no quarrel.

We will state now that we want the same kind of analysis of every doubtful account—doubtful we mean as to whether it is in whole or in part a proper charge against the cost of selling gas in our opinion, as we have in State's Exhibits "E" and "M" with regard to taxes, and it remains with the complainant's counsel and the Master to determine how we may most speedily obtain this.

If the accountant for the State has fully covered this in the examination made by him there is no necessity for our duplicating his work, but if we find on his statement being submitted that further examination is needed for the purpose, we reserve the right to have such examination under the ruling previously made by the Master. 1065

Mr. MATHEWSON: Referring to the colloquy at the conclusion of the last session as to the attitude of the Consolidated Gas Company, only a portion of it seems to have been taken by the stenographer, and that which was taken contains some verbal inaccuracies so far as my statement is concerned. That there may be no misunderstanding, I re-state our position, as follows:

The Consolidated Gas Company claims that the capital which must be taken into consideration in determining the price which it may charge for gas, comprises the value of all its assets, intangible such as franchises and good will, as set forth in the bill of complaint, as well as tangible; excluding, however, from such assets the company's investment in the stocks of other companies (outside of the Astoria Light, Heat and Power Company and the National Coal and Coke Company), such investment at book value being covered under the heading "Investment in Securities of other Companies" appearing at the end of Complainant's Exhibit 80.

Now, in reference to the discourse that has been delivered by my brother Burr, I do not see anything in it whatsoever. We have been entirely frank. They are now examining the books and the records to show whether Exhibits 93 and 94 are correct or not and nothing has been questioned.

The MASTER: I do not understand that he is making any point except to get his position straight upon the record. As I understand it, he intends to await the reports of the experts before making an examination, or he may not make any at all. Is that the situation? 1066

Mr. BURR: That is the situation.

Mr. MATHEWSON: May I make one more statement; he seeks to criticise us because we have not so far shown the items which make up the 70.02 cents which he says we claim should be charged to the cost of gas for 1905. He is merely trying to compel us to try our case in advance of witnesses not yet called. Witnesses will be called who will show exactly how that amount is made up, but it is not Mr. Carter who made up the account, and he is not the witness who could state it.

Mr. **Burr**: He is the witness who presented the statement on which we are cross-examining.

Mr. **Mathewson**: The statement from which he was cross-examined was the actual payments by the Consolidated Gas Company for the periods in question. In addition to that, if you will remember, we stated to the Gas Commission, and everybody concedes that we are entitled to an allowance on the cost of gas sufficient for those years to equalize our disbursements for repairs and replacements, with the average at least of the previous twenty years, that year having been abnormally low; therefore that statement does not contain everything which is properly chargeable in computing the amount to be allowed for the cost of gas.

The **Master**: Now, you are both all right on the record, let us proceed.

Mr. **Gans**: We asked for a copy of the map a month ago. When are we to get it?

Mr. **Mathewson**: Three copies of the map were brought down and distributed to counsel, and Mr. Francklyn says that one was distributed to Senator Page and Mr. Gans, which apparently
1067 has gone astray. I have another one here which I will lend them, pending the making of another copy for them.

Mr. **Page**: I think Mr. Francklyn sees visions and dreams dreams.

Mr. **Gans**: We asked possibly two or three weeks ago for some Astoria contracts and we have been clamoring for them ever since, or clamoring for some adequate statement of their contents which would enable us to prepare for cross-examination when the time comes.

Mr. **Mathewson**: We had the entire contracts down here, two big dress suit cases full of them, for a day or two. Mr. Bradley was then injured and is out of the city at present recovering, and he has not had an opportunity to make up such a statement as you require.

Mr. **Gans**: We want it to be clear, when the time comes, that we have been asking for these contracts for cross-examination.

Mr. **Page**: When the time comes that we have to do that, we do not want it to be claimed that we have been delaying.

William H. Wheelock, called as a witness on behalf of the Complainant, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Will you state your business?

A. Real estate.

Q. Are you connected with any firm or concern in that business?

A. I am a stockholder and director in the corporation of Douglas Robinson, Charles F. Brown & Company.

Q. Where are they located?

A. No. 160 Broadway and No. 570 Fifth Avenue, New York City.

Q. When was that company organized?

A. Incorporated January 1st, 1905.

1068 Q. With whom were you associated prior to that time?

A. With the firm of Douglas Robinson, Charles S. Brown & Company.

Q. What was your position in that concern?

A. I had charge of the brokerage of the down-town business, the main brokerage business.

Q. At the sales department?

A. Yes.

Q. And prior to that association with that firm of Douglas Robinson, Charles S. Brown & Company, with whom were you connected?

A. Douglas Robinson & Company.

Q. In what capacity?

A. I first had charge of the buildings that they managed for estates; afterwards as a broker, for four years.

Q. What have been and are your duties in connection with these various positions which you have occupied?

A. Taking practically charge of sales or purchases of clients of the office, and keeping track as far as possible of sales made by the brokers, together with appraisal business.

Q. Within what territory?

A. In Manhattan Borough.

Q. Have you kept yourself familiar with the records of sales and purchases made through your office during this time?

A. Yes.

Q. And with any other sales?

A. So far as possible, those recorded, and those that I could learn of.

Q. How about considerations that have been paid or received in case of sale through your office or otherwise; have you made any investigation in reference to those?

A. I know the considerations received.

Q. Have you in your office any maps or data in reference to sales which are made in the city, or have been for years past?

A. I have a set of insurance maps which are kept up to date as far as possible, from The Record and Guide, and also from information that we have been able to secure.

1069 Q. Have you access to those records?

A. At all times.

Q. Are you familiar with them, or do you keep familiar with them from time to time?

A. Generally.

Q. Have you ever appraised property?

A. Yes, for the last five years.

Q. On the Island of Manhattan?

A. Entirely.

Q. In one section or in various sections?

A. Various sections. I ought not to say entirely to your question as to Manhattan. I have appraised outside Manhattan.

Q. Have you ever testified or been called upon to testify in judicial proceedings in reference to values of land on the Island of Manhattan?

A. Yes.

Q. Have you ever acted as Commissioner appointed by a Court for that purpose?

A. Yes.

Q. Will you instance any one or more cases?

A. The most recent proceeding is that of the Hudson Companies, to acquire title to lot in Fulton and Dey Streets, for their tunnel to Jersey; then, two others, the latest ones, were in the case of Knapp *v.* Knapp, a partition proceeding involving property in the northern part of Manhattan, and one in the matter of the application of John M. Bowers for leave to resign as Trustee under a certain will—property in the center of the city. I have acted as Commissioner in opening streets in various parts of the city.

Q. Will you name some instances for which you have acted in the sale of property in the City of New York within the last few years?

A. The Pennsylvania Railroad, I bought one-third of their property, aggregating about $6,000,000; for the Interborough Rapid Transit, Manhattan Elevated, Columbia College, City of New York; for the Astor Estates, Lorillard Estates, the Delano and Rhinelander Estates, the 42nd Street tunnel to Long Island City; then a 1070 large number of individuals, few of whom I remember, Seligman & Company, Austin G. Fox, George C. Clark; also for the Century Realty Company, the United States Realty Company, and various operators.

Q. Was any of this property which you have bought or sold in the vicinity of the plants of the Consolidated Gas Company on Manhattan Island?

A. In certain cases.

Q. Are you the Mr. Wheelock who acted as the appraiser for The Mutual Life and for the Equitable Life when the property was appraised for the Armstrong Investigating Committee?

A. I appraised about one-third of all their property through the United States.

Q. Referring to Complainant's Exhibit No. 48, have you made an examination of the real estate of the Consolidated Gas Company on Manhattan Island, as shown in that exhibit, with a view to testifying as to its value in these proceedings?

A. I have.

Q. Does that include the manufacturing plants, or simply the land with the office buildings, and such as that?

A. Land only.

Q. How long have you been engaged in examining these parcels?

A. Roughly, six weeks.

Q. Are you able to state the value of the various parcels?

A. The total?

Q. No, one by one and then the total.

A. Yes.

Q. Referring to Complainant's Exhibit 48, page 1, will you state what the value is, according to your opinion, of the property at the southwest corner of 116th Street and Lexington Avenue?

A. $93,000.

Q. What are the dimensions of that block?

A. They are 80 feet on 116th Street and 100 feet 11 inches on Lexington Avenue.

1071 Q. The plot being rectangular?

A. Yes; the block number is 1,643, lots 56, 57 and 58.

Q. Referring to the plot at the Northwest corner of Third Avenue and 114th Street, will you give the dimensions of the plot as it appears on Exhibit 48, and the value thereof?

A. The property faces on Third Avenue, and the dimensions on Third Avenue is 25 feet 2¾ inches; it then runs westerly 100 feet, thence northerly 50 feet 5 inches to the center line of the block; thence 100 feet 11 inches to the northerly side of East 114th Street, and thence easterly 150 feet 5 inches to the corner of Third Avenue and 113th Street, the point or place of beginning. The block number is 1,642, lots 32 and 33.

Q. Have you stated the value of the second plot?

A. The value of the land alone I place at $71,500; together with the building, at $96,500.

Q. In order to cover your future testimony, am I right in supposing that where you refer to the buildings, none of the buildings are part of the manufacturing or distributing plant of the Consolidated Gas Company?

A. That is right.

Q. Will you now refer to the plot on the Southeast corner of Irving Place and 15th Street?

A. Block No. 870, lot- 54, 59 and 60, the plot being 84 feet on Irving Place and 155 feet 6 inches on East 15th Street.

Q. Will you state the valuation of that?

A. Land alone, $257,000; with the buildings, $300,000.

Q. Referring now, on the same page of Exhibit 48, to the block at the Northeast corner of Hester Street and Elizabeth Street; will you give the dimensions?

A. Block 239, lots 1 to 5; I am not sure whether that is not 1 and 5, but I think it is lots 1 to 5; it faces 100 feet on Hester Street and 150 feet on Elizabeth Street; the value of the land I place at $170,000; together with the buildings, $192,000.

1072 Q. Please refer now to page 2 of the same Exhibit 48 and take the plot west of Avenue B and south of the line of 15th Street, giving the dimensions of that.

A. That is block No. 972, lot 45; it is very irregular. The frontage on 15th Street is 13 feet 3 inches, the beginning point is 300 feet west of the southwest corner of 15th Street and Avenue B; from that point it runs south 106 feet 8½ inches, then west 74 feet and 5 inches, thence north 3 feet 5½ inches, then west 75 feet 7 inches, then north 10 feet 7 inches, and then in a general northeasterly direction 155 feet 4 inches to the southerly side of east 15th Street, and east 13 feet 3 inches to the point or place of beginning. I value it at $30,000; there are no buildings there.

Q. Take next the plot between 17th and 18th Streets, Avenues B and C, as shown on the same page of the same exhibit.

A. Block No. 985, lots 17, 19 and 20, 39 and 40, beginning 138 feet easterly from the southeasterly corner of Avenue B and 18th Street, running easterly 300 feet, thence southerly 184 feet to the northerly side of 17th Street, thence westerly 350 feet, thence northerly 184 feet to the point or place of beginning. I value it at $261,500. That is land alone.

Q. Refer next to the plot between 14th and 15th Streets and between Avenues B and C on the same page?

A. Block No. 982, lot 13, facing 206 feet 6 inches on Avenue C, and on each street, 14th and 15th Streets, 434 feet 10 inches. I value that land alone at $439,500.

Q. Will you next refer to the same page, the plot facing on Avenue C between 15th and 16th Streets?

A. Block No. 989, lot 1, being the block front on the east side of Avenue C between 15th and 16th Streets, facing 206 feet 6 inches on Avenue C and 235 feet on each street.

1073 Q. What is your valuation of that?

A. $183,500 land alone.

Q. Please refer next to the plot between 15th and 16th Streets facing Avenue D, on the westerly side of Avenue D.

A. Block No. 989, lot 26, being the block between 15th and 16th Streets, on the westerly side of Avenue D, fronting 206 feet 6 inches on the avenue and 191 feet on each street. I value that at $124,000, land alone.

Q. Will you take next the plot between 15th and 16th Streets, between Avenue D and Tompkins Street, on the same page.

A. Block No. 991, lots 26 and 50 I believe; it is the entire block. These figures are from our city map and I believe them to be absolutely correct.

Q. At any rate, it is the entire block?

A. It is the entire block, bounded by Avenue D, Tompkins Street, East 15th and East 16th.

Q. What are the dimensions of the parcel?

A. On Avenue D 206 feet 6 inches; on East 16th Street 159 feet 2 inches. On Tompkins Street it is 212 feet. There is a question of a fraction of an inch there, but I believe 212 feet is correct. On 15th Street 251 feet 8 inches. I value the land alone at $157,500.

Q. Will you take next the parcel bounded by Avenue D, Tompkins Street, East 14th Street and East 15th Street?

A. Block No. 991, Lots 1 to 47, being the entire block bounded by Avenue D, Tompkins Street, East 14th and East 15th Streets, being 206 feet and 6 inches on Avenue D, 278 feet 7 inches on 15th Street, 212 feet on Tompkins Street and 371 feet 1 inch on 14th Street. My value is $257,000, land alone.

Q. *When* you next refer to the plot shown on the same page of Exhibit 48, bounded by East 14th and East 15th Streets, and by Avenues C and D?

A. Block No. 988, Lot 1, being the entire block between
1074 Avenues C and D, and East 14th and 15th Streets; the
dimensions on each avenue are 206 feet and 6 inches, and
on each street 676 feet; and my value is $580,500 for the land alone.

Q. Are you also able to state the value of the bulkheads and land to the line across Tompkins Street from the plots which you have just described?

A. I am.

Mr. Burr: One moment. I do not think this witness is qualified as yet as an expert on the value of bulkhead property.

Mr. Mathewson: I think he is.

The Master: You may cross-examine him, Mr. Burr, if you wish.

By Mr. Burr:

Q. What experience have you had in bulkhead property in the City of New York?

A. Comparatively little.

Q. Have you had any at all?

A. Yes.

Q. What experience have you had?

A. I have sold one large water frontage, and I know in a very general way the condemnation proceedings entered into by the city for the acquisition——

Q. With regard to that particular piece?

A. No; others throughout the water front, pretty generally throughout the water front, particularly in the Chelsea improvements and also in the case of the docks at 41st and 42nd Streets, North River; the same on the East River.

Q. That knowledge you have in a general way, you say?

A. As to the prices paid, etc., you mean?

Q. Yes.

A. I know the prices that were paid and I have kept track of the testimony in those cases.

Mr. Burr: I submit this witness is not competent to testify
1075 as an expert with regard to bulkhead property.

The Master: I will allow him to answer and testify as an expert. Of course, his testimony probably on that subject might not be entitled to so much weight as that of a man who made a specialty of bulkhead property, but I think any well informed real estate man in the City of New York is entitled to express an opinion on it, and that it has some weight.

Mr. Burr: Exception.

By Mr. Mathewson:

Q. Does not the property to which I have directed your attention east of Tompkins Street comprise the land from the edge of Tompkins Street to the bulkhead line as well as bulkheads?

A. It does.

Q. And have you had experience in the sale and have you kept posted as to the prices received for water front land in the course of your experience as well as other land?

A. So far as considerations are shown. There are very few sales.

Q. Now, will you state the value which you place upon the bulkheads, including the land to the bulkhead line?

Mr. Burr: This is taken subject to my objection and exception.

The Master: Yes.

A. I have taken the two bulkheads together, that is, the bulkhead from the north side of 14th Street to the south side of 15th Street, and the bulkhead from the north side of 15th Street to the south side of 16th Street, together with the land under water from the line of the present bulkheads, to the line of the present bulkhead line as established, and I figure that value to be $359,500.

1076 Q. Have you the dimensions at hand of the land between Tompkins Street and the bulkhead line of the bulkheads?

A. The dimensions of the bulkhead taken together and excluding 15th Street equal 450 lineal feet. The bulkhead line does not run parallel to the present bulkheads as constructed. The average distance from the entire 450 feet is 70 feet, and the number of square feet is found by multiplying 450 feet by 70, which gives 31,500 square feet.

Q. Does that include the land from Tompkins Street to the bulkhead line as well as bulkheads?

A. That includes from the present bulkheads to the present bulkhead line, as established.

Q. Well, does that extend to Tompkins Street?

A. It does.

Q. Will you now direct your attention to Complainant's Exhibit 49, showing property between Tenth Avenue and the North River, as well as two parcels each of Tenth Avenue, facing on 18th Street, showing the condition before the establishment of the marginal street by the city.

A. Yes.

Q. Have you also inspected and made a valuation of the property shown on this exhibit, Complainant's Exhibit 49?

A. So far as it can be seen at present.

Q. Will you take up one parcel at a time in the order in which it is convenient to you and state the value according to your judgment?

A. The first parcel is the entire block bounded by Tenth and Eleventh Avenues, and West 16th and West 17th Streets. I believe the number of the block is 688, lot 21, the size of the block being 184 feet by 800 feet, and the value $844,000.

Q. Now, please take the next parcel?

A. The next parcel is the entire block between Tenth and Eleventh Avenues, 17th and 18th Streets, block 689, lot 17, size 184 feet by 800 feet. My value is $808,500.

1077 Q. Now, take the third parcel?

A. The third parcel is a portion of the block bounded by Tenth Avenue, West 18th and West 19th Streets, the dimension on 18th Street being 525 feet, on Tenth Avenue 184 feet, and separate lots on 19th Street, the sizes being as follows: 125 by 92 feet, 25 by 92 feet, 100 by 92 feet and 150 by 92 feet. In other words, there are five lots owned by other parties in this block.

Q. Five lots of what dimension?

A. Twenty-five each by ninety-two.

By Mr. Page:

Q. Do you know the lot and block numbers there?

A. Block 690, lots 12, 40, 42, 43, 44, 45, 48, 49, 50, 51, 52 and 53. It may possibly be that 54 is also included, but I doubt it.

By Mr. Mathewson:

Q. In other words, the frontage on 19th Street of the lots that the company owns is 400 feet, is it not?

A. Four hundred feet, yes, sir.

Q. And the westerly dimension of this plot is also 184 feet, the same as the Avenue frontage?

A. Yes.

Q. Now, you may state the value?

A. $453,500.

Q. Will you now take the next plot in order?

A. That is a portion of the block bounded by Eleventh Avenue, Nineteenth and Twentieth Streets, being 184 feet on Eleventh Avenue and 350 feet on each street, in the easterly line being 184 feet. I place a value of $340,000. That block is numbered 691. I cannot give the lot numbers:

Mr. Burr: May we be furnished with a copy of that Exhibit No. 49, Mr. Mathewson?

Mr. Mathewson: Yes, I thought you had a *a* copy.

1078 The Witness (continuing): The next block is the entire block bounded by Eleventh and Thirteenth Avenues, West 16th and West 17th Streets, being 188 feet 9 inches on Thirteenth Avenue, 184 feet on Eleventh Avenue, 24 feet 10 inches on West 16th Street, 66 feet and 11 inches on West 17th Street. The value is $63,000. The block number is 666, lot No. 3. The next block is the entire parcel between Thirteenth Avenue and Eleventh Avenue, 17th and 18th Streets, being 188 feet 9 inches on Thirteenth Avenue, 184 feet on Eleventh Avenue, 122 feet and 2½ inches on 18th Street and 80 feet 2½ inches on 17th Street, being Block 666, lot No. 12. My value on that is $127,500.

Q. Take the next one in order from the same page of the exhibit.

A. The bulkhead between 16th and 17th Streets, being 212 feet, I value at——

Mr. Burr: This testimony is also subject to my objection and exception.

The Master: Certainly.

The Witness (continuing): $148,500; and the bulkhead from the north side of 17th Street to the south side of 18th Street, being 212 feet in length, I value at the same figure: $148,500.

Q. That includes the land from the street to the bulkhead line, does it?

A. Yes.

Q. That covers all the bulkheads, does it, Mr. Wheelock.

A. Yes.

Q. Do your values for these parcels include the land without any buildings?

A. Thus far.

Q. Except where you have stated?

A. Yes.

Q. There also appears on Exhibit 49, and likewise on Exhibit 48, a small parcel on the north side of West 18th Street, about 275 feet

East of Tenth Avenue. Please give the dimensions and block number and valuation?

A. The block number is 716, lot No. 14, the plot being 1079 75 feet by 92, and the value of the land alone being $41,500, and, with the buildings, $45,500.

Q. There also appears on Complainant's Exhibit 49 and on Complainant's Exhibit 48, a parcel on the South side of West 18th Street, beginning 160 feet East of Tenth Avenue. Will you give the dimensions of that parcel and its value?

A. Block No. 715, Lot No. 51 to 59. The dimensions of the plot 225 feet by 92 feet, and my value is $127,500 for the land alone.

Q. Please refer to page 4 of Complainant's Exhibit 48, and give the dimensions and your valuation of the plot on the South side of East 20th Street, beginning 94 feet west of Avenue A?

A. That is Block 951, Lot 35; the plot is 176 feet in front by 92 feet deep. My valuation of the land alone is $66,000 and with buildings, $76,000.

Q. Please take now the large plot between East 20th and 21st Streets, fronting on the westerly side of Avenue A, and state the dimensions and value?

A. That is Block 952, lot Nos. 7, 29, 30, 33, 34 and 35, being 184 feet on Avenue A and 517 feet on each street, and the westerly line being 184 feet. I value the land alone at $430,500, and, with buildings, $439,500.

Q. Consider next, if you please, the block bounded by East 21st and 22d Streets and by First Avenue and Avenue A, giving like data?

A. That is Block 953, lot 1, being the entire block between First Avenue and Avenue A and 21st and 22d Streets, being in size 197 feet 6 inches by 613 feet. My value is $640,000 for the land alone.

Q. Will you take next the plot bounded by East 21st and 22d Streets and by Avenue A and the marginal street, and give the same data?

A. That is Block 979, lot No. 1, being the entire block bounded by Avenue A, the marginal street, 21st and 22d Streets, and 1080 being 197 feet 6 inches on Avenue A, 594 feet and 7 inches on 22d Street, being 212 feet more or less on the marginal street and 760 feet and 3 inches on 21st Street, and for the land alone my value is $578,000.

Q. Please take next the block bounded by 20th and 21st Streets, Avenue A and Avenue B, and state the dimensions and values.

A. Block No. 978, lots 1, 2, 3, 5, and 6, being the entire block bounded by Avenue- A and B, 20th and 21st Street-, excepting a lot 23 feet by 70 approximately, in the center of the block facing on the east side of Avenue A. The dimensions are, on Avenue B, 184 feet, 666 feet on 20th and 21st Streets, and a total frontage on Avenue A of 161 feet. My value of the land alone is $516,500, and, with buildings, $537,500.

Q. The frontage on Avenue B is 184 feet?

A. Yes, sir.

Q. Will you take the next parcel shown on page 4 of Exhibit 48, which you have before you, and describe it?

A. That is the parcel bounded by Avenue B, and the marginal street, 20th and 21st Streets, the size being as follows: On 21st Street, 84.54 feet; on the marginal street 212 feet more or less; on 20th Street, 238.78 feet, and on Avenue B 184 feet. The value is $130,500. The block number is 987, lots 37, 41, 42, 43 and 51.

Q. Will you kindly refer now to page 5 of Complainant's Exhibit 48 and give the dimensions and valuation of the plot on the northerly side of 42nd Street beginning 100 feet west of 11th Avenue?

A. That is Block 1090, lot 23; the plot is 150 feet front by 100 feet 5 inches in depth, and my value of land alone is $77,000.

Q. Please refer next to the parcel on the north side of 42nd Street, being 225 feet east of 11th Avenue?

A. That is Block 1071, lots 10, 11, 12 and 13; the plot is 100 by 100 feet 5 inches, and my value of the land alone is $60,000.

1081 Q. Will you now refer to the plot on the north side of 41st Street, beginning 100 feet east of 11th Avenue?

A. That is Block 1070, lot No. 5; the plot is 200 feet by 98 feet 9 inches.

Q. A rectangular plot?

A. Yes. My value for the land alone is $85,800.

Q. Will you now take the large plot shown on the westerly side of 11th Avenue between 41st and 42d Streets, running from 11th Avenue to the end of the pier?

A. The upland is Block 1089, lot 1; the bulkhead and pier, Block 1107, lot 7. The dimensions, unless you want me to give them, it will take some little time because they are quite irregular.

Q. Are the dimensions as shown in Exhibit 48 for this plot?

A. Yes. It includes the whole block running from 11th Avenue on the east to the end of the pier on the west, from the north side of 41st Street to the south side of 42nd Street, and my value——

Q. One minute. Have you the dimensions there, the exact dimensions?

A. I have the dimensions of the land.

Mr. Burr: I think we had better have the dimensions.

The Witness (continuing): The dimension on 11th Avenue is 197 feet and 6 inches. The distance on each street is 1,051 feet and 4 inches of the upland, and 400 feet approximately of the land under water to the exterior line of 13th Avenue, and the dimension on 13th Avenue is 197 feet 5 inches, that is the westerly dimension.

Q. Is the frontage on the 41st Street line quite 1,051 feet 4 inches?

A. I make it so. I beg your pardon; I am in error. It is 1,050 feet and no inches.

Q. On 41st Street?

A. Yes, sir.

Q. Now, will you state your valuation for this parcel?

A. $1,166,000.

1082 Mr. Page: That is not separated, it is all together?

The Witness: It is all together.

Q. Please refer now to page 6 of Exhibit 48, and state the dimensions of the first parcel and your valuation?

A. The first parcel is the upland in the block bounded by 11th and 13th Avenues, 44th to 45th Streets, and together with the bulkhead the parcel is irregular. It begins at a point on the southerly side of 45th Street, distant 125 feet westerly from the southwesterly corner of 11th Avenue and 45th Street and runs thence southerly 100 feet 5 inches to the center line of the block; thence easterly 25 feet; thence southerly 100 feet 5 inches to the northerly side of 44th Street; thence 950 feet to the bulkhead line; thence further west a distance of 480 feet to the exterior line of 13th Avenue; thence northerly 200 feet to the prolongation of the southerly line of West 45th Street; thence easterly along the southerly line of 45th Street approximately 480 feet to the bulkheads; thence easterly again 925 feet to the point or place of beginning.

Q. Will you state your valuation for this parcel which you have described?

A. For the land and bulkheads, $910,000, and with the buildings $920,000.

Mr. PAGE: Give us the block numbers.

The WITNESS: The upland is block No. 1092, lots 1, 28, 38, 38½ and 39; the bulkhead is block No. 1107, lot 23.

Q. Now will you take the property of the company between 45th Street and 46th Streets, and west of Eleventh Avenue, and similarly describe it and give your valuation?

A. The property begins at a point on the southerly side
1083 of West 46th Street 300 feet west from the southwesterly
corner of Eleventh Avenue and 46th Street, runs thence southerly 100 feet 6 inches to the center line of the block; thence easterly 75 feet; thence southerly100 feet 5 inches to the northerly side of West 45th Street; thence westerly to the bulkhead line 825 feet; thence westerly to the exterior line of Thirteenth Avenue, approximately 480 feet; thence northerly along the exterior line of Thirteenth Avenue 197 feet 5 inches to the prolongation of the southerly line of 46th Street; thence easterly to the bulkhead; thence from the bulkhead along 46th Street to the point or place of beginning, 750 feet.

Q. What is your valuation for the parcel?

A. $800,000. The upland is Block No. 1093, lot 1, and the bulkhead is Block No. 1107, lot 28.

Q. Refer if you please to page 7 of Exhibit 48 and describe and give the value of the parcel between 62nd and 63rd Streets, First Avenue and Avenue A?

A. That is Block 1457 and lot No. 6, being 261 feet 5¾ inches on 63rd street, 266 feet 5¾ inches on 62nd street; the easterly line is 200 feet 10 inches and the westerly line is 200 feet 10 inches, not being a rectangle. The value of the lot alone is $175,000.

Q. Will you now take the parcel between 60th and 61st Streets fronting on the west side of Avenue A?

A. That is Block No. 1455, lot No. 13, being 200 feet 10 inches on the westerly side of Avenue A and 313 feet on both 60th and 61st Streets, and the westerly line *between* 200 feet 10 inches. My valuation of that land is $235,000.

Q. No buildings?

A. No building.

Mr. PAGE: Do you mean it is vacant?

The WITNESS: I am not valuing any buildings on that land. There are two old structures, though, of some kind or other, frame shanties.

1084 Mr. PAGE: I mean it is practically vacant.

The WITNESS: Yes.

Q. Take next the parcel at the northeast corner of Avenue A and 60th Street.

A. That is Block No. 1474, lot 24, being on the westerly side of Avenue A and fronting on that avenue 114 feet 5 inches, and on East 60th Street 64 feet, and approximately 30 feet at its northern end. The value of that lot is $27,000, land alone.

Q. Will you now look at page 8 of Exhibit 48 and give *you* the dimensions and value of the parcel between the Hudson River Railroad, West End Avenue and 65th and 66th Streets.

A. The block is No. 1177, lot No. 21. The dimensions are 343 feet 9 inches on 66th Street, 200 feet 10 inches on West End avenue, 299 feet 9 inches on 65th Street and approximately 213 feet on the railroad tracks. My value is $191,500.

Q. Take next the block bounded by West End and Amsterdam avenues, 65th and 66th Streets.

A. That is the entire block between those avenues and those streets. The size is 200 feet 10 inches by 800. I should say the block No. is 1157 and the lot number 1. My value of the entire block is $703,000.

Q. Please take the next parcel on the south side of 56th street, a small parcel about 100 feet square.

A. That is in Block 1156, lots 45 and 46. The dimensions are 100 by 100 feet 5 inches. Land alone I value at $34,500, and with the buildings $41,500.

Q. Please turn now to page 9 of Exhibit 48 and give the dimensions and valuation of the property of the company bounded by First and Second Avenues, 98th and 99 Streets, land only?

A. That is Block 1670, lot No. 1. The size of the plot is 201 feet 10 inches on the avenues by 650 feet on the streets, and my value is $667,500.

1085 Q. Will you take next the plot bounded by First Avenue and the marginal street, and 98th and 99th Streets?

A. Block 1692, lot No. 1. The parcel is 201 feet 10 inches on First Avenue, 370.57 feet on 99th Street, 212 feet roughly on the marginal street, being a diagonal line, and 270.24 feet on 98th Street. My value for the land alone is $255,000.

Q. Please turn to page 10 of Exhibit 48 and give the dimensions and value of the property of the company between 111th and 112th Streets?

A. That is block 1683, lots 18, 34 and 35. The parcel begins at the northwest corner of First Avenue and East 111th Street, and runs thence westerly 225 feet; thence northerly 201 feet 10 inches to the southerly side of East 112th Street; thence easterly 50 feet; thence southerly 100 feet 11 inches to the center line of the block; thence easterly 75 feet; thence southerly 25 feet, more or less; thence easterly

100 feet to First Avenue and thence southerly 75 feet 11 inches to the point or place of beginning. My valuation is $121,000.

Q. Land only?

A. Land only.

Q. We will take next the plot between 110th and 111th Street-, fronting on the easterly side of First Avenue?

A. Block No. 1682, lots 8 and 11, being 201 feet 10 inches on First Avenue and 475 feet on each street with a westerly line of 201 feet 10 inches. My value is $450,000 for the land only.

Q. Will you now take the block between First and Pleasant Avenues, 110th and 111th Streets?

A. Block 1704, lot No. 1, being the entire block between First and Pleasant Avenues and 110th and 111th Streets, fronting 201 feet 10 inches on the avenues, and 613 feet on the streets. My value for the land only is $491,500.

Mr. Burr: On the diagram I notice the dimensions are given on Pleasant Avenue as 155.28 feet. Is that right?

Mr. Mathewson: No.

1086 The Witness: I cannot find that has anything to do with the real estate in possession, Mr. Burr.

Mr. Mathewson: That goes to another line. It is cut in, you will notice, about a quarter of an inch below the bottom.

Q. Will you next take the parcel between Pleasant Avenue and the bulkhead line and between the lines of 110th and 111th Streets?

A. That bulkhead is 212 feet long, and the bulkhead, together with the land under water out to the bulkhead line I value at $71,000.

Mr. Page: Is there any block number for that parcel?

The Witness: Yes, block 1712, lot No. 2. I believe that is correct, but I am not quite sure.

Q. Will you now look at the parcel on page 11 of Exhibit 48, between 132nd and 133rd Streets, 12th Avenue and the Boulevard?

A. That is block No. 1999, lot No. 1. Beginning at a point on the southerly side of West 133rd Street, running 125 feet westerly from the southwesterly corner of Broadway and 133rd Street and running thence westerly 650 feet to 12th Avenue; thence southerly and along the easterly side of 12th Avenue 199 feet 10 inches to the northerly side of West 132nd Street; thence easterly along the northerly side of 132nd Street 675 feet to a point 100 feet westerly from the northwesterly corner of Broadway and 132nd Street; thence northerly 99 feet 8 inches to the center line of the block; thence westerly 25 feet; thence northerly 99 feet 8 inches to the point or place of beginning, being the southerly side of West 133rd Street.

Q. The Boulevard is now known as Broadway?

A. Yes.

Q. What is your valuation for that parcel?

A. $455,500.

1087 Q. Will you now look at the parcel on page 12, Inwood Station, fronting in part on Sherman Avenue and part on

Kingsbridge Road. Are the dimensions which appear in this exhibit real dimensions?

A. They correspond with the tax maps.

Q. And you believe them to be the real dimensions?

A. I do.

Q. Will you state the value of that land?

A. $89,000.

Mr. Page: What are the block and lot numbers?

The Witness: Block No. 2175, and lot- 15, 18, 22 and 100.

Q. Does that include all the land in Manhattan which you have valued?

A. Yes.

Q. And will you state the total of the valuation?

A. The total of the valuation in Manhattan is $15,664.500.

Mr. Page: Is that of land alone?

The Witness: Land and buildings, such buildings as were valued.

Q. I understand that in this valuation you included no buildings which were any part of the manufacturing or distributing plant of the Consolidated Gas Company?

A. That is so.

Q. Have you placed a valuation upon the Shady Side property of the Consolidated Gas Company, which is shown on page 5 of Exhibit 48?

A. I have.

Q. What is its value?

A. $300,000.

Mr. Page: I wish to note an objection, that there is no evidence that the Shady Side property is used in any way for the gas making business of the Consolidated Gas Company.

The Master: I overrule that objection for the present.

1088 Mr. Page: Exception.

Mr. Burr: I make the same objection and exception.

Q. And the grand total, including the Shady Side and the Manhattan property as valued, is how much?

A. $15,964,500.

Q. Have you personally inspected and examined all these parcels?

A. I have.

Q. Made a study of the records of your office in addition to your experience as to sales and purchases in Manhattan?

A. I have.

Q. With particular reference to the value of these particular parcels?

A. Yes.

Q. And are the values which you have stated to the best of your judgment the real values of the properties?

A. Yes.

Mr. Mathewson: That is all,

Cross-examination by Mr. Page:

Q. If you will turn back to page 1 of your map; referring to Block 1643, lots 56, 57 and 58, which you valued at $93,000; tell me how you arrived at that result?

A. I take a unit of value, the unit being 25 feet by 100.

Q. That is known as a city lot?

A. Known as a city lot, yes, at $21,000. I allow in excess of that amount 60 per cent., for the corner 25 feet, making a total for the corner lot of $33,600. That leaves a frontage on Lexington Avenue of 75 11/12 feet, valued at the rate of $21,000 for every 25 feet or $840 per front foot, which multiplied by the number of front feet makes $63,697, or a total for a plot 100 feet 11 inches by 100 feet deep of 97,297 feet. The plot being 80 feet deep, it is equal in my opinion to 91 per cent. of the whole, or $88,540. On acount
1089 of the size I add 5 per cent. or $4,427, making a total of
$92,967, which I have called $93,000.

Q. You add 5 per cent. for plottage, is that what it is called usually?

A. For plottage, yes.

Q. Now, upon what do you base your value of $21,000 a lot?

A. An inspection of the neighborhood and comparison in my own mind with other neighborhoods.

Q. Have you bought or sold property on 116th Street and Lexington Avenue?

A. I have not. I have sold nothing there.

Q. Have you made investigations as to sales that have been made?

A. I find very few, almost no sales.

Q. Is that entirely vacant land?

A. Yes.

Q. The next plot is Block 1642, lots 32 and 33.

A. Being the corner of Third Avenue and 114th Street. I take a unit of value on Third Avenue of $25,000 and on 114th Street at that point of $14,000. I allow as before 60 per cent. in addition to the unit of value for the corner, making the corner $40,000 and the interior 50 feet on the street 50 x 100 feet at $14,000 a lot makes $28,000 for the street lots, which added to the corner makes $68,000. For plottage I add 5 per cent., making a total of $71,400 and I called it $71,500. For the buildings I add $25,000, making a total of $96,500.

Q. You mean you would add a plottage of 5 per cent. for two lots?

A. No.

Q. Well two lots with an L-shaped parcel running up to the corner?

A. Three lots.

Q. Well, I say two lots with an L running to the corner?

A. Yes, sir.

Q. Have you bought or sold property in that immediate neighborhood?

A. Not close to that, no.

Q. I notice that you valued the buildings on this last plot, Block 1642?

A. Yes.

Q. What are they used for?

A. Offices. The Third Avenue building is used for Offices.

1090 The 114th Street building is used for storage and repairs to meters, gas ranges and such things.

Mr. MATHEWSON: Offices of the Consolidated Gas Company?

The WITNESS: In that section, yes.

Q. How large are the buildings, how many stories?

A. The buildings cover the Third Avenue lot and the entire 114th Street plot with the exception of 10 feet in the rear and that 10 feet I believe to be covered with a one-story extension which is sky-lighted. The buildings are two, three and four stories high and are of brick.

Q. And what value did you place upon the buildings aside from the land?

A. $25,000.

Q. We will take block 870?

A. That is the southeasterly corner of Irving Place and 15th street?

Q. Yes.

A. I place the unit of value on Irving Place at $45,000, and on 15th Street $27,000, and add sixty per cent. for the corner in addition to the unit of value, making $72,000 for the corner. There are left 59 interior feet on Irving Place, each 100 feet deep, which at $1,800 per front foot, equalling $45,000 a lot, figures to $106,200. On 15th Street there are 55½ feet, which at the rate of $27,000 per lot or $1,080 per front foot, figures $55,444. The total is $233,644. For plottage I have added ten per cent., making a total of $257,000, which was my value of the land alone, and to that I add $43,000 for the buildings, or a total of $300,000.

Q. How did you arrive at the value of the buildings?

A. I put a figure that I thought the buildings would bring in a sale.

Q. How much is the building?

A. There are three buildings.

1091 Q. Well?

A. The corner is 41 feet 3 inches on Irving Place and 61 feet on 15th Street.

Q. How many stories is that?

A. That is five, and two and one stories in the rear. The greater part is five stories. The next building to the south on Irving Place is 25 feet front and 92 feet deep. I am in error. The height of the corner building is three stories. The height of the next building to the south on Irving Place is five stories, and the size of the third building which faces on 15th Street is 23 by 50, and its height is four stories.

Q. Is it a brick building?

A. Yes, brick and brownstone.

Q. Brownstone front?

A. Brownstone front.

Q. All three of the buildings, or just that one?

A. The corner building is brownstone front on both 15th Street and Irving Place, and the others are brick.

Q. Have you either bought or sold property in this immediate neighborhood?

A. I have sold property comparatively near this.

Q. How near?

A. I sold the southwest corner of 20th Street and Irving Place to Columbia College for the estate of Mr. Luther Clark. I have also sold 2 East 16th Street. I also sold the southwest corner of East 17th Street and Fifth Avenue. I think that is all in this immediate neighborhood.

Q. The price at the southwest corner of Fifth Avenue and 16th Street, or whatever the street was, would not give you much of a guide on Irving Place, would it?

A. Not very much, no.

Q. The relative differences between the values on Fifth Avenue and Irving Place are very great, are they not?

A. Yes.

Q. How recent was that sale that you spoke of that you made at the corner of Irving Place and 20th Street?

A. That was a year ago.

1092 Q. What corner of 20th Street was that?

A. Southwesterly corner.

Q. Was that the Bergen house?

A. No, it was the old Clark house, and we sold it to Columbia College and they used it for a club; a four-story house with a stable in the rear.

Q. Did you give the date of that sale?

A. No, I can furnish it, but it was in August, last year.

Q. That is near enough. What price did you get for that building?

A. $150,000, 40 feet by 134 feet; 40 feet on Gramercy Park.

Q. This plot that you sold faces Gramercy Park?

A. Yes, sir.

Q. And is a large, handsome residence, is it not?

A. Old-fashioned.

Q. Nevertheless, large and handsome?

A. Yes, it was.

Q. And, relatively, property so situated would be of much larger value than this at 15th Street and Irving Place?

A. No, considerable less.

Q. It would be of less value?

A. Considerably.

Q. Now, we will take Block 239?

A. That is at the corner of Hester and Elizabeth Streets. I place a unit of value on Hester Street of $25,000, and on Elizabeth, $22,000. I allow 60 per cent. in addition to the unit value for the corner, making the corner 100 by 100, $110,400; for the two lots on Elizabeth Street, $44,000, or a total of $154,400. Add ten per cent. for size, or $169,840. I have called it $170,000. I add $22,000 for the building, making the total land and building, $192,000.

Q. What is that property used for?

A. The offices of the Gas Company; and on the Hester Street front and the rear of Elizabeth Street, gas ranges, meters, wagons, etc.

Q. It is all used for the purposes of the company?

A. As far as I can see.

Q. Have you sold property or dealt in property in this 1093 immediate neighborhood?

A. Fairly close. Numbers 243 and 245 Canal Street, between Elm and Center, was sold by our office in March, 1906.

Q. Well, now if you will turn to No. 972. That is on page 2, an irregular piece?

A. Yes. I place a unit of value at that point at $12,000. I divide the plot and take 13 feet 3 inches frontage by 100 feet in depth at the rate of $12,000 a lot. That figures to $6,360. I add for depth an arbitrary sum of $200, the plot being 6 feet in excess of 100.

Q. How do you arrive at that?

A. Simply what I thought it was worth.

Q. You did not apply any rule as to the value of interior property?

A. No, I did not.

Q. Proceed.

A. $6,560 for that strip. Then I find the value of the front plot facing on 15th Street, being 137 feet front by 92.6 feet depth, with a southerly line of 165 feet 4 inches; I find that lot to be $40,771. I then find the value of the entire plot, 137 feet by 103 feet 3 inches, and I figure that up $67,760. I then subtract the first value from the second and reach a figure of $26,989 for the triangular interior property, which, added to a lot 13 feet 3 inches by 106, makes the total value $33,549. I then subtract by reason of the shape, $3,500, which gives $30,049. I call it $30.000.

Q. In arriving at these values do you apply any rules as to valuation? I mean the differences to be allowed for interiors and exteriors?

A. Yes, I have used in general the Hoffman scale.

Q. But you did not use that in this instance?

A. No, the reason being that it was a small lot, only 13 feet wide, and the extra depth, 106 feet, made less difference to that lot than it would to a wider lot. If it had been wider I should have used the Hoffman scale. This is probably about one-half the amount of the Hoffman scale.

1094 Q. Are there any buildings at all on this property?

A. Sheds, I think, as well as I could see.

Q. Take No. 985.

A. I put a unit of value for a lot of 25 by 92, which is the standard lot in that block, at $8,500; there being 28 lots at that figure, the total is $238,000, and with 10 per cent. for plottage added, a total is reached of $261,800. I make it $261,500.

Q. For what purpose is that occupied?

A. There are holders on a portion of it, and I think there are buildings used in connection with the holders on the rest. The land is pretty well taken up with holders.

Q. The tract at East 17th and 18th Streets, between Avenues B and C; that is the particular tract that you have been testifying to?

A. This one, yes.

Q. Did you appraise the value of the land for the use to which it is now put, or what would be its value if the holders were removed, and merely the lots were there?

A. I estimated what it would sell for, what I believe it would sell for today.

Q. If the holders were removed?

A. I am only concerned in the land alone.

Q. Yes, but you mean what it would sell for as vacant land.

A. What it would sell for as vacant land today.

Q. Have you dealt in property between Avenues A and B and 17th and 18th Streets?

A. I have sold about fifty lots over there for John Jacob Astor, to tenants in the block bounded by 14th and 15th Streets, First Avenue and Avenue A; the north side of 15th street and on Avenue A; I have also sold 316 East 19th street, 51 Avenue B, and 127 to 131 Avenue A.

Q. Property in this immediate neighborhood?

A. Yes.

Q. Take the next tract, which is 982.

A. My unit of value for a lot on 15th Street is $10,500;
1095 unit of value for a lot on 14th Street, $12,000; unit of value
for a lot on Avenue C, $10,500. Do you wish me to go
through the process?

Q. Yes.

A. Taking 15th street, there are 334 interior feet at $10,500 per lot, or at the rate of $420 per front foot; total for 15th Street frontage, $140,280. Taking 18th Street frontage, 334 feet 10 inches, at the rate of $12,000 per lot, is $480 per front foot; total, $160,720; Avenue C, 203 feet 6 inches front; 15th Street corner, $10,500, with 50 per cent. added for the corner, making a total for that corner of $15,750. At 14th Street corner the same figuring, adding for the fact that it is at the corner of 14th Street and Avenue C, $17,000; interior 156 feet 6 inches at the rate of $10,500 per lot, or $420 per front foot, $65,730, or total for the Avenue C frontage, including 14th Street and 15th Street corners, $98,480. Total for the plot, $399,480, to which add 10 per cent., making a total of $439,428, which I have called $439,500.

Q. This property has holders on it also, has it?

A. Holders, yes, and some buildings used in connection with the holders.

Q. Now, have you sold property in the immediate neighborhood of this plant?

A. This is only one block away from the other, so that I thought the property that I sold near the other might apply to this neighborhood.

Q. These properties that you sold, were they opposite gas works?

A. Not in any case.

Q. Turn to No. 989.

A. Facing on Avenue C, from 15th to 16th. My unit of value for Avenue C is $9,000 and for 15th and 16th Streets, $7,750. The Avenue C front is divided as follows: Two corners at $9,000 plus 50 per cent. in addition to the lot value makes $27,000, leaving 156½ interior feet, which at $9,000 per lot or $360 per front foot makes a total for interior, Avenue C, $56,340, or a total for
1096 the Avenue of $83,340. Fifteenth and 16th Streets, there
are in all 270 front feet, at the rate of $7,750 per lot, or $310 per front foot, equals $83,700, or a total for the property of $167,040; to which 10 per cent. is added, making $183,744, which I call $183,500.

Q. And this property is occupied by holders?

A. Holders.

Q. I understood you to say that you never have sold property in the immediate proximity of or opposite gas works?

A. Not opposite these gas works.

Q. Now, lot 26, on the same block?

A. That is the west side of Avenue D, from 15th to 16th Streets. I took one unit for the whole block, which is $7,000. On 15th and 16th Streets there are 182 interior front feet, at the rate of $7,000 per lot or $280 per front foot, total $50,960. On Avenue D there are 153½ feet of interior front, $7,000 per lot or $280 per front foot, total $43,820. The two corners at $7,000 apiece, plus 50 per cent., equal $21,000; for the total plot $115,780, to which I add 7 per cent. for size making $123,884, which I have called $124,000.

Q. There are no buildings on this property, are there?

A. There are no buildings there.

Q. Now, Block No. 991.

A. That is the entire block between Avenue D and Tompkins, 15th and 16th Streets. That is an irregular block and I divided it irregularly. The unit of value upon the marginal street I place at $8,000; the unit on Avenue D, 15th and 16th Streets I place at $7,000. The first lot is at the corner of Avenue D and 15th Street, 25 by 100, plus 50 per cent.; at a unit of $7,000, making $10,500 for that corner. There are 78 feet 3 inches of interior land, at $7,000 per lot or $280 a front foot, making $21,910, or a total for a plot in that location of 100 by 103 feet, of $32,410. The plot being 59 feet 2 inches deep, it is equal to 75 per cent. of the whole value, or $24,307.

1097 The next is the corner of the marginal street and 16th
Street, which I take at 25 by 112 feet; an average corner 25 by 100, at a unit of $8,000, plus 50 per cent. would make the corner $12,000; adding 5 per cent. for the extra depth, according to the Hoffman rule, or $600, makes a total for the corner of 25 by 112 of $12,600. Adjoining this are 81 interior feet on the marginal street, which at $8,000 per lot, or $320 per front foot, would total $25,920; the average depth of this plot being 81 feet by 129, I add 15 per cent., or $3,880, making a total for a plot 81 by an average of 129, of $29,800, which, added to the $12,600, being the value of the corner of 16th Street, makes a total for the marginal street of $42,400.

The next corner is the marginal street and 15th Street, being 25 by 100, at the unit of $8,000, plus 50 per cent., makes a total of $12,000. The depth of that corner being 144 feet I add 22 per cent. to the $12,000, making the total for that corner $14,640.

There are left 81 interior feet, which at $8,000 a lot or $320 per front foot makes a total of $25,920. The average depth of the plot of 81 feet being 128½ feet, I add 13 per cent., or $3,369, making a total for the plot 81 by an average of 128 of $29,289, which added to the corner of 15th Street and the marginal street makes a total for that frontage of $43,929.

The remaining plot is at the corner of 15th Street and Avenue D, size 100 x 100; a corner 25 x 100 at $7,000 per lot, plus 50 per cent., makes for the corner $10,500; there are 78 feet 3 inches interior feet, which at $7,000 per lot, or $280 per front foot, is $21,910. The total for the plot of 100 x 100, is $32,410, which added to the above makes a total of $143,046, add 10 per cent. for the entire block, and the total is $157,350, which I have called $157,500.

1098 Q. This property is used for yards?

A. Storage and yards.

Q. It is vacant property?

A. There are no buildings on it.

Q. That is what I mean. The next is in the same block No. 991, lots 1 to 47?

A. I put a unit of value on the marginal street of $8,500, on 14th Street $8,000, on 15th Street $7,000, and on Avenue D $8,000. The first lot is one at the corner of 15th Street and Avenue D, facing 100 feet on 15th Street and 103 feet 3 inches on Avenue D, the corner 25 feet at the rate of $8,000 per lot, plus 50 per cent. is $12,000. There are left 78.3 interior feet, which at the rate of $8,000 a lot, or $320 per front foot, makes a total of $25,040, or a total for the plot 100 feet by 103 feet 3 inches of $37,040.

The next plot is 78 feet 7 inches by 103 feet 7 inches, on the south side of 15th Street, 78½ feet at $8,000 per lot, or $280 per front foot, making a total of $21,980.

The next lot is 100 feet on 15th Street and 106 feet on the marginal street, 146 feet 3 inches on the center line of the block and 103 feet 3 inches on the westerly line; the corner 25 feet by 100, plus 50 per cent., $12,750; the average depth being 110 feet, I have added 5 per cent., or $637, making a total for that corner lot of $13,387.

There remain 81 interior feet by 100 feet deep, at $8,000 per lot or $340 a front foot, equals $27,540; the average depth being 129 feet I have added 15 per cent., making a total for that plot of $31,671, which added to the corner of 15th Street and the marginal street makes a total for the half block on the marginal street of $45,058.

The next plot is the corner of 14th Street and the marginal street, being 106 feet on the marginal street and 100 feet on 14th Street.
A corner 25 by 100 plus 50 per cent., at the rate of $8,500
1099 per lot, is $12,750, and the 81 interior feet at $8,500 per lot,
or $340 per front foot, is $27,540; making a total for that
parcel of $40,290.

The next parcel faces 92 feet 6 inches on 15th Street, and 46 feet 3 inches on the center line of the plot, the average width being 69.33 feet, which at the rate of $320 per front foot, which is at the rate of $8,000 per lot, makes a total of $22,185. Then, on account of the extra width in front, I add $5,000, making a total of $27,185 for that parcel.

The next parcel is 78 feet 7 inches on 14th Street by 103 feet 3 inches; 78 feet 7 inches at a unit of $8,000, or $320 per front foot makes a total for the parcel of $25,120.

The next parcel and last is the corner of 14th Street and Avenue D, 100 by 103 feet 3 inches on the avenue corner; 25 by 100 plus fifty per cent., at a unit of $8,000, makes $12,000. The interior 78 feet 3 inches at $8,000, or $320 per front foot, makes a total of $25,040, making a total for the parcel of $37,040. These added together make a total for that block of $233,713, to which add 10 per cent, for size, $257,084, which I call $257,000.

Q. And that plot is used for what purpose?

A. Coal.

Q. Coal storage?

A. Yes.

Q. Now we will take Block No. 988, the entire block.

A. I place a unit on Avenue C of $10,000; on 15th Street $8,000; Avenue D, $8,000, and 14th street, $10,000.

The first is the Avenue C frontage, the 15th Street corner plus fifty per cent., at unit of $10,000, making $15,000 for the corner.

The 14th Street corner is the same, plus $1,000; the inside 156 feet 6 inches, at the rate of $10,000 per lot, or $400 per front foot, is $62,600; making a total for the Avenue C frontage of $93,600.

On 15th Street there are 476 interior feet, at $8,000 per lot,
1100 or $320 per front foot, makes a total for 15th Street of
$152,320. On 14th Street, including the 14th Street half of the Avenue D frontage, there are 576 feet, of which 25 feet is the corner; the corner plus fifty per cent. equals $15,000, at the rate of $10,000 per lot.

There are left 551 interior feet, which at $10,000 per lot, or $400 per front foot, equals $220,400, or a total for the 14th Street and half of the Avenue D frontage, $235,400. The Avenue D and 15th Street corner, at the rate of $8,000 per lot, plus fifty per cent., equals $12,000. The interior 78 feet 3 inches at $8,000 per lot, or $320 a front foot, makes a total of $25,040, or total for the Avenue D frontage of $37,040, making a total for the block $518,360, which I have added because of the entire block being in one ownership, 12 per cent., making a total of $580,560, which I have called $580,500.

Q. That block is covered entirely by the works of the gas company?

A. Entirely by the works of the gas company.

Q. What has been your experience in handling bulkhead property?

A. I have never managed any, I have never leased any; I have sold one long one.

Q. Was that in the City of New York?

A. That was in the City of New York, and I have heard testimony in condemnation proceedings for the acquirement of bulkhead property; I have read the testimony given by various witnesses in condemnation of various bulkhead properties; I know from the records in the Comptroller's office some of the prices paid for bulkheads along the East and North Rivers; also for land under water in connection with those bulkheads.

Q. Where was this property which you sold, the long bulkhead?

A. 215th Street and 218th Street, in the Harlem ship canal, an irregular piece of property in the neighborhood of 1100 feet long.

1101 Q. Was that improved?

A. It was bulkheaded.

Q. Will you state what calculation you made in regard to this particular bulkhead property?

A. I consider the bulkhead between 14th and 15th Street is 225 feet long, and I take the front foot value for that particular bulkhead of $375, or a total for the bulkhead between 14th and 15th Streets of $84,375; for the bulkhead between 15th and 16th Streets, being 225 feet long, I take a value of $350 a front foot, making a total of $78,750, making a total of $163,125 for the two bulkheads from 14th to 16th Streets, exclusive of 15th Street.

Q. Turn to Exhibit 49, have you made any calculation of this property, divided to show the difference between page 3 of Exhibit 48 and the entire plot as shown on Exhibit 49?

A. I have figured the value of the property as shown on Exhibit 48, and also shown on Exhibit 49. I have not got the difference in values in each plot. I can readily get them.

By Mr. MATHEWSON:

Q. You could give the totals?

A. I could give the totals of each.

By Mr. PAGE:

Q. You have not as yet given that in the testimony? I have given it as before the proceedings began.

Q. So that your testimony in relation to the property between 16th Street and 20th Street west of 10th Avenue would relate to the property entirely as it appeared on Exhibit 49?

A. Yes.

Q. Now, you might take up Block No. 688.

A. As described above?

Q. Yes.

1102 A. The block between 16th and 17th Streets, 10th Avenue and 11th Avenue, I place a unit value on 11th Avenue of $12,500, on 10th Avenue, $15,000, on 16th Street, $11,500, 17th Street, $11,000; taking first the 10th Avenue frontage there are two corners which at the rate of $15,000 per lot plus 50 per cent. or $15,000, equal $45,000; there are 134 interior front feet which at the rate of $15,000 per lot or $600 per front foot will make $80,400, or a total for the 10th Avenue frontage of $125,400. 11th

Avenue frontage, there are two corners which at the rate of $12,500 per lot plus 50 per cent. equals $37,500. There remain 134 interior feet which at the rate of $12,500 per lot or $500 per front foot equals $67,000 or a total for the 11th Avenue frontage of $104,500. On 16th Street there are 24 lots which at the rate of $11,500 per lot equals $276,000; minus 3 per cent. on account of the lots being short, making on 16th Street frontage $267,720. On 17th Street frontage there are 24 lots which at the rate of $11,000 per lot equals $264,000, from which 3 per cent. is deducted on account of the lots being short, making the total for the 17th Street frontage $256,080, making a total for the block of $753,700, to which is added because of the one ownership of the block 12 per cent., or a total of $844,144, which I have called $844,000.

Q. Now, generally, have you dealt in property in this immediate neighborhood?

A. Fairly close to this.

Q. And have you taken your unit of value for these properties as based upon those that you have dealt in in the immediate neighborhood?

A. I have given those consideration.

Q. Were any of those properties opposite a gas works?

A. No. Not these gas works.

Q. Were they opposite any gas works?

A. No, they are not. The properties I sold in this section are not opposite gas works.

1103 Q. Now, if you will take Block 689.

A. That is the block between 17th and 18th Streets, Tenth and Eleventh Avenues, I think. My unit for Eleventh Avenue is $12,000, for Tenth Avenue $14,500, for 17th Street $11,000 and for 18th Street $10,500. Taking first the Tenth Avenue frontage, there are two corners which at $14,500 per lot, plus 50 per cent., equal $43,500. There are 134 interior front feet, which at $14,500 per lot, or $580 per front foot, equal $77,720, or a total value for the Tenth Avenue frontage of $121,220. On the Eleventh Avenue frontage there are two corners which at $12,000 per lot plus 50 per cent. equal $36,000. There are 134 interior front feet, which at $12,000 per lot, or $480 per front foot, equal $64,320, or a total for the Eleventh Avenue frontage of $100,320.

On 17th Street there are 24 lots at $11,000 per lot, which equal $264,000, minus 3 per cent. because of the shortness of the lots, making $256,080. On 18th Street there are 24 lots at $10,500 per lot or $252,000 less 3 per cent. for the shortness of the lots, making $244,440 for the 18th Street frontage; total for the block $722,060, adding for size 12 per cent. we have $808,707, which I have called $808,500.

Q. Now take Block 690.

A. That is the block next north, isn't it?

Q. Yes.

A. The Tenth Avenue unit is $14,000, the unit for 18th and 19th Streets is $10,500. Taking first the Tenth Avenue frontage there are two corners at the rate of $14,000 per lot plus 50 per cent., which equals $42,000. There are 134 interior front feet which at $14,000 per lot or $560 per front foot equals $75,040, making a total for the Tenth Avenue frontage of $117,040. On the 18th Street frontage there are 17 lots at $10,500 per lot, or a total of $178,500, less 3 per cent. for the shortness of the lots, which makes a total for the 18th Street frontage of $173,145. On 19th Street there are 12 1104 lots owned by the Gas Company, at $10,500 per lot, making $126,000, less 3 per cent. on account of shortness of lots, which makes a total for 19th Street frontage of $122,220, or a total for the block of $412,405, to which is added 10 per cent., making $453,645, which I have called $453,500.

Q. The next is Block 691.

A. Being between 19th and 20th Streets. My unit of value on Eleventh Avenue is $12,000, on 19th Street, $10,500, and on 20th Street, $11,000. Taking the Eleventh Avenue frontage first, there are two corners which at $12,000 per lot plus 50 per cent. equal $36,000. There remain 134 interior front feet which at $12,000 per lot or $480 per front foot equal $64,320, or a total for the Eleventh Avenue frontage of $100,320. On 19th Street, there are ten lots at $10,500, which equal $105,000, less 3 per cent. on account of shortness of the lots, or a total for 19th Street of $101,850. On 20th Street there are ten lots at $11,000, making $110,000, less 3 per cent. on account of the shortness of the lots, which equal $106,700, or a total for the plot of $308,870, plus 10 per cent. for size, making a total of $339,757, which I have called $340,000.

Q. Now take 666.

A. Being block between 16th and 17th Streets, Eleventh and Thirteenth Avenues. My unit of value is $12,000, but because all the lots have frontage on streets or avenues, I increase the unit by 50 per cent., making the unit $18,000. There being a total of three and one-half lots, and a lot being worth $18,000, I figure the total to be worth $63,000. I add nothing for size, because the block is very small.

Q. You say your unit of value is $12,000?

A. Yes.

Q. How do you arrive at that?

A. $12,000?

Q. Yes; that is, a lot 25 by 100, situated where, would be worth $12,000?

1105 A. Fronting on one or the other avenue, either Eleventh or Thirteenth Avenue. It is a hypothetical lot.

Q. Proceed.

A. The next block, 17th and 18th Streets and Eleventh and Thirteenth avenues, my unit of value is $12,000. This is lot 12, block 666. On the Eleventh avenue frontage there are two corners at $12,000, plus fifty per cent., which equal $36,000. There are 134 interior front feet which at $12,000 per lot, or $480 per front foot, equal $64,320, or a total for that frontage of $100,320. The lots being 80 feet deep I consider them worth 91 per cent. of the total value, or $91,291.

There remains a parcel 42 feet on 18th street by 188 feet, 9 inches on 13th Avenue, being the entire 13th Avenue frontage. This plot has an average width of 21 feet and a depth of 184 feet, making a total of 3,864 square feet, of which amount 2,500 square feet are taken out for a corner, which at the rate of $7.20 per square foot, or $12,000 per lot, equal $18,000. There remain 1,364 inside square feet at $4.80 per square foot, making $6,547, or a total of $115,838, adding 10 per cent. for size, equals $127,421, which I have called $127,500, which makes an average lot value, including corners, for the plot of $15,525, or an average square foot value of $6.21.

Q. Now omitting the bulkheads as you will probably be examined by the city on that, take Block 716, lot 14.

A. What location is that?

Q. That is east of 10th Avenue.

A. I have it. My unit of value is $13,500, the plot being 75 by 92. I consider the plot as being 100 feet in depth and at $13,500 per lot would make $40,500, less three per cent. on account of the shortness of the lots, or a total of $39,285, plus five per cent. for size, making a total for the plot of $41,249. I have made this $41,500 and I add $4,000 for the buildings, making a total of $45,500.

Q. What buildings are on this property?

1106 A. On the east side there is a two-story building and stable, approximately 25 by 92, in which there are 12 stalls on the ground floor, with hay above. On the west side there is a two-story brick building in front of that lot, used as a garage on the ground floor; the size of the building is 25 by 28, more or less. The second floor is used by the foreman for living rooms, and in the rear of this building there are sheds built of frame with tar roofs.

Q. You value the——

A. All those buildings at $4,000.

Q. You figure the buildings in to make it $45,500?

A. Yes, sir.

Q. Now we will take the plot on the opposite side of the street, being Block 715.

A. The unit of value is $13,500. There are nine lots at that rate, making $121,500, less three per cent. on account of the shortness of the lots, making a total of $117,855, and adding to this eight per cent. on account of size equals $127,283, which I have made $127,500.

Q. Block 951, on page 4 of Exhibit 48, take that next?

A. Being on the south side of 20th Street, west of Avenue A, the unit value is $9,000. There are 176 interior front feet, which at the rate of $9,000 per lot, or $360 per front foot equals $63,360, less 3 per cent. depth, making a total of $61,460, to which is added 7 per cent. for size, or a total of $65,762, which I call $66,000. For the buildings I add $10,000, making a total of $76,000.

Q. What are the buildings there?

A. On the front of the lot there is a two-story brick stable 176 feet long by about 30 feet deep, in which there are 104 stalls used by the Consolidated Gas Company, with hay and grain stored above. The brick walls are unfinished; the building is about 30 years old.

Around the rest of the plot and about 15 feet deep there are a series of sheds built in 1903.

1107 Q. Now, you may proceed with the next, being block No. 952?

A. Being on the west side of Avenue A, running from 20th to 21st Street. The unit value on Avenue A is $11,000, on 20th Street $9,000, and on 21st Street $9,500. Taking first the Avenue A frontage, there are two corners, which at the rate of $11,000 per lot, plus 50 per cent., equals $33,000. There are left 134 interior front feet, which at $11,000 per lot, or $440 per front foot makes a total of $58,960, and added to the two corners makes a total for the Avenue A frontage of $91,960. On 20th Street there are 417 interior front feet, which at the rate of $9,000 per lot, or $360 per front foot equals $150,120; deducting 3 per cent. depth, we have $145,617. On 21st Street there are 417 interior front feet, which at $9,500 a lot, or $380 per front foot, makes a total of $158,460, from which I have deducted 3 per cent. for depth, or a total for the 21st Street frontage of $153,707, to which is added ten per cent. for plottage, or $430,412, which I have called $430,500, and I have added $9,000 for the buildings, making a total of $439,500.

Q. What buildings are there on that?

A. The buildings are Nos. 333 and 335 Avenue A. No. 333 is approximately 20 by 50 on lot 20 by 68, a four-story brick tenement, very old, but has been painted and papered, and the plumbing has been made to conform to the law. There is one tenant on each floor. Each tenant has four rooms. The interior rooms are lighted by shafts, and 335 Avenue A has a building on lot 19 by 68, building 19 by 50. It is an old four-story brick tenement, painted and papered and occupied, and the condition is fair.

Q. Is that all the buildings there are on that plot?

A. Yes. Those were tenement houses in each case. I have the rents here if you wish them.

Q. Well, what are the rents?

1108 A. The rent of 333 Avenue A is $4,500, and the rent of 335 Avenue A is nothing. I understand it is occupied by the foreman of the works.

Q. You say the rent is $4,500?

A. Of that building.

By Mr. Mathewson:

Q. What building is that?

A. 333 Avenue A.

By Mr. Page:

Q. You value the two buildings at $9,000, and one of them rents for $4,500?

A. I value the two structures.

Q. At $9,000?

A. Yes.

Q. And one of them rents for $4,500?

A. One of the buildings with the land on it rents for $4,500.

Q. How much do you get a floor for four rooms on a floor in that neighborhood?

A. The first floor rents for $8, the second floor for $10.50, the third floor for $11.50, and the fourth floor for $11.50, making a total of $41.50.

Q. And that multiplied by 12 is how much?

A. Why, that would be $498 a year.

Q. Now take No. 953.

Mr. **Mathewson**: That No. 335 which the witness mentioned is the lot which I stated yesterday was occupied by the foreman of the works as part of his compensation. The rental the witness has given is of No. 333.

The **Witness**: Block No. 953, the unit on First Avenue is $16,000, on Avenue A, $12,000, on 21st Street, $9,500, and on 22d Street, $10,000. Taking first the First Avenue frontage, there are two corners at $16,000 per lot, plus 50 per cent., or a total of $48,000. There are left 147½ interior front feet which at $16,000 per lot or
$640 per front foot make a total of $94,400, or a total for the
1109 First Avenue frontage of $142,400. On the Avenue A front-
age there are two corners, which at the unit of $12,000 per lot or $480 per front foot plus 50 per cent. equal $36,000. There are left 147½ interior front feet, which at the rate of $12,000 per lot or $480 per front foot equal $70,800, or a total for Avenue A of $106,800. On 21st Street there are 413 interior front feet, which at $9,500 per lot or $380 per front foot equal $156,940. On 22d Street there are 413 interior front feet, which at $10,000 per lot or $400 per front foot equal $165,200, or a total of $571,340, to which is added 12 per cent. for the ownership of the entire block, making a total of $639,900, which I have considered as $640,000.

Block No. 979, lot No. 1, being the block bounded by 21st Street, 22d Street the marginal street and Avenue A. The unit of value of the marginal street is $11,000, of 22d Street it is $8,500, on 21st Street $8,000 and on Avenue A $12,000. Taking first the Avenue A frontage, there are two corners at $12,000 per lot plus 50 per cent., which equals $36,000, leaving 147.5 interior front feet which at $12,000 per lot or $480 per front foot equals $70,800, or a total for the Avenue A frontage of $106,800. Next, the 22d Street frontage, there are 494½ interior front feet at $8,500 per lot or $340 per front foot, which equals $168,130. And on 21st Street there are 494½ interior — feet, which at $8,000 per lot, or $320 per front foot, equal $158,240. The last is the frontage on the marginal feet, being 165.55 feet on 21st Street, 197½ feet on the marginal street, which triangle has an area of 16,347 square feet, from which is deducted 5,000 square feet for two corner lots, which at the rate of $11,000 per lot, plus 50 per cent., equals $33,000, leaving 11,347 square feet, which at the rate of $11,000 per lot, or $4,40 per square foot, equal $40,926, or a total for the block of $516,096, to which is added 12
per cent. for plottage, making a total for the block of $578,-
1110 027, which I have called $578,000.

The next is Block 978, being the block bounded by 20th and 21st Streets, Avenue A and Avenue B, with the exception of a

lot 23 by 70 in about the center of the Avenue A frontage. The unit on Avenue A is $11,000, on Avenue B $9,500 and on 21st and 20th Streets it is $8,000. The first is Avenue A, two corners at $11,000 plus fifty per cent. equals $33,000. There are 111 interior front feet at the rate of $11,000 per lot, or $440 per front foot equals $48,840. The rear of the lot is not owned by the gas company and is 23 by 30 feet. I consider this lot as 23 by 100. The value at $11,000 per lot is $10,120. The frontage of this lot is 23 by 70, which is equal to 84 per cent. of the above figure, or $8,500. The difference in value therefore between a lot 23 by 100 and the lot as shown, being 23 by 70, is $1620, or a total for the Avenue A frontage of $83,460. On the Avenue B frontage there are two corners at $9,500 per lot, plus fifty per cent., which equal $28,500. There are 134 interior front feet at $9,500 per lot, or $380 per front foot, which is equal to $50,920, or a total of $79,420. On 20th and 21st Streets, there are 932 interior front feet at $8,000 per lot or $320 per front foot, equaling $298,240, or a total for the block of $461,120, to which is added 12 per cent. plottage, which equals $55,334, making a total of $516,454, which I have called $516,500, to which is added $21,000 for the buildings. The buildings are Nos. 326 and 328 Avenue A. 326 Avenue A is the corner of 20th Street. The building is approximately 23 by 50, a four-story brick tenement, very old, but has this year been put in fair condition, being papered and repaired and one watercloset being put beneath the floor. Some new woodwork has been added. The store on the ground floor is leased and the upper part will be occupied
1111 by one family on each floor from the first of August. Each
floor has seven rooms and water closets. The rent of the building is $1,080 per annum. This particular piece I value at $7,000.

The Nos. 328 and 330 Avenue A are each 23 by 50 feet, more or less; they are old, brick tenements, recently painted and with water closet on each floor and an airshaft cut between them. There is one family on each floor and each has six rooms and a closet. The rent for a year of 328 is $960, and of No. 330 it is $876. I value each of these at $7,000.

The next plot is No. 987 and faces on Avenue B, marginal street, 20th and 21st streets. The unit of value, including corner, is $10,000. Dividing it into two plots, the first faces 84.54 feet on 20th and 21st Streets each, and 184 feet on Avenue B. The plot there is 15,548 square feet. In the second plot, which faces 154.24 feet on 20th Street and 184 feet on the marginal street, there are 14,190 square feet, or a total of 29,738 square feet, or 11.895 lots, which at $10,000 per lot equals $118,895, to which is added for plottage, ten per cent., making a total for the block of $130,784, which I have called $130,500.

The next is plot 1090, being on the north side of 42nd Street, west of Eleventh Avenue. Unit of value, $12,000; 150 feet by 100 feet 5 inches, at $12,000 per lot equals $72,000; plus for plottage 7 per cent., or a total of $77,040, which I have called $77,000.

The next is block 1071, plot on north side of 42nd Street, east of Eleventh Avenue. Unit of value, $14,000; plot 100 feet by 100 feet at $14,000 per lot equals $56,000; plus for plottage 7 per cent. equals $59,900, which I have called $60,000.

Block number 1070, being a plot on the north side of 41st Street, east of Eleventh Avenue. Unit of value, $10,000; 200 feet by 98 feet 9 inches, at $10,000 equals $80,000; plus for plottage 7
1112 per cent., or a total of $85,600, which I have called $85,500.

Block number 1089, being the entire block from Eleventh Avenue to the bulkhead line, 41st Street to 42nd Street; unit of value north one-half of Eleventh Avenue $12,000; south one-half of Eleventh Avenue $10,500; 42nd Street unit, $12,000; 41st Street unit, $7,000.

The first is 42nd Street frontage. From the east line of Twelfth Avenue to Eleventh Avenue, 701 feet 4 inches, at the rate of $12,000 per lot, or $480 per front foot, $336,600.

Eleventh Avenue, north one-half, corner 25 by 100 feet at the rate of $12,000 per lot, plus 50 per cent. equals $18,000. 73 feet 9 inches interior front feet at $12,000 per lot, or $480 per front foot, $35,400, or a total of $53,400.

Eleventh Avenue, south one-half, corner 25 by 100 feet, plus 50 per cent. at a unit of $10,500, equals $15,750. 73 feet 9 inches at $10,500 per lot, or $420 per front foot, equals $30,975, or a total for the south one-half of Eleventh Avenue, $46,725.

Forty-first Street, 700 feet at $7,000 per lot, or $280 per front foot equals $196,000.

From the east line of Twelfth Avenue to the bulkhead on 42nd Street there are ten lots at $12,000 per lot, or $120,000.

Forty-first Street, ten lots at $7,000 per lot, $70,000, or a total for that plot of $190,000, making a total for the entire upland of $822,725. The plottage is figured on the upland, plus the bulkheads and land under water, and since the bulkhead values are not given at this time we cannot figure the plottage in.

In giving this land value I find that I made an error in figuring the units for 41st Street, which will change the total of plots 1089 and 1107, combined, to $1,154,500, instead of $1,166,000, as
1113 given in my direct testimony. This will change the total for the entire holdings in Manhattan and Shadyside to $15,951,500 instead of $15,964,500, as given in my direct testimony, and will make the value of the Manhattan realty alone $15,651,500 instead of $15,964,500.

Block No. 1092, being the block bounded by 44th Street and 45th Street and the bulkhead. The unit of value for 44th Street, $8,000. Unit of value for 45th Street, $7,500.

Forty-fourth Street, 38 lots at $8,000, $304,000.

Forty-fifth Street, 37 lots at $7,500 per lot equals $277,500, or a total of $581,500. Since I cannot give the bulkhead values at this time I am unable to add the plottage, since the plottage should be added to the uplands, bulkheads, and land under water.

The buildings on this land I have valued at $10,000. They comprise three tenements, 606, 608 and 610 West 45th Street, each 16 feet 8 inches by 45. There are three 3-story brick tenements with one 2-story extension on the building No. 606 built of brick and in very poor shape; water closet is in the cellar. One tenant on a floor.

I could not get the rents from the tenants. I valued each of these buildings at $3,000.

The remaining tenement is 605 West 44th Street. The building itself is 25 feet by about 27 feet with an extension on the west side of the rear. It is wooden and in very poor shape. There are two families in it and total rent per year is $360. I valued this frame building at $1000.

Block 1093, being bounded by 45th Street and 46th Street and the bulkhead. Unit of value on 45th Street $7,500. Unit of value on 46th Street, $8,000.

45th Street, 33 lots at $7,500 equals $247,500. On 46th Street 30 lots at $8,000 per lot, $240,000, or a total of $487,500.

1114 Since I cannot give the bulkhead values at this time, I cannot add plottage, since plottage should be added to the combined values of the upland, bulkhead and land under water.

Block No. 1457, being plot west of Avenue A between 62nd and 63rd Streets.

63rd Street unit $8,500; 62nd Street unit, $8,000.

62nd Street; 266½ front feet at $8,000 per lot or $320 per front foot equals $85,280.

63rd Street. 216½ front feet at $8,500 per lot, or $340 per front foot, equals $73,610, or a total of $158,890. To which is added ten per cent. for plottage, or a total of $174,779, which I have called $175,000.

Block No. 1455, being on the west side of Avenue A from 60th Street to 61st Street.

Avenue A unit, $10,000. 60th Street unit, $7,000; 61st Street unit, $7,500.

Avenue A. Two corners at $10,000 a lot plus 50 per cent. equals $30,000. 150 feet 10 inches interior front feet at $10,000 per front foot equals $60,332 or a total for Avenue A frontage of $90,332.

60th Street. 213 feet at $7,000 per lot, or $280 per front foot, equals $59,640.

61st Street, 213 front feet, at $7,500 per lot, or $300 per front foot, equals $63,900, or a total of $213,872, to which is added ten per cent. for plottage or $235,259, which I have called $235,000.

Plot No. 1474, being on the east side of Avenue A, fronting on 60th Street. Unit, $8,000. Corner 25 feet by an average of 60 feet deep. A corner 25 by 100 feet at $8,000 plus 50 per cent. equals $12,000. The average depth being sixty feet, I consider that this lot should figure 76 per cent. of the total, or $9,120. Interior 89½ by 100 feet at $8,000, or $320 per front foot, equals $28,640. The average depth being 46 feet, I consider equal to 62 per cent. of the whole, or $17,756, or a total for the plot of $26,876, which I have called $27,000.

1115 Block 1177, between West End Avenue and the railroad track, 65th Street and 66th Street.

West End Avenue unit $7,500; street unit $6,000.

West End Avenue, two corners at $7,500 per lot, plus 50 per cent., equals $22,500. 150 feet 10 inches at $7,500 per lot, or $300 per front foot equals $45,249, or a total for the West End Avenue front of $67,749.

The streets. 199 feet 9 inches on each street, or 399 feet 6 inches front on both streets, at the rate of $6,000 per lot, or $240 per front foot, equals $95,880.

There remains a triangle facing 44 feet on 66th Street, nothing on 65th Street, and fronting 200 feet 10 inches, or a total 4,418 square feet, which at $6,000 per lot, or $2.40 per square foot equals $10,603, or a total for the three plots of $106,483, making a total for the plot of $174,232, to which I added 10 per cent. for plottage, making a total of $191,655, which I have called $191,500.

Block 1157, between Amsterdam Avenue, West End Avenue, 65th Street and 66th Street.

Amsterdam Avenue unit $19,000. Street units $8,000. West End Avenue unit $8,000.

Amsterdam Avenue, two corners at $19,000, plus 50 per cent., equals $57,000. 150 feet 10 inches of interior front feet at $19,000 per lot, or $760 per front foot equals $114,630, or a total for the Amsterdam Avenue frontage of $171,630.

West End Avenue, two corners at $8,000 a lot, plus 50 per cent., equals $24,000. 150 feet 10 inches at $8,000 per lot, or $320 per front foot equals $48,265, or a total for the West End Avenue frontage of $72,265.

The Streets. 48 lots at $8,000 per lot, total $384,000, making a total for the block of $627,895, to which is added on account 1116 of the whole block being in one ownership, 12 per cent., making a total of $703,242, which I have called $703,000.

Block 1156, being plot on the south side of 65th Street west of Amsterdam Avenue. Unit of value $8,000. Four lots composing plot at $8,000 equals $32,000, plus for the size 7 per cent., equals $34,240, which I have called $34,500 for the land, and I add for the building $7,000, which makes a total for the land and building of $41,500.

The building is numbered 222 West 65th Street, 25 by 55 feet approximately. An old four-story brick tenement, two families on a floor, each four rooms. One water closet on each floor. Washtubs and sink in each kitchen. Condition is poor. Total rent per annum I learned to be $1,248. I figure the value at $7,000.

Plot 1670 between First and Second Avenues and 98th and 99th Streets.

Second Avenue unit, $15,000. 98th Street unit, $10,000. 99th Street unit, $10,000. First Avenue unit, $11,000. Second Avenue, two corners at $15,000, plus 50 per cent., $45,000. 151 feet 10 inches interior front feet at $15,000 per lot, or $600 per front foot, equals $91,098, or a total for the Second Avenue front of $136,098.

First Avenue, two corners at $11,000 per lot plus 50 per cent. equals $33,000. 151 feet 10 inches interior front feet at $11,000 per lot or $440 per front foot equals $66,805 or a total of $99,805.

Streets. 36 lots, at 10,000 per lot, $360,000, or a total for the block of $595,903, to which I added 12 per cent. on account of the whole block being in one ownership, or $667,411, which I have called $667,500.

Block 1692, between marginal street and First Avenue, 98th and 99th Streets.

First Avenue unit $10,000; marginal unit and street unit $7,500.

1117 First Avenue frontage, two corners at $10,000 per lot, plus 50 per cent., $30,000. 151 feet 10 inches of interior front feet at $10,000 per lot, or $400 per front foot, equals $60,732, or a total for the First Avenue frontage of $90,732.

Streets. 170.24 feet by 201.83 feet equals 34,360 square feet, at the rate of $7,500 per lot or $3 per square foot, equals $103,080.

Triangle facing 100.33 feet on 99th Street, being in depth 100.915, equals 10,134 square feet at $3 per square foot, $30,402, of which 5,000 square feet are for corner lots, at $7,500 per lot, plus 50 per cent., equals $7,500, or a total for the block of $231,714, to which I added 10 per cent. for plottage, or a total of $254,885, which I have called $255,000.

Block 1683, fronting on First Avenue, 111th and 112th Streets.

First Avenue unit $12,500. 111th Street unit $9,000, 112th Street unit $10,500.

First Avenue corner, 25 x 100 feet, at the rate of $12,500, plus 50 per cent. equals $18,750. 50 feet 11 inches, say 51 feet, of interior front feet at $12.500 per lot, or $500 per front foot equals $25,500, or a total for the First Avenue frontage of $44,250.

111th Street, 5 lots at $9,000 equals $45,000. 112th Street, 2 lots at $10,500, $21,000, or a total of $110,250. Plus 10 per cent. for plottage $121,275, which I have called $121,000.

Block 1682, west side of First Avenue, between 110th and 111th Streets.

First Avenue unit $12,000. 111th Street unit $10,000.

First Avenue, 2 corners at $12,000, plus 50 per cent. equals $36,000. 151 feet 10 inches of interior front feet at $12,000 per lot, or $480 per front foot equals $72,878, or a total of $108,878.

For the First Avenue frontage, 30 street lots at $10,000
1118 equals $300,000, or a total of $408,878, plus 10 per cent. for
plottage makes $449,765, which I have called $450,000.

Block 1704, between Pleasant Avenue, First Avenue, 110th Street and 111th Street.

First Avenue unit, $10,500. 110th Street unit, $7,500. 111th Street unit, $8,500. Pleasant Avenue unit, $8,500.

First Avenue, two corners at $10,500, plus 50 per cent., equals $31,500. 151 feet 10 inches of interior front feet at $10,500 a lot, or $420 per front foot, equals $63,768, making a total for the First Avenue frontage of $95,268.

Pleasant Avenue, two corners at $8,500, plus 50 per cent., or $25,500. 151 feet 10 inches of interior front feet at $8,500 per lot, or $340 per front foot, equals $51,622, making a total for Pleasant Avenue, $77,122.

Streets. 110th Street, 413 interior front feet at $300 per front foot, $123,900. 111th Street, 413 feet at $340 per front foot, $140,420, or a total of $436,710, to which I added 12 per cent. for plottage to make it $489,115, which I have called $489,000.

Block 1712. This I cannot give the bulkhead figures, so it must be omitted for the present.

Block 1999, being on the east side of Twelfth Avenue and facing on 133rd and 132nd Streets. 12th Avenue unit, $8,500. Street unit, $7,500.

12th Avenue two corners at $8,500 per lot, plus 50 per cent., equals $25,500. 150 interior front feet at $8,500 per lot, or $340 per front foot, equals $51,000 or a total of $76,500.

Streets. In all, 1,125 interior front feet, or 45 lots at 7,500 a lot, equals $337,500, or a total of $414,000, to which I added ten per cent. for plottage, making it a total of $455,400, which I have called $455,500.

1119 & 1120 Block 2175, plot facing on Broadway and Sherman Avenue. In this plot, by dividing it into seven parcels, I find 67,069.44 square feet, which is equal to 26.80 lots. Considering the Sherman Avenue lots at $3,500, the marginal lots at $5,000 and the interior lots $900, I have averaged the lot value as $3,000, making it a total of $80,400, which I have called $80,500, to which I have added ten per cent. for plottage, or $89,000.

Adjourned to Aug. 23rd, 1906, at 1:30 P. M.

Last Exhibits:

Complainant's 100.
State's N.
City's 34.

1121 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *August* 23, 1906—
1:30 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Page, Mr. Mathewson, Mr. Gans, Mr. Burr.

1122 WILLIAM H. WHEELOCK resumed.

Cross-examination by Mr. PAGE continued:

Mr. WHEELOCK: In the record of yesterday, on page 1075, third line from the bottom, it should be, to "the line of" instead of "to the land."

On page 1087 the figures should be $15,964,500 instead of $15,664.50.

On the top of page 1113, sixth line, the same correction should be made as to the figures there stated.

Q. You have now given us the methods of arriving at the valuation of all the properties that you have testified to on your direct-examination, have you?

A. Yes. There is one exception, I think, and that is the Shadyside property. I finished testifying last night on the Manhattan property.

Q. And also I have not cross-examined you as to the bulkheads?

A. No; and in giving my figures on property where there are bulkheads as Mr. Burr asked, I left out the bulkhead figures and could not complete the figures of the block because in several instances the bulkheads had to be considered as part of the block and plottage added. I can give you those instances, if you wish them.

Q. I think it might be well to indicate them?

A. The first is on page 5 of the Exhibit 48, including the entire block from 11th Avenue to 13th Avenue. In that case the upland value showed a total of $822,725. I then added for the bulkhead $118,500, and for the land under water $89,723, making a total for the upland, bulkhead and land under water of $1,030,948, to which total I added on account of the size of the holding and on account of the conjunctive ownership of the upland and land under water and bulkhead, 12 per cent., making a total for the parcel of $1,154,500. That completes that instance.

1123 The next is on page 6 of the map, Exhibit 48*a*, and is for the block bounded by 44th and 45th Streets, and running out to 13th Avenue. The total value of the upland I have made $581,500, to which was added $120,000 for the bulkhead, and for the land under water $110,771, making a total of $812,271, to which on account of the conjunctive ownership I have added 12 per cent., making a total for the block of $909,743. To this was added buildings to the amount of $10,000, making a total for the land and buildings of $920,000.

The next block is the one directly north of this, between 45th and 46th Streets, and the value of the land I made to be $487,500, to which was added for bulkheads $120,000 and for the land under water $106,128, or a total of $713,628, to which was added for conjunctive value 12 per cent., or $799,263, which I have called $800,000.

The next is on page 10. The length of the bulkhead on the east side of Pleasant Avenue, from the north side of 110th Street to the south side of 111th Street is 212 feet, which I have valued at $53,000. The remainder of that plot, or all land under water, I have made $18,000, or a total of $71,000. That completes the——

By Mr. MATHEWSON:

Q. Did you testify as to the bulkheads on page two of Exhibit 48?

A. That went in before, Mr. Mathewson, as we were going along.

Q. And also bulkheads and land under water adjoining the West 18th Street property, page 3 of Exhibit 48?

A. I think I gave that. We can put it in. I am not quite sure.

Q. You have given $148,500 as the value of the bulkheads there. I don't think you gave that conjunctively with the others?

A. No, there was no conjunctive value there; at least I
1124 did not so consider it.

Q. No conjunctive value, as far as the bulkheads were concerned?

A. No, sir.

By Mr. **Page**:

Q. I notice in some instances that you have valued buildings and in other instances you have not, although there were buildings on the property. Why was the distinction made?

A. The only buildings which I valued were those which might be called tenement houses and were, so far as I knew, not used in connection with the manufacture of gas.

Q. Did you receive any instructions from whoever employed you on behalf of the gas company as to what properties you were not to value the buildings upon, and as to which you were?

A. I was told I was not to value buildings used by the company in its own business.

Q. So that wherever buildings were valued, they would be on property that was not used in the business of the company?

A. The land immediately under those buildings, yes.

Q. How about the rest of the land that was not immediately under the buildings?

A. I valued all the land.

Q. Yes, I know you did. And now the question is put to you relating to the properties on which you valued the buildings. If there was a tenement house there was some yard in connection with the tenement house, wasn't there?

A. Yes, in almost every instance.

Q. As a matter of fact is there any one of these plots that you have testified to upon which buildings were erected where the land was used for the purpose of the company and the building not?

A. I don't recollect any.

1125 Q. What is your age?

A. 30 years and 8 months.

Q. How long have you been engaged in the real estate business in the city?

A. A little over eight years.

Q. And all of that time you have been either in the employ of or connected with Charles S. Brown & Company, or the Corporation of Douglas-Robinson. Chas. S. Brown & Company?

A. Originally with Mr. Douglas Robinson alone; afterwards with the firm of Douglas Robinson, Chas. S. Brown & Company, and after that as member of the Corporation of Douglas Robinson, Chas. S. Brown & Company.

Q. What was the position that you first held with Douglas Robinson?

A. Wrote out repair orders, I think.

Q. How long did you continue with Douglas Robinson prior to the formation of the firm?

A. Almost exactly four years.

Q. Douglas Robinson's business was largely the collection of rents and the management of estates, was it not?

A. No, I don't think so. That was a small part of it. I may say that Mr. Robinson outside of his own office looked after personally one or two estates in the offices in which these estates were managed, but not in his own office.

Q. How long did you continue to write repair orders?

A. About three months.

Q. Then what was your next position?

A. I moved to the Park Row Building and leased offices for several months.

By the MASTER:

Q. You mean in that building?

A. In that building when it was first opened.

1126 By Mr. PAGE:

Q. Was that as a branch office of Douglas Robinson?

A. The building was put in our care and I was renting agent for Mr. Robinson on the premises.

Q. I mean by that, it was not a separate venture of yours?

A. No, no.

Q. How long did you continue to manage that renting office in the Park Row building?

A. About three or four months.

Q. Then what did you do?

A. I went to the Lorillard estate's office in Mercer Street, and worked with the department of that office which had charge of the repairs of the buildings of the estate, and which were about 400, and also in the securing of tenants for their vacant properties.

Q. That was also a branch of Mr. Robinson's business?

A. Mr. Robinson went there every day for a couple of hours to superintend the running of that estate.

Q. How long did you remain there; did you say?

A. I remained in that position for six months. I then took the place of the head of that department and remained in charge of those 400 buildings for about nine months.

Q. Then what was your next position?

A. I was then recalled to the main office and put in charge of the buildings managed by Douglas Robinson & Co., which were about 700.

Q. And your duties in that regard I suppose were looking after repairs and seeing to the collection of rents?

A. And the making of leases.

Q. How long did you have charge of that department?

A. For about a year.

Q. What was your next position?

A. I started in the brokerage department in that office.

1127 Q. And what do you mean by the brokerage department?

A. Trying to make sales, to make commission out of sales, whatever I could negotiate.

Q. Well, up to that time had Douglas Robinson been carrying on a sales brokerage business?

A. A very large one, yes, in two offices in the city.

Q. Then you were merely establishing that business in this particular office, is that it?

A. The brokerage business?

Q. Yes.

A. No. I joined the force of brokers in Mr. Robinson's office.

Q. I understood you to say that you then established a brokerage business in his office.

A. If I said that I was in error. What I intended to say was that I became a broker in the brokerage department of Mr. Robinson's office.

Q. And what were your duties in that department?

A. Making sales and keeping track of such sales as were made in the city generally, as far as possible.

Q. How long were you employed in that capacity?

A. Until Mr. Robinson united with Mr. Charles S. Brown, which was four years ago this last May.

Q. And since then——

A. At that time on account of the large number of additional properties being put in our hands to manage I was asked to give up the brokerage work for the time being and organize the management of the estates and buildings. I left that department after three months' work and went back to the brokerage again.

Q. And since that time——

A. I have been a broker and in the last two years added appraising to that, the last two and one-half years, making it a specialty.

Q. I suppose there is besides yourself a large force of others in the office that attend to the brokerage, the buying and selling on commission?

A. There are some in both our offices.

1128 Q. And in speaking of the sales that have been made I suppose you referred to sales that have been made in the office?

A. You mean when you asked if we made sales near the properties in question?

Q. Yes.

A. In some instances, my own and in other instances those made by the others in the office.

Q. What particular class of property have you been handling as a broker?

A. All kinds; no particular class.

Q. Have you been engaged in selling the properties of the estates that were managed by the office or have you been selling property that was obtained from the general public?

A. Very largely from the general public, only five or six sales of property managed by our office, I think.

Q. Does your office deal particularly near the East Side water front?

A. Particularly?

Q. Yes.

A. No.

Q. Or near the West Side water front?

A. No.

Q. You have made no specialty then of properties in those localities?

A. In selling?

Q. Yes.

A. No.

Q. You have not made a specialty of handling water front property?

A. No.

Q. Have you bought and sold property to be used for manufacturing purposes?

A. Quite a little.

Q. In the City of New York?

A. Yes.

Q. In what particular section of the city?

A. In such places as factories would be required to go.

Q. And that would be mostly outside of the city, wouldn't it?

A. Not if you confined me to Manhattan.

Q. What locality did you sell this property in?

A. Well, I can think of one instance: The entire block bounded by 58th and 59th Streets, 11th Avenue and the River, to Mr. Belmont, for the power station for his tunnel.

1129 Q. Would you call a power station attached to a rapid transit road or other railroad a manufacturing plant?

A. They manufacture electricity for the system.

Q. Well, I just want to get your idea of a manufacturing plant. Are there any others?

A. Yes, a plot I myself——

Q. Well, this Belmont property I judge then was not sold by you?

A. It was sold by our office.

Q. Well, I am speaking about your personal experience?

A. Personally, I sold within a short time three lots at Elm Street, now Lafayette Street, close to Canal Street, which is used as a factory.

Q. Three lots, each being 25 by 100?

A. No, being quite irregular; the frontage on Elm Street, as I remember it, was 75 feet; the greatest depth, if I remember correctly, was 97 feet; it was approximately 80 feet on the south line and some 95 feet on the north line.

Mr. **Page**: I think that is all.

The **Master**: Now, Mr. Burr, you may cross-examine.

Cross-examination by Mr. **Burr**:

Q. Referring to the bulkhead property which you sold, that was located, I understood you to say, at 235th Street?

A. 215th Street it began; the center of the block.

Q. When did you sell that?

A. The contract was closed on the 10th or 12th of June, of this year.

Q. Is that bulkhead physically built up or is it drawn to an imaginary line?

A. It is physically built up for almost the entire distance.

Q. How many feet were embraced in that bulkhead?

A. According to my diagram there were 1105 feet.

Q. What did that sell for per lineal foot?

1130 A. I can't tell you. It was included with a number of lots of upland.

Q. Then you have no knowledge as to the valuation placed upon that bulkhead per lineal foot?

A. By the seller?

Q. By the purchaser.

A. By the purchaser, no.

Q. Do you know whether the property you have testified regarding embraces all the real estate of the Consolidated Gas Company?

A. It is all that I have any knowledge of.

Q. Isn't it a fact that you have not bought or sold any property within a mile of the particular parcels regarding which you have testified?

A. Within a mile? No, it is not true.

Q. What is the nearest point to the gas plant itself that you have bought or sold property?

A. I, personally?

Q. Yes.

A. Well, certainly within two blocks.

Q. What parcel was that?

A. I may be slightly wrong in my distance, but I was thinking of 15th Street. I sold both sides of 15th Street from First Avenue to Avenue A and the block front on Avenue A from 14th to 15th Streets on the west side, and one-half of the block front from 15th to 16th Streets on the west side; in all, I should judge, 40 lots, to separate buyers.

Q. Well, that was the only occasion when you purchased or sold property within the immediate neighborhood of the gas plant property regarding which you have been testifying?

Mr. **Mathewson**: Do you mean any of it, Mr. Burr?

Mr. **Burr**: Any of it.

A. I would not be willing to say that, Mr. Burr, until I had examined my slips. I find another instance, if I am at liberty to state it. I made a sale of the lot and building, 543 West 1131 46th Street, which is within half a block of one of the gas plants. The contract was signed on April 27th, 1905. I also sold 319 East 58th Street in May, 1902, which was within two blocks of the plant at 60th Street. I have another sale of the entire block from 66th to 67th Streets, Second to Third Avenues, which is within a block and a half of the gas plant. I think that is all that I find on my slips.

Q. All you know about the value of water front land is derived from your knowledge of the considerations paid for such lands?

A. In certain cases, Mr. Burr.

Q. Well, specify any case in which that is not all your knowledge, that all your knowledge is not derived from that fact, that you know the consideration paid?

A. I did not understand the question.

Q. You were asked on page 1075, "And have you had experience in the sale and have you kept posted as to the prices received for water front land in the course of your experience, as well as other land?

A. So far as considerations are shown. There are very few sales." Does that refer to water front land or all land?

A. No, bulkheads and water front properties.

Q. So that I say, all the information you have on that subject apart from the sale you made at 215th Street is derived from the considerations paid for the property.

A. Yes, except one other instance which is a sale in which I figured. I have already spoken of the block between 58th and 59th Streets to Mr. Belmont; that included bulkheads and water rights.

Q. Well, do you know what was paid per lineal foot for that bulkhead?

A. I know what we advised him we considered it worth.

Q. No, I want to know what was paid?

1132 A. I know what was paid for the entire block and I know how he, in purchasing it, sub-divided it, if that is admissible.

Q. What was the value of the bulkhead property per lineal foot at that point?

A. He considered it in his purchase at $650 per front foot.

Q. That is the only way in which you arrived at any knowledge upon which to base any valuation on that bulkhead property?

A. In that particular place?

Q. In that particular place.

A. Yes.

Q. And do you undertake to give an opinion as to the value of bulkhead property on the East River from the prices paid for the bulkhead property at 59th and 60th Streets?

A. Not entirely, no. Very slightly, in fact.

Q. Do you undertake to testify as to the value of bulkhead property on the East River from your knowledge of what was paid or an apportionment of the price by the purchaser of that property at 59th and 60th Streets, taken in connection with your sale of bulkhead property at 215th Street?

A. Hardly at all.

Q. You have stated you never managed any bulkhead property or never leased any, and that your only experience was that sale at 215th Street?

A. That is true.

Q. Now, you have stated also that you followed up the proceedings in condemnation regarding bulkhead property.

A. I said that I had some knowledge of condemnation proceedings and the testimony and the awards.

Q. How far did your knowledge extend and how was it derived? From the reading of the testimony?

A. In many instances.

Q. Well, there was testimony pro and con, I presume, before the Commission?

A. Yes.

Q. Do you know what the Commission awarded?

A. In some cases.

1133 Q. Now, regarding all the property that you have testified to, can you say whether the value has increased of any portion of it within the past three years?

A. All of this property of the Gas Company?

Q. Yes.

A. Oh, yes, some of it has materially increased.

Q. Has some of it depreciated?

A. Yes.

Q. What property has depreciated in value?

A. Principally on the south side of 60th Street, which is to be under the new bridge.

Q. Any other property?

A. Any other?

Q. Yes.

A. No.

Q. To what extent has that property you have just referred to depreciated in your opinion?

A. My offhand opinion, 10 per cent.

Q. And to what extent has the remainder of the property increased?

A. That is very difficult to say, Mr. Burr.

Q. Would you say it had increased one per cent?

A. I should say it has increased nearer 25 per cent.

Q. So that there has been an appreciation in your opinion of this real estate of 25 per cent. since 1903?

A. Yes. I should think so; in some instances perhaps a little more, and in other instances not so much, but roughly. Please understand that that is not after seriously looking into the figures three years ago, but offhand opinion.

Q. Do you know who owns the bulkhead at 41st to 42d Street?

A. 41st to 42d? The Consolidated Gas Company.

Q. And North River?

A. Yes.

Q. Do you know what bulkhead rights are?

A. In a general way.

Q. What are they?

A. In the first place the right to construct a bulkhead at the edge of the marginal street, and collect such dues as the law provides. That relates to bulkhead rights.

1134 Q. What dues have you knowledge of?

A. Such as are prescribed by law for the collection from vessels which may tie up to the docks.

Q. Do you know what wharfage and cranage is?

A. Yes.

Q. What is cranage?

A. Cranage and wharfage are practically synonymous. The terms have come down from the old deeds, and I beli-ve they mean the same thing.

Q. What do they mean?

A. The right to collect from vessels under 200 tons 2 cents a ton for twenty-four hours for tying up.

Q. Do you know whether the bulkheads you have testified regarding are private or public bulkheads?

A. That depends on whether they are owned by the Gas Company or some subsidiary company. I understand they are owned absolutely by the Consolidated Gas Company.

Q. And it was upon that understanding that you based your opinion?

A. Yes.

Q. Take the first instance of the bulkhead.

Mr. Mathewson: Do you mean page 3?

Mr. Burr: Page 3.

The Witness: Is it 14th and 15th or 18th Street?

Mr. Mathewson: 18th Street, I think.

The Witness: The first bulkhead testified to was 14th to 15th Street.

Mr. Mathewson: On page 2, 14th Street, east of Tompkins Street.

Q. What number of feet are embraced in that bulkhead property?

A. 450 lineal feet.

Q. And what value have you placed upon each lineal foot of that property?

1135 A. On the bulkhead between 14th and 15th Streets, $375; on the bulkhead between 15th and 16th, $350.

Q. Upon what do you base that valuation?

A. That is my opinion of what it is worth.

Q. Well?

A. I have considered other things.

Q. Upon what have you based your opinion?

A. I considered a sale which is very close to that.

Q. The consideration for the purchase of some property close to this?

A. Yes.

Q. Is that the sole basis of your opinion?

A. No, not entirely.

Q. Do you know of your own knowledge that that was the consideration paid?

A. Yes.

Q. What else entered into your judgment?

A. The physical character of the locality, the use to which it could be put, the current at that particular place, the number of wharves in the immediate neighborhood, the streets running down to the water front, the depth of the water in front of the bulkheads.

Q. Now, you base your opinion as to values, you have said, largely on the testimony given in condemnation proceedings. Have you any——

Mr. **Mathewson**: No, he did not say largely, I think. He said he had read testimony in condemnation proceedings among other considerations.

Q. Well, have you any knowledge of the accuracy or truthfulness of the testimony given in those condemnation proceedings, the examination of the testimony of which helped you to come to a conclusion?

A. I have read the stenographic reports of some of them; I cannot tell that they are correct.

Q. And you cannot say whether the Commissioners agreed or disagreed with the testimony given, in the awards?

A. I have one award close to this property. I know that the people owning it got so much money per front foot. That was awarded by the Commission and I presume it is correct.

1136 By Mr. **Mathewson**:

Q. Was that bulkhead property?

A. Bulkhead property.

By Mr. **Burr**:

Q. Near what street was that?

A. Between 20th and 21st Streets, East River.

Q. Do you know of any actual transactions which sustain your valuation of $375 per lineal foot for this property at Tompkins Street?

A. Any transactions that absolutely sustain?

Q. Yes.

A. No, I do not.

Q. Do you know of any actual transactions which sustain the valuation placed by you per lineal foot upon any of the bulkhead property you have testified to?

A. I think I can substantiate the $350 per lineal front foot.

Q. Well, if you can, please do so.

A. The gas company received in 1903 an award of $350 per front foot for its bulkheads from 20th to 21st Streets.

Q. From the city?

A. From the city.

By Mr. **Mathewson**:

Q. The City of New York were defendants in this action you refer to, were they not?

A. I presume so.

By Mr. **Burr**:

Q. Do you know the earning price per lineal foot of this bulkhead property?

A. To the company that owns it, do you mean, Mr. Burr?

Q. Yes.

A. No. The earning power? No, I have no idea, I should think it would be very great, indeed.

Q. Now, does the presence of the gas plant add to or depreciate from the value of the real estate regarding which you have 1137 been testifying?

A. Well, I have been testifying about the property included in the plants. I think if I may explain——

Q. What I mean is, if the gas plants were not there, what valuation would you put upon the land?

A. There would be a general appreciation, I think, of each section where the gas plant is at present.

Q. Well, in your opinion, to what extent would that go? Would that increase it 25 per cent. in value?

A. Over the present value?

Q. Over the present value that you have given with the gas plants there?

A. No, I do not think so, Mr. Burr, I think it would be less than that. It might be 15 per cent. or something like that.

Q. To the best of your knowledge and information and from your experience, it would appreciate fully 15 per cent. if the gas plants were removed?

A. That is my experience with nuisances.

By Mr. **Gans**:

Q. You do not think a gas plant a serious detriment to a neighborhood, then, Mr. Wheelock?

A. Yes.

Q. And thinking it a serious detriment to a neighborhood, you think its removal would make a difference of only 15 per cent. in its value?

A. That is quite a jump in real estate values.

Q. After the removal of a matter such as a gas plant?

A. Yes.

By Mr. **Burr**:

Q. But you have testified that the property has jumped 25 per cent. since 1903?

A. That is in line with the general appreciation in Manhattan Island.

Mr. **Mathewson**: Covering four years, not a single jump.

1138 Q. Has it increased 25 per cent. within the past two years

A. The property that I have valued?

Q. Yes.

A. I cannot say that.

Q. How much would you say it had increased within the past two years?

A. Perhaps a proportionate amount, half of 25 per cent.

Q. You have given the price per lineal foot upon all this bulkhead property, have you?

A. In this proceeding?

Q. In this proceeding.

A. I believe I have entirely, yes, Mr. Burr.

Q. The property on 18th Street to 20th Street, you did not give the value of that. That property was taken by the city?

A. I believe it has been, yes. I put the value of each bulkhead as $148,500.

Q. At that point?

A. At that point.

Mr. Mathewson: Two bulkheads?

The Witness: Two bulkheads.

Q. Yes. From 16th to 18th Streets?

A. Yes, not including 17th Street.

Q. What are the dimensions of the bulkhead property alone?

A. In all 424 feet.

Q. And what did you allow there per lineal foot?

A. I allowed $700. But, Mr. Burr, pardon me one minute. I should say in valuing these 14th and 15th Street bulkheads, and in the West 16th and 17th Street bulkheads, the figures are made up of two items; one, what I consider the bulkhead worth in itself, and a small amount added in each case because of the combination across the street with the upland in the same ownership.

Q. What did you value the bulkhead right alone, or the bulkhead property alone at 14th and 15th Streets, per lineal foot?

A. The bulkhead between 14th and 15th Streets I valued at $325 per lineal front foot, and the bulkhead from 15th to 16th Street I valued at $300.

1139 Q. Well, you said that valuation was arrived at by fixing a figure for the bulkhead alone and then adding something to it?

A. Yes, in those two cases $50 per foot each.

Q. So that the total valuation given by you for this property, embracing all the situation, was $325 for 14th Street to 15th Street?

A. No, you have my testimony as $375.

Q. Then you added $50 to that?

A. $50 to $325.

Q. And for the 15th to 16th Street bulkhead you added how much?

A. $50.

Mr. Mathewson: $350 for that, being the total?

Q. Yes. Upon what did you base that valuation?

A. It was my opinion of the conjunctive value, which, in upland, I would call plottage. It is more or less a custom among brokers and varies with the individual.

Q. With the individual?

A. Yes.

Q. And that was your individual opinion, fixed arbitrarily, was it?

A. Entirely.

Q. And the value fixed was the result of that opinion?

A. The final value, yes.

Q. The next bulkhead property is on page 3, 18th Street. What did you allow at this point per lineal foot for the bulkhead property?

A. Alone?

Q. Yes.

A. For the value of the bulkhead property alone, $600 per lineal front foot. In conjunction, $700.

Q. You added $100 for the conjunctivity?

A. Yes.

Q. Upon what did you base that valuation? Did you fix that in the same way you did the other?

A. Not quite so much in this place. I tried to find out what others thought, and I considered their opinions somewhat in fixing my value there.

1140 Q. So that your conclusion or valuation here is largely the result of opinions of others than your own?

A. Not largely. I considered it.

Q. How much did it enter into your final conclusion?

A. Perhaps half, 50 per cent.

Q. So that valuation was made up, 50 per cent. of your own opinion and 50 per cent. of the opinion of others?

A. No, 50 per cent. of my opinion and 50 per cent. of what I thought the other people knew.

Q. In judging of the value of their opinion?

A. Yes, exactly.

Q. But you received their opinion to that extent?

A. I did.

Q. Are you aware of any actual transactions in that neighborhood of the purchase or sale of bulkhead property?

A. I have some records. I have not anything where the upland, I believe, and the bulkheads were sold at the same time. I have various sales or agreements to sell which run from Bank Street up to 15th Street.

Q. So that your only knowledge would be derived from the considerations paid in those transactions?

A. In giving this value?

Q. In giving this value.

A. Largely, yes, Mr. Burr, in that case.

Q. The other bulkhead is 113th Street, is it not?

A. No, on the East River, 111th Street. That is page 10.

Q. What are the dimensions of that bulkhead property?

A. It runs from the north side of 110th Street to the south side of 111th Street; at 111th Street the bulkhead line appears to be 70 feet east of the exterior line of Pleasant Avenue, and at 110th Street it appears to be 20 feet east of the exterior line of Pleasant Avenue.

1141 By Mr. MATHEWSON:

Q. I find it marked 73 feet 2 inches?

A. There is some question about that; the best figures I can get show 70.

Q. 70 feet, more or less.

A. Yes.

By Mr. **Burr**:

Q. What is the physical condition of that property? Does the bulkhead run out to the line?

A. The bulkhead runs out to the bulkhead line at the center of the block, and is platformed for ten feet in excess.

Q. How much did you allow there per lineal foot?

A. I allowed for the bulkhead rights $250.

Q. Upon what did you base that valuation?

A. I examined the neighborhood. I know of a sale—although some time ago—and I considered the opening of the park there, which took away a large amount of water front, the improvement by the city at 107th Street, and general activity in that section.

Q. Did you take the opinion of individuals?

A. I have talked with others about it.

Q. Did you take their opinions, knowing their experience of their business, as a factor in arriving at your conclusion?

A. I took it into consideration, but I found that the figure that I gave was my own prior to consulting with others.

Q. Did you place a value besides upon the land under water?

A. I figured the land under water out to the bulkhead line; it is a very small amount, only 9,000 square feet. I place a value there of $2 per square foot.

Q. Upon what basis did you arrive at that conclusion?

A. Partly in comparison with other places in the city, and partly by reason of the taking by the city of property in that neighborhood.

1142 Q. You based it then upon an actual transaction?

A. Partly, yes.

Q. What was the actual transaction?

A. It was at the foot of 114th Street. The city took 1,617 square feet in 1894, and they paid approximately $1 per square foot. I figured that that was thirteen years ago, and that various things had happened to largely increase the value of the same land.

Q. And in fixing your valuation of the bulkhead property, did you base that upon any actual transaction?

A. I considered a lease, or rather I found a lease which the city made of 187 feet of bulkhead property between 109th and 110th Streets; they leased it for two years at $1,800 a year.

Q. What year did they lease it?

A. 1905, and according to the rental which they get I figured that they valued the bulkhead at $250 a front foot.

Q. What was the rental?

A. $1,800 a year for two years, for 187 feet, which at 4 per cent. would be a total value of $45,000 for the bulkhead.

Q. Was that the only knowledge you had of transactions in that neighborhood with regard to land under water and bulkhead property?

A. That is true.

Q. And that taken in conjunction with your conversation with others and your own opinion, was the manner in which you arrived at the conclusion or fixing of this valuation?

A. Largely, in comparing it with water front property in other localities.

Q. How far away from that property was the other water front property?

A. I mean, comparing it in my mind with other water front properties of the city; what I could see was going on there?

Q. Are you familiar with the valuations of water front property all through the city?

A. No, I did not say that; I compared the activity and the general location of this property with the other properties in the city.

1143 Q. Was that all the land under water and the bulkhead property at that point?

A. I understand so, yes.

Q. Where is the other bulkhead property?

A. Page 6; there are two bulkheads there, I think you will find.

Q. What is the extent of the bulkhead property there?

A. In front of each block 200 feet. I have taken it separately because the blocks are separate.

Q. What valuation have you given that property per lineal foot?

A. I have put a value of $600 per lineal foot on that.

Q. And upon what basis did you arrive at that valuation?

A. Roughly, my value per lineal foot of bulkhead alone is $525; I add $75 by reason of ownership of the upland, and I made a further addition by combining the upland with the bulkhead in one parcel because they are in one parcel. The Gas Company owns right through from 11th to 13th Avenues, and they operate it together, and I added a plottage value of 12 per cent., not to the bulkhead alone, but to all the land together.

Q. There is a street running through that property, isn't there?

A. There is a street indicated; it is not there.

Q. Did you eliminate that street from your consideration?

A. I included that in the property owned by the Gas Company.

Q. You included the dimensions of the street?

A. Yes.

Q. And in placing a value on that property you valued the land embraced in the street.

A. I valued the upland right out to the bulkhead from the easterly beginning of it.

Q. And you did that in all the other cases where a street runs through?

A. There is no street there.

Q. I mean, where the street was mapped out through the property?

A. It is not mapped out.

1144 Q. How does it appear there?

A. It does not appear; it is enclosed by a fence, and is used and occupied by the Gas Company.

Q. Have you any knowledge of any actual transactions in that neighborhood upon which you base your opinion?

A. Of the bulkheads?

Q. Yes.

A. The nearest one I think is 51st Street. No, there is one a little nearer than that. There was a sale from 51st to 52d Streets; I have not got the exact record of the date, but that property was taken by the city at $500 a lineal foot, I believe without any extras, interest or anything else.

Q. You never bought or sold any bulkhead property there yourself?

A. No, I am wrong there. I have a record of $475 a running foot at 51st and 52d Streets, but I do not consider that as valuable as the other.

By Mr. MATHEWSON:

Q. As valuable as the 44th and 46th Street property?

A. Not as valuable, no.

By Mr. BURR:

Q. Where was the other bulkhead property?

A. There is one fronting on the north block, the same case, page 6.

Q. Between 45th and 46th Streets?

A. Yes, my value there is the same.

Q. And upon what particular experience did you base your valuation upon that bulkhead?

A. No more than the other.

Q. Just the same as the other.

A. Yes.

Q. Did you consult with others in regard to that valuation?

A. I consulted with one other.

Q. I presume you consulted these gentlemen because you thought they had as much experience as you, if not more?

1145 A. I am always glad to consult people whom I think it would be of advantage to consult and get their opinions, on upland as well as any other property.

Mr. GANS: That would be hardly called an answer to the question. Cannot you answer the question directly?

(The question is repeated by the stenographer.)

The WITNESS: As much.

Q. But no more. Where is the other bulkhead property?

A. 41st and 43d Street, page 5.

Q. What are the dimensions of that bulkhead property?

A. The length is 197½ feet.

Q. From what point?

A. From the northerly side of West 41st Street to the southerly side of West 42d Street. I believe that map which you have before you is not quite correct; the city maps show 197½ feet. I doubt if this one does. I have a city map here, if you wish it.

Q. On this may there appears to be a right of way, crossing over this property?

A. Yes.

Q. Do you know what that is?

A. Yes.

Q. What is it?

A. It is a right of way to the Albany Day Line pier at 41st Street.

Q. What is the extent of the right of way?

A. Two years yet to run, I believe.

Q. Over all the property?

A. Over a strip about 15 feet wide, enough to let two wagons pass.

Q. What valuation did you place upon that property per lineal foot?

A. $550.

By Mr. Mathewson:

Q. For the bulkhead?

A. Yes.

By Mr. Burr:

Q. Upon what basis did you fix that valuation?

1146 A. Partly for the reasons I have given you before and partly because I know of an offer which was made to the Gas Company by the City for this property.

By Mr. Mathewson:

Q. Do you mean the City of New York?

A. Yes.

By Mr. Page:

Q. Made through you?

A. No.

By Mr. Burr:

Q. Do you know that the offer was actually made, or have you heard it from somebody else?

A. I have heard it from both sides; that is, from an individual who knows that it was made, connected with the city, and also from an officer of the Gas Company, who was one of those to consider it.

Q. Have you had any actual transactions in that neighborhood, bulkhead property?

A. No.

Q. Do you know of any upon which you base that opinion?

A. I have a record here somewhere of an agreement reached between the City of New York and the owners of a bulkhead between 42d and 43d Streets.

Q. I am speaking of an actual transaction. Do you know whether that agreement was carried into effect?

A. I do not know; the agreement was made. I do not know that it was carried into effect.

Mr. MATHEWSON: Don't you call that an actual transaction, if the agreement was made, whether one side or the other broke it?

Mr. BURR: That may have been a tentative agreement too.

Mr. MATHEWSON: Possibly.

1147 Q. At all events, it was not carried into actual payment, was it?

A. I do not know that it was not.

Q. And you do not know that it was?

A. I do not.

Q. You allowed for land under water at this point, $89,723. Upon what basis did you arrive at that valuation?

A. Upon the basis of an award made by the city at 51st and 52nd streets, an appeal from which has been taken by the owners of the property.

Q. Did you ever appear as an expert at valuing bulkhead property before?

A. I do not think so; no. I have not.

Q. You valued the bulkhead property at this point at $118,500?

A. Yes.

Q. And you have just stated the value per lineal foot, haven't you?

A. I put that at $550.

Q. That is, you allowed so much for the bulkhead property alone?

A. I allowed $550 for the bulkhead property alone, and I allowed only $50 in conjunction with the upland, because of that short right of way across there. I should have added $75 if it had not been for that.

Q. Do you know what the company receives for that right of way?

A. I do not.

Q. What value did you fix upon the right of way that entered into your final conclusion as to the value of the bulkhead property?

A. I thought that it was worth about $25 a running foot, partly because it might be difficult for the gas company to dispose of that bulkhead in the next two years to as great advantage as it might if that right of way were not there; but I also figured that the gas company got practically the whole use out of that pier, because it transported its coal—the only purpose for which it uses the pier—by an overhead trolley, and the right of way did not interfere in the least with its operation.

1148 Q. Can you give the exact dimensions of the right of way?

A. No, I could not give them, but I think it is 16 feet, more or less; it runs diagonally across the pier. I do not know the distance; it is a little greater than the width of the pier, because it is diagonal.

Q. 44th and 45th Streets?

A. That we have finished; that ends the water front, I think.

Q. For all the land under water you have allowed the same rate, $1.10 a square foot?

A. I have averaged it at that; you mean at 42nd Street?

Q. I mean at all the different points.

A. No, I have allowed different amounts.

By Mr. **Mathewson**:

Q. What is the $1.10 average?

A. 41st to 42nd Streets, and 44th to 46th Streets. Land under water nearest to the bulkhead is worth more than land under water farther out, and in these particular places I averaged it at $1.10.

Q. What other land under water did you value that we have not touched now?

A. Land under water between the present bulkhead at 14th to 16th Street and the present bulkhead line.

Q. What is the extent of that?

A. The extent of that land under water is 31,500 feet.

Q. In these valuations of the bulkhead property, did you assume in every case that the Consolidated Gas Company is the owner of the property?

A. Yes.

Q. And you placed a value upon the land under water because of its nearness to the bulkhead, because it adjoins the bulkhead?

A. Depending upon its nearness to the bulkhead.

Q. How long were you engaged in making such examination?

A. Of the bulkheads?

Q. Yes.

A. That would be pretty hard to say.

Q. How long were you engaged in making an examination of all the property?

A. Between six and seven weeks.

1149 Q. Did you visit each one of the parcels?

A. Yes, each one.

Q. Did you go through them?

A. I did not go through the blocks which were taken up with holders, but I did go through the rest. I looked over the fence.

By Mr. **Mathewson**:

Q. Where the holders were?

A. Where the holders were.

By Mr. **Burr**:

Q. Did you make a personal inspection to ascertain what buildings were being actually used for gas purposes?

A. Not particularly, no.

Q. Were you accompanied by anyone representing the company when you were making this examination?

A. At most of the plants I either went with the foreman or superintendent or some official connected with the plant.

Q. And they told you what use the different buildings were put to?

A. I did not ask that; I asked for the buildings which were not used by the company; in other words, the various buildings from which they were getting rents.

Q. And they pointed out the buildings which as they said were not being used by the company?

A. Yes; I might also say that that corresponded with a list of the buildings, furnished by the central office, which I was asked to value.

Q. The dimensions which you have given—did you take those dimensions from some other source, or did you ascertain their correctness yourself by survey?

A. As to the various plots?

Q. Yes.

A. I compared the dimensions given on Exhibit No. 48 with the tax maps, the city maps, and I found them correct to within one or two inches in almost every case. 1150

By Mr. **Mathewson**:

Q. That is, you found that they corresponded?

A. I found that they corresponded except in a very few cases, and there they were only out an inch or two.

By Mr. **Burr**:

Q. When did you make your report to the company on this property?

A. I have never made any report on it to the company.

Q. To whom did you make known the result of this examination of the property?

A. To Mr. Mathewson, about three days ago.

Q. So that you were not able to report until three days ago.

A. I did not report until three days ago.

Q. And did you work continuously at this work for nearly seven weeks?

A. Excepting two Saturdays and every Sunday.

Q. And with the exception of those days, you were actually engaged in inspecting the property for the purpose of valuation, all the rest of the time?

A. I say inspecting it or working on the figures in the office.

Q. I mean, engaged in this work?

A. Yes, actually.

Q. Did you receive any figures indicating the valuation of the property from the company, or from any person acting for the company?

A. I did not; I may say that our figures here are at your disposal; they would have been the same for you as they are for the company.

Mr. **Burr**: That is all I want to ask Mr. Wheelock.

1151 The **Master**: Any further questions?

Mr. **Page**: I just want to ask one question.

By Mr. PAGE:

Q. On page 6 of Exhibit 48 you will notice that the street adjoining the bulkhead property is not colored on that exhibit. As I understand it, you valued the land that is shown as plain, not colored, on that exhibit as a part of this property?

A. I did.

Q. And if that land does not belong to the Gas Company that should be deducted?

A. Certainly.

Q. And you have given, have you, the rate, so that that would be a mere matter of computation?

A. I have given a rate or value per lot on each of those streets. If for any reason the bulkheads were separated from the upland the values would be diminished slightly.

Q. By 12 per cent.?

A. Approximately, I say 12 per cent., yes.

Q. I think that is what you have stated in each instance was the value of the conjunction of the property, if that is what you called it?

A. Yes, each plot would therefore suffer.

Q. It would suffer by that 12 per cent. and also the land in the street?

A. Yes, sir.

By Mr. GANS:

Q. When you reported to Mr. Mathewson did you report the details as you have reported to us?

A. I merely gave him a map, which I think he has there with my total valuation of each plot on it.

Q. Did you give him at all the basis on which you made the valuation?

A. Never, and he did not know until he came here, as far as I know.

Mr. MATHEWSON: I did not know until I heard you testify to-day, if that is of any value.

1152 Mr. BURR: I move to strike out Mr. Wheelock's testimony as to bulkhead values and values of land under water, on the ground that it appears from his testimony that he is not qualified to testify as an expert on the values of such property.

The MASTER: The motion is denied.

Exception taken by Mr. Burr.

Mr. GANS: We join in the motion and we take the same exception.

Mr. BURR: I would like to understand, for the record, whether this property, the real estate testified to by Mr. Wheelock, embraces all the real estate of the Consolidated Gas Company?

Mr. MATHEWSON: It embraces all that we have claimed for, except so far as the Astoria Company.

Mr. BURR: I mean in the Borough of Manhattan.

Mr. MATHEWSON: Yes, and I am not personally aware of any other. If there is any other I shall certainly put in evidence respecting it.

Redirect examination by Mr. Mathewson:

Q. Referring to the property shown on page 1 of Exhibit No. 48, at the southeast corner of Irving Place and 15th Street, are not the buildings on that property used as the general offices of the Consolidated Gas Company?

A. The entire building on the corner is used as general offices, and everything above the first floor of the other two buildings, I believe.

Q. As offices?

A. Yes.

Q. It is all used by the company?

A. As offices?

Q. No, not as offices necessarily, as testing stations, &c.?

1153 A. You asked "as offices." The other two floors are used for gas ranges and such things.

Q. If you will look at page 4 of Exhibit 48, you testified that 333 Avenue A was a tenement on the block between 21st and 22nd Streets, being block No. 952?

A. No. 952?

Q. 953, I think it is after all.

A. It is not on that page.

Q. Page 4?

A. Yes, that is right.

Q. All the rest of that land is used for the purposes of the company in connection with its gas business?

A. I believe so.

Q. And is it not true generally that these tenements to which you have referred are very slight fractions of very large plots, the balance of which is used for the gas business of the company?

Mr. Gans: I object to that.

Mr. Mathewson: As far as his observation is concerned.

Mr. Gans: I object to that. I do not think he is qualified to testify that the property is used for the gas business of the company.

Mr. Mathewson: He has been asked by you and by Mr. Burr constantly on that matter.

Mr. Gans: He has not been asked by us, and I do not think I remember any question Mr. Burr has asked on that line.

Mr. Burr: No.

The Master: He may answer it.

Mr. Gans: Let me have my objection noted. I object to the question on the ground that it calls for an expert opinion on the part of a witness who is not an expert in gasmaking.

Exception taken by Mr. Gans.

Q. (Continuing:) Of your own personal observation.

A. A very small fraction.

1154 Q. You say you valued these buildings which you did value upon what you think they would bring in case of sale.

Would that be more or less than the original cost of construction, do you know?

A. Considerably less than the original cost.

Mr. PAGE: I suppose by original cost you mean cost to build?

A. Originally?

Q. Yes, originally.

A. A very much smaller proportion than the present.

By Mr. MATHEWSON:

Q. Has the firm with which you are now connected, and the previous concerns with which you have been connected, sold property over all sections of the city?

A. Yes.

Q. In addition to the sales that have been made by you or by your office, have you access to the general statistics and records, etc., which real estate offices keep?

Mr. GANS: What real estate offices keep—his real estate office?

Mr. MATHEWSON: Which your real estate office keeps.

A. Oh, yes, certainly.

Q. Have you made a study of those statistics in addition to your own sales in your own office?

A. I think I know every sale made in the office for the last five years.

Q. Have you made use of that information in making up your amount as to the values, these appraisals to which you have testified?

A. Considerably.

1155 Q. Will you look at the plot on the south side of 60th Street, page 7 of Exhibit 48, and say what part of that plot or those plots you consider to be depreciated on account of the new bridge.

A. Since the plot is an entire one, the whole plot in case of a sale would feel the depreciation due to the construction of the new bridge, but principally the southerly half of the block, facing on 60th Street.

Q. And you mean that the depreciation might reach the percentage that you have stated, averaged over the whole plot?

A. It was my offhand opinion that the southerly half had been depreciated approximately 10 per cent. I do not think—I feel sure in fact, that that percentage would not hold over the whole plot; it would be somewhat less.

Q. I want to ask whether the corporation of Douglas Robinson, Charles S. Brown & Co., and the preceding firm, Douglas Robinson, Charles S. Brown, have a large or extensive business or not in buying and selling real estate in the city of New York?

A. It is our principal business.

Q. And has it been for some years past?

A. Yes.

Q. Have you included in the buildings which you have valued any part of the manufacturing plants of the company, or the holders?

A. No.

Q. You say that the total value of the land, according to your estimate, on the island of Manhattan, is $15,651,500.

A. May I make a statement here? No. I found yesterday in completing my survey of the general property that in my figures here there was a clerical error, which made a slight difference in the total. I have made a note of it on the record, and my total after the corrections is $15,951,500, including the Shady Side property.

Q. And excluding the Shady Side property; that is, including only property in the island of Manhattan?

A. $15,651,500.

Q. That is the same correction made by you yesterday at page 1,113 of the record?

A. That is right.

1156 Q. That I think you stated was what you would consider the property could be sold for?

A. Yes.

Q. I want to ask you whether in your judgment it would be possible to acquire plots of size, similarly situated to these which you have testified to, for the same sum of $15,651,500.

Mr. Burr: I object to that as incompetent, purely speculative and calling for a conclusion.

Mr. Gans: We join in that objection.

The Master: He may answer.

Exceptions taken by Mr. Gans and Mr. Burr.

A. No, I do not think they could.

Q. Do you base your opinion upon any experience of your own and your general knowledge of conditions in New York?

A. Yes.

Q. Any particular one?

A. Buying for the Pennsylvania Railroad.

Q. The locations of their terminals?

A. 31st to 33rd Streets, Seventh to Ninth Avenues, and large additional plots in the vicinity.

Q. And this additional value which large plots have by reason of their being large and contiguous lots is what you call plottage?

A. Yes.

Q. Will you now look at the 46th Street property, page 6 of Exhibit 48. Would not a certain per cent. beyond the value of the avenue and street lots in Block No. 1092, for example, be added by reason of the aggregation of those lots, even if the line of Twelfth Avenue were cut through?

A. There would be added something for plottage, yes.

Q. Ought not the entire 10 per cent. to which you have referred be taken——

Mr. Page: No, 10 per cent. is for the continuity.

The Witness: I think you misunderstood me.

1157 Mr. Page: No, you said it consisted in the fact that it abutted, not that it was contiguous.

A. I should add to that upland 10 per cent., as I have in other cases of the same sized plots.

Q. And the difference between that and the 12 per cent. reckoned on the entire valuation would be the addition by reason of the loss in plottage, if the street were put through?

A. Yes.

Q. You would in that case—would you not—have lots facing on Twelfth Avenue as well as on 44th and 45th Street?

A. Yes, sir.

Q. Would not that be a certain value to offset cutting off of the dock?

A. Something.

Q. And the same is true as to the block, 45th to 46th Street?

A. Yes.

Q. So that it would require some other computation than a mere *pro rata* computation to determine the value of the company's property, even if the streets were cut through?

A. Yes.

Q. Could you state or could you compute in a moment, or could you not, what would be the value of the company's property still remaining provided Twelfth Avenue were taken out and the plot left as it then is, in lieu of the values you have already stated for Blocks 1092 and 1093, and the bulkhead?

Mr. Burr: I object to that as incompetent and purely speculative, and calling for a conclusion.

Mr. Gans: We join in the objection.

The Master: I will allow it.

Exceptions taken by Mr. Gans and Mr. Burr.

A. I might be able to value that.

Q. If you haven't the data at hand I won't ask you to state offhand.

1158 A. Well, I could not even secure that data, for this reason, that if that avenue were opened and the avenue was closed again at 43d Street as it is at present it would make one value. If Twelfth Avenue were opened and it was opened at the same time from 42d Street to 43d Street, it would make another value.

Q. So your valuation is upon the basis of the property as you found it to-day used by the Gas Company?

A. Yes.

Q. Referring to page 2 of Exhibit 48, bulkhead property and property on water east of Tompkins Street, why do you establish a higher rate per lineal foot for the bulkhead property between 14th and 15th Streets than you place upon that between 15th and 16th Streets?

A. On account of the increased value of the streets running down to the water front at 14th Street.

Q. Fourteenth Street is a broader street and more of a business street than 15th Street, is it not?

A. Yes, there is a large sand business down there, unloading sand at the bulkheads.

Q. Do you remember whether Tompkins Street is closed above 16th Street and below 14th Street?

A. It is.

Q. So as a matter of fact the Consolidated Gas Company as owners of the upland have an unusual use of the bulkhead property or means of access to it, have they not?

A. Very unusual.

Q. Without interruption from any general traffic passing up or down Tompkins Street, except their own?

A. That is true.

Q. Now, you have been asked some questions as to whether figures were given you in advance for these valuations. Were you asked to do anything except merely to examine and give your best judgment of the values of these properties?

A. I think those are the exact words that Mr. Gawtry used in speaking to me.

Q. And of course in applying the data which you have
1159 discovered in the sales which you have made and sales which
you know of, and the other information which you have obtained, you have employed your own best judgment in applying them to individual parcels in valuing?

A. I have.

Mr. Mathewson: I have no more questions.

By Mr. Gans:

Q. I presume you are to be remunerated for the time spent in making these computations, viewing these properties and giving your opinion here?

A. I trust so. I have not arranged for any fee.

By Mr. Burr:

Q. Do you mean to say you are testifying before you fixed your fee?

A. Certainly.

Mr. Mathewson: I desire now, if the Master please, to put in evidence the special franchises of the company upon which I began once before. I present and offer in evidence original grant from the City of New York to New York Gas Light Company included in the articles of agreement, indented, made and concluded the 12th day of May, 1823, by the Mayor, Aldermen and Commonalty of the City of New York, party of the first part, and New York Gas Light Company, party of the second part.

Mr. Gans: Objected to as immaterial, irrelevant and incompetent; on the ground that there is no proof that the persons purporting to sign the same on behalf of the City of New York were authorized by law to bind the City of New York. By that I do not mean that we question the official character of the persons who signed or purported to sign, or that the signature appended to these in-
1160 struments was their signature. I object further on the ground
that there is no proof that these instruments convey any property to which the complainant corporation has ever acquired any title or in which the complainant corporation has ever acquired any interest.

Mr. **Burr**: I object to it on the part of the City on the ground that the franchise claimed is no longer in existence, and on the ground that there is no proof offered that the terms and conditions under which it was granted have been complied with.

Mr. **Gans**: I also join in the City's objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 101.

Mr. **Burr**: I want to add to my objection further, that it can only be offered in evidence here for the purpose of placing some value on it, I presume, and that according to our contention no valuation can be placed upon that franchise which would affect the price of the manufacture and distribution of gas to the consumers in the City of New York.

Mr. **Gans**: We shall raise the same point, but do not think it is necessary to put the objection to its admission on that ground.

Mr. **Mathewson**: This Exhibit No. 101 is found in print at page 736 and following in Volume 2 of the Appeal Record from the Gas Commission's finding, to which reference has been previously made.

I now offer in evidence indenture dated 5th day of May, 1848, being the grant from the Mayor, Aldermen and Commonalty of the City of New York, of the first part, to the Manhattan Gas 1161 Light Company, of the second part, having reference among other things to the use of the streets of the city for the fixtures of the party of the second part.

Mr. **Gans**: We make the same objection that we have made on our part before and that we made in joining in the city's objection to this instrument.

Mr. **Burr**: I make the same objection to this paper, purporting to be a franchise, that I made to the prior one.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 102.

Mr. **Mathewson**: This document Complainant's Exhibit 102 is found in print in Volume 3 of the printed record on appeal from the order of the Gas Commission, at page 2,017 and following.

I also offer in evidence a prior instrument, being indenture made the 8th day of May, 1833, between the Mayor, Aldermen and Commonalty of the City of New York of the first part and the Manhattan Gas Light Company of the second part, covering among other things the rights of the Manhattan Gas Light Company to place their fixtures in the public streets.

Mr. **Gans**: We make the same objection to this as we have made to the previous instruments of this character.

Mr. **Burr**: Same objection as I made before. On the ground, further, that that franchise has expired and that there is no evidence that the ordinances of the City of New York have been complied with, or that any action taken by said company was under the direction and authority of the City of New York.

The **Master**: Same ruling.

1162 Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 103.

Mr. **Gans**: I thought we had included in our original objection that the franchise had not expired. If we did not I want to have it included in my objection to all these instruments.

The **Master**: Yes, that objection was made.

Objection overruled.

Mr. **Gans**: Exception.

Mr. **Mathewson**: I offer in evidence certified copy of the resolution of the Mayor, Aldermen and Commonalty of the City of New York, purporting to give the Harlem Gas Light Company authority to lay conductors in the streets, etc., of the City of New York, adopted March 26th, 1865; also another certified copy of resolution of same purport, adopted April 25, 1855, in favor of the same company; in each case by the Board of Aldermen of the City of New York. This instrument includes, of course, the approval of the Mayor.

Mr. **Burr**: Same objection.

Mr. **Gans**: We make the same objection as to the previous instrument.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 104.

Mr. **Mathewson**: The printed copy of this Exhibit No. 104 is found in Volume 3 of the Papers on Appeal from the order of the Gas Commission, at page 2,023 and following.

I offer in evidence certified copy of resolution of the Common Council of the City of New York, adopted June 9, 1858, by the Council and by the Board of Aldermen on June 10, 1858, 1163 and passed over the Mayor's veto by the Council on the 21st day of December, 1858, and by the Board of Aldermen on December 22, 1858; purporting to grant to the Metropolitan Gas Light Company of the City of New York authority to lay its pipes, etc., in the public streets.

Mr. **Gans**: The same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 105.

Mr. **Mathewson**: This Exhibit No. 105 will be found in print in the Record on Appeal from the Gas Commission's order, at page 2025 and following.

I also offer in evidence certified copy of a resolution passed by the Common Council June 18, 1863, and by the Board of Aldermen on June 22, 1863, and passed by the Board of Councilmen over the Mayor's objections August 3, 1863, and by the Board of Aldermen on September 17, 1863, purporting to grant to the Anthracite Gas Lighting and Heating Company of New York the right to lay pipes in the public streets; and also a certified copy of a further resolution passed by the Board of Councilmen May 18, 1865, and the Board of Aldermen May 24, 1865, relating to the same subject.

Mr. GANS: We make the same objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Gans and Mr. Burr except.

Mr. MATHEWSON: Those resolutions are found in the printed appeal book from the Gas Commission's order, at page 2,026 and following.

Received in evidence and marked Complainant's Exhibit 106.

1164 Mr. MATHEWSON: I offer in evidence certified copy of the certificate of incorporation of the Anthracite Gas Lighting and Heating Company, dated May 27, 1863.

Mr. GANS: Objected to as incompetent, immaterial and irrelevant.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 107.

Mr. MATHEWSON: I also offer in evidence certified copy of certificate of incorporation of The Citizens Mutual Gas Light Company of New York, dated May 26, 1865.

Mr. GANS: The same objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 108.

Mr. MATHEWSON: I also offer in evidence original indenture dated May 27, 1865, between the Anthracite Gas Lighting and Heating Company of New York, of the first part, and The Citizens' Mutual Gas Light Company of the City of New York, of the second part, transferring to the latter the rights granted to the former by the City of New York by the previous resolutions introduced in evidence.

Mr. GANS: Objected to as incompetent, irrelevant and immaterial, as not tending to prove anything within the issues in this case, as not tending to establish the existence of any rights in the complainant in this case and, further, on the ground that there was no power to transfer any of the rights purporting to be transferred by the instrument in question.

1165 Mr. BURR: Same objection, and in addition I make the same objection as I made before.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 109.

Mr. MATHEWSON: I also offer in evidence certified copy of certificate of incorporation of The Union Gas Light Company, dated October 26, 1871.

Mr. GANS: Objected to as incompetent, irrelevant and immaterial.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 110.

Mr. **Mathewson**: I also offer in evidence original indenture dated the 22nd day of November, 1871, from The Citizens' Mutual Gas Light Company of the City of New York to the Union Gas Light Company of the City of New York, conveying the rights acquired by the former from the City of New York by resolutions already in evidence.

Mr. **Gans**: Same objection to that as I made to Exhibit 109.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 111.

Mr. **Mathewson**: I also offer in evidence certified copy of an order of the Special Term of the Supreme Court made on the 15th day of June 1875, John R. Brady, Justice, in the matter of the People of the State of New York against the Union Gas Light Company of the City of New York, appointing Charles Edgar 1166 Appleby, receiver of the property, franchises and effects of the Union Gas Light Company.

Mr. **Gans**: Objected to as incompetent, immaterial and irrelevant.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 112.

Mr. **Mathewson**: I also offer in evidence certified copy of order in the same proceeding, made at a Special Term of the Supreme Court on the 24th day of July, 1876, T. R. Westbrook, Justice, directing a sale by said receiver of the Union Gas Light Company of the property, rights, franchises and contracts of that company.

Mr. **Gans**: Objected to as incompetent, irrelevant and immaterial, and as insufficient to establish that a Court of Jurisdiction, and having jurisdiction of the subject matter, had entered a decree, supposing it to be entered.

Mr. **Mathewson**: I judge the Federal Courts takes judicial notice of the general statutes of the State.

Mr. **Gans**: And there are other jurisdictional defects which may have to be established.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 113.

Mr. **Mathewson**: I also offer in evidence certified copy of an order of the Special Term of the Supreme Court of the State of New York, made the 11th day of March, 1879, by Abraham R. Lawrence, Justice, in the same proceeding, confirming the sale by the 1167 receiver mentioned of the property, assets, effects, franchises and rights belonging to the Union Gas Light Company to Walter Osborn, Tilton E. Doolittle and Jared E. Redfield, Receivers of the Johnson Savings Bank of New Haven, Connecticut, they being the highest bidders therefor, and reciting due notice of the sale and that the purchasers at such sale had duly assigned their purchase and bid to Clark Bell, and that the receiver had executed transfers and conveyances of such property and assets to Clark Bell, and the order further ratifying and confirming the action of said receiver.

Mr. Gans: The same objection as to the previous exhibit.

Mr. Burr: Same objection.

The Master: Same ruling.

Mr. Gans and Mr. Burr except.

Mr. Burr: Do you mind having the date appear that that was filed?

Mr. Mathewson: March 11, 1875, is the only date here.

Received in evidence and marked Complainant's Exhibit No. 114.

Mr. Mathewson: I also offer in evidence original indenture, dated the 10th day of August, 1876, between Charles Edgar Appleby, Receiver of the Union Gas Light Company, to Clark Bell, transferring to the latter the property, rights, and franchises of the Union Gas Light Company above referred to.

Mr. Gans: Same objection as was made to the admission of Exhibit No. 109.

Mr. Burr: Same objection.

The Master: Same ruling.

Mr. Gans and Mr. Burr except.

1168 Received in evidence and marked Complainant's Exhibit 115.

Mr. Mathewson: I also offer in evidence original indenture, dated August 22, 1876, between Clark Bell and the Knickerbocker Gas Light Company, by which the former transferred to the latter the property and franchises acquired by Clark Bell from the receiver of the Union Gas Light Company as aforesaid.

Mr. Gans: Same objections as was made to the admission of Exhibit 109.

Mr. Burr: The City joins in the objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 116.

Mr. Mathewson: I also offer in evidence resolution adopted by the Board of Aldermen of the City of New York, dated December 21, 1876, approved by the Mayor December 23, 1876, granting permission to all incorporated gas light companies to lay gas mains and pipes in the streets, etc., in the City of New York, for the purpose of supplying gas to the city and its inhabitants.

Mr. Gans: Objected to on the same grounds as set forth to Exhibits 101, 102 and 103.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit No. 117.

Mr. Mathewson: I also offer certified copy of a grant and agreement made by the City of New York, March 22d, 1877, signed by Smith Ely, Jr., Mayor, John Kelly, Comptroller, and Allan Campbell, Commissioner of Public Works, reciting the resolution, Ex-
hibit 117, and prescribing conditions upon which the Munici-
1169 pal Gas Light Company may place fixtures in the streets
of the City of New York, under the terms of said resolution,

Exhibit 117, and the assent of the Municipal Gas Light Company and acceptance of said conditions, dated March 22, 1877, executed by the Municipal Gas Light Company, Charles G. Francklyn, President, and Philip Allen, Secretary.

Mr. **Gans**: Same objection as to the last exhibit.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 118.

Mr. **Mathewson**: I also offer in evidence Chapter 944 of the Laws of the State of New York of 1871, being an act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and so forth.

Mr. **Gans**: Objected to as incompetent, immaterial and irrelevant, and as conferring no rights upon the complainant in this action.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Received in evidence as Complainant's Exhibit 119, but not marked.

Mr. **Mathewson**: I also offer in evidence affidavit of publication under Section 3 of said Chapter 944 of the Laws of 1871, dated the 20th day of May, 1878, by William Foster, Jr.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

1170 Received in evidence and marked Complainant's Exhibit 120.

Mr. **Mathewson**: I also offer in evidence original assignment from William R. Dyer, one of the individuals mentioned in said Chapter 944 of the Laws of 1871, to William Caldwell, conveying rights of William Dyer conferred by said Chapter 944.

Mr. **Gans**: I am afraid we shall have to object to this as incompetent, irrelevant and immaterial and, also, on the ground, that there is no proof that William R. Dyer is the person mentioned in Chapter 944 of the Laws of 1871. My point is this, we may be able to afford to admit that certain public acts or certain public instruments purporting to be public acts are genuine, but I don't know that we would be doing our duty if we admitted the authenticity of a signature of this sort or the identity of the person.

Mr. **Burr**: I join in the objection.

Mr. **Mathewson**: I do not think you would be going very far aside from your duty if you did.

The **Master**: Same ruling.

Mr. Gans and Mr. Burr except.

Mr. **Mathewson**: This instrument recites that William R. Dyer is one of the persons mentioned in the first section of the act, Chapter 944 of the Laws of 1871; and the acknowledgment upon the instrument recites that he is the person described in and who executed the foregoing instrument, and he is described in the instrument as one of the individuals mentioned in the act which has been put in evidence.

Mr. Gans: I do not think that that constitutes proper proof of identity for any such purpose as this, and therefore I object 1171 specifically on that ground as well as on the other grounds I have mentioned.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 121.

Mr. Mathewson: I also offer in evidence assignment from William Cauldwell as assignee of said William R. Dyer, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated December 29, 1871, transferring to the assignees the rights obtained by said Cauldwell from William R. Dyer by the last preceding exhibit.

Mr. Page: I think we had better add to the last objection that that was a grant to those people jointly and not jointly and severally, and Dyer would have no power under the act to assign.

Mr. Meade: It says to them or their assigns, in the act.

Mr. Page: It says they shall within a certain time appoint an executive committee who——

Mr. Meade: We have proved that by the second document we offered in evidence.

Mr. Mathewson: We will make proof of that.

Mr. Gans: We make the same objection to this last instrument that we made to the one immediately preceding it, including the objection suggested by Senator Page, that the grant was a grant, if valid at all, to certain persons collectively and confers no rights upon any individual which he could assign, and also on the further ground that the grant reads to the assigns of certain individuals and not to the assigns of their assigns forever.

Mr. Burr: Same objection.

1172 The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 122.

Mr. Mathewson: I also offer in evidence original assignment dated June 29, 1871, from William P. Smith, recited as being one of the persons mentioned in the first section of Chapter 944 of the Laws of 1871, to Isaac P. Martin, of all interest of said William P. Smith obtained under said act.

Mr. Gans: We object upon the same grounds as to the previous paper, including the authenticity of the instrument and the identity of the person purporting to have signed it.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 123.

Mr. Mathewson: I also offer in evidence assignment dated November 27, 1871, from said Isaac P. Martin to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, transferring to the assignees all interests obtained by Isaac P. Martin under the assignment shown in the last previous exhibit. My offer includes the entire paper, including the original power of attorney attached to the assignment proper.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 124.

Mr. MATHEWSON: I also offer in evidence original assignment from Edward Jones, recited to be one of the grantees named
1173 in the first section of the act aforesaid, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated November 25, 1871, transferring to the grantees all the interest of said Jones under said act.

Mr. GANS: Same objection.

Mr. BURR: Same objection

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 125.

Mr. MATHEWSON: I offer original assignment from Shepherd F. Knapp, recited to be one of the grantees named in Section 1 of the Act aforesaid, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated November 28, 1871, of all the grantor's interest under said act.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 126.

Mr. MATHEWSON: Also original assignment from William H. Bloom, recited to be one of the grantees named in said Chapter 941 of the Laws of 1871, to Cornelius Corson, of all interest of the assignor acquired under said act.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 127.

Mr. MATHEWSON: I also offer in evidence original assignment from Cornelius Corson to C. S. Bushnell, Henry J. Davison
1174 and Gordon H. Waddell, of all interest acquired by the grantor from William H. Bloom by the instrument last offered in evidence.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 128.

Mr. Mathewson: I also offer in evidence original assignment from Joel A. Fithian, recited to be one of the grantors named in said Act of 1871, to Richard B. Connolly, dated July 6, 1871, transferring the interest of said Fithian, acquired under said Act, to said Connolly.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 129.

Mr. Mathewson: I also offer in evidence original assignment from Richard B. Connolly to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest acquired by the grantor from Fithian under the conveyance last offered in evidence, this assignment being dated November 25, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 130.

Mr. Mathewson: I also offer in evidence original assignment of Walter Smith, recited to be one of the grantees named in the first section of the Act of 1871 aforesaid, dated November 1175 28, 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, assigning all the interest of the grantor to said grantees.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 131.

Mr. Mathewson: I also offer in evidence original assignment from Joseph Murphy, recited to be one of the grantees named in section 1 of said act of 1871, to Forbes Holland, dated July 13, 1871, transferring to said Holland all interest of said grantor under said act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 132.

Mr. Mathewson: I also offer in evidence original assignment from said Forbes Holland to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated November 25, 1871, conveying to the grantees all interest acquired by said Holland from Joseph Murphy under the last preceding assignment.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 133.

Mr. Mathewson: I also offer in evidence original assignment from Edward Taylor to William M. Tweed, Jr., dated July 3, 1871,
reciting that said Taylor is one of the individuals named in
1176 Section 1 of said act of 1871 and transferring to the grantee
all interest acquired by said Taylor under said act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 134.

Mr. Mathewson: I also offer in evidence original assignment dated November 27, 1871, from William M. Tweed, Jr., as assignee of Edward Taylor, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, transferring to the grantees all interest of said Tweed under the Act aforesaid.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 135.

Mr. Mathewson: I also offer in evidence original assignment from John E. Cronly, recited to be one of the grantees mentioned in said Chapter 944 of the laws of 1871 to Alexander Frear, dated July 18th, 1871, transferring to said assignee all interest of said Cronly acquired under said Act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 136.

Mr. Mathewson: I also offer in evidence original assignment
from George H. Hicks, recited to be one of the grantees
1177 named in said Chapter 944 of the Laws of 1871, to Alexander
Frear, of all interest of said grantor under said Act, the assignment being dated November 24th, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 137.

Mr. Mathewson: I offer in evidence original assignment from Alexander Frear to C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell, dated November 24th, 1871, of all interest acquired pursuant to said Act of 1871 by said grantor, as assignee of George H. Hicks and John E. Cronly.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 138.

Mr. Mathewson: I also offer in evidence original assignment from Joseph G. Jennings, referred to be one of the grantees named in said Act of 1871 dated June 29th, 1871, transferring to Charles Banks all of the interest of the grantor acquired under said Act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 139.

Mr. Mathewson: I also offer in evidence original assignment
from Charles Banks as assignee of Joseph G. Jennings to
1178 C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell,
of all interest acquired by said Banks as said assignee of the
said Act of 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 140.

Mr. Mathewson: I also offer in evidence original assignment from Henry Johnson, recited as one of the grantees mentioned in Chapter 944 of the Laws of 1871, to William Hitchman, dated November 24th, 1871, conveying to the assignee all the interest of the grantor of the said Act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 141.

Mr. Mathewson: I offer in evidence original assignment from William Hitchman as assignee of Henry Johnson to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated November 25th, 1871, of all the interest acquired by the grantor by virtue of said assignment under said Act of 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 142.

Mr. Mathewson: I also offer in evidence assignment from Ed-

1179 ward J. Shandley, recited to be one of the grantees named in the first section of said Act of 1871, transferring to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all the grantor's interests under the said Act of 1871, being dated December 4th, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 143.

Mr. **Mathewson**: I offer in evidence original assignment from John C. Angell recited as one of the grantees named in said Act of 1871 to James M. Sweeney of all the interests of the grantor acquired under said Act, said assignment being dated June 21st, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 144.

Mr. **Mathewson**: I also offer in evidence original assignment from James M. Sweeney as assignee of John C. Angell to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all his interests acquired by said assignment under Chapter 944 of the Acts of 1871, said assignment being dated December 26th, 1871, also the power of attorney attached.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 145.

1180 Mr. **Mathewson**: I also offer in evidence original assignment from William Vail, recited to be one of the grantees in said act of 1871, to Thomas C. Fields, of all the interests of the grantor, acquired under said act, said assignment being dated June 14th, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 146.

Mr. **Mathewson**: I also offer in evidence original assignment from Patrick Quinn, recited to be one of the grantees named in said act of 1871, to Thomas C. Fields, of all the interests of the grantor under said act, said assignment being dated June 14, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

The paper was received and marked Complainant's Exhibit No. 147.

Mr. Mathewson: I also offer in evidence original assignment from William H. Murphy, recited to be one of the grantees under said act of 1871, to Thomas C. Fields of all the interests of the grantor acquired under said act of 1871, assignment being dated June 14, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 148.

Mr. Mathewson: I also offer in evidence original assignment from William Higgins, recited to be one of the grantees in said act of 1871, to Thomas C. Fields of all interests of the grantor acquired under said act of 1871, said assignment being dated June 26, 1871. 1181

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 149.

Mr. Mathewson: I also offer in evidence original assignment from John H. Johnston, recited to be one of the grantees mentioned in the first section of the said act of 1871, to Thomas C. Fields of all the grantor's interests under said act, said instrument being dated June 14th, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 150.

Mr. Mathewson: I also offer in evidence original assignment from George Chivvis, recited to be one of the persons mentioned in the first section of the said act of 1871, to Thomas C. Fields, transferring to the latter all the interest of the grantor under said act, said assignment being dated July 6, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 151.

Mr. Mathewson: I also offer in evidence original assignment from Thomas C. Fields, as assignee of John H. Johnston, Patrick Quinn, George Chivvis, William Higgins, William H. Murphy, and William Vail, to C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell, of all the interest acquired by said Fields, under said Act of 1871, pursuant to the previous assignment, this instrument being dated November 25th, 1871. 1182

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 152.

Mr. Mathewson: I also offer in evidence original assignment from Richard H. Vaughan, dated July 3rd, 1871, to George L. Loutrel, of all the interest of the grantor under said Act of 1871, said Vaughan being recited to be one of the individuals named in the said Act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 153.

Mr. Mathewson: I also offer in evidence original assignment from George L. Loutrel, as assignee of Richard H. Vaughan, to C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell, of all interest acquired by the grantor under said Act of 1871, said assignment being dated November 25th, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 154.

1183 Mr. Mathewson: I also offer in evidence original assignment from Andrew J. Smith, recited to be one of the grantees named in the first section of the Act of 1871, to C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell, of all interest of the assignor acquired under said Act, said assignment being dated November 25th, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 155.

Mr. Mathewson: I also offer in evidence original assignment from Henry A. Smith, recited to be one of the grantees named in the first section of said Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all the interest of said grantor acquired under said Act, said assignment being dated December 5th, 1871, also the power of attorney thereto attached.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 156.

Mr. Mathewson: I also offer in evidence original assignment from Joseph Bell, recited to be one of the grantees named in the first section of said Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest of the grantor acquired under said Act of 1871, said assignment being dated November 25th, 1871.

Mr. Gans: Same objection.

1184 Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 157.

Mr. Mathewson: I also offer in evidence original assignment dated December 30th, 1871, from John J. Walsh, recited to be one of the grantees named in the first section of the said Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, transferring to the assignees all the interest of the *assignees all the interest of the* assignor acquired under the said Act.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 158.

Mr. Burr: This power of attorney on Exhibit No. 156, does that purport to be an original or a copy.

Mr. Mathewson: It purports to be a sworn copy. I offer in evidence original assignment dated the — day — ——, 1871, and acknowledged November 27, 1871, from Delavan Peck, recited to be one of the grantees named in the first section of said Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, transferring to the grantees all the interest of the grantor acquired under said Act of 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 159.

1185 Mr. Mathewson: I also offer in evidence original assignment from Thomas Y. Avery, recited to be one of the grantees mentioned in the first section of said Act of 1871, to A. Oakey Hall, of all interest of said grantor acquired under said Act of 1871, said assignment being dated the 29th day of June, 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 160.

Mr. **Mathewson**: I also offer in evidence original assignment from A. Oakey Hall, dated November 27, 1871, as assignee of Thomas Y. Avery, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all the interest acquired by the grantor by the last previous assignment under said Act of 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 161.

Mr. **Mathewson**: I also offer in evidence original assignment from John Balmore, recited to be one of the grantees named in the first section of said Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all the grantor's interest acquired under said Act of 1871, said assignment being dated November 27, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

1186 Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 162.

Mr. **Mathewson**: I also offer in evidence original assignment from James S. Turner, recited to be one of the individuals named in said act of 1871, to William M. Tweed, of all the interest of the grantor under said act, said assignment being dated July 3, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 163.

Mr. **Mathewson**: I also offer in evidence original assignment from William M. Tweed, as assignee of James S. Turner to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated November 27, 1871, of all the interest of the grantor acquired by the last previous conveyance under said act of 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 164.

Mr. **Mathewson**: I also offer in evidence original assignment from William Johnston, recited to be one of the individuals named in said act of 1871, to John Ryan, of all the interest acquired by said Johnston, the said grantor under said act, said assignment being dated December 16, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

1187 Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 165.

Mr. **Mathewson**: I also offer in evidence original assignment from John Ryan, as assignee of William Johnston to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, dated December 18, 1871, of all interest of the assignor acquired by such assignment under said act of 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 166.

Mr. **Mathewson**: I also offer in evidence original assignment from Henry S. Murray, recited to be one of the persons named in said act of 1871, to Peter B. Sweeny, of all interest of the grantor acquired under said act, said assignment being dated July 3, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 167.

Mr. **Mathewson**: I also offer in evidence original assignment from Peter B. Sweeny, as assignee of Henry S. Murray to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest of the grantor acquired by such assignment under said act of 1871, said assignment being dated December 4, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

1188 Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 168.

Mr. **Mathewson**: I also offer in evidence original assignment from Peter H. E. Baxter, recited to be one of the persons mentioned in said act of 1871, to Henry W. Genet, of all interest of the assignor acquired under said act, said assignment being dated June 16, 1871.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 169.

Mr. **Mathewson**: I also offer in evidence original assignment from Henry W. Genet, as assignee of Peter H. E. Baxter to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest acquired by such assignor under said act of 1871, such assignment being dated November 28, 1871.

Mr. **Gans**: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 170.

Mr. MATHEWSON: I also offer in evidence original assignment from John Cox, recited to be one of the grantees named in the first section of said act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest of the assignor acquired under said act, said assignment being dated November 25, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

1189 Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 171.

Mr. MATHEWSON: I also offer in evidence original assignment from John J. Turner, recited to be one of the persons named in said act of 1871, to William E. King, of all interest of the assignor acquired under said act, said assignment being dated July 3, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 172.

Mr. MATHEWSON: I also offer in evidence original assignment from said William E. King, dated July 18, 1871, to James F. Pierce, of all rights acquired by said King under said act of 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 173.

Mr. MATHEWSON: I also offer in evidence original assignment from James F. Pierce as assignee of John J. Turner to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interest acquired by said assignor under said Act of 1871, said assignment being dated November 25, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

1190 The paper was received and marked Complainant's Exhibit No. 174.

Mr. MATHEWSON: I also offer in evidence original assignment from Edgar Brower, recited to be one of the individuals named in said Act of 1871 to Charles E. Wilbour of all interests of the grantor acquired by said grant, aforesaid, said assignment being dated July 3, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 175.

Mr. MATHEWSON: I also offer in evidence original assignment of Charles E. Wilbour as assignee of Edgar Brower to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interests acquired by the assignor under said Act of 1871, said assignment being dated November 27th, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 176

Mr. MATHEWSON: I also offer in evidence original assignment of Charles E. Loew, recited to be one of the grantees named in said Act of 1871 to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interests of the assignor acquired under said Act, said assignment being dated November 25, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

1191 The paper was received and marked Complainant's Exhibit No. 177.

Mr. MATHEWSON: I also offer in evidence original assignment from Matthew T. Brennan, recited to be one of the grantees named in the first section of the Act of 1871, to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, of all interests of the grantor acquired under said Act, said assignment being dated November 25th, 1871.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 178.

Mr. MATHEWSON: I also offer in evidence original resignation dated November 27th, 1871, on the part of H. W. Genet, Richard B. Connolly, Thomas C. Fields, Wm. M. Tweed, Cornelius Corson, Charles E. Wilbour, Peter B. Sweeney, A. Oakey Hall, and Henry Hilton as Executive Committee provided in the third section of said Act of 1871.

Mr. GANS: The same objection to this as to previous exhibits; also that a paper of this sort is no proof of the resignation of the persons named therein; furthermore that the assignment purporting to be made by them is beyond any power conferred upon them by the Act.

Mr. BURR: The same objections.

Mr. GANS: And also, that there is no evidence that the persons named therein were ever elected as an Executive Committee under provisions of said Act, and no evidence that they were ever qualified to be such Executive Committee.

Mr. BURR: The same objection.

1192 The paper was received and marked Complainant's Exhibit 179.

Mr. MATHEWSON: I also offer in evidence an instrument dated November 27th, 1871, signed by Hugh Smith and James M. Sweeney, reciting that they have been duly elected pursuant to the third section of the said Act of 1871, as an Executive Committee as therein provided for, and releasing, relinquishing, assigning and setting over to C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every their right, title and interest as grantees or assignees in and to the charter, franchise and authority granted by the said Act.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 180.

Mr. MATHEWSON: I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, to William Foster, Jr., of the City of New York, to all and every our joint and several rights, title and interest as owned by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp and William R. Dyer, or their assignees, as original grantees under said Act of 1871, said assignment being dated February 14th, 1874.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 181.

1193 Mr. MATHEWSON: I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, to Eben F. Bacon, of all the rights of the grantors acquired by intermediate assignments from Edward Taylor, Joseph Murphy, Walter Smith, Joel A. Fithian and William H. Bloom, or their assignees, under said Act of 1871, said assignment being dated February 14th, 1874.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 182.

Mr. MATHEWSON: I also offer in evidence original assignment from Cornelius S. Bushnell, Henry J. Davison and Gordon H. Waddell, to James M. Townsend, of all the rights of the grantors acquired by intermediate assignment from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings, Henry Johnston, or their assignees, under said Act of 1871, said assignment being dated February 14th, 1874.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 183.

Mr. MATHEWSON: I do not understand that there is any question in regard to these signatures.

Mr. GANS: We do not admit any of them and raise every possible objection in regard to the authenticity of these instruments. I do not know but that the Master may know them, and if he 1194 is willing to take judicial notice over my objection, he may do so of course.

Mr. MATHEWSON: I do not think that there is any question of that kind in regard to instruments as obviously genuine as these are.

I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. Waddell to Samuel J. Young transferring the interest of the assignors derived by intermediate assignments from William Vail, William H. Murphy, Patrick Quinn, George Chivvis, John H. Johnston, William Higgins or their assignees under said Act of 1871, said assignment being dated February 14, 1874.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 184.

Mr. MATHEWSON: I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. Waddell to Charles E. Appleby of all the interest of the assignors acquired by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughan, Joseph Bell, Delavan Peck, John J. Walsh or their assigns, under said Act of 1871, said assignment being dated February 14, 1874.

Mr. GANS: Same objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 185.

Mr. MATHEWSON: I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. 1195 Waddell to Paschal W. Turney of all the interest of the assignors by intermediate assignments from William Johnston (otherwise called William Johnson), Jas. S. Turner, Thomas Y. Avery, John Balmore, Henry S. Murray and Peter H. Baxter, Jr., or their assigns under said Act of 1871, said assignment being dated February 14, 1874.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 186.

Mr. Mathewson: I also offer in evidence original assignment from C. S. Bushnell, Henry J. Davison and Gordon H. Waddell to Henry H. Porter of all the interest of the grantors acquired by intermediate assignment from Matthew T. Brennan, Charles E. Loew, Edgar Brower, John J. Turner and John Cox or their assigns under said Act of 1871, said assignment being dated February 14, 1874.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 187.

Mr. Mathewson: I also offer in evidence original indenture between William Foster, Jr., James M. Townsend, Paschal W. Turney and Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young of the first part, to the Union Gaslight Company of the City of New York of the second part, transferring to the said
company all their rights to Act under the franchise granted
1196 by the Act of 1871, among other things, said assignment
being dated the 25th day of February, 1874.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 188

Mr. Mathewson: I also offer in evidence original assignment from William Foster, Jr., to Robert M. C. Graham of all the rights acquired by said grantor by intermediate assignment from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp, and William R. Dyer, under said Act of 1871, said assignment being — the fifth day of December, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received and marked Complainant's Exhibit No. 189.

Mr. Mathewson: I also offer in evidence original assignment from Edward F. Bacon to John Sickels of the City of New York, of all the interest acquired by the grantors acquired by intermediate assignment from Edward Taylor, Joseph Murphy, Walter Smith, Joel Fithian and William H. Bloom, acquired under said Act of 1871, said instrument being dated the 5th day of December, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

Received in evidence and marked Complinant's Exhibit No. 190.

Mr. Mathewson: I also offer in evidence original as-
1197 signment from James M. Townsend, dated December 5th,
1876, to Jared E. Redfield, of all the interest acquired by the assignors through intermediate assignment from George N. Wicks, John E. Cronley, John C. Angell, Edward J. Shandley, Joseph G. Jennings and Henry Johnston, under the said act of 1871.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 191.

Mr. Burr: I should like to have it understood that we make such further objections as seems proper upon inspection of these instruments.

The Master: You may note objections on the record, certainly.

Mr. Mathewson: But we must be informed of them.

The Master: Oh, yes.

Mr. Mathewson: I also offer in evidence original assignment from Samuel J. Young to George Howes, of all the interest acquired by the assignor by intermediate assignment from William Vail, William H. Murphy, Patrick Quinn, George Chivvis, John H. Johnston and William Higgins under said act of 1871, dated December 5, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 192.

Mr. Mathewson: I also offer in evidence original assign-
1198 ment from Charles E. Appleby to Tilton E. Doolittle, of all
the interest acquired by the assignor by intermediate assignment from Andrew J. Smith, Henry A. Smith, Richard H. Vaughan, Joseph Bell, Delavan Peck and John J. Walsh, under said act of 1871, said assignment being dated December 4th, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 193.

Mr. Mathewson: I also offer original assignment from William Foster, Jr., James M. Townsend, Evan F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, to Walter Osborn, of all the rights of the grantors as survivors of Paschal W. Turney, deceased, under the provision of the agreement dated the 25th day of February, 1874, between grantors and said Paschal W. Turney of the first part, and the Union Gas Light Company of the second part, it being recited that it is the intention of the assignment to vest in said Walter Osborn all the right, title and interest of said Paschal W. Turney as owner of certain grants and franchises from certain of the original grantees named in said act of 1871, and vested the assignors as survivors of said Turney under said agreement of February 25th, 1874, and by said instrument survivors also elected to appoint Walter Osborn a member of the Executive Committee existing under section 3 of said act of 1871, this instrument being dated the 5th of December, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

1199 The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 194.

Mr. Mathewson: I also offer in evidence a release from Charles E. Appleby, William Foster, Jr., and James M. Townsend, Eben F. Bacon and Samuel J. Young, recited to be the surviving members of the Executive Committee duly holding office under section 3 of Chapter 944 of the Laws of 1871, relinquishing, assigning and setting over to Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter, and their assigns, all the rights, powers and control which the subscribers to said instrument have acquired or can in any way exercise or have as such Executive Committee, said assignment being dated the 5th day of December, 1876.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 195.

Mr. Mathewson: I also offer in evidence an instrument executed by the Union Gas Light Company, dated December 11, 1876, consenting that William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the assignees and owners of intermediate assignments from the original grantees of the charter, grant, franchise and authority granted by the State by said Act of 1871, the owners by right of survivorship of the rights, title and interest of Paschal W. Turney, deceased, may assign, transfer and set over to Robert M. C. Graham, 1200 Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter, all of said interests, said consent being given under the provisions of a certain agreement of February 25th, 1874, between William Foster, Jr., *et al.*, and the said Union Gaslight Company; and said instrument requesting said Graham, Doolittle, Sickels, Howes, Osborn and whoever may be associated with them, to grant and delegate to the Knickerbocker Gaslight Company of the City of New York all the rights and privileges as agents and attorneys heretofore granted and delegated to said Union Gaslight Company, and also requesting said Foster, Townsend, Bacon, Appleby, Porter and Young, surviving members of the Executive Committee under said Act, to elect Walter

Osborn a member of said Executive Committee, to fill the vacancy caused by the death of Paschal W. Turney, and to assign to said Osborn all the right, title and interest of said Turney.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 196.

Mr. **Mathewson**: I also offer in evidence original assignment, dated August 10, 1876, from Charles E. Appleby, receiver of the Union Gaslight Company, assigning to Clark Bell all the interest of the Union Gaslight Company or said receiver in a certain contract made by said Union Gaslight Company with William Foster, Jr., and certain other grantees of the grants made by the State of New York, known as Chapter 944 of the Laws of 1871, said con-
1201 tract being dated the 25th day of February, 1874, and all
the right, title and interest of said company or said receiver in and to said grants.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit 197.

Mr. **Mathewson**: I also offer in evidence original indenture, dated December 11, 1876, between Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter, of the first part, and Knickerbocker Gas Light Company of the second part, reciting said act of the legislature and various assignments, and the party of the second part covenanting to perform all work, labor and services contemplated by said act for the beneficial exercise of the rights and privileges thereby granted.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 198.

Mr. **Mathewson**: I also offer in evidence consent of the Knickerbocker Gas Light Company, dated May 20, 1878, that Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, Walter Osborn and Henry H. Porter, five of the assignees and owners of the charter, grants, franchise, etc., under said act of 1871, assign to William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings and William W. Moir all said interest, said consent
1202 being given under the provisions of the agreement of Decem-
ber 11, 1876, between the individuals named and said Knickerbocker Company.

Mr. **Gans**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 199.

Mr. Mathewson: I also offer original consent signed by Jared E. Redfield, Tilton E. Doolittle, R. M. C. Graham, Walter Osborn and H. H. Porter, five of the members of the Executive Committee under said act of 1871, releasing and assigning to William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings and William W. Moir and their assigns all the rights, powers and control which said assignors had or could exercise as such Executive Committee.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 200.

Mr. Mathewson: I also offer in evidence general release executed by Walter Osborn, Tilton E. Doolittle and Jared E. Redfield, individually and as receivers of the Townsend Savings Bank of New Haven to the Knickerbocker Gas Light Company and its successors, dated May 20, 1878, of any claims which they may have against said company.

Mr. Gans: Same objectian.

Mr. Burr: Same objection.

1203 & 1204 The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 201.

Mr. Mathewson: I also offer in evidence original instrument dated March 11, 1880, executed by the Knickerbocker Gaslight Company, consenting that William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings, William W. Moir, John Sickels and George Howes, assignees and owners by intermediate assignments of the original charter, grant and franchise granted by said Act of 1871, transfer and set over to O. Ottendorfer, H. E. Gawtry, Henry Day, Philip Allen, Charles G. Francklyn, Peter Gardner and S. C. Thompson all of their interests, said consent being under a certain agreement dated December 11, 1876, between the individuals first named and said Knickerbocker Gaslight Company.

Mr. Gans: Same objection.

Mr. Burr: Same objection.

The Master: Objection overruled.

Mr. Gans and Mr. Burr except.

The paper was received and marked Complainant's Exhibit No. 202.

Adjourned to Friday, August 24, 1906, at 1:30 P. M.

Last Exhibits:

Complainant's 202.
State's N.
City's 34.

1205 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *August* 24, 1906—1:30 o'clock p. m.

Met pursuant to adjournment.

Owing to the absence of Mr. Gans, the hearing set for this hour was adjourned to 3 P. M., this day.

1206 AUGUST 24TH, 1906—3 p. m.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Page, Mr. Burr, Mr. Gans (4:27 P. M.).

Mr. MATHEWSON: I offer in evidence original instrument dated the 20th of May, 1878, executed by Jared E. Redfield, relinquishing and assigning to William W. Moir, all his rights and interests as owner by intermediate assignments of George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings, and Henry Johnson, original grantees under said act of 1871.

Mr. BURR: Objected to on all the grounds stated heretofore.

Mr. PAGE: Same objection on behalf of the State.

The MASTER: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 203.

Mr. MATHEWSON: I also offer in evidence instrument dated the 20th of May, 1878, executed by Tilton E. Doolittle, relinquishing and assigning to Oliver P. C. Billings all the rights and interest of Doolittle by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughn, Joseph Bell, Delavan Peck and John J. Walsh under said act of 1871.

Mr. PAGE: Same objection.

Mr. BURR: Same objection.

1207 The MASTER: Objection overruled.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 204.

Mr. MATHEWSON: I also offer in evidence original instrument dated May 20, 1878, executed by Robert M. C. Graham, relinquishing and assigning to M. Bayard Brown all Graham's rights and interest by assignment from William Foster, Jr., and by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd Knapp and William R. Dyer, grantees under said act of 1871.

Mr. **Page**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 205.

Mr. **Mathewson**: I also offer in evidence original paper executed by Henry H. Porter, relinquishing and transferring to Robert F. Cutting all his interest and title by intermediate assignment from John Cox, John J. Turner, Edgar Brower, Charles E. Loew and Mathew T. Brennan, grantees under said act of 1871.

Mr. **Page**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 206.

Mr. **Mathewson**: I also offer in evidence original instrument executed by Walter Osborn, relinquishing and assigning to William Bayard Cutting all his rights and interest as assignee of William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. 1208 Appleby, Henry H. Porter and Samuel J. Young, the survivors of Paschal W. Turney, deceased, and of which said Turney was the owner by intermediate assignments from Thomas Y. Avery, John Balmore, James S. Turner, William Johnston, Henry S. Murray and Peter H. E. Baxter, Jr., original grantees under said act of 1871.

Mr. **Page**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 207.

Mr. **Mathewson**: I also offer in evidence original instrument executed by William W. Moir, relinquishing and assigning to Charles G. Francklyn all his interest and rights by intermediate assignment from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings and Henry Johnson, original grantees under said act of 1871.

Mr. **Page**: Same objection.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 208.

Mr. **Mathewson**: I also offer in evidence original instrument executed by Oliver P. C. Billings, dated the 9th day of March, 1880, relinquishing and assigning to Philip Allen all his rights and interest by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughn, Joseph Bell, Delavan Peck and John J. Walsh, original grantees under said act of 1871.

Mr. **Page**: Same objection.

Mr. **Burr**: Same objection.

1209 The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 209.

Mr. MATHEWSON: I also offer original instrument, dated March 11, 1880, executed by M. Bayard Brown, relinquishing and assigning to Henry Day all his right and interest by assignment from William Foster, Jr., and by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp and William R. Dyer, original grantees under said act of 1871.

Mr. PAGE: Same objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 210.

Mr. MATHEWSON: I also offer original instrument, dated the 11th of March, 1880, executed by Robert F. Cutting, relinquishing and assigning to H. E. Gawtry, all his right and interest by intermediate assignments from John Cox, John J. Turner, Edgar Brower, Charles E. Loew and Mathew T. Brennan, original grantees under said Act of 1871.

Mr. PAGE: Same Objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 211.

Mr. MATHEWSON: I also offer original instrument executed by William Bayard Cutting, dated March 11, 1880, relinquishing and assigning to O. Ottendorfer all his rights and interests as 1210 assignee of William Foster, Jr., James M. Johnson, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the survivors of Paschal W. Turney, deceased, of which said Turney was owner by intermediate assignments from Thomas Avery, John Balmore, James S. Turner, William Johnson, and Peter H. E. Baxter, Jr., original grantees under said Act of 1871.

Mr. PAGE: Same Objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 212.

Mr. MATHEWSON: I also offer original instrument, dated March 11th, 1880, executed by George Howes, selling and relinquishing to S. C. Thompson, all his right and interest by intermediate assignments from William Vail, William H. Murphy, Patrick Quinn, George Chivvis, John H. Johnston and William Higgins, original grantees under said Act of 1871.

Mr. PAGE: Same Objection.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 213.

Mr. MATHEWSON: I also offer in evidence original instrument executed by John Sickels, dated March 10, 1880, transferring and assigning to Peter Gardner all his interest and rights by intermediate assignment from Edward Taylor, Joseph Murphy, Walter Smith, Joel A. Fithian and William H. Bloom, original grantees under said Act of 1871.

Mr. Page: Same Objection.

Mr. Burr: Same objection.

1211 The Master: Same ruling.

The Master: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 214.

Mr. Mathewson: I also offer original instrument executed by W. Bayard Cutting, M. Bayard Brown, R. Fulton Cutting, William W. Moir, Oliver P. C. Billings, John Sickels, and George Howes, dated the 11th of March, 1880, being members of the Executive Committee holding office under Section 3 of Chapter 944 of the Laws of 1871, leasing and relinquishing and assigning all the rights, powers and control which had been acquired by the assignors or which they could in any way exercise or have as such Executive Committee, to O. Ottendorfer, H. E. Gawtry, Philip Allen, Charles G. Franklyn, Peter Gardner, S. C. Thompson and their assigns.

Mr. Page: Same objection.

Mr. Burr: Same objection.

The Master: Same ruling.

Mr. Page and Mr. Burr except.

Received in evidence and marked Complainant's Exhibit 215.

Mr. Page: I make an application for adjournment on the ground of Mr. Gans' illness.

The Master: Mr. Mathewson, what is your attitude on the subject?

Mr. Mathewson: I do not want to be discourteous, of course, and on the other hand I do not want to take any advantage of Mr. Gans' illness. If I thought what I intended to offer immediately would be new matter or of sufficient importance so that he ought to be here,
I would join in the application. But really, I do not think
1212 that what I have immediately before me will be considered
of such importance, and unless you and Senator Page, as it proceeds think otherwise, I would very much like to put in a certain amount that I have here, even if the session is made a short one on that account.

The Master: It seems to me, as we have already held this hearing for a couple of hours on account of Mr. Gans' absence and there is no very definite information about his condition, and inasmuch as there are counsel here for the other defendants who can protect all his rights; inasmuch also as the witness proposed to be examined is one who is available at any time, and as I would allow Mr. Gans on returning to note any objections or make any motions that he might have desired if present, that we had better save time by proceeding.

Mr. Page: With regard to Mr. Carter, as I understood, Mr. Mathewson had completed his re-direct examination until I should have completed my cross-examination. If I had known that Mr. Carter was to be produced to-day, I would have asked Mr. Mathew-

son to postpone his examination, because Mr. Cuthbert, as I understand, has been working with Mr. Carter and he told me that he expected to put the matter in my hands Monday morning. I am ready and willing to take up the further cross-examination of Mr. Carter just as soon as I can get that report in my hands. Or if I had known you were going to produce him to-day I would have gotten together such matter as I have and completed it last night and this morning and have been ready to cross-examine him. I do not want to be foreclosed of my right to cross-examine Mr. Carter by Mr. Mathewson producing him at this time and consuming the rest of his time with his witnesses and then closing his case and making me
1213 go to the court, which I think is the object.

Mr. Mathewson: My idea, Senator, in producing Mr. Carter today was one which really was an inconvenience to me. I had not intended to do so until I ascertained that Mr. Gans was ill, and I suspected that it was possible that he might not be able to be here at 3 o'clock, so instead of producing a new witness like Mr. Addicks, whom Mr. Gans had not seen at all, I thought I would resort to the inconvenience of proceeding to examine Mr. Carter on the redirect on certain matters he has already been examined upon by you and by Mr. Burr, and consume the time in that way without any idea of foreclosing the time for cross-examination to which you are now entitled. And I also intended to produce Mr. Francklyn for a few minutes with reference to the rents, with regard to which you recollect you examined him. And as far as I am concerned, I make no application at this time that the cross-examination of Mr. Carter be closed, but am willing that Mr. Page have a further opportunity, if he gets his report Monday morning.

The Master: Certainly, that is understood.

Mr. Mathewson: I would much prefer to have proceeded the other way, but I am proceeding in this way because this situation has arisen.

Mr. Page: I do not want to be captious, but I do not want my good nature to be abused, either.

Mr. Mathewson: Well, I will offer in evidence Chapter 736 of the laws of 1905, being the Act mentioned in the complaint purporting to establish a rate of 75 cents to the City of New York for gas.

1214 Received and considered as Complainant's Exhibit No. 216.

Mr. Mathewson: I also offer in evidence Chapter 125 of the laws of 1906, being the Act mentioned in the bill of complaint, purporting to establish 80 cents as the charge for gas to private consumers other than the city.

Received and considered as Complainant's Exhibit No. 217.

The Master: That is not objected to, I assume.

Mr. Page: No, that is an entirely unobjectionable act.

Mr. Mathewson: I also offer in evidence Chapter 385 of the Laws of 1897, being the Act establishing the dollar rate in the City of New York by graduation of 5 cents per annum from $1.25, the dollar rate taking effect January 1, 1901.

Received and considered as Complainant's Exhibit 218.

Mr. **Mathewson**: I also offer in evidence complaint filed with the Commission of Gas and Electricity, dated August, 1905, executed by Edward C. Keyes and others.

Paper received and marked Complainant's Exhibit 219.

Mr. **Mathewson**: I also offer in evidence complaint filed with the State Commission of Gas and Electricity, dated August 17, 1905, executed by R. H. and M. McGurrin and others. These two being the complaints referred to in the bill of complaint.

Paper received and marked Complainant's Exhibit 220.

Mr. **Mathewson**: I also offer in evidence original order executed by the members of the State Commission of Gas and Electricity, bearing the seal of the Commission, dated February 23, 1906, based upon the two complaints just offered in evidence, purporting to establish a rate of 80 cents per thousand cubic feet in the City of New York, at which gas shall be supplied by the Consolidated Gas Company. 1215

Paper received and marked Complainant's Exhibit 221.

Mr. **Mathewson**: I also offer in evidence a memorandum or statement handed out by said State Commission of Gas and Electricity, dated the 23d day of February, 1906, a copy of which is attached to the complaint in this action.

Mr. **Page**: That is objected to as immaterial, irrelevant and incompetent. Any statement that may have been handed out by the Commission, not being an official act but their personal declaration, cannot be proved in this manner. It is mere hearsay.

Mr. **Burr**: I join in the objection.

Mr. **Mathewson**: If the Master please, the bill of complaint in this action alleges at paragraph 21 that the opinion or statement rendered by the State Commission in connection with this said order——

The **Master**: It is alleged in the bill, folio 72, that this memorandum or opinion was filed with the order.

Mr. **Page**: Yes, and that is denied in the answer.

Mr. **Mathewson**: But if you will read Section 21, a little further on. Now, this allegation of paragraph 21 is admitted by the City of New York in its answer, that this statment was rendered, whatever that may mean. The Gas Commission, the Attorney-General and Mr. Jerome in their answer admit that a statement was made "to the public press," but that it was not an opinion, and that it did not cover all the reasons of the Commission. 1216

The **Master**: What folio is that?

Mr. **Mathewson**: Folios 85 and 86. If the Senator has a copy of his answer——

Mr. **Page**: I have not.

Mr. **Mathewson**: If you find it in the answer of the City——

The **Master**: I find it in the answer of the Commission, but do not find it in the answer of the Commission.

Mr. **Mathewson**: To the public press merely. Now, that it was handed out by the Commission, I understand, is not denied. It is absolutely admitted by one defendant and it is not denied by another. Perhaps the fact is, as I think it will be conceded, that coincidentally with the filing of the order, on the same day, the memorandum, a copy of which is attached to the complaint, was delivered by the Commission through their secretary to various members of the press as the statement of the Commission. Whether a copy was kept by the Commission, whether it was filed or whether you call it an opinion is a matter of complete indifference to us. We shall not attempt to characterize it or to claim or prove that it was filed. That it was handed out I suppose Senator Page will not deny. I have here copies that were handed out by the Commission through their secretary, two or three copies at that time. And Judge Lacombe, as you will recall, in his opinion referred to the fact that the Commission in their opinion excluded franchises, and he referred to the opinion as a basis upon which his conclusion apparently was reached. Now, if the Senator desires me to call the secretary 1217 of the Commission to prove the physical act of handing these out with the consent of the Commission, I can do it, but it seems to me it is almost a waste of time, the fact being undisputed.

The MASTER: How is that, Senator? Do you dispute that fact, that a copy was handed out to the press?

Mr. PAGE: That a copy was given out to the press by the Secretary of the Commission——

Mr. MATHEWSON: By authority of the Commission.

Mr. PAGE: I do not know whether it was by authority of the Commission or whether it was prepared by one Commissioner or what. As I understand this was given to the press, this statement.

Mr. MATHEWSON: On the same day that the order was filed, February 23d, last.

Mr. PAGE: The same day that the order was published. It was about the same time. By whom this statement was prepared, I do not know, but I do know that it was not an opinion and it was not filed as an opinion and it does not purport to state the entire grounds of their decision and they have so stated under oath.

The MASTER: That of course is a question more or less of argument. It seems to me the real question to be determined here now is as to the matter of fact, and that is simply between you and the Senator. You have got this in the record and it is in your pleadings, and it is admitted by the city that it was rendered. Of course that does not bind the Senator.

Mr. PAGE: How does it bind the Commission, for whom I appear?

Mr. MATHEWSON: I call your attention to the first clause, in announcing this decision in the matter of complaints against the 1218 Consolidated Gas Company, the Commission of Gas & Electricity make the following statement, and it is conceded by the Senator that it was handed out by the Secretary of the Commission. It was handed out as a matter of fact at the Commission's main office in the City of Albany, New York, the same day that the order was made, not only in one copy but in a large copy of duplicate typewritten copies.

Mr. PAGE: I understand that statement is supposedly correct from my information. I am not quibbling over that part of it, but here you are seeking to predicate reasons for an official act upon a newspaper interview, and if you wish to hold that that is competent proof, take it and give me an exception, that is all.

Mr. **Mathewson**: No, not what the newspapers said, but the statement the Commission handed out through their Secretary, and which they state to be their statement in announcing their decision in the matter of the complaints. It seems to me that the facts as admitted upon the record makes it perfectly competent, and the act of the Commission *prima facie* until somebody denies it.

The **Master**: No, the question seems to me here is to the authenticity of this document which you are offering. In order to get any more force and effect out of that than you already have on the record by your pleadings and admissions made here on the record, you have got to dignify that, it seems to me, by some higher grade of proof.

Mr. **Mathewson**: Do you mean this particular paper that I offer?

The **Master**: Yes, that particular paper.

Mr. **Mathewson**: Or take the memorandum attached to the bill of Complaint.

1219 The **Master**: You are not required to prove allegations that are admitted on the pleadings, are you?

Mr. **Mathewson**: Certainly not.

The **Master**: You allege in your bill that Exhibit E, attached thereto, was rendered and handed out by the Commission. The city admits it and Senator Page denies it and says that it was handed out to the newspapers. How can you hoist yourself up by your boot straps by handing me this typewritten slip and offering that?

Mr. **Mathewson**: I merely offer this for this reason that this is an exact copy, as I will show, of Exhibit E attached to the complaint, and this which I now have in my hand is the original paper or one of them that the Commission handed out.

The **Master**: But where is the proof of that?

Mr. **Mathewson**: That is not disputed.

The **Master**: I do not understand that to be the case.

Mr. **Mathewson**: If that is the question, then I will offer in evidence the memorandum, or whatever it may be, known as Exhibit E, attached to the original bill of complaint, which it is conceded was handed out by the secretary of the Commission under the circumstances which now appear upon the record in this hearing.

Mr. **Page**: That is objected to upon the same grounds as before stated.

Mr. **Mathewson**: I do not understand that the Senator objected that this paper was not handed out. He merely, as I understood, objected to its force.

Mr. **Page**: I object to its competency.

The **Master**: He expressly says he does not know. He
1220 admits that the paper was handed out by the secretary, but
he will not admit anything further than that. Now, you already have that. You do not require to prove that. It is admitted in your case.

Mr. **Mathewson**: If you think it is admitted by the defendants, the Attorney General and the Commission and Mr. Jerome, I am satisfied with it, but it seems to me that the admission is a qualified one.

The **Master**: I should have to exclude that paper as you offer it, but I do not see the necessity of your offering it in view of the condition this record is in, and in view of the Senator's admission here.

Mr. **Mathewson**: Very good.

The **Master**: I think if you want to improve the situation over these pleadings or admissions here, you will either have to call that secretary here or some of those Commissioners themselves and prove the entire pedigree of that document, the particular piece of tissue paper.

Mr. **Mathewson**: I think it would go a long way if I prove that this was handed out by the official secretary of the Commission at their office to any individual.

The **Master**: Undoubtedly, probably it would.

Mr. **Mathewson**: I can prove that if there is any question. I did not suppose there would be any question that such a paper was handed out on that date. If there is, I will call the Secretary or somebody else, but I did not think that the Senator or anybody else had any doubt about its being handed out. Everybody knows it.

Mr. **Page**: I do not know that I am called upon to interpret my objection.

1221 Mr. **Mathewson**: Would you have any objection to my calling a witness on the bulkhead proposition this afternoon?

Mr. **Page**: I do not know that that is anything that either Mr. Gans or myself knows anything about; Mr. Burr will be competent to take care of him.

Gilbert Francklyn recalled for further examination, testified as follows:

Redirect examination by Mr. **Mathewson**:

Q. You were asked for a statement of rentals received by the Consolidated Gas Company?

A. Yes.

Q. Have you had such a statement prepared?

A. Yes, I have prepared such a statement.

Q. Is that it?

A. That is it.

Mr. **Mathewson**: I offer it in evidence.

Mr. **Burr**: The statement is objected to on the grounds I have previously stated in objecting to all the statements that have been presented.

Mr. **Mathewson**: You yourself asked that that statement be prepared, and Mr. Francklyn has appeared here for the express purpose of presenting it.

Mr. **Burr**: You recall the explanation which was made?

Mr. **Mathewson**: I withdraw the offer.

Mr. **Burr**: We are not to be foreclosed, by the production of any statement, from examining the original sources of information contained in the statement.

Mr. Mathewson: Then I ask that this be merely marked for identification.

1222 The statement is marked for identification, Complainant's Exhibit 222.

Q. Does this statement, Complainant's Exhibit 222 for identification, include the amount which is paid by the National Coke & Coal Company for the part used by them of the 41st Street stable, $1,800?

A. No, the statement does not include that.

Q. So, that if for any purpose the National Coal & Coke Company should be considered as separate, that $1,800 should be added?

A. It should be $1,800 more, yes.

Q. Referring to the first four lots mentioned on Complainant's Exhibit 222 for Identification, 326, 328, 330 and 333, Avenue A, are those full sized city lots?

A. No, sir, they are all small lots; they are both narrow and short.

Q. And they are parts of the large parcels shown on Exhibit No. 48, the balance of the parcels being used for gas works?

A. They are.

Q. Taking No. 329 Avenue A, the upper floor, for what is the lower floor used, do you know?

A. The lower floor is used for a meter shop, gas fitting shop.

Q. By the company, the Consolidated Gas Company?

A. By the Consolidated Gas Company, yes.

Q. Taking No. 605 West 44th Street and No. 606, 608 and 610 West 45th Street, are those lots full city lots?

A. 605 West 44th Street is a full city lot.

Q. And the other three?

A. The other three are two city lots—three of them form two full-sized lots.

Q. Are those fractions of large plots that the company owns?

A. They are; the rest of them are used by the company for making gas.

Mr. Page: I object to the characterization. Let him tell what it is used for.

Mr. Mathewson: He says it is used for making gas.

1223 Mr. Page: I move that the last answer be stricken out.

The Master: Strike it out.

Q. What is the balance of the plot used for?

A. Making gas.

Mr. Page: I object to that answer. You cannot use a lot for making gas. That is a conclusion.

The Master: Oh, yes you can. I will let that stand.

Mr. Page: You cannot make gas out of a lot. I want to know what specific purpose that is devoted to in his business.

The Witness: May I answer the question more specifically?

The Master: That is matter for cross-examination.

Mr. Gans: I take it that there is some substance to that objection. It is not merely a question as to the form of it.

The Master: That has already been ruled on. I have no objection to your discussing it, but I don't see the use of it. Note the Senator's exception.

Q. Referring to 421 East 60th Street and 420 East 61st Street, shown on Complainant's Exhibit 224 for identification, are those also a city lot each?

A. The houses occupy roughly a city lot each. They are irregular shaped houses. They do not occupy more than a city lot in extent.

Q. And are those two lots a part of the parcel between 60th and 61st Streets and Avenue A, which you have testified was intended for distributing holders?

A. They are part of that plot.

1224 Q. 222 West 65th Street, shown on the same exhibit?

A. That is a full city lot.

Q. Is that a part of a larger plot, which you have testified was to be used for valve houses, plans for which are filed?

A. Yes; it was acquired at the same time with that parcel.

Q. 99th Street and First Avenue; is that adjoining the 99th Street works?

A. Yes, that is one of the pieces of land which we know as the 99th Street works.

Q. And occupied by the foreman of the works?

A. Occupied by the foreman of the Street Department.

Q. How are the works located in relation to this lot, adjoining or surrounding this 99th and First Avenue lot?

A. That is the corner, 99th Street and First Avenue. The whole block is used for gas making except that one piece.

Q. Where is 325 Avenue A, shown on this exhibit?

A. On the northwest corner of Avenue A and 20th Street.

Q. Is that one city lot or something else?

A. It is a small city lot, not a full city lot.

Q. What is the balance of that block used for?

A. It is used for gas making and also for a meter shop, 329 Avenue A, which I have already testified about.

Mr. Gans: Now, I move to strike out his answer to the extent that he says that some property is used for gas making, on the ground that that involves a conclusion of the witness as to the very matter in issue.

The Master: Motion denied.

Mr. Gans: Exception.

1225 Q. And this property between 17th and 18th Street, Avenues B and C, as shown on Exhibit No. 222 for identification, rental $3,170, comprises how much land?

A. There are, roughly speaking, about eight city lots there; rather less than eight city lots.

Q. Is that part of a large plot used by the gas company?

A. It adjoins property on which two gas holders are built, and also property which is used by the street department for storing pipe, castings.

Q. The property between 18th and 19th Streets, 10th Avenue and the marginal street, a rental of $2,000, comprises how much property?

A. Five city lots.

Q. You already testified as to the balance of that, storing of gas material?

A. Yes.

Q. And the property on the south side of 112th Street, west of First Avenue, rental $200, comprises how much?

A. That is two city lots, two full lots.

Q. Is this a part of the plot which you have testified was used for a stable?

A. It is adjoining the stable on the rear.

Q. Do you know what purpose there is, or whether there is any purpose in reference to that stable, requiring those lots?

Mr. GANS: I object to that, as to the purposes of the company in regard to the stable.

The MASTER: That is objectionable, Mr. Mathewson, it seems to me.

Q. I will ask you this. Do you know whether there is any intention with reference to enlarging the stables there?

Mr. GANS: I object to that as perfectly immaterial, what the intentions of this company are in the future; we are inquiring into present conditions.

The MASTER: It seems to me the question is objectionable
1226 in form, though I must say I have very little sympathy with
these technical objections in a proceeding of this kind. It is not in accordance with our United States practice to spend time on such things as this. You will only take time by either side by doing this. If they want to get the fact before the Court to have it passed on, they can do it in some form or another, by putting in facts, I suppose.

Mr. GANS: I do not care to let go by any right which it seems to me the State has, in such a way that we may not have the right hereafter. I do not desire to be technical, but I desire to raise every point necessary to safeguard the interests of the State. This is a perfectly definite thing, a perfectly definite line of proof. We have all agreed hitherto, I thought, that the question was as to the present condition, and that is what we are inquiring into. It seems to me perfectly proper that I should object to anything that goes beyond that.

The MASTER: It is quite proper to object, but if it appears on the record in the testimony that it is a matter of intention to build a stable hereafter, I do not see why you cannot base any argument on it that you would like to, just as exactly as well without having formal rulings on questions as to the matter of evidence. My only desire is to save time. I suppose that they can bring witnesses here to prove, as a matter of fact, the number of horses they had, and the number of stalls and the present stable capacity, and that the present stable is inadequate, or something of that sort. Then there will be facts from which they will ask me to make a deduction 1227 that it is a reasonable intention for the future to enlarge the stable. That would take eight or ten pages, possibly, as against one or two questions or answers.

(Here followed some further discussion which the stenographer was directed by the Master not to take.)

The **Master**: Read the question.

(The question is repeated by the stenographer.)

The **Master**: That is objected to; the objection is sustained and Mr. Mathewson excepts. (To the witness:) Now you may answer it.

A. Yes, there is an intention to enlarge the stables there.

Mr. **Page**: I do not know that it is necessary, to reserve our right, to move to strike out the answer on the record.

The **Master**: No, it has to be taken under the ruling. I think you have enough exceptions on that.

Q. What would the extension cover?

Mr. **Gans**: That will be taken the same way I suppose?

The **Master**: Yes:

A. That I do not know.

Q. I mean, would it affect the two lots?

A. I am informed that it would.

Q. In reference to those rentals which are specified on Complainant's Exhibit 222 for identification, do you know whether they are permanent or whether they are terminable at any time on short notice?

A. They are all terminable at any time on short notice 1228 with the exception of the Shadyside lease; that is a year's lease.

Q. That is the last item on Complainant's Exhibit 222 for identification?

A. Yes, sir.

Q. And that is in New Jersey?

A. It is in New Jersey.

Recross-examination by Mr. **Page**:

Q. Each of these pieces of property to which you have testified is rented by the company at this time for some purpose to some person?

A. Yes.

Q. Nos. 605, 606, 608 and 610 W. 45th Street are rented to whom?

A. That should be 605 W. 44th Street and 606, 608 and 610 W. 45th Street.

Q. Yes.

A. They are rented to various tenants.

Q. What portion of the building is rented to tenants?

A. The whole portion of each building; the whole buildings.

Q. Connected with the building is there a yard?

A. Yes, there is a small yard behind the 45th Street house, and there is a yard in front of the house on 44th Street.

Q. Now, as I understand, Nos. 606, 608 and 610 occupy the space of 50 by 100?

A. Yes, that is right; that is leaving out the inches; there were a few inches one way or the other.

Q. And these buildings are occupied by tenants are they?

A. Yes.

Q. Now, as far as these identical lots or pieces of property are concerned, they are not used in any way in the business of the company?

A. Not except to the extent that some of our workmen occupy them as tenants.

Q. Do your workmen produce gas in the tenements for you?

A. Not in the tenements, no.

Q. Do you consider that your plant extends to wherever your workmen happen to be living at the time?

1229 Mr. Mathewson: I object to that.

The Master: I will allow it.

Exception taken by Mr. Mathewson.

A. I should not go so far as that.

Q. Then why did you make this characterization of this particular piece of property, that it is used by the company because workmen live there?

A. Because we find it very convenient in many cases to have workmen live near our works; in case of emergency it is very easy to get at them.

Q. You stated that this property was used for gas making.

A. I did not so intend to state; I do not think I did. I stated the rest of the property in that block was used for gas making.

Q. The rest of the property in that block?

A. In that block of land, yes.

Q. That is between 44th and 45th Streets?

A. 44th and 45th Streets, west of 11th Avenue.

Q. Now, you may state just exactly what buildings are upon that property?

A. There are five gasholders, purifier house, office, generator house, coal sheds, engine room; the house that used to be occupied by benches in the old process of water gas making, I do not know what it is used for now; I think it had some new machinery put in it a short time ago, some old naphtha tanks and tar tanks; I think that takes up practically the whole of the block.

Q. I understand that this list of property that you have given includes all the property of the Consolidated Gas Company that is not occupied by buildings containing gas making plants, for storage of materials, holders or offices?

A. This list?

Q. Yes.

A. That is a list of property which we rent to other people.

Q. I say, it does not include all the property?

A. Only such property as is rented.

1230 Q. Besides that, there are other properties of the Consolidated Gas Company that are set forth on Exhibit 48, that are not occupied by manufacturing plants or holders?

A. Or offices.

Mr. MATHEWSON: He has so testified.

Q. You were asked by Mr. Burr when you were on the stand before if you would furnish a map.

A. I thought Mr. Burr asked me for a list of rentals.

Q. He asked you if you could furnish a map showing exactly the property that was occupied by buildings and holders?

A. Yes, I remember that.

Q. And you said that you could?

Mr. BURR: And the dimensions.

The WITNESS: I do not understand that.

Mr. MATHEWSON: That would mean a survey of all these; they are there; anybody can see them that goes by them.

Mr. PAGE: Mr. Garver, as I understand it, said that he would show that by another witness. That has not been done as yet, and this witness is back here.

A. I have no map showing the locations of the buildings. I do not know of any such maps.

Q. You stated on page 77: "We have maps showing it to a certain extent; I do not know that we have any maps that are absolutely accurate as to that."

A. I have inquired since then, and I find that we have no maps which show that. I do not say that we have no maps that would show it at all, but we have no maps that would show it in an intelligible way.

Q. Will you take Exhibit 48 and state which properties are not occupied by buildings in which are manufacturing plants, holders, offices or shops used by the Consolidated Gas Company?

1231 Mr. MATHEWSON: Stables, street department yards and buildings used for coal storage? That would exclude a lot of property.

A. I went through each piece in detail the first day I was here.

Mr. MATHEWSON: Exactly, what you ask him to do here now. You will find it in the evidence.

Mr. PAGE: Then I do not wish to go over it again. If that is so, the question is withdrawn.

The WITNESS: I think it was on Mr. Burr's examination that I did that.

The MASTER: Pages 71, 72 and 73, etc. Commencing on page 70.

Q. Could you take this list of property that you have testified to to-day and identify that by block and lot number on the city map, so that we may refer to the exhibit that has already been put in?

A. Yes. You mean put the correct city block and lot number opposite each one of these?

Q. Yes, could that be done by any means?

A. I can do most of them.

Mr. **Mathewson**: Would it not be better for you to simply take that and make a statement when you can fill them all in, and hand it in?

A. (Continuing:) Yes, for instance No. 320 Avenue A I think is included in the rest of the block. It is not shown as a separate block, and as to some of them, that objection would come in. (Explains by reference to Exhibit 48.)

Q. Give us the dimensions of that which is not, if you can do that?

A. I will prepare that.

1232 Recross-examination by Mr. **Burr**:

Q. Have you prepared a statement showing what properties have been sold by the Consolidated Gas Company that were originally purchased by the constituent companies and that do not appear on Exhibit 48?

A. No, I have not prepared any such statement. Was I asked to prepare any such statement?

Q. You were.

A. The property sold by the Consolidated Gas Company that does not appear on this exhibit?

Q. The property that was originally owned by the constituent companies or any of them?

A. No, I have not prepared such a statement.

Q. Will you prepare such a statement?

A. I will prepare such a statement.

Q. And you were also to find out what was the consideration paid for the transfer of the piece of property which appears on page 2 of Exhibit 48, as having been transferred or deeded by the Consolidated Gas Company to the New Amsterdam Gas Company.

A. The consideration for that was $180,000.

By Mr. **Mathewson**:

Q. When was it?

A. It was in 1905.

By Mr. **Burr**:

Q. Can you prepare a map showing the location and size of the buildings used for gas making purposes and for what particular purposes they are so used?

A. No, sir, I cannot.

Q. That would require an inspection of the buildings themselves?

A. It would require a survey of all our property.

Q. That is used in the gas making business?

A. Of all our property that is used in the gas making business, yes.

1233 Q. I understand you to say now that you were mistaken in your answer as it appears on page 77 of the record stating that you had maps containing that information to a certain extent?

A. Well it depends to what extent you mean. We haven't any maps that would really show anything to a person that did not know the works.

Q. What I would like to have is a map showing the exact size of the buildings which you claim are actually used for gas making purposes and for what particular purpose each building is used?

A. It is possible to make such a map but it is a very elaborate undertaking.

Q. Is that the only objection to making it?

Mr. **Mathewson**: There are further objections, and one is that I don't think they are called upon to do it, I don't think it would be very valuable if you got it. It would not show the yards outside which are necessary for use in driving in carts and one thing or another. It would be of no value to you if made.

Mr. **Burr**: We have the dimension of the plots. Some of them are vacant, or some portions of them are vacant. I am trying to get at the size of the buildings actually used in the gas making business.

Mr. **Mathewson**: We could not make such a map.

The **Witness**: A lot of the gas making business is done out of doors without any buildings.

Q. That would be shown from your statement as to what parts of this property were vacant?

A. Yes, sir.

Mr. **Burr**: That is all the questions I have to ask.

Mr. **Mathewson**: I have no more questions, Mr. Francklyn.

1234 **Robert A. Carter** resumed.

Redirect examination by Mr. **Mathewson**:

Mr. **Mathewson**: I shall not be able to complete my redirect-examination because the cross-examination of Mr. Carter is not yet finished.

Q. The amount of stock which was to be issued for the tangible property and franchises of the company at the outset in 1884 you have testified was $37,775,000. The amount of the stock actually issued was $35,430,060, and the amount of the debts in the shape of bonded indebtedness carrying fixed charges was $2,329,000. That makes a total, according to my figures, of $37,759,060, or a little short of the $37,775,000. Will you explain how this difference was accounted for?

(The witness picks up a paper.)

By Mr. **Page**:

Q. To what are you referring, Mr. Carter?

A. A slip of a memorandum here; some figures I made up some time ago bearing on this particular—not particularly on this question, but that will aid me in answering it.

Q. From what sources did you make that memorandum?

A. The books of the Consolidated Gas Company.

By Mr. MATHEWSON:

Q. Proceed.

A. The difference, Mr. Mathewson, was in some adjustments amounting to $15,940, which operated to increase the amount of the sums of $35,430,060 and $2,329,000, a total of $37,759,060 to $37,775,000.

1235 Q. That difference was paid in cash or some other shape than stock?

A. Yes, sir, in that manner.

Q. You also stated on your cross-examination that in addition to this $2,329,000 there were some other debts of the constituent companies amounting to about $600,000, as you found by the Consolidated Company's books. How were they disposed of?

A. They were an offset to other assets of the companies which consolidated than those which covered appraisals of plant; that is to say, material, supplies, accounts receivable due from consumers and others to the Consolidated Gas Company, the balance being settled in cash by the Consolidated Company.

Q. Those items were assets received from the constituent companies, not included in the $29,994,000 of the original appraisal?

A. That is the case, yes, sir. The amount paid in cash by the Consolidated Company in settlement of all differences to the consolidated companies amounted to $915,716.08.

Q. It exceeded the amount of the debts to which you referred?

A. Yes, sir.

Q. Now you stated on your cross-examination that your information was that the loss on the removal of the manufacturing plants to Astoria, if the manufacturing capacity was so removed, would be in the neighborhood of $10,000,000. Do you know whether in that estimate any considerable value was allotted to the plants in New York which might be dismantled; that is, any receipts for scrap or otherwise?

A. In the case of the coal gas plants, little, if any. In the case of the water gas plants some salvage was taken into account, reducing the amount which would otherwise be lost by reason of that removal from something over $11,000,000 to about $10,000,000, in round figures.

Q. It was not expected any salvage could be obtained from the coal gas works beyond the value of the land?

A. That is the case.

1236 Q. And this water gas salvage would be represented by some apparatus which might be transferred to Astoria if a water gas plant were established at Astoria?

A. That is the case, yes, sir.

Q. Are you an engineer?

A. No, sir.

Q. Your testimony, or certain parts of your testimony before the Joint Legislative Committee and before the Gas Commission has been read in the course of your cross-examination. You recall your testimony before the Stevens Investigating Committee in 1905, in connection with the tax report?

A. I do recall it very well, yes, sir.

Q. Where were you when you were summoned to testify at that time?

A. I was at home, sick.

Q. Were you notified in advance as to the subject upon which you were to be examined?

A. I had no information upon it.

Q. Did you have any opportunity to refresh your recollection as to the facts and figures and methods?

A. None whatever. I didn't even know what the subject was.

Q. So that your answers then given were simply given from recollection of the immediate inquiry, were they?

A. That was the case, yes, sir.

Q. The tax report upon which you were examined was specifically the tax report of what year?

A. 1904.

Q. Made up in 1904?

A. Made up in 1904, as of June 30th of that year.

Q. Have you prepared a statement taking the figures contained in the books of the company as of June 30th, 1904, for the various assets and the amounts at which they appear in the tax report for that year so that we can see at a glance where the differences lay?

A. Yes, sir. I have prepared such a statement.

Q. Is this the statement (handing a paper to witness).

A. Yes, sir.

1237 Q. That is the statement similar to the one presented to the Stevens Committee and to the Gas Commission, the same thing?

A. The figures in here show the investments——

Q. But I merely ask you whether that is the same one?

A. Yes, sir, that is the case.

Q. With the addition of this clause at the bottom, further explanatory?

A. Yes.

Mr. Mathewson: I offer this in evidence.

Received in evidence and marked Complainant's Exhibit 223.

Q. Referring now to Complainant's Exhibit 223, it appears that differences are shown between the ledger accounts and the tax reports in three items, Plant, Mains, Services, and the fourth item, Meters, Stoves and Other Personal Property. Now did you make up the figures personally in reference to the services as they appear on the tax report?

A. No, sir.

Q. Or the mains?

A. No, sir.

Q. Or the plant?

A. No, sir.

Q. How about the meters, stoves and other personal property?

A. Those were made up under my direction.

Q. I see that the amount appearing in the tax report appears to be about 25 per cent. less than the $3,630,772.12 appearing upon the ledger?

A. That is the case, yes, sir.

Q. Will you explain how that difference was arrived at and what it represented?

A. The amount represents a portion of the book value of that property that was written off, to reduce it to such an amount as we would probably realize from the sale of that property under ordinary circumstances.

Q. In case you had to sell the meters at 25 per cent. discount?

A. That is the case.

1238 Q. You don't mean to say that was written off on the books?

A. No, sir, it was not written off on the books.

Q. You mean—by you in presenting that tax report?

A. In making up the figures for the tax report.

Q. Did you consider the $2,667,329.77 as the investment of the company in the meters or as the value to the company as an operating concern?

A. On the contrary, I know that is not the case. It does not represent such value.

Q. Is there any other reason except what you might obtain by forced sale which induced the taking off of that 25 per cent.?

A. That was the only consideration.

Q. As to mains and services, they are stated in one point in the franchise tax report which is in evidence at $3,366,531.38 and the services at $594,625.01. That represents, does it not, 25 per cent. off the amount of $5,613,221.12 for mains and services?

A. That is the case, yes, sir.

Q. As it appears at the foot of this Exhibit No. 223?

A. Yes, sir.

Q. And how much of the amount which I have last specified appears as mains and how much as services, dividing the items?

A. Mains, $4,829,925.82; services, $783,295.30.

Q. Mr. Simpson has testified that he handed to you or sent to the accounting department certain figures representing the cost of labor and material in laying mains in soft earth, and that a total was made in the accounting department from that. Do you remember whether that was the case?

A. That is my recollection, Mr. Mathewson, that that was the case.

Q. Did you know when you testified before the Stevens Committee, or do you know now, except as Mr. Simpson tells you,
1239 upon what basis Mr. Simpson did make up those figures?

A. I didn't know then and I don't know now.

Q. Except as he states?

A. Except as he states it.

Q. Taking the services. From what source did you get your figures in reference to the services?

A. The number of services was furnished by the street department. The price at which they are valued for the purposes of the tax report was first used before I had anything to do with making the report. The figure, to the best of my recollection, was $8 a piece for the services. That had been in use two or three years when the report was first made up under my personal supervision, and as is usually the case in making reports of that kind unless some special reason presents itself the form in use the previous year is observed, and the clerk that filled in the figures in that report at that time acting under instructions used the figure of $8 per service.

Q. Do you know from what source that figure was obtained?

A. I don't know. I have endeavored to find out without success just who started valuing that property at that price per service for the purposes of the report. I have not been able to do so.

Q. Did it come from the engineering department of the Consolidated Company?

A. I feel sure that it did not, because they repudiate it with so much vehemence.

Q. Did you make this investigation before you testified before the Gas Commission last January?

A. Yes, sir, I did.

Q. Did you explain to them at that time that the figure was a mistake, that you could not explain and could not find where it came from.

A. My recollection is that I testified before the Gas Commission that I was unable to ascertain the source from which that figure was arrived at, who used it first, and I testified the figure was repudiated by the engineering department, and I believe I testified that in my own estimation it was considerably too low. 1240

Q. Well, it appears that from these figures of $4,820,925.82 for mains and $783,295.30 for services, obtained by using the figures which were given to Mr. Simpson on mains, and from some unknown source on services, 25 per cent. was taken off in making up the tax report, reducing the mains to $3,666,531.38 for mains, and $594,625.01 for services. Now, was that percentage taken off by your instructions?

A. It was taken off before I had anything to do with making up the report. Subsequently, of course, by my instructions it was taken off, my understanding being with respect to that that it recognized the fact that the company was constantly replacing its mains and its services with mains and services of a larger size at a considerable loss. The value of the main or service taken out of the ground or abandoned, as the case might be, being a total loss practically.

Q. Well, did this 25 per cent. then represent any physical deterioration or depreciation of the main or service or merely the——

A. Physical depreciation, no; none whatever.

Q. But the fact that renewals were necessary from time to time?

A. Constantly taking place and particularly so about that time.

Q. Did you understand at the time this report was made or do you now understand that those figures represent the investment of the company in mains and services or the cost to the company?

A. No, decidedly not.

Q. Now the chief item and the only one remaining relates to plant, which appears on the books at $15,755,462.88 and in the franchise tax report of June 30, 1904, at $8,456,595.71. Do you remember now whether Mr. Bradley conferred with you, or were 1241 you advised how that figure was made up?

A. I was unable to recall at the time of the Stevens investigation how the figure was arrived at. Subsequently in conversation with Mr. Bradley my memory was refreshed as to his method of depreciating or writing down the value of that property for the purposes of that tax report.

Q. Did you testify before the Gas Commission what the fact was?

A. Before the Gas Commission I testified to the method employed by him. Before the Stevens Committee I was not able to say more than it was a depreciation that took into account our removal to Astoria, but just how it was taken into account and how the value for the purposes of the report had been arrived at by the chief engineer, Bradley, I at the time was unable to testify.

Q. Did you also testify before the Stevens Committee it did not represent the cost of reproduction?

A. I plainly did so. Neither cost of reproduction nor the cost value.

Q. Now will you state just what method was pursued in obtaining that figure?

Mr. Page: I object to that. His method or Bradley's?

Mr. Mathewson: No, Bradley's, with him.

Mr. Page: "That is objected to. He is stating now the methods that another man used to arrive at a figure as stated by that man to him.

Mr. Mathewson: I am going to produce Mr. Bradley; he is ill at the moment. But this has been figured up by Mr. Bradley in the presence of Mr. Carter, as Mr. Bradley called Mr. Carter's attention to it and Mr. Carter recalled after the circumstances were brought to his attention, how it was done by Mr. Bradley, as I under- 1242 stand it. Not something done by Mr. Bradley and brought to his attention, but the figuring was done at the time.

The Master: I suppose if Mr. Carter can explain the theory on which the figures were made up which he put in the tax report, it is proper for him to do so, whether he dreamed the method or got it from Mr. Bradley or what not, but I do not think it is competent now for him to testify as to the method Mr. Bradley advised him was the way to value that plant. That I understand to be the Senator's objection.

Q. I will ask you, so far as your knowledge goes, what method was pursued in computing the amount in the tax report?

A. Made up on the theory that the property of the company occupied by its gas plants sold under ordinary circumstances would practically bring nothing more than the value of the land. It is pretty well established by our own experience and by other people who have occasion to sell property of that sort.

Mr. Burr: I move to strike that out.

The Master: Strike it out.

Mr. Mathewson: **Cannot that stand? Isn't that fair to state our experience?**

The **Master**: That seems to me superfluous. You asked the theory on which it was arrived at, and he answered.

Exception.

The **Witness**: Our understanding as to the method of valuing property for the purpose of taxation was that it would be valued at the amount it would bring if sold under ordinary circumstances.

Q. You mean in valuing real estate?

A. Real estate, and as we had in contemplation then the re-
1243 moval of our plant to Astoria, had started the construction of
a plant there for such replacement, and carrying out that theory the book value of our plant was practically cut in half; assuming of course that the holder plant would remain on Manhattan Island, that the manufacturing plant would be removed, and to half of the book value was added something, I don't recall the figure, representing the possible salvage from the sale or from the employment of some of the apparatus which would be located on the property that we would give up.

Q. A few hundred thousand dollars?

A. A few hundred thousand dollars.

Q. looking at Exhibit 223 in your tax report, the first two items, Real Estate, $11,216,479.71 and plant, $8,456,595.71 appeared in Schedule D, did they not in a single item?

A. $19,673,075.42.

Q. Yes.

A. Yes, sir.

Q. Have you made up a statement as you did to the Gas Commission showing how that would be reached in this particular instance, by the method which you have defined?

A. I have not made up a statement. I can show the method and illustrate it at once.

Q. Well, very good.

A. One-half of the book value of the plant——

Q. In the first place the total of the items is as you say nineteen million and what—just give the amount?

A. $19,673,075.42.

Q. The total of plant and real estate in the tax report?

A. That is the case, yes, sir.

Q. Now, state how that item was made up?

A. One-half of the book value of the plant, that is to say, $15,755,462.88 would amount to $7,877,731.44. Allowing as the salvage value of the plants there would be scrapped, $578,864.27, would make a total of $8,456,595.71.

Q. And added to that is the amount which appeared in
1244 Exhibit 223, opposite plants in the tax report?

A. Yes, sir, that is the case. And adding to that the book value of the real estate, that is the land and office buildings which are not included in the plant amounting to $11,216,479.71 would give the total value arrived at by that method for the purposes of that report of $19,673,075.42.

Q. So that, generally speaking, you understood your estimate was that you would retain about one-half of the plant in New York?

A. Yes, sir.

Q. And that on removal to Astoria you would scrap about one-half of the plant?

A. Yes, sir.

Q. And you took the value of one-half of the plant at full book value?

A. At full book value.

Q. And added to that a few hundred thousand dollars for scrapping on the other half of the plant?

A. Yes, sir.

Q. And added to that the real estate at book value?

A. Yes, sir.

Q. And the total was the $19,673,075.42 that appears on Schedule D of the tax report?

A. I want to qualify that because this is rather illustrative than dealing with exact figures; because this all occurred in 1902 in connection with the tax report to the local assessors on the second Monday of January, and those figures are simply carried forward from report to report down to the report for 1904, so we are dealing with figures now for 1904 and illustrating how it was done, but this thing was not done for the 1904 report.

Q. I understand, but applying it to the 1904 report, that would be the result?

A. That would be the result, yes, sir.

Q. Now, in the first place, these figures were obtained you say for the 1902 report?

A. Yes, sir.

Q. Was that the first time that mains and services and plants were given a value in the report to the State Board of Tax Commissioners?

1245 A. That was the first year in which any value was given in the reports for that property.

Q. And in the previous reports from 1889 down those spaces were left blank, were they not?

A. Those spaces were left blank in the report.

Q. Do you remember whether your reports have stated and do state that the amounts stated are not the cost of the property?

A. Every report in which these figures have appeared has plainly stated that it was not the cost of the property.

Q. Now, in 1902, then the figures were first used for delivery to the Local Board of Tax Commissioners in New York?

A. Yes, sir.

Q. On the 30th of June, 1902, came due the reports of the State Board of Tax Commissioners?

A. Yes, sir.

Q. Did you pursue the same method in presenting it to them?

A. Used the same figures, with such additions to or such deductions from them as would reflect the book operations, or operation shown by the books, between the second Monday of January and the 30th of June.

Q. Any change in the assets?

A. Yes, sir.

Q. Were the changes large?

A. Inconsiderable.

Q. Was that same method pursued by you up to and including the report made for 1905 to the State Board of Tax Commissioners?

A. Yes, sir.

Q. Without getting any new figures, but simply using the figures you had and applying to them the same methods?

A. That is the case.

Q. You say you proceeded on the theory that the amount to be stated for the taxable value of real estate was the amount for which it would under ordinary circumstances sell and not the cost or other things. From what source was that derived? the provision of what act, if there is any?

A. The Revised Statute. I will tell you just exactly what it was, I have already had occasion to make reference to it in one of my affidavits (referring to paper). The Charter of the City of New York, Section 889. 1246

Mr. Mathewson: That section has already been offered in evidence, as the Master may recall, early in the proceedings.

Q. And was the report made up in this connection under advice of counsel?

A. Always under advice of counsel, and the report always submitted to counsel for approval before it was filed—before it was signed, I should say, also.

Q. Had the company or has the company had any experience as to what plant or apparatus brings when dismantled or scrapped?

A. Yes, sir, it has—if not experience it has had the opportunity to observe, because in the case of our holder at the 18th Street station, which the city took under condemnation proceedings to make room for the marginal street at that point, the holder valued on our books at something over $300,000, was sold as scrap for $10,000.

Q. Do you remember about the plant at 105th Street—was it not?

A. At 111th Street.

Q. At 111th Street?

A. The plant occupied ground which the city desired for a park called Little Italy Park, was condemned by the city and valued at several hundred thousand dollars and sold for a mere nominal sum by the city at auction.

Q. Do you remember how much?

A. Not much. I do not think over fifteen or twenty thousand dollars.

Q. So that in selling real estate on which there is a plant would it be your view that there was any considerable value added by reason of the plant, in addition to the land alone?

A. On the other hand, I doubt, in the case of a great deal of the plants, whether it would not depreciate the value of the land. It would cost something, especially where the ground is to be used for some other purpose, and it has to be cleared and leveled as in the case of the park. I think the city would have been very glad to have got rid of it at any price. 1247&1248

Q. But whether the method that was pursued in making up these tax reports was legally correct or not, upon which you have stated no opinion, have you correctly stated the method which was pursued in making them up?

A. That is the case, yes.

Q. I want to ask you whether those figures in the tax reports in your understanding would rightfully represent the cost of the property, the investment in the property or the cost of reproduction of the property?

A. I knew very well that they did not, and if I had ever had the faintest suspicion of the use to be made of the figures I should have asked for time to refresh my memory and an opportunity to be heard again. Of course the session was short and I do not think they sat over a few weeks, and it never entered my mind that anyone would attempt to use those figures for the purpose for which they were subsequently used.

Q. You mean as the value of the plant?

A. As the value of the plant.

Q. As an operating plant?

A. Precisely, representing the investment of the company.

Q. Is the change in the different tax reports for 1902 respecting which you have testified, down to 1905, in regard to these various items shown on Exhibit 223, a substantial one or is it very little?

A. Very little.

Adjourned to Monday, August 27, 1906, at 1:30 P. M.

Last Exhibits:

Complainant's 223.
State's N.
City's 34.

1249 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant.

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

Met pursuant to adjournment.

NEW YORK, MONDAY, *August* 27, 1906—1:30 o'clock p. m.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Page, Mr. Burr.

Appearance.

Gustavus T. Kirby, Esq. (representing Mr. Gans).

1250 Mr. MATHEWSON: I would like to call attention to a slight correction at page 1218 of the testimony. The word "supposedly" should be "substantially."

Mr. BURR: I might say that I am informed by the stenographer that he received on Saturday typewritten copies of the franchises, permits, etc., which have been offered in evidence, and that he will be unable to get them out so that we can get copies of them for several days. I would like to have it understood on the record that when the franchises are printed, and all the papers pertaining to the same, we may then have a right to make such further objections and such motions as we may deem advisable.

The MASTER: That was understood. Mr. Gans raised that question.

Mr. BURR: I know; I did also, but the delay being so great I thought I would like to make sure of it.

GEORGE S. GREENE, JR., called as a witness on behalf of the complainant, being duly sworn, testified as follows:

By Mr. MATHEWSON:

Q. Where do you reside.
A. 534 Fifth Avenue.
Q. New York City?
A. New York City.
Q. What is your business?
A. Civil Engineer.
Q. How long have you been a civil engineer?
A. Some forty years.

Q. Have you ever been connected with the Dock Department of the City of New York?

A. Yes.

Q. In what capacity and for how long?

A. I was Engineer in Chief of the Department of Docks from 1875 to January, 1898.

Q. What is your firm in New York, your engineering firm?

A. Greene & Greene.

1251 Q. Are you the senior member of that firm?

A. I am.

Q. As Chief Engineer of the Dock Department what were your duties?

A. I had charge of all the construction and repairs, virtually; practically of all the work of the Department, and the supervision of all work done on the water front by private parties, and such other duties as the Commissioners called upon me to perform.

Q. Were you ever called upon to advise with the Commissioners in fixing rentals and upset prices of dock property and water front property?

A. Frequently, if not almost constantly.

Q. What was the custom of the Department while you were there in reference to that?

A. They had the sale of the right to collect wharfage, what you call leases of the pier or bulkhead annually, and sometimes more frequently than once a year. In all those cases I was called upon by the Commissioners to advise and consult with them with regard to the proper rentals; and also in the cases where piers were not leased at public auction, but by agreement, I was called into consultation with the Commissioners with regard to the fixing of the rentals.

Q. In this connection did you keep yourself familiar with the rental values of water front property on the island of Manhattan?

A. Yes.

Q. Are you able to state the value of the water front property, of the bulkheads, the piers and the land under water?

Mr. Page: I object to that on the ground that the witness has not been shown to have a present knowledge of values.

The Master: Objection overruled.

Exception taken by Mr. Page.

A. Yes, sir.

1252 Q. Have you been called upon to give opinions in judicial procedings?

A. In regard to value of water front property, yes.

Q. Have you ever been retained to testify in any judicial proceeding in behalf of the defendant, the City of New York?

A. Yes, sir.

Mr. Burr: As to the values of this kind of property?

Mr. Mathewson: No, not especially as to values. I asked him if he has ever been retained to testify and give expert opinion in any judicial proceeding, and he says he has.

Q. Referring to Complainant's Exhibit 48, are you familiar with the water front at Tompkins Street, between 14th and 16th Streets? Do you know the locality?

A. Yes, sir.

Q. Taking the strip of land under water between Tompkins Street and the bulkhead lines, between East 14th Street and East 16th Street, which has been testified to as about 450 feet in length, excluding 15th Street, and of an average width of about 70 feet, have you computed how many square feet there are in that area?

A. Yes, sir; I make it 30,318 square feet.

Q. What is the length of the two bulkheads there?

A. Combined, 447.4 feet.

Q. What in your judgment is the value of the bulkhead rights between 14th and 16th Streets, being of the footage you have mentioned, excluding 15th Street?

A. The total value, $156,590.

Q. What valuation per foot does that mean?

A. $350 per foot.

Q. Now, taking the land under water, 30,318 square feet, what is the valuation of that per square foot?

A. $4 per square foot.

Q. Making for the 30,318 feet under water at how much?

A. $125,272.

1253 Q. Taking the bulkheads to which you have testified, and the land under water, combined, at that point between 14th and 16th Streets, what is the value of both, the total value, by your testimony?

A. $281,862.

Q. Taking next the bulkhead rights between 16th and 18th Streets and the North River, excluding 17th Street, as appearing upon complainant's Exhibit 49; state what value in your opinion attaches to those bulkheads, at the time they were condemned by the city recently.

Mr. Page: The same objection.

The Master: The same ruling and exception.

A. Do you wish it per foot or the gross amount?

Q. Per lineal foot?

A. $840 per lineal foot.

Q. And how many feet are there in those bulkheads?

A. In each of them 188.75; in the two of them 377½ feet.

Q. And what in your judgment is the value of the bulkhead rights?

A. $317,100.

Q. I next direct your attention to the property between 41st and 42nd Streets and the North River, as shown on Exhibit No. 48. There is a pier at the North River end of that property, is there not?

A. Yes.

Q. Taking the bulkhead rights at that point, what is the length of the bulkhead line?

A. 197½ feet.

Q. And what in your judgment is the value of the bulkhead rights per lineal foot, and the total for that footage?

A. $750 per foot; $148,125.

Q. What is your judgment as to the value of the pier?

A. $240,000.

Q. And does that include not only the land actually covered by the pier, but the use which is made of the water on either side of the pier to the street line?

A. Yes.

1254 Q. That is, the berths for ships or boats?

A. On both sides of the pier there is a berth for a vessel.

Q. And your valuation includes that pier with whatever rights attach on either side to the street line?

A. Either side of the pier.

Q. What do you state to be the value of that pier, so considered?

A. $240,000.

Q. Does this valuation of $240,000 include the land under water in shore of the established bulkhead line?

A. No.

Q. What is the total valuation of the bulkhead rights and pier as you have stated them, combined, between 41st and 42d streets?

A. $388,125.00.

Q. Will you consider next the parcels appearing at page 6 of Exhibit 48, being the bulkhead rights and land under water between 44th Street and 46th Street, with 45th Street out, on the North River. What is the length of the bulkhead in each of the blocks, 44th to 45th and 45th to 46th?

A. 200 feet 10 inches.

Q. And what in your opinion is the value of the bulkheads at that point per lineal foot?

A. $750.00.

Q. That would make a valuation for each bulkhead of how much?

A. $150,622.50.

Q. And for the two bulkheads together?

A. $301,245.00.

Q. How much land under water is there alongside of that bulkhead line?

A. For the two blocks 14,756 square feet.

Q. The dimensions of the land under water in each case being what?

A. 70 feet x 200 feet 10 inches.

Q. And what is the value in your judgment per square foot of the land under water to which you have testified?

A. $5.00 per square foot.

Q. What valuation would that produce for the land under water?

A. For each block $73,780.50.

Q. And for the two combined?

A. $147,561.00.

1255 Q. Taking the bulkhead rights and the land under water together between 44th and 46th Streets, what would be the total valuation?

A. $448,806.00.

Q. That does not include, does it, any additional land under water outside of the established bulkhead line?

A. No, it does not.

Q. Referring to page 10 of Exhibit 48, bulkhead and land under water east of Pleasant Avenue between 110th and 111th Streets, what is the length of the bulkhead line at that point?

A. 212 feet.

Q. What in your judgment is the value of the bulkhead per lineal foot?

A. $250 per foot.

Q. And what is the valuation in dollars for the 212 feet?

A. $53,000.

Q. How much land under water is there between the bulkheads and Pleasant Avenue?

A. About 9,400 square feet.

Q. And what is the value of the land under water per square foot?

A. $3.

Q. What value would that produce for the entire 9,400 square feet?

A. $28,200.

Q. And what is your total value of bulkhead and land under water combined between Pleasant Avenue and the bulkhead line, 110th and 111th Streets?

A. $81,200.

Q. That I think includes all the bulkheads and land under water which you have valued?

A. Yes.

Q. Are you familiar with those properties and locations and each of them?

A. Yes.

Q. Will you give me the total valuation of bulkheads and land under water to which you have now testified on this hearing?

A. $1,517,093.

Q. Has water front property been rising or falling in value in the City of New York for the last few years?

A. Rising.

Q. And do the valuations which you have stated now represent the present value?

A. They represent the present values, yes, sir.

1256 Cross-examination by Mr. BURR:

Q. Have you ever bought or sold any bulkhead property?

A. No, sir.

Q. Your experience has been confined solely to leasing bulkhead property or fixing the rentals on such property?

A. Well, I have some knowledge of the very few sales there are of water front property.

Q. I am not asking you just now about knowledge; I am asking you what your experience has been in the sale or purchase of bulkhead property; I understood you to say that you have had none?

A. I have had none.

Q. Have you had any experience in renting bulkhead property?

A. In the Dock Department.

Q. Any outside of that?

A. Outside of that, no, sir.

Q. And your experience as to renting bulkhead property was confined to the time when you were Chief Engineer of the Dock Department, between 1875 and 1898?

A. My actual experience—meaning by that when I participated in the consultations and discussions which fixed these rental values—was confined to my experience in the Dock Department.

Q. Do you know who owns the bulkhead property that you have been testifying regarding?

A. I assume that the Consolidated Gas Company owns it.

Q. And you base your opinion upon the assumption that the Consolidated Gas Company owns these several pieces of property?

A. Yes.

Q. Have you made the measurements yourself to which you have testified, or have you received the dimensions from somebody else?

A. I have taken them from the Dock Department largely, chiefly.

Q. I understood you to say that you had testified in some judicial proceeding on behalf of the City of New York. Have you ever testified for the City of New York as to the value of bulkhead property. 1257

A. Not that I remember.

Q. How long since have you testified on behalf of the City of New York in any judicial proceedings for any purpose?

A. Last spring, three or four months ago.

Q. And what was that proceeding?

A. It was the condemnation and acquisition of some property in the Borough of The Bronx for a park.

Q. Have you ever testified as an expert heretofore for any person as to the value of bulkhead property in the City of New York?

A. In the City of New York? Yes.

Q. When did you so testify?

A. Well, I have done so a number of times in the past five or six years.

Q. Can you tell me what property you have been called upon to give an expert opinion on, bulkhead property I mean, and land under water.

A. There was one piece up about 80th Street in front of the Riverside Park; there was a bulkhead and pier, 19th and 20th Streets, on the East River, there were certain pier rights at the foot of 43rd Street, North River; Pier old number 36 on the East River; Piers 16 and 17 and the bulkheads between them on the East River; Piers 19 and 20 on the East River; Piers 9 and 10 on the East River; Piers 1 and 2 on the East River. There may be some others that I have omitted, because I haven't my books here to remind me.

Q. Now, the property between 19th and 20th Streets was on the East River, was it?

A. Yes, a bulkhead and a pier, 19th Street and East River.

Q. That was on the East River?

A. Yes, sir.

Q. What was the nature of that proceeding?

A. A condemnation proceeding.

Q. By the city?

A. Yes, sir.

Q. And you were testifying on behalf of those who claimed
1258 the rights in the pier and in the bulkhead as against the city?

A. Yes, sir.

Q. And did you give a valuation of those rights including the bulkhead property?

A. Yes, sir.

Q. Land under water?

A. There was not much question of land under water; it was pier and bulkhead.

Q. Do you know what you testified the value of that property to be per lineal foot, bulkhead property?

A. Yes.

Q. How much was it?

A. $650.00.

Q. How much did the Commission award?

A. Only $300.00.

Q. Now with regard to the bulkhead at Pier 43—or Forty-third Street, is it?

A. Forty-third Street. That was a case of certain pier rights.

Q. That did not involve bulkhead rights, did it?

A. No, the bulkhead did not come in there.

Q. Nor did it involve land under water?

A. No, it was a pier right, the right to build a pier.

Q. Well, we won't waste any time on that. Pier 36, East River; is that Pier 36?

A. Old Pier 36, East River.

Q. Was that pier rights or bulkhead property?

A. Both bulkhead and pier property. If you like, I will recall an additional case, a bulkhead right that I testified in regard to, and that is between 16th and 17th Streets, North River, and between 17th and 18th Streets and North River, also between 19th and 20th Streets, and 22nd and 23rd Streets, North River.

Q. Were these properties all embraced in one proceeding which you have just mentioned, from 16th to 23rd Street?

A. Yes, sir.

Q. And what was the nature of that proceeding?

A. Acquisition, condemnation by the city of the private rights.

Q. Of bulkheads?

1259 A. Of bulkheads. In the proceeding also they took upland, but I had nothing to do with that.

Q. Do you remember what you testified in that proceeding was the value of bulkhead property between 16th and 17th Street, North River?

A. $840 a foot.

Q. And between 17th and 18th Streets?

A. $840 a foot.

Q. And between 19th and 20th Streets?

A. I have forgotten.

Q. And between 22nd and 23rd Streets?
A. $900.
Q. Do you know what the Commission awarded per lineal foot?
A. For 22nd and 23rd Streets? $900.
Q. Between 16th and 17th Streets?
A. I don't know that they have made an award. I have not heard.
Q. Between 17th and 18th Streets?
A. I have not heard that they have made an award.
Q. Between 19th and 20th Streets?
A. Nor have I heard that.
Q. And between 22nd and 23rd Streets?
A. I have heard there they gave $900 per foot.

By Mr. **Mathewson**:

Q. What did you say your testimony was between 22nd and 23rd Streets?
A. $900.

By Mr. **Burr**:

Q. What was the property embraced in the proceeding between Piers 2 and 3, East River?
A. That is on trial now. It is the whole of Pier 3 and the half of Pier 2 as it formerly existed, the bulkhead between Piers 2 and 3 and 100 feet easterly of Pier 3.
Q. What was the nature of that proceeding?
1260 A. Condemnation by the city, acquisition of private property.
Q. Did you testify as to the value of the bulkhead property there?
A. Not yet.
Q. Between Piers 9 and 10, East River?
A. 9 and 10 I have testified regarding.
Q. What did you give the value of the bulkhead property there to be?
A. $450 for part of the bulkhead and I think, as near as I can recollect, $350 for another part.
Q. And has the Commission made the award there yet?
A. Not that I know of.
Q. And the proceeding to acquire the property between 19th and 20th Streets, East River?
A. Piers 19 and 20?
Q. Has that been concluded as yet?
A. I am not aware, sir, but I think not.
Q. What did you testify the value of the bulkhead property was there?
A. I don't recollect.
Q. Pier 16, East River, has that proceeding been concluded?
A. No, 16th and 17th were together.
Q. And pier 36?
A. And the bulkhead between them.
Q. And Pier 36, East River, has that proceeding been concluded?
A. No, sir.

Q. You have testified that the proceeding at Pier 43, North River, has been concluded?

A. Yes, that proceeding was completed.

Q. Your whole and sole experience, as far as piers and bulkheads were concerned, for the time you were chief engineer, was confined to the leasing of the same, the fixing of rentals by the Dock Department, to those who were desirous of leasing the property?

A. Yes, I think if I understand your question. That is, we did not sell any property.

Q. I say your sole experience with regard to that property at the time you were chief engineer of the department was confined to the rental of such property? 1261

A. Yes.

Q. And the fixing of rates of rental by the Dock Department?

A. Yes, sir.

Q. The property at Tompkins Street, between 14th and 16th Streets, where did you take the measurement of that property from?

A. I took those by calculation from the Dock Department map.

Q. You say the length of the two bulkheads is 447 feet 4 inches?

A. 447.4 inches.

Q. And the land under water is 30,318 square feet?

A. 30,318 square feet I make it.

Q. When did you make an examination for the purpose of ascertaining the dimensions of that property?

A. Why, I don't know what day; within three or four days past.

Q. Have you talked with Mr. Wheelock who has testified here as an expert for the complainant, as to the values of real estate and bulkhead properties with regard to such valuation?

A. He showed me his valuation and he asked to see mine, and we differed somewhat.

Q. Did you take the measurements from him?

A. No.

Q. Did you embrace in this measurement Tompkins Street itself?

A. No, the measurement of the land under water you refer to?

Q. Yes.

A. No, sir.

Q. Or any part of it?

A. Oh, no. It is land under water, between the existing bulkhead and the established bulkhead line.

Q. What is the physical condition of that bulkhead?

A. Fair.

Q. Is it complete?

A. Complete? Why, yes, it was in use two or three days ago.

Q. I mean is it completely built up? Is the bulkhead completely built up?

A. Do you mean to the full established grade?

1262 Q. Yes.

A. I did not notice. I did not take cognizance of that.

Q. Is there any part of it broken down?

A. Not that I saw.

Q. Is there any part of it being presently repaired?

A. I didn't see it.

Q. But you are willing to testify that the physical condition of that pier is good?

A. I said it was fair.

Mr. **Mathewson**: He has not testified about the pier.

Q. I mean of the bulkhead.

A. Fair; in use and usable.

Q. What considerations did you take into mind when you fixed the valuation per foot there of $350 per lineal foot?

A. I took it into consideration that a bulkhead in that locality, in that vicinity, *per se,* that is without any upland opposite it, in the same ownership, is worth about $250 per feet, and that on account of the upland and the bulkhead being in the same ownership it was worth $100 a foot more, making $350.

Q. Have you any knowledge of sales or purchases of bulkhead property in that neighborhood?

A. Not except under condemnation proceedings.

Q. What did you base your valuation of $4 per square foot of that land under water upon?

A. Because land under water is rented, leased for platforms and things of that kind at various prices, sometimes downtown and on the North River at 25 cents per square foot per annum, and further uptown at less prices, and my judgment is that land under water at that locality could be leased for 20 cents per square foot per annum, which, capitalized at 5 per cent., makes $4 for the value.

Q. Have you any knowledge of any sales or purchases of land under water at that rate in that neighborhood?

1263 A. No, I don't recollect any land under water.

Q. The bulkhead property at 18th Street, North River, did you take the measurement of this property yourself or have it done for you or did you take a measurement from someone else?

A. I took it from the Dock Department records.

Q. You place a valuation of $377.50 per lineal foot on the bulkhead property here. Upon what basis did you arrive at that figure?

A. Did I say $377 per lineal foot?

Q. Oh, excuse me, $840.

A. $840, yes. Well, that was based beginning with $500 per foot for bulkheads along that part of the North River, some of them above it and some of them below, which had been fixed some eight or ten years before by agreement between the owners and the dock department and by stipulation between counsel of opposite sides, and also confirmed by decisions in the courts.

Mr. **Burr**: I move to strike that out.
Mr. **Mathewson**: I think that is responsive.
The **Master**: I will let it stand.
Mr. **Burr**: Exception.

The **Witness** (continuing): Then the property, inland property, the lots directly opposite these bulkheads, were in the same ownership as the bulkhead rights and I added $100 per foot for that, that made $600. Then an examination of water front properties, leases in that vicinity, showed in the past ten years a very great increase, a very decided increase, a very large percentage, and of that large increased percentage I took forty per cent. as applicable to these bulkheads, and added forty per cent. to the $600, which made $840.

Q. What was this stipulation or agreement that you speak of?

1264 A. In the condemnation proceedings for the acquisition of the property, water front and upland both, between West Eleventh Street and the Gansevoort Street market, the counsel for the owners and the counsel for the city stipulated that the price to be paid for the bulkheads should be $500 per foot.

Q. Were you a witness in that proceeding?

A. No.

Q. From what is your knowledge as to that stipulation derived?

A. It comes to me from the counsel on each side, Mr. Olendorff and Mr. Harris.

Q. Do you know how much the claimant asked in that proceeding?

Objected to as immaterial.

Question allowed.

Exception.

A. I do not.

Q. Do you regard the cond-tions existing between Sxiteenth and Eighteenth Streets on the North River the same as existed at that time between West Fifteenth Street and Gansevoort Street?

A. West Eleventh?

Q. West Eleventh and Gansevoort property.

A. That they were the same as Sixteenth and Seventeenth?

Q. Yes.

A. Not quite the same, no. But the same prices had been fixed for bulkhead rights at $500 by agreement, had been fixed for similar property close by Sixteenth and Seventeenth Streets.

Q. Which property was it?

Witness picks up a book.

Q. You don't recall without consulting a book, do you?

A. No. There was a sale by agreement, there, it was a good while ago and I can't recall it without reference to the book.

Q. What is the book you are referring to?

1265 A. The book is the report of the Department of Docks for 1903, which contains a list of wharf property acquired by the Department of Docks down to 1903. Reading from that book, between West Twenty-third and West Twenty-fourth Street, the bulkhead 202 feet 6 inches in length, acquired December 14, 1892, by agreement from Clements C. Cassimer and Catharine T. Moore, price per foot $500.

Q. What was the year?

A. 1892.

Q. And you give the number of feet in each bulkhead at that point at 188.75?

A. Yes, sir.

Q. What is the physical condition of that property?

A. Those bulkheads?

Q. Yes.

A. They are all gone to-day.

My Mr. **Mathewson**:

Q. At the time you made your estimate?

A. They were in process of destruction at that time in 1903.

By Mr. **Burr**:

Q. You place the total value there at $317,100, is that right?

A. Yes, sir; for the two.

Q. Now, take the property at 41st and 42d Streets, the length of bulkhead at this point you say is 197½ feet?

A. Yes, sir.

Q. And you give a valuation of $750 per lineal foot?

A. Yes, sir.

Q. Upon what do you base that valuation?

A. Upon the $500 basis for any bulkhead on the outside of a marginal street, and an addition for being in the same ownership with the land inshore, directly inshore of the bulkhead, $250 per foot. That addition includes the increase of value since the $500 rate was established, as far back as 1892 and 1895.

Q. Do you know what bulkhead property has sold in that
1266 neighborhood within the past two years at, per lineal foot?

A. No, not in that immediate neighborhood.

Q. And you arrived at your figure by taking the $500 fixed in 1892 for property at 15th and 16th Streets——

A. (Interrupting.) Well, other places also.

Q. And you add to that $250, is that right?

A. I will continue to the point. There were a number of places along there where the bulkhead rights were sold or condemned or acquired for $500 a foot.

Q. You have no knowledge yourself of those transactions other than the information you get from this report of the Dock Department in 1903?

A. Well, some of them I saw in the department, and knew about them in that way. I saw the papers certified to by the corporation counsel.

Q. Why do you put an addition of $250 to the $500 instead of $150?

A. Instead of $150?

Q. Yes.

A. The $100 I gave where there is a street between the bulkhead and the upland properties, both of which are in the same ownership. In this case the upland extends directly, or the structure extends directly to the bulkhead line, substantially. There is, as you see on the map, a little place, a small portion of it, which is not covered by the structure.

Q. How large it that place not covered by the structure?

A. Well, it is small. I should think it was, my recollection of it might be sixty feet by sixty feet or thereabouts.

Q. Sixty by sixty?

A. Thereabouts, but I included the value of all that land under water inside of the bulkhead line in the valuation of the bulkhead.

Q. In other words, if that land were separated from the bulkhead property you would have awarded $100 in adition to the $500, but being connected and running out to the bulkhead you make 1267 an allowance of $250?

A. Partly on account of that and partly on account of the increase in value that has taken place on North River water front property since the old price of $500 was established.

Q. Have you made any allowance for the right of way which is now being exercised or used by a company other than the Consolidated?

A. Oh, no, that is a mere temporary thing.

Q. Who told you so?

A. Down at the Dock Department. They made an agreement there in order to build the 41st Street pier and that is a part of it, that they can have for a limited time, I have forgotten dates, the right of way across that property there.

Q. Do you know whether the complainant receives any rental from that right of way or not?

A. I don't know.

Q. If it received rental would that enter into your consideration of the valuation?

A. Well it might if it was consequential.

Q. Do you know what use this upland is being put to now?

A. Gas manufacture.

Q. And what use the bulkhead is being put to?

A. The same thing, used in the gas manufacture.

Q. In what particular way?

A. In landing their material and handling their stock.

Q. So that it affords them, this bulkhead you believe affords them an opportunity to deliver their supplies and material there without any trouble of taking it into yards or plants or workshops there?

A. Well, they have to cross this right of way during this temporary existence of this right of way; at other times they would go directly across, but a large amount of their coal, almost all their coal I think, comes right over that bulkhead now and is taken into the upland property where they manufacture the gas.

Q. So that it becomes in your opinion valuable to the com- 1268 pany because it saves them cartage, in other words?

A. Yes, it saves them a large amount in the handling of their material.

Q. And they are able to deliver their coal at tidewater at the end of this bulkhead?

A. They receive their coal——

Q. I mean receive their coal?

A. Yes.

Q. They are able to have their coal delivered there at tidewater?

A. On the pier. They use the bulkheads for getting rid of their refuse material.

Q. Let me show you Exhibit 48 and call your attention to the map, on page 5, of this property regarding which you are now testifying, and let me ask you what these lines here indicate and this figure 250 (indicating).

A. The first line you refer to is the established bulkhead line, the line interior of that established bulkhead line is the westerly line of 12th Avenue, 250 feet inshore of the established bulkhead line.

Q. That is a proposed street, is it, this part (indicating)?

A. I don't know whether that is intended for a proposed street or not. Those lines—that one is marked "bulkhead line," that is the established bulkhead line. 250 outside of that is the westerly line of 12th Avenue, a matter of fact, because I know that the established bulkhead line—no, excuse me, it is 150 feet west; 250 feet is the easterly side of 12th Avenue.

Q. Well, doesn't that marginal street run through the property then?

A. A marginal street is laid out on the map to run through the property on the new plan, as it is called.

Q. If a street ran through there, then the property would not be so valuable, would it?

A. What street? 12th Avenue?

Q. Yes, this marginal street.

A. It would diminish it somewhat, not a gread deal.

1269 Q. Well you have added $250 because of the increase in valuation and of the conjunctivity of the land and bulkhead?

A. Yes.

Q. What difference would be made in your estimation of value if a street ran through there, if that was physically cut through there this moment?

A. Well there would be outside of that street 150 feet of land.

By Mr. MATHEWSON:

Q. Next to the bulkhead line?

A. Between the street and the established bulkhead line.

By Mr. BURR:

Q. What valuation do you place upon the item of use of water upon either side of the pier?

A. Well, that goes with the pier.

Q. Well, I know, but you testified that in arriving at your figure you took into consideration the use which it is put or may be put to of either side of the pier?

A. Well, that goes always with the pier and is always with the pier. The pier is of no use except the vessels are put on each side of it.

Q. So you did not place any particular valuation on that, other than the advantage of having a place to deliver material at?

A. The general value of the pier.

Q. The land under water inshore of the bulkhead line, what valuation did you put upon that?

A. I included it all in the valuation of the bulkhead.

Q. But did you place any particular value on the land under water in arriving at the general value?

A. I thought that as it was so nearly filled in and had so many structures upon it, that the fairest way would be to consider it simply as bulkhead and not as land.

Q. So that you wish to be understood as saying that the land under water inshore of the bulkhead line did not enter into 1270 or form any part of the general amount of $750 at which you have arrived?

A. I have endeavored to say that I included whatever value it had in the valuation of the bulkhead.

Q. Yes, I know you have in a general way. What I am trying to arrive at is what special value in dollars and cents you gave that land under water inshore of the bulkhead line?

A. I didn't give it any special value?

Q. So in an indefinite way it is embraced in the $750 valuation?

A. Including the whole thing.

Q. 44th and 46th Streets is the next bulkhead regarding which you have testified. That I understood Mr. Mathewson to say did not embrace 45th Street. Is that right, leaving 45th Street out?

A. Yes.

Q. Now, what is the length of the bulkhead there between 44th and 45th Street-?

A. 200 feet 10 inches.

Q. And are those dimensions the same in the bulkhead between 45th and 46th Streets?

A. Yes, sir.

Q. You have given a valuation there per lineal foot of $750?

A. Yes, sir.

Q. How did you arrive at that figure Mr. Greene?

A. On a similar basis, the old $500 rate and the addition for the increased value of wharf property on the North River and the fact that the ownership of the land up to the edge of the bulkhead is in the same party as the ownership of the bulkhead rights.

Q. That is, you claim in your valuation that the property of this company runs 700 feet on 44th Street and taking in the 250 feet additional down to the bulkhead line as appears here on the map, Exhibit 48, page 6 (handing map to witness)?

A. That is the upland, with which I have nothing to do.

Q. Point out where you commenced to measure the bulkheads, from what point?

A. From here, 44th Street, north side of 44th Street, to 1271 the southerly side of 45th Street, and from the northerly side of 45th Street to the southerly side of 46th Street (indicating).

Mr. Page: I suggest that "From here" does not appear on the stenographer's minutes.

Q. Just describe that again will you, Mr. Greene, the point from which you measured?

A. I measured the bulkhead from the northerly side of 44th Street to the southerly side of 45th Street and from the northerly side of 45th street to the southerly side of 46th Street.

Mr. Page: Along what line?

The Witness: The existing line of bulkheads.

Q. Well, there is a line on this map marked bulkhead line?

A. Yes.

Q. You have been figuring on a line which is east of that?

A. Yes, sir.

Q. It is that line from which you have been figuring near the figure 250 feet, is that what you claim to be the existing bulkhead line?

A. No, the line marked here bulkhead line is the established bulkhead line. The line without a designation on this map is the existing bulkhead as built.

By Mr. Page:

Q. That is shown 185 feet 10 inches?

A. It is shown there as 185 feet 10 inches.

Q. Upon the colored portion of the map on page 6?

A. Yes.

By Mr. Burr:

Q. Now, how did you arrive at the number of square feet of land under water inside the bulkhead line?

A. I took the distance between the established bulkhead
1272 line and the existing bulkhead line as 70 feet and multiplied
it by the distance between the streets 200 feet 10 inches, which
gave me 14,756 square feet for each block.

Q. Did you take that 70 feet from actual measurement or did you take that from the Dock Department?

A. Took it from the Dock Department.

Q. From what particular map or document in the Dock Department did you take that measurement?

A. One of their maps, called the standard map, on a scale of fifty feet to the inch.

Q. As it exists to-day, purporting to give the measurement or configuration of this land, as it exists to-day?

A. Yes, sir.

Q. I understood you to say in your direct testimony that the dimensions of the plot were 70 x 200 feet 10 inches, is that right?

A. Yes, for the land under water.

Q. Now, you give a valuation there of five dollars a square foot?

A. Yes, sir.

Q. On what basis did you arrive at that figure?

A. Because land under water on the North River will rent for platform purposes or things of that kind for twenty-five cents per square foot per annum which capitalized at five per cent. gives five dollars.

Q. What do you mean by platform purposes?

A. Sometimes people wish an extension to their bulkheads or to their piers and it is commonly called a platform; it is really a wharf as much as a pier or a bulkhead.

Q. And did you give the same valuation to the platform so-called as you would to the bulkhead proper?

A. Oh, if the platform has a right of wharfage on it it would not differ much from the bulkhead under the same conditions.

Q. Do you consider it as a platform pure and simple, or an extension of the bulkhead?

1273 A. It would be in any case, all platforms would be virtually extensions to piers and bulkheads.

Q. Do I understand you to mean that one having a bulkhead and having a platform has the same right over the platform as he has over the bulkhead?

A. If he controls the bulkhead or the land immediately inshore of the bulkhead, if he owns that he would have the same right because no one could go to his platform or to and from it and from the shore without crossing over his land, for which he could demand compensation or which he could forbid.

Q. Then in your estimation what he may do on the bulkhead he may do on the platform?

A. Yes.

Q. Whatever structures he may put up on the bulkhead he may put on the platform?

A. If he controls the bulkhead and the land in shore.

Q. Now, have you any knowledge of any actual transactions in this neighborhood which justify you in arriving at this valuation?

A. There are not many in that neighborhood; there are further downtown where property is more valuable.

Q. About how far downtown?

A. I will refer to the book and give you some.

Q. You have no knowledge personally of such transactions and you derive your knowledge from consultation or reference to this book?

A. Not altogether, because some of the platforms were built under permits granted while I was in the department, and in that case the work has to be done under my supervision. (Witness refers to book.) Now, I beg leave to say in explanation that I know about these general rates of compensation for the use of land under water. I cannot recollect each individual case without reference to the book. Turning to the book here, the rent roll of the department, the land under water for platform southerly about 65 feet 1274 from west 40th Street, 924 square feet, $231 per annum, which is, if you please, exactly 25 cents per square foot. And that platform was built under a resolution of the 4th of February, 1887, renewed on June 24th, 1898. In 1887 I was in the department.

Q. In arriving at this valuation of $750 per lineal foot of the bulkhead property you have concluded that that was a proper valuation in view of the connection of the bulkhead with the upland and the fact that the Consolidated Gas Company in your opinion owned the bulkhead property and used it for its own purposes?

A. Yes.

Q. Do you know what particular purpose it uses the bulkhead for at that point?

A. One of them they were receiving coal and the other one they were shipping refuse.

Q. Do you know what particular use the upland at that point is put to between 45th and 46th Streets by the Consolidated Gas Company?

A. I saw buildings there but I don't know what they were doing in them.

Q. What is the physical condition of the bulkheads at that point, Mr. Greene?

A. Well, they are in pretty good condition.

Q. Could you say from your observation and experience what is the earning power per lineal foot of that bulkhead property at that point?

A. Not directly because it would have a special value to the owners of the upland property, and I don't know of any case where it has been considered that they would separate it, so to speak, of their will or own volition.

Q. And the same I suppose applies to the other bulkhead property in that connection regarding which you have testified?

A. Yes.

Q. You say regarding this property at 44th and 46th Streets,
that the 14,756 square feet of land under water does not
1275 include the land under water outside of the bulkhead, is
that true?

A. I beg your pardon, I did not quite hear what you said. Is this in relation to 44th and 46th Streets?

Q. (Question repeated.)

A. Not outside the existing bulkhead—Oh, land under water, not outside the established bulkhead line.

Q. That is not outside the line marked bulkhead line on Exhibit 48, page 6?

A. Not outside this line marked bulkhead line.

Q. You say you capitalized the 25 cents per square foot at 5½ per cent.?

A. Five per cent.

Q. Why do you capitalize it at 5 per cent.?

A. Well, a matter of custom and a matter of somewhere near right; between 4 and 5. I use 4½, sometimes 5.

Q. You regard that as a fair return on the investment?

A. I think it would be fair in this particular case.

Q. Now, the Pleasant Avenue bulkhead property you valued that at $250 per lineal foot. Have you any special reason for valuing that at that figure?

A. The general price and rental of bulkheads in that vicinity would indicate that it is worth about $150 a foot, and I add $100 because that bulkhead property is in the same ownership as the upland.

Q. In arriving at the valuation of this property per lineal foot you take into consideration solely the rental value of bulkhead property in the immediate neighborhood, is that right?

A. Well, it is a little broader than that; bulkhead property above and below. The value of the property also above and below.

Q. Have you any personal knowledge of any purchases or sales of bulkhead property immediately below or immediately above that bulkhead property located between 110th and 111th Streets?

A. No, not immediately above or below.

1276 Q. Tell me what the pier at 113th Street rents for.

A. The pier at 113th Street?

Q. Yes.

Mr. **Mathewson**: East River or North River?

Mr. **Burr**: East River.

Mr. **Mathewson**: That is not part of the property that is at issue here.

Mr. **Burr**: I know it.

Q. Well, you don't know, do you?

A. I do not recollect.

Q. Tell me what the property at the foot of 109th Street, East River, rents for, bulkhead property?

A. I don't recollect. There is some wharfage collected there, very good wharfage.

Q. Well, what particular property above and below 110th and 111th Streets do you refer to in saying that the rentals of such property entered into your consideration in fixing this valuation?

A. I did not take a particular property. It is not directly comparable and I generalized only and fixed it by judgment and estimation from my knowledge and experience in such matters.

Q. Without regard to the rentals or sales or purchases of such property in that neighborhood?

A. Those came into consideration.

Q. That is what you have said, and I am trying to ascertain what rentals you referred to in fixing the valuation at this particular point?

A. Well, I have not a list of them here, I have general information in regard to them.

Q. No particular information?

A. No, not that I can give now.

Q. So that when you say you based this valuation upon rentals of property in that neighborhood, you have no particular rentals in mind?

A. Not in mind, no, not specially.

1277 Q. What is the length of that bulkhead?

A. 212 feet.

Q. You got that dimension from the Dock Department?

A. Dock Department records, yes, sir.

Q. Now, is it not true with regard to the valuations that you have placed upon all the bulkhead property regarding which you have testified, that you have not had in mind any particular sales or purchases or particular rentals of property in that neighborhood, but have fixed arbitrarily a figure which in your judgment suits the situation?

A. Well, I do not always make a direct comparison with some specific piece of property. As I explained in regard to the bulkheads on the North River there are a number of them where the price was fixed at $500 a foot, and I take such a case as that as a foundation to build upon.

Q. And you testified that in your opinion the land under water at this particular point, Pleasant Avenue, between 110th and 111th Streets, is fairly valued at $3 per square foot?

A. I do.

Q. What consideration entered into your mind in forming that opinion?

A. That it would rent for 15 cents per square foot per annum, which capitalized at 5 per cent. would amount to $3.

Q. And yet you state that it would rent at 15 cents per square foot without any knowledge of any real or actual rentals of property either above or below that neighborhood at that price?

A. No, I did not mean to say that. There is a piece of similar land under water further up than that that rents for 25 cents per square foot per annum, up in the Harlem River, farther up where things are generally cheaper than they are at 110th Street.

Mr. Burr: I move to strike that out. I have not asked 1278 with regard to things being generally cheaper. If you want to go into that, I can, but I have not asked about that.

The Master: Strike out the last sentence.

Q. Who owns the bulkhead property at this point, the Consolidated Gas Company?

A. I think so, I assumed that that was the case.

Q. And you assumed that the Consolidated Gas Company owned the bulkheads in arriving at the valuation which you have given?

A. Yes.

Mr. Burr: I submit, Mr. Master, that this man is not qualified as an expert to testify regarding bulkhead properties or their value or the value of land under water at such bulkheads. He has not met the recognized tests in that regard, and I move to strike out his testimony as he has given it regarding the value of such property.

The Master: Motion denied.

Mr. Burr: Exception. That is all.

Cross-examination by Mr. Page:

Q. I understand, Mr. Greene, that you do not consider that bulkhead property in conjunction with the immediate upland is more valuable than bulkhead property not in conjunction with the immediate upland?

A. Yes.

Q. No more valuable?

A. It is more valuable. I beg your pardon, I did not catch your question.

Q. How much do you add to the value for the fact of the two being in conjunction?

A. You mean where there is a street intervening?

Q. No.

A. Direct. Well, from $100 to $150.

Q. On the entire length?

A. Per foot?

Q. Per foot?

A. Yes.

Q. And if there is a street intervening then you would consider it $100 to $150 less value?

1279 A. No, because where there is a street intervening between the bulkhead and the upland both in the same ownership, I think it increases the value of the bulkhead $100 per foot. Where the land comes directly out to it it is still more valuable; perhaps $150 a foot as a general case; sometimes more.

Mr. PAGE: Will you read the witness's answer?

(Answer read by stenographer.)

Q. I do not think that is very clear. If the street is there it increases the value $150 a foot and if the street is not there it increases it another $100 a foot is your answer as I understand it.

The MASTER: Oh, no.

Mr. PAGE: Am I right.

The WITNESS: No.

Mr. PAGE: Question withdrawn.

Q. You say that the values of bulkhead properties have increased very much in the last twenty years?

A. The value of water front property has increased considerably in twenty years, various parts of the city, varying prices.

Q. By water front property do you mean bulkheads and piers?

A. Bulkheads and piers, yes.

Q. Then a statement that bulkhead property had increased in value in the last twenty years considerably would be correct, would it?

A. Oh, yes, sir.

Q. Taking this bulkhead property on page 2 of Exhibit 48, which is on Tompkins Street, between East 14th and 15th Streets, and East 15th and 16th Streets, which you will see is stated to be Manhattan Gas Light Company to the Consolidated Gas Company, will you state what the value of that bulkhead and water right was in 1884?

A. No, I cannot.

1280 Q. How much has that property appreciated in value since 1884?

A. I could not give you even an approximate idea without more study.

Q. You were in the Dock Department at that time were you not, in 1884?

A. Yes.

Q. And as I understand you derived your practical knowledge of values and all the practical knowledge that you obtained, in the time that you were in the Dock Department, is that right?

A. Well, I have been following it up to a considerable extent since I left the Dock Department and watching the rentals and prices.

Q. Were you familiar with values at that time in 1884 of bulkheads?

A. In 1884 I knew something about it. Not so familiar with it as I became afterwards.

Q. You had been Chief Engineer of the Dock Department for nine years at that time, had you not?

A. Yes, but the first few years I was in the Dock Department my attention was particularly directed and my time absorbed in the strictly engineering part of the work and my connection with that study of rentals and consultations in regard to rentals did not begin in 1875 when I first went there.

Q. When did it first begin?

A. Well, it grew gradually; I could not say exactly when.

Q. Well, you would be unable to say then to what extent bulkhead properties had increased in value in twenty years?

A. Well, I could hunt up a particular case.

Q. Without hunting up particular cases at present you would be unable to give any answer to that question; is that right?

A. I should not like to try to give an answer as to the increase in twenty years.

Q. Well, we will take it for ten years last past?

A. Or even ten.

Q. Or five, would you say five?

1281 A. I would rather look it over before answering and make a little study and examination of it.

Q. Would you be willing to inform yourself as to the values of these properties in 1884?

Mr. Mathewson: I think if counsel desire his expert testimony on that subject that they should endeavor to retain Mr. Greene and not seek it in this way. I should object to that.

Mr. Page: I asked him whether he would be willing to do so. I did not ask him to do so.

Q. How much has the value of bulkheads and dock property increased since 1898?

A. Well that varies very much. In 1898 on the North River piers were renting for $4,000, $5,000 and $6,000 a year up in the vicinity of 45th or 46th or 47th streets. A few weeks ago the Dock Commissioner refused an offer of $25,000 per annum for a pier at the foot of 44th Street, a large handsome pier, to be sure, but at the same time no such price has obtained before as I recollect for any pier up above that. At the foot of 41st Street, one half of a new pier is leased for $8,800, the half of the pier. And those are indications of an increase since eight years ago when such prices did not obtain there.

Q. Then the rental value in some cases has doubled and in other cases much more than doubled?

A. In some cases yes, sir, and in some places. The old price for a pier under the new plan at Canal Street and West 10th Street was $35,000 to $40,000, and now it is $50,000 to $60,000.

Q. And you took this increase in valuation into consideration in making your estimates of the value of these bulkheads about which you have testified?

A. Yes where it applied. I made a particular study of that 16th Street, 17th Street, 18th Street, 19th Street and 20th Street to 23rd Street, of the water-front there some time ago.

1282 Q. And you testified in behalf of the Consolidated Gas Company in the condemnation proceedings as to those particular piers?

A. Yes.

Q. Now the bulkheads and water rights that were acquired by the Consolidated Gas Company in 1884 did not decrease in value between 1884 and 1898, did they?

A. I should say not.

Q. I mean of course these that you have testified to to-day?

A. I think not. I think they should have increased in value.

Q. So that we have from 1898 to to-day they have doubled or more in value and they increased somewhat besides in the 14 years preceding.

Mr. MATHEWSON: The witness did not say that they had doubled. He said in some cases rental values had doubled.

Mr. PAGE: Let the witness answer the question and if he did not so state, he can say so.

Q. (Question repeated)?

A. What, these particular bulkheads there?

Q. Yes.

A. I did not mean to say that.

Q. Well what about these? You made a statement a short time ago that you knew of cases where the piers rented for $4,000 and $5,000 and $25,000 had been refused in one case and a portion of a pier had been leased for $8,800. Were those anywhere near any of the properties you have been testifying to to-day?

A. No, sir—well those were along the North River at 44th Street to 45th Street—those were near 42d Street and also near 44th and 45th Streets.

Q. Well that is a part of the property that you have testified about to-day?

A. Yes.

Q. 41st Street to 42d Street and 44th to 46th Streets?

A. Yes.

Q. That would apply, would it, to that particular property that you have testified to to-day?

1283 A. It shows that there is an increase in value of that property in that vicinity.

Q. Is there any relation between rental value and the real value?

A. I think so. I think that the real value is ascertained by capitalizing the net rental value at a given percentage 4 or 4½ or 5.

Q. Will you state how much the bulkheads at 41st Street to 42d Street and 44th Street to 46th Street, North River, has appreciated in value since 1898?

A. No, I would not like to state that without further consideration.

Q. I suppose that the knowledge that you had of the increase in rental value of the specific piers that you have spoken of on the

North River you took into consideration in forming your estimate of value at 41st and 42d Street and 44th to 46th Streets didn't you?

A. Yes, sir.

Q. But you are unable to state how much that made?

A. No, I took other things into consideration with it, you know.

Q. What other things did you take?

A. In fixing the value of that thing, I took into consideration that any bulkhead right was worth $500 a foot in that vicinity and that it had an increased value from ownership of the bulkhead and the upland being the same person and something of an increased value from the general rise or the increased value of property in some years past.

Q. How much was that factor, the general rise in property in your estimation?

A. That I am unable to estate. I did not give it a definite enough value to be able to state it.

Q. Well, you gave a value of $750 per lineal foot?

A. Yes.

Q. That is $250 a lineal foot more than your standard of $500?

A. Yes, sir.

Q. How did you arrive at that $250?

A. As I say, I took the general points into consideration;
1284 all those points without—I have not heretofore attempted to
separate them or itemize them.

Q. These valuations were just from general impressions in your mind and not based upon any calculation based upon the standard of value, is that right?

A. Well, not exactly.

Q. Well, how was it, how did you arrive at it?

A. As I said before, I took the old basis of $500 and added $250 for the other changes, different from the old time when $500 was established.

Q. When was that $500 value established?

A. Oh, away back in 1892 and 1893, along there.

Q. 1892 and 1893?

A. And subsequent, some of it, it was used subsequent to that.

Q. Can you state whether that amount $500 was greater than the prices that had obtained before?

A. No, I cannot. I don't know what the price that had been obtaining before was in that vicinity.

Q. In what vicinity was it that the value was established, as you state of $500?

A. 23d, 24th, 27th, 28th, and 29th Streets, on the North River, and there was another one I think between 21st and 22d Streets, where the owners and the Dock Department came to an agreement, but it was not confirmed by the Commissioner of the Sinking Fund.

Q. As I understand this $500 rate that you have accepted as a standard in 1892 or 1893 was the result of a compromise or settlement of litigation?

A. Not altogether. A decision in some cases of litigation and in another case it was fixed between the owners and the Dock Department, and then in still other cases as a stipulation between the opposing counsel.

Q. First it was fixed then by decision and afterwards that decision was followed by stipulation of counsel in other cases, is that it? Or was the decision the result of an agreement between counsel and effectuated by an order of the Court?

1285 A. Well, I suppose this agreement was influenced by the very old cases down below where $600 a foot was awarded as the result of litigation, but I don't know of course the reason why opposing counsel came to an agreement for $500.

Q. How did you come to adopt that as a standard from which to work?

A. Because I thought it was a fixed standard; I considered it a standard.

Q. Fixed by whom?

A. By the concurrent action of the opposing counsel, the officials of the Court, and the agreement of owners and city officials.

Q. I suppose where you have given a value of $840 per lineal foot you have considered that the values of those rights had increased $340 since 1892 or 1893, is that right?

A. No, the way I have made that up was to take the old basis of $500 and add $100 for the lot across the marginal street being in the same ownership, and then I added 40 per cent. for the increase in value of property in that vicinity for a number of years, which I have compiled. I have forgotten now for how many years it was, but it was for a number of years.

Q. Well, your compilation of increase would probably be from the time of the standard, would it not; or the adoption of the standard? If you start at $500 and are going to increase that, you would naturally start your estimate of increase at that?

A. No, the estimate of $500 remained as a sort of standard or foundation for several years, either for lack of transactions or for some other reason.

Q. Now, in the East River I notice that you fix a value there of $350 per lineal foot?

A. Yes.

Q. How did you arrive at that?

A. I took $250 as the value of a bulkhead in that vicinity, or such as it would be if simply on the exterior side of the marginal street. Then I add $100 for the ownership of the upland opposite the bulkheads being in the same person.

1286 Q. Did you have any standard there?

A. Yes, the standard of the bulkheads scattered and separated along on the East River.

Q. Was that established in the same way that the $500 standard was?

A. No, that came largely from the rentals and somewhat from the awards made just about there in the Brookman matter, and the Consolidated Gas Company's bulkheads, between 18th Street and 23rd Street on the East River.

Q. What value did you take at 110th Street and the East River?

A. $150 for the bulkhead on the exterior side of the marginal street and $100 additional because the ownerships of the bulkhead and the upland opposite are in the same person, making $250.

Q. How did you establish the value of $150?

A. By general comparison with the bulkheads above and below.

Q. At the present time you mean?

A. At the present time, yes, sir.

Q. You mean by that, what they produce in rentals, their rental values?

A. Yes.

Mr. PAGE: That is all. Now, I move to strike out the testimony of this witness, on the ground that the cross-examination has demonstrated that he is not an expert; that he has not compiled his values in the usual and accepted method of arriving at the values. It seems to be largely based on guesswork.

The MASTER: Motion denied.

Mr. PAGE: Exception.

Redirect examination by Mr. MATHEWSON:

Q. While you were with the Dock Department, and as far as your knowledge goes since, have there been many sales of bulkhead property by the city, or piers?

A. Very few indeed.

1287 Q. Has it not been the policy to rent them rather than to sell them?

A. The city piers?

Q. Yes.

A. The city cannot sell them, so it has to rent them.

Q. And according to your information have there been many sales of piers of the city's?

A. Very few, indeed.

Q. And with the exception of those few sales is there any feasible method which you know by which you can estimate values by considering rentals and things of that sort?

A. That is about the only way, and I think it is the best way.

Q. Now, while you were in the Dock Department and conferring with the Commissioners, were the values of the property discussed in arriving at the rentals?

A. No; what rentals they would bring; what rentals they would bear.

Q. And the value was rather determined from the rentals than the rentals from the value?

A. Yes.

Q. Now, this East 21st Street pier, respecting which the condemnation price was $300 and your testimony $650; how long ago was that?

A. 1903 and 1904; 1903 I think.

Q. Do you know of any award on the North River with relation to bulkhead property more recently than the $900 award between 22nd and 23d Street, which coincided with your testimony?

A. No, I do not.

Q. In reference to the 42nd Street property and the property between 44th and 46th Street, do I understand that you have appraised the bulkhead and water right property as now in possession by the Consolidated Gas Company?

A. Yes.

Q. You spoke about five per cent. being a fair rental in the particular case which you mentioned. I want to ask you whether in establishing or employing that figure you took into consider-
1288 ation the fact that this waterfront property is increasing in value as you have stated?

A. Yes.

Q. You have been asked in reference to certain piers, one of which an offer of $28,000 or such a matter was made for. Was that a pier which you said was a large and fine pier?

A. Yes.

Q. Is the amount of rental that you can receive for a pier governed in any measure by the character of the pier?

A. Oh, yes.

Q. So, would you be able to compare piers, even at the same location, at different periods, unless you knew the character of the pier in each case?

A. That would be advisable, certainly.

Q. Do I understand correctly that, taking the $500 which you spoke of as a sort of standard, the difference between that and the $750 which you mentioned in this 42nd Street case represents both the increase in value and the conjunctivity with the upland, and any other elements of that character?

A. That is my idea, sir.

Q. And how is that $250 arrived at, other than your general estimate from your experience and knowledge of such matters?

A. Not otherwise.

By Mr. **Burr**:

Q. What business are you engaged in now?

A. I am a civil engineer in general practice; professionally as a consulting engineer on waterfront property and other engineering works, also as a designer and constructor; that is, supervising the construction of wharves, piers and bulkheads, and also, as I have said, for some years past in eight or ten cases I have been employed to make valuations of waterfront property. I have kept up my acquaintance with it.

Q. Then the only experience you have had, that you can testify definitely regarding is the one to which Mr. Mathewson has
1289 just called your attention, where you testified that the value of the property was $900 per lineal foot, and the Commission agreed with you, and the other instance where you testified that the property was worth $600 per lineal foot and the Commissioners fixed it at $350 per lineal foot?

A. Well, the other cases, some of them, have not been decided. I do not know how they are coming out.

Q. Yes, that is what I say; the only two regarding which you can speak definitely is the one that Mr. Mathewson alluded to, where you fixed $900 and the Commission agreed with you, and the other case where you fixed $600 per lineal foot and the Commission fixed it at $350?

A. That is all I remember at present.

By Mr. **Mathewson**:

Q. In addition to your personal experience after you left the Dock Department, as well as while you were there, have you endeavored to keep posted in reference to sales of waterfront property and rentals, for the purpose of informing yourself?

Mr. **Burr**: I object to that. That does not mean anything. He may have endeavored and failed. It is quite evident that he did.

Q. I will ask if he has. Have you kept posted?

A. I have.

1290 **Edmund C. Preiss**, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside?

A. In the City of New York.

Q. What is your age?

A. My age is 65 years.

Q. What is your business?

A. My business is real estate, in different branches.

Q. What branches?

A. Buying and selling, exchanging, appraising, procuring loans, testifying in Courts and before Referees in regard to the values and conditions of values all over the city, for thirty-seven years—or rather for thirty-nine years.

Q. Have you been in the real estate business in the City of New York during this entire thirty-nine years? That is since 1867?

A. Yes.

Q. Have you ever been called upon to give your opinion in judicial proceedings, as to the value of property in the Island of Manhattan?

A. About four or five hundred times.

Q. Will you state some of the clients for whom you have acted in appraising real estate, or purchasing or selling?

A. I have been and still am employed by the elevated railroad companies and have testified for them in about four hundred and sixty cases on the different lines, and especially on the easterly lines, Third Avenue, Second Avenue, First Avenue, 23rd Street, 34th Street and 42nd Street. I have been employed very extensively by the New York Central & Hudson River Railroad in appraising all their holdings on Manhattan Island—I have the papers here—for the purpose of testing the tax assessments; went over that twice. All of their property on the westerly side. I have here the map.

Q. We do not care for the map, just give the names?

1291 A. Then I have been testifying in insurance proceedings for the New York Life Insurance Company; I have been testifying and also appraising property for the Ayer Estate in Boston.

I have been appraising and testifying for the New York Edison Company, their holdings in the city; in condemnation proceedings of the Bellevue Hospital site, and extension; condemnation proceedings for the Chanler Estate, 14th to 15th Street, between 10th Avenue and the river. I have been appraising for John Pierpont Morgan; I have been appraising for different members of the Jay Gould family, in a variety of instances.

Q. And for the Gould Estate?

A. Yes.

Q. Well, that is enough to begin with. Have your actions in appraisals, sales and purchases been confined to any one part of the Island of Manhattan since 1867, or have they covered various parts?

A. Yes, they have been spread out all over the city as occasion demanded.

Q. Do you know the values of real estate?

A. I guess I do.

Q. On the Island of Manhattan?

A. Yes.

Q. I will ask you to refer to Exhibit No. 48, first the parcel at the southwest corner of 116th Street and Lexington Avenue, being Block 1,643, lots 56, 57 and 58. Have you appraised that property?

A. Yes.

Q. What is the value of that parcel?

A. $89,200.

Q. Will you next look at the parcel at the northwest corner of Third Avenue and 114th Street, on the same page of Exhibit No. 48, being block No. 1642, lots 32 and 33—is that?

A. Yes, that is right.

Q. State whether you examined and appraised that property and what its value is.

A. I have examined it thoroughly, and put the value at $98,150.

Q. Does that include the office, the building used by the company as an office on the premises?

1292 A. That building and the building in the rear, that whole concern, lots and buildings.

Q. Did you estimate the value exclusive of the buildings?

A. I did.

Q. What is that?

A. I put the value of the buildings at $25,000.

Q. That would make the property exclusive of the buildings what?

A. Exclusive of the buildings, $73,150.

Q. Will you next take the parcel at the southeast corner of Irving Place and 15th Street, on the same page of the exhibit, being Block No. 870, lots Nos. 54, 55, 59 and 60, and state whether you have appraised that property and what its value is with the buildings and without.

A. I appraised the total value of this property at $306,550; land alone, $251,555, and the buildings at $55,000.

Q. Now, will you take the plot on the same page of Exhibit 48, the northeast corner of Hester and Elizabeth Streets. State whether you have appraised that and what the value is with and without the buildings, being Block No. 239, lots 1 to 5.

A. I value the ground at $158,400; buildings $24,000.

Q. What is the total value?

A. $182,400.

Q. Will you look at the plot on the south side of 15th Street, west of Avenue B, being Block No. 972, lot 45, appearing on the second page of Exhibit 48. State whether you have appraised that and what the value is.

A. $22,347.

Q. Please take now page 2 of Exhibit No. 48 and refer to the property between 17th and 18th Streets, fronting 350 feet on each street, west of Avenue C, being Block No. 985, lots 7, 19, 20, 39 and 40.

A. The land value, $261,800.

Q. Next, look at the plot on the same page between 15th and 16th Streets, fronting on the westerly side of Avenue C, being Block No. 982, lot 13.

A. I appraise that at $430,760.

1293 Q. Take next the plot between 15th and 16th Streets, 235 feet on each street, fronting on the easterly side of Avenue C, being Block No. 989, lot 1, and say whether you have appraised that and what the value of that plot is.

A. That I have appraised at $182,820.

Q. Will you take now the plot at the easterly end of the same block fronting on Avenue D, 191 feet on both 15th and 16th Streets, being Block 989, lot 26.

A. That I value at $136,048.

Q. Take the next, if you please, the plot on the easterly side of Avenue D, between 15th and 16th Streets, running to Tompkins Street, being Block 991, lot 26.

A. Lot No. 26, $157,690.

Q. The entire block between Avenue D, 15th and 16th Streets, and Tompkins Street, bears one lot number, which is 26?

A. The block, 14th and 15th between Avenues C and D?

Q. No, this one (indicating)?

A. That is the block I have been talking about.

Q. I ask you whether that is lot No. 26?

A. To the best of my knowledge and belief it is. It seems to me that that is one and the same number; or else I may be in error as regards the lot number. It might possibly be not the lot number.

Q. But your value of $157,690 applies to the entire square bounded by those four streets?

A. Yes, that is correct.

Q. Now, take the plot bounded by Avenue D, 14th, 15th and Tompkins Streets, which I have here indicated as block No. 991, Lots 1 to 47, inclusive, or Lots 1 and 47, I do not know which. What is the value of that entire plot bounded by those four streets?

A. 233,481.

Q. Now, I direct your attention to the property at West 18th Street, before the recent condemnation proceedings by the city, and

I ask you whether you have appraised the property bounded 1294 by 16th and 17th Streets, 10th Avenue and 11th Avenue, being block No. 688, Lot 21.

A. I beg to be excused in the value of the block 989, No. 26, on the northwest corner of Avenue D and 15th Street. The value of that property is $136,048.

Q. Which is that?

A. Block No. 989, Lot 26. There are two lots 26 there.

Q. And two blocks No. 991?

A. Yes.

Q. Now, will you look at the plot on page 2 of Exhibit No. 48, bounded by 14th Street, 15th Street, Avenue C and Avenue D, being block No. 988, lot No. 1; say whether you have appraised that and what the value is?

A. I have appraised that at $574,200.

Q. I now direct your attention to the property west of 16th to 18th Street as it existed before a portion of the property was taken by the city. Look first at the plot bounded by 10th Avenue, 11th Avenue, 16th and 17th Streets, being Block No. 688, lot 21.

A. I value that at $838,200, that block as it existed.

Q. Will you take the next block above that, which was bounded by 10th and 11th Avenues and 17th and 18th Streets, as it existed, being Block No. 689, lot 17.

A. That is the same value; $838,200.

Q. Now, take that portion of the block north of that, which was owned by the complainant, that is between 18th and 19th Streets, fronting on the westerly side of 10th Avenue and 525 feet on 18th Street, and the same distance on 19th Street, less five city lots which were taken out, being Block No. 690, lots 12, 40, 42, 43, 44, 45, 48, 49, 50, 51, 52 and 53.

A. The value of that property is $452,100.

Q. How many lots are out on the north side of that plot?

A. On the north side there are out five lots.

Q. So that the property which you have valued excludes 1295 those five lots from your estimate?

A. Yes.

Q. Take next the plot facing on 11th Avenue, being 350 feet on 19th Street and 20th Street, being Block No. 691.

A. I value that at $356,400.

Q. Take next, if you please, the small parcel bounded by 11th Avenue, 13th Avenue, 16th and 17th Streets, being that small triangular piece.

A. That is the same state of affairs; that is two plots. The same block number and the same lot number.

Q. The same block number, but not the same lot number; I have lot 3 and lot 12.

A. Lot 3 and Lot 3. This lot here, 666, lot 3 (indicating on Exhibit 48). I have got that. That is $67,991.

Q. Now take the plot just above that, bounded by 17th and 18th Streets, 13th Avenue and 11th Avenue, being Block No. 666; I have it marked as lot 12.

A. That may be correct.

Q. At all events, it is the same plot?

A. Yes, $224,122.

Q. Take, if you please, the plot on the north side of 18th Street on Exhibit 48, third page, being 75 feet front on 18th Street and beginning 275 feet east of 10th Avenue, Block No. 716, Lot 14.

A. I value this property at $43,875.

Q. Does that include the buildings?

A. Yes.

Q. How much exclusive of the buildings?

A. The buildings I value at $4,500. That would give the land value $39,375.

Q. Take next the plot on the south of that, on the south side of West 18th Street, fronting 225 feet on West 18th Street, being block 715, lots 51 to 59?

A. I value this property at $121,750.

Q. Turn now to page 4 of Exhibit 48 and state whether you have appraised the parcel on the south side of 20th Street, 175 feet front, being block 951, lot No. 35?

A. I did.

Q. What value do you fix for that?

A. $85,820.

1296 Q. Does that include the buildings?

A. Yes.

Q. How much without the buildings?

A. I value the buildings at $20,000, that would leave for the land value $65,820.

Q. Have you appraised the plot shown on the same page; that is, between 20th and 21st Streets, west of Avenue A, being block No. 952, lots 7, 29, 30, 33, 34 and 35?

A. Yes, I have appraised that property at $438,530.

Q. Does that include buildings?

A. I think it does. There are tenement houses there; that includes buildings, $7,500, so that the land value would be $431,030.

Q. Those buildings are tenement houses, are they?

A. Yes.

Q. Did you include in your appraisal any buildings used for making gas or any structures of that kind?

A. No, sir, only office buildings and tenement houses; that means the main office building on 14th Street and the one on Irving Place; those little houses that are sometimes in the middle of the block where gas is manufactured, with desk room, or something else for the superintendent, they are not included.

Q. Look at the next block north, between 21st and 22nd Streets, First Avenue and Avenue A, being block 953, lot No. 1; state whether you have appraised that and what you value it at?

A. I value that property at $619,136.

Q. State next whether you have appraised the property bounded by Avenue A and the marginal street, 21st and 22nd Streets, being block No. 979, lot No. 1?

A. That block I value at $570,080.

Q. Have you also appraised the block south bounded by 20th and 21st Streets, Avenue A and Avenue B?

A. Yes.

Q. That is block No. 978, lots Nos. 1, 2, 3, 5 and 6?

A. Yes, $539,474.

1297 Q. That includes buildings?

A. That includes buildings, yes.

Q. Are they tenements also?

A. Yes, they are tenement houses.

Q. State how much your valuation is excluding those buildings?

A. Excluding the buildings, the land value is $518,474, and the buildings are $21,000.

Q. In making this appraisal of this particular plot, have you excluded this lot facing on Avenue A?

A. Yes.

Q. 23 feet front?

A. Yes, sir.

Q. Have you also appraised the plot bounded by Avenue B, the marginal street, 20th and 21 Streets, being block 987, lots 37, 41, 42, 43 and 51?

A. Yes, sir.

Q. And at what do you appraise that?

A. $114,400.

Q. Take now page 5, Exhibit 48, and say whether you have appraised the plot on the north side of 42nd Street, facing 150 feet on that street, being block 1090, lot 23, and what your value is for that?

A. The value of that property is $72,600.

Q. Take next the plot on the north side of 42nd Street, facing 100 feet on that street, beginning 225 feet east of 11th Avenue, being block 1071, lots 10 to 13?

A. $57,200.

Q. Will you next look at the plot on the north side of 41st Street, fronting 200 feet, beginning 100 feet east of Eleventh Avenue, being Block 1070, lot 5?

A. $83,600.

Q. Will you take next the plot bounded by 42d Street, Eleventh Avenue, 41st Street, being Block 1089, lot 1, and say what the value of that plot is.

A. The value of that plot is $957,600.

Q. Have you included in that the value of any bulkhead rights?

A. No, sir.

Q. Nor any land under water or outside the bulkhead line?

A. No, sir.

1298 Q. That is for the upland, then?

A. That is for upland from Eleventh Avenue west to the bulkhead line.

By Mr. Page:

Q. How many feet is that?

A. That would be 1,050 feet. Eight hundred feet on the easterly side and 250, that makes 1,050.

By Mr. MATHEWSON:

Q. I see on the north side, that is on 42d Street, it appears by my map to be 1,051 feet 4 inches, or a slight variation?

A. That is just one of those things I could not take into consideration. It will probably be correct as it is here, 1,050 feet. It might be an inch more or a half an inch more.

Q. It would not make any difference in your estimate, I assume?

A. No, sir. It wouldn't make any difference at all in a plot like that.

Q. Will you turn next to page 6 of Exhibit 48 and say whether you have appraised the property between 44th and 45th Streets, Eleventh Avenue and the bulkhead line, being Block 1092, lots, 1, 28, 38, 38½ and 39.

A. Yes, sir.

Q. What is the value of that?

A. The value of that property is $647,150.

Q. Does that include any buildings?

A. I think it does. Yes, that includes buildings to the extent of $7,500, so that the land value would be $639,650 without buildings. The value of the building—there is one house there, it is $7,500, so that the land value would be $639,650 and the total value is $647,150.

Q. Now, in this appraisal have you taken into consideration the value of the bulkhead rights at all?

A. No, sir, I have not.

Q. Nor any land at all outside the bulkhead?

A. Neither.

1299 Q. You have included the land up to the bulkhead line, have you?

A. Yes, sir.

Q. That would make 950 feet on 44th Street?

A. Yes, sir.

Q. And a little shorter distance on 45th Street?

A. Make 750 feet on 45th Street.

Q. No, no. This is Block 1093, lot 1. On 44th Street, what distance is it?

A. Oh, 950 feet, and on the other it makes 925 feet. There is one lot less.

Q. That is on 45th Street?

A. On 45th Street.

Q. Take the block or plot, the north, between 45th and 46th Streets, facing 750 feet on 46th Street and 825 feet on 45th Street, running from the bulkhead line easterly on 45th and 46th Streets, and state what value that plot represents.

A. I value that plot at $546,000.

Q. Let me ask you whether in that you include any bulkhead rights?

A. No, sir.

Q. Or any land under water outside the bulkhead line?

A. No, sir.

Q. Please look now at page 7 of Exhibit 48. Take first the plot between 62nd and 63d Streets, being 481 feet 6¾ inches on 62nd Street, being Block 1457, lot 6.

A. That value is $185.240. Block 1455, lot 13, I have appraised at $222,750.

Q. That is the property between 60th and 61st Streets, fronting on the westerly side of Avenue A?

A. Yes, sir.

Q. Will you take next the small parcel at the northeast corner of 60th Street and Avenue A, being block 1474, lot 24, and will you state whether you have appraised that and what its value is?

A. I have appraised that at $23,535.

Q. Please turn now to page 8 of Exhibit 48. Will you say whether you have appraised the parcel between 65th and 66th Streets, West End Avenue and the Hudson River Railroad Company,
1300 being block 1177 and lot 21.

A. Yes, sir. The value of that property is $194,062.

Q. Have you also appraised the block bounded by 65th and 66th Streets, West End Avenue and Amsterdam Avenue, being block 1157, lot 1, shown on the same page?

A. Yes, sir.

Q. And what is its value?

A. Its value is $701,680.

Q. Have you also appraised the plot on the south side of 65th Street, 100 feet square, beginning 300 feet west of Amsterdam Avenue, being block 1156, lots 45 and 46?

A. Yes, sir. Its value is $40,100. That includes building.

Q. How much for buildings and what is the net value of the land?

A. The value of the building is $7,000. The value which I have given you, $40,100, is the value of the land only; the value of the building is $7,000, making a total of $47,100. I am wrong, the value including the buildings, is $40,100 and the building alone is $6,500, so that would give for the total value $40,100 less $6,500 for the buildings, and make $33,600 for the land.

Q. For the value of the land alone?

A. Yes.

Q. Now turn please to page 9 of Exhibit 8 and say whether you have appraised the block bounded by 98th and 99th Streets, First Avenue and Second Avenue, being Block 1670, lot 1.

A. Yes, sir.

Q. What is its value?

A. Its value is $667,184.

Q. Take next the block bounded by First Avenue, the marginal street, 98th and 99th streets, being block 1692, lot 1; have you appraised that and if so what is its value?

A. $262,697.

Q. Now take page 10 of Exhibit 48 and say whether you have examined the property shown at the northwest corner of 111th Street and First Avenue, fronting 225 feet on 111th Street and 50
1301 feet on 112th Street, being Block 1683, Lots 18, 34 and 35.

A. Yes. The value of that property is $118,800.

Q. Have you appraised the plot between 110th and 111th Streets, facing on the west side of First Avenue, being block 1682, lots 8 and 11, 475 feet on both streets?

A. Yes, sir. Its value is $436,700.

Q. Have you also appraised the block bounded by First Avenue and Pleasant Avenue, 110th and 111th Streets, being block 1704, lot 1?

A. Yes, sir.

Q. What is the value of that?

A. $556,827.

Q. Please turn now to the next page of Exhibit 48, being the plot between 132d and 133d Streets, fronting on the eastly side of 12th Avenue, being 675 feet on 132d Street and 650 feet on 133d Street, Block 1999, lot 1; have you appraised that?

A. Yes, sir.

Q. What is its value?

A. Its value is $447,700.

Q. Please turn now to the following page and say whether you have appraised the irregular plot facing 93 feet 8 inches on the westerly side of Sherman Avenue and a considerable distance on Kingsbridge Road, being Block 2175, lots 15, 18, 22 and 100, as shown on this map?

A. Yes, sir.

Q. What value do you place on that?

A. Its value is $103,162.

Q. You did not appraise the Shadyside property of the company in New Jersey?

A. No, sir.

Q. And have you in your appraisals included any bulkhead rights or any land under water inside the bulkhead lines at all?

A. None whatever, but I have in all cases where the land was fronting a bulkhead opposite, added an allowance to the front of that particular avenue; in other words, where the land and block fronts a water right privilege, that means on the opposite side I have made on the deduction an allowance of 5 per cent.

Q. On the value of the land?

A. On the value of the land. That means the value of the
1302 land immediately fronting, not the whole block of 1,000 feet,
but the land which is fronting, which would be fair, for instance 200 by 100. I see the other experts put value for conjunction on the value of the bulkhead, and I put it on the value of the land and deduct it afterwards from the bulkhead, making no allowance there.

Q. You have not included in your figures any buildings used for gas making purposes or any holders or anything of that sort, have you?

A. No, sir.

Q. Only the office buildings and tenements as you have testified?

A. Yes, sir.

Q. Will you state what the total is of the valuations to which you have testified, if you have computed it?

A. Well, I have made the total here, but I just discovered during the examination that I have left out two items under block on 14th and 15th Streets, which I would have to add, and I will give you that to-morrow. I have the total figure here, but it is incomplete; it lacks two items which I have not accounted for.

Q. Will you totalize it from your figures and give it to me?

A. Yes, sir.

Cross-examination by Mr. Page:

Q. Where is your office?

A. 41 Liberty Street.

Q. What is the name of the firm, if any?

A. Edmund C. Preiss.

Q. There is no firm?

A. I am the only one. I have always been alone. I have no partner.

Q. I understand you to say that you have appraised real estate for purposes of testimony five hundred times?

A. Yes, sir.

Q. And four hundred and sixty of those were in elevated railroad cases?

A. Well, I am permitted to tell you, I have appraised and
1303 testified on Fourth Avenue for the New York Central and
Harlem Railroad Company and the elevated, I put them altogether, as a rough guess, perhaps it is not five hundred and not five hundred and fifty; it would be between that, between five hundred and six hundred anyway, five hundred and fifty at least.

Q. And in these cases you have been retained by the elevated railroad?

A. Yes, sir.

Q. And the New York Central?

A. Yes, sir.

Q. Have you ever testified for the Consolidated Gas Company before?

A. No, sir.

Q. You have usually testified on the side of the owner of property for the purpose of getting as large a value as possible?

A. No, I have testified even in cases where that not only was not wanted but even not indicated to be. I take the values as they are, independent of what purpose it is, it makes no difference to me.

Q. We will take this property on 116th Street and Lexington Avenue, which is Block 1643, lots 56, 57 and 58?

A. Yes, sir.

Q. Those are vacant lots aren't they?

A. Yes, sir.

Q. Will you state how you arrived at your value of $89,200 for that property?

A. Yes, sir. I took the value of an inside lot on 116th Street, 25 by 100 feet to be $21,000. I added 60 per cent. to that for the corner, making the corner $33,600. I allowed for the lot next the corner $1,000 more than for the others, making $22,000, and I calculated the ten extra feet on the basis of $21,000 at $8,400. I added to that a plottage of 5 per cent. That gives $98,150.

Mr. MATHEWSON: $89,200 I have it.

The WITNESS: Well, that is wrong, it is $98,150—no, that is right, $89,200—that is right.

Q. Where do you get your ten extra feet to add?

A. Well, I get the ten extra feet because this property is 80 feet.

1304 Q. Well, three lots would be 75 feet, and that would only leave 5 extra feet?

A. That would be five extra feet. It would be $4,200, and that figure is not correct. I will have to change that. The five extra feet instead of ten extra feet is $4,200, and that would give $85,000 for the whole value, instead of $89,200.

Q. Then you wish to correct your valuation on the plot?

A. Yes, I do, it is a clerical error here, instead of ten feet, five feet.

Q. Take the next property. Block 1642, lots 32 and 33?

A. I have taken the value of an inside lot on Third Avenue at that point to be $25,000. I have added 50 per cent. to that for the value of a corner lot, which gives me the value of a corner lot to be $37,500. I have valued a lot on 114th Street at $14,000 and allowed $1,000 more for the lot right adjoining the corner. That would give me $66,500. I have added to that 10 per cent. plottage. That would make $73,150. I added the value of buildings $25,000, arriving at $98,150.

Q. The lot which you say adjoins the corner is 100 feet distant from the avenue, is it not?

A. Yes, sir, but it is considered worth $1,000 more; every lot adjoining the corner for special purposes, the tendency, being to have extra large and extra deep plots to-day, anyway.

Q. Would you add that same value whether the lot adjoined directly the corner lot and was only 25 feet from the corner?

A. Yes.

Q. Or whether is was 100 feet, it would make no difference in your estimate?

A. No, sir, not on a live avenue like that.

Q. How do you arrive at your lot value on Third Avenue?

A. I know the values of Third Avenue since 1869, and 1868 and 1867 up to date. I have since that time kept my separate records where I have made an extract from the Real Estate Record 1305 and Guide every year. I have tabulated all these sales and I have testified in so many cases on Third Avenue that I am perfectly familiar with their values.

Q. And you do not have to look up now to find what is the value, you are so familiar with it?

A. Hardly. In the majority of cases I will tell you right off. This is Part 5 (indicating book), you see. Here always I can give you the sales from First, Second, and Third Avenues, wherever it is, from 1870 or 1869, up to the present hour, year by year, written by my own hand with the configuration, what it is, and I have my lot books, where I have tabulated it besides. So I can read off almost everywhere the whole abstract of the title you give me from my own books, and I have done that from 38 to 39 years, before a title company existed, or information bureaus.

Q. And you have taken the values of the properties at the considerations expressed in the deeds? A. Not always. For when you sell property for 39 years, you make a distinction between fake sales and genuine sales, forced auction sales and executor's and trustee's sales. I know the difference quite well, when I read it.

Q. Have you sold property in this neighborhood?

A. I have, yes, sir.

Q. When?

A. Long ago. I find many years I can give you what I sold there (referring to paper) corner of 70th Street. Northwest corner of 69th Street. Northwest corner 72d Street.

Q. Well, that is two or three miles from here.

A. Well, I will come nearer to it. I was just going up there. I am afraid I left that list at home or at the office, but I can bring it to you to-morrow. I ought to have it here because I was looking particularly for it. It is not here, but I have around 114th Street, there are only one or two sales in the immediate vicinity
1306 that I remember. I have sales from 23d Street to the river.
Fro mthe Harlem River to the Bridge. But in the immediate vicinity of 114th Street, I think I sold some property in 112th Street, but I cannot remember it just now. I cannot tell you from memory, but I have that list.

Q. You did not look up those sales for the purpose of preparing yourself to testify?

A. No, because they are so remote, I have not been selling any property on Third Avenue for a long time.

Q. How many years since you sold property on Third Avenue?

A. That I cannot tell you. It may be ten years and fifteen years that I have not sold anything on Third Avenue in that section. Most of my time has been taken up with all this, and I am all alone.

Q. Most of your time has been taken up in preparing these books that you have prepared?

A. Well, how could I prepare my cases and get through with it for fourteen years if I didn't get posted? It is pretty hard work to be posted.

Q. Yes, I should think it was?

A. And it is a good deal of valuable time wasted on it, too. Now you see, for instance, here on Third Avenue, I have the sales, what I brought with me, from 1898 to 1905, every one of them. Now in making up my values, in order to refresh my memory I looked over this list. I only put reliable sales in, executors' and trustees' sales in, and such like. I don't put in nominal considerations or trade deals, because I know they are no good for my purpose.

Q. I understand from your testimony that for the last ten or fourteen years your business has been that of an appraiser rather than as a broker?

A. No, well, I have been selling property whenever I had the time to do it.

Q. Your time has been so engaged in making appraisals that you have not had much time to sell?

1307 A. I have not been extensively engaged in selling property for the last few years, that is true. I have not had the physical time to do it.

Q. You have based your conclusions, as I understand it, largely upon sales by executors and trustees?

A. Executors, trustees, or sales that I know to be perfectly straight, and where the consideration is known to me, somehow or other. I have lots of property for sale and I know what the asking prices are and what the selling prices are, and I can judge after my experience whether the considerations named are bogus or correct.

Q. But your information is derived from the recorded instruments rather than from your actual experience?

A. Well, I don't know, I started as a very active man so many years ago and have been at it ever since. I have never lost sight of it and have kept myself posted, and whether I sell property personally or not does not increase my knowledge and would not have increased my knowledge or my ability to testify.

Q. Well, we will take now plot 870, which is the Irving Place and 15th Street corner, and see how you arrived at the value of that property?

A. On Irving Place I took the value of an inside lot 20 by 100 feet to be $45,000. I allowed for the lot adjoining the corner 25 by 100 $2,000 more; that is $47,000. I allowed 50 per cent. over and above the value of $45,000 for the corner, that will make the corners $72,500. I accounted for nine additional front feet at $1,800 per front foot, $16,200 on Irving Place. On the south side of 15th Street I took a lot right next to the corner to be worth $22,000, a full lot 25 by 100 feet. Now, the lot in question being only 84 feet in depth, that is, according to the Hoffman rule, 93 per cent of a full lot, $22,000, which is $20,500 for that lot. The next lot 25 by 100 feet I have taken to be worth $21,000, and
1308 93 per cent of that the lot being only 25 by 84 feet depth,
is $19,500. There was an excess of five feet there by 84 feet on 15th Street, which I valued at $3,900, which makes a total of the land value of $224,600. I have allowed a plottage on that plot of 12 per cent., that is $26,950. Adding that together, I get $251,550 land value and $55,000 for the building, or a total of $306,550.

Q. Let us see. You value the corner lot at $72,500?

A. Yes, sir.

Q. You valued the lot ne [illegible] the corner on Irving Place at $47,000?

A. Yes, sir.

Q. That takes care of fifty feet. What did you value the next lot at?

A. $45,000.

Q. And the nine adjoining feet, $16,200?

A. Yes, sir.

Q. Then we come on to Irving Place and you have a lot which you value at $20,500?

A. That is for a lot 25 by 84, that is on 15th Street?

Q. Yes, and an allowance for being next the corner?

A. And the next lot on the basis of $21,000 is $19,500, and there comes the extra five feet on 15th Street, $3,900, that is on a basis of $19,500 for a lot farther up, about the middle of the block.

Q. Will you foot those all up again and see if your calculation is right?

A. Yes. Yes, sir, that is right, $224,600.

Q. But you gave in your direct-examination the value of that plot as $251,550.

A. That is including the plottage 12 per cent.

Q. Then you add something more?

A. Yes, sir, I added $26,950 to the $224,600.

Q. I don't suppose you have sold any property in Irving Place or that neighborhood for some years, have you? A. I have been living there until the last four or five years ago, and I have sold property on 14th Street, on 13th Street, on 15th Street, on 18th Street, 1309 on 19th Street, on 20th Street, on 21st Street, on 23rd Street, on 24th Street, on 28th Street, on 30th Street and all along there.

Q. In the immediate neighborhood of Irving Place?

A. Yes, sir, and in the immediate neighborhood of Irving Place.

Q. Sold any property on Irving Place?

A. No, sir.

Q. How recent are these sales?

A. Well the most recent that I could point out was on 13th Street about six years ago, and I don't think there was anything of more recent date.

Q. Has property increased in value in that neighborhood in that time since your sales?

A. Yes, sir.

Q. How much has this property appreciated in the last ten years?

A. Do you mean how much it increased in value?

Q. Yes.

A. That is hard to say. It depends entirely upon the location.

Q. I am speaking of this particular property, Irving Place?

A. This particular property, well it ought to have increased at least 15 per cent.

Q. And I suppose in the past twenty-two years it has increased in value a good deal more?

A. Irving Place years ago was very high and then it dropped down to almost nothing and went begging, and it required a long time for recuperation, and after it had recuperated it was again under a cloud, and it was only within the last two or three years that Irving Place showed signs of life. I know every house there and could give you the whole history of each of them.

Q. Was it a time of depreciation or a time of appreciation in 1884, that is twenty-two years ago? Is that one of the low times or one of the high times?

A. Well, in 1884 around there property was still low. It had

not reached the values that it had once had when it was a strictly private street in 1872 to 1873. As a general rule the old
1310 values of 1872 prior to the panic were reached in that section in 1883 and 1884, so going farther back you can see it was worth about as much in 1884, as in 1873, for the character of the neighborhood changed entirely, boarding houses and lodging houses had come in where it was private residences formerly, and then the nuisances brought in by Irving Hall and academies and such like was something frightful, because I used to live in 47 and I know I could sleep no nights.

By Mr. MATHEWSON:

Q. How about Tammany Hall

The WITNESS: Tammany Hall I leave out. So all these—and in recent years——

Q. Now, we will get into a respectable neighborhood and go into Hester and Elizabeth Streets.

A. That is fine there. Hester and Elizabeth Streets, I think it has a value of a lot $23,000, an inside lot. The value of a corner lot 50 per cent. more. That would make $33,000. Then I valued the other four lots at $22,000 apiece, that makes $88,000, arriving at a total value of $144,000, to which I add plottage 10 per cent., $14,400, which gives me $158,400. The buildings I valued at $24,000 and I got a grand total of $182,400,

Q. Take that little irregular piece on the next page of the exhibit, Block 972, and give me your method of arriving at the valuation of that piece. Block No. 972, lot 45.

A. Now, that property is a gore and it is virtually a part of old Stuyvesant Street that ran through there from the Bowery to East River, and this diagonal line is about the easterly line of the old Stuyvesant Street. Now, I figured the value of a street lot there, 25 by 100 feet, at $12,000. There are 352 square feet on the street at $4.80, that gives me $6,384 for that strip of land, 13 feet
1311 front by the full depth. I have interior lots at 11,610 square feet, at $1.66 a square foot, that is the equivalent of one-quarter of a front foot, according to the Murray-Hoffmann rule, that is $13,932. That gives me a total of $20,316, to which I add 10 per cent., $2,031, which gives me $22,347.

Q. What do you add that 10 per cent. for?

A. That 10 per cent. I added for plottage because, small as it is, it is of great value to all these people that own these short lots. You control all the lots here in the front away back here. That is what I allowed plottage for. I would not have done so otherwise.

By Mr. MATHEWSON:

Q. All the short lots facing on 15th Street, do you mean?

A. No, there is only 13 feet on 15th Street, but it runs southeasterly and all the lots adjoining to this 13 feet have only a very limited depth in some places only a fraction, no depth to them at all, so there is an additional element of value in this gore.

By Mr. **Page**:

Q. If you were valuing the property at 15th Street you would value that at an additional price because it controlled the frontage of these rear lots, wouldn't you?

A. No, that is not necessary.

Q. I know it is not necessary, but would you not make such an allowance?

A. Not on a small piece like that, on a 13 foot lot, I certainly would not add plottage.

Q. I am not speaking of a 13 foot lot, but supposing you were valuing this property which is not included here but in the front of that portion of the gore which is the rear here?

A. I would add plottage there.

1312 Q. So if you were valuing that, you would also add plottage because that controls this?

A. Yes, sir. That is always the great difficulty in straightening out lines, that both sides want more than the property is worth.

Q. And you have made that allowance so much more than this property is worth——

A. I did not make any allowance more than it is worth. I make the allowance what it is worth according to my judgment.

Adjourned to 10:30 A. M., August 28, 1906.

Last Exhibits:

Complainant's 233.
State's N.
City's 34.

1313 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, TUESDAY, *August 28th*, 1906—10:30 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Page, Mr. Burr.

1314 EDMUND C. PREISS resumed.

Mr. **Mathewson**: Before you begin, Senator, I believe the witness desires to make a correction in his testimony.

The WITNESS: The valuation for Block No. 991, lot 26, which appears on page 1293, ought to be $157,690, in place of $213,165.

By Mr. MATHEWSON:

Q. Was that a reappraisal or the result of a clerical error?

A. That was a clerical error, by my looking at the different number of the blocks here.

Q. Will you now state the total of your valuation of the property to which you have testified, which you had not totalized yesterday?

A. Yes. It is $14,305,911.

Q. That includes no bulkhead rights and no land under water outside bulkhead lines?

A. It does not.

By Mr. PAGE:

Q. Does that include the value of the buildings?

A. There are no buildings there.

By Mr. MATHEWSON:

Q. The buildings to which you testified yesterday, the Senator means?

A. Oh, yes. In this total amount the buildings I have testified to are included.

Cross-examination continued by Mr. PAGE:

Q. Will you take Block 985 on East 17th and 18th Streets, between Avenues D and C.

A. Yes, I have given the total value of Block 985 at $261,800. That is on the basis of 28 lots 25 by 92 feet each at $8500, 1315 making $238,000, plus 10 per cent., or $23,800, makes $261,800.

Q. That is ten per cent. for plottage?

A. Ten per cent. for plottage, yes, sir.

Q. Now take Block 982, lot 13.

A. Block 982, lot 13, I have put that at $430,760.

Q. How did you arrive at that result?

A. This block, being 206 feet 6, I have estimated the two corner lots as being 28 feet 3 inches by 100 feet and allowed the inside lots to remain 25 by 100 because in blocks which have an extra size over and above the 200 feet and which are all in one hand, the corner lots are generally allowed to absorb the difference between the 25-foot lot and the balance, so I made the corner lots 28 feet 3 and the inside lots 25. Now that is on inside lots at $11,000 apiece, with an addition of 50 per cent. to the corner lots, and an addition of 3 feet and 3 inches extra would make the corner lot $18,000 on 14th Street. It would make the corner lot on 15th Street $16,000. The two avenue lots adjoining both corners at $12,000 is $24,000. The four inside avenue lots at $11,000 would be $44,000. Now I have thirteen lots on 14th Street, each 25 by 103 feet 3 inches at $12,000, that would make $156,000. I have nine extra feet at $440, that would make $3,600. Now I have thirteen lots on 15th Street at $10,000, which would be $130,000. Then I have nine additional feet at $400, which is $3,600. That makes altogether $391,600, to which I have added a plottage of 10 per cent., which is $39,160, thus arriving at $430,760.

Q. Take Block 987, which is the next, I believe.

A. 989. I have given a total value of $318,868——

Q. No, wait a minute.

A. No, that is for lot 1, $182,820——

Mr. MATHEWSON: No, that is not right.

Mr. PAGE: I think it is.

1316 The WITNESS: I have added the two items of the easterly front of Avenue C between 15th and 16th Streets with the plot on Avenue D between 15th and 16th Streets, putting the two figures together, and I am going to give it to you now.

Mr. MATHEWSON: There are two big plots there.

The WITNESS: Well, you can have it separate. Lot No. 1, $182,820. That is on the following basis: Here again I have allowed 28 feet 3 inchesx100 feet, corner.

The MASTER: Yesterday he said it was $233,481.

The WITNESS: No, that is 991.

Mr. PAGE: 991 he has got $182,820.

The MASTER: That ought to be corrected then on the top of page 1293.

Mr. MATHEWSON: Yes. State what the valuation of Lot No. 1 is.

The WITNESS: $182,820. That is the corner of 15th Street, taking the basis of an inside lot on Avenue C. at $9,000. Now, I have added to the corner 50 per cent. and allowed the balance for the extra 3 feet 3 inches, arriving at a conclusion of $14,600 for the 15th Street corner and $14,600 for the 16th Street corner. For the two adjoining lots adjoining the corner each on one corner at $10,000, $20,000; four inside avenue lots at $9,000 is $36,000; five lots on 15th Street at $7,500, $37,500; five lots on 16th Street at the same value, $37,500; and ten extra feet on each of the two streets at the basis of $300, $6,000. That, $166,200, with ten per cent. plottage, $16,620, makes $182,820. Now, for lot 26, block 1317 989, I have put that down here at $157,690.

Q. Now, you are giving——

The MASTER: Is that the same as he gave before?

The WITNESS: No, I put that lot down at $136,048.

The MASTER: On page 1293 that ought to be corrected. That was the lot he valued yesterday at $143,678.

Mr. MATHEWSON: No, that is right, at the top of page 1294.

The MASTER: What is this $143,678 on page 1293? I am referring to the testimony. That is what he corrected on the top of the next page?

Mr. MATHEWSON: Yes, that is right.

The MASTER: Cross that out on the top of page 1293, as he corrected it on the top of page 1294.

Mr. MATHEWSON: I ought to say in behalf of the witness that he had arranged his valuation according to the block numbers beginning with the lowest block number and going up numerically, which was an entirely different order from that taken by Mr. Wheelock, and at the last moment I asked him if he would not rearrange his figures, putting them in the order they appear on Exhibit 48, and he put them down hastily and these clerical errors were the result and should be placed on my shoulders rather than on the witness'. I thought it would be more convenient to us to have him follow the same order.

The Witness: Lot 26, Block 989. I have valued the northwest corner on Avenue D and 15th Street, 28 feet 3 inches by 100
1318 feet, at $12,000; the southwest corner of 16th Street, 28 feet by 100 feet, $12,000; the two lots adjoining the avenue corners at $9,000 each, $18,000; the four inside avenue lots at $8,000 is $32,000; six street lots at $7,000 is $42,000; 16 extra feet on each street, $7,680. That is, $123,680. Plus 10 per cent., $12,368, gives $136,048.

Q. Block 988, lot No. 1?

A. 991 you mean.

Q. Oh, haven't you given that?

A. No. 991, lot 1. I valued that whole at $233,481. Now the analysis of that is the folowing: Northeast corner of Avenue D and 14th Street, 28 feet 6 inches by 100 feet, at $14,000; the southeast corner of 15th Street, the same dimensions, at $11,500; the two lots on the avenue adjoining each corner, $9,000, makes $18,000; the four inside lots at $8,000 make $32,000; then six lots on 14th Street at $8,000 is $48,000; six lots on 15th Street, at $6,000 is $36,000. Now there is an irregular frontage left on Tomkins Street which amounts to 12,803 square feet at $3.33 a foot, that makes $42,649. Now I put 10 per cent. on to that, $20,214; that gives me $222,363. Now this frontage having a water front on the opposite side of Tompkins Street, I have added to the land value of the Tompkins Street front on the basis of $222,363, 5 per cent. for the conjunction of the two plots.

Mr. Mathewson: With the water front?

The Witness: Yes, from the fact that the water front opposite belongs to that upland. That is $11,118. The total of which is $233,481.

Q. Now you say the avenue lots would be 100 feet?

A. Yes.

Q. On 15th Street?

A. Yes.

Q. And then you take 6 lots?

A. I have made it this way here (indicating). I have taken 105 feet 10 inches on 14th Street here and I have taken 18 feet 6 inches here.

1319 Mr. Mathewson: What is "here"?

The Witness: On 15th Street. I have made that 12,803 square feet on Tompkins Street. I have added the lots here to make it 100 feet.

The Master: Where?

The Witness: On 15th Street, so that I arrive here at 12,800 square feet at $3.33, that is $42,649 for conjunction. If I lay out that property as it is in a block 206 feet on the Avenue by 250 feet on each street, then I retain here 18 feet 6 inches on 15th Street.

By the MASTER:

Q. You had a square block?

A. I had a square block 250 feet. I have divided that block to ease the computation. I have made the block here 206 feet by 250 and then on the balance of the block, as it would be 18 feet 6 inches by 214 feet 2½ inches on Tompkins Street and 105 feet on 14th Street. I took the number of square feet and appraised it according to the value of the Avenue D lots, and for the purpose of establishing the value of the connection—nobody would buy this property 18 feet 6 inches by 105 feet 10 inches—I have added as much ground here from this 250 feet as necessary. From this 250 feet I took off as much ground as to make it 100 feet, so it would be 100 feet on 15th Street and 105 feet on 14th Street, and on that I have allowed 5 per cent. Not on the whole block, only for the front.

By Mr. MATHEWSON:

Q. 5 per cent. for that part on account of the property across the way?

A. On account of the conjunction with the water front there.

1320 By Mr. PAGE:

Q. Now if I understand your method of arriving at that result in order to get the number of square feet you made an arbitrary——

A. I made a subdivision of the block.

Q. Well, but you had already allowed, had you not, for that 100 feet—81 feet 6 inches on 15th Street, already hadn't you?

A. But not in the computation of the value for the conjunction.

Q. No, I know, not in the value of the property for the conjunction, but you had already allowed in your valuation for the 81 feet 6 inches on 15th Street?

A. It is 18 feet.

Q. Well, 18 feet 6 inches and add 81 feet 6 inches and you get 100 feet. You said you had made that frontage 100 feet.

A. Yes, I have added for the purpose of computing the value of the connection with the water front as much land west of the 18 feet 6 inches surplus on 15th Street from the size I took, 250 feet, from the square size, as would be necessary to get a depth of the southwest corner of 15th Street and Tompkins Street, 100 feet on 15th Street, so that I have made for the purpose of computing the conjunction value this way (indicating).

Q. Yes. That was merely for the purpose of computing conjunction value and not for the purpose of ascertaining the number of square feet?

A. No, the number of square feet I ascertained by simply computing the dimensions as I have them. 18 feet 6 inches on 15th Street x 224 feet on Tompkins Street by 105 feet 10 inches on 14th Street and 206 feet running north to 15th Street. That piece in itself is 12,803 square feet. That was for the purpose of establishing the land value of the whole block and for the purpose of establishing only the conjunction with the water front, I had to dissect that and add to this 12,803 square feet as many feet on 15th Street as would be necessary to make it 100 feet deep. That is what I mean. 1321

Q. I understand. Now, proceed with Block 991, lot No. 26.

A. Block No. 991, lot 26. I have given the value to-day on this lot 26 as $157,690. Now, I arrived at that in the following manner: I allowed for the northeast corner of 15th Street and Avenue D, 28 feet 6 inches by 103 feet 3 inches, $11,500; for the southeast corner of 16th Street and Avenue D, the same dimensions, $11,500; for the two lots adjoining the corner on the avenue, $9,000 each, which would be $18,000; four inside avenue lots at $8,000 would be $32,000; then two lots on 15th Street 25 feet x 103 feet 3 inches at $8,000, $16,000; five extra feet on 16th Street at 3.20 is $1,600; two lots on 16th Street at $7,000 is $14,000; five extra feet at $2.80 a foot on 16th Street is $1,400. Now, here again I come to the same rule and same method. I have made that run through to make it a rectangular block in front and computed for the balance of the block with the oblong line on Tompkins Street the number of square feet. The number of square feet is 9,035. At a valuation of $3.50 a square foot it brings it to $31,122. The total amount of this would be $137,122, to which I add $13,712, making it altogether $150,834, to which I have added the value of the conjunction on the basis of this being a very short block and it being almost next to impossible to omit any parcel of it to make it valuable for the water front, I have allowed 5 per cent. on the whole piece, that amounts to $6,856. That is 5 per cent. bulkhead connection on the value of $137,122. That is the value without the 10 per cent. plottage. That is $157,690.

Q. Now, if you will take Block 988, lot 1, that being the entire block.

A. Block 988, the whole block I valued it at $574,200 in the following manner. The Avenue C front between 14th and 15th Streets, the same as it is in Block 982 on the west side of Avenue C between 14th and 15th Streets, $95,000. Then the northwest corner of Avenue D and 14th Street, 28 feet 3 inches by 100, $13,500; the southwest corner of Avenue D and 15th Street, 23 feet by 100, $12,000; two adjoining lots on the avenue corners, $9,000 each, is $18,000; four inside avenue lots at $8,000 is $32,000; 19 lots on 14th Street at $10,500 is $199,500; 19 lots on 15th Street at $8,000 is $152,000; a total of $522,000, to which I have added a plottage of $52,200, 10 per cent., giving a value of $574,200. 1322

Q. As I understand it, the property on 14th Street which you have valued is covered by buildings, is it not, for gas manufacturing?

A. Gas manufacturing; not included.

Q. Your valuation of the land is what the land would be worth if those buildings were removed?

A. The land value without any buildings on.

Q. How much does this building on there depreciate the value of the land as it stands to-day?

A. That I cannot tell you, because I do not know the value of the buildings.

Q. I know; but if you valued these as lots, you would have to remove the buildings?

A. Yes.

Q. To get what they would be worth without any buildings on them?

A. In that case you would have to give a much higher figure probably. I give you the value as it is to-day, provided possession of the land is given. What you do with the buildings—that is a matter that does not enter into my calculations at all.

Q. You are valuing what the vacant plot of ground would be worth in that particular locality?

A. This block of ground would be worth in this locality, yes.

Q. Without any buildings on?

A. Without any buildings on.

1323 Q. Now, if they were to sell them, in their present condition, they would have to pay something for taking away these buildings, would they not?

A. They might use the material. There is nobody else that would buy these buildings. That is a matter that I cannot judge about, what they would do with the buildings in that case.

Q. I am asking, what would be the effect on the land having those buildings on there?

A. It would be worth just as much to-day as it is, because nobody will buy the land with the buildings on. They would buy the land for the purpose of improving, and not with the gas houses on.

Q. Therefore, for the purposes of sale those gas houses on there are a detriment, are they not?

A. The gas houses are a detriment, certainly.

Q. How does the gas house being there affect the property on the other side of 14th Street?

A. Unfavorably.

Q. Unfavorably?

A. Yes.

Q. And you have given the values that you have as to the value of that land, if there was no gas house in the neighborhood?

A. I have given the value not as if there was no gas house, but as they are, provided they are going to be removed, or portions of them. You may for instance sell a portion of the buildings and sell the avenue front, and retain the gas house in the rear, and somebody who has a chemical factory or some such thing might not object to the presence of the gas house in the rear, and would buy that avenue front and put up a big building there.

Q. If a portion of the plant was removed and that portion remained where gas was manufactured, would the value of the property that was cleared be the same as you have given here to-day, or would be less by reason of the proximity to the gas house?

A. That is what it would bring, and it would bring more; 1324 it would not be worth less at all for that purpose.

Q. You think then that the gas house adjoining the property would add to its value?

A. I do not.

Q. You stated that it would be worth more than what you have given here?

A. No, I say if that gas house was to be removed from the rear, if you remove the gas house and leave only the block front, say 200 x 100 or 150, and sell that; those are my figures here. If you were to sell the whole block simultaneously you would get considerably more for the land than I have valued it, because it would remove what is called a nuisance and an eyesore, so my values would be quite inadequate under that condition of affairs.

Q. Then you have not valued, as you have just testified, the land as it would be with the buildings all removed?

A. I have, but conditionally. For instance, if a man were to come and buy that whole plot to-day and the gas houses were to be removed, my figures would be altogether too low, but if a man would come along and buy only a portion, not objecting to the presence of the gas houses, or what might be left of them, then my figures are correct.

Q. Then, as I understand it, your figures are based on a partial removal of the plant and with the gas plant in operation?

A. To some extent, yes, sir.

Q. And it is not the value of the land with the building entirely removed, as you have testified here a few moments ago?

A. It is, conditionally, but not simultaneously, not the whole block.

Q. As I understand it, your value of the land is a progressive one; as the buildings are torn down your value attaches, and when the buildings are all removed then there would be a still greater value?

A. There would be on account of the whole neighborhood being benefited and attaining an entirely different character.

1325 Q. Now, we are getting at something. That is, by the removal of this gas plant, it being a nuisance, the entire neighborhood would benefit and this property would increase in value also?

A. Yes, to some extent, yes. It might possibly bring a great deal more than I have testified.

Q. And if they removed these buildings entirely then they would get a still greater appreciation of value than you have testified to to-day.

A. Yes, if it was removed in the whole block, all buildings together at the same time, but if there are buildings remaining——

Q. (Interrupting.) I know, but take that condition, remove this manufacturing plant entirely, how much would you add to the value of the property?

A. That I cannot tell because I do not know when that is going to happen.

Q. Never mind; suppose it happens to-day. We are supposing now; I do not know if anything is going to happen.

Mr. Mathewson: Well, what do you mean, if they were all cleared at once?

Mr. Page: I mean, if you wiped out your manufacturing plant and removed to Astoria, as you claim you are going to, how much would that increase the value of that land?

A. That might in all probability go to 15 per cent. higher up above my figures, if immediately cleared out.

Q. You think it would add 15 per cent. to the value you have given?

A. I mean if the whole business was removed simultaneously, and the character entirely changed. I believe my figures would be too low, and I believe that you could get 15 per cent. at least more for the property than I have valued it to-day on the basis of the gradual removal of the buildings, not simultaneously.

1326 Q. Take Block 688, lot 21, on Exhibit 49?

A. That is the block, 16th to 17th Streets, 10th and 11th Avenues; I value this property at $838,200. These blocks here are only 184 feet in depth, so they are not figured on the value of a 25-foot lot, but on the value of what a 23-foot lot to-day is. I have simply taken the lots as they have been laid out, as they have existed all the time, as if 25-foot lots never existed.

Q. You mean on the avenue?

A. Yes. I have taken the northwest corner of 16th Street and 10th Avenue, 23x100, for $19,500. The next lot to the corner at $14,000; the 4 next ones at $13,000 apiece, $52,000. The next one, $14,000, and the southwest corner of 17th Street, $19,500, which is the same as 16th Street. Then, I have 44 street lots. Now, those lots are 25x92. That gives $484,000, and 44 at $11,000, $484,000; that means that the lots run through from street to street. Then, the 11th Avenue front I have put on the same basis as the 10th Avenue front, less 10 per cent. Now, the 10th Avenue front altogether was $119,000; take 10 per cent. off for the 11th Avenue front, is $111,000. The total amount would be $762,000, to which I add 10 per cent. for plottage, $76,200, arriving at the total of $838,200.

Q. Will you turn to page 3 of the exhibit and give me the value of that plot as shown there, what is left of it after the marginal street has been taken off?

Mr. Mathewson: As now left, since the improvement, you mean?

Mr. Page: Yes, have you figured that?

A. The total value of this after the condemnation is $382,793.

1327 By Mr. Mathewson:

Q. What was the original length of the block?

A. 800 feet.

Q. And what is it now?

A. It is 286.20 feet on 16th Street and 357.29 feet on 17th Street.

By Mr. Page:

Q. That is, you would deduct for the property that has been taken $455,407?

A. Yes.

Mr. Mathewson: It is hardly possible to proceed on a method of deduction, because sometimes after an improvement there is less land than before, but that less land is worth more than the original plot.

Mr. Page: I know; I suppose he has valued that, and I suppose he is giving an approximate valuation.

Q. Now, we will take the block above, No. 689; the value of that first, as you have it on Exhibit 49, is what?

A. The Block No. 689, on the former exhibit, is the same as Block No. 688, $838,200.

Mr. Mathewson: Arrived at in the same method?

A. (Continuing:) Yes, the same method. The blocks are of the same dimensions.

Q. And the property is the same value?

A. Yes.

Q. Now take Block No. 689 as it is to-day.

A. Block 689 with the marginal street there is to-day, $457,750, making a difference of $380,450.

Q. Now, if you will take Block No. 690.

A. Block No. 690 is worth, in the original size——

Q. As it is on Exhibit 49?

A. Yes, $452,100.

Q. State how you arrive at that.

A. I have taken the 10th Avenue front as heretofore.

1328 Q. Probably I might shorten that. Are the lots of the same value of this plot as in 689 and 688?

A. No, not precisely.

Q. Then give the way you have figured it.

A. I have taken the 10th Avenue front at $119,000, the two adjoining lots at $11,000 each, are $22,000, and the other lots, 16 lots on 18th Street, at $10,000 each, is $160,000, and there are only eleven lots on 19th Street, because there are different lots out in that block, $110,000. That will give a total of $411,000, to which I have added plottage of 10 per cent., $41,100, arriving at a value of $452,100. That is the property in its former shape.

Q. Now, turn to Exhibit 45.

Mr. Mathewson: That takes just a little corner off of that?

A. With the marginal street out, yes; that is $465,973. That is the 10th Avenue front as above; that is on the marginal street, 17,429.71 square feet on the marginal street at $6.46 per foot, $112,592. Two lots at $11,000 would be $22,000, and 17 lots at $10,000 would be $170,000. That would be $423,592; now, with 10 per cent. added to that, $42,359, is $465,951.

Q. The fact that the marginal street now runs along the end of this property, whereas it was an interior lot before; this improvement has increased the value rather than diminished it; is that right?

A. Well, there is a case where it actually has, certainly.

Q. This particular plot is worth more since that improvement has been made than it was before, isn't it?

A. Well, computing the same number of square feet contained in the block, yes, sir.

Q. Well, in other words, you have got another frontage?

1329 A. You have got another frontage; but you had a frontage; but you had a frontage before that, too.

Q. Then it would not add anything, would it?

A. Well, it has not added anything in one sense of the word; when you figure the total amount as a loss; that is what the award is claimed for, for the number of square feet or the number of lots that has been taken for the marginal improvement.

Br. Mr. **Mathewson**:

Q. Well, the value of the marginal street on the west end more than offsets the loss of that little gore, which the marginal street takes?

A. Yes.

Q. So it makes what is left worth more with the marginal street than the whole plot was worth before the marginal street was put through?

A. Not in this lot No. 698. Oh, yes, it does; you are right, for the reason that you have only taken a little angle out there, and instead of this little angle that you have lost, well, about 800 or 900 square feet, instead of that you have got a whole avenue front here, and that land has actually gained; that block has gained.

By Mr. **Page**:

Q. No-, Block 691.

A. In the original size I put that as $356,400, putting the 11th Avenue front as I have taken the 11th Avenue front in the other blocks below, $111,000; then a lot 25 by 92 on 20th Street, $12,000; then nine additional lots on 20th Street, at 11th Avenue is $99,000. Then a lot 25 by 100 on 19th Street is $11,000; nine lots on 19th Street at $10,000, $90,000; the total would be $324,000, plus 10 per cent. for plottage, $32,400, makes $356,400.

Q. Are you through with the plot as it was originally?

A. With the original size of this plot, yes.

1330 Q. Now take Exhibit 48, the same property as shown after the improvement has been made.

A. After the improvement has taken place there is space left of 20,789 square feet, on the marginal street, at $6.75 per square foot; that is $139,731. There is left 19 feet on 19th Street at a value of $400 per front foot, the basis being $10,000 for a full lot; that is $7,600. Then there are two lots on 20th Street at $11,000, $22,000; then there is 15 feet on 20th Street extra at $404 per front foot, on the basis of $11,000 per full lot. That would be $6,060, a total of $175,391. Add 10 per cent., $17,539, will give you $192,930. That would show an addition of $163,470.

Q. Now, turning to Exhibit No. 49, we have block No. 666, lot 3.

A. That is an irregular sized lot here, referring to lot No. 3, between 11th Avenue and 13th Avenue, from 16th to 17th Street; that contains 8,420.8 square feet. That is on the basis of the avenue front of $6.46, $54,390. There is added to that 10 per cent. for the double frontage on the 10th Avenue basis; in other words, I have taken the value of a front foot on 10th Avenue here and I have applied the same value here (indicating) and I allow an advance of 10 per cent. on the number of square feet on account of the double frontage, these lots running from one avenue to the other. I computed the value of that and I have added a plottage of 10 per cent. on that.

Q. Plottage on a lot 24 feet on one end and 66.11 feet on the other?

A. Yes, but it is a whole block in itself, and has a connection with the water front.

Q. But plottage is for a large piece of property combined. You have practically got only two lots here.

A. That triangle—you have to pay it on account of its shape. For instance, take Broadway and 23rd Street, see what it is, and if
you want to buy that as a whole lot you have to pay extra
1331 value, not what the lots would be according to the number of
square feet represented in that triangle—or whatever it is——

Q. Well, make it triangular value.

A. Whatever it is. Now, there is an addition of 10 per cent. for plottage and 5 per cent. for the connections. That means for the conjunction with the water front here. That is $13,598, a total of $67,991.

Q. Now, if you will take the next, which is lot 12, just above, Block No. 666.

A. That contains 18,628.16 square feet; computed at the same basis, $6.46 as above, $204,379. The double frontage, 10 per cent., is $20,337; 10 per cent. for plottage and 5 per cent. for the conjunction is $30,406, leaving a toal of $224,122.

Q. If you wish to arrive at the value of the property as it is now shown on Exhibit 48, then you would deduct entirely the value of lots 3 and 12, would you?

A. I certainly would.

Q. Now, take Block 716, lot 14.

A. Block 716, lot 14, is a plot of 75 feet on the north side of 18th Street. Now I have valued this property, the land value, including the buildings, at $43,875, analyzed as follows: Three lots at $12,500 is $37,500, 5 per cent. plottage added is $1,875, which gives $39,375, plus values of buildings, $4,500, which is $43,875.

Q. Now take Block 715, lots 51 to 59.

A. 715 is on the same street, on the south side, 150 feet east of 10th Avenue. There are nine lots altogether at $12,250, that is $110,250, and a plottage of 10 per cent., $11,025, making a total of $121,750.

Q. Now, turn to the next page of Exhibit 48, block 951, lot 35.

A. I have valued that at $85,820. There are altogether 7 and 1-25th lots at $8,500 each, that is $59,840, and a plottage of 10 per cent., $5,984, which is a total of $65,820, to which I have added the
value of the buildings at $20,000, making $85,820.

1332 Q. Now take block 952, lots 7, 29, 30 and 32.

A. Block 952, the total value is $438,530, analyzed as follows: For the northwest corner of 20th Street and Avenue A——

Mr. Mathewson: Northeast you mean, don't you?

A. No, sir. Block 952 is the west corner. It is 184 feet by 517. It is the northwest corner. The northwest corner of Avenue A and 20th Street, lot 23 by 100, an inside lot, being on the basis of $12,750, plus 50 per cent. for the corner, being $19,150. The next lot adjoining the corner, 23 by 100, is $14,000. The next four lots valued at $12,750 is $51,000. The next lot is $14,000, and the corner of 21st Street and Avenue A is $19,150. Now there are 16 lots 25 by 92 on the North side of 20th Street at $8,500 a lot, which makes $136,000. There are 17 extra feet at $340 per front foot, which makes $5,786. There are 16 lots 25 feet by 92 on 21st Street at $8,000, which is $128,000, and 17 extra feet at $280, which is $4,760. The land value is $391,846, plus 10 per cent. or $39,184, which makes a total of $431,030, to which I add the value of the buildings at $7,500, arriving at the total of $438,530.

Q. Now take block 953, lot 1.

A. Block 953 is the entire block on Avenue A and First Avenue and 21st and 22d Streets, I value that at $619,136, analyzed as follows: For the Northeast corner of First Avenue and 21st Street, 24 feet 7 inches by 109, $25,500. The lot adjoining, $18,000. The next four lots at $17,000, $68,000. For the next lot $18,000. And for the corner of 22d Street, 24 feet 7 inches by 100 feet, $25,500. Now for the Avenue A front I have allowed the same as I did in block 952. That means the total of the First Avenue front is $155,000. The Avenue A front is $117,300. And Thirty-third
Street lots at $8,500 a lot is $280,500, bringing it up to
1333 $552,800, plus 12 per cent. for plottage here, which is
$66,336, making a grand total of $619,136.

Q. Now take Block 979.

A. I have valued that at $570,080, the entire block. For the northeast corner of Avenue A and 21st Street, 24 feet 7 by 100, $19,500. For the southeast corner of Avenue A and 22nd Street, $20,800. For the two adjoining lots on the avenue, each $14,000, making $28,000. For the 4 inside lots on the avenue, at $13,000, being $52,000. There are 19 4-5 lots on 22nd Street at $8,000, making $158,400. The same number of lots on 21st Street at $7,000 is $138,600. That is figured on the same principle here, making the block rectangular here (indicating), and allowing per square foot for the marginal front the same as before. There are 6,599 square feet on the marginal street, which on the basis of the Avenue A front would be $6.10 per square foot. That is $100,955. That would make altogether $518,255, plus 10 per cent., or $51,825, making $570,080.

Q. 10 per cent. is for plottage.

A. Yes, sir.

Q. Now take Block 978.

A. Block 978 I value at $539,474.

Q. With buildings?

A. Yes. The northeast corner of Avenue A, 23 by 100, the southeast corner, 23 by 100, and the plot 46 feet by 100 adjoining the corner of 20th Street, and the plot 69 feet on the avenue by 100 on

21st Street, which on account of this lot being changed I have made the avenue front here 100 feet deep, dissected the blocks, laid it out the same as it would be in case of a sale; the avenue lots would be sold 100 feet and not as they are, 70. That would be same as Block 952 opposite on Avenue A, on the basis of $12,750 per lot less the value of the plot 23 by 70 on Avenue A, which is out; altogether 16,100 square feet at $6.30, or $10,200. That is the value for that
piece of property which does not belong to the complain-t.
1334 That would be $117,300, less the value of that lot out, or
$10,200, which is $107,100. Now the northwest corner of Avenue B and 20th Street I have estimated on the basis of 23 x 100, adding 40 to the value of inside lots, making $14,000. The southwest corner of 21st Street the same, $14,000. Two adjoining lots at $11,000 is $22,000. Four inside avenue lots at $10,000 is $40,000. 14 lots on 20th Street at $8,000 is $112,000. There are 16 extra feet on 20th Street at $5,120. There are 14 lots on 21st Street at $8,000, making $112,000. There are 16 extra feet on 21st Street at $5,120. That will bring it up to $471,340, plus 10 per cent., which is $47,134, or a total of $518,474, plus the value of the buildings at $21,000, which is $539,474.

Q. Block 987 is the next?

A. 987 is the marginal Street, Avenue B, 20th and 21st Streets. There are altogether 29,745 square feet in that plot at $3.50; that is $104,000. 10 per cent. added to it is $10,400, which makes $114,400.

By Mr. **Mathewson**:

Q. What is the 10 per cent. for?

A. Plottage.

By Mr. **Page**:

Q. I suppose the same condition exists here. If this gas plant were removed this property would be worth about 15 per cent. more, would it?

A. Yes, sir. If it was removed in its entirety.

Q. Yes, in its entirety. Now take Block 1090 on page 5 of the exhibit, lot 23?

A. There are 6 lots in that plot, 24 x 100 feet 5 inches each, at $11,000, which is $66,000, plus 10 per cent. for plottage is $6,600, which makes a total value of $72,600.

Q. Take the next block, 1071, lots 10 to 13.

A. 1071 I valued at $57,200. There are four lots at
1335 $13,000 each, which makes $52,000, plus 10 per cent. plottage, or $5,200, making $57,200.

Q. Then take block 1070.

A. 1070, there are eight lots at $9,500, which is $76,000. There is added for plottage $7,600, making $83,600.

Q. Now, the large block 1089.

A. 1089, that is a block between 41st and 42nd Streets. I value that block at $957,600, as follows: Northwest corner of 41st Street and 11th Avenue, 24 feet 7 by 100, $18,000. The lot adjoining the corner, $13,000. The four next lots at $12,000 each, $48,000. The next lot $13,000, and the southwest corner of 42nd Street I allow 75 per cent. over the value of the inside lot for that, which is $21,000. There are thirty-seven lots on 42nd Street at $12,000 each, which is $444,000. There is one lot adjoining the corner, $13,000. There are thirty-seven lots on 41st Street at $7,500, which is $276,500; and one lot adjoining the corner $8,500, makes altogether $855,000; 12 per cent. plottage to that is $102,600 or a total of $957,600.

Q. That property and the blocks 1090, 1071 and 1070 would all be increased in value by the removal of the gas plant that is on this property which you last testified to?

A. More or less, yes, sir, because now, for instance, that 42nd Street, block 1071, that would only slightly be benefited and still it would be benefited, so would the others.

Q. How much?

A. I couldn't tell you that because I can't say when you are going to do that, it is all of a speculative nature or character, and I cannot discount the future.

Q. If there wasn't any gas plant there to-day how much would it be worth?

A. About 10 or 15 per cent. anyway.

Q. And 1090 would be worth a good deal more, would it?

A. Yes, sir.

Q. How much would that be worth?

A. About 15 per cent. easily.

1336 Q. And 1089 would be advanced?

A. Yes. 1089 would be largely benefited, perhaps 20 per cent.

Q. Take block 1092 on page 6 of the exhibit.

A. 44th and 45th Streets. I value that at $647,150. That is 38 lots on 44th Street at $8,000 per lot, which is $304,000; 37 lots on 45th Street at $7,500 is $277,500, a total of $581,500, plus 10 per cent. plottage, $58,150, which makes a total of $639,650, to which I add the value of buildings $7,500, making a total of $647,150.

Q. Now, take block 1093.

A. 1093, there are 33 lots on 45th Street at $7,500, which is $247,500; and 30 lots on 46th Street at $8,000, is $240,000, a total of $487,500, plus plottage of 12 per cent., or $58,500, making a total of $546,000.

Q. What size lots are the 30 on 46th Street?

A. Those lots are 25 by 100 feet 5 inches. The width of the block is 200 feet 10 inches there.

Q. But I call your attention to the fact that the dimensions as given on this map are only 500 feet on 46th Street. That would be 20 lots instead of 30, wouldn't it?

A. Yes, but where are the 250 feet to come in to the easterly line of the bulkhead?

Q. Oh, you have taken then the land in the marginal street?

A. Yes, take the land to the bulkhead line or the land marked blue on this diagram. I have taken the 250 feet eventually to be the 12th Avenue marginal street.

Q. If the company does not own that land in the bulkhead line on the part marked blue on this map, then you would have to deduct the value of 10 lots, would you?

A. Yes, sir.

Mr. **Mathewson**: No, not so much as that.

Mr. **Page**: Well, the value of 20 lots, 10 on each street.

The **Witness**: Ten on each street, that is 20 lots per block of 250 x 200.

1337 Mr. **Mathewson**: Between the present bulkhead line and the westerly margin of the projected avenue, there are about 70 feet, as I recollect it, which even on that hypothesis would belong to the company. So that it would not take out the whole 250 feet.

Mr. **Page**: But the difference would be that 65 feet would be land under water. It would not be worth much.

Mr. **Mathewson**: No, it is right next to the bulkhead line. I do not think it is land under water. I think it is land all built up.

Q. This property is also occupied as a gas manufacturing plant, isn't it?

A. Yes, sir.

Q. And if that was absolutely removed how much would it increase the value of this property?

A. About 17 per cent. That is a mere general statement on my part, you know, because I cannot tell you precisely. It would depend upon the condition of the market and the number of people that are in the market for just such property as that.

Q. Well, I suppose the number would be about the same wouldn't it, as to-day?

A. No. I believe that they would first try to sell it as a very large plot for manufacturing purposes and not for tenement houses, and it would have to be divided up into different plots. Those are all speculative things, I cannot discount them, but that is a general idea of mine that it would be about 15 per cent. anyway, 10 or 15 per cent., as the case might be.

Q. Take block 1457 next.

A. There are 19 4-5 of a lot in the street at $8,000 a lot, that is $168,400, and the plottage added is $16,840, being 10 per cent., which makes $185,240.

Q. Take the next block, 1455?

A. Block 1455 I have valued at $222,750. That is analyzed as follows: The northwest corner of Avenue A and 60th Street, 1338 25 feet 5 by 100 feet, at $15,000. The southwest corner of 61st Street, $15,000. Two lots adjoining the corner at $11,000 is $22,000. Four inside avenue lots at $10,000 is $40,000, and seventeen street lots at $6,500, that means in this number of seventeen street lots is included the 13 extra feet on each street. It would be only 16 lots and 13 feet on each street. I made it in round figures 17 lots of $6,500, which is $111,500. The total value is

$202,500, with 10 per cent. plottage of $20,250, which is $222,750.

Q. Now take Block 1474.

A. 1474 is the northeast corner of Avenue A and is an irregular plot. You have got the dimensions. There are altogether in that plot 5230 square feet. I took them at $4 a square foot, which is 55 cents less per square foot than it is on the west side of Avenue A, where it is $4.55 a square foot.

Q. Take next Block 1177.

A. Block 1177 is a value of $194,062, divided up as follows: West End Avenue front is the same as I shall give subsequently here as to Block 1157 right opposite, less 10 per cent., that is $87,500. There are 16 street lots at $5,000 each, that is $80,000, and there are 8,835 square feet at $200 a square foot, right on the retaining wall of the Hudson River Railroad Company right there (indicating) at $17,670, that is $176,420, plus 10 per cent. for plottage, or $17,642, making a total of $194,062.

Q. We will take now Block 1157.

A. 1157, that I have valued at $701,680. I valued the northwest corner of Amsterdam Avenue and 65th Street at $25,500; the southwest corner of Amsterdam Avenue and 66th Street, $25,500; the two adjoining avenue lots on the corner, $18,000 each, $36,000; the four inside avenue lots at $17,000 is $68,000. Now, the northeast
corner of West End Avenue and 65th Street I value at
1339 $14,250, the southeast corner of 66th Street, $14,250; the
two lots adjoining the avenue corners at $10,500 is $21,000;
the four inside avenue lots at $9,500 each is $38,000; and forty eight street lots at $8,000 is $384,000. The total value is $626,500, plus twelve per cent. plottage, $75,180, is $701,680.

Q. And Block 1156, lots 45 and 46.

A. 1156 is on the south side here; that I valued at $40,100. There are four lots at $8,000, $32,000. There is five per cent. plottage, which is $1,600, and the value of the buildings is $6,500, making a total of $40,100.

Q. Now, Block 1670.

A. 1670, First Avenue between 98th and 99th Streets. That block I valued at $667,184. The northeast corner of Second Avenue and 98th Street, 25 feet 11 inches x 100 feet, $23,870; the southeast corner of 99th Street and Second Avenue, $23,870; the two lots adjoining the avenue corners at $16,500 each is $33,000. Four inside avenue lots at $14,500 each is $62,000. Now, the northwest corner of First Avenue and 98th Street, $18,480; the southwest corner of 99th Street, $18,480; two adjoining lots to the corners, $13,000 each, is $26,000; the four inside lots at $12,000 is $48,000; and thirty-six street lots at $9,500 is $342,000. Now, on those corners I have allowed fifty per cent. over and above the value of an inside lot. That value would be $595,700 and adding a plottage of twelve per cent., or $71,484, gives a total of $667,184.

Q. Why do you add a plottage of twelve per cent. in this case, where you have been adding ten per cent. heretofore?

A. Well, there is a large block in its entirety with another block in its entirety adjoining owned by the same parties and both on the marginal street, which is a water front street.

Q. Well, they do not both front the marginal street?

A. That is true, but when you have two adjoining blocks in one hand and they may be both wanted together for a large con-
1340 cern, there is a larger plottage always computed in such cases than if there is a smaller plot not of a block in its entirety.

By Mr. **Mathewson**:

Q. You mean considered together, they face a marginal street?

The **Witness**: Yes. I took that item into consideration.

Q. I understand your reason now. Now take Block 1692.

A. Block 1692 I have valued at $262,697. That is the east side of First Avenue, the same value as Block 1670 opposite, less 10 per cent., that would be $99,864. Twelve street lots at $6,500 each is $78,000. Twenty extra feet on the street is $5,200. There are 10,100 square feet on the marginal streets, same value as First Avenue front, 98th to 99th street, that is $55,752, which makes $238,816, plus the plottage of $23,881, makes a total of $262,697.

Q. This is also a manufacturing station of the Consolidated Gas Company?

A. Yes, sir.

Q. And these values I suppose of yours you would estimate would increase from 15 to 20 per cent. upon the removal of the plant?

A. If the plant is removed in its entirety right away, yes, sir.

Q. Block 1683 on page 10.

A. 1683, lots 18, 34 and 35 I have valued at $118,800. That is the northwest corner of 111th Street and First Avenue, 25 feet 11 inches by 100 feet, $20,000. The next lot, $13,000; the next lot $12,000, and 7 street lots at $9,000 each is $63,000, a total of $108,000, plus 10 per cent. plottage, $10,800, gives a total of $118,800.

Q. Now take Block 1682.

A. 1682 I valued at $436,700. The northwest corner of 110th Street and First Avenue, 25 feet by 100, $18,000; that is on the basis of $12,000 for an inside lot, plus 50 per cent. The
1341 southwest corner of 111th Street I have made 26 feet 10 inches by 100. As I did in the former case, I have added a surplus of one foot 10 inches to that particular corner because it is right opposite this large public park which has been created and called the Jefferson Park, and on account of that with its extra size it is much more valuable than the lots would be if the difference was divided up and added to each lot. That corner I valued at $20,000. The two adjoining lots on the avenue $13,000 each is $26,000; the next four inside lots at $12,000 each is $48,000; there are thirteen street lots at $9,500, which is $285,000. The total would be $397,000 plus plottage of 10 per cent., $39,700, which would be a total of $436,700.

Q. For use as a gas plant that park does not enhance the value of this property, does it?

A. No, it does not enhance it now at all, but the price I give you is what it is worth to-day.

Q. If the gas plant was not there?

A. Well, if a part of it was removed. If this whole thing is gradually cleared off; for instance, if you are going to sell off portions of it gradually——

Q. If you sold off that corner, then there would be some advantage?

A. Yes, if you want to sell that front with the corner on 111th Street right opposite that park you will get more for it than I have valued it at. That is just the case as it is with the next one. I will bring you a man who will give you more than I have appraised it for.

Q. Go ahead, take block 1704?

A. I valued that at $556,827. That is the First Avenue front, which is the same as block 1682, that is $95,000. The Pleasant Avenue front at the same value, less 10 per cent., $85,500. I have sixteen lots on 110th Street at $6,000, which is $96,000; I have thirteen extra feet on 110th Street at $204 a front foot, that is
$2,650. I have sixteen lots on 111th Street at $10,000.
1342 Now those lots are the ones fronting the square, this Jefferson
Park. That is $160,000; I have thirteen extra feet there or
$5,200. The total is $493,350. I have allowed twelve per cent. plottage on that, that is $58,202, and the total is $556,827.

Q. You have allowed there for the increase in valuation because of its proximity to the park?

A. Yes, fronting on the park and fronting through on the Pleasant Avenue which is also right there a part of the park; you know from 111th Street up. The easterly side of Pleasant Avenue is all taken up by park to the bulkheads. That is a mighty fine block.

Q. Too good a block for a gas plant isn't it?

A. No, sir. If you take that block to-day and sell it for speculative purposes you will get a great deal more that I have appraised it for. I know a man who will give more than I have appraised it for, but still I don't believe it is worth that. That man figures on the resale of the property to build a saloon at a very large increase in value; in other words he expects to buy it with very little money and put a large amount of money out of his pocket into it to build a saloon and take his chances.

Q. Take block 1999?

A. I valued it at $447,700. That is two 12th Avenue corners at $15,000 each, $30,000; two adjoining lots at $11,000 each, $22,000; four inside lots at $10,000 each is $40,000, and 45 Street lots at $7,000 is $315,000; a total of $407,000 to which I added 10 per cent. for plottage $40,700, making a round figure of $447,700.

Q. Now Block 2175?

A. 2175 is a very irregular piece of property on Broadway, formerly Kingsbridge Road, northeast of Elwood Street, and running through to Sherman Avenue. That plot contains 62,523 square feet, about twenty-six full city lots, which at $1.50 per square foot would
be worth $103,162 including a plottage of ten per cent. It
1343 means the land without the plottage would be worth $93,784
and a plottage of $9,378.

Q. How much per square foot did you say that was?

A. $1.50 a square foot.

By Mr. Mathewson:

Q. How many feet?

A. 62,523 square feet; that is the nearest I can come to it.

Mr. Page: That is all I wish to ask.

Cross-examination by Mr. Burr:

Q. How long were you engaged in making this appraisal?

A. It must be between seven and eight weeks now.

Q. It took you all that time, did it?

A. More or less. I went over it twice just to be perfectly satisfied. I walked over every inch of ground.

Q. Where did you take your dimensions from?

A. I took the dimensions from the blue print that I have here.

Mr. Mathewson: Exhibit No. 48?

The Witness: Yes. Where there was a discrepancy I took it from the city maps, so I have not in every instance followed exactly the dimensions given here in this blue print.

Q. You did not take the dimensions in any event from the deeds themselves, did you?

A. No, sir, from the diagrams furnished me here by the gas company and where I saw, compared with the city maps, that there was a discrepancy, I made inquiries and I was told by the engineer that the discrepancy might possibly be due to their having drawn their diagram according to old deeds and lands actually in possession, whereas the city maps would show more or less.

1344 Q. I notice you made a 5 per cent. allowance for the conjunction of the land with the bulkhead?

A. Yes, sir.

Q. You said the other experts allowed it to the bulkheads itself.

A. Well, that is optional. I believe that when you own a plot of ground with water front opposite the real value of the water front goes in the land and not the land value to the water front.

Q. Well, that 5 per cent. would not be allowed if the street was opened and in use between the bulkhead and the land on the other side?

A. I have not allowed 5 per cent. for the conjunction in any instance where there is a street to run through. There I have omitted the plottage altogether. I have omitted plottage on 41st and 42d Streets, on 44th and 45th Streets, and 45th and 46th Streets, because it does not run through there. I have allowed nothing for plottage there, but that land runs out under water.

Q. What have you allowed at 98th and 99th Streets?

A. 98th and 99th Streets I have allowed nothing.

Q. Didn't you allow plottage there at 12 per cent.?

A. Yes, plottage at 12 per cent. but not for conjunction.

Mr. Mathewson: Plottage and conjunction he uses as two different terms.

The Witess: Or call it connection with the water front, or connection with the bulkhead, that is what I generally call it.

Q. Did you examine these buildings when you were seeking to ascertain their values?

A. Yes—not the value of the gas plants, although I went through all the buildings in every gas plant in every block. I went and saw every building, but then I was ordered to value only those buildings that were occupied by tenants.

1345 Q. Did you ascertain the rentals received from those buildings occupied by tenants?

A. Yes, sir; I did.

Q. Now, taken as a whole, has this property improved in value within the last year?

A. Well, it has on general principles, like everything; it has increased all over the city as a whole, and certainly a portion of that increase has reverted to that property.

Q. Well, about what per cent. of increase would you place on this property within the past year?

A. Within the past year? Well, that is hard to say.

Q. Well, within the past two or three years?

A. Within the past two or three years it might be about 10 per cent.

Q. Not more than that?

A. Well, it would depend where the property is located. As you take property for instance on Lexington Avenue and 116th Street, Irving Place or on Third Avenue, it is a different computation than if you go away down on the East Side.

Q. Well, take 42d Street, the West Side?

A. At 42d Street I think that has appreciated at least 10 per cent. during the last three years, perhaps more.

Q. Take 98th and 99th Streets on the East Side. That is a thickly populated neighborhood, isn't it, between First and Second Avenue?

A. Yes, sir, it is.

Q. How much has that appreciated?

A. Well, certainly 10 per cent.; certainly, if not more.

Q. That is a growing neighborhood, isn't it?

A. Yes, sir.

Q. How much in your opinion will it increase in value in the next two years?

A. I could not tell.

Q. You are now undertaking to give the present day value of this property, are you?

A. I am, yes, sir.

1346 Q. And what you believe it would realize if sold to-day?

A. Yes, sir.

Q. And you have testified that without the gas plants on such property that the value would be enhanced or increased from 15 to 20 per cent.?

A. Yes, sir, if sold simultaneously, in one lump, you know, and the whole land cleared up.

Q. When you say simultaneously you do not mean to say if all this property were sold at once, do you?

A. Well, in the plants for instance, if you were to remove all the gas plants from 14th Street up to 16th Street on one occasion, or all the plants on Avenue A from 19th to 20th Streets, it would be a different thing, and it would not necessitate the sale of the whole property together, all that property. I believe that auction prices would go from 10 to 15 per cent. higher if that whole thing was put up at auction.

Q. And has not that property increased over 30 per cent. in value since 1884?

A. Well, I cannot tell that; I have not computed that.

Q. You would not say it had not?

A. I would not say it has not and I would not say it has, for the reason that I have not investigated it.

Mr. **Burr**: That is all.

Redirect examination by Mr. **Mathewson**:

Q. In addition to your own dealings in real estate have you up to date kept track of sales of property, recorded sales and considerations all over the city?

A. Yes, sir.

Q. So that you have kept a record of transactions in which you had no part, as well as those in which you did have part, so far as possible?

A. Certainly.

Q. And in making your estimates which you have given here, did you take into consideration and make a study of actual transactions, whether by you or by others, so far as you could
1347 ascertarin them?

A. Yes, sir.

Q. I understand that your estimate of values here is as the company is now in possession of the property?

A. Yes, sir.

Q. You say that in some cases you examined the city's maps?

A. Yes, sir.

Q. You did not find any material or substantial differences from the dimensions shown on Exhibit 48, did you?

A. Not in general; only on one, and that is 14th to 15th Streets and Tompkins Street.

Q. Was that a large difference?

A. It was a difference of about two feet.

Q. That is all?

A. That is all.

Q. Now, I understand that the value you have testified to here is what you call the value to-day?

A. Yes, sir.

Q. That is what the company might realize for the property if sold off in ordinary course?

A. Yes, sir.

Q. But you think that if these gas manufacturing plants were removed all at a time that that would increase the figures you have testified to by the percentage which you have named?

A. Yes, sir.

Mr. **Mathewson**: That is all.

Recess until 2 P. M.

1348 After Recess.

Frederick J. Mayer, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. What is your age?
A. Fifty-four.
Q. What is your business?
A. Mechanical engineer.
Q. For how long have you been a practicing mechanical engineer?
A. Thirty-four years.
Q. Are you a graduate of any technical institute?
A. Yes, the School of Technology, Stuttgart, Germany.
Q. What year?
A. 1872.
Q. Are you connected now with any firm?
A. I am not.
Q. Where is your place of business?
A. Baltimore.
Q. Were you ever connected with the firm of Bartlett, Hayward & Company?
A. Yes, I was their chief engineer for 23 years, and altogether with them for 33 years.
Q. Have you ever had anything to do with the construction of gas works and apparatus?
A. Yes.
Q. How much and how long?
A. During the last 25 years.
Q. Has gas work construction been a specialty of yours and this firm of Bartlett, Hayward & Company?
A. Yes, entirely.
Q. During that time with how many gas works have you had to do in the construction of, do you think?
A. I have designed and constructed in the neighborhood of 100 complete plants, fuel, coal and water gas plants.
Q. Where?
A. Throughout the entire country.
1349 Q. Any outside of this country?
A. Yes, partly in South America and Cuba.
Q. Have you ever designed and constructed any gas holders?
A. In the neighborhood of 400, yes, sir.
Q. Did you have anything to do with designing and constructing the heating and ventilating plants of the United States Government at Washington?

A. Yes, previous to taking up gas works construction I made plans for the heating and ventilating of all the large government buildings at Washington.

Q. With the exception of the Capitol?

A. No, sir, that was not in it, no, sir.

Q. In addition to this gas works construction, which you have testified is a specialty, have you ever been engaged in structural work for buildings other than gas plants?

A. No, sir.

Q. Have you examined and appraised the manufacturing plants of the Consolidated Gas Company on the Island of Manhattan?

A. I have.

Q. What time was consumed in such appraisal and examination?

A. I have been working with 12 people altogether for the last six weeks, day and night and Sundays included; very often as late as midnight. I should judge that would be equivalent, ordinary working time, in the neighborhood of three months.

Q. Have you personally examined these plants?

A. I have.

Q. And the apparatus in them?

A. Yes.

Q. Every piece of it, which you have valued?

A. Yes.

Q. Have you examined the buildings?

A. I have.

Q. How about the holders which you have valued?

A. I also examined the holders, yes, sir.

Q. Are you able to state the value of the plants as they exist to-day?

A. I am, sir, yes.

1350 Q. The values which you are about to give mean the cost of reconstruction of the plant new to-day, or is depreciation taken out or deducted, where you have observed any depreciation?

A. My figures are based on prices of to-day, allowing for depreciation dependent upon the condition of each apparatus, building or holder.

Q. So that your figures have taken into account depreciation and deducted it?

A. They have in each instance.

Q. If these plants were to be reconstructed new with the same capacity and of the same character, would such cost of construction therefore be greater than the figure at which you have appraised them?

A. Yes, sir.

Q. I will ask you to take first the 14th Street plant of the company, located between 14th and 16th Streets on or near the East River. What sort of plant is that?

A. A coal gas plant, five million cubic feet capacity a day.

Q. And generally speaking, what area does it cover, how many blocks?

A. I would have to refer to the plans, I did not put the streets down; I have not got the plans here.

Q. Did you personally go over this?

A. I did, repeatedly.

Q. What is the value of the buildings there?

A. For the 14th Street plant——

Mr. PAGE: I object to the giving of this testimony in a general way. Find out what buildings there are.

Mr. MATHEWSON: That has already been testified to, what the buildings are.

Mr. PAGE: No, it has not been testified to at all; not a line of testimony about it.

The MASTER: Why not ask him to describe the plant generally?

1351 Q. Well, describe the plant and buildings. You have stated what the character of the plant is.

A. There is an office building—do you want the dimensions of it?

Q. Yes.

A. (Continuing:) 42 feet by 32 feet 6 inches by 23 feet 9 inches high, to the underside of the roof frontage.

Q. Go on with the other building.

A. A pay room attached to this building, a two-story brick building 28 feet 1 inch by 13 feet 1 inch by 23 feet high.

Building over alley, one-story, 11 feet wide 28 feet 1 inch by 10 feet 10 inches.

Store room, two-story building, 21 feet 9 inches by 28 feet 1 inch by 23 feet high.

Boiler room, one-story building, 28 feet by 44 feet by 24 feet high.

Engine room, two-story building and attic, 44 feet by 13 feet 10 inches by 24 feet high.

Exhauster house, two-story building, 28 feet 1 inch by 20 feet 6 inches by 23 feet high.

Machine shop and store, 47 feet by 28 feet by 23 feet.

Smith shop, 35 feet by 52 feet 2 inches by 23 feet high.

Condenser house, one-story building, 54 feet 1 inch by 36 feet 6 inches by 27 feet high.

Shed, one-story building, with galvanized iron sidings 38 feet 3 inches by 31 feet by 11 feet 6 inches high.

Large purifier house, 67 feet by 127 feet by 24 feet high.

Small purifier house, 40 feet 5 inches by 67 feet by 16 feet 6 inches high.

Oxide house, 37 feet 10 inches by 67 feet by 16 feet 6 inches high.

Meter house, 33 feet 7 inches by 40 feet 4 inches by 24 feet high.

1352 Center seal house, 16 feet by 16 feet 2 inches by 14 feet 9 inches high.

Another house of same description and dimensions and for the same purpose.

Boiler house, one-story brick building, 15 feet 2 inches by 38 feet 10 inches by 16 feet 6 inches.

Valve house, one-story and basement brick building, 12 feet 3 inches by 21 feet 4 inches by 12 feet 6 inches.

Now, before I have any other buildings I have the brick walls, to the boiler yard. Do you want those, or shall I continue with the buildings.

Q. Just continue with the buildings?

A. Retort house, one-story brick building, 185 feet 9 inches by 245 feet 4 inches by 22 feet 9 inches.

Scrubber house, one-story brick building, 48 feet 3 inches by 12 feet by 16 feet 5 inches.

Then there are some more walls around the property, brick walls.

Q. Are those included in the value of the buildings?

A. They are on the building schedule.

Q. Just mention them as they go along then, I did not understand it?

A. There is a brick wall around the holder yard; north wall 351 feet 2 inches long, south wall 366 feet 6 inches, west wall 207 feet.

By Mr. Page:

Q. How high and how thick are the walls?

A. They average 12 inches, with 20-inch pilasters, 3-inch stone coping and 3-inch water tables. The average height is about 12 feet above grade line.

Walls between Avenue C and D, 23 feet 7 inches on 14th Street and 245 feet 4 inches on 14th Street. That forms part of the retort house wall; that is a continuation of it. Two walls, one on 14th Street, and one on 15th Street, each 131 feet 6 inches long. All of those walls are 12 inches with pilasters, with water tables and stone copings.

1353 Shed 75 feet 6 inches by 21 feet 6 inches by 17 feet, covered with corrugated iron on wooden framing.

Another shed, same description and dimensions.

Coke storage, 131 feet 6 inches by 63 feet 8 inches. The two end walls are formed by the walls of the retort house and coal shed. The two long walls are formed by brick piers, 28 inches square, with arches between the piers.

Gas engine house, one story brick building, 13 feet 3 inches by 41 feet 6 inches by 11 feet 3 inches.

Coal hopper, 21 feet 6 inches by 63 feet by 32 feet 7 inches, one-story.

Coal shed, one story brick building, 184 feet 5 inches by 206 feet 6 inches by 26 feet 6 inches.

Rigging house at end of coal shed, two story building, 22 feet long by 13 feet 6 inches by 20 feet high.

Small office building 10 feet by 10 feet by 10 feet high.

A. Coal and coke storage. There are four lots, with cover the length of 282 feet 8 inches on the northside, 371 feet 11 inches on the south side, 226 feet 6 inches on the east side and 206 feet 6 inches on the west side. These lots are surrounded by timber fences and timber trestle work, arranged for coal handling machinery.

Another boiler and engine house combined, one-story brick building, 11 feet by 25 feet by 20 feet.

Another boiler house 16 feet by 28 feet 1 inch by 11 feet.

A circular brick building, 11 feet diameter, 54 feet high.

Another boiler house. One-story frame building 32 feet 5 inches by 16 feet by 11 feet 6 inches.

Valve house, one-story frame building 12 feet 4 inches by 10 feet 4 inches by 9 feet 6 inches.

1354 Exhaust house. One-story brick and basement building, 50 feet 8 inches by 43 feet 4 inches by 20 feet 3 inches.

Boiler house. One-story brick building, 27 feet 8 inches by 32 feet by 20 feet 2 inches.

Foundations for tar and ammonia tanks.

Coke office, one-story brick building, 9 feet 5 inches by 15 feet 5½ inches by 13 feet 10 inches.

Boiler house. One-story brick building, 18 feet 5 inches by 19 feet 2½ inches by 17 feet one-half inch, or an average of 16 feet high.

Clay mill. One-story frame building, 17 feet ½ inch by 29 feet 6 inches by 12 feet 3½ inches.

Clay storage. Similar building, 20 feet 3 inches by 19 feet ½ inch by 14 feet 9 inches.

Storage shed. One open frame shed, 33 feet 5½ inches by 40 feet by 9 feet 10 inches.

Another shed of similar description. 36 feet 1 inch by 19 feet 4 inches by 8 feet 11 inches high.

Stable. Two-story brick building, 50 feet by 32 feet 1 inch by 26 feet 11½ inches.

Storage shed. One-story open-frame building, 19 feet 6 inches by 84 feet 11 inches by 11 feet 4½ inches.

Carriage room, called Shed No. 1. One-story frame building, 19 feet 10 inches by 19 feet 10 inches by 10 feet 4½ inches.

Pump house. One-story frame building, 11 feet by 13 feet 2 inches by 8 feet 6 inches.

Another storage shed. One-story brick building, 20 feet 9 inches by 46 feet 8 inches by 12 feet 10 inches.

Another storage building. One-story brick, 21 feet by 36 feet 4 inches by 12 feet 10 inches high.

Another storage shed, 25 feet 10 inches by 31 feet 2 inches by 10 feet high.

Q. Brick also?

A. No, corrugated iron on the east and north sides; the fence forms the south and west sides.

1355 Fences: One iron fence, 381 feet 3 inches, 5 feet high; 251 feet iron fence, 4 feet 6 inches high; 715 feet iron fence, 3 feet high; 296 feet 6 inches, timber fence, 12 feet 6 inches high; 1,170 feet wooden fence, 9 feet 6 inches high; 605 feet of plank fence, of 3-inch plank, 13 feet high; 480 feet of wooden fence, 1-inch boards, 8 feet high.

Paving in holder yard: 11,140 square feet of brick, laid flat.

Another boiler house. One-story brick building, 18 feet 4 inches by 20 feet by 20 feet 9 inches long.

Weigh office. One-story and basement brick building, 16 feet 5 inches by 26 feet 6 inches by 13 feet 2 inches.

Another storage building. One-story brick building, 8 feet by 7 feet 11 inches by 7 feet.

Another valve house, 10 feet by 7 feet by 12 feet.

Another boiler house, 14 feet by 20 feet by 13 feet.

Now, pile foundation on the north side of 15th Street, for a similar foundation as coal handling trestle on opposite side of the street.

A portion of a newly erected boiler house, now in course of construction.

Foundations for tower scrubbers.

Concrete: 34 feet wide, 64 feet long, 4 feet deep. That is all for the buildings.

By Mr. Mathewson:

Q. Have you carefully estimated the value of the buildings and structures which you have just enumerated and making deduction for deterioration or depreciation wherever you found it to occur?

A. I have.

Q. Will you state the value of those structures?

A. $691,961.

Q. Will you now describe generally the apparatus at the 14th Street plant which you have examined and valued?

1356 A. The entire apparatus consists of all the machinery required to produce 5,000,000 feet of coal gas in 24 hours, consisting of the ordinary apparatus, including benches, purifiers, exhausters, the boilers, scrubbers, condensers, meters, pipe connections and so forth that make a complete plant.

Q. All contained in the structures which you have just valued?

A. Yes, sir.

Q. What is the value of such apparatus, making similar deduction for depreciation where you found it to occur.

Mr. Page: I object to the question as calling for a conclusion, without any detail, not based upon anything in the case.

The Master: I will allow it.

Mr. Page: Exception.

A. In detail?

Q. Well, I think I will let you give it. Yes, you may proceed and state the apparatus which you are about to value?

A. Now, together with the apparatus I have included all the contents of all the other buildings before mentioned, such as office buildings.

Q. Yes.

A. There is —— office building; contents:

One bookkeeper's desk.

One iron safe.

One roll-top desk.

One chair.

One flat-top desk and chair.

One lavatory and toilet.

One washstand.

Three Black walnut closets.

The Master: Excuse me a minute. Wouldn't it be possible to have these schedules or copies of them submitted as part of the witness' testimony, asking him the general questions about the
1357 value and then put those in evidence. In other words, is it necessary to sit here and by question and answer have all these items of office desks and waste baskets spread out on this record?

Mr. Page: No objection if we can have an opportunity to examine the exhibits so as to make a proper cross-examination. They probably could not be printed inside of some weeks.

The Master: That is merely a suggestion. That would be my way of doing it. But go on, if counsel insists on having it this way. Proceed.

Mr. Page: We do not insist.

The Master: I understood you did, Senator. I understood you objected to a general description and you wanted him to state the particulars.

Mr. Page: I just stated I would be perfectly willing if they would submit this schedule, or if they would give us a copy so that we would have an opportunity to examine properly. If offered in evidence in this form it probably wouldn't be printed for several weeks yet.

Mr. Mathewson: If you wish, I can give you a copy of the description of this apparatus which the witness is referring to now as the witness would read it, and a description of that which he values. There are pages of it.

Mr. Kirby: If counsel would have a statement prepared giving an inventory of the plants and the value the witness puts upon them that will do.

Mr. Mathewson: You have the value in the testimony, Mr. Kirby.

The Master: You may go on, Mr. Mayer.

The Witness (continuing): One bookkeeper's desk, two
1358 roll top desks, one safe, one flat top desk, and typewriter, one washstand, one 5 foot meter purifier, one drawing case filled with drawings, one toilet, one sink, chemical apparatus and books.

In the storeroom; contents: small oil tanks and work bench and some junk.

In one of the boiler houses: One Roland, 60 inches by 16 inches, 80 horsepower boiler.

One Clark's steam and fire regulator.

One cast iron tank, 32 feet by 48 feet by 4 feet 6 inches deep over the boiler house.

Mr. Mathewson: In view of the time consumed in reciting these details we will prepare and deliver the description of the apparatus and contents for the total value of which I have just asked the witness, in lieu of the witness reading the items, if that is acceptable, Senator?

Mr. Page: Yes.

Q. Now will you state the total value of the apparatus and contents of the buildings to which you have referred and which apparatus and the contents you began to enumerate?

A. $578,940.

Q. Does that allow for depreciation wherever you found it to occur?

A. Yes, sir.

Q. Have you appraised what are known as the connections or yard connections of the 14th Street plant?

A. Yes, sir.

Q. That is not long, is it?

A. No, it is very short.

Q. Just state what they are and their value in toto?

A. There is cast iron pipe from 2 inches to 30 inches in diameter, 1079.58 tons, 22,523 feet.

Wrought iron connections, 1 inch to 4 inches in diameter, 7,425 feet.

Valves:

Six 1 inch.
1359 Twelve 1-½ inch.
Seven ¾ inch.
Ten 1-¼ inch.
Four 2 inch.
Twenty-two 4 inch.
Five 6 inch.
Three 10 inch.
Seventeen 12 inch.
Four 16 inch.
Fourteen 24 inch, three way valves.
Forty-eight 20 inch.
Sixty-seven 30 inch.

Q. What is the total value of those yard connections?

A. $146,895.

Q. Will you now enumerate the holders connected with the 14th Street plant?

A. Six gas holders of 345,500 cubic feet capacity each; two gas holders 250,000 cubic feet capacity each. The six holders are all provided with brick tanks constructed upon pile foundations.

Mr. Page: What about the other two?

The Witness: I only gave you six.

Mr. Page: You gave us eight.

The Witness: It should be eight. The holders are all alike, six and two. There are 8 holders and 8 tanks.

Q. Is that all?

A. That is all for the holders.

Q. What is the total value of those holders, considering their condition to-day?

A. $475,356.

Now, holders in steel tanks, one holder, 3,250,000 cubic feet capacity. This holder has a concrete foundation constructed upon piles and surrounded by a retaining wall. The total value?

Q. The total for holders?

A. Holders in steel tanks, $314,248.

1360 Q. What is the total of holders both with and without steel tanks?

Mr. Page: There is just one steel tank holder, is that it?

The Witness: Yes, one steel tank holder. You want the total of all the holders?

Q. Yes.

A. The total of all holders is $789,604.

Q. In these holders I assume you have included the pile foundations and the retaining walls, etc., where they exist?

A. Yes, sir.

Q. And the tanks?

A. Yes, sir.

Q. Will you now state the total value of the 14th Street plant, including buildings, apparatus and contents, yard connections and holders to which you have testified?

A. To those prices which I have given must be added an item of 10 per cent. for general engineering and drawings and gradings, pavings, curbing, sewerage, drainage, temporary fences operating tools and other utensils used for operating of plant. Water for holder tanks and other items which I overlooked in my examination.

Q. How much is this additional 10 per cent.?

A. For the buildings it is $141,779. For the holders it is $78,960. And then there is an interest charge of 5 per cent., amounting to $77,978 in the instance of the buildings, and $43,428 in the instance of the holders. What I mean by buildings, that includes buildings, apparatus and pipe connections, that first total item.

Q. Did you say $140,000 on buildings?

Mr. Page: He says he meant buildings, apparatus and pipe connections.

The Witness: Yes, everything except the holders.

Q. And connections?

A. Yes, sir, everything except the holders. That makes a
1361 total for everything except the holders of $1,637,553, and
everything for all holders $911,992; a total for the entire
plant of $2,549,545.

Q. Is that what you consider the value to-day, having allowed for depreciation wherever you found it to occur?

A. You must excuse me one moment. I make the total value here $2,549,545, but there seems to be a discrepancy between my summary figure and my figure on the detailed sheet. I would like to look that over and see if there is any difference in it. The value is $2,549,545.

Q. To-day, allowing depreciation?

A. Yes, sir.

Q. Now, upon what do you base this 10 per cent. allowance for engineering and other items to which you have referred?

A. That is the general engineering and making of plans for the entire plant.

Q. Based upon your experience and study?

A. Yes, sir.

Q. Do you consider that a fair figure?

A. I consider it a low figure. In order to establish this figure I went especially to Baltimore a week ago for twenty-four hours in order to look over my records and I found that this item averages nearer 15 per cent. than 10 per cent.

Q. You took the 10 per cent. so as to be conservative?

A. I made the 10 per cent. so as I would be sure not to value it too high.

Q. Now, the 5 per cent. interest is based, is it not, upon the assumption of the time it would require to build a plant of this kind?

A. Yes. It will take on an average two years to build a plant of this kind, any one of these plants.

Q. So assuming the construction to progress favorably, that would make a year's interest on the whole sum?

A. Yes. Of course, in the beginning you have very little expenses, and they gradually accumulate as you proceed with
1362 the construction, so I have assumed an average of one year
on the total amount.

Q. Now, Mr. Mayer, will you take what is known as the 42d Street Plant, located at 42d and 43d Streets and the North River. State whether you have examined the buildings, apparatus and yard connections and holders forming part of or connected with that plant?

A. Yes, sir.

Q. Will you describe the buildings briefly as you did before in reference to the 14th Street plant?

A. Yes.

One valve house, octagonal brick building, 21 feet 10 inches by 12 feet high. That is, 21 feet 10 inches between the parallel sides.

One meter house, one-story brick building, 10 feet 8 inches by 22 feet 3 inches and 9 feet 6 inches high.

Purifier house; one-story frame building, 160 feet by 76 feet by 20 feet.

Engine and meter house, two-story brick building, 14 feet 6 inches by 59 feet 6 inches by 28 feet.

One toilet building, one-story brick, 5 feet 6 inches by 5 feet 6 inches by 8 feet 6 inches.

One retort house, 261 feet 2 inches by 62 feet 2 inches by 27 feet high.

Condenser and scrubber house, two-story brick building, 23 feet 3 inches by 60 feet 2 inches by 42 feet high.

Retort houses No. 2 and 3, 100 feet 4 inches by 118 feet 3 inches by 24 feet high.

Exhauster and engine house, one-story brick building, 28 feet 6 inches by 100 feet 4 inches by 24 feet high.

Retort house No. 4, one-story brick building, 34 feet 4 inches by 38 feet by 24 feet high.

South and north walls of Nos. 1, 2 and 3 retort houses.

Wall between purifier and exhauster houses.

One shed, 12 feet by 140 feet by 12 feet high.

1363 No. 1 coal shed, one-story brick building, 171 feet by 90 feet by 21 feet 9 inches high.

Runways in coal sheds. Two runways 9 feet wide, 170 feet long.

No. 2 coal shed, two-story brick building, 89 feet 9 inches by 171 feet by 29 feet high.

Carpenter shop. Small room partitioned off in second story of No. 2 coal shed.

Brick fence on Eleventh Avenue, 195 feet 10 inches, 9 feet above grade, 16 inches thick.

One wrought iron picket fence, same length as brick wall.

Brick fence on 42d Street, 235 feet 3½ inches long.

Stable and wagon shed, 98 feet 9 inches by 67 feet 10½ inches by 18 feet high.

Eastern extension of above building, 32 feet 10½ inches by 30 feet 4 inches by 10 feet high.

Additional extension, 32 feet 10½ inches by 26 feet 6 inches by 14 feet high.

Storage building, one-story brick, 34 feet by 24 feet 6 inches by 20 feet.

Harness house, 16 feet 6 inches by 16 feet 6 inches by 18 feet high.

Coke storage office, 15 feet, 4 inches by 7 feet 4 inches by 13 feet 6 inches.

Iron bridge crossing Twelfth Avenue. Span, 100 feet by 12 feet wide.

Frame building for deodorizing purposes 26 feet by 20 feet 4 inches by 12 feet high.

One timber pump house, 20 feet by 10 feet by 10 feet.

One timber ash dump.

Timber retaining fence for coke storage 700 feet. That is all.

Q. What is the capacity of this plant, Mr. Mayer?

A. 4,500,000 cubic feet of coal gas.

Q. Per day?

A. Per day, yes, sir.

1364 Q. What is the value of the buildings and structures which you have just enumerated at that plant, allowing for depreciation wherever you observed it?

A. For the buildings alone?

Q. Yes.

A. $598,848.

Q. Did you also examine and value the apparatus and contents of the buildings?

A. Yes.

Q. Of the 42nd Street plant?

A. Yes.

Mr. **Mathewson**: I will furnish counsel a similar description to that which we propose for 14th Street.

Q. Without taking time to enumerate them on the record will you state what the value is of the apparatus and contents at 42nd Street, depreciation deducted where you found it?

A. For the apparatus $551,743.

Q. Will you now describe the yard connections or general connections of the plant if you valued them separately?

A. Cast iron pipes and connections from three to thirty inches in diameter, 18,129 feet; steel riveted pipes from 20 to 24 inches in diameter 540 feet; wrought iron pipe connections, three inches and less, 2,800 feet; valves, three 30 inches, thirty-four 24 inches, eleven 20 inches, fifteen 16 inches, twenty-five 12 inches, three 10 inches, and ten 8 inches.

Q. What is the total value of those connections?

A. $134,157.

Q. And you also examined and valued the holders connected with the 42nd Street plant?

A. Yes.

Q. Please describe them and give their values.

A. There are four holders of 250,000 feet capacity each, with brick tanks constructed on pile foundations. The total cost of those holders—do you want the cost?

Q. Yes, go ahead.

A. $225,778.

1365 Q. You mean value, the same as you have been testifying, $225,778?

A. Yes.

Q. Are those items exclusive of the 10 per cent. engineering and the five per cent. interest?

A. Yes.

Q. Will you now state what additions you make to the figures you have given to get the entire value of the plant.

A. The entire cost of all the buildings, apparatus and connections, with ten per cent. for contingencies and five per cent. for interest amounts to $1,483,888.

Q. How much does the ten per cent. additional for engineering amount to? And how much the five per cent. for interest?

A. On the items above referred to $128,474 for contingent fees and $70,666 for interest.

Q. This value of $1,483,888, do I understand is the value to-day, allowing depreciation and deducting it where you find it to occur?

A. Yes, sir.

Q. Are there any additions which should be added, or any other items additional at 42nd Street?

A. Yes, the same ten per cent, for contingencies and five per cent. for interest on the value of the holders, which amounts to $22,577 for contingencies, and $12,417 for interest, making a total value for the holders, of $260,772, and the value of the entire plant, $1,744,660.

Q. The $1,483,888 did not include then the holders?

A. It did not.

Q. Nor the 10 per cent. and the 5 per cent. computed on them?

A. Not on the holders, no, sir.

Q. So that the total valuation is how much now to-day, deducting depreciations?

A. $1,744,660.

Q. The 42nd Street plant is a coal gas plant?

A. Yes, sir.

Q. We will now take the 44th Street plant; have you also examined and appraised the apparatus and contents, connections and holders there located?

A. Yes.

1366 Q. What kind of gas is manufactured at 44th Street?

A. Water gas.

Q. What is the capacity of the works?

A. 8,500,000 cubic feet per day.

Q. Will you now describe the buildings there in the same manner as you have for the other plants, briefly?

A.—

Governor house, octagonal building, 11 feet 2½ inches between parallel sides, 16 feet high.

Valve house, octagonal brick building, 9 feet 7 inches between parallel sides, 18 feet 6 inches high.

Carpenter shop, two-story brick building, 26 feet by 35 feet 6 inches by 30 feet.

Lumber shop, 25 feet by 28 feet by 22 feet.

Purifier house, one-story brick building, 155 feet 9 inches by 65 feet 8 inches by 30 feet.

Oxide room, included in purifier house.

Meter house, two-story brick building, 43 feet 9 inches by 45 feet 1 inch by 37 feet 6 inches.

Condenser house, 44 feet 10 inches by 49 feet 8 inches by 32 feet 10 inches high.

Engine house, two-story brick, 49 feet by 44 feet 10 inches by 47 feet 1 inch.

Generator house, two-story brick, 139 feet 9 inches by 65 feet 10 inches by 27 feet.

Retort house, one-story brick, 207 feet by 65 feet by 21 feet.

Coal hoist, wooden frame structure, a small wooden frame building.

Concrete mixer shop, frame building, 25 feet by 16 feet by 9 feet.

Storage, tar tank building, 12 feet by 12 feet by 12 feet, wood frame, corrugated iron sides.

Oil pump house, two-story brick, 28 feet 9 inches by 18 feet 9 inches by 27 feet 3 inches.

Tar separators, foundations for tar separating system on 12 inch piles, brick walls and concrete footing.

1367 Coal shed, frame structure, 118 feet 9 inches by 69 feet 9 inches by 32 feet high.

Scale building, one-story brick, 6 feet by 6 feet by 9 feet.

Water tower, two-story circular brick building, 20 feet in diameter by 35 feet high.

Exhauster house, two-story brick building, 25 feet by 27 feet by 20 feet.

Lime shed, 104 feet by 75 feet by 14 feet.

Purifier and meter house, brick building, 132 feet 3 inches by 65 feet by 25 feet 6 inches; roof construction, iron trusses, iron purlines, slate covering.

Stable, 60 feet by 45 feet by 20 feet, brick building.

Tool shed, one-story brick, 37 feet 7 inches by 26 feet by 16 feet.

Storehouse, brick building, 24 feet by 24 feet 3 inches by 16 feet 3 inches.

Small brick building, 10 feet by 10 feet by 20 feet.

One frame shed covered with corrugated iron, 10 feet by 8 feet by 8 feet.

Blacksmith shop, frame building, 15 feet by 35 feet by 16 feet.

Pipe house, storage shed for wrought iron pipe.

Pump house, frame building, 8 feet by 6 feet by 7 feet. Tin roof.

By Mr. KIRBY:

Q. Most of the largest buildings have iron roofs, have they not?

A. Partly iron, partly wood; the generator houses and purifier houses have iron trusses, some of them; some of the purifier houses are wooden and some iron.

Brick walls, 1,179 feet of stone and brick walls, 1,100 feet of brick fence.

Shed over oil tanks; frame shed, 54 feet by 6 feet 4 inches by 5 feet 6 inches.

Foundations for salt water condenser.

Foundation for hot scrubber.

1368 Foundations for air condenser.

Brick drainage tank underground in yard between scrubber and retort houses.

Draught fan room, frame building, 12 feet by 8 feet by 8 feet.

That is all for the buildings.

Q. Will you state the total valuation of the buildings?

A. Without anything added?

Q. Yes.

A. $407,767.

Q. That deducts depreciation where you found it?

A. Yes, sir.

Q. Have you also examined and valued the apparatus and contents of the buildings?

A. I have.

Mr. MATHEWSON: We will also furnish a description of the apparatus and contents to counsel, as in the case of the other plant.

Q. Will you state what the value of the apparatus and contents is, allowing depreciation where it was found?

A. $409,175.

Q. Will you describe the yard connections and general connections which you have valued at that plant?

A. Cast-iron pipe, 4-inch to 36-inch diameter, 9,117 feet;

Steel-riveted pipe, 16 inches to 30 inches in diameter, 600 feet.

Wrought-iron pipe, 1½-inch to 12-inch diameter, 8,702 feet.

Valves:

Sixty-eight 1½-inch.
Thirty-seven 2-inch.
Thirty-six 2½-inch.
Forty-five 3-inch.

Fifty-eight 4-inch.
Ten 5-inch.
Thirty-four 6-inch.
Seven 7-inch.
1369 Eighteen 8-inch.
Four 12-inch.
Nine 16-inch.
Twelve 20-inch.
Seventy-seven 24-inch.
One 30-inch.
That is all for the connections.

Q. What is the total value of the connections?

A. $99,910.

Q. Will you now describe the holders which you valued in connection with the 44th Street plant?

A. There are four holders, 375,000 cubic feet capacity each; one holder of 2,000,000 cubic feet capacity, and two holders of 125,000 cubic feet capacity each. All of the above holders are supplied with brick tanks constructed in rock excavation.

Q. What is the value of the holders?

A. $814,929.

Q. Do these figures which you have given for building apparatus, connections and holders include the 10 per cent. for engineer and the interest in course of construction?

A. No, sir, they do not.

Q. Now, will you state what items should be added to get the total value of the plant as existing?

A. To the building apparatus and pipe connections 10 per cent., on contingencies, amounting to $91,685, and interest at 5 per cent., $50,426. To the holders, for contingencies, $81,492, and for interest charges, $44,821.

Q. Why do you say 10 per cent. for "contingencies"?

A. That goes on the total plant, holders and buildings and apparatus and pipe connections altogether for the items mentioned, engineer, drainage, storage.

Q. When you say "contingencies" you mean the engineer expenses, sewers and so forth, which you previously described?

A. Yes, I do.

1370 Q. Adding these items then, what is the total valuation of the plant to-day, building, apparatus, connections, and holders, after deducting such depreciation as you found?

A. $2,000,205.

Q. We will now take up the 21st Street plant, located between 20th and 22nd Streets, contiguous to or near the East River. Have you examined and appraised that plant as to the buildings, apparatus, connections and holders?

A. I have, sir.

Q. What gas is produced there?

A. Water and oil gas.

Q. What is the capacity of the plant?

A. Twenty-four million cubic feet of water gas per day and three and one half million cubic feet of oil gas per day.

Mr. Kirby: Did you state the capacity of the 44th Street plant?

The Witness: It is 8,500,000 feet per day of water gas.

Q. Now proceed, please, to describe the buildings at the 21st Street plant which you have appraised and valued.

A. Stove shop, one-story building, 212 feet 6 inches by 50 feet by 20 feet.

Meter shop, one-story brick building, 212 feet 6 inches by 50 feet by 20 feet.

Stove repair shop, part one-story and part two-story buildings; one-story part, 64 feet by 51 feet by 20 feet; two-story part, 20 feet 6 inches by 51 feet by 35 feet.

Stove cleaning room, 51 feet by 14 feet by 20 feet.

Diaphragm room, second story over repair shop.

Prepayment meter repair shop.

Frame shed, 98 feet by 61 feet by 15 feet.

Storage room, 20 feet by 51 feet.

Wash room, 12 feet by 51 feet.

1371 Boiler house. Brick building, 40 feet by 58 feet by 20 feet.

Oil storage house, 12 feet by 14 feet by 7 feet.

Lead house, 22 feet by 17 feet by 10 feet.

Steel frames covered with corrugated iron.

Fire hose house, 5 feet by 5 feet by 6 feet.

Frame building covered with sheathing and tin.

Valve house, 21 feet 9 inches by 28 feet by 11 feet; brick building.

Octagonal valve house, brick building, 10 feet 3 inches between parallel sides; 25 feet high.

Another valve house, brick building, 15 feet 6 inches by 10 feet by 12 feet.

Tinsmith's shop, 26 feet by 28 feet by 25 feet.

Storeroom, triangular in shape, a brick building.

Paint shop, duplicate of storeroom.

Office, 47 feet 4 inches by 51 feet by 26 feet 6 inches high.

Engine room, 150 feet by 74 feet and 46 feet by 44 feet, both 25 feet high.

Engine room, 130 feet by 52 feet by 25 feet high.

Machine shop, 26 feet by 52 feet.

Old retort house, 306 feet by 54 feet by 23 feet.

New shop building, 47 feet by 57 feet by 15 feet.

Old carbureter house, 38 feet square.

Generator house, 204 feet by 50 feet by 30 feet.

Building over boiler and coke storage, 307 feet 3 inches by 68 feet by 25 feet high.

Generator house, 204 feet by 74 feet by 30 feet.

Retort house, 307 feet 3 inches by 74 feet by 25 feet.

Pump house, two-story brick, 20 feet by 38 feet by 29 feet 4 inches.

No. 1 shed, 185 feet 6 inches by 66 feet by 28 feet 6 inches.

Numbers 2, 3, 4 and 5 sheds, same as No. 1 shed.

Purifier house, 185 feet 6 inches by 66 feet by 44 feet high.

1372 Condenser house, 185 feet 6 inches by 66 feet by 44 feet high.

Purifier house, 185 feet 6 inches by 66 feet by 44 feet high.

Meter house, one-story brick, 92 feet by 72 feet by 28 feet high.

Shaving scrubber house, 185 feet 6 inches by 66 feet by 35 feet high.

Exhauster house, two-story brick, 64 feet 4 inches by 49 feet 10 inches by 41 feet 3½ inches high.

Coal shed, 150 feet by 68 feet by 34 feet high.

Water tower, circular brick building, 20 feet diameter, 225 feet high.

Excavation and foundations for 12 oil tanks underground.

Excavation for 10 separating tanks located underground.

One new foundation for additional oil tank 57 feet in diameter by 30 feet high.

One foundation for steel tank, 16 feet by 50 feet by 2 feet 4 inches deep. That is all.

Q. What is the total valuation of the buildings described, depreciation deducted where you found it?

A. $1,579,695.

Q. Did you give the capacity of this plant?

A. I did.

Q. Have you also examined and appraised the apparatus and contents there?

A. I have.

Mr. MATHEWSON: We will furnish counsel a description of those.

Q. Without asking you to repeat those in detail on the record, what is the total value of the apparatus and contents, depreciation deducted?

A. $1,139,677.

Q. Will you now describe the yard connections?

1373 A. It is not yard connections, it is the whole connections throughout the entire plant.

Q. I will change my question to the connections throughout the plant.

Mr. KIRBY: I presume that applies in all instances where you have used the term yard connections, you mean yard connections and internal connections?

The WITNESS: Yes, all connections to the appliances in the plant.

Q. You may proceed to describe the connections at 21st Street.

A. —.

Cast iron pipe 8-inch to 36-inch diameter, 6,624 feet.

Steel riveted pipe, 16-inch to 36-inch in diameter, 4,772 feet.

Wrought iron pipes, 1½-inch to 12-inch in diameter, 1,550 feet.

Valves:

Sixteen 12-inch.
Five 16-inch.
One 18-inch.

Eighteen 20-inch.
Forty-eight 24-inch.
One hundred and thirteen 30-inch.
Twenty-seven 36-inch.
Twelve 36 regulator valves.
That is all for that.

Q. What is your valuation for that item?

A. $218,201.

Q. Will you describe the holders which you valued at or in connection with this 21st Street plant?

A. There are four holders, 400,000 cubic feet capacity. One holder 1,500,000 cubic feet capacity. Those five holders are in brick tanks.

1374 Q. Is that all?

A. Yes, sir. Those are all brick holder tanks.

Q. Just go on with the other holders?

A. Do you want them altogether? We separate them in the office.

Q. All right, what is the value of the holders which you have named?

A. $561,840.

Q. Now, go on with the steel holders?

A. One holder 149,500 cubic feet capacity, and one holder 280,000 cubic feet capacity; they are steel tanks constructed upon concrete foundations on piles.

Q. What is the value of those holders?

A. $104,070.

Q. And the total for all the holders?

A. $665,910.

Q. What other items enter into the total value of the plant?

A. Ten per cent. to the buildings, apparatus and pipe connections, amounting to $292,293, and interest charges of 5 per cent., amounting to $293,757, making a total for plant without holders of $3,392,895. To the value of holders must be added a charge of 10 per cent., amounting to $66,591, and an interest charge of 5 per cent., amounting to $36,625, making the total value of all holders, $769,126.

Q. And the total value of the plant to-day, allowing depreciation, is how much?

A. $4,162,021.

Q. What is the next plant conveniently in order? Is it the 99th Street plant?

A. Yes.

Q. Have you examined and appraised the buildings, apparatus, connections and holders at the 99th Street plant or connected with it?

A. I have.

Q. What is the capacity of the 99th Street plant?

A. 5,500,000 cubic feet in twenty-four hours.

Q. Of what kind of gas?

A. That is water gas.

Q. Will you describe the buildings at that plant as you have done in the case of the other plants?

A. Engine and boiler house and pump house, machine 1375 shop, retort house and accumulator house, five houses under one roof; 271 feet 3 inches by 57 feet 5 inches by 28 feet brick building.

Generator house, two-story brick building, 69 feet by 67 feet 4 inches by 24 feet 6 inches.

Foundations for one air condenser.

Foundations for salt water condenser.

Office building, two-story brick, 42 feet by 30 feet 8 inches by 30 feet 6 inches.

Meter house, one-story brick, 52 feet by 39 feet by 27 feet.

Purifier house, one-story brick, 124 feet by 61 feet 6 inches by 30 feet.

Lime house, one-story brick, 75 feet by 15 feet 9 inches by 18 feet.

Valve house, frame shed, 10 feet by 12 feet by 10 feet.

Valve house, octagonal frame building, 8 feet between parallel sides.

Three additional valve houses, of same dimensions and description as above.

Condenser house, one-story brick, 52 feet by 39 feet by 27 feet.

Exhauster house, one-story brick building, 42 feet 8 inches by 27 feet by 25 feet.

Tar separator system.

Foundations for same.

Foundation for tar storage.

Pump pit, 23 feet by 13 feet 8 inches by 10 feet deep, of concrete.

Coal shed, one-story brick, 125 feet by 46 feet by 18 feet.

Filter press house, one-story frame, 13 feet by 20 feet by 7 seven.

Brick walls, 663 feet of wall, average height 10 feet 12 inches thick.

Timber fences, dressed lumber, 9 feet high.

I have not got the number of feet for that.

Cover over domes of oil tanks.

1376 Frame building, 7 feet 6 inches by 125 feet by 6 feet.

Foundation under hot scrubbers of concrete and steel beams.

Q. What is the value of these buildings you have described, depreciation out?

A. $248,247.

Q. Have you also appraised the apparatus and contents?

A. Yes, sir.

Mr. MATHEWSON: We will also furnish a description of these items to counsel.

Q. Without enumerating the different items on the record will you state what the value of the apparatus and contents is as you found it, deducting the depreciation?

A. $268,177.

Q. Are there any connections at that plant?

A. Yes, sir.

Q. Will you describe them, please?

A. Cast iron pipes 4 inches to 36 inches in diameter, 5,861 feet.
Steel riveted pipes, 30 inches in diameter, 339 feet.
Wrought iron pipe, 1½ to 10 inches in diameter 5,552 feet.

Valves:

Four 3-inch.
Four 4-inch.
Twenty-four 3-inch.
Twenty-five 4-inch.
Thirteen 6-inch.
Ten 8-inch.
Ten 10-inch.
Two 12-inch.
Eighteen 16-inch.
Sixteen 20-inch.
Thirty 24-inch.
One 30-inch.

That is all.

1377 Q. What is the value of these connections?

A. $55,248.

Q. Will you describe the holders which you examined and appraised at or in connection with this 99th Street plant?

A. Yes, sir. Two holders 600,000 cubic feet capacity each; one holder of 300,000 cubic feet capacity; one holder 100,000 cubic feet capacity. All of the above holders are supplied with brick tanks and constructed upon a pile foundation.

Q. What is the valuation of those holders allowing depreciation where it has occurred?

A. $262,106.

Q. Are there other items to be added to obtain the full valuation less depreciation of this plant?

A. Yes, sir.

Q. Will you state what they are?

A. To the buildings, apparatus and pipe connections 10 per cent., amounting to $57,167.

Q. For what?

A. 10 per cent. for general contingencies.

Q. Engineering and so forth?

A. Engineering and so forth, yes sir. And an interest charge of 5 per cent. amounting to $31,441, making a total for buildings, apparatus and connections of $660,280. To the holders will have to be added for general engineering and so forth 10 per cent., amounting to $26,210, and an interest charge of 5 per cent., amounting to $14,415, making a total for holders of $302,731.

Q. Now what is the total value of the plant including buildings, apparatus, connections and holders to-day after deducting depreciation where it is found?

A. $963,011.

Q. Have you also examined and appraised the 18th Street plant of the Company?

A. Yes, sir.

Q. Near the North River?

A. I have.

1378 Q. A portion of that plant has been condemned by the city, has it not, Mr. Mayer?

A. Yes, sir.

Q. Will you first describe the portion of it which is still in the possession of the company and has not been condemned, if you have that separately?

A. Well, I have that now, separated entirely.

Q. Very good. What was the capacity of the plant and what kind of gas?

A. The original capacity was three million feet.

Q. Three million five hundred thousand feet, wasn't it?

A. Three million five hundred thousand feet, yes, sir.

Q. Coal gas?

A. Coal gas.

Q. Will you now describe the buildings which have not been taken by the city?

A. —.

Five small frame sheds in holder yard.

Engine and exhauster house, one-story brick building 36 feet 6 inches by 19 feet by 15 feet 6 inches, all 30 feet high.

Valve house, one-story brick building, 19 feet by 22 feet by 20 feet.

Boiler house, one-story brick building, 46 feet 2½ inches by 14 feet by 14 feet 3 inches.

One wagon shed, 21 by 28 by 15 feet of timber covered with corrugated iron.

One gas holder building of brick, 188 feet by 92 feet by 47 feet high.

Wood fences.

Coal storage yard between 18th and 19th Streets, 520 feet, about 9 feet high.

Coal storage yard between 17th and 18th Streets, 720 feet, about 9 feet high.

One brick wall across end of storage yard 12 inches thick, 180 feet.

One timber coal hoisting trestle complete in holder yard, between 18th and 19th Street.

600 feet of brick retaining wall, 12 inches thick, about 9 feet above grade.

1379 Q. Is that all the structures?

A. That is all for the buildings.

Q. What is the value of those buildings which you have described after allowing for depreciation?

A. $182,901.

Q. Have you also examined and appraised the apparatus and contents of the building?

A. Yes, sir.

Mr. Mathewson: We will also furnish a description of those items to counsel.

Q. Without enumerating the different items on the record, will you state what the value of the apparatus and contents is as you find it, deducting the depreciation?

A. $14,019.

Q. Are there any connections at that plant?

A. There are.

Q. Describe them, please?

A. Cast iron pipes 20 inches in diameter, 1,890 feet.

Wrought iron connections, 1 to 3 inches in diameter, 360 feet.

Valves.

Eight 1-inch.
Three 2-inch.
Four 16-inch.
Twenty-six 24-inch.

Q. What is the total value of those connections?

A. $21,987.

Q. Have you also examined and valued the holders?

A. Yes.

Q. Please describe them and give their value?

A. Two holders each of 205,000 cubic feet capacity, and four holders each of 255,000 cubic feet capacity. Each of above holders is supplied with a brick tank constructed on pile foundations.

Q. What is the value of them?

A. $290,943.

1380 Q. Are the items you have given outside of the 10 per cent. engineering and 5 per cent. interest?

A. They are.

Q. Will you now state what additions there are, if any?

A. There is an addition for buildings, apparatus and pipe connections, 10 per cent. for engineering charges, &c., amounting to $21,890, and an interest charge of 5 per cent., amounting to $12,039, making a total for building apparatus and pipe connections complete, $252,836.

Q. Now, about the holders?

A. There is an additional charge of 10 per cent. for general engineering to the holders, amounting to $29,094, and an interest charge of 5 per cent., amounting to $16,000, making a total for holders of $336,037.

Q. Taking then what is the present value, allowing the depreciation where it has occurred and leaving out that portion which has been condemned by the city, including building apparatus and connections and holders, what is the value?

A. $588,873.

Q. Now, will you state what has been condemned by the city and give your valuation of the plant at 18th Street?

A. The way I arrived at the value of the original plant was by applying a unit figure of $340 per thousand cubic feet capacity of works, which price does not include any holders. The unit figure of $340 was ascertained by comparison with the 14th Street and 42nd Street coal gas works.

Q. The 18th Street manufacturing plant was a coal gas plant?

A. Yes; the total value of the plant thus established is $1,190,000.

Q. Of the manufacturing plant?

A. Yes; to this value must be added the holders, consisting first of those already referred to in the 18th Street plant, amounting to $336,037. Then the holders in addition to those mentioned which were contained in the original plant, consisting of four 250,000 feet holders, each in brick tanks on pile foundations, and one 1381 3,000,000 feet holder and steel tank with concrete and tile foundation. The four brick tank holders represent the total value of $223,590, and the 3,000,000 feet holder with steel tank, $347,281, making the value of the entire plant in the original condition, $2,096,908. From this figure should be deducted the value of the remaining portion of the 18th Street plant, amounting to $588,873, leaving the balance $1,508,035.

Q. You know that the 14th Street plant and the 18th Street plant were the property of the same company when the consolidation took place in 1884, do you?

A. Yes.

Q. Did you observe, as far as you were able to observe, any difference in the character of the plant so far as the cost of plant was concerned. You say you took the same figures?

A. It was practically the same plant as 14th Street.

Q. And you took the figures you found as unit values at 14th Street and 42d Street, which are coal gas plants, and applied them to the 18th Street plant so far as it had been condemned by the city?

A. I did.

Q. And it was open to your inspection?

A. No, it was not there; of course not.

Q. And you took this unit value and considered the capacity of the works and assumed that the works were of the same general character as the 14th Street and 42d Street works?

A. No, sir, I did not assume it was of the same character; I know that from my own knowledge.

Q. You knew that from your own knowledge?

A. Yes.

Q. In other words, you had seen the plant?

A. Many times.

Q. You had seen it many times before it was condemned?

A. Yes, many times.

1382 Q. So that you were entirely familiar with the character of the plant?

A. Absolutely.

Q. And do you feel confident that your estimate of $2,096,908 is a fair estimate, from your knowledge of the plant as it originally existed?

A. I am satisfied that it was a low value, because the value was based upon the estimated values of the 14th Street plant, and in the instance of the 18th Street plant the figure could have been proportionately higher on account of better facilities for handling coal, which are not included in the 14th Street plant. These facilities consisted of iron coal bunkers supported, alongside of the retort house, upon iron columns, which is not the case in the instance of the 14th Street plant.

Q. This $2,096,908 includes, I assume, 10 per cent. for engineering expenses and 5 per cent. interest, in the same manner as similar items computed at 14th Street and 42d Street?

A. Yes.

Q. This completes, does it not, all the manufacturing plants of the Consolidated Gas Company? That is to say, where either coal or water gas has been manufactured?

A. Yes, it does.

Q. Are there in addition certain distributing holder plants or stations which you have examined and appraised?

A. Yes, there are five.

Q. Will you state what they are?

A. The 63d Street holder station, the 65th Street station, the 111th Street holder station, the 132d Street holder station, and the so-called Inwood station.

Q. Take the 63d Street station. Will you describe any buildings which there are there?

A. Do you want me to describe the buildings?

Q. Yes.

A. Engine room, frame building, 24 feet by 28 feet by 10 feet; valve house, frame building, 16 feet by 30 feet by 10 feet 6 inches; boiler house, 17 feet by 30 feet by 15 feet 6 inches. Brick 1383 fence walls, 440 feet, 10 feet above grade, 5 feet 6 inches below grade; that is all.

Q. What is the value of those buildings, depreciation deducted?

A. $11,429.

Q. What apparatus is there there? There is not much apparatus described, is there?

A. There is not many in this instance.

Q. State what apparatus is there.

A. In the engine room:

One 30-horsepower Morris engine, horizontal reversible.

One Sturtevant exhauster, steam and exhaust connections, countershafts and pulleys, gauges and connections.

In the valve house, one photometer.

In the boiler house:

One 66 feet by 16 feet Continental Iron Works boiler.

One Simplex Blake's pump, 6 inches by 10 inches.

One Metropolitan injector, pressure gauges, pipe connections and firing tools.

In the yards:

One Duplex pump, 10 feet by 6 feet; one drip water tank with two-inch pipe connections. That is all for that.

Q. What is the value of that apparatus, allowing for depreciation?

A. $4,828.

Q. Will you describe the connections there?

A. Yes, cast-iron connections 24 inches to 30 inches diameter, 225 feet; wrought iron connections, 1½ inches to 2 inches diameter, 80 feet; valves, two 24 inches and four 30 inches.

Q. What is the total valuation of such connections?

A. $7,887.

Q. Now describe the holders there.

A. One 3-million feet holder, one retaining wall 200 feet long, one brick tank for above holder, constructed in rock excavation. That is all.

1384 Q. What is the value of those holders?

A. $420,367.

Q. Does this include any allowance for engineering and interest?

A. No, sir, it does not.

Q. Please add those items and state what the totals are?

A. For general engineering I have only made a charge in the instance of holder stations of five per cent. instead of ten per cent., for the reason that I could not have overlooked as many items and omitted them from the schedule that I put in the plant, this being a very much simpler matter to examine.

Q. All the rest that you are about to describe are holder stations, including this 63d Street station?

A. On the same basis, five per cent. for general engineering and five per cent. for interest charges; the five per cent. for engineering amounts to $1,207 and the five per cent. for interest $1,267. That is on the station without the holders, making total value $26,618.

Q. For everything exclusive of holders?

A. Yes, five per cent. for engineering charges on the holders amounts to $21,018, and the five per cent. interest charges, $22,069.

Q. Making a total for holders of what?

A. $463,454.

Q. What is the total value to-day of the buildings, apparatus, connections and holders at the 63d Street station after deducting depreciation where you have found it?

A. $490,072.

Q. Take the 65th Street station and describe the buildings there.

A. Engine house, frame building, 20 by 38 by 20.

Exhauster house, two-story brick building, 37 by 42 by 45.

Boiler house, one-story brick building, 24 by 32 by 21.

Boiler house extension, one-story brick building, 16 by 20 by 16.

1385 Brick walls, 2,164 feet, averaging about 12 feet at different heights. I have the detail as to each height.

Q. The total value of the buildings and structures which you have enumerated at the 65th Street station is what?

A. $51,183.

Q. Will you describe the apparatus which you have appraised there?

A. Yes.

In the engine house, one beam engine, 6 inches by 18 inches.

In the exhauster house, one 12 by 12 Rowland vertical engine with steam and exhaust piping.

One 30-inch Mackenzie exhauster, gauges and connections, engine shafting and belts.

One photometer; furniture and plumbing.

In the boiler house, two horizontal tubular boilers 48 inches by 10 feet.

One horizontal tubular boiler 48 inches by 12 feet.

The above boilers are on brick settings.

One No. 2 Niagara feed pump 4 inches by 2½ inches by 7 inches.

One No. 4 Korting injector.

One steel stack, with connections to boilers.

In boiler house extension:

One 66 by 14 horizontal tubular inside fire box boiler and

One No. 5 Korting injector.

Q. What is the valuation of such apparatus and contents?

A. $10,159.

Q. Now, will you describe the connections at the 65th Street plant?

A. Cast iron pipes, 16 inches to 30 inches in diameter, 750 feet; and 260 feet of average 24-inch pipe.

Wrought iron pipe connection, 500 feet of 2-inch and less in diamater.

Valves, 23 30-inch and 4 16-inch.

Q. What are the value of such connections?

A. $20,406.

Q. Will you describe the holders at that station?

1386 A. Two holders, each 325,000 feet capacity; four holders of same capacity; two holders, each four million feet capacity. All of the above holders are constructed in brick tanks.

Q. What is the value of those holders?

A. $1,212,873.

Q. Does this include an engineer allowance and interest allowance in course of construction?

A. No, sir.

Q. Please state what, if anything, should be added on that account to get the full value?

A. There should be added to the buildings, apparatus and pipe connections, for engineering charges, 5 per cent., amounting to $4,087, and interest charges of 5 per cent., amounting to $4,291 making a total of $90,126, which is exclusive of holders. Now, to the holders there should be added for engineering charges 5 per cent., or $60,643, and for interest charges $63,675, making a total for holders of $1,337,191.

Q. What is the total value of the plant at 65th Street, including buildings, apparatus, connections and holders, and allowing depreciation which has been observed?

A. $1,427,317.

Q. Now, take the next one.

A. 111th Street?

Q. Take now the 111th Street station and describe the buildings there.

A. Office, two-story brick, 50 feet by 25 feet by 31 feet 6 inches.

Exhauster house, one-story brick, 66 feet by 54 feet by 27 feet 4 inches.

Boiler house, 44 feet 3 inches by 32 feet 3 inches by 18 feet.

One-story steel frame building covered with corrugated sides and roof.

Hoisting engine house, frame shed, 13 feet by 18 feet by 7 feet.

Scale house, plain work building, 12 feet by 15 feet by 13 feet.

1387 Stable, brick building with basement, 75 feet by 32 feet by 25 feet.

Coal storage; area, 67 feet by 52 feet.

Generator house, one-story brick, 72 feet by 48 feet by 27 feet.

Tool shed, frame building, 48 feet, 6 inches by 65 feet by 9 feet.

Retort house, brick, 200 feet by 52 feet by 22 feet.

Foundations for oil tank, 43 feet diameter, 11 feet high, of brick, 12 feet thick.

Blacksmith shop, brick, 26 feet by 34 feet by 19 feet.

Fences. Stable yard 270 feet of wooden fence 8 feet high.

Fence around holders 1,140 feet, 8 feet high.

Around works, 1000 feet, 8 feet high.

Brick wall on First Avenue, 56 feet by 8 feet high. That is all for the buildings.

Q. What is the value of the buildings without engineer or interest charges?

A. $107,981.

Q. Will you describe the apparatus and contents of what you have valued at the 111th Street station?

A. In the office building, office furniture consisting of desks, chairs, safes and wall maps, cupboards, letter presses, bath and toilet, steam radiators and gas fixtures. In the exhauster house, 42 valve stands for 36-inch and 24-inch valves; tool No. 11; 118 cubic, etc., 11,118 cubic feet, vertical Root's exhausters; two 16-inch by 16-inch Payne reversible link motion engines, 100 horsepower each direct connected to the exhausters.

Two 36-inch Connelly gas governors.

One Cochran feed water meter.

Steam exhaust and *guage* piping and gauges.

Plumbing and piping to steam heating radiators and piping.

One photometer.

Four closets.
1388 One toilet.
One wash basin.

Boiler house.

One steel stack; 4 feet in diameter, 64 feet 8 inches high.

Bridging for above stack.

Three boilers 66 inches by 16 feet, horizontal return tubular, 90 tubes each boiler, 3 inches diameter, 16 feet long, brick setting, ornamental cast iron fronts.

One Knowles pump 6 inches by 4 inches by 7 inches.

Beam and water piping for same.

One 1½-inch Hancock inspirator.

In the hoisting and engine house:

One Lidgerwood hoisting engine, double cylinder, 8¼ inches by 10 inches.

Scale house:

One 10-ton Fairbanks wagon scale.

Stable:

Stable fittings and appliances, thirty-two stalls and feed racks.

Tool shed:

Four old beam engines; lockers.
One lathe and tool bins.

In the retort house:

One stack of sixteen benches of six retorts each, length of retorts, 20 feet.

One stack of five benches of five retorts each; retorts 20 feet long.

In the blacksmith shop:

Forge and tools.

In the yard:

One oil tank; 43-inch diameter, 20 feet deep, of ¼-inch plates.

One atmosphere condenser of cast-iron pipe, 20 feet in diameter, in ten sections, with cast-iron bases and return bends at top, 18-inch connections.

1389 Q. What is your valuation of this apparatus which you have just enumerated?

A. $103,446.

Q. Will you describe the connections at the 111th Street station?

A. Cast-iron pipe, 24 inches to 36 inches, 550 feet; wrought-iron pipe, 1½ inches to 4 inches, 760 feet.

Valves:

Forty-one of 36-inch diameter, and one of 24-inch diameter.

Q. What is the value of such connections?

A. $27,068.

Q. Will you describe the holders at the 111th Street station?

A. Two holders, each 5,000,000 cubic feet capacity, with concrete foundations and retaining walls around lower portion of tank.

Q. What is the value of those holders without interest or engineer?

A. $704,737.

Q. Are there any items to be added to procure the full value?

A. Yes, sir. There are charges for general engineer, 5 per cent., to be added to the buildings, apparatus and pipe connections, amounting to $11,924, and for interest charges a similar amount of 5 per cent., $12,520, making the total for the buildings, apparatus and pipe connections $262,939. To the holders there is to be added for general engineer charges 5 per cent., amounting to $35,236, and interest charges of 5 per cent., amounting to $36,998, making a total of $776,971.

Q. What then is the total value of the plant at 111th Street, buildings, appar-tus, connections and holders, after deducting any depreciation which you found?

A. The total for buildings, apparatus and pipe connections is $1,039,910.

Q. We will take now the 132d Street station. Will you describe the buildings there which you have valued?

A. One governor and boiler house, brick building, 100 feet by 49 feet by 29 feet.

1390 One stack for boilers, 125 feet high, 5 feet 6 inches and 6 feet 9 inches diameter.

Q. What is the value of those buildings?

A. $29,776.

Q. Without engineering charges or interest?

A. Yes.

Q. Will you now state the apparatus and contents at 132d Street which you valued. Is that long?

A. No.

One No. 11½-inch vertical exhaust, 122 cubic feet capacity with flexible coupling.

One 16½-inch by 24-inch horizontal Buckeye engine with reversing gear and outboard bearings, 150 horse-power.

One 24-inch Connelly gas governor.

Three B. & W. boilers, set in two batteries, each with 80 tubes, 4-inch diameter by 16 feet long.

One 6-inch by 4-inch Knowles duplex plunger pump.

One No. 6 Cochrane feed water heater.

One No. 10 steel plate breaching.

One 3-inch Crown water meter.

One No. 12 Metropolitan injector.

One blow-off tank, 3 feet diameter, 10 feet long.

One 8-inch Hudson exhaust head and steam exhaust, water and gauge piping in gauges.

One toilet wash basin and miscellaneous plumbing.

Q. What is your valuation upon this apparatus at 132d Street?

A. $18,979.

Q. Will you describe the connections at 132nd Street?

A. Cast-iron connections, 20-inch to 36-inch pipe, 2,400 feet.

Valves:

Nine 36-inch.
Seven 30-inch.
Six 24-inch.
Four 20-inch.

1391 Q. What is the value of the connections which you have just enumerated?

A. $47,714.

Q. Please describe the holders at 132nd Street.

A. One holder, 5,000,000 cubic feet capacity, on a concrete foundation with concrete retaining wall.

Q. What is the value of this holder and the structures in connection with it which you have mentioned?

A. $393,965.

Q. Do these figures at 132nd Street represent the real value of the property, or are the engineering and interest charges still to be added?

A. Yes, sir, such charges have to be added.

Q. Please state what the additions are.

A. The additions to the buildings, apparatus, and pipe connections for engineering charges are 5 per cent., amounting to $4,823, and for interest charges are 5 per cent., amounting to $5,064, making a total for buildings, apparatus and pipe connections of $106,356. For the holders, similar charges; for engineering, 5 per cent., amounting to $19,698, and for interest charges, 5 per cent., amounting to $20,683, making a total for holders and foundations of $434,346.

Q. What, then, is the total value of the plant at 132nd Street, including buildings, apparatus, connections and holders, deducting such depreciation as you have observed, if any?

A. $540,702.

Q. Will you now take up the Inwood station and say what buildings are there which you have valued?

A. Exhauster house in connection with dwelling, one-story building, 22 feet by 24 feet and 11 feet 4 inches and 24 feet high. Part of that was two stories.

Q. What is your valuation for those buildings, allowing any depreciation?

A. $3,230.

Q. Will you describe the apparatus at Inwood which you have valued?

1392 A. One six-inch Makenzie exhauster, six-inch connections, with countershafting.

One Smith & Sayre vertical engine, diameter of cylinder 4 inches, stroke, 6 inches.

One 12-inch governor.

One upright tubular boiler, 3 feet diameter by 6 feet high, containing 52 tubes, 1½ inches diameter.

Steam connections, pipe and steam fittings, steam and gas pressure gauges.

One Cameron pump, 3 inches by 5 inches.

Q. What is the valuation of this apparatus, exclusive of engineering and interest?

A. $1,640.

Q. Will you describe the connections at that station?

A. Cast-iron pipes 6 inches to 12 inches, 170 feet.

Wrought iron pipe 1-inch to 2-inch in diameter, 80 feet.

Valves, six 6-inch, four 12-inch.

Q. What is your valuation for such connections?

A. $923.

Q. Will you describe the holders at the Inwood station?

A. One holder 60,000 cubic feet capacity with brick tank.

Q. What is the value of this holder?

A. $17,948.

Q. Must any charges for engineering and interest be added to obtain the full value of this property at Inwood?

A. Yes, sir. Engineering charges amounting to 5 per cent. to be added to the buildings, apparatus and pipe connections would be $289; for interest charges at 5 per cent. $304, for the property at Inwood, exclusive of holders, making a total of $6,386. For the holder there would have to be added an engineering charge of 5 per cent., amounting to $897, and an interest charge of $942, making the total for the holder of $19,787.

Q. What is the total value of the Inwood station, including
1393 buildings, apparatus, connections and holders, allowing for
any depreciation which has taken place?

A. $26,173.

Q. What is the total valuation covering all plants and stations respecting which you have testified, for buildings, apparatus, connections and holders, allowing depreciation out wherever it has occurred?

A. $17,040,524. This includes the 18th Street station in its original condition before a part of it was condemned by the city.

Q. Will you now state what such total valuation is, excluding that portion of the 18th Street plant which has been taken by the city and including that portion of the 18th Street station which still remains in the Consolidated Gas Company?

A. $15,532,489.

Q. In your testimony to-day you have first given figures for buildings, apparatus, connections and holders, not including any charge for engineering expense or interest?

A. Yes, sir.

Q. And I understand that such figures are not the real value of the buildings, apparatus, connections and holders respectively, but are merely preliminary figures to which must be added in each case the engineering charge and interest charge in order to get the full and actual value to which you have subsequently testified?

A. Yes, sir.

Q. So that when you or counsel have used the term "value" in referring to these preliminary figures, before addition of any engineering expense or interest, we are to understand that such figures do not in your judgment represent the actual value of the property, until engineering expense and interest have been added thereto?

A. That is right, yes, sir.

Q. And do I understand that in each case the final values to which you have testified are values obtained after deduction of any depreciation which has occurred?

A. Yes, sir.

1394 Q. You examined the property for depreciation in making your appraisal, did you not?

A. Yes, sir.

Q. And where you have spoken of buildings, or holders, or other property, you have included the usual appurtenances as you found them?

A. Yes, sir.

Adjourned to 1:30 P. M., Wednesday, August 29th, 1906.

Last Exhibits:

Complainant's 233.
State's N.
City's 34.

1395 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

Met pursuant to adjournment.

NEW YORK, WEDNESDAY, *August* 29, 1906—1.30 p. m.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Page, Mr. Burr, Mr. Kirby.

1396 MR. MATHEWSON: I have a correction to make in Mr. Preiss's testimony. On page 1314 the total, $14,378,516, should be $14,305,916.

FREDERICK J. MAYER resumed.

The MASTER: You have finished your direct examination?
Mr. MATHEWSON: Yes.

Cross-examination by Mr. PAGE:

Q. Mr. Mayer, you state that in making the appraisal, and examination and valuation of this plant that you worked for six weeks day and night and Sundays and had twelve people helping you?

A. Yes, sir.

Q. I suppose that you measured the buildings yourself or had someone do it?

A. Well, my men did, yes, sir.

Q. In this time was included the time necessary to make the measurements of the various buildings?

A. Yes, sir.

Q. And as to the plant, you went through the plant and made a list yourself of the different things that were there?

A. No, my men made the list under my supervision.

Q. I mean, when I say you, I refer, of course, to the work that was done in this six weeks' time.

A. Yes.

Q. After the measurements were made and the list was prepared how long did it take you then to make the appraisal?

A. Why, I started on that from the first day; as soon as a section of the plant was finished it was sent to my office and I worked on the figures during the time the measurements for the balance of the plant were being made.

Q. Did you make any examination of the plant yourself?

A. Yes, sir, several of them.

1397 Q. Did you examine each plant to ascertain its condition?

A. Yes, sir, as near as I could.

Q. Did you make any inquiry as to how old the various apparatus and buildings examined by you were?

A. I did, yes, sir.

Q. Did you have any information as to the original cost of the buildings or apparatus?

A. I did not.

Q. In your appraisal, then, you based your estimate upon the prices of to-day?

A. I did, sir.

Q. Was it your object in making this examination to ascertain what a plant would cost to-day that would produce the results that these plants did?

A. Yes.

Q. And it was not, then, the valuation of this particular plant as it exists to-day?

A. Yes, it was a valuation of the plant.

Q. I understood you to say that you took as your method of valuation what it would cost to produce a plant to-day that would produce the results that this plant produces.

A. That is right, less the depreciation.

Q. And it is not a valuation of this particular apparatus with a view of what it originally cost, less depreciation?

A. No, sir.

Q. Then your appraisal was not of this plant, but it was an appraisal of a supposed plant that could be produced to-day, and some element of depreciation figured off from that?

A. Well, the same plant produced to-day, less depreciation.

Q. A good deal of this apparatus has been in use for a good many years, hasn't it?

A. Yes, sir.

Q. When was the 14th Street plant which you testified to yesterday built, if you know?

A. In the '50's; some parts as far back as 1853.

Q. What part of it was built in 1853?

A. The retort house.

1398 Q. Did you have placed before you the inventory of this property that was made in 1884?

A. No, sir.

Q. Now, how did you arrive at the value of the buildings?

A. Well, I have constructed a great many gas works, and knew the cost of all those works I constructed. The latest built work that I constructed in this neighborhood was the works of the Kings County Gas and Illuminating Company in Brooklyn; that works was constructed in 1899. The class and character of buildings are very similar to the buildings of these various works, plain brick work with 4-inch projecting pilasters and ordinary coping at the top of the walls and wooden and iron roofs such as are generally used in gas works construction.

Q. What was the capacity of that plant?

A. That was a coal gas plant of a million and a half capacity; that is, originally a million and a half, laid out for three million; all the mains and principal details were arranged for three million, so it could be extended to that capacity.

Q. Now, did you base your cost on that as a three million capacity plant or one million and a half?

A. No, sir, I took each building by itself and ascertained the cost of such building per cubic foot of contents, figured from the basement line to the eaves of the roof; those were my unit factors applied in the other buildings of the various gas works now under consideration.

Q. You did not measure the walls and compute the number of bricks that would be in those walls?

A. No, sir.

Q. And the price of brick laid?

A. No, sir.

Q. I understand you assumed the Kings County works, to which you have referred, as a standard of cost?

A. I did not assume that. I knew that. That is a fact.
1399 The thickness of walls compares with the thickness of the
walls of these buildings. They are practically the same.

Q. Well, I say you took that works as a standard, and using that as a standard, by the necessary multiplication produced the result that you have testified to here in regard to buildings?

A. Yes, sir.

Q. Now, what do you mean by per cubic contents?

A. Well, it is merely a factor that is easily applied; almost any other factor could be adopted, such as square feet of surface.

Q. Did you ascertain what was the cubic contents of the buildings —is that what you mean?

A. Yes, sir, I did.

Q. A building enclosed by walls of a certain dimension?

A. Yes.

Q. And what is the cubic air space within that building?

A. Yes.

Q. And what did you divide that by to get your standard after you had got your cubic contents?

A. I divided the price by the number of cubic feet, and that was the price per cubic foot.

Q. That would be the correct standard, would it not, if you were building up a solid building of that cubic contents, but where you are enclosing a space in walls, does that give you the proper standard?

A. Yes, sir, of course; because the buildings from which I figure my value were hollow buildings; they were not solid buildings.

Q. Then, as I understand you, if the building of the Kings County works was fifty feet long on each side and twenty-five feet wide and, say, twenty-three feet high, you would get the cubic contents of that building?

A. Yes, sir.

Q. If the building at 14th Street was twice that length and the same width and the same height, then you would multiply that by two; is that right?

A. If it was twice the length?

Q. Yes.

A. Yes.

1400 Q. You would multiply it by two?

A. Yes, sir, if it was twice the length and the same width.

Q. And the same height?

A. And the same height, yes, sir.

Q. And you would take that as the cost then to be doubled?

A. Yes.

Q. Now, I call your attention to the fact, then, that you would be doubling the end walls of the building, would you not?

A. Well, there would be two end walls and a partition wall.

Q. No, not necessarily a partition wall. Why, a partition wall?

A. Didn't you say a building of twice the size? You mean one continuous building without any partition?

Q. Yes.

A. Then the price would be slightly reduced.

Q. Then you would not assume the standard that you have just testified you would, you would not double the cost of that building?

A. Well, it would be double, less a small omission for that brick in the partition wall.

Q. Well, would a wall twenty-five feet long and twenty-three feet high be a small deduction?

A. In that size building, yes.

Q. In that size building?

A. Yes.

Q. It is one-half the distance on one side of the first supposed building and a quarter the size of the entire side of the second supposed building, and if you doubled the two end walls you have got the size of the side wall on one building and half the side wall on the other. Do you consider that a small deduction?

A. The side walls would be absolutely twice the length of the other building and the gable walls would remain the same.

Q. But your side wall on the first building would be half the length of your gable wall and in the second building it would be a quarter the length of the gable wall, or if you doubled the two gable walls it would be only half the length of the two gable walls? 1401

A. I cannot follow you. If you double the building the side walls are twice as long.

Q. If you sat down to estimate and bid on a plant would you figure in that way?

A. For an approximate figure I would, yes, sir.

Q. I am not speaking about approximate figures because I judge when you bid on a plant you do not make an approximation. If you were going to make figures to put in a bid to the Consolidated Gas Company for building a building, is that the way you would figure the original cost, the way you have testified here?

A. No.

Q. Now, Mr. Mayer, the firm of Bartlett, Hayward & Co., with which you were connected, has been doing the erecting work of the Consolidated Gas Company for some time past, has it not?

A. Yes, sir.

Q. You have built a large number of holders for them?

A. Yes.

Q. And your concern is now the principal contractor that is building the Astoria works at Astoria, Long Island.

A. My former concern. I am not with them now.

Q. You made up the bids for the Astoria plant, did you?

A. Yes.

Mr. Mathewson: You mean for Bartlett, Hayward & Company?

Mr. Page: Yes.

The Witness: Yes.

Q. As their chief engineer you prepared the bids which were put in?

A. Yes.

Q. And upon which the contracts were afterwards awarded?

A. Yes, sir.

Q. When did you cease your connection with Bartlett, Hayward & Company?

A. May first.

1402 Q. Of this year?

A. Yes, sir. Practically in December last before I went to Europe, but actually not until May first.

Q. What is your business now?

A. Consulting Engineer, making a specialty of gas works construction and special apparatus for gas works.

Q. I suppose your relations are still friendly with Bartlett, Hayward & Co.?

A. Very, I am glad to say, yes.

Q. In arriving at your valuation upon the plans, and by that I refer to the apparatus rather than the buildings, did you take also some standard of valuation like this Kings County Works?

A. I did.

Q. And you computed then that works that produce one million feet are worth so much, and works that produce five million are worth five times as much, is that the way you did it?

A. No, sir, I did not.

Q. Well, how did you? What figure did you use as a multiplier?

A. I figured on each and every apparatus and each and every connection throughout the entire works, separately, and applied as a factor the particular cost of each apparatus.

Q. And the factor of cost you obtained by taking the cost price of the Kings County works, is that it?

A. I did not, only for the buildings.

Q. Well, I asked you that. Read him that question; probably he did not understand it.

Q. (Repeated:) In arriving at your valuation upon the plant, and by that I refer to the apparatus rather than the building, did you also take some standard of valuation like this Kings County works?

A. In a general way I applied a factor as I did in the Kings County buildings, but the factor for the apparatus is entirely different from the factor for the buildings.

1403 Q. What is the factor for the apparatus which you applied?

A. The weight of the apparatus, multiplied by a certain number of cents per pound.

Q. The weight of the apparatus multiplied by a certain number of cents per pound?

A. Yes, varying in amount as the apparatus varies.

Q. Well, you ascertained the value of the bench at 14th Street by that factor?

A. I know what the fire brick and the red brick are worth for a bench of sixes, with elevator furnace. I know what it cost for benches of fives with full depth furnace, and I know what it cost for a direct fire furnace. I add the iron work to those figures at a certain price per pound.

Q. Then, in estimating the apparatus you would not take it by weight entirely and multiply the number of pounds by a certain number of cents, would you?

A. No, they are partly brick work in the construction; you could not multiply it by a certain number of cents per pound.

Q. Did you take the price of brick as it is of today, or as it was in 1899?

A. I got the price of the bench complete from several fire brick manufacturers in New York, for what they would place those benches in position to-day, and to that I added my price for the iron work.

Q. Now, we will take up the retorts. How many benches are there in that?

A. Which one?

Q. 14th Street.

A. There is one retort house containing four stacks of thirty benches each.

Q. How many retorts to a bench?

A. I am just looking for another retort house. Do you just want to consider that one house?

Q. Is there more than one retort house there?

A. Yes, sir, I think there is. That is all for the benches.

Q. How many retorts to a bench?

A. Six retorts to a bench.

Q. That would make altogether 180, would it not?

1404 A. I beg your pardon; there is another stack of benches, twenty-four of those.

Q. With six retorts to a bench?

A. Yes.

Q. What is the size of the first 180 retorts that you have spoken of?

A. 12 inches by 21 inches by 8 feet 6 inches long.

Mr. Mathewson: In the first there are four stacks of thirty benches each. That would be 120, and six to a bench.

The Witness: 720 retorts in the first four stacks.

Mr. Mathewson: That would make 864, would it not?

The Witness: Yes; six times thirty times four is 720 in the first four stacks.

Q. 720 retorts in the first four stacks?

A. Yes, and there is [illegible] in the other stacks.

Q. What is the size of those?

A. 12 inches by 21 inches by 8 feet 6 inches.

Q. If you were to build a plant to-day would you put in that size retort?

A. Yes.

Q. You would I suppose if it were specified, but as a gas engineer, if you were to devise an efficient up-to-date plant, would you use that size of retort?

A. For that kind of installation I would, yes, if it was a horizontal installation and I had the space at my disposal.

Q. Well, this is a horizontal installation, is it not?

A. Yes.

Q. Do you know how long ago that was installed, those particular stacks?

A. It was built in 1900, the last stack.

Q. Of those particular four stacks?

A. Yes.

Q. How much was added at that time, or was it just a renewal?

A. Just renewal; replaced.

Q. Do you know when the others were replaced?

1405 A. I have it here 1900 for the entire house; I suppose they were all reproduced at that time.

Q. What do you mean by resetting?

A. That is a term applied to the construction of benches.

Q. And when it is so applied to the construction of benches what does it mean?

A. That the entire material inside of the arches was reset, or the entire arches are filled with new material.

Q. That means that the fire brick is built in of which the retort is built?

A. Fire bricks, retorts, tiles, and settings; everything complete.

Q. You spoke of fire brick and the retort as something separate. Is not the retort made of fire brick?

A. No, sir.

Q. What is it made of?

A. Fire clay.

POOR COPY

Q. When you burn it it becomes fire brick, don't it?

A. No, sir, in that shape it don't.

Q. Everything else then was old, as I understand it, except that the retort inside the arches was filled with fire clay and the retort built, but the brick work was the same as it has been for a number of years before, and the size within the arches was the same?

A. The arches themselves formed the old brick work.

Q. When you refer to the arches to what particular arch do you refer? The arches that are below the retorts or the arches within which the retorts are placed?

A. Each bench consists of an arch built of fire brick, and the arch consists of two side walls and the arch on top, and the entire space within this arch is filled with setting. The setting consists of retorts, &c.

Mr. **Mathewson**: Is there any arch below?

The **Witness**: There is not.

Mr. **Page**: There is an arched space, is there not?

A. An arched space all above.

1406 Q. Then there is not an arch, as you refer to it, for gas making, but there is an arch that an ordinary man would see there and call it an arch, is there not?

A. Yes.

Q. Wherein does resetting differ from tearing down and rebuilding?

A. That is what it practically is. We tear out and rebuild the entire setting.

Q. The setting?

A. Yes, take everything that there is and replace it all new.

Q. What is taken down and what is left standing?

A. The entire interior work contained in the arch is taken out and rebuilt from new material.

Q. How frequently, in the ordinary operation of a gas plant, do you have to thus renew the retorts?

A. About every three years.

Q. And you say the last of that which was done here was when?

A. 1900, but it has been reset since then later, I believe.

By Mr. **Mathewson**:

Q. Look at your memorandum there, if it is a copy of this, and you can find it.

A. I have it 1900. (Mr. Mathewson indicates on the memorandum). Yes, there is something in 1904 and 1905.

By Mr. **Page**:

Q. The brick work within which these arches are fixed is the same as it has been for a great many years?

A. Yes.

Q. And when you refer to resetting it is merely a renewing of the retorts that takes place about once in three years?

A. Yes.

Q. And otherwise than that those first four coal stacks are the same as they were in 1884?

A. That I could not say, it is possible that the entire arches have been rebuilt since that time.

1407 Q. Of course all things are possible. I was asking for your information if any has been given you. I understood that you had been informed when those different buildings had been built.

A. Yes, I have been.

Q. For what period did you measure depreciation upon this particular apparatus?

A. In some of it, for a few years only, some three years, and some perhaps eight or nine years; the depreciation varies from two to 15 per cent.

Q. But some of these have been standing from 1853?

A. No, it has all been rebuilt since 1853.

Mr. Mathewson: Not the apparatus; he said the buildings.

The Witness: That is, the buildings alone, yes.

Q..But your valuation for the buildings; did you figure depreciation there?

A. Yes.

Q. On these retort houses?

A. Yes.

Q. How much depreciation did you figure?

A. 15 per cent.

Q. Why did you use 15 per cent. depreciation? How did you arrive at that?

A. That is my judgment from the appearance of the building.

Q. That is, this building that has been constructed for fifty-three years you consider to-day is depreciated only 15 per cent.?

A. Yes, for the reason that the building was kept in constant repair in order to serve its purpose.

Q. Did you make any examination of the result of this plant to see whether it was operating efficiently?

A. I know that from my own personal knowledge.

Q. You know that; so you didn't have to investigate that?

A. No, sir.

Q. How many pounds of coke does it take to carbonize 100 pounds of coal in an efficient horizontal retort?

1408 A. From 10½ to 55 pounds of coke to 100 pounds of coal carbonized.

Q. You would make a rate of 10½ to 55 pounds?

A. Yes.

Q. And if a plant was using 55 pounds of coke to carbonize 100 pounds of coal would you think that an efficient plant?

A. No, sir, I would not.

Q. Will you kindly pay attention to the questions and answer the questions that I ask you? I asked you how many pounds of coke it would take to carbonize 100 pounds of coal in an efficient horizontal retort. That is the question. Now, what some man could produce is something that was not efficient is not the question.

A. About twenty-two pounds.

POOR COPY

Q. You would differ then from Mr. Bradley, who said it would take from 10 to 15 pounds?

A. In a full depth generator furnace.

Q. What do you mean by that?

A. A furnace of considerable depth, with generating flues below the settings. Those benches are ordinary 4 by 5 benches.

Q. If you were installing a plant to-day, would you use these generator flues below the settings?

A. I would not.

Q. You would not instal this particular plant to produce efficient work to-day?

A. I would not, not so far as the furnace is concerned.

Q. That is what I mean. We are confining ourselves to this particular retort house. Now, how about the size of these retorts? Would a large size produce better results?

A. No; I should apply the same size retort in the same space, and the building controls the space.

Q. You say a 12 by 21 by 8 feet 6 inches is the size retort that you would use to-day if you were installing a gas plant?

A. Yes, in benches of sixes.

Q. Do they use benches of sixes now?

A. Yes.

1409 Q. I notice that one coal gas stack of twenty-four benches, six retorts, the size is 15 by 26 by 9 inches?

A. Yes, sir.

Q. Can you produce better results with a retort that size than you can with a retort the size of the other 720?

A. No.

Q. You would testify, then, as a gas engineer that the operation of a retort 12 by 21 by 8 feet 6 inches is as economical and produces as good results as a larger retort?

A. Yes.

Q. What is the shape of these retorts?

A. They are D-shaped.

Q. What is the size of the retorts that you installed in Astoria?

A. They are tapering retorts, as near as I can remember, about 14 by 22 inches on one end; I am not sure about that, and I think about 14 by 25 on the other end.

Q. By tapering retorts you mean a modification of the D-shaped?

A. No, it is tapering in length from one end to the other. It is a D-shaped retort.

Q. I am referring now to the horizontal and not to the inclined.

A. I did not instal any horizontal retorts in Astoria.

Q. The horizontal and inclined are two different things?

A. Yes; I did not instal any horizontal retorts at Astoria.

Q. Did you make any estimate on the horizontal retorts that they have over there?

A. I did not.

Q. What value do you place upon the benches?

A. $2,210 per bench.

By Mr. Mathewson:

Q. Does that refer to the four coal gas stacks?
A. Yes; thirty benches each.

By Mr. Page:

Q. Did you estimate this value as you would if you were
1410 bidding to build those benches?
A. Absolutely the same way.
Q. That includes the masonry and the ironwork and everything in regard to the bench, does it?
A. Except the foundations.

By Mr. Mathewson:

Q. Do those preliminary figures include the engineering expenses and the interest which you applied subsequently?
A No, sir, it does not.

By Mr. Page:

Q. Were you building gas works in 1884?
A. Yes, I think I was.
Q. Do you know whether it would cost as much or more or less in 1884 to have built these benches than it would to-day?

Mr. Mathewson: Objected to as not proper cross-examination. We called the witness here to prove the value of this property to-day, as an expert witness. We have asked nothing in reference to the cost in 1884.

Mr. Page: While you may have asked nothing of this particular witness, you put in evidence what it was valued at in 1884.

Mr. Mathewson: This witness is an expert witness, called upon that particular subject.

Mr. Page: Well, I think that goes to his competency and the weight of his testimony.

Mr. Mathewson: I do not agree with you.

The Master: I do not know that I quite follow you as far as that, Senator, but I think you are entitled to ask him the question. It may be you will run the risk of making him your own witness on that point. I will allow it.

1411 Mr. Mathewson: I would suggest that counsel make this witness his own in that connection, if the witness can answer.

Mr. Page: I will take the risk of that, as a proposition of law.

A. It would cost more in 1884.
Q. Now, have you figured a certain amount for depreciation on these benches?
A. Yes, sir.
Q. What is the amount?
A. Some of them, 15 per cent.
Q. On what?
A. On all of them 15 per cent.
Q. And upon what did you base that figure?

POOR COPY

A. Principally upon the present condition of the arches and the ironwork.

Q. And that is the part that has to be renewed every three years?

A. No, sir; that is the part that has to be renewed probably every thirty years.

Q. You would expect the resetting of the retorts to be taken care of under repairs?

A. Yes, sir.

Q. It would come under that item?

A. Yes, sir.

Q. And you think that this plant standing as it is to-day has depreciated to the extent of 15 per cent?

A. These particular benches, yes, sir.

Q. Does your value of $2,210 per bench include depreciation or do you take that off?

A. No, sir, that is taken off afterwards.

Q. What is the value to-day that you have for those?

A. I only have it in total. The total benches for the four stacks of 30 is $265,200, without depreciation, and $225,420 with depreciation taken off.

Q. Have you the other 24 benches?

A. Yes, sir. Those benches cost $2,450 each, making a total of $58,800, and the depreciated value is $49,980.

Q. You say they cost what?

A. $2,450 per bench.

Q. When?

A. As compared with the $2,210 I gave for the other benches.

Q. Well, that is the estimate you placed upon the cost and not the actual cost, is that it? 1412

A. No, sir, that is the actual cost I got from various firebrick manufacturers around this part of the country, to which I added the cost of the ironwork.

Q. You don't know what it really cost the Consolidated Gas Company to install that stack of benches?

A. I don't, but I imagine they would pay more than I would.

Q. Do I understand you called for bids or asked for bids from various manufacturers, on which you based this estimate?

A. Yes, sir.

Q. Then you did not depend upon your experience of so many years as a gas engineer as to what it would cost, and as a man who constructed so many works?

A. I should do exactly the same if I had to build the works today, I should have to go to some firebrick manufacturers and get their prices, and buy their material for that part of the work and then add my prices for the ironwork.

Q. You referred to the foundation for benches. Just what is the foundation for the benches?

A. Is this 14th Street?

Q. I mean generally. Do you mean that portion that is down underground?

A. Yes, sir. It is that portion below ground.

By Mr. **Kirby**:

Q. Are there any foundations for other than the benches you have mentioned?

A. Yes, sir.

Q. How many?

A. There is one foundation for each stack.

Q. Are there any foundations upon which stacks have not as yet been erected?

A. No, sir.

Q. How many foundations does that make altogether?

A. Five.

Q. How many benches stand upon those foundations to-day?

A. Well, on four of them there are thirty benches; and on one, twenty-four benches.

1413 Q. So there are fifty-four benches?

A. Oh, no, there are four times thirty, which is one hundred and twenty, and then twenty-four is one hundred and forty-four.

Q. One hundred and forty-four benches?

A. Yes, sir.

Q. What depreciation factors did you use in the foundation?

A. None.

Q. Simply estimated the cost of material and labor as it was given to you?

A. Well, it is very hard to give any information regarding foundations under benches, or in fact under anything.

Q. How did you get your information?

A. By general inquiry at the works, from which I learned that everything is put upon pile foundations. Of course, the piles have to be cut out at the water line to prevent them from rotting, and that gives me the length as to the foundation, and on these facts I estimated the cost.

Q. Did you get that from the Consolidated Gas Company?

A. I got it from the superintendent that was there when it was built.

Q. And then did you give that information to various contractors and receive bids from them?

A. No, I made my own estimate.

Q. With regard to the stacks, however, you got your information from other contractors, did you not?

A. Yes, sir.

Q. Have you ever put down tiles of any kind?

A. Yes.

Q. Have you estimated on work of that kind?

A. Yes, sir.

Q. What is the age of those foundations, do you know?

A. I think they were built in the fifties.

Q. Would they cost more or less then to put down than now?

Mr. **Mathewson**: Same objection.

1414 The **Master**: Same ruling.

Exception.

POOR COPY

A. I don't think there would be much difference in the price for foundations.

Q. How many foundations were there there?

A. Five.

By Mr. PAGE:

Q. As part of the cost of the coal stacks, do you include the hydraulic main?

A. It is included in the benches.

Q. Then that estimate of yours covers everything in regard to the apparatus for making the gas and carrying it through the hydraulic main?

A. Yes, sir.

Q. What value did you set upon the stoking machines? If you have them separately, you might give them separately.

A. There are four; $16,000.

Q. That is $4,000 each?

A. $4,000 each, yes, sir. There is another one at $4,400. That is the one for the large stock.

Q. What about the De Brower stoking machine?

A. $10,500.

Q. How old are these machines?

A. That I can't tell.

Q. What depreciation did you figure on them?

A. Five per cent.

Q. How did you arrive at that figure for depreciation?

A. That is more depreciation than ought to apply because the machines have got to be kept up in a complete state of repair, always in order, to maintain their working capacity.

Q. And are they in a complete state of repair?

A. They are.

Q. What about the drawing machines? How much for the five Ross drawing machines?

A. $25,000.

1415 Q. That is $5,000 apiece?

A. Yes.

Q. And the large——

A. $5,400.

Q. On these drawing machines, I want the age of the drawing machine and the amount of depreciation. Have you figured it?

A. Five per cent. on the machine for the large stack and 2 per cent. on the five machines for the other stack.

Q. How did you arrive at those two items of depreciation?

A. My judgment of the conditions of the machines. As I said before I think the depreciation applied is more than it ought to be.

Q. That is, your judgment now as to the depreciation is different than what it was when you examined the machines and made up your figures?

A. No. You cannot exactly determine the value of depreciation and in order to be absolutely fair I took the outside figure which I thought would apply. I could have applied less and had the same opinion.

Q. Do you know how old those machines are? How long they have been in use?

A. No, I didn't ask about that because these machines have been kept in perfect condition continuously.

Q. They have been?

A. They have been, yes. Of course there is small wear and tear and repairing which at the present day I cannot just exactly establish. Five per cent. would be an outside figure.

Q. Now, we will go to these turntables. For what are they used?

A. For transferring the stoking and drawing machines from one side of the house to the other.

Q. What is your value of those?

A. $630 each.

Q. Any depreciation on those?

A. Five per cent.

Q. Is that figured on all these items relating to the track?

A. Yes, sir.

Q. There are six lines of track running the length of the building and 20 feet outside?

A. Yes, sir.

1416 Q. Seventy-pound rails, 6 by 6 cross ties?

A. Yes, sir.

Q. These on 6 by 8 stringers?

A. Yes, sir.

Q. What do you value that line of tracks at, so equipped?

A. Six lines, $5,050.

Q. Now, these coke tracks?

A. Four lines of coke tracks, $1,350.

Q. They only run the length of the retort house, is that right?

A. The length of the retort house and then the inclines outside of it which follow right after.

Q. How long is the entire length of the four lines of track—is it the length of the building plus thirty-two feet?

A. Yes, sir, in one instance, and I think forty in the other. That is, you will find two more down below forty feet.

Q. Two of them are thirty-two feet longer and two of them forty feet longer than the building?

A. Yes, sir.

Q. What do you mean by 3½-inch rails multiplied by 35 pounds?

A. 3½ inches, that is the height of the rails, by 35 pounds per yard.

Q. What is the value of these two coke dumping inclines over thirty-two feet long and sixteen feet high?

A. $1,500.

Q. That includes the gauge, benching arrangements and the 2-inch pipe, does it?

A. Everything complete.

Q. In connection with that you have two engines, have you, seven horse-power engines?

A. Yes, sir.

Q. And that, together with the operating cable, is worth how much?

POOR COPY

A. $450.

Q. How much are the nine self-dumping coke machines worth?

A. $1,125.

Q. That is the entire nine?

A. Yes, sir.

Q. What value did you place upon the forty feet of coke dumping inclines, twenty feet high?

A. $2,070.

1417 Q. And on the coke drums and hoisting arrangement and countershaft connected to the gas engine?

A. $380.

Q. And the 2-inch pipe clinching arrangement?

A. $50.

Q. And upon all those I understand that you figure a net depreciation of 5 per cent.?

A. Yes, sir.

Q. Do you know whether these five Ross Drawing machines are the same that were in use in 1884?

A. I do not.

Q. The next thing in the process of gas manufacture would be to go to the exhauster house, wouldn't it?

A. Yes, sir.

Q. Now the contents of this exhauster house were one Number 9 Roots exhauster, 24-inch connections, by-pass, exhauster direct-connected to engine, 3,500,000 cubic feet capacity, including the engine. What value do you place on that?

A. $1,980.

Q. How much do you allow for depreciation?

A. None.

Q. Do you know how old that is?

A. No, sir.

Q. But you consider it just as good to-day as the day it was put in, no matter how long ago it was?

A. It is absolutely perfect in every respect.

Q. Then there is another Number 6 Roots exhauster?

A. Yes, sir.

Q. Direct connected to the engine, 20-inch connections with by-pass, capacity 2,000,000 cubic feet.

A. Yes, sir.

Q. How much did you value that at?

A. $1,078.

Q. There are two Huntoon governors?

A. $150.

Q. Those are attached to each of the exhausters or attached to the engine?

A. They are attached to the engine and governed by the gas.

Q. What do you value the photometer, stand and bar at?

A. $65.

Q. What kind of a photometer is that?

A. Bar photometer.

1418 Q. What is the length of the bar?

A. I did not measure that.

Q. Is it one or two candles?

A. It is arranged for any candles you like.

Q. But as against testing gas, against one candle or two candles?

A. You can test any candle power from nothing up to thirty candles and even higher.

Q. I know that. You test your light, though, on one end of your photometer as against a candle on the other, one or two candles, don't you, when you are using a bar photometer?

A. Yes, sir.

Q. I asked, is this arranged for one or two candles?

A. Well, you can apply either.

Q. This just refers to the machine itself, does it?

A. The contents of the exhauster house?

Q. No, I say this one photometer, stand and bar, $65, refers to the machine itself?

A. Yes, sir, purely the apparatus.

Q. Now in the condenser house you have two No. 2 rectangular condensers, cast iron tubes, 44 feet by 15 feet by 6 feet 2 inches; 648 tubes, 4 inches in diameter 11 feet long, 30-inch connections. At what do you value those?

A. $29,106 for the two.

Q. And upon that you figure a depreciation of how much?

A. 15 per cent.

Q. Do you know the age of this apparatus?

A. No, I do not.

Q. Would that cost more to-day than it would in 1884?

Mr. Mathewson: Same objection.

The Master: Same ruling.

Exception.

A. Yes, it might cost a little bit more.

Q. When?

A. Now.

Q. It would cost more to-day than then?

A. Slightly more, not very much.

1419 Q. Do you know whether those are the same two condensers which were there in 1889?

A. I do not.

Q. Is that the type of condenser that is used to-day?

A. Yes, sir.

Q. Does the value which you have given include the valves and connections?

A. No.

Q. Have you valued the valves and connections separately?

A. Yes, sir.

Q. What does this mean, by connections 30 inches?

A. That is only a memorandum to show the size of connections for the apparatus.

Q. Then the value that you gave of $29,106, would be the value of the two condensers alone?

A. Yes, sir.

POOR COPY

Q. Now there are two purifying houses are there?

A. Yes, sir.

Q. Now the large purifier house, I find two sets of 8 purifying boxes 24 feet by 26 feet by 3 feet 2 inches, connections 20 inches?

A. Yes, sir.

Q. What do you value those at?

A. Well the entire two sets together with the covers and the cranes and the supports for the boxes and center seals is $48,876 without any depreciation.

Q. You value those in their entirety?

A. Yes, sir.

Q. What is the capacity of that purifying house?

A. I have not figured that, but the capacity of the two houses combined is equal to the capacity of the plant.

Q. In other words, the capacity of the purifying house determines the capacity of the plant, doesn't it?

A. In a measure, yes.

Q. Now the small purifying house?

A. One set of 4 boxes 16 feet by 25 feet by 3 feet 2 inch center seals, supports, and two hydraulic cranes, $16,828.

Q. That includes the supports and pressure gauge, does it?

A. Yes—no, the pressure gauges are extra, $35 for that small house.

1420 Q. Do you know the age of the apparatus in these two purifying houses?

A. I do not.

Q. Upon what do you figure your 5 per cent. depreciation?

A. Upon the present condition of the apparatus.

Q. That is, if it was regarded as against a new apparatus to-day you think there would have been a depreciation of 5 per cent.?

A. Yes.

Q. In its present condition?

A. Yes.

Q. And you have not taken into consideration in figuring depreciation the actual age of the apparatus?

A. No, I have not for the reason that age does not affect an apparatus of this kind except in one spot, and that is the sides of the covers which forms a very small portion of the entire purifying apparatus.

Q. Therefore, there is with the exception of the sides of the covers, which when they wear out were replaced as repairs——

A. But very little cost.

Q. But very little cost?

A. Yes, sir.

Q. There is practically no depreciation on a purifying plant?

A. No, sir.

Q. I find you have center seals in the purifying house and you also have a center seal house. To what use is this center seal house put?

A. In this instance the center seal is located outside of the building. The center seal is an apparatus which controls the flow in and out of the various purifiers. In some instances it is located under the purifier itself, but in this instance it is located outside the building in a small annex surrounding it.

Q. Is there a center seal within the purifying house and another one outside?

A. Just outside the purifying house in a small annex around it.

Q. Is there one inside and one outside?

A. No, sir; only one to each purifier.

1421 Q. Then the center seals you have testified to in each purifying house would be the center seals as spoken of in the center seal house?

A. Yes.

Q. And there would be no separate value for the center seals contained in that house?

A. No, the center seal is included in my valuation of the purifiers, but no connections.

Q. I understand that, your connections in all cases have been the valuation you gave at the end for yard connections and valves?

A. Yes.

Q. And that applies to all the apparatus?

A. Yes.

Q. I notice in the yard two tower scrubbers, 20 inches in diameter by 84 feet 2 inches over all, capacity of each one million cubic feet per twenty-four hours?

A. Yes, sir.

Q. Eight sections of eight trays each, except lower, which has seven trays; connections 24 inches. Have you valued that separately, or did you value it in connection with the tower?

A. I figured the two scrubbers as an entirety without any connections and valves the same as in the other cases.

Q. Will you give the valuations as you have placed them there upon the items?

A. Two scrubbers, $40,390; a 14 foot water tank on top of the scrubbers, $1,764; a circular stairway enclosed in a steel shell, $672, making a total of $42,826.

Q. What do you value the foundation at?

A. $7,854.

Q. Have you figured anything for depreciation on this?

A. Eight per cent.

Q. Do you know anything about the age of those scrubbers?

A. No, sir.

Q. Do you know whether or not they are the same two tower scrubbers that they had in 1884?

A. Yes.

Q. Are they?

A. I believe they are.

1422 Q. How did you figure the brick circular walls from top of concrete to ground level, 6 feet from ground to bottom of concrete?

A. In which item is that?

Q. In the foundation.

POOR COPY

A. 800 cubic yards of excavation, 300 piles, 300 cubic yards of concrete and 52,000 bricks and the granite sills.

Q. What value did you take for those?

A. $7,854.

Q. I know, but——

A. The units?

Q. Yes.

A. Excavation $1.25 per cubic yard, piles $5.00 each; concrete $7.00 per cubic yard; bricks laid $25 a thousand.

Q. Is that based on bids you received?

A. No, sir, it is my own estimate.

Q. On the prices of to-day?

A. Yes, sir.

Q. Now there is another scrubber, Isbell Porter, standard scrubber?

A. Yes.

Q. That is a rotary scrubber, is it not?

A. Yes, sir.

Q. 16 feet 6 inches long, 13 sections, end section 7 feet 9 inches wide by 8 feet two inches high; disc 6 feet 9 inches diameter by 8, capacity 3,000,000 cubic feet for twenty-four hours, 30-inch connections 7 feet 7, 4 inches diameter?

A. That means 7 inches by 7 inches.

Q. 4 inches diameter, shaft, worm gear and wheel connections, wheel 48 inches diameter. What did you value that at?

A. $6,860.

Q. What did you allow for depreciation?

A. 2 per cent.

Q. How old was it?

A. 1892 I have it down here.

Q. Two number 2 Cameron pumps; what are they worth?

A. $110.00.

Q. Each or for the two?

A. Both.

Q. How many station meters have they at these works?

A. 2 sixteen feet diameter.

Q. Will you give the value, please?

A. $13,540. They are 16 by 13 feet.

1423 Mr. Burr: Is that for each or for both?

The Witness: For both.

Q. That is American meter make?

A. Yes, sir.

Q. And Parkinson drums?

A. Yes, sir.

Q. 20-inch connections?

A. Yes, sir.

Q. One No. 12 Westinghouse gas meter?

A. Yes, sir.

Q. What is that?

A. It answers the same purpose, but is differently constructed, $225.

Q. Then the value of the other articles in the meter house?

A. Kings pressure gauge, $35. Iron grating, platform around meters $315.

Q. We have practically gone through the apparatus through which the gas itself passes, have we not, from the retort to the holder?

A. Yes.

Q. Now will you turn to your schedule of the boiler room?

A. Yes, sir.

Q. And give us the value of the boiler?

A. $2,109.

Q. That is an 80-horsepower boiler?

A. Yes, sir, that is what it is rated.

Q. And built by T. F. Rowland?

—. Yes, sir.

Q. Do you know the age of that boiler?

A. No. That is in a thoroughly up-to-date condition.

Q. But if it was built by T. F. Rowland it was some years ago that it was built?

A. Yes, sir.

Q. How many should you say?

A. I did not inquire because the boiler was in perfect condition.

Q. How long ago did Rowland retire from business, do you know that?

A: No, I do not.

Q. Now will you give us the various items of the engine room. Was there anything else that entered into the boiler room?

A. No, there is one Clark steam and fire regulator at $25. A cast iron water tank 17 feet by 48 feet by 4 feet 6 inches deep over the entire boiler house, which forms the roof of the latter.

1424 Q. How much is that worth?

A. $4,275.

Q. Did you take any depreciation off from either of those items?

A. Five per cent. on the boilers, none on the regulators, and two per cent. on the cast iron tanks.

Q. Now, then, the engine room. You have first a forced draft fan for blowers, B. F. Sturtevant fan and engine, 3-foot fan and wheel, case 18 inches wide, direct connected with small vertical engine. What value did you place on that?

A. $250.

Q. Anything off for depreciation?

A. Two per cent.

Q. One simple engine, Novelty Iron Works, 50 horsepower?

A. $3,000; twelve inches diameter, two-inch stroke. It is a special engine.

Q. Two small boiler feed pumps.

A. $100.

Q. Two jet photometers at $65 each.

A. $130.

Q. Mackenzie exhauster?

A. $924.

Q. Sink?

A. $25.

POOR COPY

Q. Now, will you take the items on the various portions of the plant that have not been covered and give us the value, age, and depreciation as far as you know it, on every item of over a thousand dollars in value. Below that you need not.

A. Any item of over a thousand dollars?

Q. I mean, not to go back, but taking up here in the smith shop, machine shop and shed, &c.

A. I could give you the total items for that. Machine shop total contents?

Q. No, if there is nothing there over a thousand dollars just pass over it.

A. I have got one shed.

Q. The whole shed only amounts to $1,800. Everything that is in it?

A. Everything in it.

Q. I mean in the matter of items.

A. Oh, individual items.

Q. Yes. You have given, as I understand it, the total value of everything that is in these particular houses, the buildings, on your direct-examination.

A. Yes.

1425 Mr. **Kirby**: He gave the total value of all.

The **Witness**: I gave the total value of all, not of each house.

Mr. **Mathewson**: Not dividing it into each separate house?

Mr. **Kirby**: Let it be where there is apparatus of over a thousand dollars, and give that.

Q. Yes, give us the total of each house, and where in that house there is apparatus of the value of a thousand dollars and over you can give us the total of that.

Mr. **Mathewson**: Would it not be a good thing to give that in the order in which they appear on the record; taking the office, store and then the boiler room, &c.?

The **Witness**: That is what I was going to do just now, start from the beginning.

The **Master**: That is the better way, then you will have it complete on the record.

A. Office building, contents $1,875.

Mr. **Mathewson**: Are you giving those items without depreciation or after the deduction of depreciation? Is the total you are giving the value without deduction of depreciation or after the depreciation is deducted?

Mr. **Kirby**: He had better give both.

Mr. **Mathewson**: I am merely asking him so that he can find out what you want. I do not care what he gives.

Q. Give the total with depreciation and then the total deducting depreciation?

A. With and without depreciation?

1426 Q. Yes, both.

A. Contents of office building without depreciation, $1,875; with depreciation, $1,781. Storehouse, contents, $100; with depreciation, $100.

Mr. Page: We have had the boiler room and the engine room.

Mr. Mathewson: But he has not given the totals.

A. (Continuing:) Machine shop, $700 without depreciation; $665 with depreciation.

Smith shop, $430 without; $408 with.

Grindstone, $395 without; $356 with.

Mr. Page: We do not want the value of the grindstone at $395. It is grindstone, circular saw, lathe, turning tools, counter shaft, &c.

The Witness: Yes.

Mr. Mathewson: When you state your value, describe what it is.

A. (Continuing:) Shed, contents, $1,800; no depreciation.

Large purifier house, $48,876, less depreciation, $46,432.

Small purifier house, $16,828 without depreciation; $15,987 with.

King's pressure gauge, $35, no depreciation.

Meter house, we had that before.

Centre seal house, four King's pressure gauges, $140; no depreciation.

Pressure gauges, $140; no depreciation.

Checkered cast-iron runway around seals, $258; no depreciation.

Mr. Burr: You have left out the Smith & Farmer's duplex dry centre seals, 20-inch connections.

1427 The Witness: They are included in the price of 24 feet by 26 feet purifier house.

Boiler house, one locomotive boiler and tools, 35-horse-power 5-inch diameter shell, 14 feet 7 inches long, sixty 3-inch tubes, without depreciation, $1,918; with depreciation, $1.726.

By Mr. Kirby:

Q. Do you know the age of that boiler?

A. I have not got it down here. I had it when I made up my schedule, but I did not put them all in.

Valve house, contents, $335, no depreciation.

Retort house, four coal gas stacks, 30 benches, etc., without depreciation, $265,200, with depreciation, $225,420.

One coal gas stack, 24 benches, etc., without depreciation, $58,800, with depreciation, $49,980.

Four Bronder stoking machines without depreciation, $16,000, with depreciation, $15,200.

One Bronder stoking machine, $4,400, with depreciation, $4,180.

One De Brower stoking machine, without depreciation, $10,500, with depreciation, $9,975.

Five Ross drawing machines without, $25,000, with $24,500.

One Ross drawing machine without $5,400, with $5,130.

Three extra engines for retort house, $705 for the three, no depreciation.

POOR COPY

Six turntables, fourteen feet diameter, $3,780.

Six line track, &c., $5,050, no depreciation.

Four line coke track, &c., $1,350, no depreciation.

Two coke dumping inclines, $1,500.

Two 7 horse power single cylinder engines, $450.

Nine self-dumping coke cars, $1,125.

Two coke dumping inclines, $2,070.

Two drums and hoisting arrangement, &c., $380.

Two-inch pipe quenching arrangement, $50.

1428 On all items from six turntables to 2-inch pipes inclusive, 5 per cent. depreciation, making a total for such items, without depreciation, $15,755, and with depreciation, $14,967.

Retort house annex, contents, $16,370, without depreciation, $15,880, with depreciation.

Coke passage, $8,075 without, $8,059 with.

Gas engine house, total, $3,666 without, $3,597 with.

Coal hopper, contents, $3,315 without, $3,249 with.

By Mr. MATHEWSON:

Q. That refers to each of the buildings where you simply mentioned the building without defining the contents?

A. Yes, sir.

Coal shed, $6,250 without, $6,064 with.

By Mr. KIRBY:

Q. That includes the item under addenda to the coal shed, does it not?

A. Yes, No. 3.

Rigger house, $565, no depreciation.

Coal and coke storage, 30,000 tons of coal not included in valuation.

Coal handling apparatus, cable, buckets, &c., included in coke passage.

Boiler and engine house:

One 55 horse power vertical boiler, $734 without depreciation, $713 with.

One 50 horse power two-cylinder, 12 by 20, $1,000 without depreciation, $970 with.

One 25-foot sheet iron stack, $75 without, $73 with.

One small feed water pump, $55 without, $54 with.

Boiler house and well, $350 without, $341 with.

1429 By Mr. MATHEWSON:

Q. Did you add tools to that boiler house?

A. One vertical boiler?

Q. And tools for the boiler? What does that mean?

A. That is tubes, not tools. Two 66-inch diameter——

Q. Thirteen horse power boiler with tools?

A. Thirteen horse power boiler and tools for boiler.

Q. That is what I said.

A. Yes. $350 without, $341 with.

Well house, $1,042, no depreciation.

By Mr. MATHEWSON:

Q. Including addendum, item No. 4?

A. Yes, sir, No. 4.

Boiler house, one boiler 4 foot diameter, 10 feet 3 inches long, without depreciation, $607, less depreciation, $589.

Eighteen-inch sheet iron stack, $38, without depreciation, $37 with depreciation.

One clock, $15.

Pressure gauge, $8.

Valve house, $80, no depreciation.

New York safety, 14 by 60, engine, $1,980, no depreciation.

One Mackenzie exhauster, $3,050, no depreciation.

One King's pressure gauge, $35, no depreciation.

Thirty-inch valve stands, $525, no depreciation.

Photometer, $650, no depreciation.

Ten one-half Root exhauster, additional, $1,600, no depreciation.

Boiler house, two 50 horse power corrugated flue boilers, $2,860, without depreciation, $2,720 with depreciation.

Two stacks, $234, no depreciation.

Yard total, $2,804, without depreciation, $2,636 with depreciation.

1430 By Mr. KIRBY:

Q. In the yard there is an ammonia tank which you value at $1,008, is there not?

A. Yes, sir.

Q. Is there any depreciation on that item?

A. Six per cent.

Coke office, $185, no depreciation.

Boiler house, total, $2,029 without depreciation, $1,970 with depreciation.

Q. This includes the items in addenda item 6, does it not?

A. It does.

In the boiler house is one 50 horse power engine valued at $1,000, 2 per cent. depreciation.

Q. Giving a depreciated value at $980?

A. That is right.

Q. Clay mill and storage; $480 without depreciation; $460 with depreciation.

Storage sheds; 78 tons fire clay omitted from valuation as per item No. 7 in addenda.

By Mr. PAGE:

Q. Was that included in the total valuation that you gave?

A. No, sir; taken out.

Stable and yard, $455; no depreciation.

POOR COPY

Pump house, $240 without depreciation; $235 with depreciation.

Storage shed, scrap iron, $600.

Q. Why do you include the 50 tons of scrap iron?

A. That should come out.

Q. Your total figures ought to be reduced by $600?

A. By $600, yes, sir.

Storage shed, $415; no depreciation.

Weight office, $395; no depreciation. I think that covers it all.

Q. Now you have how many holders in that plant at 14th Street?

A. There are 6 holders of 345,500 cubic feet capacity each, and 2 holders of 250,000 cubic feet capacity each.

1431 Q. Take the 6 holders. What do you value the tanks at, including guide plates and inlets?

A. $219,039.

Q. Do you know when the tanks were constructed and erected?

A. No, I do not.

Q. Is that given with or without depreciation?

A. There is no depreciation.

Q. Did you include in that value the retaining walls?

A. Yes, sir.

Q. And what did you value the holders and frames of the six gas holders at?

A. $178,885.

Q. Is there any depreciation there?

A. 15 per cent., making a total value of $152,052.

Q. Can you state whether or not those were the holders that were on this property in 1884?

A. I cannot.

Q. Of the two additional holders that you have given of the smaller capacity, the two at 250,000 cubic feet capacity each, will you give us the valuation for the tank and for the holder and for the frames?

A. The value of the tank is $57,383, no depreciation. The value of the holders is $52,091, less 10 per cent., making a value of $46,082.

Q. Those two holders are separated from the others, aren't they?

A. Yes, sir.

Q. That is the six are on the block bounded by 14th and 15th Streets, Avenues B and C?

A. Yes, sir.

Q. And the two are on the block bounded by 17th and 18th Streets and Avenues B and C?

A. Yes, sir.

Q. Do you know whether the capacity of those plants has been increased since 1884?

A. No, I do not.

Q. Now all of these holders are in brick tanks, aren't they?

A. Yes, sir.

Q. How did you arrive at the value of the brick walls around the

property? I don't mean the holders, I mean the walls around
1432 the yard?

A. The tank itself?

Q. No, no. You said there were some brick walls that were built around the yard?

A. Yes.

Q. That is what I refer to.

A. They were figured in detail; so many bricks.

Q. How deep below the surface does the foundation of the wall go?

A. Four feet.

Q. Is this foundation of brick?

A. Are you referring to the tank wall?

Q. No, the wall around the yard, what is practically the fence.

Mr. MATHEWSON: Is this the wall around the holder inclosure?

Mr. PAGE: No, whatever it is. He has got several brick walls.

Mr. MATHEWSON: Yes, I know, but I am trying to find out which——

Mr. PAGE: It is on page 1352.

A. That is the first item of holder value.

Q. How did you arrive at the value?

A. It was estimated in detail: 736,000 bricks, 536 cubic feet of bluestone and 1,000 cubic yards of excavation.

Q. The excavation was for four feet in depth?

A. Foundation, yes, sir.

Q. And the twelve feet in height included foundation, did it?

A. It is above the grade, the four feet is below grade.

Q. Sixteen feet altogether?

A. Yes, sir; that is the foundation.

Q. How wide is that wall?

A. Twelve inches thick.

Q. You said there were 20-inch pilasters. What is the distance between pilasters?

A. I don't know what the distance is, but there are twenty-five pilasters altogether.

1433 Q. Does that mean twenty inches in width?

A. Twenty inches in width and four inches projection from the surface of the brick wall.

By Mr. MATHEWSON:

Q. On each side of the wall, isn't it?

A. On one side.

By Mr. PAGE:

Q. Then the wall under pilaster would be sixteen inches wide?

A. That is right.

Q. And would extend twenty inches?

A. Yes, sir, twenty inches in width.

POOR COPY

Q. All of these gas holders that you have testified to are brick tanks?

A. Yes, sir.

Q. If you were building them to-day would you build them of brick or steel tanks?

A. That would depend upon the character of the ground.

Q. Well, at this particular place, I mean?

A. At this particular place I would only build them of brick.

Q. Which is the cheaper construction, brick or steel tank?

A. In this instance?

Q. I am referring to the original construction, whether it costs more to build a brick tank or a steel tank?

A. Well, a steel tank of the same dimensions is cheaper than a brick tank.

Q. Now, we will turn to the 42d Street station. This is also a coal gas plant, is it not?

A. Yes, sir.

Q. And of what capacity?

A. 4,500,000 cubic feet in twenty-four hours.

Q. On your direct-examination you gave the dimensions of the various buildings and then gave the total valuation of all the buildings, but you did not give the value you place upon each building.

A. No.

Q. Have you them separated?

A. Yes.

Q. Will you give that? I don't mean to segregate them, but the total for each building with and without depreciation. 1434

A. Valve house and vault in the yard, $1,862; no depreciation.

Q. Do you know when that was built?

A. 1863.

The Witness: Do you want all these items?

Q. No. You need not separate the items.

A. Vault, $2,499; no depreciation.

Meter house, $958 without depreciation; $910 with depreciation.

Q. When was that built?

A. 1863.

Purifying house $63,439 without depreciation; $57,076 with depreciation. The first figure should be $72,250; without depreciation, and $65,006 with depreciation.

Q. What is the item of $8,811 which you have added?

A. That is under addenda item No. 2. That is for additional cost of the vault. It is explained in the addenda, item No. 2.

Q. Was that a part of the original construction in 1863?

A. Yes, sir, it was omitted from the first item by not allowing anything for planking, pumping and sheet piling.

Extension to main building, same house, purifier house, $3,877 without depreciation; $3,490 with depreciation.

Q. Do you know when the extension was built?

A. I presume it was built at the same time that the main house was built.

Q. That was in 1863?

A. Yes, sir.

Engine and meter house $17,476 without depreciation; $16,639 with depreciation.

Vaults, $7,125; no depreciation.

Toilet, $90 without depreciation; $81 with depreciation.

Retort house, $132,997 without depreciation; $126,348 with depreciation.

Q. What is the additional item which you have added?

1435 A. Additional cost for bench foundations and the same items, planking, capping, pumping and sheet piling.

The next is condenser and scrubber house $13,520 without depreciation; $12,844 with depreciation.

Q. That was also built in 1863?

A. 1863, yes, sir.

Retort house- Nos. 2 and 3 $82,774 without depreciation and $78,636 with depreciation.

Vault for the same building, $12,834, no depreciation.

Exhauster engine and scrubber house, $29,643 without depreciation; $28,161 with depreciation.

Retort house No. 4 $11,216 without depreciation; $10,656 with depreciation.

Q. That building was built in 1863?

A. In 1863.

Q. And a depreciation of five per cent.?

A. Five per cent.

Vault south of No. 1 retort house and north of Nos. 2 and 3 retort houses, $45,229 without depreciation; with depreciation; $45,229, no depreciation, in other words.

Q. No depreciation on that?

A. No depreciation on that, no.

Q. Which vault is this?

A. This is the vault south of No. 1 retort house and north of Nos. 2 and 3 vault between purifier house and exhauster engine and scrubber house, $4,633. No depreciation.

Shed, $1,008 without depreciation and $807 with depreciation.

Coal shed No. 1 without depreciation, $54,055. No depreciation.

Q. This shed was built when?

A. 1887.

Q. All the buildings which you have given up to this time were built in 1863, is that right?

A. I believe they were, up to this time, yes, sir.

Q. Proceed.

A. —.

One coal shed with runway overhead, $1,000. No depreciation.

1436 Q. That was built in 1887?

A. 1887, yes, sir.

No. 2 coal shed, $71,531. No depreciation on that.

Q. And built in 1887?

POOR COPY

A. And built in 1887.

Carpenter shop, $156. No depreciation.

Q. That was built in 1887?

A. Yes, sir.

Brick fence on 11th Avenue, $4,643. No depreciation.

Q. That was built in 1863?

A. 1863.

Brick fence on 42nd Street, $5,267. No depreciation.

Q. Built in 1863?

A. In 1863.

Main building, stable and wagon shed, $24,579 without depreciation, $23,350 with depreciation.

East extension of above shed, $1,680 without depreciation, $1,596 with depreciation.

Another extension to above, $2,136 without depreciation, $2,029 with depreciation.

Q. Those were all built in 1863?

A. All built in 1863.

Building used for storing of hay, straw, &c., $3,715 without depreciation, $3,530 with depreciation.

Harness house, $1,965 without depreciation, $1,867 with depreciation.

Coke storage, weigh office, $492 without depreciation, $467 with depreciation.

Q. Both of those buildings last mentioned were built in 1863?

A. Yes, 1863.

Iron bridge crossing Twelfth Avenue, $3,050, no depreciation.

Q. When was that built?

A. 1886.

Q. Proceed.

A. Now I have to skip over to the addenda. These are buildings which are not contained on the original list.

Q. They have been given on your direct testimony, haven't they?

A. Yes, they are all shown here in the addenda.

1437 By Mr. KIRBY:

Q. Frame building for deodorizing purposes?

A. Yes, sir, frame building for deodorizing purposes, $890 without depreciation, $801 with depreciation.

Q. Have you got when that building was put up?

A. No, I have not got that. Cribbing and earth filling for eight oil tanks, eight feet diameter by 25 feet long, $2,438, no depreciation.

Frame pump house on pier, $320 without depreciation, $288 with depreciation.

Timber ash dump, $2,500, no depreciation.

Timber retaining fence around coal storage, $2,800 without depreciation, $2,520 with depreciation.

Q. That is the 700-foot fence you mentioned yesterday?

A. Yes, sir, 700-foot fence. That is in the addenda. That is all for the buildings.

Q. You failed yesterday to give the dimensions of the vault. Can you give us that now?

A. That is a very long description for each of the vaults. There is one vault under the octagonal brick building. The vault is 17 feet by 18 feet with 12-inch brick walls and foundation of piles, piles cut off 12 feet below grade line. Do you want a complete description of it?

Q. Yes.

A. Roof of vault, iron beams with brick arches. Vault eight feet high inside. Floors concrete 12 inches thick. Three air shafts from vault four by five by five feet high. One iron stairway from vault to yard. You only want the descriptions referring to the vaults themselves, do you?

Q. Yes.

A. That is all for the one vault.

Q. That vault you have appraised at how much?

A. $2,499.

Vault for engine and meter house. 20 by 38 by 9 feet, 16-inch walls on pile foundation, areaway on east side of vault, 4 feet wide, 10 feet high, 16-inch brick walls, coped with bluestone, and
1438 covered with wrought-iron grating.

Mr. MATHEWSON: Are those vaults?

The WITNESS: Vaults.

Mr. KIRBY: He has valued the vaults and areaway together.

Q. At how much?

A. Well, there are some more vaults come into that additional.

Q. Add them altogether.

A. No, that is all. $7,125.

Vault on south side of No. 2 and No. 3 retort house, 150 feet by 15 feet; vault, roof watertight, brick walls 20 inches thick on pile foundation, floor flagged, 11 feet 6 inches below sidewalk, roof 12-inch I-beams, 6 feet centre to centre 16 feet long, filled with brick and concrete arches, $12,834.

Vault south of No. 1 retort house and north of No. 2 and No. 3 retort house, floor flagged, roof formed of iron beams with brick and concrete arches, covered with flagstones, 3 inches thick, perfectly watertight, five vault lights 3 feet by 5 feet, with cast-iron frames and glass, adjustable hatches and wrought-iron pipe railing.

Q. This vault you valued at how much?

A. $45,229.

Vault between retort house and exhauster engine and scrubber house, 137 feet by 9 feet; same heights as vault on south and north side of Nos. 1 and 2 and 3 retort houses; side walls are walls of adjoining buildings; no partition walls; no adjustable hatches, $4,633. I believe that is all for the vaults.

By Mr. PAGE:

Q. That completes the buildings?

POOR COPY

A. That completes the buildings and the vaults.

1439 Q. In estimating the values of the buildings which you have given did you resort to the estimate as in ascertaining the value of the 14th Street buildings?

A. I did, sir.

Q. That is, you took those buildings of the Brooklyn Company that you spoke of as the standard?

A. In comparison, yes, sir.

Q. And when you had completed your estimate of the value of the buildings, you added 10 per cent. interest to the value, did you?

A. Yes, sir.

Q. And what was that for?

A. For the same item as in the instance of the 14th Street plant, for general engineering, draining, sewering, &c.

Q. What do you mean by general engineering?

A. Engineering for the entire plant as such, but not for the individual buildings, the laying out of the entire plant.

Q. Is there any established rates that engineers charge for such services in laying out a plant and supervising its construction?

A. I do not know that there is; I do not know that there is any established rate. That item was explained yesterday, what it contained. It contained all sorts of articles that I did not find in my examination, water in holder tanks, general engineering, the drawings, gradings, curbings, sewering and other items of that kind. I forget just what that was yesterday. I gave it all in detail.

Q. If you were building a plant and had gotten in your estimates or bids from all the different contractors, you would then add this item of 10 per cent.?

A. I would, sir.

Q. Raise the amount of your bid to 10 per cent.?

A. Yes, sir.

Q. To cover such matters?

A. Yes.

Q. Is that for your services as engineer or is it to cover such contingencies as might arise in the course of construction?

1440 A. Both; it would cover everything.

Q. While you were chief engineer of Bartlett, Hayward & Company, did you add to your bids that you put in this item of 10 per cent.?

A. We did not make any contract for the entire plant in Astoria, This refers to an entire plant.

Q. I did not say Astoria particularly. I say, while you were preparing your bids, while you were connected with the firm of Bartlett, Hayward & Company, did you add this item of 10 per cent.?

A. Sometimes 10 per cent., sometimes 15, depending on the kind and character of the plant.

Q. And sometimes nothing?

A. No, never nothing.

Q. I understand that you estimated on this plant, as far as the buildings are concerned, the price that it would cost to build the buildings to-day?

A. Yes.

Q. And the depreciation which you have figured in each instance is the depreciation that the buildings in their present condition show, from a building recently completed?

A. Yes, sir.

Q. You did not figure what it would cost to put up these buildings in 1863?

A. I did not.

Q. And then figure how much they had depreciated from that cost?

A. I did not.

Q. Now, you added also another item of five per cent. What was that?

A. I think I explained that yesterday, that it is interest charges.

Q. Well, explain it again if you did.

A. It is for interest charges, for the construction of the plant; it takes about two years—not less than two years—to construct a plant of this size and we add interest on the total expenditures for one year.

Q. And you believe, in the cost of construction, that interest on the money invested should be added as a part of the cost of construction?

A. I do.

1441 Q. And should not be afterwards carried into the price or cost of manufacturing gas?

Mr. Mathewson: Is not that a conclusion which the witness has not testified respecting?

Mr. Page: I will withdraw that.

Q. Would that five per cent. be included in your estimate, or would it afterwards be charged up by the company against the cost of the plant?

A. No, by the company.

Q. And it would not be included in the estimate which you made?

A. No, sir.

Q. Did you also add the ten per cent. and the five per cent. to the cost of the apparatus, as well as to the cost of the buildings?

A. Yes, sir.

At 5.20 o'clock P. M. adjourned to to-morrow, Thursday, August 30th, at 11 o'clock A. M.

Last Exhibits:

Complainant's 233.
State's N.
City's 34.

1442 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 2) pages, numbered from 719 to 1441 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office. (Vol. 2.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

1443 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY, OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *August* 30, 1906—11.00 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Page, Mr. Burr, Mr. Kirby.

U. S. Circuit Court, Southern District N. Y. Filed Jun- 24, 1907. John A. Shields, Clerk.

1444 **FREDERICK J. MAYER**, being further examined, testified as follows:

Cross-examination by Mr. PAGE (continued):

Q. I understand you desire to make some corrections in your testimony?

A. Yes, with regard to the 14th Street plant.

Q. Is it in the building or the apparatus?

A. In the apparatus. In transferring the figures from my original notes some decimal points were changed round in some instances.

Q. In the direct or cross-examination?

A. In the cross-examination.

By Mr. MATHEWSON:

Q. In the direct also?

A. Yes, in the totals, too.

Q. I did not ask as to individual items. Correction in those items would change the totals, of course.

A. Yes, I have them here; page 1431, in the instance of the brick tanks, for the two 250,000 cubic feet holders I gave the price yesterday as $573,838. It should have been $57,383. That is just misplacing a decimal point in transferring the figures. In the instance of apparatus contained in the engine room I gave the price for a jet photometer $650. It should be $65.00; and there should be also one additional photometer instead of two, making two items of $65 instead of one.

Q. Do you mean two items of $65 each, or two together of $65?

A. Two jet photometers at $65.

POOR COPY

Q. That is $130 instead of $650?
A. Yes, sir.

The MASTER: That is on page 1424.

1445 A. In the instance of contents of meter house I gave the price of two 16 by 13 meters as $1,600. This value should be $13,540.

The MASTER: That would seem to be at the bottom of page 1422. Two 16-feet diameter station meters. Is that the item?

The WITNESS: Yes. $13,540 for the two.

By Mr. PAGE:

Q. Here is another photometer here?
A. That is a Bar photometer. I was working up to the minute I began to give my testimony, and it is possible that there may be some other figures that I have not discovered.

By Mr. MATHEWSON:

Q. When you come to make a more careful comparison?
A. Yes, sir.

By Mr. PAGE:

Q. Turn to page 1429; there is another photometer there, right after where you give the item addendum No. 4. That price is right. That is a Bar photometer.

By Mr. MATHEWSON:

Q. That first item on page 1431, about the middle of the page, where it should be $57,383 instead of $573,838, that was the value of the two together, was it not?
A. Yes, two tanks.

By Mr. PAGE:

Q. Is that all?
A. Yes. Do you want the corresponding corrections for the totals?

Mr. MATHEWSON: Yes, give the totals.

1446 A. Total value of the 14th Street plant, including the above corrections, is $2,549,545, instead of $3,132,860.

Q. And the total valuation of all the plants will be correspondingly changed, of course?
A. I can give it to you if you want it.
Q. Yes, we might as well have it.
A. That would be without the 18th Street works, $15,532,489, instead of $16,098,893.
Q. And the total, including the 18th Street Works?
A. $17,040,524.
Q. In place of what?
A. In place of $17,606,928.
Q. In the description of apparatus which you have furnished us you begin with the valve house?

A. Yes, sir.

Q. Will you state what apparatus is contained in the valve house?

A. One 6-foot diameter by 2-foot-6 high governor; one cast iron manifold in conjunction with governor; in reality a combined governor and center valve; five floor stands or standards for valves.

Q. Do you value that as an entirety or in separate items?

A. Why, it is figured in detail, but the valuation is not entirely based on so many cents per pound as to what they weigh. This whole apparatus is in connection with each other. The combination forms really one apparatus.

Q. You take the weight then of an apparatus and multiply it by some figure?

A. By a unit price per pound.

Q. What is that unit price?

A. In this instance it is 5.6 cents.

Q. What do you get as the total cost at that rate?

A. $1497.

Q. And that is without depreciation?

A. Yes, sir.

Q. What depreciation do you figure?

A. $1198, equal to twenty per cent. deduction.

1447 Q. In estimating the value of the machine by weight you do not take into consideration its physical condition or efficiency, do you. In other words, a machine that is broken down and is all out of condition, will weigh just as much as a machine that is in thorough repair and operating at a high degree of efficiency, wouldn't it?

A. Yes, sir.

Q. On the market do you buy gas machinery by weight per pound?

A. Well, I have manufactured gas machinery and based my estimate on the pound price. All estimates are made that way.

Q. If you were going out into the market to buy a governor would you ask them at how much they would sell a governor per pound?

A. No, sir.

Q. There is a market price for these things, isn't there?

A. Yes, sir.

Q. And that market price is not arrived at by multiplying the weight by a price per pound?

A. No, sir; that is only in the instance of the governor; that does not refer to other things.

Q. No, we are talking about governors now. This machinery was placed in this valve house in 1863, wasn't it?

A. 1863, yes, sir.

Q. And has probably been in operation ever since?

A. Yes, sir.

Q. The price that you have given, $1198, that would be for a governor bought to-day, wouldn't it?

A. No, sir; that same governor bought to-day would be $1,497.

Q. Well, would $1497 be the price you would pay for that same governor new with the connections and fittings that you have specified here?

POOR COPY

A. Yes, sir. That would be an exceedingly low price for it.

Q. Whose manufacture is this particular governor, do you know?

A. Morris & Tasker.

Q. Are they still in business?

A. No, sir.

Q. How long since they went out of business?

A. Oh, I think all of 12 or 15 years.

1448 Q. Now we will pass on the purifier house. Will you state how many purifier boxes there are and give a description of them?

A. There are 8 boxes 20 feet by 22 feet by 3 feet deep inside and 24 inches deep by 4 inches wide cups; two layers of trays; 8 wrought iron covers and the necessary supports.

Q. Did you value those separately or did you value them with the covers?

A. With the covers and supports complete.

Q. Will you state what the size of the covers is?

A. 20 feet by 22 feet. Well, they are for those boxes—they are about 20 feet 3 inches by 22 feet 3 inches by 3 feet 6 inches deep on the sides.

Q. And the method of estimating the purifier apparatus, did you arrive at that by taking the weight?

A. I did.

Q. And multiplying it by 5.6 cents, the same unit as you used before?

A. Yes, sir.

Q. And proceeding in that manner what was your result?

A. $37,840 without depreciation and $35,948 with depreciation.

Q. Do you know when this apparatus was put into the purifying house?

A. 1863.

Q. And you figure that in that length of time it has depreciated 5 per cent.

A. Yes, sir. There is practically no depreciation except on the sides of the covers. The purifiers are as good to-day as ever.

Q. As you explained in regard to the 14th Street property, that was taken care of by repairs?

A. Yes, sir.

Q. Is the purifying apparatus sold by weight?

A. It costs by weight.

Q. In am speaking about when a man buys it. Of course any manufacturer makes his estimate on the weight very largely.

A. It is sold by a lump sum; a contract price.

1449 Q. And you have not stated the price here for purifying apparatus that you have obtained by asking estimates from various manufacturers of that apparatus?

A. I have not. It is my own estimte.

Q. It is your own estimate, based on that rate per pound?

A. Yes, sir. Estimated in detail, each factor in detail to make up that 5.6 cents per pound.

Q. And the apparatus was not weighed by you, but the weights were estimated?

A. The weights were estimated.

Q. So to arrive at the value of this particular plant you estimated the weight, estimated the unit, and multiplied the two together to produce a result?

A. Yes, sir.

Q. Now proceed with the next item?

A. Four additional purifiers, 16 feet by 27 feet by 3 feet 6 inches deep, with 24 inch by 4 inch cups, together with supports and covers and trays.

Q. And did you also take into consideration, in giving an estimate, the covers?

A. Yes, sir; I mentioned the covers.

Q. Oh, did you? Excuse me. And in estimating the weight of that apparatus and multiplying it by 5.6 cents as before, what result did you produce?

A. $18,576 without depreciation, and $17,648 with depreciation.

Q. Do you know whether these purifiers have been in use since 1868 or not?

A. I do not.

Q. You do not know how long those have been in use?

A. No, sir; I do not.

Q. What else have you?

A. Four small purifiers, 7 feet 6 inches by 10 feet 6 inches by 3 feet deep, with covers and supports, valued at $3,308 without depreciation, and $3,142 with depreciation.

Q. The result being arrived at in the same way that you stated before?

A. The same method, yes, sir.

Q. What is the capacity of this purifying apparatus?

1450 A. The total of all the purifiers is equal to the capacity of the plant.

Q. How do you arrive at that?

A. In proportion to the number of benches and other apparatus in the entire plant making up the total capacity of the plant. If such was not the case they could not purify the gas. We know the gas is purified.

Q. Is there more of a purifying capacity here than the total capacity of the plant?

A. That may be the case; I have not figured it in detail. There certainly is not less than the capacity of the plant.

Q. You have some small items, haven't you?

A. Not in the purifying house. Oh, yes, there is another purifying house:

Two hydraulic floor carriages, that is for the 20 foot by 22 foot purifiers, $1,400;

One hand power floor carriage for the 16 by 27 purifiers, $523.

One hand power floor carriage for the 7 foot 6 inch by 10 foot 6 inch boxes, $280.

Oxide barrows, tools, etc., not valued, included in the final 10 per cent. All these prices I am giving are always without the 10 per

POOR COPY

cent. and the 5 per cent interest charges, of course. Those would have to be added in each instance given to the totals.

Q. I understand; you do that when you get through?

A. Yes, sir.

Q. And those hand barrows and hydraulic floor carriages were all estimated in the same way that the balance of the purifying apparatus was?

A. Yes, sir.

Q. The same unit was used?

A. Yes, sir.

Q. Now proceed.

A. These units are based upon the actual cost figures, of which I have intimate knowledge.

Q. Proceed.

A. The next is the engine and meter house. The first is item No. 13 of the addenda in this house:

1451 One 48 by 48 McKenzie exhauster, with 12 inch by 24 inch horizontal engines; one Huntoon governor, complete, $3,400 without depreciation; $3,230 with depreciation.

Q. Do you know when that engine was put in the property?

A. No, sir, I do not; but it is in a thoroughly good condition. It is working every day.

Q. How did you arrive at this value that you gave? Do you weigh the engine and multiply it by some figure?

A. No, sir, I took the prices of the engines and the exhausters from the manufacturers.

Q. Is that the list price that you put in?

A. That is the price delivered and erected.

Q. Proceed.

A. One 13 foot 6 inch cast iron station meter, valued, without depreciation, at $5,800; one 11 foot 6 inch meter valued at $4,800, and one 10 foot 6 inch meter valued at $3,800. The total sum for the three meters, including depreciation, is $10,875.

By Mr. **Mathewson**:

Q. Is that total right?

A. With depreciation for the three meters.

Q. How much depreciation?

A. 25 per cent. In this instance it is due to the old style drums contained in these meters, instead of the new style.

By Mr. **Page**:

Q. These meters were put in at what time?

A. 1882 and 1888.

Q. What is the depreciation item for? Is it for a reduced efficiency of the meter?

A. On account of the old style drums; old drums instead of new drums that are being built now. I think it is a question of a very few years when these drums will have to be replaced with new drums.

1452 Q. Therefore, in allowing the value here you allowed for the replacing of the drums?

A. Yes, sir, twenty-five per cent. of the total cost.

Q. Now, proceed with the contents of the engine meter house.

A. There is one additional meter in another small meter house located alongside of the holders which is not included in the contents of this meter house and I have added under the addenda, item No. 13½, an 8 foot by 8 foot station meter; $3,000 without depreciation; $2700 with depreciation. That is item No. 13½.

Q. Now, we come to the retort house.

A. 60 benches of 6's and three stacks; total value without depreciation, $180,000; with depreciation, $171,000. To this must be added the item in addenda, No. 15, on account of the deep furnace and the new settings there must be added to each bench $500, I think it is.

Mr. Mathewson: Yes, item No. 15.

The Witness (Continuing): $500 for each bench.

Q. That would make then for the sixty benches, thirty thousand dollars?

A. Yes, sir, additional thirty thousand dollars for the sixty benches without depreciation, and $28,500 with depreciation.

Q. That makes the value of the benches without depreciation $210,000?

A. Yes, sir.

Q. Without depreciation?

A. Yes, sir.

Q. And with depreciation how much?

A. $199,500.

Q. The size of these retorts was given as 14 inches by 24?

A. Yes, sir.

Q. And the setting 9 feet deep; what does that mean?

A. That is the depth of the regenerator furnace from the floor line.

Q. What is the length of the retort?

A. That means the length of the retorts. Nine feet deep means the length inside the arch.

1453 Q. What do you mean by regenerative type, 60 benches of 6's and 6 blocks of regenerative type?

A. That refers to the style of furnace applied under the benches, which in this instance is of great depth, I think it is 9 or 10 feet and contains recuperative flues to heat the secondary air required for the combustion in the benches.

Q. That increases, d[illegible]'t it, the efficiency of the retort very much?

A. Yes, sir.

Q. And by having the recuperative flues——

A. I beg pardon, not the efficiency of the retort, but the fuel consumption.

Q. Well, what I mean by that, for a less amount of fuel you can carbonize a greater amount of coal?

A. Yes, sir.

POOR COPY

Mr. MATHEWSON: With the same amount of fuel you can carbonize a greater amount of coal.

Mr. PAGE: Well, either would be correct.

Mr. MATHEWSON: You might within certain limits.

Q. As comparing this particular retort house with the retort house at 14th Street, how much more efficient are these retorts than those at 14th Street?

A. In 14th Street I think there are some one-fourth depth benches, some half depth benches and these are full depth benches. Of the three, these would give the best results, as far as fuel consumption is concerned.

Q. That is an important item in the manufacture of gas, isn't it?

A. Yes, sir.

Q. What condition are these benches in?

A. Perfect condition.

Q. Do you know when they were put in?

A. The arches, in 1863; they had been rebuilt since that 1454 time; and the settings have been renewed many times.

Q. When were they rebuilt?

A. The settings, approximately every three years.

Q. I know that, but you said that the arches had been rebuilt or the apparatus had been rebuilt since then?

A. I have not got the date of rebuilding the arches; they were rebuilt at several times.

Q. You do not refer to the entire apparatus when you say it has been rebuilt; you refer to this refilling, is that what you mean?

A. I refer to the refilling and rebuilding of the arches.

Q. The refilling is taken care of as an ordinary repair made necessary by wear and tear?

A. Yes, sir.

Q .How about the rebuilding of the arches, is that the same?

A. No, that probably does not occur but once in perhaps 20 years, 25 years in some instances.

Q. But this apparatus is in perfect condition to-day, you say?

A. Yes, sir.

Q. And do you allow something for depreciation?

A. 5 per cent.

Q. Well, why, if the apparatus is in perfect condition?

A. Because the arches are older in proportion to what the settings are. The settings are being reset now, a part of it is entirely new, alreeady in operation and the balance is being rest at the present time.

Q. I notice the retorts here are 14 inches by 24 inches, while the retorts, or a large number of them, at 14th Street are 12 inches by 21 inches.

A. Yes, sir.

Q. Is this a better retort, 14 inches by 24 inches—will it produce better results than a 12 inch by 21 inch retort?

A. No, sir, the results are the same.

1455 Q. Well, the results are gas, of course; but I mean can you produce gas cheaper in a retort of this size than you can in the other?

A. No. The charges of coal in smaller retorts are less than those in the larger, and the fuel consumption is correspondingly less, so there is no difference.

Q. Well, to produce the same number of thousand cubic feet of gas you have to charge a small retort more frequently—that is, more times—to produce the same number of thousand cubic feet, than in the other?

A. In an indirect way you do. You do not charge the same retort oftener, but you have more retorts, and with the large retorts you produce the same amount of gas; in other words, you charge more retorts in the same space of time, but not oftener.

Q. It takes just as long firing to carbonize in a large retort as it does in a small retort?

A. Yes.

Q. Now proceed with the condenser and scrubber house.

A. Condenser and scrubber house:

Two cast iron scrubbers, 8 feet diameter, 18 feet height, $1,560, without depreciation, and $1,482 with depreciation.

Q. Is this each, or the value of both together?

A. That is only for one, and item No. 16 is the addenda; the item is explained that it should be doubled, therefore there are two scrubbers, each of the same amount.

Q. How did you arrive at the value you give on the main sheet of your paper that you are answering from of two scrubbers of 24,000 pounds, multiplied by 6.5 cents a pound.

A. 6.5 cents a pound forms a figure composed of the following units——

Q. No, I do not mean that; I say how do you get at your 24,000 pounds?

A. That is estimated from the size of the apparatus.

Q. That is the two scrubbers would weigh——

A. 48,000 pounds.

1456 Q. Well, you had the two scrubbers before you when you made the estimate of 24,000 pounds; you knew there were two scrubbers.

A. The estimate is made on the basis of one scrubber, and in the schedule multiplied by the number of apparatus, and in this instance was overlooked, and the weight put down for one instead of two. That I did not find until after I went to the works after all my schedule was made, to make a final examination, and then I discovered that error and added it to the addenda.

Q. Then you knew there were the two scrubbers there?

A. Yes.

Q. Now proceed with the condenser.

A. Two scrubbers are in my original notes, but in transferring it on the schedule we transferred one instead of two.

Q. Those two scrubbers have been there since 1863, haven't they?

POOR COPY

A. Yes, sir. One wrought iron tubular condenser; value, without depreciation, $17,220, with depreciation, $16,359.

Q. Is that a water condenser?

A. Yes, sir.

Q. Do you know when that was erected?

A. 1863.

Q. How did you arrive at the value?

A. By multiplying the weight by the unit part of 8.4 cents per pound.

Q. Proceed.

A. One air condenser, without depreciation, $11,607, with depreciation, $11,027.

Q. Was that also estimated by weight?

A. It was.

Q. And what is the unit of weight there?

A. The unit of price, do you mean?

Q. Yes.

A. 7.3 cents a pound.

Q. Proceed.

A. One cast iron box 7 feet 6 inches by 5 feet 6 inches by 9 feet deep, $633; no depreciation.

Retort house Nos. 2 and 3.

Q. This box was an estimated weight at an estimated price, was it?

A. Yes, sir.

Q. What is your estimated price per pound?

A. 4.5 cents a pound.

1457 Q. Proceed.

A. Retort house- Nos. 2 and 3, 6 benches of 6's, $18,000; 14 benches of 6's, $30,940, making a total for the above benches, $48,940, without depreciation; with depreciation, $46,493; 1 range of 20 benches of 7's, $65,000, without depreciation; $61,750 with depreciation.

Q. Building in benches of 7's is an improvement, isn't it, on building in benches of 6's?

A. Well, it depends upon the space you have at your disposal; I cannot call it exactly an improvement.

Q. Well, if you have a whole block to lay out your plant in—that is, I mean it produces better results and more economical results.

A. Yes, in the manner I have described before.

Q. And if you were building a plant to-day and had the room that they have in these 14th Street and 42d Street plants, you would probably put it up in benches of 7's.

A. If I would build the plant for the total capacity at once, I should; but if I should start the plant with probably one-half of the capacity as this was done, I should not.

Q. Yes, I am talking about the plant, if you should put it up today. You say then you would?

A. For the total capacity I should put in larger benches.

By Mr. **Mathewson**:

Q. Built at one time?

A. At one time.

By Mr. **Page**:

Q. How much larger?

A. For a plant of this size I should put in benches of 8's.

Q. Go on, Mr. Mayer.

A. There is one item in the addenda No. 17 which goes into this building $500 must be added to each bench for the same reason as given in retort house No. 1.

1458 By Mr. **Mathewson**:

Q. These are deep regenerative furnaces, aren't they, all these in this retort house?

A. Not all, no.

Mr. **Page**: 14 benches are direct fire.

Mr. **Mathewson**: All except the 14 benches?

The **Witness**: Yes, that adds $3,000 without depreciation and $2,850 with depreciation.

Q. To which item?

A. To the 6 benches, the deep regenerative furnaces, the first item in the schedule.

By Mr. **Page**:

Q. You add how much to each bench?

A. $500, $3,000 for the six.

By Mr. **Mathewson**:

Q. Nothing for the fourteen?

A. No, sir; they are direct fire.

Q. How about the twenty benches of sevens? They are deep regenerative furnaces?

A. There is no addition to those; they are figured at $3,250 per bench.

By Mr. **Page**:

Q. What else have you in this retort house?

A. Nothing else in this retort house. The next is the Exhauster and engine house.

Q. Proceed.

A. One 8 by 8-inch Greenfield Engine, $1,625 without depreciation, $1,219 with depreciation; two large Mackenzie exhausters, $3,400 without depreciation, $2,550 with depreciation; one 16-inch by 30-inch horizontal engine, $3,200 without depreciation, $2,400 with depreciation; one 8-inch by 8-inch Greenfield engine, $425 without depreciation, $319 with depreciation; one 8-foot by 16-foot washer, $6,860 without depreciation, $5,145 with depreciation; one 10-inch by 10-inch Greenfield engine, $550 without depreciation, $413 with depreciation; one Eclipse washer, $5,488 without depreciation, and $4,116 with depreciation; 1459 one tubular condenser, $4,900 without depreciation, $3,675 with depreciation.

Q. Give the number of tubes 42-6 by 5?

A. It contains 576 5-inch diameter cast iron tubes. My first depreciation on all that apparatus named for the exhauster and engine house was 25 per cent. But upon another examination, after the completion of the schedule, I found that the depreciation should only be 5 per cent., for the reason that all the apparatus is in perfect working condition; that makes an addition of $5,281 to the values of the apparatus in that house. I wish to state that these little differences occurred in going back and forth to the works, because I could not grasp all the thing at one time, and while my men were working taking measurements at the works I was working on my unit figures to apply to the cost, and I had to go back there, and found the condition to be different than what I had assumed at first.

Q. You have got some oil gas scrubbers in here?

A. In this building?

Q. Those you have in this schedule you have given me. Two oil gas scrubbers.

A. Two oil gas scrubbers. They were given at $436 for two, without depreciation, and $327 with depreciation. That should be corrected as per item 19 in addenda. There should be added $734 without depreciation, and $698 with depreciation.

Q. Is that to be added to the other?

A. That is to be added to the other; yes, sir.

Q. There is one scrubber valued at $436 and another scrubber valued at $734?

A. No, the scrubbers weighed 18,000 pounds instead of 6,703 pounds, making a difference of 11,297 pounds in the weight,
1460 which I discovered on remeasuring the apparatus.

A. And on a remeasurement and estimate of weight you found that you had made a mistake before, and then you multiplied this result by how much?

A. By 6.5 cents, the same price that was applied to the weight that was too small.

Q. Proceed now with the other oil gas condensers.

A. One cast iron oil gas condenser, without depreciation, $1,512; with depreciation, $1,134. These prices should be changed as per item No. 20 of the addenda, by adding $303 to the price, including depreciation.

Q. That is, that price should be $1,437 instead of $1,134?

A. $1,437.

Q. On a re-examination you found it was not depreciated as badly as you thought it had been?

A. No, sir; as I said before, I could not establish those facts until I went back and forth repeatedly to the various works during the time my men were taking the measurements, because it was impossible for me to grasp the condition of all the apparatus on the first examination, and I did not want to go back and make an entirely new schedule, as the time was too short, and I made these addenda.

Q. We have another retort house, No. 4.

A. Retort house No. 4, four benches of sixes.

Q. If you have any corrections to make, probably you had better make them now.

A. Right away?

Q. Yes, unless you prefer to give it the other way.

A. I can make the corrections. Value, without depreciation, $14,000, and with depreciation, $13,300, which includes the item No. 20½ referred to in the addenda.

Q. What do you mean by "entirely disconnected except arches?"

A. I found that all the settings had been torn out, and on my second visit I found that new settings had been delivered at the grounds and they were going to put them in; they were getting the arches ready for repairs. I thought at first they had been abandoned. 1461

Q. Now, the values?

A. One small steam drip pump, $84; no depreciation. Two continental boilers, 60-H. P. I will give this and give the deductions afterwards. $12,000 without depreciation, $10,800 with depreciation.

By Mr. **Burr**:

Q. That is for both boilers?

A. For both boilers.

Breeching and steel stack, $475 without depreciation, $428 with depreciation; one Continental boiler, 105-H. P., $5,100 without depreciation, $4,590 with depreciation. Breeching and stack for same, $475 without depreciation, $428 with. Two small boiler feed pumps, $176 without depreciation, $158 with. One Knowles Air compressor, $700 without depreciation, $630 with depreciation.

By Mr. **Page**:

Q. Before we proceed, I notice that you value a 60-H. P. boiler at $6,000 and a 105-H. P. boiler at $5,100.

A. Yes. I say I correct that afterwards in the addenda.

Two feed water heaters, $600 without depreciation, $540 with.

One 8 x 8 Greenfield engine, $365 without, $324 with.

One vertical drill press, $100 without depreciation, $80 with.

One pipe cutter, $425 without depreciation, $340 with.

One bench lathe, $50 without depreciation, $40 with.

Mr. **Page**: Can he not lump those small items?

Mr. **Mathewson**: If you do not want the values of them why not let him say simply, bench lathe, grindstone, &c.? 1462

Mr. **Page**: They are small items, I do not think we ought to waste time on them. Just state what they are.

A. Grindstone, two brick forges, two anvils, one sledge block, one hand shear, one hand punch, one bench, one portable forge, five 100-gallon oil tanks, one 50-gallon oil tank, blacksmith's tools, wooden benches, bench vises. Those latter items, the tools, come out, they are taken off of the ten per cent. addition to the end of the schedule. As I said before, 10 per cent. has been omitted from all

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those figures. There should be deducted from the total sum of the boilers $10,025, including depreciation.

Q. On this Continental 60-H. P. boiler, or the three?

A. On the total sum of the three boilers.

Q. Why did you make that deduction?

A. It was a mistake in the first calculation.

Q. What mistake was made in the first calculation?

A. The first two boilers should cost —without depreciation, instead of $12,000 without depreciation, and the third boiler should cost $2,730 instead of $5,100 without depreciation.

By Mr. **Mathewson**:

Q. How much with depreciation; did you figure that out?

A. I gave the total just now; with depreciation $5,265 for the three boilers.

By Mr. **Page**:

Q. Then you were right in your original assumption that a 105-H. P. boiler 7 by 12 would cost more than a 60-H. P. boiler 5 feet 6 inches by 12, were you? Deducting your $6,240 from $12,000 you get $5,760; divide that by two is $2,880 as the price of the
1463 60-H. P. boiler, while you give the price of a 105-H. P. boiler as $2,730. Is that right?

A. The price for the two boilers of 60-H. P. each should be $3,120 without depreciation, and the price for the one boiler 7 feet in diameter should be $2,730 without depreciation.

Q. Therefore instead of $12,000 as the value of those two boilers it should be $3,120.

A. Yes.

Q. How do you arrive at the value of those boilers?

A. Those prices I got from the Continental Iron Works.

Q. Proceed.

A. Carpenter shop, total contents, $1,500, which includes items in addenda No. 22.

Q. How much do you make it?

A. $1,500.

Q. Without depreciation?

A. Yes.

Q. And with depreciation how much?

A. $1,425 with depreciation.

Q. You can take the coke storage yard in the same way.

A. Coke storage yard, total value $1,510 without depreciation, $1,323 with depreciation. Tanks and scales, total value without depreciation $1,226, with depreciation $1187.

Q. How do you get the value of that?

A. I got that from the companies that furnished the scales.

Q. Do you take their list price?

A. No, I telephoned for a price for the scales to be delivered and erected in New York City.

Q. Proceed.

A. Water meters, $100; no depreciation. Coal in storage not included in plant. Coal hoisting apparatus, total price of all machinery, $55,000 without, $52,250 with.

Q. Now, in adding this $20,000 to the original estimate of value, what is the reason for that? Why did you add it?

A. Because of a correction of the figures given by the people that furnished the apparatus. They gave me first $35,000 and omitted the grab bucket and the hoisting rigging at the dock, the
1464 hoisting engine, etc. In their first price they included only the railways and transporting machinery for the coal, but no hoisting machinery.

Oil in tar storage:

Two wrought iron tanks, 9 feet diameter, 30 feet long, $2,075 without depreciation, $1,868 with.

Eight wrought iron tanks, 8 feet diameter, 25 feet long, $6,014 without depreciation, $5,714 with.

One wrought iron tank, 30 feet diameter, 21 feet long, $3,302; no depreciation.

One wooden tank, 30 feet diameter, 15 feet 6 inches high, $540.

Piles under wooden tank, $650.

Wrought iron tanks, 5 feet diameter, 25 feet long, $437 without depreciation, $415 with.

One wooden well, 20 by 25 by 8 feet deep, $256 without depreciation, $230 with.

One wooden well, 20 by 20 by 8, $166 without depreciation, $150 with.

One wooden well, 18 feet 7 inches by 7 feet 6 inches by 8 feet, $437 without, $415 with.

Piles under wooden tanks, $576 without depreciation, $519 with. The depreciation for piles in this instance is due to the fact that the piles are above the water line and show the least signs of decay right above the ground. If piles are above the water line I figure no depreciation. I make that explanation so that you will understand it when I say there is no depreciation on any foundations.

Q. Have you got the price of wrought iron tank, 12 by 12? Is that omitted?

A. Yes, it is omitted.

Now, under the total there is an item, $25, which adds to the price, with depreciation, $4,364, for lead lining in all of the wooden tanks, that I did not discover until a subsequent visit to the works.

Q. In arriving at the valuation that you have given for
1465 these wrought iron tanks, did you proceed as before, by weight?

A. Yes.

Q. And what unit of value did you take?

A. 6¾ cents per pound.

Here a recess was taken until 2:15 P. M.

After Recess.

By Mr. PAGE:

Q. Is there some correction you wish to make?

A. Yes, sir; I want to insert item No. 14 under the heading of engine, meter house and office. The depreciation was changed from 25 per cent. to 5 per cent. under that item 14 on account of the meters having been provided with new drums in 1892 for the 13 foot 6 inch meter, and the drums which were placed in place in 1882 at that time were provided with new partitions.

By Mr. **Mathewson**:

Q. When you made the 25 per cent. estimate did you assume that the drums were the same as were put in when the meter was manufactured originally?

A. Yes, sir.

Q. And you found subsequently that that was not the case, but new drums had been substituted?

A. New drums had been supplied; yes, sir.

Q. What would that item be?

A. That adds an item, including depreciation, of $2,805.

Q. What would it be then, the value as you now figure it, including depreciation? Oh, those were the three engines under heading of meter, engine house and office?

A. Yes, sir. It would make a total item of $13,680, instead of $10,875.

1466 By Mr. **Page**:

Q. Is there anything else you wish to add?

A. Have I item No. 26 in the addenda?

Q. No, I don't think so.

A. I think the last we had was the lead lining for wooden tanks?

Q. Yes.

A. And there was one additional item, No. 26, in the addenda for one cast iron purifier, 30 feet by 20 feet by 3 feet deep, with wrought iron cover and hoisting crane, located in the deodorizer house; total value, $4,760 without depreciation; $3,332 with depreciation.

Q. Why do you take off a 30 per cent. depreciation there?

A. That was a purifier which was located on the dock, and is not in as good condition as were the rest of the purifiers used to purify for carbonic acid and sulphur. This purifier was erected, I understand, for the purpose of relieving the works of any smell, of which complaint was made by the Health Department, and has not been kept in as good condition as the rest of the plant?

Q. Is it used?

A. Yes, sir. It was not in a good condition. The sides are rusted, the cover tops are rusted.

By Mr. **Mathewson**:

Q. Let me ask you for clearness, whether all these items in the addenda which you are dealing with have been taken into account in making up the totals to which you have testified?

A. Yes, sir.

Q. So they are all included in the totals?

A. Yes, sir.

Q. They are not changes?

A. There are no changes in the totals except for the corrections as we found them going along, giving the changes, such as I made this morning, for instance.

Q. Is that true of all these schedules for the other plants also?

A. Yes, sir.

1467 By Mr. **Page**:

Q. This completes the apparatus of the Consolidated Gas Company that is used for the manufacture of coal gas?

A. Yes, sir.

Q. At these two stations, 14th Street and 42nd Street?

A. Yes, sir.

Q. In giving the capacity of the plants at 14th Street as 5,000,000 cubic feet per day and at 42d Street as 4,500,000 cubic feet a day, did you take that as the maximum daily capacity?

A. Yes, sir.

Q. Could you run works at that maximum daily capacity?

A. Yes, sir.

Q. Could you run works at that maximum daily capacity for any length of time?

A. Continuously.

Q. What candle power gas did you estimate would go through these works at this capacity? Just the ordinary coal gas as it is produced, is that it?

A. Yes, sir.

Q. Then you would add to the total capacity of the works, would you, the oil gas that is added as enricher?

A. Yes, sir.

Q. Are all parts of the two stations up to that full capacity?

A. Yes, sir.

Q. That is, the retorts, purifiers and condensers?

A. The entire apparatus is that capacity.

Q. And you could run it at that capacity during the period of the highest demand?

A. Yes, sir.

Q. In the winter months?

A. Yes, sir.

Q. All through the month of December?

A. Yes, sir, or longer, if necessary.

Mr. **Mathewson**: I do not think the witness is a gas maker, or an expert in the particular line in which the Senator is questioning him, but whatever he says, for what it is worth, I have not objected. He is not a gas manufacturer.

Mr. **Kirby**: It is not what the works do. It is the apparatus there, with which he seems to be familiar. 1468

Mr. **Mathewson**: There are a good many other things though, such as shutting down for repairs, &c.

Q. Now in the various buildings that you appraised, are all of them in actual use now for the manufacturing purposes of the plant?

A. Naturally.

Q. How about the apparatus?

A. All in use.

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Q. There is nothing upon this appraisal that you have given here that is not in actual use to-day in the plant?

A. No, sir.

Q. Now as I understand, you did not make your appraisal by finding out how much this property actually cost the company and then making an allowance for depreciation?

A. No, sir, I never saw any figures of that kind.

Q. Is it your idea that gas-making machinery by use enhances in value?

A. Some of them do, yes, sir.

Q. What particular part of the gas machinery becomes more valuable by use?

A. Well, for instance, water gas generating apparatus.

Q. We are talking about the coal gas stations?

A. Oh, particularly about coal gas? You want nothing except new engines, exhausters and apparatus of that kind. Those which have moving parts, they are better operated after they have been submitted to some wear and tear and have the proper bearing and do not heat and do not bind.

Q. Well, you mean by that that any machine when it is first operated is stiff and does not give its maximum capacity?

A. Yes, sir.

Q. But if it is run for a few weeks and has "found itself," as they express it, I believe, then does it continue to increase in value?

A. No, it does not increase its value, but it maintains its
1469 value.

Q. Then if it should appear that this very apparatus cost the company very much less than these estimates which you have given would you change your estimate or your appraisal at all?

A. No, sir, I would not.

Q. Why not?

A. My estimates are based upon my own personal knowledge of these matters for a good many years and therefore I cannot be wrong.

Q. And therefore if the company actually paid less you think the company must have been wrong?

A. Well, I don't know how they established their selling prices, but my values are based upon actual facts as they exist to-day.

Q. Then, as I understand it, you are not attempting to find the capital of the company that was invested in the plant, but what someone would have to pay if they got you to build them a plant somewhat similar to this to-day, is that it?

A. That is the idea exactly, with the exception that it would be an exact duplicate of the plant as it exists to-day.

Q. If, however, you were going to build a coal gas plant to-day of a capacity of 9,500,000 cubic feet per day, would you reproduce this identical plant?

A. I would not.

Q. You could not buy in the open market to-day, could you, all the apparatus that is used in these plants?

A. With a few exceptions, yes.

Q. There is nothing appearing in your testimony, nor have you any knowledge, of how much of this plant came to the Consolidated Gas Company at the time of its consolidation in 1884?

A. No, I know nothing about it.

Q. And don't you know what particular portions of the plant have been added since that time?

1470 A. No, I do not. That is I mean to say I do not know at the present time. I have been figuring on the work myself for some years, but I cannot state just now what they are.

Q. The additions that you have made yourself to the plant of the Consolidated Gas Company have been made to the 14th and 42d Streets, or to the water gas stations?

A. I made some in 42d Street, I believe, and a few apparatuses in the 14th Street; I think some at 21st Street—I don't recall exactly all the works now. There are other stations which I don't recall at the present moment.

Q. In making this appraisal, did you state the actual amount received by you for making these additions?

A. No, sir.

Q. Did you take a larger or smaller amount?

A. That I can't tell, because I did not refer to the figures which they received at all.

Q. Well, then, as I understand it, this valuation of yours is not the valuation of this plant as it exists, but you have taken a mental picture of the plant and estimated what it would cost you to reproduce such a plant to-day, and have made a mental estimation of the weight of such a plant and multiplied it by some other figure to produce the appraisals that you have presented here to-day?

Mr. Mathewson: I object to one portion of that question as a conclusion. The Senator states he has not taken the value of the plant. It is our contention that the value of that plant is what it would cost to reproduce the plant to-day. It causes the witness to discriminate in a matter of law, which he is not competent to do.

Mr. Page: That may go to the weight.

The Master: I think he may answer it. It is proper on cross-examination. That is, if he can answer.

1471 A. If you mean by the mental picture of the plant a careful, personal examination of the same then you are correct. I have based my valuations upon a careful, personal examination and estimated each and every item in detail of what that value would be to-day if I were asked to build a new plant.

By Mr. Mathewson:

Q. Less depreciation that has accrued?

A. Yes, except when depreciation is mentioned.

By Mr. Page:

Q. You mean by that that you take first what it would cost you to build a similar plant to-day, and then from that standard you figure off a certain percentage for depreciation, that amount being the amount that the property in its present condition has depre-

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ciated from the standard which you would establish as a thing which you would produce to-day, is that so?

A. As absolutely new apparatus, yes.

Q. Yes. As absolutely new apparatus?

A. Yes.

Q. I understand that if you were to produce a plant to-day which would produce the results that this plant does, that you would not build this kind of a plant; is that right?

A. Not if I were asked to build a plant with the total maximum capacity as it exists to-day.

Q. And you could build such a plant cheaper could you not than the estimate which you have given?

A. No, it would cost more, but it would be better. It would include a great many apparatus which these plants do not include.

Q. But your result in the cost of gas produced at that plant would be very much less, wouldn't it?

A. Yes.

Q. Take merely the item of the number of retorts to a bench and the size of the retorts; you have stated that it would take less 1472 fuel per hundred pounds of coal carbonized in the larger retorts and more retorts to the bench, and you would make a saving that way?

A. Provided you compare the benches of the new plants of the same type with the benches in the existing plant.

Q. Yes.

A. That is, if you compare benches of both plants with full depth regenerating furnaces, one with the other, or benches without any regenerating furnaces, one with the other.

Q. Well, you would not manufacture to-day a bench without regenerating furnaces, would you?

A. I would not.

Q. Now, as to the item of labor, don't you save on labor by having the modern bench where there are more retorts to the bench and larger retorts than you would upon the old-fashioned bench that is used in these 42d and 14th Street plants?

A. The difference would be very slight when you apply machinery, when you apply stoking and drawing machinery and work the same to the full capacity of the machines, then you save in one instance as much as you would in the other almost.

Q. Now you have stoking and drawing machines at 14th Street?

A. Yes, sir.

Q. But you have not in 42d Street?

A. No, sir.

Q. Now, the inclined retort takes even less fuel, doesn't it than the horizontal retort?

A. That is not due to the location of the retort, it is due, as I said before, to the furnace applied under the retort settles; if you have the same depth of furnace under the inclined retort as you have under the horizontal retort, then the fuel consumed in both would be alike.

Q. Yes, but they do not, do they?

A. They do. There are many instances where the heating surface in the inclined was absolutely the same as the horizontal, both styles of retorts being of the same length.

1473 Q. Is that so in the inclined retort house at Astoria?

A. That is the case, yes, sir.

Q. That it was the same depth and the same heating surface?

A. Approximately. I don't know the exact dimensions, but I think that the horizontal retorts have approximately the same cross-sectional dimensions as the inclined retorts.

Mr. Mathewson: As a matter of fact, we have both horizontal and inclined.

Mr. Page: I know, but I am talking about the inclined retort house, as I say.

Mr. Mathewson: We have installed both kinds at Astoria, and don't know which will be the best.

Mr. Page: I limited my question to the inclined retort house.

The Witness: There is no difference where the heating surface of the retorts is the same in both cases and the same method of heating is applied.

Q. Now, in arriving at the prices for some of your materials here you say you applied to the manufacturers and got estimates from them?

A. In such apparatus which are of standard makes and in the instance of retort benches.

Q. That was to be installed, wasn't it, the plant installed?

A. And brick work installed complete, to which I added my iron work, in the instance of benches, at my own valuation and my own estimate.

Q. Would not the contractor add 10 per cent. for engineering in his estimate?

A. Undoubtedly, for his own work, in each and every instance.

Mr. Mathewson: But that would not dispose of the supervision of our own engineers.

The Witness: But that 10 per cent. added on the end 1474 would not affect the other 10 per cent. That is an entirely different percentage.

Q. Then on any apparatus that would be furnished by contractors there would be 20 per cent., would there for engineering?

A. No, sir, the contractor would only add 10 per cent. for his own shop cost, operating expenses, wear and tear of plant, &c., while the 10 per cent. which is added to the end of these estimates is for expenses which the gas company would have in addition to the cost which they paid the manufacturer for the apparatus, for their own engineering costs.

Q. Well, then, as I understand it, if you went to a contractor who gave you a bid on an apparatus that would cost him $10,000 and he would add 10 per cent., which would be $1,000, you would put that in this estimate and add another 10 per cent. to the $11,000 in getting at your estimate of price or of cost?

A. Exactly.

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By Mr. **Mathewson**:

Q. Would not his 10 per cent. be in his own estimate or bid?

A. The first 10 per cent. would be in his own bid or estimate.

Q. You would not put it in?

A. No, I only put in one ten per cent. to his bid.

By Mr. **Page**:

Q. But you would take his figure at $11,000, put that in, and add your ten per cent. to it, wouldn't you?

A. I would.

By Mr. **Mathewson**:

Q. You mean to say that if his bid or estimate was ten thousand dollars you would add one thousand dollars to that for his bid?

1475 A. No, for the general engineering of the plant that ten per cent. is created by the gas company for the entire construction of the plant as such, not for any individual apparatus. If I should buy any individual apparatus for repairs and so forth, I should not add anything for engineering expenses; but in laying out and constructing a gas plant that ten per cent. is needed and added by the gas company and more than that in many instances. You must remember that that ten per cent. includes a great many other items, such as filling holder tanks with water and curbing, grading and sewerage. I enumerated them the other day, miscellaneous expenses.

Q. Now, we will turn to the 21st Street plant. The 21st Street station is a water gas plant, isn't it?

A. Yes, sir.

Q. And also includes a plant for the manufacture of oil gas to enrich coal gas at the 14th Street station, is that right?

A. Yes, sir.

Q. Will you give us the value of each of the buildings?

A. The total value of all buildings without the ten per cent. for general engineering and the five per cent. for interest charges amounts to $1,579,695.

Q. Well, I asked you to take up the buildings in detail.

A. Stove storage and meter proving shop, $57,470 without depreciation, $56,320 with depreciation.

Mr. **Page**: You have given the dimensions of these buildings, have you?

The **Witness**: Yes, sir, they are in the schedule.

Mr. **Mathewson**: They are all given.

The **Witness**: Meter repair shop and office, $59,530 without depreciation, $58,340 with depreciation.

1476 Stove repair shop, $26,830 without depreciation; $26,294 with depreciation.

Stove cleaning room, $1,285 without depreciation; $1,260 with depreciation.

Diaphragm room, included in stove repair shop.

Prepayment meter repair shop $14,557 without depreciation, $14,266 with depreciation.

Storage room $1,836; without depreciation; $1,800 with depreciation.

Washroom, $1,512 without depreciation; $1,482 with depreciation.

Q. All the buildings you have mentioned up to and including the last were built in 1890, were they?

A. Yes, sir.

Q. And you figured the depreciation at the rate of two per cent.?

A. Yes, sir.

Q. Proceed.

A. Boiler house, without depreciation $11,023 with depreciation, $10,742.

Oil storage house, without depreciation, $221; with depreciation $210.

Lead and yellow metal storage house, without depreciation $650; with depreciation $618.

Fire hose house, without depreciation $54; with depreciation $51.

Valve house, without depreciation $2,828; with depreciation, $2,743.

Q. Now the last three buildings before this one were built in 1890?

A. Yes.

Q. And this last building was built in 1883?

A. That is the way I have it here.

Q. That is the valve house?

A. Yes. Octagonal valve house, $2,592 without depreciation; $2,463 with depreciation.

Valve house, $475; without depreciation; $452, with depreciation.

Q. That building was built in 1880?

A. 1880, yes, sir.

1477 Q. And the Octagonal valve house in 1883?

A. 1883.

Tinsmith shop, without depreciation, $3,193; with depreciation $3,033.

Q. That was also built in 1880?

A. 1880.

Storeroom, triangular building, without depreciation, $320; with depreciation, $295.

Paint shop, triangular building, without depreciation, $320; with depreciation, $295.

Office building, without depreciation $20,000; with depreciation, $19,000.

Q. That building was built in 1860, wasn't it?

A. 1860 is what I have it down here.

Engine room and machine shop and gangway, without depreciation $74,991; with depreciation $71,240.

Q. That building was built in 1865?

A. 1865.

Engine room, without depreciation $8,600; with depreciation $8,428.

Q. That was also built in 1865?

A. Yes, sir.

Machine shop, without depreciation, $2,200; with depreciation $2,156.

Q. Built in 1865?

A. 1865.

Old retort house, without depreciation $74,860; with depreciation $71,117.

Foundation for benches in old retort house, $11,800. No depreciation.

New shop building, $7,420 without depreciation; $7,272 with depreciation.

Q. That building was built in 1890, wasn't it?

A. The new shop building.

Q. Yes.

A. 1890, yes, sir.

Old carbureter house, $8,176, without depreciation; $7,768 with depreciation.

Q. That was built in 1860?

A. 1860.

Generator house over machines 6 to 13, without depreciation, $63,569; with depreciation, $61,663.

1478 Q. That building was built in 1865?

A. 1865, yes, sir.

Q. Just state that in each instance where you have it.

A. Building over coke and coal storage without depreciation, $85,140; with depreciation, $83,437. Built in 1865.

Generator house, 22nd Street, without depreciation, $93,840; with depreciation, $91,963. Built in 1873.

Retort house, 22nd Street. Without depreciation $110,450; with depreciation, $104,926. Built in 1865.

Extra for bench foundation in this house, $12,700. No depreciation.

Pump house, without depreciation, $4,796; with depreciation $4,556. Built in 1865.

No. 1 shed, south side of 21st Street, without depreciation, $67,846; with depreciation $65,811.

Nos. 2, 3, 4, and 5 sheds, same values as No. 1 shed.

Q. Each?

A. Each, just the same value as No. 1 shed.

Q. Those were all built in 1874?

A. All built in 1874.

Purifier house, without depreciation, $97,626; with depreciation, $94,697. Built in 1874.

Condenser and scrubber house, without depreciation $97,626; with depreciation, $94,697.

Another purifier house of the same value. All built in 1874.

Meter house without depreciation, $38,665; with depreciation, $37,891. Built in 1884.

Shaving and scrubber house without depreciation $66,017; with depreciation, $64,037. Built in 1874.

Exhauster house, without depreciation, $42,943; with depreciation, $42,084. Built in 1884.

No. 327 to No. 331 Avenue A, not valued; included in real estate.

1479 Coal shed, without depreciation, $63,168; with depreciation, $60,010.

Stable not valued, included in real estate.

Water tower, without depreciation, $1,387; with depreciation, $1,277.

Excavation, cribbing and refilling for twelve oil tanks located on low ground, $8,118. No depreciation.

The same for ten separating tanks, $8,462; no depreciation.

One foundation for a new oil tank, $5,000.

One foundation for a steel tank, $980. No depreciation. That is all for the buildings.

Q. In arriving at the value of the buildings, I suppose you proceeded in the same method, taking the number of cubic feet contents of the buildings and multiplying that by some unit?

A. Yes, sir.

Q. What was your unit for a brick building?

A. What kind of a brick building?

Q. Any kind, it don't make any difference, does it?

A. Yes, it makes a big difference, because all these prices are based upon a specific building. You cannot compare a retort house with a generator house, or you cannot compare a generator house with an office building, but they are all brick.

Q. I thought you went by the cubic contents, no matter what the walls were?

A. No; I go by the cubic contents or the cubic feet of contents of a building, for the same class of building, not of all buildings That would not be a fair valuation. You take a retort house in one place and a retort house in another, or you take a generator house in one place and a generator house in another place, and you get a correct valuation.

Q. If you had estimated by what it would cost to put up the walls and what it would cost to put in the other material, then you would have the same unit for all kinds of buildings?

A. No, sir.

1480 Q. Brick costs as much if you put it in a retort house as if you put it in a generator house, does it not?

A. But the number of bricks that you put in a retort house of the same capacity, as far as the general plant is concerned, in comparison with the generator house would be very different; it would not by any means be the same number of bricks, the number of cubic feet would be the same.

Q. Oh, I do not mean that.

A. You have got to make a comparison for the same class of buildings otherwise you would not obtain a correct valuation.

POOR COPY

Q. What was your standard of comparison with this 21st Street plant?

A. For the retort house, the retort house of Kings County; for the condenser house, the condenser house of Kings County, for the office building, which is a two-story office building, I took the Kings County. In the instance of the buildings, it includes all the valuations of the machinery and apparatus, except where I found that additional foundations of greater depth had been built at a very much greater cost. In this instance I have added the increased cost of the foundations where they did not compare with normal conditions, as was the case of Kings County.

Q. Kings County was a coal gas plant, wasn't it?

A. Yes.

Q. Did that make any difference?

A. No; most of these buildings were originally coal gas buildings.

Q. And have been converted into water gas buildings?

A. Yes; I know from my own knowledge, and having figured these buildings so many times for various plants, that the total aggregate of the buildings forming a gas plant is so near correct that if you were to get detailed estimates of each and every building there would be no variation of any amount.

Q. The buildings in this plant as I understand you, were originally put up for a coal gas plant and have since been turned into water gas? 1481

A. In a great many instances; there were some additional water gas buildings, but the generator house was built for water gas purposes and it is exactly the same.

Q. Now, the generator house in a water gas works would be very much smaller than it would be in a coal gas plant?

A. Of the same capacity, yes.

Q. Then, if you were to give an estimate for building a water gas works to-day they would correspond with this in capacity and other particulars, but you would build smaller buildings, would you not, in some respects?

A. The buildings would be smaller for capacity; that is, a similar building would contain a larger capacity, but the price of that individual building would not change at all; my unit price would be absolutely applicable.

Q. Your unit price would be applicable, but the multiplication by the number of feet would be less and would produce a less cost?

A. Exactly.

Q. What is the capacity of this plant for water gas?

A. 24,000,000 cubic feet.

Q. Now, I do not wish to have any misunderstanding about this. You could build a 24,000,000 cubic foot daily capacity water gas plant in the way of buildings for considerably less than this 21st Street plant requires in the way of buildings now, could you?

A. Oh, no, these buildings are all completely filled with water gas machines to their full capacity.

Q. How recently have you been to those buildings?

A. Three or four times. What station are we on now.

Q. 21st Street. Is the retort house completely filled with gas making machinery to-day?

A. You asked me about water gas apparatus.

Q. I am talking about water gas. You have got down here retorts.

A. That is for the oil gas.

1482 Q. Well, call it generating house.

A. Yes, the generating house is completely filled.

Q. Have they built any new generators in there, do you know, in the last year and a half or two years?

A. I have not got the year when the last water gas apparatus was installed, but every foot of space in that entire works is taken care of by the capacity of plant. In fact, they are so close that in the generator house they are so close they are almost two together, and the walls have been broken out and columns have been substituted.

Q. Then, you think as far as the buildings are concerned—that is, if you build a coal gas plant and afterwards tear it out and instal water gas machinery you can do it cheaper than you could produce a new water gas plant with buildings adapted to that particular kind of plant?

A. Oh, yes, no doubt about that.

Q. And that is the most economical method of construction, would you say, as a gas engineer?

A. If I had the building, yes; I certainly would not tear the building down and build a new one.

Q. That is what you mean. Having a coal gas plant, it is cheaper for you to alter those buildings and instal gas machinery than it would be to tear down the buildings and build entirely new buildings?

A. Yes, sir.

Q. And if you were starting with a piece of ground, which would be the better way and produce the better results?

A. You would have to build new buildings; it would be better to build new buildings.

Q. You do not think it would be cheaper to build a coal gas plant and change it into a water gas plant?

A. No, sir.

Q. That is what you said?

A. I said if I had a coal gas plant.

1483 Q. Then, as a matter of fact, it would cost less to build a new water gas plant on this 21st Street station of the capacity of 24,000,000 cubic feet in the way of buildings than you have estimated for the value of the buildings at present in use; is that so?

A. No, sir, it would cost more. I said before that those buildings are entirely filled to capacity of water gas plant, and therefore new buildings would cost more if built for water gas.

Q. We are talking about an entirely new plant.

A. Yes, those buildings would cost more than changing these, for the same capacity.

Q. Well, I do not know if you understand my question.

A. I mean on the basis of water gas capacity, those buildings in the altered condition cost less than new buildings would have cost if they had to be built for that purpose, for the reason that the entire buildings are filled entirely to capacity.

Q. As I understand your method of getting at this, you have figured what it would cost to produce new buildings similar to these?

A. Yes.

Q. And you have not estimated what is the value of those buildings, but what it would cost you to-day to build buildings similar to this?

A. Yes.

Q. Now, if you were going to build a plant, a water gas plant, of 24,000,000 cubic feet daily capacity, would you build buildings similar to this?

A. Absolutely the same, in that location.

Q. You would?

A. Yes; I could not do otherwise, because they have utilized every square foot of ground in these buildings to the capacity of the apparatus, that is the controlling factor in the designing of the plant.

Q. And you could fill them to capacity and use them to much better advantage?

A. No, that is the point I am making. Those buildings are used entirely to capacity. Every square foot is used to capacity?
1484 You could not do better except by designing the building in different shape.

Q. Then you have an ideal water gas plant?

A. For that portion of it, yes.

Q. As far as the buildings are concerned?

A. As far as the generator house is concerned; we are talking about the generator house.

Q. I am talking about the buildings?

A. Oh, yes, the rest of the buildings contain apparatus of standard make and, therefore, could not be designed different from what they are in that location.

Q. Having settled that satisfactorily, we will turn to the apparatus. I notice you begin with your storage, tools in meter proving shops, &c. Does that correspond with the order in which the buildings are taken up?

A. No, sir, it does not.

Q. This repair shop is used for the repairing and proving of meters for the company generally?

A. Yes.

Q. And also for storage and repairs of stoves?

A. Yes.

Q. The capacity, &c., would not be limited to what would be necessary for a plant of the size of the 21st Street station alone? That is, if that was all the company had; it would not require as large a shop for a company that only put out 24,000,000 cubic feet of gas a day as they have there, but this is to take care of those things that are necessary for all the stations, is that right?

A. Yes, but it is not by any means large enough; they use it to the best advantage because they have it there.

Q. Yes, but the only thing I am trying to get at is, not criticising them for having a large repair shop, but if we wish to get an estimate of valuation upon a plant of 24,000,000 cubic feet daily capacity, you would not take this as one of the elements, because this is very much larger than is necessary, is it not?

A. No, it is not larger than necessary.

1485 Q. Not larger than is necessary for a company that only puts out 24,000,000 cubic feet of gas a day?

A. No, I know a company that puts out a good deal less gas than they do and has repair shops of three or four times that capacity.

Q. Proceed then and get at the value. How would you multiply this?

A. In getting at the value I took the building as it was.

Q. Well, this is an ideal plant; it is not anything that really exists that you are testifying to.

Mr. **Mathewson**: That is exactly what it is, something that does exist.

Mr. **Page**: No, it is an intangible figment of the moment.

Mr. **Mathewson**: Not at all. You are entirely wrong.

Q. Well, proceed with what substantial facts you can give in regard to what is in this particular house.

A. Do you want me to read this whole list?

Q. You have estimated this in its entirety; you have not the details.

A. I had the details and got them from all these various manufacturers. There is such a multitude of them that I added them together and put down the total sum.

Q. Have you got the value of the engines?

A. All engines, $17,600 without depreciation, and $17,248 with depreciation.

Q. How many engines does that make? You might read off just the engines.

A. One 15-horse-power Otto gas engine.

One 30-horse-power steam engine.

One 10-horse-power vertical steam engine, pulleys and shafts, etc.; all that goes with the engines.

Q. Whatever you have included with the value of the engine you might give.

A. One nickle-plated dynamo, 75 feet of 1 and 3/16-inch 1486 dynamo shaft; 6 cast iron pulleys, 12 to 18 inches diameter, 4 14-inch hangers, 12 16-inch hangers, 14 wooden pulleys, 13 to 18 inches diameter, 4 cast iron pulleys, 6 to 10 inches diameter, 12 feet of 1-inch shafting, 3 14-inch hangers, 3 counter shafts, 7 hangers, 16 inches by 2-3/16 inches diameter, two wooden pulleys, one elevator, 4 by 6 feet, 28 municipal arc lamps, 12 feet of 1-7 8-inch diameter shafting, 3 16-inch hangers, 18 feet of 2-3/16-inch diameter shafting, 8 cast iron pulleys, one emery grinder, 6 polishing lathes, 321 feet of 4-inch belting, 757 feet of 2-inch belting, 166 feet of 6-inch belting, 100 feet of 1-½-inch belting, one Sturtevant exhauster, 12-inch outlet, one 3-cylinder Westinghouse gas engine, 6 twelve-inch hangers, 18 feet of 1-1/8-inch diameter shafting, one Knowles double cylinder steam and air compressor, one Westinghouse 8-kilowatt lighting generator, 20 feet of one-inch shafting, 5 twelve-inch hangers, 3 cast iron pulleys, three feet of one-inch countershafts. That is all.

Q. The items you have now enumerated are included in the valuation of engines $17,600, are they?

A. Yes, sir.

Q. Now, the other various apparatus.

A. $14,300 without depreciation, $14,157 with depreciation.

By Mr. MATHEWSON:

Q. What does that make the total?

A. That makes a total of $31,900 without depreciation and $31,405 with depreciation.

Q. That is all, down to the boiler house?

A. That is all, down to the boiler house.

By Mr. PAGE:

Q. What are the gas consumer governors used for that you have in this schedule?

1487 A. They are governors probably that they put on the pipe lines in the houses. I presume they are to assist in the equal adjustment of pressure under the conditions that exist here.

Q. Now you may take up the contents of the boiler house?

A. Boiler house; do you want that in totals?

Q. I think you had better give that separately; there are only a few items.

A. Two 60 horse-power boilers, $2,710 without depreciation; $2,440 with.

Q. Those are locomotive boilers, so-called, are they?

A. Yes, sir.

Q. Each with 72 tubes, 2½ inches and 3 inches, 13 feet long; is that right?

A. Yes.

—. Proceed.

A. One 3-inch Worthington meter, $50.

Q. That is a water meter?

A. A water meter, yes, sir; no depreciation.

Two 24 by 30 steel stacks, $96; no depreciation.

Thirty cubic yards of fire brick blocks, $780, no depreciation.

Oil storage house, total contents, $50, no depreciation.

Q. What does that mean?

A. The oil tanks, cocks, and spiggots, and connections and things like that.

Q. What is the capacity for oil storage in that house, do you know?

A. No, sir, I do not; that is for a lubricating house.

Q. Oh, a lubricating house.

A. Yes, only $50 for the whole contents.

Q. I thought you were running a pretty small oil can.

A. That is a lubricating house. Lead and yellow metal storage house, entire contents, $250; no depreciation.

Q. What does that mean, the entire contents? Is that the lead and metal stored in there?

1488 A. Lead, yellow metal, smelting pots and all things like that, all small things.

Q. Proceed.

A. Fire hose house: Entire contents, $250, no depreciation.

Valve house: Do you want that in detail or the total?

Q. You might give the items in detail.

A. Photometer closet with bar photometer, $650, no depreciation.

Three gas pressure gauges, $10, no depreciation.

One Bristol recording gauge, $35, no depreciation.

One electrical pressure indicator, as called for by item 1 of addenda, $250.

Octagonal valve house, one 7 feet by 7 feet wood tank, $360, no depreciation.

One gas lamp on roof, and four gas lamps in walls, all five lamps, $40, no depreciation.

Tinsmith shop: Rigging, blocks and other contents in that house, $150, plus $400, as per item No. 2 in addenda; no depreciation.

Store room: Contents, $60; no depreciation.

Office building: Contents, except chemical apparatus in laboratory, $1,650; no depreciation.

Q. Does that include the two photometers?

A. Yes, sir, the two photometers and all office furniture, but no apparatus in the chemical laboratory.

Chemical apparatus for complete laboratory, $4,000.

Q. Well, do you mean that is chemical apparatus they have there or what would be necessary to make a complete laboratory?

A. They have everything complete there. That is a complete laboratory of all the works.

Q. That is the only laboratory they have?

A. They have a laboratory of the chief chemist of the company
where he makes all his tests, besides smaller sized laboratories
1489 in some of the stations, but this is the principal laboratory
where they make all their tests.

Q. Proceed.

A. Engine room: One Knowles combined duplex boiler feed pump, 18-inch stroke, special pattern, $440 without depreciation; $418 with depreciation. To this must be added item 4 under addenda, $400 without depreciation; $380 with depreciation.

Q. What is that item?

A. That is the Knowles combined duplex boiler feed pump.

Q. No, but this item of $400 that you add?

A. That is the cost of the pump, on account of it being made especially to the increased length of the stroke; the stroke was 18 inches long, and it was a special pattern made for the Consolidated Gas Company. My first valuation was on the normal standard of that pump.

POOR COPY

By Mr. Mathewson:

Q. How much does that make all told for the pump then? Give it to us in a single figure.

A. That makes a total of $840 without depreciation, and $798 with depreciation.

By Mr. Page:

Q. Is that what it would cost to replace that pump?

A. Yes, sir.

Q. Or is that what the pump cost to the Consolidated?

A. No, that is what the pump cost the Consolidated.

Q. You could probably replace it cheaper?

A. No, sir, I got this price from the Knowles Pump Works?

Q. As to what they charged them?

A. What they would charge for that pump to-day.

Q. Proceed.

1490 A. One Blake combined boiler feed pump, $996 without depreciation; $946 with depreciation.

One Cameron pump, $302 without depreciation; $286 with depreciation.

220 cubic feet Connersville exhausters, $5,780 without depreciation; $5,753 with depreciation.

Two horizontal Buckeye engines, $6,182 without depreciation; $5,997 with depreciation.

Q. What is the horse-power?

A. I haven't got the horse-power down here. Probably in the neighborhood of 60 horse-power—more than that—probably 75 to 80 horse-power. 24-inch stroke that is.

Q. Do you know how old those Buckeye engines are?

A. No, but I know they are in thorough condition, perfect in every respect.

Q. Proceed.

A. Three McKenzie exhausters, $5,100 without depreciation; $5,000 with depreciation.

Three 12-inch by 12-inch Rowland vertical engines, $3,642 without depreciation; $3,569 with depreciation.

Two 10-inch leather link belts, $275; no depreciation.

One 10-inch 4-ply leather belt, $85; no depreciation.

Two McKenzie oil gas exhausters, $2,660 without depreciation; $2.607 with depreciation.

Two 6 by 7 vertical engines, $396 without depreciation; $388 with depreciation.

One Armington & Sims, 10½ by 12, $1,155 without depreciation; $1.132 with depreciation.

Three Buckeye horizontal engines, $12,144 without depreciation; $11,901 with depreciation.

Q. What is the horse-power of those?

A. Probably 80.

Q. The same as the others then?

A. A little bit higher. The others were probably 75 and 1491 this probably 80, I don't know but these prices were gotten from the Buckeye people direct.

Three Sturtevant No. 16 blowers, $5,950 without depreciation; $5,831 with depreciation.

Two Cameron pumps, 14 by 7 inches by 33 inches stroke, $1,185 without depreciation; $1,126 with depreciation (refer to Item 5 in addenda).

By Mr. **Mathewson**:

Q. That was a special pump I see. Does that mean a special size?

A. That is a special size, yes, sir, on account of the stroke—33 inches. That is due to the fact that they are for so large a plant as this where the pumps and normal capacities and dimensions would not be sufficiently large and therefore they were compelled to have pumps of special stroke made to answer their purpose.

One slate gauge board, $120; no depreciation.

Steam and water pressure gauges, steam exhaust and blast piping, $4,500; no depreciation. (See Item No. 6 in addenda.)

Three 22-inch 2-ply leather belts, 60 feet long, $396; no depreciation.

Item No. 7 of addenda for blast piping, $1,094; no depreciation.

Machine shop. Do you want that in detail or added together?

By Mr. **Page**:

Q. Have you got the engine separate?

A. One Greenfield engine, 10½ by 12, $1,350 without depreciation, $1,310 with depreciation.

Q. You have something else there of $1,800, haven't you?

A. Three tons pulleys, cast iron countershafting, one half ton fittings, and working benches and three vises, $1,800; no depreciation.

1492 Q. Give the total for the machine shop if you have got it, including addenda.

A. Total for the entire machine shop, $5,935, without depreciation, $5,757 with depreciation, in which I included items 8 and 9 in the addenda.

Q. And also the engines you have testified to specifically?

A. And the engines, yes, sir.

Old retort house: Two stacks of 8 benches of six-s, 32 single benches, $70,720, without depreciation; $60,112 with depreciation.

Q. What are those used for now?

A. For the oil gas, for the production of oil gas.

Q. Do you produce oil gas in benches?

A. Those are oil gas benches.

One Worthington duplex fire pump, $178 without depreciation, $170 with depreciation.

By Mr. **Mathewson**:

Q. You have something in the addenda there, 9½?

A. I have got that in the detailed price already.

Two drip pumps, $159 without depreciation; $152 with depreciation.

Smith shop, $1,430 without depreciation; $1,376 with depreciation.

POOR COPY

New shop buildings, entire contents, $835 without depreciation; $823 with depreciation.

Old carbureter shop, in detail:

One English duplex air compressor, $2,750 without depreciation, $2,612 with depreciation.

1 Cameron pump 18 by 16 by 20 inches, $2,750 without depreciation, $2,612 with depreciation.

One Knowles pump 20 by 18 by 24 inches, $4,140 with depreciation; $4,480 without depreciation.

Q. Those are all standard apparatus?

A. With the exception of the pumps they are all special patterns. Yes, all standard.

Q. The three are standard?

A. Yes, sir.

1493 Q. Two 5,000-gallon rectangular tanks, $240 without depreciation; $233 with depreciation.

A. Witness continued:

Two 1,000 gallon rectangular tanks $80 without depreciation; $77 with depreciation.

One steam trap, $50; no depreciation.

Retort house on 22nd Street.

Three salt water condensers, 45 feet 6 inches by 9 feet 5 inches by 16 feet, containing 653 3-inch diameter cast iron tubes, $92,120; no depreciation.

Q. Is that a special condenser?

A. Yes, sir.

One similar condenser, $30,700 which is now in the course of construction. No depreciation.

Q. How did you figure that cost?

A. Why, from the weight; I figured the weight of the condenser and multiplied it by 4.9 cents a pound.

Q. You did not take the actual amount that had been expended for it?

A. No, sir, I don't know anything about what they spent for it.

Generator house over machines six to thirteen; Eight sets low water gas apparatus with 12-foot generators, 16 feet high; 11-foot carbureters, 16 feet high; 11-foot superheaters, 25 feet high; eight wash boxes, 4 feet high. Total price, $140,000; no depreciation.

Q. When were they put in, do you know?

A. No, sir, I did not inquire. They are in proper repair and perfect condition in every respect. Cast-iron floors and columns surrounding machines, as per Item 30 in addenda, $47,520; no depreciation.

Two hydraulic elevators, $4,000 without depreciation; $3,800 with depreciation.

Q. Where there is any specially designed apparatus, in reading these off, would you mention them, to save time?

A. Yes, sir.

Two Cameron pumps, $170 without depreciation; $162 with depreciation.

1494 Small gas piping, water piping, tar piping, &c., together with 600 feet industrial track, $279; no depreciation.

Add for industrial railway I omitted from schedule, as per Item 10 in addenda, $360 without depreciation; $342 with depreciation.

Building over boiler and coke storage house: Two Babcock & Wilcox boilers, 500-horse-power each, $16,500; no depreciation.

Q. Do you know the age of those boilers, when they were erected?

A. No, sir, but they are in perfect condition and kept right up-to-date in the way of repairs, else they could not use them for the water gas production.

Two new boilers of 600-horse-power each in course of erection.

Q. Do you mean foundations?

A. No, the foundations are finished and the boilers are being erected now. The boilers are right alongside of the foundations. $19,800; no depreciation.

Q. In this item, page 5, foundations going in for two more boilers, rated as 600-horse-power each?

A. That is for my memorandum. The foundations are already completed and the boilers alongside the foundations.

Q. Then your estimate is for the foundations and the boilers in their present condition?

A. No, this is for the boilers alone, $19,800; no depreciation. That just happened to be copied that way from my personal memorandum so as to call my attention to it.

Two A. & T. boilers, Altman & Taylor, 500-horse-power each, $16,500; no depreciation.

Q. Do you know the age of those boilers?

A. No, sir, but they are all in the same perfect condition and have to be in order to operate the plant.

Two steel stacks, 7 feet diameter by 110 feet high, $3,440; no depreciation.

1495 Two breeches for above stacks, $887; no depreciation.

One additional stack, as per Item 11 in addenda about one-third of which is completed at the present time, $573; no depreciation.

Two Armington & Sims engines, 10½ by 12, $2,310 without depreciation; $2,194 with depreciation.

Q. Do you know the age of those engines?

A. No, sir, I did not bother about the age of the engines because they are all perfect.

Q. Specially designed?

A. No, sir.

Two American Blower Company, fan blowers, $920 without depreciation; $902 with depreciation.

Three filter presses, Johnson & Company's make, $2,550 without depreciation; $2,422 with depreciation.

Q. Standard presses?

A. Yes, I think they are.

One centrifugal tar eliminator, $1,200 without depreciation; $1,140 with depreciation.

One horizontal engine, 7 by 9 inches, $264 without depreciation; $250 with depreciation.

POOR COPY

One round cast-iron tank, 15 feet diameter, 12 feet high, $2,442 without depreciation; $2,320 with depreciation.

By Mr. **Page**:

Q. At what rate per pound?
A. At 5.8 cents per pound.
Q. For cast iron?
A. Yes, sir, that is with flanged and faced joints and bolts.

By Mr. **Kirby**:

Q. Upon what did you appraise the foundations for the boilers in building over boiler and coke storage?

A. The boiler foundations, as well as all other foundations, 1496 are included in my valuation for the buildings and that unit figure which I spoke of before covers the foundations of these various apparatus.

Q. Proceed.
A. Two wrought iron tanks, 6 feet diameter, 4 feet 6 inches high, $153 without depreciation; $150 with depreciation.

One wrought iron rectangular tank in ground, $695 without depreciation; $626 with depreciation.

Three No. 4 Cameron pumps, $825 without depreciation; $784 with depreciation.

2,000 feet industrial railway track, switches, crossings, turntables, and so forth, $1,700 without depreciation; $1,649 with depreciation, which includes item 12 in addenda.

Q. Now, you come to the generator house?
A. Generator house on 22nd Street.

Five sets low water gas apparatus, 13 feet by 16 feet 6 inch generators, $100,000. No depreciation.

Q. Do you know the age of that Low apparatus?
A. No, the same as the others; they are in perfect condition.

By Mr. **Mathewson**:

Q. Does that include the carbureters, superheaters, wash boxes and connections?
A. Everything called for by the schedule.

By Mr. **Kirby**:

Q. On this statement, down to where it says "one experimental oil gas machine?"
A. Yes, and that item above it.

Mr. **Burr**: What does that embrace?

The **Witness**: That includes carbureters, 13 feet in diameter by 16 feet 6 inches high; superheaters, 13 feet diameter by 32 feet high and wash boxes 7 feet diameter.

1497 Mr. **Mathewson**: And twenty-four connections?

The **Witness**: Arranged for twenty-four inch connections, and connections between the various apparatus above named.

By Mr. **Kirby**:

Q. Proceed.

A. One experimental oil gas apparatus, $12,000. No depreciation.

Q. Is that a special machine?

A. Yes, sir.

Q. Is it in use to-day?

A. Yes, sir, it has been specially constructed by the gas company for a specific purpose.

Six Hazelton boilers, 250 horse-power each, $23,250 without depreciation; $22,088 with depreciation.

One Cameron pump 6 inches by 3 inches by 6 inches, $86 without depreciation; $82 with depreciation.

One Cameron pump 6 inches by 4 inches by 6 inches $90 without depreciation; $85 with depreciation.

One Worthington pump, 6 inches by 4 inches by 6 inches duplex pump, $92 without depreciation; $87 with depreciation.

Add for item No. 30 and including gas, steam, water, tar and oil piping, $47,520 without any depreciation.

Q. What do you mean by charging stage?

A. That is the floor around the apparatus upon which the coal is stored and from which the appartus are operated.

Q. Now you have the retort house?

A. Retort house on 22nd Street. Twenty single benches of 6's, $44,200 without depreciation, $37,570 with depreciation.

1498 Q. Do you mean by simple benches that they are separated one from the other?

A. No, that is only an expression to designate the length of the retort. They are set back to back, having a total length of 18 feet, but the price per bench is based upon 9-foot benches, therefore they are termed single benches.

By Mr. Page:

Q. What are they used for?

A. For the making of oil gas, the same as the others.

By Mr. Burr:

Q. Is addenda item 14 embraced in that item?

A. Yes, sir. There is one stack of 10 benches which consists of two benches back to back, making 20 in all.

By Mr. Kirby:

Q. Proceed.

A. For 40 enamelled iron wash basins and 180 expanded metal lockers, $2,420, no depreciation.

Q. Going back to those benches for a moment, you used a depreciation factor of 15 per cent., didn't you?

A. Yes, sir.

Q. Over the entire cost of the benches?

A. From the entire value of the benches.

Q. Do you know when those benches were last replaced?

A. I have not the year down here, but on account of the setting having been in there a number of years, I made the depreciation 15 per cent.

Q. Do you know how many years they had been there?

A. I don't know now, but on account of that item I make the depreciation 15 per cent.

Q. That would mean a life of how long?

A. Perhaps—these benches last very much longer than the coal gas benches, you know.

1499 Q. I understand.

A. You cannot make a comparison on that basis because they are subjected to very different conditions.

Q. That is rather a high depreciation factor for them, isn't it?

A. No, not a great deal.

Q. You don't know whether any of them had been replaced in the last ten years, do you?

A. Yes, I know they have, without asking any question about it.

Q. You know that on account of the depreciation factor?

A. I know by my own experience, that they would not last ten years.

Q. They would not have to be replaced every three years?

A. No.

Q. Or five years?

A. No.

Q. Probably ten years?

A. Perhaps six to eight years, maybe in some instances ten.

Q. Well, go on.

A. Two tar separating tanks, a total of $4,340 without depreciation, and $4,123 with depreciation, from which deduct for item 15, $965 for apparatus, without depreciation, and $897 for apparatus, with depreciation, making a total price for the two tanks, without depreciation, $3,375, and 3,226 with depreciation.

By Mr. Kirby:

Q. What did you deduct from the separator tanks?

A: On account of the difference in weights. In measuring them over again, I found they did not weigh as much as I had originally estimated.

One Worthington duplex pump, $314 without depreciation; $299 with depreciation.

Two Cameron pumps, $880 without depreciation; $836 with depreciation.

One Cameron pump, $550 without depreciation; $522 with depreciation.

One Worthington duplex pump, $250 without depreciation; 237 with depreciation.

1500 Two Cameron pumps, $170 without depreciation; $161 with depreciation.

One Cameron pump, $275 without depreciation; $261 with depreciation.

Q. Those pumps are all of standard design and build?

A. Yes.

Add, as per Item 16 in addenda, oil tank, 6 feet diameter, 10 feet deep, $189 without depreciation; $176 with.

Q. Those wrought iron tanks are used for what?

A. There is only one tank, 6 feet diameter by 10 feet.

Mr. **Mathewson**: He has not testified as to the others.
The **Witness**: That is in the addenda.

Q. Go on then.
A. You have an item there of 10 feet diameter by 30 feet long tanks in your schedule; that should be omitted. It has been substituted by Item No. 17 in the addenda.
Q. What is that item, will you read it?
A. It is ten tanks underground, 11 feet diameter by 39 feet 6 inches, ⅝-inch metal.
Q. What are those tanks used for, do you know?
A. For oil storage.

By Mr. **Page**:

Q. What is the capacity?
A. I have not got the capacity, but I can figure it out for you if you want me to.
Q. No, never mind, I thought you had it there.
A. Pump house——
Q. Haven't you left out some tanks.
A. I say those have to be omitted, those tanks, I think I said so just now. The new ones come in in the addenda.

1501 By Mr. **Mathewson**:

Q. The substituted ones come later on in the addenda?
A. Yes, sir.
Pump house:
Two Worthington duplex pumps, $356 without depreciation; $338 with.
One Cameron pump, $550 without depreciation; $522 with.
One Blake duplex pump, $250 without depreciation; $237 with.
Two Knowles duplex pumps, $374 without depreciation; $356 with.
Two Cameron pumps, $170 without depreciation; $161 with.
One Cameron pump, $385 without; $366 with.

By Mr. **Kirby**:

Q. Those pumps are all standard pattern and build?
A. Yes, all standard.
Two wrought-iron tanks, $652 without; $620 with.
Q. Having a capacity of 3,750 gallons and used for the storage of oil?
A. Yes.
One Foster pump, as per Item No. 18 on addenda, $400 without depreciation; $388 with.
Two wrought-iron tanks, $364 without depreciation; $345 with.
Sheds, Nos. 1, 2, 3 and 4; contents, coal not considered in valuation.
One hydraulic elevator, $2,100 without depreciation; $1,195 with.
Shed No. 5, firebrick and purifying material not considered in valuation.

One Cameron pump, 14 by 7 by 18, $467 without; $444 with.

One hydraulic elevator, $2,100 without; $1,995 with.

1502 Q. Do you know who the builder of those hydraulic elevators was?

A. No, sir.

Q. There is nothing special about them, is there?

A. No, just ordinary plunge elevators, which you can buy from any elevator manufacturer.

One vertical boiler, $520 without, $478 with depreciation.

One accumulator as per item 19 in addenda, $1,200 without depreciation, $1,196 with depreciation.

Q. Now, we come to the purifying house?

A. Purifier house, eight boxes, 22 by 36 by 3 feet deep with wrought iron covers, cast iron columns and beams, two sets of hydraulic lighting gears, and two 36-inch center seals. Total value without depreciation, $62,799, with depreciation, $59,659.

By Mr. PAGE:

Q. What is the capacity of this purifier house?

A. All the purifier houses in the total are equal to the capacity of the plant of course.

Q. Are they operated with the relief holders?

A. Yes.

By Mr. KIRBY:

Q. You have not figured separately the capacity of each of the separate houses?

A. No, sir.

Q. You figured this cost by taking the weight at so much, giving it a value of 5.6 cents a pound?

A. 5.6 cents a pound.

Q. And multiplying by the weight?

A. Yes. In the figures which I have given is indicated the item No. 20 in the addenda.

Q. Which one?

A. Some additional weight. Do you want the total weight?

Q. Never mind.

1503 A. Condenser and scrubber house. The first item, six tubular condensers should be omitted entirely, for which a deduction of $41,460 must be made as per item in addenda No. 21.

Q. Why do you omit that?

A. I have got them in twice.

By Mr. MATHEWSON:

Q. You have had it in twice, you mean?

A. Yes, sir. They were all considered in page 8 of my sheet; two scrubbers 14 feet in diameter, 35 feet high, $9,344, no depreciation, which includes item No. 22 in the addenda.

By Mr. KIRBY:

Q. Which was figured by weight and price per pound?

A. All the apparatus was figured by weight and a price per pound, except where they were standard and I had to get prices from the various manufacturers.

Six condensers 30 by 7 by 17; wrought iron sides, cast iron base, wrought iron tubes, containing 650 4-inch diameter by 12-foot tubes, $98,280; no depreciation.

Q. You used as your unit there 8.4 cents per pound?

A. Yes.

Q. How do you arrive at that figure?

A. The average price of the material for that condenser was 2.2 cents per pound.

Q. By average price of material you mean the average price for wrought iron and cast iron used in the construction?

A. Exclusive of the tubes; the cost of the tubes was 4.8 cents per pound; the average price for all material including tubes is 3.8 per pound, the freight and drayage is three cents per pound; shop labor two cents per pound; erection five cents per pound; makes
a total of 6.6 per pound, to which is added for operating
1504 expenses wear and tear of shop of tools 10 per cent., making
66 cents; total, 7.26, to which must be added manufacturer's profit equal to 1.1, making 8.36 per pound, or a total of 8.4 cents per pound.

Q. And to that in the grand total you add 10 per cent. for engineering and other charges?

A. For engineering by the gas company, the designing and laying out of the entire plant and other expenses in connection with the construction of the entire plant as a plant.

Q. Or, if you were to construct it for them, which you would add for your own expenses?

A. Yes.

By Mr. Mathewson:

Q. You assume that a contractor who puts in condensers figures on some profit to himself and does not simply figure on the work for the cost of labor and material?

A. No, I included 10 per cent. in those figures that I mentioned.

By Mr. Kirby:

Q. And you have reckoned that a contractor would erect this apparatus for the figures which you have there?

A. Yes, sir.

Q. And would figure 10 per cent. profit on the order?

A. Yes. As per item No. 23 in addenda deduct $16,380.

Q. What for?

A. For one condenser in course of construction which is already included in the six condensers; it was included twice.

By Mr. Mathewson:

Q. Does that mean the total, $98,280?

A. No, this has to be deducted from that, and in my total it is taken care of, in my total price.

Q. Which you have testified to?

A. Yes, that has all been taken care of.

1505 By Mr. KIRBY:

Q. So that the six condensers have a value of $98,280?

A. Yes.

Q. Where does your deduction come in?

A. Because in this I added a new condenser which was in course of construction, which would have been added twice, and it is in the six condensers already.

Q. Then there is no deduction to be made?

A. Oh, yes, from this price you have got to make a deduction of $16,380.

Q. Then we will have the cost of the six condensers?

A. The cost of the six condensers complete including the new one which I added twice. I had first the six and then an extra one.

Q. In other words there are five condensers and then a new one making six altogether?

A. Yes, I had already the new one in twice. First I had six and then a new one.

One oil gas meter, as per Item 23½ in addenda, $3,850; no depreciation.

Shed: One hydraulic elevator, $2,100 without depreciation; $1,995 with depreciation.

Six shaving scrubbers, $18,232; no depreciation.

Galleries around shaving scrubbers, with mill exhauster, with vertical engine, dust collectors and piping, and one Cameron pump, $3,342 without; $3,301 with depreciation.

Another shed: Twelve purifying boxes, 24 by 24 by 17, with twelve wrought-iron trunk-shaped covers, three 36-inch center seals; two hydraulic purifier carriages $86,968 without depreciation, $82,620 with depreciation.

Q. What item have you added there?

A. No. 24.

Q. What is that?

A. Additional weight, the first calculation being short.

Meter house: Two 13-foot station meters, $11,750 without depreciation; $11,162 with depreciation.

1506 Two 19-foot station meters, with wrought-iron cases, $21,600 for the two; no depreciation.

By Mr. MATHEWSON:

Q. That is, after deduction as per your addenda Item No. 25?

A. Yes, that is the corrected figure as per Item No. 25 in addenda.

One 19-foot cast-iron station meter, $10,800; no depreciation.

Q. Also, after deduction, as set down in addenda Item No. 26?

A. Yes.

One 16-inch Wylie proportion meter, $1,600; no depreciation.

By Mr. **Kirby**:

Q. They are standard meters, all of them?

A. These are not standard; they are a size not made of standard proportions.

Q. And therefore for which you have set down a special price?

A. No, I got that price from the meter company.

Q. They are built then by a meter company?

A. They are built by a meter company, but special dimensions, on account of this large capacity of the works.

Exhaust house:

Two McKenzie exhausters, 30-inch.

By Mr. **Burr**:

Q. You have here three McKenzie exhausters?

A. The price is charged for two, $3,980 without depreciation; $3,900 with depreciation.

One 36-inch McKenzie exhauster, $2,200 without depreciation; $2,156 with depreciation.

Three Rowland 12 by 12 vertical engines, $3,300 without depreciation; $3,234 with depreciation.

1507 By Mr. **Kirby**:

Q. Do you know how old those engines are?

A. No, sir; but they are all in perfect condition. Wherever I find a machine in perfect condition and up-to-date in operation——

Q. No matter what its age is?

A. No, I don't care what its age is.

Q. Nor do you care what the type may be?

A. No, not as far as the condition is concerned. Of course, the type has a bearing upon the valuation.

Q. How did you get the prices for those Rowland engines?

A. By applying to them for the prices.

Q. And doing that you must have mentioned the type, did you not?

A. Well, it was the type, the Rowland engine is made by the Rowland Company.

Q. But there are different types from year to year; their type of 1900 is not identical with their type of 1906?

A. Oh, yes, no change in that. There may be some changes in a few small minor details which would not affect the price of them.

Now, 321 to 327 Avenue A, omitted from valuation included in real estate. Coal shed——

By Mr. **Burr**:

Q. What becomes of all these other items opposite to 327 and 331 Avenue A. One 5 horse-power White and Middleton gas engine?

A. That is all included in the real estate. I don't know why that was, but it was telephoned to me.

Mr. **Mathewson**: It meant the building, not the apparatus. Just make a note of that.

The **Witness**: They are all very small items.

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By Mr. Kirby:

Q. You are of the impression that these items are included in the real estate.

1508 Mr. Mathewson: No, they are not.

Mr. Kirby: He has got it down here.

Mr. Mathewson: I know, but he is not under that impression.

The Witness: It would not amount to one thousand dollars the whole business.

Coal shed, containing one bucket elevator.

Two 20-inch Robins conveying belts and

Two cross belts, $8,000 without depreciation; $7,200 with depreciation, to which item must be added as per item 27 in addenda, $10,000 without depreciation, and $9,500 with depreciation, which item is for underground conveyor from dock to coal shed, conveyor trench and coal hoisting machinery at dock.

Q. What valuation have you put on your Greenfield vertical engine?

A. One Greenfield vertical engine 10½ by 12 inches, with pulley and shafting $1,155 without depreciation; $1,097 with depreciation.

Stable, included in real estate.

Water tower in yard, steel tank 20 feet diameter 30 feet high, value without depreciation $2,035; with depreciation $1,975.

In the retort house yard, steel tank 14 feet diameter by 9 feet 2 inches deep, $628 without depreciation; $565 with depreciation.

Steel tank 10 feet diameter by 9 feet deep $382 without depreciation, $344; with depreciation.

Steel tank 14 feet diameter by 4 feet 6 inches deep in lower portion, 13 feet diameter by 5 feet 6 inches in upper portion; $590 without depreciation; $530 with depreciation.

Separate item No. 28 in addenda, one new oil tank 57 feet diameter by 30 feet high; all material and on ground ready for erection, $3,000; no depreciation.

1509 Q. This tank has a capacity of how many gallons?

A. I have not the number of gallons. It is 57 feet in diameter.

Q. Well, proceed.

A. Steel tank 7 feet diameter by 20 feet high, $655 without depreciation, $590 with depreciation.

Steel tank 20 feet 1 inch by 38 feet 1 inch by 8 feet 8 inches deep, $2,056 without depreciation, $1,850 with depreciation.

Twelve steel tanks 8 feet diameter by 40 feet long, $1,808 without depreciation, $1,627 with depreciation.

Ten steel tanks 11 feet diameter, 39 feet 6 inches long, $16,795 without depreciation, $15,115 with depreciation. There has evidently been something omitted in the previous item of 12 tanks 8 feet in diameter by 40 feet long. I want to look whether my notes are right and whether it requires any correction. I will look it up to-night.

Steel tank 10 feet diameter by 9 feet deep, $410 without depreciation, $370 with depreciation.

Separate item No. 29 in addenda, one wooden tank 16 feet by 15 feet and one 12 feet by 15 feet high, $1,200 without depreciation, $1,176 with depreciation.

One steel tank 16 feet wide, 50 feet long, 2 feet 4 inches deep, $1,553 without depreciation, $1,475 with depreciation.

Q. Those tanks are all in use?

A. These tanks are now being erected for separating purposes. It is erected in place, complete on foundations.

Q. Which one do you mean?

A. The one 50 feet long.

Q. The other tanks are all in use?

A. All tanks are in use.

Q. For what purpose?

A. For separating purposes and storage purposes.

1510 Q. That finishes the apparatus in the 21st Street station, does it not?

A. Yes, sir.

At 5:30 P. M., adjourned to August 31st, 1906, at 1 o'clock P. M.

Last Exhibits:

Complainant's 233.
State's N.
City's 34.

1511 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Friday, *August* 31, 1906—1:00 p. m.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr.

1512 **Frederick J. Mayer** resumed:

Cross-examination by Mr. Page (continued):

Q. Do you wish to make any correction in your testimony of yesterday?

A. One item in the 21st Street plant: 12 steel tanks, 8 feet diameter by 40 feet long, should read $18,080 without depreciation instead of $1,808, and $16,270 with depreciation instead of $1,620. That makes the total value of the entire plant for buildings, apparatus and

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pipe connections, including the ten per cent. for engineer's charges and five per cent. for interest $3,392,895 instead of $3,375,984.

Now, about this other item I included in the real estate I went to the 21st — Station and found that should have been in the schedule and not in the real estate.

By Mr. MATHEWSON:

Q. Those were the small items under what heading?

A. 327-331 Avenue A, those houses. I tried to get the prices for these various items this morning, but the time was too short and I could not get them and I did not want to assume any prices.

Q. You need not bother about it further unless I ask you to, because the items are comparatively small.

A. It is not over $1,250 for all of it, but I *I* did not want to assume any price because I did not in the rest of it.

By Mr. BURR:

Q. You said not more than one thousand dollars yesterday, but you say $1,250 to-day.

A. Not more than $1,250.

1513 By Mr. MATHEWSON:

Q. Would $1,250 be your estimate of the items there?

A. Yes, sir.

Q. That $1,250 you have not included in the total you have just given above?

A. No, sir; it is not included in it.

By Mr. PAGE:

Q. The generating apparatus of the 21st Street Station is practically new, isn't it?

A. Yes, sir; it is in a perfect condition.

Q. Well, I say it was put in, I think they testified here, in 1904?

A. Yes. It is in perfect, up-to-date, operating condition.

Q. What kind of a plant is it, what name does it go by?

A. It is an Improved United Gas Inprovement Company's apparatus.

Q. Is it called a Lowe water gas——

A. The original Lowe type, yes, sir, improved.

Q. Is that as efficient a water gas plant as is manufactured?

A. It is the best manufactured in this country, in my opinion.

Q. How does it compare with the Jerzmanovsky?

A. It is an entirely different process. Jerzmanovsky includes a system of benches in addition to the water gas generators to carburet the water gas in a continuous manner, whereas in this instance the gas carbureted is produced intermittently by the carburet and superheater attached to generator and therefore an entirely different type of apparatus.

Q. The Jerzmanovsky is more economical in the use of fuel, isn't it, than the Lowe type?

A. No, sir, it is not. That is if you add the three sources of fuel consumption, consisting of generators, boilers and benches as compared with the two sources of fuel consumption in the instance 1514 of the United States Gas Improvement Company's apparatus which consists of the boilers and generators.

Q. Then if Mr. Addicks testified in Boston that the Jerzmanovsky would save six pounds per thousand cubic feet of gas made over the Lowe type of apparatus, you would think he was mistaken, would you?

A. No, sir.

Q. Well, do you think it?

A. It would in that Boston instance, because that was an improved Jerzmanovsky and not the Jerzmanovsky as it has been used here.

Q. Well, of course if you are building a plant to-day and that is what you are estimating on, you would put in the latest improved machine?

A. Then you could not call it a Jerzmanovsky. You asked me about a Jerzmanovsky.

Q. I merely call it what Mr. Addicks did.

A. Well, he called it wrong. I happen to know that particular instance because I was the one that improved it.

Q. That is what I had understood.

A. Yes, sir.

Q. I had understood that was your improvement.

A. So it was, that improvement, and that improvement was made in the generator by which a reduction of fuel of 25 per cent. of the Jerzmanovsky was produced.

Q. Then a plant installed with Mayer's improvement of the Jerzmanovsky generator plant would be a more efficient and more economically administered plant than this one at 21st Street?

A. With the latest improvements in the United Gas Improvements Company's apparatus the results are about on a par, amounting in both instances to about a consumption of 32½ pounds average to the thousand feet of gas produced. Since I made the improvement in Boston the United States Improvement Company has made other improvements which has reduced their fuel consumption.

1515 Q. Is this the apparatus that is used at 21st Street? Is it the latest improved U. G. I. Lowe process?

A. Yes, sir.

Q. And in its operation compares favorably with your improvement upon Jerzmanovsky?

A. Yes, sir.

Q. This substitution that was made of the improved U. G. I. Lowe process would save how much in fuel per thousand cubic feet of gas, you say?

A. As compared with what?

Q. As compared with the old process that was there before.

A. The old process?

Q. That was there before 1904?

A. I think the fuel consumption in the old apparatus ran up to approximately forty pounds, and I think they have some results to show now in which the consumption is down as low as thirty pounds.

Q. Did you give the total value of this 21st Street plant?

A. I think I gave that already.

Q. You have given your estimate of the cost of the coal gas plant, per unit of capacity?

A. I believe I did in connection with the 18th Street valuation.

Q. And that was how much?

A. If I remember correctly I believe $340 per thousand feet.

Q. What is the value of a water gas plant such as this 21st Street per unit of capacity?

A. $123 per thousand cubic feet, not including any holders, which I excluded in all valuations of this kind.

Q. That is the coal gas plant which you valued at $340 per unit of capacity, which is for a thousand cubic feet of gas produced, isn't it?

A. Yes, sir.

Q. Excluding the holder value?

A. Yes, sir.

Q. And you say that $123 would be the value of the unit capacity of a water gas station similar to 21st Street?

A. Yes, sir.

Q. Excluding holders also?

A. Yes, sir.

1516 Q. Now, we will take up the 44th Street station. The 44th Street station of the Consolidated Gas Company is a water gas station, isn't it?

A. Yes, sir.

Q. And situated on 44th Street to 46th Street between 11th and 12th Avenues, in the City of New York?

A. Yes, sir.

Q. Will you state the capacity of that station?

A. 8,500,000 cubic feet in twenty-four hours.

Q. Now, if you will give the value of the buildings that you have already testified to as being upon the premises.

A. Governor house, without depreciation, $4,015; with depreciation, $3,815.

Q. And also state when built, if you can.

A. 1877.

Valve house, without depreciation, $3,041; with depreciation, $2,889. Built in 1877.

Carpenter shop, $3,465 without depreciation; with depreciation, $3,396.

Lumber shed, $1,771. No depreciation.

Purifier house, $60,668. No depreciation. Built in 1877.

Oxide room, valued in purifier house.

Meter house and office building, $14,556, without depreciation; $13,828 with depreciation.

Condenser and scrubber building, $14,697 without depreciation; $14,403 with depreciation. Built in 1877.

Engine exhauster and blower house, $27,362, without depreciation; $26,815 with depreciation.

Generator and boiler house, $56,788 without depreciation; $53,949 with depreciation; built in 1877.

Retort house, $61,482 without depreciation; $58,408 with depreciation; built in 1877.

Coal hoist, $228. No depreciation.

Concrete mixer and engine building, $475 without depreciation; $452 with depreciation.

Storage power tank building, $379 without depreciation, $342 with depreciation.

1517 Oil pumphouse, $3,306 without depreciation, $3,141 with depreciation; built in 1877.

Tar separator system, $1,775. No depreciation. Built in 1904.

Coal shed, $46,661 without depreciation, $34,996 with depreciation.

Scale building, $275. No depreciation.

Water tower, $1,564. No depreciation. Built in 1877.

Exhauster and boiler house, $3,416. No depreciation. Built in 1877.

Lime and oxide storage shed, $7,207. No depreciation.

Purifier meter and storage house, $44,460 without depreciation, $43,571 with depreciation.

Stable, $11,121 without depreciation, $10,899 with depreciation; built in 1877.

Tool shop, $2,563; no depreciation; built in 1877.

Storehouse, $1,541; no depreciation.

Small brick building, $788 without depreciation, $749 with depreciation.

Sheds, $366; no depreciation.

Blacksmith shop, $1,418 without depreciation, $709 with depreciation.

Pipe house, $55; no depreciation.

Pump house, $44; no depreciation.

All brick walls around works, $47,160.

All timber fences, $2,860.

Shed at oil storage tank, $188; no depreciation.

Salt water condenser foundations, $489; no depreciation.

Hot gas scrubber foundation, $353; no depreciation.

Air condenser foundation, $752; no depreciation.

Underground drainage tank in yard, $2,032; no depreciation.

Forced draft fan room, $122 without depreciation, $98 with depreciation.

1518 That makes a total for buildings without the 10 per cent. for engineering and 5 per cent. for interest charges, $407,767.

Q. I suppose you arrived at this result in the same manner as you did with the others that you have testified to, you took the Kings County buildings as a standard?

A. Yes, sir.

Q. And multiplied the number of cubic feet contents in these buildings by the unit that you obtained from dividing the cubic feet by the cost of the Kings County buildings.

A. Yes, sir, that is right. And I want to say in connection with this matter that in all instances where the buildings of the Consolidated Gas Company differed from those at the Kings County Works, for instance in the construction of the foundations, where the

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foundations were deeper on account of the quality of the ground or where piling had to be resorted to in order to establish a proper foundation, those additions were figured extra because they form an extra consideration outside of the basis of comparison with the Kings County buildings, which were all based upon good ground.

Q. Where are the Kings County Works situated?

A. I think it is at the foot of 55th Street in Brooklyn, on the water; it is right near the Edison Electric Station or the power house for the Edison Station.

Q. Well, you mean it is on New York Bay?

A. New York Bay, yes, sir. And the ground there was splendid building ground, consisting of sand.

Q. Then you added something for the additional cost of foundation?

A. Wherever they differed from the conditions existing in those Kings County Buildings, yes, sir.

Q. On what theory do you add ten per cent. engineering charge to the construction of the building?

1519 A. The ten per cent. is on the total plant as such, not on the buildings alone, but on the plant as a total. That, as I already explained, contains all those charges which every gas company will experience in building a new plant and includes also the alterations made in the construction or during the course of construction which are necessitated sometimes by additions and change in apparatus and improvements, and there is no contract of that kind executed where there is not always a very large extra bill to be paid by the gas company on account of these cases.

Q. That would not apply to the buildings, would it?

A. Yes, sir; when you are making a change in your layout of apparatus it effects a change in the buildings and they have to be changed correspondingly, so the item of ten per cent includes that item as well as all others previously mentioned. And all these extras, the extra additions to the buildings in my estimate for changes in raw material were estimated in detail from conditions as I found them to exist at every one of these buildings, as near as I could ascertain them. Of course, I could not dig down and find out what the foundations were, but as near as I could ascertain it I took the description from the man who apparently had the information, and based upon that my detailed estimate.

Q. But as you had in this case a plant before you that you were going to duplicate, there would not be any changes, would there, in this case? You say you are going to duplicate this particular plant.

A. Therefore, I had to include extra cost for these foundations, which were not included in my original figures.

Q. But you would not have to allow for any alterations, any changes of plan, because that had been predetermined and foreordained, as to exactly what this plant was to be before you started.

1520 A. That is so with all plants, they are always designed beforehand, and these changes take place during the construction when they see that improvements are necessary.

Q. But you could not in this case because you were going to produce the exact duplicate of this plant.

A. That is true, but the gas company had those expenses when they built the plant.

Q. But this gas company bought these buildings already built.

A. That I don't know.

Mr. **Mathewson**: Some company built them.

The **Witness**: Somebody built them.

Q. Now, we will proceed with the apparatus.

A. Governor house, entire contents, $1,655 without depreciation, $1,572 with depreciation.

Q. In this governor house I would like to have you state the kind of governor and what you valued that at.

A. Fifteen floor stands, $230.

One 24-inch Smith & Sayre governor, $1,275.

Gauges and furniture, $150. Making a total of $1,655.

Valve house, $50 without depreciation, $48 with depreciation.

Carpenter shop, $100 without depreciation, $95 with depreciation.

Q. Now the purifier house, is that next?

A. Purifier house containing eight purifiers, 24 by 24 by 3 feet deep, with wrought iron covers, two layers of trays, 24-inch dry center seals; two hydraulic lifts for the steel covers and supports for the purifiers, $43,680 without depreciation, $41,496 with depreciation.

Lumber shed not included in valuation. See item 1 in addenda.

Meter house and office buildings: two 14 foot by 14 foot station meters, with wrought iron cases, $11,750 without depreciation, $11,163 with depreciation.

Q. Does that include the foundations?

1521 A. No, sir, the foundations of the apparatus, as I have already stated, are all included in the various buildings.

Q. Will you give me the values, by referring to any notes you have, of the foundations under these two buildings?

A. No, they are included in the units of prices taken from similar buildings in the Kings County works, where these foundations were included.

Q. I know; but whatever figure you used here.

A. They are in the unit price.

Q. I know; but you had to multiply that unit by something to produce this result for these particular foundations, didn't you?

A. No; the foundations for the meters were contained in the instance of the Kings County buildings, and therefore your unit price established by using the Kings County buildings includes those costs of the foundations.

One 16-inch Wylie proportional meter and one small meter, 24 inches diameter with 2-inch connections, $1,600; no depreciation.

Office furniture, $800 without depreciation; $760 with depreciation.

One bar photometer, $650; no depreciation.

Q. Are you an expert on office furniture also, Mr. Mayer?

A. No, I am not.

Q. Go ahead.

A. Condenser and scrubber house:

POOR COPY

Two scrubbers constructed of steel with cast-iron base, 9 feet diameter by 21 feet 11 inches high, $3,575 without depreciation; $3,504 with depreciation.

Do you want me to read all the details in these different cases? I think you have them in the schedule.

Q. I think you had better read it in, as this is evidence and that schedule is not.

A. Two rectangular condensers, cast-iron base, 30 feet long, 6 feet 6 inches wide, 12 feet righ, for 24-inch connections;
1522 $31,752 without depreciation; $29,530 with depreciation.

Q. All the apparatus you have testified to so far was put in in 1877, wasn't it?

A. Yes, sir.

Q. And on these rectangular condensers with cast-iron base you took a unit price of 8.4 cents per pound?

A. Yes, sir.

Q. How much of that is wrought iron and how much cast iron?

A. Of the total I should say that the proportion of cast iron to wrought iron would be about as——

Q. Well, I will ask the question in another way which will come to the same result and be easier to answer. What is your unit of value for cast-iron, how much per pound?

A. For the cast-iron, 1.65 cents per pound; that is for the melted material; freight .2 of a cent; drayage .1 of a cent; molding .45 of a cent; machine work .85 of a cent; erection and labor .6 of a cent; total, 3.85 cents. To which must be added an item for wear and tear and operating expenses, .39 cents, making 4.24 cents, and a profit for the manufacturer of 15 per cent., making 4.88 cents. The price applied for this part of the condenser is 4.9 cents per pound.

Q. Is 4.9 cents per pound the unit you have used in estimating the value of all the cast iron?

A. No, sir, it is not.

Q. Or does that apply merely to the condenser?

A. To the condenser works, yes, sir.

Q. And what unit did you apply to the wrought iron in this condenser work?

A. The total price of cast iron and wrought iron combined brings the unit price up to 8.4 cents per pound; that includes the tubes, the tubes being a very much higher class of material than the balance of the work.

Q. The wrought iron would be 3.5, would it not?

A. The wrought iron alone, do you mean?

Q. I want to know what your two units are, which make
1523 a total of 8.4 cents a pound?

A. In this instance there is a cast iron base and the total weight would have to be proportioned between the cast iron and steel work. The addition of the two unit prices would probably be in the neighborhood of ten cents, but the average for the total condenser is 8.4, which as I said before includes the cost of the tubes, which is higher priced material than the balance of the wrought iron. I presume that the weight of this cast iron is approximately 8 per cent. of the total.

Q. You may proceed.

A. One Westinghouse No. 25 gas meter made by the Fuel Gas Manufacturing Company at Pittsburg, Pa., 24-inch diameter, 20 inches deep, $350, no depreciation. One Pelouze & Audouin revolving condenser with Smedberg improvement, $1,260 without depreciation, $1,197 with depreciation.

Q. Is that in use now, that Pelouze & Audouin condenser?

A. No, it was not in use when I was at the works.

Q. Do you know whether it is an abandoned apparatus?

A. No, sir, it is not. It is for the purpose of taking out tar by molecular attraction, and I presume it is only used in the winter time when they are making the coal gas.

Mr. Mathewson: It is the same form we are installing in Astoria now. It is not an out-of-date or unusued type.

The Witness: It is a very important apparatus in its present condition; some very large ones are being applied in the Astoria Works.

Q. Proceed.

A. Engine exhauster and blower house:

Two vertical engines made by F. G. & A. E. Rowland; 12 inches cylinder, 12 inches stroke, 4 inches steam and 4 inches ex-
1524 haust connections, 4 feet diameter and 5 inches wide fly
wheel; diameter of driving wheel, 20 inches, $2,175; no depreciation.

Two Payne engines, 14 inches diameter cylinder, 14 inches stroke, 5 inches steam, 6 inches exhaust, fly wheel 5 feet in diameter by 16 inches wide with counterbalance attachment on wheels; each engine has two driving wheels 60 inches in diameter by 12 inches wide; each engine has extra bearings for 6 inches shafting. $3,980; no depreciation.

One horizontal Buckeye engine, diameter of cylinder 14¼ by 14 inches stroke, 5 inches steam, 6 inches exhaust connection, two driving wheels 80 inches by 12 inches wide $1,990; no depreciation.

Two McKenzie exhausters, 24-inch connections, 225,000 cubic feet per hour, $3,410; no depreciation.

Three No. 10 B. F. Sturtevant monogram blowers——

Q. Are those McKenzie exhausters?

A. Yes, sir.

Q. Are some of these engine governors and compensators or machines that you have been reading before, in connection with this?

A. No, not in this instance, because they are not exhausters, they are all blower engines. And in the instance of exhauster engines you would of course have to have a governor to control the speed of the engine.

Q. Are there any engines included?

A. Not of that kind in this plant because it is a water gas plant.

Three No. 10 F. B. Sturtevant monogram blowers, 12 inches by 12 inches driving pulleys, 24-inch discharge openings, $1,800; no depreciation.

One blast gate valve.

Two butterfly valves.

POOR COPY

One steel blast flue with connections to boilers, $290; no depreciation.

One compound duplex Worthington pump with Detroit
1525 lubricators, size of diameter, 10 by 16 by 17½, cast iron
chamber, 6 inches suction, 5 inches discharge, 2 inches steam, and 3 inches exhaust, $670; no depreciation.

One Davidson pump No. 10 with cast iron air chambers, 16 by 18 by 10 inches, 6 inches suction, 5 inches discharge, 2 inches steam, 3 inches exhaust, $772; no depreciation.

Engine exhauster and boiler house:

One Knowles duplex pump 7 inches by 13 by 6 by 16 inches suction 6 inches discharge 5 inches, 2 inches steam, 3 inches exhaust, $656.

There is a depreciation on that but I have got several items added together in one lump, and the depreciation on all those is alike.

Q. You could just state that you have combined the apparatus in the engine exhauster and boiler house and figure the depreciation from the total, and that that depreciation amounts to two per cent.

A. That only refers to those two items and not previous ones. Those are all right.

One Spencer automatic damper regulator, $250.

One McClelland oil purifier tank, $53.

One Gild & Garrison No. 4 pump, 8 by 4½ by 10, $210.

One 10 by 16 by 18-inch Blake pump jet condenser, $650.

Countershafting, pulleys, bearings, hangers, brackets and so forth, $135.

The total of the above items from the Knowles pump down is $1,954 without depreciation; $1,915 with depreciation.

Generator and boiler house:

Two 8 feet 6 inches United Gas Improvement Co. sets, $29,000, no depreciation.

Four 12-feet United Gas Improvement Co. sets. Each set consists of generator, carbureter, superheaters and wash boxes, each 8
feet 6 inches, one scrubber 8 feet 3 inches diameter by 22 feet
1526 high, one condenser, 8 feet 6 inches diameter by 22 feet high,
$70,000. The twelve sets have three scrubbers 12 feet 6 inches diameter by 22 feet high, $2,438. Total of the two above items, $72,438, no depreciation.

Q. Have you included the scrubber and condenser with the 8 feet 6 inches in set in the value of $29,000?

A. Yes, they are included, except in this instance the scrubbers were located outside of the building in a separate location. That is the reason they were estimated separately. In the above sets are included the necessary hot gas wells, water jacketed, generators and carbureters, necessary blast connections and also necessary generator, carburetor and superheating interlocking gears, oil heaters, gauge bolts and pressure gauges.

Q. I notice that the two 8 feet 6 inch sets you value here at $29,000.

A. Yes.

Q. Does that include the scrubber and condenser?

A. No, that was just the generating sets.

Q. Then you have stated separately the scrubber and condenser. Did you give any value to them, or is that included in the $72,438, taken together with the other sets?

A. Yes, scrubbers for the entire generators.

Four Hazelton porcupine boilers, 200-horse-power each, 6-inch steam take-off, necessary pressure gauges, water columns, &c., in brick settings, $10,800 without depreciation; $10,044 with depreciation. To the above must be added item No. 3 in addenda, $2,400 without depreciation; $2,232 with depreciation.

Two hydraulic lifts, 5 by 5 feet platform, with overhead hydraulic cylinder, $4,000 without depreciation; $3,920 with depreciation.

Q. Where did you get that item that you add?

A. Item No. 3 in addenda, under the heading of generator and boiler house.

1527 Cast-iron charging floors surrounding water gas apparatus, $11,234; no deprecation.

Q. Now, this Automatic Gas Improvement Company's sets and generators; they are the latest improved sets, the same as was installed in the 21st Street plant, or not?

A. Yes, they are all of the same type. That is, they are all modern sets all through.

Q. Those were installed in 1904, were they not, at 21st Street?

A. They were installed in 1894 and 1898.

Q. 1894?

A. That is what I have got down here, 1894 and 1898.

Q. Wasn't that before this improvement was made?

A. No, sir, the improvement was made since that time, but not of very big consequence. The principal improvement that they made was after the patent of the Wilkinson type of generator expired, and they adopted the reversal of steam, with one and the same generator and one and the same runner. That was previous to that time.

Q. These are the latest type?

A. Yes; there may be some minor differences in the operating gear made since that time.

Q. You may proceed.

A. Retort house:

Ten benches of sixes, back to back.

One floor fired furnace, $44,200 without depreciation; $39,780 with depreciation.

Q. Those are coal gas benches, are they not?

A. Yes, they were entirely reset in 1896.

Q. But they are water gas stations, they don't manufatcure any coal gas, do they?

A. They can use these benches for the production of coal gas the same as the 21st Street station.

Q. Well, do they?

A. They did not do it at the time I examined the plant, but I presume they do it in the winter time to get up their candle power.

1528 Q. Candle power of what gas?

A. Of their water gas.

Q. Do you mean to say that you would enrich the water gas——

A. (Interrupting.) Mixture of water gas and coal gas; this gas may be taken from the 42d Street works.

Q. It is arranged now for use as an oil gas generator?

A. Yes.

Q. There is no difference in the retorts that would be used for the production of water gas and those that would be used for the production of coal gas?

A. It is absolutely the same retort. All you have to do is to put a pipe inside of it, vaporize it, and turn it out in the shape of gas instead of the coal.

Q. Is there any evidence of this having been done for that purpose?

A. I do not recall that exactly. It was not in use when I was there. I ascertained that that had been entirely reset in 1896, and that for that reason I made a depreciation of 10 per cent. What I mean by ten benches of sixes is really twenty benches. They are made back to back the same as I said yesterday.

Two Altman and Taylor B. & W. type boilers, set in one battery, 200-horse-power, with stack breeching boiler settings and steam piping, $7,637 without depreciation; $7,485 with depreciation.

Two Hazleton porcupine boilers, 200-horse-power each, with stacks, steam pipes, &c., $5,500 without depreciation; $5,390 with.

To this item should be added, as per Item No. 4 in addenda, $1,200 without depreciation; $1,176 with.

One No. 10 Monogram Sturtevant boiler, $600; no depreciation.

One 10½ by 12 Armington & Sims engine, with belting and fly-wheel, $1,210; no depreciation.

One No. 4 Garrison pump, 8 by 4½ by 10 inches, $190; no depreciation.

1529 One Berryman feed water meter 2 feet in diameter 8 feet high, $195; no depreciation.

Air and salt water condensers:

Two air condensers made by Logan Iron Works 33 feet long by 7 feet wide by 23 feet high, constructed of cast iron base with wrought iron flues, four flues to a section, 34 inches by 7 inches, each flue "U" shaped, 6 sections in all, $14,550 without depreciation, $13,920 with depreciation.

One salt water condenser of cast iron in four sections 31 feet long by 5 feet wide by 15 feet 3¼ inches high, containing 704 3-inch diameter, ⅜-inch cast iron tubes, 11 feet 7¼ inches long, $10,290; no depreciation. These condensers have been reconstructed lately.

By Mr. Burr:

Q. Give the size of connections?

A. That only refers to the connections; it don't include any connections.

Air and salt water condensers; 1 salt water condenser constructed of wrought iron 33 feet long 5 feet wide by 15 feet high, cast iron base, 24-inch connections; 3-inch cast iron tubes 12 feet 4 inches long, $8,036; no depreciation.

By Mr. MATHEWSON:

Q. Was the one before cast iron, the one salt water condenser just above this?

A. That was all cast iron.

Coal hoisting apparatus, 9 by 10 feet Hunt single, 2 cylinder hoisting engine, 4 tubes, 1,100 pounds capacity, 2 cars, 3,300 pounds capacity, 2 counter weights, 1 trolley, 15,000 pound Howe platform scale, 120 feet of trestle 20 feet wide by 25 feet high, 240 feet of track on 4 inches by 16 inches timbers, 480 feet 4 inches by 6 inches timbers carrying rails, 480 feet of rail, total $8,037 without
1530 depreciation, $7,876 with depreciation.

Water tower, 1 Blake compound duplex pump, size 9 by 16 by 12 by 10, $1,831 without depreciation; $1,740 with.

One Worthington duplex pump 10 by 10¼ by 10, with gauges, piping and tools $450 without depreciation; $423 with.

One 20 feet diameter by 20 feet tank, ⅜ inches by ¼ inches steel plate, $1,333 without depreciation; $1,200 with depreciation.

Exhauster and boiler house:

One 24-inch McKenzie exhauster, $1,705, no depreciation.

One 8 by 8-inch Greenfield reversing engine, $468. No depreciation.

Two vertical boilers, 3 feet diameter by 9 feet high, $410 without depreciation; $399 with depreciation. They were not in use when I was at the works.

Q. Have you any idea of whether they were ever used?

A. Yes, they are used, I do not know for what purpose, but they are used.

Lime and oxide shed:

One Knowles C. & F. W. duplex air compressor, 12 by 20 by 18 inches, $2,750. No depreciation.

Purifier shed:

Four cast iron purifier boxes, 34 by 24 by 3 to 4½ deep, with 24 by 4 inches cups arranged for 24 inches connections.

Four wrought iron purifier covers, trunk shape.

Two hydraulic carriages 26 by 24, 3-inch by 9 feet high, constructed of steel. The boxes in this instance are supported by brick walls. Prices for the brick supports are included in the price of building.

One 20-inch high center seal.

Total $18,532 without depreciation; $17,606 with depreciation.

1531 Meter house:

One 14 foot diameter meter, wrought iron sides and head made by the Continental Iron Works, 24 inches connection, necessary gauges, water columns, and so forth, $6,300 without depreciation; $5,895 with depreciation.

To this amount must be added as per item No. 5 in addenda, $1,075 without depreciation; $1,022 with.

Two No. 7 Sturtevant boilers, dismantled, $400 without depreciation; $360 with.

Three dismantled walking beam engines $1,150 without; $863 with.

These are ready for repairs, and I value them in their present condition as no repair parts had been delivered, therefore, in one instance the depreciation is twenty-five per cent. and in another instance ten per cent. That is the present condition of the engines.

Q. Well, do you know whether they had been abandoned?

A. No, sir.

Q. Or whether they are merely in process of repair?

A. Merely in process of repair, and as there are no repair parts there I could not include it. If the repair parts were on the ground I would consider it perfect, otherwise I could not.

Stable, 23 stalls, two box stalls, all constructed of hard pine timbers, and feed racks, $460 without depreciation, $437 with.

Tool shop, the total contents of tool shop is only $1,540 without depreciation, $1,463 with.

Store house and annex, that is only a small amount, the entire contents $420, no depreciation.

Oil tanks underground, 13 tanks 18 feet by 30 feet, $11,578, three tanks 12 feet by 35 feet, $4,575. One tank 12 feet by 7 feet, $580. Total of the above tanks, $16,733 without depreciation, $14,232 with depreciation.

1532 Tanks overground, one 8 feet by 30 feet, $890 without depreciation, $846 with depreciation.

Filter press house, one filter press, Johnson & Company, $850, no depreciation.

Tar and oil system, various tanks, total amount, $662, no depreciation.

Pump shed, total contents, $358, no depreciation.

Blacksmith shop, total amount for forges, anvils, shears and punches, $319 without depreciation, $287 with depreciation.

Q. The last figures you gave, $319 and $287, related to all the contents of the blacksmith shop?

A. Yes, sir.

Power house, one Worthington Duplex, 10 by 10¼ by 10, $468, no depreciation.

One No. 10 Cameron, $360, no depreciation.

Oil tanks, No. 6 and No. 9, oil tanks in open, 40 feet diameter, 16 feet high, constructed of steel, set in circular pit, maximum capacity 150,000 gallons each tank, $9,750 without depreciation, $9,263 with depreciation.

Concrete mixer house:

One Sturtevant engine, 4 inches diameter, cylinder 6-inch stroke, $165 without depreciation, $157 with depreciation.

One concrete mixer, $400 without depreciation, $380 with depreciation.

(At this stage of the proceeding Mr. Kirby arrived.)

Q. What is that used for, that concrete mixer?

A. For mixing concrete for building purposes.

Q. That is some temporary affair, is it?

A. Well, they move that around wherever they have to mix concrete when they are building something for themselves, from one plant to the other.

1533 By Mr. Mathewson:

Q. For repairing?

A. Well, perhaps repairing and any kind of building they have to do, instead of spending manual labor for mixing that concrete they use this machine.

Q. I think some of the pillars are enclosed in concrete at some of the stations, by order of the fire department, to save the pillars in case of fire. If that had to be done we would have to use it?

A. Yes, sir, there are many occasions where they have use for this mixer, of course.

By Mr. Page:

Q. Proceed.

A. Storage tar tanks.

Three storage tar tanks constructed of wrought iron 8 by 8 by 7 feet 6 inches——

By Mr. Burr:

Q. You have 8 feet by 6?

A. 8 by 8 by 7 feet 6, carried on wooden beams set into ground, set inside of corrugated iron building, size of tanks 10 inches by 6 feet deep, two heads, total for the three, $1,848 without depreciation, $1,756 with depreciation.

Oil pump house:

Two steel oil tanks of 12 feet diameter, 7 feet high, and one 10 feet diameter 7 feet high, $1,218.

Two Davison single pumps 9 by 9 by 12 inches, $275.

Two Cameron pumps, 12 by 7 by 13, $314.

One Worthington duplex, 7½ by 4½ by 10, $197.

One Cameron No. 8, $314.

One Worthington duplex, 6 by 5¾ by 6, $128.

One Cameron No. 9, $325.

Total of above tanks and pumps, $2,771 without depreciation; $2,633 with depreciation.

Tar Separator system:

Constructed of wrought iron, ¼-inch thick by 54 feet long,
1534 15 feet wide, 6 feet 6 inches deep, with eight compartments,
8¾ tie rods and turn buckles, $2,250; no depreciation.

Scale house:

One 10-ton scale, ball-bearing platform, 13 feet 6 inches by 8 feet wide, set in brick pit, 12-inch walls, $300; no depreciation. That does not include the pit, of course.

False draft fan, one steel plate Sturtevant ¾-housed blower, directly connected to engine; size of fan, 50 inches by 30 inches, $1,000 without depreciation; $950 with depreciation.

By Mr. **Page**:

Q. Did you figure in that brick pit at all?

A. No, that is in the buildings.

Q. Did you figure that in the buildings?

A. Yes, in the scale house. It is not in this price of $300. All the items of fire brick, fire clay, coke and coal, they are all omitted.

Q. They are not included within the inventory?

A. No, sir, they were included once but you will find an item in addenda, No. 6, that this material is not to be considered in the valuation, but deducted. That was $11,715, which I deducted; it had been included first and then taken off again.

Q. What did you make the total amount of the value of the apparatus at the 44th Street plant to be?

A. $409,175, not including the charge for general engineering and interest charges.

Q. This capacity which you have given in regard to the 21st Street station and the 42d Street station I presume is the same as you gave in reference to the coal gas stations and is the total maximum daily capacity at which it could be run continuously?

A. Yes, sir.

Q. And all parts of the apparatus are up to that
1535 capacity?

A. Yes, sir. I found in each and every instance that they could probably run a little over that capacity. In fact in some instances they have run over that capacity.

Q. This estimated capacity of yours is the capacity at which it could be run continuously?

A. Yes, sir.

Q. And not what could be forced on special occasions?

A. No, sir.

Q. To carry a heavier load?

A. No, sir.

Q. Now, we will turn to the 99th Street station. The 99th Street station is a water gas station, is it?

A. Yes, sir.

Q. And a capacity of how much?

A. 5,500,000 feet.

Q. Now, you may proceed with the buildings.

A. Engine house, boiler house, pump house, machine shop, retort and accumulator house, total value without depreciation, $96,162; with depreciation, $91,354. Built in 1881.

Generator house, without depreciation, $30,732; with depreciation, $29,807. Built in 1881.

Foundations for air condensers, $900; no depreciation.

Foundations for salt water condenser, $368; no depreciation.

Office buildings, $8,922; no depreciation.

Meter house, $10,039; no depreciation.

Purifier house, $43,539 without depreciation; $41,409 with depreciation.

Lime house, $3,787 without depreciation; $1,984 with depreciation.

Valve house and drip pump house, $108; no depreciation.

Now, there are four valve houses, all of the same size, $513 each, without depreciation; $488 with depreciation.

1536 By Mr. KIRBY:

Q. What are those values for, for the house itself?

A. For the house itself, yes, sir.

Condenser and scrubber house, $10,185; no depreciation.

Exhauster house, $8,400; no depreciation.

Tar separator system, $1,775 no depreciation.

Pump pit, $624; no depreciation.

Tar storage, $128; no depreciation.

Coal shed, $21,600 without depreciation; $19,872 with depreciation.

Q. Is that coal shed a covered one?

A. Yes, sir, it is a brick shed, 125 by 46 feet and roofed.

Filter press house, $408 without depreciation; $388 with depreciation.

All walls around the works, $15,710, no depreciation. They were rebuilt in 1895.

Fences. All fences around the works, $3,380, no depreciation.

Cover over doors of oil tank and ground, frame shed, $534, no depreciation.

Foundation under hot scrubbers in yard, $498, no depreciation.

That is all for the buildings.

Q. In estimating the value of these buildings substantially to-day, did you use any factor for obsolescence, or are they all up to date and none of them obsolete in type, or partly so?

A. Some of them are in a perfect condition. All those where there was no depreciation allowed they are perfect in every respect.

Q. I mean if any of these buildings were to be constructed to-day for the purpose indicated, would you as an engineer construct them the same way as they are now built, or would you construct them in some other way?

A. No, sir, I see no reason to make any change for that particular plant.

1537 Q. But for a plant of that capacity?

A. Yes.

Q. To have a plant of the greatest efficiency, would you construct them in this particular way?

A. For a plant of the same capacity, located on the same ground, I would construct the buildings in the same manner, in the same relative positions.

Q. In other words, if there were no buildings upon that plot of ground of any kind or character, and you were given an order to construct a gas plant of that capacity, that is, a water gas plant, you would construct these buildings in the same way and place them in the same relative positions as they are to-day?

A. Yes, sir.

Q. Making no changes of any kind?

A. None whatever. In connection with that I might say what I said formerly that every inch of ground space of all these plants is utilized to its utmost capacity and you can do no more than that in any well constructed plant.

By Mr. MATHEWSON:

Q. And there is no chance in these to increase the capacity now, so far as you can see, because all the space is already utilized?

A. Not at all. There is not an inch left for any increase unless you go up in the air, which isn't practicable for gas works purposes.

By Mr. KIRBY:

Q. Do you know on which of these two blocks of page 9, Exhibit 48, the various buildings are situated?

A. You mean do I know whether the buildings are situated on those two blocks?

Q. Which of those two blocks the various buildings are on?

A. Oh, I can't tell from memory now. I went all over every building.

1538 Q. It is not indicated on your notes so you could inform us of it?

A. No, sir. The totals of all the buildings at the 99th Street plant, without the 10 per cent. for engineer and interest charges is $248,247.

Q. You have not figured that 10 per cent. and 5 per cent. on these separately, have you?

A. Only on the total result.

Q. The grand total?

A. Yes, sir.

By Mr. BURR:

Q. What was that other figure of $96,162 and $91,354 that you gave us?

A. $96,162 without depreciation and $91,354 with depreciation. That is for the engine house, boiler house, pump house, machine house, retort and accumulator house.

Q. What is this last amount you have given us?

A. It is the total of all the buildings.

By Mr. **Kirby**:

Q. Now we will take the apparatus?

A. Generator house: 4 sets of 10 feet U. G. I. Lowe water gas apparatus with 24 inches gas take-off mains; each set consists of a 10 feet diameter by 14 feet high generator.

Mr. **Burr**: Concretor, it is here.

The **Witness**: It should be generator; with three 19¼ inches diameter coaling doors, one 10 feet diameter by 15 feet 11 high carbureter with necessary water and oil connections.

One 10 feet diameter by 22 feet high superheater with necessary superheater stacks, 36 inches diameter by 20 feet high, over all.

One 8 feet 6 inches diameter by 4 feet hot wash box.

1539 These sets have necessary hot gas valves with air jackets, also necessary generators carbureters and superheaters, interlocking gears, from meters, gauge apparatus, coal guards and so forth. The apparatus, together with the surrounding charging floor is valued at $64,167, with no depreciation.

Q. What is the apparatus alone valued at?

A. $56,000.

Q. Being $8,167 for the charging floor?

A. Yes, sir.

Q. Do you know when that apparatus was installed?

A. 1904.

Q. The old type?

A. Yes, sir.

Q. And the present type U. G. I. Lowe water gas apparatus?

A. Yes, sir.

Q. Why do you figure them altogether as one item?

A. Why that is the way the apparatus is furnished by the United Gas Improvement Company and I got this price from them; in fact they are the water gas purifiers for the various works.

Q. In other words, when you give specifications for a water gas apparatus, you generally include with it the other apparatus mentioned by you?

A. Yes, sir.

Outside of generator house. Air condenser. Construction of cast iron base——

Q. You may give those altogether.

A. —.

Length of wall, 35 feet 7½ inches width 11 inches.

Size of connections 24 inches.

$8,025 without depreciation; $7,615 with.

Q. Do you know the age of that construction outside of the generator house?

A. Well, I had it down here over twenty years, but there is a question mark around that because it was in such perfect condition.

Q. You have, therefore, only figured five per cent. depreciation?

A. Yes, sir.

Q. Notwithstanding an apparent age of twenty years?

A. No, there wasn't any difference.

1540 Mr. Mathewson: The witness says he is not sure that it was twenty years, the condition was so good, as I understand him.

The Witness: I understood it was about twenty years, but the condition was so good I could not believe it.

By Mr. Page:

Q. Where did you get the information that it was twenty years?

A. From the superintendent.

Yard:

Salt water condenser. Cast iron, 31 feet long, 4 feet wide, 15 feet 3¾ inches high.

668 tubes, 3 inches diameter by ⅜ inch, metal water tubes, 11 feet 7¼ inches long. Size of connections 16 inches. $10,045 without depreciation; $9,845 with depreciation.

By Mr. Kirby:

Q. Do you know when that was purchased?

A. 1904.

Q. And erected at that time?

A. Yes, sir.

Office building, total contents, furniture, etc., $2,000 no depreciation.

Meter house:

One 16 feet diameter station meter, $9,250, no depreciation.

One 13 feet 6 inches station meter, $6,350, no depreciation.

Q. I presume these have been installed some time?

A. The latter meter, 13 feet 6 inches, was just recently repaired and put in thorough condition.

Q. As was also the former?

A. I don't know when the former was last repaired, but it is in perfect condition.

1541 Q. And they are built in the same manner as you would have built them if you were installing them to-day for the purposes indicated?

A. Yes, sir.

Purifier house, two sets of four purifiers, 21 feet by 20 feet by 3 feet deep, three layers of trays for each box; size of connections 24 inches; two center seals, diameter 6 feet and 5 feet deep; two hydraulic lifts for purifier covers, constructed of steel, size 15 feet by 22 feet. Total price without depreciation $33,650, with depreciation $31,970.

Q. Have you any knowledge as to how long this purifier house has been in use?

A. About 25 years.

Q. Still you used a depreciation factor of but 5 per cent.?

A. Yes, sir, for the reasons stated before, that there is no depreciation except on the cover sides.

Q. And it is of the same construction as if you were building a purifier house for the purposes indicated to-day?

A. Yes, sir.

Lime house, total contents, $100, no depreciation.

Valve house and drip pump house, $30, no depreciation. That is the same in the other valve houses.

Mr. Mathewson: The next two drip houses are $30?

A. Yes, sir.

Q. And the next two $30 and $30?

A. Yes, sir.

Valve and drip pump house, $30, no depreciation.

One valve house, $30, no depreciation.

One valve house, $30, no depreciation.

The next is valve house, $10, no depreciation.

Valve house, $10, no depreciation.

Condenser and scrubber house, two 10 feet diameter by 24 feet high, scrubbers of wrought iron; two 24 feet 3 inches long by 5 feet 2 inches wide by 50 feet condensers, cast iron construction.
1542 Three vertical tubes inside of same. Wrought iron scrubbers, $4,420.

Cast iron condensers, $15,680.

Total, $20,100 without depreciation, $19,095 with depreciation.

Q. Do you know how long those scrubbers and condensers have been installed and in use?

A. About 25 years.

Q. Now the exhauster house?

A. Exhauster house one McKenzie exhauster No. 15, $1,865.

One Greenfield vertical engine, 9 inches by 9 inches, $475, total $2,340, no depreciation.

Tar separating system in yard. Tank constructed of wrought iron ¼-inch thick, 54 feet long 50 feet wide, eight compartments each 6 feet 6 inches. Eight ¾-inch tie rods with turn buckles, $2,250, no depreciation.

Q. They have been recently purchased, haven't they?

A. In 1904.

Pump pit:

Two Knowles pumps, one 6-inch by 7-inch by 12-inch, $223; one 8-inch by 10-inch by 12-inch, $265.

One Davidson pump, 8-inch by 4-inch by 12-inch, $215.

One Cameron pump, 4½-inch by 4-inch by 6-inch, $145.

Total, $848 without depreciation; $764 with depreciation.

Yard:

Three tar storage tanks, wrought iron, ¼-inch thick, 8 feet by 8 feet by 8 feet, $750 without depreciation; $675 with depreciation.

Yard below ground:

Twelve steel tanks, laid horizontally, 8 feet diameter, 40 feet long, with domes 30 inches by 36 inches, $16,267 without depreciation; $13,837 with depreciation.

1543 Q. What are those tanks used for, do you know?

A. Oil storage.

Q. There is practically no depreciation to them, is there?

A. Yes, sir, I figured 15 per cent.

Q. When were they put in?

A. 1887.

Q. What does the deterioration come from?

A. Oxidation from the outside.

Yard below ground:

Two oil storage tanks of steel laid horizontally, 8 feet diameter by 60 feet long with domes 30 inches by 36 inches, $3,848 without depreciation; $3,271 with depreciation.

Q. They were put in at the same time as the previous tanks?

A. 1887, yes, sir.

Another yard below ground:

One drip valve tank, 7 feet diameter, 25 feet long, $668 without depreciation; $602 with depreciation.

Coal shed:

Two hydraulic lifts with 10½-inch plunger, 24-inch diameter casing pipe, 24 feet long, platform 5 feet 6 inches by 7 feet, $4,200.

Two platform scales, 3 tons each, $300.

Total of the two items, $4,500; no depreciation.

Q. I note here, Continental Iron Work in parenthesis?

A. The lifts were built by them.

Yard:

Two hot scrubbers of steel, 21 feet high, 8 feet 6 inches diameter, $1,625; no depreciation.

Q. Do you know when these were placed in the works?

A. 1904.

Q. They did not cost that then, did they?

A. They did not cost this in 1904?

Q. Yes.

A. Yes, just about the same I should say.

Q. Was steel as high in 1904 as it is to-day?

A. There is a little bit difference, perhaps, in steel in favor of the present time, but the labor is higher, so as to offset the difference in saving of cost of material.

1544 Q. The cost of labor and material to-day would average about the same as it did two years ago for work of this character?

A. Very nearly, labor is a little bit higher.

Q. And material is a little bit less?

A. Material is a little bit less.

By Mr. Mathewson:

Q. You would not undertake to say exactly without investigation, would you, what the prices were in 1904?

A. No. Since 1903 the prices jumped so quick and varied so often that it is impossible to express a general opinion as to the exact value of material at that time.

Q. Without looking into it?

A. Without looking into it.

By Mr. **Kirby**:

Q. Since 1903 have they always jumped in the same direction?

A. In 1903 we were not able to make an estimate from one day to the other unless we had confirmed prices by the various mills within twenty-four hours, the prices changed so quick that we were unable to make an estimate without getting the information specially.

Q. It is not so to-day, is it?

A. It is not quite so bad at the present time, but the tendency has been in the upward direction ever since the beginning of the year, for the price of steel.

Q. In making your estimates what prices did you use?

A. In which instance?

Q. For your present appraisal?

A. For steel plates——

Q. As of what date were all these prices?

A. To day's date.

Q. Do you mean the first of August, 1906?

A. Yes, sir.

1545 Mr. **Mathewson**: He does not ask you for the exact figure, he asks you as of what date.

Q. You have stated that the prices even this year have jumped considerably in both directions, and I asked you as of what date you based your estimates?

A. Well, say August 1st.

Q. That would be a fair mean for all the prices you have stated?

A. Yes, sir.

Q. And you consider that that would not be greater than the prices of 1903 or 1904 in most instances?

A. I stated that the prices in 1903 and 1904 varied so quickly in a short space of time that we were not even able to make an estimate from one 24 hours to the next 24 hours without having the prices confirmed by the mills.

Q. The market settled down so it was pretty stable in 1904, didn't it?

A. No, I would not call it stable. It was better than in 1903, but I would not call it stable. Prices were maintained at that time for a longer period of time than in 1903, but I should not consider them as being stable. I can give you the prices I estimated exactly.

Q. These scrubbers, were they put in in 1904?

A. Yes, sir.

Q. The Company paid a certain price for them at that time.

A. Yes, sir.

Q. With your knowledge of prices of 1904, would you consider they paid more or less than your estimate at that time without considering depreciation?

A. I said before that the prices for material were probably a little bit *higher*, but that the prices for labor at the present time are a little bit higher, so one offsets the other and there would be very little difference in cost.

Q. Would that answer be true for all classes of apparatus used in the gas works?

A. Yes, sir.

Q. So if you had made your appraisal in 1904 it would be
1546 approximately the same as it is to-day?

A. Yes, sir.

Q. Go on to the yard now.

A. Another item for yards, 2 hydrogen scrubbers, 8 feet in diameter 22 feet high, $1,560 without depreciation; $1,485 with depreciation.

Q. I notice in parenthesis here "Out of commission." What does that mean?

A. They are not used at the present time. There are a great many apparatus which are not used at the present time because the production of the amount of gas at the present time does not require it.

Mr. MATHEWSON: Summer production, that has been gone all over.

Q. Take the engine house.

A. Two Sturtevant horizontal engines, cylinder diameter 10 inches, stroke 12 inches, steam 3 inches, exhaust 4 inches, $2,045.

One Armington & Sims horizontal engine, cylinder 10 inches, 12 inches stroke, 3 inches steam, 4 inches exhaust, $1,225.

Each of the above engines have two 5 feet by 12 inches diameter wheels, speed about 300 revolutions to the minute. They are connected to three B. F. Sturtevant No. 10 gas blowers, 24-inch connections with 10 by 12 inches pulleys, speed about 1286 revolutions.

Value for blowers, $350. Two McKenzie No. 15 exhausters with 20-inch connections $1,650.

Two Greenfield vertical engines, 9 inches by 11 inches, $3,726.

Two Knowles pumps, 6 by 4 inches by 7 inches—I gave $350 for blowers. That is for the driving wheels of the engine and the $1,650 is for the blowers, and $3,726 is for the exhausters, and $1,000 is for the Greenfield vertical engine. Now add $210
1547 for two Knowles pumps 6 inches by 4 inches by 7 inches, making a total in the engine house of $10,206, no depreciation.

Q. All of the contents of the engine house have been erected since 1900, haven't they?

A. Yes, sir, from 1900.

Q. And the prices you have given for engines, condensers, and the like in all instances are not merely the prices of apparatus, but the prices of apparatus set upon foundations?

A. Yes, sir, erected in place.

By Mr. MATHEWSON:

Q. That is so all through these schedules?

A. Yes, sir, erected upon foundations and placed.

By Mr. KIRBY:

Q. The foundation value, however, is not included in the apparatus but in the buildings?

A. All foundations are included in the buildings.

Q. We come now to the boiler house?

A. Boiler house:

Two batteries, B. & W. type boilers, Aultman & Taylor, Mansfield, Ohio.

Four boilers, 250 horse power each, total 1,000 horse power for two batteries, $18,750. They were erected in 1901.

Two batteries, 21 feet 9 inches deep by 19 feet 6 inches wide by 15 feet 8 inches long for each battery with a stack 5 feet diameter, 125 feet high, including the breeching, $2,386.

Mr. BURR: Are there four batteries all together?

The WITNESS: Yes, sir. All the following items refer to the boilers.

1548 One Sturtevant steel plate boiler, 5-foot wheel, direct connected to double upright enclosed engines, cylinders above shaft; size of engine 2 feet 6 inches diameter cylinders 5 inches stroke, $1,250.

One Gould & Garrison 8 inches by 4½ inches by 8 inches engine, $175.

One Patterson & Berriman feed water heater, $265.

Total for all items in boiler house, without depreciation, $22,826. *No depreciation.*

Q. These small items of tubing, 108 4-inch diameter tubes are included in your appraisal?

A. For the boilers.

Q. Have you separated them?

A. Yes, sir.

Carbureter house used as pump house, and machine shop. Do you want that in detail?

Q. No, you need not give the detail.

A. Total value of pumps, $3,900 without depreciation, $3,510 with depreciation.

By Mr. MATHEWSON:

Q. That includes the contents of that house?

A. That includes the contents in that building.

By Mr. KIRBY:

Q. How do you figure your depreciation factor over that lot of machinery, did you take it for each one?

A. From my personal examination, yes, sir.

Q. You have only figured it on the total and not on each individual appraisal?

A. Well, I examined each and every one of them and in appearance they were all just about alike.

Q. So you used the depreciation factor on the total?

A. On the total for that house.

Pump house, total contents, $860 without depreciation, $820 with depreciation.

1549 Q. You figured depreciation the same way there as in the other pump house?

A. The same way, yes, sir.

Retort house:

Eleven through benches of sixes back to back, $43,758.

Q. That is for 11 benches of sixes back to back?

A. Yes, sir. No depreciation. Now, these benches are just being rebuilt with all the new material on the ground.

Q. What have you figured on the new material that is on the ground?

A. No, I figured on the benches in complete condition. They are in a state of repair now, and will be finished before the fall.

Q. Is all the material there?

A. All the material is there.

Q. The labor is not there?

A. No.

Q. So you figured on labor which has, as yet, not been used?

A. I did in this instance.

Q. What proportion of the cost of those benches would be the labor as you figured it?

A. The total cost per bench would not be over $450 per bench.

Q. That would be how much for the benches?

A. $9,900.

Q. So you figure $9,900 in your total which is not there at this time?

A. It is not there at this time because the work has not been completed.

Q. Because the labor has not been performed?

A. Has not been performed.

Q. The material on the ground, it is worth its value as material?

A. Yes, sir, but it is being placed in position now.

Mr. MATHEWSON: The labor to produce them before has been on the ground and is a part. There is merely a substitution. The labor is there if they have ever been built.

Mr. KIRBY: Labor not as yet performed has not been there,
1550 and that he has figured as $9,900.

Mr. MATHEWSON: Labor has been performed in producing them originally, and this is merely replacement.

The WITNESS: It is replacement.

By Mr. MATHEWSON:

Q. Ordinary repairs in fact?

A. Yes, sir.

Mr. MATHEWSON: So the labor is there.

By Mr. KIRBY:

Q. In the retort house you found 11 benches back to back in course of construction, didn't you?

A. Yes, sir.

Q. On those certain work had been performed?

A. Yes, sir.

Q. And certain material was there?

A. Yes, sir.

Q. Now, the material and the labor complete would amount to the estimate you have given ,wouldn't it?

A. Yes, sir.

Q. The labor to be performed you have figured at $9,900, haven't you?

A. Yes, sir.

By Mr. **Mathewson**:

Q. It is in course of repair, isn't it?

A. Yes, sir. I want to state this is a repair, the same as any other instance where we put new settings in the brick arches. The arches are there and the iron-work is there, and they are merely putting in new material to get ready for the next season.

By Mr. **Kirby**:

Q. But be it repairs or not, it is not there?

A. The labor is not there, but the material is there.

1551 By Mr. **Mathewson**:

Q. Is not the labor there which produced it originally?

A. For the original construction, yes, sir.

By Mr. **Kirby**:

Q. Where is the original construction?

A. The same as this was before it was taken out.

Q. Where is it now?

A. It was torn down by the gas company.

Q. Where is the original construction, is it standing there?

A. No, but the money for building it has been expended.

Q. But the result is not there?

A. No.

Q. That for which the money was spent has been taken away?

A. Yes, to a certain extent, not all.

Q. How much is left?

A. The arches and iron work.

Q. You have figured those, haven't you?

A. Yes, sir.

Q. In your appraisal?

A. Yes, sir.

Q. So that is left you have given a value to and included in your appraisal, haven't you?

A. Yes, sir.

Q. And all that is there in the way of material you have included?

A. Yes, sir.

Q. And you have also included labor which is not there as yet, haven't you?

A. Yes, sir.

Q. And that labor is $9,900, isn't it?

A. Yes, on the repairs to the benches.

Mr. **Mathewson**: As a matter of fact, we lose so much capital every time we make repairs.

Mr. **Kirby**: That is a question for argument.

Mr. **Mathewson**: It is a fact.

Mr. **Kirby**: You cannot value a thing that you have not got.

Mr. **Mathewson**: He can have the labor that we put into
1552 it. You do not lose it when you come to repair it.

Mr. **Kirby**: The legislature may give a certain amount for my services, but I haven't got it yet.

Q. We will go on with the next item.

A. The eleven empty arches should be erased from page 4 of description of apparatus, 99th Street station.

The **Master**: These are not even marked for identification, so it is useless to refer to them.

Mr. **Kirby**: Under the circumstances I think it is all important that we read every item, if they are not exhibits in the case. In many instances we have taken lump sums for the whole contents of buildings, where the items have been less than one thousand dollars and there is no description whatever on the record what that apparatus is, unless these are in the case.

The **Master**: There has been no objection to having them marked for identification, and Mr. Mathewson wanted to put them in evidence. I suggested that they should be put in and the Senator thought, and Mr. Burr thought, and I supposed that you thought also, that it was better to have all these facts appear on the record in the examination of Mr. Mayer, and these typewritten memoranda were used simply for the purpose of convenience in questioning him. I suppose there is not the slightest objection to marking all of them for identification or even in evidence.

Mr. **Mathewson**: Not the slightest.

The **Master**: So do not raise a windmill and fight it. We have enough real trouble without it.

Mr. **Kirby**: I do not see any real reason why they should
1553 not go in as the basis of Mr. Mayer's appraisal, but we certainly want an opportunity to cross-examine as to his values. We have not the apparatus here to measure, but we have the values to cross-examine him on.

Q. Go on with the accumulator house.

A. Accumulator house—do you want that in detail?

Q. Yes, give it in detail.

A. One accumulator, 20 feet high, 6 and 8 inches long, 3 feet wide, diameter of plunger 12 inches, length of plunger 12 feet, size of base, 6 feet 7½ inches by 3 feet, connections 4 inches; the plunger is counterweighted by cast-iron counterweights about 18-inch diameter.

The accumulator foundations consist of 12-inch I-beams, 16 feet long, set into building walls, $960; no depreciation.

One steel water tank, 10 feet diameter, 12 feet high, ¼-inch metal set upon four [illegible]0-inch I-beams, 16 feet long, $351 without depreciation; $347 with depreciation.

One Davidson single pump, 14 by 8 by 14 inches, 6-inch suction 4 inches discharge, $390 without depreciation; $370 with depreciation.

Yard, wooden top tank, 24 feet diameter, full 2,000 gallons, $500 without depreciation; $375 with.

Filter press house, two Johnson filter presses, 15 by 2 feet 6 inches by 4 feet, $1,700, no depreciation.

One 10-ton Howe scale, $300, no depreciation.

Q. Those filter presses are recent construction?

A. Yes, sir.

Q. The same as in the other plants?

A. Yes. Miscellaneous tanks located in boiler house. Do you want that in detail?

Q. Yes, you better give them now.

A. One discharge tank 1¼ inches steel 4 feet by 3 feet by 4 feet.
One boiler feed tank, ⅛-inch steel 6 feet 6 inches by 4 feet
1554 6 inches by 9 feet 6 inches. Do you want those prices in detail?

Q. No, the total.

A. One overflow tank, ¼ inches steel, 5 by 7 feet 6 inches by 3 feet, one gas oil tank, ¼ inches steel 10 feet 4 inches diameter by 10 feet. One fuel oil tank, 3/16 inches steel, 1,500 gallons capacity. One gas oil tank, 10 feet diameter 10 feet high. Total for all tanks, $1,282 without depreciation; $1,155 with depreciation.

Coal, oil, oxide and shavings, not considered in appraisement. Do you want me to include this item (indicating), because that is referred to in your list and also in the addenda, or shall I leave it out?

By Mr. Mathewson:

Q. There is no use of giving that; say fire brick not included.

A. List of fire brick not included in valuation.

By Mr. Kirby:

Q. How about retort house?

A. That is addenda. We had that before. Total for all apparatus without 10 per cent. engineering charges and 5 per cent. for interest charges, $268,177.

Q. Are there any buildings or apparatus in this plant or any other plant, besides those 11 benches in the retort house that we have been speaking of, that are in course of construction and on which you have figured labor that has not yet been performed?

A. No, sir.

Mr. Mathewson: These are not in course of construction. They are constructed and have been there a long time. They are merely in course of repair.

Mr. Kirby: Call it what you may, they are not as yet finished.

Mr. Mathewson: That is another proposition.

1555 Q. You examined all this apparatus yourself?

A. I did.

Q. And went over all these buildings yourself?

A. I did, repeatedly.

Q. And you made no plan as to where the relative locations were between blocks 88 and 89th Street, East River and Second Avenue, did you?

A. No, sir, I did not; there was no necessity for it. I made my schedules as to the apparatus right on the site of the same and measured the distances between them for my connections, put that down and from that made my measurements.

Q. Did you lay a plan down for the location of this apparatus?

A. No, there was not time to do that and there was no necessity for it.

By Mr. Page:

Q. The 18th Street plant is not now in use as an operating plant?

A. No, sir.

Q. And the building and apparatus that you examined and testified to on your examination in chief are remnants of a manufacturing plant, are they not?

A. Yes, with the exception of the holders, valve house—some of the holders and valve houses which are now in use for the dist[illegible]tion of gas.

Q. What portion of this plant would it be necessary to retain as a distributing station in connection with the holders that are there?

A. I do not understand that question exactly.

Q. I understand that this is now used as a distributing station and there are some holders and you said it had a valve house?

A. Yes, valve house, several holders, boiler house and exhauster house.

Q. I say, how much of this apparatus that is left there is necessary to be used for a distributing station?

A. All of it.

Q. Do you want a 90-horse power boiler to run that gas holder and your valves?

A. Yes, sir.

1556 Q. Do you need a McKenzie exhauster?

A. Yes, that is a pump and comes from the other stations to fill the holders at this station.

Q. Then, all are the matters of apparatus which you have given, and about the value of which you have testified, apparatus that is actually in use for the purpose of distributing gas at that station?

A. Yes.

Q. Or is any of it what is left over from the manufacturing plant and not necessary for use in distribution?

A. All that is left now is required for the distribution. In my connections I have included only one single pipe from the exhausters to the holders; the rest are in some instances three and four pipes from the former plant, which have been included in my valuation.

Q. Now, you may give the valuation of the buildings at this place for the purpose of distribution.

A. Five frame sheds; total for the five sheds, $145 without depreciation; $73 with.

Engine, valve, and exhauster house, $5,678 without depreciation; $5,225 with depreciation.

Valve house, $1,523 without depreciation; $1,400 with depreciation.

Boiler house, $1,841 without; $1,693 with.

Stable, included in real estate schedule.

Shed, included in real estate schedule.

Dwelling, included in real estate schedule.

Wagon shed and paint shop, $1,020 without depreciation; $970 with.

Wagon shed, $1,322 without; $1,256 with.

Brick and brownstone building used as enclosure for holders, $169,328 without depreciation; $155,784 with depreciation.

Q. What do you mean by that, that the holders are put inside of a brownstone front or not?

A. Well, there it is, a large building in which are located two holders as a protection for the holders against snow and in- 1557 clement weather, and the man that has to go on top of the holder to clean it. It is an old construction that would not be carried out in these days.

Q. It is absolutely useless, is it?

A. No, it is not absolutely useless. The building is there and contains the holders, and the holders are distributing holders.

Q. Well, I say the building does not serve any purpose. You say a holder will last forever if left exposed to the elements. Then what necessity is there for enclosing it in a brownstone front?

A. I would not build it to-day, but it was built in the days when they considered it necessary to have a building around it to protect it.

Mr. MATHEWSON: And it is not necessarily a brownstone front, Senator.

Mr. PAGE: He says it is a brownstone front.

The WITNESS: No, brownstone—brown trimmings around the windows and things like that. In Chicago the holders were enclosed up to the year about 1880, in very large circular buildings, and it has only since 1880 been abandoned; the use of those holders there, and the weather was very severe.

By Mr. KIRBY:

Q. They do not enclose holders now where the climate is severe, do they?

A. Yes.

Q. All over the world except in Canada and in England?

A. None enclosed in England and none in Canada.

Q. None in Canada that you know of?

A. Yes.

Q. Old construction?

A. Yes.

Q. No new construction?

A. No, sir.

Mr. MATHEWSON: It depends upon the section; there are 1558 some sections still using them and erecting them.

By Mr. PAGE:

Q. If you were erecting this plant, which I understand the company wishes to have valued and for which purpose you have been retained to testify, as to what you could produce this plant for today, you would eliminate this brick and brownstone building from any such estimate, would you not?

A. If I was asked to make a valuation of that now? No, I should not eliminate it because it is there and represents the value that I have given it in my schedule. I have valued everything that I found on the premises that was in actual operation or use.

Q. Have you got anything more?

A. Coal storage yards between 18th Street and 19th Street, value of all timber, fence and retaining walls without depreciation, $1,502; with depreciation, $1,352.

Coal storage yard between 17th and 18th Streets, timbers, fences and retaining walls, $2,160 without depreciation, $1,944 with.

Brick walls in yard between 17th and 18th Streets, $1,960, no depreciation.

Timber, coal hoisting trestle, $4,160 without, $3,744 with depreciation.

Holder yard between 18th and 19th, brick retaining wall, $7,500. No depreciation. That makes a total for all buildings, $182,901.

Q. Now, you might give us the plant that is in those buildings?

A. Frame buildings in holder yard: There are two vertical boilers and one locomotive boiler which are of no value and can only be considered as scrap, and I have not valued them.

Engine house and valve-house:

One 20-inch McKenzie exhauster, $1,584, without, $1,505 with.

1559 One Greenfield engine, 8 by 10 inches, $440, without depreciation. $418 with.

Countershafting pulleys and belting, no depreciation, $80.

Three King's pressure gauges, $105, no depreciation.

One arch gauge, telephone booth, lockers, etc., $130, no depreciation.

One building containing pressure gauges; total amount $167, no depreciation.

Boiler house:

One horizontal tubular boiler, 90-horse-power 8 feet diameter, 15 feet 6 inches long; 2 feet diameter by 30 feet stack, total value without depreciation, $1,973; with depreciation, $1,815.

One small Worthington duplex pump, 4½ by 2¾ by 4, $60 without depreciation, $57 with.

Pressure gauges, water columns, etc., $25, no depreciation.

Lockers, $50, no depreciation.

Stable:

Twelve stalls, $250, no depreciation.

One box stall and lockers, $60, no depreciation.

Coal storage yard, trestle work consisting of A frame posts 40 feet high and A frame posts 50 feet high, each frame rests on two piles and 3-inch plank flooring over entire area; construction of A frame post consists of seven 50 feet posts made up of 12 inches by 12 inches diameter 50 feet long, and seven posts 40 feet high for coal carrier. The total value is $10,396 without depreciation, and $9,357 with depreciation.

Q. What is the storage capacity of that?

A. I could not tell you, that depends on the height to which they fill it. They have got six coal trestles with buckets running across the entire yard, and those buckets are nearly at an elevation of about 35 to 40 feet I should say.

1560 Q. How large is the yard? Or, in other words, that coal storage is large enough for the storage of the coal that is used in the gas works when it is in operation, is it not?

A. Yes, and I should say it would not be less than—probably operated to full capacity—I should say two and one half months' capacity. I can give you the lineal dimensions of the whole building that forms the coal storage, but I did not figure the planking; I took it all out because it was all rotten, so I did not figure that, but I can give you all the lengths.

Q. Is it used now for coal storage?

A. It can be used at any time.

Q. Oh, I know that, of course, you can pile coal on a vacant lot for that matter.

A. All the machinery is there.

Q. But the question is, is it used?

A. It was not used for such purpose when I examined the plant.

Mr. Mathewson: He did not give the total of that apparatus.

Q. That was what I was going to ask him. What value do you put on the apparatus?

A. $14,019 total value of apparatus at 18th Street station.

Q. The total value of this plant excluding the holders at the 18th Street station is $192,920, is it?

A. No, sir; it is $218,907, excluding the holders and excluding the ten per cent. for engineer charges and five per cent. interest charges. We have not yet accounted for or placed any value on the pipe connections.

Q. Well, you may value those pipe connections.

Mr. Mathewson: He stated that already, what they were, in detail, and their value.

The Witness: Yes, I gave it once before.

1561 Q. For some purpose, there was a question on direct examination, to mentally reconstruct these works and value them as reconstructed, and in doing so I believe you used the unit of $340 per thousand cubic feet of capacity?

A. That is right, sir.

Q. And you stated that the reason you did that was because these works were owned originally by the same company that owned the 14th Street works and you thought that the same unit should be applied; is that right?

A. I did not say I thought they were owned by the same company.

Q. Didn't you?

A. I said that they were conducted along the same lines, with some considerable improvements at the 18th Street over the 14th Street on account of iron coal hoppers located alongside of the iron retort house, iron structures.

Q. Did you state that on your direct examination what you are now stating?

A. I think I did, to my best recollection.

—. On page 1,381 of the testimony you were asked this question: "Q. Do you know that the 14th Street plant and the 18th Street plant were the property of the same company when the consolidation took place in 1884, do you? A. Yes.

Q. Did you observe, as far as you were able to observe, any difference in the character of the plant so far as the cost of plants were concerned? You say you took the same figures? A. It was practically the same plant as 14th Street."

A. Yes, now if you will read a little bit further I think you will find I made that other statement.

Mr. MATHEWSON: Either to Mr. Kirby or to me he did; there is no doubt about that.

Mr. PAGE: Yes, here it is on page 1,382.

1562 Q. The unit that you found by dividing the capacity on the 14th Street plant by the value that you gave excluding the holders, would be $327 and a fraction?

A. Yes, about $327.

Q. $327.18, I figured it.

A. Yes.

Q. And for the increased coal facilities you added $13 to each unit of capacity?

A. No, sir, not for that reason.

Q. Well, for what reason did you do that?

A. Because the 42nd Street plant, which was a 4½ million capacity figured up to $330, indicating that the smaller the plant is the higher the unit must be in the same proportion; 14th Street, being a five-million foot plant, and 42nd Street being a 4½ million feet, and 18th Street in its original condition only being 3½ million, the same ratio of increase in that unit would be $340.

Q. The figure that you have taken has been arrived at by a comparison of those particular plants, the 42nd and the 14th Street plants, dividing the value by capacity?

A. Yes, sir.

Q. It has not been based upon your experience as an engineer, as to what a coal gas plant should be valued at per unit of capacity?

A. Yes, it has. The valuation of the 14th Street and 42nd Street at $327 and at $330 is just about the amount that works of that sive cost to-day, and then I figured them and found that these prices were obtained, and I felt sure that that was about right.

Q. Then, as I understand it, a modern up to date coal plant with all the improvements that have been devised since these plants were built would be worth the same rate per unit of capacity?

A. Yes, as far as they refer to plants constructed in this country.

Q. Certainly, plants constructed in this country.

A. That makes a big difference.

1563 Q. Oh, yes, I suppose it does. You have built a number of plants in Canada, have you?

A. Yes, sir.

Q. And you have built them in Havana?

A. Yes.

Q. And what unit did you use in Canada?

Mr. Mathewson: I object to that as immaterial. The conditions are not shown to be at all similar. If we get into matters of comparison and one thing and another we will never reach an end if we start in this way.

The Master: I will allow it.

Exception taken by Mr. Mathewson.

A. In the instance of Canada it was a water gas plant, and could not be compared with this at all.

Q. You have never built any coal gas plants in Canada?

A. No, and in the instance of Havana it could not be compared, because climatic conditions are such that they require entirely different conditions from what they do in this country.

Q. Where else have you built coal gas plants in the eastern part of the United States, except in the city?

A. The Kings County plant was a coal gas plant in its first construction.

Q. How long ago was that?

A. 1899, that was the last coal gas plant.

Q. What was the capacity of that plant?

A. At that time it was a million and a half, with buildings arranged for duplication, arranged for three million of coal gas and one and one-half millions of water gas, if I remember correctly.

Q. Its capacity as you constructed it was one and one-half millions?

A. With the buildings arranged for three millions.

Q. What unit of capacity did you figure that on?

A. I have not figured that at all. That would not apply in this case because the apparatus was not the full capacity of the buildings. I just know from my engineering knowledge that the 1564 coal gas plant averaged about that price per thousand feet of producing capacity.

Q. You have stated that the unit of capacity of a 3,500,000 cubic feet plant is $340, the unit of a 4,500,000 plant is $330, and the unit of a 5,000,000 plant is $327?

A. Yes, sir.

Q. Now, does it progress in equal ratio? What would be the unit of a 9,500,000 coal gas plant?

A. No. There would be a change in ratio when you would get above or below a certain capacity.

Q. What is that capacity where the unit becomes at its lowest and then begins to increase?

A. This ratio I have applied would probably be correct for works from 3,000,000 to 5,000,000 feet per day.

Q. Which ratio? You applied more than one here.

A. Well, the ratio between those three.

Q. Now, what is it between 5,000,000 and 6,000,000?

A. Between 5,000,000 and 6,000,000 would probably be in the neighborhood of $315. Where you advance a little below the capacity of 3,000,000 you would probably run up to the neighborhood of $375 to $400. When you get to the small sized plants it increases very fast.

Q. We are dealing in large plants, though here. Now, haven't you a regular table which you use in estimating the value of plants per unit capacity?

A. No, sir, and such a table cannot be made. There are sufficient differences in the various plants in the details of construction so that the table would be of no value except a total average for the entire value of the plant.

Q. Where does the ratio become stationary before it rises again? You say that it rises after a while as the plant gets larger. Take the seven million daily capacity, what would that be? Figure on that?

A. I don't say that the ratio becomes stationary. It is changing continuously but the rate of change alters. The rate of change is
not the same.

1565 Q. Well, give us what you estimate a 7,000,000 cubic foot
daily capacity coal gas plant at?

A. You mean under conditions as built here now without any of the latest apparatus for purification?

Q. No, I want an up-to-date plant. You would not build anything but an up-to-date plant to-day, would you?

A. Well, I made the remark before that there is a difference between this and other countries as to up-to-date plants.

Q. Take this country.

A. It is a common thing in this country to include those things in an up-to-date plant. Purification and bi-product plants depend upon the development of chemical industries in this country and when we have them we have to build our plants as in Europe and they run up to $400 easily.

Q. Which is $400, the plant in Europe where they have cyanide bi-product recovery?

A. Yes, sir.

Q. And certain other bi-product recoveries which we do not recover in this country?

A. At present.

Q. Let us eliminate the things obtained in Europe which do not obtain here, and give us an up-to-date American plant as you would build it in this country.

A. Without the differences I mentioned just now, for 7,000,000 capacity?

Q. Yes, do not put in anything you would not put in in this country.

A. I cannot give you that exactly. Those are approximate values. There is no fixed basis upon which you can value that except by comparing with these other plants. I cannot estimate the plants in a moment off hand. Here are positive data which I figured in detail and that is as good a comparison as you can get; there are absolute facts.

Q. Well, give us ten million?

A. I cannot do it offhand.

Q. Why not?

A. Because I cannot. I will have to refer to some figures.

1566 Q. Didn't you figure the capacity of the horizontal retort unit, as you might call it, at Astoria, and isn't that a ten million cubic foot daily capacity?

A. That would only be a portion of the plant. The retort unit would be a portion of the plant.

Q. I say did you figure on nothing but the retorts over there? Did you figure on the entire plant?

A. No, I did not.

Mr. Mathewson: Oh, no, a very small part of it.

The Witness: These comparisons cannot be easily made.

Q. You have nothing by which you could make such a comparison?

A. Oh, yes, lots of it.

Q. Well, value it?

A. You have got to give me time to investigate my figures and refer to my records. I cannot do it now. I believe I have more figures of the cost of coal gas plants than any other engineer in this country.

Q. But you never before figured on this per unit of capacity with the value of plant?

A. Oh, very frequently, after comparing in a general manner, and the plants vary from $350 to $400; others about $325. It depends on the details of construction; one costs a little more than another; but here is an absolute comparison between plants similar in construction, and you could not get a better basis of comparison than those I have applied here.

Q. Have you sometimes figured as low as $300 for a limited capacity?

A. Well, I do not figure it at all except for general comparison. I do not believe any coal gas plant can be built for $300. I don't think any of them would be less than $330 or $340 or $350 in capacities of from three million to five million.

1567 Q. It would cost less per unit of capacity to build one coal gas plant that would produce 9,500,000 cubic feet, wouldn't it, than it would to add together these two, 14th Street and 42d Street?

A. Oh, yes. You mean in one plant?

Q. Yes.

A. Yes, sir.

Q. How much less per unit of capacity?

A. I cannot give you that information unless you give me time to look over my figures. It is impossible to give that at a moment's notice.

Q. Well, can you give it approximately?

A. It would depend on the details of construction. They may vary from $350 to $400. It depends on what the plant contains.

Q. You have been building gas plants in your mind right along. Supposing you build one in your mind that would produce 9,500,000 daily capacity?

A. No, I would not say that offhand. I am not accustomed to give figures that way. From an engineer's standpoint it is necessary to refer to records and data to be correct, and I do that in all my calculations, and I won't give any offhand figures.

Q. You gave as a unit of value for a water gas plant $123 per unit of capacity, excluding holders?

A. Yes, sir.

Q. Is that subject to the same fluctuations and limitations as the figures on the coal gas?

A. Not as much, for the reason that there is not as much difference in the apparatus and value of the apparatus; secondly, there is not the same chance for the same variation as there would be in a coal gas plant.

Q. Then you think that would be a fair unit to assume on the value of the water gas plant, no matter what the capacity might be?

A. Yes, I think that is right.

By Mr. Mathewson:

Q. That is excluding the holders?

A. Yes, sir.

1568 By Mr. Page:

Q. All these figures are exclusive of holders?

A. Yes, sir.

Q. There seems to be something of a fluctuation in the value you have given of your three water gas plants here: The 44th Street plant would seem to be $114 per unit of capacity, the 99th Street plant, $119.50, and the 21st Street plant $125.

Mr. Mathewson: $123, isn't it?

The Witness: Wouldn't that be $124 instead of $114 in 44th Street?

Q. Well, will you give what is right, if that is not right?

A. Well, I make it $124, not $114.

By Mr. Mathewson:

Q. For what?

A. For the 44th Street plant.

By Mr. Page:

Q. And $120 for the 99th Street?

A. $120, yes, sir.

By Mr. **Mathewson**:

Q. How much for the 21st Street plant?
A. $123.

By Mr. **Page**:

Q. What did you give as the total value of the plant without holders? The entire plant you have got there, haven't you?
A. Which plant?
Q. All of them. Haven't you got it in one sum?
A. All the plants, yes, sir. The total value of all the plants is $11,991,404, without holders.

By Mr. **Mathewson**:

Q. Does that include everything but the holders?
1569 A. That includes everything except the holders, and the original 18th Street plant.

By Mr. **Page**:

Q. It would be possible, would it not, to construct as one works, a coal gas plant, that would produce 9,500,000 cubic feet to-day?
A. Oh, yes, sir.
Q. And a water gas plant that would produce 41,500,000 cubic feet per day, wouldn't it?
A. Yes, sir.
Q. And if you construct a coal gas plant of 9,500,000 cubic feet per day it would be proper and it would be ample allowance, wouldn't it, to multiply that by $3.15 for instance of capacity?
A. That is a unit of $3.15 per thousand cubic feet.
Q. Yes, that ought to give you——
A. $3.15?
Q. Yes, $3.15.
A. No, sir.
Q. What figure would you use?
A. Well, I said before I could not tell. It depends largely upon local conditions. You cannot average that.
Q. Well, it would not be more than $3.27, would it? That is what would produce a five million capacity—it certainly would not be more than that?
A. You mean $3.27 or $327?
Q. Oh, $327. I mean, for a 9,500,000.
A. On the valuation of plants of large size in that matter I would prefer not to make any positive statement until I can examine my records of cost. Cost of larger sized apparatus in proportion to the capacity is of smaller cost than smaller sized apparatus, and I would not like to state offhand what that would amount to and the total cost unless I examined my records.

By Mr. **Mathewson**:

Q. Did you not have to have some special construction for
1570 such a plant which would be more costly than the standard construction?

A. I said before it would depend upon the local conditions. It is very bad to compare one plant with another which is not of the same detail of construction. Here I have made values of the same detail of construction and you could not get a better comparison then as I have made here.

By Mr. Page:

Q. If you were called upon to construct a plant for the use of the Consolidated Gas Company, to-day, would you scatter the works around as they are here?

A. No, sir, I certainly would not.

Q. The works divided into five manufacturing stations require a much larger investment in plant, do they not, than it would to bring them together into one station?

A. Decidedly.

Q. And also the cost of operation is very much more in the scattered stations than it would be in the one station?

A. Yes, sir.

Mr. Mathewson: This witness has not operated plants. I don't think he should be asked that.

Mr. Page: He may know more about it than some people who have operated plants.

Mr. Mathewson: Possibly, but he may not know as much about it as some who have operated plants.

Q. Now, you may give the values of whatever apparatus and buildings are in the different distributing stations. The first is 63d Street?

A. It is divided in the same manner, building, connections, apparatus and holders.

Mr. Mathewson: He has described the buildings already.

1571 Q. Give it in the same way as you gave it in the operating stations.

A. Engine room, total value of buildings $1,023. No depreciation.

Valve house, $870. No depreciation.
Boiler house, $960. No depreciation.
Brick walls around property, $8,576. No depreciation.
Total value of all buildings, $11,429.

Engine room:

One 30 horse-power Morris engine, 10 by 18, reversible, without depreciation $1,430; with depreciation $1,287.

One Sturtevant exhauster with steam and exhaust connections, countershafts and pulleys and gauges, without depreciation $750; with depreciation $735.

Valve house:

One photometer, $650, no depreciation.

Boiler house:

One 66-inch by 16 feet Continental Iron Works boiler, $1,250 without depreciation; $1,125 with depreciation.

One Simplex Blake pump, 10 inches by 6 inches, $350 without depreciation; $340 with depreciation.

One Metropolitan injector with pressure gauges, pipe connections and firing tools, $45, no depreciation.

In the yard:

One duplex pump 12 by 6 inches $330 without depreciation; $314 with depreciation.

One drip water tank with 2-inch pipe connections, $350 without depreciation; $332 with depreciation.

Total of all apparatus, $4,828.

Q. You may give the value of the connections.

A. Twenty-four to thirty-inch pipe, $6,960, no depreciation. That is cast iron pipe.

1½-inch and 2-inch iron pipe, $18. No depreciation.

1572 24-inch and 30-inch valves, $909.

Total for all connections, $7,887.

Q. There is one holder there is there?

A. Yes, sir, one holder.

By Mr. **Mathewson**:

Q. And that you already valued?

A. 3,000,000 cubic feet capacity, yes, sir.

The steel work for the entire structure is $152,355.

The retaining wall, $11,090.

The brick tank constructed in rock, $256,922.

Making a total for the holder of $420,367.

Q. Describe the holder?

A. The holder is constructed in three lifts with an outer section of 184 feet in diameter; the guide frame consists of 24 steel standards, 122 feet in height. The tank is supplied with two 30-inch connections, that is, one inlet and one outlet.

Q. And you estimate the price at 7.1 cents per pound?

A. Yes, sir. It includes a permanent timber frame for the support of the crown of the holder, based upon the weight of the steel.

By Mr. **Kirby**:

Q. The tank erected in 1899 and weighs——

A. The tank was erected in 1899 and weighs 2,258,759 pounds. That is all for that station.

Q. What pressure is there on this holder?

A. Nine inches when totally inflated, all sections.

Q. When all sections are cupped?

A. Yes, sir.

By Mr. **Page**:

Q. Now, take the 65th Street. You have described the buildings already; just give us the values now.

A. Engine and valve house, $2,688 without depreciation; $2,016 with depreciation.

1573 Exhauster house, $12,350 without depreciation; $11,732 with depreciation.

Boiler house, $3,058 without depreciation; $2,906 with depreciation.

Boiler house extension, $896 without depreciation; $852 with depreciation.

All walls around the property bounded by Amsterdam and West End Avenues, 65th and 66th Streets.

By Mr. MATHEWSON:

Q. You have given the total feet and about the average height?

A. Yes, sir, I gave the sections of walls already, $33,677.

By Mr. PAGE:

Q. And those were erected in 1866, were they? I mean the buildings?

A. That one building was, I don't know about the others.

By Mr. MATHEWSON:

Q. What building?

A. The first building, engine and valve house. I suppose there was a portion of those walls erected at that time, and a large portion of it later as they extended the plant. That makes a total value of buildings of $51,183.

The WITNESS: Apparatus in engine and valve house. One Beam engine, 6 inches by 18 inches with steam and exhaust piping, $400 without depreciation; $340 with depreciation.

In the exhauster house, one 12-inch by 12-inch Rowland vertical engine, with steam and exhaust piping, $1,115.

One 30-inch McKenzie exhauster, with gauges and connections, $1,738, making a total of $2,853 for the two items without depreciation; $2,796 with.

1574 One photometer, furniture and plumbing, $1,150 without depreciation; $1,000 with depreciation.

Boiler house, two horizontal tubular boilers, 48 inches by 10 feet, $2,566.

One horizontal tubular boiler, 48 inches by 12 feet, in brick settings, $1,370, making a total for the two items of $3,936 without depreciation; $3,740 with depreciation.

One No. 2 Niagara feed pump, $60 without depreciation; $57 with depreciation.

One No. 4 Korting injector, $40 without depreciation; $38 with depreciation.

One steel stack with connections, $180 without depreciation; $171 with depreciation.

Boiler house extension, 66 inches by 14 feet tubular inside firebox boiler complete, $2,078 without depreciation; $1,975 with depreciation.

One No. 5 Korting injector, $45 without depreciation; $42 with depreciation.

Total value of all apparatus, $10,159.

Connections, 16 and 30-inch cast-iron, $12,528; no depreciation.

One 1½ and 2-inch wrought iron pipes, $128; no depreciation.

30-inch valves, $3,427.

16-inch valves, $244.

Total of all valves and connections, $20,406.

By Mr. Page:

Q. Do you take a unit of value for your pipes and valves, as you did in the other apparatus?

A. The valves are all estimated in detail, so much apiece, according to the size of same.

Q. How about the pipe?

A. And the pipe is figured at the unit of value depending upon the diameter for same, for cast-iron and for steel pipe.

1575 Q. At what price per ton did you charge for this cast-iron pipe?

A. $116, which includes the placing in position.

Q. That is the pipe laid in the yard?

A. Pipe laid in the works.

Q. Well, in the works, yes.

A. Yes.

Q. How deep do you have to lay those pipes in the works?

A. Depending upon local conditions, but in order to cover—well sometimes they are very close to the surface of the works and sometimes four or five feet down. It depends upon the drainage required for them to avoid drips. You cannot compare it with the laying of pipes in the streets, because it is an entirely different proposition.

By Mr. Mathewson:

Q. These are flanged pipes in the exhauster house?

A. In the buildings they are all flanged, and outside they are hub and spigot pipes. Holders——

Mr. Mathewson: Let us see what they want about that.

By Mr. Page:

Q. How many holders are there in this property?

A. Altogether eight holders.

Q. Take the 325,000 feet capacity holder. What is the diameter of the tank?

A. Of the tank or holder?

Q. Of the tank.

A. 94 feet diameter, 26 feet deep.

By Mr. Kirby:

Q. That is a brick tank?

A. A brick tank. All these holders are brick tanks.

By Mr. **Page**:

Q. What is the diameter of the holder?

1576 A. The outer section is 92 feet 6 inches. The holder has two lifts and a guide frame consisting of eight wrought iron columns with cast iron tops and bases. The in and outlet pipe has 20-inch connections, wrought iron pipes.

By Mr. **Kirby**:

Q. What is the thickness of the shell?

A. Of the holder?

Q. Yes.

A. No. 14 and 13.

By Mr. **Page**:

Q. What is the total height of the holder?

A. Well, it is about 50 feet when inflated. Pressure 4.8 inches when fully inflated.

Q. Now, take the two holders of 4,000,000 capacity. Will you give me——

A. Two holders of 4,000,000 cubic feet capacity, outer section 184 feet 6 inches in diameter. Holder has a guide frame of twenty steel standards 167 feet high and the pipes to the tank 36 inches in diameter. Pressure of one 12.5 inches and of the other 13.4 inches when fully inflated.

Brick tank, 187 feet in diameter, 43 feet 6 inches deep. 65 per cent. of the tank excavated in rock.

Q. Have you given the value of the holders and tanks separately?

A. Yes. Do you want the value of the holders?

By Mr. **Kirby**:

Q. Give the value of the two holders of 325,000 cubic feet capacity?

A. The value of the two holders of 325,000 cubic feet capacity for the steelwork is $55,481.

Q. And the value of the tanks?

A. The tanks are the same size and I have them all together, the whole six.

1577 Q. And the value of the four holders?

A. The value of the four holders of the same capacity is $100,920, and the two 4,000,000 foot holders are $398,645.

Q. That is with depreciation?

A. Yes, sir.

Q. In each instance?

A. Yes, sir.

Q. There being no depreciation for the two large holders, but a 3 per cent. depreciation factor for the small holders?

A. Yes, sir. Now, the six brick tanks for the smaller holders had a value of $177,547 with no depreciation, and the brick tanks for the large holders have a value of $480,280 with no depreciation.

Q. Making a total value of holders and tanks of how much?

A. $1,212,873.

By Mr. **Mathewson**:

Q. Exclusive of the engineering expenses and interest?

A. Yes, but in the instance of holder stations, the engineering charge and the other items referred to under that heading have been reduced to 5 per cent. from 10 per cent.

Q. So you stated in your testimony the other day?

A. I believe I did state it.

By Mr. **Kirby**:

Q. But the value of the holders and tanks is $1,212,873, and not the holders themselves, as is stated in the testimony, page 1386?

A. Did I state it so?

Q. The question is "What is the value of those holders? A. $1,212,873."

A. It is quite possible I did state it so, because when we speak of holders from an engineering standpoint we include the holder with the tank because the holder is not complete without the tank.

Q. Take the 111th Street station.

1578 A. 111th Street, office, $5,974 without depreciation, $5,675 with depreciation.

Exhauster house, $26,127; no depreciation.

Boiler house, $4,167; no depreciation.

Hoisting engine house, $171 without depreciation; $163 with depreciation.

Scale house, $702; no depreciation.

Stable, $11,607 without depreciation; $10,447 with depreciation.

Boiler coal storage, $583; no depreciation.

Generator house, $18,307 without depreciation; $9,154 with depreciation.

Q. How did you come to use such a large percentage of depreciation?

A. Why, that house was in bad condition and it would have required just that amount to fix it up and put it in proper condition.

Q. Do you know when that generator house was erected?

A. No, I do not, but it requires an entire new roof to put it in good condition.

Q. The office building was erected in 1871, wasn't it?

A. No, that is the scale house. Yes, 1871.

Q. And the exhauster house in 1902?

A. Yes, sir. That is entirely new.

Q. And the boiler house in 1902?

A. Yes, sir, entirely new.

Q. And the scale house about 1871?

A. Yes, sir.

Q. And the time of erection of the other buildings you have no knowledge?

A. I have not.

Wooden tool shed, $2,809 without depreciation; $2,528 with.

Retort house, $50,499 without depreciation; $37,874 with depreciation.

Foundation for old oil tanks, $4,491; no depreciation.

Blacksmith's shop, $3,006 without depreciation; $2,946 with depreciation.

All fences, $702 without depreciation.

1579 Fences around holders, $1,026 without depreciation; $923 with depreciation.

Fence around old works, 900 without depreciation; $810 with depreciation.

Brick walls on First Avenue, $703 without depreciation, $689 with depreciation.

Making a total value for the buildings of $107,981.

Now, the apparatus. Contents of office building $2,500 without depreciation; $2,125 with depreciation.

Exhauster house:

Forty-two valve stands, $651 without depreciation; $636 with depreciation.

Two number 11 vertical Root's exhausters, $5,870; no depreciation.

Two 16-inch by 16-inch Payne reversible motion engines, $3,600; no depreciation.

Two 36-inch Connelley gas governors, $4,500.

One Cochrane feed water heater, $345; no depreciation.

Steam exhaust, gauge piping, gauges, plumbing, piping, steam heating, radiators and piping, $1,610; no depreciation.

One Photometer, four closets, one toilet and wash basin, $805; no depreciation.

By Mr. Kirby:

Q. Is all that apparatus in use to-day?

A. That is perfectly new. All been erected in 1902.

Q. And is now being used?

A. Yes, and these were all figured in detail, all of these items.

Boiler house:

One guide steel stack, 4 feet diameter, 64 feet 8 inches high, $507; no depreciation.

Breech for stack, $157; no depreciation.

Three boilers, 66 inches by 16 feet, horizontal return tubular, 90 tubes each, 3 inches diameter by 16 feet long, brick setting, 1580 $5,432, no depreciation.

One Knowles pump 6 by 4 by 7 inches, $105, no depreciation.

One 1½-inch Hancock inspirator, $65, no depreciation.

Hoisting engine house:

One Ledgerwood hoisting engine, double cylinder, 8¼ by 10 inches, $1,125, no depreciation.

Scale house:

One 10-ton Fairbank wagon scale, $205 without depreciation, $195 with.

Stable:

Stable fittings and appliances, 32 stalls, office furniture and feed racks, $1,300 without depreciation, $1,105 with.

Tool shed:

Lockers, 4-beam engines not in use, one lathe and toolbins, $1,975 without depreciation, $1,778 with.

Retort house:

One stack, 16 benches, six retorts, each retort 20 feet long, $70,720 without depreciation, $53,040 with depreciation.

One stack of five benches, of five retorts, each retort 20 feet long, $20,000 without depreciation, $14,000 with depreciation.

Q. Are those retorts in use to-day?

A. They were not when I examined the plant, no, sir. It is an old coal gas works near the river side.

Q. Were they being used?

A. Not when I examined the plant, but these benches were all new, had just been rebuilt, I don't know when.

Q. Still you crossed 25 per cent. off for depreciation?

A. The arches were old and the ironwork was old. These benches can be operated at any time.

Q. But they were not being operated?

1581 A. Not when I examined the plant. They were all ready to be fired, but I don't think they had a fire in them.

By Mr. **Page**:

Q. And you don't think they had a fire in them for a number of years, do you?

A. I don't think that they did.

Q. You know as a fact that this plant is not used as an operating plant by the Consolidated Gas Company?

A. Yes, sir, it is used as an operating plant.

By Mr. **Mathewson**:

Q. You mean as a manufacturing plant?

A. I mean as a manufacturing plant, yes, sir.

By Mr. **Page**:

Q. But it could be operated if necessary?

A. Yes, sir, at any time.

Q. What is the capacity of the plant?

A. In these benches could be produced a total of 2,420,000 cubic feet of coal gas.

Q. Very well, you may proceed.

A.—

Blacksmith shop:

Various forges and tools, $350; no depreciation.

Yard:

Oil tank, 43 feet diameter by 20 feet deep, ¼-inch plates, $3,105 without depreciation, $1,652 with depreciation.

Atmospheric condenser, cast iron pipes 20 inches diameter in ten sections, $5,926 without depreciation, $4,444 with depreciation.

Q. Is there any further apparatus?

A. No, sir, that is all.

Q. There is no purifying apparatus, is there, for this plant?

A. No, sir, nothing of any kind. The gas would have to be purified at some other station.

1582 Q. What else is there that would have to be cared for at some other station?

A. Everything except one condenser, one atmospheric condenser.

Q. Then this plant could not be operated, could it, as a manufacturing plant?

A. Except with some other plant. Not by itself, no.

Q. How could you operate it with some other plant?

A. By pumping the gas to some other station and purifying and condensing it there.

Q. That is pumping it as it comes from the benches?

A. Yes, sir.

Q. Would that be a practical operation?

A. No, it would answer in a case of necessity only.

Q. Then, as a matter of fact, these are abandoned works, aren't they, and dismantled, aren't they, partially?

A. Practically, yes.

Q. What is the total value of the apparatus that would be applied to gas making at this particular station as separated from that which would be retained, treating this as a distributing station?

Mr. MATHEWSON: You asked him how much would not be used as a distributing station?

Mr. PAGE: Yes.

A. $74,914, with depreciation.

Q. That is the apparatus?

A. That is the apparatus.

Q. Now, what buildings could you do away with, as this is to be used as a distributing station merely?

A. The generator house and retort house.

Q. What figure did you value those at in this appraisal?

A. $47,028, including depreciation.

By Mr. MATHEWSON:

Q. What then would be the total valuation of the buildings which you say would not be used, and the apparatus which would not be used as a manufacturing plant at 111th Street, together, $121,941.

1583 By Mr. KIRBY:

Q. You have got some connections here?

A. Pipe connections 24-inch and 36-inch cast iron——

Mr. MATHEWSON: That is already on the record.

The MASTER: Yes, and the valuation of it.

Mr. KIRBY: He has the total, I think, but not the items.

Mr. **Mathewson**: Well, there are only three or four items.

The **Witness**: $15,950, no depreciation; 1½ to four inches, diameter, wrought iron pipes, $528, no depreciation.

All valves, $10,590. Making a total for valves and connections, $27,068.

By Mr. **Page**:

Q. Why do you have forty-one valves of 36 inches diameter?

A. They are located in the valve house and exhauster house. The gas is pumped from various stations and distributed into the new five million foot holders and there are an enormous number of large valves and connections required in this building.

Q. They are all in use?

A. They are new and in use. I have included no connections that are not in use.

Q. How about connections running from this old abandoned retort house? Are any of those included?

A. There are none included because there are no exhausters to take the gas away from that retort house. There is no other plant to which there is any connection.

Q. Go on with the holders?

1584 A. Two holders, five million feet capacity each, with steel tanks, capacity when fully inflated 14 inches. Outer section 190 feet in diameter.

Steel tank 192 feet, 9 inches in diameter.

Total height of guide frame, 192 feet. In and outlet pipes to tank, 36 inches in diameter. Total value $611,891. No depreciation.

Concrete foundation, 201 feet in diameter, 24 inches deep, for above tank, $92,846. No depreciation.

Making a total for the two holders of $704,737.

By Mr. **Mathewson**:

Q. Senator Page was not here the other afternoon when you testified that on these holder stations you allowed an engineering expense of five per cent. only instead of ten per cent.?

A. Yes.

Q. And the interest item of five per cent.?

A. Yes, sir.

Q. And of course neither of those are included in the value you have now given?

A. No.

By Mr. **Page**:

Q. Did you give the pressure?

A. I gave it as fourteen inches.

By Mr. **Mathewson**:

Q. When fully inflated?

A. When fully inflated.

By Mr. **Page**:

Q. Now that pressure, do you mean that, that it is only fourteen inches when fully inflated?

A. Yes, sir, this is rather a large diameter; therefore the pressure is less as compared with holders of smaller diameter having considerable depth.

Q. Proceed.

1585 Mr. **Mathewson**: Take up the 132d Street station.

132nd Street Station:

Governor and boiler house, $26,736. No depreciation.

Q. The building has just been erected?

A. Newly been erected. I figured that in detail and my price was less than what they paid for it, and I could not come up to the price they paid for it entirely. I figure that building three or four times. You see these question marks here?

Q. You tried to approach their limit?

A. I could not do it.

Mr. **Mathewson**: You put it down as your estimate although it was less than what we paid for it.

The **Witness**: I thought I made a mistake. I figured it half a dozen times and I could not make it, and I let it go as it was.

Boiler chimney, $3,040. No depreciation.

Total for the building, $29,776.

Apparatus in governor and boiler house:

One No. 11½ vertical exhauster, 122 cubic feet capacity, with flexible coupling, $2,910. No depreciation.

One 6½ by 24 horizontal Buckeye engine, $3,010; no depreciation.

One 24-inch Connelly gas governor, $1,375.

Three B. & W. boilers and two batteries, $8,000; no depreciation.

One 6 by 4-inch Knowles duplex plunger pump, $143; no depreciation.

One No. 6 Cochran feed water heater, $505; no depreciation.

One No. 10 steel-plate breeching, $750; no depreciation.

1586 One 3-inch Crown water meter, $165; no depreciation.

One No. 12½ Metropolitan injector, $78; no depreciation.

One blow-off tank, 3-inch diameter, 10 foot long, $73; no depreciation.

One 8-inch Hudson exhauster head, with steam exhaust water and gauge pipe, $1,885; no depreciation.

Toilet and wash basins and plumbing, $85; no depreciation.

Total for apparatus, $18,979.

Q. All brand new apparatus purchased within the last year?

A. All brand new apparatus.

By Mr. **Page**:

Q. On all this apparatus did you get the prices that the company paid, or is it your estimate?

A. My estimate, the same as in the instance of the buildings. I obtained the prices myself from the various manufacturers where they were standard articles, such as toilets and wash basins.

Q. Did you find from the various manufacturers just what they had furnished this particular station for?

A. No, I went to the station and found out what they paid.

Q. And then you went to the manufacturers and asked them what they really received?

A. No, I asked them what they would furnish me such an engine or such an exhauster for, and more than that, I asked them to give me the benefit of the manufacturer's price, and they thought it was for my firm, and they would give cheaper prices than the gas company paid.

Q. What prices did you put in here, the cheaper prices?

A. Yes, the prices I obtained from them.

1587 Connections, 20 to 36-inch cast-iron, $43,291; no depreciation. All valves, $4,423; no depreciation.

Total for all connections and valves, $47,714.

Gas holder, one holder, 5,000,000 cubic feet capacity in five lifts, outer section 180 feet 6 inches diameter, steel guide frame consisting of twenty steel standards 192 feet high, crown supported with permanent wooden frame, in and outlet pipe, two sets each of 36 inch diameter for steel tanks; total value of holder and steel tank with guide frame complete, $346,915. Foundation for same of concrete, 203 feet diameter, 24 inches deep, with footings of an average depth of 20 feet below grade, and retaining wall 15 feet deep; total value, $47,050 without depreciation; making total value of holder and foundation $393,965, which does not include 5 per cent. engineering and 5 per cent. interest charges. Total for the entire station, including those charges, $514,955.

Q. The holder and the tank being new?

A. Yes, I believe that is all.

By Mr. **Page**:

Q. I understand that all these values have to have added to them in your estimate something for engineering charges and something for interest?

A. Yes.

Q. How much for engineering?

A. Five per cent.

Q. What does that include?

A. All the items referred to under the plants where the reduction was made on account of the simplicity of the structure as compared with the difficulty of examining an entire plant consisting of a great many buildings with so many connections and details. This was very much simpler and therefore I could not overlook so many items as in the other instances.

Q. When a company has built one five million cubic feet
1588 capacity plant they don't have to get up new plans and
have new engineering problems to work on in another one identical with it, because it is located in another part of the city?

A. Yes, they have to arrange their valve house and connections and machinery for this station to suit the locality that it is in. It is never alike in two different locations. It has to be adapted and suited to that particular location, and therefore, they have to make new plans and have new expense for engineering and preliminary expense for their grading, and all that sort of business in each instance.

Q. This item of 5 per cent. interest—did you take that for one year? Or, how long does it take to construct a steel tank boiler?

A. Well, I constructed the holder and it took two years.

Q. It took you two years to construct the steel tank at 132nd Street, did it?

A. From the time we had the order until we completed it it was about two years.

Q. From the time you commenced to make deliveries and do work on which you were drawing payment, it was not two years, was it?

A. Yes. Well, not quite. The total time from the time that the contract was placed until the order was finished was practically two years.

Q. It is generally estimated that it takes two years to build a brick tank holder and one year to build a steel tank holder, isn't it?

A. Well, it takes one year after we get hold of the foundation. In this instance there was a great deal of excavation and a deep grade had to be made and a great deal of retaining work had to be done by sheet piling and packing to keep the banks intact until we could get hold of the foundation. That consumed an enormous amount of time before we could construct the steel tank, although we had the material there on the ground, and of course the gas company made payments as fast as the material was shipped.
1589 The first material was shipped probably two months after receipt of the order, and the necessity of that is because the manufacturer cannot accumulate all the maetrial that is finished in his shop. It is delivered as soon as he finishes it.

Q. You have stated somewhere that the cost of filling and testing a tank was a part, and went in to make a part of the 5 per cent. engineering item?

A. Yes; the water for filling the tank is always paid for by the gas company and never by the contractor.

Q. And the method of testing a holder and a tank is to fill the tank with water and pump in air? Is that it?

A. Yes, for the preliminary test.

Q. Then after that test is satisfactory and the holder is accepted they exhaust the air and put the gas in immediately, don't they?

A. Yes; that is, we open the manhole plate on top of the holder and let the air out.

Q. They don't draw off the water—they use the water then right straight along?

A. Yes, that same water remains in right straight along; there is only one charge for the water.

Q. That is charged up to the expense of operation, isn't it?

A. No, I have charged it in my valuation of the cost of the tank.

Q. I know where you charge it, but the company will charge it up as part of the cost of operation, won't they?

A. No, sir, because it is not an operating expense; it is a holder expense, presumably for the reason that a holder cannot be used until it is filled with water, and the expense is only once, and therefore cannot be counted as operating expense. It is not a continuous expense.

Q. If the company should charge it in as such it ought to be eliminated?

A. Yes, it cannot be charged twice.

Inwood station, exhauster and valve house, $3,330 without
1590 depreciation; $3,230 with depreciation.

By Mr. Kirby:

Q. Erected in 1886?

A. Yes.

Apparatus, one 6-inch McKenzie exhauster, 6-inch connection; one Smith and Sayre vertical engine, 4 by 6 inches; one 12-inch governor; one upright tubular boiler, 3 feet by 6 feet high, containing 52 one and one-half inch diameter steam connections, piping, steam fitting, steam and gas pressure gauges, one Cameron pump 3 inches by 5 inches. Total value of all above apparatus, allowing for depreciation, $1,640. Erected in 1898.

Q. No depreciation being for over 5 per cent.?

A. Yes, I gave that, allowing for depreciation.

Connections, 6 to 12 inches, $650; no depreciation. Those are cast iron.

One to 12-inch wrought iron connections, $18; no depreciation.

Valves, $255; no depreciation.

Total for connections and valves, $923.

One holder, 60,000 cubic feet capacity, in two lifts. Outer lift 40 feet diameter, 20 feet 6 inches deep, steel guide frame standards consisting of eight steel column standards with latticed steel bracing and tie rods, 12-inch inlet and outlet pipes for tank; 6-inch pressure when fully inflated; value, $11,882 without depreciation; $11,288 with depreciation.

Brick tank for same, concrete foundations, 47 feet in diameter, 21 feet 4 inches deep, $6,660; no depreciation.

Total for holder complete, $17,948. Did we give the total for the station before?

Mr. Mathewson: Yes, I think you did.

Q. All such buildings and apparatus are used for the dis-
1591 tribution of gas and not in its manufacture?

A. Yes, sir.

Mr. Mathewson: That was the Inwood station?

A. That was the Inwood station.

Q. Now, let us start with 14th Street and give the total value of each holder.

The Master: Subdivide the holders.

The Witness: 14th Street holders; six holders, 345,500 cubic feet capacity, constructed in two lifts with outer sections 95 feet diameter by 26 feet deep. Total value of holders, $152,052; pressure varying from a minimum of 4.55 to 4.95 inches when fully inflated.

Two holders of 250,000 cubic feet capacity each, 86 feet in diameter, constructed in two lifts, with an outer lift of 84 feet in diameter; total value with depreciation, $46,882. Pressure when fully inflated 4.75 inches.

Brick tanks for above holders, six tanks 97 feet in diameter by 26 feet deep with pile foundation, $219,039; no depreciation.

Two brick tanks, 86 feet in diameter by 26 feet deep with pile foundations, $57,383. Making a total for holders complete, $475,356.

Forty-second Street station, four holders, 250,000 cubic feet capacity, each constructed in two lifts with an outer lift of 95 feet 1½ inch in brick tanks; total value for the three holders with depreciation, $103,206. Pressure when fully inflated, 4.4 inches.

Four brick tanks for the above holders, 96 feet 10 inches diameter, 21 feet 6 inches deep, constructed on pile foundations, $120,384 with depreciation.

One steel tank holder 20 feet in diameter by 10 feet high.
1592 That holder is not in use at the present time. It can be used
because it is connected and ready for use. The value of that holder is $2,800 without depreciation, and $2,188 with depreciation, making a total for all holders at that station of $225,778.

44th Street station. 4 holders, 375,000 cubic feet capacity, each constructed in two lifts with an outer lift of 89 feet diameter by 30 feet 6 inches deep pressure, when fully inflated 6 inches. Value of four holders with depreciation, $111,946.

One holder 2,000,000 cubic feet capacity in two lifts, 181 feet in diameter by 42 feet high. Total value allowing for depreciation, $104,982.

Two holders 125,000 cubic feet capacity each, single lift, 72 feet 6 inches in diameter, 5.5 inches pressure, which is the value allowed for depreciation, $15,480. The other holder is 6 inches pressure and its value with depreciation is $16,690.

Four brick tanks for the 375,000 cubic feet holders constructed in rock of the value of $214,747. The brick tanks for the 2,000,000 feet holders, is 185 feet in diameter by 41 feet 5 inches deep, constructed in rock and has a value of $276,269.

Two brick tanks, 75 feet diameter by 32 feet deep for the 225,000 cubic feet holders; they have a value of $74,815, allowing for depreciation, making a total for all holders at that works, $814,929.

21st Street station:

Four holders each of 400,000 cubic feet capacity in three lifts, pressure 8.7 inches, outer section 88 feet in diameter, 16 cast iron columns, standards and guide frame, total for the four holders, $201,848.

One holder, one and one-half million cubic feet capacity in two lifts.

Upper lift, 165 feet 8 inches diameter, pressure when fully inflated
5.9 inches, total value, allowing for depreciation.
1593 & 1594 $84,314.
Four brick tanks for the 400,000 cubic feet holders, total value, $125,708.

Brick tank for the one and a half million cubic feet holders, 171 feet diameter by 37 feet 2 inches deep on concrete foundations, $139,970; making a total for all the holders in brick tanks at that works, $561,840.

99th Street station:

Two holders, 600,000 cubic feet capacity in three lifts.

Outer lift 100 feet in diameter, pressure when fully inflated, 7.2 inches. Total value of both holders $59,674 without depreciation.

One holder 300,000 cubic feet capacity in two lifts with an outer section 88 feet, having a total pressure of 4.5 inches, value $24,914.

One holder 100,000 cubic feet capacity in one lift, 67 feet diameter, 4.25 inches pressure; total value without depreciation $12,271. Total for the four holders above referred to $156,533 without depreciation. With depreciation $140,880.

Two brick tanks for the 600,000 feet holders each $35,954.

Brick tank for the 300,000-foot holder, $28,830.

Brick tank for the 100,000 feet holder, $20,488.

All of these brick tanks are constructed on pile foundation.

Total for all brick tanks, $121,226, allowing for depreciation.

At 6.05 P. M. adjourned to Tuesday, September 4th, 1906, at 1 P. M.

Last Exhibits:

Complainant's 233.
State's N.
City's 34.

1595 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, TUESDAY, September 4, 1906—1 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr, Mr. Kirby.

1596 FREDERICK J. MAYER, being further examined, testified as follows:

Cross-examination by Mr. PAGE (continued):

Q. Will you take the five million-foot holder at 132d Street, and give me the various items, and how you arrive at the value, beginning first with the tank?

A. The entire weight of that holder is 5,256,280 pounds, of steel of various character, and the total price per pound figured for that holder under present conditions is 6.6 cents per pound, and that 6.6 was made up from the following factors: Material, 2.2 cents per pound; freight, .20 cents; drayage, .10 cents; shop labor, .73; labor, 1.28; total, 4.57 cents per pound. To which must be added for operating expenses 15 per cent., or .68 cents per pound, and for miscellaneous expenses .46 cents per pound, making a total of 5.71 cents. Then a profit of 15 per cent., equal to .85 cents per pound, making a total of 6.56 per pound, for which a price was applied of 6.6 cents.

Q. When you add the value of this holder into the rest of the apparatus, then you add another ten per cent., don't you?

A. No, 5 per cent., in the interest of holder stations.

Q. Besides the 10 per cent. which you had allowed here for miscellaneous expenses?

A. Only for the holder proper; that is, 10 per cent., which is the manufacturers' 10 per cent. in the instance of the cost of the holder.

Q. Have you given here the tank or the holder?

A. The tank and the holder, complete, all steel work.

Q. Where do you get the item allowing for rivets in the computation which you have made?

In the item of material at 2.26 cents per pound. That 2.26 cents is made up from the following factors: Do you want me to give the detail prices of those?

1597 Q. I would like to have them, yes.

A. Open Hearth Steel plates, 1.83 cents per pound; flange steel, 1.93; sheet steel, 1.93; gas holder steel, 2.05; steel rib plates, 3 cents; universal steel plates, 1.83; steel angles, 1.93; steel channels, 1.93; steel I-beams, 1.93; flat steel bars, 1.73; steel beads, 1.73; double steel beads, 2.03; steel checkered plates, 3 cents; round steel bars, 1.73; steel tees, 1.83; tank rivets, 2.05; gas holder rivets, 4.25; boiler rivets, 2.75.

Q. How did you estimate the labor? You have given two elements of labor, haven't you?

A. One is shop labor and the other is erection labor. That is based on actual conditions as they exist at the present time, taken from my construction accounts.

Q. I suppose the labor item would be divided into ordinary labor and skilled labor, would it not?

A. Yes, sir.

Q. How much do you allow for ordinary labor?

A. That varies, of course, in the shop from those in the field. Shop wages are,. for riveters, $2.50 per day; rivet helpers, $1.62; holders on, $1.62; rivet heaters, $1.26; template makers, $3.50; fitters, $3.25; machinists, $2.70; machinists's helpers, $1.62; fitters, $3.00; pipe fitters, $2.79; pipe fitters' helpers, $1.75; carpenters, $2.75; pattern makers, $3.25; pattern makers' boys, $1.50; molders, $3.00; core makers, $2.50; helpers, $2.00; boys, 84 cents; ordinary laborers, $2.00 per day.

Q. How many hours to a day's work?

A. Eight hours. No, it is nine hours in the shop and eight hours in the field. That is all shop wages that I have given you just now.

By Mr. MATHEWSON:

Q. Field wages are the wages used in setting the apparatus, you mean?

A. Yes, at the point of construction, assembling and construction.
Foremen, $5 to $6 per day; boiler makers and caulkers, $3.20
1598 a day; riggers, $3.20; holders on, $2.50; heaters and helpers,
$2.00; laborers, $1.75; blacksmiths, $3.50; mechanics, $3.00; helpers on apparatus, $2.00 to $2.50; carpenters, $4.80. Now, I have got the labor for erecting the permanent timber frame which is located on the inside of the tank, and which supports the crown of the inner construction, all steel plate. The labor is $16.50 per thousand feet of timber in the frame, and the labor for erecting of scaffolds is $7.25 per thousand feet of lumber in the frame. Housesmiths, $4.50.

By Mr. PAGE:

Q. Where do you get your figures of labor cost?

A. From my construction accounts.

Q. The construction accounts of Bartlett, Hayward & Company?

A. Yes.

Q. Are those the rates of wages that you figure in as a co-efficient when you bid on a tank?

A. Yes, absolutely the same.

Q. Bartlett, Hayward & Company built the gas holder at 132d Street, didn't they?

A. Yes, sir.

Q. And have you taken those figures that you have given here from the estimate or contract price which you gave to the Consolidated Gas Company?

A. No, sir, I have applied the figures as they exist to-day.

Q. In making that application does this holder in total cost come to more or less than the figure which you gave to the Consolidated Gas Company?

A. I think the figure comes to more for present conditions. The figure given the Consolidated Gas Company for the 132d Street holder was a particularly low one for the reason that at that time we had under consideration the construction of four holders of the same
capacity, one for the Consolidated Company, two for the
1599 Standard Company and one, I think, for the Mutual Com-
pany, if my memory serves me correctly, representing four times the amount of weight for which we were able to place an order with the mills, and under which conditions we of course received a special and a low price.

Q. Then, if you were called upon to erect all the holders of the Consolidated Gas Company now at one time you would make a much lower figure per holder?

A. Well, all the holders are somewhat of different material, so I could not hardly include that under similar conditions which I outlined just now.

Q. Under the theory under which you have been giving testimony, that you are giving the price that it would cost to reproduce these holders new to-day, if you had that contract to reproduce all those holders at one time you would figure a much lower price on each holder than you have given here to-day, wouldn't you?

A. As I say, all the holders would not come within the limitations of the conditions which I outlined just now, because it would require a great many years to construct all of them, but for the four or five of them which could be constructed within two years, I could control the price of material for that length of time; beyond that it would be impossible.

Q. How many holders of five million feet capacity has the Consolidated Gas Company; do you recall offhand?

A. No, I do not.

Q. This holder at 132d Street has just been completed, has it not? Gas has been turned in since this hearing, hasn't it?

A. No.

Q. This year?

A. It was before that.

Q. Not since you have been here, but I believe that Mr. Bradley testified that it would be turned on that day that he was here.

A. That I do not know; I thought you referred to the time that I have been here.

1600 Q. I understand that in giving this estimate of what it would cost to reproduce this contract, you paid no attention to the figures that actually went to make up the cost, but you have proceeded under this theory of estimation of yours, which produces a much larger result?

A. I do not know that it is much larger. I do not know just what the figure was for those four holders, but these are the conditions as they exist to-day and which will have to be applied for to-day's reproduction.

By Mr. Mathewson:

Q. If you were to make a contract to-day.

A. If I were to make a contract that would be the figure.

By Mr. Page:

Q. If you were asked to make a contract to-day on four holders of 5,000,000 feet capacity, you would make a contract for much less per holder than the figure you have given, wouldn't you?

A. I would not say much less; it would be the conditions of labor as they are to-day, because that could not be changed.

Q. It would be as much less than this 132d Street holder actually cost, than it cost under your theoretical scheme?

A. Less the difference in existing prices of to-day as compared to those for labor and for material both; there is a direct increase in both for present conditions.

Q. I thought you said that within the last two years there has been no material increase or decrease in the rates of steel or labor, didn't you?

A. If I remember my testimony correctly, I think I stated that the material at present was perhaps slightly less and the labor slightly more, so that one would compensate the other approximately.

1601 Q. It would amount to about the same thing?

A. Yes; now, when I speak of labor I mean total labor for the entire construction Of course you understand that the wages are very much higher at present than they were at that time.

Q. At what time?

A. In 1903 and particularly 1904. From 1903 to 1904 the rates were jumping very fast.

Q. When did they cease to jump—in 1904?

A. They have not ceased to jump yet, and God only knows when they will, nobody knows.

Q. Then, as I understand you, as labor jumps up, material jumps down, so that they keep about an equilibrium?

A. Not absolutely. No, that was merely an opinion that I gave you off-hand, because I had that condition in my mind at the time I said that. I believe that it is approximately correct. For instance, the reason that the total cost of labor is less at the present time than it was in 1903, is due to the fact that we were compelled to improve our field machinery in order to offset the constantly increasing demand for wages.

Q. That has been the experience of every line of manufacture, hasn't it?

A. Yes, I presume so.

Q. That is, as wages increase the inventive genius of man on the other hand produces labor saving machinery and therefore we arrive at the result that we can produce cheaper although we pay more for labor?

A. Yes, I presume that the same conditions exist in other branches of business the same as ours.

Q. Now, if you will turn to the four million capacity tank at 65th Street, that is a holder with a brick tank?

A. Yes, sir; two holders, each four million feet.

Q. Now, will you give me the elements of cost that enter into the production of the tanks?

A. The total weight of the two holders—that is, steel work and iron work I refer to—is 5,614,720 pounds. The unit price is 7.1 cents a pound, making a total of $398,645. 1602

Q. You give for that as a unit figure 7.1 cents per pound?

A. Yes, sir.

Q. Is there any allowance there for excavation?

A. No, that comes in the cost of the tank.

Q. That is what I asked [illegible] for—the tank?

A. The tank alone?

Q. Yes; I want the tank first.

A. The two tanks cost $480,280.

Q. For what?

A. They are brick tanks excavated for 65 per cent. of the depth in rock.

Q. How much do you allow, how many cubic feet of rock and at how much per cubic foot, if that is what you estimated, or per cubic yard?

A. The total cost amounts to 20.1 cents per cubic foot, figuring the bottom as being horizontal.

Q. The bottom is not horizontal?

A. No; but it does not make any difference in the application of a unit factor if you figure them on the same basis.

Q. How many million feet do you make it that you excavated there?

A. I estimated another holder, which had a brick tank of 170 feet in diameter by 38 feet 9 inches in depth; this tank was 187 in diameter by 43 feet 6 inches in depth; so that the general dimensions did not differ materially. And in the other instance I found that the excavation amounted to 38,420 cubic yards. That, figured at $1.50 a yard——

Q. Is that in rock?

A. No, in earth. The back filling amounted to 9,452 cubic yards at $1.50; the concrete, 1,462 cubic yards, at $7.00. The brick, 1,618,000, at $25.00, laid; the stone landing piers at $3.50 per cubic foot.

Q. And how much per cubic foot for your landing stones?

1603 A. $3.50. That is granite, $3.50 per cubic foot. Now, the total cost of that tank, assuming the bottom to be flat, is 14.4 cents per cubic foot. If it would have been rock excavation for the entire depth it would have added $2.00 per cubic yard, which is equal to 8.7 cents per cubic foot. That would have made a total of 23.1 cents per cubic foot, completed work. In this instance I have applied the difference between the total and 65 per cent. of rock excavation, making the figure, instead of 23.1 cents, 20.1 cents.

Q. Was there any granite coping?

A. Yes, sir, that is included. Eighteen pier copings, 457 feet of stone coping: that is all included in that price of $3.50 per cubic foot.

Q. Is that not a pretty good price for that?

A. That is the price that I obtained from the builders; that is extraordinary size——

Q. What kind of granite did you get—imported Scotch granite?

A. No; any kind that can be gotten under local conditions; if that can be got and used, it will answer the same purpose.

Q. It was not a fancy granite, then?

A. No, sir.

By Mr. Mathewson:

Q. What did you say about large blocks or size?

A. Its thickness is from 3 to 4 or 5 inches—about equal to that of copings and landing piers, and the price was given on that basis.

By Mr. Page:

Q. Did you have any anchor bolts there?

A. They are in with the steel work of the holders.

Q. You figured those at 7.1 cents?

A. That and the pipes inside of the tank, as well as the guide rails and anchor bolts for the guide rails.

Q. Is your estimate given on the basis that you would reproduce these two tanks together new?

A. Yes, sir.

1604 Q. Have you made any allowance because of a wholesale rate on two tanks rather than one?

A. No, I figured upon actual cost, so much per thousand cubic feet of work, so it does not make any difference whether it is one or two.

Q. Wouldn't you, if you were bidding on two tanks to be erected side by side, make a cheaper bid than you would if you were to bid on one tank? Two tanks exactly similar, and the holders?

A. I would not make any allowance or reduction in price on account of building two tanks, but the circumstance of building two tanks right close together diminishes the price as compared with the erection of two single tanks in different localities, because there is less excavation for the two tanks so located. In constructions of this kind, where there is no shop work to be estimated, you cannot take that into consideration.

Q. How about the holders?

A. It is different with the holders. You would have a certain amount of saving in your shop work, because a great deal of the head work and other work performed in the shop would be applied to the two holders as well as to one.

Q. But in making this estimate you have given us here, you have treated it as if you were building two entirely distinct tanks at different times.

A. I did, yes, sir, for the holders.

Q. Yes. And that is so with your estimate of every bit of apparatus you have testified to?

A. No, I would not say that.

Q. Not taking into consideration the fact that you could buy a large quantity of it at one time at lower prices than you could a single machine.

A. No, I cannot base an estimate of this character upon that, but you can in an estimate for a contract, when you know that the conditions actually exist at the time you make the contract.

1605 Q. Well, I suppose that if you could not, you mean you did not.

A. I did not; besides which I do not know that these two holders were built at the same time. They may have been built at different times.

Q. But to-day you are building them in your mind at the same time?

A. Yes, but not all at once.

Q. Yes.

A. It would take a good many years to build all these holders.

Q. It only takes a few minutes to reproduce these gas holders here. Now as I understand you, in examining the 14th and 42nd Street plants, for instance, you did not take into consideration whether they were commercially or economically worth replacing, did you?

A. No, sir; I only figured on what I found there.

Q. That is what it would cost to reproduce that apparatus, whether or not it was commercially and economically an apparatus that would be built to-day?

A. I paid no attention to that whatever.

Q. And did you take into consideration whether gas could be reproduced at those particular plants at $1.50 or 50 cents per thousand cubic feet?

A. I did not consider it at all because it had no bearing whatever on the apparatus as I found them.

Q. As you valued it?

A. As I valued it.

Q. Now where a plant was of an old type which, owing to the advance in the science of gas engineering, would not be built to-day, did you allow anything for depreciation by reason of that fact?

A. No, sir.

Q. Where an apparatus was obsolete and not in use, but was standing in place, did you estimate that according to real value, or did you estimate what it would cost to reproduce that apparatus new to-day?

A. I don't recollect any apparatus that was obsolete; there were a good many that were not in use owing to the season of the
1606 year, where the demands on the production is less than at other times of the year.

Q. Will you tell me to what use you can put the hydrogen scrubber that is at the 99th Street plant to-day, what use can you make of a hydrogen scrubber to-day?

A. Well, it can be used for the scrubbing of water gas as they make it to-day.

Q. The hydrogen scrubber was a portion of the old Tessie du Motay plant, wasn't it, when they used to manufacture a hydrogen gas separately and interject it into the make of the water gas?

A. Yes, sir.

Q. And it is an apparatus that has been abandoned for years, hasn't it, and supplanted by several different processes since?

A. Well, but the scrubber of the Tessie du Motay, or any other carbureted water gas process can be used in connection with the U. G. I. as well as anything else.

Q. What did you use it for?

A. For the elimination of mechanically suspended impurities which exist in both processes. The process has nothing to do with that kind of imperfection.

Q. You find in this 99th Street station that they have the necessary scrubbers outside of the hydrogen scrubber, haven't they?

A. Yes, sir.

Q. Would there have to be any alterations made in the scrubber to use it to-day?

A. Well, it is quite possible that in the designing of the scrubbers for the U. G. I. apparatus it was taken into consideration that this scrubber should be used.

Q. Is it used? I think you have it marked as not in use.

A. I presume it is used when they make the full amount of gas.

Q. Will you turn to your data of the scrubbing apparatus and compute the amount of scrubbing surface that you have, if you call it such, and see if that is sufficient to take care of the production at that particular plant without the use of this hydrogen

1607 scrubber?

A. I haven't got all that data here with me.

Q. Turn to the 99th Street plant.

A. Two hydrogen scrubbers 28 feet high?

Q. I thought you only had one, but I see you have two there.

A. Two.

Q. Take the other scrubber, you say "out of commission"?

A. I say it was out of commission when I examined the plant.

Q. Are they connected with anything?

A. Yes, sir.

Q. What are they conected with?

A. With the pipe system.

Q. Where does the pipe system lead to?

A. I presume now it leads to the tank of the U. G. I. process.

Q. You say you presume. Do you know?

A. I cannot recall it now. I have examined so many plants I would have to examine that particularly if you want me to give an intelligent answer.

Q. What did you mean when you said out of commission? You did not say not in use, but out of commission. That is what we say when a thing is laid up and abandoned practically, isn't it?

A. It is not abandoned, it is laid up for the present, but not abandoned. You will find that same remark about several other apparatus. It means out of use temporarily.

Q. Take the other scrubbers you have up there and see whether you have enough to do the business?

A. There are two more scrubbers above that of the same size.

Q. Two hot scrubbers?

A. Two hot scrubbers, yes, sir.

Q. Those are 21 feet high and 8 feet 6 inches in diameter?

A. Yes.

Q. How much gas would those two scrubbers take care of?

A. 243,000 cubic feet in 24 hours.

1608 Q. Will you give me your calculation on that?

A. I know it takes five cubic feet of volume for each thousand cubic feet of gas passed in 24 hours.

Q. Are there any scrubbers up there in that plant?

A. There are two more up there 10 feet in diameter by 24 feet high.

Q. Take those up.

A. Do you want the capacity of those?

Q. Yes.

A. 384,000 cubic feet in 24 hours.

Q. And the other was what?

A. 243,000 cubic feet

Q. Now, if we multiply each of those by two and add them together we will get the answer to the question that I asked?

A. There are more scrubbers. 1,254,000 cubic feet. There are more scrubbers there.

Q. Well, give us those?

Mr. Mathewson: Does that include the hydrogen scrubbers?

The Witness: No, we can take those next.

Q. No, do not take the hydrogen scrubbers. Leave those out.

A. I don't find any more except the two hydrogen scrubbers.

Q. Now give me the capacity of the two hydrogen scrubbers?

A. They are about the same as the others, I guess.

Q. Then it is about the same?

A. They are about the same as the two hot scrubbers. That makes 1,740,000 cubic feet per day in those scrubbers that I have named.

Q. What is the capacity of this plant at 99th Street?

A. 5,500,000 cubic feet.

Q. Then you could not pass the total production of the plant through the scrubbers, could you, if you have only got 1,740,000 cubic feet?

1609 A. Well, in addition to these there are additional scrubbers, I assume, in the U. G. I. apparatus, or whatever they furnish in connection with the apparatus.

Q. When you buy a set of U. G. I. apparatus, it includes, does it, the generator, carbureter, the superheater and the scrubbers and condensers necessary?

A. Not always.

Q. Does it in this case?

A. I was just looking when you asked the question.

Q. Have you so estimated it here?

A. No, I find no scrubbers there.

Q. I asked you when you were considering this plant whether you found there the necessary scrubbers, condensers and purifiers to produce the full capacity?

A. Yes, sir.

Q. You said you did. Now then, how do you explain the fact that there are only scrubbers sufficient to take care of 1,740,000 cubic feet per day, when the capacity of the works, according to the generators, is 5,500,000 cubic feet per day?

A. That is on the basis of my applying a figure of five cubic feet per thousand cubic feet of gas being passed through that apparatus. They evidently are passing it through with much less volume and get the same result.

Q. Then your computation is wrong as to the capacity of the scrubbers, isn't it?

A. No, not necessarily. You cannot scrub that gas too much. I should provide a larger scrubbing capacity, but that is all that I have included there.

Q. When you took the unit of five feet, on what did you base it?

A. On my experience that is what I should apply.

By Mr. Mathewson:

Q. Is that a coal gas or water gas plant at 99th Street?

A. Coal gas.

Mr. Page: No, it is water gas.

1610 The Witness: That is right. That is where I made my mistake. It is water gas.

By Mr. **Page**:

Q. Now, water gas, how much do you pass through the scrubber in a day?

A. Well, the scrubbers in water gas are required very much smaller than those for coal gas. We take out certain impurities in the water gas and in the coal gas we take out ammonia.

Q. What unit would you apply as a unit to the water gas plant?

A. Well, it is a very small cubical part, perhaps one and one-half cubic feet per thousand, up to two feet per thousand. It is not very material in the water gas.

Q. Now will you make your calculations then on the four scrubbers, ignoring the hydrogen scrubbers?

A. As to capacity?

Q. Yes, as to capacity for water gas.

Mr. **Mathewson**: At the rate he has indicated, I suppose?

Mr. **Page**: Well, the correct rate, if he has got it there.

Mr. **Mathewson**: There isn't any correct rate. Some works do not use any.

The **Witness**: Oh, no, it is very immaterial with water gas.

Mr. **Mathewson**: In coal gas you have to have a fixed proportion. In water gas you do not.

Q. And it don't make much difference how large your scrubber is?

A. No, it doesn't, because you regulate with the amount of water or material you have inside for filling.

1611 Q. Then certainly these four scrubbers can take care of whatever is produced there without any regard to the hydrogen scrubbers, can't they?

A. Well, I wouldn't say that.

Q. Well, if it does not make any difference what the size of your scrubber is, certainly if you have got two big scrubbers like these or four big scrubbers, they would take care of this capacity?

A. You have got to have enough, of course, for a minimum capacity.

Q. Now, have you enough for a minimum capacity in those four scrubbers?

A. I wouldn't say that they have.

Q. Well, if you were going to build a water gas plant, you would have some idea what a capacity of scrubber you would have to have for 5,500,000 cubic feet.

A. I was just trying to figure that for water gas. Well, (after figuring) it will be on the basis of from one to one and one-half, it will be on the basis of 4,500,000 to 6,000,000, averaging about 5,000,000. It is not very material what the size of a scrubber in a water gas plant is. Of course you have got to have a certain minimum capacity.

Q. Then in these four scrubbers, excluding the hydrogen scrubbers, you certainly have sufficient to take care of the production of that plant, haven't you?

A. Well, as I said before, I wouldn't say that positively.

Q. Well it is somewhere between four and one-half and six millions you say?

A. Yes, sir.

Q. And the capacity of the plant is 5,500,00?

A. Yes, sir.

By Mr. **Mathewson**:

Q. Then how do you figure it out there would be sufficient if it is four and one-half million and the capacity of the plant is five and one-half million.

A. Well, from four and one-half to six.

1612 Q. No, according to whether you took one or one and one-half. It is according to the kind of coal, how much gas you get in passing through the apparatus. Some require more. If you use coke it is a different capacity than coal.

By Mr. **Page**:

Q. Well, coke makes more ashes than hard coal.

A. Some does and some don't.

Q. Where are these hydrogen scrubbers located with reference to the generating plant and with reference to the balance of the plant.

A. Thy are not very far from the other scrubbers in the yard. They are both in the yard. Both the hot scrubbers and the hydrogen scrubbers.

Q. Are they both on the same side of the generating plant?

A. What is this, 99th Street?

Q. Yes.

A. No, I think they are all on the opposite side.

Q. No, I say are the scrubbers that you testified to and the hydrogen scrubbers both on the same side as the generating plant?

A. Well, what I meant is, they are on the opposite side of the yard from where the generator house is. All the scrubbers are together on the opposite side of the yard.

Q. But as related to the generator house, they are all on the same side?

A. All on the same side, yes, sir.

Q. You have given considerable testimony relating to yard connections. How did you measure those up?

A. Partly on the plans and partly on top of the ground.

Q. Wherever the pipes were on top of the ground you actually measured them, did you, you and your assistants?

A. No. I mean I took the measurements on top of the ground of all the pipes located below the ground.

1613 Q. Of course where a pipe was visible, did you measure that pipe?

A. Yes, sir.

Q. And where a pipe was covered, you took some plans that were furnished you?

A. Partly, and where there was no plan, I took the direction of the pipe indicated by the point where it entered the ground and the point where it came out of the ground.

Q. Can you recall whether there are any pipes shown on the plans, running from the generating apparatus to these hydrogen scrubbers?

A. In 99th Street?

Q. Yes.

A. As near as I can remember, the pipe in the generating house was all overhead, and then it turned down at the end of the generator house to a point below the ground and extended across the yard underground, then came out of the ground and connected to these scrubbers which were in the yard on the opposite side from the generator house.

Q. And they would connect with the scrubber at the top, would they, or at the bottom?

A. The bottom. That is, the inlet to the scrubber was at the bottom of the apparatus.

Q. And the water comes down?

A. Yes, sir.

Q. And at the top there is a pipe to carry off the gas in the scrubber?

A. The same pipe extends through to the top of the scrubber, then goes to the outlet of the pass and becomes a by-pass in connection with a second pipe.

Q. Do you remember whether these hydrogen scrubbers were connected at the top?

A. As near as I can remember they were connected with a common pipe across the top.

Q. Common with what?

A. Common to all the scrubbers.

Q. Were there any valves to cut off the——

A. Yes, sir. The necessary inlet and outlet and the apparatus to form the by-pass.

1614 Q. Where did you get your information to put these scrubbers down as "out of commission?"

A. That simply indicated they were not in use at the time of my investigation. Some of the men used the words "not in commission" and others "not in use," and it was just an expression that they were not in use at that time, depending upon the man who made the investigation at that plant.

Q. Did you find all of these scrubbers in operation?

A. Yes, sir, only when they are marked otherwise.

Q. When did you make your examination?

A. Well, during the last seven weeks.

Q. Was the plant operating at its full capacity during the term you were examining?

A. No, sir, I think not. I didn't make any particular inquiry about that, but no plant is in the summer time.

Q. You didn't make any inquiry to find out whether or not these various apparatuses that are in the different plants were really used or not then, I understand. No, sir, I did not, at that time. Of course they had to be used when the plant was operated to the full capacity.

Mr. Page: I think that is all.

Cross-examination by Mr. **Burr**:

Q. On page 1581 of the record there seems to be an uncertainty in your answer. The question is, referring to the 111th Street station, "Do you know as a fact that this plant is not used as an operat-" ing plant by the Consolidated Gas Company? A. Yes, sir, it is " used as an operating plant.

"By Mr. **Mathewson**:

"Q. You mean as a manufacturing plant? A. I mean as a man-" ufacturing plant, yes, sir.

1615 "By Mr. **Page**:

"Q. But it could be operated if necessary? A. Yes, sir, at any "time." Now what is the fact? Is that an operating plant or is it not an operating plant?

A. It is not.

Q. And further on you testified that in your opinion it has not been used as an operating plant for several years.

Mr. **Mathewson**: What plant is that?

Mr. **Burr**: 111*st* Street.

Mr. **Mathewson**: Do you and the witness, each know what you mean by operating.

Mr. **Burr**: I will ask him.

Q. When I asked you if it is an operating plant at 111th Street, what did you understand by that question?

A. That you mean that gas is manufactured there.

Q. That is exactly what I meant. And I understand you to say it is not used for the manufacture of gas.

A. No, sir, it is not.

Q. And therefore it is not used as a manufacturing plant?

A. No, sir.

By Mr. **Mathewson**:

Q. But it is in operation as a distributing plant?

A. As a distributing plant, yes, sir.

Mr. **Burr**: I am not asking about that.

By Mr. **Burr**:

Q. It is not used as a plant for the manufacture of gas and has not been for several years, according to your testimony?

A. No, sir.

Q. What other one of the plants you examined is not being used now for the manufacture of gas?

1616 A. I don't recall any except the holder stations and that portion of 18th Street that is still in existence.

Q. Well now, that plant at 18th Street is not being operated?

A. No, sir, except as a holder station; not as a manufacturing station.

Q. It is not operated as a plant for the manufacture of gas?

A. No, sir.

Q. Do you know how long it has been out of such use as an operating plant or manufacturing plant?

A. The 18th Street?

Q. Yes, sir.

A. I don't remember exactly, but I think it is somewhere since 1902 or 1903.

Q. You have had a general supervision of the plants and holders of the Consolidated Gas Company for same years, haven't you?

A. Never have.

Q. Haven't you inspected them from time to time heretofore?

A. No, sir.

Q. Before you were called as a witness here?

A. No, sir, I built a great many holders for them.

Q. Have you never been called upon to inspect their plant to find out what repairs were necessary, or new construction work was necessary?

A. Oh, yes.

Q. You have?

A. Yes.

Q. How often?

A. I can't recall the number of times. Quite frequently in the years past.

Q. Frequently within the past five years?

A. Very seldom within the past five years, for the reason that during that time most of the plants designed for alteration, were designed by the gas company itself.

Q. Without competition?

A. Oh, no, always with competition. We never had a job from the Consolidated Gas Company without competition.

Q. I understood you to say they were designed by the gas company themselves——

A. That is, upon the alterations, upon which the various bidders submitted their various propositions.

1617 Q. And hadn't you before you made up this schedule, a list of all the plants of the Consolidated Gas Company in your possession?

A. No, sir.

Q. Didn't Bartlett, Haywood & Company have such a list?

A. Oh, no. It would be impossible for them to have it.

Q. When did you first begin to make that list up, seven weeks ago?

A. Yes, sir.

Q. And was that made up by you from a personal inspection of each particular apparatus?

A. Yes, sir; that is, by my men under my supervision.

Q. Was it the man who made the mistake in the valuation for you which necessitated the corrections which you have made here?

A. Oh, that was only the clerk in transferring the figure, in leaving off a decimal point.

Q. It was more than that.

A. Well, all the mistakes are of that kind.

Q. You recall that in some of the addenda to these lists of the apparatus of various plants, you called attention to the fact that you made a mistake in placing the valuation on some of the parts, don't you recall that?

A. It was not a mistake, as far as the addenda was concerned; it was simply an addition which I found necessary upon my personal inspection after the lists had been completed.

Q. You had to increase the valuations because you learned that certain parts of the apparatus were recently purchased, or for some other reason, isn't that so?

A. No, for the reason that I found conditions to exist that I had not observed in my first examination. I went to each of the works repeatedly.

Q. Who called your attention to the fact that you had not observed that on your examination?

A. I found that by going over the works repeatedly myself. I had to change my lists continuously from day to day in making my examinations. When I was not quite sure I sent my man, 1618 and when I did not get an intelligent reply from him I went myself.

Q. No one called your attention to it then?

A. My own men, yes, sir.

Q. Who gave you the dates of the construction of these various apparatus and plants?

A. The various superintendents at the works, as near as they could recollect, of course.

Q. I think you omitted, Mr. Mayer, to give the value of the building in detail at the 14th Street plant?

A. 14th Street?

Q. Yes.

A. I do not remember whether I did or not.

Q. No, you did not.

A. Do you want it?

Q. If you please?

A. 14th Street plant?

Q. Yes.

A. Office building, $6,752 without depreciation, $6,077 with.
Pay room, $2,762 without, $2,486 with.
Building over alley, $622 without, $560 with.
Storeroom, $5,183 without, $4,665 with.
Boiler room, $5,630 without, $5,067 with.
Stack, $1,350 without, $1,215 with.

Q. Do you know when that stack was built?

A. No, sir, I do not.

Q. Why did you allow any depreciation for it?

A. For present condition and general appearance.

Q. What was its present condition and general appearance?

A. Such as would make me think 10 per cent. depreciation should be allowed on my valuation.

Q. Does it appear as if it had been built for 20 years?

A. It is very hard to remember all those details now. If I was on the ground and had another look at it I could better answer that question.

Q. Did you make any memorandum at the time you inspected the plant?

A. Yes.

Q. Any memorandum which would inform you now if you had that data?

A. No, the matter of depreciation in a brick chimney is
1619 simply the impression it makes on a man competent to judge,
and that is all I can say now. That is what I thought at the time.

Q. What did you say the value of that was?

A. $1,350 without, $1,215 with.

Q. By what process did you arrive at that valuation?

A. There was 56 cubic yards of excavation, 17,000 bricks, 36 piles, 500 feet of capping and planking.

Q. I understood you to say that you were not an expert nor did you pretend to be an expert upon anything else but iron. You are not an expert on brickwork, are you?

A. No, I didn't say that. I have designed and built a great many buildings.

Q. You might continue and give valuations.

A. Engine room, $4,400 without, $3,960 with.

Exhauster house, $4,315 without, $3,884 with.

Machine shop, $8,342 without, $7,508 with.

Smith shop, $8,843 without; $7,959 with.

Condenser house, $18,686 without; $16,818 with.

Q. Do you know when that was built?

A. About 1870.

Q. Do you know the year the machine shop was built?

A. The machine shop—1870.

Q. The exhauster house?

A. 1870.

Shed, $[illegible],090 without; $3,070 with.

Large purifier house, $50,160 without; $45,144 with.

Small purifier house, $15,839 without; $14,256 with.

Oxide house, $10,671 without; $9,604 with.

Meter house, $10,693; no depreciation.

Center seal house, $809 without; $729 with.

Center seal house No. 2, same value.

Boiler house, $2,305 without; $2,075 with.

Valve house, $1,159 without; $1,043 with.

Brick walls around holder yard, $21,526; no depreciation.

1620 Retort house, $200,980 without; $170,833 with.

Q. What year was the retort house built?

A. 1853.

Bench foundations, $36,360; no depreciation.

Scrubber house, $2,128 without; $1,915 with.

Brick walls on Avenues C and D, $423; no depreciation.

Brick walls on 14th and 15th Streets, $6,611 without; $5,950 with.

Shed, $4,414 without; $3,972 with.

Q. Is that a coal shed?

A. That is a shed 75 feet 6 inches by 21 feet 6 inches by 17 feet, the first shed.

The next shed, $4,414 without depreciation; $3,972 with.

Coke passage, $24,343 without; $21,910 with.

Gas engine house, $1,658 without; $1,625 with.

Coal hopper building, $7,094 without; $6,952 with.

Coal shed, $167,729 without; $164,375 with.

Yard between office and retort house, $4,707; no depreciation.

Rigger house at end of coal shaft, $1,281 without; $1,163 with.

Small office, $100; no depreciation.

Coal and coke storage, $4,264; no depreciation.

Fencing and timber retaining fences around coke and coal storage, $10,305; no depreciation.

Boiler and engine house, $1,739; no depreciation.

Boiler house and well, $1,278 without, and $1,253 with.

Boiler house, $1,017 without, and $997 with.

Valve house, $169; no depreciation.

Exhauster house, $19,494; no depreciation.

Boiler house, $3,384; no depreciation.

Q. When was that built; do you know?

A. No, sir, I do not.

Q. The exhauster house—can you tell me when that was built?

A. No, sir, I cannot. There is a new boiler house in course of construction as noted in the addenda. The value of that building in its present condition is $6,000. 1621

Tar and ammonia tanks foundations, $1,620; no depreciation.

Coke office, $290 without depreciation; $261 with.

Boiler house, $3,800 without; $3,420 with.

Q. Can you tell when that was built?

A. 1865.

Clay mill and storage, $1,184 without; $1,066 with.

Storage shed, $1,475 without; $1,328 with.

Storage shed, $813 without; $732 with.

Stable, $8,143 without; $7,329 with.

Storage shed, $2,140 without; $1,926 with.

Carriage room, shed No. 1, $835 without; $752 with.

Pump house, $238 without; $215 with.

Storage shed, $3,279 without; $3,115 with.

Storage shed and tank——

Q. Is that the same tank regarding which you testified before?

A. No, sir; $2,784 without; $2,645 with.

Storage shed, $1,320 without; $1,254 with.

Fences on east side of Avenue D and between 14th and 15th Streets, also on 14th and 15th Streets; also on 17th and 18th Streets and between 15th and 16th, as well as westerly side of Avenue D between 14th and 15th Streets, and Avenue C between 14th and 15th Streets. Total $7,585 without; $7,206 with.

Holder yard, $904 without; $723 with.

Boiler house, $1,831 without; $1,648 with.

Weigh office, $1,367 without; $1,230 with.

One-story brick building, $149 without; $134 with.

Valve house, $168 without; $151 with.

Boiler house, $710 without; $639 with.

Foundation for tower scrubbers, $7,854; no depreciation. That is all.

1622 Q. Now in arriving at the valuation which you have given with regard to these buildings did you use the same formula as you did with regard to the other buildings in the other plants?

A. I did.

Q. Adopting the Kings County building as a model or standard?

A. Not as a model or standard but as a normal condition, to which in each instance where the actual condition differed from a normal one, the difference was added.

Q. You did not mean to be understood as saying that all the plants which you have examined are in perfect condition, do you?

A. No, where they were not I have noted their depreciation.

Q. In figuring up the price of the brick walls in this plant, by what process did you arrive at their valuation?

A. I gave that several times in my testimony, by figuring the excavation and the brick, and stone work where there was such in the walls, separate.

Q. For instance, in this plant, what valuation or price did you fix on a thousand brick or brick per thousand?

A. $25 per thousand laid.

Q. And did you adopt the same figure regarding the laying of brick at all the other plants, where brick walls were concerned?

A. I did.

Q. At the present price of brick per thousand?

A. I gave that once before how that was made up in detail. Do you wish to hear it again?

Q. Yes, I would like to hear it again.

A. The price of brick obtained varies from $8 to $12. I took the average price of $10. For labor: Bricklayers, 800 bricks per day, $7; helper, $4; Portland cement, $2.25; sand and water, $0.80; foreman, at the rate of $7 per day, $0.50; timekeepers, $0.20; hod hoisting, $0.50; scaffolding, $0.16. Making a total of $25.41, for which I applied $25.

Q. Did you observe whether there was any vacant land surrounding this plant at 14th Street, belonging to the Consolidated Gas Company?

1623 A. Vacant land? There was I think on the north side of 16th Street, where there was room for another coal yard, to which I have already testified as being supplied with foundations for a coal trestle for coal handling machinery.

By Mr. MATHESON:

Q. Which is now used as a *cold* storage yard, is it not?

A. Now used as a *cold* storage yard.

By Mr. BURR:

Q. What is the size of that yard, do you know?

A. No, sir, I could not tell you.

Q. Is there not room for an extension of the plant at 14th Street?

A. No, sir.

Q. At what plants is there still room for an extension?

A. At none.

Q. Have you made a diagram showing the location of these buildings at each of the various plants?

A. No, sir, I have not.

Q. Then how are you able to swear that there is no room for an extension of the plant at any one of those locations?

A. From my general knowledge as a gas engineer all that it is necessary for me to do is to go through a plant and I could see at once whether there is room for an extension or not.

Q. Do you wish to be understood as saying that there is no vacant ground attached to any of these plants?

A. I was not impressed with the fact that there was sufficient room at any place to make a notable extension.

Q. A notable extension?

A. Yes, sir.

Q. What do you call a notable extension? The erection of an additional plant?

A. No, but an increase of from 30 to 50 per cent. of the present capacity.

Q. 25 per cent. you would not call a notable extension?

A. No, not in large plants.

1624 Q. So that we may say that there is room for an extension of say 25 per cent. on each of those plants?

A. No, you cannot say that at all. On the contrary, I do not think there is any room for any extension; that is what I said before.

Q. You said you did not think there was room for any notable extension.

A. Yes, that includes the first 25 per cent.

Q. Would it be a difficult job to map out or plot out on this Complainant's Exhibit Number 48 the location of each of the buildings at the various plants that you have testified regarding?

A. Not at all; it would not be difficult, no sir.

Q. I would like to have you do that.

Mr. Mathewson: No, I shall not ask this witness, who is not called for any such purpose, to do that, and while it may not be a difficult job, it would be a job of exceeding length; it would require surveys and everything else. I do not think you appreciate what it would mean, Mr. Burr.

Mr. Burr: Would you allow us to do that?

Mr. Mathewson: That is another proposition. I am not on the witness stand.

Q. Then you decline to do so by advice of counsel?

(No answer.)

Mr. Mathewson: I am not his counsel.

Q. Could you substitute nine retort benches for six retort benches in any cases?

A. No, sir, I could not.

Q. Could you, with the existing land and buildings in the borough of Manhattan, increase the capacity of a coal gas works, by substituting nine benches instead of six, as now?

A. I think it could be extended, at a comparatively tremendous cost.

1625 Q. Will you explain a little further what that comparatively tremendous cost would be? What you mean by that?

A. The buildings would have to be changed to a certain extent, in order to accommodate benches of nine, with full depth generator furnaces and charging and drawing machines, which would cost very much more if the plant was built outright new in a different location.

Q. Then, do you consider that the locations occupied by these plants are not favorable locations?

A. No, not at all. If I had to build that plant over again new, of course, as I said, I would construct it differently, for the full capacity that it is now. For that particular district where that plant was originally intended to supply gas, the location was very favorable.

Q. Would you say, that taking all these plants together as a whole, they are up to date construction?

A. I have said the other day that if I was to construct them new for full capacity, I would construct upon different lines than those laid out, which is due to the fact that they were built in small units at the time and added to from time to time until they finally reached their present capacity, but if built for the whole capacity the basis of construction would be an entirely different one of course.

Q. Would you say that these plants are in the most efficient condition, all of them, including the 111th and 114th Street?

A. I said before there was no manufacturing plant on 111th Street.

Q. I am speaking of it as a distributing station or plant, as you choose to call it. Embracing all the plants here, of the Consolidated Company, would you say that they are in most efficient condition?

A. Manufacturing plants you are talking about?

Q. Yes.

A. All the manufacturing plants are in as perfect condition as they can be under the circumstances under which they were 1626 developed to their present size.

Q. And those circumstances under which they were developed to their present size did not operate to make them up to date construction, did it?

A. Why no, it could not be so, because some of those plants originated away back in the fifties, when the plants as used to-day were not known, and the buildings were arranged for that character of apparatus. In order to change them, as I said before, it would cost tremendously to do it on the present site as compared with a new site.

Q. Is there anything to prevent the company from taking these plants one by one and reconstructing them and bringing them up to date, as far as construction is concerned, and increase the capacity of each one as it is rebuilt?

A. There is no chance for any decided increase in capacity. As I said before, they can be improved with modern apparatus, but it would cost a great deal more to do it on the present site, as compared with a new site.

Q. When you speak of the new site, you are speaking of the site on which you are engaged in erecting the plant at Astoria?

A. No, I was not. I say a new site, any new site.

Q. Any new site?

A. Yes, sir.

Q. What was your estimate of the cost per cubic foot contents of a retort house?

A. Under normal conditions, as in the instance of the Kings County works, 14.05 cents per cubic foot.

Q. Under normal conditions?

A. As existing in Kings County.

Q. Do you claim that those conditions exist here in the Borough of Manhattan?

A. Quite to the contrary; in most instances I found that they varied considerably; in many instances there were excavations in rock and in many others pile foundations were necessary, owing to the locality. That changed the normality of the conditions, 1627 and in that case I figured the abnormality separately and added that to the cost of the retort house as determined by the application of the unit price of 14.05 cents per cubic foot.

Q. Can you say how old the turntables were that you have testified regarding, Mr. Mayer?

A. No, sir, I cannot.

Q. Can you tell me what the life of a Root exhauster is?

A. No, I cannot. I never knew one to wear out outright. Those apparatus have always to be maintained in such condition of repair that they do their work, and therefore the repairs always keep up the depreciation.

Q. What is the life of a boiler?

A. Well, that depends upon the handling of the boiler, the character of the coal and a great many other conditions and circumstances which prevent one from applying a general rule.

Q. Could you say what the life of the turntables are?

A. The life of the turntables?

Q. Yes, or the life of a turntable.

A. What I said before regarding the exhauster applies to the turntable and all other apparatus in a gas works. In order to perform their function each and every day they must be kept in perfect repair continuously.

Q. I understood you to say that in making an estimate of value for some of this work, that you sought figures from contractors, and those who made special articles; is that true?

A. I would not call them contractors; I would call them manufacturers.

Q. The manufacturers?

A. Yes, sir, that is, manufacturers of special articles which nobody else makes.

Q. Did you get more than one set of figures for any one article?

A. I could not very well do that, because the article manufactured by one manufacturer is not manufactured by another one. 1628

Q. You asked the manufacturer of a particular article what he would supply that particular article at?

A. Yes, sir.

Q. That embraced the delivery and setting up of the particular machine?

A. No, that only included the delivery.

Q. And then you added what you thought would be the proper figure for setting up?

A. For the erection, yes, sir; that is, not what I thought to be a proper figure, but what I knew to be the proper figure.

Q. Well, you are merely expressing an opinion here, isn't that all?

A. No, I am expressing my knowledge from past experience.

Q. Now, I will ask you from your past experience and your present knowledge whether you can state accurately the extreme daily capacity of the 14th Street station from your own computation?

A. No, I cannot. I have not figured the sizes of the apparatuses in order to establish the total amount of capacity, but I know that such an amount of gas per day has been produced in those particular stations in each and every one of them many times and in some of them they have not quite come to the maximum and in others they have gone beyond the maximum.

Q. Would you swear in the 14th Street station, for instance, that they had reached the maximum capacity there and they could not produce more?

A. 14th Street you are talking about?

Q. Yes, sir.

A. Yes, sir, as I recollect, at 14th Street they had produced the capacity that I stated the plant to have, within a small fraction.

Q. Well, what I am asking you, Mr. Mayer, is whether you wish to be understood as saying that they could not produce more than the figure you have given? I want to know whether that is really the maximum capacity of that plant, or whether it is not the fact that more gas could be produced there than the maximum that you have given? 1629

A. If you ask me that question, I would have to figure the capacity of each and every apparatus of the plant before I would be able to make a decided answer.

Q. So therefore the capacity which you give to each one of these plants is not the capacity arrived at from your own computation?

A. No, sir, it is the capacity which was given me by the various superintendents.

Mr. Mathewson: It is already on the record and has been testified to.

Mr. **Burr**: It is not on the record that this capacity was not the result of his own computation.

Mr. **Mathewson**: No, but the capacity is already on the record as testified to by Mr. Bradley and he took the same capacity as Mr. Bradley did.

Q. Mr. Mayer, you have stated that the 111th Street coal gas works of 2,500,000 feet daily capacity, or 500,000,000 feet annual capacity, are lying idle, and I want to ask you, could not those works be completed and more than doubled in capacity, at a reasonable expense?

Mr. **Mathewson**: He has not testified to any such thing as that, Mr. Burr; I am quite sure he has not.

A. I have already stated in connection with my testimony for that plant that the benches in this plant could not be used except in connection with some other station, where there were exhausters, condensers and purifiers.

1630 Q. Isn't there room to put exhausters, condensers and purifiers?

A. Nothing like for the capacity of the benches. I presume that a portion of that ground was taken from the other side which has now been converted into a holder storage yard.

Q. When you say the other side, to what do you refer?

A. The other side of First Avenue.

Q. Insn't there room on this block bounded by 110th Street, 111th Street, First Avenue and Pleasant Avenue, for the construction of the additional buildings which would be necessary to increase or practically double the capacity of that plant there?

A. Nothing like it, because you would have to provide for a coal storage at the same time if you supplied such a large plant as that. It would be altogether too small.

Q. It would be altogether too small?

A. Yes, sir.

Q. What space would be required in your opinion, to enable that plant to be doubled in capacity.

A. There is no plant there now; there is only a retort house there, only a part of a plant.

Q. I mean the buildings which would make it a plant capable of doubling the capacity which you say it has the ability to provide each day now.

A. I beg your pardon, I did not say there was any ability to produce any amount at that works except in connection with some other works where there are exhausters, purifiers and condensers. Upon this station there is only part of a plant, only the generating plant consisting of the retorts and benches.

Q. I asked you what space additional beyond what is here now used by the Consolidated Gas Company would be required to put up those buildings you speak of, the exhausters and condensers.

Mr. **Mathewson**: And provide for coal and coke storage?

The **Witness**: A plant not less in area than the 14th Street works, which is 5,500,000 cubic feet.

1631 Q. Which of the holders are the more recently constructed?

A. This one at 132d Street.

Q. And what is the holder that is next to that?

A. 111th Street, I think, the two at 111th Street.

Q. Did your firm build the one at 132d Street?

A. Yes, sir.

Q. And also build the two at 111th Street?

A. Yes, sir.

Q. And what other holders did your firm build?

A. Here in New York?

Q. Yes, in Manhattan.

A. Well, we built holders for all the companies more or less, and particularly all the large holders, every one of them without exception. We built formerly the holder in brick tank at 63d street. We built another one at 65th Street, I think of 4,000,000 and 3,000,000 cubic feet capacity respectively; and a great many others which I cannot recall just at the present moment as to location.

Q. Now, you say you took the rate of wages, shop and field, from your construction work?

A. Construction accounts.

Q. To what construction account do you refer?

A. To the construction account of the firm of Bartlett, Hayward & Company.

Q. How recently?

A. To date.

Q. Were these construction accounts made in connection with the construction of any particular plant?

A. Every one of them; when a particular contract is finished we know to the thousandth part of the cent; we know every mill that has entered into that construction.

Q. You say that in connection with the boilers of these various plants regarding which you have testified and given a value, you cannot say when any of them were first used. You don't know the life of the boiler, in other words?

A. No, I did not make any inquiries regarding that. I
1632 found that they were all in perfect condition and operated
to the full pressure allowed them, and as this was not a low
pressure in any instance, there was no reason for making any further inquiries. If any defects are developed, they are at once made good.

Q. Then you can fix depreciation without knowing when they were originally in use?

A. The same as I can with an engine or any other apparatus, the general appearance of that apparatus indicates to me the approximate depreciation I should allow as a practical engineer.

Q. Are you engaged now in any construction work in Astoria?

A. I am not, no, sir.

Q. Have you finished all that?

A. My firm is. I have severed my connections with the firm and therefore I answer your question in that way.

Q. And you left the firm in July last?

A. I left the firm actually in December last, but practically on May 1st.

Q. When did you start in to appraise these plants?

A. Oh, I don't know, about seven or eight weeks ago, I don't recall the exact date. I have the exact date but could not tell it just offhand. I think it was around about the 8th or 10th of July. I think it was the 8th of July if I remember rightly.

Mr. Burr: That is all I want to ask.

By Mr. Page:

Q. I intended to get, if Mr. Mayer was willing to do so, a statement bringing together the different coefficients at which he estimated the prices and cost?

A. Do you mean a copy of this paper?

Q. I don't know what that is.

A. Those are my coefficients of cost or my factors in making up the coefficients.

Q. That is what I meant, one statement.

1633 Mr. Mathewson: Do you mean as to each one of these various apparatus he has testified to?

Mr. Page: Yes, his prices on which the coefficients of cost were based.

Mr. Kirby: And materials entering into the construction.

Mr. Mathewson: Hasn't he stated them already?

Mr. Page: He has stated some of them. I mean how he arrived at that.

The Witness: I have given you all the material cost for the apparatus and given you the holders and condensers.

Q. Have you given what it cost for cast iron?

A. I think I have given you the cost of cast iron and wrought iron condensers and purifiers in detail, I think in my testimony already.

Q. What is there that you have not given?

A. That is all that I recollect at the present moment. All the others I have not given, but they do not vary much in character.

Q. Have you used the same price for cast iron, for instance, in all apparatus?

A. Yes, sir, I have stated that my price for cast iron is based on the material, to which must be added the melting of the iron in the cupola, and to that is applied my unit for cast iron. It is the same thing in each and every instance, because it only represents the iron in a melted condition ready to leave the cupola.

Q. Have you given the wrought iron?

A. I have given you the price to-day. The prices are the prices quoted by the mills.

Q. That applies to all kinds of apparatus, doesn't it?

A. To all kinds of apparatus, yes, sir.

Q. And steel the same way?

A. Steel the same way, yes, sir.

Q. Whether it is steel plate or whether it is steel in bars?

1634 A. I have given you the prices for the bars and for the plates and for the mill plates and for every kind of plate separately.

Mr. PAGE: All right, I will withdraw the question if you think it is sufficiently on the record.

Redirect examination by Mr. MATHEWSON:

Q. Mr. Mayer, has your firm of Bartlett, Heywood & Company, and have you, as their chief engineer, constructed gas plants complete, including buildings, apparatus and yard connections and holders?
A. Yes, sir, quite a number of them.
Q. So that you are familiar with the construction and the cost generally of all these different parts of a plant?
A. Generally and in detail.
Q. Referring to your valuation of buildings, you stated you took as a standard the cost you had derived of one building of the same character, say a retort house, and you applied that to another retort house and computed the value of the second retort house upon a proportion between cubic contents of the two?
A. That is right, sir.

Mr. PAGE: I prefer that the witness should state it rather than have counsel testify.
Mr. MATHEWSON: He has already stated that, and I am only reciting it as a preliminary to a question.
Mr. PAGE: All right, I was just calling attention to the fact. I do not press the objection.

Q. If you have one building 50 feet by 50 feet, a retort house, and compare that with a building 100 feet by 50 feet, is it not a rule that the larger building——

Mr. PAGE: Had you not better say what is the rule?
Mr. MATHEWSON: No, I do not think so.

1635 Q. (Continuing:) should have partitions or buttresses of trusses or thicker walls at the base or something else in order to preserve the same structural strength as the smaller building?
A. Yes, if you remove the partition and double the building, it becomes necessary to obtain the requisite resistance, which a partition wall would have had had it been permitted to remain in place, by some other means; and those means are either the increase in the thickness of the walls, or pilasters or increase in the thickness of pilasters or the addition of buttresses in the middle of the wall.
Q. Did I understand you to say that in the buildings you included the foundations of apparatus also?
A. In my unit prices of buildings?
Q. Yes.
A. The foundations of all apparatus in that particular building are included.
Q. I want to ask you whether this method of computing the value of one building by taking the standard derived from the cost of a similar building and comparing their cubic contents is one which is employed or recognized by engineers outside of yourself?

Mr. PAGE: I object to it as immaterial and irrelevant.

The **Master**: I will allow it.
Mr. **Page**: Exception.

A. I have very often in discussing prices of buildings with other engineers and with builders and contractors, heard the same rule applied. It is a quick method of arriving at practically a correct figure for an aggregate number of buildings.

Q. Have you ever compared in your experience the results of estimates made in this manner with the actual cost of the structures as they turned out?

1636 A. In all my construction records, when the same are finished, I convert the actual cost of the buildings upon a basis of this kind, that is, I establish the actual cost upon a basis per cubic foot of contents.

Q. According to your experience how do those compare with the actual cost, the estimate made in this manner?

A. Absolutely correct, for present conditions.

Q. Why didn't you, Mr. Mayer, in this case, proceed to take the measurements and compute the cubic feet in buildings and foundations and so on, instead of pursuing the method which you have in estimating the value of these buildings?

A. To do that, it would have really meant to make a detailed estimate based upon plans and specifications, therefore such a methed could not be applied in this instance for the reason that I should have had to make detailed plans and specifications before I could make an estimate of that kind. To do that it would have taken not less than nine months for all the buildings in the various plants which I have examined; besides which I was satisfied that the method which I applied was just as correct for the aggregate number of buildings as it would have been by making detailed drawings and plans and specifications of each building.

Q. Where you or your firm is called upon to make a bid for the construction of buildings, are not the specifications and dimensions all presented to you so that you have the material before you upon which to compute the cubic feet of brick, and so forth, where bids are asked?

A. For bids in connection with gas works we generally design the buildings ourselves and submit them to the various builders and obtain the prices from the various builders ourselves, therefore, I have the intimate knowledge that I do have as to what the buildings would cost if constructed by other contractors.

1637 Q. Referring now to apparatus. Is you firm a constructor of gas apparatus?

A. We, are, sir.

Q. You are not contractors alone, but manufacturers, as well?

A. Yes, sir.

Q. What proportion of the apparatus of the gas plants as they are here are manufactured by your firm, or can be?

Mr. **Burr**: When you say "here," you mean——
Mr. **Mathewson**: New York, of course, Manhattan.

A. All with the exception of a few apparatuses of special construction, such as engines, exhausters, blowers, and boilers; and in the instance of a water gas plant, the generating apparatuses, which we always purchase from the United Gas Improvement Company, considering them the best in the country.

Q. What per cent. of the apparatus in a plant of this kind would your firm be able to manufacture?

A. I should say 90 per cent. and over. I believe I could say 95 per cent. and over. Perhaps in the instance of a water gas plant, the percentage would reduce to 85 per cent.

Q. In making your estimates of the cost of apparatus to which you have testified where that apparatus is manufactured by Bartlett, Hayward & Co. did you proceed upon the same basis as you would if you were submitting a bid?

A. Absolutely the same basis.

Q. Do you proceed in that way upon the basis of weight?

A. Yes, sir.

Q. And in valuing all these pieces of apparatus to which you have testified, have you gone into the same detail in estimating the value, that is, the cost of the raw material, the shop labor, the labor in setting up, and other things that you have testified to in respect
1638 to one or two items regarding which you were asked?

A. I have and I could not do otherwise. I could not go to a work and value approximately a piece of apparatus to save my life, I am so used in making detailed estimates.

Q. Have you seen yourself all the apparatus you have valued?

A. Every one of them.

Q. Now, in reference to this estimate by weight, is it possible where you estimate apparatus or machinery for you to determine the weight?

A. Yes, sir.

Q. With what exactness?

A. With absolute exactness.

Q. In other words, the weight of cast-iron or steel is substantially uniform, isn't it, for the same volume?

A. Per unit of surface or volume, yes.

Q. So that would you consider the weight of the apparatus to which you have testified as an estimate or as an exact thing?

A. As an exact thing.

Q. And you then apply this cost of cents per pound figured out in the details to which you have testified?

A. Yes, sir, and it makes it equally as exact as the weights.

Q. How do you regard the 15 per cent. profit which you have added for contractors? Is that an excessive or an ordinary profit in your experience?

A. I have only added 15 per cent. profit, you say?

Q. 15 per cent. for the original contractors.

A. For the profits?

Q. Yes.

A. Well I consider that as an extremely low profit, but it is all that can be obtained under the present conditions of competition, and in my opinion it should not be less than 20 per cent. in order to get out whole out of the contract.

Q. Have you and your firm bought during the past year considerable apparatus of a special character which is not manufactured by you; that is to say, boilers and so on, to which you have referred?

1639 A. Well not a great deal because that is such a small percentage of the total plant.

Q. But you have had experience in buying that, have you, so that you know the value generally?

A. Oh, a great deal of it, particularly in the instance of the exhausters and blowers. Not so much in the instance of the boilers because that is an article anybody can buy in the open market, in any locality.

Q. And in making up your estimate of that part of the apparatus did you apply to the manufacturers to give their figures, to confirm your own impressions, or otherwise?

A. I did; and as I said the other day they were low figures because they have to give us lower figures than they do the gas companies.

Q. I want to ask you whether the 10 per cent. which you have added to these costs and which you stated covered the engineering expenses of the company in installing the plant and the sewering of the plant and other items, is recognized by engineers in general as an additional charge to make up the total cost of the plant?

A. Yes, sir.

Q. Did you say whether you made a personal investigation of your own records to find out whether that was a proper figure?

A. I did.

Q. And what was the result?

A. It was nearer 15 per cent. than 10 per cent. That includes all the charges I have enumerated in the first or second day of my testimony; of the items, I should say.

Q. And to holders you added only 5 per cent.?

A. Only 5 per cent.

Q. For that item?

A. Yes, sir.

Q. Now, as a matter of fact in your experience, is a plant which has been built up for the last sixty or eighty years to supply gas, being increased in capacity from time to time as the requirements of the consumers increase, in any instance exactly the same 1640 as a new plant which you would install for the full capacity if you were to do it over again to-day?

A. No, sir. If I should build a plant for the full capacity it would be built on different lines.

Q. But where a plant is built up in this way, is it ever possible to get it exactly on the lines as you would produce it to-day new?

A. Not at all.

Q. Did you observe the plants in operation as you went through them?

A. I did.

Q. You observed whether they were operating efficiently and simply.

A. Yes, sir.

Q. And wherever you found anything not in use, have you so noted it and testified?

A. I believe in every instance, as near as I could.

Q. Would it be economy, for instance, having benches of 6's operating properly, to tear those benches out and put in 9's because the consumption had increased?

A. No, it would not in these plants, for the reason that the benches of 9's would require entirely different areas than the benches of 6's, and that would in all probability entail a loss in capacity instead of an increase for the reason that the benches of 9's would have to be constructed upon the same foundations as the benches of 6's and these foundations may be entirely inadequate to support the same capacity in benches of 9's.

Q. You have spoken of benches with regenerative furnaces and spoken of the regenerative furnaces as being somewhat economical. What is the comparison in cost between regenerative furnaces and the ordinary furnace?

A. I figured these, as near as I can remember now, for benches of 6's of ordinary construction, at $2,210, I think I gave the price or the value. The same bench with the full depth regenerator furnace would cost to-day $5,600.

Q. In other words, more than twice as much?

A. More than twice as much.

1641 Q. You have been asked in reference to steel tanks and brick tanks. How long has steel been used in the construction of gas tanks for large holders?

A. I should say about 18 years; 18 to 20 years.

Q. So that prior to 1884, tanks had not been constructed, had they, of steel?

A. There was no steel made at that time for such apparatus.

Q. Have you computed, or added together, your figures so as to show the cost of reproduction of these plants of the Consolidated Gas Company as they now exist, reproduced new, without allowing for depreciation?

A. Yes.

Q. Just give me the grand totals.

A. For the plant, $12,537,262; for the holder stations, $3,600,215, making a total of $16,137,477.

Q. That is exclusive of the 18th Street plant, which has been taken by the City?

A. Yes, sir, exclusive of that 18th Street plant.

Q. If each plant were to be reproduced, I suppose it would be necessary to reproduce them new? You could not reproduce depreciated plants?

A. Not very well.

Q. And wherever you observed any deterioration in this apparatus in going over it, or any machinery, did you in every case note it, and have you included it in your figures?

A. Wherever there was any I have included it.

Q. You were questioned as to whether the plants of the Consolidated Gas Company could not now run continuously at their maximum daily capacity. Do you mean that they could run every day in the year at the maximum daily capacity?

A. Every day in the year. But what I mean by that is in gas works construction we always base a yearly production on a period of two hundred days. All my references to capacities are based on that factor, that is, 200 days per year instead of 365 days.

1642 Q. You would have to have time down for repairs, wouldn't you, in the plants?

A. Yes, sir, and that is taking up the balance of the time.

Q. And during the summer season of course there is no requirement for the maximum output of the plant?

A. No, sir, there is not.

Q. And then the maximum annual output of these plants would be obtained in your judgment, would it not, by multiplying the maximum daily output by 200?

A. Yes, sir.

Q. Are you able to state generally whether the cost of buildings is greater to-day than it was in 1884, or less?

A. As compared with 1884?

Q. Yes.

A. The cost to-day is considerably more than in 1884.

Q. How about apparatus, speaking generally, if you can state?

A. A great many apparatuses cost less to-day. The reason for that is that in some of them or many of them the patent has expired and no royalties are to be paid to-day, and in other apparatuses the competition at 1884 and previous to 1884 was such that enormously high prices could be asked at that time which is not the case now. I know that ordinary bench castings have been sold for a price at least 60 per cent. higher than you are able to obtain for them, at the present time, which was only due to the fact that competition was exceedingly small.

Q. Is your firm of Bartlett, Hayward & Company a large producer of gas apparatus, or small?

A. We employ at present in the neighborhood of 2,000 men and have been doing that almost continuously for several years.

Q. Do you know how they compare with other manufacturers as to amount of manufacture; as to output?

A. Bartlett, Hayward & Company manufactures very much more than any other manufacturer of gas works in this country.

1643 Q. How about the construction of gas works and apparatus. How do they stand as to amount?

A. The same condition applies there.

Q. They are the largest constructors in this country?

A. Yes, sir.

Q. Referring to the 14th Street plant, you spoke of $48,000 for purifiers in the large house, or about that. Did that include the center seals?

A. Yes, sir.

Q. Are you sure about that?

A. Yes, sir, but not the connections between the center seals and the purifiers. Oh, I beg your pardon, what did you say, 14th Street? It is possible I may have given the center seals extra.

Q. Well, I would like to know?

A. Yes, sir, center seals are included.

Q. In reference to the 21st Street plant, which is now a water gas plant, you stated, I think, that the buildings were now crowded with water gas apparatus?

A. Yes, sir.

Q. And you were asked if whether buildings were to be constructed now they could not be constructed for less. If you were asked to lay out and plan a water gas works of same capacity as 21st Street to-day and had the room, would you confine yourself to the buildings at 21st Street, or would you build larger ones?

A. I would build larger ones.

Q. With more space?

A. More space, yes, sir.

Q. And more expensive buildings?

A. And more expensive buildings, yes, sir.

Q. Do you know that the capacity of the 21st Street works has been increased since it became a water gas works much beyond what it was as a coal gas works?

A. Yes, sir.

Q. When you speak of $123 per thousand as the value of the water gas plant, do you include any holders in that?

A. I do not.

Q. What do you include?

A. Only the plant itself, without any holders.

1644 Q. Generating plant?

A. Generating and purifying plant, condensing plant, the entire plant except holders.

Q. Does it include the general connections?

A. Yes, sir, everything except the holders.

Q. The term operating plant was used in asking you some questions in reference to these various plants of the Consolidated? Are not all of them operating either as manufacturing plants or as distributing stations?

A. Yes, sir.

Q. When you use the term "operating" what do you mean?

A. Manufacturing. I do not recall now how often I used that and just in connection with what statement, but I do believe under the term of the operating plant I should mean a manufacturing plant, that is a gas producing plant.

Q. You were questioned as to a building at 18th Street enclosing some holders there. Is that form of construction, enclosing holders in a building, in use anywhere to-day?

A. No, I believe it has been universally abandoned, even in severer climates.

Q. Was it formerly a construction that was recognized by engineers?

A. Well, yes, it was used many times. I have constructed some of those buildings myself.

Q. Does not that reduce the cost of taking care of apparatus inside?

A. Yes, sir.

Q. Saving the expense of cleaning snow off the holders and doing various other things?

A. It was not so much the expense entailed in cleaning the holders from snow, but at that time it was considered dangerous or almost an absolute impossibility to clean holders in severe climates as Canada or Chicago from snow during heavy storms. By better and improved construction of the holder recently we have applied complete stairways extending from the ground level to the top, so any portion
of any holder, no matter how large, can be conveniently
1645 reached by the men that go on top to shovel off snow.

Q. Is there any wall around outside of this building at 18th Street, or does the building form the wall between the premises and the street?

A. Well, just the side walls of the building of course from the enclosure for the holders.

Q. So that if the buildings were not there at all and were roofed would there not be any necessity for a surrounding wall to surround the enclosure?

A. I don't understand you.

Q. If there were no building there roofed in, would there not be required a wall to surround the premises, that wall now being part of the building wall?

A. That wall would be very much lighter and, of course, very much lower.

Q. Oh, of course, but there would be some requirements for a well or some method of enclosing the premises?

A. Yes.

Q. Is it feasible or desirable in your judgment as an engineering proposition to have a single unit or plant to produce 41,500,000 cubic feet of gas daily, or is it necessary to have units in that case?

A. You mean as an entire plant?

Q. Yes.

A. Including purification, condensation and everything that makes up a plant?

Q. Yes.

Mr. Page: A water gas plant.

Mr. Mathewson: We are talking about gas in general. We will come to that later.

Mr. Page: My question was directed to the water gas.

Mr. Mathewson: I am questioning the witness now. Mine was not.

A. No, I should consider that not only as improper, but as a very
expensive method of building a large gas works.
1646 Q. What, in your judgment, would be a fair limit of the
capacity of a single unit daily?

A. The same limit as applied in the new works for the Astoria Light, Heat and Power Company; that is 20,000,000 feet per day, for coal gas.

Q. And after you pass that limit, isn't each unit in effect a new plant?

A. Yes, sir.

Q. Would there be in your judgment any special economy in the production of gas after you had reached an output of say 600,000,000 or 700,000,000 feet a year for any increase beyond that?

A. No, in my opinion there would be absolutely none, for the reason that when you arrange a plant of say 20,000,000 feet capacity so that your manual labor and your machine labor are continuously employed during a certain time entirely, in other words, if you get all out of the manual and machine labor that can possibly be obtained that limits the capacity of your plant. Will you excuse me. I just want to correct that. I won't say limits the capacity; I will say determines the limit size of the plant.

Q. Do you remember what the discount was which you allowed upon the construction of a single holder by reason of the contract for three or four $5,000,000 cubic feet holders? Do you remember the percentage, whether it was 1 per cent. or 2 per cent., or what?

A. No, I have not figured that on that basis at all. What we allowed was of course that reduction in the material for the four holders. Of course it is quite an inducement for the mills to make a special price when they get an order for such a large amount of material.

Q. Do you remember whether the reduction was slight or a very large one?

A. I cannot recall just how much that was, but it was very nearly equal to the difference in the cost and the difference in the valuation and that of actual cost, with the exception of the labor item to which I referred before.

1647 Q. In practical construction would you be called upon to build at the same time all the holders that now belong to the Consolidated Gas Company, under any conceivable circumstances?

A. Absolutely impossible. I could not make the schedule to order the iron or street at the same time so as to make an inducement to the mills to reduce the price.

Q. And holders are constructed as additional requirements for them arise?

A. Yes, sir.

Q. Increase of consumption?

A. Yes, sir.

Q. And new distributing stations?

A. Yes, sir.

Q. You have given a total value for the 99th Street plant of nearly a million dollars. Will you state how much of that is presented by you as the value of these hydrogen scrubbers respecting which so much time has been taken?

A. You mean how much of the total?

Q. Yes, as to how much those hydrogen scrubbers stand for?

A. At 99th Street?

Q. Yes.

A. $1,560 without depreciation; $1,485 without the 10 per cent. and 5 per cent.

Q. $1,485?

A. Yes, sir.

Q. Now, in reference to the scrubbers, in the manufacture of coal gas, is it not the fact that scrubbers bear some rather fixed relation to the amount of gas which passes through them or which has to be scrubbed?

A. Yes, sir, that is a fact.

Q. You have said, however, in relation to the water gas, that there must be a minimum provision for the scrubber, but after you get beyond that, isn't it largely a matter of discretion in the operator as to the kind of scrubbers that shall be used? Is there any such fixed relation as there is in connection with coal gas?

A. No, there is not.

Q. I finally ask you whether from your observation of these plants, knowing that they have been built up during the last sixty or eighty years, you consider the plants as efficient and in good condition or otherwise?

1648 A. I believe I have already stated that in my testimony. I think that all of the plants that are operated to-day for the manufacture of gas are as perfect as can be made under the conditions under which they were built and developed.

Recross-examination by Mr. Page:

Q. Would you place the same limit of capacity for a profitable reproduction of gas works, or a water gas works, that you have on a coal gas works of 20,000,000 cubic feet per day?

A. No, I should increase the total capacity per unit of plant very considerably.

Q. You could construct one plant that would produce 41,500,000 cubic feet of water — per day?

A. Very easily, but it would contain a multiplication of units of even smaller generating capacity than I had in my mind when I gave the limit of capacity for a coal gas plant as 20,000,000 for the simple reason that a water gas apparatus for 5,000,000, 10,000,000 or 15,000,000 cubic feet per day, is a self-contained apparatus in itself all the way through; whereas in a coal gas plant, you have to have a certain number of benches, and that changes the conditions entirely, so that a water gas plant could be almost increased to any total capacity by simply adding those additional smaller units one alongside of the other.

Q. So that there is practically no limit to the economical production of any one plant of water gas, no limit of capacity I mean?

A. No, you could keep on adding water gas apparatus and call each one of them a unit of the total plant, providing you were to increase your purification in the same ratio in proportion to the generating apparatus, it would really mean a multiplication of smaller units than in the instance of the coal gas plant.

Q. That is, it requires less purifying capacity to purify water gas than it does coal gas.

A. No.

1649 Q. That is, you can purify more water gas than you could coal gas with the same purifying boxes?

A. No, sir, I said just now when you come to the purifiers, you have to build your purifiers in proportion to any accepted number of units that you might call a plant.

Q. As I understand it, you have taken as a unit or maximum unit which you can use in a coal gas plant, one that produces 20,000,000 cubic feet of coal gas?

A. Yes.

Q. Now, what is your maximum unit of capacity of water gas plant?

A. Well, I should say that you could build a water gas plant of double that capacity and call it a unit, provided, as I said before, that your purifying apparatus and all other apparatus are in proportion to the generating plant.

Q. Then you could very easily construct a coal gas plant of a capacity of 20,000,000 cubic feet per day and a water gas plant of 40,000,000 cubic feet a day, making a total capacity of 60,000,000 cubic feet?

A. Yes.

Q. Now, you spoke as if the maximum of your capacity was 200 days.

A. 200 days, yes, sir.

Q. It is not required merely for the purpose of repairs and renewals that a plant should be shut down for 165 days in the year, is it?

A. No, sir, the 165 days means that it takes care of the wear and tear and necessary repairs besides the variation in gas production between summer time and winter time. If you average the total you will find it is about applicable for two hundred days a year.

Q. Now if you had a condition where the summer demand equalled the capacity of the works, could you run the works right through the summer?

Mr. MATHEWSON: An impossible assumption.

Mr. PAGE: Not at all.

Mr. MATHEWSON: Yes.

1650 A. Could I run it through the Summer?

Q. Yes.

A. You mean to say six months?

Q. Could you run 300 days, we will say?

A. On a full capacity.

Q. To the maximum capacity.

A. It would be impossible; you have to have time for alterations and to replace wear and tear.

Q. How much time is it necessary to repair and replace wear and tear in a plant?

A. Well, I know that under present conditions wheer we figure the 200 days' continuous operation, that the balance of the time is used up to the last minute in making necessary repairs.

Q. Then it has nothing to do with the increase of the demands in the summer, but the 165 days are consumed in repairs; is that right?

A. As I said before, both wear and tear and the decrease in making of gas and the demand for gas; that is all taken care of by that difference in time, being 165 days.

Mr. MATHEWSON: That has all been gone over; it seems to me it is clear enough; but perhaps it is not.

Q. You say that in constructing a gas plant it has been your custom after completing a building of any particular kind, to reduce that to a per cubic foot standard?

A. Yes.

Q. But in the estimate which you have given of the values of the buildings in this particular plant, you have used merely the comparison of the Kings County buildings? That question can be answered yes or no, I think.

A. I have applied them as a standard.

Q. Applied the Kings County buildings alone as a standard?

A. Yes, sir.

1651 Q. Now, in giving the dimensions of the U. G. I. water gas machines as you have, have you given the same dimensions as would appear on their catalogue, where you state that it is 11 feet by 20 feet, we will say.

A. I have obtained these dimensions at the various works where I found the apparatus, and then asked the United Gas Improvement Company for the price of the apparatus.

Q. Have you taken the measurement of the outside of the shell, or did you measure inside of the brickwork?

A. No, I took the measurement outside of the shell in each and every one of the apparatus.

Q. Is that the way they catalogue it?

A. I do not know that they have any catalogue, I never saw any.

Q. You say in making your estimates of units, you have allowed a manufacturers' profit of only 15 per cent.?

A. Yes, sir.

Q. Haven't you also allowed 10 per cent. additional for contingencies?

A. I have, and in the instance of the holders I think it is 15 per cent.

Q. You stated that in your going through these plants you observed that they were operating efficiently. What did you mean by that. That they were making gas?

A. That they were making gas without any apparent difficulty, in the ordinary manner in which it should be produced. I could not see any difficulty in any way, shape or form in any part of the plant.

Q. You did not take into consideration the amount produced of gas, per pound of fuel used, or anything of that sort, that would go into the cost of operation, did you?

A. I did not examine the operating results at all.

Q. What you mean then, when you say you saw them working efficiently, is that they were manufacturing gas, and that gas was being run through the different apparatus?

A. That is it.

Q. Benches of 9, with a generating furnace, is a more
1652 economical and efficient method of producing coal gas, is it
not, than it is by benches of 6 directly fired?

A. Yes.

Q. Then, did you estimate that a bench of sixes by direct fire was depreciated in value by the fact that a more modern and recent apparatus, and a more economical apparatus had come into existence when you made your estimates here?

A. I only ascertained the depreciation upon the present conditions and the appearance of the benches.

Q. That is, you took a bench of sixes produced with a direct fire furnace and compared that with another bench of sixes with a direct fire furnace that was in existence?

A. That was it.

Q. But you made no allowance or depreciation on account of the fact that a more economical or efficient apparatus was in use now?

A. I did not, sir.

Q. How did you get at your value or cost price of a full depth generator furnace at $5,000 per bench?

A. From the estimate which I only recently made, within the last two months.

Q. Is that in the City of New York, or for use in the City of New York?

A. No.

Q. Where was it?

A. Indianapolis.

Q. Can you give me the result of the computation which you made to arrive at the cost price of $5,000 per bench for a full depth generator furnace, at nine to the bench?

A. The price has not been submitted yet.

Q. I want to know the figures, never mind about that particular estimate, I want to know the various figures that would enter into a computation that would show $5,000 as the cost of the bench?

A. I know that that figure is right from my own knowledge and experience in the construction of benches, that is, for a retort 10 feet long. If it was a through retort, 20 feet, the price would be
double. The price of a 20-foot inclined retort is $12,000
1653 at the present time. This would only be $11,000, being a
horizontal retort of the same length, 20 feet.

Q. Then, do I understand that you cannot give the figures that would show that cost, or that you do not wish to.

A. I have stated just now that all my prices would be nearly $13,000 for a bench, 20 feet inclined retort. For a horizontal bench, a new bench would be about $11,000. The price I have given is $5,500, which is one-half.

Q. It is $5,000 as I remember it.

A. These are the regular market prices for the apparatus at the present time.

Q. You do not go out in the market to buy a bench of retorts, did you.

A. Perhaps I should not have said market prices, but prevailing prices for that kind of construction.

By Mr. MATHEWSON:

Q. Does that mean installed?

A. That means erected on foundations not including foundation. I am erecting such retort benches now in the State of Massachusetts, and I have just finished another installation in Massachusetts, at about those prices.

Q. How much more does it cost to make a full depth than half depth?

A. Well, the price for a half depth bench, ten foot long retorts, would probably be in the neighborhood of $3,500—between $3,500 and $4,000.

Q. Now, as I understand it, the only reason that it is impossible to reproduce the holders at one time is the fact that you could not make plans and specifications and get them to the works rapidly enough to secure contemporaneous construction, is *the* right?

A. That is not the reason. I can make plans and specifications in a comparatively short time, but the mills would certainly object to accepting them for all the material required to replace, 1654 all the holders in the City of New York, because it would extend for a period of five or six years, and maybe longer, and they would not give prices in advance for that period of time.

By Mr. BURR:

Q. Would you not say that the more improved a plant is in construction, the better the gas and the lower it cost to manufacture?

A. As to the quality of the gas I should say no. There is no reason why the quality of the gas should not be as good in a plant that was constructed some time ago as compared with construction to-day. As to the cost of production I should say it would be less, when you consider the application of machinery to replace manual labor in connection with improved apparatus.

Re-direct examination by Mr. MATHEWSON:

Q. Referring to the plants of the Consolidated Gas Company, only the 42nd and 14th Street plants are now coal gas, you testified. Can you tell the total capacity of those two plants?

A. 14th Street, 5,000,000 cubic feet; 42d Street, 4,500,000 cubic feet.

Q. That is 9,500,000 cubic feet together?

A. 9,500,000 cubic feet total.

Q. The total capacity of the plants to which you have testified, of this Consolidated Gas Company, is something over fifty millions, is it not?

A. Excuse me one moment. I will add it up. Fifty-one million feet exactly.

Q. So that the water gas plants would represent out of that fifty-one million how much, taking the 9,500,000 cubic feet out?

A. Well there is nearly four-fifths approximately.

Q. In feet, how much.

A. 41,500,000 cubic feet.

Q. Did you not testify that as far as those gas plants were
1655 concerned that they had the most improved apparatus and
up-to-date installation?

A. I did.

Q. Do you know of any way in which they could be improved, that apparatus?

A. I do not at the present time.

Q. Referring now to the possibility in a single plant of producing 40,000,000 cubic feet of water gas per day, so long as the water gas units are distinct, would there be any particular advantage in aggregating all that 40,000,000 cubic feet together in one plant?

A. None whatever.

Q. Would it not have the disadvantage that in case of explosion or something of that sort it might put the whole plant out of operation?

A. As to the purifying capacity, that may be the case, yes.

Q. And as to blast pipes?

A. Well, yes; that might affect individual apparatus, but not the whole plant.

Mr. Page: I want to make a motion to strike out the testimony of this witness as immaterial and irrelevant to any of the issues here. First, that the company ought to be allowed for the plant, the actual value of a plant built to-day that would produce the same amount of gas as this plant, the same as it would cost a new company having the right to make and distribute gas in the City of New York to build a plant, disregarding the old plant entirely. And secondly, they might claim to be allowed—although I do not think under the cases they could be—the value of the capital that they have invested in their plant, and that would be ascertained by taking the original cost of these plants and adding to that the amount of capital that has
been added in the way of additions since that time, and de-
1656 ducting therefrom the proper element of depreciation and
allowing that value; while the evidence of this witness has been entirely directed to the reproducing today new of a plant similar to the old plant—was commercially or economically worth reproducing, as he has testified, and without regard to the cost of producing gas in that plant. Therefore all his testimony and estimates are based upon something that in no way will enter into the final consideration of what is to be allowed this company. And I move that it be stricken out.

Mr. Burr: We make the same motion.

Mr. Mathewson: I do not agree with the Senator's law, but it is, it seems to me, plainly relevant.

The Master: Motion denied; exception to all parties to the motion.

Mr. Page: And further, I move to strike out the witness's testimony on the ground that it is immaterial and irrelevant, the testimony being admitted on the relevancy of the replacement value, that the replacement value of the plant is not the total replacement value of each particular building and apparatus, and to this result alone does the testimony go. It should be as to the replacement of a complete plant.

Mr. Burr: We join in that motion also.

The Master: The same ruling and exception.

Robert A. Carter, recalled and further examined, testified as follows:

Mr. Mathewson: Before you begin Mr. Gans I want to ask one more question, simply to complete the subject that I was examining on.

1657 You testified Mr. Carter, at the last session, as to the method upon which the valuations specified in the tax report of the company were reached. I want to ask whether that method was explained by you before the Gas Commission at the recent hearing last winter.

A. It was, fully, yes, sir.

Q. That was the first time you were called upon to testify on the subject after the Stevens Committee's report, was it not?

A. Yes.

Cross-examination by Mr. Gans:

Q. While we are on that; was that same explanation made before the Stevens Committee?

A. There was the same explanation made.

Mr. Mathewson: Before the Stevens Committee?

The Witness: Oh, no, I misunderstood the question. No, or rather——

(The question is repeated by the stenographer.)

Mr. Gans: If there is to be any qualification of it, do not let us have it stricken out. Let it stand.

The Master: Go ahead, Mr. Carter.

The Witness: The explanation that was made before the Gas Commission was made after I had had an opportunity to refresh my memory——

Mr. Gans: I move to strike that out as not responsive at all.

The Master: Let it go. Go on and answer.

A. (Mr. Carter, continuing.) It was made after I had an 1658 opportunity to refresh my memory as to the method that was employed in arriving at the value of the plant of the company for the purposes of that report by the chief engineer.

Q. Now, all this explanation that you have just made does not affect your answer, that the explanation was not made before the Stevens Committee, does it?

A. The explanation made before the Stevens Committee was that the value given in the tax report was the book value less depreciation, which took into account the removal of the plant to Astoria, and, as I have testified before, I had not had an opportunity at that time to refresh my memory as to the method of arriving at that value. Having done so, I testified before the Gas Commission, and have similarly testified here as to the method.

Q. Let me ask you now, was the explanation which was made before the Gas Commission the same explanation made before the

Stevens Commission. I think you have answered it, "yes," "no," and "I don't know." Let us have your final answer.

Mr. MATHEWSON: This has all been gone over at length.

A. It simply gave in greater detail than I was able to give before the Stevens Committee, the method by which the value given in the tax report was determined by the chief engineer.

Q. Then are we to understand that your first answer was right, and the same explanation was given before the Stevens Committee which was given before the Gas Commission.

Mr. MATHEWSON: Has not this reached a stage where the witness ought to be relieved from repeating over and over again?

Mr. GANS: I think, if the Master will read the testimony, he will find that the witness has given a different answer to the same questions three or four times. 1659

The MASTER: Put them all in evidence, and let me have the benefit of it.

Q. It is not clear in my mind yet. I want to know if you, Mr. Carter, wish to be understood as having made the same explanation before the Stevens Committee, as you did before the Gas Commission of the method of which this tax report was made up.

Mr. MATHEWSON: He has answered the question fully.

The WITNESS: I think that my answer to that question has thoroughly covered the ground. That is my opinion.

Q. Now, having taken the cue from Mr. Mathewson, will you answer the question?

A. I have already testified here that I was called before the Stevens Committee from a sick bed without any opportunity——

Q. I think we have heard that several times.

A. Very well.

Q. Did you or did you not make the same explanation——

Mr. MATHEWSON: If the witness is asked the question and is pushed, I insist that he may answer in his own way.

Mr. GANS: I think it can be answered yes or no.

The MASTER: Go on and answer, but do not go over the whole subject.

A. It is answered in two words, I think, Mr. Master, that I was unable before the Stevens Committee to recall the circumstances which attended the fixing of that value three or four 1660 years prior to the date of my examination; that subsequently to that I did refresh it and testified accordingly with the facts before me, before the State Gas Commission and have similarly testified here.

Q. So there was a difference between your testimony given on these two occasions?

Mr. MATHEWSON: He has not said there was.

Mr. GANS: Then I do not understand English.

Mr. MATHEWSON: You asked him if he made that explanation at that time and he said he did not, and now he explains why he did not.

Q. Do you say that you did not?

A. Did not make the explanation before the Stevens Committee? No. I did not.

Q. That is what I have been trying to get all through this examination.

A. You did not put it so.

Q. Is it not a fact that when you did make your final explanation before the Commission a great many days had elapsed since the time when you gave your original testimony as to the way in which the estimates had been arrived at?

A. You mean between the date of the Stevens Investigation and the Gas Commission hearing?

Q. No, as to the two hearings before the Gas Commission.

Mr. MATHEWSON: He never testified twice before the Gas Commission on that subject He only testified once on that subject; once before the Stevens Committee and once before the Gas Commission.

1661 Q. Is it not a fact that you were asked about the matter before the Gas Commission and that you testified substantially as you testified before the Stevens Committee and that thereafter you were recalled and then gave the explanation you have given?

A. No, it is not a fact.

Q. Now Mr. Carter——

By Mr. MATHEWSON:

Q. Didn't you give that explanation the first time you appeared before the Gas Committee?

A. I did.

The MASTER: Suppose you let Mr. Gans finish his cross-examination.

By Mr. GANS:

Q. I take it you have not the books of the constituent companies showing the capital account at the time of the consolidation?

A. No.

Q. They are not produced?

A. No.

Mr. GANS: I would like to ask, for the purpose of the record, whether you will produce those books without subpœna or whether you will require us to subpœna them?

Mr. MATHEWSON: I have no personal knowledge of where the books are. It is my position that the books are not evidence against this company in any event, and that the material, if they were found, would not be material or relevant. I shall therefore leave you to your own devices.

Q. We asked you some time ago if you would prepare for us or produce the books in which were contained the data for the year 1905, which had been made up for the nominal year ending October 31st, 1905, as Exhibit 145 in the old record, and an exhibit which

has been marked for identification here, but I have not the
1662 number of it. Have you made up any such statement as that?

A. I would like to see the request in the present testimony.

Q. Well, I cannot point it out to you at the moment. It is unimportant.

Mr. Mathewson: I do not remember that the witness was requested to prepare any such matter as that, or that it was understood that he should.

The Witness: It was very clearly understood that I was not to do so, Mr. Gans.

Q. I did not so understand. An exhibit similar to Exhibit 145 in the old Commission records could be prepared by taking the data appearing in that exhibit for the two months of November and December, 1904, and the two months of November and December, 1905, and subtracting the former from the totals here and adding the latter to the totals, could it not?

A. I think that would not be all the labor involved in adapting that report to the nominal year 1905 by any means. There would be a good deal of work in it beside adding two months and deducting two months of operations.

Q. What other labor would be involved?

A. There are a great many rates and quantities and costs per unit, and other things that would have to be adapted also besides dealing with totals.

Q. As I remember, Exhibit 145—look at it again. It just deals with totals and rates.

A. Well, when you vary the quantity, you vary the rate, and it is not arrived at by deducting or adding anything.

Q. And you could arrive at the total amount expended for various purposes by that calculation?

A. I could, but I do not understand it would be an adaptation of that report through the calendar year.

Q. Well, at all events the data are in certain books of the company, aren't they?

A. They are.

1663 Q. What books would I need for that purpose?

A. The operating ledger largely would give that information.

Q. Would I need any other book?

A. I think not.

Q. Well, if you prefer not to prepare such a statement, will you bring down the operating ledger, or bring the months of October and November, 1904, and the months of October and November, 1905, to-morrow?

Mr. Mathewson: I do not quite understand this Mr. Master. The Accountants for the State were at our office and left a week ago last Thursday, with the statement that they had got through. They went there for the purpose, as I understand it, of dealing with such matters as this, and I do not quite see why we should be called upon at this time to go into this subject in this way.

Mr. GANS: We will send them back and make up this statement if you prefer.

Mr. MATHEWSON: That is not the point. Ten days ago, nearly two weeks ago, they left our office.

Mr. GANS: I have been absent for the last ten days, but this is one of the matters I understood we were going to get, and that we were going to get it from Mr. Carter.

The MASTER: I suppose there is no objection to having the experts go up there and make this tabulation or whatever it is from these operating ledgers, is there?

Mr. GANS: How about that, Mr. Mathewson?

Mr. MATHEWSON: I will have to see about it. It is simply a question now, if that has all got to be done, perhaps Mr. Carter will be yanked off the stand while it is being done, while he has been up there waiting and ready to do such things. I will see
1664 how it can be done. It may be that we can do it with our own forces more readily, if it has got to be done.

The MASTER: It all depends as to developments, upon the rest of the case. This may or may not be a reasonable request. If it is going to have the effect of delaying the proceedings as a whole and delaying the closing of the plaintiff's case, then I should say it was unreasonable. If it can be done without inconveniencing anybody, or materially delaying the proceeding, it seems to me it is perfectly reasonable and proper to have that with the other tabulations that were put in.

Mr. GANS: It is the detail of Exhibit 94 which they have handed in, showing this particular year. Might I ask, sir, if you would consider it unreasonable if it involved delay simply because of the time at which the request has been made.

Mr. MATHEWSON: The Master can see what that involves. It begins there (indicating) and goes over to this next place where my pencil is. It is no small matter. My suggestion is that it is too bad, to say the least, that this has been delayed so long, if it was desired.

Mr. GANS: In response to that, I will say this, without consulting the records, that it was said at least two weeks ago and more than that, if my recollection serves me, to Mr. Mathewson, that we would desire this. Mr. Mathewson said, "Oh no, I think you won't." And I replied, "Oh yes, I think we will." Now I think we should not be chargeable with delay. The tabulation could have been prepared.

Mr. MATHEWSON: I don't think there was any request for it; at any rate, I do not recall it.

Mr. GANS: That exhibit shows the cost, station by station,
1665 of the various ingredients entering into the manufacture of gas and also shows the labor entering into it.

Mr. MATHEWSON: It does not cover the cost of distribution, does it?

Mr. GANS: It covers one element of the three, practically, that enter into the final cost, appears to be proved by Exhibit 93 and 94.

The MASTER: What you want is to cover those actual two months?

Mr. **Gans**: Yes, I want it to fit into the exhibit they have introduced, Exhibit 94 or 95.

The **Master**: I should think the simplest way to do would be to let Mr. Gans's expert go up there and make it up.

Mr. **Mathewson**: I do not think they could possibly without Mr. Carter's presence. And I think our men are sufficiently familiar with the books, so if it comes to that we could do it quicker than they could. Do you want to cross-examine him on that when you get it?

Mr. **Gans**: It would depend somewhat on the statement. I might want to ask him some questions.

Mr. **Mathewson**: We might complete his examination and let him devote his time to having the statement made up afterwards.

Mr. **Gans**: I would not want to close my cross-examination definitely, but I should assume there would not be many questions to ask after that statement was made up.

By Mr. **Mathewson**:

Q. How long would it take you to have that statement made up, after you got off the stand, devoting your time to it?

1666 A. I think it might be done in a few days. My understanding is that there is no two months of any kind in this proposition, simply that we reproduce this statement covering the calendar year's operations.

By Mr. **Gans**:

Q. That is right.

A. I think the simplest thing for us to do would be to prepare this.

By Mr. **Mathewson**:

Q. It would be quicker than any other way if it has to be done?

A. Yes.

Mr. **Burr**: Don't you think it would save time if these statements which were presented before the Gas Commission were also carried down to the time embraced in your Exhibits 93 and 94?

Mr. **Mathewson**: There are about two hundred of them. It is utterly impossible for us to do it and close this case within a month or more.

Mr. **Burr**: If you want to leave it that way, of course——

Mr. **Gans**: What exhibits do you refer to?

Mr. **Burr**: A good many of the exhibits I had him identify a little while ago. I want to say in this connection, Mr. Master, that I have asked for certain information which has not been supplied, and I think I made myself clear upon the record that we reserved the right after the report was made by the State experts to question further regarding the information contained in that report if it was not satisfactory to us. I have not seen that report and don't know what it contains. I spoke to Senator Page to-day, and probably to-morrow I will see it and it may contain all the information I want. But I wanted to make myself clear on the record the other day and

I want to make myself clear on the record now. I have
1667 asked for policies of insurance, payrolls and account books,
and I hope that the information that I want and expect to get from those sources may be shown in these statements and I have no desire to protract this hearing unduly, but I do insist upon getting the information which I think is germane to the defence of the City and necessary for us to have from their books, which is the only source for the very vital information we require. If you think well of it, I will submit to Mr. Carter a list of the things which I require and if he can point out that they are in the statements already, I will check it up.

Mr. MATHEWSON: You are to see the reports of these accountants, and their business was, as I understood it, to assure themselves and make it unnecessary for us to do this. It does not seem necessary to make this request until you see what you have and see if your accountants have not covered all this, which I think they have.

Mr. BURR: What I want is, that when this information comes in I may reserve the right to cross-examine upon it.

By Mr. GANS:

Q. It is perfectly feasible to tell from your books the amount of gas manufactured at each one of your stations month by month, isn't it?

A. Yes, sir.

Q. You have reports of that?

A. Yes, sir.

Q. There will be no trouble whatever to give us that for the two periods as to which you have introduced your operating Exhibits 93 and 94.

Mr. MATHEWSON: It already appears in the printed record as to
the nominal year October 31st, 1905, before the Gas Com-
1668 mission. That expressly appears and can be referred to there
without making up a new statement.

Mr. GANS: The amount of gas manufactured at each of the works?

Mr. MATHEWSON: Yes, I think I am safe in saying so.

Mr. GANS: That makes it all the easier.

The WITNESS: So far as the calendar year is concerned, your experts took these figures off from our record.

Mr. GANS: Then it will be all the easier to make up that statement.

Mr. MATHEWSON: But if they have the information, I don't suppose you want us to make it up, do you?

Mr. GANS: I don't think it makes any particular difference which way it is done. It is simply a matter of reading off from reports, isn't it?

The WITNESS: I can make up a statement of that kind, if you wish. Do I understand you want a statement of the gas manufactured at each station each month in the year?

Mr. GANS: Yes.

The **Witness**: And the total, manufactured in the year?
Mr. **Gans**: Yes.
Mr. **Mathewson**: Do you want it month by month?
Mr. **Gans**: I want it month by month.

Q. Have you in your possession the bills for the taxes upon real property which I included in Exhibits 93 and 94?
A. Yes.
1669 Q. Those bills are itemized, aren't they?
A. Yes.
Q. Could you produce those for us to-morrow?
A. I will.
Q. I understand it has been your habit, Mr. Carter, to get from your engineering department, reports from each one of your works, showing either the cost of the operation of that particular plant or some figures which are embraced in the cost of operation and that it has been your habit to keep those reports for the purpose of comparison?
A. I have no knowledge of anything of the sort.
Q. Do you remember testifying to something somewhat similar to that before the Gas Commission, or am I mistaken?

Mr. **Mathewson**: You are mistaken, Mr. Gans.

(Mr. Gans requests the stenographer to read the last two questions and answers, which is done.)

Q. Well, after having had my question read, do you still say you haven't any figures such as my question refers to?

Mr. **Mathewson**: No, he didn't say so. You asked him whether the engineering department didn't furnish figures for the purpose of comparison.
The **Witness**: The engineering department is not able to make up any figures of cost. They don't know what the materials they are using cost the company.

Q. Well, have you from any source any such tabulation as I have referred to? That is, either a tabulation showing the entire cost of gas at each one of the stations, or showing certain elements of the expense.
A. I have such statem[illegible].
1670 Q. And you keep thos[illegible]
A. I do.
Q. Have you those as a part of the record of your department?
A. Memorandum for my personal requirements.
Q. You keep them in the files of your department.
A. Yes, they are in my desk.
Q. Have you anywhere any record showing definitely and specifically and accurately the cost of manufacture of gas at each one of your works?
A. Yes.
Q. Except as aggregated in the general ledger?
A. We have some by stations. I have receipts that show the cost at each station each month.

Q. Wherein do these reports that you speak of differ from those I have just asked you about which you said you had not made up?

A. You asked me for something that was prepared by the engineering department—received by the engineering department and given me monthly by the engineering department. These figures do not come from the engineering department; they are made up for me by the accounting department.

Q. Then the point wherein I was mistaken was as to their coming from the engineering department?

A. Yes.

Q. So you have made up and kept as part of your record from your own department, a statement of the cost of manufacture for each one of the plants, for each month, showing the items and elements of that cost?

A. I have such statements.

Q. Now would you be good enough to bring those statements for the nominal year and the actual year, the one ending October 31, 1905, and the other being the actual year of 1905.

Mr. MATHEWSON: Wasn't that covered by your accountant?

Mr. GANS: I assume not. I assume it would be utterly 1671 impossible in the time they devoted to those books to have done more than to rather superficially check up the general accuracy of the books?

Q. It was developed in the course of the examination of Mr. Franklyn, I think, that $1,800 rent which was paid by the National Coal and Coke Company, was paid to the Consolidated Gas Company. Mr. Mathewson informed us of that fact in the course of the examination. Are there any other payments that were made by the National Coal and Coke Company to the Consolidated Gas Company except such payments as are made for the purchase of coke?

A. I think quite likely.

Q. Where would those appear?

A. They would appear as a charge against the National Coke and Coal Company upon our books.

Q. And they would enter into your miscellaneous revenue, wouldn't they?

A. I do not mean by that technically the miscellaneous account, but they would not enter into the operating expenses of the company, would they? Or as a reduction of the operating cost?

A. That would depend on the nature of the charge, what it was for.

Q. This is a payment by the National Coke and Coal Company to the Consolidated Gas Company?

A. They would not pay us anything we did not charge them for, I presume.

Q. No, I presume that also. Then the place to find these various items would be the ledger account of the National Coke and Coal Company in your ledgers?

A. That would be the place to find any charge against the National Coke and Coal Company for anything furnished them, either coke or supplies of any kind that they buy from us as a matter of convenience.

Q. And of course all the amounts paid by the National 1672 Coke and Coal Company enter into their operating expenses?

A. Not necessarily. It would depend upon what they bought. It might be something for construction purposes, in which case it would not enter into operating expenses.

Q. Do they do any constructing, the National Coke and Coal Company?

A. I think they might.

Q. Well, do they? You know about their operations?

A. I am not aware of their doing anything of that sort at the present time.

Q. So that suggestion would not cover the case, would it?

Mr. MATHEWSON: Yes, it would, if there were any, of course. He said that it would not be charged to the operating expenses if it went into construction. If they bought new horses and carts, that is construction in a bookkeeping term. It seems to me you are extremely technical and almost offensive in your examination.

Mr. GANS: It seems to me the witness is able to take care of himself.

The MASTER: Proceed, gentlemen.

A. It would go into their operating expenses if it was an expense of that nature, and not otherwise.

Q. In which of the two ledgers is that account kept?

A. In the sundry debtor ledger.

Q. Has that ledger been examined, Mr. Cuthbert, while you have been there; that is, do you know whether that ledger has been examined by Mr. Cuthbert?

A. Yes, it has been.

Q. Do you know whether that particular account has been examined by Mr. Cuthbert?

A. I don't know.

Q. In the event that he is not able to make a report on the account you have no objection to producing that ledger containing that account?

A. None.

1673 Q. Now, I don't know whether you have been asked, Mr. Carter, whether your company is now testing the tax imposed for the year 1905 by both the State tax and the franchise tax?

A. Not the State tax. The State tax for 1905 has been paid. The franchise tax is being contested.

Q. Any other tax being contested for that period?

A. For 1905?

Q. Yes.

A. I think not.

Q. Have you any knowledge as to the original capacity of your works, that is in 1884?

A. No.

By Mr. **Page**:

Q. Pursuant to my request, have you produced a summary of operations of the National Coke & Coal Company for the year 1905?
A. Yes, sir (producing paper).

Mr. Page: I offer that in evidence.
Received in evidence and marked State's Exhibit O.

Q. And you have also produced, have you, a statement of the coke produced, sold in manufacture and produced for sale by the Consolidated Gas Company for the year 1905?
A. Yes, sir.

Mr. Page: I offer that in evidence.
Received in evidence and marked State's Exhibit P.

Q. You have also produced pursuant to my request balance sheet of December 31st, 1903?
A. Yes, sir.

Mr. Page: I offer that in evidence.
Received in evidence and marked State's Exhibit Q.

1674 Q. You have also produced the balance sheet of December 31st, 1904, of the Consolidated Gas Company?
A. Yes, sir.

Mr. Page: I offer that in evidence.
Received in evidence and marked State's Exhibit R.

Q. You have also produced the balance sheet of December 31st, 1905?
A. Yes, sir.

Mr. Page: I offer that in evidence.
Received in evidence and marked State's Exhibit S.

Q. Referring to State's Exhibit O, I notice four items entered here in red ink, will you kindly read those items and state why they are in red ink?
A. There are but three items, one being a repetition of the other. The first item is $22, and is the difference in the price per load of certain coke, which operated to reduce the cost of the coke they purchased by that amount. The next item is included in the operating expenses as a credit item, cartage, $13,234.42, representing a credit balance in that account for the year. The next item is interest, $17.48, representing the credit balance in their interest account for the year, and shows in operating expenses as a credit item and operates to reduce the total expenses for the year.

By Mr. **Mathewson**:

Q. The fact is that those items in red ink on this Exhibit O mean deductions and not additions?
A. That is a brief description of it, Mr. Mathewson.

By Mr. Page:

Q. State's Exhibit O shows the operations of the National
1675 Coke & Coal Company for the year 1905 alone. That is,
I mean by that there is nothing carried forward from any previous year on that statement?

A. That appears to be the case.

Q. And the net earnings for that year are $10,596.33?

A. Yes, sir.

Q. Of which dividends are paid to the Consolidated Gas Company as being the owner of the entire stock, of $5,000?

A. Yes, sir.

Q. Leaving a surplus that was earned by the company on its coke operations alone for that year of $5,596.33?

A. Yes, sir.

Q. I notice in Complainant's Exhibit 94, that you have under the head of Residuals, coke, 167,071.70 loads at $2.02 per load, while State's Exhibit O accounts for 145,435 loads. Is that correct?

A. That is correct.

Q. To whom was the balance of the 22,000 loads approximately of the coke sold?

A. I don't think it was sold at all, Senator, or more than a very small portion of it. The bulk of its was used in water gas stations and used in other departments than the manufacturing department.

Q. I think you testified before that the coke used in tons, 19,892.54 was the coke that was delivered and used at the water gas station, and that that was additional, was it not, to this coke of 167,071.70 loads?

A. No, I have not so testified, no, sir.

Q. Your testimony is that 18,892.54 was taken out from the 167,071.70 loads?

A. It is a part of that Senator. It is included in that as coke accounted for in the residuals.

Q. Referring to the item of street lamp account on Exhibit 94, you carry there as a debit balance $289,259.09. Will you state of what that debit balance is composed?

A. It is composed of the amounts expended by the company for the maintenance of public lamps and for erecting and re-
1676 pairing public lamps, less the amount charged to the city for erecting and repairing public lamps.

Q. That is, if I understand your explanation, it would be the amount that it cost you to maintain, erect and repair the public lamps in excess of what you receive from the city for the same?

A. For erecting and repairing only.

Q. Referring to State's Exhibit G, repairing street lamps, $10,986.50; is that not the item that you charged the city for the year 1905 for repairing street lamps?

A. That is the amount we charged the city for that work. It is not the cost of it, however.

Q. On August 31st you transferred from your journal from public street lamp account to the gas sales account the sum of $151,690.41. Why was that done?

A. I have already explained, Senator, that we abandoned our practice of estimating the cost of lamp maintenance and treating it as a credit to the street lamp account, and included in the gas sales account the entire amount that we had charged the city for supplying gas to, lighting and maintaining the public lamps, there being no division of the amount charged the city between the amount charged them for the gas and the amount charged them for the maintenance.

Q. You sold to the city, per meter service, 127,746,300 cubic feet of gas at 90 cents, according to State's Exhibit G, didn't you?

A. Yes.

Q. And you also estimated the amount as applicable to street lamps, 270,779,670 cubic feet, didn't you?

Mr. MATHEWSON: Is that by the same exhibit?

Mr. PAGE: Yes. State Exhibit G.

A. Yes, sir.

Q. And you have carried out as having received on that 1677 account the sum of $565,241.39?

A. Not as received.

Q. Well, as charged?

A. Yes.

Q. For which you expect to receive pay, of course?

A. Hope to.

Q. Now, if we take that gas at 90 cents and deduct the results from $565,241.39, will we not have a credit that is applicable to the maintenance and repairs of street lamps?

A. If we assume that the quantity estimated was correctly estimated, which we know is not the case.

Q. On Exhibit No. 94 you state the entire amount of your gas sold to be 13,283,163,767 cubic feet, is that correct?

A. Yes, as recorded in our accounts, but as I have already testified, we do not meter the gas that is supplied the city. It is an estimate, estimated at the quantity stipulated in the contract, although we know we are supplying more gas than that.

Q. In arriving at that amount of gas sold did you not include as sold the 217,779,677 cubic feet, that has been shown on Exhibit G, as being the amount estimated to have been supplied the city for public lamps?

A. We did.

Q. And all your computations as to the cost of gas per thousand sold have been based upon that figure?

A. They have.

Q. So that for all purposes of your bookkeeping, and estimating your cost prices, that amount has been included as the actual amount of gas sold?

A. Yes.

Q. Now, if we multiply that 270,779,677 by 90, we will get the amount that is chargeable to the city on account of the gas that was sold to them for street lamps?

A. Assuming that estimate is correct.

Q. You have used it, and assumed it to be correct in all your books of account?

1678 A. Our employment of that quantity we assume did not change the quantity that we estimate we are supplying the lamps.

Q. That would be what?

A. $243,702.71.

Q. And assuming that as a factor you find that your unaccounted for gas in 1905 was only what per cent.?

Mr. MATHEWSON: 2.24, I think.

A. That is the case.

Q. If we take that $243,702.71 from the $565,241.39, as shown on Exhibit G as having been received for public lamps, including lighting and maintaining, we have the result of $321,539.68. If that amount was credited to the street lamp account, instead of having a debit balance, you would have a credit balance? You wipe out the $289,259.09 entirely and produce a credit?

A. I do not know upon what theory you would so deal with the item. That we made any profit at all is purely problematical. As a matter of fact we believe that the gas we supply the city at the rate of ninety cents per thousand would leave something to add to what appears in the street lamp account, $289,259.09, representing a loss on maintenance of lamps instead of a profit on them.

Q. I know; that is the theory under which you proceed, but you have a percentage of unaccounted for gas of only 2.24 per cent. Do you know of any other gas company in the United States that operates under so low a percentage of unaccounted for gas?

A. I have heard of companies where they operated a little closer than that.

Q. Don't you know that it is usually from 10 to 15 per cent.?

A. I think in our own case 20 years ago it was nearer 15 per cent. than anything else.

1679 & 1680 By Mr. GANS:

Q. You receive from the companies operating under the agency agreement statements of the amount due under that agreement, in some itemized form, do you not, month by month?

A. Yes, we do, your accountants saw several bills with all the data accompanying them.

Mr. MATHEWSON: They wanted to see them in order to check them with their notes, and they did.

The WITNESS: In fact, they copied them entirely.

Mr. MATHEWSON: Mr. Carter let them copy one or two and take them away so as to show you.

Mr. GANS: There would be no difficulty in producing them?

The WITNESS: None whatever.

Mr. MATHEWSON: No, but I do not think you would want them.

Mr. GANS: They would not be very bulky? I do not know what they are like.

The **Witness**: No, they are not bulky.

At 6 P. M. adjourned to to-morrow, September 5, 1906, at 11:30 o'clock A. M.

Last Exhibits:

Complainant's 223.
State's S.
City's 34.

1681 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

Met pursuant to adjournment.

New York, Wednesday, *September 5th*, 1906.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr, Mr. Gans.

1682 **Robert A. Carter**, recalled and further examined, testified as follows:

Mr. **Burr**: I want to offer in evidence certain statements from the Gas Commission records.

I offer in evidence pages 961 to 963, being the statement of Mr. Bradley's cost sheets, giving his monthly record of the cost of certain items entering into gas manufacture at each station for each month from October, 1904, to September 30, 1905.

Mr. **Mathewson**: It was from Mr. Carter; it was part of the statement produced before the Commission to which I referred yesterday, and which was explained to the Commission as incomplete and fragmentary, and which the Commission said they had simply wasted time on in its present form.

Mr. **Burr**: You may give the same explanation with regard to that statement which you gave before the Gas Commission, if you think proper.

Mr. **Mathewson**: I am simply calling your attention to it, thinking that when you know what it is that you will not think it is proper to put it in. I do not object to your putting this in if you think it is in any way material under the circumstances.

Received in evidence and marked City Exhibit 35.

Mr. Burr: I offer in evidence Exhibit 105, appearing on page 2034-A of the proceedings before the Gas Commission, purporting to be a statement of gas made for the Consolidated Gas Company by other companies net for the nominal year ending October 31st, 1905, and which Mr. Carter has testified, I believe, was made under his supervision, or by him.

1683 By Mr. Burr:

Q. Is not that so, Mr. Carter?
A. Yes, sir.

Received in evidence and marked City Exhibit 36.

Mr. Burr: I offer in evidence Exhibit 110 before the Gas Commission, appearing on page 2035 of the proceedings, being the statement of labor cost of the 14th Street station from October 31st, 1904, to October 31st, 1905.

Received in evidence and marked City Exhibit 37.

Mr. Burr: I offer in evidence Exhibit 134 before the Gas Commission, appearing on page 2069, of the proceedings before that Commission, being the 42d Street works labor cost for the twelve months, ending October 31st, 1905.

Received in evidence and marked City Exhibit 38.

Mr. Burr: I offer in evidence Exhibit 138 before the Gas Commission, appearing on page 2072 of the proceedings, being the statement of the 44th Street Station labor account, November 1st, 1904, to November 1st, 1905.

Received in evidence and marked City Exhibit 39.

Mr. Burr: I offer in evidence Exhibit 142, offered before the Gas Commission and appearing on page 2075 of the proceeding, being the statement of the labor cost at the 99th Street Station, October 31, 1904, to October 31, 1905.

Received in evidence and marked City Exhibit 40.

Mr. Burr: I offer in evidence Exhibit 143 before the Gas Commission, appearing on pages 2076 to 2082 of the proceedings before that Commission, being an analysis of the changes in cost at the
1684 various stations between September, 1904, and September, 1905.

Received in evidence and marked City's Exhibit 41.

Mr. Burr: I offer in evidence Exhibit 147, offered before the Gas Commission and appearing at page 2137 of the proceedings, purporting to show cost of meters.

Received in evidence and marked City's Exhibit 42.

Mr. Burr: I also offer in evidence Exhibit 148, offered before the Gas Commission, appearing at pages 2138-9 of the proceedings, purporting to be an analysis of costs of meters and pipes.

Received in evidence and marked City's Exhibit 43.

Mr. Burr: I also offer in evidence Exhibit 149, offered before the Gas Commission, appearing on pages 2139 to 2156 of the proceedings, being a statement of plants and operations for the nominal year ending October 31st, 1905.

Received in evidence and marked City's Exhibit 44.

Mr. Burr: And I submit for the record a statement which I have handed to the witness of information desired, and which I ask him to produce as follows:

1—Page 900: Manufacturing capacity of each station in 1884 in coal gas, and likewise in water gas.

2—Page 900-901: Contracts and vouchers for all the holders constructed since 1884, and giving, separately from the holders, the foundations, valve houses, etc., for each holder.

3—Page 901: Number of services in use Dec. 31 of each year since 1899.

1685 4—Page 901: Number of new services laid from Jan. 1, 1900, to Dec. 31, 1905, by sizes.

5—Page 901: Cost of all these services laid from Jan. 1, 1900, to Dec. 31, 1905, including cost of laying and valves, boxes, etc., connected therewith.

6—Page 901: Interest paid yearly on the bonds and debentures or other indebtedness of the Consolidated Company since 1884.

7—Page 901: The principal of said bonds, debentures or other indebtedness each year since 1884.

8—Page 901: Average annual quotations on said bonds or debentures since 1884.

9—Page 902: Average quotations of the debentures of 1904 during 1904 and 1905.

10—Page 905: Amount of gas received, price paid for same, from each company under the Agency Agreement during each month from January 1, 1904, to August 1, 1906.

11—State the date of the largest sales during 1905 by each of the companies with which the Consolidated has agreements, and the amount of the sales on said date, including in said sales not only those to the Consolidated Company, but to all others.

12—Total manufacturing capacity in coal gas, and likewise in water gas, of each of the companies with which the Consolidated has agency agreements.

13—Complete to August 1, 1906, the monthly table of the cost of gas at each station which was given from Oct. 1, 1903, to Oct. 1, 1905, on pages 961-963 of the printed record of the case before the State Gas Commission. If this is impossible, complete up to May 1, 1906.

14—Read into the case in this connection said pages 961 to 963, and any necessary explanatory matter immediately before or
1686 afterwards in connection with the testimony or cross-examination of Mr. Bradley.

15—Bring in all the bids, whether successful or not, in connection with the holders constructed since 1884, or, if that is impossible, then for as many years as the records have been kept.

16—Do the same for pipe, and for all other items of construction involving in each case more than $5,000.

17—Payroll for December, 1905.

18—Produce existing policies of insurance.

19—Produce the vouchers for the holders built since 1895.

20—Produce the vouchers for all apparatus or buildings costing more than $5,000 since 1895.

21—Produce the vouchers for oil during 1905 and 1906 up to Sept. 1st.

22—Give the age of all apparatus and buildings costing more than $1,000 and testified by Mr. Mayer in cases where he did not give the age.

Mr. BURR: Also please furnish the amount of gas consumed by the Consolidated Gas Company for its own use in the years 1904 and 1905, and a statement of coal used by each station and by each subsidiary company, which you agreed to furnish at the time the book itself containing that information was produced here and from which you were examined.

Mr. MATHEWSON: No, sir. There was no request made that he should furnish the amount of coal used by each subsidiary company. He was requested to state the amount of the various contracts which were used by the companies in which the Consolidated 1687 owned stock. I think you will find no record of any request that he state how much coal was delivered to each subsidiary station of the Consolidated Gas Company.

Mr. BURR: Well, I remember that is the line of information we were pursuing at the time we had the book here, and if I did not ask it that is what we intended to request. If he can produce one he can produce the other, I assume.

Q. And with regard to the trial balance, Mr. Carter, which was produced here yesterday, I believe you were to add to that at the request of Mr. Gans, the months of November and December, isn't that so?

A. The trial balance produced here yesterday? No, sir, I have no recollection of any request of that nature.

Q. Have you produced any trial balance for the year 1905 in this case?

A. There was prepared for you trial balance sheets covering 13 months from October 31, 1904, to December 31st, 1905, inclusive.

Q. That covers up to December 31st, 1905?

A. Yes.

Mr. PAGE: I put in evidence yesterday, Mr. Burr, trial balance sheets for 1903, 1904 and 1905.

Mr. BURR: Up to the 31st of December, 1905?

Mr. PAGE: Yes.

Q. With regard to your last trial balance sheet up to December 31, 1905, I want to ask whether all the accounts at the close of the year were embraced in that trial balance?

A. If it is a trial balance, no. If it is a balance sheet of that date, yes.

Q. Was that trial balance made before the books were closed or after the books were closed for that year?

A. I would like to see the exhibit before answering that 1688 question and find out whether it is a trial balance or a balance sheet you are referring to. (After conferring with Mr. Page.) The closing entries had all been made before that balance was taken off from the ledger.

Q. For the year 1905?

A. For the year 1905.

Mr. Page: It was a balance sheet; not a trial balance.

Q. I have yet to learn from any statement you have made or from any exhibit you have offered in evidence here what the Consolidated Gas Company claims is the cost of making and distributing to the burner 1,000 cubic feet of gas. Do you know what it is?

Mr. Mathewson: What is that?

Mr. Burr: I ask him, as Secretary of the Consolidated Gas Company, to state here now what he claims is the cost of manufacturing and distributing to the burner of the consumer a thousand cubic feet of gas?

Mr. Mathewson: I will say in reply to that, that the exhibits which we have put in show the expenditures and a computation on that basis is as available to Mr. Barr as it is to us. As to the actual amount which should be charged to the cost of 1,000 feet of gas, we shall put on other witnesses who will testify on that specific point. Mr. Carter has not prepared himself to do so, but simply to present the figures which he has presented.

Q. Then I will ask, do you charge against the cost of the manufacture and distribution of gas at the burner to the consumer, all the items which appear on your Exhibits 83 and 94?

1689 Mr. Mathewson: That is a statement, if the Master please, which shows the expenditures of the company. I don't know that any specific schedule showing the charges against the cost of gas is made up except the figures that are presented and will be presented here.

Mr. Burr: Now, you see, Mr. Master, we have been wandering around in a sort of a quagmire, and a want to get on *terra firma.* I want the company, here, through its representative, to say, as it ought to be ready to say, what is their claim regarding the cost of the manufacture and production and distribution to the consumer of a thousand cubic feet of gas as the conditions exist now, or as they existed when this proceeding started. I think that is a fair question. And if he says that it appears in any statement here, in any exhibit which has thus far been presented, I want him to point it out. I think that also is a fair question.

Mr. Mathewson: Do not be impatient and you will get it, but you cannot expect one witness to prove the entire case. You will have it, if you will only wait a little until we can put the witnesses on who can testify on that subject. Mr. Carter merely testified to facts——

Mr. Page: You are going to.

Mr. Mathewson: Certainly we are going to. Mr. Carter only testified to facts from the books, and it is a question to my mind as to whether one item or another as to which you raise the question is charged against an account which is called "cost of gas." You do not find any entries in the ledger such as "Charges against the cost of gas."

Mr. Burr: No, I think you leave it very hazy.

Mr. Mathewson: We shall not if you give us time to put our case, but do not ask this witness to testify on the whole propo-
1690 sition, which he cannot do because he is not an engineer.

Mr. Burr: I ask this officer of the Consolidated Company if all the items which appear upon Exhibit 93 and all the items which appear upon Exhibit 94 submitted here by the complainant are charged as a matter of fact against the cost of the manufacture and distribution to the consumer at the burner of 1,000 feet of gas?

The Master: Charged on what? Who charged, and where charged?

Mr. Burr: Charged by the Consolidated Gas Company as the expense or the cost at the burner of a thousand cubic feet of gas.

The Master: Is not that a matter of construction and argument? Does it not appear in the bill of complaint what they charge as the cost of a thousand cubic feet of gas? And have they not got to sustain that by proof of facts? I do not understand that a ledger account has any "cost" heading, has it, specifically?

Mr. Burr: Yes. You remember, Mr. Master, on Exhibit 93, 72.12 cents appears as the cost made out by this summary of operations for the nominal year ending October 31st, 1905; cost per thousand cubic feet of gas sold. That is the heading; 72.12 cents is the entry.

The Master: Does not that show for itself that the items are distinct in there?

Mr. Burr: If you let me finish, if you please.

The Master: Certainly.

Mr. Burr: Exhibit 94, under the same heading, cost per thousand cubic feet sold, indicates 74.81 cents. Now I ask, does he charge up against the cost of the manufacture and distribution to the consumer at the burner, of one thousand cubic feet of gas all the
1691 items which appear upon this summary of operations for the
nominal year ending October 31st, 1905, Complainant's Exhibit 93, and all the items appearing upon the summary of operations for the calendar year 1905, being Complainant's Exhibit 94.

The Master: When you say "does he charge that," what you mean is in arriving at that percentage on those exhibits?

Mr. Burr: Yes.

The Master: Well, you may ask him to explain how he arrives at that percentage stated on those exhibits to be the cost. That is a proper question. He may explain it, if he can.

Mr. Mathewson: I want to say, Mr. Master, this witness is not an engineer, nor is he an expert.

The Master: If he does not know he can say so.

Mr. Mathewson: There are others whom I shall question on that subject.

The Master: You may answer it, Mr. Carter.

A. The rates per thousand cubic feet that are shown in Exhibits 93 and 94 are calculated by taking the various amounts and dividing them by the total quantity of gas sold during the year.

Q. Then all these items do enter into producing the result of 72.12 cents on Exhibit 93 and 74.81 cents on Exhibit 94?

A. That is the result of that calculation; yes, sir.

Q. Are any of these items appearing on either of these statements to be eliminated, in your opinion, in getting up the cost of gas per thousand cubic feet?

Mr. **Mathewson**: I make the same objection, that the witness is not an engineer or expert.

1692 The **Master**: I do not see that that is a competent question to ask the witness. It is a matter of argument.

Mr. **Burr**: You will remember there are some items here, "general expenses, interest, taxes," and one thing or another. It clearly appears upon the record that so far as those things are affected or affect the stocks, they have to be considered as affecting the price of a thousand cubic feet of gas. It is conceded that on both these exhibits such entries do appear, and I want to know whether he is now prepared, as the financial officer of the company, to say that all these items are to be taken into consideration in figuring up the actual cost of a thousand cubic feet of gas, or whether some of them are to be eliminated, and, if so, which are to be eliminated from the consideration of the problem.

The **Witness**: I think I might perhaps explain in a word or two the method by which we arrived at the profits from our business during the year, and as the result of a year's operations. We credit our profit and loss account with income from the sale of gas, from miscellaneous sources, and from the securities of other companies. Against that we charge in the profit and loss account all of the expenses, as shown in Exhibit 94, for the calendar year. The balance represents the profit for the year. We make no application of any particular items of expense against any particular items of income, dealing with both in the gross.

Mr. **Burr**: That is all for the present.

Mr. **Gans**: There are a few questions I can ask the witness, 1693 but until he furnishes the information I requested I cannot proceed very far.

The **Master**: I understand your cross-examination is delayed now on account of the absence from town of your expert.

Mr. **Gans**: It is delayed by both things. I could have gone on in the absence of the expert if these matters which have been asked for had been produced to-day.

Mr. **Mathewson**: What did you ask for which could possibly be produced to-day?

Mr. **Gans**: I asked for the statement of the operating expenses of each one of these works, which are part of the files of the Company, and which could have been produced without any difficulty, I should assume. Mr. Carter says they could not. I was wrong in my assumption. There are one or two questions I would like to ask Mr. Carter, though.

By Mr. **Gans**:

Q. Included in your miscellaneous income, as appearing on the books of your company, are discounts on materials purchased to the amount of $9,497.57. Is there not such an item?

A. Yes.

Q. Those materials are materials the cost of which enters into the amounts charged on Exhibit 94, and go to make up the total of that amount of $9,936,910.42, do they not?

A. No, sir, not necessarily. They may in part. That represents discounts on the purchase of a great many things that might not go into the operating expenses at all. They might go into our property account.

Q. Then can you tell us to what extent the discounts are discounts on materials which did enter into this total on Exhibit 94?

1694 A. Probably, as the result of a great deal of labor, we might go through the year's record of discounts and separate them in that way.

Q. Another item of your miscellaneous income is real estate rents aggregating $37,408.88, is that right?

Mr. Gans: I got these figures from the accountants, and of course I don't know whether they are right.

Mr. Mathewson: Look at your own data, if you have it, to verify that.

A. That is correct.

Q. I understand there appears on your books also an amount as a rebate on oil purchased to the amount of $50,000; is that right, or, rather, the amount of $112,000?

A. Occurring during the period covered by these statements?

Q. Well, as a rebate on the books covering this period.

A. There is nothing appearing on the books covering either the calendar year of 1905, or the nominal year ending October 31st, 1905, of that nature.

Q. Do you mean that there isn't any entry on the books which were in use at that period of a rebate received during that time.

A. During the year 1904 there would appear upon the books a record of an adjustment, improperly termed a "rebate," representing the adjustment of a variation between the prices of oil under two contracts. The matter was fully explained to Mr. Cuthbert at the time he was at the office.

Q. Was that money received during 1905?

A. No, it was not received during 1905; nor during the nominal year ending October 31st, 1905.

By Mr. Mathewson:

1695 Q. Might you not in that connection explain a little more fully what that adjustment was so that we can understand it?

A. We had occasion early in the Summer of 1904 to change the grade of oil that we were using. The new oil was at a lower price. The understanding was that we were to pay the price under the old contract until it was exhausted, until the quantity stipulated was exhausted, in a month or two, at the end of which time we would receive a credit representing the difference between the price of the two oils.

Q. Which were of different grade.

A. Which were at different rate.

Q. And this adjustment is simply the difference and not a rebate on the price at all.

A. Simply an adjustment between two prices and in no sense a rebate.

By Mr. Page:

Q. I suppose you refer to the new contract which was made in June, 1904?

A. In June, 1904.

Q. That provided for oil of a grade of 28 Baumé, to be furnished at a price of 4.04 cents a gallon, the new contract.

A. That is the case.

Q. What price was provided to be paid by the other contract, so obviated by that contract?

A. I should have to trust to my memory. I think it was 4⅜ cents a gallon.

Q. 4⅜?

A. Yes, sir. That would be 4.375 cents.

Q. Now taking that to be the figure, will you state how much oil was furnished on the old contract and rebated at $112,000?

A. The figure you name, to the best of my recollection, covered the adjustment for all the companies who were receiving oil under that contract.

Q. Certainly.

A. As we were the contracting parties it went through our accounts, and from memory it would be impossible for me to 1696 say the number of gallons that were delivered that were subject to that adjustment in price.

Q. It would be a matter of very short computation, wouldn't it, to take the difference in price and make the calculation as to how many gallons it would take to make $112,000?

A. It seems a pity to spread on the record my recollection of the price and quantity. I can get that information exactly if it is desired.

Q. Well, it would be quite a large quantity of oil, wouldn't it?

A. Yes?

Q. Then, that contract that was made in 1904 was for 177,000,000 gallons of oil and was to run to June, 1906, and on October 31st, 1905, you made a new contract at a higher price, didn't you?

A. Yes, we were obliged to do so because the higher candle power established by the law which went into effect July 1st, 1905, could not be maintained with the grade of oil we were getting under the contract of June 1st, 1904.

Q. Why not?

A. Well, you will have to get the engineers to answer that question. It would be too technical for me.

Mr. Mathewson: Mr. Bradley expressly recommended it and said that he would not undertake the responsibility of running through the winter and supplying 22-candle power, using the same kind of oil that we had been using before, and the other contract expired, I think, in April, 1906, or such a matter, so that it practically made no difference. We made the best trade we could.

Q. The contract that was made for 1905 and superseded the June, 1904, contract provided for a much higher price for the same grade of oil, didn't it?

1697 A. Yes, but it insured our getting the oil at that figure for the next three years, whereas we had but a comparatively short term during which the then contract would continue in force.

Q. There was, however, a very large amount of oil that was still to be delivered under the terms of the June, 1904, contract, was there not, at a lower price?

A. Yes.

Mr. Mathewson: But not of the higher grade of oil that was needed in the winter. That was the point. That was pretty nearly exhausted. The fact that we could get a low grade of oil did us no good at that time.

Q. You produced here your oil account, and that shows from October 31st, 1904, to October 31st, 1905, that you had used 82 million gallons of oil. Do you recall that fact?

A. To the Consolidated alone?

Q. No; what was delivered under that contract, as shown by the account which you produced here, by your books, and which we entered quite fully upon the record.

A. I do not recall the figures.

Q. You recall, do you not, that the account which you brought down here commenced with the 1st of November, 1904?

A. I do not know what account you are referring to; I do not recall any account commencing November 1st, 1904.

Q. I am referring to the book which you produced here that showed the deliveries of oil, which was City's Exhibit 34 for identification, and if you will turn to page 1015 of the record you will see that your testimony commences:

"It means the quantity delivered between the 1st of November and the 29th of November, which was the last day of November, aggregated 6,190,868 gallons."

A. I think that was 1905, not 1904.

1698 Mr. Mathewson: The examination did begin with 1905. Then it took up December, 1905, according to my recollection.

Q. Here is the question, at page 1025:

"I will ask you what the total, 82,061,124, on page 242 of this book in column 'Gallons as per invoice' refers to? A. It refers to the total quantity of oil delivered between September 28, 1904, to October 31, 1905."

A. Under the particular contract which was recorded on that page of the contract record.

Q. That was under the contract of June, 1904, which called for the delivery of 177,000,000 gallons of oil, didn't it?

A. To the best of my recollection, it was.

Q. Now, on November 1st, 1905, you made the new contract to which you referred, didn't you, calling for the delivery of oil at a higher rate, didn't you?

A. Yes.

Q. And that contract called for the delivery of 255,000,000 gallons of oil at 28 degrees and 34 degrees Beaumé?

A. That is right.

Q. Portions of the deliveries were changed, however, from the contract of June, 1904, providing for 25 per cent. of 34 degrees and 75 per cent. of 28 degrees Beaumé, while your contract of November 1st, 1905, called for 40 per cent. of 34 degrees and 60 per cent. of 28 degrees?

A. That is correct.

Q. If, from September 28, 1904, to October 31, 1905, there had been delivered to you under the contract for 177,000,000 gallons, 82,000,000 gallons of oil, can you, with those figures before you, state what was delivered between the first of June and the 28th of September?

Mr. Mathewson: 1904?

Mr. Page: Yes.

1699 A. You are asking me a question, and I do not know that I can answer it unless you can refer me to something that will help me. I do not know that I can give you that information from that record.

Q. Will you refer to the books of the Company in order that we may have the information furnished to us accurately as to how much oil was delivered from the various companies, stated in the same manner that this is on the record, from page 1015 over to page 1026, between the first day of June and September 28th, 1904?

Mr. Mathewson: Can that be done without much trouble, Mr. Carter?

The Witness: Not without trouble, but it can be done.

Q. The amount of trouble that would be involved in doing that would be going to your office and opening your ledger that had the account——

Mr. Mathewson: He is willing to do it.

Mr. Page: Wait a minute; we will see.

Q. (Continuing:) —opening your ledger to the account which would show the oil delivered, and copying the total items which are there footed for each month, for the months of June, July, August and September, would it not, four entries?

A. Assuming that the same marginal entries appear there.

Q. And if the same marginal entries do not appear, it would mean the mere adding up of each month from the items appearing thereon for four months, would it not?

A. That would be about the labor involved.

Mr. Mathewson: I do not think it is material, if the Master please. I shall not object, but I do not think it is material. 1700 This is in 1904, entirely outside of the period that we are investigating.

Mr. Page: I think the Master will see the application.

Mr. Mathewson: I do not think that there is any, but I have no objection to his doing it. We are getting pretty well loaded up with things called for already.

Mr. Page: Do I understand that you will do that?
Mr. Mathewson: Yes.

Q. You can go to the telephone and telephone to a clerk now and have it prepared and ready for us this afternoon, can you not?

A. My clerks are very busy just now, preparing stuff called for yesterday, and will be for several days.

Q. There was a very substantial amount of oil still remaining to be delivered under that contract.

A. What contract are you referring to?

Q. I was just going to tell you—of June, 1904.

Mr. Mathewson: Remained by November 1st, 1905?
Mr. Page: Yes.

A. I should say quite a quantity.

Q. Irrespective of how much oil may have been furnished that was credited to the old contract and rebated?

A. And adjusted as to price.

Q. If you want to put it in that form—adjusted as to price. Now, when is the adjustment as to price to be made upon the remaining amount of oil that was to be furnished under the contract in 1904 as to the contract of 1905?

—. There will be no adjustment of that kind made.

Q. Then I am to undersand that the company foregoes the benefit of the cheaper contract and the deliveries that are to be made under that entirely?

1701 A. Because they were obliged to cancel the contracts whether they wanted to or not.

Q. Will you answer that question yes or no. I think it is capable of such an answer.

Mr. Mathewson: The witness is entitled to answer it in any reasonable way.

A. They did forego for the reason I have stated, because they were obliged to cancel the contract.

Q. Why were they obliged to cancel the contract?

A. Because they were obliged to substitute another oil for that for which they were under contract.

Q. I call your attention to the fact that the two contracts call for exactly the same grade of oil, but in different quantities.

Mr. Mathewson: Proportions.

A. Under the contract we would not have been able to get the oil of higher grade which we required for the Winter of 1905 and 1906.

Q. That may be, but you mean by that that the 25 per cent. of the 177,000,000 of 34 degree Baumé had been exhausted; is that it?

A. It was not exhausted. There was not a balance sufficient to carry us through the Winter.

Q. And there was sufficient still remaining of the 28 degrees Beaume, wasn't there?

A. You could not cancel the contract in part.

Q. No, but if you had used up the quantity of oil which was to be delivered at 34 degrees you could make a new contract for 34 degrees without foregoing the contract for 28 degrees, could you not?

A. I think not.

Q. In order that we may close up this particular instance, will you be prepared with that date after recess?

A. After recess? Well, I do not like to undertake to do 1702 things on short notice. I would not like to present that here without some opportunity to confirm it and examine it, and understand what they are giving me.

Q. All I want is those entries from the books.

A. I know what you want, Senator.

Q. Do you recall whether the accounts were kept separately as to the deliveries of 34 degrees Beaume and 28 degrees Beaume? They were, were they not?

A. I do not know.

Q. I call your attention to page 1014 of this record, where you make this statement:

"Referring to page 262 of City's Exhibit 34 for identification, calling for 102 million gallons of 34 degree oil and above. The record indicates the date of deliveries, the point of deliveries, the gallons as per invoice, the barge number in which delivery was made, and the amount of the bill and the gallons as per the company's measurement."

Does that refresh your recollection as to how that book was kept?

A. It very plainly indicates how the record was kept; I have no doubt it is correctly stated there.

Q. On page 1026 of the record:

"Q. At the top of this column, 'Contract,' appear the words and figures '135,000,000 gallons, 28 and below.' What does that mean? A. 28 degrees of specific gravity and below.

Q. Does that refer to a contract for 153,000,000 gallons of that kind of oil? A. It refers to a contract of 255,000,000 gallons of 28 degrees and 34 degrees."

Now, taking the 153 million gallons at page 1026 of 28 degree Beaume and the 102 million gallons referred to on page 1014 1703 for 34 degree Beaume, adding those together, we have 255 million gallons, do we not?

A. We do.

Q. Now, does that refresh your recollection as to whether the accounts were kept separately as to the different degrees of oil?

A. Your question did not refer to this contract that we are talking about now at all. It referred to the previous contract, and I stated I did not know whether the previous contract was similarly recorded or not.

Q. You do not know whether in this particular you have changed your method of bookkeeping or not?

A. No bookkeeping involved in it whatever; merely a record of deliveries.

Q. Made upon the books of the company. That is all any bookkeeping is, is it not, a record of transactions made upon the books of the company?

A. The dictionaries so describe bookkeeping, I think.

Q. It would be a very easy matter, when you open that book, to tell?

A. Very simple indeed.

Q. Well, if it is kept separately, will you bring it?

A. We are losing a lot of time about it.

The Master: It seems to me that there has been an enormous amount of time lost over it. Why cannot we send up and get the book and have it brought down here, and have it out, instead of prying out these questions? The book shows what it is, I suppose. Why don't you get it, Mr. Mathewson?

Mr. Mathewson: I am perfectly willing, but the book was not asked for. We were asked for a statement and I said it would be produced.

The Witness: It can be produced.

Mr. Page: Very well; let us have the books produced this afternoon. I suppose it is time to adjourn. I thought I was saving time and meeting the convenience of the complainant. If I have wasted the time of the Court, I am sorry.

Here a recess was taken until 2 o'clock P. M.

1704 After Recess.

Robert A. Carter continued.

By Mr. Page:

Q. Mr. Carter, have you produced the book that contains the account of oil delivered under the contract of 1904?

A. Yes, sir.

Q. Will you turn to the beginning of that account. Do you find that that account is divided into oils delivered at 34 degree Beaumé, and 28 degree Beaumé?

A. The contract of July 1st, 1904, is divided.

Q. Now will you start with the beginning of that account at the 34 degree Beaumé.

The Master: Is this book marked for identification?

Mr. Page: Yes, it is Exhibit 34 for identification.

(Witness produces City's Exhibit 34, for identification.)

Q. That is not it; that begins with September.

A. Those are the first deliveries under that contract.

Q. The first deliveries made under the contract, City's Exhibit 10, which by its terms went into effect the 1st of July, 1904, were made when, Mr. Carter?

A. September 28th, 1904.

Q. And the testimony already given gives the entire amount of oil that was delivered under that contract up to the 31st of October, 1905, does it?

A. 31st of October, 1905.

Q. And the oil that was delivered from the 1st of July, 1904, to the 28th of September, was delivered under the previous contract, is that right?

A. Yes, sir.

Q. Does that also hold good as to the 28 degree Beaumé as 1705 well as the 34 degree, under the contract, City's Exhibit 10?

A. The deliveries to which you have just been referring, appearing on page 229, commencing on September 28, 1904, were under the contract of July 1st, 1904, and were of the 28 degree oil.

Q. Well you can finish now about the 34 degree oil, whether that commenced at that time or not?

A. The deliveries that were made of 34 degree oil under the contract taking effect July 1st, 1904, began in March, 1905.

Q. And the amount of 34 degree Beaumé oil delivered under that contract was 7,257,982 gallons.

A. Yes, sir, that is right.

Q. And that contract called, did it not, for the delivery of 44,250,000 gallons? I think it is stated at the head of page 260, isn't it?

A. 44,250,000 gallons.

Q. On the 31st of October, when this new contract was made, the entire amount of oil that had been delivered on the contract Exhibit 10 was 82,061,615 gallons of 28 degree?

A. 82,061,124 gallons.

Q. Of 28 degree and 7,257,982 gallons of 34 degree Beaumé oil?

A. That appears to be the case.

Q. Leaving due the company on that contract on the 1st of November, 1905, 50,000,000 gallons and over of the 28 degree and 37,000,000 gallons of the 34 degree, is that right?

A. 37,000,000 gallons of the 34 degree, of which, however, we could only get 25 per cent. at any time of the total delivery.

Q. What do you mean by that?

A. Well, my recollection of the contract of July 1st, 1904, is that it stipulated that we should take 25 per cent. of the high grade oil, but not that we could take all of that during the few winter months.

Q. I hand you contract Exhibit 10 and ask you to read it over so you may correct your testimony if you wish to?

1706 A. It says here that "this material is to be taken currently."

Q. "As the same may be required of you," that is, the Consolidated Gas Company.

A. My understanding was that we were to take it currently as we required it, of course, both oils; but they were to be taken currently, both oils, as we required them, not one oil in the summer and the other in the winter.

Q. The contract speaks for itself on that?

A. Very plainly.

Q. Did you during the recess refresh your recollection as to how much the actual amount of this rebate or allowance under this old contract amounted to?

A. Yes, $119,000 in round figures.

Q. Instead of $112,000, as I stated; it was my mistake, I misled you.

Mr. MATHEWSON: I thought your figure was too high.

Mr. PAGE: Well, it was too low by $7,000.

The WITNESS: It was $119,000. Not for the Consolidated Gas Company, however, all of it.

Q. Oh, no. Now, having the book with you, can you give us the prices which were charged in that contract that was abrogated by Exhibit 10?

A. The contract abrogated by Exhibit 10 called for oil at one price only, four and three-quarter cents per gallon. I think I testified from memory this morning that it was four and three-eighths.

Q. Yes.

A. I was wrong. It was four and three-quarters.

Q. Can you state from Exhibit 34 for identification how much oil was furnished after the abrogation of the contract calling for oil at four and three-quarter cents which was rebated or allowed for in the $119,000?

1707 A. I am not able to state that just positively from this record. The record shows the deliveries of oil under the contract referred to from June 1st, 1904, to September 28th, 1904.

Q. Could not you arrive at it in this manner; the new contract went into effect on the 1st day of July, 1904. You have testified that the first deliveries were made under that contract, and charged under the new contract on the 28th of September, and the deliveries made between July 1st and September 28th would be under the old contract, would they not?

A. On that assumption which——

Q. Well, if the assumption is not correct we do not want to make it.

A. Well, my memory is not very fresh on the subject. I might see how it figures out. The deliveries from July 1st, 1904, to September 28th, 1904, according to this record, amounted to 13,221,784 gallons, and the difference between the price in that contract, 4¾ cents, and the price for low grade oil under the contract that went into effect July 1st, 1904, .71 of a cent, would not indicate a sum approximately $119,000, which was the amount received in adjustment of the prices. It would be something less than that.

Q. Would it be considerably less?

A. Yes. $25,000 less. If you take the oil that was delivered from June 1st, 1904, to September 28th, 1904, 7,780,399 gallons at .71 of a cent, you would get in round figures $125,000. The inference is that between June 1st and the 30th was the point at which this allowance began.

Q. There was some calculation made at the time was there not?

A. Unquestionably. There is no doubt that we received the full amount that we were entitled to.

Q. Is there some communication or other record that is now in the possession of the company showing how that computation was made exactly?

A. No, none that I am able to find. Unquestionably there were memoranda made of it at the time, and the correctness of
1708 the final adjustment established.

Q. Now, when that cash was received—the rebate was paid in cash, wasn't it?

A. Yes.

Q. When that was received, how was it treated on the books of the company, where was it entered?

A. In our cash account.

Q. And then how was it journalized, into what account was it posted?

A. To the credit of suspense account, if my recollection serves me; Mr. Cuthbert went over it; he can probably confirm my recollection.

Q. But you objected to Mr. Cuthbert taking a copy of it, didn't you?

A. I did.

Mr. Mathewson: Is that worth while putting on the record?

Mr. Gans: I think it is decidedly. I think it is well for the record to show what limitations were put upon our examination of the books.

Mr. Mathewson: There is no objection to your examining books, but we do not want anybody to lug off copies of our books.

Q. Where do you carry the Standard Oil account, in what ledger?

A. Our current account with the Standard Oil Company?

Q. Yes.

A. In the sundry creditors ledger.

Q. You mean, then, in the journal that this account would be credited to the Standard Oil account and charged against cash or charged against suspense account?

A. The question is not very clear, Senator.

Q. Well, in order to transfer this money or the credit for it to the Standard Oil Company, you would have to put it through the journal in some way.

A. To the credit of the Standard Oil Company?

Q. Yes.

A. The credit to the Standard Oil Company would be on
1709 account of the settlement by them of the amount due.

Q. I understand that, but I am trying to get at the bookkeeping method of dealing with it?

A. I am trying to explain that.

Q. I thought you had finished?

A. The amount that was due from the Standard Oil Company under this adjustment of prices was a charge against them in the sundry debtor ledger. The payment by them of the cash operated to balance the account.

Q. You said you carried it as an suspense account. I want to know how you got at that then?

A. We charged the suspense account and credited the stock account, the material account, with the amount of this adjustment; and when the charge was made against the Standard Oil Company in the sundry debtor ledger, the credit was to the suspense account, thereby balancing the amount with which the suspense account had been charged.

Q. Then subsequently in some way I suppose the credit was distributed to the subsidiary companies and the Consolidated Gas Company in its proportionate amounts, is that so?

A. That is the case, yes, sir.

Q. Did this item appear on the regular account of the Standard Oil Company in the sundry creditors ledger?

A. No, it did not. In this case they owed us money whereas their account in the sundry creditors ledger indicates the amount of our obligation to them.

Q. Then you opened a special account for this purpose, did you?

A. In the sundry debtors ledger, where it properly belonged.

Q. Where was the suspense account that you referred to entered? In what particular book was that?

A. The suspense account is one of the accounts in the operating ledger.

Q. And are there other items besides this?

1710 A. A great many items besides that in the suspense account.

Q. Now, referring to Exhibit 94, the item of expense, $339,999.51, did that include in addition to the ordinary and usual expenses of the company some extraordinary expense for legislative investigation?

Mr. Mathewson: He asked if it was an extraordinary expense, Mr. Carter.

A. There were included in that item certain expenses in connection with the legislative investigation.

Q. And they amounted to $77,806.76, did they?

A. No, sir; not in this particular Exhibit 94.

Q. How much of it appeared in Exhibit 94?

A. $21,910.63, according to the statement before me which I have not checked, and therefore am not prepared to say that it is absolutely correct.

Q. Now, that $55,896.13 was distributed to certain other accounts, was it?

A. You are questioning me, Senator, from a document that of course I am unfamiliar with. I know that we did take out of the general office expense account such legal expense as had been carried in there during the year and charged it to the legal expense account.

Q. And this $55,896.13 would appear then in "Advertising and Legal," $105,800.02?

A. Yes, sir, that is where it would appear.

By Mr. Mathewson:

Q. Wasn't that "Advertising and Legal" a regular every day account that goes on every day, year after year?

A. Yes, sir.

By Mr. **Page**:

1711 Q. But that account was increased by extraordinary expense of legislative investigation to the extent of $55,896.13?

A. I am not sure that that is the case and that all of that $55,896.13 was a charge against our legal expense account.

Q. Well, all of that charge was distributed somewhere in the account that appears on Exhibit 94, wasn't it?

A. That I am not sure of because it may be that we billed some other company for some of it.

Q. Well, do you know whether you did or not?

A. Well, I do not from memory recall. That is the reason I do not want to be positive about it and say that all of that $55,896.13 was distributed among our other operating accounts. It may have been and it may be something less than that was so distributed. I want to be somewhat conservative in my testimony.

Mr. **Mathewson**: Wouldn't it be well, Senator, to have it appear on the record that you are questioning the witness from these papers which are notes made by your accountants?

Mr. **Page**: If you wish it so, it may appear.

Mr. **Mathewson**: Merely to show what Mr. Carter means when he says he is not familiar with the documents.

The witness now produces a number of papers and hands them to Mr. Gans.

Mr. **Mathewson**: State what these papers are which you have produced.

The **Witness**: They are statements of station expenses by months for the year 1905.

By Mr. **Burr**:

Q. For the calendar year?

A. For the calendar year.

1712 By Mr. **Mathewson**:

Q. Each station?

A. Each station for each month, and each month aggregated as to all expenses.

By Mr. **Burr**:

Q. Manufacturing expenses?

A. Manufacturing expenses.

By the **Master**:

Q. How many sheets do you produce?

A. There are 83 sheets.

Mr. **Gans**: I ask to have them marked for identification.

The 83 sheets of paper are marked as one Exhibit, State's Exhibit T for identification.

Mr. **Gans**: The witness also produces tax receipts for the year 1905, consisting of 8 sheets from the Department of Finance of the

City of New York; and one from the Borough of Edgewater, Bergen County, New Jersey. I ask to have those marked for identification.

The nine sheets of paper are marked as one exhibit, State's Exhibit for identification, Exhibit U.

By Mr. **Gans**:

Q. These 83 sheets comprising State's Exhibit T for identification, are they part of the original records of the company or are they accounts which you have had made from the original records?

A. They are copies of original records, made from original records. They are statements of the operations of the different stations for the stated months.

1713 Q. Are they copies you have had made since I asked you for this data?

A. They are not. They are carbon copies of this data originally furnished. I usually have two copies made of everything of that sort.

Q. So what was required to comply with my request was to get these from the files of the company?

A. That is the case.

Q. Now in order to prepare what I asked for at the same time, namely an exhibit corresponding with the former exhibit 145 before the State Gas Commission, all that will be necessary would be to take the aggregate of these eighty-three statements, would it not?

A. Such a statement would of course be the aggregate of those statements.

Q. And that is all that is required to prepare such a statement, is it not?

A. That is all. There is some other information, I think, in exhibit 145 before the Gas Commission, that perhaps does not appear in those statements.

Q. Do you remember what that is?

A. No, from memory I cannot say. There is one item that I recall I think in exhibit 145 before the Gas Commission which would show gas made for the Consolidated Gas Company by the other companies, which does not appear there.

Q. That is an aggregate for the year, is it not?

A. I might save time by saying that a statement corresponding to that exhibit 145 before the Gas Commission for the calendar year 1905 is now in course of preparation.

By Mr. **Mathewson**:

Q. Would not that contain all the information that is on the State's Exhibit T for identification?

1714 A. It will, the aggregate for the year; it appearing there in monthly figures and would also contain some things that do not appear there, which were enumerated; one, the gas manufactured for us by other companies, under the agency agreements, and more detailed as to the sundry supplies used, and as to cartage; and Exhibit 145 includes the distributing expenses which do not appear in State's Exhibit T for identification at all.

Mr. Gans: I think we will save time and prevent encumbering the record unnecessarily if I can be permitted to take these Exhibits for identification and look them over and determine how much of them I want.

Mr. Page: You would want to wait, would you not, until this Exhibit which will compare with Exhibit 145 before the Gas Commission is prepared.

Mr. Gans: It will save time if I can take the two things up together.

A further colloquy now ensues between counsel and the Master, which the stenographer is directed not to report.

Q. These tax bills which you brought down, marked State's Exhibit U for identification, represent an amount equal to that appearing on State's Exhibit E opposite the words "real estate"?

A. It should correspond very closely.

Q. Exactly, should it not, unless some mistake has been made?

A. I think they would probably agree within a negligible amount. Of course the amount that is charged in the way of expenses is intended to correspond exactly, and to a penny, with the amount of the tax bills, but there may be a slight variation.

Q. The amount appearing on State's Exhibit E as real estate taxes, being $179,788.95, is the amount of the face of the tax bills rendered by the City of New York for taxes on real estate during that period?

A. That is the case.

1715 Q. And that is somewhat more than the amount actually paid by the company for real estate taxes, is it not, there being a discount?

A. There was a discount, I think, of something like $1,700, which went to the credit of our discount account, which appears in our miscellaneous income account.

By Mr. Mathewson:

Q. In Exhibit 94?

A. In Exhibit 94?

By Mr. Gans:

Q. It does not appear under that name in Exhibit No. 96, does it, as a discount allowed on a real estate tax?

A. Not separately stated; included in the discounts.

Q. It is covered in that general item?

A. General item of discounts.

Q. And one could not discover it unless one made some inquiry in regard to the details of the item? That is not intended as a reflection on anybody, but as a question.

A. I think the statement answers that question.

Q. That is true, is it not?

A. Of course it is true.

Q. The amount of that discount is to be found upon these tax bills, in these amounts in red ink, being State's Exhibit U for identification; is that right?

A. That is quite right.

Q. So if you will add these you will get the precise figures?

Mr. **Mathewson**: Why not add the discounts which are also in red ink, and you can tell at once.

Mr. **Gans**: It is the discounts I was going to add. I have accepted the other figures as being approximately correct.

1716 Q. The exact amount of that discount is $1,702.22; is that right?

A. I already gave you the figure of $1,700, and I have no doubt that $1,702.22 is correct.

Mr. **Gans**: I offer these bills in evidence.

(The tax bills, being State's Exhibit U for identification, were now received in evidence as State's Exhibit U and so marked.)

Q. Am I right, that you have not included in your statement of the amounts paid for taxes on real estate the amount paid on the Edgewater property?

A. The $870 paid on the Edgewater property seems to have been omitted from State's Exhibit E.

Q. Would that amount mean also that it has not been included in the total in Exhibit 94?

A. It would so appear.

Mr. **Mathewson**: Does that end your cross-examination, Mr. Gans?

Mr. **Gans**: I do not wish by saying that it will close my cross-examination—from being precluded if something develops in the testimony.

Mr. **Mathewson**: I mean, as far as you now foresee.

Mr. **Gans**: The matters I mentioned a few moments ago are all I can think of at present.

Recross-examination by Mr. **Burr**:

Q. Can you give me any explanation of the differences in cost per thousand feet of gas made at the various stations, as they appear here on State's Exhibit T for identification, the rate on 44th Street, being 29.34 and for 14th Street 36.29.

Mr. **Mathewson**: For the same month?

Mr. **Burr**: For the same month.

1717 A. I would not like to do so without making a detailed comparison of the expenses at the two stations and ascertaining just exactly what the difference was.

Q. I understood you to say that these eighty-three pages contain the cost of labor and material only at each station; is that right?

A. They contain such items of station cost as are enumerated on the statement.

Q. Your attention has been called to Exhibit 105, which was offered in evidence this morning, purporting to be a statement of gas made for the Consolidated Gas Company by other companies, net, for the nominal year ending October 31st, 1905. In that statement there is a variation in the purported cost of gas each month. The month of the greatest cost for the New Amsterdam Gas Company appears to be July and the cost is 39.66, the Standard for July, 35.31; the Mutual for January, 41.60; the Central Union, October, 44.43. The month of least cost of the New Amsterdam is December, 31.85; the Standard, May, 31.65; the Mutual, October, 34.95; the Central Union, June, 25.85. Can you explain those fluctuations in cost?

A. I could not do so without very carefully analyzing the figures. Offhand I should say that possibly the fact of a considerable amount of repairing occurring within a given month would operate to augment the cost for that particular month; possibly some other conditions might be abnormal in a given month, or unusual, and it would require very careful analysis of the figures to state just what contributed to that variation.

Q. Will you make such analysis?

A. I should be sorry to do so. I have not undertaken to do so.

1718 Q. Can you explain the fact that the increased percentage of the highest cost over the lowest is as follows:

The New Amsterdam	24%
The Standard	11½%
The Mutual	19%
The Central Union	33%

Can you give any explanation of the variation in that regard?

A. Only in a most general way. With respect to the Central Union Company, their cost in the latter part of 1905 was very much higher than in the first part of the year because of the candle power requirement under the law that went into effect July 1st, 1905.

Q. Are you merely assuming this?

A. I know it to be the case. They testified to it themselves before the Gas Commission.

Q. In regard to which company?

A. The Central Union.

Q. Is that all the explanation you can make with regard to this variation that I have called your attention to?

A. All I should care to make offhand.

Mr. Mathewson: There might be a large replacement in one month which goes to the operating expense.

Mr. Burr: I know; it might be a thousand and one things.

Mr. Mathewson: Yes, but you asked which particular thing it was that month. We would have to go over all the detail and pick it out.

Mr. Burr: It appears from this statement which has been offered in evidence that the amount of gas or the season of the year makes no difference with regard to this variation in the price or cost of production.

Mr. Mathewson: Quite so; a big replacement or repair might be controlling.

1719 Q. Can you tell now the amount of gas used by the Consolidated Gas Company last year for its own purposes?

A. No.

Q. Can you tell me now the total capacity of each of the subsidiary companies?
A. I cannot.

Mr. **Mathewson**: That is on the record, Mr. Burr, the capacity. What do you mean by subsidiary companies?
Mr. **Burr**: The subsidiary companies.
Mr. **Gans**: Those operating under the agency agreement.
Mr. **Burr**: Yes.
Mr. **Mathewson**: Oh, I did not know that they were so subsidiary as that.
Mr. **Burr**: We have constituent companies and subsidiary companies, and we have been so designating them throughout the course of this examination. If I had that information which I called for, we might be able to proceed on that line.

Q. Did you produce the policies of insurance?
A. I have not even considered the printed requests. I only got a copy of it a few moments ago, and certainly I should expect counsel to consider them before I undertook to furnish them.

The **Master**: How do we stand? Has anybody finished with the cross-examination of this witness, or is everybody supposed to be in a state of suspense?
Mr. **Burr**: I would like, for my own information, so far as I am concerned, to know from Mr. Carter or Mr. Mathewson, to-morrow, whether the information which I have called for is to be produced or whether in the estimation of Mr. Carter, it has already been
1720 produced. If that information is produced, I may or may not have some further cross-examination.
Mr. **Page**: I think it is safer to charge us all up with a suspense account.
Mr. **Mathewson**: You will remember Mr. Burr, that Mr. Bradley was examined on the capacities of the plants of the other companies of the Consolidated Gas Company and testified in detail on that subject, so that it is all on the record, every particle of it. Don't you recall it?
Mr. **Burr**: The capacity of the subsidiary companies?
Mr. **Mathewson**: Certainly.
Mr. **Gans**: His testimony was 62,000,000 feet a day.
Mr. **Mathewson**: No, there was an error of 2,000,000 feet there, so it made 60,000,000 and a fraction.
Mr. **Gans**: Shall we adjourn now?
Mr. **Mathewson**: Let us see if there is not some line apart from these statements that we can examine the witness on. If there are any general lines, I suggest we proceed.
Mr. **Gans**: If we adjourn I can put in the time to some good purpose by looking over these things and disposing of them.
The **Master**: Is it not possible to get some idea of what we can do hereafter? For instance, if Mr. Carter is to be on the stand all day to-morrow and further statements are to be called for, we ought to know it now.
Mr. **Page**: I did not suppose Mr. Carter was to be brought on the

stand until he got all this information, so that at the next hearing we could end it.

Mr. **Mathewson**: But new information is asked for, including this statement Exhibit 145.

1721 Mr. **Gans**: I don't think that is new. We spoke of that a long time ago.

Mr. **Burr**: I think the suggestion a very good one. If you could see your way clear, he might be busy getting out these statements, and be called as the last witness, and when the statements are produced we may have no questions to ask him, or we may desire to ask him some further questions.

Mr. **Mathewson**: Have you any line of cross-examination except that which is dependent on these statements which you have asked for?

Mr. **Burr**: No, I think not.

Mr. **Mathewson**: Well, this being the case, Mr. Master, rather than lose precious time I will go on and examine Mr. Carter myself to some extent on the redirect, unless you wish to adjourn at the present moment.

The **Master**: I am entirely satisfied to adjourn at the present moment, and do not want to force you on with the redirect unless you wish to do it. I was talking about to-morrow, whether we could go on with some other witness to-morrow. I wanted to get an idea of what these gentlemen's plans are.

Mr. **Mathewson**: I would as soon do this, perhaps as to put on another witness to-morrow. It seems that we have practically concluded the general line of examination, only leaving these statements which when presented may give the information and require no cross-examination at all, and rather than adjourn now, I having no other witness here, I think I would rather examine Mr. Carter a little while, if the Master will permit it to be done out of order, so to speak, saving my own rights, or if the Master desires to adjourn now for any reason——

Mr. **Gans**: I would very much prefer to adjourn because I 1722 want to be able to look over these things.

The **Master**: I think you had better adjourn now, and you gentlemen had better be prepared to go on with the cross-examination tomorrow and finish it up.

Mr. **Page**: That we cannot do.

Mr. **Burr**: Unless Mr. Carter is prepared to furnish the information he is asked for.

Mr. **Kirby**: And we have to study these things.

The **Master**: Do counsel say that they cannot proceed with the cross-examination to-morrow?

Mr. **Page**: On exhibits that have not been produced and will not be produced until to-morrow morning, and on these eighty-three pages of exhibits that have been handed to us to-day, we state that it is a physical impossibility to prepare for cross-examination.

The **Master**: I think counsel are a little bit unreasonable, and not quite fair to the Master in that particular. First, these 83 pages of exhibit, the witness testified yesterday that they were in his desk and he has brought them down here and counsel has had several weeks during which this hearing was in progress, and if they wanted those 83 sheets constituting Exhibit T, it was perfectly competent for them to get them at any time. They had their expert there as I understand, as stated by counsel, until he got through and then he went away. No application was made to me for an order directing any books to be brought down, or any papers or anything else. It seems to me it is hardly fair for counsel to let a couple of weeks elapse when we are trying to speed this cause and then state 1723 that they are unable to conclude the cross-examination because they have not had an opportunity to study the case.

Mr. PAGE: There was no statement that we had not had an opportunity to study the case.

Mr. GANS: If the Master will permit me to call his attention to one thing which undoubtedly he has not realized. If you will turn to page 1000 of the testimony you will see that I asked at that stage, or at least tried to ask for precisely this exhibit, and by reason of the fact that I did not frame my question so as to cover technically the thing that Mr. Carter had, I was told that I was mistaken, and that there was no such record kept. And it was only yesterday morning that I discovered that there was a record kept such as I wanted. If you will turn to that part of the testimony you will find Mr. Burr in cross-examining said:

"Q. I call your attention again to the request which I made at the last hearing for a statement as to the cost of holders and so forth. Have you done anything in regard to that? A. No, sir, I have not done anything in connection with the preparation of it.

"Q. You have a statement at the office showing the amount of coal and oil consumed by each station, have you not, during the periods covered by Exhibits 93 and 94? A. Our engineering department records show the quantity of oil used daily, which are aggregated into monthly and yearly totals.

"Q. That would not be in your department, but the engineering department? A. The engineering department.

"Q. And that could be checked up by the accountant, could it not, if desired? A. Yes, very easily."

Then I asked him:

1724 "Q. You do receive monthly reports, including those items from the engineering department to the accounting department? A. No, we do not. As I have already testified, we simply have access to the engineering department records.

"Q. Am I mistaken in this; has it not been your habit to get from the engineering department a statement month by month of the cost of operation of each one of your plants, for the purpose of comparing that statement with a similar statement for the preceding year? A. No, sir.

"Q. Did you not so testify before the Commission? A. Never."

Now, the mistake I made was in suggesting they came from the engineering department. We had simply access to the engineering department.

"Q. Did you not so testify before the Commission? A. Never.

Mr. Mathewson: No, he testified that there were certain items, of course, which were compared, that he kept a record of certain items for the purposes of comparison, but nothing showing the comparisons of the total cost of gas at each station." Which should be, I assume, "each station."

Mr. Mathewson: Month by month, that is quite right.

Mr. Gans: That is precisely the thing we asked for and precisely what we now get. I do not accuse anybody of intending to mislead——

Mr. Mathewson: Exhibit 143 in evidence was the precise thing you asked for.

1725 Mr. Gans: Now this was some time ago. I didn't get it simply because I was not as well informed of the way this company's records were kept as Mr. Carter is himself and therefore did not ask for it in terms which made it impossible to answer categorically that they had no such thing, truthfully. He said they had not such a thing and I did not get it, as yesterday I stumbled by accident upon the method of asking the question which made it impossible for him to say that they did not have such a thing, and now I have got it. But I do not think that we should be charged with delay by reason of the fact that we did not get it until now.

Mr. Burr: I think it would be advisable, and would save considerable time, if the statements called for are presented when they are made, instead of waiting until weeks afterwards and then presenting them and then expecting a cross-examination to be made immediately upon them. For instance, a statement called for a week ago, instead of when it has been made, laying it up there, it should be produced and we could examine it.

The Master: Counsel for the various defendants seem to overlook the fact that a great deal of this work of the preparing statements is done for their accommodation. The position of counsel seems to be that the complainants are obtaining some favor by allowing the proof to go in in this manner. That is not as I understand it. My ruling was in reply to your objection, that you were entitled to have the books brought down here in certain instances for your cross-examination. Manifestly, if those books had been brought down here, judging by such experience as we have had, it would have taken you gentlemen months to get at the same amount of information that you got at by statements prepared in the complainants' office, which your experts, as I understand and as I ruled, were to have the opportunity to verify. 1726

Now, it seems to me, if for your convenience, the complainants set their clerical force at work making up statements and your experts have an opportunity to verify them, that you ought not to complain if the statements are not produced here with the rapidity that you like.

Mr. Burr: You will remember I called your attention, Mr. Master, some weeks ago, to the affidavit of Mr. Carter himself, in which he stated that the only time they had a fair chance to give all the information in regard to this company was in 1886. They complained of the dearth of information or opportunity which was afforded them before the Stevens Committee and the Gas Commission. And yet you see it has been like pulling teeth to get the information we desire from them. It is true we might have proceeded legally and asked for the books and it is true it would have taken much longer than 90 days to get that testimony, but we were within our strict legal rights when we asked for the original sources of information, and we only accepted these to facilitate the matter and save time.

Mr. PAGE: It seems to me that we are charged with a good many things that are not properly chargeable with. In the first place, if the orderly manner of proof that is followed in almost any court that I have had anything to do with, had been followed, it would have been necessary for this company to produce their books rather than put in evidence compilations from the books. The burden of consuming time in proving their case would have been upon them.

We made objections as to the form, and it was only admitted 1727 on the ground that we were to have an opportunity for verification. Now they have not produced copies of the books but compilations made from the books, and it has been necessary frequently to consume quite a good deal of time on cross-examination, in raveling out the entries they have made. We have been compelled to proceed here from day to day. Repeated applications have been made for adjournment, even for a day, to allow us to verify the statements that have been put in, while in each instance those applications have been denied. We have been forced——

The MASTER: I do not recall that.

Mr. PAGE: Unfortunately the stenographer did not take those applications upon the minutes, but nevertheless my recollection is very clear as to such having been made, both by myself and Mr. Gans. We have been compelled to go on here from day to day. Mr. Carter left the stand some two weeks ago, it is true. All the time that he has been off the stand has been consumed by from five to six hours a day in taking testimony, and most of the time in preparation for examination and cross-examination of the expert witness they had on the stand. I do not feel that the defendants in this case are properly chargeable with any delay and I do feel that the defendants have been put at a most tremendous disadvantage in the trial of this case, and in the manner in which they have been compelled to proceed.

Mr. BURR: What time will we go on to-morrow?

Mr. MATHEWSON: Do I understand then that we cannot depend upon any cross-examination to-morrow forenoon?

Mr. BURR: Do we understand that we cannot depend upon 1728 any information to be supplied by you?

The MASTER: The Court will be in session to-morrow and there is a witness on the stand for cross-examination. If counsel cannot proceed, we will make the proper entry on the record.

Mr. PAGE: I think we have made an application and a suggestion that we would like to have the cross-examination suspended until the statements that have been called for are produced and we have had a reasonable opportunity to examine them. I would make such an application.

Mr. **Burr**: Yes, and I make the same application. We certainly cannot go on with the cross-examination until we get the information we have called for.

The **Master**: We will cross that bridge when we come to it to-morrow morning.

Mr. **Page**: I think we have reached it now and I would like to know what we are to do to-morrow if I can.

The **Master**: Well, Senator, I do not wish to seem to be crowding counsel at all but my directions are very explicit in this *letter*, and as I say, some of this information you have had within your power for two weeks to get at if it was very pressing, and if this was trial in any equity term, the Court would sit from day to day and gentlemen would have to prepare for cross-examination either over night or Saturdays and Sundays or some other time.

Mr. **Page**: And that brings up another suggestion, that if this had been a case that had been brought up at an equity term or in Special Terms, counsel would have had some opportunity to prepare
their case for trial before they were forced on to trial,
1729 & 1730 whereas here we were forced right into trial almost as
soon as the issue was joined. I have tried a case
nearly for two and one half months sitting from nine o'clock in the morning to six o'clock at night, but I was able to prepare that case because I had six months in which to do it.

The **Master**: You must not visit the sins of the equity rules adopted in eighteen hundred and thirty something, or whatever it was, on my head. This is equity practice and the direction to speed the cause comes from a higher source.

Mr. **Page**: Yes, I know, and I think in the desire to speed the case the interests of the State of New York and the City of New York have been lost sight of.

Adjourned to 11.30 to-morrow morning.

Last Exhibits:

Complainant's 223.
State's U.
City's 44.

1731 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

Met pursuant to adjournment.

New York, Thursday, *September* 6, 1906—11:30 a. m.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr, Mr. Gans.

1732 Robert A. Carter resumed the stand and testified as follows:

Mr. Mathewson: Counsel not being ready to proceed with the further cross-examination of Mr. Carter, I will ask him a question or two.

By Mr. Mathewson:

Q. Have you prepared a statement separating the items of miscellaneous income for the calendar year 1905 and the nominal year ending October 31, 1905?
A. I have done so, yes sir, as shown in full in Exhibits 95 and 96.
Q. And is this the paper?
A. That is the paper, yes, sir.

Mr. Mathewson: I offer it in evidence.
Mr. Gans: Same objection that we have made to the offer of all papers; that is, that if we may be permitted to verify it by the books later we are perfectly willing to have the statement go in now.
Mr. Mathewson: This is part of Exhibit 96. The items are on Exhibit 96, which your experts have already verified.
Mr. Gans: In its present form it is objected to as incompetent, immaterial and irrelevant.
Objection overruled.
Exception.
Received in evidence and marked Complainant's Exhibit No. 224.

Q. Will you state how much interest has accrued, computed at five per cent., on the moneys advanced to the Astoria Company for construction by the Consolidated Gas Company?

Mr. Gans: That is objected to as immaterial.
Question allowed.
1733 Exception.
Mr. Mathewson: It is claimed by my opponents that the

interest upon the construction of the Astoria plant should be added to construction instead of being charged against operating expenses. I am now showing how much interest has already accrued upon construction, which would go to increase the value of the plant if that method of calculation is pursued; the same as interest at five per cent. was testified to by Mr. Mayer as necessary in the construction of a plant.

A. The interest accrued to August 31, 1906, inclusive, amounted to $1,081,711.44.

Q. That is computed at five per cent. on the advances to Astoria, whether they are evidenced by the stock, the bonds or the notes of the Astoria Company held by the Consolidated?

A. That is the case; yes, sir.

Mr. **Mathewson**: That is all now.

The **Master**: Do you intend to suspend the further examination of Mr. Carter?

Mr. **Mathewson**: I will withdraw him temporarily.

Mr. **Burr**: Before you do that I have a question I should like to ask.

By Mr. **Burr**:

Q. With regard to Exhibit 89, is that exhibit intended to show the investment of the Consolidated Gas Company in securities—— I have mislaid the exact exhibit number for a moment, but it is the exhibit which is in evidence here which purports to show the investment of the Consolidated Gas Company in the securities of 1734 other companies. Does that show the investment of the company in all kinds of securities, notes included?

Mr. **Mathewson**: I do not think the witness can reply until you point it out to him?

Mr. **Burr**: It is State's Exhibit B, page 382-A of the exhibits.

Q. You have the exhibit now in your hand. Will you tell me whether that statement embraces all notes of other companies held by the Consolidated Gas Company, as well as all stocks and securities of every description?

A. No, sir, it does not.

Q. Where does that appear?

A. It would appear in the trial balance of October 31st, 1905, of which you have a copy; also in the balance sheet of December 31st, 1905, both of which have been offered in evidence.

Mr. **Mathewson**: I am ready to proceed with the redirect-examination, but it is not convenient to do so until the cross-examination has been completed, and under the circumstances I shall put another witness on the stand, withdrawing Mr. Carter.

The **Master**: Note on the record that the other counsel state they are not ready to proceed with the cross-examination this morning.

Mr. **Gans**: Note that one of the reasons why counsel say they are not ready to proceed, and one of the reasons why they are not ready to proceed, is that one of the exhibits called for for the purpose of cross-examination has not been produced, that another exhibit of 83 pages, which was handed to counsel for the defendant yesterday, is of such volume that it makes it impossible to proceed with the cross-examination until opportunity has been had to inspect it; that the delay in procuring that exhibit, as was pointed out yesterday, 1735 was due to the fact that a misleading answer was given by the witness to a question some two or three weeks ago.

Mr. **Mathewson**: That is a nasty and uncalled for intimation. It is not true, and it should not have been made.

Mr. **Gans**: Well, it is true.

Mr. **Mathewson**: It is not true. It is absolutely untrue.

The **Master**: Well, never mind, gentlemen.

Mr. **Mathewson**: I want to say, if the Master please, right here, that I had not intended to make any issue of this, but that exhibit which we are called upon to produce for the calendar year of 1905, corresponding to the nominal year of 1905, has for the nominal year been before counsel ever since this hearing began, in the printed record, and if we had been requested to produce it or make it up for the calendar year weeks ago, it could have been done. The delay in requesting it was not attributable to us.

Mr. **Gans**: I did not mention the delay in that, but I will say in reply to that, that a request was made, if not on the record, then to Mr. Mathewson and to Mr. Carter off the record, for that particular exhibit.

Mr. **Mathewson**: I think you are mistaken, Mr. Gans.

The **Master**: Well, there is no question before me now. You can proceed, as long as Mr. Mathewson is willing to take up another witness.

Mr. **Burr**: I understand Mr. Mathewson is going to take up with me later in the day the information which I asked for, and which was spread upon the record yesterday.

1736 A further colloquy now ensues between counsel, which the stenographer is requested not to report.

Walter R. Addicks, a witness called on behalf of complainant, being first duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside?

A. In New York City.

Q. Are you an officer of the complainant, the Consolidated Gas Company?

A. I am, sir.

Q. What office do you hold?

A. Vice-President.

Q. Are you the chief executive officer of the company at the present time?

A. Chief active one.

Q. The office of President is at present vacant, is it not?

A. It is.

Q. How long have you been an officer of the company?

A. March, 1903, if I recollect correctly.

Q. Are you a graduate of any collegiate or technical institution?

A. United States Naval Academy, Engineering Corps.

Q. What year?

A. 1882.

Q. How soon after your graduation in 1882 did you leave the navy?

A. I stayed in the service about a year and a half, and entered the service of the Pennsylvania Railroad, motive power department.

Q. In what corps at Annapolis were you graduated?

A. In the Engineer Corps.

Q. Will you state what your experience as an engineer was thereafter?

A. I, having entered the service of the Pennsylvania Railroad, was attached to the Motive Power Department for about four years, during which time I worked as draughtsman on car construction, locomotive construction, construction of boiler house, round 1737 house, valuation of certain portion of the Altoona plant, and made the surveys of all the shops and shop yards in the Pennsylvania Railroad system, east of Pittsburgh and Erie.

Q. Were you employed in designing motive power and car equipment, and the like?

A. Yes, sir.

Q. Did you subsequently go to Boston as engineer for any company?

A. I left the Pennsylvania Railroad Company and entered the service of the constructing company that was building the Bay State Gas Company of Boston, during which time I spent some three months in Chicago in the gas works.

Q. Were you engineer for this construction company?

A. Not at first.

Q. At any time?

A. Yes. Later I became engineer for that company, and became engineer of the gas company after the works were completed and had been started; the Bay State Gas Company of Massachusetts.

Q. Did you have any experience in the practical operation of a gas plant before that?

A. Yes. In Chicago I ran the gas generators and did all other work that was necessary in the gas works personally; took the regular watch night and day for a period of three months.

Q. What other gas companies or lighting companies have you been engineer with between the time you have last mentioned and the time you became an officer of the complainant company here?

A. I became in succession, more or less exact as to date, engineer of the Roxbury Gas Light Company, Dorchester Gas Light Company, South Boston Gas Light Company, the engineer of distribution of the Boston Gas Light Company, Superintendent of the North End station of the Boston Gas Light Company, Engineer of the Boston Gas Light Company, Chief Engineer finally of all the 1738 companies mentioned; also of Brookline Gas Light Company, and the Consulting Engineer for various works in connection with the New England Gas and Coke Company and the Massachusetts Pipe Line Gas Company. I have also been Consulting Engineer for other companies, large and small.

Q. How does the Boston Gas Light Company of which you were Chief Engineer stand as to size among the gas plants in New England?

A. It is the largest one in New England.

Q. That is a coal and water gas plant?

A. Well, the North End station was the largest individual plant and the company itself today is the largest company.

Q. These companies which you have mentioned, the Roxbury, Dorchester, etc., are what are known in Massachusetts as the Boston or "Metropolitan Group?"

A. Well, they were known formerly as the "Boston Group" and "Brookline Group," there being two groups, Jamaica Plains being included in the Brookline group. They now constitute the Consolidated Gas Company of Boston, with the exception of the New England Company.

Q. Are you a member of any engineering societies and have you held offices therein?

A. I have been and am a member of quite a number: the American Society, the Ohio Society, the Western Society, New England Society, of which I was formerly President, the Guild of Gas Managers, of which I was President, Society of Gas Lighting in New York City, and others; and also naval societies, quite a number of them, naval engineers and naval architects and so forth.

Q. Are you familiar with the manufacturing plants, holders and distributing system of the complainant, the Consolidated Gas Company of New York?

A. Yes, sir.

1739 Q. And with the prices of manufacture and distribution of gas generally?

A. Yes, sir.

Q. Both water and coal?

A. Yes, sir.

Q. Are you familiar with the requirements of the Act of the Legislature, the Act of the Legislature passed within the last year or two, limiting the pressure in mains of the company between two and one-half and one inch?

A. I am.

Q. I will ask you—based upon your knowledge as an engineer, and particularly in the gas business, whether it is possible in your judgment to observe those requirements and furnish your customers with gas in the City of New York?

Mr. Page: That is objected to as calling for a conclusion.

Mr. Burr: The same objection.

The Master: I will allow it.

Exception taken by Mr. Page and Mr. Burr.

A. My judgment is that it is practically impossible to conform to the requirements of that law as to pressure.

Q. Now, as to the provisions concerning sulphur and ammonia, in the same acts?

A. There is no difficulty in conforming with the requirements as to ammonia, nor do I foresee any. There is no difficulty at present in conforming with the sulphur requirement, but it restricts us somewhat to the character of coal we can use.

Q. Does it require the use of more expensive coal or less?

A. Apt to be more expensive. The coals which have a large amount of sulphur cannot be used and still maintain the 20 grains required by that law. That law is being modified in other parts of the world. It is the same as in Massachusetts, in so far as sulphur is concerned.

Q. The tendency under ordinary circumstances is to increase the cost of manufacture? 1740

A. No, I cannot say that in New York to-day. In view of the constantly increasing quantity in which poor coal will undoubtedly have to be used, it will tend to increase the cost of gas in future, but I cannot say that it will tend to increase the cost of gas to-day. When I say that, I say not materially, in the case of water gas.

Q. Has the complainant ever made tests of the amount of gas burned in the street lamps, the city contracts calling for three feet per hour, to determine whether more or less than that amount was being burned?

A. Yes, sir.

Q. What was the result of those tests?

A. In the Welsbach burners——

By Mr. GANS:

Q. Were those tests made by you individually?

A. No, under my direction.

Mr. GANS: Then we object on the ground that it is incompetent.

The MASTER: I will allow it.

Exception taken by Mr. Gans.

A. (Continuing:) In the Welsbach burners 3.77 cubic feet per hour, I should say. May I elaborate a little in the answer?

By Mr. MATHEWSON:

Q. Anything that you think is necessary to answer the question properly.

A. That was done by taking the street lights off various points and testing them as they stood. It is within the power of the lamp lighters to burn anywhere from 3 feet to 6, if I remember correctly, under 2.2 pressure, but the average that we took off was 3.77 in the condition in which we found them.

1741 Q. That was the average?

A. That was the average. The flat flame burners we tested also by taking one of the burners that were in use and testing it with the gas going through at various pressures. If I remember correctly, it is about 4½ or about 4.6 feet which passed through a burner which was adjusted to three feet. I would like to check my 4½ feet, if it is necessary.

Q. Were those tests made under your direction and general supervision?

A. They were made under my specific instructions for the purpose of determining this question.

Q. Who purchases the coal and oil, or under whose supervision is it purchased, used by the Consolidated Gas Company?

A. The contract was made by me on the question of oil. As to the coal contract, the bids are ordinarily asked for by another officer of the company and come under my supervision, and I submit them to the executive committee.

Q. Are bids sought in reference to the supply of coal?

A. Yes.

Q. From any responsible parties who you may think able to deliver it?

A. Or who have a quality of coal satisfactory in quantity.

Q. Assuming of course the quality of coal must govern?

A. Yes, sir.

Q. And is the purchase of this coal made at as low prices as you can obtain it?

A. Yes, under the conditions required.

Q. How as to the oil?

A. The oil likewise, sir.

Q. It is in evidence that a contract of the Standard Oil Company, which would have expired early in 1906 was superseded on November 1st, 1905, by another contract calling for 40 per cent. of 34 degree grade and 60 per cent. of 28 degree grade oil.

A. That is correct.

Q. Did you negotiate the contract?

A. I did.

1742 Q. Did you make any endeavors at that time to secure as low a rate as possible?

A. I did.

Q. Was the price which was finally covered by the contract the same which you sought to obtain at the outset?

A. It was not.

Mr. **Page**: Would it not be just as well to let the witness testify as to what he did?

Q. Go ahead and testify as to the circumstances under which that contract was made, and the necessity in your judgment which made such contract advisable at that time.

A. The matter arose by the engineer in chief stating to me that he could not meet the requirements of the new law, as to 22 candle power, with 28 gravity oil during the winter months. I therefore took up negotiations for supplying a lighter grade of oil during the winter months. Those negotiations resulted in the contract which I understand is in evidence, which specifically provides for a light grade of oil during the winter months and a heavy grade of oil during the summer months. It was necessary in that contract to pay for the heavier grade of oil 4.28 cents per gallon, I think, and for the light grade of oil, 4.78, I think, or thereabouts.

Mr. **Page**: 4.29 and 4.87½.

Mr. Mathewson: May I have the contract, Mr. Master, which I think you have?

(The contract is produced and handed to the witness.)

A. (Continuing:) Referring to the contract itself for oil, City's Exhibit No. 30, contract dated November 1, 1905, the price for 34 gravity is 4.875, and the price for 28 gravity is 4.29. This is a substantial advance, between 4 and 5 per cent., over the prior contract.
I will say that the percentage, it will be noted, can be varied
1743 from 40, 45 and 50 per cent. of 34 gravity oil. It was doubtful in my mind whether we could get through with 40 per cent. during the winter season, so that the other amounts are provided for, the object being on my part to get the lowest average price of oil for the entire year, which in this case I believe figures about 4.50 or 4.52, or something of that kind.

Q. The previous contract, City's Exhibit No. 10 called for what percentage of 34 degree oil?

A. May I refresh my memory?

Q. Certainly?

A. 25 per cent.

Q. And was it your judgment that that proportion would be insufficient to maintain the higher candle power during the winter?

A. Yes, sir.

Q. The question has been asked in previous testimony as to why this contract was made at this time, when the entire 177,000,000 gallons called for by City's Exhibit No. 10 has not been delivered?

A. It was for the reason that I have stated, on account of the requirement of 34 gravity oil during the winter months. It was necessary to have that gravity.

Q. But it is in evidence that 25 per cent. of the 177,000,000 would represent over 40,000,000 gallons, and less than 10,000,000 gallons of the 34 gravity had been delivered on November 1st.

A. Yes, I understand that.

Q. Now, what is the explanation?

A. The explanation is that the contract provides——

Q. Which contract?

A. That the contract of April 26th, 1904, requires that this oil should be delivered currently.

Q. What do I understand you to mean by that, that it should be delivered currently?

A. That we had the right to call for 25 per cent. of 34 grade and 75 per cent. of the heavier grade currently from time to time. If we did not exercise our option for the 25 per cent., and were
1744 able to use the low grade oil, it did not mean that we could call upon the Standard Oil Company for 25 per cent. in bulk at any time and then leave it to the Standard Oil Company to deliver the 34 grade all the time, for the whole year.

Q. That was your understanding of the contract?

A. Yes, sir.

Q. What position was taken by the Standard Oil Company in reference to that clause?

A. They took that position in regard to it.

Q. Did you take legal advice as to your view, to ascertain if it was correct?

A. I conferred with counsel in all these matters.

Q. And was it on that legal advice, or after it, that you made that contract of November 1st?

A. Yes, sir.

Q. The contract of November 1st, being City Exhibit No. 30, covers what period, and requires delivery of oil for what period?

A. June 30th, 1908, was the expiration of the contract.

Q. Two years and 8 months?

A. Two years from November 1st. Our option in regard to the quantity of 34 gravity must be given in April, I think, of any year.

Q. It has been suggested that you tell what occurred in connection with this contract. I would like to have you state what the price sought to be charged by the Standard Oil Company was, which you say you refused, and any other considerations which influenced you to make this contract of November 1st, Exhibit No. 30, at that time and for that period.

A. In the first place, we had to have 34 gravity oil. The price asked, as I remember it, was a half a cent more in advance.

Mr. Page: When you say the price asked, if you are going to give conversations, let us have with whom they were.

1745 The Witness: I am not going to give conversations, simply going to give the price asked.

Q. You are obliged to state in substance what was said, not in words.

Mr. Page: Whom he had any conversation with, and as near as he can recall what was said on each side.

The Witness: I will be perfectly willing to give it, but it will be very difficult for me to remember it.

Q. Simply in substance.

A. The contract was made with Mr. Higgins of the Standard Oil Company at the price and under the conditions that we put in the contract. During the period of negotiations I also had conversations with others, in connection with the question of the supplying of this quantity of oil during the winter months, and their ability to perform such a contract. There were two other gentlemen, I think, Mr. Tilford I think was one, and I have forgotten the name of the other official. I raised this question of the absolute necessity for having 34 gravity oil, and they expressed doubt as to the Standard Oil Company's ability to make such a contract and they took the matter under consideration. They finally said that they would make the contract, but that for the current year they could not agree absolutely to give the 40 per cent. They did not know whether it was possible for the Standard to do it and that is the reason that that provision appears in that part of the contract.

Q. What provision?

A. Why, in regard to 18,000,000 gallons.

Q. Just state it.

A. The result of that was that this paragraph was put in:

"In the event of your requirements, November 1st, 1905, to March

31st, 1906, being for a greater quantity of 34 gravity oil than 1746 18,000,000 gallons, we are to have the privilege of substituting for such excess oil of lower gravity than 34 degrees, but not lower than 28 degrees."

However, they did fulfill that portion of the contract.

Q. What was the amount which was first stated should be charged for oil under the new contract, or in connection with the new contract?

A. A half a cent higher than the current price, as I remember it.

Q. And the contract is made for a quarter of a cent advance?

A. A quarter of a cent, and the provisions in regard to winter and summer deliveries are specifically set forth in the contract.

Q. Was the subject of the price of oil in the future mentioned, or the probable price, and did that have any influence on your mind?

A. It was mentioned.

Q. State it?

A. My disposition was to take what 34 gravity we could at such price that we would have to pay, rather than make this contract at this time. They told me that the price of oil was advancing and that it was necessary for us to provide for our very large demand for 34 gravity oil, if we wanted it; that otherwise other contracts would be made with others and the supply might not be available for us.

Q. And as the result of these negotiations this contract, City's Exhibit No. 30 was made?

A. It was.

Q. I will ask you whether, considering the circumstances, in your best judgment, the making of that contract was a judicious business thing?

A. Unquestionably.

Q. If the Standard had refused to furnish 34 gravity oil under the previous contract during the winter months, on the construction that such a call would not be to furnish it currently, had you 1747 any other source from which you could procure the amount of oil required?

A. I know of none, sir.

Q. In reference to the purchase of material which is bought under your supervision, I want to ask you generally whether you make efforts to get the lowest prices possible?

A. Certainly.

Q. And are any purchases made which in your judgment are not necessary to the operation of the company?

A. No, sir, they are not.

Q. How as to wages and payments for labor, as far as you are familiar with them? That is, as to the number of men employed and the amount paid to them?

A. Every effort is made to make gas in the most economical manner both as to labor and material and as to the price paid for labor; whatever the ruling rate may be, or whatever may be absolutely necessary for us to pay, determined by the question of supply and demand.

Q. Mr. Bradley heretofore testified in reference to certain expenditures at Astoria and, without his figures, he said from recollection that the total estimate for the first unit at Astoria, including land and tunnel, was something over $13,000,000. Were those figures made up by him and you in conjunction, or were they made up in consultation with you?

A. They were made up by Mr. Bradley and I consulted Mr. Bradley in regard to them.

Q. In his absence, have you the figures here?

A. May I have Mr. Bradley's figures, Mr. Mathewson?

Q. Mr. Bradley had no figures with him, but he stated that his recollection was that the amount was about $13,100,000 as I recall it, possibly $13,096,000. Will you state what the exact total amount of the latest estimate is of the items regarding which Mr. Bradley was testifying?

A. This detailed estimate which includes real estate and
1748 tunnel amounts to $13,134,519.65, but it does not include certain other items which I have data in regard to.

Q. Mr. Bradley stated in his testimony that there were certain other items which were not included, some of which he mentioned. Will you state all the additional items beyond the amount which you have mentioned, which will or may be included in the first unit, with the estimate as to each as nearly as you have it?

A. These items aggregate the total of $2,582,500.

Q. Will you give them in detail?

A. As follows:

Coal storage bridge	$150,000
Foundations	80,000
Rope haulage system	45,000
Coke storage plant at Astoria	50,000
Scows and tugs for transporting of coke to New York with coke unloading and distributing station in New York City	500,000
By-product plant	300,000
Grading and filling	50,000
Switch yard to connect with the Long Island Railroad extension	70,000
Dwellings for company's employees	300,000
Stables, horses, harness and wagons	10,000
Steel work for the second holder in the tank under construction	700,000

Q. That is the 15,000,000 foot holder?

A. 15,000,000 cubic foot holder. Undistributed expenses, 10 per cent., on $2,255,000, $225,500; 10 per cent. on items one and two, undistributed expense not heretofore included, $102,000. Total, $2,582,500.

Q. Now the undistributed expense on Items One and Two refers to Items which were included in the $13,134,519.65 total, but upon which the items in course of construction had not been computed?

A. Items One and Two are the items of coal sheds and 60-inch

mains, being items aggregating $1,020,000 which were not
1749 included in the estimates prior to putting in the 10 per cent.
for undistributed expense, and therefore subject to an increase of 10 per cent.

Q. You mean before computing the 10 per cent., which entered into the $13,134,519.65?

A. Yes, and on the $9,321,783.66.

Q. On all other items on construction except these two items does the $13,134,519.65 which you have mentioned include the 10 per cent. engineering or undistributed expense as you understand it?

A. No, it does not. It does not include 10 per cent. on the real estate.

Q. That is not construction account?

A. I beg pardon, you used the sum $13,134,000, and I thought as long as that included the land, there would be a question about that.

Q. No, I said covering construction.

A. I think that is so. There are some additional items here which entered into construction, such as the cement for gas holder tanks, and overhead gas mains which did not appear in the original estimate. They were left out by error and they are in excess of the 10 per cent. They did not enter into the 10 per cent.

Q. These items for construction which you have specified which aggregate $2,582,500 and which are in addition to the $13,134,000, will you state which of those in your judgment will be required in connection with the first unit as distinguished from those which may be required, possibly?

A. Will you pardon me if I refresh my mind?

Q. Yes.

A. The item of scows and tugs for transporting coke, coke unloading and distributing station in New York will undoubtedly be required for the first unit.

Q. How much is that?

A. $500,000. The by-product plant, $300,000, there is a question about. It has always been included in the additional
1750 unit beyond 20,000,000, but it depends somewhat upon the
question whether we will be able to make a favorable contract for by-products.

Q. If not, you will have to have the plant?

A. If not, we will undoubtedly have to have a by-product plant to manufacture other products. The switch yard connecting the Long Island Railroad, I cannot be sure that we are going to have it immediately, but we are having the engineers of the Long Island Railroad or engineers recommended by them lay out our present yards to connect with such an extension. That will amount to $70,000. The dwellings for company's employees, $300,000, is a question which is a serious one. We undoubtedly will have to take care of the important employees of the company, but to what extent that $300,000 will be required, I would not like to state.

Q. Are there facilities at present adjacent to the plant for taking care of these employees?

A. No, sir, there are not. There are no houses within quite a long distance. I don't know how much in actual length.

By Mr. **Page**:

Q. There is quite a village right across the water, isn't there?

A. Yes, sir, but there are no ferry facilities going to it. Temporarily there is a tug running from one of the wharves across to Astoria. Stables, horses, harnesses and wagons, $10,000, is a very moderate figure.

By Mr. **Burr**:

Q. Will that be required or may it?

A. I don't think there is any question about it. It is a very moderate figure. Steel work for the second 15,000,000 cubic foot holder, $700,000, merely hinges on the question whether it
1751 is wise and proper to run a 20,000,000 gas plant with one holder with the possibility of that holder getting out of order at any time.

By Mr. **Mathewson**:

Q. What is your own judgment on that subject?

A. Well, $700,000 is a lot of money to spend. I would want the holder and I hate to spend the money. A second holder ought to be there. It was fully intended it should be there as soon as this other one was finished.

Q. In your judgment, would it be prudent to erect that holder in connection with the other holder, rather than rely upon a single holder?

A. Oh, there is no doubt about that. I don't like the idea of running a 20,000,000 works with one holder.

Q. What about the coal storage plant, bridge and foundation at Astoria, will those be required?

A. The coal storage bridge will be required undoubtedly, in duplicate, for the same reason, if one bridge breaks down, our method of handling coal is crippled. It is supplemented in this particular case—our bridge plan contemplates the rapid unloading of the coal to some extent from the main coal pile, and the question of transferring of this amount of very important material, I think there should be two bridges, I should say the second bridge ought to be included.

Q. Bridges are $150,000, according to the estimate each?

A. Yes, sir.

Q. To what do the foundations relate?

A. I cannot answer that question, nor the rope haulage. I have known but I have forgotten the exact application of it, so I do not want to testify to it.

Q. How about the construction of the Astoria plant?

A. Every contract that is made in Astoria, the bids are asked for by Mr. Bradley, as I think he testified, and when they
1752 come before me I take them to the executive committee and the officers do not act on any contract until the executive com-

mittee of the Consolidated Gas Company signifies their approval of the contract.

Q. That refers to all contracts for Astoria construction?

A. Yes, sir. Latterly there has been the necessity of very urgent work in small ways, and it has necessitated giving out contracts which are now limited to anything less than $1,000.

Q. The Executive Committee of the Consolidated Gas Company passes upon all before they are put into effect?

A. Yes, sir.

Q. Are these contracts let in competition?

A. Yes, sir, there is one—if that answer covers every contract that is made, I want to eliminate one.

Q. Well.

A. With the exception of one contract, which is the only one I can think of.

Q. Speak of it now.

A. The contract for the inclined retort house was let to Bartlett, Hayward & Company, they being the only builders in this country of inclined retorts that we had confidence in. The two installations that were put up by the Central Union, one by Bartlett, Hayward & Company and one by another concern, the Bartlett, Hayward stacks stood and the other one didn't.

Q. Have you considered from an engineering standpoint, Mr. Addicks, the question as to the cost of gas at Astoria, whether it can be made at a lower figure than the average which is produced now in Manhattan?

A. Yes, my simple judgment in engineering, not in the small details.

Q. What is your judgment upon that?

A. It depends largely upon the handling of the coke in Manhattan and the demand for coke.

Q. Well, assuming that the coke meets a reasonable market at a reasonable price, do you then think from an engineering standpoint that the gas at Astoria can be produced at a lower figure 1753 than the water gas is produced in New York City now?

A. No, not the water gas, but I think it can be and will be produced undoubtedly at a less figure than the coal gas in Manhattan, of course assuming in both cases it is 22 candle-power. Of course, you must not consider the unenriched coal gas there, and compare it with enriched coal gas here; but gas for gas, I think it ought to cost less in Astoria; but that judgment must be qualified on the question of cost of handling coke from Astoria into Manhattan, which is not a simple proposition. It is not like handling coal. Coke is a peculiar product. Gas coke particularly breaks up readily and it is difficult to handle it by manual labor. Of course, men have to use forks to handle it and hannot handle as much as coal, and my experience is they do not like to handle it at all. So it is absolutely essential in the Astoria proposition to handle it all mechanically, and that has not been done yet to my knowledge and that we will have to work out. I think the cost of gas in Astoria for the first year will undoubtedly be more than the cost of gas in

Manhattan, but I should not state that beyond the first year until we get shaken down.

Q. You are referring to a comparison between that gas and coal gas?

A. Only coal gas at 14th Street and 42d Street.

Q. As there is only one-fifth of the entire output which is coal gas in Manhattan?

A. About that, yes.

Q. The substitution of coal gas produced at a cheaper rate would affect in comparatively small proportion the cost of the total output of the company, wouldn't it?

A. In proportion to what the coal gas it displaced was to the whole amount of gas sold.

Q. How long ago was the construction of this plant at Astoria begun?

A. Before I came here. I came here I think in March, 1903.
1754 Some work in grading had been done before that, but the
primary contracts were given out, I think, the summer I came here, because I was asked when I first came here to go over all the plans of the works laid out and see if I could suggest any better plans; so it had not been advanced far enough but what changes could be made.

Q. To what purpose will the first unit be put when completed?

A. The extension for the supply of gas for our present output.

Q. Of your present sales?

A. Yes, sir.

Q. It will not be a replacement?

A. No, sir, that is not the idea.

Q. To take care of the gas which you procure from other companies amounting to about 3,000,000,000 feet per annum?

A. Yes, sir, roughtly.

Q. That would leave a margin to cover about how much increase?

A. Roughly 1,000,000,000.

Q. That is, a billion?

A. Yes, which represents about—which one thousand millions represents about six per cent., I think.

Q. I want to ask you, from your knowledge of the requirements of Manhattan and your experience as an engineer, whether you consider the construction of this first unit at Astoria was a prudent and wise action on the part of the company?

A. I think it was absolutely essential.

Q. Have you made an estimate of the value of the Manhattan plants of the company, including the holders, manufacturing plants of the company, based upon your knowledge as an engineer and your experience in the gas business and your familarity with the cost of gas construction as it has been involved at Astoria?

A. I did.

Q. What is your estimate of the cost of reproduction of those plants including the 18th Street plant so far as it has been taken by the city?

1755 Mr. **Page**: What does this include?

Mr. **Mathewson**: The Manhattan plants.

The **Witness**: It includes all the Manhattan plants; it includes 18th Street and includes all the city took at 18th Street. It is about $16,800,000.

Q. Does that include any interest in course of construction?

A. No, sir.

Q. Will you assume a year's interest at the rate of 5 per cent. on that construction?

A. Exactly or approximately?

Q. Give it to us with fair approximation. Five per cent. on $16,800,000.

A. About $840,000.

Q. And that added to $16,800,000 would make a total of how much?

A. $17,640,000.

Q. I want to ask you whether the item of interest in your judgment is to be included in the estimate of the total cost for plants?

Mr. **Gans**: I object to that as not a question for an expert's testimony.

Q. Well, how long would it take to construct plants, if in Manhattan, Mr. Addicks.

Mr. **Gans**: I suppose that depends upon how many men you put on the job?

A. It would depend upon a good many things.

Q. Under ordinary conditions, would it take as much as two years or three years, do you think?

A. Oh, yes, it is a question in my mind whether it would be three to five years. I should rather say five years. Astoria now has been under construction in one plant from 1902 until date. Now all that work is concentrated in a single plant. But when you distribute that over five or six, I think it would take longer. I would not like to be limited to a specific engineering answer to that because
1756 it is a matter of conjecture and judgment to some extent. It would not be shorter that Astoria, certainly.

Q. Have you made an estimate of the cost of gas based upon exhibit 94 for the calendar year 1905 including any other items which should be allowed, if any, in your judgment?

A. Yes, sir, I have.

Mr. **Page**: Would it not be better if this witness should testify to the cost of gas based upon his knowledge and experience rather than limit it to the figures which have been put in here by their accountant?

Mr. **Mathewson**: I accept that.

Q. Based upon your experience and knowledge in the gas business?

A. Of course including my experience with the Consolidated Gas Company (producing paper.) Have you a copy of this?

Q. Have you prepared it in the shape of a table, Mr. Addicks?

A. Yes, sir, I did.

Q. Well, I think I will have you put that on the record in the form that you have it as a foundation.

A. My answer is as follows:

1757 CONSOLIDATED GAS COMPANY—GAS BUSINESS—1905.

By Exhibit No. 94, Cost of Gas Delivered			74.81¢
Deduct Fixed Charges	7.32		
" Taxes, account other Companies	.48		
" Contingent	10.00		
		17.80¢	
Add—Actual Replacements	2.12		
" For Enrichment	1.83		
" " Repairs and Renewals	4.62		
" " Labor	.78		
" " Reserve	3.00		
		12.35¢	
Net Deductions		5.45¢	5.45¢
Net for Calendar Year			69.36¢
Receipts from Gas		102.03	
Miscellaneous Income		1.30	
Dividends:			
National Coke and Coal Company		.04	
			103.37¢
Difference for Calendar Year			34.01¢
Deduct Fixed Charges			7.32¢
Difference			26.69¢
Deduct 20¢ per 1,000 for an 80¢ rate			20.00¢
Remainder applicable to Dividends			6.69¢

Recess until 2.15 o'clock P. M.

1758 After Recess.

2.15 P. M.

WALTER R. AD[illegible]KS resumed.

Direct examination by Mr. MATHEWSON continued:

Q. Referring to the statement which you placed upon the record a few moments ago, I observe that you have in procuring the 69.36 cents net for the calendar year, deducted from 74.81 cents which was shown in Exhibit 94, fixed charges, the proportion of taxes that is applicable to securities of other companies or dividends paid on them, the contingent of 10%, and that you have then added 2.12 for replacements, 1.83 cents for enrichment, repairs and renewals 4.62 cents, labor .78 cents and reserve 3 cents. Now the 2.12 cents represents, as I understand it, the actual amount of the replacements for the calendar year; is that correct?

A. Yes, sir.

Q. What is 4.62 cents?

A. That represents the difference between repairs and renewals for the calendar year, and repairs and renewals for a period prior to the purchase of gas from other companies, a period of five years.

Q. What period of five years did you take?

A. Ending 1900, I think; five years prior to that.

Q. That represents a period during which the company procured no gas from other companies and will represent the situation when the company manufactures all its own gas by this new Astoria unit, does it?

A. That was the purpose.

Q. And do you remember what the renewals and replacements average in the five years to which you refer?

A. 12.31 cents from 1895 to 1899; not 1900, as I stated.

1759 Q. That compares with the average of 10.89 cents, average renewals per thousand, for the twenty years ending December 31, 1904, does it, of which we have had testimony?

Mr. Page: Objected to. I don't remember that in this case there has been testimony on that particular proposition.

Mr. Mathewson: Oh, yes, there has. There is an exhibit in evidence showing it.

The Master: Well, it is a conclusion, anyway. Isn't it a matter of argument?

Mr. Mathewson: No, I merely ask him whether that is the corresponding item for those five years.

The Master: Would not that appear on the face of the two statements or whatever there is in evidence?

Mr. Mathewson: No, it would take a computation for those five years. The figures are before the Master but he must compute the result. That it all. I do not desire to push it any further but merely to identify it as being the average for the five years in question.

Q. What does 1.83 cents represent?

A. That represents an additional cost of enrichment over and above that enrichment for the calendar year 1905, due to the increase in statute in regard to candle-power.

Q. The year 1905 included the first six months of the old 20 candle power which we maintain and the last six months of the 22 candle power?

A. Yes, sir.

Q. And this represents a year in which the 22 candle power will be maintained throughout the year?

A. Yes, sir; as they did not maintain in 1905 throughout the year.

1760 Q. What is .78 cents for labor?

A. That is the difference between the cost of labor for the prior four years and the cost for the calendar year.

Q. And the 3 cents reserve?

A. It is a reserve that was taken before the Gas Commission; the minimum figure that was used at that time.

Q. That is an arbitrary figure, is it?

A. Yes, sir.

Q. Do you consider that to be a reasonable figure?

A. Well the ten cents contingent is what I consider a reasonable figure wihch includes the three cents reserved and all these other matters.

Q. But you have deducted 10 per cent. for the purpose of this computation here?

A. Yes, sir.

A former question which was unanswered is now put in the following form, without objection.

Q. That corresponds with the average of 10.89 cents average renewals per thousand for the twenty years ending December 31st, 1904, does it, of which we have had testimony?

A. Yes. It merely takes a period of five years in place of the whole twenty.

Q. Now, in the tabulation following the 69.36 cents you have receipts from gas 102.03 cents?

A. Yes, sir.

Q. Does that include the amount charged the city for the maintenance of public lamps, as well as for gas furnished to the city?

A. Yes, sir.

Q. That item is not separated?

A. No, sir.

Q. And the miscellaneous income, 1.3 cents, does that include the entire miscellaneous income of the company?

A. Yes, sir, in connection with the gas business.

Q. And the National Coke & Coal Company dividend of .04 cents, what does that represent?

A. That is the $5,000 divided by the sales. It is not quite .04 cents, but that is the nearest figure——

1761 Q. And the 34.01 cents is the difference between the total receipts as so calculated and the amount chargeable to the cost of gas, 69.36 cents?

A. Yes, sir, leaving a balance of 34.01 cents.

Q. Does this miscellaneous income 1.3 cents include the rent from real estate, of the tenements?

A. Yes, sir.

Q. And also from gas stoves, rentals of gas stoves?

A. Yes, sir.

Q. Now, in Exhibit 94 there appears 10 cents per thousand charged which has been explained as including actual replacements and also covering contingencies. Which of these items which you have specified in the statement just before us would be included and go to make up that 10 cents?

A. All the items commencing with "actual replacements 2.12" and ending with "reserve, 3 cents."

Q. That will be 12.35 cents?

A. In this case, yes, sir.

Q. That would consume the 10 cents and 2.35 over?

A. Yes, sir, in this case.

Q. And this 4.62 cents for "repairs and renewals," is a difference, if I understand it, between the actual repairs and renewals for the year 1905, and the average of the repairs and renewals for the five years of 1895 to 1899?

A. Yes, that is true, but it has taken into consideration the repairs made by other companies on their own plants of the gas sold to us—the proportionate repairs to their works, based on the amount furnished to us under the agency agreements. In other words, we are comparing a time when the Consolidated Gas Company did all its own work, so we must take into consideration some of the repairs on the plants of the other companies, which amounts to .35 cents per thousand.

Q. With the exception of that .35 cents it is an amount to equalize the repairs and replacements for the year 1905 with the
1762 average of the repairs and replacements for the five years of 1894 to 1899?

A. 1895 to 1899, yes, sir. My figures are 12.31 and 7.34, making a total of 4.97 less .35 for the other companies, making up the figure of 4.62 cents.

Q. Did the figures which you gave as the estimate of the cost of the Astoria plant include any interest during construction?

A. No, sir.

Q. Will you state generally what the ten cents in Exhibit 94 was intended to cover; that is, the ten cents which was added at the end of exhibit to the cost of operation?

Mr. PAGE: Referred to as contingent expenses including renewals.

Mr. MATHEWSON: It is on page 380-B of the Exhibit Book.

A. Covering any minor extensions, renewals on account of extraordinary wear and tear, depreciation not covered by repairs, all supersession, accidents of larger moment than usual, fluctuations in business, changes in the cost of material, and electrolysis and other contingencies.

Q. Is there serious danger from explosion?

A. There is in the modern situation, in the construction of subways. To-day there is an entirely new element in the gas business introduced on account of it.

Q. By reason of the accumulation of gas or possible accumulation in the subways?

A. Well, during the temporary work of construction of course the presence of electricity in the street adds an additional hazard. We have explosions sometimes now from accumulations of gas, from stray currents, which we were not exposed to heretofore.

Q. Are you obliged to maintain any additional inspection by reason of the subways?

A. Yes.

Q. What?

A. Well, take the case of the subway, we have one or two men

now riding on the trains all the time. We have during con-
1763 struction a great many inspectors. Another element particularly at this time is the laying of the salt water pipes. That is involving an expense of about $500 a week at the present time.

Q. How does that impose an expense on you, the laying of the salt water mains by the city?

A. The city have the right of way and order us to remove our pipes and we have to move them. In this particular system it is particularly important that they should have an easy curve. It is a very high pressure system and it is necessary even more than in ordinary water construction to have no sharp turns in the pipes.

Q. You refer to the salt water system as a high pressure system, do you?

A. Yes.

Q. Are you familiar with the real estate, meaning the land owned by the company?

A. Yes, sir.

Q. Is there any of that land, which with due regard to the conduct of the gas business of the company now and in the reasonable future, you would consider might be disposed of?

Mr. Page: Objected to.

Mr. Burr: Also objected to as purely speculative.

The Master: I think he may give his opinion about it from an expert's standpoint.

Mr. Page and Mr. Burr except.

A. In general, no, considering no removal of the plant from Astoria. There are specific places where I think some specific pieces could be disposed of.

Q. Such as what?

A. Well, there are one or two pieces; there is one in particular at 18th Street which I think could be disposed of.

Q. What block is it?

A. It is that block between 16th and 17th Street- and between 10th Avenue and the marginal street.

1764 Q. Well, that is land which was occupied by the 18th Street plant, is it not, which plant was condemned by the city?

A. It was a portion of that plant.

Q. And the present ability to dispose of it rises from the appropriation of the rest of the plant by the city?

A. Yes, sir.

Mr. Page: Will you see if you can have that identified by block and lot number? You have it on that map, haven't you?

Mr. Mathewson: Block No. 688, Lot No. 21.

Q. Some parcels have been mentioned, such as the south side of 65th Street, three lots, where plans for a valve house have already been filed. Would it be prudent, having regard for the business of the company, to dispose of that?

A. No, that was purchased within two years, I think, for the purpose of erecting that house. That is on the West side.

Q. Yes; and it has been testified that the East side of Avenue A, corner 60th Street, is intended for a valve house. Would the same apply to that?

A. Yes. That was not purchased within the last two years, but the same principle applies to it.

Q. Is it possible, in your experience, to wait until the moment that you desire to erect a holder to acquire the property or land for that purpose?

A. It would be very unwise to do so; you would have to pay a very high price for your property.

Q. And wherever property is not at present, or any fraction of the property, is not at present actually covered by manufacturing plan-s or holders do I understand that the income therefrom is credited by you in the statement that you have presented to-day, to reduce the cost of gas or offset that, in the miscellaneous income?

A. It shows in the net.

Q. In ascertaining what remains for distribution as divi-
1765 dends?

A. Yes, but not the cost of gas; it does not appear there. It only appears in the net.

Q. Have you ever had any experience with gas companies where competition arose, where there were contests or gas wars, so-called?

A. Yes.

Q. Much or little?

A. I think much.

Q. What concessions in your experience are necessary by a competing company in order to draw business from the established company?

Mr. PAGE: How is that material to this case?

Mr. MATHEWSON: It is material in this way. Among other things we have alleged that we have a good will and an established business, that it has a value and a large value, and the extent of reduction in the price of gas which it is necessary for a competing company to make in order to procure that from us to draw it away from us is a very valuable element in determining the value of the good will and established business. That is recognized by the court as an asset upon which we are entitled to count.

Mr. PAGE: I do not know of any court that has recognized it as an asset.

Mr. MATHEWSON: We do.

Mr. PAGE: And I do not see how it is material or relevant here as to what some other companies that are engaged in competition may do, where they have not against their charters monopolized the business, as you have here.

Mr. MATHEWSON: I do not know what you are talking about, when you say against their charters.

Mr. PAGE: Or by reason of the fact that they have obtained a monopoly, they are entitled to charge the public more by the very fact that they have become a monopoly against the statutes of the State.

1766 Mr. **Mathewson**: That is another case, and we are not a monopoly; and the courts have expressly held it in a similar case.

Mr. **Burr**: I think it is irrelevant unless the condition of the companies to which he refers is shown to be exactly the condition of this company in the city of New York, so far as its rights in the streets are concerned.

The **Master**: I do not regard it as evidence of very great value, but I will take it for what it is worth and give you gentlemen an exception.

Exception taken by Mr. Page and Mr. Burr.

A. I think a minimum of 10 per cent. of the selling price existing.

By Mr. **Page**:

Q. 10 per cent. of the selling price of what, the plant?

A. Of the selling price of gas to private consumers.

Q. Would that apply also to the public lighting?

A. Yes. But it does apply to the public lighting to a degree perhaps larger than 10 per cent.

By Mr. **Mathewson**:

Q. Is it your experience that where consumers have connections and established relations with a gas company, it requires some special incentive to compel them to change?

A. Yes, sir.

Q. And the incentive you have mentioned is the 10 cents, is it?

A. 10 per cent., not 10 cents.

Cross-examination by Mr. **Burr**:

Q. Is the land that you use for the purpose of manufacturing gas any more valuable to-day for that purpose than it was in 1884?

A. I do not know.

1767 Q. Can you make a better quality of gas on that land to-day than you could in 1884?

A. I think not, whatever the gas was—the same gas.

Q. You cannot make any more gas than you could in 1884 on that land?

A. I think they do make more gas.

Q. That is by the addition of more apparatus?

A. Yes, sir.

By Mr. **Mathewson**:

Q. And by using water gas apparatus in some instances instead of coal gas?

A. Yes.

By Mr. **Burr**:

Q. What are your duties, exactly, with the Consolidated Gas Company?

A. I am vice-president of the Consolidated Gas Company, sir.

Q. And your duties as vice-president of that company are what?

A. Well, the duties which devolve upon me in the absence of the president, or that come before me from time to time.

Q. Is Mr. Bradley under your supervision or control?

A. Yes, sir.

Q. Mr. Simpson?

A. Yes, sir.

Q. Mr. Carter?

A. Yes, sir.

Q. Repairs and replacements to the plant are submitted to you first?

A. No, sir, replacements are submitted. They have to be submitted to the Board of Directors.

Q. And in addition to your duties as vice-president you also have duties as engineer of the company?

A. No, not at all.

Q. Then you do not control the action of Mr. Bradley, the chief engineer of the company.

A. I could do so, I presume; I do not control him.

1768 Q. Well, in whatever is contemplated or done in regard to the plants of the company, do you take the initiative or does he?

A. Well, it would be very apt to be done under his initiative primarily.

Q. He would make a recommendation and you would pass upon that recommendation?

A. No, I would not pass upon it except so far as I would advise with him, but the trustees would pass upon it.

Q. You mean the trustees or the executive committee?

A. The executive committee or the trustees; either one or the other; both sometimes.

Q. Now, your first connection with the Consolidated Gas Company in an official capacity was when?

A. If I remember correctly, on the 1st of March, 1903.

Q. And where had you been employed before that?

A. In Boston.

Q. As supervising engineer of the gas companies there?

A. I was chief engineer of the Boston group at that time.

Q. Did you become vice-president at once of the Consolidated Gas Company?

A. Yes, sir.

Q. And while you have been vice-president of the Consolidated Gas Company have you been acting as consulting engineer for the Boston companies?

A. I did for a period.

Q. For what period?

A. Something over a year after I left Boston.

Q. And I understood you to say that at the time of your advent into the Consolidated Gas Company, the plan regarding Astoria and the plant there was already under way?

A. The plants were all made and some of the work was under way, yes, sir.

Q. You had nothing to do with the selection of that location?

A. Nothing whatever.

Q. Did you have anything to do with the planning of the plant there?

A. No, except as stated this morning. I was asked to go 1769 over the plant and if I could make any suggestions they would be very glad to have them.

Q. Did you approve of what was being done at that time, or did you object to any portion of what was contemplated at that time?

A. I made one or two suggestions that were carried out.

Q. You did not know of course the reason, of your own knowledge, I mean, for the removal to Astoria?

A. No, sir.

Q. So that when you testified before the Gas Commisison that the reason for the construction of the plant at Astoria was because the city demanded it, that was mere hearsay on your part?

A. Well, it was my impression that I had of the situation, and from what I know from time to time after I arrived there.

Q. You do not know as a matter of fact that the city has made such demand upon the Consolidated Gas Company do you?

A. No, sir, I do not; of course I know the city favored it, but I do not know about a demand.

Q. In what way did the city favor it?

A. In conference with Mayor Low; they seemed very desirous of furthering the Astoria improvement, but that was not in the nature of a demand.

Q. At that time that you refer to, was it contemplated that the Astoria plant should be supplemental to the plant here or instead of the plant here?

A. The first unit would be supplemental, and the additional units would be built and take the place of all the manufacturing plants in the Borough of Manhattan that belonged to the Consolidated Gas Company. That was my understanding.

Q. Was it your understanding that all the plants were to be removed from the Borough of Manhattan in course of time?

A. The Consolidated Gas Company only; not the holder stations.

Q. Didn't you testify before the Gas Commission that some 1770 of the smaller holders were to be removed?

A. They were to be removed in the natural course of events and be replaced by still larger ones; but the volume of capacity would be increased on the Island, not decreased. I do not know whether I so testified, but I say so now.

Q. Have you a statement of the maximum capacity of each of the subsidiary companies?

A. I have such a memorandum; I do not know whether it is absolutely up-to-date.

Mr. MATHEWSON: Mr. Bradley, you know, gave all that.

Mr. BURR: He summarized it?

Mr. MATHEWSON: No, he gave it in detail for each one.

Mr. BURR: If you cannot find it, never mind.

A. I have it now. The Standard I have as eleven millions, the Central Union, seven million five hundred thousand. If I remember correctly, however, that is not all available; that is to say, some of it is coal gas and some of it is water gas, but I do not think they can make the full capacity of both at the same time.

Mr. MATHEWSON: I think that was corrected to five million five hundred thousand, which made a difference between Mr. Bradley's first total and his revised total.

A. (Continuing:) The New Amsterdam, thirty millions, the Mutual I have as eighteen million. I am not sure about that figure. I think I have covered them all.

Q. To what date is that compiliation of the capacity of the subsidiary companies?

A. It is some time during 1905. I do not know the date I made it.

1771 Q. That makes a total capacity of sixty-six million five hundred thousand?

A. That is what I have it.

By Mr. MATHEWSON:

Q. Does that include the Central Union, seven million five hundred thousand?

A. Yes, that would have to be deducted. I do not remember that figure of the Central Union. It has a water gas capacity of four million and a coal gas capacity of three million and a half, but they cannot handle both of those gases. It should be some intermediate figure.

By Mr. BURR:

Q. When you became vice-president of the Consolidated Gas Company, did you make an inspection of the plants of the Consolidated Gas Company?

A. Yes, I think I inspected all of the Consolidated Gas Company's plants.

Q. And did you inspect the plants of the subsidiary companies?

A. Well, I cannot say that I inspected them. I visited all the plants except the Mutual. I do not think I have ever visited the Mutual since I have been there.

Q. That was in 1903?

A. Yes, sir.

Q. Did you find all the plants of the Consolidated Gas Company in operation at that time when you made the inspection in 1903?

A. I am not sure about 18th Street; I think I saw them all in operation, but I won't be positive about 18th Street.

Q. Was 111th Street in operation?

A. As a manufacturing plant?

Q. Yes.

A. No.

Q. How many coal gas plants did you find in operation in 1903?

A. 14th Street and 42nd Street certainly, and probably 18th Street.

Q. How many water gas plants?

A. 21st Street, 99th Street and 44th Street.

1772 Q. I understood you to say that you arranged for the purchase of the oil for the company?

A. The last contract, yes.

Q. Who arranged for the purchase of the oil prior to the last contract?

A. I think the president did, Mr. Gawtry.

Q. Do you know how long the company had been purchasing oil from the Standard Oil Company?

A. No, sir.

Q. Did you make any effort to get oil from any other company besides the Standard Oil Company?

A. No, sir.

Q. Have you attended to the purchase of coal for the various stations of the Consolidated Gas Company?

A. In the way in which I explained this morning.

Q. By advertising?

A. No; I said one of the officers of the company obtained the figures and submitted them to me and I submitted them to the executive committee.

Q. Of course the character of the coal has a great deal to do with the character of the gas produced, has it not?

A. Yes.

Q. And have you sought to procure any special kind of coal?

A. The best for the purpose with the qualifications that it was to be deliverable in certain portions on different railroads. We do not want to buy all our coal on one railroad.

Q. Why?

A. If there is a strike on that railroad we don't get any coal.

Q. Do you keep a record of change in rates of mining and of freight?

A. I do not.

Q. But you see to it if there is any change in rates of mining and rates of freight, that if the company is entitled to a reduction because of such change, the company gets it.

A. That is considered as one of the elements of cost.

1773 Q. Who takes charge of it, you personally?

A. I do not, personally.

Mr. MATHEWSON: Mr. Carter had all that information this morning for you and waited for your examination on that point. You asked him to be prepared and he is prepared.

Mr. BURR: I think I asked this morning if Mr. Carter was ready with any of the information that I asked for.

Mr. MATHEWSON: No, statements, exhibits.

Q. What is the total capacity of the Consolidated Gas Company?

A. 51,000,000 feet, I think.

The MASTER: Has not that been answered seven or eight times by different people in one form or another?

Mr. BURR: I want to know whether this witness agrees with the other people.

The **Master**: All right.

The **Witness**: My memory is 51,000,000, exclusive of 18th Street.

Q. Before the Gas Commission you testified, did you not, regarding the capacity of the plants of the Consolidated Gas Company?

A. I think I gave the capacity and the amount of gas they had made.

Q. You testified as follows, didn't you?

"For the years 1905 and 1906, 14th Street, coal gas, 5,000,000 cubic feet; 18th Street, coal gas——

A. (Interrupting.) I think I can get the momorandum from which I testified, if you will allow me to, I had it a moment ago. I think I am ready now.

Q. Proceed, please.

A. I thought you were going to read there.

1774 Q. (Continuing:)

"18th Street, condemned by city, 3,500,000 cubic feet; 42d Street, coal gas, 4,500,000; total coal gas, 13,000,000 cubic feet. Net, deducting, 18th Street, 9,500,000 cubic feet.

Carbureted water gas, 21st Street station, 24,000,000; 44th Street station, 8,500,000; 99th Street station, 5,500,000. Total carbureted water gas, 38,000,000 cubic feet and oil gas, 21st Street 3,500,000."

A. That is correct, sir.

Q. And you further stated:

"I might say, in connection with the carbureted water gas, that the quantities given still leave a reserve in the generating capacity; that is to say, there are certain generators not running, when I give those capacities."

A. That is right.

Q. So that with those generators in operation, the capacity would be greater?

A. Yes, but water gas generators are very apt to break down and you must have some to spare for that purpose.

Mr. **Mathewson**: That makes 51,000,000 cubic feet.

The **Witness**: 54,500,000; less three million and a half for 18th Street, 51,000,000.

Q. And you testified that the maximum make of gas in these works as of October 31st, 1905, was 42,459,000?

A. That is correct; I think I gave it in detail.

Q. You further stated that that was not on any particular day, but that it was the maximum make of each particular works on various days, one is January 24, another January 4, another

1775 January 7th, February 2nd, January 5th, January 19th?

A. Correct.

Q. There is a distinction between make and output, is there not?

A. Yes, very decided.

Q. Will you explain the distinction?

A. The output may be entirely independent of the make; it would be the amount of gas that was lost in the holders plus the make, or the make less the amount of gas gained in the holders. It varies from day to day constantly.

Q. The output of gas is the total amount of gas which is made, plus or minus the difference in the quantity of gas in the holders from one morning to the next, is it not?

A. Yes, sir.

Q. You gave in detail the capacity of the various stations as of the dates named before the Gas Commission, didn't you?

A. The amount of gas made.

Q. The amount of gas made?

A. Yes, sir. I think I gave those in detail.

Q. Have you those details with you now?

A. Yes, sir. You have mentioned the dates already.

Q. Yes, but I mean the amounts?

A. Yes, sir, I have them.

Q. Give them?

A. 14th Street, 4,994,000, January 24th. 21st Street, water gas 17,997,000. Oil gas 598,000. 42nd Street, 4,658,000. 44th Street, 8,897,000. 99th Street, 5,315,000. Does that agree with the evidence?

Q. Look at the printed record of the Gas Commission and see if that refreshes your recollection as to those amounts?

A. I notice some places I give the maximum capacity and follow it with the actual make, so there are two figures appearing here.

The **Master**: Exactly what is the point here? I am afraid you are going to get our record in some confusion, the way this goes in. Can't you put that in in a block, or have you already put it in, or what is the idea? 1776

Mr. **Burr**: I want to get a statement from this gentleman of the details of the capacity at all the various plants.

The **Master**: Why cumber the record with these references to his testimony in the previous proceedings? Why not let him use it for purposes of refreshing his recollection, if you like, and go on and put it in as a clean matter in our record.

The **Witness**: I might say the figures are identical to those I have just read.

Q. The maximum make of gas in these works in one day was 42,459,000 cubic feet, isn't that correct?

A. No, sir.

Q. How much was it?

A. I have not given the maximum make on the same day. The sum of all the maximum makes on the various days was 42,459,000, the figure you gave, but as these maximum makes did not happen on the same day it would not be the maximum make of those works for a day.

Q. Can you say what stations you intend to abandon and what stations you intend to retain in the Borough of Manhattan?

A. No, sir.

Q. Can you state whether you intend to abandon the coal gas plants or the water gas plants?

A. I think with 80 cent gas we cannot abandon anything, in consideration of 80 cent gas. You will have to separate your question.

Q. I am asking now with regard to the construction of the plant at Astoria. Do you intend to abandon the coal gas plants here when that first unit is completed?

A. I cannot say Mr. Burr, that we intend to abandon anything under the conditions which exist to-day in New York.

1777 Q. Will the company retain, after the completion of the Astoria plant, any of its present manufacturing plants?

A. I cannot answer the question Mr. Burr.

Q. Didn't you answer that question before the Gas Commission by saying, "The idea of Astoria was to replace all the manufacturing plants in Manhattan."

A. Yes.

Q. And you were asked this question, "That is a determined and fixed policy?" and you answered, "That is the policy of the company." Is that so?

A. I think that was correct.

Q. When did you cease to manufacture gas at the 18th Street station?

A. I don't recall that Mr. Burr. I have stated by looking at memoranda, but I cannot recall now whether it was 1903 or not. I have made a distinct statement in regard to that but I cannot recall it. My recollection is that there was no gas manufactured there in 1904, but I would not be sure of it.

Q. There is nothing but coal gas proposed for Astoria at the present time, is there?

A. Nothing, sir. I would say that the question of candle power, of course, will probably have some bearing on the subject.

Q. Do you know what the dimensions of the tunnel are that it is proposed to run from the Astoria plant to the Borough of Manhattan?

A. Something like 24 feet inside diameter, if I remember correctly.

Q. 28 feet, isn't it?

A. I think it is 28 feet outside, but I think it is 24 feet inside.

Q. How much below the surface is it proposed to lay that tunnel?

A. Some 200 or 250 feet.

Q. And how long is that tunnel to be?

A. I think something between 7,000 and 8,000 feet.

1778 Q. In addition to that tunnel you have a tunnel from Ravenswood through Blackwell's Island 10 feet in diameter, haven't you?

A. The New Amsterdam Company has.

Q. Will there be any loss to the Consolidated Gas Company by the removal to Astoria?

A. If they should move all their plants?

Q. Yes.

A. Yes.

Q. How much?

A. $10,400,000 for the plant, assuming 20 per cent. salvage, in the water gas apparatus.

Q. There is no preparation being made for water gas plants at all in Astoria, is there?

A. Not so far, no sir.

Q. Do you know any reason, Mr. Addicks, for the construction of the plant at Astoria other than this reason which has been given by Mr. Bradley, of the difficulty with the city authorities?

Mr. Mathewson: That has nothing to do with the first unit, you know, Mr. Burr.

Mr. Burr: Pardon me, Mr. Mathewson.

A. I think it is very essential to look to the future and care for the present of the Consolidated Gas Company, and that would necessitate another plant.

Q. That is what I want stated a little more definitely. Is it for the purpose of looking to the future that the plant is being constructed to satisfy the requirements of the future or is it because of some present agitation on the part of the city to cause your removal?

A. I think it is to care for the present, looking forward to the future, in a large comprehensive way in coming years.

Q. You do not mean to intimate in the slightest degree, do you, that there is any coercion on the part of the city which causes this transplanting to Astoria?

A. Well, I think it would be indirect rather than direct. When you cut a street through the middle of the works and take off
1779 all your water front, it seems to me it is coercion on the part of the city to make you do something else. When you cut streets through and interfere with the manufacture, of course it may be indirect, but nevertheless it is very effective. We have also had trouble even in the past year with the smoke ordinance, and threatened with arrest, &c., for making smoke in the manufacture of coal gas, which we could not avoid.

Q. Was it because you were committing a nuisance?

A. No, I do not consider a gas works a nuisance. There is always smoke in a gas works and you cannot prevent it. It is absolutely impossible.

Q. Then you consider the ideal location for a gas works is where it cannot hurt anybody by reason of smoke and smell?

A. I think the tendency of modern times is to get all gas works out of the centre of population everywhere.

Q. So that these three considerations entered into the removal to Astoria——

A. Well, I am merely expressing my point of view as I see the situation.

Q. Before the Gas Commission you were asked: "Will you state the causes of the removal to Astoria so far as you know of the generating plant in Manhattan?" To which you answered: "The primary purpose of removing was the demand on the part of the city that the works should be discontinued. There has been in the past serious agitation in regard to it and constant complaints on the part of the Board of Health and others; and the fact of the works being a nuisance. Of course, I said the other day as an engineer that I did not concede that a gas works is a nuisance in the sense of being prejudicial to public health. But there is constant complaint of the works from various sources." Did you so testify?

A. I think so, yes, sir.

1780 Q. And you had no knowledge of any positive act on the part of the city to compel these plants to be removed?

A. I had knowledge of objection to the works. I think there was a suit in connection with 14th Street, the smoke and dirt, by the Willard-Parker Hospital. I think that is one of the things I had in mind.

Q. Does it still remain true that the primary cause for the removal of these plants is the demand on the part of the city that the works should be discontinued?

A. I think in the sense in which I have testified to-day. I cannot add or take from anything I have said. I think.

Q. Do you know of any public official, or authority or municipal authority in the City of New York who has ever made such a demand?

A. I don't say in the shape of a written demand. I don't remember anything of the kind. There may have been before my time. As I said, Mayor Low was certainly very desirous of having the gas works out of the city and so expressed himself.

Q. This plant at Astoria is located in the Borough of Queens, isn't it?

A. Yes, sir.

Q. And it is possible for you to light up the Borough of Queens from that location, isn't it?

A. Yes.

Q. In your opinion, is the sale of gas going to increase in the Borough of Manhattan?

A. I think it will, yes, sir.

Q. Have you arrived at that conclusion from the consideration of past circumstances?

A. In a general way, consideration of the gas business and being familiar with the gas business.

Q. Does the consumption of gas keep a certain ratio or proportion with the increase in the number of people?

A. I cannot say that altogether.

Q. Do you believe that the consumption of gas in the Borough of Manhattan has reached the point of saturation?

A. You would have to qualify that and say what the point of saturation is.

1781 Q. What do you figure out is the per capita consumption of gas in the Borough of Manhattan to-day?

A. I think I made some figures about that, if I can turn to them at the moment. (Referring to papers.) I cannot turn to them at the moment. I will say from memory it is nine thousand and some hundred feet, I have forgotten the exact figures.

Q. Over nine thousand, isn't it?

A. Over nine thousand.

Mr. Page: 9,400, was it not?

The **Witness**: I have it somewhere.

Mr. **Mathewson**: Per capita, not per consumer.

Mr. **Page**: I was speaking from recollection.

Mr. **Mathewson**: Yes, it is over nine thousand.

The **Witness**: I do not see it here at the moment.

Q. Well, you are familiar with all the great gas plants of the United States, are you not, Mr. Addicks?

A. Well, I have been in a great many.

Q. Outside of the city of New York, where are the largest plants located in this country?

A. I should say the larger cities by population would indicate it; Chicago and St. Louis, and New York and Boston and other large cities.

Q. And Philadelphia?

A. And Philadelphia.

Q. Have you ever had occasion to ascertain the per capita consumption in the city of London?

A. Well, I have been told what it is; I don't know that I actually made the figures myself.

Q. What I want to arrive at is this; is it not a fact that the consumption per capita is larger in the city of New York than any other city in the world?

A. I believe it to be; anything within my knowledge.

1782 Mr. **Mathewson**: I think London is about 7,500 cubic feet per capita.

The **Witness**: I would like to say, Mr. Burr, if you do not understand it, that that includes all the gas in Manhattan Island, that figure which you gave, all the companies——

Mr. **Page**: On page 1672 of the record it was given I think by Humphreys as 9,200 feet in New York and 8,000 to 8,500 in London.

Q. Do you agree with the statement of Prof. Humphreys before the Gas Commission as follows:

"In considering the question of increase in sales a good many points have to be considered, and certainly what I should call the point of saturation has to be considered. To-day, if my information is correct, and I believe it is, New York is selling more per capita than any other city in the world. It is selling nearly 9,200 feet annually per capita, a little less than that, about 9,150 feet, I think it is. London is selling somewhere between 8,000 and 8,500 feet."

A. I understand that to be correct, and I think Mr. Humphreys is very careful in his statements and always investigates a question before he makes a statement, and I should take that to be correct.

Q. What do you call the point of saturation, Mr. Addicks?

A. Well, what I would understand by the point of saturation, referring to the population, is that the amount, dividing the total sales of gas in any year by the population of the city, would be a maximum figure; in other words, that in future years you cannot expect to exceed that number of feet for each man, woman and child in the city.

1783 Q. Well, do you agree with the definition and conclusion on that point of Prof. Humphreys before the Gas Commission, when he was asked, "What do you call the point of saturation?" And he answered "To give you a physical conception of it, you know the atmosphere can absorb so much moisture for a given temperature. If that temperature drops, the moisture drops also and I think if the conditions change here, that some of the gas is going to be dropped also. The conditions are such now, we will say the electric light, and so on, that we cannot safely depend upon estimates made in the past as to what our increases will be in the future, and certainly we cannot expect to go on at the same percentages, despite the fact that we have already arrived in New York at a figure never surpassed in the world's history, 9,000 to 9,200 feet per capita. The people are consuming about as much per capita as they will be likely ever to consume." Do you agree with that statement and conclusion of Professor Humphreys?

A. I do not care to include all the simile, because I did not follow all parts of it, but I do think that the tendency of the time is such that we have about reached the maximum amount of gas used for each person in New York City. If that is the conclusion of all you have read, I agree with it.

Q. Then you agree with the statement in which he concludes "that the people are consuming about as much per capita as they will be likely ever to consume?"

A. I think it is very probable, taking conditions as we see them existing to-day in the Island of Manhattan.

Q. What do you assume the increase will be, if any, in 1907 over 1906?

A. I have assumed one per cent.

Q. And you also assumed 3 per cent. annual increase compounded thereafter until 1910, didn't you?

A. Yes.

1784 Q. And you obtain by that method a total output of 15,099,815,000 cubic feet?

A. Yes, sir.

Mr. MATHEWSON: When?

The WITNESS: In 1910.

Q. Now you base that calculation upon the Board of Health census of 1905 for Manhattan, of 2,117,375 population?

A. I do not recall how I based that particular calculation. I gave a number of figures on the increase of gas based on population, also based on the amount of gas used per meter. I had two or three figures, if I remember correctly, and I assumed a 3 per cent. increase, which gave this 15,099,815,000.

Q. Will you look at the printed record of your testimony before the Gas Commission as it appears on page 1567 and see whether that refreshes your recollection, and whether you can now state the method by which you arrived at the computation stated as affecting the year 1910?

A. Yes. This 15,099,815,000 cubic feet was one estimate. I want to say that this does not refresh my mind in reference to any typographical errors. I stated that the population in 1905 was 2,117,000, according to the Board of Health, and to check that I ascertained the State census, June, 1905, 2,112,000, and I noticed that the greatest increase in population was 55,468 in any one year——

Mr. Mathewson: I do not think you need to continue that. Mr. Burr has not asked for anything further.

The Witness: I took the sales per capita of the Consolidated Gas Company—not of all the companies—of 6,274 cubic feet and arrived at another figure.

Q. That was the figure which you gave for 1905?

A. No.

1785 Q. 6,274 feet as the per capita sales of the Consolidated Gas Company?

A. Apparently. I see I assumed 6,300.

Q. And you gave the Consolidated Gas Company sales per capita for 1903 as 6,358 cubic feet?

A. Yes, and 1905 had fallen off slightly and I multiplied that and obtained the figure 15,166,462,000 as the output for 1910.

Q. And you gave the figures for 1900 of the Consolidated Gas Company's sales per capita at 5,340 cubic feet?

A. Apparently, yes.

Q. Can you state the number of meters in proportion in the Borough of Manhattan to the population furnished by the Consolidated Gas Company?

A. I have such figures. I will try to find them, and that will save time Mr. Burr.

Mr. Mathewson: The number of meters is in evidence and cannot your accountants divide the population?

Mr. Burr: I will ask him in regard to it.

Q. Is it a fact that one meter is furnished for each 5.4 persons?

A. I cannot recall that amount now; that sounds familiar, Mr. Burr, but I cannot confirm it at the moment.

The Master: To what extent and in what way does this line of cross-examination tend to affect any of the direct-examination of the witness?

Mr. Burr: Well, I may be mistaken, but I understood him to give some figures here of the cost of manufacture and distribution of gas in the City of New York and Borough of Manhattan, and I think I am entitled to cross-examine him upon all the elements which go into the manufacture and distribution of gas.

1786 The Master: No doubt, but I wanted to see the connection, that is all, between this present line of inquiry and what he has testified to. It was not quite apparent to me.

Mr. Mathewson: I was on the point of objecting several times, but I didn't like to, on the ground that it is not cross-examination. The testimony to which the witness's attention has been called in the printed record was testimony on rebuttal on our part after that subject had been treated upon by the complainant before the Gas Commission, and this examination has no relation to our direct evidence presented here.

Mr. Burr: I may be all wrong, but I think I am here to meet a contention on the part of the counsel for the Consolidated Gas Company, supported by this witness, that the rate fixed by the Legislature is confiscatory.

Mr. **Mathewson**: That is another proposition.

Mr. **Burr**: And if there is any information which this gentleman has in regard to that particular subject, I am entitled to know it.

The **Master**: Nobody disputes that, Mr. Burr. The only question is as to how these matters you have been bringing out have any specific bearing on the subject. I have got to pass on it some day, and it might facilitate me if you could make it clear to me what you are driving at.

Mr. **Mathewson**: It is not, too, part of his direct case, if it is material at all, where it does not touch anything we have put in?

Mr. **Burr**: I am furthermore entitled to examine this witness regarding evidence he gave before the Gas Commission upon
1787 which the Gas Commission made its order.

The **Master**: Similarly, there is no dispute about that. But that does not meet the point of my inquiry. I am not in the least disposed to cut off counsel in the fullest latitude of cross-examination, but for my own information I would like to see some useful purpose coming out of it.

Mr. **Burr**: In a word, I want to show that there is really no existing necessity for the Astoria plant, so far as present conditions obtain in the Borough of Manhattan, and that the cost of that plant should not be saddled upon those existing to-day and that if there is any reason for the construction of that plant, it should be saddled upon those who are to come after.

Mr. **Mathewson**: Is that affected by showing the increase of the output of gas or the prospective increase in the output of gas? This method of examination, instead of your putting in the testimony in your direct case, as to what you expect to be the increase, and we being allowed to put in evidence in rebuttal, is simply putting in our evidence, so to speak, in advance and putting you in in rebuttal with your witnesses, if you do not agree with them. It is putting the cart before the horse it seems to me. I submit that it does not touch upon anything upon which we have presented evidence here.

Mr. **Burr**: Of course it is very——

Mr. **Mathewson**: It is part of your case if it is at all.

Mr. **Burr**: Of course it is very agreeable to Mr. Mathewson to hand in a statement showing the remainder applicable to dividends as 6.69 after the computation made on this Exhibit or statement which has been entered upon the record, but I think I am
1788 entitled to cross-examine this witness on every item which goes to make this record upon this short paper which has been handed in.

The **Master**: As I say, I did not dispute it, but how the last few questions have any bearing on it, I do not perceive yet.

By Mr. **Burr**:

Q. In the statement which you gave to-day, showing the gas business in 1905 of the Consolidated Gas Company, you have an item reading "deduct fixed charges, 7.22." What fixed charges do you refer to, and what is the amount of such fixed charges upon which you base that statement?

A. The net interest on our debentures of about twenty million dollars, less——

Q. Are those the debentures which were issued to obtain the stocks in the electric light company?

A. No, those were issued a year or two ago on account of Astoria construction. Deducting any interest we may obtain on the temporary loans, and that appears in Exhibit 94.

Q. Is that this item of $936,883.24 appearing on Exhibit 93, and the item of fixed charges, $972,423.44, appearing on Exhibit 94?

A. 7.32 is the fixed charge. $972,423.44 appearing on Exhibit 94.

Q. Have you an analysis of that charge or item of fixed charges, showing the various sums that are charged against various things making up that total of $972,423.44?

A. No.

Mr. Mathewson: Mr. Carter has testified on that subject, Mr. Burr, and showed what the total fixed charges were, and what he received from temporary investments and how this balance arose.

The Master: That is my recollection.

1789 Q. So you know nothing about fixed charges except as the total is stated here in Exhibit 94.

A. I haven't it in mind, excepting in so far as I stated what the fixed charges were.

Q. Well, you take the fixed charges as they were presented to you by Mr. Carter in this Exhibit 94?

A. Yes, sir, from the books of the company.

Q. And you could not state offhand now what that item is made up of?

A. No, not at all.

Q. But you can state generally, what the item of fixed charges represents?

A. I think so, yes, sir.

Q. Will you state?

A. What I said—it was the difference between the amount we have to pay for our debentures and the interest received from our temporary investments and loans, in a general way.

Q. The analysis of these fixed charges appears on State's Exhibit I, does it?

A. Apparently they correspond in amounts.

Q. Do you know what particular bills payable are referred to in this State's Exhibit I?

A. No, sir.

Q. But you do know that the debenture bonds and convertible debentures referred to are $20,000,000 of debentures issued within a year or so by the Consolidated Gas Company, and no more?

A. Well, there are debentures also, a few 5 per cent. debenture bonds, apparently in addition to that.

Q. Are those the 5 per cent. debenture bonds which were used in the acquisition of the stock of the Electric Light Company?

A. I don't know what that was used for. It was before my time.

Mr. Mathewson: Mr. Carter has explained those were debenture bonds of [illegible]8, of which something over a million are outstanding, and he explained in addition this exhibit in the greatest detail, exactly what that was.

Q. This item of .48 cents, taxes account other companies;
1790 where did you get that figure?

A. That is the amount of the taxes paid on the securities owned by the company—securities of other companies, which should not be included in the cost of gas as not being involved in our gas business.

Q. And the contingent 10 cents is the fund which was agreed upon to be charged against the cost of gas at a conference in 1905; is that the fact?

A. I don't remember when it was definitely agreed upon, I haven't got it in my mind. The matter was talked over a long time.

Q. It was not charged when you first took a position with Consolidated Gas Company?

A. No.

Q. It was not charged in 1904?

A. It was talked over, I think, in 1904.

Q. But actually charged in 1905?

A. Yes.

Q. And was that your suggestion?

A. I don't know whether it was a result of my suggestion or not. It probably was. In my judgment it was, but whether it was or not I can't remember. I discussed the matter seriously months before it was ever done.

Q. Did you make up any tabulation at that time apportioning part of that 10 cents to each of the things which entered into your conclusion on that subject?

A. No.

Q. It has been testified to that that was an arbitrary figure, arbitrarily fixed?

A. I don't consider it an arbitrary figure. I think it is a figure fixed on the question of business judgment and experience.

Q. Why do you not also deduct the item of street lamps as appears on that Exhibit 94, Mr. Addicks?

A. Why should I?

Q. Street lamps, 2.18?

A. I don't know why I should.

Q. That is the item which represents the cleaning and repairing of the street lamps?

A. Yes, sir.

Q. Shouldn't you also deduct the interest on the con-
1791 sumers' deposits which appears on Exhibit 94 as .39 cents?

A. No, sir, I don't think so.

Q. Upon what theory do you allow that to remain?

A. On the theory that we pay it out as part of the cost of gas. It is not retained in our capital, as I remember it.

Q. Shouldn't you deduct the item of repairs to gas stoves .42 cents?

A. I don't think so.

Q. Upon what theory do you allow that to remain?

A. It is a customary charge in the repair of stoves in all the experience I have had in the gas business.

Q. You have "Actual replacements, 2.12"?

A. Yes, sir.

Q. Where did you get that figure from?

A. That is the actual amount expended for replacements during that year and it is included in the 10 cents per thousand. That is to say it will be closed into the 10 cents a thousand at the end of the year with all the actual replacements.

Q. Have you got the paper from which you testified with regard to construction work at Astoria amounting to $2,528,000?

A. Yes, sir.

Q. Will you let me look at it please?

A. $2,582,000, it is. (Handing paper to Mr. Burr.)

Q. Do you agree with the statement of Mr. Mayer who testified here that the more up-to-date the construction of gas plants is the cheaper the manufacture is as a result?

A. With certain qualifications, within certain limits.

Q. What qualifications, for instance?

A. Well, I think if you would limit this to a single case you might make comparisons between that particular case, but I don't think you can say that in general, comparing one point with another point. Provided you do not introduce any complications or situations it might remain the same. I mean to say it might be an improvement with modern apparatus, but the expenses that
1792 might be involved might offset al- the saving. And again,
if you have an old plant and you renew that plant on the same ground you have the original capital of the old plant plus the capital of the new plant, and it is a matter of computation as to whether there is any saving by putting in a modern plant in that location unless at the same time you have the ability to charge the old plant off to depreciation so as not to unduly increase your capital.

Q. But as a matter of fact, to your knowledge the price of gas not only in the city of New York, but in all the large cities of the United States has steadily decreased, hasn't it?

A. Yes.

Q. The manufacture of gas is a progressive art, isn't it?

A. Within certain limits.

Q. It has immensely progressed since its introduction in this country some seventy-five years ago, hasn't it?

A. Oh, yes.

Q. Well is that diminishing in the price of gas due to the improvement in apparatus and plants?

A. I think it is primarily due to the process itself, up to date. The introduction of water gas in my judgment is what has made it possible to reduce the price of gas more than any other element.

Q. Does not increased consumption have something to do with the price?

A. Within certain limits, but that is a matter of local question. In some cases it does and in some cases it does not, apparently.

Q. What do you find the case to be here?

A. I think for a series of years it has remained fairly steady. There are some economies in some directions which are offset by expenses in other directions. Given a steady manufacture and an increased business for the same plant in the way of meters and mains
I should say it would be apt to decrease it, but when you have
1793 to build a large plant in order to meet that demand it would
not necessarily affect the situation.

Q. Speaking of mains, when you took charge of the Consolidated did you ascertain the condition of the mains in the streets?

A. Yes, in conversation with the superintendent of mains. I had a general conversation, but I did not dig up any in the streets to ascertain their conditon.

Q. Have you ever made any personal examination of any of the mains?

A. Only as I see excavations, I generally look to see what is in the hole, and I very frequently see mains in that way.

Q. Did you ever see the mains that Mr. Simpson thought he detected some evidences of electrolysis in?

A. No, I didn't see that.

Q. Did you ever see a map showing the mains of the constituent companies in 1884?

A. No. I may have seen it, Mr. Burr, but it is not in my mind.

Q. Have you ever kept track of the abandoned mains?

A. No.

Q. Do you know of any person who has any information upon the question of abandoned mains, abandoned by the Consolidated Gas Company?

A. Only so far as Mr. Simpson has testified. I cannot add to that.

Q. Is there a map showing the mains and their sizes in every street in the City of New York?

A. Yes, sir, I believe there is. When I say map, I mean a map in a general sense, I do not mean it in the singular sense.

Mr. BURR: Well, it is singular we have never been able to see it; that is the only singularity I have observed.

Q. Now, this item of $300,000 for dwellings for the company's
employees at Astoria? Does that contemplate the erection
1794 of hospitals and schools and kindergartens?
A. That has not crossed my mind yet. I have not gotten as far as that up to date. I have only considered the housing of the men to get them to the works. It is a matter which is pressing on us now and has been brought up a number of times in the last two months.

Q. Is there in your mind any pressing necessity for the construction of dwellings for the company's employees, requiring the expenditure of $300,000, having in mind the fact that the first unit is only now constructed?

A. I have not given that sufficient, careful thought as to the exact number of employees and the price per dwelling or the price per unit of housing them, so I would not like to testify specifically on that. There is a pressing demand definitely for some construction for our future employees under present conditions, in the vicinity of our works.

Q. That is, at some time in the future?

A. It is pressing now.

Q. You may erect model dwelling houses for your employees?

A. I don't know about model dwelling houses, but certainly if we do anything we will make them as perfect as we can afford to make them to keep up to the times, to give them accommodations such as other people would give.

Q. Well, no plans have been drawn for these buildings?

A. No, the plans have not been drawn.

Q. It is a hope and an aspiration?

A. No, it is more than that, it is a necessity.

Q. What do you mean by the rope hauling system?

A. I explained I did not recall directly in my direct-examination by Mr. Mathewson. I will have to plead a certain amount of ignorance upon that point. It has escaped my memory. It is not a large item.

1795 Q. How much would you deduct from this summary of data in the amount of $2,582,000, as being wholly and entirely unnecessary to be taken into consideration at the present time?

A. I would not deduct any of it from that point of view, not wholly unnecessary, but I should say specifically that I hope there will be no by-product plant built, that is $300,000, I hope we won't have to spend $300,000 for the dwellings of our employees. The fifteen million foot holder I am afraid will be a necessity; it will be a matter of reasonable precaution, in running the works to have a second holder.

Q. Have you adopted that plan of a second holder in the Borough of Manhattan?

A. I don't think there is any station that has not more than one or two holders, I do not recall any.

Q. Well, I mean to say is it a duplication of the holders by reason of the possible necessity for the extra holders used in the Borough of Manhattan?

A. Why, undoubtedly. I don't know what was in the mind of the engineer, but there cannot be a question in my mind that that was in the mind of the engineer.

The scows and tugs for transferring coke, $500,000. That system is an absolute necessity. You have got to get the coke over to New York and handle it in a modern way.

Q. Does that mean the wiping out of the National Coke & Coal Company?

A. Not at all. The National Coke & Coal Company will do all this work and it will necessitate their spending a large sum of money for horses and carts in addition. If the gas company handled it, the gas company would have to expend money for carts and horses and stable room.

Q. You mean it will require further advances on the part of the Consolidated Gas Company to that company?

A. For construction, yes. If they are going to do it they have got to have more money to do it with. And you cannot do it out of the present facilities.

1796 Q. This by-product plant is something new, isn't it?

A. It is for ammonia and tar.

Q. The idea I suppose is to extract every possible pound or gallon of ammonia and tar in the process of making gas at Astoria?

A. The idea is to extract every particle of the ammonia, I mean the apparatus in the works extracts every article of ammonia it can from the gas, and then that is in the shape of ammoniacal liquor of varying strengths and from that sulphate of ammonia is made. We sell it as ammoniacal liquor on the basis of a certain price per pound of sulphate. As far as the tar is concerned the object is to make as little tar as possible and then get as large a price for it as we can.

Q. The idea for this new plant would be to utilize the utmost out of your residuals?

A. Oh, yes. As a matter of fact, the larger amount of residuals you have for sale the less the tendency is to pay the price, a reasonable price, for those residuals.

Q. That would have a tendency to reduce the cost of gas, wouldn't it?

A. Certainly. The more for residuals you get the more it reduces the cost of gas.

Q. And those would enable you to do the work the company now has contracts with the Barrett Company and other companies to do?

A. Well, that would enable us to turn it into a raw product, which then would have to be placed on the market, and that the Barrett people do at the present time, but after we have turned it into the raw product we have got to sell it.

Q. Will you explain a little more in detail the difference between oil Baume 28 degrees and oil Baume 34 degrees?

A. Simply one has more lighter products, volatile products in it, than the other.

Q. And what specific purpose is the lesser degree of oil used for in preference to the greater degree?

1797 A. Never used in preference. The higher gravity of oil we can get the better we like it, within certain limits; it is a question of price.

Q. And you take 28 degree oil because you cannot get 34?

A. Well, it is the cheapest and as long as we can handle it with the fewer number of gallons to reach the consumer with the given candle power we prefer to use the cheapest grade.

Q. Are you familiar with prices paid for oil in the large cities of the State of New York?

A. I examined the returns from Brown's directory, but I don't know their accuracy.

Q. What is Brown's directory?

A. It is a directory of all the gas companies in the country, with information as to their officers as well.

Q. It is a recognized trade publication is it?

A. Yes; published by the publisher of *Progressive Age* in New York city; a capable man.

Q. And is *Progressive Age* a progressive gas paper? Is it devoted entirely to the interests and the information of those interested in gas works?

A. It has a great many articles on gas in it.

Q. Now you say you sought to obtain a low price for this oil. Can you state any person that you had any dealings with for that purpose other than the Standard Oil Company?

A. No, sir; I cannot.

Q. You are acquainted with Mr. Mayer, who testified here?

A. Yes, sir.

Q. Is he now in the employ of the Consolidated Gas Company?

A. Yes, sir; for the specific purpose involved in this hearing.

Q. I ask you is he now. His labors are finished, I understand?

A. Yes, sir; entirely.

Q. And Bartlett, Hayward & Company are building the first unit at Astoria of the plant there?

A. No, sir; they are building a certain part.

1798 Q. When you said that in your efforts to get a favorable contract for your oil, that the chief engineer advised you he needed a better grade of oil, did you refer to Mr. Bradley?

A. I did.

Q. Did he say what he needed a better grade of oil for?

A. Yes, on account of candle power, maintaining candle power.

Q. Did he say why the oil previously used was inferior for his purposes?

A. On account of maintaining candle power, yes.

Q. What was the oil that you had been using prior?

A. 28 degrees gravity, or thereabouts.

Q. And not 34?

A. Not 34. When I say that I say that practically there was some 34 used, but a very small quantity.

Q. Well, how small?

A. I do not recall the exact number of thousand gallons.

Q. Would you say million gallons?

A. Or million gallons, either.

Q. Was this your first venture into the oil regions?

A. Will you put that question a little plainer.

Q. Had you ever bought oil for any gas company before?

A. I do not think I ever made a contract ebfore that contract.

Q. Were you familiar with the prices charged in other cities for oil?

A. I have been familiar with the prices in the cities in which I was employed, in Boston.

Q. What grade of oil do they use there?

A. I was trying to recall. 34 gravity, I think—32 or 34, as near as I can remember. They did use naphtha in the past years and they have used as high as 44 gravity in the past years.

Q. You did not buy any oil in Boston, as I understood you?

A. I don't think I ever made a contract, no, sir.

Q. Do you know what the prevailing rate for oil of this degree, 34, is in Boston to-day?

A. No, sir.

1799 Q. Now, do you know what the prevailing rate to-day is for 28 degree Beaume?

A. No, sir.

Q. Are the companies in Boston coal or water gas plants?

A. The Consolidated Gas Company of Boston is both coal and water gas, the New England Gas and Coke Company is entirely coal gas.

Q. You testified at an investigation into the workings of those companies a little while ago, did you not?

A. Yes, I did.

Q. Your estimate of the cost of gas as given by you, is based upon all the items embraced in Exhibit No. 94, I understood you to say?

A. Everything on that paper is not on Exhibit No. 94, because it has reference to some of the repairs and renewals in previous years, but the basic figures are obtained from Exhibit No. 94.

Q. And the figure that you give in this statement which has been spread upon the record, 69.36 cents, is in your estimation the cost of gas per thousand cubic feet at the burners?

A. That is the price that should be allowed as the cost of gas in 1905 at the burners, based on sales.

Q. If I understand this paper rightly, you claim that the profit which is derived by the company from that figure would be what?

A. Are you figuring on 80 cent gas or dollar gas?

Q. I am figuring on 80 cent gas.

A. Well, the gross amount applicable to dividends would be 6.69; fixed charges, 7.32.

Q. Well, do you mean that this being the cost of a thousand cubic feet of gas at 80 cents, it leaves a remainder applicable to dividends upon the capitalization of the company of 6.69?

A. After paying the fixed charges on the debentures.

Q. After paying all the fixed charges?

A. Yes, sir.

Q. 6.69 cents per thousand cubic feet?

A. Yes.

1800 Q. You have not been able to figure out in anyway, from your examination of the business of this company or the figures that have been produced here, that an 80 cent rate forces you to manufacture gas without any profit whatever, have you?

A. No, sir.

Mr. **Mathewson**: We would shrink from such an effort.

Mr. **Burr**: You may be retiring.

Mr. **Mathewson**: Not yet.

Q. Your attention was called to the pressure clause of the law, and I understood you to say that it was not possible to comply with the terms of the provision of the law in that regard?

A. I said my judgment was that it would be practically impossible to comply with the provisions of the law.

Q. Have you ever tried to comply with them?

A. Yes, sir.

Q. You have had a great deal of experience, I presume, in regard to pressure?

A. Yes, I think I have.

Q. In any other city than Boston?

A. No, I never ran a works except in Boston.

Q. Is it true that the greater the pressure the greater the consumption of gas?

A. No, I cannot say yes to that statement.

Q. Then you disagree with Mr. Bradley?

A. I do not know whether Mr. Bradley testified to that or not, but I cannot say as a law that the greater the pressure the greater the consumption of gas, because I do not think it would need necessarily follow.

Q. What relation has the size of the mains to the pressure of gas?

A. I cannot answer that question intelligently. I am not quibbling, Mr. Burr, but I am just thinking of an answer.

1801 Q. In your judgment has it any relation? That is the point I am trying to get at. Has the size of the mains used in distributing gas, any relation to the pressure of the gas? It may be a simple question to answer and it may be extremely difficult; I do not know?

A. The best way I can answer that is that the size of the main is an element in the distribution of gas to which pressure has some relation. I do not think I can answer any better than that.

Q. As far as the amount of gas is concerned, for instance, you can send a greater amount of gas through a large main than you can through a smaller one.

A. Yes, under the same pressure.

Q. So therefore it has some relation to the pressure?

A. I did not say that it did not have any relation, but I thought I would qualify that one element.

Q. Is it possible to construe the law limiting the pressure of gas at from one to two and a half inches at sea level, by the usual scientific method, and add a half inch to this pressure for each one hundred feet rise?

Mr. Mathewson: I suggest that that is not a proper question. Whether it is possible to construe that is a matter perhaps of law rather than expert testimony. If there is any doubt about what it means, it is not for this witness to say.

Mr. Burr: I am asking him if that is not the usual scientific way of construing that law.

Mr. Mathewson: No, I do not think you asked him that.

The Master: Ask him anything you please about putting gas through pipes, but I do not see how he can be asked as a gas man as to any valid effect or construction to put upon a law.

1802 Mr. Page: He said he was familiar with the law, and that it was absolutely impossible to comply with the requirement of it.

The Master: Well, I will let him answer that question the best he can.

Q. Is it possible by limiting the pressure of gas at from 1 to 2½ inches at the sea level, by the usual scientific methods, to add a half inch to those pressures to each 100 feet rise, and comply with the requirements of the law in question?

The Master: That is all right.

Mr. Mathewson: I object to that again, as a conclusion.

The Master: I will let him answer it.

Mr. Mathewson: It is assuming that if he violates the law, will it be possible to comply with the law. That is virtually the question.

The Master: He may answer it.

Exception taken by Mr. Mathewson.

A. I cannot answer that question.

Q. Do you give it up?

A. No, I do not give it up by any manner of means. I would not give it up, but I cannot answer the question offhand on the stand.

Q. You mean to say that you would require some time to consider that?

A. My answer would naturally be no, that it was not possible to comply with the law even with that qualification; but I would not say that offhand on the stand. I would be very glad to consider the matter. As far as I am concerned I do not construe the law and never have, except as it appears on the face of it. For instance it says "at no place" and "no mains"—as a matter of fact, a service
main. Now, we have not any such term as "service main"
1803 in the gas business. That is the first place where the law is
very uncertain, but it says that in no service mains shall the pressure be less than 1 inch and more than 1½ inches at any distance from the works. Now, what "at any distance" means, I do not know whether it means a foot or some indefinite distance.

Mr. Burr: Well, the court will take care of that Mr. Addicks, because the law will be construed as a reasonable law, no doubt.

Mr. Mathewson: I wish it could be. Merely for information, did your question contemplate the result if the pressure specified by law should be taken as applying to sea level, and as being increased half an inch above the pressure specified by law for each additional elevation which you mentioned? Is that it?

Mr. Burr: Standing apart from the law, I have asked him the direct question.

The Witness: If there were 2½ inches pressure at the sea level, the East River at some point, and at 100 feet above that, it was, for pure coal gas, one inch more? Does it mean that we can carry, if that difference is one inch, does it mean that we can carry 3½ inches at that point, and 100 feet above that point 4½ inches, and 100 feet above that 5½ inches. That is the only thing I mean. I am speaking now of pure coal gas, where about 100 feet is one inch pressure. Unenriched coal gas as you get a higher gravity, it runs down.

Mr. Page: The question was about a half-inch.

The WITNESS: Take a half inch then; two and a half inches at sea level, three inches at 100 feet, three and a half inches for the next hundred feet and four inches at the next hundred feet 1804 and so on. If that is the proposition I do not see how it can be within one and two and a half inches at any distance from the works. I should be very glad to construe it that way, and it would certainly make the law easier if it could be construed that way. Whether it would be effective or not I would not like to say offhand.

Q. What was this average that you referred to in making up your computation of 10.89 for replacement?

A. The average replacement, 1895 to 1899, was 12.31. There is an exhibit in this case, I do not recall the number; and for the calendar year of 1905 it amounted to 7.34.

Q. You said something with regard to the average for the past twenty years.

A. No, I did not take that. Others have taken twenty years in those computations.

Q. You gave here a figure of 10.89.

A. I think that was about the figure for twenty years. Others have taken the whole twenty years. If we were manufacturing gas for the whole twenty years and not buying gas, I would be content to take that time, but as we were buying gas for some of that period, as for myself, I prefer to take the time we were manufacturing all our gas and compare it with that.

Q. You say you are familiar with the real estate of the company?

A. Yes, sir, I think I am perfectly familiar with it.

Q. Can you tell me where the company has vacant land not in use for gas manufacturing purposes?

A. I could call your attention to any plots and show you the use to which they are put.

Q. Have you made any diagrams showing the use that every parcel of property or real estate or land is put to by the Consolidated Gas Company?

A. I do not recall doing that.

Q. Is there such a diagram in existence? I mean showing 1805 at each particular plant where each particular building is located in that particular plot?

A. I cannot answer that yes or no.

Q. I call our attention to Exhibit 105 before the Gas Commission which was introduced in evidence here yesterday, which purported to be a statement of gas made for the Consolidated Gas Company by other companies, net, for the nominal year ending October 31, 1905. That statement shows month by month for the nominal year ending October 31st, 1905, the sales by each company to the Consolidated Gas Company with the price charged, which includes the ten per cent. addition to actual cost. I call your attention to the differences not only in the cost of the several companies, but the same companies for the several months of the year. For instance, the New Amsterdam, month of greatest cost is July, 39.66; month of least cost, December, 31.85. Standard, July, month of greatest cost, 35.31 month of least cost, May, 31.65. For the Mutual, month of greatest cost January, 41.60, month of least cost, October, 34.91. Central Union, greatest cost 34.43, October, month of least cost, June, 25.85. The increased percentage over lowest cost in the case of each company is as follows: New Amsterdam, 24 per cent., Standard 11½ per cent., Mutual, 19 per cent., Central Union 33 per cent.

Now, can you give any explanation as to the cause for variation between the prices of those companies?

A. No, except that in general, the price month by month is an uncertain thing. It not only depends upon the cost of labor and material, but it also depends on the amount of repairs to the plant. That has a bearing on the cost.

Q. The season of the year does not seem to be a factor, because one of the companies has its highest cost in the month of January, two others in the month of July, and the fourth in the month of October; while the least cost to one company is in the month 1806 of December, one other in the month of June, and still another, the month of October?

A. Of course you would have to have definitely the sales of that particular time in each company. As I said before, the quantity of repairs has a very great bearing. Of course normally if you had no repairs whatever and maintained the work in a normal way, year by year, with coal gas particularly, you would expect the highest cost in the summer, or higher cost in summer than you would in winter, normally. With water gas it is not so noticeable, ordinarily, except for the repairs, because the total labor is not a very large item. It would have to be that the increase of sales or output of the works would offset the increased cost in winter, and it might be that repairs were delayed, material might not have been received in summer; it might have been delayed until November or December. I cannot tell without considering each company.

Q. Can you give any explanation of the fact appearing on this exhibit that the Consolidated Gas Company buys three times as much from the Mutual Company as it does from the Central Union, although the cost to the former company is 30 per cent. greater than the latter, and buys five times as much from the New Amsterdam Company as it does from the Standard, although the cost is five per cent. less?

A. As far as the Central Union is concerned, it would buy no more gas than was necessary in Central Union territory. As far as the other companies are concerned, it would undoubtedly buy from the company that was able to supply it.

Mr. Mathewson: The Mutual does not operate in Central Union Territory, Mr. Burr, nor does any of these other companies.

1807 The Witness: None of them at all.

Mr. Mathewson: That merely relates to public lamps maintained in the Bronx. The Central Union gas is obtained for that; there is no other place to get it.

Mr. Burr: I think it is in evidence here, Mr. Mathewson, the actual sales per active meter?

Mr. Mathewson: Yes, that appears.

Q. Are you selling more gas this year than you did last year?

A. I am a little in doubt whether we are selling a little bit less or a little bit more. Some months I remember we have sold less. Month before last we had a material gain, evidently on account of the very dark weather we had during one month.

Q. Are you buying more gas this year than you did last year?

A. I have not got that figure in my mind.

Q. Is it not a fact that by the statements produced by your company before the Senate Investigating Committee, the cost of manufacturing gas in 1904 appeared to be 39.27 per thousand cubic feet?

A. I cannot remember that far back. It is a question of whether it is make or sales, or including that bought or made, or whatever it may be.

Q. Does it appear from Exhibit No. 94 in this case that the cost of manufacturing gas in 1904 was 32.42 cents per thousand cubic feet?

Mr. Mathewson: At what point, at station cost or in the holder?

Mr. Burr: Station cost.

A. That appears to be the figure at station cost, gas made, Consolidated Gas Company's own works, 32.42.

1808 Q. To what change of conditions do you attribute your
ability to manufacture at over 17 per cent. less cost in 1905
as compared with 1904?

Mr. Mathewson: Now, just a minute. There is no evidence here that in 1904 they manufactured at 39 cents. The witness is asked a question here as to whether that was not so, and he says he cannot say, and he does not know whether if there was such a figure it was based on make, or sales, or what not. I submit that there is no foundation for the question, and I object to it.

Mr. Burr: I understood the Master to make a ruling here long ago that all the statements in the pleadings and affidavits were before you, part of it being that the answers of the City of New York is the report of the Stevens Investigating Committee. By that report it appears that in 1904 the cost of manufacturing gas was the figure I have stated.

Mr. Mathewson: I would like to see the report to see whether it relates to sales or what it does relate to.

The Master: I suppose Mr. Mathewson's point is that that does not prove it to be the fact, the fact that it was reported by the Stevens Investigating Committee.

Mr. Burr: No, but these gentlemen can deny it if that is not correct. I asked for that figure for the purposes of comparison, as is plainly to be seen.

Mr. Mathewson: Let us supply the first figure first.

The Master: You can ask him, assuming that it appears in the
report of the Stevens Investigating Committee or elsewhere that they
manufactured gas at a certain price in 1904, how he can
1809 account for the fact that in 1905 it apparently cost a lower
price, and let him make the best explanation that he can that
covers that point.

Mr. Burr: Thank you, I will adopt the suggestion.

(The remarks of the Master were repeated to the witness, after which Mr. Burr put the following revised question.)

By Mr. **Burr**:

Q. Assuming that it appears in the testimony before the Senate Investigating Committee that the cost of manufacturing gas in 1904 was 39.27 cents per thousand cubic feet and you knowing the fact to be as it appears by your Exhibit 94 at this hearing that the cost of manufacturing gas was 32.45 cents a thousand cubic feet in 1905, can you tell me to what changed conditions you attribute your ability to manufacture at over 17 per cent. less cost in 1905 as compared with 1904?

Mr. **Mathewson**: I object to the question as not proper.

Objection overruled; exception.

A. I could not tell without comparing item by item, Mr. Burr, as to what to attribute it to.

Q. Calling your special attention to that data and those figures, would you be kind enough to investigate it so that you may be able to answer it to-morrow?

Mr. **Mathewson**: I do not think the witness will have a chance to do that, Mr. Burr. It is a good deal of a question, involving a great many elements.

1810 A. I would be perfectly glad to suggest things that might bear on it, and it would be a question in my mind of cost of labor and material and any increase in efficiency in the work. That is all I could see that I could look for. It varies from year to year and from time to time, so that is the reason I figured on 10 cents.

Q. What I would like to know is whether that difference in the price was due to the increased production at a lower cost for material, labor and expenses, or in the saving of a greater percentage of the gas made, it appearing that the cost of material, labor and expenses in 1904 was $3,528,901.55 for an output of 8,984,550,000 cubic feet and the cost of the same in 1905 was $3,455,091.37 for an output of 10,657,810,000 cubic feet, as shown by Exhibit 94?

A. Is that manufactured gas or is that sold gas? These figures you have called my attention to, or the one that is here, is based on the cost of gas made, not sold.

The **Master**: When you say here, you mean what exhibit?

The **Witness**: In Complainant's Exhibit 94. Now, if there is any reference to sales in any of those figures, it would not apply to this figure referred to. So far as two works are concerned, a works that is smaller than another works may make gas cheaper than one that is larger. So that it would require analysis in each case.

Q. As a matter of fact, you made more gas in 1905 than ever before in the history of the Consolidated Gas Company, is not that so?

A. I would not like to answer that offhand, Mr. Burr. I have not those figures in my mind. I have had no occasion to use them, therefore, I have not them in my mind. I could remember it. I could say what gas we sold in 1905, Mr. Burr. I have that figure.

1811 Q. Now, in the affidavit made by you you state that about four-fifths of the present generating capacity of the Consolidated Gas Company are in the shape of modern up-to-date water gas plants, which could not be improved upon anywhere and that the remaining one-fifth are coal gas plants which are efficient and in shape to operate for an indefinite period without inpairment of efficiency?

A. Yes, sir, I think that statement is absolutely correct.

Q. And you heard Mr. Mayer testify?

A. I heard Mr. Mayer testify, yes, sir.

Q. And you agree with Mr. Bradley, the engineer, in the statement made by him in his affidavit, that all the manufacturing plants are kept at a high state of efficiency and during the past year they produced more gas and at a lower cost than ever before in the history of the company?

A. I agree with the first statement, that they have produced more gas, Mr. Bradley states, and I would accept Mr. Bradley's statement for that, that it was the largest amount of gas made.

Q. Then there is no reason to believe that the value of your manufacturing plants will depreciate so long as it is kept in its present condition of use?

A. Except for supersession.

Q. What do you mean by supersession?

A. Superseded by some other plant, and the final renewals that any plant must need. It may be—take a plant in a perfectly good condition, I cannot say that there may not something happen to that portion of the plant, the whole thing may blow up and there would be an expense of hundreds of thousands of dollars.

Q. In setting aside 10 cents per thousand cubic feet of gas sold, hasn't your company intended to provide for all necessary cost of ordinary as well as extraordinary renewals, replacements and repairs?

A. Ordinary?

1812 Q. All necessary cost of ordinary as well as extraordinary renewals, replacements and repairs.

A. That is in addition to ordinary repairs?

Q. Yes.

A. But it includes renewals but not repairs. You have to make a distinction between renewals and repairs. The current repairs are taken care of in the cost of gas, but the renewals are included in that 10 cents.

Q. That is renewals and replacements?

A. Renewals and replacements, allowing 2.12 cents in this particular case. Of course I will add, too, that if there is a variation in the cost of repairs—I have shown here in this item as between the repairs for the calendar year a difference of 4.62 cents. I should consider personally that 10 cents would cover that or would be part of that difference, and the actual replacements?

Q. Well, as a matter of fact, there will not be any actual depreciation in the value of your plant until it is dismantled or removed to Astoria, or a portion of it sold for scrap?

A. Not necessarily, it may be superseded at any time, I cannot say when. I don't know what will develop in the gas business to cause supersession.

Q. Have you in mind any supersession other than that contemplated by the removal of the plant to Astoria?

A. No, none that would be probably installed in that same place; in other words, the cost of installation plus the original cost would be greater than would pay to make the change.

At 5:10 adjourned to 11 o'clock Friday, September 7th, 1906.

Last Exhibits:

Complainant's 224.
State's U.
City's 44.

1813 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *September 7th,* 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Burr, Mr. Page, Mr. Gans, Mr. Kirby.

1814 WALTER R. ADDICKS, being further examined, testified as follows:

Cross-examination by Mr. BURR (continued):

The WITNESS: I would like to make a correction in my testimony yesterday.

Q. What page of the record?

A. I do not recall the page. It was a question about electrolysis that you asked me.

By Mr. MATHEWSON:

Q. He asked you if you had seen the mains which Mr. Simpson testified as having pitted with electrolysis.

A. Yes, the question covers the general question of electrolysis, not specific in any case. I had in mind the case of some electrolysis that occurred about Spring Street, I think it was. As a matter of fact, there was a case of electrolysis about the Brooklyn Bridge, which he also testified to. A sample of that part was taken up and submitted to me, and I had forgotten it at the moment. In accordance with that, I called upon the Brooklyn Railway people to investigate that question in connection with electrolysis at the Brooklyn Bridge, after I saw that piece of pipe; I did not recall it at the time.

The MASTER: Page 1793 is the page on which occurs the statement which the witness corrects.

A. Further, regarding capacity, I stated that the Standard was eleven millions. I understand that it is rated at ten millions, instead of eleven millions, although it has made an excess of ten millions. As regards the Mutual, I said that I had never been in
1815 the Mutual works since I have been in New York in connection with the Consolidated Gas Company. Mr. Bradley has given the capacity as twelve millions, and I will have to take his figures as regards capacity, for I merely learned it from him. I also gave the Central Union 7,500,000 feet. That was correct. Mr. Bradley originally gave it as 9,000,000, and that is the sum of the capacity of water and coal gas, but 7,500,000 is all that it can handle through the works in its entirety.

Q. What would that make your total for the capacity of the other companies in Manhattan, including the Central Union?

A. Taking 30,000,000 for the New Amsterdam, 12,000,000 for the Mutual, 10,000,000 for the Standard, 7,500,000 for the Central Union—59,500,000.

By the way, I omitted entirely the Northern Union. There is half a million capacity there.

By Mr. PAGE:

Q. But they do not manufacture?

A. They do not manufacture. On capacity the total makes 59,500,000.

By Mr. MATHEWSON:

Q. Exclusive of the Northern Union?

A. Exclusive of the Northern Union.

By Mr. PAGE:

Q. Then you have the Equitable plant lying idle; can you figure that up?

A. That is another plant that I do not remember going into. The plant was shut down.

By Mr. MATHEWSON:

Q. That is not a plant that could be operated to manufacture gas with any economy, the old Equitable plant, is it?

1816 A. It is a retort process, of using oil in retorts, and except for enriching coal gas, we are not using that process to-day. We are using the cupola generator types.

By Mr. Burr:

Q. So that you have not included the Equitable in that calculation?

A. No, sir.

Q. Can you state now what the capacity of the Equitable is?

A. No, sir.

Q. So that to the total which you have given now must be added the capacity of the Equitable?

A. The Equitable has been shut down for so many years that I do not know what condition it is in to manufacture. It might be on a par in some respects with 111th Street, but I do not know.

Mr. Mathewson: The testimony in the New Amsterdam case before the Gas Commission was that it was dismantled and wholly unfit for use.

By Mr. Burr:

Q. Now, is it not a fact that there is nothing to prevent you to-day, or next month, or in the current at any time, from disposing of your holdings in the Edison Electric Light Company?

Mr. Mathewson: I object to that as immaterial and irrelevant.

The Master: How is it, Mr. Burr?

Mr. Burr: I want to show that the situation is just about the same with the Edison Company as it is with the Astoria Light, Heat & Power Company. They own all of the stock of each company. Now, certainly there is nothing to prevent—and I want to get it on the record by an officer of the company—there is nothing to 1817 prevent the Consolidated Gas Company from disposing of its holdings in the Edison Company, in which it owns all the stock, and there is nothing to prevent it from disposing to-morrow, or the day after final judgment in this case, of all its holdings in the Astoria Light, Heat & Power Company.

Mr. Mathewson: It does not own all the stock of the Electric Light Company, but I do not think that makes it material or immaterial.

Mr. Burr: In my view of this case—if your Honor would like my view—it is just as absurd to the cost of gas the construction of a plant in Astoria as it would be to charge the erection of a new electric light plant by the Edison Company against the cost of gas supplied and sold by the Consolidated Gas Company. That is the reason I want to get this fact on the record from an officer of the company, if he can say, that there is nothing to prevent his company from selling out to-morrow all its holdings in the Edison Company, nor is there anything to prevent them from selling out to-morrow all their holdings in the Astoria Light, Heat & Power Company.

The Master: Did anybody ever claim that there was?

Mr. Burr: I do not know; I want to know whether the company claims that there is any reason why they cannot.

The **Master**: He can answer it, if it is of any value.

Exception taken by Mr. Mathewson.

A. I do not think the officers would have any power to dispose of their plant, or their stock in any company.

Q. In the Edison Company?

A. No, I do not think the officers have that power.

1818 Q. Then your understanding is that the Consolidated Gas Company as a company has no power to dispose of the stock that it holds in the Edison Electric Light Company?

A. I do not think the officers would have that power; the stockholders might.

Q. In speaking of the officers, I speak of the company.

A. If you speak of the stockholders, I presume the stockholders have power to handle their property as they wish within the law. I do not know what the law is in the matter.

Q. Do you know why the Consolidated Gas Company did not construct these plants at Astoria itself?

A. No, I cannot say definitely why it did not. I do not know that they had any right to do it directly.

Q. Do you know if there is anything to prevent the Consolidated Gas Company from disposing of its holdings in the Astoria Light, Heat & Power Company?

A. I think my former answer would apply to that as well as to the Edison Company.

Q. I now ask you if there is anything that you know of to prevent the Consolidated Gas Company from disposing of its holdings in the Astoria Light, Heat & Power Company?

A. The officers of the company I do not think could do it; I think the stockholders would have to do it.

Q. In making up this statement which has been presented here, net for the calendar year, 69.36 per thousand feet of gas, did you take into consideration the increased cost, or the so-claimed increased cost, by reason of the additional candle power provided for by the law in question here in this case?

A. Yes, I have taken that into consideration.

Q. And what do you claim is the increase that has been necessary in the case of a thousand cubic feet of gas by reason of that extra two candle power? In other words, by reason of your compliance with the law?

A. 1.83 cents per thousand.

1819 Q. Can you give us the method by which you arrived, or the computation by which you arrived at that figure?

A. Yes. I figure that the additional oil would have amounted to .14 cents a gallon for the full candle power for the entire year.

Q. Is that for two candle power or one?

A. That is for meeting the law; and I figure that the new price of oil under the new contract would be 4.52, while in the calender year it was 4.23 cents per gallon, which made a difference of .294. The total oil that would have been used therefore is 4.07, multiplied by .294 is 1.2 cents per gallon. The .14 at the average price of 4.73 was 59 cents, making a total of 1.79 cents per thousand, this being on the amount of gas made. Based on the sales, 1.79 becomes 1.83.

Q. Were the figures you have just given, from the paper which you read, prepared by you or were they prepared for the purpose by Mr. Carter?

A. No, those were prepared by me from the figures which were prepared by Mr. Carter.

Q. When you say .14 you refer to the two candles and not to one candle, do you not?

A. No, that is the additional amount of oil that would be required, from our figures.

Q. An increase from 20 to 22 candle power?

A. To cover the entire law for the entire year.

Q. By reason of the addition of the extra two candle power?

A. Yes, that is right.

Q. For six months of this year you had 20 candle power and for the other six months you had 22, and the average was 21 candles?

A. The average would have been 21 candles; that is, figuring it that way. But I did not do it by candle power, I did it by the quantity of oil used. I could not do it by candle power; it is a question of the amount of oil used for six months in order to meet the requirements of a 20 candle power law and for the other six months
1820 to meet the requirements of a 22 candle power law.

Q. Would the reports from stations of the Consolidated Gas Company for the months which have elapsed since the first of January and up to the present time show the increase if any caused by the extra 2 candle power?

A. I am not personally familiar with those reports. I do not think I have seen them more than once or twice in connection with this hearing, but they would show the quantities used, whatever they might be.

Q. Can you state, Mr. Addicks, what is the actual oil required for one candle power, in gallons?

A. Coal or water, Mr. Burr?

Q. Coal.

A. Coal gas?

Q. Yes.

A. I cannot recall distinctly. If I remember rightly, when naphtha was used it was half to three-quarters of a gallon to raise it from the normal gas which comes from the retorts to about 19 candles. I do not recall what it is for gas oil. They are different.

Q. Can you state it any more definitely with regard to water gas?

A. No, I usually state about 5 gallons for 25 candle power; it is a rough figure. The exact amount for a candle power I think would vary, depending upon what candle power the gas was from which you started.

By Mr. Page:

Q. Coal or water gas?

A. I am speaking of water gas now.

Q. The same would be true of coal gas?

A. Yes, I think if you start with 12 candle power or 15 candle power gas.

1821 By Mr. **Burr**:

Q. Before the State Gas Commission you were asked:

"Q. Have you made a computation so that you can say how much per thousand feet in your best judgment the additional cost will be, due to the additional use of oil?"

A. Yes, sir.

"Q. Will you state how much it is? A. 2.62 per thousand."

A. That is correct, sir.

Q. And you were asked this question:

"Q. What price of oil is that based on? A. Based on an increase in the price of oil of 6 per cent. and the use of 34 gravity oil during the six months, which would amount to about 40 per cent. of the oil used, 60 per cent. being the lower grade."

A. Yes, sir, I think that is correct.

Q. You were asked a further question:

"Q. Is that what you estimate as the increased cost due to the increase in candle power? A. The increased candle power is about one and one-half a gallon; the increased cost of oil is about the same, out of that 2.62."

A. I do not recall those exact figures as to the 2.62.

Q. Mr. Addicks, is it not a fact that the real maximum output of the Consolidated Gas Company is around the Christmas holidays?

A. Not necessarily. It may be anywhere from the first of November to the first of February, and I have known of maximum
1822 outputs being, if I remember correctly, in November. Not of the Consolidated Gas Company, but I say in some companies. It depends upon the combination of a very dark day and very cold weather or suddenly clearing up cold the following morning.

Q. Is not that an exceptional situation?

A. I don't think so. In old days it used to be about the 24th of December, it was the largest day of the year, but it is not true now; more frequently the seventh or eighth of January in my experience in gas companies. In reading some of the maximum makes, the other day, that indicates to some extent the variety of time. But as I said the make does not mean the maximum amount in the holders because we might lose some on the maximum in the holders.

Q. Could you without any great difficulty procure and present a statement showing the maximum output, say two days before last Christmas, of all these companies?

A. I could give it to you for the Consolidated Gas Company, perhaps, quite readily.

Q. It would not require much trouble?

A. I could give it to you for the Consolidated Gas Company very readily.

Q. I would like to have that.

A. The output of the 23d and 24th of December?

Q. Yes.

A. All right, sir. It just now occurs to me, Mr. Burr, that there might be a good deal of difficulty in that, as the amount of gas made under the agency agreements is based on the calculations of unaccounted-for gas of the other companies on the whole month; I don't know about the exact accuracy of the output of the Consolidated Gas Company for any particular day.

Q. Well, I will take it as accurately as you can procure it?

A. I will do that.

Q. And with any qualification that you desire to attach to it.

A. All right, I will do the best I can.

Q. In addition to that information you will be able to produce the average output for the year, will you? 1823

Mr. Mathewson: The average daily output? We have given the daily output per year, and if you will divide it by 365 you will get the average output. We ought not to be asked to do that. We might make a mistake.

Q. Well, will you give us what you claim is the average daily output of the Consolidated Gas Company?

A. I don't claim any average daily output. It has no meaning to me. I would never use it and could not see any occasion for using it.

Q. In the affidavit which you submitted in this case, Mr. Addicks, you give the daily capacity of the first unit at Astoria as 20,000,000 cubic feet. Now, is that the extreme actual limit?

A. That is the designed capacity of the works.

Q. How many retorts are there?

A. I don't remember, Mr. Burr?

Q. Do you know the size of the retorts?

A. No, I could not recall it from memory.

Q. Can you state what charge of bituminous coal is used per retort and how many distillations for each charge?

A. No, sir.

Q. Is a 15,000,000 cubic foot holder included in each unit?

A. There will be a 15,000,000 foot holder in the unit, and there is a 15,000,000 foot holder included in this particular unit and a tank for a second unit.

Q. Have you got the contract for the construction of the Astoria plant?

A. No, sir.

Q. Or the preliminary estimates of the engineer or engineers as to the cost of its construction?

A. No, sir.

Mr. Burr: That, I believe, has already been called for.

1824 Mr. Gans: Yes, I believe they are to be produced.

The Witness: I would say, Mr. Burr, right there, I have an estimate which I testified from before the Gas Commission. I have that estimate, but I don't know that it is a preliminary estimate. It is the one in which I testified about $13,096,000 as the value. I have that here with me, if you wish to look at it.

Q. Let us have it.

Mr. Mathewson: We have given the items of $13,134,000, and the difference between that and $13,096,000 only relates to slight additions.

The Witness: I can tell you now practically the additions. There was cement to the amount of some eighty or ninety thousand dollars, and there were added certain bridges to carry the pipes. The pipes originally were to go under ground between the retort house and exhauster house, and in connection with the closing of Winthrop Avenue we had to allow a space for a larger sewer for the City, and found such difficulty in getting our pipes across on account of the prospective sewer of the City, as well as our own sewers, that we carried them across on bridges, which raised the cost in that particular case.

Q. The statement which you made yesterday with regard to these various items of which you gave us the figures of estimated cost, were they based upon anything definite, any engineer's estimates, other than your own?

A. These estimates were based in part on actual contracts and part on what would be required, but a portion of those estimates were based upon actual contract given out for the work, to which was added an undistributed expense of 10 per cent.

1825 Q. Can you state briefly which part is represented by contract or what items are represented by contracts?

A. In part.

Q. Yes.

A. Do you mean from memory? I cannot from memory. I can refer to the notes, and possibly I can.

Q. Well, if you cannot we will not waste any time on it. Is it not your experience, Mr. Addicks, that a reduction in the price of gas is followed by an increase in consumption?

A. Not necessarily.

Q. I have asked you what your experience is?

A. Well, there was a reduction in the price of gas in Boston that was followed by a decreased sale.

Q. For how long?

A. That was during the competition, and not only that, there was a time when the Boston Gas Company reduced the price of gas, which was immediately followed by the introductions of Welsbach burners and the rapid spread of electric light, and the introduction of water gas resulted in the falling off of the output for a number of years. That was finally overcome, and a gradual increase of business set in. But later, when the Brookline Company came in competition, the Boston Company stood still for a long time; so those were the results of the decreased price of gas, and they did not result in an increased consumption necessarily.

Q. Assume a case where there is no competition and the price of gas is reduced, what has been your experience in this regard?

A. Well, in suburban companies, where the price of gas has been reduced radically, there has been a very large increase of gas, but that is not only due to the decrease in cost, but also due to the fact of a large increase in population.

Q. Are you familiar with the situation as it existed here in the years 1899 and 1900?

A. No, I am not.

1826 Q. When your business or your plants are removed to Astoria, they become the property of the Astoria Light, Heat & Power Company, don't they?

Mr. Mathewson: Is that not a matter of conclusion of law, Mr. Master? I think so, and I object to it.

The Master: It is a matter of speculation or prophecy.

Mr. Mathewson: And even law.

Mr. Burr: The fact is here undenied and undisputed that they own all the stock of the Astoria Light, Heat & Power Company, but the fact is equally undisputed that they propose to construct the plants over there, so I say is it not a fact that the plants constructed there upon this plant or place or at this point, will become the property of the Astoria Light, Heat & Power Company, of which, it is true, the Consolidated Gas Company owns all the stock. I want to ask him that, and want to base another question on his reply.

Q. Is not that so?

The Master: Well, I don't see how it is a proper question, Mr. Burr. If you could show that it was by virtue of some agreement, or possibly a present intention, but your question is so vague. What is to prevent their changing their minds about it, if they have an intention, and doing something else with it to-morrow?

Mr. Burr: Absolutely nothing to prevent it.

The Master: What is the use of encumbering this record with such matters as that? Get down to facts.

Mr. Mathewson: And we may consolidate the two companies bodily.

The Master: Yes, and somebody may bring an action to
1827 dissolve them and wind them up.

Mr. Burr: I am going to ask him, is it not a fact that whatever loss the Consolidated Gas Company suffers by reason of the removal of these plants to Astoria should be charged against the Astoria Light, Heat & Power Company, and not against the consumers of the Consolidated Gas Company.

The Master: But is not that all a matter of argument? It involves conclusions. I do not see how the witness can testify about that with any value to anybody.

Mr. Burr: Well, of course, I call his attention to it. I thought they were ready with explanations to all these things, as they have been with regard to so many other things. If he has no explanation, and it is a matter of argument, very good; I will let it remain that way.

The Master: That is the way it seems to me.

Mr. Burr: It is quite clear that the removal of these plants to Astoria will be of great advantage to the Astoria Light, Heat & Power Company.

Mr. Mathewson: Then why prove it, if it is clear already?

Mr. Burr: I think that is all I will ask Mr. Addicks now.

The Master: Now, Senator Page.

Mr. Mathewson: You will take till one o'clock, Senator?

Senator Page: I presume so. Is Mr. Addicks the witness you have been stating was the witness to come on and prove the price and cost of gas?

Mr. Mathewson: Well, you will have his testimony.

Mr. Page: I want to know. You stated when we started 1828 to cross-examine Mr. Carter that you did not want us to waste any time on that because you had another witness. I want to know if this is the witness.

Mr. Mathewson: He is one on that subject, as his testimony shows.

Cross-examination by Mr. Page:

Q. You stated, Mr. Addicks, that it was impossible to comply with the pressure provision of the law of 1906?

A. Yes, sir, I stated that was my judgment.

Q. And one of the difficulties was the fact that you did not understand the meaning of some of the terms used in the act.

A. No, I did not state that that was the reason, I simply said that there were those uncertainties in connection with the act, in connection with some reply I made to Mr. Burr; at least that is my memory of it.

Q. You stated, as a gas engineer and a practical gas operator, that there was no such thing as a service main?

A. I don't know of any such term, no, sir, as described as a service main.

Q. So, in the use of that term the Legislature was inapt in its efforts to express its intentions?

A. I think so.

Q. As a part of the distributing system of a gas company there are mains of various kinds, I suppose?

A. There are mains, yes, sir.

Q. What do you call those mains scientifically; give them their scientific description?

A. We call them mains.

Q. Are they called anything else, or subdivided in any way—do you have trunk mains?

A. Some call them trunk mains, and some call them transit mains; certain mains they call transit mains, and certain mains they call trunk mains, and they call them distributing mains.

1829 Q. A trunk main would be a main that would run between the works and the holder, or between the works and some distributing district, without takeoffs for service?

A. To my mind [illegible] would describe a trunk main. I don't know that it would to all engineers, but in speaking of a trunk main that would describe it to my mind. It would be a principal supply main, leading to some district or same holder station, and might or might not have any connections taken off of it, but it would be a large main.

Q. Now, the mains that are used for distribution of gas to the consumers, what is the technical and scientific term for them?

A. Simply street mains.

Q. Street mains?

A. I know of no other term specifically.

Q. None of the mains that I have now referred to would be denominated a service main?

A. None that I would recognize.

Q. As a part of the distributing system, however, of a gas company there is in connection with its street mains what are known as service pipes, aren't there?

A. Yes, sir, or services; either service pipes or services.

Q. And that is the property of the gas company?

A. Well, usually up to the street line, and some places beyond the street line it is the property of the owners of the property.

Q. You mean up to the house line, don't you?

A. Pardon me, I do mean the house line. I don't know that that applies in New York. We put in our services, and we hold the ownership of certain pipes inside the house. I don't know legally that we have any right to control them.

Q. I think you mean you hold them to the connection with the gas meters?

A. Yes, that is right; but in some other towns that is paid
1830 for by the consumer, and therefore is, of course, the consumer's property.

Q. But in New York, I believe, the gas company owns up to the meters?

A. Yes, they put it in in that sense.

Q. Now, these service pipes, which are called by gas engineers services, are of various sizes, are they not?

A. Yes.

Q. The provision in regard to regulation of pressure would be most important with reference to the consumer, wouldn't it?

A. Yes, although it does refer also, you remember, in connection with the city, it refers, I think, to the street lights as well.

Q. Are there these services running to the street lights?

A. Yes.

Q. The regulation of pressure was for the purpose of giving an equal flow of gas to the consumer at what was presumed to be a reasonable pressure, wasn't it?

A. I think you could probably testify better than I could on that, Senator. I assume that that was the purpose.

Q. You know the legislators never know what their intention is until the courts have told them afterwards what they did intend.

A. I could only assume that it is, although I have no doubt that was the idea.

Q. Now, will you state why it is impossible to maintain a pressure within the range of one and one-half inches at the meter of the consumer?

A. At the meter of the consumer?

Q. Yes, which is the end of the service pipe.

A. Variations in the demand of the consumer; variations in the atmospheric conditions; variations in the level; the complications under which the distribution system of a great city is involved; as to space in streets, subways, and the multiplicity of elements that we meet in the practical distribution of gas; all combined make
1831 it impossible in my judgment to comply with that law.

Q. Now, we will take up, first, your variation because of atmosphere. How much of a variation would that allow for, and how rapid would be the change in variation?

A. The change might be instantaneous, and might reach as much as seven-tenths of one inch pressure.

Q. What change in the condition of the atmosphere to which you now refer could cause an instantaneous change of pressure of 0.7 inch?

A. A sudden storm.

Q. What kind of a storm?

A. I would not like to characterize it as a cyclonic storm or what particular kind of storm it is.

Q. In your experience have you ever had such changes?

A. I think we had one within six months, the one I have in mind.

Q. When was that?

A. Within six months there was a storm where the variation of pressure was marked on the sheet I believe at a maximum of 0.7 inch.

Q. Where was that indicated?

A. On the registering pressure gauges.

Q. At the works?

A. No, we have quite a number. I don't know how many of the registering gauges indicated it. It is not unknown heretofore.

Q. Then you referred to the difference in elevation?

A. Yes, sir.

Q. What variation do you figure for that?

A. That depends somewhat upon the quality of the gas that is being distributed.

Q. Well, we will assume the quality of gas that the law requires you to deliver and that you manufacture for delivery in the City of New York?

A. Well, from memory that is somewhere in the vicinity of half an inch pressure. I don't remember the exact number of hundreds.

1832 Q. You say half inch pressure. What do you mean by that?

A. Why, for 100 foot rise.

Q. That is the rule for coal gas unenriched, isn't it?

A. No, it is one inch for coal gas unenriched. Every 10 feet practically of coal gas unenriched represents 0.1 inch pressure. Now it depends upon what the quality of the gas is, the proportion of water gas and coal gas, as to what exact amount of difference there is in pressure for each 100 feet. It is a variable quantity.

Q. Well, taking air as 1., coal gas is about 0.6, isn't it, and water gas about .52?

A. Well, taking—I hesitate to testify to this from memory; I like to testify exactly; but taking air as 1,000, coal gas unenriched would be somewhere about 420 or 450, carbureted water gas, plain and simple, would be somewhere in excess of 600, probably 650; pure naphtha gas would be in excess of one thousand. Now you may have a variation from——

Q. Pure water gas would be heavier than air?

A. No. 650 in relation to 1,000.

Q. You said in excess of 1,000, didn't you?

A. No, I said oil gas would be heavier than air.

Q. That would be a gas of very high candle power?

A. Yes, sir. It would probably be in excess of 50 or 60, possibly 70 candle power.

Q. There is a certain amount of friction in the delivery of gas through pipes, isn't there?

A. Yes, sir.

Q. In making this computation you allow for the direct rise of gas, do you not? I mean perpendicular rise, when you say that the pressure would increase by half?

A. Yes. You take a pipe and put it up at the top of this building, for instance, and for each one hundred feet of height you would observe a difference of pressure, which would be indicated on a pressure gauge.

1833 Q. If this pipe though was laid at a very oblique angle, so that in getting the rise of 100 feet you would pass it through a long length of pipe, the increase of pressure would not be nearly as great, would it, because it would be overcome somewhat by the friction?

A. Well, you are assuming two different things in that case, Senator. If you take a pipe that has gas in it under pressure running to the top of this house or running the distance from here to Harlem, given the same elevation, I would not expect to find any difference in those pressures until the point when you commenced to take gas off the main; the moment you take gas off the main then the question of the difference in pressure would appear and that would vary entirely with the length of main and the quantity of gas taken out.

Q. And that would tend to very materially reduce the pressure?

A. If you could govern——

Q. (Interrupting.) Given a pipe of main that is running for a considerable distance and at regular intervals of varying services from which gas is being drawn, the pressure would be reduced very materially, wouldn't it?

A. Yes, if you knew exactly what was being used you might offset one for the other.

Q. And do not gas engineers for that purpose always place their works if possible at sea level or at the lowest point of the town so as to take advantage of the increase of pressure by the rise of the mains?

A. No. My idea is more that they do that so as not to have to increase their holders and their holder pressure, in order to force it down, rather that than the other. That is, indirectly your reason might be so. If you are down at the lowest level you are getting the full value of that holder, whereas if you locate that same holder on top of the hill, you could not get any gas down at the bottom

1834 of your hill. Nobody would get any gas there at all.

Q. And likewise with a less holder pressure you could deliver gas at a greater distance by having a slight rise?

A. That is true, sir.

Q. With the exception of the northern end of Manhattan Island is not the topography of the City of New York ideal for gas delivery purposes?

A. No, I do not think it is ideal at all, Senator.

Q. As far as the altitude is concerned, if you have a steady rise to the centre and have your works situated at the water front?

A. There are certain parts of Manhattan Island that considering distribution, with the holders or works on each side, that present no difficulty.

Q. The section that has been referred to by Mr. Bradley is practically the section north of 110th Street to Spuyten Duyvil, from Morningside and Edgecombe Avenues over to the river?

A. I don't recall.

Q. Where the altitude is testified to be from 107 to 250 feet higher than the water?

A. I don't remember Mr. Bradley's testimony in detail, but I do know from personal knowledge that around the vicinity of Fort George and between there and 80th Street there is a very great difference in the altitude. I do not recognize the streets that you refer to.

Q. Well, there are sections of the city where the altitude is much higher than the other sections. Is it not possible to regulate the pressure by carrying a trunk main and establishing a distributing system and placing a district governor at the outlet of the trunk main?

A. We do at the present time run trunk mains to the various parts of the city, but we do not have the district governor.

Q. No, I know you don't, but isn't it done by gas engineers very frequently?

1835 A. I know of one case where they have a high pressure main. The city of St. Louis has a high pressure main and they have some district governors. It is a comparatively new installation, but they do not carry as low as two and one-half inch pressure.

Q. How about Detroit?

A. I am not familiar with Detroit.

Q. Do you know whether they have district governors in Chicago?

A. I don't know whether they have district governors or not. They probably have station governors.

Q. Do you know anything about Kansas City?

A. Oh, pardon me. That is a high pressure suburban distribution system in Chicago, but that is a surburban matter where fifteen or twenty pounds pressure may be carried on a main; that is not applicable to city use.

Q. Is that handled through district governors?

A. Yes, but that is not applicable to city use, the high pressure. That suburban pressure method is used in sparsely settled territories to quite a considerable extent throughout the United States.

Q. Don't you know that abroad, and in very many cities of this country, district governors are employed for the purpose of regulating the pressure?

A. I know there are places where district governors are employed in this country, the cases I have already stated. I have never been abroad, so I have not much knowledge except from reading.

Q. Well, I mean from your reading and study of these questions as an engineer in charge of one of the largest companies in the world?

A. I know district governors are used.

Q. And it is possible with a district governor to carry in the trunk main almost any pressure and deliver it to the distributing system at a very much reduced pressure, or a uniform pressure?

A. Not without the loss of candle power.

1836 Q. But it is possible—just leave out the candle power and everything else and confine yourself to the possibilities of delivering gas at a very high pressure in that trunk main and regulating it by a district governor to a uniform low pressure in distributing mains.

A. There are high pressure systems and governors which distribute gas at the pressure at which it is burned.

Q. It is a well known method of handling a distributing system of gas plants, known to gas engineers and in practical operation in many places?

A. In certain places.

Q. You have automatic governors at your various stations, have you not. I mean manufacturing stations, also at your various distributing stations?

A. We have governors at our distributing stations and some of our manufacturing stations to maintain an even pressure at the outlet of the governor.

Q. You know, don't you, that in all cities where there are great differences in the altitude that district governors are employed to regulate the pressure?

A. No, sir, I do not.

Q. To what extent have you studied the question of the regulation of pressure by governors or otherwise since this law was passed?

A. I have studied the effect by placing or causing to be placed through the engineer department a multiplicity of registering gauges through Manhattan Island, endeavoring to reach the limits required by this law. I have sent throughout the United States and had pressure gauges put on various systems throughout the United States to determine whether there are any companies in the United States who are approximating this law. Among others, some of the places where this high pressure distribution that you refer to is in use. I have also examined some data in regard to governors that 1837 are used for that purpose. I don't know that that completely covers the ground, but it does to some extent.

Q. These pressure gauges that you have put on throughout the city and that you have had applied to pipes or mains of other companies as you have testified in various cities is for the purpose merely of ascertaining what the pressure is?

A. Yes. Self-registering so that you have the pressure for the whole twenty-four hours.

Q. Did you take a pressure at widely distributed points at the same time?

A. Yes, sir, they are distributed all over Manhattan Island from the Battery to the end of Manhattan Island.

Q. And to what particular mains or pipes were they applied?

A. There are applied in various places; some inside; I guess nearly all of them from some services either in one of our properties or in some other building.

One of your questions suggests another point. Before we could get the gauges and put them in service, we had some three or four hundred men who took pressures every fifteen minutes, that is when the law was first passed, so you could, if you wanted, get quickly a bird's eye-view of what the situation was, by the use of these several hundred men to take the pressure; and we took pressures off street lamps throughout the whole city; if not simultaneously, we would take the pressure at 8.15, then at 8.30, and then at 8.45 and so on, but that was all supplemented by automatic registering gauges in order to determine the pressure.

Q. Now, as a practical problem, the most important thing to the consumer is that the gas should be delivered at a uniform pressure, or nearly uniform?

A. If it were possible, Senator, for a gas company to give a uniform pressure to every consumer at all times it would be an 1838 ideal condition and a very desirable condition, but it is not possible to do it.

Q. I presume you have preserved these charts, have you?

A. Yes, sir.

Q. Could you produce the chart, say for one simultaneous test, or such number of tests as would fairly show the conditions?

A. No, I could not.

Q. Why couldnt' you?

A. On account of the multiplicity of conditions throughout the whole city throughout the whole year.

Q. Well, by that I mean, you say you tried to take some uniform, that is, simultaneous tests throughout the city?

A. That was by the use of the men that I referred to on the first test. Now there are other registering gauges in service the same as the city has them in service in their testing stations. It is exactly the same thing as the city has only I think we have a great many more than the city has.

Q. Yours are at different points in the city, aren't they?

A. Well, I don't know how far apart. I think wherever we have testing stations with the city it would be the same things or very similar. It may be a question of different service and if there is any difficulty with that service or any more gas is used on one service than the other, it would show a different pressure, or might show a different pressure, not necessarily so.

Q. Have you tabulated the results obtained from these pressure tests throughout the city?

A. No, that would be an enormous undertaking.

Q. How did you then use them?

A. My observation of the way the pressure was running on each chart from time to time.

Q. Are they in any way tabulated so as to show the pressure, the variations of pressure at different parts of the city in different periods?

1839 A. I really can't say whether they are. The city has such tabulations in their testing stations.

Q. I understand then that all the use that you made of these very extensive [illegible] that you have taken, was once in a while to look at them?

A. No, I consulted very frequently with the engineering department, the department that had charge of that, and I looked over the figures.

Q. That matter then was under the charge and direction of Mr. Bradley, wasn't it?

A. Yes; I do not have directly charge of every department of the gas company, you understand, and familiar with every detail. I am not physically able to do that.

Q. I understand that of course. You took the matter up, talked the matter over with Mr. Bradley, and he would exhibit certain of these charts to you?

A. Yes, I would ask for them, and look over the charts and run over all of them and draw my own conclusions from them, irrespective of anyone else.

Q. These charts are in Mr. Bradley's possession, or in his department, are they?

A. In his department or under his control.

Q. And if there were any tabulations made he would have them, would he?

A. Yes.

Q. You testified that you made the oil contract in November, 1905?

A. I did, yes, sir.

Q. And that the reason that was made was because you required more of the 34 degree Beaume to be delivered than, under your construction of the contract, City's Exhibit 10, it was possible for you to obtain?

A. For that reason I took the question up?

Q. Yes.

A. Substantially that.

Q. Did you inquire to find out how much oil had been delivered under the contract, City's Exhibit 10, prior to going into negotiations for the new contract?

A. For the current year I did, yes, sir.

1840 Q. You stated, I believe, that you thought it would be necessary for you to have, and therefore you provided for, 18,000,000 gallons?

A. No, sir.

Q. To be delivered within certain periods?

A. No, sir.

Q. This is the question that was asked you:

"Q. What provision? A. Why, in regard to 18,000,000 gallons.

"Q. Just state it? A. The result of that was that this paragraph was put in:

In the event of your requirements, November 1st, 1905, to March 31st, 1906, being for a greater quantity of 34 gravity oil than 18,000,000 gallons, we are to have the privilege of substituting for such excess oil of lower gravity than 34 degrees, but not lower than 28 degrees."

A. That is correct; only for that one year.

Q. Yes; then you estimated that it would be necessary for you to have the right to require the furnishing of 18,000,000 gallons between November 1st, 1905, and March 31st, 1906?

A. No, sir.

Q. For what purpose was that put in the contract?

A. I wanted all 34 degree oil, and the Standard Oil Company was in doubt as to whether they could possibly supply that, and they simply put that in as a matter for their safety. They said that they would make every effort to do it, but that they could not guarantee to deliver in excess of 18,000,000 gallons that year, because I came to them in November, and they said they could make no preparations for storage or furnishing that quantity of oil. The amount required, Senator, was much in excess of 18,000,000 gallons.

Q. For the use of the Consolidated Gas Company,

1841 A. For the uses of the company on Manhattan Island, including the Consolidated Gas Company; or, rather, in New York, which included the Consolidated Gas Company, and also the supplies for the New Amsterdam and Standard—the Central Union.

Q. You know, do you not, or did you not inquire at the time, as to how much oil had been delivered under City Exhibit No. 10?

A. Yes, I had at that time. I do not remember at this time what the figures were, I did know at that time. I looked into that matter.

Q. You knew that there had been 82,000,000 gallons of the 28 gravity oil delivered?

A. I do not recall the exact figures now, but I did investigate the question of deliveries of the 34 gravity and the 28 gravity for the year in question.

Q. In making that investigation you probably referred to the books that were produced here by Mr. Carter?

A. I think I asked Mr. Carter for the figures, that is my memory of it; but, however, I had the figures in some way.

Q. And that there had been only 7,000,000 of the 34 gravity oil delivered under that contract?

A. Well, I would not figure it that way. There may have been the 7,000,000, but as far as the quantity is concerned I would take it on the percentage of oil delivered through the year. The difference between that and 7,000,000 would be the difference between 28 degree and 34 degree oil for the entire year.

Q. I do not know that I quite catch your meaning there.

A. Suppose there were 80,000,000 to be delivered. Twenty-five per cent. of 80,000,000 would be one-fourth of 80 which would be 20,000,000 of one gravity, and the remainder of the other gravity. The difference of course would be the other. Now, if any portion of that 25 per cent. had been delivered, the difference between that and the 25 per cent. would give what was remaining.

1842 Q. Or to figure it in another way, you had a right to take 25 per cent. of 34 degrees Beaume and 75 per cent. of 28 degrees Beaume; and if you had taken the 25 per cent. of the 82,000,000 of 28 degree Beaume, you would be entitled to one-third of that amount in the 34 degree? That is, you would have had 27,000,000 gallons due you on that 34 degree oil?

A. The results would be—if 25 per cent. was 34 degree gravity; that would be 25,000,000 out of 100,000,000 that would be 34 gravity. Of course, if you take that proportion of that 25 per cent. what that represents with reference to the 28 gravity, that would be one-third of the 28 gravity, but it would be 25 per cent. of the whole, and 25 per cent. of the whole would be 33 per cent. of the three-fourths.

Q. If deliveries had been made currently and in the proportions of the contract you would have received 82,000,000 gallons of 28 degree Beaume, and you would have received 27,000,000 gallons of the 34 degree Beaume.

A. I do not know what the figures are, but I will put it this way. If we were to receive currently, we were to receive 25 per cent. each month of 34 gravity and 75 per cent. of the 28 gravity.

Q. Now, we find as an actual fact that you had received about 90 per cent. of 28 degree and about 10 per cent. of 34 degree?

A. In other words, when we took the oil currently we used the lower price oil to the extreme that we could use it, and therefore during those months we did not use the 25 per cent. we had the right to call for. We used the full of the lower gravity oil, which made the lowest priced gas.

Q. That would be the way that you would naturally do it; in summer time you would use the larger amount of 28 degree and in winter time a larger amount in proportion of 34 degree?

A. It depends upon your contract, and what rights you have under your contract.

Q. Irrespective of what rights you have under your contract, if you were operating with two oils——

1843 A. (Interrupting.) There was no question at that time of 22 candle-power in connection with this other contract, this question of using 28 gravity oil. The question was at that time whether in the machines we could use 28 gravity oil. We had the right to call for some 34 degree gravity, so as to make a higher gravity oil. Now, this new contarct explicitly and thoroughly covered it, so that there could be no possibility of error or mistake in the reading of the contract. I covered that very thoroughly, that we should have a right to have 34 gravity oil during the specific months, which covered the winter months and also covered either side to some extent. The remainder of the time we had to take the 28 gravity oil.

Q. But I am calling your attention to the condition that you were in at the time you made that contract, after you had been advised by counsel that the contract allowed you to call for those proportions of deliveries currently?

A. That was month by month.

Q. The practical construction of that contract would have been that you could take 82,000,000 gallons of one kind of oil and 7,000,000 gallons of another kind. That would have been a practical construction of the contract as between your company and the Standard Oil Company?

A. As I remember the contract now, we had only the option to call, or we had the right to use 28 degree entirely under that.

By Mr. **Mathewson**:

Q. Seventy-five per cent. of the total number of gallons was to be 28 degree Beaume?

A. If taken currently.

By Mr. **Page**:

1844 Q. "You are to have the privilege of requiring deliveries from us of a quantity which shall not exceed 25 per cent. of the 177,000,000 gallons of gas oil, of gravity which shall not be below 34 degrees Beaume."

A. Yes, sir.

Q. "The balance of the 177,000,000 gallons shall be of gravity not below 28 degrees Beaume, or higher at our option."

A. That is right. Those deliveries were to be made currently; if we did not take our option to take any 34 gravity we had the right to use the cheaper grade oil, 28 degrees, for the entire period that we did it, provided we could do so and obey the law.

Q. Altogether you had only taken 89,000,000 gallons, when your contract called for 177,000,000, leaving 88,000,000 to come?

A. Our contract did not require us to take any of the 34 gravity oil.

Q. It did not require you to take it; it gave you the right to demand it?

A. Yes, if taken currently.

Q. Who was the counsel that advised you as to that construction of the contract?

A. I continually confer with counsel, Shearman and Sterling.

Q. Was there any arrangement made for an adjustment of the Company's yielding to the Standard Oil Company this right that they had to take a large quantity at a lower price?

A. I do not know what you are referring to.

Q. Why, there was still about 90,000,000 gallons of oil due on the contract, City's Exhibit 10, at a price of 4.04 for 28 degree and 4.62½ cents for 34 degree, and you made a contract agreeing to pay the Standard Oil Company 4.29 for 28 degree and 4.87½ for 34 degree?

A. We went to the Standard Oil Company; the Standard Oil Company did not come to us. I was compelled to go to them in connection with getting this higher grade of oil. I could not get 1845 the higher grade oil and I had to make arrangements in order to get it. And I made those arrangements to do it.

Q. When Mr. Gawtry, your predecessor, went to the Standard Oil Company to negotiate the contract, City's Exhibit No. 10, he got an allowance of some $119,000?

A. He got an allowance of $119,000?

Q. Yes, he got a better rate on undelivered portions of the contract than the contract called for.

A. I do not know about that. What I think you are referring to is the fact that we got through that one contract and commenced to use the heavier grade oil experimentally to see if we could use it, and all that we used of the heavier grade was made at a price at which we could use it; and that amount represents the difference in price of those two oils which we actually used. They were anxious for us to stop the use of 34 gravity, as there was a great shortage of it, and then for the first time we commenced using 28 degree, and for every gallon of 28 gravity oil we used we got a lower price for it. That is my understanding of the situation. I do not understand that there was any allowance of any kind.

Q. What about the 32 gravity oil?

A. 32 gravity?

Q. Could not that be used practically as well as 34 gravity?

A. 34 gravity is what we have used successfully, the kind we wanted.

Q. What did you use in Boston?

A. All the way from 34 to 44, as I remember it.

Q. 44 is naphtha, is it not?

A. No, naphtha is 60 and 62, and 78, high gasoline averages 78.

Q. Now, as I understand your testimony as to the cost of producing gas by the Consolidated Gas Company, you have taken Complainant's Exhibit 94 and you have made certain deductions and certain additions to offset the deductions; is that it?

1846 A. No, sir, not to offset the deductions. There are certain additions which added to the figures after the deductions were made, but they were not made for the purpose of offsetting the deductions.

Q. And you offered the result of that as the cost *of* the Consolidated Gas Company of making and distributing gas?

A. I offered that as the result of what should be allowed for the cost of gas for the calendar year 1905, as I stated.

Q. If your directors should ask you to let them know the cost of making gas, would you pursue that method?

A. If my directors were to ask me for the cost of gas in order to fix a rate at which they could figure the selling price, I would submit that table.

Q. Supposing your directors should ask you what it cost you to produce and deliver gas to the burners of the company, would you take Exhibit 94 and make those deductions and present that as the result?

A. If they asked me the current year's cost, or the month's cost, I would give them a statement of the labor and material that entered into the manufacturing cost of gas at that particular time, with whatever other charges appeared on the books in the way of depreciation during that period. It depends on for what purpose the directors would ask me for the figures whether it was a current matter or something to determine the fixing of a rate as to whether they could afford to do it.

Q. There is a wonderful fluctuation in the valuations of plants, whether it is for the purposes of taxation or whether it is to enter into computation as to cost of gas. Then, the question as to what it cost you to produce gas depends on the use that is to be made of the figures, is it?

A. No, not at all; it depends on the period on which you want to undertake to consider the cost.

1847 Q. Referring to the record before the Gas Commission, I find Exhibit 78A, to which I will call your attention, and in which there is set down with great detail a statement as to operation, which purports to be a monthly report, prepared upon a blank of the company giving the gas made, the average daily make, the total amount of coal used, gas made per ton, oil used for enricher, net make per ton, coke produced, percentage used, coke produced for sale, tar produced, coal used per hundred pounds of coke carbonized, amount of gas made per man, gas made per retort, and an infinite amount of detail. For what purpose was that report made?

A. I really do not know.

Mr. Mathewson: I do.

The Witness: I do not recognize the report at the moment.

Mr. Page: I am willing to concede that Brother Mathewson knows all these things.

Mr. Mathewson: It was made because you requested certain information made up for a certain month.

Mr. Page: No.

Mr. Mathewson: Yes.

Q. Did you ever see the reports on file in your company, of which this is a copy? Now we are getting to something which was not made up.

A. I do not recognize it.

Q. Turn to Exhibit No. 114, which relates to the operations of the water gas stations. You will see an entirely different set of details, but the same infinite detail as to the operation of a water gas plant?

A. I should say from looking at that that that was the engineer's report of the conditions existing at that plant, as to blast pressure and coalings, &c.

Q. But does not every gas company keep just exactly such records as that, to show what it costs to produce a thousand cubic feet of gas? 1848

A. They keep records so that they can be reported to the office.

Q. To the most minute detail?

A. They keep such records to be reported to the office, showing what labor and material enters into the cost of gas, so that the cost of gas can be calculated.

Q. If you were getting at the actual cost of gas to your company, we would go to these records, wouldn't we, to ascertain the results from these records?

A. No, we would ascertain the basic figures from which to determine the result.

Q. You would ascertain your basic figures here?

A. Yes, how many gallons of oil, how many pounds of coal and other materials used; all that would not necessarily include all the cost of gas.

Q. There is some man in your company that has these figures month by month and year by year down to the fractional part of a cent, is there not?

A. Mr. Carter has presented that already in our exhibits.

Q. Not Mr. Carter, but I say there is some man, is there not, that has all of these figures showing to the exact fraction of a cent what it costs you to produce gas day by day and month by month?

A. I cannot say what detail there may be.

Q. Does not every well managed gas company in the United States have such a set of records, so that you, as the man chiefly responsible, or the chief engineer, can turn to those records and see at a glance exactly what it cost you to produce gas?

A. I can only say that I did not have it in Boston.

Q. And you do not know whether they have it here, the Consolidated Gas Company?

A. I do not know in what detail.

Q. When you were to testify as to the cost of gas, didn't you inform yourself as to these details?

1849 A. Yes, I went over very carefully all those questions as to cost, in all these statements, and considered them.

Q. And as a result you deducted 10 cents from Exhibit 94 for contingent expenses, and you deducted 7 per cent. for fixed charges, and you deducted .48 for some taxes, and then you proceeded to add certain other things to make it come up to more than 74 cents?

A. No, I did not bring it up to more than 74 cents.

Mr. MATHEWSON: The statement submitted by the witness did not include fixed charges, you know, Senator; the computations he made here.

Mr. PAGE: He deducted fixed charges?

The WITNESS: I did.

Q. For the purpose of testifying here yesterday as to what it cost your company to produce gas and sell it, did you go through any computations based upon your station reports?

A. No, I took the records from the books.

Q. You took the exhibits that have been put in?

A. I took the books.

Q. You took a computation from the books, the exhibit that has been put in, Exhibit 94?

A. Yes.

Q. And assumed that to be correct?

A. Yes, I did.

Q. And your testimony as to the cost of gas is based entirely upon Exhibit 94 and not upon your knowledge of the exact conditions?

A. Well, I know the conditions of the company; I only take the books of the company; I cannot take any other figures, but the cost is shown by the books of the company.

Q. But you took computations from the books, which have been put in as Exhibit 94?

A. And certain other matters that I know of.

Q. You have had quite a large experience as a gas engineer 1850 and manufacturer of gas, haven't you?

A. Yes, I think I have.

Q. And you state that you did not keep a carbonizing sheet in your Boston works?

A. No, I did not say that. I had everything to the greatest detail, but we did not work it out in cents per thousand; that is the point.

Q. Exhibit 88-A?

A. No, the second one.

Q. That is 21st Street, Exhibit 114?

A. I do not want to talk at cross purposes, Senator, I am sure.

Q. Well, I ask you if you did not keep this in detail?

A. We kept everything in detail, in the most minute way. Perhaps I kept that in Boston more minutely than the majority of engineers. This is merely a question of quantity, and those quantities are kept very carefully.

Q. Which, multiplied by the price of units would give the result in dollars?

A. Yes, but the engineer is interested in maintaining the minimum amount of material used for a thousand cubic feet of gas and that is the thing which governs him in handling his work.

Q. Yes, but the managing director of the company is interested, isn't he, in seeing what it costs him to produce the article that he is selling?

A. He is not interested in the same detail and the secretary is interested in the details of his office; but the general officer is not interested in details of that sense, and the figures which we had of the cost of gas in Boston were not in greater detail than you have in this Exhibit 94.

Q. Yes, I do not doubt that.

A. That is the only thing that interests us in arriving at the cost of gas.

Here a recess was taken until 2 o'clock p. m.

1851 & 1852

After Recess.

At the request of Mr. Page, who stated that he has an important engagement elsewhere, and all parties consenting, an adjournment was taken until Monday, September 10, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's 224.
State's U.
City's 44.

1853 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, MONDAY, *September* 10, 1906—10.30 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Burr, Mr. Page, Mr. Kirby.

1854 WALTER R. ADDICKS, being further examined, testified as follows:

Cross-examination continued by Mr. PAGE:

Q. Mr. Addicks, taking up the statement which you read in evidence at page 1757, you deducted a certain amount for taxes, .48 of a cent?

A. Yes, sir.

Q. Will you tell me how that is made up?

A. Those are the taxes which have reference to the securities of other companies owned by the Consolidated Gas Company, but not involved in the gas making business.

Q. What was the amount?

A. The amount in dollars would be some fraction, approximately .48 of a cent, multiplied by the sales. I have not got the amount in dollars and cents at hand.

Mr. MATHEWSON: 47.6 was the exact figure, and he took .48. Mr. Carter testified to it. 13,283,163,767 feet was the amount of sales.

The WITNESS: Roughly, it is $63,758 and some cents. I took the nearest decimal.

Q. You included the two items on City Exhibit M, $5,257.48 and $57,965.39?

A. My figure multiplied out would be slightly in excess of the two figures mentioned $5,257.48 and $57,965.39. My figure amounted to $63,758.40, approximately. It is due probably to the difference in the hundredths part of the decimal.

Q. In this statement of the amount of the taxes in Exhibit 94 there was also $94,000 for accrued interest, wasn't there?

A. Wasn't it $70,000?

Q. $94,000 is my recollection.

Mr. MATHEWSON: $95,506.29.

1855 A. That would undoubtedly be the amount, that would substantially be the amount, Senator.

Q. Well, included in this item $965,843.88——

A. The total amount and part of the 7.32 cents?

Q. Yes.

A. Yes, there would be an item of taxes on securities owned by the company and also accrued interest on taxes.

Q. The $95,506.29 you did not deduct?

A. No, sir, I did not deduct that.

By Mr. Mathewson:

Q. No part of that accrued on these that have been deducted.

Mr. Page: I know that. Of course, our claim is that if you do not pay taxes and allow interest to accrue, that does not go into the cost of gas.

Mr. Mathewson: I understand.

Mr. Page: I wanted to know whether he has made that deduction as part of that statement.

Q. You have not taken out your repairs to gas stoves?

A. No, sir, but they appear in the statement. The return for it appears in the statement under miscellaneous income, 1.30.

Q. Of what is that miscellaneous income made up; have you got that?

A. Not in detail. It is all the miscellaneous income from the gas company, gas stoves, and includes returns from street lamps, and other items. I don't recollect the details.

Mr. Mathewson: Mr. Carter put in a statement Friday showing that in detail, Senator. It is all the miscellaneous income. That 1.3 cents is all the miscellaneous income, $172,000 and something over, of which $122,000 was the stove rents.

1856 The Witness: If I had realized you wanted the details of that I would have saved you a great deal of time and had it in dollars and cents as well as in cents per thousand.

Q. Having deducted the 10 cents per thousand cubic feet, which in Exhibit 94 is contingent expense, including renewals, you proceed then to add certain things. You add for repairs and renewals 4.62 cents?

A. Yes.

Q. What repairs are those?

A. Those are repairs and renewals from 1895 to 1900, I think I testified, which amounted to 12.31 cents per thousand.

Q. But you did not deduct from the total of Exhibit 94 the repairs that are set forth on that exhibit, did you?

A. Yes, sir, I think I did.

Q. Where?

A. 7.34 is the total for the calendar year. The repairs and renewals amount to 7.34 cents, and the difference between 12.31 cents and 7.34 cents gives 4.97 cents. That being the difference in the repairs and renewals, and for an average period of five years when the companies were making all their own gas, and the present time.

Q. Will you show on this memorandum which you read in evidence at page 1757 where you have made the deduction for the repairs which appear on exhibit 94?

A. Well, I have the net difference, the entire repairs amount to 7.34 for the calendar year and the repairs during this period amount to 12.31, as I have testified before. That leaves 4.97. Now I have deducted from that .35 of a cent, bringing 4.62 as the actual difference between repairs for the period from 1895 to 1899 and the calendar year 1905.

By the **Master**:

Q. Where does that .35 of a cent come in; what is that for?

1857 A. Certain repairs done on the machinery that was used in supplying gas to the Consolidated Gas Company by some subsidiary company. I am endeavoring to make a comparison here of a company making and selling its own gas. It is merely a matter of choice whether you take a twenty-year period or whether you take a period where they are making all their own gas. The twenty-year period covers the time when they are making and buying as well.

Q. Then, if I understand it correctly, the items for repairs and renewals, so far as Exhibit 94 is concerned, are included in this contingent item of 10 cents, which you deduct in the first instance in your present computation?

A. No, sir. The only thing that is included in the 10 cents are the actual replacements, which is 2.12 cents. That is, so far as that is concerned. I am speaking now of the 10 cents as a book charge, but extraordinary repairs due to the extraordinary wear and tear would certainly be considered in connection with the 10 cents.

By Mr. **Page**:

Q. How much less would that allowance have been if you had taken the last five years from 1900 to 1905?

A. I don't know. I did not make that comparison. They were not making all their own gas. That is the reason I took that comparison.

Q. Well, you are not making it to-day, are you?

A. That is very true, but we are going to make it, and because of the fact we are going to manufacture all our gas it is better to take that period. You remember, before the Gas Commission that was considered by the Commission as the fair period to take and I took that period on account of the views the Commission took. They thought the fairest way to make the comparison was at the time we were going to make our own gas with the time we were making our own gas. That is the reason I took that five years as our original proposition. I thought it was the fairest thing myself. 1858

Q. The portion of your plant that is going to be devoted to the excess that you now buy will be an absolutely new plant?

A. Yes, sir.

Q. And the plant that was in operation from 1895 to 1900 was an old plant, that had been in use for 20 years.

A. Well, it was not a new plant. I don't know how long any specific part was in use. I have no doubt some parts of the plant were used 20 years.

Q. That was prior to the rebuilding of your water gas station and putting in more modern apparatus?

A. That is true.

Q. Now this 1.83 cents, what do I understand that is for?

A. That is due to the 22 candle power oil as compared with the 20 candle power on which we were working before.

Q. Well, you commenced in July last or July, 1905, to supply the 22 candle power oil, did you not?

A. We did, yes, sir.

Q. Then in exhibit 94 the cost of complying with that law would be carried in in this 33.17 cent cost per thousand sold on a total station cost?

A. That is true.

Q. And your allowance is for what it would cost you additionally from January to the 1st of July, 1905?

A. On the question of the oil only.

Q. Allowing for the oil.

A. I will give it to you accurately again if you would like to have it. During the second six months on the high candle power there were required 4.07 gallons of oil. Now the first six months together with the second six months was only 3.93 gallons of oil used. I assume if we were running the entire year it would require .14 of a gallon more for the entire year to maintain the full candle power.

1859 By Mr. MATHEWSON:

Q. .14 of a gallon more per what?

A. Per thousand cubic feet. I am dealing with thousand cubic feet in each case. Now that .14 of a gallon multipled by the average cost of the oil, 4.23 cents per gallon, would be an addition of .59 cents per thousand cubic feet as the total cost of oil for the .14 of a gallon.

By Mr. PAGE:

Q. Well, that was to comply with the candle power requirement from the first of January to the first of July, 1905?

A. Yes, that was the calculation I was trying to make.

Q. Turn to Exhibit 93, which is for the nominal year of October 31st, and refers to the station cost. There you will find it costs you less to manufacture gas for the calendar year than it did for the nominal year, although you had proceeded under two months longer of the higher candle power, 33.70 as against 33.17. Now isn't it a fact——

A. Well, won't you let me answer that question.

Q. Yes, if there is any answer to it.

A. It is a fact, according to Exhibits 93 and 94, that the station cost for the calendar year 1905 is slightly less than the station cost for the nominal year ending October 31, 1905, although the cost of the oil for the calendar year 1905 is greater than that for the nominal year 1905.

By the **Master**:

Q. The nominal year ending October 31st?

A. For the nominal year ending October 31st, 1905.

By Mr. **Page**:

1860 Q. Well, isn't it a fact that although the 34 degree Beaume oil cost more, that you have to use less oil to produce the same candle power with that as you would with 28 degree Beaume?

A. I cannot answer that question yes or no. In taking 34 degree gravity oil as for winter use it was certainly, as far as I was concerned, with the hope that we would use the minimum quantity of oil of that grade of oil during the winter months as compared with any other grade that we could obtain, considering its cost.

Q. That is, that it was the best and cheapest in the end?

A. I think so. And of the various grades of oil up to 34 I should expect we would use the minimum amount at 34 under the same circumstances as to temperature.

Q. You have added into your statement at page 1757 of the record the dividend of the National Coke & Coke Company?

A. Yes, sir.

Q. And you have not carried in, however, the value of $5,000 that was realized as surplus?

A. No, sir. I saw by the statement the other day that apparently the surplus was in the vicinity of $5,000. I don't know whether full provision was made for depreciation in that or not. If full depreciation has been considered, that $5,000 surplus, if credited to this account, would be equivalent to the $5,000 dividend, or an addition of .04 of a cent to this figure; that would increase the net return to 6.69 and .04 of one cent, making 6.73.

Q. Will you indicate from Exhibit 94 just what repairs you took into your statement to make the 12.31 which you used?

A. I could not indicate on this statement, because it does not appear in that statement. It appears on one of the exhibits. I don't know the number of this exhibit (indicating a paper). I took these figures here.

1861 Q. The exhibit you refer to is State's Exhibit L. Now, will you give us your method of arriving at your figure of 4.62, which is the result of the computation as stated on page 1757 of the record?

A. I took the five years from 1895 to 1899, repairs and renewals, which would appear on State's Exhibit L, as of 1895, 1896, 1897, 1898 and 1899, which amounts to 12.31 cents per thousand cubic feet, being the sum of all the expenses there shown, divided by the sales; so that, having that figure, we subtract from that figure the item which appears under 1905, similar item, 7.34, on the same exhibit, on page 2; that gave me the 4.97. Now, as for the five years the Consolidated Company was making and selling all its own gas, I thought it was fair to add to the repairs for 1905 that portion of the repairs to the generating apparatus of the other companies furnishing gas, amounting to .35 of a cent, and thus raising our apparent cost of repairs from 7.34 by .35, which would be 7.69.

By Mr. KIRBY:

Q. Where did you get that .35?
A. That I got from Mr. Carter.
Q. It does not appear in any exhibit?
A. I don't know whether it does or not. I do not recall. Before the Gas Commission that did appear. Last year it was .32 of one cent, I think.
Q. Where does that figure appear?
A. It is in the testimony somewhere before the Gas Commission, I don't know just where.

By Mr. PAGE:

Q. What is this item of repairs and renewals for 1905 which foots up $974,289.65?
A. 25 cents, isn't it?
Mr. MATHEWSON: Sixty-five cents.
The WITNESS: Is that for 1905?

1862 By Mr. PAGE:

Q. That is what I have here.
Mr. MATHEWSON: $974,289.65.
The WITNESS: I have 25 cents. It does not affect the computation at all.
Q. Is that made up of items that appear on Complainant's Exhibit 94?
A. Well, I have not checked them over, though I assume so.

Mr. MATHEWSON: That 2.12 for replacements would be in the 10 cents. That has been testified to before you came in, Mr. Kirby. This is not familiar to you, but all that is on the record.

Q. Then you did not check up to find out whether the amount that you were deducting corresponded with the amounts that were set forth in Exhibit 94, although you were going to make your deduction from Exhibit 94, did you?
A. I cannot recall that I did or not, Senator.
Q. What is this item of .78 cents for, labor?
A. That is the difference between our average labor during a period of five years and the present labor.
Q. Labor of the same five years that you have taken before?
A. No, that is of the prior immediate five years. Pardon me, not five, four years.
Q. You have given the valuation of the plant as a whole?
A. Yes, sir, I gave my judgment of it.
Q. How did you arrive at that?
A. By taking a valuation of the coal gas works at $400,000 per million feet daily capacity, assuming that the works were complete, and with a holder capacity equal to three-quarters of the daily capacity. That in the case of the water gas plant the price would be

$200,000 and the holder capacity equal to one-half of the
1863 daily capacity. All holders in excess of those amounts I assumed to be valued in excess of the amounts given by which I arrived at the valuation stated, and assuming likewise a value for the oil gas plant at 21st Street.

Q. Then as I understand it, the holders up to three-quarters daily capacity were included in this valuation of $16,800,000.

A. The holders up to three-quarters on the coal gas and the holders up to one-half on the water gas. For instance——

Q. (Interrupting.) Why did you assume the three-quarters on the coal gas, and the one-half on the water gas as the proper allowance to make in valuing the plant and the entire——

A. (Interrupting.) Because I thought that under the conditions existing here that if I were erecting a coal gas works I should certainly have three-quarters of the holder capacity at the station. If I were erecting a water gas works I should probably only have one-half of the holder capacity at the station.

Q. Isn't it usual among gas engineers to allow holder capacity equal to the daily capacity for 24 hours?

A. Yes, but the remainder of these holders I would have out in the district, not in the plant.

Q. Well, in this $16,800,000 that you have given as the value of all the Manhattan plants, together with 18th Street, did you figure any of the holders on Manhattan?

A. Yes.

Q. And you assumed, as I understand you, a unit value of $400,000 for a million cubic feet daily capacity.

A. Yes, being the same as $400 per thousand.

Q. And $200 a thousand for water gas?

A. Yes, with the proportion of holders, as I have stated.

Q. I understand that is what you have estimated it would cost to replace the plant new, or is that the valuation of the plant as it stands today?

A. Well, in figuring I was thinking of the value of the
1864 plant on Manhattan Island as a going concern, replacing it as it is.

Q. Would that be replacing it with a modern and up-to-date plant?

A. My idea was replacing it as it was.

Q. On the same theory that Mr. Mayer gave in his testimony?

A. I do not recall the full theory of Mr. Mayer, but my idea was the plants as they stand in operation to-day that they were worth that much.

Q. You have not made an inventory of the plant, as did Mr. Mayer?

A. No, it was beyond my power to do so.

Q. The company has no inventory itself?

A. Yes, they have now a complete inventory as a result of this examination of Mr. Mayer's. Prior to that they did not have any.

Q. It has nothing to do with the book value of the plant, that statement here?

A. No, sir.

Q. Now, last July I asked you to get me up a statement of the

Astoria plant, showing in detail the cost of buildings and apparatus. Have you such a computation?

A. No, sir, I have not, Senator; I attempted to arrive at some figures for your benefit.

Q. I am glad it was for my benefit, but if the figures had been gotten out in the way that I wanted them, it would be more to my satisfaction.

A. I understood that Mr. Mathewson was in touch with you in regard to that, and that he showed you certain figures and that you made a memoranda of what you wanted, and I understand that a statement is being prepared, better than I could personally do it.

Mr. Mathewson: I did prepare one for the Senator, which I thought was what he wanted—or, rather, I had it prepared—and he wanted it put in better shape, and it was sent back to be put in 1865 better shape; in the meantime Mr. Bradley's foot was run over, and that has put us back, but they are at it now, or were on Friday, trying to separate it in the manner that the senator has suggested.

The Witness: I have taken that same statement and endeavored to separate certain items myself.

Q. You have not a copy of that?

A. No, I did it myself in spare hours that I had over there.

Mr. Page: Well, we will have to get at it the best we can, I suppose.

Mr. Mathewson: You suggested that I have that before Mr. Bradley was put on, and I told you I would have it unless something broke. I did not know that you wanted it with Mr. Addicks.

Mr. Page: I wanted it with any one who was going to testify as to Astoria property.

Q. How much did you state was the total investment at Astoria, on your direct-examination? Do you remember?

A. I have stated that the estimated cost for the first 20,000,000 units, not including certain additional items, was $13,134,519.65.

Q. Of that amount how much was expended for the purchase of the real estate?

A. The land valuation, $1,132,558.28. There is an item, however, of bond interest; I do not know whether that is included in that or not.

Q. Is that the cost of the land or the estimated value which was placed upon it?

A. No, that is the book value as it stands on our books.

Q. Well, by book value do you mean what it actually cost you?

A. In the statement here it says "Actual expenditures for land."

Q. How much did you expend on that land for grading and filling?

A. That work is not yet completed; I cannot tell what it will be.

1866 Q. What figure did you estimate for grading and filling to make up the total of $13,134,519.65 for the entire plant?

A. $317,000, in round figures. Grading, filling and certain excavations, $317,543.

Q. How much for docks?

A. Wharves, $190,000.

Q. Is that even, $190,000?

A. Yes, sir.

Q. How much for the tunnel?

A. $2,650,000.

Q. 15,000,000 feet holder capacity would be sufficient capacity for a 20,000,000 works, would it not?

A. When supplemented by one-fourth more in the city, coal gas at the works; but at the station there should be two holders. With that qualification, yes.

Q. You have just been giving your estimate of the valuation of the plants in Manhattan, estimated coal gas plant, with three-fourths capacity at station?

A. At station. I say three-fourths under the conditions in New York. Three-fourths would be sufficient, aside from the question that there should be two holders; in other words, that 15,000,000 for one plant should be divided into two holders.

Q. Well, but the capacity of the holder would be sufficient if it is going to be divided into two holders?

A. On the basis of capacity, yes, sir.

Q. How much have you added in this $13,134,519 for a second holder?

A. For the second holder, about $230,000.

By Mr. MATHEWSON:

Q. That is for the plant, is it not?

A. Yes, sir.

By Mr. PAGE:

Q. I have here second tank and holder, $700,000.

Mr. MATHEWSON: No, that is the holder itself.

Mr. PAGE: But it costs more, the tank, than a holder.

A. Yes, but there should be something in addition to that.

1867 Q. The holder is at $200,000 odd, and the tank is $700,000 odd.

A. $279,000 instead of $230,000.

Q. What would that be for?

A. That would be for a holder tank, including the cement required for construction. That is only the tank, not the holder.

Q. What was the $700,000 which you testified about, in regard to the second holder?

A. That is for the gas holder proper, including stanchions and crowns, girders, etc.

Q. You have figures for a coal storage bridge, $150,000 each, rope haulage and coke storage?

A. That is right.

Q. And in that was an item for $700,000 for a second holder?

A. That is only the steel work, sir.

Q. That enters into this statement that you have given for $13,134,519?

A. Not that one; that is the second one; but the first one would enter into it.

Q. Then I understand that none of this $2,282,500 which you testified to on direct examination is included in this $13,134,519, such as houses for employés; is that right?

A. I think that is true with this exception; I was a little doubtful whether that $150,000 was for the second bridge, which in my judgment we should have. There is one $150,000 in the original estimate for a bridge, and this $150,000 is for a second bridge, which would not be necessary for the plant except in so far as duplicating a bridge for handling coal, and some way to provide for accidents. For everything from scows and tugs down is not included in any part of the $13,134,519.

By Mr. Mathewson:

Q. No part of that $2,282,500 is included in the $13,134,519, is it?

A. I think that some of those foundations—while they were in the original, like this $80,000 for foundation appropriation—that was more than used up in the original estimate, and therefore it 1868 would have to be added here in order to complete this other work. In other words, while the original estimate may have considered that those certain foundations may have been done for certain figures, those estimates were more than used up, — required a further appropriation of $80,000 to complete the work, and therefore it is included.

Q. I want any part of the items that you have testified to as making up the $2,282,500 included in this figure of $13,134,519.

A. I do not know of any item as to dollars and cents that is so included in the $13,134,519; only simply as a matter of description.

Q. There is only then the second holder and the tank for the holder, of capacity of 15,000,000 cubic feet, that are in the figure of $13,134,519?

A. No, I have already told you that there is one holder, but two tanks.

Q. That other tank then is how much?

A. The two tanks together are twice the figure that I gave before.

Q. You did not give me the first?

A. I gave you a figure of $279,000 as applied to one; for the two, $558,000. You understand that in building one tank it is necessary to build two. In constructing one holder it is necessary to have a second tank if you expect at all to extend your plant, only having one holder.

Q. Why?

A. If you are going to have a second holder, you have to have a tank for it. We cannot dig a hole for a second tank if we have a holder there inflated and with water in the tank. We would have to draw all the water out of the first tank if we did not build a second tank the same as the first. Do I make myself clear?

Q. You make yourself clear as a statement of fact, but I cannot understand any reason for it.

A. Suppose we had a tank and the holder in it. Here is the first unit; (draws diagram illustrating); now, we want to put 1869 alongside of that a second one; we cannot put that tank in unless we let all of the gas out of that holder and let out all of the water.

Q. Why not?

A. Because the head of water in this wall here; this goes down about fifty feet and the hydrostatic head of water on that part would burst the whole tank right out.

Q. Then the second tank was built because of this condition, but it was not because it was necessary to take care of the product of your first unit?

A. I think it is. I think if you have only one holder you should have two. As I said today, the other $279,000 is for the second holder.

Q. You might have two.

A. Yes, that is true, if we were not going to build more than that, but in the plant at Astoria it would have been very foolish not to do so.

Q. Now, what other matters have you the value of in detail outside of the plant itself? By plant I mean pump manufacturing apparatus and buildings.

A. I have no items except what would be included within the plant itself, unless it be the item of a 60-inch main.

Q. Well, what have you got the 60-inch main at?

A. $620,000, including the pumping station.

Q. How much is the pay for the 15,000,000 foot holder? I believe that is finished?

A. No, the holder is just under way. It will not be finished until next year.

Q. Mr. Bradley stated that he was hoping to begin delivering gas from that station by the first of October.

A. He does hope to, into a main without the holder.

Q. Then, where will you deliver the gas, into the mains of the company in New York or into the holders?

A. It will go by the way of Ravenswood; it will go into one of the holders there with water gas, mixed with water gas there.

1870 Q. Has the company sufficient holder capacity to take charge of its present product, and the additional which will be manufactured at Astoria?

A. I don't recall exactly the holder capacity at the present, but it should be the daily capacity of the works. I think not.

Q. That refers to the entire holder capacity of the company, doesn't it, the rule that there should be a day's holder capacity?

A. Certainly. I think they would be short about 10,000,000 feet, that is my memory of it.

Q. We have got so far items amounting to $5,189,101.28. Will you give me in as much detail as you have it the items for the remaining $7,000,000.

A. Senator, I cannot agree with those figures unless I know what they are. If you now have so many millions——

Mr. **Mathewson**: Why not let him give a statement making up the $13,134,519.

Mr. **Page**: Very well, he may do that.

The **Witness**: Shall I give them consecutively from start to finish?

Mr. **Mathewson**: The Senator says that will satisfy him.

1871 The **Witness**:

Grading and filling and excavating, including Winthrop Avenue	$317,543.53
Dredging	160,000.00
Wharves	190,000.00
Coal and coke handling plant	700,000.00
Inclined retort house	1,400,471.92
Horizontal retort house	1,191,232.29
Purifying houses and contents	608,745.00
Boiler plant	49,717.31
Exhauster house and contents	47,730.06
Condensing plant	599,981.81
Land drainage	50,000.00
General Gas Connections	40,000.00
Tar and ammonia separation and storage	40,000.00
Water supply	20,000.00
Meter house and contents	65,560.44
Holder	640,800.00
Holder tanks	460,000.00
Tunnel under Ward's Island, exclusive of lining	2,050,000.00
Electric power plant	160,000.00
Gas pumping plant at Astoria	90,000.00
Office	50,000.00
Shops	40,000.00
Foundry, not included, first units, in this item here.	
Soundings and borings	200,000.00
Fences and temporary structures including salt water plant	50,000.00
Bi-product plant not included in these figures.	
Total	$9,321,782.36
1872 Brought Forward	$9,321,783.06
Undistributed expense 10 per cent	932,178.31
Total	$10,253,961.37
The 60-inch main with gas pumping plant	$620,000.00
Total	$10,873,961.37

Real estate	1,132,558.28
Lining of tunnel	600,000.00
Coal shed	400,000.00
Cement for two gas holder tanks	98,000.00
Overhead gas mains and apparatus between retort house and exhauster house	30,000.00
Estimated cost of first 20,000,000 cubic foot unit	13,134,519.65

Q. What do you mean by undistributed expense 10 per cent.?

A. Those are expenses that are in addition to all that the engineers can foresee in the construction of the works. In this plant up to date I think on the figures I made it has been between nine and ten per cent. over and above those figures I have given you. It covered the extra cost of building beyond the estimate and all other contingencies.

By Mr. MATHEWSON:

Q. Does it cover the company's engineering expense in laying it out?

A. Yes, sir, it covers certain expenses in connection with that beyond what may be figured as part of the expense on the estimate.

1873 By Mr. PAGE:

Q. Your engineering force, or the engineering force of the Consolidated Gas Company, is the one that laid out this work, isn't it?

A. There are certain engineers that we have that are on the Astoria payroll, and such expense connected with them is charged to them.

Mr. PAGE: I will let Mr. Kirby examine Mr. Addicks. He has been trying to explain a certain line of examination to me, and if there is no objection he may continue.

By Mr. KIRBY:

Q. It is the custom of electric light companies, Mr. Addicks, to plot the daily output of current on a curve, showing the number of kilowatts drawn off. Is that the custom of gas companies, to show the amount of gas either drawn from the holders or placed in the holders? Have you any records of that kind?

A. I don't know that we have. Some companies do or have plotted off for certain purposes a daily make or send out; others do it by the week. It may vary in various companies.

Q. Does the Consolidated Gas Company do that, either by the day or by the week?

A. I really don't know whether they do or not. I don't remember seeing such a curve. I have seen one by the year or something of that kind but I don't remember seeing one of a shorter period.

Q. You have records showing the output per day, have you not?

A. Not of the Consolidated Gas Company. We don't know what our output is from day to day.

Q. Do you know it from week to week?

A. No, we do not know it from week to week.

Q. Or from month to month?

A. Month to month we do knew.

1874 Q. Do you have that for the different stations, or for the company as a whole?

A. The company as a whole. We also have the output of the various stations from day to day.

Q. Would not that show the days in the year upon which the largest amount of gas was drawn from the holders by the consumers?

A. Not in the case of purchasing gas, we would not determine that.

Q. Outside of the subsidiary companies from which you purchase gas, do not your own stations keep a record of the daily output of gas?

A. Of their own make?

Q. Of their own manufacture.

A. Yes. That I gave the other day in my testimony.

Q. And you were to furnish to Mr. Burr, I think, a statement showing when the maximum output was had or whether the period came within the month of January or December?

A. No, I think Mr. Burr wanted me to furnish if I could, the outputs of the 23rd and 24th of December, 1905, and I first said I would endeavor to do so, and then I called his attention to this condition of affairs that would prevent my giving the maximum output of the Consolidated Gas Company on any particular day.

By Mr. MATHEWSON:

Q. You mean the maximum sales, not the manufacture of the several Consolidated Gas Company's stations?

A. Not the manufacture, no. I can readily give the maximum amount of gas manufactured by each station of the Consolidated Gas Company, and those added together would give the maximum amount of gas made by the Consolidated Gas Company's own stations; but that is not the question. It is the sales of gas that I think Mr. Kirby is asking for, and I think that Mr. Burr wanted, and that I could not do.

1875 By Mr. KIRBY:

Q. You have a meter at each station showing the amount drawn from each station, haven't you?

A. No, the meter at each station shows the amount manufactured at each station, but the amount going out of the holder is not measured.

Q. That is only measured——

A. The algebraic difference between the meters and holders.

Q. And is that calculated for each day in the year?

A. Certainly, it shows the output so far as that station is concerned, irrespective of what is purchased, and what is purchased you know, may be put into the holder or into the mains adjacent to the holders, therefore we have no account of that.

Q. So that your records would show the maximum day of each station reckoned in the way you stated?

A. The maximum make, yes.

Q. No, you have stated that your meters show the make and your holders show the capacity at the station?

A. It shows the amount on hand at the station.

Q. And the difference between the amount which goes in and the amount in the holder to-day as it was yesterday would give you a basis of calculation to show how much was drawn out yesterday?

A. I know, but some of that gas might have come from some other source.

Q. You have a record of that, haven't you?

A. No, some may go into the mains immediately adjacent to that works. It would simply show the amount which has gone through those holders, but there might have been some gas gone through the main which while it came through the works and went out, it would not be indicated by the holder, because the holder might not have changed.

1876 Q. Do you mean to say that it is impossible for you to say how much gas has been drawn from the holders each day of your various stations?

A. I don't think it is possible to say that definitely. Suppose you poured gas into the holder at the rate of 100,000 feet and the consumption might be 100,000 feet, you might be pumping 100,000 and 100,000 feet going out, and the holder would remain stationary.

Q. Quite so, and you would know your use was 100,000 feet?

A. No, we have no way of measuring it.

Q. Your holder remains stationary?

A. Yes, but we have no way *to* measuring it.

Q. So you have not used any more than you have produced?

A. We would have no way of measuring the 100,000 feet in the holder. I am assuming it was 100,000 feet, but we would have no way of measuring it except returns by the exhauster, and the exhauster not being an accurate way of measuring gas, it would not be taken as a definite measurement.

Q. Is it not a fact that the deduction of the gas that has passed through the station meter into the holder, being of a certain definite amount and the holder not varying one way or the other, it indicates that the amount of gas, drawn from the holder is exactly the amount which went into the holder?

A. That is an exactly correct statement so far as that station is concerned, irrespective of the amount of gas obtained from some other source which may have gone into the holder or out of the holder.

Q. How do you measure that which comes from some other source and goes into the holder?

A. It is not measured.

Q. How do you reckon the amount to pay for it?

A. By computation at the end of the month, taking into consideration the amount made at the station every day which came into the

1877 holder, and the amount of gas used by the consumers of the company with an amount estimated for the unaccounted for gas, and the difference is the amount sent to us during the month. Of course, it would be practically impossible to have meters large enough all over the city to measure that. It would take a very large expenditure of money to have meters to measure that.

Q. Then there is no way except by guess work that your various manufacturing plants know the amount of gas that they may be called upon to manufacture during the coming day, be that in December, or be that in July?

A. That is so of every gas company in the world. We never know what we are going to make from day to day.

Q. If it were an independent gas company drawing its gas from no other source than its manufacturing plant, then it would have an exact measurement of the gas going from its holders each day or each period of measurement, would it not?

A. Yes.

Q. So that company, contrary to what you say being merely a matter of guess work, would have exact figures upon which to base its expected gas to be manufactured?

A. I did not say it was guess work as far as the meter was concerned. I said it was guess work what we were going to have from day to day, but we do have in each works exactly how many feet of gas is made. That is a definite quantity measured by each meter in each individual works.

Q. How do you know how much to make each day?

A. From a general knowledge of the situation.

Q. But by no definite measurement?

A. Nobody can tell. It depends how much we have in our holders. If our holders are empty we have to fill them.

1878 Q. But you know in December that you use more gas than in July?

A. In a general way we know we will use so much apparatus, but it may be more or less. It is a very uncertain quantity from day to day. It all depends on how much holder capacity you have, whether you have to start up apparatus or gain or lose on your holders from week to week.

Q. I think you have made some figures, have you not, on the yearly consumption per consumer?

A. Yes, I had some figures.

Mr. Kirby: Have they been put in evidence?

Mr. Mathewson: Yes.

Q. How did you reckon your number of consumers?

Mr. Mathewson: Mr. Carter prepared that statement. I don't know that Mr. Addicks knows.

A. Well, I have not refreshed my mind for this hearing, but based on the number of meters as I have it——

Q. And what meters were figured into that calculation—all the meters of the gas company installed at various parts of the city?

A. Active meters.

Q. What do you mean by active meters?

A. Those actually in use and recording, not those in the shop or out of use.

Q. No matter what the amount of gas might be which passes through those meters, or whether they were in constant use or not?

A. Well, those that were in the shop for repairs would not be in use at all.

Q. In other words, let us assume a store which formerly was lighted by gas and for some reason changed from gas to electricity, still keeping its gas pipes there, so that in case of necessity
1879 or breakdown of the electric light system, it could use gas; a meter would be there for the purpose of measuring that gas. You have considered those meters in your calculation, haven't you?

A. I think not.

Q. Well, do you know just what meters you have considered in your calculation.

Mr. **Mathewson**: He did not make the calculation.

A. I could not answer that.

Q. You simply took figures given you by Mr. Carter?

A. As to the active m-ters in use, yes.

Q. Would Mr. Carter know?

A. Mr. Carter would undoubtedly know exactly.

Q. On Thursday or Friday last, you gave your opinion in reference to the increased use of gas with the decrease of price per unit. Are you familiar with conditions in this city as they existed in 1899, when I think the so-called gas war was on?

A. I knew there was such a gas war.

Q. Do you know whether or not the consumers increased during that period or not?

A. I have a record here of the number of active meters, which would indicate that.

Q. Which would indicate an increase?

A. Yes, 1898 and 1899. Exactly what was the year of the gas war, do you recall it?

Mr. **Mathewson**: 1899 and 1900.

The **Witness**: Well, there was an increase in——

Mr. **Mathewson**: That is already in evidence in a complete statement which Mr. Carter testified to, showing the active meters each year from 1885 down to date, and the consumption per meter.

1880 Q. That is a fact, that there was an increase in that year as shown by the record?

A. The record I have before me between 1897 and 1898, shows there was an increase of about 30,000 meters; in 1898 and 1899 there was an increase of nearly 36,000 meters; and the following year, 1900, there was an increase of 22,500 meters.

By Mr. **Burr**:

Q. These are not any part of them prepayment meters, are they?

A. They are everything.

By Mr. Page:

Q. Was the prepayment meter in existence in 1898 and 1899?

A. I am merely saying that it included everything. I think they were in existence then, I don't recall the first year we put them in use.

Mr. Mathewson: I don't think we had many of them, if any.

Mr. Page: No, I think not.

The Witness: There is a record of that.

By Mr. Kirby:

Q. If they were in use, they were in the great minority?

A. I should think so. They have increased very materially in the last few years, but I am sure they were in use before 1898.

Q. You have testified that the chief engineer of the company, Mr. Bradley, stated to you that in his opinion, to produce 22 candle power gas during the winter it would be necessary to use a lighter oil than was then being used by the company?

A. That is right.

Q. You were of that same opinion?

A. Yes, absolutely.

1881 Q. Would it not have been possible to have produced 22 candle power gas by the use of a larger amount of 28 degree oil rather than to use 34 degree?

A. I don't know whether it would or not, but if so, I do not think it would be used economically, and it would be to the disadvantage of the distributing system.

Q. In other words, it would have been cheaper to produce 22 candle power gas with 34 degree oil than it would with 28 degree?

A. That was our effort.

Q. And during this period of use of 34 degree oil the Consolidated Gas Company bought this oil not only for its own manufacturing plant but for that of the other companies from which it purchased its gas?

A. That had been the custom and I followed the same custom. It does not include the Mutual, however.

Q. Was it an old custom?

A. It was the old contract and I simply followed it.

Q. Do you know how many years it went back?

A. I do not.

Q. Do you know whether it went back as far as 1904?

A. Well, it was that previous contract.

Q. Before 1904?

A. I cannot say, it was that previous contract.

By Mr. Page:

Q. By previous contract do you mean City's Exhibit 10?

A. I don't recollect. It was the one I had at the last hearing.

Mr. Mathewson: Yes.

By Mr. KIRBY:

Q. Has or had any effort been made by either the Consolidated Gas Company in its own manufacturing plants or by the subsidiary companies to produce 22 candle power gas with 28 degree oil?

1882 A. We had been using 22 candle power with 28 degree oil.

Q. I mean during the winter months?

A. This was brought around by the difficulties about the candle power.

Q. What were those difficulties?

A. I don't recollect, I simply took the reports that came in.

Q. We would have to refer to Mr. Bradley?

A. Yes.

Q. You as an expert in these matters must know what these difficulties are?

A. I anticipated what they would have been with 28 degree oil.

Q. What were they?

A. That we would not have been able to maintain the candle power.

Q. Why?

A. Because the grade of the oil is a very heavy grade oil, and during the severe weather it is not as stable as to its illuminants as the lighter grade oil.

Q. Have you ever had any personal experience in the endeavor to use 28 degree oil for 22 candle power gas?

A. I think the first experience I ever had in using as low grade as 28 degree was here.

Q. Do you know whether or not any of the subsidiary companies of the Consolidated Gas Company have used oil of as high a specific gravity as that, to produce 22 candle power gas?

A. They are using 34 gravity. I know they used 28 in Boston and had to drop it there for the same reason. They could not make their candle power with 28 degree oil.

Q. It has been made, hasn't it?

A. We make it during the summer.

Q. It has been made during the cold weather with 28 degree oil?

A. I presume you can at certain times. The moment we changed this summer from 34 to 28, we had a little cold snap and lost our candle power.

Q. But the main reason was you thought it would be more

1883 economical?

A. Certainly, so we could make our candle power that we had to, in order to obey the law.

Q. In making your calculations as to whether or not it would be more economical, did you take into consideration the fact that you had an existing contract for a certain price for that oil, and had to make another one of probably a higher price, and when you found it would be a higher price, did you reckon the difference in the calculation?

A. No, we have to maintain the law and obey the law in the first place, and I took in- consideration all the elements under which we were compelled to work. We must obey the law. We have a fine of $1,000 for every station——

Q. Couldn't you obey the law with 28 degree oil?

A. We didn't think we could, no, sir.

Q. In endeavoring to purchase this 34 degree oil, I take it you made inquiry from no other company than the Standard.

A. No, I should think it would be an absurd proposition.

The **Master**: Mr. Kirby, that question has been asked at least twice before, to my recollection. That whole question of Standard oil and contracts has been thrashed out by Mr. Burr, and also gone into by Senator Page.

Q. Could not you have purchased 28 degree oil at a very greatly decreased price, and would it not have answered your purposes, if you could have?

A. It would not have, no sir. 34 gravity oil is the oil we know we could handle.

Q. Have you ever made any experiment with 32 gravity oil?

A. We have had 32, 34 and 28, but I knew as a matter of fact, the lower you go in gravity the less stable the oil is. If we could have naphtha at 62 degrees, we would have more stable gas still.

1884 Q. And we would have a very expensive one also.

A. Yes, exactly. And there is a happy medium which you have to reach.

By Mr. **Page**:

Q. How do you lose the candle power of gas? You say you lose it in cold weather?

A. How? I don't know how the candle power is lost, except it is lost.

Q. Are not the illuminants absorbed by the water in the tank, they being cold?

A. I don't know all the reasons for loss of candle power.

Q. Don't you get it back again in warm weather?

A. No, I think not, you may have hydro-carbons on your tank, on the water in the tank, which are precipitations in winter, which may or may not vaporize during the summer, or it may require heat to vaporize them. As a rule we do find hydro-carbons on top of the holder which is pumped out from time to time so as not to have it in too great quantities on the surface of the water. We also find it in our meters at certain times, and in our mains. We do lose candle power, but how or why we do lose candle power, I am not prepared to say, except that the illuminants do not stay in the gas.

Mr. **Page**: We have no more questions to ask.

By Mr. **Burr**:

Q. I understood you to say, Mr. Addicks, that you were not able to give me the information which I asked for at the last hearing regarding the maximum amount of sales around the Christmas holidays, December 23rd and 24th.

A. Yes, sir, of the Consolidated Gas Company, for the reasons I gave the other day and also reiterated to-day.

1885 Q. Let me ask you, is it not a fact that the maximum amount of sales on any given day amount to 70,000,000 cubic feet?.

A. For the Consolidated Gas Company?

Q. Yes.

A. I estimated at one time it would be somewhere around that. but it is a pure estimate. That was my estimate. I think at one time it was about 70,000,000 cubic feet for the Consolidated Gas Company alone, but I don't know whether that is exactly right or not, I could not say.

Q. That would be your estimate now?

A. I have no reason to change that estimate.

By Mr. MATHEWSON:

Q. Do you mean a maximum day's sales?

A. On any one day's sales.

Q. I didn't know whether you meant an average sale?

A. No, not at all. I mean a maximum day's sale. I cannot substantiate that any better than I have.

By Mr. BURR:

Q. It is somewhere between 65,000,000 and 70,000,000 certainly?

A. I should think so, that is my judgment of it.

Q. And you have stated heretofore, as you state now, that you estimate it at 70,000,000?

A. I have estimated it myself at 70,000,000 and showed figures for it. I cannot say how accurate the figure is.

Q. Are renewals or replacements due to the wearing out of machinery, mains or other wearing out of plant, or due to the necessity or other and larger machinery?

A. I think they would be due to both things. In a great many pieces of apparatus in the plant, on account of replacement due to requiring larger apparatus or machinery.

1886 Q. Have those items, once renewed or replaced by the Consolidated Gas Company, ever been renewed or replaced a second or a third time?

A. I don't know.

Q. Mr. Bradley would know more about that than you, I suppose?

A. Yes.

Mr. BURR: That is all I want to ask Mr. Addicks. While I have the floor, I want to inquire if it would be agreeable to counsel for the company to furnish me with an analysis of the real estate account or allow Mr. Hayward to make such an analysis from the books of the company themselves.

Mr. MATHEWSON: I don't quite understand what you mean by an analysis of the account.

Mr. BURR: I want an analysis of the real estate account on the books of the company from 1884 to date, including all the purchases and sales.

The **Master**: That cannot be for the purpose of cross-examination, can it?

Mr. **Burr**: No.

Mr. **Mathewson**: And besides Mr. Francklyn testified to the real estate which has been bought or sold since 1884, and it was almost negligible.

Mr. **Burr**: There were very few transactions, but they were not given so as you would allow Mr. Hayward to make that analysis — would simplify matters, or Mr. Carter can prepare it himself.

Mr. **Mathewson**: Doubtless Mr. Carter can have it prepared. It is for the purpose of your case I presume?

Mr. **Burr**: It will save bringing the books. I am saying that now so that you can have it prepared.

1887 Redirect examination by Mr. **Mathewson**:

Q. You were asked whether you had made any endeavor to secure oil from any other company than the Standard Oil Company. Do you know of any other producer that produces oil enough to provide for the Consolidated's requirements for Manhattan Island, except the Standard Oil Company?

A. No, sir. I have every reason to believe that the entire production in the United States of the quality of oil we require, outside of the Standard Oil Company, would not supply our requirements.

Q. Even if it could all be gotten together in New York?

A. Even if it could all be gotten together in New York.

Q. Assuming you had to employ coke instead of anthracite coal for water gas by reason of a strike or otherwise. How would that affect your working capacity?

A. It would reduce the water gas generators by approximately 20 per cent.

Q. How do you figure the maximum working capacity of a generating plant for a year with the maximum capacity for a day?

A. I always estimate that about two hundred times the daily capacity would be the safe working annual capacity.

Q. That takes into account the period required for repairs and also the smaller amount of consumption in the summer?

A. Yes, sir.

Q. When you said before the Gas Commission that the policy of the company was to replace in Astoria its generating plants in Manhattan, had any act then been passed or any order made reducing the charge for gas in New York City to private consumers to 80 cents?

A. No, sir.

Q. Or to anything below a dollar?

A. No, sir.

Q. You said that the company could produce gas at Astoria for the purpose of supplying the Borough of Queens. Were you
1888 referring to the physical capacity of the plant or to the franchise?

A. To the physical capacity of the plant. The mere fact of their presence in Queens, that we could supply Queens.

Q. If you had a franchise?

A. Yes, if we were enabled to supply it.

Q. It has been testified to that the ten cents per thousand charged to cover replacements and contingencies was first written into the books in May, 1905, following the report of the Stevens Committee. Was that the first time it was discussed?

A. No, sir. I had discussed it in the previous year.

Q. You have testified that you testified in Boston. How early did you testify in Boston?

A. I think my testimony was taken about the first of the year 1905.

Q. Did you testify at that time that ten cents per thousand should be allowed for contingencies?

A. I testified I thought there should be such an allowance.

Q. Had the Stevens Committee at that time been a*a*ppointed?

A. I don't know that the Stevens Committee had been appointed. I don't remember the exact date of my testimony and the date on which the Stevens Committee was appointed, but I will say perfectly frankly that the question of this allowance of ten cents, so far as I was concerned, arose long prior to any sort of any investigation of the company.

Mr. Mathewson: There is no doubt is there, that the Stevens Committee was appointed in March, 1905?

Mr. Page: No.

Q. In reference to the expenditure for street lamps, you were asked why it was not deducted in operating expenses? Do you
know whether that item goes into operating expenses under
1889 the custom of the Massachusetts Gas Commission?

A. Yes, sir.

Q. Or the New York State Gas Commission?

A. There is such an item in operating expenses in both the Commissions' printed reports.

Q. And on this side when you give your statement of income for the year 1905, Exhibit 96, does that include all the receipts from street lamps on the other side of the account?

A. Yes, sir, our receipts from street lamps and other receipts.

Q. You stated that you knew and you read what Boston was paying for oil. Do you know whether that was more or less than New York was then paying?

A. At the time I knew it was about the same, somewhere in the vicinity of 4½ cents a gallon.

Q. That was in 1905, wasn't it, the nominal year, when New York was paying a little over four cents?

A. Yes, sir, paying 4.04 at the same time.

Q. You were asked by Mr. Burr if you could explain the difference in cost between the different months by companies whose gas was delivered to the Consolidated under the agency agreements. Will you look at the Gas Commission Exhibit 105, which is City's Exhibit 36? It appears by this exhibit that the Central Union Gas Company was delivering gas to the Consolidated before July 1st, 1905, at about 26 to 29 cents per thousand, whereas after July 1st it was 32 and even 34 cents per thousand. Will you explain that difference?

A. On account of the increase in candle power and the fact that there had been no examination of the Central Union Company's gas by the city's officials and they had no outside photometer whatever. They discovered that their amount of oil used had to be increased in order to maintain their candle power at 22, and that of course increased the cost of gas.

Q. Prior to the taking effect of the Act establishing the 80 cent gas, which was July 1st, 1905, was there any inspection for
1890 candle power in the Borough of the Bronx, in which the Central Union was operating?

A. I do not think there was any whatever.

Q. Do you remember the testimony that the inspection was confined to the Island of Manhattan by the officials of the city?

A. Yes, sir. I don't think there was any inspection in the other Boroughs as well, but Manhattan has always been inspected regularly.

Q. Were the services ever referred to in the gas business in your experience as mains?

A. Not in my experience, sir.

The Master: He said that on his cross-examination, did he not?

Mr. Mathewson: No, he was not asked so far as that. Senator Page stopped just short of that.

Q. Would there be any special difference between pressure in the main just outside the service and in the service at the entrance to the main?

A. Not material, normally.

Q. Assuming that you eliminate the effects of the law of gravitation on the distribution of gas, would it be possible in your judgment in that case to comply with the law establishing a pressure of between 2½ inches and one inch and still supply your consumers with gas?

A. Not in my judgment.

Q. You have been asked in reference to district governors? Under what system of pressure are district governors used?

A. As far as this country is concerned—I cannot say as to others—ordinarily by a high pressure line distributing gas into a lower pressure line, there being quite a large difference in pressure between the high pressure line and the low pressure line.

1891 Q. Is there any special danger in the use of the high pressure mains?

A. I think there is a very grave danger; the danger of fracture to the main under the crowded city conditions. The amount of gas escaping from a main under those circumstances would be so great as to be very difficult to handle, the accumulation of gas in the street would be very rapid, much more rapid than the ability of any emergency force to cope with, in all probability, and in addition to that the main itself is difficult to handle with our present methods of controlling by bagging. You have to have valves in all directions in order to handle it. In suburban districts these reasons do not apply to the same extent because the territory is sparsely settled, and there is usually a considerable distance between the mains and the houses, and there are no subways or places for gas to accumulate in. Personally I am very much opposed to high pressure service in a crowded city.

Q. Well, in case your governors gave out or got out of order, what would be the effect as to the high pressure mains?

A. Any failure on the part of a governor would involve a very populous district and might involve serious accidents to the public.

Q. Mr. Bradley or Mr. Simpson has testified that in many streets of New York City it was impossible to lay down any additional mains of any sort, but assuming it would be possible and proper to instal a system of high pressure mains throughout the City of New York, would that be a matter of considerable time and large expense, or otherwise?

A. It would be a matter of a very large expense and very considerable time, and when we had finished we would not know what condition we were in as far as distribution was concerned on account of the lapse of time in starting and completing the work.

Q. In other words, the character of distribution to different sections, according to your experience, is changing?

1892 A. According to my information. I have more information in New York than I have experience. I have experience elsewhere.

Q. Would the expense of such a system amount to hundreds of thousands of dollars or millions or what, generally speaking?

A. I should not like to state any figure, but I would not set it at less than millions of dollars.

Q. Now, let me ask, assuming you establish a system of high pressure mains, with the conditions in New York City, would it, in your judgment, then be possible to distribute gas so that never at any time in any distributing main at any time would there be a pressure outside of two and one-half inches on one side and one inch on the other?

A. I should not undertake to carry out any such proposition, Mr. Mathewson.

Q. I ask whether in your judgment it could be done?

A. I do not believe I could accomplish it. That is my frank opinion.

Q. Do you know of any city or place in the world where there is any such provision as that?

A. I have not been able to ascertain any city that had any such provision or approximated it.

Q. You know some cities which have minimum requirements, that there shall not be less than one inch pressure?

A. I do, and in some cases less than that—.6 of an inch.

Q. Do you know of any city which provides a maximum pressure?

A. I never heard of one.

Q. When you testified as to the estimate for additional enrichment, before the Gas Commission, you were dealing with the nominal year ending October 31st, were you not?

A. I was.

Q. And that contained how many months of the 22 candle power?

A. I think four months.

1893 Q. And your present testimony is in relation to the calendar year containing six months?

A. Six months.

Q. Senator Page has asked you whether the plant at Astoria will not be new. Is it not your experience that a new plant frequently requires repairs?

A. Parts of this plant are being repaired now.

Q. Is it not a fact that from the moment a plant starts up in operation that it requires repairs, whether new or old?

A. Yes.

Q. And isn't it sometimes true that before a plant gets to operating smoothly, that repairs and changes are required that you do not have in one which had been operating some time?

A. More changes than repairs. Sometimes the retorts after they have been repaired, they probably are better than when they were originally put in; they are apt to be so. A second set of retorts on an inclined bench would probably be better than the first set because all the remainder of the setting had gotten its bearings and only the retorts would be affected by the next heating.

Q. Your attention has been drawn to the fact by Exhibit 93 that the station cost of gas to the Consolidated for the nominal year ending October 31st, was 33.7, while for the calendar year the station cost was 33.17. Which figure did you take as the basis of your computation presented here, showing the cost of gas to be 69.36 cents?

A. I took the cost of gas as by Exhibit 94.

Q. That is the lower cost?

A. It is a lower cost in the station cost, yes, sir.

Q. For gas manufactured by itself?

A. In the stations cost, yes, sir.

Q. You use the term "undistributed expense" in speaking of the ten per cent., which you added to get the complete value of the plant. Is that an engineering term or is it one which you used?

1894 A. Well, sometimes used that way, or sometimes put in as "uncharged labor and material." It practically means the same thing.

Mr. MATHEWSON: I have nothing further.

By Mr. BURR:

Q. Is it your opinion, Mr. Addicks, that the pressure should not be regulated at all by law?

A. I don't see any necessity, Mr. Burr, for regulating the pressure of a gas company, absolutely none, and for this reason no gas company wants to carry too low a pressure because they do not want to run the danger of the gas going out. That would be a serious danger and therefore it is useless to place too low a pressure limit on it.

As far as a high pressure is concerned, no gas company desires to give any higher pressure than is necessary to reach the necessities of the apparatus used by the consumers. They have got to overcome a great many difficulties. In the first place you have got to reach the necessary pressure on each piece of fuel gas apparatus that may be used. The Welsbach burner requires the maximum. The higher pressure you get on the Welsbach the higher efficiency you get in your burner. As regard gas stoves, my judgment is somewhere around two inches as the minimum they should have, but the tendency of the gas business is to increase the pressure in order to get greater efficiency. Of course the objection to increased pressure is unaccounted for gas and leaks from mains, and no gas company wants to carry any higher pressure than they think is necessary to supply their consumers. You ask me frankly whether I think there need be any provision in the law as to high pressure, and I am frank to say I don't think there should be anything of the kind.

Q. That should be left to the companies themselves?

1895 A. That should be left to the companies themselves. I think so.

Q. Because no gas company would be willing to use the pressure as a means of compelling the consumer to pay for more gas than he actually burned?

A. Not unless he is the most shortsighted, misguided manager you could imagine, because it is a most foolish proposition. As far as a minimum pressure is concerned I can see there might be some propriety in that in making sure that the public would not be affected by danger from too low a pressure. I have known in my own experience where I have had too low a pressure, lower than an inch, and all I could do would not prevent it. That is generally the trouble by having a low pressure.

Q. So you think the law is objectionable because it is not only impossible to comply with but it is unwise?

A. If the State wants to pass laws, if I can obey them and know how to obey them I am going to obey them, as far as I am individually concerned; but when it comes to a question of my opinion I am frank to say that I think it is extremely unwise. If I could see any way of obeying this law I certainly would do so, as far as I am concerned, or recommend to the company to do so.

By Mr. Mathewson:

Q. You said that you tried to obey the law and found it impossible. What was the effect, so far as complaints coming into the company were concerned, with your attempt to keep inside the law?

A. Why, we had not only thousands of complaints, but in some of the cases we were threatened with suits on account of not supplying gas, people could not get sufficient gas for their purpose.

Q. The old flat flame burner required perhaps only an inch pressure to operate, did it not?

1896 A. It can be operated even under that; a half inch pressure could be used.

Q. But the new apparatus, such as the Welsbach and stoves, require——

A. They should have at least two inches pressure, and I think that for general use three inches would be better than two inches.

By Mr. **Page**:

Q. The reason of those complaints was largely because of the insufficient piping of the houses, wasn't it?

A. I don't know in every detail; I have not investigated every detail. I only know what the pressure was in the mains. I should think that if they had insufficient piping it would contribute to the difficulties that way, but to what extent I cannot say. You take the linotype machine, for instance, for a newspaper office—I think one of the very first to complain was a newspaper because they could not maintain the heat on their linotype machines on account of lack of pressure.

At one P. M., upon the Master declaring a recess for lunch, Mr. Burr requested that the rcess be extended till 2:30 P. M.

Recess until 2:30 P. M.

1897

After Recess.

The Master calls the attention of the counsel to the fact that an order has been made by Judge Lacombe extending the time of the complainant to present its evidence in chief twenty-one days from the 25th of August, 1906, with the further proviso that the complainant is to be allowed one full day and a half after the receipt of this order to complete its *prima facie* case, the witnesses being called and examined successively on the direct, without interruption. The balance of the extension granted by this order will be allotted the defendants for cross-examination, the special Master being given authority to extend such time five working days more, such extension however, to be deducted from the defendant's forty-five days.

Robert A. Carter recalled:

Mr. **Mathewson**: I have Mr. Carter here for further examination, if desired.

Mr. **Page**: As far as the State is concerned, there is no further cross-examination of Mr. Carter.

Mr. **Mathewson**: I furnished to Mr. Burr a statement of the funded debt of the company this year, and also of the fixed charges, and I am also furnishing him with the number of services in the ground, 1903, 1904 and 1905, and services relaid since those dates.

Mr. **Burr**: That is, you now hand me that paper.

Mr. **Mathewson**: Yes, I now hand you that paper. Much of the balance of the information for which you asked appears in the record already in one form or another, including the amount received from each company month by month, which has already been offered, and the amount of production of each manufacturing plant of the company, which also appears in the ex- 1898 hibit which we delivered to Senator Page, being for 1905, made up in the same form as Exhibit 145 of the Gas Commission Report for the nominal year ending October 31st, 1905.

Mr. **Page**: Has that been presented yet?

Mr. **Mathewson**: Hasn't it? I gave it to you the other day. I think you put it in evidence.

Mr. **Page**: Was that the 83 pages?

The **Witness**: No; I have a copy of it here.

Mr. **Burr**: You are going to furnish me with the information which is not already on the record, as you claim, is that it?

Mr. **Mathewson**: No, some of it we cannot. Your first request was for the capacity of coal gas plants in 1884. Mr. Carter is not an engineer, and is not familiar with it. Mr. Bradley probably will be able to tell you.

As to all contracts and vouchers for all holders constructed since 1884, giving the value of the holders, foundations and valve houses, that would be something we could not undertake to do. The vouchers are not in such shape that from them you could tell the exact cost of each holder in any event.

The number of services you have. I have given you those for six years past. I have given you the principal of the outstanding obligations and for each year, and the amount paid.

The average of the annual quotation for the bonds or debentures are accessible, and I understood that you could look at the quotations as well as we could hunt them up. We have no record of them in the books of the company.

1899 The amount of gas received appears, and the price paid for same to each company under the agency agreement appears by the exhibit already in, showing the amount of gas received, and by the agency agreement showing the price.

"The date of the largest sales in 1905;" Mr. Addicks explained this morning that that would be impossible to give, the exact sales per day. The best he could do would be an estimate.

"Manufacturing capacity of coal gas and water gas plants with which the Consolidated Gas Company has an agency agreement" has already been testified to by Mr. Bradley and Mr. Addicks.

"Monthly table of cost station by station," that appears in an exhibit which I have handed to Senator Page.

The question "Bring in all the bids, whether successful or not, in connection with holders constructed since 1884;" That we could not undertake to do. I do not think that we have them and I do not know that it would be material if we had.

The same as to the pipes.

Now, "Payroll for December, 1905;" that is a very extensive list, and Mr. Carter will produce such samples or such other illustrations as you may please, if you will indicate what you wish. I understood that your expert had checked them over and verified the statement that we presented, as far as he thought necessary.

"Produce the vouchers for holders built since 1895"; there would be a bushel basket full for each holder, and it would not lead to the full value or cost of the holder anyhow; they do not appear in the shape of vouchers.

Vouchers for oil for 1905 to 1906, up to September 1st.

1900 The record books have already been marked in evidence, showing that, or rather for identification, and all the deliveries have been read off, covering the period, before the Master.

"Give the age of all apparatus and buildings costing more than $1,000." That is impossible to give, but as far as possible it was generally testified to by Mr. Mayer, who had his statement as to when the apparatus was installed.

Mr. Burr: I said, leaving out those testified to by Mr. Mayer.

Mr. Mathewson: Now, I think I have covered all excepting those respecting which I have given you statement.

The Master: Is there any further cross-examination of Mr. Carter by you, Mr. Burr?

Mr. Burr: No, I have no further cross-examination now.

The Master: Then, Mr. Mathewson, your redirect, if you have any.

Redirect examination by Mr. Mathewson:

The Witness: In reference to some questions that were asked me last Wednesday, in connection with some figures prepared by Mr. Cuthbert, the expert accountant for the State, the item was a credit, aggregating, If I remember, something like $55,000 to the "expense, general office" account.

Mr. Mathewson: Take the exhibit and tell to which you refer.

The Witness: There was no exhibit showing that particular information.

Mr. Page: Analysis of general office expenses?

The Witness: That is it.

1901 The question was whether the full amount credited to that account during the year had not appeared as a charge in some other operating expense account and while I expressed doubt on the subject at the time, I was not able to say positively that the credit shown of $55,896.13 was not all charged to other operating expense accounts. I have investigated those credits since testifying and find that the amount credited to that account during the year, which appear as a charge in other operating accounts, was $28,876.60, the balance being adjusting entries and in no way distributing the expense over other accounts. In that connection, as the question comes up in connection with the item of "expense, general office," in Exhibit 94, and as there is a considerable difference between that item in Exhibit 94 for the calendar year 1905 and Exhibit 93 for the nominal year ending October 31, 1905, that is to say, some -63,176.29, I have combined three items appearing in Exhibits 93 and 94 to show the variation between the three items combined, the same items appearing each year in these combined items. In making the combination one of the clerks apparently did not in each year group the accounts in identically the same way, so that differences appear in these three items, expense, expense account general office, and advertising and legal, which are not differences at all except in the methods of grouping if the aggregate of the three items is taken. In other words, three items for the calendar year 1905, Exhibit 94, are made up as follows:

Expense	$490,855.36
Expense, general office	$339,999.51
Advertising and legal	$105,800.02
Total	$936,654.89

1902 The three items appearing in Exhibit No. 93, being the operations for the nominal year ending October 31, 1902, are as follows:

Expense	$583,278.52
Expense, general office	276,823.22
Advertising and legal	62,861.02
Total	$922,962.76

The difference between the two totals is $13,692.13. In other words, in combining these three items, the differences that appear in the individual items practically are eliminated in that total.

By Mr. PAGE:

Q. The question that I asked merely went to this, that the legislative investigation cost the company $77,806.76, and that the less credit was a distribution of $55,896.13 to other accounts, legal and advertising, and whatever the others were—expense, general office, and what was the other item you say——?

A. Expense, expense general office, advertising and legal.

Q. That the $77,806.76 was an expense that is properly chargeable to legislative investigation; that is right, is it not?

A. No, that is not the case, as it happens. The total expense in connection with the legislative investigation for the year amounted to $51,677.71, of which $28,876.60 was for legal services, which amount was taken out of the incidental expenses, account general office, and charged to legal expense and advertising. The balance represented other expenses in that connection, printing principally, and overtime of the clerks preparing statements, and expenses of that nature. The reason so large an amount appears in that
1903 statement, Senator, is because there was an error made in
charging into that expense account, general office, the sum of $27,019.53, which should have been a charge against suspense account, and it was the taking it out of the expense account, general office, and putting it in suspense account where it belonged that created so large a credit in the account. It simply corrected an incorrect journal entry.

By Mr. MATHEWSON:

Q. Is that all?

A. Just one moment. I was asked I think, by Mr. Burr, in connection with coal contract, marked City's Exhibit 23, to what extent the price stipulated in the contract has been affected by the variation in freight rate and in the mining rate, according to the terms of the contract. The contract was dated in 1903. In that year there was an increase of ten cents per ton in the freight rate, which operated to increase the cost of the coal from $3.50 to $3.60 per ton. In the following year there was a decrease in the mining rate of 5 cents, which under the terms of the contract operated to reduce the cost 7½ cents, bringing the price from $3.60 to $3.52½. In that year, however, we were getting a better figure from other companies and at our request they took 12½ cents more off the price of the coal, reducing it to $3.40 per ton. In the following year, there being a further reduction generally in the price of coal, they took 25 cents per ton off of the price, reducing it from $3.40 to $3.15, which price went into effect until the contract expired in 1906, the saving the company effected through securing these reductions in the price of coal amounted to some $90,000.

Q. You stated in your original examination that the cost to
1904 the company of meters, cocks, connections, &c., amounting to
$3,802,544.50, was divided between meters, cocks and connections and other items. Will you state the various items and the amounts of each making up that $3,802,544.50?

A.—

Meters	$2,941,037.07
Cocks and connections	313,714.47
Pipe and specials	113,259.64
Tools and implements	56,345.17
Office furniture and fixtures	39,708.73
Horses, wagons and harness	24,128.35
Scows	19,816.15
Automobiles and accessories	6,915.15
Gas stoves	287,619.77
Total	$3,802,544.50

Q. And you stated, from recollection that the estimate on the cost of reproduction of those upon current prices which the company is paying for such was something over four million dollars. Have you the exact amount?

A. Yes, $4,201,615.35.

Q. Does the company make any inventory of its pipes and specials?

A. Yes, sir, such an inventory is made annually.

Q. You were asked in reference to the time when the 10 cents per thousand was discussed, which was charged in the company's books from January 1st, 1905, to cover repairs and replacements and contingencies. Was it discussed at or before May, 1905, when the entries were made?

A. Yes, sir, it was.

Q. How long before that?

A. I cannot be exact as to the date, but it was some time in the fall of 1904 that the matter was first discussed.

Q. Was the 10 cents discussed at that time or some other figure, do you remember?

A. My recollection is that some other figure was discussed; that
10 cents was considered too small an estimate, too conserva-
1905 tive an estimate to provide against all of the contingencies
that were likely to arise, and I don't know but that it was
some time after that, before it was finally decided upon to use the 10
cent rate.

Q. Before the formation of the National Coke & Coal Company, how did the company provide for its cartage of coke?

A. The cartage was done by contractors who charged the company a given price per load.

Q. Do you know how the results compared to the company since the organization of this National Coal & Coke Company as to the cost of cartage and receipts of coke?

A. I would say in a general way that the dividends which we received represent the profit over and above what we would have paid the contractors under the old arrangement.

Q. Generally speaking, is the result more favorable to the company or less?

A. Much more favorable to the company. I might express that a little more definitely. The dividends are saved out of what we paid the contractors under the old condition, because the allowance to the coke company is approximately the same thing, so the dividends come out of that.

Q. In Exhibits 93 and 94, showing the coke produced, it appears that certain coke was delivered from one station to another. Isn't the coke charged to the station to which it is delivered?

A. The coke is.

Q. And credited to the station from which it is delivered?

A. That is the case.

Q. And it is charged and credited at the same figure?

A. At the same figure, yes, sir.

Q. So that in result it would make no difference what figure was used so long as it is both charged and credited in the final cost of gas?

A. That is the case, yes, sir.

Q. In reference to the gas received under agency agree-
1906 ments, if I understand you correctly; you take the amount of
the output of the company which makes the gas, and deduct
from that the amount which their own consumers receive as by their
consumers' meters and deduct leakage, and the balance is the amount
which the Consolidated Gas Company receive?

A. Yes, sir.

Q. And then that balance being delivered to the Consolidated Gas Company, the leakage occurs in the mains of the Consolidated Gas Company, and you compute that by taking the total amount of gas received and gas which leaves your stations, and from that total deduct the amount which the consumers' meters register?

A. Exactly.

Q. Is there any general interlocking of the mains of the Consolidated Gas Comapny and other companies except at the point where gas is delivered?

A. There is not, no, sir.

Q. By City's Exhibit E it appears that the amount of interest on taxes which is included in Exhibit 94 for the calendar year is $94,506.29. Does any portion of that accrue on the portion of the tax relating to the income from securities of other companies or tax on excess dividends invested in securities of other companies amounting to about $62,000 or $63,000 in total?

A. None whatever.

Q. Does this interest represent interest on taxes which you have failed to pay because they were overlooked or you did not desire to pay them, or on taxes which are contested by the company?

A. On taxes that are contested.

Q. Do you pay your taxes so as to get the advantage of any rebate?

A. Always, when we pay them.

Q. Under what advice, if any, were these taxes contested on which the interest of $94,000 and over accrued?

A. They were contested upon advice of counsel.

Q. That they were legal points?

1907 A. The consideration that there were assessments concerning which certain legal points should be decided by the courts before the taxes were paid.

Q. Legal questions which counsel advised should be determined by the court?

A. Yes, sir, that is the case.

Q. And have you contested any of these taxes without such advice?

A. In no case, no, sir.

Q. It is in evidence I think that the amount of assessment for taxation for your special franchises including mains and services in streets for 1906 is $31,900,000. Have you the amount of the assessment for 1905?

A. In 1905 it was $27,300,000.

Q. And what increase is that?

A. $4,600,000.

Q. At the tax rate prevailing in 1905, what increase in taxes would that make on account of your franchises for 1906 as compared with 1905?

A. The additional tax would amount to $68,563.87 or .52 of one cent per thousand cubic feet sold during the year 1905.

Q. And in 1906 is there any other special or additional assessment of a character which was not levied in 1905?

A. There was, yes, sir; assessments aggregating $5,455,000, which differ from any assessments that have ever been levied against the company before.

Q. Were there never any assessments of any corresponding character before?

A. Never, no, sir.

Q. And at the tax rate for 1905 what would be the tax if sustained?

A. $81,307.81 or .61 per thousand cubic feet of gas sold during 1905.

Q. And the total of these two items would be how much in money and in cents per thousand?

A. $149,871.68, equal to 1.13 cents per thousand cubic feet.

Q. You have been questioned in reference to the entries in your books in reference to gas sold to the city. The contract during this period called for how many feet of gas per lamp per hour? 1908

A. Three cubic feet per lamp per hour.

Q. And that was the amount which you could charge to the city under the contract, wasn't it?

A. That is the case, yes, sir.

Q. And was that the amount you entered in your books as a charge against the city?

A. The entry is not made in the books in connection with any charge, Mr. Mathewson; it is only for statistical purposes. The quantity supplied the lamps is estimated for the purpose of determining the total volume of our sales, and as the contract called for that quantity, we estimated that quantity although——

Q. When you arbitrarily separated the item of lamps and maintenance?

A. Yes, sir; that is the case.

Q. Do you know what the tests show as to the amount which the lamps do burn?

A. Yes, sir; the tests were made that indicated that the Welsbach burners——

Q. Well give a unit. I do not care for the details.

A. Well, they would use on an average from recollection 3.77 cubic feet of gas per hour; the ordinary flame burner would use considerably more than that.

Q. Taxing Exhibits 93 and 94 and various items therein, charged to manufacturing and operation of gas, is there any duplication of expenses in any of those items?

A. None whatever.

Q. Have you computed at 3¾ feet per hour as the basis of lamp burning, whether there would be any balance in your favor or against you on this $289,000 item that appears as street lamps?

A. On that assumption we would have lost $28,645.33, that is, we would have had but $260,614.26 to pay for maintenance and other lamp expenses amounting to $289,259.59.

Q. So on the computation of the gas actually delivered to the city that would be the result according to your test, would it? 1909

A. Yes, sir.

Q. Referring to the tax to the State Comptroller upon excess dividends over 4 per cent. and upon gross earnings, can you reach for the calendar year 1905 any closer amount than the amount assessed for the year ending November 1st, 1905?

A. No, sir.

Q. Have you a statement of the amount which has been actually expended at Astoria for that construction? Mr. Bradley testified to some figures.

A. Yes, sir; the amount actually expended to June 30, 1906, was $6,979,545.31.

Q. Mr. Bradley's figure was slightly higher than that by a few thousand dollars. Can you state how the difference occurred?

A. I think Mr. Bradley in his figures possibly included the uncompleted contracts.

Q. Yes he did.

A. They would amount to $1,460,974.97, that would make a total of expenditures and uncompleted contracts $8,440,520.28 and the difference between these figures and those that were testified to by Mr. Bradley is the cash and accounts receivable that he included as expenditures, although the Astoria Company had not actually expended them. He took into account the amount that the Consolidated Gas Company had advanced to the Astoria Company, assuming it all to have been expended. As a matter of fact they had some cash on hand and some money due from sundry parties that we have excluded as not having been actually expended upon plants or upon lands.

Q. His figures were the investment of the Consolidated Gas Company in what they had advanced to Astoria?

A. That is the case, yes, sir.

Q. And your figures now are the amounts the Astoria Company had actually expended, including the cash and accounts receivable which had not yet gone into the plant? 1910

A. That is the case, yes, sir.

Q. Mr. Carter, you were asked by counsel for one of the defendants whether you made an affidavit and an affidavit in rebuttal in this case and whether you referred to your familiarity with the report of the legislative committee of 1886 and stated that their investigation into the affairs of the gas company lasted nearly a year, and whether you called attention to the haste in which the investigation before the Stevens Committee was conducted and whether you quoted from the majority report of the committee to sustain your contention as to the proper valuation of the property by the constituent companies. Have you that affidavit before you?

A. I have.

(Witness produces paper.)

Q. I will ask you to define what portions of that affidavit refer to the matters respecting which counsel examined you and show precisely what you did state.

Mr. Burr: I object to that, if your Honor please.

The Master: Does not that show for itself?

Mr. Mathewson: I ask him to define the portions. I propose to offer them in evidence, and to have him state what he did say.

Mr. Burr: He admitted everything he did say upon which I asked him on cross-examination.

Mr. Mathewson: No.

Mr. Burr: He was asked categorically in reference to certain statements made in that affidavit and he was asked if that was his opinion now as it was then and he said it was his opinion. 1911

The Master: It would seem to me that the affidavit speaks for itself. If you want to offer it in evidence, very well, but it is before me under the equity rule. I sustain the objection. The witness can answer, of course.

Q. Well, will you state the portions now?

A. Shall I read it?

Q. No, you need not read it; state the folios beginning with the words.

A. On page 37 of complainant's affidavit in rebuttal beginning with the sentence, "The Senate Committee of 1886, Senate Document 47, of that year, completely sustained the value of the company's assets at that time."

Q. Over to?

A. To page 39, ending with the words "its property rights, in behalf of which it has sought the interposition of this honorable court."

Q. And will you point out the portions of it prior to that, in which you refer to the decision of the Committee of 1886, and quoted its report?

A. On page 25, beginning with "in 1885 the Senate of the State of New York appointed a Committee," and ending at the bottom of page 27, "and upon the finding of said committee, that such provisions had not been violated."

Mr. MATHEWSON: Without taking time to read it, Mr. Master, and as a shorter way, I offer in evidence the portions of the affidavits to which the witness has referred.

Mr. BURR: I object to that because it embraces many things about which he was not examined in this regard.

Mr. MATHEWSON: Not a thing.

The MASTER: Do you want to have it printed in later or marked as an exhibit?

1912 Mr. MATHEWSON: Perhaps the shorter way would be to mark it as an exhibit.

The MASTER: I will take it.

Mr. PAGE: I object to it on the ground it is incompetent, irrelevant and immaterial, and not the proper way to prove the facts where a witness is on the stand.

Objection overruled; exception.

Mr. Burr and Mr. Page except.

Mr. MATHEWSON: There is no objection that I have the printed copy here instead of the original affidavit?

Mr. PAGE: No.

Papers received in evidence and marked Complainant's Exhibits 225 and 226.

Q. You were asked in reference to the war of 1899 and 1900 between the Consolidated Gas Company and some other companies and were asked how low the gas was sold in those years. Can you give the average rate at which gas was sold in 1899?

A. That is one of the exhibits, Mr. Mathewson. I am not sure that I have got it. The average cost in 1899 was 84.56 cents per thousand cubic feet.

Q. And in 1900?

A. In 1900 the average price was 82.46 cents per thousand cubic feet.

Q. You were asked also whether there was any surplus in 1899 and 1900, and you replied that there was. What did you mean by surplus, as you used the term?

A. I mean that there were earnings over and above the fixed charges. I did not mean that there was any surplus over dividends that were paid during those two years, because as a matter of fact in both years the dividends exceeded the available surplus for the year, some seven hundred thousand dollars, I think, the first year, and over a million dollars the second year, that is in 1900.

Q. You were asked in reference to the competition of the
1913 companies in which the Consolidated Gas Company holds
stock. Did you observe any diminution in the competition of the electric companies since the Consolidated Company owned their stock?

A. None whatever. On the contrary.

Q. Is not that business being steadily pushed as far as your observation goes?

A. Very steadily and increasing very rapidly, and of course at the expense of the gas business to a great extent.

Q. You were asked also as to a contribution to Employees' Aid Society and the superannuation fund, vacation and sickness charges, and you were asked whether that was not a unique expenditure with you. What is your information in regard to such charges by other companies?

A. In corporations similar to ours, that is almost the universal practice to make provision of that kind.

Q. Where there is an ordinary vacation or where an employee is absent on account of illness for a short period, do you dock him for that?

A. No, sir, we do not.

Q. I want to ask you too, in reference to these expenditures what the effect is upon the character of the employees that you are able to get and the service they render?

A. We believe, and there is no doubt in my mind whatever, that it operates to improve the character and efficiency and service-ability of the company's employees throughout, and we are enabled to have a better grade of men and able to get more work done, as a matter of fact.

Q. In the production of your product, do you consider it then an economical and wise expenditure?

A. Most decidedly, yes, sir.

Q. You gave certain meter prices to Senator Page or Mr. Burr. Did the prices which you gave him include the setting of meters or merely the meters unset?

A. Unset.

1914 Q. Can you state what the assessment of the company was
on real estate, including its land and buildings for the year
1904 by the city assessors?

A. In the year 1904 the real estate was assessed at $13,451,000.

Q. That included both land and buildings, didn't it?

A. Land and improvements, yes, sir.

Q. And what did your statement to the city at that time show, made up upon the basis to which you have heretofore testified, taking the land value plus one-half of the plant?

A. Something more than $19,000,000.

Q. After you had these figures given to you in regard to mains, services and plant in 1902, did you make up the report to the local tax assessors and to the State Tax Board on the same basis thereafter?

A. Yes, sir.

Q. With whatever change might occur in the assets meanwhile between the two reports?

A. That is the case, yes, sir.

Q. You were asked in reference to the premium of something over $23,000,000 at which the stock was issued in addition to the premium on $14,322,000 which appears on the books? Is there any record kept from which it is possible to tell just what the amount of that premium is from which you made your statement?

A. Yes, sir, there is, decidedly.

Q. The securities themselves, you said were marked down to par value, however, in the books?

A. The par value of the stock of the Consolidated Gas Company that was issued, yes, sir.

Q. Except $14,372,000?

A. That is the case, yes, sir.

Q. You were asked whether Exhibit 172 before the Gas Commission showed the increase to December 31st, of the property of the company to be $9,431,198.52. Does that include any increases of
materials or supplies or cash or is it merely an increase in
1915 respect to the items shown in that exhibit?

A. That is the case. What we would term "plant" only.

Q. There are no materials and supplies or cash or accounts receivable there?

A. No, sir.

Q. And is the same true as to the $9,693,565.90 which appears in Exhibit 89 on this hearing?

A. Yes, sir. That is the case.

Q. And in addition to this $9,693,565.90 was there not a further addition to those items between June and November, 1884, of $196,419.01?

A. That is the case; yes, sir.

Q. The counsel for the city has offered in evidence as City's Exhibit 31, page 776 of Senate Document 47 of 1886, including the column headed "Cost of Property." Do you know at what figure the plants of the Manhattan Company were carried into that "Cost of Property"?

A. My recollection is that it was about $64,000.00.

Q. That is the plant at 18th and at 14th Streets?

A. 18th and 14th Streets. Those plants have a capacity of about seven million cubic feet per day combined.

Mr. **Page**: On what does he base that statement of his that it is carried in that figure?

Mr. **Mathewson**: On the same report.

Mr. **Page**: He certainly does not, because that report states it entirely differently.

Mr. **Mathewson**: No, I think not.

I offer in evidence the report of Messrs. Robinson & Murphy, constituting a majority of the Senate Committee of 1886, from Senate Document 47 of 1886, page 776, of which has been offered by the city.

1916 Mr. **Burr**: I object to it being offered in that incomplete way, because the report of the majority refers to its agreement with the conclusion arrived at by the minority, Senator Gilbert, and if it is going to be offered in evidence at all I insist that the whole report shall be offered.

Mr. **Mathewson**: I offered the report of the majority of the committee.

The **Master**: Well, I will take it.

Mr. **Burr**: Will you take the offer in evidence of the whole report?

The **Master**: I will take the whole report, yes.

Mr. **Mathewson**: I object to his offering the whole of that report in connection with my examination.

The **Master**: We might as well take it while we are on the subject.

Mr. **Mathewson**: All right, sir.

The portion of the report offered by Mr. Mathewson is received in evidence and marked Complainant's Exhibit 227.

The portion of the report offered by Mr. Burr is received in evidence and marked City's Exhibit 45.

Q. What was the date of the first session of the Stevens Committee, the joint legislative committee of 1905, and when was the last public sitting?

A. The first was on March 30, 1905, and the last on the 21st of April, 1905.

Q. Referring to the assessment of $31,900,000 for the company's special franchises for the year 1906, you were asked in reference to the order fixing the price of gas at 80 cents. It appears that the order was made February 23; did the company receive any notification before or after that date of such a tax?

1917 A. Two notices, both subsequently to February 23d; the first one being dated March 1st, 1906, advising the company that the Board had made an assessment upon the special franchises of the company, fixing the value at $31,900,000, and a second notice dated March 28, 1906, advising us of a final assessment of the same amount, $31,900,000.

Q. The first notice invited the company to make objection if they had any to make to the assessment before it was finally fixed?

A. Yes, sir.

Q. Did the company appear thereafter by counsel?

A. It appeared by counsel.

Q. And the final assessment notice of March 28th followed.

A. Yes, sir.

Q. Is there any method by which you can distribute your distribution or general expenses over the various plants, apportioning them at so much to each one?

A. No, sir; except by an arbitrary method that would simply deal with the general ratio of the sales to the make, applying it to the different stations, but the results would not be particularly satisfactory and would not indicate actually the results in connection with each plant.

Q. Referring to the exhibits relative to the franchises of the company, beginning with the exhibit, grant to the New York Gas Light Company, and concluding with the State grant of 1871, which were offered in evidence here, in whose custody have those been since the company was formed in 1884?

A. In the custody of the secretary of the company.

Q. Had they come into the hands of the Consolidated Gas Company from the constituent companies at that time?

A. They did, yes, sir.

Mr. Burr: I submit he cannot testify that they came into the custody of the secretaries of the company and that they remained with each secretary for all the years from 1884, prior to the time he became secretary. He might testify for himself, but certainly
1918 he cannot testify positively to the possession of them by other
people years ago.

Q. Were they in the files of the secretary when you became secretary?

A. Yes, sir.

Q. And what is your information as to them before that time?

A. They have always been in the files of the company since consolidation.

Q. Exhibit 143 before the Gas Commission has been offered here as City's Exhibit 41. Will you find the exhibit in that volume?

A. I find the Exhibit 43 in the printed record before the Gas Commission.

Q. That you stated was a copy of memorandum which you had, a comparison of certain items of cost, one month as compared with the corresponding month the preceding year?

A. That was the case, yes, sir.

Q. Now, did you state before the Gas Commission that that was not a complete statement of cost?

A. I did, yes, sir.

Q. Does the 14th Street station, for instance, have they any items indicating the cost of oil or the oil gas at 21st Street which enriches the gas?

A. No, sir, neither 14th Street nor 21st Street have that cost included.

Q. So that that exhibit is to be taken as a supplementary comparison and not as complete?

A. That is the case, yes, sir.

Q. Now, taking Exhibit 147 of the Gas Commission, which is City's Exhibit 42, certain prices are given there for meters. Is that the price for meters set or meters delivered to the company?

A. This is the price for meters delivered to the company.

Q. How about Exhibit 148?

A. It is the price delivered and does not include the connections.

Q. You were asked in reference to the payment by the
1919 Standard Oil Company representing an adjustment between
the rates of a previous contract and the rate of a subsequent
contract for oil at a lower figure. Does that payment operate to reduce the cost of material or the amount of material for that year?

A. It does, yes, sir.

Q. So that in making up the cost of gas the material that went into the cost would appear with that $119,000 deducted, would it?

A. Deducted, yes, sir.

Q. Are you familiar with the employees of the accounting department, the general office of the company, and with their salaries or compensation?

A. Perfectly.

Q. Who employs them?

A. A great many of them I employ myself.

Q. Are any men employed there whose presence is not necessary to the work of the company?

A. Not one.

Q. How about their compensation?

Q. It is at as low a figure as we can secure the kind of help that we have got to have to do the work and do it properly and correctly.

Q. You have general charge of the books of the company, have you not?

A. Yes, sir.

Q. The vouchers for money paid, etc.?

A. Yes, sir.

Q. I want to ask you generally whether there are any expenditures made by the company for labor and material, so far as you know, which are not required?

A. Absolutely none.

Q. Or for which a higher price is paid than is necessary?

A. In no case.

Q. Has the company many customers of small means or small consumers?

A. A very great many, yes, sir.

Q. Are there any actions pending against the company for penalties on account of this pressure law?

A. There are actions pending at the present time to recover
1920 penalties under the law fixing the pressure at which the
company shall carry the gas in the mains, aggregating, as
far as I am able to find out at the present time, $46,000. There are two actions, one of September, 1905, and one of January, 1906, where no sum was named. In two other actions, one of January, 1906, and February, 1906, penalties aggregating $46,000 are named.

Q. Do you know how many customers the company has?

A. About 390,000.

Q. And if the company were to make a charge at higher than 80 cents to each one of those and be subject to a thousand dollars penalty for each offense, how much would that make per month?

A. $390,000,000.

Q. And how much in a year?

A. $4,600,000,000.

Q. How many stations are tested for pressure by the city, do you know?

A. How many gas stations?

Q. Yes.

A. All of them as I understand.

Q. What would the penalty be at a thousand dollars a day, for pressure, assuming that the pressure should vary outside of from one to two and one-half inches each day.

A. $5,000 a day.

Q. How much would that be a year?

A. $1,800,000 a year.

Q. What is the amount of loss per day in your gross revenue if the price of gas is reduced from one dollar to 80 cents, generally speaking?

A. About $2,600,000 in round figures.

Q. A year?

A. A year, something more than that to be exact.

Q. According to statements presented, over 50 per cent. of your net income?

A. Over 50 per cent. of our net income, yes, sir.

Mr. PAGE: You qualify that as Mr. Mathewson did "According to papers presented here?"

1921 Mr. MATHEWSON: I assume that he would have to act on those. As a matter of fact it would be about 75 per cent.

Q. You were asked by counsel whether you concurred in the opinion of Messrs. Walton Clark, Emerson McMillan, Allen B. Forbes, Charles S. Fairchild, Frank A. Vanderlip, Horace J. Morse and N. Wetmore Halsey, as expressed in their affidavits upon the motion for injunction herein.

Mr. PAGE: That is objected to on the ground stated when the same question was put before.

The MASTER: He has not asked any question yet.

Q. Have you those affidavits before you, and will you point out the portions of each affidavit expressing the opinion in which you state concurrence.

Mr. BURR: I object to that; that is not the way to get the evidence of these gentlemen into the record.

The MASTER: I sustain that, as I did before, with the statement that he can offer the affidavits if he wants.

Mr. MATHEWSON: I will offer that portion of the affidavit after he has identified it.

Mr. PAGE: I object to it on the same ground as stated when this line of examination was taken up by Mr. Mathewson before, and I call attention to the fact that he is threshing over old ground that has been gone over several times by myself and Mr. Burr and the rest of us, and is consuming time.

Mr. **Mathewson**: I did not begin this.

The **Master**: I sustain the objection.

Mr. **Mathewson**: I will ask him to point out the portions; is that sustained?

The **Master**: That is sustained.

1922 Mr. **Burr**: That is the same objection I made before.

A. On page 52 of the affidavits and notice of motion, the affidavit of Walton Clark, beginning "as a result of my experience" and ending "the investment in new gas works in New York City."

Q. Whose affidavit is that?

A. Walton Clark's.

On page 54, paragraph 5, the affidavit of Emerson McMillin, beginning "I am fairly familiar with the market value of the stocks and bonds of gas companies," and ending on page 57, with the words "special hazards hereinbefore referred to."

On page 59, in the affidavit of Allen B. Forbes, beginning with the first line of paragraph 6, where it says "in the case of gas and electric companies," and ending on page 60, the end of the affidavit, finishing with the words "taxes and other fixed charges."

Page 61, affidavit of Charles S. Fairchild, beginning paragraph 2, "I have read the affidavit of Allen B. Forbes," and ending on page 62 with the words "property of the company engaged in the business."

Page 63, affidavit of Frank A. Vanderlip, beginning paragraph 2, "I have read the affidavit of Emerson McMillin" &c., and ending on page 64 in the same paragraph with the words, "of the company engaged in the business."

Page 69, affidavit of Horace J. Morse, beginning with the second paragraph, "I have read the affidavit," and ending on the same page, "property of the company engaged in the business."

Page 71, beginning with paragraph 3, affidavit of N. Wetmore Halsey, beginning, "I have read the affidavit of Allan B. Forbes herein," and ending on page 72, the middle of the same paragraph, "of the company engaged in the business."

1923 Q. Were those the opinions in which you stated you had no hesitancy in concurring?

A. Yes, sir.

Mr. **Mathewson**: I offer those portions of the affidavits referred to in evidence.

Mr. **Page**: Objected to as incompetent, irrelevant and immaterial, and an improper way to prove the statements made by those persons, and further, if their opinion or testimony is to be received, it should be brought here and be subject to cross-examination.

The **Master**: I do not understand that they are offered for that purpose and they are certainly not received for that purpose, and in admitting them I do not admit them as proof of the facts contained in them. I admit them as part of the redirect-examination of this witness and for the purpose of explaining or qualifying statements that he may have made on his cross-examination, when his attention was called to these documents by the cross-examining counsel. That is the only purpose for which they are admitted.

Mr. Burr: I join in that objection.

Mr. Page: You will remember that on cross-examination the State objected to questions asked on cross-examination by the District Attorney.

The Master: That is the difficulty of having two counsel on the defendant's side of the case.

The objection is overruled.

Exception *to* Senator Page and Mr. Burr.

The portions of the affidavits identified by the witness are received in evidence, collectively, as Complainant's Exhibit No. 228.

Mr. Mathewson: I have here a statement of the price at which
gas was sold for each year all the way down. I think Mr.
1924 Burr asked for it at one time and I did not have it. You
will remember that it was put in as to the amount of sales,
but not the price each year. Is not that so, Mr. Carter?

The Witness: Yes.

Q. Have you a statement of the average rate per thousand received for gas by the company from its formation in November, 1884, to 1905, inclusive?

A. Yes, sir.

Q. It is already in evidence for 1905, and some of those other years, is it not?

A. Yes.

Q. And what were they?

A.—

Year.	Rate per M sold.
1884	$1.6854
1885	1.6976
1886	1.4642
1887	1.2589
1888	1.2566
1889	1.2563
1890	1.2568
1891	1.2555
1892	1.2549
1893	1.2547
1894	1.2550
1895	1.2552
1896	1.2556
1897	1.2213
1898	1.1518
1899	.8456
1900	.8246
1901	.9994
1902	1.0004
1903	1.0006
1904	.9998
1905	1.0202

1925 Q. The sales year by year of the Consolidated Gas Company appear, do they not, in exhibit Complainant's 85?

A. Yes, sir.

Q. Have you prepared a statement of the same character as that delivered to the Gas Commission, showing the cost of gas of the Consolidated Gas Company's own make and of that received by it from other companies for the four months July, 1905, to October 31st, 1905?

—. Yes, sir.

Mr. **Mathewson**: I offer it in evidence.

Received in evidence and marked Complainant's Exhibit 229.

Recross-examination by Mr. **Page**:

Q. Can you give the exact amount by which your surplus was depleted, or in other words how much the dividends in 1899 exceeded the amount of earnings properly applicable to dividends?

A. I did not give the exact amount. I can furnish you with that. I testified that the deficit for the year 1899 was something approximating $700,000, and for the year 1900 something over $1,000,000. If you would like those figures exact I will prepare them for you.

Q. I would like to have them for those years. In 1899 you paid a dividend of 5½ per cent., and in 1900 a dividend of 6 per cent, did you not?

A. Yes, drawing upon the accumulated surplus for that purpose.

The **Master**: If there is to be any cross-examination of Mr. Carter for any appreciable length, under the direction of the court we will have to defer it and take the next witness on the direct. If you have only a few questions we might as well go on and complete with Mr. Carter.

Mr. **Page**: I will suspend with Mr. Carter.

1926 Mr. **Burr**: Mr. Mathewson covered a great deal of ground with Mr. Carter and he has made some very positive statements on which it will be necessary for us to cross-examine him, but in view of the order made, and the ruling, I shall not cross-examine him now.

The **Master**: Have you another witness, Mr. Mathewson?

Mr. **Mathewson**: Yes, but I am afraid you will be without a witness early in this afternoon.

Colin C. Simpson, recalled and further examined, testified as follows:

Redirect examination by Mr. **Mathewson**:

Q. You stated that pipe in 1885 for mains was lower than in 1905. How was it in 1884?

A. Very much higher.

Q. Do you know whether at times prior to 1884 pipe was higher still?

A. Very much higher still.

Q. As high as what?

A. $60 a ton.

Q. Did you give Mr. Carter any figures in reference to services in the tax report?

A. I did not.

Q. What would you say, as to the valuation for services, $600,000 or thereabouts, services of the Consolidated Gas Company, as they appear in the tax reports?

A. It is an absurd figure.

Q. Did they come from the engineering department at all, as far as you know?

A. No, sir; they did not.

Q. You have already testified as to the value of mains?

A. I have.

Q. Can you state what the value of the mains as material only would be at this date, unlaid?

A. Yes.

1927 Q. How much?

A. The value of the pipe specials and lead which comprise the mains, leaving out the yarn or anything of that kind, or blocking, or valves would approximate $4,300,000; over $4,300,000.

Q. That would be without any laying at all, even in soft dirt.

A. Without any laying at all.

Q. You have seen the figures of the tax report, have you not?

A. I have.

Q. Does that in any way modify your testimony as to the value of mains to-day?

A. Not one bit, sir.

Q. Mr. Carter stated that the figures were handed to him in reference to mains in 1902. Is that your recollection?

A. Yes.

Mr. Burr: I would like to ask him one question because of my personal solicitude about the matter.

By Mr. Burr:

Q. Since you were here last, have you heard anything as to the whereabouts of those poor, abandoned mains that you set adrift without a chart or compass?

A. I could tell you, if you want to know, in a general way, where they are. There are abandoned mains probably on 33 per cent. of the streets of Manhattan—from 25 per cent. to 33 per cent. It might not be an entire block; it might be a piece of this block and a piece of that block. Those mains range in size anywhere from an inch and a half to even some twenty inches. For instance, there is a 20-inch main on Eighth Avenue, from 59th Street to 65th Street; that is under the car tracks and cannot be reached; it has to be abandoned.

Q. In other words, they have gone to pieces?

A. No, they have not gone to pieces. The material is there. I suppose they would have to be looked after if you wanted to use them.

Q. Does that make up the 70 miles above the 822 miles
1928 that you have testified to?

A. The different abandoned mains scattered all over Manhattan make up that 70 miles.

By Mr. MATHEWSON:

A. I understand that none of the abandoned mains are included in the 822 miles of mains about which you have testified as to values?

A. Not one inch of them.

The MASTER: Any cross-examination of Mr. Simpson.

Mr. BURR: I have no questions to ask further than that.

The MASTER: Any cross-examination, Mr. Page?

Mr. PAGE: Yes, I have some cross-examination that I suppose will have to be reserved under the rules.

Mr. MATHEWSON: Can he not complete with the cross-examination of Mr. Simpson? He has been down here several times.

The MASTER: If it is not very long I suggest that it be completed.

Mr. PAGE: I am going to submit to the ruling of the judge.

The MASTER: If you will state whether your cross-examination is lengthy or not I will take the responsibility of disposing of it.

Mr. PAGE: My cross-examination will be somewhat lengthy.

The MASTER: Then we will go on with another witness.

1929 ALEXANDER C. HUMPHREYS, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Where do you reside, Doctor?

A. New York part of the year, and part of the year in Glen Cove.

Q. Are you a graduate of any engineering institution?

A. The Stevens Institute of Technology.

Q. Do you hold any position with relation to that Institute now?

A. President.

Q. How long have you been president?

—. Since 1902.

Q. Have you ever been engaged in the gas business in any authoritative position?

A. I have been so engaged since the year 1872 continuously.

Q. Will you state what your first connection with that business was?

A. I entered the business as secretary and treasurer of the building committee of a suburban company; the next year, upon the completion of the works, I was made secretary and treasurer of the company; the next year I was made superintendent in addition. A couple of years later I appreciated that I needed a technical education to enable me to go as high as I wanted to go, and entered the Stevens Institute as a freshman in 1877, carrying on my work for the gas company at the same time and carrying on work at the Stevens Institute chiefly by night study, graduating in 1881. At the end of 1881 I was made chief engineer of the Pintsch Lighting Company, now succeeded by the Safety Car Heating and Lighting Company, and in that position I had charge of the building of their oil gas works, and the fitting of cars, steamboats, light houses, buoys, to light them with compressed oil gas delivered at high pressure and governed to the burner pressure by special devices. In that connection I made a special study of candle powers and pressures. 1930 In 1885, the first of the year, I was made superintendent of construction of the United Gas Improvement Company, Philadelphia, at that time the operator of about ten works scattered throughout the country. Three months later I was made general superintendent, and given control of the operation of the works as well as construction. Then, the next year or so, about 15 works were added to my list. Within a year or two I was given control of all the commercial details, and in that position I had charge of the developing of a uniform system of accounts under which the United Gas Improvement Company operated and practically operates to-day. In 1892 I organized the firm of Humphreys & Glasgow of London, to engage in the construction of water gas plants. In 1884 I resigned from the U. G. I. and organized the firm of Humphreys & Glasgow of New York, to engage in the business of consulting and supervising engineering for gas companies, advice as to the management of gas companies, and to take up the management of gas companies and I have been continuously engaged in the affairs of those two firms since 1892 and 1894 respectively.

Q. When you were general superintendent of the United Improvement Company, what general duties did that cover?

A. It covered the entire engineering of all the works under the control of the company and all the commercial details of those companies up to the time the reports were carried into the main office at Philadelphia; and also for the last five years, which I forgot to mention, covered the charge of the contracting department through which the company contracted to build plants for outside companies.

Q. How many plants did the United Gas Improvement Company have at the time you left it, over which you had such control? 1931

A. About fifty.

Q. Had some of those been constructed by the company under your supervision?

A. Some of them, yes, and all of them added to.

Q. Had your firm of Humphrey & Glasgow erected gas plants or gas apparatus on this side of the water?

A. On this side?

Q. Yes.

A. A few, yes, sir.

Q. Have they erected any on the other side?

A. A great many.

Q. Will you name some?

A. Very large plants for the Gas Light and Coke Company, which is the biggest company in London, smaller plants for the Commercial; of London, Manchester, Birmingham, Liverpool, Brighton, Bournemouth, Southampton, Edinborough, Glasgow, Belfast, Dublin and many more in Great Britain. On the other side of the channel, Utrecht, Rotterdam, Brussels, Berlin, Vienna, Budapest. Going much further, Shanghai, Sydney, Australia, Dunedin, New Zealand and not less than 125 in addition.

Q. What proportion, if you happen to know, of the water gas plants outside of the United States, that is, in the rest of the world, has your firm constructed?

A. I don't remember figuring it up of late, but I should think from my general knowledge, 75 per cent.

Q. During the past 20 years, in addition to your practical experience in the gas business, have you made any study of economic questions involved in the conduct of the gas business?

A. I have.

Q. And of gas accounting and depreciation?

A. I have made a special study of those subjects.

Q. And of capital and interest returns?

A. Yes.

Q. Are you connected with any engineering societies, doctor, and will you waive modesty and state some of them?

1932 A. Well, I ought to put at the head of the list, I suppose, although I am an American now, the Institution of Civil Engineering of Great Britain; The American Society of Civil Engineers; The American Society of Mechanical Engineers; The American Institution of Mining Engineers; The British Association for the Advancement of Science; American Society for the Advancement of Science; American Chemical Society; Society of Chemical Industry of the World, American Gas Light Association, of which I am a Past President; Western Gas Association; New England Association of Gas Engineers; Pacific Coast Gas Association; Ohio Gas Association; Society of Gas Lighting of New York, and some others; I don't remember them all.

Q. Are you familiar in general with the plants of the Consolidated Gas Company in the City of New York?

A. Quite familiar with them, yes, sir.

Q. Have you ever examined them?

A. I have.

Q. Did you examine them for the purpose of making an estimate of value?

A. I did.

Q. How recently did you make that examination?

A. My personal examination was back last winter, somewhere around Christmas, to my recollection. I have had an examination made since by proxy, an exhaustive one.

Q. By your office?

A. By my staff under the charge of my chief engineering assistant, that is, the chief engineering assistant in the New York firm.

Q. Are you familiar with the provisions of Chapter 736 of the Laws of 1905, and of Chapter 125 of the Laws of 1906 of the State of New York, providing that the pressure in the "service mains" of the company shall never be less than one inch or more than two and a half inches?

A. Yes, sir.

Q. What is your view as to the possibility of complying with that provision?

A. Practically impossible.

1933 Q. As to ammonia and sulphur provision. Is it possible to operate plants indefinitely, taking coal which you have to get and always keep within those requirements?

A. Why, I suppose it would be possible with human nature strung up to the very finest point, but I don't think in practice we would ever find a company running without some failures, and especially in a time of stress, where they had to get a coal which was rich in sulphur compounds, outside of sulphuretted hydrogen. Of course the penalty is a very severe one.

Q. What is your estimate and judgment as — the value of the plants of the Consolidated Gas Company which are located on Manhattan, including manufacturing plants and holders?

A. I did not attempt in the time at my disposal to come down to a specific figure, I thought it better to endeavor to see whether I could find any fault with the book figures, as I recall about sixteen million, eighty thousand odd dollars. My examination satisfied me that that was a reasonable figure. When I say reasonable, I mean that is a figure less than the value at the time, taking into account depreciation.

Q. What would be your estimate of the value in such round figures as you could make it, less such depreciation as you observe?

A. Do you mean now, at the present time?

Q. Yes.

A. With the figures that are before me from this examination that my firm has made, I should say that it was considerably above the book value. Those figures are not entirely completed owing to my chief engineer being called off on an emergency, at one of the works, for which we are responsible, a very severe emergency. The figures have not been completed, but they have been completed sufficienctly to satisfy me, and I should be entirely willing to testify under oath, as I am, that the present value, allowing for depreciation, is not less than $16,400,000, probably in excess of that. 1934

Mr. Page: Do I understand this is the plant and holders?

Mr. Mathewson: Yes.

Q. Assuming that an engineer after careful examination of details, had testified that the value was $17,100,000, what would you say to that figure?

A. If an engineer had done so?

Q. Yes.

A. I should want to know who the engineer was and a good deal about it; there is a very personal equation in such an estimate.

Q. Would that be a figure which would conflict with your views, so far as you had gone?

A. No, I think it is entirely possible that the very complete continuation of my figures would bring the figure very close up to that because I am extremely conservative in stating the amount I have.

Q. Assuming the sales of the Consolidated Gas Company for the past year to have been over 13,000,000,000 feet, and their receipts to have been over $13,000,000, and with the number of plants that they have, and as you know them, what would you consider a fair allowance for working capital, including cash accounts receivable and equipments and material?

A. About 30 cents per thousand cubic feet of annual sales.

Q. And at 13,000,000,000 feet, that would amount to about $4,000,000 wouldn't it?

A. Somewhere around $4,000,000.

Q. What is meant in the engineering profession by undistributed expense in connection with contracts?

A. In connection with contracts?

Q. Yes.

A. The items of expense that are not readily apportioned to each
individual plant, each individual contract, and which would
1935 come under the head of general expense; perhaps as the English accountant would put it, establishment charges.

Q. In figuring the final cost of the plant, is it necessary for the company to add any percentage for undistributed expense and engineering expense in addition to what it paid for contractors and installing its property?

A. Certainly it is.

Q. What would be the fair figure for that?

A. About 10 per cent. is the figure I have used.

Q. And how about interest?

A. It would depend upon the time to be estimated that the construction would take. Of course if it was two years, we would charge 5 per cent. and one year 2½ per cent.

Q. Taking the plants and holders of the Consolidated Gas Company as you know them, would you consider two years as an excessive period?

A. I certainly should not.

Q. Is there an item of undistributed expense also to be computed by contractors who install apparatus?

A. Certainly, on the same principle.

Q. And what would be a fair figure for their undistributed expense and engineering, according to your experience?

A. I could not generalize very safely on that, because it would entirely depend on the system of accounting followed by the concern. Of course the concern should, if possible, itemize on the different special items, different special contracts or whatever it might be and leave as little undistributed expense as possible. I can say as an example in my own firm in London where we do nothing but a contracting business and do not get any profits that do not come from contracts, the average since 1892 is a shade under 16 per cent. The accounting is under the direct charge of Spain Brothers & Company, some of the best accountants I suppose in England, and has been from the start, and that is the result of their and our effort to spread
on each contract as much of the general expense as they can
1936 possibly figure for that particular account, and still it leaves
somewhere between 15 and 16 per cent.

Q. That is after a distribution of all the items upon special contracts which the accountants could distribute?

A. Yes.

Q. How about the profits of a contractor, is that to be included in the cost of the contractor?

A. We hope so.

Q. And what per cent. would be fair for that, would 15 per cent. be excessive?

A. I should not like to talk from my own experience on that, but I should not consider 15 per cent. excessive.

Q. Taking a plant which has been built up, one plant or one section at a time, beginning, say, with 1825 up to date, is it possible to build such a plant in that way upon exactly the same lines which it would be constructed if it would be reproduced new to-day in toto?

A. Certainly not, it is a case of foresight and backsight.

Q. If you had benches of sixes working efficiently, would it in your judgment be wise to throw out the sixes and put in nines if they were in good condition?

A. Certainly not.

Q. Assuming that the Consolidated Gas Company had sales of 13,300,000,000 feet per annum, and that they were able to produce in their manufacturing plants only something over ten and one-half billion feet or less, would it be your judgment that it would be wise or otherwise to establish a plant for the purpose of taking care of the balance of their output?

A. I should think it would be wise to do so.

Q. Are you familiar with the situation at Astoria?

A. Fairly so.

Q. Assuming that the Astoria Light, Heat & Power Company were established for the purpose of manufacturing for the Consolidated Gas Company the balance of its gas sold which it cannot now
1937 manufacture in its own plant, what would be your judgment as to the computation of the investment at Astoria in the capital account of the company for the purpose of determining the selling price of gas?

A. Who would own the Astoria Company?

Q. The Consolidated Gas Company owning all the securities of every kind and using it as a manufacturing station?

A. Certainly, the capital belongs there just as much as the Manhattan plant does.

Q. Assuming that it organizes the National Coke & Coal Company and owns all the capital of that company for the purpose of carting its product, its coke, and selling it, thereby making a more economical arrangement than when it carted its own coke or hired outside contractors; and that the Consolidated Gas Company owns all the securities of the National Coke & Coal Company, would that in your judgment come in the same category as the Astoria Company?

A. Providing the company turned its profits into the gas company, which of course it would have to under the ownership of stock.

Q. Would it in your judgment be wise, Doctor, for the Consolidated Gas Company to wait until its output had reached the complete limit, before it established a plant to take care of increase, or began the construction of such a plant?

A. Certainly not. They ought to be turned out of office if they did.

Q. Are you familiar with the effects of electrolysis on gas mains?

A. Fairly so.

Q. Are you familiar with the conditions in New York, so far as relates to the use of electricity by the subway, the trolleys and the elevated, and the increase in currents?

A. Fairly so. I do not pretend to be an electrical expert, but am familiar with those conditions in connection with the gas business.

Q. From your knowledge and observation, Doctor, what would you consider as to the danger of whether there is any danger 1938 in the future through electrolysis to the pipes of the company in the streets of New York City?

Mr. **Page**: I object to that on the ground he has not laid the proper foundation to qualify this witness to give any such testimony.

Mr. **Burr**: Under the order which has been made here by Mr. Justice Lacombe, I notice that we are required to allow these witnesses to proceed without interruption. Does that mean that we are not to object or be permitted to object.

The **Master**: I don't remember any such provision, Mr. Burr.

Mr. **Burr**: It is very clearly stated in the order that these witnesses are to be permitted to testify without interruption.

The **Master**: I do not so construe it. You can object.

Mr. **Burr**: Well, I object on the ground it is apparent that this gentleman disavows any claim to be an expert on this particular matter of electrolysis and is not competent to testify in that regard.

The **Master**: I will let him answer.

Mr. Burr and Mr. Page except.

A. May I enlarge upon my statement as to qualifications, Mr. Master?

The **Master**: Yes.

Q. Yes.

A. I do not pretend to be an electrical expert: I do know about the effect of electrolysis and have suffered from it as a manager. I was one of the first to observe it in Atlanta, where the pipes were very severely injured, and the joints also. I experienced the 1939 same thing in Syracuse, and had electrical measurements made for me to satisfy myself that the trouble came from electrolysis. There is not the slightest question of course that electrolysis is to be found all over the United States, injuring the pipes of the gas companies and water companies. I have made myself familiar with it by study, but I repeat, I don't pretend to be an electrical expert in the sense that I am a gas expert but I believe myself entirely qualified to take the ground that electrolysis is a very grave danger, although I do not believe to-day that it has done any great harm to the New York pipes. It is simply a danger, that is my position.

Q. How would that danger be affected by the increase in subways and the electrical currents which follow from them and the general installation of electricity in traction which has taken place very recently in New York?

Mr. **Page**: Objected to as purely speculative.

Mr. **Master**: It seems to me that is a deduction anyone can draw, in view of the statement he has already made, is it not?

Mr. **Mathewson**: Perhaps it is, if the Master thinks so, I will not press it.

The **Master**: If a little electricity is bad, a great deal more will be worse, will it not?

Mr. **Page**: He says it has not been very bad in New York and it would be speculative as to what——

Mr. **Mathewson**: I will not press the question in view of the Master's suggestion.

The **Master**: You can press it and have the objection sustained and the question answered if you like.

Mr. **Mathewson**: No.

Q. Have you bought and sold gas plants, doctor?

A. I have—wait a minute, sold? Yes.

1940 Q. Have you appraised them for other people?

A. That has been probably 50 per cent. of my work since 1894.

Q. Have you appraised many in that way?

A. Yes sir, a good many. I appraised all the works with one or two exceptions that were taken in by the United Gas Improvement Company from the time I was general superintendent. The directors insisted upon a report from me before they entered into negotiations or before they concluded them.

Q. Do you know whether or not the fact that a business is established and that it has connections with consumers and is operating enters into the value of the business in appraisals or sales or purchasers?

Mr. **Page**: I object to that question on that ground that while such elements may enter into the appraisement for purchase or sale, those elements cannot properly enter into an appraisement for the purpose of establishing the price that the public should be charged for gas.

Mr. **Burr**: Same objection.

Mr. **Mathewson**: The cases as we understand them, and when we come to argue the law we will present them, hold that such an element must be taken into consideration in establishing the capital upon which the company is entitled to a return.

Objection overruled.

Mr. Page and Mr. Burr except.

A. Very laregly.

Q. Assuming, Doctor, that in 1884, six gas light corporations operating in the City of New York, were consolidated, forming the complainant company, the Consolidated Gas Company; that one of the constituent companies was incorporated in 1823, and was 1941 in operation from 1825 up to 1884; and that the other five were incorporated at intervals prior to the consolidation in 1884; that the output of the six companies in gas in 1885 was about 3,942,000,000 feet and that the output has increased until in 1905 it was 13,283,000,000 feet or thereabouts; that the population of

Manhattan Island, on which the Consolidated Gas Company is operating, is over 2,100,000 people; that it shows an increase of something like 50% in population in the last 30 years or so; that the Consolidated Gas Company has about 390,000 consumers, and is in active operation to-day, what would you consider to be the value of the good will of that business, including the value of the established business, and its connections with consumers and other elements which go to make up good will as distinguished from its tangible plant.

Mr. Burr: That is objected to as incompetent, irrelevant and immaterial.

Mr. Page: Objected to as incompetent, irrelevant and immaterial, and for the reason stated in the objection to the last question.

The Master: Any question of franchise against the public is not material?

Mr. Mathewson: I did not include that. The relations between the company and its consumers.

Objection overruled.

Mr. Page and Mr. Burr except.

A. I should estimate it at not less than $7,500,000.

Q. What rate of return in your judgment and experience is the company entitled to upon the amount of its investment in the gas busines-.

Mr. Page: Objected *on* on the ground that it is calling 1942 for this witness to usurp the functions of the court.

Mr. Mathewson: I do not think so.

The Master: Well, gentlemen, there may be a very serious question about that kind of evidence, but I see the affidavits presented to the court on the injunction proceedings cover that ground to some extent, and I am going to allow that evidence.

Objection overruled.

Mr. Page and Mr. Burr except.

Question repeated as follows: What rate of return in your judgment and experience, is the company entitled to upon the amount of its investment in the gas business? Companies of this character, located as this company is?

A. In my opinion, the question of return and rate of capitalization are interwoven. I think that the original investors up to the time the business is fairly well established are entitled to 10%, and the final average must be made up on the basis of what the new capital can be brought in at in view of the natural hazards, and as a rule you figure out that on capitalization of say 3 to 3.75, the company should be allowed a return of about 10%.

Mr. Page: To get it a little clearer, will you get him to state what the 3 to 3.75 is?

Q. What do you mean by 3 to 3.75?

A. I mean that the amount of capital on the thousand of annual sales, for instance $3.50 per thousand of annual sales.

Q. When you speak of the good will of this company, as in your

judgment worth $7,500,000 upon the basis which I have indicated, you mean the good will assuming that the company is en-
1943 titled to sell gas at that price, or to make that return?

A. That it is entitled to sell gas at $1.00, that it would be protected in its rights by the courts to sell gas at a dollar and to make a return of 30 cents a thousand to cover profit, and the burden of capital generally.

Q. Is 30 cents a thousand in your experience an excessive allowance for return on capital?

A. It is not, no.

Q. Have you from the figures presented in this hearing prepared a statement of what you consider should be charged to the operating cost of the production of gas in favor of the Consolidated Company?

A. I have.

Q. For the year 1905?

A. I have.

Q. Will you present it, please?

A. Am I at liberty to read it the way I have prepared it?

Q. Have you other copies of it?

A. I have.

Q. How many have you there?

A. Two more.

Mr. Mathewson: We will hand a copy to each of the counsel and they can follow it as you read and you can simply make the statement on the record as Mr. Addicks did. I think you might read it so the Master can hear the method followed by you.

A. I consider first the income, as follows:

Income & Cost per M. as of December 31, 1905.

By Exhibit No. 96:

Gas sales stated as $13,552,482.97; but this includes $565,241.39 for city lamps. The gas consumed in these lamps was taken for the purposes of the contract at an average hourly consumption of three c. f. = 270,779,678 c. f. @ 90¢ = $243,701.71, leaving for maintenance, $565,241.39 — $243,701.71 = $321,539.68. It
1944 is in evidence that an average of 3¾ c. f. was consumed per lamp hour bringing the consumption to 338,474,597 c. f., which at 90¢ would be $304,627.13, and leave for maintenance, including Welsbach mantles, renewals, etc., $260,614.26 against a cost of maintenance of $289,259.09—a loss of $28,644.83. The inclusion of only 270,779,678 c. f. as the amount consumed shows an apparent profit on maintenance of $32,280.59. As it would now greatly complicate the figures for cost per M. to correct for the facts as shown, this statement is made up on the basis of gas consumed at three feet per hour.

Gas sales — nominal — including lamp maintenance	$13,552,482.97	
Deduct amount nominally received for lamp maintenance	321,539.68	
Total Sales 13,283,163 M.......	$13,230,943.29	99.607

Receipts applicable to the gas business but not from sales of gas:

Maintenance of Gas Lamps		$321,539.68	2.4207
Miscellaneous Income:			
Stove rentals	$122,322.60		
Discounts	9,497.57		
Real estate rentals	37,408.88		
Sundries	3,481.48		
Dividend—National Coal & Coke Company	5,000.00		
		$177,710.53	1.3378
Total		$13,730,193.50	103.365
Cost & Reserve, as shown next sheet			70.947
Gross profit to cover all charges for capital			32.418

1945 By Exhibit No. 94:

Station Cost	$3,455,091.37		
Gas manufactured under agency agreements	997,039.89		¢ per M.
	$4,452,131.26 +	13,283,163	33.517
Distribution	1,641,092.19 +	"	12.355
General Expenses	2,871,263.53 +	"	21.616
	$8,964,486.98 +	"	67.488
Taxes included $965,843.88, of which $63,222.87, taxes of 3 per cent. on dividend in excess of 4 per cent. and one-half of 1 per cent. on gross receipts does not apply on gas business—$63,222.87			.476
			67.012

Now I proceed to deduct certain charges which appear in above amount, and I believe I do what all gas managers who have had experience do, that is, substitute average figures.

Deduct Charges for the year for which are to be substituted average figures as explained in note:

Repairs—Production or manufacturing .... $217,319.07 = 1.6360¢

I call attention to the fact that that appears in Exhibit 94, I think it is, as two hundred and ten thousand and odd dollars, but there was a small amount for repairs which is included in the pumping expense or distribution expense, which makes up this little difference of $6,000,

so I repeat the amount of repairs	$217,319.07	= 1.6360¢	
Distribution	474,750.91	= 3.574 ¢	
	$692,069.98	= 5.210 ¢	
Deduct Contingent Expense covering Depreciation and extraordinary hazards, etc., to be covered separately	1,328,316.37	= 10.000¢	15.210
Cost at burner exclusive of Repairs, Final Renewals (Depreciation) and contingencies including extraordinary hazards			51.802

1946 Repairs—Average actual expenditures from 1884 to Dec. 31, 1905:

Production (Manufacturing)	3.6412		
Distribution	3.9446		
		7.5858¢	
Final Renewals (Depreciation):			
Production (Manufacturing)	4.9795		
Distribution	1.5797		
		6.5592¢	14.145
Total for Repairs & Renewals		14.1450¢	
(Current and final):			
Cost at burner with no reserve as yet included to cover contingencies			65.947
Reserve, as explained in Note			5.000
Total Cost & Reserve			70.947

Notes.

Reserve:

If the selling price is to be fixed by law and so be beyond the control of the seller, the price should be sufficient to cover an averag cost of gas, including the maintenance of the investment at full valu and a fair return on the investment, having in view the hazards an chances of the business.

The cost cannot fairly be taken as of any one year even if repair are taken at the average expenditure for twenty years and the fina renewals (to cover depreciation) are estimated on the basis of (averaged) final renewal at end—say in this case—of forty years. Ther are many contingencies which might not be covered by the pa twenty years' experience, notably electrolysis and present apparent upward tendency of cost of materials and labor. In addition to this general upward tendency, there is the hazard of strikes at the works and at the coal mines, either liable to increase cost, London Companies have been allowed to cover strike expense, at least in part, 1947 from their so-called "Insurance Fund"—one of the Reserve funds. Fire might cripple the business and even if the works were covered by insurance, the losses beyond the physical destruction might be serious. Explosions are always liable to happen and they are much more liable to happen along the lines of mains since the general use of electricity has let loose stray currents in the streets. Damages to employees and others from accidents. Increased cost liable to be met by the extraordinary activity in turning over the streets in building subways and the like. Expenses through such investigations as the present—the third inside of two years. A very serious hazard is liable to develop from electrolysis. While there is no basis for estimate—for then it could be, as it should, include in the Estimate of Depreciation or Renewals—it is known to all gas and water engineers that this is a present danger. While no man can estimate the loss liable to occur, no man informed on the subject can affirm that even in Manhattan Island this source of loss is not liable to develop.

In view of the facts thus briefly outlined, the company should be allowed to accumulate a reserve until the fund reaches, say, one-tenth of the investment, as in the case of many British companies, and the company further should be allowed to renew this fund if it should be depleted, as in the case of the British companies and recommended by the New York Senate Committee of 1886.

Repairs & Renewals (Depreciation):

There is included for repairs the averaged actual expenditures for 20 years	7.5858
and for depreciation, that is, current and final renewals	6.5592
	14.15c. per M.

1948 The actual expenditures for repairs and renewals for the period from 1884 to December 31, 1905, have been 10.60c. per M. The amount shown in the Gas Commission hearing for a somewhat different period was 10.89c. The amount then added in this statement to cover *final* renewals is only 14.15—10.60 = 3.55c.

In this connection it is to be borne in mind that repairs and depreciation (or renewals) are interwoven and should be considered together. The total cost per M. of 14.15 for maintenance—current and final—is not excessive, as can be shown by comparison with other metropolitan companies.

Stove Rentals:

While stove rentals are included as an item of income per M. sold to offset charges now applicable against that item of additional income, it is to be noted that if the rental system should be abolished for any reason, the expenses now appearing against that item might very probably continue as an expense and thus represent additional cost per M.

Now shall I go into any explanation of how I got at my depreciation item, or leave that? I can give it in just a moment, the idea of it.

Q. If you think it is essential to an understanding of the situation you may give it.

A. I take the depreciable value of the property, and in my experience as a gas engineer I don't take any fixed per cent. from the text books and authorities, but I take my own judgment as to what should be the life taken for the final renewal of the plant. In estimating that final renewal—for instance, take rather a glaring case: I would not state as has been sometimes stated that I have, that a cast iron main only lasts fifty years or forty years or what-not, but in forming my estimate of the life of the plant I take into account that very likely anyone particular piece of good cast 1949 iron pipe if laid in the street in fairly good soil, not interfered with, and left there undisturbed might last for a hundred or one hundred and fifty years. I have seen it at the end of fifty years perfectly good, if undisturbed. My estimate therefore is not made up on the exhaustion of the plant by actual rust or by anything of that kind, but what I believe, all things considered, the life of the plant, when the plant will have to be renewed by reason of exhaustion of life. In this case I have taken what figures out to be almost exactly forty years and I take 2½ per cent. therefrom as the right amount for forty years, and I take 2½ per cent. on the depreciable property, and having found the amount I divide it by the amount of sales and show a cost per thousand as we have in this statement.

I would like to say one word as to why I take 2½ per cent. instead of going to my interest tables and arriving at a theoretical amount of 1.05 per cent. for forty years; 1.05 put away in a depreciation fund to accumulate at 4 per cent. If that was put away in a depreciation fund the company would be deprived of its use. I prefer to consider the case exactly as we do in the gas business. We do not put that money away in a depreciation fund except in very rare cases, but we put it back into our business and use it in lieu of bringing in to that extent additional capital for extension of business. The theory on which I work is based upon the fact that that money, that depreciation fund, reinvested, if the business is prosperous, will at least return us 4 per cent. and therefore the additional returns from the depreciation amounts as expended will pay for the difference between the 2.5 and the 1.05. In other words, the load upon the business is the same. In one case you would have a less amount charged for depreciation and a greater 1950 load of capital and in the other case you have it all centered upon the load of depreciation.

Q. I see, Doctor, that Mr. Addicks in his estimate has an estimate to increase the quantity of oil or the price of oil and figures it out to 1.83 cents, and also averages the price of labor and finds that

.78 of one cent should be added for that and perhaps one or two other items of that kind. Those as I understand are all included in your 5-cent contingent item?

A. Yes, they must be, because I haven't any such items.

Q. Well, it is intended to cover those things without specifying them?

A. That is just what my five cents is to cover, those fluctuations.

Mr. MATHEWSON: That is all.

At 5.25 P. M. adjourned to September 11, 1906, at 11 A. M.

Last Exhibits:

Complainant's 234.
State's U.
City's 45.

1951 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, TUESDAY, *September* 11*th*, 1906—11 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Kirby, Mr. Burr.

1952 Mr. MATHEWSON: I have one or two additional questions to ask Mr. Humphrey on direct-examination.

ALEXANDER C. HUMPHREYS resumed.

Direct examination by Mr. MATHEWSON, continued:

Q. Are you familiar, Doctor, with the value of mains and services based on the cost of installation?

A. I am.

Q. Did you read the testimony of Mr. Simpson in reference to the 822 miles of mains, regarding which he testified as to the value of reproduction?

A. I did.

Q. Assuming that the Consolidated Gas Company has 822 miles of mains distributed in the sizes and mileage specified by Mr. Simpson, what in your judgment would be the present value, based on the cost of reproduction, of the mains to-day in the streets of New York?

A. The figure, if I recollect, that he gave was something over $12,000,000, and I satisfied myself that that was a very reasonable figure.

Q. Did you yourself go over the computation so that you are able to state from your own experience?

A. Yes, sir.

Q. Mr. Simpson also testified that the value of the services, based on the cost of reproduction, at present was about $1,994,000. Did you examine the question of the value of services?

A. I did.

Q. What is your conclusion on that?

A. That was also a reasonable estimate.

Q. Do you believe they could be reproduced for less than those figures?

A. I do not.

Q. The same as to mains?

A. The same as to mains.

1953 Q. What do you understand by the term "service mains" as used in the two Acts establishing pressure, to which I called your attention yesterday?

A. Never having heard the term used before in the gas business, of thirty years' experience and more, I had to evolve a meaning for myself, and I presume that it must mean the distributing mains, as differentiated from any higher pressure mains, pumping mains, and the like, which are not connected to the consumer's. And in this I was simply confirming that interpretation given to the term by the commissioners at the end of their order in regard to the Consolidated Company, in which they referred to the pressure law and say that—I don't know the exact terms—say that in so much as the law passed confines the company to distributing gas to the city lamps within the limits of one inch and two and one-half inches, and in so much as the gas has to be conveyed to the private consumers through the same service mains as the gas to the public lamps, of course the law will have to apply also to the gas distributed to the private consumers, and as you cannot convey the gas to the private consumers through a service pipe which goes in the city lamp, of course it must mean the distributing mains.

Q. Is it, in your judgment, possible to construe the mains as meaning the services?

Mr. Page: Objected to. The doctor may be able to construe certain things but he cannot say what it is impossible for the Court to construe.

Question withdrawn.

Q. I ask you whether in your judgment the term mains, whether taken alone or preceded by the adjective "service," could be properly applied to the service pipes running from a main to a house?

A. Not possible, according to the practice of the gas business. They are two distinct things, differentiated widely from the 1954 other; one is the main and the other the service from the main.

Mr. **Mathewson**: That is all. Now, if the Master please, I would like to call Mr. Halsey, who is temporarily in town.

N. **Wetmore Halsey**, a witness called on behalf of complainant, being duly sworn, testified as follows:

Direct-examination by Mr. **Mathewson**:

Q. Where do you reside.
A. I reside in South Orange, New Jersey.
Q. Where are you in business?
A. 49 Wall Street, New York; and also have offices in Chicago and San Francisco.
Q. Are you a member of any firm?
A. Yes, sir; N. W. Halsey & Company.
Q. What is the business of that firm and of yourself as a member?
A. Dealing in investment securities; principally bonds.
Q. How long have you been in that business?
A. Over 20 years.
Q. Have you during that period ever purchased or sold utility properties, gas properties?
A. Yes, sir.
Q. Do you know the return which you expect to be able to get upon an investment in gas properties in the case of your purchases?

Mr. **Page**: Objected to as immaterial, irrelevant and entirely speculative.
Mr. **Burr**: I make the same objection.
The **Master**: I will take it.
Mr. Page and Mr. Burr except.

A. Yes.

1955 Q. According to your own experience and such information as you have acquired in the banking business, what rate of return does the investor require on the investment in the purchase of a gas business?

Mr. **Page**: Same objection.
Mr. **Burr**: Same objection.
Same ruling. Both except.

A That is the first thing we look to, of course, as to what the return will be, and we expect to get a return at once, or within a very reasonable time, of at least 10 per cent.
Q. Ten per cent. upon what?
A. Ten per cent. upon the value of the property?
Q. Would it in your judgment be possible to interest capital in the acquisition of a public utility enterprise of the character of gas companies upon a less expectation of earning than 10 per cent.?

Mr. **Page**: Same objection.
Mr. **Burr**: Same objection.
Same ruling: Both except.

A. I think not, sir.

Q. Is that your exeprience?

A. That is my experience.

Mr. Mathewson: That is all.

Cross-examination by Mr. Page:

Q. You say that the rate of the return is 10 per cent. upon the value of the property. Has that any relation to the stock? Do you mean a 10 per cent. dividend on the stock?

A. I was not regarding securities. I was regarding the value of the property; what had to be paid for the property regardless of what securities might be issued to represent that investment.

Q. Well I understand then that you have been engaged in buying and selling gas works?

A. Why, I have done some of that, I don't know how
1956 many, but eight or ten gas plants I have bought. My business is more the handling of the bonds and my original interest in a property was to get a good safe issue of bonds and doing that I have sometimes thought that it was advantageous and have interested people in the entire property and reorganizing it; sometimes putting the properties together, consolidating a number of properties.

Q. I want to understand it. You say you bought and sold securities and the holder of those securities would expect to realize 10 per cent.?

A. I said if I were making an investment in a property, that I would expect on the investment from the amount of money and the value of the property, a return of at least 10 per cent. Some of them might be represented by securities with a fixed value, a fixed annual income say of five per cent., and others might be a stock representing ownership, and they are an entirely different class of investors that buy the stock than those who buy the bonds.

Q. You would expect then that a bond issued by a public utility corporation paying five per cent. interest would sell at 50.

A. Oh, no, I didn't say that at all. That is not a fair construction of what I said.

Q. How else could you get a 10 per cent. return on a five per cent. bond?

A. Did I say what amount of bonds I would issue?

Q. No, you said you would get 10 per cent. returns.

A. Yes, on the investment. To give you a concrete example, if you wish it——

Q. Wait a minute. You deal in investment securities, you have got bonds of a gas company that you want to sell, those bonds draw 5 per cent. Now, would you expect to give the investor those bonds at such a rate that he could expect to realize 10 per cent.?

A. No, sir, I said nothing of the kind.

Q. Now, in regard to stock, the stock of these public utility corporations: a stock that pays 5 per cent., would you expect
1957 that to sell at 50?

A. It depends entirely upon the conditions, but I should think that a stock that paid 5 per cent. and was certain to continue to pay 5 per cent. would sell very much better than that; sell close to par.

Q. It would probably sell at 102 or 104?

A. It might; it might sell at 75, depending on all the conditions, franchise and the location, permanency of the business; all of those things enter into it.

Q. Isn't it a matter of fact that stocks and bonds are sold at about a 4 per cent. basis—that is, on a stock or a bond that brings a certain return the investor is willing to take 4 per cent?

A. No; you can buy a great many securities to-day on an eight or a ten per cent. basis if you wish to.

Q. But I mean securities that have paid their dividends for the last twenty years, where the company has a monopoly of the business and has paid its dividends regularly, isn't it your experience that those securities sell at about a four per cent. basis?

A. Well, as I say, you must take into consideration all of those things that go to make up the value of the securities, the permanency of the business, its franchise, situation, how much that monopoly, as you term it, is to be depended upon, how much it is subject to regulation and the permanence of the locality—all of those things must enter into it. For instance, the Chicago properties, for an illustration, the stock there has been selling around 90 to 95, yet it shows very good earnings.

Q. Have you dealt in Consolidated Gas Stock?

A. I don't deal in stocks at all. That is not my business.

Q. Are you informed at all as to the rate at which that stock has been selling and the rate of dividend it has been paying?

A. Yes, from the public quotations. That is all. I have never dealt in it. Never dealt in a share of it.

Q. Do you know while paying eight per cent. dividends it sold in the neighborhood of 200 or over?

A. Yes.

1958 Q. And to-day, while it pays a four per cent. dividend, it is selling at 140?

A. Yes.

Mr. Burr: No questions.

Redirect-examination by Mr. Mathewson:

Q. When you speak of ten per cent. earnings upon the value of the property, do you intend to indicate how much of that would be distributed to bonds and how much to stock?

A. Not at all. I make an original investment.

Q. Or whether the stockholders shall keep a part of the ten per cent. and put it into extensions of the property and pay themselves only a part?

A. No, sir.

Q. Do these considerations, to which your attention has been called by Senator Page, change your view at all as to the earning power of a property based upon its value?

A. Not in the least. The price at which stock may sell may depend on manipulations or rumors that are gotten out. What it may sell at or be quoted at does not count.

Q. You know the stock of the Consolidated Gas Company carries with it the ownership of practically all the stock of the New York Edison Company, an electric company, do you not?

A. Yes.

Q. And would the future value of the property be reflected in the price of Consolidated Gas Stock?

A. Certainly it would.

Q. And might not expectations as to the future earnings have much to do with the present quotation of the stock and bonds?

A. It has a great deal to do with the stock.

Q. Isn't it a fact that the quotations of stock, as a rule, discount the future in that way?

A. It presents an entirely different investment from an entirely different point of view, than the man who invests in the bonds.

Mr. MATHEWSON: That is all.

Mr. PAGE: That is all.

1959 WILLIAM H. BRADLEY, recalled and further examined, testified as follows:

Redirect examination by Mr. MATHEWSON:

Q. In your absence Mr. Addicks presented figures in some detail showing the amount of $13,134,519.65 as the estimated cost of the first Astoria unit, including land and tunnels. Were those figures made up by you?

A. Yes.

Q. And is that the correct estimate as presented here?

A. $13,134,519.65.

Q. He also specified certain other items amounting to between $2,000,000 and $2,500,000, which he said represented items some or all of which might be added to the first unit for its completion?

A. That is correct.

Q. And are those estimates also yours?

A. Yes.

Q. Are they — best estimates you were able to form?

A. The best estimates I could give at the present time.

Q. You testified from memory to Senator Page that, taking the total at about $13,096,000, and deducting the value of the land and tunnel, it would leave a balance of $9,217,000. The exact figure is what?

A. $9,351,961.37. The estimate including the tunnel is $12,001,961.37.

Q. If you deduct from the $13,134,519.65 the land and tunnel, what is the remainder?

A. $9,351,961.37.

Q. Which of those items included in the $2,582,500 will it be in your judgment essential to construct in connection with the first unit?

A. It will be absolutely essential to include practically one-half of the amount. The others may or may not be included, as matters develop during construction. Do you want me to go on with the items?

Q. Yes.

1960 A. Coal storage bridge, $150,000; foundations $80,000;
rope haulage system, $45,000; coke storage plant, $50,000; scows and tugs, for transportation to the coke unloading and discharging stations, $500,000; stables, horses, harness and wagons, $10,000; those I consider to be essential to the construction of the first plant; grading and filling I should put in there also, $50,000; the balance, by-product plant, switch yard, dwellings for company's employees, and the steel works for the second 15,000,000 foot holder, as I say, as the work develops and construction goes on, we may find it necessary to put it up, but I hope not.

Q. You have but a single holder there now?

A. There is but one holder there now.

Q. Would you consider it safe to operate without a reserve holder?

A. It is not considered absolutely safe to do so. Many plants are worked with one holder, but holders are liable to accident, and with an accident the whole plant is stopped.

Q. It appears that two tanks are included in the $13,134,519.65. It is necessary to construct the two tanks at the same time?

A. Yes.

Q. From an engineering standpoint?

A. From an engineering standpoint. The second is pretty closely alongside of the other one, and I never like to excavate closely alongside of a very large tank filled with water for fear of breakage, bursting it.

Q. Referring to the manufacturing capacity of the plant, do you consider it safe to operate a plant without a substantial margin over for reserve?

A. Of course not, no, sir. You simply cannot do it. I do not think it is safe to operate gas plants for lighting a large city like New York with less than 20 per cent. reserve.

Q. Of your manufacturing capacity?

A. 20 per cent. reserve of the manufacturing capacity.

Q. Do you have the supervision of the expenditures in the
1961 engineering department for material, labor, &c., generally
speaking?

A. Oh, yes, in all cases.

Q. Do you employ any men in the engineering department who are not required by the needs of the business?

A. Not if I know it.

Q. You would be likely to know it, would you not?

A. Yes.

Q. And how about the compensation that they receive? Do you pay the market rate or more or less?

A. They are paid the market rate; a great many of them think they are not paid enough.

Q. Do you pay any more than you find it necessary to pay to procure the required labor?

A. No, sir, I look into that very carefully. The first of last July my assistant recommended a lot of increases to our various men, but I said no, I would not grant it.

Q. Are there any expenditures that you deem unreasonable in your department?

A. No, sir.

Q. Mr. Bradley, it has been shown in evidence that by the reports of the company filed with the local tax assessors or with the State Board of Tax Assessors, the plant and real estate of the company had been inserted at something like $19,000,000 for several years past, which it is testified is made up of the land or real estate at the book value, and the figure for the plant of the company, amounting in 1904 to $8,456,595.71, whereas the book was $15,775,462.88, or nearly twice as much. Do you remember any conversation with Mr. Carter in the year 1902 in reference to the basis of placing the value of the plant for the purposes of the tax report?

A. Mr. Carter applied to me for a figure, and I took advice with our general counsel on the subject and was informed as to what the law was in the case. Acting upon that advice I simply cut the book
value in half and added to that—the absolute figure I can-
1962 not give you; I have not got them—but I added to that, if
my recollection serves me, between $600,000 and $700,000
as the scrap value of the plants to be dismantled, understanding that we were going on with our Astoria business and that within a very short time practically the works would be dismantled and simply scrapped, as we had no market for them. The resulting figure from that, half of the book value and the six or seven hundred thousand dollars that I added, was the figure that Mr. Carter used in the tax report.

Q. You went into no detailed computation at that time, did you?

A. I went into no detailed valuation, because I assumed that the book value was very nearly if not practically correct.

Q. Then, if I understand correctly, you assumed that one-half of the plant would remain in New York indefinitely and you took that at its full value?

A. That it would remain in New York long enough to be subject to the payment of taxes; the other half would be simply thrown away.

Q. And you took the scrap value of the other half, which amounted to a few hundred thousand dollars, did you?

Mr. Burr: I object to this method of cross-examining this witness. That is leading and suggestive, and it is unnecessary to put all this into his mouth.

The Master: Do not lead him.

A. I testified to the same thing before the Gas Commission. The testimony is there.

Q. Did the scrap value plus the one-half of the plant at full value equal the figure that you gave Mr. Carter at that time?

A. It did.

Q. Do you remember what the advice of counsel was as to the value that was to be used?

A. The advice *to* counsel was to me, or the statement that 1963 counsel made to me, was that the assessors were instructed that a manufacturing plant—wait a minute, I want to get that straight—that the value of a plant was the value of the land; that there was nothing to be added to the value of the land except such improvements as were made valuable to the land. If the plant added no value to the land, if it was a detriment to the land, it was not to be assessed.

Q. Was it to be assessed at anything more than what it would sell for beyond the value of the land, in case of sale?

A. That is it; that is what I intended to say.

Q. What has been your experience as to the amount at which a gas plant will sell for when it is necessary to sell it?

A. I have had some little experience right here in New York with that. Shall I give it?

Q. Yes.

A. For instance, the 3,000,000 holder at the 18th Street station, that cost the company nearly $400,000, was sold by the city, when it was taken, for about $9,000. I was present at the sale; I was there and heard it, and I know that to be a fact.

Q. Do you know what the 111th Street plant brought when it was sold?

A. The 111th Street plant as an entirety brought between $5,000 and $6,000 at public sale. I was also there at that sale.

Q. That was a plant that cost a considerable sum in addition to that?

A. A plant that was as large in capacity as some of them in the city to-day. The 18th Street, to go further, the 18th Street plant was sold by the city, the portion taken, of a value of about a million dollars, sold for something about $6,000. That was sold at public auction. I was also there at that sale.

Q. And was not a great part of the 111th Street plant that was so sold practically new?

A. It has only been operated some four or five years.

1964 Q. You were not asked any questions on this subject before the Stevens Committee, were you?

A. I do not recall that I was; no, sir.

Q. Did you state these same facts before the Gas Commission?

A. I did as far as I was asked; I do not think I went into it to the extent that I have now, but some questions were asked me that I answered.

Q. Let me ask you whether the figures that you gave Mr. Carter, and which, with slight adjustments which he has testified to, amounted to $8,456,595.71 in 1904, as shown in Exhibit No. 223, represented the structural value of the plant as an operating concern?

A. Not at all.

Q. Or the original cost of construction or cost of reproduction?

A. No bearing whatever on that.

Q. You have testified that you have had experience in the construction of gas plants and parts of gas plants, since you have been in the gas business, and as an engineer you have superintended other constructions, have you?

A. Yes, sir.

Q. Did you make an estimate of the value of the plants of the Consolidated Gas Company to-day on the basis of the cost of reproducing them?

A. I have made a general estimate; yes, not detailed.

Q. As accurately as you could from a general estimate, and your knowledge of the gas business?

A. Exactly; as accurate as I could.

Q. Will you state what that estimate is?

A. At the time, if I recall the figures correctly, $18,321,000.

Q. That is the cost of reproduction, with allowing for depreciation, is it?

A. Yes, sir.

Q. And what does that include?

A. It includes apparatus, buildings and gas holders.

Q. Not mains and services, or anything like that?

A. No, sir, not mains or services or land.

1965 Q. Is that your present estimate also?

A. I see no reason to change it.

Mr. **Mathewson**: That is all. There is no other witness here. I would like to have them cross-examine Mr. Bradley, if they could go on with him. I do not want to get him down here oftener than I have to. I shall have one or two other witnesses for very brief examination, but I cannot get them here before to-morrow morning. I was not prepared to go on. They were out of town, and I was unable to reach them; some of them, at any rate. There may be one in town, but I was not able to see him this morning. I shall not take with them over thirty minutes all told, I think; certainly not over an hour, and I ask permission to produce them to-morrow morning.

The **Master**: You have no other witness here to-day?

Mr. **Mathewson**: No, I have witnesses here for cross-examination, Mr. Simpson, Mr. Humphreys and Mr. Carter, if he is desired.

The **Master**: You have other witnesses on the direct?

Mr. **Mathewson**: I shall have only two witnesses, and they will only take about the same length of time as Mr. Halsey.

The **Master**: Are they along the same general lines?

Mr. **Mathewson**: Yes.

The **Master**: Under the circumstances there is nothing for us to do but to go on without losing any time, and cross-examine the first witness there is, Mr. Bradley.

Mr. **Page**: If the Master assumes the responsibility.

1966 The **Master**: I do not want to assume the responsibility of either closing Mr. Mathewson's case or wasting the day, so I do the next best thing.

Mr. **Mathewson**: I said that I would only take a day and a half, but I have only taken about two hours or two hours and a half, and I think another hour will do the whole business, that is, on my direct.

Recross-examination by Mr. PAGE:

Q. Have you produced a detailed statement of the plant at Astoria which I requested last July should be prepared?

A. The items for which you made out a list?

Q. Yes.

A. Is that it, Mr. Mathewson? (Hands paper to counsel.)

Mr. MATHEWSON: This is what you requested. This is the best they could do. That will perhaps meet your requirements, Senator.

Q. Is the horizontal retort house east or west, the easterly inclined house? I notice that you refer to an east holder, and an east condenser and an east purifier house. The horizontal retort house is one that would be required at the east unit?

A. Well, it is all one unit.

Q. I understand, but I mean by that, it is connected with the east condenser house and the east purifier house?

A. They are all connected together. The reason for making the east and west house is because the houses would be too large; they are simply a duplication, not making the buildings too large or the apparatus too cumbersome in one place.

Q. If we take the east retort house, the east condenser house and the east purifier house, and the east tar extractor and washer house, we would have apparatus that would be capable of handling
1967 ten million cubic feet of gas per 24 hours?

A. Not entirely; the boiler house is common to all; so is the meter house.

Q. No, but I said we would have apparatus.

A. Yes, the apparatus contained in those buildings is capable of handling that. Other buildings would have to go in to make the unit complete.

Q. The horizontal retort house or the east retort house is not yet completed, the building itself, is it?

A. Not entirely. There is a lot of finishing work to be done, small work, small pipes and small construction of all sorts.

Q. And you estimate that the building itself will cost $302,304.03?

A. That is correct, sir.

Q. That building contains 60 benches of 8 retorts each, retorts 16 by 26 by 21 feet 9 inches; those are through retorts, are they?

A. Through retorts.

Q. And the capacity of that house is 10,000,000 per 24 hours?

A. Rated at ten million.

Q. And that has in it all the coal and coke handling apparatus, charging and discharging machinery and everything else that is necessary to a complete retort house of that capacity?

A. It will have on completion.

Q. And the estimated cost includes that as a complete operating retort house?

A. Yes, sir.

Q. And the estimated total for that is $933,291.09?

A. For the apparatus.

Q. For the apparatus?

A. For the apparatus, excluding the building.

Mr. PAGE: We have had the building before; that is about $302,000.

Q. The east purifier house will cost, when completed, $159,430.48, is that right.

A. $159,430.48.

Q. The purifying apparatus complete, piping and everything, would be $200,142.80?

A. Correct.

1968 Q. And that is sufficient purifying capacity to handle the 10,000,000 cubic feet of gas per day?

A. Easily.

Q. The east condenser house will cost $25,960.03 completed?

A. Correct.

Q. And the condensers and rotary scrubbers in that building, $83,405.72?

A. That is right.

Q. And that is sufficient capacity to handle the ten million cubic feet of gas daily?

A. Yes, sir.

Q. What is this tar extractor and washer house?

A. That is part of the apparatus for the manufacturing. The tar extractors, as their name implies, take the tar out of the gas.

Q. This is some improved method, is it?

A. Improved method of tar extracting.

Q. That is something that you do not have in your plants in Manhattan, is it not?

A. We haven't any of this improved type.

Q. You extract your tar in the condensers, don't you?

A. In the condensers.

Q. And the hydraulic main.

A. And the hydraulic main, which is something we do now. This is a further treatment.

Q. This is for additional purification of the gas and also to recover more residuals?

A. Yes, sir.

Q. And that will cost $41,965.24, the building?

A. Right, sir.

Q. And in this you also have a cyanogen washer, I see, besides tar extractors?

A. The naphthaline and cyanogen washers are also in that same house.

Q. And the contents of that building are worth $124,617.79 complete?

A. Correct. I will say right now, Senator, that there may be some little variation from these figures when the thing is absolutely complete. As you see at the head of this column, it is an estimate to complete.

Q. I think it is safe, however, for us to assume that the
1969 estimate is large enough to cover any contingency.

A. It is intended to be, but may not be.

By Mr. MATHEWSON:

Q. Does that estimate cover the 10 per cent. undistributed expense for the Consolidated Company?

A. No.

Q. Or any interest?

A. No, sir.

By Mr. PAGE:

Q. The east holder is the one now completed, or substantially so, is it not?

A. No, sir.

Q. Well, it is——

A. That is the one that is not completed. The west holder is substantially completed. That is, the west holder tank is now completed; the holder itself is now being put in.

Q. Then to take a holder of fifteen million cubic feet capacity per day we would have to take the value of the west holder?

A. Yes, if you want to get a line right through.

Q. Yes. If you were building a works of only ten million cubic feet capacity a day, you would not build a holder of fifteen million cubic feet capacity, would you?

A. I would, if my company would allow me to; if they wanted to spend the money.

Q. It is considered sufficient holder capacity for a plant, is it not, if you have a total capacity equal to twenty-four hours' output of the plant?

A. Yes, but a 10,000,000 capacity plant might on an emergency send out a good deal more than 10,000,000 feet.

Q. Certainly.

A. And the send-out, as I use the term send-out—you say output—the output of a 10,000,000 capacity plant might be largely in excess of 10,000,000 feet in a great many cases, and is often.

Q. Well, do you mean by that that you would draw on 1970 the storage capacity of your tank?

A. Yes, sir.

Q. In excess——

A. In excess of the quantity made in any given twenty-four hours.

Q. But in computing the holding capacity of a company, all the holders that it has should be taken into consideration, those at the works and also those distributed around in different parts of the city?

A. If they are available for the storage capacity, yes.

Q. And it is considered good gas engineering, is it not, to have sufficient holder capacity for twenty-four hours' production of the plant?

A. No, sir; for twenty-four hours' output.

Q. Well, for twenty-four hours' output of the plant. How much is this horizontal retort house capable of producing and passing into the holder per day?

A. It is rated at 10,000,000 feet, but I cannot sit here and speculate on what it may produce, whether it will be one million more or less.

Q. You testified that it was considered good gas engineering to have a 20 per cent. reserve?

A. Yes.

Q. Now, have you a 20 per cent. reserve here, so that this plant could produce 20 per cent. more than 10,000,000 cubic feet?

A. No, sir; I should not run the house up to within 20 per cent., and then consider that I had the 20 per cent. left after that.

Q. Do you mean that you would only run this up to 8,000,000 cubic feet?

A. That would be the safe way. If after the 15th day of December or previous to the 15th day of January, if there was a demand for gas that made it necessary to go beyond that, I should do it, but I am speaking now of a general principle, not what might be done in one day or one week, but on a general principle I want 20 per cent. reserve. I can use that 20 per cent. reserve perhaps on
1971 an emergency, but not for a general thing.

Q. If you have several plants would you have a 20 per cent. reserve of production in each plant?

A. I would try to.

Q. Then, would you have, having an output of thirteen billion cubic feet in a year, would you divide that by 200, making 65,000,000, and also have a 20 per cent. reserve on the 65,000,000?

A. Yes.

Q. Then you would also have a reserve over and above the 65,000,000 of 13,000,000?

A. Let me make an explanation right there. I don't think you have grasped the situation.

Q. Very likely not.

A. We must have plant sufficient and with an effort to preserve the 20 per cent. reserve for the maximum days of the winter. We cannot put in a plant for the winter and take it out for the summer. We have to have it and keep it, and get it into shape for use. When I speak of the maximum capacity of the works I am speaking of the winter, not for the summer months, when we are down to perhaps one-half the capacity of the plant. But that plant must be there, whether it is 200 days or 365 days; that plant must be there.

Q. Then you don't have a 20 per cent. reserve over and above the maximum capacity of the plant?

A. The reason we divide by 200 is not to get the capacity of the plant at all; it is simply to get what amount the output of gas or manufacture of gas will be for the entire year, and it is 40 or 50 per cent. more in the winter than it is in the summer, but that 200 division is the correction to average the whole thing through the year simply, and has nothing to do with the capacity of the plant.

Q. I asked you whether it was 20 per cent. reserve? Whether the reserve should be 20 per cent. more than the maximum?

1972 A. 20 per cent. should be the reserve more than the maximum make in any one day.

Q. This holder, when completed, you estimate will cost $919,800, do you? I have taken the west holder as being the one completed.

A. That is correct. Yes, sir, that is the west holder.

Q. Now the exhauster house, as I understand it, is sufficiently large to handle 20,000,000 cubic feet per day instead of 10,000,000?

A. That is its design.

Q. Would a 10,000,000 capacity exhauster house cost more than half as much as this?

A. It would.

Q. What would you estimate that a 10,000,000 daily capacity exhauster house would cost?

A. Do you mean the house or the entire house and contents?

Q. Well, you can give it either way, the house separately or the house and contents, which would be the easier?

A. The house and contents that I have here cost $66,209.45.

Q. How much?

A. $66,209.45.

Q. Well, that is what this one cost?

A. That is what I say, that this one cost. I should say that an exhauster house would cost $40,000.

Q. That is, with contents complete?

A. Contents and house.

By Mr. Mathewson:

Q. To take care of how much?

A. 10,000,000 feet per day.

By Mr. Page:

Q. What unit did you use to multiply and produce that result, Mr. Bradley?

A. I added approximately, as near as I could tell, the cost of an extra machine. In this exhauster house that we have provided now there is an extra exhauster to be used in case of a break-down on any one of the five. That would have to be provided in a single house as well and would cost just as much.

Q. You have five exhausters and compressors in this house?

1973 A. Five exhausters and two compressors.

Q. And of that one exhauster is for emergency?

A. For emergency or a break down, or whenever they have to be shut down to pack the valves.

Q. So in a 10,000,000 capacity house, you figure it would be necessary to have 3 of those exhausters?

A. Three.

Q. Now we will take the meter house. Will you make the same computation there, this being a meter house to handle 20,000,000 daily capacity, and state how much it would be for a meter house of ten million.

A. The meter house I should simply divide by two.

Q. Then you should say the meter house would be $11,861.99?

A. What are you reading from?

Q. The meter house, the house itself. Do you mean to take the whole thing?

A. I was taking the whole thing.

Q. Well, we will do that.

A. $32,179.30 I make it without the odd cents.

Q. Now we will have a boiler house, I suppose, in this plant. How would you treat that to reduce it to ten million?

A. I should divide that and add to that the value of the chimney.

Q. The boiler house, then, with contents would be $29,944.48?

A. $34,866.01 for the total.

Q. Adding the chimney?

A. Yes. A single house has to have a chimney the same as a double house.

Q. Well, it would be the same size chimney?

A. Practically the same size. There would not be difference enough to count.

Q. Now we have the tar tanks and ammonia tanks yet to put into our plant. How much would you add for those?

A. The underground tar tanks are $10,245.73.

1974 Q. Would you need as large tar tanks for ten million feet as you would for twenty million?

A. Well, not as a rule, no. We always make our tar tanks as large as we can. I should say for a single unit that our tar tanks should be $12,000, in place of the $10,245.

Q. That is, it would be more.

A. It would be more than half.

Q. Well——

A. Excuse me, I should have said $7,000. I was adding two thousand dollars and I added ten thousand instead of five.

Q. Seven thousand dollars and how much?

A. About $7,000, I would put that in at.

Q. And the ammonia tanks?

A. The ammonia tanks I should put in at $20,000.

Q. What else is there that would be necessary for completing the apparatus that we have not already taken into consideration?

A. There are the general connections on the last page.

Q. How much would that be for a ten million plant? Half of what you have here?

A. Well, yes, half. This is an approximation, you understand. I will not be bound by the figures because it is not a fair line of picking the thing out.

Q. What is there unfair about it? We want to be fair.

A. Because it is simply impossible for me to sit here in a general way and say what proportion of that $87,000 is due to the west house or to the east house. I simply cannot do it without going back to my drawings and estimates and finding out just how much there is.

Q. Well, if you are piping a plant of two separate divisions it would only take half as much pipe, would it not, to pipe one of those?

A. Theoretically, yes; practically, it might be altogether different.

Q. What else is there?

A. Electric power house.

Q. Well, for a 10,000,000 capacity electric power house?

1975 A. And going on the same line, it should be half of $154,000.

Q. That is $77,000?

A. $77,000.

Q. What else would you add?

A. That is true of all the remaining items, tools and implements, horses, office furniture and fixtures, boats and scows, and permanent fresh water system.

Q. That should all be divided?

A. That should all be divided, if you want to go on in this way.

Q. I hate to abandon the road just as we have reached the end of it.

A. All right, I will go with you to the end, but if we do, we will run up against a stone wall.

Q. Then I will stop.

A. Will I take all these in a lump in the end, Senator?

Q. Yes, if you would. It is $130,706.64, isn't it?

A. That is right. That is $65,353.32, half of that.

Q. The total of these items that we have gone over that enter into the construction of a plant to produce ten million feet of gas daily is $3,110,021.93. Would you accept that, or would you want to verify that?

A. No, sir. There is an aggregation of items that were not called off by you on that paper there amounting to over a million dollars.

Q. Well, what are those?

Mr. **Mathewson**: It is perfectly apparent what they are. He has stated fully, and he has also stated that he would not give that as an estimate.

A. I stated definitely a few moments ago I would not stand by these figures, because I do not think it is a proper or fair way to get them out.

Q. Well, for the principal things that I have mentioned in the examination, that would be a proper cost value, wouldn't it?

1976 A. It would be an approximate cost value. As an engineer, I would not stake my reputation on an estimate of that kind.

Q. No, but supposing——

A. And I would not ask anybody else to use it.

Q. But supposing I am willing to risk my reputation, and we will take these particular items, my question was whether they did not total up $3,110,021.93?

A. That is the figure you have there, yes; but on my reputation as an engineer, not yours, but mine, I would not accept it. If I had known, Senator, that you wanted to get this thing out, I would have undertaken to do it, but I really do not think it is a fair way to get at it.

Q. Wherein is there any unfairness in any of the figures you have given?

A. Simply because they are guesses to a large extent. They are estimates in a certain sense in the very foundation, and the dividing arbitrarily by two, simply because there are two plants there, is not the proper method of getting at it.

Q. Well, you haven't done that in all cases.

A. I haven't done it in all cases, but in many cases I have.

Q. Well, didn't you consider it proper in this case to do so?

A. I did not. I so stated.

Q. Well, now let us take those items and state what you would consider proper.

Mr. **Mathewson**: I do not think it is fair to ask an engineer on the stand to go to work and to figure up out of his head, without time to consider, what the plant would cost for the capacity, with all the changes that might be involved.

The **Master**: If he cannot do it, he can say so. The Senator is entitled to an answer to his question.

1977 A. I will say this, that so far as possible I have checked up my expenses and estimates of the total expense, and I find that they are different. Taking the whole thing all through, my estimate was within ten per cent. of what is the cost at the present time.

Q. Well, isn't your estimate on this as good as your estimate on the rest of the plant that you have been furnishing?

A. It is not, because this is emasculated.

Q. I know, but when I ask you to state what it would cost to produce an exhauster house for ten million capacity, and you give me a figure, isn't that as good as your figure that you have given on the exhauster house, if they are set in the other plants?

A. I have not estimated on an exhauster house of ten million.

Q. The only things that I asked that we took by dividing by two were the meter house, tar, and ammonia tanks, the boiler house and the contents, and the general connections?

A. General connections, and all the piping about the works. What did you say that figure was?

Q. $3,110,021.93. Now, you stated you thought this was unfair to you as an engineer to arrive at an estimate in this way. In what way would it be dealing fairly with you?

A. You omitted all the grading, filling, and the necessary work on real estate to produce this plant. You omitted the bridge that was necessary to prepare the docks for the receipt and discharge of coal; you omitted the wharves, you omitted the coke handling plant. It is not anything like up to where it should be.

Q. Well, I think your criticism on the whole as to the coal storage and coke plant is probably well founded and we will take that. What would be the value of a coal storage and coke plant necessary to handle these articles in a 10,000,000 daily 1978 capacity plant? Do not bother with anything in my question except the coke and coal?

A. No, I cannot take it to pieces in that way. I would only be making a fool of myself and wasting time and I don't want to be the "goat."

Q. Well, I will be the "goat."

A. The coke and coal is only a small portion of it.

Q. I know, that is what I want.

A. The coke and coal handling business would be $500,000, or $250,000 for the half.

Q. That raises our total to $3,360,021.93.

Mr. Mathewson: It raises your total, Senator, not ours.

Q. Have you an electric power plant in any of your Manhattan stations?

A. Yes, sir.

Q. But I understand that you have not this tar extractor and cyanogen?

A. No, sir.

Q. And we took the value of the tar extractor house and contents at $166,583.03?

A. Whatever it was. Yes, $166,583.03.

Q. You were connected with some of the constituent companies before the consolidation, were you not, as engineer?

A. May I ask you to define "constituent companies?"

Q. By constituent companies I refer to the companies that consolidated and became the Consolidated Gas Company?

A. I was.

Q. You became the engineer, did you, of the Consolidated Company, upon the consolidation?

A. No, sir, two years afterwards. The consolidation was in November, 1884; I became Chief Engineer in December, 1886.

Q. Are you familiar with the capacity of the various plants that were taken over by the consolidation?

1979 A. Except in a general way. Up to the time of my absolute connection with them I had no knowledge of the capacities of the other plants.

Q. But within two years after the consolidation you took charge and then of course you had knowledge?

A. Yes. Within two or three years and I became familiar with it—three or four years.

Q. Have there been any substantial changes in that time in those plants?

A. Yes, a great many changes.

Q. In the way of increased capacity?

A. Increased capacity.

Q. Now you know what the increases were, do you?

A. I know generally that the increased capacity of the past 20 years has nearly doubled; nearly, if not quite.

Q. Yes, in the past 20 years it has doubled, but I am speaking about the time when you became familiar with them, between that and November, 1884, had there been any substantial increases in the capacity of the plants, two years having elapsed?

A. I don't understand the question.

Q. You took charge in 1886?

A. I took charge in December, 1886.

Q. And the consolidation took place in 1884?

A. Yes.

Q. Now, between November, 1884, and December, 1886, had there been any substantial changes in the plant?

A. That I cannot say, because I had nothing to do with any of the companies except my own.

Q. Which was your own?

A. The Municipal and Knickerbocker. Now the 44th and 99th Street Stations.

Q. You know what the capacities were when you took charge in 1886?

A. Between twenty-seven and twenty-eight million, if my recollection serves me. I cannot give to a few feet or a thousand feet.

1980 Q. Could you give me approximately the capacity of the various plants at that time—14th Street plant?

A. I may give it approximately. Twenty years is a long time to remember back on a thousand feet of gas. I should say 14th Street——

Q. If you would prefer to refresh your recollection by looking at anything so you can give it more exactly, you may do so.

A. I will see how near I can come to it.

Mr. Page: While this witness is making his computation, I will offer in evidence this statement, prepared by Mr. Bradley, from which he has been testifying.

Mr. Mathewson: I think the paper had better have some heading.

By Mr. Mathewson:

Q. What is this paper, Mr. Bradley, that the Senator has just offered in evidence?

A. It is a statement of the expenditures on the Astoria plant to May 31, 1906, the amount estimated to complete, but it does not comprise all the items necessary to the plant.

The Master: Now, take the witness' answer to the former question as to the capacity of the plants.

The Witness: Approximately, in 1886 the

14th	Street station had a capacity of	3,500,000
21st	“ “ “ “ “	5,000,000
44th	“ “ “ “ “	4,000,000
99th	“ “ “ “ “	2,500,000
18th	“ “ “ “ “	3,500,000
111th	“ “ “ “ “	2,000,000
42nd	“ “ “ “ “	4,500,000

That is somewhere near correct. It is not absolutely correct.

1981 By Mr. Mathewson:

Q. What part of 1886 do you mean? When you took charge, in December, 1886?

A. When I took charge, in December, 1886. That total is about 25,000,000.

By Mr. **Burr**:

Q. How much of that was coal gas, and how much was water gas?
Mr. **Mathewson**: Just give those that were coal gas plants.
A. Coal Gas Plants:

14th Street Station	3,500,000
18th Street Station	3,500,000
111th Street Station	2,000,000
42d Street Station	4,500,000

The rest were water gas.

At 1 P. M. a recess was declared to 2:15 P. M.

1982 After Recess.

William H. Bradley—Cross-examination continued by Mr. **Page**:

Q. The 14th Street plant to-day has a capacity of 5,000,000 cubic feet, has it not?
A. Yes, sir.
Q. Can you say when the increase was made of 1,500,000 cubic feet to that plant?
A. It was made at times; it was not made all at once; at different times during the past twenty years.
Q. The 21st Street plant to-day has 24,000,000 cubic feet capacity as against 5,000,000 cubic feet in 1886?
A. Yes, sir.
Q. Was that change made at one time or at different times?
A. The change was made at different times as the necessities of the case warranted.
Q. What is the capacity to-day of the 44th Street plant?
A. 8,500,000 cubic feet.
Q. There has been no change in the 42d Street plant in capacity?
A. No change in capacity.
Q. Has there been any change in apparatus?
A. There have been some odd little pieces of apparatus put in. I put in an additional ammonia scrubber to take the ammonia from the gas; it did not add anything to the capacity.
Q. You have some generator benches, haven't you, at 42d Street?
A. Regenerator benches, yes, sir.
Q. Have they been put in since 1886?
A. They were in at the time of consolidation.
Q. So far as addition to the plant is concerned there would be nothing practically to the credit of the 42d Street station?
A. Nothing to manufacturing capacity.
Q. The 99th Street plant is 5,500,000, now?
A. Yes.
Q. That makes a daily capacity of 47,500,000 cubic feet, and to that you will add the oil gas that is produced at the 21st
1983 Street station for the use of 14th Street, 3,500,000 feet?
A. Yes.

Q. The plants at 18th Street and 111th Street have been abandoned, so that there is no production of gas from those?

A. They were condemned, taken by the city, both of them.

Q. Well, there is no production of gas?

A. No.

Q. Then, by the wiping out of these plants the capacity of the original plants has been reduced to 19,500,000 cubic feet, the remaining balance?

A. That was nearly correct; I should say that that was right within 500,000 cubic feet, as nearly as I can estimate it, 20 years ago. (Figures.) Yes, 19,500,000 cubic feet.

Q. So that by such additions to plant that have been made in the last 20 years you have increased the capacity of your works from 19,500,000 cubic feet to 51,000,000.

A. That is correct.

Mr. Mathewson: Assuming that his estimate of the capacity in 1886 is correct.

The Witness: Yes, assuming that.

Q. Well, you are pretty sure you are right on that, aren't you?

A. I think I am right within a half million feet; I would not say beyond that.

Q. Referring to Complainant's Exhibit No. 79, which shows the variation in real estate plant, property and construction from the date of consolidation, November 11, 1884, to October 31, 1905, we find the plant, buildings, machinery and holders to have been valued on the books of the company in the amount of $12,182,491.41, and on October 31, 1905, a valuation of $16,087,428.72, showing the net increase $3,904,937.31. Is that the value as shown on the books of the company?

A. That is as shown on that Exhibit.

1984 Q. I did not finish the question—the value as shown on the books of the company of the increased plant since consolidation, less depreciation, so that $5,132,620.41 would be carried here as construction since consolidation.

A. Carried as construction since consolidation, $5,132,620.41, that is correct.

Q. And by the expenditure of that five million dollars in construction you have increased the capacity of your plant by 31,500,000 cubic feet daily; is that right?

A. That is right.

Q. I understand that you prepared a valuation of the plant which is set forth in State's Exhibit D, being the report of the Consolidated Gas Company to the State Board of Tax Commissioners of the State of New York for the year ending June 30, 1904, and that you placed the valuation of the plant and real estate as $19,673,075.42; is that right?

A. I do not recall that at all, sir.

Mr. Mathewson: Mr. Carter testified that he added the book value of the plant to the figure that he got from Mr. Bradley for the plant.

The Witness: No, sir; I did not prepare that. That is real estate and plant. I had nothing to do with real estate at all; I did not place any value on it.

Q. Then, your part of making up this figure of $19,673,075.42 was to give the valuation of the plant; is that right?

A. It was limited entirely to the plant.

Q. And you fixed that figure at $8,456,595.71?

A. About that figure; I have no recollection as to what the exact figure was. That is nearly correct, I should say.

Q. On direct-examination didn't you testify to that specific figure?

Mr. MATHEWSON: No, he said he made it up in 1902.

1985 The WITNESS: 1902.

Mr. MATHEWSON: Not 1904; and Mr. Carter stated that he employed that same figure with slight variations.

The WITNESS: As far as 1904 is concerned, if my memory serves me, I hadn't anything to do with it.

Q. In 1902 then you fixed the valuation of the plant at $8,456,595.71, is that right?

A. I do not know whether it is or not now, I cannot recall it. I simply make the statement that I made before, that I took this book value and added between $600,000 and $700,000 to it. Whatever that amount brought was the correct amount. I have not seen the figures since and have not had any occasion to refer to them.

Mr. MATHEWSON: The figure that Senator Page gives you is the figure in the tax report for 1902.

Mr. PAGE: No, the figure I just gave you is the figure you used on your direct-examination. Now, if you want to change that——

Mr. MATHEWSON: You are mistaken; he does not want to change anything.

Mr. PAGE: Let us have the explanation. Do not shy at every figure that I give you, because this is taken right from your direct testimony. Now if you want to change that, that is the figure that I took down on your direct-examination, and if you want to make any change in that make it now.

Mr. MATHEWSON: In my question, Senator, I said that the figure which was adjusted by slight variations was $8,496,000, or whatever it is there, and I expressly asked him whether he gave the figures to Mr. Carter in 1902 and he did, he said, and Mr. Carter testified that he made some slight adjustments as to changes in
1986 items made between those dates. It is perfectly clear.

Q. As I understand it, this figure that you have given here is not your testimony but Mr. Mathewson's testimony; is that right?

A. That is my testimony.

Q. Then you are willing to stand by it?

A. I am willing to stand by the statements that I made before the Gas Commission and that I made here before, that I took half the book value, whatever that value was. It was about $15,000,000, and I added to that between $600,000 and $700,000 for the figure that I gave to Mr. Carter. Now, whether it was $100 or 100 cents, more or less, I cannot say more than that. I simply speak from my memory of what transpired at that time.

Q. Now, as I understand your explanation to-day, the reason that you divided the book value of this property by one-half was that you expected the plant to be removed to Astoria?

A. We are going on then, intending to remove it.

Q. And that was in 1902?

A. 1902.

Q. And you understood that you were preparing figures to be submitted for use by the State Board of Tax Commissioners in arriving at some tax for that year, didn't you?

A. Yes, arriving at the tax for that year.

Q. How far advanced was the Astoria plant in 1902?

A. The plans were pretty well drawn; very little physical work had been done.

Q. You did not anticipate that you would be able to remove the plants during that year, did you?

A. Of course not. If I had I should have reduced it very much more.

Q. Well, did you anticipate that you would remove half of the plant that year?

A. I did not anticipate removing any in that paticular year.

1987 Q. Could not a good portion of this plant be removed to Astoria, if you merely wished to reproduce the plant there?

A. A portion of our present plant?

Q. Yes.

A. No, sir.

Q. Why not?

A. They are too much cut up into small units that are impractical to be placed on a modern up-to-date works. Everything is too small.

Q. This book value included holders, didn't it, which you divided in two?

A. It included holders.

Q. Was it ever your intention to remove the holders?

A. Not as an entirety.

Q. How did the value of the holders compare with the value of your manufacturing plant?

A. Well, in what way do you mean, in the total amount?

Q. Yes.

A. Well, they are varying all the time.

Q. In this valuation that you gave to-day of some $18,321,000, how much of that is holders and how much of that is manufacturing plants?

A. The holders is five and one-half million and the plant is twelve million eight hundred thousand.

Q. In this estimate which you made in 1902, corrected by Mr. Mathewson in 1904, how much should be taken for the value of plants and how much for the value of holders?

A. That is a question I cannot answer because I made no subdivision at the time.

Q. Would it be in about the same proportion, should you think?

A. Well, no, I would not like to say whether it would or not, because the conditions as to holders and plant are constantly changing.

Q. Did you consider the book value in 1902 represented substantially the value of the plant at that time?

A. I considered it was very nearly the value of the plant.

Q. But you think to-day that the plant is some two million
1988 dollars more valuable than the book value, is that right?

A. Yes, sir.

Q. Is that based on any theory or advice of counsel as to how to treat values for the purposes of testimony?

A. No, because since 1902 changes have been made; we have built more gas holders and put in other apparatus and made changes.

Q. And the cost of those has been carried into the book value which has increased it from $15,465,000 up to $16,080,000, I think, to-day?

A. Yes, and it is also based on the fact that I do not think the works could be reproduced for anything less than that, whatever the book value might be.

Q. How much do you consider that the occupancy of land by your plant depreciates the value of the land?

Mr. MATHEWSON: I object to that. This witness has not been shown to be an expert on land value, and does not pretend to be, I suppose.

Mr. PAGE: He says he was instructed by counsel that he should only take into consideration such buildings as added to the value of the land, and in some particulars he considered the buildings depreciated the value of the land. Now I am just inquiring as to that particular statement of his.

The MASTER: He can answer.

A. As to amount I don't know that I can say, because in the first instance I would be obliged to place a value on the real estate, which I do not think I am competent to do; but I know perfectly well that a block of ground with a gas holder on it is worth less than it would be with the gas holder not on it, because whoever purchases it would have to remove the gas holder.

Q. If it has a gas manufacturing plant on it, anyone who
1989 purchases it will have to remove that, won't he?

A. Exactly.

Q. And so to that extent, you think the existence of the plant depreciates the value of the real estate?

A. Within certain limits.

Q. What limits would you say?

A. I suppose the assessed valuation would be less; the actual valuation might be the same.

Q. Well, then you mean that the existence of a gas plant on property is valued at a depreciating factor for taxation purposes?

A. Yes, sir.

Q. But not for any other purposes?

A. Not for any other purposes; that is what I gathered from the counsel's instructions.

Q. And what counsel was it that advised you?

A. The general counsel of the company.

Q. Mr. Sterling?

A. Mr. Sterling.

Q. Have you ever sold gas apparatus that was to be removed and used in other works?

A. Oh, possibly, yes, some small articles; I don't know that I can say exactly now.

Q. Well, there is no reason why a gas holder cannot be taken apart and put up again, is there?

A. If you do not mind the expense, no.

Q. Your purifying boxes——

A. I would like to continue that a little bit, Senator.

Q. All right, sir.

A. At the time the city took away the large gas holder at 18th Street station, I made a very exhaustive estimate as to the cost of taking that holder down and erecting it in another place for our own use, and I found that when I got to the end that I could—by the time I had my gas holder and tank taken down and the sheets all marked and transported to the place where it was to be re-erected, that I could put new material on the ground for the same price.

Q. Well, take the purifying apparatus, for instance.

1990 A. The same is true of purifying apparatus.

Q. Is that true of all gas making apparatus?

A. Practically all with the exception perhaps of an exhauster, or engine, or some small piece of machinery that can be taken up bodily and transported. Any piece of apparatus that you must cut in parts or take down and re-erect is under that same category.

Q. The sale of apparatus at 18th Street and 111th Street was merely a sale of scrap, wasn't it, and it brought its scrap value?

A. Well—no, I don't think it brought in scrap value practically. The city sold it. It was sold by the City Auctioneer and I would assume that he got the best price for it that he could.

By Mr. Mathewson:

Q. Was that sold at auction as it stood?

A. Sold at auction in both cases.

By Mr. Page:

Q. In this estimate of value that you prepared in 1902 was the 18th Street plant valued?

A. The figures taken were the book values. If the 18th Street plant was in the book value it was used, otherwise not.

Q. What can you say as to whether 18th Street was in the book value in 1902 or not?

A. I should say I don't know.

Mr. Mathewson: Do you want any concession on that point, Senator?

Mr. Page: Yes, I will take it. I suppose you are willing to concede that it was, are you not?

Mr. MATHEWSON: Yes, there is no doubt about it. It had 1991 not yet been condemned. It was not in operation. We had not been paid for it and have not yet, for that matter.

Q. I do not suppose you will be able to state at what value that 18th Street plant was carried on the books of the company at that time?

A. I cannot say, sir.

Q. When you got through and arrived at this result as the valuation of your plant, what did you feel that you had valued?

A. I felt that I had valued the plant of the company for taxation purposes.

Q. And when you make your valuation of to-day of $18,321,000 you feel that you have made a valuation for testimony purposes fixed on the question of the cost of gas, is that it?

A. No, sir, I made it in testimony, but not for testimony purposes.

Q. In both instances you disregarded entirely the book value?

A. No, I did not disregard the book value, for I used that as a basis to start with, and divided it by two and worked up from that.

By Mr. MATHEWSON:

Q. You mean in 1902?

A. 1902. In the case of the last estimate I paid no attention to book value.

By Mr. PAGE:

Q. You did not take book value and add 20 per cent?

A. I did not.

Q. Just how did you arrive at this valuation of $18,321,000 for your plant?

A. I took the valuation of the coal gas plant at $400 per thousand daily capacity, and the water gas plants at $200 per thousand daily capacity, which experience has shown is not far wrong.

Q. What experience do you appeal to when you say experience has shown that to be not far wrong?

1992 A. Experience and general knowledge of what similar plants have cost and are worth.

Q. That is not taking into consideration the condition of the plant in any way?

A. It is taking in consideration the condition of the plant, because if the plant was not capable of producing that amount, you could not use that as a factor.

Q. You mean producing that amount of gas?

A. Producing that amount of gas.

Q. But it does not take in consideration whether it is such a plant as would be commercially worth reproducing?

A. I don't know that has anything to do with the case, Senator, I don't see where the connection is.

Q. No, probably not.

A. This plant is going on day after day, year after year, doing this work.

Q. But in making this estimate you did not take into consideration the fact whether or not it was doing its work economically?

A. Yes, our plants are doing their work as economically as any plants in the country.

Q. Well, the 14th Street plant, for instance, has direct fire retorts, of six retorts to the bench?

A. Yes.

Q. Do you consider that as economical a construction as full depth regenerative retorts of eight or nine to the bench?

A. So far as construction is concerned, yes.

Q. I am speaking about operation?

A. So far as operation, the benches that you mention would consume a little less coke.

Q. Use less coke and could be handled with less labor?

A. And handled with less labor.

Q. And would produce gas cheaper?

A. A little cheaper, yes, by the amount of labor saved and the amount of coke saved.

Q. Then I am to understand that this value that you arrived at
had nothing to do with the physical conditions or practically
1993 had nothing to do with the plants as they exist to-day except the fact that they produce a certain amount of gas?

A. Except the fact that they were running every day all the time producing the gas that we wanted of a candle-power sufficient to conform with the law.

Q. But in arriving at your result you took the amount of gas produced and multiplied it in one instance by four hundred and in the other instance by 200?

A. I took the amount that the works were capable of producing in any one day.

Q. Yes, and that was irrespective of what the works themselves were?

A. Yes. You could treat my works in the same manner.

Q. Yes.

A. But given a plant that was all run down and of no special value either in production or in economy and I should probably reduce that figure somewhat if I was to make an estimate in the same way.

Q. Would you use $400 as the unit to ascertain the value of the Astoria plant and multiply twenty million feet by four hundred?

A. It is possible that I should do that after the plant is finished and in operation so I can see what it does. Just now I should not apply any figure to it.

Q. Assuming that your plant in Astoria produces what you expect it will, 20,000,000 feet, would you say it was a proper factor to multiply that 20,000,000 by 400 to ascertain the value?

A. Not the first 20,000,000 unit, no sir, I should raise the figure considerably.

Q. How much would you raise it?

A. I should raise it to $500 or $600 without any question. This is simply assumption now.

Q. Yes. Well take six hundred. That would bring the cost of the plant at Astoria to 12 million dollars, wouldn't it?

A. Right.

1994 Q. And you have stated here that your entire value at Astoria including everything, would be some thirteen million dollars?

A. Exactly, but I think, Senator, if I am allowed to go on and build some more plants over there I can build them for less than that, because there was a lot of work done in connection with this plant that will necessarily be of value for succeeding plants, but it must be done now.

Q. Well, that work was done with the idea of having succeeding plants?

A. Exactly, and for that reason the work had to be done in connection with succeeding plants.

Q. In that estimate that you gave of thirteen million dollars there was $1,135,336.63 for land and there was over two million dollars for a tunnel?

A. That is correct, two million and sixty thousand dollars I think, if I am correct.

Q. $2,050,000?

A. Yes.

Q. There was grading $317,543.53.

A. Exactly.

Q. And dredging, $160.000, wharves, $190,000, land drainage $50,000, soundings and borings $200,000; 60-inch gas mains with pumping plant $620,000, lining of tunnel $600,000; besides tar extractor and washerhouse $167,583.03. That was included?

A. Yes.

Q. All of it would not be included in a plant when you come to estimate the value of the production at $400 per thousand cubic feet?

A. That simply illustrates what I said a few minutes ago, that the cost of much of this work would be spread over other works subsequently erected, but it must be spent now.

Q. Does it cost less to manufacture one plant that will produce nine million cubic feet of gas than it would two plants at 4,500,000 feet each?

A. That is purely a theoretical proposition and simply——

Q. Well we are dealing largely with theories, aren't we?

A. I am not, I am dealing with facts.

1995 Q. Well, let us theorize on your facts, then. You take a unit of $400 as the value of producing a coal gas plant of any capacity. Now I say if you divide that in two plants, situated one at 42nd Street and the other at 14th Street, would it cost more to produce those two plants than it would to produce one plant, producing the same amount of gas?

A. It would, per thousand cubic feet.

Q. Yes?

A. Yes.

Q. Then is that unit of multiplication which you applied based upon reproducing a plant at 14th Street of 5,000,000 feet, and a plant at 42nd Street of 4½ million feet capacity?

A. Based upon the production of the plants as they stood, not with any idea of splitting them up into small units or combining them together, but taking them as they stood as a fact.

Q. Then your idea is that as these two plants stand, to reproduce them it would cost in each instance $400 per unit of thousand cubic feet capacity?

A. Yes, sir.

Q. That does not include real estate?

A. That does not include real estate. It includes buildings, so far as buildings are classed as real estate, but not land.

Q. If you were going to reproduce to-day a gas plant to produce the entire amount of gas that is now manufactured by the Consolidated Gas Company, would you reproduce these plants?

A. I think that question is answered by the very work I am engaged on now in the Astoria plant. It is not a reproduction of these plants.

Q. And the kind of apparatus that is in use in these particular plants is not the kind you are installing in Astoria, is it?

A. In many cases it is identical, absolutely identical, with the exception that it is larger.

Q. That I suppose would apply to the purifiers?

1996 A. Purifiers, engines, exhausters, condensers, meters, holders, and 90 per cent. is identical. The retorts are precisely the same, the horizontal retorts, with the exception there are two more in an oven; absolutely the same otherwise.

Q. Well, the full depth generator furnaces?

A. The furnaces are different in some cases. We have the full depth generator furnaces at 42nd Street to-day.

Q. You also have helf depth?

A. Also have half depth at 14th Street.

Q. Half depth at 42nd Street?

A. At 42nd Street, yes, sir.

Q. And at 14th Street you have direct fire?

A. At 14th Street, we have some half depth furnaces there which I have built since I was chief engineer.

Q. Well, you haven't done as Mr. Mayer did, taken an inventory of the property?

A. I have not.

Q. And estimated what it would cost to reproduce that identical property?

A. I have not.

Q. Have you made any recent inspection of the apparatus with an idea of making this estimate?

A. What estimate?

Q. That you have given to-day of $18,321,000.

A. Do you speak of mine or Mr. Mayer's?

Q. Oh, yours.

A. I have made no recent, absolute inspection for the purpose. I am familiar with the works and make inspections of them day after day, year after year. It is not necessary to start out and make a formal visit of inspection. I know it now.

Q. When you decided in 1902 to disregard the book value of the plant, did you take into consideration that the book value of the plant as entered on the books of the Consolidated Gas Company in 1884 was very much larger than the book value of the same plant on the books of the various constituent companies?

1997 A. I don't think it can be said that I disregarded the book values, because, as I said before, I started with them as a basis.

Q. But then you reduced it?

A. I did not disregard it. I reduced it.

Q. I wanted to know whether that fact had any influence on your mind?

A. If you will give me the rest of the question——

Mr. **Page**: The stenographer will repeat it.

The **Stenographer** (reading): When you decided in 1902 to disregard the book value of the plant, did you take into consideration that the book value of the plant as entered on the books of the Consolidated Gas Company in 1884 was very much larger than the book value of the same plant on the books of the various constituent companies?

Mr. **Mathewson**: I have to make objection to that. It appears affirmatively that it was not the same plant that was taken over from the constituent companies, and I don't see how the question could have any application. Those plants were never on the books of the constituent companies.

The **Master**: I will let him answer it.

Exception.

A. I took into consideration the figures of the book value of the plant, knowing that money had been spent on them, that they had been increased in capacity and efficiency. I must have known it was more than it was at consolidation.

Q. I don't think you have entirely caught my question. I wanted to know whether the fact that the plants as taken over in 1884 were entered on the books of the Consolidated Gas Company at a larger sum than they had been carried on the books of the constituent companies that consolidated, whether you took into consideration that fact?

1998 A. That is a question I cannot answer because I did not know that fact. If it was so I was not aware of it.

Q. In making this estimate that you have made for the value of the plant to-day you have not taken into consideration then the original cost of the plant and added to it the cost of such additions as have been made since?

A. No, I did not consider the original cost of the plant. That had no bearing whatever on the present value of the plant.

Q. You did not take into consideration the value of the additions that had been made under your own supervision?

A. Certainly I took them into consideration. A plant that in 1884 produced 25,000,000 and I know in fact they produce 51,000,000 now, I must have taken it into consideration. In other words, there would have been no addition to the value if that remained the same.

Q. We have a plant in 1886 that produced 19,500,000 cubic feet of gas?

A. Yes.

Q. You did not take into consideration what it would cost to produce that plant and add to it $5,132,620, which you have expended in additions since to bring that up to a 51,000,000 cubic foot plant, did you?

A. I am not in the habit of doing foolish things of that kind, Senator.

Q. Well, you did not do that?

A. I did not do that, no sir, I should not think I was doing justice to myself, my company, or anybody else if I did.

Q. We have got an estimate here of $18,321,000, which does not represent the cost of it, it does not represent what it would cost to reproduce a plant of that capacity to-day, it does not represent the book value of the plant. Now what does it represent?

A. It represents my opinion of the value.

Q. Based on what?

A. On my knowledge and a long experience as an engineer and being competent to make those valuations.

1999 Q. Well, would this be the value of the plant new to-day?

A. It is my estimate of the value of the plants of the Consolidated Gas Company, their worth to the gas company as a gas producing apparatus capable of producing a certain amount of gas per day and bringing in a certain revenue.

Q. But it is not taking into consideration the question as to whether or not another plant could not be built that would produce the same revenue at a very much less cost, is it?

A. No.

Q. Now, as I understand, you took the value of the coal gas plant at $400 and the value of a water gas plant at $200; is that right?

A. Yes, sir.

Q. And you got 9,500,000 cubic feet—Oh, is this daily capacity?

A. Daily capacity.

Q. What daily capacity did you use for your coal gas plant?

A. 13,000,000.

Q. 13,000,000 what?

A. Cubic feet.

Q. Of coal gas?

A. Coal gas.

Q. Your estimate included then 18th Street?

A. Included 18th Street.

Q. Then you are reproducing more than you have got to-day?

A. Perhaps for an adjustment that might be eliminated.

Q. Well, we want to get at the idea you had. Now taking 13,000,000 of coal gas, multiplying it by 400; what do you get?

A. $5,200,000.

Q. What amount of water gas did you take?

A. I took 3,900,000.

Q. It must be more than that?

A. 39,000,000. I left off a cipher.

Q. Will you multiply that by $200?

A. That should have been 38,000,000 instead of 39,000,000. $7,600,000.

Q. $7,600,000?

A. Yes, sir.

Q. If you add those together you get $12,800,000?

A. $12,800,000.

Q. As against your estimate given here of $18,321,000?

A. That's right.

2000 Q. And if we take the $3,500,000 from the 18th Street, it brings it down to $12,200,000?

A. Yes, sir. There are some gas holders to go in there besides that.

By Mr. MATHEWSON:

Q. How about the oil gas at 21st Street? Is that in?

(No answer.)

By Mr. PAGE:

Q. You stated on your direct examination that the estimate that you gave at that time of $18,321,000 included apparatus, buildings and the gas holders?

A. I did.

Q. And I asked you how you arrived at that and you said by multiplying the coal gas plants by $400 and the water gas plants by $200?

A. So I did. So far as you asked me and as far as I went.

Mr. MATHEWSON: He has already testified that the twelve hundred and odd millions——

Mr. PAGE: Now, never mind, Mr. Mathewson, let the witness answer it.

Mr. MATHEWSON: But he has testified to it already.

Mr. PAGE: Never mind. We will straighten it out.

Q. What unit would you use then as a multiplier to get your holders in if you have left the holders out?

A. I did not leave them out. They were in there. I used $125 per thousand feet of capacity.

Q. For holders?

A. For all of them, by and large.

Q. Then in using $400 as a unit of multiplication to ascertain the value of the Astoria plant we would have to eliminate the holder also in our calculations to verify the correctness of your unit, would we? 2001

A. Oh, yes, it would have to come out.

Q. What holder capacity did you multiply at $125 to produce the holder value?

A. 40,123,000.

Q. Is that the entire holder capacity?

A. No, sir, there are 503,000 to be added to that for the 18th Street holders taken by the city.

Q. Did you use that?

A. I used that. In my judgment that was the property of the company because it has never been paid for.

Q. The company will get interest on the award, won't it?

A. That don't pay the principal.

Q. What?

A. That don't pay the principal.

Q. Well, if they get the principal they will get interest with it?

Mr. MATHEWSON: I don't suppose he knows.

A. Some time, I hope.

Q. Since making the figures for taxation purposes based on the idea that the plant was going to remove to Astoria, you have very much modified your plans, haven't you, in regard to the removal of the plant, so that it will probably be a great many years before the plant is removed, if ever?

A. Well, yes, there is an uncertainty which has come into it since that time. The plans are not as well defined as they were three years ago.

Q. In the condition of the art, both of construction of plants and the manufacture of the product, a water gas plant is much more cheaply constructed and produces gas much cheaper than a coal gas plant, does it not?

A. The first proposition is right; it is more cheaply constructed for a given capacity. The second is not entirely correct. It was correct some few years ago, but the increasing difficulties of the oil supply and the reduction in quality and quantity and consequent in-
2002 crease in price, those things are bringing the cost of water gas pretty nearly to the cost of coal gas at the present time.

Q. It costs you to manufacture gas at the 14th Street station, according to the figures given by your company, 37 cents per thousand cubic feet. The cost at the water gas stations is about 29 cents per thousand cubic feet, is it not?

A. My answer was based on your question as to the state of the art, not speaking of any individual instance.

Mr. MATHEWSON: I think, Senator, you are wrong in your figures.

The WITNESS: Possibly he may be, I do not know.

Mr. PAGE: There is a possibility of course. You know I qualified that by stating "the figures given by your company."

Mr. MATHEWSON: I do not think you have quoted the figures accurately. I think you have inadvertently quoted the wrong figures.

The MASTER: How is it material? It has not affected the witness's answer. He says he has made the statement in view of the state of the art, and not with regard to a concrete instance at all.

The WITNESS: That was the question as I understood it.

Q. In the present state of the art, manufacturing in a modern up-to-date plant and making the recoveries of the by-product, as they do to-day, you say you can produce coal gas as cheaply as you can water gas?

A. There is another factor that comes in there; that is the illuminating power, the candle-power.

Q. Well, of the same candle-power?

A. Of the same candle-power, no, we can produce water gas cheaper.

2003 Q. I am of course referring to conditions as they obtain here in New York, not a general proposition, that you can produce coal gas unenriched?

A. Well, when you ask me a question of that kind, I must give you a straight answer. You simply say gas. Gas is gas, whether it is coal gas or water gas. When you come to candle-power, that is a different proposition.

Q. Well, modify the question to the extent of stating 22-candle-power, both coal and water.

A. 22-candle-power, both coal and water can be produced in my judgment some cheaper by the water gas method, but not so much as years ago.

Q. I understand that it is your expectation to build the Astoria plant entirely as a coal gas plant?

A. The present unit is a coal gas plant.

Q. Well, future units; how about that?

A. That is looking to the future.

Q. We have been doing a good deal of that?

A. I know; altogether too much.

Q. Well, we will cast our horoscope a little farther now.

A. The question as to whether I shall recommend the Consolidated Gas Company to build a water gas plant in Astoria next, or whether I shall advise them to keep on with coal gas plants, is yet in abeyance. I cannot say from the present standpoint what I will do.

Q. The original intention was to produce entirely a coal gas plant. Is that right?

A. No; my original intention was to have both coal and water gas.

Q. According to my recollection I thought you stated that before the Gas Commission.

Mr. Mathewson: I think your recollection is at fault. I think it was clearly testified—I know it was by Mr. Addicks—that it was contemplated to build a water gas plant there, or unit.

2004 The Witness: I have plans in my office showing water gas as well as coal gas. That is the best evidence.

Q. How is the gas that is manufactured by other companies under agency agreements delivered to your company?

A. It is delivered in two different ways. Some of it is delivered direct into our gas holders, and some of it is delivered direct into the mains.

Q. What companies deliver it to the gas holders?

A. All of them.

Q. What companies deliver it to the mains?

A. All of them.

Q. Where are the deliveries made to the mains from the different companies?

A. In the streets, various connections that we have. I do not know that I can absolutely define where those are. Mr. Simpson can answer that question a good deal better than I can, as he has direct charge of that and I only have general supervision of it.

Q. Mr. Simpson is still to come on, so that I will not bother you about that. As chief engineer of the company, do you have records in your possession which show what it costs to produce gas at each station?

A. No, sir, I do not.

Q. You have general supervision of the production of gas, haven't you?

A. Yes.

Q. And it is part of your duty as chief engineer of the company to keep the cost down to the lowest effective point, isn't it?

A. It is.

Q. And don't you ever make calculations to find out if you are doing that?

A. I do not.

Q. If you want to know, to whom would you go?

A. Mr. Carter. My office is in the general office of the company, and the accountants and bookkeepers are all there, and if I want any information I simply ask the question and get it.

2005 Q. For the purpose of supervising the daily production, what reports are made to you?

A. To me personally none at all. Reports of the amount of gas made, the amount of gas sent out and the gas received from other companies come into my office and are there filed. I see them when I wish to for any reason.

The Master: I have been looking over this record very hard to find out what was brought out at the direct examination that this cross-examination is applicable to just at this point, but I do not seem to find it. Can you tell me?

Mr. Page: I do not know that it is, and if it does not seem to be productive, I will abandon it.

Mr. Burr: I want to ask Mr. Bradley a few questions if you have finished.

Mr. Page: I think so; go ahead.

Recross-examination by Mr. Burr:

Q. By whom was the statement prepared which has been offered in evidence to-day, which was presented by you?

A. Which statement?

Mr. Page: State's Exhibit V.

A. That was prepared in my office, under my supervision, by my assistants.

Q. From the books kept in your office?

A. From the books kept in the general office.

Q. And you know those figures to be correct, yourself?

A. So far as I have been able to check them over and examine them I have found everything correct, and I assume that the rest are.

Q. The plant at Astoria is to be an up-to-date and improved construction, I understood you to say; it is not to be a reproduction of the construction which at present exists on the Island of Manhattan? 2006

A. That is my intention, to build the best plant in the world.

Q. Is it not a fact that improved instruction means cheapening of the cost of construction of gas?

A. I hope so, I hope to be able to produce it, but I will not sit here and state under oath that I am going to produce it cheaper; I intend to, that is my aim; but I may fail.

Q. In your opinion, when the Astoria plant is running it will result in a considerable reduction in the cost of the manufacture of gas?

A. I hope so.

Q. And would that extend to as much as 5 cents per thousand cubic feet?

A. No, sir.

Q. Do you recall being examined before the Gas Commission on that subject and testifying that it would result in a reduction of from 5 to 6 cents per thousand cubic feet?

A. I recollect that I protested against that examination, as I did not wish to be committed.

Q. Do you recall being examined before the Gas Commission and testifying that in your opinion the result of the construction of the Astoria plant would be a reduction in the cost of the manufacture of gas from five to six cents?

A. No, sir, I do not recall that.

Mr. Mathewson: He did not so testify; therefore he could not recall it.

Q. I call your attention to your testimony as it appears on page 746 of the printed record before the Gas Commission. You were asked this question?

"Q. Of course, when you get running smoothly and everything is as you have planned it to be, you anticipate a considerable reduction in gas? A. I anticipate a reduction.

2007 Q. To what extent? A. Perhaps to five or six cents a thousand."

Did you so testify?

A. I said perhaps five or six cents. I did not say that there would be a reduction of five or six cents a thousand feet.

Mr. Mathewson: Those were not questions which were put to the witnesses before the Gas Commission at all: that relates to questions which were put to him, and they were questions which were put to him before the Stevens Investigating Committee, and he stated before the Gas Commission that his testimony was misunderstood and he fully explained what he meant to convey before the Gas Commission. Those questions were not asked him.

Mr. Burr: These are the questions that appear here on the printed record.

Mr. Mathewson: Of course, they were read in by counsel for the complainant before the Gas Commission, but he did not so testify before the Gas Commission. On the contrary he explained fully.

Mr. Burr: I do not think that calls for a statement on the part of counsel. The witness is entirely competent to take care of himself.

Mr. Mathewson: But you stated that that was his testimony before the Gas Commission; stated it flatly, and it is not so.

*B*r. Burr: I have read the statement which appears on page 746 of the printed record.

The Master: I assume that you do not want to entrap him?

Mr. Burr: No, sir.

The Witness: I did not testify before the Gas Commission to that effect; the questions were not asked me.

2008 Q. So that we may understand each other, you did so testify before the Stevens Investigating Committee?

A. I did so testify before the Stevens Investigating Committee. I gave it as my opinion that there might be a reduction.

Q. Then, did you testify before the Stevens Investigating Committee, when you were a witness there before that body, as follows:

"Q. Bringing it down at the holder, cost of production at what? A. In the neighborhood of thirty cents.

"Q. A little less than thirty cents? A. Maybe a cent less than thirty cents.

"Q. Maybe a cent less than thirty cents? A. Twenty-nine."

Q. Did you so testify before the Stevens Committee?

A. I testified under the statement that it was entirely speculative on my part; that I had no data to go on to make that statement.

Q. The next question you were asked before the Stevens Investigating Committee was:

"Q. What are the circumstances which enable you to figure that reduced cost at Astoria? A. Better equipment; modern equipment, an endeavor to use all the modern appliances in the shape of labor-saving and recovery of some by-products that htve never been recovered by any gas company in this country, and little economies of that character; I do not know that I can enumerate all of them."

Did you so testify?

A. I did.

You were also asked this question before the same Committee:

"Are some of your present plants out of date and somewhat antiquated? A. Yes.

2009 Q. Which plants would you bring under that category? A. The 14th Street and 42nd Street plants.

Q. In what respect are they not up to modern standard? A. They have not the modern benches, so to speak, technically to speak, that is, the retort houses, and the balance of the apparatus is not as efficient as can be produced now."

Did you so testify?

A. I do not think you read that correctly as I recollect it.

Q. I hand you the book. Look at page 746. I would like you to read the testimony that appears there as having been given by you?

A. Well, this is what I was looking for; the next question:

"Which is the apparatus which is inefficient? A. There is none of the apparatus inefficient; simply comparatively inefficient." That is what I was looking for.

Q. You now remember that you so testified?

A. I did.

Q. You were asked:

"Q. I mean comparatively? A. In the case of the 42nd Street, the benches are the old style, horizontal sixes. When I say that I mean six in number. They are worked, drawn and charged by hand. The balance of the apparatus is fairly efficient, inasmuch as apparatus of that age and character can be built in the years when it was built.

Q. How old is the apparatus? A. I cannot say absolutely. I should say in the neighborhood of 35 years. I should say 35 years as nearly as I could arrive at it. I cannot give it any nearer.

2010 Q. As I understand, that apparatus requires more labor than those perfectly modern appliances would require? A. It does.

Q. And that of course involves additional expense? A. Yes, sir.

Q. And brings up the cost of production? A. And brings up the cost of production."

Did you so testify before the Stevens Investigating Committee?

A. I did.

Q. Without any reservation whatsoever, you clearly remember that you so testified?

A. I testified with the reservation entirely all the time that it was simply speculative and now it is impossible to say.

Q. You mean when you say you have testified as I have read that you had the mental reservation as stated?

A. I always have a mental reservation when counsel asks me what I am going to do in the year 1910. I cannot tell exactly. I simply give him the best of my opinion.

The **Master**: Now Mr. Burr, what is this directed to as cross-examination.

Mr. **Burr**: On the question which I wish this chief engineer to answer, and which I am now proceeding to ask him, as to whether improved construction and up to date construction does not result in better gas and cheaper gas in its manufacture.

The **Master**: I know, but what on his direct is that suggested by? That you are making him your own witness now? I do not recall anything on his direct-examination that opened up that subject.

Mr. **Burr**: I think that he has given a statement here with regard to the cost of the plant at Astoria, and I think that I am entitled to show on this general subject of the manufacture and 2011 distribution of gas whether that plant, which is contemplated to cost so much, is going to result in the cheapening of gas, its manufacture and distribution.

The **Master**: I think that is a pretty far cry.

Mr. **Burr**: They are going to commence operations in a month or so; they hope to.

Mr. Mathewson: Will you let me see that page, if you have finished quoting from it?

The Master: I have got to take it, if you insist upon putting it down, but I do not see it on cross-examination.

The Witness: I will be better able to answer those questions a year from now.

Mr. Burr: Further, on the subject of the appraisal that he has made of the plant; he has stated it to be, in one breath, old and antiquated and I am going to call his attention the next minute to a statement made by Mr. Addicks before Mr. Justice Lacombe, as it appears on page 6 of the affidavits and notice of motion. On page 6 of the affidavits and notice of motion Mr. Addicks makes this statement:

"The manufacturing plants of the Consolidated Gas Company are in good and efficient condition; about four-fifths of the present generating capacity thereof are in shape, modern up-to-date water gas plants which could not be improved upon anywhere, and the coal gas plants, while possessed of some apparatus which is not of the latest pattern, are efficient and in shape to operate for an indefinite period without impairment of efficiency."

Do you agree with that statement?

A. That is correct.

2012 Q. Can you tell me what was the amount of gas consumed by the Consolidated Gas Company itself for its own purposes last year?

A. No, I cannot.

Q. Or the year before?

A. No; I have not any record which will show that.

Mr. Burr: I think that was one of the things I asked for, which has not yet been delivered.

The Witness: I was not asked for that, I have no record which would show it.

Q. In the Astoria plant, will you tell me what would be the weight of charges of coal in pounds used in the inclined retorts, if you can?

A. About from 1,000 to 1,200 pounds in the retorts.

Q. How many hours will be used to distil each charge?

A. That would depend upon the working of the benches, whether it is four or six hours; I cannot tell you until I get that under way.

Q. What gas would you average for a pound of gas distilled?

A. Probably 4.9 feet per pound.

Q. What would be the weight of charges used in the horizontal retorts?

A. 800 or 900 pounds probably; this is all dependent upon conditions as they come up, you know; I cannot tell that.

Q. You had it in mind when you estimated the output?

A. In a general way, yes.

Mr. Mathewson: These are through retorts, Mr. Burr, if that is of any value. Are they not, Mr. Bradley?

The Witness: Through retorts.

Mr. Mathewson: Through retorts, not single.

Q. What gas do you expect to average per pound of coal?

A. I just told you, 4.9 feet to the pound.

Q. If you were to have all your vertical and inclined retorts in operation at once how much gas would you expect to produce in twenty-four hours?

2013 A. I have never made the calculation. The house is rated at 10,000,000 feet; it may produce 13,000,000, or 15,000,000, or 8,000,000; it depends upon the working of the plant.

Q. What percentage of surplus retorts do you expect to leave out of work in ordinary work?

A. About 20 per cent.

Q. What station did you have charge of from November 1, 1884, to December 1, 1886?

A. What is now known as the 44th Street station, and the 99th Street station.

Q. What increase occurred in the capacity of those plants from November, 1884, to December 1886?

A. No special increase; nothing that I can recall now.

Q. I would like to ask you whether it is not a fact that land used solely for gas making purposes is not as valuable one year as it is another?

A. I am not a land expert; I cannot give you an answer to that question.

Q. Is the land that the Consolidated Gas Company took over in 1884 any more valuable for gas making purposes this year than it was in 1884?

A. I do not know, sir, I am not a land expert.

Q. I am speaking simply of gas purposes?

A. We do not make gas out of the land.

Q. You make it on the land?

A. We make it on the land, yes, and whether it is any more or less valuable for gas making purposes I would not like to undertake to say.

Q. If there was a gold mine under the land it would not make the gas any better or any cheaper, would it?

A. I would buy it then and I would not make any gas.

Q. Is it not a fact that for gas making purposes, the land is not any more valuable this year than it was in 1884?

A. I could not say.

Mr. Mathewson: Is not that a conclusion?

2014 The Witness: Yes, it is more valuable, I happen to think now.

Q. In what respect?

A. Because in several of the plants I have put a good deal more of apparatus on the same number of square feet, that makes it more valuable. We produce more gas per square foot of land than we did before.

Q. Is it more valuable in any other respect that you know of?

A. It is more valuable in that respect; as to any other respect I have no knowledge of it.

Q. Do you know what value or price the Consolidated Gas Company claimed for that part of the 18th Street plant taken by the city?

A. I know generally, yes.

Q. How much was it?

A. Something about a million dollars.

Q. What was the price claimed for the land and what was the price claimed for the buildings?

A. I do not know; I do not know anything about the land.

Q. You spoke something about the increasing difficulties of the oil supply and the depreciation in quality and the increase in price. Do you know what that is attributable to?

A. It is attributable in the first place to the production. Years ago when Pennsylvania oil was plenty, there was a larger percentage of the lighter bodies, naphtha and benzine, but as the years went on and the production of the Pennsylvania oil regions was reduced, the other oil fields that were discovered produced a heavier body of oil without so many of the light constituents.

Q. Whom did you purchase that oil from?

A. The Standard Oil Company.

Q. Many years ago?

A. Yes.

Q. How many years ago?

A. Since 1876.

Q. Have you purchased all of your oil from the Standard
2015 Oil Company since that year?

A. As far as I know.

Mr. MATHEWSON: Did you complete your answer as to the cause of increase in price?

The WITNESS: No, he interrupted me. The advent of automobiles, motor boats and gasoline engines, and all the various forms of use for the lighter products of petroleum have made it impossible for us to get it in quantity, and we are obliged to take the heavier product.

Q. Are you testifying now from your own knowledge or what somebody has told you?

The MASTER: Are you cross-examining on anything that he has testified to on the direct, or only on Senator Page's cross-examination, because we must come to an end of this some time?

A. Somebody told me, and I read it and I know it.

Mr. BURR: That is all.

Redirect examination by Mr. MATHEWSON:

Q. This State's Exhibit V which you have produced, giving the expenditures for certain items at Astoria, included all the items going into the Astoria plant, did it?

A. No, sir, only a portion of them.

Q. Even the first unit?

A. Yes.

The MASTER: He said that this morning.

Q. Why was this statement made up, giving these particular items?

A. It was made up because asked for by Senator Page, as I understand it.

2016 Q. Have you in course of preparation another statement showing the items which were omitted from this?

A. I have.

Q. And which added to this make up $13,134,519.65?

A. Yes, sir.

Q. Senator Page has suggested certain items for deduction, which you said would apply not only to this unit but other units if they were built. Would not a portion of those items apply to this unit even if other units were built?

A. Undoubtedly.

Q. Then, in any event could the estimate of the cost of the first unit be wholly eliminated?

A. No, sir.

Q. You testified to a rope haulage system, coal storage yard and other items; are they included in these items in State's Exhibit V?

A. They are not included at all.

Q. And they would have to be added, would they not, to the $13,134,519.65?

A. Yes, sir.

Q. There is nothing in State's Exhibit V about the east purifier house or west condenser house or tar extractor or washer house?

A. Some of them are omitted but I think some of them are in there. The west condenser house is omitted entirely and condensing apparatus.

Q. The west purifier house and west tar extractor and washer house are included?

A. Yes.

Q. There appears here a holder, 15,000,000 cubic feet capacity. Is it possible to construct smaller holders than that at the same price per cubic foot of capacity?

A. No.

Q. Would it be more or less expensive?

A. The larger the holder the less expensive it is.

Q. Would you consider it judicious at Astoria, in view of the plans, to erect smaller holders than you are erecting?

A. It would be going backwards. In the city to-day we are taking out the smaller holders and replacing them with larger ones.

2017 Q. Are these figures in State's Exhibit V portions of the estimate of $13,134,000 to which you testified?

A. Simply a portion of it.

Q. You have stated that the generating capacity of the plants of the Consolidated Gas Company have been more than doubled since 1884. Was that increase effected in the same buildings?

A. Almost entirely.

Q. And it was not necessary to increase the buildings?

A. Very little more ground was covered.

Q. And what was the increase in generating capacity, chiefly?

A. In the case of 21st Street and 44th Street, it was in the generating capacity.

Q. Were the purifiers sufficient for a greater capacity than that of 1886?

A. No new purifiers were built. In 14th Street I put new sets in the old house.

Q. Is it possible where you have an existing plant or plants, such as the Consolidated Gas Company in 1886 had, with land, which is not covered with apparatus and building not fully covered, to increase the capacity without proportionately increasing the cost per thousand feet of output?

A. We have done so.

Q. When you speak of the salvage in case of the removal of the generating plants to Astoria as a few hundred thousand dollars, would that salvage be in the coal gas apparatus or water gas apparatus?

A. It would be in both to a certain extent.

Q. Which chiefly?

A. Mostly on the water gas apparatus.

Q. Were you informed by counsel in reference to the figures which you gave for the tax report of the provision of the law that real estate should be assessed at a price at which in ordinary circumstances it would sell?

A. Yes.

Q. And did you take into consideration what this generating apparatus would sell for if the plant were sold with it on?

2018 A. Yes, I took into consideration it would sell for scrap, and scrap only.

Q. Was that the theory on which you made up the figures?

A. That was the theory on which I made up the figures. Nobody else would want to buy it for a gas manufacturing plant.

Q. You have not ordinarily parted with any of your land or buildings for gas making plants?

A. No, sir.

Q. Would it be possible to acquire better apparatus in your judgment that that which you are now using for the manufacture of water gas or are they up to date?

Mr. Burr: Objected to as purely speculative.

Objection overruled; exception.

A. No, sir; most of the water gas apparatus has been built within the last five years and is just as modern and up to date as any we would contract for to-day.

Q. As to your coal gas, you have stated that your regenerating furnaces are somewhat more economical in operation. How about the cost?

A. They would cost more to construct them.

Q. It would add to the capital?

A. Yes, sir.

Q. If you took $400 per thousand feet as your unit what would that make the cost of a twenty-million cubic foot plant?

A. $8,000,000.

Q. Do you expect that subsequent units can be produced at less than that?

A. I expect they can be produced at less than the twelve million or thirteen million dollars.

Q. Yes, but less than the $8,000,000?

A. Well, hardly, I would not like to say that we could get much below the $8,000,000.

Q. In your $400 per thousand feet which you applied as the
value of the coal gas plant in Manhattan, did you not in-
2019 clude relief holders at the station?

A. All the relief holders at the station were included in every case.

Q. In the $400?

A. In the $400.

Q. And the holders which you have added were simply the other holders of the company?

A. Storage and distribution holders. The relief holders went in with the plant.

Q. And so with the estimate of the Astoria unit which you have given, the holder at the plant was included?

A. Yes, sir.

Q. Is the $18,321,000 which you have specified, what you consider it would cost to reproduce the plants to-day?

A. Yes, sir.

Q. It is then the cost of reproduction?

A. Cost of reproduction.

Q. Have you made any estimate of what should come off that for depreciation, if anything?

A. No——

Q. Knowing the condition of the plants?

A. With the exception, perhaps, of 18th Street.

Q. Well, leaving that out of account?

A. Yes.

Q. How much did you include in this $18,321,000 for 18th Street, both the manufacturing plant and the holders taken?

A. I cannot tell that, I do not think, without going over my figures. I took the three and one-half million production at $400, upon the plant.

Q. That would amount to how much?

A. $1,400,000. The holders I cannot say now, for I have not the figures of the capacity, that is in detail.

Q. If you cannot tell exactly, state approximately.

A. About $175,000.

Q. And that would make a total for the 18th Street plant as taken by the city?

A. No, sir; I think we are working at cross purposes. You say taken by the city?

Q. Yes, taken by the city, the portion taken by the city 2020 at 18th Street?

A. Oh, that is another thing. I understood you to say what was left. $1,903,000.

Q. And taking that out of your $18,321,000 would leave how much, excluding 18th Street on your figures?

A. $16,418,000.

Q. You state now that the plans of the company are not so well defined with reference to removing its manufacturing plants to Astoria?

A. No, sir.

Q. What is that due to?

A. To being unable to form plans until this business becomes settled down to some basis so we know what we can do.

Q. Do you mean the 80 cent gas Act?

A. 80 cent gas and all the other disturbances.

Q. What is your view as to the production of gas, as to whether it should be all water or all coal or a mixture?

A. I think it should be mixed gas.

Q. Considering the supply of oil and the course of oil as to price would you have considered it judicious to establish as the first unit at Astoria a water gas plant when that construction was begun?

A. No, sir, I considered that thing at length and concluded the best interest of all concerned, the company and the consumers and the City of New York was a coal gas plant at first.

Q. Does the raising from 20 to 22 candle-power make any difference as compared with coal and water gas and possible cost of production?

A. Yes, sir, that is one of the difficulties that I labor under now, being unable to know what I can do until I find out the candle-power requirements.

Q. In connection with the production of gas you know what material is ordered, I suppose, for that purpose, don't you?

A. I make requisitions for material.

Q. And is it your effort to see how far that material goes in producing as much gas as possible?

A. Absolutely. I have it watched very carefully by my assistants.

2021 Q. And the figures as to cost of items you have not in your department?

A. I don't trouble about the cost of items. I simply know if we use more coal than we did last month, the gas is costing more and I want to know why. And the same with oil and the various articles that go into the manufacture.

Q. When you speak of being able to produce at Astoria gas at somewhat less than you do in Manhattan, you refer to the cost of coal gas in Manhattan or water gas?

A. The cost of the coal gas in Manhattan.

Q. Would you undertake to say that you expect to produce coal gas at Astoria at a lower price than the cost of water gas at your station?

A. I don't think I will be able to.

Q. Now, in reference to the testimony before the Stevens Committee to which Mr. Burr has called your attention, the first question is where you were asked about the cost of gas at Astoria: "Bringing it down at the holder, cost of production, at what?" And in a later question which he read: "And brings up the cost of production" and your answer was: "And brings up the cost of production." Do you remember before the Stevens Committee statements were made showing the cost of gas production, which was a statement of labor and material?

A. Yes, sir.

Q. And then additional items of cost in the holder, which raised it a few cents?

A. I do.

Q. What did you understand when you said it might be 29 or 30 cents?

A. Cost of production.

Q. Not the cost in the holder?

A. No. I did not have anything to do with that.

Q. Did you so state to the Gas Commission in the testimony before them?

A. Yes, sir.

Q. As a matter of fact, the cost which you expected to re-
2022 duce at that time, so far as coal gas went, related to the
year 1904, didn't it?

A. It did.

Q. And have you effected a reduction since 1904?

A. We have effected a material reduction already.

Q. Several cents?

A. Several cents.

Q. Do you remember whether you testified before the Gas Commission that you could not say that you could reduce the cost at all?

A. If I recollect the testimony, I said that I could not keep going on at that rate forever, keep on reducing.

Q. Was that under the 20 or 22 candle-power law that you expected to do that?

A. Under the 20 candle-power law.

Q. Mr. Bradley, this estimate of $13,134,519.65 was made up some time ago, wasn't it?

A. Made up in March last—March, 1905, I think.

Q. Have you within the last few days gone over the items again to revise your estimate?

A. I have.

Q. And have you now the statement to which I called your attention a few moments ago showing the items which were not requested by Senator Page and which go into the total of $13,134,519.65?

A. Yes, sir, the items are here now.

Q. Now, the final revision of your estimate which you have completed within the last day or two makes a total of how much, anything beyond the $13,134,519.65?

A. $160,000 in addition.

Q. Making a total of how much?

A. $13,250,739.60.

Q. Does this show exactly what the items are which go to make that up which are not included in State's Exhibit V?

A. It does.

Mr. Mathewson: I offer it in evidence.

Mr. Page: I would like to call the Master's attention to the fact that last July I asked that this information be furnished. A tentative exhibit was prepared and shown to me and I made suggestions as to the form that that should be put in. To-day 2023 an exhibit is produced and handed to me for examination, and then when I have completed my cross-examination the statement is made that it is like Colonel Seller's eye wash, there is one ingredient missing, and other statements are prepared and produced under redirect-examination.

I merely wish to call your attention to the unfair way in which we have been used.

Mr. Mathewson: It is not a very serious suggestion. Here are the items requested by Senator Page, and here are those not requested by Senator Page, making up expenditures, estimates and totals, and the total added up is $13,250,000. The total of the estimate originally was $13,134,519.65. It is impossible to state the omitted items without showing the additional $116,219.95. Whenever the estimates are revised, months apart, the probability is, of course, that some other slight item will have appeared, and that is the fact, and we cannot get away from it.

Mr. Page: My request was for all the details relating to Astoria.

Mr. Mathewson: No, sir; we have your request and we will show it, showing precisely what you asked for.

Mr. Page: And it shows the *bona fides* of the complainants. They take a statement which was made up for the purpose of having them segregate certain items, and limit themselves to that instead of giving the information they knew *are* desired, tempted by the insufficiency of my request, as they claim, to produce an incomplete statement.

It is not fair to the defendant.

2024 Mr. Mathewson: Here is a copy of the request which Senator Page handed to counsel and which I handed to the company and we followed it exactly as far as possible, and showed the cost of each particular one of the items which he requested. We did not understand that we were asked to furnish more than that, and we furnished it in the form which he requested, and have now simply shown the items which were not included in the items he requested, making up the total to which Mr. Bradley has testified. There was no idea of doing anything except to accommodate the Senator.

The Master: Let us not discuss it. I suppose if he has not got all he wants he can put it in when he puts in his own case. If the facts are somewhere they can be brought out by some process known to law.

Mr. Page: I know, but I merely wish it spread upon the records as to the frankness with which we are met.

Papers received and marked Complainant's Exhibit 235.

Mr. **Mathewson**: As the city contracts are here, before taking up another witness for cross examination, I will be glad to offer one or two papers——

Mr. **Page**: You brought out one or two points on the redirect-examination that you did not touch upon on the direct. I wish to examine on them.

Recross-examination by Mr. **Page**:

Q. You say you have made a material reduction in the manufacturing cost of gas since 1904. Can you state just how much?

A. No, sir, I was informed of that fact by Mr. Carter, the general accountant, that we had made a reduction since 1904.

2025 Q. Did he inform you as to the number of cents which you had made? You said it was several cents?

A. Not as to the exact amount; several cents, as I repeated it.

Q. Those reductions were made with your present plants, 14th Street, 42d Street——

A. No, they were made by additions and improvements to our present plants.

Q. Well your present plant as it stands to-day at 14th Street and 42d Street?

A. I did not speak of 14th Street and 42d Street. I speak of the entire plant, water gas as well as coal gas.

Q. Since 1904 what improvements have you made in your water gas plant that would enable you to reduce the cost of production?

A. Changed the entire method of production both at 21st Street and 44th Street and 99th Street.

Q. Was not that done prior to your testifying before the Stevens Committee?

A. Part of it was.

Q. Well, was not all of it?

A. I think not, I cannot recall now. Well, it was done about that time.

Q. Has a part of the reduction that you made been made in your gas plant at 42d Street and 14th Street?

A. There has been no special reduction made there because there have been no special changes made there. It continues about the same.

Q. Then whatever reductions were made you should judge had been made in the manufacture of water gas?

A. In the water gas plants.

Q. But you stated in response to my question on cross-examination that with the use of the full depth regenerative retorts at Astoria that you expected to make some still further saving, didn't you?

A. We expect to make some still further saving over the old direct fire furnaces.

2026 Q. Do you know how many pounds of coke you use at 14th Street station to carbonize 100 pounds of coal?

A. Not without going to the records, I cannot state from memory.

Q. Do you recall how much gas you produced at 14th Street statoin in the year 1905?

A. No, sir, I do not carry those figures in my head.

Q. I wish to show you State's Exhibit P which will give you the entire amount of coke produced at that station and the entire amount used under the retorts. If we take the number of pounds of coal carbonized and divide it by the number of pounds of coke used under the retorts we will get at it, won't we?

A. Very nearly.

Q. You expect to be able to manufacture gas certainly in this up-to-date plant at Astoria much cheaper?

A. I hope to be able to make it cheaper and I am going to do the very best I can. If I fail it won't be for want of trying.

Q. Well, from the experience of others your faith is based upon a pretty firm foundation, isn't it?

A. It is as certain as I can be of anything.

Q. What is the difference in the cost in the holder and the cost of the production of gas?

A. The cost in the holder is the cost of the labor and the material that are used to make the gas in either of the holders. On top of that are other charges that are not ordinarily incorporated in the cost, such as fixed charges, taxes and all such items as that which are not ordinarily considered in considering the cost of gas in the holder or the cost of production, I should say.

Q. The cost of production then becomes the cost through the station meter?

A. It is the bare production in the works, yes; labor and materials.

Q. And what has to be added for the holder cost is the investment in the holder?

A. Care and supervision of holder and investment in holder, taxes, interest and all other items that are properly chargeable.

2027 Q. It takes no additional labor——?

A. We don't deal with those in the works.

Q. It takes no additional labor to get the gas from the station meter into the holder?

A. It takes additional labor to get it out again.

Q. But it goes into the holder without any additional labor?

A. No, a man has to regulate it by valves; let it in, change it from one holder to another before it gets to the holder.

Q. In the items that appear on Complainant's Exhibit 235, that do not appear on State's Exhibit V, are there any items that it would be necessary to take into consideration to find the items that would enter into a ten million cubic feet capacity plant, other than appear on State's Exhibit V?

A. These items from $767,000, "items not requested by Mr. Page," are required for the plant. All of this is required for the first plant, with the exception perhaps, of the 60-inch main. That is a portion of that $620,000. It is all necessary, the piping, the pavement, the shops, all necessary for the first plant (referring to first page of Complainant's Exhibit 235).

Q. While these items are necessary to make a complete plant for operation at Astoria, they would not be necessary for the production of a plant without relation to the conditions at Astoria, would they?

A. Well, which one? If we had a plant that was entirely built we could put new apparatus into a house, if we had a plot of ground that was paved we would not require paving. But those things must come in with the construction of a new plant absolutely.

Q. You would not have this gas pumping station at Astoria if you had a ten million capacity plant situated in Manhattan?

A. We could not move ten million feet of gas without a 2028 pumping station, any more than we could twenty million. The gas must be pumped.

Q. Not if your holder is in the immediate vicinity of your distributing mains?

A. Most of the holders are in the vicinity of the distributing mains because they are hitched to them. Not if the works were in the vicinity of the consumption, I think you meant to say.

Q. That is what I said, and what I said was distributing mains. I did not say holders. What is this 48-inch piping, $40,000 on the first page of Complainant's Exhibit 235?

A. That is piping in the works for carrying the gas around the works.

Q. And if you refer to the last page of State's Exhibit V you will find "general connections 30-inch, 36-inch and 48-inch gas piping"?

A. Yes, some of it is completed and some of it is not.

Q. You have allowed there $43,248.39 for piping of the dimensions specified, that are yet to be furnished, on the last page of State's Exhibit V?

A. That is for salt water, sewer, tar and ammonia piping.

Q. Well, my point is directed to inquire whether the 48-inch piping on the last page of State's Exhibit V comprises the 48-inch piping on the first page of Complainant's Exhibit 235?

A. No, sir, it is not the first lot of pipe, because if it was it would not be in there twice, and that is impossible.

Q. It is additional 48-inch piping?

A. It is additional 48-inch piping at the Ravenswood branch. The 60-inch main I testified to and the 48-inch piping connect the whole thing together and make a working plant of it.

Q. And to estimate on the cost of producing the ten million plant outside of the Astoria conditions, it would not include the 60-inch main, the gas pumping station at Astoria, or the 48-inch piping, would it?

A. It would under similar conditions.

2029 Q. Well, I say eliminate those conditions, confine it exactly as to what the plant has cost to produce gas?

A. In London they went out of the city and went to Beckton, they laid miles and miles of large sized pipe. This is not the only place in the world where it was done; and the pumping stations at Bowcommon and Australia Road. It has always been done by large companies. There is nothing new about it.

Q. Did they remove the holders out of London when they established the works at Beckton?

A. They did not.

By Mr. MATHEWSON:

Q. Mr. Bradley, having given a twenty million dollar plant, is it impossible from an engineering standpoint to divide by two or pursue any arbitrary rule of that kind and say how much a plant or the apparatus in a plant of half that capacity would cost, without going into a computation on the subject?

A. It is absolutely impossible, as I have stated this morning.

Mr. PAGE: I am through.

Mr. MATHEWSON: I offer in evidence certificate of the Comptroller of the City of New York, signed by J. W. Stevenson, Deputy Comptroller, dated July 6, 1904, certifying to the validity of the contract for lighting the Borough of Manhatton from March 16th, 1904, to March 15th, 1905, attached to City's Exhibit 2A.

Received in evidence and marked Complainant's Exhibit 236.

Mr. MATHEWSON: There may be other Comptroller's certificates of similar character and Mr. Burr has kindly consented to have an examination made and produce them without taking time here to go over them. 2030

Mr. BURR: If there are any such certificates attached to these contracts I will see they are presented here.

Mr. MATHEWSON: Or if there are any which are not attached but which have been executed by the Comptroller, relating to the contracts.

COLIN C. SIMPSON, recalled for cross-examination, testified as follows:

Cross-examination by Mr. PAGE:

Q. Mr. Simpson, when you were on the stand before you stated the entire mileage of the mains of the Consolidated Gas Company as 822.2 miles?

A. Yes, sir.

Q. I show you Exhibit 138 before the Gas Commission, which is the same as Complainant's Exhibit 86, with the exception that the first column, "Miles of Active Mains," has been omitted from Complainant's Exhibit 86. I call your attention to the fact that the mileage of mains as stated in 1905 was 795.47. That states it to be the miles of active mains?

A. Yes, sir.

Q. Making a difference of 27.2 miles. Now I wish to know which is the correct statement of your mileage of mains.

A. They are both correct. I stated the mileage. The miles of mains in the ground is 822.2. This statement is the miles of active mains. We have a certain mileage of mains, but where they are not in active use they can by very little expense be put in use again. Such mains are still on our books but they are not active. And this says here distinctly, "Active Mains."

2031 Q. Then all you have of active mains that are actually used in your business to-day is 795.47, that was used, I mean, up to the first of January?

A. If that statement is correct, yes, sir. I haven't it in my head. That is what active mains we have.

Q. Well, this was a statement furnished by your company?

A. I suppose it is correct.

Mr. Mathewson: It is undoubtedly correct as to what it purports to show.

Q. Your computation of value of mains as something over twelve millions of dollars was based on the active and inactive mains, the whole 822.2 miles?

A. Yes, sir.

Q. And you gave the same value to the 27.2 miles of mains that were not in use, as you did to those that were in active use?

A. Yes, sir.

Q. In arriving at your valuation of mains, exactly how did you proceed?

A. What valuation do you mean?

—. Well, we will take first the one that you testified to here, the twelve million dollars?

A. That was the reproduction value.

Q. Well, whatever you call it. That was testified to when you were on the stand the first time and gave this valuation of twelve million dollars?

A. Yes, sir.

Q. Will you state and give me your method of computation?

A. I took the cost of laying the mains under ordinary conditions; to that cost added the cost of new pavement as existing in the streets of Manhattan to-day on 90 per cent. of the mileage, that is because 90 per cent. of the streets of Manhattan are paved with new pavement at the present time. I then added for rock excavation 10 per cent. of the mileage at 1.75 cents per foot. I also added for engineering expenses, clerical expenses, city inspection, interest
2032 and wear and tear on tools and appliances, obstructions on the street which would delay the work, serious obstructions met with underground, suits for damages and other undistributed expenses.

Q. And you stated that cost $12,636,150.04?

A. Yes, sir.

Q. How many miles or feet of one and one-half inch mains are now laid under asphalt pavements?

A. That I could not tell you, sir.

Q. Can you tell me how many miles of any size mains are laid under asphalt pavement?

A. I can tell you the proportion.

Q. No, but can you tell me how many miles of 6-inch main are laid under asphalt pavement?

A. I could not tell you without going into a very long calculation, without going over all the maps, and referring to the maps showing the asphalted streets.

Q. In arriving at your result here, you did not make that kind of computation?

A. I did not, sir.

Q. In arriving at your estimate here you did not make that computation?

A. I did not. We have mains on every paved street in Manhattan, and of those paved streets 90 per cent. are asphalted streets.

Q. Well, that you state. Now, what price did you allow for reproduction of a main under a macadamized street?

A. I treated macadam as old pavement, and I allowed the smaller price.

Q. How many miles of main have you got under macadamized streets in the City of New York?

A. Twenty-seven miles.

Q. That particular matter you did take into consideration?

A. I did, although it should have come into the other, because up until two years ago we paid for macadam pavement in the city $1.50 a running foot for replacing it, and all those mains that are under
macadamized pavement were laid under that ruling, paying
2033 $1.50 per running foot; it makes more than $5.00 a square
yard. It is dearer than asphalt.

Q. In estimating the amount that you should allow for paving, what size did you allow for the trench?

A. I can read it off to you. I allowed for an inch and a half and for two inches, 2 feet 6 inches, that is, when I say width of trench, I mean width of trench repaving. The trench would be 2 feet wide, and in repaving the trench the contractor is allowed 6 inches on each side above the actual trench. That is, a trench is 2 feet wide, and he is allowed to charge for 3 feet for trim on the side. They do not always charge that, the full 6 inches on each side; some of them do not; so I took the minimum that he does take, and allowed 3 inches on each side for trim. That would bring a 2-foot trench up to 2 feet 6 inches, and the same way down, only allowing 3 inches on each side. I might further say that if anything the width of trench as given in every case is too narrow, and I think anybody will bear me out, taking the most favorable conditions as to the size of trench.

Q. What size of trench did you allow for repaving for 2 inches?

A. The same thing as for 1½ inch, 2 feet 6 inches.

Q. How far does the 2 feet 6 inches cover the inches of pipe in width?

A. It is necessary to have the trench at least 2 feet wide to work in there. Some of that pipe in there is cast-iron pipe, and they have got to get down there and lay the pipe and caulk the joints and run the joints and have working room, and you cannot work in a trench less than 2 feet wide.

Q. I say, up to how many inches in diameter of pipe would that hold good?

A. 2 feet 6 inches for 2-inch, 3 feet for 3-inch, 3 feet for 4-inch, 3 feet for 5-inch, 3 feet for 6-inch. It is possible to work in a
trench 2 feet 6 inches wide for all those sizes of pipe. When
2034 you come to the next sizes I have allowed the same for 8-inch,
10-inch and 12-inch.

Q. What size is that?

A. 3 feet 6 inches in each case. That is a 3-foot trench. For 16-

inch pipe I have allowed 4 feet; for 18-inch pipe the same, 4 feet; for 20-inch pipe I allow 4 feet 6 inches; for 24-inch pipe, 5 feet 6 inches; for 30-inch pipe, 6 feet, and for 36-inch pipe, 7 feet. In every case I figured it as if the trench was only in earth, and in rock it would not be much wider than that; it would not be possible to blast wider than that; you spoil too much pavement.

Q. Did you make any computation to ascertain how many miles of these different sizes were laid in rock and how many in dirt?

A. No, sir, I took my general knowledge of underground Manhattan and figured on that basis. I might say again that if anything I have taken almost too low a basis.

Q. You have information in your department or in the departments of the company, haven't you, to show exactly how many miles or feet of these various different varieties of mains were put down in rock?

A. No, sir; as to the mains that I have laid in recent years, that were laid under my direction, we might have that information, but the mains that were turned over at the time of consolidation and laid before my time, I know nothing at all about it; there was no record kept.

Q. Did you calculate for a new trench and for repaving in the case of each mile of pipe; did you make those computations?

A. You mean each mile separately, or how do you mean? They are different.

Q. Did you treat these as all to be laid in the different trenches at different times?

A. I did.

Q. A large number of these are laid side by side, are they not?

A. No, sir. You mean laid at the same time, side by side.

2035 Q. No, don't let us get on to that again. We had trouble enough with that when you were on the stand before. I mean not that these particular mains were laid at the same time, but if you were going to reproduce those mains?

A. I do not believe in any case, not with this mileage that I took here, that there are 15 or 20 miles that are in the same trench, of the entire total, or could be put in the same trench.

Q. I do not say that they are, but if you were going to put them down new, are there not some of them that could be put side by side?

A. If put down new?

Q. Yes, put down to-day.

A. I doubt it very much.

Q. Why?

A. There would be no object in doing that. Rather than put two or three mains in one trench we would lay one large main.

Q. And if you were reproducing this system to-day you would in many instances lay one large main to take the place of several of the smaller mains, would you not?

A. In some instances, yes, sir.

Q. Then you have taken the mains that have been laid at different times in the past 75 years in the City of New York, and estimated what it would cost to relay those same mains under the pavements as they exist to-day?

A. Yes, sir.

Q. And in doing that as I understand you have not figured for the number of miles of the different sized pipes that would be under asphalt pavements, or under any of the other pavements, but have made a general estimate?

A. I have taken the actual mileage of mains that we have. I have taken the actual percentage of streets of Manhattan that are paved with asphalt, or with granite block on concrete, and have 2036 taken 90 per cent. as under asphalt, and the other 10 per cent. as under ordinary pavement.

At 5:30 o'clock P. M. adjourned to to-morrow, Wednesday, September 12, 1906, at 10 o'clock A. M.

Last Exhibits:

Complainant's 236.
City's 44.
State's V.

2037 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Wednesday, *Sept.* 12, 1906—11 o'clock a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Kirby, Mr. Burr.

2038 Colin C. Simpson resumed and further testified.

Cross-examination by Mr. Page:

Q. When you testified before the Gas Commission, do you remember the valuation you placed upon the mains at that time, the mains of the Consolidated Gas Company?

A. I don't remember it, no.

Q. I show you page 1555 of the printed record, on which you state that at the price of pipe that prevailed in 1905 that the value would be $11,600,000?

A. Yes, sir.

Q. Has there been a substantial advance in the price of pipe since that time?

A. Yes, sir, between the time I testified. It shows on that sheet, you know.

By Mr. Mathewson:

Q. What sheet?

A. That large sheet.

Q. City's Exhibit 1 for identification?

A. Yes, sir.

By Mr. Page:

Q. That computation was made by you upon the mileage of mains that you assumed to exist at that time?

A. It was.

Q. Do you recollect what that was?

A. Yes, it was 822 miles.

Q. I refer you to page 1614 of the testimony, in which you say that the total mileage of mains was 880, and that you had been over 90 per cent. of those 880 miles?

A. Yes, sir. But without my knowledge at that time there was written off the books a good deal of mileage which would reduce it to 822 miles as I have here.

Q. But in arriving at the value of $11,600,000 you made
2039 your calculation upon 880 miles, did you not?

A. No, sir; on 822 miles.

Q. How could you make your calculation on 822 miles when you had before you 880 miles, and stated that to be the mileage and did not discover until afterwards that any portion of that had been written off?

A. I don't know. I have the mileage here before me that I made the calculation on. It is 822 miles; $11,687,466.41.

By Mr. Mathewson:

Q. Is that the same figure that appears——

A. I said there $11,600,000.

Q. What do you mean by "there"?

A. In that testimony before the Gas Commission.

Q. Well, if you had that 822 miles before you at that time, why did you state the mileage to be 880?

A. That I cannot say, sir. I say I made my valuations on 822 miles.

Q. Although you thought there were 880 miles, all of which you had been over or 90 per cent. of which you had been over?

A. Yes, sir. Those mains were in the ground and I had been over them. They were written off the books without my knowledge.

Q. In other words, the mileage of mains makes very little difference with your valuation, is that it?

A. Oh, no.

Q. If it is 880 miles it is worth $12,000,000; if it is 822 miles, it is worth $12,000,000 and if it is 795 miles it is worth $12,000,000?

A. It makes all the difference in the world. I am testifying now on the figures I took for that valuation.

Q. What did you have before you when you gave your testimony before the Gas Commission?

A. I really don't remember.

Q. Well, didn't you have a mileage sheet that showed 880 miles of mains? 2040

A. I doubt it very much.

Q. Doesn't it refresh your recollection to see that you testified before the Gas Commission that there were 880 miles of mains?

A. I might have testified that we had 880 miles of mains then. I don't say I did. But I might have testified to that effect without specifying that of that 880 some of them were disused mains that were not in my figures.

By Mr. **Mathewson**:

Q. And that had been abandoned?

A. Abandoned.

Mr. **Mathewson**: There is no doubt that there was that mileage of mains.

By Mr. **Page**:

Q. When you say you don't know whether you testified, or you might have testified, I refer you to your testimony.

A. I will say if I so testified.

Q. Well, I will read it to you:

"Q. Mr. Simpson, referring to the present mileage of mains of the Consolidated Gas Company, can you tell what the total mileage is, or approximately, if you have it in mind, what the new mileage is and what mileage represents new mains which have replaced old mains? A. The total mileage is a little over 880 miles. Of that 880 miles at least 90 per cent. are either brand new or put in condition to be as good as new mains. That is, they have been restripped, reexamined and recaulked, and in other regards, and, as I say, put in absolutely thorough condition."

That was your testimony. Now, upon that 10 per cent. of 880 would be 88? 2041

A. Whatever that testimony was, Senator, the figures I am testifying to now are the figures I gave you there to arrive at the value of 822 miles for the estimate of $11,600,000.

Q. Although you didn't know that the mileage was 822 miles until afterwards?

A. I do not say that I did not know.

Q. You have stated that you gave this figure 880 because you did not know at the time that a certain amount had been charged off, didn't know that at that time?

A. It had been written off the books, but I knew how much disused main we had, but in my estimate here I only took the 822 miles of mains we had in use.

Q. I understand what you gave in your estimate here, but what I am trying to get at is upon what you made your estimate of $11,600,000?

A. On 822 miles.

Q. (Continuing:) When at the time you stated that the mileage was 880?

A. I can only refer to my sheet which has 822 miles on it.

Q. That sheet was prepared for the purposes of this case?

A. No, it was not, sir. That sheet was prepared last December.

Q. Well, now you have given another valuation for mains for the tax report, mains and services together, of a little over five million dollars?

A. I never gave that. I never gave any tax valuation at all for services.

Q. We will leave out the services—you gave some figure on which the tax valuation was based for the purposes of taxation?

A. On the mains, yes, sir.

Q. And that was a little over four million dollars?

A. I don't know what the total was at all. I know it was about that amount.

2042 Q. I believe your testimony in that regard is that you gave the number of miles of mains and the rate, and Mr. Carter made the multiplication as you remember?

A. Yes, sir.

Q. And as a result of the rate per mile and the number of miles that you gave him, the result of that was a valuation of about five million dollars, a little over five million dollars?

A. I really cannot say. I haven't the figures at all. If he took my figures——

Q. You have never heard those figures, have you?

A. I have heard.

Q. Then why cannot you say whether those are the figures or not?

A. Because afterwards there were some amounts taken off for depreciation that I never gave him at all.

Q. Well, do you remember what figure you did give him at that time?

A. I haven't it in my head now.

Q. Have you in your head the method that you resorted to to ascertain the value of the figures at that time?

A. I have, sir.

Q. State what that is?

A. I took the cost of the laying of a main of each size under faovrable conditions.

Q. State what those favorable conditions were?

A. No rock, no extraordinary obstructions in the street, good soft earth, ordinary pavement or no pavement, and I didn't include anything for engineering expenses, clerical expenses, suits for damages, wear and tear on tools and appliances and such things as that.

Q. And I understand in arriving at the value of the mains for the purposes of taxation, as laid in the streets of New York, you assumed that they were laid in soft dirt as on a country road, did you?

A. No, I did not.

Q. Well, you state you took no valuation for pavements?

2043 A. I used my own judgment on what prices I should give at which the mains should be valued for taxation purposes.

Q. Did you seek the advice of counsel as to what was the proper method of arriving——?

A. I did not, sir.

Q. Then this was your own interpretation of the proper way of making up the returns for taxation, that you should disregard entirely the conditions under which the pipe was laid, and state the cheapest possible method of laying pipe in soft dirt and without pavement or with very cheap pavement?

A. Not absolutely the cheapest possible conditions, but extremely favorable conditions.

Q. Conditions that did not exist at all in the city of New York where the pipe was laid that you were valuing, is that right?

A. No, I don't know that either.

Q. Well, are there pavements in the streets of New York?

A. There are.

Q. Is there rock that you have to go through in the streets of New York, that you have to go through in laying your pipe?

A. Yes, sir, 10 per cent. is rock.

Q. Then you disregarded both of those pavements?

A. I did not disregard pavements. I testified I took either old pavement or no pavement.

Q. You took old pavement and you claim now 90 per cent. is new pavement?

A. Yes, sir.

Q. Therefore you disregard the conditions that existed, did you not?

A. I did not take the conditions that it would take to reproduce the mains. I took my idea of the cost of labor, leaving out certain items.

Q. Then that valuation is the valuation that you would place upon those mains as the cost to relay them?

A. No, it is not.

2044 Q. Now, when you value mains for the purpose of taxation, you assume that the mains are laid in soft earth and under very cheap pavements or no pavements at all, but when you come to place the value on mains for the purposes of this case, you assume that those mains are to be laid in rock and under the most expensive form of pavement, that is, asphalt?

Mr. Mathewson: Objected to. The witness has not sought anything. He has been called here to testify. He does not control the law as the company understands it to be. He has been asked whether that is the cost of replacement, and he has so testified. He has not sought anything.

Mr. Page: Will the witness answer or does he wish to adopt the answer of Mr. Mathewson?

The Master: Answer the question.

A. By no means. In one case I was asked what the mains could be laid for. In the other case I am giving the cost to reproduce those mains at the present date. The conditions have entirely changed since the mains were laid.

Q. You differentiate then between the question of what it would cost to lay those mains and what it would cost to reproduce those mains?

A. I absolutely do, sir.

Q. Then am I to understand that the value you put of four million or five million—or excuse me, the value that was arrived at by a computation of the figures that you gave, which amounts to some four or five million, was merely the cost of laying the mains and had nothing to do with the valve of the mains themselves.

A. It was not the cost of laying the mains.

Q. Well, that was what you were asked to give, the cost of laying the mains?

A. I did nothing of the kind. I was asked to give for taxation purposes figures for which mains could be laid.

2045 Q. That is, for what they could be laid for taxation purposes, is that it?

A. Nothing of the kind; that was not said at all. For which mains could be laid.

Q. Well, laid at that time in the City of New York?

A. Under favorable conditions. The conditions I took at that time in the City of New York, I could and did lay mains for those figures that I gave, under the conditions that I gave.

Q. That is, that was the price that you could relay those mains for at the time you made the statement, which was 1902, is that right?

A. No, sir; it is not.

Q. Well, then what did you mean by your testimony?

A. I mean that I gave figures under which mains could be laid under certain conditions. Now I do not say that those mains were all laid under those conditions.

Q. Well, they could be laid under those conditions in a country village, but could they be laid in the City of New York?

A. They could be laid under those conditions in certain streets of the City of New York.

Q. Are those the streets under which they were laid?

A. There were some streets laid under those conditions.

Q. But were they or were not the mains laid under the conditions which you took when you estimated your value at the time?

A. Some of them were and some were not.

Q. And you assumed that for the purpose of taxation that you would take the very lowest price?

A. I did, sir.

Q. At which any mains could have been laid in the City of New York?

A. No, sir.

Q. And give that as the value of the entire system?

A. I did not take the very lowest price, sir. I took a low

2046 price in laying mains under very favorable conditions.

Q. Wasn't this a fair average you took?

A. It was nothing of the kind.

Q. It was not even a fair average?

A. It was a fair average for the mains laid under the conditions that I took.

Q. Well, were those fair conditions do you think that you took?

A. I think they were.

Q. I mean by that fair conditions to estimate the value of the placing of the mains?

A. I used my own judgment on that. Whether I am right or wrong is——

Q. Well, you are using your own judgment when you give the value now, whether you are right or wrong, or is it somebody else's judgment?

A. No, it is my judgment.

Q. The figures that you gave to Mr. Carter you say were not given after consultation with counsel?

A. They were not, sir.

Q. The figures that you have given here were after consultation with counsel, were they not?

A. After the figures were made up I showed counsel how I arrived at them.

By Mr. **Mathewson**:

Q. You did not receive instruction from counsel as to the method of making them up, did you?

A. Absolutely none.

By Mr. **Page**:

Q. Well, did you from any other officer of the company?

A. No, sir. I will say this, that in making up my figures I conferred with the officers of the company and told them what my ideas were and how I was going to make them up and they approved of the way they were made up.

2047 Q. Have you had any substantial increase in services in the past year?

A. No, sir; not in number.

Q. Do you remember what you stated the value of the services to be before the Gas Commission?

A. I don't remember, no, sir.

Q. Do you think there would be any difference from the value of the services that you have given here to-day?

A. Do you mean the services as laid or the reproduction of them?

Q. Well, I suppose we will have to say the reproduction value.

A. There would be considerable difference.

Q. That is, you would consider the reproduction value a great deal more now than you did before the Gas Commission?

A. No, sir, I said the conditions under which they were laid and the reproduction value.

Q. I am talking of the reproduction values given before the Gas Commission and the reproduction values given by you here. What conditions are there that would make it more expensive to lay services in 1905 than it would to-day?

A. There are not any conditions that would make it more expensive to lay services in 1905 than to-day.

Q. What is it that would make it cost more to relay those to-day than it did then?

A. What makes it cost more to relay them? I don't know that it costs any more. If you give me the figures I will know what I am talking about.

Q. But I want to get at the reasons before we take the figures?

A. I don't know that I gave figures last year, reproduction values that are less than they are to-day, than I am giving to-day.

Q. Well, if you did, did you make an error in doing so?

Mr. MATHEWSON: Isn't that a little extreme, before you find out whether they correspond or not? It seems to me a waste of 2048 time. It is to entrap the witness. If you show him the figures he can answer.

A. I will say this, if you give me the dates you are talking about in 1905——

Q. Yes.

A. Was it the spring of 1905?

Q. October 21st, I think was the date.

Mr. MATHEWSON: No, he testified in January, late in January, 1906, as to the cost of reproduction.

The MASTER: I think if you are going to try and impeach the witness by confronting him with some inconsistent statement, it is only fair that you should call his attention to it, Senator, and let him know what he testified to before.

Mr. PAGE: Don't you think it is fair to get at whether there was any change in the conditions?

The MASTER: That is not the point. You assume in your last question. You say, assuming that you did do so and so, would it be correct or incorrect? I think it is hardly fair to the witness.

Mr. PAGE: Well, I do not want to be unfair to the witness.

The MASTER: It has taken it a little in the realm of speculation because it does not appear yet that he did testify as you suggest.

Q. At page 1556 of the record before the Gas Commission, you said in answer to this question:

"Q. How about the $1,227,931.86 at which they appear on the books of the company? A. A very fair figure indeed."

Mr. MATHEWSON: If you will read the testimony you will 2049 find that that related to an entirely different thing, the original cost of installation. He also testified at that time as to what it would cost to reproduce the mains at that time, and the figures are absolutely identical with those to which he has testified here before this tribunal. He testified from the same sheet, as he has already said, that he now has before him, and from which he testified before this Master.

Mr. PAGE: I only find those two figures, one at page 1556 and another at page 1615. If there is any other than those two figures given, I would like to have it pointed out.

Mr. Mathewson: That is a clerical error in taking down the question. It had reference to the book value, as you will see by the question; it is $1,222,000 in one case and $1,212,000 in another. I used each one in my question, and they both related to the same item, and there has been an error of the stenographers in taking them down.

Mr. Page: I had not reference to the second figure at all.

Mr. Mathewson: The figure that he gave was of the cost of reproduction, $1,934,000.

Mr. Page: Where does that appear?

Mr. Mathewson: He was recalled. The testimony you have before you is the testimony where he was recalled.

Mr. Page: I want to be absolutely fair to the witness. I take the only figures I can find.

Mr. Mathewson: The book value as of October 31st, 1905, was $1,212,071.09, as appears by the exhibit in evidence, and that was the figure that I used in asking as to the cost of original installation, and which he said was a very low figure, in fact, $14 per
2050 service. At another place I asked him what it would cost to reproduce mains and services at that time under conditions prevailing in January, 1906, when he testified, and he gave precisely the same figures as he has given here before the special Master.

Mr. Page: Let us see; on page 1615 it says:

"By Mr. Mathewson:

Q. What in your judgment would it cost to reproduce the services at present in New York City under present conditions? A. Very close on to two million dollars."

Is that it?

Mr. Mathewson: That is it.

Mr. Page: Then he did not give the figure of $1,994,034.35?

Mr. Mathewson: I said he gave it substantially. I did not say he gave it to a cent.

Mr. Page: You said he had this sheet before him and gave those figures.

The Witness: That was as to the mains; I did not have the sheet before me. I gave that from my head.

Q. Then, would you say that the service would not cost any more to reproduce to-day than it did in 1905, when you testified before the Gas Commission?

A. The same number of services would not, no, sir.

Q. The services in the Consolidated Gas Company. You have already stated, I believe, that there has been no substantial change?

A. I testified before the Gas Commission that it would cost $1,994,000 to reproduce those services as of October 31, 1905. I testified here and I said about two million dollars, not having
2051 the exact figures before me, referring to the same date.

Q. Don't you just want to transpose that—that you testified before the Gas Commission it would be about two million dollars and here $1,994,000.

A. No, I do not think I do. I think I testifiedd here it would be about two million dollars.

Q. I do not know that this is very necessary, but if you will turn to page 291 of your testimony in this record, and also to the page that I have just called your attention to, of the Gas Commission record, you will find that you testified before the Gas Commission that it would cost about two million dollars and that here you gave the exact figures as $1,994,034.35?

A. If that is the case, then I was mistaken.

Q. There is your testimony there (shows witness page 291 of the present minutes)?

A. Yes, sir.

Q. Then it would not cost more to lay those services to-day or reproduce them to-day than it would a year ago, October 31, 1905?

A. For the same number and the same size of services it would cost slightly more on account of the additional new pavements being put down since that date; also on account of the advance in price of pipe and labor.

By Mr. **Kirby**:

Q. Have you charge of the work of connecting up the services and meters of consumers?

A. No, sir.

Q. That is not in your department?

A. No, sir.

By Mr. **Page**:

Q. You have been referred to as the authority as to where the gas was delivered, from the various subsidiary companies, into the mains of the Consolidated Gas Company. Can you tell me where
2052 those gas connections are between the mains of the Standard and the mains of the Consolidated Gas Company?

A. Yes.

Q. Where are they?

A. The principal connection is at 132d Street and Broadway; there the Standard delivers gas into our 30-inch main; also into a 20-inch main going to Inwood, and at 125th Street and Fifth Avenue, and at 125th Street and Eighth Avenue through our connections between the New Amsterdam mains and the Consolidated mains, for the purpose of reenforcing the New Amsterdam pressure.

Q. That is, your gas goes into the mains of the New Amsterdam company?

A. Yes. At 130th Street and Fifth Avenue and 135th Street and Lenox Avenue; there is a connection at each place between the Consolidated mains and the Standard mains, also for the purpose of reenforcing the Standard pressure from the Consolidated mains. Those are practically all the connections we have at the present time.

By Mr. **Mathewson**:

Q. Except at the holders?

A. I am not testifying about holders; I was asked about mains.

Mr. **Page**: I asked as to the mains.

By Mr. **Page**:

Q. Where do you get the gas from the Mutual; how do you take that?

—. The gas from the Mutual—there is no gas taken into the mains of the Consolidated Gas Company from the Mutual at all.

Q. I say, where do you take it?

A. We have a 30-inch main between the 14th Street station and the Mutual works, and the gas is taken from the Mutual to the 14th Street station through that 30-inch main.

2053 Q. And delivered to the holders at 14th Street?

A. Yes, or sent further up town from there if necessary.

The Master: I call attention to the fact that this line of examination is not cross-examination of anything that was asked about on direct.

Mr. **Page**: That may be. I presume I am going ahead then under the pains and penalties, whatever they may be.

Q. You stated there is also some gas delivered by the New Amsterdam and the Standard to the holders of the Consolidated Gas Company?

A. Yes, sir.

Recross-examination by Mr. **Burr**:

Q. I want to ask if it is possible, Mr. Simpson, to prepare a list, from the books or data, of the streets, giving each block and its length in feet, and also the number of mains in that block and the size of each main?

A. I could do it by six months' steady work.

Q. You have the books in which that information is contained?

A. Yes, we have. We have books containing the mileage of each size of main, but as to the size of each block—we have maps, but that would have to be all scaled off and it would be out of the question, it would take months.

Q. Scaling?

A. Yes, you would have to scale every block in the City of New York, from the Battery to Kingsbridge. Every block in New York has four sides, and you would have to scale all four sides of every block in New York City.

Redirect examination by Mr. **Mathewson**:

Q. When you spoke of the 90 per cent. of the pavements of New York being asphalt, as I understood you to say in one answer, 2054 did you mean asphalted or improved pavement of one kind or another?

A. New pavement, what we call new pavement.

Q. Either asphalted——?

A. (Interrupting.) Asphalted or asphalt blocks, or wood blocks, or granite block on concrete.

Q. And the paving that you allowed in your estimate of the value of mains, you stated was 3 inches wider in each case than the trench you would be obliged to dig?

A. Yes.

Q. So that taking the width allowed for repaving, the trench in each case would be 6 inches wider than the amount allowed for repaving?

A. Yes.

The MASTER: I think he has stated that before.

Mr. MATHEWSON: Yes, but the statement was not quite clear as to the width of the trench.

Q. Referring to Exhibit 168 before the Gas Commission, which is the same as Complainant's Exhibit 86 except as to the column relating to miles of mains, this exhibit showed, did it not, the average sales per mile of mains?

A. Yes, but I see by this item——

Q. (Interrupting.) I understand; but this Exhibit 168 did show that?

A. Yes.

Q. So that the mains used in that computation were the mains to which services were actually hitched up at the time?

A. Yes.

Q. That appears in this Exhibit as 175.47?

A. Yes.

Q. If I understand correctly, there are about 77 miles additional, or 880 in all, which were not abandoned mains, but at that moment were not attached to services.

2055 Mr. PAGE: I object to that as not stating the testimony that the witness gave.

Mr. BURR: I object to it also as suggestive and leading; and there is no such testimony.

The MASTER: He is entitled to lead him to some extent, of course. Ask him what the fact is about it.

Q. Were any of the 822 miles to which you have testified, and for which you have given a valuation, abandoned?

A. No, sir, not abandoned, they were disused.

Q. Beyond the 822 miles there were other miles of mains that were abandoned?

A. No, they were not abandoned, they were disused.

Q. I say, above the 822 miles?

A. Oh, above, yes.

Q. So that the amount of mains abandoned and not abandoned would be something over 880 miles?

A. Yes, sir.

Q. In your testimony as to the cost of reproduction of mains before the Gas Commission and before this tribunal, did you have before you the same sheet, City's Exhibit 1 for identification, which you have had to-day?

A. I did, sir.

Q. And were the values at that time made up as they then existed, that is, of January, 1906?

A. They were.

Q. Upon the mileage of mains that existed on October 31, 1905?

A. Yes.

Q. Now, in reference to the tax report, you have stated that the figures which you gave to Mr. Carter represented the figures at which you could lay some mains in some streets? Did that take into account the laying of mains in rock?

A. No, sir.

Q. Or any engineering expense?

A. No, sir.

Q. Would it, in your judgment, be possible to reproduce the mains to-day for the figures shown in the tax report?

A. No, sir.

2056 Q. Or services?

A. No, sir.

Q. Could they ever have been installed, in your judgment, at those figures, taking them all together?

A. No, sir.

Q. Your attention has been called by Senator Page to your testimony before the Gas Commission in which you stated the book value was a very low value for services. Upon what basis were you testifying at that time. What had you been asked, the cost of reproduction, or the original cost of installation?

A. The original cost of installation.

Q. And also, as to the book value of the mains you were asked a similar question, and you said that was a low value?

A. Yes.

Q. What did that refer to?

A. The cost of installation.

Q. The original cost?

A. Yes.

Q. Does that in any way modify your testimony as to the cost of reproduction on January 1, 1906, of the mileage as of October 31, 1905?

A. No, sir.

Q. Did you give any different testimony before the Gas Commission than that which you have given here, as to values?

A. None whatever, except that one instance where Senator Page said I said about two million dollars, and in one case I said $1,994,000.

Q. In the other case?

A. Yes.

Q. Would the figures that you gave Mr. Carter, then, for the cost of laying some mains in some street, be a fair average of the total cost of laying all the mains in the streets, mile for mile?

A. It would not.

Q. Was your testimony as to value or originial cost of reproduction or installation before the Gas Commission true, according to your best belief?

A. What was that?

Q. Was the testimony that you gave before the Gas Commission

2057 and to which your attention is called, as to the original cost of installation, in fact true, according to your information and judgment?

A. It was.

Mr. MATHEWSON: If the Master please, I desire to offer in evidence one or two documents.

I have subpœnaed, if the Master please, and desire to offer in evidence, notice from the State Board of Tax Commissioners to the Department of Taxes and Assessments of the City of New York, of assessments of special franchises of the company for the year 1906, $31,900,000. Mr. Burr was not familiar with those facts and therefore he preferred that I bring the papers rather than to concede it.

Received in evidence and marked Complainant's Exhibit No. 237.

Mr. MATHEWSON: I offer in evidence from the assessment roll, real estate of corporations, City of New York, 1906, produced from the office of the Receiver of Taxes, the following entries on page 6:

Under the heading of "Owner or Occupant," Consolidated Gas Company of New York. See New York Gas Light Company, Manhattan Gas Light Company, Harlem Gas Light Company, Municipal Gas Light Company (Manhattan and the Bronx), Metropolitan Gas Light Company. The next column, under the heading "Description of Property," conduits, wires, mains, pipes, connections and tracks, Sections 1, 2, 3, 4, 5, 6, 7, 8.

Under the heading "Ward, Lot or Map Number," third column, 12.

Fourth column, under "Value of such Real Property," $1,500.

Under next column, "Tax, dollars and cents," 22.18.

2058 Under next column in which there is an entry "Value of Special Franchises fixed by State Board of Tax Commissioners," $31,900,000.

Under the next heading, "Tax, dollars and cents," $471,769.10.

Under the next heading, "Total Tax, dollars and cents," $471,791.28.

Under the column marked "Arrears," the word arrears.

I also read in evidence from page 15 of said assessment roll the following entries, Harlem Gas Light Company, Consolidated Gas Company of New York, under the heading "Owner or Occupant," next column, "Description of Property," mains, pipes and appurtenances, Sections 5, 6, 7, 8.

Under "Ward, Lot or Map Number" 602, under "Value of such Real Property," $845,000. Under "Tax," $12,496.70.

I also offer the following entries from page 21 of the said assessment roll, under the heading "Owner or Occupant," Manhattan Gas Light Company, Consolidated Gas Company of New York. Under "Description of Property," mains, pipes and appurtenances, Sections 2, 3, 4, 5. Under "Ward, Lot or Map Number" 600. Under "Value of such Real Property," $1,140,000. Under "Tax," $21,296.16.

I also offer, under the heading "Owner or Occupant," Metropolitan Gas Light Company, Consolidated Gas Company of New York.

Under "Description of Property," mains, pipes and appurtenances, Sections 3, 4, 5. Under "Ward, Lot or Map Number" 601. Under "Value of such Real Property," $1,210,000. Under "Tax," $17,894.69.

2059 Again, under "Owner or Occupant," Municipal Gas Light Company, successor to Municipal Oxygen Gas Light Company, Consolidated Gas Company of New York. Under "Description of Property," mains, pipes and appurtenances, Sections 2, 3, 4, 5. Under "Ward, Lot or Map Number" 603. Under "Value of such Real Property," $860,000. Under "Tax," $12,718.54.

I also read from page 27 the following entries:

Under "Owner or Occupant," New York Gas Light Company, Consolidated Gas Company of New York. Under "Description of Property," mains, pipes and appurtenances, Sections 1, 2, 3. Under "Ward, Lot or Map Number" 599. Under "Value of such Real Property," $1,080,000. Under "Tax," $15,972.12.

This assessment roll is not the assessment roll for the Borough of the Bronx, and would not cover any assessment of the Municipal Gas Light Company in that Borough.

Here a recess was taken until 2:15 o'clock P. M.

EMERSON MCMILLIN, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Where do you reside?

A. New York City.

Q. What is your business?

A. Banker, among other things.

Q. How long have you been a banker?

A. 15 years.

Q. Is your place of business in New York City?

A. 40 Wall Street.

2060 Q. Have you had any experience in the management of public utility corporations?

A. Yes, 35 or 40 years.

Q. Have you ever owned or controlled any of them?

A. Very many of them, yes, sir.

Q. Including gas companies?

A. Many.

Q. In what sections of the country have you managed, owned or controlled?

A. New York, Ohio, Michigan, Wisconsin, Illinois, Texas, Alabama, Minnesota, and perhaps other States that I cannot recall now.

Q. Have you bought or sold public utility corporations, gas companies and electric?

A. I have bought a good many and sold a few.

Q. Are you familiar with the basis of return which is expected on the purchase of gas property upon the investment made?

A. Yes.

Q. According to your experience and your knowledge which you have acquired in the business, what rate of return on the investment in the business is required to induce purchasers?

Mr. Page: Objected to on the same grounds as to similar questions asked Mr. Halsey yesterday.
Mr. Burr: We join in that objection.
Objection overruled. Exception taken by Mr. Page and Mr. Burr.

A. Of course the locality and the environment have much to do with it, but it would range at the start from 9 to 15 per cent.
Q. In the case of your long experience, what rate of return do you require on any investment in order to purchase?
The same objections, ruling and exception.
A. I would have to see in the near future, if not at the time of purchase, 10 per cent. or better.
2031 Q. On the value of the property devoted to public use?
A. On what it cost me to purchase?
Q. Would it in your judgment be possible to interest capital in the acquisition or establishment of public utility corporations of the character of a gas company with a less expectation of earning capacity than 10 per cent.?

Mr. Burr: I object to that as being speculative.
Mr. Page: The same objection.
Objections overruled. Exceptions taken by *by* Mr. Page and Mr. Burr.

A. Of course I can hardly say, but I would think that it is not probable.
Q. Is that based on your own experience?
A. Yes, sir.
Q. When you speak of an earning capacity of 10 per cent. do you mean to imply that the entire 10 per cent. be paid out in dividends or from securities?
A. No, sir, there might be none of it paid out.
Q. Or a part might be paid, and a part turned into plant?
A. Yes, sir.
Q. In reference to gas companies, what can you say as to the risks and hazards of that business as compared with other businesses, public utility corporations?

Mr. Page: I object to that; he has not been shown to be an expert.
The Master: Yes, he says he has managed and operated companies all over the country. I overrule the objection.
Exception taken by Mr. Page.

A. At present, and for the past two or three years, I have regarded them as almost extra hazardous, owing to the municipal own-
2032 ership excitement and the disposition of legislatures and city councils to cut down the price of gas, the shorter periods for franchises, things of that character, and in some instances where the public themselves are permitted to fix the price by vote, as in the case in one city.
Q. In estimating, or testifying to a return of at least 10 per cent.

necessary to interest investors, what sort of franchises did you assume that a company to which you have reference possess?

A. Those that I have purchased on that basis, or that I had in mind at the time I made that remark were, perhaps, better as to conditions than the average. Some of them were perpetual and some of them were perpetual and exclusive. One of the largest, perpetual and exclusive, had been litigated and had been settled by the Supreme Court. Others were of limited periods, but where there was a very kindly feeling towards the company. Those were properties that are now controlled by a holding company, to which I converted them. Others are very much more hazardous and are not in a holding company, and I did not have them in mind when I spoke.

Q. When you referred to 10 per cent. earnings, I presume you mean net earnings above cost of operation?

A. Net earnings above everything, every possible cost.

Q. Assuming that the franchises were not perpetual or were in litigation, would you consider that that would affect the return which would be expected if you were to invest?

A. Well, the scope of conditions that might exist is so tremendous that it might be that I would not give anything for it.

Q. It would not affect it favorably, at any rate?

A. I would not name a price that I would pay for stocks where it was open.

2083 Cross-examination by Mr. PAGE:

Q. You are the president of a corporation which controls a great many gas companies, are you not?

A. Yes.

Q. What is the name of that corporation?

A. The American Light and Traction Company is the chief one. I am president of another corporation which controls some.

Q. Do you expect the earnings of a gas company to be sufficient, as I understand, to pay 10 per cent. dividends on the stock?

A. I said 10 per cent. earnings.

Q. That is, that the earnings above the expenses should show a surplus of ten per cent.?

A. Yes.

Q. Now, would you reckon in as expenses anything more than the expense of producing and distributing the gas?

A. Everything that would be a proper charge against it in the manufacture and distribution, original expense, taxes, and the expense of keeping the property in proper repair for economical work—everything that would be properly chargeable to the profit and loss.

Q. By money invested I suppose you mean the amount of capital that is actually invested in the plant, do you not?

A. There I refer to the price that I would pay for the property if I were purchasing the property.

Q. What relation has that to the capital stock or bonded indebtedness?

A. Not necessarily anything.

Q. Then you mean, do you, the amount which you would pay would represent practically original investment, if the plant was worth as much as originally paid for it, and if not, would you offer that?

A. I did not catch that.

Q. Well, a plant that had been in existence for a number 2064 of years and was probably more or less depreciated on that account; you would take its present condition in offering a price for it, without regard to the original cost?

A. I should not pay any attention to the original cost in figuring up its value. I should figure on what it would do, or what I would think it would do under our management, and, of course, take into consideration the character of the franchise and other conditions locally.

Q. And would you take into consideration the economy that your management and large experience in handling gas plants could introduce into this particular plant?

A. Yes, if there were any that I could see.

Cross-examination by Mr. Burr:

Q. Are you familiar with the names of the companies that were consolidated in the Consolidated Gas Company?

A. Can I give you the names?

Q. Do you know the companies that were consolidated into the Consolidated Gas Company?

A. Oh, do I know the names here, consolidated into the Consolidated Gas Company? No, only in a general way. You refer to the old consolidated, back in 1884?

Q. In 1884.

A. The New York, the Knickerbocker, the Metropolitan—there were several; they used to be familiar to me, but I do not know that I can recall them now.

Q. Do you know that the Consolidated Gas Company buys gas from companies called subsidiary companies—the Standard, the New Amsterdam and the Mutual?

A. I have seen that so stated, yes, sir; but I do not know it to be a fact.

Q. Were you at any time connected with those companies?

A. I was at one time connected with the Standard, and with the East River. I built the East River.

2065 Q. How long since?

A. It is ten years since I was connected with the Standard Company. I think [illegible] is thirteen or fourteen years since the East River was built; probably twelve or thirteen years.

Q. Are you a stockholder in the Consolidated Gas Company?

A. Never was.

Q. As I understand you, the price at which you would be able to dispose of stocks or bonds of public utility corporations is based very largely on whether they have the right to do as they please or whether the Legislature has power to interfere with them at all?

A. I believe it is recognized all over the United States that the Legislature can interfere; it is not in question.

Q. And according to your opinion or judgment, where the Legislature could not interfere, or where the people did not have the power to control prices, you could sell such stock better than you could under conditions where the people had control over the prices and the Legislature could interfere?

A. No, I think that gas stocks that have been steadiest in their value are those in the States, as far as I know, where there has been Legislative and municipal interference; that is in the State of Ohio.

Q. In a large city, where a gas company had a monopoly of the business, and the consumption *per capita* was the largest in the world, would you say that to sell the stock of such a company ten per cent. would be insisted upon by you or by your clientele?

A. Of earnings, yes, with present conditions.

Q. What do you mean by present conditions?

A. That is known in a very general way to all of us, but not in any way specifically—public feeling.

Q. A spirit of unrest as expressed toward public uitlity corporations?

A. A spirit of unrest, yes, that expresses it.

2066 Q. You mean the dissatisfaction with public utility corporations generally?

A. I do not know whether it is dissatisfaction or not, but it is excitement and an effort by the political and municipal bodies to interfere with the management, and a disposition to fix prices, sometimes apparently without much regard to what it may cost. That tends, of course, to depreciate the value of the stock, to my mind. I would pay less for it under conditions than those that prevailed some time ago.

Q. That would be true of railroads, where discussion arose relative to the control of railroads by the government; for instance, the rate bill which has just been passed; that might affect temporarily the value or selling price of stocks and bonds of such railroads?

A. I think it did, yes.

Q. Would you desire to be understood as saying that a return of six per cent. upon the actual investment in the gas business was confiscation?

Mr. **Mathewson**: I object to that as a conclusion.

The **Master**: I will let him answer it.

A. Returns—do you mean an earning or a payment?

Q. First as an earning?

A. As an earning I would not care to have stock in a company that could not earn but six per cent.

Q. And now, as a payment?

A. Well, if it was earning enough, I would not myself be so particular as to what was paid. Most people would. Stock that pays large dividends would be more popular than stock which paid small ones.

Redirect-examination by Mr. **Mathewson**:

Q. When you say thirteen or fourteen years, in reference to the Standard, do you mean that you were connected with that company for that period, or since that? 2067

A. No, it is that long since I was connected with it. I was only connected with it a few months as vice-president of the company.

Q. When you speak of ten per cent. on the cost of the property which you would purchase, as the return that you would require in order to interest yourself in it, if the company that you were purchasing was established in a large community and had a large number of connections and an established business and franchises, might you not pay more for it than the actual cost of the tangible plant?

A. Oh, yes; it might have assets that I would give a good deal for, outside of the plant.

Q. When you speak of what you pay for it, you refer to what you might have to pay to acquire the whole thing?

A. Yes.

Mr. **Burr**: To what he might have to pay?

Mr. **Mathewson**: Yes.

Mr. **Burr**: That is objectionable, because it is all speculation.

The **Master**: The same objection is open to a good deal of testimony on both sides.

Samuel L. Bertron, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside, Mr. Bertron?

A. New York.

Q. What is your business?

A. Banking.

Q. How long have you been in the banking business?

A. Nineteen years.

2068 Q. Have you ever had any experience in the purchase or sale of public utility corporations, such as lighting companies?

A. Yes, a good deal.

Q. For what period?

A. For the last twelve years.

Q. Are you familiar with the selling prices of stocks and bonds generally of such corporations?

A. Fairly so.

Q. Do you know the rate of return which is required by investors to induce them to invest in properties like gas companies?

Mr. **Page**: Objected to on the same grounds as before stated.

Mr. **Burr**: Same objection.

The **Master**: Same ruling.

Mr. Page and Mr. Burr except.

A. The investor's point of view is ordinarily largely that of the banker's point of view; in other words the ordinary investor is governed quite largely by the character of the house that brings out an investment of that sort and their method of handling such an investment. We all have more or less a large number of clients that are governed by our recommendations.

Q. And in the purchase or sale, what rate of return is effective and what rate do you expect to receive upon your investment?

A. We never consider such a proposition unless it is earning as much as 8 per cent. and we expect to get more than that out of it. If we should buy one on that basis it would be because we knew we could very largely increase our income by our development of the property.

Q. Is this confined to your own experience or is that your information as to the action of others?

A. I think it is very general among those who have had experience.

2069 Q. And in case you found a business which was established and had connections with customers and franchises, would the amount which you pay for property be more than the value of the tangible property for the manufacture of gas?

A. Why, we don't consider so much what the assets of that particular property are worth when we buy. We take into consideration, of course, the amount of money necessary to put the property into the shape that we want it, and then above all else, the franchise situation, and whether or not the consumption can be largely increased or not; that, of course, being governed largely by the price at which it is selling. Those are very important matters.

Q. If it had an established business, would that be taken into your estimate of what you would pay for it?

A. Yes, but that is not likely, because we generally know about what we can do in a given community and we know what we can produce for, what the population is and what the ordinary consumption in that locality is.

Q. Would it, in your judgment, be possible to interest capital in the acquisition or establishment of a gas business on a less expectation of returns than 10 per cent. on the amount of investment in the business?

Mr. Burr: Objected to on the grounds heretofore stated.

Mr. Kirby: We join in that objection.

The Master: Same ruling.

Mr. Burr and Mr. Kirby except.

A. That is general, and just now I think there is less disposition than at any time since I have been in the business to invest in gas securities, and I think it is very difficult just now to sell a property at any reasonable figure. Possibly the best illustration of 2070 that, if you desire me to make this statement, is in connection with the company of which Mr. McMillan is President. That company owns and controls a number of very successful gas properties and it is known to be well managed. The stock of that company sells to-day at about 113, and the company is earning between 17 and 18 per cent. on that stock.

Q. When you speak of the earning capacity being at least 10 per cent., do you mean necessarily that dividends at that rate would be paid?

A. Oh, it is not a question of dividends. Everybody who knows the business is governed by the returns. No company can pay all it earns and be safely managed.

Q. Are there not many prominent railway systems whose stock is selling on as high a basis as nine or ten per cent. of the earning capacity of the system as it is shown?

A. Yes, the Atchison stock was being sold, for instance, until very recently, in the neighborhood of 90; it is higher now.

By Mr. Page:

Q. Do you mean that pays 90 per cent. dividends?

A. No, 12 per cent. He is speaking of earnings, I understand. Pennsylvania stock selling at about 140 showed last year about 12½ per cent. and that included a large deduction that had been in the way of interest charges, by reason of the great number of bonds that they have sold for improvements, upon which there is no return as yet, and I should think the Pennsylvania was a typical railway property, as it certainly has the confidence of the people in its management.

Cross-examination by Mr. Kirby:

2071 Q. You have stated in purchasing a gas property you do not pay material consideration to what the tangible assets are worth. Did I understand you correctly in that?

A. Well, in a general sense, yes. They are considered, because to arrive at an earning there must be tangible assets there, and we buy it on its present earning basis, having in mind largely what we can do in the way of development.

Q. Upon what value do you base your ten per cent. earnings?

A. I don't understand you.

Q. You have stated that you consider that gas companies should earn ten per cent. over and above the expenses?

A. The price we should pay for them.

Q. And you base that ten per cent. on the price which you could purchase them for?

A. Yes, sir.

Q. Irrespective of the capitalization or bonded indebtedness?

A. Yes, sir; I do not care about that.

Cross-examination by Mr. Page:

Q. When you refer to these railroad companies earning 17 per cent. and 12 per cent., that is the net earning of the operating system?

A. As shown in their statement.

Q. Now, the road that you cited particularly, the Atchison, but a few years ago was in the hands of a receiver, was it not?

A. Yes, in 1894, some twelve years ago.

Cross-examination by Mr. **Burr**:

Q. What is the highest grade of investment at present in the United States?

A. You mean that brings in the lowest income?

Q. Yes.

A. Government bonds.

Q. Now, assuming that gas is a public necessity, and that a corporation has a monopoly of the supply of gas in the City of New York, and that the consumption of that gas is greater *per capita* 2072 than in any other city in the United States, would you still say that before you could float any stock of that company you would require ten per cent. on the price that you paid for the stock?

A. Well, your question in reference to the government bonds brings up a point that I think many fail to consider in arriving at an investment basis. Now, my judgment is that government bonds are selling entirely on an artificial basis. You see, they are required for the circulation of the banks, and so on. They must have them and certain other investments must be made in government bonds.

Q. What do United States Government bonds sell for to-day?

A. On a two per cent. basis, and the reason for that is that a bank taking them for circulation can make another certain profit for circulation. If they were simply governed by general investment conditions, they would not sell on such a basis, I do not think; in other words, it is no indication of the value of money in the open market.

Q. But the certainty of the return is just as fixed in the case of the company that I have spoken of as it is in the case of the government bonds, is it not?

A. You mean the New York City Gas Company?

Q. Yes.

A. I misunderstood your question. Be good enough to state it again.

Q. I say, assuming that gas is a public necessity, and that a company has a monopoly of the supply of that public necessity in the City of New York, where the consumption of that commodity is greater *per capita* than in any other city in the world, would you not say that the return, whatever it might be, on an investment in that company would be a certain investment?

A. Yes, if they have got to use gas, and nothing else is going to take its place, and if they have a monopoly. I mean by that if they have no encroachment, then it makes it a safe investment, 2073 and it would certainly sell on a better basis than the returns we have been discussing.

Q. So, in such a case as that it would not be necessary for you or your clients to be assured of a ten per cent. basis?

A. Not with sufficient guarantees to that effect.

Redirect examination by Mr. **Mathewson**:

Q. When you speak of net earnings in case of the Atchison and these other systems, don't you mean net earnings on the par of the securities?

A. I mean the amount shown to be earned on the stock.

Q. Over operating and fixed charges?

A. Over all charges.

Q. The Atchison Company which was foreclosed years ago was a different corporation than the present, was it not?

A. Quite.

Q. And the system is quite different to-day?

A. It has been thoroughly rehabilitated in the public mind, and also in its management.

Q. And in your reply to Mr. Burr in reference to gas in New York City would you not also have to take in consideration or to assume that a sufficient price would be allowed for gas to establish a proper return on the investment?

A. That would be a proper guarantee; yes, sir, certainly.

ALLEN B. FORBES, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Where do you reside, Mr. Forbes?

A. New York City.

Q. What is your business?

A. I am a banker, member of the firm of N. W. Harris & Co.

2074 Q. They are in business in New York City?

A. New York City, Chicago and Boston.

Q. Have they had and have you had experience in dealing with securities of municipal corporations and public utility corporations, and other securities of that character?

A. We have dealt very largely in securities of such corporations.

Q. During what period?

A. The firm has dealt largely through its entire existence, for a matter of twenty-five years.

Q. Have you and your firm, either alone or in conjunction with others, had experience in the purchase or sale of public utility corporations?

A. We have had experience. Our business is primarily, and in fact altogether, the business of dealing in bonds, but we have had in connection with that a varied experience in connection with the purchase of properties and the prices at which they have been sold, &c.

Q. Are you familiar with the rates of return which are required by your firm and others of whom you have knowledge upon the purchase or the cost of utility corporations such as gas companies?

A. I am in a general way familiar.

Mr. PAGE: Same objection to this.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Mr. Burr and Mr. Page except.

Q. Will you state what rate is required to attract investment in that regard?

A. I should say, calculating all the hazards which the conservative banks and investors calculate, that the net return which could be seen at the time of the purchase or within a very reasonable future should be at least 10 per cent. and in a great many cases it should be a great deal more.

2075 Q. Is it not a fact that some corporations which are not subject to the hazards of the public utility corporations, well known established corporations, pay more than 10 per cent., upon the price at which they sell?

A. I believe that that is the case.

Q. How about the United States Steel Corporation, preferred stock, two or three years ago?

A. I believe that that showed earnings considerably in excess of the amount stated.

Q. Did it not yield an income of something like 12 or 14 per cent. at its selling price?

A. That is my recollection.

Q. Would you consider that a less hazardous form of investment, the preferred stock of that company, than a gas corporation under present conditions?

A. That is largely a matter of opinion, I should think it was considerably less hazardous than a great many gas corporations.

Cross-examination by Mr. Kirby:

Q. What do you consider the hazards which bring you to your conclusion of the return on the investment?

A. Well, in the first place, the gas business is to some extent an industrial business; quite a large production of the revenue of gas companies is derived from the sale of fuel; it is in competition with coal and it is in competition, looking ahead from a banker's standpoint, with some new form of fuel; I don't know what it is, but it has been variously discussed. It is subject also to new forms of taxation and increased taxation. I remember when franchises were not taxed in New York State. And now they are.

Mr. Burr: Is that a sign of progress?

The Witness: I am not prepared to say; I think perhaps it is. And the gas business fluctuates more or less with the general business conditions of a community. Gas as an illuminant also may be displaced; a good many people found it was temporarily by electricity, and it may be displaced by some new illuminant. The conservative banker should take all those things into consideration before recommending securities to his clients. 2076

Q. Your new illuminant has not as yet been discovered, has it?

A. I believe not.

Q. And your criticism as to taxation applies to all corporations, doesn't it?

A. I think it particularly applies to public service corporations more than to any others.

Q. But no more to one public service corporation than another?

A. No, I think not.

Q. Your criticism as to fuel applies to all industrial corporations, doesn't it?

A. It does.

Q. Do you class a gas corporation as more hazardous than an ordinary industrial corporation?

A. No, not than the ordinary industrial corporation where conditions of franchises, etc., are satisfactory, but where conditions of franchises are not satisfactory, where the temper of the community is uncertain, I regard it as hazardous.

Q. In regard to franchises, don't you consider the question of whether or not the franchises had been tested by the court as to whether or not they are exclusive bears a very great influence upon the return to be expected on the property?

A. It does.

Q. And that if a corporation had an exclusive franchise and a monoply of the district in which it operated that its expected return and the value of its property would be greater than when it did not have such a monoply and such an exclusive business?

A. I think that is right.

Q. What do you base your 1 per cent. return upon?

2077 A. Partly on the idea that you have got to have a certain return in order to get the money, that is considering the purchase of a gas corporation, for instance, and in order to get that money and have people feel safe in advancing it, you have got to have a margin above that which will take care of all contingencies, and there are all kinds of contingencies facing the conduct of the business.

Q. What do you mean when you say your money, the money which you have to actually expend to buy that gas business?

A. Yes, or which had been expended from time to time in building it up.

Q. In buying it and building it up?

A. In buying it and building it up.

Q. That would be the basis of your 10 per cent. calculation; in other words you would expect that company to earn over and above its running expenses——

A. Over and above its running expenses, including maintenance.

Q. Over and above its running expenses including maintenance?

A. Yes.

Q. Ten per cent. upon the amount of money that had been invested and in the purchase of the plant, and since that time in renewals and replacements?

A. Well, I would say on the reasonable value of the plant.

Q. What do you mean by that?

A. Well, the value of the property as you have indicated it, plus whatever value it had for good will and established business. A gas property starting in a new city would have to operate for a year or perhaps two years before it developed a business and would be without return for that time, therefore I should think it conservative to capitalize the loss of return that the people who built have experienced while it was being built up.

Q. But Mr. McMillan has testified that he expected a larger return during that period by reason of not having established a business. Would that be your conclusion?

A. I do not understand your question.

2078 Q. That where business had not been established you would expect more than 10 per cent. on your capitalization?

A. Yes, I would.

Q. So therefore you would not at the time of your purchase capitalize on a future value?

A. Well, I have not been discussing the question of capitalization.

Q. You would not pay for the property more than its value at that time?

A. I would not pay for the property more than what I thought was its value.

Q. As of the day of purchase?

A. As of the day it was purchased.

By Mr. **Burr**:

Q. What corporations do you group under the head of public utility corporations?

A. We group in our own business street railroads, gas companies and electric lighting companies under that head.

Q. Not steam railroads?

A. We do not in our own business. We regard steam railroads securities as an entirely different class.

Q. But you recognize that in another sense apart from your own business that steam railroads are also public utility corporations?

A. In a general sense, yes.

Q. What gas companies did you have in mind when you said that you found it was necessary to have this 10 per cent. assured before you could dispose of their bonds and stocks?

A. I should say in the case of practically any gas company.

Q. Have you in mind any special gas company that you have had experience with in the past?

A. No.

Q. This is merely a general statement covering existing conditions as you find them?

A. Yes, based on my own knowledge.

2079 Q. And where gas is a public necessity and a company has a monopoly of the supply of this necessity in a city such as the City of New York, and where the consumption *per capita* is greater than in any other city in the world, would you require such an assurance of ten per cent. as you would in the case of other companies you have in mind?

A. I think specific in the City of New York; I should.

Q. For what particular reason?

A. Because of the general tendency.

Q. Do you mean——

A. Towards reduction of rates, which is something which a banker has to consider; it bothers him; he cannot figure what the return is going to be.

Q. I understand. It is a tendency to be dissatisfied with the operation of public utility corporations, is that it?

A. It is a tendency to regulate them, which cannot entirely be gauged by a banker.

Q. A tendency to regulate them?

A. To regulate prices.

Redirect examination by Mr. MATHEWSON:

Q. If you were dealing with a gas corporation or for a gas corporation which had already an output greater *per capita* than any other city in the world, there would not be the same chance for increase, in your mind, would there, as though there was a very small output *per capita?*

A. No.

Q. And the opportunity of development in the future is a considerable element, is it not, in the price which you paid for the property?

A. Yes.

Q. You were asked whether if an company had an exclusive monopoly, to use my friend's expression, to manufacture and distribute gas in New York City or elsewhere, that would not make it more valuable. Would you not, if it had such a monopoly as that,
2080 expect to pay more for it when you purchased it?

A. Yes.

Q. In other words, the figure upon which you would expect a ten per cent. return would be increased; that is, the cost, by reason of that monopoly, would it not?

A. Yes.

By Mr. PAGE:

Q. Would you not be willing to pay a price that would show less than ten per cent. return?

A. If you could guarantee earnings, this would be a different proposition, but you are talking about the earnings from the operation and skill of the men operating this property, and taking into account all the contingencies of business and everything else. I do not believe that it is a conservative policy to reckon that an amount can be paid unless that amount is considerably less than the apparent earnings.

Q. You are familiar with the prices paid in the open market for Consolidated Gas Company stock?

A. In a general way, yes, sir.

Q. And you know that while it was paying eight per cent. dividends with gas at one dollar, that stock was selling at over 200?

A. I believe that is a fact.

Q. And that under the present law, at a price of eighty cents, the public is paying over 140 for the stock, although they have reduced their dividends to four per cent., don't you?

A. Yes, and I know further that there are many corporations that are not paying dividends at all which are selling their stock on the stock exchange.

Q. Do any of them sell over par?

A. I don't know.

Q. Well, you know that they do not, don't you? Stock 2081 that is not paying dividends and has not paid dividends for some time past, is not selling at par?

A. I would not think it would, but there are some odd things on the exchange.

By Mr. **Kirby**:

Q. Not of a well-known recognized corporation?

A. Not usually.

By Mr. **Mathewson**:

Q. Do you know that the Consolidated Gas Company owns the greater part of the stock of the electric companies?

A. That is my information.

Q. And would not that fact and the prospect of the electric companies in the business have something to do with the value of stock?

A. I think it would.

Q. Referring to the fact that the Consolidated Gas Company's stock is quoted at 140 about, and paying 4 per cent., do you think it would sell at that price if its return were limited by law to 4 per cent. or there was not expectation of increase beyond that?

A. I think it is very doubtful indeed. I should not think it would.

By Mr. **Page**:

Q. The first information as to the fact that the Consolidated Gas Company owned the electric light companies came as the result of revelations before the Senate Committee in 1905, did it not?

Mr. **Mathewson**: Is that important?

Mr. **Page**: Yes, I think it is.

A. I don't know. I have known it for some time.

Mr. **Mathewson**: Everybody knew it for years.

2082 The **Witness**: I don't know when I first learned it.

Mr. **Page**: You tried to conceal it.

Mr. **Mathewson**: No, that is not true. Everybody knew it, it was common knowledge.

Mr. **Page**: The only point I was thinking of was that the stock sold at 220 or thereabouts long before it was known that the Consolidated Gas Company controlled the other lighting companies of the city.

Mr. **Mathewson**: That is not a fact. It was known years before the investigation, and the investigation didn't disclose anything except the exact amount which was held by the Consolidated Gas Company.

The **Master**: You need not waste any time about that.

By Mr. **Kirby**:

Q. You stated that if the City of New York had by reason of its large consumption per capita given a value to the properties of the gas companies, that you would take it that the future values were not apt to be as great as the present by reason of the conclusion that the consumption had about reached its limit. If you add to that the fact that there is a large yearly increase in the population of the city, would that in any way change your conclusion?

A. I beg your pardon, I did not state or did not mean to state that the fact that there was a large consumption here would make the value less in the future than it is at present. I simply acquiesced in the suggestion—and stated as my own conclusion that the fact that there was a large consumption per capita would not show such an opportunity for increase as a place where the gas 2083 business had not been fully developed and there was a small consumption per capita.

Q. But you would modify that conclusion if it was brought to your attention that there was also a large increase per year in population?

A. That is another element entirely.

Q. And that element you would take into consideration.

A. Yes, I would take it into consideration.

After Recess.

ALEXANDER C. HUMPHREYS resumed.

Cross-examination by Mr. PAGE:

Q. Mr. Humphreys, I believe you testified that your firm had been in the past engaged in the business of erecting water gas plants?

A. It is now very largely engaged.

Q. But not in this country?

A. We do not erect water gas plants in this country at present, no.

Q. In regard to the pressure provision of the laws of the State of New York, that the pressure should not in the service mains exceed 2½ inches nor be less than one inch, you state that that is practically impossible of enforcement?

A. I do.

Q. Will you state why?

A. Yes, sir. The variation in pressure necessarily due to variation in demands by the consumer in a city situated as is New York would make it impossible to comply with those restrictions, and at the same time furnish the consumers with a sufficient pressure to properly operate the appliances in ordinary use. If you like, I will give some examples, because I honestly believe that the law never would have been passed had the subject been understood. 2084 We will take, for instance, even getting down to as gross a variation as the hourly output, whereas we have got really to consider the variations per moment, because it is only in a moment that the pressure gauge is observed, the output of the Consolidated Gas Company hourly for the minimum hour for the minimum day is about 450,000 feet. The maximum hourly output for the maximum day would be 8,150,000 feet. To show what that variation that I have just referred to brings into the problem, if we were delivering all the gas through a single 48-inch pipe, which I do not claim but am simply using as an illustration, the total variation in pressure which is allowed under the law irrespective of any difference of level would in the case of a 48-inch pipe, that total variation of 1½ inches would be absorbed while that amount of gas, while the 8,150,000 feet, is passing through forty-eight feet of pipe 48 inches in diameter; whereas in the minimum case it would not be absorbed until it passed something over 15,000 feet, three miles. That serves as an illustration to show how the variations in output makes a demand upon the pressure regulation which is far beyond, in my belief, anything that even the ordinary engineer conceives of—I would not like to say that, I would like to take that out, as it might sound egotistical; but I mean that ordinarily the engineer does not conceive of, until he gets to studying the question in detail.

Q. Your illustration uses a 48-inch pipe to deliver the entire amount of gas?

A. Yes, sir, just as an example.

Q. And presupposes, does it not, that the pressure at the holder or at the station governor remains the same, remains stationary?

A. No, sir, it does not presuppose anything of the kind. It is absorption of pressure and that is where people go astray. It is actual absorption of pressure which is known in engineering as difference of head.

2085 Q. Well, you stated that the pressure would be absorbed under the maximum condition in 48 feet?

A. That is right, the passage through 48 feet.

Q. You mean that the resistance in the pipe would cause that loss of pressure in 48 feet, the friction?

A. I mean this, that the flow of gas through a main has been put in the form of a formula which is practically correct, which I can state if you wish me to state it.

Q. I wish you would.

A. All right. I will refresh my memory if I am not correct, but I think that is simple enough for me to remember, with a very poor memory; that the quantity will equal a constant multiplied into the square root of the diameter to the fifth power, multiplied again by the difference of pressure, (not the pressure as it is ordinarily stated, which misleads so many people,) and divided (all under the radical,) by the length of main and the specific gravity.

Q. It is a constant multiplied by the square root of the diameter——?

A. The diameter to the fifth power, and that again multiplied into the difference of pressure, that is p-sub 1 minus p-sub 2. That will illustrate it.

By Mr. Mathewson:

Q. Is that all under the radical?

A. Yes.

By Mr. Page:

Q. Do you mean that, p-sub 1?

A. P-sub 1 representing the initial pressure taken at any point you like, and p-sub 2 representing the pressure after it is delivered; in other words, p-sub 1 minus p-sub 2 represents the absorption of pressure, and that again is divided under the radical by the length of main and the specific gravity. Now the quantity is in cubic feet and the constant, I will give you its range, if you like.
2086 The pressure is given in inches of water, the diameter in inches, the length in yards, and the specific gravity with relation to 1 for air.

Q. Upon this formula there have been prepared tables, have there not?

A. Yes, sir, more or less accurate.

Q. Then in applying this formula, as I understand, you arrive at the result in delivering the maximum amount of gas which you have specified in 48 feet of pipe, the initial pressure of two and one-half inches would be absorbed below one inch?

A. Reduced to one inch.

Q. Reduced to one inch?

A. An absorption of an inch and a half in pressure.

Q. And if it is extended over 795 miles of mains, your initial pressure would have to be something enormous, would it not?

A. Enormous in any such case as that, yes.

Q. Well, the Consolidated Gas Company has 795 miles of mains, I think we have got that correct now, and all interlocked. To deliver the gas at the end of the system, what would have to be your initial pressure?

A. We would have to take into account all the initial pressures you have started with, all the sizes of pipes you are working on, a complication which no man living or that ever will live can figure out in advance.

Q. And which no formula could be used for?

A. No, but this formula serves as an example to show that this absorption of pressure is taking place all the time and to an extent which is not even appreciated ordinarily by engineers who are working on it.

Q. And by reason of that very fact does not a good gas engineer place his works at the lowest point possible in order to overcome by the levity of the gas somewhat this loss of pressure?

A. Unquestionably, the engineer who understands his
2087 business gets his works at the lowest point and would hope to have all the points of delivery uniformly higher.

Q. If on your pipe there are at regular intervals take-off- for supplying customers with gas, that goes to the reduction, doesn't it, of the pressure?

A. Yes.

Q. And if in this 48 feet of pipe you had services, that gas would flow to a greater distance under the same pressure, would it not, that is the pressure would not be absorbed in so short a distance?

A. Say that again, please.

Q. (Question read by stenographer.)

A. It would depend on the amount of gas, which amount taken separately flowing through that pipe, and the addition of all the amounts absorbed to each different consumer, would be the total absorption.

Q. Well, you would not figure that it would be necessary to multiply the number of feet by one and one-half inches to ascertain the pressure in any given distance, would you?

A. Certainly not.

Q. What?

A. It does not enter into it that I can see.

Q. If your 1½ inches are absorbed in the first 48 feet, to send the gas another 48 feet you would have to have three inches pressure?

A. Certainly.

Q. That is what I mean.

A. Certainly.

Q. And to send it 144 feet you would have to have 4 inches pressure?

A. In proportion.

Q. And then to send your gas through a mile of main, under your theory, how many feet of pressure would you have to have at the station governor?

A. I should have to figure that out, sir. Now, you are going on to a different problem.

Q. No, I think it is the same problem.

A. It is not, sir.

Q. I think it is the same problem extended, probably?

A. Oh, no, it is a different problem entirely. Now will you repeat that question?

2088 Q. (Repeated as follows:) And then to send your gas through a mile of main under your theory how many feet of pressure would you have to have at the station governors? That is to produce at the end of a mile of mains, I mean, a maximum of one inch pressure?

A. It will take some time to solve it. It does not follow from what I have said at all.

Q. Well I make it 13 pounds pressure, Doctor.

A. I will tell you in a minute. It would take almost 164 inches for one mile.

Q. Well, is that correct?

A. 163 inches.

Q. Is that correct, that it would take less pressure, initial pressure, to deliver gas at the end of a mile of main?

A. I am not talking about initial pressure. I am talking about absorption of pressure. You can take your initial pressure as you please within reasonable limits.

Q. This 163 or 164 inches is supposed to be the initial pressure required to deliver gas?

A. It is not at all, sir.

Q. (Continuing:) At the end of a main a mile long, at one inch pressure there?

A. It is not.

Q. That was the question.

A. Well, we will put it in that shape.

Q. Well, what is this you have given?

A. That is the absorption of pressure; the difference of head.

Q. Well, if in a mile of main you absorbed 163 inches, you have got to have 163——

A. What was the original question?

Q. If an inch and a half of pressure is absorbed in every 48 feet of pipe, what would be the initial pressure required to deliver gas at one-inch pressure through a main a mile long?

Mr. Mathewson: So it would be one-inch pressure at the end of the main.

Mr. Page: Yes.

2089 A. It would be two and one-half inches. You would absorb an inch and a half and have an inch when you got through.

Q. That is in the mile you would absorb an inch?

A. No, wait a minute. 164.6 instead of 163.

Q. Well, that would be the initial pressure required, would it?

A. Yes, and you would start with 164.6 and absorb on the way 163.6. You would have one inch at the end.

Q. Would it make any difference whether the main was straight or whether it turned corners?

A. That is all worked on the basis of a straight pipe, in rough numbers, and sufficiently accurate for our engineering work, that each right-angle turn would take about 1/42 of an inch in addition.

Q. And that assumes that at the end of the pipe the pipe is open, that there is no obstruction there? That is, that there is where the take-off is to the customer?

A. It is not necessarily open, no; simply that the gas has an opportunity to pass beyond, so the absorption is stated up to that point. It is loss of pressure on the way. It is due simply to the passage through that pipe.

Q. Now if you have along that line of a mile of pipe, at regular intervals, service pipes that go to consumers and there is drawing off of gas at those pipes, does it require an increase of pressure or would that reduce the requirements of pressure?

A. Reduce. You have then simply the sums of absorption and the volumes would decrease as you went along.

Q. Now, if your pipe is on a gradual upward rise of, we will say 10 feet to each 700 feet of pipe, how much would that aid you and reduce the pressure required?

A. The amount it would aid you for a particular part of the——

Q. Make it 10 feet to a thousand?

A. It would depend upon the specific gravity of the gas,
2090 and I would like to state here, which I should have done in
the first place, that my original case was taken on a specific gravity of 65, which I thought would be a fair average for New York City. The lighter the gas the greater would be the difference. For instance, with a coal gas of a specific gravity of 45, the difference would be very much greater. As the gas gets lighter the differ-

ence is greater of course. Now you want to know for a thousand feet?

Q. Take the gas as delivered by the Consolidated Gas Company in the City of New York?

A. A thousand feet with a 65 specific gravity—of course I have to assume the figure—and that will vary unquestionably in the City of New York according to the mixtures—even with the same candle power it will vary. The difference in pressure in a thousand feet, due to the rise in elevation, will be 5.17 inches. There will be the same fall of pressure and the same loss of pressure in descending to another level if the ground happens to be broken up into uneven altitudes rather than a steady rise, or in plateaus. No matter what the conditions are, the element of variation will be introduced to that extent; either rising or falling that element will be introduced, irrespective of all other elements.

Q. Then as against this absorption of pressure in the pipes that you assume we have possibly the rise in elevation to help overcome it; and we have next the fact that in the City of New York at regular intervals services are in operation that would very much reduce the pressure, and then also where you have an interlocked system as you have here with the feeding in from other mains?

A. Unquestionably we could not get along without it, could not satisfy the consumers.

2091 Q. If there is an automatic governor, would that not work instantly upon the increase in consumption, reducing the pressure in the pipe?

A. I shall have to expand that question a little more, Senator.

Q. If you will expand it, as you like to have it, you may.

A. Yes, I will interpret it for you, and then if I am not right you can go at it again. What is the question?

The STENOGRAPHER (reading): If there is an automatic governor, would that not work instantly upon the increase in consumption, reducing the pressure in the pipe?

A. It would entirely depend upon the character of the automatic governor. I will try and tell you just what you want to know. The automatic governor will simply regulate the initial pressure, I mean it will regulate the pressure at the outlet at that particular governor and not an inch beyond. If the governor is set to give a certain pressure, it will give it at that point, whether the pressure varies at the inlet to the governor or not, as long as it is in excess of the initial pressure desired. Now, the problem that you have in mind is probably in connection with the working of a volumetric governor. You can so regulate that governor or have that governor so designed that as the pressure decreases it not only raises the pressure, but acts to put on weights to increase the pressure, but the result will be right at that initial point, namely the riblet of the governor.

In other words, the governor wouldn't do any more than a man can do with a valve in his hands with instructions to do so and so if certain things happened.

Q. But it will do that and do it instantaneously?

A. Yes, sir, if it is a first class governor, in good working order, which many of them are not.

Mr. **Page**: I think I will have to move to strike out that
2092 last part. I think it hardly a fair characterization. There
is no question but what you will find a great many machines
of any description that are not in first class condition.

The **Master**: Strike it out.

Q. Would it be possible, Doctor, to run a trunk main for a considerable distance and bring that into a service main—excuse me, a distributing main, and thereby increase the pressure beyond the point of the junction of the two?

A. Undoubtedly.

Q. By "boosting," as we might say.

A. We know it can be done because it is being done very largely in New York.

Q. So that is one way of overcoming the inequality of pressure?

A. That is one way of overcoming it.

Q. And maintaining an equal pressure?

A. No, sir; cannot possibly maintain it equally under any circumstances.

Q. Wait a minute. Maintain a more equal pressure?

A. That is one of the methods followed to maintain a more equal pressure and avoid greater variation and it is being done in New York to-day.

Q. Now, furthermore, it would be perfectly practical in the matter of gas engineering, wouldn't it, to have district governors which would regulate the pressure over quite a large area?

A. Not unless those districts are separated from each other. If you are going to have a district governor on a certain set of pipes, those pipes must be separated, if you are going to depend on that governor.

Q. And it is quite possible, isn't it, and practical, to isolate one section from another and to regulate the pressure in that section by means of a district governor?

A. Not in New York, sir. Decidedly unpractical as an
2093 engineering proposition. I don't know of any city in the
United States that I have examined where it would be harder.

Q. Where it would be harder?

A. Yes, sir. Where it would give less results. I can explain that if you like.

Q. I would like to hear an explanation of that?

A. With the variations of level in New York as we now have to consider, the minute you commence to use district governors, you have to take in the change of pressure due to altitude and that is the primary reason for their introduction. In New York we have variation of level of about 250 feet. That variation is not, as in most of these cases where these governors are used, confined to certain districts of certain elevation, but the elevation varies very widely in the whole upper part of New York; and if we started out to do anything of that kind we should have to first decide what we would expect in a district to limit our variation to, as far as altitude is concerned, in each district. Suppose we should separate the mains of New York on the basis of having a variation due to altitude even of .24 or say

¼ of an inch, we should have to establish six different sets of mains; one set would run from the Battery to the Ship Canal to take in all the points of the first elevation, within the first 40 feet. We should then have to run another set from Canal and Bowery to Broadway and 34th Street, and so on up to the Ship Canal, because from the Ship Canal a short distance towards the Battery all levels are involved. In other words, you have the level of one foot, say, at the Ship Canal, or five if you prefer to put it so, and you have the ultimate maximum levels all involved within a very short distance of the upper part of the Island, so you would have to run almost up to the Ship Canal to take in that set of mains. The third set would be from 59th Street and Columbus Avenue and so on up on the 2094 West Side, nearly to the Ship Canal, almost to it. The fourth set you would run from the West Side of 116th Street and Amsterdam Avenue up nearly to the Ship Canal again. The fifth set from 165th Street to the Ship Canal nearly, and the sixth set from 173d Street nearly to the Ship Canal. In other words, you would have to have six distinct sets of mains, and the capital burden would be very much increased, and having put these different sets of mains in you would not then be able to supply your consumers with the pressure needed for their appliances and still keep within the law.

Q. Are you familiar with Butte, Montana?

A. No, sir, I am not.

Q. Do you consider that the city of New York is the most hilly city in the United States?

A. No, sir.

Q. Do you consider that the changes of altitude in the city of New York are greater than they are in any other city in the United States?

A. No.

Q. Outside of the territory extending from 110th Street west of Morningside Avenue, running from there on up St. Nicholas and Edgecomb Avenue, are there any substantial altitudes which you would have to meet, where gas has to be delivered?

A. Take the case of the very thickly settled district around 125th Street and Amsterdam Avenue: You have a range of five blocks with a change of level of 75 feet, and we go on four blocks more and the range is increased 38 feet more.

Q. Well, within the range of five blocks of 125th Street which way, or is it both ways?

A. At 125th Street we have a level of about 25 feet at Amsterdam Avenue; at 120th Street a level of 100 feet and at 116th Street a level of 138 feet, but that is not the worst of it; it is a question of hollows and knolls. You go north again from 125th St. to 135th Street and you have got 129 feet again, and at 138th Street only three blocks further we have got 148 feet. In the distance 2095 between the Ship Canal and 183rd Street we have got a difference of 251 feet. Now, it is not that we cannot control pressure due to the elevation in a district; it is due to the fact that those differences of level are scattered all over. You would have to run to a starting point here with a pipe and cover the same district with another pipe.

Q. You know that at the upper end of Manhattan Island the Ship Canal ends practically in a bluff?

A. I am referring to streets. You take Broadway, and we find at 218th Street, just away from the Ship Canal, it has risen from five feet to 25 feet; and at 211th Street it has fallen to 18.75 feet; at Dykeman Street it has risen again to 20.67; a short distance beyond that it is 37.50; at 183rd Street it has risen to 251 feet again. In other words, it is ups and downs. I have used district governors with very great success and very great satisfaction to myself and——

Q. (Interrupting.) Well, now, outside of this territory which is practically the territory that I mentioned in my questions to you, outside of that territory, isn't the City of New York an ideal city for the delivery of gas, and no better?

A. I should not call it ideal, but as far as the elevation is concerned, it is not more difficult from any other city, but—well, the real trouble commences about 59th Street, for even there we have a variation, ups and downs, from one foot up to 76 feet, and a very great variation according to whether you go west or east. For instance, we have at Fourth Avenue and 34th Street 61 feet, whereas at First Avenue and the same street it is only seven feet. In other words, there is no regularity as to change of level. That is where district governors are not useful.

2096 Q. Feeding from a main carried up on the east side, your elevation toward the center of the island would help, wouldn't it, in regulating your pressure?

A. Unquestionably, no.

Q. Because the pressure of gas would help overcome the absorption of pressure?

A. Unquestionably no. Any variation as to altitude simply introduces an element of variation beyond our control. Where we gain in one point we must lose in another if there is a fall. And in New York we have those decreases in altitude as well as increases. It is not a question of pressure. We can get all the pressure we want, by simply putting on the pressure at the works, and that is the way we would run the works if we could, by putting on the necessary pressure; but it is not a question of gain of pressure; it is a question of reduction of variation of pressure, and that is where we cannot control the question. The laws of nature are against it.

Q. Does the company employ district governors on these bumps and knolls and ups and downs?

A. I think not.

Q. Well, while the company can get undoubtedly all the pressure that it wants in the pipes, does not the excessive pressure operate to the detriment of the consumer?

A. What would you call excessive pressure, for me to answer the question? Anything above 2½ inches.

Q. At what point of pressure do you get the best results from a flat flame burner, 22 candle-power gas?

A. You still have not gone far enough. If you will designate the burner I might happen to remember for that particular burner and I may not. I will do the best I can to remember it.

Q. I mean the burners that are in common use, not the burners that are adjusted to pressure, which are not in common use but are used by scientists?

A. You will have to go still farther, Senator. There are a great
many flat flame burners in use, and you will find engineers
2097 disagreeing as to which is the best, and they require different
pressures. Not to quibble, I will say that you can get a first
rate result with many kinds of flat flame burners with seven-tenths of an inch, and if we had nothing but flat flame burners to take account of, flat flames and Argands, the problem would be simple as to the maximum pressure to be used, and also the variation within the house.

Q. You produce the best results from an ordinary flat flame burner at seven-tenths of an inch pressure?

A. No, I did not say all of them; I said with some of them.

Q. What I am referring to is the ordinary burner in use in the City of New York, the kind that the Consolidated Gas Company distributed to its customers at one time out of its generosity. You are familiar with them, are you not?

A. I do not remember which particular burner that was. I suppose that some of the gentlemen here can tell me. That kind would vary, as I think has been indicated, as to candle-power.

Q. Well, take 22 candle-power.

A. All right, then we will define it as 22 candle-power. Then they will vary again as to the diluents of the gas. In other words, gases that do not make candle-power but which go to dilute it. According to the make-up of the gas, so will the pressure most desirable for a particular flat flame burner vary, but in round figures I can say that seven-tenths of an inch ought to be a pretty satisfactory pressure to give good results. If I were making photometrical measurements in my laboratory I should not take anybody's word for anything of that kind, but I would determine that from my own observation, as I have done repeatedly, and proved the tables to be wrong in many instances, in my individual work.

Q. Now, as the pressure increases on that same burner with
2098 the same quality of gas, the consumption increases, does it
not? That is, if a burner at seven-tenths of an inch pressure
burns five feet of gas, and you increase that pressure by an inch, it would burn much more gas, wouldn't it?

A. Yes, if unchecked.

Q. And if at seven-tenths of an inch it produces 22 candle-power of light, how much will it produce with the additional inch pressure?

A. That I would not generalize, sir, it would depend on the burner. For instance, many of these flat flame burners have what are known as checks in them, and those require a larger initial pressure, a greater initial pressure, because the burner is made——

Q. (Interrupting.) I am not referring to the Gray check burner; I am referring to the ordinary burner that is used, the one we have taken at seven-tenths of an inch.

A. Yes, but you have not gone far enough. You see I am talking about something that I know something about. Those ordinary burners that you speak of are very apt to have those checks in them. I am not speaking of governors, I am speaking of the ordinary fixed check, and many of those burners are actually designed with the checks in them and work under a certain pressure, so that the checks will take the swirl out of the gas so that it will come to the burner with an even delivery, and it needs a higher pressure for that kind of burner than it would for a burner without the check.

Q. I do not want the burners that are particularly regulated to keep down consumption, but the burner as ordinarily used by the consumer.

The Master: The common people?

Mr. Page: Yes, the common people, the plain people.

Mr. Mathewson: Those are the burners which we deliver, 2099 with checks largely. You wanted him to testify in regard to the burners that the Gas Company delivers.

A. I am not talking about laboratory results. Unless I am talking to a gas engineer I forget my laboratory unless for a particular purpose. I am talking about the burners that are being used, and there are more check burners used in the world to-day than there are unchecked, a good deal.

Q. And as the people come to understand the subject a good deal better, more of them will be used, won't they?

A. I tried to educate them up to that in my companies thirty-three years ago, and I think all the gas companies in the United States are trying to do it, issuing pamphlets showing the flames produced by flat flame burners under varying conditions, educational pamphlets that they are distributing, showing them how to save gas themselves, with the flat flame burner.

Q. We will disregard the Bray burners and the check burners and the anti-swirl burners, and come down to the burner used by the plain people, and which under seven-tenths of an inch, 22 candle-power, will produce the best results. Now, if you take that burner and increase your pressure by an inch, what would be the result on the illuminating quality of the gas?

A. Let me say first of all that we cannot disregard the swirl burners and all those things and come back to the burners used by the ordinary people, because I am talking about the burners used by the ordinary people. As I have said repeatedly, and I am not trying to quibble about any extraordinary burner, if you have a seven-tenths pressure on a burner and increase it an inch the effect would be to reduce the candle-power probably and the amount could not possibly be told until you took that particular burner and the particular gas to determine it by experiment.

2100 Q. But you have been for thirty odd years considering this subject, haven't you?

A. Yes.

Q. And you must in that time have made a number of tests and observations on this very point?

A. I have, but not any such indefinite and general point as you have given. If you will give me a certain burner, and define it and give me a certain gas, put your question to me and give me a few hours, I will tell you what that particular burner will do, but when you generalize, as they do in such books as Newbigging and Hunt, &c., and say that such and such things do such and such things under such and such conditions, I can prove those tables to be absolutely wrong, and I have done so.

Q. Newbigging says that the greater the pressure the greater the consumption of gas. You will agree with him that far?

A. Certainly.

Q. Well, we will see if we cannot get on some general ground of agreement without adjourning the case for a test in the laboratory. As a general proposition, after you have increased your pressure above the point of greatest efficiency, you consume more gas?

A. For that particular burner.

Q. For that particular burner; you increase the consumption of gas and decrease its illuminating power, candle-power?

A. If you have been able to arrive at a specific point where you know you have got a maximum, as a rule there is a short range where you cannot detect the difference. But, going beyond that range, if you increase your pressure, you decrease your candle-power per foot. Of course that pressure can be regulated at the cock, and must be regulated at the cock by the consumer, for he has other appliances at the house which will need from 1½ inches to 2 inches to give him a result.

2101 Q. Now, we will come to that. Rapid variations of pressure are detrimental to the consumer, are they not? That is, he can adjust his cock of the burner to meet the pressure at one time, and then if the pressure is changed very suddenly within a very short time——

A. (Interrupting.) He would have to adjust it again.

Q. He would have to adjust it again?

A. Yes, and it would be an inconvenience and make a fellow mad. It would me, I know.

Q. And probably under the ranges of pressure that existed in the City of New York before our Gas Investigation, he would have to lead somewhat of a strenuous life running around to his burners to regulate his pressure and keep in touch with the frequent changes of pressure of the Company, wouldn't he?

A. That I could not say, because I am not aware that there are such variations. I am fairly familiar with New York conditions, and have been so for many years, and I have always supposed that the pressure in New York was excellently attended to.

Q. Three inches in an hour would be a rapid variation in pressure?

A. That would be a rather rapid change, yes, sir.

Q. The important point in regard to pressure, as far as it relates to the consumer, is that he should have the gas delivered to him at somewhere near equal pressure, is it not, if there -s to be any regulation on behalf of the consumer?

A. The desirable thing is to avoid variation of pressure.

Q. And the closer you can limit the range of pressure, why, the more advantageous it is to the consumer?

A. That is right.

Q. The object of the regulation of pressure being for the benefit of the consumer, the nearer the pressure can be kept at an equal flow to the consumer's apparatus, the better and more effective it
2102 is, is that so?

A. For both consumer and gas company, yes, sir.

Q. Now, you say that there is no such thing known in gas engineering science as a service main?

A. I never heard of it. Oh, yes, I have heard of it since the Stevens Committee—born of ignorance.

Q. That was the child of ignorance?

A. Fathered by misinformation.

Q. And born of the legislature?

A. Yes.

Q. That being the case, Doctor, it is the duty and prerogative of the Court to correct such errors as legislatures fall into. Now, as a friend of the Court—the criticism that you make of that phrase is the joining of "service" and "main" is it?

A. Yes.

Q. If we strike off the "main" and substitute "pipe" making it "service pipe" that would neither shock your ideas of propriety nor very much impress you with the ignorance of the legislature, would it?

A. The ignorance has already shown itself. No, there is no shock about it, anyway, but when I read anything of that kind I like to understand what it means, so that I can comply with the law. When they say "service mains," I do not know what it means.

Q. We will eliminate the word "main" and leave "service" now, if it said "service"——

A. I should have understood instantly.

Q. You would have understood instantly?

A. Yes, the trouble was that they tried to join up two things which are entirely opposed to each other.

Q. Now Doctor, I understand that you also criticise the provisions in regard to ammonia and sulphur of the legislative regulation?

A. I do in this sense, that I think the penalties are extremely severe, and as far as I know, have never been heard of before outside of his city. The tendency in England, of course, is at present the other way, to remove the restrictions entirely on sulphur com-
2103 pounds and ammonia. The London companies do not have to stand any penalties either for ammonia or sulphur compounds. They are only tested for candle-power and sulphuretted hydrogen, as far as penalties are concerned. The tendencies are rather the other way, to liberalize than to put any such thousand dollar fines on them.

Q. Then, the thing you criticise is not so much that the provision should not require a pure gas and a better gas, but that the violation of it is visited with a heavy penalty?

A. Yes, for the reason that it would be almost beyond the range of possibility that companies should not at times fall within the limitations set by the law, even with all good management, and every desire to maintain the purity of their product.

Q. The Astoria Light, Heat & Power Company are constructing a plant for the recovery of cyanogen in connection with their production of coal gas. Would not that process absorb the sulphur very largely from the gas?

A. It would tend that way.

Q. And the more sulphur you have in the coal the more cyanogen you produce?

A. Not necessarily.

Q. You have given a valuation to this plant, Doctor, and you come to the conclusion that the book value of $16,080,000, odd, was about the right value, did you?

A. I came to the conclusion that it was not an over-statement of value, my inclination in the first place being that it was an under-statement.

Q. That is, you think it would be worth a little something more than that?

A. Yes.

Q. Do you understand that the book value as stated is the value at which the Consolidated Gas Company entered the plant on its book in 1884 with such additions as have been made since?

A. In a general way. Before replying to that specifically I
2104 should want to go over the books myself and see every entry
that had been made and see that that properly represented
the book value without any writing off to reduce the value.

Q. Well, we will assume, which is in the evidence, that there has been no depreciation written off on the plant, and that the plant account was opened by taking the various plants of the subsidiary companies at their inventoried value, and that the additions to it had been of actual money expended in expenses and in additions to the plant?

A. Yes.

Q. Now, assuming that to be the condition, and $16,080,000 the result, would you say that that plant was worth more to-day than that figure?

A. I should say as my very best judgment, and having confirmed it by recent examination through my assistants, that the cost to reproduce that plant in its present condition, taking into account the depreciation just as we find it, would be more than $16,087,000. I feel perfectly certain of it.

Q. That is, to reproduce the identical plant?

A. Yes.

Q. If you were going to build a gas plant to-day of that capacity, would you reproduce those particular plants?

A. Probably not, in every particular.

Q. Well, it is certainly not, is it not, that you would not reproduce the plants as they exist to-day?

A. Yes, I think it is practically certain.

Q. That is, it would not be an economical or efficient plant, or as economical and efficient plant as you could produce to-day?

A. Probably not quite as economical as you could produce, some parts of it, but the largest part I do not think could be improved upon as far as efficiency is concerned, and as far as economy is concerned.

Q. That is water gas?

A. Water gas.

2105 Q. Which has been entirely rebuilt within the last two years?

A. Not to my knowledge it has not.

Q. 1904, wasn't it?

Mr. Mathewson: No, there was a lot of water gas before that, there was a great deal of water gas before that; not all of the water gas stations have been rebuilt or replaced in the past two years.

Q. Well, would you replace the coal gas with water gas?

A. I do not think I should. I know I should not.

Q. You would replace that with more modern apparatus which would be of greater efficiency and more economically handled and operated, would you not?

A. There would be a question to decide, as to whether it would pay to carry a much heavier capitalization to get in regenerator benches and the like, or whether I should put in a new plant.

Q. That is what we are talking about; reproducing that plant new.

A. Reproducing that plant new; the only practical change, as far as the generation of gas is concerned, would be to put in regenerator benches, and there we have to balance up, in regard to the residuals and the like, as to whether it would pay to put in the amount of capitalization for the saving in operation. Sometimes it pays and sometimes not. Some of the best engineers think it does not pay to put those modern appliances in. It might be decided both ways, according to locality.

Q. Is there any engineer that you know of that would recommend the placing of a direct fire retort in preference to a regenerative retort?

A. Yes, I think there are quite a number of them. They say it is a question of how much capital you want to put into it; balance up the pros and cons. General judgment of course would be in favor of regenerator benches, all other things being equal.

2106 Q. As I understand, you have not been all over this plant, as was done by Mr. Mayer, with your assistants, and this result is not the result of a computation as to the different elements entering into the plant?

A. My original statement was based upon my previous general knowledge of the plants, some of which I was quite familiar with, reinforced by an examination of all of them personally. From my wide experience, especially my wide experience in examining plants for purchase, I made up my mind that the price on the books was a moderate one. Since then the plants have been examined by my assistants in every detail, have been examined, but the figures have not been entirely completed. As I said the other day, my chief assistant was called away by a sudden emergency and he is still away.

Q. How long a time was your assistant engaged in that work?

A. My chief assistant with two engineering assistants, two or three clerks and three or four accountants to help in figuring, were engaged night and day, practically Sundays and all, for about three weeks. And every important part of all the plants was examined.

Q. They took measurements, I suppose?

A. I presume they did. I have not had an opportunity to go over the work with them except to get this general statement from my chief engineer, which was sufficient to confirm me in my original belief.

Q. You do not mean to say that that plant is worth $16,080,000, do you?

A. I do.

Q. And would that be your testimony if it should appear that that plant cost a great deal less than that?

A. I would not care anything about it; if it cost 10 cents it would not affect my testimony a bit. I am taking the thing as I find it and judging it accordingly. What sort of bargains they may 2107 have been able to make in the past I don't know and don't care much about.

Q. Then if it should appear that this plant was built at less than $16,080,000 and a good deal of it had been in use for fifty-three years, you would consider it was more valuable to-day than when it was put in fifty-five years ago, would you?

A. I should not make any comparison that way. I don't know under what circumstances it was produced. I don't consider whether the plant has had money spent on it in the meantime. As I said, it would not affect my judgment at all. I take it as I find it.

Q. Then this plant as it exists to-day, having had money spent on it from year to year in the way of repairs and replacements, you consider to-day to be of the full value or more than the book value?

A. At least $300,000 more than the book value.

Q. Although it has been testified to by the company that nothing had been written off for final depreciation?

A. I don't know what they have testified, or I don't care what they testified.

Q. I am telling you what they have testified and ask you if you will take that into consideration?

A. I take it into consideration—or at least I do not consider it. I take the thing as I find it.

Q. If that is the condition of the plant, what is the necessity of establishing a fund for depreciation?

A. Now, we have got on a very different proposition.

Q. It is the same proposition from a different point of view?

A. No, sir, entirely different, if you will pardon me. No matter what has happened in the past or whether there may be appreciations in certain items which overcome depreciations, as conservative business men managing a large property of that kind or any property, we must acknowledge the self-evident proposition that the plant will eventually have to give up its day of usefulness, and 2108 the best we can do under those circumstances is to consider the plant separately and collectively and make up our minds in how many years, all things considered, that investment will have to be renewed. Then as conservative business men we must set aside each year and say that a certain per cent. of the value of that property must be set aside, and called part of the yearly cost as accruing depreciation. Now then if I come along later and find that certain things have happened and my estimate is wrong, I correct my estimate. But I have done the very best I can with all the knowledge I had in advance, to say what will be done in the future. For depreciation as a question of estimate for the future and the question of depreciation for a plant as submitted are two entirely different propositions.

Q. As I take it, you do not take the lamp of experience to guide your steps in the future?

A. We do not?

Q. I say you do not?

A. I do not take the lamp of experience to guide my steps in the future?

Q. Yes.

A. I certainly do.

Q. Here is a plant that has been in operation for a great many years and which has been kept up by repairs, and is worth more to-day than when it was produced.

Mr. Mathewson: Is that your testimony, Senator?

The Witness: I was going to say, I don't know that you know.

Q. I have asked you, assuming that that was so, assuming that that plant has been in operation, and you say you don't care how long it had been operating, you looked at its condition to-day, and if it was worth more to-day you so valued it and that it was 2109 worth $300,000 more than the book value?

A. If you will permit me, I don't think I said how long it had been operating, I said I would take it as I found it. I did say I should not care how many good bargains had been struck in the purchase of the property and its cost. I should take into consideration every element as an engineer in valuing that piece of property as to what I thought it would do in the future.

Q. From your investigation, did you not ascertain that parts of this plant had been in operation for a great many years?

A. Yes, sir.

Q. You did not take that fact into consideration?

A. Certainly. I also took into consideration the fact, apart from the years, what is its present condition.

Q. Certainly.

A. And in my depreciation, if you will permit me, my estimates on the depreciation, as I have tried to explain, I think, on the direct-examination, do not depend simply upon the case of exhaustion of life but upon my general experience as to how long we can depend, all things considered, as to when certain plants will be displaced, outside of the question of their actual usefulness as a piece of separatic apparatus at the time, but how long they will have to go before they will be displaced as a working unit.

Q. Displaced for what purpose?

A. Everything.

Q. For what reason?

A. Obsoletism, moving, because the city takes your property, because the city cuts your streets off and cuts you off from access to your water, and all sorts of the ordinary contingencies of business life. Street mains would be very largely affected on account of having to put in large mains for small mains, and the like.

Q. The taking by the city of your property is not a very serious depreciation, is it?

A. It depends on the price the city pays you for it.

2110 Q. From your experience, I suppose, the same as others, it is that the city generally pays a little more than it is worth?

A. No——

Mr. MATHEWSON: I object to it.

The WITNESS: I would like to answer it. I have had some experience.

Mr. MATHEWSON: All right, if you want to answer it I withdraw the objection.

The WITNESS: You have the evidence right here that property that has been taken is not paid for at all.

Q. The property taken is not paid for at all? Well, we will let it go at that.

Mr. BURR: The City of New York is still solvent?

The WITNESS: She may not be if she goes on.

Mr. MATHEWSON: You cannot prove it by the fact that they have paid their debts to us, either for plants or gas furnished.

Q. Do you anticipate that there will be any greater advances in the method of handling retorts in coal gas plants than there have been in the past, in the intermediate future?

A. Any greater?

Q. Yes.

A. I am not looking for any great advance in the gas making apparatus. I am looking for very great advances in the burning, in the appliances of gas, but not for any great advance in the gas making business, I am sorry to say.

Q. Therefore there will not be any very great requirement for supersession by reason of improvement?

A. My anticipation is not very great in that direction at present, no.

2111 Q. Therefore we have not got to take that element into consideration to any great extent?

A. Not as much as in the past, no.

Q. Is not the plant at 14th Street about the most antiquated type there is in use?

A. In New York?

Q. In the United States.

A. Oh, no.

Q. Well, what type is there that is more antiquated than the direct fire retort?

A. Direct fire benches of threes.

Q. Where are there any of those in use to-day, direct fire benches of three?

A. I cannot say from memory, but until very recently there was a very great number of them in St. Louis. I imagine they are torn out by this time. They got very good results from them, too.

Q. Is this theory of the necessity of a reserve for depreciation something new to gas science?

A. Reserve for depreciation?

Q. Yes.

A. You are not referring to the so-called reserve, are you? You mean the amount that I set aside for depreciation? Because you know the term "reserve" I have used in another sense, but you are referring to the depreciation?

Q. The depreciation?

A. No, I imagine it is as old as commercial life.

Q. It was well known in 1884, wasn't it?

A. Yes, though differently treated. In the older days the prices were higher and the profits were larger and the amount of money was constantly carried back into the business for renewals and for extensions, and they did not attempt to capitalize all those extensions. In that way they were sometimes unconsciously, as I have discovered in my examinations, taking care very fully of depreciation. Now, as time goes along and the price is reduced and limitations are put on the price, we have to figure very much more closely and see how much we can put aside and how much we will be allowed to
2112 be put aside, specially as they do not allow us to capitalize anything in excess.

Q. The way the Consolidated Gas Company has been financed is to make the necessary repairs and extensions out of its earnings, is it not?

Mr. Mathewson: Repairs and extensions?

Mr. Page: Repairs and renewals.

A. Repairs and replacements so-called as current renewals; current renewals, as distinguished from deferred and final renewals.

Q. Now, we will also go to the further item of extensions. Have they not been taken care of in the same way?

A. Out of their profits?

Q. Yes.

Mr. Mathewson: Does Dr. Humphreys have any information on that subject?

Mr. Page: If he has not he may say so.

A. I am trying to think if I have the information. Just at the moment I would not like to reply to it.

Q. That is the way you advocate, is it not, of using any reserve that you have for depreciation?

A. I advocate taking the reserve for depreciation and putting it back into the business, keeping very careful track of that reserve and how it is spent, so it cannot be considered as a warrant for extra capitalization. In other words, it is against the depreciation to the limits of my estimate.

Q. I may not understand your theory of depreciation, but your idea is that the fund should not be accumulated but should be carried into further extensions of plants?

A. My theory is this, Senator, that a certain amount of money should be set aside to care for depreciation accruing and which has not yet manifested itself by the breakdown of plants. Now the question is how shall we invest that money. If the business
2113 is lying dormant and is not extending and there is no use for further capital, then of course we will put it out to accumulate at compound interest and of course the day of the death of the business is coming. If we do not go ahead, we will go back very shortly. But if the business is active and there is use for capital to cover extension of business, I claim it is the wise policy to take that depreciation fund so far as it will go—you will probably require a good deal more, but so far as it will go—and use that depreciation fund not only for the current renewals and even the deferred renewals, but for the final renewals, to offset the final renewals and invest it in extensions so as not to draw in that extra capital which otherwise would be necessary for those extensions. In other words, if you put it into a sinking fund to accumulate at 4 per cent., all you get upon it is the 4 per cent., and that money is withdrawn from your business and it cannot be used except as the parts of the plant fall in. Now, I say if the business is active and you need that money and can make 4 per cent. or better on your extensions, and it would be very poor gas business if you could not—it is better to use that money instead of putting your money away at 4 per cent.

Q. I think I understand your theory. Now we will take that. At the end of forty years you have extended your plant to the value of the existing plant at the beginning of the forty years?

A. Yes—well, no, not quite. You will have taken care of your renewals as they come up and such surplus as you have will have gone into extensions. The Lord knows what that surplus would be, but you have to take care of your current renewals as they come up. You must bear in mind the plant does not exhaust itself in forty years. There is no such thing as the complete exhaustion of a plant at any one specified moment. The different parts of the
2114 plant are being exhausted from time to time, and the estimate I made up on the basis was that certain parts will go out in ten years, twenty years, thirty years or forty years. Now, if you are not ready to use the surplus from depreciation charges for exhausted part of the plant, at any particular moment, you have the opportunity to use it for extensions, and you put it into extensions. How much you will have in forty years, of course, is problematical.

Q. On those extensions you get an increased business?

A. Yes, and you need it.

Q. That goes on to your general earnings on gas sales?

A. Yes.

Q. Mingled with your other profits?

A. Yes.

Q. And at the end of that time, whenever that may be, that you say will arrive when you should need this plant to replace your original plant, your money has gone into extensions and the income derived from those extensions has gone into the ordinary income of the company, and if you have to replace your plant, would you not have to issue your new capital?

A. No, sir.

Q. Where are you going to get your money from to build your new plant, or old plant?

A. So far as you had used that money in advance for extensions, in lieu of depreciation, you would have to put out capital at that later day rather than at the earlier day. You would have saved yourself capital charges in the meantime. Now, the difference is this, you will in the meantime have earned on the money so reinvested in the business, and those additional earnings you need to pay the difference between what Mr. Bemis would calculate as the right amount for 40 years and the amount I would calculate. He would calculate only 1.05 per cent. and I would calculate 2.5 per cent. Now, those increased earnings would be the amount required at 4 per cent. to pay the difference between those two, and the
2115 burden so far as capital and all is concerned is exactly the same, provided I can make the 4 per cent. in my business. If I happen to earn a little better than 4 per cent., I have the advantage. In other words, it is less of a burden upon the business to put that depreciation cost back into the business than it is to put it out to somebody who will only give 4 per cent. For instance, if I have——

Q. But haven't you testified that in the meantime you have distributed your earnings on your extensions to the stockholders instead of preserving it to use in the rebuilding of the plant?

A. No, indeed, I have not. It has been absolutely held intact by the fact that I have put it back in the plant, which must be kept against depreciation, it does not go to the stockholders at all.

Q. I am speaking about the earnings.

A. The earnings are involved in that 2½ per cent. I could take and cover my depreciation by putting in a certain fund 1.05 per cent., if I placed it out of my own hands and did not retain it for use in my business between the 1.05% and 2½%. If I take all that money and reinvest it, the difference is covered by the earnings I get back at 4 per cent. from amounts taken out to cover depreciation and reinvested in plant, it does not go to the stockholders at all. For instance, if I set up a fund——

Q. But you are putting it into extensions, so at the end of this time you have a larger plant and you may have reproduced a plant that was the same value of your original plant, but you have nothing back to take care of your original plant which has given out?

A. We will take a simple case and say that there is no necessity for renewals in the meantime and that the plant ceases to exist at the end of 40 years and goes out of existence at once. In the mean-

time I have taken my 2½ per cent., which multiplied by 40 is 100,
and at the end of 40 years I have reproduced that much more
2116 property, and my original plant goes out. I have got the
100 per cent. for the old 100 per cent. Now I have got to go out, instead of taking the old capital at the end of 40 years, I get my capital——

Q. It is just a difference of time when you would get the capital?

A. Yes, a difference of 40 years, an average, say of 20 years.

Q. And it is in the difference in the cost of gas of one per cent., isn't it?

A. No difference at all, it does not affect the cost of gas.

Q. It is more than that. You said you take two and one-half per cent., and putting out the same money at compound interest to produce the same result, it would take 1.5?

A. Exactly. And if I put 1.5 out I would lose the use of my money from the start and have to bring in capital to do the very same thing and pay the interest. The burden is the same on the business.

Q. But you are making the consumer to-day bear the burden of the needs of the future consumer?

A. No.

Q. That is if you capitalize your extensions to-day, you do not place the burden of those extensions upon the consumer of to-day, but under your theory you are making the consumer of to-day pay for the extensions of the plant and the capitalization at the end of 40 years, you make the consumer of to-day bear that burden and the consumers along during that 40 years bear the burden, don't you?

A. To a very slight extent in the first few years.

Mr. Page: I see that the Master does not agree. It seems to me——

The Master: I do not see why the consumer does not have to pay the money that goes into your sinking fund.

Mr. Page: He does, but it is 1.5 instead of 2.5.

2117 The Master: It is 1.05 to him to-day and the two and
one-half is something to posterity that does not concern him.

Mr. Page: No, it comes out of his pocket to-day, it is a difference of 1.05 on the consumer of to-day.

The Witness: Oh, no, sir.

The Master: It does not seem that way to me.

The Witness: You have taken that additional amount and put it out, getting additional earnings, but you would have to bring in capital to do it, if you did not. If you take this money and put it out, you have to bring in more capital to do this work, the extensions will have to be made, whether you take it from one or the other. If you take it as new capital, and bring it in, the customers are going to have to pay for it. Nobody else will unless we have some more red journalism.

By Mr. Mathewson:

Q. You get revenue from the extension which you produce by taking the 2½ per cent. that if you did use it, would go towards paying dividends, if you did pay dividends on original capital, wouldn't it?

A. Yes.

Q. And thereby it would come to the benefit of the consumer?

A. The burden of capital is exactly the same on the business, and on the company, provided always that it is both on a four per cent. basis that we figure. Of course there is an advantage to the company, and there it is good business to do it, because they probably earn more than 4 per cent. The first year they may not earn
2118 over two. I have put in many extensions where I didn't get
2 per cent. the first year, but it gets better as it goes on.

By Mr. PAGE:

Q. Why did you assume 40 years as the life of a gas plant?

A. Of a gas plant, I do not. I take each case as I find it.

Q. Well, you think a reserve should be made of 2½ per cent. on this gas plant?

A. Yes.

Q. On what do you base that?

A. On my general experience and very wide experience in such matters and after viewing the plant. And taking everything into consideration, so far as I can, I thought that is just as far a limit as I can go. Other minds materially differ with me on that. Professor Marx, for instance, thinks it should be 5 per cent., which makes it 20 years for final renewal. Professor Bemis thinks it should be 33 years, which is seven years shorter, but I prefer to be a little more conservative and I think I am safe in saying that forty years is all right, as it is the result of my experience.

Q. We have the plant of the Consolidated Gas Company which has been in operation, some portions of it, for 53 years, and Mr. Mayer has made a very careful examination and the greatest depreciation that he found in any part of that plant from an absolutely new plant to-day was 15 per cent. Does that affect your estimate at all?

Mr. MATHEWSON: Let me correct you, he found much more than that in some cases. In some cases as high as 25 per cent., and in one holder house he found 50 per cent.

Q. Well, we will eliminate the holder house, but we will take the machinery and the apparatus for gas making and the highest percentage of depreciation he found was 15 per cent., and from that to
5 per cent., and in some cases he found none. Now, in the
2119 light of that experience, what period of time are you going
to place for the final depreciation of that plant?

A. I should not base my judgment upon Mr. Mayer's work any more than I base my opinions upon text books, if I think I know more about it than the text books, if I think I know more about it than the next books. Now Mr. Mayer has made certain statements, I don't know what they are or how he has figured it. I should want to go over the whole question with him and see whether he figured at it as I do before I express any opinion. I should say that my judgment of forty years is a very conservative estimate for ultimate renewals, what I call final renewals of plants, and I think it would be so considered if you put fifty men here on the stand that had experience.

Q. If you put a cast-iron main down in the streets of New York it will last how long?

A. If you put a cast-iron main down in certain streets in New York and do not connect it up and do not regard it as a gas delivery main at all, so you will not have to consider whether it will have to be removed or not, and simply consider the question of the oxidization of iron, I am not prepared to say how long, but I should be almost willing to guarantee it for 100 years. All that I took into consideration in making my estimate.

Q. It has been testified that mains are in the streets of New York that were placed there seventy-five years ago, and were connected up and have been operated ever since and show no depreciation?

A. I don't know whether it has been testified or not.

Q. Well, Mr. Simpson so testified.

A. All right. I also happen to know that in New York the amount that I have set in advance without knowing anything about these facts for depreciation of the distribution system came out, I think, within .04 of 1 per cent. of what they have actually expended in keeping the mains up in the whole distribution
2120 system. In other words, they have been ahead of accruing depreciation.

Q. Well, then you would take 100 years as the life of the mains?

A. No, I do not. I say I would be willing almost to guarantee it for that. That entered into the matter so little it makes no difference.

Q. I understood you, Doctor, to say that was the figure you took in your calculation?

A. No, I did not.

Q. Excuse me, that was my mistake. Now we will take a gas holder.

A. A gas holder?

Q. Yes. What is the life of a gas holder?

A. The life of a gas holder altogether depends upon how it is built, the locality, the chances of its having to be replaced and chances of needing a larger holder and the like. I place no general life limit upon any piece of property, never have so testified and never will. Each case must be considered by itself.

Q. Well, take gas holders complete, built as they are in the City of New York and kept well painted on the outside. Is there any period of life we can place on the gas holders?

A. I would place different life on the different holders according to how they were constructed; there is a very wide difference in the gas holders of New York as to their method of construction, etc.

Q. But for depreciation, actual wear and tear, is it possible to set any limit?

A. Upon what?

Q. Upon the life of a gas holder.

A. Yes, the life of a gas holder in my experience has varied all the way from fifteen years up to—I have known them to go as high as sixty years. I have had them give out inside of fifteen years. I have had to displace them inside of ten because the land was required for other parts of the plants. Making it necessary to absorb the cost of that holder for other reasons than the mere——

2121 Q. I am not talking about change of plant, and your wanting to remove your plant and wanting to tear down the holder for that purpose, but I am speaking now of the depreciation, the wear and tear which you have to take care of; what is the life of the gas holder upon which you base your calculation for that reserve?

A. That I could not answer at all generally, Senator. It would have to depend upon the case.

Q. I am confining myself to the holders of the Consolidated Gas Company.

A. They will vary in their life. I couldn't tell you what each holder was without having it all specified, and making a separate problem of it.

Q. In arriving at this figure of 40 years we would like to know what length of life you gave the holders?

A. I took a general survey of the whole field, and I set a life of 60 years on the distribution plant as a whole, and a life of 33 years on the works as a whole, and it happens to average up about 40 years. It would vary from year to year.

Q. When you have taken the holders and the mains of a gas plant you have taken the largest investment of capital, haven't you, that is here in the City of New York? That is, more than half of the capital employed is in mains and holders, isn't it?

A. In the works? I think not. My recollection is it is not. Of course you have a large amount of property in the distribution system outside of mains, services and meters, and the general property which we have roughly included in distribution all the way through.

Q. Did you take into consideration buildings, in making the 40 year term for depreciation?

A. Yes.

Q. And you calculate that the buildings will have to be replaced in 40 years?

A. Oh, no, that is not the basis of my estimate at all.

Q. Well, what life did you give to a building?

2122 A. That will vary according to each particular case as to the chances whether it will have to be displaced, extended, whether built with a design for the future, whether they have invested their capital for the future, or simply invested it for the present, and so on. It is not nearly as much a question of actual killing of the plant as it is of readjustment and the like.

Q. Well, an extension would be a replacement, wouldn't it?

A. Certainly not.

Q. Then whether they have got to extend their building for the future would have no bearing upon the depreciation value?

A. A very great bearing.

Q. In what way?

A. Suppose I laid out a plan for works, as I have seen many of them laid out, and have bought some of them, and it was built to sell, built perhaps to strike an established company. They might have spent as much money on that plant as would have put up a good plant. Poorly advised. Now, if they design that plant for the present uses, the undertaking continues and we have to go forward with the business, the depreciation on that plant will be very much greater, irrespective of whether they are good bricks or poor bricks, or good iron or poor iron, because not having been designed for the future they will have to be torn down and extensions made in that sense. Now, to a greater or lesser degree that enters into all questions of depreciation, because human brains are fallible. No man has the foresight to equal his backsight, and he cannot possibly in advance lay out that plant which will be best, all things considered, for the future. Mistakes must be made and capital sunk in that way.

Q. Well, supposing we take a plant which was in 1886 producing 19,500,000 cubic feet of gas daily, and in the same building they to-day produce 51,000,000 of gas daily. Would you
2123 consider that that plant provided for depreciation?

A. In that particular element that would be favorable; for the future it would be unfavorable, already crowded to its capacity.

Q. Then I understand that you would figure, if there was to be an extension of those works, that that extension would be figured as a depreciation of these buildings now, is that right?

A. Certainly not. If I had a building or a plant to extend and in any way I had to sacrifice parts that had already been capitalized, that part would be written up against depreciation, so far as the new plant went in to extend the capacity and had nothing to do with the parts displaced that would be a legitimate extension. So far as I had to sacrifice the old construction it would be a depreciation. I differentiate very particularly between the two.

Q. How much of the plant of the Consolidated have they sacrificed in this way in the past twenty years?

A. You ask me how much they have?

Q. Yes.

A. I don't know, sir. I have not been around here for twenty years examining every detail. I will say this, that from my knowledge of the way they keep their accounts, and my observation of these matters, they seem to follow a conservative, fair policy in that regard and try to make the adjustments fairly between the two elements. You cannot say any further than that.

Q. In your examination before the Gas Commission you stated you had known of some cases of an accruing depreciation being completely cared for by a conservative policy and charging liberally to repairs and to a like extent dealing lightly with construction accounts.

A. Do you ask me a question now?

Q. I ask you if you remember testifying to that?

A. Oh, yes, that is in accord with my views.

Q. Has that been the policy of the Consolidated Gas Com-
2124 pany?

A. No, it has not. My understanding of the policy, and an examination of the accounts submitted to me indicates they have charged up their repairs, but they have not charged up in any such liberal way as against the replacements; in other words, putting in a new plant in addition to replacements as would cover the accruing depreciation. The case I had there in mind is more particularly the English case where they have an item they call "wear and tear." They interlock repairs and replacements together, as they can do if they wish. Preferably I should do so. I believe the two are interlocked. For instance, if a man does less repairs to his plant, he is going to have more renewals, and so on. Now the English companies spend a certain amount "wear and tear" and they treat this item liberally in their bookkeeping, and their amount spent for wear and tear is as a rule as much as I have included for actual repairs and depreciation in this case. So we find in the case of Massachusetts companies.

Q. In the case of the Consolidated Gas Company you have gas works that in 1884 were capable of producing 4,000,000,000 cubic feet annually, or about that, and twenty years later the engineers of these same works testify they are in perfect operating condition and repair. Would you deem it necessary to charge a depreciation item to operating accounts of works so increased in capacity as to enable them to deliver 10,000,000 cubic feet daily?

A. Certainly. It would not affect my opinion a particle. The question is what is going to happen now. The mere fact they have kept their works up is going to save them for all time to come from the renewal plant. I am just as efficient to-day, as I said to the Commissioners, and more so, than I was twenty-five years ago, to testify here; I have had a great deal of experience, but I am twenty-five years nearer my death. Somebody else will have to
2125 testify shortly for me, I hope.

Q. Would you consider then the condition of the Consolidated and its plants a matter more of good luck than good management?

A. Oh, no, sir; no, sir. It has been a very well managed concern. Mr. Bradley is one of the greatest gas engineers we have seen in America.

Q. And if they have been able for more than twenty years to keep this plant in perfect condition, so much so that an expert examining it to-day can find practically no depreciation from an absolutely new plant, wouldn't you consider that they had taken care of the current renewal and the current depreciation?

A. Yes, sir, current renewals and current depreciation but not final renewals; that is the whole story.

Q. And had postponed the day for final renewals very materially?

A. No, sir. I based my calculations upon the property being kept up.

Q. Mr. Addicks, he is a gas engineer of eminence, I believe?

A. Yes, sir, very great.

Q. He has sworn in this case, in an affidavit, that about four-fifths of the present generating capacity is in the shape of modern up-to-date water gas plants, which could not be improved upon anywhere, and the coal gas plants while composed of some apparatus which is not of the latest pattern are as efficient and in shape to operate for an indefinite period without impairment of efficiency. Is that your judgment, too? Do you concur in that?

A. I concur to this extent, that a plant, so far as efficiency is concerned, if kept in repair, will last up to the time it has got to be renewed. The plant can be efficient and still have to be renewed. A boiler, for instance, works perhaps efficiently up to the day it is renewed, but the day comes when it must be renewed.

2126 Q. But you can by continually renewing parts of the machine, you can very largely extend its life?

A. Yes, sir, and that I take into consideration. That is all included in what I call partial and current renewal. There is where the money goes. They have spent a lot of it for that very purpose. The whole amount I have got in for repairs and renewals taking in depreciation and everything, I have only included 14.15 cents and they have spent for the last twenty years 10.60 cents. Now that figures out—I think—I am not much on memory, but I think I am right about that, I have only got there 3.55 cents for accruing depreciation for the future.

Q. If you were dealing with an entirely new plant, Doctor, you would take forty years as the life of that plant for the purpose of depreciation, would you? I mean for the purpose of establishing a fund for the depreciation?

A. I really don't know what I should take, Senator, until I had examined the plant, as I have said, and I never yet failed to lay great stress, especially in lecturing to my students on the commercial side of engineering, that each case must stand by itself. I would want to examine that plant and consider the local conditions, what the chances were, whether the man had designed this plant along the lines I thought would last and it would be largely a matter of judgment as to that. I would not give any general statement of that kind and should carefully warn anybody against it.

Q. Well, assume a modern, up-to-date, well-built coal gas plant, new to-day, and you were called in to give advice as to the necessities for reserve, would you calculate the reserve on the forty-year basis, as you have in this case?

A. As I have said, I should want to know a great deal more than simply about the plant. I should want to know the conditions generally, the business conditions and everything else. 2127

Q. What do you mean by business conditions in reference to a depreciation fund for a plant?

A. Well, I have already given one example, a very important one; the plant even though it were well designed, well built, but was not designed to best meet the conditions of that locality, as to using the materials, best adapted to the supply of gas in the locality, and best adapted to meet what I should consider the requirements of that business ten years hence. My judgmnet would be very much affected as to what I should set aside for depreciation. The unfortunate part of it is that the term depreciation has been used so much. I try to get out of it myself and use the term renewals, final renewals. Depreciation seems to limit it strictly to what you have in mind.

Q. Well, assume instead of depreciation then the word- "final renewals" as you define *it?*

A. And then the same question?

Q. Yes.

A. I have already answered it. That that would depend on the conditions in that particular locality and whether the plant was adapted at that time, and whether I thought it was adapted as to the future, or whether circumstances would come along which would make it necessary to make a change in the methods of production.

Q. The purpose of establishing final renewals then, or whatever you call it——

A. That is, I think, the best term to use.

Q. A final renewal fund—is it for a fund which will replace a plant when it wears out?

A. Not entirely, no, sir. It is to maintain the asset of plant at par. Now, it may not be used for renewals at all. We have fulfilled our duty as managers if we have kept our plant asset at par and can do that by placing certain moneys as I have explained in
2128 extensions, and do not recapitalize them, but have that piece of extension take care of that piece of depreciation. Of course that is practically being done all over the world in every business.

Q. Cannot you put it back onto the plant itself in the way of renewals and replacements as different things do wear out?

A. Cannot you?

Q. Yes.

A. That is a question, sir, that I am extremely glad you asked, because if I could reply to that so it could be understood, it would meet the whole question; it is because the plant does not wear out in that way that we have to have this money set aside from year to year. We want to spread the expense from year to year. Now, to take an example. Suppose it is a 40 year life. You will have to use your imagination a good deal, I never knew of such a case, but I think it will stand, and that the plant had been built——

Q. My imagination is in pretty good working order now, Doctor.

A. Well, we will try to cultivate it still further before we are through. You had a plant built up in units of 1/40; each year there was a unit added and it went on to the 40th year. Now, after that the complete cycle would take in renewal of 1/40 each year; you would not need any renewals fund. Now, the nearer you come to that, the nearer the current expenses meet the total renewal requirements, and in this case they come within 3½ per cent. a year of doing it. There is the point.

Mr. Page: May I suspend my cross-examination now and let Mr. Burr proceed with his. I have a few more questions I desire to ask, but I do not feel well enough to continue at this stage.

The Master: Proceed, Mr. Burr.

Mr. Mathewson: No objection.

2129 Cross-examination by Mr. Burr:

Q. You reach a cost at the burner of 51.802 cents per thousand cubic feet, Doctor?

A. No, sir.

Q. At page 1945 of your testimony, it is stated, "Cost at the burner, exclusive of repairs, other renewals, depreciation and contingencies, including extra hazards 51.802."

A. Quite correct, sir. That is not the cost at the burner.

Q. Well, it is the cost at the burner exclusive of the things that are stated here?

A. Yes, but that is a very different proposition. In other words, I have already eliminated some of the cost for my own purposes, as carefully explained.

Q. You have assumed this 51.802 to be absolutely correct as deduced from Exhibit 94 and the accounts set forth in that exhibit?

A. Yes, and with some adjustments that I have made myself here.

Q. Have you carefully analyzed the accounts of Exhibit 94?

A. Not the books—I have not made an exhaustive audit of the books. I start in with the general assumption that it is correct and that it has been approved, not that particular year, but the other years have been approved by the Stevens Committee Audit. And there was so little variation between the two that I felt warranted in taking that after a rather exhaustive examination myself extending over some months of the different figures involved, but as to having audited the books in the complete sense I have not done it.

Q. Have you examined the vouchers for the items appearing on the exhibit 94?

A. No.

Q. You have as a matter of fact accepted the statements on Exhibit 94 as correct?

A. I have. I have readjusted some of them.

Q. Then, as a matter of fact, your testimony as an independent expert is wholly based upon statements made by officers and employees of the Consolidated Gas Company? 2130

A. Not wholly, no, sir. It is based to the extent that I have drawn out. As I have not seen the records, I am assuming the record is the same as my sheet.

Mr. Burr: That is all I want to ask.

Mr. Mathewson: Mr. Carter is here, if Mr. Burr can proceed with any cross-examination that he has of him.

Mr. Burr: I have no questions to ask Mr. Carter now, but I would like to know if I can obtain this information: I asked Mr. Addicks some few days ago regarding the largest sales upon a given day and he was unable to give it. Now I want to ask if he will name the day in 1905 when there was the largest aggregate manufacture of gas by the Consolidated Gas Company, and state the total gas manufactured on that day by the company.

Mr. Mathewson: That can be done. Yes, we can do that.

Mr. Burr: Now can I also get, for the same day, the total gas manufactured by each of the companies with which the Consolidated Gas Company has agency agreement?

Mr. Mathewson: No, we cannot do that. We have no record of that sort.

Mr. Burr: Haven't you the means of procuring that?

Mr. MATHEWSON: Well, I do not think we could invoke the risk of subpœna.

Mr. BURR: Under your agency agreement you have the right to look at their books at any time.

Mr. MATHEWSON: I do not think we should be asked to do that. We stated the amount of gas that we procured from them, and how much more they make or sell it does not seem to us is pertinent. So I should not attempt to do that unless the Master directed it. 2131 & 2132

The MASTER: I shall not direct it. I think you will have to subpœna those books, Mr. Burr.

Mr. KIRBY: You have no other witness?

Mr. MATHEWSON: We have Mr. Carter here if you desire to cross-examine him.

Mr. KIRBY: I am under the impression that we shall not want to cross-examine him, but I do not want to take that burden on myself.

The MASTER: I understood Senator Page to say that he had something else to ask Mr. Carter.

Mr. MATHEWSON: I understood otherwise, but suppose the Master is right.

The MASTER: Yes, I think you had better be here in the morning.

Mr. CARTER: Very well, sir, I will be here.

At 5 o'clock P. M., adjourned to to-morrow, Thursday, September 13, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 237.
City's 44.
State's V.

2133 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *September* 13, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Page, Mr. Burr, Mr. Kirby.

2134 ALEXANDER HUMPHREYS resumed.

Cross-examination (continued) by Mr. PAGE:

The WITNESS: I would like to make a correction in a statement of mine, on page 2090. It is the question asked as to what would be the difference in pressure due to change of altitude, and I understood the question the reverse, that it was for a thousand feet rise in 70. Of course I did not take the 70 into calculation at all, and it would not make any difference.

Q. Where is the question?

A. The question commenced on the other side. Now, if I understand it, you want to know what would be the change——

Q. Well, I changed it, making it ten feet to the thousand instead of ten feet to seven hundred?

A. Nor did I catch the fact that it was ten feet rise. I thought you wanted to know what would be the change due to an altitude of one thousand feet, and my calculation was based on that. Would you like to have it answered as to ten feet or to 70, that is 100 feet in a thousand?

Q. No, my question was as to a rise of ten feet for a thousand feet length of pipe.

A. Oh, it is changed to ten feet in a thousand?

Q. I did that, thinking it would be an easier computation.

Mr. KIRBY: It amounts to what was the difference in each ten feet assuming the straight length of pipe.

A. The length of pipe makes no difference in this calculation whatever. It would be for the specific gravity 65, for each ten feet, it would be .0517. That would be the change in pressure without
any regard to any other changes introduced by flow or the
2135 like. So it would be a deduction or addition to pressure pro-
vided there was no flow from the point on to the point where
the gauge was placed to take the pressure.

Q. While we are on this subject, you spoke of the difficulty of delivering gas because of the ups and downs, I think you used the phrase "knobs and hills."

A. Knobs and valleys, or hills and valleys. I was trying to explain the uneven stages in elevation without any regularity, any plains in it.

Q. On page 2094 the answer was, "That is not the worst of it, it is a question of hollows and knolls."

A. Well, that is better than my term. Much obliged to the stenographer; it is certainly more elegant.

Q. Now, Doctor, if you have gas running along here and it goes up a hill and then down again, isn't that in effect the same as having a pipe on the level?

A. No, sir.

The **Master**: Why not make a diagram of that, illustrating the level and the hill and the hollow and mark it A, B, C and D, and ask the questions and have the diagram marked in evidence and let it be reproduced in the minutes, and then it will be intelligible. Because it will not be intelligible two months from now, and it will not be intelligible to the court, while a diagram would make it clear to everybody.

(Diagram drawn by Senator Page was marked State's Exhibit W.)

Q. Referring to State's Exhibit W, in which we will assume that the line A-B is at sea level, that A-C-B represents a hill having its highest point 100 feet above sea level—and that the C is at the highest point 100 feet above sea level; assuming that the gas is not flowing
and gas is turned on in the pipes will not the increase of
2136 pressure of the gas as it rises from A to C have an effect to
push the gas down the hill to B and will arrive at B at the
same pressure that it started from A?

A. I would not like to accept the term push, but while the pressure will vary constantly in passing over the hill under the condition you named, no flow will be the same at B at the same pressure.

Q. Assuming that the flow has been established, will not the resistance of the gas in passing from C to B equalize the increase in pressure from A to C and establish a substantial equilibrium of pressure from A to B?

A. No man could answer that without having an exact statement of the amount of pressure that would be taken off at each foot of pipe. There would be a general tendency from A to C for the increase of pressure due to change of altitude to compensate for the pressure lost through flow of gas. From C to B, on the other hand, the loss of pressure due to altitude change would be added to the loss of pressure due to flow.

Q. Assume that at B there is an opening to the atmosphere.

A. A full opening?

Q. A full opening, and that there is no gas drawn off between A and B, then how would it be?

A. The pressure at B would in that case not be changed in any respect by the change in altitude, but as to what the exact pressure would be would depend upon the rate of flow.

Q. Take a point half way distant between A and C, which we will call X, and a point half way distant between C and B, which we will call Y, each of which is 75 feet above the sea level, would the pressure be the same at X and Y, the gas flowing through with an opening to the atmosphere at A and B?

A. No.

Q. Which would be the greater?

A. The only gas being taken off is here at B?

Q. Yes.

A. The pressure would be greater at X.

2137 Q. Why would it?

A. Because you have got to have the pressure up to this point X necessary to push that up. In other words, pressure will continue to be absorbed all the way to B, so far as flow is concerned, irrespective of altitude.

Q. And so pressure would continue to be absorbed if the pipe passed on a level between A and B?

A. Certainly.

Q. So that the same condition would obtain in regard to the absorption of pressure whether the pipe was on a level or——

A. Due to flow, exactly, given the same pipe.

Q. Then I will alter my question in this way. Would the pressure be the same at B as it would if a pipe was run on a direct line from A to B?

A. No.

Q. Would it be greater or less?

A. If run on a direct line it would be greater.

Q. Because there is a greater length of pipe going over the hill?

A. Yes.

Q. Now if we assume the same length of pipe then from A to B on the level, the pressure would be the same?

A. In other words, turn your plan over and let it be a turn on the level.

Q. Yes.

A. No.

Q. Would it be greater or less?

A. It would be less, because you have absorbed some in the curve, which is a partial bend.

Q. As I understand your answer, if this line A to B was flat on the ground on a curve——

A. (Interrupting.) That would be the same in either case if the altitude was the same.

Q. That is, if this curve instead of going up in the air was laid on the ground.

A. That is right; it would be the same, if you eliminate altitude, in either case.

2138 Q. The absorption of pressure by distance is the same whether the pipe goes over that hill or whether it goes on the level for the same distance?

A. For the same distance, except as the curves reduce it by going over the hill, we have to introduce bends of one kind or another, but I am perfectly willing to state my position——

Q. Therefore, with the gas passing through a curved pipe on the level, the pressure would be greater at X than it would at Y?

A. Yes.

Q. And would it be the same difference in pressure as it would be at X and Y and passing over the hill from A, C, B?

A. No.

Q. Why wouldn't it?

A. With the same difference in pressure?

Q. Would it be the same difference in pressure as it would be at X and Y and passing over the hill from A, C, B?

A. It would be with regard to the absorption due to the passage of the gas.

By Mr. Mathewson:

Q. But it would not be if you take into account the change of altitude?

A. No.

By Mr. Page:

Q. In passing over the hill you take into consideration the question of altitude?

A. And I say that, as far as the absorption going through the hill pipe is concerned, there won't be any difference, but of course there will be the difference due to the altitude in each case. In other words, the difference due to the altitude will be found in every point as indicated by that altitude; if you put on a gauge and have that condition, it is liable to occur at any moment, if there is no flow on that particular run.

Q. We are supposing that flow?

A. That I cannot answer you without having the data and the rates of flow and how much is taken off each line.

2139 Q. Assuming a constant flow and a free exhaust into the atmosphere?

A. Well, assume that, and then what?

Q. Well, wouldn't the pressure be the same, minus the absorption of pressure?

A. On a hill.

Q. At the points X and Y, or in other words would not the pressure be the same between A, X, and between Y B, X and Y each being at an altitude of 75 feet?

A. The previous questions as I understood them referred to a comparison between this curved pipe standing up vertical and laid on the flat. Is that what you are still asking?

Q. Yes.

A. There would not be the same pressure, of course, if it stood on the vertical as if it stood on the flat. At this point there would be the difference due to the altitude, whether it was flowing more or less.

Q. The flow though would change that difference?

A. It would not change that difference, the difference due to the altitude, in any respect. You would always find a difference there because here you gain and there you lose (indicating on Exhibit W.)

Q. You gave the valuation for the mains, that is, you agreed with the valuation given by Mr. Simpson?

A. Yes, sir.

Q. What calculations did you make to find out whether he was right or not?

A. I took City's Exhibit No. 1 for identification and went over each item in detail on a number of occasions with Mr. Simpson, going into original data as far as I could and going over every step of the calculations individually, making every calculation myself, and finally arrived at the conclusion that the estimate of $12,636,150.04, as the present valuation on a replaced basis, was less than the actual replacement value.

Q. That is you took the figures and verified the multiplications and the results.

2140 A. I did that and a great deal more. I took all the data that he could supply me, cross-examined him carefully on every assumption, agreed with him where I could, disagreed with him in a number of cases where I thought he was too conservative, and arrived at the result, as I said, by saying that he is under the value, and positively I believe that that is the case. Mr. Simpson himself cannot replace those mains in New York under the present conditions for $12,636,150.04.

Q. How many miles of mains did you figure as laid under asphalt pavement?

A. I figured on 90 per cent. of the total mileage, just as Mr. Simpson took it.

By the MASTER:

Q. When you say that, do you mean under asphalt alone or under modern pavements of all kinds?

A. Modern pavements; asphalt, granite block on concrete, wood block on concrete and block asphalt on concrete; those four.

By Mr. PAGE:

Q. It costs a great deal more to lay an eight inch main than it does to lay a four inch main, doesn't it?

A. Eight and four, oh, yes, a good deal more.

Q. Now if a greater proportion of the larger mains were under the cheap pavements, your calculation would be out, wouldn't it?

A. Somewhat out, yes, sir.

Q. There was not presented to you, was there, the exact mileage and size of each main that was under each kind of pavement?

A. It was presented to me at so many miles of each size, with a general statement as to the percentage of these so-called new pavements in New York City. I called for verification and they

2141 gave me the records that they had collected as to details from the Bureau of Highways or whatever it is. In, however, checking off Mr. Simpson as to his percentage, I took very careful count of the points you have named and assumed a figure for the pavement which I felt was entirely safe, even to cover that point.

Q. Did you go to the books of the Company to discover what it had cost them, or did you assume the costs?

A. I went to many of the records of the company, including Mr. Simpson's black book, and Mr. Simpson gave me free access to all the information he has, as far as I know. I put him on the witness stand.

Q. Did you take account of the books of the company for excavating, and did you take the actual cost of excavation that you found on the books, or did you assume the figures?

A. I took the figures submitted to me by Mr. Simpson as the result of their own experience, necessarily varying, and having to be more or less averaged, and checked them up by my own extensive experience, as to what it would cost for labor and so forth.

Q. What figure did you take as the cost of excavation?

A. I took as the figure for all labor and cartage per foot for one and one-half inch fifteen cents, and so on down. I will give you the figures if you like. I took the figures that appear on the exhibit referred to for that item.

Mr. Mathewson: State's Exhibit 1 for identification, to which counsel is referring, refers to the situation "if the current prices for pipe and lead" are used, that referring to the prices current in January, 1906, when this was made up, although it relates to the mileage of October 31st, 1905, which was the amount before the Gas Commission.

2142 Q. In your computation for labor and cartage you included the item of labor and excavating and laying and back filling and in handling the pipe?

A. I have.

Q. Did you include labor for repaving?

A. Everything for paving is handled in that other item.

Q. You valued the pipe differently?

A. The pipe itself, yes.

Q. Did you calculate a uniform price for labor and cartage in the case of the excavation in rock as you did on excavation in dirt?

A. Not exactly beceuse we went over the figures on the average as to what it actually cost per foot, which would take into account those variations, of course. The facts would show for themselves in the average price as made up in the records.

Q. What percentage of the excavation throughout the City did you figure to be in rock?

A. I figured the same as Mr. Simpson—10 per cent.

Q. And you figured what it would cost to lay each pipe separately, entrenched by itself, and assumed an opening for the laying, an opening in the pavement, and the repavement, in the cost of these pipes?

A. Yes, sir; that is, each size of pipe; not each pipe, I didn't mean computed each individual job, but each size of pipes we considered separately, just as shown on this table.

Q. A great many of these mains were laid by the original companies that afterward consolidated in the Consolidated Gas Company, weren't they?

A. I presume so.

Q. And that in some streets there were mains of your company?

A. No doubt of it.

Q. If you were relaying those mains to-day would you lay them separately, or would you lay one larger main, if the requirements of the delivery in that street required the diameter of the two mains?

A. Personally, I should lay two mains.

2143 Q. But you would lay them at the same time?

A. I would lay them at the same time.

Q. And there would be but one opening in the pavement?

A. No, two.

Q. You mean by that, you could lay one each side of the street?

A. Yes

Q. Aren't there cases where mains were laid on each side of the street and duplicated by a different company?

A. I imagine there are.

Q. In such a case as that, would you lay four mains?

A. If I was starting with a new proposition.

Q. Well, if you were reproducing it as you are in imagination now?

A. Well, I am reproducing this particular plant just as it stands, just the sizes.

Q. You are not reproducing the distributing system. That would take care economically of the output of gas as it exists to-day.

A. I haven't studied that sufficiently to say just exactly how I would lay it out; that would be a problem by itself. I am taking this property as I find it, and valuing it as to what it would take to reproduce that property in the present conditions.

Q. That is, if originally three competing companies laid mains in the one street, you would produce to-day, I mean on your theory here, you would reproduce those identical three mains?

A. That's about it.

Q. Although each main might have been sufficient in itself to carry the delivery of gas to-day?

A. I have not gone exhaustively into that question as to whether one pipe would be sufficient or not, but I don't imagine it is so at all.

Q. You have not studied, in making your estimate of the cost of reproduction, the distributing system of the company; you have not studied present conditions except that they are to take the pipes as they are now in the ground, and figured what it would
2144 cost to put them there now?

A. That is practically what I have done. I have studied present conditions.

Q. To what extent?

A. To the extent of understanding how they are conducting the business, but not to go to work to make out an engineer's diagram as to what exactly in my opinion would best provide for the present demand and in the most economical way provide for the demand in the future.

Q. As to the mileage of mains of particular pipe, you took Mr. Simpson's statement, you did not go the maps to discover and check that up, did you?

A. No, sir, I did not.

Q. You did not go to the maps to discover where these particular mains were situated?

A. No.

Q. Nor how many of them were in particular streets?

A. No.

A colloquy now ensues between counsel which the stenographer is directed not to report.

Q. In arriving at your conclusion you included the 27 miles of mains that are not now in use by the company, did you not?

A. I included this whole mileage of 822 miles, nearly, I think it is.

Q. It is 822.2?

A. Yes, sir.

Q. You know that Mr. Simpson has testified that the active mains of the company are only 795 miles?

A. I do not remember the exact figure. I remember that he testified that there was some few feet less active than the total number of 822.

Q. 27 miles would not be some few feet; it would be some many feet, wouldn't it.

A. It is not a large percentage for New York.

Q. It helps out pretty well on the final estimate of cost, does it not?

A. Yes, money is invested in it.

2145 Q. If you were reproducing this system to-day you would not reproduce pipes that were not necessary and not in use?

A. No, I might put in pipes that are not absolutely necessary at the time, and probably should if I had any sense at all.

Q. Then, such pipes as you would put in to take care of future business would be extensions beyond the mileage of mains, here, would it not?

A. That would depend upon a very careful survey of what there is here, and whether or not there is provision for the future, which I presume there is.

Q. If you were called upon to estimate upon the cost of producing to-day a distributing system to meet the needs of the City of New York, in the Borough of Manhattan, you would take into consideration all the conditions surrounding it and the most economical way of handling that distribution, would you not?

A. I certainly should, yes, sir.

Q. That was not the method which you used in arriving at your figures of the cost of reproduction here?

A. My method was to take the pipes as listed to me and calculate what it would cost to lay those pipes under present conditions.

Q. For the purpose of establishing a fund for depreciation, you set a value upon the plant that is to be reproduced, do you?

A. Yes.

Q. What value did you take in the case of the Consolidated Gas Company?

A. I took for the value of depreciable property $34,419,418.38.

Q. Did you separate that into different items, that is, as to manufacturing plants and buildings?

A. No, I took the manufacturing plant as a whole and the distribution plant as a whole.

Q. What figure did you place upon the manufacturing plant?

A. On the manufacturing plant in Manhattan, eliminating for this particular calculation the 18th Street plant, I took $14,329,591.17.

Q. And the distributing system?

2146 A. The distributing system, including the general item to which I have referred before, $12,589,827.31. And for Astoria $7,500,000, depreciable property.

Q. Astoria, they have not finished building it yet.

A. I have to include it in an estimate of this kind, because this has to do with the future as well as the present. It is practically finished, and depreciation will commence the moment that things are paid for and delivered over. Of course this represents not nearly what will be the full value of the plant when completed. I am modifying my estimate somewhat on that line for the present estimate.

Q. In figuring your amount necessary to take out of the gas sales, you have figured that on the 13,300,000,000 cubic feet as delivered to-day?

A. Yes.

Q. While the plant, including Astoria, would deliver in the neighborhood of 15,000,000,000, would it not?

A. Yes, but I have not included the value of the plant when it is delivering 15,000,000,000. I made a modification on that account.

Q. What modification have you made?

A. I have taken the estimate of $13,134,519.65 and I have taken out the tunnel and the land, although, of course, they would not depreciate; but they have value as far as the plant is concerned, and you have got to consider that. I have taken out for part value of the holder, because it is not finished, and I have taken out the coal sheds, etc., to the amount of $1,500,000. In other words, I have deducted from the $13,134,519.65, on account of the things that are not involved in depreciation, on account of things that are not at present depreciable, reducing that amount then to $7,500,000. This in my opinion, will increase the depreciable property,—when the plant is completed, to about $9,300,000. There may be considerable more than that due to other items as they will be put in as specified in the supplemental estimate.

2147 Q. You have made your computation on the idea that a forty-year term would represent the life of the plant?

A. Yes, as a whole, averaging everything up.

Q. If you should value this plant next year would you deduct one-fortieth?

A. Valuing the plant next year?

Q. Yes, one-fortieth of your valuation of this year?

A. It would depend on what I should see when I look the plant over.

Q. In twenty years would you assume that the plant had depreciated about one-half, and if you were called upon to value it at that time would you take that into consideration?

A. I should confirm my previous estimate by careful examination, and I should particularly look out to see whether they had put back into the plant, without charging to construction, amounts to compensate for depreciation.

Q. Assuming that they, having been advised as to your theory, had adopted it and followed it out in every particular, would you then, if called upon to value the plant, value it at one-half of the valuation?

A. If they had adopted my theory and I should be called upon to appraise it at the end of forty years, and my estimate was practically correct, the result would be to appraise it at exactly the same value.

Q. Exactly the same value as to-day?

A. Yes, sir.

Q. That is, you mean if the same amount of extensions had been made?

A. No, I am not referring to the extensions in general. I am simply referring to such additions as the Massachusetts law puts it, "Additions and enlargement as against depreciation." I think that is the way it is expressed. If I had found that they had carried out my theory—I say mine, it is the one I am using, it is not mine; it is the one that is used all over—if I found that they
2148 had carried that out, and had, in addition to the amount actually expended for actual renewals, so that the plant was brought back not only by repairs, but by renewals, out of this fund—if in addition to that they had extended and enlarged their plant by the use of this depreciation fund, and that was within the scope of my appraisal, if my theory is correct, the appraisal would be the same, providing the units of value would be the same twenty years hence.

Q. That is, assuming that they had expended in renewals one-half the value of the original fund, or whatever they call it here?

A. Yes.

Q. That is, that they had expended $17,000,000?

A. Always providing that nothing has entered in to disturb the calculation. As I say, I should go and look at the plant and examine it and value it according to the values then apparent.

Q. That is the purpose of accumulating this fund or using this fund, because there are elements which enter in to disturb your calculations?

A. Yes, and as far as human foresight can go, you do introduce those elements.

Q. As to the portion of the Consolidated Company's plant that was taken over in 1884, did you apply this theory of depreciation in your valuation?

A. Certainly not; that was an entirely different problem. I had no means of knowing what they had spent or had not spent. I took the plant as I found it.

Q. And you found that it was more valuable to-day than it was 20 years ago?

A. Yes, sir, according to present prices.

Q. Therefore, not having been operated on your theory, the plant is worth more than if they had operated on that theory; is that it?

A. No, sir.

2149 Mr. MATHEWSON: The plant to-day is not the plant of 20 years ago, Senator.

Mr. PAGE: It is with the exception of $5,000,000 which you have spent on it.

Mr. MATHEWSON: It is not the same plant; it is changed radically.

Q. And if you were called upon to value this plant 20 years from now you would look at the plant itself and its appearance and value it on that, and not take into consideration this element of depreciation. Is that right?

A. I should not go much by its appearance. I should go much deeper than that.

Q. Yes, I assume that you would make a careful examination of its physical condition at the time?

A. Yes, sir; in other words, I would check up my estimate.

Q. You would not take into consideration that, although that plant was working efficiently, that, nevertheless, there was a time coming when it would disappear like the life of a man would disappear, that you to-day were doing better work and accomplishing better results than twenty years ago, but you were twenty years nearer the end of your life. You would not take into consideration that depreciable value.

A. I should take into consideration exactly what I take into consideration in this estimate, and everything else, the best estimate I could make at the time as to its life, and so forth, as to what its present value, all things considered, would be; in other words I should not be estimating in the same sense with the facts before me, and instead of foresight I would have backsight, or a mixture of both.

Q. Then it would be immaterial to you in that estimate or appraisal as to whether they had spent $30,000,000 or $17,000,000 or had not spent anything?

2150 A. Oh, no, I should take everything into consideration that I could get hold of.

Q. Yes, but if the plant was in perfect condition and was producing the results that it was designed to produce you would not care whether they had spent $10,000,000 or $50,000,000 on it.

A. I should want to make up my opinion as to how much longer they could continue to do that same thing. There must be a limit to the life of a plant by exhaustion of one kind or another.

Q. Then instead of using the theoretical limit of life as forty years you would try to arrive then at the actual limit as near as you could estimate it from its past experience and present condition.

A. And then have to become theoretical again as to the future, just as I have in this case. I have theorized in this case that this present plant, all things considered, will have an average life of forty years.

Q. The 1.05 per hundred dollars invested at 4 per cent. compound interest in forty years would equal the value of this plant?

A. Yes.

Q. And that is a very general way, is it not, of handling a sinking fund for depreciation?

A. I think it is not at all general in the United States in my experience. The case I have just quoted, one of the few under legal restrictions, in Massachusetts they don't do that. On the contrary the law, and the new law at that, specially provides for its being expended for renewals, etc., and the municipalities objected to putting it out in any form of sinking fund, thinking it is better used in their own business.

Q. That only relates to the municipal operations?

A. Yes.

Q. Now you prefer to take instead of 1.05 on the business today, 2.5?

A. I do.

Q. Because $2.50 without interest in 40 years will equal $100?

A. Yes, sir. In other words you are spreading the load evenly. If the total loss is $100, the total loss is going to be spread over 40 years. Then you spread the load evenly by putting $2.50 on each year. 2151

Q. Well, the load would be spread evenly by taking $1.05 each year, wouldn't it?

A. No, sir, it would not.

Q. Your idea is that this $2.50 invested in extensions will produce a greater return than $1.05 invested at 4 per cent. compound interest, is that right?

A. Not exactly. It is somewhat in the direction of my line of thought. My idea is that the $2.50 devoted to compensation for yearly depreciation, so much of it as is not used during the year currently for renewals, what I call current renewals, will be put into extensions of plant as an offset of the depreciation that has not yet developed, and so much of it as goes to those extensions, will win earnings.

Q. The ordinary repairs which were made, and which you have specified you would take out of this $2.50, you have already taken out in your computation, haven't you?

A. In my computation I take out the ordinary current repairs for that particular year as they would vary very widely from year to year and do not furnish a safe figure for average results, and I introduce in place of that the average current expenditures for repairs during the period of 20 years.

Q. That was an entirely different factor than is involved in the depreciation factor in which you have provided a fund to replace the plant 40 years hence, $2.50, is it not?

A. No, sir, it is not. It is quite in conformity. The whole thing is very consistent in my opinion.

Q. But as I understood you to say, that there is a necessity for providing a fund which will take care of the invisible depreciation——

A. Yes.

Q. That will result in death at forty years from the birth?

A. That is right.

2152 Q. And that $2.50 on the $100.00 is the amount that is invested in the plant?

A. That is right, and that amount is fixed after considering the repairs. I consider the whole problem together. I know some companies I examined I should not put in anything for depreciation at all, because there is so much money being expended for repairs, current renewals and small extensions, and the like, which do not appear as expenses, but which really go into that account. They all go into the wear and tear account, and when I find that to be the case I even go to the point of cutting down.

Q. Now, you invested $2.50 instead of putting it in the bank, putting into the gas business in the way of extension?

A. Yes, sir; part of it.

Q. And you figure, I suppose, that that would bring a return of 10 per cent.?

A. No, I do not go as far as that. I figure it will give us at least 4 per cent., because we have to bear in mind that at first the investments of the gas companies do not bring in large returns; they have to be built up.

Q. But, Doctor, we are not taking a new gas company and starting it; we are taking a gas company that has been established for years.

A. I understand.

Q. And we are providing for that.

A. Yes.

Q. Let us get away from any new gas company idea.

A. I have not introduced the new gas company idea. I was considering this particular case, and had fully in mind what you had.

Q. Let us get down, eliminating the new gas company——

A. I would be very glad to eliminate it, as far as I am concerned, because I have never introduced it.

Q. And answer the questions.

A. I will answer them just as you ask them.

2153 Q. You calculate that the Consolidated Gas Company would earn on those extensions 10 per cent.?

A. I do not at the start, no, sir.

Q. Why not at the start?

A. Suppose it is an extension of pipe; they have got to wait until they get the business and build the good will up. Now if it is renewal, that is another proposition; that is not new money, it is a renewal of the plant as it exists. If it is an extension of plant which is not fully demanded, but it is demanded partly for the increase of business and partly by wise management, for increase in the future, which must be provided for, it is not earning to any such extent as 10 per cent.

Q. Give us the amount it would earn on your theory?

A. I don't know. I should have to have each case by itself.

Q. But we have got a fund here that you built up, $2.50, and you say that it would earn so much more as one reason you want it put into the gas business instead of putting into the bank to-day a smaller sum which will earn 4 per cent. compound interest. I want to get at what that return will be which makes this a more advantageous theory of handling the money?

A. The only trouble is you have the wrong idea of what my theory is.

Q. I think not.

A. The money reinvested in the business will earn a certain amount, and I simply assume, and feel safe in assuming that, that it will, as a whole, average 4 per cent., and if it does average 4 per cent., then we are putting no greater load on the business than if we put it out at 4 per cent. and deprived ourselves of that as working capital and had to borrow other capital for that purpose.

Q. Well, assuming that it earns 4 per cent., how much would that 4 per cent. on the $2.50 amount to in forty years, the interest itself compounded?

2154 A. You would not have that interest. It is the additional interest that comes in from that $2.50 that enables you to pay the $2.50 as compared with the $1.05. For instance, suppose instead of figuring it that way, I say I will not pay in $2.50, but I will put into the business the same amount that will be required if I put it into a sinking fund.

Q. Well, what are you going to do with that 4 per cent. you earn—distribute it to the stockholders?

A. No, it is required to make up this very amount. Suppose I say I will put in $1.05 the first year, and I will go on putting in a like amount that I should have to pay or lose by way of interest earned in the sinking fund. I would then have to put in $1.05 the first year, the next year I would have to put in $1.09 to carry the interest——

Q. You are assuming that the money is not invested where it would compound itself, is that it, but——

A. I am assuming that it is compounding in the business, and having the earnings, I must take them out to furnish the $100 at the end of forty years, because forty times $1.05 does not make 100, but $42, and some one else supplies that $58. They don't do it for charity, the banks, for instance; they do it because we give them the use of our money.

Q. But there are some charitable individuals that are very glad to do that.

A. I have never met them.

Q. You don't know of any such banks?

A. I don't know of any banks that are willing to give you $58 for the use of $42.

Q. They are reinvesting the money each year and compounding it that way?

A. I am giving that——

Q. Let us eliminate the charity and get down to business.

A. If you are carrying a sinking fund on your own books and

prefer to do it this way rather than put up the $2.50 as an even load throughout the term, what you would have to do would be to pay $1.05 and a different amount each year according to the
2155 accumulated interest until the last year you would have to pay into your sinking fund to cover principal and interest 4.8742, the total coming out nearly right, $99.77689.

Q. That is assuming you had not invested your sinking fund at interest, but that you put away a sufficient amount of money each year to have taken care of the fund and interest compounded?

A. That is putting it right into your business, and you have the return from your business to help pay these amounts, of course, the same as in other cases. But you have an uneven distribution of the load instead of an even distribution.

Q. But this $2.50 you put in your business is going to earn something, isn't it?

A. Yes.

Q. Now at the end of the 40 years what becomes of those earnings?

A. They have been put back into the business and you have the increased earnings from the additional amount you put in instead of putting it out from your own hands and getting in more capital to do it. One compensates for the other.

Q. At the end of 40 years, having put in these earnings, and they in themselves having earned the 4 per cent., therefore you have been compounding your earnings or interest, whichever it is, and take out $2.50 each year and invest that and invest your earnings on that $2.50, and at the end of 40 years what sum would you have?

A. $2.50——

Q. $2.50 compounded at 4 per cent. would amount to how much?

A. I can figure it out in a minute.

Q. You have some tables with you, have you not?

A. Yes.

Q. I would like to have that down.

A. 4 per cent. for 40 years?

Q. Yes.

A. I cannot get that direct from any table I have got. I would have to calculate that out. I will give it to you. Are you
2156 going to examine me after the lunch hour? I can give it to you after lunch.

Q. I suppose Mr. Mathewson will.

Mr. Mathewson: Very briefly.

Q. Then you will be back after lunch, doctor, and can give it.

A. My tables do not give that direct.

Q. Now if at the end of 40 years we are going to buy this plant, you would take into consideration the original plant and extensions and capitalize that, would you not?

A. If I was going to buy the plant I should take into account all the property that was offered, tangible and intangible.

Q. And that would include the original plant and all these additions?

A. Yes, whatever was offered to me.

Q. Now, Doctor, in addition to accumulating this fund you want 5 cents on every thousand feet of gas sold besides, do you?

A. No, I do not want it.

Q. Well, you take it?

A. No, I do not take it as a permanent thing. I simply ask that it shall be reserved as a cushion, because if the price is to be fixed we cannot tell what contingencies are to be met. Even by an experience of twenty years something is liable to happen every day, and I have mentioned a great many of them, all of which I have experienced myself, every one of them; and therefore I say that the company should be allowed for a limited time to take such a reserve, say until they have built up one-tenth of their capital, and then to cease. It is a practice that is quite regularly followed on the other side, where they are very carefully controlled by Parliament.

Q. Well, that 5 cents on each thousand feet of gas as sold would amount to some six hundred and fifty thousand dollars a year, wouldn't it?

A. Yes, I think so; yes.

2157 Q. Of course, the sales of the Consolidated Gas Company increase each year, and have done in the past, and probably will in the future, is that right?

A. I cannot say much about the future. The last year they have increased very little. I think .85 of one per cent.—something like that. They will get an increase, of course—I won't say of course; I don't know—they will get an increase probably from an increase of population.

Q. Well, even eliminating that increase and taking that amount that you want reserved, or that you suggest should be reserved, at six hundred and fifty thousand dollars a year, how long would you take that out—how large a sum would you accumulate?

A. Until it accumulated, say, to one-tenth of the capital.

Q. That is, one-tenth of $80,000,000?

A. No, one-tenth of the capital involved in this particular branch of the business.

Q. That is, this $34,419,000?

A. No, that is the depreciable property; one-tenth of the capital actually and actively employed in the gas business.

Q. That includes land and everything else?

A. Yes.

Q. That would not include stock holdings, you mean, in other companies?

A. No; just as if the Consolidated Gas Company was a separate business standing on its own bottom.

Q. Well, for the purpose of this argument we will make a violent assumption, and assume that the land is worth $15,000,000. You would add that to it, would you?

A. Yes, for this purpose.

Q. Yes; I would not for any other, Doctor. Now, that would make $49,000,000 in round figures, or we will call it $50,000,000. Now, you would go on taking out this $650,000 until you had accumulated how large a fund?

2158 A. About $5,000,000, using it in the meantime for the purpose named, for a cushion; if you had an explosion or anything of that kind, you could fall back on that.

Q. What would you do with that money; if you got it this year, what would you do with it?

A. It would depend whether we had any reason to draw upon it. If not, let it out.

Q. Would you seek some charitable institution?

A. No, I should not expect to do much with a charitable institution.

Q. Would you put it in the bank and let it lie there without interest?

A. I would invest it the very best way I could, whether in the business or any other way.

Q. Well, the best way——

A. It would not be capitalized, and would not be given out as dividends.

Q. The best way you could discover to invest your $2.50 was to put it back into the gas business, it being one of the most productive things you could think of?

A. Yes.

Q. Would you put this back in the same way?

A. I don't know whether I would or not. There would be no objection to doing it in my mind.

Q. And if you did and there should come some of these untoward circumstances which you think might possibly happen, where would your money be to take care of them?

A. You would not have invested that in the business unless you needed that extra capital. You would simply have then deferred the bringing in of the extra capital. When the trouble occurred you would now get that capital which otherwise you would have obtained outside in the first instance.

Q. Then in eight years, Doctor, you would have taken out 2.5, which amounts to how much on $34,419,418.38?

A. Do you mean per year?

Q. Yes.

2159 Mr. Mathewson: I do not see where you get your eight years, if you take out your $650,000 a year and it accumulates. It would take a shorter period than eight years considerably, I should suppose, as that would be without accumulation, would it not?

The Witness: The amount you asked me for would be about $860,480.

Q. Take out $860,400 for that, and on your five cents you take out $365,000. That is, for this purpose you would take $1,225,400 each year?

A. For that purpose, no, sir.

Q. What?

A. No, sir.

Q. Each year up to the time you——

A. I think you are entirely losing sight of one very important element. Before putting in that amount I have deducted, if you will refer to this, the actual expenditures, and as this is based on the full period, I, of course, deduct final renewals. Now in this particular case the final renewals are involved in that 10 cents, but that 10 cents not only involves things in the way of estimates, but things actually spent for in the way of renewals. Now those final renewals—this company has actually spent in 20 years three cents a thousand, so I do not put in the total of that on estimating, but I simply take out the amount which is actually spent and put back in place of it the amount I conceive to be large enough not only to cover the amounts actually expended, but also the amounts which have not been met yet, but are simply accruing liabilities.

Q. Then do we understand that this company has been taking care of final renewals currently?

A. To a certain extent.

Q. And to such an extent that the plant to-day is in as perfect condition as a new plant?

A. No, I do not say that.

2160 Q. I know, but another expert has.

A. It is in good working order, but its life is more or less exhausted. Another way of looking at it is that I include in my estimate for up-keep of the plant, including this amount you refer to, this $2.50, 14.15 cents, whereas the total amount expended for current renewals as found and repairs has been 10.60, which is slightly changed by the figures that have been involved since from the State Commission's amount of 10.89.

Q. As I understand your testimony in regard to this five cents, that is to provide for fluctuation of business, to provide for explosions if there should be any; it is to provide for accidents and injuries and things of that sort?

A. And electrolysis.

Q. And electrolysis?

A. Yes.

Q. Well, that would be depreciation. You are taking care of that pretty well in the depreciation.

A. Absolutely not a cent.

Q. Here is your distributing system, you are going to depreciate that in 40 years and we have mains lasting for 75 years which will possibly last longer?

A. And on that distributing system they have spent in the last 20 years the full amount which I allowed for depreciation.

Mr. MATHEWSON: The full amount you allowed for depreciation for the distributing system?

The WITNESS: Yes.

Q. They did that by putting out new mains?

A. I am referring to the mains not charged to new mains, but charged for replacements and the like, just exactly as I would do it.

Q. Then, do I understand you to say that in the distributing system they did expend this five million dollars, this five cents?

A. No.

2161 Q. You mean that in their mains——

A. Now you are talking about the reserves.

Q. Let us keep to one subject if we can.

A. Yes, I would like to.

Q. I was not talking about taking care of your mains out of this five cents until you said you were.

A. No, sir, you spoke of electrolysis and asked if I had included that in the depreciation for the mains, and I distinctly said I had not.

Q. Yes, I think that is correct. Then, to this speculative field of electrolysis about which we know nothing, whether it will depreciate or not?

A. I don't know whether you know about it or not, sir, but I do know. I know it is a very serious hazard in the business, very serious. Whereever there are stray currents we expect electrolysis more or less, and there are stray currents in the City of New York.

Q. To that extent my ignorance will correspond to your knowledge, doctor?

A. All right, sir.

The Master: Drop the persiflage and get down to business. What is the question?

Q. My question is that this five million dollars is to take care of explosions and unexpected accidents and fluctuations in business.

A. Fluctuations in prices of labor and all the things that make up a variation in cost, which variations we find all the time happening.

Q. And if a new company was starting in business it would be well for them to have reserve to meet those?

A. Yes, to accumulate to meet them.

Q. But you take now an old company that has been going for years and has had a surplus which it could draw upon to pay dividends when their earnings did not warrant it, would you also tax the public five cents per thousand cubic feet of gas to supply them with an additional reserve fund of $5,000,000? 2162

A. I have not involved any question of surplus. I have simply taken——

Q. I know, but are not these very items that you speak of things that should be taken care of out of surplus if there is one?

A. No, I don't think so.

Q. That is, you think the people for eight years or less should go down in their pockets and pay $5,000,000 to this company in order that they may have a fund for such uncertain contingencies, and not call upon their surplus or stockholders by a reduction of their dividends?

A. That will depend, of course, upon whether they have been drawing full dividends right straight along, and it will also depend upon whether they are going to be allowed to maintain their own business, and whether an arbitrary price is to be fixed, and whether, therefore, an arbitrary price being fixed, they should not be allowed to have a cushion in between the actual present cost and the selling price in addition to return on capital.

Q. Then this five cents, as I understand it, is a defense against depreciation in the selling price of gas, or a decrease in the selling price of gas and a cushion between the Legislature and the gas company?

A. In a measure, yes.

At this point a recess was taken until 2:15 P. M.

2163 After Recess.

Alexander C. Humphreys resumed the stand.

Cross-examination by Mr. Page continued:

Q. Doctor, you were to have made a computation as to what 2.50 per hundred dollars of depreciable value of the plant at 4 per cent. compound interest would amount to for forty years?

A. Yes, sir. That is $238.09.

Q. At the end of forty years by investing your 2.50 in the business and reinvesting the earnings at 4 per cent. in the business you would have at the end of the forty years 2.38 times the depreciable value of the plant.

A. No, sir. It is a different proposition entirely when you put it that way. If we took the 2.50 and placed it outside of the business in a sinking fund where we did not have the use of it, then it would amount to that money, but if they do as I said where I used the 2.5 we would simply have year by year not only the active current depreciation taken care of, the current renewals made, but we would have the final renewals paid for, currently, either by renewals or by plant investment to offset it. There would be no opportunity for accumulation in that sense.

By Mr. Kirby:

Q. Doctor, in the table you have put in evidence, pages 1943 and thereon, you have put in as a depreciation factor a figure which is based on this 2.50 which you have figured in the way you have stated, have you not?

A. I have put in such an amount to be at once paid out for renewals or reinvested as an offset to the current undetermined depreciation. In other words, the accruing depreciation. In other words, I do not let it accrue. 2164

Q. Whether you let it accrue or not it is for the purpose of taking care of that unseen depreciation which you said will so affect a plant like that of the Consolidated that in forty years an amount will have to be expended to keep it up to its present value.

A. Equal to its present value, no. Expended right there at that time.

Q. At what time?

A. Year by year, provided always that my premises are correct, that the business is an active one and such amounts as are not required for the current renewals can at once be actively put into plant as an offset to that accruing depreciation.

Q. And if this amount were not obtained from this fund you speak of, where would it be obtained from?

A. I don't know. I have never thought of such a contingency.

I have always worked on the principle that I must include in my cost not only the cost items which were made apparent by demands for payment, but accruing liabilities and that undoubtedly must be kept intact in that regard.

By Mr. MATHEWSON:

Q. Included in what cost, cost of gas?
A. Yes, sir cost of production.

By Mr. KIRBY:

Q. Do you know what course the Consolidated Gas Company has pursued prior to this time?

A. As far as I understand, to paying for their future renewals and not setting aside any definite sum until of late, when they set aside a sum of ten cents to cover that and many other items.

Q. And in current renewals did they include such renewals and all renewals which you consider are to be covered by your depreciation factor? 2165

A. They covered as I understand all such renewals as became apparent to them at the time currently but they did not take care of accruing and undeveloped necessities.

Q. And your factor is to take care of such accruing and undeveloped necessities is it not?

A. Certainly.

Q. And that amount if not obtained from the consumer that is from the price paid for gas, would have to be obtained from new capital, would it not?

A. If you like to look at it so. I should say it would be obtained from the depreciation of the capital already invested. In other words, you would impair your capital to that extent but it would not be new capital.

Q. So no moneys would have to be expended? If it were merely an impairment of the present capital no new moneys would have to be furnished to meet these expenditures?

A. Certainly there would be. You have got to keep the plant up. First or last you have got to keep your investment unimpaired.

Q. And so if it were not obtained as I said before from moneys received from consumers in the price paid for the gas it would have to be obtained either from the reserve fund if the same existed or if the same did not exist from new capital invested in that business?

A. No, I should not put it that way. It would be obtained from new money brought into the business but it would not be from my standpoint new capital. I should not feel warranted in considering it new capital. I should simply consider it money obtained somehow to repair losses I had made.

Q. And not new capital being received it is not an extension of the present business?

A. Not an extension, no, sir.

2166 Q. Now, this fund which you would obtain in some way, whether from an addition to the cost, either from the consumer in the price he paid for gas or in a loan or in some manner you desire or you state it is advisable to invest in the gas making business, do you not?

A. I work on the theory——

Q. Answer the question.

A. I will answer it just as I please. You cannot answer a question for me.

The Master: Repeat the question.

(Question repeated.)

Mr. Page: I ask that the question be answered yes or no. I think it is capable of such an answer.

A. No.

Q. According to your theory as set down in the statement to which I have referred, in what do you suggest or recommend that such moneys be invested?

A. To commence with, as I have tried to explain, you won't have the money to invest. As has been shown by my testimony you would only have a limited portion of it because I not only include in my 2½ per cent. the amount to cover accruing depreciation, but I also cover the amount which is actually expended from year to year; and I therefore state that in addition to the amounts which are so expended currently and have been expended currently for the past twenty years, the additional amount, part of the 2½ per cent. will be not invested for I do not consider that the correct term, but will be put into plant as an offset to the value of that accruing depreciation of the plant already established. The total investment will not have been changed.

2167 Q. In other words, this 2.5 factor when used, is to be used not only to take care of this depreciation about which you have testified, but also to take care of current renewals; that is, to keep the plant in proper repair and condition, or do I misunderstand your testimony in that regard?

A. I am sure I don't know what you do. The 2½ per cent., according to the figures that I have prepared, have nothing to do with the repairs, as shown on that page of my statement, but it does include the amount expended in addition to repairs, for renewals and replacements as made. In other words, if they take the repair amount which I include and also this 2½ per cent. amount and add them together, it is my estimate of what the difference between that amount and the amount actually expended for repairs, current renewals—the difference between those two is what I estimate as necessary to put in for deferred renewals.

Q. Then do I understand you in saying that these current renewals, that is, the sum expended therefor, would be expended out of the depreciation fund, however, the same might be invested?

A. Certainly, sir. That is what it is for.

Q. And the proper amount to set aside for that purpose, whether they take place this year or next year or at any period in the life of the company will be sufficient if it is based upon a two and one-half per cent. basis?

A. Upon the basis of the figures that I obtained from the Consolidated books for repairs, if I add to that an amount which is indicated by the two and one-half per cent. on the depreciable property I shall have an amount which in my opinion will keep the property at par value from year to year.

Q. Then two and one-half per cent. in itself would not be sufficient?

A. Certainly not.

Q. What would be sufficient?

A. I have indicated it.

Q. Will you show where it is?

2168 A. The total per cent. will be about 5.4 per cent., including not only current repairs, current renewals, but deferred; in other words, total maintenance.

Q. That is based upon the experience of the Consolidated Gas Company for the past twenty years, taking into account the current renewals as shown in one of their exhibits, referred to in your statement, appearing on pages 1943 and following, you consider them an addition to the amount they have spent yearly for repairs for the upkeep of their plant, that they should have set aside a sum reckoned at 5.4 per cent. on the amount invested in their gas business to take care of this depreciation factor about which you have testified?

A. Certainly not.

Q. Then what would the 5.4 take care of?

A. It would take care of what I understood you to ask me. If on the basis of my statement it required 2.5 per cent. to take care of renewals in addition to repairs, 5.4 is what it would require in per cent. to take care of the total up-keep.

Q. And what do you include in the total up-keep?

A. Repairs, current renewals and final renewals.

Q. And are those items the ones which your depreciation fund would be used for?

A. No, sir.

Q. Which of them would it not be used for?

A. It would be used for the total renewal, including the amount as shown in the books as having been spent for the last twenty years.

Q. Well, is that not what I have said in regard to the 5.4?

A. No, sir.

Q. Wherein is the difference?

A. I cannot follow your reasoning, Mr. Kirby. It is not it at all. If you are going to ask questions you can draw out anything you like from them.

Q. Well, you know what we are trying to get at?

A. I am sure I do not. Lord knows if I knew it I would tell you right off and save the trouble.

2169 Q. I think we can come to an understanding?

A. Personally, I doubt it.

Q. You desire to set aside a certain fund?

A. I don't desire to set aside a certain fund at all. Right there we do not understand each other.

Q. You recommend in this statement that a certain amount of moneys be taken from the earnings of the company for the purpose of caring for depreciation, is that true?

A. Quite.

Q. You state on page 1949 as follows:

"My estimate therefore is not made up on the exhaustion of the plant by actual rust or by anything of that kind, but what I believe, all things considered, the life of the plant, when the plant will have to be renewed by reason of exhaustion of life. In this case I have taken what figures out to be almost exactly forty years, and I take 2½ per cent. therefrom as the right amount for forty years, and I take 2½ per cent. on the depreciable property, and having found the amount I divide it by the amount of sales and show a cost per thousand as we have in this statement."

A. Quite correct.

Q. Does it not follow from that statement that the 2½ per cent. which you recommend to be set aside is for the purpose of taking care of those things which you mentioned; that is, not exhaustion of the plant by act*aul* rust or anything of that kind, but by reason of the exhaustion of the plant, giving it a life as you estimate, 40 years?

A. In part you are correct.

Q. In what part am I in error? That is what I am trying to get at.

A. I am not offering any suggestion to set aside a fund—on the contrary, I have tried to maintain all along not to set it aside, but to put it back into the plant.

2170 Q. Well, we will assume that it is put back into the plant. My first inquiry is directed toward whether or not that 2½ per cent. item is a correct item to be used for this depreciation, to which I have just referred, and outside of such repairs due to rust and other things, which you may also have reference to?

A. No, sir; repairs due to rust, &c., if we can detect them, are included in the repair account, but not included in that 2½ per cent., for renewals which are made currently and all other things which tend to shorten the life of a plant or tend to terminate its life, rust and everything included; but rust we would probably detect from time to time, and that would be charged to repair account.

Q. It would not be paid out of that 2½ per cent. account?

A. No, not what we could detect; what we could detect we would repair.

Q. I think we understand each other on that score.

A. I do not know whether we do or not.

Q. I assume that we do.

A. I do not assume it. I have had very little indication that you understood it.

Q. I have a very good indication that you quite understand it.

A. Yes, I understand that perfectly.

Q. Now then, we go on: We take this 2½ per cent. and you desire that that shall be invested in a certain way, and recommend it be invested in the plant itself in some way, don't you?

A. For a specific answer I should object to the words invest or re-invest.

Q. Should be expended in the plant?

A. That is better, yes.

Q. And if I understand your testimony correctly, you have taken 2½ per cent. instead of 1.05, because while 1.05 is put aside in a fund bearing interest at 4 per cent. and the compound interest would bring the original back in 40 years——

A. (Interrupting.) If you waited that long.

2171 Q. Yes, if you waited that long; but this money, if expended in the plant, would bring back a larger and greater return; am I right in that?

A. Not necessarily, no, sir.

Q. Then why, if it will not bring back a larger and greater return, do you recommend its being expended in that way?

A. To keep the return up to par, keep the property investments to par from year to year; to maintain it, not to increase it.

Q. In other words, this 2½ per cent. is not to be expended in any part in the extensions of the plant?

A. Extension to the extent necessary to represent the depreciation of plant not yet determined by exhaustion.

Q. True; so that the first year the chances are that a certain part of this 2½ per cent. could be expended in extensions?

A. I have not the faintest notion whether it could or not; it would depend on circumstances, perhaps the very first year something would happen and you would have to spend it all in renewals. If you will take in the meaning of "Deferred Renewals" you will understand.

Q. Yes, deferred renewals. You may expend a large part of this depreciation fund; your stoking apparatus may become antiquated, and you may have to replace it with another apparatus and expend maybe more than you have set aside in your depreciation fund for this year, which might balance off the next or succeeding years, and which in 40 years would bring the amount which you state, according to your opinion, is a proper amount; but if we assume that that amount is not expended the first year, then what do you do with the balance, the difference?

A. I assume that the business, being an active one, there will be opportunities to put money into new plant, as an offset to depreciation, and having done so that depreciation is paid off right
2172 there and then, and all such amounts as are expended during 40 years, and all such property depreciation as so paid off, will at the end of 40 year- be taken as an offset to this accruing depreciation.

Q. So that if you were fortunate enough to be able each year to expend that money in new plants, and the next year the amount which you set aside was not sufficient, you would capitalize the amount you spent in new plants and raise the money to pay for this extraordinary expense?

A. No.

Q. Upon what then would you call for the funds to make this renewal?

A. Make a temporary financial arrangement.

Q. In other words, you would borrow money or take it from your reserve, if you had it?

A. Possibly.

Q. And this money which you have invested in new plant will bring a return which you state is somewhere more than 4 per cent. I am right, am I not?

A. In the long run, yes. I also stated that you would not do it in the first years.

Q. Even with the Consolidated Gas Company?

A. Yes.

Q. And it is invested in the making business, is it not?

A. Yes.

Q. And at no time have you counted upon a 4 per cent. return, have you?

A. No, sir.

Q. Then, if the company was fortunate enough to have been able to take care of its renewals by the expenditure of its current repair fund and had done so during this period of forty years, it would have two plants, would it not, each of the value of the original plant?

A. Of course, if you want to suppose such a case—I never heard of one—you would in a measure, have two plants, yes. You would have the old plant for what it was worth at the time, and you would have the new one.

2173 Q. And the new plant from its inception would be bringing back such returns as a gas plant would be expected to bring in the community in which it was operating, maybe starting with less than two per cent. because new, and building up to four per cent. or thereabouts as it became older?

A. That is on the basis of your being able to make your renewals for some sum much less than it cost.

Q. No.

A. That is the way I understand the statement, that you are able to keep up the plant by simply expending a certain amount for daily renewals.

Q. That is it, whatever they cost?

A. No such condition could exist, in my opinion.

Q. I have assumed that it does exist, when I ask the question.

A. Well, I won't answer it, I think, because I give a good deal of thought to the questions as they are put to me and I do not give much thought to these hypothetical questions outside of my experience.

Q. You could certainly state what you consider a new gas company should earn on the capital invested in a gas making business, could you not?

A. Yes.

Q. What do you think that should be?

A. I think it ought to earn ten per cent. on the investment in the business, averaged up.

Q. And that on each addition to the investment and extension, finally, so that if we had a plant that started out with two and one-half million dollars in the beginning that would earn ten per cent. its first year—or do you consider it should earn ten per cent. the first year?

A. No, I should not.

Q. What should you consider?

A. It would depend too much on circumstances. I do not like to generalize. I managed a company once that did not earn a cent for four years and had a handsome good will later on.

2174 Q. Take it over a period of 40 years, you think it ought to earn 10 per cent.?

A. Yes.

Q. And that 10 per cent. will be on the total investment that had gone into the plant during that period?

A. Yes.

Q. Figured from the time of the investment to the end of the 40 years?

A. Yes; not on the reinvestment covering depreciation.

Q. Not on the re-investment covering depreciation; that is my understanding. Now, this 5 per cent. reserved for contingencies; you are not prepared to state how you think that ought to be invested or used?

A. I do not think it makes much difference as long as we have the amount of reserve as a cushion.

Q. You would consider that if it were put into extensions of plant or a new unit added, that would be proper business management?

A. It would temporarily take the place of moneys that would otherwise have to be brought in.

Q. A new unit would be an extension of plant, would it not?

A. Not necessarily.

Q. You consider the Astoria plant is an extension of the Consolidated Gas Company, do you?

A. Yes.

Q. And you consider this 5 per cent. reserve might properly be invested in that plant, would you not?

A. Temporarily invested until needed, when they so defer the day for borrowing money for that.

Q. And when needed capital would have to be obtained from other sources to take its place?

A. That is right.

Q. And put into the Astoria plant in place of that which you take out, for the purposes reserved and set aside?

A. That is one way.

Q. And you expect this 5 per cent. invested in the Astoria plant would be earning as much return as is reasonably to be expected from a plant of that kind?

A. Yes.

2175 Q. And then, if a company had the good fortune to have created at the end of forty years a plant of the same size as that which it started with, out of this depreciation fund, paying for those renewals which would otherwise have to be taken out of depreciation, out of its current repair account, you would have a plant of twice the value of the original plant, would you not?

A. If you were able to take from what I call, for present purposes, my final renewal fund of 2½ per cent., and you were able to keep up the present plant, not only in full working order, but so as to take care of all exhaustion of life, and also build a plant of the same value, you would of course have a plant of double value.

Q. And that plant would have been paid for without any increase of capitalization of the company?

A. Yes, sir.

Recross-examination by Mr. BURR (continued):

Q. Doctor, is it customary in scientific and technical works where pressures of the atmosphere or gas are given, to give them at sea level, and at a temperature of 60 degrees Fahrenheit?

A. It is sometimes done in laboratory work; I have never heard of it being done in ordinary gas practice.

Q. Do not scientific experts, reading and using those figures invariably deduce from these standard figures the pressure of gases — higher or lower levels?

A. Certainly not.

Q. Or, to put it another way, when scientific data as to pressures of the atmosphere or of gases are given and no level is fixed or mentioned as compared with the sea level, is it not usual to accept those atmospheric gas pressures at the sea level?

2176 A. In scientific work, where we are making comparisons with different localities, and it is scientific work, we do read it in that way, but in the gas business and in a certain locality we do not make such corrections.

Q. Why don't you accept that situation in the gas business?

A. Because we have one locality to deal with and we are not making comparisons with other localities. Apart from the cases I have stated that I have never heard of it being done, where we take the pressures as we see them, sometimes for the purposes of corrections of volumes and so on, we take in these different factors. But in our ordinary readings of pressure we take just what I have stated, the readings on the gauge, because those are the practical pressures that we have to deal with, and others we do not deal with. We do not have to.

Q. Not even where there are knolls and vales?

A. Certainly.

Q. Have you seen the report attached to the Investigating Committee of 1885?

A. 1885?

Q. Yes.

A. I cannot recollect whether I have or not.

Q. If you will look at this, which purports to be a report on the pressure of public lamps of the several gas companies, as reported in tenths of inches, as recorded by lamp pressure registers January 7th, 1881, and see whether they do not figure upon the difference between sea level and various elevations stated.

Mr. **Mathewson**: I object to this. The witness is asked to look at some document to see if somebody else did not figure on some basis.

Mr. **Burr**: He says it was never done by gas experts, in the gas business, and I want to show that it was done by the experts for the city as far back as 1881.

2177 A. I should not consider that as being in the gas business, any more than I should consider the Stevens Investigating Committee as in the gas business. I was talking about practical results.

Mr. **Kirby**: It accomplishes results.

The **Witness**: It does not accomplish results, if you have a certain figure and then try to figure it out by taking another one.

Q. That purports to be a report of the Bureau of Gas and Lamps, January 7, 1881?

A. That is right. I am simply not willing to accept that as indicating practice in the gas business. It is simply the report of a bureau chief, or something of that kind. He may have had some reason for reporting in that shape; but what we have to deal with is the pressure that we find, irrespective of any calculations or deductions that we cannot make in practice, or under conditons that we have not to deal with.

Q. It was evidently intended to get the pressure at various points?

A. I am trying to see if it does. I will look at it for a moment and study it.

Q. Certainly; take all the time you want, Doctor.

A. Is there anything here that says it is pressure in tenths of inches after correcting for difference in level? I may be very stupid, and it may be that it is figured out so, but I do not see here any indications in the titles of the columns or anything of that kind that there were such corrections made. It may be, possibly.

Q. Does it not show the distances and the elevations from the level?

A. Yes.

Q. That these pressures are taken?

A. Yes, but it does not say that these pressures have been corrected for that; it does not say so. It may be so, I do not know. It may be that the pressures were reported as found. It is not a very conclusive report.

Q. On an inspection of that table which is attached to Dr. 2178 Mark's affidavit in this case, and which appears on page 45 of the affidavits submitted by the City of New York in opposition to the motion for injunction *pendente lite,* is there not such a statement?

A. Not the slightest, that is stated there.

Q. Assuming the specific gravity of 22 candle-power to be .65, would not a rise of 100 feet add a half inch approximately to the gas pressure?

A. Assuming the specific gravity to be .65 would not a rise of 100 feet add approximately five-tenths?

Q. A half inch, to the gas pressure?

A. Yes, my recollection is that it is .517, which is approximately half an inch, and would reduce the pressure for a like fall.

Q. In the matter of pressure, the variation is the main thing, is it not?

A. That is right.

Q. And the variation of the law which is now under discussion here is one inch, is it not?

A. The variation allowed is between one inch and two and one-half inches.

Q. Would not a law limiting gas pressure to one inch minimum and two and one-half inches maximum, if a half-inch pressure of water column were added to each of those pressures for each one hundred foot rise or *vice versa* practically be more easily fulfilled?

A. Yes.

Q. If this allowance of a half inch per hundred feet were made, would not any difficulties or variations of pressure arising be due entirely to the irregularity of consumers' demands, or to the size of mains used?

A. No, not entirely; there are other things that enter in. For instance, there are atmospheric disturbances which give us the same factors for difference.

Q. Well, *if* I do not say entirely; but I say mainly?

A. Yes, largely.

Q. If difficulties as to variations of pressure in any districts arose, would it be practically possible, allowing one-half of an inch 2179 rise per one hundred feet, or fall, to correct it by properly apportioning or distributing the mains to the demands of the customers?

A. We could take the demands of the customers for any one day and proportion the mains, so as to get a result of that kind; but demands vary from day to day and year to year, and demands for whole districts vary, so that the mains laid out for a certain district would be entirely upset as to design perhaps within a year or two. For instance, you might have mains designed for A to burn so many thousand feet in a given hour, and the same hour B should burn so many thousand feet, and so on, and might be within the law. Those conditions might change. A cigar factory might shut up, and others might be started in another district, and your conditions are changed at once, and the pipes that were designed to fill the conditions at one time would not fulfill them at another, without variation. That is absolutely so. Of course, the differences between winter and summer are also so widely divergent that you can not possibly cover that by any fine design, and the actual practical experience of gas engineers is not to attempt to do that, except in an approximate way, and then get down by actual experience and correct the troubles as they come up.

Q. Is it not one of the fundamental principles of gas engineering to keep down the pressure?

A. Yes, to a point where its consumers will get a sufficient supply for their appliances, the result being that of late years the demand is for a much higher pressure than when I first went into the business.

Q. What is the reason for that, in your judgment, for that change?

A. Well, you need hardly put it my judgment. It is simply the fact that since I have been in the gas business that the appliances brought in require higher pressure than they did in the older days, when they practically used argand and flat flame burners, 2180 and the superintendents of the works were nearly all hipped on the idea of keeping the pressure down to a minimum to reduce leakage, so that they would dissatisfy the consumer, and I frequently had to threaten my superintendents with discharge for the reason that they would not carry high enough pressure to supply the gas stoves and other appliances because they were either afraid there would be an excessive leakage and that I would blame them for that.

By Mr. Mathewson:

Q. Welsbachs also had something to do with it?

A. Welsbachs, as I have mentioned before, Welsbachs and stoves, require from one and one-half to two inches pressure, whereas in the old days we could get along if we could get inside the house with .7.

By Mr. Burr:

Q. But if the mains are sufficient for the maximum demand, will they not be equal to the lesser demand?

A. Yes, sir.

Q. Is it not true that in London the law requires that the gas pressure shall be tested at street lamp-posts and .1 inch water column shall be deducted for decreased pressure at service pipes?

A. The law demands that there shall be tests for pressure made, and they are penalized within certain limitations if they go below the minimum, but there is no limitation as to maximum pressure.

Q. Is it not true, as I have stated?

A. Will you state the law again?

Q. That the gas pressure shall be tested at street lamp-posts and .1 inch water column shall be deducted for decreased pressure at service pipes.

A. I don't remember having read that of late, but it sounds right.

Q. Mr. Bradley has testified that in some streets there 2181 are ten mains, and Mr. Simpson testifies also that three and four mains are frequently found in some streets. Is not this an exceedingly costly form of gas distribution?

Mr. Mathewson: He has not testified that that number of Consolidated Gas Company's mains were found in the same street. You are mixing them up with the other companies.

The Witness: I should say it was hardly possible from my information. I do not pretend to know all the mains, but I should hardly conceive it was possible. I have made a particular study of mains and I have watched the main distribution in New York more than the Consolidated Gas Company knows about, and have seen more than they think.

Q. Assuming that condition to exist, that would be an exceedingly costly form of gas distribution?

A. Certainly.

Q. If you were as an engineer requested to elaborate an adequate main distributing system with the least capital outlay, how would you go about it?

A. I should study the physical conditions of the city and I should then make a very careful study of the present distribution by areas and streets and then lay out my pipes and take care of that business, bearing in mind, of course, that those areas would be apt to change widely so I would have to lay out a wide margin throughout the general distribution system. Then I should be largely influenced by the conditions as to pavements, and even more perhaps—by the obstructions I should find in the street.

Q. That is in the bed of the street?

A. In the bed of the street. I should then lay out the mains decidedly with an eye to the future, because it would not pay 2182 me probably to rip up those streets again even if I could get my pipes in, so I should very carefully think of that, as the difference on that additional investment would not equal the expense of going into it later on.

Q. And that is all you would do with that proposition before you?

A. I should do every thing that a man could think of to influence my opinion as to the future distribution demands.

Q. Would you under the condition of least capital outlay put in two pipes or one pipe in each street?

A. If you will permit me, I prefer to answer that, that I should probably in New York City decide almost invariably to put in two pipes, because I should not only take into account capital outlay, but operating expense, which would involve, by the way, capital outlay also. I should want to avoid crossing the streets as far as possible and keep my mains on each side of the street. That is my present impression with regard to New York City.

Mr. Page: To avoid crossing the streets for services?

The Witness: Yes.

Mr. Mathewson: Especially if you had a subway down in the middle of the street?

The Witness: I had that in mind, yes.

Q. Mr. Simpson has testified that 795 miles of mains are active and 27 miles dead or not in use. Do you know the sizes and street locations of those 27 miles of dead mains?

A. No, sir.

Mr. Mathewson: He has not testified it was dead main. He said it was not in use.

2183 Q. Would not two pipes of a capacity equal to one large pipe cost more than one pipe?

A. Yes, sir.

By Mr. Kirby:

Q. There is just one question I would like to ask. On page 1946 of the testimony it is stated final renewals, depreciation, production, manufacturing, 4.9795. Distribution 1.5797, totaling 6.5592 cents.

A. Yes.

Q. What factors did you use in producing the figure for production of 4.9795 and distribution, 1.5797?

A. I used the factor given by the basis of 33 years life on works and 60 years on distribution, which, as I stated in my estimate, figure out practically 40 years for the whole plan.

Q. Did you use that 40 years for the production and distribution?

A. No.

Q. Did you use the 30 years——

A. I used the 33 years for production and 60 years for mains and distribution, and all that; in other words, the years that I took for the production being the same figure as Prof. Bemis uses for all.

Q. And what values did you use upon which you made that calculation?

A. That I gave you, you know, this morning. I will give it to you again, $21,829,591.17 for the production as they call it and $12,589,827.21 for distribution.

Q. The production including the $7,500,000 required at Astoria?

A. Yes.

Redirect examination by Mr. MATHEWSON:

Q. You stated in reply to Mr. Burr that two pipes which combined would carry the same volume of gas would be more expensive than one pipe. On the other hand, after two pipes were in, 2184 would not the expense of maintenance be less?

A. Certainly, that is what I would do it for.

Q. Your judgment would be that that would more than offset in New York City the advantage accruing from one large pipe.

A. Certainly, or I should not do it.

Q. Mr. Kirby has asked you a hypothetical question and asked if upon that basis you would not have a double plant in 40 years if his premises were carried out. Did you in your experience or practice ever know of such a case as he outlined in the hypothetical question?

A. No.

Q. Do you think that judging from your own experience and knowledge of the business that such a situation would be possible?

A. No.

Q. You said something in your cross-examination in reference to your not constructing gas plants in the United States. Have you ever constructed any here?

A. A great many—we are still supervising such construction.

Q. And installed water gas apparatus.

A. We do not in the United States, now instal water gas apparatus. We supervise the installation.

Q. Are you familiar with it?

A. Very.

Q. And also coal gas apparatus?

A. Yes.

Q. What in feet or atmosphere is this pressure of 1½ inches or variation of 1½ inches pressure?

A. Do you mean pounds to the square inch?

Q. Yes.

A. 54/1000 of a pound to the square inch about.

Q. You said that in London there was no limitation as to maximum pressure, only a limitation as to minimum?

A. Yes, sir.

Q. Do you know of any place where there is a limitation as to minimum?

A. I do not, except this.

Q. And "this" means New York City?

2185 A. New York City. Let me see, does not the law extend to more than New York City.

Q. No.

A. Manhattan, yes, New York City.

Q. When you gave the formula with the long radical sign at the outset of your cross-examination, did that relate to a single pipe straight of the length which you gave?

A. Yes.

Q. With no services off?

A. Yes.

Q. When you discussed the question of trunk mains in the street and the establishment of distribution areas or districts, did you take into consideration the question of whether it was possible to lay trunk mains in the streets of the city of New York by reason of the present sub-surface structures?

A. I certainly took into consideration the whole question, but I was not asked that.

Q. If it be true that in many streets of New York or some of them it would be impossible to lay more mains or larger mains, that would be an answer at once, would it not, so far as that goes?

A. Yes, certainly.

Q. If a system of trunk mains such as was suggested to you was to be installed, or an effort made to install them, would that be a matter of considerable time and considerable expenditure or not?

A. Trunk mains or separate district mains?

Q. Such as Senator Page asked you in reference to when he was discussing running trunk mains through the streets?

Senator Page: I did not ask him anything about trunk mains.

Mr. Mathewson: Oh, yes.

A. He referred to district mains, I believe.

Q. Well, such mains as he referred to as you understood it.

A. Of course it would take time and very large expenditure in view of the present conditions of the streets of New York.

2186 Q. And after these districts had been established, considering the change in consumption, would it in your judgment, even then be possible within each district to provide that the pressure will never be more than two and one-half inches and less than one inch and still deliver the gas to your consumers in proportion for use?

A. It would not.

Q. And if the mains were to be cut off in districts, so each district would stand by itself, would that not eliminate on the other hand the running in of gas from various other sections, which tends to unify the pressure in them?

A. It could neutralize that element. Each separate system would have to stand upon its own feet.

Q. In reference to mains and services, did you hear Mr. Simpson's testimony since your direct testimony, that the book figures of $1,212,071.09 for services and $7,852,151.03 being the book value for *mains* was a low valuation based upon his estimate of the original cost of installation even?

A. Yes, I recall something of that kind.

Q. Did you consider that subject?

A. I did.

Q. And what was your conclusion?

A. My conclusion is that it is a low estimate for the value, under those conditions.

Q. Eliminating the present book value?

A. Eliminating absolutely.

Mr. Page: I should not say that that was an estimate. It is a fact.

Q. In reference to the cost of replacements of mains, you have testified you think the figure of $12,600,000 and odd is less than it would cost to replace. What in your judgment would be the cost of replacing the 795 miles of active mains, excluding the 25 miles of mains which are not abandoned but not at the moment in use?

A. I believe it would cost fully that sum under present conditions.

2187 Q. The entire $12,600,000 and odd?

A. Yes, sir, fully that.

Q. Would you consider it good judgment to supplant the benches of sixes with nines in the company's gas plants?

A. Not under present conditions. I should want them to wear out more than they had at present.

Q. Will you take your statement of the cost of gas aggregating 70.947 cents and say whether the 14.145 cents is the 2½ per cent. allowance regarding which you have been testifying?

A. Whether that is it?

Q. Yes.

A. No.

Q. Is the 14.145 cents included in the 2½ per cent.?

A. Yes, certainly.

Q. Now, how much of the 14.145 cents did you say was actually expended in renewals and repairs during the past 20 years on the average?

A. 10.6 cents.

Q. That would leave how much of that 14.145 cents?

A. 3.545 cents.

Q. Will you deduct that from the 65.947 cents which you state to be "Cost at burner with no reserve as yet included to cover contingencies" and say what the remainder would be?

A. 62.042.

Q. That would represent the actual expenditures then?

A. Yes, sir.

Q. Now, Mr. Addicks testified in reference to the additional requirements for enrichment due to the change in candle-power and to a sum to equalize the labor for this year with the preceding average was as follows:

Enrichment	1.83 cents
Labor	.78 cents

The sum of those I make to be 2.61 cents. Now, do I understand that you include in the five cents under the heading "Reserve as explained in Note" such items as the difference in the cost of material by reason of the change of candle-power? 2188

A. Certainly, that is what the reserve is for.

Q. Now, will you add that amount of 2.61 cents to the last figure 62.402 cents which you said was the actual expenditures?

A. 65.012.

Q. Then assuming these two items of Mr. Addicks to be correct, that would make 65.012 actual expenditures quite aside from any reserve whatever, would it not?

A. Yes, averaging the repairs.

Q. And the difference between that and your total of 70.947 or between five and six cents would be left for final renewals and contingencies and other items which you have testified to?

A. Yes.

Q. Now when you speak of depreciation or final renewals, am I right in understanding that you do not mean wearing out of the plant so much as necessity of plant or supersession, as you call it, readjustment which may require the disposition of part of the plant before it is worn out?

A. I take all those into account.

Q. The extinction of life, as you call it, does not mean the wearing out of the apparatus?

A. No, I may not wear out, but may get run over by a trolley to-day.

Q. May I ask whether your estimates in this regard are based upon your own experience as well as upon your study?

A. They are.

Q. You have said that you require pressure to operate Welsbachs and stoves of 1½ to 2 inches inside the house. Is there any loss of pressure between the mains and house pipes or these apparatus?

A. Certainly.

Q. To what extent?

A. There is the pressure required to pass the gas through the meter. The meter itself is a machine that is operated by the pressure of the gas, and naturally absorbs pressure and absorbs from .2 to .5. You cannot reckon on less than .5, when you are running the house to capacity. Then in your pipes in the house, supposing we have ideal conditions, we will have all pipes laid out according to schedule, which starts with the hypothesis 2189 that there will be a loss of pressure of .1 of an inch for each 50 feet of run. Then you will have your bends included, of course, in that case.

Q. You were asked in reference to booster systems, or mentioned them in your cross-examination. What is a booster system?

A. It is a term I rather imagine borrowed from our electric light friends. It is a pipe run under a higher pressure than ordinary distributing pressures, and not connected or should not be connected, although they are connected sometimes, to the consumers, with the idea of carrying the pressure from the distributing point to some outlying point, and there to boost the pressure at that particular point where it is attached to the distributing main. It is a reinforcement of pressure by independent system of pipes.

Q. That was the subject on which Senator Page examined you?

A. He did examine me a little, sir.

Q. Are you familiar with any booster system such as those in Milwaukee and St. Louis so as to know how they operate?

A. I am fairly familiar with both of those.

Q. What is the result there, if you know?

A. They are helping the condition of affairs and reducing the variation of pressure, and St. Louis, for instance, is laid out with the idea that they will ultimately be able to keep within 3.2 inch maximum pressure, that is, they hope they will be able to do it.

2190 Q. Are they accomplishing keeping within the limits of 1½ inches pressure, if you know?

A. Do you mean 1½ inches variation?

Q. Yes.

A. I think not. They are certainly not keeping within the limits of two and one-half maximum pressure.

Q. When you testified in reference to your estimate of the value of the mains of the company, either upon original cost of installation or cost of reproduction, were you using the knowledge of Mr. Simpson or were you using your own knowledge and experience?

A. I used both to the best of my ability.

Q. But where you found that your estimates did not agree with his, whose did you accept?

A. I used my own.

Q. So that to all intents and purposes it is fair to say that it was your own estimate?

A. Certainly.

Q. Taking the mileage of mains as given?

A. Taking the mileage of mains as given. That is my basis for saying that I think the estimate is too low.

Q. Have you made any investigation or have you any information that the system of distribution of the Consolidated Gas Company is not economical?

A. I have not.

Q. Considering the situation in New York to-day, Doctor, with your knowledge of it, and assuming that you were to lay out a system of distribution to best meet requirements as was suggested on your cross-examination, is it your belief that it could be installed to-day for less than the sum which Mr. Simpson has testified as the reproduction value of the mains in New York?

A. With $12,000,000?

Q. Yes.

A. I have never made, as I testified, a complete engineering investigation of that large problem, but from my present knowledge I have not the slighest doubt that to install such a plant under 2191 the conditions as they exist to-day would cost very considerably more than twelve millions of dollars. I have not the slighest doubt of it.

Q. Do you know whether in making that estimate, there was taken into consideration the extraordinary street obstructions, such as the subway and the electrical conduits for the trolley roads along the centers of the avenues?

A. No, sir. And that was one of the faults I found with the estimates.

Q. Those things would have to be taken into consideration if you were installing a system to-day, would they not?

A. Yes, certainly.

Mr. Mathewson: That is all.

By Mr. Page:

Q. You say there is a certain pressure at the meter which is less than the pressure in the main—I mean past the meter?

A. Yes, there is an absorption of pressure in the meter, that is right.

Q. A further absorption of pressure of .1 of an inch for each 50 feet of pipe?

A. Well, there probably is a good deal more than that, but I state, to be conservative, that the ideal condition in the house which would follow the laying of the pipes in the house according to these rules would show .1 inch if we used the gas according to which that schedule is laid out. In other words the schedule is based upon the falling off in pressure of .1 for each fifty feet. Of course it does not always fall so, because they do not use enough gas to reduce it .1, but we have to be prepared for it.

Q. Would not the same element of increase of pressure by increase of elevation also follow in the house pipe as it would in the street pipes?

A. Yes.

2192 Q. And your meter is as a rule in the cellar?

A. Yes.

Q. So that as you go on up in the house you have gained in the same proportion as you have given here for gain or elevation?

A. Yes. I considered more especially the first level of a house, which we have to think of. We have to think of the worst conditions as well as the good ones.

By Mr. Burr:

Q. What advantage outside of short services would be gained by a double line of pipe or mains?

A. The mere shortness of the service would not be much of an item. It is avoiding having to cross the street with the very expensive work you would have by reason of ripping up pavements, running under conduits and the rest of it, obstructions in the street.

By Mr. Mathewson:

Q. Senator Page has referred to the use of governors and district governors for the control of pressure in the distributing system. Would it in your judgment be possible for the rate of flow through the governor and the pressure at the outlet of the governor to remain constant and still have the pressure along the line of pipe covered by that connection to vary?

A. Yes.

Q. Would it be possible to have such variations under the conditions named as to be at a given point sometimes within the law and sometimes outside of it?

A. Yes.

Q. And not indicated by the governor at all?

A. Yes.

2193 William Halpin, called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct-examination by Mr. Garver:

Q. You are a member of the State Board of Tax Commissioners of this State?

A. I am.

Q. Are you Chairman of that Board?

A. Since the first of January, this year.

Q. How long have you been a member of that Board?

A. Since early in March, 1904.

Q. As a member of that Board did you take part in the valuation of the special franchises of the Consolidated Gas Company for the year 1906?

A. I did.

Q. Do you recollect that those franchises were valued at some $31,900,000?

A. That is the figure.

Q. In your opinion was that a fair and reasonable value for the franchises?

A. It was.

Q. The State Board assesses the special franchises of Public Service Corporations throughout the State?

A. All those occupying the public streets and highways for a greater distance than 250 feet in those streets and highways.

Q. Will you mention the different companies whose franchises are thus assessed by the State Board?

A. Railroad companies, steam and street.

Q. Railroad companies—does that include steam and trolleys?

A. Yes; telephone and telegraph companies, gas companies, electrical subway companies, water companies and oil pipe lines; and we assess a number of scales in the streets used by private people. That comprises about all the assessments that we make.

Q. Did you mention water companies?

A. Water companies.

2194 Q. Have you taken part in the assessment of special franchises of those various companies throughout the State since you have been a member of the Board?

A. Since I have been a member of the Board, yes.

Q. In making the assessment of the special franchises of the Consolidated Gas Company for the year 1906 did the Board consider the report of the company, a copy of which is now shown, marked State's Exhibit C?

Mr. Burr: Objected to as incompetent, irrelevant and immaterial.

The Master: He may answer it.

Exception taken by Mr. Burr.

A. The Board considers all the reports submitted to it when it determines the assessments, tentatively and finally, and it considered the reports made by the Consolidated Gas Company when it made the tentative valuation and when it made the final valuation of that company, this year.

Q. In this report, State's Exhibit C, the present value of the property in the streets, allowing for depreciation, is given. Do you remember whether the Board accepted that statement of value or whether it fixed an independent value upon the tangible property?

A. My recollection is that the members of the Board have considered that the present value of the tangible property of the Consolidated Gas Company and its constituent companies has always been under valued, and we have increased the valuation of the tangible property, and that is reflected in the assessment.

Q. Do you recall approximately the extnet of that increase?

A. No, I do not recall the extent of that increase, but I should say it was not more than from 40 to 50 per cent., but how close to that I do not remember. We have seven or eight thousand of 2195 those assessments to make, so that it is hardly possible to recall the items of any special assessment.

Q. Is it your recollection that this valuation was not increased by the Board more than about 50 per cent.?

A. No, I do not think it was increased more than 50 per cent.

Q. It appears that the final notice of assessment sent out by the Board of the franchises of the Consolidated Gas Company for the year 1906 was dated March 28th. Was that about the date when the assessment was finally fixed by the Board?

A. I do not recall the date when it was finally fixed. I know that the proper legal notice was given to the companies of the time of the hearing, and I know that, the day before those assessments were certified to the Tax Department in this city, the chief clerk in the office brought the list of them to my house and I compared them with the figures I had taken at the meeting of the Board when the assessments were finally made, and compared the certificate as filed with the assessments on the list I had. That was the day before the first of April, or perhaps the 31st of March.

Q. It is in evidence that the first notice sent out was dated some time the first week in March. Would the special assessment have been fixed between those dates, the date of the first notice and the date of final notice?

A. The assessments were finally fixed after the hearing, after Mr. Frank H. Platt was heard with respect to the assessments of the Consolidated Gas Company and its constituent companies, and not until after that.

Q. And that was in March?

A. That was in March.

Q. And Mr. Frank H. Pratt appeared as counsel for the company in objecting to the valuation that had been tentatively placed on the franchises?

A. Yes. Our method is to send notice to the companies
2196 assessed, the notice stating a time for the hearing when they
may be heard if they desire to object to the assessment, and
after the time of the hearing then the assessments are finally made.

Cross-examination by Mr. Page:

Q. The report, State's Exhibit C, is the report of the Consolidated Gas Company for the year ending June 30, 1905, is it not?

A. That is right.

Q. And in making your assessment you made it upon that report, largely?

A. Yes.

Q. As of what date?

A. As of the second Monday in January, 1906, when all taxes are determined.

Q. The Consolidated Gas Company is complaining in the courts of the valuation which you have fixed, $31,900,000, is it not?

A. I do not recall whether *certiorari* proceedings have been begun with regard to this assessment or not, but it would not surprise me if they had done so.

Q. They have as to all previous assessments?

A. They have as to all previous assessments, yes.

Mr. Page: That is all.

Mr. Burr: No questions.

Robert A. Carter, recalled for further examination, testified as follows:

The Master: I believe you had some further cross-examination, Senator.

Mr. Page: No, I had no further cross-examination, but Mr. Carter was to produce an exact statement of the amount of moneys that were drawn from surplus accounts to pay the dividends of 5½ per cent. in 1899 and six per cent. in 1900.

2197 By Mr. **Mathewson**:

Q. Have you the figures here, Mr. Carter?

A. The amount drawn from surplus accounts to pay the dividends as indicated were, in 1899, $705,199.44 and in 1900 $1,116,633.85.

Q. Mr. Carter, yesterday there was put in evidence the record of assessments upon the six constituent companies which form the Consolidated Gas Company for special franchises in the Borough of Manhattan. Do you know whether either one of those companies was assessed for a special franchise in the Borough of Bronx, and if so, which one, and what amount?

A. There was an assessment of $20,000 against the Municipal Company in the Borough of the Bronx, but that there was a special franchise assessment of course, I don't know. I am not aware that that has——

Q. The amount is $20,000?

A. The amount is $20,000.

Q. And that $20,000 with the amount of the assessment for the six constituent companies, as stated yesterday, make up the total of $5,455,000 which you stated was assessments of an additional character?

A. Yes.

Q. Beyond those heretofore existing?

A. That is the case.

Q. In what way, if in any way, do the conditions under which gas is delivered to the city, differ from those under which gas is delivered to the consumers?

A. I am not aware that they differ in any conditions, Mr. Mathewson.

Q. They are made in the same manufacturing plants?

A. The gas is made in the same apparatus, distributed through the same mains, supplied in similar meters and in every other way the supply is identical to that of the consumers.

2198 Q. The conditions so far as you know, are no more favorable than in delivering to private consumers, are they?

A. Not at all.

Q. Complainant's Exhibit 86 shows "Active Meters on district average sales per active meter," and some other items. The question has been raised as to the 795.47 miles of mains shown in the corresponding Exhibit 168 before the Gas Commission. What was the heading of the column on Exhibit 168 before the Gas Commission in which the 795.47 miles appears?

A. Miles of active mains.

Q. And this Exhibit was prepared by you for the purpose among other things of showing the sales per mile of mains?

A. Precisely.

Q. And so mains which were not at that moment connected with services were eliminated?

A. Yes, sir.

Q. Are the balance the property of the company and so carried?

A. Yes, and liable to be put in commission at any time. That happened to be the number of miles out of commission at that time, and it is a constantly changing element.

By Mr. **Burr**:

Q Is it not a fact that in the electric light business that a great reduction is made to a large consumer in the price of electricity—electric current supplied per kilowatt.

Mr. **Mathewson**: I object to that. The conditions are entirely different and it would not affect the question of law before the Master at all, whatever might be the case.

The **Master**: What is the point of it?

Mr. **Burr**: On the question of the supply of gas to the city, I claim that the city being the largest consumer and certain other elements entering into the question, it is entitled to a reduction and has received a reduction and that situation is recognized for years, and it is recognized by the electric light companies in their sales for years. 2199

Objection overruled. Exception.

A. I am aware of variations in the prices charged electric consumers, but I think that it is rather the period that the current is used in twenty-four hours that governs it rather than the volume of it. In other words, given a certain investment in the necessary plant and apparatus and distributing system to reach a customer, and without the storage facility which the gas companies have for storing their commodity, they recognize the advantage to them of having their current used a great many hours during the twenty-four over a short hours' use of it and they recognized that in the price to their consumers.

Q. Even to the extent of charging small consumers twelve cents per kilowatt and large consumers three cents?

Mr. **Mathewson**: Not twelve.

Mr. **Kirby**: Ten.

Q. Well, say ten. You do not require meter checking for the city supply, do you, as you do for the ordinary consumer?

A. Meter checking?

Q. Yes.

A. I don't quite understand your question, Mr. Burr.

Q. Meter reading?

A. Oh, precisely, the same meter reading in the case of the city as in the case of any other consumer.

Q. For the lamp-posts?

A. The gas supplied to the lamp-posts is supplied under contract, and does not come into the question at all, as I understand it.

Mr. **Page**: The city has to pay for it.

Mr. **Mathewson**: Yes.

2200 The **Witness**: Ought to have to.

Q. I asked you the other day for a transcript of the account in the ledger of the transactions in real estate since 1884?

A. That is practically prepared. It took a little time to dig that up, covering 20 years.

Mr. **Burr**: If it can be done, I would like to have the number of services in use December 31, for the years 1895, 1896, 1897, 1898 and 1899.

Mr. **Mathewson**: Requests were made not covering that period and we presented a list of the services, which Mr. Burr has. We prepared it at his request, 1903, 1904 and 1905, and I cannot undertake, now that we expect to close our case in a few minutes, to make up any more statements.

Mr. **Burr**: Then I assume you have supplied all the statements you intend to supply?

Mr. **Mathewson**: I stated the other day quite clearly.

The **Master**: Is that all Mr. Carter?

Mr. **Mathewson**: No.

By Mr. **Mathewson**:

Q. The delivery of electricity is to consumers in proportion to their consumption, and does not distinguish or discriminate, does it, as between the city and individual consumers?

A. No, sir, it does not.

By Mr. **Page**:

Q. You mean by that there is no provision in the law establishing a price that you can charge the city for the public lights, the electric lights?

A. There would not be one that was made voluntarily by
2201 the company as I understood Mr. Burr's question to convey.
If there is such a provision——

By Mr. **Mathewson**:

Q. You are referring to the metered delivery of electricity?

A. I am referring to metered currents, yes, sir.

Colin C. Simpson recalled.

Direct examination by Mr. **Mathewson**:

Q. As to the Consolidated Gas Company mains included in the 822 miles to which you have testified, are there in any case that you know of more than one line of main on each side of the same street?

A. In very few cases.

Q. You testified as to taking 90 per cent. of the pavement of New York as asphalt or new pavement, and you did not figure out exactly how much main of each size was under the new pavement or within the 10 per cent. of the old pavement. From your knowledge of the main system and of the streets, in your judgment is 90 per cent. upon the basis which you figure a fair, a law or a high estimate of the main value within asphalted pavement?

A. It is a very low estimate.

Q. In other words, the small sized mains are under what sort of pavement, that is, a greater proportion as compared with the large size?

A. You would have to put it this way.

Q. Well, put it your own way.

A. That mileage of paved streets is mostly in thickly settled portions of the city where the most mains are, and the other portion of the city where there are many streets not under new pave-
2202 ments, in nearly every case there is only one main on the street, and where the new pavements come in there are generally two.

Q. Would you think the 90 per cent. estimate a conservative one?

A. Very conservative. My first intention was to make it 95 per cent.

Q. And if the mains were taken figured out, showing which were under asphalted pavements, is it your judgment that that figure would be raised or lowered?

A. I think the figure would be very close to 95 per cent.

Q. In figuring the cost of replacement to-day at $12,600,000 and over, did you take into consideration the obstructions offered by the present system and the electrical conduits of the trolley roads?

A. In no instance.

Q. The 10 per cent. which you added did not cover that?

A. No, sir. The reason for that was that I figured that the cost of the alterations for the mains along the line of the system were already paid for by the subway people, and the many thousands of dollars that had been expended for lowering mains under trolley roads had also been paid for by the trolley people.

Q. Then if you were in fact to replace to-day, taking into consideration those items that would add, would it not, a considerable sum to the cost of replacement?

A. A great deal of money.

Q. When you gave the figures for the tax report, were you informed that those figures were to go under the column headed "Cost of Reproduction, New?"

A. I was not.

Q. Were you aware of that fact?

A. I was not. In fact I never knew it at all until last January when I was in court and saw that paper produced here.

Q. The tax report?

A. The tax report.

2203 Mr. **Mathewson**: I desire to offer in evidence Section 522 of the Charter of the Greater New York, Laws of 1901, providing a penalty for failing to maintain a candle-power of 20 candles.

Received in evidence as Complainant's Exhibit 238, but not marked.

Mr. **Mathewson**: I also offer chapter 651 of the laws of 1866, being the Act to incorporate the New York City Mutual Gas Light Company.

Mr. **Page**: Objected to as immaterial and irrelevant.

Mr. **Burr**: I object to it as immaterial, irrelevant and incompetent, and if allowed to go in we will be entitled to show, if we may, what transpired since, so far as that company is concerned.

The **Master**: I do not see that it is very material, but I will take it.

Received in evidence as Complainant's Exhibit 239, but not marked.

Both except.

Mr. **Mathewson**: That completes our direct case with the understanding, as I suppose, that the statements and figures which were testified to, introduced in our statements, have been verified by counsel for the defence, so far as they see fit, and that the fact that the figures are true statements from the original entries may be accepted subject to verification, the same as though the original entries were produced here.

Mr. **Burr**: That is your understanding?

Mr. **Mathewson**: I say I assume that is it. Is that correct?

2204 Mr. **Page**: We do not acquiesce entirely in that understanding.

Mr. **Burr**: It is not my understanding. I would suggest that we adjourn until to-morrow.

Adjourned to September 14, 1906, at 2 P. M.

Last Exhibits:

Complainant's 239.
State's W.
City's —.

2205 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, *September* 14*th*, 1906—2 o'clock p. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Page, Mr. Burr, Mr. Kirby.

2206 Mr. **Burr**: I am handed by counsel for complainant a statement purporting to be a statement of gas made for Consolidated Gas Company under agency agreement, net, for the months of November and December, 1905. I understood from counsel yesterday that he had furnished all the information which he intended to furnish, and I ask to have this marked for identification.

Mr. **Mathewson**: Do you offer it in evidence?

Mr. **Burr**: I asked to have it marked for identification.

Marked for identification, City's Exhibit 45.

Mr. **Burr**: At the conference which was held yesterday between counsel and the Master it was understood that to-day, whatever motions were to be made by the defendants, could be made with the understanding that those motions in formal shape might be submitted at a later date, and that an arrangement as to an adjournment would be made to-day. On behalf of the city I move for an order by the Master permitting an audit of the books of the complainant and for an inspection of its plant for the purpose of enabling the defendant, the City of New York, to properly define its action, and that request I understand will be joined in by the State.

Mr. **Page**: We join in the motion.

The **Master**: Well, I do not understand that I would have any power to grant any such motions as these that have been made. At all events I shall deny them, with exceptions to the several counsel.

Mr. **Burr**: On behalf of the city we move to dismiss the complaint on the grounds which I may be permitted to set forth in the formal application for that purpose.

The **Master**: Same disposition.

2207 Mr. **Burr**: And I further move on behalf of the city to strike out the testimony of the various witnesses adduced on behalf of the complainant, on the grounds to be hereafter stated in the formal motion.

Mr. **Mathewson**: I do not see how that motion can be made or considered in that form.

The **Master**: It cannot be passed on in that form. I should dislike to entertain any motion to strike out any part of the testimony without having specified exactly what was covered by the motion, and the grounds in detail. There were certain features in the complainant's testimony, as I recall it, to which that motion might perhaps be applicable. There were certain matters that were received subject to being connected later and with all rights reserved to the defendants to move to strike out testimony which was received at the time against their objections. Of course I cannot pass on their motion to strike out until I have looked into those matters fully, but I see no objection to letting Mr. Burr formulate his motion in writing, it being understood, of course, that nothing in connection with his motion shall operate to delay any proceedings or extend the time of adjournment or anything of that sort. How long do you want, Mr. Burr, to put that in writing?

Mr. **Burr**: The record is not yet complete showing the complainant's case, and of course that would be necessary before we could properly formulate all the grounds upon which I desire to make the various motions. I might inquire of the stenographer when he expects to have the exhibits furnished *in toto* to counsel for the defendants.

The **Stenographer**: Next Tuesday.

2208 Mr. BURR: I shall require about five days after that to get my motions in such shape as I desire to present them to the Master.

The MASTER: Of course if it should transpire that any part of Mr. Mathewson's case is stricken out in consequence of that motion, before his case can be deemed finally rested, he will be entitled to an opportunity to make good any deficiencies which will have to be on such an arrangement as to time as may be fair and right under the circumstances, and if you take additional time now to the extent you indicate for the purpose of preparing your formal motion it must be without prejudice to any of his rights.

Mr. BURR: I think that would be fair.

Mr. MATHEWSON: If the motion were made now and something were stricken out I should expect to fill the gap if any material gap was left. I do not know what the motion may be. I am unable to act.

Mr. PAGE: On behalf of the State I will say, I had understood that an arrangement was made yesterday that the motion to dismiss the complaint and the motion to strike out such portions of the proof as we deemed advisable were to be submitted in writing; there would be no meeting and no hearing upon it and entry upon the record. Of course if we had expected to present to-day the motion, we should have asked yesterday for a *single* extension or adjournment to allow us to go through the record and prepare our motion with some degree of care. I expect to make a motion to strike out certain portions of the testimony and also a motion to dismiss the complaint and had supposed it would be done in
2209 that way, that I would submit a motion in writing and serve the other side with copies of the motion.

The MASTER: I suggest that that be done without any meeting.

Mr. PAGE: Yes. And if the Master should strike out any portion of the testimony he could make such disposition as seemed just to him to all the parties, and if he should dismiss the complaint of course that would dispose of any other motions.

Mr. BURR: I understand we may submit these motions without a formal hearing?

The MASTER: Yes; sending a copy to the other side and a copy to this office by the end of next week.

Mr. PAGE: Of course that does not interfere with the time in any way, shape or manner.

Mr. MATHEWSON: I did not wish to interrupt Brother Burr's motions, but it seemed to me they were a little premature in view of the fact that we have not as yet rested our case, but we were to meet here to-day with a view of putting the record in such shape that we could rest it. I do not know that I have anything to offer that will affect his motions, and I have no objections to their standing as though made at the conclusion——

Mr. BURR: I certainly understood that the case was closed yesterday.

Mr. MATHEWSON: I don't see how you could after the discussion in the Master's room. We desire a ruling from the Master on one point to be given in advance.

Mr. Master: Statements or compilations were presented in regard to certain matters by the complainant from the books and records of the company with a view to facilitate the hearing all around, 2210 as I understood it, and they were received with the understanding that the defendants should have an opportunity by their accountants to verify the accuracy of the compilations by examining the books at the company's office instead of bringing them down here, and repeatedly when Brother Burr asked for various data he said he might not require the data if the examination of his accountants covered the point. The accountants for the defendants went to the company's offices; they were there for a long time and they completed their examination of the complainant's books for the purpose of verification on August 23, 1906, and they have not been there since. I understood it to be the arrangement that if the defendants were given this opportunity for verification that would dispose of their objection that the original books were not presented here, in lieu of the compilations, and we thought we were facilitating the hearing by that method, that having been found to be in previous investigations the only practical way to get at the result within reasonable time.

Mr. Burr: I dispute that statement.

Mr. Mathewson: Just a moment, I have not completed yet. This examination having been made by the experts of the defendants, no objections having been raised to these items, I would like the ruling of the Master as to whether the objections have not been complied with, or rather the conditions upon which the testimony was received. It seems to me that is a point on which we should have something on the record.

The Master: Now, Mr. Burr, what were you going to say?

Mr. Burr: The counsel has repeatedly stated what pre- 2211 vious investigations found was the proper thing to do. I know nothing of what previous investigations have found to be proper. What they did, not being in evidence here, can have no bearing upon the present situation. You remember that this inquiry had not been an hour in progress when I called attention to the fact that an audit of the books of the company and an inspection of the plant would facilitate a proper inquiry such as this was intended to be into the affairs of the company, and counsel for the complainant reminded me that if I desired to prove my case I must take and prove it in the legal way and they had no intention of entering into any stipulations whatsoever.

Mr. Page: Well, it seems to me, if the Master pleases, that it is proper we should make some statement as to what our accountants did do and then the record stands, if such be as the record discloses was the case and how we availed ourselves of it. If we should have gone farther I suppose we have got to take the responsibility, or if the ruling was not sufficient to meet the legal requirement the other side must take the responsibility. They have closed their direct examination and we closed our cross-examination, and as to the fact I am willing to admit that the accountants for the State have examined the entries appearing upon the ledger and journal of the Consolidated Gas Company for the year 1905 and for the nominal year ending October 31st, 1905, and found that the compilations made therefrom as appear upon exhibits 93, 94, 95 and 96 correspond with the books.

The **Master**: It may very possibly be that any statement
2212 in the nature of a ruling from me such as Mr. Mathewson requests would be properly deferred until the formal motions which counsel intend to make are submitted, for possibly the intention of counsel may be to include in those formal motions, especially the motions to strike out what Mr. Burr referred to, and all these questions as regards production of books and the inspection of the books at the office of the company. However, in advance of any such motion, I will state my position in the matter as now advised. Those statements in the nature of tabulations or compilations showing the substance of entries on the books of the Consolidated Gas Company were received as I think the record clearly shows, subject to examination and verification by the defendants. They were received with the express statement and recognition on my part, and on the part of counsel as well, I think, that they were not the best evidence and that under a strict application of rules of proof the complainant would be required to produce here the books from which the tabulations were made up, not only in order to establish the main propositions for which the complainant was contending, but also for the use of counsel in cross-examining. Of course it would have been possible for the complainant to introduce those tabulations in the first instance, calling some witness who could make proper proof that they were abstracts or compilations prepared by him showing the result of a long series of accounts, but the books necessarily must have been produced here to substantiate them in case counsel required. Now those books were evidently of such enormous bulk—I do not mean the individual volumes, but I mean the record of a year's business of a corporation as large as
2213 this was so voluminous that it would be manifestly very burdensome for counsel to examine them here and it would have protracted the hearings to an unwarrantable degree. Under those circumstances and for those reasons the arrangement was made which I assumed would, after it had been working awhile, prove to be a harmonious and satisfactory one to all counsel, that these experts should examine the books at the office of the company, calling for such details as they required. I stated repeatedly that if necessity for any particular book should be apparent and a foundation was laid for I should require its production and in so far as particular books were required they have been produced and the record so shows. I have been advised from time to time that the experts of the State have been in the office of the complainant, making these examinations, and that the experts for the city, as a matter of convenience to themselves and to avoid unnecessary duplication had deferred their examination until after the State's experts had finished, in the idea that possibly when the State's accountant had completed his work there would be very little independent work that the city's expert would want to do. Now there has been no case made out here

before me by application, formal or otherwise, for the production of any books or papers that have not been actually produced. I do not recall any such instance now, excepting the case of some pay-rolls which Mr. Burr called for and which I said I would not order produced unless some better reason was shown than had then been made apparent, nor has any application been made to me to make
2214 any order or take any other action based on the fact that the experts, had not been allowed every reasonable facility at the office of the company to make such examinations as they saw fit, and the fact that they have been now absent from that office and the hearing has been in progress for several weeks since and nothing heard on this subject rather inclines me to the view that the defendants have not suffered any especially trying hardship for lack of information as to this documentary evidence in the defendant's office and, therefore, my present view is that for those reasons I should be inclined to deny your motion to strike out this evidence in so far as it depends upon the competency——

Mr. PAGE: We had not made any such motion.

The MASTER: I understood Mr. Burr did.

Mr. BURR: Yes, I did.

Mr. PAGE: I understood this was a ruling for the advice and instruction of Mr. Mathewson as to where his case stood in the mind of the Master. Of course I am not offering stipulation on Mr. Burr's motion.

Mr. BURR: That is the ruling of the Master, and we will have to abide by it, I suppose.

The MASTER: Gentlemen, I think you are all perfectly protected on the record by exceptions, and everybody's position is perfectly plain. Mr. Mathewson proved his case in the way that commended itself to him, and everything has been made the subject of proper exception, and I do not think there can be any doubt about it.

Mr. PAGE: I think it fair that we should make that statement, that our accountants had been there, so there would be no question as to the fact

Mr. MATHEWSON: If a motion were to lie or to be seriously
2215 considered now to strike out our evidence on the ground the original books have not been produced, then the whole purpose of the arrangement we have made with counsel would go for naught, and instead of having facilitated it for either of us, it would have been simply a waste of time. I could not have conceived that that had been the purpose of the arrangement, that in spite of any inspection the objection should be available for advancement that the original books had not been produced. The Master will remember that some of them were produced, and how it was perfectly apparent in reference to one or two of them that it would be impossible to make any progress if examination item by item were to be had before the Master. A half a day was consumed going over items in a single book, adding and subtracting. Naturally, viewing the stipulation as I did and other counsel of the complainant, we do not desire to leave the case in any doubt upon that subject.

The **Master**: Well, Mr. Mathewson, what is the situation? Do you rest?

Mr. **Mathewson**: Well, I am confident that an examination of the record will show that the purpose and effect is as I have stated. I will supplement that for a moment by asking Mr. Carter to take the stand and I will ask him some questions.

Robert A. Carter, recalled for further examination, testified as follows:

By Mr. **Mathewson**:

Q. Did the experts for the city and State come to the office of the Consolidated Gas Company early in August and ask to ex-
2216 amine the books in relation to the statements which the complainants had put in showing the figures from which those tabulations and statements were made up?

A. Yes, sir.

Mr. **Page**: Am I to understand then that Mr. Mathewson refuses to receive the concession as to the facts that I have made?

Mr. **Mathewson**: No, I do not. I am simply asking this as a preliminary question to show other things.

Mr. **Page**: If he does, of course we will have that stricken from the record.

Mr. **Mathewson**: No, I do not reject that at all.

Q. What facilities were these accountants given for examination of the books showing the transactions of which such statements were compilations?

Mr. **Page**: That is objected to as immaterial and irrelevant and having no bearing upon any of the issues and in the light of the record, being entirely foreign to any inquiry before the Master.

The **Master**: Mr. Mathewson, I hardly think it profitable to go into that.

Mr. **Mathewson**: Very good.

The **Master**: Of course, I can simply indicate my views and sustain the objection, and the evidence can go in, but it seems to me that the record is all right as it stands.

Mr. **Mathewson**: With the Master's suggestion, I will not press this question.

Q. Have you here the original operating ledger from which the compilations of the results in 1905 were presented in Exhibit 94?

A. Yes, sir.

Q. Will you produce it?

A. I have the book here.

2217 Mr. **Mathewson**: This book is marked Complainant's Exhibit 97 for identification, and I offer it in evidence.

Book received in evidence and marked Complainant's Exhibit 97 in evidence.

Q. Have you the station records of the Consolidated Gas Company for 1905 of the material used, &c.?

A. Yes (producing books).

Mr. Mathewson: I offer in evidence the 14th Street station records produced by Mr. Carter.

Book received in evidence and marked Complainant's Exhibit 240.

Mr. Mathewson: I also offer in evidence the 42nd Street station record for 1905.

Book received in evidence and marked Complainant's Exhibit 241.

Mr. Mathewson: Of course I offer only the year 1905. Some of these books cover a longer period, that is, some portions of them. I also offer in evidence part of the 42nd Street records for 1905, which is contained in this volume.

Book received in evidence and marked Complainant's Exhibit 242.

Mr. Mathewson: I also offer in evidence the record of the 21st Street station.

Book received in evidence and marked Complainant's Exhibit 243.

Mr. Mathewson: I also offer in evidence the record of the manufacture of the 44th Street station for the year 1905.

Book received in evidence and marked Complainant's Exhibit 244.

Mr. Mathewson: Also the record of the 99th Street station for 1905.

Book received in evidence and marked Complainant's Exhibit 245.

2218 Mr. Mathewson: I also offer in evidence the portions of the sundry debtor's blotters Nos. 13 and 14, covering the year 1905, relating to the city's account and the sales of residuals, scrap and other material relating to the production of gas for that year.

Books received in evidence and marked Complainant's Exhibits 246 and 247.

Mr. Mathewson: I also offer in evidence that portion of Sundry Debtor's Ledger No. 3, relating to the accounts of the City of New York on the sale of residuals, scrap and other items relating to the production of gas for the year 1905, the volume being Complainant's Exhibit 100 for identification.

Book received and marked Complainant's Exhibit 100 in evidence.

Mr. Mathewson: I also offer in evidence those portions of Sundry Debtor's Blotters Nos. 11 and 12, relating to the same matters for the same period.

Books received in evidence and marked Complainant's Exhibits 248 and 249.

Mr. Mathewson: I also offer in evidence the portions of Sundry Debtor's Ledger No. 2 and Sundry Debtor's Blotters Nos. 15 and 16, relating to the same accounts for the year 1905.

Books received in evidence and marked Complainant's Exhibits 250, 251 and 252.

Mr. Mathewson: I also offer in evidence the Trial Balance Sheet of the company in its original balance book No. 5, for October 1, 1905—This is found on pages 92, 93 and 94.

Books received in evidence and marked Complainant's Exhibit 253.

Mr. Mathewson: I also offer in evidence record of gas sales No. 5, so much of it as covers the sales for the calendar year 1905.

2219 Book received in evidence and marked Complainant's Exhibit 254.

Mr. Mathewson: I also offer in evidence the operating journal for the year 1905, being Complainant's Exhibit 98 for identification.

Book received in evidence and marked Complainant's Exhibit 98 in evidence.

Q. Mr. Carter, were the compilations and tabulations which are comprised in statements presented before the Master made from the books of the company in your control?

A. Yes, sir.

Q. Were they true and accurate compilations and tabulations from the books?

Mr. Page: I would object. It seems to me that this is going over the same ground we have been over before. It was testified they were made up as compilations from the books of the company, and he offered then in evidence.

The Master: That is sufficient, I think. I suppose Mr. Mathewson is asking that in view of the motion made by Mr. Burr.

Mr. Mathewson: I was not exactly clear whether I asked that question. I think I have before, but I repeated it for further assurance.

The Master: I will take it, although I think you asked it.

A. Yes, sir.

Q. I think you also stated you were familiar with the books and frequently tested them and that they were accurate statements of the accounts of the company?

A. If I have not already stated it, I state it now.

Mr. Mathewson: I would like to offer in evidence City's Exhibit 45 for identification, being the last two months of 1905.

2220 Paper received in evidence and marked Complainant's Exhibit 255.

Mr. Mathewson: O[illegible] case is closed.

Mr. Page: If the Master please, I think that under the circumstances, my concession not having been accepted by the complainant, should be withdrawn and stricken from the record.

Mr. Mathewson: I do not think that, because I depended upon that in presenting these. You stated that a certain examination was made and I stated that I accepted that and from that point I desire to show certain other things.

Mr. Page: But instead of that you have gone on and put all your books in evidence.

Mr. Mathewson: Not instead of it at all.

Mr. Page: I do not wish to be precluded by any concession I made to save you the trouble of doing that, from any rights I might have now that the books are all in evidence.

Mr. **Garver**: Your concession would not affect the city. We put it in against both, of course.

Mr. **Mathewson**: I do not think the concession you made is at all prejudicial to the situation as I can see.

Mr. **Page**: But it is not well to cumber the record with the offer of a concession that is not accepted.

Mr. **Mathewson**: I stated expressly that I did accept it.

The **Master**: If the Senator on second thought wants to take back his concession and have it stricken from the record, he is entitled to do so. I do not think it is any different one way or the other. As you say, your concession did not bind Mr. Burr. They had to do what they were going to do against Mr. Burr in view of his notice of motions. If you prefer it that way, it may be striken out. 2221 & 2222

Mr. **Mathewson**: Do you wish to withdraw it?

Mr. **Page**: Yes.

Mr. **Kirby**: Will you note the time of adjournment?

The **Master**: Yes. At the request of the defendants, the hearing is adjourned to October 1st, 1906, at 11 A. M., which I believe was the date arranged.

Adjourned to October 1st, 1906, 11 A. M.

Last Exhibits:

Complainant's 255.
State's W.
City's 45.

2223 *The Corporation Counsel serves on the Attorneys for the Complainant herein, September 27, 1906, the following notice:*

On behalf of the defendant, The City of New York, I make the following motions:

I.

I move to strike out all evidence of the value of real estate at this present time, more particularly the testimony of Wheelock, as the basis of computation must be the amount invested in said real estate, that is, the cost thereof, and not the present value, where such present value is admittedly greater. That is to say, the complainant is not entitled to dividends on the appreciation.

II.

I move to strike out evidence of the value of all such real estate as is vacant, or not used in the manufacture of gas in Manhattan, by the claimant, more particularly as follows:

Rented Parcels.

No. 326 Avenue A.
No. 328 Avenue A.
No. 330 Avenue A.
No. 333 Avenue A.
No. 335 Avenue A, City lot occupied by foreman.
No. 329 Avenue A.
No. 605 West 44th Street.
No. 606 West 44th Street.
No. 608 West 45th Street.
No. 610 West 45th Street.
No. 421 East 60th Street.
No. 420 East 61st Street.
No. 222 West 65th Street.
2224 99th Street and First Avenue (part occupied by foreman).
325 Avenue A, between 17th and 18th Streets, Avenue B and Avenue C, eight City lots.
Between 18th and 19th Streets and Tenth Avenue and marginal street, five City lots.
South side of 111th Street, west of First Avenue, two City lots.
Shadyside, New Jersey.
One-half 41st Street Station.
Also all other parcels not actually used by complainant in the business.

III.

I move to strike out all deeds offered and received in evidence as to the title to Astoria property. All evidence as to moneys spent or to be expended thereon, on the ground that such property or money is not used in the manufacture of gas at the present time, and should not be included as part of the capital on which the plaintiff is entitled to dividends. Such investment in the property and plant at Astoria is not shown by complainants to be essential to the manufacture and supply of gas at the present time in the Boroughs of Manhattan and The Bronx, and is not so used at the present time and in no case should such investment be allowed as part of the capital prior to the time such plant is in operation.

And upon the further ground that such property is owned by and is for the use of a separate corporation, to wit, the Astoria Light, Heat and Power Company, not a party to this action.

Exhibits 50, 51, 52, 53, 55, 56, 57A, 58, 59, 61, 62, being deeds from various parties to the Astoria Light, Heat and Power Company.

Exhibits 54 and 60 being letters patent to the Astoria Light, Heat and Power Company.

2225 Exhibit 63, blue print of property conveyed to the Astoria Light, Heat and Power Company.

IV.

I move to strike out all evidence as to the value of "good will" or the "going value," on the ground that it forms no part of the capital; and cannot exist with regard to a business that enjoys a monopoly, since where there are or can be no competitors, the value thereof ceases.

V.

I move to strike out all evidence introduced as to the cost of gas and the value of investment where the same consists of statements alleged to be taken from the books on the ground that the said statements are not shown to be correct transcripts or extracts of the books, etc., *to the knowledge* of the witnesses, or compiled by them and not the best evidence, but merely hearsay.

VI.

I move to strike out Plaintiff's Exhibit 70, which purports to be schedules of appraisement and valuations of the constituent companies forming the basis of consolidation, on the ground that it relates to plaintiff's machinery and equipment existing in 1884, much of which does not exist to-day, having been superseded and replaced, and relates to equipment which is out of date and not adequate for present purposes in the manufacture of gas on an economical basis, and further, said statement is not a fair statement of values of the property therein appraised, as it does not show on its face that the element of depreciation has been considered in giving the values therein stated; that it is not the best evidence of the value of 2226 the property therein appraised at that time, in that such values could and should be shown by the entries in the books of the respective constituent companies, with an additional allowance for depreciation, and that such appraisements do not represent the cost to the complainant of the property therein specified, but represent the estimate of the values of the property in 1884, which estimate is unfair and biased, and does not make allowances for the appreciation in the value of real estate and the depreciation in the value of the plant and machinery.

VII.

I move to strike out plaintiff's Exhibit 71, on the grounds stated in paragraphs V. and VI. and on the further ground that it includes and purports to be the value of a franchise at that time, which value, if it existed, forms no part of the capital to be used as a basis in determining the rate at issue in this proceeding.

VIII.

I move to strike out Exhibits 72, 73, 74, 75, 76 and 77 on the ground that such increases of stock are immaterial, irrelevant and incompetent and do not show necessarily any increase in the investment on which the Company is entitled to dividends, but which increases in stock have been used for other purposes not incident to the manufacture of gas at the present time in the Boroughs of Manhattan and The Bronx by the complainant.

IX.

I move to strike out plaintiff's Exhibit 78, which purports to be the real estate, plant, property and construction, as shown from the balance sheet of November 11, 1884, and December 31 of 2227 each of the following years, on the ground stated in paragraph V., and on the further ground that the figures for the year 1884, $37,971,419.01, are subject to the objection stated and referred to in paragraph VII., and upon the further ground that such Exhibit includes items and expenses not connected with the manufacture of gas by the complainant in the Boroughs of Manhattan and The Bronx.

X.

I move to strike out plaintiff's Exhibit 79 on all of the grounds set forth or referred to in paragraph IX. herein.

XI.

I move to strike out plaintiff's Exhibit 80, which purports to be a statement of assets and liabilities, on the grounds stated or referred to in paragraph IX.

XII.

I move to strike out plaintiff's Exhibit 81, which purports to be a statement showing the investments in the gas business, on all of the grounds set forth or referred to in paragraph IX., and upon the further ground that the following items in no wise enter into the investments of complainant for the purpose of the manufacture of gas in the Boroughs of Manhattan and The Bronx; "invested in gas manufacturing plant at Astoria, $556,000; invested in cartage plant, $50,000; proceeds from debentures, $12,717,494.64."

XIII.

I move to strike out plaintiff's Exhibits 85 and 86, on the grounds stated in paragraph V.

2228

XIV.

I move to strike out plaintiff's Exhibits 87 and 88, which purport to be certificates of incorporation of the Astoria Light, Heat and Power Company and the National Coke and Coal Company, on the ground that said companies are not parties to the present action and cannot be included in the capital of complainant.

XV.

I move to strike out plaintiff's Exhibit 89, which purports to be a comparatively condensed balance sheet, on grounds set forth in paragraphs V. and IX., and on the further ground that it contains securities of other companies not parties to this issue, amounting to $53,041,134.52, and securities of the Astoria Light, Heat and Power Company amounting to $5,560,000, and of the National Coke and Coal Company, $50,000.

XVI.

I move to exclude plaintiff's Exhibits 93 and 94, on the grounds stated in paragraph V, and upon the further ground that the items for coal and oil represent purchases from parties who are directly interested in the capital stock of the Gas Company, and that said items are not a fair estimate of the cost of coal and oil, and on the further ground that the statements include items for gas stoves bought, sold and leased, separately from production and sale of gas, and upon the further ground that the charge for street lamps is no part of the cost of the manufacture of gas, and on the further ground that the item of contingent expenses and depreciation, amounting to $1,114,236.00, is excessive and not warranted by the conditions and is no part of the cost of the manufacture of gas, and on the further ground that there are expenses for clerks and employees included in said statements, which persons rendered services to other companies and for other purposes not incident to the manufacture of gas by the Complainant in the Boroughs of Manhattan and The Bronx, and on the further ground that such statements include contributions to Employees' Aid Association, taxes and interest on taxes which have not been paid and which are the subject of litigation at the present time, all of which form no part of the cost of gas during the period in question; and on the further ground that the estimate of fixed charges, amounting to $936,883.24 does not represent the actual interest on charges pertinent to the investment of the complainant in the manufacture of gas in the Boroughs of Manhattan and The Bronx. 2229

XVII.

I move to strike out plaintiff's Exhibits 95 and 96, on the ground stated in paragraph V, and on the further ground that such exhibits are made up of totals containing items in no wise connected with the manufacture of gas by the complainant in the Boroughs of Manhattan and The Bronx during the periods covered by said exhibits.

2230 *The Corporation Counsel serves on the Attorneys for the Complainant herein, September 27, 1906, the following notice:*

The defendant City of New York moves to dismiss the complaint of the complainant herein on the following grounds:

I. We submit that the complainant has wholly failed to prove its contention that Legislative enactment reducing the selling price of its gas to eighty cents per thousand cubic feet to private consumers and seventy-five cents per thousand cubic feet to the City of New York, is a practical confiscation of its property, in that it cannot manufacture and sell its commodity at such prices and render an adequate return to the capital invested in its business.

It appears from the testimony that the complainant is not only a manufacturer and seller of gas, but that the major portion of its invested capital is devoted to an investment in the stocks and bonds of other lighting corporations, owning them in entirety or so nearly so as to be able to dictate their policies; it also loans from its ample funds to those companies and notably to one of them, the Astoria Light, Heat and Power Company, *without charge for interest;* it has furnished millions of its capital and is pledged to supply millions more for the construction of a gas plant in a locality where it has no legal right to operate itself, and as a result of all of these transactions, and by introducing statements covering all its operations, some of which are shown not to be remunerative, it has sought to prove that the purely gas making branch of its business will be unprofitable under the present law.

2231 *We are able, however, by the use of figures introduced by the complainant itself, which we accept as accurate only for the purposes of this motion and deny for any other purpose, to show, that upon the basis of its operations for the year 1905, and considering its capital invested solely in the business of making and selling gas, it can supply gas at 80 cents per thousand cubic feet to private consumers and 75 cents to the City of New York, with a reasonable profit when all the circumstances and conditions are given due consideration.*

Investment in the Gas Business.

The first question to consider is the amount of money which the complainant has invested in its legitimate business of making and selling gas.

Complainant stated in Exhibit 80, under the heading, "Investments in the Gas Business," that it has so invested the sum of * * * $56,891,454.99. But that is manifestly incorrect, because it includes therein two items of its investment in the securities of other companies, namely, the Astoria Light, Heat and Power Company and the National Coke and Coal Company, the aggregate of these two items being $5,610,000.

Counsel for the complainant very properly stated (Testimony, page 1059) that,

"The amount invested in other securities we do not claim a right to earn upon from the consumer of gas."

Such is our own position and, however, for its own purposes of accounting, the complainant may see fit to treat the two corporations above referred to, the sum of $5,610,000 is, in law and in fact an "amount invested in other securities" hence, cannot be an investment in the gas making business of the complainant.

2232 The items on said Exhibit 80 of

"Material and Supplies"	$616,470.08
and	
"Due from Consumers and Others"	2,000,000.00

must also be eliminated from consideration, for the reason that they are much more than offset by the item on the other side of the account entitled:

"Accounts Payable and Accrued Charges" $3,281,711.52

This latter item is not an investment of the complainant, nor a sum upon which any interest has to be paid.

In the ordinary course of its business it covers the cost of materials and supplies remaining on hand at the close of the year, together with a still greater amount of the same which it has converted into gas and sold; in any event, it is not an investment of the complainant, no interest has to be paid for its use and there is no good reason why it should be so treated, as, in effect, to charge the consumers of gas with a cost for interest which does not have to be met in the first instance by the complainant, nor to allow a profit to be made thereon.

Taking then the total assets shown by Exhibit 80 to have been invested in the gas business......		$56,891,454.99
and deducting these items:		
Plant and Property, Astoria......	$5,560,000.00	
National Coke & Coal Co.........	50,000.00	
Material and Supplies...........	616,470.08	
Due from Consumers and Others...	2,000,000.00	
		8,226,470.08
There is left as a remainder..............		$48,664,984.91

2233 From complainant's own showing, therefore, the total amount of the funds which it has raised from the sale of its stocks and bonds, which is now invested solely in the gas business and upon which it is entitled to earn an amount sufficient to pay whatever rate of dividend the Legislature and the Courts shall find to be reasonable; and such further sum, if any, as shall judicially be determined is wise and proper to be kept in a Sinking Fund for future contingent use, is less than $49,000,000.00.

That this is substantially the correct sum invested in the gas business we may readily substantiate by arriving at a result closely approximating this, from a different method of figuring, which perhaps may be more readily understood:

Assuming for the purposes of this motion only that the original capital of the Complainant Company was	$39,073,000.00
Add Debenture Bonds Issued in 1888...........	1,387,000.00
The Insurance Fund........................	286,809.84
Consumers' Deposits	904,520.07
Additions to Plant and Property in excess of the last three items...........................	7,115,235.99
	$48,771,565.90

Secretary Carter testified (at pages 392 and 572) that the original capital provided for more than a million dollars of working capital and in one form or another it must still exist as such.

Exhibit 79 shows that from the date of its organization to October 31st, 1905, it had added to its permanent investment in plant and property,

The sum of	$9,693,565.90

We have assumed, for the purpose of accounting, that the funds to pay for such addition came in part from the sources 2234 itemized and that the remainder came from surplus profits or from premiums received from the sale of its stocks and bonds, but, as a matter of fact, it is not important from what source the funds were derived.

All money received by the complainant goes into one treasury account and is finally, and we assume accurately, accounted for.

It will be seen, then, that one method of figuring

Produces	$48,771,565.90
And the other	48,664,984.91

But from either sum there must be a deduction for a matter which does not appear upon the books of the company, but which is in evidence, namely, the disposal of a portion of its property and plant to the City of New York, and hence its release from the capital invested in the gas-making business.

Not all of the property so condemned and taken over by the City of New York has had a price fixed upon it by the proper tribunal, but awards have been made upon the following property:

Land and structures at 111th Street	$365,000.00
Part of land and structures at 18th Street	485,748.00
Bulkhead property at 21st and 22d Streets	247,853.00
As to much the larger part of the property taken at 18th Street no award has yet been made, but an extremely conservative estimate is	672,952.90
A total of	$1,771,565.90
Deducting from the capital investment shown to be	$48,771,565.90
The value of the property sold	1,771,565.90
There remains	$47,000,000.00

which is the utmost amount entitled to earn dividends from 2235 the gas business on the basis of the complainant's own figures.

Result of Gas Operations for the Year 1905.

No evidence has as yet been introduced which will show the exact cost of making and selling gas separate and apart from all the other business of the company, and we have no purpose at this time of making such a showing, but rather to follow the line adopted by the complainant, and consider as a whole its business for the year 1905.

On the one hand, we shall set down as receipts only those items shown by the complainant as being derived from the gas business, and as operating expenses shall allow those only which are to be fairly considered as a proper charge from the standpoint of the consumer.

Complainant's Exhibit 96 shows a total of receipts from "Gas Sales," $13,552,482.97.

As a matter of fact, these receipts were not all from the sale of gas, but were in part from the rent of gas stoves and for the maintenance and care of street lamps; there are items of income also pertaining to the gas business which in Exhibit 96 are included in "Miscellaneous Income."

There was sold in 1905 (see Exhibit 94) 13,283,163,767 cubic feet of gas, of which there was sold to the City an estimated quantity of 398,525,978 cubic feet, leaving for private consumers, 12,884,637,789 cubic feet.

The price in 1905 being one dollar per thousand to the latter and ninety cents to the former, we must deduct twenty cents and fifteen cents respectively to reduce the figures to those that would result from an enforcement of the present law.

2236

12,884,637,789 c. f. at 20 cents	$2,576,927.56
398,525,978 c. f. at 15 cents	59,778.90
Total	$2,636,706.46

Receipts (Exhibit 96)	$13,552,482.97
Deduct, as above	2,636,706.46
Receipts under present law	$10,915,776.51
To this should be added from "Miscellaneous Income":	
Rentals, wharfage, discounts, scowing, suspense accounts, etc.	172,710.53
Total income from investment in gas business	$11,088,487.04

From Exhibit 94 we take the following items of expenditures which enter into the cost of making and delivering gas, selling and collecting for the same:

Station cost	$3,455,091.37
Cost of gas manufactured under Agency agreements	997,039.89
Total distribution, less interest on consumers' deposits, which will be included in the general expense item of interest	1,589,690.67
	$6,041,821.93

This sum, reduced by repairs to gas stoves and by street lamp account ($345,213.44) we submit as the cost of making, selling and delivering gas, keeping the gas accounts and collecting the bills and based upon the quantity of gas sold, amounts to 42.88 cents per thousand c. f.

2237 The General Expense items, which we also take from Exhibit 94, are as follows:

General Office Expense (90%)	$305,992.36
Automobiles, (90%)	4,557.74
Advertising and Legal (90%)	95,220.02
Vacations and Sickness	8,175.20
Real Estate Rents	42,674.71
Gas Companies' Aid Society	6,413.99
Superannuation	14,943.86
Insurance	54,031.83
Renewals (Actual Exhibit L.)	232,219.67
Taxes	738,067.86
Interest	118,918.37
Total General Expenses	$1,671,215.61

Summary.

Gross Income		$11,088,487.04
Gas Cost	$6,041,821.93	
Other Expenses, Interest and Taxes.	1,671,215.61	7,713,047.54
New Earnings		$3,375,449.50
6% Dividend on Actual Capital Invested		2,820,000.00
Surplus		$555,449.50

The surplus may be carried in a fund to provide for all extraordinary renewals, repairs or contingencies, as to which testimony has been admitted and which fund is largely in excess of any sum which past experience has shown is needed.

We have treated the General Expense items shown in Complainant's Exhibit 94 with great conservatism in making a division of the amount that should be borne by the capital of the company invested otherwise than in the gas business. 2238

When it is considered that the complainant owns all or nearly all the stocks and bonds of the lighting companies in which it is interested, and with the unimportant exception of The Bronx Gas and Electric Company, controls all the other gas and electric light companies in the Boroughs of Manhattan and The Bronx, that it keeps close watch over their operations and dictates their policy, that its general officers give much of their time and attention to even the details of their business, the 10 per cent. of the three items "General Office Expenses," "Automobiles" and "Advertising and Legal," which in the aggregate amounts to only $45,085.57, will seem a small enough amount to charge against the capital used for other than gas making purposes.

In the matter of taxes, which are shown in total on Exhibit E, and the detail of State taxes further shown on Exhibit M, we have charged the gas business as follows:

Tax Account.

Real Estate	$179,778.95
Special Franchise	406,909.23
Mains, etc., on Private Property	14.91
Proportion of State Tax, figured on the Basis of $39,078,000 Capital Stock Invested in Gas Business and $40,992,000 Capital Stock Otherwise Invested.	129,155.02
Local Tax on Personal Property, 25% of $88,839.00	22,209.75
	$738,067.86

We have not taken account of interest due on unpaid taxes; the testimony shows that only contested taxes are allowed to remain unpaid.

2239 If the company wishes to contest its tax bills, let it do so at the expense of the stockholders, who alone will benefit, if the contest proves successful.

Interest Account Entitled "Fixed Charges" in Exhibit 94.

Items from Exhibit I.

Bills Payable	$20,637.50
Debenture Bonds	69,488.07
Bond and Mortgage	129.54
	$90,255.11
Less Interest on Bank Balances of Working Capital	22,728.26
	$67,526.55
Add Item from Exhibit 94; Consumers' Deposits	51,391.52
Total	$118,918.37

It is not at all certain that the interest on "Bills Payable" is a proper charge to the gas account, but we have assumed it to save controversy over a small matter.

It is quite certain that the remaining items of interest shown on Exhibit I. have no connection with the gas business.

We have shown 6 per cent. as the proper amount of dividend to be earned, because in the absence of any other agreement the statutes of the State specify that to be the rate of interest governing dealings between its citizens.

Whether as dividend or interest, the rate of 6 per cent. is one that is gladly accepted by many thousands of investors whose 2240 investments are based upon enterprises far less stable than is that of the complainant and no enterprise which is limited to such a percentage of annual earnings on its capital may reasonably claim a confiscation of its property; in addition to this, we are fully persuaded that by the exercise of strict economy and the proper distribution of its expenditures the complainant may easily make a better showing than we have here done.

The charging of ten cents per thousand feet of gas sold, to a contingent fund, which appears in the accounts of the complainant last year, for the first time in its history and which thus abnormally increases the apparent cost of gas, is a matter that cannot, in good faith, be defended. Particularly absurd is one of the reasons given for the establishment of such a fund—that at some time in the future it is contemplated to break up one-half its plant and turn over its manufacturing business to another corporation operating in another borough.

If anything more illogical than to ask the consumers of gas in the City of New York to bear an expense of that kind has been introduced at this hearing, it has escaped our notice.

Equally fanciful and romantic are some of the other reasons given for the establishment of that fund.

Slow decay by electrolysis of the underground plant is one of the anticipated disasters; but the use of electricity in New York is no new thing, and the complainant's Superintendent of Mains has testified that he has never exposed nor removed a pipe that was not as sound as when it was laid; and some of them have been in the ground since 1825.

Nor can we agree with the Gas Commission, that any greater sum for renewals should be allowed than the actual cost of the same.

In addition to ordinary repairs, it is in evidence that extra- 2241 ordinary repairs and renewals, replacements and supercessions have been going on ever since the complainant acquired its property in 1884, and the result has been to bring the plant to such a state of perfection as to elicit testimony from the officials of the company that it cannot now be improved upon.

That being the case, it is reasonable to assume that the cost of further renewals must be constantly lessened, and only ordinary repairs, with an occasional renewal of minor parts of the plant, be expected in the future.

Much time has been consumed at this hearing in seeking to prove by expert testimony the considerable value of the real estate and plant of the complainant over and above its cost and book value. It would seem to be time and labor wasted; if proved, it would only show that the original investment of the company was not a bad one, and it is the investment of capital that we have to consider, not the fluctuations in value of the property acquired to serve the public in the business of making and selling gas.

We may only express the hope that the officials of the complainant company will not forget what they have so diligently sought to establish, when next they are called upon by the tax assessor.

We are not especially concerned with the interests of that portion of the capital stock invested in the securities of other companies.

It is true that Exhibit B shows a return from such investments of less than 2 per cent. in 1905, but it is not true that no more than that small rate was earned.

One of the affidavits in support of our answer to complainant's bill stated that the accounts of the complainant company did not reflect its true earnings.

2242 As substantiating the truth of that affidavit, we refer to Gas Commission Printed Papers on Appeal, Exhibit 170, page 2197, in the case of Keys, complainant, which is here in evidence; that exhibit shows the earnings, expenses and dividends of the Consolidated Gas Company for a period of five years, from 1900 to 1904, and that the dividends paid were in excess of the net earnings for the same period, by the sum of $10,290,354.54.

A note attached to the same exhibit states, however: "The surplus earnings of other gas and electric companies, to which the Consolidated Company, as a stockholder, was entitled, in excess of amounts actually received, were merely sufficient to cover the deficits shown in these statements.

"But owing to the capital requirements of those companies, for extensions and improvements, the Consolidated Gas Company has thus far refrained from drawing such earnings.

"Its own accumulated surplus and reserve, to that extent, have therefore been for the time being diminished."

The complainant has a monopoly of the supply of gas in the territory in which it is engaged in business, in which territory the consumption of gas is greater than in any other territory in the United States, if not in the world.

An investment in this business under these circumstances, with economical and careful management, is as safe as an investment in government bonds and realizing a much larger return.

In the case of Stanislaus County *v.* San Joaquin C. & I. Co., reported in 192 U. S. Reports, Judge Peckham, at page 213, says:

"It is not confiscation nor a taking of property without due process of law, nor a denial of the equal protection of the laws, to fix 2243 water rates so as to give an income of six per cent. upon the then value of the property actually used, for the purpose of supplying water as provided by law, even though the company had prior thereto been allowed to fix rates that would secure to it one and one-half per cent. a month income upon the capital actually invested in the undertaking. If not hampered by an unalterable contract, providing that a certain compensation should always be received, we think that a law which reduces the compensation theretofore allowed to six per cent. upon the present value of the property used for the public is not unconstitutional. There is nothing in the nature of confiscation about it."

In the case of the Covington and Lexington Turnpike Road Company *vs.* Sandford, decided at the October Term, 1896, U. S. 164, page 396, it was held:

"It is proper to say that if the answer had not alleged, in substance, that the tolls prescribed by the Act of 1890 were wholly inadequate for keeping the road in proper repair and for earning dividends, we could not say that the Act was unconstitutional *merely because the Company* (as was alleged and as the demurrer admitted) *could not earn more than four per cent. on its capital stock.* It cannot be said that a corporation is entitled, as of right, and without reference to the interests of the public, *to realize a given per cent. upon its capital stock.*

* * * * * * *

"But that involves an inquiry as to what is reasonable and just for the public. * * * That inquiry also involves other 2244 considerations, such, for instance, as the reasonable cost of maintaining the road in good condition for public use, and the amount that may have really and necessarily been invested in the enterprise.

"*In short, each case must depend on its special facts;* and when a Court, without assuming itself to prescribe rates, is required to determine whether the rates prescribed by the Legislature for a corporation controlling a public highway are as an entirety so unjust as to destroy the value of its property for all the purposes for which it was acquired, *its duty is to take into consideration the interests both of the public and the owner of the property,* together with all other circumstances that are fairly to be considered in determining whether the Legislature has, under the guise of regulating rates, exceeded its constitutional authority and practically deprived the owner of property without due process of law."

It is well settled the rate fixed by the Legislature is presumed to be reasonable until proven otherwise.

This presumption the complainant has not overcome. It has entirely failed to prove the rate fixed unreasonable or confiscatory, and the motion to dismiss should therefore be granted.

I move to dismiss on the further ground:

II. The bill of the complainant herein should be dismissed for the further ground that it has failed to prove that its property has been confiscated within the provisions of the Constitution. Taking the figures introduced by the complainant, it does not appear from them that if it continues to operate its business that such business will be conducted at an *actual* loss, but merely at a reduced profit, and it is submitted that unless it can be shown that an actual 2245 loss will be inflicted upon the complainant there is no confiscation.

In the cases which limit the doctrine laid down in the case of Munn *vs.* Illinois, we do not find any clear definition of what constitutes confiscation until we reach the case of Cotting *vs.* Kansas City Stock Yards Co., 183 U. S., p. 79, in which Mr. Justice Brewer, giving the opinion of the Court, says at page 93 as follows:

"* * * The owner has intentionally devoted his property to

the discharge of a public service. * * * He deliberately undertakes to do what is proper work for the State. * * * It may be said that he voluntarily accepts all the conditions of public service which attach to like service performed by the State itself. He expresses his willingness to do the work of the State, aware that the State in the discharge of its public duties is not guided solely by a question of profit. It may rightfully determine that the particular service is of such importance to the public that it may be conducted at a pecuniary loss, having in view a larger general interest. At any rate, it does not perform its services with the single idea of profit. Its thought is the general public welfare. If in such a case an individual is willing to undertake the work of the State, may it not be urged that he in a measure subjects himself to the same rules of action, and that if the body which expresses the judgment of the State believes that the particular services should be rendered without profit, he is not at liberty to complain? While we have said again and again that one volunteering to do such services cannot be compelled to expose his property to confiscation, that he can-
2246 not be compelled to submit its use to such rates as do not pay *the expenses* of the work, and therefore create a constantly increasing debt which ultimately works its appropriation, still is there not force in the suggestion that, as the State may do the work without profit, if he voluntarily undertakes to act for the State, he must submit to a like determination as to the paramount interests of the public?"

This is undoubtedly the test of confiscation of property where public service corporations are concerned; are the rates so low as to prevent the company from meeting its obligations? Unless this can be established there is no *taking* of property.

It is submitted that the Court must distinguish between *unreasonable* rates and *confiscatory* rates, as a rate may well be unreasonable without actually confiscating property within the meaning of Judge Brewer's definition. The province of the Court is only to determine whether or not the rate fixed by the Legislature is unconstitutional, in that it confiscates property, while it is the province of the Legislature in fixing the rate to determine whether or not the rate fixed is reasonable. If the complainant is aggrieved at the amount of dividends it is able to earn under the rate as fixed, it should address itself to the Legislature for the amending of such rate, and not address itself to the Court, unless it is prepared to prove the actual *taking* of property. Where, however, any profit, no matter how small, can be made under the established rate, the company has the alternative of applying to the Legislature for relief or retiring from the business.

I move to dismiss on the further ground:

III. The bill of the complainant herein should be dismissed
2247 for the further ground that said complainant has failed to introduce any evidence showing the true cost of its property, plant, etc., which figure must be taken into consideration in determining whether the rates established by the Legislature are confiscatory.

That such value must be taken into consideration is determined, it is submitted, by the decisions in the various United States Supreme Court cases in which this question has been at issue, on the broad grounds of equity, although the language used in several instances shows the Court disregards *the cost* for the *fair value* of the property.

Careful consideration will show the reason for this, and that the defendants' contention is based on the identical grounds adopted by the Court in those cases, namely, that where the public has an interest in the business it is inequitable to allow a corporation operating the business to earn dividends on unfair investments.

In the case of Stanislaus County *vs.* St. Joaquin C. & I. Co., 192 U. S., p. 214, the Court, in taking the market value as distinguished from the actual cost as the basis, used the following language:

"The original cost may have been too great; mistakes of construction, even though honest, may have been made, which necessarily enhanced the cost; more property may have been acquired than necessary or needful for the purpose intended. Other circumstances might exist which would show the original rates much too large for a fair or reasonable compensation at the present time. Notwithstanding such facts, are the shareholders in the company to be forever enti-led *at* eighteen per cent. upon this cost, and does a reduction in amount, as provided for in the Act of 1885, take away property in violation of the provisions of the Federal Constitution? We think not. * * *"

2248 If the Court then refuses to allow a return on money *actualy* but *improperly spent,* it is submitted that it cannot by any distortion of reason permit a return on money *never* spent. It will be noted that the present case is the first one where the *value* of the property of the complainant *exceeds* the *original* cash investment, and presents a case quite the reverse of the former cases, but in which, on the broad grounds of equity, the Court must take as a basis the actual investment and not the actual investment plus the unearned increment; that is to say, the present value.

There is no evidence introduced by the complainant as to the cost of its property and plant prior to the year 1884, when the consolidation was effected. A moment's consideration will show that the 1884 values cannot be taken as the true cost, but that the actual cost of the six subsidiary companies must be determined. It is submitted that the complainant cannot by the subterfuge of consolidation in 1884 increase the true cost of its property and plant, and that the Court must, under the decisions, disregard all such increase in paper values in the same manner as the courts have heretofore construed money rashly or ill-advisedly spent.

There being no evidence as to the true cost of the plaintiff's plant and property on the record, the basis for the determination of the issue is not established, and the complainant's case fails.

2249 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 3), pages, numbered from 1443 to 2248 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office. (Vol. 3.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

VOL. III.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING THE PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

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2249*a* Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 1, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Page, Mr. Kirby, Mr. Burr.

U. S. Circuit Court, Southern District, N. Y. Filed Jun- 24, 1907. John A. Shields, Clerk.

2250 MR. BURR: I wish to say, Mr. Master, that since the last adjournment I have made a motion before Mr. Justice Lacombe for an examination of the books of the company and for an inspection of its plants. That motion was set for last Thursday, and because of my illness it went over until Friday next. I have also, as was suggested at the last hearing, served in formal manner the motions I made then informally to dismiss and to strike out; copies of those papers were served upon the respective attorneys, and they are now handed to us by the stenographer in printed form, and they form part of the record. I find that there was one motion that was omitted.

I therefore now move further to strike out the testimony of Bradley, Simpson, Carter, Addicks and Humphreys so far as such testimony is based on the exhibits or statements purporting to be taken from the books of the company. And I also move to strike out the act or the franchise which was offered relating to the Mutual Gas Light Company.

MR. PAGE: I join in the motion made by the City of New York to strike out the testimony, and I would like to have the following spread on the record as my statement of my motion to dismiss:

The defendants, Julius M. Mayer, as Attorney General, William Travers Jerome, as District Attorney, Frederick E. Gunnison, John C. Davies and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, move to dismiss the bill of complaint herein on the complainant's evidence, on the ground:

That the complainant has failed to establish its case in this, that

2251 I. The complainant has failed to show that Chapter 736 of the Laws of the State of New York of 1905 and Chapter

125 of the Laws of the State of New York of 1906, in so far as they establish a rate to be charged for gas to the City of New York at 75 cents per thousand feet, and to the private consumers at 80 cents, is confiscatory in that it does not allow a fair return on the capital invested in the business of making and distributing gas.

II. The complainants have failed to prove what it costs *it* to make and distribute gas to its consumers.

The testimony given is argumentative merely, although it was shown that records were kept by the secretary of the company which showed month by month what it actually did cost, and these records were not produced in evidence.

III. The complainants have failed to prove the amount of capital actually invested in making and distributing gas upon which *it* would be entitled to a return.

All the complainant's evidence as to value is hypothetical, and does not bear any relation to actual conditions or proper hypothesis, (*a*) The value of its real estate is given as the valuation of vacant lots without buildings, while their witness, Mr. Priess, admitted that the same was less valuable with a gas works upon them; (*b*) no evidence has been given showing exactly what portions of the real estate were used by the company in its gas-making business; (*c*) the valuation of buildings and plant is given at the cost to-day to reproduce the identical buildings and machinery, irrespective of the fact as to whether they were commercially and economically worth re-
2252 producing; (*d*) the complainant has failed to prove the amount of capital actually invested in its real estate and plant, or what it would cost to construct a plant that would produce and distribute the same amount of gas under modern conditions.

IV. The complainant does not prove or claim that it cannot earn and does not earn sufficient to pay four per cent. in dividends on its entire capital stock, although more than one-half of which is conceded to be invested in the stocks, bonds or obligations of other companies.

It has been shown that the complainant to-day, under the operation of these laws, is paying four per cent. dividends on $80,000,000 of capital stock. It has been proved that at least $56,000,000 of this capital is invested in the stocks and securities of other companies which are very largely unproductive.

V. The complainant has failed to prove that it is impossible to comply with the regulation with regard to pressure contained in said Acts of the Legislature.

It is admitted that no attempt has been made to regulate and control the pressure, and that in other cities district governors are used for that purpose. That it might cost the complainant something to comply with the law does not render it unconstitutional; it must be shown that the penalty attaches for the failure to comply with an impossible condition.

VI. Chapter 737 of the Laws of 1905, which establishes a commission of gas and electricity, is clearly a constitutional exercise of the power of the Legislature, and the order made by it February 23d, 1906, was a reasonable exercise of its powers, for the reasons set forth under the foregoing subdivisions of this motion.

The MASTER: I will make no disposition of those motions 2253 at present until I have had an opportunity to examine them. The understanding was at the last hearing that they were to be submitted within a week thereafter and sent to me some time before this hearing to be passed on. I observe the time schedule has somewhat overrun and so I will defer action on them for the present.

Mr. BURR: They probably would have been served sooner only I went straight from this hearing to a sick bed and was several days in bed.

The MASTER: I am sorry to hear that. Are we ready to proceed this morning?

Mr. KIRBY: I have some motions to make here in the absence of Senator Page, who is talking over the telephone. I will simply read from his memorandum:

The defendant moves that the hearing herein be adjourned until after the presentation and determination of a motion brought on by an order to show cause which was returnable last Friday before the judge sitting in the Circuit Court of the United States for the Southern District of New York, and which order was as follows:

Upon the annexed affidavit of Gustavus T. Kirby, verified the 25th day of September, 1906, on all the pleadings and proceedings had herein.

It is Ordered that the complain-t show cause before the Hon. E. Henry Lacombe at a stated term of this Court, to be held in the General Post Office Building in the Borough of Manhattan, City of New York, on the 27th day of September 1906, at 11:30 o'clock in the forenoon, or as soon thereafter as counsel can be heard, why an order should not be issued directing the complain-t herein to 2254 permit an examination of its books, papers, vouchers and plants, buildings and apparatus by the accountants and engineer of the defendant, the State of New York, and for such other and further relief as to the Court may seem just and proper.

And it is further ordered that service of a copy of this order and of the affidavits upon which the same is based, upon the attorneys for the parties hereto on or before the 25th day of September, 1906, shall be sufficient.

Dated, New York, September 25, 1906.

(Signed) C. M. HOUGH, *P. J.*

Mr. KIRBY: And the affidavit thereto annexed to be spread on the record as though read.

Mr. MATHEWSON: Is it necessary to spread that on the record? I think that the statement is that a motion has been made of a certain general character, and it does not seem necessary to spread the affidavit on the record from which that is made.

The MASTER: What is the necessity of that?

Mr. KIRBY: I see no reason why the affidavit itself should be spread on the record, but the relief asked for being stated in the order to show cause, I think should have been spread on the record and that is the part I have read.

Mr. Mathewson: No objection to that.

Mr. Kirby: Then we do not offer the affidavit at this time. And we also ask that the hearings herein be adjourned until after the hearing and determination of the motion for a similar order brought on by the defendants, the City of New York, and which motion is practically in the same form as that or the order to show cause which has been read. The grounds of this application are generally those set down in the above moving papers as the reason why the
2255 hearing before the Master should be adjourned until after
the defendants have an opportunity to examine the plants, books, and records of the complain-t; specifically upon the grounds that until after the hearing and determination of these motions the defendant will be in no position to determine the kind and character of its defence and the nature of its testimony which it will present. If the motions made should be granted, its defence will consist of testimony of its experts relative to results of such examination, and their deductions therefrom. If, on the other hand, the motions are denied, its witnesses can only give testimony as to their opinion of the correctness or incorrectness of the testimony of the witnesses of the complain-t, and make on their own account such deductions therefrom as seem to them fit and proper. Such testimony being largely hypothetical would be but cumbering the record, and unnecessarily, if the defendant was permitted to, from its own examination, obtain the information demanded in the motions referred to and which is imperative and necessary to its defence.

The defendant takes occasion to here state to the Master that the arguments of the motions referred to has been adjourned by the Court until Friday, October 5, 1906; that such adjournment was not at the request of the State of New York, but that on the other hand the State was ready to proceed with the argument thereof on the return day of the argument to show cause—that is, on the 27th day of September, 1906.

That the complainant on the return of said order to show cause on said 27th day of September, 1906, stated that it was not ready to proceed for the reason that the order to show cause had not
2256 been served upon it until the 25th day of September, 1906;
and that while such statement was true, that as the complainant was aware (and which the papers themselves show) the motion of the State was identical with that of the City of New York, which made service of its moving papers on Saturday, the 22d day of September, 1906; the same being within the time permitted by the Court for regular notice of motion to be served; and further, that the complainant had been informed before the adjournment of this hearing on Friday, September 7, 1906, that such an application was to be made and as to the grounds upon which the application would be made.

And the defendant stands ready to argue such motion at this or any other time, and is in no way responsible for the adjournment of said argument until the date set by the Court for the hearing thereof.

The defendant has made repeated application for the permission requested in its moving papers, both to the Master and to the complainant, and that such application has in each instance been denied.

Mr. **Burr**: I would say in addition to what I have already said on that subject that I got out of my sick bed to prepare these papers for the motion for the examination of the books and the inspection of the plants which I deemed was very essential for the preparation of the defence of the City, and those papers were served on the 22d day of September—at least a notice of motion—and the motion was returnable on the 27th day of September, 1906. On that day I was unable by reason of illness to appear and argue the motion and it was adjourned by Mr. Justice Lacombe until Friday.
2257 The City finds itself in the same difficulty as the State. Our experts whose affidavits are attached to the voluminous papers that I propose to submit on this motion all agree that without such an examination of the plants and without such an examination of the books as they ask for in these affidavits, the City will be seriously hampered in the proper presentation of its defence. If I proceed this morning with our case it will be with the serious disadvantage that we are obliged to take the statements as they are on record here, without the examination of the books which is the source from which these statements have been taken, and without an examination of the plant, the valuation of which has been testified to by those who carefully examined them on behalf of the complainant. That is all I desire to say at this moment.

Mr. **Garver**: It seems to me these motions are addressed to a tribunal that has no power to pass upon them. So far as the complainant is concerned we have always gone to Judge Lacombe for an extension and as I understand it, he has expressly stated that he did not propose to allow the time to be extended in this case either by a consent of counsel or in any other way except under his own personal supervision. Now, when these motions came up before him last Thursday and an application was made on behalf of Mr. Burr, for the adjournment, he asked of me whether I had any objection to the adjournment and I said not if the time was not extended and he very emphatically stated at that time that there was no motion before him for an extension, and after some argument by counsel there and reasons stated why an extension should be granted, he de-
2258 clined very emphatically to grant any extension and *and* stated that he had understood that the attitude of the company right along for a couple of months had been that of denying the right to the defendants of the inspection applied for, and in view of the delay of which they had been guilty in making the application he would not consider the motion at that time for further time in which to put in their proof. And the same reasons that have been stated here this morning were stated at that time as to the willingness and readiness of the State to argue the motions. When that was suggested it was replied—although I think Senator Page may have said he was technically ready—yet he certainly suggested that the motions ought to be argued together, and the motions were really put over at the suggestion of Mr. Burr's representative. Further than that, there was a motion made about a month ago, an order to show cause obtained from Judge Lacombe and that came up. That was on the calendar last Thursday and that was a similar motion for additional

time at that time and for an inspection, and that motion was withdrawn and Judge Lacombe, it seems to me, very well suggested the other day, that there was no reason why an adjournment should be given at this time, as he said there were two or three volumes of evidence there that had been taken on behalf of the State in the Gas Investigation and he did not see why some of the time at the disposal of the defendants could not be profitably employed in putting in evidence that was contained in those volumes. Now, all that evidence was given at that time without this inspection of the plants by experts and without the inspection of the books, and if the whole case could have been made up in that way it seems rather 2259 difficult to understand why at least a part of the case could not be made up from such a record. There has not been any statement made here even that anyone except experts on accounts or plants are to be examined; if there are any other witnesses who are to be examined certainly they could be called now as well as later, and in any event it seems to us that the defendants should proceed with their proofs. If their motion should be granted, as to which there may be a good deal of doubt, as that motion has not been argued yet, and if they show good cause later, why, undoubtedly, if they require additional time the Judge will extend it to them.

Mr. **Page**: If the Master please, the statement by Mr. Garver is in many respects correct and in some not correct. Mr. Garver himself made the application for the adjournment, and the ground upon which the motion for the State was adjourned, and that was that the motion papers had only been served upon him or his firm on the 25th. That was the ground that Judge Lacombe stated when he announced that the motion would be adjourned. He said, of course, if the motion papers had only been served on the 25th they should have proper time to reply.

Mr. **Garver**: Wasn't that only after Mr. Burr had made the application for the adjournment and during the course of the discussion as to the adjournment?

Mr. **Page**: That was after he got through with Mr. Burr's motion and took up my motion.

Mr. **Garver**: And after you had stated you did not think the two motions ought to be argued separately.

2260 Mr. **Page**: I stated the two motions should be argued together, and it was stated we should go ahead and argue ours and then you made the application for an adjournment. I think that is the exact way it occurred.

Mr. **Garver**: I didn't make any formal application.

Mr. **Page**: I told the Judge this was not an application to him to extend the time. As our time had not expired I didn't think it proper we should apply for an extension at that time. The Judge then stated that an application for an adjournment should be made to the Master and I stated the Master was out-of-town and if an adjournment was to be granted that I understood from his office that he would probably like to stay out-of-town. The Judge then replied that the Master would be here to-day.

The **Master**: Well, without expressing any opinion at all on the question of this motion to inspect the plant or books, with which I have nothing to do in its present aspect, it does not seem to me that a case is not made out here for an adjournment of these proceedings before me. If the defendants required for the proper presentation of their case this extension they must necessarily have known it long before the complainant's case was closed. It was not necessary to wait until the complainants rested and then until the very end of this recess before bringing the motion on for a hearing.

Mr. Burr: Pardon me a second. When you refer to the inspection of the plant do you also refer to the application for an examination of the books?

The Master: Both of them. These matters now pending. This motion could have been made, so far as I can see, at any 2261 time during the Summer. There were motion calendars called here every two or three weeks and it seems to me that it is rather late in the day now for the defendants, after the complainants had rested and an adjournment was taken by an agreement of counsel for a long recess of two weeks, to come in here without any warning and ask the Master for an adjournment on account of the pendency of these motions. The fact that they might perfectly well have been made at least a month ago is evident by what has been said here this morning that a motion of a similar character was at one time noticed. I remember a discussion before me about an application to be made to Judge Lacombe at one time when he was passing through town here in the Summer, for this inspection. It seems to me the defendants are at fault for not having pressed such a motion as that if they took it seriously, and I don't see that the pendency of these motions now affords any grounds for an adjournment at this hearing to-day.

Mr. Page: The Master may remember that Mr. Mathewson with his usual suavity, has stated every time we have asked him whether they would consent to an inspection of the plant, that he would take that matter up with Mr. Sterling; he didn't really apprehend any difficulty but he would talk it over with Mr. Sterling. The motion that was made and which has been withdrawn—we had to withdraw it that day before the complainants for some reason had noticed it after I had notified both Mr. Garver's office and Mr. Mathewson that we should withdraw that motion almost immediately after it was made.

Mr. Garver: We didn't put that on the calendar, Senator.

2262 Mr. Page: Who did?

Mr. Garver: I don't know how it got on. At least I have been unable to ascertain that it got on from our office.

Mr. Page: It did not from ours.

Mr. Mathewson: I didn't put it on surely.

Mr. Page: Well, that motion was not a motion for a modification of the injunction but to allow an inspection to be made by the Commission of Gas and Electricity and was not a motion for the inspection of the plants by experts. Now, until the complainants had presented their case and put on their expert witnesses we had no means of knowing what position they would take, whether they were going to, as they did, proceed by a process of a valuation of what it would cost to reproduce that plant new to-day, whether they were going to present evidence as to what the plant had cost them and what the actual amount of capital they had invested in the plant was, whether they were going to give evidence to show what it would cost to produce a plant to-day that would not be a duplicate of this plant but would be a plant sufficient to economically produce the amount of gas they would produce and sell; so until they develop their case we are not in a position to say as to what examination would be necessary and what kind of an examination. If they had not given the evidence in the manner in which they did the inspection of their present plants would have not been necessary. If they had gone on on either of the other theories of their case, and neither of which I think would have been a more correct theory than that on which they did proceed——

Mr. MATHEWSON: I think the Senator's quotation of my statement is a little inaccurate. What I did say, as I recollect it,
2263 when the request was made, was that I would take the subject up later with Mr. Garver or Mr. Sterling, and that it might be permitted—we might not object. I did say that, but that took place before Senator Page made his first motion, about a month ago, for the right to inspect the books and look at the plant.

Mr. PAGE: It may be that the statement made at that time was of as much value as those made since, but there was one made not later than the day of adjournment.

Mr. MATHEWSON: But nothing more was said on that subject and nothing more definite than was said before you made that original motion.

Mr. PAGE: No, nothing more definite, except the same condition of uncertainty which prevailed.

The MASTER: And there is another suggestion which has been referred to here this morning which seems to me to be very persuasive in this matter. From the papers on this motion for an injunction in this case which have been placed before me it appears here that the proceeding- before the Gas Commission are said to have been of a most thorough and exhaustive character, and it is to be presumed that this legislation which is attacked here in this suit was not lightly or inadvisedly made but some one must have gone sufficiently into the facts regarding this to justify the conclusions which were finally arrived at and embodied in the legislation.

Mr. BURR: But that statement was attacked by the witness for the complain-t company. They claim and testified that it was a partial, hurried and harried examination which did not do justice to them, and they so swore.

2264 The MASTER: The present application is made on behalf of the defendants in this case, and in the affidavits in opposition to the complainant's motion for an injunction the position of the defendants was—it is immaterial now for this purpose what the position of the complainants may be, but the position of the defendants was that the examination and investigation before the Commission was of the most thorough and exhaustive character. Now it seems to me that under those circumstances the defendants are, to say the least, estopped from complaining now that they cannot go on with something in the nature of evidence to support their side of the case, without any adjournment at this time, pending the decision of these motions. There ought to be enough with these vast volumes of investigations here and records, there ought to be enough for them to put in something to take up the time between now and Friday. I came back to town—that is of course a matter of no great importance, but I came back to town, having taken the trouble to communicate with my office and was advised that both the defendants would be ready to proceed this morning, and I do not see any reason why they should not proceed, at least to some extent.

Mr. Page: As far as the statements made in regard to the investigation of 1884 before the Senate Committee, the Gas Company presented in evidence as usual large claims for the value of the plant, and we proceeded upon what we found in the books and the reports of the Senate Committee that preceded us, and that is that the plants had cost about $20,000,000, and they added about $9,000,000 more to it. We had also their sworn tabulations that had been put in before the Tax Commissioners and they offered no other evi-
2265 dence and therefore we took the evidence that was before us and found or decided that they had a plant worth about thirty million dollars. Before the Gas Commission, the complainants here did not produce any evidence as to the valuation of their plant, put no witnesses on the stand; so far as this particular branch of the case is concerned, it has never been brought forth or forward on the part of the complainant at any of the other hearings that have been had and it is new matter. Now, as far as the voluminous record taken before the Gas Commission is concerned, a very large part of that has already been put in evidence, and probably all has been put in evidence that is material to this proceeding, or substantially so, this being a suit and that being an investigation; the investigation not being limited by issues probably more was put in than could be here put in probably, not being limited there by the ordinary rules as to relevancy to the issue, and the rules as to competency and materiality.

Mr. Mathewson: May I say before the Master makes a statement that the Senator is, I think, in error in one respect. This investigation by the Senate Committee, of which he was a member and to which he has referred, covered only three weeks; it is so pressed that the Committee were absolutely unable to take any evidence in reference to a good many of the outlying companies in the City of New York, although they wanted to do so, and that we were finally offered an opportunity—by "we" I mean the Consolidated Gas Company,—to present evidence the very last afternoon of the session of the Committee, I think about half past 5 o'clock, and I think
2266 we took about an hour to put on one witness, and that this one witness swore that the value of the plant of the company was at least the valuation shown on the books of the company, and yet he having testified to that and being an engineer familiar with the plant, they took the statement in the tax report, eight million dollars, or only a trifle over half the book value, in arriving at their

conclusion, so that the Senator is mistaken in saying there was no evidence before his Committee as to any valuation.

Mr. PAGE: I meant no valuation put in as you put it in here.

Mr. MATHEWSON: Oh, no, not in detail. We didn't have time.

The MASTER: There is another subject that occurs to me. Now, for instance, assuming the defendants intend to take issue on the valuation of this land as to which Mr. Wheelock was examined at some length, or as to the value of the dock property on which there was a witness called—Mr. Green; or assuming that they proposed to take issue on the views of some of these experts here with regard to the question of regulating pressure—there are several matters of that kind in the case which it seems to me in nowise depend upon the investigation or examination of the plants, and I don't see why counsel cannot proceed with those branches of the case——

Mr. GARVER: And a reasonable return on the value of the property to-day.

The MASTER: If you are not going to concede the correctness of the witness Wheelock's valuation you must intend to meet that and there is no reason apparent to me why that should not have been done, why that could not have been arranged, why you could 2267 not have your real State experts on the stand, because that does not in any way depend on an examination of the books. So on the whole I feel constrained to deny these applications for I do not think you have made out a case, much as I regret to have to deny them.

Mr. BURR: I am prepared to go on now on behalf of the City.

The MASTER: Have you a witness here?

Mr. BURR: Yes.

Mr. PAGE: I will let Mr. Burr proceed with his case because I do not feel that for the safety of the State or that with propriety I could proceed until after these motions are heard and determined.

Mr. BURR: I say I am ready to proceed, but of course, under the disadvantage I have referred to, in not having had the inspection and examination, but I will make the best I can of the present situation.

The MASTER: Take up some of the branches I have indicated that will not depend on your examination of the plant or books.

Mr. GARVER: I would like to suggest what I intimated here a moment ago, if they intend to meet the evidence which we gave of the banking experts as to the return on the investment of this kind, that is something that certainly could be done without an inspection of the plant and books.

WILLIAM D. MARKS, called as a witness in behalf of the defendants, being duly sworn, testified as follows:

Direct examination by Mr. BURR:

Q. You might tell us something about yourself, what your profession is?

2268 A I am a consulting engineer and statistician, making a specialty of gas and electricity. I have had a good deal of experience, more particularly in the direction of statistics of costs.

I have attended all of the meetings in these hearings, also before the State Gas and Electricity Commission, and listened to the testimony. I have spent a good deal of time in a careful study of the reports of the Legislative Committees of the State of New York for 1885 and 1886, and the report of the Stevens Commission of 1905.

Q. And the testimony of the Stevens investigation?

A. The testimony also, and have been present at nearly all of the meetings here.

Q. And have you read all the testimony here?

A. I have read all the testimony here carefully. I was graduated——

Q. Wait a moment. Have you read the testimony which was given before the Gas Commission?

A. I have read the whole of the testimony and have analyzed it carefully in the case of the Gas Commission.

Q. As I understand it, you have carefully read the testimony given before the committee appointed in 1885 and the committee appointed in 1886 and the committee appointed in 1905 and the Gas Commission, as well as the testimony presented and adduced here before the Master?

A. I have.

Q. Proceed, please.

A. I was engaged by the Corporation Counsel in January, 1906, and I have practically given my undivided attention to the analysis and study in connection with the cost of gas in connection with this case, and also looked up authorities in many other cases of more recent date. I was graduated by the Scientific Department of Yale College in 1870, taking the degree of Bachelor of Science, and in 1871, after a year of post graduate study, was given the degree of Mechanical Engineer. During a portion of the year following I pursued my engineering studies in Europe. In 1871 I entered the employ of the D., L. & W. Railway as an assistant of the division engineer, after which becoming transit man on the Chicago & Northwestern Railway. In 1872 I was appointed resident engineer and accountant for the contractors building the Laclede Gas Works in St. Louis Missouri. I was the subordinate of William Farmer, a gas engineer of New York City, who furnished all the drawings and specifications for these works, and it was my business to care for the execution of the work from them. I remained with the Laclede Gas Company until their works were completed and put in operation, and then took up the building of railway locomotives and machinery and of blast furnaces and machinery as a contractor until 1876, when I was appointed instructor in mechanical engineering at Lehigh University upon the recommendation of the Faculty of Science at Yale. From 1876 until 1887 I held the chair of the Whitney professorship of dynamical engineering at the University of Pennsylvania, giving instruction in engineering and in mathematical study of force and motion, including electricity. In the year 1884 I interrupted my service as professor on leave of absence to become superintendent and organizer of the scientific work of the

2269

International Electrical Exhibition at Franklin Institute at Philadelphia. This was the first of all the electrical exhibitions.

In 1885 I was Chairman of the Executive Committee of the Franklin Institute, which instituted and completed its well-known standard series of experiments on steam and steam engines, boilers, electric dynamos, incandescent and arc-light illumination. Though having general charge and arrangement of all this work, I was specially in charge of the details of electrical measurement and of photometric tests. In 1887 I relinquished my position in the University
2270 of Pennsylvania to become engineer to the Philadelphia Edison Electric Company, and designed and built for that company a ten thousand horse-power electric light station, it being at that time the largest individual station in the world, and the first one built of that size. In 1892, having completed the engineering construction and put it in operation, I was made President of the Philadelphia Edison Electric Company, and reorganized its business, earning and paying an actual dividend to the stockholders of 53 per cent. in four years. In 1896 the Edison Company of Philadelphia sold its property at a profit of one million dollars, thus paying its stockholders 103 per cent., dividends included, on its investment of two million dollars.

In 1899 the Edison General Company of New York City appointed me engineer-in-chief, and the *the* then president, Mr. Henry Villard, assured me of their intention to shortly make me president, but after a few months I preferred returning to Philadelphia. Since 1896 I have given my attention to construction of electrical apparatus and practiced as an engineer, being connected as manager, director or president with some fifteen or sixteen electric light and electric railroad companis, undertaking for them, as was required, either the actual construction of new work, the operation of going work and the organization or reorganization of their finances and accounting department. At all times during my technical work as an engineer, I have given a great deal of attention to the finances and accounting departments of all the corporations with which I have been connected as an engineer or manager or president. At all times during my technical work as an engineer I have invariably kept accurate account of costs, not only of construction, but also of operation. I have been in charge of affairs of large corporations and am entirely
2271 familiar with their methods of keeping their books and accounts, and have made special studies of a very large number of them. Of late years I have been engineer and built and operated gas works in Durham, North Carolina, and reorganized and operated gas works in Fostoria, Ohio. From 1876 I was regularly employed as expert engineer and accountant for gas works all over the United States, in which Mr. Arthur W. Benson, president of the Brooklyn Gas Light Company, and his associates were all very largely interested, and I have made many expert reports to them on their interests and on their gas works.

Besides many scientific papers and books on engineering, I have written a book on Finances of Gas, Electric Light and Power Enterprises, which has reached a third edition, selling over 5,000 copies within the last two years. I am an honorary member of the Franklin Institute of Philadelphia for scientific services rendered, and was for some time chairman of its committee on science and the arts; I am a member of the American Philosophical Society; a Fellow of the American Association for the Advancement of Science; a member of the American Institute of Electrical Engineers—I was a charter member of that organization; I am a member of the American Gas Light Association and also of other technical associations, and I have also been offered many elections to technical societies, which I have declined for lack of leisure.

Q. Now, have you for some years past given special attention to investigations relating to the capitalization and operating expenses of quasi-public corporations?

A. I have made a study of them for two or three years past to the exclusion of almost all else.

2272 Q. And that has enabled you to become familiar with the kind of investigation that is absolutely necessary before you could make an independent or absolutely trustworthy report?

A. It has.

Q. And what does such an investigation consist of, in your judgment, as an absolute prerequisite before you can make an independent and trustworthy report?

A. Assuming that both parties to an investigation of the value and also of the profitableness of a gas works are acting in entirely good faith, it is usually customary, and I have never known it to be refused, that a——

Mr. MATHEWSON: I object to that and move to strike it out. It is not an answer.

The MASTER: He may go on.

Mr. MATHEWSON: I except.

The WITNESS: That careful examination of the work shall be made by a duly qualified expert or experts, both with a view of learning its present condition and its future possibilities. This is generally followed by a careful inventory, giving the actual structural cost of the wohks and properties, also a present valuation of them. In addition to this, I have never know-, where both parties were open in their dealings, such a thing as a refusal of an examination of all vouchers and of all check stubs or checks themselves, if returned, covering the question of the actual structural cost of the work. Referring now to the question of operation of works, the inspection of the works is usually made with a very careful regard to their condition, the question being whether or no these works are fairly up-to-date and in fairly good repair being an important question and this in turn is followed by a very careful investigation of the actual cash costs of the production of gas or whatever other manufactured product may be for sale. Perhaps, however, the most important point in connection with such an investigation as 2273 this lies in the future possibilities of the quasi-public corporation; that is, as to the amount which can be hoped for in the future in the way of sales and, consequently, of profit.

Q. When you speak of vouchers and checks, did you mean also books showing the cost of these structures and plants and apparatus and the cost of operations?

A. It is impossible to classify vouchers and checks without corollorating them exactly with the books and with the entries in the books, item by item and detail by detail.

Q. You have not had any such investigation or examination of the books of the Consolidated Gas Company?

A. I have, on personal application, been refused by Mr. Addicks an opportunity even to make a cursory examination of the works.

Mr. Mathewson: I move to strike that out as not responsive and improper. The question was whether he had had an opportunity to examine the works.

The Master: It is not necessary for you to undertake to sum this case up on the stand. If you will, just answer the question. You were asked if you had made such an examination. You either have or you have not.

Q. You have not made an examination of the books of the Consolidated Gas Company, nor have you made an examination of the plants of the Consolidated Gas Company?

A. I have not.

Mr. Mathewson: I want to say we would immediately take issue with the statement——

The Master: There is no need of taking up the record with this bickering. If the thing is to be taken before the Court, the Court will decide.

2274 Q. Did you ask for an inspection or examination of the plant?

A. I did.

Mr. Mathewson: Objected to as immaterial and irrelevant. He is not the defendant, nor would such a request properly come from him, and we would not consider it, perhaps, if it did.

Q. Did you ask, representing the Corporation Counsel of the City of New York, any officer of the Consolidated Gas Company for leave to inspect its plants?

Mr. Mathewson: Objected to on the same grounds.

The Master: I do not see how this is at all material to the defendants' case.

Mr. Burr: We are going to continue, of course, and we want to show, as far as this witness is concerned, having a knowledge of what is absolutely necessary before a correct report can be made, that he sought to make this investigation and inspection.

The Master: You have shown that he did not make it and why he did not make it, and it appears in long detail this morning about these motions you are making before the Court.

Mr. Burr: I want to show as a careful expert he used every means he could to make such an examination.

The Master: You are entitled to have your record full enough to protect your rights with regard to this point. The mere fact of the pendency of these motions is sufficient for that. When you go beyond that, it is wasting time.

Mr. **Burr**: I want to get on the record the fact that he made a request for the inspection and it has been refused.

2275 Mr. **Mathewson**: We understand no such request has been made——

The **Master**: That is the point. You opened up all these matters——

Mr. **Burr**: I do not want to appear captious about this, but in view of what Mr. Mathewson has said I will ask him this question: Have you not refused an opportunity to the City of New York to make such an investigation?

Mr. **Mathewson**: I object to that question.

Mr. **Burr**: I am asking you. Have you not here refused the City of New York——

Mr. **Mathewson**: I am not on the witness stand. You have asked the witness whether he has not made a request of somebody. I say we do not understand that any such request was made by him. As to whether you have made such a request, that is another proposition, which I do not intend to answer.

The **Master**: There is another thing! I have repeatedly said that experts should have an opportunity to examine the books, and so far as any request that has been made of me, the books have been brought down, with the exception of some large payrolls. If any complaint had been made to me that experts were not having sufficient opportunity to examine those books up there while cross-examination was in progress, I should have taken such steps as I was able to, to see that they had such opportunities. It was fair that they should, and that has been my position from the outset.

Mr. **Burr**: We will have to stand on the record as it is made, I suppose.

The **Master**: I will sustain the objection to this line of examination.

2276 Mr. **Burr**: Under the rule I presume he may answer?

The **Master**: Yes.

(Question read by stenographer.)

A. I did.

Q. And was that request denied?

Same objection.
Same ruling and exception.

A. It was.

Q. Who was it?

Same objection.
Same ruling and exception.

A. Mr. Addicks and Mr. Carter.

Q. Mr. Addicks is the Vice-President?

Same objection.
Same ruling and exception.

A. And Mr. Carter is the Secretary.

Q. And, now, have you made a careful study of the exhibits that have been produced in evidence here by the Consolidated Gas Company?

A. I have.

Q. And have you from such study arrived at any conclusion as to what effect the passage and enforcement of the laws regulating the price of gas to seventy-five cents to the city and eighty cents to the general consumer will have upon the operation of the Consolidated Gas Company?

A. I have made a careful and laborious investigation on that point.

Q. And will you give us the result of such investigation?

Mr. Mathewson: I think that question is too broad, Mr. 2277 Master, and I object to it on that ground as calling for conclusions which really it is the preregative of the Master and the Court to draw.

The Master: Is not that a little wholesale, Mr. Burr?

Mr. Burr: I will go into it in a little more detail if Mr. Mathewson prefers me to, but I thought we would save time, and the period is limited, but if he wants me to ask question by question I will ask them.

Mr. Mathewson: I do not want you to put the witness on and ask him what he thinks is the effect of producing a revenue lower than the company is entitled to. You practically put that question.

The Master: I will allow you, Mr. Burr, to bring out a very general question, and I don't expect you to cross-examine your own witness as to the details of his conclusions; but it seems to me, if you are going to ask what he figures out, for instance, the cost of gas ought to be on the data he has tabulated, or testimony of that sort, as it now is, you simply ask him what is the effect of this legislation. That is a little too broad.

Mr. Burr: Upon the output of gas of the Consolidated Gas Company. I was proceeding to ask him in a little more detail.

The Master: You can ask him what the cost is which he figures out, or any such question of that kind. Ask him a question which gets at the crux of the whole thing.

Q. And you made a careful investigation of the production of gas by the Consolidated Gas Commpany since 1884?

A. I have.

2278 Q. And of the sales of gas since the same year?

A. I have, year by year.

Q. And have you put that in the form of a record of graphic record?

A. I have.

Q. Is that the paper which I now hand you?

A. Yes.

Mr. Mathewson: Will you let us have one of these??

Mr. Burr: Yes, with pleasure.

Q. Is that the paper which I now hand you?

A. It is.

Q. And as the result of such investigation do you find that the enforcement of the law, making the price to the City of New York at 75 cents and the price to the general consumer at 80 cents, will increase or diminish the sales of the Consolidated Gas Company?

Mr. Mathewson: Just a moment. If the witness were asked whether in his opinion the sales would increase or decrease, I do not think I would object to the question, but it seems to me in the form it is put, I shall have to object to it.

Mr. Burr: So as to make it unobjectionable, I will ask him this question:

Q. Will the sales of gas, in your opinion, increase or decrease?

A. They will greatly increase.

Q. Will you tell us the method by which you arrived at that conclusion?

A. Mr. Mathewson, there are a great many figures in this. It is not a long matter, of which I have made a note, and I can abbreviate what I have to say very much by reading from my notes and turning the figures over to the stenographer as I do so.

2279 The Master: There is no objection to that, I suppose.

The Witnesss If the price of gas is reduced to 75 cents to the city and to 80 cents to the private consumer during the year 1907, the gross receipts from the sales of gas will probably amount to 15,342,981,000 cubic feet at 80 cents, or to $12,274,385.18, as against the following for the year 1905, for the Consolidated Gas Company:

By Mr. Mathewson:

Q. What year is this, 15,342,981,000?

A. 1907.

Q. Your testimony is that in your judgment it will increase to that amount, not by that amount?

A. Yes, to that amount.

By the Master:

Q. If you will allow me to interrupt, Doctor, where does that result appear on this chart?

A. On the chart in the year 1907, the Island of Manhattan shown at the top, the total sales of the four companies, the Consolidated Gas Company, the Standard Company, the New York Mutual Company and the New Amsterdam Gas Company will amount to 22,569,845,605 cubic feet, of which the Consolidated Gas Company, speaking accurately, would probably sell 15,342,981,000 cubic feet, or about 68 per cent.

By Mr. Burr:

Q. What do you estimate the population of the Borough of Manhattan will be in 1907?

A. The estimated population of the Borough of Manhattan in the year 1907 will be 2,217,295. You will find it at the top of the blue print.

Mr. Mathewson: What date in 1907.

The WITNESS: December 31st.

2280 Q. And what will be the per capita consumption of gas at 80 cents?

A. 10,179 cubic feet, about.

Q. From your study into the previous history of the gas companies now operating in the Borough of Manhattan, what has been the effect in a reduction in the price of gas?

Mr. MATHEWSON: The witness takes the output of gas for each year and he is asked to state from that what the effect of the reduction of gas is. Assuming by that question that the increase in the sales of gas has been all due to reduction of price, whether it is or not is a question of argument. The gas war and the use of gas for fuel due to the strike, all those things being considered, it seems to me the question is not a proper one, the way it *us* put.

Mr. BURR: If there is such a thing that reduction of price means greater consumption, that can be shown by this witness.

The MASTER: He can testify to it as his opinion on that subject from his familiarity with the general questions in regard to gas distribution and consumption and from his study of these data which are in evidence.

The WITNESS: Under average conditions the reduction in the price of illuminating gas or heating gas always results in a larger output per capita and, consequently, a larger total output for the station.

Q. Now, will you give us more in detail, Dr. Marks, what is shown in your opinion by this table which you have prepared here and which you have now before you?

A. State's Exhibit H for the year 1905, Sales to private consumers, 12,884,637,789 cubic feet, to $12,872,269.88.

2281 From Complainants Exhibit 103:

Metered Service to public buildings		127,712,700 c. f.
Arbor Lamps		32,600 c. f.
Gas for public or streets lamps (Estimated)		270,779,679 c. f.
Total		398,524,978 c. f. at
90c. per M. c. f. or	$358,672.48	
Added to	12,872,269.88	
Gives a total revenue from gas of	$13,230,942.36	
If from this we subtract	12,270,385.18	
We have a diminution of gross revenue from gas of		$956,557.18

instead of the alleged diminution of 20 per cent. of $13,230,942.36, stated to be or appearing to be $2,646,188.47. The figures leading to this result——

By Mr. MATHEWSON:

Q. That is for 1907 that you are assuming?

A. Yes, for 1907.

By Mr. **Burr**:

Q. How do you arrive at that result, Doctor?

A. As this involved immense amounts of both gas and of money, in order to be as nearly absolutely impartial as possible, it was necessary for me to trace the history of the output of gas and the prices of gas beginning at a point when electricity first put in an appearance in 1888 as a serious competitor. That was the time
2282 at which it really began to make some inroads on gas. And that is shown by means of a line shown on this blue print, giving the actual output per capita each year, beginning in 1888 and giving the price at which the gas was sold, and also showing at the right hand side of that blue print all the gas that was burned on the island of Manhattan. You see the island of Manhattan in the year 1905 burned something like 19,540,000,000 cubic feet of gas, while the whole State of Massachusetts burned a little over ten million cubic feet, only about one-half, and this elaborate work was due to the enormous responsibility connected with an opinion on the problem. The figures leading to this result are obtained as follows:

For the calendar year 1905 the total sales of gas of the Consolidated Gas Company amounted to 13,283,164,000 cubic feet and the total sales of all companies on the island of Manhattan amounted to 19,540,243,000 cubic feet, showing the Consolidated Gas Company to have sold 67.98 per cent. of all the gas on the island of Manhattan, and making its total sales, 15,342,981,098 cubic feet, with the same ratio in 1907.

To learn how the probable gross revenue from the sales of gas of $12,274,385.18 is obtained, we are obliged to refer to a graphic record of the sales of gas herewith presented.

Mr. **Burr**: One moment. I offer this in evidence.

Mr. **Mathewson**: Before it is offered in evidence, I would like to ask a few questions in reference to its origin, to see what these figures mean, I would like to understand them.

Mr. **Burr**: You may proceed.

By Mr. **Mathewson**:

2283 Q. Where did you get your record of sales for the year 1905 of the other companies than the Consolidated Gas Company?

A. Referring to the key at the [illegible] of the blue print, T is the testimony before the Gas and Electricity Commission, 1905, 1906; B-D is Brown's Directory of Gas Works; E is estimated.

Q. Was the testimony before the Gas Commission for these other companies given covering the output of gas for the calendar year 1905, or only for the nominal year ending October 31st, 1905, and which figures are these which you have used?

A. Taking the year 1905, if you like, the Consolidated Gas Company, 13,283,164,000 cubic feet is testimony gas?

Q. No. I am not asking you that. I am asking you whether the testimony before the Gas Commission was for the calendar year 1905 or for the nominal year Oct. 31, which figures you have taken?

A. The calendar year 1905 is used in the case of the Consolidated Gas Company.

Q. What about the other companies?

A. In the case of the Standard Company it is taken from Brown's Directory. In the case of the New Amsterdam Company it is estimated. In the case of the New York Mutual Gas Company it is taken from Brown's Directory.

Mr. Burr: What is Brown's Directory?

Mr. Mathewson: Just a moment. I do not understand these columns and I wish you would explain them.

Mr. Burr: He is going to explain it after I offer it in evidence.

Mr. Mathewson: I know, but I want to know what it is first.

Mr. Burr: I will proceed with my examination and let him go on and testify, if you object to its going in now.

2284 Mr. Mathewson: I certainly do object to its going in. The statements here are not statements of facts as to the output of gas of other companies. Some are estimates and some are from Brown's Directory, which is not in evidence in any proceeding I have ever heard of. I would have to object to this on that ground alone.

The Master: I think the best way would be to let this go in and you can cross-examine if you please about it. I do not see that you are going to gain anything by objecting to it now.

Mr. Burr: And it will simplify his examination.

Mr. Mathewson: I think I should take the objection because I do not think that statement from Brown's Directory which appear on statements which purport to be statements of fact are evidence at all.

The Master: That goes to the question of the soundness of his conclusions, as to whether they are based on facts that are in evidence here or whether they are not, but I think as showing the basis of the witness' conclusion as to which he has testified, that this diagram had better go in now and you can cross-examine about it.

Objection overruled.

Mr. Mathewson: Exception.

Mr. Burr: Adopting your suggestion I offer it in evidence.

Paper received and marked City's Exhibit 46.

By Mr. Burr:

Q. Now then as I understand you, Dr. Marks, this chart, marked City's Exhibit 46, of this date, shows the record of sales of gas per capita, and also the record of total sales of each and every gas company furnishing the Island of Manhattan. 2285

A. That is exactly the case.

Q. Beginning with the year 1888 and ending with January 1st, 1906.

A. It presents to the eye the record of the sales of gas per capita and also the record of total sales of each and every gas company furnishing the Island of Manhattan beginning with the year 1888 and ending January 1st, 1906.

Q. Why did you select the year 1888?

A. Because it was at that time I knew from my personal experience that electric lighting was becoming a serious factor on the

Island of Manhattan. I was engineer-in-chief of the Edison General Company in the year 1889 on the Island of Manhattan for a brief period.

Q. And electric lighting has from that time shared the field of public lighting with gas, has it?

A. It has.

Q. You may proceed to explain this chart?

A. There is still another reason for making this a record of the sales of gas on the Island of Manhattan itself rather than referring to precedents derived from other companies in other localities, in giving an accurate prediction on the effect of the reduction in the price of gas in the Island of Manhattan. New York is not comparable, so far as Manhattan is concerned, with any other city in existence, in its area, or in the character of its business and residence structures, and therefore one might easily be misled by using data derived from other cities. The evidence as to sales of gas heretofore given by Vice-President Addicks or by President Alexander C. Humphreys has not been founded on the broad basis of the consumption of gas by all the inhabitants from all the companies selling gas on the Island of Manhattan. Nor have these gentlemen taken up and discussed the effect of the reduction made in the price 2286 of gas in the years 1899 and 1900, which would throw a clear light on the probable response in increased gas sales per capita, which will result upon fixing the price of gas at 75 cents to the City and at 80 cents to the private consumer of Manhattan. Had they founded their reasons upon the broad basis of a consideration not only of the Consolidated Gas Company, but also of the Standard, New York Mutual and the New Amsterdam Companies, and then traced back the history of the sales of gas per capita at the various prices fixed, they would concur with me in the belief that a reduction of the price of gas to 75 cents, and 80 cents will in all human probability be largely profitable to the Consolidated Gas Company, as well as beneficent to the consumer of gas.

Mr. MATHEWSON: No, Mr. Master, I must object to this philosophical discussion and summing up. It seems to me that this is utterly improper. I do not know, if we followed the same course, how long it would take us to deliver our addresses.

Q. Now refer to the chart in detail, Doctor?

A. Referring now in detail to the chart, and to the point of its concurrence with the testimony at page 1924 we have the following comparison with the prices stated by the Consolidated Gas Company.

Q. You may read those.

A.—

1888	Consolidated Gas Co.,	$1.2566	Chart,	$1.26
1889	" " "	1.2562	"	1.26
1890	" " "	1.2563	"	1.26
1891	" " "	1.2556	"	1.26
1892	" " "	1.2549	"	1.25
1893	" " "	1.2547	"	1.25
1894	" " "	1.2550	"	1.25
1895	" " "	1.2552	"	1.24

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1896	"	"	"	1.2556................	"	1.23
1897	"	"	"	1.2213................	"	1.20
1898	"	"	"	1.1518................	"	1.15
1899	"	"	"	.8456................	"	.85
1900	"	"	"	.8246................	"	.82
1901	"	"	"	.9994................	"	.98
1902	"	"	"	1.0004................	"	.99
1903	"	"	"	1.0006................	"	.99
1904	"	"	"	.9998................	"	.99
1905	"	"	"	1.0202................	"	1.00

The figures for the total sales of gas given on the chart are in the case of the Consolidated Gas Company taken from the testimony and the key letter is T. The total gas sales of the Standard Gas Company are taken from the testimony before the Gas and Electricity Commission, and from Brown's Directory of Gas Works; the key letter of Brown's Directory is B. D. The total gas sales of the New Amsterdam Gas Company are estimated, an allowance being made for its delivery to the East River Gas Company in Long Island City, and the balance being charged to the Island of Manhattan; the key letter for estimates is E. The total sales of the New York Mutual Gas Company are either taken from the testimony or from Brown's Directory.

Referring to the population, it is taken from the United States census of 1890 and 1900, and the State Census for 1905, as indicated on the map. All of the intermediate populations are necessarily estimated, and these estimates are carefully checked from a pamphlet published by the State for election purposes, obtained from the Secretary of State, and from the Board of Health Statistics as to the population furnished by Commissioner Darlington.

Q. How do you obtain the output per capita for each year?

2288 A. The output per capita for each year is obtained by dividing the total gas sales for each year by the population of it. It is of interest to observe this output per capita as it forms a very important factor. In the year 1888 it appears to be 5,626 c. f., and this steadily rises with gas at $1.26 to the year 1893 when it reaches 6,381 c. f. In 1894 it appears to fall off slightly to 6,344 c. f., and again in 1895 falls to 6,321 c. f., rising again in 1896 to 6,370 c. f. In 1898 with gas at $1.15 it rises to 6,595 c. f., and again with the advent of the reduction of prices about May 1st, 1899, it rapidly rises to 8,128 c. f. for the year 1900.

It will be observed that in the gas war, during which the Consolidated Gas Company, New York Mutual Gas Company and the Standard Gas Company reduced the price of gas to sixty-five cents and the New Amsterdam Gas Company reduced the price to fifty cents, the sales per capita rose with extraordinary rapidity, although the reduced price of gas extended only from May 1st, 1899 to about May 20th, 1900. The average reduction in the price of gas during the two years 1899 and 1900, was thirty-three cents and the sales per capita increased 1,533 c. f. Dividing this by thirty-three cents, we can see in a rude way that the sales per capita increased 46.46 c. f. in these two years for each one cent of reduction in selling price. Upon reflection it is obvious that the raising of the price of gas to one dollar in 1900 would be likely to put a stop to the increase of the sales per capita and it did so.

Q. Is that verified by the chart?

A. It is verified by the chart, which shows that during the year 1900 the sales per capita 8,135 c. f. remained at a standstill, and in 1901 the sales per capita steadily increased until 1904 when it reached 9,426 c. f. In 1905, however, we find that the sales per capita appear to have reached 9,250 c. f., having fallen back
2289 from the sales of 1904 by an amount of 176 c. f. On page
1782 of the testimony Vice-President Addicks corroborated the statement of Alexander C. Humphreys which is as follows:

"To-day, if my information is correct, and I believe it is, New York is selling more per capita than any other city in the world. It is selling 9,200 cubic feet annually per capita. A little less than that, about 9,150 c. f. I think it is. London is selling somewhere between 8,000 and 8,500 c. f."

And the statements of these two gentlemen very closely corroborate my own figures, which are sales per capita of 9,250 cubic feet. From what goes before it appears probable that these gentlemen have fully corroborated the figures of this graphic record of the sales of gas——

Mr. MATHEWSON: I move to strike that out—"from what goes before it appears probable." Whether they have or not appears from their testimony, and I do not think the witness should state that fact.

The MASTER: That of course is objectionable, but, Mr. Mathewson, are we not going to save time by letting the doctor, who has prepared this careful statement of his position, proceed with it?

The WITNESS: It appears probable that these gentlement have fully corroborated the figures of this graphic record of the sales of gas, which has been worked out independently and checked up by two of my assistants.

Q. And yourself.

A. Worked out by myself independently and checked up by two assistants.

Q. What degree of accuracy do you claim for these figures?

A. With an accuracy sufficient for all commercial pur-
2290 poses. The facts in regard to the increase of the sale per
capita appear to have been correctly related on the chart up to the year 1905. We have learned from the period of the gas war, 1899-1900, covering about one year, that each one cent of reduction in the average price of gas corresponded to an increase of 46.46 cubic feet. It would appear to be justifiable if we assume a period of two years, extending from January 1, 1906, to January 1, 1898, which is just the same as the period of the gas war, to infer that a reduction of 20 cents or from one dollar to 80 cents in the price of gas would produce an increase in the output per capita of about twenty times

46.46 cubic feet or 920 cubic feet, making the average sales per capita for the year 1907, 10,179 cubic feet as shown on the chart.

In order that this sale per capita may be reached, it will be necessary that during a period of twelve months out of the two years, the price of gas should be held at 80 cents.

By the Master:

Q. What do you mean by that, twelve months out of the two years?

A. The gas war in itself occupied the last half of 1899 and the first half of 1900, and the period at which I can get figures began at the beginning of 1899 and ended at the end of 1900, and for that reason I dared not venture on a prediction beyond two years, that is, to the end of 1907. Since the end of 1905 to the end of 1907 is exactly the same as the end of 1898 to the end of 1900——

By Mr. Burr:

Q. Having reached that point of the probable sales per capita for the year 1907, assuming the selling price to be 80c. for twelve months, what more do you find it necessary to do?

2291 A. It will be necessary to take a broader view of the conditions and factors affecting the sale of gas than has yet been given to them. The increase in the total sales of gas in any city appears to increase with the population, whatever the price of gas may be, and therefore a growing community will furnish a growing business to a gas company, even though the citizens of that community may regard the price fixed for gas as extortionate.

On the other hand, it is quite easy by fixing the selling price of gas at a rate satisfactory to any community, by the introduction of gas stoves. Welsbach burners and careful service, to considerably increase the sales of gas in a community which has ceased to grow in population, and this is done by increasing the output per capita. If, however, the population of a community is increasing, and at the same time the wise and energetic effort of the gas company also increases the output per capita the gas corporation will be so very fortunate as to realize a very great increase, both from the increased population and the increased sales per capita.

All our experience goes to show that the most lucrative field for the establishment of gas works is in a densely populated metropolis in which a vast business is being transacted, and the manner of living is luxurious, and in these qualities the Borough of Manhattan, in the City of New York, excels all other cities in existence with the consequent result of selling more gas per capita than is possible in any other metropolis in the world.

By the Master:

Q. May I ask a question. What is the purpose of this collection of figures down in the lower left hand of the diagram?

2292 A. The total output of each one of the four companies is arranged under columns headed by their names.

Q. Well, total output for what period?

A. For one year and each year. Beginning on the right hand side the four companies are arranged in four columns; following them down, these four columns are broken and shifted to the left hand side, having exactly the same heading, merely as a matter of convenience to allow the laying down of the line of progress of the output per capita of gas as it chanced to come from these figures. To the extreme right headed, "Approximate," there are four columns which give total results. These it is convenient to keep in one column, going down the extreme right.

By Mr. Burr:

Q. With this statement of the actual facts of the experience of the Borough of Manhattan, you are able to hazard the prediction as to the sales of gas per capita and total sales of gas for 1907?

A. I can. The population of the Island of Manhattan during the five years from 1900 to 1905 has increased at the rate of 52,457 per year, and we can therefore safely predict an additional population of 104,914, for the year 1907, making the total population when added to that of 1905, 2,217,295, on the Island of Manhattan. Multiplying the sales per capita, 10,179 cubic feet by this population, we obtain a total sale of gas for the Island of Manhattan, during the year 1907, with the price of gas at 80c. or a little lower, of 22,569,845,805 cubic feet, which at 80c. per 1,000 cubic feet, would yield a revenue to the four companies supplying Manhattan Island of $18,055.877.

2293 Referring to the chart for the data of 1905, we find the sales of gas for the Consolidated Gas Company to be 13,283,164,000 cubic feet, and the total sales of gas for the whole Island of Manhattan to be 19,540,243,000 cubic feet, so that the Consolidated Gas Company did sell 67.98 per cent. of all the gas sold in the Borough of Manhattan. The total revenue from the sales of gas in the Borough of Manhattan for the year 1907 should be about $18,055,877 and 67.98 of this is $12,234,385.18, and the diminution of revenue from the sales of gas by the Consolidated Gas Company as compared with 1905, ought to be about $956,557.18, instead of $2,646,188.47, as was stated by the complainant, by inference.

The question of the accuracy of these figures will at once arise, and it is proper to say that it cannot be claimed that they are given with scientific accuracy, but it can be claimed from these figures that they are sufficiently accurate and quite as accurate as figures ordinarily used for commercial purposes, and that they possess the decided advantage of being based upon the actual history of the sales of gas on the Island of Manhattan as far back as the year 1888, and therefore include not only the competition due to a steadily growing electric lighting business, but also the record of the great increase in sales per capita due to a lowering of the price of gas to consumers during the years 1899 and 1900. In fact, the advent of electric lighting appears to have stimulated the consumption per capita of gas by stimulating the desire for more brilliant illumination.

It will be noted that I have ventured upon a prediction only of two years from January 1, 1906. That is because I have only the record of the effect of a reduction in the price of gas for two years.

The interval during which this reduction in the price of gas was in actual operation was about twelve months in the two years, and if the price of gas is put at 80c. in 1907, it is fair to assume that a proportionate increase in the output per capita and in the 2294 total output of the Consolidated Gas Company to about 15,340,000,000 cubic feet will occur, if we assume that the four companies now engaged in lighting Manhattan share pro rata in the increased sales due to a uniform reduction in price.

Recess until 2.15 P. M.

After Recess.

Mr. Burr: I omitted to say this morning that with regard to the franchises, the gentleman representing the Company, and the gentleman representing the corporation counsel are still going over those documents and as soon as they have finished I will make my motion with regard to those.

Mr. Mathewson: I wish to say, Mr. Master, in view of the motion that has been made, and the statements made this morning by counsel, that the first motion for leave to inspect the plants was withdrawn as stated. The second motion was made in my absence—I have only returned this morning and knew of it this morning. I stated to Senator Page before the first motion was made that it quite likely would be necessary to make a motion to examine the plants because while we thought there was no power in the court to order it, I thought we might consent to it, and I have now conferred and am in a position to say that so far as the plants are concerned, that the defendants' proposed witnesses may examine the plants, beginning to-morrow morning if they please, without their motion, and this conclusion is reached wholly regardless of the fact that 2295 the motion was made, because the suggestion was made and my statement to Senator Page was made before any motion was made. As to the books, as your Honor said, those that have been requested have been produced and any other books pertinent could be no doubt called for and I think counsel for the defendant will conclude that that portion of their motion is not profitably pursued. However, as to the plants I have made the statement.

Mr. Burr: I am glad to hear the statement made by Mr. Mathewson and that he has now arrived at that conclusion. He will remember it is sometime ago that he and I spoke about the matter and he said he would see me and talk on the inspection of the plant later. I never got any definite suggestion or statement from him until just this moment.

Mr. Mathewson: I said I would consider it later and I would inform you and I have so done. No request was made to counsel for complainant before either of these motions was made to state finally whether we would permit an examination of the plant.

Mr. **Burr**: I beg your pardon. I refer you to the index of the case so far, and on the first page you will find the heading "Accounting, suggestion of Mr. Burr, Page 9," and "inspection of plants, suggestion of Mr. Burr, page 9." That was the first thing we did, before we started in to take the testimony.

Mr. **Mathewson**: Yes, and I said we would consider it and I would take this matter up.

Mr. **Burr**: And now you have taken it up.

Mr. **Mathewson**: Yes, sir.

Mr. **Kirby**: May I ask if that permission carries with it the furnishing to the defendants of a copy of the inventory as pre- 2296 pared by Mr. Mayer? The testimony, as you will remember, was based upon that inventory and is in such shape as to make it a practical impossibility for the defendants' experts to work with it, and would either mean a preparation of an inventory from that or the examination of plants aided by the testimony, which would take many weeks; or if a copy of the inventory as prepared by Mr. Mayer, (and as you will remember, he brought it in typewritten form,) was furnished to the defendants, that is without any valuations thereon, it would materially aid them in their inspection and appraisal thereof and would, based upon such information as I have had from our experts, save not days but weeks in their examination and appraisal.

Mr. **Mathewson**: I don't know as to that. That inventory is not ours and was not made by us. It is the personal property of Mr. Mayer. I don't see how I could undertake to furnish it. In the second place counsel for the defendants had full opportunity to go into such details as they chose on his cross-examination, so I could not answer that.

Mr. **Kirby**: Well, we make that request and inasmuch as this motion is to be argued on Friday it would mean much longer time to make an examination and appraisal if it were not furnished to us than if it were. And as far as not being the property of the Consolidated—I think we will find in the record and if not in the testimony I think it was stated here that at last the complainant had a complete inventory of its works and apparatus and that it was now a record and part of the books and of the information of the company.

2297 Mr. **Burr**: I join in the request because it is undoubtedly the fact that if furnished with an inventory it will save the time of the experts that we will have to examine the plants, and for that reason I hope that the company will see its way clear to furnish us with a copy of it.

Mr. **Kirby**: And I might further say, Mr. Master, that inasmuch as this motion was adjourned until next Friday, certain engineers whom we have retained for this matter have been informed that no opportunity, if it were, could be given them until a week from today to make that inspection, and therefore they are not in the city and could not go into the work to-morrow under this permission which has now been granted us.

Mr. **Mathewson**: That is your affair, Mr. Kirby, with your engineers. You should have made your motion long before if it was necessary to make a motion.

Mr. Kirby: I am simply speaking for the moment and not as to what might have been done.

Mr. Mathewson: As to the inventory, I should personally have some objection to giving it in the form that it is, so far as I know its contents, because where it is made by Mr. Mayer for his own personal reference, he knows precisely what the article is, and a brief description might not give you the information and an inspection would. I should think it would.

Mr. Kirby: It would not.

Mr. Mathewson: And it might mislead you in some way and you might take that and say this thing is worth so much whereas there might be appurtenances to it included in the general description of the article, which if your experts had considered would have 2298 added a value and made it what Mr. Mayer stated it was.

Mr. Kirby: My suggestion was merely as a matter of expediency. If the inventory is not furnished we will simply have to make one of our own, which takes more time.

The Master: Meanwhile, Mr. Kirby, do not omit to get your experts in here as soon as you can.

Mr. Burr: The situation now, as far as the City is concerned, is this. Dr. Marks, our chief expert, is on the stand, and will take some time to finish his testimony, he could not be examining the plants while he was testifying, so I suppose that will be a matter which will be arranged to the satisfaction of both sides. At least I hope so.

Mr. Kirby: There is no doubt that the Master will agree that it would save time to all concerned that the examination be done by the City and State jointly rather than by each separately, and we have made arrangements to that end. If Dr. Marks could be released so that we can go on, I think probably not to-day but within the next two or three days we should be able to go ahead.

William D. Marks resumes the stand.

Direct examination (continued):

By Mr. Burr:

Q. Referring to the cost of manufacture and distributing gas of 22 candle-power, will you tell us what investigation you have 2299 made upon that subject, if any, and what study you have given to the testimony produced here and at the other investigations regarding that subject?

A. Before taking up Exhibit 94, I made a very large number of investigations of the cost of making gas and of the method of computing their costs in a good many different works, not only here but also in England. The same difficulty applies to a consideration of the cost of making gas as applies with regard to the previous question of the sales of gas per capita. It is made on so enormous a scale that the precedents derived from the smaller companies or even from the larger companies did not apply in the case of the Island of Manhattan. Referring to Exhibit 94, called "Summary of Operations for the Calendar Year 1905," I would say that owing to the extraordi-

CONSOLIDATED GAS COMPANY OF NEW YORK.

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR 1905.

		Quantity.	Price per unit.	Amount.	Quantity per M. c. f. made.	Divisor 10,657,810 cost per M. c. f. made.	Divisor 10,419,461 cost per M. c. f. sold.
1	Coal—Bituminous—Tons	229,282.81	$3.18	$729,606.21	48.19	6.84	7.00
2	Anthracite "	106,024.68	4.36	462,680.25	22.82	4.34	4.44
3	Boiler "	10,399.67	3.67	38,156.43	2.19	0.36	0.37
4	Cartage "	....	..	18,222.89	.	0.17	0.18
5	Labor handling	....	..	49,150.07	..	0.46	0.47
6	Total	....	..	1,297,815.85	..	12.17	12.46
7—	Residuals—						
8	Coke-Loads	167,071.70	2.02	333,300.91	..	3.17	3.25
9—	Less—Labor handling	....	..	35,678.39	..	0.34	0.34
10	Cartage	....	..	11,164.97	..	0.10	0.11
11	Net	....	..	291,457.55	..	2.73	2.80
12—	Tar (Coal)						
	—Tons Carbonized	229,282.81	28.59	65,546.70	..	0.62	0.63
13—	Ammoniacal Liquor, lbs.	4,896,886.	01.34	65,849.65	..	0.62	0.63
14—	Carbon "	485,720.	01.00	4,857.20	..	0.04	0.05
15—	Spent Oxide "	5,577,034.	00.11	6,196.47	..	0.06	0.06
16—	Oil Tar—Gals	2,710,826.	01.93	52,207.26	..	0.49	0.50

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16—Oil Tar—Gals								
17 Total Residuals	....	..	486,114.83		..	4.56		4.67
18 Net Total—lbs	....	..	811,701.02		..	7.61		7.79
19—Coke Used—Tons	19,892.54	$3.22	63,972.09		..	0.60		0.61
20—Labor	....	..	1,293.31		..	0.01		0.01
21—Cartage	....	..	43.87		..	..		..
22 Total	....	..	65,309.27		..	0.61		0.62
23—Naphtha—Gals	5,587.	04.38	244.43		..	..		..
24—Gas Oil "	41,876,670.	04.23	1,769,968.42		3.93	16.61		16.99
25—Fuel Oil "	2,502.	02.00	50.04		..	..		..
26—Lime—Bushels	62,374.	04.99	3,114.02		..	0.03		0.03
27—Oxide "	121,485.	15.78	19,173.35		..	0.18		0.18
28—Water—c. f	22,684,200.	$1.00M.	22,684.20		..	0.22		0.22
29—Fuel Oil Labor (Inc. Drip Oil Labor if used in Mfg.)	....	..	4,424.70		..	0.04		0.04
30—Oil, Waste & Sundries	....	..	5,407.15		..	0.05		0.06
31—Cartage	....	..	17,123.60		..	0.16		0.17
32—Labor	....	..	382,632.04		..	3.59		3.67
33—Net amt. of material & Labor	....	..	3,101,832.24		..	29.10		29.77
34—Repairs to Apparatus	....	..	169,197.39		..	1.59		1.62
35— do Buildings	....	..	24,900.69		..	0.23		0.24
36— do Tools & Implements	....	..	16,228.48		..	0.16		0.16
37—Expense	....	..	59,016.97		..	0.55		0.57
38—Distribution	....	..	31,655.34		..	0.30		0.31
39—Experiments	....	..	3,030.08		..	0.03		0.03
40—Profit & Loss adjustment	....	..	Credit	7,508.39	..	Credit 0.07		Credit 0.07
41—Distribut'g Sta. Expenses	....	..	56,538.57		..	0.53		0.54
42—Station Cost	....	..	3,455,091.37	..	..	32.42	..	33.17
43—Cost of Gas Mfg. under Agency Agreement			997,039.89	..	..	34.04	..	34.82
44—Total Cost at Holder	....	..	4,452,131.26	..	..	32.77	..	33.52
45—Expense	....	..	490,855.36	..	..	..	..	03.69
46—Distributing	....	..	281,524.12	..	..	..	..	02.12
47—Repairs to Gas Stoves	....	..	55,954.35	..	..	..	..	00.42
48— do Mains	....	..	126,110.31	..	..	..	..	00.95
49— do Services	....	....	89,033.46	..	..	..	..	00.67
50— do Meters	....	..	172,925.52	..	..	..	..	01.30
51- do Buildings	....	..	15,116.68	..	..	..	..	00.11
52— do Tools&Implements	....	..	15,610.59	..	..	..	..	00.11
53—Street Lamps	....	..	289,259.09	..	..	..	..	02.18
54—Interest on Consumers' Deposits	....	..	51,391.52	..	..	..	..	00.39
55—Bad & Doubtful Debts	....	..	82,995.11	..	..	..	..	00.63
56—Profit & Loss Adjustment	....	..	Credit	29,683.92	..	..	..	Credit 00.22
57 Total Distribution	....	..	1,641,092.19	..	..	..	..	12.35
58—Expense—General Office	....	..	339,999.51	..	..	..	..	02.56
59—Vacations & Sickness	....	..	8,175.20	..	..	..	..	00.06
60—Automobiles	....	..	5,064.16	..	..	..	..	00.04
61—Advertising & Legal	....	..	105,800.02	..	..	..	..	00.80
62—Real Estate Rents	....	..	42,674.71	..	..	..	..	00.32
63—Gas Co's Mutual Aid Soc.	....	..	6,413.99	..	..	..	..	00.05
64—Superannuation	....	..	14,943.86	..	..	..	..	00.11

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32—Labor	....	..	382,632.04		..	3.59		3.67
33—Net amt. of material & Labor	....	..	3,101,832.24		..	29.19		29.77
34—Repairs to Apparatus	....	..	169,197.39		..	1.59		1.62
35— do Buildings	....	..	24,900.69		..	0.23		0.24
36— do Tools & Implements........	....	..	16,228.48		..	0.16		0.16
37—Expense	....	..	59,016.97		..	0.55		0.57
38—Distribution	....	..	31,655.34		..	0.30		0.31
39—Experiments	....	..	3,030.08		..	0.03		0.03
40—Profit & Loss adjustment	....	..	Credit	7,508.39	..	Credit 0.07		Credit 0.07
41—Distribut'g Sta. Expenses........	....	..	56,538.57		..	0.53		0.54
42—Station Cost	....	..	3,455,091.37	..	..	32.42	..	33.17
43—Cost of Gas Mfg. under Agency Agreement			997,039.89	..	..	34.04	..	34.82
44—Total Cost at Holder	....	..	4,452,131.26	..	..	32.77	..	33.52
45—Expense	....	..	490,855.36	..	..	..	..	03.69
46—Distributing	....	..	281,524.12	..	..	..	..	02.12
47—Repairs to Gas Stoves	....	..	55,954.35	..	..	..	..	00.42
48— do Mains	....	..	126,110.31	..	..	..	..	00.95
49— do Services	....	....	89,033.46	..	..	..	..	00.67
50— do Meters	....	..	172,925.52	..	..	..	..	01.30
51- do Buildings	....	..	15,116.68	..	..	..	..	00.11
52— do Tools&Implements........	....	..	15,610.59	..	..	..	..	00.11
53—Street Lamps	....	..	289,259.09	..	..	..	..	02.18
54—Interest on Consumers' Deposits	....	..	51,391.52	..	..	..	..	00.39
55—Bad & Doubtful Debts	....	..	82,995.11	..	..	..	..	00.63
56—Profit & Loss Adjustment........	....	..	Credit 29,683.92		..	..	..	Credit 00.22
57 Total Distribution.........	....	..	1,641,092.19	..	..	..	..	12.35
58—Expense—General Office	....	..	339,999.51	..	..	..	..	02.56
59—Vacations & Sickness	....	..	8,175.20	..	..	..	..	00.06
60—Automobiles	....	..	5,064.16	..	..	..	..	00.04
61—Advertising & Legal	....	..	105,800.02	..	..	..	..	00.80
62—Real Estate Rents	....	..	42,674.71	..	..	..	..	00.32
63—Gas Co's Mutual Aid Soc.........	....	..	6,413.99	..	..	.	..	00.05
64—Superannuation	....	..	14,943.86	..	..	..	..	00.11
65—Insurance	....	..	54,031.83	..	..	..	..	00.41
66—Taxes	....	..	965,843.88	..	..	..	..	07.27
67—Contingent Expenses (includes renewals)	....	..	1,328,316.37	..	..	..	..	10.00
68 Total General Expenses........	....	..	2,871,263.53	..	..	..	..	21.62
69—Fixed Charges	....	..	972,423.44	..	..	..	..	07.32
70 Total Operating	....	..	$9,936,910.42	..	..	..	..	74.81
71—Gas made at Consolidated Co's. Stations			....	10,657,810,000				
72— " " " other Co's. Stations under Agency Agreements			....	2,929,210,322		13,587,020,322 c. f.		
73—Gas Sold, made at Consolidated Co's. Stations			....	10,410,461,426				
74— " " " other Co's. Stations under Agency Agreement			....	2,863,702,341		13,283,163,767 c. f.		
75—Excess made over sales—2.24¢						303,856,555 c. f.		
76—Gas Sales, cubic feet				13,283,163,767				

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nary obstacles placed in the way of a proper investigation by independent and impartial experts in accounts, and in the manufacture of gas, which have resulted in the facts that there has been no examination of the works of the Consolidated Gas Company, and also that there has been no comparison of vouchers with accounts, guaranteeing that these vouchers have been properly distributed to their respective accounts, and further that there has been no examination of a complete nature of the subsidiary books, or of the final books made by impartial experts in accounts and the manufacture of gas, in behalf of the city of New York; has rendered all of the items in Exhibit 94 either doubtful or obviously to be rejected.

Mr. MATHEWSON: I object most seriously to the witness going on in this way and characterizing and stating that no opportunity has been given to examine accounts when everybody in this room knows that they have been given that. I do not think it is proper 2300 nor fair for the witness to proceed with a diatribe of that character. It seems to me he should testify and not characterize or sum up. I do not wish to be importunate, but it does seem to me that is not proper.

Mr. BURR: The record must speak for itself in that regard.

The MASTER: Yes, the record speaks for itself in that regard, and therefore it is unnecessary for the witness to testify in this fashion.

Q. Proceed.

A. Even if all the figures and computations that are on the books of the Consolidated Gas Company are correct and exact, the distribution of these figures from the vouchers still remains a matter open to discussion between experts who are sincere in their views as to the proper distribution of them.

Further an agreement should be reached as to the proper distribution of costs as represented by the vouchers, to their various accounts, and there still remains the question of what accounts are justly chargeable to the cost of gas or operating expenses, and what should go to the capital account or the cost of the works.

For the purpose of instant identification of the items in Exhibit 94, they have been numbered from 1 to 76, as per the following tabulation:

By Mr. MATHEWSON:

Q. Is that tabulation or paper just referred to by you Exhibit 94?

A. Exhibit 94, with the items numbered from 1 to 76.

Q. Simply the numbering of the items?

A. That's all. I am reading it according to Mr. Burr's request.

(Here follows table marked p. 2300*a*.)

2301 The WITNESS (continuing): Item 70, total operating, is given as $9,936,910.42 or 74.81 cents per M. c. f. of gas made, distributed and sold.

The items which I eliminate because they obviously are not chargeable to the cost of gas, are as follows:

Item 47, Repairs to gas stoves......	55,954.35	00.42	M. c. f.
Item 53, Street lamps............	289,259.09	2.18	"
Item 54, Int. on Consumers' Deposits	51,391.52	00.39	"
Item 67, Contingent Expense......	1,328,316.37	10.00	"
Item 69, Fixed Charges..........	972,423.44	07.32	"
Total rejected items.........	2,697,344.77	20.31	"
Balance doubtful items......	7,239,565.65	54.50	"
Item 70......................	9,936,910.42	74.81	"

By the rejection of the above stated items, we find the total operating costs to be $7,239,565.65, and the actual cost of gas appears to be 54.50 cents per M. c. f. made.

An investigation made into item 66, taxes $965,843.88 or 7.27 per M. c. f. is as follows:

Taxes on Real Estate..........................	$179,778.95
" " Personal Property......................	88,839.00
" " Special Franchises....................	406,909.23
" " Mains, Pipes, etc.......................	14.91
" " Income from Gas Business.............	70,538.02
Total	$746,080.11

2302 Taxes on Income from other Companies' Securities	$5,257.48
Taxes on Dividends in excess of 4 per cent. on $38,643,590.14, Stock invested in securities.......	57,965.39
Taxes on $41,356,409.86, Stock in gas business......	62,034.61
Interest on unpaid taxes.........................	94,506.29
	$219,763.77

We observe that instead of items 66, Taxes, $965,843.88.

We should have $746,080.11 or 5.61c. per M. c. f., showing a reduction of 1.66c. per M. c. f., which subtracted from 54.5c. per M. c. f., gives 52.84c. per M. c. f. for the apparent cost of gas up to this point.

Referring to Complainant's Exhibit 224 and to Item 62, Real Estate Rents $42,674.71, or 00.32c. per M. c. f., we find that for the calendar year the Real Estate Rents received amounted to $37,408.88, leaving a balance of $5,265.83, or dividing by 13,283,164 M., or about .04c. per M. c. f., which subtracted from 00.32c. leaves 00.28c. Subtracting this 00.28c. from 52.84c. we have 52.56c. for the present figures on the apparent cost of gas.

Item 67, Contingent Expenses $1,328,316.37, or 10.00c. per M. c. f. has been omitted, and so far as possible, should have substituted for it the actual renewals.

Referring to the testimony before the Gas and Electricity Commission of New York, it appears that this account was sophisticated by the introduction of a theory, and the actual renewals hidden within the 10c. per M., arbitrarily fixed as the cost of contingencies and renewals.

2303 On Page 1183 Printed Testimony, Gas and Electricity Commission, it is $194,666.87, or 1.45c. per M. If we add this sum to the apparent cost of making gas 52.56c. we have 54.01c. per M.

Referring to Exhibit 224, Page 759, we find the gas stove rents for the calendar year to be $122,322.60. Refer to Item 47, Exhibit 94, repairs to gas stoves, and we find the expense to be $55,954.35. The difference between these is $66,368.25, or 00.50c.

If, according to the English custom, the credit for stove rentals, or the cost of stove rentals, is entered into the cost of gas, this latter account would reduce the apparent cost of gas to 53.51c. per M. c. f.

It will be observed from this discussion of Item 47, Repairs to Gas Stoves, and Item 62, Real Estate Rents, that the apparent cost of gas is increased by putting into it the expenditures under these heads, and then adding the receipts under these heads to miscellaneous income, with the result of increasing the receipts from gas sales to over $1.00 per M. c. f., which is obviously absurd. Now we come to

Review of Rejected Items.

Item 53, Street Lamps, $289,259.09 is analyzed as follows:

Page "15."

Labor, fitting, repairing, lighting, extinguishing, cleaning and inspecting	$15,864.70
Pipe fittings	1,959.91
Glass	86.70
Repaving	3,849.65
Welsbach Street Lighting Company (for Mantles)	321,316.93
Sundries (Materials)	17,595.60
	$360,854.69
Credit	71,595.60
Total	$289,259.09

2304 Item 54, Interest on Consumers' Deposits $51,391.52. These Consumers' Deposits are demanded by the Gas Company as an insurance against loss from irresponsible consumers, and these Consumers' Deposits amount to $904,520.07 (See Complainant's Exhibit 81).

Interest at 6 per cent. is claimed to be paid on these deposits, and should be paid, because, in addition to forming an insurance fund against loss, it furnishes nearly $1,000,000 working capital for the purposes of the Consolidated Gas Company, but it forms no part of the cost of making gas.

Item 67, Contingent Expenses, $1,328,316.37, is a purely arbitrary assumption, not even based on empirical data. It has been explained above that the actual contingent expenses for twelve months ending October 31, 1905, amounted to $194,666.87, or 1.45c. per M. c. f., which has been added into the apparent cost of gas.

Item 69, Fixed Charges $972,423.44 or 7.32c. per M. c. f., has been relinquished as a charge by the experts of the Consolidated Gas Company, although they, in former investigations before other Commissions, presented it as a proper charge against the cost of making gas.

It is obvious that both Item 69, Fixed Charges, and Item 54, Interest on Consumers' Deposits, is interest on money which the Consolidated Gas Company has found it more convenient to borrow than to furnish and invest.

It would appear from the foregoing examination of items, that each of the items which has had the consideration of an expert in gas manufacture, required modification or rejection.

The fact that accountants for the State have found the computations, meaning by that the additions, subtractions, divisions, and multiplications entered on the various accounts, to be correct, is no proof that the accounts themselves have not been sophisticated by a wrong distribution of the amounts of the vouchers or that the cost of gas has not been sophisticated by a subsequent incorrect distribution of these accounts in Exhibit 94. 2305

It is not possible for a mere accountant, familiar only with figures, and unfamiliar with the practical processes of gas making, to authoritatively determine the distribution of vouchers to accounts, nor, assuming these vouchers to have been propertly distributed, to determine the proper accounts which should go to operating cost, and which should go to capital or investment accounts.

It is a fact that a complete examination of vouchers and their distribution, and an examination of accounts and their distribution, has not been made by the Stevens Commission, Senate Document 30, 1905, or by the Gas and Electricity Commission, 1906.

Mr. Mathewson: I object to the statement of the witness. If there is anything to show from those records which is pertinent, and if they are pertinent evidence, the evidence as to what they show and what was done is the record itself and not the statement of this witness.

Mr. Burr: If he is familiar with the record and makes it as a statement, you can deny it later.

Mr. Mathewson: I do not think we ought to be put in that position.

The Master: It does not seem to me that it is proper testimony. I think we are allowing considerable latitude in letting the witness go on and present his statement, but when he gets into matters

2306 which are more properly matters of summing up and characterizing the testimony as a whole, I do not think it ought to go in.

Mr. **Burr**: Very well, sir. It is not very material. Leave that out. Proceed.

The **Witness**: Referring to witnesses—President Alexander C. Humphreys, of the Stevens Institute of Technology, who was retained by the Consolidated Gas Company and who assumed the attitude of one having an enormous experience and undisputed authority, acknowledged on the stand that he had not examined the vouchers and accounts of the cost of gas, but has blindly accepted the figures furnished by the officials and employees of the Consolidated Gas Company.

Mr. **Mathewson**: What is the use of the witness stating that if that is the fact. I move to strike it out.

The **Master**: Why, yes; that is not testimony. Of course the witness is entitled to give us his views on this subject, or any facts or figures or anything which is in evidence before me, but it is not a part of his evidence to say here that some other witness planned or did something else.

Mr. **Mathewson**: Dr. Humphreys took the testimony as presented here and then presented his statement of the cost of gas from that.

The **Master**: What I understand the Counsel objects to is the characterization on the part of the witness and he contends that it is no part of his testimony.

Mr. **Burr**: You might strike out the word "blindly."

The **Master**: You had better have the witness leave out the speeches and the characterizations.

2307 By Mr. **Burr**:

Q. Referring to the testimony which was given by President Humphreys on pages 1943, 1944, 1945, 1946, 1947, 1948, 1949 and 1950 of this record, is it not a fact that he accepted the unverified figures of the officials and employees of the Consolidated Gas Company for 51.802 cents per M c. f. sold (page 1945) by the rejection of contingent expenses and repairs.

Mr. **Mathewson**: Objected to as simply a characterization of the testimony by the witness which it is not proper for him to make.

The **Master**: Oh, he can state that, I think.

A. It was a fact.

Q. And does he not proceed to add for average repairs from 1884 to 1905, and for final renewals the sum of 14.145 and reaches a cost at burner of 65.947 cents per thousand cubic feet sold?

A. He does.

Q. Now you heard the testimony of Mr. Bradley as it was given on page 2018 of the record here that "most of the water gas apparatus has been built within the last five years, and is just as modern and up-to-date as any we can contract for today."

A. I did.

Q. And in the statement appearing in Mr. Bradley's affidavit, page 35: "The manufacturing plants of several of the constituent companies which formed the Consolidated Gas Company in 1884, were originally coal gas plants, but at the present time, they have been replaced with water and oil gas plants of the latest and most improved methods, that the maximum daily capacity of the water and oil gas plants of the company is 41,500,000 *thousand* cubic feet out of a total manufacturing capacity of the gas plants in operation, amounting to 51,000,000 cubic feet. This computation does 2308 not include the 18th Street plant with a daily capacity of 3,500,000 cubic feet, for the acquisition of which condemnation proceedings have been instituted by the City of New York." And, further, the statement in the affidavit of President Walter R. Addicks, page 6: "The manufacturing plants of the Consolidated Gas Company are in good and efficient condition. About 4/5 of the present generating capacity thereof, are in the shape of modern, up-to-date water gas plants which could not be improved upon anywhere. And the coal gas plants, while possessed of some apparatus which is not of the latest pattern, are efficient, and in shape to operate for an indefinite period without impairment of efficiency." What do you conclude from these statements to which I have called your attention?

A. That the repairs themselves should be and are very low. I should say from the statements of Chief Engineer Bradley, and Vice-President Addicks, showing the coal gas plants of about one-fifth of the capacity, to be in as perfect a state of repair as possible, and that the water gas plants 4/5 of the capacity, have all been renewed and replaced within five years in the most modern methods possible, would appear conclusively——

Q. What do you deduce from those statements?

A. First, that taking an average of repairs from a number of coal gas plants, between the years 1884 and 1900, in connection with the repairs to the modern water gas plants from 1900 to 1906, is a very adroit method of padding the apparent cost of gas by using the higher repairs of old-fashioned smaller coal gas plants for the new and larger water gas plants.

Q. What have you to say with reference to the five cents added to the cost of gas making allowed by President Humphreys, making the total cost and reserve 70.947 cents per thousand cubic feet sold.

A. This reserve is purely an arbitrary assumption. It is 2309 obvious upon reflection that if the methods of the English companies had been adopted, the reserve in hand in 1905, would have amounted to a very large sum indeed, far exceeding the real needs of the Consolidated Gas Company.

The English, as a general custom, set aside their profits.

First, an insurance fund, limited to five per cent. of the capital of the company, which is intended wholly for contingencies, accidents and large and unexpected demands above ordinary repairs, and

Further, set aside out of their profit, a reserve fund limited to ten per cent. of the capital of the company, which reserve fund is sued for the equalization of dividends in years, when the profits of the company may fall below the established rates of dividends.

The fact that the large profits of the Consolidated Gas Company may have been absorbed in the purchase of electric light corporations, or other gas corporations, at exorbitant prices, as well as the erection of new works at Astoria, is no justification for an assessment of five cents in every one thousand cubic feet of gas sold upon gas consumers.

Q. I call your attention to the testimony of Vice-President Addicks, as to the cost of gas per thousand sold on page 1757 of the record and ask you if it is not a fact that he omitted fixed charges, contingencies and a portion of the taxes, amounting to 17.81 per thousand and then added for enrichment, replacements, repairs and renewals, and labor, 9.35 cents, also 3 cents for a reserve, which is two cents less than is claimed by President Alexander C. Humphreys?

A. That is so. During the year 1905, the standard illuminating power of gas was fixed by law at 20 candles until July 1st, 2310 and after that at 22 candles. An averaging of the results of observations made by Chief-Examiner Love——

Q. Who is he?

A. Chief examiner for the city of New York. An examining of the results of observations made by Chief Examiner Love of the candle-power each day during 1905, gives the candle-power for the first six months, about 22 candles, and for the last six months above 24 candles, and in both cases proves the extravagant use of oil for unnecessary illuminating power.

Q. Is this a copy of the statement made by Dr. Love?

A. It is. It has been carefully computed and verified by two parties besides being generally arranged by myself.

By Mr. Mathewson:

Q. What do you mean by computed?

A. The Chief Examiner Love's affidavit was turned in on the days given, on the days you will observe, and the month given on the exhibit.

Q. But you say you have carefully computed, what do you mean by that?

A. He made in some cases two, in some cases three, and in some cases four observations of the gas of the Consolidated Gas Company which was necessary to compute an average of those for the days that were made, and then having reached those averages to compute the total average as you will observe at the bottom for the month, and then the total average for the first six months and then the total average for the last six months.

Mr. Burr: I offer that in evidence.

Mr. Mathewson: I do not object to it, subject to verification.

Received in evidence and marked City's Exhibit 47.

2311 By Mr. Burr:

Q. Proceed.

A. It is entirely proper to hold the illuminating power of gas at about one-half candle above a fixed standard, to provide for accidents, and oversights, but it is not necessary to exceed this amount. A careful manager using oil at 04.23 per gallon for enrichment in such vast quantities should effect a great saving in the course of a year without running any serious risk of penalties.

Q. What do you find is the average price for oil used, purchased at a fair average price, granted to smaller companies of 03.65 cents per gallon instead of 04.23 cents per gallon.

—. ——.

Q. What do you find is the average price of oil paid by the small companies to which you have referred?

Mr. **Mathewson**: Objected to. I submit this witness has no special knowledge on this subject and what he thought some small companies paid for oil where they could get it from anyone of a dozen different sources would be no criterion of what we have to pay.

Mr. **Burr**: If he knows what other companies are paying in other cities in the State of New York for oil he may state that fact.

The **Master**: I will allow him to answer.

Mr. **Mathewson**: Whether the witness has any personal knowledge or not, is it allowed?

The **Master**: No, he is to state what he knows about it. That is what the question is.

A. I have obtained through Brown's Directory a work used by gas managers and the data for which is communicated by officials of these companies, prices of oil in fourteen small companies in the State of New York, these prices averaging about 3.65 cents per gallon.

2312 Q. Will you give the names of the cities or towns where such companies are located?

	Per gallon.
Batavia, N. Y.	3½ cents
Binghamton, N. Y.	3.58 cents
Clifton Springs, N. Y.	3.00 cents
Fishkill, N. Y.	3½ cents
Fulton, N. Y.	3.1 cents
Half Moon Gas Company, N. Y.	3.37 cents
Middletown, N. Y.	3.75 cents
Nyack, N. Y.	3.75 cents
Oneonta, N. Y.	3.95 cents
Peekskill, N. Y.	4.00 cents
Plattsburgh, N. Y.	3.63 cents
Schenectady, N. Y.	3.58 cents
Syracuse, N. Y.	3.35 cents
Waterville, N. Y.	4.00 cents
Average	3.65 cents

Q. What do you say, Doctor, regarding the item given by Mr. Addicks as to "actual replacements," 2.12 cents?

A. Referring to Mr. Addicks' item "Actual replacements," 2.12, it would appear as if the actual replacements for the twelve months ending October 31, 1905, amounting to $194,666.87 or 1.45 cents per thousand cubic feet sold for the calendar year, did not corroborate his statement of 2.12 cents for a calendar year overlapping only by two months, that is (about $284,700.00).

Referring to Mr. Addicks' item for enrichment, 1.83, it will be recalled that the average requirement for the year 1905, made by law, was 21 candles, and therefore that as this average was largely exceeded (23.1) that this addition of 1.83 cents to the cost of gas is a wholly unnecessary extravagance.

Q. What do you say as to the extra item of "Repairs and Renewals," 4.62?

2313 A. Referring to the extra item of repairs and renewals, 4.62, deduced from the discussion of repairs and renewals in the five years 1895 to 1899, inclusive, the same objection applies as did in the case of President Humphreys.

Mr. Addicks has selected a period during which smaller and less perfect gas works were operated for the purpose of deducing repairs, which period being one of the final destruction of this apparatus, was immediately followed by the period of 1900 to 1905, in which Chief Engineer Bradley says "most of the water gas apparatus has been built within the last five years, and is just as modern and up-to-date as we can contract for to-day." It is apparent that Mr. Addicks is selecting the five years, 1895 to 1899, which is a period in which the old works were tottering to their final collapse. According to Mr. Bradley's testimony they did collapse about 1900 and were replaced by the latest type of water gas plants.

Mr. Mathewson: He selected that period as he testified because the Gas Commission suggested that that period should be taken.

Mr. Burr: I object to a running commentary on my witness. I protested in vain to the helps and aids to your own witnesses.

Mr. Mathewson: I think he should be more careful.

Q. Regarding the item of "Labor," 78 cents and "Reserve," 3 cents what have you to say as to that?

A. The latter three cents is a purely arbitrary assumption for which empirical data are not even offered, and the fact is that had usual and proper methods of operating and financing gas works been observed, there would have been in the treasury of the Consolidated Gas Company in 1905, a more than ample reserve for all possible needs. In this way Vice-President Walter R. Addicks obtains a net cost of 69.36 cents which coincides very closely with the 70.95 cents per thousand cubic feet of gas sold, reached by President Humphreys. 2314

Q. Do these periods selected by them show properly existing conditions of the works?

A. They do not.

Mr. Mathewson: I object to the word "properly."

Mr. Burr: Existing conditions.

Mr. Mathewson: How does he know except from the testimony? He has not examined the plant.

Mr. Burr: If he knows from the testimony here. If he knows they have not and he is given the period, and now he may characterize them that they are not proper to base their assumptions upon.

Mr. Mathewson: That is not the point. Your question is as to whether they represent the present condition of the works. Now he does not know whether they do or not, if he has not examined the works.

Mr. Burr: I ask for the period they take for their computation.

The Master: You might be able to show there is some failure in their line of argument based on an improper selection of periods other than that applicable but I do not think you can prove it by questioning this witness.

Q. Isn't it a fact that Mr. Addicks and Vice-President Humphreys have selected periods for the deduction of items of repairs which do not cover the existing condition of the works?

A. They have.

Mr. Mathewson: Objected to on the same ground as I did before.

2315 The Master: It is answered. You can ask him if you care to, to point out any defect or error which he claims to exist in that allowance for repairs, whatever it is.

Mr. Burr: He has stated the statements that have been made with regard to the condition, and also state the testimony of these gentlemen with reference to a particular period, and this is his conclusion.

The Master: It is proper for him to state why in his opinion the period stated by them is not fairly representative, but the question as you put it I think is objectionable, but you can get at the same thing by modifying the question. He has answered it now practically.

Q. What have you to say with regard to their statements regarding the use of oil for enrichment?

A. The oil has been used in excessive quantities, unnecessarily used for an expensive illumination.

By the Master:

Q. Do you mean to say they have made gas of richer quality than the law required?

A. 2.1 candles ordinarily.

Mr. Mathewson: We have been spending unnecessary money in order to reduce our own profits.

Mr. Burr: We will show you how to run the business after a while.

By Mr. Burr:

Q. What does the statement of Dr. Love show, Dr. Marks, with regard to the use of excessive candle-power?

A. In the first six months of the year 1905, the legal requirement

was 20 candles. Dr. Love's observation on the photometer
2316 either personally or by his assistants show that the average
illuminating power of the gas at the city station was 22
candles. In the last six months of the year 1905, the requirement by law was 22 candles. Dr. Love's observation during that six months made at the City's test station shows an average of 24.19 candles; nearly 24.2 candles.

Q. In excess of the legal requirements?

A. In excess of the legal requirements, and the consequence is that the average excess has been about 2.1.

Q. So that in your opinion, the oil necessary to make that candle-power was unnecessary and was wastefully used?

A. Yes, sir, and therefore Mr. Addick's addition of 1.83 cents or any addition whatever was entirely unnecessary.

Q. What is the method in your opinion, which should be pursued to avoid theories and to follow authoritative precedent as to the factors and items which enter into the cost of gas?

Mr. Mathewson: I object to the form of the question.

The Master: I think that is rather an objectionable question, Mr. Burr:

Mr. Burr: It seems to me he has pointed out some basis of the accounting of these experts on behalf of the Consolidated Gas Company which he believes he has demonstrated were improper, and I am asking what in his opinion is the proper way of figuring upon those subjects as factors going to make up the cost of gas.

The Master: Do you mean that the question generally was based on some of the evidence which already appears here in this case?

Mr. Burr: Based upon the evidence in this case and upon his experience and knowledge as an expert.

2317 The Master: Well, I will let him answer it then.

Mr. Mathewson: Exception.

A. There have been several suggested methods of obtaining the cost of gas.

Q. What is the practice in England, for instance?

A. The practice in England has been established by accountants and also approved and enacted by Acts of Parliament. There are other processes on this side which have not met with universal acceptance, such as the American Gas Association.

Q. What is the practice in England, for instance? Do they take in consideration anything——

A. In England the necessity of taking into consideration anything else than the actual cash expenditures incurred in the manufacture and distribution of gas is avoided by having the actual depreciation for each term of a year or six months, written off on the books, upon a carefully prepared report of the engineer of construction and carbonizing or the distributing engineer, or the superintendent of by-products works, and also requiring of each of these officials a further statement that the apparatus in his charge is in good order, and in a thoroughly efficient state of repair. These reports are attached to the regular report of the governor [president] of a gas company.

Q. While on that point I want to call your attention to the practice there with regard to furnishing accounts or keeping accounts. What is the rule? Is it not a fact that a taxpayer or consumer on the payment of a shilling may demand and is bound to receive a copy of the accounts of the gas company?

Mr. Mathewson: Objected to. The question here is what is the cost of gas. Whether a consumer is entitled to examine the 2318 accounts of the company upon paying a shilling, it seems to me does not have much bearing on the cost of gas.

The Master: Wouldn't it be better for you to refer me to the statute, if there is one, and put it on the record?

Mr. Burr: Yes.

Mr. Mathewson: I shall object to it even as a statute.

Q. What do you find is the result of the precautions and the insistence upon a thoroughly efficient state of repairs?

Objected to as immaterial and irrelevant.

Mr. Burr: This is on this point of depreciation and now we want to find out what is the system with other companies, the recognized standard, which differs from the standard set up by the Consolidated Gas Company and of which we now complain, so the Court may be enlightened on that subject and draw its own deductions.

The Master: It seems to me if you go into that sort of thing you are opening the door very wide by raising any quantity of collateral issues which the other side have got to come in and meet. I assume that the conditions of manufacturing gas are as different in different countries and different localities as day is from night—different rates of wages, different freight rates, different local conditions—a thousand considerations, and it cannot be that we have got to go in here and draw out the merits of each individual gas company all over the world and compare it with this. I think it is quite proper of course for you to put your expert on the stand here, one skilled and experienced in this business, and let him speak in a 2319 general way as to his knowledge of conditions prevailing elsewhere, and in the light of such knowledge let him test and criticise the statements of the complainant's experts; I think that is right enough, but when you ask him to go into details and the merits or demerits of the English system I think that is going pretty far.

Mr. Mathewson: I make these objections, among other things because before the Gas Commission I did not make them and let the witness go on and explain all the time on what seemed to me utterly immaterial and irrelevant matters and then when I desired to put on my experts in rebuttal I was met with the proposition I should have objected, that these things went in without objection and I could not meet them. I do not wish to be put in that position here.

The Master: Of course if I sustain the objection the answer is nevertheless taken. It is only a question of saving time. Is there much of this line?

Mr. Burr: Not at all. I just want to ask another question with reference to Exhibit 94.

The Master: Well, then, let him answer it.

The Witness: What is the question?

The Stenographer (reading): What do you find is the result of the precautions and insistence upon a thoroughly efficient state of repairs?

Mr. Mathewson: I object to that. I thought that question was ruled out.

The Master: I will overrule the objection and let him answer.

Mr. Mathewson: Exception.

A. The result is that the depreciation of manufacturing
2320 plants and the depreciation of meters usually form the principal items, and the depreciation charge is a very small percentage, sometimes only a fraction of 1 per cent. of the total structural cost of the plant.

Q. For the purpose of reaching the apparent cost of gas after the English method, have you examined and arranged Exhibit 94?

A. In order to——

Mr. Mathewson: I shall object to going into this. It seems to me utterly unprofitable to arrange Exhibit 94 after the English method.

Q. I will ask you what you consider is the proper method of segregating the accounts in Exhibit 94?

Mr. Mathewson: Has not the witness testified to that already and gone over it?

The Master: Let him answer.

Mr. Mathewson: Exception.

A. In order to confirm any personal opinion that I may have formed, I have taken the clearly defined and specified method used by English accountants in giving the cost of gas each year for public and judicial use. I have seggregated the accounts and the items stated in Exhibit 94 according to this method and having done that, have deduced a cost of gas by this segregation under the following heads:

1905.	Total.	Cost per M sold.	Percentage cost.
Net Coal	$2,647,276.18	25.40	
Mfg. Charges	807,818.19	7.77	
Distribution Charges	1,095,123.87	8.23	
General Expenses	751,345.94	5.65	
Management Charges, Law etc.	812,090.55	6.11	
Total, or apparent cost per M. sold	$6,113,651.73	53.16	

Q. Have you taken any measures to check that total with a comparison of Exhibit 94?

2321 A. To check this total with Exhibit 94 we add the following items. Total cost as above $6,113,651.73.

Item 53, Street Lamps..............	$289,259.09	
" 54, Interest on Consumers' Deposit...........................	51,391.52	
Item 59, Fixed Charges............	972,423.44	
" 67, Contingent Expenses.......	1,328,316.27	
Less.......................	194,666.87	1,133,649.50
Item 47, Repairs to Gas Stoves......		122,322.60
Item 66, Taxes....................		219,763.77
" 43, Cost of Gas Mfg. Agency Agreement....................		997,039.89
Item 63, Real Estate Rents..........		37,408.88
		$3,823,258.69

which added to $6,113,651.73 gives a check total of $9,936,910.42, corresponding to item 70 in Exhibit 94.

Q. And by that method the apparent cost of gas used is 53.16 cent per thousand cubic feet of sales?

A. That is right.

Q. That differs from the apparent cost of gas previously deduced, doesn't it?

A. That differs, in this respect, this .35 cents difference is the difference between Item 42, station costs, and Item 44, total cost at holder, and checks the computation in both cases, as in the first case total cost, Item 44 included Item 42, Station cost, and Item 43, gas manufactured under Agency Agreement.

Q. Did you take pains to further check the total result of these computations with Exhibit 94, and if so, state in what manner?

A. In order to further check the total amount of these computations with Exhibit 94, omitted items and partially omitted
2322 items have been added together and then added to the total
of the items, giving the apparent cost as 53.16 cents per thousand cubic feet. Item 70, Total Operating Expense, $9,936,910.42 exactly equals this amount and proves there are no errors in the computation, and further, Exhibit 94 has been carefully checked in every figure for the purpose of eliminating any possible numerical errors.

Q. Now, Doctor, what have you to say in regard to the items charged here on Exhibit 94 for insurance and reserve funds? Is that a proper charge or are these proper subjects for special allowance if required or demanded by a company which has confessedly, as in the case of the Consolidated Gas Company, made for a long term of years, the profits that the Consolidated Gas Company has?

A. It is obvious that the surplus applicable to both these funds would have been more than ample, had not the Consolidated Gas Company gone out of its province as a gas manuufacturer in the endeavor to obtain the monopoly of all forms of lighting in the Island of Manhattan and in Greater New York.

Mr. Mathewson: I move to strike that out. There we are again. He is not answering the question at all. The only question is whether it was a proper charge and he is entering into a discourse on our holding a monopoly of lighting. The question was whether that was a proper charge on the manufacture of gas.

Mr. **Burr**: I assume he was going to state his reasons. If you want to object——

Mr. **Mathewson**: I do object. I move to strike that part out.

(Question and answer read by stenographer.)

The **Master**: It is very difficult to separate that so as to strike out the objectionable portion.

2323 Mr. **Burr**: I will ask to have the answer stricken out and take the answer yes or no, and then ask for his reasons.

The **Master**: That is proper. It may be stricken out.

Q. What is the answer?

A. It is not under existing conditions.

Q. Why?

A. Because the Consolidated Gas Company appear to have spent their surplus in an endeavor to obtain control of all forms of lighting on the Island of Manhattan.

Mr. **Mathewson**: I move to strike that answer out.

The **Master**: I will let it stand.

Mr. **Mathewson**: Exception.

By the **Master**:

Q. What you mean by that is that the surplus has been expended in the purchase of securities of other companies?

A. Yes, sir.

The **Master**: That is the way it should have been stated.

Mr. **Mathewson**: Whereas the evidence is directly to the contrary.

Mr. **Burr**: I ask to have that stricken from the record.

The **Master**: Strike it out.

Mr. **Burr**: I do not believe Mr. Mathewson should make such statements.

The **Master**: No, but if you let your witness go on and get loose from the facts, you render yourself liable to that sort of interruption.

By Mr. **Burr**:

2324 Q. If the Consolidated Gas Company was in need of a reserve or an insurance fund, its proper procedure would be to form these funds out of the profits of these other purchases of securities in other companies.

A. It would seem entirely proper.

Q. Now, what have you got to say, Doctor, from your examination of the testimony here and your knowledge with regard to the situation at Astoria and the proposal of the Consolidated Gas Company to acquire the plant at that point?

A. It would seem to me that any suggested claim for an allowance to be devoted to the erection of gas works at Astoria is extortionate. Brooklyn and Queens County being rapidly populated and put into communication with the Island of Manhattan by bridges and tunnels as well as ferries, in another decade a gas consuming territory will be closely populated, in comparison with which the demands of the Island of Manhattan will be relatively small indeed.

Astoria with its proposed works of 240,000,000 c. f. daily capacity or 48,000,000,000 c. f. of annual capacity is an enterprise which can on an independent footing easily command unlimited capital and consumers on the Island of Manhattan are being subjected to either 3 cents or 5 cents or 10 cents per M. c. f. of sales for the purpose of building up this vast enterprise, whose future is guaranteed by every condition favorable to an almost unlimited sale of gas.

Q. I call your attention to the profits per M. c. f. of gas sold. What do you find the facts to be from your investigation?

A. By using the cost of gas manuufactured by the Consolidated Gas Company and the English method of computing the cost of gas, we have obtained an apparent cost of 53.16 cents per M. c. f. of gas sold.

Q. All of the information upon which these figures are based is derived by you from the transcript of the accounts of the company which have been furnished you?

A. From the unverified transcripts.

2325 Q. Except in the few instances such as Item 47, Repairs to Gas Stoves, Item 53, Street Lamps, Item 54, Consumers' Deposits, Item 62, Real Estate, Item 66, Taxes, and Item 67, Contingent Expenses, which have been partially analyzed and explained, is that true?

A. Yes, and they lead to the inference that every other item needs a thorough investigation——

Q. On Exhibit 94?

A. On Exhibit 94, needs a thorough investigation, not by an accountant for the purpose of seeing whether 2 and 2 makes 4, but by some expert in the gas business.

Q. And what in your opinion, what would be the actual cost of gas if an impartial and fair audit of vouchers relating to this item on Exhibit 94 were had?

Mr. **Mathewson**: Objected to as pure conjecture and speculation of the barest kind. If those figures are not correct, what can he conjecture if they were properly gone over?

The **Master**: I do not think that is very valuable testimony.

Q. Well, I will ask, in addition to that, based on your experience and upon your knowledge of the gas making business, and the conditions that you have ascertained exist here, from the investigations heretofore had and the present inquiry before the Master.

Mr. **Mathewson**: I object to that. The witness is not an expert in this line and he has not been shown to be and he never made gas in the City of New York.

The **Master**: I will let him state his opinion on the subject.

Mr. **Mathewson**: Exception.

A. It is difficult to say how low the price or rather the cost
2326 of gas may go under the conditions of enormous manufacture and quantity put out here in New York, and more particularly on the Island of Manhattan. It appeared to me at the outset

from figures which I had been able to obtain from smaller companies that there was a probability that the cost of gas would be somewhere between fifty cents and fifty-seven cents, that it would be found to be about that; but as I have gone on going into these matters, I have felt certain that the cost of gas would be found below fifty cents—I refer to the cash cost—how much below I do not know, but probably something above 44 cents.

Q. And less than fifty cents?

A. And less than fifty cents.

Q. Have you any knowledge of the gas situation as it exists in other cities in the United States in comparison with the conditions which have been revealed here by this testimony to exist in the City of New York?

A. The nearest approach——

Mr. Mathewson: I object.

The Master: Have you any knowledge, is the question?

A. I have.

Q. Of what cities?

A. In the City of Chicago I have the recent report of Hon. Lynn H. Young, Chairman of the Committee on Gas, Oil and Electric Light of the City of Chicago.

Q. What is gas manufactured and sold for there?

A. His statement is——

Mr. Mathewson: I object to that as immaterial and irrelevant, in the absence of testimony as to the local conditions, cost of material and other items.

Mr. Burr: I am asking for the fact: If he cannot justify
2327 it, it does not amount to anything.

The Master: I will take it.

Mr. Mathewson: Exception.

A. His statement is that the cost of gas in the City of Chicago of 22 c. p. based on an interrupted investigation made by accountants has reached 45.45 cents per M. c. f. sold.

Q. There was an investigation, was there not?

A. There was an investigation made.

Q. What was the holder cost of gas stated to be in that investigation?

Mr. Mathewson: If you have the record of the investigation there and the testimony exact, and if it is relevant at all, why not produce it instead of getting this witness to go over this subject.

The Master: I think that is a fair suggestion, Mr. Burr.

Mr. Burr: If he will state the fact, I will produce the evidence.

The Master: If the witness's only knowledge is the report of which he speaks, we might as well have the report here.

Q. Have you the report?

A. I have the report here.

The Master: I regard that evidence as of very little value, but I think under all the circumstances we might as well get all the light we can on this question under reasonable limits and put in the cost of gas in Chicago; but what I cannot understand is how it is at all relevant to what the gas companies claim was the cost there. Suppose they lied. He has testified that the cost was 45.45 cents at the holder. Now suppose the gas companies claimed it was $1.45.

Mr. **Burr**: But the condition is entirely different. They 2328 were yanked into an investigation and protested that they were being unjustly dealt with, and they admitted that the cost at the holder was something around 45 cents.

Mr. **Mathewson**: I do not think they ever admitted that, and I think that the professor is stating something about which he knows nothing, and that the computation is entirely wrong.

The **Master**: But all this evidence is open to the objection that I pointed out before, that it raises a vast number of collateral issues, some of which it may not be practicable to meet.

Mr. **Burr**: I can have the accountant here who made this examination and whose result it was, if we are going into it. I only wanted to get the fact that the cost of gas in Chicago was so much.

Mr. **Mathewson**: But it is not the fact.

Mr. **Burr**: Now, if we can show that the conditions are not the same, it will have very lit-le value.

The **Master**: Produce your report and let us see what it is.

(Book produced.)

Mr. **Burr**: That is from the report of the accountants to the Board of Counsel there.

The **Master**: Do you want to offer this report?

Mr. **Burr**: Yes.

The **Master**: Then it seems to be hearsay 3 degrees removed. The Doctor here is testifying about something of information he gets from a chairman of a committee in Chicago who bases his report on the report of a firm of New York accountants. Is that very valuable?

Mr. **Burr**: And the official report published by the City.

2329 The **Master**: Is not that Marwick & Company in New York?

Mr. **Burr**: Yes.

The **Master**: I should think if you want to prove anything about the cost of Chicago gas you had better call Mr. Marwick.

Mr. **Mathewson**: I call the Master's attention to the fact, too, that he is selecting one item out of this. Following that is Prof. Bemis, who was trying to make the cost appear as low as possible, 51.91 cents, virtually 52 cents, and not 45 cents, and following that is another one from Mr. Cawdrey of Laclede, who figures 53.52, and we are dosed here with 45.45 cents, when their own expert says it was 52 cents, Bemis, who I suppose is retained here to testify in this case.

By Mr. **Burr**:

Q. I call your attention to this report of the committee on Gas, Oil & Electric Light for the City Council of Chicago, January 28, 1906, page 40, Exhibit A. Will you be good enough to state from looking at that what the cost of gas was at the holder?

Mr. **Mathewson**: Objected to as immaterial and irrelevant and the witness is incompetent to testify on the point.

The **Master**: I will take it for what it is worth, as I stated. I do not regard it as of very great value, but I will take it. I assume that the witness having testified here on the facts in this case as to his opinion regarding what ought to be the cost of gas, that he ought to be allowed to get out here any facts that have influenced him in forming that opinion, and if this report about the cost in 2330 Chicago has any bearing on it, I think it is quite proper he should put it in. On that theory I will take it.

Mr. **Mathewson**: Exception.

A. From the report of the committee on Gas, Oil and Electric Light to the City Council of Chicago, January 29, 1906, I obtained the following figures of the revised cost by accountants who have made an investigation of gas of 22 candle-power. Cost of manufacturing in the holder, 28.22 cents per thousand c. f., cost of distribution including renewals at the consumer's meter 17.23 cents per M. c. f. Total cost 45.45 cents per M. c. f.

Q. Now, Doctor, if you for the purpose of computation take the apparent cost of gas to the Consolidated Gas Company at 53.50 cents and with the price of gas is fixed at seventy-five cents, what do you find remains of profits on each thousand cubic feet?

A. There remains a profit on each thousand cubic feet of gas sold of 21 and one-half cents.

Q. During the year 1905?

A. During the year 1905.

Q. If instead of the price of seventy-five cents for the city, you fix the selling price at eighty cents, what do you find there remains of profit on each thousand cubic feet of gas sold at the consumer's meters?

A. There remains 26½ cents for every M. c. f. of gas sold at the consumers' meters.

Q. By what method would you be able to arrive at the percentage of this profit on the actual structural cost of the gas works?

A. By finding out the actual structural cost of the gas works per M. c. f. made in each year and then finding out by the ordinary methods of computation what the percentage of profit would be on the actual structrual cost of each M. c. f. delivered.

Q. Now adopting that method what do you find the ap- 2331 parent fact to be regarding the Consolidated Gas Company and its plants?

A. From previous investigations or investigations in other companies——

Mr. **Mathewson**: I object to that unless the witness is shown to have some competency to judge as what the cost or value of the property here is. He certainly has not been shown yet to have any information on that score.

The **Master**: Let him finish his answer.

Mr. **Mathewson**: If he finishes his answer it will be up to me to move to strike it out and his answer is there. May I ask him two questions before he answer that question, as to his competency?

The Master: Certainly.

Mr. Burr: All right, I have no objection.

By Mr. Mathewson:

Q. Have you made a personal examination of the plants of the Consolidated Gas Company, Doctor?

A. As previously stated, I have been denied the opportunity.

Q. Have you seen any of the vouchers or any of the records as to the original cost of these lamps?

A. As I have previously stated, I have been denied the opportunity.

Q. Did you construct any of them?

A. I have not.

Mr. Mathewson: I object to this testimony as incompetent and the witness is not qualified to state what the cost of these plants is or was.

The Master: I will let him answer it and overrule the objection.

Mr. Mathewson: Exception.

A. I have been inclined to place the actual structural cost 2332 of the Consolidated Gas Company's station at $2.00, but a more minute and careful examination of the original reports of Jay Yeldon, accountant for the Commissions of 1885 and 1886, proves that the original and actual structural cost, when we take into consideration subsequent additions, is in the neighborhood of $1.91 per annual thousand cubic feet of gas sold. Thus, calling it $2.00, would for 75c. gas give a profit of 10¾ per cent. or over, and for 80c. gas a profit of 13½ per cent. or over, on the actual structural cost.

Mr. Mathewson: I move to strike it out on the ground it appears by the witness' answer that he bases it on the statement or report of Jay Yeldon, which is not in evidence here and of the accuracy of which there is no evidence presented.

The Master: I will let it stand.

Mr. Mathewson: Exception.

Mr. Burr: It is the basis of the report which you have offered in evidence.

Mr. Mathewson: The record shows differently.

By Mr. Burr:

Q. Have you examined Complainant's Exhibit 96?

A. I have.

Q. And from an examination of that and the testimony given in this case by the complainant what have you to say as to the total cash profits to the Consolidated Gas Company?

A. From Complainant's Exhibit 96, 1905, we have the following: Gas Sales, $13,552,482.97; operating expenses including taxes, $8,964,486.98; net earnings, $4,986,995.99. If we deduct arbitrary charges added to the cost of gas as a reserve, we have been 2333 given the following figures for the cost of gas per thousand cubic feet of gas sold.

By Mr. Addicks, 69.36 cents less reserve 3 cents, difference 66.36

cents. By Mr. Humphreys, 70.95 cents less reserve 5 cents, 65.95. Average of these two, 66.15 cents and if we further multiply this average of 66.15 cents by 13,283,164,000 cubic feet, we obtain $8,786,812.97, which is somewhat less than the operating expenses given in Exhibit 96.

From the figures of Messrs. Humphreys and Addicks it would appear as if

Gas Sales	$13,552,482.97
Less Operating Expenses, inc. taxes	8,786,812.97

would give net earnings of $4,765,670. This amount approximately corroborates the figures taken from the company's books.

Q. That is as they appear upon the statement in evidence?

A. Yes. It would be of interest to compare this net earning with the probable net earning, resulting in 1907 from a reduction of the price of gas to 75 cents to the city and to 80 cents to private consumers. We have from Mr. Addicks' affidavit, the statement that about four hundred million cubic feet annually are sold to the city authorities of the Borough of Manhattan by the Consolidated Gas Company, so that the 5 cents reduction to the city makes a negligible difference of about twenty thousand dollars, in this very large total.

Referring to the discussion of the probable sales of gas in 1907 it would seem as if it was probable that the total amount sold at 80 cents by the Consolidated Gas Company would be 15,342,981,000 cubic feet, and referring to the figures deduced for the cash cost of gas per thousand cubic feet sold of apparently fifty-three and a half cents we have the following:

2334 Gas Sales, 15,343,000,000 c. f. at 80c	$12,274,400.00
Apparent operating exp	8,208,505.00
Net Earnings	4,065,895.00

If, however, it should prove after a thorough investigation of the books, accounts, vouchers and works of the Consolidatedd Gas Company that the true cash cost of gas delivered at the consumer's meter is, as in Chicago, 45.50 cents or less, we would have

15,343,000,000 at 80 cents	$1,227,440.00
to add to the preceding	4,065,895.00
Making	5,293,335.00

cash profit on the sales of gas during the year 1907.

Q. What have you to say, doctor, as to the duty of a gas engineer with regard to the procurement of materials at fair prices.

Mr. MATHEWSON: I object to that as immaterial what the doctor has to say on that point. We concede that he ought to get them as low as he can.

Mr. BURR: He has given testimony as to the consumption of an unnecessary amount of oil in the additional candle-power which was not required by law. Now he as an old experienced gas engineer——

The MASTER: Don't you think I am capable of drawing that deduction?

Mr. **Burr**: No doubt about that, but I wanted to get what he had to say on the subject.

The **Master**: I know, but he might have a great deal to say that wasn't evidence.

Q. Now what do you conclude from the statements you have made will be the result with the price of gas fixed at 75 cents to
2335 the city and at 80 cents to private consumers, assuming that your prognostication as to population and consumption proves to be true?

Mr. **Mathewson**: What way?

Mr. **Burr**: Result to the Consolidated Gas Company in the way of profits.

Mr. **Mathewson**: Hasn't he already testified what he thinks there will be?

Mr. **Burr**: On the structural cost.

Mr. **Mathewson**: He has not testified what the structural cost was.

Mr. **Burr**: Per annual thousand feet of gas.

The **Witness**: I have made the annual structural cost at $1.91 previously, and suggested $2.00 as being in a rude way a sufficient factor of computation of the profit, or in the neighborhood of 10 per cent. or over in one case and in the neighborhood of 13 per cent. or over in the case of 80-cent gas——

Q. Thirteen or seventeen per cent.?

A. Thirteen per cent. in the case of the figure $2.00 being taken.

Mr. Burr will you pardon me, my eyes are beginning to hurt me, and if you can kindly suspend now——

Q. Just one moment. Referring to Exhibit 81, if you please Doctor, investment in gas business October 31, 1905, $40,500,455.99, did you examine that exhibit and what have you to say with regard to it and to its relation to what you have previously testified regarding this structural cost and the price of 75c. to the city and 80c. to the consumer?

A. It would appear that net earnings or profit for the sales of gas in 1907 would be about five million dollars on an actual structural cost of something less than thirty million dollars, or referring to Exhibit 81 investment in gas business October 31, 1905, $40,500,454.99 claimed structural cost, or of $49,110,454.99 tangible
2336 investments claimed as required in the gas business actively, this five million dollars would show a percentage ranging all the way from 17 per cent. or over in the first case to about 10 per cent. in the last case.

Mr. **Burr**: With your permission we will conclude to-day.

Adjourned to October 2, 1906, at 11 a. m.

Last exhibits:

Complainant's, same as before.
City's, 47.
State's, same as before.

2337 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 2, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

MR. BURR: The statement of which the total figures were given on page 2320 was omitted from yesterday's proceedings and is now inserted here.

2338 SEGREGATION OF EXHIBIT 94.

				Cost per M sold.	
	Net coal, including coke, oil and spirit:				
Item	1, Bituminous coal	$729,606.21		7.00	
"	2, Anthracite coal	462,680 25		4.44	
"	3, Boiler coal	38,156.43		0.37	
"	4, Cartage coal	12,222.89		0.18	
"	5, Labor handling	49,150.07		0.47	
"	19, Coke used	638,972.09		0.61	
"	20, Labor	1,293.31		0 01	
"	21, Cartage	43.87		0.00	
"	23, Naphtha	244.43		0.00	
"	24, Gas oil	1,769,968.42		16.99	
"	25, Fuel oil	50.04		0 00	
			$3,133,388.01	—	30.07
"	11, Net coke	$291,457.55		2.80	
"	12, Tar	65,546.70		0.63	
"	13, Ammoniacal liquor	65,849.65		0.63	
"	14, Carbon	4,857.20		0.05	
"	15, Spent Oxide	6,196.47		0.06	
"	16, Oil tar	52,207.26		0.50	
			$486,114.83	—	4.67
	Net coal, less residuals		$2,647,273.18	....	25.40
	Manufacturing charges:				
Item	26, Lime	$3,114.02		0.03	
"	27, Oxide	19,173.35		0.18	
"	28, Water	22,684.20		0.22	
"	29, Fuel oil labor	4,424.70		0.04	
"	Oil, waste and sundries	5,407.15		0.06	
"	31, Cartage	17,123.60		0.17	
"	32, Labor	382,632.04		3.67	
"	34, Repairs to apparatus	169,197.39		1.62	
"	35, Repairs to bldgs	24,900.69		0.24	
"	36, Repairs to tools and impl'ts	16,228.48		0.16	

Item 37, Expense	$15,016.97		0.57	
" 38, Distribution	31,855.34		0.31	
" 41, Distributing station expense	56,538.57		0.54	
" 39, Experiments	3,030.08		0.03	
		$815,326.58	—	7.84
" 40, Profit and loss adjustment		7,508.39	0.07	
		$807,818.19	7.77	7.77
		$3,455,001.37	....	33.17

2339 Distribution charges:

Item 45, Expense	$490,855.36		3.69	
" 46, Distribution	281,524.12		2.12	
" 48, Repairs to mains	126,110.31		0.95	
" 49, Repairs to service	89,033 46		0.67	
" 50, Repairs to meters	172,925.52		1.30	
" 51, Repairs to buildings	15,116.68		0.11	
" 52, Repairs to tools and instruments	15,610.59		0.11	
		$1,191,176 04	—	8.95
" 47, Repairs to gas stoves (rents)		66,368.25	....	0.50
		$1,124,807.79	....	8.45
" 56, Profit and loss adjustment		29,683.92	....	0.22
		$1,095,123.87	....	8.23

General expense:

Item 62, Real estate rents	$5,265.83		0.04	
" 66, Taxes	746,080.11		5.61	
		$751,345.94	—	5.65

Management charges, law, etc.:

Item 55, Bad and doubtful debts	$82,995.11		0.63	
" 67, Contingent expense	194,666 87		1.45	
" 58, Expense, Gen'l Office	339,999.51		2.56	
" 59, Vacations and Sickness	8,175.20		0.06	
" 60, Automobiles	5,064.16		0.04	
" 61, Advertising and legal	105,800.02		0.80	
" 63, Gas Co.'s Mutual Aid Soc'ty	6,413.99		0 05	
" 64, Superannuation	14,943.86		0.11	
" 65, Insurance	54,031.83		0.41	
		$812,090.55	—	6.11

2340 WILLIAM D. MARKS resumed.

Direct examination continued by Mr. BURR:

Q. Doctor, was the method which you adopted to ascertain the true cost of gas from the figures in evidence here based on Field's Analysis?

A. It was.

Q. What is Fields' Analysis?

A. Fields' Analysis is a compendium of the results published yearly in England giving the cost of gas made in the various gas works throughout England, in conventional form.

Q. Is it a standard form?

A. A standard form, and is used for comparing the results of the various gas works throughout England, Ireland and Scotland.

Q. Have you Field's Analysis of the accounts of the gas companies in England, Ireland and Scotland for the year 1905?

A. I have. It is in your hands.

Q. And was your analysis of the accounts of the Consolidated Gas Company based upon that method pursued in the Fields' Analysis?

A. It was.

Mr. **Burr**: I offer in it evidence.

Mr. **Mathewson**: I object to that book going in evidence. I do not see how it is material or relevant. He stated he followed the methods there, and if we find he did not——

Mr. **Burr**: It is a standard method.

The **Master**: He testifies it is a standard and proper method, and unless it is contradicted it stands, and it is not necessary to put the book in evidence.

Mr. **Burr**: I will not burden the record with that book, if that is the understanding.

The **Master**: Well, I would not take it.

2341 Q. Have you made an investigation of the actual structural cost of the stations of the Consolidated Gas Company?

A. So far as it has been permitted, I have made approximate estimates based upon comparisons with the actual structural cost of gas works in Massachusetts and upon their outputs and capacities.

Q. As you have testified, it is impossible without an inventory going into detail and involving a personal examination to give the actual structural cost?

A. In individual instances it cannot be given with great precision without a personal examination and a careful inventory.

Q. But are there, as the result of experience and to your knowledge, certain precedents and constants of construction and of capacity of gas works which are recognized among engineers as sufficiently approximate to afford a safe estimate of the actual structural cost of proposed or existing gas works?

A. There are, and they have been used in this investigation.

Q. And is it customary to use these constants of costs and capacity for the purpose of checking precise inventories of gas works?

A. In order to avoid the possibility——

Q. Well, is it?

A. It is.

Q. You may continue about that.

A. In order to avoid the possibility of large errors or to check unusual constructions, a competent engineer would not regard an inventory as complete unless it had been carefully checked from precedents already in existence and of a somewhat similar character, if such a thing were possible.

Mr. **Burr**: I offer in evidence Mr. Yalden's report attached to the report of the Senate Committee of Investigation of Lighting Companies in the City of New York, March 1st, 1886. 2342

Mr. **Mathewson**: Senate Document 47?

Mr. **Burr**: Senate Document 47.

Mr. **Mathewson**: I object on the same grounds that I objected to the offering of page 776, which was part of Mr. Yalden's report; that it is incompetent, and, furthermore, that it is immaterial, in view of the terms of the statute under which the complaint was formed.

The **Master**: I will take it.

Exception.

Received in evidence and marked City's Exhibit 48.

Mr. **Burr**: I meant the report and the tables attached to City's Exhibit 48 of October 2nd, 1906, embracing from page 635 to and including page 781.

The **Master**: Exactly what is that? Is it an accountant's report attached as a schedule to a report of a Senate Committee?

Mr. **Burr**: Yes.

Mr. **Mathewson**: That includes City's Exhibit 31, already offered on page 776 of this Exhibit 48 to-day.

Q. Now, you have familiarized yourself, Doctor, have you not, with the consolidation of the companies in November, 1884?

A. I have. I have made a very careful study of the records and reports upon that consolidation.

By Mr. **Mathewson**:

Q. Won't you specify what records and reports?

A. The report, Senate Document of 1885, and also Senate Document 47 of 1886.

2343 By Mr. **Burr**:

Q. What did you find was the method of consolidation adopted by the six companies in 1884?

Mr. **Mathewson**: Objected to, the witness being incompetent to state. It is already fully in evidence, covering the method pursued.

Mr. **Burr**: Well, he is going to base—— It won't take more than ten lines.

The **Master**: But it is all in evidence as to how it was done.

Q. In 1884, is it not a fact that the six companies which had been operating under the pooling agreement fixing the price of gas to the inhabitants of the Borough of Manhattan, consolidated as one company under the statute of 1884?

Mr. **Mathewson**: Objected to as improper in form, and the witness is incompetent to answer. There has been no testimony about a pooling arrangement. I do not suppose Professor Marks was connected with the companies or has any knowledge on that point. It is in evidence six companies consolidated.

The **Master**: If it does not appear here already in evidence it must be susceptible of better proof than this, Mr. Burr. I will sustain that objection.

Mr. **Burr**: I offer in evidence pages 782 and 783 of Senate Document No. 47, being the pooling agreement and apportionment tables attached to the report of the Senate Committee.

Mr. **Mathewson**: Objected to as incompetent, irrelevant and immaterial. I cannot see how it affects the issues in this case at all. It does not make their property more or less valuable.

2344 The MASTER: I will take it.
Exception.

Received in evidence and marked City's Exhibit 49.

Q. Is it not a fact, or is it the fact, that by reason of the consolidation that the actual and true structural cost of the companies was hidden through the capitalization which resulted from the consolidation of the companies?

Objected to as purely a conclusion and as something which, if it is of any value at all, should be drawn by the Referee or Court and not by this witness; furthermore, that the witness is incompetent.

Mr. BURR: Well, the Referee can learn it in two words here and we can go on with the testimony without pausing here to——

The MASTER: Do you not think we had better get in the facts on which that conclusion is based? I might possibly draw the same conclusion as the witness. The witness might think something was concealed and say so, and somebody else looking at the facts might not think that something was concealed and say so.

Mr. BURR: I want to get the facts on which he bases the conclusion, if that is his conclusion.

The MASTER: Your question rather called for a conclusion.

Mr. BURR: Because I thought he objected to giving the facts.

Mr. MATHEWSON: Your facts are admitted, so far as you have offered them.

The MASTER: You can show, and I think it has already been shown, what the capitalization was of all those constituent
2345 companies and what the capitalization of the new company was, and you can produce the figures if you like of the structural value of the plants and then it would be open to the Court to draw a conclusion based on those facts, as to whether there was any concealment or shuffling around of capitalization.

Q. You have examined the report of the Committee of 1886 and you have also examined the report of the accountant employed by that Committee, Mr. Yalden?

A. I have.

Q. And you are familiar with the facts and figures brought out by Mr. Yalden in his report and his schedules annexed to his reports?

A. I am.

Q. And as a result of the examination of Mr. Yalden's account, which is now in evidence here, what do you find was the situation in 1884 when this consolidation took place, as to whether there was anything sold by the constituent companies to the Consolidated, or whether it was merely an aggregation of these companies coming together and changing their name to the Consolidated Gas Company?

Mr. MATHEWSON: I object to that, on several grounds. In the first place, he has asked what these reports show. The reports show what they show. His testimony cannot make it any more or less emphatic. In the second place, the testimony sought is purely a conclusion, and you might call a witness to say that some other conclusion was correct, neither one of which would be of any value as against the language of the documents themselves. It seems to me we are going very far afield and opening a wide field if we are going into these things—conclusions of witnesses.

The **Master**: It seems to me there is considerable force in that, Mr. Burr.

2346 Mr. **Burr**: I simply desired to show now by this witness what I think will not be denied by Mr. Mathewson or by anybody, that these companies simply changed their name, that is all, by adopting a partnership name called the Consolidated Gas Company.

The **Master**: Isn't that a matter for you to argue if you choose in your brief at the proper time from these facts now in evidence? How does it add any strength to it to have one witness or another say what he admits to be shown by those figures?

Mr. **Burr**: I am simply trying to have him tell you what he finds existed at the time with regard to the structural value, and in the absence of such an investigation as he has been able to have had he can deduce from that——

The **Master**: He can comment on these facts in this report in evidence from which conclusions such as you want might be drawn possibly, but beyond that I do not think he ought to go. Your question is pretty broad.

Mr. **Mathewson**: We consolidated under the statute of 1884 expressly authorizing such consolidation of such companies, and whether the effect of the statute was to change the name of the company, or whether it formed a new corporation, it seems to me is not for this witness to say.

The **Master**: I will sustain the objection. I think the question is objectionable.

Mr. **Burr**: You may answer.

A. From my investigations, so far as the stockholders were concerned, nothing was sold and nothing was paid for in money. The stockholders of the six companies received in exchange for their stocks certificates in these companies, an average of about 2347 what was twice their face value in the stock of the Consolidated Gas Company.

Q. And was the capitalization increased?

A. The capital stock of the six companies was $17,000,000. It was increased in the Consolidated Company to $39,078,000.

Q. Was that from your opinion or investigation a fictitious capitalization?

Objected to.

Objection sustained.

Exception.

The **Master**: You can answer it.

A. It was a fictitious capitalization to a very large amount.

Q. And to that extent is it your opinion that the actual structural cost of the gas plants of the Consolidated Gas Company was concealed—the true structural cost?

Mr. Mathewson: I make the same objection, that it is a conclusion and as incompetent.

Objection sustained.

Exception.

A. The actual structural cost of the six companies was concealed by the opening of the new books of the Consolidated Gas Company with very large increased values to correspond with that increased capitalization.

Q. Have you sought to ascertain with some approximation the probable structural cost of the gas works of the Consolidated Gas Company?

A. I have.

Q. Will you state what methods you pursued in such endeavor?

Mr. Mathewson: I object on the ground that this witness
2348 has not been shown to possess knowledge or to be competent
to testify as an expert on the cost of gas plants.

The Master: He may state what method he pursued.

Exception.

A. I have been obliged to take the figures as to the output or gas sales of the Consolidated Gas Company and having those figures to endeavor to obtain the actual constructural cost by careful comparison with the carefully kept figures of Massachusetts Gas Companies and the relation which existed between their structural cost and their gas sales.

Q. And will you tell us the result of such investigation by you?

Mr. Mathewson: I make the same objection.

The Master: When you say the result, you mean what is the structural cost of those plants as arrived at by him by the application of this method?

Mr. Burr: Yes.

Objection overruled.

Exception.

A. In order to learn the sum approximately of the probable structural cost of gas works it would be necessary to refer to the report of the Massachusetts Gas and Electric Light Commissioners for the calendar year 1905. On page 26, Appendix, we find the statement of assets of the Cambridge Gaslight Company as follows:

Real Estate	$321,737.21
Machinery and Manufacturing Appliances	472,589.58
Street Mains	461,269.43
Meters	50,000.00
Works in Process	263,394.14
Total Structural Assets	$1,568,990.36

2349 On page 114 the daily capacity is shown to be 4,000,000,
c. f., making an average cost per thousand c. f. of daily capacity of $392.25. The gross output of these works December 24, 1905, was 2,125,000 c. f. The annual output of these works is

439,162,251 c. f., or dividing this by 365 gives an average daily sales of 1,203,184 c. f. The water gas used as ordinary coal gas, 140,300,000 c. f. for the year. The population supplied was 97,434 in 1905. It is customary to divide the structural cost of daily output by 200 to obtain the required structural cost of the annual thousand feet sold, which in this case is $1.96.

Referring to the Fall River Gas Works, page 51 appendix of same report, we have:

Real Estate	$215,006.46
Machinery and Manufacturing Appliances	385,952.43
Street Mains	337,789.86
Meters	58,704.83
Office Furniture	2,648.18
Total Structural Assets	$1,000,101.76

By Mr. MATHEWSON:

Q. Is that the total structural assets or cost?
A. Yes.
Q. Which?
A. Both.
Q. Which is carried out in the report?
A. As assets.

The daily capacity of works is 2,500,000 c. f., making an average cost of a thousand c. f. of daily capacity $400. The gross output of these works December 24, 1905, was 1,509,000 c. f. The annual output of these works is 321,119,341 c. f., or dividing by 365 gives us a daily average sale of 879,779 c. f. No coal gas was used. The total manufactured being water gas. The population supplied
2350 was 105,762 in 1905. The structural costs required per annual thousand feet is $2.00.

Referring to the Lowell Gas Works, Page 80, Appendix of same Report, we have:

Real Estate	$804,741.08
Machinery and Manufacturing Appliances, Street Mains and Meters	620,619.12
Total Structural Assets	$1,425,360.20

The daily capacity of works is 4,400,000 c. f., making the cost per thousand c. f. of daily capacity of $323.95. The gross output of these works December 28, 1905, was 2,234,000 c. f. The annual output of these works was 482,088,600 c. f. Dividing this by 365 gives a daily average sale of 1,320,791 c. f. Of the gas made 235,271 c. f. was low carbureted water gas and the remainder was coal gas. The population supplied was 94,889 in 1905. The required structural cost per annual thousand c. f. is $1.62.

By Mr. MATHEWSON:

Q. Per thousand cubic feet of what? I don't understand.
A. Annual sales.

Q. Per thousand cubic feet of annual sales?

A. Yes.

Q. Not of capacity?

A. Of capacity. I beg your pardon.

Referring to the Worcester Gas Works, page 151, Appendix of same report, we have:

Real Estate	$536,477.34
Machinery and Manufacturing Appliances	626,399.51
Street Mains	114,278.44
Meters	19,415.75
Total Structural Assets	$1,296,571.04

2351 The daily capacity of works is 4,200,000 c. f., making an average cost per thousand cubic feet of daily capacity of $308.69. The gross output of these works December 24, 1905, was 20,196,000 c. f. The annual output of these works was 410,641,700 c. f., or dividing by 365, gives a daily average sales of 1,125,046 c. f. Of the gas made 226,400,000 c. f. were low carburated water gas. The remainder was coal gas. The population supplied was 128,136 in 1905. The structural cost per annual thousand cubic feet capacity is $1.54.

It is of interest to note on page 117 of the Mass. report of 1905 that the total sales of coal gas in the State of Mass. for 1905 was 10,410,347,847 c. f. as against 13,283,163,767 c. f., in the island of Manhattan sold by the Consolidated Gas Company.

Tabulating these results we have:

Name of city.	Population served in 1905.	Total annual gas sales, c. f.	Structural assets.	Daily capacity, c. f.
Cambridge	97,434	439,162,251	$1,568,990.36	4,000,000
Fall River	105,762	321,119,341	1,000,101.76	2,500,000
Lowell	94,889	482,088,600	1,425,360.20	4,400,000
Worcester	128,135	410,641,700	1,296,571.04	4,200,000
Totals	426,220	1,653,011,392	$5,291,023.36	15,100,000
Average	106,555	413,262,973	$1,322,755.84	3,775,000

Cost per M daily capacity.	Greatest output, c. f.	Average daily sales, c. f.	Structural cost annual M. Divisor 200.	Structural cost annual M sales. Divisor 111.3.
$392.25	2,125,000	1,203,184	$1.96	
400.00	1,509,000	879,779	2.00	$5,291,023.36
323.95	2,234,000	1,320,791	1.62	1,653,012 M.
308.69	2,019,000	1,125,046	1.54	
$1,424.89	7,887,000	4,528,800	$7.12	
$356.22	1,971,750	1,132,200	$1.78	$3.20

2352 By Mr. Mathewson:

Q. If you will permit me to ask, do I understand by this that the assets represent $3.20 for each thousand of annual sales?

A. Structural assets, yes.

Q. And your average is obtained by dividing by four in each case, the total?

A. Yes.

By Mr. Burr:

Q. By using the divisor 200, what do you obtain?

A. In the above calculation, by using the divisor 200 we obtain $1.78 structural cost for annual thousand c. f. capacity, and using the actual sales we obtain $3.20 structural cost per M annual c. f. of sales, the divisor being 111.3. It is obvious if these works were run to their full capacity under the ordinary method of engineering that the structural cost obtained by a competent engineer would be $1.78, and also that the cause of the abundance of precaution used in establishing these works that a useless expenditure has been made of $1.42 per annual M c. f. of capacity. It will be observed that the greatest daily output, 7,887,000 c. f., is 1.74 times the average daily sales of 4,528,800. Further it will be observed that if we divide the daily capacity 15,100,000 c. f. by the greatest output, 7,887,000 c. f., we obtain 1.91, showing that the promoters of these works had over-estimated the greatest output of these works by 91 per cent. for 1905. Possibly they have intended to build their works so as to provide for the growth of population and the sales of gas for many years after 1905.

Q. Applying the result of your investigation into these companies to Exhibit 94, in this case what do you find?

A. Referring to Exhibit 94 we find gas sold and also made at the Consolidated Gas Company's stations 10,419,461,000 c. f.
2353 Referring to Chief Engineer Bradley's first affidavit, page 35, we find that he gives the capacity of the Consolidated Gas Company's plants at 51,000,000 c. f. per day. If we divide the first figure by the last we obtain a factor of capacity of 204, which proves that the present stations of the Consolidated Gas Company are run slightly beyond their average of standard capacity, as reckoned by Chief Engineer Bradley with a capacity factor of 200. This 200 has been used in the case of the Massachusetts Gas Companies and, therefore, the actual structural cost per annual thousand sold should be in the neighborhood or less than 1.78 for the existing works of the Consolidated Gas Company. If we multiply 10,419,461,000 by $1.78 we obtain $18,546,640.58 as the true and approximate structural cost of the Consolidated Gas Company's existing stations. Referring now to the gas made by other companies and sold by the Consolidated Gas Company, Exhibit 94, 2,863,702,000 c. f. and multiplying this by $1.78, we obtain $5,097,389.56, which is an amount justifiably invested in other stations and in the mains, service pipes and meters for distribution. Adding these two together, we obtain Consolidated Gas Company's Stations, $18,546,640.58.

Other investments in stations....................	$5,097,389.56
Or a total of....................................	23,644,030.14

This is the fixed or structural investment which can approximately be claimed on the basis of the Mass. State's precedents for fixed or structural cost of the main and subsidiary plants controlled or acquired by the Consolidated Gas Company, which is to-day using a capacity factor of 204 which is slightly in excess of the standard capacity of 200. It is obvious that the above reasoning is based on the fact that if the plants of the Mass. Gas Company had been employed to their full annual capacity as is at present the 2354 case of the Consolidated Gas Company the proper actual structural cost would be $1.78 per annual M and the cost of the entire works required by the Consolidated Gas Company, from real estate through all details to meters, would be about $23,644,030.14.

Q. Now in addition to the fixed or structural assets of a company is a certain amount of capital required for operating the works?

A. There is.

Q. And does that bear a certain relation to the annual sales of gas?

A. It has been stated to bear a certain relation to the annual sales of gas and it will therefore be necessary to learn from these Massachusetts companies the amount of capital per annual M. furnished by the stockholders and the amount ordinarily borrowed on short term notes or furnished in the form of consumers' deposits or unpaid bills.

Referring to Massachusetts Gas and Electric Light Commission's report for the calendar year 1905, we find the total assets of the four Massachusetts companies as follows:

Cambridge Gas Company	$1,742,581.88
Fall River Gas Company	1,228,760.41
Lowell Gas Company	1,732,486.24
Worcester Gas Company	1,439,444.77
Total	$6,143,273.30
Substracting fixed or structural assets	5,291,026.36
We have a Working Capital of	$852,246.94

Part of this Working Capital is obtained in the form of Consumers' Deposits, and part on short term notes and unpaid bills, as follows:

2355 Cambridge Gas Company—Consumers' Deposits	$11,415.00	
Cambridge Gas Company—Notes Payable	225,000.00	
		$236,415.00
Fall River Gas Company—Consumers' Deposits	$429.85*	
Fall River Gas Company—Unpaid Bills	13,580.92	
Fall River Gas Company—Notes Payable	180,000.00	
		194,010.77

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* See correction on page 2562 $2,193 and Consumers' Deposits changed to "Interest accrued but not due."

Lowell Gas Company—Consumers' Deposits	$2,832.51	
Lowell Gas Company—Notes Payable	75,000.00	
Lowell Gas Company—Unpaid Bills	8,670.38	
		$86,502.89
Worcester Gas Company—Consumers' Deposits	$25,237.00	
Worcester Gas Company—Notes Payable	95,000.00	
		120,237.00
		$637,165.66

If we subtract the total of these floating liabilities, $637,165.66 from Working Capital, $852,249.94, we obtain $215,084.28, being the active capital furnished by the stockholders for the ordinary needs of the gas business. If we divide this amount by the total annual sales of 1,653,012,000 c. f. we obtain $0.13 per annual M. sold as the amount of capital actually and practically necessary on the part of these Massachusetts companies. If we multiply 2356 13,283,164,000 c. f. in Exhibit 94 by this, we obtain the proper allotment of active capital furnished by the stockholders of the Consolidated Gas Company from Massachusetts precedents, which is $1,726,811.32. These figures would appear to prove that the required and practical investment of the Consolidated Gas Company, provided it had built its gas works with the skill and prudence of Massachusetts engineers and managed its working capital by methods actually in existence in Massachusetts to-day would be as follows:

Fixed or Structural Assets	$23,644,030.14
Active Capital Furnished, or Quick Assets	1,726,811.32
Total Required	$25,370,841.46

Q. How close does that corroborate your former statement?

A. This figure closely corroborates my statement in my first affidavit, page 41, cost of property, $25,000,000. That is quite as closely as could be expected. Or the same affidavit, page 57, the entire cost of plants, $26,600,000. It would appear from the results obtained in Massachusetts as also from the deductions of the three commissions which have already——

Mr. Mathewson: Now——

Q. Never mind, leave that out. Now, do these four Massachusetts companies form a group resembling in any manner the group of Consolidated Gas Company's stations in the Island of Manhattan?

A. These four companies were selected because they formed a group resembling very closely the five stations in the Island of Manhattan, differing, however, in the fact that they were not driven to their utmost capacity, as Chief Engineer Bradley states. May I ask, Mr. Burr, in connection with the figure which I have just 2357 referred to of $25,370,841.46, that in referring to my other figures of $25,000,000 and of $26,600,000 that I did it for the purpose of stating frankly that in averages of this sort it is necessary to allow a *liability** one way or another which sometimes may reach five, six and even ten per cent. above or below under conditions of this sort, and that my object in mentioning the $25,000,000 and the $26,600,000 in addition to this figure was to state clearly in advance that such variations and percentages are acknowledged as being right and often used by engineers.

Q. Now the Massachusetts stations have smaller sales of gas, have they not?

A. They have smaller sales of gas than the New York Companies, but they are engaged, as is the Consolidated Gas Company, in making ordinary coal gas and low carbureted water gas, requiring for this purpose like apparatus. Their actual structural cost per annual M. c. f. of capacity or of sales of gas, referring to the Massachusetts companies, will somewhat exceed the structural cost of the New York companies, even though driven to the same limit as are the Manhattan stations. Particularly in the matter of mains for gas distribution is the Consolidated Gas Company of New York favored by conditions and the cost of these mains of large diameter and delivering vast quantities of gas per annual thousand feet of sales should be very much less per M. c. f. than is the case in the Massachusetts gas companies. In the matter of the original cost of the real estate and apparatus, I mean the first cost of the real estate, the money that was paid for it by the original six companies, there would appear to be very little difference indeed.

Q. With the exception of the holders?

2358 A. With the exception of the holders. In the matter of the holders, the rapid decrease in cost of holders per thousand cubic feet of capacity as their size has increased, gives the New York companies very decided advantages over the Massachusetts companies. We are justified in inferring, therefore, that in deducing the correct cost approximately of the Consolidated Gas Company's and subsidiary companies' investments, that we have not underestimated the investment required in New York City for actual structural cost.

Mr. **Burr**: May we suspend now and reassemble at two o'clock?

Recess until Two P. M.

After Recess.

William D. Marks resumes the stand.

Direct examination (continued):

By Mr. **Burr**:

Q. Doctor, have you finished as to the structural cost?

A. Before ending up with the structural cost based upon the Massachusetts estimate, I would like to say that my estimate of $25,370,000 and my estimate of $26,600,000 are estimates, and making all possible allowances for differences in the locality and also for the difference between the gas made and the gas sold, I am positively of the opinion that the actual structural cost of the works of the Consolidated Gas Company is less than the twenty-nine to thirty millions fixed by the Gas and Electricity Commission of New York State.

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*Variation; see correction on page 2561.

2359 Q. Now, we will take up the real estate account so far as it has been presented here. Have you made an examination of the statements and have you heard the testimony or read the testimony which has been given here with regard to the real estate of the Consolidated Gas Company?

A. I have.

Q. Will you state what conclusion you came to from such examination as to the value of the real estate.

Mr. **Mathewson**: I object to this, Mr. Master. The witness clearly has not been qualified as a real estate expert, he is incompetent to testify, not qualified to give an opinion.

The **Master**: The question seems a little bit wide open, Mr. Burr, does it not?

Mr. **Burr**: He is not testifying as a real estate expert, but he is testifying as to what, by a proper arrangement of the accounts that have been presented here, in his opinion as a gas expert, fully familiar with the works and the operation of the company and the testimony that has been given, the real cost still continues to be of the real estate.

The **Master**: If you want to show by him that any part of that real estate is not desirably situated or not advantageously situated for the purposes of use in a gas plant, or that it is wastefully employed or anything of that kind, why that is right enough; you can ask him that; but to ask him if he has heard the testimony of the real estate experts as to the value of this property and ask him what conclusion he came to, without showing that he has any knowledge of real estate values, that is going pretty far.

2360 Mr. **Burr**: I am not asking him to testify to the value of the real estate, but I am asking him whether he has examined the real estate account as presented here.

The **Master**: There is nothing to show here that his conclusion is of any importance on the subject one way or the other. That is the difficulty with your question.

Mr. **Burr**: There are certain exhibits here which he has studied and he has arrived at certain conclusions from those exhibits. Now I think he is entitled to express the conclusion he has arrived at from the study of those exhibits.

The **Master**: Not unless you point out in what respect his conclusion is material or relevant.

Q. State's Exhibit S., page 728 C., give the real estate as $10,929,918.28. I call your attention, doctor, in that connection to the exhibit——

A. I have it. Balance sheet December 31, 1905.

Q. What is the real estate given there as?

A. Real estate $10,879,329.63; real estate M. $50,588.65. Total $10,929,918.28.

Q. Now, referring to that, I call your attention to City's Exhibit 48, Senate Document 47, 1886, page 779. What do you find to be the valuation given by Mr. Yalden, the accountant, of the real estate on the books of the Consolidated Gas Company?

Mr. **Mathewson**: I think I shall have to object. I do not see that it makes any difference what the witness finds in that exhibit to be stated. It obviously cannot be followed up by any testimony of the witness as to the valuations, and whatever appears does appear.

Mr. **Burr**: Well he is going to arrive at a conclusion and I think I am entitled to have spread on the record just what methods 2361 he has resorted to to arrive at his conclusion. His statement appearing offered here that such a value is placed upon the real estate for the year 1905 he takes the valuation of the same real estate that is fixed in 1884. Naturally it may have increased or it may have diminished. Now he reasons from that to a certain other conclusion and he reasons from the fact that part of that real estate that was originally the property of the Consolidated Gas Company appraised by Mr. Yalden at a certain figure has been taken by the City and paid for, which would naturally leave a certain other figure as the real estate remaining, and upon that he arrives at his conclusion as to what effect that has upon the price of the production of gas and the propriety of the charge made by the Consolidated Gas Company based upon the value of their real estate as given here.

The **Master**: What I do not understand is why that all is not a matter of argument and a matter of brief making. Why is it necessary to call a witness and put him on the stand and ask him what he thinks about it? You have got the facts here. You have got the Yalden report here. If the point is one in which the peculiar knowledge and experience of the witness as an expert in the gas business comes into question that is one thing. Then I think you are probably quite right.

Mr. **Burr**: I want to ask as to the structural value of this real estate and that is in line with his previous testimony.

The **Master**: I am not disposed to limit you at all, and I do not want to encourage any making of technical objections, although some of these questions are very objectionable, no doubt, as 2362 far as the point of view of the laws of evidence is concerned. I do not want to cut you off, but at the same time it seems to me that this is getting a little beyond the ordinary line. I am perfectly willing and I think it is right that you should bring out here whatever you want to [illegible] the way of showing Dr. Marks' criticisms from the standpoint of a gas expert on the methods according to which the other side have made up their estimates of cost. Now if you can point out by some question here what the point is that you want to bring out here regarding these real estate values so as to bring it within that rule, I do not think there would be any objection. If so, I should overrule it.

Mr. Burr: I will ask the one question and then leave it to them to cross-examine.

Q. From your examination of the real estate accounts or data, so far as they have been presented or supplied by the Consolidated Gas Company, what do you find to be the approximate constructural cost of the real estate remaining in use by the Consolidated Gas Company?

Mr. **Mathewson**: Objected to, for the same reasons. He confessedly is proceeding upon an exhibit which has been offered in evidence and which states whatever it does state, and the witness is not shown to be qualified to draw any conclusions as to the value himself.

The **Master**: It is apparent from that question that it must argue out some sort of theory based on these facts. I will let him answer it.

Mr. **Mathewson**: Exception.

2363 A. I find by a careful examination of the transcript furnished by the Consolidated Gas Company, and also of the accounts of J. Yalden of the individual companies, that the actual structural cost of the real estate remaining in active use for the purpose of gas making of the Consolidated Gas Company amounts to approximately $3,068,140.51.

Mr. **Mathewson**: I move to strike that out, Mr. Master, as a statement of opinion by this witness upon a subject respecting which he is incompetent to testify, not qualified in any sense. We might as well put on any one of our officers who had more experience in the gas business than this witness to testify as to the value of real estate. I do not know where we will come out if we are going to do that.

The **Master**: I will let it stand.

Mr. **Mathewson**: Exception.

Mr. **Burr**: We have made demand for that account and our demand was not complied with. We are doing the best we can with the material you supplied.

Q. Is that after you have made allowances for the pieces of property which have been sold or condemned by the city or are in process of being condemned and taken by the city?

A. It is after making allowance of the property sold or abandoned by the Consolidated Gas Company.

Q. What do you find the total of such property to be?

A. About $1,985,874.34. In round figures two million dollars.

Q. Give the details of that amount or that total.

2364 A. Little Italy Park, 111th and 112th Street, Harlem	$365,000.00
Purchased by New Amsterdam Co., (Exhibit 48) ...	180,000.00
Condemned by City, Bulkheads 21st and 22nd Street.	247,858.00
Abandoned Because of Condemnation Proceedings by City, Bulkheads 16th, 17th and 18th Street......	317,100.00
Land, 18th St. Station, Parcel 4, Exhibit 48 and 49, Valuation, City Expert......................	875,916.37
Purchased by Standard Gas Light Co., Exhibit 48, Price Not Given..........................	
Total	$1,985,874.37

Q. That does not include the piece of property purchased by the Standard Gas Light Company, Exhibit 48, on which the price is not given?

A. It does not, nor does it include the piece of land purchased of John D. Crimmins.

Q. The total of real estate, bulkheads and office buildings as appearing in the account of Mr. Yalden on page 779 (1401 in Exhibits) of City's Exhibit 49, appears to be:

Real Estate	$8,617,000.00
Bulkhead Piers and Water Rights	1,390,000.00
Office Buildings	325,000.00
Total	$10,332,000.00

And at page 674 (1272 in Exhibits) the value of the same real estate belonging to the various companies consolidated appears to be given as follows:

2365 Page 674, Manhattan Gas Light Company	$930,872.45
Page 712, New York Gas Light Company. Exhibits P. 1334	1,957,000.00
Page 734, Metropolitan Gas Light Company. Exhibits P. 1356	1,445,779.79
Page 748, Municipal and Knickerbocker Companies. Exhibits P. 1360	561,462.83
Page 760, Harlem Gas Light Company	158,899.81
Total	$5,054,014.88

Do you deduct the total of the property condemned and sold, $1,985,874.37, from the $5,054,014.88?

A. I do.

Q. And you then obtain the $3,068,140.51, as appears?

A. I do.

Q. (Continuing:) In the account of Yalden to have been the original cost to these companies of such real estate?

A. As taken from the books of the original six companies.

Q. Now, will you take up plants, tanks and holders, foundations and damages as they are given on State's Exhibit 8?

A. It is given as $16,175,382.67.

Q. Referring again to City's Exhibit 48 of this date, I find on page 674 of Mr. Yalden's report:

Page 674, Manhattan Gas Light Co., Manufacturing, Building	$447,819.00
Page 674, Manhattan Gas Light Co., Apparatus	1,890,810.82
Total	$2,338,629.82
Page 712, New York Gas Light Co., Works and Apparatus	2,893,767.35
Page 734 (see page 847), Metropolitan Gas Light Co., Construction	2,608,195.64

Page 748, Municipal and Knickerbocker Co.'s Gas Works	$2,327,330.32
Page 750, Harlem Gas Light Co., Buildings in Construction	569,495.57
Total	$10,737,418.70

2366 Q. Now, referring to Complainant's Exhibit 89, page 371, what is the statement made in that exhibit as to the increase in the real estate, plant, property and construction since 1884?

A. Complainant's Exhibit 89, comparative condensed balance sheet, real estate, plant, property and construction, variations, meaning by that increase, $9,693,565.90.

Mr. MATHEWSON: Beginning from what time.

The WITNESS: From November 11th, 1884, to October 31st, 1905.

Q. And is the increase in the value of the real estate stated by the books, given?

A. The increase in the value of the real estate stated by the books——

Q. What books?

A. Of the Consolidated Gas Company is $597,918.28.

Q. Making a total of what amount?

A. Which leaves according to accounts $9,095,647.62 for additions exclusive of real estate applied upon plant, property and construction.

Q. Now, will you refer to Exhibit 81, at page 350?

A. Exhibit 81, October 31st, 1905—shall I give the figures?

Q. Yes.

A.—

Mains	$7,852,151.03
Services	1,212,071.09
Meters	3,802,544.50
Total	$12,866,766.62

Q. What do you find the same items appraised at in Exhibit 48 of the City?

Mr. MATHEWSON: They were not appraised.

Mr. BURR: Well, stated to be.

Mr. MATHEWSON: They were what they stood on the books of the original companies, according to the testimony.

2367 A. In Senate Document 47, page 652:

Mains	$5,217,000.00
Services	1,005,000.00
Meters	1,195,000.00
Total	$7,417,000.00

Q. A difference in the increase then claimed by the Consolidated Gas Company of $5,449,766.62?

A. This being the difference between those two totals.

Q. If you subtract that amount of $5,449,766.62 from the amount of $9,095,647.62 what do you obtain?

A. $3,645,881, and that is a residue which is claimed to have been applied upon the manufacturing plants and holders.

Q. Making a total of how much?

A. Making a total of $14,385,299.70 as against $16,175,382.67.

Q. For what?

A. For the value of the manufacturing plant and holders.

Q. Now I refer you to the testimony of Mr. Mayer as it appears at page 1381 regarding the value of the abandoned plant at 18th Street. It is stated by him to be $1,508,035.00. As you have stated it, it appears to be $569,495.57, as the value in 1884 of the abandoned plant, 112th Street, Harlem, of which the holder now remains?

A. That is correct.

Q. What do you find the total to be?

A. The total property abandoned, that is, out of active use, amounts to $2,077,530.57.

Mr. **Mathewson**: What kind of property?

The **Witness**: The abandoned plant at 18th Street and the abandoned plant at 112th Street, Harlem.

Q. Now, if you deduct that from the $14,385,299.70, what do you find to be the remainder?

2368 A. It leaves $12,307,769.13 for the value of the actually operating and going manufacturing plants and holders of the Consolidated Gas Company.

Q. Calling your attention to the testimony of Mr. Simpson regarding the mains, do you find any discrepancy between the number of miles in use and the amount previously stated as being operated by the Consolidated Gas Company?

A. It would also appear from the testimony of Mr. Simpson that instead of 822 miles of active mains there are 795 miles, a difference of 27 miles of mains, of sizes which have not been specified by him.

Q. Well, what have you to say with regard to that, the subject of mains?

(Witness produces chart.)

Q. You produce a chart, Doctor. Does that show the estimated cost of laying gas mains in 1905 of all sizes and descriptions as stated to be in use by the Consolidated Gas Company in that year?

A. It is the estimated cost of laying mains during the year 1905, and is the result of the accumulation of a very large amount of data at various times and finally putting it in the form of a chart which enables us to immediately learn the cost of any size of main under any pavement that is in ordinary use per lineal foot laid with the surface restored. It has been used and checked in a good many different ways by a good many different authorities.

Mr. **Mathewson**: Well, they are not here, the authorities are not here, except you, Professor.

Q. Well, will you explain a little further what this shows, more in detail?

A. For instance, beginning at the bottom the prices of 10 cents, 30 cents, 50 cents and 90 cents up to $1.00 are laid off in the first half and the prices from $1.00 on to $25.00 are laid off in
2369 the second half or right hand side; the sizes of the various mains placed under consideration, that is to say their diameter in inches, is laid off vertically beginning with the 2 inch and running through as far as a 60 inch diameter main. The method of using it is to select the size of main as for instance a 36 inch main and tracing the horizontal line from 36 inches across, find out the cost per lineal foot where it intersects the heavy lines or curves shown. As for instance, the cost per foot of straight pipe not laid of 40 inches diameter, is $6.48; the cost of the same pipe per foot in streets with macadam tops laid and restored is $9.65 and so on through.

Mr. Mathewson: What is the $9.65?

The Witness: Beginning at 36, and then off horizontally, $9.65 for a 40 inch pipe per lineal foot laid. This chart has been used in computing the lengths and sizes of pipes put down as stated by Mr. Simpson and his statement checks out to within a very small percentage as being as near as an engineer can come to being entirely correct provided the lengths and sizes given are correct.

Q. As given by Mr. Simpson?

A. Yes.

Mr. Burr: I offer it in evidence.

Mr. Mathewson: Then this corroborates him instead of contradicting him, so far as it goes?

The Witness: Mr. Simpson's statements are correct so far as the lengths and diameters put down are given.

Mr. Mathewson: I should like to ask the witness one or two questions before the chart is received in evidence.

Mr. Burr: I have no objection.

2370 By Mr. Mathewson:

Q. Have you ever laid any mains in the City of New York?

A. I have not.

Q. Where have you ever laid mains?

A. In St. Louis.

Q. How long ago?

A. Some thirty years ago.

Q. Have you laid any since anywhere?

A. In Durham some two years ago.

Q. Durham, North Carolina?

A. Durham, North Carolina, some two years ago.

Q. Were there asphalt streets there?

A. No. And in Fostoria, Ohio.

Q. How long ago,

A. Four or five years ago.

Q. Did you yourself lay them or were you the superintendent of the laying at that time in Fostoria?

A. I did pretty nearly everything but dig the ditch and caulk the pipes.

Q. Did you meet there the rock conditions you meet in New York City?

A. No rocks there at all. That is provided for, however, in the chart.

Q. How many miles of mains did you lay in Durham and Fostoria?

A. Some ten or twelve miles, if I remember rightly, in Durham and in Fostoria there was something more, I cannot recall it now.

Mr. Mathewson: I press my objection, Mr. Master. It does not seem to us that he is qualified to state the cost of laying mains in the city of New York, and I make the objection as a matter of principle, although it corroborates Mr. Simpson, because I do not think the witness is justified in making it.

The Master: I will overrule the objection.

Mr. Mathewson: Exception.

Mr. Burr: It corroborates Mr. Simpson to a certain extent.

Mr. Mathewson: Fully as to prices and cost.

2371 Paper received in evidence and marked City's Exhibit 50.

The Witness: May I go on?

By Mr. Burr:

Q. Yes.

A. It has been stated repeatedly in the evidence that these mains are largely duplicated, sometimes triplicated and sometimes quadruplicated in the streets of New York City——

Mr. Mathewson: I move to strike that out, Mr. Master. I do not think it is a correct statement, and if it were it would not add anything to the testimony, whatever it is.

Mr. Burr: He is going to base something upon that statement. Do you want to strike out the original statement?

The Master: I do not think you will save a great deal of time by making these objections, although I think most of them are well founded, but I think you had better go on and let the Doctor make his speeches——

Mr. Burr: I do not think he is making speeches; he is giving testimony. If he has to give it in the form he is now giving his testimony, it is due to the fact that the Company has refused to allow him access to the books and——

The Master: If the evidence shows that it is a fact that the mains are duplicated, it is not necessary to call a witness to testify to it.

Mr. Burr: He is going to base some testimony on that fact.

The Master: But that is not the question you have asked him, which is a different thing.

2372 Q. Proceed, Doctor.

The Master: The motion to strike it out is granted. It is not responsive to any question that I know of.

Q. What is this other diagram that you have prepared?

A. It shows what a system of mains laid as a substitute for a duplicate system would cost, on the same chart.

Mr. BURR: I offer that in evidence.

Mr. MATHEWSON: I object to this. No foundation has been laid for any such table or testimony as this. It does not appear where mains have been duplicated or between what streets, and the witness is not competent or it seems to me to testify as to laying a duplicate set of mains. He is not familiar with the requirements of this city and could not possibly be, or with the location of mains.

The MASTER: I will take it.

Mr. MATHEWSON: Exception.

Paper received and marked City's Exhibit 51.

Q. Now will you explain this diagram, City's Exhibit 51 in detail, Doctor?

A. Taking the total cost minus 15 per cent. contractor's profit and the statements as to lengths and sizes made by Mr. Simpson, a computation, assuming the pipes to be under cobble pavement as an average, is $7,901,682.26, which is very close indeed to what he has stated. Taking a single pipe substituted of equal or greater capacity than a double pipe we obtain $5,935,155.12 or in round figures about $2,000,000.00 less cost for a regularly laid out system of mains of equal or greater capacity.

Mr. MATHEWSON: What is this total cost?

2373 Q. Than is charged by the Consolidated Company here?

A. Than is charged by the Consolidated Gas Company here.

By Mr. MATHEWSON:

Q. What is this total cost?

A. It approximates to their taxed cost.

Q. What is your total cost, $6,982,535.44?

A. It includes the contractor's profit you know, which Mr. Simpson did not make.

Q. Will you turn your attention to the meter account presented by the Consolidated Gas Company, page 1904. What items of——

A. I find under the head of meters, scows $19,816.15; gas stoves $287,619.77, a total of $307,435.92, which can bear no possible relation to meters or their expenses.

Q. Then as the result of this analysis, what have you found with regard to these items of land, manufacturing plants, mains, services and meters?

Mr. MATHEWSON: What do you mean by that?

Mr. BURR: Adding up the totals that he has now given.

A. Land, $3,068,140.51; manufacturing plants and holders, $12,866,766.62; mains, $7,700,151.03; from which should be subtracted, if a duplicate system is deemed improper, about two million dollars; services, $1,212,071.09; meter, less scows and gas stoves, $3,495,108.58.

Q. A total of——

A. A total of $28,342,237.83.

Q. And deducting the $2,000,000 to which you referred?

A. $26,342,237.83.

Q. What does that represent?

A. This is the structural cost of the active stations of the Consolidated Gas Company so far as it can be gathered from the books.

Mr. **Mathewson**: By you.

2374 Q. So far as it can be gathered from the testimony?

A. And from the books accessible.

Q. And the exhibits here?

A. And the exhibits here. The discussion and investigation was made more particularly for the purpose of locating the sophisticated accounts.

Q. How does that compare with the structural cost required from the Massachusetts precedents that you have testified regarding?

A. When comparing with the Massachusetts precedents, it gives a structural cost of about $5,000,000 more than that obtained from the Massachusetts precedents.

Q. And that is not adding the $2,000,000 which you say should be deducted from the mains?

A. No.

Q. So that would make $7,000,000,

A. $7,000,000—no, it would make three millions more, not seven millions.

Q. Now, if you use the valuation that has been given of the existing Consolidated Gas Company's stations, $18,546,640.58, and subtract it from your figures just given, what do you find?

A. If we subtract $18,546,640.58 from the $28,342,237.83 we obtain $9,795,597.25, and it is probable that the proper cost in Massachusetts precedents is somewhat less, making every allowance, than the $29,000,000 to $30,000,000 stated by the Gas and Electricity Commission.

Q. How can exact figures be obtained with regard to these matters you have been testifying to?

A. By a careful inventory of the works as they stand and by a thorough examination of the books continued back through every book to the vouchers and checks and check stubs, and only in that way.

Q. Now, will you, so we may have the record complete, briefly give us a resume of your statements as given here?

2375 A. In 1905 the sales of gas in the Borough of Manhattan amounted to 19,540,343,000 c. f., of which the Consolidated Gas Company sold 13,283,164,000 c. f. or about 68 per cent.

If the Consolidated Gas Company and other gas companies accept 80 cents to private consumers and 75 cents to the City, the sales of gas in 1907 on the Island of Manhattan will amount to 22,569,,846,000 c. f., of which the Consolidated Gas Company will sell about 15,340,000,000 c. f., realizing a gross revenue of $12,274,000.

From the unverified figures of Complainant's Exhibit 94, summary of operations for the calendar year of 1905, it would appear as if the cash cost of gas had been about 53½ cents, and might be anything below this to 44 cents per M. c. f. of sales at the consumer's meter for gas averaging 23.1 c. p.

Using English accountants' methods for computing the cost of gas and the unverified and doubtful items of Complainant's Exhibit 94, summary of operations for the calendar year 1905, the apparent cash cost of gas is found to be 53.51 cents per M. c. f. of gas sold and the total net earnings $6,175,342.94 as against net earnings $4,587,995.99 (Complainant's Exhibit 96) or a somewhat larger sum, $4,765,670.00, derived from the figures of Messrs. Addicks & Humphreys.

With the price of gas at 80 cents and its cost at 53½ cents, the net earnings for 1907 will be $4,065,895.00, or if we take the cost of gas of 22 candle power as found at Chicago to be 45½ cents per M. c. f. of sales, we would have a net earnings of $5,293,335.00.

The matter of a reserve fund of five cents per thousand cubic feet of sales claimed by Pres. Alexander C. Humphreys and for three cents per thousand cubic feet of sales as claimed by Vice-President Walter R. Addicks can well be eliminated since it is clearly shown that a very large surplus accumulated by the Consolidated 2376 Gas Company from the profits of its business has been invested in other enterprises, from which any future surplus required could be obtained.

The matter of an extra allowance for oil for increased illumination is also shown to be unnecessary, since the average illuminating power for the first six months of 1905 is proved to be 22 candle and for the last six months to be 24.19 candles. The excessive use of oil at prices far above those obtained by many lesser companies has added considerably to the apparent cost of 53½ cents per thousand cubic feet of sales.

Concerning the actual structural cost of gas works, it appears that so far as the stockholders were concerned in the consolidation of 1884 nothing was sold and nothing was paid for in money. The only things that were done were to produce an exaggerated inventory of the cost of the works and then to sophisticate the new books of the Consolidated Gas Company to conform to the fictitious capitalization effected.

It was simply a case of the old firm trading under a new name with 2.3 times as much capitalization.

A careful comparison of the structural cost of the four gas companies operating in Massachusetts, has revealed the fact that under similar conditions to those to-day existing in the works of the Consolidated Gas Company, their structural cost is $1.78 per annual M. c. f. of sales or of capacity, and the total cost of the works of the Consolidated Gas Company should be $18,546,640.58 with an allowance of $5,097,389.56 for investment in other companies or additional structures and an active capital of $1,626,811.32 required for the operation of the works, making a required total of $25,670,841.46.

The investigation of the accounts of the consolidated Gas Company has not been possible in any proper sense, but the frag-2377 ments accessible have been used primarily to show in instance after instance the sophistication of nearly every account which has been presented in any form in the testimony given by the witnesses of the Consolidated Gas Company.

Mr. MATHEWSON: I move to strike out the last statement of the witness.

The MASTER: Strike it out.

Q. What would you say with regard to the capitalization of the gas companies on the Island of Manhattan being limited to less than $2.00 per annual thousand.

Mr. MATHEWSON: I do not understand the question. I think if I do, it is objectionable.

(Question read by Stenographer.)

Mr. MATHEWSON: This is not a question of what capitalization shall be issued by the companies. It is a question, it seems to me, of value of property and returns upon that property.

The MASTER: I do not understand the question. Will you read it?

Mr. BURR: I will withdraw the question.

Q. As the result of your experience and your study of the situation as presented here by the testimony and the exhibits and your study of the proceedings before the Gas Commission and before the Commission of 1885 and 1886, what in your opinion should be the capitalization per M. fixed for gas companies in the Island of Manhattan?

Mr. MATHEWSON: Objected to as irrelevant and immaterial, and the witness is not competent to testify.

2378 The MASTER: Well, that is probably all true, but I will let him answer and give you an exception.

Mr. MATHEWSON: Exception.

A. I should be inclined to fix the limit to capitalization of gas companies situated as is the Consolidated Gas Company and the other gas companies also on the Island of Manhattan to not more than $2.00 per annual M. c. f. of gas sales.

Q. And have you any opinion to express with regard to the advisability of adopting a system of accounting similar to that used by the English gas companies, than that which reveals itself to be used by the Consolidated Gas Company in the testimony presented here?

Mr. MATHEWSON: Objected to as immaterial and irrelevant. I do not want to make technical objections, but it is worth while for us to call witnesses to show that they think otherwise?

The MASTER: I do not think that is valuable, and if you want to press it, I will sustain the objection.

Mr. BURR: In other words, as the result of his experience and previous study of this subject——

The MASTER: No doubt they could improve their methods. Everybody can. There is no question about it. That is all it amounts to. He thinks it would be better to keep their books in the English style rather than the way they do.

Mr. BURR: Yes.

The MASTER: What difference does it make if he does think so?

Mr. Burr: I thought it might be interesting.

2379 The Master: I will sustain the objection and you may take the answer.

Exception.

A. Both for the sake of the company and for the public, it appears to me an imperative need that the accounts of the quasi public corporations should be kept after the manner, although perhaps varying in detail, prescribed by Acts of Parliament in England and that there should be the same publicity, not only to the stockholders but to the public, insisted upon in the opening of accounts to the authorities, to the justices and to the general public, if they are willing to pay the trifling sum demanded for the printed accounts.

Q. Have you the English Statute to which you refer, Doctor, handy?

Mr. Burr: This I might say is nothing new and is entirely pertinent to this inquiry because I find before the Commission in 1886 that a recommendation similar to the one he now speaks of was made and a form of the English accounting system was attached to the report. I won't bother about offering that in evidence, but I want to call attention to this statute which exists.

The Witness: Referring to Michael & Will on the law relating to gas and water, page 219, Model Gas Bill as amended in 1900 prescribed——

Mr. Mathewson: What edition?

The Witness: Fifth edition. Model Gas Bill prescribed the form in which franchises——

By the Master:

Q. What Act of Parliament is it?

A. Companies Clauses Act, 1863, was amended by subsequent acts and the Gasworks Clauses Acts 1847, 1871, Companies 2380 Clauses Consolidated Act of 1845, except the provisions relating to the conversion of borrowed money into capital. Pages 220 and including 228. That is in this third edition of Will.

Mr. Burr: I offer in evidence the Gasworks Clauses Act of 1847, Tenth Victoria Cap. 15, an Act for consolidating in one Act certain provisions usually contained in Acts authorizing the making of gasworks for supplying towns with gas, appearing on pages 36 and the following pages of Reeson's Complete Gas & Water Acts, 1817 to 1902, published in London by Butterworth & Company, 1902. I am referring to the modern Gas Bill as amended, 1900, used in England, as the same is printed on page 220 of Michael & Will on the law relating to Gas & Water, fifth edition by J. Shiras Will, K. C., published in London by Butterworth & Company, 1901.

Not marked in evidence.

Q. Now, something has been said here with regard to electrolysis, and were you here when Mr. Simpson testified regarding that?

A. I was.

Q. You heard his testimony?

A. I did.

Q. And you heard him testify that he in two instances found what he thought to be electrolysis effects upon the mains at two different points. Is it a fact that the effect described by him as he was informed by the expert who examined these mains was found, namely, pits in the mains. Is it a fact that that is due entirely or solely to electrolysis?

A. The formation of pits in cast iron gas pipe and sometimes in steel pipe was going on long before the wandering earth currents due to trolley systems and other power systems were in existence.

2381 Wherever a main is laid in alkaline soil and wherever this alkaloid comes in contact with the iron and carbon of cast iron it is very apt to produce pits. That is there is an iron and carbon alkaline battery going on. This is nothing new. It was written about half a century ago and it does not necessarily follow that a power current is required to produce the peculiar form of pitting called electrolysis, because the iron itself in conjunction with an alkaline fluid can do it without any assistance from the outside.

Q. Is there any well known authority who made reference to that situation as you have stated it?

A. There is. I take a very old book on gas engineering, Hughes & Connor, Gas and Gas Works, London. On page 302——

By the MASTER:

Q. London, what is the date? What is the imprint there?

A. There does not appear to be any date on it. This edition was printed in 1904. It was written a good many years ago.

By Mr. BURR:

Q. Proceed.

A. Page 302 (reading:) "There are, however, certain destructive " agencies which materially affect the durability of mains. But it is " said that the worst of all ground in which pipe can be laid in that " containing, ashes, cinders and moisture. In these the pipes are " speedily covered with marks throughout similar to pock marks " some of them eventually penetrating the metal.

"This action is undoubtedly due to the electrical agency by each " of the numerous particles of carbon being in contact with the iron, " which aided by the moisture form little batteries and produce rapid " decay."

2382 Q. So that the so-called electrolysis affected gas and water mains long before the trolley systems having return earth currents of electricity were in use?

A. It did, and consequently you cannot say what would have been done if there had been no wandering earth currents.

Q. And under the conditions you have read there electrolysis *is* will affect pipes in the absence of return earth currents?

A. In the absence of return earth currents.

Q. What is your opinion as to their being any danger in the future of electrolysis to the Consolidated Gas Mains?

A. It appears to be very slight, shall I give my reasons?

Q. Yes, sir.

A. If we take the case of the subway, all electrical engineers take particular pains to make a return circuit through their rail as perfect as they possibly can, either by bonding the ends of the rail with copper bands or by cast joints or by solder joints, so as to allow the current to come back as rapidly as possible to the dynamo which has generated it. The object of this is economy. They desire above all things not to lose power and if the return of the current is obstructed the consequence is that the power is lost in getting back to the dynamo. But assuming an imperfect joint or rail in the subway the structure itself has involved the use of a vast amount of iron, thousands and thousands of tons, and it is much easier for the current, if it has to leave the rail, to take the iron track of the subway than it would be to go off and hunt up a pipe somewhere. Now that is equally true with regard to the surface railways. The conconductors for the surface railways in New York are laid in immense cast iron conduits weighing a great deal and of very great thickness and strength. If the current has to leave the rail the gas or water main is as nothing in presenting a direction to the current as
2383 compared with this immense conduit, and this immense conduit leads directly back to the neighborhood of the generator or dynamo; and, of course, in the case of the elevated railroad, if the current has to leave the rail there, I do not see how it is possible for it to get off the vast mass of iron that leads back. It is a well known law of electricity that the amount of current is inversely in proportion to the resistance. That is to say, an electric current will not take one channel and run along as a stream of water does. It divides itself inversely as to the resistance which is opposed to it; the less resistance the bigger the amount of current. Now it would be hard to find anything that would present less resistance than the enormous iron work of which the subway is constructed, the large cast iron conduits of the surface railways or the complete iron structure of the elevated railway. And so the pipes will probably be left alone for all time.

Q. You heard the testimony of President Humphreys regarding the necessity in his opinion for an allowance of five cents extra to be collected from consumers for the reserve fund?

A. I have.

Q. What have you to say as to that?

A. It would appear to me that President Humphreys neglected to place any limit as to the length of time within which this five cents extra should be collected from the consumers. He also neglected to place any limit as to the amount of accumulation which should cause an end to the collection of five cents extra per thousand cubic feet from the consumers. He also overlooked the fact that under ordinary conditions there was either in cash or invested a very large surplus due to the immense surplus profits of the Consolidated Gas Company in current years.

Q. Did he fix any sum for insurance and reserve for which any further charge should be made of five cents per thousand cubic feet for reserve?

A. He did not.

2384 Mr. Mathewson: Is it worth while to get the witness to testify to that when he has directly contradicted the testimony? Professor Humphreys distinctly stated it would be limited to 10 per cent. on the capital.

The Master: Well, Mr. Mathewson, if that is all so, so much the better for you when you come to make your argument.

Mr. Mathewson: It shows the very cursory examination of the witness, to make a statement of that kind.

Q. Do you know what candle-power the gas that is used in Philadelphia is?

A. 22 candle-power.

Q. That is the same candle-power as called for by this law in question here?

A. It is.

Q. What is the cost of the gas in Philadelphia, if you know?

Mr. Mathewson: I would like to ask the witness whether he has any personal knowledge on the cost of gas in Philadelphia for the year 1905?

The Witness: I was going to say to Mr. Burr that I had no knowledge of the books or the cost of producing gas in Philadelphia. I have knowledge only of the price at which it is sold. I have an opinion, however.

Mr. Mathewson: Oh, well, that is another thing.

By Mr. Burr:

Q. What is your opinion as to the probable cost of the gas as manufactured and sold in Philadelphia and state the ground for your opinion?

Objected to.
Objection sustained.
Exception.

2385 Q. I believe you have been supplied with some data by the officials of Philadelphia with regard to the manufacture and sale of gas in that city?

A. I have been supplied with complete data with reference to the sale of gas in the City of Philadelphia by the Mayor and by the Director of Public Works.

Q. Now, as a result of the data so supplied to you and which is incorporated in the affidavit made by you, submitted to Mr. Justice Lacombe, have you arrived at any opinion as to the cost of gas in Philadelphia?

A. I have.

Mr. Mathewson: Objected to.

The Master: Now, Mr. Burr, do we want that? You know if it is in his affidavit it is already before me under the Equity rule.

Mr. Burr: I am unwilling to waste a moment. That whole subject was gone into in his affidavit, so I shall not pursue it any further.

Mr. Mathewson: Do I understand, Mr. Master, that statements of that sort in the affidavit, are evidence upon which he can present and make a finding?

The **Master**: No, it is before me to show that such an affidavit was made containing such-and-such statements and what was before the Court. I can make a finding to that effect, that an affidavit of such a date, presented on the motion herein, did contain so-and-so and was according to such statements. Of course, it is not primary proof of the facts contained in the affidavit. But, of course, neither would the testimony of the Doctor to-day be. That is my only point, that his testimony could not add anything to what was already in his affidavit.

Mr. **Mathewson**: The point I had in mind was this, if that was to be taken as proofs of the facts and we had not in our affi-
2386 davit met those facts for the reason either that we did not consider it material or for other reasons, that then would leave it uncontradicted, and we should not be put in that position.

The **Master**: No, it would have no evidentiary force at all.

Q. In the affidavit which I have referred to you stated in your opinion that the price at which gas was sold in the City of Philadelphia during the past four years under an arrangement which the U. G. I. or the United Gas Improvement Company had with the City, was 78.1 cents per thousand cubic feet of gas.

A. I did.

Mr. **Mathewson**: Now wait a minute. I object to the testimony of the witness on that subject unless he knows something about it.

The **Master**: The question is not finished yet, as I understand it. It may be superfluous, as the affidavit is already on the files in the case. I understood it was preliminary to asking some question and on that understanding I allow it?

A. I did.

Q. Upon what information or investigation did you base that statement?

A. I based that statement on authoritative documents furnished by the Director of Public Works of Philadelphia, and duly verified.

The **Master**: That all appears in evidence, doesn't it?

Mr. **Burr**: You just said it was not evidentiary proof and I naturally want it as a piece of evidence.

The **Master**: His statement is not any higher quality of proof than the affidavit.

Mr. **Burr**: I should like to have the answer.

2387 A. It was duly verified by public officials.

By the **Master**:

Q. It is hearsay, as far as you are concerned. You have no knowledge of it?

A. Why not at all. It was a duly verified document which was sent to me. If that is hearsay, all right.

The **Master**: I am speaking from the legal standpoint. From that standpoint it is what we call hearsay.

By Mr. **Burr**:

Q. Do you know whether the U. G. I. under its arrangement with the City of Philadelphia supplies free of charge the public lamps there?

A. It does. It supplies a very large number, some twenty thousand lamps free of charge, and supplies the public buildings and the city free of charge. And, besides that, it pays the city ten cents on every thousand feet of gas it sells to the consumers.

By Mr. **Mathewson**:

Q. You know all this from the same source, I suppose?
A. Yes.

By Mr. **Burr**:

Q. I call your attention to a statement appearing upon page 29 of your affidavit and ask you to state what that is and upon what it is based?

A. The statement on page 29 is the tabulated computation of the actual price per one thousand cubic feet received by the United Gas Improvement Company furnishing gas to the city and citizens of Philadelphia, under a contract dated November 12, 1897, figures used to January 1, 1906, candle power of gas, 22.

2388 Q. From whom did you procure that statement?

A. This statement was computed by myself from the original documents furnished by the Director of Public Works of the City of Philadelphia.

Mr. **Burr**: I offer that in evidence.
Mr. **Mathewson**: Same objection.
The **Master**: It is already before me, as I say, under that rule.
Mr. **Burr**: All right, sir.

Q. What have you to say, Doctor, regarding the statement appearing in your affidavit as to the prices of mains and services? You said in your affidavit, page 49, "I have carefully recomputed the "cost of the mains owned by the Consolidated Gas Company "from the inventory given by him (Simpson) and I am of the "opinion that the cost of installation, $7,542,151.03, as given on the "books of the Company, is probably correct and moderate." Have you changed your opinon as the result of this hearing or the evidence produced here or any of the exhibits that have been offered, and if so, please state?

A. Referring to the computation merely on the basis given by Mr. Simpson I have no reason to change my opinion, but referring to subsequent development as to the actual location and as I have said before a duplication and triplication of mains in the streets it appears to me that an allowance should be made for excessive capital investment in mains.

Q. What have you to say, Doctor, if anything regarding the services of the Consolidated Gas Company?

A. I of course have had no opportunity to make a detailed examination of services and I don't know that I could do much better

if I had. It would appear however as though Mr. Simpson's
2389 statement with regard to the cost of putting in the services
was correct and moderate.

Q. You are assuming that the figures given are correct?

A. Assuming Mr. Simpson to be as stated.

Q. That you don't know?

A. That I don't know. I have had no opportunity to examine or check them off.

Q. I will ask you a little more specifically regarding depreciation as it is applied under the English system. Is not depreciation covered in the English companies each year by specific entries upon the Company's books made before computing the year's profit?

A. That is the usual custom.

Q. Is there any allowance made for a depreciation in English companies by adding an estimated sum to the cash cost of making gas?

A. It has never appeared in any statement as to the cost of gas to which I have had access.

Q. Under that system is not the insurance fund made up from the clear profits after dividends have been paid and limited to 5 per cent. of the paid-up capital of the company, allowing only 1 per cent. of that to be set aside each year?

A. That is the usual custom.

By Mr. MATHEWSON:

Q. When you referred to the insurance fund I suppose you mean what we ordinarily call a reserve fund?

A. A contingent fund.

Q. A contingent or reserve fund, whichever you please.

A. A contingent fund, yes, sir.

By Mr. BURR:

Q. Do you know what the investment of the U. G. I. in Philadelphia is claimed to be per thousand cubic feet of gas sold?

A. At the time of my first affidavit it was claimed to be
2390 2.15 dollars per annual thousand cubic feet of gas sold, by
presentation of bills to the city.

I would like to make a little correction in my testimony. I would like to say that on thinking the matter over that I recall that lately President Humphreys has agreed that the reserve fund should be terminated when 10 per cent. of the capital or investment was reached. But I also recall that he did not state this at first.

Q. Is there any other correction that you wish to make just now?

A. None other.

Mr. BURR: That is as far as I can proceed to-day.

At four o'clock p. m. adjourned to Wednesday, October 3rd, 1906, at eleven o'clock a. m.

Last Exhibits:

Complainant's 255.
State's W.
City's 51.

2391 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 3, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby, Mr. Mathewson.

2392 WILLIAM D. MARKS resumed.

Direct examination by Mr. BURR (continued):

Q. Doctor, what did you find the approximate actual cost of the land on which the manufacturing plants of the Consolidated Gas Company are located—I mean land in use?

Mr. MATHEWSON: I object to that on the same grounds, that he is not an expert.

Mr. BURR: He is not testifying as an expert—what he found to be the cost.

The MASTER: Perhaps he means from the testimony.

Mr. BURR: Yes.

The MASTER: Objection overruled.

Exception.

A. As I stated yesterday, about $3,000,000.

Q. You have read the affidavit of Prof. Humphreys which was submitted in rebuttal in this case before Mr. Justice Lacombe?

A. I did.

Q. In that affidavit reference is made to a model gas bill of 1900. Will you explain what that model gas bill is to which he refers?

A. The model gas bill is a form suggested by the members of Parliament or by their advisers, under which companies desiring to obtain franchises for the manufacture and sale of gas are forced to apply, filling in spaces left for the amount of their capital and also for other details in which they may vary from the general run of gas works.

Q. And that is the bill to which you made reference yesterday?

A. That is the bill to which I made reference yesterday.

2393 Q. Now, referring to the English companies to which President Humphreys referred and of which you spoke yesterday, what did you find was the average profit or capital allowed by England on capital invested in gas companies?

Mr. MATHEWSON: I object to that question. It is well known that the basis of capital return abroad is substantially different, particularly in England, from this country. It seems to me it does not aid us any.

The MASTER: I will allow it.

Mr. MATHEWSON: Exception.

A. On page 54 of my first affidavit I tabulated the profit on capital employed by London Metropolitan Gas Companies in 1904 from Field's Analysis, the candle power of the gas being from 14 to 16 candles. The average profit on capital employed as stated from the résumé given in Field's Analysis is 8.24 per cent. This is rather more than would be claimed, because I have subtracted meter rentals, stove rentals and miscellaneous receipts from the net cost of coal and working expenses instead of adding them to the price of gas in order to obtain the profit on capital employed.

Mr. MATHEWSON: May I ask which Field's Analysis you refer to? For which year?

The WITNESS: 1904.

Q. Is the standard dividend allowed gas companies in England fixed by statute, by law?

A. It ranges all the way from 3 to 10 per cent. in some few cases, the majority of standard dividends being 7 per cent. or below.

Q. Is it stated in Field's Analysis, and, if so, will you please refer to it or state it in detail?

Mr. MATHEWSON: Give us the year, because there is one for each year.

2394 A. Referring to Field's Analysis of the principal gas undertakings in England, Scotland and Ireland for the year 1905 on folio 1, the Metropolitan Gas Companies, I find the standard rate of dividends to be as follows:

Gas Light Company—3½ to 5 per cent. There is no 10 per cent. dividend allowed.

The Commercial—3½ to 4 per cent.

Q. When you say Commercial, you are speaking of a company?

A. The Commercial Gas Light Company. I am using the exact abbreviated verbiage of Field's Analysis.

The South Metropolitan—4 per cent.

Of the suburban companies of London, the Brentford 10 per cent. standard dividend allowed on £380,000; 5 per cent. dividend allowed on £50,000; 7 per cent. dividend allowed on £576,920.

Bromley Company—No 10 per cent dividend allowed. 3½ per cent. dividend on £265,700, 5 per cent. on £100,000.

The Croydon Company—10 per cent. dividend on £76,600; 7 per cent. dividend on £100,000; 5 to 7 per cent. on £519,400.

South Suburban—No 10 per cent. dividend allowed; 5 per cent. on £685,767.

Hornsey—10 per cent. dividend allowed on £20,000; 7 per cent. allowed on £278,460.

Mr. MATHEWSON: When you say "allowed," do you mean paid according to that book?

A. Standard rate of dividend.

Q. What is your meaning of the word "allowed"?

Mr. **Burr**: Permitted.

A. Permitted.

Q. Does it say in that book it is permitted?

Mr. **Burr**: It says in the book standard rate.

2395 A. Standard rate, at the heading; you will see it there.

Q. Then what you mean is the standard rate when you say allowed, is that it?

A. That is it.

Leabridge—No 10 per cent. dividend; 5 per cent. on £271,737.

Mitchan—10 per cent. on £100,000; 7 per cent. on £80,000.

Richmond—No 10 per cent.; 5 per cent. on £218,425.

Tottenham—No 10 per cent; 3½ on £400,367; 5 per cent. on £120,000.

Wansworth—No 10 per cent.; 3½ per cent. on £550,905; 5 per cent. on £30,000.

West Ham—5 per cent. on £1,167,401.

West Kent—10 per cent. on £50,000; 7 per cent. on £100,000.

For suburban companies 10 per cent. standard rate of dividends on £626,600 and from 3½ to 7 per cent. on £5,514,882.

By Mr. **Burr**:

Q. The three Metropolitan Companies are the Gas Light, Commercial and South Metropolitan?

A. They are.

Q. And the suburban companies are Brentford, Bromley, Croydon, South Suburban, Hormsey, Leabridge, Mitchan, Richmond, Tottenham, Wansworth, West Ham and West Kent?

A. Yes. I would like to make a note with regard to the Metropolitan Companies, that in the case of the Metropolitan Companies, at the outset some of them were allowed 10 per cent. standard rate of dividend on a portion of their stock, but subsequently, by act of Parliament which specially provided that they should not increase the price or cost of works in case of sale, they were allowed to 2396 convert this 10 per cent. to 4½ and 5 per cent., enabling the same gross profit to be distributed.

Q. And as I understand it, the standard rates of dividend for the Metropolitan Companies is to the Gas Light 3½ to 5 per cent., the Commercial 3½ to 4 per cent. and the South Metropolitan 4 per cent.?

A. It is.

Q. When you refer to these various amounts with the different rates, what distribution is there to be drawn, if any? I notice the column is headed there Capital Authorized and Capital Raised.

A. In the case of the English companies a very complicated method of issuing capital stock and of loaned capital is frequently practiced. For instance, in the case of the Gas Light and Coke

Company, we find at the outset the stock divided as follows (on page 53 of my first affidavit):

(1) Ordinary Stock.
(2) Preference Convertible Stock, first issue.
(3) Preference Convertible Stock, second issue.
(4) Preference Convertible Stock, third issue.
(5) Preference Stock, fourth issue.
(6) Preference Stock, fifth issue.
(7) Stock.

And of loaned capital:

(8) Debentures.
(9) Debenture Stock.
(10) Bonds.

The object apparently being to obtain capital as it is needed in the increase of the demand for gas, and consequently for the capacity of the works.

Q. Do you know what the average price per thousand cubic feet is sold in the city of London?

Mr. MATHEWSON: Objected to as immaterial.
Objection overruled.
Exception.

2397 A. Referring to my first affidavit, page 54, the average price of all metropolitan gas companies of London is about 62 cents for gas ranging from 14 to 15 candle power.

Q. Referring to the English Acts regulating gas companies, what provision, if any, exists regulating the converted stocks in the event of the purchase of the company's undertaking?

A. I read Article 19 as follows:

"Whereas the conversion by this Act authorized may affect the market price of the company's stock, therefore be it enacted that in the event of any purchase of the company's undertaking by a public or a local authority the market price of the company's stock shall not be taken into consideration in determining the price paid for the said undertaking."

Q. Are not these converted stocks especially limited to a low rate of 4 per cent. or 5 per cent. dividend?

A. 3½ per cent. to 5 per cent., the highest.

Q. What do you find from all the data procurable by you is the probable cost of the 22 candle-power gas at the consumers' meters in Philadelphia?

Mr. MATHEWSON: I object to that as irrelevant, and the witness is incompetent to testify. How can we meet it?

The MASTER: I do not think it is of any value at all. I do not think you have to meet it. I will allow it.

Exception.

A. It is my opinion, based on the fact that the geographical locality of Philadelphia is very close to that of New York City, and from what figures I have been able to gather, that if Philadelphia is free of tax owing to its being a municipal gas works to the extent of 6½

cents, or thereabouts, that the probable cost will be in the
2398 neighborhood of 47 cents, with a possibility of being reduced
somewhat below that—47 cents for sales, for gas sold.

Q. The price of gas you know in Philadelphia, do you not?

Mr. MATHEWSON: He testified on that, Mr. Burr, so far as he did know, or did not know, rather.

Mr. BURR: He said the net price was a certain amount yesterday. I want to know what the regular price is in Philadelphia for gas.

A. The price to consumers in Philadelphia is one dollar, of which the City Councils take ten cents for the use of the city.

Q. And besides which the company furnishes free the public lighting?

A. And furnishes free the lighting of public buildings and streets.

Q. And taking that into account, you estimate it sells gas there for 78.1 cents?

A. It has sold gas for the last eight years of 22 candle-power at an average of 78.1 cents per thousand cubic feet.

Q. In President Humphreys' affidavit he refers to the book which you have informed us you have written, and to the 15 per cent. usually allowed to cover profit and depreciation on investment. To what size of towns is this confined and limited?

A. May I ask what page?

Q. He refers to pages 213 and 217 of your book. He quotes from your affidavit, Doctor, the statement made there, to wit: "With a profit ranging "from 8 to 10 per cent. the present price of gas "should be fixed at not more than 75 cents per thousand cubic "feet to consumers in New York City," and then refers to what he claims are some contradictory statements in that regard, appearing in that book at pages 213 and 217. What have you to say in regard to that?

2399 A. Referring to page 213 of "The Finances of Gas and Electric Light and Power Enterprises," near the middle of the page I make the following statement:

"It should be remembered in a general way that one dollar in "the price of each long ton of gas coal means about ten cents per "one thousand in the cost of gas, and that one cent per gallon in "the price of oil used in carbureted water gas means about five cents "per one thousand feet in the cost of gas."

I wish to particularly emphasize the qualifying sentence which follows this:

"These latter three factors, then, should control any attempt to "go below the price of $1 per one thousand cubic feet for gas."

Referring to page 217, I would say that it is quoted from a report on new gas works for a small city.

Q. What is quoted, the statement?

A. The statement: "It is of interest to observe in the following "table that the profit on gas at $1.75 would be somewhat greater "than the 15 per cent. usually allowed to cover profit and depreciation on investment."

In addition to that, I wish to say that wherever I speak of cost of gas in my work on the Finances of Gas and Electric Light and

Power Enterprises I am talking about the actual cost of gas as deduced by an engineer from a thorough investigation of the books and not from accounts which may or may not be correct if written up by a mere accountant not familiar with the technical part of gas making.

Q. In your opinion, is there a difference where a company has newly started as distinguished from a company that has been long in existence?

A. The best example I can give of that is the English practice, where it will be observed that at the outset in many of the companies the stock was limited to a standard dividend of 10 per cent. on the comparatively small sum required to start, 2400 and as the works expanded and the works became greater the result was that subsequent issues of stock came out at lower rates of standard dividends. Take, for instance, the case of the suburban companies referred to in Field's Analysis for 1905. I have not made the figures, but I think that the 10 per cent. stock standard rate dividend amounts to in the neighborhood of only one-tenth of the total issue of the stocks of the surburban companies, nine-tenths of the stock of the suburban companies, speaking in valuation, being limited to a dividend ranging all the way from three and one-half to seven per cent.

Q. Does that apply also to the metropolitan companies?

A. The metropolitan companies appear to have been set apart in many ways. In the early history of London, a period of great depression occurred in the prosperity of the various gas works. There were a large number of gas works, none of them making any dividends, or if they did make dividends they were making small ones, and many of them losing money. They were finally, I think, many of them consolidated in the Gas Light and Coke Company, and a great many investigations were made, and finally they were erected into one company, more particularly the Gas Light and Coke Company, with two other companies which followed. I don't know much about the history of the two subsequent companies. And they had a lot of 10 per cent. standard dividend stock at the outset granted to them, being because of the severe usage which apparently they had received at the outset, but even that has since been converted as related in what I have already stated.

By Mr. MATHEWSON:

Q. It has been about doubled, hasn't it?

2401 A. I looked up the figures once, but I have forgotten them. I could look it up—anybody could look it up.

By Mr. BURR:

Q. Now, in President Humphreys' affidavit he takes 62.56 cents as the cost of gas and uses your methods to produce the selling price. What would you use to produce the selling price of gas proper for New York City?

Mr. MATHEWSON: Dr. Humphryes takes the amount mentioned by the Commission in their statement of cost as 62.56. He does not state that as his own estimate at all.

Mr. **Burr**: The language he uses is this. I will read it as long as Mr. Mathewson objects:

"If for the Consolidated Company we take the cost per thousand " as allowed by the Commission of Gas and Electricity, namely, " 62.56 cents, and adds Mr. Marks' minimum profit of twenty-five " cents, we have a selling price of at least 87.56 cents. If we now " add for depreciation the difference between my 2.6 per cent. " (=6.87 cents per one thousand) and Mr. Marks' 5 per cent. " (=13.21 cents per one thousand), =6.34 cents per one thousand, " and then we have 93.90 cents as the selling price without any allowance for reserve."

What have you to say about that statement which appears in his affidavit?

A. In that statement Doctor Humphreys has taken the price adopted by the Gas and Electricity Commission of 62.56, and he has then added a minimum profit of about 25 cents. Now, had that question been put to me by the Gas and Electricity Commission, I would have stated the actual cash cost of material and labor for gas to have been somewhere between 45 cents and 50 cents per
2402 thousand cubic feet sold. I would further have stated the
actual structural investment to be somewhere in the neighborhood of or less than $2.00 per annual thousand cubic feet of sales. If I took 15 per cent. of two dollars I would have thirty cents to cover the depreciation and the profit, which depreciation was in a rough and ready way intended as a reserve or contingent fund, not using in this book the verbiage which has been so carefully worked out, and when I add this thirty cents first to forty-five cents actual cost of gas, I get as the proper price of gas in New York City seventy-five cents. If I add this thirty cents to fifty cents, which is a higher cash cost of gas, I would, of course, get eighty cents. I intended in this work and all through to write for the average gas manager, who would know these figures pretty closely, or who should know them.

Q. Which figures?

A. Figures of the actual cash cost of gas and paid out for materials and for labor and for current small repairs.

Q. Have you prepared a chart covering the Borough of The Bronx and the estimated increase in population and increase in the consumption of gas in that Borough for the year 1907?

A. I have.

Mr. **Mathewson**: What has the Borough of The Bronx to do with the Consolidated Gas Company?

Mr. **Burr**: It is in evidence here that the Consolidated Gas Company controls all the lighting companies in both Manhattan and The Bronx except the Bronx Gas and Electric Company.

Mr. **Mathewson**: Isn't that another proposition? We are not entitled to charge the consumers of the Northern Union or the Central Union any more than if we did not own that stock.

2403 Mr. **Burr**: We have shown the connection between the Northern Union and the Central Union and the Consolidated Gas Company, so we are taking the precaution to show you the estimated population of The Bronx and the estimated consumption of gas for the year 1907.

Mr. **Mathewson**: I object to it as immaterial and irrelevant and as uselessly cumbering the record.

The **Master**: I will take it.

Exception.

Q. What do you show by that chart?

A. This is a chart giving a graphic record of the sales of gas and the relation between the average price for the gas and the per capita consumption for the Borough of the Bronx for the years 1888 to 1906, including the sales of gas of the Central Union Gas Company, the Northern Union Gas Company, the Westchester Lighting Company, the Yonkers Gas Light Company, the Bronx Gas and Electric Company. It is prepared for the purpose of showing the relation, by means of a heavy line or curve drawn, which exists between the price of gas and the per capita sales of gas resulting from variations in the prices and variations in the population.

Mr. **Burr**: I offer it in evidence.

By Mr. **Mathewson**:

Q. From what source were these sales of gas for each of the companies obtained for each year?

A. Referring to the key in the right-hand upper corner, "T," testimony before Gas and Electric Commission, 1905-1906; "B. D.," Brown's Directory; "P. L.," estimated from public lamps; "I.," information obtained from President of Company; "E.," estimated.

2404 Q. Nothing before the Commission of Gas and Electricity in the shape of testimony as to output for these companies except for 1904 and a very short period theretofore, was there?

A. Each and every figure given for these companies has a key letter to it. For instance, the Central Union Company, 1904, "T" has a gas sales of 1,010,119,700; the Northern Union, marked "T" (testimony before the Gas Commission), has a total gas sales of 371,504,900. The Westchester Lighting Company, marked "E," has a total annual gas sales of 45,635,020.

Q. "E." means estimated, doesn't it?

A. "E." means estimated.

Q. Estimated by you?

A. Estimated by me.

Q. You had no information except your own conjecture on that?

A. Oh, not at all. Every possible means of figuring and information has been exhausted in this matter.

By Mr. **Burr**:

Q. What sort of information did you seek in making up this estimate that you speak of?

A. Always from the president of the companies, with the exception of the Northern Union and the Central Union Gas Companies, and being referred either myself, or by my assistants, to men qualified to give the figures, and in that case the men sometimes very frankly confessed—I refer to the officials of these companies—that they did not have correct figures, but that they could give us an estimate that would be near enough for all practical purposes, meaning by that it would be a very small percentage of error, namely, say, three per cent. either way, something of that sort. It was close enough to establish what I was in search of, corroborative evidence to the truth of the relations generally existing between the output per capita, sales per capita, and the price of gas.

2405 By Mr. MATHEWSON:

Q. Do you mean to say the officers of the Northern Union or the Central Union, any of them, told you they could not tell you the sales of that company for the year?
A. They were not consulted at all.
Q. And as to the other companies they could not tell you the exact sales?
A. In some cases they could not.
Q. *D. B.* means Brown's Directory again, doesn't it?
A. Yes, sir.
Q. What is Brown's Directory?

The MASTER: You asked him that the other day.
Mr. MATHEWSON: I object to this because I do not know whether it is correct or not, and in the second place it seems to me immaterial and irrelevant in any event. I do not think it has been proven sufficiently correct so it is worth anything for statistical purposes if the subject be relevant at all.
The MASTER: Even assuming that it may not have been technically proved, I think it is proper to allow it as it is undoubtedly the basis of some line of testimony that the Doctor is going to give here, and as a part of it I will allow it.
Mr. MATHEWSON: The difficulty is, Mr. Master, that the very purpose of using it as a basis, it not being shown to be reliable whatever, renders all the testimony on it unreliable.
The MASTER: Mr. Burr has to take that risk. You have saved your rights by objections and have called attention to what you regard as the defects in the proof, and if he chooses to rest
2406 his case on some theories that are based on figures that are only estimates instead of as you claim accurate figures, that is his lookout. I do not see that you are hurt. I will overrule the objection and take it.
Mr. MATHEWSON: Exception.
Paper received and marked City's Exhibit 52.

By the MASTER:

Q. As I understand it, this diagram is a continuation of the similar diagram which you introduced the other day, is it not?
A. It is.

Q. Only that it continues that line of work into The Bronx instead of confining it to Manhattan, is that it?

A. By request of the Corporation Counsel.

By Mr. Burr:

Q. This is as far as possible making it for the Borough of The Bronx similar to what you made it for Manhattan?

A. It is.

Mr. Burr: Before I forget it, I want to offer extracts from the English law regulating accounts, 34 and 35 Victoria Chapter 41, as taken from Reeson's Complete Gas and Water Acts, 1817 to 1902.

Paper received and marked City's Exhibit 53.

Q. What do these four columns headed approximate refer to, Doctor?

A. The four columns headed approximate are the results of the additions and other mathematical operations upon the four columns headed C. U. Company, N. U. Company, W. L. Company and B. G. Company. And they give first, the sales per capita in cubic 2407 feet; second, the total sales in cubic feet; third, the sales per capita in dollars and cents; and fourth, the total sales in dollars and cents.

Q. And what is given in the four columns to the right?

Mr. Mathewson: Don't you think it should appear that the last two columns *mean dollars and cents?* There is nothing to indicate it.

The Witness: At the bottom you will find the dollar sign shown. It should have been put at the top.

Q. And the four columns to the right, what do they contain?

A. The four columns to the right take up the individual companies and the data derived from the individual companies.

Q. What kind of data is it, what does it purport to be?

A. Beginning at the top on the right hand side, C. U., or Central Union Company, the total annual sales in cubic feet is given. Under the head of N. U. Company, the total annual sales is given; under the head of W. L. Company the total annual sales is given, and under the head of the B. G. Company the total annual sales in cubic feet is given. These four are added together and carried out to the left hand side under the second column headed "Approximate."

Q. What is the meaning of the irregular line running through the center of the chart?

A. The irregular line is drawn in order to show the variations occurring in the output per capita as variations are made in the price of gas per thousand cubic feet.

Q. Where are the dates fixed?

A. The dates are placed on horizontal lines, for instance, estimated population 257,405 in 1904 has in the same horizontal line with it all of the figures.

Q. In the approximate column?

A. In the approximate column and also in the individual 2408 company's columns.

Q. And that applies all down that line, does it?

A. All through.

Q. And that applies to the chart for the Borough of Manhattan?

A. Also to the Borough of Manhattan. That is the horizontal line—all figures for any given year are always on one horizontal line.

Q. From what source have you taken your statements as to population?

A. The State census for the year 1905 and the United States census for the years 1900 and 1890. In between, the population has been estimated and is so marked, but in many cases in a rude way only from such figures as I could get from the Board of Health and from some election statements as to population.

Mr. Mathewson: I do not see the year 1906 there. Is it in there?

The Witness: The year 1906 is not in. It has not yet passed.

Mr. Mathewson: Then the heading should be changed to 1905?

A. It is to 1906 which is not included.

Q. I assumed this was a chart showing all you have stated from 1888 to and including 1906.

A. No, it is to 1906.

Q. It is to and including 1905?

A. To and including 1905.

The Master: But it includes 1888.

The Witness: It includes 1888.

Q. This is a statement from you, not an estimate as to the future. You have confined yourself to the year 1905?

2409 A. Yes. This is a statement in the case of The Bronx more particularly for the purpose of confirming the work done in the case of the Borough of Manhattan.

Q. And do you find that there was an increase in the consumption of gas as there was a decrease in the price of it in The Bronx?

A. In every case on the average in a general way.

By Mr. Mathewson:

Q. But you have the Westchester Lighting Company and the Yonkers Gas Company in here. Are not part of their sales and operations outside of The Bronx?

A. I can give you all the figures on that if you——

Q. Well, I merely asked a question——

A. They have some. You will notice that Yonkers Company previous to 1900, under the head of W. L., that is, under the head of Westchester Lighting Company, you will observe.

Q. Yes, but my inquiry is as to whether the Westchester Lighting Company does not operate and whether part of its sales are not made outside of The Bronx?

A. Well, there was a great deal of difficulty about that and finally from the president, or rather from the employees of that company, to whom we were referred by the president, the figures were obtained and confined within the Borough of The Bronx. All that is in the form of a memorandum which I can give.

By Mr. Burr:

Q. What do you find to be the increase in the consumption per capita in the Borough of The Bronx between 1888 and 1905?

A. The consumption per capita for the year 1905 was 5,636 cubic feet and the price was $1.01 on an average. In 1888 the consumption per capita was 1,165, and the price of gas was $1.59.

2410 Q. What do you find the variations of price to be if any between those years?

A. At each reduction of price there appears, perhaps not immediately but ultimately, an increase in the consumption per capita, which can be followed along the line; this line is traced for that purpose, so it can be regularly followed from end to end.

Q. Now, Doctor, we will take up the subject of pressure if you please. You are familiar with the statute in the respect that it fixes the minimum and maximum amount of pressure in the city of New York, are you not?

A. I have familiarized myself with it.

Q. What is the object of regulating the pressure of gas, or what good purpose is served by it?

A. For the purpose of consuming gas we have various forms of burners, of mantle lamps, of gas stoves and of heaters, and these require certain pressures in order to operate uniformly and safely. With this object in view it has been found necessary to establish the average pressure or the fixed pressure or a minimum pressure, and of late in this case, a maximum pressure of gas which shall be held in mains and in the service pipes of any gas company furnishing gas to the public.

Q. How is the pressure ascertained, the amount of pressure?

A. The pressure is ascertained in terms of a column of water. There is a glass tube used for this purpose which is bent in the form of a U., and being half-filled with water, one side is put into communication with the gas main and the other left open to the atmosphere; the gas main, having a slightly higher pressure, drives down the water on its side of the U tube and consequently the water rises on the atmospheric side of the U tube as the tube is open to the atmosphere. It is usual to state pressure in inches or in tenths of inches, measured between the two surfaces of water in the U tube.

2411 Q. Won't you demonstrate that for the Master?

A. Unfortunately I forgot that U tube at the last moment, but I will send the boy for it.

Mr. Burr: I thought you might want to see it demonstrated.

Q. What is the English rule with regard to pressure that prevails in London, if you know?

A. As prevailing in London, it is required that the pressure shall not fall below .6 of an inch at any period during the day, and during the hours when lighting is on fall below .10 or ten-tenths, or one inch.

Q. Based upon this column of water which you have described?

A. Based on this column of water that I have described.

Q. Now you have heard the testimony of the witnesses called by the complainant, Mr. Bradley and Mr. Addicks and Prof. Humphreys, I think, was also asked about the pressure, that it was a physical impossibility to comply with the terms of this statute fixing the pressure between one inch and two and one-half inches maximum. Do you agree with that opinion?

A. I do not agree as to the physical impossibility of furnishing gas at all parts of New York at a pressure ranging from a one-inch minimum to a two and one-half inch maximum.

Q. The geographical configuration of New York shows that there is an elevation at certain points of upwards of 250 feet; is not that the fact?

A. That is the fact.

Q. If the Consolidated Gas Company should ask you to do what was necessary to comply with this law, could you do that?

A. I could if I were allowed to expend whatever sum I deemed necessary for the purpose.

Q. What would be necessary to commence with?

2412 A. First of all, the complete survey of the City of New York, giving its topography and differences of level. In turn, then the pressures would have to be established according to these levels and the mains isolated or segregated according to levels throughout New York. It would then be necessary to see that in some method the pressure which comes from the holder usually should be so regulated or modified for each level that it would never go above two and one-half inches or below one inch, and this is physically possible.

Q. During all the years you have testified you have been engaged as a gas engineer and in gas works and electric works, have you familiarized yourself with pressures and the laws regulating pressures, and the operation of pressure as applied to gas?

A. I have.

Q. If you were called upon to interpret this law as a gas engineer and from a scientific standpoint in what way would you construe this law to be operated?

Mr. Mathewson: Fortunately, the witness, perhaps, is not called upon, as I understand it, to interpret this law. That is for the Court.

Mr. Burr: As I understand it, the Court may call in those who are familiar with technical conditions and this is a highly technical situation, and get from them their views as to whether this law could be given a reasonable interpretation. Is not that so?

The Master: Did not some of Mr. Mathewson's witnesses undertake to put an interpretation on the law and did not you gentlemen object to it? How was that?

Mr. Kirby: They were permitted to do so, however.

Mr. Mathewson: No, they were not.

The Master: I think they were.

2413 Mr. Mathewson: We were not permitted to put an interpretation on it at all. It was excluded.

The Master: I do not see how it is competent for a witness to construe the law. I did not see when the question was raised before, nor do I see now. If there are any expressions in it, technical expressions or phrases as to which you think it is proper to ask his expert opinion, I think that you should be allowed to do so.

Mr. **Burr**: I will ask this question.

Q. If the object of a law was to preserve a uniform variation in pressure and assuming the conditions which exist in the City of New York and in the Borough of Manhattan, having the elevation at points that you speak of of 250 feet and taking the pressure at sea level, what way would that uniformity be preserved?

Mr. **Mathewson**: I object to that, Mr. Master, as attempting to get the same point in in a different way. If there is any word in the Act that is technical, perhaps the witness might testify as to what it meant in the art, but I do not think——

Mr. **Burr**: I think the Court is entitled to get all the information he can on this subject. I ask, assuming certain conditions were existing and it was necessary or desirable to have and keep a uniform variation in the pressure, and assuming that there are variations in the levitation of the Borough of Manhattan, how could that uniformity of pressure be preserved with that varying levitation?

The **Master**: He can answer that. I will give you an exception.

Mr. **Mathewson**: Exception.

2414 A. It would be necessary to assume the maximum pressure at sea level at 2½ inches and the minimum pressure at 1 inch. At any point above the sea level the maximum and minimum pressures would rise. At a point 100 feet above the sea level, from the experiments of Doctor Love, I would say that the maximum pressure should be 3 inches and the minimum pressure 1½ inches, as observed with the open U tube. At a point 200 feet above the sea level I should say the maximum pressure should be 3½ inches and the minimum pressure 2 inches at a point 250 feet above the sea level, which is said to be the highest point of Manhattan Island I should say that the maximum pressure would be 3¾ inches and the minimum pressure 2¼ inches; and this would be in an ordinary technical and scientific way a proper construction from an engineer's and gas man's point of view of the law——

Mr. **Mathewson**: Now wait a moment. Is that quite fair for the witness after having heard the ruling of the Court to say what the proper construction is? I move to strike it out.

The **Master**: No, I think you can omit that, Doctor.

Motion granted.

Q. Would this necessitate any change in mains in the City of New York?

A. If the mains of the City of New York as presently existing are adequate in a good and sufficient engineering way to the supply of gas, there is little probability that any change would be required. If, however, it should prove, as it probably has proved, that the sales of gas have so enormously outstripped the anticipation of even those best qualified to judge, it is probable that in some cases they

2415 would have to put in larger mains than they have, but that would be equally true if all their mains happened to be on a dead level.

Q. When pressure is spoken of by gas engineers where is it taken from, is it taken from sea level?

A. If the level is not mentioned.

Q. If the level is not mentioned, is it assumed to be sea level?

A. It is assumed to be at sea level and ordinary atmospheric pressure.

Q. And do you know of any instance in your investigation in the gas business of the City of New York where that assumption is demonstrated by a table or statement by the officials?

A. I do.

Q. Will you point it out, please?

A. In the year 1881 a report of the bureau of Lamps and Gas, January 17, was made marked Exhibit F. in my first affidavit. The pressure of public lamps of the several gas companies——

Mr. BURR: I offer it in evidence.

Mr. MATHEWSON: Is it of any value?

Mr. BURR: Except to corroborate the statement he has made, that in figuring out pressure the pressure has been taken by the officials and is taken and gas engineers take it when not otherwise specified as being at sea level and there is the statement taken at the various elevations in the City of New York commencing at sea level.

Mr. MATHEWSON: I do not think the table shows it, and if in the next place, the companies for their own purposes took the pressure and reduced it to sea level, that would not at all affect the statute passed by the Legislature, and which this tribunal cannot amend, I assume.

Mr. BURR: It helps to show the usual and customary way of figuring out pressure.

2416 Mr. MATHEWSON: No, it does not show anything of the sort. If it did, it would not be of the slightest importance in my judgment.

The MASTER: I will take it.

Mr. MATHEWSON: Exception.

Paper received and marked City's Exhibit 54.

The WITNESS: May I explain it?

Q. Yes.

A. In this table not only the distance in miles from the stations is given but also the elevation above mean high water as established in New York Harbor. In the case of the New York Gas Company, corner of Grand and Gouverneur street, the station is 1.8 miles away from the point of observation, and the point of observation is 34 feet above the level of mean high water. It is very easy to see at once that this was intended for no other purpose than the correction of the observed pressure, the observed pressure below, say——

Mr. MATHEWSON: I move to strike that out. If it is very easy to see, why does the witness have to testify to it? We can make our own deductions from the tables.

The **Master**: Strike it out. It is a matter of argument.

Q. What does that chart show from your experience and in your opinion?

Mr. **Mathewson**: Does it not show what it shows, Mr. Burr? He may say it shows something that we do not think it does show, and will have to put on a witness to say that it shows something else?

Q. This shows the distance in miles from the various stations named in this chart?

A. It does.

2417 Q. And it also shows the elevation above mean high water of each station?

A. It does.

Q. And it shows the hours at which the pressure was taken?

A. It does.

Mr. **Mathewson**: I assume it shows the pressure in tenths, doesn't it?

Q. In your opinion as an expert and gas engineer, what is the meaning of this column, elevation above mean high water?

Mr. **Mathewson**: Objected to as perfectly clear.

The **Master**: It does not require any explanation. As ignorant as I am, I know what that means.

Mr. **Burr**: I mean, if he knows whether it was taken for any special purpose.

Q. What is the meaning——

A. It was taken for the purpose of correcting the observed pressure.

Q. What, if any, need exists for the use of that column?

Mr. **Mathewson**: I object to that as another conclusion which is called for.

Q. Well, in your opinion that was for the purpose of comparing the pressures at these different stations above the level of the sea?

Objected to.

The **Master**: I will allow it.

Mr. **Mathewson**: Exception.

A. It certainly was.

The **Master**: As I understand it, it corroborates his previous testimony.

Mr. **Burr**: Yes.

2418 Mr. **Mathewson**: We do not think it does, at all.

The **Master**: Well, that is your view of it.

Mr. **Burr**: Yes. That is all.

The **Master**: Now Mr. Mathewson.

Mr. **Mathewson**: I considered the subject, Mr. Master, and I do not see how I can properly cross-examine the witness until he has completed his testimony. The counsel on the other side declined absolutely to proceed with Mr. Carter and finish any lines before he had finished, and I find that all these matters are so co-related that it is simply chopping off a little here and there and then stopping before I am through, and I do not think it will hasten it at all if I started. I will say this, that I think the defendants should put the witnesses on as suggested, the real estate witnesses and others, and if it comes to a stop and I can then take up some of these matters and touch on them and save a little time, reserving the balance of my cross-examination, I will try to do so. But I am not prepared now to do so.

Mr. **Burr**: Do I understand the counsel for the complainant refuses to proceed with the cross-examination of this witness whose testimony on the direct has just been concluded?

Mr. **Mathewson**: I do not understand the testimony has been concluded. I understand you intend to ask this witness further questions hereafter.

Mr. **Burr**: I have finished with him.

Mr. **Mathewson**: Finished completely with him?

Mr. **Burr**: Except if I need to call him again for any other purpose.

Mr. **Mathewson**: I would like to know when he proposes to recall him.

2419 Mr. **Burr**: I notified Mr. Mathewson many times that we wanted an inspection of the books and of the plants, and at the last session prior to the adjournment he definitely understood both at an informal meeting before the Master and with counsel for the defendants that we proposed making an application to the court for an inspection of the plants and for an examination of the books, because both those had been refused by counsel for the complainants. Such motions have been made during the recess between the session of September 14 and the first day of October, and they are now returnable before Mr. Justice Lacombe on Friday next. When we reassembled on last Monday, counsel for the defendants presented the situation to the Master and begged leave to have an adjournment until after the application pending before Justice Lacombe had been disposed of, counsel for the complainant protested against any further adjournment and insisted that we proceed, and under the ruling of the Master, we proceeded. Subsequently, Mr. Mathewson, counsel for the complainant, stated that he at last would concede that we had a right to the inspection of the plants——

Mr. **Mathewson**: No, I never conceded it.

Mr. **Burr**: Now, having gone on with Dr. Marks, who is our chief expert for the City of New York and finished with him on the direct, and in view of the fact that they now allow us to inspect the plant, which inspection will take undoubtedly about 30 days, they refuse at this time to go on with the cross-examination of Doctor Marks upon the testimony he has given, based upon all the testimony they have given up to the present time, and I think it is a very unfair position to take, and I think it will be doing an injustice to
2420 the City, and I therefore protest against it.

Mr. **Mathewson**: I have not conceded that you were entitled to the inspection of the plant, and never have and do not now concede it. It is a matter of courtesy. Secondly, Mr. Kirby stated to me yesterday that Dr. Marks was to be called on the valuation of the plants and was to go over them. I understand that is not disputed and I do not propose to be thrown off by any subterfuge that he may be recalled for any other purpose.

Mr. Burr: If there has been any subterfuge, it has been on your side.

Mr. Mathewson: When we had Mr. Carter on, it was said that a motion would be made to strike out his testimony if he was not presented for cross-examination.

Mr. Burr: That was because of the tabloid form in which you presented his evidence.

Mr. Mathewson: Now, if you have other witnesses to put on, whom you do not intend to continue the examination of later on, I will endeavor to cross-examine them as they conclude their testimony.

Mr. Burr: I hardly think that is fair. We were forced to go into the cross-examination of all their witnesses. As far as we could get the information we demanded. Now they have got the information of our witness, and they want 30 days to prepare to cross-examine.

The Master: It seems to me that we will have to pursue a middle course in this to be fair. I do not think Mr. Mathewson ought to be compelled to go on and cross-examine Doctor Marks on any matter that is at all concerned with this inspection of the plants. On the other hand, I think he ought to go on and cross-examine him 2421 as to matters which are fairly and entirely disconnected from the inspection of the plants; as, for example, this last subject you have had this morning, the question of pressure. I presume he will want to cross-examine on that and I see no earthly reason why he could not proceed to cross-examine on that and several other branches of his testimony.

I have no doubt perhaps it would be more convenient to have the cross-examination all at once, but still all these matters are more or less matters of discretion, and it seems to me the fair thing under the circumstances would be to have the cross-examination proceed now so far as it can on matters which are not involved in the inspection.

Mr. Mathewson: The matter of pressure would be involved in the inspection. They would probably inspect our pressure appliances and so forth and will probably testify as to their adequacy.

The Master: You can cross-examine him on that further testimony again, but I think there has been enough here this morning for you to cross-examine him on. That is my view of it.

Mr. Mathewson: Of course, if the Master insists I shall have to do it, but it does not seem to me that I ought to have to do it.

Mr. Burr: We would be ready with Doctor Marks and the expert retained by the State, commencing on Monday——

Mr. Kirby: If I may suggest, on each day of this hearing during this week it has been stated that if the matter is adjourned over until Monday we will be in a position to go on with some real estate experts and witnesses who have not anything to do with the inspection of the plants, but we have made no preparations for 2422 any such testimony during this week for the reason that we understood the examination of Doctor Marks would be lengthy, as it undoubtedly will be, and we cannot go on until we are prepared.

Mr. **Burr**: It disarranges all my plans, because I had no reason to anticipate that we would not proceed at once to cross-examine Dr. Marks, and I had made my arrangements to present my evidence in an orderly way, calling one witness after another, and it seriously interferes with that arrangement.

The **Master**: Those considerations do not appeal to me very strongly. You have had plenty of time to arrange for your real estate experts and you have had all summer and all this recess, and counsel in presenting the case have got to take the ordinary risks of the progress of litigation. I did not perceive that the other side had a great deal of consideration. I made them go on from day to day and stump along the best they could and without much assistance from you, as you delayed them to some extent by asking for statements, and they had to go on. I cannot apply any easier rules to you than I did to them. All requests for delay and every indulgence it seems to me comes from the defendants in this matter, and I do not see any reason why I should grant it.

Mr. **Burr**: I cannot see where we have been indulged.

The **Master**: And any time there has been any suggestion of an early adjournment of the session or a postponement of any kind, they have all come from the defendants with one or two trifling exceptions. And as I say, I made the other people go on, and I
2423 do not see why you defendants, with all your talent and associate counsel and all that cannot go on as well as the other side.

Mr. **Burr**: I have no associate counsel.

The **Master**: Well, I mean that there are two or three of you and that it makes it easier for you to go on.

Mr. **Burr**: I represent the City of New York.

The **Master**: And I think, Mr. Mathewson, you had better proceed as far as you can. Of course, I will not make you go on as to any matter connected with this inspection, and it is going to be difficult for me to say how long you should go on, because these matters are dove-tailed to some extent; but there are certain matters you can go on with. But at the same time, that must not relieve the other side from going on with another witness when the cross-examination is suspended.

Mr. **Burr**: Upon that subject, we telephoned to Mr. Mathewson's office last evening, and he was not there and so we communicated with Messrs. Shearman & Sterling, and Mr. Garver said it would not be necessary to have Mr. Gawtrey here because we have the records of the petitions presented by the Consolidated Gas Company for a reduction in the taxes upon various parcels of property, so we could use time in getting those on the record without Mr. Gawtrey, if that is agreeable.

Mr. **Mathewson**: No doubt, if you will present the petitions he signed or any affidavits he made or anything of that sort, I shall not ask you to have him identify them. There will be no doubt about that. I do not think it will be necessary to have him.

Mr. Burr: If you will go on as far as you can with the
2424 cross-examination of Doctor Marks——

Mr. Mathewson: You know his testimony was only delivered a few moments before the session this morning and I have not had time to look at it.

The Master: The other side had similar disadvantages while you were going on.

Mr. Mathewson: No, but they got adjournments so they could examine these statements.

The Master: No, but they had to work some nights, and I think you will have to, too.

Mr. Mathewson: Is it the instruction of the Master that I shall proceed?

The Master: I think so. I do not think any other way would be fair. I do not see any reason why the whole cross-examination should be held up.

Recess until 2 o'clock.

After Recess.

William D. Marks resumes the stand.

Cross-examination by Mr. Mathewson:

Q. What was the date of the construction of the Laclede Gas Works at St. Louis?

A. During the years 1872 and 1873.

Q. Were you employed by the company or by the contractor constructing the works?

A. I was employed by the contractors, four gentlemen associated for that purpose.

Q. What were your duties?

A. I was primarily constructing and resident engineer for
2425 William Farmer, and confidential accountant, secondarily, for all of the contractors.

Q. Was the contractors' employment merely to construct the plant?

A. It was merely to construct the plant.

Q. The contractors never operated the plant, did they?

A. The contractors did operate the plant?

Q. For how long did they operate it?

A. So far as I was there, for some three or four months.

Q. As a test?

A. No. It was one of those arrangements by which the contractors took pay in stock and bonds for the work and appeared at the inauguration as stockholders and bondholders of the company and became the Board of Directors themselves; in part, at least.

Q. But did the contractors as such operate the works, or did the company operate the works after they were completed?

A. The company operated the works.

Q. Were you the executive officer of the company in charge of the operation of the works?

A. During the time of the contractors' construction I was not. At the time the works were started in, the gentlemen turned the whole matter over to me up to the point where, a large consumption coming on, it was necessary to enlarge their staff, which they did, by the addition of a great number of men, and I left to take work in other engineering matters.

Q. That was three or four months?

A. I should say that. It is a long way back; as near as I can recall it.

Q. What was your position during the operation of the works for the three or four months?

A. I held no official position by name. Mr. S. L. Husted, who was the largest owner and a promoter, as well as one of the contractors for the works, deputed me to act in his stead when he 2426 or Mr. Frederick Cromwell were absent; and they were absent a good deal of the time.

Q. Did you purchase the material during that three or four months for the manufacture of gas, personally?

A. The company made a contract for Youghi-eny coal which was signed by some of the officials there, the terms being arranged by William Farmer, then the engineer in chief.

Q. My question was whether you had charge of the purchase of material?

A. I did not.

Q. Have you ever constructed a gas plant?

A. Yes.

Q. The contract running to you for the construction?

A. Do you mean did I ever take a contract to construct works?

Q. Yes.

A. I never acted as a contractor in the construction of gas works.

Q. Were you ever engaged with any other company than the Laclede Gas Company, except with the Durham, North Carolina, Company—and what was the other you mentioned?

A. The Fostoria Company.

Q. The Fostoria Company?

A. For quite a while I was placed by the president of the Brooklyn Gas Light Company in the position of a factotum to, as he phrased it, "learn the business," anterior to going to the Laclede, in St. Louis.

Q. Previous to that?

A. Previous to that.

Q. Well, subsequent to that had you been connected or had you had charge of the operation of any companies except the Durham Company and the Fostoria Company?

A. I don't recall any now. I may have had.

Q. With the Durham Company, what was your position?

A. First of all, I was employed as engineer, to plan the works, and if I remember rightly—I am not clear on that point—I was made president of it at the time we started in and after some 2427 little time was engaged in getting up the account books in proper shape and operating the works.

Q. Did you have charge of the operation of the works in the purchase of material and supplies and work of that character?

A. At Durham, do you mean?

Q. Yes.

A. At the outset I think everything was entrusted to me. There were gentlemen interested in it who may have acted personally in the matter, but if they did so it was simply to assist me as I was busy with a good many other engineering projects at the time.

Q. Had you any superintendent at Durham who had direct charge of the operations?

A. There was a man there whose name I have forgotten who did a lot of laying of pipes and attended to the brick work and that sort of thing. He was a relic of the previous arrangement of parties who had failed.

Q. Well, I don't care about the details. I am merely asking you direct and rather brief questions.

A. He was utilized as the foreman on the ditch. I don't know that he had the position of superintendent.

Q. How large a plant was Durham, as to sales?

(Witness proceeds to get a book.)

Q. Oh, somewhere near it; I do not care to have it to a thousand feet.

A. The annual sales of gas for the year were estimated at from 16,000,000 to 20,000,000 cubic feet.

Q. What was the output of the Fostoria plant?

A. I am not entirely clear on that, it is too far back, but it was somewhere between 16,000,000 and 24,000,000 cubic feet. I cannot recall.

Q. How far back?

A. Was that?

Q. Yes.

A. Four or five years, I think.

Q. Four or five years ago?

A. Yes.

2428 Q. What was your position there, at Fostoria?

A. I was, I think, made president of the company at the time that I arrived for the purpose of putting in operation, more particularly, a water gas plant which was there, and attended to getting the accounts in proper shape.

Q. Wasn't your connection with the company more in connection with the accounts than it was with the actual operation of the plant?

A. No. They could not get the plant going.

Q. You mean the wheels would not go around?

A. They didn't know apparently how to run a water gas plant, the people out there, and they were operating a little coal gas plant and incidentally I discovered that the accounts were in very bad shape and on saying so I was instructed to get them into proper working shape.

Q. Did you have charge of the purchase of material there, or was that in charge of some one else, the superintendent or purchasing agent?

A. I had charge of the purchase of material there.

Q. Did you personally make it?

A. Yes. I remember now half a dozen different instances in which I purchased material for the company, although I should much prefer that the people who owned the company should have done so.

Q. Have you within the last thirty years operated or had charge of the operation of any gas plants under metropolitan conditions such as prevail in New York City or other large cities in the East?

A. No, I have not.

Q. You have never constructed a plant in any of the New England or Middle Atlantic States, have you?

A. No, I have not. I beg your pardon, if you will allow me to correct that. At the time that Professor Low was engaged in his experimental work on the water gas plant I was deputed by the people of the Brooklyn Gas Light Company to stay with him 2429 and work with him and I remember at that time something was done, but that was away back in the '70's and was nothing more than a trivial matter, comparatively speaking.

Q. Referring to the pressure, you spoke of a minimum requirement in London of one inch in busy hours and .6 at other hours. Is there any maximum requirement as to pressure in London?

A. There is none that I know of.

Q. In your affidavit in this case did you swear that "at a height of 100 feet above the sea or works level, it will be necessary to accept a minimum pressure of 1½ inches and a maximum pressure of 3 inches?"

Mr. **Burr**: What page?

Mr. **Mathewson**: Page 46.

A. I did.

Q. And also that "at a height of 200 feet above the sea it will be necessary to accept a minimum pressure of 2 inches and a maximum pressure of 3½ inches water column?"

A. I did. The assumption being——

Q. Do not give the assumption. I merely asked whether you so swore. I ask you whether you also swore that "at a height of three hundred feet above the works or sea, it will be necessary to accept a minimum pressure of 2½ inches and a maximum pressure of 4 inches water column."

A. Under the existing conditions and connections of the mains of the Consolidated Gas Company, I did so.

Q. And you believe that to be true?

A. It is a law of nature.

Q. Now, did you also say that it is to the interest of gas companies to keep their pressures in their mains just as low as possible in order to avoid a great loss by breakage and excessive use of gas in street lighting?

A. I did.

2430 Q. That is true, isn't it, too?

A. It is true.

Q. Did you also say, that with the great increase of incandescent lighting by means of Welsbach mantles, and of cooking by means of gas stoves, it has been found necessary of late years to increase the gas pressure to about two and one-half inches which pressure is required for the best operation of both incandescent mantle lights and gas stoves?

A. I did.

Q. Did you also say that within reasonable limits, or say not exceeding four inches, the modern high pressures of gas distribution are not in deponent's opinion productive of excessive use of gas, because it is within the power of every user, by means of a stop-cock, to adjust the flame and the flow of gas according to its needs?

A. I did.

Q. And you still believe that to be the fact, do you?

A. Yes, sir, I do.

Q. And in taking record of pressure at any point, is it not the object to show whether the pressures at the particular point of observation are suitable ones for the consumers?

A. It is.

Q. If the pressure to a consumer at any altitude is four inches registered upon a gauge there, it is of no importance, is it, to the consumer what that pressure would be if reduced by formula to sea level so far as it affects him?

A. No, it is of no importance to him.

Q. Referring to the table which you put in, do you know of your own personal knowledge that the pressures which are registered in that table were ever in fact reduced to a sea level uniformity?

A. I certainly have not seen anything more than what is printed there.

Q. In the table?

A. In the table.

Q. Did you take record of pressures in the Durham and Fostoria Companies?

A. It was not necessary.

2431 Q. Well, did you take any?

A. Very careful records in both cases at the station and also at the office, keeping an automatic record on a float gauge of the pressures.

Q. Upon taking those pressures did you reduce those to sea level and have you such a record?

A. I did not.

Q. Do you know of any gas company which in practice does customarily reduce the pressure shown at various points to sea level?

A. The London gas companies prescribe a difference of one-tenth of an inch for the height of a lamp-post above the main which it is served from, the burner of a lamp-post.

Q. But do you know of any company which in fact, reduces upon its records the pressure which is taken at any particular point to sea level, customarily?

A. I do not.

Q. Do gas engineers generally guide themselves as to practical results at any point or points as to the use of appliances by pressures reduced to sea level or to pressures which appear at those points?

A. They guide themselves by the pressures which appear at those points.

Q. Now in reference to the mains of the Consolidated Gas Company you stated that pressure could be equalized and brought as a matter of possibility within the limits of the present law at some future time by installing new lines of mains or by setting off the various districts. How many districts would be required in New York City for that purpose?

A. I stated that the first necessary move would be a careful topographical survey of the whole field served by gas and then on the determination of the various tracts having various levels.

Q. You have not made such a survey?

A. I have not, but I have listened to what Dr. Humphreys had to say in regard to the matter and studied the Geological Survey's charts.

2432 Q. Is it not true that smaller pressure was required twenty years ago than is now required by reason of the fact that flat-flame burners were then more generally used and Welsbach burners and gas stoves were not generally in use?

A. That is true.

Q. Is it not also true that larger mains are now required in order to give a larger pressure than was required when a less pressure was needed for operation of appliances?

A. Exactly the reverse is true.

Q. Will you explain why?

A. Because, in order to get a large quantity of gas through a small main it is necessary to increase the pressure.

Q. Then larger mains are required now, you think, that was my question?

A. I beg pardon, the first question was what, that you asked me?

Q. Whether larger mains were not now required than were required when it was necessary to deliver gas to the flat flame burners?

A. May I ask for the question to which I gave the answer first?

Question read by Stenographer as follows:

"Q. Is it not also true that larger mains are now required in order to give a larger pressure than was required when a less pressure was needed for operation of appliances?"

A. My answer was, exactly the reverse is true.

Q. Is it not true that the London companies in using their one-tenth inch reduction to which you have referred, do this simply to enable them to state with greater accuracy what would be the pressure in the mains below?

A. It is.

Q. The observed pressure, of course, I refer to.

A. Yes.

Q. Did you hear the testimony of Mr. Bradley and Mr. Simpson as to the condition of many of the streets of the City of New York regarding sub-surface structures and that it was impossible 2433 in some of them to put in more mains, to say nothing of larger mains?

A. I did.

Q. How does that affect the possibility of laying out a system of mains towards this pressure regulation?

A. I have had a great deal of experience in putting down electrical conductors and large bodies in the last fifteen or twenty years, and wherever the streets were, I never found any difficulty, if I had to get there, that was insuperable. It was a question of depth and of cost generally.

Q. And any cost of laying a system of mains would naturally add to the capitalization of a company, would it not?

A. It would, yes.

Q. And would require a larger allowance more or less of profit to pay a return on it?

A. Of course.

Q. Did you conclude how many different lines of mains you would have to lay out in the City of New York in order to establish this uniformity of pressure in the future?

A. It will be impossible for anybody to do so until they are furnished with a complete and exact map of the existing mains in the streets of New York.

Q. Would not that be a very expensive proposition to run mains under the subways existing and projected in the City of New York?

A. It is impossible to say until a study has been made of the locality.

Q. Would you think that it would probably be less than millions of dollars to rearrange the mains with the present and proposed subway structure?

A. It would be utterly impossible to say because there is no information furnished.

Q. You have not prepared any estimate of the cost of installation of such a system then?

A. I have not been able to do so.

Q. You from time to time in walking the streets have seen the
conditions down town, I suppose, and in other sections of
2434 the city as to sub-surface structures?

A. I have noted them with a great deal of interest and care.

Q. And you know the lines the subways follow?

A. Yes.

Q. And the projected subways?

A. No, I do not.

Q. Now you have made an estimate of the increased sales of gas to and including the year 1907, and you have testified that the sales you believed of the Consolidated Gas Company in 1907 will be 15,342,000,000 feet and some over. Does this include the gas which is acquired by the Consolidated Gas Company from the other companies as well as of its own manufacture?

A. That point was not taken into consideration at all, as to where the gas was to be produced from.

Q. You gave an estimate of the entire sales of all of the companies in Manhattan for 1907 as 22,569,000,000 feet and something over. Did that include all the gas put out by those companies, including the gas which they have been delivering to the Consolidated Gas Company?

A. It had nothing to do with any company or companies. It was simply the amount of gas which it was probable that the consumers of the Island of Manhattan would demand for their use and would be willing to purchase at 80 cents, irrespective of its source.

Q. That was limited then to sales and not to manufacture, so there is no possibility of duplication there?

A. That is it.

Q. What percentage of increase did you assume in reaching that conclusion?

A. No percentage of increase was assumed.

Q. Did you take the rate of increase as shown in 1899 and 1900 during the gas war in getting a unit from which you could deduce the increase?

A. During the gas war, a period of two years, of which it occupied the middle twelve months very nearly, the price of gas was
2435 reduced by about thirty-three cents. In order to find the
amount of increased sales per capita due to each cent, I took the increase of sales per capita in that two years and divided it by thirty-three cents, which gave me 46½ cubic feet in round figures as the increase per capita due to a reduction of one cent. I then took the proposed reduction of twenty cents and multiplied it into 46½, and it gave me about 929 cubic feet as the probable increase per capita due to reduction in price of twenty cents. That then was taken and added to the existing sales per capita which I had, without reference to anything that had been stated to me, deduced as about 9,250 cubic feet. I ought to say, by the way, that Dr. Humphreys and Vice-President Addicks, one or both of them, agreed upon 9,150 to 9,250 cubic feet, in other words, without any attempt on my part, it corroborated my figures to within about one per cent.

Q. Present output per capita?

A. Yes, 1905. I then added 929 cubic feet to the 9,250 and it gave me 10,179 cubic feet as the probable output per capita during the year 1907, on the assumption that all the gas companies would accept a price of eighty cents.

Q. Did you take into consideration whether that increase at the time of the gas war was due to extraordinary expenditures on the part of the companies or whether it resulted in a corresponding profit to the companies or whether the new business was acquired at an unnatural expense?

A. All of those matters are, of course, outside the possibility of my knowledge. The influence that most strongly urged me, I should say, is my knowledge of the enormous quantities of gas sold where natural gas, costing nothing, is offered at forty cents, thirty-five cents, thirty cents and so on down to ten or twelve cents.

2436 Q. There is no natural gas delivered in New York, is there?

A. No.

Q. You know, do you not, that during the period in question, these companies were making every endeavor, even to laying mains in the streets where the Consolidated Gas Company already had mains, to procure business at almost any expense?

A. I know that has been done in New York City.

Q. Is it not your information that that was the situation at that time, Professor? You lived in New York City at that time?

A. I was here off and on during that time.

Q. Is not that your information, that they were using every expedient to procure business?

A. I cannot say that it was anything more than a general impression.

Q. Was that you general impression?

A. That was my general impression.

Q. Did you compare the increase per capita during those two years with the increase per capita at the time of previous reductions in the price of gas to see that that was not an excessive increase compared with normal conditions?

A. In a general way the curve shown to you here on the chart shows verly clearly that every reduction in the price of gas has, without any very exact figures being attached, always immediately been responded to by an increase in the output per capita. It is apparently a general law. As for instance, when the price of gas in 1897 was $1.20, the output per capita is shown as 6,311 feet, and again in 1898 at $1.15 as 6,595 feet. That is not a long enough period, nor does it happen to coincide so perfectly with the existing conditions as does the period for 1898 and 1900, which was selected for that reason.

Q. Was it not selected for the reason that there was a gas war at that time and the price of gas was reduced somewhat?

2437 A. If I had not known of the existence of a gas war, I would from this curve, in seeking what I wanted, have selected that as as fair and impartial a basis as I could find, acting entirely without any partisan spirit of any sort or kind.

Q. Is it not true that the sales of gas per capita is increased and has increased at just as great proportion when the price remained stationary as when it has been dropped, does it not so appear from your chart to be the case?

A. It does not. On the contrary it shows that the increase per capita in the year 1905 became a decrease as compared with the year 1904, and that from 1903 the increase to 1904 per capita was very small. This is verified too, by a reference to the chart of The Bronx.

Q. During the years 1902 and 1903 the price remained a dollar in the City of New York, didn't it?

A. It did.

Q. According to an exhibit in evidence, the sales per mile of main increased from 14,340,225 feet to 16,112,865 feet during that twelve months.

Mr. Burr: From what exhibit are you reading those last figures?

Mr. Mathewson: I cannot tell you the exhibit.

Mr. Burr: What statement is it?

Mr. MATHEWSON: Average sales per mile of mains and average sales per active meter, which was put in evidence some time ago.

Q. That had no relation to any change in price. What in your judgment was that due to?

A. Looking at the charter for 1901——

Q. 1902 to 1903?

A. And 1902, taking those as consecutive, there appears to be an increase in sales per capita of 563 cubic feet, an increase of sales per capita; and I am not talking about the gross sales; and 2438 the population going forward steadily. Following that now, further to 1903, there appears to be an increase of 730 cubic feet per capita. In both those cases that increase is due to the life and the increased population of a metropolis. The study of the case shows decidedly that with the increased population and the manner of life of a metropolis that the demands, the individual demands per capita are greater than they are in smaller cities. Going up to 1904 a reverse movement begins. It has slowed down very much there.

Q. Do you know what the increase in sales of the Consolidated Gas Company was for 1905 compared to 1904?

A. I can figure it for you if you like.

Q. Gross sales?

A. It appears from the chart to be in the neighborhood of 113,404,000 cubic feet, if I have not made a mistake in my figures.

Q. In output 113,404,000?

A. In both of these cases it is taken from the testimony, in 1904 and 1905, the testimony before the Gas and Electric Commission. It is the sales and not the output.

Q. As a matter of fact, do not the sales per capita for 1905 appear by your chart to be less than they were in 1904?

A. Yes, they are.

Q. So there was a drop there which could not have been due to any raising in the price of gas?

A. It was due to the fact that the price was not dropped.

Q. But it was not due to any raising in the price of gas was it?

A. There was a slight raise between 1904 and 1905, of just one cent.

Q. What, one cent?

A. Yes, in 1904 the price of gas was averaged at 99 cents and in 1905 it averaged at one dollar.

Q. But don't you know that the private consumers in the City of New York paid one dollar in both these years and that any 2439 difference is due to the amount that went to the city or some other feature of that kind?

A. I presume that is the case.

Q. So that there was a drop there in spite of the fact that the price of gas remained stationary?

A. There was a drop there in the output, per capita, yes.

Q. Now, is it not a fact that in 1902 and 1903 the large increase in the sales of the company both in per capita and gross sales was largely due to the coal strike which compelled people to use gas for fuel and had no relation to price so long as the price remained identical for those two years?

A. I have had no opportunity to look into that matter.

Q. Have you any doubt about that, that the coal strike had a large influence on the increase?

A. I expect it had.

Q. Then you do not think that every increase in the sales of gas per capita and in gross is due to the price at which it is sold?

A. Speaking of specific instances, other factors can come in and influence the consumption per capita, as you have mentioned, but on the other hand it is proper to say that the reduction in price will cause an increase in sales per capita.

Q. Did you not say in your book, to which reference has been made, at page 213, that "it must not be assumed that in every instance reduction in price will insure increase in consumption per capita, as might at first appear to be the case?"

A. Looking at this in connection with the context——

Q. I simply asked you if you so stated in your book. I would like to know in the first place whether you did say so before you explain it?

A. In connection with the context, "Instance" refers to the various cities of the State of Massachusetts.

Q. You have taken the cities of the State of Massachusetts and compared them with conditions in New York in your previous
2440 testimony, have you not, certain cities?

A. I have been very careful not to do so in the matter of the cost of gas.

Q. We are speaking now about the effect of a change of price in sales per capita, and I asked you whether you did not say in your books that "it must not be assumed that in every instance reduction in price will ensure increase in consumption per capita, as might at first appear to be the case?"

A. I did so, meaning by the word "Instance," cities.

Q. Now, if you have a per capita consumption the largest of any city in the world already, there is not that same opportunity for increase in consumption per capita as there would be if the per capita consumption of New York were very small, would there be?

A. There is even greater opportunity.

Q. You think there is no limit to the increase per capita consumption?

A. There is no limit.

Q. Do you expect to continue increasing at the rate you have indicated forever?

A. If you are able to reduce the price, yes.

Q. Is not there a point where people use all the gas they need and no price will induce them to buy more gas than they need merely because it is cheap?

A. That point might be found in some of the communities using natural gas, but it is a long ways beyond anything that has ever been heard of in New York.

Q. Do I understand you to say that natural gas costs nothing?

A. To manufacture.

Q. Well, but it costs something before it reaches a consumer, doesn't it?

A. Certainly.

Q. Does it not cost something before it reaches the distributing system?

A. It has to be distributed.

Q. Does it not cost something before it reaches the distributing system at all?

A. It may cost the investment in a well.

2441 Q. Do you know how many cents per thousand it does cost ordinarily before it reaches a distributing system within a reasonable distance?

A. That cannot be stated. In every individual case of drilling for natural gas it varies and is different.

Q. Does not a period of prosperity or a period of depression affect the sales of gas like the sales of any other commodity for which people have to pay their money?

A. I can only give you my impression on that point, and it is that gas and flour and two or three other things of that sort are not varied by any season of prosperity or the reverse to any appreciable extent.

Q. You do not think then that the period of prosperity which we have been going through from 1896 down to date has anything to do with the increase in the sales of gas of the Consolidated Gas Company?

A. I could hardly say that, because it has undoubtedly caused the erection of many buildings requiring gas, but it has not varied the use of the individual consumer very much.

Q. Well, now, let me call your attention to the exhibit in evidence, which shows that in 1893 beginning for that year that the sales of gas in gross by the Consolidated Gas Company per mile of mains were 8,812,618 cubic feet, and that in 1897, which ended the period of depression five years later, the sales per mile of mains had actually fallen to 8,567,832 cubic feet. Don't you think that that failure to increase and the actual fall during those five years had some relation to the period of depression through which the country was going from 1893 to 1896?

A. Has any statement been made as to possible variation in the lengths of mains during that period?

Q. Oh, yes.

A. Is it given there?

Q. It is. It is given in one of the exhibits of the case.

A. No, but I mean in this case what was it?

2442 Q. In 1892 the miles of active mains from which services were then operating was 777 and a fraction miles, and in 1897 it was 792 and a fraction miles, that is only fifteen miles difference.

Mr. Burr: What page are you reading from?

Mr. Mathewson: It is from page 2192 of the Gas Commission record.

A. From this—I may be wrong in my computations—it appears that in 1897 the miles of active main were 792.60 and in 1893 the miles of active main were 777.75. The difference between those is 15 miles, or something over two per cent. increase.

Q. In the miles of main. Now taking the gas for the same time in 1893 the sales per miles of main were 8,813,000, and in 1897, 8,567,832 or 8,568,000, and the difference is 254,000 cubic feet, which is somewhere between two and three per cent. of the highest output which was in 1893. The one balances the other to a large extent, showing that the total output has probably not largely increased.

Q. That all may be so, but isn't it the fact if this exhibit is correct that in spite of an increase of 15 miles in active main the output per mile of mains in 1897 at the end of the period of depression was actually less per mile of mains than it was in 1893?

A. No, there were more miles of mains.

Q. But the output per mile of mains was less in 1897 than in 1893?

A. Yes.

Q. Now will you look at the same table and say whether it is not a fact that the sales per meter which were 37,863 feet in 1893 has fallen to 30,393 feet in 1897 at the end of the period of depression?

A. It is so stated.

Mr. **Burr**: You are reading from Exhibit 168 before the Gas Commission as it appears upon page 2192?

2443 Mr. **Mathewson**: I have that before me but I am quoting figures which are a part of the evidence in this record.

Q. Do you know in what city the consumption is next largest per capita to the city of New York—I mean what city in the world?

A. It is conceded in the evidence by, I think, Dr. Humphreys, if not Vice-President Addicks, that London is with from 8,000 to 8,500——

Q. You know that the price of gas was reduced there, do you not, from 1901 on substantially by the various companies, or haven't you studied Field's Analysis to that extent?

A. I know of but about one or two years of Field's Analysis of late. It is an old book that has been published a long time. I have not studied enough——

Q. But from the 1905 Field's Analysis it seems to appear that there was a very substantial percentage of reduction in the price of gas from 1901 on and that the rate of increase in London for 1901, the average rate of increase of all the Metropolitan companies, was .92 of one per cent. in 1901, .85 of one per cent. in 1902, an actual decrease of .56 of one per cent. in 1903, an increase of 2.98 per cent. in 1904 and an increase of .49 of one per cent. in 1905, in spite of the reduction in the price of gas. If that is correct, how do you account for the failure to increase at anything like the ratio you have suggested for New York?

A. I am not sufficiently familiar with London, the place is too distant, the customs and the precedents of the place are too fixed to be compared with any community in the United States.

Q. But if the increase in the United States in the use of gas is

2444 due to a reduction in the cost, is not London with its shorter days and foggy days and atmosphere in general more favorable to the use of gas than New York City.

Mr. BURR: That is not in the evidence here.

A. I was very careful in my discussion to confine this to facts in the city of New York, relating those and even avoiding the facts in cities close by New York. I know nothing about the conditions that you stated. I have not familiarized myself with them although it would be very easy to do so.

Q. I thought I heard you refer to the London companies and I supposed you had fully posted yourself on that subject, Professor.

A. I had stated that I considered New York as entirely different from any other community and that too after very careful consideration.

Q. In other words you think that the increase of gas in New York City will be different from the rate of increase in any other city in the country that you know of?

A. Take for instance the case of Philadelphia, I wouldn't think for one moment of comparing the possibilities of Philadelphia with the possibilities of Manhattan Island.

Q. But the output per capita in Philadelphia is not anything like so large now as it is in the Island of Manhattan, is it?

A. I heard the president of the United Gas Improvement Company say not very long ago that it was about 7,500 per capita in Philadelphia.

Q. Now, I would like to have you state if there is any limit, up to what consumption per capita you may select an increase of consumption of gas by the ratio which you have specified, at an increase of 46.46 feet, for the reduction of each one cent in price, or isn't there any limit whatever?

A. I was very careful to limit myself to two years.

2445 Q. My question is how long that is to continue and up to what limit of consumption?

A. I decline to answer beyond two years.

Q. Now, you based your estimate of the consumption of gas in 1907 to some extent, did you not, upon the increase in population in the city which you anticipated?

A. I did.

Q. And is it your supposition that the increase of population in Manhattan Island will continue to increase at the proportion which you took?

A. For two years, yes.

Q. For longer than two years?

A. I don't know.

Q. You have to face a more distant future than two years, have you not, when you will determine the price at which gas shall be sold for the future?

A. If you are safe for two years you are safe for what is beyond that.

Q. Are you familiar with the report of the Commission on additional water supply for the City of New York?

A. I am not.

Q. Will you look at this volume which I show you, entitled, "Messrs. Burr, Herring & Freeman, Engineers," and see what they estimate the population of Manhattan Borough to be in 1925, looking forward some distance.

A. On page 67 you refer to an estimate of Messrs. Burr, Herring & Freeman, 2,130,000.

Q. For 1925, is that correct?

A. For 1925.

Q. And what is the estimate for the other boroughs as specified in that estimate?

A. Bronx 675,000; Brooklyn, 2,705,000; Queens, 680,000; Richmond 130,000.

Q. In other words, their estimate for Manhattan in 1925 is less than your estimation of population for the Borough of Manhattan in 1907, isn't it?

A. 2,130,000, is it?

Q. Yes.

A. That allows an increase to 1925 from the present State census of population of 2,112,380 to 2,130,000.

2446 Q. In other words, they anticipate, do they not, that with the lines of communications to other boroughs and so forth, that the population of Manhattan in 1925 will not be substantially greater than it is to-day?

A. That seems to be their theory.

Q. They are all engineers of repute, are they not?

A. They are.

Q. Now, taking your estimate of the output in 1907, based upon your assumption of increase in the sales per capita and likewise upon your assumption of increase of population, you figure that at 80 cents per thousand the income of the company in 1907 will be only about one million dollars, or to be exact, $956,957.18, less than it was in 1905. But you have provided there for the manufacture and distribution of something like two billion feet of gas in 1907 beyond that distributed in 1905, have you not?

A. Yes, I have predicted that.

Q. It will not be possible then to apply whatever profits you get in 1907 to a return on the same limited capital investment which you have in 1905, will it? In other words, will it not require additional investment in capital in order to provide for the production and distribution of this extra two billion feet of gas?

A. I am not sufficiently familiar with the conditions of these works and stations of the Consolidated Gas Company to express an opinion on that point or as to the amount required.

Q. But you testified that the plants of the Consolidated Gas Company, according to the testimony, had already reached their maximum capacity, taking the daily capacity and multiplying it by 200?

A. I testified that it so appeared, but it is only apparent——

Q. Well, if it so appears and if it so is, because that is the testimoney of the officers of the company, and if you assume that $2.00 is required to provide plants for the production and distribu-

2447 tion of each 1,000 feet of gas as you testified yesterday to be your opinion, that would mean an additional plant, would it not, of about $4,000,000 in addition to the existing plant to provide for the extra two billion feet in 1907 over 1905?

A. I should say that in a general way and as a matter of opinion merely that the plant would increase in cost with the output, assuming the increase of plant to have been in the past what it will be in the future.

Q. The profit in 1907 even if reduced below the profit of 1905 by only this $956,000 must take care of and pay a return upon a plant value in excess of the plant value existing in 1905 of about $4,000,000, if you are correct in your assumptions; is that not correct?

A. If the plant had been established on the basis stated by my figures then that would be correct, partially. Of course with a larger plant you can always expect a decrease in the cost of manufacture somewhat, and certainly if you have an ample distributing system a very considerable decrease in the cost of distribution.

Q. But whatever increase there may be it will not be possible to apply the income of the company in 1907, which will be less upon your theory by $956,000 than that for 1905, to pay a return upon only the plant of the Consolidated Gas Company as existing to-day and producing the gas which it now sells; is that a fair statement. In other words, you have reduced the income by a little less than a million dollars, if your theory is correct, and you will have a greater plant and investment than you have to-day, upon which a return will properly be paid, is that right?

A. To answer you in figures on that point——

Q. I don't ask you to answer that in figures. I ask you whether that is the fact.

A. The question is not sufficiently concise and clear for a concise and definite answer.

2448 Q. I will put it this way: You expect, do you not, that the investment of the Consolidated Gas Company in its manufacturing and distributing plant in 1907, if its output is fifteen billion feet and more, will be greater than the investment required to-day with its output of thirteen billion feet and more?

A. Yes.

Q. And at the same time you estimate that the income of the company will be reduced a little less than a million dollars?

A. The gross income.

Q. The gross income a million dollars.

A. Yes.

Q. And assuming the cost of gas is the same in 1907 as it now is the net income will be reduced by the sam- sum, will it not?

A. Yes; no, the net income will not, excuse me.

Q. Well, why not. With the gas being produced at the same cost in 1907 as it is produced now?

A. Because the profit is on each thousand and the number of thousands turned out in 1907 will be larger than the number of thousands turned out in 1905, and consequently the net profit will be larger in 1907 than the net profit in 1905.

Q. We will assume that the gas costs the same in each year, Professor. You figure out in your testimony that the return in 1905 to the Consolidated Gas Company was $13,000,000 on account of its gas sales, and you then figure, do you not, that taking the output of 1907 as estimated by you at 80 cents, the company would receive only something more than $12,000,000, making an actual decrease in its gross receipts of $956,957.18, is that correct?

A. That is a correct statement, with this qualification, if you please, that I accepted the figures of the company for the sum of $13,000,000——

Q. Oh, I understand that, Professor.

A. Yes.

Q. In other words, the company in 1907 would sell something
like 2,000,000,000 feet more of gas and it would receive in
2449 gross $956,000 less in revenue, and at the same time have
an increased plant and investment in 1907 upon which it
must pay a return above its investment in 1905; is that a fair statement or is not that true?

A. The difficulty in making reply to that question——

Q. Can you not answer?

A. (Continuing)—is due to the fact that the statements of the Consolidated Gas Company's accountants were compared with the statements resulting from computations on a projected possible gas sale at a price of 80 cents. If 13,300,000,000 cubic feet of gas are sold at $1 per thousand, it will produce a gross revenue of equal amount, that is $13,300,000.

Q. If 15,300,000,000 cubic feet of gas were sold at 80 cents——

Q. Won't you look at page 2281 of your testimony——

Mr. **Burr**: Let him complete his answer, please.

The **Witness** (continuing): It will produce a gross revenue of $12,240,000.

By the **Master**:

Q. That is how much less than the other?

A. About $900,000 less.

By Mr. **Mathewson**:

Q. You testified yesterday that the receipts in 1907 upon that basis would be $956,557.18 less?

A. That is more accurate.

Q. Now, I will ask the stenographer to read to you my last previous question again, and ask you whether, assuming the testimony
of the company's officers as to the amount of gas sold and the
2450 amount received for it to be correct, my question does not
state an accurate conclusion.

The **Stenographer** (reading question as follows): In other words, the company in 1907 would sell something like two billion feet more of gas and it would receive in gross $956,000 less in revenue and at the same time have an increased plant and investment in 1907 upon which it must pay return upon its investment in 1905, is that a fair statement, or is not that the truth?

A. Under the assumption of $2.00 capitalization per thousand cubic feet this statement is correct.

Q. Well, if it was $1.00 additional investment required for an additional thousand cubic feet it would still be correct, wouldn't it, and merely involve the question as to how much the investment would have increased in 1907?

A. That is merely a question of proportion.

Q. And at the same time the company would have to pay the cost of the additional two billion feet of gas and over which it sold in 1907, would it not?

A. The cost of manufacture and distribution.

Q. Yes.

A. Yes.

Mr. **Burr**: If you have finished on that point I have a witness from Philadelphia I should like to call for five minutes to verify this statement as to the price of gas by the accountants that I referred to at the time that we offered in evidence the report of the Chicago Gas and Electric Board.

Mr. **Mathewson**: I don't know, I might want to cross-examine him at some length. I have been forced on to the cross-examination of this witness on the stand and I do not think that I ought to assume that I can get through with him immediately. I want to accommodate as much as I can, but—— 2451

Mr. **Burr**: I simply want to call him to verify the letter that is now in evidence that the accountants employed by the City of Chicago found the cost of gas to be as stated in that letter.

Mr. **Mathewson**: If they wrote that letter.

Mr. **Burr**: No, that this man directed the investigation and that was the result as stated in that letter.

Mr. **Mathewson**: I do not think I can consent to five minutes intermission for that purpose. I am afraid it would take too long, Mr. Burr. I think he had better stay over. I may have quite a cross-examination on that point, if that is supposed to be competent at all.

Mr. **Burr**: Well, I will bring all the witnesses you require on that point. Then you decline to allow me to call him for that purpose?

Mr. **Mathewson**: No, I do not decline. I merely say I do not think it would be wise because he could not get through in five minutes, I know.

Mr. **Burr**: How long would you probably take?

Mr. **Mathewson**: I don't know. I would have to look into the report to which you refer and it might take some time. I should hate to have him put on and then be compelled to cross-examine him as you might ask me to, right on the spot.

Mr. **Burr**: Would you let me put in the direct testimony and reserve the right of cross-examination to some later period?

Mr. **Mathewson**: Yes, I will do that.

2452 The **Master**: You agree to reproduce him here or else strike his testimony out?

Mr. **Burr**: Yes.

(Witness withdraws).

JAMES HALL, a witness called on behalf of the City, being first duly sworn, testified as follows:

Direct examination by Mr. BURR:

Q. Are you connected with the firm of Marwick, Mitchell & Company?

A. Yes, manager of the Philadelphia office.

Q. Marwick, Mitchell & Company are engaged in what business?

A. Chartered accountants.

Q. Are you a chartered accountant?

A. Yes, sir.

Q. How long have you been engaged in that?

A. I have been in the business thirteen years.

Q. Was the firm of Marwick, Mitchell & Company employed by the City of Chicago to invest the accounts of the People's Gas & Coke Company of Chicago, Illinois?

A. Yes, sir.

Q. In what year?

A. In the course of the year 1905.

Q. Did you conduct the examination for them?

A. Yes.

Q. Did you make a report to the City of Chicago?

A. Yes.

Q. I show you page 40 of the Report of the Committee on Gas, Light and Electric Light to the City Council of Chicago, January 29, 1906, and ask you whether the paper marked Exhibit A is a correct copy of the report made by you on behalf of the firm of Marwick, Mitchell & Company?

A. Yes, that is a correct copy.

2453 Q. And did you find, as a matter of fact, the difference which is stated here of 8.0746, being the difference as between the price stated of 53.5294 of the Gas Company and 45.4548 as revised by Marwick, Mitchell & Company?

Mr. MATHEWSON: Is that part of the report?

Mr. BURR: Yes.

Mr. MATHEWSON: Are you referring to a statement in the report?

Mr. BURR: In the report.

Mr. MATHEWSON: Then I object to it. The report is the best evidence as to what it says.

Q. Did you find, as a fact, a difference between the cost of manufacturing as stated by the People's Gas Light & Coke Company, and what you found as the result of such examination of their accounts as you have stated you made?

Mr. MATHEWSON: Objected to as irrelevant and immaterial. Is the presumption that we are doing the same thing, or what——

Mr. BURR: Well, we will not indulge in presumptions at this stage.

Mr. MATHEWSON (continuing): If he found a difference between what the company gave and the figures that he figured out——

Mr. **Burr**: It is fully stated in this report which is identified and here is a copy of the report which he swears is a copy.

The **Master**: I will have to exclude it, Mr. Burr, unless you can show something more than appears on the surface as showing it is relevant and material here.

Q. What was your examination of the books of the People's Gas Light Company?

2454 By Mr. **Mathewson**:

Q. Does that not appear in the report itself as to what the result of the examination was?

A. Yes, sir.

Mr. **Burr**: But if he knows of his own knowledge, having made the examination, he is competent to testify. If he can swear to it as a fact I think he is entirely competent to testify to it as a fact. The mere fact he has made a written report does not preclude him from testifying what he finds himself, if he knows it to be the fact.

The **Master**: Is the evidence competent anyway? That is the part that suggests itself to me.

Mr. **Burr**: I asked Doctor Marks what was found to be the price of the manufacture of gas in Chicago?

The **Master**: The cost.

Mr. **Burr**: The cost of the manufacture of gas in Chicago. He gives it at a certain figure and it is objected to and I say I will verify that by the accountants who found it. Now we went to the accountants——

The **Master**: The accountant has testified he examined the books and made a report on them. Now suppose that he testifies one way or the other about this, how is it possible in this proceeding here, without taking out a commission and going to Chicago to have his testimony of any value? How is it possible to cross-examine him? How is it possible to say whether his examination of the books was complete or accurate?

A. You have not got the books here and you cannot produce them here.

Mr. **Burr**: I will ask him this question:

2455 By Mr. **Burr**:

Q. Is it not a fact that the cost of manufacturing and distributing gas, including renewals in the City of Chicago, was stated and claimed by the People's Gas Light & Coke Company to be 53.5294, and that as a matter of fact as a result of your investigation you found the cost of manufacture and cost of distribution including renewals to be 45.4548, making a difference of 8.0746 between the cost as claimed by the company and the cost as found by you as a result of your examination which you testified you made?

A. Yes.

Mr. **Mathewson**: Objected as incompetent, immaterial and irrelevant.

Objection sustained; exception.

Q. That is the fact?

A. Yes, sir.

Q. Did you make a thorough examination?

A. Yes, sir.

Q. With assistants?

A. With assistants, yes, sir.

Q. What was the scope of the examination?

A. We went thoroughly into all the vouchers and further examined all the payrolls and work tickets as used and turned in by the laborers, checked them up against the laborers for the purpose of determining whether all the charges in the revenue accounts were proper charges.

Q. And distinguished between maintenance and capital expenditures?

A. And distinguished between maintenance and capital expenditure.

Q. Could you have made the report you submitted without having made the examination you made?

A. No.

Q. And for the purpose of ascertaining what should be applied to the cost of manufacture and distributing, was it necessary to analyze the maintenance and revenue accounts?

A. Absolutely.

2456 Mr. BURR: That is all. The understanding is that your testimony is taken now, but at a future time at the convenience of counsel you will appear for cross-examination.

The WITNESS: All right, sir.

WILLIAM D. MARKS resumes the stand.

Cross-examination by Mr. MATHEWSON continued:

Q. In reference to your chart showing, or purporting to show, the sales per annum made in 1888 down to 1905 and the sales per capita, there are no details of the chart, are there, which are within your personal knowledge, so far as the figures of output, population, etc., are concerned?

A. I have not operated any works or measured any of the gas.

Q. But it is made up from whatever information you have gathered from Brown's Directory and in some cases your estimate, without personal knowledge on your part, isn't it?

A. My main reliance has been the testimony before the Gas and Electricity Commission.

Q. But there was no testimony given before the Gas and Electricity Commission for any period back of 1900, was there?

A. The list of the total output of the Consolidated Gas Company is given beginning in 1884 and in one of the exhibits and that was utilized from 1888, and as the Consolidated Gas Company appears to have gotten out about two-thirds of all the gas sold on the Island of Manhattan, it made a preponderating quantity which rendered any estimate which might have been slightly one way or the other of comparatively little significance as sources of error.

2457 Q. Was there any such data before the Gas Commission in reference to any of the other companies except the Consolidated Gas Company—I mean sales each year from 1884 down?

A. Referring to the chart, the Standard Gas Company in 1904, from the testimony——

Q. Yes, my question was whether back of the year 1900 there was any testimony before the Gas Commission as to the output of sales of gas of these various companies other than the Consolidated.

A. In 1899 the New York Mutual Gas Company was taken from testimony——

Q. Anything back of that?

A. And the New York Mutual in 1898 and the New York Mutual in 1896.

Q. From what testimony?

A. Testimony given either in the Stevens Commission or before the Gas and Electricity Commission.

Q. Do you remember which?

A. I don't remember which. It is marked "T." It can be found. In 1897 the New York Mutual, in 1895 the New York Mutual, from testimony. And then from 1894 back to 1888, Brown's Directory——

Q. How about the other companies, the New Amsterdam and the Standard?

A. The New Amsterdam Company is from Brown's Directory with intermediate estimates.

Q. Do you know who estimated those intermediates?

A. I did, with the aid of my assistants checkers.

Q. Do you know where Brown's Directory got the figures?

A. Mr. Brown stated he got them by making direct application and sending blanks to the various gas companies. getting his figures from the officials of the companies.

Q. Did he tell you he got the statement from the Standard and New Amsterdam Company?

A. No, he did not specifically name any company.

2458 Q. And the proportions of output which apply to the Consolidated and the per capita and other items there depend then for their accuracy upon these estimates and the information from Brown's Directory, except as far as they appear in the testimony before the Gas Commission — the Stevens Committee, do they?

A. With the exception of the output per capita for 1905 on which I lay a great deal of stress, being 9,250; independent investigation and corresponding very closely to the 9,150 or 9,200 given by Mr. Addicks as a result of his presumably thorough knowledge of all the gas works of Manhattan.

Q. You know he has only been here two or three years, don't you, Mr. Marks, in New York City—do you know that?

A. I knew that he had been here for two or three years.

Q. Do you mean to say he told you he was thoroughly familiar with all the gas works of these other companies outside of the Consolidated?

A. Average ability in a man who had been here two years ought to be able in his position to obtain every figure that was necessary.

Q. If he was directing his attention specifically to getting those figures, that might be so, but do you think he would have in his mind all of these items upon those books with reference to the plants of other companies after being here two years?

A. It would certainly be part of his duty as manager of so stupendous a corporation to post himself thoroughly on all these figures.

Q. Away back to 1888?

A. As far as he can go.

Q. Do you consider that the increase of the per capita sales on which you have figured will come from sales to new consumers or from the increased sales to the old consumers?

2459 A. So far as the population increase influences from sales to new customers; so far as the reduction of price influences, from all the consumers, both old and new.

Q. Will there not be a point where there will be no new consumers except as population grows?

A. I fail to grasp the question.

Q. Well, there will be a point ultimately where there will be no new consumers except by the increase in population? I am trying to find whether there is any limit to your assumption or not?

A. That seems to be rather an academic question.

Q. Well, perhaps it is.

A. Well, I don't know, I am frank to say.

Q. Is it not true that the greater the output of gas as a rule the smaller the consumption per meter?

A. No, indeed.

Q. So that the increase in the gross output results rather from an increased number of consumers than from the consumption by each consumer of a larger amount of gas?

A. That is purely a theory.

Q. Well, is it not carried out by the testimony in this case that shows that in 1885 the sales per meter were 36,038 feet with gas at about $1.70, whereas in 1905 there were only 34,031 feet with gas at $1.00, a reduction of seventy cents. Is that not the experience of the Consolidated Gas Company, if the testimony here is correct?

A. The causes of that I cannot say.

Q. I ask you whether that is not the experience of the gas company, if the testimony here is correct?

A. The experience of the Consolidated Gas Company?

Q. Yes.

A. I presume as you state it is so.

Mr. Burr: The figures speak for themselves, if they are true.

Q. Well, what is the explanation of that?

2460 A. There is nothing so helpless as a big corporation with an antagonistic lot of consumers and patrons, and even though the corporation may be entirely fair in its attitude, really, if the community is against them they lose all the time; people must have gas but they will use just as little as possible.

Q. They use more than they need if they like the corporation, is that correct, or do they use what they need and pay only for what they need, whether they like the corporation or not, in your experience?

A. Their attitude is not rational, perhaps, but they are more generous towards those whom they feel very friendly to. I speak of that as a factor of real value in the management of any corporation.

Q. Will you state any company of which you have ever known where there has been an increase of sales per meter with a large increase in the output of gas?

A. I have never studied the question of the sales per meter, but always as a question of the sales per capita, in a community.

Q. Is it not true that where the company pushes for more business that it as a rule has the larger consumers already on its lines and that the result of its efforts is to get the smaller consumers on, thereby reducing the average and is not the same effect observable where you put out prepayment meters? Does not that all tend to reduce the average consumption per meter as you increase the number of your consumers?

A. Each and every company whether of gas or electricity is a study by itself. You cannot enunciate any generality or law of that sort. It depends upon the community that it happens to be in.

Q. You say you read the testimony before the Stevens Committee and the Gas Commission. Do you recall Professor Bemis' statement before the Gas Commission in substance that local conditions govern the cost of gas in a community and that it cannot be determined from general data? 2461

A. I do not recall it as a specific statement.

Q. You testified that in reference to the cost of gas no examination of the plants of the company has been made and that no examination by experts of the company's books has been made. Were you not aware that the Gas Commission examined all the plants of the Consolidated Gas Company with their engineer, going over them so far as they desired, including the Astoria plant and that the order fixing the price of gas recites their inspection?

A. I testified of that which I had personal knowledge. I know nothing about the doings of the Gas Commission and there was nothing specific and no reports given showing an inventory or an accountant's statement of the investigation.

Q. Did you testify yesterday that the reports of the Gas Commission and of the Stevens Committee were made without any opportunity to inspect the plants or without an inspection?

A. I should change that, perhaps, without making any report of the inspection of the plant and without making any accountant's report of an inspection of the books——

Q. Now, Professor, in view of your statement yesterday, I think it is proper to call your attention to this recital in the order of the Gas Commission fixing the price at 80 cents, page 46 of the complaint: "The said Commission having investigated as to the causes for such complaints and inspected the works, system, plants and methods used by said Consolidated Gas Company in manufacturing and distributing such gas and having examined the books and papers of such company pertaining thereto." Now, do you mean still to say

2462 that the action of the Gas Commission was without any inspection of the plants of the Consolidated Gas Company and without any examination of their papers or vouchers?

Mr. **Burr**: I object to it. How does he know? He does not assume to say——

Mr. **Mathewson**: He should not have said so.

A. I do not assume to say that their action by themselves was without due precaution so far as they are concerned but I do assume to say that they made no report which would enable anybody else save themselves to form any opinion either as to the value of their inventory or as to the value of their accountants' report.

Mr. **Burr**: There is no inventory in the proceeding and no accountants' report.

Mr. **Mathewson**: That is not the point. It is one of many statements, I am sorry to say, that should not have been made.

Q. Why did you state, if you have not any knowledge on the subject, that the action of the Gas Commission was without any examination of the plants of the Company or their books and vouchers?

A. May I see that statement?

Q. Don't you remember such a statement in substance?

A. I do not recall such a statement.

Q. Well, you have your testimony of yesterday?

A. Well, you are referring to it. If you will kindly show it to me——

The **Master**: Was it yesterday or day before yesterday?

Mr. **Mathewson**: Day before yesterday, I think.

Q. Did you read the testimony of Mr. Arthur W. Teal before the Stevens Committee?

2463 A. I read with a great deal of interest his statements as to the cost of gas for four or five years.

Q. Do you know he was the expert engaged by the Stevens Committee to examine the books of the Consolidated Gas Company at the time of their investigation in 1905?

A. I knew he was an accountant engaged for that purpose.

Q. By the Committee?

A. By the Committee.

Q. And did you observe his statement that the cost of gas for those four or five years was 61 and a fraction cents, excluding fixed charges and any reserve fund and also any amount to equalize repairs and renewals with an average term?

A. I noticed that.

Q. Well, you had at least that data to assure yourself when you proceeded to examine the cost of gas, didn't you?

A. I beg your pardon, I have no confidence in that data at all.

Q. Oh, you have not?

A. No.

Mr. **Burr**: He may state his reasons, I suppose?

Mr. **Mathewson**: No, I do not care anything about his reasons.

I assumed that the Stevens Committee expert who examined the books was worth something.

Mr. **Kirby**: Mr. Mathewson knows how far he went in his examination.

Mr. **Burr**: He totaled up the totals, which is what you wanted us to do.

Mr. **Mathewson**: I don't know, I supposed it was entitled to some consideration.

Q. Do you know that his conclusions and statements as to the cost of gas for five years were quoted by the Stevens Committee in their report?

A. Why, yes.

2464 Q. Do you know that in the present case experts representing the city and the State or one or the other have been at the office of the Consolidated Gas Company for two or three weeks going through the accounts of the Company with reference to the cost of gas among other things, that is Exhibit 94.

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial.

Mr. **Kirby**: And a misstatement of what was in fact the case.

The **Master**: Objection overruled.

Mr. **Burr**: May he explain then?

Q. Did you know that?

A. Am I to answer, Mr. Master?

The **Master**: Yes.

The **Witness**: I heard so. It had no influence on me at all, though I was perfectly indifferent to what the statement might be.

Q. Did you not state yesterday that there has been no comparison of vouchers with accounts in connection with this Exhibit 94?

A. In such a statement as that I referred distinctly to a comparison of vouchers with accounts, of which I am cognizant and in which I have some portion, at least, of authority to determine.

Q. You appear here, do you not, to testify upon the retainer of the City of New York?

A. I do.

Q. And what you mean to say then, when you do state that there has been no comparison of vouchers with accounts and no examination of subsidiary books, is that you yourself have not made such comparisons and examinations, is that correct?

A. I do not mean that.

Q. Do you mean that no such comparison or examination has been made by representatives of the city or of these defendants?

2465 A. I mean that there has been no such examination as is necessary, made by representatives of the city to my knowledge, by experts in the art of gas making.

Q. Well, Mr. Cuthbert, who made the examination, is not an expert in the art of gas making, although he is an expert accountant?

A. A mere accountant may make many blunders in adding up figures. One must have a fairly good knowledge of the business in order to see that accounts are not sophisticated.

Mr. **Kirby**: I think this is entirely misleading. Mr. Cuthbert has made no such examination and the inference of Mr. Mathewson's questions is that he has. They examined what they were permitted to.

Q. Now, do you know of the firm of accountants which made the examination at Chicago?

A. I have heard of them.

Q. They did not have any knowledge of the gas business particularly, did they, so far as you know?

A. I don't know. The first I ever heard of them was within a few days.

Q. And your view would be, if they were not familiar with the gas business and acquainted with that, that their examination would be of little value, would it?

A. Unless directed by some one familiar with the gas business.

Mr. **Burr**: Will you permit me on that subject to ask the Doctor a question?

Mr. **Mathewson**: Well, had you not better wait until I get through, Mr. Burr? If it is important that you ask him right here, I will allow you, but I would prefer to finish my examination first, but go ahead.

2466 By Mr. **Burr**:

Q. Since the adjournment of September 14 did you have any interview with any of the officers of the Consolidated Gas Company for the purpose of procuring an examination such as you thought would be necessary?

A. At the secretary's request, over the telephone, and in response to a request on my part here, to have an opportunity to examine the accounts or at least a few of the accounts of the Consolidated Gas Company, I visited No. 4 Irving Place, the principal office of the Consolidated Gas Company, and had an interview with the secretary, stating to him——

Q. Mr. Carter, do you mean?

A. Mr. Carter. Stating to him what I deemed to be necessary for the purpose of facilitating my work in examining the cost of gas and the cost of the manufacturing plant.

Q. What was the date, September 20?

A. If I remember rightly, it was about September 20.

Q. And as a result of that interview what happened?

A. Mr. Carter promised to write me a letter after consultation with his fellow officers the following morning, and I was about that time called upon on the telephone and told that it would be impossible to grant me access to one account, the real estate, which I had asked; that I was at liberty to examine and compare the ledger which had been put in evidence, and that I should have no opportunity to visit and examine the work, even in a cursory way.

Q. What action, if any, did you take upon receiving that information from Mr. Carter?

A. I at once placed the whole matter before the assistant corporation counsel, and with his approval wrote a letter to Mr. Carter covering the situation.

2467 Q. (Handing paper). Is that a copy of the letter? A. That is.

Q. Will you read it?

Mr. MATHEWSON: I object.

Mr. BURR: You brought this out yourself now. You asked him what facilities he had and I am going to show just what he had and what facilities were denied him.

Mr. MATHEWSON: No, I have not asked as to that. I am asking him as to his statement that no examination of the books had been made, made so broadly that nobody could understand but the one thing, that no examination had been made. Now, he says that he has not made any.

Mr. BURR: I will show this to the Master and let him understand the situation. That is a copy of the letter Mr. Marks sent to Mr. Carter as the result of that refusal to give him the information which he asked. Now, if Mr. Mathewson had not referred to those things I would not have brought that out.

Mr. MATHEWSON: The witness himself brought up the whole subject.

The MASTER: I do not see that it is particularly important. It is subsequent to the day of adjournment and subsequent to the complainant's resting their case. However, I will let it go in if you think it is important.

Mr. BURR: Well, I do. I will ask the witness to read it.

Mr. MATHEWSON: Exception.

The WITNESS (reading):

2468 "OFFICE OF THE CORPORATION COUNSEL OF THE CITY OF NEW YORK, *September* 20, 1906.

Mr. Robert A. Corter, Sec'y, Consolidated Gas Company, 4 Irving Place, N. Y. City.

MY DEAR SIR: Referring to our verbal interview of yesterday, I would say that I had hoped to have a letter from you (as per your promise) this morning, giving your replies to my requests for definite information on the following points:

First: An exact transcript of the Real Estate account of your general ledgers, together with transcripts of the entries from the journal and cash books, which are posted in the Real Estate account of the general ledger, and with permission to examine these accounts and vouchers.

Second: A statement as to the facilities which you could afford me, and a requisite number of assistants in comparing the vouchers and subsidiary books and payrolls, with the entries upon your operating ledgers.

Third: A reply to my request for an opportunity to make a general inspection of the stations and works of the Consolidated Gas Company, with access to the drawings and maps and records, for the purpose of facilitating this inspection, and enabling me, with my assistants, to make a sufficiently accurate inventory and valuation of the existing plants and distributing system, to be satisfactory to the Corporation Counsel.

Referring to your telephone message of this afternoon at 4.30, I understand your verbal reply to be.

First. A refusal of access to or a transcript from the Real 2469 Estate account of your general ledger and other books.

Second. A verbal statement that you will furnish me with all the facilities required for the examination of your operating ledgers in evidence, and a comparison of the vouchers and subsidiary books and payrolls.

Third. You advise me that it will be impossible to permit me to make a visit of inspection, and an inventory of the stations and works of the Consolidated Gas Company, and finally that you prefer not writing any letter at all, but merely acceding to my second request verbally.

It is apparent from this to me, that it is quite impossible to make a complete and satisfactory investigation of the cost of gas, and of the cost of gas works, and that at no time have the various investigators been afforded an opportunity, in a complete and thorough manner, to learn what is imperatively required to make a report worthy of consideration, as accurate and exhaustive.

In view of this situation, which I have communicated to Assistant Corporation Counsel Burr, it is quite apparent that the motion for an investigation of the company's books and vouchers, and an inspection of its plant, must be proceeded with as originally mapped out by the Corporation Counsel.

Yours truly,
(Signed) WILLIAM D. MARKS."

By Mr. Mathewson:

Q. I had not proposed to go further than to call attention to your statements and ask you how you confirm them with the facts 2470 as they were, but this compels me to ask a few more questions. You state in this letter that "at no time have the various investigators been afforded an opportunity, in a complete and thorough manner, to learn what is imperatively required to make a report worthy of consideration, as accurate and exhaustive." Do you mean that the report of the Stevens Committee was not worthy of consideration?

A. I have not in that any reference to anything more than the various parties who have been concerned with myself in this matter.

Q. But you say that at no time have the various investigators been afforded an opportunity, &c. To whom do you refer by the various investigators?

A. There were a number of men, Prof. Bemis is one of them; there were two or three experts who are no longer in the City's employ.

Q. Who are they, what are their names?

A. There was Mr. Witherby——

Mr. Burr: Well, is that material?

The Witness: I think not.

Mr. MATHEWSON: I think it is pretty material, if he has put such statements as these on the record.

The WITNESS: Mr. Beedle, both of whom——

Q. I simply asked you their names. Answer my question if you will.

A. Both of whom were at no time afforded an opportunity to go through the works.

Q. When and from whom did they request such an opportunity and on what occasion?

A. I don't know all the details of this transaction.

2471 Q. Well you seem to state them in your letter with great emphasis, as though you knew all about it, Professor. I am trying to get at if you know what you are talking about?

A. I am speaking of my own knowledge entirely.

Q. When you state that "at no time have the various investigators been afforded an opportunity," &c., "to learn what is imperatively required to make a report worthy of consideration," did you intend to include in the investigators the Stevens Committee?

A. I told you I did not.

Q. Did you intend to include therein the Gas Commission?

A. I told you that so far as that letter was concerned that I referred to those associated with me.

Q. Then I do not understand you to mean that either the Stevens Committee or the Gas Commission were not given an opportunity to make such investigation as they proposed, is that right?

A. I made no reference to them in any way or form.

Q. Have you conferred with Mr. Cuthbert, the accountant for the State, or Mr. Hayward, the accountant for the city, as to the facts that they found upon their examination in this proceeding, of the books of the Consolidated Gas Company?

A. Mr. Cuthbert I have never met. Mr. Hayward I have met and have heard him speak with regard to——

Q. Did you make any request or suggestion that you go with Mr. Hayward when he made his examination or when the books were thrown open to the examination of the defendants' representatives a few weeks ago?

A. I don't know that I specifically asked to go with Mr. Hayward. I have asked at all times, in season and out of season, to be given an equal opportunity with others to see the works and see the books.

2472 Q. Did you make any request or suggestion that you go with Mr. Hayward or at that time while the experts were examining the books in order to satisfy yourself?

A. Of whom do you mean should I make the request?

Q. The counsel for the city?

A. I don't recall that I did at that time.

Q. Did you make any request of any officer of the Consolidated Gas Company at that time that you be permitted to go with Mr. Hayward and join him in any examination of the books which he desired to make?

A. I have made but two requests of the officers of the Consolidated

Gas Company; one for access to the works, to the Vice-President and the other to the Secretary for access to the books.

Q. And this request to the Secretary was after the Complainants had closed their case and all their evidence was in and after the examination by Mr. Hayward had been completed, was it not?

Mr. Burr: By Mr. Hayward?

Mr. Mathewson: Yes.

Mr. Burr: Mr. Hayward never completed that examination and was never afforded an opportunity to make such an investigation as he desired.

Mr. Mathewson: You have made the statement, and I state emphatically, he was given the opportunity to make any investigation he desired, and see any vouchers he desired, as was Mr. Cuthbert, and if he did not, it was his own fault.

Mr. Burr: You gave us the shadow of an investigation while holding back the substance.

Mr. Mathewson: You stated here before the Master repeatedly, that you would wait until you saw what the state expert got, and that if that was not sufficient, Mr. Hayward could ask for anything more that he desired, and he was asked for nothing more. It is getting a little tiresome, this assuming that we have not given you an opportunity. 2473 & 2474

(At 4.40 P. M. an adjournment was taken to 11 o'clock to-morrow morning, October 4th, 1906.)

Last Exhibits:
Complainant's Exhibit 255,
State's Exhibit W,
City's Exhibit 54.

2475 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Thursday, *October* 4, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

2476 William D. Marks resumes the stand.

Cross-examination continued by Mr. Mathewson:

Q. Having computed the profits of the Consolidated Gas Company for the year 1907 on the basis of eighty-cent gas, you proceeded to state on page 2335 of the testimony that this would give the company a profit on the investment in plant as you assumed it, of from ten per cent. to thirteen per cent. What valuation of plant did you use as a divisor to procure that result?

A. At the time that I made that reply I was in great pain from my eyes and I was not as full in my answer as I should have been. It appears probable that with the price of gas fixed at seventy-five cents to the city and at eighty cents to the consumer, that the profit of operation for the year 1907 would be about five million dollars, more or less on an actual structural cost of something less than thirty million dollars. Or, taking figures from complainant's Exhibit 81, investment in the gas business, October 31, 1905, an apparent constructural cost of $40,500,454.99, which has been claimed, or again $49,110,454.99, investments of a tangible nature claimed as required in the gas business, showing a percentage ranging all the way above seventeen in the first case to about ten in the last case.

Q. And in neither case did you in your division and the four million dollars or such a matter which you said yesterday would be required to add the additional plant to produce and distribute this additional two billion feet per annum, did you?

A. From the figures——

Q. Cannot you answer directly?

A. Hardly as a technical question. It is not a technical question.

2477 Q. I merely ask you whether you did add that four million dollars or thereabouts which you said would be required to produce the two billion feet per annum.

A. Agreeing, then, with the request to be brief, that four million dollars was in there. I can explain how it was in there if you wish.

Q. Well, it was not in there if you took the forty million as the company has stated in the one case, or the forty-nine million as it stated in the other; was it?

A. I refer you to my figure of about thirty million dollars.

Q. Was it included in the forty million dollars which you say were the company's figures?

A. The company's figures were taken, as all other figures are taken by me, as being doubtful and for that reason not used as a basis.

Q. But you say you did use the forty million dollars as a basis to compute one of these per cents. Now I ask you whether that forty millions included the additional value of plant that would be required to produce the additional two billion feet.

A. It did not, because I did not think——

Q. I merely asked you whether it did. Won't you give direct answers? If not, I shall have to request the Master to instruct you to do so. Now in computing your apparent profit of about five million dollars in 1907, you take operating expenses at about $8,208,000, if I read you testimony correctly on page 2334; is that right?

A. Page 2334, apparent operating expenses, $8,208,505.

Q. But on page 2333 you state operating expenses for 1905 in the production of thirteen billion feet of gas on that valuation to be $8,786,000, or more than $500,000 more than you allowed for 1907, with two billion feet additional for the latter year; how is that?

A. On page 2333 I took the figures of results of Messrs. Addicks and Humphreys; not my own.

2478 Q. And in this $8,208,505 it is not based upon the testimony of the company's officials here, but upon your own deductions; is that right?

A. The $8,208,505 on page 2334 is obtained by multiplying 15,342,981,000 cubic feet of gas by the apparent cost deduced by myself from the company's data of fifty-three and a half cents.

Q. Eliminating these various items of taxes and one thing and another which you stated you did not eliminate in your previous testimony?

A. Very carefully stated in figures.

Q. So that if those deductions were not justifiable the amount of the operating expenses would be very much in excess of $8,208,000 in 1907, would they not?

A. They would appear to be.

Q. Well, not making those deductions, they were something like $8,786.000 in 1905, weren't they, when only thirteen billion feet or something over of gas was distributed?

A. What page?

Q. Page 2332. In fact, they appear to be stated by you as from the complainant's Exhibit, $8,964,486.98, at the bottom of page 2332?

A. Yes. In complainant's Exhibit 96 for 1905.

Q. You haven't any doubt, have you, upon that basis, the operating expenses in the production of fifteen billion and more feet of gas in 1907 would be very substantially more than the operating expenses upon the same basis for 1905?

A. As a mathematical computation, yes.

Q. So that in that event there would be a very substantial addition to the operating expenses to be deducted from the revenue as computed by you in 1907 and a corresponding reduction in the balance of profit?

A. As a theoretical, mathematical computation, yes.

Q. Now, if I understand you correctly, your theory of the increase of sales due to the reduction of price involves particularly the period from about May, 1899, to about May, 1900, when you testified the price of gas in the gas war was reduced to about sixty-five cents, and you attributed the increase at that time to the fact of the reduction, did you not? 2479

A. Not to sixty-five cents, but to eighty-two cents average.

Q. But the eighty-two cents average included, did it not, the full dollar rate during a considerable part of the year 1899 and the full dollar rate after the gas war was over, in 1900, from May on?

A. It did.

Q. Therefore, there could not be any increase in the sales due to a reduction while that dollar rate was still in existence, and the increase, if it was due at all to the reduction, must have taken place between May, 1899, and May, 1900, and been due to the rate at which gas was then selling, which was sixty-five cents, you stated, isn't that so?

A. I did not so state.

Q. Didn't you state the gas sold at sixty-five cents?

A. I stated the gas sold at sixty-five cents.

Q. During the gas war?

A. During the gas war.

Q. Well, now, let us take the rate of sixty-five cents. The statutory rate at that ime, I should have said, Professor, as stated by you, was $1.15, and not $1.00.

A. At the beginning; if I can find the chart I can find those details.

Q. Was it $1.15 in 1899?

A. From the chart it appears that in 1899 the average price obtained——

Q. (Interrupting.) I didn't ask you that——

A. (Interrupting.) Was eighty-five cents——

Q. I didn't ask you that. I asked you whether the legal rate for gas as permitted by statute was not $1.15 in 1899?

A. On that point I am not informed.

Q. How did you get your thirty-three cents which you
2480 said was the difference between the average rate for that year,
1899, and some other hypothetical or exact rate?

A. Referring to the price of gas for 1898, it has been deduced as averaging $1.15. Referring to the price of gas for 1900, it has been deduced as eighty-two cents. The difference between these two is thirty-three cents.

Q. Now, if the increase in the sales of gas were due to a reduction of price, and the price while it existed was sixty-five cents, that would mean a difference not of thirty-three, but of how much below $1.15?

A. Well, sixty-five cents and $1.15 would be fifty cents.

Q. Now, if you applied fifty cents to the increase in sales which you have testified to and which you use as the main item in getting your 46.46 feet per capita, what would be the result?

A. May I explain to you, Mr. Mathewson, that I have canvassed that question of the divisor in this case very carefully, in which——

Q. I know you have, and so have I——

A. And the thought occurred to me at the time after investigation that this fifty cents would not be a proper divisor for the purpose of drawing an inference as to the two years extending from the year 1905 to the end of the year 1907. To explain, the reasons for that is this:

During the years 1898 to 1900 two years elapsed. Of those two years, six months of which the price was very much reduced, fifty cents. Now, during the remainder of each of those two years, the price remained in the one case at $1.15 and in the other case at $1. In the existing case where I have endeavored to make some inference, the price has been held as thoroughly as it could be since 1905 at $1. The consequence is that but a trifle over a year still remains
before reduced to eighty cents. That was the cause of my
2481 limitation to any question of prediction of two years. You
have, then, two analogous periods, the period between 1898
and 1900, of which one-half was at a reduced price and the period
between 1905 and 1907, at which it was possible that about one-half

might be at a reduced price, and that caused my rejection of the fifty cents, which would naturally occur at first to anyone taking up such a problem as this.

Q. Well, we may wish to apply your theory to a period beginning with the taking effect of this eighty-cent rate, and I consequently would like to know how much per capita the increase was in 1899 and 1900, assuming that the reduction was fifty cents—that is, from $1.15 to sixty-five cents for that period during which there was a reduction, and during which period there was inducement due to a reduction to an increase- consumption of gas? If it is 46.46 cubic feet per capita increase of consumption for each one cent reduction in price of gas, I ask you to take not thirty-three cents reduction, but fifty cents reduction, and see what the result is in that regard.

A. Will you allow me to explain how the matter which you are bringing up was very carefully canvassed by myself and my assistants?

Q. I don't think it is worth while. Really I think I understand your theory, and I merely am endeavoring to have you apply the actual reduction that was made and which induced this increased consumption of gas according to your statement instead of an average price, of which a good deal was at the regular rate and no reduction at all, and which therefore could have had no effect on the consumption of gas.

The MASTER: Answer the question directly, if you can, and if not say so. Any question of explanation, you know, Mr. Burr can bring out on redirect-examination.

2402 A. Lack of exact data as to the amount of outputs and of the populations on May 1st, 1899, and of similar exact data as to the amount of the outputs or sales of gas and of the population at that time renders it impossible to use the reduction from $1.15 to sixty-five cents.

Q. Well, will you take the population as it existed on January 1st, 1900, which is just about the middle of this year during which the sixty-five cent rate prevailed; and then take the fifty-cent reduction from $1.15 to be sixty-five cents which prevailed during that year and tell me how that would mean increase per capita for a cent of reduction?

A. As a mathematical computation for your purposes?

Q. Yes, certainly. It will take only a moment.

A. You desire to have me take the estimated population for 1898 and also the output for the sales of gas for 1898 and subtract——

Q. The increase in the sales of gas which you say was due to the reduction in price. You gave the amount in your direct testimony and stated the increase in sales of gas during those two years was so much and that it was due to a decrease in price.

A. I gave the increase in the sales of gas per capita.

Q. Yes, I mean per capita.

A. At nine hundred and twenty-nine cubic feet? You wish that divided by fifty cents?

The WITNESS: That is about 18.6 cubic feet, one-fiftieth.

Q. Is it not the 929 cubic feet that you divided by 33 to obtain 46.46?

A. Yes.

Q. How can you divide it by 50, which is only half as much more and just less than half of 46 as your quotient?

A. I may have made a mistake.

Q. I cannot see, professor, how you divide 929 by 33 and get your original 46.46 to begin with. According to my figuring, it would be a little less than 30.

2483 A. That was divided by 20, apparently divided in an error by 20. Will you allow me time to look at that carefully and take it up to-morrow or later on with you?

Q. Well, would it take more than a moment if you now divide it by 33 instead of 20, as you did, and just give me that result? Because I would a little prefer to put this consecutively, and then if there is any further correction, you can make it.

A. Mr. Mathewson, there has been a misprint there or a typographical error. It was not 929, it was 1533, which, divided by 33, gives you the required 46.46.

Q. Now you are sure that that is correct, are you, Professor?

A. Well, it appears to be.

Q. Where did you get the 929 which you have testified to?

A. If you multiply it by 20 you get 929.

Q. Is the 1533 which you now give the difference between the per capita consumption in two years, and if so, in what two years?

A. The per capita consumption in 1900 is given as 8,128, and the per capita consumption in 1898 is 6,595.

Q. That is on your chart?

A. On the chart, and the difference between those is 1,533. I will refigure it. It seems to be correct, with the exception that there is a typographical error or a printer's error, presumably a typographical error.

Q. Now, will you use the divisor of 50 in view of the reduction period having been sixty-five cents?

A. It seems to be about 30.6.

Q. About 30.6?

A. That is the result of dividing 1533 by 50.

Q. Now, if you apply that as a factor of increase instead of 46.46 for the year 1905 and 1906 it would show a less output of gas than you have heretofore estimated for 1907, would it not?

A. It would not show anything.

2484 Q. If you applied that factor in the same manner that you did the 46.46 it would produce a lower figure than the 15,000,000,000 and over feet which you have testified as for 1906?

A. As a mathematical calculation.

Q. Now, when you speak of the per capita consumption in 1899 on your chart as 7,363 cubic feet, do you mean for the entire year or at any particular date or an average time in that year?

A. That is an average on the year.

Q. How do you get the average of the year?

A. The estimated average population is 1,809,205, and the total gas sales appear to be 13,325,943,400 cubic feet.

Q. But you have taken the per capita consumption in 1898, and the gas war did not begin until 1899. Now, will you take the year 1899 and the year 1900 per capita consumption each year according to your chart, those being the two years in which the gas war prevailed, and let me know what the increase is between those two years in the per capita consumption?

A. It appears to be 762 cubic feet increase per capital consumption average.

Q. About one-half of what it was if you started with 1898, to wit, your 1,533 feet?

A. It makes 1,524 cubic feet, multiplied by two.

Q. Well, it is just about one-half of 1,533 cubic feet, is it not? Now, if you divide that by 50, what would be the increase per capita. shown for those two years?

A. If I divide 762 by 50?

Q. Yes.

A. If I divide 762 by 50 I obtain 15.2.

Q. Now, your estimate of the sales in 1907, and incidentally your estimate of the revenue of the company from sales in 1907, depends entirely on the accuracy or the justification for your estimate of increase per capita of 46.46 cubic feet for a reduction of one cent in the selling price of gas, doesn't it?

A. Yes, that is the basis.

2485 Q. Now, will you look at your chart, Professor, and tell us what, according to your chart, the increase was from the two years 1901 to 1903 in consumption per capita while the price of gas remained constant at $1.00?

A. The consumption per capita for 1903 appears to be 9,328. The consumption per capita for 1901 appears to be 8,135, and the increase appears to be 1,193 cubic feet.

Q. Pretty nearly 1,200 cubic feet in those two years with no reduction in price.

A. Yes.

Q. Now, in your testimony on page 2313, referring to the period which Mr. Addicks selected at the suggestion of the Gas Commission, that is 1894 to 1899, to compute the expenditures for renewals you say that that was a period in which the old works were tottering to their final collapse. What is your authority for that statement?

A. Mr. Bradley's statement.

Q. Will you point out in the record where Mr. Bradley says that most of the water gas apparatus has been built within the last five years.

A. The testimony of William H. Bradley, page 2018. It does not say here what proceeding that is in. In the middle of the page:

"No, sir, most of the water gas apparatus has been built within the last five years and is just as modern and up-todate as any we could contract for to-day."

Q. Quite right. Now point out the additional rates upon which you base your testimony on page 2313 that, "according to Mr. Bradley's testimony, they did collapse about 1900 and were replaced by the latest type of water gas plants." Where does he say that they did collapse about 1900 or that they were tottering on the verge of collapse in 1900?

A. He did not say so. I said so.

2486 Q. But you say "according to Mr. Bradley's testimony they did collapse about 1900." Now, where is Mr. Bradley's testimony that they did collapse about 1900?

A. Perhaps I did not use the English language as precisely as I would had I known the point would be raised.

Mr. **Burr**: I call attention to the fact that on page 2313 Dr. Marks quoted the exact language of Mr. Bradley as he has read it now, and has said according to Mr. Bradley's testimony that was his inference, that it did collapse about 1900.

The **Master**: That is the point, whether it is his inference or whether it is according to Mr. Bradley's testimony.

Mr. **Mathewson**: Yes.

Mr. **Burr**: The presumption is they would not have been rebuilt if they had not collapsed.

Q. Did Mr. Bradley testify at any point in this record that you can point out that the apparatus of the company or any of it did collapse about 1900?

A. No; that is my own inference from his testimony regarding the rebuilding of the works.

Q. That shows the futility of making such inferences, Professor. Don't you remember Mr. Bradley testifying that what he referred to was the generating apparatus, that some of the generating apparatus in some of the plants was replaced with newer type apparatus, was not that the whole effect of Mr. Bradley's testimony as you understand it?

A. I have just quoted what he said.

Q. Have you quoted all of his testimony? I ask you if you do not remember his testimony that certain of the generating apparatus was replaced in some of the plants about that time?

2487 A. I have a general impression that he made that statement, but I specifically looked up his answer and quoted it here so as to avoid any possibility of impression.

Q. Do you remember his testimony that certain of the apparatus was what was replaced and not the entire working plant, from 1900 on?

A. No, I do not, beyond what I have quoted to you.

Q. Do you think that these plants could have been tottering on the verge of collapse and still deliver gas in the quantities that it is shown that they did deliver in 1900, or up to that time, immediately before they were replaced?

A. As a very young man and engineer I had seen the inside of a good many of these old works and I know that many of them were not in very good condition.

Q. Some of the Consolidated Gas Company's works?

A. If I remember rightly it was the Manhattan at the time.

Q. How long ago was that?

A. Oh, that was 30 years ago, 25 or 30 years ago.

Q. That was a coal gas plant, wasn't it?

A. Yes. at that time.

Q. And that coal gas plant at 18th Street has been taken by the

City and was operating up to the time it was taken, efficiently. You have heard testimony to that effect?

A. I have heard it, yes.

Q. And the other one was 14th Street and it is still operating. You understand that, do you?

A. Yes.

Q. Do you understand that any of the manufacturing plants of the Consolidated Gas Company have been changed from coal gas to water gas since the consolidation in 1884?

A. I have had no opportunity to examine the works or to inquire into their history.

Q. Have you any information to that effect?

A. To what effect?

2488 Q. To the effect that any of them have been changed from coal to water gas since 1884?

A. I am not familiar with the details.

Q. Did you not in making your criticisms upon the repairs and replacements which Mr. Addicks took for the period of 1894 to 1899, inclusive, refer to or have in mind a change from coal gas to water gas plants in your suggestion that the repairs thereafter should be less?

A. I cannot locate Mr. Bradley's testimony. I have an impression on my mind, however, that he did state, and I think if I had time I could find it, that since 1884 there had been a great many alterations in the works, and I am not at all sure that he did not add in the direction of increasing the water gas output rather than the coal gas. I think that was the general impression.

Q. But you do not understand that he decreased the coal gas output at all, do you, since 1884?

A. No, I didn't go that far into it.

Q. Now, as a matter of fact, don't you remember his testifying that some of these water gas apparatuses were not substituted until 1903 and 1904 instead of 1900?

A. Mr. Mathewson this is simply a test of my memory of what Mr. Bradley said——

Q. Yes.

A. If you will kindly indicate to me these points—it has no bearing on the technical evidence which I am supposed to give here.

Q. I rather think it has Professor. I think it is a test both of your memory and of the accuracy of your statements and the basis upon which you criticise the taking of the period for renewals and repairs.

Mr. Burr: Would it not be better and would we not proceed a little more speedily if you called his attention to some specific testimony?

Mr. Mathewson: I do not think so. I have asked the witness if he does not recall Mr. Bradley's testimony that some of the 2489 water gas apparatus was installed in 1903 and 1904 instead of 1900 as the witness himself has stated in his direct testimony.

The Witness: I do not recall making a statement such as you have made. If you will kindly refer me to the point in my own evidence——

Q. I refer to your own evidence "According to Mr. Bradley's testimony they did collapse in 1900 and were replaced by the latest type of water gas plant."

A. Referring to what page?

Q. The same testimony that I quoted your statement that according to Mr. Bradley they did collapse in 1900 and were replaced by the latest type of water gas plant.

A. Page 2313?

Q. It would follow, then, that if they collapsed about 1900 and were not replaced until 1903 and 1904 that the company was without an operating plant during that period to that extent?

A. I said about 1900.

Q. Now, if the water gas apparatus which was installed from 1900 to 1905 was in substitution for other water gas apparatus, repairs would still continue, would they not, at substantially the same rate in the future?

A. Not necessarily.

Q. Unless the new apparatus became worn, and, indeed, at the outset repairs would be required from time to time, would they not?

A. Repairs are always required upon all machinery.

Q. And are the repairs and replacements greater in a coal gas plant than in a water gas plant?

A. That is so general a question it cannot be answered. A specific coal gas plant or a specific water gas plant might be compared, but you cannot generalize.

Q. Well, take water gas plants and coal gas plants in the City of New York operated by the same officials and with the same efficiency and care, is it not a fact that a coal gas plant, as a rule, requires a greater expenditure in repairs than a water gas plant? 2490

A. I have had no opportunity to examine the New York gas plants and therefore cannot answer your question.

Q. Take it in the same locality and under similar conditions, is not that true?

A. No answer can be made in the way of generalization.

Q. Do you mean that you don't know or that it is not possible to state generally that a coal gas plant, as a rule and in similar circumstances, requires more repairs than a water gas plant?

A. I know that it has been very frequently stated by gentlemen who have given evidence here that such is the case.

Q. Have you any doubt of it?

A. Yes.

Q. Then you don't know whether when the Astoria plant is in operation this fall, being a coal gas plant, and when the output of the company shows a larger proportion of coal gas than it has for some time in the past, a greater amount of repairs would naturally be required or not, do you?

A. Using the word "know" in its proper sense, I do not.

Q. Have you any opinion on the subject?

A. I have.

Mr. Burr: There is the testimony of Mr. Bradley in regard to the change (handing book to the witness).

Q. Do you think that the coal gas plant would require more repairs than a water gas plant of the same capacity?

A. Recalling instances that come to my knowledge, I have knowledge where coal gas plants have required more repairs, more costly repairs, than the water gas plants. I don't know whether the reverse may or may not have occurred in other cases.

Q. Now referring to your testimony at page 2308, where you refer to the repairs and renewals, you were asked this question and made this answer:

2491 "Q. What do you deduce from those statements? A. First, that taking an average of repairs from a number of coal gas plants between the years 1884 and 1900, in connection with the repairs to the modern water gas plants from 1900 to 1906, is a very adroit method of padding the apparent cost of gas by using the higher repairs of old-fashioned smaller gas plants for the new and larger water gas plants."

Don't you know that the same coal gas plants are in operation and have been all the time since 1884 to date?

A. Do you mean in the Consolidated Gas Company?

Q. Yes, and that none of the coal gas plants have been substituted with water gas plants?

A. I have been denied all information on that point.

Q. Then what is your basis for the statement to which I have just called your attention on page 2308?

A. Very easily stated. It is a matter of age and old-fashioned works against new and much perfected works.

Q. And repairs, so far as the coal gas plants are concerned, would remain substantially uniform, would they not, having relation to their capacity?

A. In what case do you refer?

Q. I refer to the case of the coal gas plants of the Consolidated Gas Company. Assuming them to have been cared for equally well during the entire period?

A. Without an examination, my opinion on that subject would be of no value.

Q. Then, taking the water gas plants, assuming that there was in existence efficient machinery producing up to the year 1900, and later, water gas in the quantities which are shown in the evidence, would the substitution of other water gas apparatus for the purpose, as Mr. Bradley testified, of being able to use cheaper oil, reduce very largely the amount that would be required for repairs in time to make on the water gas plants? 2492

A. On page 2025 of the testimony, Mr. Bradley makes this statement:

"Q. Since 1904 what improvements have you made in the water gas plants that would enable you to reduce the cost of production?

A. Changed the entire method of production both at 21st Street and 44th Street and 99th Street.

Q. Was that not done prior to your testifying before the Stevens Committee? A. Part of it was."

Q. That doesn't answer my question as to whether repairs, and in general similar repairs, would not be needed upon water gas apparatus of the class which he describes as was required upon water gas apparatus theretofore, assuming that the previous apparatus was working efficiently?

A. It is obvious that repairs are always needed on all manufacturing apparatus used in the gas making business. As to the amount required, it is necessary to make a careful investigation either in person or by those in whose skill you have confidence.

Q. And is it not true that where you substitute machinery for hand labor, for instance, so far as possible in apparatus, that you increase the amount required for repairs, because you have more machinery, but at the same time you reduce the amount required for payroll?

A. That is the object of introducing the machinery.

Q. Now, in reference to Dr. Humphreys' testimony, you have referred to him as "blindly accepting the statements of the company." Did you hear his testimony that he himself tested the accounts of the company and examined items and found that the division between replacements on the one hand and new business on
2493 the other had been very carefully made?

A. I have a general impression that he made such a statement, but I also recall the fact that he stated he had not examined the vouchers or the accounts of the company as to the cost of gas.

Q. But you do recall the statement to which I have called your attention, don't you?

A. I have a general— If you can refer me to it.

Q. I asked you whether you recollected it?

A. I beg your pardon?

Q. I asked you whether you recollected it?

A. I do not specifically recollect the exact language. That was the impression, I think, that he gave.

Q. Let us take up the question of the use of oil. You have presented here a chart purporting to show the average illuminating power shown by the city's tests for the gas of this company for the calendar year 1905, and you show about 24 candles average for the last six months. Have you a record showing the specific examinations upon which your average was made up?

A. That is in the possession of Chief Engineer Charles F. Lacombe, chief of light and power, and was by him furnished to my assistants who made up this statement from the affidavits given day by day or at regular intervals by Chief Gas Examiner E. G. Love.

Q. Did you examine those detailed tests yourself or a record of the tests, individual tests?

A. I did, quite a number of them and explained the method.

Q. Did you not find that at some times even with this average candle power, that the candle power recorded at some point in the city tests would fall in the main to 22 candles or very close to it?

A. I noticed occasional irregularities in the gas, which occur.

Q. Did you not find that the test showed a candle power in some cases of 22 candles or a very small fraction over it?

A. Yes, I think so; I think it is shown there.

2494 Q. Did you find any test in which in spite of this average, the candle power actually fell a trifle under 22 candles?

A. Will you k-ndly let me look at the tabulation, if you please.

(Paper handed witness.)

The WITNESS: You are referring to the last six months of 1905?

Q. Yes.

A. No, I do not in the last six months of 1905.

Q. You did not find any individual case, any average for a month, where the tests of Prof. Love showed little, if any, over 22 candles?

A. There were a few cases which I have already stated. I can get the affidavits from Dr. Love and look the whole matter up if you wish.

Mr. BURR: We shall produce Dr. Love.

Q. You answer so many more questions than I ask that it takes a good deal of time. I am merely asking you whether with this average it is not the fact that in many cases tests by Prof. Love showed that the candle power in the mains had fallen to very close to 22 candles in individual instances?

A. In relatively very few cases has that occurred.

Q. In any case did you find that they fell below 22 candles?

A. If I did, it was very small. There was a very large number of observations there which we had to go through, and it was inconsiderable.

Q. And you understand that there is a thousand dollars penalty fixed by the statute for each time that the candle power in any one of our five stations on any day is found to fall below 22 candles.

Mr. BURR: Objected to as immaterial and irrelevant.

The MASTER: I will allow it.

Mr. BURR: Exception.

2495 A. I have heard it so stated.

Q. Do you know any other city in which so great a penalty as $1,000 for failure to keep up the candle power is fixed for each daily inspection?

A. I do not.

Q. Do you know of any reason why Chief Engineer Bradley should use more oil than he considered necessary to keep the candle power up?

A. I don't know what his instructions are.

Q. No reason occurs to you, does it, Professor, why he should use more oil and the company should spend more money than is necessary to produce their gas?

A. I say I do not know what his instructions are. Anything I might say would be a mere guess.

Q. Do you mean to say without experience in the operation of a gas plant in New York City or in any other metropolitan community in the East that it is possible to maintain an average candle power of only 22½ candles monthly record and at the same time at all times keep the candle power on test by the city a mile from the works above 22 candles?

A. There are certain periods of——

Q. I asked you a direct question. Will you not give me a direct answer for once.

A. Yes.

Q. That is your view, in spite of the testimony of Mr. Bradley or Dr. Humphreys or any one else who has had experience in operating plants constantly?

A. It is.

Q. Have you ever used in your experience the quality of oil which this company uses and requires, 34 standard?

A. Beaumé?

Q. Yes.

A. I have used a good — of oil, I don't know that it was 34 Beaumé.

Q. You have also referred to the price which the company pays for its oil, and you have cited various other gas companies in the State of New York, which you say you took from Brown's 2496 Directory, and have said that the average which they pay for oil is 3.55 cents. Why didn't you take all the municipalities in the State of New York which are producing gas, instead of omitting twelve which appear in Brown's Directory in selecting those which you did take?

A. It is well known in business that anything purchased in wholesale quantities and in gross is expected at a considerably lower price than anything which is purchased in very or relatively small quantities. I picked out fourteen instances in which this obvious violation of well-known precedents had occurred and in which the companies were small relatively as nothing and yet appeared from Brown's Directory to be obtaining their oil at a less price.

Q. If there is but one producer who produces the amount of oil and with the certainty and reliability which this company requires you think they could get their oil cheaper than a company which produces so little oil that it could get it in a half dozen different directions?

A. Certainly if that company gave them a square deal.

Q. It is not a question of a square deal. When one has a product which he desires to sell and a purchaser of that product must deal with that seller alone is not he put at a disadvantage as compared with another man who requires so little of the product that he can get it from many different dealers and reliable dealers? Now I ask you to give me a direct answer to that question.

A. Without a careful investigation taking the quantities into consideration I should say that anybody that paid more than the lowest market price that they could learn was doing very bad business indeed and as for the theoretical condition which you have stated, that remains to be shown whether it does or does not exist.

Q. It has been testified to exist. Assuming, now, that it 2497 does exist, will you answer my question, or have you given the best answer you can?

Mr. **Burr**: Well it is claimed here that the Consolidated Gas Company is at the mercy of the one company that supplies it with oil, the Standard Oil Company.

Mr. **Mathewson**: I shall not characterize it. I call your attention to the testimony, that the Standard Oil Company is the only company that produces the quantity of oil desired by the Consolidated Gas Company, so that it is able to furnish it. We are in that unfortunate position, if you please to put it so.

The **Witness**: That is about the best answer that I can give you.

Q. So that if a company is confined to a single producer, no other producer is able to fulfill its demands, you think they would be still in a better position than a smaller company which required but a small amount and who get that amount from half a dozen other dealers?

A. If fairly treated, yes.

Q. Now, have you read Mr. Addick's affidavit in rebuttal, and did you note his statement that while the municipalities which you chose showed an average of 3.65 cents for oil in the State of New York, those which you had omitted, to wit, Cooperstown, Fort Plain, Grandville, Huntington, Patchogue, Fort Henry, Port Jervis, Sag Harbor, Saratoga, Suffern, Warsaw and Watertown, showed an average price of oil to be 4.12 cents up to 7 cents a gallon or an average of 5.035 cents per gallon?

A. I have.

Q. And have you read his further statement that the average price of oil for all the twenty-six companies, including those you did take and those you did not, was 4.25 as against 4.08 paid by the 2498 Consolidated Gas Company during the same period?

A. I have.

Q. Have you any doubt of the accuracy of that statement, or have you checked it?

A. I have not checked it.

Q. Do you know whether that statement is correct or not?

A. I see no reason to doubt the general accuracy of that statement.

Q. If that statement is correct, then the price paid by the Consolidated Gas Company for oil within that period, 4.08 cents, was considerably less than the average price paid by all the other companies in the State of New York, of 4.25 cents, is not that true?

A. That is true.

Q. Now you have testified that a reserve or insurance fund which is allowed in England and which you have said should be allowed in this country, in your book, should not be allowed to the Consolidated Gas Company for the reason that it has spent its surplus in acquiring control of other companies and establishing a monopoly. That is page 2323 of your testimony. I would like to have you point out any testimony where it appears that the surplus of the Consolidated Gas Company has been invested in the securities of other companies.

A. State's Exhibit B, page 382A, statement of securities and obligations of other companies acquired, par value.

Q. Oh, yes, that is quite right, we have acquired securities of that par value, but point out to me where there is any testimony that our surplus fund has been invested in those securities. Don't you recall the testimony that the securities of the Consolidated Gas Company in the shape of stock were issued for the purpose of acquiring securities of these other companies?

A. I recall such a statement.

2499 Q. Now, will you point out any statement or any evidence here upon which you base your statement that the surplus of the Consolidated Gas Company, earned in its gas business, was invested in acquiring the securities of other companies, for a monopoly or for any other purpose?

A. The word "surplus" was used as indicating the investment of funds not actually required for the operation of their proper gas business.

Q. What funds, funds that they acquired by the issue of new securities for the purpose of purchasing securities of other companies? Do you refer to that as a surplus?

A. I refer more particularly to the apparent value of this exhibit of $100,877,059.56; to the book value of $53,041,134.52, and to a statement of the return on the investment amounting to $1,018,712.28; in addition to which the Astoria Company is charged with $7,135,000 and the National Coal & Coke Company included, and a book value is given of the purchases of the securities as $7,060,000, making a total of all companies of $108,012,059.56 apparent par value and a book charge of $60,101,134.52.

Q. Now, Doctor, let me recall your mind to what we were considering. You have said that a surplus or reserve fund is ordinarily allowed to be accumulated by a gas company in its gas business. You then go on to say in substance that in the case of the Consolidated Gas Company that should not be allowed now on the cost of gas. And you were asked this question, at page 2322:

"Q. Now, Doctor, what have you to say in regard to the item charged here on Exhibit 94 for insurance of reserve funds? Is that a proper charge, or are these proper subjects for special allowance if required or demanded by a company which has confessedly, as in the case of the Consolidated Gas Company, made for a long 2500 term of years the profits that the Consolidated Gas Company has? A. It is obvious that the surplus applicable to both these funds would have been more than ample, had not the Consolidated Gas Company gone out of its province as a gas manufacturer in the endeavor to obtain the monopoly of all forms of lighting in the Island of Manhattan and Greater New York."

And a little later:

"Q. What is the answer? A. It is not under existing conditions.

"Q. Why. A. Because the Consolidated Gas Company appear to have spent their surplus in an endeavor to obtain control of all forms of lighting on the Island of Manhattan."

Now, did you not refer in that answer and did you not understand the question to refer to the surplus which the company was making in the operation of its gas business?

A. I referred to the vast sums——

Q. Can you not give me an answer to that question?

A. I did not.

Q. Then what earthly pertinence did it have to the subject under consideration, which was whether there should be an allowance of five cents per thousand feet or something else on account of a reserve fund for the Consolidated Gas Company in connection with its gas business?

A. I had the knowledge at the time that these sums were in possession and control yielding something over a million dollars, according to their own statement, to the Consolidated Gas Company, outside securities, and the statement was of a value approximating $100,000,000. Why should a company want to go on piling 2501 up a surplus which had such vast profitable resources back of it?

Q. Yes, and did you figure out that the amount that the company received on the securities of other companies, this $1,000,000 or so, was only about two per cent. of the cost of those securities to the company? That would not represent a very large surplus, would it, when you applied — to that investment?

A. I know the real profits of gas and electric works, and particularly of electricity; I know what is being made.

Q. We are not talking about the return that the Consolidated Gas Company received from these other companies, which figure you yourself used. Now I want to know where the surplus of the Consolidated Gas Company, earned in its gas business, which we are treating with here entirely separately from its investment in securities of other companies, was invested in securities of other companies, if it was invested at all. I would like to have you point it out?

A. Taking State's Exhibit B——

Q. You certainly do not mean that the income that the Consolidated Gas Company has received from the securities of other companies is the surplus which is invested in the securities of other companies, do you?

A. Will you repeat the question.

(Question repeated by stenographer.)

Q. You do not refer to that when you say surplus invested in the securities of other companies, do you?

A. I do not understand the first question clearly. May I ask to have it in a somewhat different shape?

Mr. **Burr**: Will the stenographer read it?

(Question read by stenographer.)

The **Witness**: Is the income which is received from the 2502 surplus invested in other companies, is the surplus which is invested in other companies?

Mr. **Burr**: That is about it.

Q. No, it is quite clear, if you will refer to your previous testimony. You have referred to a million dollars which you say was received by the Consolidated Gas Company from its investments in securities of other companies, received from those companies by way of dividend, and I am asking whether you referred to that fund when you spoke of the surplus of the Consolidated Gas Company, which was invested in the securities of other companies?

A. Will you mention the sum, if you please? Is it the $1,018,712.28?

Q. I refer to the sum of about that amount which you yourself introduced a few moments ago.

A. I referred to that sum as being available for the needs of the Consolidated Gas Company, but I meant from my own personal knowledge of the profits of electric lighting and gas, a much larger sum, which is very carefully hidden by some method, which is earned by these various companies on their securities.

By Mr. **Burr**:

Q. By the various electric light companies?
A. By the various electric light companies.

By Mr. **Mathewson**:

Q. Well, then that is not the profits of the Consolidated Gas Company covering a long term of years which is invested in the securities of other companies and to which you referred when you made that kind of a statement, is it?

2503 A. It is impossible to answer questions without access to the books.

Q. I am trying to find out what you mean and what you referred to in your testimony and nothing further. I read from page 2323 as follows:

"By the Master:

"Q. What you mean by that is that the surplus has been expended "in the purchase of securities of other companies? A. Yes, sir."

Now, what surplus did you refer to there which has been invested in the securities of other companies? Didn't you refer to the surplus which the Consolidated Gas Company had made in its gas business, because it had no other business until it invested in the securities of other companies?

A. I referred to its visible possessions, State's Exhibit B, page 382.

Q. I repeat my question. When you replied to the Master's question, "What you mean by that is that the surplus has been expended in the purchase of securities of other companies," and you answered "yes, sir," to what surplus did you refer as having been invested by the Consolidated Gas Company in the securities of other companies?

A. I referred to State's Exhibit B, page 382, given by the Consolidated Gas Company and amounting apparently to something over sixty millions.

Mr. **Mathewson**: I would like to have the Master look at this if he does not know what it is.

The **Master**: I know what it is.

Q. Don't you know that State's Exhibit B., 382A, is not a statement of surplus at all and that those securities shown there were purchased by some other funds?

A. I have not had access to the books.

2504 Q. When you state that those securities had been purchased out of the surplus, as you did in substance in reply to the Master, by the use of what surplus did you understand they were purchased?

A. By a surplus not required for the operation and the legitimate business of the Consolidated Gas Company.

Q. Then you referred to the surplus accumulated by the Consolidated Gas Company in its operations before it purchased these securities, didn't you?

A. Without access to the books I cannot answer that.

Q. What did you refer to?

A. To the visible results given in State's Exhibit B.

Mr. **Mathewson**: Mr. Master, I think the witness should answer that question.

The **Master**: You can answer that question.

Mr. **Mathewson**: Mr. Stenographer, repeat the question.

The **Stenographer** (reading): Q. When you said that those securities had been purchased out of the surplus, as you did in substance in reply to the Master, by the use of what surplus did you understand they were purchased? A. In using the word surplus I referred to the surplus possessions of the Consolidated Gas Company over and above what was required in its legitimate functions as a producer and vendor of gas.

Q. Did you not refer to the surplus which the company had accumulated in its gas business before it purchased these securities when you said that it used its surplus in the purchase of securities of other companies?

Mr. **Burr**: That is the fourth time that question has been asked and he has now given an answer showing exactly what he meant.

2505 Mr. **Mathewson**: And I have been unable to get an answer after asking it four times.

The **Master**: The witness stated very plainly on page 2323: "Because the Consolidated Gas Company appeared to have spent "their surplus in an endeavor to obtain control of all forms of light"ing on the Island of Manhattan."

Now it is a fair question on cross-examination to find out on what he bases that statement. He bases, it according to his answer here now, on this State's Exhibit B, but that does not go to the point. The counsel is entitled to cross examine——

Mr. **Burr**: I have not the slightest objection to the fullest examination, only if he asks the question four times and the answer is given now, he should proceed to another question. But that question has been asked four times.

The **Master**: Either the witness does not understand, else he does not want to answer, else he does not know.

Mr. **Burr**: It is quite apparent here and on the record that the Consolidated Gas Company has acquired the New Amsterdam Company and the electric light companies.

Mr. **Mathewson**: No doubt about that. That is not in dispute.

The **Witness**: Mr. Master, I have answered that just as clear as I am able to. Will you kindly read my last reply.

Mr. **Mathewson**: Read my last question before you read his reply.

The **Stenographer** (reading): Did you not refer to the surplus which the company had accumulated in its gas business before it purchased these securities, when you said that it used its surplus in the purchase of securities of other companies. 2503

The **Witness**: Now will you read my answer?

The **Stenographer** (reading): In using the word "surplus" I referred to the surplus possessions of the Consolidated Gas Company over and above what was required in its legitimate functions as a purchaser and vendor of gas.

The **Witness**: I shall be glad to answer any further questions. I have nothing to keep back. I wish to meet it frankly and fairly.

Mr. **Mathewson**: I repeat the question and ask you to give me a direct answer.

The **Master**: Well, the witness says in effect he cannot answer it any better than he has. That seems to end it. Is that not the case, Doctor.

The **Witness**: That's it.

Q. Well, Doctor, there was a time about 1900, we will assume, when the Consolidated Gas Company owned no securities of other companies. It then proceeded to purchase the securities of other companies and you have testified that it used its surplus to acquire the securities of other companies. Now, not having been in any business except the gas business up to that time, did you not refer to the surplus that the Company had accumulated in the conduct of its gas business since 1884 down to that time when you used the term "surplus."

A. Had the company accumulated a surplus at that time?

Q. I am not on the witness stand. I am asking you to define what you mean, and I have asked a question that I think is susceptible of a fair and direct answer.

2507 A. And my reply is that when I used the word "surplus" I referred to the visible evidence of great and extraordinary possessions outside of the gas business.

Q. No, you said it used its surplus to acquire those securities and interests in other companies. Now, I am asking if the surplus to which you referred was not the surplus that it had accumulated in its gas business before it acquired the securities of other companies? I think I am entitled to a fair answer, and won't you give me that answer; yes or no?

A. I am not aware that it has accumulated or has not accumulated a surplus.

Q. Then you don't know whether it had any surplus or not to expend in securities of other companies.

A. I asked the question and received no reply.

Q. But you did not ask me the question before you testified that it invested its surplus in the securities of other companies.

A. I referred to the Exhibit, State's Exhibit B.

Q. Those are the best answers you can give, are they?

A. That's it.

Q. Now we will take the gas business of this company and forget it owns any securities of other companies, it being conceded that that is not in the issue before this Master at all. We will take the gas business of the Consolidated Gas Company. Did you not say in your book that a company was entitled to a reserve or contingent fund of about 5 per cent. on the value of its assets?

A. I did so say.

Q. And didn't you say that the Consolidated Gas Company was not entitled to that now because it had invested its surplus in the securities of other companies, and if that be true what was the pertinence of your observation if you did not refer to the surplus of the Consolidated Gas Company which was acquired in the conduct of its gas business?

A. I did not say that the Consolidated Gas Company was not entitled to a surplus. I said it was not entitled to an allowance
2508 on the cost of gas of three cents claimed by Addicks or five
cents claimed by Humphreys, or ten cents claimed by everybody.

Q. And if it had not acquired these securities of other companies, would it have been entitled to that five per cent. the same as other gas companies, according to your book?

A. Certainly not. It is simply a case of after paying a proper dividend accrued upon setting aside from profits a contingent or reserve or insurance fund and also a reserve fund for lean years.

Q. But isn't the Consolidated Gas Company entitled to set aside a certain number of cents per thousand or a certain percentage upon its property for a reserve or contingent or final renewal fund if companies in general are so entitled as you state in your book?

A. What is the peculiar situation of the Consolidated Gas Company that deprives it of that right?

A. I have not stated in my book that the companies are entitled to set aside a certain number of cents on every thousand cubic feet of gas. I have not made such a statement.

Q. Haven't you made a statement in substance that they are entitled to a surplus until it amounts to a certain percentage of their capital?

A. I have stated that it is the custom in England to set aside a surplus from the clear profits amounting, if I remember all right, *of* 5 per cent. and in the case of the reserve fund amounting to about 10 per cent. of the capitalization or structural value of the works.

Q. Both 5 per cent. and 10 per cent. for those two purposes?

A. Both 5 per cent. and 10 per cent. I don't know the details. I know it is a reasonable sum.

Q. But you have drawn in the English system and the English accounting as a very desirable thing to be following in America. Now, why is not the Consolidated Gas Company entitled to
2509 set aside a like fund until its surplus fund reaches say 10 per per cent. of its capital?

A. Under proper capitalization I would ardently advocate such an arrangeemnt as to give the Consolidated Gas Company both an insurance and a reserve fund under the English system.

Q. We have nothing to do with the paper capital of these companies. We are determining the value of its assets and the amount which should be allowed for the cost of gas and we are only claiming a return upon that and its investment in the gas business. That being the case, is not the Consolidated Gas Company entitled, like the English companies, to an allowance for a reserve or contingent or final renewal fund of the same amount and up to a certain point?

A. Surely, out of the clear profits.

Q. What would that be? How much should they allow?

A. That would require very careful study any very impartial discussion on the part of all parties at interest.

Q. You do not claim then that the surplus of the Consolidated Gas Company which it now possesses and which is due to the result of the conduct of the gas business, is invested in the securities of other companies, as I understand it?

A. I really do not know.

At 1.05 P. M. a recess is taken until 2.15 P. M.

2510

Afternoon Session.

William D. Marks resumed the stand.

Cross-examination by Mr. Mathewson (continued):

The Witness: May I make a little further explanation in regard to the meaning of the word "surplus" as I used it in my testimony?

The Master: Unless Mr. Mathewson wants it I think you had better wait until Mr. Burr re-examines, unless Mr. Mathewson does not object to its being done now.

Mr. Burr: You will be given an opportunity to explain all things necessary——

The Witness: Well——

Mr. Burr: If there is any misunderstanding with regard to your use of the word "surplus," you might explain it now, if you think there has been a misunderstanding.

The Witness: Shall I go on?

The Master: Yes, there is no objection.

The Witness: In the use of the word "surplus" I may not have stated as clearly as I might have stated, that I meant surplus capital and surplus earnings both.

By Mr. Mathewson:

Q. You said you have been an accountant, Doctor. Is it customary in accounting to refer to moneys or property received in exchange for capital stock issued as surplus?

2511 A. Referring to the accounts of large corporations frequently published you will observe that they state that their surplus is thus and so and frequently invested in stocks, bonds and other securities, frequently enumerating those stocks, bonds and other securities.

Q. I ask you whether when you issue capital stock of a corporation or issue debentures in a corporation and receive therefor cash or value, that is called surplus from an accountant's standpoint or whether it is called capital?

A. The question——

Q. Now, can not you answer yes or no.

A. The question is not distinct. It depends on the use which is made of the cash or capital to which you have referred as to whether it would be called surplus or simply remain as working capital.

Q. Is not surplus in the accountants' view or in their method of treatment the balance of assets beyond outstanding stock and securities?

A. In financial institutions such as banks which have had their stock paid in full an accountant would use the word "surplus" for all the accumulations over and above par value of their stock. For instance, it has become the custom——

Q. I do not care to have you give any illustrations. My question is a fair one and you can answer it directly, I think. I am asking you whether surplus from the standpoint of an accountant is not the balance of assets above capital and securities outstanding?

A. It is, with this qualification, that in the case of many corporations more than the par value of the stock is charged at the outset and that I have known to be carried to surplus at the very beginning.

Q. But that is assets above the par of the stock and securities outstanding, isn't it?

A. You might put it that way, yes.

Q. Well, it is the fact, isn't it, in that case?

A. Yes.

2512 Q. Now, that you say that you include both earnings and funds derived by the companies from other sources in the term "surplus" and without discussing the accuracy of this designation will you point out to me where the surplus, so far as it is earnings of the Consolidated Gas Company, has been invested in the securities of other companies?

A. As before stated I have no access to your accounts.

Q. Then why did you state that?

A. Because my knowledge of the business, both the profits in gas and electricity——

Q. Does the fact that profits are made in gas and electricity prove that the surplus of a company which represents earnings beyond distribution to stockholders, is invested in the securities of other companies?

A. That again is a question which can only be answered in particular cases. There is no generalization possible.

Q. Are you familiar with the exhibits in this case? I think you said you had been over everything, didn't you?

A. I tried to.

Q. Will you look at Exhibit No. 80 and see if it does not appear that the surplus of this company, so far as it comes from earnings, is invested in its gas business and not in the securities of other companies that appear below, if that is a true statement.

A. (No answer.)

Q. You notice the amount invested in the securities of other companies appears to have been derived from the issue of stocks, do you not?

A. I see a statement here that the surplus is placed at $1,546,697.38, Complainant's Exhibit 80, October 31, 1905.

Q. And so far as that exhibit shows, or if that exhibit is correct, then the surplus is invested not in securities of other companies which are tabulated at the foot, but in its gas business, isn't it?

2513 A. Wait a minute. This does not appear to be a transcript from the book of a precise nature but is a statement of assets and liabilities in a more concise form, showing an exact two millions, and an exact one million, as the result of the subtraction of two accounts, which is a very unusual and extraordinary thing in accountants' results.

Q. Whether it is new or extraordinary or not, it is testified to be correct, and if it is correct, the surplus is not invested in the securities of other companies, is it?

A. Apparently not in that case of the $1,546,697.38.

Q. Now, when you speak of English allowances of both an insurance fund and reserve fund, isn't it true that the companies are allowed to charge for gas enough to cover the standard dividend and also the operating cost of gas and also the amount properly chargeable to these two funds?

A. There is a standard rate of dividend fixed—I may be wrong in this matter—by a commission which, I think, is drawn from a Board of Trade——

Q. (Interrupting.) I do not think that is important——

A. (Interrupting.) I don't know that this Commission takes into consideration the surplus for either the insurance fund or the reserve except in a general way as providing a margin on which all business has to come and go according to the vicissitudes that occur from year to year.

Q. But the point I am asking is this: Is it not the fact that this reserve fund and insurance fund are not taken out of the standard rate of dividend allowed but a price is permitted to be charged for the gas large enough to cover the operating cost of gas, to cover the amount properly chargeable to these two funds, and an amount sufficient to pay the dividend beyond. That is a fair statement, isn't it?

A. Both of these funds are limited in their amount not to a term of years, and therefore no arrangement can be made which would in perpetuity allow a constant surplus for the purpose of creating these——

2514 Q. Of course not, and I therefore use the "amount properly applicable" to these two funds but the amount allowed to be charged for gas is sufficient to cover the operating cost of making and distributing the gas, plus the amount properly allowable for the two funds in any year, plus an amount sufficient to pay the standard dividend of the company, isn't that so?

A. The sliding scale is attached to the standard rate of dividend and in the sliding scale, recalling roughly, every ¼ of a one per cent. dividend is added for every penny or two cents reduction in the price of gas, at least in the case of some of the companies; and the reverse is true where the price of gas is raised, the standard rate of dividend is reduced in the case of some companies; and therefore the question of the surplus necessary for the insurance fund and for the reserve fund is left largely in the hands of the managers and directors of the English companies.

Q. Precisely. So that the point is this: A company may pay more than the standard dividend if it reduces the price of gas below the rate which may be called the standard rate fixed?

A. Yes.

Q. And whatever it does within the discretion of the company it may charge for gas a sufficient amount to cover the operating cost of the gas, an amount to cover the proper sum chargeable or allowable to these funds in any year, and an amount sufficient to pay the dividends to which they are entitled under the terms of the statute?

A. If it so desires.

Q. Yes, exactly.

A. Under the sliding scale.

Q. In other words the amount of the insurance and reserve fund does not come out of the dividend which is allowed under the statute, but is in addition to it and included in the price of gas in addition to it?

A. That would be true unless the price of gas was raised
2515 and the dividend reduced for the purpose of creation of surplus funds for the insurance fund and for the reserve fund.

Q. Yes, but in the ordinary case my statement is accurate, is it not?

A. That I cannot answer.

Q. Now, in reference to the cost of plant, cost of operation and your method of deduction, I want to ask you whether this is a correct quotation from your books:

"**Practical figures required.** No mere theory as to the cost of the plant and of its operation is of any value. The actual figures, deduced from the cash costs of an operative plant of sufficient size to produce light and power in quantity required for a city's use, must be obtained."

A. That is written with regard to electrical stations if I remember all right, and is accurately true.

Q. And isn't it equally true of gas stations?

A. I should say it was.

Q. And throughout your work, without calling your attention to many instances, do you not recognize, or is it not based upon the right to compute 15 per cent. or thereabouts to cover dividend and what you may call reserve or depreciation, 15 per cent. computed on the structural value of the entire plant?

A. In the case of both gas, electricity and electric railways, of which I have made a careful study I should say that in a rude way adaptable to the uses of an active manager—for such individuals the book was written—that if you take the actual cash cost of raw material and of productive labor in producing whatever is produced, whether it be 1,000 cubic feet of gas, a kilowatt of electricity or a car mile of railway, that taking 15 per cent. of the investment required for that and adding it to the cash cost already obtained 2516 should produce a safe profit covering everything outside of ordinary small repairs, the reserve, the vicissitudes of the business, and in addition to that a dividend. The difficulty most aimed at in that 15 per cent. is one very common particularly among the smaller enterprises of a quasi-public nature in the United States which almost invariably forget and overlook the necessity of a proper reserve for the future.

Q. Of course, when you speak of the operating cost of the product to which this 15 per cent. on investment is to be added, you include what may be called the general expenses of a corporation like the office expenses and the salaries and the taxes and whatever——

A. Whatever is required, yes, in cash.

Q. And I also find in a communication in this book signed by you and addressed to the committee of the City Council——

Mr. Burr: What city?

Mr. Mathewson: I don't know, it doesn't say.

The Witness: It is regarding the cost of electric light. The City Council of Fostoria, Ohio.

Q. On page 137.

"If we can obtain money at 4 per cent. on bonds or mortgages, which have no risk whatever attendant upon them, we surely ought to allow to the average business man a profit of 8 per cent."

Is that a correct quotation?

A. Those are my sentiments, yes.

Q. And as though to anticipate your view, I find on page 160 your statement that

"Fifteen per cent. annual profit on the cash investment in a 120,000 light plant costing $2,000,000 should be a liberal 2517 allowance to a monopoly as covering a fair dividend, and allowing for deterioration."

So you would not make any distinction between a monopoly and an ordinary corporation engaged in this business?

A. A fairly conducted corporation.

Q. And I find that you also state on page 170:

"The writer may be pardoned, he trusts, for saying that a corporation capitalized only to the extent of its cash investment, restricted to a fair dividend of about 8 per cent. and a reserve of 7 per cent. for large renewals and repairs, is a beneficent institution."

A. That is right.

Q. And do I quote correctly from your book on page 213, where you say

"As the population of towns increase the price of gas appears to approximate more and more closely to the one dollar per thousand, and the cash surplus, over cost of manufacturing and distributing and fixed expenses, appears to be somewhere between 25 cents and 30 cents a thousand. At $1.00 for gas the price appears to have reached a practical minimum and the profit becomes dependent upon the reduction in investment per annual one thousand produced.

It should be remembered in a general way that one dollar in the price of each long ton of coal gas means about ten cents per thousand in the cost of gas, and that one cent per gallon in the price of oil used in carbureted water gas means about five cents per one thousand in the cost of gas. These latter three factors then, 2518 should control any attempt to go below the price of one dollar per thousand feet for gas."

A. That is entirely correct, sir.

Q. And then follows your statement that,

"It must not be assumed that in every instance reduction in price will assure increased consumption per capita, as might at first appear to be the case."

A. The word instances referring to the cities of Massachusetts.

Q. You refer to the possibility that the Consolidated Gas Company might make some additional profit by distributing gas in the Boroughs of Queens and others outside of Manhattan. That would require additional plant of course to produce the gas to be so distributed and with that we are not concerned. More than that have you any information that the Consolidated Gas Company has franchises that would permit it to operate or deliver gas outside of Manhattan? You know there are gas companies over there now in operation that have franchises in that territory, do you not?

A. I know there are companies which claim to have franchises there.

Q. Have you any information that the Consolidated Gas Company has franchises there which would legally enable it to distribute it if it chose to do so?

A. I have chanced in my investigation of the Brooklyn Gas Companies upon the names of the controlling syndicates and they are identical in many instances with the controlling syndicate of the Consolidated Gas Company.

Mr. Mathewson: I move to strike that out.

Motion denied. Exception.

2519 Mr. Burr: I think it is fair to state on the record that there is no evidence here that the Consolidated Gas Company has any right to operate outside of the Borough of Manhattan, nor is there any evidence here that the Astoria Light Company has a franchise to operate in the Borough of Manhattan.

Mr. Mathewson: I don't know that there is any evidence that the Astoria Light Company intends to operate in the Borough of Manhattan.

Mr. Burr: I think that is the only reason for its existence.

Mr. Mathewson: No, I guess not.

Q. When you spoke of the figures in the transcripts of accounts which have been submitted being unverified, did you refer to the fact that they had not been verified by you and Mr. Willoughby only, or did you refer to a supposed fact that no opportunity had been given anybody to verify them——

A. I presume that I should state——

Q. Well, what did you mean, that is what I want to know.

A. I mean that nobody with whom I was associated or acquainted in the present matter, had to my knowledge made such an examination, or, making such, had given me the information, and that I certainly had none myself nor had I been advised by the Corporation Counsel that anything of the nature of an investigation that was adequate had been obtained.

Q. If you have been here every day as you have testified, you certainly do know that the accountants for the defendant were invited to go to the office of the company and verify certain statements, do you not?

A. Referring to whom, may I ask?

2520 Q. Oh, referring to Mr. Cuthbert or Mr. Heyward, if you wish names, or anyone appointed by the defendants.

A. Mr. Cuthbert I have never known or spoken to.

Q. And if he checked accounts and vouchers wherever he asked for them and if he took away copies of certain vouchers that he asked for to display to counsel, that is something you don't know anything about, is it?

A. I certainly never had any of Mr. Cuthbert's accounts or statements in my hands. Mr. Heyward did make, I understood, an investigation of some sort at the outset, an incomplete and impartial one, giving me a few sundry memoranda. He afterwards told me that he had met Mr. Carter, the secretary, and had decided to defer further investigation until the State's accountants were through. This is as near as I can recall.

Q. Was that the last you heard of it?

A. The last I heard of it.

Q. Now you stated yesterday or the day before that in view of the enormous output of the Consolidated Gas Company, you thought the production should be at a low operating cost. Having read the testimony before the Gas Commission, do you not recall Professor Bemis' statement that after a company gets an output of some seven hundred million feet per annum that there is virtually no reduction in the operating cost beyond that because of the greater——

A. On what page was that?

Q. I cannot give you the page. I merely asked if you do not remember that. You say you examined the record with care. I will refer you to the page at the next session if you wish it?

A. I wish it, if you please.

D. Do you remember any such testimony?

A. I have the general impression that such testimony has been given.

Q. Have you any doubt of the truth of that testimony if it was given by Prof. Bemis?

2521 A. My point of view is the point of view of an individual who has been actively engaged in the actual work of distributing light and——

Q. Gas or electricity?

A. Electricity more particularly, and gas in a smaller way, and I have been impressed by the fact that in neither can one afford to generalize. The only way is to take up any locality that is presented for that purpose and with thorough care for the details to make a very careful and accurate investigation, placing the limitations either of electricity or of gas or of any other enterprise and finding, from a vast number of averages which I have collected, running into the thousands, that there is nothing so dangerous or so unreliable as an average statement where the factors deduced from averages are not produced in other analogous or almost similar circumstances to the proposition to which you wish to apply them.

Q. Then if your testimony is understood as generalizing on this subject you wish to withdraw it, do you?

A. I said nothing of the sort.

Q. But you say it is dangerous to generalize?

A. With certain qualifications.

Q. Did you not generalize when you expressed the view that the cost ought to be reduced because of the increasing output in New York?

A. With the qualification you have omitted from my statement.

Q. What is that?

A. Unless the factors which are deduced in averages are deduced from similar propositions.

Q. Well, assuming that the cost of gas from the year 1900 to 1904, 5 years, computed on the same basis as reported by Mr. Teal to the Stevens Committee, stood at sixty-one cents almost exactly for the 5 years and that for 1905 it was 60.75 cents as reported by the Gas Commission, that would not indicate any considerable decrease in 2522 the cost of production of gas in New York City by reason of the increase from year to year of its output, would it?

A. As a pro rata matter it would not appear to do so.

Q. And if I understand you correctly, you stated that gas could be produced in New York City perhaps as low as 45 cents because of the report of some accountants in Chicago that such was the result of their examination in Chicago, is that right?

A. No, I thought that the probabilities were that with management of an economical character it might be even a little lower.

Q. Than Chicago?

A. Than the 45½ cents found in Chicago. I am referring now to the cash cost of raw or crude material and of productive labor and also of office organization, etc.

Q. Do you know whether the 45 cents which the accountants reported in Chicago included anything for taxes?

A. The accountant's statement was that it did.

Q. That it included taxes?

A. Yes, and renewals.

Q. Do you know what proportion of the streets of Chicago are covered with asphalt or block pavement on concrete, or other new pavement of the expensive character which we have to go under in New York in attending to our distributing system?

A. That would affect the services only and I know that in Chicago they have continually increasing pavement of a better character going on, that is all I know about Chicago.

Q. Don't you know that the proportion of what may be called new pavement in Chicago is very small as compared with 90 per cent. and over in New York?

A. No, I do not know that.

Q. Don't you remember Professor Bemis saying that the cost of distribution in Chicago, would be affected in the way of reduction as compared with New York on account of the character of their
2523 streets which he described as very poorly paved?

A. I do not recall that fact.

Q. Do you know what they pay for oil in Chicago?

A. I don't know.

Q. Don't you remember that Professor Bemis' testimony was that they were able to get it there, nearer the fileds, for about three cents per gallon as against 4.08 cents which we pay here on the average?

A. I recall the fact that he mentioned three cents per gallon.

Q. Well, if that be true and that would be a difference of one cent per gallon in the cost of oil and over, that, according to your book which I have quoted, would mean a difference of about five cents in the cost of gas in favor of Chicago as against New York on the score of oil, wouldn't it?

A. In speaking of the possibility in the reduction of the cost of gas in New York to the figures given by the accountants for Chicago I did not assume that the management of the New York companies would differ very largely or the prices differ very largely from those obtained in Chicago. For instance the——

Q. Well, I am not going into that, if you will permit me. I don't care to waste time on that, but I ask you a question which I think is susceptible of an easy answer.

Mr. Mathewson: Mr. Stenographer, read the question.

The Stenographer (reading): Well, if that be true and that would be a difference of one cent per gallon in the cost of oil, that, according to your book which I have quoted, would mean a difference of about five cents in the cost of gas in the favor of Chicago as against New York on the score of oil, wouldn't it?

Mr. Mathewson: So far as the oil is concerned.

2524 A. I assume th[illegible]he oil could by proper management be procured at the same price in New York as it is in Chicago.

Q. Well, please assume the facts.

A. I have stated in my book that one cent in the price of oil will very nearly increase or decrease the cost of gas about five cents, which is true.

Q. Now, do you know whether Marwick, Mitchell & Company, these accountants who made the examination, were experts in the gas business or had any practical knowledge of the gas business?

Mr. Burr: That we went over yesterday.

Mr. **Mathewson**: Oh, no, we did not.

A. I have been told that they had had considerable experience in the gas business.

Q. In operating gas works?

A. In accounting gas works.

Q. Didn't you say the other day that the reports of accountants unless they were practically familiar with the gas business would give no idea as to what the cost of gas was or give any exact figure as to the cost of gas?

Mr. **Burr**: Objected to, because the testimony that was given yesterday was that accountants who had no special knowledge of the gas business unless advised by a gas engineer who had could not bring about the results that should be obtained.

Mr. **Mathewson**: They were not advised.

Mr. **Burr**: You evidently know all about it.

Mr. **Mathewson**: I do, a good deal more, I think, than you do, Mr. Burr.

Mr. **Burr**: There is his testimony yesterday though. You can refer to it.

The **Master**: I will allow him to answer the question.

2525 A. I said, referring to my testimony of yesterday: "A. Unless directed by someone familiar with the gas business."

Q. Have you any knowledge that these accountants were directed by any one familiar with the gas business, and if so by whom?

A. I was told that they themselves were familiar with the gas business.

Q. In what way?

A. As accountants.

Q. Any practical knowledge of gas operations?

A. Practical knowledge of the ordinary methods of gas accounting.

Q. Yes, but with the operations of gas companies, practically familiar?

A. I so inferred from what was stated to me.

Q. Did you understand that they had ever operated gas works or had been, as operators of gas works, concerned with the distributions of items to capital and operating cost?

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial. His understanding of what their capability or knowledge was, has nothing whatever to do with it.

Objection overruled; exception.

A. It was only a general knowledge.

Q. Will you point out to me in the report of these experts where they say they included taxes?

A. Report of the Committee of Gas, Oil and Electricity to the general council of the City of Chicago, January 29, 1906, page 8.

Q. That is not the report, I think, that statement of Mr. Cowdery, of St. Louis.

A. This is the report of the committee, you know.

Q. Oh, no.

A. Page 8, of the report of the committee.

2526 Q. No, that is the statement. I am talking now of the report of the accountants.

Mr. Burr: He is reading from the official report of the committee.

Mr. Mathewson: He has stated that they included taxes in their 45 cents and I ask where it is stated.

The Witness: I am reading from the report.

Q. The report of the accountants I refer to. Do you find any such statement in the report of the accountants?

A. I do not. I find it in the report of the committee.

Mr. Burr: On what page?

The Witness: On page 8.

Q. That is in the statement of Prof. Edward W. Bemis, quoted in this pamphlet, is it not?

A. As is also the report of the accountants.

Q. Precisely, but is there any statement in the report of the accountants that they included taxes?

A. I have answered that question.

Q. Is there?

A. I have answered that question by saying that they did not.

Q. Very good. Will you look on page 40 of this pamphlet and see if there is not a communication from Marwick, Mitchell & Company to the Hon. Lynn H. Young, chairman of the Committee of Gas, Oil & Electric Light of the Common Council of the City of Chicago, dated New York January 22, 1906, in which they say "no allowance is however included in either statement for the wear and tear which is usually conceded to occur in excess of what is covered by renewals." That statement appears, does it not, as I have quoted it?

A. I see that, yes.

Q. So that if there was wear and tear generally conceded in excess of the renewals actually paid out, that would mean an addition to the 45.45 cents, would it not, assuming the first amount to be correct? 2527

A. That is what I refer to in my various statements in my book covering in a general way all of those matters; the cost given by Marwick, Mitchell & Company is the cash cost to which I make continual reference in all I have testified in regard to gas.

Q. Now, while you have quoted from Prof. Bemis on page 8 of this pamphlet, have you observed that his final estimate of the amount chargeable for gas as appears at page 3 at the bottom is 51.96 cents, in round figures 52 cents?

A. I have observed it at the outset.

Q. And Mr. Cowdery of St. Louis, was 53.75 cents?

A. Yes.

Q. And Dr. Humphreys was 53 cents?

A. Yes.

Q. Who is Mr. Cowdery?

A. Manager of the Laclede Gas Works.

Q. A man of very large experience in the gas business, is he not?

A. A man of experience.

Q. And large experience, isn't he?

A. As to what extent it goes, I don't know.

Q. And these figures that I have given you are without allowance for reserve, which appears at the top of page 4, or accruing depreciation or reserve for contingencies or allowance for extraordinary depreciation as appeared at the top of said page 4 and also without any allowance for bond interest and dividends, which Prof. Bemis states to be 19.2 cents, Mr. Cowdery to be 34.92 cents and Dr. Humphreys to be about 32 cents; is that right?

A. All of whom were entitled to their own opinion.

Q. Certainly.

A. I have none regarding it.

Q. But the figures 51.96 for Bemis, 53.75 for Cowdery, and 53 for Humphreys were exclusive of these other items, which I have mentioned.

A. Apparently.

2528 Q. And the total including those for Prof. Bemis was 74.16 cents, Mr. Cowdery 98.67, and Dr. Humphreys 95 cents.

A. Yes.

Mr. Burr: Are you reading from the official report of the Chicago Committee of Gas, Oil and Electricity?

Mr. Mathewson: Yes, from this same pamphlet respecting which you have questioned the witness.

Q. Do you know how the cost of coal in Chicago compares to the cost in New York.

A. That depends upon whether it is anthracite or bituminous coal.

Q. Have you made any investigation as to the rate of wages payable in Chicago as compared with New York?

A. I have made none.

Q. Referring to your supposititious cost of $2.00 or less per thousand feet for the establishment of a gas plant, do you observe in this same pamphlet that Prof. Bemis estimates for the establishment of a plant, $3.20 per thousand cubic feet?

A. What page is that, is it page 19?

Q. Yes—pages 18 and 19.

A. I have read that and I presume that he did not use the capacity factor in estimating the value.

Q. No, but he does say, "I do not know of any gas company that was successfully floated, on a basis of 6 per cent. of its structural value with the exception of Cleveland. I do not know of any company that has started in with an entirely new plant on a basis of $3.20 per thousand output that was floated on a 6 per cent. basis." Is that correctly quoted?

A. On what page, if you please.

Q. Page 18, I believe, second column about the middle.

A. That seems correct.

—. And Prof. Bemis took $3.20 on the next page "as the 2529 approximate cost of structural value," did he not, in making his computations and discussions?

A. Apparently.

Q. Now you say you have read all the testimony before the Gas Commission. Do you remember Prof. Bemis' testimony that in Chicago there was practically no rock as there is in New York?

A. I do not, but I know that is a fact.

Q. So that the installation of a distributing system in the City of Chicago per mile of mains would be less expensive than in New York where there is a considerable amount of rock work to do, would it not?

A. I do not know how considerable the rock work is in New York, as I have not had an opportunity to examine the maps.

Q. You know there is considerable rock work from your own observation in going about town?

A. I have seen rock in New York.

Q. And that would tend to increase cost of the distributive system?

A. If the distributive system is in the rock.

Q So, too, as to the valuation of land, is not the situation in Chicago such that you can go to a greater distance from the centre of population to establish your plants than you are able to in the Island of Manhattan which is surrounded by water.

A. Appaently not, in the case of Astoria.

Q. Will you please answer my question?

A. No.

Mr. Mathewson: Well, I ask that the question be repeated and I ask that the witness answer it.

(Question read by stenographer.)

Q. We are dealing here with the plants which are established in this present valuation largely?

A. My answer is no.

Q. You think the land then in the outskirts of Chicago would be as valuable as land in the City of New York, where the gas 2530 plants of this Company are established, do you?

A. Positively, I am not a land expert.

Q. No, that is a fair answer. Would you expect the cost of plants constructed from time to time as the plants of the Consolidated Gas Company have been to be greater or less than the cost under similar conditions of an entire plant covering the whole capacity constructed at one time?

A. That would depend altogether on the scale of economy which was adopted in the construction of the new plant and largely on the ability of the engineer in design and in the capacity and shrewdness of the business manager and purchaser. There are a great many factors entering in——

Q. Oh, yes, but assuming those things to be equal, is it not a fact in your judgment if a plant were to be built to cover the entire capacity with everything before the engineer designing it, and the job to be done wholesale, so to speak, with full knowledge of what was required, that he could produce the plant for less money than would be invested in plants which were built for sixty or seventy years, to meet the requirement of consumption as it appeared?

A. That would depend largely on the scale of prices, whether it had or had not remained constant during the sixty or seventy years.

Q. Well, supposing those things to have remained constant?

A. That is a theory which is never true——

Q. Oh, of course.

A. But assuming such to be the case it would be easier to build, providing properly designed and cared for, a single station up to a large capacity, than to build a large number of small stations, and the result I think would be quite favorable in economy of installation and in economy of operation, subsequently.

2531 Q. Is it not your experience that products of iron, such as pipe, say, in the 70's, were very much more expensive than now, going as high as $50 or $60 a ton?

A. Even higher than that in the 70's.

Q. Now, in respect to Philadelphia, do you intend to assert that the Philadelphia Gas Company sells gas to anybody at 78 cents, and if so, to whom?

A. No. I have asserted that the average price received by the United Gas Improvement Company of Philadelphia for the gas that it sells or gives away to the city is about 78.1 cents during the past eight years.

Q. We will see whether it gives away any. As a matter of fact all the gas that the company sells so far as you know and for which it receives returns from the consumers of gas in Philadelphia aside from the city, is sold at $1.00, is it not?

A. It is.

Q. And am I right in the impression that some time ago an ordinance to reduce the price to 90 cents was defeated or vetoed by the Mayor?

A. It was vetoed by the Mayor.

Q. Now, the Philadelphia Gas Company as a matter of fact or the United Gas Improvement Company leases from the city a great part of the plant which it operates, the plant having originally belonged to the city, doesn't it?

A. It still belongs to the city.

Q. Certainly, it still belongs to the city and is merely leased by the gas company.

A. Yes.

Q. Now, whatever gas the company delivers to the city is delivered, is it not, in whole or in part, as compensation or rental for the property or plant of the city which the company is allowed to use, and it is not given to the city at all, except as consideration for the use of the property, is it not?

A. Well, I don't think that is specifically stated. I wonder if I have the lease here. No, I haven't the lease here; I have it at my office.

2532 Q. Well, is it not your recollection that the gas is delivered to the city as compensation for the use by the company of the property of the city which the company uses?

A. I know the gas is delivered to the city free of charge. I don't know——

Q. Pursuant to the contract under which the company uses the city's plant to manufacture gas?

A. Yes.

Q. Your 78.1 is obtained by dividing the amount received by the company from private consumers to which it sells gas at $1.00 by the gas delivered to private consumers plus the gas delivered to the city under this contract, is that not right?

A. My first affidavit, page 22. The United Gas Improvement Company, in return for the use of the gas works, Article 4, binds itself to spend not less than $15,000,000 for enlargements and improvements in thirty years. Article 5, the United Gas Improvement Company agrees to pay the City of Philadelphia $10,000 each year for salaries of inspectors of meters and gas, and to furnish at its own expense proper stations for testing the candle-power of gas located at a distance not less than one mile from each point of manufacture and to fully equip them.

Article 7. The United Gas Improvement Company agrees to supply without charge such amounts of gas as may be required for illuminating Philadelphia's public buildings.

Article 8. The United Gas Imporvement Company agrees to supply without charge all gas for the city's street lamps and lamps in public squares and to add at its own expense, 300 lamps each year to the existing number in 1897.

Article 9. The United Gas Improvement Company agrees, at its own cost and expense, to run all services, make all connections between street lamps and its distributing pipes or mains, to furnish all burners required on street lamps and light, clean, extinguish
2533 and repair lamps and lanterns and keep in repair all lampposts, lamps and lanterns in use during the term of this lease.

Article 10. Until otherwise provided by ordinances of Council to charge all consumers except the City $1.00 per thousand cubic feet retaining on this charge until December 31, 1907, 90 cents per thousand cubic feet; then until December 31, 1912, 85 cents per thousand cubic feet; then until December 31, 1917, 80 cents per thousand cubic feet; then until December 31, 1927, 75 cents per thousand cubic feet, and pay all surplus collected into the City Treasury.

During the present period the City is at liberty to retain about 10 cents for each one thousand cubic feet sold or, if the City Council so wish, to put the price of gas at 90 cents, leaving nothing for the City Treasury. To recapitulate, since 1897, a period of 8 years, the United Gas Improvement Company has collected of citizens $1.00 for every 1,000 cubic feet of 22 c. p. gas, and it has paid into the City Treasury about 10 cents per one thousand cubic feet of gas, and furnished free of charge all the gas required for street lights and public buildings in Philadelphia, and has at its own expense, lighted, extinguished, cleaned, repaired and connected lamp-posts and street lamps, furnished test inspection stations and paid $10,000 per year for salaries of such inspectors.

Mr. **Mathewson**: Now, will you read the question?

(Question read by Stenographer as follows):

Q. Your 78.1 cent- is obtained by dividing the amount received by the company from private consumers to which it sells gas at $1.00 by the gas delivered to private consumers plus the gas delivered to the City under this contract, is that not right?

2534 A. Is that the question?

Q. Yes, simply how you get 78.1?

A. Taking this statement and embodying the figures required——

Mr. Mathewson: Will you read the question?

Question repeated.

Q. Is that right?

A. Taking the figures arising under this contract, we find the net balance of the United Gas Improvement Company to be $35,085,479.40 which is divided by the sum of 40,243,341,550 cubic feet plus 4,639,899,816 cubic feet, and gives an average of 78.1 cents.

Mr. Burr: As what?

The Witness: As the actual price per thousand cubic feet received by the United Gas Improvement Company of Philadelphia during the eight years.

Q. But if you charge one dollar to private citizens of Philadelphia, that is to everybody for gas, how is it possible to get the amount received for that gas on the part of the company down to 78 cents?

A. By the method explained just immediately before this; the figures are given.

Q. That 78 cents does not include anything for taxes, does it, on the plant of the City which it leased to the company?

A. It is the price, not the cost of gas I am giving.

Q. Well, I suppose the price at which a product may be sold depends upon the expenditures that the producer has to make. You do not understand that the U. G. I. Company has to pay anything for taxes on the city's plant which it is using, do you?

A. I know that city property is not taxed. I don't know whether the U. G. I. is or is not taxed on any portion of it.

2535 Q. Well, if you assume taxes to be on their plant, about 7 cents per thousand, as the testimony is they are in New York, and add that to 78 cents, that would make 85 cents, would it not?

A. 78 and 7 cents, 85 cents.

Q. As a matter of fact the U. G. I. Company do not have to earn and pay dividends on the value of the city plant which they use, and which a private company would be obliged to establish and earn upon, does it?

A. No, I think not.

Q. That would make a difference also in the calculation of a price at which gas would be fairly produced and sold, would it not?

A. They are very secretive about the question of their actual expenditures and their stock issues and their bonds. In fact there has been a good deal of public quarreling about them.

Q. Well, but as a matter of fact, if you do not have to earn and pay a dividend upon a capital that would naturally result in the ability to sell the product lower?

A. They claim that they have already expended the equivalent of $2.15 per annual thousand.

Q. Yes, I will come to that in a moment. But does the 40,243,341,550 cubic feet of gas which you specify in the table at page 29 include the gas which was delivered to the city or city buildings or lamps?

A. Column 3, you will observe gives you the free gas, 4,639,899,816.

Q. Yes, I understand that, but is that included in the forty billion?

A. Is what included in the forty billion?

Q. The 4,689,899,816?

A. No, not at all.

Q. If you will turn to page 33 of your affidavit it appears that in addition to the works belonging to the city of Philadelphia which the U. G. I. Company operates under lease it has added according to your statement additional plant which belongs to the Com-
2536 pany amounting to $16,018,192.22. Is that correct?

A. That is correct as the public statement made by them and printed in a Philadelphia newspaper.

Q. And that amounts to $2.15 annual thousand sales, doesn't it?

A. Yes, per annual thousand cubic feet of gas.

Q. Yes, which standing alone and excluding entirely the city plants which they lease and which they operate amounts to more than the $2.00 which you assumed as the structural value of a gas plant?

A. Yes, sir, it does.

Q. Now, as a matter of fact, is it not stipulated in the contract that if the lease is terminated the city of Philadelphia shall take over this plant which the Company has established and which amounts to $16,018,192.22, paying therefor the cost with 6 per cent.?

A. Yes.

Q. Now, are you familiar with a report of the Mayor of Philadelphia to the Special Senate Committee of Pennsylvania in or about May, 1895, in which Mayor Warwick estimates the value of the gas works belonging to the city at $30,000,000?

A. No, I am not familiar with that report. I was well acquainted with Mayor Warwick, though.

Q. Well, I am shown an extract from the report of the Special Senate Committee of May 8th, 1895, in which this appears. If it be true that the value of the Philadelphia city's plant which is used by the U. G. I. Company, is $30,000,000 and the value of the additional plants of the U. G. I. is $16,000,000 and over, that would make the total value of plant in Philadelphia upwards of $46,000,000, would it not?

A. If those statements were correct, yes.

Q. So instead of $2.15 as the structural value of the Philadelphia gas works, it would be something nearly three times that or about $6.00 per thousand cubic feet of output?

2537 A. That is true, and all of it is absolutely worthless from an engineering point of view, both the statement——

Q. Well, it was considered the fact, that the Company's addition to plant, which the city is to buy if it terminates the lease, amounts to $16,000,000 and more. You considered that of sufficient probability so you have included it in your affidavit on this motion, have you not? You covered quite a large amount of your affidavit with the discussion of the subject at Philadelphia?

A. Referring to what?

Q. Referring to the structural value or cost of the plant which the U. G. I. has established in Philadelphia in addition to the plants of the city which the U. G. I. Co. leases and operates in the production of its gas?

A. What page?

Q. Page 33.

A. On page 33, I occupied one paragraph, making this statement:

"In his annual report of the U. G. I. Co., the statement is made that its investments in the Philadelphia Gas Works for building, apparatus, machinery, mains, pipes, services, connections, meters, appliances and appurtenances of the Philadelphia Gas Works, together with simple interest at 6 per cent., amounted to $16,018,192.22, which divided by the gas sold or given away during 1905 amounting to 7,434,524,760 cubic feet, gives $2.15 per annual one thousand cubic feet of gas."

Mr. Burr: What report did you refer to there in your affidavit, to the annual report?

The Witness: In this annual report of the United Gas Improvement Company.

Mr. Burr: You are not referring to the report to which Mr. Mathewson has just called your attention, by Mayor Warwick.

The Witness: Oh, no.

2538 Q. Well, there is one point which I am not quite clear upon. Referring to your total on page 29, in order to get 78.1 what divisor did you use?

A. 40,243,341,550 plus 4,639,899,816, I think it is. I think there is a misprint there.

Q. So, as a matter of fact, you did divide the amount received by the United Gas Improvement Company by private consumers for gas delivered to them by the amount of gas delivered to private consumers plus the amount of gas delivered to the city?

A. I so stated in my affidavit.

Q. I did not understand whether that was so or not.

A. Yes.

Q. You have referred to the report of J. Yalden, accountant for the Committee of 1886, and quoted from him a cost of $20,942,000 to the original companies of the plants as they existed in 1884. Did that 20,000,000——

A. At what page of my affidavit?

Q. I cannot tell you the page of your affidavit. It is down here, page 776, I think.

A. $20,942,632.85. I do not recall making such a statement or making out that figure.

Q. My recollection is that you did, but if I am mistaken——

A. I think Mr. Burr made use of that figure.

Q. My recollection is that you did, but if I am mistaken——

A. I think Mr. Burr made use of that figure but not myself.

Q. Did you not make use of the figure or the details or analysis of that figure in your testimony?

A. In my testimony I used a large number of fragmentary figures for the various divisions, but not the lump sum.

Q. Purporting to show the cost in those cases to the original companies of the property with which you were dealing?

A. Yes.

2539 Q. Now, that figure of $20,942,000 does not include, does it, any accounts receivable or any cash or other working capital, nor even materials and supplies?

A. Well, as I stated to you before, I had not investigated that in my testimony. That was brought out by Mr. Burr, but not for myself. I could look that up, if you wish, between now and to-morrow.

Q. Very good. You say that you read the testimony before that Commission. Is it not the fact that Mr. Yalden's report so far as you have examined it merely gave the figures at which the various items of property were carried on the books of the constituent companies?

Mr. Burr: Well, the report, I would suggest, is in evidence and speaks for itself.

Mr. Mathewson: The testimony is not in evidence and he says he has read all the testimony. I am merely asking him for his information in this regard, whether that shows anything more than the figures at which the various items of *of* property were carried on the books of the constituent companies.

The Witness: On page 636 J. Yalden makes the statement as follows:

"To show these results I have compiled separate tables for each company, assimilated as near as practicable, giving the analysis of the Profit and Loss accounts, an account showing the capital used in their business, the investments on account of real estate, mains, meters, services, etc., the particulars of the sales to the Consolidated Gas Company, an account showing the dividends paid to the stockholders and a calculation thereon giving the difference between 10 per cent. on the capital stock as paid up and the actual sum 2540 divided. This is followed by a consideration in detail of the books of each of the six companies incorporated."

Q. Yes, but so far as your investigation goes, are not the figures of Mr. Yalden merely the figures at which the various items appeared on the books of the companies in their capital account or asset account?

A. In some cases, yes; in others, these figures are followed by notes elucidating the real meaning of the figures.

Q. That is quite true, but the figures themselves as relating to the different items are merely figures at which those items appear on the books of the company, is not that correct?

A. He appears to be a most excellent accountant and the figures are given accurately and annotated where he thinks they need further lucidation.

Q. But with that exception you would answer my question in the affirmative, or rather, with that explanation?

A. Yes.

Q. In examining the testimony there did you find any evidence at all introduced as to what was the actual cost to the constituent companies of the various items of property or any record of examination of vouchers or otherwise to determine whether the figures at which they were carried on the books of the company really represented their original cost or whether they represented the cost as charged down or charged off?

A. Yes; for instance, take the Manhattan Gas Light Company, price of sale to the Consolidated Gas Company, November 11, 1884, page 671. Account to Real Estate and also to plant——

Q. To plant, how much?

A. On page 672 the following note occurs. The plant given in detail is put at $64,247.49 and then the further explanation of real estate is: "Real Estate, additions and improvements, North
2541 River, $1,774,919.38; Real Estate, additions and improve-
ments, East River, $1,486,607.42; Real Estate, additions and improvements, Irving Plaec, $90.203,94; making a total of $3,251,730.74."

Q. That is not my question, Professor. I do not think you quite had in hand what I meant.

A. That is where I——

Q. You say you have gone over the testimony and read the testimony given before that Commission, and I want to know whether you found any testimony before that Commission of any witness, that the original cost of any item of assets of these six constituent companies was actually the figure at which that item was carried on the books of the company.

A. No, unless Mr. Yalden is a witness.

Q. No, he simply took the figures, that is the point.

Mr. Burr: The report refers to the situation in that regard.

Mr. Mathewson: Yes, so it does, and I will call attention to the report.

Mr. Burr: And so did Mr. Gawtry in his testimony.

Mr. Mathewson: Well, I will not ask the witness regarding this, and in view of Mr. Burr's statement this report which is in evidence, if the Master please, is that the majority of the Commission did not determine the original cost, stating that they did not consider it necessary, in view of the fact that the Act of 1884 authorized the consolidation upon the basis of the then value of the property.

Mr. Burr: I have not characterized what the report is, but I see that the report speaks of the situation as they found it in that regard.

Mr. Mathewson: Yes, and the majority of the Commis-
2542 sion, as the Master will observe, stated that there was no evi-
dence that they were valued higher than they were worth, except the evidence that they seem to have been valued higher than they appeared to have been charged on the company's books.

Q. Now, you said that at the time of the consolidation, or at the time of the formation of the Consolidated Gas Company nothing was sold and nothing was paid for.

A. On what page, please?

Q. I cannot tell you. But am I not correct in substance in quoting your statement, or don't you remember what you did say?

Mr. **Burr**: If you have his testimony before you, refer him to some specific statement, as it would be much easier.

Mr. **Mathewson**: That was yesterday's testimony, and I only received it as I came in this morning, and I have not had time to annotate it.

Mr. **Burr**: I do not think it was yesterday.

The **Master**: I think it was the first day.

Mr. **Mathewson**: Perhaps so.

The **Master**: Well, is it important as to the language?

The **Witness**: Whatever the printed matter may show, I recall that I said that so far as the stockholders were concerned, nothing was sold and nothing was paid for in money. Of course the minor matters of——

Mr. **Mathewson**: Page 2346, the middle of the page.

Mr. **Burr**: Well, you quoted it from memory almost exactly.

2543 The **Witness**: So far as the stockholders were concerned.

Q. Does your statement apply only to the tangible assets appraised at $29,994,000 in 1884 and the franchises appraised at $7,781,000, making a total of $37,7[illegible],000?

A. Only to stockholders, and what they gave and what they received.

Q. Does it apply only to those two amounts which I have specified, or the property which was covered by those two valuations?

A. Well, so far as the stockholders were concerned.

Q. You do know, don't you, that from the constituent companies immediately following the consolidation there were obtained further assets of one kind and another for which the Consolidated Gas Company paid to the constituent companies something like $600,000 or perhaps more?

A. Yes, I spoke only of the stockholders and what the stockholders did.

Q. And of the property included in the original appraisement to which I have referred?

A. And to the property which at that time was transferred from the six companies to the Consolidated Gas Company.

Mr. **Burr**: I think there is a word omitted in this statement: "The stockholders of the six companies received in exchange for their stock certificates in this company an average of about what was their face value in the stock of the Consolidated Gas Company." See page 2347. Was it not double?

The **Witness**: About twice their face value.

Mr. **Burr**: So that correction is to be noted there.

Q. You do not understand, do you, that the $20,942,000 2544 to which reference has been made included the franchises of the constituent companies?

A. I have never looked into that total. I will do so, if you like, between now and to-morrow.

Mr. **Mathewson**: Is it claimed that that did include franchises, or that there was any item of franchises going to make up that amount of $20,294,000 which you say the property of the constituent companies was carried at on their books?

Mr. **Burr**: I would not say at this moment.

Mr. **Mathewson**: My information is that it does not, and I wish to have it clear if I am right or wrong.

Q. You know that the constituent companies, some of them, were very prosperous and were paying very large dividends prior to the consolidation, don't you?

A. I do.

Q. And is it not your general experience that companies in that situation are liable to pay construction out of operating cost or to charge down very liberally for depreciation of plant or otherwise?

A. I would not like to say from so limited a general experience as I have had that this applies exactly to gas companies, but I should say that the American is very apt to be lavish when he has plenty of money.

Q. Yes, and so you have known a great many instances where the book value of assets does not represent what the investment therein was, have you not?

A. I have; and the reverse also.

Q. And do you observe in the report of the committee of 1886, a statement that $39,078,000 which included franchises at $7,781,000 and tangible property at $29,994,000 and $1,103,000 for working capital, was only the market value of the securities of the
2545 constituent companies outstanding at the time of the consolidation?

A. I understand that the very basis of the whole consolidation was an attempt to take the existing stocks, add to them their premiums and to increase the stock of the Consolidated Gas Company for distribution to a point which was equivalent to the par value plus a premium on the stock of the original six companies.

Q. That is to the market values of the six constituent companies?

A. Whatever that was.

Q. On certain computations to which I shall call attention in a few moments, you said you were compelled to take the company's figures as to the sales of gas for the last year or two. Don't you know that the company's sales and their amount was checked over by the accountant for one — the defendants?

A. May I ask the name?

Mr. **Mathewson**: Mr. Cuthbert wasn't it?

Mr. **Carter**: Yes.

Q. By Mr. Cuthbert, for the express purpose of verifying the sales as they were presented in the exhibit.

A. Nothing coming from Mr. Cuthbert has been handed me by any of the defendants.

Q. And you have not been informed by Mr. Hayward of the truth of those figures?

A. Mr. Hayward seemed to be very enthusiastic with regard to the skill and ability displayed in their bookkeeping, but did not go into details.

Q. You made certain deductions as to the structural cost of plants in Massachusetts in the cities of Cambridge, Fall River, Lowell and Worcester, showing that their structural values as carried on the books of those four companies averaged $3.20 per thousand feet of sales. And you then computed what the capitalization per thousand feet of sales would be, provided the sales of the company equalled what you assumed to be the full capacity of the plants. Do
2546 you remember what that latter figure was per thousand feet of sales? $1.75 appears at page 2351 of the record, if that is right?

A. Page 2351, structural cost per annual thousand, divisor——

Q. No matter about the divisor, I am merely asking the figure which you obtained as the structural cost per thousand?

A. $1.78.

Q. That was on the assumption that each one of these plants produced the daily capacity evidenced in the fourth column, was it not?

A. You mean the year through?

Q. No, that that is the daily maximum capacity, as you might call it, or a maximum capacity for a day?

A. It is the daily capacity returned by the company's managers to the Massachusetts Gas and Electricity Commission.

Q. Does the company return to the Massachusetts Gas an- Electricity Commission a statement of its annual capacity?

A. Yes.

Q. Or of its daily maximum capacity?

A. It has given its daily maximum capacity in cubic feet.

Q. You did not obtain this by dividing the annual capacity by 200?

A. No, it is from the book as referred to here.

Q. Will you show me the book and the column, I refer to the Massachusetts report from which you have been quoting in that testimony?

A. Yes.

Q. Just give me the page and column of that report?

A. Page 114, report for the calendar year 1905.

Q. Now, taking the last one of the four cities, Worcester, I find on page 115 of this report for 1905 of the Massachusetts Gas Commission the greatest output on any one day was 2,019,000 feet, is that correct?

A. That is correct.

Q. Now, the 4,200,000 which you have placed in the fourth column under the head of daily capacity appears on the left
2547 on page 115 of this report and is under what heading?

A. Daily capacity of works.

Q. Yes. Do you understand works to mean the distributing system of the company and they could distribute 4,200,000 feet of gas daily as their distributing plant now stands, including meters, services, mains, etc.?

A. Well, I presume that under pressure, as far as the mains are concerned, if they could get out that much out of the works, that they could also get it through their mains and to consumers.

Q. But let us take the conditions which you understand to prevail generally in Worcester and such places. Do you think that the Company could more than double their output without the requirement of more meters and more services to furnish their consumers? Would not that increased output mean more meters, services and a larger plant and distributing system naturally and also almost inevitably according to your experience?

A. Yes, that is the reason why I made an extra allowance of about five million dollars for the gas sales of purchased gas in the case of the Consolidated Gas Company.

Q. No, I am speaking now of the Worcester Gas Company. Would you not expect if and when their output became 4,200,000 feet that their distributing plant would be larger and a greater investment in it than when their output is only 2,019,000 feet per day.

A. Well, without a careful local investigation I could not express an opinion on that.

Q. Taking your general understanding of the gas business, would you not expect that when the daily output of Worcester more than doubled beyond the present two million feet that that would mean more consumers, and more meters and more services and a greater distributing plant than exists to-day?

2548 A. That is a generalization in which I would add to the facts actually stated by the managers on their reports to the Massachusetts State Gas and Electricity Commission, and I have taken as what they have stated as being in round figures and approximately correct.

Q. But this document here is headed "Daily Capacity of Works?"

A. Yes.

Q. You do not understand it to include the distributing system of the company, do you?

A. I understood this much that the distributing system was probably quite equal to any demands that came upon it, and with a very large surplus.

Q. But is it not your experience that if the demand comes for double the amount of gas which they now sell, it would — more consumers, and therefore more meters and more services than at present existing?

A. Naturally, yes. Increased demand means increased meters and services.

Q. Then if that be the case the amount of your structural assets when you name to your maximum output would probably be greater than the structural assets as they appear to-day, would they not?

A. No, that would be *pro rata* less per annual thousand of sales.

Q. Yes, but you have already taken the full capacity of 4,200,000 feet per day and anticipated that increase in dividing——

A. Well, I also call your attention to the fact that under existing circumstances of actual output that the actual structural cost amounted to $3.20 and that the capacity factor amounted to $111.3.

Q. But let me call your attention to this, you have taken the amount of structural assets of the Company as you assume them to appear upon the books to-day and have divided those structural assets not by the output as it is to-day, that is 2,000,000 feet, but by more than twice that or 4,200,000 feet, in the case of Worcester, 2549 which would give a lower quotient than would result had you divided the structural assets as they will exist when the Company has an output of 4,200,000 by 4,200,000. That is the point, and if there would be an increase in the structural assets at the time that the daily capacity of 4,200,000 is reached then your $1.78 would be too low a quotient, would it not?

A. That is a little too long to answer directly. I have assumed this, that the daily capacity of any works multiplied by a capacity factor of 200, which factor has been fixed by Mr. Bradley, Chief Engineer, and who is well known to most gas engineers.

Mr. MATHEWSON: We accept that.

The WITNESS (continuing): And that is not 365 days which would be necessary to make good your statement that every day the works would be run to a capacity of 4,200,000 cubic feet.

Q. I do not make any such statement and I do not make any such ridiculous claim. I should rebut it if you made it. My point is this, you have obtained $1.78 by dividing the value of the structural assets as they are carried on these books now; by an output more than double the present output; in other words by an output equal to the capacity of the works.

A. Not quite, less than double, if you please.

Q. Well, call it that, it is more anyway than the present output. Now, in the case of Worcester, the daily capacity is stated at 4,200,000 and the gross output is stated at 2,019,000, so that in that case the estimated capacity is greater than the present output as I have stated. But is not this a fact, that if the structural assets should be greater when this daily capacity is reached and that greater amount of gas is put out than now then your figure of $1.78 would be too low.

2550 A. The figure given for Worcester under which you are speaking with a capacity factor of 200 is not $1.78 but $1.54 which is a much lower sum.

Q. Oh, do not take one case, take any case or all the cases. I think you understand what my question is, don't you, Professor, and is it difficult to answer it?

A. No, but you took an average of four cases, and then you took a single case, Worcester, and you mixed them up.

Q. No, I didn't mix them up at all. I am sorry I mixed you up for I didn't intend to. But confining ourselves to Worcester for the moment and we will assume the quotient is $1.54. Now, if the assets at Worcester when the output reaches 4,200,000 feet for the maximum daily capacity, which would mean an annual capacity of 200 times that, shall exceed the structural assets $1,296,571.04, then your quotient would be somewhat greater than $1.54, wouldn't it, for the value of the structural assets at that time?

A. Not necessarily. It could not be decided except by a careful inspection of the Worcester works whether that would or would not.

Q. Oh, well, these are figures which you assumed, I did not assume them. We are assuming that the value of the structural assets is now $1,296,571.04 for Worcester, and I say that if the structural assets were greater than that at the time when the maximum capacity was reached, which is more than twice the present output, then the structural cost per annual thousand would not be $1.54 but would be something greater than that, wouldn't it?

A. Well, if you increase the structural assets without increasing the capacity, the daily capacity then, of course, using a capacity factor of 200 then your average of $1.54 per annual thousand might be increased to any amount, dependent entirely on how
2551 much you swell the sum of $1,296,571.04 without increasing thereby the capacity of the works and mains.

Q. Precisely. Now, did you make any examination of the Worcester works at all to see whether their full capacity was actually 4,200,000 cubic feet, even at the works, all parts of the works, or whether it is simply applied to the generating part?

A. I have visited Worcester lately a couple of times in connection with my engineering work and merely casually looked at the works. Of course I have to take these figures from the report of the Gas and Electric Light Commissioners, but they appeared to me to be exceedingly neat and well managed so far as I was able to go, as a mere stranger.

Q. Well, now do you understand that the purifying apparatus at the works is sufficient to take care of 4,200,000?

A. The book so states——

Q. The book states that the purifying apparatus has a capacity of 4,200,000 cubic feet per day, are you sure about that?

A. The book states so.

Q. What books?

A. The book—the report which is before you of 1905.

Q. Of the Massachusetts Gas Commission?

A. Of the Massachusetts Gas Commission.

Q. You do not mean to say that the books of the Worcester Gas Company show that they have a purifying capacity——

A. I know nothing about that. I am referring to the book in my own possession here.

Q. If I am informed and if I am correct that the purifying capacity is not much if any over 3,000,000 feet per day, and that the generating capacity is 4,200,000 feet, that would make an additional amount to be charged to structural assets beyond any increase in distribution system if you were to have an output of 4,200,000 feet per day, wouldn't it?

A. Possibly.

2552 Q. So that all of these deductions depend upon investigations which you have not personally made as to the capacity of the various parts of the plant, is that so?

Mr. Burr: That is hardly a fair assumption.

A. Hardly. I am taking a statement of the Commission which has long been known as careful and accurate in all its statements.

Q. But it is not your own investigation at all except as you took it from reports of the Commission, is it?

A. No.

Mr. **Burr**: It is after half past four and I suggest that we take a recess now.

Mr. **Mathewson**: It will take me some time to finish with this subject.

At 4.30 P. M. adjourned to October 5, 1906, at 11 A. M.

Last Exhibits:

Complainant's 255,
State's W,
City's 54.

2553 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, Friday, *October 5th*, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr.

2554 **William D. Marks** resumes the stand.

Cross-examination continued by Mr. **Mathewson**:

Q. Have you ever operated a well-established gas works which has been in operation for many years in which the sales were subsequently doubled without increasing the investment in works or the distribution system, or both?

A. First of all, I have never operated a gas works for a number of years consecutively. My work has been the building of them to such an extent as they have gone and the inauguration of them.

Q. I merely asked you as to your experience. You gave your views yesterday. Do you know, and if so will you name any engineer or any corporation that has established or proceeded with the establishment of a gas plant in the East upon a basis of $1.78 per thousand feet to cover land, plant, mains and all other investment, including working capital?

A. Including working capital, do you say?

Q. Yes, including the whole investment which the company requires for its gas business?

A. Referring to the four Massachusetts gas companies, the $1.78 of which you speak was derived entirely as actual structural cost, and does not include the working capital.

Q. Well, exclude working capital, but I ask you the same question, if you will give me the name of any engineer who has taken the formula of $1.78, or any smaller amount, and proceeded under that formula for the construction of a gas works in the East, including all the investment required, including land, except working capital?

A. Those are my own figures, and I cannot give you the figures of other engineers.

2555 Q. Now, do I understand in this computation that you accepted blindly, to use your own word, the figures in the report which these companies made to the Massachusetts Gas Commission, without even an examination of the individuals who made them for explanation or verification?

A. I took the figures as given by the report of the Massachusetts Gas and Electricity Commission in their report for 1905.

Q. Now let us take the four companies, Cambridge, Fall River, Lowell and Worcester, to which you have testified on page 2351 and following. You say those four stations in Massachusetts, or cities, were chosen as resembling New York. Will you state in what respects they resemble New York?

A. As being a group of stations, similar, as nearly as could be found, to the group of stations owned by the Consolidated Gas Company.

Q. You don't claim that the cities themselves particularly resemble New York, do you?

A. I was very careful to state their population.

Q. In other respects except population?

A. A great deal could be said, but I will say that they are all of them a much poorer field for gas sales than New York City. I can add to that to any extent that you may desire.

Q. Well, we were speaking now of the structural cost of the plants of the company, not of the field for sales. You spoke about holders. Do you know whether these companies in Massachusetts have any greater proportion of small holders than the Consolidated Gas Company has?

A. I have not the details as to the holders of these companies. Their daily capacity being small as compared with the New York capacity and output, they would require smaller holders.

Q. Would they necessarily require smaller holders, or a smaller holder capacity? Which do you mean?

A. Both.

2556 Q. Don't you know that the Consolidated Gas Company has quite a large number of small holders which have been established to meet the requirements of consumption in the past?

A. I do, relatively speaking.

Q. Did you make any investigation in Massachusetts of these four companies to show to what extent, if at all, they had increased their plants, being prosperous companies, without charging the increase adequately in either to share capital or to construction cost in their books?

A. I confined myself to actual figures given in the books and in the sworn report of the Massachusetts State Gas and Electricity Commission.

Q. Don't you know that it is well understood among gas engineers in the East that the Massachusetts companies put money largely into additional construction without charge in their books to additional capital account?

A. I presume instances of that sort have occurred. I don't believe it to be general.

Q. You haven't any personal information on the subject, have you?

A. I have heard the matter discussed.

Q. Have you seen the sworn report of these companies or is your information taken wholly from the report of the Gas Commission in which they are quoted?

A. My information is taken from the report of the Massachusetts State Gas and Electricity Commission for 1905.

Q. Do I understand you to say that the cost of land in New York to the Consolidated Gas Company or to the six constituent companies which forms it was less than the cost of land to the gas companies in these four cities in Massachusetts to which you refer?

A. You did not. I stated distinctly I am not a land expert.

2557 Q. You stated that subsequently. What did you say? Didn't you say in substance in your direct testimony that land cost the original companies in your opinion in New York no more than it cost the four Boston gas companies?

A. At what page?

Q. I ask you if you did not so testify?

A. I do not recall.

Q. I have a note to that effect and you either so testified or I misunderstood you.

A. I do not recall it, but——

Q. If you did so testify, do you wish to modify it?

A. If you will allow me. I do not recall making such a statement, but as nearly every bit of the land of the Consolidated Gas Company was purchased anterior to 1884 and some of it as far back as 1823 and 1824 it is probable that the average cost of land is somewhat akin to the average cost of the land in these smaller cities.

Q. Do you say that as a real estate expert or on your general judgment as a man?

A. On my general judgment. I am not a real estate expert.

Q. Now, Doctor, how long has the Lowell Gas Company been in existence and when did they buy their land?

A. I could not state without reference to the figures.

Q. Do you know what the population of Lowell was or is now as compared with the population of New York even in 1823?

A. The population of Lowell now is given as 94,889.

Q. Was not the population of New York even in 1823 a great deal more than that?

A. I could tell if I had reference to the census.

Q. Well, what do you think? Have you any doubt about it without looking at the census?

A. I recollect visiting New York as a boy in 1865 and I recollect that the buildings became rather thin back of the Astor House
2558 up Broadway, and that at 42nd Street there was termination
of all travel, showing it to be quite a small city as compared to what it is now.

Q. Oh, yes; no doubt about that; but have you any doubt that in 1823 it was a larger city than Lowell is to-day?

A. I cannot give you any opinion on that point.

Q. Do you know when the Cambridge Gas Company bought its land?

A. I do not. I can look it up if you wish.

Q. Do you know when the Fall River Company bought its land?

A. I don't know when any of these companies bought their land nor did I look it up.

Q. Well, then have you any special basis for saying that you think the cost of land to these companies in the smaller Massachusetts cities, whenever it was bought, which you don't know, was no greater than the cost of land to the six constituent companies of the Consolidated Gas Company, which land was bought from 1823 up to 1884 or such a matter?

A. Yes, I looked over J. Yalden's report of the stated cost of the real estate anterior to 1884, so far as he could get it from the books.

Q. But you did not find in J. Yalden's report any report of the cost of land in Worcester, Lowell, Fall River or Cambridge, did you?

A. It was the cost of land in New York apparently.

Q. Have you any basis for stating that, in your judgment, the cost of land in New York to the constituent companies of the Consolidated Gas Company was no greater than it was to the four companies which you have named and, if so, state the foundation for that conclusion?

A. Careful study of the cost first made out from the original six books by Mr. Yalden and a subsequent study of such fragmentary information as was furnished in the testimony showing that
2559 sales at very good prices of considerable amounts of real estate
had been made by the Consolidated Gas Company, enabling me to draw a rough inference that the total cost of the land was something less than three million—I mean the actual cost—how much less I do not know.

Q. The cost of the land now used you say by the Consolidated Gas Company in its business?

A. Yes, that is what I mean.

Q. Now, won't you go a step further and tell me the foundation of your belief or conclusion that the Massachusetts gas companies, to which you have referred, paid as much for their land as the New York companies did for theirs?

A. Simply the question of the population of the cities and my general knowledge of the growth of cities, as I was very careful to state in my investigation that it was only a rude approximation and necessarily would be until I had more accurate information.

Q. But if you know neither the dates when either one of these companies purchased its land and do not know the population of those cities when the land was purchased, and do not even know the population of the City of New York when the New York companies purchased their lands, how does that give you any basis for that conclusion, in figuring upon the population?

A. Nothing more than a rude approximation was attempted or asserted.

By Mr. BURR:

Q. As to the value of the land?

A. As to the value of the land.

Q. In Massachusetts?

A. In Massachusetts or in New York.

By Mr. MATHEWSON:

2560 Q. Well, the cost of land is a very substantial element, isn't it, of the cost of a gas works and plant?

A. Sometimes, yes.

Q. And if the cost of land in New York City were substantially greater than the cost of land in Cambridge, Fall River, Lowell and Worcester, that fact would substantially affect any comparison which you chose to make on the basis of structural cost to these four Massachusetts companies per thousand feet of output or capacity, wouldn't it?

A. So far as the real estate was concerned, yes.

Q. Now, isn't it true that the average capital in the United States in gas undertakings per thousand feet is about $8.47 per thousand?

A. So the United States census is asserted to have said, but that includes a vast number of other small companies.

Q. Naturally. And isn't it true that by the same census it appears that the structural value of the plants of the gas companies in the United States, taken together, averages $7.23 per thousand feet?

A. Per thousand feet of what?

Q. Sales.

A. Thousand feet of sales?

Q. Yes.

A. Was there no capacity factor used?

Q. Well, I am asking you, Doctor. I think you referred in your affidavit to the showing of the United States census.

A. To state that it must be incorrect, I did.

Q. What is that?

A. To state that it must be incorrect, I did.

Q. Well, that is your conclusion, but I am asking you what the census shows?

A. The census shows what it shows, and you can refer to it.

Q. Well, will you state or can you state what that $7.23 represents or purports to represent in the United States census?

A. On page 11 of my first affidavit I have made the statement,

"It can hardly be claimed that a valuation fixed in this manner by inexpert legislators and lawyers can be accepted as a standard
2561 for the valuation of other works, nor would it be just to accept
an average capital per thousand feet sold of $8.47 taken from the United States census as a basis on which to compute the proper capital employed in the gas works of the Island of Manhattan, since this average is obtained from an immense number of small gas works distributed all over the United States"——

Q. We understand that if it includes all the gas works in the United States it must include small as well as large companies. I am asking you what you understand this $7.23 in the United States census given as the structural value per thousand feet of all gas companies represents?

A. I am trying to find it. I do not recall that I have stated that figure.

Q. Well you are familiar with it, are you not?

A. I have heard it.

Q. And what do you understand that represents, $7.23 per what—thousands of sales or thousands of capacity?

A. I have not studied it specifically.

Q. But your recollection is that it is one or the other, is it not?

A. I will look the thing up, if you like, and tell you what I find out, but at the present time——

Q. No, you need not bother if you do not recall it, but I thought you had it in mind probably, having quoted the other. Now, let us take your testimony at page 2355. For instance, the Fall River Gas Company, Consumers' Deposits $429.85. You stated that all these things were carefully checked by you. I would like to have you point out to me in the report of the Massachusetts Gas Commission this item of $429.85.

See page 2357.

Mr. Burr: By the way, while he is looking for that, I want to call attention to a mistake on page 2357. The word on the fifth line, "liability," should be "variation."

2562 The Witness: That should be changed from "Consumers' Deposits" to "Interest Accrued But Not Due."

Q. Well, but you have not any item for any of these companies, "interest accrued and not due."

A. No, but I say in that case it should be.

Q. What are consumers' deposits, then?

A. Shall I read the whole of the liabilities to you?

Q. Oh, no, I merely said that I could not find consumers' deposits, $429.85. Now that was an error, wasn't it?

A. It was, I suppose, a stenographic error.

Q. Well, it was an error, no matter what kind of an error. What are consumers' deposits?

A. They do not appear in this. Apparently there are none.

Q. What about $2,193 next above in the Massachusetts report, deposits, $2,193?

A. On what page?

Q. Page 52, Roman lettering, of the Massachusetts Gas Report.

You say there are no consumers' deposits. Don't you find on page 52 of the Massachusetts Gas Report, under the head of Fall River Gas Company, deposits $2,193?

A. Yes. That should have been added. That, however, is an allowance which I should have had and did not get in.

Q. Well, whatever it is, that is another proposition. The fact is that $429.85 is an error and it should have read $2,193.00, (see statement p. 2355) is it not?

A. Yes, it is so much against my figures.

Q. That is all argument, Doctor. If you will just answer the questions and not argue each one, I think we will get along faster. What is the difference in your mind between floating and fixed liabilities?

A. Well, that is one that is not very clearly defined. A floating liability is in the nature of something which may be called up at any time for payment or within a very short time for payment, while a fixed liability is a liability under the form of a bond which has a definite time of payment and perhaps very long-term notes or something of that sort. 2563

Q. Well, you know that railroad companies and gas companies and other companies do raise capital that they use in their business by the use of notes, don't you, sometimes short term and sometimes long term notes?

A. Yes.

Q. Which are subsequently paid off or are funded into bonds, or what you might call fixed indebtedness of that character. That is quite common, is it not?

A. Recently it has become quite popular.

Q. Now, don't you know it may be called a regular practice pursued by the Massachusetts gas companies, or many of them, to issue notes to procure capital that they require, and subsequently to apply to the Gas Commission for leave to put them into the shape of bonds or stock?

A. That is not an unusual practice anywhere. I am not familiar particularly with Massachusetts.

Q. But under the Massachusetts statutes, bonds or stocks may be issued, may they not, only by consent of the Gas Commission?

A. Fortunately, yes.

Q. So that it is a common practice there, is it not, for companies to issue notes for capital that they require and run the liability in that shape, and subsequently fund it into bonds or stock by consent of the Commission?

A. I have no reason to differ with you.

Q. Now you have said in your testimony that the total amount of the Consumers' Deposits, Notes Payable and Unpaid Bills of these four companies in Massachusetts was $852,249.94. And you have subtracted from this floating liability $637,165.66, leaving only $215,084.28, which you have considered working capital?

A. Pardon me, the active capital.

2564 Q. Active capital?

A. Furnished by the stockholders.

Q. Well, I understand; it is furnished by the stockholders, we will say. But is not capital which is procured on notes in the market for the purpose of the operations of the company and used in the business of the company working capital just as much as though stock was issued and the money was put in by the stockholders?

A. It is undoubtedly a working capital required by the business, but it differs in its characteristics from the permanent active capital furnished by the stockholders who are not in a position at any time to demand its return.

Q. That may well be. But assume that a company requires a million dollars in cash working capital and instead of issuing a million dollars in stock and taking the money from the purchasers of the stock, it issues a million dollars in notes and borrows that money from banks on the open market. Is not that working capital equally as much, whether it came from one source or the other, so long as the company retains it and uses it in its business?

A. It is money used for working capital, but not money invested by the stockholders as active capital for the purposes of the company.

Q. But it is money invested in such a way that the company is entitled to a return upon it, is it not, because the company has to pay for the use of the money that is procured, whether it procures it from the stockholders or a bank?

A. I have but related the facts as shown in the accounts of these companies given to the Massachusetts State Commission, and to me it appears to be money borrowed, rather than money invested.

Q. But, Doctor, you have gone further than that and have made these deductions and have taken the $215,084.28 which is left and have said that that represents only 13 cents per thousand feet
2565 of active capital, and have then taken that as a basis upon which you have allowed the Consolidated Gas Company $1,726,000.00 of cash active capital beyond its plant, instead of the $4,000,00 which Dr. Humphreys testified was correct. Now I am asking you whether these deductions are proper, and for that purpose I am asking you whether the money which is borrowed on notes payable and which the company has to pay for and which money is used in its business, is not active or working capital or asset, whichever you please to call it, just as much as though the stockholders themselves had furnished that money and stock had been issued for it? Now, won't you give me an answer to that directly? Is it not?

A. It is, from my point of view and as related in the accounts, money borrowed.

Q. Yes, it is money borrowed as related in the accounts, but that is not the question. Won't you be good enough to answer my question?

A. The question should more properly be answered by the officials of these companies as to the point of view from which they regarded this money borrowed. Anything on my part would be a theory.

Q. It is not the officials of the company who have deducted those notes payable from the total of $852,249.94. You have deducted that upon some theory. I do not care what the theory of the officials of the company is. I want to ask you whether that is not just as truly active working capital, when it is furnished by a bank and borrowed on notes and is actually used in the business of the company, as though it had been furnished by stockholders and stock issued for it? Now, won't you answer that, either yes or no, is it not capable of such an answer?

A. No. I can explain, if you wish me to qualify it.

Q. Is your answer no?

A. With a qualification, which is at your service if you desire it.

2566 Q. Very good, go ahead if you will, Doctor, and explain.

A. In taking up the Massachusetts companies I have related but the fact as to what the Massachusetts gas companies spoken of have found necessary in the form of active capital subscribed by themselves to conduct their business, and that amount is $215,084.28, slightly less, I presume, by about $2,000, owing to an oversight in the Fall River Gas Company, making in round figures $213,000.

Mr. **Burr**: When you refer to the oversight in the Fall River Gas Company, you mean the item of $429.95 which should be $2,193, of Consumers' Deposit?

A. I do. That is what is demanded by the necessities of the case, and what these gentlemen, knowing their business thoroughly and undoubtedly working it to the uttermost profit that they can reach, have been forced to put up.

Q. I will ask you again, Doctor, assuming that a company has a plant ready to operate or in operation and that it requires a million dollars of cash in addition as a working capital, and it issues its notes payable and procures that one million dollars from banks or on the market, for which it pays, is not that working or active capital employed in the business of the company, assuming those facts to be true?

A. It is impossible to answer a question that is a generalization. I can answer it specifically and have done so.

Q. I am putting a hypothetical question and will ask you to answer the hypothetical question. We will assume that a gas company in the town of A has a plant that is in operation, that it has no cash on hand sufficient for working capital; that it requires a million dollars reasonably for that purpose and that it borrows one 2567 million dollars by its notes payable and runs those notes payable along from time to time as it pleases, and that it pays interest on that million dollars, and that it uses the million dollars necessarily in the operation of its plant as working capital; is not that million dollars, then, working or active capital upon which the company is entitled to earn a return?

A. That, of course, is purely an academic discussion of a theory which is not realized in practice, as shown in the case of these Massachusetts gas companies; but, I presume, being answered as a baseless theory, it might be called a theoretical working capital.

Q. Now, Doctor, is it not the use that is made of money in the business of a gas company or the question whether it is necessarily or reasonably used in the business of a gas company, which makes that working or active capital, and not the source from which the money is derived?

Mr. Burr: Do you refer to consumers' deposits?

Mr. Mathewson: I have asked him a question which I think is perfectly clear.

A. Will you kindly read that question over?

(Question read by stenographer.)

Q. Is not the governing factor, in other words, the use that is made of the money, and not the source from which it comes, which determines whether it is active capital or not?

A. In the case of an individual——

Q. Will you not answer in the case of a gas company? That is what I am talking about.

A. Or as differing from the case of a corporation, it might be called working capital; but the thought evidently conveyed by working capital in the case of a corporation is the amount of
2568 money found necessary to be raised through stocks or bonds
for the general uses of its business.

Q. I am not talking about the paper or the form of the paper that is issued as evidence of the money received; I am talking about the money as an asset. Is not the question of whether the money is an asset upon which the company is entitled to earn determined by the use which is made of the money received or its necessity to the company, and not by the source from which money is received?

A. The company is justly entitled to earn upon the balance which occurs between the money that it obtains from the sources shown on page 2355 and the amount that it appears to have obtained in the form of cash by other means. The company is not——

Q. Well, if it requires to use then the amount, and does use its consumers' deposits, the amount received from notes payable and the amount represented by unpaid bills in its business necessarily, then they are part of the assets of the company upon which it is entitled to earn, is that not correct?

A. Kindly read that question.

(Question read by the stenographer.)

The Witness: Kindly read that again.

(Question read by the stenographer.)

The Witness: No.

By the Master:

Q. Now that is what I want to know. Why not?

A. If a company can defer the payment of a bill for meters for an indefinite length of time, and it very frequently is done where its credit is very good, it certainly is not entitled to earn a profit on money which it has not paid, even though the amount of the
2569 meters appears on the books, as it naturally would be put
there on the receipt of the invoice.

By Mr. Mathewson:

Q. Well, we will eliminate unpaid bills, which amount to a trifling part of this $852,249.94, to wit, $13,580.92 plus $8,270, and I ask you the same question as to consumers' deposits and the moneys received from notes payable?

A. Referring particularly to consumers' deposits, this is of the nature of an insurance fund of very great value indeed to the company, particularly where there is, as in some cases, a very large amount of unreliable consumers. It is this insurance which they get from it that should more than compensate them for any interest which they may pay on it.

Q. In other words, they ought to pay interest on consumers' deposits, and not be permitted to earn on the deposits that they hold. Is that your theory?

A. Well, it may not be—in a general way, I should say yes.

Q. Then if the amount of money which the company received from the consumers as deposits is used by it as working capital the company is not entitled to earn anything on those consumers' deposits, although it would have been entitled to earn, if it had procured the same amount of money upon its notes from a bank or the same amount of money from the stockholders by the issue of stock and used it in the same manner; is that your theory?

A. We have not had the opinion of an insurance man, an accident insurance man, for instance. The question of the payment of interest, say of six per cent., would depend entirely, taking for instance the case of the Consolidated Gas Company, on what amount,
if you had no consumers' deposits, some solid insurance com-
2570 pany would insure you against loss from all of your doubtful
consumers.

Q. That has nothing to do with the point. I say if you have a certain fund, we will say one million dollars in cash, which has been received by the company as consumers' deposits, and the company uses that one million dollars in cash as necessary working capital, is it your contention that the company is not entitled to earn anything on that one million dollars which it uses as working capital because it came from consumers' deposits, whereas they would have been entitled to earn upon one million dollars used in exactly the same way if it had been borrowed by the company at a bank or had been furnished by the stockholders of the company and stock issued for it? Now, that is a fair question and I think it is clear, and I will ask you if you will not answer it directly.

A. I will answer it very briefly. I regard it as an insurance fund and the interest on it as a premium.

Q. Then the company would not be entitled to earn in that event on the money that it used as working capital merely because it was really a fund which was constituted by consumers' deposits, is that right?

A. I could give you a concrete case, in the case of the Consolidated Gas Company, if you like.

Q. No, I don't want a concrete case. I am asking you what your opinion is, because it bears directly upon your testimony given here.

Mr. Burr: He has expressed his view as to that.

Mr. Mathewson: I think the Master will rule that I am entitled to an answer.

Mr. Burr: He already stated how he regards consumers' deposits in practice——

The Master: He may answer it.

2571 Mr. Burr: Will you read the previous question and answer?

(Question and answer read.)

Mr. Burr: That is a complete answer.

The Master: I think he can answer that question. It is a perfectly simply question.

A. Would you kindly ask me any question you please, Mr. Master? I am anxious to answer it.

Mr. Mathewson: I have asked a question of Dr. Marks.

The Master: The question that Mr. Mathewson has asked is perfectly plain, I think.

The Witness: It seems to me exactly the same question I answered before. That is the trouble with it.

Mr. Mathewson: It is a question calling for an answer yes or no.

The Master: It puts you face to face with the result of your previous answer, that is all.

The Witness: Will you repeat the question?

(Question read by stenographer.)

Mr. Burr: Insurance fund, you mean?

Mr. Mathewson: I did not say insurance fund. I said a fund.

The Witness: The company which should——

Q. Can you not give me an answer yes or no to that?

A. No.

Q. You cannot answer that?

A. It is not entitled to earn. Is that what you want?

Q. Yes. It is not entitled to earn?

A. It is not entitled to earn.

2572 Q. Then the company is bound to pay six per cent. to consumers and is entitled to earn nothing with which to pay that six per cent. Is that right?

A. Do you mean in this case?

Q. I mean in the case of the Massachusetts companies.

A. I don't know that they pay six per cent.

Q. Well, assuming that they do, what then?

A. It is not necessary for me to assume that they do.

Q. Yes, I think I am entitled to ask you, assuming that they pay interest on consumers' deposits, do I understand that they are not entitled to earn anything on that?

A. I should wish to know how much interest they have to pay on consumers' deposits before I answered that question.

Q. Assuming that they pay interest on consumers' deposits in Massachusetts, do I understand it to be your opinion that these four companies would be entitled to earn nothing on the deposits which they hold?

A. I had assumed that they did not pay interest, and if they did pay interest of a very considerable amount I presume some proper allowance ought to be made in the way of earnings.

Q. But if they use the fund as working capital, which working capital they would be obliged to procure from another source if they did not receive it from consumers' deposits, they would not be entitled in your view to earn on that working capital, is that right?

A. The question of earning——

Q. Can you not answer that question and say either yes or no to it, or in substance that? I want to get an answer and I am wholly unable to.

Mr. Burr: If you cannot say yes or no, explain it.

The Witness: Will you read that question, please?

(Question read.)

The Witness: Can you give me some concrete case?

2573 Q. No, I am asking you a question to test your theory. I am trying to find what your theory is about this?

A. I have no theory.

Q. You put one into execution in making your deductions here and I am testing it.

A. My deductions were for the purpose of obtaining the active working capital required.

Q. I think the Master will instruct you that I am entitled to ask a hypothetical question of that kind. If I am wrong, he will correct me and if I am right I will ask you if you will not answer the question over again?

Question read as follows:

"Q. But if they use the fund as working capital, which working capital they would be obliged to procure from another source if they did not receive it from the consumers' deposits, they would not be entitled in your view to earn on that capital, is that right?"

The Witness: What fund do you refer to?

Q. Does the question not indicate sufficiently? Will you read it again?

(Question read.)

Q. I refer to the fund constituted by the consumers' deposits that we have been talking about all the time?

A. Will you kindly read that question again?

(Question read.)

A. No.

Q. Well, would they be entitled to earn if they used it as working capital?

A. My answer was no.

Q. Then your view sums up as follows, if I understand you, that if a company receives consumers' deposits and pays interest

2574 upon them, it is probably entitled to earn something on the consumers' deposits to meet the interest, except that if it uses the consumers' deposits as working capital, in that event, it is not entitled to earn anything on the consumers' deposits to pay the interest, is that correct?

A. No, you have mixed that up very badly.

Q. I have.

A. Yes.

Q. I am inclined to think you have mixed it, because I have quoted you directly from what you said, that if the company received consumers' deposits and paid interest on them, that it would be probably entitled to earn something on them in order to meet the interest payable to consumers, *did* you not say that in substance a few moments ago?

A. What I undertook to say——

Q. Didn't you say that in substance?

A. What I undertook to say, and add to it, was that if it did not receive interest, it was entitled to consideration.

Q. We are assuming that it did receive interest, and you did say that then. Now, you say they are not entitled to earn anything on it, however, if it is used as working capital?

A. I beg your pardon. If there is no interest paid on consumers' deposits. I may not have made myself sufficiently clear.

Q. No, I don't think you did, if that is your explanation.

A. It is difficult to follow your questions.

Q. I am sorry. Then your view now is that if interest is paid on consumers' deposits, you are entitled to earn on the deposits by the use of the funds even as working capital, if the company requires capital, and is able to use the fund in that way, is that correct?

A. If you will give me any concrete instance and figures which I have stated, I will be glad to answer.

Q. No, I will not give you a concrete case, *will* you be good enough to answer the question? 2575

A. Will you read the question?

(Question read.)

The WITNESS: Where interest is paid on consumers' deposits, it should have consideration in the matter of earning.

Q. Well, the Consolidated Gas Company, it is in evidence, does pay six per cent. on consumers' deposits. Then so far as the consumers' deposits of the Consolidated Gas Company are concerned, it is entitled to earn on consumers' deposits, is it not?

A. Something less than the interest paid on account of the insurance effected.

Q. I will touch on that later, but it is entitled to earn on consumers' deposits whether it uses the consumers' deposits as working capital or uses them in some other way to produce an earning on such deposits, is not that right?

A. Apparently.

Q. Then, so long as the Consolidated Gas Company does have to pay, in making your computation as to the amount allowed to the Massachusetts Gas Companies per thousand, for working capital, which computation you made for purposes of application to the case of the Consolidated Gas Company of New York, ought you not to have included consumers' deposits instead of excluding them?

A. I made the comparison for the sake of the capitalization, confining myself solely to that matter of the capitalization, and not to the question of earning.

Q. You made your computation for the purpose of showing the amount of working capital beyond plant to which the Consolidated Gas Company was entitled, didn't you?

A. Exactly.

Q. And if it appears that part of the Consolidated Gas Company's working capital is consumers' deposits, then you should have 2576 included consumers' deposits in making the comparison in computing as to these four Massachusetts companies, should you not?

A. In the case of these companies?

Q. Yes.

A. Not necessarily, because I was relating the facts as to capitalization, and not as to earnings.

Q. But it does appear, does it not, and you state here that from the working capital, $852,249.94, you deduct floating liabilities amounting to $337,165.66?

A. You should add about $2,000 to that.

Q. And you define the total sum $852,249.94 as working capital?

A. Yes, but not the active working capital furnished by the stockholders.

Q. No, not furnished by stockholders, but working capital. I make no distinction in that regard, and don't think any is to be drawn. Now, as to your insurance fund, as a matter of fact you have made no question that the amount of bad debts of the Consolidated Gas Company is a proper charge against the operating cost of gas, have you?

A. The bad debts?

Q. Yes. You allow them as a proper charge against the cost of gas?

A. I have allowed those as all other accounts, as a doubtful matter.

Q. Oh, have you heretofore specified that the amount of bad debts is a doubtful matter to be allowed in estimating the cost of gas?

A. All of the items of Exhibit 94 are clearly classified, first, as those obviously to be rejected, and secondly, as those doubtful.

Q. All the rest are doubtful?

A. Yes.

Q. I see. Now, assuming that it is established that the bad debts did amount to the sum specified, and assuming that to be the fact, as shown on Exhibit 94, then you do not question the proposition that the bad debts of a company which it incurs in the pru- 2577 dent conduct of its business, is a charge against its operating cost, do you?

A. I presume if thoroughly satisfied of the proper and vigorous management of the company in the matter of debts, that any small residue of bad debts ought to be allowed to them.

Q. Don't you know, if you have read the testimony before the Stevens Committee and before the Gas Commission, that no witness, not even Professor Bemis, questioned the propriety of charging the amount of bad debts to operating cost of gas?

A. Under the conditions stated by me, I would do the same.

Q. Then, if the Consolidated Gas Company, or any other gas company, did not receive consumers' deposits or exact consumers' deposits, it would be quite likely, would it not, to increase the amount of bad debts which would be uncollectible?

A. I presume so.

Q. And in that event it would increase the cost of gas by the amount of those additional bad debts which would thus be produced, would it not?

A. I presume that there would be increased bad debts.

Q. Then this insurance fund, as you call it, that is the consumers' deposits, is as much to the advantage of the consumers of gas, in order to reduce its cost, as it is to the company; in fact, more so, if the amount of bad debts is to go into the cost of gas and the company is to be entitled to earn a fair return upon the cost of gas. Is not that a fair proposition?

A. Well, yes, it certainly is advantageous to insure themselves in every way, not only in the matter of bad debts, but also in the matter of buildings, and against all the accidents that occur.

Q. And any payment for insurance, in whatever form the corporation makes it, is a proper charge in the operating cost of its product, is it not?

A. Well, that depends entirely upon what the insurance is for.

2578 Q. Is there any question that the amount that the company pays for the insurance of its buildings is a proper charge in the operating cost of gas?

A. I recall an item of about $52,000 of insurance in Exhibit 94, unless I am very much mistaken, which appears to me to be an enormous sum of money for insurance.

Mr. Burr: And you remember that we called for the policies and they were never produced?

The Witness: Yes.

Q. We are assuming that the amount paid by the company for insuring its buildings is a proper and reasonable amount. Is there any question that it is entitled to include that payment under those circumstances in the price of gas?

A. It would appear proper in a properly managed company, carefully insured.

Q. Furthermore, is it not also true that if the company did exact consumers' deposits that not only would the bad debts be increased, as you have admitted, but that the cost of collection would probably be considerably increased as to the amount which the company did collect?

A. Of course one has to know—the difficulty which I have in answering you and I wish to answer you clearly—lies in the fact that you are putting hypothetical and not concrete cases. Taking the consumers' deposits here in Massachusetts you will find that they are all relatively very small apparently little difficulty arising from the collection of bills. And it may be and possibly it is true that in the $904,000 of the Consolidated Gas Company a sum is exacted out of all proportion to the doubtful and irresponsible consumers.

Q. That may or may not be true, but I do not think that affects
the proposition that we are now directing our attention to.
2579 Will you now tell me how the Gas Commission of the State
of Massachusetts regards notes payable such as you have speci-
fied for Cambridge, Fall River, Lowell and Worcester gas companies,
as part of the capital or not?

A. I don't know.

Q. Let us see if we cannot find out. Have you a copy of the report from which you have been quoting, and, if so, will you turn to page 116? There is a table from which you have taken the sales of gas which you have used in your computation, is there not?

A. Yes.

Q. Now, will you take the Cambridge Gas Company? What is stated under the heading: "Capital per thousand sales, including bonds"?

A. $2.52.

Q. Now, will you turn to the page of that report which shows the capital stock of the Cambridge Gas Company?

A. Will you give me the page?

Q. Page xxvi.

A. I have it.

Q. What is the capital stock of the Cambridge Gas Company?

A. It appears to be $880,000.

Q. Will you then add to that the amount of the notes payable of the Cambridge Gas Company which you name at page 2355 of the present record to wit, $225,000, and now will you tell me what the total of those two amounts is?

A. $1,105,000.

Q. Now will you divide $1,105,000 into the amount of sales for Cambridge, to wit, 439,162,251 feet shown on the table at page 116 of the report and see whether that does not give the $2.52 with which we started?

A. I am perfectly willing to accept those figures as their statement of gas sales.

Q. Yes, but I am asking you if you won't divide the amount of sales by the $1,105,000 which includes both the capital stock and the notes and see if the result is not $2.52 with which we started?

A. The total gas bill is given as 439,162,000, is that it?
2580 Q. Yes, 439,162,152 feet, to be exact. I ask you to divide
the total amount of $1,105,000 by the sales?

A. It appears to be about $2.51 here.

Q. Well, $2.52 about.

A. Yes, $2.51 and something over.

Q. If you want to compute it over again and see if it is $2.52; please do so.

A. Well, it is near enough that way.

Q. All right. Then it appears that the Massachusetts Gas Commission must have included this $225,000 of notes payable of the Cambridge Gas Company that you state at page 2355 as part of the capital of the company in order to get the result $2.52 per thousand feet of gas sold at Cambridge, does it not?

A. It would appear as if they called the notes payable bonds drawing interest, from that computation.

Q. In other words, they would include it under the title, "Capital including bonds"; that would be it, wouldn't it, because $2.52 appears under the caption, "Capital per thousand sold including bonds"?

A. Of course, they have made an error in their statement here and there maye be—I have not had a chance to look into the figures thoroughly—and there may be an error on their part in figures as well as in words.

Q. Oh, but this is the Gas Commission's report from which you have been making all your computations? You do not assume that is error, do you?

A. Indeed, they are very fallible.

Q. Then it is too bad you use it and compel us to take all this time.

A. It is the best I could get.

Q. Now, take the Fall River Company under the head of "Capital per thousand sold, including bonds," at page 116 of the Massachusetts report, and you find, do you not, $2.54?

A. $2.54; yes.

Q. Now, look at page 52, Roman, in this report, and state what the capital stock of the Fall River Company is.

A. $635,000.

2581 Q. Will you now add to that $635,000 the amount of notes payable which you have specified for the Fall River Company at page 2355 of the present record, to wit, $180,000, and say what total that gives?

A. $815,000.

Q. Will you now be good enough to divide the $815,000 by the gas sales which appear at page 116 of this report, and which you have used, to wit, 321,119,341 feet, and see if it does not give $2.54 as a quotient, being the figure with which we started?

A. It would appear to me in both of those cases of the Fall River and the Cambridge Gas Companies that the Massachusetts Gas and Electric Light Commission or the statistician had included notes payable without so saying under the tabulation on page 116. Now it does not necessarily follow that that is any more than their opinion or the opinion of the statistician.

Q. It purports to be the 21st annual report of the Board of Gas and Electric Commissioners of the Commonwealth of Massachusetts, doesn't it?

A. Yes.

Q. You don't find anything there about it being the report or opinion of the statistician, do you?

A. No, but I happen to be aware of that fact.

Q. Have you any reason to suppose that that method of computation and the inclusion of these notes as part of the capital of these companies is not the judgment of the Commission?

A. I take it for granted that it would not call notes payable bonds if they were aware of that fact.

Q. You think, then, that for years and years they have pursued this course, having been deceived by their statistician, and have computed year by year the amount of capital per thousand feet sold without ever having discovered that the notes payable were included as part of the capital of the company in making that computation, is that what you suppose? 2582

A. I have no opportunity to form an opinion on that elaborate statement of yours.

Q. You formed an opinion a moment ago, when you said you thought that it could not be aware that the notes payable were included in the capital. Now, do you really mean to say that you think the Gas Commission of Massachusetts are not aware that the notes payable are included in the capital of the company by them?

A. I have no basis on which to form an opinion.

Q. Well, then, I would not express one to the contrary. Now, by taking the Lowell Company and the Worcester Company in exactly the same manner, I have made a computation which discloses that $75,000 of notes payable of the Lowell Company shown at page 2355 and the $95,000 of notes payable of the Worcester Company shown at page 2355 of the present record are also included under the capital of the company, pursuing exactly the same method. Do you wish to compute that, or are you willing to take my statement of it and verify it?

A. For the present it is not worth while losing time; it is obvious in two cases that that has been done.

Q. Well, I state I have made a computation in exactly the same way, and find in exactly the same manner that those notes payable have been included in the capital by the Commission, as relating to the Lowell and Worcester companies.

A. Yes, I will look it up later, at some other time.

Q. And if you do not hear to the contrary, you will accept our statement as a fact, will you?

A. Why, yes; certainly, if I don't find anything further.

Q. Now, we will disregard the question of consumers' deposits and unpaid bills for these four companies, and I will ask you how much of the $852,249.94 remains as working capital after deducting consumers' deposits and unpaid bills and leaving only the notes payable? In other words, the same result would be obtained by adding to the $215,084.28, which you found to be the balance—— 2583

A. Would it be satisfactory to you to add together the notes payable?

Q. Yes, any way you please. Add those, and add that to the $215,084.28. That is a short way of getting it.

A. That seems to be about $575,000.

Q. Well, will you now add that to the $215,084.28 active capital that you specified on page 2355 of the present record, in which you did not include these notes payable?

A. That appears to be $790,084.28.

Q. Now, will you be good enough to divide this total of $790,-

084.28, which appears to be the active capital recognized by the Boston Gas Commission, by the total annual sales of 1,653,012,000 feet of these four companies?

A. Would $0.48 be near enough for you?

Q. Yes, that is near enough; it is a trifle below $0.48. Now, if you include these notes payable, as the Massachusetts Commission does, would it show an active capital not of thirteen cents per thousand, but of forty-eight cents per thousand? And will you multiply those forty-eight cents by the output of the Consolidated Gas Company, 13,283,164,000 feet, and say what working capital it would produce for the Consolidated on that basis?

A. Do you mean working capital or capitalization?

Q. Whichever you meant when you applied the thirteen cents the other day?

A. I meant the capitalization allowable.

Q. Very good.

A. Do these figures coincide with those—$6,375,918?

Q. My figures on this are a little less than that. It is about $6,350,000. I think you had better perhaps make your——

A. I took——

Q. The total is $6,375,918.52 as you figure it?

A. Yes, sir.

2584 Q. Was that including the notes payable which you denominated at page 2356 of the present record as "Active Capital Furnished, or Quick Assets" would be $6,375,918.52 in place of $1,726,811.32, upon that basis, is that right?

A. No, it would be that the working capital to correspond *pro rata* with the views of the Massachusetts Gas and Electric Commission would be $6,375,918.52, and not the active capital furnished by stockholders.

Q. Well, whichever you please, I don't suppose you know, Doctor, whether these notes payable represent monies advanced by stockholders or monies advanced by other people?

A. Banks.

Q. But you have no information in this regard particularly?

A. Only casual information in regard to the banks. I have heard the remark made that banks are very glad to furnish money to gas companies.

Q. Oh, they always are if they get good security, even to the Consolidated Gas Company; but as the Massachusetts Gas Commission permits the issue of stocks and bonds only for established expenditures or expenses which have been or can be certainly computed, you know, do you not, that the companies there get their money on notes payable very largely, and then apply to the Commission after they have determined the amount required and have obtained it to put it into the shape of stocks and bonds, and in that event it would be more probable, would it not, that the stockholders would advance the money than it would be if they did not expect to convert it into stocks and bonds later by consent of the Commission? If you are indulging in assumptions, wouldn't that be a fair one?

Mr. **Burr**: I do not think that is an assumption worth while wasting time on. I think it is the merest kind of guessing.

2585 Mr. **Mathewson**: I don't know that I shall dispute it. I don't know that it makes the slightest difference.

Q. Now, in your original affidavit on the motion here you included in a somewhat similar computation not only these four Massachusetts companies but also the Brookline company, which is one of the Boston or Metropolitan Gas Companies, did you not?

A. Referring to my first affidavit?

Q. Yes.

A. On page 16?

Q. I merely ask you whether you did?

A. I included the Brookline Gas Company.

Q. I suppose you have read the rebutting affidavit of Mr. Addicks?

A. I have.

Q. In that affidavit, at page 44, he called attention to the fact that in the case of the Brookline Company you had entirely omitted part of the capital, to wit, outstanding bonds and other capital obligations amounting to over $2,000,000, exclusive of capital invested in the electric plant belonging to the company, and that the capitalization of the Brookline Company, which is one of the five companies that you mentioned operating in the City of Boston, under metropolitan conditions, was equal to $4.60 per thousand feet of sales instead of $2.18, as stated by you. Did you make an examination and discover that $2,000,000 to which he referred?

A. It was a case in which I was discussing the dividends on capital stock regardless of other matters, and the result of taking their capital stock and dividing it by the annual gas sales in cubic feet was $2.18. It was for the purpose of considering dividends only on stock and average rates of dividends in Massachusetts.

2586 Q. But didn't you in that computation omit any consideration of this $2,000,000 to which he calls attention?

A. Do you mean the $2,000,000 in bonds?

Q. Yes.

A. I purposely omitted that. It had nothing to do with dividends on stock.

Q. Doesn't it have something to do with the amount left for dividends whether you pay interest on bonds or not?

A. I was simply citing facts as precedents in Massachusetts.

Q. Have you a copy of the 1905 report of the Massachusetts Gas Commission?

A. Yes, but I think those figures are from 1904, if you wish that.

Q. You did not include in the capitalization in determining how much per thousand feet that represented in the case of the Brookline Company, then the two million dollars which the Massachusetts Gas Commission apparently includes in the capital?

A. No, I did not.

Q. Have you any doubt, if that were included, the result would be $4.60, as specified by Mr. Addicks, or haven't you computed that?

A. I did not compute that, because Mr. Addicks misunderstood the object of my figures I found, and it was merely to take the amount of capital stock and show the dividends, rate of dividends on it, which in this case happens to be ten per cent.

Q. Was your purpose then merely to show in this table at page 16 of your affidavit the amount of assets per thousand feet which was represented simply by share capital, excluding entirely bonds and other forms of capital?

A. On page 24 of the appendix, Roman numerals, for 1905, Massachusetts Gas and Electric Light Commissioners, under the head of liabilities, is "Capital stock, two million dollars." This is reported by the company themselves.

Q. Oh, yes, capital stock; that means share stock, you understand it?

A. That is what I was seeking, the term.

2587 Q. Now, considering the fact that some gas companies have outstanding perhaps all capital stock and no bonds, and other companies have outstanding a small amount of bonds and a larger amount of capital stock, and still others may have outstanding a substantial amount of bonds and a small capital stock, the securities in each case representing the assets of the companies, do you think it is valuable to show how many dollars per thousand feet of cost is represented by capital stock only as distinguished from all capital obligations such as stocks, bonds and notes payable?

A. When ten per cent. dividends are under discussion, which was the case here, that was the object.

Q. That was the sole object, then, of this table?

A. It was the principal object.

Q. It would make a great difference, would it, if half of the capital of the company were in the shape of bonds and one-half in the shape of stock, as to the amount of earnings that the company would be permitted to make upon its assets as compared with a company all of whose assets were represented by the capital stock?

A. You mean the rate of dividend?

Q. I said the earnings of the company.

A. Will you repeat the question?

The STENOGRAPHER (reading): "It would make a great difference, would it not, if half of the capital of the company were in the shape of bonds and one-half in the shape of stock as to the amount of earnings that the company would be permitted to make upon its assets, as compared with a company all of whose assets were represented by capital stock?"

A. Permitted by whom?

2588 Q. Oh, permitted by the Legislature, or by the Commission, or whoever might have it in charge. In other words, assuming that a company has assets or investment of a certain amount, or that two companies have investments of exactly the same amount in the gas business, are you going to determine the amount of earnings that the company is going to be permitted to make on its investment, by seeing how much of those assets are represented by capital stock and how much by bonds in each case?

A. Were I to determine the earnings or profits of a company, I should pay no attention to either the stock or bonds. I would find out the actual structural cost, and put a fair profit on that.

Q. Precisely. Then, we have no dispute on this, that the actual value or actual structural cost of whatever may be the proper basis to proceed upon is what we have got to take in determining the return which a company is entitled to, and not the amount of paper it has outstanding or the shape of that paper?

At this point, 1:00 p. m., a recess is declared to 2:15 p. m.

2589 After Recess.

William D. Marks resumes the stand.

Cross-examination by Mr. **Mathewson** (continued):

Q. Doctor, in getting your $2.18 per thousand feet for the capitalization of the Brookline Gas Light Company, in your affidavit you say you took merely the share capital stock for a divisor. Do you know that part of the property of the Brookline Gas Light Company was an electric plant, which appears by the report of the Gas Commission to amount to six hundred thousand or seven hundred thousand dollars?

A. Not only did I know that, but I also knew the fact that it largely produces gas, and for that reason left out the dividend per thousand, not including it in the computation.

Q. Yes, but in getting your $2.18 you divided by the entire share capital stock and not by a portion of it, didn't you? I am simply talking of the share stock capital, whether you did not divide by the entire amount of the outstanding share capital of the Brookline Company, to get even your $2.18 you divide by two million dollars, that was the entire outstanding capital?

A. Yes. I did so and then made no further use of it, as you will observe, because I had not given the dividend per thousand cubic feet, except that afterwards in adding up, $2.18 being the largest, with the exception of the Lowell Gas Light Company, I added it in to give good measure in the average.

Q. You did not give any data as to capitalization per thousand of sales or capitalization or assets per thousand of capacity relating to the Boston Consolidated Gas Company did you?

A. I did not.

2590 Q. Do you remember the testimony of Professor Bemis before the Gas Commission that the conditions in Boston were more nearly like those in New York than any other large city?

A. Are you referring to the Boston printed testimony?

Q. I am referring to the testimony before the Gas Commission which you say you read?

A. In Boston?

Q. No, the Gas Commission in New York. Don't you recall my asking him that question and his replying in substance as I have stated?

A. I would not answer definitely on that point because I probably would not really be much affected by a general statement of that sort, a statement made by anybody.

Q. But you do know that Professor Bemis testified in 1905 and 1906 in the Boston Investigation and that he testified there previously, and that he made a careful study of Boston conditions, do you not?

A. I have been so informed.

Q. And wouldn't you consider that his statement if it was made to the effect that the conditions there were more similar to New York than conditions in any other large city with which he is familiar would be entitled to some weight?

A. Why, yes.

Q. Now, as a matter of fact, the Boston Consolidated Gas Company has several plants or stations representing their original companies, hasn't it?

A. Yes.

Q. In that respect it is very similar to New York, is it not?

A. Well, I cannot say because I have made no study of it.

Q. Don't you think that would be more nearly a similar condition to New York than it would be to take four widely separated companies like Cambridge, Fall River, Worcester and Lowell?

A. As to what?

Q. As a comparison with New York?

A. As to what particular?

2591 Q. As to the comparisons which you made?

A. You mean in actual structural cost?

Q. Yes, in comparisons which you made.

A. In the actual structural cost where accessible I would have been very glad to have taken the matter up if I had had the time.

Q. But you say you read the testimony before the Gas Commission of New York and all those figures as to the cost appear there, do they not?

A. No, not in such detail as given by the Massachusetts Commission.

Q. Well, you know the Corporation Counsel of the City of New York, with whom you are conferring, has the entire record of the testimony in Boston before the Gas Commission there, as well as in relation to the Boston situation, do you not?

A. I do.

Q. Do you know that an appraisal of the property of the Boston companies was made about 1904 or 1905 by experts, the city having a representative present, as Professor Bemis testified?

A. By what expert, may I ask?

Q. I didn't say. I said by experts.

A. I do not.

Q. You didn't know that any appraisal of the property of those companies was made preliminary to the consolidation which the legislature authorized?

A. I knew that an appraisal was made.

Q. Isn't it a fact that the appraisal referred to the valuation of property, the amount running to something like twenty-four millions for the Boston companies?

A. Appraised by whom?

Q. The appraisal to which I have referred in 1904 and 1905 preliminary to the consolidation—there was only one that I know of.

A. I should like to know who made it.

Q. Well, I cannot gratify you at the moment. I merely ask you the question.

2592 By the MASTER:

Q. It is not a question whether or not that was a correct appraisal. It is simply whether or not you knew an appraisal was made at or about that amount.

A. An appraisal was made or claimed to be made in Boston.

By Mr. MATHEWSON:

Q. And don't you recall or isn't it your information that the amount of that appraisal was about twenty-four million or twenty-five million dollars?

A. Am I at liberty to ask by whom?

The MASTER: It does not make any difference; that is not the question. It might have been made by me or anybody.

A. Not the accepted appraisal.

Q. Will you answer my question?

A. There was no appraisal accepted by the parties interested giving a value at twenty-four million or twenty-five million dollars.

Q. Will you look in the report of the Massachusetts State Board of Gas and Electric Light Commissioners at page 20, Roman, and see whether the total assets as per the books of the company do not appear there at $24,366,520.14 exclusive of a profit and loss balance of $79,053.11?

A. I see the following paragraph:

"Total assets as per books of the Company $24,366,520.14."

Q. That is the same kind of an account, isn't it, and presented in the same sort of a form as the statement of assets of these other companies, Cambridge, Fall River, Lowell and Worcester.
2593 respecting which you have testified from this same book?

A. Apparently.

Q. Well, now it appears that there are a few electric items there, which you will observe. Altogether they do not amount, do they, to more than a few hundred thousand dollars, if you will run your eye down them, certainly of less than a million dollars? My calculation is that deducting that the balance is $23,501,113; is that substantially correct?

A. That would appear about it.

Q. Now do you know what the sales of the Boston Consolidated Gas Company or of the constituent companies of which it is composed were at the time of the consolidation?

A. I could not give those without referring to the statement made of the investigation.

Q. Isn't it your recollection of the examination of the testimony before the Gas Commission and from Professor Bemis' statement that the sales were about three billion feet at that time?

A. I have a very clear recollection of Mr. Addicks making that statement, that is was three billion feet.

Q. If that be true, then this $23,501,000 would represent assets of nearly $8 per thousand cubic feet of sales, would it not?

A. Yes, I should say about that.

Q. And will you look now at page 114 of the Massachusetts Commissioners and say what the daily capacity of the works of the Boston Consolidated is stated to be?

A. 28,000,000.

Q. I think, Professor, that that includes the capacity of the New England Coal & Coke Company which does not put out any gas, but waiving that for the time being and assuming that capacity to exist would it be indicated as to assets per thousand feet of capacity upon the same basis as you testified as to the four other Massachusetts companies?

2594 A. That is, to divide by sales of gas, do you mean?

Q. Well, the same way you have computed with reference to the other four companies. You have the same data in reference to the Boston Company exactly as you have with regard to the other four companies.

A. I have not got the structural assets for the Boston Company out. I refer to page 2,351.

Q. Well, what do you include in the term "structural assets," if I understand correctly?

A. For instance, on page 2,349, real estate, machinery and manufacturing appliances, street mains, meters and office furniture.

Q. I see.

A. I can work that out if you give me all the time that is required.

Mr. Burr: Work it out.

The Witness: I have run it through and make it $22,632,663.09. I have taken one-half of the office furniture and one-half of the printing plant as justly chargeable to the gas as well as to the electric plants.

Q. I think that is a little excessive, in view of the fact that the electric assets are a mere fraction of the total business, but go ahead on that basis and we will see where we come out.

A. Making the computation as you request, the result is as follows:

Real estate for gas	$6,750,000.00
Mach. & Mfg. Apparatus	4,430,790.52
Street mains, gas	9,003,050.77
Services	1,250,210.59
Meters	1,177,210.17
Office Furniture (½)	17,897.85
Printing Plant (½)	3,503.19
Total	$22,632,663.09
Daily capacity stated	28,000,000.00

2595 Dividing this 28,000,000 into $22,632,653.09 you obtain $808.31. The apparent result from these figures, cost per thousand daily capacity $808.31, dividing by the capacity factor of apparent cost per annual cost, is $4.04.

Q. If you divide by all the gas assets instead of only by those which you have taken, I figure the capitalization per thousand of gas assets including horses and wagons and cash on hand and other items to be $4.20. Would that be pretty close to the facts, or do you wish to compute that?

A. I can compute that if you wish.

Q. Well, just as you please. You can verify it if you wish. You have already figured out the amount deducting the——

A. I am trying now to figure for you the active capital.

Q. Yes. Deducting the electric items.

A.—

Due for gas	$41,599.29
Gas Coal on hand	53,045.87
Coke on hand	4,901.27
Tar on hand	17,803.49
Enrichers	39,540.74
Purifying Material	16,892.75

Q. The next item, Other Gas and Electric Materials includes both, but I know of no other way than to take the proportion of that item which electric assets bear to the total assets or to gas assets?

A. Well, the amount of electric material on hand in an average station unless very well cared for amounts to considerable.

Q. Yes, but you must remember these are very small stations compared to the gas. You can assume any proportion you wish.

A. Have you any idea of the horse-power of the station?

Q. The capacity is 1,950 kilowatts.

A. Well, about $25,000 worth of material would be a proper allowance for about 2,500 horse-power.

2596 Q. Supposing you take $200,000 for the gas material. That will leave you $26,773.38 for the electric.

A. Stoves on hand $270,000. Horses, wagons, etc., would practically all be for the Gas Company I think.

Q. Yes, I think so.

A. $24,004. Total rated horse-power of the boilers is about 1,375 and engines 3,150; $26,000 is as near as you can guess, with the loose material lying around. Horses, wagons, etc., $24,004.

Q. You have given that.

A. I put all those down, but there may be a horse or wagon or two for the electric company. Sundry accounts due the company, how would you divide those?

Q. Well, the operating expenses for gas during that period were $92,000 and for electricity $3,900. It is only thirteen days, you see. What do you assume that to be?

A. Sundry accounts due the company.

Q. Yes.

A. I left you to figure on that. I put down about $17,500.

Q. Very good. Just say, assumed $17,500.

A. Out of about $20,000 is it not?

Q. I should think that would be possibly about fair.

A. Now, with regard to cash on hand.

Q. Well, that would be the same basis as the accounts due probably, one-eighth you took of the accounts due, substantially. Suppose you take one-eighth of the cash on hand for the electric.

A. That would leave about $110,000.

Q. Yes, I should think so.

A. Insurance. I have taken all the insurance since I left it out of the other one—I beg your pardon, I had no right to put in the office furniture at all. We are talking now about the active assets. We have no right to put in the horses and wagons.

2597 Q. Oh, yes. My question contemplated those if they are used in the gas business. You are proceeding on exactly the basis my question contemplated.

A. Well, the office furniture ought not to have gone in?

Q. Yes.

A. No, it went in in this case, you will observe, in the fixed or structural assets.

Q. Oh, yes. Very good. You put in the office furniture then at one-half of the amount. That amounts to it finally, doesn't it?

A. Well, that goes up against the electric plant, if we choose to take that up. Cash on hand $110,000, leaving $15,000 for the electric plants. Insurance, I don't know how to treat that, I don't know what to make out of that exactly.

Q. Well, omit it entirely. Omit the insurance entirely and put in the whole either of the printing plant or the furniture for the gas, and that will probably adjust it.

A. The printing plant I had already inserted, you will observe, one-half, as a fixed asset, so I suppose we had better omit that and foot this up.

Q. Very good.

A. I may be wrong but I have added it once and it appears to be $795,287.41.

Q. Added to the $22,632,663.09 would give you how much?

A. Do you wish me to treat this in the same way you did those?

Q. Yes. In other words, you figured $4.04 on the capacity, taking certain items. Now, will you take all the gas assets and say how much it is. It will be something over $4.04?

A. You wanted me to add that in?

Q. I understand, in the case of the other four companies, your computation simply took in as assets the real estate, machinery, manufacturing apparatus, street mains, meters and office furniture and works in process.

A. Do my figures check yours, $795,287.41?

Q. Yes.

A. Carrying that out, which is merely checking your computation, apparently $4.18.

2598 Q. Referring to your computations at page 2,351 relating to the other four Masaschusetts companies, of course, if you had included in the assets there, the cash on hand, horses and carts and other items of assets which you excluded, the assets per thousand feet of sales or capacity would have been somewhat larger than you specified at page 2,351 of this record, would they not?

A. Yes. You are referring now to Cambridge, Fall River, Lowell and Worcester.

Q. Yes.

A. Yes.

Q. Now, you have referred to the Boston appraisal not being accepted, which leads me to ask you whether you do not understand that the consolidation of the Boston Gas Companies was made on the basis so far as the statute was concerned, allowing the consolidation of the outstanding stock and bonds amounting to $15,124,600.

A. All that I know about it I have seen in the printed copy that was handed to me through the kindness of the Corporation Counsel.

Mr. Mathewson: In this connection, I offer in evidence Exhibit 169 before the Gas Commission, being the Act of the Massachusetts Legislature permitting the consolidation of the Boston Gas Company, Chapter 421 of the Acts of 1905, showing exactly the terms of the consolidation.

Received in evidence and marked Complainant's Exhibit 256.

Mr. Mathewson: In passing, I call the attention of the Master to the capitalization fixed stated to be the face value of the outstanding notes and bonds or certificates of indebtedness as of October 31, 1904, to wit: $15,124,600 which was the authorized capital of the new company, and the following provisions:

2599 "The Boston Consolidated Gas Company shall not, by the acceptance of the capitalization herein authorized, be deemed to have admitted for any purpose that the par value of the capitalization is equal to the value of its property or to the value of the property necessary for the proper conduct of its business."

Q. Now, assuming Prof. Bemis' testimony before the New York Gas Commission at page 1,441 to be correct when he states that the output of the Boston Consolidated Companies for the year ending June 30, 1904, was about three billion feet of sales, that would indicate even under the capitalization fixed by the Act something more than $5.00 per thousand on sales, would it not?

A. If you wish me to make the computation——

Q. Well, merely in your head?

A. It is about 3,000 M. divided into 15,000,000 gives about $5.00. Of course I am merely serving you as a computer in all these instances. It is not my opinion.

Q. I understand, and I am much obliged to you for your courtesy in computing. Not being a land expert, I suppose you don't know whether land in Boston is as expensive as in New York or not?

A. I do not.

Q. In answer to one of my questions on page 2,448 of the present record, you stated, according to the record, the net profits of the New York Consolidated Gas Company would be greater in 1907 than in 1905 on the basis of a price of $1.00 per thousand cubic feet in 1905 and one of 80 cents in 1907. Is this statement correct, even under your estimate of sales in 1907?

A. If you assume the same cost in 1905 and also in 1907 you will have the same net profit on each thousand feet if the price is kept constant. If, however, you differ in the price by 20 cents the net profit will be cut by this amount in 1907 as against 1905.
2600 There would be some compensation in the reduced cost of distribution, and it appears to me in the possible reduced cost of manufacture, but I am inclined to adhere to my statement on page 2,448 as about right.

Q. Well, then will you look at page 2375 of the present record and say whether you did not state the net earnings for 1905 to be $6,175,342.94 according to your computation or method of treatment and did not state the estimated net earnings for 1907 to be $4,065,895.00 or more than $2,000,000 less?

A. Under the conditions placed there, using the English accountants' methods for computing the cost of gas and the unverified and doubtful items on complainant's exhibit 94, summary of operations for calendar year 1905, given apparent cost of gas found to be 53.51 cents per thousand you will obtain the amount stated, $6,175,342.92 as against the figures obtained from Exhibit 96 given by the Consolidated Gas Company, which figures are $4,587,995.99 and are unverified and doubtful to me.

Q. Well, you say all the items in Exhibt 94 are doubtful, which go to expenses?

A. This is Exhibit 96.

Q. I know, but you have referred to Exhibit 94, showing the cost for 1905, and you stated that all those items are doubtful because you have not verified them. If then you exclude the doubtful items as you say you do, you would exclude all items of expense, would you not, and do you get any amount to allow as operating expenses?

A. I think that you perfectly well understand in this wholly extraordinary method of making out the cost of gas that has been pursued for years, the difficulties under which I am laboring and the difficulties under which any man accustomed to ordinary
2601 business labors. It is accepting simply what you choose to hand out and nothing more than that.

Q. I will see about that in a minute. Meanwhile do I quote you correctly from page 2375 where you say "under the English accountants' methods for computing the cost of gas and the unverified and doubtful items of Complainant's Exhibit 94, summary of operations for the calendar year of 1905, the apparent cash cost of gas is found to be 53.51 cents per thousand of gas sold, and the total net earnings $6,175,342.94" and a little below; "with the price of gas at 80 cents and its cost at 53½ cents, the net earnings for 1907 will be $4,065,895.00." Have I quoted you correctly so far as I read, or have I quoted correctly what you have said?

A. Apparently, yes.

Q. Then, even upon your statements, and with gas computed in each case at 53½ cents, the net earnings for 1907 would be something more than $2,000,000 less than in 1905, would they not, if those statements of yours are correct?

A. You have given that partially and incompletely, for I have added, in handling this subject, that that seems to be something near right. I have added this, on the figures derived from Chicago, that the profits will be $5,293,335.

Q. I am taking the cost of gas there as the same in 1907 and in 1905 in the computation, as you did at this point. Now on that basis the net profits from gas would, as you state at page 2375, be more than two million dollars less in 1907 than in 1905 upon your basis of computation. Is that correct? Let me have a direct answer, please.

A. Subtracting the one from the other and acting as your computer in this matter, $2,109,447.94.

Q. Now, referring to your previous statement which you
2602 said a few minutes ago you stood by, on page 2448, that the
net profits in 1907 on your computation would be greater than they were in 1905, will you not say, whether if gas in 1907 costs the Consolidated Gas Company to produce only forty-five cents as against the 53½ cents that you accept for 1905——

A. Would you mind dividing up that question?

Q. I cannot very well. Would not the net profits in 1907 still be less than in 1905?

A. Will you kindly give me the first statement that I said I stood by?

Q. Page 2448, the first question I asked you on page 2375 you said it would apparently be $2,109,000 less than it would be in 1905. Now I ask you if we were able to manufacture gas for forty-five cents in 1907 and we took the cost of gas in 1905 as 53½ cents, if the net profits in 1907 would not still be less than they are in 1905?

A. Bringing my reply down to a few concrete figures to you, my statement was that the probabilities were that the profits in 1907 would be $5,293,335.00, more or less and that you or the Consolidated Gas Company had claimed that in 1905, Exhibit 96, your profits were $4,587,995.99. That clears that situation up completely and is all that I meant or intended. I cannot answer the question that you put to me beyond that.

Q. Taking the cost of gas for the year 1905 at 53½ cents, will you look at page 2375 of the testimony and say if the total net earnings according to your statement should not be $6,175,342.94 for the year 1905?

A. That is what I believed your profits to have been exactly, although the Consolidated Gas Company stated that it was $4,587,995.99.

Q. Now, if we assume that in 1907 the Consolidated Gas Company
would manufacture gas at 45½ cents, you state on the same
2603 page that their net earnings would be $5,293,335.00?

A. More or less approximately.

Q. Well, of course. Which would be, would it not, nearly a million dollars less than the $6,175,342.94 which you compute to be the profits of the Consolidated Gas Company for the year 1905?

A. But which you state to be $4,000,000——

Mr. Mathewson: I move to strike that out.

The Master: Strike it out. Answer the question and it will save all of us time. We understand what you claim about this, you have made yourself clear, and the main thing to do now is to answer these questions as they are asked.

The Witness: Yes.

Q. You have referred again to what you say was the inability to get information, and I propose to ask you one or two more questions on that subject. Is it not true that on or about September 19, you called at the office of the Consolidated Gas Company and saw Mr. Carter and asked to be shown the Real Estate Account from 1884 to date. Is that right?

A. I called at the office about that date as near as I can recall and asked for that and a great deal more besides.

Q. That may be. Your answer to my question is yes, then, is it?

A. No.

Q. Is your answer no?

A. It is not necessary for me in an ordinary matter of business to answer unqualifiedly. I am not in a matter that cannot be treated in a rational way.

Q. Did you ask him to be shown the real estate accounts from 1884 to date?

A. I did so, and other matters.

2604 Q. And he told you that as this account was not in evidence for that period it could not be shown to you by him, is that right in substance?

A. It was not shown to me by him.

Q. Did he not state that as the account was not in evidence for that period it could not be shown to you by him, or didn't he say that in substance to you?

A. I related all of that as well as I could in a letter which I can find——

Q. Oh, well, that letter we have all seen. Now, Doctor, I will ask you to answer my question if you will be good enough. You brought this subject up yourself repeatedly, and I am going to find out about it. Now, will you answer the question?

A. I will offer you the letter or read it to you in reply to your question.

Q. No, I decline to have you read from it.

The Master: The letter is in evidence.

(Question repeated as follows):

"Did he not state that as the account was not in evidence for that period it could not be shown to you by him or did he say that in substance to you?"

Mr. Burr: If he needs the letter to refresh his recollection as to what occurred, I suppose he may use it.

Mr. Mathewson: I have no objection.

A. The interview at that time was rather indefinite and definite replies——

Q. Can you not answer that question?

A. I do not recall whether he did or not at that meeting.

Q. Do you mean to tell me that you cannot remember so far back as September 19 in respect to a matter upon which you have placed so much and so repeated stress in your examination?

A. I can state the exact fraction to you where they are definite from this letter, if you wish it.

2605 Q. You don't remember whether he said that or not, you say?

A. He did not show me the account.

Q. Didn't you comment on the exhibits which had been presented, showing the cost of gas and state that there had been no adequate audit of them to determine whether the charges in the various operating accounts had been made or whether items of expenditure properly chargeable to construction had not been charged in the operating expense account, or didn't you make statements in substance as I have recited?

A. I was very much dissatisfied with what I had obtained and expressed that dissatisfaction to Mr. Carter, asking for further information. I do not recall any commentary.

Q. Did not Mr. Carter in reply to your statement say he would be very glad to have you satisfy yourself on these points by as complete and elaborate an audit of the operating accounts for 1905 as you might choose to make, including original vouchers and payrolls, and that he would place at your disposition as large a corps of clerks as you might require to assist you in making such an examination. Did he say that to you or say that in substance?

A. He deferred definite reply on all matters until after a consultation, which consultation was reported to me as to the results, over the telephone, I think, the next day.

Q. Didn't he say in substance to you what I have just recited?

A. At that time?

Q. O, yes.

A. There was no definite promise that I——

Q. Didn't he say so the next day after the telephone conversation?

A. Exactly what I related in my letter, he made a verbal statement that he would furnish facilities required for the examination of the operating ledgers in evidence and a comparison of the vouchers and subsidiary books and payrolls.

2606 Q. Now, didn't you ask him to put that in writing and didn't he subsequently tell you that he would not put it in writing, but that the accounts were open to your inspection as he had offered? Now, just *just* give me an answer, please, to that, Doctor. And didn't he tell you so within twenty-four hours after that first conversation?

A. At four-thirty on the afternoon of the following day he stated amongst other things——

Mr. Burr: Is this over the telephone?

The Witness: Over the telephone, verbally, that he would not reply to it in writing but was willing to furnish me with all the facilities required for the examination of operating ledgers in evidence and a comparison with the vouchers and subsidiary books and payrolls, refusing all else that I had asked.

Q. Did you go after that to the office of the company and make any examination such as he offered, or did you go off and write the letter to which you are now referring and which has been offered in evidence?

A. I conferred with the Corporation Counsel, stating to him at the time that such an examination would be merely a partial and incomplete one, of one portion of the works and the last phrase of this letter was suggested by the Corporation Counsel himself.

Q. No matter about that. I don't think that is necessary.

The **Master**: That does not answer either of the questions you were asked. The question was whether you went there and made the examination or whether you wrote that letter?

The **Witness**: I did not go there and I wrote the letter.

2607 Q. Then you did not avail yourself and have not since availed yourself of the offer at all which Mr. Carter made you to submit to you these vouchers, payrolls and records?

A. I was unable to do so on account of being engaged in getting evidence or in giving it.

Q. Then I hope we shall not hear any more about no information being granted to you and no examination of the records of the company possible, because they were refused.

By Mr. **Burr**:

Q. You stated your reasons in the letter why you did not accept the offer?

A. I did.

The **Master**: You can bring that all out, Mr. Burr; and, besides, he is now pretty clear on that, I think.

By Mr. **Mathewson**:

Q. Now, you have said a great deal about the methods of the English accountants and I would like to ask you some questions in that regard; when you say that reports can be obtained for a shilling by anybody, you simply mean, do you not, that anyone who sends a shilling can get a copy of the regular report which is submitted in Great Britain the same as anyone sending a dollar to Washington for a copy of a patent that has been issued can get a copy of the patent. Do you mean they can get anything more than that?

Mr. **Burr**: The law is in evidence and a copy of the account which the tax payer or consumer is entitled to is also in evidence in an exhibit offered by the city.

Q. Is the report referred to anything more than the ordinary report of the company which is available to everybody, the regular annual report?

2608 Mr. **Burr**: If the Master likes to see the kind of a report they are entitled to, there it is.

Mr. **Mathewson**: They are bound by law to print it in manifold.

Mr. Burr: You cannot get such a comprehensive report as that from the Consolidated Gas Company or any other company here.

Mr. Mathewson: Perhaps not.

Mr. Burr: I submit that the copy of the report and the law providing for its delivery to the person paying the shilling is in evidence and speaks for itself, and a copy of which the Master now has in his hands.

The Master: That is true, but in view of the witness's statement on direct examination I think it is proper to ask the question on cross-examination.

A. Referring to Reeson's *Complete Gas and Water Gas,* 1817 to 1902, with full index, accountants, appointment of, to examine affairs of undertaker, Gas Works Clauses Act, S. 35, page 47; also page 219 under the heading of "Accounts," Gas Works Clauses, 1871:

"The undertaker shall fill up and forward to the local authority of every district within the limits of the special act on or before the 25th day of March in each year, an annual statement of accountants made up to the 31st day of December then next proceeding as near as may be in form and containing the particulars specified in Schedule B to this Act annexed."

Q. My question merely is whether there is anything more that you can get for a shilling than a copy of that regular annual
2609 report, that is the whole question.

A. I have told you all that can be gotten here. If you allow me to finish——

Q. I do not really think it is necessary.

A. I am not a lawyer. I can read you the Acts of Parliament and that is as near as I can give you the information you are asking for.

By Mr. Burr:

Q. Just refer to the schedules and give the headings of what, contained in the schedules, they are obliged to give; contained in the accounting that they are obliged to give.

A. The schedules are on page 224:

"Form of annual accountants, statement of share capital, statement of loan capital, statement of capital account, revenue account for year ending, profit and loss account."—

Q. All in detail?

A. All in detail.

"The reserve fund account, statement of coals, statement of residual products, general balance sheet," following one after another.

Q. Doesn't it also provide that regular accounts must be given for depreciation fund for works on leaseholds, if any?

A. It does.

Mr. Mathewson: Now, I repeat my question.

By Mr. Mathewson:

Q. When you referred to the report which could be obtained for a

shilling by any shareholder it was simply a copy of its regular annual report that you had in mind?
A. That was all that was intended.

2610 By Mr. **Burr**:

Q. In addition it contains a general balance sheet, does it not?
A. Yes, that I have stated here.

Mr. **Mathewson**: That all is shown in what was previously in evidence. My question could have been answered in three words, or one in fact.

Q. Now, you have testified that the system of accounts employed by the English companies is superior to that employed by the Consolidated Gas Company, as I recollect your testimony. Do you know whether all English and British companies employ the same systems of accounts?
A. I do not.
Q. To what system of accounts do you refer then?
A. Those I just read over.
Q. Do the British companies employ the same system as that employed in the case of gas works owned and operated by municipalities in England?
A. System of what?
Q. System of accounts, of course.

Mr. **Burr**: The same system of keeping accounts or publishing them.
Mr. **Mathewson**: The same system of accounts. The witness has repeatedly referred to the system of accounting in Great Britain. Will the Stenographer repeat the question.
The **Stenographer** (reading): Do the British companies employ the same system as that employed in the case of gas works owned and operated by municipalities in England?

A. I have received accounts from a municipal plant and I have models of other accounts and I have looked it up and found out how much——
2611 Q. Don't you know from recollection on that?
A. They might differ by one word.
Q. That is the best answer you can make without looking it up?
A. Yes.
Q. Now, referring to the English system of accounts as commended by you, will you take Field's Analysis for 1905 and point out wherein the system there employed differs from that of the Consolidated Gas Company?
A. I didn't know that the Consolidated Gas Company had any definitely stated system.
Q. Oh, you didn't know they had a system of accounts?
A. No.
Q. I thought you said Mr. Heyward told you it was one of the best system- of accounts he had ever seen?
A. Oh, no, he was lost in admiration of the accuracy of the additions and subtract-ons.

Q. Then as far as your own information goes, you are not able to point out from Field's Analysis that there is any difference between the Consolidated system of accounts and the British system of accounts, do you?

A. I took very great pains, referring to page 2338, segregation of Exhibit 94, to make as close an approximation as I could to the heads under which British costs of gas are frequently found.

Q. Now, you understand that in the State of New York companies are forbidden to charge meter rental and that the price which they receive for gas covers both the gas delivered and the use of the meter which belongs to the company, do you not?

A. I am not posted on that.

Q. Do you not know that the companies here are not permitted to charge a meter rental?

A. I do not.

Q. Well, then, I see that in taking the price charged by the British companies, you took merely the price paid by the consumer
2612 for gas but did not take the amount paid by the consumer, for meter rental according to Field's Analysis, was that right?

A. Referring to what?

Q. Referring to your statement of the price at which gas was sold in London by the three Metropolitan companies. If you include the amount received by the London companies as meter rentals and as shown in Field's Analysis?

A. I presume you refer to page 54 of my affidavit?

Q. Yes, which you have quoted in your testimony here. Where you state the average is sixty-two cents for all Metropolitan companies.

A. Meter rental, stove rental and miscellaneous receipts were deducted from the net cost of coal and working expenses instead of being added to the price of gas to obtain the profit on capital employed.

Q. Yes, but in the price which you said was received by the company per thousand cubic feet you did not include the amount received by the companies as meter rentals, did you?

A. I did not.

Mr. Burr: Are you speaking of the English companies?

Mr. Mathewson: Yes.

Q. Now, if the London companies receive a certain amount for gas and a certain amount for meter rentals these two sums should be added together in comparing the price of gas with New York city, should they not, if it be true that the companies in New York cannot charge meter rentals, but the use of the meter as well as the gas furnished is covered by the amount received from the consumers in New York?

A. Referring to Field's Analysis for 1904——

Q. I do not think that will answer the question.

A. If the English companies do receive meter rentals in such cases in comparing the gross revenue of an English company
2613 with that of a New York company it would be proper to take cognizance of the meter rentals.

Q. Should not the meter rental in that case be added to the price of gas, as you have stated it for the three London companies, before comparing with the price received by the Consolidated Company in New York?

A. In the case of two of the companies, yes.

Q. Two of which companies, the London companies?

A. The Commercial and the South Metropolitan Company receive a meter rental. In the case of the Gas Light & Coke Company, not receiving any meter rental, it probably could not be.

Q. Will you state what the meter rental is stated at in Field's Analysis for each of these companies?

A. For the year 1904?

Q. For the same year with which you are dealing when you stated the selling price at page 54 of your affidavit as averaging sixty-two cents?

A. Meter rental, folio 3, Field's Analysis 1904, the Gas Light Company, nothing at all; the Commercial, per one thousand sold, 1.63 English pence.

Q. About how many cents would that be?

A. There are 2.03 cents to each English penny; that would make about 3.3 cents, I should judge.

Q. And that added to the figure of fifty-eight cents at page 54 of your affidavit would give 61⅜ cents?

A. Something of that sort. In the South Metropolitan Company 1.21 pence, which multiplied by 2.03 will give you about 2.4 to 2.5 cents which, added to forty-nine cents will give you 51.5 cents.

Q. Of course, you know that the cost of the production of gas in Great Britain is very much less than it is in New York or in America generally, do you not?

A. That claim is made.

Q. You never have operated a gas plant there yourself?

A. Never.

2614 Q. Isn't it a fact that every one of the British companies shown in Field's Analysis of the London companies, the suburban as well as the city, do charge meter rental except the Gas Light Company of London, according to the statement in Field's Analysis?

A. It would so appear from Field's Analysis.

Mr. Burr: I suppose it will be conceded that the Gas Light Company of London is the largest company there?

Mr. Mathewson: Yes, I think that is right. The largest company in London and they charge the highest price for gas, according to the Doctor's statement, which is undoubtedly so.

Mr. Burr: You mean by "Doctor," Dr. Humphrey's statement?

Mr. Mathewson: Oh, no, according to Doctor Marks' statement.

The Witness: I beg your pardon, I am not a doctor. Just plain "Mr."

Q. Now, let us look at your affidavit further on the subject of London companies—you state in your affidavit, do you not, that the profit on capital employed, amounts to 8.39 per cent. in the case of the Gas Light Company?

A. So it reads.

Q. And for the Commercial the profit per cent. on capital employed is 8.72 cents?

A. Yes.

Q. And the South Metropolitan is 7.58 cents, at page 54?

A. Correct.

Q. Or an average for the three Metropolitan companies of 8.24 cents profit on the aggregate capital employed?

A. "Profit on capital employed," is the heading.

Q. Now, you also said that the per cent. of profit on stock,
2615 share and premium capital excluding premium on debenture
stock is for the Gas Light Company 9.35 per cent., for the
Commercial Company 10.86 per cent., for the South Metropolitan Company 8.85 per cent., and the average for three Metropolitan companies is 9.32 per cent.; is that correct? You so state in your affidavit on page 54?

A. Yes. It is a valuation from a statement in Field's Analysis.

Q. And you believe it to be true, of course?

A. Yes.

Q. And you also state that the average profit realized on all the capital employed by all the Metropolitan companies of London appears to be 8.25 per cent.?

A. Yes.

Q. Now, isn't it the fact, Doctor, according to your information that the London companies were paying as high as 10 per cent. and the South Metropolitan, indeed, as high as 12 per cent. about twenty years ago and that they were permitted substantially to double their stock, paying upon the double stock about as much per cent. in dividend or something like that?

A. Yes, that was related in my direct evidence.

Q. Yes, so I understood. In other words, the lower rate of interest or return now paid on the share capital is upon double the amount of the original capital?

A. Yes, that was the first issue, and some others that were joined to that.

Q. Referring to electrolysis, isn't it possible to tell the pitting due to an electric current from the pitting that occurs in iron pipes by reason of disintegration from other causes?

A. Well, electrolysis consisting of a carbon and iron battery with an alkaline solution in contact with it does not differ in its general appearance from electrolysis occasioned in any other way. In other
words, you cannot tell if the electrolysis occurred—and it oc-
2616 curred fifty years ago, in many cases before we ever heard of
any wandering currents. You cannot tell by looking at it
just what it might be laid to.

Q. But is it all pitting due to electrolysis of one kind or another?

A. Is it all pitting?

Q. Yes.

A. Oh, no, I cannot say that.

Q. Then my question is whether you cannot detect the pitting due to electrolysis in iron pipes form pitting due to other causes?

A. In using the word electrolysis, you mean electrolysis due from possible wandering currents or electrolysis due to the action——

Q. I used the term exactly as you did a moment ago, where you said it was all electrolysis where electricity was concerned——

A. Did I?

Q. I thought so, yes. Now, my question is whether you cannot detect pitting due to electrolysis in an iron pipe, whether due to this spontaneous battery to which you have referred or to stray currents, from pitting in iron pipes due to other causes than electrolysis?

A. No.

Mr. BURR: There are only two causes given, stray currents and the electricity in the earth itself.

Mr. MATHEWSON: That is all electrolysis and Dr. Marks says there is pitting in iron pipes which is not due to electrolysis. My question is whether you cannot determine by inspection whether pittings are due to electrolysis or due to other causes.

The WITNESS: Electrolysis is like medicine. You cannot tell what would have happened if you had not given it.

Q. Of course, but I think that does not quite answer my question. You say that the pitting is due to electrolysis in some cases and that in other cases pitting occurs without the existence of electrolysis.

A. Unknown causes.

2617 Q. My question is, cannot an expert determine by the character of the pittings whether they are due to electrolysis or whether they are due to some other cause?

A. I should think the only way would be to use electrical instruments to determine whether or not there was electricity there.

Q. Even if mains may rest in an ashy or alkaline soil and therefore there will be some electrolysis from this natural battery, is it not true that additional or stray currents of electricity will greatly augment the pitting?

A. There is no doubt that there is such a possibility, but it depends so largely on conditions outside of mere existence of the currents that you cannot say.

Q. Is it true even where mains are not laid in any ashy *of* alkaline soil and where consequently there is no natural battery set up as you have mentioned the pipes will still be affected by electrolysis where stray currents of electricity come in contact with them?

A. Of course my experience in that matter is very limited, but I never found where there was very great agitation for about nine or ten years——

By Mr. BURR:

Q. Agitation of what?

A. Of the subject of electrolysis; but for nine or ten years there was a continuous discussion in the way of suggestions and accusations against the Philadelphia Edison Electric Light Company of which I was engineer and president, and which had a ground neutral, carrying that all the time. There never was any case where it could be definitely said that the damage had been done by electrolysis by reason of the grounded neutral.

2618 Q. Do you not know that the subject is considered of such importance by the American Light Association that they have appointed a special committee of most competent experts to consider the subject and to report how it can be guarded against and treated with?

Mr. Burr: I do not object to the question if he leaves out "most competent experts." I don't know whether the professor knows anything about it or not.

Mr. Mathewson: If he does not, he can say so. I suppose he knows who they are.

A. I know that such a commission has been appointed.

Q. And don't you know that the Water Pipe Association—I am not sure of their name exactly—have appointed a similar committee in view of the danger to their pipes?

A. You mean of what locality is the water pipe?

Q. Well, it is the Water Works Association of America—Doctor Humphreys gives me the exact title.

A. That is my first information. I have not paid much attention to water works.

Q. Didn't you testify substantially that an electric current in passing is in strength inversely as to resistence?

A. That is Ohm's law. The quantity of the current is inverse to its resistence, indirectly as to electromotive force.

Q. If that is true, will there not necessarily be some current straying from the return conductor, provided the conductor is not completely insulated?

A. Referring to any form of conductor that is true. Insulation can hardly be made absolute and perfect.

Q. And it is true then that unless the return conductor, no matter how large it may be, is completely insulated, there will be some current straying therefrom which would involve possible
2619 electrolysis in a neighboring pipe?

A. Unless picked up by large masses of iron before it got there.

Q. Now the surface roads in New York City—the underground trolley surface roads, have as you knew, I suppose, return conductors?

A. Yes.

Q. And you would not expect that that would have much effect, if any, in electrolytic action on the neighboring pipe, would you?

A. I should think not.

Q. Now taking the elevated structure, the road there having no such return conductors as the surface roads, as I understand it, do you contend that on account of the large mass of iron in the elevated railroad structure there can be no stray currents or conductors except the elevated structure itself?

A. In electricity everything is relative, and Ohm's law obtains everywhere. It would appear to me that the iron is so much greater in the elevated structure that the chances are very small indeed of any currents ever getting off it, even with bad rail connection, appreciable currents.

Q. When you say any currents getting off from it, isn't it true that electric currents even passing through conductors from the point of generation to a distant point where employed as a motive force suffer some loss in that way?

A. I say appreciable currents.

Q. Don't you think that the current on the elevated railway can pass into the street from the foot of the columns, even if those columns may be insulated by concrete settings?

A. No doubt it can. Electricity will find its way out by the easiest passage that presents itself at any and all times.

Q. You said in your testimony, if I understood you, that Doctor Humphreys did not limit the accumulation of a reserve fund to any sum and you subsequently corrected that by saying that 2620 he did limit the five cents per thousand which he claimed to some amount equal perhaps to ten per cent. of the capital, but that he did not do this at first. You know that Doctor Humphreys was called only once before the Gas Commission and once before the Master here. What do you mean by saying that he did not at first limit——

Mr. Burr: Are you referring to any particular page?

Mr. Mathewson: The testimony of the witness, which I suppose he has in mind.

A. In regard to this matter, page 2390, I would say that my memory was not very good, nor even now very distinct on that point. I said that lately President Humphreys had agreed to the reserve fund of ten per cent. on the capital. Whether that referred—I heard President Humphrey's testimony before the Gas and Electricity Commission. I also heard it here and it is quite impossible and I presume unimportant, for me to find out whether it referred to the Gas and Electricity Commission or to this evidence.

Q. Well, the impression made on my mind, Dr. Marks, was that Dr. Humphreys had, as an afterthought, limited it. Now I call your attention to his testimony at page 1947 of this case where he specifically says the reserve fund shall be limited to, "say, one-tenth of the investment as in the case of many British companies." And I also call your attention to page 2469 of the printed testimony before the Gas Commission, where Doctor Humphreys said, "I would like it distinctly understood in my opinion is a reserve should not be called an actual expense of the business but as a reserve and be treated as a reserve and having grown to certain dimensions 2621 should be there stopped." Now, in that view, don't you wish to modify your testimony that Doctor Humphreys at first did not suggest a limitation, of his reserve fund?

A. I do not regard the phrase, "certain dimensions" as a limitation of sufficiently clear character to——

Q. Not even if he says "And having grown to certain dimensions, should be there stopped?" You would not consider that as a statement that it should be limited?

A. Not to any specific amount.

Mr. Burr: It is twenty-five minutes of five. If you have any more questions to ask along this point you had better finish with him now. We propose to start in Monday morning to examine the plants, and Dr. Marks is our expert to examine the plants.

Mr. MATHEWSON: I will ask one or two other questions then which will be very brief.

Q. Referring to your book at page 220, in an article headed, "Opinion Concerning Reorganization of Gas and Electric Works," you compute a price on gas, a supposititious case in which appear these items:

"Depreciation, 5 per cent. of $125,000," which is supposed to be the investment; then, "Profit and Depreciation 15 per cent." That leaves ten per cent. allowance above the 5 per cent. for depreciation, doesn't it?

A. Yes.

Q. And you include in the price for gas, if I understand it correctly, the depreciation, 5 per cent., and the fixed expenses as you call it, the profit and the manufacturing and distributing expense; what do you mean by the fixed expense, Doctor?

A. The fixed expense differs from what is commonly known as the fixed charges. The fixed expense is very carefully gone into on pages 188 and 189.

2622 Q. Well, I won't go into it at present. The price of 2.11 which you figure out here in this supposititious case includes the price of gas per thousand, $1.10——

A. I beg your pardon. The last three items at the bottom are footed up, making $2.11.

Q. Oh yes, the last three items at the bottom, "Profit and Depreciation, 15 per cent., $1.17"——

A. Of $7.81.

Q. No, $1.17?

A. Yes, 15 per cent. of $7.81 is $1.17.

Q. Then "Fixed Expense for one thousand cubic feet, 0.19," and manufacturing and distributing expense per one thousand 0.75, total $2.11?

A. Yes.

Q. And this $7.81 is the investment as per annual thousand cubic feet of sales upon your assumed capitalization?

A. Yes, in a town of 8,000 inhabitants. I think that is what you were referring to earlier on before here.

Q. Now, on page 239 again you say: "With the allowance of 5 per cent. for depreciation, the net profit to be added to the profit of the electric plant would be $4,536.80, or 10 per cent. on the investment?"

A. Yes.

Q. And you subsequently say in your book, do you not, experience has taught you that 5 per cent. for depreciation in an electric plant is insufficient and that it should be 10 per cent.?

A. In many cases.

Q. And so, too, in various other cases, including Marblehead and Attleboro, I see you refer to a price necessary to yield 5 per cent. depreciation and 10 per cent. profit on the investment (page 188); that is the case, is it not?

A. Yes; that is correct.

Mr. Mathewson: That is all. Now I have not cross-examined
Dr. Marks on the cost of gas and on the matter of value of plant and
its various items, which I understood I might not take
2623 & 2624 up until he has completed his evidence on those subjects,
and there may be a few more questions on these
other features that I have not covered, but they will not be extensive.

The Master: It is understood if they do not wish to call him again on those matters that then you may resume your cross-examination in so far as you may desire on the testimony as it already stands.

Mr. Mathewson: And if they do call him again I shall have the right to cover his subsequent testimony. I will ask you just one more question now.

Q. According to Ohm's law electricity leaves not only by the easiest way, but by every passage which presents itself, the only question being the proportion that goes by the various passages?

A. It does.

At 4.45 o'clock p. m. adjourned to October 8, 1906, at eleven o'clock a. m.

Last Exhibits:

Complainant's 256.
State's W.
City's 54.

2625 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Monday, *October* 8, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Garver, Mr. Burr, and Mr. Kirby.

Mr. Burr: We are about to offer in evidence certain ap-
2626 plications by the Consolidated Gas Company for reduction
of assessments of various plots due in 1903, 1904, 1905 and
1906, showing the estimated value placed upon those lots by the company itself. These are the *certiorari* proceedings I spoke to you about over the 'phone some days ago, Mr. Garver, that we desired to avoid the necessity of calling Mr. Gawtry if possible, so if it was

agreeable to you, after your looking at them we might upon consent enter them upon the record.

Mr. **Garver**: We have no objection to your offering these copies instead of producing the originals, but we object to the papers going in evidence on the ground that it clearly appears from the various petitions that the value that was placed on these properties was not the value of those properties to the company as a going concern, but the value for which the property would, according to the statutory provisions, sell for under ordinary circumstances, and also the fact that the values placed upon the different pieces of property were uneqqual. In other words, the basis of valuation stated in these various applications is entirely different from the basis upon which we rely in the present suit.

Mr. **Burr**: We do not think so, and we think they are admissions as against interest upon the question of valuation of this real estate, and are permissible to be placed upon the record.

The **Master**: They are all verified petitions of the gas company on *certiorari* to review the assessments of the real property?

Mr. **Burr**: Yes, sir.

The **Master**: I will admit them, Mr. Garver, and give you an exception.

Mr. **Garver**: Exception.

Mr. **Mathewson**: That will apply to each one of these without raising the question anew?

2627 The **Master**: Yes, you need not repeat the objection.

Mr. **Burr**: I read from the petition and order for writ of *certiorari* from the Supreme Court, New York County, in the matter of the application of the Consolidated Gas Company of New York for a writ of *certiorari* to the Board of Taxes and Assessments of the City of New York. The order for the writ is dated October 3d, 1903. The petition is signed "Consolidated Gas Company of New York, by Lewis B. Gawtry, Vice-President, Petitioner. Shearman & Sterling, Attorneys for Petitioners." Said petition is verified on the Twenty-third of October, 1903, by the said Lewis B. Gawtry.

Attached to the petition are certain exhibits with regard to each of the parcels referred to in the said petition.

Block 715, Lot 51.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 438 West 18th Street, in Volume 1 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot 51 in Block No. 715.

It finds that the same has been assessed on the assessment roll of 1903 at a valuation of $9,000, whereas the same should not have been valued at more than $6,250, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

2628 The assessment is illegal and erroneous by reason of overvaluation and in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate of the tax rolls of the city.

The assessed valuation for this lot for the year 1902 was $5,000. The valuation for this year is an increase of 80 per cent.

There have been no improvements upon this lot for a number of years.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about thirty-three and one-third per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the valuation of the said Lot 69, in excess of thirty-three and one-third per cent., is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $6,600.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

2629 STATE OF NEW YORK, *County of New York:*

On this 28th day of March, 1903, before me personally came Lewis B. Gawtry, to me known, who, being by me duly sworn, did depose and say that he resides in New York City; that he is the Vice-President of the Consolidated Gas Company of New York, the corporation described in, and which executed the foregoing instrument; that he knew the seal of the said corporation, that the seal affixed to said instrument was such corporate seal; that it was so affixed by authority conferred by the Board of Directors of the said corporation, and that he signed his name thereto by like authority.

CORNELIUS A. LOUGHLIN,
Notary Public, New York County.

Certiorari proceedings were also instituted by the Consolidated Gas Company to review the assessments of its real estate for the year 1904 and an order in those proceedings was obtained on October 28, 1904.

Attached to the petition which was verified by Mr. R. A. Carter, Secretary of the Company, on October 27, 1904, are statements referring to the parcels mentioned in the petition. In this statement the grounds of objections are as follows:

"The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

2630 It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902. The assessed valuation for this lot for the year 1902 was $5,000. The valuation for this year is an interest of 100 per cent.

In 1903 the said lot was assessed at a valuation of $9,000. The undersigned filed an application requesting that the assessment be reduced to the sum of $6,600, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for 1904 be fixed at $6,600.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*"

Verification March 28, 1904.

An order in this proceeding was obtained on October 30th, 1905. Attached to the petition which was verified by Lewis B. Gawtry, Vice-President of the Consolidated Gas Company, on March 24, 1905, are statements referring to the parcels mentioned in the petition. In this statement the grounds for objections were the same as those expressed in the petition for a writ of *certiorari* for 1904, except that the following statement was added:

2631 In 1904 the said lot was assessed at a valuation of Ten thousand ($10,000) dollars. In 1903 and 1904 applications were filed by the undersigned requesting that the said assessment be reduced to the sum of $6,600, but no reduction was received on either assessment.

Block 715, Lot No. 59.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 454 West Eighteenth Street, in Volume 1, of Section 3 of the Borough of Manhattan, of the City of New York, designated on the Tax Map as Lot No. 59 in Block 715.

He finds that the same has been assessed on the Assessment Roll of 1902 at a valuation of $165,000, whereas the same should not have been, in his judgment, valued at more than $100,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

Lot 8, Block 716, on West 18th Street, an- immediately opposite, is assessed for only $3.91 per square foot, while said lot of the undersigned is assessed for $8.97 per square foot.

Lot 7, Block 716, is assessed at the rate of $5.65 per square foot.

2632 Lot 12, Block 715, is assessed at the rate of $3 per square foot. Other lots in Block 716 are also assessed at a much lower figure than said lot of the undersigned.

Lots 7, 8, 9, 10, 11, 12, 13, 14, Block 715, and facing on West 17th Street, are assessed from $5.47 per square foot to $7 per square foot.

The undersigned claims that the aforesaid lots with the improvements thereon have a market value proportionate to that of the said lot of the undersigned, and that there is no reason why his said lot should be assessed at any higher rate than any of the said lots mentioned or other lots in the immediate vicinity.

The undersigned has objected to this assessment at the sum of $165,000 in former years as it has always believed that this assessment was in excess of the market value of the property.

It therefore asks that the same may be reduced to the sum of $100,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

Block 716, Lot 14.

The application for the year 1905 recites as follows:

To the Commissioners of Taxes and Assessments:

Location of property, between 9th and 10th Avenues and 18th and 19th Streets.

Volume 1, Section or Ward 3, Lot 14, Block 715.

2633 Assessed valuation 1905, $36,000, with improvements; $32,000, unimproved.

The undersigned represents that it is the owner of the above described property and claims to be aggrieved by the aforesaid valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The assessed total valuation for this lot for the year 1902 was $25,000. The valuation for this year is an increase of 44 per cent.

There is a stable on this lot which has but little market value.

In 1903 and 1904 there was no assessed valuation of improvements, while this year, with the same cond-tions existing, the improvements were assessed at $4,000.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $25,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK, 4 *Irving Place.*

Verification March 24th, 1905.

2634 Block 870, Lot 54.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 124 East 15th Street, in Volume 3 of Section 3, of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 54 in Block No. 870.

It finds that the same has been assessed on the assessment roll of 1903 at a valuation of $11,000, whereas the same should not have been valued at more than $7,500, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

There is an old home on this lot which has been damaged by fire. The same is now practically worthless, except for storage purposes.

This lot was assessed at a valuation of $6,000 for the year 1902. The valuation for this year is an increase of 85 per cent.

The value of said lot and of other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

2635 The undersigned is informed and believes that the total assessed valuation in the City of New York for the year 1903 is about thirty-three and one-third per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the valuation of said Lot No. 54 in excess of thirty-three and one-third per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the city.

It therefore asks that same may be reduced to the sum of $7,500.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

Block 870, Lot No. 56.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 126 East 15th Street, in Volume 3 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 56 in Block No. 870.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $50,000, whereas the same should not have been valued at more than $37,500, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over valuation and is in excess of what the property would sell for under ordinary circumstances.

2636 The aforesaid assessment also is illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

The assessed valuation of this lot for the year 1902 was $30,000. The assessed valuation for this year is an increase at the rate of 67%.

There have been no improvements on the said lot of the undersigned and the value of said lot and of other real estate in the same locality has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is almost 33⅓% higher than for the year 1902.

Even if such increased assessment were legal, any increase in the valuation of said lot No. 56 in excess of 33⅓% is unfair, illegal and erroneous, and not in proportion to the value placed upon other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $37,500.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

2637 Block 952, Lot No. 29.

The application for 1904 recites as follows:

BOROUGH OF MANHATTAN.

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate at the corner of Avenue A and 20th Street, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 29 in Block No. 952.

It finds that the same has been assessed on the Assessment Roll of 1904 at the valuation of $10,000, whereas the same should not have been valued at more than $7,000, to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

The value of this lot has not increased since the second Monday in January, 1903. This lot was assessed for $7,000 for the year 1903, which sum represented the fair market value of the property. There is no reason for the increase in the assessment.

This lot is assessed at the rate of $6.96 per square foot. The lots immediately north of it on Avenue A are assessed, unimproved, at only $4.08 per square foot.

2638 It therefore asks that the assessed value of said premises for the year 1904 be fixed at $7,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

Block 952, Lot 29.

The application for the year 1905 is substantially the same as the application for the year 1903, with the exception that in place of paragraphs 6 and 7 in the application for 1903 the following appears:

In 1904 this lot was assessed at a valuation of $10,000 and the undersigned filed an application to reduce the said assessment to $7,000, but no reduction was made and the undersigned instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $7,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK.

Address, 4 Irving Place, New York City.
Verification March 24, 1905.

Block 952, Lots 33 and 34.

The application for the year 1905 recites as follows:

To the Commissioners of Taxes and Assessments:

Location of property, Nos. 333 and 335 Avenue A.
2639 Volume 4, Section or Ward 3, Lots 33 and 34, Block 952.
Assessed valuation, 1905, Lot 33, $8,000, with improvements.
Assessed valuation, 1905, Lot 33, $6,500, unimproved.
Assessed valuation, 1905, Lot 34, $8,000, with improvements.
Assessed valuation, 1905, Lot 34, $7,000, unimproved.

The undersigned represents that it is the owner of the above described property and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessments are illegal and erroneous by reason of overvaluation and are in excess of what the property would sell for under ordinary circumstances.

They are also illegal and erroneous by reason of inequality, in that they have been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

The assessed valuation of these two lots for the year 1902 was $5,000 each. The assessed valuation for this year is accordingly an increase of 60 per cent.

There are some old tenement houses on this property upon which no improvements have been made for many years.

In 1903 the said lots were assessed at a valuation of $8,000 each, and in 1904 they were assessed, for the same amount. In 2640 both years the undersigned filed applications, requesting that the assessments be reduced, but no reduction was made, and the undersigned instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessments of 1903 and 1904, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $6,250.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK.

Address, 4 Irving Place, New York City.
Verification March 29, 1905.
952—33-34.

Substantially the same application was made for the years 1903 and 1904.

Block 952, Lot No. 35.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 341 Avenue A, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 35 in Block No. 952.

It finds that the same has been assessed on the assessment roll of 1903 at a valuation of $45,000, whereas the same should not have been valued at more than $30,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

2641 The assessment is illegal and erroneous by reason of overvaluation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate on the tax rolls of the city.

The assessed valuation of the said lot for the year 1902 was $30,000. The assessed valuation for this year is an increase of 50 per cent.

The value of said lot and of other real estate in the same ward and section or in the same locality has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about thirty-three and one-third per cent. higher than for the year 1902. Even if such increased assessment is legal, any increase in the valuation of the said Lot No. 35 in excess of thirty-three and one-third per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $30,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

2642 Block 952, Lot 35.

The application for the year 1904 recites the following grounds of objection:

The assessment is illegal and erroneous by reason of over valuation, and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportion valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

The improvements on this property, according to the above figures, are assessed at $20,000. They consist of a valve house with a considerable amount of machinery in it, which should not be assessed as real property. The valve house is not worth more than $10,000, at which sum the undersigned values it and insures it for that amount.

In 1903 the said lot was assessed at a valuation of $45,000. The undersigned filed an application requesting that the assessment be reduced to the sum of $30,000, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $30,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1904.

2643 952, Lot 35.

The application for 1905 differs in the following respects:

The improvements on this property, according to the above figures, are assessed at $20,000. They consist of a valve house with a considerable amount of machinery on it, which should not be assessed as real property. The valve house is not worth more than $8,000.

Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts, who value the land at $18,988, and the buildings at $8,000.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $26,988.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK.

Address, 4 Irving Place, New York City.
Verification March 24th, 1905.

The application for 1906 recites the following:

Location of property, No. 341 Avenue A.

Volume 4, Section or Ward 3, Lot 35, Block 952.

Assessed valuation, 1906, $45,000, with improvements; $25,000 unimproved.

The undersigned represents that it is the owner of the above described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same revised and corrected.

The ground of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

2644 The improvements on this property, according to the above figures, are assessed at $20,000. They consist of a valve house with a considerable amount of machinery in it, which should not be assessed as real property. The valve house is not worth more than $8,000, and adds no more than that sum to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $33,000.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK,
LEWIS B. GAWTRY, *Vice-Pres.*

Address, 4 Irving Place, New York City.
Verification 29 day of March, 1906.

Block 953, Lot No. 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate lying between First Avenue and Avenue A and 21st and 22nd Street, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1 in Block No. 953.

It finds that the same has been assessed on the assessment roll of 1903 at a valuation of $800,000, whereas the same should not have been valued at more than $700,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal, unfair and erroneous by reason of overvaluation and is in excess of what the property would sell for under ordinary circumstances.

2645 There are six gas holders on this property, which are very old, together with a meter, repair shop and two or three valve houses. The property is depreciating in value owing to the wear and tear on the machinery and appliances.

The assessed valuation for 1902 was $610,000. There has been an increase of 31 per cent. without any reason, as there have been no improvements on the property nor any increase in the value of property in the same locality since the second Monday in January, 1902.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

Block No. 954, which is exactly the same size as said Block 953 immediately to the north of it, is assessed at $721,500.

Block 927, which is considerably larger than said Block No. 953, is assessed at a valuation of $783,000. The improvements on both these blocks have a much higher market value than those on the said block of the undersigned.

It therefore asks that the same may be reduced to the sum of $700,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

The application for 1904 recites as follows:

Location of property, between 21st and 22nd Streets and Avenue A and First Avenue.

Volume 4, Section 3, Lot 1, Block 953.

Assessed valuation, 1904, $800,000, with improvements.

2646 Assessed valuation, 1904, $500,000, unimproved.

The undersigned represents that it is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal, unfair and erroneous by reason of overvaluation and is in excess of what the property would sell for under ordinary circumstances.

There are six gas holders on this property, which are very old, together with a meter repair shop and two or three valve houses.

The improvements are assessed at $300,000, but they are not worth more than $266,000, at which sum the undersigned values them for the purposes of insurance.

The assessed valuation for 1902 was $610,000. There has been an increase of 31 per cent., although there have been no improvements on the property, nor any increase in the value of the same, nor of property in the same locality with it, since the second Monday in January, 1902.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

The valuation for the land alone is $500,000. The block between 19th and 20th Streets and First Avenue and Avenue A is assessed for $373,500, unimproved. The block above the one in question, that is, between 22nd and 23d Streets, is assessed for $470,000, unimproved, and the block above that at $448,000, unimproved.

2647 There is great inequality here. Block 853 is certainly no more valuable than those fronting on 23d Street.

In 1903 the said lot of the undersigned was assessed at a valuation of $800,000, with improvements. The undersigned filed an application requesting that the assessment be reduced to the sum of $700,000, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $700,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

In 1905 an identical application was presented.

Verification March 24, 1905.

In 1906 the application recites as follows:

Location of property, No. ––, 21st & 22nd Sts. & Ave. A & 1st Ave.

Volume 4, Section or Ward 3, Lot 1, Block 953.

Assessed valuation, 1906, $785,000, with improvements; $500,000 unimproved.

The undersigned represents that it is the owner of the above described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal, unfair and erroneous by reason of overvaluation, and is in excess of what the property would sell for under ordinary circumstances.

There are six gas holders on this property, which are very old, together with a meter repair shop and two or three valve 2648 houses, all of which add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $500,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
Name, LEWIS B. GAWTRY, (Signed) *Vice-Pres.*

Address, 4 Irving Place, New York City.
Verification 29 day of March, 1906.

Block 972, Lot No. 45.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. 536 East 15th Street, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 45 in Block No. 972.

It finds that the same have been assessed on the Assessment Roll of 1903 at a valuation of $19,000, whereas the same should not have been valued at more than $13,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There is nothing on this property but a little pump house, not in use, and an old well. The lot has a frontage on the street of only 13 feet, and although it widens in the rear, such increased width adds but little to the value of the property.

The assessed valuation of this property for the year 1902
2649 was $13,000, which represented more than the full market
value of the property. There has been an increased valuation at the rate of 46%, without any reason.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higer proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $13,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

The application for 1904 is the same as the application for 1903, except that it differs in the following respects:

Location of property, No. 536 East 15th Street.

Volume 4, Section 3, Lot 45, Block 972.

Assessed valuation, 1904, $21,000, with improvements.

Assessed valuation, 1904, $20,000, unimproved.

There is nothing on this property but a little pump house, not in use, and an old well. The tax map shows that this lot has a frontage on the street of only 3 feet 6 inches, and, although it widens in the rear, such increased width adds but little to the value of the property.

Lot 51 immediately adjoining said Lot 45 has a frontage of 142 feet and is assessed for only $20,000, unimproved. Said Lot 45, notwithstanding its extremely small frontage, is assessed unimproved for nearly as much per square foot as other lots in said Block 972, and on a valuation per front foot is assessed entirely out of proportion to other lots in the immediate vicinity.

2650 It therefore asks that the assessed value of said premise for the year 1904 be fixed at $13,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 29, 1904.

The application for 1905 is substantially similar to the application for 1904.

Verification March 24, 1905.

The application for 1906 recites as follows:

Location of property, No. 536 East 15th Street.
Volume 4, Section or Ward 3, Lot 45, Block 972.
Assessed valuation, 1906, $21,000, with improvements.
Assessed valuation, 1906, $20,000, unimproved.

The undersigned represents that it is the owner of the above described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

There is nothing on this property but a little pump house, not in use, and an old well. The Tax Map shows that this lot has a frontage on the street of only 3 feet 6 inches, and, although it widens in the rear, such increased width adds but little to the value of the property.

The assessed valuation of this property for the year 1902 was $13,000, which represented more than the full market value of the same. In 1903 the said lot was assessed at a valuation of $19,000, and in 1904 and 1905 at a valuation of $21,000. In 1903,
2651 1904 and 1905 the undersigned filed applications requesting that the assessments be reduced to $13,000, but no reduction was made, and in all three years the undersigned instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessments for 1903, 1904 and 1905, which proceedings are now pending. The value of the said property has not increased since 1902 and there is no justification for its increased assessment.

The assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $13,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
Name, LEWIS B. GAWTRY (Signed), *Vice-Pres.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

Block 978, Lot No. 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate located on the corner of 20th Street and Avenue A, in Volume 4 of Section 3 of the Borough of Manhattan, of the City of New York, designated on the Tax Map as Lot No. 1 in Block No. 978.

It finds that the same has been assessed on the Assessment
2652 Roll of 1903 at a valuation of $15,000, whereas the same should not have been valued at more than $10,000, to be in

proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and unfair and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the city.

The value of this lot and other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓% higher than for the year 1902. Even if such increased assessment is legal, any increase in the valuation of said Lot 1 in excess of 33⅓% is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the city.

He therefore asks that the same may be reduced to the sum of $10,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

Block 978, Lot No. 6.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

2653 The undersigned represents that it is the owner of real estate located on Avenue B, between 20th and 21st Streets, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 6 in Block No. 978.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $500,000, whereas the same should not have been valued at more than $400,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

The assessed valuation of this lot for the year 1902 was $325,000. The valuation for this year is an increase of 54%.

There are gas works, a coal storage house and a purifying apparatus on this lot. The same can only be used for the purpose of manufacturing gas. There have been no improvements on this property during the last year.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The value of this Lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓% higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of said Lot 6, in excess of 33⅓% is unfair, illegal and erroneous and
2654 not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $400,000.

THE CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification 28th of March, 1903.

The application for the year 1904 was substantially similar except that it stated the assessed valuation for 1904 to be $500,000 with improvements and $320,000 unimproved.

Paragraph 5 in the Petition for 1903 appears in the Petition of 1904 as follows:

There are gas works, a coal storage house and a purifying apparatus on this lot, all of which can only be used for the purpose of manufacturing gas. These improvements according to the above figures are assessed for $180,000. They are not worth more than $158,000, at which sum the undersigned values them for the purposes of insurance.

Verification March 28, 1904.

The Application for the year 1905 was substantially similar to that for 1904, except that the clause quoted in full for 1904 reads as follows in the petition for 1905:

There are gas works, a coal storage house and a purifying apparatus on this lot, all of which can only be used for the purpose of manufacturing gas. These improvements according to the above figures are assessed for $180,000, but they are an inadequate improvement for the land, and add nothing to its value.

2655 Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts who value the land at $299,512, and state that the buildings add nothing to its market value.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $300,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,

Address, 4 Irving Place, New York City.
Verification, March 24th, 1905.

The application for 1906 recites as follows:

Location of property, Avenue B, between 20th and 21st Streets.

Volume 4, Section or Ward 3, Lot 6, Block 978.

Assessed valuation, 1906, $500,000, with improvements.

$335,000, unimproved.

The undersigned represents that it is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There are gas works, a coal storage house and a purifying apparatus on this lot, all of which can only be used for the purpose of manufacturing gas. These improvements are an inadequate improvement for the land, and add nothing to the amount for which it would sell under ordinary circumstances.

2656 It therefore asks that the assessed value of said premises for the year 1906 be fixed at $335,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.
Verification, March 29, 1906.

Block 979, Lot No. 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate comprising the block bounded by 21st and 22nd Streets and Avenue A and the marginal Street, in Volume 4 of Section 3 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lot No. 1 in Block No. 979.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $540,000, whereas, the same should not have been valued at more than $456,250 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The said assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character, in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation of this property for the years 1900, 1901

2657 and 1902, was $365,000. The increased valuation at a rate of 48% is excessive and without reason, as there has been no change in the character of the property nor of the neighborhood since last year.

This lot is occupied by works of the Gas Company. There have been no improvements of such a nature as to increase the value of the property, which can only be used for the purposes of a gas works. Owing to wear and tear of the machinery and appliances, the property has depreciated in value.

Certain inequalities in the assessment of surrounding property to be noted are as follows:

Blocks 980 and 977 are both assessed at a less sum in proportion than said lot of the undersigned. The assessed value of the said lot is at the rate of $4.79 per square foot. The assessed value of Block 977 is at the rate of $3.63 per square foot; and Block 980 is also assessed at a lower rate per square foot than said lot of the undersigned.

The value of this lot and of other real estate in the same ward and section or in the same locality has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuations of real estate in the City of New York, for the year 1903, is about 33⅓% higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of said Lot, in excess of 33⅓% is illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

He therefore asks that the same may be reduced to the sum of $456,250.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-President.*

Verification March 28th, 1903.

2658 For the year 1904 the application, paragraph 1, same as paragraph 1 for 1903, with the following difference: Assessed valuation, $540,000, with improvements; $350,000, unimproved.

Paragraphs 2, 3, 4, 5 are substantially the same as paragraphs 2, 3, 4, 5 for 1903.

The following appears in the place of paragraphs 6, 7, 8, 9, 10 and 11 in the application for 1903:

The improvements on this lot comprise a plant for the manufacture of gas.

The improvements are assessed for $190,000, but they are not worth more than $135,550, at which sum the undersigned values them and insures them.

In 1903, the said lot of the undersigned was assessed at a valuation of $540,000, with improvements. The undersigned filed an application requesting that the assessment be reduced to the sum of $456,000, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1904, be fixed at $456,250.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *Vice-President.*

Verification March 28, 1904.

The application for the year 1905 recites as follows:

Paragraph 1 the same as paragraph 1 for 1903, with this exception:

Assessed valuation for 1905 $542,000, with improvements; $351,500 unimproved.

Paragraphs 2, 3 and 4 are the same as paragraphs 2, 3 and 4 for 1903, and in the place of paragraphs 6, 7, 8, 9, 10 and 11 for 1903 the following appears:

2659 The improvements on this lot comprise a plant for the manufacture of gas.

The improvements consist of a brick building, containing a gas plant, a large part of which is machinery. The said building is an inadequate improvement for the land and adds nothing to its market value.

In 1903 and 1904, the said lot of the undersigned was assessed in two parcels, one at $540,000 and the other at $1,500, making $541,500, with improvements. In both years the undersigned filed application requesting that the assessment of the larger lot be reduced to $456,250, but no reduction was made and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State, to reduce the said assessments of 1903 and 1904, which proceedings are now pending. The lot that was assessed at $1,500 in 1903 and 1904 has been included in the same parcel with the lot that was assessed for $540,000, making the net increase on the portion of the plot which was assessed in 1903 and 1904 at $540,000 the sum of $500, assuming that the lot that was separately assessed in those years at $1,500 is included in the larger assessment for 1905 at the same amount.

The assessed valuation of the larger lot for the years 1900, 1901 and 1902 was $365,000. The increased valuation at the rate of nearly 48 per cent. is excessive, as there has been no increase in the valuation of this lot since the second Monday in January, 1902.

Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts who value the land at $320,000 and state that the buildings add nothing to its market value.

2660 It therefore asks that the assessed value of said premises for the year 1905 be fixed at $350,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK.

Address, 4 Irving Place, New York City.
Verification March 24th, 1905.

The application for 1906 recites as follows:

Location of property, Block bounded by 21st and 22d Sts. and Ave. A. and the marginal St.

Volume 4, Section or Ward 3, Lot 1, Block 979.

Assessed valuation 1906, $542,000, with improvements, $351,500 unimproved.

The undersigned represents that it is the owner of the above-described property and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same revived and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The improvements on this lot comprise a plant for the manufacture of gas.

The improvements consist of a brick building, containing a gas plant, a large part of which is machinery, which is personal property. The said building is an inadequate improvement for the land and adds nothing to the amount for which it would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $351,500.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.
Verification 29th day of March, 1906.

2661 Block 982, Lot No. 13.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate located on Avenue C. between 14th and 15th Streets in Volume 4 of Section 3 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lot 13 in Block 982.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $475,000. Whereas the same should not have been valued at more than $375,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The assessed valuation of this property for the year 1902 was $375,000. There has been an increase of 27 per cent. without any apparent reason.

There are six very old gas holders on this lot, and a meter and purifying house. The property can only be used for the purpose of manufacturing gas.

There have been no improvements on the property since the second Monday in January, 1902, and the value of the same and the value of the property in the said ward and section or in the same locality has not increased, on the contrary this property has decreased in value.

The aforesaid assessment is illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

2662 It therefore asks that the same may be reduced to $375,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 is substantially the same as the application for 1903 with the exception that in paragraph 1 the assessed valuation for 1904 reads: $475,000, with improvements; $250,000, unimproved. And in place of paragraph 6 in the application for 1903 appears the following:

"There are six very old gas holders on this lot, and a meter and purifying house, which can only be used for the purpose of manufacturing gas.

"These improvements are assessed for $225,000, but they are not worth more than $156,350, at which sum the undersigned values and insures them."

The Petition concludes:

"It therefore asks that the assessed value of said premises, with improvements, for 1904, be fixed at $375,000, which sum represents their fair market value.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *Vice-Pres.*"

Verification March 28, 1904.

The application for 1905 is the same as the application for 1903, with the exception that in paragraph 1 the assessed valuation for 1905 reads: $475,000, with improvements, $275,000 unimproved, and in place of paragraphs 6, 7 and 8, appears the following:

2663 "Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts who valued the land at $182,074 and stated that the buildings, except the gas holders, add nothing to its market value. These gas holders are not under any circumstances worth more than $126,000. The meter and purifying house should not be valued at more than $31,000. The assessment of the property, therefore, at any sum above $339,074 is unfair, illegal and erroneous.

It therefore asks that the assessed valuation of the said premises for 1905 be fixed at $339,074.

CONSOLIDATED GAS COMPANY OF
NEW YORK.

4 Irving Place, N. Y. C."
Verification, March 29, 1905.

Block 985, Lot No. 7.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate on East Eighteenth Street, in Volume 4 of Section 3 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lot 7 in Block 985.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $180,000, whereas the same should not have been valued at more than $156,250 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

2664 It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate character than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation of this lot for the year 1902 was $125,000. The valuation for this year is an increase of 44 per cent.

The value of this lot and of the other real estate in the same ward and section or in the same locality has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuations of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of the said Lot 7 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $156,250.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 is the same as the application for the year 1903, with the exception that in paragraph 1 the assessed valuation reads: $200,000, with improvements, $140,000 unimproved.

In other respects the application is substantially similar, except that paragraphs 5, 6 and 7 in 1903 are omitted and the following appears in place thereof:

"There are two very old gas holders and a small valve house on this lot. These improvements are assessed for $60,000, but 2665 they are not worth more than $31,600, at which sum the undersigned values and insures them.

In 1903, the undersigned filed an application requesting that the assessment be reduced to $156,250, which sum represents the fair market value of the property, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $156,250.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *Vice-Pres.*"

Verification March 28, 1904.

The application for the year 1905 is substantially similar to that for 1904.

Verification March 24, 1905.

The application for 1906 recites as follows:

Location of Property, East 18th Street between Avenues B and C.

Volume 4, Section or Ward 3, Lot 7, Block 985.

Assessed valuation, 1906, $200,000, with improvements.

$155,000, unimproved.

The undersigned represents that it is the owner of the above-described property and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There are two very old gas holders and a small valve house 2666 on this lot. These improvements add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $155,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
Name, LEWIS B. GAWTRY, *Vice-Pres.*

Address, 4 Irving Place, New York City.
Verification 29 day of March, 1906.

Block 987, Lot 37.

The application for 1904 recites as follows:

BOROUGH OF MANHATTAN.

To the Commissioners of Taxes and Assessment-:

The undersigned represents that it is the owner of real estate on Avenue B, between East 20th and East 21st Streets in Volume 4, of Section 3, of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot Number 37, in Block 987.

It finds that the same has been assessed on the Assessment Roll of 1904 at a valuation of $60,000, whereas the same should not have been valued at more than $50,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward 2667 and section, and other real estate on the tax rolls of the City.

The value of this lot has not increased since the second Monday in January, 1903, on which date it was assessed for $50,000. This lot is vacant and unimproved, and there is no reason for the increased valuation.

A lot, between East 19th and East 20th Streets and East of Avenue B, corresponding in location to the said lot of the undersigned, and of the same size, is assessed for only $50,000.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $50,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

The application for 1905 is substantially the same as the application for 1904, with the exception that it shows assessed valuation of $55,000.

In other respects the application is substantially similar, except that the following is introduced in place of paragraphs 6 and 7:

The total size of lots No. 1 and No. 33 between East 19th and East 20th Streets and east of Avenue B is just equal to the lot of the undersigned, and these two lots correspond in location to the said lot of the undersigned. The two lots are assessed at a total valuation of $50,000, unimproved.

It therefore asks that the assessed value of said premises for the year 1905, be fixed at $50,000.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK.

Address, 4 Irving Place, New York City.
Verification, March 24, 1905.

2668 Block 988, Lot No. 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate comprising the block bounded by 14th and 15th Streets and Avenues C and D, in Volume 4 of Section 3 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lot No. 1 in Block No. 988.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $550,000, whereas the same should not have been valued at more than $400,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, on the tax rolls of the City.

Lot 1 in Block 989 to the north of Block 988 is also owned by the undersigned and is assessed at $450,000 which is an over-valuation. Lot 1 in Block 988 is not worth more than said Block 989 and is assessed higher.

The total assessed valuation of Block 383 to the south of Block 988 is $508,000. This block is cut up into lots and is partly improved and should be worth more than said block of the undersigned, though its assessment is not so high.

2669 It therefore asks that the same may be reduced to the amount stated.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

For the year 1904 the application is substantially the same, with the exception that the assessed valuation for 1904 reads $550,000, with improvements, $350,000, unimproved, and the following are inserted in place of paragraphs 5, 6 and 7 in the application of 1903:

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

In 1903, the said lot was assessed for $550,000, with improvements. The undersigned filed an application requesting that the assessment be reduced to the sum of $400,000, which sum represents the fair market value of the property, but no reduction was made, and the undersigned has instituted *certiorari* proceedings to reduce the said assessment, which proceedings are now pending.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $400,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK.
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

The application for 1905 is substantially the same as the application for 1904, with the addition of the following:

2670 "Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts, who value the land at $293,188.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $400,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK.

4 Irving Place, New York City."

Verification March 24, 1905.

Block 991, Lot 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate situate between 14th and 15th Streets and Avenue D and Tompkins Street, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1 in Block No. 991.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $180,000, whereas the same should not have been valued at more than $156,250 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The assessed valuation of this property for the year 1902 was $125,000. The assessed valuation for this year is an increase of 44 per cent.

There has been no change whatever in the character of the property or that of the neighborhood. The land is used for the storing of coal.

2671 The aforesaid assessment is also illeged and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuations of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment is legal any increase in the valuation of the said Lot No. 1 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $156,250.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 is substantially the same as the application for 1903, except that paragraphs 5, 7 and 8 in the application for 1903 are omitted in 1904.

2672 Block 991, Lot No. 26.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate lying between 14th and 15th Streets and Avenue D and Tompkins Street, in Volume 4 of Section 3 of the Borough of Manhattan of the City of New York, designat*ion* on Tax Map as Lot No. 26 in Block No. 991.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $125,000, whereas the same should not have been, in *his* judgment, valued at more than $106,250 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The assessed valuation of said lot for the year 1902 was $85,000. The assessed valuation for this year is an increase of 47 per cent. There has been no change whatever in the character of the property nor that of the neighborhood.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The value of said lot and of real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year
2673 1903 is about 33⅓ per cent. higher than for the year 1902.

Even if such increased assessment is legal any increase in the valuation of the said Lot No. 26 in excess of 33⅓ per cent. is unfair, illegal, and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $106,250.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 is substantially the same as the one for 1903, except that paragraphs 6 and 7 in the application for 1903 are omitted from the application for 1904.

Block 1070, Lot No. 5.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as No. 551 West 41st Street, in Volume 2 of Section 4 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 5 in Block No. 1070.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $65,000, whereas the same should not have been valued at more than $62,500 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over
2674 valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation of this lot for the year 1902 was $50,000. The assessed valuation for this year is an increase of 30 per cent.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902.

The value of said lot and of other real estate in the same locality with the said lot of the undersigned has not increased since the second Monday of January, 1902. Even if such increased assessment were legal, any increase in the valuation of said Lot No. 5 in excess of 33⅓ per cent. is unfair, illegal and erroneous, and not in proportion to the valuation placed upon other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $62,500.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 is substantially the same as the one for the year 1903, except that the assessed valuation is stated to be $75,000, with improvements, $58,000, unimproved, and the following is inserted in place of paragraph 7 for the year 1903:

2675 "The value of this lot has not increased since the second Monday in January, 1902. The assessed valuation of this lot for that year was $50,000. The assessed valuation for this year is an increase of 50 per cent.

There is a stable on the rear of this lot and a storage house occupies a portion of it, but a large part of the lot is vacant. These improvements are assessed for $17,000, but they are not worth more than $10,000, at which the undersigned values and insures them."

Verification March 28, 1904.

The application for the year 1905 is substantially the same as the application for the year 1904, with the exception that the assessed valuation for 1905 is stated to be $70,000, with improvements, and $58,000 unimproved.

Verification March 29, 1905.

Block 1071, Lots Nos. 10, 11, 12 and 13.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that is is the owner of real estate known as No. —, 42d Street, in Volume 2 of Section 4 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lots Nos. 10, 11, 12 and 13 in Block No. 1071.

It finds that the same has been assessed on the Assessment Roll of 1903 at a total valuation of $38,000, whereas the same should not have been valued at more than $30,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

2676 It is also illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

These lots are all vacant and unimproved in any way. The assessed valuation for 1902 was $24,000. The assessment for this year is an increase of 58 per cent.

The value of these lots and of other real estate in the same ward and section or in the same locality with them has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessement were legal any increase in the valuation of said Lots Nos. 10, 11, 12 and 13 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $30,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1906 recites as follows:
Location of Property.
Volume 2, Section or Ward 4, Lot 1, Block 1089.
Assessed Valuation, 1906, $800,000, with improvements.
$525,000, unimproved.

2677 The undersigned represents that it is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There are four holders and a gas plant on this plot, which can only be used for the purpose of manufacturing and storing gas and which add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $525,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
Name, LEWIS B. GAWTRY, *P.*

Address, 4 Irving Place, New York City.

Verification March 29, 1906.

Block 1090, Lot No. 23.

The application for 1904 recites as follows:

BOROUGH OF MANHATTAN.

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate on the north side of West 42d Street, between Eleventh and Twelfth Avenues, in Volume 2 of Section 4 of the Borough of Manhattan of The City of New York, designated on the Tax Map as Lot No. 23 in Block No. 1090.

It finds that the same has been assessed on the Assessment Roll of 1904 at a valuation of $55,000, with improvements and 2678 $50,000 unimproved, whereas the same should not have been valued at more than $36,000 with improvements, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

In 1903 the said lot was assessed for $36,000 with improvements, which sum represented the fair market value of the property. There is no reason for the increased assessment this year.

The improvements are assessed at a valuation of $5,000. The lot is used for the storage of coke and the only improvement on it is a small one-story brick, office building. This building is not worth more than $1,000, at which sum the undersigned values and insures it.

It therefore asks that the assessed value of said premises for the year 1904 be fixed at $36,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

The Application for the year 1905 is substantially the same as for the year 1904, except that it recites the assessed valuation for 1905 to be $53,000 with improvements and $50,000 unimproved, and omits paragraph 6 in the application for 1904.

Verification March 24, 1906.

2679 Block 1092, Lot No. 1.

The application for 1906 recites as follows:

BOROUGH OF MANHATTAN.

Application for Correction of Assessed Valuation of Real Estate.

Location of property, Volume 2, Section or Ward 4, Lot 1, Block 1092.

Assessed valuation 1906, $550,000, with improvements, $300,000, unimproved.

The undersigned represents that it is the owner of the above described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioner of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There are five holders and a gas plant on this plot, which can only be used for the purpose of manufacturing and storing gas and which add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $400,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.

CITY OF NEW YORK, *County of New York:*

Lewis B. Gawtry, being duly sworn, says that he is the Vice-President of the Consolidated Gas Company of New York,
2680 the owner of the within-mentioned premises, and that the statements contained in this application for the revision and correction of the assessed valuation are true.

LEWIS B. GAWTRY. (Sgd.)

Sworn to before me, 29 March, 1906.

CHARLES D. IMMEN, JR.,
Notary Public, New York County.

Block 1093, Lot 1.

The application for the year 1904 recites as follows:

BOROUGH OF MANHATTAN.

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate comprising the greater part of the block between 45th and 46th

Streets and 11th and 12th Avenues, in Volume 2, of Section 4, of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1, in Block 1093.

It finds that the same has been assessed on the Assessment Roll of 1904, at a valuation of $425,000 with improvements, and $250,000 unimproved, whereas the same should not have been valued at more than $410,000, to be in proportion to the assessed value of the adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over valuation, and is in excess of what the property would sell for under ordinary circumstances.

2681 It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

The value of this lot has not increased since the second Monday in January, 1903. The assessed valuation for 1903 was $410,000, which sum represented the fair market value of the property. There is no apparent reason for the increased assessment this year.

The improvements are assessed for $175,000, which is greatly in excess of the sum for which the undersigned values and insures them.

It therefore asks that the assessed value of said premises for 1904 be fixed at $410,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1904.

The application for 1906 recites as follows:

Location of property.

Volume 2, Section or Ward 4, Lot 1, Block 1093.

Assessed valuation 1906, $425,000, with improvements, $250,000, unimproved.

The undersigned represents that — is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

2682 There are two gas holders and part of a gas plant on this plot, which can only be used for the purpose of manufacturing and storing gas and which add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $250,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

Block 1107, Lots Nos. 23 and 28.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate consisting of wharves or bulkheads lying at the foot of 45th and 46th Streets in Volume 2 of Section 4 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lots 23 and 28 in Block 1107.

It finds that the same have been assessed on the Assessment Roll of 1903 at a total valuation of $48,000 for each lot, whereas the same should not have been valued at more than $25,000 each, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The aforesaid assessment is illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The total assessed valuation of these lots for 1902 was $40,000. The valuation has been increased 140 per cent.

The value of said lot and the value of real estate in the
2683 same ward and section or in the same locality with the said
lot of the undersigned has not increased since the second
Monday in January, 1902.

The undersigned is informed and believes that the assessed valuation of real estate in the City of New York for the year 1903 exceeds that for the year 1902 by about 33⅓ per cent.

Even if such increased assessment were legal, any increase in the valuation of the said lots 23 and 28 in excess of 33⅓ per cent. is unfair, illegal and erroneous, and not in proportion to the valuation placed upon other real estate [illegible] like character in the same ward and section, and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $25,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for 1904 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate consisting of wharves or bulkheads, lying on the North River, between 44th and 45th Street- and 45th and 46th Streets, in Volume 2 of Section 4 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lots 23 and 28 in Block 1107.

It finds that the same have been assessed on the Assessment Roll of 1904 at a total valuation of $75,000, for each lot, whereas, the same should not have been valued at more than $25,000, each to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

2684 The assessments are illegal and erroneous by reason of overvaluation and are in excess of what the property would sell for under ordinary circumstances.

They are also illegal and erroneous by reason of inequality, in that they have been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The value of each of these lots has not increased since the second Monday in January, 1903. These lots were assessed for $48,000, each for 1903. There is no reason for the increased assessment.

In 1903, the undersigned filed an application requesting that the assessment be reduced to the sum of $25,000, for each lot, but no reduction was made, and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessments, which proceedings are now pending.

It therefore asks that the assessed value of the said premises for 1904, with improvements, be fixed at $25,000 for each lot.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

Block 1157, Lot No. 1.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate, located between 10th and 11th Avenues and 65th and 66th Streets, in Volume 3 of Section 4 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1 in Block No. 1157. 2685

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $1,050,000, whereas the same should not have been valued at more than $800,000 to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation; and it is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reasons of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

This property was assessed for the year 1901 and 1902 at a valuation of $800,000, and for 1900 at $700,000. There has been an increase of $250,000 without any reason. The property is used as a gas works and much of it consists of appliances useful only in the manufacture of gas and having no market value.

The total assessed valuation of Block 1158, which lies immediately to the north of said Block 1157, is $943,400, and that of Block 1156, which lies immediately to the south, is $475,800. Both of these blocks are of the same size as said Block 1157.

The total assessment of Block 1159 is only $898,000, while that of Block 1155 is only $822,000. The said Block 1157 should not be assessed at a higher valuation than any of the aforesaid blocks.

It therefore asks that the same may be reduced to the sum of $800,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28, 1903.

2686 The application for the year 1904 is substantially the same as the application for 1903, except that the valuation is stated to be $1,000,000 for 1904, and paragraphs 5 and 7 in the application for 1903 are omitted and the following is inserted in place of paragraph 6:

"Blocks 1155, 1156, 1158 and 1159, which lie immediately to the north and south of said Block 1157, are assessed, respectively, on a valuation unimproved at $430,000, $418,000, -430,000 and $477,000.

Verification March 28, 1904.

The application for the year 1905 recites substantially the same as the one for the year 1904, except that the assessed valuation for 1905 reads $1,000,000 with improvements, $500,000 unimproved and the following paragraphs are added:

"Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts, who value the land at $488,231.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $800,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,

4 Irving Place, New York City."
Verification March 24th, 1905.

Block 1177, Lot 21.

The application for 1904 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate situated between 65th and 63th Streets, and 11th Avenue and the New York Central Railroad tracks, in volume 3 of Section 4, of the Borough of Manhattan of the City of New York, designated
2687 on the Tax Map as Lot No. 21 in Block No. 1177.

It finds that the same has been assessed on the Assessment Roll of 1904 at a valuaton of $140,000, whereas the same should not have been valued at more than $100,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

The assessed valuation of this lot for the year 1903 was $100.000, which sum represented the fair market value of the property. There has been no increase in the value of the lot, during the past year and there is accordingly no reason for the increase of 40 per cent. in the assessment.

It therefore asks that the assessed value of the said premises for the year 1904 be fixed at $100,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Sgd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

The application for the year 1905 is substantially similar, except that the assessed valuation is decidedly as follows:

Assessed valuation 1905, $140,000 with improvements; $130,000, unimproved.

Verification March 24, 1903.

2688 Block 1455, Lots Nos. 13, 14, 15, 16, 17 and 18.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as Nos. 421-433 East 60th Street, in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot Nos. 13, 14, 15, 16, 17 and 18 in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1903 at a total valuation of $30,000, whereas the same should not have been valued at more than $18,750, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal, unfair and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances, and is not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

The assessed valuation of these lots for the year 1902 was $15,000. The assessed valuation for this year is an increase of 100 per cent.

These lots are all vacant with the exception of Lot No. 18. On this lot there is a small wooden house.

Their market value and the value of real estate in the same ward and section, or in the same locality with the said lots has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation
2689 of the said lots Nos. 13 to 18 in excess of 33⅓ per cent. is
unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the amount of $15,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28, 1903.

Block 1455, Lots Nos. 20 & 21.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as Nos. —— 60th Street, in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Maps as Lots Nos. 20 and 21 in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1903 at a total valuation of $7,000, whereas the same should not have been valued at more than $4,375, to be in proportion to assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and in excess of what the property would sell for under ordinary circumstances, and is not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

2690 The total assessed valuation of these lots for the year 1902 was $3,500. The assessment for this year is an increase of 100 per cent.

These lots are both vacant and produce no income.

The market value of these lots and of real estate in same ward and section or in the same locality with them has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase on the valuation of said lots 20 and 21 in excess of 33⅓ per cent. is unfair, illegal and erroneous, and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $4,375.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

Block 1455, Lots Nos. 23, 24, 25, 26, 27 and 28.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as Nos. —— Avenue A in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lots Nos. 23, 24, 25, 26, 27 and 28 in Block No. 1455.

2691 It finds that the same has been assessed on the assessment roll of 1903 at a total valuation of $30,000, whereas the same should not have been valued at more than $22,500, to be in proportion to the assessed values of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason *over* over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation of these lots for the year 1902 was $18,000. The valuation for this year is an increase of 67 per cent.

Their value and that of other real estate in the same ward and section or in the same locality with them has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of said lots Nos. 23 to 28 in excess of 33⅓ per cent. is illegal and erroneous and not in proportion to the assessment of other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $22,500.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28, 1903.

2692 Block 1455, Lot No. 29.

The application for the year 1903 recites the following:

To the Commissioner- of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. — Avenue A in Volume 4 of section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 29 in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $7,500, whereas the same should not have been valued at more than $5,625, to be in proportion to the assessed valuation of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances, and is also not in proportion to that of other real estate in the same ward and section and other real estate upon the tax rolls of the city.

The assessed valuation placed upon this lot for the year 1902 was $4,500. There has been an increase of 67 per cent. without apparent reason.

This lot is vacant and unimproved in any way and produces no income.

The market value of this lot and of real estate in the same ward and section or in the same locality with them has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year — 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of the said lot No. 29 in excess of 33⅓ per cent. is unfair, illegal and
2693 erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $4,500.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28, 1903.

Block 1455, Lot No. 30.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner — Real Estate known as No. 418 61st Street, in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 30 in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $4,500, whereas the same should not have been valued at more than $3,125, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

2694 The assessed valuation placed upon this lot for the year 1902 was $2,500. The valuation has been increased 80 per cent. without any apparent reason. This lot is vacant and produces no income.

The value of this lot and other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of the said Lot No. 30 in excess of 33⅓ per cent. is unfair, illegal and erroneous, and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $3,125.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28, 1903.

Block 1455, Lot No. 32.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as No. 420 E. 61st Street, in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 32 in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $12,000, whereas the same should not have been valued at more than $8,750, to be in proportion to the 2695 assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation placed upon this lot for the year 1902 was $7,000. The valuation has been increased 71 per cent. without any apparent reason. There is a wooden house on this lot on which there have been no improvements during the last year.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of the said lot No. 32 in excess of 33⅓ per cent. is unfair, illegal and erroneous, and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $8,750.

CONSOLIDATED GAS COMPANY OF NEW YORK.
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

2696 Block 1455, Lot Nos. 33, 34, 35, 36 and 37.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as Nos. 422-32 E. 61st Street, in Volume 4 of Section 5 of the

Borough of Manhattan of the City of New York, designated on the Tax Map as Lot Nos. 33, 34, 35, 36 and 37 in Block No. 1455.

It finds that the same have been assessed on the Assessment Roll of 1903 at a total valuation of $22,500, whereas the same should not have been valued at more than $15,625, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

The assessed valuation placed upon these lots for the year 1902 was $12,000. The valuation has been increased 80 per cent. without any apparent reason. These lots are all vacant and produce no income.

The value of these lots and other real estate in the same ward and section or in the same locality with them has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation 2697 of said lots in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $15,625.

CONSOLIDATED GAS COMPANY OF NEW YORK.
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

The application for the year 1904, as to lots 13 to 37, being all those quoted for the year 1903 with the addition of lot 22, recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate occupying the entire eastern half of the block lying between East 60th and East 61st Streets, and First Avenue and Avenue A, in Volume 4, of Section 5, of the Borough of Manhattan, of the City of New York, designated on the Tax Maps as Lots Nos. 13 to 37, in Block No. 1455.

It finds that the same has been assessed on the Assessment Roll of 1904, at a total valuation of $144,000, with improvements, and $140,000, unimproved, whereas the same should not have been valued at more than $100,000 to be in proportion with the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessments are illegal and erroneous by reason of over-valuation and are in excess of what the property would sell for under ordinary circumstances.

They are also illegal and erroneous by reason of inequality, in that they have been made at a higher proportionate valuation than the assessment of other real estate of like character, in the 2698 same ward and section, and other real estate on the tax rolls of the City.

The value of these lots has not increased since the second Monday in January, 1902. The assessed valuations, however, have been increased all the way from 67 to 100 per cent.

In 1903, the said lots were assessed at a total valuation of $125,000. The undersigned filed an application requesting that the assessments be reduced, but not reduction was made and the undersigned has instituted *certiorari* proceedings in the Supreme Court of this State to reduce the said assessments, which proceedings are now pending. There is no reason for the increase in the assessment this year to a total valuation of $144,000, with improvements.

It therefore asks that the total assessed valuation of the above lots be reduced to $100,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Sd.) LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28, 1904.

The application for the year 1905 is substantially the same as that for 1904.

Verification March 24, 1905.

Block 1457, Lot No. 6.

The application for the year 1906 recites the following:

Location of property,
Volume 4, Section or Ward 5, Lot 6, Block 1457.
Assessed Valuation 1906, $225,000, with improvements; $125,000, unimproved.

The undersigned represents that it is the owner of the 2699 above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioner- of Taxes and Asessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There is a gasholder on this plot, which can only be used for the purpose of manufacturing and store gas and which adds nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $125,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

Block 1474, Lot No. 24.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. — East 60th Street, in Volume 4 of Section 5 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 24 in Block No. 1474.

It finds that the same has been assessed on the Assessment Rolls of 1903 at a valuation of $20,000, whereas the same should not have been valued at more than $16,250, to be — proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

2700 The assessment is illegal and erroneous by reason of overvaluation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The assessed valuation of this lot for the year 1902 was $13,000. The valuation for 1903 is an increase of 54 per cent.

This is a vacant lot which is unimproved in any way.

The value of the said lot and of other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of the real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of said lot No. 24 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the amount of $16,250.

CONSOLIDATED GAS COMPANY OF NEW YORK.
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

The application for the year 1904 is substantially the same as the application for the year 1903, except that paragraphs 6 and 7 are omitted.

2701 Block 1643, Lots Nos. 56, 57, and 58.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate at Lexington Avenue and 116th Street in Volume 1 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lots Nos. 56, 57 and 58 in Block No. 1643.

It finds that the same have been assessed on the Assessment Roll of 1903 at a valuation of $47,000, whereas the same should not have been valued at more than $39,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character, in the same ward and section, and other real estate on the tax rolls of the City.

Lot 56 was assessed for the year 1902 at a valuation of $16,500. The assessment for this year is an increase of 52 per cent.

Lots 57 and 58 were assessed for the year 1902 at a total valuation of $15,500. The assessment for this year is an increase of 47 per cent.

These lots are all vacant and unimproved in any way and produce no income.

The value of these lots and of other real estate in the same ward and section or in the same locality with them, has not increased materially since the second Monday in January, 1902.

2702 The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York, for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the valuation of the said Lots Nos. 56, 57 and 58 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the amount stated.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

Block 1670, Lot No. 1.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents it is the owner of Real Estate comprising the block bounded by 98th and 99th Streets and First and Second Avenues, in Volume 2 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1, in Block No. 1670.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $500,000, whereas the same should not have been valued at more than $375,000, to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances. 2703

There is a plant for the manufacture of gas on this lot. It is very old and has practically no market value.

The property was assessed for the year 1902 at the sum of $300,000. The assessment for this year is an increase of 67 per cent.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

The total assessed valuation of Block No. 1671, which is immediately to the north of the said Lot 1670 is only $271,000.

Block No. 1691, which is about half the size of Block 1670, is assessed at $150,000. The said lot of the undersigned should be valued at no higher rate than these two blocks. The improvements on both these blocks have a much higher market value than those on the said block of the undersigned.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of the real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal any increase in the valuation of the said lot No. 1 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

2704 It therefore asks that the same may be reduced to the sum of $375,000.

CONSOLIDATED GAS COMPANY OF NEW YORK.
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

The application for the year 1904 is substantially the same as the one for 1903, except that paragraphs 5, 7, 8, 9, and 10 in the application for 1903 are omitted and the assessed valuation for 1904 is to be $450,000 with improvements, and $290,000, unimproved, and the following allegation appears:

"On this lot there is a plant for the manufacture of gas which is a very old one."

The application for the year 1906 recites as follows:

Location of Property, —.

Volume 2, Section or Ward 6, Lot 1, Block 1670.

Assessed Valuation 1906, $525,000, with improvements; $365,000, unimproved.

The undersigned represents that it is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

There are four gas holders and a gas plant on this plot, which can only be used for the purpose of manufacturing and storing gas and which add nothing to the amount for which the property would sell under ordinary circumstances.

2705 It therefore asks that the assessed value of said premises for the year 1906 be fixed at $365,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) LEWIS B. GAWTRY, *V. P.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

Block 1682, Lot No. 11.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate located on the west side of First Avenue between 110th and 111th Streets, in Volume 2 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 11, in Block No. 1682.

It finds that the same has been assessed on the Assessment Roll of 1903 as a valuation of $350,000, whereas the same should not have been valued at more than $250,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character, in the same ward and section, and other real estate on the tax rolls of the City.

2706 This lot was assessed for $200,000 for the year 1902. The valuation for this year is an increase of 75 per cent.

The only improvement this property consist of two gasholders. These gasholders have little or no market value.

The value of said lot and other real estate in same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of the real estate in the City of New York for the year 1903, is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the value of said lot No. 11 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $250,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

The application for the year 1904 is substantially the same as for the year 1903, except that paragraphs 5, 7 and 8 in the application for 1903 are omitted and the assessed valuation for 1904 is decided to be $455,000, with improvements and $220,000, unimproved, and the following paragraphs are inserted:

The value of this lot has not increased since the second Monday in January, 1902. This lot was assessed for $200,000 for the year 1902. The valuation for this year is an increase of 127 per cent.

2707 There is no reason whatever for the increase in the assessment with improvements this year of $105,000.

Verification March 28, 1904.

The application for the year 1905 is substantially the same as the application for the year 1903, except that paragraphs 5, 7 and 8 of 1903 are omitted, and the assessed valuation is recited to be $455,000 with improvements, $220,000 unimproved, and the following paragraphs are inserted:

"The only improvements on this property consists of two gas holders, which are only useful for the purposes of the present holder and which, if the property were sold, would in all probability have to be removed to make room for other improvements.

Since the second Monday of January, 1905, we have had the property appraised by skillful real estate experts, who value the property at $192,955.

It therefore asks that the assessed value of said premises for the year 1905 be fixed at $192,955.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK,

Address, 4 Irving Place, New York City."
Verification March 24, 1905.

The application for the year 1906 recites as follows:

Location of Property, First Avenue, between 110th and 111th Streets.

Volume 2, Section or Ward 6, Lot 11, Block 1682.

Assessed valuation, 1906, $500,000, with improvements.

Assessed valuation, 1906, $275,000, unimproved.

The undersigned represents that it is the owner of the above described property and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected. 2708

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The only improvements on this property consist of two gas holders, which are only useful for the purposes of the present owner and which add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $275,000.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Sgd.) LEWIS B. GAWTRY.

Address, 4 Irving Place, New York City.
Verification 29 March, 1906.

Block 1683, Lot Nos. 34 and 35.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of Real Estate known as No. —— East 112th Street, in Volume 2 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot Nos. 34 and 35 in Block No. 1683.

It finds that the same has been assessed on the Assessment Roll of 1903 at a total valuation of $5,000, whereas the same should not have been valued at more than $4,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

2709 It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation, that the assessment of other real estate of like character, in the same ward and section, and other real estate on the tax rolls of the City.

These lots were assessed for $3,000 in 1902. The valuation for this year is an increase of 43%.

These lots are vacant and unimproved in any way and produce no income. There is no reason for an increase in the assessed valuation.

The value of these lots and of other real estate in the same ward and section or in the same locality with them has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of the real estate in the City of New York for the year 1903 is about 33⅓% higher than for the year 1902. Even in such increased assessment were legal, any increase in the valuation of the said Lots Nos. 34 and 35 in excess of 33⅓% is unfair, illegal and erroneous, and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the city.

It therefore asks that the same may be reduced to the sum of $4,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verified March 28th, 1903.

The application for the year 1904 is substantially the same as the application for 1903, except that Pars. 6, 7 and 8 in the application for 1903 are omitted and that the application for 1904 alleges that the valuation for 1904 was $5,000 for each lot, and petitions that the assessments for 1904 be fixed at $4,000 for each lot. 2710

Verification March 28, 1904.

Block 1692, Lot No. 1.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate situate between 98th and 99th Streets and First Avenue and East River in Volume 2 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1 in Block No. 1692.

It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $100,000, whereas the same should not have been valued at more than $81,000, to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid improvement is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the Tax Rolls of the City.

This lot was assessed for 1900 at a valuation of $65,000, and for the years 1901 and 1902 at a valuation of $81,000. The increase of the valuation to $100,000 is without any apparent reason. This lot is unimproved and is only used for the purpose of storing coal.

2711 The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

It therefore asks that the same may be reduced to the amount stated.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for the year 1904 shows substantially the same as the application for the year 1903, except that the assessed valuation for 1904 is stated to be $135,000, with improvements, and $130,000 unimproved, and the following is inserted in place of Pars. 5 and 6:

"The value of this lot has not increased since the second Monday in January, 1902, on which date it was assessed for $81,000. The valuation for this year is an increase of 66 per cent."

Verification March 28, 1904.

For 1905 the application is substantially the same as for the year 1904.

Block 1704, Lot No. 1.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate located between 110th and 111th Streets and First and Pleasant Avenues, in Volume 2 of Section 6 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 1 in Block 1704.

2712 It finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $350,000, whereas the same should not have been valued at more than $240,000, to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

This lot is occupied by works of the company, which have been rendered useless, as the city has condemned the land in the block above on which a part of the same system of works was located. Accordingly this land no longer has a value as a gas plant and would not sell for more than the value of the land as vacant property.

The assessed valuation of this block for 1902 was $240,000. The valuation for this year is an increase of 40 per cent.

The value of said lot and of other real estate in the same ward and section or in the same locality with it has not increased materially since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the valuation of said Lot No. 1 in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in
2713 the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same be reduced to the sum of $240,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for the year 1904 is substantially the same as the one of 1903, except that it recites the assessed valuation of 1904 to be $350,000 with improvements, and $285,000 unimproved, and Pars. 7 and 8 of this application for 1903 are omitted and in place thereof is the allegation:

"The valuation of the improvements at $65,000 is therefore manifestly erroneous. The value of said lot has not increased since the second Monday in January, 1902."

Verification March 28, 1904.

The application for the year 1905 is substantially the same as the application for 1903, except that paragraphs 7 and 8 in the application for 1903 are omitted, and the application for 1905 recites the assessed valuation for 1905 to be $330,000 with improvements, $285,000 unimproved, and recites, "The value of this lot has not increased since the second Monday in January, 1902."

It also recites:

"The assessed valuation of this block for 1902 was $240,000. The valuation for this year is an increase of 38 per cent."

Since the second Monday of January 1905, we have had the property appraised by skillful real estate experts, who value the land at $240,295, and state that the buildings add nothing to the market value of the land.

2714 It therefore asks that the assessed value of said premises for the year 1905 be fixed at $240,000.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
4 *Irving Place, N. Y. C.*

Verification March 24, 1905.

The application for the year 1906 recites as follows:

Location of property, 110th and 111th Streets and First and Pleasant Avenues.

Volume 2, Section or Ward 6, Lot 1, Block 1704.

Assessed valuation, 1906, $330,000, with improvements; $285,000 unimproved.

The undersigned represents that it is the owner of the above-described property, and claims to be aggrieved by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation, and is in excess of what the property would sell for under ordinary circumstances.

This lot is occupied by gas works of the undersigned which have been rendered useless, as the city has condemned the land in the block above, on which a part of the same system of works was located. Accordingly, this land no longer has any value as a gas plant and would not sell for more than the value of the land as vacant property. The improvements add nothing to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $285,000.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Signed) LEWIS B. GAWTRY, *V.-P.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

2715 Block 1999, Lot Nos. 1 to 27 and 39 to 64.

The application for 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of the real estate situated on Twelfth Avenue, between 132d and 133d Streets, in Volume 2 of Section 7 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot Nos. 1 to 27 and 39 to 64 in Block No. 1999.

It finds that the same have been assessed on the Assessment Roll of 1903 at a total valuation of $174,000, whereas the same should not have been valued at more than $145,000 to be in proportion to the assessed value of adjacent property, and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over valuation, and is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section, and other real estate on the tax rolls of the City.

The total assessed valuation of these lots for the year 1902 was $116,000. The total valuation for this year is an increase of 50% on each lot. They are all vacant. The Twelfth Avenue viaduct has depreciated the value of this property, as it interferes with the light on the property, and has had the effect of lessening the value of the property adjoining to it.

The value of real estate in the same ward and section or in the same locality with the said lot of the undersigned has not increased materially since the second Monday in January, 1902.

2716 The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓% higher than for the year 1902. Even if such increased assessment is legal, any increase in the valuation of said lots in excess of 33⅓% would be illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the sum of $145,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for the year 1904 is substantially the same as the application for the year 1903, except Pars. 5, 6 and 7 in the application for 1903 are omitted and the assessed valuation for 1904 is recited to be $180,000, and the following paragraphs are added:

"These lots are all vacant and unimproved. Their total assessed valuation for the year 1902 was $116,000. The total valuation for this year is an increase of over 60%.

"The increased assessment to $186,000 is without any apparent reason.

"The Twelfth Avenue viaduct has depreciated the value of this property, as it interfered with the light, and has had the effect of lessening the value of property adjoining it."

Verification March 28, 1904.

The application for the year 1905 is identical with the applica-

2717 tion for the year 1904 with this exception, that the assessed valuation for 1905 is stated to be $208,500, and the following sentence is added:

"The total valuation for this year is an increase of over 79%. The increased assessment to $208,500 is without any apparent reason."

Verification March 24, 1905.

The application for 1906, including Lots 1 to 27, 39 to 64, heretofore recited, is as follows:

Location of property, Twelfth Avenue between 132d and 133d Streets.

Volume 2, Section or Ward 7, Lot 1, Block 1999.

Assessed valuation, 1906, $350,000, with improvements; $265,000 unimproved.

The undersigned represents that it is the owner of the above described property, and claims to be aggre*v*ied by the aforesaid assessed valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessments are illegal and erroneous by reason of over-valuation and are in excess of what the property would sell for under ordinary circumstances.

These lots are all vacant and unimproved, except that a gas holder is in process of construction on the lots, which will not, however, add anything to the amount for which the property would sell under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $265,000.

Name, CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Signed) LEWIS B. GAWTRY, *V.-P.*

Address, 4 Irving Place, New York City.
Verification March 29, 1906.

2718 Block 2175, Lots Nos. 15, 22 and 100.

The application for the year 1903 recites as follows:

To the Commissioners of Taxes and Assessments:

The undersigned represents that it is the owner of real estate known as No. — Broadway, in Volume 1 of Section 8 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lots Nos. 15, 22 and 100 in Block No. 2175.

It finds that the same has been assessed on the assessment roll of 1903 at a total valuation of $29,000, whereas the same should not have been valued at more than $18,125, to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

The assessment is illegal and erroneous by reason of over-valuation, and it is in excess of what the property would sell for under ordinary circumstances.

The aforesaid assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the City.

The assessed valuation of these lots for the year 1902 was $14,500. The assessed valuation for this year is an increase of 100 per cent.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuations of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even 2719 if such increased assessment were legal, any increase in the valuation of said lots in excess of 33⅓ per cent. is unfair, illegal and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the amount stated.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for the year 1904 is substantially the same as the application for the year 1903, except that paragraph 7 is omitted, and the assessed valuation for the year 1904 is recited to be $29,000 with improvements, and $28,000 unimproved.

Verification March 28, 1904.

Block 2175, Lot No. 18.

The application for 1903 recites the following:

To the Commissioners of Taxes and Assessments:

The undersigned represents that he is the owner of real estate known as No. — Broadway, in Volume 1 of Section 8 of the Borough of Manhattan of the City of New York, designated on the Tax Map as Lot No. 18 in Block No. 2175.

He finds that the same has been assessed on the Assessment Roll of 1903 at a valuation of $24,000, whereas the same should not have been valued at more than $15,000, to be in proportion to the assessed value of adjacent property and in accordance with the marketable value thereof.

2720 The assessment is illegal and erroneous by reason of overvaluation and is in excess of what the property would sell for under ordinary circumstances.

The assessed valuation of this lot for the year 1902 was $12,000. The valuation for 1903 is an increase of 100 per cent. The only improvement on this lot is a small gas holder, which has hardly any marketable value, and the cost of which was only a few hundred dollars.

The assessment is also illegal and erroneous by reason of inequality, in that it has been made at a higher proportionate valuation than the assessment of other real estate of like character in the same ward and section and other real estate on the tax rolls of the city.

Other lots in the same block which have a market value equal to said lot of the undersigned are assessed at a much lower rate than his said lot.

Lot 1, a much larger lot, situated at the corner of Sherman Avenue and Broadway, is assessed for only $16,000.

Lots 4, 6, 8, 10, 12, 27, 29, 31, 33, 35, 37, 39, 41, 43 and 45 are assessed from $6,000 to $8,000 each.

These lots have not as great a frontage as said lot of the undersigned but have a much greater depth, and his said lot should not be assessed at a sum three times that of these lots.

The value of this lot and of other real estate in the same ward and section or in the same locality with it has not increased since the second Monday in January, 1902.

The undersigned is informed and believes that the total assessed valuation of real estate in the City of New York for the year 1903 is about 33⅓ per cent. higher than for the year 1902. Even if such increased assessment were legal, any increase in the valuation of said Lot No. 18 in excess of 33⅓ per cent. is unfair, illegal 2721 and erroneous and not in proportion to the assessment of other real estate in the same ward and section and other real estate on the tax rolls of the City.

It therefore asks that the same may be reduced to the amount of $15,000.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] LEWIS B. GAWTRY, *Vice-Pres.*

Verification March 28th, 1903.

The application for the year 1904 is substantially the same as the application for the year 1903, except that the following is inserted in place of Par. 4:

"The assessed valuation of this lot for the year 1902 was $12,000. The valuation for 1904 is an increase of 100%. The only improvement on this lot is a small gas holder, which has hardly any marketable value."

Paragraphs 6, 7, 8, 9 and 10 in the application for 1903 are omitted.

Verification March 28, 1904.

The application for the year 1905 is substantially the same as the application for 1904, except that the assessed valuation of 1905 is recited as follows:

"$24,000 with improvements, $12,000 unimproved."

Verification March 24, 1905.

Block 2175, Lot No. 14.

The application for 1906 recites as follows:

Location of property, Broadway.
Volume 1, Section 2, Ward 8, Lot 18, Block 2175.
Assessed valuation, 1906, $36,000, with improvements; $24,000 unimproved.

2722 The undersigned represents that it is the owner of the above described property and claims *it* to be aggrieved by the aforesaid valuation, and makes application to the Commissioners of Taxes and Assessments to have the same reviewed and corrected.

The grounds of its objections are as follows:

The assessment is illegal and erroneous by reason of over-valuation and is in excess of what the property would sell for under ordinary circumstances.

It therefore asks that the assessed value of said premises for the year 1906 be fixed at $24,000.

Name, CONSOLIDATED GAS COMPANY OF NEW YORK.

Address, 4 Irving Place, New York City.
Verification.

Adjourned at 5:50 P. M. to Wednesday, October 10, at 11 o'clock.

Last Exhibits:

Complainant's 256,
State's W,
City 54.

2723 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, *October* 10, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Meade.

2724 **John M. Thompson**, a witness called on behalf of City, being first duly sworn, testified as follows:

Direct examination by Mr. **Burr**:

Q. What is your business?
A. Real estate broker and appraiser.
Q. In the City of New York?
A. Yes, sir.
Q. How long have you been so engaged in the City of New York?
A. Fourteen years.
Q. Are you familiar with real estate in the Borough of Manhattan?
A. Yes, sir.
Q. Have you sold and appraised property throughout the Borough of Manhattan?
A. Yes, sir.
Q. Have you acted as an expert in any proceedings in giving testimony as to the value of property in Manhattan?
A. Yes, sir; quite a number.
Q. Will you mention a few of them?
A. I was retained by the City in the 69th Regiment Armory site; Bellevue site, 28th and 29th Street, the Bulkhead; at Fourth Avenue and 8th Street, Rapid Transit; Harlem Hospital site; Chelsea Park, Ninth Avenue, 27th and 28th Street; North River Docks, 18th to 22d Street; and a number of school sites and street opening proceedings.
Q. Blackwell's Island Bridge?
A. Blackwell's Island Bridge, also, yes, sir; the Anchorage of Blackwell's Island Bridge; and *certiorari* proceedings for the City in the Produce Exchange Building, Mutual Reserve Fund Life Association Building. I have appraised for the estate of William Astor, Robert Goelet, John Jacob Astor, the estate of John Inman, the estate of Abram S. Hewitt, the estate of Edward Cooper, the estate of John

Roach, the estate of Nicholas Low; and I have appraised for the
United States Mortgage & Trust Company, Parsons, Closson
2725 & McIlvaine; Einstein, Townsend and Guitterman; Carter,
Ledyard and Milburn; Consolidated Gas Company; Sherman
& Sterling, or, John W. Sherman rather; and others.

Q. Have you examined the diagram or Exhibit No. 48 in this case?

A. Yes, sir.

Q. Have you read the testimony in this case in regard to the real estate appearing upon that Exhibit?

A. Some of it, yes, sir.

Q. Are you familiar with the properties mentioned and described on Exhibit 48?

A. Yes, sir.

Q. Have you made an examination of such property?

A. Yes, sir. Part of it I made two years ago, and I then looked it over again this year and some new pieces have been added since I appraised it two years ago.

Q. Are you familiar with the value of that property?

A. Yes, sir.

Q. As such property appeared upon Exhibit 48?

A. Yes, sir.

Q. Now taking Exhibit 48, page 1, Block 1643, Lots 56, 57 and 58?

A. Yes, sir.

Q. Just give the frontage and identify it in each case. Will you locate that and give the dimensions of it?

A. Southwest corner of Lexington Avenue and 116th Street, vacant with the exception of a one-story frame shanty on the corner used as a news stand; the dimensions are 80 feet on 116th Street by 100 feet 11 inches on Lexington Avenue, containing a total area of 8,073.60 square feet.

Q. How many lots are there in that?

A. There is a fraction over three lots; three and one-fifth lots.

Q. What in your opinion is the value of that plot or parcel?

A. $84,386.40.

Q. The next parcel is Block 1642?

A. Yes, sir. Northwest corner of 114th Street and Third Avenue,
two three-story brick buildings occupied as offices, and on
2726 114th Street there is a three-story brick building occupied
as an office and for the sale of gas ranges. The dimensions
are 25 feet 2¾ inches front on Third Avenue by 150 feet 5 inches deep on 114th Street. The first lot is 25 feet 5 inches in front by 100 feet 11 inches in depth; the second lot is 25 feet front by 100 feet 11 inches in depth.

Q. 150 feet 5 inches deep, did you say?

A. Yes, sir.

Q. In the rear?

A. Yes, sir.

Q. How many lots are there in that parcel?

A. Three lots and a small fraction.

Q. What is the value in your opinion of that parcel?
A. (See correction on P. 2747 $74,104.) $89,104.00.

By Mr. Mathewson:

Q. Will you state in each case whether that includes buildings where there are buildings, Mr. Thompson?

By Mr. Burr:

Q. I understood you to say in parcel 1643 there are no buildings but a news stand?

A. No, sir; it was vacant. Block 1642, land $74,104.00; (see correction on P. 2747 $59,104.00) buildings $15,000.00.

Q. Take the next parcel appearing upon page 1 of Exhibit 48, Block 870 and give the dimensions, if you please?

Mr. Mathewson: That is at the corner of Irving Place and 15th Street?

The Witness: **Yes, sir.**

A. Southeast corner of Irving Place and 15th Street, 84 feet wide on Irving Place, 155 feet 6 inches on 15th Street. No. 4 Irving Place, corner building, three-story and basement brownstone 2727 building. No. 2 Irving Place is a five-story brownstone building. Both of these buildings were formerly residences and have been converted into offices for the gas company. No. 124 East 15th Street, situated on the southerly side of 15th Street, distance 92 feet easterly from Irving Place, being a plot 50 x 84; improvement on westerly lot, four-story and basement brick building; and No. 124 East 15th Street is a four-story brick cellar and basement old dwelling with brownstone window lintels and coping, now used by the Consolidated Gas Company in connection with their Irving Place office. Cellar flagged and contains furnace for heating the building. Divided into two rooms, two store rooms and closets and in the rear are two toilets and one marble-topped sink with running water. First floor divided into two rooms, used as offices. Ceilings in both rooms are finished with hardwood. In the hallway of the first floor, one iron sink with running water; building heated by steam. Second floor——

The Master: Do you think it is necessary to go into a detailed description of the physical condition of the buildings?

Mr. Mathewson: No, sir.

Mr. Burr: I understand Mr. Mathewson does not care for the full description of the property. We are all familiar with the situation as it is there.

The Witness: All right, sir.

Q. Did you examine that property carefully?
A. Yes, sir.

Q. And what in your opinion is the value of that parcel, Block 870, giving your valuation first as to buildings, and then as to the land?

A. The land $196,491.20; buildings $27,000.

Q. Making a total of how much?

A. $223,491.20.

2728 Q. Now please turn to Block 239 on page 1 of Exhibit 48?

A. Northeast corner of Elizabeth and Hester Streets, 100 feet on Hester and 159 feet on Elizabeth. On the Hester Street front there is a two and one-half story and basement gable roof brick building setting back about 25 feet——

Q. You need not give the description——

A. All right, sir.

Q. Just describe what the parcel is, buildings and land and the dimension and the estimate?

A. Yes, sir, buildings and land. The land is $167,500.00. The buildings add nothing to the market value of the land.

Mr. Burr: I think that is all on page 1, Mr. Mathewson.

Mr. Mathewson: Yes, I think so.

Q. Now turn to page 2 and take up Block 972?

A. Block 972, situated on the southerly side of 15th Street, distant 350 feet westerly from Avenue B; it is an irregular shaped plot having a frontage of 13——

By Mr. Mathewson:

Q. Are you not mistaken in saying it is 350 feet westerly from Avenue B? Isn't it 300 feet?

A. It should be 300 feet westerly from Avenue B. It is an irregular shaped plot having a frontage of 13.25 feet on 15th Street, a depth of 106.70 on its easterly end. The property is practically vacant. The valuation of the land is $12,279.37. The buildings add nothing to the market value of the land.

Q. Now take Block 985?

A. The property has a frontage of 184 feet of Avenue C, extending back 350 feet on 17th Street and 350 feet on 18th Street. I would like to correct that description. It has a frontage of 2729 350 feet on 18th Street and 350 feet on 17th Street. It is practically vacant. It has a small frame power house and two gasometers on it. Part of it is leased as a lumber yard to Myer Hellman. There is a coal hoist on the easterly end. The value of the land is $196,000.00. The buildings add nothing to the value of the land.

Q. Now take up Block 982, on page 2 of the Exhibit?

A. It has a frontage of 206.50 feet on Avenue C; 434 feet on 15th Street and 434.87 feet on 14th Street. On Avenue C front there are one-story brick buildings. On the balance of the plot there are gasometers. The buildings add nothing to the market value of the land.

Q. What is the value of that parcel?

A. There are some other buildings. There are six gasometers altogether, several one-story brick buildings, a one and one-half story brick building; most of the buildings used as purifying buildings. The value is $240,436.58.

Q. Now the next parcel is Block 989, Lot 1, on page 2 of the Exhibit.

A. 989 has a frontage of 208 — Street and East 16th Street; there are 206 feet 6 inches on Avenue D by 191 feet on East 16th

Street *feet on Avenue D by 191 feet on East 16th Street* and 191 feet on East 15th Street.

Mr. Mathewson: Is that the property?

The Witness: 989.

Mr. Mathewson: I think you are giving 989, lot 26.

The Witness: You want those given separately? I have not got them separately.

Q. Take the property you first gave.

A. Avenue C?

Q. Yes.

A. 206 feet 6 inches on Avenue C by 235 feet on East 16th
2730 Street and 235 feet on East 15th Street.

Q. Are there buildings on that plot?

A. I have taken those buildings in the entire two parcels. I think I can separate them. Avenue C has two large gasometers and two one-story brick buildings, one of them new. That is all I have on that parcel.

Q. What is the value of that lot?

A. I will have to give you that after lunch. I have only got that totalled.

Q. You have totalled the two lots appearing on this exhibit as Block 989?

A. Yes, sir.

Q. Will you give us the total value of both, and afterwards separate them?

A. $231,058.60, land only.

Q. Take up Block 991 on the same page.

A. Which 991 is that? There are two.

Q. 991, between 15th Street, 16th Street, Tompkins Street and Avenue D.

A. Comprising the entire block between East 15th Street and East 16th Street, Avenue D and Tompkins Street, having a frontage of 206 feet 6 inches on Avenue D and 159.16 feet on East 16th Street, 226.02 feet on Tompkins Street, 251.56 feet on East 15th Street. There are several one-story buildings which add nothing to the market value of the land, the property being used principally for the storage of coal, etc. The value of land only, $115,683.27.

Q. What if any value have you added for the buildings?

A. I have said land only.

Q. You have that on your memorandum as 991-B?

A. That was 991-B that I gave you then, yes, sir.

Q. Now take the other portion of Block 991 bounded by 15th Street and 14th Street, Tompkins Street and Avenue D.

A. Comprising the entire block between 14th Street and 15th Street, Avenue D and Tompkins Street; the frontage on Ave-
2731 nue D being 206.50 feet and on East 14th Street 371.08 feet and on Tompkins Street 224.20 feet and on 15th Street 278.58 feet. The property is vacant and is used for storing coal, wagons, etc. There are some coal elevators on both 15th Street and 14th Street sides, small boiler house on the corner of Avenue D, the balance being coal sheds. Small one-story building on Avenue D

and Tompkins Street. Small one-story building on the corner of 14th Street and Tompkins Street. Small building on Avenue D and 15th Street.

Q. What is the value of that parcel?

A. Land only $167,536.92.

Q. Take Block 988.

A. Comprising the entire block between East Fourteenth Street and East Fifteenth Street, Avenue C and Avenue D, it has a frontage of 206.50 feet on each avenue and 676 feet on each street. There were quite a number of buildings on this property used for gas purposes which add nothing to the value of the land.

Q. That is the block bounded by 14th Street, 15th Street and Avenue C and Avenue D?

A. Yes, sir. Steel towers and offices, engine rooms, boiler rooms, machine shops, retort buildings and such things.

Q. What is the value of that parcel?

A. Land $370,754.63.

Q. Calling your attention to the block on page 3 of the Exhibit, will you take up Block 688, bounded by West 16th Street, 17th Street, Tenth Avenue and the marginal street?

A. Comprising the entire block with a frontage on the marginal street of 197.26 feet, on Tenth Avenue of 184 feet, on 17th Street of 357.29 feet and on 16th Street of 286.20 feet. The property is vacant.

Q. What is the value of that parcel?

A. Land $322,187.20.

Q. Take Block 689, Lot 17.

2732 A. Comprising the entire block bounded by the marginal street, Tenth Avenue, 17th and 18th Streets, having a frontage of 197.26 feet on the marginal street, 380.47 on 17th Street, 184 feet on Tenth Avenue, 451.55 feet on 18th Street. The Tenth Avenue front has a one-story brick building, extending back on both sides about 100 feet. Two steel towers in the rear of this building; in the center of the block on 18th Street, two small brick offices and a one-story brick building on 17th Street and one two-story brick building. The buildings add nothing to the market value of the land. The value of the land only, $402,347.20.

Mr. Mathewson: All these blocks in this vicinity you are giving as they are now improved?

The Witness: Yes, sir, after the City improved them. I appraised them at the time the City improved them.

Q. The next parcel is 690.

A. Comprising the entire block, marginal street and Tenth Avenue, 18th and 19th Streets. Frontage of 139.48 feet on the marginal street, 474.73 feet on 18th Street, 184 feet on Tenth Avenue—I am mistaken about its being the entire block. There are some lots out on 19th Street.

Q. What lots are out on 19th Street?

A. 150 feet easterly from the marginal street there are two lots out; 250 feet easterly from the marginal street there is one lot out; 150 feet westerly from Tenth Avenue there are two lots out.

Q. Altogether there is 125 feet out on that block, is that it?

A. Yes, sir, 125 feet out on 19th Street. There are two gasometers and one one-story brick building. On 19th Street there is also a wagon yard near the marginal street end. The land value is $413,822.52.

Q. Take Block 691.

2733 A. Located on the easterly side of the marginal street between 19th and 20th Streets, the entire block front on the marginal street; 190.08 feet on 20th Street; 119 feet on 19th Street. The plot is vacant with the exception of two disused gasometers. The value is $164,479.20. In making this statement that they are disused gasometers, they have no gas in them; I don't know that they are entirely disused, but on my two examinations there was no gas in them.

Q. I notice that in the testimony of Mr. Wheelock he gave the description of this Block 691 as being a portion of the block bounded by 11th Avenue, 19th Street and 20th Street, being 184 feet on 11th Avenue and 350 feet on each street, and in the easterly line being 184 feet.

Mr. Mathewson: May I say here, so there need be no confusion, that the values given by Mr. Wheelock as to Blocks 688, 689, 690 and 691 were all values for the entire blocks, before anything had been taken by the City, and the testimony of Mr. Preuss was given on the same basis, but he subsequently gave on cross-examination his values for what was left also, and this witness is giving simply the value of what is left. They are still carried on our books as real estate so long as they have not been paid for by the City and their value not fixed.

Q. You have followed in your examination of these parcels the Exhibit No. 48, have you?

A. Yes, sir.

Q. As offered in evidence here?

A. Yes, sir.

Mr. Mathewson: Exhibit 49, a single sheet, if the counsel will remember, shows the property before the changes were made on account of the City improvements.

2734 Q. Take up Block No. 716.

A. North side of 18th Street, 175 feet east of 10th Avenue; two old two-story brick buildings which add nothing to the market value of the land. The value of the land $36,000.

Q. Take Block 715.

A. South side of 18th Street, 150 feet east of 10th Avenue, 225 feet by 92 feet. There is an old two-story building on the property which adds nothing to the value of the land. The value of the land, $108,000.

Q. Turn to page 4 of the Exhibit and take up Block 951.

A. South side of East 20th Street, between Avenue A and First Avenue. Three-story brick stable built front and rear and on easterly side with an open court in the center. Value of land $49,000, and the building adds to the market value of the land $10,000; total $59,000.

Q. Take the large plot between 20th and 21st Streets, First Avenue and Avenue A, Block No. 952.

A. It is the entire block front on Avenue A by 517 feet on 20th Street and 517 feet on 21st Street. On the corner of Avenue A and 21st Street is a two-story brick machinery building which is used for gas purposes, but adds about $8,000 to the market value of the land, as it could be used for other purposes. 327 Avenue A is a four-story brick building and is leased and used as a storage house. 333 is a four-story brick tenement 20-foot front, occupied by two families, employees of the gas company. 335 Avenue A is an old four-story brick building which I think is also occupied by employees of the gas company, but of this I am not sure. The value of the land is $313,520. The buildings add to the market value of the land $20,000; total $333,520.

Q. Take Block 953.

A. Comprising the entire block between 21st and 22d Streets, First Avenue and Avenue A. There is 197.50 feet frontage on
2735 each avenue and 613 feet on each street. Avenue A front is
occupied by gasometers and First Avenue front by one and two-story brick buildings extending part of the way from First Avenue. The balance of the block is occupied by gasometers. 21st Street side of the property, near Avenue A, by one-story brick buildings. On the north corner of 21st Street and First Avenue is a two-story gabled building, on the street there are gasometers. Two-story building in the center of the block about 15 feet wide. The balance two and one-story brick buildings. On the corner of 22d Street there is a building used for gasometer repair shop and storage of gas stoves.

Q. Any vacant land there?

A. No, sir, except spots of it, of course. The buildings add nothing to the market value of the land and the land value is $403,000.

Q. The next parcel is Block 979 on the same page, page 4 of the Exhibit.

A. 979, comprising the entire block between Avenue A and the marginal street, 21st and 22d Streets. It has the entire block frontage on the marginal street, 197.50 feet on Avenue A, 594.58 feet on 22d Street, 760.25 feet on 21st Street, occupied by buildings used for gas purposes. Land value of the property $338,086.

Q. The next parcel is 978.

A. Comprising the entire block bounded by Avenue A and Avenue B, 20th and 21st Streets, with the exception of 23 feet by 100 feet on Avenue A. 326 Avenue A, corner 21st Street, is a four-story tenement; store on the first floor is vacant. 328 and 330 Avenue A, five-story tenements, old-fashioned houses, two families on a floor. Balance of the block used for gas purposes. Value of the land $326,518.60. The value of the buildings not used for gas purposes $12,000; total $338,518.60.

2736 Q. The next parcel is 987. That is the irregular plot between the marginal street and Avenue B, 20th Street and 21st Street.

A. It has a frontage on Avenue B of 184 feet, on the marginal street 240.10 feet, on 20th Street 238.78 feet, on 21st street 84.54 feet, and is vacant land. The land value, $83,873.96.

Q. These are all the parcels on page 4?

A. Yes, sir.

Q. Now take on page 5, Block 1090.

A. North side of 42d Street, 100 feet west of 11th Avenue, six lots. There are one and two-story brick buildings which add nothing to the value of the land. Land value $72,000.

Q. Next take Block 1071.

A. Four lots on the north side of 42d Street, 225 feet east of 11th Avenue, vacant land. Value $52,000.

Q. Take Block 1070.

A. North side of 41st Street, 200 feet east of 11th Avenue, 8 lots with one-story brick buildings on the property which add nothing to the market value of the land. Value $80,000.

Q. Now take the large parcel, Block No. 1089, between 41st and 42d Streets, west of 11th Avenue.

A. Comprising the entire block between 11th and 12th Avenues, 41st and 42d Streets, to 12th Avenue as proposed, having a frontage on 11th Avenue of 197.50 feet by 800 feet on each street. Four gasometers. Balance of the block occupied by one-story brick building used for gas purposes and one-story frame building. The buildings add nothing to the value of the land. I have three valuations on this property.

Q. Let us have them?

A. Assuming that the City owns 12th Avenue, the land value is $599,500; assuming that the gas company owns 12th Avenue and that 12th Avenue is upland at that point, the value is $779,500; assuming that the gas company owns 12th Avenue and that it is land under water, the value is $699,500.

2737 By Mr. Mathewson:

Q. That does not include the bulkhead and pier there, does it?

A. It does not.

By Mr. Burr:

Q. Now take the block appearing on page 6 of the Exhibit, between 44th and 45th Streets?

A. Block 1092 has frontage of 675 feet on 45th Street and 700 feet on 44th Street. This block is used for gas purposes with the exception of three tenements which are occupied by employees of the gas company. Then there is also a small frame tenement, 645 West 44th Street, which has no value. The value of the buildings on this property is $4,500. The same condition exists there. If the City owns 12th Avenue, the land value is $426,500, or a total with the buildings of $431,000. If the gas company owns 12th Avenue, the land value is $581,500, or a total with the buildings of $586,000. I have taken the figures of Mr. Wheelock and Mr. Preuss, who considered it as upland, and I have taken it as upland and have not considered it as land under water.

Mr. MATHEWSON: This does not include bulkhead?
The WITNESS: No, sir.

Q. Take the block between 45th and 46th Streets.

A. Block 1093 has a frontage of 575 feet on 45th Street and 500 feet on 46th Street. Gasometer and one-story brick buildings and frame building. One-story office building. They add nothing to the market value of the land. If the City owns 12th Avenue, the value is $332,500; if the gas company owns 12th Avenue, the value is $487,500, 12th Avenue having been treated as upland, the bulkhead not included.

Q. Take the block appearing on page 7 of the Exhibit,
2738 Block 1457.

A. 1457, the property is situated between First Avenue and Avenue A.

Q. Between 62d and 63rd Streets?

A. Yes, sir, with a frontage on the north side of 62d Street of 266.56′ and 216′ 5¾″ on 63d Street. It is occupied by two gasometers and one in process of construction. They add nothing to the value of the land. Nineteen and one-fourth lots, $154,000.00.

Q. The next parcel is Block 1455, between 60th and 61st Streets and Avenue A.

A. It has a frontage on Avenue A of 281.33 feet, 313 feet, each on 60th and 61st Streets. The property is vacant with the exception of two old frame buildings which add nothing to the value of the land. The grade of the street is very steep at this point and there is considerable rock on the plot. The value is $194,000.

Q. The next is Block 1474, an irregular piece at the corner of Avenue A and 60th Street.

A. It is an irregular parcel, northeast corner of Avenue A and 60th Street, containing about 5,230 square feet vacant. The value is $26,150.00.

Q. The next parcel is Block 1177 ap-earing on page 8 of the Exhibit, west of West End Avenue.

A. Block 1177 is a block bounded by West End Avenue, the New York Central & Hudson River Railroad, 65th and 66th Street, and has a frontage of 200.83 feet on West End Avenue, 206 feet on New York Central Railroad, 299.75 feet on 65th Street and 343.75 feet on 66th Street. One-story brick building on the plot which adds nothing to the market value of the land. The valuation is $172,-719.60.

Q. Take the other parcel on the same page, Block 1157 between 65th and 66th Streets, West End Avenue and Amsterdam Avenue.

A. It has a frontage of 200.83 feet on Amsterdam Avenue and
West End Avenue and a frontage of 800 feet each on 65th and
2739 66th Streets. It is the entire block. Some small two-story
brick buildings and gasometers on the property which add nothing to the marget value of the land, the land value being $602,844.00.

Q. The next piece is a small piece on the south side of 65th Street. Block 1156, between Amsterdam Avenue and West End Avenue.

A. It is 100 feet by 100 feet on the south side of 65th Street and

300 feet west of Amsterdam Avenue. Four-story brick tenement, two families on a floor, in fairly good condition. The westerly lots are vacant. Land $32,000; the buildings add to the market value of the land, $8,000; total $40,000.

Q. The next parcel appears on page 9, being the plot between 98th and 99th Streets, First and Second Avenue, Block 1670.

A. Comprising the entire block between First and Second Avenue, 98th and 99th Street, fronting 201.83 feet on each avenue, 650 feet on each street. The First Avenue frontage is vacant. The easterly portion of the property has one-story brick buildings; westerly portion gasometers. There are four gasometers, three on 98th Street and one on 99th Street. On 99th Street are small two-story brick buildings. Two of these buildings were used for gas purposes. There were quite a number of them. They add nothing to the market value of the land. The land value is $496,576.00.

Q. Take the parcel appearing on the same page bounded by First Avenue, the marginal Street, 98th and 99th Streets, Block No. 1692.

A. Comprising the entire block fronting 212′ on the marginal Street, 201.83′ on First Avenue, 270.24′ on 98th Street 370.57′ on 99th Street. This property is used mostly for the storing of coal. There is a slip on the 98th Street side extending from the East River
to a point about 150′ east of First Avenue and used for dock-
2740 ing barges east of First Avenue, and at this point First Ave-
nue has not been used except for storage of lumber, the balance being used for the slip. The southeast corner of 99th Street and First Avenue is a brick building used by some of the employees, and of no material value. The balance is vacant except for racks for holding coal. The improvements add nothing to the market value of the land. The land value is $201,358.00.

By Mr. Mathewson:

Q. That included no bulkhead or pier values?

A. No, sir.

By Mr. Burr:

Q. Take Block 1683, 111th and 112th Streets, First Avenue and Second Avenue.

A. Block 1683, three lots on the northwest corner of First Avenue and 111th Street, five lots on the rear on 111th Street and two lots on 112th Street, vacant with the exception of small brick building in the rear of the lot facing on 111th Street, which adds nothing to the market value of the land. The land value is $109,644.

Mr. Burr: When you spoke of parcel 1692, there is no bulkhead property there claimed by the company is there?

Mr. Mathewson: I merely asked the question on account of the witness' statement that part of the street was used as a slip by the Company for scows and barges.

The Witness: No, sir, 99th Street is used, the slip runs up 99th Street and crosses the bulkhead property.

Q. Now take Block 1682 between 110th and 111th Streets, First and Second Avenues.

2741 A. The entire block fronting on First Avenue, 475′ on 111th Street, 475′ on 110th Street. The land value $395,288. It does not take the entire block. There are two gasometers and one small building on the property which add nothing to the value of the land.

Q. The next parcel is Block 1704, being the entire block between Pleasant and First Avenues, 110th and 111th Streets.

A. Comprising the entire block having a frontage of 201.83′ each on First Avenue and Pleasant Avenue and 613′ each on 110th and 111th Streets. There are a number of small buildings on this property, two-story brick buildings, 1½-story frame building, frame shop with asphalted floors and old retort house not now in use; 1½-story building, slate roof, used as a blacksmith shop; 1½-story building on 110th Street used as a coal house. Opposite the coal house there is a small brick shop. The balance of the block is taken up with old frame shops and an old tramway structure leading to the docks which is not now in use. The entire block has been abandoned for gas use and is used by the Street Department of the gas works. These buildings add nothing to the value of the land. The value is $396,784.00. This does not include the bulkhead.

Q. The next parcel appears on Page 11, Block 1999.

A. Frontage on Twelfth Avenue of 199.83 feet, on 132d Street 675 feet, on 133d Street, 650 feet. This property is vacant. The grade of the street at this point is about ten per cent. from Broadway to Twelfth Avenue. On the Twelfth Avenue front is Riverside Viaduct and on the Broadway front is the subway viaduct. The property is from 12 to 15 feet below grade. Value $397,800.

Q. Take up Block 2175 on page 12 of the Exhibit.

2742 A. The property is situated at Broadway near the junction of Sherman Avenue and contains about 65,253 square feet. There are no improvements on the property except a small brick house and gasometer which add nothing to the value of the land. The land value is $97,879.50.

Q. Was there any other piece that you valued?

A. None except Shady Side and the bulkheads.

Q. Now, leaving out Shady Side and the bulkhead property, what do you find the total valuation of the property to be?

A. Mr. Burr, I would like to let that go until I come back from lunch. I find my stenographer has made a typographical error in here which makes a few hundred dollars' difference.

Q. Just prepare it so you can give it, assuming that the Company owns the marginal street and takes in the other assumption you have stated.

A. Yes, sir, I have done that but there is a mistake here in some of the figures.

At this point a recess was taken until 2 p. m.

After Recess.

The Master states that he has received from Judge Lacombe the following memorandum regarding recent motions made by the defendants for certain inspection of the books:

"The motion for inspection of plant was settled by consent, complainant offering such inspection, and therefore calls for no discussion. As to the suggestion that there should be some postponement because such inspection was not accorded earlier; the difficulty is that it was not accorded sooner because the Court was not asked to intervene. As far back as the latter part of August the Circuit Judge came to the city to pass upon such application (among others) but it was postponed and subsequently withdrawn. As to the books and records, the Master has full power, and the subject should be left with him, who fully understands the situation. Wherever it appears that any testimony or exhibits or tabulation introduced by complainant is founded on entries in the books, etc., such entries will of course be produced. Moreover as to any specific fact which defendants wish to show which can be shown only from entries in the books, etc., the particular entries required to prove such fact may be produced or inspection thereof allowed. 2743

"E. H. LACOMBE,
"U. S. C. J."

Oct. 10, 1906.

John M. Thompson resumes the stand.

Direct-examination (continued):

By Mr. Burr:

Q. Will you give the total valuation of the real estate of the Consolidated Gas Company?

A. The subdivision of Block 989, Lot No. 1, $131,527.75; Lot No. 26, $99,530.85.

By Mr. Mathewson:

Q. That makes a total of $231,058.60?

A. Yes, sir.

By Mr. Burr:

2744 Q. Now will you give your total valuation of the property, Mr. Thompson, aside from Shadyside and the bulkhead property?

A. Assuming the city owns Twelfth Avenue, the value is $9,637,908.55.

In Block 1089 if the Company owns Twelfth Avenue and assuming it is upland, $180,000 added to this block. Block 1092 if the Company owns Twelfth Avenue, assuming it is upland, $155,000. In Block 1093, if the Company owns Twelfth Avenue, assuming it is upland, $155,000.

By the Master:

Q. That is another $155,000?

A. Yes, sir. That is Block 1093. Or a total of $490,000, and a grand total of $10,127,908.55. If the land in Twelfth Avenue in Block 1089 is land under water, deduct $80,000, leaving $10,047,908.55.

Mr. Burr: That is all.

Mr. Mathewson: You do not intend to examine this witness on bulkheads?

Mr. Burr: No, not now. We are going to take up the bulkheads as a separate proposition.

Cross-examination by Mr. Mathewson:

Q. What is your age, Mr. Thompson?

A. Forty-two years.

Q. How long did you say you had been inthe real estate business?

A. In New York City?

Q. Yes.

A. Fourteen years.

Q. Where were you in business before that?

A. Nashville, Tennessee, for about four years.

Q. Have you ever been in any partnership or firm dealing in real estate in New York?

A. I am now, yes sir, John M. Thompson& Company.

Q. Who are your partners?

A. It is a corporation. I am president of the Company.

2745 Q. Any other partner or concern heretofore?

A. Yes, sir.

Q. Will you state?

A. Why, I had a partner, Mr. Williams, that was about 1897.

Q. What Williams?

A. Mr. Edgar C. Williams, 1898 and 1899 I had Mr. Samuel Pryor. Then I was alone, I think, until my present partnership or corporation with Mr. Burton Thompson.

Q. Where is your office?

A. 212 Broadway.

Q. Have your activities been chiefly in appraising real estate or in buying and selling?

A. Why, I think it has been about equally divided, sir.

Q. Have you ever sold any bulkhead property?

A. Yes, sir.

Q. Where?

A. I was interested in the sale of bulkhead property at the corner of 49th Street and North River in this way: that it was sold by Mrs. M. Ryan to Judge Dugro. At the time Mrs.Ryan's son Vincent O. Ryan was an employee in my office and I asisted in the sale. The property was sold under contract. The title has never passed for there is a squatter on the property, and they have not been able to get rid of him.

Q. Have you had charge of any of the sales of dock or bulkhead property?

A. I have had no other sales, no, sir, buthave had with the exception of bulkhead property in Long Island City opposite 34th Street; those are the only cases I have had for sale.

Q. What class of property have you been engaged in buying and selling?

A. Why, I have sold generally, sir, business buildings, apartment houses, residences and vacant property.

Q. What part of the Island particularly?

A. I sold all the way from I think Liberty Street on the south to—I can refer to my memorandum, sir, and tell you exactly—(after referring to memorandum) to 210th Street on the north.

2746 Q. Have you not operated more particularly in some special part of the city?

A. Why, no, sir. I should say that in a majority of my sales they have been south of 14th Street and north of 23d Street. I have not done much in the wholesale dry goods district.

Q. Will you take Block 1643, Lots 56, 57 and 58, being property at the southwest corner of Lexington Avenue and 116th Street?

A. Yes, sir.

Q. And say how you reached your figures of $84,386.40 for that appraisal?

A. I face the property on 116th Street; for one inside lot I have allowed $20,000; for the lot adjoining——

Q. That is for an inside lot?

A. Yes, sir.

Q. $20,000?

A. Yes, sir.

Q. Yes.

A. For the lot adjoining on the corner I have allowed $22,000; for the corner lot, in which I have allowed the full 30 feet frontage, $42,386.40.

Q. Did you allow any plottage?

A. In all of these figures I have included plottage in my estimate. Had the land been sold separately there would be 10 per cent. deducted from the larger plots and 5 per cent from the smaller.

Q. Isn't it customary to take the valuations of lots sold by retail, so to speak, and add to that total some percentage in order to reach plottage?

A. Well, I don't know that that is a general rule, sir. I have done it one way and I have done it the other.

Q. Do you think it is possible to take the valuations of single lots and add to them a certain amount representing plottage and then aggregate a large number of lots on that basis and reach as accurate a result?

A. Yes, sir, I think so.

Q. Will you take the next plot, Block 1642, Lots 32 and 33, northwest corner of Third Avenue and 114th Street, and say how you reached that total of $74,104?

A. Northwest corner of Third Avenue and 114th Street, 2747 2,592 square feet, $12 a square foot, $31,104. Two lots on 114th Street at $14,000 each, $28,000. There is a mistake in that sum that I have given to you before, a mistake of my stenographer.

Q. Will you make the correction now?

A. Yes, sir; the total of that land value is $59,104.

By the Master:

Q. Instead of $74,000?

A. Yes, sir. I see my stenographer has added in

$15,000 there twice and the buildings add to the market value of the land $15,000 making a total of $74,104.

See correction p. 2726.

By Mr. MATHEWSON:

Q. That $74,104 includes the buildings?

A. Yes, sir.

By Mr. BURR:

Q. Will that change your total to that extent?

A. It will change the total $15,000, yes, sir.

Q. Less or more?

A. Less.

By Mr. MATHEWSON:

Q. Is your 2,592 square feet the area of the plot facing on Third Avenue running back 100 feet?

A. Yes, sir.

Q. And is that the basis upon which you think that the lot would sell if sold by itself?

A. Yes, sir. I should not have allowed for plottage on that plot.

Q. Isn't it a fact that where you have a plot of land like this facing on two streets running through from one street to another, or having a facing on an avenue and a street, that it is more valuable in the aggregate than it would be sold in lots. Isn't it a distinct advantage to have entrances on both an avenue and a street for a plot of that shape?

2748 A. I don't think so, no, sir; not in this special neighborhood.

Q. Don't you think an L shaped plot as a rule having an entrance on two streets or a street and an avenue has an added element of value from that very fact?

A. Yes, sir, on Broadway, Fifth Avenue and others, but not at Third Avenue and 114th Street.

Q. You think this is an exception to that rule?

A. No, sir. I think there are a great many other exceptions.

Q. That may be, but you think this is an exception?

A. I think that is an exception to the general rule, yes, sir.

Q. Are you familiar with the sales in the vicinity of Third Avenue and 114th Street?

A. Yes, sir.

Q. Have you ever made any in that section recently?

A. I have sold several in that neighborhood but as far back as 1898.

Q. That is the oldest, is it?

A. That is the oldest sale in there, yes, sir.

Q. Hasn't property largely increased in value in New York City in the real estate field in the past five or six years?

A. Very much, sir.

Q. Are you familiar with the property at the northeast corner of 114th Street and Third Avenue?

A. Yes, sir.

Q. Do you know what that sold for in 1900, in May, 1900? I refer to the plot 25 x 100, being the same size as this plot amounting to 2,592 square feet on Third Avenue, belonging to the Consolidated?

A. I have not the memorandum of that sale with me. I have it in my office; I haven't it here.

Q. Well, now, you have taken the value of the Consolidated Company's lots at the northwest corner of Third Avenue and 114th Street, facing 25 feet and a trifle over on the Avenue as $31,104?

A. Yes, sir.

2749 Q. Now, if it be true, that the lot on the northeast corner of 114th Street and Third Avenue, of the same or a little smaller size, sold in May, 1900, for $40,000, wouldn't that modify your view as to the value of a corner lot at that point?

A. Not until I had seen all the circumstances of the sale, the class of building and everything else on it.

Q. Not a very expensive class of buildings there, is there?

A. I do not know, sir; I do not recall the northeast corner.

Q. Is there any building on the northwest corner, occupied by the Consolidated Gas Company?

A. A three-story building there, yes, sir.

Q. You have not a memorandum either of the sale of 2091 Third Avenue?

A. No, sir.

Q. The corner of 114th Street, have you?

A. No, sir. I will make a memorandum of this and have that for you to-morrow.

Q. Will you take Block 870, plots 54, 56, 59 and 60, at the southeast corner of 15th Street and Irving Place, and give the details of your figuring resulting in $223,491.20?

A. Southeast corner of Irving Place and 15th Street, 2,637 square feet at $60,000 per lot or $24 per square foot, $63,288.00. The lot adjoining the corner, 2,637 square feet at $44,000 per lot or $17.60 per square foot, $46,411.20. 3,587 square feet, inside lots on Irving Place, at $40,000 per lot, or $16 per square foot, $57,392. Two lots each containing 4,200 square feet on East 15th Street, $17,500 per city lot, or $7 per square foot, $29,400. The buildings add to the market value of the land $27,000, divided as follows: Irving Place, $20,000; 124 East 15th Street, $6,000; 126 East 15th Street, $1,000.

By Mr. BURR:

Q. And what is the total?

A. The total is $223,491.20.

2750 By Mr. MATHEWSON:

Q. I see in this estimate Block 870, Lots 54, 56, 59 and 60, you have allowed for buildings only $27,000 to make up your total of $223,491.20?

A. Yes, sir.

Q. You have no idea that those buildings could be reproduced in their present condition for $27,000, have you?

A. I don't think that they can be.

Q. And aren't they, so far as you observed, employed by the Consolidated Gas Company for an office building and for its uses?

A. For the Consolidated Gas Company, yes, sir. I presume it is, as far as I can see.

Q. Why, then, don't you allow for the buildings the value of the buildings to the company as they are at present in use at their probable cost?

A. Because I am talking about as to what they add to the market value of the land and not giving the structural value of those buildings.

Q. You are assuming in other words that the land with these buildings on would be sold for some use other than the same use to which the buildings are now put?

A. I am assuming what it would sell for under ordinary circumstances.

Q. Under ordinary circumstances for the purpose of improvement in some different way?

A. That would depend on whether the man could use the buildings or not.

Q. If he could use the building, if it was useful to him just as it stood now, it would be worth more than $27,000?

A. It might possibly. It might be worth $27,000 to a man that would alter the building.

Q. You have used the expression from time to time that you have omitted buildings on the property because they would add nothing to the value of the land?

A. To the market value of the land.

2751 Q. To the market value of the land. Just what did you mean by that?

A. I mean what that land would sell for under ordinary circumstances.

Q. And it would be your view that if this land were sold with gas appliances on it that it would virtually, so far as structures go, bring the value of the land or a very little more?

A. That is my opinion, if sold in the open market.

Q. Under ordinary circumstances?

A. Under ordinary circumstances.

Q. Taking now your values on 15th Street, Block 870, what valuation do you say you placed on the street lots?

A. $17,500, that is, per city lot; they are not full city lots. The total value is $29,400.

Q. And what on Irving Place?

A. On Irving Place my unit of value is $40,000.

Q. Are you familiar with sales in that locality?

A. I am; yes, sir.

Q. Are you familiar with the sale of 131 East 15th Street?

A. I have only the Irving Place sales here.

Q. Where is 42 Irving Place located?

A. 42 and 44, 7 feet 9 inches south of 17th Street.

Q. Do you know what 42 and 44 sold for?

A. Yes, sir, for $90,000 on July 9, 1906.

Q. Two lots—not full city lots, are they. Is not 42 only 22 feet wide and 86 feet deep, and No. 44 26 feet wide and 86 feet deep for part of the distance and 116 feet for the balance?

A. No. 42 is 22 by 86 feet 4 inches; No. 44 is 26 by 86 feet four inches on the southerly line and 116 feet 1 inch on the northerly line.

Q. What would be an average depth, do you think?

A. About 101 feet—there is more average depth than that, sir; only a small portion of that which is not 116 feet deep; there is only 22 feet on the rear end which is not 116 feet deep.

2752 Q. You said your lots on 15th Street were — $17,500?

A. Yes, sir; $17,500.

Q. What is the width, 25 feet?

A. 25 feet, yes, sir; 25 by 100. Did you ask me about a sale on 15th Street?

Q. You placed the value of the 15th Street lots at $17,500 apiece?

A. Yes.

Q. Are you familiar with the sales of 126 East 16th Street or 128 East 16th Street. They are in the next street?

A. I have the sale of 128 East 16th Street in 1900.

Q. Have you it for 1906, when it was sold to the City, this defendant?

A. No, sir, I have not.

Q. Have you the record of the sales of 125 East 15th Street or 127 East 15th Street, this same street, made to the city in 1906?

A. No, sir; I have not any record of sales to the city.

Q. Or 129 East 15th Street or 131 East 15th Street?

A. Are all those to the city?

Q. Yes.

A. No, sir. I have no record of those.

Q. If it be true that 126 East 16th Street was sold in 1906 for $40,000 with an old building worth perhaps $5,000, and 128 East 16th Street was sold for $50,000 and 125 and 127 East 15th Street were sold for $72,500 and 129 East 15th Street was sold for $30,000, and 131 East 15th Street was sold for $48,000, within the current year, would not that modify your view that the lots on 15th Street of the Consolidated Gas Company, off Irving Place, were worth $17,500?

A. Not until I knew the value of the four-story buildings which were on there and also I would consider it value, because they were bought by the city of New Yo[illegible] who always pay more than a private purchaser, to save the expense [illegible] condemnation proceedings.

Q. You would not think the expenses of condemnation 2753 proceedings would be the difference between $17,500 and any such figures as I have stated?

A. I have added that there were 4-story buildings in addition to the expenses of condemnation proceedings. You have not spoken of the buildings at all, but have assumed that they were vacant lots.

Q. No, I am assuming the buildings of such general character as you know them to be in that section, and that you valued them on the same basis you valued the buildings of the Consolidated Gas Company at Irving Place and 14th Street.

A. Yes, sir, but I don't know that I would take them on the same basis that I valued the Consolidated Gas Company buildings. A 4-story dwelling on East 15th Street will bring in a good rental.

Q. Don't you think the buildings of the Consolidated Gas Company on 15th Street and Irving Place only one block from 14th Street and half a block from Third Avenue, would bring in a good rental?

A. Not those buildings. You cannot make a residence out of it, and cannot make a business building out of it unless you spend a good deal of money on it.

Q. Well, that would be a question to be determined.

A. I am speaking of it as a real estate man.

Q. Will you take the property at the corner of Hester and Elizabeth Streets, Block 239, Lots 1 and 5, and say how you arrived at your total of $167,500 for those?

A. Two lots on Hester Street at $25,000 each, $50,000; lot adjoining the corner $27,500; corner lot $50,000; two lots on Elizabeth Street at $20,000 each, $40,000, total $167,500.

Q. You say that there are no buildings there that add to the value of the land?

A. Yes, sir.

Q. What buildings are there?

A. On Hester Street is a 2½-story and basement gable roof brick
building apparently about fifty years old. In the rear is a
2754 3-story brick building which is used as a stable; also an old
building.

Q. Do you mean to say those buildings are worthless?

A. To the market value of the land, yes, sir. They are absolutely inadequate improvements.

Q. In other words, you proceed on the theory that if someone bought the land they would pay the value of the land and remove the buildings to put up something else?

A. I am going on that assumption, yes, sir.

Q. But so far as those buildings are concerned, they seem to be in use now?

A. They are in use now, yes, sir.

Q. And you have not taken into consideration there the cost or value to one who can use them as they are, in giving this estimate of the value of the land?

A. No, sir, I have only taken them as to what they add to the market value of the land.

Q. Are you familiar with sales in that vicinity?

A. Yes, sir, I have recently done quite a little appraising in that neighborhood and have had reason to look up the sales.

Q. Do you know what 174 Hester Street sold for in 1905?

A. Yes, sir. I cannot tell you offhand. I took that into consideration. I have appraised 174 Hester Street not less than five weeks ago.

Q. The buildings there are practically worthless, aren't they, old three-story buildings?

A. 174 Hester Street?

Q. Yes.

A. Five-story building, isn't it?

Q. I think not.

A. I appraised it about five weeks ago.

Q. I think that 174 Hester Street is an old three-story building.

A. 174, three-story and basement brick and frame building, with three-story tenement in the rear; front and rear tenements.

Q. Do you remember what that sold for?

2755 A. I don't recall right now. I knew it at the time I made up these figures.

Q. Take now the plot on East 15th Street, irregular in shape, being Block 972, Lot 45. How do you make up the $12,279.37 which you give as the value?

A. This building has a frontage of 13¼ feet on the street by 106.70 feet, containing 1,413.78 square feet, which I have valued at $9,000 a lot, or $3.60 a square foot, making a valuation of $5,089.61. To the west of it is an interior plot containing 7,988.62 square feet, which I have valued at 90 cents per square foot or one-fourth the value of the front land, or $7,189.76, or a total of $12,279.37.

Q. Did you use any scale in estimating the value of the interior land there, not fronting on the street?

A. I did not. This is the same rule I used when I appraised the property for the company two years ago, taking them on the theory that interior property is worth one-fourth the value of front land.

Q. Do you know what 25-foot lots are worth on East 15th Street in that neighborhood?

A. I put them at $9,000.

Q. Do you know of any lots in that neighborhood that sold for $9,000 within the last year, equally well located?

Mr. Burr: What do you mean by equally well located?

Mr. Mathewson: I mean so far as distance from 14th Street or from the corner goes.

A. I have no sales on East 15th Street in 1906 in that locality.

Q. Your estimate then in your own view and not based upon sales in that immediate locality?

A. Based upon my opinion, sir, of two years ago, with what I think it is worth to-day. I based it on sales two years ago that were made then.

2756 Q. Property is considerably more valuable than it was two years ago, is it not?

A. Not in that special place, no, sir.

Q. Is it not generally in the city? Has there not been a very substantial rise in the City of New York in the last two years?

A. Yes, sir, it has raised all the way from 10 to 100 per cent. in localities; in some it has raised more.

Mr. Burr: Were you speaking of the City of New York or the Borough of Manhattan?

The Witness: Borough of Manhattan.

Mr. Mathewson: I also referred to the Borough of Manhattan when I speak of the City of New York.

Q. Will you take now Block 985, the stations on 17th and 18th Streets, between Avenue B and Avenue C, and say how you obtained those values of $196,000?

A. There are twenty-eight lots there, $7,000 a city lot, making $196,000.

Q. You say you considered the buildings there as adding nothing to the value of the land. Will you define the buildings which you observed there?

A. Why, the property was almost entirely vacant.

Q. But you said there was a coal office, didn't you, and that there was coal sheds?

A. Yes, sir, I gave no value to that coal office and coal sheds. I don't think they added anything to the value of the land.

Q. So, I understand; they may not have, if you were selling it for improvements in some other direction, but the coal office and the sheds were of some value to the people who were using them, presumably, were they not?

A. I presume they were of some value, but I do not see how anybody could fix a value on that coal office.

2757 Q. Just what, you could not say?

A. Why, $50.

Q. Coal sheds cost money, too?

A. Coal sheds cost money, too. They are all frame sheds.

Q. You did not take into consideration the structures there that the company was using regardless of whether they cost much or little?

A. Not where the improvement was inadequate. There are buildings I have taken into consideration which the company was using.

Q. I understand, but you considered the structures there which the Company was using as inadequate and therefore included no value at all for those in your total value of the plot?

A. No, sir.

Q. Now I want to recall your attention for a moment to the previous plots regarding which you testified. That is the irregular plot which you gave an estimate of $12,279.37, being Block 972. Are you not aware that that plot is assessed for $20,000 for taxation as against your estimate of $12,279.37?

A. I have not the remotest idea what the assessment is, not the remotest.

Q. If it be true that it is assessed for $20,000, would that modify your estimate of the value of the parcel at all?

A. Not in the slightest.

Q. Are you aware that the Block marked 985 to which you have just testified and upon which you have placed a value of $196,000, all told, is assessed for $179,000 for land only?

A. What year is this?

Q. 1906?

A. I am not.

Q. That would not affect your estimate of value if you knew that to be the fact?

A. It would not, no sir.

Q. Take Block 982, being the property facing on Third Avenue bounded by 14th and 15th Streets. How do you get your total of $240,436.58 for that plot?

2758 A. Northwest corner of Avenue A and 14th Street 2814.38 square feet at $4.15	$11,679.57
Adjoining the corner of 14th Street 2813.29 square feet at $3.45 a square foot	9,705.85
Four inside lots 2813.29 square feet each, 11,253.16 square feet at $3.25	36,572.77
Adjoining the corner of 15th Street 2813.29 square feet at $3.40 a square foot	9,565.19
Southwest corner Avenue C and 15th Street 2814.38 square feet at $3.70	10,413.20
Thirteen inside lots on 14th Street, $6,900 each	89,700.00
Thirteen inside lots on 15th Street, at $5,600 each	72,800.00
	$240,436.58

Q. You know sales have taken place in 14th and 15th Streets as far east — within the last year or two, don't you?

A. 14th and 15th Streets?

Q. Yes. Take 15th Street, do you know or any sale that has taken place on the basis of $5,600 per lot for a lot on 15th Street in that neighborhood?

A. There does not seem to have been a sale on 15th Street with an expressed consideration in that time, sir.

Q. How about in 1905?

A. When in 1905? There were in 1903. It is not a very active neighborhood.

Q. Are you not aware that there was a lot sold on East 15th Street between Avenue B and Avenue C, 25 by 100 feet for $11,900 in May, 1905, with an old building worth perhaps $2,500?

A. What is the number?

Q. 606 East 15th Street.

A. I beg your pardon, I have the sale here.

Q. That is $11,900, isn't it?

A. Yes, sir, with a four-story brick tenement with store in front and one-story brick tenement on the rear.

2759 Q. Do you know how much that building was worth?

A. I do not, I would have to go and look at it. I know it has two tenements.

Q. It probably is not worth more than $2,500, is it?

A. I have no idea, Mr. Mathewson, unless I look at it.

Q. Do you allow any plottage at all in this large block?

A. Just in a general way.

Q. No special percentage?

A. I would think these lots would separately — for 10 per cent. less.

Q. What did you add after you had got the value of your individual lot, selling as individual lots, to the value of such individual lot, to get the value of that lot if it went into a large plot?

A. In the neighborhood of ten per cent.

Q. You have not been familiar with the sales of any such large plots as this at one time by a single owner, have you, in that vicinity?

A. No, sir; I have not.

Q. Now it appears, if my information is correct that this plot here that you have valued at $240,000 is assessed for taxation at $275,000 for land alone. If that be correct, would that modify your view as to the value there?

A. None whatever, sir.

Q. Now, let us take the next plot. Block 989, Lot 1, facing on Avenue C between 15th and 16th Streets. How do you obtain your figures of $131,527.75 for that plot?

A.—

Northeast corner of Avenue C and 15th Street, 2840.20 square feet at $3.50 per square foot......	$9,940.70
Adjoining the corner of 15th Street, 2839.10 square feet at $3.35 a square foot....................	9,510.98
4 inside lots, 2839.10 square feet each, 11,356.40 square feet at $3.25......................	36,908.30
2760 Adjoining the corner of 16th Street, 2839.10 square feet at $3.35 a square foot........	9,227.07
Southeast corner of Avenue C and 16th Street, 2840.20 square feet at $3.50 a square foot........	9,940.70
10 Street lots at $5,600.00 each.................	56,000.00
Total	$131,527.75

Q. Now, take Lot 26, Block 989, at the other end of the block?

A.—

Southwest corner of Avenue D and 16th Street, 2349.62 square feet at $3.25....................	$7,636.26
Adjoining the corner of 16th Street, 2348.71 square feet, $2.90 a square foot.....................	6,811.26
4 inside lots, 2348.71 square feet each, 9394.84 square feet at $2.75.............................	25,835.81
Adjoining the corner of 15th Street, 2348.71 square feet at $2.90..............................	6,811.26
Northwest corner of Avenue D and 15th Street, 2349.62 square feet at $3.25..................	7,636.26
8 Street lots at $5,600.00 each..................	44,800.00
Total	$99,530.85

Q. Are you able to point to the sale of any street lots in this neighborhood for $5,600.00 each in the last year?

A. I would have to take in all these sales and analyze them. If I found any of them I would have to separate between the land and the buildings. There were no vacant lots sold in there that I remember.

Q. Now, the total of these two lots in Block 989 you have testified equals $231,058.60 as your estimate?

A. Yes, sir.

2761 Q. Now, it appears that they are assessed for taxation at more than that, or $245,000. Does that modify your view as to their value?

A. It does not, sir.

Q. Now, take Block 991.

Mr. Burr: When you speak of it appearing that they are assessed a certain amount, are you referring to the exhibit which appears in this case as the assessment?

Mr. Mathewson: Yes, the exhibit was put in in this case and I think it covers the 1906 assessment

Mr. Burr: That I don't know.

Mr. Mathewson: Well, I am assuming so. It is barely possible that my assessment is of another year, but I am sure if it is, that it is not any higher than the present assessment. They have been rising instead of falling.

The Witness: Is that the smaller block, do you mean, Mr. Mathewson:

Q. Yes, the block bounded by the marginal street, Avenue D, 15th and 16th Streets. How do you get at that total of $115,683.27?

A.—

Northeast corner of Avenue D and 15th Street, 2,582 square feet, at $3.25	$8,391.50
Lot adjoining 15th Street, 2,581 square feet, at $2.85	7,355.85
Four inside lots, at 2,581 square feet each, 10,324 square feet, at $2.75	28,391.00
Adjoining 16th Street, running through to Tompkins Street, 4,555.40 square feet, at $2.85	12,982.89
Southeast corner of Avenue D and 16th Street, running through to Tompkins Street, 4,258.80 square feet, at $3.25	13,841.10
2762 Northwest corner of Tompkins Street and 15th Street, 3,766.50 square feet, at $2.75	10,357.87
Adjoining the corner, 3,466.40 square feet at $2.85	9,879.24
Four inside lots, 10,881.70 square feet, at $2.25	24,483.82
Or a total of	$115,683.27

Q. Now, I will ask you the same question as to that. If it be assessed at $115,000, just the figure you have given, would that modify your views as to the value?

A. No, sir, it would not.

Q. Take now the next block south of that, Block 991, Lots 1 to 47, bounded by Tompkins Street, Avenue D, 14th and 15th Streets and state how you reached your total of $167,536.92 for that?

A.—

Northeast corner of Avenue D and 14th Street, 2,582 square feet, at $3.70	$9,553.00
Adjoining the corner of 14th Street, 2,581 square feet, at $3.00	7,743.00
Four inside lots of 2,581 square feet each or 10,324 square feet, at $2.75	28,391.00
Adjoining the corner of 15th Street, 2,581 square feet, at $2.85	7,355.85
Southeast corner of Avenue D and 15th Street, 2,582 square feet, at $3.25	8,391.50
Four lots on 15th Street, at $5,000 per lot	20,000.00
Southwest corner of Tompkins Street and 15th Street, 2,178.20 square feet, at $2.75	5,990.05
Adjoining the corner of 15th Street, 2,475.70 square feet, at $2.40	5,941.68
Four inside lots on Tompkins Street, 14,596.50 square feet, at $2.25	26,092.12
Adjoining the corner of 14th Street, 3,322.50 square feet, at $2.50	8,306.25
2763 Northwest corner of Tompkins Street and 14th Street, 3,622.30 square feet, at $3.25	11,772.47
Five lots on 14th Street, at $5,600 per lot	28,000.00
Total	$167,536.92

Q. Now you put a valuation of $5,600 on the lots facing 16th Street, as I recollect it, did you not, in Block 989?

A. Yes, sir.

Q. Well, do you mean to say that the lots on 14th Street which you also placed at $5,600, as near the water as that, are no more valuable than the lots on 15th and 16th Streets?

A. As a matter of fact I think they are less valuable on account of being near the water, they are less valuable for tenement house purposes.

Q. Are not lots, generally speaking, more valuable on 14th Street than they are on 15th and 16th Streets?

A. Generally speaking, yes, sir. But this is factory property and not residential property.

Q. Well, take it either as factory or residential, is not that true, that on a broad street like 14th Street, lots are more valuable than they are on 15th or 16th Streets?

A. 14th Street for factory property would be more valuable than 15th Street, but 14th Street factory property would not be more valuable than 15th Street residential property.

Q. No, but this property is of exactly the same kind, all used by the Gas Company, is it not?

A. I am speaking of the market value and what it would sell for.

Q. For what purpose?

A. For what the neighborhood justifies, if the gas houses were not there.

Q. Can you tell whether it would go into residential or factory property?

A. From the present indications, from the trend of events 2764 over there, I would say it would go into tenement property, with the exception of the water front.

Q. Can you point out here any lots which sold in 14th Street for $5,600 within the last year or two?

A. There have been no sales of vacant lots there within the last year or two.

Q. The only way you could reach this conclusion would be by a general reasoning; you could not say anything further without analyzing the sales?

A. If it was improved property. I have sold property on the east side and negotiated, and I know what it is worth further west. It is easy enough to take the trend of values from block to block.

Q. Have you sold unimproved lots on 14th Street to the west of this?

A. I have on 15th Street, not on 14th Street.

Q. Now the total which you give is $167,535.72, and it appears that the property is assessed for $180,000 for taxation by this defendant, the City of New York. Does not that modify your views as to the value?

A. It does not. I would like to add in most of those assessments there, I think the City has assessed, allowing for the buildings also, and I am testifying to the value of the land alone.

Q. I am referring to the assessment by the City of New York of $180,000 for land only.

A. I am only saying in some of the other cases. It would not change my opinion any.

Q. In every case I have mentioned the assessed value I am giving the land only.

A. It would not change my opinion any.

By the MASTER:

Q. In your experience, Mr. Thompson, is it common in the City of New York for land to be assessed for the purpose of taxation for more than its market value?

2765 A. No, it is generally assessed less, but it is very irregular. I could take you to 44th Street, and show you where one assessor differs from another just from one side of the street to the other, where one man would be very much higher than the man across the street.

By Mr. MATHEWSON:

Q. But generally speaking the assessment for taxation is lower.

A. I cannot say it is. I am retained now in over 300 cases where the assessment is much larger than it should be.

Q. That may be, but is it not the general experience that land in New York City, in the Borough of Manhattan, is assessed at a lower rate than the actual value of the property?

A. As a general proposition, I would say yes, but there are a great many exceptions to the rule. It is very irregular. It depends entirely on who the assessor is.

By the **Master**:

Q. Well, the fact is, is it not, that until a few years ago the assessed valuation ran anywhere from 50 to 80 per cent. of the market value, and that since the Low administration, when steps were taken looking to have property assessed at its market value, it has been assessed at a somewhat higher rate than it was before?

A. The year 1903, I think—I am striving to prove inequality now—will prove about 70 per cent.; and these very properties, a number of them, I have always thought they were assessed too high, and in fact I was retained two years ago to testify by the Consolidated Gas Company in the majority of these cases, that they were assessed too high. In 1904, I think, the assessment will show about 82 per cent.

Mr. **Burr**: Well, it is not disputed, and I think it is al-
2766 ready proven in the case that these assessments are disputed by the company.

Mr. **Mathewson**: Well, if your *certiorari* shows it, it shows it. I am not familiar with the *certiorari* proceedings.

By Mr. **Mathewson**:

Q. Now take Block 988, being the entire block between 14th and 15th Streets, Avenues C and D, which you have estimated at $370,754.63, and give us the analysis of that valuation.

A.—

Northeast corner of Avenue C and 14th Street, 2607.83 square feet, at $4.15	$10,822.45
Adjoining the corner of 14th Street, 2606.81 square feet at $3.45	8,993.49
Four inside lots 2606.81 square feet each, 10427 square feet at $3.25	33,888.53
Adjoining the corner of 15th Street 2606.51 square feet at $3.35	8,732.81
Southeast corner of Avenue C and 15th Street, 2607 square feet at $3.50	9,124.50
Nineteen inside lots on 15th Street at $5600 each	105,400.00
Southwest corner of Avenue D and 15th Street, 2582 square feet at $3.25	8,391.50
Adjoining the corner of 15th Street, 2581 square feet at $2.90	7,484.90
Four inside lots 2581 square feet each 10324 square feet at $2.75	28,391.00
Adjoining the corner of 14th Street, 2581 square feet at $3.05	7,872.05
Northwest corner of Avenue D and 14th Street, 2582 square feet at $3.70	9,553.40
Nineteen inside lots on 14th Street at $6900 each	131,100.00
Total	$370,754.63

2767 Q. You have taken the same value for street lots, $5,600 that you did in the other cases?

A. Yes, sir.

Q. Do you allow any special valuation for plottage here by reason of the fact that the blocks east and west of this block 988 are owned by the same owner?

A. I certainly did not.

Q. Now, I would like to know the basis on which you make your estimate of value. Is it the amount at which the lots would sell for?

A. Yes, sir; the amount for which the lots would sell for.

Q. How, at forced sale or at ordinary auction or how?

A. I have stated, sir, under ordinary circumstances, in the open market, not at forced sale, and not at auction, but what a purchaser——

Q. You mean negotiated in the usual way?

A. When a seller is willing to sell and a purchaser is willing to buy, that is market value.

Q. That would be true in the case of an auction sale. I am asking whether you refer to auction sales or negotiations?

A. I refer mostly to negotiations. Auction sales do sometimes bring the full price, but not always.

Q. Have you taken into consideration in estimating the price you think would be obtained for those lots, the character of the neighborhood and the fact that the Gas Company's plant is there?

A. Yes, sir.

Q. Have you considered the lots as sold one by one, or small plots at a time, or taken them as sold in very large plots?

A. I don't think it would ever be sold in very large plots, no sir.

Q. As a matter of fact, does not the presence of the gas plant depreciate the value of the surrounding property?

A. I think it does.

2768 Q. Well, the value of surrounding property, or the fact that surrounding property is surrounding does not affect the value of this property for use as a gas plant at all, does it?

A. Why, no, sir, I don't know that it does.

Q. In other words, the effect of the presence of the gas plant is on the surrounding property, and the property which the gas company uses is just as valuable for its purposes as though the land around it were vacant?

A. I am free to admit, sir, that if the gas companies were all going to be moved away, the property would sell for a great deal more, probably.

Q. If this property was to be sold, are you proceeding on the assumption it is to be sold for another gas works or improved on ordinary lines?

A. I am taking what it would sell for to-day. If you made the announcement to-day that the Consolidated Gas Company was going to move everything away to-mor-ow——

Q. Of course if the property is sold, and is sold for some other purpose than the making of gas, immediately upon that announcement or as soon as that became known the value of this property in the market would rise?

A. If you moved them all away, yes, sir, but I am appraising that piece of property for instance with the gas company on the other side of the way. If you move them all away it is a different proposition.

Q. So the value of surrounding property which is depreciated by the presence of the gas works would not be any sure indication of the value of the Gas Company's property for the manufacture of gas so far as it is concerned, would it?

A. I have not taken that into consideration. I have only taken the values as I found them to-day. I don't know what value it would be for a manufacturing concern.

2769 Q. That is the point. Other property does not hurt us, but we do depreciate them and therefore it is utterly unfair to take the value of that surrounding property to get the value of our property?

A. Then we would go absolutely into the realm of speculation if we speculate on what we would do if they were not there. I can only take it as it is to-day.

Q. What percentage do you think would be added to the value of the property for the purpose of sale in ordinary negotiations if the Gas Company were to announce the removal of their gas works from this vicinity?

A. That assumption would be too much of a speculation for me. I couldn't guess at it. It would be too much for me.

Q. You think it would be very large?

A. Yes, sir, I think it would be a great deal; no doubt about that.

Q. Now, take the property on West 16th Street, Block 688, Lot 21, bounded by 16th and 17th Streets and Tenth Avenue and the new marginal street which you have valued at $322,187.20, and give me the analysis of that valuation?

A.—

Northeast corner of the marginal street and 16th Street, 2,275.75 square feet, at $8.40	$19,116.30
Adjoining lots, 2,517.25 square feet, at $6.00	15,103.50
Four inside lots, 9,176.16 square feet, at $5.00	45,880.80
Adjoining the corner of 17th Street, 2,945 square feet, at $6.00	17,670.00
Southeast corner of the marginal street and 17th Street, 3,186.50 square feet, at $8.40	26,766.60
Nine lots, 16th to 17th Streets, 2,300 square feet each, at $4.50	93,150.00
Two corner lots, Tenth Avenue, $17,500 per lot.	35,000.00
2770 Two lots adjoining the corners, at $13,750 each	27,500.00
Four inside lots, 2,400 square feet each, at $5.00 a square foot	42,000.00
Total	$322.187.20

Q. What does that make the value of those interior lots on 16th and 17th Streets computed 25 by one-half the depth of the block? You have given the valuation per square foot?

A. Yes, sir.

Q. Can you tell me what value that produces for a 25-foot lot half the depth of the block?

A. 2,500 square feet, $10,500.

Q. That is the least valuable of any of the lots you have figured out in this plot?

A. No, sir, there are nine lots on 16th and 17th Streets that I have appraised at $4.50 a foot.

Q. How much would that make per lot?

A. $10,350.

Q. Are you familiar with the sale at 418 to 420 West 16th Street, between Ninth and Tenth Avenues, in April, 1902, of an irregular vacant lot, 50x118 feet, over four and a half years ago?

A. In April, 1902, yes, sir.

Q. That sold for $35,000, didn't it?

A. I have no such record. It was sold for a nominal consideration.

Q. Well, don't you take pains to follow up and ascertain the actual consideration where it is possible, in keeping yourself familiar with sales and values in Manhattan?

A. When I can do so, I do.

Q. Well, aren't you aware that that sold actually for $35,000 or at the rate of about $17,000 per full lot, as against your estimate of $10,500?

A. I am not aware of it, but I have no reason to question it. There were two five-story brick tenements on it. I have no reason to question it at all.

2771 Q. No, this was irregular and vacant at that time?

A. What time?

Q. 1902, I think, April.

A. No, sir, there were two five-story tenements. I used it in my 19th and 20th dock proceedings, a sale very much used in favor of condemnation proceedings?

Mr. Burr: In whose favor?

The Witness: In favor of us the city, at that time, in establishing the value of the property.

Q. I will ask you to consider that subject further before to-morrow morning and see whether you are correct in considering that the land was improved.

A. I am quite positive it had a one to three-story brick tenement. Sale of the Hamilton Bank to the National Biscuit Company. I am pretty positive, I am very familiar with the sales in this neighborhood.

Q. Are you familiar with the sale of 445 West 16th Street between 9th and 10th Avenues which was sold, I think, in June last, 25 by 92 feet?

A. In June last?

Q. Yes.

A. I haven't any sale of it in June last. It must have been at a nominal consideration or I would have had it. I have no nominal considerations within the last year.

Q. It is suggested to me that that was sold for $13,250 with a two-story frame building of no value. If that sale be a fact, would that not affect your judgment as to the value of lots along there?

A. No, sir; not unless I knew the conditions surrounding the sale. It would not affect my judgment of the value, and their consideration would not.

Q. Take Block 689, Lot 17, bounded by 10th Avenue and the marginal street, 17th and 18th Streets, and analyze your value of $402,347.20.

2772 A.—

Northeast corner marginal street and 17th Street, 2,757.50 square feet at $8.40	$23,163.00
One lot adjoining the corner of 17th Street, 2,999 square feet at $6.00	17,994.00
Four inside lots, 9,744.84 square feet at *at* $5	48,720.00
One lot adjoining the corner of 18th Street, 2,801.50 square feet at $6	16,809.00
Southeast corner of marginal street and 18th Street, 3,043 square feet at $8.40	25,561.20
Sixteen street lots, 2,300 square feet each, at $4.50	165,600.00
Two corner lots on 10th Avenue, at $17,500 each	35,000.00
Two lots adjoining the corners at $13,750 each	27,500.00
Four inside lots, 2,100 square feet each, at $5	42,000.00
Total	$402,347.20

Q. Did you allow plottage there except in the manner that you have previously testified?

A. Only in a general way.

Q. Now, take the block next north, Block 690, bounded by 10th Avenue, marginal street, 18th and 19th Streets.

A.—

Southeast corner of marginal street, 2,018.59 square feet at $7.50 per square foot	$15,139.42
The lot adjoining on the east, 2,300 feet at $5.00	11,500.00
The next easterly lot, 2,300 square feet at $4.80	11,040.00
The next easterly lot, 2,300 square feet at $4.80	11,040.00
2773 Eight lots on 19th Street, 18,400 square feet at $4.40	80,960.00
Northeast corner marginal street and 18th Street, 2,614 square feet at $8.40	21,957.60
Adjoining lot, 2,855.50 at $6	17,132.00
Two lots adjoining, 5,340.50 at $5	26,702.50
11 lots on 18th Street at $4.50, 2,300 square feet each	113,850.00
Two corner lots on 10th Avenue, $17,500 per lot	35,000.00
Two lots adjoining corner at $13,750 each	27,500.00
4 inside lots, 2,100 square feet each, $12,500 per lot or $5 per square foot	42,000.00
Total	$413,822.52

Q. Analyze next your figure of $164,479.20 for Block 691, facing on marginal street, 19th and 20th Streets?

A.—

Northeast corner of marginal and 19th Streets, 2,470.75 square feet, at $8.40	$20,754.30
One lot adjoining corner, 2,712.25 square feet, at $6.00	16,273.50
Four inside lots, 9,831.36 square feet, at $5.00	49,156.80
One lot adjoining corner, 3,140 square feet, at $6.00	18,840.00
Southeast corner of marginal and 20th Streets, 3,381.50 square feet, at $8.40	28,404.60
Three street lots, 2,300 square feet each, at $4.50	31,050.00
Total	$164,479.20

Q. Did I understand you to say that you had been retained by the City and had testified for the City in connection with this improvement, which took a portion of these various blocks belonging
2774 to the Consolidated Gas Company?

A. I was retained by the City in the matter of 18th, 19th, 20th, 21st and 22d Streets in that proceeding. I was the third witness in the case and the other two witnesses were Mr. Kerwin and Mr. Smith; they testified; I was not called upon to testify, but I had prepared myself in the event of the death of one of them.

Q. When was this?

A. My original figures were made in 1902 and brought up to 1904, from time to time.

Q. Did you ever testify to those figures in a proceeding?

A. No, sir, I was not called upon to testify.

Q. Are the figures you have given here to-day, the 1904 figures?

A. No, sir, they are in excess of 1904 figures.

Q. You allowed for some increase in value?

A. Yes, sir.

Q. Due to the lapse of time or due to the fact that the marginal street now runs along this property?

A. Well, not only the marginal street but the ferries coming up there—I mean the railroads coming up there to 23d Street, like the Lackawanna, Erie, New Jersey Central—and improvements of that character have improved the neighborhood.

Q. That has added very substantially to the value of the property in that section?

A. I think so. Above there it has added more than it has below. I think it will do so. I have taken that into consideration.

Q. If you owned that property you would expect to sell it for considerably more on account of those improvements?

A. Exactly, sir, and I have allowed for those improvements in making my figures. I might add in all these cases I have arranged my figures as to what they would be worth after the City had taken its portion. For a marginal street I gave $21,000 for Eleventh Avenue. I would not have given more than $12,000. I am speaking of the corner.

2775 Q. Block 716, Lot 14, being a 75-foot lot on the north side of 18th Street, east of Tenth Avenue?

A. Three lots at $12,000, $36,000.

Q. Don't you allow anything for buildings there?

A. No, sir; those are old two-story buildings; they are very old.

Q. But aren't they used for any purpose?

A. I am not sure now whether the gas company uses them or not. At one time they did not, I know.

Q. Don't you know that the gas company is using them; didn't you observe that?

A. I am not positive about that. While I was there the other day I was there in an automobile and I just looked it over hurriedly, and I remembered it from when I had looked at it two years ago.

Q. You did not include any valuation for buildings in this $36,000?

A. Not for that building, no, sir.

Q. Nor for any building?

A. No, sir.

Q. Now take Block 715 on the south side of 18th Street opposite the last plot, 225 feet front on 18th Street?

A. Nine lots at $12,000 each, $108,000.

Q. Do you know of any sales of vacant lots in that section or immediately in that neighborhood at the prices you have fixed per lot, $12,000, recently.

A. I don't think there has been a sale in that neighborhood for five or six years, if anything.

Q. Now, take Lot 951, south side of East 20th Street, Lot 35, west of Avenue A, which you valued at $59,000, including building, and will you give us the details of that valuation?

A. Seven lots at $7,000 a Block, $49,000. Buildings add to the market value of the land, $10,000.

Q. What kind of buildings are they?

A. It is the Gas Company's a three-story brick stable.

Q. Covering the entire property?

A. No, sir; built from front and rear and on the east side, with an open court in the centre.

2776 Q. There are about seven lots there, aren't there?

A. Seven lots, yes, sir.

Q. And for the buildings on that you allowed $10,000?

A. Yes, sir, main building, and there was a building all the way around.

Q. That would leave for the land alone $49,000?

A. $49,000, yes, sir.

Q. Now it appears to be assessed at $50,000 or more than the appraisal of the land; does that affect your estimate of value at all?

A. No, sir.

Q. Take next block, 952, between 20th and 21st Streets, facing on the westerly side of Avenue A and which you have valued at $333,520. Please give us the details of that?

A.—

Two corners on Avenue A at $12,000 each	$24,000.00
Two lots adjoining corners at $10,000	20,000.00
Four inside lots at $9,000 each	36,0000.00
Thirty-two lots at $7,000 each	224,000.00

Then there are 34 feet more on the street, which I have valued at the rate of $7,000 a lot, which would be $9,520, a total of $313,520; to which I have added $20,000 as what the buildings add to the market value of the land, making a total of $333,520.

Q. Now, the land valued only which you valued at $313,520 appears to be assessed for taxation by the city at $340,000 for the land only, which is more than you allow both for the land and buildings which you estimated at $20,000. Does not that have some influence on your judgment as to the accuracy of your estimate?

A. None whatever.

At 4.40 p. m. adjourned to October 11, 1906, at 11 o'clock a. m.

Last exhibits:

Complainant's 256.
State's, W.

2777 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 11*th*, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

2778 MR. BURR: The motion made before Judge Lacombe by the defendant, the City, was for an examination of the books of the company and for an inspection of its plant by a competent engineer. A similar motion was made by the State. This examination and this inspection were deemed absolutely necessary for the proper presentation of the defense of the defendant. We wished an equal chance with complainant to present our case to the Court. The complainant made up its case from its books, which were the sole source of information, and we wished an opportunity for a full examination of those books.

The complainant put witnesses on the stand to testify to the value of its plants. We desired an opportunity to inspect them by competent engineers so that they could testify to their value. The right to the inspection of the plants was conceded by the complainant, and the only remaining question to be determined by the Master under the ruling of Judge Lacombe is to what extent and in what manner shall we be permitted to examine the books and vouchers of the complainants to ascertain what is the true cost of the manufacture and distribution of its gas and what is the true structural value of its plant. We have our accountants ready to examine the books and our engineers ready to inspect the plants.

It will be necessary that the accountants, and we now ask the Master to direct that they be permitted:

1. To examine all documents and books relating to or upon which Exhibit 94 is based.

2. To examine all books and documents relating to or upon which is based the cost of gas for some particular year between the years 1900 and 1905.

2779 3. That the accountants shall be permitted to examine all books and documents relating to or upon which the actual structural cost is based in 1884, or subsequent thereto, and also all of the books of the six companies which in 1884 joined together as the Consolidated Gas Company.

For these purposes will be required the following books:

For the Actual Cash Cost of Gas.

The operating ledger for 1905 and all subsidiary books and documents from which its entries are made.

Also the operating ledger and all subsidiary books and documents for a selected year subsequent to 1900, from which its entries are drawn.

For the Actual Structural Cost of the Gas Works.

The general ledger or ledgers since 1884 and all subsidiary books or documents from which its entries are drawn.

If necessary, the investigation of these general ledgers and subsidiary books and documents can be confined to the following principal accounts, together with their subsidiary repairs and new construction accounts, and all books, vouchers and documents from which their entries are drawn:

1. Real Estate.
2. Manufacturing and Distributing Plant.
3. Gas Holders.
4. Mains.
5. Service Pipes.
6. Meters.
7. Miscellaneous Apparatus.

2780 Now I understood at our conference yesterday that I was to make this request upon the record and Mr. Garver, representing the complainant, was to state to what part of that request he would accede, and then that we would ask a ruling by the Master upon those parts which were refused.

Mr. **Mathewson**: Does this include the requests for Attorney-General Mayer and the Gas Commission-s and the other defendants other than the City?

Mr. **Kirby**: We make such a request.

The **Master**: Do I understand that you unite in the request made by Mr. Burr and that it is identical in all respects; in other words, that you want the same books and for the same years and to the same extent that are specified in Mr. Burr's motion?

Mr. **Kirby**: We do so unite. We do not feel the present great necessity for the examination of all the documents which Mr. Burr suggests, but we do consider that such an examination will be necessary before a determination of this hearing, so that we join in *at* the request at this time. The State, specifically, at this time, desires permission to examine all books and documents of any kind going to make up the statements set forth in any of the exhibits of the complainants and especially in reference to Exhibit 94 and the exhibit relating to repairs and renewals from 1884 to the present.

The **Master**: Do you want to have anything about this on the record now, Mr. Mathewson, or do you prefer to wait until it is written out?

Mr. **Mathewson**: I prefer to wait until this is written out so I can see what is really requested. I will merely say now that the right of defendants to an inspection of complainant's plants is not conceded and has not been conceded. We have given the right to such an inspection, but I do not wish it to appear that we concede that as a matter of right, because we do not. As to the requests before the Master, I would like to see them in form and then present any considerations to the Master before they are formally passed upon. 2781

Mr. **Burr**: May I suggest that the time is limited and if the stenographer could have that written out by the time we come back at recess, so we could have a ruling upon it this afternoon, it would expedite the matter, as the time is extremely limited and our people are ready to proceed with the examination.

The **Master**: Then after Mr. Mathewson has indicated to what extent this can be arranged by stipulation, I will take up the matters that still remain in issue and dispose of them.

Mr. **Kirby**: I take it that even now there is no objection to our going ahead with an examination of those items going to make up the statement Exhibit 94.

The **Master**: I have so understood.

Mr. **Kirby**.: And that being so, we can start in this morning, as I take it, in that part of the examination. Mr. Mathewson is in accord with that, is he not?

Mr. **Mathewson**: No objection to that except that I would have to instruct the company's subordinates on the subject.

Mr. **Kirby**: Then is it your desire that we should not start in this morning?

Mr. **Mathewson**: I think I can arrange by telephone that you can start in on that.

2782 JOHN M. THOMPSON resumed.

Cross-examination by Mr. MATHEWSON (continued):

The WITNESS: On page 2745, the 12th line from the bottom, strike out "no appraisements," and insert "but have had appraisements."

Page 2747, the 8th line from the bottom, change the word "should" to "should not."

Page 2748, 15th line from the bottom, change "not much" to "very much."

Page 2752, 21st line from the bottom, change "my sales" to "any sales."

Page 2753, 13th line from the top, change "building" to "dwelling."

Q. Returning for a moment to page 3 of Exhibit 48, and taking Block 715, Lots 51 to 59, you refer to buildings thereon which you did not value, as you considered them to add nothing to the value of the land?

A. Yes, sir.

Q. What were those buildings?

A. There was just one two-story building there.

Q. What was it used for?

A. At one time it was used for gas purposes. As I told you yesterday, I am not sure whether it is being used now or not.

Q. Do you know for what gas purposes?

A. I do not. Shops, I think.

Q. Now, it is testified by other witnesses that that building was formerly used as a cover for holders or tanks. Did not you make sufficient examination of it so that you ascertained its use?

A. No, sir; I looked at it exteriorly and was satisfied by the exterior appearance that it could not be used for other purposes than gas purposes, and it was not necessary to ascertain its actual use.

Q. Where did you get the idea it was used for shops?

A. That is my recollection of what I gained from my examination in 1904.

2783 Q. Will you now take Block 953, being the entire block between 21st and 22d Streets, First Avenue and Avenue A, and state how you made up your valuation of $403,000?

A.—

2 corners on Avenue A at $12,000 ea.	$24,000.00
2 lots adjoining corners at $10,000 ea.	20,000.00
4 inside lots at $9,000 each.	36,000.00
2 corners on First Ave. at $15,000 ea.	30,000.00
2 lots adjoining corners at $11,000 ea.	22,000.00
4 inside lots at $10,000 ea.	40,000.00
33 street lots at $7,000 each	231,000.00
Total	$403,000.00

Q. Do you know of any unoccupied lots in that section that were sold for $7,000 within the last year?

A. No, sir; as I have stated, there have been very few sales of vacant lots in that neighborhood for some years.

Q. Are you not aware that No. 437 East 18th Street, lot 25 by 92 feet, sold as long ago as 1902 at $9,000, with only sheds on it, as against your present valuation of $7,000 for a street lot four years later?

A. That building was sold, sir, on April 30th, 1902, with a two-story brick front and rear building by M. Duffy, Trustee, to the American Carbonate Company, who are now using the building.

Q. 437 East 18th Street?

A. 437 East 18th Street.

Q. And is that the character of building that was on there in May, 1902?

A. Yes, sir; April or May, whatever time it was.

Q. Do you remember the building yourself?

A. Not in 1902, but I remember it when I appraised it for the gas company, and this was one of the sales I used.

2784 Q. I am talking about the condition in 1902. Is it not a fact that there were nothing but sheds there in 1902?

A. No, sir, it is not a fact.

Q. Where do you get your information?

A. From the *Real Estate Record and Guide,* a transfer taken from the *Real Estate Record and Guide,* which gives every character of improvement.

Q. At that time?

A. At that time. The record reads, being a transcript from the *Record and Guide:* "North side, 115 feet west of Avenue A, 25 by 92, two-story brick front and rear building, M. Duffy, Trustee, to the American Carbonate Company, April 30th, 1902, $9,000."

Q. Has property increased in that neighborhood in value in the last five or six years?

A. I think it has, yes, sir.

Q. Are you not aware that lots 515 to 521 East 17th Street sold at the rate of $7,000 six years ago, in 1900?

A. Will you give me the date in 1900?

Q. November, 1900, I think.

A. Yes, sir, four lots sold there in November, 1900, for $30,000, $7,500 each.

Q. And if there has been an increase in value in that section, they ought to be worth more now, ought they not?

A. More than $7,500?

Q. Yes.

A. No, I do not know the circumstances under which that sale was made for $7,500. And one sale does not——

Q. But generally speaking, you say that land in this vicinity has increased in value?

A. Yes, sir.

Q. And your present estimate is $7,000 per city lot?

A. Yes, sir.

Q. Let me call your attention to the further fact——

A. This is one sale.

Q. Certainly. That this entire block 953 which you estimate at $403,000 is assessed for taxation at $500,000 by the city. Does not that modify your judgment as to value?

A. None whatever, sir.

2785 Q. Take next, if you please, the block bounded by Avenue A, 21st Street, 22d Street and the marginal street, being Block 979, and state how you reach your valuation of $338,086 for that.

A.—

2 corners on Avenue A, $4.60 a sq. ft.	$23,000.00
2 lots adjoining the corner, $3.50 sq. ft.	17,500.00
4 inside lots on Avenue A, $3.40 sq. ft.	34,000.00
42 street lots at $5,600 each	235,200.00
2 gores on corners of marginal street, 7,885 sq. ft., at $3.60	28,386.00
Total	$338,086.00

Q. Now this entire block which you estimate at $338,086.00 appears to be assessed for taxation by the city, land only, at $351,500.00 or considerably more than your estimate of the full value. Does that affect your judgment as to the value at all?

A. None whatever, sir.

Q. Take next the block bounded by Avenue A, 21st Street, 20th Street and Avenue B, being Block 978, and state your analysis of the total of $338,518.60, which is your estimate.

A.—

Northeast corner of Avenue A, 2,500 sq. ft., at $4.60	$11,500.00
Lot adjoining the corner, 2,500 sq. ft., at $3.50	8,750.00
1 inside lot, 1,900 sq. ft., at $3.40	6,460.00
529 sq. ft. in the rear at $3.40	1,798.60
2 inside lots, 2,100 sq. —, each, being 4,200 sq. ft., at $3.40	14,280.00
Lot adjoining the corner of 21st Street, 2,500 sq ft., at $3.50	8,750.00
Southeast corner of Avenue A and 21st Street	11,500.00
2 corners on Avenue B at $10,000 each	20,000.00
2786 2 lots adjoining the corners at $7,500 each	15,000.00
4 inside lots, 8,400 sq. ft., at $2.40	20,160.00
37 1-5 lots at $5,600 each	208,320.00
Total	$326,518.60
No. 326 Avenue A, corner 21st Street, 4-story tenement, store on the first floor	$4,000.00
Nos. 328-330 Avenue A, 5-story tenement, 2 families to a floor, $4,000 each	8,000.00
Making a grand total of	$338,518.60

Q. In other words, you have added $12,000 to your land value for the buildings that are not used in the manufacture of gas?

A. Yes, sir.

Q. Do you suppose those buildings could be reproduced for $12,000?

A. No, sir.

Q. You have not taken, then, in any of your estimates where you have included a building value, either the original cost of construction of the building or the value of the building to the users as it is now used, but only the value of the buildings which you think would add to the selling value of the land?

A. No, sir, I have taken its rental value, just what it would add to the value of the land, taken on a rental basis.

Q. But not on the original cost of construction?

A. No, sir.

Q. Nor the value which it may be to the users for the particular use to which it is put?

A. No, sir. I might add that the gas company rents some of these buildings.

Q. That is all on the record. That is understood. What
2787 did you say you considered lots on the interior were worth for
this particular Block 978?

A. $5,600 each.

Q. Why do you put down $5,600 there as against $7,000 for the blocks westerly between Avenue A and First Avenue?

A. Because this is strictly a gas house district; there are four blocks occupied by the Consolidated Gas Company.

Q. But is not the Block 953 also occupied by the Consolidated Gas Company?

A. That block is farther west, one block farther west; a very much better block.

Q. So that if this property were to be sold here and not used as a gas manufacturing plant, and it were understood that it was to be sold for the purpose of general improvement, it would bring more than $5,600 a lot, wouldn't it?

A. I stated yesterday that I thought it would.

Q. Let me call your attention to the fact that the land in Block 978 which you value at $326,518.60, is actually assessed for taxation at $369,000, as appears in evidence. Doesn't that modify your view?

A. No, sir.

Q. Will you now analyze Block No. 987 which you have estimated at $83,873.96?

A.—

Northeast corner of Avenue B and 20th Street........	$10,000.00
Adjoining the corner of 20th Street...............	7,500.00
4 inside lots, 9,140 sq. ft., at $2.40 sq. ft.............	21,936.00
1 lot adjoining the corner 21st Street, 2,899.25 sq. ft., at $3.00..................................	8,697.75
Southeast corner of Avenue B and 21st Street, 2,375.50 sq. ft., at $4.00..........................	9,502.00
Gore on corner of marginal and 20th Streets, 4,699.44 sq. ft., at $3.20 sq. ft.......................	15,038.21
2 lots on 20th Street, at $5,600 each...............	11,200.00
Total	$83,873.96

2788 Q. Now I call your attention to the fact that this property which you have estimated at $83,873.96 is assessed land only, at $86,000. Again does that effect your view?

A. It does not, sir.

Q. Let me call your attention to the fact that every one of the six parcels on page 4 of Exhibit 48, that is to say, Blocks 951, 952, 953, 979, 978, and 987, are each and every one assessed for taxation, land value alone, at a higher figure than you have given for the value of the land. Does not that circumstance, taking all the blocks together, lead you to think you under-valued property in that section in this estimate?

A. It does not, sir. In fact, I know I have not under-valued it.

Q. Well, that is a matter of opinion. I wouldn't say I knew, because we are mistaken on matters of opinion. What you mean to say is you think you have not under-valued it, don't you?

A. And in the opinion of a great many others besides myself.

Q. That may be, but they are not on the stand now, however. Isn't it true that in taking four or six blocks contiguous as these are there is a considerable value added by reason of the fact that they are contiguous and in the hands of a single owner for the uses of that owner?

A. No, sir, I have allowed nothing for that.

Q. You haven't any idea that if the gas company were to endeavor to procure plots of equal size on the river, contiguous, at or about this point, they could be procured for the figures which you estimated as the present value of the land there, have you?

A. Why, I could only answer that by saying there are no such blocks in the City of New York. They could not get a vacant block; they would have to buy the buildings in a number of instances.

Q. Yes, upon the land values only.

A. Not if the buildings added to the value of the land, sir. They would have to pay for them.

2789 Q. You do not think, do you, that the land alone in this section could be acquired at the figures that you have placed as the land values for this company for its uses as a gas property, excluding values of buildings?

A. Again, sir, that is too much in the realm of speculation. There is no such block to-day to be purchased there. It is a question whether the Consolidated Gas Company would be next to it or not. It is impossible for me to answer that.

Q. Assuming this was not used now for gas purposes, but was used for the purpose of general improvements and tenements, whatever you find surrounding there, do you then think that the property, if it were so used and found so in use, could be acquired for the figures that you have placed on it here?

A. I do not.

Q. Will you now take Block 1090, page 5 of Exhibit 48, and state how you arrived at the total of $72,000 for that block?

A. Six lots at $12,000 a lot, $72,000.

Q. What buildings are there on Block 1090 which you say add nothing to the value of the land?

A. There are one-story and two-story brick buildings, used, I think, as offices.

Q. Why don't they add anything to the value of the land?

A. Because they are absolutely inadequate improvements.

Q. Except for the use of the Consolidated Gas Company, I suppose?

A. I suppose they find it adequate, sir. It is not adequate to the land.

Q. Not adequate to some other kind of improvement to the land, is it?

A. No, sir. My definition would be it is not an adequate improvement for the land.

2790 Q. Wouldn't it depend entirely upon what the land was used for? If you have a plot of land used for coal storage, and you have to have that covered by sheds, and it is so covered, it is adequately improved, so far as that use of the land is concerned, is it not?

A. In this case I do not consider it adequately improved for anybody. There are 150 feet, and on that there are a couple of little two-story buildings, and the value of the land is as much as $72,000.

Q. Do you know what the buildings are used for?

A. One is a stable, and the other is an office, a coal office, I think, according to my recollection. I have not gone carefully into these buildings. When I decided that they were inadequate I did not go into the absolute use of each one, but I think this was a coal office.

Q. Now, make the same analysis as to Block No. 1071, which you appraised at $52,000?

A. Four lots on 42d Street, at $13,000 a lot, $52,000.00.

Q. Why do you make a difference of $2,000 a lot between Block 1090 and 1071?

A. One is between Eleventh Avenue and Twelfth Avenue, the cheaper property; and the more expensive property is between Tenth and Eleventh Avenues. The difference is in the blocks.

Q. Isn't that wholly due to the fact that 1090 is nearer the gas plant?

A. No, sir, it is not.

Q. Isn't property nearer the river worth more than it is between Eleventh and Tenth Avenues?

A. No, sir, it is not.

Q. Is that a result of actual transactions there, or your estimate?

A. Actual transactions, yes, sir, and negotiations, appraisements, and a study of the situations.

Q. Will you take now Block 1070?

A. I might add that the gas company across the street does not help it any.

2791 Q. No, I suppose not; but you don't think that it hurts the gas company's property for the use of a gas company?

A. No, sir. Eight lots at $10,000 each, $80,000.

Q. Why $10,000 for those as against $12,000 for Block 1090 and $13,000 for Block 1071?

A. Because one is on 41st Street and the other is on 42d Street.

Q. Isn't the fact that Block 1090 is comparatively near a ferry at 42d Street a point in its favor, when you come to valuation?

A. Are you comparing 1070 and 1090 now, sir?

Q. 1071 and 1090?

A. It is a point in its favor, yes, sir.

Q. If it is nearer than Block 1071 substantially, wouldn't that indicate it was of as great a value in 1090 as in 1071?

A. No, sir, I don't think so, sir. I think the Tenth and Eleventh Avenue block is a better block.

Q. We will now take Block 1089, bounded by 41st and 42d Streets, Eleventh Avenue and the river. You first make an estimate of value of $599,500, if the city owns Twelfth Avenue; $779,500 if the company owns it and considers it as upland; and $699,500 if the company owns the avenue and it is considered as under water. Now, as a matter of fact, isn't practically the entire plot filled in up to the bulkhead line?

A. Yes, sir. I have so ascertained this morning.

Q. So it would be more proper to consider that as upland than land under water, would it not, in considering it?

A. I would like to state that I have discovered, furthermore, that the gas company does not own Twelfth Avenue and never did own it. The grant does not call for it.

Q. That, again, is a conclusion. You are simply, as an
2792 expert, making statements upon a hypothetical situation. I
do not think your testimony is very competent on that point?

Mr. Burr: Do you claim the company does own Twelfth Avenue?

Q. Didn't you find the company in possession of the property?

A. Yes, sir.

Q. And using it?

A. Yes, sir.

Q. Fenced in?

A. Yes, sir, but the grant does not give it to them.

Q. Do you know how many years they have used it?

A. A good many years.

Q. Do you know whether they have used it long enough to own it by adverse possession if they had not any deed at all?

A. I believe the case is on appeal now.

Q. Well, you don't want to decide the case in advance, do you?

Mr. Burr: Will you answer the question as to whether they own it?

Mr. Mathewson: Yes, it is certainly claimed the company owns Twelfth Avenue.

Mr. Burr: And that is the only claim the company has to it, adverse possession?

Mr. Mathewson: No, I do not say that at all, Mr. Burr.

Q. Now, you gave your dimensions, when you gave your valuation, as 801 feet or 800 feet on 41st and 42nd Streets. That takes you only to the westerly line of the projected Twelfth Avenue, does it?

A. Yes, sir, that is correct.

Q. And between that and the bulkhead line there were 250 feet?

A. That's right; 1,050 feet taken.

Q. Did you make an estimate of the entire 1,050 feet?

A. Yes, sir.

2793 Q. You did not in the $599,500.00 estimate, of course?

A. No, sir, but I did it in the next case where I assumed them to be owned by the gas company.

Q. Well, now, I will repeat my question: However it is to be considered, having been virtually filled in, all of it, up to the bulkhead line, it would be considered as upland rather than as land under water?

A. Yes, sir. It is not land under water.

Q. And you say you have not made any estimate at present of the value of that pier or of the privileges in connection with the bulkhead or the pier?

A. No, sir, I have not been able to get the information necessary. I am trying to get it to-day.

Q. Has not property in this neighborhood increased quite largely in the last few years in value?

A. I think there has been an increase over there, yes, sir.

Q. You haven't given the analysis yet, have you?

A. No, sir.

Q. Will you give me your analysis of this large Block 1089, leaving out the estimate of the value of the property within the line of projected Twelfth Avenue as under water, in view of the fact that it is found to be upland?

A. Northwest corner 41st Street and Eleventh Avenue, 2,469 square feet, $15,000; lot adjoining corner, $11,000; four inside lots, at $10,000 each, $40,000.

Q. That is on the value?

A. That is on Eleventh Avenue, yes, sir.

Lot adjoining corner 42d Street	$12,000.00
Southwest corner of 42d Street and Eleventh Avenue	17,500.00
28 lots on 42d Street, $11,000 each	308,000.00
28 lots on 41st Street, at $7,000 each	196,000.00
Total	$599,500.00

2794 If the City owns Twelfth Avenue. If the gas company owns Twelfth Avenue, add to this 10 lots at $11,000 each, $110,000, and 10 lots each at $7,000, or $70,000, or a total of $180,000, and a grand total of $779,500.

Q. Now, you have not added anything to your valuation by reason of the fact that the company owns the bulkhead rights, also owns the land adjoining, have you?

A. I have taken that into consideration, yes, sir.

Q. Have you taken into consideration plottage, except in the manner which you previously testified?

A. In no other way, sir.

Q. Are you familiar with the sale of 537 and 539 West 40th Street, in November, 1901?

A. I am familiar with it. No, sir, I have not the sale in 1901.

Q. Have you a record of the sale of 550 West 40th Street in 1901?

A. I have No. 537 in 1900, sir, and I have 537 in 1901, but not 537 and 539 in 1901.

Q. What was the improvement on that property, No. 537, according to your information?

A. In 1901 there was a one-story frame building, sheds, etc., and coal yards; that was 40th Street, however, wasn't it?

Q. Yes, sir.

A. A different street, too.

Q. 40th Street.

A. Yes, sir.

Q. What value did you put on the side lots facing on 41st Street in Block 1089?

A. $7,000, facing the stock yards.

Q. Have you the selling price of No. 537 in 1901, of the one-story shed to which you referred?

A. Not in 1901. I only have that in 1900.

Q. What was the selling price then?

A. I have just stated, $8,000.

Q. You say the property has increased in that neighborhood in value since?

A. Yes, sir.

Q. You have only given a value of $10,000 here?

A. Yes.

2795 Q. This latter for Eleventh Avenue lots?

A. Yes, sir, that is right, sir; 40th Street and Eleventh Avenue are not comparable.

Q. 40th Street and Eleventh Avenue?

A. Lots on 40th Street and lots on 11th Avenue are not to be compared.

Q. No, I suppose not, but you have figured your inside lots on 41st Street at how much again?

A. On 41st Street at that point $7,000, but it is very different from 40th Street in the other block. These lots on 41st Street face the stockyards.

Q. Does not the fact that a lot six years ago sold on 40th Street for $8,000, and there has been a general increase since, modify your estimate that the lots on 41st Street are now worth only $7,000?

A. No, sir, for at this point on 41st Street six years ago lots would not have sold at $7,000 or anything like it; they are lots right opposite the stockyards. They would have brought nearer $5,000.

Q. Now take page 6 of Exhibit 48 and give me the analysis of your values of $426,500 for Block 1092 if the City owns Eleventh Avenue, and $581,500 if the company owns it.

A.—

28 lots on 44th Street, at $8,000 each	$224,000.00
27 lots on 45th Street, $7,500 each	202,500.00
Total	$426,500.00

$4,500 added for the buildings making $431,000. If the gas company owns Twelfth Avenue, to this should be added

10 lots on 44th Street, at $8,000 each	$80,000.00
10 lots on 45th Street, at $7,500 each	75,000.00

a total of $155,000, or $581,500, to which is added the $4,500 for the buildings, making $586,000.

Q. If the company owns Twelfth Avenue, do you think
2796 that all those lots right up to the bulkhead line should be
considered as interior lots and valued in that way?

A. Yes, I have taken this and given what I thought was a fair average value there together.

Q. Considering the distance of 44th Street from the principal crosstown street, 42d Street, to be two blocks, and 41st Street to be only one block, don't you think that there is a disparity when you give an interior lot on 41st Street, as you did in reference to the previous plot, at $7,000, and an interior lot on 44th Street as more valuable, to wit, $8,000?

A. No, sir, because, as I have stated before, on 41st Street there is a great nuisance there in the way of stock yards; an exceedingly great nuisance, which would render those lots less valuable.

Q. Is that all it does, render them less valuable?

A. In my opinion, yes, sir.

Q. Assuming the neighborhood to be the same, lots on 41st Street——

A. The neighborhood cannot be the same with stock yards there.

Q. I say, assuming the neighborhood to be the same, under similar conditions you would say that lots on 41st Street would be more valuable than lots on 44th or 45th Street, wouldn't you?

A. I think they would, yes, sir, in the absence of the stock yards.

Q. Now take Block 1093, and give your analysis of the figures $332,500 if the city owns Twelfth Avenue and $487,500 if the company does?

A.—

23 lots on 45th Street at $7,500 each	$172,500
20 lots on 46th Street at $8,000 each	160,000
Total	$332,500

If the company owns Twelfth Avenue, to this should be
2797 added on 45th Street, ten lots at $7,500 each, or $75,000;
on 46th Street, ten lots at $8,000 each, $80,000; total, $155,000; or a grand total of $487,500.00.

Q. Why do you take $8,000 as a valuation of lots on 46th Street and $7,500 as the value of interior lots on 45th Street?

A. Because the character of improvement on 46th Street is better than those on 45th Street—on the north side of 46th Street.

Q. In other words, it is because 45th Street cuts the company's gas property, while 46th Street has only one side occupied by the gas works, which makes the difference?

A. Well, the easterly end of the block on 46th Street does not belong to the gas company and is improved.

Q. Is not the same true between 44th and 45th Streets?

A. Yes, sir, but there are a little better improvements at 46th

Street on the south side and very much better improvements on the north side.

Q. If the whole property were to be disposed of and not used thereafter as a gas plant, then the blocks on 45th Street would be just as valuable as on 46th Street, wouldn't they?

A. They probably would be, yes, sir.

Q. Now I ask you again, do you think it is fair to estimate to take interior lots, the lots on the bulkhead line, as considerably more valuable than interior lots as a rule?

A. I have taken that into consideration. They are more valuable, but I have taken that into consideration and given a general average value.

Q. But you took the same general average that you take for the assumption that the company did not own Twelfth Avenue, haven't you?

A. For the value of those lots, yes, sir. In that respect I have given the benefit to the company.

Q. I do not quite see that you have, but perhaps so. Now
2798 take page 7 of Exhibit 48, Block 1457, lot 6, which you valued at $154,000, I think it is, and give me your analysis of that figure.

A.—

19¼ lots, at $8,000	$154,000.00

Q. Will you likewise give me the analysis of your figures for $194,000 on Block 1455, Lot 13?

A. —

2 avenue corners, at $15,000	$30,000.00
2 lots adjoining corner, at $11,000	22,000.00
4 inside lots, at $10,000 each	40,000.00
17 street lots, at $6,000 each	102,000.00

Q. Referring to your valuation of lots on Block 1457 and 1455 at $8,000 and $6,000 for street lots, are you familiar with the sale of 417 East 59th Street in 1902?

A. Yes, sir.

Q. What did that sell for?

A. Lot 25 by 100 feet 4 inches, a four-story brick tenement, sold for $20,000, on East 59th Street.

Q. Do you know what No. 1108 First Avenue, between 60th and 61st Streets, 25 by 100 feet, sold for last year?

A. I probably do, as I testified in the Blackwell's Island case there. I think I bought that for the City. Did you say First Avenue or Avenue A?

Q. First Avenue.

A. Oh, I beg your pardon, then I was mistaken. Is it 1108?

Q. Yes.

A. No, sir, it must have been a nominal consideration, as I haven't it.

Q. Well, your values on the acquisition of the approach to Blackwell's Island Bridge were considerably higher than those you have testified to here.

A. I have not heard the awards. I don't know whether the Commissioners have made them or not.

Q. They purchased some of it, didn't they, without condemnation?

A. Yes, sir.

Q. And isn't it your information that they paid considerably higher figures than testified to here as the value of this property?

A. Not in proportion, no, sir. For a single lot at 59th
2799 Street and Avenue A, of course, the prices were larger, but, of course, the property was different.

Q. In proportion?

A. No, sir.

Q. In your judgment not?

A. Positively not. Not in my judgment, but founded on fact.

Q. Well, that would depend again upon your estimate of the relative values of the properties, which would be an opinion of yours, wouldn't it?

A. The city purchased on my estimate there.

Q. Let us take Block 1474, Lot 24, at the northeast corner of 60th Street and Avenue A.

A. Yes, sir.

Q. How did you reach the figures given there?

A. 5,230 square feet, as $12,500 per lot, or $5 per square foot, $26,150.

Q. Now turn to page 8, of Exhibit 48, and take Block 1177, bounded by West End Avenue, the railroad, 65th and 66th Streets, and give us the analysis of your estimate of $172,719.60.

A.—

2 corners on West End Avenue, 2,542 square feet each, or 5,084 square feet, at $5.60....................	$27,962.00
2 adjoining lots at $10,000 each..................	20,000.00
4 inside lots at $9,000 each......................	36,000.00
15 inside lots at $5,000 each......................	75,000.00
2 gores on the New York Central Railroad, fronting on the railroad, 6,878.80 square feet, at $2..........	13,757.60
Total	$172,719.60

Q. Do you mean to say that street lots there in your judgment are worth only $5,000 each?

A. I do, sir.

Q. Aren't you aware that there was a sale on the north side of 66th Street about 50 feet east of the railroad tracks, 40x100 feet, last
May, for about $13,000, or at the rate of $8,100 per lot
2800 taken—that would be directly across the street from this plot?

A. I am not aware of any such sale, sir.

Q. Well, if that be true, that a sale was made there as recently as last May on the north side of 66th Street directly across from this property at the rate of $8,100 a lot, wouldn't that modify your judgment that street lots are worth only $5,000 there?

A. Not unless I knew something of the circumstances of the sale, and I have not admitted the sale, either.

Q. I understand that. I have not admitted, either that your estimates are correct.

A. Well, unless I knew the circumstances of that sale it would not change my opinion in the slightest.

Q. Now take Block 1157, bounded by 65th and 66th Streets, West End Avenue and Amsterdam Avenue, if you please, and give the analysis of your estimate of $602,844.60.

A. —

2 Amsterdam Avenue corners, 5,084 square feet....	$50,840.00
2 lots adjoining corners........................	27,500.00
4 inside lots at $12,500 each....................	50,000.00
48 Lots on 65th and 66th Streets at $8,000..........	384,000.00
2 West End Avenue corners, 5,084 square feet......	30,504.00
2 lots adjoining corner at $11,000 each.............	22,000.00
4 inside lots at $9,500 each......................	38,000.00
Total	$602,844.00

Q. Will you give us the same analysis of your figures of $40,000 for Block 1156, Lots 45 and 46?

A. Four lots, at $8,000, $32,000.

Q. Now turn, please, to page 9 of Exhibit 48 and give us the analysis of your figures of $496,576 for Block 1670, bounded by First and Second Avenues and 98th and 99th Street?

A.—

2801 2 corners on Second Avenue, 5,184 square feet, at $8	$41,472.00
2 adjoining corners on Second Avenue at $13,000.....	26,000.00
4 inside lots at $12,000 each......................	48,000.00
2 corners on First Avenue, 51,184 square feet, at $6 a square foot, or.............................	31,104.00
2 lots adjoining corners on First Avenue at $11,000 each	22,000.00
4 inside lots at $10,000 each......................	40,000.00
36 inside lots at $8,000 each......................	288,000.00

Q. Is that on both 98th and 99th Streets the $8,000?

A. Yes, sir. Total, $496,576.00.

Q. Are you familiar with 227 to 231 East 98th Street? Do you know what character of improvements there were on that last year, say a year ago?

A. They were vacant.

Q. Do you know what they sold for in December, or about that?

A. I have no record of it, no, sir. A nominal consideration, my records give it.

Q. Now give us the analysis, if you please, of Block 1692, estimated at $201,358?

A.—

2 corner lots on First Avenue, 5,184 square feet......	$31,104.00
2 lots adjoining corners at $8,800 each..............	17,600.00
4 inside lots on the avenue, $8,000 each............	32,000.00
2 gores on marginal street, 9,163.50 square feet, at $14.00	36,654.00
14 street lots at $6,000 each.........................	84,000.00
Total	$201,358.00

Q. Now, you have given the value of the street lots in Block 1670 between 98th and 99th Streets at $8,000.00. If it be a fact that 227 to 231 East 98th Street between Second and Third Avenues and close to Second Avenue sold at the rate of $12,500 per lot or more in 1905,
vacant, as you say the land was, would not that modify your
2802 view that the interior lots are worth only $8,000 in Block
1670?

A. No, sir, I don't think $12,500.00 out of the way between Second and Third Avenues.

Q. Not if it is close to Second Avenue?

A. No, sir.

Q. Do you mean to give as your opinion that inside lots between First and Second Avenues on 98th Street are not worth more than 65 per cent. of inside lots on 98th Street between Second and Third Avenues and much nearer Second than Third?

A. In this location, yes, sir. Between Second and Third Avenues is a new Little Italy. It is thickly settled in there; one of the biggest advances in New York City has taken place in those blocks.

Q. No reason why the territory between First and Second Avenues on 98th Street, if the gas company should sell that property, might not be used or developed in the same manner as between Second and Third Avenues, is there?

A. On 98th Street?

Q. Yes.

A. Yes, sir, that is true; but I am not speaking only of 98th Street, but of that entire section, that the property east of Second Avenue is not as valuable as that west, not by reason of the gas works, but general location.

Q. Your proposition is that lots are worth more than 50 per cent. more between Third and Second, and nearer Second, than they are between First and Second Avenues?

A. Yes, that is perfectly correct, sir.

Q. Will you now take page 10 of Exhibit 48 and give the analysis of your figures of $109,644.00 as the value of Block 1683, Lots 34 and 35?

A. Northwest corner of First Avenue and 111th Street, 2,592 square feet, at $7.00 square foot, $18,144.00.

Q. Is that in the form of a lot or does that number of square feet in it constitute a lot?

2803 A. It is a little more than a lot—2,500 square feet would be a lot. It is 2,592 square feet, 92 feet added in there, adjoining the corner, $13,000. Inside lot, $12,000; 7 street lots at $9,500 each, $66,500.

Q. In what way would you lay out this lot containing a little more than 2,500 square feet?

A. I would give three lots—oh, I would give 29.92 feet on First Avenue.

Q. For how many lots?

A. For one lot. Then the next two lots, 2,500 square feet each, giving the benefit to the corner.

Q. Will you give the analysis of the next block, 1682, between 110th and 111th Streets, west of First Avenue, which you estimate at $395,288?

A. Two corner lots on First Avenue, $36,288; 2 adjoining lots at $13,000 each, $26,000; four inside lots at $12,000 each, $48,000; 30 street lots, $285,000; total, $395,288.00.

Q. Did you make the lots $9,500 here on 110th or 111th Street?

A. Yes, sir.

Q. Now give the analysis for the block 1704 between First and Pleasant Avenues, 110th and 111th Streets which you have estimated at $396,784.

A. Two corners on First Avenue, 5,184 square feet, $31,104; two lots adjoining corner, $11,000 each, $22,000; 4 inside lots at $10,000 each, $40,000; 2 corners on Pleasant Avenue, 5,184 square feet, $25,900; 2 lots adjoining corners on Pleasant Avenue, $16,500; 4 inside lots at $7,500 each, $30,000; 16 lots on 110th Street at $6,000 each, $96,000; 13 feet extra on 110th Street at the same rate, $3,120; 16 lots on 111th Street at $8,000 each, $128,000. There are 13 feet extra on 111th Street at the same rate, $4,160; total, $396,784.

Q. Now you have placed a street lot on 110th Street, west of First Avenue, at $9,500 as against a street lot east of First Avenue at $6,000?

A. Yes, sir.

2804 Q. That is something more than 50 per cent. higher west of First Avenue. Is that your estimate of the relative value of the property east and west of First Avenue and close to it?

A. It is the difference between $8,000 and $6,000—$2,000.

Q. I thought you said $9,500?

A. Yes, sir, $3,500 difference.

Q. That is a difference of more than 50 per cent. directly west of First Avenue?

A. Yes, sir.

Q. Do you think there is that difference?

A. I do, sir.

Q. Now, on the north side of 111th Street you have placed the lots at $8,000.

A. South side of 111th Street?

Q. Yes, on the south side of 111th Street—I meant on the north side of the block. At what figure do you place street lots at 111th Street in Block 1682, being west of First Avenue?

A. $9,500.

Q. Now, are not the lots on the south side of 111th Street, between First and Pleasant Avenues, opposite some sort of a park there—Little Italy or whatever they call it?

A. It is opposite Jefferson Park.

Q. Does not that add to the value of the land?

A. I have allowed for that $8,000 as against $6,000 on the street south of it.

Q. Is it your estimate that lots opposite this Jefferson Park on the south side of 111th Street are worth only $8,000 when lots on First Avenue and not opposite the park you have given a valuation of $9,500?

A. I do, sir.

Q. Will you now give the details of Block 1999 which you valued at $397,800 between 12th Avenue, Boulevard, 132d Street and 133d Street?

A.—

Two corners on Twelfth Avenue	$27,000.00
Two lots adjoining corners at $9,900	19,800.00
Four inside lots at $9,000 each	36,000.00
Forty-five street lots at $7,000 each	315,000.00
Total	$397,800.00

2805 Q. Will you likewise give us the details of your valuation for the Sherman Avenue and Kingsbridge Road property, $97,879.50, Block 2,175?

A. The block contains 65,253 square feet at $1.50 per square foot, $97,879.50.

Q. What do you make the front lot on Sherman Avenue worth?

A. I have taken it as a plot, sir.

Q. Will you give us the estimate of the value of a lot on Sherman Avenue?

A. I can, after lunch, sir.

Q. Cannot you do it now, in a moment?

A. I cannot. I would have to divide up these lots. It is a very irregular plot.

Q. I think that is all the property respecting which you have testified?

A. I think so.

By Mr. **Burr**:

Q. Did you look at the Shadyside property?

A. No, sir, I am going to do so this afternoon if I am through here; if not, in the morning.

By Mr. **Mathewson**:

Q. You stated you examined this property about two years ago?

A. Some of it, yes, sir.

Q. How much of it?

A. Thirty-seven parcels, I think it was. In some of those appraisals there were not the full blocks as they are now.

Q. Is it easier for you to state which of the plots respecting which you have testified you examined two years ago or to specify which you did not examine?

A. I expect I can testify better to which I did examine. Block 982, Block 988, both Blocks 991, Block 972, part of Block 952, practically the whole Block of 978, practically the whole Block of 979, Block 953, Block 985, part of Block 870, part of Block 1455—almost all of 1455, Block 1474, Block 1670, almost all of 1692, 2806 1682, 1704, 715, 1070, 1157, 1998, 2175. Now the others I will have to check up.

Q. Didn't you examine 1999?

A. I was just going to say here are some here I have got to check up. Block 1071, Lots 10 to 13; Blocks 1092, 1093, 1643, 1683.

Q. You stated that your information as to the buildings and land which you have given here were derived in some degree from that examination?

A. I don' think I understand the question.

Q. You stated at the outset, Mr. Thompson, that you had examined this property and inspected it about two years ago, and I assumed from that that some part of the knowledge of the lands and the buildings about which you have testified came from this inspection of two years ago?

A. Yes, sir.

Q. Who was your client at the time you inspected that property two years ago?

A. The Consolidated Gas Company.

Q. And it was by their permission and upon their invitation that you did inspect it?

A. Yes, sir, not at their invitation but by my request.

Q. You at that time had been retained by the Consoli-ated Gas Company to testify as to some values in *certiorari* proceedings, hadn't you?

A. Yes, sir.

Q. Have you ever been retained by the Consolidated Gas Company to testify except as to tax values in *certiorari* proceedings?

A. No, sir.

Q. And you accepted a retainer and they paid you certain fees, did they not, on account for such services?

Mr. **Burr**: I object to that. I do not see the purport of these questions.

The **Master**: Well, it is difficult to say at this period, Mr. Burr. I can imagine two or three different ways in which it might be a proper cross-examination. It does not appear now, but I 2807 have got to let the counsel go on to a sufficient extent to make it apparent what he is getting at.

Mr. **Burr**: I think it is proper to inquire whether he claims because a real estate expert was employed by the Consolidated Gas Company——

Mr. **Mathewson**: No.

The **Master**: It may be that this gentleman had a disagreement about fees, and they have got a suit on, and in that case it would tend to show bias or feeling, would it not?

Mr. **Burr**: Yes.

The **Master**: That is the idea I have in mind. I do not know what he proposes to show, but I will allow the question.

A. Yes, sir.

Q. And those services included the examination, appraisement and testimony on those properties, didn't they?

A. Yes.

Q. Are not some of these proceedings still pending?

A. I believe they are.

Q. And in some of them you have not yet given your testimony?

A. Yes, sir.

Q. And under those circumstances you have accepted a retainer from the other party to the suit, that is the City of New York, to testify in this proceeding respecting values of those same plots?

A. Yes, sir.

Q. Has the City paid you?

A. No.

Q. You expect to be paid by the City?

A. I do, sir.

Q. Are any of the proceedings in which you were to testify, whether you have testified or not, yet concluded, if you know?

A. In which I have testified?

Q. Whether you have testified in them or not?

2808 A. I don't know; some they were adjusting with the Comptroller, and I don't know whether they were adjusted or not.

Q. Has there been any friction between you and the Company in reference to this matter in any way?

A. None except that I have requested them to pursue the cases, as it was very difficult to testify after the lapse of two or three years; in fact I asked them some time ago to drop me out of it, as I could not keep them in mind.

Q. You know the last adjournment was taken at the request of the Corporation Counsel, don't you?

A. I have so understood from your office, or the office of Shearman & Sterling.

Q. And you know proceedings of this kind frequently spread out to a considerable length, especially where there are a great many of them?

A. Yes, sir.

Mr. **Mathewson**: That is all.

The **Master**: Is there any re-direct?

Mr. **Burr**: Can we adjourn now?

Recess until 2 o'clock p. m.

After Recess.

JOHN THOMPSON resumed.

By Mr. MATHEWSON:

Q. The *certiorari* proceedings to which I referred at the conclusion of my examination before recess, were *certiorari* proceedings by the Consolidated Gas Company against the City of New York. You understood that?

A. Yes, sir.

Q. Did you refer the subject of your retainer by the City in this proceeding to the Consolidated Gas Company or inform them
2809 of it before you accepted this retainer?

A. I did not.

Mr. MATHEWSON: That is all.

Mr. BURR: I move to strike out all the testimony with regard to his former retainer by the Consolidated Gas Company as being immaterial, irrelevant and incompetent.

The MASTER: I will let it stand.

Mr. BURR: Exception.

Redirect-examination by Mr. BURR:

Q. Now, Mr. Thompson, has the fact that you testified for the Consolidated Gas Company in these proceedings that have been referred to by Mr. Mathewson affected your judgment at all as to the values of the property upon which you have been called to testify?

A. None whatever.

Q. In the proceedings in which you testified for the Consolidated Gas Company, did you give your honest opinion as to the valuation of the property?

A. I did.

Q. On each piece of property that you were examined with regard to?

A. Yes, sir.

Q. And have you given your honest and unbiased and unprejudiced opinion with regard to the true value of the pieces of property with regard to which you have been examined?

A. I have, yes, sir.

Q. Have the values that you have testified to here with regard to these several parcels been the same values that you gave for the Consolidated Gas Company, allowing for appreciation or depreciation since 1903 or 1904?

A. In almost every case it has been with appreciation.

Q. And they have been the same values with that appreciation since that time?

A. Yes, sir.

Q. How many cases did you testify in for the Consolidated Gas Company?

2810 A. I don't remember how many I testified in. I appraised thirty-seven different parcels, but some of the cases I have not yet testified in although I have appraised them.

Q. Referring to Block 972, Lot 45, that is an irregular plot or parcel, is it not?

A. Yes, sir.

Q. You have made no allowance for a rise of value in that plot. Will you state your reasons?

A. Simply on account of its shape. It is an undesirable shaped parcel and I think there has been no increase there.

Q. You have been asked several times by counsel for complainant whether the fact as he stated it was, that the assessed valuation was larger than the valuation given by you, affected your opinion as to valuation and you said it did not. Will you state your reasons why it did not affect your opinion?

A. Because I think at the beginning of 1903, that is as far back as I know, the assessed valuation of the Gas Company in almost every instance has been very high, indeed. At the time I made my examination there were only five or six pieces that I thought under or equally assessed.

Q. And you so testified in these *certiorari* proceedings, did you?

A. Yes, sir.

Q. Since July, 1905, has there been any appreciation in the real estate that you have been examined regarding?

A. Well, I should say probably five per cent.

Q. There has been a rise in the value of real estate in the city generally since that time, has there?

A. Yes, sir.

Recross-examination by Mr. Mathewson:

Q. In reference to these *certiorari* proceedings by the Consolidated Gas Company against the city, in which you are under retainer by the Consolidated Gas Company, is it not true that in much the greater number of cases you have not yet testified?

2811 Mr. Burr: I object to the question as being immaterial and irrelevant.

The Master: I will allow it.

Mr. Burr: Exception.

A. I am not certain. I should say I had testified in two-thirds, certainly one-half.

Q. Is it not a fact that none of those cases, even those in which you have testified, is completed so far as you know?

A. As far as I know. I understood that some were going to be completed or compromised.

Q. And that you still claim compensation coming to you from the Consolidated Gas Company upon the completion of these cases upon which you have testified and also in those upon which you have not yet testified?

A. Yes, sir. They have my figures, my appraisements.

Q. And your retainer was to examine, report and testify?

The Master: He so stated this morning.

A. Yes, sir.

Q. Now, are you under retainer here by the City of New York or by the State?

Mr. **Burr**: Objected to as irrelevant, incompetent and immaterial.

The **Master**: I will allow it.

Exception.

A. I declare I don't know.

Mr. **Burr**: I will admit it is by the City.

The **Witness**: Mr. Burr employed me and I never asked him.

Q. Have you ever been in the buildings respecting which you have testified in connection with these parcels since you went in under retainer from the Gas Company two years ago? 2812

Mr. **Burr**: Objected to as being incompetent, immaterial and not being proper recross-examination based upon my redirect-examination which this witness has been subjected to.

The **Master**: It is hardly redirect-examination.

Mr. **Mathewson**: He has stated he took the figures then and added certain figures to them.

Mr. **Burr**: That was a matter for cross-examination.

The **Master**: Still, I am not disposed to lay down any strict rule about that. I will allow it.

Mr. **Burr**: Exception.

A. With the exception of Irving Place and 15th Street I don't think there is any.

Q. And Irving Place and 15th Street is the general office of the company?

A. Yes, sir.

Q. Where you have gone since that to confer with the officers of the company and confer respecting your testimony in the *certiorari* proceedings?

A. No, sir; on the contrary, I have never conferred with the officers of the company. My conference has been with Shearman & Sterling, and my visit to Mr. Gawtry was to sell some property in Long Island City.

Q. And you have never given any testimony for the Consolidated Gas Company as to values with the exception of values for the purposes of taxation?

A. That is all.

By Mr. **Burr**:

Q. Your testimony in those proceedings is a matter of record, is it not?

A. Yes, sir.

Mr. **Burr**: I suppose the point of these questions is to show that the Consolidated Gas Company has valuations for taxation and valuations for other purposes, of the property. 2813

Mr. **Mathewson**: We think that the valuation for taxation is different from the valuation of property as an operating concern; but whether that be so or not, I think the effect of the examination is a matter of argument.

MARTIN MCHALE, called — a witness in behalf of the defendant-, being duly sworn, testified as follows:

Direct examination by Mr. BURR:

Q. What is your business, Mr. McHale?
A. I am an appraiser of real estate.
Q. In the City of New York?
A. In the City of New York.
Q. Borough of Manhattan?
A. Borough of Manhattan; in fact I might say Greater New York.
Q. How long have you been engaged in such business?
A. Twenty-one years.
Q. Where is your place of business?
A. No. 55 Cedar Street.
Q. Will you state what experience you have had in the valuation of property in the Borough of Manhattan?
A. Well, I have had twenty-one years' experience with different concerns. With the United States Mortgage & Trust Company——
Q. Are you connected with that company now?
A. I am, sir. I am their appraiser. And the Lawyers Title Insurance & Trust Company, the Lawyers Mortgage Company, the Windsor Trust Company, Columbia Trust Company, Guarantee Trust Company, the State of New York, the Banking and Insurance Department of the State of New Jersey, and I have appraised 2814 for the City of New York and the Consolidated Gas Company, the firm of Shearman & Sterling, Davies, Stone & Auerbach, John Jacob Astor, Rollins & Rollins; and I might mention, I suppose, fifty or seventy-five other concerns and different institutions. I have appraised for the Erie Railroad.

Mr. BURR: If Mr. Mathewson desires to examine this witness as to his ability as an expert before I proceed, I have no objection.
Mr. MATHEWSON: I accept the invitation.

By Mr. MATHEWSON:

Q. You say you have been an appraiser of real estate for twenty-one years in the Borough of Manhattan?
A. I have.
Q. Have your appraisals been confined to any special part of the Borough?
A. No, sir.
Q. Have they been more largely in one section than in another?
A. No, sir; general appraisals throughout the city.
Q. Are you a member of any firm?
A. I am not.
Q. Have you been during that period?
A. No, sir; I have been for myself individually.
Q. Have you bought and sold real estate?
A. I have, some; but I am not a broker. I make a specialty of appraising.
Q. From what sources do you obtain your information from which

you express an opinion as to the value of real estate or form your estimate as an appraiser?

A. I keep records of all the transfers in the City of New York; I associate with different real estate men and ascertain the consideration, when it is possible, and keep myself generally posted in regard to sales, leases and everything pertaining to real estate.

Q. Have you ever sold any bulkhead property?

2815 A. Bulkhead property? No, but I have some for sale.

Q. Well, that may be, have you ever bought any?

A. I never bought any.

Mr. **Mathewson**: I object to the testimony of the witness as to values on the ground that he is not an expert qualified to testify according to the standards established, and he has not purchased and sold real estate.

The **Witness**: I have not said that I have not. I have said that I have sold real estate.

The **Master**: I will take it and give you an exception.

Mr. **Mathewson**: I will ask one more question. I misunderstood the witness.

Mr. **Burr**: I might say that I intend to ask this witness as to the bulkhead property.

Q. To what extent have you bought and sold real estate in the city?

A. I am connected with the United States Mortgage & Trust Company, and where we have a trustee sale I always appraise the property, and it is sold generally on my appraisal, consisting of property all the way from tenement houses up to private houses.

Q. Sold upon your appraisal?

A. Yes, sir.

Q. But have you bought and sold property personally?

A. Personally, yes, sir. And own property myself.

Q. And what did you mean by saying you were not a broker?

A. I am not a broker. I only do it for my own individual self, that is, as far as the question of purchasing and selling.

Q. To what extent have you purchased and sold?

A. Not so very much. I have bought 132, 134 and 136 West 41st Street, and sold it; I have bought 181 Lexington Avenue, 2816 and sold it; 86 Lexington Avenue, and several pieces throughout the city. That is, I speculate for my own individual self, as a rule. I am not a broker and avoid it as much as possible and absolutely refuse brokerage business.

Q. What is your connection with the United States Mortgage & Trust Company?

A. Superintendent of real estate.

Q. What are the duties of that position?

A. The duty is to look after loans, also to look after leases, &c., and buildings. We have all the way from tenements up to a two million dollar building to look after.

Mr. **Mathewson**: I press the objection again, Mr. Master.

The **Master**: I will overrule it.

Mr. **Mathewson**: Exception.

By Mr. **Burr**:

Q. You have been retained by the City to examine for the purposes of appraisal the property of the Consolidated Gas Company, including bulkhead property claimed by it?

A. I have.

Q. And you are familiar with the exhibit which has been offered in evidence here, Exhibit 48?

A. I am.

Q. We will take up that exhibit and examine with regard to each parcel, taking first the parcel of property, Block 1643, situated at the southwest corner of Lexington Avenue and 116th Street. Will you give me the dimensions of that property and state what in your opinion is the proper value of that piece of property?

A. It has a dimension on 116th Street of 80 feet and on Lexington Avenue of 100.99 feet, and is practically three full city lots.

Q. What is the value of it?

A. $84,386.40.

Q. Are there any buildings on it?

2817 A. There is none except one little wooden structure which adds nothing to the value of the property.

Mr. **Mathewson**: That appears to be exactly to a cent what the testimony of Mr. Thompson is.

The **Witness**: We examined it together and agreed exactly as to the valuation of it; in fact we have examined it three times together.

Q. Did you say three times together?

A. We did, at least three times together.

Q. When?

A. We examined it twice for the Consolidated Gas Company and once for the City of New York, which was here about—some time ago.

Q. You examined it for the Consolidated Gas Company?

A. I did.

Q. How long ago is that?

A. Nearly two years ago, in the year of 1904, anyway.

Q. Take the next parcel as it appears on page 1 of Exhibit 48, Block 1642, being the parcel situated on 114th Street, between Third Avenue and Lexington Avenue, and describe that property and the buildings, if there are any, and give your valuation of it.

The **Master**: As all the other witnesses have given a description and the dimensions of the property, is it necessary to go over it every time. So long as you get the block numbers and identify the lots, is it necessary to go over all the description?

Mr. **Burr**: I thought Mr. Mathewson might require it to show that this man had familiarized himself with the property.

Mr. **Mathewson**: I do not think to that extent, but it seems to me it might be proper to say, facing so many feet on Third Avenue and so many on 114th Street.

2818 Mr. **Burr**: And whether there are any buildings on it.

Mr. **Mathewson**: Yes.

A. Block 1642, it has dimensions on Third Avenue of 25 feet 2¾ inches by 150 feet deep; that is, it is equal to three full city lots, one on Third Avenue and two on 114th Street.

Q. Give the valuation, please?

A. $59,104—No, $74,104.00.

Q. Is not this your figure for that parcel?

A. No, I am mistaken, it is $89,104.00.

Q. Are there any buildings on that property?

A. There are two buildings.

Q. Does that amount which you have just given include the buildings?

A. It does.

Q. Have you made any separate valuation of the buildings?

A. I have.

Q. What is that valuation?

A. The buildings $15,000.00 and land $59,104.00.

The Master: That does not foot up.

The Witness: No, $59,104.00, and buildings $15,000.00.

Mr. Mathewson: Mr. Thompson testified that the land was $74,104.00, and buildings $15,000.00, making $89,104.00, or the total which you gave.

The Witness: Northeast corner of Third Avenue and 114th Street, containing 2,592 square feet, at $12.00 a foot, would be $31,104.00. I have got two inside lots on 114th Street at $14,000.00 each, $28,000.00.

By the Master:

Q. The first figures you gave were right, $74,104.00 for the land and the buildings?

A. Yes.

2819 Q. Of that $15,000.00 is buildings?

A. Yes.

Q. Mr. Thompson corrected his error on cross-examination?

A. Yes.

By Mr. Burr:

Q. What is the correct count?

A. $74,104.00.

Q. Take the next parcel, Block 870, situated at the corner of Irving Place and 15th Street. What does that parcel consist of?

A. Situated on the southeast corner of Irving Place and 15th Street. It is improved by a 4-story, really a 3-story and basement building, used for the general offices of the Consolidated Gas Company. Next to that is a 4-story building.

Q. What is the value of it?

A. The value of the property is $196,491.20.

Q. Does that include the buildings and all?

A. It did.

Mr. Mathewson: Well, in each case through this, as you give valuations including buildings, do you include the same amount that Mr. Thompson did in his appraisal?

The Witness: Merely in the buildings. We differed considerably in different parcels as to the land, but as far as the buildings are concerned, we examined them together and practically agreed as to the value of the buildings.

Q. Take the next parcel on page 1 of Exhibit 48, Block 239, the property situated on Elizabeth Street and Hester Street, and briefly describe what property it is.

A. The property has a front of 100 feet on Hester Street and 150 feet on Elizabeth Street. There are practically four lots on Hester Street and two lots on Elizabeth Street. The Hester Street property
is a two-story and basement building used for offices and there
2820 is another small building in the rear—not a small building;
in fact, it is a building about 50 feet deep, used for storage for pipe and a stable and other things like that, in connection with the gas company.

Q. What valuation do you put upon that parcel?

A. $167,500 for the land. In my opinion the buildings did not add anything to the market value of the land.

Q. On page 2 I call your attention to Block 972, an irregular piece on 15th Street, between Avenue A and Avenue B. Will you describe that property and state what, in your opinion, is the just valuation of it?

A. Situated on the southerly side of 15th Street, distant 350 feet westerly from Avenue B. It is an irregular shape and has a frontage of 13 feet on 15th Street, and as near as I can judge from the dimensions of it—I have divided it up into two separate parcels——

By Mr. Mathewson:

Q. It is about 150 feet on the southerly side?

A. Yes, and on the easterly side it has 106.70 feet and on the westerly side 10.50 feet.

By Mr. Burr:

Q. What is the value?

A. The total for the property is $12,279.39.

The Master: Could you not make it 37 cents?

Mr. Mathewson: Mr. Thompson's value was 37 cents.

The Witness: Thirty-seven cents, yes.

Q. Take the next parcel, Block 985, running through from 17th to 18th Street on Avenue C and Avenue B and describe that parcel.

A. Property situated between Avenue B and Avenue C. It is
situated between 17th and 18th Streets, and has a frontage
2821 on 18th Street of 350 feet and the same distance on 17th
Street, or equal to twenty-eight city lots, at $7,000 per lot, $196,000.

Q. Any buildings on it?

A. No buildings on it.

Q. Now take Block 982, the parcel running through from 14th to 15th Streets, between Avenue- C and D.

A. The northwest corner, $12,000 a lot, and there is a little more than a full lot there; in my opinion a full lot, 2,500 square feet would be worth $12,000, and this lot has 2,814.38 square feet at $4.40 a foot, or $12,832.72.

Q. Well, give us the total valuation?

A. $255,012.10.

Q. Take Block 989, Lot 1, and describe that and give its value.

A. It is situated between Avenue C and Avenue D. They own the whole block with the exception of the center; in other words, they own—I shall have to describe that, Mr. Burr, in order to get that right.

Q. Go ahead.

A.—

I have taken the northeast corner of Avenue C and 15th Street, 2,840.21 square feet at $4 a foot equal to $11,000 a lot or	$11,360.80
Lot adjoining the corner of 15th Street, 2,839.10 quare feet, at $3.45 would be	9,794.90
Four inside lots of the same dimensions at $3.30 would be	37,476.12
Lot adjoining corner of 16th Street, taking the same number of square feet, which is 2,839.10 at $3.45, would be	9,794.90
Southeast corner of Avenue C and 16th Street, contains 2,840.21 square feet at $4 a square foot	11,360.80
I have taken ten street lots there at $6,000 a lot, which would be	60,000.00
And the total for that portion would be	$139,787.52
2822 The southwest corner of Avenue D and 16th Street, 2,349.62 square feet, at $3.60 would be	8,458.63
Lot adjoining the corner of 16th Street, 2,348.71 square feet, at $2.94, would be	6,905.21
Four inside lots, 2,348.71 square feet each, would equal 9,394.84 square feet, at $2.80	26,305.55
Lot adjoining the corner of 15th Street, 2,348.71 square feet, at $2.94	6,905.21
Northeast corner of Avenue D and 15th Street, 2,349.62 square feet, at $3.60, would be	8,458.03
Eight street lots, $6,000 a lot	48,000.00
	$105,032.63
Or a total for the whole block of	$244,820.15

By the Master:

Q. How is that subdivided between Lots 1 and Lot 26?

A. Lot 1 is $139,787.52, and Lot 26 is $105,032.63.

By Mr. Burr:

Q. Now take Block 991, Lots 26 and 50.

A. I think there are two 991's.

Q. Take the one bounded by Avenue D, Tompkins Street, East 15th Street and East 16th Street?

A. That is an irregular plot situated between 15th and 16th Streets and Avenue D and Tompkins Street which I valued at $115,683.27.

Q. Take the other parcel also appraised in Block 991 between 14th and 15th Streets?

A. Situated between 14th and 15th Streets, Avenue D and Tompkins Street, valuation $177,435.52.

2823 Q. Now I call your attention to Block 988, being the parcel embracing block between 14th and 15th Streets, Avenue D and Avenue C.

A. Block 989, situated between 14th and 15th Street-, Avenue C and Avenue D, taking in the whole block, which I valued at $383,873.15.

Q. Now take Block No. 688, on page 3 of Exhibit 48, and describe that parcel, stating what in your opinion is the value of it?

A. Block 688, situated between 16th and 18th Streets, Tenth Avenue and the marginal street, my valuation is $322,187.20.

Q. Now take the parcel just above, Block 689.

A. 689 is situated between 17th and 18th Streets, Tenth Avenue and the marginal street, which I value at $402,347.20.

Q. And the parcel just above that, Block 690, between 18th and 19th Streets and Tenth Avenue and the marginal street.

A. It takes in that whole block with the exception of a portion of 19th Street, which I value at $413,822.52.

Q. Now I refer you to Block 691, on page 3 of Exhibit 48, 20th Street and marginal street.

A. That is situated between Tenth Avenue, marginal street, 109 feet 8 inches on 20th Street and 119 feet on 19th Street, which I value at $164,479.20.

Q. Now take Block 716, Lot 14, and just describe its location?

A. It is situated on the north side of 18th Street, a distance of 275 feet east of Tenth Avenue. It is three full city lots. In my opinion it is worth $12,000 a lot, or $36,000 for the three.

Q. Now take Block No. 715.

A. That is situated on the south side of 18th Street, a distance of 150 feet from Tenth Avenue, and my unit of value is the same there, $12,000, or $108,000 total value. There are nine full city lots.

Q. Now take Block No. 951, on page 4 of Exhibit 48, situated on the southerly side of East 20th Street, between Avenue A and First Avenue.

2824 A. Yes, sir; it is situated on the south side of 20th Street, distance 94 feet west of Avenue A. Seven full city lots; in my opinion worth $7,000 each, or $49,000 for the plot; and I add $10,000 for the buildings, making $59,000.

Q. Now take Block 952.

A. That takes in the whole block with the exception of the First Avenue frontage, which I place value on of $350,200.

Q. Were there buildings on that?

A. Yes, sir. I add $20,000 for the buildings, making a total of $350,200. Do you wish me to describe the buildings?

Q. Yes, you might?

A. No. 333 Avenue A, an old four-story brick tenement with about 20 feet front, occupied by two families employed by the Gas Company. In my opinion it adds to the market value of the land about $3,000.

No. 335 Avenue A, an old four-story brick building, 19 feet front, which adds to the market value of the land in my opinion about $3,000.

No. 341 Avenue A, southwest corner of 21st Street, of a plot 65 x 94; a two-story brick machinery building, which adds to the market value of the land about $6,000.

No. 327 Avenue A, a four-story building on plot 69 feet 6 inches by 70 feet, used as storage house; value about $6,000.

By Mr. Mathewson:

Q. That makes how much all told for the buildings?

A. Makes all told for the buildings, $20,000.

Q. That would leave $330,000 for the land?

A. $330,200 for the land, sir.

By Mr. Burr:

Q. Wherever there are any buildings on any of these parcels you might briefly refer to them, or structures of any kind.

A. Yes.

Q. Take Block 953, parcel comprising the whole block
2825 between First Avenue and Avenue A, 21st and 22d Streets.

A. Parcel 953 takes in the whole block from First Avenue to Avenue A, and from 21st to 22d Street. I value it at $403,000.

Q. Are there any buildings on that?

A. There are no buildings on that; that is, which in my opinion add anything to the value of the land.

Q. Now take Block 979, on page 4 of Exhibit 48.

A. Block 979 is situated between 21st and 22d Streets, Avenue A and the marginal street, which I value at $401,963. There is a one-story building on it used by the Gas Company, which in my opinion adds nothing to the market value of the land.

Q. Now take Block 978.

A. Block 978 is situated between Avenue A and Avenue B, and 20th and 21st Streets, and takes in the whole block with the exception of a parcel in the centre of the Avenue A frontage, about 23 feet in depth by 100 feet. The land I put in at $389,264. There are some buildings on that. No. 326 Avenue A, corner of 21st Street, a four-story tenement, store on first floor vacant. In my opinion the building is worth about $4,000.

Q. What is your total valuation of that parcel?

A. And there are two more buildings on the avenue, two tenements; they are worth about $8,000, or $4,000 each. My total for the whole block is $411,264. All told the buildings in my opinion, add about $12,000.

Q. Now, take Block 987, an irregular piece fronting on the marginal street, between the marginal street and Avenue B and 20th and 21st Streets.

A. Block 987 is situated between Avenue B and 20th and 21st Streets and the marginal street. In *In* my opinion it is worth $83,873.96.

Q. Any buildings?

A. No buildings on it that add anything to the market value, in my opinion.

2826 Q. Now, take Block 1090, on page 5, of the Exhibit 48, on 42d Street, Lot No. 23, west of 11th Avenue.

A. 1090, yes, sir; situated on the north side of 42d Street, a distance of 100 feet west of 11th Avenue. There are six full city lots at $12,000 each, making $72,000. A one-story building there that I did not think added anything to the market value of the land.

Q. Take the next parcel, Block No. 1071?

A. 1071 is situated on the north side of 42d Street, a distance of 225 feet east of 11th Avenue. There are four full city lots worth $13,000, in my opinion, each, or $52,000. Those lots are vacant.

Q. Now, take Block 1070.

A. Block 1070 is situated on the north side of 41st Street, a distance of 200 feet from 10th Avenue. There is a one-story brick building which, in my opinion, adds nothing to the market value of the land. There are eight full city lots at $10,000, or $80,000.

Q. Now, take Block No. 1089, between 41st and 42d Streets and west of 11th Avenue.

A. Block 1089 takes in the whole block between 41st and 42d Streets, 11th and 12th Avenues. Now, I value that in two ways; assuming that the Gas Company does not own 12th Avenue, I put that plot in at $599,500. Assuming that they do own it I put it in at $779,500. In other words, 10 lots at $11,000 each on 42d Street would be $110,000; 10 lots on 41st Street at $7,000 would be $70,000 or $180,000 for the portion which is occupied as Twelfth Avenue.

Q. Take Block 1092, on page 6 of the Exhibit.

A. Block 1092 takes in the whole block between 11th and 12th Avenues with the exception of the 11th Avenue frontage and one lot in 45th Street, being 28 lots on 44th Street at $8,000 each, which would be $224,000; 27 lots on 45th Street at $7,500 each, which would be $202,000, or $431,000 for the property. Now that is assuming the Gas Company does not own 12th Avenue——

2827 By Mr. MATHEWSON:

Q. How much of that is for buildings?

A. Well, the buildings—there are three little buildings on 306, 308 and 310 West 45th Street, one of them 16 feet 8 inches by 45 feet, a three-story brick building, the other one is a two-story brick building, with an extension. The land I put in at $581,500. The buildings, in my opinion, add——

Q. We are talking now of the property, assuming the company does not own the street. You gave $431,000 as the value?

A. Yes, sir.

Q. My question was how much of that was for buildings?

A. $4,500. The land was $426,500. And the buildings, in my opinion, add about $4,500 to the market value of the land.

By Mr. **Burr**:

Q. Have you given two figures there?

A. Not yet. Now, assuming that the Gas Company does own 12th Avenue, it would be 10 lots on 44th Street at $8,000 each or $80,000; 10 lots on 45th Street at $7,500, which would be $75,000, or a total for the land and buildings of $586,000.

By Mr. **Mathewson**:

Q. The same buildings as before being included, $4,500?

A. The same buildings as before being included, $4,500.

By Mr. **Burr**:

Q. Have you considered that as upland?

A. I have considered that as upland, yes, sir.

Q. You have not considered it as land under water?

A. No, sir. I have not.

2828 Q. Now take the block between 45th and 46th Street- and Eleventh Avenue and the river.

A. Block No. 1093?

Q. Yes.

A. That block is situated between 45th and 46th Streets and takes in the Eleventh Avenue frontage, and twenty-three lots on 45th Street and twenty lots on 46th Street. Assuming that the Gas Company does not own Twelfth Avenue it would be $332,500. Assuming that they do own it it would be $487,500.

By the **Master**:

Q. Was your valuation of the other one the same as Mr. Thompson's?

A. Just the same. We examined the property together several times and came to the same conclusion.

By Mr. **Burr**:

Q. What did you say was the valuation if the city owned Twelfth Avenue?

A. $487,500.

Q. And if the Gas Company owned Twelfth Avenue what is the value?

A. Well, I mean—no—if the city owned it it would be $332,500, but assuming the Gas Company owns it it would be $487,500.

Q. Now take page 7 of Exhibit 48, Block 1457, between 62d and 63d Streets and First Avenue and Avenue A?

A. Situated between Avenue A and First Avenue and between 63d and 62d Streets; occupied by two gasometers, one in process of construction, not yet finished—it was not the other day when I was up there. There are nineteen and one-quarter city lots at $8,000, or $154,000.

Q. The next parcel is Block 1455, on the same page of the exhibit, parcel commencing on Avenue A from 60th to 61st Street?

A. Parcel 1455. My valuation on that is $194,000.

2829 Q. The next parcel is Block 1474, an irregular piece at the corner of Avenue A and 60th Street?

A. Yes. My valuation on that is $26,150.

Q. Now turn to page 8 of the exhibit, and I call your attention to Block 1177, which is located between West End Avenue and the Hudson River Railroad and 65th and 66th Streets?

A. Yes, sir. My valuation on that is $172,719.60.

Q. Now go to the other parcel, Block No. 1157, that takes in the whole block between West End Avenue and Amsterdam Avenue?

A. That takes in the whole block between West End Avenue and Amsterdam Avenue and 65th and 66th Streets. My valuation on that is $602,844.

Q. Now there is a small parcel on the southerly side of 65th Street, Block 1156, between the same avenues?

A. Yes, sir.

Q. What is the value of that parcel?

A. $40,000. That is $32,000 for the land, and the buildings $8,000, making a $40,000 total.

Q. Now we will turn to page 9 of the exhibit and I call your attention to Block 1670, which is a parcel embracing the whole block between Second Avenue and 98th and 99th Streets.

A. Yes, sir, taking in the whole block from Second Avenue to First Avenue and 98th to 99th Streets. My valuation on that is $496,576.

Q. Are there any buildings on that property?

A. None, sir, in my opinion, that add anything to the market value.

Q. Now, take the parcel, Block No. 1692, appearing on the same page, bounded by the marginal street, First Avenue and 98th and 99th Streets.

A. Takes in the whole block with the exception of the Second Avenue frontage.

Q. That is an irregular piece, is it not?

A. 1682?

Q. No. 1692.

A. Oh, 1692? That is an irregular piece situated between
2830 First Avenue and marginal street, 98th and 99th Streets. My valuation on that is $201,358.

Q. That does not include bulkhead or pier values?

A. It does not. I have not so far included any bulkhead or pier properties in any of the parcels I have testified to. I have made a separate item of them.

Q. Take Block 1683 on page 10 of the exhibit, which appears to be an irregular piece of parcel situated between First Avenue and Second Avenue and 111th and 112th Streets.

A. Yes.

Q. Briefly describe that and its values, please.

A. It is situated west of First Avenue, having a frontage on First avenue of 100 feet and a depth of 225 feet on 111th Street, running through to 112th Street; vacant, with the exception of a small brick building in the rear of lot facing on 111th Street; on the 112th Street side that is vacant. Value of that property in my opinion is $109,644.

By Mr. MATHEWSON:

Q. Well, you have got in 25 feet more than Mr. Thompson did?
A. Yes, there are only 3 lots on First Avenue.
Q. 75 feet 11 inches?
A. Yes, sir.

By Mr. BURR:

Q. Take Block 1682, between 110th and 111th Streets and from First Avenue to Second Avenue.
A. That is situated between 110th and 111th Streets, First Avenue and Second Avenue, with the exception of the Second Avenue frontage. My value on that is $395,288.
Q. Take Block 1704 next.
A. Yes, sir; that takes in the whole block between 110th and 111th Streets, First Avenue and Pleasant Avenue.
Q. Are there any buildings on that?
A. No, sir.
2831 Q. Yes, there are some buildings on that, aren't there?

Mr. MATHEWSON: Mr. Thompson testified there were buildings there.

A. There is a one-story brick and also a frame building but I have not added——
Q. You mean you have disregarded the buildings entirely?
A. Yes, sir; in my opinion they add nothing to the market value of the property.
Q. What do you say the valuation of that was?
A. The valuation of the whole property is $281,584.
Q. That does not include the bulkhead, does it?
A. It does not, sir; nor the land under water.
Q. The next parcel appears on page 11 of the Exhibit, Block No. 1999?
A. 1999; yes, sir. That is situated on 132d and 133d Streets, between 12th Avenue and Broadway——
Q. And the Boulevard?
A. Well, it is really called Broadway now, sir. That takes in the whole block with the exception of the Broadway frontage. In my opinion it is worth $397,800. The improvements, in my opinion, do not add anything to the market value of the land.
Q. Turn to page 12 of the Exhibit and I call your attention to Block 2175, situated on Kingsbridge Road and Sherman Avenue.
A. Yes, sir.
Q. What is the value of that?
A. $97,879.50.
Q. That, I think, includes all the property?
A. Yes, sir; except bulkheads and land under water.

Q. What is your total valuation of this?
A. This is for the upland and buildings only.

By Mr. **Mathewson**:

Q. Excluding bulkheads, land under water, docks, etc.
A. Yes, sir. The total value is $9,822,565.74.

2832 By the **Master**:

Q. On what basis does that cover the 12th Avenue property?
A. That is assuming that the Gas Company does own 12th Avenue.

By Mr. **Burr**:

Q. You have not given the value of Shady Side?
A. No, sir; I have not. I treat that practically as really water front property.

Cross-examination by Mr. **Mathewson**:

Q. For Block 1643 you give the same valuation $84,386.40, as was given by Mr. Thompson.
A. Yes, sir.
Q. Did you reach the figures by the same valuations in detail as he did?
A. I think the chances are that we did, that we examined the property together and we concluded that that land was worth so much, that that property was worth so much.
Q. Well, will you state the details of the valuation by which you reached that total?
A. Yes; 1 inside lot at $20,000; 1 adjoining lot next to the corner, I have added ten per cent., which would be $22,000; 1 corner lot, in my opinion, situated where that particular piece of property is on a thoroughfare, that is worth 75 per cent. more than an inside lot, and I have given you the benefit of the corners, in other words, giving more than a corner, 3,027.60 square feet at $14 a square foot, which would be $42,386.40, or a total for the property of $84,386.40.
Q. Where you have given the same total as Mr. Thompson I do not wish to take time to examine you specifically on each block and ask you to specify the detail which you employed to reach the total if you are able to say you reached the total by the use of the same detail that Mr. Thompson did.
A. In a great many of them; in several we differed.

2833 Q. Where you reached exactly the same totals that he did, did you then use the same method in each case?
A. Yes.
Q. So it is not necessary for me to take up those now in examining you, is it?
A. No, sir.
Q. That is right? isn't it?
A. It is.
Q. You have present here the detail showing exactly how you reached those totals in each case, I suppose?

A. I have, yes, sir, every one. Those I worked out myself.

Q. But where your total valuation coincides exactly with Mr. Thompson's you worked them out together?

A. Yes, sir.

Q. And your method is the same?

A. Exactly the same. We worked them out jointly. In fact we worked them all together but did not agree on some.

Q. And where you did not agree on them all you have so stated in your testimony?

A. I have.

By the **Master**:

Q. In all cases where you do not agree your figures seem to have been higher than Mr. Thompson's?

A. Yes, sir.

By Mr. **Mathewson**:

Q. Taking Block 1642, office buildings, etc., of the Consolidated Company at the northwest corner of Third ave. and 114th Street, you have figured land at $59,104, and the buildings at $15,000, making a total of $74,104?

A. We did, sir.

Q. You do not wish to be understood as saying that those buildings could be reproduced for $15,000, do you?

A. It is not the structural value of them at all, sir.

Q. They could not in your judgment be reproduced for that?

A. In my opinion they would cost a good deal more.

2834 Q. And what you have taken in these cases where you have included buildings is what the buildings on the land would add to the value of the land if the land were sold under ordinary circumstances?

A. In my opinion, yes, sir.

Q. In your opinion?

A. Yes, sir.

Q. I am glad it is your opinion, because Mr. Thompson said he knew in some cases, and I doubted it.

A. I prefer to say it is my opinion, sir.

Q. In other words, Mr. Thompson testified that his original figures of two years ago also were made up for the purpose of testifying in *certiorari* proceedings to reduce the amount of taxes; is that your case as well?

A. It was my case as well, sir.

Q. You and Mr. Thompson were associated in that case, were you not?

A. We were engaged by Shearman & Sterling, for the Consolidated Gas Company.

Q. And you understood that the tax law of the City of New York, as provided in the charter, specified that the assessor should state the amount for which under ordinary circumstances the real estate would sell?

A. I did well, sir.

Q. So no matter what the structural value of the buildings on the property was, or no matter what the value might be to the Company itself in using the buildings, you merely took that value of the buildings which would indicate the amount for which the property would sell beyond the bare value of the land if the property were sold, is that right?

A. The building may be very useful to the Company, but in my opinion what it really added to the market value of the land is the value I placed on the property when I appraised it.

Q. And you have on that basis simply added now as Mr. Thompson did, I assume, the increase in value which took place since
2835 you made your original figures, say two years ago.

A. Well practically three years, for the reason that the values——

Q. Well, whatever it may have been.

A. Yes, sir. The *certiorari* was for 1903, and these are really 1906 values.

Q. For instance, taking the manufacturing plant of the Consolidated Gas Company, if that land was sold with improvements in other directions it would not be your idea that the manufacturing plant of the Company would add anything particularly to the value of the land to a purchaser?

A. In that same place it would be a detriment because it would cost something to remove them.

Q. And in this case you would not only add nothing to the value of the land but you would rather deduct something from it?

A. No, I would not, I would simply ignore the structures—I could not call them improvements—ignore them and treat it as vacant land.

Q. Your idea would be in taxation, the amount fixed would be the amount of the value of the land practically nothing added for the plants if they were to be sold under ordinary circumstances?

A. I would rather not pass an opinion as to taxation.

Q. No, but that would be the theory on which you would testify in reference to taxation?

A. That is the theory I should appraise it on, yes, sir.

Q. For the purposes of taxation?

A. I don't say so.

Q. That is the theory on which you would appraise it if you were determining the amount for which under ordinary circumstances it would sell?

A. It would sell for, yes, sir.

Q. And that is the method which you did pursue in conjunction with Mr. Thompson in making up your figures as you have presented them here?

A. It was the method I pursued, yes, sir.

2836 Q. Now in reference to Block 870, the offices at Irving Place and 15th Street, your total for the buildings and land was how much?

A. $196,491.20.

Q. Of which you allowed buildings, $27,000, as the amount which would add to the selling price of the land?

A. I did.

Q. And you did not allow $27,000 for the buildings on the theory that they could be reconstructed for that amount?

A. I am positive they could not. Being familiar with buildings I know they could not. What I mean is the structural value.

Q. Yes, exactly.

A. Yes, they could not be reproduced for that.

Q. Now take next the Block No. 239 at the northeast corner of Hester and Elizabeth Streets. You say you have appraised that at $167,500 and have allowed nothing for buildings. Now the office buildings of the company on that corner are worth something, aren't they?

A. They might be to the Gas Company, but my opinion is that they don't add anything to the market value of the land. That neighborhood is entirely devoted to tenements.

Q. In other words you think if the land was sold that the purchaser would remove those buildings and put something in their place?

A. He would not consider the buildings at all, in my opinion.

Q. Considering now Block No. 972, the irregular piece on Avenue A west of Avenue B—the very irregular piece with a small frontage on 15th Street west of Avenue B?

A. Yes, sir.

Q. It appears that that property is appraised by you at $12,279.37, but it is assessed for $20,000?

A. Yes, sir.

Q. For taxation?

A. Yes, sir.

Q. Did you consider that in reaching your conclusion of value?

A. I never consider assessed valuations at all in reaching value.

2837 Q. Isn't it your experience, speaking generally, that the values fixed by the assessors for the purposes of taxation are less than the actual value of the land?

A. Ordinarily they are. I have known in several cases where it has been far above.

Q. But as a general proposition my question would be answered in the affirmative?

A. Oh, I think in the majority of cases, yes; but it has no real bearing, in my opinion. In fact in making up my values I never look at the assessed valuation at all. I do not know what it is assessed at to-day.

Q. It is in evidence that it is $20,000.

A. I have not the slightest idea, sir.

Q. Take Block 985, which you valued at $196,000, between 17th and 18th Streets. It is in evidence there are certain coal sheds and a coal office there which would cost something to construct. I assume, as you say you included nothing for the buildings, that you allowed nothing for them?

A. Nothing. Simply valued it as vacant land.

Q. Take Block 982, on which you have placed a valuation of $255,012?

A. Yes, sir.

Q. Give the detail by which you reached that total.

A. Northwest corner of Avenue C and 14th Street, I put a lot in there at $12,000, there being 22,814.38 square feet at $4.40, which would be $12,832.72. The adjoining lot, same number of square feet, at $3.50, would be $9,846.56; there are four inside lots, or 11,253.16 square feet, at $3.20, which would be $36,010.11; an adjoining corner on 15th Street, 2,813.29 square feet, at $3.40, or $9,565.19; northwest corner of Avenue C and 15th Street, 2,814.38 square feet, at $4 a square foot, which would be $11,257.52; thirteen inside lots on 14th Street, at $7,000 each, which would be $91,000; thirteen inside lots on 15th Street, at $6,500, which would be $84,500.

Q. You have given the total as $255,012.10 for this Block 982?

A. Yes, sir.

2838 Q. And it appears in evidence it has been assessed at $275,000 for the land only. Does that affect your estimate of its value at all?

A. It does not.

Q. You have given the detail by which you reached your total of $244,820.15?

A. Yes, sir.

Q. For two parcels in Block 989, and it appears in evidence that the assessed value of the land is greater slightly than the total that you have given for your value, to wit, $245,000, and I ask you the same question, whether that modifies your judgment of the value of that plot?

A. The assessment, sir, would have no bearing at all on the value as far as I am concerned. I really don't know what they are assessed at.

Q. Take Block 991, Lot 26, between Tompkins Street and Avenue D, and East 15th and East 16th Streets. It appears that that is assessed at $115,000 for taxation?

A. Is that 991-A or 991-B?

Q. Twenty-six, the upper one, the small lot, $115,000, which is exactly what you give as the structural value?

A. Market value rather.

Q. The market value I mean. And this assessment is for the land alone?

A. It is, sir.

Q. It is in evidence that there are certain coal storage structures and buildings on this plot, and I understood you to say you had included nothing in your $115,683.27 for those?

A. No, sir, I did not.

Q. And the fact that the land alone is assessed at substantially the figure you give would not affect your judgment at all?

A. No, it would not.

Q. Now will you give the details referring to Block 991, lots 1 to 47, being bounded by 14th and 15th Streets, Avenue D and Tompkins Street, by which you reach $177,435.52 as your total estimate?

A. Yes, sir, I have taken the northeast corner of Avenue D and
14th Street containing 2,581 square feet at $4 a foot, which
2839 would be $10,328; adjoining the corner of 14th Street would
be the same number of square feet at $2.94, which would be

$7,588; four inside lots the same number of square feet, 2,581, at $2.80, and there are 10,324 square feet at $2.80, which would be $28,907.20; adjoining the corner of 15th Street, 2,581 feet square at $2.94, which would be $7,588; southeast corner of Avenue D and 15th Street, 2,582 square feet at $3.60, which would be $9,295.20; four lots on 15th Street $5.500 per lot, would be 22,000; southwest corner of Tompkins Street and 15th Street, 2,178.21 square feet at $3.20, which would be $6,970.24; adjoining corner of 15th Street, 2,475.70 square feet at $2.52, which would be $6,238.76; four inside lots equal to 14,596.51 square feet at $2.40 a foot, or 27,851.60; adjoining corner of 14th Street there are 3.322.50 square feet at 2.52, which would be $8,372.70; northwest corner of Tompkins Street and 14th Street, 3,632.30 square feet at $3.40 per square foot, which would be $12,315.82; five lots on 14th Street at $6,000 per lot, which would be $30,000; total $177,435.52.

Q. Are you able to point to the sale of any lots in this vicinity on 14th Street at $6,000 per lot, which is the figure you have assumed?

A. Yes, if you allow me to refer to the sales.

Q. Yes; I mean within the last year or so—not too far back.

A. No, I can not.

Q. Well, how far back is there a sale?

A. You mean on that side of the street, between 13th and 14th Streets.

Q. No, on 14th Street is my question?

A. No, not on 14th Street.

Q. I say taking a lot on 14th Street?

A. No, sir.

Q. Is 14th Street a broader street than 15th Street, 16th Street and the other side streets thereabout?

A. It is a little broader.

Q. Now it appears that this Block 991, Lots 1 to 47, which
2840 you have testified to be worth $177,435.52 were assessed at a
larger sum for taxation, to wit, $180,000, and that as we have seen practically all the property on page two of Exhibit 48, to which you have testified has been assessed for taxation for a higher figure than you have given as the present value. Does that circumstance, considered as a whole, affect your opinion as to the value of this property?

A. It does not, sir.

Q. Are these slips as to valuations, or rather slips as to sales and prices obtained for different lots and sections, the same ones as Mr. Thompson had here?

A. The same ones. We got them up together; some of them belong to me and some to him.

Q. Well, there have been no additions made since he testified, I suppose, to these sales included in those little books?

A. Not since to-day.

Q. Then I do not think I will need to ask you about that, as I questioned him quite fully.

A. Yes.

Q. Referring to the 18th Street property, between 16th and 20th

Street West, the marginal street and 10th Avenue, your figures appear to be identical with those presented by Mr. Thompson?

A. Except——

Q. Were you not retained by the City for the purpose of appraising this particular property or testifying in regard to it in connection with the 18th Street improvements?

A. I was not.

Q. Did you testify in that regard for the City?

A. I did not.

Q. Referring to Block 715 on the south side of 18th Street, east of 10th Avenue, what buildings did you find there. You said you did not find any that you included as adding to the value of the land?

A. No, there is an old 2-story building that was on there and I did not think it added anything to the value of the land.

Q. Do you know what that was used for?

A. Used in connection with the Gas Company.

2841 Q. You don't know for what purpose?

A. No, sir; I do not. I did not really examine the building, for I did not think it was an adequate improvement and therefore did not add anything to the market value of the land.

Mr. Burr: Mr. Thompson said it was a stable. You don't know whether it was a stable?

The Witness: I do not. I think it was a stable for storage; they used it for storage of different things in connection with the gas plant.

Q. Did you make any estimate of the value of the land west of 10th Avenue, between 16th and 20th Streets, belonging to the Consolidated Gas Company as they stood, before the improvement took place?

A. I did not; no, sir.

Q. You have only appraised what is left?

A. I simply appraised what I found to be on that Exhibit 48.

Q. Now, your valuations for these parcels appear to be identical with Mr. Thompson's, with one or two exceptions.

A. Yes, there are several exceptions.

Q. One is——

A. I think there are eight or ten that we did not agree on.

Q. No, I say this particular parcel.

A. I beg pardon.

Q. I refer to the 18th Street property, so-called, on North River. I think you agree in every respect so far as that is concerned?

A. We do; yes, sir.

Q. In reference to the properties between 19th Street East and 22d Street East and First Avenue and the marginal street, you also agree in most cases, and I will call your attention to those cases in which you do not. The first is Block 952, where you give a valuation of $350,200 as against $333,520 by Mr. Thompson. 2842

Q. Will you give the detail by which you reached your total?

A. I have put in the corner lots on the avenue at $12,000 each, which would be $24,000; the 2 adjoining the corner $20,000, $10,000 each; 4 inside lots at $9,000 each, $36,000; 32 lots at $7,500 each, $240,000; 34 front feet—I have made a mistake there. Well, the remaining land was $10,200 or a total for the land of $330,200. Now, for the buildings I have added $20,000, making a total of the land and buildings of $350,200.

Q. How much does that make for the street lots, interior?

A. $7,500.

Q. The same on 21st Street as on 20th Street?

A. About the same; in my opinion there is no difference.

Q. Is not the property more valuable the nearer you get to 23d Street, generally speaking?

A. I don't think 23d Street has any bearing below the north side of 22d Street; in other words the property abutting 23d Street.

Q. Will you take Block 979 which you have estimated at $401,963 as against $338,086, and give me the details of your valuation?

A.—

I have taken the two corner lots at $12,500 each......	$25,000.00
Two lots adjoining the corner $9,000 each..........	18,000.00
Four inside lots at $3.50 a square foot.............	35,000.00
Forty-second Street lots at $7,000 would be..........	294,000.00
There are two gores on the marginal streets 7,885 square feet at $3.80.........................	29,963.00
Or a total of............................	$401,963.00

There is a 1-story gas building covering the plot.

2843 Q. You did not add anything to your valuation for this building?

A. I did not.

Q. Take the next block if you please, 978, which you valued at $411,264 against $326,518.60 as given by Mr. Thompson.

Q. Will you give the details of your valuation there?

A.—

Northeast corner of Avenue A.....................	$12,000.00
Lot adjoining the corner.........................	10,000.00
One inside lot—the Company does not own the whole front there and I have divided them up into lots or had my surveyors do it. There are 1,900 square feet at $3.60, which would be......................	6,840.00
The next would be 529 square feet in the rear of the portion that is not owned by the Company, at $3.60, which would be	1,904.40
Two inside lots 2,100 square feet each, or 4,200 square feet at $3.60 a square foot....................	15,120.00
Lot adjoining the corner of 21st Street, at $4 a square foot	10,000.00
Southeast corner of Avenue A and 21st Street........	12,000.00
Two corner lots $11,000 each.....................	22,000.00
Two lots adjoining the corner $8,000 each..........	16,000.00

Four inside lots or 8,400 square feet at $2.60 a foot would be	23,520.00
Then I have 37 1-5 street lots at $7,000 a lot	260,400.00
Or a total of	$389,264.00

Now there are some buildings on that property. There is No. 326, which is on the corner, 326 Avenue A, which is a 4-story 2844 tenement, stores and basement vacant; that is the stores were vacant, and I think one or two floors upstairs were occupied, and which would add in my opinion about $4,000. 328 and 330, two five-story buildings occupied by men employed in the Gas Company, and in my opinion they add about $4,000 each, or $8,000 for the two or $12,000 for the buildings, making a total for the whole property of $411,264.

Q. What is the frontage of these three tenement houses which you valued at $4,000 each?

A. I think they are full lots.

Q. Is either of them a corner?

A. One of them was, 326 was on the corner.

Q. Is not that worth more than the two interior lots?

A. I don't think the building is worth any more.

Q. Five-story tenement?

A. This was a four-story tenement on the corner. The inside ones are five-story, but in my opinion the value of the buildings is about the same.

Q. That would be $4,000 a piece for the five-story tenements?

A. Yes, sir. They are old buildings which have been build there for thirty years from my own knowledge, and I don't know how much longer.

Q. I assume it cost more than that to construct them originally a great deal.

A. Yes, a great deal more to construct them at the time they were constructed, also now. But they were an adequate improvement at that time and now they are not.

Q. And again you take merely what they would add to the value of the land if a purchaser came along for the land?

A. Precisely.

Q. Now, referring to this property in general, between East 19th Street and East 22d Street and east of First Avenue, it appears that Block 951, while you have given a land value of $49,000 is as- 2845 sessed at $50,000; Block 952, for which you have given a land value of $330,200, is assessed at $340,000 for taxation; Block 953, which you have valued at $403,000, is assessed for taxation at $500,000, and that Block No. 987, which you have testified is worth $83,876.96, is assessed for taxation at $86,000. Would not the fact that each one of these is assessed for more than your figures, and the fact that they are grouped together here as they are, indicate to you that you had undervalued them in your estimate?

A. It would not, sir.

Q. I call your attention to another circumstance, that is to say, that what is known as the 14th Street property, that is, between 14th

Street and 16th Street east, respecting which you have testified, and this property between 19th and 22d Streets east, that is to say practically all the property on the east side, you have placed at a lower figure than it seems to appear on the books of assessments for taxation. Would not that indicate to you that you have undervalued the property of the east side?

A. I really don't know what the assessment is, Mr. Mathewson.

Q. Well, it is in evidence——

A. But the figures I have testified to is what in my opinion the property is worth to-day.

Q. Well, I am simply calling your attention to the fact which appeared in evidence and ask, those being the facts as to the assessments for taxation, and the difference appearing to be largely on the east side, if that would not induce you to think that perhaps you had made a mistake in your valuations and put the valuation too low in this section.

A. It would not have the slightest effect, sir.

Q. What do you figure a lot in Block 1089, being the block between 42d and 41st Streets and west on Eleventh Avenue to be worth, facing on 42d Street, interior?

A. $11,000 each, situated where that is, between Eleventh and Twelfth Avenues.

2846 Q. You valued it as worth $11,000 assuming that Twelfth Avenue belonged to the city, to begin with?

A. No, sir; I did not.

Q. Did you not assume it at first as worth $11,000?

A. Yes, sir. I have made no difference.

Q. If Twelfth Avenue belonged to the city, there would be a corner lot at 42d Street and Twelfth Avenue, which you would have to consider. It would not be an interior lot?

A. No, it would not, if that was a fact, but Twelfth Avenue is not there at the present time and it is a question in my mind whether it would or would not, and I took the property just as I found it.

Q. Yes, but if you did not take the property as you found it for that purpose, but you assumed that Twelfth Avenue belonged to the city, and I assume, would be used by the city, then would not the lot at the corner of Twelfth Avenue which you assumed, and 42d Street be valued as a corner lot in any abstract, instead of an interior lot?

A. It would make some difference, Mr. Mathewson.

Q. Then if Twelfth Avenue does not belong to the city, you would have lots on the bulkhead and would not they be worth more than interior lots?

A. If they were not separated from the uplands, yes, but if Twelfth Avenue was cut through they would be——

Q. But I have asked a question, assuming that Twelfth Avenue was cut through, and you said it would be a corner lot. Now, I make the assumption that it is not cut through, that is, that the street belongs to the company. In that event the company would have lots on the bulkheads adjacent to its upland; and would not those lots be worth more than interior lots?

A. I do not think so.

Q. You don't think bulkheads are worth the same as interior lots, do you?

A. I don't think—it would only be used for one purpose, 2847 for unloading canal boats, etc. The piers might be worth more, but in my opinion the upland would not be worth more.

Q. Then your proposition is that lots on a bulkhead are worth no more per foot than lots on the interior of a block?

A. I say the bulkhead itself would be, but in my opinion the land here would not be (indicating).

Mr. Burr: Where do you mean by "here?"
The Witness: Twelfth Avenue adjoining the bulkhead.

Q. Not even the lot immediately adjacent to the bulkhead?

A. Possibly the one adjacent to it, possibly might be, but you would have to have a marginal street there in order to use your bulkhead and the lot adjoining that lot might possibly be worth a little more than one possibly fifty feet back.

Q. Why would it be necessary to have a marginal street there to use the bulkhead?

A. I think it would be to the advantage of the property; in other words, you would want to have access to the bulkhead.

Q. But if you owned the land right up to the bulkhead, which is the assumption upon which I am going, you need no marginal street to get to it?

A. Yes, but I don't think the particular location is adapted for that. I think it is too valuable for that. You could only use it for a factory or something of that sort if you utilized it, and the bulkhead would be only useful as a factory.

Q. You know it is being used right to the bulkhead by the Gas Company in connection with their business?

A. Yes, I admit it is very valuable to them in connection with the whole block.

Q. And is it not a fact that the location of this whole block, and with the pier extending out on the bulkhead, in respect to 2848 which you have not testified, gives a peculiar value to the Gas Company for its business?

A. I do not think so. I have assumed, Mr. Mathewson, that the city will cut Twelfth Avenue through; in other words, I have every reason to believe they will. They are building a sea wall now in a case I testified in between 42d and 43d Streets.

Q. I am assuming that the company owns up to the bulkhead line and of course I am assuming that the city if it does take the property, will have to pay whatever it is worth and I am trying to get at its value. My question, therefore, is directed to this point. Assuming that the company retains this property up to the bulkhead line, in connection with the pier, does it not make it a part-cularly valuable piece of property for the uses of the company.

A. I think it would for the purpose of manufacturing gas, but I have not assumed anything of the sort, knowing the fact that the city is going to cut through Twelfth Avenue and that I knew different.

Q. Well, if they did cut through Twelfth Avenue and the property in the street belonged to the company, you would assume that they would pay the company whatever under proper judicial proceedings would be found to be the value of the property?

A. In my opinion the city always pays what property is worth.

Q. I understand you have no more data here in reference to sales of individual lots in regard to any of this property regarding which you have been examined than Mr. Thompson had when he testified?

A. No, sir. We had those sales made up to date, and I have nothing new, that is, I have nothing new since Mr. Thompson testified.

Q. Taking Block No. 1092, between 44th and 45th Street- and west of Eleventh Avenue, you have included in your total of $431,-000, $4,500 for buildings?

A. Yes, $4,500 for buildings.

2849 Q. Will you describe the buildings which you have allowed at that amount?

A. The buildings were 606, 608 and 610 West 45th Street. One of them was 16 feet 8 inches by 45 feet, three-story brick with one-story extension. No. 606 was a small tenement house; in fact, they were three small tenement houses.

Q. Were they all the same width?

A. No.

Q. Give them to me.

A. One was 20 by 45; in fact, two of them were. There was only one 16 feet 8 inches by 45 feet.

Q. The others were 20 feet by 45 feet?

A. Yes, sir.

Q. Were they all five-stories?

A. Four-stories I have them.

Q. All four-stories?

A. Yes, sir.

Q. Did the yard extend to the centre line of the block?

A. It did.

Q. And three you have valued at $4,500 or an average of $1,500 apiece?

A. $1,500 apiece. In my opinion that is what they added to the market value of the land.

Q. You do not mean that that is what they originally cost I assume?

A. They cost a great deal more than that.

Q. Now, what do you give as the value of an interior lot on 44th Street and a lot on 45th Street and a lot on 46th Street, referring to Blocks 1092 and 1903, between 44th and 46th Street-, west of Eleventh Avenue?

A. In my opinion on 44th Street the land is worth $8,000; on 45th Street, $7,500; in my opinion it is worth a little more on 44th Street than it is on 45th Street on account of the gas.

Q. How much on 46th Street?

A. About $8,000.

Q. In adding to your estimate for these two blocks, made on the assumption that the city owns Twelfth Avenue, in order to get the

total which would result if the company owned Twelfth Avenue, you have simply taken the width of Twelfth Avenue and
2850 divided that into lots and taken as the value of each lot, the value of an inside lot, have you not?

A. Exactly what I did.

Q. Exactly the same as you did at 42d Street?

A. I did. I used the same method.

Q. And similarly, if Twelfth Avenue is to be cut through, you then would have corner lots instead of inside lots at the corners of these several streets and Twelfth Avenue?

A. You would.

Q. And your reply also would apply, I suppose, as to the lot, next the bulkhead lot if the Company owned Twelfth Avenue?

A. It would.

Q. If then a revision of figures was to be made on those theories, it would add somewhat to the figures you have given?

A. It would make a slight difference, sir, in favor of the Gas Company.

Q. Will you refer on page 8 of Exhibit 48 to Block 1156 which you have valued at $40,000 for four city lots, in which amount you have included $8,000 for buildings, and describe the buildings.

A. That is situated on the south side of 65th Street. This was a four-story building, occupied by men employed by the Gas Company, in very fair condition, and in my opinion has added about $8,000 to the market value of the land.

Q. Does this building cover the entire 100 feet front on 65th Street?

A. No, sir, it is only twenty-five feet, the remainder is vacant, seventy-five feet is vacant.

Q. Is that a five-story building, did you say?

A. Four-story.

Q. Now on page 10 of Exhibit 48, Block 1704, which you have estimated at $281,584 contains some brick buildings and frame structures for which I understand you have included nothing.

A. I have not, no, sir.

Q. They are used by the Company in its business?

A. They are.

Q. And do you think they would add nothing to the land
2851 if the land was sold.

A. In my opinion they would not.

Q. Does it modify your opinion that that block is assessed for $285,000 for land only, or more than your estimate?

A. It would not affect my opinion any whatever.

Q. What is the provision for plottage that you make, Mr. McHale, in considering the values of these large parcels belonging to the Consolidated Gas Company?

A. In my opinion, of course I valued them just as I found them as a large parcel. In my opinion an individual lot would not sell within ten per cent. to five per cent. of what I valued those at.

Q. Did you find the valuation of an individual lot, and then determine from that, the value of the entire parcel of lots if sold in small plots, and then add a certain percentage to those figures to represent plottage?

A. In some cases I did and in other cases it was a question of judgment. In a great many cases there had been really no transactions.

Q. In which of the blocks did you pursue the method I have indicated, that is to say, taking the value of individual lots and ascertaining the full values of the parcel by multiplication and then adding to that value a certain percentage for plottage?

A. I think I really did in the most of them.

Q. Have you the details showing the percentage that you added each time in such cases?

A. That I had in mind they added in the neighborhood of five to ten per cent. and in some places more than that.

Q. You do not catch my question. Have you the details here showing that?

A. No, I have not.

Q. Then you are unable to state what details you employed in each individual instance to reach a valuation upon which you added the percentage for plottage?

A. No, I do not state anything of the sort.

2852 Q. Well?

A. I state just the reverse, that I compared sales very carefully, compared sales wherever I could find them.

Q. I don't think you have followed me. I asked you whether you have for any block here a statement of the estimate which you made of the value of individual lots and indicating that you multiplied that by the number of lots in a plot and reached a valuation upon which valuation you added five or ten per cent. as plottage value to reach your total, whether you have such detail here in reference to any block?

A. No, sir, I have not.

Q. Now Mr. Thompson testified that that was not the method which he pursued and that what he did was to take the plottage and add it to individual lots at the outset, instead of adding to the valuation of the block, which he got by taking individual lots and multiplying. How do you account for the fact that you and he reached in most instances the identical figure to a cent?

A. In some cases we did agree exactly as to the value of the land.

Q. What puzzles me is how you could have reached exactly the same value to a cent by taking an entirely different method of computation.

A. I think it is an easy matter, I think it is a very easy matter.

Q. Then if Mr. Thompson took individual lots and added plottage to individual lots, and then multiplied those lots by the number in order to reach the total value of a block, he pursued a different method from the one which you indicated a few moments ago as pursued by you.

A. He has his own methods, I assume.

Q. And just how you came to come out identical as to figures in most of these blocks you cannot explain other than you have?

A. Not other than I have. I don't think it requires any explanation.

2853 Mr. BURR: Have you in mind where that testimony of Mr. Thompson appears to which you refer?

Mr. MATHEWSON: I cannot, but I think it was this morning. I think I have quoted with substantial accuracy.

Mr. BURR: I have no doubt of it, but I wanted to refer to the exact language he used.

Q. When were you retained by the City to testify in this proceeding?

Mr. BURR: Objected to as incompetent, irrelevant and immaterial.

The MASTER: Objection overruled.

Mr. BURR: Exception.

A. Some time ago, I really could not tell you.

Q. Well, I do not mean the day, but was it a month ago or a week or how long ago about?

A. I think about two weeks ago, but I have been appraising this property for three years.

Q. Well, when you made these two appraisals you said you made them for the Consolidated Gas Company. Were you retained by the Consolidated Gas Company at that time?

A. At the time that I——

Q. Made the appraisals to which you refer, the first two, or the examinations of the real estate?

A. I don't know whether I am retained or whether I am not.

Q. Were you retained by the Consolidated Gas Company, and was it in connection with that retainer that you made the examination of their property two years ago with Mr. Thompson?

A. Do you mean for Shearman & Sterling?

Q. Yes.

A. Yes.

Q. You understood that Shearman & Sterling were acting for the Consolidated Gas Company?

A. I did, yes, sir.

2854 Mr. BURR: I object to this testimony and I objected to the same line this morning. I don't know what the object is. If it is to discredit them, as you suggested this morning, if they are going to prove there is a bias or a quarrel of prejudice existing, that is one thing; but if it is merely for the purpose of spreading upon the records that they have at some time, two or three years ago, appeared for the Consolidated Gas Company as experts, I cannot see what materiality it has here. It is already in evidence as to the fact.

The MASTER: I think it is proper to show the relation of these gentlemen to the property, and what they have done about it.

The WITNESS: I have got the kindest feelings towards Shearman & Sterling, and I wrote them a letter, not to pay my bill until they got ready.

Q. Were you not retained by them prior to these examinations of the real estate?

A. I was retained by them some time about three years ago.

Q. And in that connection you made these examinations of the property to which you have referred?

A. In most of them. Some were not included in that case.

Q. But most of it was included respecting which you have testified?

A. I think 90 per cent. was.

Q. And you conferred with Mr. Thompson and Mr. Thompson and you dealt with Shearman & Sterling, and were you not retained for the examination, appraisement and testimony respecting these different parcels in *certiorari* proceedings begun by the Company against the City of New York to reduce the tax valuation.

A. In most of them we were.

Q. And in some of them you have testified?

A. I have testified really in most of them. I think I have 2855 testified in all of them with the exception of one.

Q. Are there not about 50 per cent. of them at least where you have not testified?

A. No, sir, I have testified in every case where I was retained with the exception of that little property up at Sherman Avenue and Kingsbridge, and 132d and 133d Street. In the rest of them I have testified in every one.

Q. Were you not retained in respect to the same parcels Mr. Thompson was?

A. I think I was.

Q. Mr. Thompson testified this morning or this afternoon that he thought perhaps 50 per cent. he had not testified in?

A. I have testified in a great many that Mr. Thompson has not testified in at all. Mr. Thompson I don't think has testified in any of the sixty's, that is on the west side property. I don't think he has testified on any of the west side property.

Q. Do you know whether any of these proceedings in which you have been retained has yet been concluded?

A. I have not the slightest idea, but I have every reason to believe they are not.

Q. Did you confer with Shearman & Sterling and the Consolidated Gas Company before accepting the retainer, with reference to accepting the retainer for the valuation of this same property in this proceeding for the city?

A. I have not had a conference with Shearman & Sterling, I don't think, for a year or a year and a half. The last communication I had I wrote them telling them when they got ready to pay my bill, to pay it, but did not ask them to pay it until it was settled.

Q. Haven't you testified on valuations of land in cases where you have been retained by them and have not yet testified?

A. And have not yet testified?

Q. Yes, in the *certiorari* proceedings?

2856 A. Those two I spoke of and the one up at Kingsbridge and 133d and 132d Streets. All the others I have testified in.

Q. You are under retainer then to the Consolidated Gas Company with reference to those parcels at present, not having testified?

A. I don't know whether you can call it a retainer or not.

Q. Didn't you receive certain money on account?

A. I did, with the understanding that the cases were to be pushed, that the cases were to be tried.

Mr. BURR: I think this is gone far enough. I think this is entirely immaterial and irrelevant, because the proceedings in which these gentlemen testified are matters of public record and they could bring the record here to show what they testified.

Mr. MATHEWSON: I have nothing further, therefore there is nothing to object to, as far as I know.

At 4.45 an adjournment was taken until Friday October 12th, 1906, at 11 a. m.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 54.

2857 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *Friday, October 12th,* 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Meade, Mr. Burr.

2858 MARTIN MCHALE resumes the stand.

Cross-examination (continued):

By Mr. MATHEWSON:

Q. Suppose the Consolidated Gas Company were to sell all its property at 42d Street, its real estate, and were to announce before making such sale that the manufacturing plant was to be discontinued and disposed of there, what effect would that have on the value of the land or the selling price of the land?

A. Why, I think it would sell for considerably more, particularly so 42d Street.

Q. As a matter of fact, it would have the same effect, differing only in degree, in the case of any of its plants, wouldn't it?

Mr. BURR: I object to that line of examination. The question is here what was the valuation of this property at the time this law which is said to be confiscatory went into effect.

Mr. Mathewson: The witness is giving the amount for which it will sell. If we sold our plant at 42d Street that very element of sale is involved; and it would be sold, under ordinary circumstances, of course, not for a gas plant, but for improvements in other directions; and the very fact we sold it would increase its value above the value of surrounding property to-day.

Mr. Burr: I press my objection, because there is nothing to show what would be the conditions existing subsequent to the present when they might make up their mind to sell or remove their plant. The existing situation at that time or what the valuation of the property at that time might be is purely speculative. The question 2859 is, what is the value of this property now, and what was the value when the law went into effect as against this company.

Mr. Mathewson: You and Senator Page asked precisely the same question on cross-examination of our witnesses; what would be the effect on the sale of this property if they were sold and the plants discontinued?

Mr. Burr: You asked that question on direct, and we had the privilege of cross-examination.

Mr. Mathewson: No, I did not.

Mr. Burr: I object to it as incompetent and immaterial. We might indulge in speculation along this line *ad nauseam,* but it would have no bearing on the issues in this case, it seems to me.

Mr. Mathewson: You say it is the selling value. I am finding out what the effect would be as related to the figures given by this witness if all the blocks, for instance, in any particular locality, should be sold.

The Master: I think it is a fair question on cross-examination, in view of the testimony that has been given, to ask the witness on various hypotheses and test his views as to the value of the property. At the same time I think there is considerable force in your objection, Mr. Burr. If the question is as to what amount of capital is fairly locked up and employed in real estate by the Consolidated Gas Company for the purposes of their business, it may not be very material to get at the value of the real estate under conditions which entirely negative their doing business. That I apprehend to be the force of your objection?

Mr. Burr: Yes, sir.

2860 The Master: But I will allow it. I think it is proper under the circumstances, and will give you an exception.

A. I think if your gas plant was removed entirely from 42d and 41st Streets it would have a very decided effect upon values there.

Q. And the values which could be obtained for the lands of the Consolidated Gas Company, if it were announced that all the lands would be sold for purposes of other improvement, would be considerably increased in that event, would they not?

A. In my opinion, sir, they would.

Q. And would not that be true in all the other localities in which the company has plants, in greater or less degree?

A. If they were all removed, it would, yes, sir. It would apply to them all possibly.

Mr. BURR: When you say "plants" do you mean plants and holders all removed?

Mr. MATHEWSON: Manufacturing plants. The objectionable part of a gas plant is the manufacturing plant, isn't it?

The WITNESS: That is what I assumed to be the case.

Mr. MATHEWSON: Holders are not such a serious proposition.

Mr. BURR: You do not claim they are not objectionable?

Mr. MATHEWSON: They are not so very objectionable. There are holders in some very good localities. It is the fumes and noise and dirt from manufacturing which are particularly objectionable.

Redirect examination by Mr. BURR:

2861 Q. Now, what might occur by that possibility of the Consolidated Gas Company taking away all its manufacturing plants is merely speculative on your part, is it not?

A. Entirely so, sir.

Q. You have no way of gauging any opinion upon that by conditions that might exist in the future?

A. Not the slightest; it is purely speculative.

Q. You have been asked several times as to whether the assessed valuation which was stated in certain figures by Mr. Mathewson as having been given in the testimony here affected your valuation in any way and you answered no. Now will you say what reason there exists for the failure of that assessed valuation to affect your valuations as you have given them here?

A. Why, an assessor is human, the same as I am, and he is liable to make a mistake the same as I have often done. I never pay any attention to assessed valuations in valuing property. I familiarize myself with sales, leases and everything pertaining to real estate and have an idea of my own as to what the property would sell for, irrespective of any assessed valuation. I have known several cases where, in my opinion, the property has been assessed fifty per cent. or seventy-five per cent. more than it would really sell for.

Q. As a matter of fact, in these proceedings wherein you were retained by the Consolidated Gas Company, your services were called into operation to show that the assessed valuations were not the proper valuations in your judgment, that they were excessive?

A. I was called in consultation in regard to these cases and several others. In some cases in question we advised *certiorari;* I think in quite a number we advised to discontinue those particular cases in question. With the exception of a very few, in my opinion, for the year 1903 they were assessed entirely too high.

2862 Q. The testimony taken in these *certiorari* proceedings is a matter of public record, is it not—I mean your testimony?

A. I suppose it is, sir.

Mr. BURR: And I do not think it will be claimed that the City of New York has not a copy of that testimony?

Mr. MATHEWSON: I do not think it is of the slightest importance. I place no weight on that suggestion.

Q. Were the valuations which you gave in this proceeding on behalf of the Consolidated Gas Company honest and fair valuations according to the best of your judgment and opinion?

Mr. MATHEWSON: I do not know that that is very material.
The MASTER: I will allow it.

A. They were, sir.

Q. Does that apply to the values given by you here?

A. The values I have given here are very much above the ones for 1903, and it is the very best of my opinion, my judgment.

Q. That is, the valuations that you gave here were the same valuations that you gave for the Consolidated Gas Company, with the addition of an appreciation which has accrued since, in your opinion?

A. With the appreciation which has accrued since 1903.

Q. So in every case that you have testified here your valuation is higher than the valuation given by you when you were testifying for the Consolidated Gas Company?

A. In some cases fifty per cent. higher.

Q. And *I* say that the testimony you have given here in this proceeding as to the values was the result of your honest judgment and opinion?

2863 Mr. MATHEWSON: He has so testified. Once yesterday and once to-day.

A. It is, yes, sir.

Recross-examination by Mr. MATHEWSON:

Q. You testified that the figures that you have given are the amounts for which, under ordinary circumstances, you believe the real estate would sell for?

A. I have.

Q. Now if the company sold some of its land at 42d Street, wasn't it your assumption that it would sell it for some other purpose than a gas plant?

A. If they did sell it, I assume that they would sell it for some other purpose than manufacturing gas, yes, sir, otherwise it would not increase——

Q. Then, what you did mean by saying a moment ago that it would be a matter of pure speculation to give the value that the land would sell for if sold for some other purpose?

A. It is impossible to give an idea of what it might sell for. It might sell for fifty per cent. more or one hundred per cent. more, I couldn't tell. It is a matter purely of speculation.

Q. Have you not, in making the estimate of the price at which this land would sell, having it in mind as you had that if sold it would be sold for some other purpose than manufacturing gas, tried to determine what effect that would have on the value if it were sold for other purposes?

A. I appraised the property for what it would sell for to-day.

Q. For what purpose?

A. Any purpose. I am not supposed to know the purpose. I did not take that into consideration.

Q. But, if sold for some other purpose than manufacturing 2864 gas, would it not involve the elimination of the gas manufacturing nuisance from that section?

A. It might be sold for a factory that would be more of a nuisance than a gas plant, as far as that is concerned.

Q. You assumed it would be sold for some purpose that would be at least as much of a nuisance as a gas plant, did you?

A. I valued the property as I found it. I did not take into consideration what it would be used for afterwards, and I don't know what it would be used for. I appraised it just as I found it to exist now in the city.

Q. But you have stated if it would be sold for some other purpose than a gas manufacturing plant, and that purpose would be less of a nuisance than a gas manufacturing plant, that the figures which you have given here would necessarily be increased more or less?

A. But how much, sir, I could not say.

By Mr. Burr:

Q. Has there been an increase in the valuation of this property and other property in the City of New York since the 1st of July, 1905?

A. Since the 1st of July, 1905?

Q. Yes.

A. Oh, there may be a slight increase. There has been a decided increase since 1903. In 1903 real estate was very low. There was quite a depression in the financial section, consequently it affected real estate, particularly so high-priced real estate. In fact, it did up to 1904, August, 1904. Since August, 1904, or July, 1904, I might say, to 1906, I think there has been a decided increase all over the City of New York.

Q. What would you say, in your opinion, has been the increase during the past twelve months in property, this property especially.

Mr. Mathewson: Which property?

2865 Mr. Burr: The property he has been testifying regarding.

A. Most of it is taken between 1904 and 1905, I should say, perhaps in the neighborhood of five per cent. of it might be; I don't think it would exceed that.

By Mr. Mathewson:

Q. That would be on the average to all the land?

A. I should say certain sections, of course. The big boom was in 1905, as low as 98th Street on the East side, and on the West side in 65th Street and through that section there has been a decided increase there; also in 132d Street, on the West side, there has been a big increase in land up there since the Subway was opened.

By Mr. Burr:

Q. But on the whole, with regard to this property, you would say on the average there has been an increase in the past twelve months, or since the first of July, of about five per cent.?

A. I should say so, sir.

Direct examination by Mr. **Burr**:

Q. Now, have you made water front property in the city of New York a study, and, if so, for how long?

A. About twenty years.

Q. Are you familiar with the sales and leases of piers and bulkhead property in the city of New York on the North and East Rivers?

A. I am, sir.

Q. Please state what pier and bulkhead property you have appraised in the city of New York in the last ten years, also for whom you have appraised?

A. I have appraised the Brooklyn Wharf and Warehouse property twice—I might say three times—I have appraised—I will take on the other side first, then come back on the East River, if you have no objections. I have appraised the ferry property, Williamsburg Ferry, the Greenpoint Ferry, and also on the East River Pier 9, Pier 10, Pier 11, Pier 13, Piers 18, 19, 20, with all the bulkheads; Pier 36, Pier 35, water front between 8th and 9th Street, with the land under water, which I have for sale; also the land under water with upland, bulkhead, between 4th and 5th Streets on the East River, between 18th and 19th Streets, 19th and 20th, 28th and 29th, 36th to 37th, 44th to 46th. On the North River I have appraised 42d to 43d Streets, bulkhead and land under water; I have appraised from 44th to 46th Streets on the North River, from 46th Street to 48th Street on the North River, 121st to 152d Street on the North River; and my clients have been the City of New York, Brooklyn Wharf and Warehouse Company, Title Insurance Company, New York Dock Company, United States Mortgage & Trust Company. There were other piers and bulkheads that I have been connected with more or less, but I do not just recall them.

2867 Q. Now, have you examined the water front bulkhead property of the Consolidated Gas Company as the same appears upon Exhibit 48 in this case?

A. I have.

Mr. **Mathewson**: I wish to make an objection here that the witness, not having bought and sold bulkhead property, is not qualified to testify on this subject. He has not been shown to be qualified within the rules of law.

The **Master**: I will overrule that objection, Mr. Mathewson. I think it is well understood that transactions in bulkhead property in the way of sales are so infrequent that no man in the city of New York can really claim to be called a specialist in that line and have that as any considerable amount of his business; but I think any real estate man of experience in New York is customarily permitted to express his opinion on bulkhead property. I took that view in the case of Mr. Wheelock when he was objected to, and I take the same view here.

Mr. Burr: Mr. Wheelock had no such experience as this gentleman has had.

Objection overruled. Exception.

Q. Have there been sufficient sales of bulkhead or pier property within the past few years which, in your opinion, would make a fair criterion as to values?

A. In my opinion there is not, neither on the North nor the East River.

Q. Now, in your opinion has water front property increased or decreased in the past few years?

A. In my opinion it has increased, sir. That is, I think piers have, shedded piers. I think piers have increased more than bulkheads have.

Q. Now, we will take up the bulkhead property or water front property of the Consolidated Gas Company, if you please.
2868 Which piece did you examine first?

A. I have got between 14th and 16th Street here as the first.

Q. That is the bulkhead property on Tompkins Street?

A. Yes, sir, situated between 14th and 15th Streets.

Q. Appearing on page 2 of this Exhibit. Now will you describe that property and tell us all you know about it and give us your estimate as to the value of it?

A. There are about 30,318 square feet; in other words, 450 by 70 feet, equal to 30,318 square feet, in my opinion, worth about $2 a square foot, or $60,636. There are 446 feet, 4 inches of bulkhead at $200 a foot, which would be $89,480, or a total for the property of $150,116.

Q. Now take the next property.

A. I have taken the next, between 41st and 42d Streets.

Q. That is the bulkhead property appearing on page 5 of the Exhibit?

A. Yes, sir.

Q. 41st and 42d Streets. Now will you please describe that property and tell us what your valuation of it is?

A. There are 197 feet and 6 inches of bulkhead, at $250 a foot, would be $49,375. Now the pier rights, I have taken your exhibits assuming they were correct, I have assumed you could erect a pier there 60 by 700 feet, running out to the pier head line established by the Secretary of War in 1900.

Mr. Mathewson: You said you had 197 feet 6 inches, at how much a foot?

A. 197 feet and 6 inches at $250 a foot equals $49,375.

Q. Continue in regard to the 41st Street property.

A. I assume pier rights 60 by 700 feet equal to 42,000 square feet. In my opinion the pier rights ought to be worth $6 a foot or $252,000.

Q. That is larger than the complainant's witnesses have given?

A. Yes.

2869 Q. The next parcel of bulkhead property is between 44th and 45th Streets?

A. Yes, sir. Land under water.

Q. That is known as Block 1107, Lot No. 23. Proceed.

A. Between 44th and 45th Streets, land under water. 70 feet by 200 feet 10 inches, or about 14,756.10 square feet, in my opinion worth $2 a foot, or $29,512.20. Between 45th and 46th Streets the same number of square feet, 14,756.10, at $2 a foot, $29,512.20, or a total of the land under water of $59,024.40. The bulkhead between 44th and 45th Streets, 200.83 feet, at $200 a foot, would be $40,166. Between 45th and 46th Streets, the same number of feet, at $200 a foot, $40,166, or a total of $80,332 for the bulkheads, or a total for the land under water and bulkhead of $139,356.40.

Q. The next parcel is on Pleasant Avenue?

A. Pleasant Avenue, situated between 110th and 111th Streets. Land under water about 9,400 square feet, in my opinion worth about $1 a square foot, would be $9,400. There are 212 feet of bulkhead, at $100 a foot, would be $21,200, or a total of $30,600. Now I have inspected Shadyside. I do not think that has any number.

Mr. Mathewson: Is that all the bulkhead property?

The Witness: I think it is. 14th to 16th Streets, 110th to 111th Streets, 44th to 45th Streets.

Mr. Mathewson: Did you not appraise the West 16th, 17th and 18th Streets, which the city has taken?

The Witness: No, I did not. Now, Shadyside property situated on the Jersey side of the Hudson River——

Mr. Mathewson: May I ask a question as to his qualifications to appraise a Jersey property? 2870

Mr. Burr: Of course.

Q. Have you bought and sold any property in Jersey in the vicinity of Shadyside?

A. The nearest, sir, is West Hoboken. I have bought and sold—in other words, I bought it and sold as quick as I could.

Q. How long ago was that?

A. About five or six years ago.

Q. How much, not in money, but in area?

A. One piece of property.

Q. This Shadyside property is on the water, is it not?

A. It is on the water down underneath the cliff.

Q. And a railroad running across the rear?

A. Yes, sir.

Q. Have you bought or sold any other Jersey property in that section?

A. Not in that section; no, sir. I have appraised all through there, though.

Mr. Mathewson: I submit the witness is not qualified.

The Master: I will allow it.

Mr. Mathewson: Exception.

By Mr. Burr:

Q. Proceed.

The **Witness**: It contains about 611,700 square feet, or equal to about 245 city lots with water front, and I have taken the property as a whole, as a whole proposition. The property is entirely vacant, with the exception of a pile of coal being on it, with an iron runway from the river up. In my opinion that property is worth in the neighborhood of $45,000 as a whole, or $1,000 a lot. I have not divided that, for the reason that in my opinion they are inseparable, adapted for only one purpose, and in my opinion I would simply give one lump sum. I think the property would sell as a whole for about $1,000 a lot. 2871

Q. Is that all water front property at Shadyside?

A. No, it has a frontage on the water there of about 486 feet, and all this is upland from here back (indicating), but I have treated it practically as water front property for the reason that it is only adapted for factory property, etc., being low ground, and most of the large institutions over there occupy large tracts like that, the Glucose Company occupies next to it there, and——

Q. You mean by institutions, factories of that sort?

A. Yes, and sugar refineries, etc.

Q. Now give the total of the bulkhead property?

A. Including Shadyside?

Q. Yes.

A. $871,447.40.*

Q. Does that include the bulkhead and pier property at Shadyside and land under water?

A. Yes, sir, everything with the exception of the upland which I testified to yesterday, or a total for the land under water, bulkheads, pier rights, Shadyside and upland, $10,689,013.14.

Q. That is the grand total of all of the real estate property of the Consolidated Gas Company?

A. That I have appraised, yes, sir.

Mr. **Burr**: He is your witness, Mr. Mathewson.

Cross-examination by Mr. **Mathewson**:

Q. This excludes all valuation of land at 18th Street which was taken by the city, but which, the testimony is, is still carried by the Consolidated Gas Company as land, in view of the fact that they have not been paid for it yet?

A. I have not included that 18th Street property in my valuation.

2872 Q. Neither the land nor bulkheads nor land under water, nor pier rights, whatever they are, there?

A. None whatever.

Q. Now, in reference to Shadyside, is it not greatly to the advantage of the property, so far as value goes, that it has a water front and that it has a railroad running along the rear?

A. It would not be worth half of it if it did not.

Q. And it is much more valuable for factory purposes than it would be for any other purpose over there in that section?

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* Should be 886,447.40. See page 2901.

A. In my opinion it is only adapted for factory purposes.

Q. It could not be used for that purpose if it was high land, as some of the land is on the Jersey shore?

A. It is well adapted for factory property, as the other property similarly situated there. Of course, that property is entirely vacant, with the exception of a pile of coal there.

Q. Is property in that section increasing in value?

A. It has increased; in fact, there has been quite a boom there in the last four or five years, but I think it is at about its highest mark.

Q. What percentage of increase would you consider there has been in the last four or five years?

A. I could not answer that. It is impossible for me to say. Further up on the heights there has been a very decided increase, more so than in the factory sites. They have been selling building sites off at almost any price they ask for them along the Palisades, but there has not been such an increase in the last year or so for factory sites over there.

Q. Referring to the bulkheads at East 14th and 15th Streets, and the land under water, I see you have the bulkhead rights valued at $200 a foot?

A. I did, yes, sir.

Q. Are you familiar with the prices established for the bulkhead
rights between 19th and 20th Streets and the East River in
2873 the condemnation proceedings?

A. That is in connection with upland as well, I understand it, Mr. Mathewson.

Q. Well, at Tompkins Street, the company owns all the land, does it not, adjacent to these bulkheads, across Tompkins Street, East 14th and 15th Streets?

A. They do.

Q. And is it not a fact that Tompkins Street at that point is virtually cut off so that the company has the full use of the street between its uplands and the bulkheads?

A. They have free access to it; they have not any monopoly of it any more than anybody else.

Q. No, but from the nature of things, have they not practically free use of that bulkhead?

A. As much as anybody else. Of course, Tompkins is a public street.

Q. Is it not closed above 15th Street?

A. Above 15th Street it is. The hospital runs out there.

Q. So it is not a free street for travel along the river front above that point?

A. It is not what you would call a thoroughfare.

Q. So the company would have relatively much more exclusive rights to this bulkhead line so far as traffic is concerned than they would have if Tompkins Street was not closed at the upper end?

A. I have used 15th Street several times; I have had cargoes of coal come down there to the bulkheads.

Q. But there would not be the same traffic as there would be on West Street, for instance, which is open above and below the pier?

A. That is one of the things that depreciates that property, the fact of Tompkins Street being cut off.

Q. It does not depreciate the value of these bulkhead rights to the Consolidated Gas Company?

A. I don't think it enhances them; that is my opinion, it does not.

2874 Q. Do you know what the price fixed in the condemnation proceedings for the bulkhead rights between 19th and 20th Streets was?

A. I heard of them, but I don't just remember. They took in upland with them.

Q. I refer to the bulkhead rights.

A. That was condemnation proceedings, and I don't always consider those the best criterions of value, for the reason they add the cost.

Q. They were condemnation proceedings by which the defendant, the City of New York, acquired the property?

A. They were.

Q. Is it not your recollection that $300 per foot was obtained for those bulkheads?

A. I have a recollection it was somewheres along there, in the neighborhood of $200 to $300. I think it was $250, although I am not just clear on that. If I remember right, it was $250.

Q. My information is $300, and I do not think I am mistaken, Mr. McHale. Well, take the condemnation proceedings for the bulkhead rights between 20th and 21st Street and the East River. Mr. Wheelock, or Mr. Green, I think, testified that the amount fixed in those condemnation proceedings was $350 per foot for the bulkheads, as against your $200.

A. Yes, sir.

Q. Are you not familiar with that proceeding?

A. I am, I have a record of it.

Q. Is that correct?

A. I think it was $350 that the Commissioners allowed for it, but they also took upland together as well.

Q. Well, you did not mean to say that the $350 covered the upland?

A. No, sir. If I remember right, $350 they allowed for the bulkheads.

Q. Are you quite sure that the land adjacent to these bulkheads belonged to the same owner as the bulkheads?

2875 A. I think they belonged—I know the man that leased them, for I have been down there hundreds of times, H. L. Hurlbut, the coal man, at the foot of 20th Street there.

Q. Do you know of any land under water acquired in the vicinity of East 14th Street at $2 a square foot recently?

A. I have got some for sale at less, in a better location.

Q. Is it around East 14th and 15th Streets?

A. It is between 9th and 10th Streets, which, in my opinion, is worth a great deal more than 14th Street to 15th Street.

Q. I suggest you send a description of it to my clients. They would be glad to see you.

A. I would be very glad to, sir.

Q. Now let us take the bulkhead rights and land under water at West 42d Street. You have given the value of pier rights at $252,000, with which I shall not quarrel. Now let us take the bulkhead at $250 a foot. Do you know of a sale of bulkhead rights between 58th and 59th Streets west?

A. Which sale do you mean? There were two sales; that was sold twice, if I remember right.

Q. Was it not sold once for $650 a foot?

A. No, sir, I haven't any recollection of that.

Q. I think Mr. Wheelock testified to it.

A. There are really so few sales of bulkheads and pier rights that I have not taken them into consideration. In other words, while sales are really the best criterion of value, in bulkhead and water property they are not, because there are so few. In other words, most of the bulkhead property and water rights are owned by different individuals; in some cases I know where there are sixteen different individuals owning the property, where frequently parts of the property are sold, and it does not represent the value of the whole. The best criterion, in my opinion, is what it will rent for in ordinary conditions, capitalized on a certain percentage.

2876 Q. And you found that was the one basis upon which Mr. Greene gave his testimony, did you not, if you have read his testimony?

A. I read his testimony, but I do not agree with him.

Q. Are not the sales of bulkheads one of the best means of determining what the value of those bulkheads are, if you are trying to figure out what their value is in total and not their rental value?

A. No, sir. A steamship company owning a pier may pay four times what a bulkhead is worth in order to control the slip, where an individual could not rent it for more than one-eighth part of what it is worth to the steamship company. You can take any pier from 34th to 59th Streets, and there is not any one of them which is rented on more than a four per cent. basis.

Q. Do you mean to say that these bulkheads are not worth what they would sell for?

A. No, sir, a bulkhead, in my opinon, is not worth very much unless it is connected with the upland.

Q. But if people are willing to pay $650 a foot, is it not worth that amount then?

A. There may be circumstances where they would pay one thousand dollars, but that would not interfere with my opinion.

Mr. Burr: Because there may be some special circumstances?

The Witness: Most decidedly.

Q. I am quite willing you should distinguish if there are any special circumstances, but if the testimony of Mr. Wheelock be correct, that the bulkheads between 58th and 59th Street west sold for $650 a foot, would not that indicate a greater value of bulkheads than $250 per foot at 42d Street?

A. Capitalized on those figures, of course it would.

Q. Are not piers at 42d Street, and are not bulkhead rights
2877 at 42d Street worth more than they are at West 59th Street?

A. Yes, sir; 59th Street there is quite a grade, at least two per cent., in fact, down at 42d Street I think it is worth twenty-five per cent. more.

Q. Mr. Green's testimony was that this was worth $750 at 42d Street. Now, if it be true that at 59th Street bulkheads are worth $650 per foot, they certainly would be worth $750 at 42d Street, would they not?

A. I do not claim so.

Q. Well, if they were worth $650 at 59th Street, would they not be worth $750 at 42d Street?

A. Of course, using those methods, it would, yes.

Q. Are you familiar with the amount established in condemnation proceedings for the bulkhead rights between 51st and 52d Streets and the North River?

A. I was told about it.

Q. And the bulkhead rights are worth more at 42d Street than they would be at 51st and 52d Streets, per foot, are they not?

A. Well, there is not very much difference. You take that whole section, even 59th Street; 59th Street is where the stock yards are. Bulkheads there are valuable for the purpose of unloading cattle, and live stock, etc. And at 52d Street—in my opinion there is very little difference.

Q. Well, aren't you aware that $500 per foot was fixed as the value of the bulkhead rights at 51st and 52d Street- in the condemnation proceedings?

A. I am not responsible for what commissioners do.

Q. I understand that.

A. I think those were the prices that were awarded.

Q. Are you familiar with the stipulation to which Mr. Green testified in reference to the bulkheads at West 11th Street to Gansevoort Street, by which $500 per foot was fixed by stipulation?

A. I have been reading Mr. Green's testimony for years, and am familiar with every word of it.

Q. Are you familiar with that transaction?

A. Yes, I know it to be a fact.

2878 Q. And are you aware of the fact that between 22d and 21st Streets and North River, bulkhead rights were established in condemnation proceedings as worth $900 per foot, which Mr. Green testified was the figure that he gave in that case?

A. I am not aware that the awards are made.

Q. If Mr. Green testified that it had been made at $900, and that was exactly the figure he made, you would not doubt it, would you?

A. I would want to know it to be a matter of fact. I don't think the award has been made, sir; in other words, I have not seen the records.

Q. Well, it has been testified to here that it has been made, Mr. McHale.

A. But that really would have no bearing on the value of 42d Street or 44th Street or 46th Street in my opinion.

Q. Has there not been a very large increase in values at 42d Street and along 42d Street in the last few years?

A. Not near as much as there has been south of 34th Street.

By Mr. Burr:

Q. As I see Mr. Greene's testimony, he is the one who fixed the valuation at $850.

Mr. Mathewson: No, he said they accepted his figure on that. You asked him if they did accept his figure on a previous condemnation proceeding and he said they did not, but accepted a lower figure, and then he said they did accept his figure in that condemnation proceeding at $900 and that has been awarded.

The Witness: I have not seen it, Mr. Mathewson.

Mr. Burr: He says, I have heard, that they gave $900 a foot.

Mr. Mathewson: Yes.

2879 Mr. Burr: As you are asking Mr. McHale if he heard that Mr. Green heard that it was awarded?

Mr. Mathewson: No, I am not asking him if he is familiar with the fact that that award had been made, and he replied that he did not know that it had been made.

The Witness: I was not familiar with it, no, sir.

By Mr. Mathewson:

Q. Do you know of an award for the bulkhead property between 42d and 43d Streets?

A. I have heard of it I was on that case.

Q. How much was that?

A. I don't just recollect.

Q. Was not that $500, or twice that you have figured here?

A. It was more than I figured.

Q. Is it not your recollection that it was $500?

A. Well, there were certain circumstances connected with that and perhaps I am a little more familiar with them than most people. There was a sea wall there that the city had built costing in the neighborhood of $300 per running foot, that the Commissioners allowed them for.

Q. Was not the award $600 or $650 between 42d and 43d Streets?

A. It was above my figures, but my figures were without the sea wall. There was a sea wall which cost all the way from $350 to $400 a running foot.

Q. What were your figures at that time?

A. I think $200 or $250.

Q. For whom did you testify in that connection?

A. The City of New York, but they awarded in addition the value of the sea wall.

Q. The City of New York was the party that was condemning the property at the time?

A. They were.

2880 Q. Was not the award for the sea wall separate from the bulkhead rights?

A. I don't think so.

Q. Now, you have given for the bulkhead rights at 44th Street to 46th Street, North River, only $200 per foot in your estimate. If there is not very much difference in value between 51st and 52d Streets and 42d Street, I suppose that there would be very little difference in value between 42d Street and 44th and 46th Streets, would there?

A. I think 42d Street is worth a little more because it is a thoroughfare, and I think bulkhead rights there are worth a little more than they are north of there.

Q. And are bulkhead rights at 44th to 46th Streets worth more than they are at 51st to 52d Streets?

A. I do not think so. I do not think there is but very little difference. It is all used for practically the same purposes, the landing of live stock and factories and one thing and another and building material. The leases do not show it. They are leased for about the same amount between 42d Street and you might say 59th Street. All the leases which I have here, some of them leased for less money really down towards 42d Street. It depends upon circumstances.

Q. If bulkhead rights are worth $650 at 58th Street and are worth $500 at 51st Street and 52d Streets, they certainly would be relatively worth more than $200 at 44th and 45th Streets?

A. I do not acknowledge your figures.

Q. I know, but on that assumption?

A. Most decidedly, yes, sir.

Q. I am merely taking the sale made at 51st Street and 52d Street, without arguing that that established a value.

A. Yes, sir.

Q. Now as to land under water at 44th and 45th Streets, you valued it at $2 a foot?

A. Yes, sir, or about $5,000 a city lot.

Q. On what basis do you make that estimate?

2881 A. It would cost a good deal to fill it between that and the bulkhead and would cost the difference between that and what I have allowed for the upland.

Q. You have proceeded on the same basis, allowing $2 at East 15th and 14th Streets?

A. Land under water?

Q. Yes.

A. No, I have taken it because I have some property in the same neighborhood which is better than 14th Street in my opinion.

Q. How far is the property you own from the property of the Consolidated Gas Company?

A. Ninth and Tenth Streets, only four blocks away.

Q. How much have you for sale at that price?

A. The whole block front with upland, also land under water, twenty-five lots. I will sell it at $3,000 a lot and the bulkhead at the rate of $150 a running foot.

Q. And the land under water at $2?

A. Less than $2, $3,000 a lot.

Q. What is the character of the upland there?

A. Flat land which used to be occupied by the Roach Shipbuilding Company, now owned by the estate of Roach.

Mr. BURR: The Novelty Iron Works?
The WITNESS: Yes.

Q. Do you own it personally?
A. I am sorry to say I do not own it. I have only got it for sale.
Q. For an estate?
A. For an estate, the Roach estate.
Q. Unimproved?
A. Unimproved.
Q. It brings in no income?
A. It does. The lots are rented at so much a year for the purpose of storing coal, lumber, etc., but there are no buildings on it.
Q. Do you know of any land under water which has been recently sold for $2 a foot in the neighborhood of West 44th and 45th Streets?
A. No, sir.
2882 Q. What do you consider the rental value of land under water in the vicinity of West 44th and 45th Street- per annum?
A. Well, it depends very largely upon circumstances. I know of leases by the City where they leased it as low as 5 cents a square foot per year, and I have known cases where it has rented for 25 cents as well.
Q. Don't you know that at West 40th Street, only four blocks from this property, land was leased at 25 cents?
A. It might have been.
Q. In 1887 and renewed in 1898?
A. It might have been. Where did you say it was?
Q. 924 square feet under water, West 40th Street. If you assume that this land under water at West 44th and 45th Streets, is worth 25 cents a square foot, which was the rate of that rental, what valuation would that make?
A. $12,500 a lot.
Q. How much would that be all told in place of the figures you have indicated here upon that basis?
A. I would have to figure that out.
Q. You took, didn't you, ten cents, or what did you take as the rental per square foot?
A. I did not take any rental? You mean between 44th and 45th Streets, land under water?
Q. Yes, supposing you assumed that to be rented or rentable at 25 cents per square foot per annum, as the land at 40th Street is rented, what valuation would you think applies to the land under water?
A. They are both the same as between 44th and 45th Streets.
Q. Yes, just the same, 401.6 feet.
A. It equals practically twelve lots, a trifle less than twelve lots, which would be practically $150,000 at $12,500 a lot.
Q. Let us take the Pleasant Avenue bulkheads next. If I understand correctly, you have valued the land under water there at $1 per square foot, is that right?
A. Yes, sir, about $2,500 a lot.

Q. Did you testify in the East River tunnel condemnation
2883 proceedings as to the value of land under the East River from 110th Street to Astoria?

A. I testified for the State as to the land under the river.

Q. Well, you testified as to the land under the river?

A. Yes.

Q. What did you testify was the value of the land under the bed of the East River per foot?

A. I don't just recollect now.

Q. Well you testified as to the value merely of an easement?

A. Of an easement.

Q. Was not your testimony that that was worth 40 cents a foot, for the easement?

A. I don't remember just what I testified.

Q. Is it not your best recollection that 40 cents per square foot of surface area of the section over the tunnel was easement?

A. I should have to refer to my testimony. That was two years ago, I think.

Q. Can you not remember what you did testify as to that?

A. I never carry those things in my head, Mr. Mathewson.

Q. I wish you would assure yourself on that subject and then I will ask you that if the value of an easement under the bed of the East River was worth 40 cents per square foot, how you reconciled that with the testimony that the value of land under water next to the bulkhead and useable is worth only $1 per square foot in fee.

A. I do not claim it is useable. There is a very swift current on the East River. This is right opposite Ward's Island, and it is almost impossible for a boat to stay there.

Q. Didn't you make your estimate of $1 on the theory it is unuseable?

A. It is not entirely so, but it is not adapted for shipping.

Q. Do you mean to say that if the easement of land under water under the bed of the East River, the tunnel being 200 feet down, is worth 40 cents per square foot that the value of land under water adjacent to the bulkhead at 110th Street from which that
2884 tunnel starts is worth only $1 per square foot?

A. I do, and if it were 300 feet, it would be worth more. The deeper down you go, say between 200 and 300 feet, it is worth more than if it was 10 feet, and I so testified, for the purposes of a tunnel.

Q. Explain that a little. I don't quite understand you.

A. In my opinion it was worth more 200 feet under the bed of the river than if it were 10 feet.

Q. What is worth more?

A. The land for the purpose of digging a tunnel.

Mr. Burr: That is, you mean the easement.

The Witness: The easement is worth more 100 feet below than it would be 10 feet or one foot.

By Mr. Mathewson:

Q. Is not a fee worth more than an easement?

A. Worth more, and I have allowed more.

Q. Do you mean to say then, that if the easement in the City relating to the land under the bed of the East River 200 feet down is worth 40 cents per square foot, in connection with this tunnel, that the land under water on the 110th Street front, inside the bulkhead line, is worth in fee only $1.00?

A. I do, and I think I was too modest in placing my value at 40 cents a foot on the tunnel for the easement.

Q. I do not see why you have allowed us anything here, in that case. Let us take the bulkhead rights which you have put at $100 per foot——

A. Running foot, yes, sir.

Q. Do you know what the bulkhead at 109th Street to 110th Street is leased for?

A. Is that by the City?

2885 Q. It was leased in 1905 by the City, I suppose, I am not sure for the moment.

A. Where did you say that was?

Q. 187 feet between 109th and 110th Streets?

A. I have not got that. There is record here.

Q. Assuming it were leased at $1,800 per year in 1905, that would indicate a greater value than $100 per front foot on that basis, would it not?

Mr. Burr: Is not that the lease which was never carried out, which has been spoken of?

Mr. Mathewson: I do not know, Mr. Burr. The testimony was that the lease of the bulkhead between 109th and 110th Streets was for $1,800 and that it was made in 1905.

The Witness: That would indicate a value of about $160 a foot capitalized on a six per cent. basis.

Q. Was this proceeding in reference to the East River Tunnel in which you testified for the State, a proceeding by the East River Gas Company to acquire from the State the right to put its tunnel under the river, as you understand it?

A. No, if I understand it, it was really the State and City jointly.

Q. Well, whatever it was, the object of it was to determine what the company should pay to the State for the right to put the tunnel under the East River?

A. Well, it was a question between the State and City as to who was entitled to compensation.

Q. That may be, but as far as the company was concerned?

A. As far as the company was concerned, yes.

Q. To determine what they should pay for the privilege of putting their tunnel under the East River?

A. Yes, sir.

2886 Q. Will you not be good enough to ascertain if you did not testify that the easement in that connection was worth to the State or whoever owned the land under the East River, forty cents a foot?

A. In my opinion it did, and I think if I had to testify again I would say fifty cents.

Q. Then you think it is worth fifty cents?

A. I think it is worth one-half of the fee for that particular purpose.

Q. Do you mean to say that a fee under the navigable water of the East River is worth half as much as the fee of land inside the bulkhead line?

A. In this particular instance, yes, for the purpose for which it was to be used. I assumed that the Consolidated Gas Company employed the brightest engineers in this country and Europe. They examined both sides of the river from 34th Street up to and above Ward's Island for the best location for their tunnel, and I assumed that it was the best location, consequently it was worth more to the— it was worth that much, not alone to your company, but to any other company for building a gas tunnel.

Q. This tunnel was run from 110th Street to Astoria?

A. Yes, between 110th Street and 111th Street in that little jog where it comes out to the bulkhead.

Q. Well, you know that the Department of Docks acquired in or subsequent to 1884 a number of bulkheads by agreement with the owners upon the approval of the Commissioners of the Sinking Fund, did they not?

A. I knew they did.

Q. And that has been their policy to acquire them?

A. They always tried to acquire them when they could get them for a reasonable compensation.

Q. Don't you know that the bulkhead rate varied then from $450 to $600 a foot?

A. Yes, and even down to $100 a foot.

Q. Where were they $100 a foot, give me an instance?

2887 A. If I remember right, there was one acquired here about the time you speak of, between Old 12th and 13th Streets. There were several at $200 a foot.

Q. How long ago was that?

A. In about 1885, I think. Then there were one or two acquired up this side of Corlies Hook at the rate of $200 a foot.

Q. Was not the price generally paid to owners $600 a foot for lengths over 25 or 30 feet?

A. No, sir.

Q. You think not?

A. I am positive they were not.

Q. Are you familiar with the Langdon cases decided in 1892?

Mr. Burr: Langdon against the Mayor?

Mr. Mathewson: Yes, for bulkheads taken in 1877.

A. Yes, but that was in connection with where the city destroyed the bulkhead rights.

Q. Yes, that may be, but do you know what the result of that judgment was?

A. That was on the North River?

Q. 150 feet below Charles Street.

A. Yes, I know the case very well, and have read and used it very often.

Q. Was not the judgment $600 per foot for these bulkheads which were taken in 1877?

A. I don't know, Mr. Mathewson, what the judgments were.

Q. Is it not your recollection that that is substantially it?

A. No, I haven't any recollection of the judgment, so I am not really competent to answer that question.

Q. You remember those are the cases tried before Ex-President Cleveland?

A. Yes, sir. Mr. Boardman was counsel.

2888 Q. If the judgment in that case was established at $600 per foot for bulkheads taken in 1877, that would indicate a larger valuation for these bulkhead rights relatively than any you have testified to?

A. Based upon that it would.

Q. Has not the City acquired at practically that same rate considerable bulkhead property all the way up to Gansevoort Street?

A. On the North River?

Q. Yes.

A. They acquired a good deal of it there, yes, sir; but it is a different proposition entirely. That is in the shipping section where all the large steamships land, and if bulkhead was left there to the statutory rate of wharfage, which they would be confined to, they would not earn 2 per cent. on the basis of $100 per running foot, but they are valuable to steamships and that is the reason high prices were paid for them. But that in my opinion is no criterion for bulkheads situated as I have testified to.

Q. Has not the trend been up the North River, of improvement in bulkhead property?

A. It does not go beyond 34th Street, in my opinion. Take it from 34th Street up to 59th Street, it is gridironed with railroads, slaughter houses and live stock yards and things like that. It is no comparison with south of there where you are right in connection with large railroads on the Jersey Shore and the large wholesale houses and retail stores in the City of New York.

Q. Everything has been moving uptown. The Hudson River Day Line is now at 41st Street and the Sandy Hook Line?

A. Yes, they have a stopping place there.

Q. And the tendency of these shipping points and ferries is to extend uptown, is it not? It is the only way they can extend now, isn't that a fact?

A. It is the only way they can extend.

2889 Q. Are there any Transatlantic Lines now north as far as 34th Street?

A. Yes, the Italian Line is at 34th Street.

Q. Are you familiar with the sale made by Moore to the City of bulkhead rights as far back as 1892 between 23d and 24th Streets for about $500—for exactly $500?

A. It is a question of record.

Q. Well, I ask you if you are familiar with it?

A. No.

Q. You did not take that into consideration of course?

A. No. It is one of the best locations in the city, and in my opinion would have no bearing on this 44th Street property.

Q. Are you familiar with the judgments obtained by the owners between West 28th and 29th Streets, and between West 29th and 30th Streets, about December, 1893, for bulkhead rights at the rate of $500, less an estimated cost of construction of the bulkheads of $75 a foot, or $425 net?

A. No, sir.

Redirect examination by Mr. **Burr**:

Q. What do you mean by the statutory rate of wharfage?

A. Regulated by the state in reference to the amount that owners of bulkheads or open piers can charge for wharfage.

Q. That rate does not apply to these piers you were speaking of or bulkheads?

A. It does, yes; it would apply to them.

Q. I mean——

A. My values have not been based upon the statutory rate of wharfage, no.

Q. Your valuation was based, I suppose, upon the assumption that the Consolidated Gas Company owned these bulkhead properties and piers.

A. I assumed that they did; yes, sir. All my valuations are based on the assumption that they owned the bulkhead rights and the land under water.

Q. Now, as a basis for your valuation, have you a record of leases and sales which you have consulted?

2890 A. I have. I have not really paid any attention to the sales, Mr. Burr, for the reason that in my opinion there has not been a sufficient number of sales there on the North River or East River to base my valuations on. I have considered leases which, under ordinary circumstances, in my opinion is a very good basis of values. I have all the city leases and also am familiar with most of the private leases.

Q. In arriving at your valuation as to the Tompkins Street water front, did you take into consideration any leases in that immediate neighborhood?

A. I did, and also property that I have for sale as well.

Q. That is the property of the Roach estate?

A. Yes.

Q. And you have those here with you, the record of such leases?

A. Yes, I have all the City leases here.

Q. I mean the leases that you consulted in making up your opinion as to the value of that property?

A. Yes, those are all here, both on the North River and East River.

Q. And the same applies to 41st Street and 42d Street, that is, you have the record of the leases there upon which you have based your judgment?

A. Yes, sir.

Q. 44th and 45th Streets?

A. Yes, sir.

Q. And 45th and 46th Streets?

A. Yes, sir.

Q. And Pleasant Avenue and 110th and 111th Streets?

A. Yes, sir.

Q. So that if Mr. Mathewson should ask you upon what you based your valuations on you have your data here to inform him?

A. Yes, sir.

By Mr. Mathewson:

Q. Referring to the 22nd Street pier and your reply that you have largely based your answers as to valuations on rentals, are
2891 you familiar with the lease of that pier at West 22nd Street
which was made at a public sale from May 1, 1886 to May 1, 1901 at $2,500 per annum?

A. What pier?

Q. Twenty-second Street pier. What was the rental paid for that? Wasn't it $2,500 a year?

A. North River, West 22nd Street, pier with water front 32,408 square feet, to Olcott, from May 1, 1902 to May 1, 1912, for $18,333.33.

Q. Wasn't that pier rented for a five-year term from May 1, 1886, to May 1, 1891 at $2,500 per annum as against the present rental of——

A. 1881? I haven't that lease away back there. It is no criterion. It is ten years ago.

Q. I am showing the increase in valuations in that section. And haven't you a record showing that from May, 1886 to May, 1891 it was $2,500 per annum and from May 1, 1891 to May, 1898, it jumped to $11,500 per annum or 360 per cent.?

A. I have taken the leases, sir, from 1900. I have given you all the advantages of the increase. There has been an increase.

Q. Have you any doubt that the figures I have given you as to those two years are correct?

A. I have not the slightest doubt that what you say is true.

Q. That is the information that I have at any rate.

A. Yes.

Q. And if that be so that would indicate an enormous increase as early as 1891.

A. There was a big increase in that section. That is the time when all those steamship companies commenced to go in the Chelsea section. There was a decided increase during those years.

Q. This term expired then, May, 1891, to May, 1898, at a rental of $11,500?

A. Yes.

Q. And you say the present rental is what?

A. This is the rental of a shedded pier.

2892 Q. How much?

A. A great big modern pier built by the city, $18,333.33. That is for an improved pier built by the city, shedded.

By Mr. **Burr**:

Q. That pier in 1890 was a very short pier?

A. A very short pier and, if I remember right, it was really a non-shedded pier. A non-shedded pier is restricted to the statutory rate of wharfage and it is a very different proposition than a shedded pier. A shedded pier can charge or make any arrangements it sees fit, just as you could for this building. A non-shedded pier is restricted to the statutory rate of wharfage.

By Mr. **Mathewson**:

Q. You can shed any pier?

A. No, you have to apply to the Dock Department, you have to get a permit.

Q. It appears by my memorandum that this pier was extended in 1892 by a resolution of the Board only twenty-seven feet on the north side and forty-five feet on the south side. But the rental was increased in 1892 from $11,500 to $12,519.26 per annum by reason of the increase.

A. This is a different kind of a pier entirely, Mr. Mathewson. This is a shedded pier, and I think it is a very low rental for a shedded pier.

Q. At that point?

A. At that point, I do. I think it is a very low rental for that.

By Mr. **Burr**:

Q. In arriving at a valuation in regard to such bulkhead property as this, what other circumstances do you consider besides the sales where you can find them, or leases. Do you take into consideration the character of the neighborhood and the approachability

2893 of the bulkhead by water and all that?

A. What it is best adapted for, yes, sir, always.

Q. Now, take the Tompkins Street water front. What leases in that neighborhood did you consider as the basis besides the other considerations you speak of in arriving at your valuations there?

A. Well, here is a lease right here at the foot of East 14th Street, Murray & Company, bulkhead, East 14th Street, 111 feet, leased for $525. The capitalization on a six per cent. basis would be $80 a foot.

By Mr. **Mathewson**:

Q. Bulkhead?

A. Yes, sir; 111 feet. Then knowing the conditions of the East River for the past twenty years, in regard to what the City gets and what I have got for sales through that section those are the very best elements of values I had to apply to 14th Street.

By Mr. **Burr**:

Q. Now, is there any other one you want to refer to in that neighborhood?

A. No, not necessarily. I do not think it is necessary.

Q. Well, take 41st and 42d Streets. What leases or sales in that neighborhood influenced your judgment in fixing the valuation?

A. You mean on the North River?

Q. On the North River.

A. Well, here is Pier 76 West 36th Street, 25,265 square feet, rented to the New York Central & Hudson River Railroad Company for $20,000 a year.

By Mr. **Mathewson**:

Q. When was that rented?

A. October 8th, 1904. Here is Pier 77, West 37th Street, 30,100 square feet, rented July 1st, 1901, for a term of twenty years.
2894 That is, in fact it is rented for thirty years, three renewals at $11,000 a year.

By Mr. **Burr**:

Q. What would that make it?

A. That would show really a valuation of the pier of about—a pier is a little different than a bulkhead as to capitalization. In other words, I capitalize a bulkhead at six per cent. where I capitalize a pier at eight per cent.

Q. That is on account of the higher valuation for the pier that Mr. Wheelock and Mr. Greene gave?

A. Yes. The difference is this: In a pier I allow one per cent. for a sinking fund, and two per cent. for maintenance of pier, collecting rents and such things. On a bulkhead you have only repairs which is not near as much in proportion to the value of the bulkhead as it is to the pier.

Mr. **Mathewson**: Capitalization at a higher rate would produce a lower capitalization rather than a higher one, as compared with Mr. Wheelock and Mr. Green.

The **Witness**: Well, I mean per square foot. I should say about $3.50 a square foot for pier rights, sir.

By Mr. **Burr**:

Q. You have given $6.00 here?

A. Yes, sir.

By Mr. **Mathewson**:

Q. $3.50 per square foot?

A. Yes, sir. That would show a valuation of $137,500 or nearly $4.00 a square foot for the pier rights including the structure.

Q. That would not be the bulkhead rights?

A. No, sir.

2895 Mr. **Burr**: He has figured pier rights at $6.00 and the lease figures out at $4.00.

The **Witness**: I have given you the benefit of that. Here is a pier, 78 West 38th Street, 37,364 square feet, for the same length of time, at $11,000. That really is less, about $3.75 per square foot for pier rights.

Pier 74, foot of 39th Street, 200 feet south of the dump, with dumping privilege, 4,780 square feet, for $1,250 a year. That was on a ten-year lease.

Here is also Pier 79, foot of 39th Street, 150 feet north of pier, with ice privilege, &c., People's Co-operative Ice Company "Pleasure of the Board." That is $1,575. I did not take that into consideration, for my opinion where a pier is leased where the Board can revoke the lease at any time or break it at any time, it does not show the true value of the pier.

By Mr. Burr:

Q. Well, that will do for that part. Now, suppose you take and tell us by what method, under what consideration, you arrived at your valuation as to 44th and 45th Streets, the land under water?

A. The same. The land under water.

Q. Yes.

A. Well, in my opinion it could be leased for—could be capitalized on about the figures I have stated.

By Mr. Mathewson:

Q. About how much per foot was that?

A. I think about six cents per foot.

By Mr. Burr:

2896 Q. Now, as to the Pleasant Avenue water front, 110th and 111th Streets, how did you arrive at your valuation there per square foot?

A. Land under water?

Q. Yes.

A. In the same way, sir.

Q. And the bulkhead, 212 feet, at $100?

A. $100 a foot, in my opinion.

Q. You resorted to the same method pursued in the other cases you have now described?

A. I did, the very same, sir.

By Mr. Mathewson:

Q. From what record are you giving the details as to these leases?

A. The record of the Dock Department, which is a public document. Here is one of them here (indicating a bound book).

Q. You took no part personally in making any of these leases?

A. I did not, no, sir.

Q. Or any negotiations respecting them?

A. No, sir, I did not.

Q. You were never connected with the Dock Department, were you?

A. I am sorry to say that I was not; no, sir.

A recess is now declared till 2:10 P. M.

After Recess.

Martin McHale resumes the stand.

Direct examination by Mr. **Burr**:

Q. What is the total assessment of all this real estate of the Consolidated Gas Company with regard to which you have been testifying including bulkheads, land under water, pier- and pier rights, etc., excepting Shadyside and excluding buildings as appears by the Exhibit in evidence here?

A. $10,348,513.

2897 Q. I ask you what is the assessed valuation?

A. $8,508,100.

By Mr. **Mathewson**:

Q. That excludes Shadyside and excludes all buildings, and excludes the 18th Street property taken for improvement?

A. Yes. You mean by the City?

Q. Yes.

A. It does, yes, sir. That is $8,508,100.

By Mr. **Burr**:

Q. And your testimony excludes those also?

A. Also.

Q. What is your total?

A. The total without improvements is $10,348,513.

Q. What percentage of that valuation is the assessed valuation?

A. 78½ per cent.

John M. Thompson, recalled for further examination.

Direct examination by Mr. **Burr**:

Q. Have you made water front property in the City of New York a study, and if so, for how long?

A. Why in connection with my business for the last four or five years.

Q. Are you familiar with the sales and leases of pier and bulkhead properties in the City of New York on the North and East Rivers?

A. Yes, sir.

Q. Have you sold any bulkhead property?

A. Yes, sir.

Q. What property?

A. I sold North River and 49th Street, 117 by 686 feet; that is 686 feet of course being land under water; 117 feet of bulkhead by 686 feet under water.

2898 By Mr. **Mathewson**:

Q. Does that mean lineal feet?

A. Lineal feet; 686 feet on each side.

By Mr. **Burr**:

Q. When was that?

A. That was in June, 1903.

Q. Have you appraised water front property?

A. I would like to say in addition that I have sold a water front property in Astoria very near the gas works. That was about ten acres with riparian rights.

Q. Have you bought any bulkhead property, water front property?

A. No, sir.

Q. Have you appraised water front property for any parties?

A. Yes, sir.

Q. For whom?

A. I appraised the bulkhead property and the land under water at the foot of 9th and 10th Street-, for the estate of John Roach. I appraised the bulkhead at the foot of 28th and 29th Streets, East River—the other being the East River also—for the city of New York in the Bellevue Hospital proceedings. And I appraised the land under water—riparian rights I should say, on the Long Island side extending from White Avenue to Ditmars Avenue, in Astoria, for the East River Land Company, I think it is.

Q. I think you said something on your previous examination about the bulkhead property that you bought. Was it from Mary Ryan to Judge Dugro?

A. Yes, sir sale from Mary Ryan to Judge Dugro; 1903.

Q. What property was that?

A. Forty-ninth Street and North River property.

Q. What price did you receive for that?

A. $60,000.

Q. And at what figure was the bulkhead?

A. The bulkhead I sold at $100 a foot, making $11,700. 2899 Land under water at sixty cents a square foot, making $48,297 or a total of $59,997, or within $3 of the $60,000.

Q. At sixty cents a square foot?

A. Yes, sir.

By Mr. MATHEWSON:

Q. Not six cents?

A. Sixty cents.

Q. I thought Mr. McHale had his at six?

A. No, sir. That was a rental value of six cents.

By Mr. BURR:

Q. Have you examined the water front property of the Consolidated Gas Company as the same appears on Exhibit 48 here?

A. Yes, sir.

Q. Including bulkhead, piers and land under water?

A. Yes, sir.

Q. Will you take up the first piece?

Mr. MATHEWSON: I wish to enter an objection against the competency of this witness. I do not think he has been qualified.

Objection overruled; exception.

A. Which is the first piece?

A. The Tompkins Street, East River, between 14th and 16th Street-, land under water, 450 by 70 feet, containing 30,318 square feet, at $2.00 per square foot, $60,636. Bulkhead, 446.4 feet, at $200 per lineal foot, $89,480; total, $150,116.

North River, between 41st and 42d Streets, bulkhead, 197½ feet, at $250 per lineal foot, $49,375.

Pier, $252,000, being 42,000 feet, at $6.00 a square foot, assuming that such pier can be built there. Total, $301,375.

North River, between 44th and 45th Streets, land under water, 14,756.10 square feet, at $2.00, $29,512.20.

2900 Between 45th and 46th Streets, 14,756.10 square feet, at $2.00, $29,512.20; or a total *of* land under water of $59,024.40.

The bulkhead between 44th and 45th Streets, 200.83 feet, at $200 a lineal foot, $40,166.

Between 45th and 46th Streets, 200.83 feet, at $200 a lineal foot, $40,166, or a total for the bulkhead of $80,332; and a grand total for the land under water and bulkhead of $139,356.40.

Pleasant Avenue, between 110th and 11th Streets, land under water, 9,400 square feet, at $1.00 per square foot, $9,400.

Bulkhead, 212 feet, at $100 per lineal foot, $21,200; total, $30,600.

Shadyside, about 611,710 square feet, or two hundred and forty-five city lots of upland, including the river front, at $1,000 per lot, $245,000.

Mr. MATHEWSON: As to the Shadyside I do not think any question has been asked of the witness and I would like to ask him one or two questions as to his Jersey experience.

Mr. BURR: Certainly.

By Mr. MATHEWSON:

Q. Have you ever bought and sold land in New Jersey?

A. Yes, sir, but nowheres near this property.

Mr. MATHEWSON: I move to strike out the testimony of the witness respecting his valuation as to Shadyside.

Mr. BURR: He will describe how he arrived at his valuation. He has not given the valuation yet.

Mr. MATHEWSON: Well, you have not qualified him. I do not have to anticipate.

2901 By Mr. BURR:

Q. Well, state how you arrived at your valuation of Shadyside?

A. My valuation of Shadyside was arrived at from the experience that I have had in the last eighteen months in water fronts all along the East River and Newtown Creek and Long Island City, and by comparison and deduction between properties over there and this property in Jersey, based upon my general experience as a real estate man.

Mr. MATHEWSON: I submit that that——

The **Master**: It is pretty remote. I will overrule the objection and let it in for what it is worth.

Exception.

Q. Now give us your valuation of Shadyside?

A. I gave that, sir.

Q. Now, that makes a total of bulkhead property——

A. It makes a total of bulkhead property including Shadyside of $866,447.40.

Mr. **Mathewson**: Wait a minute. Mr. McHale gave $871,447.40, and his figures in detail are identical with yours. Which is right?

The **Witness**: There is a mistake in Mr. McHale's addition, then.

By Mr. **Mathewson**:

Q. Your's is the Simon-pure correct total, is it?

A. It looks that way to me, sir.

Q. How much is it?

A. $866,447.40.

Q. Well, let me see. That includes then just the bulkhead, land under water, and pier rights to which you have testified at this session plus Shadyside?

A. Yes, sir.

2902 By Mr. **Burr**:

Q. That makes a grand total valuation of all the property that you have testified regarding of how much?

A. $10,486,356.15.

By Mr. **Mathewson**:

Q. Does this include the West Side property on the theory that the company owns 12th Avenue which it now occupies, or does it exclude 12th Avenue?

A. It excludes 12th Avenue.

Q. Well, if the company owns 12th Avenue it would add the difference which you——

A. I would like to suspend that question. I have not my book with me and really I do not remember what total I took on that when I made up my additions this morning. If you leave the question open I will answer it later. I really don't remember which total I took. I did it hurriedly.

Mr. **Burr**: Can I send around for your book?

The **Witness**: Yes, sir. It includes 12th Avenue. Mr. McHale states it includes 12th Avenue. He has evidently made a mistake in his figures.

By Mr. **Burr**:

Q. The total assessed valuation of all this property regarding which you have testified as appears by the evidence amounts to how much?

A. $8,508,100 without improvements and without Shadyside.

Q. And your valuation without Shadyside and without improvements amounts to how much?

A. $10,144,856.

Mr. MATHEWSON: Ought not we put in at the conclusion of 2903 Mr. McHale's testimony that this does not include Shadyside because his testimony was that the property he testified to——

Mr. BURR: He said excepting Shadyside.

Mr. MATHEWSON: Very good then, if it is clear.

Q. What percentage of your valuation is the assessed valuation?

A. 80.7.

Cross-examination by Mr. MATHEWSON:

Q. I see that your figures in every instance for bulkhead, water rights, pier properties, and Shadyside coincide to a cent with Mr. McHale's?

A. Yes, sir.

Q. I judge that these figures are the results of collaboration between you and Mr. McHale.

A. Yes, sir; Mr. McHale and I appraised all of those water fronts together, I think.

Q. And you agree to a cent on every piece?

A. Yes, sir.

Q. I understand this is your independent judgment, and Mr. McHale's is his independent judgment?

A. Yes, sir; at the same time in conjunction.

Q. In reference to your bulkhead property, East 14th and East 15th Streets which you have valued at $200 per foot, are you familiar with the condemnation proceedings of the 19th and 20th Streets bulkheads, in behalf of the city?

A. I know of them, yes, sir.

Q. Do you know that $300 is fixed in this proceeding as the value of the bulkhead?

A. I have so understood.

Q. Similarly are you aware that between 20th and 21st Streets, East River, the bulkhead was fixed in condemnation proceedings, at the instance of the City of New York, as $350 per foot?

A. I believe so, yes, sir.

2904 Q. Have you taken those into consideration in reaching your $200 per foot?

A. Yes, sir.

Q. Do you know what the difference in the character of the current is, or otherwise, affecting the value of bulkhead rights at 14th and 15th Streets as compared with 19th and 20th Streets, or 20th and 21st Streets?

A. I don't think there is a difference of $150 a foot, but I think there is a slight difference in favor of the 20th and 21st Streets on account of the width of the river there; it widens out.

Q. If these figures, $300 for 19th and 20th Streets, and $350 for 20th and 21st Streets be correct, relatively 14th and 15th Streets would be more than $200, wouldn't it?

A. I don't know that it would. Those were in condemnation proceedings.

Q. Just observe my question. I say assuming that to represent the true value at 19th and 20th Streets and 20th and 21st Streets, then the value at 14th Street relatively would be greater than $200?

A. On that assumption, yes, sir.

Q. Now as to land under water which you have estimated at $2 a square foot, are you aware of any land close to that which recently sold for $2 per square foot?

A. No, sir, I don't know of any recent sales of land under water except that one I testified to.

Q. In this Roach estate between 9th and 10th Streets, where you made an appraisal as you say, is the same Roach estate to which Mr. McHale has referred in his testimony, isn't it?

A. Yes, sir. Property I have for sale. At the figures Mr. McHale stated I appraised it and had it for sale.

Q. And Mr. McHale also stated he had it for sale?

A. Yes, sir; and have had it for sale for several years.

Q. Which was the Bellevue Hospital site?

A. 28th and 29th Streets, sir.

Q. And the East River?

A. Yes, sir.

2905 Q. Were bulkhead rights condemned there?

A. They have not been condemned yet. The testimony is in but the Commission has not finished the case yet.

Q. Turning now to the water front property on West 41st and 42d Street, you valued the bulkhead there at $250 per foot?

A. Yes, sir.

Q. And do you know of any bulkhead property that has sold in that vicinity recently at $250 per foot?

A. The only sale I can refer to is the one at 49th Street, sold three years ago at $100 a foot.

Q. That is the one from Ryan to Dugro?

A. Yes, sir.

Q. Was there any bulkhead built there at the time?

A. Yes, sir.

Q. Was it fully constructed across the frontage of one hundred and seventeen feet?

A. That I am not able to state now.

Q. What was the character of the upland at 49th Street?

A. In what way, sir?

Q. I mean was it precipitous?

A. Oh, no, sir.

Q. Was the New York Central Railway track between the upland and the dock property?

A. No, sir.

Q. You would not have to cross the railway to reach that?

A. No, sir.

Q. Does not the New York Central track run from 30th Street all the way up near the North River or through 11th Avenue?

A. It runs through 11th Avenue, but I do not think it is at 12th Avenue at that point.

Q. You do not think so?

A. No, I do not think so. I have not been there in three years and really do not recall.

Q. What Ryan was it that made this sale to Dugro?

A. Mary Ryan.

Q. Was it an estate or an individual?

2906 A. I have the contract here in my pocket, sir. I can tell you in a moment. It was an individual.

Q. Does she reside here in New York City?

A. I think so. She did at that time.

Q. Do you know where in New York City?

A. No, sir, but she is the mother of the late William M. Ryan, a real estate broker. I really don't know where she does reside. I did know at that time.

Q. This was to Judge Dugro?

A. Yes, sir.

By Mr. BURR:

Q. You have the original contract there?

A. I have the original contract here, yes, sir.

By Mr. MATHEWSON:

Q. Are you aware that the bulkhead at 58th and 59th Street sold for $650 per foot as Mr. Wheelock testified?

A. I have so understood.

Q. And are you aware that the bulkhead of 51st and 52d Streets and North River was fixed in condemnation proceedings at the instance of the City of New York as worth $500 per foot?

A. I think so, yes, sir.

Q. If those figures represent the actual value at 58th and 59th Streets and at 51st and 52d respectively, then relatively the value of 42d Street would be greater than $250, would it not, per foot?

A. If those figures represented the value, yes, sir.

Q. Is not the water front property at 42d Street worth more than the water front property at 51st and 52d Streets, or 58th and 59th Streets, per foot?

A. I think so, sir, but I know nothing of that sale for $650.

Q. No, I am asking relatively?

A. Relatively 42d Street is worth more.

Q. Assuming that 58th and 59th Streets was worth $650 per front foot, would not on that basis the bulkhead property at 42d 2907 Street be worth $750 per foot?

A. No, sir, I should say $700 a foot. I do not think there would be more than $50 a foot between the two.

Q. Are you familiar with the condemnation proceedings at 22d and 23d Streets, North River, respecting which Mr. Green testified, that as he understood it, $900 a foot had been allowed by the Commissioners in condemnation?

A. Yes, sir, $900 has not been allowed.

Q. The Commission has not reported yet?

A. No, sir.

Q. That is your information?

A. Yes, sir.

Q. If Mr. Green thought they had then you think Mr. Green is mistaken?

A. I think he is mistaken, yes, sir. I tried to verify that at lunch time but I was unable to do so.

Q. What rate per square foot have you estimated as the value of the land under water at 42d Street in estimating the pier property as worth $252,000?

A. I have not estimated the land under water there, except, I believe, the land under water could be utilized and that the owners would be allowed to build a pier sixty feet wide and seven hundred feet long, that would be extending from the bulkhead line to the pierhead line established by the Secretary of War in 1900.

Q. That means the use there for pier or for slips alongside pier of what area in square feet?

A. 42,000 square feet.

Q. And what would $252,000 represent per square foot?

A. $6.00 per square foot.

Q. Now, take 44th and 45th Streets and the North River, do you mean to say that the land under water at 44th and 45th Streets and North River would be worth only $2.00 per square foot if the computation of $6.00 per square foot for 42d Street is correct?

2908 A. Yes, sir, because that is a different proposition. One is land under water and the other is a right to build a pier.

Q. Well, the right to build a pier really involves the use of land under water.

A. Yes, sir.

Q. Or rather of the surface above the land under water, either for a pier or for slips.

A. Yes, sir.

Q. Is there any reason why at 44th Street the company should not pursue either course which it sees fit in the use of its land under water?

A. No, sir; but they have never availed themselves of their pierhead rights there, and they have done so down at 41st and 42d Streets.

Q. But the land under water or the surface above the land under water is possible of utilization in the same manner as at 42d Street if the company chooses to do so, isn't it?

A. Yes, sir.

Q. And in that event wouldn't it be worth more than two dollars a square foot, if it is worth $6.00 at 42d Street?

A. Why, yes, sir; if you have the right to build the pier out there, and this land under water is available for pier purposes, it would be, yes, sir.

Q. What would be the difference between 42d Street and this in the value of the land under water on that assumption?

A. Well, on that assumption I don't think it would make any difference, possibly fifty cents a foot.

Q. That is $5.50 or $6 at 45th and 44th Streets?

A. Yes, sir. I would like to make some explanation. I have only taken these measurements from the testimony. As I understand it, you have only got seventy feet of land under water there in depth and you could not build a pier out there. The testimony shows you have seventy by two hundred feet ten inches, and on that assumption you could not build a pier.

Q. That is at the bulkhead line, is it not?

2909 A. The land under water is testified by your expert from which I have taken these figures to be seventy by two hundred feet ten inches.

Q. Aren't you aware there are four hundred and eighty feet more of water out to the line of 13th Avenue?

A. I was not called on to testify to that. I only took what your experts testified to. If you wish me to testify to that, that would be a separate proposition.

Q. Assuming that to be so, then the value of the land under water would be available to 42d Street as you testified a moment ago?

A. Assuming that to be so, sir, I would have to re-appraise the property.

Q. Do you know of any actual sales of land under water recently in that vicinity at $2?

A. Three years ago the Mary Ryan sale at eighty cents a square foot.

Q. You have already testified to that.

A. No, others, except, of course, that East River land that I have for sale at less than that.

Q. That is East River. This is North River?

A. Yes, sir.

Q. Referring now to the bulkhead property at Pleasant Avenue and 110th and 111th Streets, did you hear Mr. McHale's testimony that he also appraised the land under water at one dollar per square foot?

A. Yes, sir.

Q. Do you concur with him that if an easement to put a tunnel two hundred feet under the East River was worth fifty cents or forty cents per square foot that the value of land inside the bulkhead line at 110th Street in fee would be only one dollar per foot?

A. I never testified to a tunnel under the river, and it would be impossible for me to answer that question.

Q. I know you did not.

2910 A. I could not answer the question. I have no idea what a tunnel under the river is worth. I have no idea what the easement is worth.

Q. And if the easement be worth that amount you could not form any opinion as to whether the bulkhead land under water would be worth twice as much?

A. I am positive that the land under water at that bulkhead is worth one dollar a square foot. As to the easement I don't know.

Q. Take the bulkhead which you have appraised at $100 per lineal foot?

A. Yes, sir.

Q. Are you familiar with the fact that a lease was made in 1905 of one hundred and eighty-seven feet of bulkhead between 109th and 110th Streets at $1,800 a year? It was testified to by Mr. Wheelock at page 1142 of the record.

A. I am not aware of that, sir.

Q. Assuming that the lease was made as Mr. Wheelock testified, at $1,800 a year, Mr. McHale has figured and testified that that would mean a value of the bulkhead at about $160 per lineal foot, capitalizing the rental at 6 per cent. Is that your computation, or would you accept his?

A. I would first want to know the conditions of that lease.

Q. No, I say assuming it.

A. Oh, assuming it. Yes, sir, that is about right.

Q. Well, property or bulkhead rights between 110th and 111th Streets would not be less valuable than between 109th and 110th, would they?

A. No, sir.

Q. So that if bulkhead property is worth $160 between 109th and 110th Streets, it would be worth as much between 110th and 111th Streets?

A. On that assumption, yes, sir.

Q. Are you also familiar with the policy of the Dock Department of the city in acquiring water rights since 1884 down to date? Do you know that has been their policy to acquire them?

A. Yes, sir.

2911 Q. And are you not also familiar with the fact that they paid generally from $450 to $600 per foot even as far back as the '80's, to acquire water front property?

A. No, sir, I don't think that the minimum figure was as high as that.

Q. Didn't they pay from $450 to $600 a foot generally for short pieces of twenty-five feet or thereabouts under one ownership and from $500 to $600 per foot for greater lengths?

A. That is possible, sir. I would not like to dispute it, but I think it is rather high.

Q. Well, you know a great deal of water front was acquired as high as $600 per foot for lengths of over twenty-five or thirty feet from your study?

A. Yes, sir.

Mr. Burr: Mr. McHale has testified that was in the shipping section.

Q. And under legal proceedings the city acquired various water front property at $500 per foot or more?

A. Well, just as Mr. Burr said, it was in the shipping district.

Q. Well, that may be, that is another thing. I ask you whether that is not the fact?

A. Yes, sir, that is a fact.

Q. And are you familiar with the Langdon cases where a rate of $600 per foot for one hundred and fifty feet between King and West Houston Streets was established and for two hundred feet between West Houston and Clarkson Streets for bulkheads taken as far back as 1877?

A. I know the cases; yes, sir.

Q. That is correct, isn't it, as to the figure?

A. I think it is.

Q. Are you aware that in 1892 the City purchased bulkhead prop-
erty between 20th and 21st Streets from the General Theolog-
2912 ical Seminary for $300 a foot, fourteen years ago?

A. Yes, sir, I believe so. What streets was that between?

Q. Between West 20th and 21st Streets?

A. Yes, sir.

Mr. Mathewson: I wish to say, that the offer was accepted by the city, but I am not sure whether the transaction was finally carried out. I think the property was subsequently condemned.

The Witness: I think it was condemned.

Mr. Mathewson: I think that arrangement was rescinded for some reason.

Q. Are you familiar with the fact that about December, 1903, the City acquired bulkhead rights between 28th and 30th Streets and North River at $500 a foot, less a small estimated figure for the construction of the bulkhead?

A. No, sir; I don't recall that one.

Q. It is true, is it not, that water front property, dock property on the deep water of the North River has been continually and rapidly advancing in value within the last fifteen or twenty years?

A. South of 23d Street, a great deal; north of 23d Street, to a less degree.

Q. But it has been advancing all along the North River water front, has it not?

A. Yes, sir.

Q. Now, it is in evidence that 924 square feet of land under water at West 40th Street was leased in 1877 and renewed in 1898 at $231 per annum, which would be at the rate of 25 cents per square foot. Have you not known of land under water being leased along the North River as high as 25 cents per square foot?

A. That is the case with 924 feet, yes, sir; but not for a large body of it.

2913 Q. Is not a large body of bulkhead property for many uses more valuable than a small body of bulkhead property?

A. You are speaking of land under water?

Q. Yes, and for land under water the same thing.

A. It would depend entirely upon the locality, whether they could use it or not.

Q. Quite true, but if you have enough land under water so you can build a pier with slips on either side for boats is not that more valuable than if you had a smaller amount of land which would not permit either by the width or length of it of the building of a pier with such slips?

A. I doubt very much whether it would be worth more per foot than 25 cents a foot, 924 feet, the City could hardly have leased it for less.

Q. Why was the City paying more for bulkhead rights where the bulkheads were over 25 feet long than for shorter lengths?

A. We were speaking of land under water and not bulkheads.

Q. Yes, and now we are speaking of bulkheads. Does not the same rule apply?

A. No, sir; I do not think it applies. I do not think you could lease the Ryan property of 80,000 feet for 25 cents a foot, and while you might 924 feet, I don't think you could lease 80,000 feet at that rate.

Q. What is the length of the Ryan property?

A. 117 feet.

Q. Do you consider that an excessive length for a bulkhead, to acquire a maximum rental per square foot?

A. No.

Q. Well, if you pay 25 cents per square foot as the rental of land under water at 40th Street, the rental value of land under water at 45th Street would not be appreciably less, would it?

A. Not on that assumption, no, sir.

2914 Q. And if you assumed a rental value of 25 cents per square foot, can you tell me what value that would give for the land under water at 44th to 46th Streets capitalized at the rate you have taken, 6 per cent.?

A. I have taken 5 per cent. for land under water. There are no expenses for land under water.

Q. Well, 5 per cent.?

A. On that assumption it would be $12,500.

Q. For the entire land under water?

A. $12,500 per lot.

Q. How much would that be for the entire amount of land under water?

A. 41st to 42d Street?

Q. No, 44th to 46th Street. It would be about $150,000, wouldn't it?

A. On that assumption it would be $147,560.

Q. Is it not a fact that bulkhead property and water right property on the North River and on the East River in the City of New York is closely held and is difficult to acquire?

A. I don't know. I have in addition to the piece on the East River, 9th and 10th Streets, I have another piece from John C. Sheehan, I think it is 114th to 115th Street.

Q. The East River?

A. Yes, sir; and then I have a piece that I am negotiating for or was in negotiation for recently with Simonson, the lumber man in that neighborhood, 108th, 109th, 110th Streets. Of course there are not very many; there are not very many on the Island.

Q. The supply that can be acquired is limited?

A. No question about that.

Q. And it is becoming more limited relative to the business of the port all the time?

A. Yes, sir.

Redirect examination by Mr. **Burr**:

Q. You and Mr. McHale have the same theory as to value therefore your figures are practically identical.

A. Yes, sir; we figured on the same basis of capitalization, therefore our results must be the same.

2915 Q. And in giving these figures, you have assumed that the Consolidated Gas Company owns the bulkhead and piers?

A. Yes, sir.

Mr. BURR: That is all the evidence I have to-day.

Mr. MATHEWSON: In regard to this motion, I have read the request spread upon the record yesterday by Mr. Burr and Mr. Kirby, relating to an examination of the Company's plants and books. The plant is being examined so that that is disposed of.

The first request is that the defendant be permitted to examine all documents and books relating to or upon which Exhibit 94 is based. There is no objection to that.

The MASTER: That is being done, as I understand.

Mr. MATHEWSON: That is being done, and we supposed that we had given consent to that weeks ago, and that it had been done. Second, to examine all books and documents relating to or upon which is based the cost of gas for some particular year, between the years 1900 and 1905. We cannot concede to that. We consider that the cost of production of gas now is the criterion, and labor and material and other things are distinctly different in cost in previous years.

Third, that the accountants shall be permitted to examine all the books and documents relating to or upon which the actual structural cost is based in 1884, or subsequent thereto, and also all of the books of the six companies which in 1884 joined together as the Consolidated Gas Company. I had instructed the officers of the Company to permit the examination of books and documents 2916 of 1905, covering all vouchers so far as desired, relating to the cost of operation as shown in Exhibit 94, and the construction account and repairs and renewals account, which I think cover all or substantially all of the vouchers for 1905.

So far as relates to the period prior to 1905, the complainant put in an exhibit showing the repairs and renewals for the period from 1884 to 1905 and there is no objection to the defendants examining the books and vouchers in respect to those renewals and repairs and at the same time in relation to construction account, which would show additions to construction since 1884, and also repairs and renewels since 1884. That would not apply to vouchers in relation to the operating cost of gas in each year since 1884, because he has put in no such exhibit and an investigation of previous years would be valueless in any event.

I think that covers all the requests of the defendants and covers them substantially except for the examination of some other year from 1900 to 1905 besides the year 1905.

The MASTER: Does that cover the question of the examination of the books of the six companies which united in 1884?

Mr. MATHEWSON: Yes, if counsel desire to examine them. I think the Master will see at once, if we went into the question of operating cost of gas for another year than 1905, considering the time it has taken us to cover that year, it would be out of the question to finish in a reasonable time, aside from the relevancy of the question.

I want to say that the vouchers for the year 1905 alone, which we have said we will submit to the defendants if they desire, would probably make a solid stack comprised in drawers three feet
2917 deep and eight or ten feet high covering the whole end of this
room, and if the defendants were to examine every one of these vouchers, I do not believe they could do it, and do that alone, in the time which is left them to put in their case here. And I call their attention to this because it is an utter impossibility to go over all these vouchers for 1905 and upon these construction, renewal and repair accounts back to 1884, in any time at the disposition of the defendants, and I suggest that they must make their choice as to which and where they desire to test. I call their attention to it now, so there may be no mistake or misunderstanding about that.

The MASTER: That seems to cover everything except this question of the examination of some particular year between 1900 and 1905.

Mr. BURR: In the absence of Mr. Kirby, I call the Master's attention to what Mr. Kirby said:

"The State, specifically, at this time, desires permission to examine all books and documents of any kind, going to make up the statements set forth in any of the exhibits of the complainant and especially in reference to Exhibit 94 and the exhibit relating to repairs and renewals from 1884 to the present."

The MASTER: Well, Mr. Mathewson's statement here covers the only two matters as to which Mr. Kirby has made himself sufficiently explicit to comply with the understanding we have of this matter, that is, Exhibit 94 and the exhibit relating to renewals and repairs from 1884 to the present. I think if he wants anything more specific than that, he will have to set it forth. He says, "All books and documents of any kind going to make up the statements set forth
2918 in any of the exhibits of the complainant." That is a pretty
broad order. Some of them have been made the subject of investigation and some of them Mr. Mathewson will no doubt concede and some of them he may object to; and until Mr. Kirby makes it a little more clear what he is driving at, I think we will have to suspend decision on that.

Mr. BURR: I wanted to call the Master's attention to the memorandum of Judge Lacombe on pages 2742 and 2743 of the record, in which he speaks of having come to the City to pass upon an application for the examination of the books in the latter part of August. That I wish to be understood was not an appliaction made by the City. It was an application made by the State for a modification of the injunction made by Judge Lacombe so that the State Commission of Gas and Electricity might have the power under the law bringing them into existence to call for the production of the Consolidated Gas Company's books, but inasmuch as that very law itself is called into question here as being unconstitutional, I advised that in my judgment that could not bring us very much relief, and as I understood, Senator Page agreed with that view and the motion was then withdrawn. But I did not wish it to appear that I was party to a motion which was not acted upon at that time.

Mr. Mathewson: I want to say, Mr. Master and Mr. Burr, that in conceding the examination of the construction account and the renewals and repairs account back to 1884, so far as you may decide to test it, I want it distinctly understood that the complainant's position is that the present property that we have and the present value of the property that we have is the capital upon which we are 2919 entitled to return and not any original cost; and in making this concession I do not wish to be taken as conceding any other theory.

Mr. Burr: I do not understand the concession to mean that. I will move now before the Master that he make a direction that the complainant permit the examination to the full extent for which it has been applied by us.

Mr. Mathewson: I do not think that that is quite appropriate now, considering that we have conceded that much.

Mr. Burr: You have refused, for instance, a comparison with the other years.

The Master: I will pass on that. As I understand, that is the only thing that is left that is not covered by Mr. Mathewson's concession, and if there is any trouble in getting what you want, you may bring it to my attention.

Now, with regard to that second branch of your motion, that is, taking out some other year between 1900 and 1905, I do not see, as at present advised, what the materiality or relevancy or benefit of that will be. I can see, possibly, that it might gratify an expert, who was getting up a theory covering his views of this matter, to have some other year taken out for the purpose of comparison or argument, if the results happened to show his way; but unless it is made a little more clear to me exactly how deductions based on the business of that proposed year between 1900 and 1905 are material, I should be inclined to think Mr. Mathewson's objections was well taken.

Mr. Burr: Then I will reserve the right to make further application as the examination develops.

2920 **The Master**: Yes, and if you can amplify that at some future time and show me that it is necessary for the proper presentation of your case to have some such investigation as that, you are entirely at liberty to make the application; but as now advised, I think you are getting all that is necessary.

At 3.40 P. M. adjourned to October 15th, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's 256,
State's W,
City's 54.

2921 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 15, 1906.

Met pursuant to adjournment.

Present, The Master, Mr. Garver, Mr. Page, Mr. Burr and Mr. Kirby.

2922 MR. BURR: Mr. Master, pursuant to the right reserved by me and allowed by the Master, I make the following additional objections and motions to strike out, on behalf of the City of New York, to the Exhibits introduced in behalf of the Complainant and numbered 101 to 215, both inclusive.

Generally, the objections are as follows and I will state them then more in detail.

The City objects to the reception of papers offered by the Complainant as grants or franchises under which it claims its rights to operate in the streets of New York on the ground:

First, that the said papers are not legally executed or properly acknowledged.

Second, that there is no proof that the assignments by the companies were authorized by the Board of Directors of such companies or by the City authorities.

Third, such assignments were made without the consent of the City and contrary to law.

Fourth, the time fixed to operate under the alleged franchises or permits has expired.

Fifth, the terms, conditions and requirements under which such alleged franchises and permits were obtained have not been complied with.

Sixth, such franchises or the valuation placed upon them should not be charged against the cost of the manufacture and distribution of gas.

Seventh, there is no proof of the identity of the persons signing the assignment under Chapter 944 of the Laws of 1871.

Eighth, the valuation arbitrarily fixed on the alleged franchises of the constituent companies at the time of the consolidation in 1884 is not binding on this Court in 1905, and should not be considered as a factor to add in any manner or in the slightest degree to the cost charged against the manufacture and distribution of gas 2923 in New York, against the City of New York or any other consumer.

Ninth, that said assignments are mutilated and interlined without the same being noted and the names of assignees and assignors have in many instances been changed.

Tenth, there is no proof that the companies to which said alleged franchises or permits were granted, ever operated under them or ever laid mains in the streets under said alleged franchises, or if they did, it does not appear in what territory or to what extent, and it does not appear what rights in the particular streets of the City are claimed under the particular franchises offered in evidence.

Some of the objections and motions go to the merits of this controversy, and the Master is urged to give them mature consideration and not to overrule them as having been made simply for the record. Others may seem technical. They go to the method of proof. They are nevertheless important.

The City's position is that certain extraordinary rights and privileges, some of which were granted without its consent, are now sought to be proved against it, and if proved here may hereafter become *res adjudicata,* although this is not conceded. The genuineness and validity of such hostile rights should be proved in the strictest manner known to the law of evidence, and should not be held to prove themselves without the production of any witness. The City, in taking this position, does not seek to embarrass the Complainant unduly. Many of the witnesses to the transactions mentioned in the Exhibits are still living and available, and the City is informed that many of them have actually been interviewed on behalf of the Complainant. All such witnesses should be produced by the Complainant and the City should be allowed the fullest opportunity for cross-examination. 2924

Exhibit 188 (page 648) purporting to be an agreement between William Foster, Jr., and others and the Union Gas Light Company under date of February 25th, 1874, and in and by which the parties of the first part attempted and purported to delegate to the Union Gas Light Company all the power of the parties of the first part as the Executive Committee under the Act of 1871, to manage and control the gas making business, the right to carry on which was conferred upon such Executive Committee by said Act, is objected to on the ground that said Act of 1871, Chapter 944, was an Act to authorize certain *individuals* there in named and their assigns, acting through certain of their number, not less than seven, composing an Executive Committee, to carry on a gas making business and to use certain portions of the City of New York for that purpose, the intention of the Act (assuming that it was not a fraud upon the City of New York) being that the actual active management and control of the business should be in the hands of said Executive Committee and not to be delegated by them to any *corporation,* and that said Committee might thus be free from the restrictions and limitations placed upon gas corporations by the general statutes of the State of New York.

In the case of individuals conducting a gas making business without a State franchise, there would be no right to use the streets of the City of New York for the purposes of distribution even with the consent of the municipal authorities. Instead of carrying out the purposes of the Act as above set forth and clearly appearing upon the face of the Act, it appears from the exhibits offered in evidence that William M. Tweed and his associates secured the individual interests

of certain of the grantees (misnamed incorporators) under
2925 the Act, and instead of organizing and conducting a gas
making business, proceeded to sell (at a profit, presumably)
the interests thus acquired.

Section 1 of the Act of 1871, page 488 of Exhibits says: "And also the said persons and their assigns shall so conduct *their* manufacture * * * of gas * * * The rights and privileges hereby granted are exclusive; but shall not be construed to affect or impair any exclusive rights or privileges, if any, vested in any *incorporated company* in said city."

The Act does not provide for incorporation or create a corporation. Throughout it refers to *individuals*.

No corporation became an "assign" of any of the grantees, every assignment of any individual interest being to another individual. No corporation ever received an interest in the grant except as the agent of the Executive Committee. The word "assigns" is used in the Act only for the purpose of enabling the individual grantees to have perpetual succession.

All of the exhibits relating to the said statute, Chapter 944 of the Laws of 1871 and the Act itself, Exhibits 119 and 215, both inclusive, are objected to on the ground that it appears from those exhibits that the legal title to said State grant, if the same still exists to-day, is not vested to-day in the complainant, but in the last assignees of the individual interests of the grantees named in the Act, namely: Oswald Ottendorfer, Charles G. Francklyn, Philip Allen, Henry Day, Harrison E. Gawtry, S. C. Thompson and Peter Gardner, the assignments to whom are all dated in March, 1886, there being no proof of any transfer to the complainant or any one else of their individual interest, and the assignments to them purporting to transfer to them absolutely the rights and interests of all the original
grantees. (Exhibits 208 to 214, both inclusive.)

2926 The MASTER: You mean there is no proof of assignment
by Ottendorfer and associates to that gas company?

Mr. BURR: Yes. The only interests under Chapter 944 of the Laws of 1871 passing to the complainant in this action as shown by the exhibits offered in evidence, consists of such interests as the Complainant may have received from the Knickerbocker Gas-light Co. under the consolidation agreement of November 11, 1884, and as to this, objection is here made as follows:

First. The Act of 1884, under the authority of which said agreement was made, conferred no right on the Knickerbocker Gas-light Co. to transfer to the Complainant any *municipal* franchise which it might then have possessed or controlled.

Second. No *municipal* franchise held or controlled by a gas lighting company, organized either under the Gas Company's Act of 1848 or the General Manufacturing Companies' Act of 1848 was assignable in 1884 without express sanction of the Legislature, and at that time no such sanction had been given by the Legislature.

Third. The only interest in the said State grant of 1871, Chapter 944, held or controlled by the Knickerbocker Gaslight Company was a right to exercise said grant as the agent and attorney of the Executive Committee under the said Act (see Exhibit 198, page

678), and such right was never acquired by the Knickerbocker Gaslight Company for the reason that the Executive Committee, even if legally chosen, had, as above stated, no power to delegate such right to the Knickerbocker Company, and even if such right had been delegated to the Knickerbocker Company, that company could not (under the terms of Exhibit 198, page 678) delegate the same to the Complainant without the express consent of Messrs. 2927 Ottendorfer, Francklyn, Allen, Day, Gawtry, Thompson and Gardner, and there is no proof in this case that those gentlemen ever consented to such delegation by the Knickerbocker Company to the Consolidated Gas Company.

Objection is made to all of said Exhibits from 101 to 215, both inclusive, on the ground that they purport to show, if anything, certain rights or privileges at one time claimed to be owned by the companies which consolidated in November, 1884, to form the Consolidated Gas Company, and all of such exhibits tend to prove no municipal franchise to-day owned by the Consolidated Gas Company, unless they may be held to have been legally and properly transferred to that Company by the consolidation agreement of November 11, 1884, and the Act of 1884 pursuant to which said agreement was made, conferred no right upon any of the constituent companies to transfer or delegate to the Consolidated Gas Company any municipal franchise. And further, that on November 11, 1884, when the Complainant claims to have received the municipal franchises, if any, of the said constituent companies, such franchises were not by law assignable, without the express authority of the Legislature, and no such authority had then been given by general act or otherwise.

The meaning of the word "franchise" as used in said Act of 1884 and in the general Acts relative to the consolidation of corporations has reference merely to the franchise to be a corporation received from the State and does not include any consent by any municipality to the use of any of the streets of that municipality. The franchises, if any, of the constituent companies were granted to them for the avowed purpose of creating healthy competition, and from this point of view ceased to exist upon the consolidation of the constituent companies which destroyed the very purpose of creating them.

2928 The MASTER: What would be the object of passing the Act of 1884 if the companies could not consolidate under it with their franchise?

Mr. BURR: They should have obtained the consent of the local authorities, we contend.

All of said Exhibits No. 101 to 215, both inclusive, are further objected to on the ground, that even if they do tend to establish in the Complainant any municipal franchises as against the City of New York, the said Exhibits are immaterial and irrelevant, as such franchises, if any, cannot be taken in this proceeding as part of the property used in the gas making business upon the value of which the Complainant is entitled to a return as against the consumers' supplied by the Complainant.

Objection is further made to Exhibit 101, (Page 421) purporting to be a grant of certain rights to the New York Gas-light Company on the ground that said grant was made in the year 1823 for the term of only thirty years and has therefore by its express terms expired.

Objection is further made to Exhibit 102 (page 427), purporting to be a grant of certain rights to the Manhattan Gas-light Company, on the ground that the said Exhibit is dated in the year 1848 and was for the term of only thirty years and has by its express terms expired.

Objection is further made to Exhibit 103, (page 434) purporting to be a grant of certain rights to the Manhattan Gas-light Company, on the ground that such grants purports to have been made in the year 1833 and by its express terms expired on May 12, 1853.

Objection is further made to Exhibit 104, (page 439) purporting to show grants of certain rights to the Harlem Gas-light Company, on the ground that said grants do not tend to show any rights in the Complainant. Even if a gas corporation in 1884 had the 2929 power to assign its municipal franchises, and even if the Harlem Gas-light Company did attempt to assign to the Consolidated Gas Company any rights it may have possessed under the grants shown in Exhibit 104, such assignment passed nothing to the Consolidated Gas Company because the said grants were not to the Harlem Gas-light Company and its assigns, but were intended to be used only by that Company. A municipal franchise to a particular gas corporation made prior to 1884 (even if assignable) was similar to a deed of real estate under the common law made to A. B., but not to his heirs and assigns forever. A. B., under such a deed in the absence of statute, received merely a life interest, and he could convey, if anything, only his life interest. If this analogy be correct, and even assuming that the Harlem Gas-light Company received more than a privilege to be used only by itself, and that it did assign what it had to the Consolidated Company in 1884, nothing passed to the Consolidated Gas Company beyond the mere right to exercise the privileges shown by Exhibit 104 during the corporate existence of the Harlem Gas-light Company, which term of existence has already expired.

Objection is further made to Exhibit 105 (page 444), purporting to be a grant or permission to the Metropolitan Gaslight Company and not to its assigns, on the same grounds specified in the objections to the grant to the Harlem Gaslight Company, and on the further ground that said permission was for the period of only 30 years, and having been granted in 1858 has already expired.

Objection is further made to Exhibit 118 (page 480), purporting to be a grant or permission to the Municipal Gaslight Company, on the ground that it expressly appears, in paragraph 9 thereof, 2930 on page 484 of Exhibits, that said permission should not be assigned or transferred without the previous consent of the Common Council, and there is no evidence in this case to show that such consent to the assignment of said permission to the Consolidated Gas Company, assuming that it was so assigned, was ever given; and on the further ground that said permission was in its inception invalid as beyond the authority of the municipal officials attempting to make the same, and the ordinance of August 18, 1884 (even if in evidence), in which the Board of Aldermen of the former City of New York undertook to confirm the said permission, was void under Section 86, Subdivision 5, of the Consolidated Act of 1882, then amended, and the attempted confirmation of said permission by the Legislature in Chapter 530 of the Laws of 1885, amending Subdivision 5 of Section 86, was unconstitutional in failing to express in its title that said amendatory act was designed to effect such confirmation.

Objection is also made to Exhibit 120 (page 490), purporting to be an affidavit of William Foster, Jr., made to verify and authenticate copies of affidavits of the publication of certain notices, on the following grounds:

First, the paper has no probative force of the facts therein stated, there being no proof that William Foster, Jr., is dead, or as to the circumstances under which the said affidavit was made and delivered, or that such facts (if they be facts) cannot otherwise be proved.

Second, the paper is not an affidavit, having been taken in New York County by a Notary Public for Kings County.

Third, the said paper in so far as it states that Hugh Smith was not eligible to serve on the Executive Committee as assignee of any of the original grantees under the Act of 1871 contradicts Exhibits 160 (page 585) and 144 (page 546), which tend to show 2931 that Hugh Smith did receive assignments of certain of the interests of certain grantees under said Act, and also Exhibit 180 (page 628), which tends to show that Hugh Smith was regarded as a member of the Executive Committee and resigned as such member.

Fourth, the exhibit is not admissible in the absence of proof that the original affidavits of publication cannot be produced at the present time or that proof of the publication of the notices cannot be obtained from the files of the Daily Transcript and the New York News.

Fifth, the affidavit, even assuming that it is proof of the publication of the notices in question under the Act of 1871, is inadmissible in the absence of proof tending to show that the meeting was actually held as stated in the notice, and that the Executive Committee was duly chosen at such meeting as required by the Act.

Exhibit 169 (page 606) offered as an assignment by Peter H. E. Baxter to Henry W. Genet is objected to as immaterial and irrelevant in the absence of proof that Peter H. E. Baxter therein described was the Peter H. E. Baxter, Junior, mentioned as one of the grantees named in the Act of 1871, the mere statement to that effect in the exhibit itself not being sufficient, as the admissibility of the entire exhibit is the question before the Master, and it must be proved to be connected with the Act of 1871 by evidence outside of the Exhibit itself.

Exhibit 196 (page 672) offered in evidence as a request or consent of the Union Gaslight Company and purporting to have been executed on December 11, 1876, is objected to for the reason that upon said date the said Union Gaslight Company was without 2932 power to make such instrument, a receiver of all the property and assets of said company having been appointed in 1875 as shown by Exhibit 112, page 462, of Exhibits.

Exhibit 201 (page 688) is objected to on the ground that, although it purports to be a general release from Walter Osborn and others as receivers of the Townsend Savings Bank of New Haven, it is signed by Walter Osborn and the others, not as receivers, but as individuals, and bears no notarial certificate of acknowledgment. Further there is no proof of the appointment or qualification of such receivers or that they were ever given authority to make and deliver such release. There is no proof that if they were receivers in Connecticut ancillary authority was ever given to them in this jurisdiction.

There is a total lack of proof of the execution, delivery and authenticity of Exhibit number 103 (page 434) purporting to be a grant to the Manhattan Gas-light Company; number 109 (page 454) purporting to be an assignment from the Anthracite Gas Lighting and Heating Company to the Citizens Mutual Gas Company; Number 124 (page 499) purporting to be an assignment from Isaac P. Martin to C. S. Bushnell and others, numbers 179 (page 627) 180 (page 628) 195 (page 671), 200, (page 687) and 215 (page 721), purporting to be resignations of various persons describing themselves as in the case of each said exhibit, as an Executive Committee, number 201 (page 688) purporting to be a general release from Walter Osborne and others to the Knickerbocker Gas Light Company. None of said Exhibits bear any acknowledgment before a notary public or other duly authorized official and there is no proof of any description as to the execution, delivery or authenticity of the said documents, or any of them.

2933 Similiar objection is made to numbers 115 (page 472) and 197 (page 675) purporting to be assignments executed by Charles E. Appleby, Receiver of the Union Gas Light Company, to Clark Bell. The notarial acknowledgments affixed to said exhibits are acknowledgments by said Appleby individually and not by him as such Receiver.

There is a total absence of proof of the execution, delivery and authenticity of Exhibit number 145 (page 547) purporting to be an assignment by James M. Sweeney to C. S. Bushnell. Said assignment purports to be executed in behalf of James M. Sweeny by John J. Bradley, his attorney in fact, and there is no proof of the authority of said Bradley to act as such attorney in fact, the document annexed to said exhibit and purporting to be a copy of a power of attorney from James M. Sweeny to John J. Bradley not having been proven to be a correct copy of said power of attorney, and there being no proof that said power of attorney ever existed or was duly executed. The mere certificate of Henry Parsons attached to said power of attorney is not proof of any of the facts in said certificate purporting to be stated. Further, the alleged copy is not a complete copy. There may have been provisions in it which would negative any power of Bradley to sign said exhibit in behalf of James M. Sweeny.

Similar objection is made to Exhibit 156, (page 574) purporting to be an assignment from Henry A. Smith to C. S. Bushnell and

others. The said assignment purports to have been executed in the name of Henry A. Smith by Bernard Smythe, his attorney in fact, and the authority of said Smythe to act as such attorney in fact has not been proven, the document attached to said Exhibit No. 156 and purporting to be a copy of power of attorney from Henry A.
2934 Smith to Bernard Smythe not having been proven by any
evidence to be a true copy of said power of attorney, and the existence and execution of the original thereof not having been proved or its absence accounted for. Further the alleged copy does not purport to be a complete copy.

The execution, delivery and authenticity of Exhibit 151 (page 563) have not been proved, there being no proper notarial certificate of acknowledgment of such execution, the document attached to said exhibit purporting to be such certificate of acknowledgment being without venue.

Similar objection is made to Exhibit 160 (page 585) on the ground that the document attached thereto purporting to be a notarial certificate of acknowledgment lacks any date.

Objection is made to numbers 188 (page 648) and 196 (page 672) in so far as the execution of either thereof by the Union Gas Light Company is concerned, on the ground that the document attached to each of said exhibits and purporting to be a notarial certificate, is fatally defective in failing to state that the officer who signed the corporate name to each of said exhibits signed such name and his own name as an official of said corporation by authority of the board of directors of said corporation.

Objection is made to numbers 129 (page 512), 161 (page 587) and 169 (page 606) for the reason that although each purports to be an instrument in writing under seal, the seal is absent from each of said exhibits.

Objection is also made to Exhibit 161 (page 687) on the ground that there is no proof that the official purporting to take the acknowledgment of said instrument was duly authorized to take such acknowledgment or to take the acknowledgments and proofs of deeds of lands to be recorded in the State of New York.

2935 Objection is made to Exhibit 134 (page 524) introduced
in evidence as an assignment to William M. Tweed, Jr., on the ground that said exhibit offered in evidence is not such assignment, it appearing upon the face thereof without explanation that the name "A. Oakey Hall" has been stricken out and the name "William M. Tweed, Jr." interlined in place thereof in the handwriting of William M. Tweed, Sr., and there being no proof or evidence that the said exhibit at the time of its execution was an assignment to William M. Tweed, Jr., and not to A. Oakey Hall.

Similar objection is made to Exhibit 142 (page 539), offered in evidence as an assignment of the interest of Henry Johnson, on the ground that it appears on the face of said exhibit without explanation that the name "William" has been stricken out and the name "Henry" interlined in place thereof, and there being no proof or evidence that at the time of its execution the said document was an assignment by Henry Johnson.

Similar objection is made to Exhibit 144 (page 546), offered in evidence as an assignment to James M. Sweeny, it appearing on the face of said exhibit without explanation that in one place the name "Hugh Smith" has been stricken out and the name "James M. Sweeny" interlined in place thereof, and in another place also without explanation the name "Hugh Smith" has been stricken out and the name "A. Oakey Hall" interlined in place thereof, and the name "James M. Sweeny," then interlined in pencil in place of the said name "A. Oakey Hall," the name "James M. Sweeny," in each case being in the handwriting of John J. Bradley, as appears by a comparison of said handwriting with the signature of said Bradley upon Exhibit 145 (page 550).

2936 In this connection the Master is referred to the endorsement in pencil upon the back of Exhibit 133, (page 521), namely "Chk. to J. J. Bradley;" and to the reference to Hugh Smith in Exhibit 120, page 492, purporting to be an affidavit of William Foster, Jr., and to the erasures in said affidavit of the words "eligible as such."

Attention is also called to Exhibit 180 (page 629), purporting to be the resignation of Hugh Smith as a member of the Executive Committee.

Similar objection is made to Exhibit 145 (page 547), for the reason that in what purports to be the acknowledgment of the execution of said instrument the name "William M. Bradley" has been stricken out and the name "John J. Bradley" interlined in place thereof, and the word "Nov." has been stricken out and the word "Dec." interlined in place thereof, all without explanation and without proof as to the condition of said instrument at the time of its execution.

Similar objection is made to Exhibit 156 (page 574), for the reason that in what purports to be the acknowledgment thereof, the words necessary to show that the acknowledgment was by Bernard Smythe, as Attorney in fact for Henry A. Smith," have been interlined without explanation and without proof as to the condition of said exhibit at the time of its execution.

Similar objection is made to Exhibit 160 (page 585), offered in evidence as an assignment to A. Oakley Hall, for the reason that it appears upon the face of such exhibit without explanation that the words "Hugh Smith" were stricken out and the words "A. Oakley Hall" interlined in place thereof, and there being no proof as to the condition of said exhibit at the time of its execution.

2937 In this connection attention is called to the reference to Hugh Smith, Exhibit 120 (page 492), purporting to be an affidavit of William Foster, Jr., and to the erasures in such affidavit of the words "eligible as such."

Attention is also called to Exhibit 180 (page 629), purporting to be the resignation of Hugh Smith as a member of the Executive Committee.

Similar objection is made to Exhibit 165 (page 596), for the reason that it was offered in evidence as an assignment by William Johnson, who does not purport to be one of the grantees named in Chapter 944 of the Laws of 1871, and for the further reason that the words necessary to connect the person executing said instrument with William Johnson, one of the grantees named in said Act, have been interlined in said Exhibit without explanation and without proof as to the condition of said Exhibit at the time of its execution.

Same objection is made to Exhibit 167 (page 601), offered in evidence as an assignment to Peter B. Sweeny, it appearing upon the face of said Exhibit without explanation that the name of "James M." before the name "Sweeney" was stricken out and the name "Peter B." interlined in place thereof, and on the back of said assignment the name of "James M. Sweeney" is stricken out and the name "Peter B. Sweeney" written in red pencil thereon, and there being no proof as to the condition of said Exhibit at the time of its execution.

Attention in this connection is called to Exhibit 195 (page 671), the signature of H. H. Porter thereto having been stricken out in red pencil and the word "error" written opposite thereto in red pencil.

Attention is also called to the fact that all of these Exhibits 101 to 215, both inclusive, bear upon the backs thereof numbers written in red pencil of the same color and style as was used to make the interlineations of the name of "Peter B. Sweeney" on the backs of 2938 Exhibit 167 and to strike out the signature of H. H. Porter in Exhibit 195.

On the back of Exhibit 167 and to strike out execution of H. H. Porter in Exhibit 195.

Objection is made to the following exhibits, and each of them, on the ground that there is no proper proof of the execution, delivery and authenticity of any one of them, the notarial certificate in each case stating, "Before me came —— —— to me known to be the person described in, &c.," and failing to state, "Before me came —— ——, to me personally known and known to me to be the person, &c."; 121, 122, 125; 127 to 133 both inclusive; 135 to 138, both inclusive; 140 to 145, both inclusive; 149 to 168, both inclusive; 170 to 178, both inclusive; 181 to 194, both inclusive; 197, 198; 203 to 214, both inclusive.

Objection is made to Exhibit 170 (page 607), for the reason that the notarial certificate of acknowledgment fails to state that Henry W. Genet, purporting to be the person who executed the said exhibit, was known to the Notary Public to be the same person, the words "known to me to be" being omitted from said certificate of acknowledgment.

In connection with this objection and the one preceding I refer the Master to acknowledgment on Exhibits 147 and 148, which are unquestionably in -correct form; also, to the acknowledgment on numbers 191, 194 and 206, which purport to have been taken outside of the State of New York, and in which cases certainly the Notary should have stated that the person acknowledging the instrument was personally known to him.

If these objections are overruled for any reason I move to strike out the exhibits on the grounds specified in said objections respectively.

I move to strike out all reference in the testimony to an in- 2939 vestment by the Consolidated Gas Company at Astoria, on the ground that the same is irrelevant, the evidence showing that such investment was made by **the Astoria Light, Heat & Power**

Company and that the only relation between that company and the complainant is that the complainant owns all the stock of the Astoria Company and holds certain evidences of debt issued by that company; and on the further ground that the said Astoria Light, Heat & Power Company is not shown upon this record to have any right to operate in the Borough of Manhattan, either directly or indirectly.

And in this connection I desire to call the Master's attention to the fact that it is conceded that the Consolidated Company owns a controlling interest in the stock of the New Amsterdam Company and that the latter owns all the stock of the East River Gas Company of Long Island City. But in case there should be any doubt of that I desire to quote from report of the Stevens Committee—you no doubt will concede that, won't you, Mr. Garver?

Mr. GARVER: I am not making concessions. If it is on the record it is conceded. If it is not on the record it is not conceded.

Mr. BURR: It is on the record.

The MASTER: I think you brought it out by Mr. Carter.

Mr. PAGE: I would like to join in the objections to the various exhibits and in the motions Mr. Burr has made with regard to them.

Mr. BURR: I would like to have entered upon the record about these franchises, this stipulation, if it is agreeable to counsel:

It is hereby stipulated and agreed by and between counsel for the respective parties to this action that the original of any exhibit, whether printed in the record or not printed, will be produced at any hearing or argument, provided reasonable notice be given
2940 for its production, and counsel may refer to or quote from on brief or argument any exhibit whether printed in this record or not.

No objection.

Mr. BURR: In connection with the testimony in the case already given here as to the kind of plants operated in this borough by the Consolidated Gas Company, and also in connection with the construction of the plant at Astoria, I think it important to produce before the Master, as being an official explanation of the situation as regards both those matters, the character of the plants in the Borough of Manhattan and the necessity for the Astoria plant, what appeared in the New York *Daily Tribune,* Friday, April 15, 1904, and I would ask Mr. Garver now whether this statement which is headed "To allow Gas Plants' Removal. Consolidated Gas Company declares that is purpose of Remsen East River bill," was not an official statement issued by the Company.

Mr. GARVER: I don't know as I have ever seen the statement before, but I certainly cannot concede that it was or that it is competent evidence here, or that there is any proof that it was ever made by the Company.

Mr. BURR: This purports to be a statement given out by a representative of the Consolidated Gas Company in view of the persistent misrepresentations, as to the purpose and effect of the so-called East River gas bill.

Mr. GARVER: I object to your reading anything from newspapers.

Mr. BURR: If you like I will read it, and if we cannot prove it we will have it stricken out.

Mr. Garver: I object to it as irrelevant and incompetent and mere hearsay.

The Master: You can offer it, Mr. Burr, if you like, and I 2941 will exclude it, and it will be printed as an excluded exhibit and you will have it in the record.

Mr. Burr: All right, sir. I offer it.

Received in evidence and marked City's Exhibit 55.

Mr. Burr: City's Exhibit 55 is as follows:

"The following statement was given out by a representative of the Consolidated Gas Company yesterday:

"In view of the persistent misrepresentations as to the purposes and effect of the so-called East River Gas Bill, the Company, contrary to its usual custom, has decided to make a statement on the subject. For the last ten years it has been the desire of the Gas Company, and the successive local administrations, to remove from the Island of Manhattan its fourteen gas plants, which are (under the most favorable conditions) not good neighbors, and assemble them on a single site at Astoria.

"At this point it has undertaken to make an investment of some fifteen million dollars in modern machinery and buildings. When this work was under way it was accidentally discovered that, through the neglect of an attorney some time between 1871 and 1878, to record a deed or a bill of sale, the chain of franchise title of the East River Gas Company was to that extent impaired. Since it was necessary, in making the vast improvement at Astoria effective, to use this East River franchise, the so-called Remsen East River Gas Bill was introduced in the Legislature to correct the clerical omission of the attorney. This bill was passed last year, but Mayor Low was informed by his Corporation Counsel, Mr. Rives, that the 2942 Company's title was defective, and he thereupon refused to sign the bill, notwithstanding that the avowed purpose of the bill was to correct a clerical omission.

"The Gas Company was thereupon forced into the Supreme Court, where, in mandamus proceedings, it obtained an order based on the validity of its charter, compelling the authorities to permit it to lay its mains in their city up to the new Astoria plant. The financial interests directing the vast public improvement did not wish to make an investment of this magnitude subject to court orders and so it sought affirmative legislative relief, and the Remsen Bill was again introduced and again passed.

"As the new gas station at Astoria, when completed, will be five times larger than any other in the world, and will bring together, on a new location, about 10,000 people, the citizens of Queens have been very active in assisting this matter, and have petitioned in its favor.

"In respect to modern gas manufacturing practice, New York is far behind London, Vienna, Paris and Berlin, where the authorities long since compelled the isolation of gas making plants outside the centres of population.

"The sole effect of the Remsen Gas Bill will be to facilitate and make safe the expensive work of bringing New York up to the sanitary level of these cities."—**New York Tribune, Friday, April 15th, 1904.**

Mr. Burr: Do you wish me to call your attention to any cases upon any particular points I have made, while we are here?

The Master: I shall have to have some cases if I am expected to rule on all these propositions, and I should like to 2943 have some statement of cases from the other side. I suppose as a matter of course they must have looked into some of these things before.

Mr. Garver: These motions are the technical kind that might have been made in the days of Lord Coke in an action in ejectment. Mr. Burr states that we are required to make strict proof of everything in this case. We do not understand that that is the rule at all. I do not understand that this is an action that we have brought to compel a recognition of our franchise rights, or that we are required to show that every assignment of every fractional interest has been executed and acknowledged in a precise manner to have enabled it to be recorded as a deed. There is not any such rule of evidence as that which applies to this case. They have put on their magnifying glasses here and they have subjected every page to a microscopic examination and they come in and urge these little, miserable, petty objections after the company has been doing business for more than a generation—after all those people have passed away. Now there is no rule of evidence that is better settled than that an ancient document proves itself. If a document is thirty years of age the mere production of it from the proper custodian is enough. If a document is not thirty years old, as some of these may not be yet, the very fact that a long time has elapsed certainly makes it incumbent upon the Master to take that into consideration in viewing the effect of the objections that have been made here. As I look at it, these objections are either too general, such as ought to be urged really in summing up the case, or they are too infinitesimally minute and they are all based really on the theory that we get all of our rights from the City. Now that is the greatest kind of an error and it is an error that has crept into the public press and that is shared by the 2944 community generally. It is not the fact and it is not the law.

We get our rights from the State, and the only act on the part of the City under the laws as they have existed since 1848, is the consent of the City that we shall exercise the franchise that the State has conferred upon us. Now, it is the State and it is the general law that gives a gas company that is organized under that law the right to lay and maintain mains in the streets of the City. The City has the right to consent to it but the statute does not require any formal or even written consent to our exercise of the right. That precise question has been recently passed upon by the Appellate Division in the Second Department in the case of the New York and Richmond Gas Company. That was decided in 89 App. Div. In that case they refused to recognize the right of the gas company to lay its mains and I think the proceeding was one to compel the City to grant it a permit. They did not have a scrap of paper, did not have any written consent of any kind, but that company and its predecessors had operated there for a number of years—I think perhaps fifty years; and the Court said that in a case of that kind it would be assumed that the City had consented by such long acquiescence, the consent would be presumed, and they cited a case, Jorgenson against Squire, I think in the Court of Appeals, being the case of maintaining an area-way under the sidewalk and where that existed over twenty years. The Court there held it would presume the right had been granted. And more recently, the Appellate Division in the Second Department has held that a consent would be inferred or assumed from the fact that the City entered into a contract with the gas company, that that in itself was a recognition.

Now that is all that we need to prove in this case. We are 2945 not proving down to the minute details as to what our franchises are. We do not have to; we did not have to give any proof of that fact. The mere fact that we have been operating in the streets for nearly one hundred years, with the consent of the City, and that we are getting permits from the City every day to lay and maintain our mains, and the fact that no proceedings have ever been instituted against us, raises the strongest kind of presumption and is the most persuasive sort of evidence that we do have franchise rights and that those rights are necessarily—where, as was shown, we have over eight hundred miles of mains in the City streets—of very great value. Now we don't have to come down to showing exactly what our franchise rights are. We could rest on that mere fact; the fact that we own these mains in the streets, and that we are an operating company. And their corporate existence will run along for thirty years yet and then it can be renewed merely by getting the consent of the stockholders which shows that we have franchises of very great value, and that is all that we need to show.

The issue in the present case is not whether the Consolidated Gas Company has a right to do business in the city, but it is what it shall charge for that right. In other words, the issue that they seek to raise here is necessarily presumed in this litigation, that we have rights but that those rights must be limited, that we cannot charge more than eighty cents for gas, and the Gas Commission whose order we attack in this case has necessarily passed on that because they say not the companies in general, but the Consolidated Gas Company in particular, shall charge only eighty cents; therefore they recognize affirmatively our right to operate in the streets of the city. Now a great many of these questions that have been raised as questions of evidence are not questions of evidence at all. For 2946 instance they object to those old rights away back in 1823 and 1830 and so forth on the ground that they have expired. Now that is a question that we shall argue before you when this case is submitted. We shall maintain the proposition that where the Legislature has granted to a corporation the right to lay and maintain mains, that although that right may be limited say to thirty years and although you may not be able to lay any mains after the expiration of that period, yet if your corporate existence continues the company that owns those mains has the right to manufacture and supply gas thus limited. That is merely a question of occupying the streets; that having been permitted to lay those mains, and its corporate existence with all the powers that that implies continuing, it has the right to maintain the mains. Now that is one of the propositions I do not need to argue now because it is something to take into consideration on the final hearing.

Then, too, as to the assignability of these franchises, as to whether they are assignable or not, that is purely a question to be considered, when we come to consider these assignments it can be met, but it is perfectly well settled that franchises of this kind can be assigned. Since the courts have held that franchises are property it necessarily follows that the person who owns that property can dispose of it, unless there is an express restriction or prohibition against its assignment. That was passed upon in the Broadway franchise case, People *vs.* O'Brien, 111 N. Y. That is the Jacob Sharp franchise, and there, as you remember, the Legislature repealed the charter. The company had previously mortgaged the franchise and the Court of Appeals held that that franchise was property, that it was therefore subject to mortgage and that the Legislature could not repeal it.

2947 In other words, they held that the company in spite of the fact that its corporate existence had been terminated had the right to assign the franchise that was given to it, which of course was their property, and it is being exercised to-day.

But there was a case that is directly in point, the case of Parker *vs.* Elmira, Cortlandt & Northern Railroad Company, 165 N. Y. That was a case where the old Utica Railroad Company had been given the right to charge four cents a mile and subsequently it went into the hands of a receiver and the mortgage was foreclosed. Its property was sold and it was bought in by an individual, who, of course, did not have any right to run a railroad and he transferred it to the Elmira, Cortlandt & Northern Railroad Company, the defendant in this case to which I refer, and the question came up whether that company had obtained this right. The Court of Appeals said that it had, although in the original Act it was restricted to the original railroad company it was given to that company and its assigns. That must be the law where a company owns property; unless its right to transfer that property is expressly restricted it of course has the power to assign it.

Now, all these minute objections to these particular instruments, as to whether the word "duly" or "personally," etc., are contained in the certificate of acknowledgment have absolutely faded out of existence when you consider the fact that by the consolidation of 1884, which was twenty-two years ago, the franchises of those various companies, including the Knickerbocker Company which had obtained a special grant, were vested in the Consolidated Company. Now, if A, or B, or C, or D did not transfer the very small fractional interest which he may have had in that original grant the fact that this was a matter of such general public concern and at that time it was recognized, especially by the Legislative Investigation

2948 that the franchises were transferred to the Consolidated Gas Company, if any of these persons as to whom objections has been made had not transferred his rights or duly sold his rights prior to that time, he clearly would be estopped at this late date from coming in and stating he had any rights.

Mr. Burr: I want to say just this in reply. It is quite evident all through this case and particularly from what Mr. Garver has said now, that these alleged franchises are regarded as very valuable property—nay, more property that they claim that they have a right to capitalize and that capitalization shall be a source of revenue from the consumer. Now that is a very serious proposition to the consumer of the City of New York and therefore I think they are bound to prove that right if they are going to ask the Master and this Court to say we have so many millions of dollars invested in these franchises, they represent so much property——

The **Master**: So far as you are concerned, Mr. Burr, representing the City, are you not estopped from claiming that those franchises are not worth at least the amount for which you are now assessing them?

Mr. **Burr**: I think not, under the decisions. The fact that they are assessed or have to pay taxes is not to be taken as a recognition of their validity.

The **Master**: In other words you can tax them on the basis of so many million dollars and at the same time contend here that for the purpose of capitalization they are valueless?

Mr. **Burr**: Just as they can say "we should not be taxed at all," and that is being litigated. That does not bind us in a case of this kind.

I will call your Honor's attention to another matter: Mr. Garver says these "petty objections." I do not believe they should be characterized that way, but if they are petty it is because it is the 2949 first time these papers have seen the light of day; they have never been recorded and I do not believe they have ever been produced heretofore in any similar proceedings by this Company where the question of their validity was brought up.

Mr. **Garver**: I do not think you should make that statement. That is evidently beyond your personal knowledge.

Mr. **Burr**: I am expressing *by* belief, that so far as my knowledge goes, these papers were never produced in any proceeding before, and I know they were never recorded; and further, I believe they were never recorded because they were defectively executed.

Mr. **Garver**: They did not require to be recorded.

Mr. **Burr**: And they purport to transfer an interest in real property.

Mr. **Page**: As far as their not having been produced before is concerned, they were not produced before the Stevens Investigating Committee, I mean none of these under the Act of 1871; nor any of these assignments under that Act. The counsel for the Consolidated Gas Company stated when they had completed offering all the franchises that they offered at that time that those were all the franchises that the Consolidated Gas Company claimed to hold. And in the matter of the investigation before the Commission, merely the franchises that were put in evidence before the Stevens Committee were read in evidence. So far as recent investigations are concerned, the first time we ever knew that the Act of 1871—which was a general grant to a lot of politicians—had ever become vested in any constituent company of the Consolidated Gas Company, was when produced here.

Mr. **Garver**: We do not rely on one franchise. We rely on all the franchises we have.

2950 Mr. **Page**: Of course, if the position of the Gas Company is that they have no franchise except that which they have obtained by prescription, of course that is all right, and we will value what they have got by prescription, what it is worth, but if they claim to have some exclusive franchise or franchises which are granted to them by some authority, that is another thing. That might be worth something. We would like to know what their position is, because if they claim they have acquired rights——

Mr. Garver: I thought I had made my argument clearer than that. My point was in showing that we do not get our rights from the City, that the City merely consents and acquiesces, and therefore that we are not bound down to technical rules of evidence which apply in an action at law. We have got other franchises, for instance, the Harlem franchise that we claim to be perpetual above 79th Street, and a very valuable one, and on that alone we think a very large amount could be given as its value.

Mr. Burr: I just want to say in answer to that point that Mr. Garver has raised, with regard to the acquiescence of the City in the situation, that he may and does contend that the City has acquiesced for twenty-two years in the existence of the Consolidated Gas Company and recognized the legality of its existence by giving it permission to extend mains, contracting with it for the lighting, &c. This is immaterial because the City had to have gas and had to buy the same from this company. Up to 1904 it had no legal authority to make its own gas or light its own streets. The controversy with this complainant arose in 1903 and the City's acquiescence in the existence of the complainant was therefore involuntary. The City had no other recource and was acquiescent as if under duress.

The City is not the aggressor in this litigation. It is
2951 seeking to defend itself against the assertion of extraordinary
claims. It is not asking that the pipes in the streets be torn up. It might concede, though it concedes nothing, that the company is in the position of a licensee, and has no other rights than a mere licensee. The company's business might not be destructible without compensation, it certainly should not be held to have perpetual rights upon which it may rely for all time so as to prohibit progress in lighting except upon its own extortionate terms.

If Mr. Garver's contention is true, they have an absolute right in the streets which time cannot change and whatever change there may be in lighting, a perpetual right against the City, which is a very serious question. It may be in this action the Court may disregard these franchises as an element going towards the capitalization or increasing or enhancing the capitalization or in any way affecting the price of the manufacture and distribution of gas. It may disregard it and say, That is an issue with which we have nothing to do here. But if it does take those matters into consideration it is going to very seriously affect the City of New York in the regard as to whether these franchises are legal or not, so that I believe, therefore, that we are justified in presenting to the mind of the Master all the possible objections we have and all possible claims at this time, so that later on we may elaborate them still further in our brief.

The Master: I shall be glad to have you, and I should be glad particularly to hear what you have to say in your brief on that question of taxation. As against the city, it seems to me that is a serious question.

Mr. **Burr**: The tax you refer to is a tax levied by the State.

2952 Mr. **Garver**: No, it is not a tax levied by the State. It is like any other piece of real estate, it is assessed by the State officers but becomes part of the local real estate assessment, because they send it down here and then it is entered on the assessment books here.

Mr. **Burr**: Which tax do you refer to?

Mr. **Garver**: To the State Franchise Tax. It seems to me that is also conclusive against the State, because the State gets its share and the City assesses it.

Mr. **Burr**: The City's duties in that regard are purely clerical. The assessment of the taxes is by State officers over whom the City has no control.

The **Master**: Well, for the purpose of this litigation, as the State and City are both parties, I do not suppose there is any particular significance in that distinction. We have got them all here, and they all have to defend their rights.

Mr. **Burr**: In view of the absence of Mr. Mathewson at the Court of Appeals, I have arranged with him not to produce Professor Bemis until to-morrow morning when Mr. Mathewson returns, and I will then be ready to proceed with Professor Bemis.

Adjourned to Tuesday, October 16, 1906, at Eleven o'clock A. M.

Last Exhibits:

Complainant's 256,
State's W,
City's 55.

2953 United States of America,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 4) pages, numbered from 2249 to 2952 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office (Vol. 4)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

2953½ Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York, WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 16, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr and Mr. Kirby.

U. S. Circuit Court, Southern District, N. Y. Filed Jun- 24, 1907.
[SEAL.] JOHN A. SHIELDS, *Clerk.*

2954 EDWARD W. BEMIS, a witness called on behalf of the city, being first duly sworn, testified as follows:

Direct-examination by Mr. BURR:

Q. What is your age?
A. 46.
Q. Are you a graduate of any institution of learning?
A. Yes; Amherst in 1880 and the Johns Hopkins University, where I received the degree of Doctor of Philosophy in 1885.
Q. Have you made a study of the gas question?
A. Yes.
Q. When did you begin to make a study of that question?
A. About 1889, when I was in charge of Economics at the Vanderbilt University at Nashville, Tenn. I took an interest in the special study of municipal gas works at that time and visited the various municipal plants then in operation in this country, and finally prepared a monograph at the request of the American Economic Association, which they published.
Q. Upon what subjects?
A. Upon Municipal Gas in the United States. That was published about 1891.
Q. What have you written on the subject?
A. In 1897 I prepared a report for the Special Bureau of Labor Statistics of Illinois, upon the Gas and Street Railway situation in Chicago, making a study of the franchises and the cost of manufacture and distribution of gas, and, generally, a history of those two problems in Chicago. Then in 1899 T. Y. Crowell & Co. published a book on Municipal Monopolies, which I edited. I wrote the chapter on gas and about half of the other chapters; and I have written

a good deal at different times in the magazines and papers, periodicals, etc., on the subject.

Q. Now have you appeared and given testimony in the 2955 courts before Commissions upon this subject, and if so please state where and when?

A. I appeared before the United States Court at Des Moines, Iowa, about 1893. I think I appeared first about 1892 and again in 1893, or 1894, before the same court. Then I subsequently have appeared before many different tribunals. I have appeared before the Massachusetts State Gas Commission in the case of the Springfield, Haverhill and Boston gas companies, and before the New York State Gas Commission in this Consolidated case a year ago, and have appeared also before the same State Gas Commission in the Syracuse case last spring.

Q. That is, you appeared before the State——

A. The New York State Gas Commission. I appeared before a State court in Baltimore last spring with reference to a gas case in Baltimore. I appeared before the Chicago City Council last winter. I also prepared a report for the Montreal City Council.

Q. What was the occasion of your appearance before the Chicago City Council?

A. The question of a proper price of gas was being considered by the city, and they called upon several to appear before them and give evidence. I was one.

Q. And you say you prepared a report for Toronto?

A. No; the City of Montreal; at the request of the City Council.

Q. Upon what subject?

A. That was on a proposed municipal gas plant. The cost of the plant and its operation. Then I have had occasion to make a good deal of study of the gas question within the last year or two in connection with the National Civic Federation, which created a committee of twenty-one to make an investigation of municipal, as compared with private, gas and electric light and street railway and water works, here and abroad. They created a special committee of five, of which I happened to be a member, and which had the 2956 direction of the work and the hiring of the experts; and they have been in Europe—were in Europe——

Q. Who, the experts or the committee?

A. Both. We were in Europe together during the spring. And then there was created a special committee of four to analyze the results of this investigation in America and in Europe, and I am one of that committee.

Q. And you are engaged on that work now?

A. Yes.

Q. While in Europe, while a member of that committee to which you referred, did you visit the gas plants there and electric light plants?

A. I visited them in Great Britain. We did not go on the Continent for that purpose.

Q. Have you visited gas plants in America to any extent?

A. Yes; I have visited a great many; and I may say visited gas works in Great Britain in 1900 also, when I was over there on another occasion, not connected with that directly.

Q. In what cities in the United States have you visited gas plants?

A. Boston, Worcester, Lowell, Haverhill, Springfield, Holyoke; and, further west, in Syracuse, Cleveland, Toronto, Chicago, Cincinnati, Baltimore, Philadelphia. I suppose there are a good many others, but those are some of the larger ones. I know I have visited the municipal plants. All of those I have visited a good many times—Richmond, for example, and Hamilton and Wheeling, etc.; a good many small works, Duluth.

Q. You are now and have been for some time in the employ of the City of New York as an expert in this matter of the Consolidated Gas Company?

A. Yes.

Q. And in connection with the general lighting situation which exists between the city and the various gas and electric light companies?

A. Yes.

2957 Q. Have you made a study of the testimony in this case, and if so you may state exactly what you have done in connection with this case and prior investigations regarding the Consolidated Gas——

A. Well, I prepared myself by a review of the evidence taken in all the previous hearings which I had already read at previous times, such as the two reports made in 1885 and 1886, to the New York State Senate; and the Stevens report and evidence and exhibits; and the evidence taken before the New York State Gas Commission in this case, and the exhibits and evidence in this case.

Q. And the exhibits before the Gas Commission?

A. Yes, that's right. And I have made special studies of such facts as I could gather in the files of the Massachusetts Gas Commission.

Q. Now, you have heard or read all the testimony in this case?

A. Yes.

Q. And you have made a study of all the exhibits in this case?

A. Yes.

Q. Which exhibit do you desire to take up first for your consideration now?

A. Exhibit 93 and Exhibit 94 more particularly; Exhibit 93 at first, and also a more detailed analysis of that exhibit which appears as Exhibit 145 in the printed testimony before the State Gas Commission of this State.

Q. Now, do Exhibit 93 and Exhibit 94 divide the cost of gas to the Consolidated Gas Company?

A. The Exhibit 93 refers to the twelve months ending October 31st, and Exhibit 94 is for the calendar year 1905—the other for the year, I said, ending October 31st, and each of them divide the cost into the cost at the holders or the manufacturing cost, and other costs which the company itself divides into Distribution, and General Cost and Fixed Charges.

2958 By Mr. MATHEWSON:

Q. Referred to as "Station Cost" in the exhibit?

A. I think it is. And these fixed charges. That is one of the four. The last was "Fixed Charges."

Mr. BURR: I want to offer in evidence—I do not think it is in evidence yet—Exhibit 145 before the Gas Commission. It is the statement purporting to be "A Statement of Summary of Operations for the Nominal Year Ending October 31st, 1905, All Stations," offered by the Consolidated Gas Company of New York in the proceedings before the Gas Commission, and appearing upon page 2112——

Mr. MATHEWSON: It was not offered by the Consolidated Gas Company.

Mr. BURR: It was not?

Mr. MATHEWSON: No. It was prepared at the request of the Commission, at the request of Professor Bemis, and submitted by the complainant in the proceeding before the Gas Commission.

Mr. BURR: Well, it is an exhibit in the proceedings there?

Mr. MATHEWSON: Oh, yes, if it so appears in the record.

Mr. BURR: Yes.

The WITNESS: It was prepared by the Consolidated Gas Company, as I understood it.

Mr. BURR: I offer it in evidence, commencing at page 2112 and ending at the bottom of page 2135.

Received in evidence and marked City's Exhibit 56.

Q. How do Exhibits 93 and 94 divide the cost?

A. They divide the cost between station costs and all the other costs which the company divides into Distribution, General and Fixed Charges. 2959

Q. Exhibit 93 gives——

A. That gives the so-called operating cost as 72.12 cents, and Exhibit 94 gives it as 74.81 cents. That exhibit was for a later period, you see, covering the calendar year of 1905.

Q. Well, in each case is there a division between the cost at the holders?

A. Yes, I think that is very properly made between the cost at the holders or the station, commonly known as the manufacturing cost, and all the other costs, which, as I have said, the company divides into Distribution, General and Fixed Charges.

Q. What did you do with the interest charges?

A. They are no- an operating cost; they are an interest on indebtedness and are in the nature of a return on capital and should be eliminated from the study of operating cost.

Q. What did you do with the consumers' deposits?

A. The same remark applies to those.

Q. Now, will you describe what these two items are in Exhibits 93 and 94?

A. Yes. In Exhibit 93 the fixed charges are 7.04 cents and the interest on consumers' deposits is——

Q. Excuse me. You can get it in a little more accurately?

A. Yes. Here is a table which I prepared for the stenographer, as follows:

TABLE 1.

Elimination of Return on Capital.

Description.	Ex. 93.	Ex. 94.
Fixed Charges	7.04c.	7.32c.
Interest on consumers' deposits	0.40	0.39
Total return on capital	7.44	7.71
Total operating cost as given by company	72.12	74.81
Operating cost as corrected above	64.68	67.10

2960 Q. The table you have prepared is in three columns, headed, "Description, Exhibit 93, Exhibit 94"?

A. Yes. "Elimination of Return on Capital" is the heading of the paper.

Q. Under the heading of "Description" you have "Fixed Charges"?

A. Yes.

Q. Under "Exhibit 93" that appears to be 7.04 cents?

A. Yes.

Q. Under the heading of "Exhibit 94" it is 7.32 cents?

A. That's right.

Q. The next item is "Interest on Consumers' Deposits" and under "Exhibit 93" is 0.40?

A. Yes.

Q. And under "Exhibit 94" you have 0.39 cents?

A. Yes.

Q. The "Total Return on Capital" under "Exhibit 93" is 7.44 and under "Exhibit 94" it is 7.71 cents?

A. Yes, sir.

Q. The "Total Operating Cost as Given by Company" is under "Exhibit 93" 72.12 cents and the total under "Exhibit 94" for the same item is 74.81?

A. Yes.

Q. "Operating Cost as Corrected Above," under "Exhibit 93," is 64.68 cents and under "Exhibit 94" is 67.10 cents?

A. Yes, sir.

Q. That is correct, is it?

A. Yes, sir.

Q. What was the manufacturing cost in Exhibits 93 and 94?

A. Well, I include in that, as does the company, the cost at the holders; that means cost of manufacturing and any expenses connected with it; maintenances of the holders, and so it is all the cost up to the time that the gas leaves the holder. Now this cost as given by the company was 32.84 cents in Exhibit 93, and 32.77 cents in Exhibit 94.

Q. How is it divided?

A. It was divided into gas made by the Consolidated Company and gas purchased under the agency agreement.

Q. Have you a statement showing that division?

A. I have a statement here and I will hand it to the stenographer. It is as follows:

2961 TABLE 2.

October 31, 1904-1905. January 1 to December 31, 1905.

Gas Made and Bought Under Agency Agreement.

Description	Feet, Exhibit 93.	Feet, Exhibit 94.	Cost, Ex. 93.	Cost, Ex. 94.
Gas made	10,659,909,000	10,657,810,000	32.68c.	32.42c.
Gas purchased on agency agreement	3,062,354,768	2,929,210,322	33.38c.	34.04c.
Total	13,722,263,768	13,587,020,322	32.84c.	32.77c.

2962 The WITNESS: That shows that they made, according to Exhibit 93, 10,659,909,000 feet and that the cost was 32.68 cents.

Q. Wait a moment. If you just give the statement as it is there you will get the matter clearer. This is a statement of the gas made or bought under agency agreement, October 31st, 1904, to 1905, isn't it?

A. That is a mistaken heading you have on your paper. That should be October 31st, 1904-1905, and January 1st-December 31st, 1905, for there are two periods covered. One is in Exhibit 93; the other is Exhibit 94.

Q. That statement that you have prepared is divided into five columns, is it?

A. Yes, sir.

Q. The first column is "Description"?

A. Yes.

Q. And the second column shows the feet made under Exhibit 93, the third column shows the feet made under Exhibit 94, the fourth column shows the cost under Exhibit 93 and the last column shows the cost under Exhibit 94?

A. Yes.

By Mr. MATHEWSON:

Q. That is the cost of the gas made and not the cost of that portion of the gas made which reached the consumers' meters?

A. This is per thousand cubic feet of gas made. This is not per thousand cubic feet of gas sold to the consumers.

Q. So it is not computed on the same basis as the station cost in Exhibits 93 and 94, is it? Or, is it?

A. Yes, I think so.

Q. On the same basis as in the last column in Exhibits 93 and 94?

A. Yes. This is taken directly from those exhibits.

By Mr. **Burr**:

Q. Now, have you any criticism to offer as to the station 2963 cost or cost at the holder of the gas made?

A. Yes.

Mr. **Mathewson**: If it is anything that appears on these exhibits, if the Master please, I have no objection to the witness showing a mathematical error in computation, or something of that sort, but if he proposes to criticise the inclusion of items here, or say that they are too much, or too little, I must object to that, because the witness has never operated a gas plant, he has never built a gas plant, he has never been in the gas business, and he is not an expert qualified to speak in that subject. I would like to ask the witness a question.

By Mr. **Mathewson**:

Q. Have you ever managed a gas plant?

A. No.

Q. Have you ever constructed a gas plant?

A. No.

Q. Have you ever been in the gas business?

A. No.

Mr. **Burr**: A man might understand political economy and never have run a green grocery.

Mr. **Mathewson**: He probably would not understand political economy if he had spent his life as a green grocer.

Mr. **Burr**: He would understand a good part of it

Mr. **Mathewson**: I do not know quite what the answer may bring forth, but I think in time I should register that objection, which it seems to me cannot be passed over.

By Mr. **Burr**:

Q. Mr. Bemis, whatever your testimony may be, it is based upon the result of the study which you have stated to the Master 2964 you have made on this subject, together with a careful study of all the testimony and exhibits in this case?

A. Yes, sir.

Mr. **Mathewson**: A man would not be qualified even to study, if study would qualify a man as an expert in a matter of this kind, unless he had some preliminary practical knowledge, in my judgment. But I doubt if study of practical knowledge will justify a man in appearing as an expert and saying, this is too much for this, and that is too much for that, when he never operated a plant.

Mr. **Burr**: That is something that appeals to the Master. If the Master thinks his testimony in that regard is entitled to so much weight or no weight, that is for him to say.

The **Master**: It is very difficult for me in advance of the testimony to pass on your objection with any degree of intelligence, but I am inclined to let the professor attack your tabulations and figures from the standpoint of a statistician, if you please, or an expert on the theory of gas making, and I think that——

Mr. **Burr**: And a student of gas economics.

The **Master**: And I think, as Mr. Burr says, that your objection goes in the last analysis to the question of the weight to be attached to his testimony. I may be wrong in that, but at all events, your rights are reserved; you may have the objection noted, and if it should transpire hereafter that the testimony that the professor gives is going to unduly protract the case or open up side issues, or if for any other reason it is believed by you that the examination ought not to proceed further, why, of course, you may renew the objection to strike it out and reserve your right. I think we will save time by letting him proceed and answer these general questions according to the line that he and Mr. Burr have worked out, and protecting your rights subsequently, as may be. 2965

Mr. **Mathewson**: I shall take an exception, if you please. And in order not to take time or embarrass the witness, may it be understood that this objection shall apply to all the testimony of this witness which deals with other than the mere statistics and figures?

Mr. **Burr**: Before I make any comment upon that suggestion I desire to ask the Professor one question.

By Mr. **Burr**:

Q. Have you had any experience in works kindred to gas works—water works, for instance?

Mr. **Mathewson**: The question whether they are kindred is another thing. Leave out "kindred."

Q. Well, have you had any experience in water works?

A. For five years and now I have been and am superintendent of the Cleveland, Ohio, Water Works.

Mr. **Mathewson**: Do I understand, then, my objection applies to not only this but subsequent testimony here?

The **Master**: Yes. It is not necessary for you to repeat the objection each time. Now you may proceed.

Q. What do you wish to take up first?

A. Very briefly I wish to refer to the purchase and handling of coal, coke and oil, &c.

Q. Have you itemized those matters in a schedule prepared by you?

A. I have. Here is the statement.

2966 By the **Master**:

Q. What is this supposed to be? A mere rearrangement of the figures contained in these exhibits, or some independent conclusion you have arrived at? And if so, what is the nature of that conclusion?

A. This is a rearrangement merely of what is in the exhibts thus far.

By Mr. **Burr**:

Q. All taken from the exhibits in this case?

A. Yes, sir.

Mr. Burr: And all rearranged as he thinks they should be?

The Witness: The statement is as follows:

Table 3.

Cartage and Labor of Handling.

Description.	Cost. Exhibit 93.	Cost. Exhibit 94.	Ex. 93. Cost per 1,000 ft. made.	Ex. 94. Cost per 1,000 ft. made.
Coal, cartage	$18,250 48	$18,222.89	.17c.	.17c.
Coal, labor handling	50,506.25	49,150.07	.48	.46
Coke, cartage	12,360.66	11,164.97	.12	.10
Coke, labor handling	36,694.71	35,678.39	.34	.34
Coke used, cartage	43.87	43.87		
Coke used, labor	1,473.08	1,293.31	.01	.01
Oil, cartage	17,830.15	17,123.60	.17	.16
Total cartage and labor handling	$137,159.20	$132,677.10	$1.29	$1.24

2967 By Mr. Mathewson:

Q. This item of handling, that refers to coal only?

A. No, as it appears, coal, coke and oil.

Q. Do you call that table three?

A. I have not specified it, but you might call it table three.

Q. And the others are tables one and two?

A. Yes.

By Mr. Burr:

Q. What interpretation do you put upon this cost?

A. It is high. It indicates either bad management, or what is more likely that some of the works are poorly situated, being separated from the water by streets, or not possessed of proper conveyors. Their Astoria plant should be operated nearly one cent cheaper per thousand feet in these respects.

Q. You say that is shown by an expenditure of $132,677.10 as shown in Exhibit 94 or 24 cents per thousand feet of gas made?

A. Yes.

Q. For the handling of coal, coke and oil at the works?

A. Yes.

Q. Entirely apart from the delivery of coke?

A. Yes. That is higher than in good works properly situated.

Q. In this case the delivery of coke is managed by a subsidiary company?

A. Yes, so that this does not include the cost of delivering coke to consumers as is the case in many companies.

Mr. Mathewson: Of course, I suppose the Master and counsel understand that I am objecting to this testimony under that general objection just the same.

The Master: Yes, I understand, it is taken subject to that objection.

Mr. **Mathewson**: I cannot think that the witness is competent to testify to these things, as he has not had practical knowledge.

2968 Q. What is the next point you wish to take up in this connection in the station costs?

A. In connection with the station costs, it is the excess of those costs over those of other gas companies affiliated with the Consolidated Gas Company doing business in the same City of New York and paying substantially the same prices for coal and oil and presumably for labor.

Q. Have you made any comparisons with other plants in the city?

A. Yes.

Q. State what results you arrived at.

By Mr. **Mathewson**:

Q. Let me ask you where you got the data with reference to these other plants? It is not in evidence in this case.

Mr. **Burr**: I will produce it now. He is going on to give it.

Mr. **Mathewson**: It is not in evidence in this case.

Mr. **Burr**: I am going to offer it in this case.

The **Witness**: It is evidence that will be in this case in a moment, I suppose.

By Mr. **Burr**:

Q. Between what stations have you made comparisons?

A. I first made a comparison between the water gas made at the three water gas stations of the Consolidated Gas Company, namely, the 21st, 44th and 99th Street stations.

Q. For what year?

A. For the year ending October 31st, 1905, as covered by Exhibit 93, and more particularly as covered by Exhibit 145, just put in evidence from the previous case.

Q. That is, City's Exhibit 56?

2969 A. Or City's Exhibit 56 now, and compared that for the cost with the same period of time of the Standard and New Amsterdam companies.

Q. Where is the data for the 21st Street plant to be found?

A. That is to be found in Exhibit——

Q. City's Exhibit 56?

A. City's Exhibit 56, in the printed copy, the big volume, where it appears as Exhibit 145 before the Gas Commission, pages 2121-2124.

Q. And the data for the 44th Street plant is found in the same exhibit?

A. The same City's Exhibit 56 as it is now, and as it was in Exhibit 145 of the State Gas Commission—pages 2129-2131.

Q. And the data for the 99th Street plant is found in the same exhibit, is it not?

A. Same exhibit, City's Exhibit 56 in this case, but in Exhibit

145 of the printed testimony before the State Gas Commission it is pages 2132-2135.

Q. And the data for the Standard Gas Company is found where?

A. In Exhibit 23-A, page 1745 of the typewritten testimony before the State Gas Commission in the Standard Gas Case.

Q. Do you know who appeared for the Standard Gas Company before the State Gas Commission?

A. Mr. Mathewson.

Mr. **Mathewson**: Does that make it competent?

Q. Have you got the testimony here?

A. It was put in that bag.

Mr. **Mathewson**: You do not claim that evidence in any case in which I appeared as attorney is competent in any other case, do you?

Mr. **Burr**: No, but testimony was produced in that case in regard to these matters which we have the right to refer to here.

2970 The **Witness**: (Handing paper.) That is the Standard.

Mr. **Mathewson**: Can't you give us the printed pages?

Mr. **Burr**: I have not got it, and never had it. The only one I ever had a printed copy of was the Consolidated Gas Company. I would be very glad to have you supply me with a printed copy.

The **Witness**: There is a copy for the stenographer. I don't think I have but one other.

The **Master**: Where is this taken from?

Mr. **Burr**: This is one of the exhibits offered before the State Gas Commission in the matter of the inquiry in relation to the price, purity and pressure of the gas in the City of New York, in the Standard Gas Company's case.

Mr. **Mathewson**: Complaint was made before the State Gas Commission against the price charged by the Standard Gas Company a year ago and the complainants in that case offered this exhibit, which I suppose, assuming it to be and accurate transcript, was prepared by the Standard Gas Company. I don't know.

The **Master**: By whom was it prepared?

Mr. **Burr**: By the Standard Gas Company.

Mr. **Mathewson**: At the request of the complainants before the Gas Commission?

Mr. **Kirby**: Yes.

Mr. **Mathewson**: But this, I think, is only a part of the exhibit which they prepared. It is not evidence in this case, but so far as it is valuable, I do not wish to say much on that point. But I do wish to say this, that it is utterly impossible to take companies 2971 differently situated, a company with a single plant for instance, a company which furnishes a product to a limited area, and compare it cent for cent with the Consolidated Gas Company and prove by that that the Consolidated Gas Company is either too high or too low in its cost by a cent or two. The experience is that no two companies in the same city—and it has been shown in London and everywhere else—produce their gas or can produce it for the same price.

Mr. Burr: Is this going on the record?

Mr. Mathewson: I am making this as an objection to the proof and calling the attention of the Master to the reasons of my objection.

The **Master**: You offer this, do you?

Mr. Burr: Yes.

The **Master**: I will take it.

Mr. Mathewson: Exception.

The **Master**: Do you want it marked as a separate exhibit?

Mr. Burr: No, so it may be continued into the record. Mark it Table 4.

The **Master**: That is, it goes in as his testimony, but not as part of the exhibits?

Mr. Burr: Yes.

TABLE 4.

The Standard Gas Light Company. Nominal Year Ending October 31, 1905.

	Total amount.	Cost per M made.	Cost per M sold.
Coal, 39,668.32 Tons a. $4.422	$175,408.79	.0676	
" 12,016.97 " 2. 2.836	34,086.41	.0131	
" Cartage, Labor and Handling	5,627.75	.0022	
	$215,122.95	.0829	
Less Residuals, Oil Tar for Sale, 1,268,226 gals a. .02	25,364.52	.0098	
	$189,758.43	.0731	
Coke, 101.76 Tons a. $1.492	152.21	.0001	
Gas Oil, 11,639,544 gals. a. .040903	476,100.56	.1834	
Oxide, 12,000 bu. a. .15048	1,805.81	.0007	
Shavings, 7,440 bu. a. .0119	142.81	.0001	
Water, 5,128,290 c. f. a. $1. M.	5,128.29	.0020	
Oil Waste, etc	2,353.15	.0009	
Labor, (at works)	43,313.24	.0167	
Repairs, (to works)	32,246.26	.0124	
	$751,000.76	.2894	
Less Amount billed Consolidated as per Agency Agreement	132,847.68	.2877	
	132,847.68	.2877	
	$618,153.08	.2897	
Expenses at Works	12,537.21	.0059	.0062
Holder Distribution	11,063.10	.0052	.0055
Insurance	3,863.16	.0018	.0019
	$645,616.55	.3026	.3215

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2973 Q. The data for the New Amsterdam Company is given where?

A. Exhibit 36, pages 234-236 of the typewritten testimony before the New York State Gas Commission in the New Amsterdam case.

Q. Did Mr. Mathewson appear for the New Amsterdam Company also, before the State Gas Commission?

A. Yes.

Q. These hearings in regard to the various companies were had at the same time the Consolidated Gas Co. was heard?

A. The cases ran along together; they would sometimes adjourn one case for a few days and take up another.

Q. Have you a copy of the exhibit in the New Amsterdam case to which you have referred?

A. Yes, I have it in my hand. But I only desire to put in evidence that part relating to the manufacturing costs for the present, and that is on the first three pages that I hand over, down as far as here (indicating). That will be table five.

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TABLE 5.

New Amsterdam Gas Company.

Summary of the Operations for the Nominal Year Ending October 31*st*, '05.

Gas Made	5,102,082,000	cu. ft.			
Less Gas made for Consolidated Gas Co. under Agency Agreement,	2,178,003,000	"			
Gas made for N. A. G. Co.	2,924,079,000	"			
Gas Sales:					
Consumers	2,660,652,800	cu. ft.	at	.9984	$2,656,292.52
Public Buildings	84,913,700	"	at	.90	76,422.33
Blackwell's Island Lamps	120,000	"	at	1.00	120.00
Street Lamps, N. Y.	4,725,900	"	at	.7168	3,387.65
	2,750,412,400	"			$2,736,222.50
Miscellaneous Income					106,903.27
					$2,843,125.77

2975 *Operating Expenses:*

	Quantity.		Price.	Amount.	Cost per M. Made.	Cost per M. Sold.
Generator Coal	75,289^{18}	tons	4.52^{6}	333,395.21	.0653	.0676
(Broken)	5,075^{63}	"	4.42^{6}			
Boiler						
Boiler Coal (B'wheat)	9,906^{12}	"	1.87^{3}	43,448.50	.0085	.0088
(Coke)	1,831	"	1.40			
Coal Labor				5,079.84	.0010	.0010
Oils	23,175,882	gals.	.040023	927,577.18	.1818	.1882
Purifiers (Oxide, etc.)	5,020	bus.	.12	6,122.40	.0012	.0013
Water	8,899,776	cu. ft.	$1 M.	8,899.79	.0017	.0018
Supplies (Oil, Waste & Sundries)				2,233.79	.0004	.0005
Cartage				4,376.42	.0009	.0009
Oil Tar Labor				1,142.97	.0002	.0002
Generator House Labor				33,877.09	.0066	.0069
Boiler House Labor				18,669.06	.0037	.0038
Purifier House Labor				5,585.05	.0011	.0011
Incidental Labor				17,071.78	.0034	.0035
Superintendence				8,333.18	.0016	.0017
2976 Repairs to Buildings				8,684.10	.0017	n.0018
					.0113	
Repairs to Apparatus				57,445.89		.0117
Repairs to Tools & Implements				3,312.02	.0007	.0006
Works Expense				9,624.15	.0019	.0020
West Side Holder				8,474.94	.0017	.0017
East Side Holder				17,860.45	.0035	.0036
Insurance				12,867.00	.0024	.0026
				1,534,080.81	.3006	.3113

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Less Residuals, Tar *Figures in red.	2,694,287	gals.	.02	53,885.74*	.0105*	.0109*
				1,480,195.07	.2901	.3004
Less for Labor and Materials for a/c of Consolidated Gas Co. as per Agency Agreement				608,116.29*		
				872,078.78	.2982	.3171

*Figures in red.

IN BOOK

2977 Q. What do you claim these exhibits show, what facts do they show?

A. Those facts I have introduced in another table which I hold in my hand.

By Mr. Mathewson:

Q. Let me ask you, Professor, do these tables of the New Amsterdam and Standard companies cover the entire station cost?

A. Yes.

Q. Including the items of labor and cartage which you covered in Table 3 for the Consolidated Gas Co.?

A. I understood them to do so. This will be Table 6.

Q. I see the total is in for the New Amsterdam Co., but not for the Standard.

A. I see. I was going to explain that in my testimony. If I could have that volume dealing with the Standard——

Q. If you have the figures, supposing we put them in here, so the two will be exactly the same.

A. Well, we can add them, but they are not added in this volume,

Q. I think perhaps you had better give us the totals, and then you will have that to compare with the other exhibits.

(The totals appearing at the bottom of Table 4 were then inserted by the witness.)

The Witness: I wish to call attention to the fact that in the use that I make of the Standard table just referred to, I hold that the last three items in the second column, and for that matter, in the first column, to wit: expenses at works, holder distribution and insurance, should be added to the total a little above, which in dollars was, $751,000.76, and in cents per thousand was .2894, instead of being added as has just been done, to a figure which has been obtained by taking into account the amount billed the Consolidated Gas Company as per agency agreement. The last three should be added to this $751,000.76 instead of to that $618,153.08.

2978 In other words that should be ignored. The amount out should be ignored for the purpose I have in view, which is to find out the cost to the Standard without any refer-nce to whether it makes or loses with refer-nce to its bargain with the Consolidated Company.

By Mr. Burr:

Q. These exhibits you claim show the following facts, as appears by Tables 6 and 7?

A. Yes.

Mr. Burr: Table 6 shows as follows:

TABLE VI (6).

Consolidated Company Water Gas, October 31, 1904–5.

Station.	Feet made.	Cost.	Cost per M made.
21st Street	4,185,341,000	$1,341,188.50	32.04c.
44th Street	2,263,444,000	695,539.20	30.73c.
99th Street	1,401,538,000	420,938.42	30.03c.
Total & Av.	7,850,323,000	$2,457,666.12	31.29c.

Mr. BURR: Now the Standard and New Amsterdam Companies, Oct. 31, 1904–5, by Table 7, compiled by the Professor show:

TABLE VII (7).

Standard and New Amsterdam Companies, October 31, 1904–5.

	Feet made.	Cost.	Cost per M made. (1)
Standard Co.	2,595,111,000	$778,464.23	30.23c.
New Amsterdam Co.	5,102,082,000	1,480,195.07	29.01c.
Total & Av.	7,697,193,000	$2,258,659.30	29.34c.

2979 NOTE (1). In the exhibit the expense is given in four items: 1st, Manufacturing Cost; 2nd, Expense at Works; 3d, Holder Distribution, and 4th, Insurance. The figure in the table is the sum of these four items.

Q. What was the average cost of the water gas made by the Consolidated Company in its three stations?

A. 31.29 cents or 1.95 cents greater than the 29.34 cents, which was the cost of the New Amsterdam and Standard Companies.

Q. And should it have been even less?

A. It should——

Mr. MATHEWSON: Just a moment. Is not that almost leading? I think it is bad enough to——

Mr. BURR: Mr. Mathewson is the last one who should talk about leading in this case. His helpful suggestions have been——

Mr. MATHEWSON: Gratefully received by suffering witnesses, if you will let me complete the sentence.

Q. What is the difference, if any, in candle-power between the water gas stations of the Consolidated Gas Company and the stations of the New Amsterdam and Standard?

Mr. MATHEWSON: Does he know? Is there any evidence here that he knows?

Mr. BURR: I do not think it is right to interrupt him in this manner. If he does not know and you ask him if that is right, he can say whether it is or not.

The WITNESS: I will present soon a table showing the candle-power. I will say that the cost for the Consolidated Gas Company should have been about .82 cents less than the New Amsterdam and

Standard, instead of nearly two cents more, for the average
2980 candle-power of the five testing stations of the Consolidated
Gas Company was 22.5 during those twelve months as compared with 23.38 candle-power for the New Amsterdam and 23.73 for the Standard, as I have computed from Dr. Love's test filed in the office of Mr. Lacombe, City Engineer.

Q. What effect would that have on the cost?

A. According to Mr. Bradley's testimony, page 281, in this case and other pages near there, the Consolidated Gas Company finds one-fifth of a gallon of oil necessary for every change of a candle-power, and one-fifth of 4.08 cents, which was the average price of a gallon of oil in Exhibit 93, is .82 of a cent. Then the Consolidated Gas Company making gas of approximately one less candle-power than the New Amsterdam and Standard Companies should have made gas for .82 cents less than the cost of 29.34 of those two companies, the New Amsterdam and the Standard.

By Mr. Mathewson:

Q. All other things being equal?

A. Certainly.

By Mr. Burr:

Q. In other words, the cost should be 28.52 cents instead of 31.29?

A. Yes, a difference of 2.77 cents. This 2.77 cents multiplied into the total number of feet of water gas made at the three Consolidated stations, 7,850,323,000 feet is $217,453.95. (See p 3479.)

Q. Now, have you compared the coal gas cost of the Consolidated Company with any other New York plant?

A. Yes, I have taken the two coal gas plants, the 14th Street and 42d Street and compared them with the coal gas plant of the Central Union Gas Company for the same twelve months, ending October 21st, 1905. And I may add, that I selected that year instead of the calendar year 1905 covered by Exhibit 94, because
2981 there was no data available for these other companies, the
New Amsterdam, Standard and Central Union, later than October 31st, 1905.

Q. And is there any data for any company except the Consolidated Gas Company doing business in New York except for the——

A. No, that is right, except for the twelve months ending October 31st, 1905. That was all the testimony in evidence.

Q. Where do you get the data for the 14th Street Station?

A. That was given in this new exhibit, City's Exhibit 56, which was known in the State Gas Commission testimony as Exhibit 145, pages 2117 through to 2120 of the printed testimony.

Q. And for the 42d Street Station?

A. And for the 42d Street Station also in the new City Exhibit 56, but formerly in Exhibit 145 of the State Gas Commission testimony, pages 2125 through 2128.

Q. Where do you get the data for the Central Union?

A. That is given in Exhibit 20 of the typewritten testimony of the Central Union Gas Company.

Q. Before the Gas Commission?

A. Before the Gas Commission.

Q. Did Mr. Mathewson appear for that company?

A. Yes. And in this case likewise I wish only to copy the——

By Mr. Mathewson:

Q. Just a moment. In your water gas stations did you take more than the two water gas stations of the Consolidated Gas Company?

A. The three water gas stations of the Consolidated Gas Company.

Q. All of the water gas stations?

A. Yes. And all of the coal gas stations for the other companies. Now, for the Central Union I ask to have put in evidence page 96, being the full exhibit for coal gas.

2982 Mr. Mathewson: I have an objection to make to this Central Union statement. It does not seem to me that it is going to be profitable to go into the Central Union case, whether it is in the others or not. The Central Union operates in The Bronx, and its gas is a mixture of coal and water gas. The witness is taking the coal gas stations here in Manhattan and comparing the cost of coal gas as he takes it in The Bronx, which is enriched there by a mixture of water gas, whereas ours is enriched by oil gas and the candle-power maintained there according to the testimony, for a large part of this period, was below that required by law, and it does not seem to me that any comparison of this sort even with the allowance that the Professor will reason are proper, is a profitable comparison when you come to the cost of coal gas to the Consolidated Gas Company. There is a coal gas company, a company manufacturing coal gas in the Borough of Manhattan, which is the Mutual Gas Light Company, and I do not know how the comparison of their cost of coal gas shows up with the cost to the Consolidated Company of its coal gas, but it would seem to me if we are going into this it would be a great deal more profitable to take the Mutual Gas Light Company rather than a comparison of the kind which the witness is about to make.

Mr. Burr: I am never very much impressed by the Greek bearing gifts, and the suggestion of the other side to take one company when I have taken another does not accord with my view of the situation. I think it of the utmost importance, on the contrary, to have the Master understand the situation as it exists in the Central Union Gas Company, and if we do not, from this comparison and reasoning by analogy and comparison of figures, make out what we 2983 claim we can make out and have assumed we could make out, why, that is all a matter which you may address to the Master in your cross-examination and in your argument; but I think we should be permitted to have the oportunity to put it in.

The Master: I will take it.

Mr. Mathewson: Exception.

The Witness: May I be permitted to say that as to the Mutual which has been mentioned here, I have been through all the testimony in the Mutual case——

The Master: Never mind about that.

Q. Have you tabulated the cost of the Central Union with the 42d and the 14th Street stations?

A. Yes.

Q. What is the difference in the cost between the stations?

A. The Central Union has a cost of 19.64 per thousand feet of gas made, the 42d Street station 34.77 and the 14th Street, 37.77, so that the 44th Street station has a cost of 15 cents higher and the 14th Street station a cost of 18 cents higher, approximately.

Q. Have you got a copy of that tabulation?

A. Yes.

Table VIII. (8.)

Coal Gas.

Central Union—42nd St.—14th St.

Comparative cost in the holder of coal gas at the Central Union plant and at 14th and 42nd streets for the twelve months ending October 31, 1905, as compiled from Exhibit 20 of the Central
2984 Union Gas Company's testimony before the State Gas Commission (page 96) and Exhibit 145 (pages 2117–2120 and 2125–2128), printed copy in case of the Consolidated Company before the State Gas Commission.

	Central Union.	42nd.	14th.
Coal	30.95c.	27.12c.	26.86c.
Cartage and Labor	3.48	1.55	2.14
	34.43	28.67	29.00
Residuals	29.06	17.03	14.58
	5.37	11.54	14.42
Oil	1.27	6.54	9.00
Coke	.39		
Lime	......	23	
Oxide	.23	.22	.25
Water	.35	.24	.25
Oil, Waste, &c	.52	.06	.15
Cartage	......	.03	.17
Labor	5.89	11.52	(¹) 7.65
Repairs	4.88	2.64	3.79
Gas bt	.06		
Expense at Works	.40	.92	.69
Distribution	.28	.70	1.33
	19.64	34.74	37.70
Depreciation	......	.03	.03
Gas made 670,518,000	19.64	34.71	37.67
Cost aside from repairs	14.76	32.13	33.94
Less oil as above	1.27	6.54	9.00
	13.49	25.59	24.94

(¹) Includes 0.63c labor ($9,603.51) at 21st St. There was also spent at 21st St. on behalf of 14th St. coal $48.25 and coke $7.90.

2985 Q. What is some of the difference due to?

A. Due to the large amount of oil used by the two Consolidated Company's plants, in order, as claimed, to produce a higher candle-power. Repairs are also somewhat different in the three stations, although in that respect, more was spent upon repairs at the Central Union station than at the 14th or 42d Street stations.

Q. What did you do to make as fair a comparison as possible, and what is the result?

A. I deducted the expense for oil and repairs at the three stations so as to find out the net cost aside entirely from the enriching, and I found the net cost, as given at the bottom of Table 8, was 13.49 cents for the Central Union, 25.59 cents for the 42d Street station and 24.98 cents for the 14th Street station.

By Mr. MATHEWSON:

Q. You deducted oil and repairs in each case, did you?

A. Yes, so as to find what the cost would be with those items eliminated.

By Mr. BURR:

Q. What is the total result if the cost at the two coal gas station- *is* united?

A. If the two coal gas stations of the Consolidated Gas Company be treated as one, then their output was 2,809,586,000 feet and the average cost aside from oil and repairs was 25.26 cents or 11.77 cents more per thousand feet than the cost aside from oil and repairs at the Central Union Station.

Q. Can any of this difference, in your opinion, be accounted for by the difference in the price of coke, and if so, how much?

A. Only 1.01 cent. The price of coke is not given directly in the exhibit in the Central Union Gas case, but it is there stated that the value of the coke, 23,155,050 pounds, or, dividing by 2,000
2986 pounds, 11,577.5 tons, used in making 925,892,000 feet of water gas, was $37,381.56.

Q. What does that mean?

A. That means $3.23 per ton of coke. Now, I got that from the exhibit in the Central Union case relative to water gas which adjoined the exhibit relative to coal gas, that one figure on coke.

By Mr. MATHEWSON:

Q. Was that coke which came from the coal gas station to the water gas station?

A. Presumably.

Q. $3.20?

A. $3.23 per ton.

By Mr. BURR:

Q. What was the price obtained for coke at the 14th Street Station?

A. Right here I will stop to put in a table which will give this in better form:

TABLE 9.

Price of Coke, October 31, 1904–5.

Stations.	Difference in cost of coke per T.	Tons of coke sold.	Total am't of said difference.
14th Street	15c.	57,844.06	$8,676.61
42d Street	33c.	56,932.93	18,787.87
Total	......	....	$27,464.48

The WITNESS: Well, as I was starting to say, the price obtained for coke at 14th Street was 3.08 cents and at 42d Street 2.90 cents. Multiplying the 15 cents difference at 14th Street by the amount of coke sold and multiplying the 33 cents difference in coke at 42d Street by the amount of coke for sale, that gives a total of 2987 $27,464.48 as the increased receipts from coke that would have been obtained at the 14th Street and 42d Street stations had the price been equal to that obtained by the Central Union Company.

Q. What does this total mean?

A. This only means a difference of 1.01 cents per thousand feet distributed over the 2,809,586,000 feet made by the 14th and 42d Street stations.

Q. Is it certain that there is any difference in the price of coke?

A. No, there is no certainty that there is any difference at all. Possibly the Central Union returned the price of coke as that obtained on delivery to the consumer instead of at the works, as in the case of the Consolidated Gas Company, although I think that it is not certain in this case, since it was coke used in making water gas; but that is simply a possibility. If that be the case, and the large charge for cartage by the Central Union might seem to bear this out, then there would be practically no difference at the works in the price of coke between the Consolidated Company and the Central Union. In other words, the price of coke at the Consolidated Company's plant which appears to be a little lower, making a difference of one cent per thousand feet may be due to the fact that their prices are quoted as the sales to the National Coal & Coke Company, while if they were selling to the consumer their price might not be any different than at the Central Union plant. Yet, on the other hand, the particular coke used in this table of the Central Union Company was used right at the station for the water gas and did not require any more cartage than the coke delivered by the Consolidated Gas Company to the National Coal & Coke Company; so I do not put any stress on that, but it is only this difference of a cent anyway in the coke item, so that does not make—there is over eleven cents difference between the two stations of the Consolidated and the 2988 Central Union after eliminating all questions of oil and repairs, and the coke item does not take up more than one cent of that eleven cents.

By Mr. **Mathewson**:

Q. Let me ask a question. Instead of this Table 9 being price of coke October 31st 1904-5, it should be the difference between the price of coke which you have computed for the Central Union and the cost of coke in these two Consolidated Gas Company's stations?

A. Yes, the difference in the price of coke obtained by the Consolidated Gas Company and the cost of coke at the Central Union water gas plant, as given in the table.

By Mr. **Burr**:

Q. And this table you refer to is Table 9?

A. Yes. I would state that it might be better to introduce in evidence the statement that the figures on coke sold or used by the Central Union in making its water gas is obtained from the same exhibit which has been put in evidence, Exhibit 20, before the Gas Commission, in the Central Union case, with respect to coal gas made at its coal gas stations. But it appears in another portion of the exhibit which was not introduced into evidence directly a few minutes ago.

Q. And the figures there given are what?

A. The figures here given are in the water gas stations, coke used 23,155,050 pounds, $37,381.56.

By Mr. **Mathewson**:

Q. And the result of the division is $3.23?

A. Per ton, that is the way I made it.

Q. Long ton or short ton?

A. Short ton, 2,000 pounds.

2989 By Mr. **Burr**:

Q. What reasons are there for the difference in your opinion, between the cost of the Central Union and the two coal gas stations of the Consolidated Gas Company?

A. Table 8 which has been introduced, shows that it consists mostly of two items, the labor cost and the residuals. The labor cost at the Central Union is 5.63 cents less than at 42d Street and 1.77 cents less than at 14th Street. Just what it is in the residuals that accounts for the great difference in receipts appear because the exhibit of the Central Union Company does not analyze the residuals as do the various exhibits which have been introduced in evidence as Exhibit 56 in this case for the Consolidated Gas Company.

Q. Now, you have stated that after making due allowance for repairs and oil the Central Union Company produces coal gas at 11.77 cents per thousand cubic feet cheaper than the 14th Street and 42d Street stations?

A. Yes.

Mr. **Mathewson**: Does that take out the one cent difference for coke?

The **Witness**: No, because it was not clear that it should be taken out.

Q. What would be the total saving in dollars to the Consolidated Gas Company if it made its coal gas as cheap as the Central Union?

A. This 11.77 cents difference multiplied into the coal gas of the two Consolidated Gas Company's stations, namely, 2,809,586,000 feet is $330,687.27, which is——

Q. Does that in your opinion represent excessive cost by the Consolidated Gas Company?

A. Excessive cost by the Consolidated Gas Company. The addition of this to the excessive cost of water gas made by the Consolidated Gas Company over the cost at the Standard and New
2990 Amsterdam plants, makes a total of excessive cost of $532,440.57, or five cents per thousand feet of the gas made by the Consolidated Gas Company which was 10,657,810,000 feet.

Q. In other words, the cost to the Consolidated Gas Company for all of its gas instead of 32.68——

A. Should have been 27.68, had the company done as well as its neighbors in the City.

By Mr. **Mathewson**:

Q. Had you not better modify it, perhaps, by saying had it done as well as the Central Union and the other companies you have mentioned, because there are other companies here?

A. Yes, some of its neighbors then.

Q. Yes, those which you have compared?

A. Yes.

By Mr. **Burr**:

Q. Now, how does the price of oil compare in New York with other places?

A. It is higher than in Eastern Massachusetts——

Q. And it appears in the testimony in this case?

A. Yes. I have the Boston Gas Company here——

Q. What do they pay here——

A. The Boston Company during the twelve months ending June 30, 1906, used only——

Mr. **Mathewson**: Had you not better take the same period that you are comparing with in the other cases?

The **Witness**: I would state that the exhibit is for the year ending October 31, 1905. The evidence given is that for the year ending December 31st, 1905, and for the time since them, oil was still higher, that a contract was entered into, to take effect the 1st of No-
2991 vember, 1905, by which the price of oil was largely increased, so that the only comparison I can get from Massachusetts is the comparison just filed under oath with the Massachusetts State Gas Commission for the twelve months ending June 30, 1906, and during that period the Consolidated Gas Company's price was considerably higher than the price I am referring to here, so there is no injustice being done to the Consolidated Gas Company in any comparison I am making here.

Q. Well, I think there is, but no matter about that.

By Mr. **Burr**:

Q. What degree of oil was used at the time you speak of?

A. The Boston Gas Company used nothing but 34 degree oil.

Q. Beaume test?

A. Beaume test, and it paid only 4.01 cents therefor.

Mr. **Mathewson**: That is for the year ending when?

The **Witness**: Lowell used oil of 29 degree test and paid only 3.13 cents therefor. Lynn used 28 degree oil gravity test and paid only 3 cents a gallon.

Q. Now, if Boston had used 50 per cent. of each kind of oil, as the testimony is here that the Consolidated Gas Company has the right to do under its new contract, how much would it have paid?

A. Only 3½ cents per gallon as contrasted with an average of 4.23 cents paid by the Consolidated Gas Company in the calendar year 1905, as given in Exhibit 94.

Mr. **Mathewson**: Has a right to do. It has to use oil to produce its candle-power, and it has a right to call for certain quantities of oil.

Q. Has New York any advantage over Boston in the use
2992 of oil in your opinion, and to your knowledge?

A. I think it has three advantages. If Boston got 34 degree gravity for 4 cents, and Lynn got 28 degree gravity for 3 cents, New York should have gotten oil for less than the average of the two or 3½ cents.

Q. What are these advantages you refer to that New York possesses over Boston?

A. First, during the calendar year 1905, about five-sixths of the oil used by New York was cheaper, or 22 degree gravity oil.

Q. 28 degree, was it not?

A. 28 degree I meant to say. I am not aware that complete figures were ever given on this point, but of the 82,061,124 gallons of oil delivered from September 28, 1904, to October 31, 1905, according to pages 1628 and 1735 in the testimony in this case, only 7,257,982 gallons were of 34 degree gravity.

Q. How much of the oil in New York in 1905 was 34 degree gravity?

A. Less than 9 per cent. was of the higher gravity. During the twelve months ending October 31st, even if the two last months 50 per cent. was 34 degrees gravity, which is not testified to as true, although the company might under its contract have had that amount of the higher gravity, then the total of the better oil during the year could hardly have exceeded one-sixth of all the oil used. On that basis of five-sixths at 3 cents and one-sixth at 4 cents, the Massachusetts price, the average for the whole year should have been only 3 1-6 cents instead of 4.23 cents, even on the Boston price——

Mr. **Mathewson**: For what period?

The **Witness**: For the calendar year 1905 or for the year ending June 30, 1906, either one. It would be more strictly true for
2993 the year ending June 30, 1906, but according to the testimony in this case the Consolidated Gas Company's cost is more than

4.23 for the year ending June 30, 1906. It was 4.23 cents for the calendar year 1903, and is rising under their contract all the time, they claim.

Q. Has New York any advantage in location over Boston?

A. It certainly has an advantage in that it is nearer both the Pennsylvania and the Texas oil fields, whether by rail, water or pipe line, than Boston. It has a third advantage. It appears that some of the directors of the Consolidated Gas Company are also directors of the Standard Oil Company, which furnishes the oil——

Mr. **Mathewson**: I move to strike that out.

The **Master**: Strike it out.

Mr. **Burr**: I except.

Q. Is it in your opinion necessary for the Consolidated Gas Company to use more of the 34 degree gravity oil than the 9 per cent. actually used October 31st, 1904-5 for the production of 22.5 candle-power gas?

A. No, that is, since 22.5 candle-power was produced with the use of only 9 per cent. of 34 degree gravity oil, it seems as if it was not necessary to use more.

Q. Upon what do you base this? What reasons are there for this opinion?

A. Well, the reason for this conclusion is not only that the candle-power of the Consolidated Company averaged—well, it averaged 22 during the twelve months ending October 31st—I don't know whether it is 22 or 21½. I have one here 22 and the other 22½—I think it is 22½ during the twelve months ending October 31, 1905, when it used only 9 per cent. of the higher grade oil, but more conclusive is the fact—yes, it is 22½, I remember now. But more conclusive is the fact that the New Amsterdam Company during
2994 the same twelve months had an average candle-power, according to Mr. Love's test, of 23.38, and the Standard Company had an average of 23.73 candle-power on the same oil contract that was abrogated by the Consolidated on the ground that under it 22 candle-power could not be maintained.

Q. Did the New Amsterdam Company or the Standard Company fall below 22 candle-power during any month?

A. There wasn't a single month in the year ending October 31, 1905, in which the New Amsterdam Company fell below 22 candle-power in the average of its monthly tests, save in April, when it was 21.61. The Standard Company did not fall below 22 during any month, and during only two months was it below 22½, and only three mont-s below 23 candle-power, according to Dr. Love's test.

Q. Was there any necessity, therefore, in your opinion, for canceling the oil contract of 1905?

Mr. **Mathewson**: That is the conclusion.

The **Master**: That is a matter of argument entirely.

Q. Well, are you familiar with the testimony here with regard to the oil contract?

A. Yes. Now I have the average of the monthly tests of candle-power, which might be put in as Table 10, which is as follows:

2995

TABLE 10.

Average Monthly Test of Candle-power.

By Dr. Love, City Tester.

	New Amsterdam Co. Candle-power.	Standard Co. Candle-power.
November, 1904	22.23	22.31
December, "	22.93	22.85
January, 1905	22.73	22.00
February, "	22.51	23.57
March, "	22.18	23.05
April, "	21.61	23.00
May, "	23.10	23.55
June, "	23.21	23.97
July, "	25.61	25.79
August, "	25.46	25.47
September, "	24.78	24.63
October, "	24.22	24.60
	23.38	23.73

Q. By that table it appears?

A. It appears as I just was testifying that in the New Amsterdam Company on the same contract for oil which was abrogated in October, 1905, the New Amsterdam Company maintained more than 22 candle-power every month except April, 1905; and the Standard Company maintained 22 candle-power or more every month; and that the average of the New Amsterdam Company was 23.38 candle-power and that the average of the Standard Company was 23.73 candle-power.

Q. If oil in New York during the calendar year of 1905 had been one-half of 34 degree test and one-half of 28 degree test, what would have been its cost at the price prevailing in Eastern Massachusetts?

2996 Mr. MATHEWSON: He has testified to that, hasn't he?

A. It would have been 3½ cents.

Q. What is the difference between that price and the price actually paid in New York, according to Exhibit 94, and how much does it amount to per thousand cubic feet of gas made?

A. The difference between 3½ and 4.23, according to Exhibit 94 is 73 cents. This multiplied into 10,675,810,000 feet of gas made by the Consolidated Company, according to Exhibit 94, will give $305,699.69, which represents the minimum estimate of the excess cost of oil in New York for the gas made by the Consolidated Company, but it assumes the use of half of each grade of oil, while there was not half of each grade of oil, 34 to 28 gravity used during that year. This is equivalent to 2.87 per thousand feet of all the gas made, that is both coal and water gas. If this saving in oil be added to the excess cost of the consolidated above the New Amsterdam, Standard and Central Union Companies there is a total unnecessary excess cost to the Consolidated of 7.87 per thousand feet of gas made or $838,140.26. This is 6 per cent. on $13,969,000.

By Mr. MATHEWSON:

Q. Did you take the total amount of gas made or the total amount of gas sold?

A. The gas made, I think it is, in all this case right through. In discussing station costs up to the present time I applied it equally to gas made in all stations alike.

At 1 P. M. a recess is declared to 2:15 p. m.

2997 After Recess.

EDWARD W. BEMIS resumes the stand.

Direct-examination (continued):

By Mr. BURR:

Q. Professor, in the computations you have made in the various tables presented and introduced this morning, referring to those, were they based on the amount of gas sold, or the amount of gas made?

A. On the gas made, in all cases.

Q. Now we left off on the oil situation. How will the proposed transfer to Astoria probably affect the situation?

The MASTER: That is a little vague, is it not, Mr. Burr?

Mr. BURR: It would be, if alone, but in connection with what has gone before I do not think it is.

Mr. MATHEWSON: I suppose my objection covers this. This is rather a new departure?

The MASTER: I think so.

A. If it be argued that it is impossible to do as well as the Standard, the New Amsterdam and the Central Union Companies, as long as the somewhat inferior coal gas works at 14th and 42d Streets are used—inferior either in location or in character——

Q. Construction?

A. Construction. And there has been some testimony on both points, and if it is claimed that as long as a large percentage of water gas is used the Company is at the mercy of the Standard Oil Company, then the expected completion of the first two units of 40,000,000 cubic feet daily capacity of an up-to-date coal gas works at Astoria should involve economies sufficient to pay six per
2998 cent. on the entire investment and enable the abandonment of the 14th and 42d Street stations, as far as manufacturing is concerned, and render unnecessary more than half as much oil per thousand feet as required in the water gas. That is, to the extent to which they can substitute enriched coal gas for water gas, they will save nearly half the number of gallons of oil, because only about half as many gallons of oil per thousand feet of 22 candle-power

coal gas is required as for 22 candle-power water gas, according to the data of their own exhibits in this case. That is, the 14th and 42d Street plants as compared with the three water gas stations.

Q. Now what would the saving of 7.87 cents that you mentioned this morning in the cost for 1905 result in?

A. It would reduce the total cost from 32.42 cents on the gas made to 24.55 cents per thousand feet on the gas made.

By Mr. MATHEWSON:

Q. After how much is taken off?

A. 7.87 cents, which was the morning testimony.

By Mr. BURR:

Q. Now, if oil were obtained at 3.05 cents per gallon instead of 4.09 paid on the average by the Standard Company during the twelve months ending October 31st, 1905, or 4 cents as paid by the New Amsterdam Company during the same period, what would be the saving, if any.

Mr. MATHEWSON: For the Standard and the New Amsterdam?

Mr. BURR: Paid by the New Amsterdam.

Mr. MATHEWSON: I do not quite understand this. Has not the witness figured on what he claims would be a smaller amount of oil and at a smaller price in reaching his 7.87 cents?

2999 By Mr. MATHEWSON:

Q. That is all included there, isn't it, in the 7.87 cents saving, Professor?

A. That was only on the ten billion odd feet of gas made. I am now going to consider that they would have obtained cheaper the 2,929,210,000 feet that they got under the Agency Agreement.

Q. If the Standard and the New Amsterdam Companies had manufactured their gas cheaper?

A. Had secured all at 3½ cents instead of 4 cents or 4.09, because the same contract applied on oil to both the New Amsterdam and the Standard and the Consolidated.

Mr. BURR: That is the testimony here.

The WITNESS: And the Agency Agreement called for a price by the Consolidated based on the operating cost, plus 10 per cent., at the station, and if those operating costs were reduced by the Standard and the New Amsterdam by virtue of a lower price for oil than under the contracts that are in evidence that would have resulted in a lower price under the Agency Agreement to the Consolidated for gas.

By Mr. BURR:

Q. As a matter of fact there would have been a saving of about 2.4 cents per thousand feet in all.

A. Yes, sir, in the companies with which the Consolidated has an Agency Agreement. In fact there would have been a slightly higher amount than that as subsequently discovered, because I found in the exhibit of the Mutual, which has not been put in evidence in this

case, that they were paying and did pay in the year given in Exhibit 31 of the testimony before the State Gas Commission, they were paying 4.495 cents per gallon for oil during the same period, ending October 31st, 1905, in which the Consolidated was paying
3000 about 4.08 cents, and the New Amsterdam 4 cents.

By Mr. Mathewson:

Q. Then the Mutual was paying more than the Consolidated or other companies?

A. Yes, sir.

Q. Because they make their contracts independently instead of through the Consolidated, as the testimony shows, I suppose?

A. Yes.

By Mr. Burr:

Q. This 2.4 multiplied by the number of feet of gas obtained from these companies, 2,929,210,000 would mean a net saving in the cost of manufacture to those companies, the New Amsterdam, Mutual, Standard and Central Union of how much?

A. $70,301.04.

Q. And that benefit under the Agency Agreement would go to whom?

A. To the Consolidated Gas Company.

Q. What would the total saving be as obtained by adding this last amount to the $838,140.26 just mentioned?

A. That is the amount mentioned this morning as the saving in the other phases of the case, making $908,441.30. This is 6.69 cents per thousand feet on all the gas made or bought under the agency agreement, and would reduce the cost from 32.77 cents per thousand feet of gas in the holder to 26.08 cents per thousand feet of gas sold, which would reduce the cost from 33.52 cents to 26.68 cents.

Q. That would be six per cent. on how much?

A. On over fifteen million dollars.

Q. On the basis of the consumption of 1905?

A. On the basis of the consumption of 1905.

Q. Now it is in evidence here that the price of coke was
3001 slightly raised in 1905. What was the result of that?

A. That, according to the testimony in this case (pages 644-5) testimony by Mr. Carter, would naturally result in a little more from residuals, therefore to that extent a reduction in the cost of the gas; but it would only be solely for that in the period covered by Exhibit 94, because it only went into effect October 13, 1905.

Q. Now, regarding the inferiority in construction and the location of the 14th and 42d Street coal gas stations, to which you have referred, have you in mind any testimony bearing on that subject?

A. Yes.

Q. Will you be good enough to refer to it.

A. The engineer of the Consolidated, Mr. George E. Wood, in direct charge of all the stations, as stated on page 93 of the printed testimony before the State Gas Commission.

Mr. **Mathewson**: Wouldn't it accomplish all purposes to offer it, instead of having it characterized?

Mr. **Burr**: Just read it, so there will not be any mistake about it.

The **Witness**: I read from page 93, on the examination of Mr. George E. Wood:

"Q. What is your occupation? A. Engineer of manufactories of the Consolidated Gas Companies.

Q. You have direct charge of the various stations at which gas is produced in the City of New York of the Consolidated Gas Company? A. I have.

Q. They are all under your immediate direction and supervision? A. Yes, sir.

Q. Will you state the stations and their location? A. 14th Street Station, 14th Street and East River; 21st Street Station, at 21st Street and East River; 42d Street Station, at 42d Street and North River; 44th Street, at 44th Street and North River; 99th Street, at 99th Street and the river." 3002

The **Master**: All that is in evidence somewhere or other. What is the use of taking time to do this, stating where the different stations are?

The **Witness**: Yes. I did not need to read those except to show he was in charge of those? Then on page 127, 128 and 129 of the printed testimony before the State Gas Commission, he was being asked about the cheaper gas of the Central Union Gas Company as compared with the Consolidated.

Q. That is the Central Union Company's plants as compared with the Consolidated Company's plants?

A. Yes, sir; and the question was (page 127):

"Q. Have you investigated in any way to see how they can produce gas at that price while it costs your Company apparently so much more? A. Yes, there are reasons for it.

Q. Did you make any investigation at that time? A. No, I did not investigate, I thought I knew the conditions that existed.

Q. What are those conditions? A. Well, they were getting a better price for their coke than we were able to get downtown, I think; the type of their apparatus—I think.

Q. You say I think, do you know? A. No.

Q. Do you know what your Company was getting for coke? A. No, I do not, only I know——

Q. Then, as to the next reason? A. The type of their apparatus is different and is more up-to-date than what we have at our coal gas stations down here on Manhattan Island; they have inclined retorts and we have the old fashioned horizontal that are small, they require a great deal of labor, and the use of a great deal more coke under the benches to keep them going than the type of furnace that they have in The Bronx. 3003

Q. Then you think there is a very material saving in the case of the retorts, between the horizontal and the inclined furnace or retort? A. I think there is some difference, just how much I am not prepared to say.

Q. In the new works at Astoria that your Company are having installed there, they are to use the inclined retorts? A. They have inclined and horizontal over there, I believe."

Mr. MATHEWSON: It already appears we have both kinds and we don't know which are the best.

The WITNESS: Then a little later he states:

"There was one other thing, they were able to handle their coal more cheaply there; at the 14th Street station it cost us more money to get it into the retort house than it did cost them; there were little odds and ends that made up the difference."

Q. I understood Mr. Mathewson to testify a moment ago that they did not know which to use. Is that right, Mr. Mathewson, what you just got on the record?

Mr. MATHEWSON: I say it is the evidence that we are putting in both kinds at Astoria, and we don't know which will prove the most satisfactory; so it is testified by the engineers.

Mr. KIRBY: Not the same kind of retort that you have in your 14th Street plant?

Mr. MATHEWSON: That is another proposition.

3004 The WITNESS: This witness called them "the old fashioned horizontal that are small."

Mr. MATHEWSON: I understand it is simply stating as between horizontal and inclined. He was asked then whether they had horizontal or inclined retorts at Astoria. He said he thought they had both. He was not asked whether they had old fashioned ones at Astoria. Of course not.

Mr. BURR: I think that is all with Mr. Wood's testimony for the present.

Q. Taking up the station distribution and general cost as the same appeared in Exhibit 94, what was the total operating cost given in Exhibit 94 and how much did you deduct on the ground of fixed charges and interest on consumers' deposits?

A. The Consolidated Company in Exhibit 94, as was stated this morning, presents what it calls "total operating cost" as 74.81 cents, but from this I have already deducted fixed charges of 7.32 cents and interest on consumers' deposits of .39 cents, or a total of 7.71 cents as being in the nature of capital charges and not of operating expenses.

Q. How much did this leave. How was it divided between station cost on one hand and distribution and general expenses on the other?

A. Deduction of this 7.71 from 74.81 in Exhibit 94 leaves 67.10 cents. In this amount 33.52 cents, as already stated, is given by the company as production or station cost, and the remainder is 33.58 cents, which they divide into distribution and general expenses.

Q. Have you anything to say with regard to the items which make up this sum?

A. Yes.

Q. Please state.

A. Well, there should be deducted, miscellaneous income, which President Humphreys summarized as follows (page 1944)——

3005 By Mr. **Mathewson**:

Q. Do you understand that Exhibit 94 is a statement of expenditures and not of receipts?

A. Yes. But just as we deduct the receipts from the residuals in getting the cost of gas in the holder, I think it is appropriate to deduct—although I am aware that they do not do it in the Massachusetts returns—but I think it appropriate to deduct other receipts not connected with the sale of gas from expenses of distribution, following the same analogy in residuals as in the case of gas in the holder.

Q. What have you to say as to item "miscellaneous income"?

A. I have a table here giving those items. It will be table No. 11. I have it entitled, "Miscellaneous Income," and it is as follows:

Miscellaneous Income.

Stove rentals	$122,322.60
Discounts	9,497.57
Real Estate rentals	37,408.88
Sundries	3,481.48
Dividends of Natl. Coal & Coke Co.	5,000.00
Total	$177,710.53

Q. That you claim should be deducted?

A. Yes.

Q. What is that equivalent to?

A. That is equivalent to 1.34 cents per thousand feet of gas sold.

Q. Why should that be deducted for the cost of gas?

A. Well, for the same reason as we deduct the receipts from residuals from the cost of coal or oil in finding the net manufacturing or station cost.

Q. If these miscellaneous receipts are not deducted from the operating cost what would result?

3006 A. Then, of course, they must be added to the receipts from the sale of gas. The results so far as profits are concerned, are precisely the same in either case, but it is much simpler to start with placing in receipts only the money received from the sale of gas and to deduct all other receipts, whether from residuals, or stoves or real estate rentals, and so forth, from the operating expenses.

Q. Is there still another deduction to be made, in your opinion, in the matter of street lamp expenses?

A. Yes, I think they should be deducted. They are given in Exhibit 94 as $289,259.09 or 2.18 cents per thousand feet of gas sold. Nominally this is all recovered from the City in special charges for care of street lamps, but Mr. Addicks claims that 3.75 feet of gas is used per hour in the Welsbachs instead of 3 feet, as nominally charged, so that after allowing 90 cents per thousand feet for gas so used there is left over $260,614.26 for maintenances and other lamp expenses, as compared with an actual expense for the work of $289,259.59. That is, Mr. Addicks (page 1908 of the testimony in this case) claimed a net loss of $28,645.33. This, however, which seems to be the maximum claim of the company, is only .22 of a cent instead of the gross expense of 2.18 cents given in Exhibit 94.

Q. How much does this amount to per thousand feet of gas?

A. That is .22 of a cent. So I do not deduct the whole 2.18, but I take the difference between that and .22. In other words, the company gets back 1.96 cents for lamp expenses, as well as 1.34 cents on account of miscellaneous income. This makes a total recovered by the company of 3.3 cents from the distribution and general expenses.

Q. That is to be deducted from the distribution and general expenses?

A. Which they give—they give the gross distribution and general
expenses as 33.58 cents, and this miscellaneous income and
3007 net receipts on, or, recovery of expense on lamps which they
admit in the testimony, reduces the distribution and general
expenses to 30.28 cents.

Q. How much of this latter amount is represented by taxes, according to the exhibit?

A. In this Exhibit 94 it is given as 7.27 cents, and I notice that Mr. Addicks (page 1757) deducts .48 of a cent for taxes paid on account of other companies, and Professor Marks (page 2302) deducts 1.66. He excludes four items. At least three of these it seems to me should be deducted. The fourth I have not had time to investigate, so I only deduct the three. I have a table for that, which is No. 12, which is headed, "Deductions from Tax Returns," which is as follows:

Deductions from Tax Returns.

Taxes on income from other companies' securities.....	$5,257.48
Taxes on dividends in excess of 4 per cent. on $38,643,590.14, Stock, invested in other companies........	57,965.39
Interest on unpaid taxes..........................	94,506.29
Total	$157,729.16

Q. How much does this amount to per thousand feet of gas sold?

A. 1.19 cents. Whether any of the other taxes should be omitted, I was not in a position to determine, but the investigation by the accountants would give clearer light on that and many of these other items. I am taking the face of the returns here.

Q. You understand some of the taxes are in litigation?

A. Yes.

Q. Now, deducting 1.19 from the previous figure of 30.28 leaves
how much for distribution and general expenses, according
3008 to the claims of the company?

A. 29.09.

Q. For what?

A. That would be the cost of distribution and general expenses, with the above corrections.

Q. According to the claims of the company?

A. Yes, starting with the claims of the company.

By Mr. Mathewson:

Q. Starting with the exhibit in evidence?

A. Starting with the exhibit in evidence and deducting the receipts from miscellaneous income and the——

By Mr. **Burr**:

Q. Payments by the city for——

A. And the corrections on taxes, and the street lamp expenses—the receipts for maintenance of street lamps.

Q. And the reduction of taxes not directly charged to gas?

A. Yes.

Q. Now, may this 29.11 be divided into four items of taxes, repairs, contingent expenses including renewals, and other distribution and general expenses, and if so, give the percentage of each?

A. Well, I have divided into four items, taxes, 6.08; repairs, 3.56; contingent and renewal expenses, 5.31——

By Mr. **Mathewson**:

Q. What do you mean by contingent; do you mean to say any part of that is contingent?

A. I call it that item because that was the name used in Exhibit 94.

Q. But that included an actual contingent as well as expenditure?

A. Yes.

Q. Well, which is this?

A. This is their expenses for renewals and contingent expense not included in repairs, 5.31. And other expenses, such as management,
salaries, collection of bills and all other distribution and gen-
3009 eral expenses aside from those already mentioned, 7 cents, an
item which the company gives as 9.45 cents. I will give you
a table on that, as follows:

TABLE 13.

EXHIBIT 94 AND CORRECTION OF SAME.

	Operating cost according to Exhibit 94.	Operating cost according to Bemis' preliminary estimate per 1000 ft. sold.
Station	33.52c.	26.68c.
Repairs on Distribution System	3.56	3.56
Taxes	7.27	6.08
Contingent and Renewals	10.00	5.31
Other Expenses, aside from excluded items	9.45	7.00
	63.80c.	48.63c.
On basis of Station Cost Claimed by Company	......	55.47c.

Excluded items:

Lamps	1.96c.	
Miscellaneous Income	1.34	
Fixed Charges	7.32	
Interest	0.39	— 11.01c.
		74.81c.

On the basis of other expenses as given by the company, to wit, 9.45 cents instead of 7 cents equals 57.92 cents.

By Mr. Burr:

Q. You refer in giving these items to the table headed "Exhibit 94 and Correction of Same."

3010 A. Yes, the table I have just handed in, No. 13. The first column of Table 13 is merely a rearrangement of what the Company itself gives in Exhibit 94, giving the same total, 74.81, and the same items, only they are in many cases put together. Now Mr. Mathewson has asked me with regard to the 9.45 cents which appears in the fifth line. Now that as stated there is "Other Expenses, aside from Excluded Items," such excluded items being those that follow:

"Lamp, Miscellaneous Income, Fixed Charges, and Interest, 11.01 cents," which I have already testified about. The contingent 10 cent appears in that form in Exhibit 94, also the taxes, also the repairs and the station cost. Now in the last column is my preliminary estimate—I call it preliminary because it awaits on the final investigation by the accountants for any possible changes—but my preliminary estimate, the first station cost is given this morning as 26.68, and in the early part of the afternoon; Repairs on Distribution System 3.56, taxes reduced from 7.27 to 6.08 as I testified a few minutes ago. Then contingent, by which I include also renewals not 10 cents as the Company gives it, but 5.31 cents; and "Other Expenses, aside from Excluded Items," which amount in their exhibit to 9.45 cents, although they had not given that particular figure, I reduce to 7 cents, making a total of 48.63 cents as compared with 63.80 cents as the total cost at the burner per thousand feet of gas made aside from return on capital.

Q. What is this 55.47?

A. Now on the next line I give what those costs would be at the burner on the basis of the station costs claimed by the Company, which was 33.52 cents, while I had taken 26.68 on the basis of the testimony I gave this morning but on the basis of the station cost claimed by the Company it would be 55.47 cents. Now I

3011 have added here another line at the bottom of this table: "On the basis of other expenses as given by the Company, to wit., 9.45 cents instead of 7 cents equals 57.92 cents." That represents the same cost as the Company claims with three exceptions, first a change in taxes to exclude taxes on property not connected apparently with the gas business, and reducing the contingent and renewal from 10 cents to 5.31, and excluding those items, four in number, Street Lamps, Miscellaneous Income, Fixed Charges and Interest.

Q. That is, making the reductions which appear in the column headed "Operating Costs according to Bemis' preliminary estimate per thousand cubic feet sold," and taking the basis of the Company's own statement as to station costs, it amounts to 55.47 cents?

A. Yes.

Q. And adding to that their own figure, that is, you take their own figure as to station costs and then you add their own figure as to other expenses?

A. Yes.

Q. As given by the Company, 9.45 cents, making a total of 57.92 cents?

A. Yes.

Q. As the cost in the burner?

Mr. MATHEWSON: You do not add the 9.45 cents, but add the difference between that and the 7 cents, which was employed by Professor Bemis.

Mr. BURR: Yes, that is what I mean.

The WITNESS: Yes, that is right.

Q. That gives the total in your estimation and judgment as 57.92 cents as the cost in the burner?

A. Yes.

Q. That is using their figures?

A. That is using their figures. I do not change my opinion.

Q. Your conclusion is that it is 48.63?

A. That is right.

3012 By Mr. MATHEWSON:

Q. Do you mean that that is your conclusion of what it does cost or what it——

A. Does cost or should cost; what it should cost either at present or with an up-to-date plant.

By Mr. BURR:

Q. What have you to say, if anything, as to the items called Other Expenses?

A. That I take at 7 cents, the reason being that the accountants found, as given in this case in a letter which has already been put in evidence that in Chicago it was only 17.2344 cents and that included repairs and renewals of 6.0043 cents.

Mr. MATHEWSON: I wish you would repeat that again.

The WITNESS: The Chicago accountants found the total distribution and general expenses to be, in the People's Company 17.2344 cents; they also found that that included repairs and renewals of 6.0043 cents, and in the hearing when I was testifying, the attorney of the company stated that the taxes were 5.5 cents per thousand feet. The taxes amounted to $604,000 and the sales were approximately twelve billion feet, which as we worked it out before the City counsel together, was 5.5 cents. Now, this item of Other Expenses does not include either taxes or repairs, which are elsewhere in this table. Deducting the taxes and repairs in the Chicago Report, namely, this 5.5 cents and 6.0043 cents or a total of 11.5043 leaves for the other expenses of distribution and general 5.7301 cents. Now, the Chicago Company sells only one-third as much gas per mile of main and has one-third as many consumers per mile as does the Consolidated Gas Company.

3013 By Mr. BURR:

Q. Do you know, by the way, how many miles of main they have in Chicago? Is it not two thousand or thereabouts?

A. I know it, yes. In the annual report of the People's Gas Light & Coke Company for the year ending December 31st, 1904, which I hold in my hand, it is stated on page 6: Street Mains, 1,939 miles; Meters, 359,327; Gas Stoves, 145,222——

Mr. Mathewson: You were not asked about all that.

Q. That 5.7301 cents includes something that the People's Gas Company charge to the expense of street lamps besides, doesn't it?

A. It did. I was given the form of distribution items which were included in the report, and they included the following in the People's Company: Meter repairs, main repairs, service repairs, gas stove repairs, general expense, including amounts written off, etc., office expense, New York office expense, legal expense, governor house expense, street expense, applicance expense, wages and salaries, meter setting, statement taking, turn on and cut-off, complaints, general inspection, burner inspection, fittings inspection, meter deposit, interest, rent, competition, lamp account, uniform account, advertising account, employees' aid, pensions, thawing, gas stove complaints, gas lost, taxes, insurance, store expense.

Q. Still referring to this item of other expenses, what in your opinion is an ample allowance for those in New York?

A. 7 cents.

Q. That is, not having before you the information that the accountants may have obtained?

A. Yes, subject to change if they find more, but based on the Chicago experience, it seems ample.

Q. What have you to say as to the contingent expense of
3014 ten cents claimed by the company?

A. That expense or renewal expense and contingent, as I finally made it read, I have figured upon as 5.31 cents. The way I reached that was this: The total repairs of the manufacturing portion of the system, according to Exhibit 94, were 2.02 cents, and the repairs upon the distributing system 3.56 cents, or a total of 5.58 cents. The difference between that and the average repairs and renewals for the twenty years preceding 1905, which were 10.89 cents as stated by the company (State Exhibit L, page 417), amount to 5.31 cents, and that is used instead of ten cents. In other words, I simply give enough to make up the total in repairs and renewals from the average of the last twenty years, or the last twenty years preceding 1905.

Q. You have prepared a table entitled Exhibit 94 and corrections of the same, have you?

A. That is the table that was really introduced a few moments ago.

Mr. Mathewson: Which was read in as part of your evidence?

The Witness: Yes.

Q. This table, Exhibit 94, and corrections of the same, what does that show?

A. That shows the cost to be 48.63 cents, in my opinion, with a proper first-class plant.

Q. As compared with?

A. 63.8 cents given by the company as their expenses with their plants and with their contracts for oil, and so forth. It also shows a cost——

Q. Do you mean the present plant, up-to-date plant, or a new plant?

A. 48.63 cents shows a cost with the present plant, or a plant doing as well as the New Amsterdam, Standard, or the Central Union are doing, and with a reasonable price for oil. Whether that 3015 requires a better plant than they have now, I will not undertake to say.

Q. If the company is not actually making and distributing gas as cheaply as your estimate of 48.63 cents, what reasons do you assign therefor?

Mr. **Mathewson**: Has he not gone over that. He has made certain deductions and stated upon what basis he makes them.

The **Witness**: I think I have covered that now.

Q. You have also stated what the result would be assuming the station costs are what the company returned them at?

A. Yes.

Q. We will take up the subject of return on capital. From your study and investigation of gas works and gas accounts and of the testimony and exhibits in this case and all the other matters that you have stated and considered in connection with the reports of 1885 and 1886, the Stevens Commission and the Gas Commission testimony, what is the best evidence of a proper return upon capital?

A. It is what one gets from the purchase of gas securities in the market. For example, if one pays $120 for a share of stock which pays a dividend of 6 per cent., the purchaser only secures 5 per cent. on his investment of $120, and that would show if he were willing to buy a 6 per cent. stock at $120, that he considered 5 per cent. a reasonable return on a gas investment.

Q. Have you made a study of the securities of other companies?

A. Yes.

Q. In other States?

A. Yes.

Q. You might specify a little in detail.

A. I have made a careful study of all the securities of all the large gas companies east of the Mississippi and north of the Ohio River that are quoted in the recognized financial authority, the *Commercial and Financial Chronicle* of this city.

3016 Mr. **Mathewson**: You mean a study of what their securities sell for?

The **Witness**: Yes.

Q. What do you find from this study as to bonds?

A. A study of these quotations for the year——

Mr. **Mathewson**: Is this also admissible under this ruling.

The **Master**: I do not think so, but——

Mr. **Burr**: We will produce these——

Mr. **Mathewson**: I do not object on the ground you have not the original papers here, but on the ground it is incompetent and immaterial.

The MASTER: I doubt very much about general testimony as to market prices of gas securities all over the country, without any knowledge whatever of how the conditions attending those companies compare with those in this case, and to attempt to compare the conditions existing in every case with the conditions existing here would raise a number of collateral issues which manifestly even the free and easy methods of an equity suit would not permit, and I do not see that it is very material, but if it is not long, I will take it for what it is worth, but it is only fair to say that I do not think it is of very great importance.

Mr. BURR: It will only take five minutes.

Mr. MATHEWSON: Of course, we will have an opportunity to rebut it?

The MASTER: It opens the door for a great deal of very remote testimony, if the other side think it of sufficient importance to follow it up.

Mr. BURR: It is in the line of replying as best we may to the statements made by their bankers and financiers.

3017 The MASTER: Of course, to a certain extent they have invited that testimony by putting in general testimony of bankers, but that is a little different than putting in definite prices of securities. However I will al-ow it.

Mr. MATHEWSON: Exception.

A. A study of these quotations for the year 1905, was given in the review of that year published at the beginning of the year 1906 by the *Commercial and Financial Chronicle* and a study of the quotations of the year 1906 to date as given in the Bank and Quotation Supplement of the *Chronicle* of September 8th, 1906, shows that of the thirty-four issues of gas bonds of large companies in twenty-four different cities every 5 per cent. bond was at par or above throughout 1905 with the exception of the Buffalo Gas Company, and every four per cent. and four and one-half per cent. bond was above 90 throughout the year.

Q. What do you find as to stocks?

A. A similar study of the price of gas stocks has been made; not many are quoted, but the following are the dividends during the last twelve months and the prices actually brought for their stocks during the current year and given in the *Financial and Commercial Chronicle*, Bank and Quotation Supplement, for September, 1906.

3018

(TABLE 14.)

Gas Stocks and Dividends.

January 1–September 1, 1906.

Name.	Annual dividends. Per cent.	Price of stock.	Net return on investment. Per cent.
Cambridge, Mass	10	275	3.64
Charlestown, Mass	10	252	4
Lowell, Mass	10	248	4
Lynn, Mass	10	325	3.08
Mass. Gas Companies, Com	...	57¾	
" " " Pref	4	88½	4.52
Montreal Light, Heat & Power Co	4	96	4.17
United Gas Improvement Co., Phila	8	172¾	4.65
Consolidated Gas, Baltimore, Common	...	37½	
Washington, D. C	10	300	3⅓
People's G. L. & C. Co., Chi	6	99	5.27
		to 114	to 6
Laclede G. L. Co., St. Louis, Common	5	95	5.26
Laclede G. L. Co., St. Louis, Preferred	5	95	5.26

Q. From this it would appear that the stocks are all selling on a six per cent. basis, would it not?

A. They were selling on a better basis than that. They were nearly all of them selling on a four to five per cent. basis.

Q. What do you find, Professor, in this regard from an examination of State's Exhibit 82, page 351, and State Exhibit 83, page 352?

A. The first exhibit mentioned, State's Exhibit 82, page 351, giving market quotations for the Consolidated Gas Company's 3019 stock since 1884 and Exhibit 83, page 352, giving dividends for the Consolidated Gas Company since 1884, show that since 1885 up to January 1906, there have been only portions of two years, 1894 and 1895, when one could secure six per cent. by an investment in Consolidated Gas Company's stock, the premium being so high.

Q. What do you deduce from these facts?

A. That it is a conservative statement that one can not secure more than a five per cent. return on an investment in gas bonds in any of our large American cities or more than six per cent. on an investment in their stock.

Q. Does this apply to companies that are newly organized?

A. No. It is quite possible that during the early history of these companies, from forty to eighty years ago, a larger return was necessary in the infancy of the business, in order to enable the securities to be floated at par, and that may be true in smaller cities to-day. I do not for one moment believe, however, that a Company possessed of the only rights that have been granted to sell gas in New York

City, as is true of the Consolidated Company and of the companies with which it has agreements, and selling more per capita and per mile of mains than any other city in the world, would have the slightest difficulty in floating at par all the five per cent. bonds and all the stock bearing six per cent. dividends that might be required for the actual cost of construction. Probably one-half of the money could be raised on a four and one-half per cent. bond and the other on a five and one-half per cent. stock, making an average return on the cost of construction of five per cent. Certainly a six per cent. return is very liberal.

Q. Would that be sufficient in your opinion to cover unforeseen contingencies?

A. Yes, it will cover insurance against unforeseen contin-
3020 gencies, as has often been referred to, like the gas explosion
in Boston. I might refer to that a moment if you like.

The Master: Well, Mr. Burr, I do not want to cut you off, but is not this a little speculative? The Professor has not been shown to have any experience in the flotation of securities of this kind. As to what could or could not be done, that is a matter which could be put in your brief, as well as putting it in as testimony here.

Mr. Burr: Well, that is all we were going to put in on that subject.

Q. Now, the Boston explosion which has been referred to here by President Addicks, I think——

A. Yes.

Q. Have you any information in regard to that, or its causes, or any findings with regard to that subject?

A. I know of no other gas explosion as costly to a Company as that, and its occurrence anywhere else seems exceedingly improbable. As to that Boston gas explosion I will quote from the report to the Massachusetts Legislature relative to this explosion, the report being dated June 4th, 1897, and being made by the Massachusetts Gas & Electric Light Commission, in response to a request by the State Legislature for a report. This report appeared in the Appendix Page 172, of the Annual Report of the Massachusetts Gas & Electric Light Commission for the year ending June 30th, 1897, the explosion having occurred a little before in the same year, and I will read merely a short statement about the causes.

"In the light of the event itself, this explosion might have been averted if any one of the following things had been done:—" Now
I omit three statements, and come to the fourth.
3021 "Fourth. If reasonable skill and activity had been applied
in the management of the jobbing department of the gas company, so that one of its jobbers had been sent with reasonable promptness on the complaint from the Masonic Temple or upon the later complaint received from the police officer.

"The work of the subway throughout its length was one of unusual hazard and extraordinary difficulties. Life and property were both imperiled, and the danger to the latter was perhaps the more obvious.

"It is doubtful if the difficulties encountered at the intersection of these streets, in the number and character of the underground structures met, in the enormous amount of street car and other traffic to be maintained without interruption, in the nearness of the new structures to the surface of the street were ever paralleled in any public work."

Q. Now what do you conclude from this?

A. I conclude that the Company was partly to blame, and that it is not reasonable to ask the gas consumers to insure the Company against its own mistakes. But I should think that 6 per cent. being much more than an ample return on an investment without risk, for such investments can be floated at 4 per cent, and even less, that there is covered in the 6 per cent. some risk.

Q. Your conclusion is that 6 per cent. is ample?

A. Yes.

Q. Have you any further confirmation of this statement as the result of the facts gleaned by you with regard to other companies?

A. Yes.

Q. Please state what companies you refer to?

A. Reference should be made to the action of the Massachusetts Gas & Electric Light Commission during the year ending
3022 June 30th, 1905, as given in their last printed report, pages 18 to 36. This relates to the action taken by this Massachusetts Commission in fixing the interest on new bonds and the premium on new issues of stock. Very significant in this connection are the orders issued in the year ending June 30th, 1906, by the Massachusetts Gas & Electric Light Commission for the issue of new securities by several gas companies in Massachusetts. It may be observed that the Massachusetts Commission has the right to fix the interest on all new bond issues and the price at which stock issues may be taken by the stockholders.

The Clinton Gas Light Company secured the right to issue $110,000 worth of bonds. The Commission stated, pages 21 and 22 of the report, that the bonds can be placed at par and yet bear interest at 4½ per cent., and that interest was fixed by the Commission.

The Cambridge Company was permitted to issue 1,200 shares of stock, but the market value was fixed at 200, the stock paying 10 per cent. dividends; which means that the Gas Commission consider 5 per cent. sufficient return on further investments, while any one buying in the open market, already observed——

Mr. Mathewson: I move to strike out "Which shows that the Gas Commission considers etc."

The Master: Strike it out.

Q. You need not characterize it.

A. While any one buying in the open market, as already observed, would get less than 4 per cent., because the stock is selling at 275.

The Lynn Gas & Electric Light Company likewise, was only allowed by the Gas Commission to issue its $100 shares at $200. Since

its shares were paying 10 per cent. this gave only a five per
3023 cent. return on the new investment. It may be remarked
that the State Commission only fixes the price at which new stock can be taken by the old stockholders without public bidding. Any stock which the stockholders do not care to take, at those prices fixed by the Commission, is sold at auction after due advertisement. Experience has shown that the stockholders usually take all of the stock at the price fixed by the Commission.

Brockton was allowed to issue 1,300 shares at par but that stock was only paying 5 per cent.

The Newburyport Gas & Electric Company was allowed to issue 600 shares at $100 a share. The stock was paying 5¾ per cent.

The Fitchburg Gas & Electric Light Company was allowed to issue 2,200 shares capital stock at the par value of $50 each at 80, that is, at 160. Since the stock was paying only 8 per cent. this meant again a five per cent. return.

The Natick Gaslight Company was allowed to issue 250 shares at par. The company was paying 4 per cent. dividends.

The Malden and Melrose Gaslight Company was allowed to issue 2,025 shares of stock, at $120 each. Since this stock was paying 9 per cent., it was equivalent to 7.5 per cent. return on the investment. This was the highest return authorized.

The Worcester County Gas Company, which was paying no dividend, was allowed to issue $85,000 of new stock at par. It appears from all the above illustrations, that, with one unimportant exception, existing stockholders were forced to put up with a 5 per cent. investment or less on all new investments in the gas business.

Q. That is, 5 per cent. return on the new investment on the gas business in Massachusetts?

A. Yes.

Q. Do these companies sell as much gas as the Consolidated Gas Companies?

3024 A. Not one of them sell one-twentieth as much gas as the Consolidated Gas Company.

Q. And in your opinion, under these circumstances, 6 per cent. would be a liberal return to the Consolidated Gas Company?

A. Yes.

Q. Now, these investments that you speak of in Massachusetts and the issues of stock and bonds since 1894, could they be made for any thing more or other than actual construction?

A. No, neither in Massachusetts nor in Great Britain can securities be issued or prices charged on sales of gas to cover either an increase in the value of land owned by the company or the value of street paving put over the mains at the expense of the tax-paying consumer of gas.

Q. Have you read the testimony of Professor Humphreys in this regard to which you refer?

A. Yes.

Q. Will you kindly call the Master's attention to it? I think it is very important.

A. In the Holyoke Gas case, the Holyoke Water Power Company, Petitioner, against the City of Holyoke, Volume 2, pages 277 and 278, occurs this statement:

"Q. You have not in this case taken, in the first place, the structural value of the gas plant and the electric light plant, and then added to it an additional value on account of what the plant could earn, but you have made your valuation in the first instance upon the earnings? A. I followed my usual practice by basing it on earnings, simply checking myself up, simply to show that my assistants reported to me a plant capable of maintaining that business.

3025 "Q. Why do you take 5 per cent. as the sum at which you capitalize the net earnings of the company? A. In my judgment that was a fair return on that kind of an investment.

"Q. By that do you mean annual return to the persons who put their money into it? A. Yes.

"Q. And if the investment were represented by stock, you would mean that dividends should be paid at the rate of 6 per cent? A. Yes, sir.

[On the margin:] 6% amended to read 5%. See Supplemental Opinion March 11, 1908, Paragraph IV.

"Q. And whether or not in making this estimate of value you assumed that there would be the same freedom from competition that now obtains? A. I assumed the same conditions.

"Q. With respect to competition? A. Yes.

"Q. That is, you assumed the same conditions that now exist? A. Freedom from competition.

"Q. And I understand you to say that you valued this plant on the same basis that you valued the plants which you were employed to appraise in New York and New Jersey and other States? A. The same conditions generally."

After some discussion between the attorneys the witness finally stated this, at the bottom of page 278:

"I did not go into that very specifically, but I reinforced my opinion as to the values by my general impression that gas properties and lighting properties in Massachusetts are perhaps a little better protected than in other parts of the country. I did not make any special allowance, but I thought that reinforced my judgment as to the values.

"Q. Was your attention called to any particular feature of the laws of this State affecting gas and electric light companies? A. No.

Redirect examination by Mr. Brooks:

3026 "Q. Whether or not you took into consideration at all the future earning capacity? A. No.'"

Q. What was the nature of that proceeding in which Professor Humphreys, who testified in this proceeding, testified?

A. It was a case in which the City of Holyoke had voted to purchase the gas and electric light plant, and under the State law of Massachusetts the Company has the right to require the City to purchase the plant then in operation, and the law provides that a

State Court shall appoint a Commission to receive evidence as to the value of such a plant.

Q. And was Professor Humphreys called as a witness to testify as to the value of that plant?

A. Professor Humphreys was called as a witness to testify as to the value of that plant.

Q. And in that proceeding he testified as you have read?

A. Yes.

Q. Do you wish to take up the question of the capitalization?

A. I am prepared to, and the cost of the property.

Mr. MATHEWSON: I should correct, if you will permit me, a misapprehension that got on the record this morning with reference to the Mutual Gas Light Company. It was formerly a coal gas company and not having represented that Company, I was under the impression that they manufactured some coal gas. I understand they do not, so that if I am correct, of course it would be impossible for Professor Bemis to make the comparisons suggested.

Mr. BURR: That was the reason that I refused to accept the offer you made me.

3027 The WITNESS: I did not have a chance to state this morning that I had looked for an evidence of coal gas but could not find it.

Q. Have you taken up the consideration of the cost of the property of the Consolidated Gas Company?

A. Yes.

Q. And have you examined the testimony given before the various Commissions?

A. Yes.

Q. As it appears in the reports of 1885 and 1886 for the purpose of getting all the information you possibly could on that subject?

A. Yes.

Q. You might tell us what you did do in that regard?

A. I read the two reports to the Senate——

Mr. MATHEWSON: My objection to this line of testimony, is made, Mr. Master, and does it meet with the same reception.

The MASTER: We will go on a little further with it and see. What did you say you had read beside the two reports?

The WITNESS: That is all I had said. There were two reports made in 1885 and 1886. I started with Mr. Yalden's report, with full knowledge of the fact that the report of two members of the Committee constituting a majority in 1886 stated at page 76 of the report, referring to the——

The MASTER: Never mind that, Professor. What I want to get at is the question as to the propriety of these articles.

The WITNESS: I wanted to give my reasons for accepting Mr. Yalden's statement.

Mr. BURR: We have Yalden's reports in evidence.

3028 The MASTER: Do I understand he is going to testify as to the value of these properties and his conclusions based upon something which appears in these reports of the Senate Committee?

Mr. Burr: You have three documents before you here. One is the report of the Committee of 1886, another is the appraisement made at that time by Thomas F. Rowland, introduced by the Committee; and the other is the report of the Committee of that year, 1886, the minority part which was offered by the City and the majority part was offered by the Company. Now we are taking these just like exhibits in the case from which he has arranged such items of cost which will lead up to the present situation here.

The Master: It seems to me that is a little remote. In regard to these other branches of the case, where he based his testimony largely on the evidence taken in this case and tabulations put in by the other side, I allowed you considerable latitude on the theory that as a statistician, it was competent to analyze and criticise and pick flaws in any figures that the other side advanced. But, as I understand this proposition his criticisms are not directed towards any of the evidence in this case, but he is basing some theory here on reports made by the Senate Committee or documents contained in those reports that we have nothing to do with here.

Mr. Burr: No, he is starting with a situation which is made evident as existing at the time when the consolidation occurred, as appears by these exhibits, and starting with that, he is taking that as a basis in connection with the statement now here before you as to what has been spent in that time for construction and what has been spent in that time for repairs and what the present valuation of that
3029 property is, and in order to be logical I have got to start at the
beginning. And I will read to you, he does not need to testify at all, I can read from the testimony there given, the testimony of Rowland and the testimony of Yalden, and starting with that testimony and in connection with these exhibits here, have him arrange his conclusions as the result of that situation.

The Master: Well, but does not even that go back pretty far?

Mr. Burr: It does, but in my judgment—I may be wrong and we entertain undoubtedly different views in regard to that—but I think the Court is entitled to take into consideration the cost of these plants and the costs as they appeared upon the books of the companies and given by Yalden in his testimony and the manner in which Rowland raised that cost, by his appraisal, as stated by Mr. Rowland himself, and I think you are entitled to have that statement from the past before you. It is not long and it is not going to occupy much time. The whole thing is here and it is a few extracts by question and answer as to what basis they took. Yalden took the valuation from the books and Rowland took another system of appraising, and the amount of his appraisal is in the exhibit before you, and that I think is material in view of what we claim is the real investment in these plants making gas upon which we contend they are only entitled to a return.

The Master: I do not understand that the other side has put in any proof as to the value of the plant based upon what it cost in 1884 or what they allowed for it in 1884.

Mr. Burr: No, they carefully avoided it. They are insisting that

we have nothing to do with it, but you are to find the value
3030 as it has appreciated in the year 1906. We say you must look
back and see what was the real investment in this business.

The Master: But if you are going to fix the price of gas based on what property they have employed in the gas business, is not the question as to what that value is to-day? What difference does it make what it was worth twenty years ago? It may have gone up or gone down.

Mr. Burr: I think it makes a good deal of difference in our view of this situation. We present the cost of this property at a certain year and we take their exhibits and show what they claim to have spent on it since both in repairs and new construction and renewals, and we say there is the original valuation as appears upon the books and here are vast sums of money they have spent and that represents what it has cost them up to the present time.

The Master: And a further question suggests itself to my mind, and that is that whatever valuations this witness testifies to according to your statement are book valuations made up by expert accountants. Now, I do not understand, do you, that in getting at the value of a company that book valuations are evidence of any great weight? A great many companies consistently carry their book values very much below or very much above what the actual values are or the actual cost for purposes of their own. Some companies carry them down as low as one-tenth of the cost and some companies, who may want to float a bond issue, carry them away above.

Mr. Burr: You will see that this inventory in 1886 was for the purpose of ascertaining whether there was a justification of a capitali-
zation of $37,000,000, so the inquiry went to the root of the
3031 thing, and the root of the thing was brought about through
Yalden, who went to the books of the various companies and
he states in this statement how he arrived at his figures.

The Master: But at the best, it is a second-hand reproduction of Mr. Yalden's testimony with no opportunity to cross-examine him, and *non constat*, we do not know but what if he were cross-examined his figures would be deprived of their value.

Mr. Burr: The same applies to the report of Michael C. Murphy. He is dead and Mr. Yalden is dead. We take the figures as they are attached to the Senate Document, Exhibit 42.

Mr. Mathewson: Is not this the situation, you first offered page 76 of the report of 1886, and we objected, but the Master admitted it, showing how the $20,946.60 were made up, which was said to be the value at which these items of assets were carried on the books of the constituent companies. That was all it purported to show. Then that having been admitted we offered the majority report and you offered the minority reports, and then later on offered all the schedules of Yalden together with his report. Now why does not that cover the whole ground? You offered the schedules as they are in evidence.

The Master: Well, I have been very liberal about allowing all these things that took place before the various bodies who investigated this matter, in view of the memorandum and opinion from

the court that time would be saved here by allowing both parties to
put in all sorts of tabulations which might otherwise require new
work, and on that theory I have allowed all these things to go
3032 in which might under the strict rules be objectionable; but
it seems to me that when I have gone that far it is about far
enough. There is no particular force in allowing a witness to go to work and testify basing his arguments on those matters which are some of them twenty years old at least. I have no desire to cut you off, but it does seem to me that it is getting a little beyond the proper scope of the inquiry. I am disposed to sustain this objection and give you an exception, and if you decide to press the matter of course the witness can answer and it can go in in the ordinary way and be on the record. But I think that I must exclude it.

Mr. **Burr**: I want to call your attention to th- fact that in the Stevens Committee Mr. Hughes read from this very book that I am referring to, the testimony of Mr. Gawtry. And in the Gas Commission I am informed they used Yalden's figures.

Mr. **Mathewson**: No, I do not think it was the testimony of Mr. Gawtry in that proceeding, but the testimony of Mr. Gawtry in a subsequent proceeding relating to taxation which Mr. Hughes read. I do not think he read his testimony given in the investigation of 1886.

Mr. **Burr**: Will you say that the proceedings of 1886 were not read into the record before the Stevens Committee?

Mr. **Mathewson**: That is my impression, that none of it was read in.

Mr. **Kirby**: It was read in.

Mr. **Mathewson**: Well, it must have been very little.

Mr. **Burr**: Well, this is very little, but it is of extreme importance.

The **Master**: I may be in error about all this and it may be in
direct conflict with something I have held heretofore about
3033 this line of testimony, but it seems to me the way you put
it that that testimony is not only clearly incompetent, but
irrelevant and immaterial.

Mr. **Burr**: The Master has ruled it out and I take an exception and I now proceed to ask him under the ruling of the proceeding.

Q. Have you studied or consulted Yalden's figures in arriving at the basis of the cost of the property to the Company in 1884?

A. Yes.

Q. Did Mr. Yalden appear as a witness in that proceeding?

A. Yes.

Q. Will you refer me to the place where he testified?

A. In the index there are many references to his testimony, and then he has a whole appendix prepared apparently at the request of the Commission, of tables.

Mr. **Mathewson**: That is all in evidence, including his report preceding the table.

Q. You are familiar with the cost of the property as it appears there upon page 76 of the Senate Committee's report?

A. Yes.

Mr. Mathewson: You mean you are familiar with the cost of the property or with the statement?

The Witness: With the statement.

Mr. Burr: With the statement of the cost appearing on page 76.

Q. And referring to the report of the Committee on page 76 as to the appraisal by Mr. Rowland and others of the $30,190,419.01, the report states, does it not, "There is no evidence that any
3034 of these items were appraised too high, except the evidence of the expert, Mr. Yalden, who finds that they were higher than they appeared to have been charged as costing in the Company's books."

A. Yes.

Q. Now, in the minority report, page 28, there is a statement there that the stockholders had only contributed $8,727,050, and that the total cost from all sources of property paid for by stockholders' original contributions, by surplus earnings, by stock treated as money and from the proceeds of bonds and other loans was only $20,942,632.85, although the property was capitalized at $37,190,419.01 in 1884?

A. Yes.

Q. What leads you to believe in the accuracy of Mr. Yalden's figures as given in his report is the fact that he testified as a witness?

A. He did.

Q. Will you refer to his testimony in that connection?

A. He testified frequently throughout the 624 pages.

Q. I refer particularly to page 345.

A. On page 345 he was asked if he had ascertained from the books the actual cost to the Consolidated Gas Company. He replied yes in every company.

Q. Is there any further confirmation of this in the testimony taken before that Commission?

A. A very powerful confirmation in the testimony of Mr. John P. Kennedy, President of the Mutual Gaslight Company, which was organized in 1866 and was included in Mr. Yalden's investigation.

Mr. Mathewson: That is not one of the consolidating companies at all.

The Witness: It was included in Mr. Yalden's investigation.

Mr. Mathewson: It might be possibly true that it might be arguable, although I do not think it is, that if officers of
3035 & 3036 one of the constituent companies may have said something, it might be raised inferentially against us, but how an officer of the Mutual Gas Light Company, which is not one of the constituent companies at all can be offered here or be in any way competent, I do not see.

Mr. Burr: Only for this reason, that it takes 339 Mr. Kennedy states "The fact is we do not criticize Mr. Yalden's work, but take it for granted that it is all right." There is the President of the Mutual Gas Light Company, emphasizing the fact.

The Master: I cannot see that is of any importance, with all due respect. I will exclude all that.

At 4 P. M. adjourned to October 17, 1906, at 11 A. M.

Last Exhibits:

Complainant's 256,
State's W,
City's 56.

3037 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Wednesday, *October* 17, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr and Mr. Kirby.

3038 Mr. Burr: I want to read into the testimony at this point extracts from the testimony before the Senate Committee of 1886, apropos of the appraisal which has been introduced in evidence here, made by Mr. Rowland at that time.

Mr. Mathewson: My objection lies to that, I understand. I do object.

The Master: I will overrule it.

Mr. Mathewson: Exception.

Mr. Burr: Mr. Kennedy, the President of the Mutual Gas Light Company, being examined in regard to the appraisal of Mr. Rowland, testified as follows:

Mr. Mathewson: I further object on the ground that the Mutual Gas Light Company is not a party to the consolidation, so that no argument can be based on that proposition.

Mr. Burr: The fact is that they attempted to be a party to the consolidation, but were prevented by a statute, and got around it in another way.

The Master: I am overruling that objection simply from the fact that the material that Mr. Burr wants to get in is from some of these printed records in other proceedings which have been admitted, and the fact that it is twenty years old——

Mr. Burr: This is all pertinent to the valuation of the plant. I will read the testimony:

"Q. And the basis of the valuation of the plant was what it would cost to duplicate it? A. Yes, sir.

"Q. When you spoke of what it would cost to duplicate, did you mean what it would cost for a plant equivalent to the plant to be appraised? A. No, sir; to duplicate everything as it was

3039 without any reference to anything else.

"Q. Without reference to whether it was really necessary to produce a given capacity or not? A. Yes, sir.

"Q. And without reference to whether the plant or any part of it had been superseded, or rendered more or less useless by reason of the change in the method of production? A. Yes, sir.

"Q. So that the properties that were laid aside as useless, or comparatively so, caused by the change of production in the same works from coal gas to water gas, were to be appraised or valued according to what it would cost to duplicate them as they stood. A. Just as they stood.

"Q. In your opinion, would that be a fair way to buy a gas plant for present actual business purposes? A. No, I don't think it would. If I was going to buy one, I should want to get a modern one, of course."

Mr. MATHEWSON: What page is that?

Mr. BURR: Page 411. Now I go to page 413.

"I could only say that the companies were all estimated upon the same basis of valuation.

"Q. That basis was what it would cost, estimating the cost of material on hand? A. Yes, sir.

(By the CHAIRMAN:)

"Q. That might be a very different thing, getting at its real value as the purchaser would look at it? A. Yes, sir.

"Q. All you were looking after was to get it relatively right? A. Yes, sir; compare my own with the others.

"Q. To see that they were on the same basis? A. Yes, sir.

3040 "Q. The ultimate object was to get it relatively right? A. Yes, sir; to get it relatively right.

"Q. The appraisement was very different from a purchaser? A. Yes, sir; if the company desired to sell out, there would be two parties to the affair.

"Q. One of which would look to see whether this particular piece of machinery—what it would cost? A. Yes, and in this case there was only one party.

"Q. And he was the seller? A. Yes, sir. There was no one there to bid them down."

EDWARD W. BEMIS resumed.

Direct examination by Mr. BURR (continued):

Q. Now you heard Mr. Carter in this proceeding criticise Mr. Yalden's statement in regard to the Manhattan Gas Light Company. What have you to say to that?

A. I would say that Mr. Carter called attention to the fact that Mr. Yalden had reported the cost of the Manhattan Gas Light plant on page 671 of the Senate Report of 1886 as only $64,247.49, that is the cost of all the manufacturing portion of the property of the company, which Mr. Carter held to be very much out of the way. This statement——

By Mr. Mathewson:

Q. Mr. Carter used the word "plant" in his testimony, did he not, simply the word "plant"?

A. Probably. This figure of $64,247.49 purported to be for plant and was so interpreted by Mr. Carter, the term "plant" being 3041 used to cover the manufacturing portion of the property. But this is all explained in the next three pages of the same report of 1886 by Mr. Yalden, where it is shown that in the real estate item of $3,351,730.74 was included $1,890,810.82 of apparatus, and $513,022.94 of buildings and improvements. Mr. Yalden's report, therefore, did not ignore the manufacturing plant of the Manhattan Company, as a first glance at his table on page 671 would imply. I might add, in respect to this company, that Mr. Yalden stated in his testimony, page 368, "The Manhattan Company has nothing to show on the books for an increase in book value from $4,873,000 to $9,611,000." And I may state that this new capital went into the consolidation.

Q. Did you read all the testimony before the committee in 1886?

A. Yes, 624 pages and the appendix.

Q. And did you find Mr. Yalden's report referred to often?

A. Yes, and he himself was on the witness stand several times.

Q. And was it criticised in any respect?

A. Not a criticism.

Q. Was it approved?

A. Yes, it was taken for granted, at least, as correct.

Q. Now, as to the report of the committee of 1885——

Mr. Mathewson: Just a minute. This witness has now stated that the report of Yalden was approved in every respect, and it was taken granted. That is a pretty broad conclusion. Just what the witness means, I don't know, but it seems to be improper, in any event. What the testimony shows, it shows as to what Mr. Yalden took.

The Master: That seems to be a reasonable proposition, does it not?

3042 Mr. Burr: He has read all the testimony, and states that Yalden's conclusions were not disputed. He states that as a fact, in that proceeding. Now, if Yalden's figures were disputed and found to be incorrect, there is the record, which is open to Mr. Mathewson, as it was to me. We state that, from the whole record, his figures were correct and were not disputed.

The Master: That may all be. There may have been many reasons for not disputing them that I know nothing about, and which Mr. Mathewson could not show at this time. I think if I let those old tabulations in, that is as far as I am justified in going. I do not think the witness' conclusions about them are relative and material, and I do not think that any independent testimony based upon those tabulations has anything to do with this case. As I said yesterday, it seems to me it is too remote.

Mr. Mathewson: I move to strike out the language to which I just called attention, where the witness states his conclusions as to the acceptance of that report.

The Master: Strike it out.

Mr. Burr: Exception. I want to read into the record an extract from the report of the committee of 1885 on this subject.

Mr. Mathewson: That is the previous committee?

Mr. Burr: Yes.

Mr. Mathewson: I suppose counsel knows, but perhaps the Master does not know, that a committee was appointed by the Senate in 1885 to investigate this consolidation, which was completed in November, 1884, and that it was to report to the Legislature of 3043 1885. It did hastily make an examination and made a report, which was considered so insufficient that a new committee was at once appointed and directed to report the next year and go over the ground thoroughly. That was the second committee which reported in 1886, Senate Document 47, and from whose report various items have been put in. Now, it does seem to me that to take the report of the committee of 1885, appointed by the Senate, which was turned down and a new committee appointed because the committee of 1885 had not had time, the Senate thought, fairly to consider the question, and put in suggestions from that report is rather idle. I do not know how I could meet the proposition if the report had been the other way.

Mr. Burr: The object is to show, since you have made your statement in that connection, that this committee of 1885 in their report found just as the witnesses from whose testimony I have read found, as stated in their testimony in regard to the valuation. And they say: "The president of one of the New York companies, R. N. C. Graham——"

Mr. Mathewson: I do not think it should go on the record until we know what it is. I do not think you should say you propose to offer it, and then read it.

Mr. Burr: Well, I will read it without having it taken down, so the Master can see what it is (reading).

The Master: I will admit it, as long as the one of 1886 is in, and will let it go in.

Mr. Mathewson: Exception.

Mr. Burr: I read from the report of the committee of this New York Senate, March 30th, 1885, as follows:

"The president of one of the New York companies, R. N. C. 3044 Graham (of the Equitable Company) testified that in his opinion $15,000,000 would be a fair estimated capitalization to produce an annual output of 5,000,000,000 feet for the equivalent of $3 capital to each 1,000 feet on such a large output. The fact, as exhibited by recognized publications, appears to be that the average capital per 1,000 feet of gas in Great Britain is about $3.23 and in the City of London about $3. * * * But by the imposition of this consolidation it would appear to be at the rate of $8.75 per one thousand feet. This unreasonable result could not have been reached without the introduction of illegitimate items, the character of which has already been indicated. An illustration of the method of capitalization is afforded by the allotment of $3,000,000 of consolidated stock for the shareholders of the Knickerbocker Company. In fact, the Knickerbocker Company for several years has had only a nominal independent existence. Its entire stock was acquired, according to the testimony, by the Municipal Company, which caused it to be held for the benefit of the Municipal Company. * * * It is known that money was spent by the Municipal Company in increasing the works of the Knickerbocker Company, and that by the terms of such expenditure the property thus added was to be deemed to be the property of the Municipal Company. Several hundreds of thousand dollars appear to have been thus spent. The plant and works of the Knickerbocker Company, however, seem to have been rated in examination, at least, at their full value, while the franchises, so called, of the Knickerbocker Company are separately stated about $528,000, when in fact it had none."

3045 Mr. Mathewson: How foolish all that proposition is appears at the start, that a comparison with the cost in London is made, where material and labor, and everything else were less expensive.

Q. Have you tabulated these results as you found them in these reports?

A. I have.

Mr. Mathewson: Which reports?

Mr. Burr: Showing in his judgment and opinion what was the cost of the gas property up to October 31st, 1905, taking as a basis the statements I have just read from Yalden's report from the testimony that has been introduced already and read into the record here.

Mr. Mathewson: I object to this witness, who never constructed a gas works in his life, and who never even operated a gas works, stating what, in his opinion, is the value of our property to-day.

The Master: Objection sustained.

Mr. Mathewson: If he means to ask the witness to tabulate figures which he has taken which are not an expression of opinion on his part as to value, that is another question.

Mr. Burr: I am asking him to tabulate the figures which have been given in this case and the figures that have been read into the evidence here from the reports of 1885 and 1886.

Mr. Mathewson: No figures have been read in from the report of 1885.

Mr. Burr: Well, from the testimony as it has been read into the record here.

The Master: I sustain the objection for the reasons stated yesterday. While I am disposed to allow great liberality in admitting these old tabulations for the purpose of reference, in view of

3046 the language of the Court's memorandum, I do not think it is right to allow the witness to put in independent testimony, not based on the complainant's case, but on criticisms and analyses of these old documents over twenty years old. It is going pretty far afield, in my judgment, so I will sustain the objection, as I did yesterday.

Mr. Burr: I except.

A. This table, which should be numbered consecutively Table 15, cost of the gas properties up to October 31st, 1905:

Cost in 1884, according to Yalden page 776 of report of '86	$20,942,632.85	
Net increase from 1884 to Oct. 31, 1905, according to Complainant's Exhibit 79, page 347*a*	9,693,555.90	
Material and supplies (Complainant's Exhibit 80, page 348)	616,470.08	
Total	$31,252,668.83	$31,252,668.83
Less value of the property taken by the City at the 18th St. and other property sold by the Co. as given in testimony of Prof. Marks, page 2364	....	1,985,874.37
Balance	....	$29,266,757.46
Total cost of property per 1,000 feet sold in 1905	$2.20	
Profits, 6 *a*/*c* of $2.20	13.2c.	

That table takes the complainant's own figures for the changes since 1884, and takes Mr. Yalden's computation of the cost then. I am aware that Professor Marks (page 2367) made a further reduction of $2,077,530.50 for other property not in use in the gas
3047 business at 18th Street, as inventoried by Mr. Mayer, and at
112th Street, but I have not had the time myself to look into the matter as to particulars, and so have not subtracted those two items. I do not express any opinion as to whether they should be or not, therefore.

Q. Now, in your testimony before the State Gas Commission last winter you allowed the Consolidated a million dollars of working capital, did you not?

A. Yes.

Q. In your opinion do they need such an amount, and, if so, how do they secure it?

Mr. Mathewson: Is Professor Bemis an expert on this subject, as to what is required for working capital in a gas business?

Mr. Burr: He is now testifying from the figures that have been introduced here, and from the figures and the exhibits introduced before the State Gas Commission, whether you show that you have any need of that amount of working capital. You remember that Mr. Marks made the point also——

Mr. Mathewson: He had had some little experience in the gas business, although extremely remote.

Mr. Burr: As I said before, that all goes to the weight to be given by the Master to the testimony.

Mr. Mathewson: This witness was never in the gas business, and is asked what is the proper working capital.

Mr. Burr: That all goes to the weight of his testimony. If his opinion is not worth anything, the Master will probably find it so. If it is worth anything, and he can testify to his statements from exhibits here and from your own sworn testimony, that is another matter.

3048 The Master: I will allow it.

Mr. Mathewson: Exception.

The Witness: May I be permitted to say that in connection with the management of the water works in Cleveland we have similar problems, as the distribution system is very much analogous, and the question of working capital and other matters—the character of street mains, the effects of electrolysis, general clerical expenses and many other things are similar problems—not the same precisely, of course, but it is very much analogous in many respects.

Q. Now answer the question.

A. They have in their treasury, I believe, from half a million to a million dollars for working capital. The average monthly expenses aside from construction are somewhat less than $700,000. That is obtained by dividing their annual expenses by twelve; and they may need that amount on hand, but most expenses are probably only paid after thirty days, except salaries and wages, and many of those are by the month, and it seems quite likely that the current receipts which are coming in all the time from the sale of gas will take care of these bills when they are due. Still, I give them the benefit of the allowance of a full million dollars.

Q. How much does that million dollars amount to per thousand feet of gas?

A. It amounts to only—that is, the million dollars is only 7½ cents per thousand feet of sales in 905; and six per cent. of that is less than one-half cent per thousand feet; eight per cent. of it is less than .6 of a cent. Now, I might state there that $906,000 of that million they have from consumers and pay them only six per cent. on it, and it would not be necessary to add but six per cent. I will have here computations later on the basis of both six and eight per cent.

3049 Q. Now will you just state again what the operating cost was according to Exhibit 94 as corrected by you, in the matter of taxes and contingencies and renewals, and what was your own estimate?

A. 57.92 cents was my correction of Exhibit 94.

Mr. Mathewson: That has all appeared and it is, in so many figures, in his statement.

Mr. Burr: I want it in connection with these figures.

The Witness: And my estimate independently was 48.63 cents.

Q. If you add to this operating cost the return on capital you just mentioned of 13.2 cents, what would be the result?

A. It would be 71.12 cents on the basis of my correction of Exhibit 94, and 61.83 per thousand feet on the other basis.

Q. Now, will you take the valuation of Mr. Rowland and others in 1884, on the basis of which the companies were consolidated, add to that the construction account since then as it appears in Complainant's Exhibit 79, and also add the increase of supplies on hand, $616,470.08, and state what total capitalization would be reached?

A. $40,500,454.99, because Rowland's valuation and that on which the companies were consolidated November 11, 1884, was $30,190,419.01 aside from franchise rights, while the construction account since then, according to Complainant's Exhibit 79 in this case, was $9,693,565.09, while the supplies as you stated were $616,470.08.

By Mr. MATHEWSON:

Q. Your total just given does not include any working capital of any sort, does it?

A. No. I make an allowance for that a little later.

3050 By Mr. BURR:

Q. What would this per thousand cubic feet of sales, and what return per thousand feet would six per cent. and eight per cent., respectively, give?

A. This is $3.05 per thousand feet of sales; and six per cent. is 18.3 cents per thousand feet; and eight per cent., is 24.4 cents. But this 18.3 cents, being a six per cent. return, added to the 57.92 cents above computed, would give a total cost of 76.22 cents; while if 24.4 cents or an eight per cent. return were added it would make 82.32 cents.

Q. If these figures were added to your estimate what would be the result?

A. If added to my estimate of 48.63 cents it would make on a six per cent. basis 66.93 cents and on an eight per cent. basis 73.03 cents.

Q. On an eight per cent. basis?

A. Yes.

Q. Have you made any computation on the basis of the figures presented by Exhibit 80 (page 348), showing the investment in the gas business, or claiming an investment in the gas business of $56,891,454.94?

A. Yes. Taking the figures from Complainant's Exhibit 80 (page 348), I find that that included investment at Astoria, according to same exhibit, $5,560,000. That I exclude and $2,000,000 due from consumers; they do not have to pay any interest on that; and $50,000 capital of the National Coke & Coal Company, and that is in all a deduction of $7,610,000. Then there would remain $49,281,454.99, which is $3.71 per thousand feet of sales. Six per cent. of this is 22.3 cents, and eight per cent. of this is 29.7 cents. If this 22.3 cents, being the six per cent. return, be added to the 57.92 cents above referred to, the total would be 80.18 cents. If 29.7 cents or an eight per cent. return be added it would make 87.62 cents. On

3051 the other hand, if the same six per cent. return on this amount, namely, 22.3 cents, were added to my computation——

By Mr. MATHEWSON:

Q. 29.7 cents, wasn't it?

A. This is at six per cent. The other was 29.7 cents at eight per cent. If 22.3 cents were added to my computation of 48.63 cents it would make 70.93 cents; and if the eight per cent., or 29.7 cents were added it would make 78.33 cents.

By Mr. BURR:

Q. Now, have you tabulated or summarized these figures.

A. I have and I will number this table 16, and there will be another table to follow that which I have got on the same page. I will put them in together as tables 16 and 17 and refer to them separately. It is table 16 that I am now referring to as being the summary of what has just been stated.

By Mr. MATHEWSON:

Q. Tables 16 and 17, isn't it?

A. Yes. Table 17 would be included as a further summary. I think I had better discuss, perhaps, a little more the table 17. The tables are as follows:

3052 TABLE 16.

Return on Capital.

Basis used.	Per M ft.	At 6% profit.	At 8% profit.
$29,266,757.48, according to Yalden, plus $9,693,565.90, plus $616,470.08	$2.20	13.2c.	17.6c.
$1,000,000 claim for working capital	.075	0.5	0.6
$40,500,454.99, according to 1884 valuation, plus $9,693,565.90, plus $616,470.08	3.05	18.3	24.4
$49,281,454.99, according to Exhibit 80, less Astoria investment, money due from consumers and capital of National Coke & Coal Company	3.71	22.3	29.7

TABLE 17.

Cost, Plus Return on Capital.

	Exhibit 94, less excluded items.		Estimate of Bemis.	
Operating cost	57.92c.		48.63c.	
	Total at 6%.	Total at 8%.	Total at 6%.	Total at 8%.
Capitalization.				
$29,266,757.48	71.12c.	75.52c.	61.83c.	66.23c.
$30,266,757.48	71.62c.	76.12c.	62.33c.	66.83c.
Including cash on hand.				
$40,500,454.99	76.22c.	82.32c.	66.93c.	73.03c.
$49,281,454.99	80.18c.	87.62c.	70.93c.	78.33c.
The last two lines will read as follows if $1,000,000 now held as consumers' deposits be added.				
$41,500,454.99	76.72c.	83.62c.	67.43c.	73.63c.
$50,281,454.99	80.68c.	88.22c.	71.43c.	73.63c

3053 By Mr. BURR:

Q. What does table 17 show?

A. Well, the first part of the table 17 is the same as I have testified to. My testimony thus far has been in explanation of table 16 and table 17 except the last two lines. Now, the last two lines or three lines of table 17 represent the addition of one million dollars for working capital which is mentioned here as now held as consumers' deposits; that is, nearly all of it is; say some nine hundred and six thousand dollars, I believe the testimony is, is so held. That makes the last two lines read as follows: $41,500,454.99 as the valuation based on the valuation of 1884 plus the addition subsequently made, plus a million dollars and represents then at six per cent. a return of 76.72 cents and at eight per cent. 83.62 cents on the basis of Exhibit 94, with those corrections that have been referred to while——

By Mr. MATHEWSON:

Q. And on the basis of your estimate of forty-eight——

A. I was going to say, on that basis, the last two columns, 67.43 on a six per cent. return and 73.63 cents on an eight per cent. return.

Q. But they are on the basis of your assumed operating costs?

A. The first two columns are not. They are on the basis of 57.92 cents as a correction for Exhibit 94.

Q. Yes?

A. And that did not make any change in your operating cost except to exclude certain items of lamp expenses, miscellaneous in-

come and a slight correction of a cent and a little over on taxes, and reduces the contingent from ten cents to enough to make the average of the previous twenty years, but did not change your general operating expenses at the station or distribution or repairs or anything of that kind. Now, the last line represents the Exhibit
3054 80 of the Complainant, $49,281,454.99, after deducting the Astoria investment, the capital of the National Coke & Coal Company, and two million dollars due from consumers, and add one million dollars for working capital, and that made 80.68 cents on a six per cent. basis; 88.22 cents on an eight per cent. basis, if you start with the slight changes that I have made in Exhibit 94; while on my larger basis of change in that exhibit it makes 71.43 cents on a six per cent. basis, and 73.63 cents on an eight per cent. basis.

By Mr. Burr:

Q. Have you prepared a table on dividends, interest and capitalization of the Massachusetts Companies in connection with the claim of Mr. Addicks and other witnesses for the complainant that dividends of 10 per cent. are allowed in Massachusetts?

A. I have. It is table 18.

This is taken from the last annual report of 1904-1905 of the Massachusetts Gas Commission. It takes up Boston and the seven largest companies outside of Boston, but two of them—Lynn and Lawrence—are omitted in some important features because the Massachusetts report omitted them. The reason of that is that Lynn and Lawrence are not the largest by any means and have a combination of gas and electric light, so that the Commission did not think it easy to separate the capitalization. I have given it as the Commission gives it in alphabetical order. It is as follows:

Dividends, Interest and Capitalization in Massachusetts.

1904-1905.

3055 The five of the seven largest companies outside of Boston, two—Lynn and Lawrence—being omitted because of lack of data.

Table 18.

Name.	Dividends.	Capital, including bonds, per 1,000 sold.	Dividends and interest per 1,000 feet sold.	Feet sold.
Cambridge	10%	2.52	21 28/100c.	439,162,251
Fall River	10%	2.54	20 87/100c.	321,119,341
Lowell	10%	2.23	19 87/100c.	482,088,600
Springfield	10%	2.38	21 69/100c.	311,678,930
Worcester	8%	2.18	20 66/100c.	410,641,700
Lawrence	6%	......	....	261,888,830
Lynn	10%	......	....	358,776,700
		1905–1906.		
Boston	8%	4.56	32 8/10c.	3,480,000,000
		(1)	(2)	(3)

(1) There are no bonds, but the above item includes 22¢ per M feet sold of Notes Payable unsecured.

(2) The Company on July 1, 1906, reduced the price by 7 15/100¢ to 85¢. On the basis of the business during the last fiscal year ending June 30, the dividends and interest to be divided next year would only be 25 65/100¢, assuming the same cost of operation per M feet and no growth in business.

(3) There were also sold to other companies 432,040,270 feet, but that was not included in the divisor used in computing the line in the table.

Boston was composed of a series of companies then, and I have taken the latest return for 1905 and 1906, not yet in print, but of which I secured a copy of the schedule just received from the company in the office of the Massachusetts Gas Commission. Eight 3056 per cent. was the dividend last year. Their capital was 4.56 cents; and I put in a note that "There are no bonds, but the above item includes 22 cents per thousand feet sold of notes payable unsecured." The dividend and interest per thousand feet sold was 32.8 cents. The number of thousand feet sold is 3,480,000,000. I also state in a note, "There were also sold to other companies 432,040,270 feet, but that was not included in the divisor used in computing the line in the table."

Now, I have another note for the 32.8 cents, to the effect that, "The Company, on July 1st, 1906, reduced the price by 7.15 cents, to 85 cents. On the basis of the business during the last fiscal year ending June 30th, the dividends and interest to be divided next year would only be 25.65 cents, assuming the same cost of operation per thousand feet and no growth in the business."

Q. Now, in Mr. Addicks' affidavit verified May 12, 1906, in this case (page 84 of the Complainant's supplementary affidavit), he quotes from the Massachusetts laws and states that the effect of those laws is that the price charged by the Massachusetts Gas & Electric Light Company "shall not, except with the written consent of the Board of Gas and Electric Light Commissioners, be fixed at less than cost, in which shall be included not less than five per cent. per annum of its cost." What are the facts in that regard?

Mr. Mathewson: Mr. Addicks has not testified here in this hearing as to that, because the statute is a public statute of the State of Massachusetts. What it says is perfectly clear to the Master, or will be, and any of us can refer to it and he can take judicial notice of it without offering it. Is there anything to be gained by having either Mr. Addicks or Professor Bemis put their construction on it in this hearing?

3057 Mr. Burr: As to the Massachusetts situation? This affidavit was used——

Mr. Mathewson: That was on a motion before the Court and the only way we could get it in was by means of an affidavit. But the Court can take judicial notice of it here.

Mr. Burr: I want to ask the Professor here if he knows what are the facts as they exist to-day in that connection.

Mr. Mathewson: I do not know quite what you mean?

The Master: Cannot you bring out the facts you want, if there is anything in the case that they are pertinent to, without referring back to the affidavits on the motion?

Mr. Burr: What I mean to say is that Mr. Addicks was probably speaking of something that existed at the time that he had in mind. I ask now, apropos of these dividends and returns and all of this sort of thing as provided by the Massachusetts law, what is the present law there?

The Master: I noticed, when Doctor Marks was testifying that he directed a great deal of attention to various statements in those affidavits. I could not see what pertinence it had here except in so far as there was testimony to the same effect before me. I do not suppose the issues on that motion for an injunction will be tried out again here.

Mr. Mathewson: Is that the Municipal statute to which you refer?

The Witness: The law has been changed since that affidavit and I was going to quote the latest law.

Mr. Mathewson: I ask, is it the Municipal Act to which you refer?

3058 The Witness: Yes.

Mr. Mathewson: There is an act in Massachusetts providing for what Municipal Gas *Gas* Companies or those owned by municipalities may earn and what they shall charge to depreciation, etc., and it is a public statute.

The Master: Why not put it in evidence?

Mr. Mathewson: If the Master please, isn't it true that the Federal Court takes judicial notice of the public statutes of all the States?

The Master: I so understand it.

Mr. Mathewson: I have assumed that and have not offered in evidence public statutes.

The Master: I so understand.

Mr. Burr: I will read this to save time:

The law referred to by Mr. Addicks was changed in Chapter 411 of the Acts and Resolves of the last session of the Massachusetts Legislature in 1906 (see Acts of 1906, p. 314) so as to read in substitution of the last clause above quoted:

"Depreciation equivalent to 3 per cent. of the cost of the plant exclusive of all land and any water power pertinent thereto or such smaller or larger amount as the Board of Gas and Electric Light Commissioners may approve * * * No part of the sum therein included for depreciation shall be used for other purposes than renewals, in excess of ordinary repairs, extensions, reconstruction, enlargements and additions."

Q. Now, I will ask you if such rule as I have just read from the Massachusetts law was applied to the New York situation as it is here in this case what would be the result?

Mr. Mathewson: What rule?

3059 Mr. Burr: That I just read.

Mr. Mathewson: That covers a good many things. Do you mean that rule if you deduct three per cent. depreciation?

The Witness: Excluding all land.

By Mr. **Burr**:

Q. If such a three per cent. rule were applied to New York what would be the result?

A. If such a three per cent. rule were to be applied to New York, bearing in mind that the land was about one-third of the total structural assets in 1884, three per cent. on the other two-thirds would have been equal to about two per cent. on the total, and this two per cent. would not have been very different for twenty years from the total actually spent in renewals, which was about three cents per thousand feet. But the Massachusetts law is not an iron-clad law. It allows the Commission to fix a smaller or larger percentage as the circumstances may require. The law covered both electric light plants and gas, and the depreciation in gas works and especially in water gas works is less than the average depreciation that you find in the Massachusetts plants, which are more largely coal gas, and electric light is a large portion of the investment, too, so that if three per cent. on everything except land was considered a fair allowance, not only for depreciation but for renewals in Massachusetts for all coal gas as well as water gas, and for electric light as well as gas, then less than that would be on that basis a fair allowance for large water gas plants.

Q. Is that all you desire to say upon that subject?

A. Yes, sir.

3060 Mr. **Mathewson**:

Q. You haven't the language of the Act here, have you, Professor?

A. I quoted a certain portion of it and I have it all in my hotel and can bring it down to-morrow. I will do so. I will try to remember to do so.

Mr. Mathewson and the witness now engage in a colloquoy relative to the above Act, which colloquoy the stenographer is directed not to report.

Q. What have you to say as to Professor Humphreys' method of reckoning depreciation for a forty-year period at one-fortieth each year instead of on a sinking fund basis?

A. Mr. Humphreys reckoned depreciation on the assumption of a forty-year life, one-fortieth a year, instead of a sum put into a sinking fund which will equal the total at the end of the forty years. In his testimony and elsewhere he has held that the result would be the same at the end of the forty years in either event, but that to take off one-fortieth each year would be somewhat better probably from the standpoint of the gas company; it would be more convenient in their bookkeeping, and perhaps more profitable, but it would more seriously burden the price of gas or the nominal cost of gas for the first part of the period. Now, that is precisely the time in the period that we do not wish to have it burdened for the reason that in fixing the price of gas it is not being fixed from year to year; it is being fixed for a period of years, and to have a form of depreciation which makes a cost larger relatively the first part of the period than the last is not, I hold, as just a method to the consumer as a system of computation which is on the sinking fund basis and which does not abnormally burden the consumer the first part of the period.

3061 From the standpoint of the company I agree with Professor Humphreys. There does not appear to be any marked difference, but from the standpoint of the consumer there certainly is a difference, especially in the first years of the period.

Q. Have you prepared a tabulation, Professor, of the figures given as to the valuation of the property of the Consolidated Gas Company, as given by the various witnesses called on its behalf?

A. Yes; and first, as to land, the valuation of Mr. Wheelock was fifteen million——

Mr. MATHEWSON: I am going to read the question again, whether it is worth while to have this witness go into a tabulation for us of what totals are?

Mr. BURR: It is to bring out his conclusion so that the whole thing as a complete statement on his part may be before the Master. It would be idle for me to produce Professor Bemis and have him give all the testimony that he has unless he has arrived at certain results, and he is now about to state the results which he has arrived at.

The MASTER: The objection to this kind of testimony, it seems to me, Mr. Burr, is that it is more properly to be incorporated in a brief or argument, if it is based entirely on evidence already in the case. I should think that unless Professor Bemis gives you his conclusions based on those figures and on independent researches of his own that the brief is the place for that rather than the testimony.

Mr. BURR: But this is the result of his rearrangement of the figures produced by the Company.

The MASTER: If he can detect any flaws in them that he can testify about that is another thing.

3062 Mr. BURR: He has testified, taking the figures presented by the various witnesses of the Company and rearranged them as they should be arranged, in his opinion. Now this is the rearrangement he wishes to present as to the values given by the various witnesses as to the various properties of the Company.

The MASTER: Well, I will allow it to go in, Mr. Mathewson, and give you an exception.

Mr. MATHEWSON: The Master does not, I assume, allow the witness by this ruling to testify what in his judgment value of all the property of the Company is?

Mr. BURR: There is no such intention to ask him that.

The MASTER: As I said the other day, Professor Bemis from the standpoint of a statistician is going to show that there are various errors in the method of getting at your results, independent of any facts of his own.

The WITNESS: Well, the land has been testified to by Messrs. Preiss and Green as $15,895,609 and according to Wheelock (page 1113)—I have forgoten the other pages—$15,651,500. The manufacturing plant has been testified to by Mr. Mayer at—first let me give the larger figure as I did before—testified to by Mr. Addicks as $16,087,428.72.

Q. What was testified to?

A. The value of it.

Q. Of what?

A. Of the plant. But he also stated in his affidavit on notice of motion of the Consolidated Gas Company (page 8) that the present reproduction value was $18,771,000, or $2,683,571.28, higher than he had otherwise testified.

Mr. MATHEWSON: Now I call the Master's attention to the fact that Mr. Addicks in the affidavit mentioned did not state his valu- 3063 ation at $18,771,000. On the contrary he says present value as appears by the affidavits of William H. Bradley and Colin C. Simpson, also cost of reproduction, in a certain figure. Now, Mr. Simpson and Mr. Bradley put in their affidavits what they considered the value to be and he used the total of those.

Mr. BURR: You might add to the question that Mr. Addicks, in his affidavit, basing his statement on the affidavits of Mr. Simpson and Mr. Bradley.

Mr. MATHEWSON: But neither these papers nor the figures are in evidence and have not been testified to by Mr. Addicks and I don't see what the witness is gaining by comparing Mr. Addicks' estimate of the present value with Mr. Bradley's estimate of the cost of reproduction.

Mr. BURR: Do you mean to say all the statements made before Judge Lacombe were idle and unnecessary and not to be referred to hereafter?

Mr. MATHEWSON: No, but I say they are different and you must not put in Mr. Addicks' mouth the estimate of Mr. Bradley and then proceed to say it emanated from Mr. Addicks.

Mr. BURR: That is a mistake. It is the estimate of Mr. Addicks based upon the statements of Mr. Bradley and Mr. Simpson. I will put it that way.

The WITNESS: I prefer to correct it in that way. There is a difference between this $18,771,000 and Mr. Mayer's estimate which I have here at $15,515,578, a difference of $3,255,422. The holders in Mr. Mayer's statements should be added and just about balance them with what has been given in this other affidavit, the holders $3,600,215. There was only one series of estimates on the 3064 holders. Then mains $12,600,000 was the figure used by Mr. Humphreys in the testimony (pages 2187-8), and Mr. Simpson (page 289), gave it just about the same $12,636,150. The services testified to by Mr. Simpson (page 291) as $1,994,034.35, and the meters were testified to in Exhibit 8 (page 414) as $4,100,000—meters and other personal property.

Mr. MATHEWSON: Mr. Carter subsequently gave the exact figure. That was simply what he had in mind. It was about $4,200,000 slightly beyond that.

The WITNESS: What was you- personal property?

Mr. MATHEWSON: Scows, horses, automobiles and office furniture; but about $3,000,000 out of the $4,000,000 and over was for meters. He gave the exact figure later, the cost of reproduction on the basis of present prices, and it was not much different from what you have there.

The WITNESS: The total that I have here, and taking Mr. Mayer's figures on plants and holders and the other figures as I have read them and continuing to use $4,100,000 for meters and other personal property as the only figures absolutely at hand at the moment, gives a total of $53,461,327.35. That may be slightly in error but I think it is substantially what the figures total up.

By Mr. MATHEWSON:

Q. And whose figures, if I may ask, in order that we may be clear?

A. Yes. They were the figures on land of Mr. Wheelock; on plant and holders of Mr. Mayer; on mains of Mr. Humphreys; on meters and services of Mr. Simpson—Well, I don't
know—services, Mr. Simpson; meters $4,100,000, Carter. A
3065 more official estimate would take Mr. Simpson's figure doubt-
less on mains because Mr. Humphreys was only attempting to give a rough approximation and Mr. Simpson's were simply $36,150 higher. Perhaps I will use that, which will make the total $53,497,477.35; and if the later testimony gave another $100,000 as Mr. Mathewson asserts, covering meters and other personal property, of course that must be added in, and if we take that as approximately $100,000, that would make $53,600,000 approximately, and I think perhaps I would let it stay at that point now in the absence of any further information.

Now, that is, as I understand it, the inventoried value according to the Complainant's witnesses of the property to-day. Its present value, if I have totaled the figures up from the testimony correctly, and should be compared in my opinion with the inventory of 1884, plus the additions made since then, as given in Complainant's Exhibit 79 (page 347 A); that valuation given then.

By Mr. BURR:

Q. When?

A. For November 11, 1884, was $30,190,419.01. That is the valuation of the physical property without reference to franchise rights, just as the same exists, as it appears on Exhibit 69. Now there has been an increase according to the testimony in this case on the basis of the Complainant's witnesses, from $30,190,419 to approximately $53,600,000 or an increase according to their statements, of $23,409,581. Of this amount they have explained in Exhibit 79 that $9,693,565.90 was charged to construction. Then there remains a difference of $13,716,015.10 which they claim has been the increase
in the value of their property aside from what they nominally
3066 put into construction in the last twenty-one years. Now, if
that be the case, and if they are entited to earn interest or profits on that, then to that extent the $13,716,000 must come out of the total that you have nominally spent for repairs and renewals during those twenty wears, which I will give in a moment. The total was obtained from State's Exhibit L (pages 415-18). According to that exhibit they have spent for repairs and renewals—I might perhaps have also gotten it if I had thought of it, from this other

exhibit (79), but I have this Exhibit L before me. According to that exhibit, bottom of page 417, they spent for repairs and renewals $16,418,223.03, which appears to have been only up to the close of 1904, and when adding in 1905, which is given. I have the figures of 1905 here; I added them in.

Mr. MATHEWSON: What is the total?

The WITNESS: The total up to the close of 1904 is given on the bottom of page 447 as $16,118,225.03. Now, I add to that for 1905 the calendar year, there are two months overlapping there—two months additional. I find from page 418 the amount $974,289.65, which makes a total of $17,392,512.68. In other words, with the expenditure of $17,392,512.68 chargeable to the repairs and renewals they claim their property has increased in value about $13,716,015.10, so that of that total increase——

Mr. MATHEWSON: We do not make any such claim at all.

Mr. BURR: If you do not you can show it.

Mr. KIRBY: Then it would appear.

Mr. MATHEWSON: No, it would not. I won't let that pass.

The WITNESS: Then the total increase in value by the entire amount spent for repairs and renewals, $4,676,497.58. That 3067 is on the supposition that the witnesses of the complainant are correct in those valuations in the present valuations. Of course I am taking their testimony for the purpose of this computation as correct, and also assuming, which I do not assume myself—I do not endorse—that they are entitled to earn a return or capitalize any increase which may have been got from appreciation in their land or from the street paving, but for the present purpose I have taken, as I said, their present testimony, and on that basis there is only $4,676,497.58 that was really taken out of the gas business and is not for any purpose now found in the structural values. Now, dividing that by the total sales——

By Mr. MATHEWSON:

Q. That is after eliminating the appreciation of land?

A. That is after eliminating repairs and renewals, which were $13,716,015.10, according to the Exhibit L. Now, dividing this into the 164,076,200,000 feet of sales, during those twenty-one years, gives a figure of 3.46 cents a thousand feet. In other words, on the basis of their claims of the increase in value of their plant then there has been a loss to the company each year that had to be made up in some form, not of 10.89 cents, but only 3.46 cents.

Now, I want to make myself very clear on that. I do not myself believe that there has been any such increase in the value of their property, and if there has, I do not believe such portion of it at least that has come from appreciation in land or street paving can be made the basis of charging for gas. It cannot be capitalized in either Massachusetts or Great Britain.

3068 By the MASTER:

Q. What do you mean by appreciation in land and street paving? Do you mean the increased cost of removing street paving when they have to lay down mains?

A. I may suppose I have one million dollars invested in street mains in a plant that I own. I am selling gas to the consumers, the people of the city. The city decides to pave over my mains and the money for it is raised by taxes paid for chiefly by the people who use the gas, the consumers, and by reason of that paving it would cost two million dollars to duplicate the mains. Have I a right to raise the price of gas to the consumers who have paved over my mains by their taxes, because they have done it. Have I a right to add a million dollars to the capitalization of my gas plant because the consumers through their taxes have put a paving over it? It looks to me absolutely ridiculous, and yet I fully admit that it would cost more to duplicate that paving than originally. There is no dispute as to that. And as to the appreciation in land, I make the remark that there is nothing in the law of England or Massachusetts which allows an increase of capitalization for that appreciation.

Mr. Mathewson: You have already said that once, Professor.

The Witness: I will add a statement that is new in this case. When a company sells out to another there may be some precedent for capitalizing any increase in the value of the land. That I will not undertake to say. But I remark that I find nothing in the precedents in Great Britain or Massachusetts, and nothing in my own view, and I do not seem to find any theory which seems to justify making the consumer pay any more for gas on that account.

3069 There are other reasons why I have not thought it necessary to allow for depreciation, contingencies and repairs more than 10.89, the experience of the twenty years preceding 1905. One reason is brought out in what I have just given, that the 10.89 cents seems to have been so much more than sufficient. But other reasons appeared in the testimony, for example, Mr. Bradley in his testimony before the State Gas Commission, in page 1548, was asked: "What was the condition——"

The Master: Is that testimony in evidence here?

Mr. Burr: He has practically testified the same thing here with regard to the condition of the plant. Is not that what you refer to?

The Witness: Yes.

Mr. Mathewson: Then why not take it from the present testimony instead of outside records?

The Witness: I happened to have this citation here.

The Master: Either take it from the evidence here or put that in evidence from which you take it.

Mr. Burr: The point to which the Professor refers I desire to read into the testimony. It is from the testimony given by Mr. Bradley before the Gas Commission:

"Q. What was the condition, Mr. Bradley, of the works and plants of the Consolidated Gas Company when the Company was formed and took over these plants in 1884, if you know? A. They were in good condition. Operating continuously and successfully.

3070 Q. What is their present condition relatively? A. They are in rather better condition now than they were at that time.

Q. Are they producing as much gas as they did then or more? A. Almost twice as much if not quite. Q. And at a higher or lower rate of cost of manufacture? A. Oh, generally, a lower rate."

Q. You may continue, Mr. Bemis.

A. Then Mr. Carter in Complainant's affidavit in rebuttal pages 29-30, says, "Substantially all services included therein have been replaced by services of two or three times the capacity and much more expensive. Plants have been reconstructed and it would lead to a wholly inadequate and misleading result if such assets were taken even at their original cost to their constituent companies plus only additional assets since acquired, leaving out of the consideration the fact that the original assets have been largely changed in character and improved in value without additional charge to capital account since they were so originally acquired. Thus, while complainant's services were valued at $1,034,241.41, being part of said $29,994,000, all complainant's services are now carried on its books at $1,212,071.09, an increase of $177,829.68, in spite of the fact that the gas distributed by complainant has increased from less than four billion feet in 1885 to over thirteen billion feet in 1905. Said $177,829.68 represents merely additional services, and the services existing in 1884 valued at $1,034,241.41 have all been replaced with larger and more expensive services with no addition whatsoever to the capital account, the complainant having expended in the renewals and repairs there, since 1884, the sum of $1,831,325.99."

3071 In other words, the testimony that has come to my attention since I testified last Winter indicates that the structural value may be somewhat greater than I then thought, while there should be no allowance, as I then gave of three cents extra for extra contingent expenses, and further tends to show that the 10.89 cents has partly gone into construction. Therefore on that basis, 10.89 is a high allowance for the future for all items covered by repairs, renewals, depreciation and contingencies for even that amount in the last twenty years has made their plant according to the testimony in this case, much better than it was before. This instance is the most thorough going one I have ever come across of a presentation of data of the repairs, renewals and depreciation matter for a long period of time, and if we can only be sure that the records are in every way what the complainant's witnesses seem to think they are in this matter, it has a very important bearing on that 10.89 cents.

Q. Have you a statement showing what have been the average expenditures on the items of repairs, renewals and depreciation for the last eleven years as compared with the previous eleven years?

A. I have. There have been twenty-two years covered by the exhibit.

Q. Exhibit 79?

A. State Exhibit L, pages 415-418. Twenty-two years, beginning with 1864 and ending with 1905. I find that during the first eleven years of that period the sales of gas as given in Complainant's Exhibit 85, page 358, amounted to 56,878,689,000 cubic feet, and the amount expended for repairs and renewals was $6,967,874.39 or 12.25 cents per thousand feet of gas sold. Likewise during the last eleven years the sales were 107,197,511,000 feet and the expenditure for repairs and renewals were $10,424,638.29 or 9.73 cents per thousand feet of gas sold, a reduction from the first eleven 3072 years where it was 12.25 cents, and 9.73 cents is lower than the 10.89 cents which I have used by the amount of 1.16 cents of 1 1-6 cents.

Q. Have you made a study of the effect of price reductions in New York from 1885 to 1905, inclusive?

A. Yes.

Q. And have you prepared a chart upon that subject?

A. Yes. This relates only to the Consolidated Gas Company, and is an attempt to show graphically the changes in price and the changes in consumption each year without any attempt to estimate per capita charges, but simply the absolute changes. The heavy line represents the fall in price from year to year, starting with about $1.70 in 1885 and going down to almost 80 cents in 1900 and coming up again to one dollar. The other broken line represents the increase in consumption in numbers of billions of feet from year to year, and the chief points I notice in that chart are these, that when the price fell from 1885 to 1887 it led to, I think, or was certainly accompanied by, a large increase in consumption, as was indicated by the rise of the broken line. That rise continued, as usually happens in such cases, after the continuance of the reduction had stopped, having got to the lower point, the people more and more used gas. But when there was no further reduction after 1892, there was practically no increase in consumption during the next four or five years. That was undoubtedly, however, to some extent, by another cause, the financial depression. But after 1897, when the price sharply fell to 1900 there was another sharp increase in consumption. When in 1901 the price rose again, there was only a temporary check, a slight check to the increase in consumption, but not a large increase, showing that there are other causes operating to stimulate the use of gas, and which are very much of course 3073 in favor of the company, for it grows largely even without changes in price; simply changes in price precipitate further changes in consumption. Of course, in 1903 came the coal famine, which kept the increase of consumption going, but during the last year the consumption has not been increasing so fast. I infer from that, however, while taking into account other facts we know of the history, that while change in price is not the only factor by any means which affects the consumption of gas, it is one factor, and a factor which can always be relied upon to have a marked influence. And I present this chart, not in conflict but in harmony with what Professor Marks presented. It is intended to confine itself to the one point of consumption, without complicating it, perhaps, with the question of per capita consumption and all the companies. This is for the Consolidated Company alone.

By Mr. **Mathewson**:

Q. I see "Professor Wm. D. Marks" appears on this chart. Was he simply the draftsman or a collaborator in the result?

A. I will frankly state that after I had prepared the chart I consulted with him as to how I could secure a blue print and he had draftsmen at his disposal who were working for the city, I suppose, in this case, who were put at my disposal by Professor Marks, very kindly, to work out the blue print from my figures. I had this same chart, which I showed the Gas Commission a year ago nearly, but it was not in blue print form.

By the **Master**:

Q. Will you explain to me why it appears on this chart that the
consumption of gas is *not* the highest when the price is the
3074 highest? As I understand there is the high price, $1.70, and
now on the opposite side——

A. That is the low price.

Q. You have sales in billions of feet. According to that you have thirteen billions of sales when the price is $1.70 and only six billions when it is one dollar?

A. When the price is $1.70 you follow down here opposite to this line and the sales are shown to be four billions. These figures, 4, 5, 6, 7, and so on up to 13, are billions of feet, and refer to the broken line, while these figures of price on this column refer to the heavy line, and you have to read the two together. It is a little confusing, but it is about the best way to work it out I could think of. So, if the price was $1.70 the sales were down here in the broken line to four billion feet, each line representing a year. When the price had fallen in 1887, to this point, which is between $1.30 and $1.20, about $1.26, the sales had risen to nearly that point, which was five billion (indicating), and continued to rise rapidly, as is usual with such cases, that the reduction in price is not always felt the first year, but continues to be felt for some length of time; and although the price afterwards remained stationary, yet the consumption continued to increase up to that point.

Mr. **Burr**: Which point are you referring to?

The **Witness**: To the year 1903. Then there were two causes which——

By Mr. **Burr**:

Q. You might explain the situation each year as it appears by that chart.

A. Well, that was such a continuous condition that it was about the same from year to year. Now the consumption actually fell off
a little from 1893 to 1895. The odd years are put at the top
3075 and the even years down at the bottom for convenience of
those lines, that is all. The falling off was not a natural condition, because I do not claim that that falling off was due to the fact of the price, as the price was not changed much, but there came a depreciation in business in 1893, 1894 and 1895, and anything which affects business more or less affects the use of gas, although not as

much as it does some things; but it did fall off a little and the price did not change much. It fluctuated a little but not much. In 1896 before the depression was hardly over, the price began to fall and it fell very rapidly, until it got down finally in 1900 to a point which was a little over eighty cents, an average of eighty-two or eighty-three cents, I think it was, and then there came a great upward movement of sales. Up to that point, everything looked very natural, but here comes the exception. Here comes the point that looks strange, namely, that when the price came back to $1 as it did after the close of the gas war, that it did not much change the consumption. It did just a little, and then it kept on. But there was another factor that came in here, namely, the coal strike, which had a great effect. But there is another factor which is always operating that there is a tendency in all communities for gas to be used more and more. Granted a stationary price, gas is being more and more used for two or three reasons. It is being used chiefly for heating and cooking, more and more, with the growth of high buildings, as it becomes more and more of a nuisance to bother with coal and ashes, and it is convenient to have it for night and morning, bedroom and bathroom heating; of course, we all understand about those things. So that all that is claimed is that while the normal tendency is for the consumption of gas to increase, and change is only affected by 3076 either depression or on the other hand improved by coal strikes or coal famine or something of that kind, yet working in and through it all, changes in price have a further affect, a reduction in price having a tendency to accelerate the increase that otherwise would occur, and that factor there accompanied with this and then this fact that another decline was accompanied by another big increase, rather, I think, tends to bear that out. That is not the only fact I am going to adduce in that connection, but it is simply one tending to confirm my views.

Mr. **Burr**: I offer this chart in evidence.

Paper received and marked City's Exhibit 57.

At this point a recess was taken until 2.15 p. m.

After Recess.

The **Master**: Gentlemen, I have to advise you that some of my other affairs are getting so urgent that I have got to give them a little attention, and next week I will have to make some change in our hearings. I have another proceeding in which I have to do some work, and we will have to begin a little later in the morning perhaps and sit later in the afternoon next week.

Mr. **Burr**: About what hour have you in mind?

The **Master**: This other matter of mine will go on every day next week except Monday, from 10:30 to 12 o'clock, and I thought we would go on here, say, from 12 to 1.30 and then perhaps from 2.30 to 5.

3077 Mr. **Burr**: Would you prefer to go on from 1 to 6?

Mr. **Mathewson**: That would hardly suit my convenience, as I have to go out of town.

The **Master**: Also I shall have to have a short session to-morrow, as I have to be away to-morrow afternoon. We can go on from 11 o'clock to 1 to-morrow, or at 10.30, if you can go on at that time.

Mr. **Burr**: We had better make it from 11 to 1, as I have some other matters to attend to.

The **Master**: Then we will go on from 11 o'clock to 1 to-morrow, and next week we will change the hours. And if you gentlemen of the defense find that you are running behind to an undue degree on your time allowance, I will help you out by sitting Saturdays at any time you like.

Edward W. Bemis resumed.

By Mr. **Burr**:

Q. Have you made a study of the effect of reductions in price in Massachusetts for the last twelve years?

A. Yes, I have.

Q. What do your studies show as to Boston?

Mr. **Mathewson**: I have not any objection to the Professor showing what the results in Boston are, but I think when he comes to say that they are due to the fall in price, that that is a conclusion he ought not to draw. He can state anything that happened.

Mr. **Burr**: In other words, you differ with his conclusions.

Mr. **Mathewson**: I may materially differ, yes.

3078 The **Witness**: I will present at this time a blue print for Boston, corresponding to the one for New York, arranged on the same basis and giving the changes in price in a heavy line since 1884, and in a broken line the changes in consumption. I would state that the figures at the top of the page representing the odd years and those at the bottom representing the even years should in every case be taken as only the first half of the year. The fiscal year in Massachusetts ends June 30th, so when at the top of the page is the figure 1887, it should be taken as meaning the fiscal year beginning July 1st, 1887, and more properly therefore it might have read, and I intended it should read, 1887-8, and so for every other year, 1891-2, 1892-3, etc., but in the haste of preparation that was not done; but it is clear enough with that explanation.

Now, in another blue print which I will present in a few minutes will be given, I think, the detailed figures; but here it is graphically shown, and it will be noticed that it is for the same period as the table for the Consolidated Gas Company in New York.

Q. You might produce them both and explain them at the same time?

A. I think I can explain this better now.

By Mr. **Mathewson**:

Q. What company in Boston is this?

A. This is a combination from the Massachusetts Gas Commission report of the six companies selling gas in Boston and which have lately been consolidated into one, namely, the Boston, the Brookline, Dorchester, Jamaica Plain, Roxborough and South Boston. It ex-

cludes the Bay State, for that company practically sold no gas except to other companies. This is solely based on the sales to private consumers and the city and is not at all based—in fact, it excludes sales by one company to another, such as frequently occurred
3079 in Boston during that time. I reached my data relative to prices of gas in this way. I took the Massachusetts Gas Commission report, which began at this time when I began my chart, that is, the charts begin with the report of the Commission, and for each year I took the sales of gas in that year for each company to private consumers and added them together, and thereby got the broken or dotted line indicating sales. Now, in getting the other heavy line indicating price, I took the total receipts of each company for the sales of gas to private consumers and the city and added them together, taking each year by itself. Therefore, I would have in one column the monetary receipts of each company and a total. I divided that total by the number of feet sold each year by those six companies, and I thereby reached the figure of a little less than $1.60 in 1885 and running down to 92.2 cents to be accurate, 92 cents, during the year ending June 30th, 1906.

Now it will be observed that there is a very marked relation here between decline in price and increase in sales. As the price fell from 1885 to 1890, the consumption rose; and when the price rose again, as it did from 1890 to 1891, the average price, the increase in sales was checked. When the price again fell in 1892, with the advent of the Brookline Company, and the competition which followed it, so that the price fell from a point near $1.35 to about $1 between 1892 to 1895, the sales rapidly jumped up from a little over a billion and a half to somewhat over two billion and a quarter feet. It will then be noticed that the price remained stationary at one dollar until a year ago. It will be further noticed that the consumption was checked for a little while. There would naturally have been some increase in consumption if it had not been for the depression of
3080 1896-7. Then there came a moderate increase in consumption until the coal famine, and then a rapid increase.

By Mr. Burr:

Q. The coal famine of what year?

A. The coal famine of 1902-3, or the coal famine of 1903-4, about 1903. Then after the famine was over, there came a reduction of sales, partly connected doubtless with the fact that there had been such a rapid expansion, an abnormal and unnatural expansion, the year before on account of the lack of coal. That represents that year 1902-3. Then with the reduction last year from $1 to 92 cents came a jump upward in consumption.

Q. What has been the reduction to which you refer?

A. The reduction was 8 cents during the last year on this chart. Since June 30th, there has been a further reduction from 92 cents to 85 cents.

Q. In Boston?

A. Yes, and it took effect July 1st, but the results of that are not yet to be had.

Q. That is the result as to increased consumption.
A. Certainly. I suppose——

By Mr. Mathewson:

Q. It is wholly experimental, and the Company can restore the price to 90 cents at any time it sees fit?
A. Yes. It seems satisfied to let it remain as it is.
Q. It has only just started?
A. It has been in operation four or five months.

By Mr. Burr:

Q. You mean you have no data to show the effect?
A. No, but have no reason to understand that they are going to raise the price.

3081 By Mr. Mathewson:

Q. And no effect on net earnings, either?
A. No. This chart then seems to tend in the same direction, very decidedly as the one on New York, showing that where there are no abnormal conditions such as a great depression or on the other hand a coal famine that price reduction has a marked effect on consumption. Now I have prepared for the same City——

Mr. Burr: Before you go into the other chart, I will offer this chart in evidence.

Paper received and marked City's Exhibit No. 58.

The Witness: Now I have another chart giving the per capita consumption. This chart——
Q. What does S. C. stand for?
A. That is supposed to stand for State Census. Massachusetts has a State Census.
Q. And "E" is estimated?
A. Yes. They have a census every five years in Massachusetts. A State Census in the years 1885, 1895 and 1905, and the United States Census in 1890 and 1900, and in between is an estimate. The table at the top gives the average price such as I described before and the total sales. The price line is the same as in the previous chart. The only difference in the two charts is that the broken line relates to sales per capita instead of sales in millions of feet, and is a still stronger confirmation of my position as to the striking relation between reduction in price and increase in sales. It will be noticed, for example, that when the price fell from $1.57 at the beginning of the chart in the year 1885-6 to $1.29 in the year 1890-1 that the sales increased per capita from 3,288 to 3,916. When the price rose as it did to $1.36 in 1891-2 the consumption actually fell off per capita and then when the price was rapidly reduced to $1, which it reached in the year 1895-6 the consumption per capita rapidly rose. Then the price remained stationary——

3082

By the Master:

Q. What was the last you stated?
A. The consumption rapidly increased, this line rapidly rose when the price fell.

Q. But what years did you say?

A. From the year—really that is the year 1892-3. From that point it began to fall from the year 1892, the year beginning June 30th, 1891, that is when it began to fall and it reached the bottom in the year 1895-6, the year beginning July 1st, 1895, and when that fell the consumption rapidly increased.

Q. It commenced to rise in 1893 and went up steadily to 1895?

A. Yes.

Q. What about the momentum which always follows an increase? It seems to have exhausted itself in 1895, does it not?

A. Yes. I stated in connection with the other chart when I reached that year that the depression of business beginning in 1893-4 and running on through for three years had a marked effect on consumption or some effect, as it naturally would have. I have been careful to state that the state of business has an effect on the consumption of gas and also on the condition of the coal market, but that the price of gas also has an effect, and a very marked effect. Now the price remaining uniform from the year 1895 until last year, we would naturally have expected an increase, but only a moderate increase per capita in sales beginning June 30th, 1895. As a matter of fact, we do not find any increase but a decrease for three years and then an increase, which decrease I attribute to the depression;
the first part of the increase to the gradual recovery from that
3083 depression, and the last part of the increase, just at the very
top there in 1903, to the coal famine. Then that peak was followed by a depression which is an indication of the abnormally rapid increase which had preceded it in the coal famine, so that the consumption finally in the year 1904-5 reached the point indicated on this chart next to the last column. Then the fall last year in price of eight cents was accompanied by that very rapid increase of per capita sales of 5,152 to 5,626 feet, in other words, an increase of 474 feet per capita. If we were to draw that chart with reference to a normal condition without change in price and without any coal famine or depression, we would connect by a straight line the peak in the year 1895——

Mr. Mathewson: Say you would, not "we would."

The Witness: I would, with the condition as it was in the beginning of last year. In other words, it would be a line connecting this peak with that point there (indicating).

Mr. Burr: Specify it, for the record.

Mr. Mathewson: The peak of 1895 to the peak of 1902?

The Witness: No, with the beginning of 1905 and that point. That peak was abnormal, the peak of 1902-3 was abnormal on account of the coal famine, just as the depression of 1898-9 was abnormal on account of the industrial depression in the earlier period, and the coal famine in the later period somewhat affected it, otherwise there would have been a normal line running from the peak which was reached in 1895-6 to the point at which this dotted line
stood in the year 1904-5. Then the very rapid increase the
3084 last year, which means a per capita increase, as I have said,
from 5,152 feet to 5,626 feet was connected with the fall in

price from $1 to 92 cents. I believe there would have been some increase without that fall in price, but not as great an increase as occurred. It was much greater than the average increase that had occurred during the previous period when the price remained stationary, which will be noticed from the table, the right hand column of the table——

Mr. Mathewson: Is that in evidence yet?

The Witness: Everything on this chart, I suppose.

Mr. Burr: I offer it in evidence now.

Paper received and marked City's Exhibit No. 59.

The Witness: It will be noticed that the first year when the price reached $1 on City's Exhibit 59, namely in the year 1895-6 the yearly consumption per capita was 4,541 feet. It will be noticed that in next to the last year, that is the year beginning July 1st, 1904, it was 5,152 feet, an increase of only 611 feet in nine years during which the price remained stationary or 67 feet per capita per year. I think that is a fair statement to take because it included both the period of industrial depression and the period of the coal famine. Now compare that——

By the Master:

Q. How much did you say it increased in 1896?

A. Only 67 feet per year. It increased 611 feet in the nine years, but that was an average of 67 feet a year. From this point to that point (indicating).

Q. You mean from the peak of 1895——

A. To the depression just before the last reduction in price,
3085 during the time, in other words, when the price remained stationary. Now, I want to compare that with two other periods, first, the period of last year in which the price fell as it did 8 cents. During that period the per capita sales increased from 5,152 feet to 5,626 feet, or 474 feet, about seven times as rapid a rate.

Now, let me compare during the period from 1885, that is the year beginning July 1st, 1885, to the time when the price became stationary, which was the year beginning July 1st, 1895. Now, during that period the per capita sales increased from 3,288 feet to 3,788 feet, a period of nine years, and there *there* was an increase per capita of about the same amount of 500 feet per capita or about 55½ feet per year. Now, these two charts, Exhibits 58 and 59, both relate to Boston and simply tend to confirm the chart I offered this morning with reference to New York.

By Mr. Burr:

Q. In what respect?

A. As to a relation between price reduction and increase of consumption. I have one further point upon that matter which I have here. In the year 1892-'3 when the average price in Boston was $1.35 the sales were 1,645,085,702 feet. In the year 1895-'6 when the price was $1.00, which was only three years later, the sales were 2,325,454,855 feet. And what is perhaps more remarkable is that the receipts in dollars increased, that despite the fall of so large an amount as 35 cents in price——

Mr. Mathewson: In 1892-'3 was the average $1.35?

The Witness: The price in the year 1892-'3, which appears there as 1892, because it is, as I stated a little while ago, 3086 really only the first half of the year, which is told by the figures at the top—in the year beginning July 1st, 1892, and known in the chart as 1892, the average price was $1.35 and in the year beginning July 1st, 1895, known in that chart as the year 1895, the price was $1.00.

By Mr. Burr:

Q. Referring to City's Exhibit 59?

A. Yes. Now my point is, that despite the enormous fall in price of 35 cents, the receipts in money of these six companies in Boston increased from $2,221,156.07 to $2,325,067.09, an increase of $113,911.02 or a little over five per cent. That is all I have on Boston.

Q. What do your studies show as to other Massachusetts cities in this connection?

A. I here have a table which I would present.

By Mr. Mathewson:

Q. Is that the same table which you had before the Gas Commission?

A. Somewhat revised, but the same principle. It is brought up to date.

Q. The same cities?

A. Being brought up to date, it has two or three others, I think. This table is prepared from a study of the effect of every reduction in price in Massachusetts outside of Boston since June 30, 1893, and ending with the last printed report of the Massachusetts Gas Commission for the year ending June 30, 1905. I have compared the price and the sales of gas in feet and in dollars and the profit as reported to the Commission the year before each reduction with the year after each reduction. Any reductions made during the past year have been omitted because the results can only be learned when the next report of the Gas Commission appears next April. I have therefore used the year 1905 to check up any reductions of the previous 3087 year or two. Twenty places and thirty-two cases of reduction have been found in which the reduction in price exceeded eight cents, and I have only attempted to cover those, only such cases have been stated. It is possible that three or four small companies whose reductions have not exceeded ten cents in price may have been unintentionally omitted, but to the best of my knowledge and belief, I have included every reduction exceeding eight cents and certainly, I believe, every one exceeding nine or ten cents during those twelve years, in other words, I have omitted nothing for the sake of proving a point, but have attempted to include everything, and if anything has been omitted it has been purely unintentional.

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TABLE 19.

Effect of Reduction in Price in Massachusetts, Outside of Boston, from June 30, 1894, to June 30, 1905.

	Year.	Price.	No. of 1000 Ft. Sold.	Year.	Price.	No. of 1000 Ft. Sold.
Adams	1902-3	$1.80	6,095	1904-5	$1.51	5,261
Attleboro	1902-3	1.51	24,425	1904-5	1.41	25,651
Cambridge	1894-5	1.35	159,004	1896-7	1.16	200,809
"	1897-8	1.14	215,132	1899-0	1.00	276,285
Charlestown	1894-5	1.35	91,421	1896-7	1.24	112,251
"	1897-8	1.21	118,714	1899-0	1.11	135,015
"	1901-2	1.10	145,719	1903-4	1.01	179,799
Dedham	1902-3	1.51	18,898	1904-5	1.22	24,990
Haverhill	1898-9	1.19	91,738	1900-1	1.02	115,457
Lawrence	1897-8	1.28	98,578	1899-0	1.14	138,314
"	1899-0	1.14	138,314	1901-2	1.00	184,257
Lowell	1900-1	1.00	354,986	1902-3	.91	453,294
Lynn	1894-5	1.22	104,261	1896-7	1.08	130,377
3089 "	1901-2	1.00	224,515	1903-4	.90	320,621
Malden	1898-9	1.42	69,506	1900-1	1.21	90,534
"	1899-0	1.32	81,834	1901-2	1.22	109,951
Natick	1902-3	1.73	8,429	1904-5	1.66	10.234
New Bedford	1895-6	1.54	52,200	1897-8	1.31	66,404
Otis Co. (Ware)	1902-3	2.00	5,399	1904-5	1.64	6,090
Peoples	1902-3	1.21	5,999	1904-5	1.04	5,843
Southbridge	1902-3	2.09	3,668	1904-5	1.90	4,593
Springfield	1896-7	1.37	113,369	1898-9	1.26	146,276
"	1899-0	1.26	152,272	1901-2	1.04	197,264
"	1900-1	1.12	168,415	1902-3	1.01	271,832
Webster	1902-3	1.69	5,703	1904-5	1.59	8,087

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Williamstown	1902-3	4.91	1,839	1904-5	1.51	5,261
Woburn	1902-3	1.50	13,073	1904-5	1.40	13,856
Worcester	1894-5	1.29	158,541	1896-7	1.21	200,376
"	1896-7	1.21	200,376	1898-9	1.10	231,038
"	1898-9	1.10	231,038	1900-1	1.00	279,314
		$1.20	3,063,461		$1.07	3,949,334

ICAL IN BOOK

3090 *Effect of Reduction in Price in Massachusetts, Outside of Boston, from June 30, 1894, to June 30, 1905.*

	Year.	Receipts.	Profits.	Year.	Receipts.	Profits.
Adams	1902-3	11,002.43	2,421.69	'04-5	$13,517.20	$1,209.02
Attleboro	1902-3	36,926.32	14,954.36	'04-5	36,251.19	11,617.51
Cambridge	1894-5	214,898.41	107,344.24	'96-7	233,683.28	91,037.73
"	1897-8	246,202.52	106,180.98	'99-0	275,823.71	103,241.65
Charlestown	1894-5	122,965.24	43,715.24	'96-7	139,016.06	57,153.33
"	1897-8	143,916.96	58,593.29	'99-0	149,274.39	49,461.47
"	1901-2	159,714.17	64,679.58	'03-4	181,632.10	64,886.01
Dedham	1902-3	28,493.18	13,581.32	'04-5	30,853.00	12,039.22
Haverhill	1898-9	109,241.93	52,628.83	'00-1	117,531.13	24,403.45
Lawrence	1897-8	126,547.67	44,282.82	'99-0	157,280.57	43,890.24
"	1899-0	157,280.57	43,890.24	'01-2	185,081.74	36,673.16
Lowell	1900-1	356,469.13	97,706.43	'02-3	411,968.74	126,902.67
Lynn	1894-5	127,251.27	46,212.01	'96-7	141,314.40	31,254.44
"	1901-2	224,967.63	92,478.47	'03-4	289,466.82	114,200.74
Malden	1898-9	98,765.43	44,201.05	'00-1	109,721.32	35,175.22
"	1899-0	108,057.80	48,487.88	'01-2	134,054.32	39,468.72
3091 **Natick**	1902-3	14,593.26	3,487.99	'04-5	17,021.06	1,480.36
New Bedford	1895-6	80,644.82	38,664.41	'97-8	86,672.80	41,802.72
Otis Co. (Ware)	1902-3	10,793.70	1,980.68	'04-5	9,974.99	Cr. Bal.
Peoples	1902-3	7,280.35	2,061.38	'04-5	6,047.78	680.79
Southbridge	1902-3	7,658.70	3,749.63	'04-5	8,714.65	4,565.80
Springfield	1896-7	155,465.60	61,819.33	'98-9	183,879.57	83,815.46
"	1899-0	191,453.80	86,543.83	'01-2	204,355.56	68,734.23
"	1900-1	189,329.36	69,518.30	'02-3	273,876.95	103,117.49
Webster	1902-3	9,655.68	3,138.36	'04-5	12,894.00	5,470.65
Williamstown	1902-3	9,036.93	4,203.47	'04-5	7,922.83	1,366.10
Woburn	1902-3	19,658.74	6,929.83	'04-5	19,459.09	4,738.66

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Worcester	1894-5	215,978.95	84,773.85	'96-7	243,400.13	97,179.94
"	1896-7	243,400.13	97,179.94	'98-9	254,645.93	100,341.21
"	1898-9	254,645.93	100,341.21	'00-1	280,349.53	103,063.75
		$3,682,296.61	$1,445,750.64		$4,215,684.84	$1,458,973.74
		Otis Co.	Cr. Balance			4,137.26
						$1,454,836.48

ERTICAL IN BOOK

3092 The WITNESS: Now it first appears that the price the year before the reduction averaged $1.20 per thousand feet and the year after the reduction $1.07, a reduction of 13 cents or 10.83 per cent. This average price was obtained by dividing the total sales into the total receipts the year before the reduction and the year after the reduction. The total sales of gas in the two years increased from 3,063,461,000 feet to 3,949,334,000 feet or 28.92 per cent. while the price obtained for the gas, despite the reduction in price, increased from $3,682,296.61 to $4,215,684.84 or 14.48 per cent. Still more astonishing is the fact that thanks to the large increase in consumption even the profits did not fall at all but actually increased a trifle, from $1,445,750.64 to $1,454,636.48, an increase of .63 of one per cent.

By Mr. MATHEWSON:

Q. About $9,000?

A. Yes. It will of course be urged that to take care of this increased amount of gas some new capital must have been required. But it is a well known fact in the gas business that an increase of consumption following a reduction in price does not involve a proportionate increase in capital. Very few new mains are necessary and scarcely any new land or buildings, and not even a proportionate increase in the manufacturing plant. The great increase comes in the services and meters, particularly the meters. It will be observed that the consumption of the Consolidated Gas Company according to Complainant's Exhibit 85 increased from 3,942,433,000 feet in 1885 to 13,283,164,000 feet in 1905, or over three fold, and the amount manufactured increased to about 10,000,000,000 feet or or over twice as much, while expenditures on construction according to Complainant's Exhibit 79, increased only from $30,190,-
3093 419.01 on November 11th, 1884, to $39,883,984.91 on October 31st, 1905. This increase of $9,693,565.90 was an increase of less than one-third. This increase of over two-fold in the production and of threefold in the sales with an increase of only one-third in the construction account was larger than usual, but it is the testimony in this particular case with respect to the Consolidated Gas Company. In other words, the amount invested in construction by the Consolidated Gas Company in 1885, according to their testimony was $7.66 per thousand feet and in 1905 only $3, aside from the gas they bought. That is based on sales, even if we add the $616,470.08 increase of supplies on hand in 1905 over 1884, it would only mean less than 5 cents increase per thousand feet of sales. Put in another way, 6 per cent. on the investment in 1885 would mean 46 cents per thousand feet of sales and in 1905 18.3 cents upon the invesment as above computed. The fact then, that the profits in Massachusetts remained stationary or even very slightly increased with a reduction of 13 cents in price can only to a very moderate extent have been accompanied by any necessary increase in capital. The year after the reduction in price these twenty Massachusetts companies, in thirty-two instances, were as well off as the year before the reduction barring perhaps, three to five cents more

required for a return on capital. From this study I draw the conclusion that if the companies can stand a reduction of any given amount, they can stand a reduction of at least eight or ten cents more by reason of the large increase in business sure to follow without any proportionate increase in expenses, always providing of course that the reduction does not go down to the operating cost. If then, the Consolidated Gas Company could stand a reduction to 85 cents on the basis of last year's business, it could stand a reduction to 75 cents on the basis of the business that would surely
3094 come to it during the next two years after the reduction.

Q. What have you found in Cleveland in this respect?

The WITNESS: In that city——

Mr. MATHEWSON: Don't you think we have gone far enough if you take the Eastern Cities? Is there any particular advantage in going to Cleveland?

Mr. BURR: The witness resides in Cleveland and may have some special knowledge with regard to the conditions existing there in this regard that he has been testifying about.

The WITNESS: In Cleveland with their artificial gas at seventy-five cents the consumption in 1903 was about two billion feet or 5,000 feet per capita. With the introduction of natural gas at 30 cents, which is equivalent to artificial gas at 18 cents, owing to the difference in the calorific power, the consumption of all kinds of gas increased from 5,000 to 12,000 feet per year per capita, in three years. To say nothing of the use of gas for manufactures. The consumption per meter which was about 25,000 feet with artificial gas, is about 100,000 feet of natural gas, as I am told by the manager of the natural gas company. If such an increase in the use of gas could come under the extreme conditions mentioned, which of course are more extreme than could be expected in the case of artificial gas alone, it is evident that the theory that no large increase can be expected with reductions in the price and that there will be no increase per meter is based on too narrow a generalization. In other words, the nearer you approach the natural gas conditions the more largely gas will be used for fuel purposes and the greater its per capita consumption. The peculiar feature about reduc-
3095 tion in price is the stimulus it gives also to new consumers along the lines of mains. If the reduction is much below a dollar there is a further stimulus to all consumers to use a larger amount of gas instead of coal.

Q. Is that all you have to say on that subject, Professor?

A. I think it is, on that subject.

Q. Now, in Table 17 I notice you gave some facts about the return on capital and then others upon renewals, depreciation and contingent fund. Have you anything further to say on those matters?

A. Only a sentence or two. There seems to have been accumulated $2,000,000 due to the company from consumers which they might treat in the nature of a surplus.

Q. You mean the company?

A. The company. As against contingencies. This $2,000,000 is testified to in one of the company's exhibits, and I quoted it this morn-

ing. That is an accumulation which they did not testify to in 1884, and therefore it is the product entirely of the last twenty years; further, I would state, that if we ignore, which I do not do, Mr. Yalden's computations, and start with Mr. Rowland's and the consolidation of 1884, then $41,500,454.99 is the largest amount of capitalization that can be estimated on the basis of the increase of construction account since 1884, plus the $616,470.08 of supplies and plus one million dollars for working capital. And as to any further increase in the present value of the plant that can be shown by an inventory in excess of that amount, it has to be divided into two classes: The first class is appreciation in property, either paving or growth of land values, which I do not think can be made a basis for charging for gas, but the other point in which there might be an increase is through their having brought into the plant since 1884 more money than is reported under the head of new construction, namely,
3096 $9,693,565.90. To the extent to which the inventory made showed that more money has gone into the plant than that and now represented by structural value, then to that extent must we deduct from the amount of repairs and renewals during the last twenty years which have not reached 10.89 cents paid for the last eleven years. That will average about nine and one-half cents, I believe. Now, the extent to which the capital account would be increased in that way would be more than counterbalanced by a greater reduction in repair and renewal account so that the maximum that I am able to estimate even on the basis of the $41,500,454.99 as capitalization, which is more than I admit, but taking that, which is $3.71 per thousand feet of sales, six per cent. on that will leave, as stated this morning, 76.72 per thousand feet, and eight per cent. will leave 83.62 cents; but I have already testified——

By Mr. Mathewson:

Q. Added to what figure?

A. That is where the six per cent. and eight per cent. originally were added to the 57.92 cents operating cost, that operating cost being the cost claimed by the Company after reducing their repair account to 10.89, and after excluding lamp account, miscellaneous income and making a slight correction, in taxes but leaving their station costs and general operating costs, distribution charges. But that makes no allowance again for the result of reducing prices on consumption which I have just been testifying about. I think that is all.

By Mr. Burr:

Q. And the maximum figure that you are able to estimate as the cost per thousand cubic feet at the consumers' meter is what?

3097 A. The maximum on the six per cent. basis is 76.72. While with that same six per cent., taking my estimate of what the cost of operation ought to be by revising station cost and general distribution cost, 67.43; both of those being on a six-per-cent. basis.

By Mr. **Mathewson**:

Q. What is that figure 48.63?

A. That was operating cost that I testified about yesterday, and was based upon reducing the station cost reported by them to what the other companies in New York City are doing and applying the cost also of oil prices prevalent in Boston and Lynn. And as to the distribution, reducing their distribution cost from 9.45 cents to 7 cents, which is still higher than the accountants found was the case in Chicago where it was less than 6——

By Mr. **Mathewson**:

Q. Do you mean distribution?

A. I mean distribution and generally what was technically termed in my table "Other Expenses."

Q. Oh, yes.

A. And which covered practically distribution and general expenses, aside from taxes and repairs and depreciation.

By Mr. **Burr**:

Q. Now, the result of the examination of the books of the Company and the examination of the plant that engineers are to make may give you further light on the subject?

A. Certainly.

Mr. **Burr**: And so, with that reservation, and the coming in of the reports of the accountants and the engineers, that is all that I have to present through Professor Bemis at the present time.

3098 Mr. **Mathewson**: Has the Professor concluded his testimony? Do you so understand?

Mr. **Burr**: With the exception that the figures, and the facts that may be gleaned from the examinations that I have spoken of.

The **Master**: He does not say he will, but he says he may, as I understand it.

Mr. **Burr**: Yes. Of course we do not know what the results are or may be.

Mr. **Mathewson**: The Professor is not testifying on the subject of the valuation of plants, is he?

Mr. **Burr**: Not as I understand it.

Mr. **Mathewson**: He is not one of the experts for that purpose, is he?

Mr. **Burr**: I have not called him for that purpose and he will not be called for such purpose.

Cross-examination by Mr. **Mathewson**:

Q. Professor, you say you never have operated a gas plant, or built a gas plant?

A. No, I have not.

Q. And you never have been in the gas business?

A. No.

Q. But you are superintendent of the Cleveland Water Works Company?

A. Water Works, yes. It is a city-owned plant.

Q. That is a municipal concern?

A. Yes.

Q. What is your position in that plant?

A. Superintendent.

Q. What is your duties as superintendent?

A. The general management of the plant in all respects, both the pumping stations and the distribution.

Q. Do you have any charge of the purchase of pipes for the distributing system?

A. Yes.

Q. Directly or through your subordinates?

3099 A. We have a system of advertising for bids and then I report upon which bid seems to me the best and then it is accepted by the Board of Public Works, which finally makes the award.

Q. You say you testified in Boston in 1905, or was it late in 1904?

A. Well, it was the Winter of 1904-5. My testimony began. I think, in December, 1904.

Q. By whom were you retained in that matter?

A. Jointly by the city and by Mr. Auerbach, the attorney for the Boston *American*.

Q. The Boston *American* is the Boston paper of Mr. William R. Hearst, isn't it?

A. That's right.

Q. And Mr. Auerbach represented that interest, didn't he, in that investigation?

A. Yes.

Q. You also testified before the New York Gas Commission in 1905 and 1906?

A. Yes.

Q. And by whom were you retained here?

A. By Mr. Shearn, Clarence J. Shearn.

Q. And Mr. Shearn is the counsel for Mr. William R. Hearst here, isn't he?

A. I understand so.

Q. And you understand you were retained by that interest here?

A. Yes, at that time, not in this case.

Q. And compensated by them?

A. Yes.

Q. You did not receive any compensation from any other source except that source in New York, did you?

A. No. I did in Boston, as I said. Half of it was by the city.

Mr. Burr: You are referring solely to his testimony before the Gas Commission?

Mr. Mathewson: Yes, certainly.

Q. And being so retained you testified really in Boston and in New York in behalf of the Municipal Ownership League which was being advocated by this gentleman, didn't you?

A. I really don't know what you refer to by my testifying in Boston or here in behalf of the Municipal Ownership League. These two cases are those what you mean?

3100 Q. Yes, before the two commissions?

A. That testimony had no relation to any Municipal Ownership movement, so far as I am aware.

Q. Was not the newspaper that employed you instrumental in pushing and advocating the Municipal Ownership League at that time?

A. I have read in the papers that such was the case, but that had nothing to do with my work.

Q. No, you didn't know anything about that? That is a subsequent development, I suppose?

A. I knew nothing of the League at the time I was in those cases.

Q. Have you testified within the last fey years in favor of any Company or in favor of maintaining the price of gas, that you remember?

A. My work has always been for the cities.

Q. And in favor of the reduction of the price of gas?

A. Where it seemed to be justified.

Q. Can you remember any case where you have testified that you have not testified that you believed a reduction was justified?

A. No.

Q. You have been advocating and still are an advocate of Municipal Ownership, are you?

A. In a general way and under general conditions. There are exceptions.

Q. Generally speaking, the municipal ownership of public utilities?

A. Yes.

Q. Including gas companies?

A. Yes.

Q. In making certain computations as to the cost of gas in the City of New York or the operating charges against gas, you have eliminated fixed charges. You found, did you not, that Mr. Addicks and Dr. Humphreys in their computation of the operating cost of gas made a similar deduction?

A. Yes.

Q. So there is no difference between you there?

A. No.

Q. You did deduct for the year 1905 (Exhibit 94) interest on consumers' deposits .39 of a cent? 3101

A. Yes.

Q. Neither Mr. Addicks nor Dr. Humphreys did make that deduction, so that would be a difference of .39 cents between you and them, wouldn't it?

A. Yes.

Q. And you have stated in connection with the suggestion that gas could be manufactured cheaper in New York by the Consolidated than its exhibits show, that if it is not manufactured cheaper than these exhibits show it is due in your judgment to extravagance or to badly situated plants cut off by city streets. I understood you to say that you were not prepared to charge extravagance.

A. No, I didn't claim that. I did say a third reason. You mentioned two.

Q. What is that?

A. Bad oil contracts.

Q. Oh, yes, but except for the bad oil contracts, assuming them to be bad, there is no claim on your part of extravagance?

A. No.

The MASTER: Didn't he say something besides extravagance? Didn't he say incompetent management or inefficient management?

Mr. MATHEWSON: No, I don't think so.

Mr. BURR: Inferior plants.

The WITNESS: I would say I didn't claim to know positively what the causes were.

The MASTER: Badly managed, I think he said, something of that kind.

The WITNESS: I said in an up-to-date, efficiently managed plant, the cost of it would be less.

By Mr. MATHEWSON:

Q. Well, eliminate for the moment, the oil contract which
3102 you have critizised. Are you able to state any other direction
or item in which you are able to say the Company has been extravagant or has been incompetently managed?

A. I said labor cost was high, and I said, that as compared with the Central Union, the receipts from residuals were low.

Q. Well, we will take those. Then we have got the oil contracts, labor cost and receipts from residuals.

A. I think I criticized the cost of cartage and labor handling

Q. Then, you do think that the company was extravagantly or incompetently managed in connection with the oil contract, the general cost of labor, the receipts from residuals, the cartage and labor of handling, do you?

A. Either poorly managed, or a poor plant, or poorly situated plant.

Q. Well, which one?

A. I do not undertake to say.

Q. If there is any item of labor, which appears in these exhibits, general labor, exclusive of cartage and labor of handling, which you can point out as extravagant or improper, I will ask you to do so now?

A. I cannot do so until I have the report of the accountants.

Q. You cannot do so from any material now before you?

A. No.

Q. Now, as to labor of handling and cartage, you said that the plants of the company had been cut off by streets in some instance laid out by the city between the plants and the river?

A. Such has been the testimony.

Q. That being so, that would not mean incompetence or extravagance if the expense of cartage and labor of handling had shown an increase, would it?

A. That would relate to the station.

Q. And that would not indicate extravagance or incompetence in the handling of the company?

A. No.

3103 Q. Now, as to receipts from the residuals. Have you any grounds for suggesting that the receipts from residuals indicate extravagance or incompetency except for the reason that you say they are less than the receipts of the Central Union plant?

A. That was my reason.

Q. Have you any other that you can assign?

A. No. There was testimony in this case by George E. Wood, which I quoted.

Q. Yes, we will come to that latter. But I don't think that necessarily indicates incompetency of management. Didn't that have reference to the character of the plant at the Central Union?

A. More or less.

Q. Now, as a matter of fact, if you read the testimony as I understand you to say you did, before the Gas Commission, do you not recall the fact that the Central Union Company manufactures a much greater amount proportionately of coal gas than the Consolidated?

A. Yes, but I only compared the coal gas plants of the Consolidated with the Central Union.

Q. And to get the amount which was obtained for residuals by the Central Union did you take the gas that was produced by the coal gas part of the Central Union, or did you take all the gas which was sold by the Central Union and divide the receipts for residuals by the total output of the Central Union Company?

A. I took the receipts from residuals of the Central Union Company and divided them by the gas made at the coal gas plants, which was 925,000,000 feet. In other words, I took the exhibit which was put in evidence.

Q. You understand that no part of that 925,000,000 feet which was produced at the coal gas plants was sent out to consumers in that shape, do you not?

3104 A. When I say 925,000,000 I may have been mixed about that with water gas one was 925,000,000 and the other was a little less. Which ever it was I took only the coal gas. The exhibit and the evidence will show what it was, and how many feet there were.

Q. Don't you recall in evidence the statement that the conditions for the sale of coke at the Central Union plant were very much more favorable than the conditions for the sale of coke by the Consolidated plant in Manhattan?

A. Yes, and I made a remark on that. It made a difference of one cent only out of eleven cents.

Q. How did you make the estimate?

A. In the testimony I introduced a table showing how much more the two coal gas plants of the Consolidated would have obtained per thousand feet if they had obtained the same price for coke which was obtained by the Central Union, which was $3.23 per ton, I think, instead of about $2.90 in the case of the Consolidated plant, and $3.09, or something like that, in the case of the other.

Q. How about the tar and ammonia?

A. The Central Union exhibit did not detail at all those items and so I stated in the evidence that I had not sufficient evidence to go on and itemize the difference in residuals.

Q. You did not take into consideration the water gas tar, did you?

A. You mean the Central Union?

Q. Yes.

A. No, I had no data I said for itemizing the residuals because the exhibits and all there was of evidence in the case did not itemize. But coal gas and tar would have been made also by the coal gas plants of the Consolidated.

Q. I am speaking about water gas tar, Professor?

A. The exhibits separated coal gas residuals in the Central Union from water gas residuals, and I had the total residuals of the coal gas plant. All I mean to say is I did not have any way of
3105 separating the receipts from coke and the amount of coke from tar and ammonia. That is all I meant to say.

Q. Did you not read in the testimony that the Central Union Company was able to sell large quantities of its coke to the New York Central & Hudson River Railroad Company, which was delivered on the cars of the company, which were run into the station yard for that purpose, so that there was no expense in storage or handling or the breakage which is incident to the rehandling of coke?

A. I don't remember fully. I do remember that there was testimony of their selling to that railroad, but I took account of the fact that the delivery of coke by the Consolidated is done for it, and the expenses of the delivery are taken care of by the National Coke & Coal Co.

Q. Didn't you say you didn't know whether that was so or not as to the Consolidated?

A. No, I did know that. I did know that the delivery of coke by the Consolidated to private consumers through the city was done by the National Coke & Coal Company, according to the evidence which I have read in the case, as I understood the evidence; but what I did say was I did not know as to the Central Union, just how they managed their coke question.

Q. If it be true in the testimony as you have read, that a large part of the coke of the Central Union is sold to the railway company, that it is separated right there, and that it takes the coke immediately without storage or handling, that naturally would give a higher price to the Central Union for coke, would it not, than the Consolidated which has to re-handle it, or some of it, or deliver it?

A. But the difference is only one cent. I brought that out in the evidence.

Q. I am not dealing with the degree of difference, but that would make a natural and proper difference in the price received for that residual?

3106 A. So far as the expense is greater, but you cannot say that the entire delivery of coke is by the Consolidated, because as I have read the evidence, the National Coke & Coal Company does the delivery of coke. They get it, as I understand it, they shovel it into their carts, at the Consolidated works, and I don't understand that the Consolidated has to bear that expense.

Q. But, as a matter of fact, you have read also that the National Coke & Coal Company is a corporation, all of whose stock is owned by the Consolidated and that it is in reality the cartage department of the Consolidated?

A. Certainly.

Q. So that it would not make very much difference whether you said it was sold by the National Coke & Coal Company or sold by the Consolidated directly?

A. Oh, yes, it would in the matter of this evidence, because the price obtained for coke by the Consolidated would be much higher nominally if it was delivering to consumers than it is when it is delivering wholesale to a company that gets it at the yard. While——

Q. Yes, but if the Consolidated received from the National Coke & Coal Company a price for this coke and the National Coke & Coal Company sells it and the amount of net earnings of the National Coke & Coal Company for the year are only $5,000 or $10,000 or $15,000, that would not make a very material difference, would it, in the price which the Consolidated received from the coke, which ever way you considered it?

A. Certainly it would make a difference in the gross price because the difference between what the National Coke & Coal Company charges the consumer and what the Consolidated charges the National Coke & Coal Company must be considerable, it must cover all those expenses of delivery.

3107 Q. Yes, but when you are computing the price at which coke is sold, do you take in the case of the Central Union and in the case of the Consolidated the price which is received from the purchaser of the coke less the expenses of delivering it, or do you take simply gross the amount which is received from the purchaser?

A. In the case of each company I took what I understood to be the price at the yard. In the case of the Central Union, for example, I had only this to go upon, the price at which coke was valued or what was used in making water gas, which was doubtless the coke made in the coal gas plant, and I was able to compute the price of that per ton and that was coke delivered in the yard, you might say. Then when it came to the two Consolidated plants there was in what is known as Exhibit 145 before the State Gas Commission, brought into this case as City's Exhibit 56, and that was the price of the coke of the Consolidated Gas Company of coal gas stations, and that was a price also at the yards, only in this case instead of being delivered on cars as you say it was of the Hudson River Railroad it was delivered to the carts of the National Coke & Coal Company. In either case the delivery was done by other parties.

Q. And when you assume a price of coke you take then, therefore, the price which is paid by the consumer for coke delivered at the yard and you do not deduct therefrom any expenses of cartage or delivery on the part of the seller, do you?

A. In either case I do not.

Q. Then it would make no difference, would it, whether the expenses of the delivery of this coal and coke were paid directly by the Consolidated or whether they were paid by the National Coke & Coal Company and thereby the profit which the National Coke & Coal Company would return to the Consolidated Company were reduced; it would make no practical difference in the result, would it?

3108 A. No, I think not, as I see it now. I think it will make no difference. No difference in the net result.

Q. Nor in what you would call the price received for the coke?

A. There would be a little profit there of the National Coke & Coal, so far as there is a profit.

Q. Slight. Now let me see what figure you take for the coke of the Consolidated Gas Company. Do you take the figure at which the Consolidated Gas Company delivered its coke to the National Coke & Coal Company at the Consolidated yards?

A. I understood that to be what I was doing. I understood that to be the character of the exhibit.

Q. Well, the exhibit, or rather the testimony showed the price at which the coke was sold delivered at the yard to the consumer at wholesale, the price at which coke was sold delivered to the consumer at retail, in the yard, and the price which was received delivering coke by wholesale to the consumer, and the price which was received delivering the coke retail to the consumer outside. Now, which one of those four did you take?

A. I understand I took what appears in City's Exhibit 56, which was the report of the Company as to the price the Consolidated got for the coke; not the price which the National Coke & Coal Company got for the coke.

At 4 P. M. adjourned to October 18, 1906, at 11 o'clock A. M.

Last Exhibits:

Complainant's, 256,
State's, W,
City's, 59.

3109 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *October* 18, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

3110 **EDWARD W. BEMIS** resumes the stand.

Mr. BURR: Professor Bemis wishes to call attention to some errors in the testimony of October 16, and inasmuch as they concern certain figures, it is better to have them corrected now, so that the cross-examination may be based upon the correct figures.

The WITNESS: I only refer to typographical errors. I have not had time to read over the printed testimony, taking it for granted that it was probably correct; but in a glance this morning at a small portion of it, I find on page 2966, at the bottom of the page, that the cost of cartage and labor handling is put down as $1.29 per thousand feet, when it should have been 1.29 cents. In other words, the dollar mark should not have been there. The same applies to the footing of the last column, which in the printed page is $1.24, but should be 1.24 cents, the dollar mark to be omitted.

On page 2937, about the middle of the page, occurs this question:
"Q. You say that is shown by an expenditure of $132,677.10, as "shown in Exhibit 94, or 24 cents per thousand feet of gas made?
"A. Yes."

That should have been not 24 cents, but 1.24, as is also indicated in the figures in the previous table.

Now, having mentioned these two, and I may say there was a place somewhere where I noticed my name was put down as William G. Bemis, that makes me believe that I may find in reading it over to-night other errors which I will have to call attention to to-morrow, but I have not read it through yet to find any others.

3111 Cross-examination continued by Mr. MATHEWSON:

Q. You were referring at the adjournment yesterday to certain comparisons that you drew between costs of manufacture, as you computed them for the Consolidated Gas Company on one hand and the Central Union Company on the other, and you said that you understood that the price for coke which you had assumed was the price specified in City's Exhibit 56, which was Exhibit 145 before the Gas Commission?

A. Yes.

Q. You know, don't you, whether you took the figures from that Exhibit or not?

A. Yes, I testified that I used the figures of coke employed in making the water gas and computed from that the unit price of coke per ton for the Central Union (bottom of page 2985 and top of page 2986).

Q. You took the price of coke received by the Central Union Gas Company as $3.23 per ton, did you?

A. Yes.

Q. And that was the price at which you say coke was delivered from the coal gas plant of the Central Union to the water gas plant of the Central Union, according to the exhibits in the Central Union case before the Gas Commission?

A. Yes.

Q. Will you point out in the Central Union Exhibit, how you procured that $3.23?

A. In the Central Union Exhibit, which was a tabulation of coal gas and water gas separately—I am looking for my copy of the water gas. It was not put in evidence, the water gas part of the exhibit, but as I copied it from the typewritten exhibit, the statement is made, "coke used 23,155,050 pounds;" then to the right is "$37,381.56," which is also what I think I stated in the testimony. Yes.

Q. In other words, you took the amount of coke used by the
Central Union Gas Company in its water gas plant and
3112 divided that into the figures $37,381.56, at which it was carried in the water gas manufacturing statement?

A. Yes.

Q. And the quotient was $3.23?

A. After reducing it to tons.

Q. You understand, do you not, that the Central Union water gas plant receives all its coke from the coal gas plant of the Central Union?

A. I suppose it does.

Q. You haven't any figures as to what the Central Union paid, if it paid aything, in the open market for coke, have you?

A. No.

Q. You haven't any figures as to what the Central Union sold a ton of coke for, have you?

A. No.

Q. And so long as the Central Union sends its mixed coal and water gas out together—as you understand it does, do you not, Professor?

A. Yes.

Q. It sends no water gas or coal gas separately into its mains, but mixes the two and sends that out?

A. That is as I understand it.

Q. The gas that reaches the consumer is a mixed coal and water gas?

A. Yes.

Q. So that it is not of the slightest importance, so far as the cost of this mingled gas is concerned, whether the coal gas plant in turning its coke over to the water gas plant credits that coal to itself at $3.23 a ton or $5.00 a ton, provided it charges the water gas plant at the same figure?

A. I was under the strong impression that in corresponding exhibits of the Consolidated Gas Company the value or price put upon the coke used in its water gas plant was the price at which it was selling the coke to the National Coke & Coal Company.

Q. Well, if you recall the testimony, you will find that Senator Page in his questions raised the question as to whether that was so, don't you remember that?

A. I don't recall it.

Q. And there was quite a long examination of Mr. Carter 3113 on that subject?

A. I don't recall it at the moment.

Q. But, as a matter of fact, it would not make any difference at what price the coke was charged to the water gas plant of the Central Union and credited to the coal gas plant of the Central Union, provided it was charged and credited at the same figure, would it?

A. No.

Q. In the final cost of the gas?

A. Certainly, it is usual to charge——

Q. Therefore, it is not a matter of great importance in determining the cost of the entire volume of gas that the charge of coke to the water gas plant and the credit to the coal gas plant should be an exact market figure, or exactly follow the market, is it?

A. No, but in the absence of testimony to the contrary, it was proper to assume the usual practice.

Q. That is a question, but as a matter of fact, you did assume——

A. The usual practice.

Mr. Mathewson: I move to strike that out. You have never been in the gas business, I understand. I do not know that is the usual practice, Professor.

The Witness: Well, I meant that was what I had observed in a great many cities in reports to the Massachusetts Gas Commission.

Q. But simmered down, it is this, that you took the figure at which it is charged to the water gas plant and credited to the coal gas plant of the company itself, and not any figure at which the company sold any coke in the market to the New York Central Railroad, or anybody else?

A. I think I so stated in my evidence.

Q. Now, about the Consolidated Gas Company, you say 3114 that in dealing with the cost of coal gas at the 14th Street and 42d Street stations, and in determining the price received for coke as a residual you took the figure which appeared in City's Exhibit 56 at this hearing?

A. Yes. Well, City's Exhibit 56 for the Consolidated, that was not any City's Exhibit. Oh, yes, that is right.

Q. Was that figure a figure at which the Consolidated was selling its coke in the open market, or was it a figure at which it charged the water gas plants and credited the coal gas plants?

A. I will perhaps answer that better by looking a moment. In that exhibit the total coke sold in the market, which was 114,776.99 tons, was $2.99.

Q. Are you taking now the 14th Street?

A. I am taking all the stations, "Summary of Operations," which is the page preceding the 14th Street, and represents the annual cash receipts from coke, and I find that the total coke sold by the entire Consolidated Gas Company is credited as worth to-day, and as bringing in to-day, as I just stated, $2.99 a ton. I discover on the next page of the exhibit that the 14th Street station credited its coke as bringing in $3.08, and the 42d Street station as bringing in $2.90, and I find that the average of the two is exactly $2.99.

Q. When you say that the 14th Street plant credits itself with bringing in a certain sum for its coke and the 42d Street does likewise, from what sources do you understand these sums were brought in?

A. In the sense you intended it is brought in by Mr. Carter, to my kno*lw*edge.

Q. No, let us have an answer. I want to know what your understanding is?

A. I understand that in the exhibit showing the total cost of gas, operating expenses of gas, the Consolidated Gas Company tells the Court that from the total gross cost of coal must be deducted receipts from residuals, and it gives those receipts; and the receipts for
3115 coke were $2.99 a ton, and amounted for the entire company
to $343,526.94, less labor of handling; being for the period ending October 31st, 1905.

Q. You understand, then, that that is received from sales of coke in the open market, and not merely transferred from a coal gas station to a water gas station of the Consolidated, do you?

A. I understand it is a transfer from the Consolidated to the National Coke & Coal Company.

Q. Well, very good; not a transfer from a coal gas plant to a water gas plant?

A. That is true.

Q. In other words, you do not understand that the number of tons you have specified as selling for $343,526.94 includes all the coke produced by the company, do you, but only that which it did not use and sold?

A. In the case of the Central Union?

Q. No, in the case of the Consolidated Gas Company?

A. It is the value placed upon the coke used—I was not paying the closest attention to that question.

Q. Well, I will repeat it. (Question repeated.)

A. I so understand it. I understand, however, that it does include the coke transferred from the coal gas to the water gas plants of the same company, so that it includes more than is sold to private consumers.

Q. Now, is there anything there which tells you, or have you any data from which you can tell what the Consolidated Gas Company received in the open market or from the National Coke & Coal Company, if you put it that way, for its coke, and how that compared with the price which it charged water gas plants for coke transferred from coal gas plants to water gas plants?

A. In an exhibit of the National Coke & Coal Company, which I have not in mind very fully, there is a statement of, I think, the total and entire coke business which the National Coke & 3116 Coal Company receives, and then carts and sells, but I did not make a study of that transaction of the National Coke & Coal Company. I can easily do it.

Q. The question is whether you find that the price at which the company's coke was sold in the open market corresponds precisely with the arbitrary price which was credited to coal gas plants and charged to water gas plants where it was transferred from one to the other?

A. I have not examined to know.

Q. Then you are not able to say whether in the case of the Consolidated Gas Company this rule that you have sometimes found observed as to following the market price in transfers of coke between plants was here followed?

A. No, I cannot. But I found that the 21st Street station in its water gas plant charged itself with an expense for coke at $3.24 a ton; the 44th Street station at $3.35, and the 99th Street station at $1.45 a ton.

Q. And you find that no one of those figures agrees precisely with the average figure at which the company disposed of its coke, do you?

A. I have not averaged it to see.

Q. Well, is it not pretty obvious that it would not come out exact?

A. There was very little coke used, I see, at the 99th Street station, only 568 tons, and at the 21st Street station 16,308 tons, and at the 44th Street Station 5,858 tons. I would no- be surprised by a cursory glance, and which I will take longer to verify if you wish, that the cost, adding all these tons and dividing into these prices, would be about the same. I don't think there would be very much difference. If you wish, I will verify it.

Q. No, it is not worth while to take the time now.

A. It looks to my eye to be about the same.

Q. Do you think it is a safe thing to make comparisons the way you have done as to prices received for coke and criticise a 3117 company because it has not received as much for coke as you think some other company does, and take for the purposes of comparison only the prices at which the company transfers its coke from coal to water gas plants, without investigating what it actually received in the market for that which it sells?

A. But while I think it was not a complete and full study, as I stated in my evidence, for lack of further data, yet it was only involving one cent out of eleven cents of cost, and I presented it as the best I could get on the subject. I will make a further study of the coke question, if it will please you, as to the exhibit, as to the sale in the open market of the National Coke & Coal Company.

Q. So, too, as to the Consolidated Gas Company, so far as concerns its gas; you know it is sent into the same mains and there mingled, before it reaches the consumer?

A. Yes, sir.

Q. And so far as the Consolidated Gas as a whole is concerned, it makes no difference at what price it credits its coal gas plant with coke transferred to water gas plant and charges the water gas plant correspondingly, provided it uses the same figures.

A. In making the exhibit to the Gas Commission——

Q. I am just asking you whether that is not the fact?

A. I would not consider that is a fair exhibit, or that which it purports to be, if it was not giving a market valuation on that coke.

Q. That is not the question, at all. So far as the cost of the Consolidated Gas as a whole is concerned, it makes no difference at what price it credits its coal gas plant with coke transferred to water gas plant and charges the water gas plant correspondingly, provided it uses the same figures?

A. Repeat that again, please.

Q. (Question read.)

A. That is correct, but it makes a great difference in the fairness of the exhibit.

3118 Q. We may not be so artistic, but we are trying to get at the substance. Having made these assumptions as to coke, and the prices received, you presented a table which we have called 8, page 2983-4, and in that connection you say you deduct for oil and repairs—in comparing the Central Union coal gas production with the production of the Consolidated Gas Company's coal gas production at 14th Street and 42d Street?

A. Yes.

Q. Why did I understand you deducted the oil?

A. Because there was a good deal more oil used by the 14th and 42d Street stations, in order, as the testimony has it, to secure a higher candle-power than the Central Union was giving.

Q. Yes?

A. And especially as the Central Union was giving in its coal gas plant, therefore I eliminated the oil to find what the cost was without regard to that element of extra or high illumination. In other words, to bring it down to a coal gas of perhaps 12 or 13 candle-power.

Q. And why did you deduct the item of repairs, which seems to be higher for the Central Union than for the 14th and 42d Street plants?

A. Repairs are somewhat fluctuating in any company from year to year, in a coal gas plant more particularly. Some years they do more of the renewal of retorts than they do other years, and I was endeavoring to find costs, aside from these items.

Q. You will have to assume something for those items of repairs, if you were to make a fair comparison, would you not? Would it not be fair to assume the same cost per thousand cubic feet for each plant on the average?

A. I do that by assuming no cost.

Q. You think it would not be fair to take the cost of repairs as they stand here, where the Central Union is higher than the Consolidated Gas Company?

3119 A. Not without further information. It may be that the Central Union is spending too much on repairs, or the others too little.

Q. Well, you say that the great difference in the cost of coal gas at the Central Union and at the Consolidated Gas Company's coal gas plants consists in the amount received for residuals, and, secondly, in the labor cost?

A. Yes.

Q. As to the amount received for residuals we have dealt with that subject?

A. Only with coke.

Q. Is there anything else that you desire to say on the subject of residuals?

A. I remarked that the Central Union did not itemize its residuals, so it is impossible to go into it.

Q. You cannot tell how much is received, then, for each one of the various products aside from coke?

A. And I cannot tell what it received from coke as a whole.

Q. Taking the subject of labor, the Central Union, as you say, shows 5.89 for labor, while the 42d Street station shows 11.52 cents, and the 14th Street 7.65 cents. Do you know that the Central Union plant consists of a coal gas plant and a water gas plant under almost the same roof, that is, directly adjacent?

A. I don't know how they are related to each other. I have never visited them. But I know there are two plants that make gas together there, one a coal gas and the other a water gas plant, for the exhibit shows it.

Q. You know they are directly together, don't you?

A. I understand so.

Q. Located adjacent?

A. I understand so.

Q. The same is not true of the 14th Street plant of the Consolidated Gas Company and the 21st Street plant from which it receives its enrichment in oil gas, is it?

A. No, but either the 14th or 42d Street makes as much gas as the Central Union output, both coal and water.

3120 Q. That may be, that is another proposition. Where a plant like the Central Union has a water gas and coal gas plant situated immediately together, would not the cost of labor naturally be less?

A. The coal gas labor?

Q. Yes.

A. I cannot see why it should. I cannot see, unless you assume they have taken some labor that belongs in coal gas and put it in the water gas in their exhibit.

Q. No, might there not be labor applying to both which might be divided in some proportion?

A. Not any more than where there is a plant making twice as much gas as the Central Union, there might be economy, but the Central Union had no larger output than the 42d and 14th Streets.

Q. After a plant has an output of something like 700,000,000 feet, there is no further economy so far as cost of production is concerned?

A. Some claim there is and others claim there is not?

Q. What was your opinion as expressed before the Gas Commission?

A. I think the economies are very slight in the larger output above the $700,000,000 feet, but I am not prepared to say that there are none.

Q. You said before the Gas Commission that you thought there would be substantial economies above that figure.

A. I stated that perhaps it was so, but at another hearing I stated that at Astoria, owing to the great size of the output, there would be economies they could not get from the smaller plants.

By Mr. **Burr**:

Q. That was the testimony of Mr. Bradley also, was it not?

A. I understand so.

Mr. **Mathewson**: I move to strike that out. I don't think that was the testimony of Mr. Bradley, stated broadly.

3121 The **Witness**: I remember distinctly my own testimony, that I did later say something about the economies of the enormous output at Astoria.

By Mr. **Mathewson**:

Q. Did you not testify in the Boston investigation in 1904-5 that after you had reached an output of about 700,000,000 feet, there was no substantial economy by reason of any increase in production beyond that?

A. I don't remember definitely, but it is quite possible. The economies do come chiefly in distribution after that point is reached.

Q. Now, as to this cost which you have referred to as 19.64 cents of coal gas at the Central Union plant, you have referred to some testimony of Mr. George E. Wood?

A. Yes.

Q. You say that he referred to the cheaper price at the Central Union Company as attributable to the Central Union plants as compared with the Consolidated Gas Company plants, for one thing.

A. That was one thing.

Q. Was not his statement in that regard that the two plants were modern plants and located directly together, which made an economy in operation?

A. I don't remember at the moment. It was read yesterday or the day before in the evidence.

Q. Perhaps it may not all have been read. Don't you remember that that is substantially what he said?

A. I don't recall it now.

Q. He said that they received a higher price for coke, you recollect that, and a better market, you recollect that?

A. Yes.

Q. Don't you remember that testimony was given as to the candle power of the Central Union generally?

A. Yes.

Q. Now, Mr. Wood's testimony was as to the cost of the Central Union gas, taken as a whole, wasn't it?

A. Yes.

3122 Q. Do you remember that Mr. Wood gave any testimony as to the reason, if there be one, why the coal gas at the Central Union cost less than the Consolidated?

A. Yes, he did testify on that point.

Q. On the coal gas?

A. Yes, because he referred to the inclined benches of the Central Union as superior to the small benches, which took more coke and had other disadvantages, at the 14th and 42d Street plants, so that was entirely coal gas.

Q. Yes, but was not he dealing entirely with the cost at which the Central Union mixed coal and water gas was produced?

A. Yes.

Q. And were not the questions directed to that?

A. Yes, but in so doing he took up as the evidence of inferiority the coal gas plants.

Q. Well, inferentially, he mentioned certain of the apparatus.

A. Directly.

Q. Well, directly he mentioned certain of the apparatus employed in the manufacture of coal gas?

A. Yes.

Q. But he did not deal with the difference in cost of coal and water gas at that time specifically?

A. His criticisms were all directed to the coal gas features of the Consolidated.

Q. Did he deal with the cost of the coal gas and the water gas separately in his testmony of the Central Union Company?

A. Perhaps not in so many words, but he commented on the coal gas portion of the Central Union as compared with the coal gas portion of the Consolidated.

Q. Did he give any figures of the coal gas as distinguished from the water gas of the Central Union and compare those two?

A. No, he testified that Mr. Carter had the figures.

Q. Do you know what candle-power this coal gas was which was produced, as it appears, at a cost of 19.64?

A. I believe the testimony was not very clear on the coal gas as distinguished from the water gas, but there was testimony on 3123 the gas after it was mixed, and it was said that through lack of a proper inspection in The Bronx the company had not been living quite up to the law, they thought.

Q. We will get to that in a moment, but I am speaking of the coal gas, which stands at 19.64 cents, according to what you have indicated.

A. I believe there was some statement that it was practically a coal gas, with only this slight mixture of oil, and therefore I know it could not have been much above 14 or 15 candles.

Q. I call your attention to the testimony in that case where this reply is given, "The candle-power is not uniform; one month it is 14.27 and the next month it is 13.83, and so on."

Mr. **Burr**: Whose testimony is that which you are reading from?
Mr. **Mathewson**: The testimony in the Central Union case of Mr. George W. Doane.
The **Witness**: He gives other statements where it runs up to 15.

Q. One month 15.68, month of May, 14.44, April 13.82, March 13.84, February 13.83, January 14.37. And Mr. Doane continued: "I should say I was giving you a fair estimate if I said it was from 14 to 14½ candles."
A. Yes, I remember it now.
Q. So that that coal gas which was unenriched——
A. It was a little.
Q. And costing 19.64——
A. It was enriched by a little oil.
Q. Yes, a little oil, oil to the extent of 1.27 cents?
A. That is right.
Q. Whereas the testimony you found to be that it cost to enrich at the 14th Street coal gas station by oil in order to bring it up to candle power something like ten cents, wasn't it?
A. The oil cost at 14th Street nine cents and at 42d Street——
Q. How much more than nine cents?
3124 A. It was nine cents.
Q. Wasn't it higher?
A. No, the exhibit on page 2984 shows nine cents.
Q. Exactly nine cents?
A. Yes.
Q. Gas made or sold?
A. Gas made.
Q. And this is only 1.27?
A. Well, it was 6.54 cents at 42d Street and 9 cents at 14th Street, and I eliminated those items.
Q. Yes, but I am calling attention to the fact that this was gas practically unenriched or enriched to a very small extent and far below any candle power in which it could be sent out to the consumers?
A. Yes.
Q. Have you taken pains to ascertain what the cost to the Central Union Company was of the gas which it actually sent out to consumers, I mean the cost of production of the mixed gas which was sent out to consumers for the year ending October 31st, 1905?
A. I have not it in mind at the present time. I went over it once I think, but some time ago, and I do not recall it now.
Q. Suppose you take the same exhibit as the one from which you have been testifying—perhaps I can show it to you here. I think it is the same thing, and I ask you if it does not appear from that that the cost of the water gas manufactured as distinguished from the coal gas was 32.79 cents?
A. Yes, I will give you a total of the mixture if you wish.

Q. I have it right here, I think. And it also appears——

A. I have a copy of that here before me.

Q. And it also appears by this exhibit which you have used in your computations that the cost of the entire gas, or mingled gas, per thousand feet sold was 28.94 cents or in round figures 29 cents for that year, doesn't it?

A. Just a moment.

Q. (Handing paper.) Here is what you referred to.

3125 A. I was talking all the time about gas made, and that exhibit shows—let me examine it a minute.

Q. Yes. Take it either way or both.

A. My figures were different from those, and so I am waiting to verify them. This exhibit which I think I have never seen before, this combination gives the total cost as $424,343.02, to which should be added, not any losses on gas sold to the Consolidated Company under the agency agreement, but there should be added only expense at works, $6,403.19, and distribution at works, $4,573.76, making $435,319.97. Now, that divided by the total gas made, both coal and water gas, which was 1,596,410,000 feet, gives 27.27 cents, which should be compared with City's Exhibit 56 which——

Q. I have not got to that point. Let me ask the questions and you later will have an opportunity if there is anything you want to explain. I am simply trying to get at certain facts now.

A. Well, per thousand feet of gas made——

Q. Now you said something about there having been no inspection in the Borough of The Bronx?

A. I said that was the testimony.

Q. Now you understand the laws to have been, prior to July 1st, 1905, when the 22-candle-power law went into operation, that there should be inspection as to candle-power and perhaps in other respects in the various boroughs?

A. Yes.

Q. Do you remember the testimony of Dr. Love, the city chemist that there was no inspection in any borough except in the Borough of Manhattan for candle-power?

A. Yes.

Q. And do you understand that the Central Union operated entirely in the Borough of The Bronx, don't you?

A. Yes.

Q. And you remember the testimony of those who represented the Company, conceding before the Gas Commission that the
3126 Central Union Company did not maintain the candle-power
of even 20 required by the law, don't you?

A. I don't remember that it did not maintain—that there was any evidence as to what its candle-power was, but there was some suspicion thrown upon it.

Q. Was it not stated in evidence that they did not maintain the candle-power required by law?

A. I don't recall the evidence on that, but I recall the statement that it was not believed that they did.

Q. Yes, it was not believed by the officers of the Company who testified that they did.

A. I understood them to say that they did not think they did, but I do not remember any exact evidence on it as to what the candle-power was.

Mr. **Burr**: Have you got the evidence there, Mr. Mathewson?
Mr. **Mathewson**: Yes, some of it.

"*Q.* By Commissioner **Sheddon**:

"Q. Then it was quite evident to the Company that you were not complying with the law along the distributing districts at that time? A. I think if the law had been strictly interpreted requiring a test to have been in the remote districts, it would have been found so."

And don't you remember there was further testimony in the Consolidated Gas Company's case by Mr. Addicks that the candle-power was not maintained?

A. Yes, there was a charge made by other witnesses, but there was no test offered.

Q. There were no tests offered, but as you recall the testimony was it not made quite clear that the Central Union Gas Company was not complying with the requriements as to candle-power in the Borough of The Bronx?

A. What you have just read is quite in line with what I recall, that in remote districts the President doubted whether they were fully complying with the law. The exact sentence that you 3127 read on that point, of course, was in evidence, there is not doubt of it. I don't remember anything any stronger than that.

Q. Do you know whether the Company in The Bronx maintained even 20 candle-power a mile from the works at any time?

A. I know nothing except the testimony there, and that is not positive and relates only to a remote distance from the works, as you read it.

Q. I will read this question:

"Q. So this cost then would not represent the cost of this gas even to the Central Union Gas Company at the candle-power which was maintained by the Company? A. That is true."

Mr. **Burr**: Whose testimony are you reading?

Mr. **Mathewson**: I am reading the testimony of Mr. Doane, I think.

Mr. **Burr**: Who is Mr. Donae?

Mr. **Mathewson**: Mr. Doane was the gentleman who appeared and testified in behalf of the Central Union Gas Company in the case before the Commission.

Mr. **Burr**: He is the president, is he not?

Mr. **Mathewson**: I cannot say whether he was the president, but he was their representative there and knew what he was talking about.

Mr. **Burr**: That testimony was given by him in the proceeding before the Gas Commission?

Mr. **Mathewson**: Yes.

Q. Now we will assume that instead of maintaining 22½ candle-power which you say was the average of the Consolidated Gas Company during this period, that the Central Union Gas Company maintained 17½ candle-power on the average, or 5 less.
3128 What difference would that make in the cost of the gas, the cost of the production?

A. That would make a difference, of course, of about a gallon of oil.

Q. And that would mean about, say, 4¼ cents, would it not?

A. No, about 3¼.

Q. No, I am speaking about the prices paid in New York.

A. According to the testimony it would make 4——

Q. 4¼?

A. No, not at that time—during that period——

Q. 4.08 cents?

A. 4.08, yes.

Q. Now, if you added 4.08 to 27.27, which you think is the cost of the Central Union gas according to their exhibit, that would mean 31.33, would it not, that assumption being correct?

A. 31.35 on those assumptions which I do not assent to.

Q. Well, you don't know whether it is so or not?

A. No, but the evidence does not indicate it.

Q. The evidence indicates there was some difference between the candle power maintained by the Consolidated Gas Company and the Central Union?

A. Yes.

Q. How much it was you don't know?

A. But testimony indicating it in remote districts would not indicate a difference of more than one candle power necessarily.

Q. Well, it would indicate that 27.27 cents for the Central Union gas must have been increased by some amount if it had kept up to the standard maintained by the Consolidated Gas Company?

A. But I have never claimed that the water gas plant was any more efficient than the Consolidated Gas Company. It was only the coal gas I took——

Q. (Question repeated).

A. Yes.

Q. Now, I want to show you Exhibit 171, for the four months ending October 31st, 1905, that is beginning with July 1st, 1905, at which date the inspection of the companies was extended
3129 to all boroughs. It appears by this Exhibit 171 that the cost to the Consolidated Gas Company of the Central Union gas was how much?

A. First let me state that this is not the cost I have been talking about.

Q. I understand that.

A. It is the cost plus ten per cent.

Mr. Burr: The Exhibit 171 to which you refer is an exhibit before the Gas Commission?

Mr. Mathewson: It is offered in here.

The Witness: It is what the Consolidated Gas Company paid for the gas.

Q. That is exactly what I showed.

A. And it shows 35.47 as a total for all the companies.

Q. What does it show that the Consolidated Gas Company paid the Central Union Gas Company for the gas delivered for those four months?

A. 34.35.

Q. Those were the only four months under the present candle power law which were included in the nominal year ending October 31, 1905, were they not?

A. Yes.

Q. If you should divide 34.35, which was the amount paid by the Consolidated Gas Company to the Central Union, by 1.1, it would indicate the cost to the Central Union of the gas delivered, would it not?

A. Yes.

Q. Because the Consolidated Gas Company paid the cost of labor and material plus ten per cent.?

A. Yes, it would make substantially that.

Q. That would mean something over 30 cents for cost, would it not?

A. Yes, about 31 cents.

Q. That would not differ very substantially then from the cost to the Consolidated Gas Company of its water gas, would it?

A. But it does not prove anything on the coal gas.

3130 Q. That may be. What it proves, the Master and the counsel are to argue. What was the cost according to your figures to the Consolidated Gas Company per thousand feet of gas made at its water gas plants for this year ending October 31st, 1905?

A. I give it, do I not, in the testimony?

Q. I think you did, yes, but I thought you had Exhibit 56——

A. I will turn back and see how I gave it here. Because I had summarized the three, 31.29 cents for the three, 29.78.

Q. Then the cost of the Central Union production would be, as I figure it, dividing 34.35 by 1.1, 31.33, which would be practically identical with the cost of the water gas to the Consolidated Gas Company?

A. Those figures would be practically identical, yes.

Q. Now, let me call your attention for a moment to the costs to the Standard Company and the New Amsterdam Company of the gas manufactured by those companies. You said for the year ending October 31st, 1905, for the Standard Gaslight Company it figured up how much, according to table 4?

A. Table 7, isn't it, page 2078? 20.23 cents.

Q. Yes.

A. It is the same table.

Q. That would be about a cent less than it cost the Consolidated Gas Company at their plant, would it not, for the same period, according to your computation?

A. Yes, but it was higher candle power.

Q. Higher average candle power you found?

A. Yes.

Q. Now, taking the New Amsterdam you found the cost was what?

A. 29.01 at the bottom of page 2978.

Q. And those differences you stated you were not able to explain?

A. No.

Q. Now, is it not known to you that the New Amsterdam Company has a water gas manufacturing plant in a single location where its production is concentrated, as against several water gas plants of the Consolidated Gas Company? 3131

A. It is only a trifle larger than the 21st Street plant. It made 20 per cent. more gas only than the 21st Street plant.

Q. Yes, it did make more.

A. And the 21st Street plant was the most expensive of the three of the Consolidated Gas Company.

Q. Yes, the largest plant the most expensive of the three?

A. That would tend to confirm your theory that there is not much difference in expense after you reach a certain point of manufacture.

Q. Yes, it would not only tend to confirm my theory, but would tend to confirm the theory you enunciated in Boston?

A. Yes, if I did enunciate it.

Q. Well, have you any doubt that you did?

A. I think you stated it correctly a little while ago, substantially, that I did not think it made any difference after you reached 700,000,000 feet. I think I said it at that time, and I still believe it. I qualify that, however, where such a large and scientific plant is erected as is contemplated at Astoria.

Q. Yes, I understood you enunciated the general proposition, but when you came to us you made us and exception.

Mr. Burr: Well, you are attempting to build what is the largest plant and the most economical plant in the world.

The Witness: Yes, the fact that it is the latest and most up-to-date ought to give it advantages.

Q. Don't you know, Professor, that it is impossible for two companies manufacturing the same kind of gas in the same city to produce gas exactly the same price at the holders?

A. It would be quite unusual to have them reach that point.

3132 Q. You know for instance in the City of London that the companies there, the three metropolitan companies produce gas at substantially different prices at the holders, each one presumably doing its best, don't you?

A. There are differences and there are also differences in candlepower. I have not them sufficiently in mind now to discuss them on that point.

Q. But you would not expect, taking the three gas companies operating in the City of New York or any other great city, that all the companies would produce gas at precisely the same figure at the holders, and you would presume, would you not, that there might be a difference of a cent or two in the cost of production?

A. Yes.

Q. Did you not find in the City of Chicago that of the two companies, the People's and the Ogden Gas Company, that there was a substantial difference in production in the cost at the holder?

A. So reported by the companies, but when the accountants came to investigate I did not see any report from them about the smaller, or the Ogden Company. But in the report made by the companies there was a difference.

Q. Well, according to the reports of the companies the Ogden Company which produced a smaller amount of gas had a smaller cost of production to the holder than the Peoples' Company, which produced a larger amount of gas, didn't it?

A. Yes, but part of that cost to the Peoples' Company is what it bought from subsidiary companies known as the Universal Company, the company at Cicero and one at Evanston.

Q. And on the other hand, although the Peoples' Company had sales of something like eleven billion feet nearer the Consolidated Gas Company than any other company in the country, you found their cost of distribution was less than the cost of the Ogden?

3133 A. I did not find anything, I simply read in my testimony what they had stated.

Q. Well, that was the statement there?

A. The statement they made.

Q. So far as anything appeared, that was the fact?

A. So far as they stated, but the accountants state the cost of the Peoples' Company, and did not make any report so far as I have learned about the Ogden, so I don't know how it was left. To the best of my knowledge and belief, no report was made about the Ogden.

Q. You have referred to the fact that the New Amsterdam and the Standard Companies had an average candle-power of 23.38 and 23.73?

A. Page 2995, 23.38 for the New Amsterdam and 23.73 for the Standard.

Q. And for the Consolidated 22.5?

A. Yes.

Q. It would appear from that, would it not, that the Consolidated Gas Company has been making greater efforts to keep within the law at an economical rate than those other two companies?

A. Well, I have been told by attorneys that there is a special law relating to either the New Amsterdam or the Standard, requiring 25 candle-power, but I have not verified it.

Q. Well, if they maintained 23½ candle- power, your assumption would not be that they maintained that so as to comply with that law, would it?

(No reply.)

Q. You read Dr. Marks' suggestion that the Consolidated Gas Company was maintaining an extravagantly high candle-power?

A. That was during the last part of the year 1905, as I understood him to say.

Q. You heard him testify that to maintain 22 candle-power it was

not necessary to maintain an average of 24 candle, which the
3134 company was maintaining, but only 22½, didn't you?

A. I did read that testimony.

Q. Well, do you know what the standard of candle-power is in Boston, the legal required standard?

A. 18 in Massachusetts, I think.

Q. Is it not 16 in Boston?

A. Yes, 16.

Q. Do you know what candle power the Boston Consolidated is maintaining?

A. Yes, about 19.

Q. In other words, about 3 candles on the average they maintain, over the legal candle power?

A. I don't understand they did it to obey the law.

Q. What do you understand they did it for?

A. To compete better with electricity.

Q. To please their customers?

A. I suppose they consider it a good policy.

Q. As a matter of fact, they do maintain about 3 candle power above the standard?

A. Yes.

Q. When you speak of the average being 22.5, for the Consolidated Gas Company, and something over 23 for these other companies, you mean what?

A. I mean that these were the averages as given in table 10 of Dr. Love's tests.

Q. How often do you understand the tests were made, from which those averages were taken?

A. Prior to July 1st, 1905, they were only made about once a week, perhaps twice a week on some occasions. After July 1st they were made every day and are so made now every day.

Q. You understand that the law imposes a penalty on the company, not if it fails to keep up an average, but if it falls in any instance below 22 candle power, don't you?

A. I saw that quoted in one of the affidavits of the Complainant, yes.

Q. In your examination of the tests of Prof. Love subsequent to July 1st, 1905, did you find that in spite of the average that the Consolidated Gas Company maintained, yet, on various
3135 occasions, the candle power has dropped to 22 or very close to it?

A. Yes.

Q. You know that Mr. Addicks and Mr. Bradley are gas engineers of experience and standing, don't you?

A. Yes.

Q. Of long experience?

A. Yes.

Q. And you know of no reason, do you, why they should expend money to reduce the profits of the company by maintaining a higher candle power than they thought was necessary to comply with the law?

Mr. **Burr**: I do not think that is material.

The Master: It is fair cross-examination.
Mr. Burr: Exception.

A. I think I do.

Q. You think you know why they should maintain a higher candle power?

A. I think I know why they might maintain it or a reason that might influence them.

Q. Do you know why they did?

A. I don't know their minds, but I can understand a motive.

Q. I should be pleased to have you state it.

A. To make the cost appear as high as possible in this investigation, because this year is to control for probably the next five or ten years.

Q. Have you taken pains to examine the candle power of the Consolidated Gas Company for years before this, when the standard was 20?

A. No.

Q. Don't you know that the excess of candle power over 20 which the company maintained on the average before this inquiry took place was just as great as the excess which is now maintained over 22 candles?

A. No, I have not gone back at all.

Q. It seems to me before I made a suggestion of that kind I would have gone back.

3136 A. I did not make it except as you asked me on cross-examination. I do not consider that dishonorable. I am not charging them with doing anything dishonorable.

Q. I might differ with you. I don't know about that.

A. I do not say that that is their motive. I did not say that. I said I could conceive of that motive. I do not claim to read their minds or know what they are trying to do.

Q. No, but it would have been quite easy for you, these tests being public records, to have satisfied yourself on that point if you had any suspicion that a proceeding of this kind was contemplated?

A. Well, I have thought of it, but I have been so busy night and day that I could not do it.

By Mr. Burr:

Q. You don't know what their instructions were?

A. No.

By Mr. Mathewson:

Q. Mr. Addicks is president of the Company and does not get instructions, he gives them. Let me ask you another question before we take up the subject of oil. We have now taken the subject of residuals and cartage and labor and handling which you state might be due to the cutting off of the plant by the public streets for which the Company is not responsible, and I want to ask you a general question as to labor. Don't you recall that before the Gas Commission the subject of labor was quite extensively gone into and the Company was asked to produce a statement showing the men employed at the different plants and the number of different classes and the wages paid to each?

A. Yes.

Q. And don't you remember examining those and testifying that you found the charge for labor was not excessive and that 3137 you found the charge to be less, as it seemed to you than paid in Chicago?

A. I think I stated substantially that.

Q. So that so far as you can observe or have observed from an examination of the Gas Commission's testimony or the testimony here, there is no instance in which you could criticise the figures paid for the various classes of labor?

A. Labor cost per thousand feet may be high without any individual laborer getting more than the ordinary rate.

Q. Well let us take that phase of it. Are you prepared to say that in your opinion at these plants the Company is employing more men than are required to do the work efficiently in the face of Mr. Bradley's testimony that no one is employed that is not necessary?

A. More men than would be required in an up-to-date plant, I maintain, especially in the coal gas plant.

Q. But so far as the water gas plants are concerned you understand that they are up-to-date, from the testimony in this case?

A. I have not seen the plants, but the testimony of the Company is to that effect.

Q. Now as to the coal gas plants, supposing you were to install charging machinery at one of the plants of the Company where it is not employed, that would mean an expense for machinery which would be added to capital?

A. Yes.

Q. And that would mean additional repairs, would it not?

A. Yes.

Q. When a man wears out, we do not have to pay for his repairs, but get a new man at the same price?

A. Yes.

Q. So there would be offsetting charges, if machinery of that kind were put in?

A. Yes, but Mr. Wood seemed to think on the whole the plants were inferior at 14th and 42d Streets.

Q. But so far as the plants now stand and operated as they 3138 are, you are not prepared to say that any more men are employed to operate those plants than are required to operate them efficiently?

A. I am not prepared to state. I have not had opportunity, in the first place, to study it.

Q. Not being a gas man, perhaps we might doubt your qualification to state, any way. Now, taking up the cost of oil which is the one item left in manufacture, you say that the Boston Gas Company for the year ending June 30, 1906, paid 4.01 cents for oil. Where did you get that information?

A. From the return of the Boston Gas Company, the Consolidated

Gas Company it is now called, to the Massachusetts Gas Commission, for the year just ended, June 30, 1906.

Q. Have you a copy of the return here?

A. Yes.

Q. Will you let me see it?

A. There it is (indicating).

Q. This appears under the heading of average cost per gallon of each kind used at the works, and under that I find naphtha 5.52 cents, other oils 4.01 cents. What do you understand they mean by naphtha?

A. Naphtha is a test above 60—60 to 90. It has been testified to in this case.

Q. Well, do you know what test oil you can get for 5.52 cents in Boston, do you know what test that is actually?

A. I only know what one of your witnesses, I think Mr. Addicks, testified in this case as to what test of naphtha was used—there was very little naphtha used—you know how much percentage of naphtha was used.

Q. I have not got to that point. I am simply asking as to naphtha. Naphtha runs from 12 to 13 cents a gallon or more?

A. Yes, 13 cents, I believe so.

Q. Naphtha is the motive power of most of the automobiles?

A. Yes.

Q. And sells as high as 25 cents a gallon, doesn't it?

3139 A. Yes. The price of the other oil is given here as 5.52 cents for that oil, but there was only one-half of one per cent. of all the oil which was of that character.

Q. Well, you were not quite accurate then in saying that the Boston Company used all 34 gravity oil?

A. I was wrong to the extent of 1 in 200.

Q. Well, where do you find the statement here that they use nothing but the naphtha and 34 gravity oil?

A. I do not find it there except by inference, as far as finding it there is concerned.

Q. Nothing in the report then which supports your statement to that effect?

A. No.

Q. Where do you get that information?

A. From official authority.

Q. What was the official authority?

A. A letter from an official connected with the company.

Q. Who was he?

A. It was not a letter calling for secrecy or confidence, at the same time I don't know whether—if The Master rules that I shall give it, I will. It was a high official of the company. I will show the letter to the Master if you wish it.

The MASTER: I have no curiosity about it, but if Mr. Mathewson wants it, he is entitled to have it.

Mr. MATHEWSON: I should like to see the letter.

The WITNESS: Well, from President Richards. (Witness produces letter.)

Q. Now, he states, "The test of the oil at both stations shows practically 34 degrees." Do you know whether that as used in the gas business would refer to a 34 test oil Beaume?

A. I wrote him asking him what it was, Beaume test, and that is his reply.

Q. You notice this, "Third. So far as we know we do not use any Texas oil?"

A. Yes, I asked him that question.

3140 Q. You referred to the nearness of New York as compared with Boston to the Texas oil field in your testimony?

A. Oil of 27.28 degrees in Texas oil, and I asked him whether they were using any of that and he states they were using nothing but 34.

Q. So if New York was in the same category as Boston it would not be of much importance whether they were nearer Texas or not?

A. But New York is using Texas oil and Boston is not.

Q. The Texas oil you call 28 degree?

A. The Texas oil is 28 degree.

Q. Is any of it 28 degree and over?

A. I have been told so by oil companies.

Q. Now do you notice this "The average candle-power of water " gas made at our Calf Pasture Station for the year ending June 30, " 1906, was 23.13, and at our Commercial Point Station for the same " period 22.7."

A. Yes.

Q. And you found that it reaches the consumer at about 19 candle-power, you stated?

A. The return which they have shows that the average of all the tests, which means of the tests of water gas when mixed with the coke oven and coal gas, is 19.37, as you will find here in this record in copy of the return of the Boston Consolidated Gas Company to the Board of Gas and Electric Light Commissioners of Boston for the year ending June 30, 1906. On page 19 is the statement that the average candle-power of gas as determined by the said Board is 19.37, but that is after this water gas is mixed with the coke oven and coal gas.

Q. That is what I was going to call your attention to. It is not the fact that this Calf Pasture or Commercial Point gas to which I have called your attention is delivered to consumers at anything like that candle-power?

A. No. 19.37.

3141 Q. It is used to enrich other gas, or other gas is used to dilute this, and after they mixing it averages 19.37 candle-power when it reaches the consumer or when it reaches the testing station?

A. That is right.

By Mr. **Burr**:

Q. The writer of this letter is the president of the Boston Consolidated Gas Company?

A. He is.

Q. J. L. Richards?

A. Yes, and the letter is dated October 4, 1906. It is a letter to me in reply to a letter of inquiry. I made no request or suggestion of confidence or secrecy in the letter, but I did not intend to use his name save as the Master ruled I must.

By Mr. **Mathewson**:

Q. You testified before the Gas Commission that oil was higher in the East than the West?

A. I may have testified. I don't remember now.

Q. Well, don't you remember whether you did or not?

A. I know it is higher in the East than it is in the West.

Q. And you testified before the Gas Commission that your information was that it was about 4 cents in Cleveland, didn't you?

A. Yes. It is not that, I have found since. It is lower than that.

Q. Then you are mistaken in that regard?

A. Yes.

Q. Do you know what it costs in Cleveland?

A. I have a memorandum to that effect from the company but I haven't it in mind at the moment. I can tell you to-morrow if you wish.

Q. And didn't you also a year ago in your testimony before the Boston Gas Commission see the contract with the Boston gas companies for their oil?

A. Yes.

3142 Q. And didn't you find that it was 4½ cents per gallon as against 4.8 cents per gallon which the Consolidated was then paying?

A. No.

Q. Didn't you?

A. No.

Q. Did you find then it was 4.49 cents per gallon in Boston or a little lower?

A. That was the average price for the year ending June 30th, 1904.

Q. That was the lowest period which you had in mind?

A. Yes, but we are now talking about a period of two years later, the year ending June 30th, 1906, when the average price was 4.01 cents. It was 4 cents on one oil and enough on naphtha to make it 4.04.

Q. Well, if you were in error in your testimony that is another proposition, but I am asking you whether you did not testify before the Gas Commission here last year, or within the year that you had testified in Boston but a short time before, and that you found that the price which the company was then paying for oil was a little above 4.49 cents?

A. I think so, but that related, and my testimony in Boston related, to the last year for which I was permitted to testify. I was allowed to see all their contracts under the conditions that I should not testify as to the exact prices.

Q. Well, the later contract that you were permitted to see and respecting the exact price of which you did not testify, showed over 4.49 cents, didn't it?

A. No.

Q. It did not?

A. No. My testimony related to what was paid during the year for which I could testify, which was the year ending June 30th, 1904. Now, of course, I will not assert too positively that there may not have been some typographical error or some error in misunderstanding your question, but that is certainly the fact of the case and what I supposed I was testifying. I wish you would produce my testimony if you have any about it.

3143 Q. Oh, no; you have the testimony. I will ask you to examine it and see if my question does not convey to you precisely what you stated?

A. I haven't any copy, except Mr. Burr has a copy which has been loaned to the stenographer.

Q. I ask you to review your testimony and be prepared to state at the next hearing whether you did not testify so before the State Gas Commission.

A. The New York State Gas Commission?

Q. Yes.

A. All right.

Q. And whether the contract which was shown to you when you testified before the Boston Gas Commission on the last occasion theretofore was not the current contract?

A. Well, that may be.

Q. Well, that is what I say; the current contract was shown to you at the time that you testified before the Boston Gas Commission and it showed that the Boston Gas Company under that current contract was paying a little over 4.49 cents per gallon for oil, didn't it?

A. No, it did not.

Q. You are sure about that?

A. 4.49 or something like that was what the company had been paying but the contract which they showed me was not a contract by which I could testify because I had agreed not to.

Q. No, in the Boston Gas Examination you did not put any figure on the record as to what the company was then paying for oil, and wasn't this contract shown to you in order to satisfy you that they were not paying too much and didn't you say after seeing the contract that you were satisfied that it was all right as to oil?

A. I saw two contracts. The contract covering the period of their report to the Commission and the contract for the next year which was lower, but I was not allowed to state what either contract was because I agreed not to by agreement between the attorneys.

Q. What was the contract the year before?

3144 A. I don't remember now. I have the notes at the hotel of both contracts.

Q. What year was covered by the 4.49 cents?

A. There is no use guessing. I will look up the testimony if you wish.

Q. Well, I want you to look up the memorandum so you can tell us?

A. I know that was generally made during the Boston hearing and when that occurred was in the early part of the year 1905 and was a contract just made, if I remember right. I don't know whether it had gone into effect or not, but it was a contract for the next twelve or fifteen more months or two years, I don't remember just how long and I think I was shown the contracts under which they had been operating.

Q. You did testify before the Gas Commission here, did you not, that it was of the highest importance that the Company should be assured at all times of the delivery of oil to them, without failure of delivery on account of strikes or otherwise?

A. Yes.

Q. And that they should procure it from such sources as they would be assured of a supply and run in no danger of running short, or that in substance?

A. I don't know whether I so testified but I believe it so. That equally applies to Boston, Philadelphia, Baltimore and all the cities.

Q. And is it not the fact that a Company like the Consolidated Gas Company of New York, which uses a vast amount of oil and which can obtain that oil from, we will assume, but a single producer, is at a disadvantage as compared with a small company whose requirements are so small that it can get the oil from various producers, and can store an amount with reasonable expense, bearing a larger proportion to their annual requirements than the Consolidated could?

3145 A. I cannot say. It depends on the character of the Standard Oil Company and the directors.

Q. Just leave out the Standard Oil Company and the directors for a moment. Assuming there is but one producer which produces oil enough of the grade required for the Consolidated Gas Company, isn't the Consolidated Gas Company of New York on that account, other things being equal, at a great disadvantage as compared with a small company which might deal with half a dozen different producers, any one of whom could furnish it the amount required?

A. No, because it can divide its contracts; it can do as Philadelphia does, have one station supplied by one company and another by another.

Q. You think that would be feasible, do you, in running a gas business in the City of New York?

A. Yes, just as coal comes from different companies to the Consolidated—eight or ten different companies supply coal.

Q. There is quite a difference, isn't there, in that connection when you are dealing with oil and coal?

A. One is no more important than the other.

Q. How about storage? Is it easier to store coal than it is to store oil?

A. I cannot say. Coal is more bulky. I don't know.

Q. It is safer, isn't it?

A. It is safer. That is, oil is not considered as safe to store, but coal will catch fire from spontaneous combustion, so it is rather difficult to store coal in large quantities. I do not recall at the moment an instance of oil stored at gas works anywhere having exploded or burned up.

Q. You do not recall the case of any gas company storing oil for the greater part of its annual requirements, do you?

A. No, and I have not assumed it would be necessary if it got it from several companies.

3146 Q. Don't you know as a matter of fact the Company has to get its oil from time to time and keep on hand a very short supply?

A. I don't know its amount of storage tanks or what it might construct of additional storage tanks.

Q. It would be a pretty expensive proposition, wouldn't it, to construct tanks of sufficient size on the Island of Manhattan?

A. I have not testified that obtaining oil from different companies would necessarily involve that any more than in the case of coal.

Q. Have you been a purchaser of oil for gas manufacture?

A. No. And the oil at Lynn, you will notice, was only three cents.

Q. Yes, I understand that is your statement?

A. That is the lowest test, 28 degrees; one was 28.

Q. 3.29 cents for 28?

A. Lynn, 28 degrees gravity, for 3 cents; Lowell—I thought I introduced Lowell—yes, on the previous page, 2991, 29 degrees test, 3.13 cents.

Q. Where do you get your information as to those grades?

A. I get one of those from an official of the company and another through a friend from an official.

Q. You say that all the oil used in Boston is 34 gravity oil. You heard the testimony that the Consolidated used half 28 gravity oil, did you not?

A. Ninety-one per cent. is 28 gravity in the year ending October 31, 1905.

Q. Yet you think that Boston used 34 gravity oil entirely, practically?

A. Well, that is the statement I get from the president of the company.

Q. That would indicate, would it not, that the Consolidated Gas Company was operating very skilfully if it used 28 gravity oil to the extent of 91 per cent., a cheaper oil, whereas Boston was using all 34 gravity?

3147 A. It would indicate a good management after the oil reached the plant, certainly.

Q. Is it your statement of belief that the company will come back with 50 per cent. of 34 grade oil for the future? Did I understand you to state that?

A. This company only has expected that according to this contract as made in October, 1905, and the testimony indicates that it was not expected to use even as much as 50 per cent. the year around, but only in the winter months. I should say then, yes, to your question. In fact, the New Amsterdam and Standard go along even and produce a higher candle-power with the 91 per cent. of this low grade oil.

Q. Let me call your attention to your Boston testimony, page 492 of the record:

"By Mr. Auerbach:

"Q. After having examined the contract for the purchase of oil by the Boston and Bay State Companies of the company that sells to them, do you find any explanation in the price of oil which you need to give, which accounts for the higher manufacturing cost of the gas sold by these companies? A. Do I find any explanation?

"Q. That they cannot make gas at the same price as other companies because they pay too much for oil, which price you need not give? A. I have not found an explanation for the higher cost of Boston except one in the line of manufacturing cost and one in the line of distributing costs."

Now, you were dealing at that time with the price at which the companies could produce gas as a basis for an argument that the selling price ought to be reduced because companies then could produce gas for a certain price, weren't you?

A. Certainly.

3148 Q. Well, do you mean to say then that the contract you were talking about when you were testifying on that subject was a contract which was not then in existence but a contract which had been in existence some years before?

A. No. What I mean to say is that the company had entered into a contract at a reduced price for oil but which was to cover a year which had not then been completed. We were in the midst of a fiscal year during the testimony and at a later time I expected to be called in rebuttal where more would have been said upon it, but as I was not, Mr. Babson in his argument for the City stated, as I recall it—and I was present at the time and handed him the slip which he used—that the cost to the company would be less for the current fiscal year owing to the lower price of oil, the exact reduction being something I was not permitted to state.

Q. And you didn't know when I asked you as to what they were paying in Boston for oil and you said it was 4.49 and a little over that I was referring to the latest contract which was shown you; is that right?

A. I don't recall what I had in mind at the time, but I know this much that at that time I did not have the knowledge which I now possess of what they did pay during the year ending June 30th, 1906. They may have made another contract since the one they showed me. In fact the contract they showed me, as I recall it, was for two different grades of oil, different prices for each grade, and according to the proportion of each which they used would be the total average cost of oil per gallon, and at the time you asked me the question I did not know what proportion of each they were using, neither did I know whether they had made any new contracts, and 3149 & 3150 I am now giving the late information, only recently obtained, regarding the entire year ending June 30th, 1906.

Mr. Mathewson: I intend to take up another subject, but as it is about 1 o'clock perhaps I might as well suspend here.

The Master: Yes, if you have come to a good place. Now, as we are not to sit this afternoon, can we not start to-morrow morning at half past ten?

Mr. BURR: Yes.

Mr. MATHEWSON: Yes.

At 1 P. M. adjourned to October 19th, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 59.

3151 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *Oct.* 19, 1903.

Present: The Master, Mr. Mathewson, Mr. Kirby.

Mr. Burr sends word by a representative that he is ill and unable to proceed this morning and asks for an adjournment. There
3152 being no objection, the application is granted.

Adjourned until Monday, October 22nd, 1906, at 1 p. m.

Last Exhibits:

Complainant's 256.
State's W.
City's 59.

NEW YORK, MONDAY, *October* 22, 1906—1 p. m.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

EDWARD W. BEMIS resumes the stand.

Mr. BURR: In last Thursday's testimony you made some corrections in the printed copy of the testimony and stated there might be other changes when you had time to read over your testimony? Do you desire to make such corrections now, and, if so, what are they?

A. I will only make now those which seem the more important, leaving for private conference with the stenographer the minor changes.

Page 2960, near the bottom, occurs the line, "cost up to the time that the gas reaches the holder." It should be "cost up to the time that the gas leaves the holder."

3153 Page 2969, middle of page, occurs this statement of mine: "in exhibit 23A, page 1745, of the typewritten testimony;" it should be "page 174;" the "5," in other words, does not belong there.

Page 2972, the last line of the table, is subsequently referred to in my testimony, page 2977, as *as* "totals inserted by the witness," as in parentheses, to the effect that the totals appearing at the bottom of table were then inserted by the witness. That is correct, only the totals are not inserted; the totals there *in* page 2972 are not the totals I inserted, but the totals in the original exhibit, for that exhibit took into account sales under the Agency Agreement, and I excluded those, so I want to put in now the figures for the last line of table, page 2972, in place of those that are there.

By Mr. BURR:

Q. The last line of 2972? You mean the last totals?

A. Yes, the last totals. Instead of the figure "$645,616.55," it should be "$778,464.23;" and instead of ".3026," it should be ".3022.

Page 2984, in Table 8, 5th line, under 42d Street, the figure 11.54 should be 11.64. Then the last line of the long table on the same page, under 42d Street, where it is now 34.74 it should be 34.77.

By Mr. MATHEWSON:

Q. It is so in your tables. Is it merely an error in the copying of them?

A. Yes, but I thought you should have it. And, again, under 14th Street, where it is 37.77 it should be 37.73.

Q. That is wrong in the table, then?

A. Yes, some of these are my mistakes and some are the printer's. Now the very last line of the same page, where it is 25.59 under 42d Street it should be 25.29, and instead of 24.98 it should be 24.94.

3154 Q. Those were both errors in the table, weren't they, Professor?

A. I don't remember now. I have not stopped to see.

Q. Well, it so appears on mine.

A. There were two or three different copies made at different times and I had it corrected on one sheet and didn't have it corrected on some other sheets.

On page 2985, as a result of these other changes near the bottom where the figure occurs, 25.26 cents, it should be 25.09.

Q. Shouldn't it be above that? It should be 25.29 in your testimony, on page 2985?

A. I am figuring it out now. I think it should be 25.09; and the 11.77 should be 11.60. These changes are not large, but I thought I ought to tell you of them, as I believe they are slight errors.

By Mr. **Burr**:

Q. Is that 25 and——

A. I have got it 25.09.

By Mr. **Mathewson**:

Q. In the second place, also, on page 2985?

A. Oh, there are two places on the page. It should be 25.29 where it occurs first on the page, because that is a repetition of the table on the previous page. When I started to correct those now I said I was correcting the last part of the page. I did not notice I had made in my own page corrections in the middle of the page also; so, to make it clear, in the middle of the page 2985 the figure 25.59 should be 25.29, and in the next line the figure 24.98 should be 24.94. Then further down the same page, only about eight or nine lines from the bottom, where the figures 25.26 cents occur it should be 25.09 cents, and where it is 11.77 cents, on the same line, it should be 11.60.

Then on page 2989, about ten lines from the bottom, where
3155 the figure 11.77 is repeated, it should be 11.60. That makes
a slight change in the dollars—only a little over $4,000, but I mention it. $330,687.27 becomes $325,911.98.

Q. How about the 11.77 cents four or five lines above?

A. Well, where it occurs it should be the other figure. Then on page 2996, in harmony with these other changes, about ten lines from the bottom, where it is 7.87 it should be 7.85; and then, instead of its being $838,140.26 in the next line it becomes $833,364.96; and the next line instead of $13,969,000 becomes $13,873,020.

Q. Are these clerical errors made by the stenographer or are they errors in your testimony?

A. The latter errors were mine, following my taking a wrong start, but they don't make changes that amount to anything really; still I thought I would correct them. I think they were mostly mine.

Now, page 3000, near the bottom, after the figure in the line beginning "which would reduce the cost from 33.52 to 26.68," the "which" should be "and;" and after 26.68 cents it should read "per thousand feet of gas sold;" or after either, for that matter.

On the next page, 3001, 5th line, instead of the words "solely for that in" should read the "last two and one-half months of."

Page 3007, the table, second statement in the table, occurs the words "taxes and dividends in excess of 4 per cent. on $38,643,590.14 stock invested in"; after the word "in" it should read "other companies."

Page 3052, the next day's testimony, the last line, the last figure, 73.63 should be 78.93.

Page 3066, last line, before the last line should be the word "exceeds," so it should read, "the total increase in value exceeds the entire amount spent for repairs and renewals by $4,676,497.58."

At the bottom of page 3074, next to the last line, the fig-
3156 ures "in 1883" should be omitted, so as to read, "Now the
consumption actually fell off a little from 1893 to 1895? A. Yes."

Page 3085, a mistake I made in computation on the spur of the moment here at the table. I looked at the wrong figure here in a column and it changes it as follows:

In the sentence beginning in the tenth line it should read, "Now during that period the per capita sales increased from 3,288 feet to 4,550 feet, a period of ten years, and there was an increase per capita of 1,253 feet, or 125.3 feet per year."

By Mr. **Burr**:

Q. What becomes of the balance of the sentence?

A. All the other sentences I leave. Page 3094, sixth line from bottom, the words "in the" should be "no," so as to read, "and no increase per meter."

Page 3096, the fourth line, after the word "deduct" should read "from the amount." And in the next line, after the word "have" before the word "reached" should be "not," so as to read, "have not reached."

On page 3123, on the next day's testimony, the word- in the seventh line from the bottom, "per cent." should be changed to "cents;" 1.27 per cent. should be 1.27 cents.

The last change I have noticed, save very minor ones, is on page 3140, third line; instead of 27.28 degree, it should be 27.28 degrees.

The **Witness**: Now, before the cross-examination continues, I would like to call attention to a letter I have just received from President Richards of the Boston Gas Company, as a continuation of his previous letter to me, evidently. Shall I have the privilege of referring to it? It is intended to be sort of a correction to his
3157 previous letter. He says "In your letter to me from Cleveland, dated October 1st, you asked if the oil used by us during the year ending June 30th, 1906, was 34 degrees gravity, and I replied to you on the 4th of October that it was 'practically 34 degrees.' I find on a further and more thorough investigation that we used a considerable amount of oil averaging 29 degrees gravity during the period referred to, but finding that in cold weather we could not get the desired candle-power with the low gravity oil, we obtained during the cooler weather oil of about 34 degrees gravity, thus bringing the average gravity of the oil used by us during the year ending June 30th, 1906, substantially below 34 degrees. I write the above to correct any wrong impression you may have obtained from my former communication on the subject."

Now, I have assumed that from the two letters, one saying practically 34 degrees and the other saying there was substantially less than 34 degrees on account of the reasons he gave, not having any better guide, I have assumed one-fifth was 29 degrees and the other four-fifths 34 degrees.

Mr. **Mathewson**: Do you think it is worth while to assume these things? Can we not assume the same things, Mr. Master, if we want to?

The **Master**: I think so, probably.

The **Witness**: The 3.13 cents for 29 degree oil paid in Lowell, remains undisputed.

The **Master**: You may proceed.

By Mr. **Mathewson**:

Q. I have not seen any evidence except as to hearsay——

A. I will produce it now if you like.

3158 Q. I don't think you have any evidence, if you don't know yourself.

A. I have a letter here.

Q. I don't think that is evidence. It is a subject for cross-examination, however——

Mr. **Burr**: You can bring it out on cross-examination.

Q. You observe that President Richards says he found it impossible to maintain the candle-power in Boston which you say was about 19, without the use of 34 gravity oil?

A. 19.37 for all after it was mixed——

Q. Yes, whatever it is——

A. He had a much larger proportion of coal gas to mix than they had here.

Q. You observe he says he was unable to maintain even the 19 candle-power which you say was delivered in Boston without the 34 degree oil?

A. It is much colder there.

Q. And that the candle-power is much lower, isn't it?

A. Yes, sir.

Q. Do you know the proportions of coal and water gas in Boston?

A. I think I can tell you in a minute. The water gas made during the year ending June 30th, 1906, was 1,421,194,000 feet and the coal gas made was 304,340,000 cubic feet, and the coal gas bought was 2,262,654,700 feet, so that out of about four billion feet that was either bought or made, 1,421,000,000 or about 35½ per cent. was water gas.

Q. How do you know that the coal gas came into Boston at all and did not go to some of these subsidiary companies, roundabout?

A. Which gas?

Q. Not in the Consolidated Company, the coal gas?

A. That was bought from Everett. The sales to private consumers and the city by the Consolidated Company was 3,479,998,565 3159 feet, and since the gas, both coal and water gas, that was made was only 1,725,534,000 feet, the other half of the gas sold in Boston must have come from Everett.

By Mr. **Burr**:

Q. What do you mean by Everett?

A. Well, the coke oven plant at Everett which makes coal gas, sells gas to Boston and Boston therefore gets gas from three sources; it gets it from the coke oven plant at Everett and then gets some from its coal gas station and some from its own water gas station.

By Mr. **Mathewson**:

Q. You don't know whether it is sent to Roxborough, Brookline, Dorchester or Jamaica Plains, or what proportion went into the pipes of these companies?

A. No. It is all treated as one company now.

Q. Yes, but they are different pipes and different systems.

A. I think they are laced up together at present.

Q. Before we leave this question of oil in Boston, I want to call your attention to the fact that you testified the other day that when you testified in Boston in the fall of 1905—it was the fall of 1905, wasn't it?

A. I testified—I have written out that whole statement here——

Q. No, no, what was the date?

A. Well, the testimony is page 234 of the printed statement, which was reprinted for this case.

Q. Leaving that out, when did you testify in Boston last?

A. It was in the neighborhood of January, 1905.

Q. But you said you were testifying for the year ending June 30th, 1904, in dealing with the cost of gas in Boston, is that right?

A. Yes.

3160 Q. And that a contract was then shown you which did not deal with the year ending June 30, 1904, or did the contract then shown you deal with that year?

A. In my testimony at that time I did not refer to a contract. The contract was shown to me later.

Q. Well. the contract which was shown you later in that hearing and which you referred to in your testimony here?

A. Yes.

Q. What period did that contract cover?

A. Just a minute. I have it all here. It covered the year—it was dated May 9th, 1904, and was to begin to run from July 1st, 1904.

Q. Did the contract so provide that you saw?

A. Yes.

Q. And what were the rates in that contract?

A. That I have never testified to because it was agreed that I should not state what they were.

Q. Did you not say that that was at a lower price than the four and one-half cents average which you testified in the Gas Commission hearings the Boston Company was paying?

A. I was asked, "Wasn't it as high as 4.49 cents?" And my answer was, "Yes."

Q. Well, to what contract were you referring when you said it was as high as 4.49 cents?

A. This contract that I was shown in Boston that was to begin to run from July 1st, 1904.

Q. But you said that there was a contract which you were shown at that time which ran at a lower rate than an average of four and one-half cents?

A. Well, I find I was mistaken in that. I will say this——

Q. Will you look at this paper I show you (handing paper) and say whether that is a copy of the contract of May 9, 1904, to which you refer?

A. Yes, it is similar to the notes I have here of it.

Q. Will you point out where in that contract there is any provision that it shall begin to run on July 1st, 1904, instead of 3161 at its date?

A. No, I do not find anything here, but I have a note to that effect taken at the time. Perhaps it came in the course of conversation.

Q. It evidently is not in the contract?

A. I do not see it there. I had made the note at the time and Mr. Richards was present while these contracts were produced by him, and I must have got it from some remark made at the time.

By Mr. **Burr**:

Q. Do you know that the paper produced by Mr. Mathewson is a copy of the contract shown you in Boston? If you don't, say so, and if you know, say so, also.

A. It appears to be quite in harmony with my notes in every respect, so far as I can determine it.

By Mr. **Mathewson**:

Q. I state that that is a copy which I have procured, or purports to be a copy. You have no doubt that it is?

A. I have no doubt that it is.

Q. This contract of May 9th, 1904, which you say was to begin to run July 1st, 1904, for the next year, calls for a large quantity of oil at 4½ cents per gallon, an average of 4½ cents per gallon, to consist of one-half of the Texas product at 4 cents and one-half of the northern gas oil at 5 cents, does it not?

A. Yes.

Q. So that this letter covers the period during which you were testifying in Boston, and the year beginning July 1st, 1904, and ending June 30th, 1905, as you understood it?

A. Yes. It did not cover the year for which I have given figures in this testimony.

Q. That is, it did not cover the year ending June 30th, 3162 1904?

A. No, June 30th, 1906, I just meant to say.

Q. It does not cover either the year ending June 30th, 1904, does it?

A. I understood that it was to take effect July 1st. If it did take effect a month earlier or a month and a half earlier of course I was mistaken to that extent.

Q. Do you know what the Boston Gas Company——

By Mr. **Burr**:

Q. What does the fact appear to be from this copy you have been handed by Mr. Mathewson as to the time that that contract to which you have alluded is to begin to run?

A. It does not state. There is only a difference, to my mind very immaterial, between May 9th and July 1st, of 1904.

Q. But please be accurate as to the times that these contracts are to commence to run. If you are sure of it, that is one thing——

A. There is nothing in this contract that shows when it is to begin to run.

Q. There is nothing in this paper which you have been handed to show when the contract, if that is a contract, is to begin to run?

A. That is right, and I had the note that I suppose that I got at the time from a conversation with Mr. Richards that it was to begin to run July 1st. If Mr. Mathewson asserts that it began to run May 9th, I have only to say that I have this note and it may be wrong.

By Mr. Mathewson:

Q. Were you not referring to this contract of May 9th, 1904, a copy of which I have shown you when you said that the price of oil in Boston at the time you were testifying in the gas case
3163 before the Gas Commission in New York was as high as 4.49 cents?

A. I was referring to that contract.

Q. Now as a matter of fact, do you know what the Boston Gas Company paid for its oil on the average for the year, ending June 30th, 1904?

A. I do, I think.

Q. What was it?

A. In that year they paid—the Bay State Company paid 5 4-5 cents, and the Boston Gas Company 5.7 cents.

Q. Per gallon?

A. Yes. Then they made this contract——

Q. Of what grade?

A. Then they made this contract which was lower, and they may have it down still lower since.

Q. That you have already testified to, and it is not necessary to repeat it, as it takes time. What grade was this oil which averaged 4.49 cents for the year ending June 30, 1904, to the Boston Company?

A. I am not positive that I have information on the subject, but I believe I have information that it was to some extent a higher grade of oil than they are now using and I don't think they were using any 28 degree or 29 degree oil.

Q. You wish to correct your testimony of the other day when you said that that contract was not the one which was shown you?

Mr. Burr: Well, which contract—what contract do you mean?

Mr. Mathewson: May 9, 1904.

The Witness: I don't know what you refer to. Will you point to the page?

Mr. Burr: Are you referring to a paper which you have just held up to him?

Mr. Mathewson: This copy of the contract of May 9, 1904.

3164 The Master: Why not mark it for identification or read it, because it makes the record a little blind in looking it over afterwards.

Mr. Mathewson: I hardly think it is necessary. He has referred to it and he stated the figures which it provides.

The Witness: I have my testimony and I do not see any conflict between my testimony and what I say now.

Q. Didn't you say at the time that the contract which was shown to you in Boston was a contract which provided for a lower rate than four and a half cents?

A. I will read:

"Q. And whether the contract which was shown to you when you testified before the Boston Gas Commission on the last occasion theretofore, was not the current contract? A. Well, that may be.

"Q. Well, that is what I say, the current contract was shown to you at the time that you testified before the Boston Gas Commission and it showed that the Boston Gas Company under that current contract was paying a little over 4.49 cents per gallon for oil, didn't it? A. No, it did not.

"Q. You are sure about that? A. 4.49 or something like that was what the company had been paying, but the contract which they showed me was not a contract of which I could testify because I had agreed not to."

Q. I referred to the current contract at page 3143, and asked you if it showed that the Boston Gas Company under that current contract was paying a little over 4.49 cents per gallon for oil, and you answered, "No, it did not." Now don't you wish to change that?

3165 A. I think I do. That contract I thought was lower because the price became so much lower in the next year. Now I have never seen that lower contract, and not having it in my hands and not having seen for months the contract which I did see in Boston——

Q. I simply asked you the question as to the current contract and you answer that you do wish to correct your testimony, and it was a little higher than 4.49?

A. Yes. That is, it might be higher. It depends altogether on whether they used the proportion they had the right to use.

Q. Does not the contract of May 9, 1904, state that it shall average 4½ cents?

A. Yes.

Q. Now on page 1304 of the Gas Commission testimony, where you testified in respect to the price of oil, appears the following?

"Q. So that oil is no higher here apparently and not quite so high as it was in Boston, is it? A. That is true.

"Q. And if it was four cents in Cleveland and higher in the east, it could not have been a great shock to find it was 4.49 in New York? A. The figure given me in Cleveland was an offhand statement from one of the officers who said he was not sure."

Q. Now I understand that you have testified here since that you find you were mistaken about the cost of oil at Cleveland?

A. Yes, the cost of oil in Cleveland is 2¾ cents last year.

Q. Let me call your attention to the statement presented to the Commission of Gas, Oil & Electric Light in Chicago, as it appears in the pamphlet which your counsel, Mr. Burr, has quoted from occasionally, and see if I quote you correctly: "The City of Cleveland is one of the largest——

Mr. Burr: Referring to what page?

3166 Mr. Mathewson: 20.

Mr. Burr: And the date when this was given?

Mr. Mathewson: December 27th, 1905, it appears on page 4 as the date of Professor Bemis' appearance, and this statement appears from its heading on page 16 to have been given on December 29th, 1905.

Q. (Continuing:) "The City of Cleveland is one of the large cities that charges 75 cents for its gas. In Cleveland they get their coal and oil cheaper than they do here, and there they have to compete with natural gas, and in addition to the ordinary taxes they have to pay a franchise tax amounting to 5 cents per thousand feet of gas. Oil and coal are cheaper there; I don't know the exact figures, but the treasurer and vice-president of the company told me they were paying 4 cents for gas oil there. Labor also is cheaper in Cleveland than here." Now is it true that the treasurer and vice-president of the company told you that the charge was 4 cents?

A. Yes, in a street car one day, and he told me at the time he was not sure.

Q. Is that what you refer to in this testimony, when you state before the Gas Commission "The figure given to me was an offhand statement from one of the officers who said he was not sure?

A. Yes.

Q. You did not state in this statement to the City of Chicago that you were not sure anywhere, did you?

A. I don't know.

Q. Well, if you did I would like to have you show it to me?

A. That is only a condensation. I don't remember that I did, but I have since seen the contract, and it is 2¾ cents.

Q. Cheaper even than it is in Chicago?

A. I don't know the price in Chicago.

3167 Q. Didn't you testify before the Gas Commission that your information was that it was about 3 cents in Chicago.

A. I never had definite information. One engineer who went around with me refused to tell me, but from some remarks he made I thought it might be in that neighborhood; but afterwards I felt it was not sure. I had seen no contracts or definite statements.

Q. Didn't you testify before the Gas Commission that your best information was that it was about 3 cents?

A. Yes, I think I did, but don't remember precisely and I did not feel positive about it.

Q. Referring to tables 8 and 9, the first is at page 2984 of the record, comparing operating cost at the Central Union Coal Gas Station and at the 14th and 42d Street coal gas stations of the Consolidated Gas Company. You stated at page 2987 of this record that if the Consolidated Gas Company received for its coke the same amount which you computed as received by the Central Union "This only means a difference of 1.01 cents per thousand feet distributed over the 2,809,586,000 feet made by the 14th and 42d Street stations. Will you show how you procure that result?

A. By turning back to the previous page I gave a table——

Q. Table 9?

A. Yes, and that tons of coke sold, the dollar mark does not belong there, 57,844.06, multiplied into the 15 cents, gave the $8,676.61

and the 56,932.93 tons at 42d Street multiplied into 33 cents, the difference there per ton, gave me $18,787.87, and then I added the two, making the $27,464.48, which is a little more than a cent if distributed over the 2,809,586,000 feet.

Q. You say it is a little more than a cent. It is 1.01 cents?

A. Yes.

Q. Did you not divide the amount in dollars into the amount of feet which would give 1.01 instead of dividing the other way?

A. That is possible.

3168 Q. In other words, you reversed the process completely?

—. But it is——

Q. It happened to come to perhaps not over two or three tenths of a cent difference?

A. It does not come out that much?

Q. But you should have divided the amount in dollars by the number of feet, should you not, instead of the other way?

A. Yes, that is what I thought I had done, but when I came to look it over, I found it was about the same.

Q. You divided the other way and then displaced your decimal point and that brought it somewhere near right?

A. There is not a difference of over a tenth of a cent?

Q. But there would have been if you had pointed off your decimal properly, when you divided originally, you would have got about $9,000 or $99,000 instead of about one cent.

A. I don't know how it was done but I did this in giving it. I glanced through and saw that one cent would mean about that amount and did not stop to go through the full computation again. It is .98 of a cent instead of 1.01, a difference of .03 of a cent.

Q. Yes, you have this time divided the amount of dollars by the number of cubic feet, haven't you?

A. Certainly.

Q. Now, you have reached that result, as I understand it, assuming that the arbitrary figure at which coke is transferred back and forth between coal and water gas plants, is really that figure at which the coke of the company is sold or could be sold in the market. Now, let us see if we cannot find out a little more accurately what the difference per thousand feet due to coke would amount to. Will you take from table 8 the 13.49 cents which I understand includes your computation for coal gas at the Central Union station, after deduction for oil and repairs——

A. Yes, that was the figure.

3169 Q. —and now take the 14th street station, which is 24.94 cents according to your corrected figure this morning after a like deduction.

A. Yes.

Q. Now, you deducted the oil in reaching these two figures because the gases might at the time you compared them have been enriched to different degrees?

A. Yes.

Q. So you thought that was fair. But, as a matter of fact, the Central Union Station, as you have said, has more machinery, and therefore the repairs would therefore naturally be larger than they would at the station which had less machinery?

A. The repairs are larger on coal gas than water gas, but these are repairs on the coal gas separate.

Q. I understand, but as between two coal gas stations, the coal gas station which has the most machinery and the least hand labor would have higher repairs, as you said the other day, than the one with less machinery and more hand labor, because you don't have to repair you- *man*.

A. Yes.

Q. Therefore, in order to be fair in this comparison, we must leave the repairs in because that is a part of the efficiency of the Central Union plant.

A. You cannot determine that very carefully and accurately—you could over a period of three or four years, because——

Q. But the Central Union appears to be 4.48 cents and the 14th street 3.79 cents?

A. Yes.

Q. And the repairs at the Central Union station should be somewhat greater on the average, having more machinery. Now, will you add those repairs to the 13.49 cents for the Central Union and the 24.94 cents for 14th street, and see what we have, eliminating only oil?

A. In other words, add 4.88 to the Central Union and that makes 18.37 cents; now add 3.79 cents to the 14th street would make 28.73 cents.

3170 Q. Now, have you a copy of the Central Union testimony here?

A. No, I did have the other day.

Q. You understand in the Central Union and all these other cases the exhibit was made up, showing in considerable detail what was received for different products, at your request, upon the order of the Commission?

A. Yes.

Q. Well, now, I will show you that exhibit and ask you to look at page 212 and see how much coke was used in the generators at the Central Union.

A. It is an exhibit I have never seen.

Q. It is on file with the Gas Commission and also on file with the printed case on appeal, where Mr. Mayer, one of the defendants here, represented the State.

A. I have never seen it though. Page 212?

Q. Yes. Give me the amount of coke used in the generators.

Mr. Burr: Let us get this straight, if you please. This purports to be Exhibit 22 before the Gas Commission, appearing upon the printed record, being the papers on appeal in the matter of The Commission of Gas & Electricity in the matter of the complaint of H. Brown and others against the Central Union Gas Company, page 212.

Q. If you will give me the amount of coke used in generators?

A. Water gas; amount and value of coke used in water gas generators?

Q. Yes, that is the coke transferred from the coal to water gas plants. Just the amount in dollars, I do not care for the amounts, but just the dollars?

A. $34,177.41.

Q. And the amount used under the boilers?

A. $3,204.15.

Q. That seems to be the coke used in water gas which came from the coal gas station?

A. Yes.

3171 Q. Page 214, coal gas, coke used, $2,626.05?

A. $2,626.05.

Q. And the amount sold, page 215, that is the amount sold in the market and not merely transferred between stations?

A. What page do you say it is?

Q. Page 215.

A. Amount and value of coke sold or available for sale out of the year's product $114,810.02.

Q. Yes. Well, that represents all the coke of the Central Union Company which was transferred from the coal gas plant to the water gas plant and used in generators and that transferred to the water gas plant used under boilers and all the coke produced which was used at the coal gas plant and all the coke which was sold; in other words, all the coke of the company?

A. Yes.

Q. Now will you give me the total amount upon those figures for the coke of the Central Union Company, which will be simply the addition of those four items.

A. $154,817.63 appears to be the amount and value of coke produced, whether used or sold, as given at the bottom of page 214.

Q. Now will you divide that by the total coal gas made by the Central Union Company which appears at page 132 of that record.

A. 670,518,000 feet; that divided into $154,817.63——

Q. I make it 23.09 cents.

A. That is what I make it.

Q. The result is 23.09 cents per thousand feet of coal gas manufactured, is it not?

A. Yes.

Q. Now will you look at page 2142 of the printed record before the Gas Commission in the Consolidated case and tell me the amount realized for the coke of the 14th Street station of the Consolidated, all of this being for the nominal year ending October 31st, 1905, respecting which you have testified?

3172 Mr. Burr: As it appears on that page. Is that an exhibit?

The Witness: It is Exhibit 149.

Q. It is $178,527.11, isn't it?

A. Now you ask me to do what?

Q. If you will state the amount received for the coke produced at the 14th Street station for the nominal year October 31st, 1905?

A. Before or after deducting the cost of handling, labor and cartage?

Q. 178,527.11?

A. That is before the deduction.

Q. Yes, you have already dealt with the labor of cartage and handling in your table previously.

A. Was it on the same basis in the Central Union that I just figured?

Q. So far as I know.

A. The figure is $178,527.11.

Q. Now, divide that by the amount of coal gas made at 14th Street station, which appears on page 2145 of the same record to be 1,360,284,000 cubic feet, and see how many cents per thousand feet produced that would mean for coke.

A. It would be 13.1 cents plus.

Q. 13.12 cents, I make it, if that is right?

A. Well, I guess so.

Q. And if the Central Union receives 23.29 cents for coke from its coal gas and the 14th Street station receives 13.12 cents that would mean that the Central Union received how much per thousand feet of coal gas made beyond that received by the 14th Street station?

A. 9.97 cents.

Q. Now, if you will take your figures at the foot of table 8 and add 9.97 which is the difference received in coke to the 18.37 of the Central Union, it will make how much.

A. 28.34.

Q. As against 28.73 for 14th Street?

A. That is right.

3173 Q. So that upon that showing the difference would seem to lie almost wholly in the amount received for the residual coke as between 14th Street and Central Union stations, with practically no difference in operating cost outside of that?

A. Well, there is a difference in labor cost although——

Q. Yes, but those smaller items seem to adjust themselves back and forth so that there is practically no difference?

A. On that basis I shall have to look into the coke matter further before I see what other facts enter into it. Of course those computations work out that way.

Q. We have now been proceeding in the figures in the exhibits which include the figures at which coke is transferred back and forth from the coal gas to the water gas plants as well as upon the amount received for the coke which is sold by the two companies in the outside market. Will you look at page 414-A of Exhibit J.

A. In this case do you mean?

Q. Yes. And tell me the amount of coke aside from screenings coming from 14th Street plant and the amount received from it for the calendar year ending December 31st, 1905?

A. I don't know if I am looking at the particular figure you suggest from 14th Street station on account of coke transferred?

Q. No, coke sold I am referring to now, so as to get at the market price?

A. Coke sold by 14th Street you say?

Q. Yes.

The WITNESS (continuing): Sold to outside parties?

Q. Yes.

A. Yes. I thought at first this was perhaps an exhibit of several stations.

Q. No, I am now getting at the difference per thousand feet on account of coke sold by the Central Union and the 14th Street plant of the Consolidated on the basis of market prices; that is, 3174 what they can sell it for in the market or do sell it for?

A. Coke sold to outside parties 117,940.7 tons?

Q. No.

A. Loads.

Q. Oh, loads, yes.

A. Being 260,118.34.

Q. That is for both 14th and 42d Streets, the two coal gas plants, Professor, and of course we only produce coke at those two plants, you understand?

A. Yes, exactly.

Q. Then that means, according to my computation, 78,308.51 tons?

A. Counting a load as 1,500 pounds, I suppose?

Q. Yes. Will you take the screenings for 14th and 42d Streets and tell me the amount received for them?

A. Screenings 33,155.5 loads; $30,114.14.

Q. And that if I am correct means 27,847.88 tons?

A. Yes.

Q. About 2,000 pounds to the ton?

A. Excuse me. May I ask you how many pounds you give to a load?

Q. 1,500 for coke and 2,000 for screenings.

A. Then there would be the same number of tons and loads, wouldn't there?

Q. I am talking about long tons, 2,240 pounds to the ton. That would make how many tons all told, coke and screenings, and how much received for——

A. Well, taking your computations on what it amounts to in tons——

Q. If you have any doubt about it verify it if you wish to, Professor?

A. No, I haven't at present. It would be 106,156.39 tons. And did you ask the price?

Q. Yes, the total.

A. $290,232.48.

Q. At how much per ton on the average?

A. $2.73 plus.

Q. 2.733?

A. Yes.

Q. Now, will you take the amount of coke sold by the Central Union, which you stated to be from the exhibit, $114,810.02, 3175 and will you kindly reduce the pounds to tons and say how many tons that represents—the long tons, the same as the Consolidated?

A. I make it 26,787——

Q. 26,787.65?

A. Yes. It was not quite 26,788.

Q. You are willing to accept the decimal as I will give it—26,787.65?

A. Yes.

Q. And that would mean how much per ton for the coke for the Central Union?

A. Dividing that into $114,810.02 is what I must do. Well, it is nearly $4.29.

Q. I make it $4.285.

A. Yes, I think that is right.

Q. Then based on the sales by the Consolidated and by the Central Union to outside parties the Consolidated receives $2.733 per ton for its coke against $4.285 for the Central Union, or a difference of how much per ton?

A. I do not understand this exhibit yet to be able to state whether I assent or not to your statement that these are prices actually received. I am making these computations, but I do not want to assent to anything further on the basis of these computations. There is a difference between 4.285 and 2.733 cents——

Q. Well, they appear in the same volumes and appear to be *bona fide* exhibits, the same as those from which you have computed, do they not?

A. Well, how these figures are obtained I cannot say, because I am very clear in my mind that there was another exhibit I used giving the value of the coke used in making water gas which was very different.

Q. To what are you referring when you say you cannot say from what source these figures are derived the Central Union exhibit?

A. Yes, the Central Union exhibit gave very different figures from the value of the coke used in making water gas, so I must go over these exhibits very carefully to reconcile them. I do not understand them yet.

3176 Q. As far as the Consolidated exhibits go, those you have been over very carefully?

A. Yes, sir.

Q. And on the basis of this exhibit which is a part of the printed case on appeal in the Central Union case, the computations you have just made would seem to be correct, wouldn't they?

A. Why I think the figures are correct, but what they mean I cannot tell till I look them over further.

Q. Don't they appear by the exhibit to be exactly what I have stated?

A. They are in such conflict with that other exhibit of the Central Union before the Gas Commission that I am not prepared to say.

Q. This is the exhibit of the Central Union before the Gas Commission to which I have just called your attention?

A. But being one which I have never seen before I shall have to take a little time to look it over. I cannot do it in a minute.

Mr. Burr: The last exhibit is Exhibit 22, is it not, Mr. Mathewson? The one you refer to, appearing on page 210 of the printed case to which reference has been made previously.

Mr. Mathewson: Yes.

The Witness: I will call attention to the fact that I did not appear in the Central Union case as I did in the Consolidated a year ago. I prepared data for questions for Mr. Ford, but I never saw the answers. This is the first I have seen of this.

Q. And requested that information to be presented in this form for all the companies?

A. Yes.

Q. And assuming that this exhibit in the Central Union case to state the fact, the results would be sufficiently computed, wouldn't they?

A. Why, I think I have computed carefully, but what they imply I should not want to say until I took really a night's study.

Q. I do not think you have answered as to what the difference
3177 would be between the $4.285 and the $2.733.

A. It is $1,552.

Q. Per ton?

A. Yes.

Q. Now, in your testimony before the Gas Commission you had before you Exhibit 93 in this case or its equivalent, showing the cost of gas for the nominal year ending October 1st, 1905, did you not?

A. I had part of it at least. I think it had all been handed in but I am not sure when I testified that I had examined more than the consolidation of it all in a single table. Whether I had before me a separate return for each company I am not sure.

Q. What do you mean by a separate return for each company, because this relates only to the Consolidated Company?

A. Oh. That was Exhibit 145. That is the one. I meant to say that I was not sure whether I had it fully in my possession but I did have what is in Exhibit 93.

Q. Didn't you also have Exhibit 145 before the Gas Commission which showed in details the items of this?

A. That was handed in at the time I testified but I don't think I had very fully examined it.

Q. Well, the cost of the gas made, not sold, at the station, appears in Exhibit 93 to be 32.84 cents, for the nominal year ending October 31st, 1905. Now in your computation of the proper charge of the cost of gas, as given before the Gas Commission did you make any deduction from the station cost at all?

A. No, I was not then aware—I had not had opportunity to analyze these other companies. In fact, the exhibits had not yet been made in the Central Union, or the Standard, or the New Amsterdam at the time when I testified.

Q. So that your present action in deducting something from the station cost which appears in Exhibit 94 for the calendar year 1905 to be 32.77 cents, or a little less than for the nominal year,
October 31st, 1905, is based on the exhibit showing the
3178 operation of the other companies in the City of New York,
which subsequently came to your knowledge.

A. And on studies of oil.

Q. Well, you had before you before the Gas Commission all the testimony in respect to oil that appeared in the gas record, didn't you—in the record in that case?

A. I didn't have these later figures in Massachusetts at all.

Q. Do you then base your deduction at this time on the fact that you had the statements of these other companies and also on the further fact that the oil is obtained at a lower price in Boston?

A. Boston and Lowell and Lynn.

Q. Were not the data available in reference to those in the office of the Commission in Massachusetts in 1905 when you testified?

A. The data for the year ending June 30, 1906, had not been delivered to the Commission.

Q. But for all previous years it was there, wasn't it?

A. Yes. I did not get it though because I didn't have time.

Q. You know that the cost of oil for the nominal year ending October 31st, 1905, as shown in Exhibit 93, is only 4.04 cents per gallon?

A. Yes. 91 per cent. of it was oil that cost only three cents in Lynn.

Q. Because the greater part of that year—in fact all the cold part of that year came under the 20 candle-power rate, you remember?

A. Yes.

Q. Now, referring to candle-power, do you know what the penalties are in Boston for failure to maintain candle-power?

A. No.

Q. Do you — what they are in New York under the present law?

A. I have noticed some testimony about it in this case.

Q. Do you remember Mr. Cowdrey's testimony in Chicago, or his statement that you must make an allowance of two candles between the candle-power at the station and at the limits to which it is sent?

3179 A. I think he said something of that kind between at the station and at the limits. I think he may have. Others dispute that.

Q. Mr. Cowdrey is the manager of the Laclede Gas Works in St. Louis, isn't he?

A. Yes. I heard others say differently.

Q. He is a man of large experience?

A. Certainly.

Q. Assuming that the penalty is $1,000 for each offense in not maintaining candle-power, and that the tests take place daily, as they do under the present law, would it not be necessary in prudence to maintain a higher candle-power above the standard than what would be necessary if a penalty were affixed only for a failure to maintain the candle-power for three consecutive tests taken a week apart?

A. If what you state is true the law is more rigid.

Q. And there would be required a larger margin of average candle-power in order not to fall at any time below the maximum?

A. Yes.

Q. You have referred to the removal to Astoria, Professor, as probably resulting in certain economies. Do you remember the testimony of Mr. Bradley that the economies which he had in mind had been obtained so far as the water gas was concerned?

A. I remember that he testified about having affected some economies which he had previously had in mind.

Q. And that he had no idea that he could make coal gas at Astoria any cheaper than he is now making water gas in New York?

Mr. Burr: I don't think that is the testimony.

Mr. Mathewson: Yes, it is.

Mr. Burr: Then you had better refer to it specifically. 3180 Mr. Bradley started out by saying before the Gas Commission that he could economize up to five cents, and afterwards he said here whether he could economize was problematical. Now, that is my recollection of the testimony.

Mr. Mathewson: Mr. Bradley testified before the Gas Commission it would make a difference of five cents, and subsequently stated he referred to the coal gas and that that economy had been already made, and that he had reference as well to 20 candle-power and not the 22 candle-power which prevailed at that time. He also stated he could not produce coal gas cheaper at Astoria than water gas is now produced in New York.

Q. You understand that Astoria is wholly a coal gas plant?

A. Yes.

Q. And as to what the result will be at Astoria will depend considerably, will it not, upon what they are able to obtain from their coke as a residual?

A. Yes.

Q. Coke is a substance which is very easily damaged, is it not, by storing and by transfers?

A. It is affected by it. It is injured by it.

Q. The amount of screenings increased?

A. Yes, sir. I did not mean to say that the question of residuals would be the sole economy—the sole thing that would effect economies at Astoria.

Q. Well, but you have said that after the plant has an output of 700,000,000 feet or such a matter there is practically no further economy in connection with production?

A. But there would be a great economy over 14th and 42d Streets.

Q. But you have in mind that 14th and 42d Streets now produce about one-fifth of the gas of the Company, have you not?

3181 A. Yes, but as regards that coal gas, 2,800,000,000 feet per year, I think there would be great economies at Astoria.

Q. Assuming that at Astoria you were able to make a saving of five cents on that coal gas?

A. I think it ought to make ten cents.

Q. Well, some of us do not believe it, but assume that it made ten cents saving at Astoria, below the present cost, that would make a difference in the total output of the gas of only two cents, including water and coal gas, would it not?

A. About that.

Q. And if there was a reduction of five cents in the cost below 14th and 42d Street, that would mean a difference of only one cent in the total volume of gas?

A. I think they ought to do as well as the Central Union; that is my point.

Q. Before we get through perhaps it will appear we are doing as well now, aside from what we get from our residuals. Your figures this morning would seem to indicate it. And if we have a coal gas plant operating at Astoria of course we would not have to use this high priced oil to which you referred, but how about coal. We will have to use coal instead of oil, will we not, very largely?

A. Coal and coke. Oh, yes, coal for coal gas.

Q. And how are you going to enrich it to 22 candle-power? You cannot get that 22 candle-power gas out of coal, can you without any enrichment?

A. No, I testified there would be oil used but not as much used per thousand feet.

Q. Wouldn't there be just as much oil used in enriching coal gas at Astoria as there would be in enriching it on Manhattan Island?

A. Yes, that is true. I meant as much as in making water gas.

Q. But so far as coal gas which we are now producing is concerned and which would be produced ultimately at Astoria, it would take just as much oil to enrich it in one case as in another?

A. Yes.

3182 Q. So that the economy to which you refer by the use of oil would only come up in connection with surplus gas produced beyond that?

A. Yes, instead of enlarging the water gas plants or in substitution for the water gas, to some extent.

Q. Well, let us see about that. You understand that the sales of the Consolidated Company for the past calendar year were 13,283,000,000 or thereabouts, and that it only produced something over 10,000,000,000 feet itself and obtained under the Agency Agreement 3,000,000,000 feet more.

A. Yes.

Q. And you observe that that gas that it obtained under Agency Agreement represented a station cost of 33.38 cents, by Exhibits 94, as against 32.68 cents for the gas manufactured by the Consolidated?

A. Yes.

Q. Both being very largely water gas?

A. Yes, that is true.

Q. And the first unit at Astoria with its capacity of 20,000,000 feet per day maximum capacity would mean, according to ordinary computation, an annual capacity of about 4,000,000,000?

A. Yes.

Q. So that the first unit, costing, as the testimony is, something like $10,000,000, exclusive of land and tunnel, would only take care of the amount of gas which the Company is now procuring from other sources, and make a very small margin over to take care of this expected increase?

A. I did not think it would be a substitute at all for the gas it gets from other sources.

Q. You did not think it would be?

A. No.

Q. Why not?

A. Because it is much cheaper to buy that gas at the price they are paying than to pay interest on a plant to make it. In other words, the ten per cent. as margin over and above operating cost is less than interest and depreciation on a plant, I think.

3183 Q. Did you know that a suit was pending already against one of these companies from which the Consolidated receives gas because it delivers gas to the Consolidated for the figure that it does, the claim being that it is too small a figure to represent cost and return?

A. No, I am not acquainted with the lawsuit.

Mr. Burr: *The* which suit does counsel refer? To the suit now pending with this suit in the United States Court?

Mr. Mathewson: No. I merely asked the witness if he knew that the suit was pending. He says that he did not. That seems to end it.

Mr. Burr: Neither did I know, and it does not make any difference to the issues here or to the defendants.

The Witness: In my belief the Astoria plant will be used as a substitute for the coal gas plants and, to some extent, for the more expensive water gas wherever they choose, and in providing for increased consumption. As I understand it, there is a second unit under way at Astoria, so as I understand there are to be 40,000,000 feet capacity.

Q. What about the companies in New York which now have a surplus production, if there is any increase of output as you have computed by reason of any reduction in the price of gas? Won't the other companies here need the surplus here to take care of their own increased production?

A. The Mutual has 9,000,000 feet a day surplus capacity—I don't know that the others have very much. In fact, the Astoria plant, as I have just said a second ago, would be used in part in providing for increased demands for gas. I said that just now. That was one of the ways in which I thought it could be used.

3184 By Mr. Burr:

Q. In Manhattan or in Queens?

A. Anywhere where it can be most advantageously piped. Sold to Brooklyn perhaps.

By Mr. Mathewson:

Q. Now, you have figured a reduction in the cost at Astoria, 6.69 cents, if I get it correctly, upon the make of gas with the opening of the Astoria plant. Is it your idea that the coal gas plants here will be immediately abandoned as soon as that is opened?

A. The manufacturing portions of the plant, I think, will soon be discontinued. Not the holders or the land and some things about them.

Q. How soon?

A. I don't know. I believe comparatively soon.

Q. How do you make up this 6.69 cents? How much of that is oil and how much something else?

A. That, I think, appears in evidence.

Q. Isn't that made up, that 6.69 cents, that gain made up on the theory that there will be a saving in the production of all the gas that is made and not merely the coal gas which is made at 14th and 42d Street stations?

A. It assumes that the water gas will be made as cheap as the New Amsterdam and Standard make it, and it assumes that the coal gas would be made as cheap as the Central Union makes its coal gas, after making full allowance for the difference in oil and then it provided more oil on the Massachusetts prices.

Q. On what you say to be the Massachusetts prices?

A. Yes.

Q. Because the Standard and Central Union as a matter of fact do not now manufacture their gas at figures representing what you say is the Massachusetts cost of oil?

A. No. According to the exhibits they do not.

3185 Q. What do you mean when you say that the economies at Astoria will be sufficient in your judgment to be six per cent. on the entire investment? On what entire investment?

A. Well, I used the figure—well, I said it would be six per cent. on the $15,000,000, did I not?

Q. I am not quite clear what you did say or mean.

A. I was trying to find the place in the testimony where that was brought out.

Q. Don't you remember to what you did refer?

A. Yes, but I wanted to refer to the page. It was about $15,000,000. Six per cent. on about $15,000,000 was the saving and I used $15,000,000 in connection with the cost at Astoria.

Q. What becomes of the two coal gas plants which you say you would abandon? How about the valuation of those?

A. I think that has been taken up in the—that is, the part abandoned has been taken up in the repairs of the last twenty years in excess of the $9,000,000. In other words, I allow 10.89 cents for repairs, renewals, depreciations and contingencies, and so far as there is any strength in the complainant's testimony about the increase in value of the plant over and above nine and one-half million dollars since 1884, to that extent that figure is too high, and to that extent it will wipe out the 14th and 42d Streets investment.

Q. Then your argument that the 14th and 42d Street plants would be wiped out is based on that theory you have just stated?

A. I think it is cared for by that.

Q. Is it cared for by anything else, because if it is I should like to know what?

A. Why, I don't have in mind anything else now.

Q. Well, we will deal with that subject of 10.89 cents a little later, in order. You testified in Chicago about the time you were testifying before the Gas Commission, did you not, that all of the plants, or practically all of the plants of the Consolidated Company were to be removed to Astoria very promptly? 3186

A. Whatever I stated I stated.

Q. Don't you remember whether you did or not?

A. I don't remember that I stated that all of them were.

Q. Practically all?

A. I don't remember just what I stated.

Q. Well, when you came before the Gas Commission, how many did you state were going to be removed?

A. Whatever the testimony says.

Q. Don't you remember?

A. No.

Q. Do you really mean that you don't remember, or that you don't want to state?

A. I should rather you read it. I don't remember it exactly. Whatever you read I will accept but I don't remember it exactly. Only I do remember this, that the company had been testifying as if a larger amount was to go to Astoria at that time than what the testimony since then has seemed to indicate, and I don't find now as much evidence of the intention of the company to vacate the property on the Island as I did when I read their returns to the State Gas Commission, when they proposed to "scrap" it off, or "scrap" over most of it.

Q. You say this in substance:

"In other words whatever the cost you have changed your mind " since you testified in Chicago on that subject? A. Yes, sir.

"Q. Yes. A. Well, I should change it only to that extent, make " it one or two instead of three or four, to that extent."

A. I have in mind that Addicks testified that the 14th and 42d Street stations would be likely to be the first to be abandoned, and things of that kind.

3187 Q. The testimony as to purpose of abandoning the plants here by way of replacement at Astoria was before the present act was passed of the present order was made reducing the price of gas to 80 cents, wasn't it? You understand that?

A. You say that the construction at Astoria was begun?

Q. No, the testimony of Mr. Addicks as to the intention of the company to remove its plant to Astoria instead of merely — produce a plant to take care of any excess as well as their present production, was given before the act was passed reducing the price to 80 cents?

A. I think in this case since then there has been some reference to 14th and 42d Streets being likely to be abandoned first. I think so.

Q. Well, I should like to have you look that up and show it to me some time. I haven't seen it.

A. Well, I don't remember where it was but I have that in mind.

Q. I would like to have you take Exhibit 94, which is the cost of gas for the calendar year 1905. You took for the actual expenditures the figures, as shown in this statement?

A. Yes.

Q. And questioned the propriety of charging some of them to the cost of gas. Dealing with these now I am assuming that the amount properly expended and that it is simply a question of where they should be put in?

A. Some were not expended, as I understand it.

Q. No, we will reach that in a moment. Now, as a matter of fact you first deducted the fixed charges from 74.81 cents?

A. Yes.

Q. That left 67.10?

A. 67.49. Then there was deducted interest on consumers' deposits, which was .39 of a cent; that would be 67.10.

Q. In other words, you deducted fixed charges and interest on consumers' deposits?

A. Yes.

Q. Now, Messrs. Addicks and Humphreys both deducted fixed charges, so there is no difference, as far as that is concerned?

A. No.

3188 Q. Interest on consumers' deposits they did not deduct. That makes a difference of .39 of a cent between you and them?

A. Yes.

Q. Now, with reference to the contingent expenses which are stated here at ten cents, contingent expenses including renewals and replacements, you deducted that and substituted what?

A. Substituted 5.31, I think it was.

Q. Yes, that is right.

A. It appears in table 13, page 3009.

Q. That makes how much, deducting the ten and adding the 5.31?

A. 62.42 cents.

Q. Now those represent the only deductions which you made from this Exhibit 94, if I assume that the expenditures for oil and other items were of proper amount, does it not, with the exception of the item of street lamps of $289,259.09?

A. No. I made other deductions.

Q. What were they?

A. Miscellaneous income was another.

Q. Just let me correct you for a moment. There is nothing on Exhibit 94 about Miscellaneous Income.

A. Oh, yes. Excuse me.

Q. I am getting now at the expenditures of the Company?

A. Well, I made a change in taxes. Did you ask a question?

Q. As to what you made? Another deduction for taxes?

A. Yes.

Q. I thought you were about to state what that was?

A. It was from 7.27 cents to 6.08 cents, as explained in Table 12 (page 3007); it was a deduction of 1.19 cents.

Q. If you deduct 1.19 cents from the previous amount you get what?

A. 61.23 cents.

Q. Now, in connection with taxes, you deduct taxes on income from other companies' securities amounting to $5,257.48 taxes on dividends in excess of 4 per cent. on $38,643,590.14, stock 3189 invested in securities of other companies amounting to $57,965.39 both of which amounts you found that Messrs. Humphreys and Addicks included?

A. Yes, I think they did.

Q. Then in addition you took the interest on unpaid taxes $94,506.29 for that item?

A. Yes.

Q. Can you tell me how many cents this amounts to, $94,506.29, so I can see what the difference is in cents per thousand between you and these two gentlemen as to that item?

A. I shall have to divide it. I will divide by the gas sold which was 13,283,164. .71 of a cent I make.

Q. .7 of a cent?

A. Or .71.

Q Now that with the exception of the street lamp item to which I referred a moment ago includes all the deductions you made, assuming the amount of these items to be proper?

A. Yes, I think so.

Q. And that leaves you how much?

A. 61.23 cents.

Q. Now in 1905, testifying, you allowed the Company three cents for reserve or contingent fund?

A. Yes.

Q. Three cents per thousand feet on the theory that they were to remove to Astoria or were otherwise entitled to that reserve, did you not?

A. Yes.

Q. Now, I will ask you prior to taking up that subject to say how much your present computation would amount to if you add three cents to the 61.23?

A. 64.23, but in my testimony before the State Commission I deducted for lamps and miscellaneous income——

Q. I understand?

A. Which I have not done yet, I think.

Q. I understand. We will reach that point in a few moments. We are now dealing with the question of expenditures. Now on the subject of street lamps, they are included in this statement, and is it not a fact that the lamps are included in the expense of 3190 manufacture according to the form adopted by the Massachusetts Gas Commission?

A. Yes.

Q. And also the form adopted by the Gas Commission of the State of New York?

A. Yes. I am not sure about the latter.

Q. It is the same, I think. Did not Mr. Teal in his computations—Mr. Teal being the accountant of the Stevens Committee—leave the expenditure for the care and maintenance of gas lamps in his estimate of the cost?

A. Yes, but, of course, if you do that you have got to take the receipts not at one dollar, but one dollar and three cents or something.

Q. That is another proposition and we will come to that in a minute. But there is very substantial authority then for leaving this in the cost?

A. Yes. I stated that.

Q. I think with those authorities before us we will leave it so for the purposes of our present computation. Now, if you deduct that $289,000 which is expended in maintaining lamps from the operating cost of gas you will also deduct a similar amount from the receipts of the company?

A. Certainly.

Q. So that the difference between the operating cost and the receipts of the company which will be the fund available for dividends or interests on bonds, will be exactly the same in either case?

A. Certainly.

Q. So it is simply a question of how you should treat it?

A. That's right.

Q. Now, as a matter of fact the company gives certain attention and care and makes certain repairs, you know, upon the apparatus of private consumers, doesn't it?

A. Yes.

Q. And the dollar they receive from private consumers covers both the gas thus delivered and also the care that the company gives to the apparatus of the consumer, that is correct, isn't it? He gets it in no other way that you know of, does he? 3191

A. I don't know what they charge for special services.

Q. Well, they do not charge anything for those services?

A. I suppose they do not.

Q. Then the dollar received from consumers covers both the gas delivered and the services rendered to the consumer?

A. That they call advertising generally.

Q. No matter what they call it.

A. Some repairs to meters and services they charge to repairs. Repairs to stations, I think, they charge it.

Q. But even those repairs are received back indirectly and ultimately from the money they receive from the consumer, and so, too, where the company makes a contract with the city by which it furnishes gas through lamps and at the same time takes care of the lamps, the lump sum it receives from the city covers both maintenance of the lamps and the gas furnished to the city?

A. I think there is a separate contract for that.

Q. No, not this year.

A. Well, a special statement in the contract to cover each point; special paragraphs.

Q. For some of them but not by any means recently. The contracts this year, as the evidence shows, are almost wholly for Welsbachs and they are for a fixed sum covering gas and care?

A. Is that true for this Exhibit 94 for the period covered by this exhibit?

Q. Yes, the same.

A. Yes. However that would not make any difference in my view of the case.

Q. It is a fact but it would not make any difference in your view of the case?

A. No.

Q. But you and I do not differ in this proposition, I suppose; that this expense of care and maintenance here to private parties or of city lamps is an expense that the Company has to make as preliminary to getting back its money from the consumer? 3192

A. I treat them both alike. When it receives money from the consumer for the rent of gas stoves, I take that just as I take what it receives from the City for the care of lamps.

Q. Now, let us take up the subject of miscellaneous income. You now have, including 3 cents reserve, 64.23 cents after deducting consumers' deposits and these amounts for taxes, all contingent expenses of 10 cents per thousand except an amount equal to the average of the twenty-one years, and fixed charges, and we find that the miscellaneous income altogether amounts according to your table No. 11 to $177,710.53?

A. Yes.

Q. How much is that per thousand feet?

A. I think 1.34 cents.

Q. And if you deduct that from your 64.23 cents you get how much?

A. 62.89 I make it. We have not yet deducted the lamps.

Q. If you deduct that from the operating cost of gas you must also deduct that from receipts on the other hand?

A. Certainly.

Q. And there will be no difference whichever way you treat it?

A. There will be quite a difference in——

Q. In what you call the operating cost of gas?

A. Yes.

Q. But so far as the main thing we are looking to, which is the amount of our profit to be deduced by the cost of gas, subtracted from the receipts, there will be no difference whatever because you will have to deduct it from both sides of the account if you deduct it from either?

A. That's right.

Q. So that, aside from the method of treating it in reaching the profits of the company available for dividends, the only difference between you on the one hand and Mr. Addicks and Mr. Humphreys on the other, is that you have deducted lamp expenses of .39 of a cent and you have deducted $94,000 of interest on unpaid taxes, making a total of about 1.1 cent, as I figure it? 3193

A. I do not recall now whether they deducted the miscellaneous income or not.

Q. Yes, they did in that case. But whether they deducted the miscellaneous income or not from the operating cost, it would make no difference whatever, would it, because if you deduct it from the operating cost, you also deduct it from the receipts?

A. Yes.

Q. So it would be merely a different method of treating it in reaching the amount of profit available for dividends?

A. Yes, and I have done the same with the lamps.

Q. But, if the lamps are to remain in as an operating cost, that would make 61.23 cents as the operating cost before deduction of miscellaneous income; or if you allow three cents for reserve it would amount to 64.23 before deduction of miscellaneous income, or 62.89 cents after you have deducted 1.34 cents miscellaneous income?

A. Yes.

Q. Those figures I think I have quoted correctly. Now, in reference to this interest on unpaid taxes, which is $94,560.29 and which amounts to .71 of a cent, why should we not be allowed to charge that expense in the operating cost of gas?

A. Because you resisted taxes and it goes out of your own dividends, if you choose to—of course you may get it back, you may win.

Q. You understand the directors of a company are trustees for the stockholders and bound to protect their interests?

A. Exactly. That was a gamble they took on the dividends.

Q. Assuming that the company has assessed against it a tax as to which its counsel advises it that it is of sufficient doubt that it should
be tested in the interest of stockholders, and it is tested that
3194 the company is unsuccessful, is it your theory if they acted
with reasonable prudence in testing that tax that they are not
entitled to charge that as an operating cost to their business, whether it is a gas company or an industrial company or a railroad company?

A. I should think the tax itself which was originally assessed if you had to obey it would be a tax and cost, but this is extra interest that was paid by reason of not paying the tax promptly.

Q. Yes, but if the interest accrues because they are advised by counsel that there is a sufficient legal question to say that the tax should be tested?

A. Well——

Q. And assuming that they act with reasonable prudence in testing a tax in the courts and they are defeated and have to pay interest on that tax when they come to pay it, isn't that, just the same as their attorney's fee in the case, a proper charge against the operating cost of the property?

A. Well, it looks to me rather as a gamble on the dividends.

Q. In other words, being a gas company, your theory is that they must not test even a doubtful tax unless they are prepared to take the interest on the tax if beaten out of their dividend instead of charging it as any other corporation does as an operating cost of the business?

A. I think it should come out of the dividend if they lose.

Q. If they win, how about that? Should it then go to the favor of consumers of gas?

A. No, they get it in the dividends then.

Q. Don't you know that taxes are constantly tested and fought for the express purpose not only of setting aside the existing tax but for the purpose of preventing the imposition of higher taxes in the future?

A. Yes.

3195 Mr. Burr: Are you referring to the action of this company?

Q. Do you not think that it is a prudent action therefore of the trustees, and that if they make a test on a tax with that in view, that it will ultimately come to the advantage of the consumers in preventing the increase of taxes?

A. Well, I have not thought so far as that, as to anticipate that.

Q. If it be a judicious action in the interest of lower taxes, which of course are an operating cost of gas, then any such thing as interest on taxes when it comes to be paid would be properly charged against the operating cost?

A. The consumer does usually get the benefit of these taxes.

Q. But he gets the advantage of high taxes, if they are accumulated, doesn't he?

A. It depends, of course, on limits.

Q. Don't you find that the taxes against the company here in the City of New York, 6.08, being after the deduction you have made, is a very substantial item in the cost of gas?

A. Certainly.

Q. And don't you think it is the duty of the trustees of the company in the interest of their stockholders, as well as the interest of the consumer, to maintain their contention that it is beyond a figure where it should reasonably and properly go?

A. Well, I should think there would be great limits to their duty, but of course, within certain bounds, which I won't attempt to fix now.

Mr. Burr: Do you want to appreciate the property for the purpose of capitalization?

Mr. Mathewson: Please do not interrupt, Mr. Burr.

A. I was about to add——

Q. But within certain limits you said, and what would be the conclusion?

3196 A. Within certain limits they would naturally seek to keep the taxes at a reasonable figure, but I think that when it goes so far as to incur a large interest change on the unpaid taxes, that there they are running a risk which should come out of dividends if they lose.

Q. Now, Professor, speaking perfectly frankly, is it not a matter which rests in the fair discretion of the directors of a corporation as to just when and how far they shall contest such matters as taxes which they may consider to be excessive as levied against them.

A. All expenses in *quasi-public* corporations must depend to some extent upon the judgment of the public as to their fairness, as well as the directors; the public is a silent partner in all *quasi-public* corporations.

Q. That may be a question to be debated, and I don't know exactly what you mean by the statement, but we will not debate it here.

A. I mean it is different from a private business.

Q. I see that in these items of miscellaneous income which you say should be credited appears stove rentals $122,322.60, forming the greater part of the $177,710.53 and therefore the greater part of the 1.34 cents which is the total of miscellaneous income. Supposing the Company went out of the business of renting gas stoves, that item of income would fail, wouldn't it, at once?

A. You mean if no other Company took its place?

Q. If this Company went out. Yes, if it determined to furnish no more gas stoves on rental or sales, but to leave the consumer to to go to a hardware shop, that source of income would immediately terminate?

A. I don't understand that they would abandon their title to the stoves they now own and which appear in their inventory of assets.

Q. I am talking now about the miscellaneous income.

A. They would continue to get a rental on the stoves they now own, or so far as it brings them in a rental now it would continue. It would not increase if they did not buy any more stoves. 3197

Q. You know some companies do not deal in stoves at all, and some companies furnish free stoves?

A. Yes, sir.

Q. And if this Company thought it was wise to furnish free stoves, as many well-managed companies do, then there would be no income at all from stove rents?

A. Just the same as if they thought it wise to reduce the price of gas, it would reduce their income.

Q. But at the same time the expenditures would remain the same?

A. Yes, but this is not a condition which confronted me in this exhibit.

Q. But that is a condition which might occur?

A. Yes, sir.

Q. And didn't you testify before the Gas Commission that it might be just as well to add the stove rent to income, and that there was room for that argument?

A. I don't remember. I may have said so. I don't think so now.

Q. You don't think you did say so?

A. No, I don't think so now, that it should be.

Q. If you didn't so testify then you have changed your mind?

A. I don't remember what I testified.

Q. Well, if you did so testify——

Mr. Burr: I want to call counsel's attention to the fact that there is no evidence that many well-managed companies do furnish free stoves.

Mr. Mathewson: The Professor can correct that if it is not so. I have no objection to his correcting it.

The Master: I understood him to say that that was the fact.

Mr. Mathewson: Yes.

3198 The Witness: I was looking over that matter the other day over seven or eight of the larger companies in Massachusetts, and I think only two or three had any stoves in their assets. I don't know very much about the cases of those two or three companies who do have them, but I think there are—I believe there are—some companies that do not charge stove rentals. I am not prepared to say whether the majority of companies furnish stoves free or not, but I feel it is fair to take this company at what it is now doing as the basis of our present discussion.

Q. You do not remember then whether you said before the Gas

Commission that it might be just as well to add stove rentals to income, instead of deducting them from distributing expense?

A. I don't remember now.

Q. Will you look at the original Gas Commission minutes at page 1579——

A. The typewritten testimony?

Q. Yes.

A. I haven't it here.

Q. I will be glad to let you look at it. I have it at the office.

A. If you say I did so testify, I will not dispute it. I simply said I did not remember it.

Q. That is my minute of it. Now, if I understood you correctly, after certain deductions, you obtained a figure of 29.09 representing the balance of the items which were included in distributing expense and stated that you divided that into four items which appear on table 13?

A. Yes, page 3009.

Q. What are those four items into which you divide this 29.09 cents?

A. I must first say—I have the table before me but I was looking for the testimony. It is 29.11 cents, I have it on page 3008, and in another place 29.09 cents. The testimony shows at the bottom of page 3007 that I deducted the 1.19 cents from 30.28 cents to get the 29.09 cents.

3199 Q. Now, what were the four items which you said you divided the 29.09 cents into, and don't they appear on table 13?

Mr. Burr: Excuse me. In the middle of the page that 29.09 cents seemed to be changed into 29.11 cents. Is that the same, or which is the correct figure? You say that 29.11 cents should be divided into four items and you also refer to 29.09 cents in that connection?

The Witness: For the moment I do not remember, but I suppose the four items I must be referring to are the four which appear on table 13.

Q. Yes, I so took them down; 3.56 cents, 6.08 cents, 5.31 cents and 7 cents; but making the same supposition that you do now, that those are the four items making up the 29.09 cents, I added them and found they amounted to only 23.95 cents, if my computation is correct.

A. No, they make less than that, 21.95 cents.

Q. 21.95?

A. While the addition—no, add the column to the left, 3.56 cents, 7.27 cents, 10 cents and 9.45 cents and see what that gives. That is 30.28 cents, which I also had at the bottom of page 3007 and then I deducted the 1.19 cents from that and I got 29.09 cents. Then the 29.09 cents is the first column of table 13, aside from station cost after deducting the 1.19 cents for the taxes, I think that was.

Q. Yes, the 1.19 cents was taxes including the interest on the taxes?

A. Yes.

Q. Your present statement makes that ambiguity clear.

A. But I seem a little later to have called it 29.11. I think that was an error in speaking. It should have continued to be 29.09 cents. I think the difference of .02 cents slipped in there somewhere.

3200 Q. Now, if you will direct your attention for a moment to table 13 instead of other expenses "Aside from excluded items, 4.95 cents," which the company actually expended, you put in an arbitrary allowance of 7 cents or 2.45 cents less?

A. Yes.

Q. What would this 9.45 cents or your assumed 7 cents cover in general?

A. All the expenses of meter reading, collection of bills, management of the offices, rental of offices, so far as they were not owned, salaries, legal expenses, insurance, advertising, claims and damages, losses by bad debts, incidental expenses; those are the chief items; there are doubtless some others.

Q. How much would that 2.45 cents which you deduct from 9.45 cents to get your 7 cents amount to in dollars, or somewhere near?

A. About $325,437.52, as I make it, in a rapid computation.

Q. I understand you to take this $325,000 and over from our operating expenses and ask that the price of gas should be reduced so as to eliminate that, on the theory that in Chicago you figure out general expenses to be 5.73 cents?

A. That was the special reason I gave here. There are other companies whose expenses are below yours.

Q. That may well be. There are other companies whose expenses are above ours, are there not?

A. Yes, but there is no company that I think is as advantageously situated as yours is in this country for low distribution cost.

Q. Well, we will see about that a little later. As a matter of fact, the distribution cost with which you started in computing this 5.73 cents related to the Peoples' Company of Chicago, and you started with the figure of 17.234 as their distributing cost, less taxes?

A. Yes.

Q. According to the——

A. No, that included taxes, the 17 cents did.

3201 Q. According to their statement of distribution expense, that is the Peoples' Company's statement, it was nearly 22 cents, wasn't it?

A. Yes.

Q. And you eliminate certain items and bring it down to 17 cents or nearly five cents less, merely because the accountants saw fit to exclude certain items, is that right?

A. Yes, I took their report as correct.

Q. Now, what knowledge have you as to the relative cost of any individual items as between Chicago and New York entering into this 7 cents which you assume and the 9.45 which we expended?

A. The cost of labor is not very different in the two cities and the density of distribution is nearly three times as great per mile of main here.

Q. Have you employed labor in either city?

A. No.

Q. Do you know how the cost of collection compares as between the two cities?

A. No. I got data on labor, I might add. This company gave it.

Q. I know you have got it from one source and another, but it is very difficult, is it not, without knowing what each individual performs, to determine exactly the economy or otherwise of the labor?

A. It will be remembered that Mr. Burr asked for a payroll complete for a month, but I don't think it has been given him.

Q. Well, you have not had the advantage of that in your computation?

A. I had the monthly statement given by the gas company before the State Gas Commission.

Q. You don't know what the cost per thousand for collection of bills is and indexing of meters, in Chicago, as compared with New York?

A. No, the items in Chicago that made up the 5.73 cents or whatever it was, were not given.

Q. You know at some time there was a method in vogue in
Chicago of having bills collected by consumers at the express
3202 company's offices at their own expense for transmission?

A. You suggested a year ago when I was under cross-examination that that was correct, but I have never learned that it was so.

Q. Do you know whether in Chicago the company's bad debts are included in their expenses in the 9.45 cents?

A. I understood it was included.

Q. Do you know how much they amounted to?

A. No.

Q. Do you know what the practice of the Chicago Company is as to charging off bad debts?

A. No. Now that I think of it, I am very sure that the item was included.

Mr. Burr: Which item?

The Witness: Bad debts, but the amount I don't know.

Q. Do you know whether the Chicago Company has any considerable item of rent to pay?

A. That question I don't know. These items of expense were never given to the public.

Q. Do you know whether they rent any bulkheads in Chicago as we have to for our business?

A. No.

Q. Do you know whether they have——

A. They have locations on the Chicago River, but what their relation to it is, I don't know.

Q. Do you know whether they have special inspectors imposed upon them by the city, whose salaries they have to pay in Chicago, as we have to pay them in New York?

Mr. Burr: Inspectors of election or what?

Mr. Mathewson: Inspectors of street works, or how that charge compares in the case of Chicago with New York.

3203 The WITNESS: I don't know the details of the Chicago account, as conditions of secrecy prevailed as to that.

Q. You have read the testimony, if you have read it all, that we have not only inspectors of the city which we have to pay, a large number, but we also have inspectors riding in the subways constantly to detect leaks, etc. There is no like subway in Chicago which has to be cared for by like inspection?

A. No, there is no subway, but the meter readers have to go over three times as much territory to read the same number of thousand feet of gas as here.

Q. Well, you are not prepared then to give any of the details which justify your lopping off $325,000 from our expenses which amount, to 9.45 cents, are you?

A. I argue only from the total there, and what I know from a few other places and my belief, but I think I stated that it was a preliminary estimate that would on that point await the investigation of the accountants.

Q. Well, you had last year before the Gas Commission quite a detailed statement, showing the number of foremen employed, the number of laborers at the different stations and what they were paid, in classes, and the amount of legal expenses that were paid, and the amount paid to the general officers, etc., and I would like to have you point out if you can, which men we are employing in excess of the men we require, and also which ones we are paying too much to, so that we can curtail?

A. That was a statement for December of a certain year, giving the number of men, chiefly, I think, and I believe entirely, connected with one of the stations. I don't think that it was a payroll—it was not a payroll in the first place, and in the second place I don't think it was an analysis of the distribution payroll, but
3204 rather of a station payroll, if I recollect right, a coal gas station payroll, 14th Street or 42d Street.

Q. Well you know that that exhibit which was made up at your request, and a very detailed exhibit, showed the amount payable for attorney's fees and payable for general office salaries and expenses, &c.?

A. I don't remember in detail.

Q. Have you read over the exhibits in the present printed record?

A. Yes. I meant the salary lists by individuals.

Q. But did you observe anything there which you can put your finger on and say that is not a proper expenditure?

A. I have not had a sufficiently full opportunity or sufficiently full exhibit before me to be able to tell that.

Q. Let us take the figures of these accountants to which you have referred in Chicago. Did these accountants have any practical knowledge of the gas business?

A. I know they have examined gas companies before. Just how much knowledge, I would not undertake to testify.

Q. Do you know whether they have any practical knowledge of the gas business?

A. I don't know.

Mr. Burr: Do you refer to Marwick, Mitchell & Company?

Mr. Mathewson: Yes.

Mr. Burr: The same accountants that are now examining your books on behalf of the defendants?

Mr. Mathewson: I don't know anything about that, I know there are thirty or forty men up there.

Q. Now you know, don't you, from this report of the Committee of the Common Council in Chicago, that these accountants were merely appointed "to verify the figures as presented by Mr.
3205 Meagher" on account of the gas companies, and not to make any deductions of their own at all because they were not gas men?

Mr. Burr: Is that the quotation?

Mr. Mathewson: I ended the quotation.

Q. And on the further understanding that "such accountant should treat as confidential the figures of the Company thus disclosed to him."

A. What part of the page are you reading from?

Q. Second column about half way down. I will read the whole of it if you wish: "Mr. Meagher, representing the Peoples' Company consented to have the Committee select a chartered accountant to verify the figures of the Company, and this arrangement was made with the understanding that because of pending litigation such accountants should treat as confidential the figures of the Company as thus disclosed to him, the purpose of this examination being only to verify the figures as presented by Mr. Meagher." That appears to be the statement in the report, doesn't it?

A. Yes, I had read that before. I remember it.

Q. And you understand further that these accountants, in spite of that, proceeded to present certain deductions which they were not asked by the Committee to make at all?

A. No, I don't understand that they did anything which they were not asked to do. I understood they were not to give the details of the items of distribution.

Q. You did not know then that they were appointed only to verify the figures as presented by Mr. Meagher?

A. Certainly, and they did not verify them, as they could not; they found they were wrong.

Mr. Mathewson: I move to strike that out.

3206 Mr. Burr: I object to its being stricken out.

The Master: Let it stand.

Mr. Mathewson: Exception.

Q. How do you know they were wrong?

A. I have their word for it in the report.

Q. Have you examined the books?

A. No.

Q. You have the word of the officers of the Company that the figures were right. How do you know that those figures are wrong as given by the Company and that the figures as presented by the accountants are right, so far as they include the proper charges to the operating cost of gas?

A. Why, I know that this was the report of the accountants——

Q. Yes, but do you know that that is right for any other reason except that they made it?

A. I put it on the basis of the accountants having said so.

Q. You said you knew. Have you examined the books?

A. No. I do not find in any further publications of the Council or in any other place where I have read it that this report of Marwick, Mitchell & Company was followed by any disproof of their report.

Q. Merely a question of what should be charged to the operating cost of gas, and I think I can show you a little later from the conclusions of the Committee themselves that they did not accept those figures, certainly as complete. Now will you look at page 40 of this same pamphlet and see whether over the signature of Marwick Mitchell & Company, does not appear this statement, second column at the bottom; in relation to the figures which they presented and which you have quoted: "No allowance is however included in their statement for that wear and tear which is usually conceded to occur in excess of that which is covered by renewals."

A. Certainly.

3207 Q. So that their account on its face does not purport to show the proper amount which should be allowed to the Company for the cost of gas, does it?

A. It does not give the renewal and contingent account, neither did I include that in the seven cents which I took.

Q. That is all right, but I am reading the figures that have been quoted here as the cost of gas in Chicago to show that they did not include all the charges which must be made to the cost of gas.

A. But in their next letter, in the next column they state to the City Council, to the Chairman:

"Replying to your communication of even date, I wish to advise you that there is 6.0043 cents per thousand feet included in the figures for renewals and repairs in the year 1904 and included in the figures in the distribution of gas as shown by the Peoples' Gas Light & Coke Company in our report. Yours truly, Marwick, Mitchell & Co."

Q. You find, too, later that the City Council allowed four cents beyond that for repairs, don't you?

A. They allowed something. I don't remember the figures.

Q. We will therefore stop that for a moment and go back to another suggestion of yours. You say that the distribution charge ought to be small in the City of New York or smaller because the consumption is greater.

A. Per mile.

Q. Per mile. Does it not appear in Chicago the Ogden Gas Company's density of consumption on their mains was greater, nearly twice as great as the density on the Peoples' mains, and yet that the cost of distribution to the Ogden Company was greater than the distribution to the Peoples' Company?

A. I don't remember about any figures on the density of distribution of the Ogden Company. They may have been given. I have no knowledge either that the accountants investigated the Ogden Company. I have never found a report about it. 3208

Q. Was not that called to your attention when you testified in the Chicago Investigation as rebutting your theory that the greater the density of consumption the less the cost of distribution?

A. Will you call my attention to it? I don't remember it.

Q. I think I can. Was it not also called to your attention before the Gas Commission here in the Consolidated Gas Company's case?

A. It may have been. I don't recall at the moment. But the return as I have it here of the Ogden Company's total costs was 47.67 cents of which 27.86 cents were nominal manufacturing costs——

Q. You do not need to do that, because I have the testimony right here and I think I can save you the computation.

A. If I can just finish this a moment. That left 20.81 cents as the distribution cost returned by the Ogden Company.

Q. 22.81 is it not? You had added 2 cents to the Ogden Company in order to make up a difference in candle-power, had you not, in order to get that 26 cents, whereas it is 24.86 cents before you added those 2 cents, is not that right?

A. Possibly. I don't remember.

Q. Don't you remember you added those two cents?

A. Possibly, but I think however that came in another connection.

Q. I don't think so.

A. I think 26.86 cents was their return, but 2 cents was only a bookkeeping charge.

Q. I have it right here in your testimony, page 1310:

"Mr. DeFord: Yes, go ahead and make any explanation you desire. A. The statement that I am objecting to is this, that I must compute on the basis of adding this 5.18 cents to the cost of the Consolidated Gas for the same candle-power at the burner, which is 24.86 cents." 3209

Q. Don't you remember that it was 24.86 cents for the Ogden?

A. That is what I insisted was the cost to the Ogden, but they had made their return as 26.86 and afterwards their president had admitted to me that 2 cents was only a bookkeeping charge.

Q. To equalize the cost to the Peoples Company?

A. No, that came up later.

Q. Well, let me read from page 1312 of the testimony before the Gas Commission. I asked the question as follows:

"In Chicago can you tell me what the Peoples' Gas Company's distribution was or the rate per thousand? A. 21.71 cents.

"Q. Do you know what the distribution of the Ogden was? A. 22.81, or more than a cent greater.

"Q. You stated the other day that density had a great deal to do with the cost of distribution. A. The density of population.

"Q. Or consumption? A. Yes.

"Q. Did it not appear in Chicago that the density of the Ogden Company's consumption was about double the Peoples' although its output was only a fraction? A. I don't think that was brought out while I was there. I don't know what has happened since."

Q. You did testify however that high density did not always give a cheaper distribution?

A. Other conditions affecting.

3210 "Q. (Reading:) Alderman Potter: Yes, but Ogden, has it anything in density of consumption? Professor Bemis: 'Yes.' A. I had forgotten that. Now, what was the density in Chicago?"

Q. Your reply was that you had forgotten it, and you see that Alderman Potter called your attention to the density there of consumption being twice as great.

A. I don't recollect even now how many miles they have or what their consumption is in the Ogden.

Mr. Burr: Do you mean how many miles of the 2,000 miles of mains?

The Witness: That was another Company, the Peoples' Company was 2,000, and they sold eleven billion feet. I don't remember about the Ogden mileage. I don't think I have any data about it.

Q. As a matter of fact the Ogden Company's sales were only about one billion feet?

A. I think that was their sales, but I don't remember their mileage.

Q. And their consumption it appears was nearly double in density per mile of main to the consumption of the Peoples', and yet it appears that the Ogden with that greater density of consumption had a distribution cost greater than the Peoples' doesn't it?

A. Well, I cannot discuss it much without having more of the evidence before me.

Q. But I have read your own evidence before the Gas Commission.

A. I should want to go through the whole case.

Q. If that evidence is correct——

A. I never did know a great deal about the Ogden Company. It did not go into evidence, and I never visited their plant and the accountants never examined their books, so far as I can learn.

3211 Q. What is your final answer, are you prepared to say now or are you not prepared to say that the Ogden Company's distribution was greater than the Peoples' Company according to the information you have?

A. At the present time I don't recall, but if you say that I at one time testified differently, probably it would be acceptable. I will accept it, that you read it correctly, but the facts about the Ogden I don't know. The Ogden Company may have been distributing only in a specially favored district in the city. I have never looked into their situation.

Q. It appears in the testimony here before this tribunal that the Consolidated Gas Company has mains in every street in this City that has been opened, the outskirts as well as the heavily populated sections.

A. But taking that all into account it sells three times as much as the Ogden; certainly the Peoples' Company, and I think, as the Ogden.

Q. But that proposition would seem to be proven from the Ogden and Peoples' Companies that density of population only does not mean a lower distributing cost?

A. Not unless you know the circumstances attending the Ogden Company, and I don't know just where it sells its gas. It may sell to the Peoples' Company for all I know. A lot of the Companies do.

Q. If these figures you gave before the Gas Commission were correct, they would tend to show that density of consumption alone does not necessarily mean a lower distributing cost per thousand?

A. There may be other——

Q. Of course, but can't you answer that question?

A. It has the same tendency, just as the lowering of price has the tendency to increase sales, but there may be counteracting forces——

Q. (Question repeated). Can't you answer that directly?

A. Not necessarily, if other conditions are not fairly equal.

3212 By Mr. Burr:

Q. And those conditions in that case are not known to you?

A. And the conditions in the Ogden Company are not known to me at all.

By Mr. Mathewson:

Q. Don't you remember that the accountants in Chicago stated that they had not examined several of the distributing or other accounts bearing directly on the investigation as to the cost of manufacture or the distribution in Chicago?

A. Yes, but the inference they drew was that the cost would be still further modified.

Q. Well, we may draw inferences, but the point is that they did not have any definite information from which they made their report and they had not examined certain accounts?

A. No.

Mr. Burr: You are calling attention to what they claimed?

The Witness: This is what they wrote on page 40: "Had we had access to these accounts, the cost of manufacturing and distribution might have been somewhat further modified."

Q. It does not say whether up or down, does it?

A. No. I know what they think, though.

Q. I don't think such facts are very material, when you come to cut off $325,000 which we have made, as improper. Do you remember what you testified that the distributing cost in New York was, acual expenditures? *A.* In 1905, ending October 31, 1905?

A. Probably I took Exhibit 93. At that time I took their exhibit as it was.

Q. Well, you made certain deductions in order to make comparisons with Boston and other cities and you found that

3213 & 3214 the items you had left and which you called distributing expenses amounted to 16.24 cents, didn't you?

A. I don't have the figures in mind but if you say I did, I will accept it.

Q. Well, I will let you see.

A. That must have included some items not in this. Very likely it included repairs or taxes.

At 4.10 P. M. adjourned to October 23, 1906, at 10.30 A. M.

Last Exhibits:

Compalinant's 256.
State's W.
City's 59.

3215 Circuit Court of the United States. Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, TUESDAY, *October* 23, 1906—12 m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr and Mr. Kirby.

3216 Continuation of the cross-examination of EDWARD W. BEMIS.

By Mr. MATHEWSON:

Q. We were referring yesterday to the cost of distribution and the effect thereon of density of consumption and——

A. I have never meant to imply that density was the only important element; size of the company is an important element. Density affects the expense of meter reading and many things of that kind; the size of the company affects the salary list per thousand feet.

Q. What do you mean by the size of the company, the output in thousand feet?

A. The number of feet of sales.

Q. We found yesterday that the Ogden Company, operating in Chicago, had a higher distribution rate than the People's Company although the density of consumption in the Ogden was about double that of the People's.

A. May I read my testimony on that in the Chicago case verbatim, which I have here?

Q. I don't think it is necessary to.

A. Well, I dispute the fact, then, that there was any practical difference between the distribution costs of the two companies.

Q. Very good; supposing you assume them to be the same, that is not very material to my point. The density of the consumption of the Ogden Company appears, so far as it appears at all, to have been about double the density of the People's, and yet the distribution expenses of the Ogden Company per thousand feet appears to have been no less than that of the People's.

A. I am not prepared to admit that there was any such difference as double density. I have here the last report of Brown's Directory, which shows a different result.

Q. Well, I don't think very much of that for an authority,
3217 but does not the evidence in Chicago show that the density
of consumption in the Ogden Company was greater than in the People's?

A. A little greater, but not double.

Q. Is it not stated in the evidence that it was double?

A. I am not aware of it. If you will show me the evidence I will look at it.

Q. Well, that is my recollection of it.

A. I haven't any such recollection.

Q. Now, we will take your other proposition, that the greater the company the smaller the cost of distribution. Now, it appears that the output of the Ogden Company, as you stated yesterday, was about 1,000,000,000 per annum, and the People's Company was about 11,000,000,000 cubic feet per annum, and yet you say that the cost of distribution was substantially the same.

A. Not as found by the accountants.

Q. Well, the accountants did not find out anything about the Ogden Company, did they?

A. No, they did not look at that, but they did the other.

Q. Well, the statement as presented by the People's Company and the Ogden Company showed, so far as their figures were concerned, that the Ogden distribution was about 22.81 and the People's distribution about 21.71 cents, didn't they?

A. The distribution cost of the People's Company as claimed by them was 21.71 cents.

Q. And the Ogden was what?

A. 22.81 cents, but the taxes of the Ogden are a little higher, so the taxes being eliminated I testified the costs in each is about the same.

Q. Precisely?

A. That is the cost as reported.

Q. Well, but that is the only basis upon which you can make any comparison, is it not, because you did not examine the Ogden figures?

A. That is right, so far as the Ogden is concerned.

Q. Well, that is the only basis of comparison that you
3218 have, that is, the reports of the two companies, is it not?

A. The fact that the accountants were able to make and did make or find great reduction in the cost of distribution in the case of the People's Company does not seem to establish the probability that they would have done so in the Ogden, because experience throughout this country and Europe tends to establish the fact that the large company has lower costs, and I am not prepared to admit that it is even probable that an examination of the Ogden by Marwick, Mitchell & Company would have shown a different result.

Q. Well, so far as the reports of the companies were concerned, which was what you were dealing with in your testimony before the Gas Commission, it appears that the Ogden distribution was certainly as much in cents per thousand as the People's?

A. Just about the same.

Q. Yes, and the Ogden, on the other hand, had an output of 1,000,000-cubic feet per annum, as against 11,000,000-cubic feet per annum by the People's?

A. Yes, but——

Q. That would not indicate, then, would it, that great output was necessarily going to make a smaller distribution cost per thousand feet of sales?

A. But such absolute discredit has been thrown on the report- of the People's Company that you cannot place any credit on them.

Q. You are referring to the accountants?

A. I am.

Q. Don't you think that accountants who are not acquainted with the business are quite fallible?

A. All people are fallible.

Q. You dwell so much on these accountants' figures, that I want to inquire whether the Water Works Company at Cleveland of which you are superintendent hasn't been examined and investigated recently?

A. Yes, at my request.

3219 Q. At your request?

A. Well, by Marwick, Mitchell & Company, or others; which do you mean?

Q. I do not say by Marwick and Mitchell. I say they have been examined.

A. Yes.

Q. And an expert accountant was appointed to go over the books, wasn't he?

Mr. Burr: I object to this as incompetent, irrelevant and immaterial. I do not see what this is leading us to.

Mr. Mathewson: You will in a minute.

Mr. Burr: Before you go further, I want to know what you are going to lead us to. What is the object of the examination of this witness as to an examination of the water works in Cleveland?

The Master: It seems to me that is proper cross-examination. He has based a lot of statements here on figures of expert accountants, and I do not know but what Mr. Mathewson may be going to show that at some other time the said expert accountants were no good.

Mr. Mathewson: That is about it.

The Master: I cannot tell at this stage.

The Witness: I would like to have him go on, really.

Mr. Burr: I withdraw the objection.

Q. (Question repeated.)

A. Yes.

Q. I refer to the expert accountant who was appointed by the committee of the City Council, wasn't he?

A. Yes.

Q. And he hadn't any great familiarity with the water business, had he?

A. No.

Q. And he made certain recommendations with reference to the character of your accounts?

A. Yes.

3220 Q. And so on, which you now declare were fully unjustified?

A. Yes, the committee discharged him in disgust.

Q. And then they got another one?

A. Yes.

Q. And this other one made an examination?

A. Yes.

Q. And the result was that they found there that the accounts were not in the proper shape, and that they could not figure out expenses and receipts, etc.?

A. That is not the report of the accountant, no.

Q. I am talking about the committee.

A. The committee of two members of the opposite party, who were trying—who had a particular axe to grind——

Q. But the point is that the report——

Mr. Burr: I object, because this is entirely and plainly immaterial and has no bearing upon the facts in this case. I object to it as incompetent, irrelevant and immaterial.

The Master: Objection overruled.

Mr. Burr: Exception.

Q. Now, Professor, your conclusions were, and you strenuously maintained, didn't you, that the findings of the accountant, so far as he found anything, and of the City Council, they not being acquainted with the water business, were misleading and incorrect?

A. No, that is not a correct statement.

Q. What is the correct statement?

A. The correct statement is that there were two accountants at different times. The first was discharged by the committee in disgust. He had been employed by the electric light company, which had an especial grievance against the city, and they were afraid of the question of municipal ownership, and he was working for them and was employed by the committee. When they found that out they discharged him. The second accountant I found no 3221 fault with, and neither have I found any fault with his report. The committee of the City Council, composed of three members, has made a report, two members have made a report, composed of Republicans who had special reasons for fighting Mr. Johnson, and there is a minority report just going into the Council.

Mr. Burr: What Johnson?

The WITNESS: Mayor Johnson of Cleveland; and the whole matter has been referred to the Judiciary Committee of the City Council, which has the matter under discussion now, and I am prepared to discuss the points raised, if you wish, by the committee, but I have made no report antagonistic to the findings of the second expert bookkeeper; in fact, his report was favorable to the water works, I may add.

Q. Who was the second bookkeeper?

A. Mr. Williams.

Q. You find fault, then, with the conclusions of the committee who appointed the expert, made after the expert had reported, and not the expert himself?

A. That is right.

Q. And your conclusion is that the report of the committee, the findings of the committee, in that case, not being acquainted with the water business, were unjustified and improper?

A. Absolutely, and prejudiced to the greatest extent.

Q. Now, let me ask you about these so-called expert accountants of Chicago. Did they give any testimony in that proceeding at all?

A. All I have seen are two letters.

Q. You know, don't you, that they never appeared, and were not subjected to cross-examination?

A. They were ready to appear, I understand.

Mr. MATHEWSON: I move to strike that out.

Mr. BURR: No, I think that is——

3222 Q. I asked you if they appeared and were subjected to cross-examination?

A. I only know what appears by the evidence.

Q. Do you know whether they appeared and were subjected to cross-examination or not?

A. I am informed, on what I believe to be good authority, that a member of the City Council offered to have the entire report taken up by items with Marwick and Mitchell and the bookkeepers of the company present, and it was not accepted by the company.

Q. You get that information. Do you know anything about it yourself?

A. I was not present.

Q. You do not find any evidence there, do you, of these accountants in Chicago at all except that from statements that are in that pamphlet to which we have been referring?

A. I have been informed on this fact by the accountants.

Mr. MATHEWSON: Will you read the question, please?

(Question read by stenographer.)

The WITNESS: I find no official evidence save that.

Q. You read the testimony of Mr. Marks in which he said it was impossible for accountants who were not practically acquainted with the gas business to examine records and make a proper deduction?

Mr. BURR: Adding, unless they were guided by competent engineers. That is what Dr. Marks said.

A. I don't remember his testimony sufficiently to quote it, but I think it was along that line, in somewhat of a general way.

Q. Well, we will proceed on this subject, of cost of distribution and size of cities. It appears, does it not, according to my last question of yesterday, that your testimony as to distribution 3223 in New York for the nominal year ending October 31st, 1905, excluding taxes for comparison, was 16.94 cents?

A. I don't remember now what the 16.94 referred to.

Q. Don't you remember what that referred to?

A. No, I have not had time, I have been so busy with this testimony, to go over my testimony in that case. I know there was a figure 16.94 cents, but just what it included and what it excluded I don't now quite recall.

Q. Well, you remember comparisons were made between that figure and the distribution cost in Boston, don't you?

A. Yes, sir.

Q. Perhaps I can refresh your recollection?

A. My impression is that I took the figures of the company, of the Consolidated Company, in my testimony last spring.

Q. Oh, yes, I am assuming that you took the statement Exhibit 93 or its equivalent?

A. Yes.

Q. And from the information you then had before you you did not question the propriety of the expenditure for any one of the items that appeared on that exhibit, did you?

A. I don't think I gave a complete bill of credit to the company, but I did not—I think I took the ground that I had not data at hand sufficient to dispute it, save that I did refer to the fact that distribution costs were lower in some other places. I am positive I did that. And in that way I threw discredit on their report, but I made computations based on their reports.

Q. Well, now, I am going to read from your testimony before the Gas Commission and see if I can refresh your recollection. Page 1331:

"Q. Now, returning to the subject of distribution, it appeared at the last session that while the output of the People's Gas Company in Chicago was much greater than the output of the Ogden Company, the distribution charge of the People's Gas Company was 3224 greater than the distribution charge of the Ogden, which rebutted your theory that the greater the distribution the smaller ought to be the distribution expense? A. Yes.

"Q. And it also appeared that although the Ogden density per mile of main was double the People's, yet the Ogden's cost of distribution was greater than the People's, which also rebutted the theory that the expense of distribution depended on density. Now it also appeared that the cost in Boston of distribution was 18.76 cents, as against 16.94 cents in New York, or nearly two cents greater. That is correct, is it? A. I think those figures are correct.

By Chairman **Gunnison**:

"Q. Do you want to verify these figures? A. The evidence has been given on that in a previous volume, but I don't think they are wrong."

Mr. Burr: There is some more in that statement which you have not read.

Q. "There are often exceptional conditions." Now is that a proper quotation, is it an exact quotation from the testimony before the Gas Commission?

A. That is an excellent illustration——

Q. I must ask you to answer my question. You are not going to sum up this case. Your counsel can get such facts as he wants. I am asking you a simple question, whether that is an accurate quotation from your testimony before the Gas Commission, so far as it goes?

A. Yes, but it was not an accurate reply when made, and should not have been made.

Q. That is another proposition. There may be others?

A. Yes. I think I said altogether too much on cross-examination. I have discovered that. May I testify wherein I think I was inaccurate in my reply there? 3225

Mr. Mathewson: Well, Professor, I think really we will get through much quicker if you will let me ask my questions, you answer them, and then make any further explanations that you wish, on redirect, because it interferes with my line and does not do you any good.

The Witness: All right, sir.

Q. Now you say that your statement was inaccurate?

A. Yes.

Q. Is it not the fact that the distribution expense in Boston, deducting taxes, you computed to be 18.76 cents?

A. That may have been. My amount referred to another portion of the paragraph.

Q. Well, is it?

The Master: Cannot you answer these questions directly? We lose a lot of time getting a direct answer.

Q. Isn't it a fact that the distribution cost you computed to be in Boston 18.76 cents after deduction for taxes?

A. If it says so there, I must admit it.

Q. Doesn't it say so there?

A. Well, you read it.

Q. Don't take my word for it. I might not be reliable (handing book to witness).

A. It says 18.76 in Boston; 16.94 in New York.

Q. And you were asked then if you wanted to verify these figures, and you said that you did not think they were wrong at that time.

A. The question referred to the whole paragraph.

Q. (Reading.) "Do you want to verify those figures?" Now, the only figures in that paragraph are 18.76 for Boston and 16.94 for New York? Aren't they the only figures in that question at all? 3226

A. No.

Q. What?

A. No.

Q. What other figures?

A. That the density of the population per mile of main was double that of the People's Company.

Q. I will leave that out, I am not referring to that. I am referring to the cost of distribution in Boston and New York; those figures. The Chairman asked you if you wanted to verify those figures, did he not, and you replied, "I don't think they are wrong"?

A. Yes.

Q. Now let us proceed a step further. The distribution being 18.76 cents in Boston—that is the largest city in Massachusetts by far, is it not?

A. Yes.

Q. And according to your theory the distribution expense should be smaller than it is, in small cities. Let us see whether that is so or not. You referred in your testimony before the Gas Commission to the distribution expense in the seven next largest cities in the State to Boston, being Lowell, Lynn, Fall River, Cambridge, Worcester, Springfield and Lawrence, did you not, at page 2178 of the printed record before the Gas Commission?

A. Yes.

Q. Now, those are the same cities, or many of them are the same cities, which you and Professor Marks have been dealing with on this hearing?

A. Yes.

Q. Will you tell me what the distribution expense appears to be in those cities, less taxes, to compare it with Boston?

A. 17.03.

Q. In other words, those seven smaller cities show a lower distribution cost per thousand feet than Boston, which is 18.76 cents, do they not?

A. This is according to Exhibit 161, page 2178 of the printed testimony.

3227 Q. Have you any doubt about it?

A. I have not at present.

Q. Didn't you, in fact, before the Gas Commission testify that the distribution cost of these seven cities was 16.01 cents per thousand feet, and were you not corrected by this exhibit which was shown you?

A. I think so. I know I testified they were lower.

Q. So that would not tend to prove your theory that the larger the city and the larger the output, the smaller the distribution expense per thousand feet?

A. That particular fact would not, no.

Q. Isn't it a fact that the companies operating in great cities like New York and Boston are subjected to a great many impositions in the way of expensive pavements in the case of repairs, and metropolitan exactions of one kind or another, such as inspections, abatement of nuisances and other things which increase or tend to increase the expense of delivering gas?

A. Certain items of that kind do tend to increase it.

Q. And it would appear in this case, would it not, that Boston, in spite of having a much greater output, had a distribution expense greater than the small cities, due, perhaps, to these additional burdens that it had to bear which the smaller cities did not?

A. When you say perhaps due to that cause, I do not assent without further explanation, but that it was right as to the small cities I agree.

Q. In other words, it would appear from this, would it not, that certain cities of sufficient size to have what you might call a wholesale output and were not of sufficient size to be subjected to these metropolitan exactions, might have and do have a smaller cost of distribution per thousand feet than a greater metropolitan city which has a larger output.

3228 Objected to as assuming something. The Professor has not conceded these metropolitan exactions.

Mr. MATHEWSON: He said that there were, just a moment ago.

Mr. BURR: He said, "perhaps."

Mr. MATHEWSON: No, that was something else.

The WITNESS: In the case of Boston, I said "perhaps" as compared with the other Massachusetts cities. I did not say on that that I knew that.

Q. And your answer would be "yes," would it, to my question?

A. I answered that in some cases that was true.

Q. And in these cases it would be true?

A. But as to Boston as compared with the other Massachusetts cities, I said I was not prepared at the present time to analyze the difference in the cost of distribution.

Q. No, but you have testified in Boston during that time, have you not?

A. Yes. In one case.

Q. And you have made a very careful analysis of the Boston cost of distribution and also a very careful consideration of these other seven cities for the express purpose of testifying before the Gas Commission on the relative cost of distribution?

A. I remember in a general way that salaries in Boston were exorbitant as compared with these other cities, and that was the chief reason for the difference, but I am not prepared now to present a table, as I can in twenty-four hours, giving the exact difference and where it lies.

Q. I don't care where the exact difference lies. I would like the general rule. Isn't it true as a general rule that the salaries are higher in a great city like Boston or New York than they are
3229 in a small community?

A. They are likely to be, but Boston was then composed of six—really seven—companies which maintained, to a certain extent, an independent organization, not fully, but in considerable measure; and there were expenses there which do not exist in the case of the Consolidated, which has been consolidated for twenty years. That company effected a consolidation after my testimony. There had been a partial consolidation previously, but it had not been fully carried out; and even now, I do not think, has been completely carried out, as far as the reduction of expenses is concerned.

Mr. MATHEWSON: Will the Stenographer please read the question?

The STENOGRAPHER (reading): Isn't it true as a general rule that the salaries and wages are higher in a great city like Boston or New York than they are in a small community?

A. Absolutely yes; per thousand feet, salaries would be lower in a big city.

Mr. MATHEWSON: I move to strike out, "per thousand feet, salaries would be lower in a big city."

The MASTER: Strike it out.

Mr. BURR: I except.

Q. Now, isn't it true that the physical conditions in Boston are more nearly similar to those in New York than those on any other great city that you can mention?

A. I don't think they are any more like New York than is Chicago, nor so much.

Q. You don't think so?

A. No, because at that time Boston was not one company while Chicago was—that is the People's was one company, in a complete sense.

3230 By Mr. BURR:

Q. How about Philadelphia?

A. (No answer.)

By Mr. MATHEWSON:

Q. I am talking about physical conditions?

A. Excuse me. I thought you were talking about the general considerations.

Q. I said physical conditions. Now, won't you answer the question?

A. I still think there is no great difference in the physical conditions in the three cities, save that Chicago is nearer in population to New York than is Boston. I should say Chicago was nearer in physical conditions to New York than is Boston.

Q. Has Chicago any rock to deal with in laying their distribution system?

A. No. That affects the cost of construction.

Q. How about Boston and New York?

A. As affects the cost of operation—I don't think Boston has much rock. According to my recollection of the testimony neither Boston nor Chicago has much rock.

Q. Do you mean to say that Boston has not much rock?

A. I don't recall—and I have read all the testimony in the Boston case, that there was evidence of any considerable amount of rock in connection with street mains. The whole Back Bay District I remember is a filled-in district.

Q. Is Chicago flat?

A. Yes.

Q. How about New York and Boston? They have substantial elevations, each of them, haven't they?

A. Yes.

Q. Boston and New York are both very much older cities than Chicago, are they not?

A. Yes.

Q. They both have many old and narrow streets, with congested traffic therein, haven't they?

A. Yes.

3231 Q. Are not the streets of Chicago laid out on a much broader scale and more modern, less winding, than the streets of either New York or Boston?

A. Yes.

Q. Let me read from your testimony at page 1322 before the Gas Commission:

"Q. You finally took up the city of Boston. Didn't you say in the " Boston investigation that the conditions in Boston and New York " were more nearly alike than perhaps in other cities you could " mention in reference to their distribution system? A. Boston, " next to New York, has, I think, a dense population, but nothing " like it. It is only a third as condensed as New York, but it per- " haps comes nearer to New York than most other cities.

"Q. As a matter of fact, both New York and Boston have many " old, narrow streets? A. Yes.

"Q. Each of them has a subway to deal with, so far as that affects " conditions at all? A. Yes.

"Q. And each of them has a great deal of rock haven't they? A. " Yes."

Now, do you mean to say now that Boston has not a great deal of rock? A. My recollection is I was wrong in saying a great deal of rock in Boston.

Q. That is another case where you were wrong? Is there anything further in those answers that was wrong?

A. I believe on further investigation of the case that in some respects Boston is nearer like New York than in some respects Chicago. When you come to balance the two I will say that in the matter of size, in the matter of maintaining street mains on account of electrolysis, in the expense of wages and of labor, Chicago is nearer like New York than is Boston. Also in the fact that 3232 Chicago makes almost entirely water gas, while Boston has only about one-third water gas, is again a reason why Chicago is nearer like New York than is Boston. On the other hand, as has been just mentioned, Boston is an older city and in that respect nearer like New York than is Chicago; and the streets are narrower than Chicago, and there may be, probably is, more rock proportionately in Boston than in Chicago, but I don't recall now the percentage.

Q. Let me continue to read:

"Q. And each of them has a very condensed population in certain parts of the City? A. Yes. I do not think the density is anything like as great in Boston.

"Q. But you said the distribution cost in Boston was 18.76 cents, as against 16.94 cents in New York. In other words, Boston is nearly 2 cents per thousand greater in distribution than New York, upon the most favorable basis for New York? A. Yes.

"Q. Is not the re-location of the pipes there very expensive, where there is such a congestion of traffic? A. Yes.

"Q. Do you know what the legal regulations of New York are in reference to permitting us to open the streets and allowing long trenches to remain open? A. I have not looked that up.

"Q. Do you know what the condition is in the streets of New York as to sub-surface work, the amount of pipes, and whether there is room for extra pipe, and how deep we can lay pipes?

A. I know it is greatly congested here, because I have seen men working in them.

"Q. Do you know that if sometimes takes our gang as much as a week to get our pipes around a single corner on account of the subway traffic? 3233

A. That subway involves heavy repairs."

Is that all correct?

A. That is correct, yes.

Q. On page 1324:

"Q. Can you think of any other city which, in its change of conditions as to pipes, comes as near New York, we will say, as Boston, as to location in the East and general conditions? A. No, I don't know that I can.

A. In the East, you say?

Q. Do I quote that right: "As to location in the East and general conditions"—not in the city—in the East?

A. Let me see that once more.

Counsel hands book to witness.

The WITNESS: No, I don't know that I can. I undoubtedly said that.

Q. Now, when you speak of Western cities and you come to operation, you know that gas coal, and you know that the oil, is very much cheaper in the West than it is here in the East, New York or Boston, don't you?

A. Oil is cheaper in the West; that is, as far west as Chicago. It is cheaper than here.

Q. Don't you know that the gas coal is in the making of coal gas very much cheaper in Ohio, for instance, than it is in New York?

A. I am not sure about Chicago. I think coal in Chicago may be—I have not the exact figures, but I think gas coal in Chicago may be quite as expensive as in New York.

Q. Do you know whether it is or not?

A. I never got absolute data, but the anthracite coal goes further—

Q. They don't make coal gas in Chicago, do they?

3234 A. In making water gas they use anthracite coal and coke.

Q. Under the boilers?

A. In the generators.

Q. When I refer to gas coal you know that I mean coal which is used to produce coal gas, do you not?

A. Oh, excuse me. I was not for the moment noticing what you said, and I thought you said any coal that might be used in making gas.

Q. I refer to gas coal.

A. Of course they don't make any coal gas in Chicago, so if I had noticed what you said I would have said there was no gas coal such as you refer to used in Chicago. To be accurate, I must say there was none at the time I was testifying there. I have since understood there is a coke oven plant being put in there which will undoubtedly use gas coal.

Q. Now, the figure of 64.23 which we procured at page 3193 of the testimony yesterday, including 3 cents allowance for reserve, did not include, did it, any allowance for the additional candle-power required of the Consolidated under the recent act raising the standard from 20 to 22 candle-power? It was merely for the period, as I understand it, for which you were computing, that is, the calendar year 1905?

A. It was either the calendar year or the year ending October 31st, I have forgotten which now.

Q. That was the calendar year which you were dealing with there certainly, with 74.81 cents?

A. Oh, yes. Well, that did include then——

Q. It included six months of the new law?

A. Yes.

Q. Now, the Gas Commission, as you have read no doubt, taking the nominal year ending October 31st, 1905, which included four months of the new 22 candle-power, made an addition of 1.81 cents to their computation in order to cover the new candle-power. On that ratio how much would be added for the six months?

3235 A. Well, that is purely a mathematical computation.

Q. Well, make some estimate of your own, roughly?

A. On that basis it would be 2.7 cents.

Q. Oh, no, that could not be, because there was only 1.81 they added to the cost for the nominal year to represent the cost for 1906, we will say, due to the additional two candle power.

A. Why, if for four months the extra cost is 1.81 cents, then for six months it would be six-fourths of it. That was what I was doing.

Q. You misunderstand. The Gas Commission found 60.75 cents as the cost for the nominal year ending October 31st. They said that as only four months of that year were under the 22 candle-power law, they would add to the 60.75 cents 1.81 cents, making 62.56 cents.

Mr. Mathewson: That appears in the opinion of the Gas Commission attached to the papers.

Mr. Burr: That was excluded, I understand.

Mr. Mathewson: Oh, no. It is expressly admitted by the City in their answer.

Q. Now, the period which you have taken, the calendar year, included six months of the 22 candle-power?

A. Exhibit 94 takes six months, yes.

Q. Now, what amount should be added to the 64.23 which we have if we wanted to represent a subsequent period dealing only with 22 candle-power?

A. Oh, if you want to take the twelve months' period?

Q. Yes. It would be about one cent and a half, wouldn't it?

A. Why, on that basis of reasoning, if it took for four months 1.81 you want to know what it would take for twelve months?

Q. No.

3236 A. It took 1.81 for increase for four months, what would it take for twelve months, isn't that your question?

Mr. MATHEWSON: Will the Stenographer read the record?

The Stenographer now reads the record down to the end, starting with the question, "You misunderstand me. The Gas Commission found 60.75 cents as the cost," etc.

Q. You would have less than 1.81 in that case, because you would have six months of that 22 candle power in that period, whereas the Gas Commission had only four months of the 22 candle power in their period?

A. Yes.

Q. Well it would be roughly upon that basis one cent and a half?

A. Well, I will assume that without stopping to figure it out.

Q. Or one quarter— I don't know, it is something around there, isn't it?

A. Very likely.

Q. And whatever it is, that is not included in the 64.23 cents which we were computing yesterday, is it?

A. No.

Q. Now, furthermore, it appears in the evidence that for the year 1906 there have been assessed against the constituent companies which formed the Consolidated additional taxes which never have appeared before and that the special franchise tax or assessment has been increased $4,600,000, and that the increase in taxes from those two items alone would be 1.13 cents, if they are maintained. That amount has not been included either so far, has it?

A. No.

Q. Did you find that quotation in your testimony before the Gas Commission to which I referred you where you said that miscellaneous income or stove rent which formed the greater part of

3237 it might perhaps as well be added to income?

A. I did not look for it.

Q. You are willing to accept my word, as far as that goes?

A. If you say it is there I believe it.

Q. I think so. That is my quotation. I suggest you look it up if you have any doubt about it?

A. I should have said offhand that I deducted miscellaneous income.

Q. You did in your final computation, Professor, but that was some time subsequent to the statement to which I called attention, that perhaps it might as well be added to income. You stated in another place that was open for argument. Those are your exact words I think you will find.

Now I take up with you the subject of this reserve to see whether your theory is correct or not. It appears that of the twenty-two past years the first eleven years show an average of repairs and renewals of 12.25 cents, according to your testimony, and the second eleven years an average of 9.73 cents. Now as a matter of fact the Company began purchasing gas in 1900 and it is in evidence that for the last five years prior thereto, being the last five years within which the Company manufactured all the gas which it sold, the average repairs were 12.31 cents per thousand. Have you taken into consideration the fact that since the Company has been procuring gas from other companies, that is since 1900, there were certain repairs and renewals covering the gas which is required from other companies, which are not included in repairs and renewals of the Consolidated Company at all?

A. I have. I guess that is so.

Q. And there would be some additional repairs and renewals?

A. Yes.

Q. And if the Company were manufacturing, or as soon as it commenced to manufacture its own gas entirely, there would be 3238 additional repairs and renewals due to this 3,000,000,000 feet or such a matter which is now procured from other companies?

A. If it stops buying from them——

Q. If it manufactures its own gas?

A. Yes.

Q. And isn't it true too that the repairs and renewals in a coal gas plant are greater than they are in a water gas plant?

A. Yes.

Q. So that the Astoria being a coal gas plant, there would be additional repairs and renewals which must be considered there over what there would be even in the water gas plant?

A. But the full expense is not necessarily increased.

Q. You answer too much in a single question. I am getting a single point for the moment.

A. Well, it is true that the repairs are greater in a coal gas than in a water gas plant.

Q. And in taking into consideration that subject of repairs and renewals we must take into consideration the fact that Astoria is a coal gas plant for its first four billion annual capacity at least.

A. Yes.

Q. So that it is not entirely accurate while we are procuring gas from other companies to take merely the repairs and renewals of the Consolidated and say that that represents the repairs and the renewals chargeable to the entire volume of gas which we sell.

A. Although there are other reasons for my statement, if you wish me to give them.

Q. Well, I asked that question at the moment?

A. I think my statement was fair, taking all things into consideration, but as far as your coal gas is concerned I should agree with you and say yes.

Q. Now, take the Massachusetts municipal plant. Have you the Act here?

A. Yes. Pages 314 and 315 of the Acts and Resolves of the Legislature, Session of 1906.

Q. This is the one to which you referred and which provides for a certain depreciation fund among other things?

A. That is the Act, yes.

3239 Q. Chapter 411 of the Acts of 1906 of the Commonwealth of Massachusetts?

A. Yes, if you say that is the number. I haven't it in mind.

Q. I think so. Section 21 as amended by this Act reads in part as follows:

"Prior to the beginning of each fiscal year the manager of the plant shall furnish to the mayor, selectmen or municipal light board, if any, an estimate of the income from sales of gas and electricity to private consumers during the ensuing fiscal year and of the expense of the plant during said year, meaning the gross expenses of operation, maintenance and repair, the interest on the bonds, notes or script issued to pay for the plant, an amount for depreciation equal to three per cent. of the cost of the plant exclusive of land and any water power appurtenant thereto, or such smaller or larger amount as the board of gas and electric light commissioners may approve, the requirements of the sinking fund or debt incurred for the plant, and the loss, if any, in the operation of the plant during the preceding year."

Q. Now, under the Municipal Act of Massachusetts there is set aside a sinking fund to take care of the plant which is, of course, charged against the consumers of gas, isn't it?

A. Yes.

Q. And there is named three per cent. as the cost of depreciation which may be enlarged or reduced, but that is the figure the act names?

A. Aside from land and water power.

Q. Now, if you take three per cent. and apply it to the Consolidated Gas Company's depreciable property, which it is fair to assume is not less than $20,000,000, perhaps even upon your 3240 figures—we think it is a great deal more than that—what would that make per annum?

A. $600,000.

Q. And if you divided $600,000 by the output for the Consolidated Gas Company which is 13,283,000,000 feet, it would represent, would it not, something like——

A. 4½ cents.

Q. Per thousand cubic feet?

A. Yes.

Q. Now, you testified in Philadelphia quite a number of years ago that 10 cents per thousand was a fair allowance for depreciation alone, didn't you, beyond ordinary current repairs and renewals?

A. About 10 years ago, I think.

Q. And you founded that testimony on the opinion of Mr. Vanderpool?

A. I think that related to coal gas plants, and there was accompanying it a statement that it would be less for water gas.

Q. Now, I asked before the Gas Commission, "Mr. Vanderpool was a great authority on that subject? A. Yes." Was he or wasn't he?

A. Yes.

Q. And when you testified, you accepted Mr. Vanderpool's theory at that time, did you not?

A. I did.

Q. Now, later in Boston, about two years ago, you testified, did you not, that five cents a thousand should be allowed for depreciation beyond the current expenses?

A. Later I modified it.

Q. You changed your mind late in the testimony and testified to what?

A. That the repairs and renewals and depreciation must all be treated as one item and that the more there was spent upon repairs in one year the less the depreciation, and *vice versa;* that the chief thing was to have a total of an adequate amount; that some companies took care of their plant entirely from what they called repairs.

3241 Q. But your first impression was when you testified there, that taking the ordinary current repairs and renewals as the company progressed that five cents additional would be required for final renewals or depreciation or whatever you please to call it?

A. That's right.

Q. Last year, before the Gas Commission, you came over to New York and revised your estimate of three cents when you testified in the Consolidated case and thought that was fair for contingent and reserve fund, did you not?

A. Yes.

Q. And now this year you say it is zero cents?

A. Yes.

Q. You have reached the ground floor now?

A. Yes, I have learned from your testimony about the plant more than I knew then.

Q. You commented in Chicago a year ago on Dr. Humphreys' views on depreciation, did you not?

A. Yes.

Q. And did you make this statement in the testimony (page 1368) before the Gas Commission—I have the Chicago record here also but I am reading this from page 1368 of the printed record before the New York State Gas Commission:

"Now, the best authority that I know of in the gas world in such a matter is Alexander C. Humphreys, who is the veteran manager of the gas works and president of gas associations and now President of Stevens Institute and senior member of the firm of Humphreys & Glasgow, which builds works, and consulting engineer work here and in Europe. He installed the Consolidated in New York and Liverpool, Brussels, Glasgow, Edinburgh, Bath, Brighton, Amsterdam and Copenhagen, and from 1885 up to 1894 he was in charge of the construction and engineering for the United Gas Improvement Company, which has about sixty companies in forty cities."

3242 Do I quote you correctly?

A. I think you do.

Q. Now, in reference to this depreciation of final renewals, what ever you please to call it, with which we are dealing, did you not in Boston state in substance as follows, there is a great depreciation which comes from invention which displaces machinery which may run just as well as it did when it was built, but which the up-to-date manufacturers throw into the scrap pile when the invention gives them something better?

A. I think I said so. It certainly is so.

Q. So it is not merely the wearing out of the machinery, but it is the possible supersession by improvement that you must consider as well?

A. That is right.

Q. And in Springfield, if I am correct, you said that scrubbers, condensers, Lowe, Flannery, &c., condensers were revolutionized in twenty years?

A. Generators probably.

Q. Yes, generators—had been revolutionized in twenty years. Is that substantially correct?

A. I probably said that.

Q. And is it not the case that it is the custom in well managed companies to make an allowance for depreciation or maintenance or some account like that?

A. If you have it there I do not doubt I said it.

Q. Your answer appears to be "there are some well managed plants which temporarily ignore it but their engineers are always protesting."

A. Do you wish me to correct that now or wait till redirect?

Q. I think perhaps you had better wait until redirect unless there is something immediately relating to my question?

A. It was immediately relating to it.

Q. Very well then.

A. In stating that engineers are always protesting against 3243 it, I should say that it depends on the amount of the repair fund. I know of very large enterprises like the Pennsylvania and Lake Shore railroads that out of their repair fund do a lot of construction and I don't believe their engineers protest at all. They have no nominal depreciation fund at all in their entire accounting system and yet they improve their plant right along out of their repairs and renewals, and so when I said that engineers protest I thing it was a little too sweeping. It depends upon the amount of repair fund whether they protest or not, I think.

Q. In other words, engineers according to you do precisely what Dr. Humphreys advocates, that is to put something into extensions instead of into a sinking fund, and thereby increase the value of the plant or keep it up, offsetting any depreciation?

A. Yes, they believe in keeping it up.

Q. Now I find in the Boston testimony (page 275), if I am correct, that you stated that two per cent. on the structural value must be allowed for depreciation; is that right?

A. I may have said that. If you say I did——

Q. Does not that accord with your view?

A. At the present time do you mean?

Q. Did it accord with your view then?

A. Undoubtedly, whatever I said then I believed, and if you find it in the testimony I shall not deny that I said it.

Q. You will have an opportunity to correct it if it is not there.

Mr. MATHEWSON: I have reached a point where I shall change the line of examination a little, and if you wish to take the recess now it will be agreeable to me.

Recess to 2.30 P. M.

3244 After Recess.

EDWARD W. BEMIS resumed.

By Mr. MATHEWSON:

Q. Professor, referring to the reserve which is to be created, apart from the question of how the cost of final renewals shall be financed, the measure of the loss through depreciation is the number of years that a certain part of the plant will be employed before replacement, or the average number of years of the plant as a whole, isn't it?

A. That is the usual method of reckoning depreciation, taking the average life.

Q. When you speak of the average life being 33 years, you say, do you mean anything more than if you establish a sinking fund to take care of each individual class of items in a plant as they require replacement, aside from the ordinary current repairs and renewals, of course, the total of the various sinking funds will equal the value of the entire plant in 33 years?

A. If you take 33 years, or whatever time you take, the sinking fund at the end of the time would be sufficient to cancel the investment that had to be displaced.

Q. And I suppose that the cost of depreciation should appear as part of the cost of the product every year, and that this cost should be spread evenly over the years of the plant's life?

A. When you say evenly, that can be interpreted, I suppose, as an equivalent percentage into a sinking fund, or as President Humphreys says, an equal number of dollars, so that I hardly know how to answer your question. If you interpret the word "evenl'y," in the sense of an even percentage into a sinking fund, I would say yes.

3245 Q. Would you say yes if you interpret it to mean a uniform number of cents per thousand each year?

A. I think the one would probably be not far from the other, yet not necessarily, because the ratio of sales to investment varies; the tendency being for sales to increase faster than investment.

Q. Of course, the life of some parts of the plant exceeds 40 years or 33 years?

A. Oh, yes. In fact——

Q. So when you speak of an average life of 33 years or 40 years you are really using a term which is inexact in itself?

A. Yes. There is no absolute agreement as to the life of a plant and, of course, it varies in different cities.

Q. Your testimony was that 33 years is the average life of a plant, was it not, or your estimates have been based on that in your testimony heretofore?

A. Some estimates have, and some on longer life.

Q. And Dr. Humphreys used 40 years, didn't he?

A. Yes.

Q. Now, neglecting the question for the moment of how the fund shall be provided or the loss should be taken care of, that is the question of financing, the yearly loss on a 40-year life for each one hundred dollars' worth of depreciable property would be one-fortieth, or $2.50 on each $100, would it not?

A. If you do not invest it. But you don't have to invest that amount——

Q. Well, however you are to get it and wherever you are to get it, if you assume 40 years is the life of a plant it will mean $2.50 a year to make up the $100.

A. Yes, without any interest or profit.

Q. But whether it is interest or profit or not?

A. If you put it into a stocking it will take $2.50 each year to make the $100.

Q. But if you want to replace your $100 at the end of 40 years you have got to have enough money to equal $2.50 for forty 3246 years, or else you will not get your $100, whether you get it from accumulations of interest or other sources?

A. Yes.

Q. So that the $2.50 on each $100 in case of the forty-year life of a plant is something that must be dealt with in some way, and must be procured from some source.

A. Yes.

Q. And this means in substance that the yearly loss will be 2½ per cent. of the depreciable property, doesn't it?

A. If you ignore the element of time.

Q. I am taking forty years——

A. No, but if you ignore the element of time during forty years that is true, but since the loss is not felt very much until near the end of the forty years, you can take account of time as related to compounding of interest.

Q. Now let me see. You take a plant like the Consolidated Gas Company that has been in existence for seventy-five or eighty years or 100 years; is it not true that if you take a forty-year life of a plant, 2½ per cent. of the depreciable property on the average will disappear each year and have to be finally renewed or finally replaced? In other words, it is not going to wait until the end of the forty years and then all go to pieces like the "one hoss shay," is it?

A. No, but whatever the part be, whatever the life, when a part has been in existence for forty years or fifty years and has reached a certain gait, as it were, then a certain amount of renewals must be made each year.

Q. And it would make no difference, would it, if you established a sinking fund for each class of property separately, the result would be the same?

A. I think it would make a difference in the effect on the consumer.

Q. Let us see if it would. If to take care of a plant, assuming a forty-year life, you have to get from some source $2.50 on each $100 per annum, then on the thirty-three-year life, such as you 3247 have assumed in previous testimony, you would have to get 1/33 of $100 or $3.03 per annum, would you not? Forget for the moment whether it is coming from interest or somewhere else.

A. Yes. That amount would have to be at hand, I should say.

Q. Then if it would be $2.50 on the theory of Dr. Humphreys' taking forty years, and $3.03 on yours, that would make a difference of 53 cents, which you would have to procure from some source beyond what Dr. Humphreys would have to procure under his forty-year theory, per annum, would it not?

A. If you assume that that difference of life between thirty-three years and forty years exists. I don't think in all cases it does. I think that in a company where mains do not depreciate any more than they do in either Boston or New York there would be a longer life, forty years or upwards rather than less. In some cities and with coal gas plants it might be less.

Q. But we are making an assumption, Doctor, and in this case I understood you to take thirty-three years as your average life of plant, didn't you?

A. I said I had in some cases.

Q. Didn't you in your figures here?

A. I don't remember now, but the more I have studied it, the more I think that in view of all the testimony as to the durability of mains in New York, that thirty-three years is altogether too short a life.

Q. Well, didn't you take thirty-three years in your estimate before the Gas Commission?

A. I don't remember.

Q. Well, don't you? Just think a moment.

A. No, I have not had time to study just what I took.

Q. That was less than a year ago.

A. But if you say I took it, I will accept it.

Q. No, I ask you if you remember?

A. I don't remember.

3248 Q. You did not take over forty years, you are pretty sure about that?

A. Yes. I did not.

Q. And if the average life of a plant was one year, the loss from depreciation would be, of course, 100 per cent. each year and you would have to add that all in to the cost of gas?

A. Yes.

Q. It is simply a question of time?

A. Yes.

Q. Now, taking your sinking fund upon the theory you have advanced, you say it would be $1.05 for the first year?

A. On a forty-year life I believe that is it.

Q. And so the second year it would be a certain sum, and in order to reach the entire value of the plant in forty years, you would have to leave that $1.05 free for the entire forty years, would you not and accumulate at interest?

A. Yes. I think it was on a four-per-cent. basis.

Q. So that your theory proceeds upon the leaving of the money in a sinking fund and letting it accumulate, instead of using it.

A. Yes.

Q. Now Dr. Humphreys proposes on the other hand to use $2.50, we will say, per year on each $100, and charge that in operating expense, but that goes into renewals and extensions. Now if you don't make the renewals and extensions from that source, you have got to borrow money to make them, haven't you?

A. No——

Q. Or raise capital in some other way?

A. No. As I understand——

Q. Haven't you?

A. As I understand Dr. Humphreys' theory, the first few years' renewals would not take all of this $2.50 and it would be put into the plant in the shape of extensions or new construction and would be drawn on later for meeting the depreciation when it appears. Now, whether it is thus put into extensions—it can be put into extensions that way as a resource earning a return or it can be put into a sinking fund outside of the gas investment. 3249

Q. I think you misunderstood Dr. Humphreys. If I understand his theory correctly, it provides for putting this $2.50 per $100 we will say, assuming the amount annually back into the property?

A. Yes.

Q. Thereby keeping the investment good by additions or extensions which will take the place of plant which is losing its life?

A. Yes, but that does not differ from my view of it.

Q. If you put your money into a sinking fund instead of using it in that way, you have got to get capital from some source to make your extensions and additions, haven't you?

A. Yes, for your extensions you have.

Q. Then you have to pay a return on that property?

A. Yes.

Q. And that must come out of the consumers of gas?

A. Yes.

Q. So that while you have your sinking fund accumulating at four per cent., you are at the same time borrowing money to make these extensions in your case and paying five or six or eight or even ten per cent. for it, if you issue it as capital, are you not?

A. Of course I don't think you have to pay any eight or ten per cent.

Q. Well, you have to pay at least five per cent?

A. Yes.

Q. So that the interest that the consumer has to pay more than offsets the interest that he gets or that the company gets on its sinking fund?

A. I think the matter becomes more burdensome to the consumer during the first few years——

Q. That is your statement, but I am trying to get down to a point where you will show how that is.

3250 A. As I recall it, I can produce it next time, President Humphreys said so himself in an article in "The Progressive Age" within a year.

Q. He will testify for himself later perhaps, but I am now getting your testimony. You would produce a fund equal, if you took a 40-year life, to $2.50 per annum for forty years to make up your $100, and that would be produced either by taking the fund out of the earnings or by accumulating interest upon it after it was taken out, a smaller sum being put into a sinking fund. Now, Dr. Humphreys gets precisely the same sum by taking $2.50 for forty years. You cannot make something out of nothing?

A. Certainly. But in the one case you only take $1.05 a year out of the business, putting it into a sinking fund.

Q. But on the other hand you have to have capital, you have to get in new capital to make the extensions and additions which would have been made by the 2.50, if that had been put back into the business, so that you gain no advantage. Don't you see so?

A. Well, we are facing a concrete proposition in which the company during its past one hundred years has not accumulated any fund for either purpose, so we are as it were beginning the thing.

Q. Oh, we have got a plant here that is of age, Doctor, and we must take it as it is, as you have said in some cases.

A. Yes, but you would have to, I should think on that principle, have to divide your present capital or structural value into such portion of it as a legitimate sinking fund on President Humphreys' theory would have amounted to at this time, if it had begun to be invested forty years ago.

Q. Did not Dr. Humphreys in his article to which you refer, illustrating the effect of a sinking fund, say that the final year you would have to put in $4.85, or put in $1.05 the first in order to produce the fund?

3251 A. Yes, but you would not if you put it into a sinking fund, you would only use $1.05 each year.

Q. And your figure is on the basis that that you produce it at the end of forty years?

A. Yes, at four per cent.

Q. As a matter of fact, so long as a plant does not go to pieces all at once and fall flat, at the end of forty years, you have got to put money into your final renewal, supersession, removal to Astoria, or whatever else it is that requires some supersession from time to time as occasion requires, haven't you?

A. Yes.

Q. And if you used your sinking fund for that purpose you would not have it running for forty years, would you?

A. No, although other portions of it would run for more than forty years, so that is the theory, that the forty years is an average. Some of it would be withdrawn in twenty years and even ten years and some would last eighty years.

Q. But if you wanted to withdraw in twenty years you would not have that part running for forty years and the accumulation would not occur?

A. But I think the whole thing mathematically would work out the same in the end, if you assume that forty years is the average.

Q. Would not the same result follow more cheaply if instead of having an accumulation at four per cent. for twenty years for a part of your plant and borrowing money at five or six per cent. to add to your plant, you had added to your plant by putting in a certain amount each year and made those extensions and required no extra capital therefore to produce them?

A. It may be quite as good policy for a company to finance that way, but when you come to reckon as part of operating costs, you can get at it much more scientifically on a sinking fund basis.
3252 But if they prefer to substitute another plan in their own private financing which works out just the same at the end of forty years, there is no objection to it; but in the estimate that we are making in operating cost the scientific theory, I believe, is the sinking fund.

Q. I am proceeding on the theory of advantage to the consumer as well as the scientific theory, and if the consumer pays a smaller amount into a sinking fund but pays a larger amount for return upon capital which has been required for extensions because the money was put into a sinking fund, then the consumer is not benefited, is he, if they offset?

A. The total profits of the company may be greater by investing the sinking fund in the property rather than in an outside sinking fund investment, and so far as the consumer shares in the profits of the company he would benefit too under that supposition, but it is very much more fair and more correct, I think, in approaching a company that has no sinking fund, and no accumulated depreciation fund, to apply the sinking fund, and then admit that the company can apply any other actual method of financing they please.

Q. How do they do it in Massachusettts in connecting with the Municipal Act to which you have just called attention? Is there any provision in that Act whatsoever for a sinking fund?

A. I understood there was.

Q. Will you read it and see if it does not provide expressly that they shall be put into extensions or something of that sort (handing paper)?

A. I will read, shall I?

Q. No. I merely asked you a question. I can't think it is necessary to read it yet. The question was whether there was any provision for a sinking fund there to be set aside as such?

A. It appears to be in this way. The law states as among
3253 the expenses of operating a municipal plant this: "The requirements of the sinking fund or debt incurred for the plant." I interpret that to mean that in borrowing for the plant the town or city very likely has to agree to a sinking fund provision or there may be a State law as to all municipal bonds.

Q. I don't think it is worth while to speculate as to what there may be. Look at the Act.

A. Well, whatever law there may be regarding the sinking fund must be complied with. That is all that law says. It must comply with the requirements.

Q. That refers to a sinking fund to retire bonds, doesn't it?

A. Yes, and it must be complied with.

Q. That is not a sinking fund for depreciation purposes in the ordinary sense or final renewals?

A. Oh, no.

Q. Won't you read along down further in the Act and see if it does not provide that the depreciation fund may be used only for extensions, reconstruction, enlargements and additions, thus maintaining the investment?

Mr. **Burr**: In excess of ordinary repairs?

Mr. **Mathewson**: Of course, in excess of ordinary repairs. I am now talking about this final renewal fund.

A. It provides that the three per cent. on the property aside from land shall be put into a depreciation fund and shall be used for renewals and reconstruction.

Q. Extensions, enlargements and additions?

A. Yes, and "the surplus, if any, of said annual allowance for depreciation after making the above payments, shall be kept as a separate fund and used for renewals other than ordinary repairs, extensions, reconstructions, enlargements and additions in succeeding years." Now when I read that I was uncertain, and I still am uncertain from the punctuation just what it means. 3254 I noticed that a few days ago. For example, I don't know whether the expression, "other than ordinary repairs" is to be followed by the implication "other than ordinary extensions," and "other than ordinary reconstruction," or whether extensions is to be included on a parity with renewals; it is not clear grammatically.

Q. You have made a study of Massachusetts cities I judge, from your testimony, and you seem to have access to the files of the Massachusetts Gas Commission. Don't you know that it is the practice and custom of the Massachusetts Gas Commission to require the investment of these depreciation funds in additions, enlargements, etc., to keep the investment good and that they do not consent to the establishment of a sinking fund to accumulate for a long term of years, such as you have advocated.

A. Up to a few months——

Q. I merely asked that question. Won't you answer it, please?

A. I can only answer it by a statement. Absolutely, I can only answer it by a statement.

Q. I ask you whether you don't know that to be their practice or custom. Can't you say whether you do or not?

A. It has not been their practice and custom.

Q. It has not?

A. There has been no practice in the matter.

Q. You think so?

A. Yes, I do. The law on depreciation in Massachusetts has been only a dead letter. It has been only a bookkeeping charge. The law until that was passed did not require a cent to be set aside for depreciation; it only required the towns owning their plants to put the bookkeeping allowance for it in their reports.

Q. You put it in this way. Don't you know that the towns
3255 themselves would not consent to the establishment of a sinking
fund of the character that you advocate, and therefore the terms of the present law and the treatment of the accounts by the Commission?

A. I don't think there has been a sinking fund except for the debt.

Q. But I was going to ask you, and I will now ask you, if you will name a single gas company which you know maintains an accumulating sinking fund of the character which you have advocated instead of putting its money into enlargements and additions for the purpose of keeping the investment good in that manner?

A. No, I don't know of any.

Q. Now in your testimony in Boston some time ago, you were testifying in reference to the Brookline plant and claiming that the Brookline plant was of less value than was claimed, because it had not charged a sufficient sum to its depreciation, repairs, renewals, &c., were you not?

A. Yes.

Q. In that connection do you remember that you cited some English cities to sustain yourself?

A. Yes.

Q. And did you not cite nine municipally owned plants, Bradford, Boulton, Birmingham, Carlysle, Leicester, Manchester, Nottingham, Oldham and Salford, to show that the funds there for repairs, renewals and depreciation were equal to 12.66 cents.

A. While I don't remember the exact figures, that impresses me as substantially what I said.

Q. It occurs at page 419 of your Boston testimony. Do you remember saying that to this should be added one-sixth for wages because wages were higher in the United States, which would produce 14.7 cents?

A. Yes, I think I said that.

Q. And when you were asked why not add more than one-sixth,
if the difference is 25 to 30 per cent. (meaning in labor) your
3256 answer was "Because all distribution is not labor."

A. I think that was substantially what I said.

Q. Now the 10.89 cents which you have allowed for the Consolidated Gas Company and saying that you allow nothing beyond that, is nearly 4 cents less than the 14.7 which you showed there, isn't it?

A. Yes.

Q. Now let us look at your Chicago estimates made recently, as they appear in the pamphlet to which attention has been so often called. Did you not there on page 43 allow 10.16 cents for repairs and renewals and supplement that with an additional three cents "in order to be surely on the conservative side?"

A. Yes.

Q. That makes 13.16 cents?

A. Yes.

Q. And did you not say at page 41 "The New York Consolidated Gas Company produces about one-quarter of the gas which it makes in the form of coal gas and therefore requires more extensive repairs than the Chicago Company"?

A. Yes. . Where was that on page 41? I want to look at it.

Q. Page 41, second column.

A. That is right. I have found it.

Q. And do you remember the testimony of Mr. Cowdery, of the Laclede Gas Company in St. Louis, that he had known as much as 15 cents variation in the cost in a single year of gas within the vicinity?

A. He used some figure like that. I don't remember exactly. In the coal famine, which I thought he referred to when I heard him say it, there was of course quite a change in the price of coal and also in the demand for gas.

Q. And do you remember his statement which appears on page 22 that with the prices that gas companies are now making they must figure further into the future and on a sufficient basis, after stating that he thought ten cents should be allowed?

3257 A. I have not found in all my studies of the Massachusetts companies for twenty years that on the average for any year there was any such change as 15 cents.

Q. Well, I will read from Mr. Cowdery, on page 22 of this pamphlet, and see if this impresses you as fair:

Mr. Burr: This is the report of the Chicago Council you are reading?

Mr. Mathewson: Yes, his statement contained in that report.

"Q. I make the stat-ment that repairs and renewals as they should be made every year with a company conducting its business properly would require in the neighborhood of 10 cents per thousand and unless some extraordinary allowance were made for extraordinary things that would happen, some other means must be found by the company to raise the money for such a purpose. Mr. Bemis cannot possibly show this to be different if he states conditions as they exist in this country."

Is that a fair statement?

A. Of what he says?

Q. Yes. And do you agree with that?

A. No. I agree that he said it.

Q. You don't accept his estimate of 10 cents?

A. No, not as applied to New York. I did think it would apply to New York but I do not think so any more.

Q. How recently did you change your mind on that subject?

A. On studying the testimony you have put in as to the increase in valuation of your property since 1884 over and above the amount you have spent for construction.

Q. We will come to that in a few moments, and I think we can satisfy even you on that subject; if not, we can the Master. Referring to the——

3258 A. I may say that I have also learned more about the English companies since I was over there this summer as to my testimony about them. I find they have been improving their plants out of their repair and renewal fund, so they have been furnishing part of their capital that way, the municipal plants I mean, and it is also true of Sheffield and some of the other private companies.

Q. And don't you remember in Syracuse your statement that you were aware of an instance in which the coal bill of a gas company no larger than the Syracuse company had varied $50,000 from one year to another?

A. I was asked, I think, some such question on cross-examination. I don't remember how I replied and I certainly do not remember what company I had in mind.

Q. It appears at page 2979 of the Syracuse Minutes, that you were asked that question and that you said "Not as much as that save in the big strike four years ago. I think it did then." Now what company did you have in mind at that time?

A. Well, I don't think I had in mind any company, but knowing the fluctuations in coal, I took it for granted that that might have occurred in a very big plant.

Q. Well, no larger than the Syracuse plant?

A. Oh, I think it would not have occurred in a plant like that.

Q. What is that?

A. I think it would have been a larger plant than that.

Q. The question is "Q. Have you ever known a coal bill to vary from one year to another in a company no larger than this at least in the sum of $50,000?"

A. Then if I said that it certainly was a mistake because I certainly don't know of any such plant, but I must have had in mind that there were plants in which it would vary, without referring to a plant of that size.

3259 Q. If you did refer to a plant of that size, as the question would indicate, and the sales of that company were only 350,000,000 feet a year, that would mean a difference of something like thirteen or fourteen cents per thousand feet of sales for the coal bills?

A. Yes, but I don't know, as a matter of fact, any such plant.

Q. And you wish to modify that answer in that respect?

A. Yes.

Q. Now, if you should find a company charging twelve per cent. to depreciation, taking that out and putting it into plant, you would think that excessive, wouldn't you?

A. Twelve cents or twelve per cent.?

Q. Twelve per cent.

A. Yes, I should think it was.

Q. You would think they were building up their plant and enlarging it without letting it appear in construction, wouldn't you?

A. Yes.

Q. And doing so very largely and very liberally?

A. Yes.

Q. Would the same be true if you took ten per cent.?

A. Yes.

Q. And anything down to the two per cent. which you mentioned in Boston as a fair figure?

A. And even that two per cent. depends upon the amount they put into repairs.

Q. Yes, but assuming that they put what you may call the normal amount in repairs, your answer would be to that yes, would it?

A. Unless there were exceptional conditions.

Q. Yes, I mean the average and ordinary conditions, of course. Now, I think you have stated, have you not, that there is no definite proportion in the gas business which you have been able to figure out between the sales and operating expense?

A. Yes, I have said that.

3260 Q. Now, let us take this 10.89 cents per thousand, to which you have not added the three cents this time, but which you did before the Gas Commission a year ago, and see whether your theory is correct on which you have excluded the three cents now. If a piece of apparatus is replaced, it is proper, is it not, to charge to depreciation to reduce the capital of the company the amount which that piece of apparatus cost?

A. Not necessarily.

Q. Well, is it not proper to do so, is it not the usual custom when a piece of apparatus is displaced, to charge on the one side to depreciation the cost to the company, as it stands on its books, on that piece of apparatus?

A. Not if you are going to put into capital account more than you had before, it is not proper, that is, if you are going to put any of that discarded into capital.

Q. We will assume you are not, but that it is something which is absolutely abandoned.

A. Let me put it this way——

Q. An abandoned main that is absolutely useless and will never be used.

A. If you have a main that cost $1,000 and you discard it and put in a larger and better main costing $3,000, it is all right to charge off the one thousand dollars for depreciation if you do not add to the value of your property more than $2,000. But if you come in and ask the right to earn dividends on more than two thousand dollars, then to that extent you have charged off too much.

Q. Let us see. If we replace a piece of apparatus, a main, we will say, that cost $1,000, and put in its place a larger main that cost $3,000, is it not quite proper to charge $1,000 to depreciation and charge the $3,000 to construction, the net result being to increase the $2,000 in the capital account?

3261 A. It would seem so, unless it appears after awhile that you have increased your capital account on that ground more than $2,000.

Q. We are assuming that we do things in a businesslike way and that the books represent the facts. That being so, that would be quite proper, would it not?

A. Yes, under those circumstances.

Q. Now, the piece of apparatus, in other words, which is removed, would be charged off at its cost, of course, and the new apparatus would be put into capital account to increase capital account at its cost and any difference would be added to capital account.

A. That is right.

Q. Have you not heard Mr. Carter testify, or haven't you read his testimony that that is exactly the method that the Consolidated Gas Company has pursued?

A. I could not understand his testimony as to services, I think it was, as meaning precisely that.

Q. Well, you are referring now to an affidavit, and I will take that up later. But I am referring to his testimony which has been given in this case and also before the Gas Commission.

A. I did see testimony to that effect but when I read the valuations here I saw that it was wrong.

Q. I don't think you did see it was wrong, because the testimony was absolutely correct, professor.

A. Or the valuations were wrong, I don't know which.

Q. I don't think either were wrong. We will see about that in a minute. If a main cost the company a thousand dollars and by reason of the fall in pipe it replaced that pipe for $800 it would still charge $1,000 to depreciation, would it not, and only $800 to construction, and its capital account would be reduced by $200?

A. Renewals hardly ever take that form. That is, while prices fall renewals are generally of larger mains and services,

3262 Q. That may be so, but I am assuming for simplicity that they were of the same size?

A. For that year's operations it would not be true.

Q. Assuming that to be the case, then the capital account would be reduced by $200, wouldn't it, by proper bookkeeping?

A. I should say so, with that supposition.

Q. Now, let us take a ten-inch main which cost a company at the rate of $60 a ton for pipe, which is inside the figure that Professor Marks took for pipe at the same times?

A. That was not the basis of Rowland's value in 1884.

Q. No, no, I understand that. That is another proposition. Supposing that it is desired to replace a ten-inch pipe by a twelve-inch pipe and that by reason of the fall in pipe the twelve inch for the same number of feet cost less now than the original cost of the ten-inch pipe?

A. Yes.

Q. You then would have a reduction in your capital account, would you not?

A. Yes.

Q. And at the same time you would have a better pipe, larger pipe, and a better plant, so far as that goes?

A. Yes.

Q. Suppose that you take services and assume that the company finds it possible to replace an old service which cost it a certain sum with a service of twice that capacity, at exactly the price that the old service cost, then there would be no increase in the capital account at all, would there?

A. No.

Q. Still you would have a new service of double the capacity of the old service?

A. Certainly.

Q. So if those results followed to the Consolidated Gas Company and produced the result which Mr. Carter testified to, and the Company at all times followed its approved system of bookkeeping, of charging off against property the cost of what it has replaced and charging to increased property the cost of what it has acquired to take its place, no fault could be found, could it? 3263

A. There would be no fault with that part of it. There might be a fault with the valuation that followed it.

Q. We are not dealing with the valuation that followed it. We are dealing——

A. Well, you want to judge one by the other.

Q. Because what you dealt with on Mr. Carter's affidavit as to services was the book value and what they stood on the books, not the present valuation at all. You understand that, don't you?

A. Not if I understood your question. I dealt with Rowland's value as a structural value in 1884, and the present value as a structural valuation to-day and I understood that neither one was a book value but both were structural values based on an inventory.

Q. There is where you have made your mistake, because if you read Mr. Carter's affidavit again you will ascertain that Mr. Carter was dealing with the book value, showing how much the book value had been increased, and was not dealing with the cost of reproduction of those services to-day at all. That being so——

A. Well, admitting that, that would not apply as to what I took as to plants and holders by Mayer and certain other things I took. And as to the mains and services and meters, I understood the testimony to be that the true value was at least equal to the book value, and I understood Mr. Addicks to say that he thought it could not be duplicated without more than that book value.

Q. I am dealing now simply with the book value. Assuming I am dealing with the book value and that it charges against capital, and charges in favor of capital have been made in the approved manner to which we have referred, there would be no criticism, no matter what the result might be as to small or large increase, would there?

A. No.

Q. Then, if that be the case and if my supposition is right you still then would allow this three cents for the final renewal which you have excluded on the other theory. 3264

A. Yes, because the total increase in valuation of the property now over 1884 is over twice the increase in book value.

Q. You are speaking now, Professor, of the cost of reproduction. I am not dealing with that at all because Mr. Carter's affidavit, where he showed an increase in capital account chargeable to services of only $177,000 in twenty-one years, dealt solely with the present book value of the services and not with the cost of reproduction. You understand that, don't you?

A. Well, on that particular point——

Q. Don't you understand that?

A. I don't remember as to—yes, I got $177,000, but I find somewhere in the testimony of your witness they put a valuation on those services to-day of $1,994,034, an increase of $959,793 over the valuation that Rowland put on them.

Q. Oh no, not at all. You found that the cost of reproduction today was $1,994,000?

A. Yes; and that the book value of these services was about $1,212,000.

Q. Well, Mr. Carter used the $1,212,000 in reaching his $177,000 and not the larger sum.

A. Yes, that is right.

Q. Then if in the books of the Company so kept renewals and replacements were charged in the manner we have discussed here; then there would be no inflation of property at the expense of the consumer of gas and you would be compelled to allow the three cents beyond the 10.89 on that supposition, wouldn't you?

A. If it should appear—I take services now alone which are not typical of the whole situation, but taking services now, which we are speaking of, if it should appear that the Company made a claim on behalf of the increase of cost in duplication and claimed they were entitled to some consideration on that account, in charging for
3265 gas, then it would certainly be right to take into account that the repairs and renewals were too heavy on the services.

Q. But, taking the book values of the property and assuming that that 10.89 cents has simply taken charge of the current repairs and renewals and that no part of it has gone in to swell property accounts, but that the accounts in relation to replacements and renewals have been conducted in the approved manner that we have suggested, then you would need a final renewal allowance beyond the 10.89 cents, the same as you allowed before the Commission?

A. Not if it should appear that the property as a whole had greatly increased in value, aside from land. Now I do not allow for increased value of land or mains on account of paving, but if it should appear that all the other property had increased in value more than that book value and you made any claim on that account than to the extent to which you proved your claim, to that extent would 10.89 be excessive.

Q. But I understood you to say that you based your conclusion on some assumption that part of this 10.89 which has been expended for current repairs and renewals had gone to swell the plant account?

A. It may have done so.

Q. Well assume that it did not, as Mr. Carter testified it did not, then that would modify your conclusions?

A. Not if the property has really increased in value.

Q. Then the point is if the property has increased in value, that is to say the present cost of reproduction is greater than the cost to the Company, that is what controls you and not the putting of any part of this 10.89 cents into additional plants, is it?

A. Well, I exclude the land and the mains, but so far as relates to the rest of the property I find, excluding land and mains, that your witnesses have reported the property has increased in 3266 value in excess of the book repairs and renewals by $10,671,000. Now, if there is any claim made that any portion of that should go into capital account, then to that extent is the 10.89 excessive.

Q. You understand the testimony is that the cost of reproduction of these plants is a certain figure?

A. I have taken your witnesses on that, for what they have testified.

Q. Just a moment. I want to find what you understand. You understand from the testimony that the cost of the reproduction of this plant is a certain figure?

A. According to your witnesses, yes. I understand it so.

Q. That land we will assume, which cost the company $11,000,000, is now worth fifteen and one-half million dollars. Now, no part of that increase in land has come out of that 10.89 cents that we have spent for ordinary renewals, you understand that?

A. I do.

Q. And that increase in the value of the land has been a natural and normal increase?

A. Certainly.

Q. Now, supposing you take mains, the fact that the mains to-day would require $12,600,000 to replace them on account of the expensive pavements which have been put down, as against the cost of $7,852,000, is not due to any part of that 10.89 cents going into mains to increase their values; you understand that too, don't you?

A. Yes.

Q. So that the increase in the value of the property is not in any way due to the use of any part of that 10.89 cents for anything else than current repairs and renewals; you understand that, do you not?

A. No, I have my grave doubts about it.

Q. Well, assuming that to be so, as Mr. Carter has testified, and waiving your doubt for a moment, then you would have to add something to the 10.89 cents for the final renewal of plant on 3267 expiration of life, upon the theory you have enunciated, wouldn't you?

A. No.

Q. Simply because these items of plant, like land and mains and services have increased by what we may call normal processes, and without taking any part of the increase out of the consumers of gas you would say we are not entitled to any reserve fund to take care of final renewals, would you?

A. No, if you claim profit on that appreciation.

Q. You mean by that if we claim that we are entitled to a return?

A. Yes.

Q. On the present value of our property we then are not entitled to any reserve fund to take care of final renewal of our property, is that it?

A. Well, so far as your theory of appreciation balances with the theory of depreciation. You cannot work the one without the other.

Q. Well, I don't know whether we can or not. We are going to rest on the law, so far as we are able to ascertain it.

Mr. **Burr**: Well, that is the question.

A. Now, so far as depreciation has not balanced, why, of course, we must take it into account.

Q. Supposing the appreciation of that property had a good deal more than counterbalanced the entire 10.89 cents that we spent for ordinary repairs and renewals, then we are in a dreadful state, aren't we? What would happen then?

A. Why, I should say if you claimed there was profit——

Q. In that case we ought — divide up part of our property among the consumers of gas, ought we not, on your theory, because it had increased beyond the amount of 10.89?

A. That is not all your expense of gas production. It would sweep out the entire repair and renewal accounts. Certainly
3268 you cannot work a depreciation theory and an appreciation theory unless you work them together.

Q. Now, let me call your attention to another point. When we are figuring upon the amount required for final renewal of these plants in forty years, or any other time, you have got to take the plant as it now is and figure the reproduction of this plant, haven't you?

A. I deny that as to land or mains.

Q. Well, if we have got to reproduce mains at the end of forty years we have got to reproduce mains under this present expensive pavement? You cannot suppose there will be any poorer pavement at that time than there is now; isn't that so?

A. Yes, but you do not replace them in forty years.

Q. And we have got to figure our sinking fund or our depreciation fund, whichever way you treat it, upon a basis which will reproduce the property as it now exists, haven't we? Mains, services and other things, in computing its life; is not that so?

A. The land does not have to be replaced.

Mr. **Burr**: The testimony is a main does not die. You may have to put down larger mains.

Mr. **Mathewson**: That is a replacement which may be a final renewal.

Q. (Question repeated:)

A. It is not true as to land, and whether it is true as to mains I should have to consider a little more. It would be true as to everything else.

Q. But you could not replace your mains upon the expiration of their life, whether it is ten years or one hundred years from now without replacing those mains under pavement just as expensive as there now is, so far as you can see.

A. When that replacement occurs under this more expensive pavement, then by the theory that we both agreed on a little 3269 while ago the difference between that replacement and the original cost of the main can then be charged into capital account, and not until then.

Q. But we must provide for the final death of the plant by the sinking fund which you have just referred to, and I want to know——

A. You will then——

Q. Just a minute. I want to know what the value of the property is which we have got to provide for or for the replacement of; and isn't it the property as it is to-day and not as it was fifty years ago?

A. Not as to mains, services and land; but as to everything else I agree.

Q. How are you going to replace the mains except by going under the pavement as we find it?

A. Then you can charge it to capital account.

Q. Do you mean to say that you charge that to capital account, the replacement of the mains?

A. Less the original cost.

Q. Has not your whole theory been that we are entitled to replace the plant at the expiration of its life and to charge something against the consumer of gas to produce a fund for that purpose?

A. As to the original cost of the mains, that is my theory, but I say, just as we said a little while ago, if the main cost $3,000 that took the place of a main costing $1,000, the $2,000 difference would be charged into capital account; the $1,000 would be charged off. Now, suppose that $3,000 is not due to the extent of more than $1,500 to a difference in the cost of the pipe; suppose the other $1,500 is due to the difficulties of paving which did not exist when the original pipe was laid; it would still remain true that the new main cost $3,000 and the old one $1,000, and the difference between the two, or $2,000, I would charge to capital account.

Q. In other words, we could wipe out our entire capital, 3270 and be obliged to, and have nothing left if there were expensive pavement enough so that it cost a great deal to get under it, couldn't we, under your theory?

A. No.

Q. Why not? If you have got to charge to capital account any replacement of that kind instead of charging it against the consumers of gas by the establishment of a depreciation fund, you concededly would wipe out your entire capital by what might be charged to it in that way, if pavement were expensive enough?

A. Oh, no.

Q. Well you would cut a very large hole in it, wouldn't you?

A. No.

Q. If you had to replace the system of mains in New York City to-day, we will say which cost $7,852,000, and we had to pay $12,600,000 for it, would you say that we charge $5,000,000 against our capital account and impair our capital to that amount?

A. I should say this, that if by virtue of changes in conditions of New York——

Q. Won't you answer my question first?

A. You would be entitled to charge for cost and return on that increase of investment made necessary by the conditions in the City, and I still say that as to mains that when you have to renew them by virtue of paving you then have to put in a bigger capital account, and you will be justified in earning a return on that capital.

Q. In other words we would be entitled to increase our capital by $5,000,000?

A. Yes, for your expenditures.

Q. And then against consumers of precisely the same amount of gas we would have a right to charge in that case enough to produce a return upon $5,000,000 more of capital than to-day?

A. Certainly.

Mr. **Burr**: It does not appear it is precisely the same amount of gas.

3271 The **Witness**: But that would never occur under those conditions.

Q. But it will occur in degree from time to time and you must know that we are replacing mains constantly under these pavements?

A. As I understand the theory, those charges now go into book value. I understand to-day if you tear out a main and put in another main, having to dig through new pavement for the purpose, and if the entire cost is $3,000 for the job, no matter how much is on account of the new paving, that you charge the entire $3,000 to the book value.

Q. But our depreciation fund of three cents which you allowed last year was to take care not of these ordinary current repairs and renewals but for extraordinary life such as you stated, such as the removal to Astoria, which leaves our plants here in good condition, many of them—all of them we say—you say many of them—and which is not due at all to the wearing out of the plants; and we have got to determine, have we not, whenever we establish a final renewal fund some basis upon which that fund may be computed, and the question I am asking you is, isn't it the present value of the property that has to be replaced, excluding land, if you please for your purposes?

A. I say, no. Excluding land and mains and services I say yes.

Q. As far as manufacturing plant and holders are concerned, it all applies, so far as mains and services, it does not?

A. It does as to the pipe. But I am talking as far as the paving is concerned, as to mains and services.

Q. And we have got to charge that to additional capital if it ever becomes necessary to replace?

A. Yes; and that is what you are doing now, as I understand your book value of account.

3272 Q. I don't know whether we do or not but I am getting your views on it. Now, you have referred to Boston, which is obliged to maintain 16 candle-power against our 22. What would be the difference in the cost of six candles?

A. Some would say that it was a gallon and a fifth of oil. Some would say it was only a gallon.

Q. Well, a gallon and a fifth would mean about five cents, wouldn't it?

A. Yes.

Q. For the difference in the candle-power?

A. With oil at four cents.

Q. Well, you are referring to oil?

A. With oil at four. It would be 4.8 cents, of course.

Q. Yes, it would be about five cents. How did you take pains to find whether any city in Massachusetts paid as high as four cents for the oil?

A. I think I have obtained figures, tried to, of all the large cities of the State.

Q. You found some of them paid at least four cents for oil, didn't you?

A. I think one or two did, but I am not sure. I can tell if you wish.

Q. I was wondering whether there were not some that paid more than Lynn?

A. Yes. I will say the average of all of them is much lower than your price.

Q. You know the average of all the companies in New York is much higher than that, don't you?

A. I don't recall any but the Mutual which pays more.

Q. Didn't you see the statement of Professor Marks as to the average of certain oil in cities which he cited?

A. Yes. I thought you meant New York City.

Q. Don't you recall in the cross-examination he was asked as to the cities he left out and that the average there was over five cents?

A. Yes, I remember that testimony.

Q. Isn't it your information that the prices paid in New York
City by the Consolidated is not in excess of the average paid
3273 by the cities in New York State?

A. So far as that testimony shows it. I don't think that it is very exhaustive testimony.

Q. Oh, no, but it was derived from this Brown's Directory on which you place such weight.

A. I haven't quoted Brown's Directory for oil.

Q. No, but you have on other things. Let me quote it on a few.

A. On the miles of main in the Ogden Company in Chicago I quoted Brown's Directory or started to.

Q. You notice that Doctor Marks quoted it constantly?

A. He quoted it on oil.

Q. And now let me ask a further question about Boston. Don't you know that the Boston Company procures considerably more than half its gas from the New England Coal & Coke Company, which is a coke company?

A. Yes, I read the figures. I think it is about half.

Q. And this New England Coal & Coke Company is not a distributing gas company at all, is it?

A. No.

Q. Just a manufacturing company?

A. That is right.

Q. Its business is manufacturing coke and it has this gas as a residual?

A. That is right.

Q. Now, in a coke company of that kind, a ton of coal produces in round numbers say 10,000 cubic feet, doesn't it, speaking roughly?

A. No. In the coke oven plant it produces about 4,000 feet. That is of a proper quality for sale; but in a coal gas plant you are right.

Q. In the New England Coal & Coke Company do they not produce about 10,000 feet of gas with a ton of coal?

A. Not commercial gas for sale.

Q. I am not talking about commercial gas for sale. I say gas—10,000 feet per ton of coal. Is that a round figure?

A. I think not. 4,000 feet is the usual allowance of gas at coke oven plants.

3274 Q. Didn't you testify before the Gas Commision in response to my questions that the New England Coal & Coke Company produced roughly 10,000 feet of gas per ton of coal, and that 7,000 cubic feet of this was used to coke more coal, leaving about 3,000 cubic feet to go for illuminating purposes?

A. I may have said that. I do not recall exactly.

Q. You certainly did, or else I am much mistaken. Was that an error if you did state it?

A. I don't know how much they used for heating their retorts. All I know is the amount they sold.

Mr. Burr: Have you a reference to the testimony?

Mr. Mathewson: No.

The Witness: I don't know the amount of gas they produced. I know the amount which is commercially saleable, which is 3,000 to 4,000 feet per ton of coal.

Q. When you coke a ton of gas coal, is it not the fact that in round numbers you produce about 10,000 feet of gas?

A. Yes.

Q. And if this New England Coal & Coke Company delivers 4,000 feet that would indicate that they had used about 6,000 feet for their own purposes of coking more coal, wouldn't it?

A. Yes, but when I say that amount of gas, 10,000 per ton of coal, I refer to the commercial coal gas process. I am not sure just how much gas they do get out of the coke ovens because it has never been a matter of report to any commission; it has never been a matter of investigation so far as I have been able to trace it. It is quite likely true that they get 10,000 feet. It is not a matter I am very positive about. They refused to let anybody go through their plant in Everett.

3275 Q. You say you have been a statistician and studied the gas business and other things in the City of New York and you know that a ton of gas coal produces about 10,000 feet of gas, do you not?

A. It does in commercial coal gas; perhaps 10,000 to 11,000.

Q. Have you any idea less gas is produced in coking their coal at the New England Coal & Coke Company?

A. I don't know.

Q. You don't know that there is any difference, do you?

A. No.

Q. And do you know that about 4,000 feet of the gas that they produce is delivered commercially to the City of Boston or the companies they are operating?

A. And I do know that they could not deliver 10,000 feet of ordinary commercial coal gas.

Q. No, because they have to use part of the gas; they use it to coke more coal and to keep their own business going.

A. I understood they did not produce of commercial quality, 10,000 feet in coke oven plants, but maybe 10,000 feet of some kind of gas.

Q. Do you know at what figure they are able to deliver that gas to the Boston companies?

A. I know what price they do deliver it at.

Q. Well, what is it? I think you stated before the Gas Commission that it was fifteen cents unpurified, or something of that sort, was that right?

A. I have here the figures for the year just closed.

Q. Where did you get those?

A. From this copy of schedule just made to the Massachusetts Gas Commission by the Consolidated Gas Company of Boston, in which it tells how much gas it made, how much it bought, how much it paid for it, and so on. Now, they bought 2,262,654,700 feet.

Q. That is considerably more than one-half, isn't it, of their total output?

A. Their total output? It is. Their total output is
3276 3,988,188,700; so it is 55 per cent.

Q. That includes about 500,000,000 cubic feet sold to other companies?

A. They buy it first and then sell it afterwards.

Q. But the 3,988,188,700 include about 500,000,000 sold to other companies?

A. It includes 432,040,070 feet sold to other companies.

By Mr. Burr:

Q. You mean they buy it from other companies and sell it to other companies?

A. Yes. They do not sell as much as they buy, but sell about one-fifth of what they buy.

By Mr. Mathewson:

Q. What do you find they paid for that New England Coal & Coke Company gas?

A. 23.01 cents per thousand.

Q. That is the total cost?

A. Yes.

Q. That was 19 candle power, as you say—about that?

A. I did not say it was that candle power. I do not think it is. I said that the mixture of what they bought and what they sold had an average test according to the State tester of 19.37, but I did not say that what they bought was that. It is not. It is not over 15.

Q. How do you know it is not?

A. Because the testimony that came out in connection with the gas hearings, if I recall correctly, was that this gas was commercial coal gas.

Q. Didn't you testify before the Gas Commission that the cost to the Boston companies of this New England Coal & Coke Company gas was about fifteen or sixteen cents, but that there was additional
expense put on to treat it afterwards, and isn't this twenty-
3277 three cents which you refer to here the cost of the gas after
it has been raised to the candle power required by law?

A. I think it has been purified, and probably some oil, but I do not believe it has been raised to the average of 19.37.

Q. You do not know, do you, Professor?

A. No, not positive, but that is simply my impression, that it was mixed with the other gas before that candle power was reached.

Q. Well, what did you find the cost at the station was of the gas that this company manufactured itself at Boston?

A. 42.05.

Q. That is very much in excess of the cost at the station of the Consolidated Gas Company's gas, isn't it?

A. Yes, they make it under very much greater difficulties than you do. They have to mix it by "fits and starts."

Q. And it costs very much more, too, doesn't it, about ten cents more?

A. But the average cost of the whole is about the same.

Q. Well, that is another proposition. The company's gas which it manufactures itself costs nearly ten cents per thousand at the holder more than the gas of the Consolidated Gas Company in New York, according to the reports, didn't it?

A. Yes.

Q. Now, don't you know that the New England Coal & Coke Co. which produces this low priced gas as a residual product and delivers it to the Boston companies, gets its coal, alongside, from Nova Scotia; and I think you testified before the Gas Commission at $1.95 a ton?

A. There was testimony to that effect brought out by some investigation, but I never, I think, knew the price except as I have heard it.

Q. You have no reason to doubt it—you have heard it generally?

A. I don't know what the price was covered by these figures
3278 for that year. I have heard it, but I was unable to get official
information on it.

Q. You have no information it was different from $1.95?

A. My impression is the $1.95 was first brought to my attention in the examination six months ago.

Q. And you testify that was your information, don't you?

A. I don't recall what I said.

Q. Don't you?

A. I don't remember that I said I had any information.

Q. I suggest you look it up.

A. Cannot you look it up for me?

Q. Isn't it your information that the New England Coal & Coke Company, when you were testifying in Boston, was paying about $1.95, alongside, for coal?

A. It is my impression that there was no testimony given on the subject, and none ever given by the Company, as the Company said it was not a corporation and refused to give information.

Q. But you have based your testimony here on what you learned and heard, didn't you? Don't you remember it was said it was about $1.95 a ton?

A. I don't remember anything but what you said?

Q. Didn't I ask you if it was not about $1.95 and you said that that was your information?

A. I don't remember. That is the coal from Nova Scotia with a great deal of sulphur in it.

Q. But a very rich gas coal?

A. Yes.

Q. As a matter of fact that coal was delivered to the New England Coal & Coke Company according to your information, was it not, and to no other Company in the city of Boston, because the same interests that controlled the New England Coal & Coke Company also controlled this Nova Scotia coal mine; is that right?

A. Your question has too many questions in it for me to answer it.

3279 Mr. MATHEWSON: Well, the stenographer will read it.
(Question read by stenographer.)

The WITNESS: Shall I tell you how many questions there are? You ask me the price, and whether delivered to any other Company, and to state that it was for a certain reason. There are three different questions. Which do you want answered?

A. I cannot answer them all by the same answer.

Q. Well, answer them all in detail then without answering them together.

A. I believe that the interest that owned the plant at Everett owned the mines from which they get coal in Nova Scotia. I believe to the best of my knowledge there are other mines in Nova Scotia situated near it of about the same quality, but the price obtained in Boston for that coal I am ignorant of.

Q. But, I am going to read your testimony now before the Gas Commission and see if you have any further corrections to make. I read from about the middle of page 1325, as follows:

"Q. You stated in Chicago if I read your testimony correctly, that about a third of the gas delivered by the Boston Companies was not made by themselves, but that they bought it? A. Yes.

"Q. Isn't it a fact that, according to the testimony last year in Boston, about 1,800,000,000 feet out of 3,000,000,000 feet distributed was bought; that is to say, was what was known as the New England Coal & Coke Company gas, which is produced as a by-product by that Company, which is a Coke Company? A. I have here the exhibit which shows that there was purchased about 1,600,000,000; in other words, about one-half of that they used for fuel.

3280 "Q. About one-half in the past year? A. Nevertheless, their cost——

"Q. I am just asking you whether that is a fact, Professor? A. Yes.

"Q. I am coming to that later about the cost; do you know what the New England Coal & Coke Company, which produces this gas, sells it to the companies for in Boston, I mean at what price? A. 15 cents; but it has to be purified a little afterwards.

"Q. Do you know what it costs to purify it? A. I had those figures, but I do not have them with me.

"Q. Could you make a general estimate? A. Oh, perhaps two or three cents, but ordinary purification does not cost that, but I think there are expenses in connection with the pipe line amounting to that much.

"Q. Let me ask you this, as I understand it, and you will correct me, if I am wrong, the New England Coal & Coke Company is a company whose main business is the production of coke? A. Yes, sir.

"Q. For the production of coke, it produces, we will say, from each ton of coal, about 10,000 cubic feet and about 7,000 cubic feet out of 10,000 feet produced per ton of coal is used to coke more coal, and about 3,000 cubic feet is transmitted to the pipe line company, which purifies it and delivers it to the Boston companies to sell as gas? A. From 3,000 to 4,000 feet.

"Q. So that only about one-third of the gas which this New England Coal & Coke Company produces really goes to illuminating purposes? A. Yes.

"Q. The rest, about 7,000 feet out of 10,000 produced per ton of coal is simply used by the New England Coal & Coke Company to coke more coal? A. Yes, sir. 3281

"Q. It cannot furnish and does not furnish, therefore, enough to the Boston companies to supply all their consumption, so that the Boston companies make about as much more? A. Yes.

"Q. Now, as a matter of fact, don't you know that the New England Coal & Coke Company was owned by the same interests that controls the Dominion Coal Company in Canada, and that the Dominion Coal Company accordingly delivered gas coal to the New England Coal & Coke Company in Boston for $1.95, alongside? A. About that.

"Q. And they do not deliver coal to anybody else in the City of Boston for gas purpose at that price, do they? A. No."

Now, do I correctly quote your testimony?

A. Yes. And it may be I had in mind some statements that President Richards may have made about that coal, but I don't remember it now.

Mr. **Burr**: He did not suggest the figure in that testimony you just read, Mr. Mathewson. You did.

Mr. **Mathewson**: I asked him if it was not that and his answer was "about that."

The **Witness**: It looks reasonable. It should be about that and it may be at that time I had some recollection. I don't know now about any recollection.

Q. If you so testified at that time, that was the best information you had at that time, wasn't it?

A. Yes. It applied to a previous year, not to this current year.

3282 Q. Now, as a matter of fact the *coal* which is produced by the Boston Gas Company itself and is not obtained from the New England Coal & Coke Company is produced from coal which comes from other sources, the same as we get our coal in New York from other sources, isn't it?

A. Yes.

Q. And the cost in the holder of the gas which the Boston Company itself manufactures is, you have stated, about 42 cents?

A. Yes.

Q. Now, let me ask you whether it is not so that in the cost of gas local conditions govern and that you must take each place and figure it out on its own basis as to cost of material, cost of distribution, salary, wages and other things?

A. You will have to do that largely but you can be greatly helped in forming your judgment of good management by your knowledge of what other companies are doing.

Q. Did you not in Boston before the Gas Commission testify in this manner (page 1336 of the record before the State Gas Commission):

"So that, when you come right down to it, as I think you said in some other place, you must, to get exact data, take the particular place under consideration, and devote yourself to the local conditions there? A. That is right. I was only trying to establish a general rule, but there are always exceptions to all rules."

A. Yes. Now, you just read a long quotation from my testimony. I want to call the Master's attention to the fact that I did not there refer to whether the gas obtained from coke oven plant was enriched in candle-power or not before it was delivered over to the pipe line, but what I did refer to was its being somewhat further purified. I am not sure as to the enrichment even now, but you formed the
3283 impression I think that I had testified as to its enrichment. What you quoted there only referred to purification.

Q. Now, in view of the difficulty in getting this thing down on the record I am going to read further from the Gas Commission record while I have it before me, and ask you to say if this is an exact quotation of your testimony before the New York Gas Commission? I read from page 1336 as follows:

"Q. Now, in 1897 you testified in Chicago, if I am correct in my " assumption, that ninety cents was a fair price for gas in the City of " Chicago? A. I don't—that was brought up in a hearing in Chi-

" cago the other day. I don't know what it referred to, as I didn't " give any testimony in 1897, and I never gave testimony in the Chi- " cago gas case—oh, I thought—yes, it was a hearing in Springfield, " not in Chicago.

"Q. But relative to Chicago? A. But relative to Chicago, yes.

"Q. Ninety cents. Now, isn't it a fact that, since 1897, both labor " and material have risen? A. Yes.

"Mr. DeFord: Now, I would just like to ask with respect to what " part of the direct examination is this cross-examination? He has " made no statement here as to what it would cost to produce gas " here, and he is asking what he testified concerning the cost of pro- " duction of gas in Chicago, at a Springfield hearing in 1897. It " seems to me remote and not proper cross-examination.

"Mr. Mathewson: I do not think it needs much argument on " that proposition. You have asked him about Chicago distribu- " tion and one thing and another in this case, and, besides 3284 " that, I propose to show what he testified, that in one city " ninety cents was proper in 1897, and labor and material " have risen since then. I think, to test the witness' observations " and the value of them, all these things are proper.

"The Witness: I would like to explain to the Commission the " fact, that, in 1897, when this testimony was given, I had not made " much study of the Chicago gas companies. I did not know any- " thing about their real costs of material, if I recall correctly, and it " was pretty largely an estimate based on a guess, as you might say. " I don't remember that the company had ever produced any accu- " rate data. Soon after that, however, I did come across a report of " a Chicago gas company to the New York Stock Exchange.

"Q. But, professor, at the time you delivered this testimony, then, " that you thought ninety cents was a proper figure in Chicago, you " say it was only a guess, and you have no data to proceed upon? " A. I didn't say I had none, but I don't think I had accurate data " of the cost of oil and coal.

"Q. You said a moment ago it was only a guess, did you not? A. " Yes, to a large degree; that it was based on some evidence, I insist " on. But I say it was not based on as much evidence as my later " testimony in Chicago, or the later testimony I have been able to " give in other cases. I had not studied the subject then as much as " I have since, but I think I ought to say that I later found a report " of the Chicago companies to the New York Stock Exchange, when " they were issuing some securities."

3285 If you have any doubt about my having accurately read it, I wish you would note it any say whether I have or not.

Mr. Burr: You have accurately read it.

A. I believe you have accurately read it.

Q. You stated there that labor and material have both risen since 1897, when you testified that 90 cents was a fair price in Chicago, and even the last year you have gone to Chicago and testified that less than 60 cents was a proper figure, is that right?

A. I do not recall about less than 60 cents.

Q. Was your estimate a year ago in Chicago when you testified there above 60 cents as the cost of gas?

A. Do you refer to this pamphlet?

Q. I refer to your estimate to the City of Chicago, as shown in the pamphlet to which we have all referred.

A. Will you point out the page?

Q. No, I merely asked whether you did not give an estimate to the City of Chicago a year ago which was less than 60 cents in spite of the fact that the material and supplies have both risen since 1897?

A. I don't remember. I don't find anything here. I may have referred to the operating expenses, but I don't know what you refer to, and in fact, I may say that I have since then been trying in every way to see what the testimony in 1897 in Springfield was and I could not put my finger on it or find out if there was any authority for saying that I stated 90 cents, except Mr. Mayer's implication when he was cross-examining me in Chicago. I took it for granted he had the evidence there before him and I did not remember it and assumed he was quoting it correctly just as I have in this case frequently assumed you were quoting it correctly, but I had no personal recollection of it.

3286 Q. I merely asked you before the Gas Commission if this testimony is correct, whether you did so testify and you replied as the record shows, didn't you?

A. I did, but I do not think it is what you find; it changed a good deal since then and I cannot put my finger on what I said or when.

Mr. Burr: And it does not say it here in the testimony. You claimed he said 90 cents.

Mr. Mathewson: I will let the testimony speak for itself.

The Witness: I think it was because of my too readily assenting to a suggestion on cross-examination in Chicago.

Q. And do you remember in Mr. Cowdery's statement, in his estimate to the Committee on Gas an- Electric Light of the Common Council of Chicago, "There are no two places probably in the United States where conditions are same," referring to the cost of production and distribution?

A. I don't remember, but I should prefer to believe they were not absolutely the same.

At 4:25 P. M. adjourned to October 24th, at 12 o'clock.

Last Exhibits:

Complainant's 256.
State's W.
City's 59.

3287 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *October* 24, 1906—12 m.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3288 Mr. BURR: On page 3267, in my remark on that page, the word "custom" should be "question."

EDWARD W. BEMIS resumes the stand.

Cross-e-amination by Mr. MATHEWSON (continued):

Q. Referring to the Chicago report to which the City counsel referred, and upon which we have commented from time to time, it appears that statements were presented by yourself, Doctor Humphreys and Mr. Cowdery. That is çorrect, is it not?
A. Yes.
Q. Now, as to you and Doctor Humphreys we know. It appears from this pamphlet, page 8, if it is correct, that Mr. Cowdery has been connected with the gas business for thirty years, that he commenced with the Toledo Gaslight & Coke Company of Toledo, tha in 1877 he went from there to Milwaukee, where he became assistant superintendent; that from 1882 to 1884 he was connected with the People's Gas Company of Chicago; in 1884 he returned to Milwaukee and became superintendent of the plant——

Mr. BURR: What is the object of all this description of Mr. Cowdery?
Mr. MATHEWSON: I am just calling attention to Mr. Cowdery's experience, and then purpose to ask some questions as to Mr. Cowdery's views and ask this witness if they affect him, after showing his qualifications.

Q. (Continuing:) and subsequently general manager, remained there until 1903, when he took charge of the Laclede Gas Co.'s property in St. Louis, and it appears on page 8 in his statement that he has been interested with others in the purchase of gas 3289 properties and their improvements, building up their business, and so forth, including the plants at Racine, Kenosha, Fond du Lac, and other Wisconsin cities, and I quote from his statement as follows:

"During those thirty years it has been my duty as well to cover the country thoroughly to know what other gas companies were doing, to become acquainted with the men operating those companies; and during that time I believe I have become pretty well acquainted with practically all of the men operating gas properties in the United States, and I am familiar more or less with the conditions that govern the different properties throughout the country. I have been connected with the gas associations of the country for ever twenty years. In 1892 I served as president of the Western Gas Association, an association which is supposed to incorporate in its membership practically all of the gas men operating gas companies throughout the Middle States. I have just served during the last year as president of the American Gas Association, which is the national association of America and supposed to embrace all of the gas men of the United States. I was for one year president of the State Association of Wisconsin."

Now, in the questions which I asked you yesterday as to Mr. Cowdery's statements and views and as to your concurrence therein, were you familiar with Mr. Cowdery's experience and practical work in the gas business as he has recited it?

A. I had never met Mr. Cowdery until I was introduced to him during that week, but I have seen his name as connected with the Milwaukee company, particularly, and later with the St. Louis Company.

3290 Q. You have no doubt, I suppose, that the statement of his experience which I just quoted is true?

A. I know nothing about the other companies except what you have read that he stated. I do have other information that he was connected for a long time with the Milwaukee and St. Louis companies.

Q. You have no reason to doubt the accuracy of his statements, have you?

A. I have no reason to doubt the accuracy of what you have just read, as to his being connected with these companies, but at the same time I have no information either way, only I suppose that he would not give any inaccurate information on such a thing, but I cannot speak from any knowledge.

Q. Now, it appears that this committee of Chicago, in their report (page 3), referring to you, Mr. Cowdery and Dr. Humphreys, employs the following language:

"In selecting these three men your committee had in mind not only the obtaining of the best authorities on the subject, but authorities who would represent every phase of the subject. Professor Bemis was selected as representing the theoretical side of the question and that phase of it which is antagonistic to private control of public utilities and strongly favorable to municipal ownership. Mr. Cowdery, as one who for many years has been actively engaged in the construction and management of gas plants. And, lastly, Mr. Humphreys, the head of a great technical school and the leading consulting engineer of America and Europe on the subject of manufacture and distribution of gas, as one who would present the subject from a wholly impartial standpoint, simply as a great engineer."

3291 Is that a fair statement of your position, as representing the theoretical side of the question and one that is antagonistic to private control of public utilities and strongly favorable to municipal ownership?

A. A little exaggerated.

Q. The Committee in their report say of you, "He approached the subject wholly from a statistical standpoint." That is correct, is it not, in that you had no personal experience in operating gas plants in Chicago or elsewhere?

A. I have had no personal experience, as I have stated in this case, in the operation of gas works; but I do not say that I am antagonistic to well-regulated, privately-managed gas works. I think that more and more the movement will progress toward municipal ownership, but I do not take the ground that all privately-owned gas works are to be tabooed or outlawed or treated unjustly.

Q. I see that Mr. Cowdery (page 10), referring to the fluctuations of as much as five cents per thousand in cost within two years, adds: "In trying to fix the price for gas you must not take too narrow a view *for* it and therefore take the lowest possible cost in any one year as a basis. You must take into consideration the fluctuations in the prices of oil, fuel and labor, and make due allowance for such changes."

You will concur in that, will you not?

A. Subject to one qualification; that the general tendency of costs, as I have found in sixty odd Massachusetts companies, has been downward.

Q. But the general tendency of labor and material, as you have also stated, has been upward?

A. Yes, but despite that fact, the statistics of the sixty odd Massachusetts companies, tabulated as one company every year in the returns of the Commission, shows a tendency downward.

3292 Q. But the lower you get the less room there is for a further drop?

A. Well, I would not say that.

Q. Don't you think that it is so? There must be some limit below which you cannot expect companies to reduce the cost of gas, and the nearer you approach that limit the more serious the question becomes, doesn't it?

A. Why, in fact, there is a limit at the present time. That limit is a fluctuating one, with the progress of the art.

Q. Mr. Cowdery also states (page 10), that whether water gas is cheapter than coal gas in manufacturing is a question of locations and conditions entirely. That is the fact, is it not?

A. As to whether coal gas or water gas is more economical?

Q. No; whether water gas is cheaper in manufacture than coal gas, is a question of locations and conditions entirely?

A. Yes.

Q. On page 13, Mr. Cowdery also says:

"The only way that one can get at the proper cost in any particular place is by making a careful investigation in that particular place and by taking all the conditions into consideration that exist there."

Do you concur with that proposition?

A. That is one of the things to be undertaken, but there is always great room and reason for judging of the efficiency in one plant by one's knowledge of good practice elsewhere.. The two are well put together, or would be.

Q. But you would not feel that it was proper to fix the price of gas in any particular place through your generalizations until you had made a careful investigation of the conditions and costs there?

A. I have urged that that should be done in all cases. I have urged in this case for accounting and engineering investigations to supplement others.

3293 Q. Now, Mr. Cowdery further says (page 15), that

"The repairs and renewals that take place frequently should be charged to the repair account as they come along, but those that take place at infrequent intervals should be provided for by a reserve fund."

Is that substantially the view that you have taken and that you understand has been taken by Dr. Humphreys, that what is called final renewals should be taken care of by the reserve fund, and current renewals and repairs should be charged to the current repair and renewal account?

A. I understand Dr. Humphreys to provide that this whole thing can be put under the renewal fund and spent from time to time. That is what I understand his testimony to be. A sinking fund provision would rather look forward to a fund set aside as a sinking fund would be, and I have suggested that that was to me a simpler and more scientific method of treatment. But it can be done in either way. I think this *this* company has been doing it as Dr. Humphreys has suggested, in the way of a renewal fund.

Q. You stated, it appears at page 20, that coal and oil were cheaper in Cleveland than in Chicago, and you also said "labor also is cheaper in Cleveland" than in Chicago. Is that a correct quotation, or is that the fact, as you understood it?

A. I suppose I stated, if it appears there—you ask me now do I think it is true that labor and oil are cheaper?

Q. I asked you whether it is a correct quotation of your statement? I suppose that to be the fact myself; I am not questioning it at all.

A. I have an idea that that is true, but as to oil there was not ever given in this hearing a statement about the cost of oil per gallon in Chicago.

3294 By Mr. **Burr**:

Q. Which hearing?

A. In the hearing before the Chicago City Council.

By Mr. **Mathewson**:

Q. But, assuming the cost of oil in Chicago to have been what you assumed it to be and what we have assumed it to be in the testimony here, according to your best information, you stated the other day that the cost of oil in Cleveland you now understood to be cheaper than in Chicago?

A. Yes, but I am not positive about the Chicago price.

Q. Now, taking up the subject of returns on capital. I want to ask you at the outset on what theory of valuation of capital you compute your return? Is it the original cost of the property? Is it the cost of reproduction now, or what is it?

A. It is any investment in the gas business. I say any investment in the gas business in the shape of stock or bonds can be floated on a six per cent. basis.

Q. No, I am getting away from paper and taking the substance. I do not care how much paper there is out representing the property. For the moment, I ask you whether you compute a return in your estimate upon the structural value of the property as it exists, or upon some other basis of valuation of plant and property?

A. My testimony was based solely on the way the securities sold in the market of all the leading companies east of the Mississippi River, without regard to whether that stock was larger than any particular theory of valuation or not. It was based solely on the dividends and interests of said securities as related to the market price of the same.

Q. But you have testified that you took six per cent.?

A. Yes.

Q. In your computations?

A. Yes.

3295 Q. And you have computed six per cent. on some valuation and have added the number of cents per thousand that that computation produces to your assumed cost of gas to reach the proper selling price for gas? Now, I want to know upon what you computed your six per cent.?

A. Yes. I understood you were asking me how I got the figure or six per cent. I will tell you. I used in my table as a matter of computation——

By Mr. Burr:

Q. Speaking of Table 16, page 3052?

A. Yes. I used in Tables 16 and 17 (page 3052) I used, as will be noticed, three or four different estimates of capitalization, and showed what six per cent. would be upon each.

By Mr. Mathewson:

Q. You expressed no view or preference then, nor did you establish any theory of valuation of property on which you were to compute the six per cent.?

A. I may not have done so. I have a theory and should have expressed it. It is quite likely I did not. Well, whether I did or not will have to be determined by the testimony.

Q. Now, on what basis of value of capital did you compute your six per cent. in procuring what you call the proper selling price for gas?

A. First, original cost of land now in use, after deducting land sold or no longer in use in the gas business. Second, original cost of mains and services that are now in use. Third, present structural value of the rest of the property necessarily used in the conduct of the gas business, such as buildings, machinery, holders, meters, supplies on hand, necessary working capital, which I assumed, as 3296 Mr. Carter had testified in the previous case before the State Gas Commission, at about a million dollars.

Q. Oh, no, he stated three million dollars, but arbitrarily divided it into a million dollars cash and two million dollars outstanding. Do not forget that. In addition to working material, which was $616,000 more.

A. I allowed the $616,000, and I allowed the million, and I made reference to the other two million dollars as the amount due the company, but there was no interest computed on it. Now, the present structural value which I have described or named is, in my opinion, to be determined by engineering investigations such as are now being made on the one side by the City and State engineers, and such as have been made on the other side by the engineers of the company, taking into account the cost of duplicating that property at present prices, and taking into account the present age and condition of the said property and its prospect of continued use. If, for example, a lot of that property is about to be discarded, as was asserted in the returns to the State Tax Commission, then a very low value——

Mr. Mathewson: I move to strike out "as was asserted in the returns to the State Tax Commission."

The Witness: As asserted in the evidence relative to those——

Q. Do you refer to the evidence in this hearing, before this Master?

A. This hearing and the State Gas Commission, that the value had been reduced very largely because of the prospective abandonment.

Mr. Burr: There isn't any question about that, is there?

3297 Mr. Mathewson: Yes, there is a great question. We do not intend, as far as I understand, to replace a single gas plant at Astoria if this 80-cent gas act is sustained. We could not afford it, could not think of it for a moment. That is pretty nearly in evidence.

Mr. Burr: No, it is not.

Mr. Mathewson: All this testimony the Professor is referring to is while the charge for gas was one dollar.

The Witness: I was not determining what you were to do with that property, but I say the facts bearing on that must all be taken into consideration in fixing the structural value. That is what I meant to say.

Q. Very good. Now, let me ask you a question right there. If you were going to reduce the value of the plants in Manhattan on the theory that they are going to be abandoned and the Astoria plant substituted for them, you cannot avoid substituting in place of these Manhattan plants the value of the Astoria plant, can you? You cannot discard one without including the other, can you?

A. I could not answer you that without an explanation.

Q. Well, it seems to me you can a-swer it and then explain. In other words, if you propose to discard part of the value of the Manhattan plants on the ground that they are to be abandoned, can you logically avoid including in the property the value of the Astoria plant which would be in existence when the Manhattan plants are abandoned and which will take their place? Cannot you answer that directly and then explain, if you please?

Mr. Burr: Do you mean included in the Consolidated?

Mr. Mathewson: I mean included in the value of the 3298 property, a return on which must be taken into consideration when you are fixing the price at which the gas produced by those plants goes to the consumer. I do not care how you figure it out as a mathematical proposition.

Mr. Burr: It is a different entity at Astoria, and a different corporation.

Mr. Mathewson: Oh, well, that makes no difference.

A. The valuation of the Consolidated would certainly be an independent valuation. I would not assert that when the plants are abandoned that there would not be necessary other capital to take their place. I believe that it would be necessary, and productive capacity, to take their place.

Q. Can you then reduce the value of the Manhattan plants in your estimate upon the assumption that they are to be replaced by other plants without at the same time including the value of those other plants which are to be substituted, and if so on what possible theory?

A. The valuation of the Astoria plant to me is an entirely separate proposition. When it comes to manufacturing gas, it will have to be reckoned with.

Q. But you are anticipating now when you say you would reduce the value of the Manhattan plants on the theory that they are going out of the manufacturing business; you are anticipating there. Can you anticipate in that way in reducing the value of the Manhattan plants without anticipating also by including the value of the plants that are to be substituted for them at the same time?

Mr. Burr: I think we shall contend that if there is any loss by reason of the removal of these plants to Astoria, the construction of new plants in Astoria for the Astoria Light, Heat & Power 3299 Company, that the loss should not be sustained by the consumers in the Borough of Manhattan, but must be charged up to the corporation known as the Astoria Light, Heat & Power Company.

Mr. Mathewson: That is not the proposition. The proposition which is now advanced is that the value of the plants in Manhattan will be reduced in some way on the theory that they are going out of business, but that nothing will be included for the value of the plants which take their place when they do go out of business.

Mr. Burr: What plants take their place?

Mr. Mathewson: We won't argue on that now, Mr. Burr.

Mr. **Burr**: The Astoria Light, Heat & Power Company's plants take their place, if any.

Mr. **Mathewson**: We may absorb the Astoria Light, Heat & Power Company before that occurs; and it may be a single corporation, for aught you know, if that was of the slightest importance in the discussion.

Q. (Question repeated.)

A. In my computation I did not cut off that loss of value connected with removal to Astoria. I contemplated no reduction in the value of the plants on the Island of Manhattan, except such reduction as engineers now studying the subject would find to be their actual depreciation, taking into account the present state of the art, and the relations of these plants to it, and their efficiency; based also on their location; but I did not take that position which I understood to have been taken, by the evidence, as a justification for a return to the State Tax Commision, namely, a scrap value, for half of the duplicable property on the Island. I did not do that. I have said—I think I made that clear.

3300 By the **Master**:

Q. Well, have these engineers reported?

A. They have not reported yet. They are still at work, by permission of the Court.

Q. Do you understand they have decided what they are going to report in advance of completing their investigation?

A. No, I do not. I have not said that I did, have I?

The **Master**: No, but I wondered if that was so.

By Mr. **Mathewson**:

Q. But you advanced the theory a few moments ago that in estimating the value of the Manhattan plants you would take into consideration the probability of their continued use or their early abandonment, and that was the occasion of my asking you how, if you are going to reduce their value by reason of that, you logically avoid including the value of the plant which will be substituted for them to the same degree, and if there is any logical reason I would like to know what it is.

A. Well, my thought in that statement a few minutes ago, was that there should be two valuations by the engineers, one with reference to the present efficiency of the plant, and the other with reference to the removal to Astoria, and I had not in mind to settle the question as to the relative weight to be given to those two points of view, but in my own computations I have taken the view of the valuing of the properties on the basis of their efficiency and not on the basis of any scrap value.

Q. In fact, you have discussed here the probability of the production of the coal gas at Astoria cheaper than the production of the coal gas in Manhattan and have based on that an argument in 3301 favor of the probable reduction in the station cost of all the gas, have you not?

A. Yes, sir, I have fully taken that into consideration as to the coal gas plants.

Q. You cannot take that into consideration on the one hand and then exclude the Astoria plant from consideration on the other when it comes to a consideration of capital, can you?

A. I could not, but I did take both into consideration in this way, that the economies that could be affected by an up-to-date plant, whether at Astoria or elsewhere, I would not undertake to say, ought to return in a short time—not the first year necessarily—six per cent. on the investment. But I did not presume to pass upon the wisdom of the selection of Astoria.

Q. I understand. Now, let me ask you another question on this Astoria proposition. The consumers of gas produced at Astoria must in some way pay a sufficient amount to make a return upon the investment at Astoria, must they not?

A. In the course of four or five years; not necessarily the first year.

Q. Well, directly or indirectly——

A. Yes.

Q. The consumers of gas produced by the Astoria Company must pay a return on the investment at Astoria which produces that gas.

A. Yes, I should say the average for the next ten years should be six per cent.

Q. I did not ask you about rates.

(Question repeated.)

A. I must qualify even what I stated, provided the Astoria investment was a wise one, which I will not undertake to determine. If it was an unwise one, there is nothing in the law of nations or fate by which we should guarantee them any return.

3302 Q. Then if gas is produced at Astoria and is consumed by consumers, they don't have to pay anything for their gas as a return on capital, provided the investment at Astoria is an unwise one; is that the proposition?

A. That is the law of business.

Q. That is your proposition?

A. Certainly, unwise investments are failures always in all businesses.

Q. Do you mean to say that consumers receiving Astoria gas, if it is sent out by the Astoria Company and sold to them, and is produced at reasonable prices at Astoria, that the consumers of that gas will not, under all circumstances in law, be compelled to pay a return upon the capital that produced the gas, assuming that the capital was invested at not excessive amounts?

A. If they have not made a wise investment they certainly will not be able to sell their gas at all.

Q. That is another proposition.

Mr. Burr: That is what you mean, is it?

The Witness: Yes. They would fail up for lack of a market.

Q. We will have to take our chances about failing up. You are not under that burden.

A. It is the same proposition as the New England Gas & Coke Company.

Q. Let us see if it is. If you treat the Astoria Company as separate from the Consolidated Company, then the Astoria Company is entitled to charge to the Consolidated Company, to which it delivers its gas, the cost of the gas, plus an amount sufficient to make a proper return on the Astoria investment, is it not?

A. Depending on whether the Consolidated Gas Company can do better in its own works. It is not obliged—if they are separate corporations, as your questions ask, the Consolidated Company is not obliged to buy it.

3303 Q. Supposing the Consolidated Company does buy it or any other company buys it, Company A, B or C?

A. Yes.

Q. The Astoria Company is entitled, if it makes gas at a reasonable and prudent rate, to charge in selling the gas the cost of the gas, plus enough to return a proper rate of interest upon this prudent investment in the production of gas, isn't it?

A. If it is a rational investment of capital; otherwise not.

Q. We will assume it is.

A. That is the point I was making all the time.

Q. Let us go a step further. The Consolidated Company then would get the gas at the cost at Astoria plus an additional amount sufficient to make a proper return upon the investment at Astoria that produced the gas?

A. Yes.

Q. And that would have to be taken into consideration by the Consolidated Company when it fixed its price to the consumer, would it not?

A. Yes, so far as it bought any gas from the Astoria Company.

Q. Now, supposing the Consolidated Company owned the Astoria plant directly, it then would be entitled to the proper cost of the production of gas at Astoria plus an amount sufficient to produce a return upon its investment at Astoria, would it not?

A. Provided the investment was a wise one.

Q. So that in substance there is not the slightest difference whether the Consolidated Company owns the Astoria plant directly or whether the Astoria Company is a separate organization and the Consolidated Company buys the gas at the cost to the Astoria Company plus an amount sufficient to afford a fair return to the
3304 Astoria Company on its investment, is there?

A. Yes, I think there is a difference.

Q. Does it work out any differently in dollars and cents?

A. Yes.

Q. I should like to know how?

A. If the whole plant were owned by the Consolidated Company and you admit that it was a wise investment——

Mr. **Burr**: Wise and necessary investment.

The **Witness**: Wise and necessary investment, the Consolidated stockholders would be affected by the profits of that company from the start. If, however, it were an independent organization which was establishing a plant for the next, not two years but ten years and longer, twenty years and thirty years, in the growth of this city and Brooklyn, or Greater New York, in other words——

Q. But we have no franchises, you know, outside of the Island of Manhattan and Long Island City.

A. Well, the right to sell gas to other companies, I mean—if that be taken as an independent proposition, then its burdens for the first two or three years would not be borne by the Consolidated. The Consolidated would simply pay for the gas that it bought, and it might be that the Astoria Company, building for the future, might do wisely to look forward to no dividends the first two years, and then dividends that would gradually increase until ultimately they averaged six per cent. from the start. I should say it would make a difference to the Consolidated Company therefore.

Q. I am not talking about the Consolidated or the Astoria; I am talking about the cost of gas wherever the investment is, or whoever owns the investment, assuming it is a prudent one, and that the gas is produced at a fair price, the consumers of that gas must 3305 pay enough to afford a fair return upon the investment in addition to the station cost of that gas.

A. It must be such, assuming that the Astoria is built solely for the Consolidated consumers.

Q. Assume that, then.

A. I do not find anything in the evidence to prove that.

Q. Assume that, and then is your answer in the affirmative?

A. Read the question, please.

Question read as follows:

"I am not talking about the Consolidated or the Astoria, I am talking about the cost of gas wherever the investment is or whoever owns the investment, assuming it is a prudent one, and that the gas is purchased at a fair price, the consumers of that gas must pay enough to afford a fair return upon the investment in addition to the station cost of that gas."

Mr. **Burr**: That is the object of this action, to have that determined, is it not?

Mr. **Mathewson**: Not at all.

Q. Isn't that so?

A. On those assumptions, the consumers—all the consumers, not necessarily the Consolidated Company's consumers, but all the consumers of Astoria gas wherever located in the long run, would be, according to my theory, likely to pay and ought to pay a six per cent. return upon the investment.

Q. They ought to pay whatever is a fair return, ought they not?

A. Yes, taking that assumption, you understand, that it was a wise and necessary investment, and taking the further assumption that it is all the consumers of that gas and not merely the Consolidated consumers.

Q. Of course you understand from the evidence, don't you, that

the Consolidated Gas Company owns all the stocks and bonds
3306 and notes and securities of this Astoria Company?

A. Well, I could not put my finger for the moment on the evidence, but that has been my impression of the evidence. I think I have read it.

By the MASTER:

Q. Professor, you said that in figuring on the price of gas, you take the land at its original cost. Now, do you announce that as a general proposition or do you simply have in mind this particular case of the Consolidated Gas Company?

A. I asserted as a general proposition, upheld by the law and practice in Massachusetts and Great Britain as to all gas companies. I know of no exception to it in either Massachusetts or Great Britain in the last ten years.

Q. This Consolidated Gas Company, let us say, has paid dividends continuously, for some period. But suppose you had a gas company that for some reason had not paid any dividends for a few years but had skipped, say, for three or four years in dividends. How do the stockholders of that company get a return on the capital that is locked up in their real estate, if always as a general rule you are going to base the proper price of gas on the original cost of the real estate irrespective of any subsequent rise in value or any extraneous consideration whatever? Is that fair in your judgment?

A. Yes, the company that is declaring no dividend, would have the right, I suppose, to appeal to the State Gas Commission in New York State for the privilege to increase its price. That has been done in Massachusetts and it is done in England.

Mr. MATHEWSON: Well, it is not done here.

3307 The WITNESS: And they would have the right to show—
Gas has been increased in New York City after the gas war.

Mr. MATHEWSON: No, never by the Legislature or by any authority.

The WITNESS: Well, by the company. The companies would have the right to show not merely their dividends but their accumulated profits if it should appear that they had not declared dividends, because they had put the earnings into extensions of mains and holders, &c., that would have to be taken into account and would be considered a profit, though they had not divided it. But your question may not be answered fully, and if you mean to consider a company which has made no profits in any form, shape or manner, either by dividing them or by putting them into extension, and has simply done business without a profit for a series of years, is that the question?

Q. No, but I assume on a general proposition, that any capitalist who puts any money in the business is entitled to a return on his money. That you do not dispute?

A. No.

Mr. BURR: But you will bear in mind this is a public utility corporation.

The **Master**: Well, a man has some rights even if he puts his money into that sort of a company.

Mr. **Burr**: But assuming that function to the general public is a little different than the general proposition you have submitted.

Mr. **Mathewson**: Only to this extent, and it has been upheld by the decisions, that within reasonable and just limits, the rate of return may be governed; that is all.

3308 Mr. **Burr**: That is right, I agree with you.

Mr. **Mathewson**: Not as to the value.

Q. The only question to my mind is this, if you take an inflexible rule as I understand you do, a general rule that in getting at what would be the proper price of gas, and proper return on capital invested, you have to take real estate at its original cost, a case might arise where that would work injustice. I do not mean to say that is this case, but suppose you take a case where for some cause or other a gas company had been obliged to suspend its dividends for several years during which time the stockholders got no return on their investment at all.

A. I would say as to that that such a fact should be taken in consideration in connection with the price of gas. A Company would be treated very differently that had made no profits in any shape or manner than a Company that had, but that is not a question of valuing the capital.

Q. Then it comes back to the point that it is not an inflexible rule necessarily?

A. There are two questions to consider, first, the capital and next, the capital on which the profits are to be rendered. Now when I said that some consideration in fixing price so as to yield profits, should be given in a case such as you mention, I did not mean to say that I would change my theory as to determining the proper capital, only the proper price and the profits; but the capital, I do not see any exception to the position which has become an inflexible rule both in Massachusetts and Great Britain, that they cannot capitalize any increase in the value of land or any results of street paving.

Mr. **Mathewson**: We do not think that is a fair statement, either of the law of Great Britain or Massachusetts.

3309 Mr. **Burr**: Mr. Mathewson smiled at the suggestion of the Professor, that they might under those conditions, appeal to the Commission to raise their rates. The very object of this action here is an appeal to some future Legislature to raise their rate, if they are successful here, because the Court is not going to fix a new rate. The Court may say that this rate is confiscatory and unfair and unreasonable, but the Court will not fix what is a fair rate, and they have to appeal to another Legislature or another Legislature will take up the question of what is a fair rate.

By Mr. **Mathewson**:

A. I recall in the law the provision that a mayor of a city or the consumers of gas may appeal to the Gas Commission in the State of New York to fix the rate of gas. Do you know of any provision in that law authorizing the gas company who produces the gas to appeal to the Commission for anything?

A. I am not sufficiently familiar with the law to state. I think it is in the Massachusetts law.

Q. I think it is a very remarkable omission in our law. I do not find any such provision as that in it.

Mr. Burr: The old decisions say you can go back to the Legislature, and the new decisions say you must go to the Court.

Q. Now you lay down two lines of computation in reaching capital. You say so far as land and mains and services are concerned, you will take the original amount invested therein as your basis, but when you come to — plant, you will take, not the original amount invested, but the appraisal thereof to show the structural value at present. What logic is there in that proposition?

A. Before answering that, in order that my previous reply
3310 may be correct on the record, I wish to qualify what I said
about mains and services to this extent. I should take the original cost of laying the mains and services, but for the pipe itself, I should take the present structural value, just as I would of buildings and machinery and holders and meters; in other words, the duplicable property, as it were, should be taken on its present structural value, but the land value and the laying resulting from paving should be fixed at its cost originally. Now, coming to your question, as to why I make that distinction, I make it because I—I have described it I think in the case of paving a few days ago, in answer to the Master——

Q. No, you are getting beyond my question. Then I understand you now to say on reflection that the basis of capital upon which you compute your return is the cost of reproduction to-day except that you exclude the additional cost of paving, the additional value of the services and mains due to a more expensive paving, and exclude any additional valuation of land due to lapse of time and growth of the community. Is that right?

A. Yes, if you understand as to the rest of the property that it is the cost of duplication less the decline in its efficiency and value due to use and the progress of the art, to what I mean structural value.

Q. Structural value?

A. Yes.

Q. Structural value with you, then, means cost of duplication, of course taking into consideration the depreciation which has occurred?

A. Yes.

Q. And that was the basis which you assumed in Chicago, wasn't it, cost of duplication?

A. I had no data in Chicago as to the plant; there was no inventory and no engineering report, but I think I took an estimate of what a new plant would cost and took their statement that their plant was as good as new, and figured out an estimate there.
3311 But——

Q. Cost of duplication, wasn't it?

A. Yes, but I asserted in that statement that I made, wherein I think I took the figure of $3.20 per thousand feet, that should be subject to change on an investigation by engineers.

Q. Oh, yes, but the theory was cost of duplication?

A. Oh, it was that theory, yes.

Q. Now, we will assume that we have land in the gas business which cost $7,000,000; that it has increased in value, and meanwhile of course our taxes have increased as it has increased in value, until to-day it is worth fifteen million dollars in the market, and that we could sell it to-day for fifteen million dollars, and have the use of that money or that we could lease it on a basis of fifteen million dollars valuation, and that our manufacturing plants are properly on that land; now do you mean to say that it is your view that because the public is having the use of that land in a sense, that we are entitled to a return of only seven million dollars, while if we sold it in the open market, or used it for any other purpose, or leased it, we could get a return of fifteen million dollars?

A. You are assuming that this is all an increase in the land value?

Q. Yes.

A. Yes, I hold that they should not increase the price on account of the increase in the value of land.

Q. You hold then, that while anybody else might have to pay fifteen million dollars for the land, or while we could lease it to anybody else on a fifteen million dollar basis of valuation, that merely because the public is using it, we can get a return on only seven million dollars, when we could sell it for fifteen million dollars in the market; is that it?

A. I should hold——

3312 Q. Well, is that it or not?

A. As I understand your question, it is the same as I assent to.

Mr. Burr: You must also have the further fact in mind, according to the testimony in this case, that no better or greater gas can be made on the land that was purchased in 1884 than on the same land in 1906.

Mr. Mathewson: Yes, there is a great deal more, and very much cheaper, both.

Mr. Burr: On the same land?

Mr. Mathewson: Yes.

Mr. Burr: Because of the land?

Mr. Mathewson: No, of course not, there is no claim of that sort.

The Witness: That is what I assumed.

Mr. Mathewson: Our claim is that here is land that we are devoting to the use of the public and they are obliged to pay for it the same as any individual.

Mr. Burr: Used in the gas making business.

Mr. Mathewson: Certainly.

Q. Now, Professor, if the land should increase from something like five million dollars in valuation, which you have assumed from Mr. Yalden's report may have been the original cost in 1823, and from then on to fifteen million dollars and even one-third of that land were sold, that five million dollars would wipe out the entire investment in land would it not?

A. Yes.

Q. So that in that view you would allow no land at all and no return on land, in computing the capital upon which we are entitled to a return?

A. That is right.

Q. You don't think then if land increases in value, the capital of a company not being impaired at the outset, that that
3313 increase in the value of land forms a surplus which stockholders are entitled to?

A. I have not discussed the question of a sale of one company to another——

Q. No, I am not discussing it and do not want you to answer on that basis, because I did not ask you any such question.

A. No. But if the other position be taken, that the company is entitled to earn on the appreciation of its land, then to exactly the same extent has its operating expense been reduced, because you will have set that increase off against your expenses of operation; as long as the six per cent. on the original investment is kept, justice has been done and you can get your capital. The main point is that Wall Street will give you your capital, and that is all we need to know. The law of the market will give you all the capital you need on a six per cent. basis on that proposition.

Q. We do not think we can settle this on a Wall Street basis, but have to settle it on a business basis.

A. The United States Supreme Court has declared you could, in the Adams Express Company cases.

Q. If they did, you will not have to emphasize it with your own opinion. But do you think that a theory, which by an increase in the value of land very much less than is claimed, and I may say admitted in this case, to have been the increase in the value of the Consolidated Gas Company land, would wipe out the entire investment in land, is a possible theory to entertain?

A. Yes, and I maintain further that it is the practice in Great Britain and Massachusetts.

Mr. MATHEWSON: I move to strike that out. We have had it four or five times.

The MASTER: No, let it stand; it is a justification for his opinion, and I think he is entitled to have it appear there.

3314 Mr. MATHEWSON: Exception.

The MASTER: Let me ask another question, if you do not mind my interrupting.

By the MASTER:

Q. Suppose this land that Mr. Mathewson speaks about cost $7,000,000 originally, and is now worth $15,000,000; suppose the gas company in order to make the same amount of gas under equally advantageous conditions that they now make on this land would have to pay ten million dollars for a piece of land if they moved; what effect would that have on your scheme?

A. No effect unless the law compelled them to move because they were a nuisance or something of that kind. Then it would have an effect. The increase—if, for example, they were obliged to sell their own land and buy new, on account of their becoming a public nuisance, then any increased investment in land after selling their old land would become a legitimate charge on capital.

Q. Well then, would it not resolve itself into this, that if under existing conditions, to make a certain amount of gas, the necessary land on which to put your plant would cost ten million dollars, because a gas company bought this land a good many years ago when it was cheap, and they got it for seven million dollars, the public on your theory would get the benefit of that unearned increment, would they not? They would have the benefit of gas made on land that cost three million dollars less than any gas company starting in the market to-day, to manufacture gas, would save to pay?

A. Yes.

Q. That is about the size of it?

A. Yes.

By Mr. Mathewson:

Q. Supposing it were the case that by reason of rise in
3315 material and labor, it would cost to-day twenty million dol-
lars to produce the manufacturing plants which originally
cost certain companies ten million dollars, then you concede in fixing the price of gas you must take as the valuation of that plant, the cost of duplication which would be twenty million dollars?

A. I have in this case assumed that it has been the—there are certain reasons for criticising that, but I have assumed that any change, either a rise or fall in the value of material—pipe for example has fallen in the last thirty years, although not much since 1884; building materials may have risen; and so I would apply the rule in this case and I am applying it that you asked me about; but I realize there may be some objections to it.

Q. So the theory you are now applying is cost of duplication of property except land, but not cost of duplication of land?

A. And the same applies to paving as to land.

Q. Yes, but in the case of land, the city has not put any expensive pavement over that to raise the value, you understand, that is the mere natural rise of value due to the growth of community.

A. Partly due to public improvement.

Q. For which we probably paid our assessments in due course?

A. I don't know.

Q. Now, you said the other day that a purchase in the market was the best evidence of a proper return or of the rate of return which might be allowed——

A. Before you ask that question, may I make a further explanation of my last answer, or would you rather I wait until the redirect?

Q. If it is anything brief, I have no objection to it.

Mr. Burr: It is ten minutes after one. Do you want to stop now?

Mr. Mathewson: Let the Professor say what is on his
3316 mind, if he has something brief on that subject. I do not
want a long discussion.

The Witness: In conversation with the Massachusetts Gas Commission at different times I have found their theory has been——

Mr. Mathewson: I object to that. We have had conversations and we have letters and other things. Does he want to quote the Massachusetts Gas Commission? Why not bring them on here?

The Master: I think that is a little remote. I think you can explain what your own view is, but I don't know that what they told you is of very great importance.

Mr. Burr: And he may explain his reasons.

The Witness: I will change it and see if this will be less objectionable. In the decisions of the Massachusetts Gas Commission I have found that the companies in Massachusetts, the sixty odd companies, have not been allowed to capitalize any increase in the value of their buildings, even, or machinery, that has been brought about by earnings.

Mr. Mathewson: That is another proposition, and when we get to it we will see what earnings they do allow in Massachusetts. I think we are satisfied with that.

The Master: Shall we take the recess now?

Mr. Mathewson: I would like to have the Professor state the companies which he had in mind which he said sold bonds at par and above, for a five per cent. rate.

The Master: Did he not give that on the direct?

Mr. Mathewson: No, he only gave a few. In Table 14
3317 he gave certain companies as illustrations.

The Witness: Shall that come this afternoon?

Mr. Mathewson: I would like the whole list if you have them.

Mr. Burr: You have them, have you not?

The Witness: I think so. I have not them at my fingers' ends, but can produce them this afternoon.

Recess until 2.30 o'clock p. m.

After Recess.

Edward W. Bemis resumes the stand.

Cross-examination by Mr. Mathewson (continued):

Q. Continuing my question, I refer to the thirty-four cities which the witness mentioned at page 3017. I merely asked the names of them.

A. I had hoped to present it in tabulated form, but the stenographers were out at lunch, so I will simply be obliged to read from my notes.

Q. I did not ask for anything except the names of the cities.

A. I see. On bonds: Boston, Minneapolis, Montreal, Rochester, Newark (New Jersey), Paterson and Passaic, gas and electric, Peoria, Rochester, St. Paul, Syracuse, Troy, United Gas and Electric of New Jersey, Washington, Brooklyn Union, Buffalo, Detroit, Kansas City, St. Louis, Milwaukee, New York and Richmond, Chicago, Trenton.

Q. Which Chicago, Ogden or People's?

A. On bonds, it was Chicago Gaslight & Coke 5's, which
3318 are bonds assumed by the present People's Company. It was the name of one of the largest of the original Chicago companies and the bonds are still outstanding. Newton, Massachusetts, I suppose, Westchester Lighting. So much for bonds.

On stocks: Cambridge, Mass., Charlestown, Mass., Boston, Montreal, Hartford, Kansas City, St. Louis, Louisville, Lowell, Lynn, Masschusetts Gas Company's preferred stock, Albany, Nashville, Toronto, New Bedford, New Haven, Providence, Syracuse, Troy, the United Gas Improvement Company of Philadelphia, Washington, Brooklyn Union, the Consolidated Gas of New York, Detroit, Milwaukee, People's Gaslight & Coke of Chicago.

Q. Do I understand that the Boston Consolidated Company has any bonds outstanding? You gave Boston as in the list of bonds?

A. That was the only city in the list that I could not read distinctly and it looked—it was written as I dictated it to one who wrote in longhand several days ago, and it looked like "Bo." Now it may be intended for Baltimore. I recognize that Boston has not any bonds and it is probably the Consolidated Gas of Baltimore. That was 5's of the issue of 1939, that is, payable in 1939; and I think that must be Baltimore.

Q. Do you think that a five per cent. bond, where the earnings equal only five per cent. on the bonds, would sell at par?

A. Where the interest was paid at five per cent. right along.

Q. Do you think that the bond of a gas company where the earnings of the gas company are barely sufficient to pay the five per cent. and did not show a substantial earning capacity above five per cent., would sell at par?

A. It might have to be joined to dividends of six on stock.

Q. Isn't it as a matter of fact a very important element in the selling price of bonds, the determination of what the earn-
3319 ings of the company are, and how much those earnings exceed the requirement of interest?

A. That always is an element, but in this wide group of securities all of them are practically on a four to six per cent. basis. There are many whose full earnings are probably not known by the investor. He only knows that they have kept up their interest payments and their dividends.

Q. Have you been a large investor in gas bonds?

A. No.

Q. Then your idea as to what the investor thinks is simply your theory, is it?

A. Yes; but I am sure of the fact that the profits of many of these companies are a secret, which is not generally known to buyers of securities.

Q. Well, I don't doubt you do know that, Professor, but some of them pay interest on stock—it is a matter of public knowledge—do they not, or do not most of them pay interest on stock?

A. You mean dividends on stock?

Q. Dividends I mean?

A. Yes.

Q. And that itself would be some indication that the earnings would be considerably more than enough to pay five per cent. on bonds?

A. Yes, I said that myself a few minutes ago.

Q. Have you taken pains in each one of these cases to ascertain the amount of the earnings of the company as distinguished from the amount that they pay on bonds or stock?

A. No, I took the quotations, as I stated in my testimony, of the *Commercial and Financial Chronicle,* and the rate paid by the bonds, as also given there.

Q. Without analyzing each one of those companies I am going to take one company (Table 14) respecting which we all know something, because it is a large company and we can test it; that is the Laclede Gas Light Company of St. Louis?

A. What page is that, please?

3320 Q. 3018. In illustration of your theory you say that the stock of the Laclede Gas Light Company is selling at 95 and paying 5 per cent. and that the preferred stock is selling at 95 and paying 5 per cent.?

A. And it is not in the table but I can tell you the bonds if you wish.

Q. Very good. I wish you would tell me the bonds.

A. What I have here is that all five per cent. bonds are quoted at 106⅞ to 110.

Q. Now you are coming to just the point I want. Will you tell me how many first mortgage bonds there are of the Laclede Gas Light Company in par value?

A. No, sir, I don't know.

Q. Haven't you the *Financial Chronicle?*

A. Yes.

Q. Will you tell me the amount of the bonds, first mortgage, and then the amount of the extending and refunding bonds?

A. If you have the page it will help me quickly.

Q. I haven't it. I have, however, the amount of the bonds, if you wish to verify it: Ten million first mortgage bonds and seven million extending and refunding bonds, or a total bonded indebtedness of seventeen million.

A. I have now on page 166 of the Railway and Industrial Section of the *Commercial and Financial Chronicle,* published on July 28, 1906, a statement about the Laclede Gas Light Company, and you ask me now about the number of bonds, do you?

Q. Yes.

A. It states here that twenty million of bonds, authorized issue——

Q. Of which?

A. Of which six million five hundred thousand dollars have been issued, ten million dollars are reserved to refund the outstanding bonds due 1919, and three million five hundred thousand dollars for not exceeding eighty-five per cent. of cost of future extensions and improvements. Then the outstanding bonds would be sixteen million five hundred thousand dollars.

3321 Q. That is the latest record you have, is it?

A. Yes.

Q. My impression is they will a little exceed that now, but we will take that figure.

A. There may have been a supplement since, but this was the last one I got the other day.

Q. That is the amount of the preferred stock and the common stock?

A. Preferred 5 per cent., cumulative, two million five hundred thousand; common authorized, seventeen million five hundred thousand; outstanding, eight million five hundred thousand dollars; so there is a total of eleven million dollars of stock. The dividends were five per cent. last year.

Q. Do not answer any more than the question; I haven't got to that yet. How much does that make, all told, for bonds and stock, all of which you say are paying five per cent.?

A. Well, eleven million of stock plus sixteen million five hundred thousand of bonds, make twenty-seven million five hundred thousand dollars.

Q. Precisely. Now, you know, do you not, that the output of the Laclede Gas Company of St. Louis, a city of about the size of Boston, has a little less than 3,500,000,000 feet?

A. I have not tried to look up their output and don't know. I wouldn't know any place to look except Brown's Directory for that.

Q. Well, it is about the same as Boston, isn't it? If you have Brown's Directory supposing you look at it, if you think that is an outhority.

(Witness consults Brown's Directory.)

Q. I think Brown's will give the total output and not the sales, but what does that give as the total output?

A. Approximate annual output, four billions cubic feet. That is the directory dated 1906, but relating, I suppose, to last year.

3322 Q. Now for purposes of computation, will you not take 3,500,000,000 feet which I think exceeds the amount of the sales, but it is not far from four billion, and see how much that capitalization amounts per thousand of sales on that basis?

A. It amounts to $7.86.

Q. Yes, nearly $8.00.

A. Yes.

Q. That is to say, they pay five per cent. on nearly $8.00 in securities for every thousand cubic feet of sales on this assumption?

A. Yes.

Q. That would be equivalent to about eight per cent. if you followed it up on five dollars capitalization per thousand cubic feet of sales, wouldn't it?

A. Yes, five per cent. of $8.00 is the same as eight per cent. of five dollars.

Q. Well, if you take that eight per cent. rate therefore, and assume $5.00 per thousand feet of sales as the capital, you would get exactly the same result as to the amount of dividend and interest requirement?

A. That is true.

Q. Now, if you take the Consolidated Gas Company's sales of

13,308,000,000 at even $5.00 per thousand feet of sales, that would make between $66,000,000 and $67,000,000, would it not?

A. $5.00 per thousand feet, yes.

Q. Did you take occasion in looking up the market price of these bonds in these various companies to ascertain what relation they bore to the value of the tangible assets of the companies in each case?

A. No.

Q. That is a very important circumstance, isn't it, in determining the safety to an investor of securities which he purchases?

A. Yes, most of these stocks undoubtedly are much larger than the tangible assets, yet they are on a five per cent. basis, which is a greater confirmation of my theory.

3323 Q. But they are on a five per cent. basis on a very large capitalization in the case of the Laclede Company?

A. Yes; on a legitimate capitalization probably of four and one-half per cent.

Q. And at four and one-half per cent. capitalization on the basis of the Laclede Gas Company, that would be equivalent to a nine per cent. or ten per cent. dividend, wouldn't it, as compared to what they actually do pay on that capitalization?

A. No. I mean capitalization on earnings, not on the stock.

Q. Well, I am taking your own companies and analyzing those.

A. That's right.

Q. Now, taking Exhibit 82 of the present record?

A. I haven't it with me.

Q. I will show it to you. Here it is. Now, in reference to the relation of Stock Exchange sales to dividends, it appears that the highest prices quoted for the Consolidated Gas stock were 241½ in 1887 and exactly the same, 241½, in 1897, is it not, by that table?

A. Yes. That does not mean for the whole year.

Q. No, the very highest quotation ever reached?

A. Yes.

Q. Now, what was the rate of dividend in 1887 when the quotation was 241½?

A. Four per cent.

Q. What was the dividend in 1897 when the quotation was the same?

A. Eight per cent.

Q Just double?

A. Yes.

Q. So there is no special relation between the dividends paid and the market price, so far as that is concerned, is there, in these cases?

A. There is always a tendency to that, but there may be counteracting circumstances.

By Mr. Burr:

Q. Special circumstances?

A. Special circumstances.

3324 By Mr. Mathewson:

Q. Well, so far as that is concerned, the quotation is precisely the same when the stock was eight per cent. as when it was four per cent., in those two highest years; is that right?

A. Yes, sir.

Q. Now, in 1891 the stock sold as low as 92½, didn't it?

A. Yes.

Q. And the highest price was 104¾?

A. Yes.

Q. What was the dividend in 1891?

A. Five per cent.

Q. So that in 1891 the stock paid five per cent. and sold for less than par, and in 1887 the stock sold for 241½ although it paid one per cent. less, or four per cent., is that right?

A. Yes.

Q. So that so far as those particular instances are concerned there does not seem to be any fixed relation between the dividend and the market price of the stock at those times, does there?

A. That's right.

Q. Now, will you look at table 18, the table of Cambridge, Fall River and so on?

A. It is on page 3055. It does not seem to be numbered but that is undoubtedly it.

The MASTER: It is numbered on the preceding page.

Q. Now, when you give the dividend paid upon capital, including bonds, per thousand feet in this table, you refer, do you not, to the dividend on the par value of the securities?

A. Yes.

Q. And not the dividend that is paid upon the structural value of the assets, although they may be greater?

A. Certainly. It is the dividend paid upon the stock.

3325 Q. Now, taking $2.52 for Cambridge as capital, you know, do you not, that some of the Cambridge stock was sold for two hundred dollars a share?

A. I testified, I think, to that effect.

Q. So that would be an addition to the assets of the company which would not appear in this $2.52, so far as the premium on stock is concerned?

A. So far as it applies to new stock issued, that would be true.

Q. My point is that the $2.52 would not adequately represent the structural assets if the stock were sold at a premium, but only carried into this $2.52 at par?

A. That is, any new stock sold at par, allowed by the Commission?

By Mr. BURR:

Q. What would not be true?

A. It would not be true, to apply the premium to all the existing stock.

By Mr. MATHEWSON:

Q. If you averaged it over the existing stock it would amount to the same thing?

A. Oh, no. The law did not go into effect until about 1894, I think, in Massachusetts.

Q. I understand, but when you take the stock oustanding and the market value of stock, you get an average value of all the stock outstanding, of course.

A. Yes, but the inference could not be drawn from that that the premium on all the stock represented investment in structural assets. You could only derive that from stock issued under the auspices of the Gas Commission.

Q. Oh, yes, I understand that. Now, when you stated the amount of dividends that are paid in this table 18, and the amount of dividends per thousand feet of capital, you do not refer to the amount of earnings, net earnings, do you?

A. No.

3326 Q. The net earnings of a company might be very substantially more than the amount distributed in dividends, might they not?

A. Yes.

Q. And do you not know that some stocks sell at par even before they pay any dividends at all?

A. Yes.

Q. On the strength of earnings. So that if there is any test of that character, the real test is the amount of earnings that a company is permitted to make rather than the amount which it sees fit to pay out in dividends to its stockholders, isn't it?

A. Not altogether in Massachusetts.

Q. Well, isn't ordinarily the value of the stock based on the amount of earnings which it makes, whether it pays out any dividends or not?

A. So far as that is known to the investor.

Q. Well, we are assuming that the investor knows a thing or two and that he does not buy blindly. Some companies pay pretty nearly all their earnings in dividends, as you know, and some other companies pay perhaps small dividends and put large amounts to one account or another, but their net earnings are just the same and they all go to determine the real value of the stock, do they not?

A. Yes.

Q. Now did you take pains to ascertain what the net earnings actually were in these cases rather than merely what part of the net earnings was paid out in dividends?

A. You mean in these Massachusetts companies or generally?

Q. Well, generally.

A. Generally there was no data available.

Q. Did you as to the Massachusetts companies?

A. Yes, that is, I looked into their reports to the Gas Commission.

3327 Q. On page- 3021 and 3022 of the testimony you gave a list of various Massachusetts companies, Lynn, Cambridge, Clinton, and so forth.

A. I don't see any table there.

Q. No, I don't think it was in the form of a table.

A. Well, I think you are correct, pages 3022 and 3023, yes. I was looking for a table.

Q. Lynn, Cambridge, Clinton, and so forth?

A. Yes. I have it before me.

Mr. BURR: Clinton, Cambridge, Lynn, Brockton, Newburyport, Fitchburg, Natick, Malden and Melrose, Worcester County.

Mr. MATHEWSON: Yes, eight companies, were there?

The WITNESS: Clinton, Cambridge, Lynn, Brockton, Newburyport, Fitchburg, Natick, Malden and Melrose, Worcester County. Nine now, I count.

Q. Do you include Worcester County in your computations?

A. I understood you to ask me how many companies I had presented here?

Q. Yes, precisely.

A. I say I count nine.

Q. I ask you now if you included Worcester County in your computation or in your statement in that connection?

A. I made no average. I included in this list, if I recall right, every issue of stock to a gas company in Massachusetts last year.

Q. But the Worcester County Company had no earnings, did it?

A. That's right. Well, it paid no dividends. I don't know about its earnings.

Q. Well, omitting that, and taking the other eight companies, did you take pains to ascertain what the assets of those eight companies were and what their profits amounted to on the assets as permitted by the Commission?

A. No. I did not look into that except as I have in the past looked into some of the larger ones, but in preparing this table I did not especially do that.

3328 Q. If my computation is correct it would show assets of those companies of about $5,895,499.60, and profits permitted by the Commission amounting to $595,968.12, or an average return upon the assets of all the companies of something over ten per cent.

A. What do you mean, "permitted by the Commission?"

Q. I am using the same term you have used right along that the Commission permits so-and-so.

A. The Commission had no authority except on a complaint by a certain number of consumers.

Q. I understand that. We won't split hairs on that. These companies are under the jurisdiction of the Commission, are they not?

A. Only on a complaint.

Q. They are under that jurisdiction if they are brought before the Commission in proper form.

A. Yes.

Q. Now if it be true that the earnings of all these companies, their profits, were more than ten per cent. on their assets, that would tend to rebut your theory that only five per cent. or six per cent. should be allowed, wouldn't it?

A. Not at all.

Q. Now as a matter of fact, have you taken pains to ascertain how many cents per thousand, of profits, the Massachusetts companies earn over the operating cost of gas? I mean profits applicable to dividends and interest.

A. Which companies?

Q. Oh, the Massachusetts companies generally.

A. In addition to what they pay out in dividends?

Q. No, over the operating cost of gas. I refer now to the number of cents per thousand that they have available for dividends and interest, which, as I put it, the Commission permits them to earn above the operating cost of gas.

A. It varies from thirty to thirty-two cents generally.

Q. Doesn't it average more than thirty cents for the entire State of Massachusetts, taking all the companies?

A. I have not averaged it.

3329 Q. You would be surprised if it did not equal thirty cents, wouldn't you?

A. I couldn't say I would be.

Q. Of course the maximum rate of dividend or return which is fixed must be applied to a successful company, well located, and not to the average company, must it not?

A. Why, if I understand what you mean possibly the most successful companies earn the largest rate.

Q. In other words, the fact that a company, poorly located, may earn only three per cent., or that the average of all the companies in a State may earn only five per cent., would be no reason why you should limit the dividends of an exceptionally successful company to the average rate, would it?

A. I have not argued on that basis.

Q. I understand. I am asking a question, I am not arguing.

A. There is naturally some premium for exceptional skill. I would not take that away. In other words, I should not insist that a company must be allowed to earn good dividends if it was poorly managed or a poor plant.

Q. You referred to Dr. Humphreys' testimony at Holyoke, and to his reference to five per cent. upon the assets. Was not the testimony in that case directed rather to fixing the value of the entire plant and property of the company, including its intangible assets, with a view to their purchase by the municipality?

A. It was a valuation with a view to purchase by the municipality.

Q. It was not primarily a hearing to determine what rate of charge should be allowed for a company which was to continue, was it?

A. No.

Q. And don't you remember that Mr. Humphreys' associate, Mr. Randolph, made an appraisal of the property, and gave the structural value of the property, excluding franchises and good-will?

3330 A. I recall that Mr. Randolph did some work of that character and that there were structural values presented. I do not at this moment recall the particular work of Mr. Randolph as to distinct matters.

Q. Don't you remember that the earnings with which Dr. Humphreys was dealing represented about ten per cent. on the value of the assets as appraised, excluding the intangible assets?

A. No, I have no recollection as to that physical value.

Q. But you did understand, did you not, that the five per cent. to which Dr. Humphreys referred was five per cent. upon the total valuation of all the property, tangible and intangible, and was not confined to the tangible assets at all?

A. I understood the valuation was based on a capitalization at five per cent. of the net earnings.

Q. A capitalization of five per cent. upon the net earnings?

A. That five per cent. was a fair capitalization and a fair earning on an investment in the gas business.

Q. Did he mean by an investment in the gas business the tangible, structural assets alone or the franchise and good will and value of the established business plus the tangible assets?

A. I don't know what he meant——

Mr. Burr: Well, his testimony is here and speaks for itself.

Mr. Mathewson: You have not got in all the testimony or anything like it.

Q. On the record appears this answer, quoted from Dr. Humphreys' testimony at page 3025 of the present testimony:

"I did not go into that very specifically but I am reinforcing my opinion, &c."

3331 Now, the question respecting which the witness made that answer is omitted from the record or from the quotation as given by Professor Bemis here and is as follows, is it not, Professor:

"Did you in making this value assume that there were any differences in respect to the legal status of gas and electric light companies in Massachusetts and the status of companies in New York and New Jersey, and the other places where you made valuations."

Then there was some discussion between counsel and then followed the answer which has been quoted. Is that correct?

The Witness: Yes.

Mr. Burr: Page 3025 is the page where Professor Bemis quoted the testimony as given by Dr. Humphreys in the examination in regard to the Holyoke Company.

Q. In other words, to be brief, the purpose in that inquiry was to find the total value of the assets of the company, tangible and intangible, was it not, Professor?

A. It was to find what the property was worth for purposes of sale to the city.

Q. Referring to the amount paid by the Massachusetts companies upon paper capital, so far as that is of any value at all, it is true, is it not, that many of the Massachusetts companies are paying ten or more per cent.?

A. I have in my hand the last report of the Massachusetts State Gas Commission——

Q. I do not ask you to name them over but simply to reply to the question generally if you can.

A. On page 103-104 where the dividends are given, I find but three companies, namely the Adams, Attleboro and Marlborough, all very small, that paid over 10 per cent.

3332 Q. You find quite a number that did pay 10 per cent., don't you?

A. Yes.

Q. And that is refer-ing to dividends, you understand, in my question, and not to earnings.

A. Certainly. In my table I gave all the large companies, I think.

Q. So that assuming that the companies earned anything more than they paid out in dividends, the earnings on many of these companies must be over 10 per cent.?

A. On that supposition, yes.

Q. And is it not true, too, that some of the English companies under their method of supervision pay ten per cent. on their paper capital?

A. I am not prepared just now to say what they are. I have not yet gone into that particularly.

Q. Does it not appear by the reports of the Committee of 1886, that the South Metropolitan Company of London was then paying twelve per cent?

A. I don't recall what it stated.

Q. Page 655.

A. Mr. Mathewson, I shall not dispute the accuracy of your quotation if you state as a matter of fact that it is in there.

Q. I will merely ask you to correct me, if I am wrong if you are willing to leave it that way?

A. It is a mere matter of a quotation appearing in a report twenty years ago, and if you are reading from it I have not any reason to doubt that you are reading it correctly.

Mr. Burr: Did it not further state that they were selling gas at 75 cents?

Q. In many of these cases in which you testified that stocks and bonds were selling on a five-per cent. basis, it appeared, did it not, that the price of gas was well over a dollar?

A. I never looked into that carefully, but I do not believe, and I
know most of these companies off-hand, I do not believe that
3333 the price exceeded one dollar in more than one-tenth of the
companies selling over one hundred million feet, but it certainly only exceeded a dollar in a very few cases and it was less than a dollar in some of them.

Q. That answers my question.

A. Lowell and Lynn is 90 cents and Boston is 85 cents, and I quoted Chicago. That is 85 cents, too.

Q. You testified in Boston, in December, 1904, or about that time and advocated there a six-per-cent. rate, didn't you?

A. I don't remember what I suggested, but six per cent. has been the usual rate that I have suggested for quite a while.

Q. Can you remember whether you advocated a six-per-cent. rate in Boston or not?

A. Absolutely I don't remember, but if you find it there I do not doubt it.

Q. I do find it there, and you say you represented the city on that occasion as well as another interest.

A. Yes.

Q. Are you not aware that when Mr. Morse referred to the six-per-cent. rate and proposed to go into a discussion of that and the propriety of a six-per-cent. rate, Mr. Babson, the attorney for the city for which you were acting, said that he would not argue that at all.

A. I don't remember about that.

Mr. **Burr**: Does he say why?

Mr. **Mathewson**: Obviously, because he does not consider that it was fair.

Mr. **Burr**: No, that is not obvious at all.

Q. Will you look and see whether Mr. Babson, the attorney for the City, said that he would not argue that at all?

A. On page 602 of the record in this case I find a question from Mr. Mathewson to that effect.

3334 Mr. **Burr**: And Mr. Morse added, "I don't know that you will, but I think somebody is going to argue it in this case."

Mr. **Mathewson**: Mr. Babson was the attorney for the City for whom Mr. Bemis was testifying there.

Q. Is it not a fact that the Committee of the Legislature of Massachusetts as late as 1900 referred to the ten per cent. maximum up to which a company might be permitted to earn if it could, as recognized by custom in Massachusetts?

A. I don't recollect.

Q. You do remember, don't you, that in the investigation in 1900, by the Legislature the question arose of bringing the New England Gas & Coke Company, to which I have referred (I think I have referred to it heretofore as the New England Coal & Coke Company), under the wing of the Commission, although that company manufactured gas but distributed none; and the Committee of the Legislature in Massachusetts, House Document No. 1405 of that year, referred to the propriety of that action; and will you look at this document which I show you and say if the committee in that connection did not say in substance that in that event they would be compelled to allow the New England Gas & Coke Company to pay "not exceeding, of course, the ten per cent. heretofore recognized by customs," at the bottom of that page?

A. This report of the Committee on Manufactures, dated June 11, 1900, stated as you read, as follows: "The enactment of any law which will place the New England Coke Association under the control of the Board of Gas & Electric Light Commissioners as the New England Gas & Coke Association at present exists, without first compelling it to incorporate, will be a legislative sanction and 3335 approval of its $35,000,000 securities and it would compel the Board of Gas & Electric Light Commissioners for all time in arriving at the cost of gas to reckon and allow all charges, interest or dividends that the New England Gas & Coke Association chose to pay upon the $35,000,000 of securities, not exceeding of course the ten per cent. heretofore recognized by custom." That is the quotation but it is an incorrect statement of the practice of the Commission.

Q. That is the report, is it not, of the Committee of the House of Representatives of the Comonwealth of Massachusetts, which was investigating this very subject in 1900?

A. Yes, but it is a wrong statement of the facts.

Mr. Burr: And you dispute its conclusion as the conclusions of the Stevens Committee are disputed here by the Consolidated Gas Company?

The Witness: Yes. No ten per cent. position has been taken by the Massachusetts Gas Commission.

Q. Don't you know that the Massachusetts Gas Commission permits a well regulated, successful and well located company to earn as high as ten per cent. if it is able to do that?

A. It will and has reduced it below that when cases have been brought before it. It has no right to initiate proceedings.

Q. In any case where it does not believe ten per cent. can be earned, total net earnings upon the structural value of the property?

A. They have reduced prices so as not to leave ten per cent.

Q. Will you name the cases that you think they did?

A. I have not them in mind at the present moment.

Q. Now, a lot of English companies pay ten per cent. dividends, don't they?

3336 A. That applies to some companies for their original stock issued many years ago.

Q. But a lot of them have that ten per cent., have they not?

A. I don't remember how many. There are some.

Q. Well, say a lot, put it generally; that is about right, isn't it?

Mr. Burr: What do you mean by "lot?"

Mr. Mathewson: Let the professor put his own construction on it.

A. I don't know. I know there are a number. There are a good many but just how many I don't know.

Q. I will simply read from the Syracuse testimony on that subject—*A.* A good many of the older companies.

"Q. In England how much are companies allowed to earn on the capital paid in 1887? A. I don't know.

"Q. Did not your investigation extend to them over there? A. A lot of those companies had ten per cent., but I don't know that there is a law for all of them."

A. Yes.

Mr. Burr: Which page?

Mr. Mathewson: Page 2942 of the Syracuse testimony.

The Witness: It is simply a vague expression. I meant to say that a good many of them do.

Q. And seven per cent. after that time?

A. But there is an option clause in all of those.

Q. And seven per cent. afterwards in all of those?

A. Seven per cent. with the option clause. The actual earnings on the actual stock is much below what those figures would indicate.

3337 Q. But not below the actual earnings on the assets, is that right?

A. What?

Q. But not below the actual earnings on the assets, is that right?

A. I don't know what you mean by actual earnings on the assets.

Q. I mean the actual earnings as applied to the assets, the value of the assets, to get your per cent.

A. I cannot say as to that.

Q. I will just read a little more from the Syracuse testimony:

> "Q. Wasn't ten per cent. prior to 1887? A. Not for all companies.
>
> Q. And seven per cent. after that time? A. I think that relates to a certain class of companies.
>
> "Q. Will you testify positively that that was not the fact as to all the companies there and the sums allowed during those periods? A. It may be. I am not sure. There are many companies that have that——"

That is all on that subject so far as I can see. Do I quote that correctly, Professor? (handing book.)

A. I believe you do.

Q. Are you also familiar with the fact that the Senate Committee of 1886, Senate Document 47, recommended ten per cent. as a maximum rate for the earnings of this Company, with a further allowance of a reserve fund to accumulate until it equalled ten per cent. of the capital?

A. I don't remember it now. Ten per cent. twenty years ago is quite different from that now.

Q. Perhaps not, if you put most of your money in twenty years ago on that basis. What did you allow the Syracuse Company in your recent testimony up there as a return upon capital?

A. I think I gave them on different bases showing——

3338 Q. What did you allow them finally?

A. I don't remember.

Q. Can't you remember? That was inside of a year?

A. Yes, but I have had so many figures to deal with and other matters that I am not carrying them in my head. When I get through with a case I try to dismiss it from my memory and think of something else. My impression now is that bearing in mind the decision of the New York State Gas Commission for eight per cent. in New York City, I made an estimate on an eight-per-cent. basis in Syracuse, in harmony with the eight-per-cent. basis used in the decision by the Gas Commission for the City of New York.

Q. Well, did you allow 8 per cent., put it in that way?

A. No, I never intended to, and I remember having conferences with the attorneys in which I said 6 per cent. was sufficient, but I think I made an estimate on the witness stand of what 8 per cent. would amount to.

Q. I read this from page 2936 of the Syracuse minutes, testimony of Prof. Bemis, referring to another subject in the first part of this question:

> "Q. And therefore struck out as compared with 100 years. Well we will pass that. You allowed us 8 per cent. dividends, did you not? A. Yes."

A. That means, allowed in the computation I made. I made a computation as you will find on some previous pages.

Q. You did make a computation there in which you allowed 8 per cent.?

A. Yes.

Mr. **Burr**: Just as you have here.

The **Witness**: Certainly, I have done so in this case.

3339 Q. And that is what you meant when you said you allowed 8 per cent?

A. Yes, you will find I have done that in one of the tables here.

Q. And the Gas Commission to which you have referred as allowing 8 per cent. allowed that after they heard your testimony in which you recommended a six-per-cent. basis, didn't they?

A. Here in the city, yes. I used 6 per cent. in Chicago and Montreal, I remember.

Q. Did you not find in the testimony of the Stevens Committee with respect to which you have spoken, the basis assumed by Mr. Hughes in his question as to return was an eight per cent. basis?

A. I don't remember.

Q. Did you not observe that he asked the witnesses what the earnings would be on the various capitalizations at eight per cent.?

A. I don't remember.

Q. Professor, in some cases you have referred to the question of candle-power marked disapproval of a candle-power as high as 22, have you not?

A. Yes.

Q. And you have advocated an 18 candle-power?

A. Yes.

Q. You are still of the same view, that an 18 candle-power, all things considered, is better for all concerned, are you not?

A. Yes.

Q. And if the public wants a 22 candle-power or some higher candle-power, it is for the public to pay for the additional cost?

A. Of course, it must do that.

Q. Let us refer now to the cost of the properties of the Consolidated Gas Company on the basis which you have advanced. You say at the outset that you took certain figures of Mr. Yalden, the accountant for the Committee of 1886. Mr. Yalden was an accountant only and not a practical gas man, was he not?

3340 A. The evidence so far as I am aware, brought him in as an accountant.

Q. Are you aware that he had anything before him except the books of the constituent companies from which he made his report?

A. I think he went back to vouchers and pay rolls.

Q. Well, have you any evidence that he did so except the testimony before the Commission of 1886?

A. I have nothing except what is in that testimony.

Q. You found that these companies which consolidated in 1886 forming the present complainant, had many of them been paying large dividends, didn't you?

A. Yes.

Q. Very prosperous companies, apparently?

A. Yes.

Q. And you found the statement of the Committee of 1886 was that, except so far as the franchises were concerned, the property in 1884 appeared to have been appraised at simply its cost of reproduction?

A. They said that Mr. Yalden's figures were in contradiction of that. They also said——

Q. Did they say anything more than this, that the only evidence against the value as fixed by the appraisal of 1884 being fair was the fact as reported by Mr. Yalden, that the properties or some of them were appraised at a higher figure than they appeared to be charged on the books of the constituent companies?

A. Yes.

Q. That was substantially what the Committee said?

A. Yes, and in that they did not correctly quote the evidence.

Q. You think that the Committee of 1886, who had all these witnesses before them and went into the subject for an entire year, did not know what they were talking about?

A. Right in black and white there is proof to the contrary.

3341 Q. You draw deductions from the evidence contrary to the Committee of 1886, do you?

A. There is evidence——

Q. Well, do you?

A. Yes.

Mr. Burr: You are speaking of the majority report?

Mr. Mathewson: Yes.

The Witness: Yes. The chairman reported differently.

Q. Did you find in the report of the majority of the Committee so far as the franchises were concerned, which were appraised at $7,781,000, the statement that the franchises of four of the companies alone were worth more than the entire $7,781,000?

A. I don't remember about that.

Q. Did you observe that the assets of the Knickerbocker Company, which was under lease to the Municipal Company at that time, were not carried into this $20,942,000 total which Mr. Yalden reported, except only to the extent that the Municipal Company had made expenditures on the Knickerbocker plant?

A. My impression was that all the assets were carried in, that is the way I understood Mr. Yalden's report.

Q. Don't you know that the Knickerbocker Company had outstanding something like $1,200,000 of bonds when it was leased by the Municipal Company and that no assets were carried into this total at all representing this $1,200,000 of bonds?

A. I did not gather that any assets were omitted by Mr. Yalden.

Q. You understand, do you not, that the Act of 1884, under which the Consolidated Company came into being, provided that the constituent companies might consolidate at the aggregate value of their property, franchises and rights at that time, and not upon the basis of original cost?

A. While I have read the report, at the moment I don't
3342 remember its exact wording.

Mr. **Burr**: But the Act Mr. Mathewson is referring to is in evidence and speaks for itself.

The **Witness**: I don't remember the exact language.

Q. Don't you remember the statement of the Committee of 1886, in their majority report, that there was no great complaint as to the valuation of the tangible property which was valued at $29,994,000 at that time, but that the main complaint was that the company had capitalized its franchises at $7,781,000?

A. They made a remark along that line, but with the reservation that Yalden's figures were different, and they did not correctly quote, as I said, the testimony.

Q. Their reservation was, was it not, that Yalden's figures, as derived from the books, showed, or tended to show, that the costs of the properties originally were less, is not that a fair statement?

Mr. **Burr**: The report is the best evidence.

The **Witness**: The report had better be quoted here.

Mr. **Mathewson**: Yes, but the Professor has been referring to the report from time to time in his testimony and I am very briefly testing his understanding of it. That is my last question on that subject.

The **Witness**: My recollection is that Mr. Yalden was the one they quoted as having given different figures for the cost of the plant.

Q. You don't find in your examination of the testimony, do you, that any witness was called who purchased or acquired for
3343 any one of the constituent companies, any item of their assets and testified as to what the cost was?

A. There was no purchase that took place.

Q. By the constituent companies was there not?

A. There was simply a consolidation.

Q. Do you mean to say that the six constituent companies never purchased any property?

A. I thought you meant that the Consolidated Company—purchased from the constituent companies.

Q. There again you misapprehend me. Did you find any evidence presented, any witness appearing aside from the books to testify what the cost of the assets of the constituent companies was or anyone of the assets?

Mr. **Burr**: Do you mean their original cost?

Mr. **Mathewson**: Yes.

A. No witness except Mr. Yalden.

Q. But he proceeded on the books and records?

A. Yes, and he was backed up by the president of the Mutual.

Q. And besides that, no witness appeared to testify what the original cost of these items was.

Mr. **Burr**: Except Mr. Kennedy.

A. Mr. Kennedy testified as to his faith in Yalden's report.

Q. Oh, yes, but can't you answer my question?

A. There was no other witness, neither was there anybody that disputed it.

Q. Did not the Committee in substance say that the value in 1884 was the basis upon which the companies were entitled to capitalize, and did not the majority of the committee therefore fail to go into the question of cost at all? Now give me a fair answer.

A. The majority took that position, two members taking 3344 one position and the Chairman taking the other.

Q. We lay greater stress on majority reports than we do on minority reports.

Mr. Burr: The minority report took the contrary view and gave its reasons *in extenso,* which are in evidence in this case.

Q. Now let us look at Table 15 for a moment, entitled Cost of the Gas Properties up to October 31, 1905:

A. Page 3046?

Q. Yes. Now in starting this off you say, cost in 1884, $20,942,632.85?

A. Yes.

Q. That is the amount, is it not, which Mr. Yalden reports as the property being charged as costing on the books of the six constituent companies, or the figure at which it appears as carried on the books of the companies, if you please?

A. Yes.

Q. To that you add net increase from 1884 to October 31, 1905, $9,693,565.90?

A. Yes

Q. From what time in 1884 did that increase accrue?

A. I think it was November 11.

Q. Don't you know that between the appraisal of June, 1884, and November 11, 1884, there was an addition of nearly two hundred thousand dollars to the assets of the Consolidated Gas Company, which you have omitted entirely?

A. Perhaps there was that amount. I remember there was some such amount.

Q. Suppose you look at Exhibit 71 of the present record and see what the amount was that you have omitted here?

A. $196,419.01.

Q. Well, then, so far as this is concerned upon your own theory, there should be added $196,419.01, should there not?

A. Mr. Yalden's report was of June instead of November. I have forgotten which it was. If you say Mr. Yalden's estimate 3345 was of the earlier period then that should be added. May I ask if it was?

Mr. Kirby: That is right. It takes two figures. The first one was the one stated here and the next was the addition of that amount.

Q. My understanding of his report was that $20,942,682.45 covers the same property appraised by Mr. Rowland at $29,994,000, and that was of June, 1884.

A. With that understanding this $196,000 should be added.

Q. Now that would make a total of about $31,450,000 in round figures, would it not?

A. I get it $31,449,087.84 or roughly, $31,450,000.

Q. Now you have deducted from this total the item: "Less value of the property taken by the city at 18th Street and other property sold by the Company given in the testimony of Prof. Marks, page 2364, $1,985,874.37." The figures that Prof. Marks took were the present value of the land and other items which he deducted, were they not?

A. I think it was.

Q. Don't you know, if you have read his testimony, the figures he took were the present value of the land which we now value at $15,000,000, but which you valued according to the report of 1885 at only about five million dollars?

A. I think this was based on the sale to the city, which of course, is present value.

Q. Let me ask you if this is a fair way to make the comparison, to take the value according to Yalden in 1884 which included land, as you have stated at about $5,000,000, and deduct therefrom property which has now been disposed of, at the present land value, which is three times that according to our testimony?

A. Certainly, I think it is fair.

3346 Q. You do?

A. Yes.

Q. In other words, while the same land went into the $20,942,000 at, we will assume, $600,000—you could pick it out—you think it is fair now in making this deduction to take out one and one-half times that, do you?

A. Provided it is sold for that. I am not taking out a theoretical valuation, I am assuming the company is to get this money for it.

Q. And you think it is fair to take out the present value of the land from the original appraised value, do you?

A. I think if the company paid $5,000,000 for land and subsequently did not require the use of a million dollars of that land, and could sell it for $4,000,000, that $4,000,000 cannot be capitalized, but should go into the business as providing for extensions.

Q. Does it not go into the pockets of the stockholders, if it is the surplus upon the capital?

A. It is part of the earnings that tend to make up the legitimate six per cent. I have said this morning that the unearned increment does not belong to the stockholders.

Q. It does not?

A. It is part of the earnings of the company, but I should not give it in excess of the six per cent.

Q. Supposing a company has assets of one million dollars, a part of which is land; supposing that land increases so that its assets are worth one and one-half million dollars and the company winds up; does not the entire one and one-half million dollars go to the stockholders?

A. Yes.

Q. Supposing the company was able to dispose of part of its land and obtain two hundred and fifty thousand dollars for it, and still had its entire capital of one million dollars intact, would not that surplus go to the stockholders and be divided among them, and if not, why not?

A. My understanding of it is that would not be allowed in Great Britain.

3347 Q. Well, we are talking about New York City, and good fair business judgment.

Mr. BURR: I think you are under a misapprehension, we are not deducting the present value, we are deducting the present price which you have received. This is money you actually received for the land.

Mr. MATHEWSON: No, we have not received it, and whether we will receive it or not, Heaven only knows, because the city has condemned this property and they have not yet paid us. But that is another proposition.

Q. Assume that we have obtained for that land one million dollars and that we still have land upon which we are still manufacturing gas to supply our consumers, and having taken that million dollars and distributed it to our stockholders, our capital is still intact, are we not entitled to distribute that to our stockholders?

A. I don't think so.

Q. What should be done with it?

A. To be used in new construction as you need it.

Q. So in getting at the present value of property you would take land appraised or carried on the books in 1884 at five million dollars, making part of a total; you would then deduct from that the land which was disposed of now at three times the price, three times the amount at which that particular land was carried in Yalden's figures of 1884, and you think the balance would be a fair balance?

A. Certainly. I don't think you are entitled to more than six per cent., you are not entitled to the unearned increment on the rise of that value of that land.

Q. Did you not testify before the Gas Commission in response to my question that if a company had a surplus in the value 3348 of its land, it was entitled to divide that among the stockholders and that it belonged to the stockholders and did not belong to the consumers of gas?

A. I don't remember.

Q. I suggest that you look them up, professor, for unless my recollection is at fault, and it is not often on those things, you will find my statement is right.

A. But if I did say it, I should say I was mistaken. But I don't remember saying it.

Q. Now, I am going to put another question to you. We will suppose here is a company in the gas business that proposes to go out of the gas business in a certain city; it has land which is then worth a million dollars, but which cost it seventy-five years before, five hundred thousand dollars; of course if it goes out of the gas business it can sell its assets, distribute the assets among its stockholders and go out of business, can it not? In other words, it is not obliged to distribute any part of those assets to the consumers of gas, is it?

A. I should think it could go out of the gas business and wind up, I should think so.

Q. And its assets should be so distributed to its stockholders and not to anybody else after the payment of debts?

A. I should think so.

Q. Now, we will assume that another company proposes to take the place of this company in furnishing gas to that community and it buys land equally well located for the purposes of its gas plant, a prudent investment, and has to pay $1,000,000 for its land, because that is the market value. Would not the company in having a price fixed which it might charge for gas, be entitled to a computation of a return upon $1,000,000 which it thus prudently expended in land?

A. I think so.

Q. And supposing that this successor company that intended to go into business bought this very land of the company which 3349 was going out of business and paid $1,000,000 for it, it would then be likewise entitled to count its land as $1,000,000 in computing its capital upon which it was entitled to a return, would it not?

A. I doubt it.

Q. In other words, if this new company going into business saw fit to buy its land from some third party and pay $1,000,000 for it, it could include that $1,000,000 as part of its capital upon which it would earn return, but if it bought equally good land from the company that was going out of business at $1,000,000 it could not include the $1,000,000 in its capital for return. Now, that is your statement. Is that what you want us to understand?

A. I will modify it to the extent that I have not perhaps thoroughly settled on this question of what would happen in that particular instance. But I answer positively that if a new company bought the old one out, as a going concern, it would not have the right to capitalize any of the price it paid for the old company but only could continue to earn on the original structural assets. That was tried in Haverhill and the Massachusetts Gas Commission ruled it out.

Q. And that is still at issue and the courts have not decided it yet?

A. Yes.

Q. Then the proposition is this: While the new company might purchase land and pay a million dollars, equally well located, from a third party, then that would be part of the capital upon which the new company would be entitled to earn, yet if it bought land for a million dollars from the old company for the same purpose, the old company going out of business, then it would be doubtful whether it would be entitled to include that million dollars in its capital?

A. I will not take a positive position on that question. When the old company goes out of business absolutely and ceases to 3350 exist, I am not positive, but when the old company is bought out as a going concern, then I am positive as to the land. Of course the most of the Haverhill case related to improvements and not to land.

Q. Take this position. If, then, the new company buys land from a third party for a million dollars and goes into the gas business it is entitled to a return on that one million dollars, and perhaps it is if it buys the land only from the old company at a million dollars, but does not buy out the old company as an operating concern; but the old company, if it continues in business and uses that same land of the same value, would not be permitted to include a million dollars as part of the capital upon which it would earn, is that your proposition?

A. Yes, as long as it is in the business of gas manufacture it cannot recapitalize its land value. If it goes out of business and winds up, then I think it would be entitled to what it sells the land for.

Q. You feel pretty sure about that, don't you, Professor?

A. Yes.

By Mr. Mathewson:

Q. Let me proceed a step further, Professor. The new company if it laid its mains under an existing pavement, which we will assume is new and improved pavement, would have to expend, of course, the cost of reproducing the mains under the present pavement?

A. Yes.

Q. And if they did that they would be entitled to a return on that amount as part of their capital?

A. Yes.

Q. Whereas if instead of doing that, there being no collusion, they purchased from the existing companies the mains of the existing company, at a little less than the cost of reproduction, just a little less, not much, they then would not be entitled to include
3351 the mains which they had so purchased and add the cost to the new company as part of the new company's capital upon which it might earn. Is that right?

A. Before I answer that let me ask you what your further supposition is as to whether the old company continues in business or not.

Q. I will assume that the old company went out of business.

A. I would say that the new company might be justified in recapitalizing the expense that it was put to, to get possession of these mains, provided it did not pay more than they could be duplicated for; but I say that if it bought out the old company as a whole, as a going concern, it could not increase its capitalization because of any money it paid in excess of the original cost of those mains.

Q. It might wait until the old company was out of business and buy in detail perhaps.

A. Gas Companies are too prosperous to go out of business.

Q. Not all of them.

A. They are in large cities.

Q. And the same theory would prevail as to all the other classes of assets of the old company, would it, as acquired by the new company?

A. Well, I have made a disinction between pavement and land one the one hand and other structural assets on the other, so I don't know just what is implied by your new question.

Q. I will put this question. Supposing all the assets of the old

company would cost to reproduce now ten million dollars, and suppose it is going out of business and a new company is organized by other parties to take up that business. The new company has the option of reproducing a plant of ten million dollars, but it meets the officers of the old company and the old company says "we will sell you this plant, all of it together as it exists to-day, for nine and a half million dollars and make a discount." Now your proposition is, as I understand it, that if the new company bought
3352 out the old company in that way for nine and one-half million dollars, it could not include all of that as part of its capital upon which it was entitled to a return, whereas if it put in its new plant for ten million dollars it would be entitled to count that ten million dollars as its capital upon which it was entitled to a return, and if you think that is so, where does the advantage to the consumer come in by compelling him to put in a ten million dollar plant where he could get one for nine and a half million dollars?

A. If the old company is still in business and is bought out for $9,500,000 that cannot be an excuse for increasing the capitalization. But if the old company has actually disappeared from the field as a gas producing enterprise, it would be like what I've said as to the mains or the land.

Q. It would be to the advantage of the public, would it not, that the new company should acquire the entire plant of the old company at $9,500,000 rather than put in a new one in its place for ten million dollars, assuming them to be equally efficient?

A. I can see some reason for that position.

Q. Now referring to Table 15, respecting which we were speaking at page 3046 of the record, the $196,000 is not in the table. Is there any working capital in that table?

A. No, I put that in in the next table, or the second table after it.

Q. Except the materials and supplies of $616,470.08?

A. Yes. You will find, in the next table 16, the million dollars for working capital.

Q. I am referring now to Table 15?

A. No, it is not in there.

Q. Is the property of the National Coke & Coal Company included there?

A. No.

Q. Why not? The income of the National Coke & Coal Company you took as part of the miscellaneous income and took that out the operating cost of gas in order to reduce the cost, and
3353 if you do that, how can you fail to include the National Coke & Coal Company in the capital?

A. Well, it was only $50,000 capital in all.

Q. It is not a question of amount, it is a question of consistency. Now, there is Table 11, in which appears as part of the $177,710.53, miscellaneous income, the following: "Dividends of National Coal & Coke Company, $5,000." That makes part of that total. Now, how can you deduct the income from the National Coke & Coal Company from the cost of gas on the one hand and exclude the investment in the National Coke & Coal Company from the capital of the Consolidated Company on the other?

A. It is possible that I could not. I may be mistaken, but I rather think I should have excluded that $5,000.

Q. Should you have excluded the $5,000 in miscellaneous income, or should you have included the investment in the National Coke & Coal Company in the capital of the Consolidated upon which it may earn a return?

A. I rather think I should have excluded it. It is another company altogether.

Q. But you understand that the testimony is that it is really the cartage department of the Consolidated, and didn't you read in this testimony, if you have read it through, the statement of Mr. Gans, one of the counsel for the State, that they claim that the National Coke & Coal Company is part of the capital of the Consolidated and accordingly its returns should be credited in the cost of gas?

A. Yes, I think I have read such testimony. I am not able to say whether you quote it with absolute accuracy or not.

Q. I am trying to be substantially accurate.

Mr. Burr: Mr. Mathewson quotes it as a statement which he claims was made by counsel for the State.

3354 The Witness: I will say that I do not recollect the testimony, except this, that there was a claim that the National Coke & Coal Company was owned by the Consolidated Company. I do not recall much beyond that, save an exhibit as to their operating expenses and dividends.

Q. And of course this Table 15 does not include either the values of the company's franchises, does it?

A. No.

Q. Nor the value of the good-will or of an established business which forms part of the value of a going concern?

A. It does not include good-will or franchise value.

Q. Nor does it include anything for the Astoria investment, does it?

A. It does not.

Q. You remember the amount expended at Astoria, on June 30 last, was testified to be $7,710,000?

A. I don't remember the exact figures. They are not very different, from my impression.

Q. Nor does that include any part of the $5,500,000 or such matter that Professor Marks allowed for additional capital as producing a portion of the gas which the Consolidated Company is now selling, does it?

A. No. I don't think it necessary since this company was buying its gas and paying for it, to put in addition a return on the capital which the New Amsterdam Company, or the Standard or the Central Union were employing.

Q. You know the contracts that provide that gas shall be delivered to the Consolidated at the bare cost of labor and material plus ten per cent., which ten per cent. ordinarily amounts to three cents, or in that vicinity?

A. Yes. I am aware of those contracts.

Q. And that three cents is not a very heavy return on the capital invested and producing, is it? Three cents per thousand feet?

A. No.

3355 Q. And you hadn't thought whether that arrangement was temporary, awaiting the completion of the Astoria plant only or whether it would be possible to make a permanent arrangement of that kind, had you?

A. I understood the company to say that the majority of the stock of those companies was controlled by the Consolidated.

Q. They are entirely distinct concerns operating with other stockholders, and the trustees and the directors must protect the minority as well as the majority. But didn't it occur to you that it might not be possible to continue indefinitely procuring that gas at the mere cost of labor and material, with only three cents over to represent return on capital investment?

A. You brought that up.

Q. I ask if that did not occur to you, as to whether that could be continued indefinitely?

A. I had observed that there was no testimony on the subject so far as I could recall. I thought it——

Q. Now you said at page 3050 that you exclude two million dollars due from consumers and that that "might be considered as a surplus." I think your statement that that "might be considered as a surplus" may occur on a later page. What did you mean by that expression, it "might be considered as a surplus."

A. Why, it did not seem to be covered by the amount covered by previous exhibits of extensions, new construction, since 1884, and it seemed to have been undivided profits. It was not in the 1884 appraisal and is in this appraisal.

Q. Do you mean to say that the amounts due from consumers are necessarily undivided profits?

A. I mean to say by that growth of assets. It is an asset of the company as a growth, for there was scarcely any of it, if I recall, in 1884; that the growth of that amount due to the company was one of the profits of the last twenty years.

3356 Q. Don't you know that if you have sales of thirteen and one-half million feet per annum and send out bills monthly and collect promptly, you still would have outstanding in accounts receivable something like $1,100,000 all the time?

A. Well, it wasn't anything in 1884?

Q. But don't you know that?

A. Why, I think so, yes. That is, it depends on how you send the bills out.

Q. Does that mean that is surplus of profits merely because you have that amount due to you?

A. It is part of your profits and if you began in 1884 with an arrangement of some kind, under which you were not credited with anything of that kind, and now in the course of twenty years you have two million dollars that you did not have to start with, I would say that that was a profit.

Q. But we haven't it. It is money due.

A. Yes, but there wasn't any money due in 1884.

Q. Don't you understand if the company has a million and a half or two million dollars of money out in account receivable that the probability is it has to secure funds at some other point to carry itself? Isn't that ordinary experience?

A. I think the million dollars adds that working capital.

Q. That is your view?

A. Yes.

Q. You have never managed a gas company, I understand, and especially one of the size of this one?

Mr. BURR: I think you asked that question before.

Mr. MATHEWSON: I think it is quite obvious, perhaps.

Q. Now in case the company does require a larger amount of working capital than a million dollars, adjustments being made, that would be allowed?

3357 A. If it required it, although I am not sure how it would be financed. If it requires that—I will say yes. I will leave the question answered for the time being as I did a minute ago. I may return to it, but I will leave it now.

Q. Did you not read the testimony of Professor Marks which showed that these typical Massachusetts companies which he selected, even excluding notes payable, had a working capital of thirteen cents, which would amount to $1,726,000, as he computed it?

A. I remember reading over his testimony very hastily, about 13 cents, but I don't remember dwelling on it at all.

Q. Don't you remember that your attention was called to the fact that the notes payable were treated as capital by the Massachusetts Gas Commission, and that making that correction in his testimony these Massachusetts companies which he considered typical, showed 47.8 cents per thousand feet, or something more than $6,000,000?

A. I remember there was a long discussion on it but I had so much else to attend to and since I was not going to refer to the Massachusetts companies in that respect, I left that for him to treat.

Q. I understood you had read his testimony with great care and you collected certain figures from Professor Marks' testimony?

A. Some portions of it I read with far greater care than others. I have been limited in time and strength.

Q. Well, if the figures to which I have drawn your attention are sustained by the operations of these Massachusetts companies that would tend to negative your theory that only $1,000,000 is required, or something like seven cents, for working capital per thousand feet, wouldn't it?

A. If the evidence tends to establish it would be two or three million, of course, I would accept it.

3358 Q. In other words, what is required we are entitled to add?

A. Certainly.

Q. You in your testimony here, in your computations, under the heading, "Capital, including bonds, per thousand sold" did include the notes payable in Massachusetts?

A. Referring to the testimony in Boston?

Q. No, to your schedules that are here presented, such as table

No. 18, "Cambridge, ten per cent., $2.52," the $2.52 being under the caption "Capital, including bonds, per thousand sold?"

A. Including bonds, yes.

Q. You understand, do you not, that the notes payable are included in that $2.52?

A. Well, I took it just the way the heading was in the Gas Commission's report.

Q. Haven't you made a careful enough study of that report so that you know whether notes payable are included under the heading, "Capital including bonds per thousand feet sold?"

A. I took that table direct from the Commission without stopping to go back to the Appendix to see how they made it up. I didn't verify that table.

Q. So you don't know whether it includes notes payable or not?

A. No, I suppose it included all that the Commission considered was rightful capitalization, but just what the Commission considered in making up that table, I didn't have time to investigate.

Mr. Burr: There is a note to that table, as follows: "(1) There are no bonds, but the above item includes 22 cents per thousand feet sold of notes payable unsecured."

Mr. Mathewson: Yes.

3359 Q. Now, I will direct your attention to table No. 16, appearing at page 3052 of yuor present testimony, and table 17 immediately following it. As to the first basis of capitalization used, $29,266,757.48, that is identical, if I am correct, with the capitalization of table 15, which we have just discussed, is it not?

A. Yes.

Q. And that excludes the $196,000 of increase between June and November, 1884, the entire Astoria investment, all working capital except $616,000 of material, the stock of the National Coke & Coal Company, the franchises and the good will?

A. Table 16 has the million dollars for working capital additional included, which you did not mention.

Q. Yes. With that exception, all the items to which I have just referred are omitted in this $29,266,757.48?

A. Yes.

Q. And in the $40,500,454.99 there is excluded the Astoria investment, the entire working capital except the $616,000 of material, and the investment in the National Coke & Coal Company and the franchises and good will?

A. That's right.

Q. And in the $49,281,454.99 there is excluded the Astoria investment, the National Coke & Coal Company investment, all working capital except one million dollars?

A. That is excluded, too.

Q. That is excluded, too. Very good. All working capital. Now——

A. Well, the $616,470.08 is in there.

Q. All the working capital is excluded except the $616,000 of material?

A. Yes.

Q. Now, in order to be quite fair, I am going to take the rate of return which the Gas Commission found was fair and the cost of gas that the Gas Commission found and see where we come out. The Gas Commission reported the cost of gas to be 62.56 cents did they not, if you remember, including the 1.81 cents for the additional two candle power? 3360

A. I think that was the figure. I haven't it clear in mind.

Q. Now, at eight per cent. you figured the profit on the $29,266,757.48, which is your smallest amount, at 17.6 cents; or if you include one million dollars of working capital, which would make $30,266,757.48, you figure it at 18.2 cents per thousand feet, do you not, at eight per cent.?

A. That is 17.6 cents and 18.2 cents; that is right.

Q. Now, if you add that to the Gas Commission's finding of the cost of gas which did not include any allowance for reserve at all, you will find what total?

A. 80.76 cents.

Q. And if you take your second amount of $40,500,454.99, eight per cent. on that would be 24.4 cents, according to your table?

A. Yes.

Q. And that added to the finding of the Gas Commission as the cost of gas, would make how much?

A. Adding that to 62.56 cents, would make 86.96 cents.

Q. And taking the final amount of $49,281,454.99, eight per cent. on that you compute to be 29.7, do you not?

A. Yes.

Q. And adding that to the cost according to the Gas Commission, what is your total?

A. 92.26 cents.

Q. So that with no reserve whatever included in the cost of gas, and with these various capitalizations shown in table 16, excluding the various items which the Consolidated Company claims should be included, and which I have recited in every case, the return on the capital at eight per cent. upon your assumed amounts would exceed the 80 cents which the present act provides, if added to the cost of gas as bound by the State Commission?

3361 A. On those suppositions. It is a mere matter of computation.

Q. Yes, that is true, is it not, on those computations?

A. Yes.

Q. Now, in table 17 your operating cost so called does not include in any case any three cents for reserve, does it?

A. No.

Q. Or anything else for reserve?

A. It assumes that 10.89 cents which is the average of the last twenty years is sufficient. There is some renewal in it.

Q. It takes the actual expenditures for renewals and repairs for twenty years and averages the actual expenditures?

A. Yes.

Q. With nothing added for reserve or contingencies to your average?

A. Yes, that's right. That is what I stated in the evidence.

Q. You have computed a further and larger capital than any of the figures appearing on Tables 16 and 17, if I understood you correctly, amounting to about $53,600,000, by taking Mr. Wheelock's valuation for the land, Mr. Mayer's for plant and holders, Mr. Humphreys for mains, Mr. Simpson's for services and Mr. Carter for meters and other personal property?

A. Yes.

Q. But you did not include in that connection the entire working capital that the company claims, did you?

A. No. I think I was trying to give the structural assets that could be compared with the 1884 valuation.

Q. You did not include any working capital, did you, in the $53,600,000?

A. No, I don't think that was included in either. I think not, but my object was——

Q. Well, be sure on that because my recollection is you included $1,000,000. I am not quite sure about it.

A. I think not.

3362 Q. You think not. Very good.

A. Subject to correction afterwards.

Q. And you did not include the value of the franchises?

A. No.

Q. Nor any investment representing the plant which is producing the 3,000,000,000 feet or more which the Company now purchases?

A. No.

Q. Nor the National Coke & Coal Company?

A. No.

Q. Now, as to the Astoria plant, you heard the testimony that according to the estimates of the Company the first two units would cost, say $21,000,000, and there would be a loss, if we removed to Astoria our manufacturing plants, after we had produced there the gas which we were purchasing from other sources now, of about ten million dollars or something like that. You remember testimony substantially to that effect, do you not?

A. Well, I cannot commit myself to any definite statement of figures because there have been so many different computations at different times as to the matter. For example, the extent to which the property in New York is going to be "scrapped" has been variously estimated at various times by the witnesses for the complainant, so that I haven't in mind what is exactly the official and final statement of the company.

Q. Well, as a matter of fact, you have always contemplated that about $10,000,000 of the $20,000,000 or $21,000,000 that these two units in Astoria will cost will ultimately be added to capital, haven't you?

A. I have contemplated that the coal gas works at 14th and 42nd Street- would doubtless be abandoned as far as making gas is concerned, if the Astoria plant went into operation.

Q. That is not quite my question. Have you contemplated that

3363 upon the completion of the second unit in the Astoria plant, about ten million dollars of that expenditure would be capitalized, even if the balance, that is, the other ten million dollars or such a matter be taken care of by a depreciation fund or otherwise?

A. I may have testified in the previous case along that line. I don't remember distinctly.

Q. Well, I don't ask you at the moment whether you so testified. I asked whether you did not so contemplate in your testimony?

A. Well, I had at first supposed there was to be a very much more extensive removal to Astoria than the later evidence has appeared to indicate.

Q. There may be still, if we convince the Court that we are not getting a fair and reasonable return at eighty cents, so don't follow that assumption completely.

Mr. Burr: So far as the evidence here is concerned, it is doubtful whether the Astoria plant is to be in supplement of the present plants or in substitution of them.

Mr. Mathewson: I think it is quite clear that the first unit of four billion feet will be required to produce gas which we procure elsewhere but which we sell, which is beyond the capacity of our present Manhattan plants; and the second unit is a replacement of certain of the Manhattan plants, whichever may be the most economical to replace when the time comes. But the replacement and the construction of the second unit, I am frank to say, depends largely on the outcome of this litigation; necessarily so.

The Witness: I haven't seen any evidence in the case about the reasons for dropping the contracts with the companies with which you have agency agreements, the subsidiary companies.

3364 Q. Fortunately, we have directors who have that matter in charge and we do not have to worry about it. But I ask you if in your testimony and computations before the Gas Commission, you did not contemplate that ten million dollars of this twenty million dollars expenditure at Astoria, for the first two units, would be capitalized?

A. I think I did.

Q. And if the assumption comes true that the first two units will be completed there and that they will be employed as has been discussed, then $10,000,000 would have to be capitalized, would it not, producing an additional capacity beyond the present sales of the Consolidated?

A. Whether it would be all for the consumers of the Consolidated Company is now becoming doubtful in my mind.

Q. Well, if it is capitalized, we will assume it could not be capitalized except properly?

A. Yes, but not necessarily all to be borne by the consumers of the Consolidated Company.

Q. I will say the consumers of the gas which is produced at the Astoria plant; all the consumers?

A. Yes.

Q. And it would be capitalized, would it not, no matter who the consumers were?
A. Yes.

At 4:45 P. M. adjourned to October 25, 1906, at 12 o'clock.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 59.

3365 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *Thursday, October 25th,* 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3366 Continuation of the cross-examination of **EDWARD W. BEMIS**:

By Mr. **MATHEWSON**:

Q. Professor, yesterday we referred to your computation of $53,600,000, value of land, plant, holders, mains, services and meters, but excluding working capital, National Coke & Coal Company, Astoria, good will, etc.——

A. May I state, before you ask that, that I think I presented the exact figures with some degree of qualification, that they might be slightly modified by further computation.

Q. Oh, yes, I understand that.

A. And that was just a summary.

Q. I quite understand that. But from that you made this deduction. You figured by starting with Exhibit 79 in this case a valuation of about $40,000,000, taking the appraised value of the property taken over by the Consolidated in 1884 at something over $30,000,000, and adding to that $9,000,000 and more of additions which have been made since. Now, deducting this $40,000,000 from $53,000,000, you obtained a difference of something like $13,000,000, and you proceeded to deduct that $13,000,000 from the $17,392000 of renewals and repairs which are shown for the past twenty years, and obtained a balance of $4,676,497. Now, did you make that deduction on the theory that any part of the 10.89 cents during the past twenty years, representing renewals and repairs, had gone into increase in plant, increase in construction?

A. I had an opinion on the subject, and I——

Q. In making this computation and your deductions therefrom did you consider and were your deductions based upon the fact in any degree that some part of the 10.89 average renewals for twenty years making up this $17,392,000 altogether went into additions to plant or new construction? 3367

A. I have found no evidence on the subject. I will tell you what I used in my computation.

Q. Well, did you assume that to be the fact in making these deductions, or did you not?

A. I did not consider it material either way, although I had a belief on the subject; that is, very material.

Q. Well, it may be material to you, but I do not think it is to us. You did not take that into consideration at all, then, as to whether it had or had not gone into construction?

A. I wanted to know the fact, and hoped the accountants would bring it out.

Q. But you say it is not material whether it is or not ?

A. I changed that a moment later and said very material. It is not indispensable, but it has a bearing, of course.

Q. But in making this deduction and your reasoning thereupon did not assume that any part of it had gone into new construction, or did you not, so far as it is material at all?

A. My testimony shows that I merely stated that if the value of the plant was so much greater than it was formerly, the appreciation must be set off against any claim of depreciation, and so far as it came near balancing the 10.89 cents, so far should it be set off.

Q. And it does not make any difference in your judgment whether that appreciation is due to the natural increase in the valuation of land or whether the appreciation of $13,000,000 which you have computed came out of the consumers of gas, does it, so far as your theory is concerned?

A. It does make a difference whether it came out of the appreciation of land and paving or whether it came out of the improvement of the value of the plant itself. And I only went so far in my statement as to say to the extent to which the courts might allow or the company might establish a claim to that appreciation, 3368 to that extent was the 10.89 cents too high. But I do, in my own opinion, make quite a distinction, as I have repeatedly said, between the appreciation which comes from land and that which will come from the plant.

Q. We will assume that no part of this 10.89 per thousand, representing renewals and repairs for twenty years, did go into new plants, but that the books were kept in the approved method which you and I agreed upon the other day as the proper method——

A. I don't remember whether we agreed upon it absolutely.

Q. Well, I think we did.

A. Well, I will leave that to the evidence.

Q. In that case, would that make any difference in your conclusions on this subject?

A. Not if the Court is going to allow the appreciation.

Q. Now, as a matter of fact, Professor, you found that this increase which you have computed, consisted almost wholly of the increased value due to the new paving so far as it related to mains and services, and to the increased value of the land by reason of lapse of time, whereas, the plant and holders and meters and other personal property showed little, if any, increase over the book value. You remember that, don't you?

A. No, I do not. I will look at it again. Just a moment, I want to find an exhibit in the case which——

Q. Let me call your attention while you are looking at it, to one or two circumstances which may refresh your recollection. You remember the improvements were carried on the books of the company at about $7,850,000, whereas the cost of reproduction was given as $12,636,000, or nearly five million dollars more than this sum?

A. It appears from Complainant's Exhibit 79, page 347*a*, 3369 that there was a net increase of plant of $3,904,000, but I have somewhere, I don't know that I can lay my hand on it at the moment, that there was a very much larger increase than that in the valuation put by Mr. Mayer on the plant compared with the Rowland valuation. As I have it here, there is nearly $7,000,000 increase in said plants, meaning the manufacturing plant and holders, I believe.

Q. What did it appear to be on October 31, 1905, after adding the additions since 1884?

A. $16,087,000.

Q. What was Mr. Mayer's valuation?

A. That was, if I understood it right, about $19.115,000, including holders.

Q. That it was what—$19,000,000 and what?

A. $19.115,000 for the plant.

Q. And that would show an increase of only $3,000,000, because, you remember, the figures you deducted from the $50,000,000 to reach this $13,000,000 were the totals shown on this Exhibit 79?

A. Yes, it would be about $3,000,000.

Q. The mains show here on Exhibit 79 as about $7,850,000, do they not, or something like that?

A. Yes.

Q. How near right is that?

A. $7,852,151.03.

Q. And the cost of reproduction was testified to be about $12,636,000, I think.

A. Yes.

Q. That would be an increase of nearly $5,000,000 in mains, wouldn't it?

A. Yes.

Q. And for services, they were stated to be $1,212,000 on Exhibit 79?

A. Yes.

Q. And the cost of reproduction was $1,994,000?

A. Yes.

Q. That would mean about $775,000, wouldn't it?

A. Yes.

Q. Now, if you take land, what does it appear to be car-
3370 ried on the books at by Exhibit 79? $10,920,000, isn't it?

A. Yes.

Q. What is the appraisal of Mr. Wheelock that you took ?

A. $15,651,500.

Q. Well, that is something more than $5,000,000, isn't it?

A. Yes.

Q. So that taking these three items of land, and mains and services alone, we have about $11,000,000 out of your $13,000,000 increase?

A. Let me see, the plant and holders as I have them here were as follows, according to Mayer. The holders I get from pages 1348 to 1356 as $3,600,215 and the plant I get according to Mayer in the same testimony after deducting as he did 3.9 per cent. for depreciation, he got the present value, as I understand him, $15,515,578, which made $18,115,793, while I understood here that the plant was valued October 31st, 1905, at $16,087,428.72. That meant an increase in that item of $2,028,364.28.

Q. Well, you have pursued that far enough, Professor. Assume that your figures are correct, and I am not going to review them at present——

A. There is quite a difference on meters too.

Q. That would mean a difference, adding this $2,000,000 and more which you have just now suggested for plant, to the $11,000,000 or thereabouts which we have accounted for of land, mains and services, and you get about $13,000,000?

A. There would be about $1,000,000 on meters——

Q. Oh, no, you had better look at that again. Don't confuse yourself.

A. Well, there must be a mistake, yes.

Q. The meters and other personal property showed on Exhibit 79 $3,802,000, if my recollection is correct, whereas the cost of reproduction to-day was testified to be only about $4,200,000, or a very
3371 small increase.

A. Meters and other personal property, that was.

Q. Certainly, so there is not a great difference there. But these items we have gone over account for all of your $13,000,000 and a few small items outside. Is it not apparent on the face of these figures that most of this increase arises from the increase in the value of the land and from the increase of cost of reproduction of mains and services over the cost of original installation?

A. Most of it does.

Q. So if that be the case, it would be impossible that a great amount of that increase could have come from the employment of any part of the 10.89 cents towards new plant and new construction, would it not?

A. I have no sufficient information at the present moment to determine whether in the case of the mains and services the considerable increase is entirely due to the question of paving or whether quite a sum of it is due to other factors such as connect themselves with the pipe itself, the physical property aside from the paving, so that not being able, not having that data in mind even if it had been given, which I am not sure, I could not directly answer your question, I don't think.

Q. It appears, however, does it not, that if no part of the 10.89 cents expended for repairs and renewals per annum on the average during the last twenty years, went into additional construction, no part of this increase of plant, whatever its cause, came out of the consumers of gas?

A. If none of it did come out; it did not come out; that is a truism.

Q. And there is no evidence that it did come out of the consumers of gas unless it was included in this 10.89, is there, so far as you have seen it?

A. That is the place it would come from, I should suppose, if anywhere.

3372 Q. Now, Professor——

A. I would like to qualify my last statement by saying that it would naturally come out of the 10.89 cents. Of course, not being acquainted with the books of the company I cannot say positively how it was financed.

Q. Well, we will leave it that way, naturally. You have stated that you have been connected with water companies, and that they also have pipes and mains the same as a gas company, and that to the extent of that distributing system, there is some similarity?

A. And there are others, in meters and many other directions, distribution expenses quite largely.

Q. Now, as a matter of fact, you have read the testimony of Professor Marks, that the cost of installation of our mains and services, as they appear upon the books, and as they appear upon Exhibit 79, are correct and moderate, as he states?

Mr. Burr: So far as his information went. He had no knowledge of the maps of the mains or other information.

Mr. Mathewson: Well, he said he had made a computation, and assuming the mileage of mains to be as stated, that the figure on the books of the company which is on Exhibit 79 as to original cost of installation was fair and moderate, or correct and moderate.

The Master: All that he said and assumed is in the book of testimony, and what is the use of spending time discussing about it? If you can turn to it and ask it in the language of the witness, so much the better. If not, we will have to let it go subject to my correcting it.

Mr. Burr: On the assumption that what Simpson testified in regard to the mains was correct, Dr. Marks made certain remarks.

3373 Mr. Mathewson: Well, we will call attention to Dr. Marks' affidavit, page 49——

Mr. Burr: He called attention to it himself.

Mr. Mathewson: Yes, so he did. In which he says, "Referring to the affidavit of Colin C. Simpson, Superintendent of Mains and Services of the Consolidated Gas Company, I would say that I have carefully recomputed the cost of the mains owned by the Consolidated Gas Company from the inventory given by him, and I am of the opinion that the cost of installation, as given on the books of the company—probably correct and moderate."

Q. You read that, didn't you, Professor?

A. Yes.

Q. Now, you also noted his statement that he had checked Mr. Simpson's estimate of the cost of reproduction at $12,636,150.04 similarly, and that list also seemed to be "moderate and fair." And that he also then took up the subject of services including the curb box and stop valve and stated that they corresponded very closely with the average experience as to the cost of installation, and that he considered that to be "moderate and correct."

Mr. Burr: All on the assumption that Simpson's statement was correct.

Mr. Mathewson: As to the mileage and size of mains, of course.

Q. Now, you also before the Gas Commission made a computation as to the cost of installation of the mains of the Consolidated Gas Company which you stated appeared reasonable from all that you could gather, didn't you?

A. Well, will you read what I said?

Q. "The value worked out on the basis of the unit values
3374 used in 1884 (this is 1904 here by mistake) the mains were
probably laid in New York before paving was put down in most cases before even cobblestones or macadam, so that the book values would appear reasonable from all that I could gather." Is that correct?

A. Yes, I think I said that.

Q. And your computation at that time upon the unit value which you assumed, produced a total for mains, did it not, of $8,396,698 or a little beyond the book value?

Mr. Burr: Is it page 1255 of the Gas Commission testimony?

Mr. Mathewson: Yes.

A. What I did was to take the present sizes and the cost per foot in 1884, as given by Rowland, and computed that if there had been no depreciation whatever new mains would now be worth on the basis of 1884 prices $8,400,000.

Q. And did you not say that that appeared to be reasonable?

A. If you find it there. I don't remember.

Q. Well, I just read your testimony.

A. Well, I assented to it as read.

Q. "So that the book values would appear to be reasonable from all that I could gather?"

A. Yes.

Q. And you found that those figures differed very little from the figures upon which all the experts, you agreed, testified in the Boston appraisal as between cobblestone and macadam or something of that sort?

A. It was about equivalent to an average between the cost of the two.

Q. So that as far as your experience was concerned applying to the Gas Company, that is the laying of mains, the book value appeared to be fair and reasonable as to cost of installation, not cost of reproduction, to-day?

3375 A. Yes, that is what I stated. I have to correct a statement that I assented to a moment ago as to figures I think to a slight extent. I implied that the $2,000,000 difference in plants—$2,000,000 higher value in plants according to Mayer, than the valuation October 31, 1905, was practically the only difference outside of land, mains and services, but I find instead of there being only $2,028,000 difference in the total, outside of land, mains, and services, there is a difference of $3,325,819. The total as given by your various witnesses exceeds the valuation of October 31, 1905, as it appears on Exhibit 79 outside of lands, mains and services by $3,325,819, omitting the odd cents.

Q. That is according to your computations from their testimony, is it not?

A. I took the total as given here in Exhibit 79, $30,883,984.91, being the valuation in 1884, plus the net increase of $9,693,565.90. That brought it up to the figure just quoted of $39,883,984.91. I deduct that from the $53,461,327.00 as the recent appraisals which leave an excess not accounted for by the construction account of $13,577,342. But of that amount the increase in the real estate, mains and services was $10,251,523, not accounted for in the construction account, and taking that out left a balance of $3,325,819. I may say that in using those figures I took the round figure for mains at $12,600,000 that Mr. Humphreys testified to, instead of taking the $36,500 more which I think was the exact figure of Mr. Simpson.

Q. Now, you subsequently used the $36,500 in getting your computation?

A. No, I mean in this computation.

Q. But there is a difference of a million dollars, and the only item you have not included in your computation are meters and other personal property, which are carried on the books at $3,802,000, the present value of which was stated to be only $4,200,000 or
3376 $400,000 increase, so you have made some error in your
computation, but it is not material to my present point and I will not pursue it. You can see in a moment there must be a difference which will appear when you go over your figures. Now, taking up the subject of capitalization per thousand of output, you have already shown on your table that the capitalization in Boston, as fixed by the Act is $4.26 per thousand of output. Is it not a fact——

A. Where have I stated that?

Q. In your table which you presented. You have also stated that there was an appraisement there. That appraisement, as a matter of fact, whether it was accepted by all parties or not, was at a very much higher figure for the value of the property than the amount of the capital stock, which was only $15,170,000 under the Act, was it not?

A. An appraisal was brought in which was disputed and never came to a final issue.

Q. But it was an appraisal which if it were true showed the value of the property to be in Boston $24,000,000 or $25,000,000?

A. Yes. Hardly any deduction was made for depreciation or duplication, or because the mains were duplicated.

Q. Yes, I understand that is your belief, but there was no deduction?

A. No.

Q. But taking things as they stood, cost of reproduction, it was about $24,000,009 or $25,000,000, according to the appraisal?

A. I don't remember just what the total was.

Q. It was over $20,000,000 considerably?

A. It was over $20,000,000, but there was a great dispute about it.

Q. I know. It was claimed some deductions should be made because the mains of companies duplicated in the street and some depreciation should come out, &c., but the appraisal as made by Mr. Humphreys as a practical gas man exceeded $20,000,000
3377 considerably?

A. My recollection is it was in excess of $20,000,000 but I criticise very much the appraisal.

Mr. Burr: Is that the same Dr. Humphreys who has testified here?

Mr. Mathewson: Oh, no; it was his brother, who is with the Lawrence Gas Company.

Q. Do you remember that the Brookline Company went into the City of Boston and paralleled the mains of the Boston Gas Light Company so as to give the people of Boston the benefit of competition at one time?

A. To some extent they paralleled.

Q. And so far as they paralleled the mains for that purpose some people objected to their capitalizing the mains which were able to produce this competition; you remember that, don't you?

A. There was criticism of that.

Q. Yes, and that was part of the duplication of mains that was objected to, although the mains were put down for the purpose of giving competition. Now, let us take up the City of Chicago. What was your estimate in the Chicago report to the City of Chicago as to the cost of duplication of the Chicago gas works?

A. I think I spoke of a new plant as $3.20 per thousand feet.

Q. That was for water gas, was it not?

A. Yes, but they had as many mains. They had twice as many mains—I had to allow for twice as many mains as New York.

Q. Yes, but a distributing system is not the greatest nor the most expensive part of the plant of a company when you come to compare it with manufacturing plant and land in a great city, is it?

A. I wouldn't want to answer that question offhand. That is a point of considerable importance and I would not want to answer offhand.

3378 Q. And the size of the mains might be very much larger in New York, although the mileage was less, might they not?

A. There might be of course a difference. The distribution system is by no means a small part of the total cost of the plant.

Q. Well, as a matter of fact, assuming the mileage to be greater in Chicago, the cost of laying mains in New York, in view of the rocks here, and the other obstructions, such as the old and narrow street and the congestion of traffic, is very much greater, isn't it, than it is in Chicago?

A. That is true of the rocky district, which is not, however, a large percentage here, if I recollect it is ten per cent., if I remember right, but I may be wrong as to the percentage. Most of the mains seem to have been laid in New York before the congestion became as great or the paving became as expensive.

Q. But taking the denser population of New York and the congestion of traffic on the streets, they would all tend to make the laying of mains in New York more expensive than in Chicago, wouldn't they?

A. I should think the cost of laying might be a little more, but I am not sure of that. Wages in Chicago are rather higher than in New York, if I remember the last tabulation of the United States Department of Labor; and, further, I rather think that pipe per ton would be a little cheaper in New York than in Chicago.

Q. Do you think it would right next to the Illinois Steel Company's plant?

A. Well, Philadelphia is a large maker of pipe right in this vicinity.

Q. Is it not so near this vicinity as the Illinois Steel Company's works are to Chicago?

A. No; not quite.

Q. Now, you are simply speculating. You have never laid any mains in Chicago, nor in New York?

A. I was considering your question. You were asking me to express an opinion.

3379 Q. No. I was merely asking you as to the cost of laying mains in Chicago and New York; if the cost of installing the system, of laying the mains, would not be much greater in New York than in Chicago?

A. I thought you included the mains themselves as well as the laying.

Q. No, I didn't ask any such thing, because I didn't think you were qualified to reply.

A. I laid over forty miles of mains last year.

Q. In New York City?

A. In Cleveland.

Q. I am talking about New York City. Don't you think the expense of laying mains in New York City would be substantially greater than it would be in Chicago per mile of main of the same size?

A. I think it would cost more to-day, but whether it did cost more when it was done, I am not at all certain.

Q. What about the streets in Chicago; aren't they very broad streets?

A. Yes.

Q. Ample room for trenches, without interfering much with traffic?

A. But labor is more expensive there. That is the trouble.

Q. I don't know whether it is or not. I am talking about one point. Assuming labor to be the same. And I don't think it is any higher there; I don't think it is so high.

Mr. Burr: Well, you are not testifying.

Mr. Mathewson: No, but I know just as much about it as the Professor does, and he is testifying.

Mr. Burr: I disagree with you.

The Master: Gentlemen, let us proceed.

Q. Well, I will read now from your Chicago testimony and ask you if you did not testify as follows:

"New York has a more dense population on the Island than
3380 Chicago. Yet, on the other hand, the cost of laying mains
is very much greater per mile of main because of the rocky
soil they have to blast, and the congestion of traffic on the streets and the greater quantity of good paving."

A. That is true to-day, yes.

Q. And the same was always true, as far as you know?

A. Yes, but the congestion was not.

Q. Do you know of any period when the congestion in Chicago, when they were laying mains, was as great as it was in New York City in 1823 when they began to lay mains here and at which time Chicago was a prairie?

A. I was talking about the cost of laying mains in Chicago to-day with the cost of New York as originally laid, I think.

Q. The capitalization of the Chicago companies is over $6.00 per thousand feet, isn't it?

A. I would not be surprised at that figure, but I don't remember exactly what it is.

Q. Didn't you so testify before the Gas Commission, at page 1436 of your testimony?

A. I don't remember that I did. If I did, all right.

Q. Won't you look at it (handing testimony to witness)?

A. Yes. You gave me the figure, did you not? $69,000,000, and I made a division for you a year ago.

Q. Something over $6.00?

A. That's right.

Q. Do I understand that in Chicago you were comparing the cost in Chicago at that time with the cost to the Consolidated Gas Company of its plant as originally established?

A. I don't remember now, but I thought I was comparing it with the testimony in the case as to the book value of those mains.

Q. Yes, but I ask you, taking the mains, whether you were 3381 comparing the cost of installing the system in Chicago at the time you testified a year ago with the original cost of installation by the Consolidated Company when it put its mains in.

A. I don't remember now exactly.

Q. Now, I call your attention to Mr. Cowdery's statement in Chicago, regarding capitalization per thousand feet of annual output——

Mr. Burr: You read considerable from Mr. Cowdery's statement yesterday and I might well have objected to it because he is not here as a witness and subject to cross-examination, but I will avail myself of the privilege that you took of reading other parts of that report, inasmuch as you read Mr. Cowdery's statement to such an extent.

Mr. Mathewson: If it comes under the legal rules of examination I do not know that I can object, and if I did, I don't know that I would be sustained. I call the witness's attention now to a statement of Mr. Cowdery and ask if he agrees with it and if it modifies his testimony.

A. What page?

Q. Page 21 as follows:

"Regarding capitalization per thousand feet of annual output, I will say that I have taken a company and replaced it absolutely from beginning to end, and I know positively that it would not be possible to replace the company here in Chicago with its first-class property and its business for less than five dollars per thousand feet of annual output. I would consider it a physical impossibility to replace the plant and business of the People's Company for $35,000,000."

3382 Q. Now, considering Mr. Cowdery's standing and experience as a constructor, and your want of it, in gas properties, wouldn't that modify your previous view that the plants in Chicago could be duplicated for $3.20 per thousand feet?

A. You notice he is not talking about the same thing.

Q. What is he talking about?

A. Property and business.

Q. Very good. Property and business. Do you concur with his statement as to that?

A. That I am not sure about, but it was not what I was talking about.

Q. You are not prepared to question it at this moment, are you?

Mr. Burr: He has not spoken of it.

A. I have not spoken of it.

Mr. Mathewson: The witness ought to testify, I think.

Q. I asked whether you are prepared to criticize that estimate at the moment?

A. I have found no data anywhere as to a matter of that character. I hold it is not a proper subject for capitalization. In other words, the capitalization of the consumer at so much a head is not to be found anywhere in either Massachusetts or Great Britain.

Q. Not even if five dollars per thousand feet was actually expended in establishing a plant and producing the business?

A. That went into advertising and operating expenses in the last fifty or one hundred years. It has been charged already, the consumer paid already for getting himself on as a consumer. Why should he be capitalized and pay interest on himself?

Q. (Question repeated.)

3383 A. I have answered. And I will say even if $5 was required to establish the plant and business, what was devoted to establishing the business should not be capitalized because it is already included in operating expenses.

Q. Of course it would bring something if you went to sell; an established business would bring more ordinarily than the mere structural value of the plant?

A. Probably.

Q. You made an estimate to the City of Montreal, I think quite recently, as to the establishment of a plant there. Do you remember what your estimate per thousand feet of sales was for that plant?

A. Not exactly. I will look at it and verify the figures.

Q. Will you look at it and see if it was not $4.30 per thousand feet of sales?

Mr. Burr: What relevancy has that unless the conditions are the same there as here?

Mr. Mathewson: Well, the Professor has been referring to other cities.

The Master: The same might be said, Mr. Burr, of a good deal of the testimony here.

A. I did. Shall I explain why there is that difference?

Mr. Burr: Yes.

Mr. Mathewson: No. Not yet. I have the witness just at present.

By Mr. Burr:

Q. But you can explain later.

A. Later.

By Mr. Mathewson:

Q. You also testified in Baltimore, quite recently, didn't you?

A. Yes, sir.

Q. Within the past year?

A. Yes; in the early spring.

3384 Q. In that case you were testifying for the city which was trying to sustain an assessment on taxes which was claimed by the companies to be high, weren't you?

A. Yes.

Q. And in that case did you not estimate the value of the property of the Baltimore Gas Company by taking the net earnings of the Company and multiplying them by twenty, and state that to be a fair basis for reaching the valuation of the entire property?

A. I think I did. That is Mr. Humphrey's basis in Holyoke.

Q. Then you quite approve of that basis of taking the earnings of five per cent. and multiplying by twenty in order to get the value of the property?

A. The Company in Baltimore had no inalienable right to continue to earn on that, but as long as it was earning on that basis the city had the right to tax it on that basis.

Q. Well, we all have inalienable rights, Professor, we hope. I desire to ask you if you testified as follows in Baltimore (pages 282-283):

"Q. Kindly state in detail how you arrived at your valuations? A. I first took into consideration what should be the value of a gas company which divided in a certain year earnings of $928,410 and which, in addition to that, added somewhat to its surplus. I have for years been studying the relation of the dividends and interest or divided profits of gas companies to their total values, and I have found that in large cities of the East, such as Boston, New York, Philadelphia, Washington, and Brooklyn that the Company is worth more than twenty times its divided profits, that a capitalization of five per cent. is a very conservative capitalization; in the larger gas companies of the East based upon the profits which they yearly divide. So that I approach the subject from
3385 the standpoint of the customary rule in gas companies
* * * I considered five per cent. very conservative but not unduly so perhaps for this investigation. Four and one-half would be a little too low, and so I took five per cent. as a basis of capitalization, and that gave me $18,568,200 as the total value of the property."

On cross-examination by Mr. Gans (page 294) you were asked:

"Q. Then you capitalized the divided profits at five per cent.? A. Yes, sir.

"Q. Your theory of capitalization being that from your experience in gas companies you say the value, the total value of the property is twenty times the divided profits? A. Yes, sir.

"Q. When you say the total value of the property of the Gas Company, you mean all that it owns? A. Yes."

Mr. Burr: Is that the same Mr. Gans who appeared here?

Mr. Mathewson: I don't know.

The Witness: No.

Mr. Mathewson: Subsequently, at page 296, you said:

"A. Except that I should add * * * that I took a very conservative figure at five per cent., particularly in the case of a Company which has so large a surplus; many of those companies worth twenty times the divided profits which do not have large surpluses, so that I would not make the absolute assertion that twenty was quite a large enough amount, but I took it in order to be rather conservative."

3386 A. It shows how much more conservative I was here when I take six per cent.

Q. Yes. Then you were asked:

"Q. State what a purchaser would pay for the property at a fair sale?. A. I believe that he would capitalize the earnings that it was making and consider that he was thoroughly justified on that basis if he should only expect five per cent. on these earnings on the purchase price, but he would have almost conclusive reasons, from the experience of other States to expect a growth in that business with the growth of the city," and so on.

Now let us capitalize the Consolidated Gas Company on the basis of twenty times its earnings, which you stated you thought was rather low; and will you look at Exhibit 96 and see what the earnings of the Company were for the last year? Exhibit 96 shows net earnings of $4,587,955.99. Of course the earnings are a good deal larger than that if your estimate of the proper cost of gas was correct, but we will take those modest earnings?

A. That makes $91,759,919.80.

Q. Have you ever taken occasion to note the average structural value per thousand feet of sales of all companies operating in the United States, and if so, I will ask whether the statement in this table appended to this Chicago pamphlet which is $7.23 per thousand feet accords with your information?

A. I have been looking for it lately. I don't know whether I brought with me the census bulletin which you refer to; which would bear on that, I mean.

Q. It is already in evidence that the average capitalization per thousand feet is $8.47 and this refers to the structural value per thousand?

A. I have left at the office, I think, the census bulletin.

3387 Q. Isn't it your recollection that that is about it?

A. I don't recall now. I remember looking it up and finding that it was much larger in the United States as a whole than it was in Massachusetts, owing to the way they have of padding their assets to make them conform to their watered stock.

Q. Have you ever kept any books for any gas company in the United States?

A. No, but I know how they do it.

Q. Then your views as to how much they pad it is largely hearsay—wholly so, isn't it?

A. I don't know what you mean by hearsay. I have not done it myself.

Q. Exactly. Referring to this Chicago report again, I call your attention to page 35 and ask you whether this is not the summary of the Commission:

"A brief explanation is presented, showing the course of reason followed by your Committee in arriving at the price of 85 cents. The cost of manufacture and distribution is taken as indicated by the report of the auditors; 45.4548 cents. This, the auditors state, includes 6.0043 cents for repairs and renewals. Messrs. Bemis, Cowdery and Humphreys practically agreed that 10 cents is a fair allowance for current repairs and renewals. The difference between 10 cents and 6.0043 cents is 3.9957 cents, which is added as additional allowance in order to make the full 10 cents. This gives 49.4505 cents as the cost of manufacture and distribution, including current repairs and renewals. This is approximately 50 cents, and we so call it for convenience. A reserve of 5 cents is added for contingencies. Mr. Cowdery and Mr. Humphreys agreed that $5.00 per

thousand cubic feet of gas sold is a fair allowance for capi-
3388 talization, representing structural value and working capital
to secure the business. Upon this we allow an income of 6 per cent., or 30 cents per thousand feet. In this way a total cost of 85 cents is reached."

Have I quoted you correctly?

A. Yes.

Q. And you observe that thirty cents per thousand feet was allowed by the Commission in their estimate?

A. Yes.

Q. And six per cent. on the capitalization of $5.00 would be just the same as eight per cent. on a capitalization of $3.75, wouldn't it?

A. They may have vetoed the bill. They passed it over the veto.

Q. This report has been presented here by the Council for the City and we are making use of it accordingly. Now, taking the fifty-five cents which you estimated as the cost of gas in Chicago, assuming that the cost of oil in Chicago was as you stated, according to your best information, and in New York was only four cents, which would make a difference of over one cent for each gallon of oil, that would make a difference in the cost, would it not, of about five cents per thousand feet, about five gallons of oil being required for each thousand feet?

A. Yes; about five cents; between four and five.

Q. But if the Consolidated Company properly pays say four and one-half cents as against three cents in Chicago, that would make probably more than five cents?

A. I have forgotten this estimate, whether the oil is four gallons or five when distributed over the entire amount made.

Q. You testified, I think, before the Commission that it was four and three-quarters or five?

A. Yes, I know it. It was not very much. I didn't want to commit myself to an exact figure without verifying it from your exhibit.

3389 Q. Precisely. And you found or estimated that the taxes
in Chicago were about five to five and one-hall cents?

A. I think it was five and one-half.

Q. While in New York, upon your own theory, they are a little over six?

A. Yes.

Q. And if we are entitled to charge interest on unpaid taxes into the construction cost of gas it would be six and three-quarters or something like that?

A. If your property is anything like this figure of course——

By Mr. BURR:

Q. What figure are you referring to?

A. The figure of capitalization at five per cent. of net earnings, $91,759,919.18.

By Mr MATHEWSON:

Q. Well, the taxes then in Chicago are less than they are in New York upon any theory, to some extent?

A. Yes, I should think they were.

Q. And your computation of the cost of "Other Items of Distribution," after you had eliminated certain items, was for Chicago, about 5.7 cents while New York showed an expenditure of 9.5 cents for the same items; you remember that, do you not?

A. Yes.

Q. There is a difference of something like four cents. So that if the expenditures of the Consolidated are proper and prudent you would have in the cost of oil, and in additional taxes, and in the additional expense of distribution of these "other items," an excess of ten cents beyond the Chicago cost?

A. On all those suppositions I should say, yes. Of course that does not take into account other facts such as the larger density in New York and other things, but on that supposition it is correct.

3390 Q. Oh, yes, it does, because we are talking about the operating amount of cost and I am assuming that the expenditures of the Consolidated Company were fair and prudent, as I stated?

A. Yes.

At 1:15 P. M. a recess is declared until 2:30 P. M.

After Recess.

EDWARD W. BEMIS resumed.

Mr. MATHEWSON: Professor Bemis, I find you quoted on page 16 of the Chicago pamphlet as follows: "For taking care of ultimate depreciation I accept the standard established by Alexander C. Humphreys, the best authority I know of in the gas world." Is that correct?

A. That is a quotation from a letter of mine to the City Council of Chicago, I judge. You have not finished the sentence, have you?

Q. Yes. It merely follows with a statement as to Professor Humphreys' testimony in the Holyoke case. I also find on page 18 the following statement: "I don't know of any gas company that was successfully floated on a basis of six per cent. of its structural value with the exception of Cleveland. I don't know of any gas company which started in and built an entirely new plant on the basis of $3.20 output, which was floated on a six per cent. basis?

A. Don't I go on to say——

Q. No matter what you went on to say. Do I quote you correctly so far?

A. That was quoted correctly so far as it went.

Q. I also find you quoted on page 19 as saying: "A five per cent. bond will float at par and a seven per cent. stock will float at par in the gas business."

3391 A. I don't remember whether I said seven or not. It is so quoted there as a synopsis of my testimony.

Q. Have you any doubt about it?

A. I should have thought I said six; I usually do.

Q. Won't you see if immediately following that you did not get your six per cent. by assuming that the company would issue bonds and borrow money from the public at five per cent. for one-half of the plant and issue stock and furnish the money themselves for one-half at seven per cent., which would make an average at six per cent.?

A. Yes, sir.

Q. Instead of furnishing all the money themselves and issuing all the stock, as we will assume they might have done?

A. Yes.

Q. Now, will you look at Exhibit 85 in this hearing, referring to the increase of output of gas, and tell me what the output of the Consolidated Company was in 1893?

A. 6,854,014,000 feet.

Q. Take five years later, 1897, or covering the five years' period——

A. That is four years later.

Q. Well, four years later, what was the output then?

A. 6,790,864,000 feet.

Q. Practically the same thing, wasn't it?

A. Yes.

Q. What was the output in 1894?

A. 6,731,325,000 feet.

Q. And it is a fact, is it not, that the output in 1897 was less than it was in 1894?

A. The sales were less by 59,000,000 feet, as appears by that exhibit.

Q. Oh, certainly. Don't you think that the business depression which began in 1893 and 1894 and continued until 1897 was responsible for the failure to increase?

A. Why, I think it was, as far as my present knowledge goes.

Q. On the other hand, don't you think that prosperity is responsible for a very large increase in the sales of gas in a period of prosperity?

A. I think it is.

3392 Q. Is it not true that hard times result in economies in the purchase of gas, the same as economies in the purchase of any other commodity on the part of consumers?

A. And also on the part of the gas company, both, I think.

Q. If the gas company can, of course.

Mr. Burr: Or if the consumer can.

Q. But won't you confine yourself to my question. Let us not reason about it now, let us get down to the fact?

A. In hard times all prices and all labor are likely to be lower than in good times. Consumption is likely to fall off.

Q. Well, it may be likely to, but it is a question of fact here, Professor.

A. It remained about stationary there in gas.

Q. Let us look at City's Exhibits 57 and 58 in this hearing, that is the charts purporting to show "Effect of Price Reduction in New York" for Exhibit 57 and "Effect of Price Reductions in Boston," Exhibit 58. These relate, do they not, to gross sales?

A. Yes.

Q. What effect would the period of prosperity which began in 1897 and which has existed up to the present time have on the ability and inclination of consumers to purchase gas?

A. Other things being equal, it tends to increase the consumption of gas.

Q. What effect would the coal strike of 1902 and 1903 have on the consumption of gas?

A. Other things being equal, it would have a tendency to increase the consumption.

Q. What effect would the fact that the winter of 1902-3 and the winter of 1904-5 were the two coldest winters on record consecutively in the City of New York have on the sale of gas?

A. I am not sure.

Q. Don't you think that would tend to increase the consumption of gas?

A. I am not sure.

3393 Q. It certainly would if it were to be largely used for fuel, as you have indicated, and in open grates?

A. I am not sure. I will explain why I am not sure if you wish.

Q. Well, do so briefly.

A. From my own experience in the use of gas and from the experience of many others, there is more and more a tendency to use gas in the fall and spring and start the coal furnace later. Now, if a cold spell began earlier and quickly, one might more quickly proceed to a coal furnace or steam heat or something of that kind, and not continue so long with gas logs and grates.

Q. Don't you know that taking private houses which are heated by furnaces in the City of New York, very few of them indeed have gas grates, and that substantially all of them, if they have grates at all, have grates for coal or wood, more expensive forms of heating?

A. I suppose there may be a great many asbestos grates, and I used that expression interchangeably with logs, any form of heating the room.

Q. Don't you know the rooms which are fitted with gas grates are largely appartments where they are not heated by a furnace at all but by steam?

A. The same would apply to steam as to a furnace. I intended to make that change a few moments ago.

Q. So that in these apartments where open grates are largely used they could not turn on the furnace in the winter, because there is not any furnace. They would have either to turn on the steam or use the gas logs?

A. And I used it interchangeably for steam heat or a furnace. If, for example, the cold weather came on very sharply, the steam might be turned on for the building while in the intermediate weather between the warm weather and the time when the heat was put on in the basement there would be the use of gas for heat.

3394 Q. You have not in your testimony referred to the increase of population particularly. Does not the increase in population result in the increased consumption of gas even if the total sales per capita remain the same?

A. Yes, I looked into the figures in the Borough of Manhattan to some extent, and did not discover any large percentage of difference in the five-year periods from 1885 to 1905.

Q. Don't you think the occurrence of a period of great prosperity and of the two coldest winters on record and of the coal famine in the period from 1901 to 1903 would of itself, naturally result in a large increase in the output of gas quite aside from any change in price?

A. My testimony provided, for that——

Q. Just answer that if you will?

A. Yes, in my testimony I made allowance for that.

Q. That would explain this point on Exhibit 58, would it not, where it runs up in 1902?

A. Yes, I said so in my direct testimony.

Q. As a matter of fact, if the price had remained the same you would have expected this line showing the increase in the gross consumption of gas to rise constantly, due to the increase in population and to the period of prosperity?

A. But not as much as it has risen?

Q. But won't you answer my question?

A. I did. I said yes.

Q. Well, don't say "but." I am asking you for facts, and you have enunciated your theories before. Now just answer my question.

A. I was afraid my answer would be misleading.

Q. Don't think so. I want you to take the theory——

A. Mr. Mathewson, sometimes my answers have been quoted by you, and I can see by reason of not making them full enough they have misled you.

Q. You are entitled to have any explanation on the redirect that your counsel deems proper. Won't you look at Exhibit 58, 3395 from 1893 to 1895, two years, and say whether that does not show quite a sharp rise in consumption?

A. Yes.

Q. At the same time there was a drop in price?

A. Yes.

Q. But the drop in price ended at the same time as this particular rise, that is 1895?

A. Yes.

Q. What became of the momentum which you have said would carry the rise on continuously for some time farther?

A. It was temporarily checked by the hard times, so far as I can tell.

Q. Well, but it kept going up to the end of 1895 when the hard times were half over, and then continued at about the same rate until 1899, although that included two years of the good times, didn't it?

A. I am not quite sure how good the times were between 1897 and 1898.

Q. Don't you remember that from the time of the election of McKinley in November, 1896, that a period of prosperity set in, not because of that election, perhaps, but as a matter of fact. Don't you remember the date?

A. I remember the date of his election and that good times began soon afterwards, but I don't think the good times were especially felt by the gas users so quickly as you speak of.

Q. Let me ask you this. Beginning with 1901 and running to 1902 when the price of gas remained precisely the same in Boston don't you find a sharper rise than occurred between 1893 and 1895 when the price of gas was reduced?

A. I think it is slightly sharper.

Q. So, too, Professor, taking Exhibit 57 in the City of New York, is it not true that the increase in the sales of gas from 1901 to 1904, while the price of gas remained stationary in New York, shows just as sharp a rise as from 1899 to 1901 when the temporary reduction in price took place?

A. Yes, it was the period of the coal famine.

3396 Q. Not all of it, no. And the rise before the coal famine began, that is from 1901 up to the beginning of 1902, is just as great, is it not, as it is from 1902 up to 1903?

A. Well, I think the momentum of that previous price reduction was felt.

Q. But we saw that the momentum failed in the case of Boston entirely, so it would not be accepted as a general rule, would it?

A. No, I don't think it changes the general rule. I did not state in my direct testimony that the question of price was the sole factor, but it always was a force in operation; it might be temporarily counteracted.

Q. And you do not think it makes any difference how much gas a community is using per capita, you still think there is just as big a chance for increase and that an increase is just as likely, do you?

A. Yes, up to a point where we will say all conceivable uses of gas had taken place.

Q. Don't you think in a city like New York, judging from your observation, that gas as an illuminant as distinguished from its use as fuel has seen its best days?

A. That is uncertain. It was thought so when electric lighting was first introduced, but the contrary has occurred and now the Welsbach burner has come in and there are improvements being made in the use of burners, so I am not prepared to say although I do think that the greatest future of gas lies in fuel.

Q. And you do know by your own observation along the great commercial streets of New York that electricity has virtually superseded gas as an illuminant in the shops and in the department stores so far as you can see, has it not?

Mr. Burr: You mean for signs?

Mr. Mathewson: Yes, for signs and illumination.

3397 The Witness: I cannot say that.

Q. You have not observed that?

A. Why, there has been a more rapid increase of electricity than in gas in illuminating stores but I am not prepared to state that the increase in gas for lighting has not continued through the last twenty years of electric competition. I believe it has. I do not think by any means all the increase in gas has been in fuel.

Q. Well, electricity as a real competitor has made its best strides, has it not, within the last five or ten years?

A. Yes. I make the same remark referring to the last five or ten years.

Q. You referred to the high buildings. You know the high office buildings downtown are virtually all lighted by electricity and not by gas?

A. I think most of them are.

Q. So that would not add anything to the requirements of gas?

A. For lighting, yes, that is true.

Q. You know that is true of the apartment houses generally being put up, that they provide for electric lighting, with gas logs and ranges?

A. I thought they were usually piped for both, that is, piped for gas, and wired for electricity.

Q. Your observation is not sufficient so you can say which they do use?

A. No, sir, I think they use both. No, it has not been sufficient for me to give you a positive statement.

Q. It is true, is it not, that the better illuminants, other things being equal, tends constantly to supersede the poorer, beginning with candles and whale oil, lamps and gas and electricity, all the way down through?

A. Of course.

Q. And the earlier industries have been virtually driven out of business in some instances by the discovery of better illuminants?

A. Well, the uses have been diverted, as in the oil business; there is not as much oil used for lamps, but there is more oil used.

3398 Q. But unfortunately we cannot use gas except for the purpose of fuel and illumination.

A. Oh, no, but you were speaking of illumination.

Q. Have you any information about this Tunston lamp which it is claimed will produce 2½ times the illumination at the present price of electricity?

A. I have heard discussions on that but don't know much about it.

Q. If it should prove to be well founded, would that make a very serious inroad into the gas lighting that is left, if you could produce your electricity for illumination for 40 per cent. of its present cost?

A. Any reduction of price, in short tends to affect consumption as I have said.

Q. And you have to take into consideration such things, as in all possibilities of the future?

A. Yes, and it becomes all the more important to reduce the price of gas.

Q. The less we sell and the bigger the inroad of electricity the more the price ought to be reduced?

A. The lower you sell the better you compete with electricity.

Q. That depends whether we can sell at a profit or a reasonable return. You would not claim we could make more money if we sold gas at a price which netted us an insufficient return.

A. No, you have to have a return.

Q. Now did you in the case of Boston, in computing the average prices and receipts, include all the receipts of the Brookline Company, part of which were from electricity?

A. In what computation now do you refer to? Oh, yes, in that table?

Q. Yes. Did you exclude the receipts from electricity?

A. I intended to exclude them and I believe I did. I can say that I am positive that I did but I don't know that I have brought with me the way in which I made that table up.

3399 Q. I don't care how you made it up, if you will assure me that you eliminated them. I merely asked for information because I have not computed it myself.

A. The way I made the table was to take the sales of private consumers of each company of the six and multiply it into the average price as given by the State Gas Commission, and in that way I got my table.

Q. Let us look at Table 19 for a moment. At what page is that?

A. I think that is the table on page 3088. Table 19 begins at page 3088 and runs through 3091.

Q. This table to which you have referred shows reductions in the price of gas in each of the cities named, sometimes the reductions for two periods, that is Cambridge, 1904-5 in the first place and then 1897-8 in the second place; Charleston 1894-5, 1897-8 1901-2, showing the year before and the year following in each case?

A. Yes.

Q. And you have shown what you think is the result on what you say was an average reduction of 10.83 per cent. in the price of gas?

A. Yes.

Q. Do you think that the same result would follow as to profits if you reduced the price of gas 25 per cent. as is proposed in New York City, instead of only 10.83 per cent.

A. No, not to a greater degree. I did not claim that in my testimony.

Q. Now, you do not claim, do you, that if a man is burning forty dollars' worth of gas per year, that merely because the Company reduces the price of gas so that he gets more gas for forty dollars than he did originally, he will then proceed to buy fifty dollars' worth of gas per year merely because he feels pleasantly towards the Company.

A. No, but he is quite likely to buy more.

Q. But he will get more gas for the original forty dollars, will he not?

A. Yes, but he is likely to have larger gas bills.

3400 Q. And a greater part of the consumers are people who are apt to have an average gas bill for the same amount each year, aren't they?

A. I will modify that as to his paying a larger bill. That begins to occur after the price goes down so it begins to compete with coal. Prior to that the fact is that there are more consumers who begin to use gas.

Q. How low will you have to have the price of gas so it will be as cheap as anthracite coal at, say, $6 a ton? How low will it have to be sold?

A. It varies as to whether it has to be used for cooking or for a furnace. It would have to be much lower for a furnace to compete with coal than in cooking.

Q. Well, it would have to be sold, would it not, as low as 30 cents a thousand feet at least in order to produce as economical results in consumption as anthracite coal at $6 a ton?

A. In heating through the dead of winter, I should say so, but that would not be true for summer and fall and for cooking.

Q. How low do you think it would be reduced before it could compete with anthracite coal for that purpose?

A. Taking into account the greater convenience, you would find large quantities used at 80 cents.

Q. Eliminate the question of convenience for a moment, and let me know at what price, if you can, gas must be sold to be as economical in use as anthracite coal at $6 a ton?

A. That is rather difficult to state exactly, but the experience of the cities that have tried the reduction in price shows a larger use of gas for fuel purposes.

Q. Was not Mr. Cowdery's idea that it would have to be as low as 30 cents a thousand feet?

A. Not for use in cooking or for summer and spring and fall heating; if he said anything of that kind, it could only have been in reference to heating through the middle of the winter. They have developed an immense business in the use of gas for fuel purposes in Milwaukee at a price of 60 and 80 cents and there they are allowed to use soft coal, while in New York, as I understand it, soft coal is tabooed and therefore they have to use a more expensive coal. 3401

Q. They would not use soft coal in furnaces anyway, would they?

A. They do to some extent in the West.

Q. On page 23 of this Chicago pamphlet which I have borrowed from Mr. Burr I find he states that "Gas at $1.00 per thousand for lighting is the cheapest artificial light that we have the privilege of using to-day. Gas cannot be used for general heating purposes until it gets down to at least 50 cents a thousand. A small number of customers could be secured to use gas for heating at that price. It would not begin to be as cheap as anthracite coal until it gets down to about 30 cents a thousand. At 30 cents a thousand gas is about as cheap for the consumer as anthracite coal at $6.00 a ton. To produce this result it should be used with a hot water heating system. To be used in connection with a hot air furnace the price must be reduced to 20 cents in order to be equal to anthracite coal at $6.00 a ton." Have you any quarrel with that proposition of Mr. Cowdery?

A. He has put it a little too extremely. I have found that by using natural gas in my own house, where I have a bill of about $150 for natural gas for heating and lighting, artificial gas at 30 cents being equivalent to natural gas at 18 to 20 cents, that I have saved $50 a year. My bill has fallen $200 to $150.

Q. There are more heating elements in natural gas than in artificial?

A. Well, that has been my experience, which I have worked out quite carefully, which makes me believe that statement which you have just read is a little too extreme.

Q. But not very much, is it?

A. Yes, I should say 5 or 10 cents. But I was not talking 3402 about the general substitution of gas for coal for general heating the year round when I say that at 80 cents it would make great inroads on coal.

Q. If, of course, you deliver more gas to the consumer for the same money than you delivered originally, you must have a greater capital account in order to produce this additional gas that you deliver, must you not?

A. The capital account——

Q. Well, would you not?

A. Yes, but not proportionately.

Q. Don't say "but." You have been all over that once, and I am calling attention to certain points in your testimony.

A. If I say yes, then on some other case, if not here, some one else will bring it up——

The Master: We have no concern with that. You will oblige me very much if you will answer these questions directly.

Q. The fact is then that it would mean an increase of the capital account for the delivery of a greater quantity of gas, would it not—greater or less?

A. Not in all cases.

Q. So that even if the sales were sufficiently increased so that the net profit was the same, that profit would have to be applied to pay a return on a greater amount of capital?

A. Yes, in most cases, not in all.

Q. We will see about that. Taking this table No. 19 and the cities which you yourself have chosen, that is in Massachusetts where you remarked a few minutes ago the assets could not be padded as they were in other parts of the Union, you take Cambridge for the year 1894-5, that is the year before the first reduction, and 1896-7, which is the year after the first reduction, and you then take the year 1897-8, the year before the second reduction and the year 1899-1900, the year after the second reduction, and you show what 3403 the increase is in feet sold. Now, it would be a fair thing, would it not, in order to determine whether the assets increased with the sales, and in what proportion, to see how much the sales increased in per cent. from the year 1894-5 to the year 1899-1900, that is the earliest and latest years and compare that with the increase in assets of the Cambridge Company during the same period?

A. If one could determine the extent to which the assets were due to that increase, and to what extent they were a preparation for the future, in other words, if one could determine the condition at the beginning and end with reference to its sales, that would be a very good method.

Q. But a company always has to make some preparation for the future, has it not?

A. Yes, but——

Q. And is it not fair to assume that it had made as much preparation for the future in 1894-5 as it had in 1899-1900 relatively?

A. But it would be a pure guess as to any one company. If you could average a hundred it would be a fair average probably.

Q. Would it not be a fair thing to take all the companies you have recited here in Table 19 and find what the result was, applying that method to the entire lot?

A. It would be fairer than to take one company.

Q. Let us take those and see how we come out on your theory. You have not the eleventh report of the Massachusetts Gas Commission here. That is, 1894-5, have you?

A. No.

Q. Well, I have. If I am correct, by that report the assets in 1894-5 were $971,547.47.

A. Speaking of the Cambridge Company now?

Q. Yes. Is that right (handing book)?

A. Yes.

Q. And in 1899-1900, as appears by that report, were they not $1,075,204.54?

A. $1,075,204.54.

Q. Now the gas profits appear in the year 1894-5 to have been $107,344.24, don't they? 3404

A. That is right, $107,344.24.

Q. And in the year 1899-1900, they appear to be $103,241.65, don't they?

A. Yes.

Q. Or less than they were in 1894-5?

A. Yes.

Q. So that the gas assets in the year 1899-1900 were 1.11 times the assets of 1894-5?

A. The assets were about that increase, I should think.

Q. While the profits were only .96 as much as they were in 1894-5?

A. I should think that was about the ratio.

Q. You did not take these various companies and compute throughout, did you, to find out whether the same result obtained on the average through them all?

A. No, I did make——

Q. You don't know therefore, whether the assets increased much more rapidly than the profits?

A. I made a computation with reference to Boston and found that during a period which I studied, the assets did not increase as fast as the sales. And I have found that generally true of all companies.

Q. You did not make a computation covering these cities, Professor, to determine what proportion the increase in assets between the first and last years mentioned for each one of these companies bore to the increase of sales between the first and last year, did you?

A. No, I simply tried it on Boston during the period in which the price fell from $1.35 to $1.00.

Q. No, but you said it was not fair to take one city, but you would have to take a number of them.

A. That is the only one I took anyway.

Q. Because Boston was more nearly like New York than any other city in general conditions?

A. No, but it was an extreme fall of thirty-five cents in two years and I had the time to take that, so I stopped to do it. I was 3405 quite surprised at the result because there was a new company almost starting in then, the Brookline Company.

Q. You still subscribe to the statement that if you take a large number of companies the result obtained by them will be more satisfactory than taking one city?

A. Yes, but I consider the results in Massachusetts will be very difficult to obtain from any such statement as the Commission returned on assets.

Q. But it is the best information you have, and these Commission reports are the various reports from which you have taken much of the data you have stated here?

A. In order to conceal their profits they are applying to construction all the time the money that should be classed as profits.

Mr. Mathewson: I move to strike that out.

The Master: Strike it out.

Mr. Burr: I object and except.

Q. If the companies of Massachusetts did pad their assets, which I understand to be contrary to what you originally asserted here, by taking money and putting it into new construction and additional plants without so charging it, then the assets of these companies would be greater instead of less than they appear on the reports of the companies, would they not?

A. I don't understand exactly the question except to say that their assets are larger than their stock and bonds.

Q. Well, that is another proposition. I have not said anything about stocks and bonds, but I am talking about their assets.

A. That is their assets claimed in their report.

Q. I am directing the question to the point you raised, that an increase in the sales of gas would mean a very small or proportionately small increase in the assets of the company on the 3406 ground the main increase would be in meters, services and things of that kind.

A. It would not be a proportionate increase.

Q. It would not be a proportionate increase. You have spoken of the increase in the Consolidated Gas Company in sales from 1884 to 1905 being from 3,942,000,000 feet to 13,283,000,000 feet, and during that time the plant of the Consolidated Gas Company increased about $9,963,000, as you stated?

A. It increased that according to that exhibit.

Q. The statement is somewhat wrong, because the $196,000 is left out of that and no working capital is in there, and so forth. But taking your testimony, as you gave it on that point, don't you know that in 1884 the Consolidated plants acquired from the six constituent companies already had a capacity considerably in excess of their sales of gas at that time?

A. I believe they did.

Q. And you know, to-day, don't you, according to the evidence here, that the plants are being run to their full capacity and that they are still unable to make the gas that they sell?

A. Yes, but I don't know of any evidence as to the extent of the surplus capacity in 1884. There was an excess, but how much I don't know.

Mr. BURR: What plants are you speaking of, of the Consolidated Company, or of the subsidiary companies?

Mr. MATHEWSON: Either, if you please. I am speaking of them at the time the consolidation took place and they then became the Consolidated Gas Company.

Mr. BURR: You speak of to-day, do you mean the plants of the subsidiary companies?

Mr. MATHEWSON: No, I am speaking of the plants of the Consolidated Gas Company.

3407 Q. So that the increase of assets from 1884 down to 1905 would not be a fair estimate of the required increase of assets to produce the increased output of gas, would it?

A. I so stated, I think, that there should be some allowance made for that.

Q. You did not state how much allowance, and you have not been able to compute from any data before you, have you?

A. No.

Q. What do you mean exactly by the statement that if a company can stand a reduction of any given amount it can still stand a reduction of eight or ten cents more?

A. That is, if it can stand a reduction on the assumption that the sales will remain stationary, which is the point on which I meant to use the term. That is, if the Consolidated Gas Company, on the basis of the sales of 1905, could stand that reduction to, we will say, 85 cents, then there will be such an increase in sales that it would make as much on 80 cents in the future as it would have made on 85 cents in 1905.

Q. Now, I am going to call your attention to Table 19, which, for all these Massachusetts cities, showed that during this period when they had this large increase in output of gas and the prices were somewhat reduced, the net profits at the end of the period were almost exactly what they were at the beginning of the period?

A. That is the year after the change. They were about the same as the year before the change, a slight increase but not much.

Q. But you do not mean quite that, because some of these changes took place in 1894-5, and there is a second change in 1897-8.

A. No, but I took each one as a separate entity. I think I made a fair statement there.

Q. Assuming that the Consolidated Gas Company was able to afford a cut in its price of gas to, we will assume, 90 cents, and would then just show profit enough to make a return on its capital 3408 at a reasonable rate and subsequent to the cut it delivered more gas to the consumers or showed such an increase of gas that the net profits were the same, how could it afford a further cut, the net profits being just the same afterwards as they were before, in spite of the larger output of gas?

A. But that is not a right interpretation of that table?

Q. Well, but the table shows, does it not, that the year after these cuts net profits were practically the same, almost exactly the same as they were the year before the cut?

A. Yes, but the first one——

Q. We will apply that to the Consolidated Gas Company, and suppose they made a cut of 90 cents and the year after the cut was made they only showed the same profit that they showed the year before the cut was made; they got less for their gas but sold more and got the same profit, how does that prove they could make another cut of ten cents and be just as well off?

A. Now, we will see if I can illustrate it by concrete figures. The profit that was read from an exhibit this morning as having been made last year amounted to how many million dollars? There was a figure given there in an exhibit.

Q. $4,000,000 and over, Exhibit 96, 1/20th of $91,000,000 and a little over.

A. I have it here, $4,587,995.99. Now, suppose that a reduction of 10 cents would reduce those profits by a total output of 1905 multiplied into ten cents or approximately $1,300,000, that would leave $3,288,000 approximately as the assumed profits the year after the reduction, if the reduction of ten cents were made. Now, assume that $3,288,000 is reckoned as a sufficient return to allow a reasonable profit on the structural value of the plant properly interpreted, whatever that may mean; assume that for the moment.

3409 Then my statement was intended to be that as far as that table would tend to establish anything it would establish the fact after the reduction did take place to 90 cents——

Q. That is two years later?

A. Yes, the year after the reduction——

Mr. Burr: And supposing there was no increase in consumption?

The Witness: No. That table would tend to establish the fact that if the reduction were made, we will say, early in 1906, then in 1907 the profit would continue to be $4,587,996. But we have already assumed for the purposes of comparison that the company can stand a reduction to $3,288,000. Then if it can stand a reduction to $3,288,000, then it can stand a fall to 80 cents, the fall to 80 cents leaving the profit still at $3,288,000, because of the enormous increase in sales. But there is a fair statement to be made, that some increase in plant would be necessary, and I do not mean to deny that, but so far as any implication can be drawn, and I hold there can, then to that extent if a company can stand a reduction of a certain amount it can stand a considerably larger reduction.

Q. But when is this thing to end? Is the theory to continue until you get down to zero?

A. I stated in my direct-examination—I made some statement providing always that the profits continued to be above operating expenses and enough to allow—that assumed a reasonable margin on the structural value.

Q. Then the whole computation rests on the preliminary determination of what the structural value is and what a proper return on that is, does it not?

A. It starts with that and figures on then that if can can from that justify a reduction of a certain sum on the basis of last year's business, future business will justify your making a larger reduction.

3410 Q. And that will always be so down to what figure?

A. It is very difficult to say, but it would continue to a considerable extent.

Q. Let me ask you another question. If you make a reduction from one dollar to 90 cents, that cuts off only ten per cent. of your gross receipts, but it cuts off a very much larger percentage of your profits, does it not, because they are the difference between the cost of gas and one dollar?

(No reply.)

Q. In other words, if the gas cost 70 cents and is sold for one dollar, and you cut to 90 cents, you are cutting off 33⅓ per cent. of the profits, although you cut off only ten per cent. of the gross receipts of the company, that is clear, is it not?

A. I started out with the assumption that we can stand a cut in profit to $3,288,000.

Q. I understand.

A. So that it is independent of the question of what the price of gas would reduce it. We start with the question of how low the profits can be reduced, and having fixed that, we will fix sales at such a price as on the basis of the operating expenses of 1905, will reach this sum.

Q. And I am trying to reach the limit of your theory.

A. There are no definitely fixed or mathematical limits.

Q. Would not a reduction from 90 cents to 80 cents make a greater difference than from one dollar to 90 cents, the sales being necessarily greater on your theory?

A. A reduction from 90 cents to 80 cents would make a greater difference than a reduction from one dollar to 90 cents, you say, in the profits?

Q. Yes, the sales necessarily being greater under your theory, as we reduced the price?

A. I don't know that I have stated that the proportionate increase is a greater per cent. of reduction in price, which is apparently what is back of your question. I don't remember making any such statement.

3411 Q. But I say, would not a reduction from 90 cents to 80 cents make a greater difference in the profits than one from one dollar to 90 cents, the sales necessarily being greater under the reduced price, according to your theory?

A. I don't quite see how that would follow.

Q. You are aware, are you not, that the city of London, next to the City of New York, consumes per capita the most gas?

A. That has been this testimony in this case and I have no reason to doubt it.

Q. Don't you know that when a reduction was made in the price of gas in London a few years ago, and a very substantial reduction, that the increase in consumption was less than one per cent. per annum, based on the previous year's sales?

A. No, I know nothing whatever about that.

Q. And if that were so, considering the character of the London climate, that would be quite a strong piece of evidence, would it not, that after you had reached a very high per capita of sales the increase beyond that reduction of price would be moderate?

A. No, not necessarily unless it were confirmed by the experience of Sheffield, which has made still greater reductions and still further cities and companies; there might be special circumstances connected with the London reduction. I know nothing whatever about it.

Q. Now, in this Chicago pamphlet, and I will ask you to correct me if I do not quote properly, Mr. Cowdery says: "Increasing the output usually cheapens the cost of production. Among gas men it is usually assumed that in the case of manufacturing the cost was usually decreased in the works until it reached a million cubic feet daily capacity. The second million would not cost much less than the first. I doubt if one could distinguish between the cost of
3412 operating a plant of 20,000,000 capacity and the operation
of four plants of 5,000,000 capacity each. I think the cost per thousand would remain practically the same whether you manufactured 20,000,000 or 40,000,000 feet. This would be true in the case of either a coal or water gas plant." Considering Mr. Cowdery's experience, would you not be prepared to accept that as strong evidence of the fact which he states?

A. Certainly, it has a bearing on it and tends to—it is a point in the evidence, certainly.

Q. And I read further from the statement: "Increasing the number of consumers to each mile of mains does not materially cheapen the cost of gas. This is especially true after reaching a certain point. The difference in cost would not be sufficient to warrant a reduction in price." Now, I understand in spite of Mr. Cowdery's large practical experience that you, who have had no experience in operating a gas plant, differ substantially from that proposition, do you?

A. Yes, I do to this extent, that as between companies similarly situated, increased sales are not accompanied by corresponding increases in distribution expenses usually, and that can be established by the statistics of Massachusetts and Great Britain, so that I consider I am as competent to study those facts as an engineer would be.

Q. Yes, but you misconstrue Mr. Cowdery a little, because he says that increasing the number of consumers to each mile of mains does not materially cheapen the cost of gas. That is to say, he refers to the cost of gas at the burners, and takes into consideration the additional plant required to produce the gas as well as any additional distribution expense?

A. But he has stated that the manufacturing expense does not change. If that does not change and if the total does not
3413 change according to his testimony, then there could be no change in the distribution expense, but I have found in my study of the statistics on the subject that there is a change in the distribution expense. There is a tendency to reduction.

Q. But we saw the other day, did we not, that the City of Boston, which had a very much greater distribution that the seven next largest cities in Massachusetts had a distributing expense of 18.76 cents, while those seven cities next averaged only 17.03?

A. I would say we did.

Q. And we found also on that basis that the cost of distribution in New York, 16.94, for the nominal year as you figured it, taking the same items for comparison, was less than either Boston or the seven next largest cities in Massachusetts, did we not?

A. That it was less than the seven next to Boston. I think it was less than Boston.

Q. Yes, nearly two cents.

A. According to that table.

Q. And a little less than 16.94 as against 17.03 when compared with the seven next largest cities named?

A. Yes.

Q. I would like to ask you one question in reference to your hypothetical figures on New York. The profits of the company for the year 1905 appear in Exhibit 96 to be $4,987,995.99. That at ninety cents which you figured with would mean a reduction of $1,300,000?

A. I am not sure about that. I took that for an assumption for the amount. But I afterwards modified that and said I was—I am not sure about that at all, but I said that if the profits would stand—if a price were finally fixed which would cut off $1,300,000 of profits so as to leave the profits $3,288,000, then a still lower price would still leave those profits.

3414 Q. Now, assuming that we were to reduce the gas to 90 cents, that would cut off $1,300,000 from the net profits, would it not?

A. I do not say that now. I should want to take that off from the gross receipts.

Q. Well, on the same sales of gas, assuming the profits to be as stated, $4,587,000 at one dollar, and the price of gas was reduced to 90 cents, it would mean a loss from that source of about $1,300,000, or ten cents per thousand feet, would it not?

A. It would seem so, but I would not—I am not so absolutely positive——

Q. It would on that number of cubic feet, would it not?

A. It looks so now to me on that number of cubic feet.

Q. How much more gas would the company have to sell to make up that $1,300,000, provided gas was costing it 65 cents at the burners?

A. Then the profit on that basis——

Q. In other words, how many thousand feet would it have to sell to bring its net profit back to the original figure?

A. The difference between sixty-five and ninety or twenty-five cents would seem at first the proper margin, but it would not be because taxes would probably not increase proportionately. Certainly distribution expenses would not.

Q. I don't know why you think that, because taxes have been increasing every year.

A. If the profits were declining there would not be an increase in taxes from that source. It may be taxes will increase for other reasons but distribution expense would decline with increase in sales. That is, per thousand feet. But I will take your supposition in the way you give it without assenting to the basis for it and figure out what number of feet at twenty-five cents a thousand feet profit would be necessary to make a profit of $1,300,000, which I understand would be four times as many thousand feet as there are dollars, or 5,200,000,000 feet.

3415 Q. In other words, it would require an increase of 5,200,000,000 feet over the present sales of 13,283,000,000 feet or forty per cent., in order to make up to us that $1,300,000 which we lost by reducing the price of gas to eighty cents, would it not?

A. On those two suppositions. The gas costs you 65 cents now and that there would be any reduction per thousand feet with the additional sales.

Q. And that is without taking into account the additional plant that might be required to produce this additional gas and the consequent requirement for a larger return on capital?

A. Unless the capital was to increase faster than the sales of gas that suggestion of yours would not apply.

Q. But we are simply getting at here the amount of the net profits before any application is made of capital at all.

A. No. You have assumed there was a twenty-five cents margin for profits per thousand feet.

Q. Yes, precisely.

A. No, your last suggestion that there would be less than twenty-five cents profits because of necessary increase of capital would not hold.

Q. Wait a minute. I haven't made any such suggestion as that at all. I mean by profits the difference between the cost of gas at the burner, with proper allowance for reserve fund and so forth included, if any should be, and the selling price of the gas, nothing for return on capital coming out of that at all as yet. And would it not be true, as I said, that this result which you have just testified to would be without taking into account the fact that we would require a larger plant to produce the gas and a greater requirement for the return on capital to come out of the net profits?

A. That would apply to the 5,200,000,000 feet. It would not apply to the twenty-five cents margin.

3416 By Mr. Burr:

Q. Why not?

A. Because the twenty-five cents margin would still continue unless the property was to increase faster than the sales.

By Mr. Mathewson:

Q. Yes, but the point is this, having sales of 13,283,000,000 feet and having cut $1,200,000 off our net profits, as shown in Exhibit 96, by reducing gas to ninety cents, in order to get our net profits back where they were originally, as shown in Exhibit 96, we would have to use, if gas costs say sixty-five cents at the burner, 5,200,000,000 cubic feet more than the present 13,283,000,000 cubic feet in order to restore the profits to what they were originally?

A. On the suppositions you give I should say yes.

Q. And that would be without taking into consideration at all the increased value of plant and the requirement for a larger amount to pay a return on the increased plant?

A. Yes.

Q. Now there is one thing which I think you have left out of consideration in this case. Most of the cities which you have been considering have been cities which have suburban sections which have been growing up, growing quite rapidly, and where there is a chance for further growth within the territory of the company which you were considering, were they not?

A. They have been situated that way principally.

Q. Now in the Island of Manhattan you understand that it is surrounded by water and that this company has no right to sell gas outside of the Island of Manhattan? And you understand do you not, that there are no suburbs to which the company can deliver its gas, so it will not benefit by the growth of the Borough of The Bronx or Queens or Brooklyn?

A. I understand that.

3417 Q. And would you expect the same percentage of increase to take place under those circumstances as takes place in a city with large suburbs which are constantly growing. Isn't that a serious thing to be considered?

A. I allowed for that by looking into the increase in population. It seems to me that the census establishes the fact that the growth has continued on the Island and will for the next five years represent a rate that it has averaged for the last twenty years.

Q. Don't you know that the Borough of The Bronx is increasing in population very much more rapidly than Manhattan Borough?

A. Yes.

Q. And that the sales of gas are increasing very much more rapidly there than in the Borough of Manhattan?

A. That is true.

Q. And don't you know that some portions of the Borough of Manhattan which formerly were residence districts have grown up to be business districts and that their population is constantly decreasing?

A. Yes, but I believe the Borough of Manhattan has increased as fast and is likely to for the next ten years as the Massachusetts cities I took, although I have not looked that up, but I know New York has been increasing very fast, faster than the average American city.

Q. Do you refer to the Borough of Manhattan when you say New York?

A. The Borough of Manhattan has been increasing fast too.

Q. You know a commission on additional water supply for the City of New York was appointed some time ago consisting of engineers, Messrs. Burr, Herring & Freeman, do you not?

A. Yes.

Q. Will you look at page 67 of the report of that committee and say what that committee estimates the population of Manhattan to be in 1925?

3418 Mr. BURR: That is objected to as incompetent, immaterial and irrelevant; the Commissioners are not here so that we may cross-examine them and find out the reason for their deduction as to the population of that year to which you refer. You called Professor Marks' attention to that.

Mr. MATHEWSON: I am going to call Professor Bemis' attention to it also and ask what effect that has upon his opinion of the increase of population, or something of that sort.

Mr. BURR: For the purpose of that report, in special instances, they may have found that that would be the population, but that is not binding on us.

Mr. MATHEWSON: They may have made a mistake.

The WITNESS: I am not looking as far ahead as 1925.

Q. What do you find the population to be according to that estimate?

A. 2,130,000.

Q. That population is only equal to the population at the present time as given by Dr. Marks, and if the estimate of this Commission was to be accepted as an authority it would show, would it not, that an estimate of a very great increase in Manhattan within the next five or ten years was subject to question?

A. So far as that is concerned it would have that bearing but I think I have seen census figures indicating an increase of considerable in the last five years.

Q. You haven't seen census figures up to 1925?

A. No; 1905 as compared with 1900.

Q. Speaking of conditions under which we operated, do you know any city east of Ohio, with the exception of this eight--five-cent rate in Boston, which is selling gas at less than ninety cents per thousand cubic feet?

A. I do not.

3419 Q. And do you know of any cities outside of Massachusetts which are selling even for ninety cents?

A. East of Ohio?

Q. Yes.

A. No.

Q. And the Massachusetts candle-power as you stated the other day is 16 as against our 22, so that there must be some allowance made in making comparisons for that difference, must there not?

A. That is one of the points for which some allowance must be made.

Mr. Burr: The evidence is that gas is made here and produced under the most favorable conditions that exist in this country.

Mr. Mathewson: That is the testimony of Professor Marks.

Mr. Burr: No, I think Mr. Bradley assented to that.

Mr. Mathewson: Well, the evidence shows.

Q. Now, Mr. Shearn, whom you say retained you for appearance before the Gas Commission, did not personally conduct that case, did he, on behalf of the complainant?

Mr. Burr: Objected to. I do not see what Mr. Shearn or Mr. Hearst or anybody else has to do with this case.

Mr. Mathewson: I will develop it in a moment so that you will see what it is.

Mr. Burr: Well, what is the object, Mr. Master?

The Master: Well, I do not know.

Mr. Burr: If we are going into that I think we should be informed ahead of time what is the object of Mr. Mathewson's question.

The Master: There is no objection to the preliminary question.

Mr. Burr: Well, what is the object of it?

3420 Mr. Mathewson: It will appear in a moment.

Mr. Burr: Shall I be obliged to call Mr. Shearn here and Mr. Hearst?

Mr. Mathewson: No, I don't think so. I don't think it will be disputed.

Q. Who was Mr. Shearn's associate or representative who conducted the case before the Gas Commission for the complainant, at which Mr. Shearn appeared as attorney of record?

A. Mr. Ford.

Q. Mr. De Ford?

A. Mr. De Ford.

Q. And it was he with whom you had your conferences and he who examined you before the Commission?

A. Yes.

Q. And he you would say was a young man of ability and discernment, wouldn't you?

Mr. Burr: Objected to. We are not giving a certificate of character to either Mr. Shearn, Mr. Hearst or Mr. De Ford in this case. I do see its pertinency.

The Master: I do not think that is of any great importance.

Mr. Burr: Maybe I would admit it if you will tell me what you want to prove.

Mr. Mathewson: What is the ruling?

The Master: I have no objection to your going on only I do not see how it is material.

Mr. Mathewson: I have only one or two questions on this point. I think my purpose will appear in a minute.

The Master: What is the object of it, as to whether Mr. De Ford was an able man or otherwise?

Mr. Mathewson: If the Master rules the question out I shall accept that ruling, of course.

The Master: I will rule it out then.

3421 Mr. Mathewson: I won't press it.

Q. Mr. De Ford, you know, was the representative before the Gas Commission of Mr. Shearn from beginning to end.

Objected to as incompetent, immaterial and irrelevant, not bearing on this question at all.

Question allowed; exception.

A. Yes, I so understood.

By Mr. Burr:

Q. You have no doubt that Mr. De Ford did his full duty at that investigation?

A. No.

Mr. Burr: If that is what you are trying to prove, I will admit that.

By Mr. Mathewson:

Q. Now, I show you the minutes of a hearing before the Senate Finance Committee at the capitol at Albany, New York, February 16, 1906, which was subsequent to the conclusion of the testimony before the Gas Commission where Mr. De Ford appeared in favor of the eighty cent gas act which had been passed and which is here the subject of attack. If you have any question about it, Mr. Burr, I will present to you the volume.

Mr. Burr: Does this purport to show what Professor Bemis said on that occasion, or does it purport to show what Mr. De Ford said on that occasion?

Mr. Mathewson: It does not purport to show what Professor Bemis said on that occasion, because Professor Bemis was not there.

Mr. Burr: If it purports to show what anybody else said

3422 on that occasion, I object to it as incompetent, immaterial and irrelevant.

Mr. Mathewson: I propose to read here very briefly what Mr. De Ford said upon the subject of the economical management of this company and then ask Professor Bemis in view of his testimony and the expressions of Mr. De Ford at that time whether he is not prepared to modify his expressions as to possible extravagant management of this company?

Mr. Burr: If that is admitted I propose to show what political economists have said as to the management of gas companies all over the United States.

The Master: Not before me.

Mr. Burr: I insist upon my objection. This certainly is incompetent, immaterial, and irrelevant. Though I have the highest regard for Mr. De Ford and I am fully assured he did his full duty before that Commission, at the same time what he said in the capitol at Albany on a given occasion after the meeting of the Commission terminated, certainly we would not be bound by, and I don't know what it is.

The Master: I think that is stretching the thing pretty far, Mr. Mathewson: It might very well be proper cross-examination to take some well known text-writer or expert and quote his views and ask if they modified the Professor's opinion, but when it comes to getting down to the question of individual counsel and individual investigation, I think that is going pretty far.

Mr. Burr: I have Mr. Mathewson's brief here which I would like to read to you which he presented to the Governor, contradicting some of the assumptions he has assumed in this case.

3423 The Master: I will sustain the objection and you can have an exception.

The Witness: I would like to assert that I would not like to be interpreted as saying that I had any direct knowledge as to who paid Mr. Shearn's bills or Mr. De Ford's. I never knew anything about it.

Mr. Mathewson: Oh, no, of course not. Now I will read from these proceedings before the Committee as follows:

"Senator Cassidy: In a spirit of temperate discussion, have you examined into this company's affairs so that you know whether they are economical?

"Mr. De Ford: The only knowledge I have got is what I have received by two months association with Mr. Mathewson and Senator Page and the Commission. But I would say that it appears to me, so far as I can tell, that they are economically managed. That is to say, that all depends; I want to qualify that in this way. They handle their cartage, which is a saving of money to them. They save cartage through the instrumentality of the National Coke & Coal Company. But whether those items are true or not, I don't know. I wouldn't be satisfied with it if this was litigation; for if I could spend the next two years in going through their books I wouldn't be satisfied with the statement.

"Senator Cassidy: Are they doing eevrything possible to realize the largest profit from their concern? Have they got a capital account?

"Mr. De Ford: I couldn't tell that. I know that they are very smart men. They are watching every corner where they can save a penny.

3424 "Senator Cassidy: Employ the most skilled help?

"Mr. De Ford: Everything that affects the reduction of their cost.

"Senator Cassidy: So as to get large profits?

"Mr. De Ford: So as to get and keep large profits.

"Senator Cassidy: You don't think there is any concern——

"Mr. De Ford: I think they are trying to make all the money they can and manufacture gas as cheaply as they can."

In the two lines which I read as follows: "Mr. De Ford: Everything that affects the reduction of their cost," in the typewritten copy of the minutes of this debate received from the stenographer, the word "cost" appears as "property," I have changed the latter word in lead pencil to read "cost." Now have I correctly quoted all I have read, or are you willing to accept my reading as accurate?

A. I know nothing about it except I heard you read it.

Q. I am quite willing you should look at it if you have any doubt about my having read it inaccurately.

A. I think it had better go in as your testimony and not mine.

Mr. Burr: We have no doubt you read it correctly.

The Witness: If you state you have read it correctly, I have no reason to think you did not.

Q. Now, assuming that as the statement of Mr. De Ford who was present, as you have said, before the Commission from the beginning to the end, and who was the associate of Mr. Shearn and who examined you, have you any doubt that the company was economically managed, as Mr. De Ford states was his conviction.

3425 & 3426 A. I can only judge by the evidence.

Q. You still, from what I have read and in spite of Mr. De Ford's view, maintain the position which you stated at the outset, do you?

A. I do. I do not mean to say that on re-direct examination I shall not take occasion to slightly modify one or two tables, but I mean to say in general my position remains.

Mr. Mathewson: I have no more questions.

Mr. Burr: Have you finished now your cross-examination?

Mr. Mathewson: I have.

Following a colloquy between counsel and the Master the re-direct examination of Professor Bemis goes over till Monday, October 29th, 1906.

At 4.15 p. m. adjourned to October 26, 1906, at 12 o'clock.

Last Exhibits:

Complainant's, 156.
State's, W,
City's, 59.

3427 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *October* 26, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Mead, Mr. Burr.

3428 JOHN M. THOMPSON, recalled on behalf of the City, testifies as follows:

Direct examination by Mr. BURR:

Q. Have you appraised the property of the Consolidated Gas Company on the west side, as it was prior to the acquirement by the City of New York?

Mr. MATHEWSON: You mean the real estate?
Mr. BURR: I mean the real estate and land.

A. Yes.
Q. Will you describe that property?
A. The first is Block 688, being the entire block bounded by 16th and 17th Streets, Tenth and Eleventh Avenues.
The next is Block 689, being the entire block bounded by 17th and 18th Streets, Tenth and Eleventh Avenues.
The next is Block 690, fronting 184 feet on Tenth Avenue, twelve lots on the southerly side of 19th Street, and seventeen lots, or 425 feet, on the northerly side of 18th Street.
The next is Block 691, fronting 184 feet on Eleventh Avenue; ten lots, or 350 feet, on each street.
The next is Block 666, lot 3, which is an irregular plot, bounded by 16th and 17th Streets, Eleventh and Thirteenth Avenues.
The next is Block 666, lot 12, an irregular block, bounded by 17th and 18th Streets, Eleventh and Thirteenth Avenues.
Q. Is this the same property that was appraised by Mr. Wheelock and Mr. Preiss?
A. Yes, sir.
Q. Now, will you take them up in their regular order and state what in your opinion was the value of each parcel?
A.—
Block 688, $639,860.00.

Block 689, $639,860.00.
3429 Block 690, $363,600.00.
Block 691, $285,460.00.

Block 666, lot 3, $74,280.80.

Block 666, lot 12, $119,834.19.

And there is another thing I should have given—a bulkhead between 17th and 18th Streets, $94,375.00.

Bulkhead between 16th and 17th Streets, $94,375.00.

Cross-examination by Mr. MATHEWSON:

Q. Are these figures which you have given for the first four blocks, 688, 689, 690 and 691, figures for the entire blocks before deduction was made for the 18th Street improvement, or is it merely the valuation you placed upon that portion of those blocks that was taken by the City?

A. Why, no, sir. It embraces the entire blocks 688 and 689, which were owned by the gas company, and the entire portion of 690 which was owned by the gas company, and the entire portion of 691 which was owned by the gas company; all before the city acquired any of it.

Q. In other words, that is the valuation of those blocks, or of that portion of those blocks that the gas company owned before the improvement?

A. Yes.

Q. And not the valuation of merely the part that was taken by the city?

A. No, sir.

Q. And did you use the same unit values in reaching these totals for those four blocks that you used in computing the value of the portions still left to the company, in your original testimony?

A. I did not.

Q. What variation did you make, and why, in these blocks, from your original figures?

A. I could not tell you the exact figures, for I haven't the papers with me; but I put a less value on this property prior to its
3430 acquirement by the City of New York. I gave a greater value to that which remained for the reason that the property had been very much improved by the new marginal street, new piers, new steamship companies going there.

Q. You mean you put a higher value in your original testimony on the part that was left to the company and a proportionate value as it existed before the improvement?

A. Yes.

~~Q. So~~ that these figures here represent a lower value relatively than you gave in your original testimony for the property still left to the company?

A. Yes, sir; somewhat lower.

Q. Will you give me the basis of valuation that you now employ in reaching these totals for each of these blocks?

A. Northeast corner of Eleventh Avenue and 16th Street, 2,500 square feet at the rate of $19,000 per lot, or $7.60 per square foot, $19,000.

Lot adjoining corner, 2,500 square feet, at the rate of $12,500 per lot, or $5.00 per foot, $12,500.

Four inside lots, 8,400 square feet, at the rate of $11,500 per lot, or $4.60 per square foot, $38,460.

Lot adjoi-ing the corner of 17th Street, 2,500 square feet, at the rate of $12,500 per lot, or $5.00 per square foot, $12,500.

Southeast corner of Eleventh Avenue and 17th Street, 2,500 square feet, at the rate of $19,000 per lot or $7.60 per square foot, $19,000.

Forty-eight lots on 16th and 17th Streets, 2,300 square feet each, or 110,400 square feet, at the rate of $4 per square foot, or $10,000 per lot, $441,600.

Two corner lots on Tenth Avenue, 2,500 square feet each, at the rate of $16,500 per lot, or $6.60 per square foot, $33,000.

Two lots adjoining corners, 2,500 square feet, $13,000 per lot, or $5.20 per square foot, $26,000.

3431 Four inside lots, 2,100 square feet each, 8,400 square feet, at the rate of $4.50 per square foot, $37,800.

Total, $639,860.

Block 689, I arrived at the valuation there in exactly the same way, the blocks being identical.

Block 690, two corner lots on Tenth Avenue, 2,500 square feet each, at the rate of $16,500 per lot, or $6.60 per square foot, $33,000.

Two lots adjoining corners, 2,500 square feet, at the rate of $13,000 per lot, or $5.20 per square foot, $26,000.

Four inside lots, 2,100 square feet each, 8,400 square feet, at the rate of $4.50 per square foot, $37,800.

Seventeen lots on 18th Street, 2,300 square feet, each, 39,100 square feet, at the rate of $4 per square foot, $156,400.

Twelve lots on 19th Street, 2,300 square feet each, 27,600 square feet, or $4 per square foot, $110,400.

Total, $363,600.

Block 691, northeast corner of Eleventh Avenue and 19th Street, 2,500 square feet, at $19,000 per lot, or $7.60 per square foot, $19,000.

Lot adjoining the corner, 2,500 square feet, at the rate of $12,500 per lot, or $5 per square foot, $12,500.

Four inside lots, 8,400 square feet, at the rate of $11,500 per lot, $4.60 per square foot, $38,460.

Lot adjoining corner of 20th Street, 2,500 square feet, at the rate of $12,500 per lot, or $5 per square foot, $12,500.

Southeast corner of Eleventh Avenue and 20th Street, 2,500 square feet, at the rate of $19,000 per lot, or $7.60 per square foot, $19,000.

Twenty lots on 19th and 20th Streets, 2,300 square feet each, 46,000 square feet, at the rate of $4 per square foot, or $10,000 per lot, $184,000.

Total, $285,460.

3432 Block 666, Lot No. 3, containing 8,441 square feet, at the rate of $22,000 per lot, or $8.80 per square foot, $74,280.80.

Block 666, Lot 12, 2,076.39 square feet, at the rate of $22,000 a lot, or $8.80 per square foot, $18,272.23.

The next lot north, 2,219.37 square feet, at the rate of $14,500 per lot, or $5.80 per square foot, $12,872.35.

Four adjoining lots, 8,504.44 square feet, at the rate of $13,500 per lot, or $5.40 per square foot, $45,923.98.

Lot adjoining the corner of 18th Street, 2,842.87 square feet, at the rate of $14,500 per lot, or $5.80 per square foot, $16,488.65.

Plot on south side of 18th Street, 2,986.02 square feet at the rate of $22,000 per lot, or $8.80 per square foot, $26,276.98.

Total, $119,834.19.

Bulkhead between 16th and 17th Streets, 188.75 lineal feet, at $500 per foot, $94,375.

Bulkhead between 17th and 18th Streets, 188.75 lineal feet, at $500 per foot, $94,375.

By Mr. Burr:

Q. I allow you notice $500 for the bulkhead property that you speak of, and you only allowed $250 at 42d Street. What is the reason for the difference?

A. Well, the city acquired a great deal of that property down at $500 a foot. I don't believe those bulkheads should be made to pay on that basis, but I have allowed the value very largely on account of the increase of traffic that has taken place there, around from 18th to 23d Streets, such as the establishment of the Delaware, Lackawanna and Western Railroad ferry, the building of the new Erie ferry house, the Central Railroad, and things of that kind 3433 that have added very largely to the values down in that neighborhood.

By Mr. Mathewson:

Q. Do I understand it is questioned whether $900 per foot has been awarded at 22d Street?

A. I think so, yes, sir.

Q. You think it has been awarded?

A. I think it has not been.

Q. If it had been, or if it should be, would that modify your view of values at this point?

A. No, sir, because it cannot be made to pay on that basis.

Q. In your opinion?

A. Backed by the Dock Department rentals, sir.

Martin McHale, recalled for further examination, testified as follows:

By Mr. Burr:

Q. You have heard the testimony of Mr. Thompson in regard to the property that he has appraised?

A. I did.

Q. Did you appraise the same property?

A. I did.

Q. Will you describe it and give your valuation?

Mr. Mathewson: Is there any use of describing it over again?

Mr. Burr: Not if you do not want it.

Mr. Mathewson: I do not.

The WITNESS: Our figures are precisely the same. We examined it together and came to the same conclusion.

3434 By Mr. MATHEWSON:

Q. Did you reach them on the same basis of computation as to individual lots?

A. On the same basis of computation as to individual lots yes, sir.

Mr. MATHEWSON: I have no further questions.

Mr. BURR: That is all I have.

The MASTER: Call the next witness.

Mr. BURR: I will have Mr. Lacombe here after recess.

Recess until 2 p. m.

After Recess.

CHARLES F. LACOMBE, called as a witness in behalf of the defendant, the City of New York, being duly sworn, testified as follows:

Direct-examination by Mr. BURR:

Q. What is your occupation?

A. I am an engineer of light and power for the city of New York.

Q. How long have you occupied that position?

A. Very close to a year.

Q. And what were you before that?

A. I was engineer of surface construction for two years.

Q. For the City of New York?

A. Yes, sir.

Q. Has your attention been called to the item on Exhibit 94 in this case, of street lamps?

A. Yes, sir.

Q. Is it part of your duty as chief engineer or engineer to look after the lamps of the city?

A. Yes, sir.

Q. Are you familiar with the situation as it existed during 1905 with regard to street lamps between the City of New York and the Consolidated Gas Company?

A. Yes, sir.

3435 Q. Did the Consolidated Gas Company have a contract with the City of New York during 1905?

A. Part of it, up to Mach 16th, 1905.

Mr. MATHEWSON: You refer to a written contract when you say a contract.

The WITNESS: Yes, sir.

Q. Have you that contract with you?

A. No, sir, you told me you had a copy here.

Q. Well, it is in evidence here. Was there a written contract for the balance of 1905?

A. No, sir.

Q. What part of the year was the contract for?

A. The contract was from January 1st to March 15th.

Q. And do you know the reason why there was not a contract for the rest of the year?

Mr. Mathewson: Is that important? I object to it unless the materiality is shown.

Q. I will ask you whether as a matter of fact the bids that were made by the Consolidated Gas Company were not rejected?
A. Yes, all the bids were rejected.
Q. And what was the contract for, that you have referred to?
A. It was for furnishing and erecting and lighting and cleaning and extinguishing of mantle gas lamps and the supply of gas to them, including the repairs and maintenance of the lamps and was for the supply of gas to public buildings.
Q. And to the lamps?
A. Yes, and to the lamps, and for the repair of lamp posts according to a schedule.

By Mr. Mathewson:

Q. Was it not in the same form practically as the bids or request for bids of the previous years? 3436
A. Practically, yes.
Mr. Mathewson: I think that form is in evidence, is it not?
Mr. Burr: I think so.

By Mr. Burr:

Q. Was the service for public buildings and street lamps continued during the rest of 1905 after the contract had expired?
A. Yes, it was fully performed so far as we knew throughout the whole year.
Q. Did the Consolidated Gas Company render bills for this service?
A. Yes.
Q. Have you the bills?
A. Yes, these are the bills, by months.
Q. Will you take one of them and state what that bill embraces?
A. This embraces the street lighting for the month of January in the Borough of Manhattan and includes all the lamps in the Borough of Manhattan and the proper contract performance that had to be gone through with these lamps, and they billed them, and in addition they billed the various changes that occurred during the month; a certain number of the lamps billed here are open flame lamps and the large majority mantle lamps, and they are billed at the same rate as specified in the contract period. This was during the contract period.
Q. How many lights are there that the Consolidated Gas Company supplies?
A. According to this bill, 16,236 mantle lamps and 746 open-flame lamps.

By Mr. Mathewson:

Q. Were not those open-flame lights the street corner lamps, the sign lamps, as they are called? 3437

A. At that time they were, yes.

By Mr. Burr:

Q. Have you made an analysis of those bills?

A. Yes.

Q. Will you produce it?

A. Yes.

Mr. Mathewson: What bills? He has only referred to a certain bill. Do you mean has he made an an-lysis of each one separately?

Q. Of what bills did you make such an analysis?

A. I have taken each month for the year 1905 and made the analysis complete, both for the Borough of Manhattan and The Bronx, but they are presented separately in this analysis clear through the year.

Q. This analysis which you produced, marked Schedule I, is an analysis of the bills rendered by the Consolidated Gas Company for the year 1905?

A. Yes.

Q. What does that show?

A. That shows in the first column the charge per month for lighting, cleaning, extinguishing and taking care of lamps complete. In the second column it shows the repairs to lamp posts, complete. The third column shows the total of those two amounts. The fourth column shows an item we call "Miscellaneous Lighting," which consists of the lighting of four or five special lamps. In the fifth column are the bills for lighting, care and attendance of open-flame gas lamps. In the sixth column the care and attention and supply of gas to sign lamps, which were discontinued at the end of the third month, and also an item of repairs to lamp posts for street sign lamps. The last column shows the bills for lighting, care and so on, of single Welsbach lanterns in The Bronx.

3438 Q. Will you give the result of that analysis and totals as you figured them out?

A. This analysis checks exactly the bills of the Consolidated Gas Company and shows that the total bill for the Borough of Manhattan was $431,624.95.

Mr. Mathewson: For the calendar year?

The Witness: Yes, sir. In The Bronx it was $143,758.90, and the total bill of the Consolidated Gas Company for Manhattan and The Bronx was $575,383.85.

Q. What other analysis have you made of the bills?

A. Well Schedule I-a is an analysis giving the repairs of lamp posts in the Borough of Manhattan. There were none in the Borough of The Bronx for the year.

By Mr. Mathewson:

Q. Let me ask at this point, if I may, do these items of repairs and all these other items on this analysis or these various schedules appear in the bills presented by the Consolidated Gas Company?

A. Yes.

Q. These are figures merely analyzing the figures which appear in the bills to which you referred at the outset?

A. Not so much analyzing them, but classifying them.

The MASTER: Grouping the various items?

The WITNESS: Yes.

Q. In other words, these are figure- of the company as classified and your own statement?

A. Yes. You see that second sheet is really the separation and classification of column 2 on the first sheet.

3439 By Mr. BURR:

Q. Will you continue your explanation of Exhibit 1-A?

A. That shows by columns the kind of repairs which the city ordered and which the Consolidated Gas Company performed and which were billed at the scheduled rates given in the contract, and that checked with the total as given on the first page, showing the total bill for repairs to lamp posts for the year was $10,986.50.

Q. You might proceed with the rest of those tables which you have prepared.

A. The rest of these tables, Mr. Burr, are only important in that we made them up in order to be dead certain that we could check the Consolidated Gas Company's bills. The slight differences that occur here are simply because we take it on the basis of actual days and turn those into actual lamp hours. The Consolidated Gas Company in billing single Welsbachs, for instance, charges at the annual rate of $24.75. They charge at a monthly rate of $2.06. Now, $2.06 is not a twelfth of $24.75, and on that basis the Consolidated Gas Company is really undercharging. In open-flame gas lamps, which is the result of the next sheet, they make that up practically by overcharging a little the open-flame lamps at the annual rate of $17.25, or a monthly rate of $1.44. That is a little too much, a little more than one-twelfth. They practically balance, so the difference is not of any account. The reason we differed at all from you is because we take the actual thing carried out to a fraction and take the actual number of days and hours.

By Mr. MATHEWSON:

Q. But there is not any difference that is substantial?

A. No, we only did it to be exhaustive, that is all, and 3440 that applies to Schedule 3-A, 3-B, 3-C and Schedule 3-D. There is one cent deficit. We tried to get as close as we could and Schedule 3-E is The Bronx, which is analyzed the same way. That brings us to schedule IV, which begins to get the analysis of the thing.

Q. What does schedule IV show?

A. Schedule IV shows our computation of their bills by getting them into the actual number of lamp days, that is, the number of days that one lamp would have had to burn to make this bill.

Q. In other words, it is an analysis of the gas consumption?

A. Then we turned that into lamp hours for the year. That was represented by the second column. Now, according to the contract, the minimum amount of gas that any of these lamps should take was three cubic feet. They took that and took more, probably.

Mr. MATHEWSON: When you say "they," you mean the city, the lamps?

The WITNESS: Yes. We calculated them on practically four different bases, in order to try and exhaust the subject. The first column gives the number of cubic feet of gas if the consumption is maintained at three cubic feet per hour. The next one gives it at three and a half cubic feet per hour. Then I understood from the testimony that Mr. Addicks had testified that in his opinion he thought the mantle lamps consumed 3.77 cubic feet of gas per hour, and the open-flame 4½ per hour, so we calculated what the consumption of gas would be if sold as well.

Q. And what is the result?

A. Well, of course, there are four results. The single Welsbach
lamp at 3 cubic feet per hour, they would take 195,374,865
3441 cubic feet of gas, at 3½, 227,937,342; at 3.77 feet, 245,521,-
080, and at 4½ feet, the open-flame lamps would take
9,923,566.

Q. What is this total?

A. Making a total on Mr. Addicks' basis of 3.77 feet for mantle lamps and 4½ feet for open-flame lamps, 255,622,213 feet in the Borough of Manhattan, and in the Borough of The Bronx on the same basis they would have taken 85,945,304, making the total consumption for street lamps in Manhattan and The Bronx of 341,567,517. Schedule V represents the way of getting all these various rates of gas consumption into dollars. According to that, at 3 cubic feet, the number of feet used is given, and then the amount. The same way with 3½ cubic feet, and then on the basis of 3.77 feet and 4½ feet. And The Bronx is given in the same way.

Q. On the basis of the 3.77 cubic feet, what does that show?

A. It would show the total single Welsbach lamps would cost $220,968.97 for gas, figuring at 90 cents per thousand cubic feet, and miscellaneous mantle lighting would add to that $159.81. The open-flame gaslight would add to that $8,931.20 in the Borough of Manhattan.

Q. And on the basis of 3 cubic feet?

A. $175,837.38, plus $4,752.88, plus $1,201.26, plus $127.17. The same way at 3½ cubic feet would be the sum of $205,143.61 and $5,545.02.

Q. For open-flame?

A. Yes. These figures are both for open-flame and mantles. They are practically arbitrary figures. We did not split them, but averaged them. And $1,401.47 and $148.37, plus $71,811.06 in the Bronx.

Q. Turn to the next schedule.

A. The reason we did all this was to try to see if we could check on the amount for maintenance and make the amount due to the Consolidated Gas Company $289,000.

Q. As it appears on Exhibit 94?

A. Yes. We put this all into money, and if the con-
3442 sumption of gas is taken on either of these bases that I have given, subtracting that from the total bill would give you what the maintenance cost apparently would be. In no instance can we check the $289,000.

Q. You might state a little more in detail what this Schedule VI shows.

A. The first column shows the total of bills rendered for each of the different items. The second column shows the cost of gas if the lamps consume three cubic feet per hour, and subtracting that from column 1 would give column 3, which would be the cost of maintenance on that basis. In this case the total of the three columns will be $431,624.95, minus the cost of gas $181,918.69, leaves $249,706.26 for maintenance, but on the other hand, if we take 3½ cubic feet of gas per hour for each lamp and go through the same process the cost of maintenance would become $219,386.48. If we go still farther and take the basis of 3.77 cubic feet per hour for a mantle and 4½ feet for open-flame lamps, the total cost of gas would be $230,059.98. Subtracting that from bills rendered would give a supposed cost of maintenance of $201,564.97. Now in the other line is the Borough of The Bronx. The total here checks out with the total amount of the bills as rendered.

Q. What total do you refer to?

A. The total of the first column which is a total of the bills rendered, $575,383.85.

Q. As a matter of fact can you check the account as it appears in Exhibit 94 with your analysis?

A. No.

Q. Why not?

A. Well, I have just shown you. I have taken all the consumption of gas I could take without doing a lot of unnecessary work, and it does not check out particularly near that amount.

Q. Does the city own the lanterns?

A. No, sir, except in the case of the open-flame lanterns.

3443 Q. How many are there of these?

A. 746 at the beginning of the year.

By the **Master**:

Q. What is that figure for maintenance, $289,000?

Mr. **Mathewson**: Two hundred and eighty-nine thousand and some odd dollars.

By Mr. **Burr**:

Q. Are the mantle lamps owned by the company and leased to the City or supplied under contract?

A. Yes.

Q. And of course the city is obliged to pay the price agreed on in the contract for the service rendered?

A. Yes.

Q. What are the items of service as to street lamps agreed to be performed by the Consolidated Gas Company besides supplying the lamps, does it not embrace lighting, cleaning, extinguishing, maintaining, repairing, painting, replacing when broken, replacing mantles, and furnishing gas of 20 candle-power at one inch pressure?

A. Yes, it covers every service necessary to operate the lamps. The city did absolutely nothing.

Q. Are there any other items to be supplied or work to be done by the Consolidated Gas Company outside of the lanterns under these contracts?

A. Yes, they repair the lamp posts, take down old ones and put up new ones at a regular price.

Q. As itemized in the contract?

A. Yes, and also furnished light to public buildings.

Q. Including services and meters?

A. Yes.

Q. And the setting of them?

A. And the setting of them.

Q. Does the city own the lamp posts?

A. Yes.

Q. Are the repairs to lamp posts paid by the city?

A. Yes.

3444 Q. Under the agreement?

A. Under the schedule in the contract.

Q. Have you an account or bills for these repairs?

A. Yes, the repairs are all given in these bills, as well as the lamp lighters. You will find the repairs at the end of each bill. For instance, the bill of February first, we start in with removals and resets.

By Mr. MATHEWSON:

Q. Are those repairs the one which appears in the second column of Schedule I?

A. Yes, and they continue on through the rest of the bill. Repairs are always going on, and there are repairs practically in all these bills.

By Mr. BURR:

Q. Have you analyzed all these bills for repairs?

A. Yes. That is submitted in Schedule I-*a*.

Q. Is that analysis correct?

A. Yes.

Q. And is the city obligated to pay for these repairs?

A. Yes.

Q. Are these contracts and analyses based upon bids publicly advertised and opened and contracts awarded?

A. Yes.

Q. Were these prices and bids the lowest bids received?

A. Well, there was a question about that.

Q. What do you mean by that?

A. Well, at the time this contract was let, or rather the portion of the contract in 1905, at the time that contract was let, which was March 15, 1904, and extended down to March 15, 1904, there were two other bids for the supplying and maintenance of lanterns only; one in our opinion was not a responsible bid, and the other one was, but it was restricted to a very small area in the city. The doubt we had was this: If you took the irresponsible bid, we will say, 3445 to identify it, which was $13.35 per year, for supply and maintenance of same outside of gas, and added to that the cost of the gas for 3,925 hours at three cubic feet, the amount became lower than $24.75 which the Consolidated bid. It was incomplete, however, but at the same time it left a doubt and it was deemed best to go to the Board of Estimate and Apportionment and ask them if they would recommend the acceptance of the bid and ask them if we could accept the bid of the Consolidated Gas Company. It was submitted to the Corporation Counsel and finally on the certificate of that office that it was all right the Board of Estimate and Apportionment awarded the contract to the Consolidated Gas Company at their bid figure.

Q. The Consolidated Gas Company as a matter of fact made the only bid on the complete requirements as called for by the contract and specifications as advertised?

A. Yes.

Q. Outside of the partial bid you mentioned was there any other competition?

A. Yes, relating to a small area of the city, but if you added the cost of gas to that bid it became higher than the Consolidated, consequently it was not considered.

By Mr. **Mathewson**:

Q. That was from a responsible bidder, wasn't it?

A. Yes.

By Mr. **Burr**:

Q. That is on the theoretical consumption of gas?

A. Yes.

Mr. **Mathewson**: Of three feet?

The **Witness**: Yes.

Q. Outside of these two items there was no competition?

A. No.

3446 Q. Did the city accept these bids?

A. Yes.

Q. As you have stated they were——

A. That is they accepted the bid of the Consolidated Gas Company.

Q. They were referred to the Board of Estimate and Apportionment?

A. Yes, and the department made a contract with the company.

Q. In other words, the Consolidated Gas Company got the contract at their own price although there was a question as to their being the lowest bidder?

A. Yes.

Q. And they will then in time be paid their bid for services rendered under the contract?

A. Yes.

Q. When did this contract expire?

A. March 15th, 1905.

Q. And the bids for the balance of the year were rejected, were they not?

A. Yes.

Q. What were the bids for the balance of 1905 on a yearly basis?

A. The same as the year before, $24.75.

Q. What bids were received for 1906 on this work?

A. In that year the bids were split, there was no bid received for the supply of gas, but there was a bid received for the supply and maintenance and operation and the repairing of mantle lamps at $12.00 a year.

Q. As a matter of fact the price was regulated by the Legislature for the gas, was it not?

A. Yes.

Q. What do you figure the cost of a mantle gas lamp in 1906, basing the cost of supply and maintenance of lantern on the bid, and supply of gas on the legal price for gas, that is, the legislative rate?

Mr. MATHEWSON: You mean the seventy-five cents after July 1st.

Mr. BURR: Yes.

A. $22.37 per annum.

3447 Q. Or to be accurate, how much?

A. $22.3675.

Q. What was the previous price?

A. $24.75.

By Mr. MATHEWSON:

Q. That was all gas at the rate of ninety cents?

A. Yes, included by us at ninety cents.

By Mr. BURR:

Q. Were there any bids received for the year 1906, received from any company?

A. None.

Q. The Consolidated Gas Company having received contracts and to be paid for same at their bid price, including separate payments for repairs to posts and supply of gas to public buildings, should this or any portion of it be charged to the cost of manufacture of gas, as shown in Exhibit 94?

Mr. MATHEWSON: If the Master please, that is purely a conclusion, as to whether any portion of the item of maintenance of lamps should be charged to the operating cost of gas, which it seems to me the Master is to draw. We can argue it, but I don't think the witness can testify to that.

Mr. BURR: He has given you the facts and the analysis of the bills.

The MASTER: I think that is so, Mr. Burr. You brought this witness here to testify to these matters of fact and to the correctness of computation. I do not understand you have qualified him, nor did you undertake to qualify him like Professor Bemis, as a professional gas statistician and then ask what his theories about these figures were. That is the only theory upon which his opinion on a matter of this kind is admissible, is it not?

Mr. Burr: Isn't it obvious if his statement is correct from 3448 this analysis that the Consolidated has been paid by the City what they charge as against the cost of gas in Exhibit 94.

Mr. Mathewson: It is not claimed we have not been paid. The expenditure we have had to make in producing and delivering gas to the private consumers and to the city, preliminary to our collecting anything from our consumers, either private or the City, is an expenditure, as Professor Bemis conceded, which we had to make in advance.

Mr. Burr: No, Professor Bemis did not concede that nor has anybody conceded it. On the contrary it is a matter that is very much disputed by the City. You have here as a part of your operating expenses now $289,000 for street lamps. We showed you here, if we showed anything, that you are fully paid for everything you do in the matter of public lighting of street lamps in the City of New York, and that charge should not be made against the cost of gas and is an inappropriate charge on Exhibit 94.

Mr. Mathewson: When are we paid? When we get our money from consumers for all the coal we purchase, for all the oil we purchase and for all the repairs we make on private apparatus, but that does not make it improper to charge those items in the operating cost of gas, which means what we have got to pay out for making and distributing our gas before we can collect bills from consumers. That, however, is a conclusion which the Master should draw and not the witness.

Mr. Burr: I think he is entitled to answer the question.

The Master: Objection sustained; and the witness may answer.

3449 Mr. Burr: Exception.

A. I think not.

Q. And if not you may state your reasons?

Same objection; same ruling; exception.

A. Because it is a sale of gas, for rentals of lanterns, it is payment for services in connection with some building, it is a contract for repairs to lamp posts and a sale of gas to public buildings.

Q. Do the companies bid prices for each separate item?

A. Yes, sir.

Q. And the City was to pay the amount agreed upon for each item?

A. Yes, sir.

Q. The receipts from the City should be balanced against the expense of the execution of the contract by the company, the balance between the two sides of the account being the profit or loss on this contract only, and not chargeable to the cost of the manufacture of gas to the private consumer.

Objected to as leading, as a conclusion, and as calling for a conclusion upon a conclusion already stated.
Same ruling; exception.

A. In my opinion, yes.

Mr. **Burr**: I offer these schedules in evidence.
Received in evidence and marked City's Exhibit 60.

Q. I omitted to ask you as to the bills, are these similar bills rendered monthly for the year 1905?
A. Yes, sir.
Q. I mean they contain similar items all through the year?
A. Yes, sir.

3450 Mr. **Burr**: I offer one of the bills in evidence, the January bill, dated February 1st.

Received in evidence and marked City's Exhibit 61.

Cross-examination by Mr. **Mathewson**:

Q. The last written contract of the Consolidated Gas Company for supplying public lamps and public buildings was that terminating with March 15, 1905, you said?
A. Yes.
Q. But for the balance of the year 1905 bills were rendered to the city on the same basis as though the contract had been continued?
A. Yes. These are the bills here.
Q. Now, the rates of the bid for the year beginning March 16, 1905, or for the balance of that year, were the same by this company, were they, as the rates fixed by the contract expiring March 15, 1905?
A. Yes.
Q. Did you, on your estimate and those bids, call for a minimum of three feet per hour at the burner?
A. Yes, sir.
Q. And you were aware, of course, if that was observed, that that would mean the burning of something more than three feet on the average at the burner?
A. Yes, sir.
Q. And you called for estimates for the year 1906?
A. Yes.
Q. And that call for estimates prescribed a minimum of three and one-half feet at the burner?
A. Yes.
Q. The Department recognizing that more than three feet would be supplied?
A. Well, it was mainly on account of mantle lamps.
Q. And substantially all of the lamps, as you have shown, were mantle lamps?
A. Yes, sir.

3451 Q. And of course, as the last contract called for three feet per lamp per hour you understood that the Consolidated Company could during that period, that is, the year 1905, bill the City only for three feet per lamp per hour, no matter how much more they actually supplied?

A. Yes.

Q. As a matter of fact the rate of $24.75 for mantle burners which was that fixed in the contract terminating March 15th, 1905, you considered under the conditions existing in New York as reasonable and recommended its acceptance, didn't you?

A. I did, very strongly.

Q. That was at a substantially lower price than the City had been receiving before?

A. Yes.

Q. Now, when you say that all bids for the year beginning March 16, 1905, or rather for the balance of the calendar year, because bids were only called for for the balance of that calendar year, were they, at that time?

A. Yes, sir.

Q. (Continuing:) Were rejected, isn't it true that all bids of all companies were rejected except some bids of the New Amsterdam or Standard Company?

A. Yes.

Q. And those bids of the New Amsterdam or Standard Company were made at a low rate in accordance with that condition which was made, you say, the consideration for their charters or franchises when granted?

A. Yes, sir.

Q. So that in the Borough of Manhattan, as a matter of fact, there were other companies which bid in competition with the Consolidated?

A. Not for mantle lamps.

Q. But they did for open flame lamps?

A. No company bid in the other fellow's area.

Q. However that may be, there were certain companies bid in certain areas in the Island of Manhattan where their areas were located?

A. Yes, sir.

3452 Q. Now, in reference to checking this $289,000 which the company states under the item of street lamps in Exhibit 94, I understand that the Schedule I in City's Exhibit 60 which you present shows in the first column "Lighting," plus the care of the lamps, &c., various items which might be called maintenance, making that first column read "Lighting and Maintenance?"

A. Yes.

Q. And after that the company presented a single bid covering the gas to be furnished and also its maintenance?

A. Yes, sir.

Q. That was not separated in the bid, nor was it separated in the bills of the company, nor is it separated in the payment by the City to the company?

A. No, sir.

Q. The second column on this Exhibit No. 60, Schedule I, refers to certain items of "Repairs," does it not, which were separately provided for in the contract, the company to receive a certain amount for each repair of that character?

A. Yes, sir.

Q. So that the contract with the City and the bids to the City, to sum up, provided first, that the company should furnish certain mantle or open flame burners, should maintain those lamps, including lighting and certain repairs, all for a lump sum, which in this case was $24.75 for the mantle lamps?

A. Yes.

Q. And some other sum for the open flame?

A. Yes.

Q. And in addition to that the contract provided that repairs of certain characters, such as you have defined, should be made at a certain rate for each repair?

A. Yes.

Q. And if the company making these repairs to which I last referred, expended in making them more than the contract provided that they might charge the City, that would mean an expenditure for that repair beyond what would be received from the City? 3453

A. Yes.

Q. Now, you understand from the testimony, do you not, that the sum of $289,000 specified in Exhibit 94, was reached as follows: The company took its expenditures for maintenance, which would come under the first column of Schedule I of City's Exhibit 60, and also take its expenditures for repairs which repairs would be charged off as individual items in the contract, and added the two together and deducted from that the amount which it might charge the City for those repairs; you understood that to be the case?

A. Yes.

Q. So that if the company expended more in making the repairs specified in the second column of Schedule I of City's Exhibit 60 than it received from the City for those repairs, the difference between what the City paid to the company or is to pay to the company altogether, and the amount of gas delivered at the rate specified in the contract, would not give the amount which the Consolidated Company covers by the $289,000?

A. That question is really in two parts, Mr. Mathewson.

Q. Well, I will put it this way——

A. If the company expended for repairs and the City paid for repairs, and the company expended more than the City paid there is a balance to charge off to profit and loss account, of course.

Q. In other words, you made this computation and endeavored to check the $289,000 item of Exhibit 94 upon the theory that the making of the repairs by the company or the cost to the company for making the repairs exactly equalled the amount which the City paid them for those specific repairs?

A. No, I didn't take that theory. The only information I had on the account at all was what I could derive from these bills.

3454 Q. But you know the company——

A. And what I had from Exhibit 94.

Q. But you know the company charged the City in the bills of course only the amount that the contract provided that the company might charge for specific repairs?

A. Oh, that might be.

Q. Don't you understand that to be so? In other words, if the company charged more for making any particular repair——

A. It would not be paid.

Q. So that you understand that the company in these bills charged to the City only the amount which it was entitled under the contract to charge to the City for that particular kind of a repair?

A. Yes, sir; sure.

Q. And if the company actually expended more in making the repairs than it was able to charge the city, then there would be an additional expenditure by the company for repairs which would not be accounted for by this analysis that you have made, would there not?

A. There would be a loss.

Q. In other words, it would be an expenditure by the company which they would not get back from the city?

A. Yes.

Q. Except as they got a lump sum for furnishing the gas and maintaining lamps and that reduced the amount per cubic foot which they really received for the gas furnished?

A. Precisely. If any of us made a contract, stuck to it and lost money on it we would have to charge to profit and loss a loss.

Q. So that until you knew the separate items and the amount of the separate items which the company really had to expend for repairs and maintenance as distinguished from the amount which they were entitled to charge to the City under the contract you would not be able to check definitely the $289,000, would you?

A. No. If you were losing money badly or making very much money.

3455 Q. Yes, exactly. In other words until you have those items showing what the company actually expended and what was included in the $289,000, you would not be able to make a check as to how the company came out in connection with these repairs and maintenance?

A. Not altogether; and yet if you assumed, for instance, that Mr. Addicks' statement is correct as to the cost of gas, the amount of gas that was sent out, and you assumed for instanec that it was seventy-five cents, and you take those figures on the last sheet and you subtract them from the total amount you received at the burner you would receive from maintenance $201,000. Now if you had paid out for maintenance $289,000 you would have a loss of $88,000.

Q. In other words, we would have an expenditure we should have to charge against something?

A. Yes, but not the entire $289,000.

By Mr. **Burr**:

Q. You mean to the extent of $88,000?

A. Assuming that were true. I am merely pointing it out for illustration.

By Mr. MATHEWSON:

Q. I am merely now checking another feature, which is this: If you take the entire amount which the Company is entitled to receive from the City for lighting and maintenance of lamps, plus the amount which the Company is entitled to receive from the City for repairs under the special terms of the contract, and deduct therefrom the amount of gas figured at three cubic feet per lamp per hour and the amount which it is entitled to charge the City for repairs, there would be a balance of expenditures which is represented by this $289,000, you understand that?

A. Yes.

3456 Q. Now, your analysis of these bills here which you have presented in these schedules does not at all contradict that result and it could not.

A. That is the way it is done.

Q. And you could not contradict it until you knew how much the Company expended in repairs and maintenance beyond the amount it received back from the City, could you?

A. No. But in a way we are not trying to contradict your amount.

Q. I know. Well, that is all right. I do not think we disagree at all. Now, let us take the question of the charge of operating cost of gas to these other expenditures in caring for the lamps. It is not the case that all of this $289,000, as I understood you to say to Mr. Burr, represents separate items which are charged by the Company to the City and for which the City must pay as separate items because certainly the greater part of that would simply represent a portion of the amount which the City is to pay the Company for its mantle and open flame burners, covering both gas supplied and maintenance in a lump sum, is not that correct?

A. Yes, that represents a portion of that amount.

Q. Now, so far as the items which are charged for individually by the Company are concerned, that is to say, these specific items of repairs that are covered as such in the contract separately, you understand that all of those items have been deducted in reaching this $289,000 already; do you so understand from the testimony?

A. Well, I had no information on the $289,000 at all.

Q. I didn't know but what you had Mr. Carter's testimony that those items had already been deducted in reaching this $289,000?

A. It does not matter whether they were or not so far as my analysis is concerned, but I didn't have all the evidence that has been introduced by Mr. Carter before me. I heard him the last time he was here.

3457 Q. I merely asked you the question because I think Mr. Burr's question and your answer were a little misleading, and I know they were not intended to be.

Mr. BURR: Let me call your attention to Mr. Carter's testimony upon the subject.

Mr. MATHEWSON: Well, call my attention to the portion to which I have referred, and not to something else.

Mr. BURR: Yes, page 661. I read it as follows:

"Q. You mean you spent $285,701.13 more than you received from the City? A. More than we received from the City for repairing lamp posts. The contract with the City for the maintenance of gas lamps and supplying gas is at so much per lamp per annum, and it does not include any repairs. There is a separate contract for the repairs, stipulating the amount to be charged the City for each class of repairs, and as that repairing is done the cost of work and labor and material is charged against this account, and this bill that is rendered the City for such repairs is a credit to this account.

"Q. And $285,701.13 is the amount you expended in the nominal year ending October 31st, 1905, more than you received from the City or charged to the City for that service, is that as I understand your statement? A. More then we charged to the City, for we received nothing."

Mr. **Mathewson**: That is quite right. In other words, the amount which the company actually expends in repairs is charged to this account. The amount which it charges the City and expects to receive on account of the repairs is credited, so that $289,000 is a balance; those items for which the company has specifically
3458 paid, such as repairs, &c., having been credited on that account and deducted in reaching the $289,000.

Mr. **Burr**: May I inquire whether you claim that this item on Exhibit 94 of $289,000 represents what you claim you spend more than you receive from the City for maintenance and repairs?

Mr. **Mathewson**: I could not state it any more clearly than Mr. Carter has already stated it.

The **Master**: Both of you say $289,000, and it is here in the record $285,000.

Mr. **Mathewson**: That is due to the difference between the nominal year and the calendar year.

The **Master**: He says very plainly here that it is a debit balance of the account.

Mr. **Burr**: It has been contended before the Gas Commission and, I think, stated here that this was merely a matter of bookkeeping.

Mr. **Mathewson**: No, no.

Mr. **Burr**: I shall have to call your attention to that testimony before the Gas Commission, Mr. Mathewson, and that it was, as I understand it, a charge for repairs for which they did not receive compensation from the City.

Mr. **Mathewson**: No.

(A colloquy now ensues between counsel which the stenographer is directed not to report.)

Q. Now, of course, Mr. Lacombe, this cost of maintenance, whatever it is, or this expenditure, if taken out of the operating
3459 cost of gas would be taken out of receipts on the other side?
A. Yes.

Q. So that when you came to take the difference which would be the fund applicable to dividends, there would not be any difference which way you treated it, would there?

A. Why, yes in your account as to the manufacture of gas.

Q. Yes, exactly, but I mean in getting the net profits which we might employ to pay return on our capital it would not make any difference which course you pursued.

A. The profit and loss account is not necessarily the cost of the manufacture of gas.

Q. I think we do not disagree that which ever way you treat it, the balance applicable to the return on capital would be just the same, whether you include this in the cost of gas or whether you include the corresponding amount in receipts or whether you exclude this from the cost of gas and exclude a corresponding amount from the receipts, when you come to figure the result is just the same?

A. So far as profit and loss account is concerned.

Q. And it is simply a question of what the operating cost of gas is and what should be charged in the operating cost of gas?

A. The question is the manufacturing cost of gas.

Q. Taking the irresponsible bidder to which you referred, and adding to his bid for maintenance only the amount of gas which would be required at three feet per lamp per hour at ninety cents or seventy-five cents as the rate provided by law, you would get a result of $23.95 per lamp per burner as against $24.75 by the Consolidated Gas Company?

A. Yes.

Q. But in case you made a separate contract for maintenance even with the irresponsible bidder, and the Company supplying only gas should insist on metering that gas at the lamp-post, it would 3460 be pretty sure, wouldn't it, that they would make the bill higher than $24.75 in vew of the fact that more than three feet per lamp per hour would be consumed?

A. I think it would unless it was governed by something like that.

Q. You took that into consideration among other things in accepting the Consolidated contract, did you not?

A. Yes.

Q. This year you say the Consolidated did not bid for the supplying of gas but only for maintenance?

A. That is all.

Q. Don't you remember there was some special provision in the Act or in the specifications which the Company considered made it impossible for it to bid? Was it not that the gas should be delivered within a certain pressure?

A. Above a certain pressure.

Q. Yes, above a certain pressure?

A. Yes, sir.

Q. And did not the Company say that in view of the pressure law they feared they would be unable to comply with that requirement and therefore they did not feel it safe to bid, in substance?

A. Yes, that is right.

Q. That was the position which a great many other companies took?

A. They all took the same position, and the reason it was asked for is you cannot operate a mantle lamp at a lower pressure and get any kind of service out of it.

Q. One and one-half is the minimum?

A. Yes.

Re-direct examination by Mr. **Burr**:

Q. Do you know of any repairs made by the Consolidated Gas Company to the lamps in addition to those that are specified in detail in the contracts?

A. Well, of course, the contracts do not specify the repairs of little parts of the burner and that sort of thing. It only makes a 3461 sweeping clause of all repairs to the lantern. The City does absolutely nothing; the Company does everything necessary to keep it in operation, no matter what it is.

Q. The object of your contract is to embrace all the repairs necessary to the lamps?

A. Yes, the bid is asked for on that basis.

By Mr. **Mathewson**:

Q. But most of these repairs are included in the lump bid for supply of gas and maintenance?

A. Altogether as to lanterns.

Q. Yes, exactly.

A. Entirely.

Q. And it is only other items of repair which are included in that separate clause and paid for at so much per repair?

A. Lamp-posts, yes.

By Mr. **Burr**:

Q. What is your understanding of this item in Exhibit 94 of this item of $289,000? What does it represent?

Mr. **Mathewson**: I think I asked the witness that and he said he was not informed on that point. He said he had not read the testimony.

Q. Let me call your attention to the testimony of, I think, Mr. Carter, at page 707 of the present record. I read it as follows:

"Well, this item of $289,259.09 represents, then, the entire debit side of the account? A. The entire debit side, account for maintenance and repairs less the amount billed the City for repairs."

Mr. **Mathewson**: Less the amount billed the City for these separate items of repairs. The supplying of gas and main- 3462 tenance of lamps are separate because they are never included by the City or the company in its bill.

The **Witness**: Yes, as far as the City is concerned.

By Mr. **Burr**:

Q. What is your answer to your understanding as to what this $289,000 represents?

A. It appears that according to that testimony after they charge off the amount for repairs to lamp posts there exists something left which included the cost of maintaining the lanterns and supplying them with gas and all that against which they would receive $24.75 per lantern.

By Mr. Mathewson:

Q. You don't understand that that $289,000 includes also an amount which the company will receive for the gas computed at three feet per hour per lamp at ninety cents per thousand?

A. No. I assumed it was a balance, I don't know just what balance it is. Of course I couldn't get that without seeing all your accounts. It was evidently a balance against which a further credit is to go, as I understood it.

By Mr. Burr:

Q. Your understanding of the matter is that the contract embraces all the repairs that were to be made and the maintenance of these lamps and everything was to be paid for in the price stated in that contract?

A. Yes, certainly.

By the Master:

3463 Q. Assuming this $289,000 represents a balance of account, an excess of the expenditure on repair account over what the company received from the City, would you modify in any way your answer to Mr. Burr's question as to whether you thought that was properly chargeable as an expense to gas making, to the cost of gas?

A. If I understand your question correctly, sir, if that was a balance to be charged off to profit and loss as a loss on a contract I should think it would probably go to the profit and loss account, but I do not think it should be charged to the cost of the manufacture of gas, which would be another account.

Q. Then I understand by that that you do not think anything that is in the profit and loss account should be charged as part of the cost of gas?

A. Oh, no. The profit and loss account would be made up by cost of the manufacture and distribution of gas and by other costs that they might be put to by losses in business.

Q. Bad debts, for instance?

A. Yes. Or if they had lost on a contract like this any such amount as that it would be almost worse than a bad debt. It would be foolish.

By Mr. Mathewson:

Q. But if you take bad debts, which may be incurred in a business reasonably well run, isn't that debt included in the operating expense of any industrial business and charged as a part of its operating expenditures before you reach the point where you deduct from total receipts in order to determine what is left for dividends?

A. That is true in certain ways, but it depends upon how the accounts are kept. The profit and loss account of a company, as I understand, must include every possible account of gain or loss. The manufacture of gas is part of the profit and loss account, but it is not all of it.

3464 By Mr. **Burr**:

Q. The repairs are a separate item altogether?
A. They might be part of it, but there are other items.
Q. In other words, a company that was not in the gas business, could enter into a contract with the City to keep the lamps in repair?
A. Yes. In other words, if you wanted to get at the cost of gas on this basis all you need do is to take the profit and loss account and divide it by the total production.

By the **Master**:

Q. Now, put the proposition in this way: Supposing that taking the dealings with the City as a whole the gas company made money on the transaction, they received from the City for their gas and repair more than it cost them for their gas and repairs and so forth, and yet at the same time in the single item of repairs to these lamp posts and so forth they actually paid out more than they received, would or wouldn't that repair item be in your opinion an expense of gas making or part of the cost of gas? There would be no loss on the contract as a whole, and yet in the single item of repairs, they would spend more than they got. Now, would that be part of the expense of gas making?
A. Not in my opinion, no. They make a contract for the sale of certain things and that would be a proper charge against the contract account. If they made a contract with me to sell me a whole lot of different things, they sell it to me at their price which I accept, and of course they have to look to themselves for protection on the price. If they do not make money on the contract that is bad business for them.

3465 & 3466 By Mr. **Burr**:

Q. There is nothing to compel them to make the contract, is there?
A. No, nothing.
Q. The City might make these repairs themselves?
A. There is nothing to compo*le* them to make the contract at those prices unless they wanted to.

Mr. **Mathewson**: And nothing to compel us to go into the gas business at all.
Mr. **Burr**: This is an amazing thing that you are losing $289,000 on a contract with the City.
Mr. **Mathewson**: No, do not say that again, because afterwards you will apologize when you understand it.

Q. Would it not be possible by making an unwise contract to have the Company expend such an excessive amount on maintenance as to make the apparent cost of making and distributing gas in amount double?

A. Reduced to an absurdity, yes.

At 3.45 p. m. adjourned to Monday, October 29, 1906, at 10.30 a. m.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 61.

3467 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucien L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

New York, Monday, *October* 29, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3468 **Edward W. Bemis** resumed.

Redirect examination by Mr. **Burr**:

Q. Professor, Mr. Mathewson alluded on page 3100 and asked you whether you had been advocating and were still an advocate of municipal ownership. Has the fact of your former advocacy af municipal ownership or your ideas upon that situation or proposal affected your judgment at all in this case?

A. It has not. In fact, I might add that while I have been employed in a good many gas cases, I have never been employed in a case, so far as I recall, in which the question of municipal ownership was up at all, except, I may say, that Montreal asked for what it would cost the city to put in and operate a plant; to that extent, that was an exception; but, barring Montreal, I would say that municipal ownership has not entered into it at all.

Q. Do you consider that municipal ownership is in any degree directly or indirectly an issue in this action?

A. No.

Q. You were retained by the city, were you not, months ago to support the claim of the city of this action, that the rate fixed to the city and the rate fixed as to the general consumer are no- confiscatory, as would appear by the evidence in this case?

A. I was so retained by the city many months ago.

Q. Had Mr. Hearst or Mr. Shearn anything directly or indirectly to do with your testimony or your action or your activity in this case?

A. No.

Q. You were acting solely, were you not, in behalf of the corporation as represented by myself?

A. Certainly. I don't think they even knew of my being retained at the time I was retained.

3469 Q. Now, before taking up in detail the points brought out on your cross-examination, do you desire to make any changes in the statement you gave on direct-examination, and if so, will you briefly state what such changes are?

A. I have discovered only two or three points bearing on the matter of cost of gas in which I see any occasion to modify what I gave on direct-examination. Those changes that I am now able to make are these:

First, an item of about $196,000——

Mr. Mathewson: Can you give us the page where this testimony occurs which you propose to correct?

The Witness: Well, it practically all relates to the table on capitalization.

Mr. Mathewson: You need not take time to look it up.

The Witness: Pages 3046 and 3052 practically summarize the points I wished to refer to. On page 3046 I omitted in the capitalization an item of $196,419.01, being the increase during certain months in the middle of 1884, between the time when Mr. Yalden made his report and the time of the final consolidation. Six per cent. on that, however, would only be $11,760, or less than one-tenth of one cent per thousand feet of annual sales.

The second change is that I included in miscellaneous income, which should properly be deducted from expense, $5,000 from dividends of the National Coal & Coke Company. That I now think should not have been included. That item of $5,000 a year plus the six per cent. on the $196,000 just referred to, makes about $16,760, or about one-seventh of one cent per thousand feet of sales.

3470 Finally, in bringing out the reasons for allowing an operating cost of 48.63 cents, which I used on page 3052, I made a statement that I did not think more than one cent per thousand feet in the cost of the gas at the Consolidated Coal Gas plant as compared with the coal gas works of the Central Union was due to the difference in the price of coke. My later computations, which I will give more in detail a little later this morning, makes me belive that about four cents is the real difference as far as affected by the price of coke, or three cents more than I allowed. And I further think that there is a small point in the matter of somewhat larger repairs being necessary in a plant like the Central Union, requiring or using machinery. I think one-half cent to one cent

per thousand feet will cover that difference, while, as I have said, I will allow three cents more on account of difference in the price of coke, or a difference of four cents in all per thousand feet of coal gas sales. This four cents multiplied into the three billion feet, substantially, of coal gas made and divided by the thirteen billion feet of all gas made, only adds about one cent to the cost which I allowed per thousand feet so far as due to this larger allowance for coke and for repairs of the coal gas machinery, charging and drawing machinery, coal handling machinery generally, at the Central Union works. This added to my 48.63 cents would make 49.63 cents. I do not state that the cent ought to be added, because it may be that there should not be that difference in the price of coke with proper energy in the sale of it by the Consolidated, but the facts seem to indicate that there is that difference, and on that basis, then, I find, not that my former reckoning was wrong, for there is the difference of operating cost between the Central Union and the coal gas plants of the Consolidated Gas Company, which I stated, and which I used as one of the factors in reaching the 48.63 cents.
3471 I merely add now that perhaps one cent of the expense is inevitable on the part of the Consolidated, so that 49.63 or, roughly, about 50 cents may be the just operating cost that up-to-date plants on the island, doing as good work as the New Amsterdam, Central Union and Standard, and with such price for oil as is paid in eastern Massachusetts, and with the seven cents allowance for distribution expenses, other than taxes and repairs, instead of the 9.45 claimed by the company——

Mr. Mathewson: And without any allowance for reserve fund if one should be allowed?

The Witness: Yes.

Q. Is that as fully as you wish to state?

A. Other points may come up as you go on, but I think that is all for the present.

Q. On page 3098 of the testimony you were asked by Mr. Mathewson as to your connection with the Cleveland Water Works and the nature of your duties in connection with those works, having called attention to the fact that you never actually operated a gas plant. Will you tell us a little further than you did in reply to that question what your duties are there in that water works plant?

A. The management of the entire department. We have a very large pumping station, which consumes over 60,000 tons of coal a year. We have about the same mileage of mains and of larger average size than those of the Consolidated Gas Company. We have the same problems of repairs of mains, electrolysis, etc., and services which they have, only water mains are always attacked worse than gas mains if there be any electrolysis. We have the same problems of reading meters and making out bills, for Cleveland during the last four years has attained the position of
3472 having the most water meters of any city in the world; I have set over fifty thousand; and the collection department and general office expenses are somewhat on the same basis as a gas works; so that the problems are not so very distinct and different.

To be sure, the City of Cleveland is not as large as the City of New York only half a million instead of over two million; but we have 70,000 services in use and we have to deal with every consumer in the city; they all use the city water.

Q. So, in your opinion, many of the questions which arise in a gas plant arise in this institution of which you are superintendent?

Mr. Mathewson: I object. I think that is a conclusion.

The Master: Oh, Well, that is a conclusion which I could draw, I should think. He has already said the questions are similar.

Q. Now, Professor, on page 3105 you were asked if you had not read the testimony that the Central Union Company was able to sell large quantities of its coke to the New York Central & Hudson River Railroad Company, which was delivered on the cars of the company, which were run into the station yards for that purpose, so that there was apparently no expense in storage or handling or breakage incident to the rehandling of coke, and you stated that you did not remember fully. Have you anything further to add to that suggestion of Mr. Mathewson's now?

A. I have not yet come across the reference to some of the coke of the Central Union being taken by the New York Central, but I have come across this important fact, which is given in Exhibit 22 of the Central Union Case, pages 210, 212 and 215 of the printed copy of the Central Union case on appeal: Out of 85,167,560
3473 pounds of coke produced for sale by the Central Union Com-
pany during this year we are talking about, ending October 31st, 1905, 23,155,050 pounds were used in the water gas department, and the rest, 60,012,510 pounds were sold for the gross price of $114,663.76, or nineteen cents per hundred pounds; while the expense for the cartage borne by the Central Union Company on that coke was $20,935.91, or three and a half cents per hundred pounds, leaving a net price of 15.5 per hundred pounds. This would indicate that the Central Union had to pay nearly twenty per cent. of its gross receipts for coke in order to cover cartage.

In a similar way I found in City's Exhibit 56, which was Exhibit 145 before the State Gas Commission, that the cartage and labor of handling the coke produced at the 14th Street station was 2.7 cents per hundred pounds of coke, or also about twenty per cent. of the gross price of said coke, which was 13.8 cents. And 42d Street, according to the same exhibit, the cost of cartage was only 1.1, or about nine per cent. of the 12.9 gross price of the coke produced at that station. On the whole, then, the cost of labor and cartage of coke to the 14th and 42d Street stations was less than to the Central Union. This is largely due, I believe, to the fact that much of the cost of coke delivered in the case of the Consolidated was borne by another company, known as the National Coke & Coal Company, but the facts just given show that the Central Union does have considerable expense in the cartage of coke.

Q. Now, on pages 3111 and 3113 you were asked how you got the figure of $3.23 a ton for coke made by the Central Union and what was the market price of the coke sold by the Central Union rather than the price at which they valued the coke transferred from the coal gas to the water gas department of the plant. What have 3474 you to say about this?

A. As I stated in my testimony, I obtained the quotient of $3.23 a ton of coke at the Central Union by reducing the 23,155,050 pounds of coke to tons, transferred from the coal to the water gas department of the Central Union, and then divided the number of tons into the $37,381.56 given by the company as the value of said coke. In doing this I assumed 2,000 pounds of coke to the ton, as that is the number of pounds in the ton of coke that I was familiar with in Cleveland and the West generally, and which I supposed applied to New York City, although I knew that coal was bought by the long ton of 2240 pounds. Mr. Carter, however, I understood to say during my cross-examination, that he had used a ton, in the case of coke, to mean a long ton.

Mr. Burr: Is that a fact, Mr. Mathewson?
Mr. Mathewson: Yes.

The Witness (continuing): To mean a long ton, as Mr. Carter now states; the same as in the case of coal; consequently, in making any comparison between the price of coke per ton in the Central Union and the Consolidated Gas plants I should have used the long ton, which would, of course, have reduced my divisor about ten per cent. and increased the quotient or value of coke at the Central Union about ten per cent. The number of tons would have become 10,377 instead of 11,577½, and the average price would have become $3.62 instead of $3.23.

With regard to the other point, as to whether the Central Union valued the coke used in its water gas at the same price at which it sold its coke, I have discovered, as already stated, that the 60,012,510 pounds of coke sold yielded nineteen cents per hundred 3475 pounds before deducting cartage, and 15.5 cents after deducting cartage.

Now, I found that the 23,155,050 pounds of coke used in the water gas plant, which was valued, as I have stated, at $37,381.56, or 16.1 cents per hundred pounds, is in reality .6 of a cent higher per hundred pounds than the net price received for coke sold in the open market. I do not, therefore, recognize any unfairness in the figure I took, but would have used, of course, the absolutely correct figures if I had been possessed of this later information, which I was not aware was in existence at the time of my testimony on direct examination.

Q. How was it you did not have those figures at the time of your direct testimony?

A. It was because the evidence from the Central Union on that point was not in the typewritten volumes of evidence bearing on the Central Union case that I had the privilege of examining.

Q. You mean the exhibit which Mr. Mathewson called your attention to in the printed copy of the testimony in that case was not part of the typewritten record which the City had in its possession?

A. Yes, sir, and I did not know that I could have consulted an original copy at the office of the Gas Commission. I was not familiar with the fact that there had been such a statement presented to the State Gas Commission.

Q. So, after having an opportunity to consult those figures, you are glad of an opportunity to correct your testimony in that regard?

A. Yes. I may say I had prepared a form of question for Mr. De Ford to present to any gas companies outside of the Consolidated that he wished, but as I did not appear in those cases and they came later than the Consolidated, I was not aware to what extent he had obtained information along those lines.

3476 Q. And that refers to the Central Union?

A. Yes.

Q. You were asked on page 3116 whether the price which the Consolidated gave as the value of coke at its coal gas plants and the price which it charged itself for coke in its water gas plants corresponded to the price which it obtained for coke in the open market. What have you found as to that, Professor?

A. The coke produced for sale at the 14th Street station in the year under discussion, ending October 31st, 1905, was 57,844.06 tons, or 129,570,694 pounds. The gross value of this was given in City's Exhibit 56 as $178,527.11, or 13.8 cents per hundred pounds. The net value, after deducting cartage, was given at $143,706.08, or 11.1 cents per hundred pounds. Likewise, in the case of 42d Street, the 56,932.93 tons, which is equivalent to 127,529,763 pounds, produced for sale in the coal gas plant is given as worth $164,999.83, or 12.9 cents per hundred pounds, less cartage of $14,234.34, or 1.1 cents, leaving a net value of 11.8 cents on 33,955.43 loads. The 33,955.43 loads, or 50,933,145 pounds of coke, counting 1,500 pounds to the load, sold by the three water gas stations of the Consolidated, is given as worth, after adding cartage, $74,862.97, or 14.7 cents per hundred pounds. The difference between 14.7 cents at the water gas stations and 11.8 at the 42d Street coal gas plant, a difference of only about 3 cents per hundred pounds, does not appear to me unreasonable in view of the fact that the coal had to be carted from the coal gas to the water gas stations. With respect to the comparison between either price and the price at which the coke was sold in the open market, I have the following information:

In City's Exhibit 44, page 804, being a reprint of an exhibit before the State Gas Commission, prepared by the gas
3477 company at my request, appears this question:

"Amount of coke and receipts therefor?"

In their answer the company gave the coke produced for sale at both the 14th and 42d Street stations and its value, and then deducted the labor and cartage, and that let the figures which I used. I don't see what better evidence I could have that the company professed to give the actual receipts for coke at the two coal gas stations.

I also find in State's Exhibit J (page 414-a) that the coke sold by the Consolidated during the calendar year ending 1905, to outside parties, was 117,940.7 loads, for which $260,118.34 was obtained or $2.205 per load was received. The coke used at the water gas stations (same exhibit) is charged at practically the same price, $2.25, taking account of cartage, and the same represents the figure I last gave for water gas. That same value is placed on the coke used at the distributing stations and shops. I do not see, therefore, that I made any mistake in taking the receipts for the coke of two coal gas stations of the Consolidated as given by the company in City's Exhibit 56.

Q. I call your attention to the bottom of page 3117, where Mr. Mathewson states, so far as the cost of the Consolidated gas as a whole is concerned, it makes no difference; it credits its coal gas plants with coke transferred to the water gas plants and charges the water gas plants correspondingly, provided it used the same figures. Has the statement you have just made answered the objections made by Mr. Mathewson on pages 3116 and 3117, as stated by him?

A. I think they do. It seems to me, so far as I can learn, that the price to outside parties, taking account at least of cartage, is 3478 substantially the same as the price at which the coke was transferred between the coal and water gas stations of the Consolidated.

Q. On page 3119, your attention was called to the fact that the cost for labor at the Central Union was 5.89 cents per thousand feet in making coal gas, while at 14th Street 7.65, or about thirty per cent. higher, and at 42d Street 11.52, or about twice as high, and you were asked on page 3119 and 3120 whether this might not be explained by the fact that the coal and water gas were made under the same roof, and therefore economies might have occurred because of that fact. What have you to say as to that?

A. I don't see how the economies could have been any greater than the economies that might occur at the 14th or 42d Street stations, provided they were up to date, for at either one of the latter two stations the coal gas made is not greatly different from combined coal and water gas at the Central Union station.

Q. On page 3130 your attention was called to the fact that according to Exhibit 171 before the State Gas Commission, the reported price of the coal and water gas furnished by the Central Union to the Consolidated during the four months ending October 31st, 1905, under the new law as to candle-power was 34.45 cents, indicating operating costs of 31.33 cents. How much lower do you find that to be than the station cost of the gas made by the Consolidated as given in the same exhibit?

A. It is 34.35 cents. I have it here. The difference is 4.27 cents. Exhibit 171 reports the cost of the gas made by the Consolidated for those months as 35.6 cents. This exhibit was prepared by the company.

Q. On page 3130 you are quoted as stating that in Table 7 you had reported the station cost of the Standard Company on page 2078 as 20.23 cents for the year ending October 31, 1905. How should 3479 the answer have read?

A. It should have read page 2978 instead of 2078, and the cost should have been stated as 30.23 cents. It must have been a typographical error.

Q. On page 3132, you were asked by Mr. Mathewson if it was not to be expected that there would be a difference of one cent or two cents in the cost of manufacture of gas between different companies in the city. Have you anything further to say on that point?

Mr. Mathewson: The answer was yes, wasn't it?

A. I would merely like to emphasize the fact that the difference in this company was more than was stated in the question. It was 2.77 cents, taking account of the difference in candle-power and meant a difference in the total production of water gas of the Consolidated as stated on page 2980 of $201,753.30. I am surprised to find that the largest company——

Mr. Mathewson: I move to strike out from "I am surprised to find——" If the Court pleases, the question was whether he would not expect a difference of a cent or two, and his answer was yes, and this examination so far as this point is concerned is not re-direct at all, it merely goes into a different subject.

Q. What do you find the fact to be?

A. I find the largest and the oldest company has the larger cost. If I had taken the New Amsterdam Company alone for comparison with the Consolidated I would have noted that it not only operated at a cost of 2.28 cents less but furnished an average candle-power of .88 of a candle more; worth, according to the claims of the 3480 Consolidated, over .72 of a cent on the basis of oil at 4.04 cents per gallon. This added to the 2.28 makes 3 cents of inferiority on the part of the Consolidated. This multiplied into 7,850,323,000 feet of coal gas made by the Consolidated means an excess cost of $235,510.00 or more than the figures which are used in Table 7 on the basis of comparing the Standard and New Amsterdam together with the Consolidated water gas stations.

Q. You were asked on page 3134 as to the candle-power maintained in Boston and whether they did not there maintain an average of 3 candle-power above the standard and you said they did. Have you any further information on that point?

Mr. Mathewson: Is it necessary? I thought he had finished his direct testimony.

Mr. Burr: Well, as to the reason for that.

Mr. Mathewson: I asked him whether the candle-power was greater and he said it was about 19. I cannot see any point in going into that further, I confess.

The Master: I do not see what the point of it is unless the question is made a little more specific, Mr. Burr.

Q. Have you any reason to qualify the answer given by you at that time?

A. I am rather strengthened in my position by observing that in London according to Field's Analysis——

Mr. Mathewson: I protest against this.

Q. In what respect?

A. Why there is only a difference of half a candle-power there between the legal requirement and what they maintained.

Mr. Mathewson: I move to strike out all this statement. The simple question was whether in Boston the candle-power was 3481 19 and he said it was and showed by the report filed with the Commission exactly what it was. He apparently wants to proceed and put in additional arguments here in his re-direct which he should have presented in direct, if at all.

The **Master**: Strike it out.

Mr. **Burr**: Exception. You were making a point as to the fact that the candle-power in Boston was of a different kind from that in New York and you were drawing an inference which I wish to rebut, if I may, by his explanation.

Q. You were asked if they did that to obey the law. Now, I want to know whether you found that to be the fact or not. Did they?

The **Master**: He said they did not do it to obey the law and he was asked what he understood they did it for, and he said to compete with electricity, and because it was a good policy.

Mr. **Burr**: If he has upon investigation any reason to qualify his answer, I suppose he is entitled to qualify the answer in any respect. It is not a cast-iron rule that after giving an answer you must be bound by it, even on his re-direct.

Mr. **Mathewson**: If his answer is wrong, I have no objection.

Mr. **Burr**: Or if he wants to modify or give additional reasons for his answer he is entitled to do it. The Master has ruled it out. I take an exception, and you may answer.

A. The last issue of Field's Analysis of the principal British gas illuminating companies for the year 1905 shows that the dif- 3482 ference in London between the prescribed candle-power and that supplied was only .48 of a candle in the case of the London Gas Company and .6 of a candle-power in the case of the South Metropolitan Company, and did not exceed a candle in the case of eight out of twelve suburban London companies.

Q. And from knowledge of these facts would you conclude there is actually no necessity for the large difference which exists between the prescribed candle-power and the actual candle-power as found by the tests both in Boston and in the City of New York, as relates in the first instance to the Boston companies, and as relates in the City of New York to the Consolidated Gas Company?

Mr. **Mathewson**: Objected to as leading in the highest degree, and as a conclusion which the witness is not qualified to draw, as not being a gas expert; and if it depends upon figures that he presents the Master can draw it just as well as he can, if it is to be drawn.

The **Master**: I think the question is objectionable, Mr. Burr.

The **Witness**: Here is Field's Analysis. I can verify my figures if anybody doubts them.

Mr. **Mathewson**: It is not a question of doubt. It introduces another subject that we ought not to go into.

Q. Well, what do you conclude from these facts that you have stated?

Mr. **Mathewson**: Objected to on the grounds just stated to the last question.

Objection sustained.

Mr. **Burr**: Exception.

3483 A. I consider that it tends to show that it is not necessary to have any such large difference as exists in Boston or existed during several months of the last two years in New York City.

Q. You were asked at the bottom of page 3134 by Mr. Mathewson this question:

"In your examination of the tests of Professor Love subsequent to July 1st, 1905, did you find that in spite of the average that the Consolidated Gas Company maintained, yet, on various occasions, the candle-power has dropped to 22 or very close to it."

Have you investigated that matter further and do you wish as a result of such investigation to modify your answer in any respect?

A. Yes.

Q. Please do so.

A. I misunderstood the question. I thought it related to the whole year 1905 and not simply to the last six months. I did not grasp the word "subsequent," in other words, in the question. During the last six months of the year there were 151 days on which the gas in each of the five stations was tested by Dr. Love, making in all 755 tests. There were only five days in which the average of the tests of the five stations fell below 23 and only one day in which it fell below 22.6. Of the 755 tests at the individual stations only thirty fell below 22.5, while there were 175 tests or nearly one-quarter of the whole that were over 25, and more than six-eighths were above 23. The candle-powers fell below 23 chiefly in September and October, yet the average even for the lowest month, September, was 23.65. The average candle-power for the six months were 24.18 while the law only required 22. The average candle-power during the last half of 1904 when the law required 20 was 21.08. In other words, during the last six months of 1904 3484 the company gave 1.08 candle-power on the average in excess of the legal requirement, but during the last half of 1905 it gave 2.18 candle-power in excess of the legal requirement.

Mr. **Mathewson**: Now, if the Master pleases we are met with this proposition: I asked the witness in order to test the care of his computation as to whether he had examined the individual or had made the individual examinations to see whether on various occasions they did not drop below 22 (page 2134). He said yes they did, he said in another place he had not the individual computations with him. Now the witness goes off between the cross and re-direct, makes an examination, brings in the year 1904 and makes another argument which was not called for by the questions at all, and it strikes me it is not proper or fair re-direct examination. If the examination had continued at that time it would have been ended and I do not think that the witness's subsequent investigations are matters of re-direct examination.

Mr. **Burr**: If a subsequent investigation requires any explanation or modification of his answer made during some question you put, he is certainly entitled to give it on re-direct examination when you have not called his attention to the situation by your cross.

Mr. **Mathewson**: He has now gone into a subject which requires a further examination and gives an answer that is simply poppy-cock when the facts are concerned.

Mr. **Burr**: I move to strike that out.

The **Master**: Gentlemen, I think we had better stop all the speeches. There is no motion before me. The question was
3485 proper if Mr. Mathewson did not object and has not moved to strike out the answer.

Mr. **Burr**: The table showing the variation between the prescribed illuminating power and that actually supplied by the London companies appears upon page 2 of Field's Analysis, and I think at this point I will read it into the record. I think this is recognized as the standard book upon the subject.

The **Master**: I understood I had already excluded this question of going into the London candle-power as not re-direct examination. I allowed this last question with regard to his examination of Professor Love's tests on a different theory altogether, but the London candle-power matter was excluded and I shall make the same ruling if Mr. Mathewson objects to it.

Mr. **Mathewson**: I object to it.

The **Master**: Objection sustained.

Mr. **Burr**: Exception. The point is, if it should be allowed, I want to have coupled with the answer the actual official proof contained in these two lines of the facts which I wish to have before the Court; that is, as to the amount of candle-power required, and the actual candle-power supplied.

The **Master**: I will exclude it, the reason being that when the witness was on the stand before the witness was asked some questions on the subject and stated he did not know the facts regarding the London candle-power, and I do not think it is proper re-direct examination for him to go off during the recess and come back with a new set of theories or tables on the subject, based on those statistics.

Mr. **Burr**: Not even if it tends to modify his former answer or explain his former answer.

3486 The **Master**: Well, I do not see that it does.

Mr. **Burr**: Well, I won't stop to read that into the record. Attention has been called to the place where the tables appear and he has already stated in his answer the exact figures with regard to the candle power actually required and that actually supplied.

Q. Much time was devoted to, and many questions were asked you regarding, the alleged conflict in your testimony with respect to the price of oil in Boston at the time of the hearings before the State Gas Commission on pages 3141, 3147, 3159 and 3166?

A. Yes.

Q. Is there any correction you desire to make in your testimony in that regard, or do you wish to amplify it in any way?

A. The only mistake I have discovered in my testimony at any time with regard to this matter was on page 3142 in reply to a question by Mr. Mathewson when I stated that the price of about 4½ cents per gallon in Boston was the average price for the year ending June 30th, 1904. In reality it was, so far as I have been able to ascertain, the average for the following year, but I had not looked at my notes on that subject for a long time and got the date wrong. That contract in Boston, a copy of which has been produced by Mr. Mathewson on cross-examination, was dated May 9, 1904, and was for 7,500,000 gallons of oil. If it began to run immediately thereafter the oil would probably have been all used up under that contract by July 1st, 1905, for the Boston companies use 6,200,000 gallons of oil every twelve months, which I learned from their return to the Massachusetts Gas Commission. Therefore in the light of the fact that the oil used in Boston with the exception of one-half of one per cent. of naphtha during the year closing June 30, 3487 1906, averaged only 4.01 in price, although mostly only 34 degrees gravity, is an indication that a new contract has been made since the one I saw. When I was asked, January 9, 1906, in testimony before the State Gas Commission (pages 1303 and 1304), with respect to the price of oil in Boston, I was not asked, neither could I have told, what price was then being paid in Boston, but I was asked about the contract I had seen a year before and I didn't know in January, 1906, that the price had fallen in Boston six months before I testified here in New York.

Q. Referring to page 3157 and to the letter which was quoted on that page from President Richards of the Boston Company, and to your subsequent cross-examination upon that by Mr. Mathewson as to the situation in Boston, regarding the kind of oil and the price of oil, have you anything further to add?

Mr. Mathewson: Is this a correction?

Q. Or do you desire to modify your answers as given on your cross-examination, in any respect?

A. Yes.

Q. If so, please proceed.

A. In table 4 of my testimony (page 2972), I gave the gas oil used by the Standard Gaslight Company during the year ending October 31st, 1905, as 11,639,544 gallons, costing at 4.0903 cents $476,100.56. I also gave in table 5 the gas oil used by the New Amsterdam Company as 23,175,882 gallons at 4.0023 cents or $927,577.18. The total oil used——

The Master: How does this have any bearing on this testimony to which you have called attention at page 3158, that is, about the price of the Boston oil.

3488 Mr. Burr: In instituting a comparison with the situation in Boston, he relied upon information which was contained in that letter. That information was subsequently modified by an additional letter from President Richards, which was sent to him evidently as a result of having a communication from the complainant company, and upon the new situation as he finds the facts to be from President Richards' second letter, he desires to make this explanation which may affect the tables he gave, Nos. 4 and 5.

The Master: What he is saying is to modify his table on page 2972 instead of modifying his testimony on page 3158.

Mr. Burr: But so far as that testimony given on the latter page affects those tables on the prior pages in the item of oil——

Mr. Mathewson: But this testimony on the prior page 2972, is taken bodily from the Exhibit in the case of the Standard Gaslight Company before the State Gas Commission, simply taking the items of manufacture, showing or purporting to show the station cost to the Standard Company as per the Standard Exhibits. This table 4 is simply part of the Standard Exhibit before the Gas Commission and has nothing to do with Boston, and none of the figures there are made up from the Boston prices or purport to be.

Mr. Burr: You have laid great stress upon his testimony as to the price of oil in Boston. Now——

Mr. Mathewson: What has that to do with this Standard Gaslight Company Exhibit?

Mr. Burr: He is now proceeding to call your attention to the facts as he has ascertained them positively to be in connection with 3489 the Boston oil situation and as the same can be applied to these exhibits that are now in evidence referred to.

Mr. Mathewson: Oh, that is a further argument, then. I object to this, Mr. Master, as not redirect-examination; and, furthermore, as being immaterial anyhow.

Mr. Burr: I think it is very material because he originally started out to institute a comparison between the situation, so far as oil is concerned, that exists in Boston and New England and the City of New York, and you by cross-examination showed that in certain respects he had possibly made a miscalculation. On his re-direct I asked him now to explain fully with regard to the particular matter of oil and its similarity or dissimilarity as the situation exists between New York and Boston.

The Master: I will overrule your objection, Mr. Mathewson.

Mr. Mathewson: Exception.

The Witness (continuing): The total oil used by the two companies was 34,815,426 gallons, costing $1,403,677.74 or 4.032 cents per gallon. This indicates that all the oil used by these two companies was 28 degrees gravity because the testimony is that they used the oil bought on the contracts of the Consolidated Company, which provided that the 28 degrees gravity during that period should cost only 4.04 cents. It is also to be noted that using that quality of oil, those two companies were able to maintain an average candle-power every month, with the exception of one month in the case of the New Amsterdam, sufficient to comply with the new law as to candle-power, as I showed on page 2995. Similarly, the 3490 Consolidated Gas Company, as shown in Exhibit 93, paid an average of 4.08 cents, which would indicate that 92.6 per cent. of the oil was of 28 degrees gravity Beaume test. Now, I have here the copies of the annual reports of several Massachusetts companies for the year ending June 30th, 1906, recently filed by these companies under oath with the Massachusetts State Gas Commission. From this it appears——

Mr. Mathewson: Now, just a moment. I again renew my objection, especially to this matter which the witness now proposes to go into. He has examined since the adjournment reports of other Massachusetts gas companies and proposes to deduce other arguments from those. Is that fair?

The Witness: It is practically the same companies.

Mr. Mathewson: Well, the same companies.

The Master: I will allow him to proceed.

Mr. Mathewson: Exception.

The Witness (continuing): From this it appears that the average price of oil at Springfield given on page 22 of the return was 3.6 cents, average price of oil in Fall River was 3.01 cents; in Lynn 3 cents; in Lowell 3.13 cents, save for a small amount of naphtha. I have no evidence as to the quality of oil used by Springfield or Fall River but Lynn used 28 degrees gravity and Lowell used 29 degrees gravity. I have here a letter from Mr. A. C. Pease, superintendent of the Lowell Gaslight Company, dated October 10th, in which he makes the statement that the oil used was about 29 degrees Beaume. An engineer and personal friend of mine has been informed——

3491 The Master: That is a little beyond anything that there is any justification for.

Mr. Mathewson: I move to strike it all out.

Q. What do you say as to Fall River?

The Master: This very table about which the witness says he is testifying now, I do not see that what he has thus far said has any relevancy to the table. This other table on page 2972 was put in evidence at the hearing of October 16, and he is now referring as part of his testimony to a letter from a man in Lowell on October 10th, if the letter from the man in Lowell on October 10th had any relevancy to the issues here it should have been produced on his direct-examination.

The Witness: I had it then in my hand right here.

Mr. Burr: Mr. Mathewson, as you remember, devoted a great deal of time to weakening the point he originally made in regard to the oil contract, and I want to give you all the information he has had. It is only a very short matter now.

The Master: You are quite right in that, Mr. Burr, but it seems to me only fair to Mr. Mathewson that if there is to be any correction or any change in the testimony brought out by him on cross-examination that it should be done by specific questions and manifestly not to open the door for a long disquisition or general statement by the witness on subjects which apparently ought to have been taken up on his direct-examination. It is unfair to opposite counsel. It imposes too much of a burden on him. You will have to take the witness in hand and question him as to the specific matters 3492 you want to bring out. There is evidently a long discourse here, the relevancy of which is not apparent to me.

Mr. Mathewson: I might add to that that it compels me to waste the time of this tribunal either in cross-examination to bring out the facts and distinctions, or else on my own case to take the time to do it then. It is easily answered, but it takes time.

Q. What do you find the oil used at Fall River to be, so far as the gravity is concerned?

Mr. Mathewson: The witness has already stated his information on that subject and the sources of it, which is not very conclusive.

Q. Will you be a little explicit so that we can have this matter cleared up? What is it you desire to show by these figures you are now ready to produce before the Master?

A. I desire to say this. On my direct-examination I gave the fact about the price of 28 degree gravity and of 34 degree gravity oil in two or three places in Massachusetts. A great deal was made of the modification as to the 34 degree gravity by President Richards, and some aspersions were cast upon the accuracy of the 28 degree test, of the price of that. I wanted to back up my statement as to the 28 degree test and show by last year that was practically the only oil used in New York anyway and that the Standard and New Amsterdam maintained the full candle-power on that. Also that whatever becomes of the price in Boston it does not account for 5 per cent. of the whole business. Practically the whole thing is a 28 degree gravity oil, and that remains unassailed except some suspicions were thrown out that it could not be correct and I am very sorry
3493 that I left at the office the letter—I will bring it this afternoon, from Superintendent Pease of Lowell regarding oil being 29 degrees Beaume test and also bring down the Massachusetts Gas Commission report from Lowell which is handed in under oath by Lowell, showing it was 3.13 cents, Lynn 3 cents, and Fall River 3 cents.

Q. In other words you wish to call attention to the fact in connection with your prior testimony that ending October, 1905, the Consolidated began to pay 4.29 cents for the same quality of oil, or more than 1¼ cents in excess of the price in Eastern Massachusetts?

A. Yes.

Q. Which locations are further from the oil fields, I believe you testified on your direct-examination?

A. Yes, exactly.

Q. And it appears further that they began mixing with this oil an oil costing them 4.875 cents per gallon, making an average cost, if they mixed it equally, as they did during the last six months of the year 1905, of 4.58 cents?

A. Yes.

Q. And you wish to draw the comparison which that statement——

Mr. Mathewson: Hasn't he drawn the comparsion in his direct-examination? Every particle of that he has gone over, drawn his comparisons between the cost of oil here and the cost he said it was in Massachusetts, and figured out the difference and said it would make, taking this and other things into consideration, something like six cents difference, that he thought we should take advantage of in New York if conditions were as he assumed them to be.

The WITNESS: The only point I chiefly had in mind was
3494 that the modification in Boston scarcely affected the situation
five per cent., because the oil used here was mostly up to within a few months——

The MASTER: So far as I can see, this is all a matter of argument from the facts you have testified about on direct-examination.

The WITNESS: Well, I will put in the letter this afternoon, if I may, from the superintendent at Lowell.

Mr. MATHEWSON: I shall object to the letter.

Q. And from these figures that you have given here and your previous testimony given here, what would you say as to the price for oil as given in Exhibit 93, to what extent that is reasonable or exorbitant in your opinion, over and above the price to which you have referred, that applying also to the price of oil as given in Exhibit 94?

Mr. MATHEWSON: Exhibits 93 and 94 show the costs for the nominal and calendar year 1905. The witness is asked what his opinion is, whether it is exorbitant what we pay. He has shown what we pay and purports to give from one source or another what other companies have paid. There is no comparison of conditions, and the witness never bought any oil, yet he is asked to state whether the price we pay is exorbitant. It is utterly incompetent.

The MASTER: There is a lot of evidence in here as to the price of oil everywhere, from which they seek to argue that the company pays more than other companies do. There is the fact. Now, how it adds to the witness's testimony to say that that is exorbitant when
he is not a dealer in oil, I do not know. It does not hurt
3495 Mr. Mathewson any if that is all there is of it, but I do not
want to have a long disquisition go on the record.

Q. Is it not a fact that the price of oil as given in Exhibit 93 is in excess to the extent of over 1 cent a gallon, and the price in Exhibit 94 is in excess by over 1¼ cents per gallon as compared with these prices you have spoken of in Boston, Mass.?

A. I will throw out Boston for the time being as somewhat uncertain, as to just what proportion of each grade of oil they use, and take the absolutely unassailed testimony regarding Lowell and Lynn on the 28-degree gravity oil and the 29-degree gravity oil, and I can say on that basis alone, and the price also at Fall River, that the excess in New York was over a cent a gallon in the period covered by Exhibit 93 and over 1½ cents in the period covered by Exhibit 94, or by the new contracts above what it should be——

Mr. MATHEWSON: Well——

The WITNESS: Above what it is in eastern Massachusetts, I will not say what it should be.

Q. That, in other words, would be a reduction of 1 cent a gallon down to 3.08 cents?

A. Yes, that is a conservative statement, that with the prices prevailing in eastern Massachusetts there would be a reduction of 1 cent a gallon or nearly 4 cents per thousand feet of gas made.

Q. That would reduce the cost from 15.89 to 12 cents per thousand feet of gas made?

A. Yes.

Q. Should that be any higher in Exhibit 94 when distributed over all the gas made by the company?

Mr. MATHEWSON: Objected to as calling for a conclusion, and a non-expert opinion on that exhibit.

3496 The MASTER: I will let him answer it.

Mr. MATHEWSON: Exception.

A. No, because there was no need of changing the contract, as judged by the experience of the Standard and New Amsterdam.

Mr. MATHEWSON: I move to strike that out, that there was no need to change the contract.

The MASTER: Strike it out.

Mr. BURR: Exception.

Q. This reduction which you claim should be made of 1 cent per gallon in the way you have spoken of would mean a reduction in the gas made by the company of how much?

A. $415,049.07 and on the gas bought from the companies with which the Consolidated Gas Company has agency agreement, $135,000, a total of about $550,000.

Q. For the 12 months ending October 31st, 1905?

A. Yes.

Q. Now, on pages 3167 and 3168 it appears that the allowance you made for differences in the price of coke at the Central Union as compared with the Consolidated amounted to $27,464.48, and that this, divided by the total coal gas made at 14th and 42d Street stations, 2,809,586,000 feet, would yield .98 cents per thousand feet instead of 1.01 cents, and it was suggested by Mr. Mathewson that the error of .03 cents was made by the blunder of dividing the number of dollars into the number of feet, and then making a mistake in pointing off the decimals. Although the error is so insignificant, yet so much was made of it that I would like to ask if you have discovered how the mistake was originally made?

A. I have. I have discovered my original computation, and find that I used for my divisor not the number of feet of gas
3497 made at the two stations, but the number of feet of gas sold,
to wit: 2,724,736,502 feet—the figures for gas sold appear in the parallel column to that containing the number of feet of gas made, and by an oversight was taken.

Q. On page 3169 your attention was called to the fact that in your table 8, page 2984, you compared the operating cost of the Central Union with the 14th Street station, after deducting in both cases not only oil but repairs, under the theory that you desired to compare on the same basis with the same degree of illumination and with the same expenditure for repairs. Your attention was called by Mr. Mathewson to the fact that the Central Union coal gas, by reason of its better machinery, might require more repairs than the 14th Street station—by reason of its add-tional machinery might require more repairs than the 14th Street station. What have you to say as to that?

A. I would say that, other things being equal, there might be required one-half cent per thousand feet more repairs in the Central Union than at the 14th and 42d Street stations on account of its additional machinery. As I would rather err, if at all, on the conservative side, I will concede the difference of a cent on this account, as contrasted with the average of the other two stations. But I could not concede that the Central Union in the long run would require 2.24 cents more repairs than the 42d Street, and 1.09 cents more repairs than the 14th Street, on account of any improved or labor-saving machinery at the Central Union plant. In fact, the difference between the 1 cent and the 1.09 at 14th Street is very slight, anyway. It was only in the case of the 42d Street that there was any great difference.

It is impossible to determine the question of repairs of any coal gas plant on the basis of a fiscal year.

3498 Mr. Mathewson: Well, that is what you argue, but on your direct testimony and on your cross-examination you give that. I do not think there is anything in addition here.

The Witness: I am through. I practically concede the repairs of 14th Street as proper for the Central Union.

Q. In view of this situation, you think it is only fair to add the one cent you have spoken of?

A. Yes.

Q. That would be to cover the possibility that in the long run the operating expenses would be that much higher on account of improved machinery at the Central Union?

A. Yes.

Q. I call your attention to pages 3170 and 3171, where, at Mr. Mathewson's request, you there made certain computations of the value of coke used by the Central Union Company. Do you desire to modify or change in any way the answers you gave as they there appear?

A. Yes.

Q. Please do so.

A. First, it was not proper, it seems to me, to include the coke used in making coal gas and amounting to $2,226.05, on the first line——

Q. That is the figure appearing on the top line of page 3171?

A. Yes, I think so. It should not be done either in the case of the Central Union or the Consolidated.

Mr. Mathewson: You understand that that is an item used for distributing holders, not for making gas?

The Witness: I don't know what it is used for.

Q. Well, it is for distributing holders, if that makes any difference in your view.

The Witness: It is a very small matter, anyway, because
3499 the point at issue is the quantity of coke that can be sold or
used in making water gas, and I thought this was used under
the retorts, but, as I say, it is a small matter. Second, it clouds the

issue to attempt to find the value of even the coke produced for sale per thousand feet, for that mixes up two issues that must be kept entirely distinct. One is the price obtainable for the coke per unit of quantity and the other equally important point, the quantity of coke that can be and is produced for sale by the Central Union, as compared with the inferior plants producing less coke for sale at the 14th and 42d Street stations.

Q. For sale?

A. Yes, or for use in water gas, either.

Q. What is this difference in the coke produced for sale per ton of coal carbonized?

A. The Central Union plant, according to Exhibit 22 of the complaint on appeal in the Central Union, pages 210, 212 and 215, produced for sale or for use in the water gas plant 83,167,560 pounds of coke, to which I see should be added even more now on account of this used in the distributing stations—and used 63,599 tons of gas coal in the retorts. In other words, the coal gas plant of the Central Union produced for sale 1,308 pounds of coke per ton of coal carbonized; really, it is more I now find. On the other hand, the 14th and 42d Street plants, according to City Exhibit 56, if we reduce the tons to pounds by multiplying by 2,240, produced for sale only 257,100,457 pounds of coke as a result of carbonizing 234,586.73 tons of coal. Thus the Consolidated produced for sale only 1,091 pounds of coke per ton of gas coal carbonized, instead of over 1,308 in the case of the Central Union. Put in another form, the Central Union produced 124 pounds of coke or really more now, I find, for sale per thousand feet of gas made, while the 14th and 42d
3500 Street stations produced only 97.3 pounds of coke per thousand feet of gas made. The 97.3 is obtained by reckoning the coal gas made at 14th Street as 1,360,284 and at 42d Street, 1,280,813 feet. In other words, the water gas made at 21st Street and piped over to 14th Street, before mixture with the coal gas, is omitted with a view to making the comparison as fair as possible for the Consolidated. It thus appears that the yield of coke for sale per ton of coal was about 20 per cent. greater in the case of the Central Union than of the Consolidated and per thousand feet of gas made it was 27 per cent. greater. This strikingly confirms the testimony of Mr. George E. Wood, quoted in my testimony at pages 3002 and 3003 as to the greater yield of coke for sale in the Central Union plant.

Q. On page 3175, you made another computation on certain assumptions of Mr. Mathewson as to the price of coke of the Consolidated Gas Company compared with the Central Union, reaching the result, on his suppositions, of $4.29 per ton for the Central Union and $2.73 for the Consolidated.

The **Master**: $4.285.

Mr. **Burr**: Yes, $4.285.

Q. Now, what have you found further as to that computation?

A. I have found that the assumptions under which the computations were made were faulty in two respects. First, the period of comparison was not the same. The figures for the Central Union are for the twelve months ending October 31, 1905, and for the

Consolidated they are for the calendar year 1905. But I find a second and greater criticism in the fact that the figures given me for the computation were the net price of coke at the Consolidated Company's plant after deducting all expenses of cartage, while
3501 at the Central Union the figures were the gross valuation of
the company before any deduction for cartage. I will make this clear.

Exhibit 94 and State Exhibit J, page 414-a, give the value of the total coke produced for sale as $388,300.91, and Exhibit 94 shows that after deducting the labor and handling, to wit: $35,678.39 and the cartage, $11,164.97, there was left as the net value or real return to the Consolidated Company $291,457.55. The figure given me for computation on page 3174 of $290,232.48 is shown in State Exhibit K, page 414-b, as the gross price of coal actually sold to consumers aside from the water gas plant and without any deduction for cartage. On the other hand, Exhibit 22 of Complainant's papers on appeal in the Central Union case shows that while 60,012,510 pounds of coke were sold for $114,663.76, as given in the computation on page 3175, there was also 23,155,050 pounds transferred to the water gas plant, and there was an expense of coke cartage, presumably borne in chief measure by the coke sold, of $20,935.91, and this, of course, should be taken from the gross price in the Central Union, if it is deducted in the case of the Consolidated, in any comparison between the two works. Therefore, all the conclusions based on the computation made by me for Mr. Mathewson on pages 3171-7 are based on false premises.

Q. In the light, however, of the additional information, which you state was given you by Exhibit 22 which you saw for the first time, as you have stated, on cross-examination by Mr. Mathewson, what do you believe would be a fair statement to make as to the difference in the price of coke as bearing on the cost in comparing the coal gas plant of the Central Union with the coal gas plant of the Consolidated?

A. The Central Union gas plant produced for sale 23,155,-
3502 050 pounds used in the water gas plant, and 60,012,510
pounds actually sold for $114,663.76, or 19 cents per 100 pounds, less cartage of $20,935.91, or 3.5 cents per 100 pounds, leaving a net price of 15.5 cents per 100 pounds. The coke transferred to the water gas was valued at $37,281.56, or 16.1 cents per 100 pounds. Since a little cost of cartage was doubtless connected with that transfer, the price that the Central Union netted for its coke actually sold was practically the same as the value that it credited itself with per 100 pounds for the coke transferred to the water gas plant. If, then, we combine the entire coke produced for sale by the coal gas plant, omitting the two or three thousand dollars' worth which my attention was just called to, which I did not understand, and which will not materially affect this, we find that it was 83,167,650 pounds valued at $152,045.32 or 18.3 cents per 100 pounds. From this should be deducted the $20,935.91, the expense for cartage or 2.5 cents per 100 pounds, and this divided over the entire amount leaves a net return on coke to the coal gas plant of the Central Union of 15.8 cents. Turning now to the Consolidated Gas Company, City

Exhibit 56, pages 1231-9 and multiplying the number of tons of coke sold by 2,240 to reduce it to pounds, we find that the two stations produced for sale 257,100,457 pounds, and we find that, after deducting the labor of handling and cartage the coal gas plant was credited with $143,706.08 at 14th Street and $150,765.49 at 42d Street, or a total of 249,471.57. If, however, this coke had been sold at a net price of 15.8 cents per 100 pounds, as at the Central Union coal gas plant—really, I think it would have been a little less if I had known of this other point mentioned this morning—the return would have been $204,721.71 at 14th Street and 3503 $201,506.88 at 42d Street or a total of $460,228.58. This is $111,757.02 more than was actually received by the 14th Street and 42d Street coal gas plants or 3.98 cents per thousand feet of gas made. In other words, 3.98 cents of the 11.60 superiority of the Central Union over the 14th and 42d Street stations is accounted for by the difference in the price of coke, and possibly one cent could be deducted from the difference on account of the essential difference in the repairs or a total of about five cents. I am not sure, however, that with the proper energy in pushing the sale of coke, there would be the above difference, or that there is really in the long run such a difference, but that I leave for the time being for the purposes of computation. There was apparently such a difference in the year ending October 31st, 1905.

Q. I call attention to your testimony on page 3185 regarding the Astoria plant and the possible economies which might be realized at that plant sufficient to earn interest upon it, and your testimony in that regard as questioned by Mr. Mathewson. Do you wish to modify your testimony in that respect, and if so, please state?

A. I meant this, that if the Consolidated Gas Company did as well as the New Amsterdam, the Standard and the Central Union, and paid a fair price for oil, it would have profits enough to bring its plants entirely up to date, if they are not up to date now. I find that the Consolidated Gas Company on the basis of last year's and the present year's consumption of gas does not use the Astoria plant. Whether that plant is to justify its existence in the future, I do not attempt to say. The Consolidated Company ought to be producing gas at about fifty cents per thousand feet without any larger capital investment than is necessary to bring its existing plants up to 3504 date if they are not up to date now. I do not hold that it is necessary to go to Astoria in order to do as well as the New Amsterdam, Standard and Central Union are doing, barring perhaps the slight difference in coke, nor do I hold it is necessary to go to Astoria in order to get a reasonable price for oil. All I mean is that if the company contends that it cannot secure as good a plant and reasonable price for oil as it should while making its gas on the Island, it certainly should be able to do so after completing its first two units at Astoria. It could then run the Astoria plant at, say, 80 per cent. of its capacity or 32,000,000 feet per day, thus making over 11,500,000,000 for the year, and relying upon the best of its water gas stations to supplement the supply in the winter months as is done in Boston and more or less using oil to mix with coal gas throughout the year to bring up the candle power as at 14th Street and 42d Street now.

Astoria seems unnecessary to take care of the present output on an economical basis, although some improvements would doubtless be necessary at 14th and 42d Streets in order to reach the economies of the Central Union. Such an improvement should have been provided for in a depreciation fund, if it has not been in the years past. The burden should not be on the present users of gas.

Mr. Mathewson: Your addresses seem to be all written out there. It seems to me that if the questions could be put and you would answer them directly, we would get more point and less argument.

Q. I call your attention to the testimony on pages 3189-3190 where reference was made to the item of public lamps and
3505 you were asked, I think by Mr. Mathewson, whether the manner of placing these public lamps or the item for public lamps as appears in Exhibit 94, was not in accordance with the procedure as adopted in Massachusetts?

A. Both the Massachusetts Gas Commission and the New York Gas Commission in its schedule recently sent out to be filled out by the various gas companies of the State, called in one place for all the expenditures by items including street lamps and on another page called for all the gross earnings from operation, including the earnings from residuals and from street lamps, gas stoves, etc. This is similar to the returns made out by the Consolidated Gas Company and is a convenient bookkeeping account, but the important point is that when it comes to a question as to the cost of gas per thousand feet, the Massachusetts Gas Commission in its hearings, in several of which I have taken part, has acted as did the New York State Gas Commission in the New York case, and deducted the receipts from residuals, street lamps, rent of stoves and other sources in order to determine the net cost of gas. The only controversy in the present case on this issue seems to be in connection with street lamps, and I would state that the most famous compendium of gas statistics in the world, known as "Field's Analysis," in reaching the total income, deducts the public lamp charges, as will be noticed on page 3 in Field's Analysis for the year 1905.

Q. On page 3195 you and Mr. Mathewson had some amiable discussion as to the propriety of allowing interest upon taxes deferred. Have you anything further to say in modification or extension of your testimony as given there?

A. No. Further thought confirms the position I then took.

Q. Which was?

A. That in any quasi public corporation, any expenses in
3506 fighting taxes imposed by public authorities so far as the expense exceeds reasonable attorneys' fees, should not be paid by the consumer but by the stockholders, if it cares to assume that risk.

By Mr. Mathewson:

Q. And if any saving is made, of course, that should go into the pockets of stockholders, and not go to reduce the price of gas; is that right?

A. Possibly.

Q. Well, do you think that is right?

A. Well, I should say that in Massachusetts is six per cent.——

Q. Oh, well——

The Master: Your turn will come a little later on that, Mr. Mathewson.

By Mr. Burr:

Q. Your attention was called, Professor Bemis, and the claim was made, I think, that you were incorrect or wrong in your deductions by which you only allowed seven cents in New York for distribution expenses aside from taxes and repairs instead of 9.45 cents actually claimed by the company, and your attention was specifically drawn to the City of Chicago, where it was claimed the accountants found the expenses to be only 5.73 cents, and you were asked to give your information as to whether they included the full cost of collecting bills, or whether they were not paid at the offices of express companies.

Mr. Mathewson: I asked him whether he knew and he said he did not. That was the whole of that. It was a subject which he himself brought up.

3507 Q. What have you to say on that point?

A. I have been informed on what I think good authority that the bills are repaid at the various offices and shops of the company. A little more with regard to the 7 cents. The New York Consolidated Gas Company sells 2,000,000,000 more feet of gas than the People's Company of Chicago——

Mr. Mathewson: That is all in evidence. This matter was brought out and the comparison made by the witness and the 7 cents assigned to New York as against 9.45, and then I asked him at length what he knew of one thing and another, and whether he knew what the cost of this, that and the other was and he said he did not. I object to going into any further argument on the point. It already appears that the output of the People's Company is about 11,000,000,000 feet in Chicago, and the Consolidated Company here is about 13,000,000,000 and a little over. That is all testified to certainly once.

Q. Have you any further reasons to add to what you gave, Professor, in justification of your allowance of the 7 cents as against the claims of the company for the 9.45 cents?

A. Yes.

Q. If so, please state them.

Mr. Mathewson: I object to that as not proper redirect-examination.

The Master: I think that is so, Mr. Burr.

Mr. Burr: I think he is entitled to show all his reasons for that allowance and if there is any reason that he has heretofore given, or if all the reasons are heretofore given are questioned by very vigorous and rigid cross-examination, I think he is entitled 3508 to give all the reasons possible to justify such a claim as made by the Professor, for the information of the Court.

The Master: The only question, Mr. Burr, is whether it is evidence or not. What you say may be doubtless correct as a general proposition, that on a fair and liberal basis of redirect-examination he would be entitled to state additional reasons for matters as to which he has been cross-examined. But if it is that the witness is to be allowed to make a general statement into which he may interject hearsay and private letters and things of that character, counsel will no doubt object to it. If you can bring out by some specific question what you want to get at, let us hear it.

Q. In your direct-examination you gave only one reason for allowing 7 cents instead of 9.45 cents for distribution expenses in New York, and that was that the expense was still lower in Chicago, being only 5.73 cents.

The Master: At page 3200?

Mr. Kirby: And 3201.

Mr. Mathewson: I asked him at that time what he had in mind which induced him to allow us only 7 cents. I asked him if there was anything further or something of that sort, and he said it was upon the rate in Chicago that he established this. Now, that went to the reasons for his making that 7 cent rate in New York. Now he proceeds to bolster it up by something that he has thought up since, which was not the foundation for his 7 cent figure at that time, and it does not go to the point. It is all *ex post facto.*

Mr. Burr: And you stated that they should be lower than
3509 5.73 cents in New York because the company not only sells
three times as much gas per mile of main as does the People's Company, but sells two billion additional feet of gas, from which the general salaries and legal expenses can be properly distributed and gave those as your reasons. I now ask you if you had other reasons upon which you based your judgment of that allowance of 7 cents as against the higher rate claimed by the company.

Mr. Mathewson: Same objection.

A. Yes. I have many reasons which I can bring in now. I had them in the office. My theory of the relation of increased distribution and decreased cost per thousand feet was not based solely on Chicago.

Q. But you based your claim on the experience as you find it in the other companies?

A. Yes.

Q. Will you give us the experience of these other companies as you find it?

Mr. Mathewson: I object to going into this subject again. The witness evidently has a long writing there before him that he proposes to read. I do not think it is proper to bring that in.

The Master: It does not seem so to me, as he stated that he had given all he could on that subject at that time that he could. I will sustain the objection, that is, unless what you intend to show is something that has been developed by the examination of the accountants here.

Mr. Burr: I will take an exception and ask him to proceed.

A. I have been familiar with the information on the sub-
3510 ject for many years, and I will now only quote two things along that line. If we divided the several largest Massachusetts gas companies next to Boston into two groups, the smallest three, Fall River, Lawrence and Springfield, with average sales of 330,000,000 feet in the year just closed, June 30, 1906, had distribution expenses aside from taxes and repairs of 12.51 cents per thousand feet, while the four larger companies, Lowell, Cambridge, Worcester and Lynn, with average sales of 456,000,000 feet, had an average cost of only 8.77 cents, showing the tendency of increasing consumption to reduce the operating cost of distribution. Another reason is the English experience. I take as my authority the Gas World Analysis of Accounts of Gas Undertakings for 1904-'5——

Mr. Mathewson: Just a minute. The seven Massachusetts companies are those to which attention has been called. The witness in his direct-examination proceeded to argue that the distribution cost to New York was larger than it should be and presented comparisons with all the cities that he saw fit at that time to support that argument. Now he proposes to bring in other statistics as to other cities and proposes to go over that fully. When we covered the cities he introduced on the direct fully on my cross-examination, it does not seem to me proper to introduce these additional cities and arguments at this time and compel us to go over that argument further. As far as the Massachusetts cities are concerned, he has referred to them, and more than that, I want to add this, that the situation in England as to wages, labor salaries and everything is so different from this country that without going into great detail in regard to that, it is perfectly idle to deduce comparisons.

3511 Mr. Burr: You called attention to that situation before, including the fogs. You said on page 3200 that may well be, there are other companies whose expenses are above ours, are there not? and he said yes, but I think there is no company as advantageously situated as yours in this country for low distribution cost. It is elaborating upon that statement that I ask for details.

The Master: There is nothing to be determined here. The testimony was objected to and the objection sustained and Mr. Burr is putting it on the record over objection.

Q. Will you proceed?

A. I refer to the account of the Gas World Analysis of Accounts of Gas Undertakings for 1904-'5, which is accepted as un-oubted authority, and I have to use it because it covers a much larger range of companies than Field's Analysis. I find according to its last returns of last June, the seven private companies whose average sales amounted to between one billion and two billion feet had an expense of distribution aside from repairs, and taxes of 6.19 cents per thousand feet, while the five companies next larger, having between two billion and four billion feet of sales had operating expenses of 4.67 cents, and the next largest company, and the one most nearly resembling New York, to wit: the South Metropolitan of London, had sales of 12,142,000 feet and had distribution expenses of only 4.42 cents per thousand feet, if we omit the expense for profit sharing and

supreannuation expenses, which in the case of the Consolidated *amount to .11 cents. This experience confirms my statement that* distribution expenses tend to decline with increase of sales. If distri-
bution expenses are only 4.42 cents in London and in Chicago
3512 5.73 cents, I do not think they should exceed seven cents in
New York. I may add that the five English companies having sales of over two billion feet and under four billion feet, and an average expense of only 4.67 are the Brentford and Commercial companies of London, Bristol, Newcastle and Sheffield, while the seven smaller companies were Brighton, Dublin, Plymouth, Portsmouth, and the South Suburban, Tottenham and West Ham of London. I have not quoted any figures from municipal plants, as I thought the comparison would be fairer with private companies, and I have taken all of them and not made any selection. I should state that in allowing the Consolidated seven cents instead of 9.45 cents for distribution expenses, which it will be noticed is 50 per cent. larger than the London company, I have been considering what should be their normal distribution expense. It may be that the accountants will find that on account of the unusual and heavy expenses attendant upon these various investigations as to price and litigation over taxes the expenses of the Consolidated for the current year are higher than seven cents. Of course I do not undertake to say——

Mr. Mathewson: Why not say right off, if you are going to argue from it, else it is of no value.

The Witness: It is important to consider what is normal and not what was extraordinary last year for the price is now being fixed for a period of several years, and my testimony applies to what is normal.

Q. On page 3207 and subsequently you were asked by Mr. Mathewson many questions all tending to lessen the force of your conclusions on distribution expenses, by calling your attention to
the fact or alleged fact that the reported expenses of the
3513 Ogden Company in Chicago were not as great as the reported
expenses of the People's, although the latter did not have as great a sale of gas per mile of main. Have you anything you desire to say upon that subject further?

A. Yes. On page 35 of the official typewritten testimony of my statements to the Chicago City Council, which I have had the opportunity of reading since my cross-examination, I find I made this statement:

"Q. The Ogden Company has some advantages in distribution from a denser territory and some disadvantages from being a much smaller company so that those expenses that relate to office and legal expenses would be much larger per thousand feet of gas sold, while other expenses like repairs of mains and meters might be smaller." In other words, the Ogden Company proves nothing either way. It is a combination of large sales and dense consumption which brings down cost of distribution. Each is a force acting in that direction, but when a company is smaller than another with which it is compared, and at the same time has a denser consumption the two forces may neutralize each other. In the Chicago testimony, pages 47 and 48 I tried to make clear, as follows:

Q. The Ogden Company has nearly doubled the density of consumption? A. Yes.

"Q. And from that should be cheaper in distribution? A. Not necessarily.

"Q. No. A. Not necessarily, for it only sells about a billion feet, while the People's Company sells in the neighborhood of eleven billion feet. That may not be exact, but very near. Now, the fact that the one company sells eleven times as much as the other 3514 enables the salary account and the legal account and many offices expenses to be divided over a large amount of gas. Salary account for general offices, such as for superintendents, engineers, &c., would not naturally be eleven times as great in the People's as in the Ogden, so that while it is true that the Ogden Company has an advantage in the one point of maintenance of street mains and meters, it has a disadvantage in the other parts of distribution cost, and I take the figure of distribution cost of the People's Company as proving that point, because in the distribution cost of the People's Company there is included apparently, a larger amount for depreciation, or repairs or renewals than in the case of the Ogden Company, and yet they only reach 21.71 cents——

Q. The Ogden Company is a new company, is it not?

A. "It is a new company, as the president told me, and has not reached its full rate of repairs. There are other reasons for maintaining that the larger the company the smaller the expense of distribution, and that has been confirmed by subsequent information from Chicago which has been so often quoted from the accountants."

Recess until 2.10 p. m.

3515 After Recess.

Edward W. Bemis resumes the stand.

Redirect examination continued by Mr. Burr:

Q. You were asked on cross-examination about the apparently much larger distribution expenses of Boston than the small cities in the State. Have you a word further to say on that subject?

A. Boston is an exception to the general rule. The experience of New England shows that.

By Mr. Mathewson:

Q. Perhaps New York may be the same, Professor. How do you know?

A. Well, if you wish me to reply now I will say that the accountants' examination will determine that fact of course finally, after making allowance for any expenses last year that were extraordinary and unusual in character.

Q. In New York?

A. Yes.

By Mr. **Burr**:

Q. In confirmation of your statement as to the price of the low gravity oil in Lowell, have you any direct information from the companies themselves in addition to the information as contained in the return to the Board of Gas & Electric Light Commissioners of Massachusetts?

A. I have the letter before me dated October 10th, from A. C. Pease, the superintendent, showing the oil used.

Mr. **Mathewson**: Just a minute. The professor has quoted here various sources of information which are not subject to our cross-examination at all, the informants not being here, and it does 3516 not seem to me that the letter will add anything to what the Professor has already said.

Mr. **Burr**: Well, he may state that he has the letter which is in confirmation of that statement, as to the price of the oil.

The **Witness**: It is in confirmation of my statement that the gravity test Beaume was 29. The return to the Gas Commission which I have before me shows the price of 3.13 cents a gallon.

Q. I call your attention to the question asked you at the bottom of page 3227, as follows:

"In other words, it would appear from this, would it not, that certain cities of sufficient size to have what you might call a wholesale output and were not of sufficient size to be subjected to these metropolitan exactions, might have and do have a smaller cost of distribution per thousand feet than a greater metropolitan city which has a larger output."

And a little further on you said:

"But as to Boston as compared with the other Massachusetts cities, I said I was not prepared at the present time to analyze the difference in the cost of distribution."

And again you say:

"I answered that in some cases that was true."

Now have you anything further to say upon that subject in explanation of your testimony or in amplification of it?

A. I will say, in addition to what I have already stated 3517 to-day, that exceptional differences in Boston were brought out in my testimony before the Massachusetts Gas Commission in the hearings on the reduction of price in 1904 and 1905. I there showed that the distribution expenses in Boston, particularly the management expenses, were higher than in other cities in the State and due in part to the fact that Boston was just emerging from a condition where there were seven gas companies with more or less distinct and separate office expenses. This had been partly but not fully remedied at the time of my testimony in the Boston case. The condition was very much as it must have been in New York in 1884 at the time of the Consolidation.

Q. And the data that you have already quoted from Great Britain, Massachusetts and elsewhere shows that is the general tendency, doesn't it?

A. No.

Mr. MATHEWSON: It shows it if it shows it. If it does not the witness's say so does not make it so.

Q. When being examined by Mr. Mathewson regarding the physical conditions of Boston and Chicago, and their comparison with the conditions which he claims exist in New York you were asked about Philadelphia——

Mr. MATHEWSON: No, I didn't ask him anything about Philadelphia. I didn't mention it.

The WITNESS: That is a question you asked Mr. Burr. I thought it was a question he asked.

Q. Well, as a matter of fact, so far as physical conditions in Philadelphia are concerned the streets are wider and less congested than New York?

A. Yes.

3518 Q. And while on the subject of possibility of the Consolidated Gas Company purchasing increased amount from the subsidiary companies you were asked (pages 3237-8):

"And if the company were manufacturing, or as soon as it commenced to manufacture its own gas entirely, there would be additional repairs and renewals due to this three billion feet or such a matter which is now procured from other companies?"

You did not answer that question fully. Have you anything to say further in amplification of your answer there?

Mr. MATHEWSON: Look at the top of page 3238. I think he answered it exactly——"A. If it stops buying from them. Q. If it manufactures its own gas? A. Yes."

Mr. BURR: I say, has he anything further to add in amplification or explanation of that?

A. I will state that I have lately ascertained from exhibits of these several companies with which the Consolidated has Agency Agreements, exhibits which were not accessible when I testified before the State Gas Commission, that the average cost of repairs at the works of these companies is about one and one-third cents per thousand feet. An increase, therefore, of one and one-third cents per thousand feet on about 3,000,000 feet sold to the Consolidated, if divided over the ten billion feet now made by the Consolidated would not increase the repair account one-half cent per thousand feet. The repair and renewal account together might amount to one-half to two-thirds of a cent, but that is divided over the entire output.

3519 Q. And while you are on that subject and along on the same page, after the testimony I have just called your attention to, you were asked if you should not also take into account the fact that repairs and renewals at Astoria would be greater per thousand feet than in the water gas plants of the Consolidated, and therefore that you should take that into account in considering the proper cost of gas. What have you to say as to that?

A. Repairs and renewals are certainly greater in a coal gas plant than in a water gas plant, but the total operating cost in an up-to-date coal gas plant in New York properly situated might be considerably less than those of a water gas plant, as seems to be the evidence by the Central Union——

Q. You were asked at the bottom of page 3239 with regard to taking three per cent. and applying it to the Consolidated Gas Company's depreciable property, and what would be the result?

A. That and a proper amount for repairs would not exceed 10.89 cents during the last twenty years.

Q. Well, you were asked if you applied that three per cent. depreciation on the property of the Consolidated as the new Massachusetts law required when approved by the Gas Commission in the case of municipal plants, whether that would not mean at least 4½ cents per thousand feet for depreciation and renewals in New York?

A. It very likely would. The actual renewals of twenty years in New York were 3.73 cents according to the exhibit prepared by the company, but the 7.16 cents for repairs which was the other item in the 10.89 cents is rather larger than was testified to by either Mr. Cowdery in Chicago or Mr. Humphreys in Holyoke. So an ordinary allowance simply for repairs or repairs and depreciation together, I think, would still be within the 10.89 cents in New York City. That is under the conditions existing here. And, further, in Massachusetts, the Gas Commission does not always insist upon three per
3520 cent. They can do that if necessary.

Q. You were asked at the bottom of page 3247 whether you did not take thirty-three years in your estimate before the Gas Commission as your estimate of the average life, as contradistinguished from the forty years of Doctor Humphreys?

A. I have discovered on page 41 of the typewritten copy of my testimony before the Chicago City Council that I there assumed in my testimony that Mr. Humphreys had somewhere held that thirty-three years was the average life. I stated to the Chicago Council as follows:——

Mr. Mathewson: My question was whether before the Gas Commission here the witness did not assume a thirty-three year period?

Mr. Burr: Do you remember the testimony which you quoted from the Gas Commission referred to some statement he had previously made to the Chicago City Council, so he is going to the source of this statement—and it may be a misstatement—to contradict or explain it.

Mr. Mathewson: The simple question was whether before the Gas Commission, at page 3247 of this record here the witness did not assume a thirty-three-year life for a plant. What he said in Chicago I did not inquire or care about.

Mr. Burr: He said in answer to your question he did not remember. Now he gives the facts.

I stated to the Chicago City Council "thirty-three years is less than the average life of a plant," but in order to be conservative I later stated that I would take thirty-three years in Chicago and im-
3521 mediately afterwards used the same figure in New York.

Q. You still say that a gas works, predominatingly a water gas works, has a longer life than thirty-three years?

A. Yes.

Q. And as the testimony shows here, the mains being subject to practically no deterioration, you would say their average life was what?

A. Nearer fifty, of the whole plant.

Q. I call your attention to page 3255, where you were asked at the top of the page whether a sinking fund to meet depreciation would be set aside in towns owning lighting plants in Massachusetts——

Mr. MATHEWSON: I do not see that on that page.

Mr. BURR: It is put in this way.

"Q. You put it in this way. Don't you know that the towns themselves would not consent to the establishment of a sinking fund of the character that you advocate, and therefore the terms of the present law and the treatment of the accounts by the Commission? A. I don't think there has been a sinking fund except for the debt."

Have you anything in addition to say to that answer now, in explanation of it or in amplification of it?

A. I would say that a sinking fund to retire the debt within the probable life of the extension for which the debt is incurred is the improved method of financing in the English municipal plants as the Board of Trade and the Local Government Board of England hold, although they have in addition frequently a further expenditure for renewals as they go along.

3522 Mr. MATHEWSON: I don't think that that subject was discussed. It was simply a question of whether a sinking fund to take care of final renewals was provided and the Professor said he didn't know of any such expenditure.

The WITNESS: Well, now I do know that that is the way they financed most of their indebtedness for extensions in Great Britain. That is, if a municipal gas works in Glasgow wishes to borrow one million dollars for holders, they go to the Local Government Board, and the Local Government Board through its engineers has fixed upon a probable life of holders and they allow them to issue those bonds but they must create a sinking fund to retire the debt at the time the holders will have to be "scrapped."

By Mr. MATHEWSON:

Q. That is for additional holders?

A. The same is true of mains.

Q. Isn't it for additional holders and mains and so forth?

A. Any addition to the plant.

Mr. MATHEWSON: That is another proposition entirely.

The WITNESS: It is the form for many years in which they have financed their extensions. And that takes care of depreciation on those extensions, is my point.

By Mr. BURR:

Q. Now your attention was called on page 3256 to the statement of Mr. Cowdery of Chicago, that he had known a fifteen-cent variation in the cost in a single year of gas within the vicinity, the question being:

"Q. And do you remember the testimony of Mr. Cowdery
3523 of the Laclede Gas Company, of St. Louis, that he had known
as much as fifteen cents variation in the cost in a single year of gas within the vicinity? A. He used some figure like that. I don't remember exactly. In the coal famine, which I thought he referred to when I heard him say it, there was of course quite a change in the price of coal and also in the demand for gas."

Now, do you desire to qualify your statement or add to it in that connection?

A. I find that the greatest change in the total cost of gas for the entire sixty-nine gas companies of Massachusetts during the last six years was during the coal famine. That is probably the most extreme case that has occurred. The average operating cost at the burner in Massachusetts distributed over gas actually sold to consumers rose five cents, from 64.6 cents in 1901-2 to 69.6, two years after that, in 1903-4; but the sales increased so fast that the actual profits increased 8.36 cents, which is above the rise of five cents in cost; while the next year, 1904-5, three of the five cents increase of expense disappeared again. The general tendency of cost during the last twenty years in Massachusetts gas statistics has been downward. I may say that in getting the divisor to use for determining the changes in the cost of gas in Massachusetts I have taken the sales to consumers and not the total sales which include sales of one company to another.

Q. On page 3277 you were asked:

"Q. Well, what did you find the cost at the station was of the gas that this company manufactured itself at Boston," referring
3524 to the Boston Consolidated Gas Company, and you stated
"42.05." And you were asked this question: "That is very much in excess of the cost at the station of the Consolidated Gas Company's gas, isn't it? A. Yes, they make it under very much greater difficulties than you do. They have to mix it by 'fits and starts'."

Do you wish to qualify your statement or add to it in that connection?

A. The latest information I have for Boston is for the year 1903-4, when I found that was true to an enormous extent. Even the large Bay State Water Gas Plant only made during that year, during two months of that year, six per cent. of the average monthly make, and some of the plants were shut down entirely part of the year, only making during the winter months in order to supplement the coke ovens. Gas manufactured under those difficulties is of course much more expensive than where they manufacture continuously. But even with that handicap if I take what the Bay State water gas plant made, 1903-4, and apply to it the four cents average price of oil in Boston last year and the New York City Consolidated price for anthracite coal, and the Bay State operating even under those difficulties would have had less than thirty cents cost at the holder, even though it was making so irregularly.

Q. So then the Boston Company has an average cost at the holder of 31.85 of gas made and bought and about 42 cents for that which it directly makes, is that it?

A. Yes, what it buys costs it 23 and the average of the whole is 31.85 cents, or about the same as in New York.

3525 Q. What do you find the fact to be? Is the price at the holder about the same as to the Consolidated, as to sales?

A. It is about the same. And now I am on that, I would like to add one more point on that Boston Company. The company sells 20 per cent. of what it buys, ten per cent. of the total sales to other companies. Its average price of sales to other companies and to consumers was eighty-six cents last year and this year will be under eighty cents because of the fact that to the private consumers it sells for eighty-five cents and its price to the other companies is thirty-six cents. It sold 432,000,000 feet at thirty-six cents last year, which it obtained from coke oven plants.

Q. Are you speaking of cost to the consumer at the burner now?

A. Yes. Price. That is for the year ending June 30th, 1906, the year just closed. My figure of the current year of under eighty cents is based on the assumed sales being just the same as last year. Of course they will probably be greater.

Q. On page 3279 you were asked regarding the fact as claimed by Mr. Mathewson that the mines that supplied coal to the coke oven plant at Everett were owned by the owners of the Boston Company, and you said:

"I believe to the best of my knowledge there are other mines in Nova Scotia situated near it of about the same quality, but the price obtained in Boston for that coal I am ignorant of."

Do you wish to add further to your statement in that connection?

3526 A. It appears that I was wrong in assuming or believing as I did then, that the same people owned the gas interests in Boston and Everett that owned the mine in Nova Scotia, because I have discovered from Moody's Manual for 1906 that not a single director or officer of the Boston Consolidated Gas Company or of the so-called Massachusetts Gas Companies which controlled both the Boston Gas Companies and the Everett plants called the New England Gas & Coke Company, is the same as any of the officers or directors of the Dominion Coal Company. All of their names and many of them are given, are different.

Q. That is the company which has a contract for supplying coal to the coke oven plants at Everett, is it?

A. Yes. Most of the directors of the Dominion Coal Company appear to be Canadians, residents of Canada; and most of the directors of the Boston Gas Company appear to be residents of Massachusetts, according to Moody's Manual.

Q. Your attention was called on page 3284 to a statement of an alleged difference made at some period some years ago in which you were stated to have said that ninety cents was a proper figure in Chicago. This testimony was quoted on that page:

"Q. But, Professor, at the time you delivered this testimony, then, that you thought ninety cents was a proper figure in Chicago, you say it was only a guess, and you have no data to proceed upon? A. I didn't say I had none, but I don't think I had accurate data of the cost of oil and coal."

3527 Do you desire to amplify your testimony in that regard? A. I would like to quote *verbatim* my testimony before the Chicago City Council, to which reference has been made in this examination here (pages 206-7 of my testimony that day).

Mr. MATHEWSON: Before the Chicago City Council in 1897?

The WITNESS: Testimony with reference to it in 1905.

Mr. MATHEWSON: I have not asked you about your testimony before the Chicago City Council, have I, in reference to this subject? I asked you whether in 1897, at Springfield, before a legislative committee, I think, you did not testify in favor of 90 cents as a fair price of gas in Chicago. Now you are going to tell what you testified to before the City Council a year or two ago. I do not care about that.

The WITNESS: With reference to the same subject.

Mr. BURR: You spent some time in bringing out what he said, on pages 3283-4-5, as to the apparent inconsistency between his statements now and then. That you claimed in that year he said 90 cents was a fair and reasonable rate for Chicago.

Mr. MATHEWSON: If you read the testimony you will find you are mistaken. I asked whether in 1897 he did not testify in Springfield—that was Springfield, Illinois—that 90 cents was a fair basis for gas in the City of Chicago, and he said he did, but it was more or less of a guess. Now you ask what he testified as to this before the Chicago City Council a year or two ago.

3528 Mr. BURR: I call attention to page 3283, where, in order to show that he did so testify in Chicago, you read from testimony before the New York Gas Commission and stated as follows:

"I read from page 1336 as follows:"—

The MASTER: I have it before me.

Mr. MATHEWSON: That is before the Gas Commission.

Mr. BURR: Well, this has reference to the subject I have immediately in mind. I will continue reading it (page 3283):

"Q. Now, in 1897, you testified in Chicago, if I am correct in my assumption, that 90 cents was a fair price for gas in the city of Chicago?"

3529 By his answer it is quite evident he didn't see what you would mean to have him say. He answered,

"A. I don't—that was brought up in a hearing in Chicago the other day. I don't know what it referred to, as I didn't give any testimony in 1897, and I never gave testimony in the Chicago Gas case—Oh, I thought—yes, it was a hearing in Springfield, not in Chicago."

Mr. MATHEWSON:

"Q. But relative to Chicago?" The inquiry I made of the witness was in reference to his testimony in 1897. Have you got his testimony of 1897?

The WITNESS: No.

Mr. MATHEWSON: Of course you haven't got it.

Mr. **Burr**: Why do you say "of course"?

Mr. **Mathewson**: Because he just said he hadn't it to you.

Q. Have you found a verbatim report of your testimony on the subject taken before the Chicago City Council?

A. In 1905, yes.

Q. Will you tell us just how this question of 90 cents being a reasonable rate for Chicago was first raised, so far as you are concerned?

A. The first I know anything about it was during my testimony in 1905 before the Chicago City Council.

Q. Under what circumstances was that testimony taken?

A. I was speaking before the Chicago City Council or before a committee of the Council with respect to a reasonable price for gas in 1905, and the attorney of the People's Company and Mr. Sullivan, president of the Ogden Company, asked me if I had not stated in Springfield, Illinois, before a committee of the State Legis-
3530 lature in 1897 that at that time 90 cents was a reasonable price. And I was going to show how, when this was first mentioned to me, how I answered it before the Chicago City Council Committee.

Q. Now do you desire to explain under what circumstances and conditions you said in 1897 at Springfield, Illinois, if you did so, that 90 cents was a reasonable price in your estimation for Chicago?

A. I do not believe I said it but I had come to the conclusion that I must have said it because it came to me in this examination two or three times, and I was inclined to assume that they knew I said it but I cannot remember and do not now believe I said it.

Q. And you so stated, did you not?

The **Master**: That all appears on page 3285. What he has just been saying he stated there.

The **Witness**: I have a confirmation of it in the testimony I gave in Chicago and that is why I wanted to read a sentence.

Mr. **Mathewson**: I don't think that confirms anything. I didn't ask about that.

Q. At all events in 1897, was that the time of the consolidation in Chicago?

A. I think it was, but I am not absolutely positive. There was some legislations connected with a new Gas Act then, I think. Just what I do not remember.

Q. You have been asked at this hearing about your previous testimony in Chicago with respect to the price of oil there and also with respect to the price of oil in Cleveland. Have you anything further to add in that connection or do you desire to modify your answers in that connection?

A. I will quote what I said in Chicago.

3531 "By Mr. **Meagher**:

"Q. And did you agree with me that the oil would cost 14 cents?" That refers to per thousand feet. "A. I took your suggestion that oil was 3 cents a gallon and on that basis I worked out a result. I didn't know what the oil was. You were my only authority.

"Mr. **Meagher**: Yes, that is right."

Page 198 of my testimony.

Again, with respect to Cleveland, page 91 of my testimony before the Chicago City Council:

"Q. Is coal and oil about the same price also in Cleveland as here? A. I think he said a little cheaper there. I don't know the exact figures either there or here but the vice-president and treasurer of the company told me the other day that they were paying 4 cents for gas oil there. I could hardly understand it because if they are, they are paying as much apparently as is being paid here, which Mr. Meagher said was 3 cents per gallon, although I did not know exactly."

I merely quoted to show I did not claim to be positive even in Chicago.

The **Master**: Does this refer to pages 3293 and 3294?

Mr. **Mathewson**: The Master will remember I merely asked the witness whether that was not his best information. He said yes, I do not see that this modifies that at all. On page 3293 that is a quotation from the Professor's statement to the Chicago City Council.

3532 Q. You have been asked regarding the comparison between Chicago and New York as gas making centers and the conditions that prevail in each city, and you have given some statements in that connection. Have you anything further to add in that regard as to what constitutes any difference or distinction between the two cities in the manufacture and distribution of gas?

A. I merely wish to bring out in one sentence the fact as I understand it: there is a more stringent effort here to prevent the use of soft coal than in Chicago, thereby forcing upon the people the choice of a more expensive fuel or gas for furnace use and household heat. In fact all through the West there is more leniency in allowing soft coal than in New York City. This, I think, tends, other things being equal, to furnish a better market both for gas and for coke.

Q. On the top of page 3323 you said something about the return of the Laclede Gas Works being four and one-half per cent. on a legitimate capitalization. What did you mean exactly by that?

A. Well, I don't think I apprehended the question and don't think my answer was appropriate. I don't think my answer was based on an understanding of the question. Of course the present dividends, I believe they were five per cent. on the stock, and interest of five per cent. on the bonds would become much more than five rather than less if the capitalization were reduced, and the premium on the said securities would proportionately rise, I believe. Whereas I seem to state that it would be 4½ per cent. on a legitimate capitalization, by which I meant a small capitalization, so my statement was not an accurate answer; it was made without much understanding of what the question was; I believed it was purely a mathematical statement that would reduce the capitalization and keep some earnings, and the earnings would be a larger percentage on the same capitalization, of course.

3533 —. Calling your attention to page 3328 and to the questions asked you there with regard to the Massachusetts companies and about the dividends in Massachusetts, have you anything to add to what you said there?

A. I have to add that the dividends during the fiscal year of 1904-5 of all the Massachusetts companies were $1,864,701.50, which was 6.71 per cent. of the capitalization, of the stock, of $27,783,404.

Q. I will ask you while on this subject of dividends, have you, in view of your cross-examination by Mr. Mathewson upon the subject, obtained any additional data regarding the Massachusetts companies?

A. I have simply noted the fact that I already had in mind in a general way, that the Massachusetts Gas Commission has frequently ordered reductions in price which the companies have accepted, although at the time of said order the company had only been paying six per cent. dividends.

Q. Have you any special instances in mind in that connection?

A. Yes, I have taken all instances in the last five years. Springfield is the first in date. The Gas Commission ordered a reduction to take place November 1st, 1900, in Springfield from $1.25 to $1.00. The dividend was only six per cent. in the previous year and at the time the reduction was ordered. The next year, 1901-1, the Gas Commission ordered a reduction in East Boston from $1.40 to $1.25. The dividend was nine per cent. before the reduction. The same year in Waltham where the dividend was six per cent. the Commission ordered a reduction from $1.50 to $1.25. In Newton the same year, where the dividends were eight per cent., the Commission ordered a reduction from $1.40 to $1.30. In the next year, the fiscal year, 1901-2, Chicopee was paying no dividend and the Commission permitted an increase in price from $1.40 to $1.50. 3534
In 1903-4 Chelsea was paying six per cent. and the Commission ordered a reduction from $1.25 to $1.10—these are all net prices. The same year East Boston was paying six per cent. dividend and the Commission ordered a reduction from $1.27 to $1.00. The same year Newburyport was paying six per cent. dividends and the Commission ordered a reduction from $1.50 to $1.40. And during the year 1904-5 Charlestown was paying ten per cent. and a reduction was ordered from $1.01 to $0.90. In all these cases the reductions were noted in the report as having been accepted by the company and the price reduced accordingly.

Mr. Mathewson: I do not see that that has the remotest bearing on any examination of mine.

Mr. Burr: Well, you examined with regard to dividends in the Massachusetts companies.

Mr. Mathewson: No, not on that at all.

Q. On page 3349, after a lengthy conversation between you and Mr. Mathewson with regard to the probable buying out of a company by another company and what should be allowed for depreciation, &c., and a distinction being drawn as to whether it was going out of business or was a going concern, you said in the midlde of the page:

"But I answer positively that if a new company bought the old one out as a going concern it would not have the right to capitalize any of the price it paid for the old company, but only could continue to earn on the original structural assets. That was tried in Haverhill and the Massachusetts Gas Commission ruled it out.

"Q. And that is still at issue and the courts have not decided it yet? A. Yes."

3535 Have you any further information on that, and do you desire to add anything?

A. I desire to correct a statement I made there. As I understand the Haverhill case, the issue was not the right to capitalize any sale over and above the physical or structural value, but the question was a more radical one than that. It was a question whether a company had the right to capitalize the structural value if it had been created out of the consumer, that is, if it had not been a stock subscription by the stockholders, but where the stockholders had been receiving regular dividends and the company had used surplus earnings from the sale of gas to build up the plant, until it had become worth even in structural value, a great deal more than the stockholders had put into it, then the Gas Commission ruled that they could not capitalize that surplus; so that it was a very much more advanced position than I intended in my statement. That case has not yet, I think, been decided. It is still in the Courts, and, of course, it has a very direct bearing on the present case, because even all——

Mr. Mathewson: Just a moment. I move to strike that out.
The Master: Strike it out.
Mr. Burr: Exception.

Q. Has that situation any bearing upon this case in your view?

Mr. Mathewson: I think it was excluded, was it not?
Mr. Burr: I have just asked the question.
Mr. Mathewson: Objected to as purely a conclusion.
The Master: Objection sustained.
Mr. Burr: I except. You may answer, Professor.

3536 A. It is the same princip*al* as is involved in the capitalization for all the increase in the value of the proper*l*y since its construction, for all the property since 1884 of the Consolidated Gas Company, as I understand it, there has been very little increase of stock for the purpose. I believe there has been $1,300,000 and odd in bonds, but I believe most of the increase since 1884 according to the testimony in the case as I recall it, has not come from the sale of securities, while dividends have been paid regularly.

Q. You were cross-examined, Professor, quite minutely by Mr. Mathewson, on the question of whether the company was entitled to a return on the two million dollars due from consumers, page 3357.

Mr. Mathewson: My proposition was that the Company was entitled to a return on its working capital whether in the shape of cash or any other shape up to a reasonable figure, which Dr. Humphreys testified was about four million dollars, and not on any special consumers' deposits or amount due from consumers.

Well, do you desire to add anything to your testimony or explain your testimony in that connection, Professor?

A. Well, I do not find any evidence that any securities were issued or any obligations contracted for which the Company is obliged to pay interest or dividends in order to have secured that two million dollars, but they are in the nature of an accumulated surplus.

Mr. Mathewson: That was all gone over in almost that exact language.

The Witness: I think so.

3537 Q. On page 3370 and on page 3375, your computations were questioned and their accuracy called into question with respect to the increase claimed by the Company in the value of their property since 1884 as compared with the increase in book value. Do you desire to add anything to your testimony or to qualify your testimony in that regard?

A. Yes. Complainant's Exhibit 79, page 347-a gave the book value as of October 31, 1905, as I believe, $39,883,984.91, while my computations of the claims of the Company now, using $4,200,000 for meters and personal property, $1,994,034.35 for services, $12,636,150 for mains, $19,115,793 for buildings, machinery and holders, and $15,651,500 for land amounts to $53,597,477.35. The difference between those two totals is $13,713,492.44, and represents, as I understand it, the claim of the company for increase of value since 1884 not accounted for by the nine and one half million or ten million dollars that they have designated as new construction. Further I find that leaving out all question of land, mains and services, there is an increase in the appraisal of buildings, machinery and holders further than is covered by the item of extensions of $3,028,364.28, personal property and meters, $397,455.50, or a total of $3,425,819.78. So that in so far as those figures are correct, and in so far as there is such a value, to say nothing of any value that may be admitted on account of growth of land and mains and services, to that extent is the 10.89 cents too high rather than too low. But I continued to use 10.89 cents.

Q. And to that extent you have given the benefit of that higher allowance to the company?

A. Yes. I recognize the duty of making a further calculation when the revised appraisals now being made are in, but this is only taking the company's testimony.

3538 Q. I understand. You stated that previously, and I so understood it. Your attention was called to the cost of duplication in Chicago on page 3377. Now let us take up the City of Chicago. Mr. Mathewson said "What was your estimate in the Chicago report to the City of Chicago as to the cost of duplication of the Chicago Gas Works. A. I think I spoke of a new plant as $3.20 per thousand feet." How do you reconcile that with the cost in this case as you claim it to be, an increase in book value since 1884 of $2.20 per thousand cubic feet?

A. The difference in the mains in the two cities will account for almost the entire difference. There are if I remember right about 795 miles, or call it 800 miles, in use in New York, and 2,000 miles in use in Chicago. In other words, 150 per cent. more in Chicago. You take the book value even of the mains here in New York, which is, I think, in the neighborhood of $7,600,000, I don't recall exactly at the moment, but about that, and 150 per cent. of that is $11,400,000, and that alone divided into the 13,300,000,000 feet of sales would make 90 cents of capitalization per thousand feet, or account for almost the entire difference. Then again, I was considering in the case of Chicago a plant that was buying its land more recently, while in New York I was considering the land as bought many years ago.

By Mr. MATHEWSON:

Q. The land is worth the $5,000,000 which you claim Yalden found it cost the original companies?

A. What the land is worth now in New York or what it ought to be worth—wait a minute, what was your question?

Q. In other words, you took land here at about $3,000,000, didn't you?

3539 A. Yes, I think so, Yalden's figures of about $20,000,000 plus about $9,000,000 and a little over increase since——

Q. Yes, about $21,000,000—$20,942,000?

A. Yes. So that I think that the difference, while I make no attempt to say that the Chicago statement was the result of any long study, for it was not and does not claim to be, yet I do not see any marked discrepancy between it and the valuation here, when account is taken of the enormously larger number of miles of mains in Chicago for the same amount of sales; in fact, for less sales, for they sell only eleven billion feet with 2,000 miles, while here they show thirteen billion feet for 795 miles. On the other hand the Consolidated Gas Company does not have manufacturing capacity sufficient to take care of all its sales, its manufacturing capacity being between ten billion and eleven billion feet a year.

Q. On page 3383 you were asked:

"Q. You made an estimate to the City of Montreal, I think quite recently as to the establishment of a plant there. Do you remember what your estimate per thousand feet of sales was for that plant? A. Not exactly. I will look at it and verify the figures.

"Q. Will you look at it and see if it was not $4.30 per thousand feet of sales?"

Will you explain how that estimate was made?

A. Yes. It was not as large per thousand feet of sales as the New York basis, if the difference in size of the plant is considered. For example, in Montreal the mains average $6,886 a mile; meters, $8.00 a piece; services, $21.65, and the coal gas manufacturing plant $200 per thousand feet capacity, the water gas plant $100 and the holders about $75.00 per thousand feet, between $75.00 and $80.00.
3540 Those figures multiplied into the New York capacity and the lengths and so forth bring out less than $1.70 per thousand feet, but there would have to be larger mains per mile than in Mon-

treal, and that merely indicates that there is no contradiction between the terms. My unit figures are lower in Montreal than Mr. Mayer took here with respect to coal gas or water gas or holders, but in Montreal I made what I thought a very liberal allowance on the cost of mains for the size required there because the city engineers and other engineers in Montreal and everybody including the officers of the gas company told me that mains had to be laid six feet deep there to protect them from freezing, while here I do not understand that they are much more than three to four feet from the top of the main to the surface of the street. They have very great difficulties from cold weather in Montreal. The present company's mains are not laid quite as deep in all cases, but they wish they were, so I was making a computation for the city based upon a new plant. And then I had this point in mind that this was a report to a city that was considering the possibility of building a plant of its own, and I thought it was just as well to be very careful, and where any possibility of doubt existed I took what I thought to be the higher prices as I did not feel that I wanted them to be led into a question—into a wild goose chase. But I do not see any inconsistency between those prices so far as magnitude is concerned and here. It must be remembered that they have to have many more miles for the same output than here. I estimated an output of only a billion feet and 250 miles of mains, while here they only have about three times as many miles of mains for about thirteen billion feet of output. But I based it on a study of the city.

3541 Q. You were asked about the capitalization of all the companies in the United States which was stated to be $8.47 per thousand cubic feet of sales according to the computations of the city statistician of Chicago. Have you anything further to say about that?

A. I will call attention to the fact that Massachusetts according to Mr. Grosser, had a capitalization of only $3.96 per thousand feet of sales, according to this computation, while, approaching it somewhat differently—I don't know just his method, I reach $4.03 as the capitalization from the Census Bulletin, which I suppose he used, United States Bulletin, No. 123, dated January 23, 1902. And I would say that the average size according to this same bulletin of the Massachusetts company was 68,727,000 feet of sales or less than the average of 877 companies in the United States which was 76,504,000 feet of sales, so one would expect the cost, or the stock and bonds per thousand feet of sales would be higher rather than lower in Massachusetts, especially when we consider that Massachusetts is among the colder States, where mains have to be buried somewhat deeper to protect them from frost and so forth. I therefore do not place much weight upon the returns for the United States, where there has been no restriction of capitalization for the last few years as there has been certainly for the last few years in Massachusetts.

Q. Your attention has been called many times by counsel for the Complainant to the report of the Committee on Gas, Oil and Electric Light to the Common Council of the City of Chicago, dated June 30, 1906, and you have been examined at some length in regard to the

statements purporting to have been made by Mr. Cowdery and others
therein, and I understood you to say that in giving your statement
as to the cost of manufacturing and distributing gas in Chicago, you
took the figures as presented in this report by Marwick, Mit-
3542 chell & Company, and their report on the People's Gaslight &
Coke Company to the Chairman of the Committee on Gas, Oil
and Electric Light of the Common Council of the City of Chicago, as
this same appears on page 40?

A. Yes, sir.

Q. In which communication dated January 22, 1906, they state: "In accordance with your instructions, we have made an examination of the accounts of the People's Gas Light & Coke Company, of Chicago, and compared the statement submitted by them as purporting to show the cost of manufacturing and distributing illuminating gas in the City of Chicago in the year 1904, with the relative vouchers and the manufacturing accounts in their ledgers. This statement was classified under several headings. We have eliminated from each heading, such items (if any) as were in our opinion erroneously charged therein. The result of our examination is summarized in the following figures:

	As stated by P. G. L. & C. Co.	As revised, M. M. & Co.	Difference.
Cost of manufacturing........	31.8193	28.2204	3.5989
Cost of distributing (including renewals)	21.7101	17.2344	4.4757
	53.5294	45.4548	8.0746

"We should have been accorded an opportunity of more fully examining several of the distributing and other accounts in the ledgers that bear directly on this investigation, but this was denied us. Had we had access to these accounts the cost of manufacturing and distributing might have been somewhat further modified.

3543 "It appears right that we should state that the figures sub-
mitted by the People's Gas Light & Coke Company include
charges for renewals which, we were informed were considered
adequate to maintain the property at a fair operating standard of
efficiency. These renewal charges were accepted by us in our re-
vision of their figures. No allowance is, however, included in either
statement for the wear and tear which is generally conceded to
occur in excess of that which is covered by renewals.

Yours truly,

MARWICK, MITCHELL & CO.,
Chartered Accountants."

This letter is addressed to Honorable Lynn H. Young, Chairman of the Committee on Gas, Oil, Electric Light of the Common Council of the City of Chicago. On page 41 appears a second letter addressed to the same Lynn H. Young as such chairman, dated Chicago, January 26th, 1906:

"DEAR SIR: Replying to your communication of even date, I wish to advise you that there is 6.0043 cents per thousand feet included in the figures for renewals and repairs, in the year 1904, and included in the figures in the distribution of gas, as shown by the People's Gas Light & Coke Company and our report.

Yours truly,

MARWICK, MITCHELL & CO.,
Chartered Accountants."

On page 3404 you asked——

Mr. MATHEWSON: Well, was there any question in connection with that?

3544 Mr. BURR: Yes, the question went before the reading. I referred in my former question to this paper and then I read it.

Mr. MATHEWSON: The witness has not answered the question, has he?

Q. You know that those two communications appeared in this book which Mr. Mathewson has referred to so often on pages 40 and 41?

A. I have read such a letter as you were reading.

By Mr. MATHEWSON:

Q. That is the same book to which Mr. Burr has called your attention in your direct-examination, is it not, as to what the accountants found in Chicago?

A. Who called my attention to it in this case first, I do not remember. Of course I knew of the book before.

By Mr. BURR:

Q. When you made your statement on your direct-examination as to what was the cost of manufacturing and distributing gas in the City of Chicago did you base such statement on this report that I have read of Marwick, Mitchell & Company or upon anything else in addition?

A. I based it upon that report.

Q. On page 3404 you were asked about the profits on the capital investments in all those cities that had reduced their price within the last ten years?

A. Yes. I have had that matter looked up since the last hearing.

Q. You have investigated that matter?

A. Yes.

Mr. MATHEWSON: Since the last hearing?

The WITNESS: Yes.

3545 Q. What do you find to be the facts?

Mr. MATHEWSON: I object to this as not proper redirect-examination, the investigations of the witness since the last hearing.

Mr. BURR: You would not let him make an investigation or give the result at the time you asked him on page 3304. Now I understand he is amplifying his testimony or explaining it in that regard. Is that so?

The Witness: Yes.

The Master: To determine what the increase in assets as mentioned in your testimony bears to the increase in sales, is that it?

The Witness: Yes.

The Master: He may answer it.

Mr. Mathewson: Exception.

A. I have found that the profits the year before reduction as given in the table to wit $1,445,750.64 were 11.94 per cent. of the stocks, bonds and notes payable, which amounted to $12,108,400. I find that the year after the reduction the profits amounted to 11.52 of the stock, bonds and notes payable then outstanding which were $12,626,800; in other words the profits fell off only .42 of 1 per cent. from 11.94 to 11.52 per cent. I find further that the sales increased 28.92 per cent., the receipts 14.48 per cent., the stocks, bonds and notes 4.28 per cent., the assets 10.8 per cent. But if you leave out Lowell and Lawrence, which made large increases, it was 7.17 per cent. increase in assets as reported in the Massachusetts gas reports, and the sales increased—I think, perhaps, I stated that increase 28.92, while the reduction in price was 10.83 per cent. In
3546 other words, the requirement of interest and dividends did not increase anywhere near as fast as the receipts, but the assets increased nearly as fast. But if you leave out Lowell and Lawrence the increase is only 7.17 per cent. One cannot know those assets very well without going into each plant individually. In Boston from 1892-3 to the year 1895-6 when the price fell from $1.35 to $1.00——

Mr. Mathewson: Did I ask you about Boston in that connection?

The Witness: Perhaps not.

Mr. Burr: I think you did. You say on page——

The Witness: The table that I have been testifying about was Table 19 giving the effect of all the reductions in price outside of Boston since June 30th, 1894 in Massachusetts. Thirty cases there were in that table. I was starting to say, that in Boston when the great reduction came from $1.35 to $1.00, it was $1.35 in 1892-3 and $1.00 in 1895-6, the sales increased 41.4 per cent. and the assets 35.9 per cent. That was a case of larger increase of assets than in the case of the Massachusetts cities outside of Boston, for it was accompanied with a duplication of mains by the Brookline company and many other features of investment that would not be necessary where there was no more competition in gas than exists now in New York City.

Q. What has been the effect on profit of price reduction in New York City?

A. I find that during the five years ending with 1895, the sales in New York at an average price of $1.25½ were 33,173,000,000 feet, and during the five years of a ten-year later period ending with December, 1905, they were 61,011,000,000 feet, or nearly double,
3547 while the assets increased only nine per cent. and the dividends double while the price fell from $1.25 the first five years to $1.00 during the second five year period, a decade later.

By Mr. MATHEWSON:

Q. Does that include all the companies, or the Consolidated Gas Company alone?

A. The Consolidated Gas Company. I have also compared the year 1897, which has been spoken of by Mr. Cowderry, as a year of great cost—no, as the year when costs were lower than they have been since, with 1905, and I find that in 1897 the price in New York was $1.22 and in 1905 it was $1.00. But I find that the sales have doubled and that the dividends doubled.

Q. What do you mean by the dividends doubled? What do you mean, in rate, or what?

A. The dividends in 1897 were $2,850,392, and they were about twice as much in 1905.

Q. And the stock was about twice as much, wasn't it?

A. The book value of the assets increased from $44,576,521.05 to $47,664,984.91. In other words, the assets increased only $3,000,000, or less than eight per cent., while the divided profits doubled, showing that the tendency has not been for the cost of gas making to rise since 1897, due regard being had to the effect of price reduction from $1.25 to $1.00, in enormously increasing sales, taking account also of the fact that there is a growth of population which also tends to increase sales.

By Mr. BURR:

Q. Have you any facts in this connection regarding Milwaukee?

A. First, let me explain about this.

Q. Well?

A. One explanation partly explaining this is further the
3548 fact that, to go back a little longer, comparing 1885 with
1905, for I have not the data for the intermediate period, I find that while it is true as brought out in some exhibits and testimony of the complainant that the sales per meter have not increased during the last twenty years, I find that the sales per service have increased from 43,660 feet in 1885 to 153,851 feet in 1905. In other words, there are actually less services in use now than there were in 1885, if I understand right the exhibits. There appears to have been according to the Rowland valuation as I have been able to compute it, for it is not exactly given in so many words, but by adding half a dozen columns at the close of the report of 1886, I discover 90,299 services in the plants that form the Consolidated Gas Company while in October, 1905, that has shrunk to 86,338 services, 4,000 services less, while the consumption had grown from about five billion feet in 1885 to over thirteen billion feet in the twenty years. The consumption per mile of main likewise had increased from 5,507,807 feet in 1885 to 16,606,461 feet in 1905. Although the consumption per meter has not increased, there are nearly four times as many meters off the same service pipe as formerly and off from the same mile of main, so there has been required very little increase of travel to overseee the mains and services in the twenty years. In fact, the number of miles of mains does

not increase largely. I have forgotten exactly, but I do not think it has increased more than 20 per cent.

Q. What has been the effect on *price* of price reduction in Syracuse?

Mr. Mathewson: Now, is this re-direct? Has any question been raised as to Syracuse either on the original examination or my cross-examination? Have I got to chase up Syracuse? 3549

The Master: How is that, Mr. Burr?

Mr. Burr: Do you decline to receive this information?

Mr. Mathewson: Yes.

Mr. Burr: Well, I do not know that the Master would refuse to take the example of a single city upon this very important question as to the bearing of the reduction of price upon consumption here in our own State quite recently. I think that we ought to give him all the information that is available, and that was not available at the time we had our direct-examination, and I would like to have you have the benefit of it now. So with that in view I would ask the Professor to let us have the facts in that regard.

Mr. Mathewson: Syracuse has not accepted the order of the Commission, which was merely an order for a reduction from one dollar to ninety-five cents, and my information is that they are not going to. I do not see how any deductions from that are going to be of value, aside from its not being redirect-examination. It is still in the Courts.

Mr. Burr: I submit that if he will give us the facts, they are very brief, and he thinks they are not applicable to this case, he may move to strike them out, and then the Master can grant the motion. But I think they are pertinent as giving a thorough understanding of this very imporant point as to the effect of reduction upon consumption.

The Master: I do not think it is re-direct, but if there has been any development as to Syracuse, which under the course pursued here would have been allowed in the first instance, I will take it now, but merely the facts with regard to it and no arguments deduced from it. 3550

A. In the Syracuse case before the Gas Commission last spring the company gave the following facts. That the net price in 1901 was $1.1776 and I have it for each year, but will read the last year, 1905, average 98.98 cents. The sales meantime increased from 229,348,300 feet to 352,806,500 feet or about 50 per cent., and the profits increased despite the fall of 19 cents from $104,379.43 to $140,759.14.

Mr. Mathewson: Gross or net?

The Witness: Net.

The Master: It does not appear but what that was entirely available when the Professor was on the stand.

The Witness: I did not happen to think of it.

Q. With respect to the 10.89 cents which you took as covering repairs, renewals and depreciation based on the average of the twenty years preceding 1905, do you find in the record in this case testimony which confirms that position which you take?

A. Yes.

Q. And if so will you please refer to it?

A. I find from Complainant's Exhibit 85 on page 458 and from the State Exhibit L, page 45, that during the last three years repairs and renewals both were only 7.7 cents per thousand feet, but I find that Mr. Bradley on page 176 of the testimony of this case was asked this question on July 15th:

"Q. Would you say that they (speaking of the holders and plants) were in better physical condition to-day than they were three years ago? A. I think so."

3551 In other words, although only 7.7 cents per thousand feet have been spent the last three years on renewals and extensions, Mr. Bradley thinks the physical condition of the holders and the plants better at the end of the time than they were in the beginning, which bears very decidedly, it seems to me, on the fact that 10.89 cents is certainly a conservative statement to take for repairs and renewals. For if they were at the end better than in the beginning there was no depreciation.

Mr. Mathewson: I suppose counsel could not have presented that argument as well as you did, having the facts before him. It is simply an argument and nothing else.

Q. In your cross-examination by Mr. Mathewson you were made to appear as taking the ground that the company was justified in capitalizing the increase of the value of its plant aside from any increase in the value of land or paving, provided it made allowance for this increase in its repairs, renewals and depreciation account. Is that your contention or is that your claim?

The Master: What page?

Mr. Burr: Well, it runs through his examination.

Mr. Mathewson: I do not quite follow that. I do not recognize the theory. Is that quite right? Cannot you point some place here in the testimony where that appears to have been suggested?

The Witness: It was the structural value.

Mr. Mathewson: That may be, but that was another thing.

Mr. Burr: That is the trend of your cross-examination as 3552 I remember it and as I recall it. Now, I do not want to leave that unexplained or leave the record with that apparently the Professor's opinion, if it is not his opinion, and I am asking him now whether he desires to add anything to that or whether that is really the position he takes.

Mr. Mathewson: I do not understand the question. I do not want to delay the proceeding, but I should like to have the question read.

(Question read by stenographer.)

Mr. Mathewson: I do not remember such a suggestion.

A. The word capitalizing may be interpreted as the right to earn dividends from such an increase in value. I have some doubts as to whether such portions of the increase as was due to surplus profits should be capitalized. In other words, I have some leaning towards the position taken by the Massachusetts Gas Commission in the Haverhill case. At the same time I have made computations on the basis of assuming that they could capitalize any increase or claim the right to earn six per cent. on increased value on any part of their property aside from land and paving, provided that they made allowance for that in fixing the repairs, renewals and depreciation percentage.

Q. You are quoted as having said in Chicago that you did not know of any new case that had been started on a six per cent. basis in the last thirty years.

A. New company, that should be.

Q. Do you wish to qualify that statement or add anything to it?

A. Well, I do not know of any new company at all in the last thirty years that has started in on the basis that I am contemplating giving to the large gas companies of this country, 3553 namely, a company starting in with the entire field for itself with a practical monopoly. The only cases that I know of are where they have started in in competition with existing plants, which is a theory I do not believe in in the gas business.

Q. Now, Mr. Mathewson examined you quite at length as to the statement made by Mr. Cowdery in this report of the Committee on Gas, Oil and Electric Light to the City Council of Chicago, and to his qualifications and expressed the opinion to which your attention was immediately directed. Did you hear Mr. Cowdery make this statement appearing on page 13 of that report with regard to the City of Milwaukee (handing book)?

A. I have read this and it is in harmony with my general remembrance of what he said at that time.

Q. Will you read it?

A. (Reading:) "I left Milwaukee in the spring of 1903, after being there for twenty-six years. While I was in Milwaukee, the price was reduced from $2.75 a thousand, to $1.00 a thousand for lighting, and 80 cents for fuel. I was known in Wisconsin as the champion of reduction in the price of gas. The price in Milwaukee for illuminating purposes has been reduced within the last year. The price is now $1.00 for the first 1,000 feet in any month, and for all additional illuminating gas used during the month, the price is 90 cents. Fuel gas is furnished at 80 cents per thousand. A reduction is made to large users. The first 10,000 feet of gas used in any month is sold at 80 cents. The next 10,000 feet is sold at 70 cents and all additional gas through the same meter during the same month is sold at 60 cents. These reductions have been entirely voluntary on the part of the company. Such reductions have been made 3554 to cultivate the larger use of gas for fuel purposes, to encourage manufacturers and others who desire to use large amounts of gas monthly. The result of such reduction has been to increase the sales of gas and to increase the profits. This has been the result in a large number of cities where reductions have been made."

Q. You have no reason to doubt that statement or those statements?

A. No.

Q. Will you explain a little more in detail, Professor, in view of your cross-examination, what is your view of a sinking fund as applied to the depreciation in this case?

A. I had at first planned to make quite a study of it, but having found that 10.89 cents would simply cover and apparently more than cover the entire amount necessary each year, and being very busy with other features of the work, I did not carry it out. But it seems to me unnecessary in a way, in view of the fact there is so much evidence of the 10.89 as it is, covering the plant, so it is worth more to-day than it was twenty years ago by fully the amount spent for extension. I do not assume that is worth any more than the excess—any more than twenty years ago except for the nine and one half million: In other words, I give them the benefit of the 10.89, assuming that the increase in capitalization has been precisely what has been claimed in the book value, and the amount spent for extensions, and the testimony seems to indicate that if anything it may have been a little more.

Q. You were asked by Mr. Matthewson, he making certain assumptions, whether the land belonging to the company, if sold,—whether its price should be divided amongst stockholders or should go to extension. I wish you would clear up your ideas or your position on that point.

3555 Mr. MATTHEWSON: You are a little in error, Mr. Burr.

The MASTER: Does it need any clearing up, did not he answer the questions on cross-examination?

Mr. BURR: I will withdraw the question.

Q. You were also asked by Mr. Mathewson regarding your testimony in the Baltimore case. Do you desire to add anything in that connection or explain anything?

A. Yes, the Baltimore case was a——

The MASTER: To what particular point is this directed, please, as to the question of the basis of the value of that property?

Q. You were asked this question on page 3384: "And in that case did you not estimate the value of the property of the Baltimore Gas Company by taking the net earnings of the company and multiplying them by twenty, and state that to be a fair basis for reaching the valuation of the entire property? A. I think I did. That is Mr. Humphrey's basis in Holyoke.

Q. And you quite approve of that basis of taking the earnings of five per cent. and multiplying by twenty in order to get the value of the property? A. The company in Baltimore had no inalienable rights to continue to earn upon that, but as long as it was earning upon that basis, the city had the right to tax it on that basis." Now, do you desire to explain your testimony in that connection or any other connection?

A. I merely desire to add that that it might not appear to be a contradiction, though at first it would seem to be that I considered that all values of *quasi* public corporations above the struct-
3556 ural value is subject to reduction at any time through reduction in rates or through taxation. Until that occurs, it has that value for purposes of either condemnation or sale, but it is a

value subject at any time to be taken away down to the value of its structural assets by either taxation or regulation of rates. But having taken that position, of course,——

The Master: That answers the question, does it not?

The Witness: I wanted to couple it with the other point of view, that there must always be conceded to the company if that is so the right to fully earn enough to keep its plant intact without depreciation in structural value and it is to be assumed that rates will not be cut if there have been no profits or dividends or anything of that kind. It is assumed that the company is an ordinarily prosperous company which should be entitled then to earn on its structural assets and keep them up.

Q. You were asked about the probability of the competition of electricity checking the growth in consumption of gas. Have you an-thing that you desire to add to your testimony in that regard?

A. There is a good deal of an opposite tendency in the fact that electricity accustoms the eye on the street and in the theatres and stores to brilliant lighting and the tendency is when one goes into a house where gas is used to turn up the gas and use more gas, so that it is by no means certain that electricity is injuring the gas business even for lighting in the long run and taking into account all phases of consumption.

Q. You believe that having light, we would exclaim with Goethe "More light."

A. Yes.

Q. Have you tabulated the data which you gave on gas stocks and bonds?

A. Yes, I have it here.

3557 Q. That is you have arranged it in a more convenient form for Mr. Mathewson's better understanding?

A. Yes.

Mr. Burr: I think you asked him if he would not do that, Mr. Mathewson?

Mr. Mathewson: I think he testified and answered all the questions I asked him. I do not think I asked him to make up a table of this kind.

Mr. Kirby: You asked him if he had one and I think he said he would prepare one.

Mr. Mathewson: It may be. I do not remember what he said. Is it proposed to put this table in as evidence.

Mr. Burr: Yes, put it in here now.

Mr. Mathewson: I will have to object to it.

The Master: Can you point me to the place where the matter was under consideration before?

The Witness: It was just before recess one day and it was then taken up in the afternoon.

The Master: Page 3317?

Mr. Kirby: Yes, that is what I have reference to.

Mr. Mathewson: I will not object to it if you desire to put it in.

Mr. Burr: Yes, that is the one. He said I hoped to present it in tabulated form. So we will put it in now in better form.

3558

TABLE 20.

Gas Stocks.

Quotations During 1906—January 1st–September 1st, and Dividends.

Company.	Quotation.	Dividends, per cent.	Return on investments, per cent.
Albany, Municipal Gas	255	10	4
Baltimore, Cons. Gas El. L. & P.			
Preferred	85	3	3 5/10
Common	37½		
Boston, Mass., Gas Co's.			
Preferred	88⅛	4	4 4/10
Common	57¾		
Brooklyn Union	175–215	8½	4 3/10
Cambridge, Mass.	275	10	3 6/10
Charlestown, Mass.	252	10	4
Cincinnati, O., & Gas. El.	101⅝	4 5/10	4 5/10
Chicago, People's Gas Lt. & Coke	99–114	6	5 7/10
Detroit, City Gas	200	6	3
Hartford, Ct.	200	8	4
Kansas City, Mo.	45		
Louisville	139	6	4 3/10
Lowell, Mass.	248	10	4
Lynn, Mass.	325	10	3 1/10
Montreal	96	4	4 2/10
Nashville	123	6	5
New Bedford, Mass.	237	10	4 2/10
New Haven	200	8	4
N. Y. Con. Gas	175–214	8½	4 4/10
Phila. United Gas Improvement Co.	172¾	8	4 7/10
Providence	206	8	3 9/10
St. Louis Laclede.			
Preferred	95	5	5 3/10
3559 Common	95	5	5 2/10
Syracuse—Preferred	90	5	5 6/10
Common	60	2	3 3/10
Toronto—Consumers' Gas	205	8	3 9/10
Troy	165	8	4 9/10
Washington, D. C.	300	10	3 3/10

Gas Bonds, 1905.

Company.	Date of maturity.	Quotation.	Interest, per cent.	Return on investment, per cent.
Baltimore, Con. Gas	1939	110	5	4 5/10
Brooklyn Union	1945	112–118	5	4 4/10
Buffalo	1947	68–47	5	6 4/10
Chicago, Gas Lt. & Coke	......	108–111	5	4 6/10
Chicago, People's	1943	123–127	6	5 2/10
	1947	106–109	5	4 7/10
Detroit, City	1923	100	5	5
Detroit, Gas	1918	105	5	4 9/10
Kansas City	1922	100	5	5
Milwaukee	1927	92	4	5 4/10
Minneapolis	1910–30	109	6	5 6/10
Montreal	1832	99	4½	4½
	1933	101	5	5
Newark, Gas	1944	131	6	4 6/10
Newark, Con. Gas	1948	107	5	4 7/10
Newton, Mass	......	111	5	4 6/10
N. Y. & Richmond	1921	103	5	5
Paterson & Passaic.	1949	105	5	4 9/10
Peoria	1923	100	5	5
Rochester, Municipal	1942	98	4½	4½
Rochester, Gas & El. 5s	1912	100	5	5
4½	1910–20	96	4½	4 7/10
St. Louis, Laclede	1919	102	5	5
3560 St. Paul	1918	114	6	5 3/10
	1915	110	6	5 5/10
	1944	100	5	5
Syracuse, Gas	1946	102	5	5
Lighting	1951	100	5	5
Troy	1923	113	6	5 3/10
	1939	112	5	4 4/10
United Gas & Elec. of New Jersey.	1922	100	5	5
Washington, D. C	1927–9	103	4	4
	1923	110	6	5 5/10
Westchester Lighting Co	1950	112	5	4 4/10

Q. And by that statement it appears—what do you claim that statement shows?

A. It shows that the securities of gas companies net a return to the investor of less than six per cent. in almost every company of large size east of the Mississippi River.

The MASTER: That appears on the face of it I suppose.

The WITNESS: Yes, the last column brings out that fact.

Q. Now from the testimony in this case and your cross-examination have you corrected your figures in any respect as to the cost of gas in addition to the one cent in the beginning of your cross-examination that you said should be allowed or possibly might be allowed?

A. I have not, save of course as I stated in the direct after the accountants and engineers are through, there may be some modification. With that exception I have not. That is not a change now, of course.

Q. And your conclusion as to the profits of the Consolidated Gas Company on the basis of 80 cents remains the same, does it?

A. Yes. I did not give it in exactly that form, but their 3561 figure of operating cost of 58 cents, that is 57.92 cents, 58 cents, if you take my figure of 10.89 for contingencies and their figure—that is, there will be a difference between that and 80 cents of about 22 cents a thousand feet. Now, it is immaterial, as I have understood, all sides agree, from the standpoint of profits, whether lamps and miscellaneous receipts be taken out of expenses or be included in the receipts and expenses; the margin of 20 cents would remain. I do not understand that the 22 cents therefore, of margin, on an 80-cent price, would cover any disputed point except the difference of less than one cent on taxes and the question of whether 10.89 is large enough for contingencies and depreciation. I understand that the 22 cents eliminates all controversy on street lamps or rental of stoves or other miscellaneous income, so the margin is agreed to be there, whichever way you express it, as a bookkeeping expression. Now, 22 cents per thousand feet——

By Mr. Mathewson:

Q. Just a moment. That 22 cents does not eliminate the difference in taxes, which is something like one cent or a little less, nor the interest on consumers' deposits, does it?

A. I stated that it did not eliminate all of the difference on taxes, but it does eliminate part of it, because I understand some of the difference in taxes was stated to be due to taxes on outside investments. As to interest on consumers' deposits——

Q. .39 of one cent, and interest on taxes was a little over .7 of a cent or 1.1 cent for the two is not eliminated in the 22 cents, you differing with Messrs. Humphreys and Addicks, is not that right?

A. 1.1 cent?

Q. I think so for the two, I think that is right.

3562 A. What I desire is to get a difference that would not be disagreed to for the moment, without reference to my claim of lower costs. Then that would bring it up to about 59 cents. The difference between that and 80 cents would be 21 cents. The 21 cents would be six per cent. on $3.50 per thousand feet of capital or structural value, and that multiplied into the 13,300,000,000 of sales, or possibly multiplied into sales—that would include the sales to the city—I wondered whether that should not be added in this kind of a computation, but will leave it out for the moment——

Mr. Burr: Add it both ways, it if will simplify the understanding of the conclusion.

The Witness: I will take it without.

Mr. **Mathewson**: 13,300,000,000 feet includes the sales to the city and a little more, 13,280,000,000.

The **Witness**: 13,280,000,000 feet. $3.50 in that is, if I make it correctly, $46,540,500. That is, taking, if I understand it, all the contentions of the company with the exception of the 10.89 cents which they think is not large enough, but I think it takes in everything else. Now, this would allow six per cent. on $46,540,000. Now, the entire valuation in 1884 was about $31,000,000—I wish I had the exact figure, for the moment I haven't it, but it was perhaps at least $30,000,000—what was that exactly, the valuation at the time of consolidation of 1884 of all the companies.

Mr. **Mathewson**: It is about $30,190,000 structural value, exclusive of franchises of $7,781,000.

A. The $30,190,000 in November 1884 plus $9,693,565.90 of increase of structural value claimed since then, plus—this
3563 may be subject to slight correction—plus $1,000,000 for working capital, $616,470.08 for increase in supplies on hand would amount to $41,500,000. Now even if you add $2,000,000 more for money due the company from gas users——

By Mr. **Mathewson**:

Q. But that does not include the $1,000,000 of cash working capital?

A. I did include that, yes, excuse me.

Q. Did you?

A. Yes. Well, and $2,000,000 asserted by the company to be a necessary part of the working capital gives $43,500,000, leaving still a margin of $3,000,000 between that and the amount upon which the earnings would be six per cent. This, too, makes no account of the tendency of reducing prices to increase sales without a corresponding increase of expenses, and it includes no deductions for any questions of difference of price of oils or between the cost of production here and in the New Amsterdam, Standard and Central Union plants &c., and I do not mean in making this computation that I admit there should not be any allowance for all these things, I only am giving a computation to show how I understand the claims of the company—except on the 10.89,—would be covered by 80 cent gas.

By Mr. **Burr**:

Q. What do you conclude?

A. I conclude that the price of 80 cents without any increase of business would cover six per cent. on $46,500,000, while the entire valuation in 1884, plus all extensions written into the books since then, plus $1,000,000 for working capital, plus $2,000,000
3564 claimed also to be necessary working capital, because due company from consumers, plus $616,000 charged for supplies on hand, still amounts to $3,000,000 less than the $46,500,000. This takes all claims of the company for all expenses of every kind, shape and description, as I understand them, with the exception that it only concedes 10.89 to cover repairs, renewals and depreciation and

I do not hold that it is necessary with the 10.89 for the reasons I have already so often spoken of.

Q. That is against the claim made by the witnesses for the Consolidated?

A. Yes. And I asserted a moment ago that I did not, in making this computation, concede that all the claims of the company covering operating expenses were to be accepted in this case, or even if they were, during last year, that they would necessarily be taken as true on the average.

By Mr. MATHEWSON:

Q. No, they might be larger next year?

A. They might be. The assumption is that this litigation will some time end. I should add that the company's claim of an amount additional to the 10.89 cents if conceded and amounting, perhaps I have forgotten now, to five cents possibly, or possibly eight cents or nine cents, but anyway whatever it be, would be met on the other hand not only by this $3,000,000 margin I have referred to, but by the certainty that reductions in price will increase sales without a proportionate increase in operating expenses.

By Mr. BURR:

Q. Your attention has been called here towards the close of your examination to some statement made by Mr. De Ford who is 3565 claimed to have been an associate of Mr. Shearn's in the prosecution of the complaint before the Gas Commission. Do you know anything about this statement that has been referred to, as appears in the minutes of the hearing before the Senate Finance Committee at the Capitol?

The MASTER: That was excluded, wasn't it, Mr. Burr?

Mr. BURR: In case it should be allowed in, I want to get his explanation of it. That is one of the difficulties.

A. I have been unable as yet to get at the copy of his speech to know what it was further that he said, that is, aside from what was quoted, and I have not met him or heard from him, and therefore I cannot say anything about it.

Q. Whatever his statement was, it had no bearing upon your testimony in this case?

A. Why, no.

Q. And whatever his statement was on that occasion it has no bearing certainly upon the testimony you gave before the Gas Commission?

A. Certainly not.

Mr. BURR: Now, I move to strike out the statement purporting to have been made by Mr. De Ford, read by Mr. Mathewson from what purports to be minutes of the hearing before the Senate Finance Committee at the Capital at Albany on February 16th, 1906, and which is printed on pages 3421-3-4 of the testimony in this case.

Mr. MATHEWSON: You have your exception to the admission, haven't you?

The MASTER: That is all I can do.

Mr. **Burr**: Is the motion to strike out denied?

3566 The **Master**: No, it is granted, but it seems sort of inoperative, since according to my ruling the testimony was excluded. I cannot strike it out physically.

Mr. **Mathewson**: I take an exception if it is granted.

Mr. **Burr**: That is all I have to ask Professor Bemis.

At 4.45 P. M. adjourned to October 30th, 1906, at 10.30 A. M.

Last Exhibits:
Complainant's, 256.
State's, W.
City's, 61.

3567 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Tuesday, *October* 30, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3568 **Edward W. Bemis** resumes the stand.

Direct-examination continued by Mr. **Burr**:

Q. Have you any corrections to make in the testimony given by you yesterday?

A. I have not yet had time to read over the testimony, except the last three or four pages, which I read first, and there may be some corrections in the printed copy which will have to be made later; but, so far as I recall the testimony as I gave it, I think there are possibly two corrections.

I testified on some previous day last week that I thought the candle-power of the gas furnished by the New England Gas & Coke Company to Boston had to be enriched before it came up to the 19.37 candle-power used in Boston, but I have since discovered that when my memory was fresh upon the subject I testified in Boston that it was enriched before it was delivered to Boston, and came into Boston at the candle-power of from 18 to somewhat over 19. And I have no later information than what I gave in the Boston testimony a year and a half ago.

The second correction: I think I stated that the total profits obtained by the Consolidated Gas Company during the first five years were about twice as great as during the five years ending in 1895, when gas was 25 cents higher. That statement I do not change, but I should have explained the figures I used. I took and intended to state—perhaps I did state—that the figures I used for the period of 1891 to 1895, inclusive, were dividends paid out, as that was the only data I had. For the last five years I didn't use the dividends because the evidence showed that the dividends were more than the earnings on the gas alone. If I had taken the dividends there would have been an increase of two and a half fold instead of two-fold. 3569 I took the net earnings reported by Mr. Teal and appearing as an exhibit in the State Gas Commission case copied from the Stevens Report for 1901 to 1904, inclusive, and for the last year which has closed I computed the earnings from Mr. Addicks' testimony, taking his figures and allowing the full ten cents for contingents which he allowed, and I merely would say now that those figures, in order that there may be no mistake about them, I gave to a typewriter this morning in the form of three or four columns, giving each year, and she was late in arriving at the office, and therefore had not quite finished copying it when I started, and when it arrives I would simply like to hand it to the stenographer and Mr. Mathewson, as part of the testimony yesterday or to-day, being merely an explanation of my statement, not any new evidence. That is all I think of now.

Q. And have you tabulated the value of the plant as appears by Yalden's report?

A. Yes. The cost of the plant as appears by his report I have, and I find that he appears to have valued the land, the cost of the land taken into the company in 1884, as $4,251,810.94, which went into the consolidation at $10,332,000. Some of that land has since been sold, I understand from the evidence. I don't know where it is now, but some of it has been sold.

Q. Have you made a concise tabulation of the value of the property as appears by his report which would save the Master, if Mr. Mathewson does not find fault with your tabulation, the trouble of wading through those figures and that report of Yalden's to ascertain?

A. I have it, but I haven't had time to have it copied. It is right here.

Mr. Burr: I will ask leave to submit that later. It will aid the Master.

3570 Mr. Mathewson: I don't believe it will, for I don't believe the Master will find it material at all to wade through that.

Mr. Burr: I say if it is material it will aid him in arriving at the proper figures.

Mr. Mathewson: Well, I would like to see what it is.

The Witness: The other statement was merely put in two columns, the Yalden statement of cost as he reported it at that time and the figures taken in the consolidation of 1884.

Recross-examination by Mr. **Mathewson**:

I ought to say to the Master and counsel that I have not yet yesterday's testimony except as Mr. Kirby handed me a copy a moment ago. I have not been able to go over Professor Bemis' redirect-examination, and I find in going over my notes for recross-examination that it may be absolutely necessary for me to have a further interval, in view of the new matter he presented, before I complete his cross-examination. I will do as well as I can this morning, as I am anxious to conclude as soon as possible. I understood that I could have some time if it was essential, but I prefer to conclude as far as I can.

Q. Professor, you were shown an exhibit referred to at page 3130 of the testimony, Exhibit 171 before the Gas Commission, showing the cost to the Consolidated Gas Company of the gas manufactured by itself as compared with the cost to the Consolidated Gas Company of the gas manufactured for it by other companies for the four months, July 1st to October 31st, 1905.

A. I have the exhibit before me, yes.

3571 Q. And as the Central Union contribution, 34.35 cents, represented 10 per cent. above cost of labor and material you divided that by 1.1 and found that the balance, 31.33, would represent the cost of labor and material to the Central Union?

A. Yes.

Mr. **Burr**: As compared to the cost of water gas to the Consolidated Gas Company.

Q. And I then asked you to compare that to the cost of the water gas of the Consolidated Gas Company and it showed a little difference?

A. 31.23, is it not?

Q. Well, whatever it is.

A. I think there was a mistake of .1; 31.23 it is.

Q. Now yesterday you assumed to compare this 31.23 with cost to the Consolidated Gas Company for those four months at the holder, which was 35.6, and stated that it showed a difference of something like this?

A. Yes.

Q. You know, do you not, that that table was made up to show the difference in cost between the gas manufactured by the Consolidated Gas Company itself and the cost to the Consolidated Gas Company of gas which was produced for it under its agreements?

A. Yes.

Q. And that that is not a comparison of station costs at all. You understand that, don't you?

A. This is not a comparison of station costs.

Mr. **Burr**: Which one do you mean?

The **Witness**: I mean that Exhibit 171, as relates to the companies from which the Consolidated Gas Company buys the gas, is station cost plus 10 per cent., while for the Consolidated it is station cost.

Q. You are entirely mistaken about that. Don't you know that labor and material does not make the entire station cost of gas?

A. Yes, that is right.

3572 Q. Then 31.23 cents would not represent the station cost of the Central Union Gas, would it?

A. I now recall there is a small difference there.

Q. Well, whatever the difference is, there is a difference?

A. That is right.

Q. And whatever the difference is could only be determined exactly by going into the figures of the Central Union station cost?

A. Yes. They are given, I think, on an exhibit which I put in as regards at least the coal gas. I don't know whether they are as regards the water gas or not in any exhibit.

Q. And if you read the testimony before the Stevens' Commission you found that the Consolidated Gas Company, in making up their station costs, had an item known as gas production, which included merely labor and material to which they added repairs and other things amounting to several cents, as I remember it, to make up their station costs, don't you?

A. I don't recall that, but I do recall that in Exhibit 93 and Exhibit 94 there is given the cost of labor and material that you speak of, and then there is added the distribution expense for—holder costs, I understand them to be largely, to make up the final figure given in those two exhibits.

Q. In other words, take Exhibit 94, and the net amount of material and labor in gas made is stated to be 29.1 cents, is it not?

A. I don't recall now.

(Paper handed witness.)

The WITNESS: Yes, net amount of labor and material, 29.1 cents.

Q. Whereas the station cost of the gas manufactured by the Consolidated Gas Company excluding the gas purchased under agency agreement, is stated to be 32.42 cents, is it not?

A. Yes.

Q. Or a difference of how much?

A. 3.32 cents.

3573 Q. Then if you take this 3.32 cents and assume *Q. Then if you take this 3.32 cents and assume* that to be a fair average, that would pretty nearly dispose of the difference, would it not, between your 31.23 cents, which was the cost of the labor and material to the Central Union, and the 35 cents which is stated in Exhibit 171 before the Gas Commission to be the station cost of the Consolidated Gas Company?

A. For those four months. It does not affect the comparison of coal gas plants for the previous year.

Q. That is another proposition entirely. I am speaking of your comparison of this table.

A. Yes. I never had the full details.

Q. But that difference would dispose of pretty nearly all the difference which you found in your comparison on the basis of Exhibit 171 before the Gas Commission, would it not?

A. As relates to those four months, without the details, which I have not for the other year.

Q. I say it would, assuming that the difference between labor and material and station cost of the gas of the Consolidated Gas Company referred to in Exhibit 171 was as great as the difference between the cost of labor and the material and the station cost of the Consolidated Gas Company gas as shown on Exhibit 94.

A. Well, it makes several assumptions. I think that probably is one, without going into it very much, because I have not the time, but it makes several assumptions. It assumes, for example, that the cost given here for the gas made by the Consolidated Gas Company of 35.6 cents during those four months was only labor and material. That is not stated in the exhibit at all, that that is only the labor and material, but, assuming that it is, there would have to be another assumption added.

3574 Q. No; let us see if you are not wrong about that. Assume the 35.6 cents represents not labor and material only, but represents the station cost, to wit, labor and material plus these other items making up station cost.

A. But what it does assume is not stated there. I say you have to assume one or the other.

Q. You assumed, when you made your computation that that represented station cost, did you not, yesterday?

A. Yes.

Q. Let us continue that assumption?

A. And I assume that as to both, but now I say I don't know, because I find there is no data on that.

Q. You did testify, did you not, that you understood that the Central Union 34.35 cents, under the terms of the agency agreement to which you referred, represented the cost of labor and material plus ten per cent. thereon?

A. Yes.

Q. And then you figured that if that were true, the cost of labor and material alone would be 34.35 cents divided by 1.1 cents, which made 31.23 cents as the cost of labor and material at the Central Union?

A. Yes.

Q. Now, if 35.6 cents is station cost for the Consolidated Gas Company, that includes items in addition to labor and material, which on the basis of Exhibit 94, would amount to 3.32 cents, does it not?

A. I don't know what it includes. I say, if you assume that, you get the result just brought out.

Q. Won't you assume it as you did assume it yesterday, and assuming your assumption yesterday to be correct——

A. I assumed yesterday that it was a comparison on the same basis. If it is not so, why, so far as my testimony on that particular exhibit is concerned, of course, the point falls.

Q. Did you not examine the record before you made this computation and made this statement, to know what this Exhibit 171 did represent?

3575 A. No, I took it very hastily. It was something you had referred to in the cross-examination, and I just looked at it for a few moments to notice those figures.

Q. Is it not fair to assume that that is the station cost, from the heading of that exhibit?

A. It says here nothing about it directly. It says Consolidated Gas Company make cost 35.6 cents.

Q. And when you assumed that to be the station cost, didn't you?

A. Yes, I did.

Q. Well, that is quite right.

A. But I say now I don't know.

Q. Then, if that is the station cost, in order to get the cost of material and labor alone, you would have to deduct the difference between the cost of material and labor and the 35.6 cents, would you not?

A. Yes, on that assumption.

Q. And the difference between the cost of labor and material and the station cost appears in Exhibit 94 to be 3.32 cents, does it not?

A. Yes.

Q. And assuming that that factor were to be a fair one to take, then deducting that from 35.6 cents it would not leave very much difference between the cost of labor and material to the Consolidated Gas Company and to the Central Union, would it?

A. No.

Q. Well, exactly——

A. But with the exception of that one exhibit, brought out on cross-examination, my main comparison was with the coal gas plant only.

Q. That is another proposition which we will take up later, and we will show that it is as exactly unfounded. We will take them one at a time, Professor. Now you spoke about London and stated that the difference between the prescribed candle power and the candle power actually furnished in London you found to be for the principal company, I think, .6 candle power, a little over a half a candle power. Do you know where the gas is examined in London? 3576

A. No.

Q. Do you know how far from the works it is examined?

A. No.

Q. Do you know how often it is examined?

A. No.

Q. Do you know what the penalty is for violations by falling below the candle power required?

A. No. All that data has been collected this summer, but I have not looked it over.

Q. Do you know whether the requirement of the law in London is that each station of each company shall be examined or whether one examination per day is all that can be had?

A. All that has been looked up, but I have not had time to look into it myself.

Q. Do you know what the penalty is over there which could induce the keeping of a candle power safely above the required candle power?

A. I understood the inspections were very honest in London.

Q. Do you know what the penalty is? That does not quite answer my question.

A. No, I do not.

Q. If there was a penalty, for instance, of only 40 shillings in case of a defect of half a candle power, it would not be so essential to keep the candle power safely above the rate fixed by law as though the penalty were a thousand dollars, would it?

A. No, although I was taking the actual candle power. I think the actual candle power is above the requirements.

Mr. Burr: And the testimony is that even before the passage of this law there was an increased candle power, before there was any penalty fixed whatsoever, just the same as it has continued to be since the penalty was fixed.

3577 Mr. Mathewson: That is almost a matter of argument.

Mr. Burr: Well, I object to the question as being incompetent, irrelevant and immaterial on that ground.

Q. When you said that the candle power was .6 of a candle above the requirement of the law in London, did you mean that it never fell below the required candle power or that that was merely an average?

A. I took simply what is given in Field's Analysis, and even at the moment I don't remember whether it was just .6 or .5. I haven't it before me.

Q. Do you remember whether it was an average or not?

Mr. Burr: I meant to have read the table with regard to these companies from Field's Analysis, showing the prescribed rate and actual rate of candle power, as the Professor alluded to it yesterday.

Q. Do you know whether that was an average candle power or not?

A. No, I suppose it is so, but I suppose that the tests show that it did not fall below the requirements.

Q. You have previously said, and it is otherwise in evidence, that the candle power of the largest London company is 14 candles. Don't you know that when you have to maintain a candle power of only 14, and with coal gas without the necessity for oil enrichment, that it is very much easier to maintain your candle power close to the average required by law than it is when you are obliged to maintain a 22 candle power by means of oil enrichment to a large degree?

A. It is easier probably to maintain 14 than 22, and yet I know that in Philadelphia the candle power does not vary half a candle between the works and the home of Mr. Walton Clark, as he has often told me. He lives seven or eight miles away. 3578

Q. That is what Mr. Walton Clark has told you, is it?

A. Yes.

Mr. Burr: Who is Walton Clark?

The Witness: The Vice President and Manager of the U. G. I.

Mr. Mathewson: I do not think that testimony is very valuable. I move to strike it out.

The Master: Strike it out.

Mr. Burr: Exception.

The Witness: That is 22 candle power there. I am under the impression that——

Q. Have you ever taken or made any tests in Philadelphia yourself for candle power?

A. I went to the testing station furnished by the U. G. I. and also the testing station at Mr. Clark's home.

Q. Have you ever made any tests in Philadelphia as to candle power?

A. No. I want to correct the assumption that it is 14 in London. While I have not read the law in regard to that, Field's Analysis, my impression is, gives it as 16.

Q. It is 14 for two and 16 for the third, is it not?

A. It is 16 for one of them.

Q. And 14 or 16 candle power you can deliver without any enrichment by the fine quality of coal you get in London, can't you?

A. I think they enrich a little.

Q. Well, practically no enrichment for 14 candle power?

A. No, not for 14.

Q. Now about the effect of severe temperature and changes of temperature such as we have in New York, is not that a very serious matter when you come to candle power, in maintaining candle power to provide for fluctuations? 3579

A. It affects it.

Q. And is not the temperature in London more even and a higher temperature on the average than it is in New York, if you know, in the winter?

A. You ask if it is colder where?

Q. If it is not more even and a higher temperature in London in the winter than it is in New York?

A. I believe it is higher in London; I don't know positively.

Q. Well, that is your impression, is it not?

A. Yes.

Q. Now, you spoke about 755 tests that you produced here with reference to the Consolidated Gas Company, did you not?

A. There were supposedly 755, substantially 755; it may have varied four or five. I think there was one station that on four or five days was not tested. There were 151 days in which there were tests, and there were five stations; that would make 755 tests, but I think one station on four or five days was not tested, so there were about 750 tests really.

Q. And you said about thirty fell below 22½ candles, if I am correct; is that right?

A. Whatever I stated I had at the time, but I have not my notes before me. What page, please?

Q. I don't know.

Mr. Kirby: Page 3483.

(Question repeated.)

The Witness: That is what is here, yes.

Q. And when you take 22½ candles, was that the average, or what was that figure?

A. No, that was in each case. There were thirty-two separate cases.

Q. Well, you spoke about an average of 22 or 22½ candles, did you not, as having been furnished by the company?

3580 A. I spoke of that for a certain period.

Q. What was the period?

A. I think that was for the year ending October 31st, 1905.

Q. Now, how many times did you find that the tests fell below the 22 candle power required by law?

A. In that period or in this period?

Q. Yes.

A. I don't remember; I did not count them up.

Q. You found that they fell below 22 candles in some cases?

A. Well it was only 20 candles prior to July 1st, as required by law.

Q. I understand, and your average is made up of a part of the period while 22 candles was required?

A. Well, this relates to the last half of 1905, under the new law?

Q. Then it is?

A. Yes.

Q. That is your testimony as to the 755 tests?

A. Yes.

Q. Now, didn't you find that in some cases, even with that average, the candle power fell below 22 candles during that period?

A. I had the data before me yesterday.

Q. Well, what is your recollection?

A. I don't recall. I think, as I recollect; I think I remember one case. I don't think I remember—it was either one test or one day, I have forgotten.

Mr. Burr: You had better refer to your notes.

The Witness: If I have them. I am not sure whether I brought them back. When I testified yesterday I did not have those notes; they were used in making up my original testimony.

Q. You cannot tell how many, then, from your data fell below 22 candles since July 1st last, can you?

3581 A. I thought my testimony went into that pretty fully, and yet what is not in the testimony on the point I am not able, I think, at the present moment to supply.

Q. If you can point it out to me in your testimony, where you have answered that question, I will relieve you. I did not recall any such testimony.

A. On the pages which are open there, there was some statement, I thought, about it. I stated here, I notice on page 3483, that there were only five days in which the average of the tests of the five stations fell below 23, and only one day in which it fell below 22.6.

Q. Yes, but you understand that the penalty does not have any relation to averages; it provides that if a single examination discloses a fall below 22 candle power that we must suffer the penalty, and we have five stations and each station is tested. Now, I would like to know whether the tests did not show that, even with the average which you have testified to, in some cases the candle power fell below the 22 candles required by law?

A. I am sorry I have not with me my tests for each day and each station, so that I cannot answer the question. But my present recollection is that there may have been one station one day. I don't remember now. I think there was.

Q. Well, you do understand that the law does not impose a penalty for an average but for a single offense, don't you, upon any test?

A. Yes. I do understand, though, that taking it month after month it was away above at every station, and then there would be——

Q. (Question repeated.)

A. Yes, that is, it has been so read.

Q. Now you have referred to the Philadelphia works. Are you not familiar with a paper just read by Chief Engineer Gartley
3582 of the Philadelphia works before the American Gas Institute
in which he stated that in winter, when the thermometer drops, he has to allow for a drop of four candles at least between the works and the testing stations?

A. I have not read the paper, but during these winter months, as well as in the summer, these stations were away above. It was only, I think, in September and October when I saw much tendency to drop in the tests.

Q. In other words, during the winter months, when the effect of cold would be felt, a margin was provided above the legal candle-power a little higher than it was in the warmer months, is not that right?

A. There was a big margin in the summer as well as in the winter months in every station and every test, and I think in September and October, or else in October and November, there were some stations that came very near the line, and in one or two cases fell below it.

Q. You have stated in the last six months of 1904 the average candle power was 21.08 candles, as I understand you?

A. Yes.

Mr. Burr: That is when the law required 20.

Q. And that the excess in 1905 jumped to 2.18 candles. Have you not got that turned about?

A. Why, I do not see in what way I have. What I meant to say was, and I think it is the same here, that the average candle power the last six months of 1905 was 24.18, and the last half of 1904 it was 21.08.

Q. Then your statement is as you desire it. Now, don't you know that in 1904, the period which you compare, the law provided for a test only once in three weeks, and provided for a penalty only if three consecutive weekly tests showed below 22 candle power?

A. No, I don't know the law at all.

Q. You did not know that that was the law?

3583 A. I found tests every week and supposed they were according to law.

Q. And you did not know that the law then was that the company could only be penalized for three consecutive weekly tests falling below 20 candles?

A. No.

Q. They would not be penalized if one week showed 17 candles and another week 15 candles and the next week 21 candles? You did not know that?

A. No, my attention was never called to that.

Q. And did you know, too, that the penalty was only $100 in case of three consecutive failures?

A. No. That law has not appeared in evidence, I do not believe.

Q. That would furnish an explanation for running so near on an average to the candle power required by law in 1904?

A. It would have a bearing on the case, certainly, but I think an analysis of the candle powers during 1905 for each day, which I might have brought with me if I supposed it would be required, would show for every station a large excess for most of the six months, barring out about two or three months.

Q. Let us take up this 34 degree gravity oil which you say was mostly used in Boston for the year ending July 31st, 1906. Have you got any data except the letter from Mr. Richards or the letters which you have quoted for the statement that it was mostly 34 degree gravity oil in Boston?

A. It is an interpretation of two statements, one that it is practically all, and the other substantially less than 34.

Q. And don't you know that oil of 28 degree Beaumé and of 34 degree Beaumé may differ very materially so far as the value in the production of gas goes?

A. Whether it is a straight oil or a mixed oil, you mean?

Q. Any way you please to put it.

3584 A. I have no reason to know that it means anything different in Boston than it does in New York. It is furnished by the same company.

Q. And you have no reason to know that it does not? Don't you know that the same company can furnish two oils of 28 degree, one of which is more expensive than the other and substantially more valuable in gas making?

A. I examined the contracts and those contracts say—I have seen the contracts of the Consolidated Gas Company——

Q. That is not the question——

A. But I have not seen any reference to any differences that you now speak of.

Q. Don't you know that some 25 degree oil Beaumé test is as good for gas making as other 28 degree oil Beaumé test, having reference simply to the test?

A. I am not sufficiently familiar to say about that.

Q. Now you stated that the New Amsterdam and Standard had used only 28 degree oil because you found that the cost of oil to them was only a little over 4 cents, and that they maintained their candle power every month, the same candle power required by the new law. Do you mean that they maintained that candle power on the average every month, or that every inspection showed the required candle power?

A. I don't remember just how I put it in my testmiony.

Q. I don't care how you put it in your testimony. I am asking you what you mean.

A. I think I meant that every test showed it; in fact I feel quite positive that that was my meaning. There was no occasion for averaging stations, because there was but one testing station for the New Amsterdam.

Q. I understand——

A. So I cannot see how I could have made any mistake on that.

Q. But you said they maintained every month the candle power required by law. Now, did you mean that the average was 3585 above the candle power required by law or that the tests showed above the candle power required by law in the case of those two companies?

Mr. Burr: His exact language was: "It is also to be noticed that, using that quality of oil, these two companies were able to maintain the average candle power every month, with the exception of one month in the case of the New Amsterdam, sufficient to comply with the new law as to candle power.

Q. Now, you have just said you thought it applied to the new test. Which is the fact?

A. I am not sure now, because when I prepared my testimony I had before me the tests, but I did not bring them down this morning, and do not remember just what I had before me then.

Q. Now, if you have read the evidence, you know, do you not, that the New Amsterdam and Standard received oil under the contract made by the Consolidated Gas Company?

A. Yes.

Q. For joint benefit?

A. I understood so.

Q. And, accordingly, the quality of the oil they received is the same as the Consolidated Gas Company's?

A. Yes. The average candle power of the New Amsterdam and Standard, which I stated as a certain amount, compared with a lower amount for the Consolidated Gas Company, was made up on the same basis. I did not take one basis for one company and another basis for another, I am sure. I think what I took in each case was the average for the month, and then added them together and divided by twelve for the year.

Q. Have you been in Massachusetts since the last session last week?

A. No.

Q. Have you examined any of the reports of the Massa- 3586 chusetts companies since?

A. Since last week?

Q. Yes.

A. None that I did not have with me at the time last week.

Q. You have access to those, I judge, in the office of the Commission, have you?

A. Some weeks ago I had some of them copied for me.

Q. By order of the Commission?

A. Yes, by the consent of the Commission.

Q. Now, you have spoken about oil in Lowell and Fall River. Do you know what the average paid for oil in Lowell is?

Mr. Burr: He says, on page 3496, 3.13 cents is the average price of oil.

The Witness: The return to the Commission is as follows for the year ending June 30, 1906——

Mr. Burr: What are you reading from?

The Witness: The return of the Lowell Gaslight Company to the Gas and Electric Light Commission for the year ending June 30, 1906. Their return is that they used 60,009 gallons of naphtha at 5.3 cents and 833,033 gallons of other oil at 3.13 cents. And then I wrote a letter to Mr. Pease, asking him with regard to the Beaume test, and he replied that——

The Master: You stated that yesterday on page 3490.

The Witness: As I stated yesterday.

Q. So that it is a fact, is it not, that 6/14 of the oil which Lowell uses costs them, not 3.13 cents, which you stated as the average, but 5.3 cents, Professor?

A. 6/14?

Q. Yes, about 6/14?

3587 A. I think not; 60,009 gallons of one kind and 833,033 of the other, or 893,042 gallons in all, of which 60,000 gallons is less than 7 per cent.

Q. Less than 7 per cent.?

A. Yes, that is right. 1/14. You said 6/14, as I understood.

Q. Yes, that is what I said, and you find it is 1/14?

A. Yes, it is less than that; it is less than seven per cent. It is six and a fraction.

Q. That is according to the report?

A. Yes.

Q. That would make an average higher than the 3.13 cents which you gave yesterday?

A. Yes, but I am talking about the 29 degree gravity oil.

Q. And that was 3.13 cents, was it not?

A. Yes.

Q. But you were comparing that with the oil used by the Consolidated Gas Company and saying there was more than a cent difference?

A. Yes, there is.

Q. The Consolidated Gas Company has to use 34 degree oil, does it not?

A. I was comparing Exhibit 93, where they used 92.6 per cent., as near as I can compute it of 28 degree gravity oil, and at that time paid 4.04 cents. Now, Lowell paid 3.13 cents for one degree higher gravity, for 29 degree gravity.

Q. But you have no information about that oil except merely that the test was 29 Beaume, have you, whether it was a good gas oil or poor gas oil of that grade, have you?

A. While I have no absolute information, gas companies like that who have been buying oil for years are supposed to know what what good gas oil is.

Q. Yes, and they might get good gas oil and pay more money for it than that, might they not, or consider that it was better to buy cheaper oil and pay less money for it?

Mr. BURR: Objected to as being purely speculative.

The MASTER: He may answer it.

Mr. BURR: Exception.

3588 A. I could work out an answer of some value, but I could not give it offhand. I should need to take their amount of water gas made and the information that Mr. Pease gave as to the candle power and divide the gas into the number of gallons of oil used and see how the consumption of oil compared with other companies, to know whether they were using an amount of oil larger than could be expected or not.

Q. Do you know what North Adams pays for oil?

A. No, I do not.

Q. Is it not more than 4 cents?

A. It is possible. I only secured——

Q. Have you no recollection that it is? You have examined all these companies, have you not, or their reports?

A. No, the seven largest companies outside of Boston are all that I sent for.

Q. Well, don't you know that Worcester pays more than 4 cents? That is one of the largest.

A. I will tell you in a moment about Worcester. Worcester, I know, is not as well situated as Boston because it has no water competition. A curious fact developed at Worcester; I believe it is the only one of the seven companies that the copyist used a blank for a previous year which did not have that page in it; and I sent again to get that page, and the reply I received was that the Worcester company did not appear to have made any return as to the price they paid for their different qualities of oil.

Q. Well, is it not your information that Worcester pays as high as 5 cents for some of its oil and more than 4 cents for the rest?

A. I worked out this scheme. I found out what the total oil was and divided it into the total return of the price paid for oil without knowing the quality of oil at all, and it averaged 4.42 cents. But Worcester is an interior city, away from the seabo-rd.

3589 Q. How about Lawrence? Does not Lawrence pay considerably more than 4 cents for its oil?

A. Lawrence pays 4.53, but I have no information, although I tried to get it, as to the gravity of their oil.

Q. Don't you know that New Bedford pays more than 4 cents, and that is on the seaboard, is it not, and subject to water competition?

A. I don't recall. I saw in Brown's Directory that Pawtucket only pays 3 cents, I think.

Q. I am asking you about New Bedford.

A. I did not get any data on that. It was not among the largest cities, and I did not write for it.

Q. I have direct information, I think, that Lowell pays more than 4 cents on the average for its oil. Are you sure about your figures?

A. Well, I have this copy here; that is as far as I probably could go at the present time. I have not had the opportunity which I have been hoping to get; I have not had the time to compare the copy with the original in the office of the Gas Commission, but I have had reason to believe that it was correct.

By Mr. Burr:

Q. Let me ask you, did you write the Lowell Gas Company with regard to what appeared to be the average price paid by them?

A. I asked them for the gravity of their oil. I found that the return showed that, including a little less than 7 per cent. of naphtha, they used 896,042 gallons of oil and that the cost of it——

By Mr. Mathewson:

Q. That is assuming that the amount of naphtha that they used is accurately stated in your report, is it not?

A. Yes, and that the price, $29,442.52, as given on page 6 of the return, or 3.3 cents, a little less than 3.3 cents on the average.

3590 Q. That is more than the 3.13 cents you gave yesterday?

A. No, I gave that for 29 degree Beaumé. When you add in the naphtha, the average obtained by dividing the oil, 893,042 gallons into the price of $29,442.52 makes the average per gallon not quite 3.3 cents.

Q. That is assuming that your copy is an accurate copy of the report, and assuming that the report states the details accurately?

A. Yes, of course.

Q. Now, you have referred to the Astoria plant again, and the cost there. Don't you know that the Consolidated Gas Company has had a great deal of difficulty in selling the coke at the price at which it has obtained, even to the extent of that produced at 14th and 42d Streets?

A. I thought the contrary.

Q. You thought the people were crying for coke?

A. They raised the price six months ago, which appeared to me to indicate that times were booming.

Q. No, they are not. We have great difficulty, you found the testimony to be before the Gas Commission to sell the coke at the prices at which we were able to sell it.

A. I thought it was all negatived by the fact that you raised the price.

Q. You don't think we would get all we could for it if it took a little work?

A. I think if you could not sell it, you would reduce the price instead of raising it.

Q. I said we had difficulty in selling it, that was my proposition.

A. I don't understand the meaning of the word in that sense.

Q. You don't understand the meaning of difficult?

A. There is difficulty in all life and business.

Q. Don't you understand from the testimony that we had difficulty in disposing of our coke at the price we obtained for it?

A. No difficulty, not in the sense you would have me understand the term.

3591 Q. Very good. What would be the effect on the coke market of a vast production of coke at Astoria, much beyond what we now produce in New York, do you think?

A. The success of the New England Gas & Coke Company in marketing its enormous supply of coke would lead me to think that it could be met, but I don't know absolutely and cannot prophesy as to the future.

Q. And you do know, don't you, that taking into consideration the longer haulage of the coke at Astoria, and the fact that there is nothing in the immediate vicinity that uses or needs coke, would add to the expense or delivering or selling coke?

A. I don't know that it would. As long as you are on the water front and can go to any docking place on the island with it, I don't know that the expense of delivering to consumers would be much greater than by carts.

Q. If you sell coke to some concern in New York, you think that it is just as cheap to put it on a lighter in Astoria, to transfer it across the river, to unload it at the dock in New York, and then have it hauled from the dock to the consumer who uses it, as it is to have the consumer take the coke direct from the plant on Manhattan Island without lightering it at all, do you?

A. No, not if the consumer on Manhattan Island happens to live comparatively near the coke producing plant, which is only at 14th Street or 42d Street. But those are the only two points on the whole island. Now, a consumer living at a distance from those points might find the cartage no more expensive from the nearest dock to his home or business, and by lighterage from Astoria to that dock, than by cartage from 14th Street or 42d Street several miles farther by cart.

3592 Q. Is it not the rehandling of coke which injures its value rather than the distance which you have to transfer it in a single conveyance, once it is in that conveyance?

A. Both factors enter.

Q. Does not that enter very largely in the case of a brittle substance like coke is liable to injury by rehandling?

A. Rehandling injures coke more than many other substances.

Q. Now, the Central Union case, to which reference has been made, I desire to read from page 147——

A. I understand, if I am at liberty—I must assume that the Astoria plant will be so situated that the coke will be delivered on lighters with far less trouble than it is now delivered at 14th and 42d Streets into carts in many cases, because it will have a thoroughly up-to-date coke handling device doubtless.

Mr. Burr: And there is no evidence on this record as to what the condition will be as to delivering coke at the time the Astoria plant commences to deliver it and have it for sale. It is dealing with the future.

Q. But once the coke is delivered into the carts of the carting company at the plant, or into the cart of the consumer, there is no handling necessary until it reaches the consumer and is dumped into his bin, is there, where the plants are located on Manhattan Island?

A. But to get it into a lighter from 14th or 42d Street, is harder. I understand they are separated by streets from that water-front.

Q. Do you think you would necessarily have to get it into a lighter from 14th or 42d Streets?

A. You asked me that question.

Q. No, I did not ask you anything of the sort.

A. I thought you said lighter or carts.

3593 Q. Let us see if we cannot get this cleared up. Where the consumers of the coke are on Manhattan Island and the plants of the company are located on Manhattan Island, the coke can then be placed into the conveyance which delivers it without transfer from the company's plant to the consumers' premises. That is clear, is it not?

A. Yes.

Q. Is not that a great advantage as compared with transferring into a lighter and lightering it across the river and re-transferring it from that lighter to the cart which takes it to the consumer.

Mr. **Burr**: That is assuming conditions which do not exist.

Mr. **Mathewson**: Will you not let me cross-examine the witness?

Mr. **Burr**: But you asked the question and the same conditions would prevail when they got to Astoria. They could put the carts on the lighter or on the boat which they use now, so there would be only one vehicle, and have it transferred from Astoria to the consumer in Manhattan, as there would be one vehicle from the plant or station in Manhattan to the consumer.

The **Master**: You can argue that at some other time. Get the facts now, if you please.

The **Witness**: I would say, as far as the handling is concerned, it would appear as if there would be less injury to the coke from a direct cartage from the plant to the consumer, but there might be much larger cost of cartage, which would offset any difference in the condition of the coke at the end of the cartage and many consumers of coke might not find the coke any worse for their purposes in one case than in the other.

Q. But coke which is not screenings, or coke which is uninjured, is more valuable in the market than screenings or injured coke, is it not?

A. Yes.

3594 Q. Now, I will read from page 147 of the Central Union case, Mr. Doane's testimony:

"Do you know whether you have customers to whom you have to transport the coke or whether they take it at the works? A. The Central Union are advantageously situated in regard to supplying coke. They have a steady trade which takes the coke as they make it. The result is that they are always able to market their coke at a price better than it is marketed down town and it is taken with such regularity that they do not have to pile it and handle it as the companies do down town."

Now you understand, do you not, that Mr. Doane who testified in regard to that is the president of the National Coke & Coal Company which handles the coke for the Consolidated Gas Company?

A. The figures which I gave confirmed the statement, that it does cost more.

Q. Did you ascertain that from your reading?

A. I think I did.

Mr. **Burr**: And also an officer of the Central Union, is he not?

Mr. **Mathewson**: No, I don't know that he is. He knows a good deal about the company.

Q. Now you have made some reference to the fact that individuals interested in the Standard Oil Company were also interested in the Consolidated Gas Company as perhaps explaining something in reference to the so-called excessive price of oil. Can you explain on that theory why the company should establish a coal gas plant at Astoria instead of a water gas plant, which would use a great deal more oil?

Mr. **Burr**: That is objectionable because it is not re-cross-
3595 examination. There was not anything brought out about that on the re-direct, and that was a statement that he made in his direct-examination, and Mr. Mathewson cross-examined him as fully as he might or desired.

Mr. **Mathewson**: And it was a statement which he knows he should not have made.

The **Master**: I do not think that is important, Mr. Mathewson.

Q. I read further from the Central Union case in reference to the coke.

"By Senator **Page**:

"Q. Why is it you have so much better market for coke in the Bronx than they would have in Manhattan? A. I think there are two or three reasons. One is, they do not produce as large an amount and they have a large territory to supply and there is a large amount of building going on.

"Q. When you say they, whom do you mean? A. The Central Union. We are testifying now in regard to the Central Union. There is a large amount of building going on in that Bronx district, an exceptionally large amount, and it is customary for building contractors to use coke in portable boilers, &c., and I am under the impression also that they get domestic trade among smaller houses, one family and two family houses, which they do not get down town among families who live in apartments. Those are the reasons I have in my mind for the ready sale they have for their coke."

A. I took that all into account, and the figures I used, if accurate, as I believed they were when I used them, would still *have* a
3596 large margin to be accounted for.

Q. We will account for it before we get through with your cross-examination, Professor.

A. All right. All I have are the exhibits.

Q. Have you any official documents showing how the Massachusetts Gas Commission treat the cost of gas as distinguished from the form of report which they require from the companies?

A. No, except that in the hearings it has been customary to bring in evidence showing the net cost which they have accepted as bearing on the case with great——

Q. And in reaching the net profits, they deduct the residuals and receipts from gas sold and so forth, do they?

A. Certainly.

Q. Well, now, in the matter of residuals, the residual is a necessary and inherent thing, isn't it, in the manufacture of gas and delivery to the burner? You cannot get rid of it? It must be?

A. Certainly.

Q. So it is a necessary part of the operating cost of gas. On the other hand, when you come to the returns from gas stoves or the returns from rentals, that is something which may or may not exist in the manufacture and distribution of gas?

A. That is right.

Q. So that there is a very clear distinction between the two, is there not?

A. But if you are going to put your capital in gas stoves you must put in your returns from them?

Q. I agree with you perfectly, but you must also contemplate the proposition that the Company may go out of the renting of gas stoves some day and have no return of that character to apply.

A. Well, then, it would disappear from the record and the capitalization of the stoves would disappear if they sold them. If they stop renting stoves you mean they would sell the stoves, I suppose?

3597 Q. Well, you might assume that. Now I asked you yesterday or was about to ask you when it was suggested my time had not come, what the result would be if you made a saving in taxes by reason of these contests; whether that would be applied to reduce the cost of gas or not. Taking that in conection with your statement that you think if interest accrued on taxes that were unsuccessfully contested, it should come out of the dividends to stockholders?

Mr. Burr: Isn't that purely and simply a matter of argument?

The Master: No, I think it is proper cross-examination.

A. I think in the long run those savings will go to the stockholder, if the price of gas is only fixed occasionally and during all the intermediate years it is not changed, with changes in taxes.

Q. You know that taxes are not fixed occasionally, but fixed annually in New York?

A. Yes, certainly.

Q. And you do know from experience that if a tax fixed this year on the plant or property of the company is not contested, that the tendency is to maintain that tax for the future?

A. Yes.

Q. So that the action of the company in contesting a tax which it considers improper affects in substance not only the present but the future?

A. Yes.

Q. Don't you think in that connection that if a company prudently sees fit to contest a tax, upon the advice of counsel, and are unsuccessful, that they ought to be allowed to charge the interest that they pay on that tax to the cost of gas, provided if they are successful they charge into the cost of gas in future years only the amount of the reduced tax?

3598 A. But I don't understand that there is any provision under the decisions of the State of New York, under which this is automatic, so that if the Commission, for example, fixed the price this year on the basis of cost of interest of $94,000 and next year that did not exist that the price of gas would be reduced by the equivalent of $94,000. I do not understand there is any such automatic provision of the State law. Therefore when we are fixing the price of gas now for the future and any $94,000 at the best is only a temporary expense for one year.

Q. Isn't it your observation from examination of the records here that the taxes of the company have been constantly increasing?

A. Yes, but I have had no record that there has been an annual interest of $94,000 on back taxes. This is only one year.

Q. You have not examined the previous years to see though, have you?

A. We have the year 1904 before us, I think, in the State testimony.

Q. Did you observe whether interest was included there?

A. I do not remember there, but in Mr. Teal's report which went back to 1900 I do not recall.

Q. I think it was in each year, Professor?

A. As high as $94,000?

Q. Oh, I don't know what the amount was, but the principle——

Mr. **Burr**: You mean the Consolidated has always contested its taxes.

Mr. **Mathewson**: I do not. I mean that wherever it has done so the interest, if it has had to pay a tax——

Mr. **Burr**: You say that is the principle which has existed for a series of years, if I understand you correctly?

3599 Mr. **Mathewson**: I am afraid you do not understand very correctly. I do not think we need this colloquy on the record.

Mr. **Burr**: Yes. When you say to him you believe such and such condition of affairs has existed I thought you meant to have it go into the record.

Mr. **Mathewson**: I have no objection to what I said going in the record. That is to say, that wherever the company has had to pay a penalty upon the payment of a tax which it has under the advice of counsel protested and contested that that penalty has been charged in the operating cost of gas and, in our judgment, ought to be.

Mr. **Burr**: You were speaking of this $94,000 being an exceptional case and you referred him back to the previous years to show the same principle was adopted and acted upon.

Mr. MATHEWSON: I think it will be seen it is adopted and acted on.

Q. You referred yesterday to the cost of distribution in London, in Engand, in some of the largest companies. What did you include in the 4.02 cents for the South Metropolitan?

A. I included all distribution expenses outside of repairs and taxes, superannuation and profit sharing.

Q. What year?

A. I took most of the companies from here, from the Gas World Analysis of Accounts of Gas Undertaking, 1905, but for London, I think I did use Field's Analysis for 1905.

Q. Now, will you tell me what elements entered into this 4.02 cents for the South Metropolitan which you stated to be the distribution expense?

A. I think I will have to work it out over again, because I don't
think I have those notes with me, therefore I will have to
3600 follow Field's analysis. South Metropolitan, on page 4, oc-
curs salaries and wages for the South Metropolitan .65 of a
penny. Then come repairs, which I said I did not include. The next item I find is directors and auditors, on page 5, .10 of a penny; salaries, .13; commission to collectors, .49; stationery and general charges, .42 of a penny; law and parliamentary, .15; bad debts, .06; public offices and testing stations, .01. That, I think, makes up the amount, because I said I omitted superannuation, profit sharing. That is 2.01 of a penny, if I computed right, which multiplied by two, you get 4.02 cents. I omitted in my original computation the .01 for testing stations on the ground that was in the nature of a tax, and I said I omitted taxes, so in my testimony it was two pennies exactly, and multiplied by two made four cents.

Q. Why did you leave out repairs?

A. I stated I was trying to compare an item analogous to your 9.45 cents, which was leaving out repairs in that case, too.

Q. Why did you leave out superannuation?

A. I stated in my testimony that that and profit sharing amounted to .11 of a cent in your company and it would have been fair to have carried that statement one step further and say that therefore the four cents which I finally got in London would be compared, not with 9.45 cents but with 9.34 cents.

Q. No, let us turn it around the other way——

A. And then again, there is another reason. Most of the superannuation and profit sharing, as I found on visiting the plant, concerns itself with the manufacturing portion of the plant, and not with the distribution portion.

Q. The profit sharing is not based on any particular portion of the plant, is it?

A. No, but most of the men who get the profits and most
3601 of the men who get the superannuation benefits are in the
manufacturing portion of the plant.

Q. Now, as a matter of fact, when you take an item like profit sharing, it means the employees received a certain figure, and they also receive a certain contingent figure for compensation?

A. Yes, they share in the profits.

Q. Then it is really labor as much as though it was not called profit sharing—isn't it compensation, anything you please to call it of that sort?

A. Some think it is.

Q. Well, don't you think it is?

A. Well, the other companies have not adopted it; they do not think it is an advantage.

Q. Well, it may not be an advantage, but as a matter of fact, it is a payment for labor, isn't it?

Mr. BURR: No, it is in addition to their labor. How can it be a payment for labor when it is an addition?

Q. Isn't it a payment for labor?

A. It is an addition to wages based on the profits of the company and given by the company for two purposes, as we learned over there, as near as I could gather, at least: Partly to encourage the men not going into Unions, and partly to encourage zeal.

Q. In other words, what the company pays is a certain fixed wage plus a certain additional wage which is contingent, which is what is included in the item profit-sharing, isn't it?

A. Yes. In a way. But even if you look—it is not fully that, but so far as it is it mostly relates to efforts to keep not the clerks and inspectors out of Unions, but to keep the men in the manufacturing portion of the plant out of Unions, and those are the men who get most of the benefit.

3602 Q. However that may be, it is not a return on capital, but it is an expenditure in the operation of the plant in one branch or another, isn't it?

A. In the manufacturing branch it might be considered, but only a portion of it in the distribution branch.

Q. Wherever you distribute it it is an expenditure in the operating cost of the gas, isn't it?

A. Yes.

Q. And not a return upon capital?

A. Oh, yes. That's right, but I say in the distribution expense. I was not trying to find the profit of that company.

Q. Whatever part of that then would apply to distribution would be charged to distribution expense?

A. Yes, whatever would be added would be added, but even if you add that——

Q. Well, no matter about that——

A. The 1.08 is the entire amount paid out for superannuation and profit sharing of the South Metropolitan, which would be 2.16 cents, but starting on the basis of my personal knowledge on that subject not one-quarter of it goes to distribution, is a distribution expense. The rest is a manufacturing expense.

Q. This 1.08 pence is more than half as much as the total distribution expense, 2.01, which you figured up a moment ago, isn't it, so it is a very substantial item?

A. But it is applied on the whole system.

Q. I understand, but won't you answer my questions? It is a very substantial item, isn't it, when compared with the distribution items which you previously mentioned amounting to 2.01 pence?

A. Yes.

Q. Now don't you know as a matter of fact, a superannuation charge largely goes into the distributing branch of the plant, as much as 95 per cent. of it?

A. No, I don't know that that percentage goes into it.

Q. Don't you know that it does in the Consolidated Gas Company?

A. I don't know. Their expenses for the whole thing is
3603 small and I don't know anything about their statistics, and
it has never been given.

Q. You have no knowledge that any different proportion went into any plant than went into the Consolidated plant in the distribution branch, have you?

A. I think so, yes. I would suppose that long continued existence of profit-sharing and the facts I learned about the long time the men had worked as stokers in the South Metropolitan Company lead me to suppose that a very considerably more than half of the superannuation must go to the works and not to the distribution system.

Q. That is your assumption and you don't know anything about it by analysis, do you, or direct information as to the distribution?

A. The actual percentage I don't know, but I know that a large amount of information was given us, indicating the great number of men at the works that got this profit sharing and superannuation.

Q. Will you look, Professor, at page 4 of Field's Analysis for 1905 to which you have referred and say what under the English practice are included in distribution charges, so-called?

A. Salaries and wages, wear and tear. That means not of the manufacturing plants. That is provided for elsewhere. Meter repairs, stove repairs, public lamps, rents payable, rents and taxes, directors and auditors, salaries of management—oh, there is a separation between distribution and management. I was reading it all as distribution because sometimes it is a fund to cover all their expenses of distribution over manufacturing.

Q. I am referring to the English system of distribution?

A. That stops, and I should have stopped, at the word "stove repairs," but there is a place——

Q. And management is put in separately, is it not, subsequently,
on the next page?
3604 A. Management is put on the next page, but I used the
word "distribution" in the same sense there that I did in your
company; 9.45 cents in your company was everything, outside of holder, not covered by repairs and taxes.

Q. Now, I am asking you to take the entire management expenses. You know wages are lower in Great Britain than in America?

A. Yes.

Q. So you could not very well compare the distribution expense of London with the distribution expense of New York with a view to determining what the distribution expenses of New York ought to be?

A. It ought to be somewhat higher than London, but not the condition I think that exists.

Q. You employed here an argument as to the dropping of the expense of distribution with the addition of the sales of gas. In other words, the greater the sales of gas, the lower expense of distribution?

A. Yes.

Q. Won't you take Field's Analysis for 1901?

A. I haven't it.

Q. Well, I have it. Here is Field's Analysis for 1901. Take it and tell me what the distribution charges are there.

Mr. Burr: Objected to as incompetent, irrelevant, and immaterial. The period we are confined to here is the period of 1905, the existing conditions that are presently in England and the conditions that are presently here are what we are confining our attention to. What existed in 1901 as to gas conditions in London may be entirely different from the conditions that existed here in 1901 or in 1897 may be entirely different than they are for the year 1905, and counsel is strictly limited in inquiry as to the period covered.

3605 Mr. Mathewson: You do not catch the point. This witness on his redirect-examination cited British companies and proceeded to argue that increased sales meant lower distribution. Now I propose to show that from 1901 to 1905 not only the Metropolitan but the suburban companies, which have shown large increase of sales have at the same time shown a very substantial increase in the cost of distribution instead of a decrease; direct matter which you brought out on your recent examination on redirect——

The Master: I will allow it.

Mr. Burr: Exception.

Q. What was the distribution expense of the Gaslight Company of London for 1901? Was it not 3.04 instead of 6.14 cents approximately?

A. I want to make it on the same basis as the others.

Q. No, I ask now for the distribution expenses as they define it in London?

A. Well, that includes the repairs.

Q. It includes the whole thing which they put in as distribution expenses?

A. Well, on that basis, which is a very different proposition from what I was establishing——

Q. Well, I am taking the whole thing, distribution expenses, rather than selecting items that may tend one way and excluding other items which tend the other way.

A. I am not comparing with your 9.45 cents. This does not compare with that, but this 3.04 is the total charge for distribution.

Q. In 1905 what did they charge?

A. 3.72.

Q. Now how about the sales as between 1901 and 1905?

A. There was a large increase in repair items.

Q. I asked how did the sales compare in 1901 and 1905 by the Gaslight Company?

A. The gas sold in 1901 by the Gaslight Company, as given on page 2 of their return, was 21,160,142,000 feet.

3606 Q. And in 1905?

A. In 1905 it was slightly less; 21,018,423,000.

Q. In other words, the sales of the London Gaslight Company fell in those four years, did they not?

A. They fell by about 142,000,000 feet or about one-half of one per cent.

Q. Whereas the distribution cost increased from 3.04 pence to 3.72 pence, or in a much larger proportion, did it not?

A. Yes. The distribution including repairs increased from 3.04 to 3.72.

Q. You are dealing now when you use the word "distribution" with exactly what the English companies in Field's Analysis include under the term "distribution," are you not?

A. Yes.

Q. That is what I want you to do. Now, will you take the Commercial Company of London and tell me whether its distribution expense in 1901 was not charged as 1.91 pence?

A. Yes.

Q. Equal to 3.86 cents, generally speaking; and in 1905 was it not 3.73 pence, equal to 7.53 cents or nearly twice as great?

A. Yes, but the most of it was due to the repairs.

Q. Very good. What were the sales in 1901 as compared with 1905?

A. The sales in 1901 were 2,657,006,000, and in 1905 2,986,533,000.

Q. So that while there was a large increase in sales there was also an increase of distributing cost per thousand feet, wasn't there?

A. Yes.

Q. Now, will you take the South Metropolitan——

Mr. **Burr**: How much was it?

Mr. **Mathewson**: Oh, nearly doubled.

A. The distribution charges increased from 1.91 pence to 3.73, but the salaries and wages only increased from .39 to .53 of a penny. All the rest was addition in repairs.

Q. That is something like 30 per cent. increase in wages?

3607 A. Yes. It is the management charges, I think, that probably——

Q. Now, take the South Metropolitan Company and see if in 1901 the distribution charge was not 3.11 pence or 6.28 cents?

A. It was 3.11 pence.

Q. And in 1905, was it not 3.68 pence, equal to 7.43 cents?

A. Yes.

Q. And what were the sales in 1901 and 1905?

A. In 1901 they were 11,008,945,000 feet and in the later date they were 12,142,723,000; but any comparison of that should cover the same items that I covered and run right down through a series of years.

Q. Now, I take the average of these three companies, and find, if my figures are correct, that in 1901 the average distribution charge was 2.98 pence per thousand or 6.02 cents, while in 1905 it was 3.71 pence per thousand or 7.49 cents; is that about right?

A. Yes.

Q. Now, taking the suburban companies, and taking the twelve suburban companies so-called, and which you have mentioned or which have been mentioned here, I find from Field's Analysis, if I am correct, that in 1901 the charge was 4.07 pence, equal to 8.22 cents for distribution, is that right?

A. Yes.

Q. And in 1905 the charge was 5.67 pence or 11.45 cents for distribution?

A. Yes. But the same thing——

Q. That is an increase of something like 40 per cent., isn't it—35 or 40 per cent. per thousand feet in four years?

A. Forty per cent.

Q. Now, will you give me the sales in 1901 of these companies as compared with 1905?

A. I don't consider that a fair comparison of the point I was making.

Q. Well, I do not consider a good many of yours fair, Professor, but that is a matter of argument. I am getting facts.

3608 A. But this does not take up the same point I made.

Mr. Burr: Do you mean to say it does not embrace the same items?

Mr. Mathewson: It meets the Professor's argument that as sales increase distribution falls per thousand feet.

Mr. Burr: That would be true if you took up the same items of distribution he took up.

Mr. Mathewson: You cannot prove anything by two or three of the items and seeing how they come out.

The Master: This is a matter of argument, gentlemen. Proceed.

Mr. Mathewson: Will the stenographer read the question?

The Stenographer (reading): Now, will you give me the sales of 1901 of these companies as compared with 1905? A. In 1901 it was 7,676,036,000 feet and in 1905 it was 9,540,954,000 feet.

Q. Isn't it true that the management charges increased between 1901 and 1905 in every one of the three Metropolitan companies and in twelve suburban companies with the sole exception of the Gaslight & Coke Company of London? A. That is quite possible.

Q. Won't you see if it is true?

A. But the difference is nothing like as great as in this other. The management charges in the three London companies are given in 1901 as 1.05 pence, and in 1905 as 1.08 of a penny, and for the suburban companies as 1.69 of a penny in 1901 and 1.77 of a penny in 1905.

Q. You said yesterday, referring to the cost of gas, that you thought the cost might be greater on account of the expense 3609 of the recent investigations. Will you point out any item in Exhibit 94 which you think is an expense of the recent investigations or give me from any other source any item which substantially affects the cost of gas and is an expense due to the recent investigations?

A. I am waiting for the report of the accountants to know just what did enter into that.

Q. But you did not wait for the report before you did make this statement?

A. I remember something in the evidence that has been given in this case as to the sort of expenses that have been incurred during the last two years on those accounts.

Q. Can you point out any substantial item that materially affects the cost of gas which you attribute to the expense of those investigations?

Mr. **Burr**: "Legal and advertising," on Exhibit 94.

Mr. **Mathewson**: Advertising? We did not advertise the investigation. And the entire legal charge, if there had been none before, would not very seriously have affected the price of gas, would it? "Advertising and legal" appears in Exhibit 94 to be altogether .8 of a cent only; and can you point out any item also on Exhibit 94 which you say is attributable to the Gas Investigation, as an expense?

A. I understood that there were in those items the expenses that have been incurred on account of those investigations.

Q. Do you think they are large enough from your observation so that they would materially affect the cost of gas where an expenditure of $8,000,000 is necessary to produce and distribute the gas?

A. I think it should be taken into account, so far as they are found to exist.

3610 Q. Rather an insignificant item, wouldn't that be?

A. I don't know.

Q. Can you point to anything that is substantial there?

A. I don't know yet what the facts are on the subject, but I say I think I did not attempt to give figures definitely. But I said so far as there were such expenses, and I believed there were.

Q. You saw that the Gas Commission found the cost of gas to be 60.75 without allowance for the extra candle-power and for a reserve, and don't you know that Mr. Teal in his investigation from 1900 to 1904, found it to be substantially 61 cents every year, about the same figure?

A. My impression is that he found some such result.

Q. Don't you remember that was substantially what he found? You say you have examined this evidence very carefully?

A. I won't undertake to say exactly, but I do remember this, that the expense was a little less, as I recall it in 1905, than it had been in one or two previous years.

Q. But 1905 was the year in which the Gas Investigation took place that all this expense went into to which you have referred and that appeared to be less than in the years before when there wasn't any Gas Investigation?

A. Yes, but that might be entirely consistent with the fact there were expenses in the Gas Investigation.

Mr. **Burr**: Consistent or inconsistent?

Q. Do you think the cost of meter repairs is affected by density of sales?

A. I didn't state that they were in my evidence. I don't think very materially. Of course it takes a less trouble to run 10,000 meters probably than it would in a city which was more spread out, where there were not as many meters per mile of main, that is self-evident, but aside from expenses of connecting the meter and delivering it——

3611 Q. That is not charged to the expense of the repairs to the meter ordinarily, is it?

A. When a meter is taken out for repair and then repaired and put back I thought it quite likely the expense of cartage of the meter to and fro would be included in the meter repairs.

Q. You referred to the fact the other day that the services had decreased in number. Isn't it due to the fact largely that in many buildings there are many consumers now whereas fifty or seventy-five years ago there were very many fewer consumers per building?

A. Certainly. The buildings are higher and more people live on a given number of square feet.

Q. You have one big service instead of many single services?

A. Certainly.

Q. And you have as many meters connected with that service perhaps as were connected originally for the same amount of gas, have you not?

A. Yes. Here is the table which I said at the beginning of the testimony this morning was being prepared at the office, merely giving the figures which I had given offhand, showing apparently that your costs have declined more than they have in London. It is as follows:

Consolidated Gas Profits—1891-1895 *Compared with* 1901-1905.

Authorities: Complainants' Exhibit 84, pages 353-7; State Gas Commission Exhibit 144, pages 1053-1068, being Teele's Report; Complainants' Exhibit 78, page 347; Mr. Addicks' Testimony, pages 1944-5.

3612

Dividends.	Dividends.	Net earning.
1891	1901	1901
$1,771,482.50	$5,821,632.00	$4,028,670.56
1892	1902	1902
2,125,783.50	5,832,328.00	4,604,139.66
1893	1903	1903
2,657,235.00	5,974,766.00	5,003,514.17
1894	1904	1904
2,834,390.00	6,799,970.00	5,246,615.28
1895	1905	1905
2,834,392.00	6,800,000.00	*4,828,929.39
$12,223,283.00	$31,228,696.00	$23,711,869.06

Ex. 78, p. 347.

Assets.	Assets.
1891	1901
$41,699,890.26	$46,438,975.90
1892	1902
42,450,786.35	46,672,936.12
1893	1903
43,416,396.63	46,789,121.38
1894	1904
43,930,828.02	47,402,617.53
1895	1905
44,188,883.65	47,664,984.91
5)$215,686,784.91	5)$234,968,635.84
$43,137,358.98	$46,993,727.17—9% increase

Ex. 85.

Sales at $1.25½		Sales at $1.00	
1891......	6,269,304,000 ft.	1901......	10,296,955,000 ft.
1892......	6,581,954,000 ft.	1902......	11,494,338,000 ft.
1893......	6,854,014,000 ft.	1903......	12,766,545,000 ft.
1894......	6,731,325,000 ft.	1904......	13,170,760,000 ft.
1895......	6,736,461,000 ft.	1905......	13,283,164,000 ft.
	33,173,058,000 ft.		61,011,762,000 ft.

3613 (*) The profits are arrived at in this way: Mr. Addicks, pages 1944-5, testified that the gross receipts were $13,730,193.50 and the gross operating expenses $8,964,486.98, from which should be excluded a tax item of $63,222.87, leaving a net expense according to Mr. Addicks of $8,901,264.11, after leaving in the expenses the bookkeeping charge of 10 cents for contingencies, depreciation and renewals. This leaves the net profits $4,828,929.39. If, however, only 5 31/100 cents contingent is allowed as in my testimony, the net earnings would be about $600,000 greater.

Mr. Mathewson: It certainly shows economy and efficient management and want of extravagance, doesn't it, as compared with London?

A. There has been a more rapid growth of business. It has doubled.

By Mr. Burr:

Q. What has doubled?

A. The sales in ten years have doubled in New York. That is a much greater increase than in London.

By Mr. Mathewson:

Q. You referred again yesterday to the three cents for reserve and you stated 10.89 cents was enough you thought for New York City to cover repairs, renewals and reserve. Didn't you in Chicago, as I called your attention earlier, allow 10.16 cents for repairs and renewals alone and three cents reserve in addition?

A. I think I did.

Q. And didn't you say the repairs and renewals would be greater in New York than they would be in Chicago?

A. I don't think you quoted all I said on the subject in Chicago.

Q. Well, didn't you say that?

3614 A. I think I stated—well let us read what I did state in Chicago. My impression is that there was a phase—it was not exactly what you give. The figures I think are the same but I would not swear to some things in connection with it that perhaps is not——

Q. Isn't it true that in a coal gas plant, or a mixed coal and water gas plant, there are generally greater repairs and renewals than in a strictly water gas plant?

A. Yes.

Q. And Chicago is a strictly water gas plant, is it?

A. Yes, or it was at the time.

Mr. Burr: What page of the testimony yesterday are you referring to?

Mr. Mathewson: Page 41. After allowing——

Mr. Burr: Of his testimony yesterday?

Mr. Mathewson: No, I cannot tell you the page yesterday, because I only got the testimony as I came in. Page 41 in Chicago, after referring to the allowance about reserve, and so forth:

"The New York Consolidated Gas Company produces about one-quarter of the gas it makes in the form of coal gas and therefore requires more extensive repairs."

Mr. Burr: I think you read that once before. You are becoming much too infatuated with that book.

Mr. Mathewson: The witness took it up again and allowed 10.89 cents yesterday.

A. On page 41 I find my statement in the letter as follows:

"For meeting extraordinary depreciation, however, I have just computed in the New York case that a further allowance of three cents would be ample, and I think it would be on the safe 3615 side, although hardly necessary to concede in Chicago also three cents."

So it seems, I did not consider it hardly necessary, but I said to be on the safe side I would concede it.

Q. And you did concede it in your computation?

A. I did.

Q. And didn't you say down below, a little further on,

"It must be remembered that exclusively water gas plants like that in Chicago do not require as large repairs and renewals as do the mixed coal and water gas plants in New York."

A. Yes.

Q. And you allowed 10.16 cents in Chicago for repairs and renewals?

A. Yes. Since then I have the information of your witnesses in this case, indicating that there was not any three cents necessary.

Q. But you have said that over and over again and I did not ask you any such question.

Mr. Burr: Well, you asked him the question.

Mr. Mathewson: I did ask him about repairs and renewals, not about reserve at all.

The Witness: I include all of it in 10.89.

Q. While, at the same time you allowed 10.16 for repairs and renewals alone in Chicago and stated that New York would require more for repairs and renewals, did you not, as I have just quoted from your statement?

A. I said,

"I have just computed in the New York case that a further allowance of three cents would be ample,"

that is, I computed that a year ago, before the recent testimony.

Q. That was in addition to the repairs and renewals of
3616 10.16, wasn't it?

A. Yes.

Q. And then you went on to say:

"It must be remembered that exclusively water gas plants like that of Chicago do not require as large repairs and renewals as do the mixed coal and water gas plants of New York."

Now, have I quoted exactly?

A. Yes.

Q. Well, I will leave it there. Now, when you talk of renewals and repairs, isn't the line between the two very close so that it is sometimes difficult to distinguish whether an item should go to renewal or repair?

A. Yes.

Q. So that it is the best practice, isn't it, to take repairs and renewals together in a single amount to determine what should be allowed for that item?

A. Quite common to do that.

Q. Isn't it the better and the safer way in view of the differences in bookkeeping and discrimination in charging to one or the other account in different companies, if you desire to compare different companies?

A. I think that strictly speaking the more scientific plan of getting it exact is the sinking fund method rather than to lump it all together as an expense.

Q. I am not referring to that feature at all. I am only saying in dealing with the subject of repairs and renewals—current repairs and renewals, if you please—isn't it the best method of comparison to take the sum of repairs and renewals of different companies if you desire to compare them instead of comparing the repairs of one, with what are charged as repairs of the other, and the renewals of one with what are charged as renewals of the other?

3617 A. The main thing is to get the value on the same basis in comparison.

Q. And isn't it a safer and surer basis to take the repairs and renewals together when you come to compare with the repairs and renewals of another company, so as to eliminate the difference in method of charging one account or another?

A. I think there is more agreement among engineers as to the amount of repairs necessary in the long run than there is in the amount of renewals, and there is great difference in the practice.

The Master: Cannot you answer directly?

The Witness: No, I say it is not safe to combine them in comparing one company with another unless you know they have treated renewal account on the same basis. If they have then it is better to unite the two items in the comparison.

Q. But where you haven't all the details showing precisely how each company treated it the safer way is to take the sum of repairs and renewals and compare it with the sum of repairs and renewals in the other plant, isn't it?

A. No, I think not.

Q. Now, you have spoken about the depreciation item as allowed by the Massachusetts company's municipal plant, three per cent. being fixed as the standard? Aren't you familiar with the hearings given by the Massachusetts Gas Commission in reference to Holyoke applied under the former law before amendment for permission to charge depreciation of less than five per cent. and the Gas Commismission refused to sanction it on the ground that five per cent. was not excessive.

A. I am somewhat familiar with that but there was a special condition there.

Q. Well, whatever the condition, that was the fact as to
3618 Holyoke, wasn't it?

A. But the condition is too important, it should not be ignored.

Q. Very good. State the condition. I do not wish to take any advantage of you?

A. The condition was that the depreciation was to cover, as I understood it, not normal depreciation in structural assets, but the depreciation in the difference between what the City had paid for the plant and its structural assets. The City had been forced by the Commission or had been directed by the Commission to pay a price which was apparently more than the structural assets, and that the State desired to have written off, as well as any decline from year to year in structural assets.

Q. Now, if you take the three per cent. which is established as the standard rate we may say in this municipal act to which you have referred in Massachusetts, that is one-half per cent. more than the two and one-half which Dr. Humphreys used in his computation of so-called life of plant, isn't it?

A. Yes.

Q. And you say that you took a thirty-three year average life of plant because you accepted a statement to that effect made by Mr. Humphreys.

A. That is a year ago, you mean, I did.

Q. Yes, a year ago, on a previous examination. Will you point out where Dr. Humphreys used thirty-three years for that purpose?

A. I took certain periods that he had given in the Holyoke case for the life of various parts of a plant and applied it to the whole plant, I have forgotten what now, and thought it would average thirty-three years.

Q. But you didn't find that he in that testimony or any other testimony took thirty-three years and stated it to be the life of a plant, did you?

A. Since that question was raised the other day, I have looked to see and I have not come across it and I think that forty 3619 years is more likely what he has always used. I simply meant to say that I had understood him to use thirty-three years when I was testifying in the Chicago case.

Q. You have referred to some practice in England in reference to retirement of debt by sinking fund. I will ask you again whether since you previously testified you have ascertained any company in the country which establishes or has established a sinking fund to accumulate instead of making final repairs and renewals currently?

A. No, I don't know of any.

Q. You referred to the cost of gas of the Consolidated Company of Boston, the average of that produced by the Coke Works and that produced by the Bay State as 31 and a fraction cents. Do you remember what it was—31.73 cents, was it, cost at the holder?

A. Per thousand feet made, I have it 31.25 cents, and per thousand feet sold 31.85 cents, in my notes here.

Q. For what period is that?

A. For the year ending June 30th, 1906.

Q. Haven't you information that the cost of gas computed on the make was 34.31 cents to the Boston Company for the year ending June 30th, 1906?

A. I have no such information.

Q. Where do you get your information that it is 31 and a fraction cents?

A. I will give you that information now. For gas bought they paid, as given on their return to the Gas Commission, $520,602.29 and I have it here that——

A. Yes, I find it before me—that for gas made, manufacture of gas at the works $878,065.98. And then residuals are $152,455.56; deducting that left a net cost at the holder of the gas made $725,610.42, and that added to the figure just given of gas bought made a total of $1,246,212.71.

3620 Q. I was asking you about gas made, not gas bought, gas made by the Boston Company, not that received from the coke works?

A. Excuse me. I was giving you the combined figure of all.

Q. Well, that was not the question. I was asking you whether on gas made the cost was not 34.31 to the Boston Company?

A. I have it higher.

Q. Made by itself. Well, what have you higher?

A. I have the cost of the gas made after deducting residuals was 42.05 cents.

Q. That is by the Bay State?

A. Oh, that was by the Consolidated Gas Company, that is all put in here as one company, kept in this return. I haven't it separated for each one of those plants. That was done in the hearing in Boston before the State Gas Commission for that previous year.

Q. Very good, let it go. Now, as to the New England Coal & Coke Company gas, you now say you find it was enriched before delivery to the Boston Company?

A. I find it was so enriched in the years 1903 and 1904, as brought out in the testimony before the State Gas Commission, and I think I stated that that was the last year, for which I have information. The candle power from my recollection is, and I read it last night, that my testimony was that it was about nineteen. My recollection is about nineteen candle power. It was enriched partly by the coke works and partly by the Massachusetts Pipe Line.

Q. And that residual gas so received from the coke company you say went to the Consolidated Gas Company at about 23 cents for the last year?

A. Yes, during the year just closed.

Q. Whether that was enriched, and if so, to what candle-power during the past year, you don't know, do you?

A. I do not.

5621 Q. Now, you testified that you understand now that the Dominion Coal Company that furnishes this Nova Scotia coal at $1.35, alongside, is not controlled by the same parties who now own the Consolidated Gas Company of Boston or the New England Gas & Coke Company, which?

A. I testified that so far as I could learn, and the only information I could get, was the directors and officers were altogether different individuals, in the case of the Dominion Coal Company or either the Boston Gas or the New England Gas & Coke. I didn't say that I knew positively whether it was the same interest or not, I only know that I got this information from *Moody's Manual*.

Q. At the time you did testify that they were under the same control your information was, was it not, that Mr. Henry M. Whitney was the president of both companies and that they were controlled by the same interests?

Mr. Burr: He didn't testify that he knew they were both under the same control.

Mr. Mathewson: Oh, I read his testimony from the Gas Commission and what it is, it is.

A. Why, I don't remember that I ever testified as to who was president of the New England Coal Company, but I did suppose that there was a very close connection between Mr. Whitney and the Dominion Coal Company as well as between Mr. Whitney and the New England Gas and Coke at that time, two years ago.

Q. Your best information was then, was it not, as you testified before the Gas Commission, that they were controlled by the same interest at that time?

A. I suppose they were two years ago. I know nothing of what has happened since.

Q. And you know, do you not, there was a contract in existence for the delivery of the coal at the time?

3622 A. Yes, I suppose there was, and *Moody's Manual* shows there was a contract for the delivery of it.

Q. The contract has not yet expired?

A. I suppose not. It is a contract according to *Moody's Manual* for the delivery of coal and something of that kind.

Q. Now, what did I understand you to say about the sales being an average of 80 cents or 86 cents in Boston?

A. I said that if the sales to private consumers at 92 and a small fraction cents in the year just closed be added to the sales to other companies at very much less than that and then the total price divided by the total sales, would give that figure; and I said that if for the next year we take the same figures of sales in feet but substitute for the 92 cents to private consumers the price that went into effect July 1st of 85 cents that would make the average a little under 80 cents.

Q. Don't you know that the gas that was delivered to other companies and which you have included at the price for which it was delivered to the other companies was delivered to them for distribution to their consumers?

A. Certainly.

Q. And do you mean that you consider it fair to take the price at which the gas was delivered to these other companies in their holders or in their mains, with no expense of distribution at all in, and compare that with the cost of gas to private consumers, delivered by the Boston Consolidated Gas Company at the burner?

A. No, unless it is coupled with further statements which I brought out, namely, that I stated it was sold to other companies. I didn't state it was sold to private consumers; and it must be coupled with this further fact that the cost of gas to the Consolidated Gas Company of a little over 30 cents would be higher probably if it did not buy so much in bulk from the New England Gas & Coke 3623 Company; it buys in bulk and then it turns around and sells perhaps one-fifth of what it buys to other companies. I do not consider myself that it should be stated that the price of gas in Boston is 79 and a fraction cents this year apparently as contrasted with $1.00 in New York, and I consider it is much fairer to compare 85 cents in Boston with $1.00 in New York.

Q. But did not the sales of gas to private consumers during the past year in Boston average 92 cents?

A. The present year?

Q. 92 cents?

A. I may have misled you by what I said. I meant to say 85 cents since July 1st in Boston.

Q. During the past year the average was 92 cents in Boston?

A. That's right.

By Mr. **Burr**:

Q. Since July 1st, 1906?

A. Since July 1st, 1906, it has been reduced to 85 cents in Boston. Before that it averaged 92 cents during the previous year.

By Mr. **Mathewson**:

Q. And you understand that under the Massachusetts law the company is entitled to increase the price to 90 cents if it chooses, do you not, legally?
A. Oh, yes.

At 1:05 P. M. a recess was declared till 2:15 P. M.

3624 After Recess.

Edward W. Bemis resumed.

By Mr. **Mathewson**:

Q. You referred yesterday to some instances in which the Massachusetts Gas Commission had reduced the price of gas and named some cities for the purposes which you described. Is there any city in the list in which the price of gas was reduced by the Commission below $1.00 except the City of Charlestown?
A. No.
Q. And does not the City of Charlestown get this cheap coke company's gas?
A. I don't know. It did at one time, and they testified in a hearing, where I represented the city and was in that case, before the Commission, that they thought they would have to give it up and make their gas. And the Commission——
Q. You don't know of your own knowledge that they made any change, do you?
A. No. I read the report of the Commission in which they said it might have to be made or that the company thought so, but I don't know.
Q. If they find themselves unable to get this cheap gas, I suppose the Commission has the power to raise the price for them if necessary?
A. Yes, the Commission made the statement that they did it even though they might have to make their own gas.
Q. Let me ask you about this testimony of yours in Springfield, Illinois, in 1897. Do I understand you to deny that you said in substance in 1897 before the Legislative Committee at Springfield that you thought 90 cent was a fair price for the City of Chicago at that time for gas?
A. I wish to be understood as saying that I do not remember what I said then.

3625 Mr. **Burr**: In connection with the 90 cents?

The **Witness**: In connection with the 90 cents. All I remember is that I appeared before a committee, of which Senator Crawford was chairman, with respect to the consolidation of Chicago gas companies, or in connection with some bill relating to them, but I really don't remember what I said.

Q. Don't you remember that the question as to the price of gas in Chicago, or the price which should be allowed for gas, was discussed?

A. I think it was.

Q. Well, have you any doubt that you testified at that time that you thought 90 cents would be a fair price?

A. I have no recollection about it, none whatever.

Mr. Burr: That was in 1897?
The Witness: Yes.

Q. That is the best answer you can make, is it?

A. Yes.

Q. What do you mean then by your statement in yesterday's testimony "I don't believe I said it, but I have come to the conclusion I must have said it," in referring to the 90-cent recommendation?

A. I came to the conclusion in Chicago, I meant to say, that I must have said it, and in the previous testimony here a year ago, because of the insistence on the part of two or three people that I had said it, but I do not recall it.

Q. You are not willing to swear that you did not say it, are you?

A. No, I don't remember anything about it.

Q. Now, you referred to the Massachusetts dividends, and stated that the income of all the Massachusetts companies, net earnings, was $1,864,701.50, if I understood you correctly. Is that the
3626 earnings of all the companies including Boston?

A. I so understood it.

Q. And you stated that the return on the capitalization as paid out in dividends was 6.71 per cent., is that right?

A. Yes, that was taken from the last report to the Massachusetts Gas Commission.

Q. That was an average, was it not?

A. Yes, that means that there were a good many companies above 6.71, does it not? Whatever the percentage I gave, was it 6.71?

Q. Yes.

A. Of course, the average would not be the exact amount of all companies.

Q. And you do not claim, do you, that a well managed and a well situated company shall be held down to the average which all companies are able to earn whether well managed or whether well situated?

A. I have not said that. My basis of 6 per cent. was reached in another way.

Q. Were the Boston companies paying any dividends in 1904, the year which you selected for this computation?

A. The year 1904-5, do you mean?

Q. Yes, the year which you selected. Was it the year 1904-5?

A. Yes, that is the year covered by the last annual printed report to the Commission.

Q. What was the dividend of the Boston Gas Company at that time?

A. Well, I did not bring the report with me. I think it was 8 per cent., but I am not absolutely positive.

Q. You did not compute what they were earning on their capitalization as distinguished from what they were paying out in dividends, did you?

A. Not for that year. For the year just closed I did. I found out they paid out in dividends all they claimed they earned.

Q. Did you make any computation for this same year 1904-5 on that same basis?

A. No, but I did for the year just closed.

3627 Q. Do you mean to say the companies paid out in dividends all they earned and put up no surplus?

A. I thought you asked about the Boston Consolidated Company.

Q. No, I asked as to all these Massachusetts Companies whose average you stated was 6.71 per cent. paid in dividends.

A. Oh, no, I did not make that computation.

Q. Nor did you compute for that year how much they earned or paid on their structural assets as distinguished from their capital stock outstanding, did you?

A. No. I think the Boston Company should be corrected for the year just closed. I think it was 7 per cent. for the year just closed, and that included all their earnings.

Q. Well, what was the Boston Company paying in 1904-'5 as distinguished from the——

A. That I don't remember but I think it was 8 per cent. I don't like to——

Q. Referring to this 7 per cent.——

A. I don't like to be very positive about the dividends there were in 1904-5, because the more I think about it the more uncertain I am.

Q. As to the dividends paid by the Boston Company during the last year ending June 30th, 1906, it appears, if I am correct, that the amount of dividends declared were $1,209,968. That would be 8 per cent., would it not on the capitalization, instead of 7?

A. I have it all here and can tell you——

Q. That is a very simple question. All I have asked is whether it would be 8 per cent. instead of 7.

A. The capital stock was $15,124,000——

Q. You can tell about, can't you?

A. I am looking for the dividends. Eight per cent., that is right.

Q. And you say the Boston Company paid all that it earned that year?

A. I have so computed it. The balance to profit and loss was $1,142,166.39 and the amount paid out in dividends seems to have been $1,209,968, but in addition there was some other ex-
3628 pense, interest on notes $10,908.53 and sundry charges prior to July 1st, 1905, $21,702.50 and amount carried to employees' fund $50,000, so that in reality the total debit was $1,371,632.42.

Q. So that it did not earn its dividend according to that by about $200,000 and odd dollars, $230,000, wasn't it?

A. There was a profit from the electric business of $129,539.80 and some other interest, so that its total—the final total earnings or receipts did not equal its disbursements of dividends and interest by $82,668.73.

Q. Now you spoke yesterday of the Haverhill case, and stated that in that case it was claimed that the structural value of the Haverhill plant had been built up out of the consumer. I am correct, am I not, in understanding your testimony?

A. I believe I so testified. That is, a large portion of it, not the whole of it.

Q. And therefore there was a question whether they should capitalize the plant, so far as it had been built up, out of the consumer?

A. Yes.

Q. That I suppose means that after payment of proper dividends and proper charges for the cost of gas, and a proper reserve, if any should be allowed, that there were still surplus earnings out of the consumer which had been put into plant?

A. Yes.

Q. Now in the case of the Consolidated Gas Company, unless part of that 10.89 cents which is charged for repairs and renewals has gone into the plant, nothing has come out of consumers to add to the cost of the Consolidated Gas Company's plant as far as you have observed, has there?

A. No. Of course there may have come out of the consumer the $2,000,000 due to the company, and unpaid and which did not exist at all in 1884, and something of that kind.

3629 Q. But that has not come out of the consumer yet, if it is still due and unpaid.

A. No, going to come out of him, we will assume.

Q. And what there may be to offset that in the way of accounts on the other side you have not considered?

A. No, I have not considered those.

Q. And the Haverhill case has been in the courts a great many years, has it not, ten or twelve years, something like that, a very long time anyway?

A. It was in the year 1898 or 1899 that this case was tried in Haverhill and therefore it has been seven or eight years.

Q. And how long it was in the courts before the trial came off, of course you don't know?

A. I think I know that it came up first in the trial, that is the case has gone into the courts with respect to sustaining the decision of the Commission, so it could not have arisen before. I was in the Haverhill case and remember that feature of it.

Q. You speak of Chicago, where you fixed a structural value at $3.20 and compare that with New York when you say the assets upon the Yalden's figuring with the additions amount to about $2.20, which makes, if I understand, $1.00 difference per thousand feet of sales in the relative capitalizations. Is that right?

A. Yes.

Q. And you say that that can be explained by a difference in the bids?

A. Not altogether, I did not mean to say. The Yalden figures, which I did not tie down to as absolutely conclusive, are based on the cost of the land at the time it was bought, but I said most of the addition was due to the mains.

Q. Did you take the cost of the Chicago land at the time it was bought or the value which you considered to-day?

A. I don't recollect.

Q. You certainly must have had some definite idea on that, Professor, didn't you, as to what you were taking?

3630 A. I think I took a figure based upon a general view of the cost of water gas plants per thousand feet of capacity and some knowledge that I had of other features of the plant and made some assumption on land, but I think I stated very positively to the Committee that no very close approximation could be given without an engineering investigation.

Q. I know, but let us take this tribunal instead of that Committee. You said your $3.20 in this pamphlet which I have called your attention to relating to Chicago, was the cost of duplication. That means, does it not, the cost of the land, if procured to-day?

A. I don't know just how I took it, but I think I took it on that basis.

Q. And yet, in figuring out the $2.20 upon which you say the Consolidated Gas Company is entitled to a return, you take, not the cost or value of that land to-day, but the original value beginning with 1823?

A. I think that should be done in Chicago, too, but I did not have any data for it.

Q. Then you do not make this $1.00 difference relating wholly to mains?

A. Not wholly, but it is largely.

Q. What is the condition of the streets of Chicago as to pavements, as compared with New York?

A. It is poorer.

Q. Much poorer, isn't it?

A. Yes.

Q. Are not the streets of New York more congested than Chicago?

A. Yes.

Q. Is not laying of mains very much more expensive in New York than in Chicago?

A. Yes.

Q. Is there any rock to speak of in Chicago?

A. No.

Q. What is the cost of excavation of a trench, say, for an average pipe, as between earth and rock?

A. I have not the figures with me now at all.

3631 Q. Is not the cost of putting mains through rock in a city street with the care there has to be taken by reason of the surroundings five or even ten times as much as it is digging a trench to lay the same main in?

A. Not that difference, but there is a considerable difference.

Q. You don't think it would be as much as ten times?

A. No, not——

Q. The excavation in soft earth, and I am speaking now simply of the excavation of the ditch, does not the excavation of a ditch in rock——

A. Where you have to blast, do you mean?

Q. Well, not necessarily, because in a city like this you cannot blast frequently, but have to pick it out. In such a case as that is not the cost of producing a trench four feet deep in solid rock ten times a much as it would be to dig that trench in soft earth?

A. I would not undertake to give the exact figures.

Q. You have spoken about the mains in Chicago as being 2½ times in mileage what they are in New York?

A. Yes.

Q. And that the density in New York is greater. Do you know the sizes and lengths of main in New York classified as to sizes?

A. Only as given in the exhibit, yes.

Q. Have you got it in Chicago?

A. No. I have it in New York, that is what I meant to say.

Q. Do you know how the mileage in Chicago compares as to size of mains with New York?

A. No.

Q. Are not the larger mains very much more expensive?

A. Yes.

Q. Both to purchase as material and to lay when you have purchased them?

A. Yes.

Q. Because you have a very much bigger ditch, is that not so?

A. I have no reason to believe that the mileage would be much larger in New York, that is they have to take out from the works here 2,000,000,000 feet more than they take out from the works in Chicago.

3632 Q. I am trying to find out what you know about it. Is it not true that the heavier the consumption off mains the larger the mains, other things being equal?

A. Yes. I think it would be larger here than in Chicago.

Q. So you cannot take two and one-half times the figures of the New York mains and say that that represented the value or cost of Chicago mains?

A. No, not directly.

Q. You gave the cost of the Chicago plants by your estimate as something like $35,000,000?

A. I said $3.20 multiplied into the 11,000,000,000 feet.

Q. That would be a little over $35,000,000?

A. I think so.

Q. Now, your figures for the mains in New York as I called your attention to them in your cross-examination were about $8,400,000. If you multiplied that by 2½ times, assuming that the mains were of the same size and same value, that would make something over $20,000,000, would it not?

A. Yes.

Q. You would not say for a moment, would you, that the value of the mains in Chicago was over $20,000,000 if the value of the entire plant, manufacturing, holders, mains, meters, services and everything was only $35,000,000?

A. I think that would be a little too large a proportion but——

Q. Have you any reason to suppose that the mains in Chicago cost more than $5,000 per mile, laid?

A. To lay?

Q. Laid as they are, as they stand?

A. I think they would cost—well, I don't know, I would not undertake to say.

Q. That would not be an unfair figure, would it, offhand?

Mr. BURR: If he knows.

Mr. MATHEWSON: I am asking the Professor on this subject——

3633 The WITNESS: Well, I don't know that.

Q. In soft earth?

A. I would have to know the average size and a great many things I don't know about the Chicago mains.

Q. Well, assume an average size, that would not be out of the way, would it, $5,000 per mile?

A. Well, I don't know the conditions in Chicago. They claimed there in the testimony according to Meagher's claim that the expenses there were very large for laying.

Q. They are large anywhere for laying?

A. He said they were much larger there than Cleveland.

Q. Who is Mr. Meagher?

A. The attorney for the company.

Q. In your calculation, did you estimate at more than $5,000 a mile?

A. I don't remember now.

Q. And you would not say that you did, would you?

A. I could not say.

Q. You would not say positively that it would cost more than $5,000 a mile on the average to lay those mains, for material and labor?

A. I could not say.

Q. So you are not prepared to say how much, if any, difference does arise by reason of the greater mileage of the mains in Chicago in the total value of plant?

A. I have not attempted to fix a definite cost of the mains here. I have taken only the book value of the mains and the various data of the 1884 valuation and the extensions since then. I have not attempted to make an independent estimate as to the value of the mains, that is, in this hearing.

Q. Yes, but yesterday in your redirected-examination you made some comparison between the $3.20 per thousand feet for capital value in Chicago and $2.20 in New York, and I understood you to
attribute that difference largely to mains. And I am trying
3634 to find out whether you had any foundation for that. You
say you are unable now to make any comparison?

A. I know the considerable portion of it was due to mains. They have 1,200 miles more mains there than here.

Q. But it may have been smaller on the average and have cost very much less to lay per mile?

A. I think the 2,000 miles will cost much more than the 800 miles here.

Q. Let us take $5,000 per mile, which you say you cannot say was too low, and figure that. That amount multiplied by 2,000 miles would be how much, $10,000,000 would it not?

A. Yes.

Q. The figures for the mains here in New York were $8,400,000, which would mean about $1,600,000 difference on that basis?

A. I think that is sufficient itself to prove that—my figure in Chicago would be higher probably.

Q. We do not think it is. You conclude merely from that comparison that the figures in Chicago would be higher without knowing what the size of mains is in Chicago as compared with New York, and without knowing what the cost of laying them is in Chicago as compared with New York?

A. I think it would be more than that.

Q. Do you know anything about it?

A. No.

Q. In Montreal you stated you took $4.30 as the value per thousand feet?

A. Yes, sir. It came to that.

Q. And you said you made that average among other things, because that was a municipal plant and you wanted to be on the safe side. Is that a fair statement of your testimony yesterday?

A. I do not think it is quite what I said, but it is along the line of what I said.

Q. And you thought, did you not, that the city might establish a municipal plant which would test your figures, and you wanted your figures to be fair?

3635 A. It was not that; but I wanted them to be quite high enough to warrant,—I knew there was always a margin with a municipal plant, with a possibility of large cost.

Q. When you are going to estimate for a private plant, don't you want to be just as fair and liberal?

A. Yes, and I want to in this case, and that is why I want this engineering valuation. I have been the most insistent in asking for it——

Q. Do not wander off. Just answer the questions and we will get along more rapidly. Why yesterday did you lay emphasis on the fact that you gave this liberal estimate because it was a municipal plant?

A. I did not lay great emphasis, but I said it did affect my view of the cost. I wanted to be very liberal with them. I would rather err on that side in makiig such an estimate as that, but I do not think it is necessary to take that into account at all in explaining the difference. I took lower unit figures than I have here.

Q. Lower unit figures on what?

A. Lower unit figures than were taken here.

Q. On what?

A. On coal gas and water gas I think—or at least no higher figures per capacity, about the same, about $100 for water gas and $200 per thousand feet capacity for coal gas.

Q. $100 to cover what?

A. Just the manufacturing plant aside from land and holders.

Q. But your whole thing figures up $4.30 average for the entire outfit.

A. Yes, but they had three hundred miles of mains.

Q. Is it not a fact that you did take $4.30 all told?

A. Yes.

Q. Now you bring up the question of mains and output.

A. And I gave them a larger manufacturing capacity in proportion to their annual sales than what the testimony shows they have here in New York, where they buy even part of the gas they sell.

3636 Q. Yes, but the gas which we buy, as you put it, requires a plant to produce it and we will reckon with that later, so that need not make any difference with us. In the City of Montreal, as in other cities, I suppose, labor is the one thing that goes to produce every part of plant, that enters into every detail?

A. Yes.

Q. Are not wages lower in Montreal than they are in New York?

A. I should think they would be but I do not know definitely.

Q. Did you not testify in Chicago that they were?

A. Very possibly. I think myself they are now. I don't know what I testified.

Q. Now let us take mains. You said that they had to be laid six feet deep. The cost of the system of mains for a great company is a small fraction of the total value of the entire plant anyway, is it not, generally speaking?

A. It is quite a charge.

Q. Oh, a substantial part, but it is not the half of it.

A. Mains and services often constitute over one-third.

Q. In New York they did not, according to Yalden's figures in 1884, did they?

A. I don't remember now, just what his figures were on that.

Q. Now, the expense of digging a ditch two feet deeper than in New York is not going to make a very great difference, is it, in the capitalization per thousand feet of your entire plant if it is dug just in the soil of Montreal?

A. The report shows there was a good deal of rock there but——

Q. How much rock?

A. I have forgotten exactly.

Q. I have your report. Look at page 1370 and see if it does not appear that the entire number of miles of rock through which the city water mains are laid is only 12¾ miles and if you did not consider that and use that in your estimate?

A. I stated in another place just what percentage I used of rock. I think you can find it.

3637 Q. Yes, 12¾ miles, is that right?

A. I think you are looking at the wrong place, not what I refer to.

Mr. Burr: What is the document you are referring to?

Mr. MATHEWSON: This is the Professor's report to the City of Montreal.

The WITNESS: This is what I said: "In the system of 300 miles it is assumed that 25 miles will be laid in rock and 33 miles in paved street. The entire number of miles of rock through which the city water mains are laid is only 12¾ and the suburban companies, if I recall aright the statement of its engineer, has less than ten miles in such ground. Then since this proposition was to cover a gas works which went out into the suburbs, where the other rock was located, I assumed 25 miles and not twelve.

Q. Is it not a fact in Montreal there were only 23 miles of modern paved streets, with modern paving?

A. Yes.

Q. And there were about 300 miles of streets altogether, were there not?

A. In the city and suburbs, I think, there were.

Q. Which you dealt with in your estimate?

A. Yes.

Q. And is it not a fact that there were only about 100 miles of permanent sidewalks and the other 240 miles were wooden sidewalks?

A. I don't remember now, but if it is in the report I accept it. It is about that.

Q. These things were before you at the time you testified before the Gas Commission?

A. Yes.

Q. And I read from your testimony——

A. I accept what you read.

Q. "And with approximately 100 miles of permanent side-
3638 walks and 240 miles of wooden walks."
The cost of labor is less in Montreal than in New York?

A. Yes, but material is higher.

Q. Is not land cheaper in Montreal than in the Island of Manhattan?

A. Yes.

Q. Is it not cheaper in Chicago than in New York, if you choose your own site for a gas plant?

A. Yes, and buy it to-day, I think so.

Q. Can you tell me now the average structural value of gas plants in the United States taken as a whole per thousand feet? It appeared in this table that you quoted something—$7.23.

A. What you show me is a computation made by the City statistician of Chicago and purported to be compiled from a United States census report. I have not attempted to verify the computation. I didn't have, when I was testifying the other day, the bulletin from which that was quoted.

Q. Well, that is the same table from which you have already quoted one or two things, is it not?

A. I did not quote from that statement of Mr. Grosser's at all. I quoted in my testimony direct from the bulletin itself, but I do not think there is any large difference between the figures.

Q. This appears to be $7.23, which is the same figure that we used before the Gas Commission and in our briefs. Have you any doubt that is substantially correct?

A. No. I think it differs a little from the bulletin, I don't know just how, but the difference is not large. Some figures are different. I noticed Massachusetts is a little different.

Q. But you think it is substantially correct. If you find it is not, you can correct it.

A. Yes.

Q. Now, referring to the cities which you named in table 19——

A. On bonds and stocks, is that?

3639 Q. Yes. You stated that including all of them that there was an increase of assets approximating the increase of sales and that if you left out Lowell and Lawrence the result would be somewhat different. Leaving the situation as you left it, is it not true that the assets or the capital would not show a corresponding increase to the sales or to the proportionate sales if the stocks were sold at a premium?

A. The stocks and bonds and notes did not appear to increase much.

Q. And that might be due, might it not, in the case of Cambridge, for instance, that the stock was sold at double its par value so that the stock was increased at only 50 per cent. really of the increase of assets?

A. Yes, so far as there was a premium that would affect it, that is true. I don't think——

Q. And it would affect Lowell particularly, would it not?

A. Yes, I don't think it would wipe out the difference, however.

Q. Pardon me.

A. I don't think if the stock increase of about half a million of dollars, stocks, bonds or notes, I forget which it was that increased, but there is usually quite a premium on stocks, and I do not think the stock increases after taking account of the premium would——

Q. Equal the increase in assets?

A. Yes, equal the increase in sales.

Q. Or equal the increase in assets?

A. I don't know as to that. They were not very different, however.

Q. The assets might be increased there from application of premiums on stock or by application of surplus earnings to capital account?

A. Yes.

Q. You spoke of sales in Boston in 1892 and 1893, as compared with sales in Boston in 1895 and 1896 and showed quite a 3640 large increase. Will you name the companies which you included in that computation?

A. That was a computation for one year in each case. It was not the years 1892 and 1893 but the year 1892-3 because their year begins July 1st, likewise for the other year, whatever it was, and I took the six companies that sold to private consumers, that is, I omitted the Bay State and the Massachusetts—the Massachusetts

Pipe Line, I think, was not in existence—I omitted the Bay State. That left the Boston, Brookline, Jamaica Plain, Roxbury, South Boston and Dorchester.

Q. Now, in reference to New York, you spoke about the sales from 1890 to 1895 being 33,173,000,000 feet?

A. Something like that, as I recall it.

Q. And from 1900 to 1905 as being about 61,000,000,000 feet?

A. Yes.

Q. Now, 1890 to 1895 included the period, did it not, of very great depression, for the sales of the company did not increase at all?

A. Yes. Two years, I suppose, of it.

Q. Whereas the period of 1900 to 1905 included a period of great prosperity, that included the two coldest winters on record, and included the period of the coal strike, all in one. Would not that have a material effect in making these comparisons?

A. I have already testified as to two of those causes having an effect, namely, the prosperity and the coal strike. I have testified that as to the cold winters I was not aware that that effect would be——

Q. As to the increase in assets——

A. I will frankly say, in a natural gas territory where people depend on gas for all their heating, then a cold winter would certainly increase consumption of gas, but I was testifying with regard to New York when I said I was not certain.

Q. We will take the proportionate increase of assets of the 3641 Consolidated——

A. Nine per cent. I think that was on the average.

Q. Whatever it may have been. You understand, do you not, that within the last two years the company has been crowding its buildings with machinery until, as the testimony is, there is room for no more?

A. Yes.

Q. So that that increase might be due, to some extent, to the fact that they have larger buildings in which they were able to install more apparatus without purchasing more land or buildings?

A. Certainly. The fact that the assets increased so slightly over nine per cent., while the consumption doubled, was in part due to a greater use of the land as manufacturing plant and partly to the fact that the company has been purchasing part of its gas, but that would not account for it all by any means. The assets would not have increased, I believe, proportionately to the sales even if you take account of those two factors.

Q. The argument is then that the increase shown does not represent a normal increase provided the company had purchased all its own gas and had a plant reasonably crowded with apparatus, but not over-crowded, but at the same time that you think that the assets would not have kept up the same proportion of increase as the sales?

A. That's right.

Mr. Burr: I want to call attention to a mistake made on page 3546. The last question: "What has been the effect on price of price reduction in New York?" It should be, "What has been the effect on profits of price reduction in New York City?"

Q. Referring to the table of dividends from 1887 to 1905, I understand you to say now that you took in 1897 the amount
3642 which was paid in dividends without respect to the amount of earnings?

A. I believe I did. I had no earnings before me and I do not consider it as fair a comparison as to take five years as I had just done in another comparison, taking the five years ending with 1895 and comparing them with the five years ending 1905.

Q. Well, that is the table which I hold in my hand and which I have preliminarily marked 21?

A. That is the table that takes the five years. I consider that fairer than a table that takes one year, but I brought that out because so much has been said of the year 1897 as representing relative conditions as to cost.

Q. But even in this table 1891 to 1895, you have dividends paid out, without regard to the amount that was earned in those years?

A. Yes.

Q. On the other hand, from 1901 to 1905 I understand you take earnings rather than dividends?

A. Yes. I did at first take a table of dividends and might have inserted it there. It would have brought out a larger payment, but I considered it fairer to take the earnings and should have preferred to take the earnings for the first period if I could have found them, but I had no data about them.

Q. As a matter of fact, isn't this an unfair result of the operating period from 1891 to 1895 when the dividends paid out were not equal to the earnings, to compare it with the years 1901 to 1905 when the dividends paid out exceeded the earnings, as you observed by the testimony, didn't you?

A. I had no evidence as to whether the dividends exceeded the earnings in the first period.

Q. But you know that in 1901 to 1905 the company's stock had been largely increased for the purchase of securities of other companies?

A. So it appeared in the evidence.

3643 Q. It had been increased from 1900 to 1905, from $39,-
078,000 authorized capital to $80,000,000 authorized capital, hadn't it?

A. And I should, come to look at it, thought that I did have a column of dividends here.

Q. That shouldn't be. It should be earnings, shouldn't it?

A. No. I have them computed here, they are marked right, but I considered the column of earnings a fairer comparison of earnings than the dividends for the last five years.

Q. Were not part of those earnings from securities of other companies?

A. These net earnings?

Q. Yes. The last period, 1901 to 1905?

A. For the last year it certainly was not, and for the previous four years I thought it was not so, I took it. I thought it was the net earnings from gas alone as given.

Q. Excluding securities of other companies?

A. I thought so. It purported to be, it used earnings from gas only.

Q. Now, take the item of assets, 1901 to 1905, ending with 1905, $47,664,984.91. That you know from Exhibit 78, to which you refer on this sheet, represents in all four items of real estate, plant, property and construction so-called, do you not?

A. Yes. The same as in the other period.

Q. But it does not include materials nor working capital?

A. Certainly not. I compared the same things in both columns.

Q. This is merely to compare the similar items at different times?

A. Yes, and that constituted over 90 per cent., if I recall right, of the total.

Q. Whatever it may be, I want to be sure. You understand the effect of the comparison?

A. Certainly. I so understood it. It meant the mains and services and meters and lamps and the manufacturing plant and holders. It did not refer to money on hand or money due for supplies on hand.

3644 Q. Now, I find down below that on this table an item "Sales at $1.25½, Exhibit 85." That refers to the number of feet sold in the years 1891 to 1895, does it, with the average rate applied?

A. Yes.

Q. And now as to the other side, "Sales at $1.00," 1901 to 1905, stated separately. This 13,283,164,000 feet in 1905 was not sold at $1.00, was it, entirely?

A. There were a small amount sold to the City at 90 cents, I think.

Q. So this would not be exactly accurate?

A. It was intended in both cases to be round figures. It would not vary half a cent. Yes, it is a round figure. It was not attempted to carry out the decimal.

Q. It included sales to the City——

A. In both cases the same.

Q. Whereas that would be sold at 90 in the latter part of the period?

A. And in the former there were sales to the City, too. I only know in round figures. Attempting to have it relate to the price to the private consumer in both cases.

Q. Now, as to the increase of mileage of mains in New York, do you know whether the increase is larger in the large sized mains than in the smaller sizes?

A. I believe it is, as I recall. Since 1884, you mean?

Q. Yes.

A. Also in the services, I think, probably. There has been no increase in services but they are larger.

Q. Now, you referred to the sales in Syracuse from 1901 to 1905 and show, if your information is correct, an increase of nearly 50 per cent. Don't you know that that period not only includes the two severe winters and the period of prosperity and the coal strike but a complete change of management of that company, particularly as to the sales department?

A. I believe there was a change of management. I don't 3645 know whether there was any great change in the sales department. I don't recall any evidence about that. There may have been.

Q. Do you mean that the net profits from sales of gas was somewhat larger than they were under the previous sales?

A. I think in my testimony I gave the total net profits as reported by the company for each period, and there was an increase.

Q. You stated something yesterday in reference to the method of collecting bills at Chicago. You understood they were paid at the offices of the Company instead of through the express offices, did you?

A. I so understood although I said I was not positive.

Q. Would the fact that I have long distance information to the effect that they have been paid, or some of them, through the express offices, modify your impression?

A. Yes, if you have that.

Q. I have it, for what it may be worth. You referred to Milwaukee. You know, do you not, that the amount sold at the lower rates in Milwaukee was very small in proportion to the total output?

A. I don't know anything about it? I have never seen any analysis of the sales in Milwaukee.

By Mr. Burr:

Q. You are referring simply to what Mr. Cowdery said in regard to it?

A. Yes, as quoted in this Council Committee's report. I do know this——

By Mr. Mathewson:

Q. In other words, that these very low rates have reference to what is called "daylight" consumption?

A. I know this. Excuse me a minute. Can I have that Committee report again? There is a point bearing directly upon 3646 that on that Council Committee's report. This statement that was read yesterday from Mr. Cowdery——

Q. Do not read it over again. Just answer the question.

A. Yes, but I want first to notice it (page 13). It is to the effect that the low price of 60 to 90 cents is for gas used for fuel. That is for heat and power and, as you say, is largely a day consumption. Now I did read before my testimony that the last edition of Brown's Directory gives over 50 per cent. of the sales of that company as day consumption. I think it was 56 per cent.—anyway, over fifty.

Q. How much of that relates to the gas burnt at $1.00 or 90 cents or 95 cents for gas stoves and fuel purposes of that kind, you don't know, do you?

A. I think it would indicate 90 or lower.

Q. Do you know what the average in Milwaukee was?

A. No, but the day consumption according to this report or this statement of Mr. Cowdery's, the day consumption would naturally be the fuel consumption. Now the fuel gas it says is furnished at 80 cents a thousand and to large users it goes down to 60, and if over half of that consumption is day consumption, then over half of the consumption ought to be less than 80 cents or a little of it might be used for light at $1. On the other hand a great deal would be used by the 60 and 70 cent users.

Q. You are simply reasoning now.

A. It is positive the average must be below 90.

Q. It is positive that the average of the gas sales in Milwaukee was below 90?

A. I would say that was a positive deduction from those statements.

Q. Well is it? Does the statement that this 60 cent grade is used in day consumption prove that all day consumption is at the 60 cent rate or anywhere near that?

A. No, but all the fuel consumption is 60 to 80. I don't say all
at 60. Eighty is for fuel and then it runs from 80 to 60,
3647 according to the amounts used. Not all day consumption is
fuel consumption, certainly.

Q. You don't know the average rate received for the gas, do you?

A. No.

Q. Isn't it true that Mr. Cowdery who describes himself, as you said, as the father of reduction of price, or whatever it was, estimates a fair price for gas in Chicago under conditions there at 98.67 cents?

Mr. **Burr**: I think you went all over that before with him, Mr. Mathewson.

A. I was very much interested.

Q. Of course you were.

A. Yes, and the company reduced to 80 cents immediately afterwards.

Mr. **Mathewson**: I move to strike that out.

Mr. **Burr**: It is the fact and you have brought it out yourself already. This is the second or third time.

The **Master**: Answer the question.

The **Witness**: Yes, I said to the question asked. Mr. Cowdery said 98 cents was all they could do, if you read it correctly. I don't remember it exactly.

Q. Won't you see if I did read it correctly, if you have any doubt about it?

A. Will you point to the exact place.

(Counsel indicates in book as requested.)

The **Witness**: 98.67 cents was Mr. Cowdery's estimate.

Q. Which included 34.92 cents for return on capital, didn't it?

A. Yes.

Q. Now you referred to Baltimore. Isn't it the fact that at

Baltimore you were testifying in favor of sustaining the valuation of a company for purposes of taxation in behalf of the city 3648 and that you did estimate the value of the property at twenty times the net profits and testified as you admitted testifying on your cross-examination?

A. Yes.

Q. And gas in Baltimore at that time was $1.10 a thousand, wasn't it?

A. Well, I thought it was a dollar, but I am not sure.

By Mr. **Burr**:

Q. What year?

A. This year, the spring of this year.

Mr. **Mathewson**: I think it was one dollar and ten cents, with provision for some cut in case of early payment or large consumption, wasn't it?

The **Witness**: I think they lately made a reduction to a dollar, but I am not sure.

Mr. **Burr**: The same plan was followed in Milwaukee, as Mr. Cowdery referred to—the reduction for large consumption.

Mr. **Mathewson**: Oh, No.

The **Witness**: No, but for prompt payment.

Mr. **Mathewson**: The arrangement was very different, as I understand it.

Q. Table 20 of page 3558, has in the final column the heading "return on the investment, per cent." What do you mean by "investment" as you used it there?

A. Purchases of the securities. Investment in stock or bonds, as the case may be.

Q. You mean return on what you concede to be the selling price of those securities?

A. Yes.

Q. Not on the structural assets or anything of that sort?

A. No.

Q. Now you figured out yesterday, taking 58/59 cents as 3649 the cost of gas and return on a certain capitalization which I think you stated to be $46,500,000?

A. Yes. Six per cent. on that.

Q. Now you took a six per cent. rate on that?

A. Yes.

Q. And all your computations on that yesterday were based on six per cent., were they not?

A. Yes.

Q. Now, that $46,500,000 does not include the franchises, does it?

A. No.

Q. And it does not include the Astoria investment?

A. No.

Q. Nor any assets of other companies producing gas which we receive but do not manufacture?

A. No.

Q. And good will?

A. No.

Q. Value of an established business?

A. Well, there was a three-million dollar margin, that was all.

Q. Yes, I understand. I am speaking now about the $46,500,000.

A. Well, I say in that there was a three million dollar margin.

Q. I understand that, but I say that did not include these various items I mentioned?

A. Except in so far as you may say the three million would cover it, but I do not intend to include anything for those.

Q. But when you said your computations, assuming six per cent. and assuming this capital, were correct, if 10.89 cents was sufficient for repairs and renewals, you referred, did you not, to our claim to an additon beyond the 10.89 representing reserves or contingent fund?

A. Yes. And beside that taking your claims on cost of operation, on taxes, &c.

Q. But excluding the item of street lamps.

A. It took everything because you did not exclude street lamps ultimately. You simply insisted that these remain in the expense account.

3650 Q. But in computing the operating cost of gas you did exclude it in getting this figure, didn't you?

A. Yes, I did.

Q. And when you take that out of the operating cost of gas and at the same time take a corresponding amount out of receipts the effect is to make the cost of gas appear small by so much?

A. But it does not effect the twenty cents per thousand feet remaining whichever way you do it, or 6 per cent. on $46,500,000 is not affected.

Q. Still my question would be answered in the affirmative: It would make the apparent cost of gas appear smaller by taking that item out?

A. Yes.

Q. You referred again yesterday to the Central Union Company and have stated, if I read your testimony correctly, that instead of one cent which you computed as the difference between the coke at the Central Union and the coke at the Consolidated Coal Gas plants per thousand, it would be 4 cents?

A. Yes. That was my testimony.

Q. And then one cent more for repairs which on consideration you thought would be allowed to the Central Union and that would make five cents?

A. Yes.

Q. So that the gap between the two on your estimate, that is between the Central Union coal gas and the Consolidated coal gas would be lessened by five cents by those two items?

A. Yes, sir.

Q. You stated, or I understood you to state yesterday, that you took out the original one cent per thousand which you computed as difference in coke in getting your figure of 48.63 cents?

A. Yes.

Q. Aren't you mistaken about that?

A. Well, repeat the question again.

(Question repeated.)

A. Yes. I did not take it out.

3651 Q. So you correct that statement, if I understood you correctly previously?

A. Yes.

By Mr. **Burr**:

Q. That is, it would make it 49——

A. No, that distributed over the entire gas sold, the whole thing would come up to about fifty cents now instead of 48.63 as per table 17. Now, all my changes bring that to about fifty cents.

Q. As appears by your statement on page 3471?

A. Yes, that is what I stated on page 3471 of the redirect testimony herein.

By Mr. **Mathewson**:

Q. In computing the value of the coke disposed of by the 14th Street plant of the Consolidated Company and by the 42d Street plant of the Consolidated did you not take the entire make of gas of those two stations?

A. In computing it per thousand feet, you mean?

Q. Yes.

A. Yes. I think so.

Q. Well, don't you know that a part of the make of those two stations, of the gas sent out of those two stations, was oil gas and not coal gas at all?

A. It was enriched coal gas.

Q. But we are getting at the coal gas product. Don't you see that you ought to have divided by the amount of the coal gas and not by the amount of the coal and water gas combined?

A. No, because I did this. I took the exact figures of sales of coke, the value of residuals, and found how much more it would amount to at the prices prevailing with the Central Union and applied that to the receipts from residuals, showing how much they would rise. I took the totals in dollars, whatever it was.

3652 Q. But you reduced it in dealing with it to the product per thousand feet of gas at the 14th and 42d Street and Central Union stations?

A. Later.

Q. And it would not be the fair comparison to divide by the Central Union gas which was all coal gas and to divide by the aggregate volume of the coal and oil gas at the 14th and 42d Street stations of the Consolidated, would it?

A. Well, I thought it would. I deducted, of course——

Q. Don't you see now that it would not?

A. Well, I don't see that, no.

Q. Supposing the oil gas at 14th Street was not as much in volume as the coal gas, do you still mean in computing the results as you did and comparing them it would have been proper to have divided by the aggregate output of the 14th Street plant, half of which was oil gas?

A. I don't think half of it was oil gas.

Q. No, but if it had been. I am getting you to the principle of the thing—it would have made the quotient just half as great, when you are dealing with coke and the results of operation of the coal gas plant and comparing that with another coal gas plant of another company?

A. Well, there was oil used at the Central Union, although not so much.

Q. Yes, there was a certain amount of oil gas in that but nowhere so large a proportion of oil gas at 14th or 42d Streets, as is obvious?

A. No.

Q. Now, don't you see in order to get a fair result you would have to exclude the oil gas from all the stations unless the oil gas amounted to the same proportion at each station in getting the comparative results of the coal gas station?

A. Well, I am not sure what allowance should be made on that question.

Q. Well, now let us go a step further. Here is a very simple proposition and let us see if you did not make an error even as it stood. You took if I understand in yesterday's testimony
3653 $152,045.32 as the Central Union receipts from coke, did you not?

A. Yes. I had omitted two thousand odd dollars.

Q. Yes. So that you were in error there as appears on page 214 of the Central Union, and the total should be, should it not, $154,817.63?

A. Yes. I have since made that computation.

Q. Now, you said that you took out cartage?

A. Yes.

Q. The cartage deducted by you was $20,935.91, leaving net $131,109.41, whereas the remainder should be, should it not, $133,881.72?

A. There would be a difference of two thousand odd dollars.

Q. Well, will you look at that computation and see if that is not correct?

A. I stated in my testimony that a correction of $2,000 should be made.

Q. Yes, and I am now indicating it?

A. I have made it here only I work- it out from the start on the basis of 100 pounds of coke and found that it changed——

Q. No matter about that. I am just getting at the result. We have now $133,881.72 as the results of the Central Union Coke Company, deducting cartage. Now, will you look at your testimony of yesterday and at page 2118 of the case before the Gas Commission, the two, and see if the results on the 14th Street Company deducting cartage were not $143,706.03 for coke?

A. I have that here, yes. I have it .08, that is all the difference.

Q. That is all right. And those figures as to the Central Union and as to the Consolidated at its 14th Street plant are figures obtained by taking the figures at which the coke delivered from the coal gas to the water gas plants was delivered, and at which the coke sold in the market was sold in the market, taking exact figures?

A. Yes.

Q. Now, if you take the Central Union net receipts of $133,881.72 and divide that by the Central Union coal gas make which 3654 appears at page 132 of the Central Union report to be 670,518,000 cubic feet, what would be the result per thousand cubic feet—19.97 cents, wouldn't it?

A. Yes. It is about that.

Q. That then is the amount realized by the Central Union according to the figures for its coke per thousand feet made. Now, will you divide the amount realized by the 14th Street plant, $143,706.03, by the amount of coal gas made at 14th Street, which is 1,360,284,000 feet, as appears on page 2415 of the record before the Gas Commission?

A. About 10.57.

Q. 10.56 and a fraction?

A. Yes.

Q. And you stated yesterday there was very little difference as you figured it out, between the price at which coke was sold in the market and the price at which it was transferred from the coal to the water gas plants, we have taken the exact figures in each instance, and we find that the Central Union realized 19.97 cents per thousand and the Consolidated 10.57 per thousand or 9.40 cents less than the Central Union, do we not?

A. 9.40 cents.

Q. And that, compared with 9.97 as you computed it the other day, if we leave out of account cartage and take gross receipts——

A. Yes, but as I stated in my testimony, that is partly accounted for by other factors than the difference in price. The number of pounds of coke per thousand feet of gas at the 14th Street station is something I want to give you in a minute.

Q. But I don't care anything about the pounds of coke. I am finding out how much we received for coke per thousand feet of make, which is the basis that you took in comparing the results of these two plants, the 14th and 42d Streets with the Central Union plants.

A. No. I claimed that the fact that you get only 953 pounds for sale at 14th Street—95 pounds I think it is, of coke for sale 3655 per thousand feet of gas at 14th Street, while you get over 124 pounds at The Central Union, confirms what Mr. George E. Wood said as to the greater yield of coke.

Q. You said that the other day and that is quite another proposition, as to what your reason is. The point is that the difference between the Consolidated 14th Street plant, and the Central Union plant, so far as coal gas is concerned, is 9.4 cents per thousand feet of make in receipts for coke, isn't it?

A. There is that difference in receipts for coke, yes.

Q. Now you have spoken as to Mr. George E. Wood's testimony.

Do you know what the cost of regenerative furnaces is, such as those used at the Central Union, as compared with those used at 42d Street and 14th Street?

A. No. I have seen such figures, but I don't remember them now.

Q. You know they cost several times more, generally speaking?

A. They cost more.

Q. And you understand that if the Central Union has a more expensive plant that while there may be a production of gas a trifle cheaper, on the other hand it will have to pay more return on capital and probably pay more in repairs?

A. There will be some more. It is not considered——

Q. And you have not weighed those things, and you are not a gas expert so that you can weigh those things, are you?

A. But I am sufficiently familiar with the business to know that it is considered everywhere a good policy in a plant of that size to have such coal charging machinery and such retorts?

Q. Do you mean to say that if in 42d Street we have not room for coal charging machinery that in the face of the statement of Doctor Humphreys and Mr. Bradley and Mr. Mayer that it would be economy to throw out our present retorts, destroy that amount of capital, and put in regenerative retorts in their places, and purchase new land so as to have more space—that that would be 3656 an economical thing to do?

A. I say that an up-to-date plant would have those economies.

Q. I am taking these plants as they now stand. Would you be prepared to rebut that statement, that it would be uneconomical in our present situation to do that thing.

Mr. Burr: The facts speak for themselves, don't they?

Mr. Mathewson: I think they do.

A. I have not had an opportunity to visit the plants yet.

Q. And you are not a gas expert, either in machinery, operation or construction?

A. Why, I have testified on that subject.

Redirect-examination by Mr. Burr:

Q. Will you explain, Professor, a little further the proposition just presented to you regarding the difference in the coke between the Central Union and the Consolidated and these various stations?

A. The fact is that they get one-third more coke per thousand feet of gas they sell at the Central Union than they do at 14th Street, and that is absolutely independent of the price of coke. That is a result of engineering conditions. The fact that they have at the Central Union a plant which yields more coke, does not use up so much coke in making the gas and leaves more for sale or for use in the water gas part of the plant, which is the same thing, that is an important point to be taken into consideration. What I was saying was in my direct testimony that the plant would produce double, as I said, if it had an up-to-date plant. The Company should, if it had an up-to-date plant, do as well as the Central Union

or the Standard or the New Amsterdam, and the difference
3657 in the price of coke does not dispute that except to modify it, as I have already modified it in my statement that of the eleven and one-half cents difference, there is about five cents of it due to repairs on that machinery and to the difference in the price of coke.

By Mr. **Mathewson**:

Q. But the point is instead of there being one cent difference per thousand feet of make, in what is received for coke sold, there is 9.4 when you come to take accurate data?

A. But there wouldn't be that—

Q. But is there not?

Mr. **Burr**: He proceeded to explain for you the reason why that does not make the effect that you claim it does. Now you are going over the ground again that you have already gone over.

Q. Is there not that difference per thousand feet of make in the price received for their coke?

A. Yes, I think so, but half of it is due to the difference in the yield of coke. The other half, roughly, to the difference in price.

By Mr. **Burr**:

Q. Just a moment ago Mr. Mathewson asked you regarding the street lamp item, but that being taken out on Exhibit 94, being a statement of operations, makes the apparent cost of gas smaller, and it is equally true that street lamps being retained in that makes the apparent cost of gas larger, does it not?

A. Yes, sir, certainly.

Q. Do you know, as a matter of fact, anything of your own knowledge about the contract with the Dominion Coal Company and the other company that you referred to?

3658 A. Not a thing. I merely read in *Moody's Manual* that there was a contract for supplying coal from that mine.

Q. So when Mr. Mathewson points his finger at you and says "don't you know?" and you say "I suppose," you mean you have no actual knowledge on the subject?

A. Certainly. No testimony on the subject came out in the Massachusetts gas hearing.

Q. Now, with regard to distribution, you were asked to compare the items of distribution as they appeared in Field's Analysis to show their bearing on the computation which you made as to distribution. Does the situation presented by Mr. Mathewson in that regard embrace the same items which you embraced in your item about distribution?

A. No.

Q. And was it therefore a fair comparison?

A. It was not.

Q. Why not?

A. Because it used the term "distribution" in the sense in which it is used in the English companies to include one of the expenses that I call distribution, and a lot of repairs on distribution system, whereas I use the word "distribution" to cover everything except repairs and taxation after the gas left the holder. Now, I do not dispute the propriety of the English terminology. I simply for convenience used a term to cover their 9.45 cents and that might have been perhaps just as properly called "distribution and management expenses."

Q. Take Field's Analysis which was handed to you by Mr. Mathewson and point out the items which were embraced in his theory and those which were left out in yours.

3659 By Mr. MATHEWSON:

Q. Your 9.45 did include management as well as usual distribution expenses outside of repairs, didn't it, as those terms are used in England and in Field's Analysis?

A. It did. And I would state that I was showing that as the city increased in size in England the same year there was no gap in the prices, that as they proceeded to larger and larger groups those distribution expenses, using the term now in its broadest sense, declined per thousand feet. I have not with me, although I have them home, all of Field's Analyses for the last twenty years to show whether it is a mistake as to London, but I have observed this that in comparing one year, 1901 with 1905, there may have been exceptional conditions. And I did notice this, there was no large increase in sales for three companies combined in London and——

Q. There ought to have been because the price was reduced.

Mr. BURR: Won't you let him proceed? I thought you had finished.

The WITNESS: While in the case of the suburban companies there was a much larger increase as brought out this morning, and in the suburban companies there was not such a marked change in the distribution cost as in the centre of the city with the three big companies where the sales remained about the same as between 1900 and 1901 and 1905, but unfortunately the total sales were not given this morning for the three London companies combined, and if that 1901 report is there I would like to read into the evidence the total sales of the three companies for the year 1901 and then for the year 1905. The total sales for the year 1901 of these three big London companies, namely,—there are only two big ones really, the 3660 Gaslight and the South Metropolitan, and the smaller one known as the Commercial. The total sales of those three companies in 1901 was 34,826,093,000 feet. During 1905, it was 36,147,679,000 feet or an increase of only 1,700,000,000 feet, which would be about 5½ per cent. There was not such a large increase as to bring out any important facts on distribution I should think.

Q. Now may I ask a question. How does that happen when there was a very heavy reduction in the price of gas from 1901 to 1905 in these metropolitan companies? There ought to have been an enormous increase, oughtn't there, to use an expression of yours in Chicago?

A. I have not even before me the change in the price of gas in London.

Q. You can see it by Field's Analysis before you?

A. Yes, but I have not looked it up and have not looked into the history of the London companies the last few years. This is one of the things I have not been able to tackle although it is part of the work I have got to tackle pretty soon, but not in connection with this case.

Q. In this 1905 Field's Analysis, page 15, it appears that the price by the Gaslight Company has been reduced something like six or eight per cent.—yes, more than that, about twelve, and the Commercial has been reduced——

A. They declined, taking the American equivalent of two cents to a penny, from 71.4 cents to 59.8 on the average for the three Metropolitan companies.

Q. That is a pretty heavy reduction and there ought to have been an enormous increase in sales. How does it happen there was not? Is it because the consumption has become so nearly saturated that they used something like 8,000 cubic feet per capita and that there was not room for much more increase?

A. Let me have the other volume, Field's Analysis for 1901, for a minute.

3661 (Book handed to witness.)

The Witness: There was an enormous increase.

Q. There was an actual decrease in sales of the Gaslight Company, which made a large reduction?

A. There was an increase of sales in the suburban companies of London.

Q. But I am talking about the Metropolitan companies?

A. Yes, but that has to be taken into account because the growth had been in the suburbs.

Q. I did not ask you anything about the suburbs.

A. You did this morning.

Q. I did not now. The morning is a long way back. I call your attention to the fact that in London they used, as has been testified, about 8,000 feet per capita, and ask you how you explain the failure to increase in view of the reduction by the three Metropolitan companies except upon the theory that they were pretty nearly saturated by gas already per capita.

A. I don't think that is the explanation at all, but I don't know what it is. I have no doubt there is an explanation that is very satisfactory, but I have not looked into it at all.

Q. You observe that the London Gaslight Company, which is the largest of all, shows an actual decrease in sales for those five years in spite of this decrease in price?

A. London may be an exception this year.

Q. You don't think the decrease in sales was due to the decrease in price, do you, by the London Gaslight Company?

A. I know there has been an increase in Sheffield, Glasgow, and other cities, and a large increase. There has been an exceptional difference in London and I don't know what it is.

Mr. Mathewson: It is saturated, isn't it.

Mr. Burr: Is that your claim, because of the point of
3662 saturation having been arirved at in London?

Mr. Mathewson: The Professor is on the stand. I am not.

The Witness: There is no such thing as a point of saturation in that matter.

By Mr. Burr:

Q. While you are here let me call your attention to the illuminating power as called for by these companies that you referred to this morning, as the same appears on page 2 of Field's Analysis, and the amount that is prescribed and the amount that is actually supplied in candle-power. I will read it:

	Gas Light. Prescribed.	Supplied.
Metropolitan (City of London)	16 Sperm Candles,	16.48
Commercial	14 Sperm Candles,	14.90
South Metropolitan	14 Sperm Candles,	14.60

You were asked with regard to the candle-power on your recross-examination by Mr. Mathewson. Do you desire to make any statement in that regard?

A. I do.

Q. Please proceed and make it.

A. The question was asked whether I knew as to the extent to which the Consolidated was below 20 candle-power during the last six months of 1904. I find that of all their stations there were only three days in which they were below 20 and that was only, in each case, in one station and that was only a trifle below, less than a candle if I recall aright. Now, as to the year 1905, the last six months of the year 1905, I was asked whether I knew as to whether the New Amsterdam and Standard were below the required amount in test.

3663 Mr. Mathewson: No, I asked you about the Consolidated.

The Witness (continuing): Well about the New Amsterdam and the Standard. I find they were not below the requirement of 22 candle-power and I find that not only is that the case, but I have marked the times when they were even below 23 candle-power, and I find that there was no time during July, August and September. In October there was one test in which it was 22.59 in the New Amsterdam, on October 26th; and 22.92 October 31st.

In November: On November 3rd one test of the Standard 22.86.

December: December 4th, Standard, 22.92; December 5th, New Amsterdam, 22.22, Standard 22.06. On the 6th, Standard 22.42; and that was all. Those are the only cases in which it even went below 23—in the cases of the New Amsterdam and Standard.

Now, as to the Consolidated during the last six months of 1905, I was asked first if there was any case in which they fell below 22. There was one day, September 26th, in which the Station No. 3, was 21.53. That was the only time in which it fell below 22. Now I have noted the days in which the Consolidated was below 22½ in any one station.

Q. Why not below 23 as you did with the New Amsterdam?

A. I will give that in a minute. First below 22½. One station, August 18th, when it was 22.10; and two stations, August 28th; one station, September 2nd, 14th, 26th and 30th; two on October 7th, one on October 9th, one on October 21st, one on October 25th. On November 22d, one; on December 5, three; on December 6, two; on December 7th, one; on December 8th, one; on December 26th, one. It was below 22.4 however, on only a portion of those days.

3664 Now, as to its being below 23. During July it was not below 23 at all, when the average of the month was 25.10. I think on the last day of the month, one station was 22.94.

Now, in August, below 23, one station on August 1st, 22.86; August 14th, 22.63; August 16th—this is only one station in each case—22.7; August 17th, 22.68; August 18th, 22.10; August 19th—two stations—22.90 each; August 21st, one station, 22.72;

August 28th, 22.06; 22.12; 22.84.
August 29th, 22.33; 22.26; 22.65.
September 2d, 22.29—one station.
September 5th, 22.93.
September 14th, 22.06; 22.66; 22.50.
September 15th, 22.66; 22.04.
September 16th, 22.36.
September 18th, 22.50.
September 20th, 22.65; 22.84; 22.69.
September 23, 22.38.
September 25, 22.12.
September 26th, three stations were below 23—22.70; 22.72; 21.53.
September 27th, 22.88; 22.82; 22.84.
September 28th, one station, 22.50.
September 29th, one station, 22.70.
September 30th, one station, 22.49.

The low station seemed to be station 3 in most all those cases where there was only one.

October 2d, 22.66.
October 4th, 22.91.
October 6th, 22.64.
October 7th, 22.35; 22.86; 22.05.
October 9th, 22.81; 22.05.
October 10th, 22.78; 22.50.
October 17th, 22.44.
October 21st, 21.37; 22.80; 22.90.
October 23d, 22.96; 22.52.
3665 October 25th, 22.30.
October 28th, 22.80.
October 31st, 22.68.
November 1st, 22.56; 22.60.
November 6th, 22.75; 22.93.
November 8th, 22.88.
November 9th, 22.74.
November 10th, 22.61; 22.68.
November 11th, 22.94.

November 17th, 22.50; 22.95.
November 20th, 22.40; 22.74.
November 21st, 22.72; 22.56.
November 22d, 22.70.
November 25th, 22.96.
December 4th, 22.56.
December 5th, 22.46; 22.16; 22.12.
December 6th, all five stations, 22.56; 22.95; 22; 22.71; 22.03.
December 7th, 22.43.
December 8, 22.48.
December 13, 22.58.
December 15, 22.76.
December 16th, 22.88, 22.98.
December 19th, 22.92.
December 23rd, 22.70.
December 26th, 22.42.
December 27th, 22.60, 22.72.

In other words, it will be observed that they mostly came in October.

Q. What did?

A. Below 23, did not come in the summer months, neither did they come so much in December. They came more in September and October and two or three days in November. The fifth and sixth of December a good many below 23; I gave in each case the number of stations.

3666 Q. And now, have you finished the tabulation of the cost of the plant including the real estate as appears, as you contend, from Yalden's statement?

A. No, I have not finished that.

Mr. Burr: When you have finished that I will ask leave to submit it, as I stated this morning.

By Mr. Mathewson:

Q. The period which you took did not include the coldest part of the winter, that is, January, February and March, did it?

A. No.

Q. And you know that last winter, do you not, 1905-6, was one of the most open and warm winters on record?

A. It was warmer than the average, I believe.

By Mr. Burr:

Q. Do you know?

A. Well, I have that impression that it was warmer than the average. I don't know about it making any record in the matter.

By Mr. Mathewson:

Q. A very warm winter, wasn't it, as winters go, in your experience?

A. I can only go as far as to say that I think it was warmer than the average.

At 4:30 o'clock P. M. adjourned to October 31st, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 61.

3667 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 5) pages, numbered from 2953 to 3666 inclusive contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.,* Defendants-Appellants, as the same remain of record and on file in my office (Vol. 5)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

3667½ Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Wednesday, *October* 31, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr and Mr. Kirby.

3668 Mr. Burr: I call the attention of the Master to the fact that at the time Dr. Marks was withdrawn from the stand it was with the view of his subsequently examining as an expert the plants of the company with a view to testifying as to their value. Matters have so shaped themselves that Dr. Marks has confined himself to directing the examination now proceeding of the books of the company, while other engineers, having examined the plants, will testify as to their value. Mr. Mathewson at the close of his cross-examination, stated: "Now I have not cross-examined Dr. Marks on the cost of gas and on the matter of value of plant and its various items, which I understood I might not take up until he has completed his evidence on those subjects, and there may be a few more questions on those other features that I have not covered, but they will not be extensive." So that Dr. Marks is here this morning for the purpose of having Mr. Mathewson complete his cross-examination. Of course, as the result of the report of the engineers, Dr. Marks may have some other testimony as to the facts brought out by that examination.

Mr. Mathewson: And how about the cost of gas?

Mr. Burr: He has given his testimony on the cost of gas.

Mr. Mathewson: And does not intend to give any further testimony on that subject?

Mr. Burr: No, not on that subject. I say we may make whatever comments we desire to make on the facts, both as they are revealed by the report of the accountants and of the engineers.

Mr. Mathewson: I understood I was not to cross-examine him until this examination had been completed of the books, and he had testified as to the cost of gas, as he might argue from what was thus ascertained.

3669 That was the only reason for the adjournment, so far as that was concerned, on the cost of gas.

Mr. Burr: The idea was that he was to testify as an expert as to the value of the property. Now he is ready to be cross-examined as to the cost of gas and along his direct-examination as far as you may think proper.

The **Master**: Manifestly he cannot be cross-examined to a finish now and then recalled on another occasion and then further examined in chief.

Mr. **Burr**: No, but all the witnesses who have testified as experts for the city, so far as the cost of gas and structural value is concerned, have always made the reservation that the bringing in of the results of these examination- may necessitate them either modifying their views or testifying further in that regard.

Mr. **Mathewson**: If I cross-examine now and continue on that subject, I certainly shall expect anything presented hereafter to be new matter by a recalled witness, and not compel me to retraverse the ground, Mr. Master.

The **Master**: That is right.

William D. Marks resumed.

Cross-examination by Mr. **Mathewson** continued:

Q. I will first take up your computations on the subject of the cost of gas (page 2301). You take the total of 74.81 cents shown on Exhibit 94 as total expenses of the company in the production and distribution of gas and make therefrom certain deductions. In the first place, to reach the operating cost of gas you deduct fixed charges, 7.32 cents, do you not?

A. I do.

3670 Q. You find no conflict between you on the one hand and Messrs. Addicks and Humphreys on the other in that regard, do you?

A. I think they both deducted it.

Q. Now you also deduct the item of street lamps which has been shown to be the expenditure in the maintenance of the street lamps that the company pays out in excess of certain receipts. That, you understand, is an expenditure that the company makes preliminary to its delivering bills for the gas, that it furnishes to the city and collecting them, do you not?

A. I do.

Q. And it makes no difference in effect whether you include this in the operating cost of gas and also include it in receipts, or whether you deduct it from the operating cost of gas as you deduct a similar amount from receipts in computing the net result to the company?

A. I have had quite a number of street-lighting contracts. Would you allow me to explain just how I have been in the habit of handling those accounts?

Q. No, I do not care so much about that, Doctor, but if you will just give me answers to my questions I think we will get through much more rapidly.

A. It makes a good deal of difference.

Q. Well, let us see if it does. If you include in the operating cost of gas $289,000 of street lamp expenditure for maintenance, then you have a corresponding receipt, have you not, on the other hand, when you come to consider the receipts of the company?

A. If you have received the money.

Q. Yes, if you have received the money. Well, you know in the present case the money is charged, but not yet paid to the company?

A. I don't know. I have not proceeded sufficiently far in the examination of the books to ascertain.

Q. You observed from the testimony that the company
3671 credited itself in receipts for all the amounts that it has
charged to the city exactly as though they had been received. Did you not observe that in your reading of the testimony?

A. I have noticed it in some instances. Of course, I cannot state as to the fact.

Q. If that be a true statement, then the company would have a receipt on the other hand to balance this expenditure for street lamps, would it not?

A. On the books.

Q. Yes. And on the other hand, if you deducted street lamp expenditure from operating cost of gas, you must at the same time deduct a corresponding amount from the receipts on the other side of the ledger, must you not?

A. That would not be good bookkeeping. You might do that.

Q. Well, however you treat it, when you come to take the difference between expenditures and receipts and find what is remaining for dividends and interest, the result is the same, whichever way you treated it, whether you included the expenditures for maintenance of gas lamps in expenditures and included a similar amount in receipts, or whether you excluded that amount both from receipts and expenditures, there would be no difference in the net, would there?

A. You could add any amount, large or small, to the credit and debit sides, and the difference between the two would be the same.

Q. Have you read the testimony of Professor Bemis on that subject?

A. No. You will pardon me for saying that I am entirely in accord with Professor Bemis, but my point of view as a constructive engineer would prevent me from undertaking a discussion of the subject after a similar method.

Q. Now, let us take repairs to gas stoves. You have ex-
3672 cluded in addition to the items fixed charges and street lamps,
being 7.32 and 2.18 cents, respectively, the further item of .42 on account of repairs to gas stoves. On what theory do you exclude those?

A. Referring *from* item 47, on page 2301 to page 2303, Exhibit 224, page 759, we find the gas stoves rent for the calendar year to be $122,322.60; and referring to item 47, Exhibit 94, repairs to gas stoves, we find the expense to be $55,954.35. The difference between these is $66,368.25, or one-half a cent per thousand cubic feet.

Q. Well, you have got a little ahead of me, Professor; you will observe that you deduct .42, being the amount of repairs for gas stoves 47 in Exhibit 94?

A. Yes.

Q. Now, I want to know why you deduct repairs to gas stoves in reaching the operating cost of gas?

A. In taking up the cost of gas I took it first according to the usual method, which individually I should adopt, of rejecting independent accounts which could be closed at the end of the year by the direct transfer of balance to profit and loss account.

Q. Supposing the repairs to gas stoves had exceeded the amounts received for stove rent, or supposing there had been no stove rents, as there are no stove rents in the case of a great many companies, wouldn't you include repairs to those gas stoves, the same as repairs to any other consumer's apparatus, in the operating cost of gas?

A. No.

Q. Why not?

A. I would regard and set apart the gas stove business as something which could better be transacted by a plumber's department attached to the concern.

Q. Well, it would still be a part of the concern if it was a plumber's department attached to the concern, and its receipts and disbursements would be part of the business of the company, wouldn't they?

3673 A. They would, if the capital was furnished by the company, but it is an account which can be closed, and would be closed by me, by a direct transfer to profit and loss account at the end of the year.

Q. Well, however it may be treated from a bookkeeping standpoint, assuming there were no gas stoves rented by this company at all, and it occupied the position of other companies which do not rent gas stoves, would you not say then that the expenditures that the company made in caring for the apparatus of the consumer would be a proper expenditure of the company, the same as the expenditure of the company in taking care of the consumers' tips in ordinary burners?

A. Personally, I should not, but I would refer the matter to the Board of Directors for instructions on that subject.

Q. Well, as a matter of fact, the company, and all the companies you know, expend certain moneys in repairs of the burners of the consumers, and in repairs of the burners of gas stoves, for the purpose of encouraging the consumption of gas by the consumer?

A. Any wise company would do that.

Q. Then it is a fair thing to do that, of course, if a wise company would do it?

A. I am referring to the gas tips at the burners on stoves. Then, in addition to that, you know that the English companies, at least—I may be wrong—I think take the result of their stove business, whichever way it may go, and introduce it into the annual results.

Q. Well, we are coming to that later. And the result might be reached if they deducted the stove rent, but I have not got to that point. I am assuming there was no stove rent to deduct. I am asking you whether the expenditure for repairs of the burners on gas stoves in order to encourage the consumption of gas would not be just as appropriate an expenditure as the repairs of the burner on the ordinary flame in a consumer's house?

3674 A. In the case of the gas tips, which I presume you mean, for jets?

Q. Yes?

By Mr. **Burr**:

Q. On the gas fixtures?

A. On the gas fixtures it is an ordinary expenditure of quite a small amount, sufficiently inconsiderable to warrant a manager in going ahead without making it a serious matter of discussion before a Board of Directors. In the case of gas stoves I should say that the matter of gas stoves should be decided authoritatively.

By Mr. **Mathewson**:

Q. I am assuming you are the whole board of directors and that you have full power to make a decision, or that the power has been delegated to you. Would it not be true, in that case, that any reasonable expenditures of the company for taking care of the burners of the consumer in his gas stove you would consider a proper charge in your operating expenses just as much as expenditures made for taking care of his tips in the ordinary burners? Putting it up to you?

A. Putting it as an entirely personal matter, Mr. Mathewson, I come here with an absolutely open mind and desire to be entirely frank.

Q. I am proceeding on that presumption, Professor.

A. Yes, and I wish to be as brief as possible, too. It seems to me that the establishment of a stove department, connected with which would be proper inspectors, and the operation of it with a view to giving satisfaction and selling as much gas as possible, with a desire to come somewhere near even at the end of the year, is an entirely proper action on the part of the English companies.

3675 Q. Well, would it not be a proper action on the part of the American companies, then, including particularly the Consolidated Gas Company of New York?

A. I could be much more positive if I had not heard the hardest sort of arguments on both sides in actual practice, and while personally I should advocate what I have just stated I would not insist upon it with a board that was opposed to it.

Q. Don't you know that those repairs are included as part of the operating expenses in the form of report required by the Massachusetts Gas Commission and also by the New York Gas Commission?

A. I know it is put in.

Q. And you lay great stress upon the English companies' practice and cited Field's Analysis?

A. Yes.

Q. Stating you approved their methods? Now, won't you look at Field's Analysis for 1905 and see whether "stove repairs" is not included under the distribution expenses in English companies?

A. Pardon me, before I answer this, for saying I used the English method for the purpose of entirely avoiding any imputation of a theory on my part, accepting their methods not because I approved or disapproved of them, but because they were precedents established by years of usage, and on page 2303 of my testimony I fully stated the fact that the results of the gas stove business under the English methods were introduced into the cost of gas and showed the same in my segregation.

Q. I am coming to that later, Professor. I am merely asking you now whether "Stove Repairs" under that exact name are not included in the English system, as shown in Field's Analysis under "distribution charges," which are part of the operating cost of gas?

A. On pages 4-11 the amount of stove repairs per one thousand sold is given by companies.

3676 Q. The simple question is, Doctor, whether the "Stove Repairs" under the English System of accounting, as shown in Field's Analysis, to which you have often referred, are not included as part of the distributing expenses in the operating cost of gas?

A. Distributing charges, you mean?

Q. Yes, call it distributing charges.

A. Yes.

The Master: Then the answer is "Yes."

The Witness: Yes.

Q. Now you have also deducted interest on consumers' deposits?

A. Yes.

Q. .39——

A. Item 54, page 2301.

Q. Yes; .39 of a cent. You understand that that represents money actually paid, do you not, by the company as interest on consumers' deposits?

A. It is so stated.

Q. Well, as far as your information goes now upon the facts which you had before you when you gave your testimony in chief, that does represent actual payment?

A. Well, I understood that statement to be made by the Consolidated Gas Company.

Q. Yes, exactly. And is there any reason, therefore, why it should not go into the operating cost as well as any other expenditures?

A. It is an account which should be closed by a direct transfer to profit and loss account.

Q. Well, you might transfer taxes or anything else from this Exhibit 94 to Profit and Loss Account and set off against it an amount of receipts sufficient to cancel it, but what I am asking now is whether it is not a proper expense in the manufacture and distribution of gas, and should it not be counted as an expense, however it may be treated in bookkeeping?

A. I should not count it as an expense, because it is not 3677 necessary for the company except for the purpose of insurance against bad debts.

Q. Well, consider bad debts. You have allowed bad debts as part of the proper expenditures or credits in the operating cost of gas, as shown in Exhibit 94, have you not?

A. With the qualification that a proper unavoidable percentage of bad debts is frequently found, and——

Q. Well, you don't find that the amount of bad debts that the Consolidated Gas Company has incurred has been criticised or excluded by any expert either before the Stevens Committee, the Gas Commission, or here so far?

A. I would have to defer an opinion on that point, now.

Q. No, but do you find that they have been excluded by anyone either before the Stevens Committee or the Gas Commission, or here, so far as you have read the testimony, and you said you had read it all?

A. I do not, no.

Q. Well, if you did not take deposits from consumers to secure the company, the probability is that the item of bad debts would be increased?

A. That is the theory.

Q. So that you would increase the item of bad debts, which is chargeable in the cost of gas, if you did not take deposits upon which we had to pay .39 of a cent in interest. Why, therefore, isn't it prudent to take deposits and pay interest on them, amounting to such a small figure, only .39 of a cent, in order to keep down the amount of bad debts which would otherwise be charged in to the operating cost of gas?

A. It is a theory, and has not been proved by tests.

Q. Why shouldn't that amount be included if it does tend to reduce the amount of bad debts?

A. Because it is not proved that it would reduce the amount of debts.

3678 Q. Don't you think it would have that tendency, Professor, in a city like New York? Don't you think the taking of deposits from irresponsible consumers covering a month or two of bills would tend to decrease the amount of bad debts that the company would incur during the year?

A. The theory is that it would wipe them out altogether.

Q. Well, we won't go to that Utopian point, but don't you think it would have a tendency and an effect to reduce the amount of bad debts that the company would otherwise incur?

A. It would appear to me as if it should do so.

Q. Well, now you speak of it as an insurance. You have not included the item 65 in Exhibit 94, the .41 of a cent, have you, in your computations?

Mr. Burr: You mean in the rejected items?

Mr. Mathewson: Yes; item 65.

Q. You have not excluded that item of interest?

A. No, I have stated though that it was doubtful, awaiting the result of my investigations.

Q. I am assuming the expenditure was made for insurance, and that it was proper. If that item was made for insurance at that figure, then it is a proper item to be included, isn't it, in the operating cost of gas?

A. That is, for proper insurance.

Q. Yes.

A. It has been so considered as against fire or accidents, or anything of that sort.

Q. And you have not claimed you ought to exclude from the operating cost of gas any proper payment for fire insurance, have you?

A. No, I have not.

Q. Because, if we did not have insurance, and the buildings burned and we had to replace them, then that would mean a considerable charge for replacement which would go finally against consumers of gas. Now, in the same way, if they pay .39 of 3679 a cent per annum on consumers' deposits as an insurance against bad debts—I use your own term insurance in that connection—why isn't that a proper charge—an insurance charge, if you please, which likewise should be credited in the cost of gas?

A. Because you have the use of the money of the consumer, presumably in a much more profitable form, yielding larger profits than the rate of interest that you pay on it, and for that reason it classifies itself with the money raised on bonds, which, according to your own expert, is excluded without any comment whatever.

Q. That is another point. I am merely getting at now the propriety of the expenditure. You do not question the propriety of the expenditure of .39 of a cent per annum for interest on consumers' deposits, do you, in view of the effect of that policy in reducing the amount of bad debts which would otherwise be charged in operating expenses? No matter how it may be taken care of ultimately, I am asking now the question simply?

A. I have always taken the ground that a consumer that required a deposit in order to be safe should not receive any interest, but I understand that in this case the State laws force the payment of interest.

Q. Well, then, in this case you would say that an expenditure of .39 of a cent, however you may treat it in the books, was a fair expenditure as an insurance against an excessive amount of bad debts, wouldn't you?

A. It is a little difficult to make the matter clear, because it is a matter that admits of a good deal of argument both ways.

Q. Well, I am merely asking you for a conclusion.

A. It is difficult in ordinary business to jump at a conclusion in that way.

Q. Assuming that this expenditure of .39 of a cent is made in pursuance of a special law, which requires payment upon con- 3680 sumers' deposits, would you not consider that a wise expenditure as an insurance against an excessive amount of bad debts?

A. After stating that it finds its compensation in the actual use of cash, as do fixed charges, I would say that it is a wise thing to obtain an insurance against unsafe consumers.

Q. Do you know of any company that does not pay interest on its consumers' deposits?

A. Yes, but they are all small ones.

Q. None operating in a large city?

A. None of the size of a metropolitan company.

Q. Now the other item that you deduct from the operating cost of gas is 10 cents contingent expense. You understand that that 10 cents is intended to cover and does cover the actual expenditure for renewals and replacements as well as contingent or reserve fund, do you not?

A. It is so stated.

Q. And after deducting the 10 cents for contingent expenses, you have added to take its place the actual expenditures for repairs and renewals which you state to be $194,000. Now, as a matter of fact, isn't that $194,000 the amount of the expenditures for replacements and renewals for the nominal year ending October 31, 1905, instead of for the calendar year 1905, which is covered by this Exhibit 94 with which you are dealing?

A. On page 2304 of the testimony, item 67, I state the question. I would like to reserve my reply to that question until the present examination of the accounts is had.

Q. Oh, no, I am not examining you on the present examination of the account. I am examining you on what you testified to respecting these matters.

The MASTER: Repeat the question, Mr. Stenographer.

3681 The STENOGRAPHER (reading): And after deducting the 10 cents for contingent expenses, you have added to take its place the actual expenditures for repairs and renewals which you state to be $194,000. Now, as a matter of fact, isn't that $194,000 the amount of the expenditures for replacements and renewals for the nominal year ending October 31, 1905, instead of for the calendar year 1905, which is covered by this Exhibit 94 with which you are dealing?

A. On page 2304 I so state.

Q. Well, that you state amounts to only 1.45 cents and you substitute that 1.45 cents in place of the 10 cents for renewals and contingent expenses. Now, did you not ascertain in reading the testimony that the actual expenses for renewals and replacements in the calendar year 1905 were 2.12 cents instead of 1.45 cents?

A. On page 2312 of Mr. Carter's testimony, "it would appear as if the actual replacements for the twelve months ending October 31st, 1905, amounting to $194,666.87, or 1.45 cents per thousand cubic feet sold for the calendar year, did not corroborate his statement of 2.12 cents for a calendar year overlapping only about two months." That is reversing the operation, $284,000 approximately. That was brought out very clearly.

Q. Did you read Mr. Carter's testimony after the introduction of Exhibit 94, where he expressly gave the amount of renewals and replacement for the calendar year 1905 and stated it was 2.12 cents, or considerably more than it was for the nominal year?

A. I recall very distinctly Mr. Addicks' use of that.

Q. Mr. Carter's use, I think you mean?

3682 A. No; Mr. Addicks' use, laying more stress on Mr. Addicks' testimony than that of the others, and for that reason referred to in my own testimony.

Q. Why did you take this $194,000 replacements for the nominal year ending October 31st, 1905, instead of replacements for the calendar year ending December 31st, 1905, when Exhibit 94 covers the calendar year and not the nominal year?

A. Because there have been so many different statements with regard to a contingent account following one another that it was necessary to defer final and accurate statements until the investigation now in progress was completed.

Q. Oh, well, but you were testifying, Professor, at that time from facts and figures which were then before you and you were put on the stand by your own counsel and not by me. Now I want to know, so long as Exhibit 94 with which you are dealing covers the calendar year, you did not take the statement of replacements and renewals for the calendar year which amounted to 2.12 cents instead of renewals and replacements for the nominal year ending October 31st, 1905, which amounted to only 1.45 cents?

A. Because both these amounts appeared to me to be doubtful, and I thought one was as good as the other.

Q. Do you find in the testimony anywhere, and if so please point it out, that the expenditure for renewals and replacements for the calendar year of 1905 were anything else than 2.12 cents per annum?

Mr. BURR: That is not the point, Mr. Mathewson, excuse me.

Mr. MATHEWSON: I think it is.

Mr. BURR: The Doctor has explained that the difference between $194,666.87 and $284,700 for the two months appears to him to have been so singular that he assumed the small amount, as I understand it.

3683 The WITNESS: That's it exactly.

Q. Yes, you assumed a small amount in that case, although the sworn testimony was that was not the correct amount and included that in place of the 10 cent-, did you, Professor?

A. I am sorry to repeat it so often, but I have been forced into the position of doubting the statements made.

The MASTER: That is all right, and you have a right to state it. The question is whether you did in your computation assume it as Mr. Mathewson asks? Whteher you did or did not, that is all.

The WITNESS: I assumed it was not probable.

Q. And so in spite of the sworn testimony that the replacements for the calendar year were $284,000 instead of $194,000, and in spite of Mr. Carter's explanation in the testimony as to how that was made up, you still took the nominal year, 1.45 cents, instead of the calendar year, 2.12 cents?

A. I did.

Q. And you think that is a fair thing to do, do you, Professor?

A. It was the best I could do.

Mr. BURR: And the accounting will show whether it is correct or not?

Mr. MATHEWSON: Yes, the accounting will show whether it is correct or not.

Q. Did you take any other items here for the nominal year instead of for the calendar year except this item of renewals and replacements in your computation?

A. I don't recall that I did. There were some cases where it was rather hard to take——

Q. Now, I would like to have you turn to the testimony of Mr. Carter in reference to the items of replacements and renewals $284,000 for the calendar year 1905 and point out what there is

3684 there that causes you to doubt the accuracy of the statement. A. Can you refer me to the page?

Q. No, I assumed you considered that very carefully before you made such a discrimination as that.

A. I know, but my memory is not a numerical index.

Q. But you must have a memorandum of it, it must have been very carefully considered by you?

A. It was. I confess I have forgotten the page on which Mr. Carter made this statement.

Q. I would have had it for you but I assumed it was merely an oversight and not a deliberate action on your part.

A. On page 624 the question is asked, "What was the actual depreciation for the year 1905, per thousand as shown by the books of the Company? A. 2.12 cents per thousand."

Q. Whose testimony is that?

A. This is Mr. Carter's testimony.

Q. And you found, too, that in the exhibit showing repairs and renewals from 1884 down to date that the statement appears, "renewals, 1905, 2.12 cents," didn't you?

The Master: What Exhibit is that?

Mr. Mathewson: State's Exhibit L.

Q. As you can figure out from State's Exhibit L it is 2.12 cents, isn't it?

A. This all comes back to me now. The amount of $194,666 was for the yhole wear ending October 31st. The amount of $284,700 was also for that whole year ending December 31st, so that really it was November and December of 1904 against November and December of 1905, and one appeared as good as the other to me, and being in doubt, I used the first stated, which is $194,666.

Q. Why didn't you use the other items for the nominal year such as bad debts and expenditures for insurance, if the items appear as good in one case as in the other, instead of singling this item out?

3685 A. Because the other accounts were not hidden inside of a ten-cent per thousand estimate at the outset.

Q. Do you mean to say they were hidden when Mr. Carter testified before he was turned over for cross-examination at all expressly what the details of the ten-cent item were and explained a part of them were contingent or reserve and a part of them actual expenditure? Do you consider that as hidden?

A. Perhaps "included" would be a better phrase.

Q. Now, as a matter of fact, did you from State's Exhibit L take the pains to compute and find that the renewals for the year 1904 amounted to 3.46 cents and for 1902 3.99 cents, and so on, practically every year greater than even the 2.12 cents which Mr. Carter stated to be the expenditure for the year 1905? Did you make that computation from that exhibit?

A. I gave most careful attention to the matter of renewals from beginning to end, so far as I was able, for every year since 1884 with the result of being utterly in doubt as to each and every statement.

Q. Didn't you find that in substance every year the expenditures for repairs and renewals exceeded even the 2.12 cents which Mr. Carter stated they were for the year 1905?

A. I cannot say that, but as a matter of fact, to my own judgment they appear to me excessive throughout.

Q. Well, assuming that they were greater than 2.12 cents for pretty nearly every year from 1884 down, you still thought that you ought to reduce them to 1.45 cents, which they appeared to be for the nominal year ending October 31st, 1905?

A. I did.

Q. Now, as to the difference between $284,000 for the calendar year and $194,000 for the nominal year, a difference of only $90,000, might it not very well be that replacements and renewals in two months would be made exceeding that difference in a company the size of the Consolidated?

3686 A. I should much prefer to testify from the facts, which we are trying to find now, but while such a thing was possible, it did not appear regular to me.

Q. Are you able to point out anything in Mr. Carter's testimony, or the testimony of any other witness of the Consolidated Gas Company, which led you to cast reflection on the $284,000 item? I now give you an opportunity to do so, if you can?

A. I explained as fully as I was able my reasons for that selection. I do not think I can add anything to it.

Q. In addition to the items to which I have called your attention, you proceed to deduct certain items appearing at the bottom of page 2301 and the top of page 2302, as to the taxes on income from other companies' securities, and the taxes on dividends in excess of four per cent. on $38,643,590.14 stock invested in securities of other companies. You found that those items were deducted both by Dr. Humphreys and Mr. Addicks, did you not, in their computation?

A. I recall, I think, that they did so.

Q. Now, you differ from them in that you exclude from the operating cost of gas taxes on $41,356,409.86 of the stock of the company that was invested in its gas business. On what theory do you exclude that?

Mr. Burr: That was claimed to be invested in its gas business.

Mr. Mathewson: Well, put it that way.

A. This does not read in its gas business. It is invested in gas business.

Q. Well, you understand, don't you, that above is the amount which appears to be invested in securities of other companies, whether gas or electric companies? Didn't you make an examination to ascertain whether that was so or not?

3687 A. I have a memorandum here somewhere.

Q. You took these figures, didn't you, from Complainant's Exhibit 80 as to the amount invested in the gas business and invested in the securities of other companies?

A. No, I did not, but I see this figure, $41,356,409.86, is confirmed in Exhibit 80 as a liability in the form of a stock.

Q. Where did you get the figures to which I have referred?

A. I was trying to hunt it up. I thought I had it in my portfolio here.

Q. You do not recall, do you, Professor?

A. Yes, here it is.

Q. Now, where did you get the figures to which I have referred?

A. The memorandum which I have in my hand shows for 1905, charge to cost of making gas, $965,843.88. The taxes charged on real estate are $179,778.95; on personal property, $88,839; on special franchises, $406,909.23; on mains, pipes, and so forth, private, $14.91; and on the income from securities of other companies——

Q. Income from gas business, $70,538.02?

A. No, you haven't it there. Income from other securities, other companies, $5,257.48; and income from gas business, $70,538.02; taxes on dividends in excess of four per cent. on $38,643,590.14; stock invested in securities, $57,965.39; taxes on $41,356,409.86, stock in gas business, $62,034.61; interest on unpaid taxes $94,506.29; total, as stated, $965,843.88.

The Master: What you have read is just a reproduction of the statement that appears on the foot of page 2301 and 2302?

The Witness: Yes.

Q. Now, you included in the operating cost of gas all of the items which appeared on page 3301 and excluded all that appeared on page 2302?

A. Yes.

3688 Q. And it appears that Dr. Humphreys and Mr. Addicks also excluded the first two items on page 2302. Now I asked you on what theory you excluded the taxes on $41,356,409.86, which constitutes the third item on page 2302.

A. On page 2301, you will observe, is segregated the taxes on real estate, the taxes on personal property, the taxes on special franchises, the tax on mains, pipes and so forth, and the taxes on income from gas business. Those are segregated on page 2301 and amount to $746,080.11. On page 2302 I segregated, first of all, taxes on income from other companies' securities——

Q. I see—we all have that before us, and we see the $219,763.77 which is stated on that page.

A. And taxes on dividends in excess of four per cent. on all stocks both the $38,000,000 and the $41,000,000, and interest on unpaid taxes is taken out.

Q. But the $41,356,409.86, so far as any evidence in this case goes, was stock invested in the company's own business and not in securities of other companies. Now I ask you on what theory you exclude from the operating cost of gas the taxes on this $41,356,409.86?

A. Because it appears to be a tax on the profits.

Q. Does it?

A. In excess of four per cent.

Q. Supposing it is a tax on the profits, if it is a tax against the corporation, and the company does not make the laws, why should not the company be entitled to charge in the operating cost of gas the tax so computed?

A. To me it appeared a proper charge to profit and loss and not the cost of making gas.

Q. You understand, don't you, that that is not a tax assessed against individual stockholders and that it is no lien against individual stockholders, and could not be collected from individual stockholders, but is a tax against the corporation?

A. It appears to be paid by the company.

3689 Q. Well, if it is a tax against the corporation, is it not a proper charge in the operating cost of gas?

A. Not all taxes, no.

Q. Is not this tax?

A. It did not appear to be to me.

Q. I will read you the section of the act, being Section 186, I believe, of the Tax Law, which reads as follows: "Franchise tax on waterworks companies, gas companies, electric or steam-heating, lighting and power companies. Every corporation, joint stock company or association formed for supplying water or gas or electricity or steam heat and lighting or power purposes, shall pay to the State for the privilege of exercising its corporate franchises or carrying on its business in such corporate or organized capacity in this State an annual tax, which shall be .5 of one per centum upon its gross earnings, from all sources within this State, and 3 per centum upon the amount of dividends declared or paid in excess of 4 per cent. upon the actual amount of paid-up capital employed by such corporation, joint stock company or association." Now, assuming that this amount of $41,356,409.86 is employed in the gas business and that this tax is a tax to the State for the privilege of the exercise of its franchise by the company, is there any theory upon which that can be excluded fairly from the operating cost of gas?

Mr. Burr: Is not that the very question this Court is going to decide?

A. I can only say in reply to that that it did not appear to me, being a tax on surplus profits over four per cent., to properly belong to the cost of gas, but should be an amount handled in the Profit and Loss Account.

Q. And should be taken out of dividends going to stock-3690 holders, is that right?

A. It looked that way to me, yes. It was——

Q. Is your conclusion reached because it is a tax on dividends in excess of four per cent.?

A. Because it appears to be a tax.

Q. In excess of four per cent.?

A. In excess of four per cent., as stated to me.

Q. Take the next item which you exclude from operating cost, interest on unpaid taxes, $94,506.29. You recognize the propriety of a corporation, acting under legal advice, to contest in the interest of its stockholders and consumers taxes which are assessed beyond a valuation that seems to the company fair, do you not?

A. Yes.

Q. And if the company succeeds in such litigation as that and reduces the amount of taxes or keeps taxes low for succeeding years, that reduces the amount of taxes that go into the operating cost of gas, does it not?

A. Yes.

Q. On the other hand, if the company, acting prudently in contesting the taxes, is unsuccessful, and has to pay attorneys' fees and a penalty in the shape of interest on the tax, should not that likewise be charged in the operating cost of gas?

A. Using your own language, for succeeding years, if distributed.

Q. But the interest for the year 1905 is for the year under consideration. Should not that interest, assuming that the tax was prudently contested and under legal advice, be allowed to the company as an operating cost?

A. That is an expense incurred as an adventure under the guidance of counsel, and——

Q. But if the adventure comes out favorably, then it will inure to the consumer, because the taxes chargeable to the operating cost of gas would be lower?

A. Yes, for many years, probably.

3691 Q. Then, if it does not happen to come out successfully, but was undertaken prudently, should not the attorneys' fees which were incurred in contesting that tax be allowed as an operating cost of gas?

A. Not against one year. Divided up.

Q. Your theory is that this $94,000 should be divided over several years?

Mr. Burr: I think the Doctor misconceives the question. The taxes are imposed every year.

Mr. Mathewson: I hardly think he does. That is another proposition.

Q. (Question repeated.)

A. If I were dealing with the matter myself I would distribute it over a period during which the gain or less in taxes might properly be expected. Of course, it is a matter that admits of a good deal of discussion.

Q. But you have excluded it entirely in this year, 1905, and have allowed no part of it in the operating cost for the year 1905. You would, then, revise your figures in that regard in some respect, would you not, upon reflection?

A. Instead of charging this amount of $94,506.29 to the cost of making gas, I would have in exactly similar cases of somewhat larger amounts, carried it to suspense account, awaiting the outcome, and in this present case, not being able to carry it to suspense account, awaiting the outcome of the legal suit, I have temporarily and as an extraordinary expense, thrown it out of the cost of gas.

Q. But if you carry it to suspense account, that means that you must have an allowance in the way of a reserve or contingent fund per thousand feet to take care of your *of* suspense account, so it comes into the operating cost of gas just the same, does it not?

A. The suspense account does not come into the account
3692 of the cost of gas or electricity, or any other manufactured
article that is brought out by the corporation or individual
manufacturing it.

Q. Does it not, sooner or later?

A. It awaits the proper partition to the various accounts to which it is determined to be charged when the suspense is ended.

Q. However you choose to treat it ultimately, either upon one year or several years, and either through a suspense account or by charging it into the proper accounts, at some time it does get into the operating cost of gas, does it not?

A. Usually into the profit and loss account, and not the cost of gas or other material.

Q. But it gets into the expenditures in making and distributing the cost of gas and the expenditures that you have to make before you deduct, to determine what you have left to pay interest and dividends, does it not?

A. It has to come out of the income before you get through with it.

Q. Exactly. Now we have disposed of these items which you have excluded in your original testimony from the expenditures shown in Exhibit 94. In addition to these figures, you make certain credits further reducing the operating cost of gas. One of them is stove rent, is it not, which is part of the miscellaneous income, $123,322.60?

A. Is that page 2303, near the top?

Q. Yes.

A. Will you allow me an explanation, or——

Q. I think it is quite clear, for you include the repairs as to gas stoves.

A. For the sake of clearness, I would like to explain that the first method of deducing the apparent cost of gas ends on page 2302, and the second method of deducing the cost of gas begins at 2302, at the paragraph referring——

Q. I think it is clear enough. You deduct the amount of stove
rent, do you not?

3693 A. I deduct the amount of stove expense from the amount
of stove rental reported in Exhibit 224 and I have a balance
left of $66,368.25.

Q. I understand. Well, that is exactly the same thing as though you included repairs to gas stoves in the operating cost of gas as is done in England, and then deducted the stove rentals from the operating cost thereunder. It amounts to the same thing precisely, does it not?

A. No, it is a seperate enterprise entirely.

Q. No, no. I am not referring to that feature at all. It amounts to the same thing so far as dollars and cents go, whether you include repairs to gas stoves in the operating cost of gas and then deduct thereafter your $122,000 of stove rentals, or whether you exclude repairs to gas stoves from the operating cost of gas in the first instance, and then only deduct the difference between the repairs and stove rentals, which is your $66,368.25; it amounts to precisely the same thing, does it not?

A. It amounts to adding——

Q. Does it not amount to the same thing so far as the outcome is concerned?

A. No, I can explain it in a very few words to you.

Mr. **Burr**: The answer is no.

Q. Well, your answer is no?

A. Yes.

Q. Very good, I am willing to accept that as your answer.

A. The difficulty is that you cannot transact ordinary business on the basis of answering yes or no. You can do some things that way, but not the transaction of ordinary business.

Q. Well, if you will explain how it makes any difference in dollars and cents at the end, I will be glad to have you do it, because I cannot see it.

A. It makes a difference in the cost of gas.

3694 Q. Does it make any difference in the balance left as distribution for dividends or interest, whichever way you treat it?

A. Practically none at all.

Q. Does it make a cent's worth of difference?

A. I say practically none at all.

Q. Won't you eliminate the word practically and tell me whether it makes any difference in dollars and cents when you come to a discussion of the profits you have left for distribution?

A. Do you mean the balance will be the same?

Q. I do.

A. The balance will be the same, but the two quantities from which the balance is derived will be different.

Q. Now, it appears that from the operating cost of gas, while you deduct the repairs to gas stoves which are .42 cents you do not deduct the repairs to meters which amount to more than three times as much, or 1.3 cents, as shown in Exhibit 94. If you take one from the operating cost of gas why should you not take the other from the operating cost of gas?

A. Referring to what page?

Q. 2339, item 50 of your segregation.

A. On page 2339, item 50, repairs to meters, $172,925.52; per thousand, 1.31 cents.

Q. Well, I have already stated that.

A. In this segregation I have not used any opinion of my own. I have simply followed the established English method as closely as I could.

Q. But have you, Professor, because we have shown that the established English method is to include stove repairs as part of the distributing expense, which is a part of the operating cost of gas and you have done directly contrary in your computation as to stove repairs.

A. I have included the rent and repairs both by deducting one from the other.

Q. But the English method includes stove repairs, does it not, as part of the operating cost of gas which you seem to lay great stress on.

3695 A. As I understand the English method—and I may find that I can be corrected—what they call stove repairs is the difference between the income and the outgo, the rental.

Q. If, then, they include something for stove repairs and it is such a difference, it must be that the receipts for stove rentals are less than the expenditures for stove repairs, must it not, else there would not be any balance to include as an expense?

A. I understand it is a settled policy to come as near as possible even, on the stove business with the English companies, submitting if necessary to a slight loss in order to increase the output of gas. On that point I am not as well informed as I might be, not having lived in England.

Q. But you have told us what the English practice was and that you were following it and I want you to follow it consistently if at all.

A. I would be delighted to do so.

Q. And not mix us up. Won't you look at page 4 of Field's Analysis and see whether you do not find, as we found before, stove repairs under distribution charges?

A. Yes.

Q. Now, don't you find on a previous page, page 3, as a separate item, stove rentals under income?

Mr. **Burr**: It does not say under income, but stove rental is there.

Mr. **Mathewson**: Those pages cover income in Field's Analysis, you will see. That is the way it is arranged.

Q. That is a simple question. Let us have an answer to it.

A. I find stove rentals mentioned there, but I am looking further for a matter which I looked up some time ago showing their treatment of these amounts at the end.

Q. (Question repeated).

3696 A. My answer is, I do, and I am looking further for the method of summation used in the case of net gas rentals, meter rentals, stove rentals, rents receivable and miscellaneous receipts.

Q. Well, now on page 3, in connection with the statement of accounts by the British companies, we find in the first column, net gas rental, which means the average price received for gas, does it not?

A. Gas rental means price.

Q. Then, in addition to that, we have meter rentals as another column?

A. Yes.

Q. And as a third column we have stove rentals, haven't we?

A. Yes.

Q. Then in a fourth column we have rents receivable and miscellaneous receipts?

A. Yes.

Q. So it is a fact, is it not, that, according to Field's Analysis, which you have quoted, the accounts are treated precisely as the Consolidated Gas Company treats them, that is to say, that the stove repairs are included in the operating cost to gas, and, on the other hand, stove rentals appear separately as an item of income and not in the operating cost of gas at all?

A. So, also, do meters, yes.

Q. So also do meter rentals, but the answer is yes to that, is it not?

A. Yes.

Q. Now, you also deducted rent that the company paid amounting to $42,674.71, or .32 of a cent, being Item 62 of Exhibit 94, from the operating cost of gas, and, on the other hand, you credited against that rents received by the company amounting to $37,408.88, which, you said, left a balance of $5,265.83. Now, you observe, don't you, that rents receivable, according to the English method, and as appears in the fourth column on page 3 of Field's Analysis, are included in income, rents receivable and miscellaneous items?

A. Rents receivable and miscellaneous items are included as a separate item in the records of the company, not in the price of gas.

3697 Q. And that is the way that rents receivable are treated by the Consolidated Gas Company in the statements submitted here, is it not?

A. That I don't know until we have finished our examination.

Q. In the accounts presented here they are included, are they not, as part of the miscellaneous income?

A. Apparently.

Q. And rents payable are included, are they not, in page 5 of Field's Analysis on the same basis as taxes and management charges and bad debts as part of the cost of gas business?

A. They are also included apparently as one of the accounts of the gas business.

Q. And you do not find, do you, in Field's Analysis, anything or any place where rents receivable and rents payable are offset against each other or where repairs to gas stoves and rents from gas stoves are offset against each other and only the balance used in order to reduce the apparent cost of gas?

A. That is what I was looking for.

Q. Well, if you can find it there I would like to have you point it out.

A. The figures given in Field's Analysis are——

Q. I do not want you to get discoursive, but I want you to point out in Field's Analysis where you can show that the balance is deducted and only the balance used in computing the apparent operating cost of gas. I do not want your analysis but want you to show it in Field's.

A. I call your attention to the fact that Field does not carry his analysis to final conclusions as is necessary, and therefore this deduction of one account from another is not required.

Mr. **Burr**: That is, it does not appear.

Q. It does not appear in Field's Analysis?

A. No, it does not appear.

3698 Q. You have stated that you think the amount of renewals appearing in the Consolidated Gas Company accounts from 1884 down to date were excessive. How about the repairs, do you find those excessive, too?

A. Pardon me, I stated that of two statements as to renewals made, one for the calendar year and another for twelve months ending October 31st, I gave my preference to the smaller amount of $194,666.87.

Q. Naturally, but you said, too, did you not, that you had examined State's Exhibit L relating to renewals and repairs from 1884 down to date, and that you thought the renewals were excessive?

A. That they appeared to be.

Q. How about the repairs which appear also in that exhibit, do they also appear to you to be excessive?

A. I should have to look it over very carefully. It is a large matter.

Q. It appears for the entire twenty years they only averaged 10.89 for repairs and renewals, whereas your associate, Professor Bemis, has testified that he considered in Chicago 10.16 to be a fair figure, and that the repairs and renewals would be greater in New York than they would be in Chicago.

A. Will you allow me to defer my reply until I know something about your accounts?

Q. No, I cannot because I am asked to cross-examine you now and your counsel has produced you for that purpose to-day.

A. It is impossible for me to indulge in that kind of thing, theorizing as to fractions of a hundredth of a cent.

Q. It was not my suggestion that these renewals and repairs were excessive from 1884 to date; it was your volunteered statement this morning, and I propose to cross-examine you on that. I have called your attention to Professor Bemis' statement and allowance in Chicago of 10.16 with the statement of his that repairs and renewals would be greater in New York than Chicago. 3699 If that is a fair statement of Mr. Bemis's testimony are you prepared now to say that 10.89 is an excessive figure for repairs and renewals in New York?

Mr. **Burr**: You will remember that Professor Bemis said that was a statement made by him in Chicago as read here from the report and that he did not at that time have the benefit of the testimony in this case.

A. I cannot answer that question without further information as to the accounts of the company.

Q. I show you again Field's Analysis, page 6, and ask you if the figures under the heading "Net coal and working expenses" do not include stove repairs and rents payable without any deductions for stove rentals and rents receivable? I have figured it out for you, if it will aid you any in answering the question, and you can see what the items are (handing book).

A. This is figured on the mains of the three metropolitan companies, is it not?

Q. Well, whatever it may be figured on, I am simply referring to the form of the account which you approved in your direct testimony.

A. The distribution charges 3.71 cents appear to include salaries, wages, wear and tear, meter repairs and stove repairs and also appear to check out when added up for net coal and working expenses——

Q. (Question repeated.) Won't you answer the question that I have just asked you?

A. I think I have answered it.

The Master: Is it yes or no, Professor, that is the point?

The Witness: Yes.

3700 Q. And the item "Net coal and working expenses" is used as an equivalent in England for our expression "Operating cost," is it not?

A. I should have to look that up again.

Q. Is it not your impression?

A. In a general way.

Q. Now, will you look at page 2303 of your testimony where you figured out after these various deductions 53.51 cents per thousand feet as the operating cost of gas. Taking this figure without correction, you have not included therein any amount, have you, in order to equalize the renewals and repairs for the calendar year 1905 with the average renewals and repairs as shown by the company's experience.

A. I have stated it to be the cash cost of gas for 1905 and nothing more or less.

Q. Then will you answer the question that I asked a moment ago?

A. I have not.

Q. Professor Bemis included 5.31 cents to equalize by reason of the fact that the repairs and renewals were much lower than normal. If you add that to 53.51 cents, it will make over 59 cents, will it not?

A. Acting as your computer, yes.

Q. Nor does this 51.53 cents include anything for reserve or contingent funds, for which Professor Bemis before the Gas Commission allowed the company three cents, does it?

A. Referring to page 2339, item 67, contingent expense $194,666.87, or 1.45 cents, was included——

Q. I do not think that is an answer. Can't you answer with yes or no as to whether it does or not?

Mr. Burr: Pardon the suggestion, but I think you will get along quicker if you leave out the references to Professor Bemis, because I do not think the Professor knows what Professor Bemis testified.

Mr. Mathewson: Yes, because he says he has read all the testimony before the Gas Commission. 3701

Q. Does the 53.51 on page 2303 of your testimony include any allowance or reserve or contingent fund?

A. Yes.

Q. How much?

A. $194,666.87 or 1.45 cents.

Q. On the contrary, that is not a reserve or contingent fund, is it, but an actual expenditure for renewals, as you understand it?

A. It is called contingent fund by the Consolidated Gas Company.

Q. But did you not take that ten cents contingent and renewal fund and deduct it from the operating cost of gas as shown by the company and include in its place $194,666.89 which you said represented the actual expenditures for renewals for the nominal year?

A. I beg pardon, that appeared to represent.

Q. Well, that appeared to represent. Then don't you understand that that $194,666.87 which you included as part of your 53.51 cents was not a reserve or contingent fund, but was an actual expenditure?

A. Did no contingencies occur during the year?

Q. And they were provided for in the balance of the ten cents which you have excluded. Now won't you answer the question?

A. Will you read that again?

(Question read.)

The Witness: I understood it to mean an expenditure of the kind classed as contingencies.

Q. Well, if you expend $194,000 in a year, it is not a contingent item at the end of that year, when it has been spent?

Mr. Burr: It has been spent meeting the contingencies that have happened during the year.

3702 Q. Let us not split hairs about this. Don't you understand that that $194,000 was actual renewals made during that year so far as you have any understanding on the subject?

A. Trying to be clear——

Q. Can't you answer that yes or no?

A. No.

Q. You can make it clearer by answering it yes or no than in any other way I know of.

A. Trying to make it clear, I understood by contingent expense, what I have heard some of your officials call undistributed expense, meaning by that, expense which it is hardly possible to anticipate or classify.

By the Master:

Q. That is not the point. The point is whether you did not in making up this figure consider that $194,000 as representing money actually paid out for actual renewals. Did you or did you not?

A. Mr. Master, I am terribly embarrassed by the fact that all this testimony that I am giving is to me individually doubtful because the figures submitted to me are doubtful.

Q. That may all be, but you present on page 2302 a certain result and the question is whether in arriving at that result you take

$194,000 as representing renewals or not. Now it may have been false or may have been true and you are not responsible for that. The question is how did you take it in making your figures?

A. I took it as the only thing possible for me to know, a contingency stated by the company as a contingent fund.

Q. Then do you mean to say that it represented something that was not paid out at all?

A. I don't know.

By Mr. MATHEWSON:

Q. Let me read from page 2312 of your testimony in this case.

"A. Referring to Mr. Addicks' item 'Actual replacements' 3703 2.12, it would appear as if the actual replacement for the twelve months ending October 31st, 1905, amounting to $194,666.87 or 1.45 cents per thousand cubic feet sold for the calendar year did not corroborate" and so forth.

Now didn't you consider then the $194,666.87 as representing actual replacements for that year?

A. All I truly know about that is that the word contingent was wrong and a statement was made that it was replacements. I have had no opportunity to examine it.

Q. Why did you deduct any part of the ten cents then if the whole ten cents in your mind was in exactly the same category, that is, contingent?

A. Because the ten cents was obviously preposterous.

Q. Why did you take the $194,666.87?

A. Because it was furnished by the company, as the best that I could do.

Q. As representing what?

A. I have no idea, but figures written by them under the name contingent. Whether it existed or not I don't know.

Mr. BURR: And as it appears on Exhibit 94?

Mr. MATHEWSON: Show me the $194,000 marked as contingent on any paper before this tribunal.

The WITNESS: Let me see the index.

Q. Perhaps I can solve this by asking you this question. Don't you remember that Mr. Carter testified in reference to this 10 cents charge both before the Gas Commission and here, stating what proportion of the 10 cents per thousand feet under the heading "Contingent and renewals" represented actual renewals and what part of it represented a contingent or reserve fund? Don't you remember that, that he did?

A. I have a very distinct recollection that that 10 cents was qualified.

3704 Q. Don't you remember that he testified stating what proportion of the 10 cents represented actual renewals and what proportion represented a contingent or reserve account as distinguished from actual renewals? Now, don't you remember that?

A. I would prefer finding the exact words of his testimony.

Q. Don't you remember that, Professor?

A. I can find the exact words of his testimony, and I prefer to find that.

Q. Well, in your testimony at page 2302 you say "Referring to the testimony before the Gas & Electricity Commission of New York it appears that this account was sophisticated by the introduction of a theory and the actual renewals hidden within the 10 cents per thousand arbitrarily fixed as the cost of contingencies and renewals. On page 1183, printed testimony before the Gas & Electricity Commission it is $194,666.87."

Q. Now, what is the $194,666.87, and what did you refer to and have in mind that it was? In other words, did you have in mind that it was actual replacement or contingent fund which did not represent actual replacement?

A. The statement of Mr. Carter, secretary, that the total of replacements in distribution plants and at works for the months of November and December, 1904, amounted to $87,522.47. The replacement in works and distribution plants actually occurring during the ten months ending October 31st, 1905, amounted to $107,144.40, making a total of actual replacements during the nominal year ending October 31st, 1905, of $194,666.87.

Q. Well then, you understand that $194,666.87 represents actual replacements, don't you?

A. To my——

Q. Well, do you not understand that, Professor? Can you not answer that yes or no?

3705 Mr. Burr: You understand that is the claim made by Mr. Carter, that it does represent actual replacements?

A. I don't understand his meaning of the word "replacements."

Q. Call it renewals. He has testified to that several times, that replacements and renewals mean the same thing.

A. Renewals has no proper meaning in the use of this word. You can do but two things to a gas works——

Q. Let me ask you another question. Do you understand that the $194,000 represents something actually done?

A. Claimed by Mr. Carter, say.

Q. And in your computation you assumed that to be a fact, didn't you?

A. I accepted it.

Q. So, returning again to page 2303 of the present record, to your 53.51 cents, that does not include anything does it, for reserve or contingent fund to cover matters which are not actually accomplished?

A. It does not cover matters which are not actually accomplished.

Recess until 2:15 P. M.

After Recess.

William D. Marks resumed cross-examination (continued):

By Mr. Mathewson:

Q. In order to obtain what you compute as the cost of the Consolidated Company's property in the gas business to-day, I find you take at page 2336 the increase in property amounting to $9,693,565.90 since 1884, then deduct from that $597,918.28 which
3706 you say represents the increase in real estate, leaving a balance of $9,095,647.62. The increase that you deduct appears to be what you term the increase from November 11, 1884, to December 31, 1905, instead of October 31st, 1905, doesn't it?

A. What date was that?

Q. The difference between October 31st, 1905, and December 31st, 1905, happens to be negligible, $128.71, but as a matter of fact, you took the increase to real estate to December 31, 1905, didn't you?

A. Exhibit 89 is the one I see that I used. Exhibit 89, October 31, 1905, and November 11, 1884.

Q. Yes, that gives the total increase as $9,693,565.90, but when you come to deduct what you call the increase in real estate you deduct the increase up to December 31st, 1905, do you not?

A. You mean from that?

Q. Yes.

A. Yes. Of course you understand——

Q. There happens to be very little difference in this case, but that would not be a proper method of procedure, would it?

A. All this is understood as rudely approximate and I was using what was readily available.

Q. The increase in real estate was available up to October 31, 1905, wasn't it, by this same exhibit?

A. Yes.

Q. Now, from this $9,095,647.62 which you call the increase after deducting the increase in real estate, you make further deduction representing the increase in value of mains, services, meters and other personal property, $12,866,766.62 being the value of the mains, services, and so forth, on October 31st, 1905, and deduct from that the appraised value in June, 1884, of $7,487,000, less office furniture, $70,000, which you omit, do you not?

A. In Senate Document 47, 1886, page 652.

3707 Q. But you get after this deduction of $70,000, the figure $7,417,000 as increase in mains, services, meters and other personal property, is that right?

A. No. The difference in the $5,000,000—that is the total of the book account, $7,417,000; in 1884.

Q. Yes, and you deduct that from $12,866,766.62?

A. Yes.

Q. Which is the book value of those items, and get a remainder of $5,449,766.62?

A. Five and one-half million.

Q. Well, I have given you the exact figures, I think?

A. Yes.

Q. And deduct that last amount from $9,095,647.62 which was the difference between the increase in our property according to your figures and the increase in real estate and get a remainder of $3,645,881 as the increase in value of plant since 1884?

A. Yes.

Q. Now, will you not look at Exhibit 79 in evidence here and see if that is not something like $260,000 out of the way as to increase in plants?

A. See if what amount is $260,000?

Q. The amount of increase of plant which you have figured out, to wit, $3,645,881. Isn't that about or, to be exact, $259,056.31 less than the actual increase in plant as shown on Exhibit 79?

A. What is the actual increase shown on Exhibit 79? What is the amount?

Q. $3,904,937.31, is it not?

A. $3,904,937.31, that is the amount as per your books, as I understand it, yes.

Q. Then how from our books do you figure out now an increase of only $3,645,881 in plant or $259,056.31 less than the amount from which you were computing actually showed?

A. The first thing that I did was to take the total amount claimed by you.

Q. We have already gone over that, Doctor, and shown just
3708 how you got it. Now, where does this discrepancy arise in
your computation?

A. It arises undoubtedly from the fact that instead of taking the figures on your books I have taken first of all the figures given in evidence principally by Mr. Simpson amounting to $12,866,766 (page 2366), and from that I have subtracted the statement made by J. Yalden, Senate document 47, of 1886 (page 652 of the document, page 2367 of the testimony), and by doing so have obtained about five and one-half million dollars, which five and one-half million dollars I have subtracted from that $9 000,000, leaving about three and one-half million dollars as against what you have with your books, of which I have no knowledge, $3,904,000.

Q. But you do not find in Mr. Simpson's testimony anywhere that the value of the meters and other items were $12,866,766.62, do you?

A. I do not, no; but if I remember all right, he testified, with my entire accord in the matter, that the mains were worth about $7,852,000, the services worth about $1,212,000, and the meters $3,802,000, if I remember rightly, was a book account, he has stated, I think, in Exhibit 81. I may be wrong about that.

Q. But you took the increase, did you not, from November 11, 1884, and did you make any allowance for increase in real estate between the time of the appraisal in June, 1884, and the time the Company took over the property on November 11, 1884?

A. I did not, for I was simply endeavoring in an approximate way to relate the actual facts as they appeared, from very insufficient data of structural cost.

Q. Well, but to get at the structural cost, you first endeavored to get at the increase in plant and other items from 1884 down to October 31, 1905, and what we are dealing with now is the increase?

A. Yes.

3709 Q. And I have shown your figure increased $3,645,881, whereas the very accounts from which you are computing showed the increase in plants to have been $3,904,937.31. Now did you take into account at all the increase in the real estate obtained by the Company in November, 1884, above that price or the value of the appraisal in June, 1884, amounting to $258,927.60?

A. I simply took the statement given in Exhibit 89 of the total increase (page 2366).

Q. But Exhibit 89, you will observe, deals only with the increase in these items between November 11, 1884, and October 31st, 1905?

A. Yes.

Q. It does not at all deal with the increase between the date of the appraisal or examination in June, 1884, and November 11, 1884, when a considerable change arose, does it?

A. No attempt was made. It was impossible——

Q. Well, it doesn't, does it?

A. It did not.

Q. So that your increase in value of plant would be short by the amount of the increase between June, and November, 1884, wouldn't it?

A. In so approximate a study as this it would be of no consequence.

Q. Well, $259,056.31 would be of considerable consequence to some of us, Professor, but the fact is, whether it was of consequence or not, it was not included, was it?

A. No.

Q. On page 2365 you make a statement purporting to give the amount at which the plants of the six old companies were carried on the books of those companies, as shown by Yalden's summary. Where do you find the valuation of the plant of the New York Gas Light Company, $2,893,767.35, which should appear, if I read your testimony correctly, on page 712 of Senate Document 47, of 1886?

A. Is that the second line or third line from the top?

The Master: No, the fifth line of figures from the bottom, on page 2365.

3710 A. "New York Gas Light Company, works and apparatus, $2,893,767.35" are the figures to which you refer, are they not? That was obtained in this way: On page 712 of Senate Document 47 of 1886, under the head of investments, works, apparatus, meters, mains and so forth were all together given at $4,186,000. From this $4,186,000 was subtracted by the use of the inventory made by Mr. Rowland the value of the mains, services and meters, leaving as the result the approximate and only the approximate value of the works and apparatus.

Q. Did you take the total as found by Yalden and then deduct the valuations of these particular items as found by Rowland in order to get your estimate of $2,893,767.35?

A. The only possible method of even approximating it.

Q. Did you do that?

A. Yes, I did.

Q. But you say Rowland's figures on the appraisal were very much above the figures at which these plants were carried on the books of the constituent companies. Do you think that reaches a fair result if you take the total of all the items including plant as found by Yalden as charged on the books of the constituent companies and then deduct the appraisal of Rowland as to a part of those; as to all except the plant? Do you think that would give us a fair result in the remainder as the value of plant?

A. The ap-raisal of the mains, services and meters is made and added in elsewhere.

Q. I am merely getting at this valuation of $2,893,767.35 and ask you whether you think that a fair figure can be obtained by taking the book charges for this property in toto and deducting that from the appraisal of a portion of it made at a much higher rate?

A. If I deducted too much at one point I have added too much at another.

3711 By the **Master**:

Q. Do you think it is fair?

A. I do, for all practical purposes.

By Mr. **Mathewson**:

Q. Now, I find that you take the total value of plants as you find them charged on the constituent companies, $10,737,418.70, that you increase $3,645,881 and get $14,385,299.70. What would that amount to if you added the $258,927.60 increase which you omitted between June and November, 1884?

A. At what page of the evidence?

Q. Page 2367, $14,385,299.70. You figured that out as against $16,175,382.67 which is the figure at which the plants are now carried on the books of the Consolidated Company?

A. You wish me to add $258,927.60——

Q. Yes, and including that increase what would the total be. I make it $14,644,227.30?

A. Acting as your computer, I make it $14,644,227.30.

Q. And so far as the plant is concerned, if your method of taking the entire assets of the New York Gaslight Company, as found by Yalden, and deducting therefrom the appraisal of Rowland as to all assets but plant is found to be incorrect, you would still have to add something more to that $14,644,227.30, would you not, to get the real valuation on your theory?

A. If it was incorrect, I might have to add or subtract, I don't know which.

Q. Well, in view of the fact that you have stated, that Mr. Rowland's appraisal was higher than the figure at which these plants were carried on the books of the constituent companies, it would mean you have deducted too much and that your remainder representing the plant of the New York Company would be too little, would it not, if that was not a correct method of procedure?

3712 A. No, but you will observe I took the appraisal of 1884, made by the company for mains, services and meters, and then I took the appraisal made by the same company for 1905, or thereabouts, and I subtracted one from the other and consequently had the same authority whether correct or not, in both cases, presumably.

Q. I am not getting at the comparison at present. I am simply getting at the valuation on the books of the constituent companies plus the increase from 1884, down to date?

A. Yes.

Q. Your valuation of the plant of the New York Gaslight Company as distinguished from its other assets would be too little, would it not, provided the appraisal of Mr. Rowland for the items which you deducted were a greater amount than those items were carried on the books of the constituent companies, is not that clear?

A. No, because I used for mains, services and meters Rowland's appraisal to add in one case, whereas in the present case I have used it only to subtract.

Q. I am dealing only with the present case and with nothing else except the valuation of plant. Now, won't you please answer the question, having that in mind?

A. Mr. Rowland's appraisal——

Q. Cannot you answer that question on the supposition that I have made?

A. What is the question?

Mr. Mathewson: The Stenographer will read it.

The Stenographer (reading): Your valuation of the plant of the New York Gaslight Company as distinguished from its other assets would be too little, would it not, provided the appraisal of Mr. Rowland for the items which you deducted were a greater amount
3713 than those items were carried on the books of the constituent companies; is not that clear?

Mr. Mathewson: Now can not you answer that?

A. I would like to. Nothing would please me better than to say yes and no to you. Mr. Rowland's appraisal does not appear at any point on the books of the constituent companies——

Q. No, of course not.

A. It does appear I presume on the books of the Consolidated Gas Company. Therefore in dealing with the books of the Consolidated Gas Company it is not improper to use his appraisal as something to be added or subtracted *pro rata*.

By Mr. Burr:

Q. You mean as the books of the Consolidated appeared of November 11th, 1884, we will say?

A. Yes. There were no books of the Consolidated before November 11th. It did not exist.

By Mr. Mathewson:

Q. You did not proceed upon any *pro rata* basis in getting the valuation of the plant of the New York Gas Light Company at $2,893,767.35, did you?

A. This is all the crudest sort of exploration while waiting an investigation of some real value, merely for the purpose of showing the absurdity of the present values stated.

Mr. MATHEWSON: I move to strike the answer out.

Motion granted.

Mr. MATHEWSON: Repeat the question.

The STENOGRAPHER (reading): You did not proceed upon any *pro rata* basis in getting the value of the plant of the New York Gas Light Company at $2,893,767.35, did you? 3714

A. At what point of the testimony?

The MASTER: You just said a moment ago you thought it was proper to take Mr. Rowland's valuation on a *pro rata* basis in getting at those values. Mr. Mathewson now asks whether you did it in getting at this figure in the fifth line of figures from the bottom on page 2365?

The WITNESS: I did. If such a crude performance can be called pro rating anything.

Q. The plant of the New York Company and all its assets in the gas business were carried on its books as found by Mr. Yalden at a certain figure, were they not?

A. They were.

Q. Now referring to Rowland's appraisal, did you take the entire amount of the appraisal of the assets of the New York Gas Light Company as appraised by Rowland and ascertain what proportion of that entire valuation of Rowland's was represented by plant?

A. Why certainly I did not. I would say—

Q. Then how did you apply any *pro rata* basis to getting this $2,893,767.35 as the valuation of the plant of the New York Gas Light Company on the books of that company?

Mr. BURR: Now you may explain the method fully that you adopted.

A. It was a case of compensation in the fact that whatever the value was of the mains, meters and services to be subtracted from the total value given, if I remember rightly something like $4,186,000.

Q. Yes, and from that you deducted, you have said, the appraisal of all the other assets except plant at the figures appraised by Mr. Rowland? 3715

A. That's right.

Q. And you have stated that Rowland's appraisal was higher for the assets of these other companies than such assets were carried on the books of the companies, have you not?

A. Yes, I am not talking now—it is not true with regard to the Consolidated.

Q. Oh, no, I am talking about the six original companies and the transfer in 1884.

A. I am talking about the Consolidated prices. Rowland's prices or valuations were the basis of the books of the Consolidated Gas that were——

Q. Well, I want to know what you meant a moment ago by saying you took a *pro rata* basis in computing the valuation of the plant of the New York Gaslight Company according to the books of that constituent company.

A. I will do my best to make that clear. The books of the Consolidated Company are based on Rowland's inventory as to the figures for their plant. The books of the six merged companies are not based on the inventory——

Q. We all know that.

A. When dealing with the figures of Rowland's inventory, it is in a crude way proper to make use of the figures, either in the books of the Consolidated Gas Company, but not of the six merged companies, or of the figures of Rowland's inventory.

Q. But you repudiate Rowland's valuations on the one hand and then you used certain of Rowland's valuations in deducting from the total assets of the New York Gaslight Company, as shown on the books of that company, to get a remainder, which you concede is the value of the plant of the company, do you not?

A. I repudiate both Rowland's inventory and the books of the Consolidated Gas Company. However, there is a pro rate of error, I presume. I don't know.

3716 Q. Now, taking your total of $14,385,299.70 (page 2367) waiving these other points to which I have called your attention, it appears that you deduct from that total $1,508,035 on account of the portion of the 18th Street plant taken by the city and $569,495.57 on account of the 111th Street plant which formerly belonged to the Harlem Gaslight Company, or a total deduction of $2,077,530.57, leaving a balance of $12,307,769.13 which you compute as the present value of plant on the basis of Yalden's figures, plus additions since. This valuation of $1,508,035 for the 18th Street plant taken by the city, was not Mr. Yalden's valuation of the 18th Street plant according to the books of the original companies, was it?

A. Mr. Yalden made no valuations.

Q. You have spoken of them from time to time as his valuations. The $1,508,035 is not the figure at which the 18th Street plant was carried on the books of the Manhattan Gaslight Company, is it?

A. Certainly not. It is Mr. Mayer's.

Q. Yes, Mr. Mayer's. Now, at what figure was that carried on the books of the original Manhattan Gas Light Company? Was it not $1,281,694.84?

Mr. Burr: I do not see that figure here.

Q. Well, can you tell at what figure that plant is carried, that is the entire plant at 18th Street, on the books of the Manhattan Gas Light Company according to Mr. Yalden?

A. Page 2365——

Q. Now, of your testimony, I know what you state there, but I am asking another question.

A. There appears the total of $2,238,629.82.

Q. For what?

A. For Manhattan Gas Light Company manufacturing building and Manhattan Gas Light Company apparatus.

Q. Well, but they owned both the 14th Street plant and
3717 the 18th Street plant. I am now asking at what figure this
18th Street plant entire was carried on the books of the Manhattan Gas Light Company as reported by Mr. Yalden?

A. I do not think I stated that in my testimony.

Q. Well, I ask if you can state now?

A. I can look it up.

Mr. Burr: You refer to page 674, on page 2365, and you say. referring to page 674 the value of the same real estate belonging to the various companies consolidated appears to be given as follows: $930,872.45——

Mr. Mathewson: That is real estate. We are talking about plants now.

The Witness: There are two entries there making a total of $2,338,629.82, but the examination was not minute enough to require going into those details.

Q. Now Professor, without taking your time to compute it, according to the computation which I have before me the entire amount at which the 18th Street plant was carried on the books of the Manhattan Gas Light Company according to Mr. Yalden, land being excluded, was $1,281,694.84. If that be so, you have made a deduction upon Mr. Mayer's estimate of considerably more than the entire plant was carried by the Manhattan Gas Light Company, have you not?

A. The figures seem to exceed it.

Q. Have you any information as to how much of this new construction was applied to the Manhattan plant at 18th Street since 1884?

A. I have not.

Q. Now, let us take this Harlem Gas Light plant at 111th Street. You have stated in substance, if I understand you correctly, that you
made this deduction of $569,495.57 on the theory that the
3718 111th Street plant was abandoned, did you not?

A. Abandoned, out of use.

Q. Is this $569,495.57 Mr. Yalden's appraisal of the entire plant?

A. Of course I would have to look that up again to be positively certain and verify it, but it appears to be $569,495.57 as the value in 1884.

Q. In 1884 But what about the additions to plant since 1884 at 111th Street, have you taken those into consideration?

A. I mentioned the fact that the holder "Of which the holder now remains," on page 2367.

Q. Have you made a personal inspection of that 111th Street plant?

A. I have not. This is information derived from statements of gentlemen who claim to know.

Mr. Burr: Not in the testimony in this case?
The Witness: Yes.

Q. Not from any testimony presented in this case?
A. No, but from gentlemen who claimed to know.
Q. Now, don't you know that as a matter of fact the City acquired only one block out of four of the 111th Street station?

Mr. Burr: He is speaking in the testimony of 112th Street, is that the same thing?
Mr. Mathewson: Yes.
The Witness: Referring to Exhibit 48——

Q. Did not you gather that from the testimony?
A. I say, referring to Exhibit 48—there is an irregular plot there, part of which appears to have been condemned by the City and the rest to have remained in the hands of the company, and as I am advised from the testimony and from others, not in active operation, except as a distributing station.
3719 Q. However that be, is it not your information that only one plot out of four has been taken by the City and that the other three plots are still in use by the Company?
A. No. Part of it is used as a distributing station only.
Q. And have you not read the testimony, that the balance so far as not a distributing station, is held as a reserve capacity, and that the manufacturing apparatus there is in excellent condition and some of it has never been used?
A. I also was advised that the manufacturing apparatus was not complete.
Q. And you have deducted the entire valuation of the 111th Street plant as though it had all been abandoned, have you not, in this computation? The entire valuation as appeared by Yalden's figures, in spite of the fact that we still have three out of four blocks and that it is used as a distributing station?
A. In deducting the $569,500, Yalden's figures of 1884, I took a very small figure, presumably much less than the existing value of to-day, and therefore acknowledging all the time that this is but a crude exploration on my part, very much favored the company.
Q. You think it very much favors the company to deduct the entire valuation of the 111th Street plant, although only one block out of four has been taken by the City, do you?
A. Dating back to 1884, yes.
Q. And you observe that this plant is one which is valued by Mr. Mayer at $1,039,910, and you make no allowance for that at all, do you?
A. You are referring now to what plant?
Q. 111th Street.
A. I simply deducted the amount you have just stated, $569,500.

Q. Which was the entire figure at which it was carried on the books of the Harlem Gaslight Company in 1884?

A. Yes.

3720 Q. In other words, you have left in as part of the valuation of your plant only the items added since 1884, that is the effect of that, is it not?

A. I took it as a plant not used in the manufacture of gas, simply for distribution, and left, according to Mr. Mayer's statement, a million dollars to the credit of the company for a distributing station.

Q. Oh, no; but you have deducted $569,495.57, have you not, as against whatever valuation may be put upon it now?

A. As against a total valuation of $14,385,299.70——

Q. No, I am taking the 111th Street plant, not the value of all the plants. I say you have deducted on account of the 111th Street $569,495.67, have you not?

—. In so crude an exploration, it is impossible to individualize, and I did not treat that plant individually; I treated the lump sum of $14,000,000——

Q. Didn't you take $569,495.57 from your total estimate of plants on account of the abandonment of the 111th Street plant?

A. Yes, and from the $14,000,000——

Q. Was not that $569,495.57 the exact amount at which that plant was carried on the books of the Harlem Gas Light Company in the consolidation in 1884 according to Yalden's figures?

A. Yes.

Q. So that the result is this, you have left in your final estimate of plants, $14,000,000, only the amount of additions that have been put into the Harlem plant since 1884, is not that right?

A. All of which appeared on your books.

Q. Well, but is not that right?

A. Intentionally, allowing you what appeared on your books presumably——

Q. For additions since 1884?

A. Yes.

Q. And nothing more?

A. And presumably amounting to nearly a million dollars although I would require a more careful investigation before
3721 making any further figure. A most liberal treatment.

Q. You have left in your final valuation of plant only the additions to plant since 1884 at 111th Street, is not that the case?

A. I have left in the additions to all plants.

Q. I am talking—won't you answer my question as to this plant?

A. Including 111th Street.

Q. And that is all that is included as to 111th Street, isn't it.

A. I presume so. It applies equally to all the other stations.

Q. Now you take up the subject of real estate on page 2365, and start with the total for real estate $5,054,014.88, which you say is the summary of the real estate of the six constituent companies according to Yalden's figures. Now you have allowed in dealing with plant, mains, meters, services and so forth for increase since 1884. Why don't you add to the value of real estate which you have taken the increase in real estate since 1884 amounting to $597,918.28 as appears by Exhibit 89 and I think Exhibit 79 as well?

A. Because the plants, mains, meters and services have all increased in length, in number and in size, which, speaking crudely as I do of the accounts, does not appear to be the case with the real estate.

Q. But this $597,918.28 to which I have called your attention represents actual additions to real estate, if you have followed the exhibits and not a marking up of the value of real estate since 1884. Why then should not that be added to the figure $5,054,014.88 with which you started, being Yalden's figures in 1884?

A. I am not familiar with the details of the real estate account of the Consolidated Gas Company, and what I have said has been picked up from various sources and used merely as a rough indication of the probable change in values of real estate—or costs, I should say, not values.

3722 Q. But it is not necessary to take a rough estimate, if you look at Exhibit 79, and you say you have read this record very carefully. Does not that show an increase in real estate of $597,918.28 since November 1884?

A. Yes.

Q. Well, then, if that is a new item in real esate that ought to be added, ought it not to Yalden's figures of $5,054,014.88 with which you started?

Mr. Burr: I call your attention to the fact, Mr. Mathewson, that that is represented on that exhibit to be construction since the consolidation.

Mr. Mathewson: That is the general heading which is used to apply to all the items including buildings, machinery, mains and services, and it is stated in Mr. Carter's testimony that this represents additions, as you will recall.

Mr. Burr: Additional purchases of real estate?

Mr. Mathewson: Additions as I understand it to the real estate which we had in 1884.

The Witness: This is the first time I ever heard it stated that that $597,918.28 represented additional expenditures for increased real estate.

Q. I think it quite clearly appears in the evidence but in any event, if it does represent such new expenditures, it should be added to the $5,054,014.88 with which you started, should it not, in the same way as the increase in mains and services?

A. No one accustomed to business could answer that question without a thorough examination of the real estate account of the Consolidated Gas Company.

Q. Well, assuming that it represents additional real estate, it should be added, should it not, to the original figure of $5,054,014.88 with which you started?

A. Acting as your computer.

3723 Q. No, I don't ask you to compute, but merely ask you if it should not be added on that assumption?

A. As an assumption, yes.

Q. Now from Yalden's figures as quoted by you, and waiving the question as to this $597,918.28, additional real estate, you deduct $1,985,874.37 and get a balance of $3,068,140.51 as the present value of the real estate used by the Consolidated Gas Company——

A. Pardon me. Actual structural cost.

Q. Actual structural cost and not present value?

A. Yes.

Q. Now, this $1,985,874.37 which you deduct seems to be made up among other items of the following item: Little Italy Park, 111th and 112th Streets, Harlem, $365,000.

A. Page 2364.

Q. Yes. Now, you deduct that from the value of the land. Do you know what that land was carried at on the books of the Harlem Gaslight Company?

A. On page 2365 reference is made to page 760, Senate Document 47, giving an amount of $159,000 in round figures.

Q. Yes, $158,899.81 in exact figures.

A. Yes.

Q. Now, that real estate entered into the total of $5,054,014.88 with which you started at $158,899.81, didn't it?

A. Yes.

Q. And you have deducted on account of that real estate, $365,000, have you not, or more than twice as much?

A. That was the testimony.

Q. Oh, yes, but we are dealing now with Mr. Yalden's figures, and you are deducting that real estate from Mr. Yalden's figures at more than twice the amount at which it entered into the total of $5,054,014.88 with which you started, are you not?

A. Mr. Yalden's figures were used for the purpose of determining the amount of money claimed by the various companies to have been spent on their real estate, which appears to be about $5,000,000. 3724

Q. Now, can't you answer my question, Professor?

A. I am deducting the increase in price of the Harlem Gaslight Company's real estate at some subsequent period to November 10th, 1884, which appears to be $365,000.

Q. Now, will you be good enough to answer this question (question repeated)? You have stated that this Harlem real estate by Mr. Yalden's figures appeared to be $158,899.81 and at a figure which entered into the $5,054,014.88 with which you started?

A. Yes.

Q. Now, I say, you are deducting that same real estate at a valuation of $365,000 or more than twice as much as the figure at which it entered into *to* your original figures, is not that so?

A. I am deducting——

Q. Can't you give me an answer whether that is so or not?

A. I am taking it at the price of $365,000 given——

Q. And that is more than twice as much as the figure at which that same real estate entered into your initial amount of $5,054,014.88, is it not?

Mr. BURR: But always bearing in mind——

Mr. MATHEWSON: Please let me finish with the witness on this point.

A. Yes.

Mr. BURR: But always bearing in mind the figure $158,889.81 is the value as it appeared upon Yalden's account and $365,000 is the price which you received.

Mr. MATHEWSON: Yes, in taking the total at the outset we must take the smallest figure possible, and when you come to de-
3725 ducting in order to see what our present value is, you must take the higher figure.

Mr. BURR: We are not taking a higher figure, we are taking what you actually got for what originally cost you $158,000.

Q. Now, where did you get this $365,000 which you have deducted on account of the Little Italy Park?

A. I failed to have noted it, but I think it was in the testimony of one of the real estate experts.

Q. Was it not in the City Record or the city records showing the figures at which the property was condemned by the City, to wit, $365,000?

A. You are right.

Mr. BURR: In order to be correct, showing the award which was made for it by the City.

Mr. MATHEWSON: Yes, the award.

Q. You obtained then the $365,000 which you have deducted for Harlem land which was carried into the total originally at $158,899.81 from the City Record. Didn't you examine the City Record to find out how much of that $365,000 was real estate, that is land, and how much was something else? I see you have deducted the whole $365,000.

(At this point Mr. Page appeared.)

A. My recollection is very vague, but it was in part, I think, damages as well.

Q. Damages for what?

A. I cannot recall the total proceeding. There is $25,000 in there——

Q. As a matter of fact, Professor, the record shows from which you got this $365,000 total, that of that award $246,100 was for plant and only $118,900 for real estate.

A. Yes.

3726 Q. If that be true how can you deduct the entire $365,000, even on your theory, from the valuation of land, to get the balance of land which the company still holds?

A. On the same system of compensation which I have already mentioned, if this amount is included in the real estate and not in the plant, why the ultimate result would not be affected.

Q. We are dealing now simply with the valuation of the land that is left to the company upon the basis upon which you have proceeded to reach that valuation, and I ask you again whether you ought to deduct the entire $365,000 to obtain the value of the land left instead of $118,900 which was that part of the award which related to real estate.

A. Had I known this fact I would have separated the real estate from the manufacturing apparatus at the outset. But the result——

Q. But those facts appeared, the division appeared in the very document which you examined and from which you got the $365,000.

A. I beg your pardon. I said I had heard from a real estate expert, not that I had examined the document.

Q. Then this is something you obtained without an examination of the data yourself, is it?

A. It is.

Q. Don't you know, as a matter of fact, but a small part of the Harlem Company's real estate which altogether was included in Yalden's figures of $158,899.81 was condemned by the City in this proceeding, to wit, about one block out of four?

A. I was so advised.

Q. And the value of the property which was taken would naturally be only a fraction of $158,899.81, if it were valued on the same basis as Yalden's figures, would it not?

A. I beg pardon. The cost would be under your conditions, original cost, about one-quarter of $160,000, or about $40,000,
3727 and its value might be anything that a real estate expert might fix upon it.

Q. Now, your next deduction in making up your total deduction of real estate is for a parcel of land sold by the New Amsterdam Company for $180,000, which was appraised in 1884 at $130,000. Here again, do you take the figures at which that land was carried into your total by Yalden, or do you take a higher value since?

A. I take a valuation stated to me as the selling price, $180,000.

Q. Without any regard to the figure at which that was carried in your original total of $5,054,014.88, which you obtained from Yalden's tables?

A. Without any regard to Yalden's tables. In fact, all these tables on page 2364, including the total, have no relation whatever to Yalden's figures.

Q. Now, your next deduction was on account of bulkheads, at or about 21st street condemned by the city for $247,858. Was that again the figure at which those bulkheads were carried in Yalden's total or have you deducted these at a higher figure?

Mr. Burr: He has already said it applied to all these items.

Mr. Mathewson: I want to call his attention to them, there are only a few of them, so as to be sure we are clear about it.

The Witness: It has no relation to Yalden's figures.

Q. Now, your next two deductions are for bulkheads and land taken by the city at the 18th Street station?

A. Yes.

Q. Which you valued at $1,193,016.37. They are not carried at this last figure, are they, in Mr. Yalden's total of $5,054,014.88?

A. They have no relation to Yalden's figures at all.

3728 Q. Is this not a very much higher figure than they are carried in Yalden's total?

A. I could compare that if you wish.

Q. Is it not true that the value of all the land and bulkheads at the 18th Street station is included in Yalden's figures at about $473,000, and that your deduction now amounts to $1,193,016.37 for only a portion which——

A. If you will allow me to look at the book——

Q. Well, it may be a subject for computation.

A. North River property, page 674, Senate Document 47, which I presume is what you mean, appears to be put at about $473,000 by J. Yalden.

Q. Now, that is the entire property and yet, on account of the bulkheads and land which has been taken by the city there, constituting only a portion of the property you deduct $1,193,016.37, is that right?

Mr. **Burr**: There are other bulkheads and pier rights besides the North River.

Mr. **Mathewson**: This is the North River we are referring to now.

A. I deduct those figures because they were given to me by real estate experts.

Q. Where did you get the $1,193,016.37 which you deduct, what is your authority for that?

A. An extract prepared by one of the Corporation Counsel's assistants from the proceedings in condemnation between the city and the Consolidated Gas Company with regard to that property.

Q. Was that the highest estimate made by any one for the valuation for that property?

A. It was the one given to me at my request.

Q. And if you deduct this $1,193,016.37 while all the land and bulkheads at 18th Street were carried into your total of $5,054,014.88 as per Mr. Yalden at $473,173.51, this wipes out the
3729 entire valuation at 18th Street, as per Yalden and leaves a minus valuation of nearly $720,000, does it not?

A. An appreciation you mean.

Q. Call it what you please.

Mr. **Burr**: It is not a valuation, it is the difference between the original valuation and the price which you received for this property.

Q. And you will wipe out all our land and say we have nothing left, if you keep on. That would be the effect, would it not, Professor, to wipe out the entire valuation of all the land and bulkheads at 18th Street, as shown by Yalden, with nearly $720,000 on the other side?

A. Yes, but unfortunately neither the stocks nor bonds would be wiped out, which had been issued on it.

Q. That is too bad. And you noticed, didn't you that according to Mr. Wheelock that we still have land left there after this wiping out and after what is taken by the city of $1,714,000. Have you observed that?

A. I had noticed it was quite a valuable piece of property you had left.

Q. Now you also deduct the sales to the Standard Gas Light Company——

Mr. **Burr**: There were no figures given.

A. I beg pardon, that is not given.

Q. So you make no deduction for that?

A. I have no means of finding the price.

Q. Now, Professor, upon your own theories, don't you think it would be a fairer proceeding to take either Yalden's figures of 1884 and when real estate is deducted to deduct for that real estate the figures at which it entered into Yalden's total, or, on the other hand, to take the present value of the real estate and to deduct from such total present value the present value of parcels which are to
3730 be deducted? Don't you think that would be a fairer method of procedure, to pursue either one course or the other, consistently?

A. The change in the books in 1884 rendered shifting from Yalden's values anterior to 1884 to subsequent values to 1884 necessary. It is proper in the matter of the real estate to charge against it everything that it has cost and to deduct from it everything that it has returned by sales.

Q. But if you take a total representing original cost as you suppose in endeavoring to find the value of the property which the company has left in land, is it not a fairer thing to deduct from the total of original cost the items which are disposed of at the figures which they entered into the original cost instead of at the figures of the present valuation?

A. It is not usually done in business.

Q. You do not think that that is the thing to do?

A. It is not done as a matter of business.

Q. And your theory might result when we had sold a considerable amount of land at a considerable increase over the original cost in wiping out completely the original valuation instead of leaving it nearly $3,000,000?

A. I have been fortunate enough to have that happen in some companies.

Mr. **Burr**: Always bearing in mind the testimony in this case that the real estate is no more valuable to-day that it was in 1884 for gas making purposes.

Mr. **Mathewson**: Is that your testimony?

Mr. **Burr**: I am calling your attention and his to the testimony in this case.

Q. Now referring to Mr. Yalden's figures, have you made any comparison between the figures of different plants as employed by him to see whether they give internal evidence of being accurate costs and values or not?

3731 A. Mr. Yalden's report disclaims anything else but a faithful transcript of the original books of the first merged companies.

Q. Very good. I am very glad to have that statement. Now the question is whether those books showed the actual cost of the companies instead of something else. Let me call your attention to some things. The 14th Street real estate as it appears in the books of the Manhattan Company, the original company that owned it——

Mr. Burr: Where do you get these figures?

Mr. Mathewson: I am going to call attention to them.

Mr. Burr: We are very anxious to get them.

Q. (Continuing:) Appears on page 674, I think it *it*, of Senate Document 47 of 1886, at $376,495, does it not, that is the 14th Street plant?

A. What is that?

Q. East River property at 14th Street and East River.

A. Yes.

Q. Now look at pages 826 and 827 and see whether the number of lots there are not 228.

A. Real estate 14th Street, East River, total value of the 14th Street station, East River, $1,400,000——

Q. No, but we are simply dealing with the land value you have given from the schedule, and I am speaking about the number of lots. It is 228, is it not?

A. Do you wish me to add those up?

Q. I did not know but that the total might be there or it might be easily computable.

Mr. Burr: Do you want him to give the number of lots by addition and adding them up?

Q. Is it easy to state or will it require some computation?

The Witness: I will add them up for you.

3732 The Master: I want to put on the record now while I have an opportunity a suggestion that all the counsel in this case should, so far as possible, be getting ready their requests and perhaps their findings or a memorandum of matters on which they want findings. Of course it will be manifestly impossible for Senator Page and Mr. Kirby to do much at it until they get their evidence a little further in, but Mr. Mathewson can and Mr. Burr can. I suppose you could have some of your subordinates or assistants working on that outside of here, because when we come to close eventually you will be pressed for time on that, and I think you will find it to be more laborious work than you think, and if you could have some of your young men working on the more formal parts of it, you will save time. Of course there is a great deal of it which is merely formal, and you can get that done just as well now as when the case is all in.

The Witness: 288 lots, yes.

Q. And similarly, are not the 225 lots at 21st Street station, pages 845 and 846, I think, of the same document?

Mr. **Burr**: Might I inquire what the object of this is, because no doubt when he speaks of the 14th Street property he means all of the property. Are you speaking of the computation as to the lots, so as to call attention to the number of lots?

Mr. **Mathewson**: Yes, that is the purpose.

Mr. **Burr**: I do not think it makes any difference.

Q. Does it appear how many lots there were at 21st Street?

3733 Mr. **Burr**: This statement that the Doctor is reading from——

A. This 18th Street and North River seems to be the next one.

Mr. **Burr**: The paper which the Doctor has was prepared by Rowland and not by Yalden, and it appears in Rowland's inventory.

Mr. **Mathewson**: Merely as to the number of lots. There is no difference in their statement as to the number of lots.

The **Witness**: I count, page 845, Senate Document 47, 95 full lots and six gores.

Mr. **Burr**: As belonging to what company?

The **Witness**: The real estate inventory of the New York Gas Light Company.

Q. Well, we have seen what the 14th Street real estate was carried on the books of the Manhattan Gaslight Company at, that is, $367,495. Was not the 21st Street real estate, for a smaller number of lots, carried at $1,857,000, page 709, I think, of Senate Document 47?

A. Referring to what page of my testimony?

Mr. **Burr**: He wants to know if it was carried in the New York Gaslight Company's books at a certain figure and refers to page 706 of Senate Document 47. What was the figure?

Mr. **Mathewson**: $1,857,000 for the 21st Street property.

Mr. **Burr**: There are two items here, Hester Street property $100,000 and real estate at gas works $1,220,000.

Mr. **Mathewson**: Don't you find additional real estate there at the gas works, making a total of $1,857,000?

3734 The **Witness**: On page 709, under the item, "To Real Estate and Gas Works, State of Account prior to Credit of Appreciation, $1,220,000; appreciation written up $637,000——

Q. No, no. Now, wait a minute.

Mr. **Burr**: Let him finish.

Mr. **Mathewson**: No, I want an answer to my question.

Mr. **Burr**: But the figures you have asked for appears to be the amount at which it sold for, $1,857,000.

Mr. **Mathewson**: As appearing on the books of the constituent company.

Mr. **Burr**: That is what the land sold for.

Mr. **Mathewson**: Well, go ahead.

The **Witness**: Sold for $1,857,000.

Q. That means the figure at which the land was acquired by the Consolidated Gas Company at the consolidation, do you understand?

Mr. Burr: That means as this book shows, does it not, the state of account prior to credit of appreciation $1,220,000, and appreciation written up $637,000, sold for $1,857,000, as it appears by that record.

Mr. Mathewson: Yes.

The Witness: It means the relative value of the land of the New York Gaslight Company as compared with the valuations placed for stock distribution in all the companies.

Q. Now, we will reach the point which I was reaching, you having covered yours. If you take 14th Street land at $367,495, at which figure it was carried on the books of the original companies, and divide it by the 228 lots, it would appear that the lots 3735 were carried at 14th Street at about $1,622 per lot, would it not?

A. I will accept your figures.

Q. If they are wrong, you can correct them later, Professor.

A. Yes.

Q. And if the value of the land at 21st Street, just above, on the books of the original company, was carried at $1,220,000, and there were about one hundred lots——

A. Ninety-five lots and six gores.

Q. Call the siz gores full lots for this purpose—for 100 lots it would mean a valuation of about $12,000 per lot placed on that land, wouldn't it, on the books of the original company?

A. I will accept your figures.

Q. As compared with $1,622 at 14th Street. They are both on the East River, you understand, Professor, don't you, on the same side of the City?

(No reply.)

Q. So, too, please——

The Witness: One moment. We were talking about the real estate at 14th Street and also about the real estate at 21st Street?

Q. Yes.

A. Both, on the East River, apparently.

Q. Is it fair to say, Professor, that my computation, which I have not verified, shows the 21st Street lots to be a larger number and to be valued at somewhat less than your figures, but there is a very great discrepancy between the values at 14th and 21st Streets nevertheless, which is the point I was going to bring out.

Mr. Page: I was just going to call attention to the fact that there are several blocks which you apparently have not covered.

Mr. Mathewson: It is not a matter of exactness or a matter of which I desire to prove anything by the witness except that there is a large discrepancy in the figures at which the lots were 3736 carried on the books of the two comapnies in the same neighborhood.

Q. Now, taking the plants at 14th Street and 18th Street of the Manhattan Gas Company, they were both coal gas plants, you remember?

A. Yes, I remember.

Q. And you remember that their capacity was the same?

A. No, I do not.

Q. Did you observe the relative values at which these two plants, of what the testimony shows to be the same capacity, were carried on the books of the same company at?

A. Of each company do you mean?

Q. No, no; of the same company, because both these plants were owned and operated by the Manhattan Gas Light Company at the consolidation in 1884.

A. I beg your pardon. Can you refer me to the page?

Q. I think page 674 may show, and if I am wrong in my assumption that the capacity was the same in 1884, I wish to be corrected. Now, the plant as it was carried on the books at 14th Street, manufacturing building, when I refer to the plant I refer merely to the manufacturing building——

A. Referring to page 674, the two plants are given there after being subjected to appreciation and afterwards one of them to depreciation——

Q. I am speaking now of the values according to the books of the original company which you assume to be cost. Is it not true that the buildings at the 14th Street station, were carried at $75,197.54 according to Yalden's table?

A. East River property, buildings and improvements——

Q. $75,197.54.

A. Yes.

Q. Now what were the buildings at 18th Street carried at?

A. North River property at $372,621.46.

3737 Q. Now if those plants were both coal gas plants and of the same capacity, that discrepancy between the buildings, between one place and another, might indicate pretty loose bookkeeping, might it not?

A. It could indicate almost anything that you wish to attribute to it.

Q. You said a few moments ago that it would be all right if you deducted the $365,000, which represented both land and plant in the condemnation at 111th Street from the value of the land because it would not then be deducted for plant.

A. Yes.

Q. Now, as a matter of fact, did you not deduct the entire $569,000 representing the whole value of the 111th Street plant from plant also when you were dealing with that, on the theory that it had been abandoned.

A. Referring to page 2367, I there state that I have deducted $569,495.57, as the value in 1884.

Q. That was the entire valuation in 1884, according to Yalden's figures on that plant, wasn't it?

A. Yes.

Q. So that there does not seem to be any special compensation to use your own words, in that case, does there, where you deduct the value of plant, at 111th Street, from the value of real estate also?

A. If you are not aware of the fact that three-quarters of the land, a good gas holder, and a half completed gas-making apparatus was still in existence then.

Q. Yes, but I am getting at your theory of compensation. I do not see where the compensation comes in if you have deducted the entire Harlem plant from the plant account and subsequently deduct that which is condemned by the city, that is, the plant which is condemned by the city as well as the real estate condemned by the city, from the value of land also as you did when you took out the whole $365,000. Where does the compensation come in to 3738 which you refer?

A. In the residue which is of, I presume, very considerable value as it stands to-day.

By the **Master**:

Q. Where is the value in your figures represented?

A. It is left to them in the improvements and additions to their plant. $9,000,000—page 2367, there is $3,645,881 residue of the amount added for improvements left. Also at the bottom of page 2365 there is $10,737,418.70, the apparent cost of the six original plants at the time they were turned over in 1884.

By Mr. **Mathewson**:

Q. The point I am making is this: You said there was compensation when you took out the value of plant condemned by the city as well as land condemned by the city from the value of the land, thereby reducing the value of the remainder of the land which we had left, because if it were deducted there, it would not be deducted in plant. Now, as a matter of fact, you deducted the valuation of Yalden as to the entire plant from plant account, as well as deducting this whole $365,000, from real estate, did you not, and if so, where is the compensation to which you refer?

A. I could find it in a day in the books of the Consolidated Gas Company and this. It is very difficult to——

Q. I do not believe you could find the compensation, Professor, but I would like to know where it comes in. Certainly it is not compensation because we have got a little something left in hand.

A. (No answer.)

Q. Well, if you are not able to answer the question——

Mr. **Burr**: At this time.

3739 Q. (Continuing:) Further, I shall not press it.

A. It would be very easy to answer the question with sufficiently full figures from the books of the two companies. As I have said before, my figures were simply an exploration of a field with very insufficient equipment.

By Mr. **Burr**:

Q. As to data?

A. As to data.

By Mr. **Mathewson**:

Q. As to mains and services, I ask you whether you stated in substance in your affidavit that you had carefully recomputed the cost of the mains owned by the Consolidated Gas Company from the inventory given by Mr. Simpson and that you were of the opinion the cost of installation as given on the books of the company was probably correct and moderate?

A. I did. Assuming his figures to be correct.

Q. As to mileage and size?

A. As to mileage and size.

Q. And did you also state that Mr. Simpson's estimate of the cost of reproduction, $12,636,150.04, had been similarly checked and appeared to you to be moderate and fair, but unnecessary?

A. I did.

Q. Now, as to services, did you say in your affidavit, that Mr. Simpson's estimate of the value of the services of the Consolidated Gas Company 86,338 in number, at a book value of $1,212,071.09, appeared to be moderate and correct?

A. I did.

Q. Given an average of about $14 for each service, curb box and stop valve because it corresponded very closely with the average experience as to the cost of installation of services in other large companies?

A. I did.

Mr. Burr: He said that in his direct examination. He said that always assuming Mr. Simpson's figures and statements to be correct. 3740

Mr. Mathewson: Of course; as to numbers and so forth.

Q. You have, in the course of your testimony, mentioned $2 per thousand feet of sales as the value of the plant of the Consolidated Gas Company?

A. I have.

Q. Do you know of any engineer who uses the basis of $2 in the construction of gas works in any large city in this country to cover land, plant, mains, services, meters and everything else that goes to make up a complete operating company, and if so, will you name him?

A. Apparently the structures of the plants in Cambridge, Fall River, Lowell and Worcester——

Q. No, no, no. I am asking for some information of your own on that?

A. I never heard anybody enunciate it except myself; my own statement, for which I am responsible.

Q. And in connection with the cost of gas as well as pressure, did you state that while you considered it mechanically possible by isolating the gas mains of the Island of Manhattan according to their levels, and feeding each level by means of a separate feed main or mains, with the use of governors to come within the limitations of the law of June 3, 1905, it did not appear to you to be necessary and that any such attempt as this would be found to be commercially expensive and technically very troublesome in operation, without giving any return in real advantage or economical results to consumers (page 48 of affidavit)?

A. I did.

Q. And of course if it is commercially expensive and fully possible to be done the expense, so far as return on capital necessary to accomplish it is concerned, or the expense of operation 3741 & 3742 of the system when installed, would be a charge against the consumers of gas to be reckoned with in fixing the price at which that gas could be sold? That is a fair proposition, isn't it?

A. It is so.

Q. And isn't it true that in the gas business a company with a growing consumption prudently anticipates the future reasonably in the building of its manufacturing plants?

A. That is proper and wise.

Q. And I see that you allowed a certain addition to the plant owned by the Consolidated Gas Company amounting to about five and one-half million dollars to represent the plant which was used in the manufacturing of gas sold by the Consolidated Gas Company which it acquired from other companies?

A. I did.

Q. And it would not make any difference in your computation whether that plant were the plant of other companies or whether the five and one-half millions be located at Astoria and produced the same gas?

A. None whatever. The sources of the gas would have no consequence.

Q. And of course it would be part of the capital, whichever course were to be pursued?

A. Yes.

Mr. Mathewson: I think that is all, Mr. Burr.

Adjourned at 4:40 P. M. to Thursday, November 1st, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 61.

3743 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Thursday, *November* 1, 1906—10.30 a. m.

Met pursuant to adjournment .
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3744 William D. Marks resumes the stand.

Redirect examination by Mr. Burr:

Q. I call your attention to the testimony on page 2595, given by you in reference to the structural cost of the Cambridge, Fall River, Lowell and Worcester Companies. In response to a question of Mr. Mathewson, you stated the apparent result from the figures previously given by you regarding these companies——
A. The Boston companies?
Q. The Boston companies, yes. "The apparent result from these figures, cost per thousand daily capacity $808.31, dividing by the capacity factor of apparent cost per annual cost, is $4.04."

Mr. Mathewson: That must be a misprint. I never said that.

Q. Well, you took the four Massachusetts companies and obtained, as I understand, $1.75 actual structural cost per thousand cubic feet?
A. I did.
Q. You added to this, making $1.78, so as to be liberal?
A. I did.
Q. The assumption in this question would make the apparent cost per annual thousand 4.04 in Boston, would it not?

Mr. Mathewson: No, no.

A. The figures given by Mr. Mathewson and the computations made by myself to assist him gave $4.04.
Q. As to Boston?
A. As to Boston.

Mr. Mathewson: It is $4.20, if you include all the gas assets in Boston. You should read the next question. That was merely certain assets.
The Witness: I was referring to the actual structural cost.
3745 Mr. Mathewson: Excluding cash on hand and things of that sort.

Q. Is the valuation of gas works per annual thousand cubic feet sold in Boston more than the proper valuation of gas companies in other Massachusetts cities of about 100,000 population?

Mr. MATHEWSON: That is objected to as purely a conclusion to be derived and determined by others, upon the facts submitted.

Mr. BURR: He can either say that it is or not. If he says it is I will ask him upon what he bases that statement.

The MASTER: The question seems to be objectionable, calling more for a conclusion than a matter of legitimate opinion. I will sustain the objection, give you an exception, Mr. Burr, and the answer may be taken down.

Mr. BURR: I will put it this way:

Q. Is the valuation of gas works per annual thousand cubic feet sold in Boston excessive, in your opinion?

Mr. MATHEWSON: I object to that. You asked whether it is greater than other Massichusetts companies. That is another question. The Professor has not indicated anything which qualifies him to make a statement of that kind.

Mr. BURR: I will ask him on what he bases his statement.

Objection sustained.

Mr. BURR: Exception.

A. Yes, it is excessive.

Q. Upon what basis do you make that statement?

3746 A. It is upon the statements made in the report from the Committee on Manufactures relative to the price of gas in Boston, June 11, 1900.

Q. Contained in what report?

A. On page 178, Appendix C, to the 16th Annual Report, Gas and Electric Commission of Massachusetts. That is for the year ending December 31, 1900.

Q. Will you refer more specifically to the statements in that report?

A. In the column headed, "Total Assets," in the table on that page——

Q. What does that column give?

A. (Continuing:) We find the total asset- of nine Boston companies. It is testified by Mr. F. E. Smith, assistant treasurer of the Boston, the Roxbury and the South Boston Companies, that it had been the practice of those companies to charge all new work to construction——

Q. Pardon me a moment. Let us get this straight. Will you commence the quotation from, "A word?" Proceed to quote from this report at the page stated.

A. "A word should be said relative to the column entitled 'Total Assets.' It was testified by Mr. F. E. Smith, assistant treasurer of the Boston, Roxbury and South Boston companies that it had been the practice of these companies to charge all new work to construction and to charge off nothing to depreciation. If this has been the system adopted, it follows that the book assets are largely in excess of the actual assets, for in the nature of things there must have been a substantial depreciation. The column entitled 'Accumulated Surplus' shows that these companies have, besides paying the dividends to their stockholders, accumulated from their earnings from consumers a large sum of money which is sufficient to secure 3747 stockholders from accidents or contingency and loss—a large sum for depreciation.

"A single exception must be made to this. The Brookline Company has no surplus. Its liabilities are $303,595.75 in excess of its assets. This grows out of the peculiar conditions under which the Brookline Company has done its business for the last seven years, which will be more fully explained hereafter. Of all these companies the Charlestown and East Boston are the only ones which are now under the management of boards of directors elected by stockholders who are residents in our own communities. Substantially all the stocks of all the other companies have been bought up by speculators and are pledged to two New York trust companies as security for large amounts of so-called stocks and bonds put out by the Bay State Gas Company of Delaware, a Delaware corporation, and the New England Gas & Coke Company, a syndicate of eleven trustees, nine of whom are not residents of this Commonwealth."

In addition to this statement, the Committee on Manufacturers states on Page CLXXIX:

"Certain important results of this quasi-consolidation may here be noted.

"In the first place, the manufacturing plants of the South Boston and Roxbury companies have been shut down, and thes- companies have bought their gas for some years from the Bay State Gas Company of Massachusetts."

And again, Page CLXXX:

"Your committee are of the opinion that there has been a considerable unnecessary duplication of capital by these means, 3748 and that justice to the consumer demands that if a gas company is to be permitted to disuse its own manufacturing plant and purchase its gas of another company, this arrangement should be made so as not to impose upon the consumer any unnecessary duplication of capital. The gas plants can (doubtful; substitute cannot) be maintained, but not used simply for the purpose of furnishing a basis of paying dividends upon capital, which may have been invested, but which is no longer used for the public benefit."

Again, Page CLXXXII, the Committee states:

"Owing to a contest between Mr. Rogers, or the Standard Oil interests of New York, and Mr. Addicks, the controlling spirit of the Bay State Gas Trust, the Standard Oil party bought the controlling interest of the Brookline Company and entered into competition in the Boston field, for the purpose of driving Mr. Addicks out of Brooklyn and Buffalo, New York."

Mr. Mathewson: I don't think that this has any weighty effect on the assets of the Boston Company or upon the question before the Master.

The Witness: "This competition had not as its basis any reduction in the prace of gas, nor furnishing to an unsupplied part of our

people lighting facilities; it was a speculative movement, pure and simple. This competition went on from early in 1893 until May, 1896. At the expiration of that period the Brookline Company had book assets, as appears from the table above, of $4,627,907.35, and liabilities of $4,931,503.10, showing a deficit of $300,000. Its actual assets are apparently considerably less. On its appli-
3749 cation to the Board of Gas and Electric Light Commissioners for authority to issue another $1,000,000 of bonds, the Commission did not find assets sufficient, in their opinion, in justifying them in the issue."

Mr. Mathewson: Are you reading from your notes?

Mr. Burr: No, this is all a quotation from the official report.

The Witness: "There is weighty evidence that the property of this company is worth $1,000,000 less than its books would indicate."

From a minority report of Charles F. A. Smith, of the same committee, page CCV, I take the statement:

"It would seem that still further opportunity for a reduction might be found, if some of the companies were made to dispose of certain property, which will practically remain idle, as they do not manufacture their own gas. Further inquiry along this line should have been made, but a premature closing of the hearings prevented this. The proceeds of any such sales should be applied to the payment of some of the outstanding obligations, and thus reduce the interest and capital charges."

From the above it is evident that the book account of the Boston companies merged into the Consolidated Gas Company are entirely unreliable as a basis of true cost of construction, and that the figures on the books are largely in excess of the actual structural cost of the works.

Q. And was it for that reason that you selected as a basis for comparison the four companies having a regular organization and
3750 a normal growth, the Cambridge, Fall River, Lowell and Worcester Companies?

A. I at first investigated Boston for the purpose of making a comparison, and finding the facts stated by the Gas Commission and recently quoted by me, as well as many others, I selected, because I believed that there had been an ordinary organization and a normal growth, the four companies in Cambridge, Fall River, Lowell and Worcester.

Q. And you deduced from them an average of $1.78 actual structural investment per annual thousand feet capacity, did you not?

A. I deduced an average of the totals of $1.75 and an average of the averages coming at $1.78, I accepted that as being more liberal and in favor of the companies.

Q. Have you any other authority for avoiding the use of the book accounts of the Consolidated Gas Company of Boston as a basis for the computation of the actual structural value of gas works in general?

A. Yes, the capitalization of the Boston Consolidated Gas Company was fixed by the State Legislature of Massachusetts at $15,124,-

600 for "All the property, locations, rights, licenses, powers, privileges and franchises of all the corporations mentioned in Section 1, Chapter 421, Laws of 1905, Massachusetts."

There is also the statement in the Act, "The Boston Consolidated Gas Company shall not be the acceptance of the capitalization herein furnished, be deemed to have admitted, for any purpose, that the par value of such capitalization is equal to the value of its property, or to the value of the property necessary for the proper conduct of its business." In fact there is, in my opinion, little doubt that works costing, as an actual structural investment, somewhere in the neighborhood of $7,000,000 or $8,000,000 would amply suffice to supply Boston's present annual gas requirements, or its total sales for 3751 the year ending June 30th, 1906, of 3,988,188,700 cubic feet, as reported by the Gas Commissioners.

Q. Is the distribution of gas in Boston any more difficult than in other communities?

A. The cost of the distribution of gas in Boston may be somewhat more difficult than in many more communities in the soil of which there is not a large proportion of rock or of made soil. I have estimated the above somewhat higher price——

Q. You mean the seven or eight million dollars?

A. Yes, a somewhat higher price per annual thousand cubic feet of sales than in the case of the gas companies situated in other towns in Massachusetts. I refer to actual structural cost.

Q. For that reason?

A. For that reason. I have, however, assumed that there shall be no duplication of gas mains as appears to be the case in the streets and that the capacity of the gas works of Boston shall be for a maximum daily demand of about 15,000,000 cubic feet, for the maximum demand reported for the year ending June 30th, 1906, by the Massachusetts Gas & Electric Commission, being very nearly 15,000,000, not quite.

Q. You are familiar with the recent proceedings in Boston on the petition of the Consolidated Gas Company to have determined the fair value of the plants and profits of its constituent companies, are you not?

A. I have read the proceedings of the Boston Consolidated Gas companies in the case of both petitions.

Q. To fix the price of gas and to fix the values of the plants?

A. Yes.

Q. For the purpose of capitalization?

A. For the purpose of capitalization, and at no time during these proceedings were the Commissioners of Gas and Electricity allowed to fix values, although they were experienced in the cost of 3752 Massachusetts gas companies, that is, if anybody could be said to be; nor in those proceedings did I find any attempt by a recognized commission or board of engineers, to fix the proper cost of an ordinary gas works and distributing system as would be required to supply gas to the citizens of Boston under the existing conditions.

Mr. Mathewson: You mean in the proceedings in connection with the consolidation of the companies?

The Witness: In the proceedings in connection with the consolidation of the companies, or the petition concerning the price of gas.

Q. Now, while on the subject of capitalization of the Boston Consolidated Company, and comparing that capitalization with the capitalization of the Consolidated Gas Company of New York, did or did not, in your opinion, the division of twenty million dollars in six per cent. debentures among the Consolidated Gas Company of New York stockholders result in excessive capitalization, and if so, in what way?

Mr. Mathewson: I object to that as utterly improper. There is no evidence that we have distributed twenty million dollars of debentures. The testimony clearly is that the company authorized twenty million dollars of debentures and sold nineteen million, eight hundred and ninety thousand dollars to their stockholders at par in cash and received the money and have spent seven or eight million dollars already in the Astoria investment, and have the rest in cash or temporary investments, as it is being poured in by further construction. Now, what possible propriety is there in a question
3753 of that sort or in a conclusion of the witness based upon that
assumption?

The Master: I think that is objectionable, Mr. Burr. You have the facts here about it. I do not see that the witness's characterization will add anything. I sustain the objection.

Mr. Burr: Exception. You may answer.

A. At the time of the allottment of twenty million dollars of six per cent. debentures by the Consolidated Gas Company of New York, to its stockholders, the stock of that company was selling on the market at an average very closely approximating 204 for each $100 share. These 6 per cent. debentures were convertible in 1907 into the stock of the Consolidated Gas Company and for that reason would naturally become a very attractive investment, commanding a large premium; and if they had been sold in the open market by the treasury for whatever they would have fetched, in my opinion they would have commanded a very large premium indeed, approximating to the premium of 104 then existing on the stock. The result would have been that the treasury of the Consolidated Gas Company instead of realizing exactly $20,000,000 from the distribution at par and paying six per cent. on it, would have perhaps realized twice that sum, or something less than twice that sum, ranging in cash something below $40,000,000, which would have been applicable for the purposes of the company without the capitalization being any more than $20,000,000 to procure it.

Q. Please turn to page 2448. You were asked this question: "You expect, do you not, that the investment of the Consolidated Gas Company in its manufacturing and distributing plant in 1907,
if its output is 15,000,000,000 feet or more, will be greater
3754 than the investment required to-day with its output of
13,000,000,000 feet or more?" To which you answered
"Yes." Do you wish to modify or explain that answer?

A. I would like to answer the question more clearly and concisely.

A plant having a sale of 13,000,000,000 cu. ft. annually will in my opinion cost about $26,600,000, and a plant with a sale of 15,300,000,000 cubic feet, will in my opinion cost $30,600,000, estimating the actual structural cost at $2.00 per annual thousand cubic feet of sales. Referring now to the sales of gas, if 13,300,000,000 feet of gas are sold at $1.00, the gross receipts will be $13,300,000. And if the cost of the gas is, as it appears to be, about 50 cents per thousand cubic feet for manufacturing, distribution and general management—I refer to the cash expenditures in the manufacture of gas—the net earnings on this will be $6,650,000. Again, if a plant sells 15,300,000,000 cu. ft. of gas at 80 cents, the gross earnings will be $12,240,000, and if the cost of producing this gas is 50 cents at the meter, the net earnings will be $4,590,000. It is probable, however, in the first case of 13,300,000,000 cu. ft. sales of gas——

Q. That is, the cost being 50 cents.

A. If the cost happens to be 50 cents, and that in the second case of 15,300,000,000 cubic feet sales of gas the cost will be substantially less than 50 cents per thousand cubic feet, and therefore the reduction in net earnings will be much less than the $2,060,000 which would appear in subtracting $4,590,000 from $6,650,000.

Q. The reduction of net earnings?

A. Yes.

Q. I wish you would just give us those figures. In the first case the gross earnings would be how much?

A. The results will be as follows. The first case, gross earnings $13,300,000, second case gross earnings $12,240,000 saving to consumers and reduction in gross earnings also $1,060,000. Another tabulation: In the first case the net earnings $6,650,000 for
3755 1905 and in the second case net earnings $4,590,000 for 1907.
Reduction of net earnings, $2,060,00- as above computed.

Q. In the first case what would the profit be?

A. In the first case the profit will be 25 per cent. on $26,600,000 and in the second case the net profit will be 15 per cent. on $30,600,000. And these figures would appear to me to be about the actual truth as to the situation of the Consolidated Gas Company to-day, and to show that as near as may be that the statement quoted from my written work on testimony, pages 2516 and following are correct. It was after investigating a very large number of corporations engaged in furnishing gas and electricity that these statements were made. And further——

Q. That the statement was made in your book?

A. Yes, these statements were made in the book, and, further, that this particular statement was made: "A corporation, capitalized only to the extent of its cash investments, restricted to a fair dividend of about 8 per cent. and a reserve of 7 per cent, for large renewals and repairs is a beneficent institution."

Q. Referring to page 2585 of the testimony, your attention was called to the affidavit which you made in this case and particularly to that part of it referring to the capitalization and dividends of the Massachusetts company to which you have referred. You gave the dividends per thousand cubic feet and also the capitalization per thousand cubic feet as taken from the report of the Massachusetts Gas and Electricity Commission, June 30th, 1904, pages 102 to 111 and 118. In that tabulation did you or did you not refer solely to that portion of it on which dividends were being paid?

A. Yes, and I endeavored to make it clear that the only
3756 object of the tabulated data given in my affidavit was to show
the dividends on stock in percentages and also the dividends per thousand cubic feet of sales. The rest of the tabulation is merely for the purpose of identifying and referring to my authority.

Q. If a franchise tax is assessed upon the stock of a company furnishing gas, is it, in your opinion, proper to charge the amount of this tax to the cost of manufacturing and distributing gas?

Mr. Mathewson: Wait a minute; is not that the purest kind of a conclusion? I object to it on this ground.

The Master: There has been that kind of evidence allowed, and I will let him answer.

Mr. Mathewson: Exception.

A. It is, for this franchise tax is in the nature of annual operating expense, and though the franchise, being a gift, should not be capitalized, any tax placed upon the theoretical value of this gift should be charged to the cost of operation.

Q. You do not adopt, however, Mr. Mathewson's theory, as I understand it, that the greater the increase in the value of real estate owned by the company becomes, the greater the cost of gas should become to the consumer by reason of the increase in capitalization of the company due to the increase in value of the real estate?

A. I do not for this reason, that the real estate used for the manufacture of gas in the case of the Consolidated Gas Company, at least, has always earned a profit on its purchase price.

Q. Well, but the taxes on this increased value are paid by the consumer, are they not?

A. They are.

Q. And should he, in your opinion, be compelled to pay the return upon such increased capitalization in addition?

3757 A. He should not. If he pays increased taxes, he should not pay increased profits on a problematical sale in the future, although, of course, it would be natural to sell land at a profit if he could.

Q. I call your attention to page 2531 of the testimony. You were examined at this point by Mr. Mathewson with regard to the situation in Philadelphia, as you had referred to it in your testimony and in the affidavit which was made in this case, and you were asked this question:

"Now, whatever gas the company delivered to the city is delivered, is it not, in whole or a part, as compensation or rental for the property or plant of the city which the company is allowed to use, and it is not given to the city at all, except as consideration for the use of the property, is it not? A. Well, I don't think that that is specifically stated. I wonder if I have the lease here. No, I haven't the lease here; I have it at my office.

"Q. Well, is it not your recollection that the gas is delivered to the city as compensation for the use by the company of the property of the city which the company uses? A. I know the gas is delivered to the city free of charge. I don't know——

"Pursuant to the contract under which the company uses the city's plant to manufacture the gas? A. Yes."

Now, do you wish to modify or explain or amplify your answer in that connection?

A. I do.

Q. Proceed.

A. In addition to the various sums of money paid by the United Gas Improvement Company to the city of Philadelphia and the $15,000,000 for improvements to be put into the works, as well as the free gas delivered to the street lamps and to the public 3758 buildings, the United Gas Improvement Company agreed at the end of thirty years to turn over the Philadelphia Gas Works to the city without any charge whatsoever or receiving any money in any form for it. Besides that, as showing how exceeding lucrative the past eight years must have been, the United Gas Improvement Company offered an additional sum of $25,000,000 in cash.

Q. When?

By Mr. **Mathewson**:

Q. Is this on record anywhere?

A. In my affidavit.

Q. Yes, but that is not a very valuable record for the purposes of evidence here. Is it in any other record or where is this offer found to which you are about to refer?

A. In the archives of Philadelphia.

Q. You have not the records here, have you?

A. No.

By Mr. **Burr**:

Q. When was this?

Mr. **Mathewson**: I think I shall have to object to this, Mr. Master. I do not know whether the so-called archives are available to us for explanation.

The **Master**: What do you say to that, Mr. Burr?

Mr. **Burr**: If he knows of this matter, I suppose he can testify to it.

Mr. **Mathewson**: I do not think it is competent. I have not made that objection in most cases, but here is something I know nothing about and he may refer to a record which is not available to us.

3759 Mr. **Burr**: You examined him very fully in regard to this situation and I am giving you some further information to explain his answers.

Mr. **Mathewson**: I have not asked him about that.

The **Master**: If this appears in any published proceedings such as we have hitherto used in this case, like those in Chicago, or Boston or elsewhere, it may go in, but if it is merely hearsay on the part of the witness, I think that objection will have to be sustained, Mr. Burr.

Mr. MATHEWSON: If the paper was here so we could see it and cross-examine upon it and put any parts of it in which we wish to, it might be another thing.

Q. Have you the annual report of the United Gas Improvement Company?

A. I have not. There was a printed cutting from it which was sent to me.

Q. Well, you have seen an extract from the annual report for 1905, have you, of this company?

A. The report of the United Gas Improvement Company at its annual meeting on May 7th, 1906, for the fiscal year 1905.

Q. Does it appear by that report what amount the company claims to have invested during the past eight years in the gas business in Philadelphia at six per cent.?

A. The amount is $16,018,192.22.

The MASTER: The question was does it appear upon that report?

The WITNESS: Yes.

Mr. MATHEWSON: That is all testified to in direct-examination and again in cross-examination.

3760 Mr. BURR: One point of your cross-examination was to show that this free light which was testified to——

The MASTER: Well, I have it before me, Mr. Burr.

Mr. MATHEWSON: I do not want to embarrass the witness or counsel as to this $25,000,000 offer which was said to have been made, and I am willing to say this, that I will not press the objection of incompetency as to the witness's testimony on that point, assuming that the testimony may be stricken out if we are unable to get the information ourselves.

The WITNESS: I see no reason why you could not get a copy.

Mr. MATHEWSON: I think perhaps we can, and I shall not press the objection if that understanding prevails.

Q. Now, in addition to this amount which you have stated as appears by the report this company invested in the gas business during the past eight years at 6 per cent., did it on April 26th, 1905, make an additional offer to the City of Philadelphia for an extension of its lease?

A. It did.

Q. Will you give us the particulars if you have them.

A. It offered an additional sum of $25,000,000 cash for an extension of its lease for fifty-three years, fixing the price of gas at $1.00 for five years, 95 cents for ten years, 90 cents for fifteen years, 85 cents for twenty years, and 80 cents thereafter. This would make the total investment which — claimed by the United Gas Improvement Company about $41,000,000, of which the treasury of Philadelphia would receive $25,000,000.

Q. So that it is fair to infer, is it not, from this offer, that the result of selling gas in Philadelphia at an average of 78.1
3761 cents as you have testified has proved enormously profitable?

Mr. **Mathewson**: I object to that, whether it is fair to infer.

The **Master**: Cannot I be trusted to draw that inference ?

Mr. **Burr**: Well, I will say, has proved profitable.

Mr. **Mathewson**: I make the same objection, that it is fair to infer. Is that a fair question?

The **Master**: I do not think that adds anything to the testimony.

Mr. **Mathewson**: Gas was never sold for 78 cents in Philadelphia, as the witness admitted on cross-examination. It is sold now for $1.00 to every consumer.

Mr. **Burr**: The testimony is that it is sold at 78.1 cents.

Mr. **Mathewson**: There is no such testimony.

The **Master**: I sustain the objection and you can have the witness' answer.

Mr. **Burr**: Exception.

A. It must be profitable or they would not offer to pay such a large sum for it.

Q. Now, referring to page 2477, as the result of previous testimony given by you in answer to the questions of Mr. Mathewson by which it was made to appear that $4,000,000 would be necessary for additional plant to meet the requirements of the additional consumption to which you had referred as being imminent in 1907, you were asked, referring to that $4,000,000 on page 2477: "Was it included in the $40,000,000 which you say were the company's figures?"

A. The company's figures have been taken by me at all times as doubtful and subject to verification. If I was computing
3762 the capacity of works which could be built for $40,000,000, stated structural cost, I would put the capacity at about 20,000,000,000 cubic feet annually.

Mr. **Mathewson**: The question is whether it was included in the $40,000,000 of the Company's figures.

The **Witness**: I would say that this $4,000,000 would by me be included in the $30,600,000 allowed as actual structural cost and also in any larger sum that might be suggested where the capacity was not greater than 15,300,000,000 feet.

Q. On page 2482, being still under examination with regard to your chart, showing the probable increase in sales for 1907, you were asked the question:

"The increase in the sales of gas which you say was due to the reduction in price. You gave the amount in your direct testimony and stated the increase of sales of gas in those two years was so much and that it was due to an increase in price.

"A. I gave the increase in the sales of gas per capita.

"Q. Yes, I mean per capita. A. At 929 cubic feet. You wish that divided by 50 cents?

"The **Witness**: That is about 18.6 cubic feet, one-fiftieth.

"'Q. Is it not the 929 feet that you divided by 33 to obtain 46.46? A. Yes."

Do you wish to add anything to that answer or explain it?

A. It was a fact that I divided 1533 cubic feet by 33 to obtain 46.46 feet per one cent of reduction in the price of gas. My reply was due to a misunderstanding.

3763 Mr. Mathewson: You fully explained that on the next page.

The Witness: It was an omission in the previous evidence.

Mr. Burr: Well, we wish to emphasize that evidence.

Q. On page 2485 you were asked, "Is it possible to maintain an average candle power of only 22½ candles monthly record, and at the same time at all times keep the candle-power on test by the city a mile from the works above 22 candles? A. There are certain periods of—— Q. I asked you a direct question. Will you not give me a direct answer for once? A. Yes."

Do you wish to explain that?

A. Yes, referring to Field's Analysis for 1904, page 2, we find the standard or prescribed candle-power to be 16 and the average furnished to be 16.52 candles. This is the Gaslight and Coke Company. Also referring to Field's Analysis for 1905, page 2, we find the standard or prescribed candle-power to be the same and the average furnished to be 16.48, showing the average furnished for the two years to have exceeded the standard of 16 candles by one-half candle and showing the practical possibility of realizing the result stated by me in the practical operation of gas works selling 22,500,000,000 cubic feet annually.

Q. Have you any further informtaion on this subject from the books of the Consolidated Gas Company?

Mr. Mathewson: What subject is that, about candle-power?

Mr. Burr: Yes.

3764 A. Yes. Since testifying I have been handed the monthly report of manufacturing averages and results of the Consolidated Gas Company for the year 1905.

Q. What appears from that?

Mr. Mathewson: Has that anything to do with candle-power? I thought this was redirect upon the subject of Professor Marks' testimony before the examination of the records of the Consolidated Gas Company and I proceeded upon that basis in my cross-examination. If you are going to inject on redirect new matter based on that examination, and then further new matter later based on that examination, it seems to me it will chop things up a good deal.

Mr. Burr: You have gone into the cross-examination of both Dr. Bemis and Dr. Marks as to candle-power and candle tests and he has made a statement here which you have challenged by your cross-examination. He now explains the statement made in response to your questions on cross-examination, and fortifies the position he has taken there by information which has come to him now and which he offers to produce here. I think that is clearly within our rights.

Mr. Mathewson: May I see what you propose to go into. I may not have any objection if you limit it.

Paper handed to Mr. Mathewson.

Mr. MATHEWSON: If this is limited, I am not going to object to this particular thing, but I do object to the principle very seriously. Here is Marwick, Mitchell & Company's accountants' statement, if the Master pleases, and Marwick, 3765 Mitchell & Company get this up while they are examining our books and pass it out for the purposes of this redirect-examination. I do not think it is the fair or proper thing to do.

Mr. BURR: I wish to protest against any such statement. We are either in the office of the company for the purpose of obtaining information or we are not. If we are there for the purpose of getting information, that information is for our use in this case; and if Dr. Marks asks the accountants to procure for him whatever information that could be procured with regard to these matters that are contained in this statement, that is not spreading it broadcast. That is for the use of the defendant, the City of New York, in this case, and it is for that purpose that I procured it, and it is for that purpose that I offer it as part of the record.

Mr. MATHEWSON: It is not a question of spreading it broadcast. It is a question of where I have been asked to cross-examine the witness to get that out of the way, and then your importing into the redirect-examination results of examinations regarding which I had had no opportunity in my cross-examination to deal with at all. That was something which was to be postponed. In this particular case I do not object to it, but I do not like the principle of the thing, and I shall object to its being done continuously, if it is attempted.

Mr. BURR: There is no intention on my part to do anything with regard to information that may be given by the accountants further than in this instance, but while we are on the subject of candle power——

The MASTER: Then there seems to be no substantial issue 3766 between you gentlemen as the matter stands.

Mr. BURR: I thought it well to have this information supplied to fortify, as I said, the position taken by Doctor Marks.

Q. Referring to that statement which you have produced, you may state what it is?

A. It is a tabulation of the monthly record of manufacturing averages and results of the Consolidated Gas Company for the year 1905.

Q. By stations?

A. Showing the data for the five manufacturing stations, given separately.

Q. Taking the 14th Street station for the year 1905, what does the yearly average appear to be there?

A. The yearly average appears to be 25.62 candles, and the highest average is for the month of July, 30.38 candles.

Q. And for the other stations?

A. For the 21st Street station the yearly average appears to be 26.03 candles and the highest average 27.72 candles for July. For the 42d Street station the yearly average appears to be 24.25 candles and the highest 26.36 candles for July.

For the 44th Street station the yearly average appears to be 25.32 candles and the highest 28.06 for July.

The 99th Street station, the yearly average is not complete but in part appears to be 25.24 candles, with the highest average for the month of July 27.19 candles.

Q. The average of the whole year for all stations appears to be what?

A. Average candle power, coal and water gas stations, is 25.35.

Q. What is the average of candles above the average legal requirement of 21 candles for the year?

A. The average of the legal requirement is 21 candles, being 20 during the first six months and 22 during the last six, which 3767 shows an average excess of about 4.35 candle power throughout the year. I have already stated that I believed the candle power to be unnecessarily high and the use of oil extravagant, and offer this to substantiate it, outside of the records of the City which I used in making my first statement.

Mr. Burr: I offer that in evidence.

Received in evidence and marked City's Exhibit 62.

Q. I call your attention to page 2498 of the testimony where you were being examined regarding the price of oil and as a conclusion of the answers which you gave before, Mr. Mathewson says:

"If that statement is correct then the price paid by the Consolidated Gas Company for oil within that period, 4.08 cents, was considerably less than the average price paid by all the other companies in the State of New York, 4.25 cents, is not that true? A. That is true."

Do you wish to explain or amplify that answer?

A. Yes. In no case was I dealing with the average of the whole State. I tried to make it very clear that the use of oil was relatively so enormous in New York that the Consolidated Gas Company should have received a price far below that received by any other small corporation using oil in the manufacture of gas. In order to show that this difference in the stated price of oil, given by Brown's Directory, does not appear to be a matter of locality, I have prepared a map of the State of New York, giving the localities and prices paid for oil, and it will be observed that those companies paying 4 cents or less for oil are intermingled with companies paying over 4 cents, and quite regardless of geographical position. From this it might be in- 3768 ferred that the price of oil depended largely on the care exercised in its purchase, and not upon the location of the town in which it was bought.

Q. Will you produce the map, for the inspection of the Master, showing the geographical location of these cities?

A. (Producing map). The red ones are over 4 cents, the black ones are 4 cents or below.

Q. A good deal of time was consumed by Mr. Mathewson in examining you as to what you meant by the word "surplus," and on page 2503 of the testimony he said:

"I am trying to find out what you mean and what you refer to in your testimony and nothing further. I read from page 2823 as follows: 'By the Master: Q. What you mean by that is that the surplus has been expended in the purchase of securities of other com-companies? A. Yes, sir.' Now, what surplus did you refer to there which has been invested in the securities of other companies? Didn't you refer to the surplus which the Consolidated Gas Company had made in its gas business, because it had no other business until it invested in the securities of other companies? A. I referred to its visible possessions, State's Exhibit B, page 382."

Now, in what sense did you use the word "surplus" in that connection?

Mr. MATHEWSON: If he did not explain it in the next three or four pages of his testimony, he never can.

A. My use of the word "surplus" was clear to me in the ordinary business sense, as being any sum of money which a firm or corporation had invested outside of and beyond the capital demanded 3769 in the transaction of its professed business. In the case of the Consolidated Gas Company, I meant to convey that, if the Consolidated Gas Company had invested in other than gas enterprises, any sums, no matter from what source these sums were derived, or how they were obtained, they would form a surplus above its requirements.

Q. In what manner does the word "surplus" touch upon the future profit from gas manufactured, of the Consolidated Gas Company?

A. If, however, as appears from the books, the source of profit in the Consolidated Gas Company was almost entirely the manufacture of gas, and its investments in other enterprises returned very small or no dividend, then, in addition to the surplus already referred to and defined by me, it appears to have mortgaged for the future the surplus profits of the gas business in paying dividends on a very large capitalization, far beyond the needs of the gas business alone.

Q. Can you put this in a more concrete form?

A. Yes, the Consolidated Gas Company appears to have issued $80,000,000 in stock and $20,000,000 in six per cent. debentures, and to have recently paid eight per cent. on $8,000,000 or $6,400,000 annually, and six per cent. on $20,000,000 debentures or $1,200,000 annually, a total of $7,600,000 annually, all of which would, with the exception of the one million dollars received from electric light company investments, appear to be derived from the profits of the gas business. Eight per cent. on $30,000,000 which is the amount fixed by the Gas & Electricity Commission as a proper capitalization, is $2,400,000, which subtracted from $6,600,000 leaves $4,200,000, which might be called surplus profit derived from the gas business, over and above a fair rate of dividend from a proper capitalization, as stated by the Gas & Electric Commission.

3770 Q. Referring to your testimony on page 2533 I think you have already stated that it is a fact that at the end of thirty years the U. G. I. Company is to return the gas works free of all charge and without the payment of any money whatever, to the City of Philadelphia?

A. I have.

Q. Referring to your testimony on page 2551, and your testimony as it appears there regarding the gas works at Worcester, Massachusetts, and your statement that the Massachusetts Gas and Electricity Commission might have reported the capacity as too much, do you wish to explain further in that connection?

A. Yes. It would appear to me in taking the statement of the Gas and Electric Commission, knowing as I do that they have the statements from the various officials of the various works as there was at that time no particular reason to bias them, that the statements made by the managers were about averages. In the case of the Worcester Company I would say that the actual structural cost of the Worcester Gas Works appears to be $1.54, per annual thousand, and that the average which I have used is $1.78, and therefore that there is an excess allowance of 24 cents in the average used above the Worcester Gas Works stated actual structural annual cost per thousand cubic feet; that is the actual structural cost as reported by this company.

Q. At pages 2558 and 2559, you were being examined regarding the cost of the real estate of the Consolidated Gas Company and your comparison of the conditions which existed in Massachusetts with the conditions which existed here, so far as the Consolidated Gas Company is concerned, in the Borough of Manhattan?

A. In explaining that I would say that the cost of real estate is taken per annual one thousand cubic feet of capacity and that it appears generally——

3771 By Mr. Mathewson:

Q. Where is it taken here? In your testimony?

A. In my testimony.

Q. Pages 2558-9?

A. Yes. And as a result where the output or sales become very large the land is also apt at the same time to become valuable, increase in value, except under exceptional circumstances, so that there is a counterbalancing of the two factors which perhaps can be best illustrated by a reference to the 21st annual report, Massachusetts Gas and Electric Light Commissioners, for the calendar year 1905. On page 117 of that report the total sales of gas—not the total capacity, but the total sales of gas—are given as 10,410,000,000 cubic feet in a year in the whole State of Massachusetts. Now this does not differ very far from the amount of gas stated to be actually manufactured on the Island of Manhattan by the Consolidated Gas Company's stations.

Q. That has already been referred to at length.

A. (Continuing:) and I am also advised that the 10,410,000,000 Massachusetts sales has in it a duplication to a very considerable amount, which would reduce that. If the two quantities happen to be about equal though, then according to my method the value of all the real estate used by all the gas companies of the State of Massachusetts would have to be about the same as the value of the Manhattan real estate owned by the Consolidated Gas Company, since the output or sales of gas by all the companies in Massachusetts is about the stated sales of gas manufactured on the Island of Manhattan.

Q. Now referring to page 2561 and page 2355, a mistake appears there in enumerating the consumers' deposits of the Fall River Gas Company, does there not?

A. There is.

Mr. MATHEWSON: I called his attention to the fact. He 3772 misplaced an amount and he corrected it on that page and on page 2562. Instead of $429.85 it should be $2,193.

The MASTER: That is corrected on page 2562.

The WITNESS: And on page 2355 the total of all four companies should be $638,928.81. I would also add that the error is so small that the result of thirteen cents per annual thousand cubic feet sold does not differ but very slightly—immaterially—from the first figure found.

Q. Nor would 4.78 cents differ materially from the figure found, would it?

A. No.

Q. When you include the notes payable?

A. No, not a particle.

By Mr. BURR:

Q. Now, if you subtract the total of these floating liabilities, $638,928.81, from the working capital, $852,249.94, you obtain $213,321.13, do you not?

A. Yes.

By Mr. MATHEWSON:

Q. In place of $215,084.28?

A. Yes, sir.

By Mr. BURR:

Q. That representing the active capital furnished by stockholders for the needs of the gas business?

A. It is.

Mr. MATHEWSON: He changed that and said he had made a mistake and did not include notes payable. Are you going to have him testify to that over again and have me correct him again?

Mr. BURR: You have desired a change of notes payable into a bond?

3773 Mr. MATHEWSON: Not at all. I take the Massachusetts Commission's estimate of notes payable as capital.

The MASTER: That was made very clear, I think.

Mr. BURR: I think so.

Q. If you divide this amount, $213,321.13 by the actual total annual sales, 1,653,012,000 feet you obtain what?

A. Thirteen cents per annual thousand cubic feet sold. That is the amount of capital found to be necessary to be obtained from stockholders.

Q. Turn to page 2565, where you were asked to distinguish if you could tell the difference between working capital and active capital. What have you to say as to that?

A. I would say that a working capital is whatever fund is required to move the business of the gas company along, no matter how obtained, and that the active capital is the raised capital contributed by the stockholders, but not invested in permanent works or plants. The fact is that the Massachusetts companies appear to utilize a working fund of 48 cents per annual thousand cubic feet of sales, of which they have raised as active capital by stock subscription 13 cents and by borrowing in various forms 35 cents. In my opinion borrowed money is a liability and until funded in some form of long termed security must be reckoned with as a possible quick liability at any time. The fact that the Commissioners in Massachusetts or their statistician chose to regard what was stated on the balance sheet as notes payable as bonds does not convert notes payable into bonds.

Q. Referring to the subject of consumers' deposits on page 2570, Mr. Mathewson asked you this question:

3774 "Then the company would not be entitled to earn in that event on the money that it used as working capital merely because it was really a fund which was constituted by consumers deposits, is that right? A. I could give you a concrete case, in the case of the Consolidated Gas Company, if you like.

"Q. No, I don't want a concrete case. I am asking you what your testimony is, because it bears directly upon your testimony given here."

Do you desire to make any statement with regard to consumers' deposits?

A. Yes.

Q. Can you give me a concrete numerical statement of your views as to the use of consumers' deposits?

A. Yes. The custom seems to vary in gas companies regarding these deposits, some companies paying interest on these deposits, and other companies returning them without interest. These companies consumers' deposits are an insurance fund, and by some companies are set apart as a special deposit drawing interest, and by others are used as part of the working capital.

If the gas company received interest on its special deposits, and does not pay interest, it received a profit on capital which it has not contributed. If the gas company received interest, and pays equal interest on a special deposit, it has then the benefit only of an insurance fund. If the gas company uses the consumers' deposits as a working capital, but does not pay interest, it is not entitled to a profit on the amount of the consumers' deposits. If the gas company uses the consumers' deposits as a working capital, and pays interest to the consumers, it will appear proper that an allowance should be made of this interest to a consideration of profits justly to be claimed 3775 by the company. All this, however, is a matter of the profit and loss account, and should not enter into the cost of gas.

In making use of the word "insurance" I would say that insurance resulting from a consumer's deposit differs from fire insurance because the party who insures against fire does not put the total amount of that insurance in the hands of the party insured, while the consumer making a deposit to insure the gas company against loss does so by putting the actual cash of his deposit in the hands of the gas company, thus furnishing capital as well as furnishing insurance.

Q. Mr. Mathewson again adverted to the subject of notes payable on page 2579, but I think you have already fully explained your views on that subject in connection with the Fall River Company, and that also applies to the Cambridge Gas Company, does it not?

A. It does.

Q. That is, that the balance sheet of that company shows notes payable and you claimed that notes payable are not bonds, no matter whether the Massachusetts Gas Commission or any other parties may chance to call them so.

Mr. MATHEWSON: When you say "the balance sheets of the company," do you refer to anything more than is published here in this volume of the Massachusetts Gas & Electric Light Commissioners?

The WITNESS: All to which I have had access.

The MASTER: I do not get the point of the answer on page 2579. As I understand it, the Massachusetts Gas Commission does not say that notes payable are bonds, they simply include them as capital.

Mr. BURR: But Mr. Mathewson claimed that notes and 3776 bonds were, for the purposes of the Gas Commission, regarded by them as capital.

Mr. MATHEWSON: Notes payable. Notes payable are limited under the term "Capital per thousand sold, including bonds." In other words, they are included in the term "capital," not in the term "bonds."

The WITNESS: May I explain to you in regard to the matter that in Massachusetts, with the exception of Boston, the companies are thoroughly under the control apparently of the Massachusetts Gas Commission, and this Commission prevents them, until they can make a good showing of assets, from issuing further securities and the consequence is that they borrow money on notes more frequently than companies do elsewhere.

Mr. MATHEWSON: I am glad to hear that they are under the control of the Gas Commission. Professor Bemis seemed to object to my use of the word "permit," and so forth, in connection with the Gas Commission.

The WITNESS: With the exception of Boston, I said.

Mr. BURR: What he meant by control was that they might limit their prices.

Q. On page 2583 you were examined with regard to the capitalization of the Consolidated Gas Company of New York and its comparison with the existing conditions in Massachusetts and you made some statement on that page with regard to active capital and borrowed capital and the division of the same. Will you explain that if you can?

The MASTER: Exactly what, Mr. Burr?

Mr. BURR: As regards his division of the two.

3777 Mr. MATHEWSON: He merely explained there——

Mr. BURR: How would he divide the figures that he gives there into active capital and borrowed capital so as to show the total working capital?

A. Referring to the amount of $6,375,918.52, figured at the bottom of page 2583, I have recomputed it somewhat more accurately and put it in concrete form to correspond with existing conditions in Massachusetts. First, active capital furnished by stockholders $1,726,811.32, borrowed capital or working fund $4,649,107.20, making a total working capital of $6,375,918.52, which would appear to be the amount of free funds, investments, bills, liabilities and so forth required under the same conditions as those in Massachusetts, by the Consolidated Gas Company of New York City. The difficulty with this borrowed capital is that its destination in Massachusetts is not stated. That is, the way it is used; whether for the purchase of materials or the transaction of business or whether invested in a fixed or in a new plant. It may be used for either one or may be used for both, according to the necessities of the company and its future plants.

Q. Now in your chart showing the probable conditions of the gas business in 1907 in the Borough of The Bronx, and the examination of Mr. Mathewson regarding the figures which you gave as applicable to what you computed as to consumption of population, your attention was called to a report of Burr, Herring and Freeman, particularly as to the statement contained in that report as to what the probable population would be of the Borough of Manhattan in the year 1825. Have you looked into this matter of population any further because of your attention having been so drawn to
3778 that statement in that report?

A. Yes, I have. Taking a good deal of trouble looking the matter up, procuring from the department the copy of Burr, Herring and Freeman's Report.

Q. What do you find that report to be or to be based on?

A. It is a collection of papers from various parties, as well as from the gentlemen named. I find that they give as the authority Appendix 10, but it is so carelessly put together that on referring to Appendix 10, I find it to be a list of the employés of the Water Department. They also——

Mr. Mathewson: You do not understand that that 1925 is to be made up exclusively of the employés of the Water Department?

Mr. Burr: No, but that may be the reason for the increased water supply.

The Witness: (Continuing:)——tracing it further, I find that Messrs. Burr and Herring have relied entirely on Mr. Freeman who published a report in the year 1900. This report of Mr. Freeman in the year 1900 was with regard to the future demands of water anticipated on the part of Greater New York.

Q. You mean the future demands for water?

A. Yes, on the part of Greater New York. Mr. Freeman has laid off in a diagram a number of curves, stating that the increase might be 20 per cent., twenty-five per cent., or thirty per cent. in a decade, and he has started from existing conditions in each of the boroughs, considering them, and then proceeded on these assumptions to prophesy as to the future, but in the case of the Island of Manhattan

Mr. Freeman announces there are to be a very large indefinite number of bridges and apparently cut it off at 2,130,000 population.

3779 By Mr. MATHEWSON:

Q. For 1925?
A. For 1925. That is some twenty years from now.

By Mr. BURR:

Q. In other words, at a certain period the Borough of Manhattan will begin to be depopulated?
A. Yes.
Q. Now, have you consulted any other report in addition to the report of Mr. Freeman?
A. Following this very unsatisfactory investigation and result and method I visited Mr. Diverona, the head of the Water Department of New York and found that he had completed and had in manuscript his prognostications with regard to the future of New York, but it was not yet published.
Q. Did you take any figures from his report?
A. Mr. Diverona had quite a number of figures but as my own work was very narrowly limited, I simply took his figures for 1906, Mr. Diverona's that is this year, the end of that year.
Q. He is the chief engineer of the Water Department?
A. He is the chief engineer of the Water Department, and he says the population of the Island of Manhattan will be 2,464,000. For the year 1907 he states that the population will be 2,541,000. In my own case, reasoning closely but perhaps with not as great facilities in the matter of data, I obtained on the diagram 2,217,295.
Q. There is a difference of how much between your estimate and Chief Engineer Diverona's?
A. Making a difference of about 124,000, that I am below Mr. Diverona's figure. Regarding this chart and populations on it, I would say that it is only one of many charts covering the whole of Greater New York that I have made. And in getting out this
3780 chart I was very careful to hold myself to numerical figures, that is to say in anticipating the population I only anticipated it for two years beyond 1905, that is to the end of 1907, and I took the population for five years back, the difference in populations, and divided it by five and then multiplied it by two and obtained a uniform period of seven years from end to end, five back and two ahead, which I think gives very close and very conservative results as to population.

Now, in regard to the question of the increase per capita, I took as you know the increase per capita for two years only. Of that two years only twelve months was a period which involved a reduction in the cost of gas. Now, for that reason, I was obliged to confine myself to two years because there is but one year of 80 cent gas which is hoped for ahead. Of course at the end of two years of 80 cents gas I presume that the sales per capita would be considerably more than the 10,000 which is about what I had reached.

Recess until 2.15 P. M.

After Recess.

William D. Marks resumed.

By Mr. Burr:

Q. Your attention was called yesterday in the cross-examination by Mr. Mathewson to the manner in which stove rentals were treated under the English system as appears by Field's Analysis. Have you any comment to make in that regard, regarding stove rentals or stove repairs?

3781 A. Referring to Field's analysis, pages 3 and 4, it will be observed that on page 3 the average stove rental of the Metropolitan Company is .82 of a penny per thousand cubic feet, and on page 4, that the average stove repairs is .74 of a penny per thousand cubic feet of sales; the result being that the two amounts very nearly equal each year, and, in my opinion, is the result of an endeavor to neither make nor lose money on stoves, put out for the purpose of increasing the sales of gas.

Q. In your opinion, if I understood you correctly yesterday, you stated with regard to repairs to gas stoves, that that should be part of the expense of a plumbing department and should be a matter which would be closed out in the profit and loss department?

A. I did, and I think anybody else trying the experiment will find that it is clearer and better. Unless that is done you never really do know the precise amounts of money you are making or losing until at the end of the year.

Q. And I understood that was your opinion also with regard to the item of consumers' deposits?

A. Yes, sir; that they should go to profit and loss account.

Q. You explained, I think fully, yesterday your opinion, as to what should be done with interest on unpaid taxes in that, if I understand you correctly, that was a proper charge to be entered in and kept in suspense account?

A. Yes. It appears to me to be almost a matter of course. Were it not suggested, I cannot imagine any business man or bookkeeper doing otherwise, than placing it in suspense account, until matters were finally adjudicated.

Q. And on page 3670 of your testimony yesterday, your attention being drawn to the item of $289,000 lamp account, public lamps, as chartered in Exhibit 94, Mr. Mathewson said:

3782 "Well, you know in the present case the money is charged but not yet paid to the company."

Do you understand that that appears in Exhibit 94 because that money has not yet been paid to the company or do you understand that the Consolidated Gas Company claims that that is a proper charge in the operating expenses and indirectly to be charged up against the cost of gas?

A. The street lamp account is usually a separate contract account against which is charged all the expenditures and to which is credited all the receipts. The difference between these two at the end of the term of the contract or at the end of a fiscal year is closed by a balance, which balance should either be charged or credited to profit and loss according as to whether the contract results in a loss of money or in a profit.

Mr. Burr: That is all.

Recross-examination by Mr. Mathewson:

Q. You understood my question yesterday to be, did you not, Professor, as to whether stove repairs were carried into the expenditures for gas and stove rents were carried as income instead of carrying in the balance between the two as you advocated?
A. Yes.
Q. And you found that in Field's Analysis they did carry the stove repairs as part of the cost of the gas and carried income separately as an income, you will remember, didn't you?
A. May I look at my papers?
Q. Yes.
A. Yes, but——

The Master: Now, Doctor, remember that we have very little time this afternoon. Just answer the questions and Mr. Burr will take care of you.

3783 Q. It does not appear by Field's Analysis that their method of treatment of stove rents and stove repairs depends upon the amount of one as compared to the other, does it?
A. It does not.
Q. And in some companies as appears by Field's Analysis the stove rentals appear to differ very substantially from the amount of stove repairs?
A. Referring to what?
Q. Page 4, for instance, for the South Metropolitan Company, stove rental amounts to 1.03 pence and stove repairs to only .76 of a penny?
A. For what year?
Q. 1905.
A. I judge that is an exceptional instance.
Q. Take Brentford, the first of the suburban companies, it appears there that the stove rentals is .81 of a penny while the stove repairs are 2.14 pence or more than 2½ times as great, is not that the fact?
A. I referred more particularly——
Q. Is not that the fact?
A. That is the fact.
Q. So that it does not appear that there is any difference in the method of treatment of stove rents and stove repairs by the English accountants, depending upon whether one is greater than the other or not. That is so, is it not?
A. I referred in my testimony——
Q. Won't you answer my question. Is not that the fact?
A. I cannot draw that inference because I don't know how that is treated.
Q. But you have used this book and commented upon it. Won't you point out any case in which the stove rent and stove repairs is

treated differently by reason of any variation between the amount of the two items so far as it appears in Field's Analysis?

A. I don't know of that. I mentioned the facts in the case of the Metropolitan Company.

Q. That they happened to pretty nearly balance in that case?

A. For the reason that I stated.

3784 Q. You have referred to Burr, Herring & Freeman's report? Who is Mr. Freeman, do you know?

A. Mr. Freeman is an engineer and specialist in hydraulics.

Q. And has been connected in an advisory capacity with the defendant, the City of New York, for a considerable time, hasn't he?

A. I don't know. I know he has done work for the City for some time.

Q. Did you find that Mr. Verona's figures or estimate of the population of the Borough of Manhattan were carried up as far as 1925?

A. They were not.

Q. Don't you know that in many portions of the Borough of Manhattan in many districts the population is decreasing, as the census has shown, from year to year?

A. I have not made a sufficiently careful study of that to be sure on that point.

Q. In computing the assets per thousand of capacity in the Boston Consolidated Gas Company you have employed 28,000,000 feet as the daily capacity?

A. By your request.

Q. Well, what should be the daily capacity according to your investigation?

A. I have that memorandum somewhere but not with me.

Q. Is it not a fact that the 28,000,000 feet included the capacity of the New England Gas & Coke Company, which is not a part of the Boston Consolidated Gas Company at all?

A. (No reply.)

Q. You say you have read over the Boston testimony, Professor, and it all appeared in the Boston testimony?

A. Frankly, the 28,000,000 cubic feet of which you speak, is to my mind a quantity which is in excess of the Boston make, as near as I can recall having read it.

Q. Is it not your recollection that the total capacity of the Boston works, excluding the New England Coke & Coal Company, which is not part of the Consolidated Company, is something like 21,000,000 or 22,000,000 feet per day?

3785 A. I have not the figures with me and would not care to venture on a guess.

Q. I think the figures appear in the Boston testimony, which you said you had examined, and I thought perhaps you had noted the capacity?

A. It is a question of memory entirely. I can look it up if you like.

Q. But your memory being, and I think it is correct, that the capacity of the Boston Consolidated Gas Company's plant is actually less than 28,000,000 feet, if the capacity items were corrected to the fact, it would show a larger amount of assets per thousand feet of capacity than that which you gave, would it not?

A. Acting as your computer, and dividing a smaller amount into the amount which you gave me as their assets, I presume the result would be larger.

Q. I did not give you anything as their assets. I asked you to look at the Massachusetts Gas Commission report which you had been using as to other companies, and you will remember you took the assets from that, did you not?

A. Acting as your computer, solely.

Q. Yes. But you took the assets from the Massachusetts report and not from me, didn't you?

A. Yes, acting as your computer.

Q. And on the other hand if the 28,000,000 cubic feet daily capacity includes the New England Gas & Coke Company's capacity, that is, if you use the 28,000,000 feet as the divisor, you should also include the assets of the New England Coal & Coke Company, to be consistent, should you not?

A. I presume you are right, if you wish me to compute.

Q. No, I do not. I am merely getting at the principle. I am not trying to entangle you, but am merely trying to get at the facts.

3786 Now, you said that the Boston assets per thousand feet you considered excessive and stated your reasons why. Will you let me see that book from which you read incorporating some report from the Committee on Manufacturers of the Massachusetts Legislature?

(Book produced by witness.)

Q. Do you remember the date of that report?

A. It is at the head of it.

The Master: 1900, was it not?

Mr. Mathewson: Yes, June 11th, 1900.

Q. Now you referred to nine Boston companies in this connection. To what Boston companies did you refer as the nine companies?

A. As given in the list.

Q. On page 178?

A. Yes.

Q. Bay State, Boston, Brookline, Charlestown, Dorchester, East Boston, Jamaica Plains, Roxbury and South Boston. Now, you don't understand, do you, that those nine companies are all part of the present Boston Consolidated Gas Company?

A. I do not.

Q. So that any remark generalized on those nine companies would not necessarily be applicable to the Boston Consolidated Gas Company, would it?

A. The two companies, East Boston and Charlestown, mentioned in the list on page 178 are comparatively small companies as compared with the others which are in the Consolidated Gas Company and therefore would have very little effect upon the totals which are mentioned in this table as the rest of the companies, I think are all in the Consolidated.

Q. Do you know that the Massachusetts Pipe Line Company, which is not mentioned in this table at all, is also one of the constitutent companies of the Boston Consolidated Gas Company?

A. I do.

3787 Q. Now, in connection with these nine companies you took occasion to say that the assets were less than the capital stock as I understood you. Is that correct?

Mr. Burr: He read from the report.

A. I quoted——

Q. I understand, but I am asking if that is a correct statement?

A. I quoted the report to that effect.

Q. To that effect?

A. Yes.

Q. Let us see if that is right. This you will remember was in 1900. It states here that——

Mr. Burr: What are you referring to?

Mr. Mathewson: To the same document, pages 178 and 179.

Q. That it had been the practice of the Boston Roxbury and South Boston Companies not to charge anything to depreciation but to charge all new work to construction. And you observe too at the top of page 179 that it says these companies had accumulated a large surplus?

A. Yes.

Q. So that if the companies instead of charging down their plant to depreciation by a certain amount had instead of that accumulated an equivalent amount in surplus they would be just as well off, would they not, as though they did not show that surplus item, but had charged down the corresponding amount in depreciation?

A. The Committee does not think so, and so states.

Q. Well, don't you think so now?

A. I agree with the Committee.

Q. Then if the plant of a company had shown a depreciation to the extent of $200,000 and had charged it down to that amount and shown no surplus, you don't think that company would be as well off as though it had charged down nothing to depreciation and showed a surplus of $200,000, do you? And if you don't think it would be as well off, I would like to know why? 3788

A. Because in the case where there was a depreciation which was not properly charged off the books would be sophisticated——

Q. No matter about the books being sophisticated. I am asking you a straight question, Professor. Will you read the question which I did ask?

(Question read by stenographer.)

The Witness: That question is not clear. There seems to be a contradiction in it.

Q. Are you unable to answer it?

A. Kindly read it by sections.

(The stenographer read part of the question as follows: "Then if the plant of a company had shown a depreciation to the extent of

$200,000 and had charged it down to that amount and showed no surplus"——)

The WITNESS: Charged what down?

Q. The plant down by that amount?

A. The plant account or capital account?

Q. Yes, either you please, both, each.

A. Reducing the assets by $200,000?

Q. Charged it down $200,000, the book assets that I am referring to, yes, if you please.

A. Now the next section.

(The stenographer then read the remainder of the question as follows: "You do not think that company would be as well off as if it had charged down nothing to depreciation and showed a surplus of $200,000, do you?")

The WITNESS: In using the phrase well off, do you mean well managed?

3789 Q. No, I mean as well off in assets.

A. I presume there is no practical difference in reality if there is an actual surplus instead of a credit upon the books.

Q. But you observe at page 179, that the Committee find that these companies have, besides paying the dividends to their stockholders, accumulated a large sum of money which is sufficient to secure the stockholders and so on—"a large sum for depreciation," so that you see in that case the Company had actually accumulated a surplus according to the report of the Committee, had they not?

A. It is so stated, but the figures bear no proper relation to the actual condition of the companies and do not relate these conditions accurately.

Q. Do you consider capital stock in accounting and bookkeeping as a liability against assets?

A. It is usually written as a liability.

Q. Pardon me?

A. It is usually written as a liability.

Q. Well, generally speaking, in bookkeeping, when you show your assets on one side of the account, you show on the other side corresponding items of liability which include obligations of various kinds, including capital stock, don't you, in order to produce a balance?

A. In order to produce a balance.

Q. Now, you have referred to the Brookline Company and commented upon the Brookline Company, which is one of the eight companies which formed the Boston Consolidated Company, as having assets less than the total liabilities, in other words, as having a deficit instead of a surplus, but you did not call attention to any of the other companies. Now, I want you to look at this table on page 178, showing the nine companies, and say if every other one of the eight companies therein mentioned does not have a surplus above its liabilities, in other words, whether the assets of each one of

3790 the other eight companies do not exceed not only the capital stock but the total liabilities of the company?

A. Yes, and it is so stated by the committee quoted from.

Q. So that taking those companies together it does not follow at all their assets are less than their capital stock or less than their liabilities including capital stock, does it?

A. I was speaking of the book assets given in the tabulation on page 178, headed "Total Assets."

Q. That is what I am talking about. So that it appears by the final column, does it not, that these nine companies had accumulated surplus, that is to say, assets over liabilities in each case to the following extent:

Bay State.................	$252,730.44	Surplus
Boston	4,564,059.83	"
Charlestown	87,681.85	"
Dorchester	210,307.04	"
East Boston...............	79,071.22	"
Jamaica Plains............	156,449.68	"
Roxbury	431,506.36	"
South Boston..............	148,120.97	"

Against which is Brookline with a deficit of $303,595.75, or a net surplus of the nine companies above liabilities of $6,233,523.14. Is not that right?

A. No.

Q. Is not that total right as it appears in that column or have I misread it?

A. The strongest possible imputation of sophistry——

Q. Will you be kind enough to answer my question and not argue about sophistry, because I shall have to argue about that if you do?

A. Repeat the question.

The Master: Is the total right, is the question.

3791 The Witness: No.

The Master: Where is it wrong?

Q. Will you read the total in the last column——

Mr. Burr: The Master has asked where is it wrong.

The Witness: The total is $6,233,523.14, and you have spoken of a surplus. It is a correct book account. I will not acknowledge it is a surplus in existence.

Q. Did the committee in dealing with these companies have anything else before them so far as appears from this statement and from their report except the reports of these companies to the Massachusetts Gas Commission?

A. I know nothing more than the Committee states.

Q. Very good. Now let me read:

"The following table computed from the returns of these companies to the Board of Gas & Electric Light Commissioners for the year ending June 30th, 1899, discloses some of the most important facts relative to these companies."

Then immediately after that follows the table to which I have called your attention, does it not?

A. Yes.

Q. So that this surplus "Accumulated surplus" in the last column amounts to something like 50 per cent. more than the total liabilities including capital stock, does it not, of those nine companies?

A. Do you refer to the figures there or do you refer to the existing surplus?

Q. I refer to the figures there, which are the only figures
3792 that the Committee had before them or upon which they comment.

A. The figures there $6,233,523.14, appear to be in the neighborhood of two-thirds of the actual stock, $9,000,000.

Q. In other words, the capital stock of the company appears, does it not, to be $9,029,600 by this table?

A. Yes.

Q. And the total liabilities including capital stock appear to be $13,709,206?

A. Yes.

Q. And the accumulated surplus of $6,233,523.14 would be something like 66 per cent., would it not, of the capital stock?

A. 66 per cent. of the capital stock is about $6,000,000.

Q. And about 50 per cent. more than the total liabilities of the company, which includes capital stock?

A. About——

Q. Six is about half of thirteen, isn't it?

A. About half.

Q. Well, about 50 per cent. more, yes, the surplus was about half.

A. Yes.

Q. Now, as a matter of fact, Professor, you know, don't you, that the present assets of the present Boston Consolidated Gas Company as they appear in the report to the Boston Gas Commission to which you have referred are not an aggregation of the assets of the six companies that entered into that consolidation as per the books of the constituent companies?

A. I am not posted on the details of that account.

Q. You know, do you not, that an appraisal was made of the assets of all the companies—there were eight instead of six, I think, which formed the Boston Consolidated Gas Company—and that the assets of those companies upon their books are the result of such a distinct appraisal without any reference to the amount of paper that was outstanding of the constituent companies. Don't you know that?

3793 A. I am not familiar with the details of the opening of the books of the Boston Consolidated Gas Company.

Q. But as we are dealing with assets and not as to how much paper may be out representing them, if that assumption is correct that I have made, that is to say that there was an appraisal as shown by the testimony before this tribunal, you would not get very much aid from going back to the paper capitalization of the eight companies, in ascertaining the present value of the structural assets of the Boston Consolidated Gas Company?

A. The present value of the structural assets of the Boston Consolidated Gas Company could be obtained by a fair and careful appraisal.

Q. Yes, and don't you know that the structural assets, as they appear in the report to the Gas Commission, and to which I called your attention in that volume are the result of an appraisal of the assets of the Boston Consolidated Gas Company, or don't you?

Mr. Burr: This volume?
Mr. Mathewson: No, not this one, but for 1905.

Q. If you don't know whether that is so or not, Professor, there is no use in wasting time on it.
A. I know that they are the result of a compromise between the corporation counsel and Mr. Snow largely, afterwards acted upon, I believe, by the State Legislature.
Q. And who is Mr. Snow?
A. Representing the Boston Consolidated Gas Company.
Q. Now, you say that at the time of the Boston consolidation, the Massachusetts Gas Commission and the Legislature acted carelessly and without thought in fixing the capitalization. Is that what I understand you to say or did you mean——
3794 A. No, I said that the Gas Commission was not allowed to act.
Q. But, as a matter of fact, after such investigation as they saw fit to make, the Legislature passed this act to which you have referred, did it not, providing for a capitalization of $15,000,000 and more for the Boston Consolidated Gas Company with the proviso that the company by accepting that, should not be held to admit for any purpose that the assets were not in excess of that sum?
A. No, were not equal to that sum.
Q. Look at that book and see.

Mr. Burr: If Mr. Mathewson insists upon it, you might read from the book as to the appraisal.
The Witness: Equal.

Q. (Handing book.) See if that is right. "Said Boston Consolidated Gas Company, shall not, by the acceptance of the capitalization herein authorized, be deemed to have admitted for any purpose that the par value of such capitalization is equal to the value of its property or to the value of the property necessary for the proper conduct of its business." That is correct, is it not?
A. Yes, equal.
Q. That is substantially what I asked you. I put it the other way around, that is all.
A. The two things are not equal, they may be either greater or less.
Q. Well, I am willing to leave that construction with the Court as to what the Company intended to provide or protect itself. Now you have made an estimate in Boston or for Boston in which you said, that two dollars per annual thousand feet capacity was enough for Boston?
A. Actual structural value.
Q. You say in that estimate you have eliminated mains.
3795 What mileage of mains did you eliminate?
A. Duplication of mains.
Q. Don't you know in order to produce competition in the City of

Boston that the Brookline Company before consolidation was authorized to lay mains through the City of Boston paralleling to a considerable extent the mains of the Boston Gas Light Company?

A. I knew that the Brookline Company did parallel a great many mains in Boston, but that was only in a general way. I did not go into the details of it.

Q. Do you think that after a company has paralleled the mains of another company for the purpose of inducing competition, that those mains should be eliminated from its capital account as you have done if you have eliminated parallel mains?

A. In making the statement that I did make that for actual structural cost between $7,000,000 and $8,000,000 would suffice for the real needs of Boston, I made a statement or an estimate of about what would be required to meet the actual needs of Boston without any surplus as matters go in a rude way to-day and to avoid any misunderstanding as to taking what was under the ground for a basis of my figures, I added the phrase, eliminating duplication of mains.

The MASTER: I do not understand any better than I did before what your position is on the question Mr. Mathewson asked you.

The WITNESS: Will you kindly read the question.

(Question read by stenographer.)

The WITNESS: If they are not required they should be written off as to value.

Q. But they were required while the Brookline Company was delivering gas, were they not?

3796 A. I presume they were required by the Brookline Company.

Q. And don't you know that the mains of the Boston Gas Light Company were not sufficient to take care of the output at the time of consolidation even in the streets where it was paralleled by the Brookline mains?

A. Nobody could know the details of any of these large cities unless they were engaged in actual operation or had made a special and careful quantative study of the situation.

Q. Have you made such a special and careful quantative study of the situation in Boston?

A. Referring to what particularly?

Q. Your estimate of $2 per thousand feet of sales as the basis of capitalization?

A. I have spent a good deal of time in Boston looking over the ground, not in connection with this matter at all, but in past years in connection with electrical matters which gave me a good general idea of what the possibilities in the way of gas would be in Boston. My statements, as you know, claim to be nothing more than average and a generalization.

Q. Well, did you not find out whether the Boston Gas Light Company's mains were sufficient to supply consumers in the street through which they passed without recourse to the Brookline mains, did you?

A. I did not. And in my estimate I paid no attention to it.

Q. In your estimate of $2 per thousand feet for actual structural cost in Boston what costs per foot did you put upon the mains which you supposed would be necessary and what was the schedule of mains as to mileage of each dimension?

A. In a general way the large table which I have already handed to the Master of the cost of laying gas mains served the purpose.

3797 Q. Well, but the large schedule that you have handed to the Master as to the estimate of laying mains in New York was an estimate of the cost of laying mains originally before any of the present pavement existed in Boston or New York, wasn't it?

A. It covered every known form of pavement with the exception of the recent wooden pavement which I omitted.

Mr. Burr: When you say "schedule" you refer to the chart?

The Witness: Chart, yes.

Q. I would like to know in making this estimate for Boston, how many miles of 36-inch main you computed and how many miles of 12-inch main you computed, and at what cost, in other words, the figure for each main and each class of main?

A. It would be a very difficult matter to do anything more to average up as I did.

Q. You did not go into that subject in making up your two dollars per thousand feet as the capitalization for Boston, did you?

A. The probable cost for mains, do you mean that part of it?

Q. I mean the total mileage required and mileage of each size of main required, and the cost per foot of each class of main?

A. I looked up the statement made, I think it was by Mr. C. J. R. Humphreys, if not, it was by someone else, as to the actual existing mains in Boston and printed in that testimony——

Q. I would like to have you state how much the mains in the City of Boston under your estimate of two dollars to cover everything——

A. Will you allow me to finish?

Q. I thought you had.

A. And getting at those and getting a fair general idea, I made such an average check estimate as seemed to me would serve the purpose of trying out my two-dollar actual structural cost per thousand cubic feet and that was all there was to it.

3798 Q. Can you tell how many miles of mains are required in the City of Boston?

A. I cannot, without going over it again and taking what there is there.

Q. Have you the details here?

A. Why, certainly not.

Q. Did you consider the location of the various works in reference to the distributing system, the distance for the transportation of gas in detail in Boston?

A. Why, certainly not. There were half a dozen places around Boston that would appear fairly decent and some of them are mentioned by the Commission here as being ideal. If I remember rightly, they mentioned the North End station or something like that.

Q. And you know the North End station is the one station that is going to be abandoned because it is found in practice that that is not so available as any other, don't you, or don't you know that?

A. Certainly, I don't know it.

Q. Well, it is the fact.

A. I could never tell what they would do next in Boston, by any possibility.

Q. I don't think you would want to let contracts without a more careful estimate, Professor. Now, you referred to the $20,000,000 debentures of the Consolidated Gas Company which have been sold to stockholders at par in cash. You understand, don't you, that under the laws of the State of New York the company might have issued its stock to stockholders and got one hundred dollars per share, that is, got par for it, and have been entirely within its rights?

A. I presume it can do it.

Q. You know there is no law here as there is in Massachusetts compelling even the selling of capital stock at a premium, don't you, or has not been before the recent Act?

A. I am not an authority on the law. I will consult some good lawyer if I wish to be advised.

3799 Q. But you are criticising the acts of the company as though you did know it. Now, what we are dealing with here, you know, is the value of the assets of the Consolidated Gas Company. Does it make any difference in the value of the plants of the company as they exist whether the money was received from debentures or from stock or whether it was received from stock sold at a premium or stock sold at par?

A. It would make a great deal of difference as to how much premium you got out of the sales of stock.

Q. It would make a difference in the amount of paper you had outstanding or representing it in the shape of either stock or debentures, wouldn't it?

A. Yes.

Q. It would not make a particle of difference, would it, in the value of the property after it was constructed whether the paper was issued at par or above par, would it?

A. It would furnish more money and build bigger works.

Q. Won't you answer my question. It would make no difference in the value of the plant of the company after it was constructed and in operation whether the stock was sold at par or above par?

A. You mean in the cost?

Q. Yes, the value and cost of the plant of the company?

A. If a plant cost a million dollars it would make no difference in its cost how you got the money.

Q. Precisely. It would not make any difference in its value as a plant how you got the money, would it?

A. Well, that is rather deep. I presume not.

Q. Now, you have referred to real estate of the company as not capitalized at what you consider the six original companies paid for it. I refer to land when I speak of real estate. And you have said increase in the value of land should not be considered. Do you

mean to say that if the company has land worth $15,000,000
3800 which it can sell in the market for that price or which it
could lease on a basis of that value that it can receive a return
on only $5,000,000 merely because it is put to the use of the public of the City of New York instead of to the use of some other individual?

A. Yes.

Q. In other words, they are cut out of a fair return on the value of their property as it exists to-day merely because they are serving the public. That is the proposition, is it?

A. No, I will explain if you care.

Mr. Burr: Suppose you explain.

The Witness: When property is bought for the purpose of manufacturing upon it gas or electricity, for instance, it is fairly assumable that the profit is made year by year on the amount of the investment. If this property should be so very fortunate as to increase greatly in value, there certainly could be no objection to its being sold at this increased value and a second profit being obtained, the profit due to its sale. But if the property is assessed at a higher value than its cost, it is anticipating a sale and assessing the consumer for a problematical profit, when that has not yet been realized, in addition to heaping up on him what will probably have to stand, the increased taxes, due to the increased assessment of the property.

Q. I am not talking about the assessment. I am talking about the value. I am assuming it is proven before this tribunal or any other that the value of the land of the company which it has to-day is $15,000,000, that being the price at which it could sell it or leave it or use it in any other business. I understand your proposition to
be that because the public uses it in a certain sense we can
3801 get a return on only, say, five million dollars as representing
land?

A. On the cost.

Q. If that be the cost?

A. Yes, if that be the cost.

The Master: I do not think he used the word "assessment" in the sense of for purposes of taxation.

The Witness: No.

Mr. Mathewson: He spoke of taxation later, which led me to suppose that he did. I did not think so at first.

Q. If the company sold the land and realized a profit in that way, it would be necessary, of course, for it to establish a gas plant somewhere else, would it not, if it continued in business?

A. It might be forced out of business by the competition of electricity.

Q. But do you think it would be a matter of economy for the consumer if the company sold its land and thereby virtually lost its entire investment in plants, and had to establish an entirely new plant on other land that it purchased at even a considerably smaller valuation?

A. I would be glad to take up any practical instance of that sort that you can suggest and give it careful consideration. But this is purely an academic discussion of a baseless theory.

Q. You think so, but you have opened the theory itself and I am going to see where we get to. You say the company can realize a profit on the land when it sells it.

Mr. BURR: You formulated the theory yourself and he stated on the redirect-examination that he disagreed with you and gave his reasons.

3802 Q. I am now asking the Professor whether it would be a matter of economy even to the consumer if the company were compelled to sell its land and transfer its plant or rather establish its plant at another point in order to get the value of its land to itself as it exists?

(Previous question repeated.)

A. That might be done with beneficial results all around but generalizing is not possible and in order to offer an opinion the specific conditions must be stated.

Q. But the plant in the present case you computed to be, even on Yalden's figures plus subsequent additions, something more than $12,000,000, and practically all of that plant would be worthless, would it not, if it were necessary to abandon the present manufacturing stations?

A. I can answer that question after the appraisal made by the State's experts——

Q. I am assuming the figures that you yourself made up, and whatever the value is found to be it would virtually mean a wiping out of the entire investment if we had to go to another manufacturing point and abandon this, would it not? In other words, they would not bring anything practically would they, in addition to the bare value of the land.

A. I am not so sure. I have not had a chance to look over your place yet. I have done a good deal of thinking about that thing and it might be an exceedingly profitable move.

Q. Well, Professor Bemis and everybody else seem to agree that if you abandon a manufacturing plant that you can sell it for the bare value of the land with practically nothing for the plant. In other words that the plant is valueless except for the purposes of operation as it exists. Is not that true?

3803 Mr. BURR: Professor Bemis drew the distinction whether it was a going concern or was going to close up its business.

Q. Do you agree with that proposition?

A. Will you read that question.

(Question repeated.)

A. Not as a generalization.

Q. Well do you as a particularization?

A. There may be some instances in which that is true, but I do not think with the conditions as they are in the Island of Manhattan, that we can afford to say anything of that sort.

Q. You don't think you can move the manufacturing plant at 14th Street from 14th Street to any other place, I mean the physical property, the buildings, the machinery and other things there?

A. If you will pardon me, I will not answer that. I have given it a good deal of thought.

Q. But you are not prepared to answer that?

A. I am not prepared to answer that until I have given it more thorough thought.

Q. Now you have referred again to Philadelphia. If the city of Philadelphia terminates the lease there before the expiration of the thirty years, the city must take over, must it not, the additions which have been made by the U. G. I. Company at the cost to the U. G. I. Company and 6 per cent. interest?

A. That is at the end of ten years; it is possible, on giving notice, for the city to recover the works.

Q. To terminate the lease and then they have got to take over these additions made by the U. G. I. Company with 6 per cent. interest.

A. Paying for additions and improvements. If, however, the city omits to give them notice, then the lease runs for thirty years and
the works are returned to the city of Philadelphia at the end
3804 of thirty years without one dollar of payment of any sort or
kind.

Q. You understand that the works belong to the city of Philadelphia anyway, do you not, and what I am speaking of are merely any additions that may be made thereto by the U. G. I.?

A. They are pledged to make $15,000,000 additions, and to pay a number of large salaries.

Q. There is a case where, at the end of thirty years the fixed period, the U. G. I. may be out a certain amount of their investment. Have you made any computation as to what would be required in a sinking fund to cancel that expenditure at the end of thirty years?

A. No.

Q. You don't know what that would represent in cents per thousand in the cost of gas?

A. I am not a believer in computations of sinking funds.

Q. You don't agree with Professor Bemis then on that theory.

Mr. Burr: Where does Professor Bemis refer to that?

Mr. Mathewson: He says he does not agree with it.

The Witness: I said I was not a believer in computations of sinking funds.

Q. You do not mean you are not a believer in sinking funds but merely not in the computation, is that right?

A. Yes. I believe in their existence.

Q. When you refer to the 78.1 cents in Philadelphia, you obtained that, did you not, by dividing the receipts from private consumers by all the gas manufactured by the company, including that to the City of Philadelphia?

A. Yes.

Q. You refer to the standard of candle power in Great Britain and have mentioned some companies as showing——

A. One company.

3805 Q. One company, as showing that it runs with a furnished candle power of one-half candle power above the required power?

A. Yes.

Q. That shows the least difference between the prescribed and the supplied candle power of any one of the three suburban companies, doesn't it?

A. Yes.

Q. And do you observe that taking the Brentford Company, the supply is 15.6 candles and the prescribed is only 14 candles; do you observe that?

A. Yes.

Q. And that the Bromley Company has a supply of 16.75 candles as against 14 prescribed; did you observe that?

A. Yes. Mr. Mathewson, I have observed the whole column all the way down, every one of them.

Q. I am glad to know it because you didn't mention them. I didn't know as you had observed these others. Now, don't you know that the gas which is supplied in London is an unenriched coal gas and does not derive its candle power from the use of oil, except possibly one or two companies which use a very slight amount of oil?

A. I know it is largely coal gas but not unenriched coal gas.

Q. Do the Commercial or South Metropolitan Company, two of the three Metropolitan companies, enrich their gas?

A. The Gaslight Coke & Coal Company enriches its gas by the use of oil and spirit; the Commercial——

The **Master**: Doctor, that was not the question.

Mr. **Mathewson**: I asked about the Commercial or South Metropolitan.

The **Witness**: The Commercial enriches its gas by the use of oil.

Q. To what extent and where do you find it?

3806 A. On the 16th page, 1905, appendix A, "details of coal carbonized and oil and spirit used."

Q. Yes. Now, what enricher do they use. Oil?

A. Oil.

Q. Does the South Metropolitan use any oil?

A. Apparently none.

Q. Then that apparently does not use any oil for enrichment, does it, as far as you observe here?

A. My statement is based on the Gaslight and Coke Company above.

Q. But my questions are based on the Commercial and South Metropolitan?

A. The South Metropolitan does not use any enricher nor have I referred to it in my testimony.

Q. Don't you know, Professor, that it is very much easier to maintain a furnished candle power close to the prescribed candle power where the prescribed candle power is 14 than it is where the prescribed candle power is 22?

A. It is perhaps a little more difficult. It is all a matter, very much like a man shooting at a mark, of skill; and it can be done by properly skilled men. The fact that a great many men cannot hit a mark does not prove that the mark cannot be hit by a properly skilled man. I refer now to the illuminating power as the mark.

Q. Now, what is the answer to the question?

The MASTER: That seems to be responsive.

Q. It is perhaps a little more difficult. That is your answer, is it?

A. Not all of it.

Q. It is more difficult, is it?

A. It is perhaps a little more difficult but it can be done.

Q. Isn't it a great deal more difficult?

A. No.

3807 Q. Don't you know that oil gas or gas which is enriched by oil to a high candle power drops its illuminating power much more readily in passing through mains than an unenriched or slightly enriched coal gas of 14 or 15 candles?

A. I know that there is a difference.

Q. Don't you know that?

A. I know that there is a difference of the nature of a percentage difference.

Q. Do you know what the penalty is in London for failure to meet candle power requirements?

A. Practically none, I understand, worthy of consideration.

Q. Is not the candle power which you have given here an average candle power as supplied?

A. Yes.

Q. Do you know how often in London the tests showed that these fell below the 14 or 16 candle power which was required?

A. You mean the average?

Q. No.

A. The individual instances?

Q. Yes.

A. That would be impossible without careful investigation of the original tests.

Q. And if you had a thousand dollars penalty for each offense where a company fell below 22 candle power, it would be necessary and prudent, wouldn't it, to keep the candle power higher to insure a better margin than as though you were subjected to practically no penalty if you fell below the 22 candle power?

A. It would require greater vigilance. I don't know that it would require a greater margin.

Q. And do you not know that the London testing stations are so arranged as to receive the gas after it has traversed a long distance and when ordinarily all the dropping which is to be expected in candle power between the works and testing stations has occurred?

A. No, I was not posted on that.

Q. Is not condensation a factor in dropping of candle power and isn't that due to the low temperatures which prevail in New York below the temperatures which prevail as a rule in London in winter?

3808 A. There are so many factors entering into that question of illuminating power, particularly some that render the condensation that is spoken of so much not the controlling factor.

Q. Now, will you refer to the City's Exhibit 62 in reference *in* the

City of New York which you say was a tabulation from the company's books. By whom was this prepared for you?

A. By Mr. James Hall.

Q. Of Marwick, Mitchell & Company?

A. Of Marwick, Mitchell & Company.

Q. They are the accountants who are now looking over the books of the Consolidated Gas Company?

A. Yes. It is a copy.

Q. You state here that the average candle-power, coal and water gas stations, for the year, appears to be 25.35 candles. Was that the average of the candle-power at the city testing stations or was that the candle-power at the works of the company before the gas had been sent into the mains at all?

A. The candle-power just outside of the works.

Q. Before the gas was sent into the mains for distribution?

A. I understand that it was not in the works but immediately adjacent to the works. I am not especially familiar with it.

Q. Do you know whether this candle-power represents only results at the works or at the city testing station which must be at least a mile from the works?

A. It is not the city testing station.

Q. There will be a substantial drop between the works and the city testing station a mile from the works, will there not?

A. That is a theory that would have to be tested.

Q. Well, don't you know it to be a fact that there will be and always is a drop between the works and testing station if the station is located a mile or more from the works of the company?

A. You said a substantial drop.

3809 Q. Yes, I will put it in that way?

A. You said that.

Q. Yes.

A. I except to that. There will be a drop. How much I do not know.

Q. You know the maximum candle-power for various stations, all these candle-powers, except those appearing in the column "City test" are candle-powers at the works of the company, are they not?

Mr. Burr: They are not city testing stations.

A. Only one city test in it.

Q. And the others are at the works?

A. The others are at the works, and the city tests are not complete.

Q. You haven't any data here showing how low the tests were at the station or how low they were at the works?

A. Those are averages of which the details are all in the possession of the Consolidated Gas Company.

Q. And you understand that the penalty under which the company labors if its candle-power falls below the requirement is imposed in accordance with the results of the city test a mile from the works but has no relation to the candle-power of our gas at the works, do you not?

A. According to City's Exhibit 62, the candle-power city test shown for the 99th Street station is given on that average as being

25.24 candles, and the candle-power station test which is immediately in the vicinity of the station is 25.52, showing a drop of .28, about one-quarter of a candle occurring in the mile travel from the 99th Street station.

3810 By Mr. Burr:

Q. To the city testing station?

A. To the city testing station.

Mr. Burr: But he said it is not based on the test at the works.

The Witness: Excuse me. He said it has no relation to the city test.

Q. No, I said the imposition of the penalty is based upon results found at the city testing station and has no relation to the candle-power which the company maintains at its works?

A. And I replied there was no relation shown by a drop of one-quarter candle in round figures at the 99th Street station in traveling the mile from the station to the city testing station.

Q. Don't you know that the gas of this company manufactured at the different stations is mingled in the mains and that the candle-power of the mingled mixture is that which reaches the consumer?

A. I have no other information than is furnished by your own figures.

Q. You say you have read the testimony. Didn't you read that in the testimony?

A. Your statement is specific and clear there as to its being 99th Street station.

Q. Is that the best answer you can give to the question?

A. It is.

Q. You have referred to the Massachusetts cities in your re-direct, including, among others, Worcester, and have figured at one dollar and fifty-four cents per thousand as some value. Now, as a matter of fact, won't you take your 1905 report of the Massachusetts Gas Commission and see whether I read the values and assets set forth therein correctly for the Worcester Company?

A. Referring to the report for 1905?

3811 Q. Yes. Real estate, $536,477.

A. And thirty-four cents.

Q. Machinery $626,399.

A. And fifty-one cents.

Q. Street Mains, $114,278.

A. And forty-four cents.

Q. Meters, $19,415?

A. And seventy-five cents.

Q. That makes, according to my total, $1,296,569, omitting cents, is that right?

A. $1,296,571.04.

Q. Well, you get two dollars more than I did. Now, if you will divide that by the sales as they appear in that book, which I think are 410,641,700 feet——

A. The daily capacity, 4,200,000?

Q. No, I am not on that at all. Won't you confine yourself to my question? I asked you if you would not use as a divisor the annual sales of the company, to wit, 410,641,700 feet and let me know how many dollars per thousand of sales those assets represent.

A. It appears to be $3.15.

Q. Well, $3.15 plus; yes. Now, will you tell me whether the assets of the Worcester Company which equal $3.15 per thousand of sales include services or cash working capital other working capital?

A. I presume services are in the street mains.

Q. Well, if the services are not included in the street mains no services are included at all, are they, as far as you can judge from the report to the Gas Commission?

A. Of course services are there serving gas.

Q. But they are not in that report, are they, by name at any rate?

A. They are not named in the report.

Q. Do you know whether there is anything in the $1,296,571 representing working capital in the shape of cash or otherwise?

A. In taking that quantity out I purposely excluded everything but the actual structural assets.

Q. Then the answer is no, isn't it?

A. No, I excluded all except the actual structural assets.

3812 Q. In your reference to these other Massachusetts Companies, computing the dollars per thousand for capitalization, you have also excluded cash and other working capital and working assets aside from bare land, machinery, mains and meters, have you not?

A. In the Cambridge Gas Company in addition to what you have mentioned I have also added works in process of construction.

Q. Yes, but that is works, plant.

A. In the Fall River Gas Company in addition to what you have mentioned I have added office furniture. In the Lowell Gas Works I have given only that which you have mentioned, and in the Worcester Gas Works I have given only that which you have mentioned.

Q. Do you know whether services are included in any one of those companies?

A. Intended to be in every case.

Q. Do you know whether they are included as per the Massachusetts report from which you took the figures?

A. Not specifically mentioned in any one of these companies but included as necessary; the works could not operate without them.

Q. And in each case you have excluded cash working capital and other working capital, have you not?

A. In the case of Worcester that seems to be the case. In the case of the Lowell Gas Light Company I appear to have also excluded investments. That appears to be correct in the case of the Fall River Gas Works Company too, and in the case of the Cambridge Gas Company I have excluded notes receivable.

Q. All right, I merely asked whether in each of those cases you did not exclude working capital and you did; that seems to be the answer. Now let us take this Worcester capitalization still further. I show you the Massachusetts Gas Report for 1900. Will you look at the

Worcester Company and tell me how many miles of mains
3813 there were in Worcester according to that report (page 127)?

A. Page 127, January, 1901, you have handed me.

Q. Yes, it is another page. Don't you find 93½ miles in 1900?

A. 93 and a little over one-half.

Q. And what figure is it carried on the books according to that report. Is it not $134,065.92?

A. $134,065.92.

Q. Will you look at your 1905 report and say whether the mileage in 1905 has not increased from 93½ miles to 126¼ miles (page 127)?

A. Just about 126¼.

Q. What is the valuation at which that 126¼ miles are carried on the books of the company in 1905?

A. $114,278.44.

Q. In other words, although the mains of the company have increased in mileage from 93½ to 126¼ miles, it appears the mains have been marked down so they are carried in 1905 at actually $20,000 less than they were carried at in 1900; is that not correct?

A. It appears to be about right. It is exceedingly careful bookkeeping apparently.

Q. Now, if you take the 4 and 6-inch pipe alone as shown for 1905 and average that at a cost of only fifty cents, it would equal $163,000, wouldn't it; almost fifty per cent. more than the entire mileage of mains is carried at on the books of the Worcester Company?

A. I would have to figure these out carefully. If you wish me to do so for you.

Q. Well, 4 and 6-inch mains are right there, and supposing you take the mileage and apply fifty cents to that mileage and see if that does not give you $163,000 for those mains alone?

A. If you say it is so, I will accept the figures.

Q. And if you find it is not so you will correct me?

A. Yes.

Q. Is not fifty cents an exceedingly low price for 4 and 6-inch——

A. You mean laid?

Q. Yes, according to your computations. Assume ordi-
3814 nary pavement, not the new expensive pavement.

A. Referring to 6-inch pipe of which you have spoken for streets with macadam top, it would appear that pipe laid, filled back and pavement restored, would be very closely in the neighborhood of 85 cents.

Q. How much would 4-inch pipe be?

A. 4-inch pipe under the same conditions would appear to be sixty-two or sixty-three cents.

Q. So that if you take 4 and 6-inch pipe alone in Worcester and find that reckoned at fifty cents that equalled $163,000 or nearly fifty per cent. more than the entire mileage of mains in Worcester is carried at on the books of the Worcester Company, it would indicate, would it not, a very large charging down of the value of mains in some way?

A. I would not be willing to guess from figures of physical conditions under which pipes were laid. You can if you give the physical conditions make a fairly good guess of cost of it but you cannot reverse it.

Q. Assuming any physical conditions to exist in the City of Worcester with which you are familiar and which is one of the largest cities in Massachusetts would not your answer to my question be in the affirmative, to your best understanding?

A. No. It would be absurd for me to guess at the physical conditions from the price of pipe.

Q. You would not expect to find an increase of 23 miles in pipe in the City of Worcester with a decrease of $20,000 in value of the pipe, would you?

A. You mean changed to that extent?

Q. Yes.

A. Why, I would have to investigate that carefully.

Q. You would not expect it, would you?

A. No, I would have to investigate that carefully and look into it.

3815 Q. Now, let us take the subject of meters, which is easier yet, in Worcester. Will you look at the 1900 report which I show you and see if there were not then 9,074 meters?

A. 9,074, which includes one 70-light meter.

Q. At a valuation of $15,081.18?

A. Meters, $15,081.18.

Q. Now, according to my computation that means $1.65 or about that per meter; are you willing to assume that for the purpose of your answer, or do you want to compute it?

A. $1.65, it looks right.

Q. In 1905 were there not in Worcester according to the report 13,708 meters?

A. Yes.

Q. Valued at $19,415.75?

A. $19,415.75.

Q. And that according to my computation makes only $1.42 per meter as against $1.65 per meter in 1900. Is that a result which you would expect if the assets showed in each case the exact cost of the meters?

A. Probably a good deal of depreciation which has been promptly written off in that case.

Q. Don't you know that either $1.41 or $1.65 is a ridiculous price for the value of meters taken on the average and that meters will probably average $8.00 or $9.00 if you take actual structural value?

A. If I remember all right 3, 5 and 10-light meters will hardly average indeed more than somewhere in the neighborhood of $5.00 or $6.00.

Q. Well, take this value, they would be very much more than $1.41 or $1.65, wouldn't they in a city the size of Worcester, the ordinary standard meters?

A. They probably have been writing off depreciation in this case on the basis of seven years' life, which is very frequently done. Of course, I don't know this, it is a mere surmise on my part.

Q. But you know that $1.41 or $1.65 would look as an extremely low rate at which to carry meters?

A. Regarding the question of the light, I have not the figures. It probably has resulted from their writing off the meter values,
3816 assuming the life of seven years to a meter.

Q. After they had written off their meters for awhile they would get down to an average life where there would be no further writing off but the meters would maintain an average, and don't you see that 40 per cent. of all these meters are only five years old because there were only 9,000 in 1900 and 13,700 and more in 1905?

A. It seems to me a very conservative estimate indeed, of the value of the meters.

Q. Let us be perfectly fair and frank about this. Does not that valuation impress you as a valuation substantially below the actual value of the meters as they would exist naturally in a city like Worcester, assuming that 40 per cent. of them have been added new since 1900?

A. If we could get the average life of those meters——

Q. I don't care to have you figure on the average life. If you cannot answer my question I am not going to press it.

The Master: He already answered it substantially, as I understand it. He said it would strike him as a very conservative figure for them.

Mr. Mathewson: I think he should have said it was a very ridiculous figure for them.

Mr. Burr: Are you testifying again?

Mr. Mathewson: No. I am stating what I think he should have testified to.

Q. Now, let us take your little book. You at pages 218 and 219 prepared a table covering the gas companies in Massachusetts, did you not?

A. Not in its entirety.

Q. Well, it appears in that book and is adopted by you, isn't it?

Mr. Burr: As what?

3817 A. Gas companies which did not meter their gas or which had a large contract of sales, lump sum, were in whole or in part omitted from this.

Q. Well, very good. Let us take it——

A. And also companies in many cases——

Q. Well, we will take it as it stands; that is included under the column headed, "Investment per thousand feet?"

A. I would have to look that up to see whether that is the capitalization or assets per annual one thousand feet of sales.

Q. Well, at any rate the figures are taken from the Massachusetts report of 1901, are they not?

A. Yes.

Q. Now, here I find opposite these cities in Massachusetts, the heading, "Investment per Annual One thousand feet," the following:

Fall River	$3.97
Springfield	4.36
Charlestown	4.31
Cambridge	3.85
Lawrence	5.50
Haverhill	3.85
Lowell	2.77
Dorchester	4.45
Lynn	3.06
Worcester	2.89

Is that correct? Have I read it correctly?

A. That is per annual thousand sales?

Q. Now in another column, referring to your testimony heretofore that you allowed 10 per cent. dividends and 5 per cent. for depreciation, I find this, this being the heading of the column: "Fifteen per cent. depreciation and profit per one thousand" and under that column I find the lowest figure which you allowed
3818 to be 33 cents which is in the case of Fitchburg or Newburyport, if I am correct; and then next in order from the lower up I find:

39 cents for North Adams
41 " " Lowell
42 " " Worcester
46 " " Lynn
55 " " Woburn
58 " " Haverhill
58 " " Cambridge
59 " " Fall River

and so on, up to higher figures. Have I read the figures correctly?

A. I presume you have. I am willing to accept them.

Mr. MATHEWSON: Have I, Mr. Burr?

Mr. BURR: I think so.

Q. And these cents per thousand relating to these separate companies which you have included under the heading "15 cents depreciation and profit one thousand" are carried into the total of the next column which is headed "Total charge—proper selling price per one thousand feet." Is that correct?

A. That is correctly related.

Q. And the very lowest selling price or "Proper selling price," to use your language, per one thousand feet, is that marked for the City of Worcester, $1.07, is that right?

A. I accept your reading, Mr. Mathewson. Always.

Q. Referring for a moment to your remarks on real estate you state that in a great city where there was a high cost that was compensated by the subsequent increase in value?

A. Increase in output, in sales.

Q. But how does that compensate you as to the value of
3819 your land if you cannot use your land until you move your plant off?

A. I was speaking of the original cost, purchase price.

Q. If you do move your plant off from a piece of real estate in order to sell it at the present value and get that advantage who bears the expense of the replacement of the plant on some other plot?

A. I presume you would not move unless it was a pretty good move.

Q. Well, but we would have to if we received any advantage from increase in value of our real estate so we were able to realize on it.

A. It is altogether a voluntary matter with you, to be determined according to the best profit you can make by either staying or going.

Q. And in the best profit we can make by staying, that would mean simply a return on original cost of the land although it might now be worth three times the original cost?

A. Yes.

Mr. Burr: You do not claim you are speculating in real estate, do you, in addition to manufacturing gas?

Mr. Mathewson: I have not made any such claim, but we accept the gifts the Gods provide, as they provide them, without protest.

Mr. Burr: At the expense of the consumer?

Mr. Mathewson: No, because nothing comes out of the consumer in increasing the value of our land. It is due to Divine Providence and the growth of the City of New York.

Q. You have spoken about the output in Massachusetts being about equal to the output in New York?

A. No, somewhat less, considerably so, perhaps.

Q. Do you mean to say that the value of the land in Massachusetts to produce that amount of gas ought to be as great as 3820 the value of the corresponding land on the Island of Manhattan required to produce the same amount of gas, or that there is any comparison at all between values of land in Massachusetts and on Manhattan Island?

A. I stated that the value of the land used on the Island of Manhattan for gas purposes must be greater than the value of all the land used by all the gas works in the whole State of Massachusetts, in order that the cost per thousand cubic feet of sales should be greater in New York than it is in the whole State of Massachusetts.

Q. You have not any doubt that the value of the land is greater in the Island of Manhattan than it is in Massachusetts, have you, for the production of a similar amount of gas?

A. I referred, not to the question of gas, but to all the land, every foot of land, owned by all the gas works in the whole State of Massachusetts.

Q. That is what I mean——

A. Which produces a less quantity of gas and sells it than does the land now used for gas making on the Island of Manhattan.

Q. You did not mean to suggest, did you, that the value of the land in Massachusetts spread over the State producing that amount of gas was equal to the value of land in the Island of Manhattan producing a similar amount of gas?

A. The ten billion?

Q. Yes, did you mean to suggest that the value of land in Massachusetts taken all together was as great as the value of land in the Island of Manhattan producing a similar quantity of gas?

A. Used for making gas?

Q. Yes.

A. I offered it as a simile giving a general idea of what I had before stated that, as the gas sales went up it was compensated by an increase in the cost of land generally, and that as they went
3821 down as they do in Massachusetts in many small towns, that that was to say, compensated by a cheapening of the price of land and finding fortuitously that Massachusetts claimed to make 10,400,000,000 feet, as I thought incorrectly, and it coincided with New York, I tried to make it clear by that general statement.

Q. I do not understand how we are compensated by the increase in the value of our land if we cannot sell the land but have to use it for gas manufacturing at exactly the same value which it cost us originally. How is there any compensation if we cannot treat the land as of the present value? You cannot make any more gas per square foot, can you?

A. Well, land costing the $3,000,000, as I look at it, on the Island of Manhattan, and turning out ten and one-half billion cubic feet of gas, and having done that for many years, is doing mighty well.

Q. But where do we get the advantage of any increase in price if we are obliged to compute that land always at the original cost to us in using it in the gas business? I am trying to get you to explain where your theory of compensation comes in if your other theory that we cannot consider the value of the land at its present value is to be accepted?

A. My idea is that you should not get the result of the increase in value.

Q. I understand. If that be so, then where is there any compensation because theoretically the land is increased in value, if practically we are unable to receive any greater return on it than we were when the land was originally bought and was only one-third the present value?

A. The extraordinary increase of value of land in New York City is simply a piece of good luck for which no deserving return has been made, and the community makes the value of the very profitable gas works in New York and ought not to be assessed extra on account of that.

3822 Q. Is that the best answer that you can make?

A. I have made other answers. I am trying——

Q. Is that the best answer you can make as to my inquiry as to where the compensation comes in?

A. It don't come in.

Q. Then there is not any compensation by reason of the increase in the value of the land, is there?

Mr. Burr: You get compensation when you sell it.

The Witness: That has already been stated.

Q. By Mr. Burr?

A. I beg pardon, by myself.

Q. Then I ask you if when we do get this compensation which is such a great thing for us by removing our plant to some other place, how the expense of the construction of this new plant is to be met, is it to be met by increasing the cost of gas, that is charging the replacement to the consumers?

A. Mr. Mathewson——

Q. And if not, where does the compensation come in, because while we have got some increase in the value of our land we have lost completely the value of the plant which we have abandoned, because as scrap, the testimony is unanimous that it is worth nothing or practically nothing. Now, can you elaborate a little more your theory of compensation, because we are anxious to find where it is and we are looking for it?

A. In all these matters, as in all business matters, you have to use your judgment doing the best you can, the decision as to whether you move or do not move is simply a question for you to decide.

Q. Is that the best answer you can make?

3823 A. The situation with regard to the Consolidated Gas Company is an exceedingly fortunate one as compared with a good many other companies I know of, and I don't think that the company need worry over the question of moving, if, in figuring it out, it would not appear quite as profitable as staying where they are.

Q. Is that the best answer you can make to my question?

A. Indeed it is.

Q. Then I do not see that we have got much light on compensation, but we will go to another point. You have said that in England, according to the English accountants taxes or certain items went into profit and loss or should go into profit and loss and you thought therefore they should not go into the operating cost of gas. Don't you know that by the English law taxes are referred directly to profit and loss and that they also appear in the cost of gas?

A. I know that rates and taxes appear in profit and loss.

Q. And you also know that they appear in the cost of gas, don't you?

(No reply).

Q. Now, you have used the term "profit and loss" as a dumping ground for items which you take out of cost of gas, because you say they ought to go into profit and loss. Now, is it not a matter of fact that profit and loss is an account into which other accounts are charged at the end of the year and that the best practice is to charge nothing into profit and loss directly where it is possible to avoid it without first charging it into some other account, some other operating account, is not that true?

A. Profit and loss, you know, is a final account.

Q. Exactly. It is a final account. Now, is not that the best practice, to carry expenditures to some other account which is closed into profit and loss at the end of the year instead of transferring the items directly to profit and loss?

A. If you will mention any particular account that you are handling——

3824 Q. No, I am speaking generally——

A. I cannot give general instructions in bookkeeping.

Q. Is it not the best practice in bookkeeping to charge general expense into operating accounts in the first instance instead of charging them over directly to profit and loss where it can be charged into some current account?

A. As I said to you before, profit and loss is regarded as a final account, you know, and it does not follow—you can generalize in the way you are——

Q. Everything has to go into profit and loss account ultimately, doesn't it?

A. Yes.

Q. Whether carried directly to profit and loss account or whether first carried into an operating account. That is true, is it not?

A. Well, you know, of course, there are certain capital expenditures which do not go into that account.

Q. I am talking about expenditures of the business, and not return upon capital and payment of dividends. That is true, is it not?

A. I am speaking now of what might be called active accounts.

Q. Exactly. So it does not at all follow, because you think an item should be charged into profit and loss account ultimately, that it may not also appear in the operating cost of gas, does it?

A. Well, that is altogether a question of common consent amongst those adjudged proper to decide on those questions.

Q. Well, I am asking your view on that subject. You have used the term "profit and loss."

A. I have specifically stated in every case the particular account that I thought *out* to go to profit and loss. I have not attempted to generalize in regard to bookkeeping and cannot answer you in that way, because I cannot——

Q. You have taken various general items and said you did not charge them into operating account, but charged them into profit and loss.

3825 & 3826 A. I did and I have named every item and I know too much about bookkeeping——

Q. Now, I ask you, if the fact that they are to be charged into profit and loss of itself is any reason why they should be excluded from an operating account in determining the cost of gas?

A. I know too much about bookkeeping to make a general reply to that question. Every account will have to be considered specifically and I will answer specifically if you wish.

Q. If you cannot answer the question I asked you generally, I shall accept what you have said, Professor. Is that the best answer you can give?

A. That is the best answer I can give.

Mr. Mathewson: I have only two more questions but I shall ask the Master to suspend, as I have to catch the 5.05 p. m. train.

Adjourned to 10.30 a. m. Friday, November 2, 1906.

Last Exhibits:

Complainant's, 256.
State's, W.
City's, 62.

3827 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *November* 2, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3828 WILLIAM D. MARKS resumed.

Continuation of the cross-examination by Mr. MATHEWSON:

Q. Do I understand that in connection with the building of the Laclede Gas Works about 30 years ago you were employed by and represented William Farmer, the Chief Engineer?

Mr. BURR: I object to that as not being proper recross-examination. His qualifications and everything in regard to that were gone into on cross-examination, and there was nothing said on redirect that would justify an examination now by way of recross-examination in regard to his qualifications and past experience.

Mr. MATHEWSON: It is not recross-examination, but I desire to ask him one or two questions, not over three, relating to his position in the Leclede Gas Company.

Mr. BURR: You see, that makes it necessary for me to examine him on the re-redirect.

The MASTER: I will allow it.

Mr. BURR: Exception.

A. I would like to clear that point up beyond any possible misunderstanding. I was paid by the contractors for the building of the works. Mr. William Farmer was also paid by the contractors for the building of the works. William Farmer did not visit St. Louis, except I think on two occasions during the construction of the works. For that reason I was designated by the contractors to take all the work that came, delivered to them by Mr. Farmer, with Mr. Farmer's approval as I understood.

Q. Mr. Farmer was the Chief Engineer, was he?

A. Mr. Farmer was the Chief Engineer.

3829 Q. Well, was not Mr. Scobelski the Chief Resident Engineer in charge?

A. Jake Zabriskie, do you mean?

Q. Well it is spelled both ways in the literature, I find.

A. Jake Zabriskie was the man——

Q. Was he not the Chief Resident Engineer under Mr. Farmer?

A. Certainly not. He did not even suspect the true meaning of engineering, let alone knowing anything about it.

Q. And you were the resident engineer, were you?

A. I was the man designated to carry out Mr. Farmer's work, criticising, examining and inspecting, and in so far as I had any official title, was both accountant for the contractors and resident engineer for the contractors.

Mr. **Mathewson**: I have no more questions.

By Mr. **Burr**:

Q. Now, Doctor, yesterday you were referred to a tabulation of Massachusetts Gas Companies from the report of 1901 of the Massachusetts Gas and Electricity Commissioners as they appeared on pages 218 and 219 of your book, "The Finances of Gas and Electric Light and Power Enterprises." Will you state what was the original object of these tables as they appeared in your book?

A. The object of Chapter 6 of *by* book, prices of gas in Massachusetts——

Q. You are now referring to the schedules to which your especial attention was called yesterday?

A. Yes, was a review of the then existing conditions of the large number of small companies, and the deduction of a general law, connecting sales per capita with the price of gas, per thousand cubic feet in Massachusetts. Many of these companies were quite small, and for that reason amongst others, their fixed expenses invested per
annual thousand cubic feet of gas sold, their cost of manu-
3830 facture and distribution per thousand cubic feet of gas sold,
and the proper selling price of gas were all large. In that table no attempt was made to prescribe the proper method or cost of construction or prices which should be charged if the works were properly designed and properly operated, or properly arranged as to their capacities. All of the data stated in that table is but a relation of the actual facts as deduced from the report of the Massachusetts Gas and Electricity Commissioners. No attempt was made to criticise, examine or develop the possibilities of these various companies. They were accepted without criticism, and the proper selling price per thousand cubic feet was deduced to show what would have to be charged to produce 15 per cent. to cover depreciation, profit, and all of the contingencies existing as they stood.

An entirely different treatment is required to use what few of them are of sufficient size to be available in comparison with metropolitan companies. None of the figures given show the possibilities of these companies, they show only their actual condition, and for this reason the figures in the tables on pages 218 and 219 are of no value whatever for the purposes of the investigation of the Consolidated Gas Company of New York.

Q. Will you state in a general way what has been your method of investigation of the Consolidated Gas Company of New York?

A. The gas works operated by the Consolidated Gas Company on the Island of Manhattan are operated under conditions which do not exist anywhere else in the world. First of all, these gas works are driven to their utmost capacity, and therefore the investment per annual thousand feet of sales is as small as can possibly be hoped for in gas works. In but one item are these works as a matter of 3831 structural cost more costly than any other average gas works per thousand cubic feet of sales, that is the real estate. It happens, owing to the early purchases, and at low prices, and subsequent sales at high prices, of a portion of the land, that the structural cost of the land appears to be in the neighborhood of three million dollars.

Mr. **Mathewson**: That is not redirect examination. You have already gone into that three million dollars in direct examination at length.

Q. That the structural cost of the land remaining appears to be about three million dollars?

A. Yes. The structural cost of all the other details, brick buildings, manufacturing apparatus, gas holders, mains, services and meters, can only exceed, because of locality, by a small percentage, the structural cost of these details in any metropolis. On the other hand, because of their very large size, the cost of these works is probably very much lower in cost per thousand cubic feet of capacity than the average of the small and medium sized gas works. The conditions all point to a minimum of cost of construction and a maximum of profit per thousand cubic feet of sales. The responsibility of dealing with such large affairs as are involved in the consideration of the Consolidated Gas Company's price for gas has rendered necessary most exhaustive investigation and immense labor in details.

First, it was necessary to learn the probable result of reducing the price of gas from $1 to 80 cents per thousand cubic feet as shown on the chart of Manhattan already in evidence. It appears probable that if the price of 80 cents for gas goes into effect during the year 1907, that the total sales of gas by the Consolidated Gas Company during that year will amount to about 15,300,000,000 cubic feet, earning in gross about $12,240,000 from gas sales.

3832 The **Master**: Pardon me. Is there very much of this?

The **Witness**: No, very little.

The **Master**: It does not seem to me to be reredirect.

The **Master**: It is explaining in a general way the methods he pursued.

The **Master**: It covers the whole ground of his position in the case, and if Mr. Mathewson chooses to cross-examine on it it opens up a vista of another day's examination which would seem to be unnecessary.

The **Witness**: Second, it was necessary to investigate the actual cash cost of gas for material, labor, repairs, general supervision and operation under the conditions existing in the year 1905. From the statistics presented, the estimated cash cost of gas appears to have been in the neighborhood of 53.5 cents, although this is stated to be doubtful from the data furnished. It cannot be predicated from this investigation that economical and scientific management will not further largely reduce the cost of producing and distributing 22 candle power gas at the meter.

The price of oil, when compared with the prices obtained by other and smaller companies appears to be about one cent too high per gallon——

Mr. Mathewson: Has not that already been said and gone over?

The Witness: I never before said anything about the oil.

Mr. Mathewson: Yes, you compared the rate of oil here and took the cities in this State and compared them with the rate we paid.

3833 Mr. Burr: He never stated what, in his opinion, was the amount that it was in excess of the rate that should be charged.

Mr. Mathewson: I do not think he is competent to state that at all. He has never bought and sold oil in this vicinity.

The Witness: And the illuminating power of the gas produced, largely in excess, say about four candles, above the average legally required. The investigation of the methods of management, so far as gone into, would appear, in the matter of material, to admit of heavy losses, due to lack of close supervision and system in the handling of material used.

The existing facts as to the cost of gas will be learned, so far as the year 1905 is concerned, from the investigation of vouchers, pay rolls and account books, now in progress.

Third. In order to determine the true structural cost of the gas works of the Consolidated Gas Company, it was necessary to make careful inventories of the existing plant, and to obtain for this purpose the services of reliable and impartial gas engineers and constructors. This inventory has been made for the Consolidated Gas Company by one of its employees, an engineer, but appears to me to be too high on account of an unwise neglect of depreciation. Another inventory is being made by engineers employed by the State.

In order to corroborate, or rather to anticipate the results of this inventory, I have taken the statistics of four Massachusetts gas companies, Cambridge, Fall River, Lowell and Worcester, which appear to have had a normal growth, and not to have had their accounts sophisticated by tricky financial methods, and from the capacity of these works and their cost as reported to the Mas-
3834 sachusetts Gas & Electricity Commission I have deduced an average cost per thousand cubic feet of capacity of about 1.75 cents, and, using this average with additions, I have obtained a total cost of the plant of the Consolidated Gas Company, together with a necessary working capital, which it does not appear can by any possibility exceed the twenty-nine million or thirty million dollars fixed as the cost of all the plant, from real estate to meters, with working

capital by the New York Gas & Electric Commission, at the same time that the price of gas was fixed at 80 cents per thousand cubic feet to private consumers.

Mr. Mathewson: I move to strike out the entire answer on the ground it is not redirect-examination, but is simply a summation and statement of conclusions which should not now be presented, and which is not properly in the case in that shape.

Mr. Burr: I think it is entirely proper in view of the cross-examination, which was for the purpose of discrediting the conclusions which he thought should be drawn. He is entitled to show the means he adopted in arriving at his conclusions.

The Master: He is entitled to tell it in response to question and answer in the ordinary way. There is no warrant that I know of for a witness making a stump speech to justify his testimony.

Mr. Burr: I object to the designation of this statement as a stump speech.

The Master: Well, it is perhaps a little extreme——

Mr. Burr: All these experts, Dr. Humphreys and the others, have made their statements from carefully elaborated data, and it has been impossible by question and answer to extract the information
3835 in regard to the various details in those examinations.

The Master: I know, sometimes that habit of preparing long written answers prevails among experts in patent cases, but it is a very reprehensible practice.

Mr. Mathewson: Is there any justification for the witness going into the question of sophistry and sophistication by tricky financial methods? I say it is utterly improper, and it is not worthy of the witness to employ such language. It is outrageous. It is not testimony, it is simply villification.

Mr. Burr: It is not worthy of any one to employ such methods if they have been used.

Mr. Mathewson: No, sir; no one can put a finger on such a method. They have not been used. That is an outrageous statement.

Mr. Burr: I except to the striking out of the testimony.

Q. I call your attention to Field's Analysis, Doctor Marks. Your attention was called by Mr. Mathewson yesterday to the use of the candle power as required and as actually supplied in London. Do you desire to make any explanation in that regard?

A. The candle power furnished being an average of 16½ candles by the London Gas Light & Coke Company, designated as the Gaslight Company, page 16, was made by the mixed method; that is, the use of common coal gas distilled in retorts enriched by the use of oil and spirit in large quantities. It appears for the year 1905, page 16, that the Gaslight Company in that year used 15,935,240 English gallons of oil and 220,973 English gallons of spirit. In this respect the London Gaslight & Coke Company differs largely from the Commercial and the South Metropolitan, for while it uses common coal, as also does the other companies, it also in addition
3836 uses large quantities of oil and of spirit as enrichers. For

this reason it does not present any difficulty in retaining or holding very closely to the candle power described, which is 16.

Q. You heard the testimony of Chief Engineer Bradley, that it would take from fifteen to twenty-five years to complete the projected Astoria works?

A. I recall it.

Q. If the figures given in the Burr-Herring-Freeman report should be accepted as true, there would be no reason in your opinion, or no justification, in your opinion, for completing the Astoria works, would there?

A. Not if the gas from the Astoria works was to be used in the Island of Manhattan.

Mr. BURR: That is all.

By Mr. MATHEWSON:

Q. What did you understand would be completed in from fifteen to twenty-five years at Astoria?

A. The works at Astoria.

Q. What works, what capacity?

A. The gas works.

Q. What capacity, the first unit or second unit?

Mr. BURR: All the works, I understand.

Mr. MATHEWSON: Won't you let him testify? It is not what you understand; I am trying to find out what the witness understands.

The WITNESS: It was to be 240,000,000 daily capacity ultimately, if I remember right.

Q. And that is what you had in mind, twelve units of twenty million capacity each, which would be completed in fifteen to twenty-five years if the entire project was put through, wasn't it?

A. I understood Mr. Bradley to say so.

3837 Q. Well, that did not refer to the completion of the first unit or the second unit, did it?

A. I understood that that was to be completed much earlier from testimony.

Q. Now, you spoke of the London Gaslight & Coke Company, where the candle power runs 16.48 as against a required candle power of 16. You understand that the 16.48 is an average, don't you?

A. 16.50 for two years.

Q. Well, call it 16.50, 16½ about; you understand that is an average, don't you?

A. Yes.

Q. Do you know how often the tests showed below 16?

A. I do not.

Q. Don't you know that a great deal of the gas of the London Gaslight & Coke Company is made fourteen miles from the city, and is sent into the city from that distance, and that these tests are made in the city testing station, near the point of consumption, after the gas has traversed that mileage of mains, or don't you know that?

A. I do; that there is a very large gas main laid carrying gas a very great distance, in a general way. I cannot recall the figures.

Q. Do you know under what pressure that main works?

A. I do not.

Q. Don't you know that it works under a pressure of 60 inches?

A. That depends upon which end you are considering.

Q. Well, we will consider the starting end.

A. No, I knew it was necessarily at a high pressure at one end.

Q. Do you know whether any oil is used in enriching the coal gas of the London Gaslight & Coke Company at all or, whether that oil is used in the manufacture of water gas wholly?

A. I do not. I know just what they state.

Q. I am not going to examine you one the answer that was stricken
out, Professor, because it was stricken out, but I am going to
3838 ask you about this neglect of this depreciation which you say
you found in the testimony of Mr. Mayer. Did you find that
he deducted depreciation right along for various pieces of apparatus
and buildings used in arriving at his figures?

A. My objection——

Q. Just a minute—answer that question.

A. Yes.

Q. Did you not find in some cases he deducted as much as 50 per cent.?

A. I recall that in one case where he said the roof had fallen in and he had deducted 50 per cent.

Q. Did you not read his testimony or hear it where he said that wherever he saw any deterioration he deducted depreciation?

A. I remember he stated that he did deduct depreciation because of what was visible to him.

Q. Don't you remember in some cases he had deducted depreciation where he said the apparatus appeared to be as good as new, but that he deducted it because he found that it had been acquired a considerable time before?

A. That was very rare, if at all.

Q. You don't remember any such instance in his testimony, do you?

A. Very rarely if at all.

Q. Do you remember any such instances in his testimony?

A. I am not sufficiently clear on that point to make any further reply.

Q. Now, in reference to the manufacturing of great amounts of gas by this company, did you read the testimony of Professor Bemis and the other witnesses that after an output of about 700,000,000 feet per annum is reached there is no substantial economy in the production of further amounts per thousand cubic feet?

Mr. Burr: Professor Bemis qualified that statement and explained it.

3839 Mr. Mathewson: No, he said he still believed it.

Mr. Burr: You had better refer to his special testimony on that point if you want to ask this witness.

Q. Have you read that testimony?

A. I once before answered that I had a general impression of that sort, but had not seen it. I should have to see it.

Q. Don't you agree with Professor Bemis and the other witnesses in that respect?

A. I do not concur with any engineer or individual who proceeds to generalize in the air on the subject of any plant.

Q. Is it your view that there is a substantial economy in production per thousand feet by reason of increase after a company does have an output of say 700,000,000 feet per annum.

A. I cannot make any better reply than I did to you before.

Q. Very good. Now, I am going to take your table on page 218 and page 219 of your book and refer to the companies you just mentioned as having compared with the Consolidated Gas Company.

Mr. Burr: Is that the same table you referred to yesterday?

Mr. Mathewson: Precisely.

Mr. Burr: I object to it because you have already had your opportunity to go fully into that and we have answered you this morning. Now, if you are going into it again, of course, I shall have to have the opportunity of examining him still further.

Mr. Mathewson: All right. The witness a few moments ago in his testimony in reply to Mr. Burr said that this table on pages 218 and 219 was intended as an average of smaller companies and that
there were few large companies. He then mentioned that
3840 the companies he compared to the Consolidated were the
Fall River, Cambridge, Worcester and Lowell. And I now
propose to read from these pages the data regarding those four companies and ask if I read correctly.

Mr. Burr: That was all gone into yesterday when examining from this table, and this was a reply to their examination yesterday. Now, if they go still further into these tables I must have the opportunity to reply. I thought they had exhausted these tables and that was the reason I asked the doctor to make an explanation as to what those tables represent.

Mr. Mathewson: I am going to select the four which he said he had himself compared.

Mr. Burr: Those are the four you referred to yesterday?

The Master: If you examined on these redirect, Mr. Burr, and Mr. Mathewson wants to cross-examine on them, I think he is entitled to. I don't know exactly what the point is, yet.

Mr. Mathewson: My question will be very brief.

Q. I will ask you, taking the four cities to which you have referred this morning as having compared to the Consolidated, whether your tables do not show the following:

"*Investment Per Annual Thousand Feet of Sales.*

Fall River	$3.97
Cambridge	3.85
Lowell	2.77
Worcester	2.89."

and if you do not state for those under "Total Charges, Proper Selling Price per Thousand Feet,

3841

Fall River	$1.30
Cambridge	1.25
Lowell	1.15
Worcester	1.07"

Is that correct?

A. I have not caught all of them. It appears to be, though.

Mr. Mathewson: That is all the questions I have to ask.

By Mr. Burr:

Q. Have you pursued your studies as to the estimated population and the estimated consumption of gas in 1907, in the Borough of Manhattan?

A. Not only in the Borough of Manhattan, but also in all the boroughs of the City of New York, in order to avoid any possible incorrect theory of superficial reasoning; I have worked them out very thoroughly.

Q. Is that the chart upon which your results are set forth?

A. Yes, a chart showing the Borough of Manhattan, the Borough of Bronx, the Borough of Brooklyn, the Borough of Queens, the Borough of Richmond, and the composite line of Greater New York, together with a population of Greater New York of about 4,244,413, estimated, in 1907.

By Mr. Mathewson:

Q. Is that chart worked out on the basis of your previous testimony?

A. Yes.

Mr. Burr: I offer it in evidence.

The Witness: It was worked out in the rough before my testimony was given.

Mr. Mathewson: I make the same objection to that that I did to the original testimony; that the Professor is not a competent witness on that subject; it is merely speculation.

3842 The Master: There is no new matter in this that is not covered by your prior testimony?

Mr. Burr: It shows the results of the study of the whole of Greater New York and confirms the statement as he presented it with regard to the Borough of Manhattan.

Mr. Mathewson: I understand it is merely a graphic representation of his previous testimony and nothing further.

Mr. Burr: That is all. It does not change anything in the previous chart at all, Mr. Mathewson.

Objection overruled. Exception.

Received in evidence and marked City's Exhibit 62.

By Mr. Mathewson:

Q. There is one other thing I want to read from this table which I overlooked for a minute. From page 219 of your book, Professor, I quote in reference to the four cities as follows, and ask if I am incorrect:

"Fifteen Per Cent. Depreciation and Profit Per One Thousand Feet.

Q. "Worcester, 43 cents"?
A. Yes.
Q. "Lowell, 41 cents"?
A. Yes.
Q. "Cambridge, 58 cents"?
A. Isn't Cambridge 39 cents?
Q. No, that is North Adams. "Fall River, 59 cents"?
A. All right.
Q. If there is any mistake about it you can correct it. Does that appear to be correct?
A. Yes, as stated in this table, based on thousands of annual cubic feet of sales.

3843 By Mr. BURR:

Q. As you have previously stated?
A. As I have previously stated.

WILLIAM HALLOCK, a witness called on behalf of the State, being first duly sworn, testified as follows:

Direct examination by Mr. KIRBY:

Q. Are you a graduate of any university or technical school?
A. I am a graduate of Columbia University, with the degree of Bachelor of Arts, and the University of Wurzburg, with the degree of Doctor of Philosophy.
Q. Do you occupy any Chair upon the faculty of Columbia University?
A. I am Professor of Physics, Columbia University, and present Dean of the Faculty of Pure Sciences.
Q. As such and during your studies, have you given any special attention to matters having to do with photometers, electric measurements, electrolysis and kindred subjects?
A. As professor of physics I have had my attention devoted to such subjects for upwards of fourteen years.
Q. Have you during the past two years made any special studies in reference to candle power of gas which is furnished in the Borough of Manhattan, the illuminating efficiency of the flame and kindred matters?
A. I have.
Q. You appeared as a witness in behalf of the State before the Stevens Investigating Committee on this subject of candle power, did you not?
A. I did.
Q. Are you a member of any scientific societies or associations?
3844 A. I am a member of the American Physical Society, Fellow of the American Association for the Advancement of Science, and the New York Academy of Sciences.

Q. I call your attention to the testimony of Alexander C. Humphreys, given at this hearing, pages 1938 and 1939 thereof, where, in answer to certain questions having to do with Mr. Humphreys' qualifications, as to his being qualified to testify upon the subject of electrolysis, the Master states: "If a little electricity is bad, a great deal more will be worse, will it not?" Also, to the testimony of President Humphreys appearing on pages 2160 and 2161, where he states:

"Q. I was not talking about taking care of your mains out of this five cents until you said you were? A. No, sir, you spoke of electrolysis and asked if I had included that in the depreciation for the mains and I distinctly said I had not.

"Q. Yes, I think that is correct. Then, to this speculative field of electrolysis about which we know nothing, whether it will depreciate or not? A. I don't know whether you know about it or not, sir, but I do know. I know it is a very serious hazard in the business, and very serious. Wherever there are any stray currents we expect electrolysis more or less and there are stray currents in the City of New York."

Mr. Mathewson: Whose testimony is that?

Mr. Kirby: Dr. Humphreys'.

Q. Now, I take it, professor, except in a general way, you are not familiar with the conditions of the pipes and mains and electric elements in the streets in the City of New York or the Borough of Manhattan?

A. No; except in a very general way.

3845 Q. But you are, are you not, familiar with the physical law as electrolysis applies not only to electrical current, but to the chemical-physical action known as electrolysis which the same may set up under proper conditions? You are so familiar, are you not?

A. I am.

Q. If a current is passing through a pipe or other conductor will or will not such current produce a harmful effect upon that conductor?

A. It will not produce any harmful effects unless the strength of the current is sufficient to heat the conductor.

Q. And that would not be an electrolytic effect, would it?

A. No.

Q. Under any circumstances will a current flowing to a conductor of any kind produce any harmful electrolytic effect?

A. No.

Q. Under what circumstances and conditions can there be such an effect as electrolysis?

A. Electrolysis takes place when a current of electricity passes from one element through a material, which is usually a solution, technically known as electrolyte, and leaves this solution to enter upon another conductor. Under these circumstances the passage of the current through the solution or the semi-solution produces the physical-chemical reaction known as electrolysis.

Q. In other words we must have first of all an electric current; next we must have a conductor carrying that current; next a solution which is a conductor of electricity, and next some other conductor to which the current will pass if the current is able to pass through this solution; and then, in addition to that, am I right, that you must have a sufficient voltage or what is commonly called pressure to decompose this solution before any other electrolytic action can be set up? Is that a correct statement of the conditions?

A. That is a correct statement.

3846 Q. Now, if it be that a gas main is the conductor to which the current flows what would be the effect if there were stray currents and electrolyte and therefore what is known as electrolysis?

A. If the current is flowing to the gas pipe the electrolysis would produce no injurious effects upon the pipe.

Q. If there would be any effect it would be that of depositing upon the pipe such substances as might be carried over through the electrolyte? Am I right in that?

A. Yes.

Q. This, therefore, would be a deposit upon the gas main rather than taking away any substance from it?

A. Yes.

Q. And after the current reached the gas main, in its flow through it, unless the current should be so great as to produce a heating effect sufficient there to melt the pipe or the lead caulking thereof, there would be no harmful results produced, in your opinion?

A. No.

Q. Now, I take it that it is a general law, a general law of the flow of electric current, as well as of most other forms of energy, that it always seeks the path of least resistance; am I right in that?

A. Correct.

Q. So that if we had a street in which were placed gas mains, water mains, and various cables covered with lead sheathing, such cables as are in general use for telephone and telegraph wires, we would find a condition, would we not, in which the tendency would be for the current to follow the continuous path such as is afforded it by the continuous lead sheathing of these cables rather than to follow a gas main or a water main where the path is broken by the pipes being of sections joined or caulked together?

A. The tendency would be to follow the continuous metallic path in preference to broken paths.

3847 Q. The passage of current through a semi-fluid or material, or say moist earth, which through drainage or otherwise had become somewhat permeated with salts, would, I take it, have the effect of decomposing the moisture in such earth and leaving the earth itself in a dry condition; am I right in that conclusion?

A. That would be the general tendency. It would depend somewhat upon the dissolved salts.

Q. What other effect, if any, might take place?

A. The salts would be accordingly removed from the solution by electrolysis, and then if it were carried on still further the water would undoubtedly be removed also.

Q. And that taking place, what would be interposed to the path of the current from one metallic conductor to the other where formerly the damp, moist earth was and in which the electrolytic action would be set up?

A. The action would be to increase the resistence offered by the moist earth.

Q. Increasing the resistance would mean that the amount of current which would flow would be increased in the same proportion?

A. Decreased in the same proportion.

Q. Decreased, I mean, in the same proportion?

A. Yes.

Q. If we had a current flowing upon a gas main or other conductor and another current, or no current, flowing upon an adjacent conductor and there were damp earth or a liquid between such conductors so permeated with salts as to make the same a proper electrolyte, would it necessarily follow or would it follow at all that there would be any electrolytic action or current flowing between the two?

A. That would depend upon the salts involved in the solution and the strength of the current in the pipe carrying the current and the relation of the strength of current to the resistance which the pipe offered to the current.

3848 Q. And, in other words, it would depend very largely upon the voltage which would be necessary to start electrolytic action and to overcome such resistance which might be in the electrolyte?

A. Yes, it would depend upon the existence of a sufficient pressure between the pipe carrying the current and the pipe carrying no current to overcome the counter-pressure of the electrolyte.

Q. I ask you if you have read the Act in relation to illuminating gas in the City of New York, etc., being Chapter 125 of the Laws of 1906, and especially Section 2 thereof, having to do with the candle power of the gas which is to be furnished and the pressure under which it is to be furnished?

A. I have.

Q. I call your attention to the testimony of President Humphreys, given at pages 2096, 2097, 2098, 2099, all of which is in reference to the candle power of the gas and the flame and the proper pressures and especially in reference to the question at the bottom of page 2099, as follows:

"Q. We will disregard the Bray burners, and the check burners and the anti-swirl burners, and come down to the burner used by the plain people, and which under 7/10ths of an inch, 22 candle power, will produce the best results. Now, if you take that burner and increase your pressure by an inch, what would be the result on the illuminating quality of the gas? A. Let me say, first of all, that we cannot disregard the swirl burners and all those things and come back to the burners used by the ordinary people, because I am talking about the burners used by the ordinary people. As I have said repeatedly, and I am not trying to quibble about any extraordinary burner, if you have seven-tenths pressure on a burner and increase it an inch the effect would be to reduce the candle-power probably, and the amount could not possibly be told until you took that particular burner and the particular gas to determine it by experiment." 3849

And also more especially to the question and answer at the bottom of page 2179 and the top of page 2180, as follows:

"Q. Is it not one of the fundamental principles of gas engineering to keep down the pressure? A. Yes, to a point where the consumers will get a sufficient supply for their appliances, the result being that of late years the demand is for a much higher pressure than when I first went into the business.

"Q. What is the reason for that, in your judgment, for that change? A. Well, you need*ly* hardly put it my judgment. It is simply the fact that since I have been in the gas business that the appliances brought in requirè higher pressure than they did in the older days, when they practically used argand and flat-flamed burners, and the superintendents of the works were nearly all hipped on the idea of keeping the pressure down, so that they would dissatisfy the consumer, and I frequently had to threaten my superintendents with discharge, for the reason that they would not supply the gas stoves and other appliances because they were either afraid there would be a leakage or afraid that I would wig them on that."

Now, I understand, or is it not a fact, that you have, as is subgested by President Humphreys, taken particular burners and particular gas, and determined by experiments various illuminating powers of the flames under various pressures?

A. I have.

3850 Q. And these experiments have been directed towards ascertaining the efficiencies of gas burners and of various burners, and the effect of pressure upon the illuminating quality of gas flame, and also to some extent as to the calorific value of the gas, that is correct, is it not?

A. That is correct.

Q. What gas did you use for these experiments?

A. I used the gas that is furnished to Columbia University, Fairweather Hall, at Amsterdam Avenue and 118th Street, which I believe is the Consolidated Gas Company's gas; the meter bears the name of the Consolidated Gas Company.

Q. Did you take any precautions during your experiments to be sure that the gas did not vary either in chemical constitution or in illuminating power?

A. I took precautions of two kinds: during many of the experiments the precautions were taken of running tests of the illuminating power to see that the quality of the gas was not changing seriously, and in other cases the supply of gas for a particular test was drawn off and stored in a small holder, so that a sufficient supply was available that would be entirely free from variation.

Q. In other words, you took the gas from the mains of the Consolidated Gas Company, drawing it into a small holder, and it was the gas from that holder that you used in making an experiment about which you are now going to testify?

A. Part of them. Not all of them, but part of them.

Q. And in such instances that you did not use this holder you from time to time checked off the gas to be sure that it did not vary in candle power during the time of the tests?

A. I did.

Q. As a standard for the candle power did you use that set down in the Act from which I now read, that is, "22 sperm candles of six to the pound, burning at the rate of 120 grains of spermicetti per hour"?

A. I did.

3851 Q. And how did you interpret that Act where it says that the illuminating power shall be given by a burner consuming five cubic feet of gas per hour? What did you take the words "by a burner" to mean?

Mr. MATHEWSON: Do you mean what he used in his experiment?

Q. What did you use in your experiment?

A. I took it for granted that in selecting a burner for the experiments on candle power to determine whether the gas supplied complied with the requirements, that the burner should be as favorable a burner to the company as could be consistently selected without going to some extreme of unusual or impracticable burner and on that account selected what is known as a Bray burner of the slit type.

Q. Is this the burner which is commonly known as the Bray No. 7?

A. Commonly known as the Bray No. 7.

Q. Is it your information that this is the burner used by the City gas examiner Love?

A. I have been informed that that is the burner which he used.

By Mr. MATHEWSON:

Q. Has he informed you?

A. No.

By Mr. KIRBY:

Q. And in your opinion this burner outside of the Welsbach or mantle burners is one which under ordinary circumstances will give tests showing the greatest illuminating power of the flame?

A. That has been my experience.

Q. In measuring the pressures in your experiments what point relative to the burner did you use as that from which to take the pressure?

3852 A. In all cases except one the pressure was taken immediately behind the opening of the burner and consequently represents the pressure under which the gas is issuing into the air.

Q. In other words, the pressure was taken where the pressure might be said as having been taken at the tip?

A. At the tip.

Q. In those experiments in which you used what is commonly known as the check burner, at what point did you take the measurements?

A. In the series of tests which I made with one form of check burner the pressures were taken behind the check and in this case represented the pressure under which the gas is passing through the check.

By Mr. MATHEWSON:

Q. Not the pressure after it has passed the check?
A. No, not in this series to which reference is now made.

By Mr. KIRBY:

Q. Now, taking up your experiments, which burner did you use for the first series?
A. The first series of tests were made with what is ordinarily called the bat-wing, lava-tipped burner, marked six foot.
Q. And how did you come to use this burner?
A. That was the burner with which I had been most familiar as a gas consumer in New York City for fourteen years, being practically the only one that I had had any experience with. It is the kind used in the apartments in which I have been living and the one which I have seen in the apartments of friends.
Q. Have you such a burner with you?
A. I have (producing a burner).
3853 Q. The burner produced by the witness and which I hold in my hand, is what in your opinion is known as the "common or garden" bat wing, lava tipped burner, with which you have had experience for some fourteen or more years in the City of New York?
A. It is.
Q. Now you used other burners in your experience, did you not?
A. I did.
Q. What other burners did you use?
A. I used a burner similar to this except marked four foot and a Bray fishtail burner, and a burner with a metal tip also of a fishtail variety, the trade name of which I do not know.
Q. Have you such burners with you, or one similar to those you used?
A. Yes (producing a number of burners).
Q. In your experiments, Professor, you used among other burners a six-foot, lava-tipped, bat-wing burner. Is this that burner?
A. It is.

Mr. KIRBY: I offer that in evidence.
Received and marked State's Exhibit X.

Q. There is no check in this burner?
A. No.
Q. You also used a similar burner, the same being four foot instead of six foot, didn't you?
A. I did.
Q. Is this the burner which you used?
A. It is.

Mr. KIRBY: I offer it in evidence.
Received and marked State's Exhibit Y.

Q. You also used a metal-tipped fish-tail burner, the same being unchecked. Is this the burner which you used.

A. It is.

Mr. Kirby: I offer it in evidence.

Received and marked State's Exhibit Z.

Q. You also used a burner similar to the burner last placed in evidence, being a metal-tipped fish-tail burner with the difference
3854 that this burner is checked. Is that the burner which you
used?

A. It is.

Mr. Kirby: I offer that checked burner in evidence.

Received and marked State's Exhibit AA.

Q. You also used what is known as a Bray No. 7, the same being a lava slit tipped burner, being a Bray slit Union, but in your experiments you removed the check, didn't you?

A. I did.

Q. And is that the burner which you used?

A. It is.

Mr. Kirby: I offer that in evidence.

Received and marked State's Exhibit BB.

Q. Now, in your tests made with the Bray No. 7, which you stated is the one which would give the greatest efficiency of the flame, and which were directed only towards the candle-power of the gas furnished, irrespective of the pressure under which it was furnished, did or did not you find that the gas was of as high a candle-power as 22 for five cubic feet burned per hour, tested in the manner set down in the statute?

Mr. Mathewson: If the Master please, I think that if we are going into the subject in this way, we are going to spend a good deal of time on something that is entirely outside the issues. The law requires that our candle-power be 22 a mile from the works, and that it be tested by the city. It frequently happens, by reason of small house pipes or some cause or another, that at a much greater distance, or beyond the testing station possibly, the candle-power may fall, but
that is nothing for which we are responsible, and it argues
3855 no violation of the law. This witness was called to testify
before the Stevens Committee, where it was a question as to
what law, as a matter of policy, should be advised. We are now met with the law as it is passed, and the question as to pressure is whether we can conform to that pressure, whether we can conform to it; and as to candle-power, if we keep our candle-power at the city testing station as required by law, our duty is performed. I do not quite understand how we are going to be advantaged by taking private tests at other points where various elements may enter in, showing that they are or not so high as 22 candle-power. We can bring in rebuttal perhaps, a great many other private tests, made at different points, showing it is above 22 candle-power at those points, if this witness says he has found it in these instances below 22 candle-power.

Mr. Kirby: May I ask from what the learned counsel infers that his tests show it was not above 22 candle-power?

Mr. Mathewson: I do not. I make the objection in entire ignorance of what the witnesses is going to testify to, but merely drawing attention to the fact that that is not an issue before this tribunal at all and that the tests, whatever their result, would be absolutely worthless and merely a matter of interest, but of no earthly value in the determination of this case.

The Master: It does not appear here, Mr. Kirby, does it, that the place where these tests were made, was at a distance or not less than a mile from the distributing holders?

Mr. Kirby: No, it does not. There is no contention that
3856 they were. The contention is that the witness qualified to
make the experiments which he has made, and to give the testimony which he is about to give, in the course of those experiments, found it necessary to take tests of the candle-power of the gas which was furnished by the complainant in this action. Whether those tests were made a mile away or two miles away or right at the holders, nevertheless, they show and have a considerable bearing upon the candle-power of the gas which is being furnished, and certainly if not by themselves, at least in conjunction with the tests made under the strict regulations of the statute, that is a mile from the works and under the other conditions set down therein, would not only be relevant, but certainly, I should think, in every way material to a proper consideration of that question. Now, as a matter of fact, the testimony is not directed towards this one of candle-power of the gas more than it has to do with the experiments which he has made and about which he is about to testify.

The Master: That is what I wanted to get at, are the questions that you are about to ask him directed primarily to the matter of pressure?

Mr. Kirby: No, sir; they are not.

The Master: Or simply as to the question of candle power alone?

Mr. Kirby: The question of candle power as it is affected by pressure.

The Master: And do these tests have any bearing on the question of pressure, or are they limited to candle-power?

Mr. Kirby: They have a bearing upon both. The testimony in this case has been from many witnesses of the complainant that the requirements of the Statute are not only impossible in the
3857 compliance therewith, but are unwise and impracticable; and
especially the testimony of President Humphreys, to which I have drawn attention, is to the effect that there should be no such requirement? Now, these experiments will show the grave necessity for such requirements, and before we are through with this and other witnesses, I think we will find that not only is the act a proper one, but that the compliance therewith is practicably possible. That is the raeson for this testimony and the reason for other testimony which we will produce.

Mr. Mathewson: Let me call the Master's attention to the fact that this Act providing for the tests of candle-power is merely a general act and that it is provided in the City Charter, and by amendment to the City Charter made at the same time that this act was passed, that the tests contemplated in this Act should be made in each borough of the City and by the City Inspectors, so that if we were to be charged with failing to keep up candle power, we could only be charged on the basis of the inspection by the City. That, I think, will be conceded.

Mr. Kirby: There is no contention to the contrary.

Mr. Mathewson: Now, Mr. Kirby says that he proposes to show the candle power as affected by pressure. It is not a question of discretion before this Tribunal as to what Act shall be passed. We have an Act now. It does not make a particle of difference how candle power is affected by pressure. If we could observe the law that had been passed, providing that the pressure should be kept within 2½ inches and 1 inch, between that limit of one and one-half inches, and still deliver gas to our consumers for their requirements,
3858 it would not make a particle of difference to the Master and we could not complain, if that unwise legislation had been passed. The point is that if we maintain the candle power at the figure required by law, we are not subjected to any penalty. But that is not before the Master, but the question before the Master is that we claim that we cannot maintain the pressure within the limits provided by that law. If we can, what the effect will be of maintaining it within that limit is something with which the Master has nothing to do. That is a legislative discretion that has been exercised, and the consumer must suffer, even if it be unwise, if we can accomplish that result. So I cannot see how the question of "how candle-power is affected by pressure," to use the expression of my friend, Mr. Kirby, is a subject which it is worth while to go into here. It is entertaining, but it is certainly not an issue upon which this case can turn.

Mr. Kirby: Such might indeed be the case, Mr. Master, were it not for the testimony which has been put in by the complainant, and this testimony is largely in rebuttal of that and contradictory to it.

Mr. Mathewson: We put in no testimony, Mr. Kirby, except as to the ability to maintain that pressure requirement, and in that connection merely.

The Master: Do you mean testimony put in to the effect that it is impracticable to maintain a candle power of that kind without furnishing candle power that is really in excess of that by measurement?

Mr. Kirby: No, I do not. I mean the testimony has been put in in this case and there are pages of it, to the effect that the
3859 necessities of the present time require a pressure different from that set down in the statute; and even going so far as to contend by such testimony as that pressure regulation, except in a minimum amount, should not be enacted, or if enacted, should be held contrary to the proprieties of the situation and unconstitutional therefore under the act.

Mr. Mathewson: No, not for that cause unconstitutional and because it is unwise, but because it is impossible of performance by us and imposes a penalty upon us for something which we cannot perform. Now, if Mr. Kirby will read the testimony carefully, he will find that in the direct testimony of the witnesses produced by complainant, we did not ask them as to the wisdom of that provision at all, but simply as to the possibility of carrying it out in practice, and these other questions which he now says were asked, were asked in cross-examination. The only question we may have asked in direct-examination to which he has referred would be the question as to whether there was a maximum regulation elsewhere in the world, of candle power, merely to show the probability of its having been impossible to regulate the maximum; that is all, not the effect of the pressure. And I think the Master will see——

The **Master**: The difficulty in my mind is that I do not see the relation here between the question of candle-power and pressure. If the object of this testimony is to show that the gas company has maintained at the spot where the Professor made his tests a pressure of less than 22 sperm candles, it does not show anything so far as I can see concerning a violation of this law. I do not see how it affects, so far as anything yet made clear to me, the question of press-
3860 ure. If, on the other hand, the object of the testimony is to show that they maintain as a matter of fact an illuminating power of more than 22 sperm candles, I can see that it might have some bearing on the testimony already in the case as to the practicability of maintaining an equable candle-power without necessarily supplying gas of a higher candle-power than that required by the Statute. But Mr. Kirby disavows that and——

Mr. **Kirby**: Not that I disavow it, but I say it is incidental to the main purport of these questions and of this testimony.

The **Master**: I do not see, Mr. Kirby, what it has to do with any of the questions before me, on your statement.

Mr. **Kirby**: It would have—I concede the irrelevancy of the testimony, were it not that by reason of such testimony as has already been put in, parties representing the State in this matter consider that it is necessary to rebut such statements and inferences as have been made, to the effect that a pressure regulation except for a minimum requirement is unwise, improper and not in use elsewhere, and that therefore the pressure requirements of the Act are not only impracticable of performance, but are unwise and unjust.

Mr. **Mathewson**: Do you think the Master could declare this Act unconstitutional if he found we could perfectly comply with this pressure regulation and still furnish gas to our consumers, but on the whole that the legislation was unwise? I am not crazy enough for an instant to ask the Master for such a finding as that.

Mr. **Kirby**: I think not, but the testimony is there, and
3861 as such we are prepared to meet it, and that is our reason for producing this witness.

Mr. **Mathewson**: A great deal was asked on cross-examination of our witnesses and perhaps there may have been something along the line of wisdom, but it was not asked by us and I make no point, and I do not assert that the unwisdom of the statute, if it be merely a matter of unwisdom, is sufficient basis for declaring this law unconstitutional.

Mr. **Kirby**: As I have said ofttimes before, that is a legal proposition subject to argument and about which you and I would probably not differ.

The **Master**: Did you call attention to any testimony of the complainant on direct-examination which in any way shows a connection between this question of pressure and candle-power?

Mr. **Kirby**: I did not, but I have no doubt there is much of it. I think the specific statements which I referred to were in the cross-examination——

The **Master**: I see in the testimony of Dr. Humphreys that an increase of pressure means a decrease of candle-power, but that was gone into on cross-examination by Senator Page. I do not recall any direct-examination on that subject. I think the direct-examination was limited simply to the question of practicability of maintaining the pressure provided by the Act.

Mr. **Mathewson**: I think so, as I conducted the examination, the practicability of observing the Act, not the wisdom of passing the Act.

3862 The **Master**: I do not wish to curtail in any way the scope of your evidence, Mr. Kirby, but at the same time I hesitate, in view of the great volume of material we have here already, in opening up a line of proof that may involve considerable time, unless I am convinced of its materiality.

Mr. **Kirby**: If it be the fact that there is no direct testimony on the part of the witnesses of the complainant to the effect that I have tried to indicate, and if from that fact it follows, that testimony of the kind which is here produced is not relevant or material, then certainly such testimony as is in the record under cross-examination would not be relevant or material, and if the Master is prepared to rule that the rebuttal of such testimony is not competent, why, I will take an exception and take about ten minutes to put it in under the rule. But the Master will certainly find much upon the point.

Mr. **Burr**: I call the Master's attention to page 2100, the examination of Dr. Humphreys.

The **Master**: Yes, that is on cross-examination, I think.

Mr. **Mathewson**: Yes, on cross-examination. Was it cross-examination by Senator Page?

The **Master**: Yes.

Mr. **Mathewson**: And he is associate counsel for the State.

Mr. **Kirby**: The question asked, however, is certainly relevant. Such questions as may be asked may under your ruling have a contrary bearing——

3863 The **Master**: It is the question as to the general line of testimony that we have been considering, as to the subject of these individual tests on the subject of candle-power. I do not myself see the materiality of it. I think I will sustain the objection and let you put it in under exception.

Mr. **Kirby**: You will not reject the testimony in answer to this question as to whether he found the gas he experimented with to be over or under 22 candle-power, because that has a direct bearing upon all the testimony which is put in.

The **Master**: I will let him answer that.

Mr. Mathewson: If this testimony goes in, whatever it may be, and although it is excluded and goes in under an exception, I shall of course feel at liberty to present anything in rebuttal of it I see fit. And I have not made any objection here because I have hesitated at all to meet the proposition, but merely because it did seem to me to be outside the issues and to be consuming time.

Mr. Kirby: I do not think we will find the time consumed of any considerable length. Will you read the question.

(Stenographer reads question as follows: "Now, in your tests made with the Bray No. 7, which you have stated is the one which would give the greatest efficiency of the flame and which were directed only towards the candle-power of the gas furnished, irrespective of the pressure under which it was furnished, did or did not you find that the gas was of as high a candle-power as 22 for five cubic feet burned per hour tested in the manner set down in the Statute?")

Mr. Mathewson: I wish to make an objection that it is not rebuttal of anything offered on the direct, and that it is also immaterial and irrelevant to any of the issues before the Master, and I understand the Master's ruling to be——

3864 Mr. Kirby: The Master has not ruled against that question.

The Master: Now that it is read, I think I do rule against it. When you put it a moment ago to me, you asked as to whether it was greater or less.

Mr. Kirby: I will withdraw that question and will put this question.

Q. The gas which you use in the experiments and which you tested as to its candle-power, did you find that it was of a greater or less candle-power than 22, being the illuminating power required by the statute?

Mr. Mathewson: Same objection.

The Master: Objection overruled.

Mr. Mathewson: Exception.

A. I found that on a consumption of five cubic feet per hour, the candle-power was above 22.

Mr. Kirby: Now, the questions which I am about to ask have to do with the experiments made by the Professor, which go to show the change in the illuminating efficiency of the gas due to the variation in pressure, and I understand that those questions are objected to and the objection is sustained and I except and I put them in under the rule.

Mr. Mathewson: And I may, without objecting to each one, be understood as having objected to each one?

The Master: Yes.

Mr. Kirby: That is what I understand.

Mr. Mathewson: Then I shall not interrupt the witness.

Mr. Kirby: We wish to take up as little time in this under the circumstances as possible.

3865 Q. Your experiments have been conducted mainly to show the effect of variation in pressure upon the illuminating efficiency of the gas, have they not?

A. They have.

Q. In the types of burners which you have used, and which types have been placed in evidence, at what pressure did you find the point of greatest efficiency for 22 candle-power gas?

A. In practically all cases, under a pressure of one inch at the tip.

Q. In the bat-wing burners, being State's Exhibits X and Y, did you find that the point of highest illuminating power per unit of gas was below an inch and if so, at about what point?

A. I found that the maximum efficiency was attained at pressures in the neighborhood of half an inch at the tip.

Q. What change did you find as the pressure increases to one inch?

A. The efficiency gradually decreases as the pressure under which the gas is consumed increases.

Q. And is this more particularly true as the pressure increases from one to two inches than from one-half inch to one inch?

A. It is, yes. The decrease in efficiency is generally more rapid after pressures of one inch to one and one-quarter inches are passed.

Q. Now from two inches on, what do you find is the effect of pressure upon the illuminating powers?

A. From two inches on, the illuminating power of the flame decreases very rapidly, and in most cases becomes practically non-luminous at pressures of about three to three and one-half inches, and is actually blown out by pressures ranging from seven to twelve inches.

Q. And is this generally true of all open flame burners, such as you have experimented with?

A. The experiments were only carried to moderate pressures in the other forms of burners, but up to pressures of one and 3866 one-quarter to one and one-half inches, the effects were the same.

Mr. Mathewson: The same as——

The Witness: As in the bat-wing.

Mr. Mathewson: The two bat-wing burners?

The Witness: Yes.

Q. Did you also make experiments with the mantle burner which is commonly known as the Welsbach burner?

A. I made some experiments with the Welsbach burner. In this case the conditions are more complicated owing to the more complex regulation of the mantle burners, and I found that a Welsbach burner that had been regulated for a lower pressure maintained practically the same candle-power as the pressure increased up to a point where the regulation was no longer satisfactory and consequently the efficiency fell off very rapidly. On the other hand, a burner regulated for a high pressure became inefficient at low pressures.

Q. Would a general statement to the effect that in a Welsbach burner the pressure will not produce any greater candle-power per unit until it reaches some high figure, such as twenty or thirty inches be true?

A. I believe that the pressure under which the gas is furnished to the Welsbach burner would not produce any variation in its efficiency if properly regulated to the pressure until the gas is under sufficient pressure to produce a flame of an entirely different character, and this would probably require some such pressure as that referred to.

Mr. Mathewson: Twenty or thirty inches.

The Witness: Twenty or thirty inches.

Q. If a Welsbach burner were regulated by the ordinary 3867 attachments which are upon such burners for the pressure of gas at one inch and such pressure were increased, would or would not the efficiency of the flame increase in accordance with the experiments which you have made?

A. The efficiency would not increase but would in general decrease.

Q. You have also made some investigations in regard to pressures applied to the use of gas for fuel, that is in stoves and other appliances which use illuminating gas in that way. What is your conclusion therefrom relative to the need for pressure and as to how high such pressure should be for such appliances?

Mr. Mathewson: Well, is this based upon experiments and if so, it seems to me the results should be given. I do not think this witness is competent to speak on that subject, it is a conclusion. He has never operated a gas plant or been in the gas business so far as I know. It has not been shown.

Mr. Kirby: Certainly he is qualified to speak as to whether or not gas under certain pressure produced the best calorific power for gas stove or range or anything of that kind. A man does not have to operate a gas business to be competent to testify as to what the heating effects would be. A physicist who has spent all his life, you may say, in making experiments of that kind is certainly as well qualified as one who has run a gas works.

Mr. Mathewson: I think the question is too broad and I object and make a further objection in addition to the standing objection.

The Master: This comes under the same objection as the other testimony. The testimony is of the same general character, I assume?

Mr. Kirby: Yes.

3868 The Master: I will consider it in the same way and sustain the objection upon the ground of materiality and relevancy and give you an exception.

Mr. Kirby: Exception.

A. I have made tests showing that the actual calorific value of gas when burned at different pressures is practically the same and the question of the practical efficiency of the gas for heating purposes as affected by pressure depends upon the burner and stove conditions under which it is consumed and for appliances of this sort of the character in general use.

Mr. Mathewson: Did you mean gas ranges?

The WITNESS: Gas ranges, gas burners and gas heaters, do not require a pressure of over an inch at the tip.

Q. Now, you have set down the result of your experiments, and the deductions therefrom in certain tables, and I ask you if the result of experiments with the commercial 6-foot lava tipped bat wing burner, being States Exhibit X, are correctly set down in the three tables headed "Series 1, five tests; Series 2, six tests; Series 3, four tests?

A. They are.

Q. I ask you if the result of your experiments with the commercial 4-foot bat wing lava tipped burner, the same being Exhibit Y, are correctly set down in a table headed, Series 4, commercial 4-foot bat wing lava-tipped burner, four tests?

A. They are.

Q. I ask you if your experiments with the Welsbach burners are correctly set down in a table headed, "Welsbach against Argand,"
Series 5, three tests, regulated for 1.54 inch pressure, and in
3869 another table, the same being headed, "Same burner regulated for 2.35 inch pressure?"

A. They are.

Q. The latter table being series 6 of experiments?

A. Yes.

Q. I ask you if your experiments with the commercial 6-foot fishtail burner, No. 5, with the check removed, being State's Exhibit V, are correctly set down in the table headed, "Table 7, Commercial 6-foot fishtail burner, No. 5, Check removed?"

A. They are.

Q. I ask you if the result of your experiments with the burner, State's Exhibit AA, are correctly set down in the table headed, "Series 8, being commercial fishtail No. 5, checked?"

A. They are.

Q. I ask you if your experiments with State's Exhibit BB are correctly set out in table headed, "Series 9, Bray No. 7, Standard?"

A. They are.

Q. And I ask you if the tables and statements headed, "Bat wing lava tipped commercial 4-foot, bat wing lava tipped commercial 6-foot, and Series 10 and Series 11" are further results of your experiments with such burners, being State's Exhibits X and Y?

A. They are.

Mr. KIRBY: I offer these statements in evidence.

Papers received and marked State's Exhibits CC, DD, EE, FF, GG, HH.

Q. In these tables which have been placed in evidence, and especially those marked State's Exhibits CC, DD, FF and GG, you have indicated under various pressures the rate of burning in cubic feet per hour and the actual candle-power of the flame, the efficiency of candle-power per cubic foot per hour the candle-power for five cubic feet per hour and what 200 hours of 22 candle-power light under those various conditions would cost with gas at 80 cents 3870 and what such 200 hours of 22 candle-power light would cost under those varying conditions with gas at $1.00 per thousand cubic feet, have you not?

A. I have.

Q. Have you taken the results of your experiments, shown in pages 1, 2, 3 and 4 and reduced them in the form of two curves, one showing the candle-power per cubic foot per hour and the other the cost of 200 hours at 22 candles, and if so is the chart which I show you the result of your experiments and the computations therefrom?

A. I have done so, and the chart is the result of those calculations and that plotting of the curve.

Mr. Kirby: I offer that in evidence.

Paper received and marked State's Exhibit II.

Q. From such chart can you tell us what effect the increase in pressure has upon the cost or of the illuminating efficiency of the light or illuminating power of the light.

Mr. Mathewson: Does it not show in the diagram he has made from his experiments what they show. He says this graphic print illustrates it.

Mr. Kirby: I want him to say it in words.

A. It shows that in the experiment in question the effect of the increased pressure from .4 of an inch to 1.35 of an inch resulted in an increase of the cost of 22 candles of lights for 200 hours from 86 cents at .4 of an inch to $1.26 at 1.35 inches.

Q. Have you, Professor, assisted Mr. H. H. Edgerton in making certain tests and taking certain readings upon and in reference to the pressure of the gas furnished by the Consolidated Gas Com- 3871 pany where the same is supplied to the buildings of Columbia University?

A. I have.

Q. Are you familiar with the apparatus with which such experiments were made?

A. I am.

Q. Do you consider that such apparatus is one that is proper for such experiments?

A. I do.

Q. Do you consider that such experiments were made in a proper and scientific manner?

A. I do.

Q. And that the calculations therefrom as the same have come under your observation are accurate and correct?

A. I do.

Mr. Kirby: That is all.

Recess until 2:15 P. M.

After Recess.

WILLIAM HALLOCK resumes the stand.

Cross-examination by Mr. MATHEWSON:

Q. You stated that you were Professor of Physics. I think you testified before the Stevens Committee that you were not a chemist, did you not?

A. I am not what would professionally be known as a chemist. Naturally, however, a physicist nowadays has to know more or less chemistry.

Q. Have you ever had the management of any industrial concern, or has your life been devoted to your profession of teaching or learning?

A. I never have had charge of any industrial concern. I was for nine years physicist for the United States Geological Survey.

Q. Have you ever been connected with any gas or electric business?

A. Commercially?

Q. Yes.

A. No.

3872 Q. Referring to the subject of electrolysis, you say that the damage does not occur where it occurs in gas pipes by the entry of the current into the conductor. It does occur, does it not, as an effect of the leaving of the conductor by the current?

A. Yes.

Q. Now, as a matter of fact it is not true, is it, that a current of electricity, and the entire current, follows the best conductor?

A. The current, if it has a choice between conductors, will divide in inverse proportion to the resistance of the path.

Q. Precisely, so that if electricity has a good conductor, and there comes in contact with the current a much poorer conductor, a portion of it will follow the poorer conductor although the greater portion will continue with the good conductor, is that right?

A. That is right. In inverse proportion to the resistance to the current along any path.

Q. Now, having settled these points on which we agree, let us find what you mean by a solution. You have stated that a current, for instance, in leaving a pipe, in order to do damage to the pipe, must meet some sort of a solution, did you not?

A. Yes, sir.

Q. What is a solution, as you define it, in that connection?

A. I should define it in that connection as water in which certain salts are dissolved by certain substances.

Q. Well, would you really say water? Is not moisture or dampness which exists in the ground a solution or may it not be a solution without being in such form that you could dip it up in cups?

A. Oh, yes.

Q. In other words, a solution may mean simply moisture, may it not?

A. Moisture as it occurs in the ground is in general a solution.

Q. And it is in fact in pretty nearly all ground except very sandy ground, and even there when you get down a little you find moisture is in it?

A. Yes.

3873 Q. Now, you spoke about the salts in solution being absorbed, did you not, or something of that sort when traversed by an electric current?

A. Decomposed.

Q. Is it true that the salts resulting from iron are decomposed, or if decomposed are they not merely changed in character without being destroyed?

A. The salts of iron if in solution—the action upon the salts would depend upon whether you had in mind the point where the current enters the solution or where it leaves the solution.

Q. Well, make the distinction yourself?

A. In the place where the current leaves the solution the end result would be the production of metallic iron; and the place where it leaves the conductor to enter the solution, the other component of the salt would be liberated and might or might not indicate a secondary decomposition.

Q. Well, the moisture of the ground which would carry a salt, or might, would be constantly renewed in a climate such as this by the action of the elements, wouldn't it, even if they were disposed of to some extent, currently, by the electric action?

A. Likely to be.

Q. When once disposed of it would not follow it might not be there again next day?

A. If it happened to be under an asphalted street there would not be very much there the next day.

Q. Don't you think that the soaking in or absorption in one form of action or another of moisture from sewers and from the ground which becomes dampened by sewers, would be felt?

A. Undoubtedly to some extent. It would be a quantitative question rather than a qualitative one.

Q. And when the current leaves the pipe and meets with these solutions that is when the pitting occurs in the pipe, isn't it?

A. Yes.

3874 Q. You spoke about it being necessary, or rather Mr. Kirby did, that there should be sufficient voltage for decomposition of the solution in order to set up this action. What would be the minimum voltage required for that purpose?

A. It would depend upon the metals involved and upon the nature of the salts in solution.

Q. Well, if you take the ordinary cast-iron pipe such as we find in the mains in the City of New York generally and such salts as you ordinarily find here——

A. I would say that that would be according to those circumstances somewhere between possibly one and five volts at the actual surface.

Q. At the point of leaving the pipe?

A. Yes.

Q. How would it be with wrought iron?

A. It would be very much the same.

Q. Now, I assume as a matter of course that the multiplication of the subways in the City of New York and the use of electricity on the elevated road where they do not have especially return conductors as they do for the street surface railways, would tend to increase the number and importance of stray currents in the earth, would they not?

Mr. Kirby: The Professor has testified——

Mr. Mathewson: Other things being equal?

Mr. Kirby: Then assume that that is so, and do not make the witness by his answer infer that what you say is so.

A. The conditions, if any further change in any other respect were made to increase the quantity of electricity we use would naturally be to increase the stray currents.

Q. And assuming that there is no insulated return conductor provided for the current, such a condition would tend to let more currents astray than if you were dealing with an insulated system, would it not?

A. Yes.

3875 Q. And would the electrolysis, in your judgment, if it once got fairly in operation be a serious menace to the integrity of pipes, especially of iron pipes?

A. Certainly, if it got fairly at work and kept up working it would be a menace to pipe.

Q. Have you read in connection with your readings the statement of Mr. Cowdery, the manager of the Laclede Gaslight Company, that the services in St. Louis in cases under his personal observation have to be renewed once in two or three weeks on account of their destruction on account of electrolysis?

A. I have not.

Q. If that be true, that would indicate a very serious situation, would it not, in a distribution system?

A. It would if it were true, yes.

Q. Now, in reference to the candle power and pressure, you say you used in your experiments the gas which you obtained at Fairweather Hall, Amsterdam Avenue and 118th Street?

A. Yes.

Q. Were all of these tests to which you have testified and which are shown in these tables which you have presented, obtained with that gas ?

A. They were.

Q. And in each of these tables was the gas drawn for your experiment from the tank into which you had first segregated it?

A. As I believe, in series of seven and eight.

Q. That is Exhibit FF. As to the other sheets, your tests were made by the gas furnished directly from the burner or service pipe of the company without first being drawn off into a separate tank?

A. Yes.

Q. You said at the outset that you checked the gas as to chemical composition, did I understand?

A. I certainly intended to convey no such idea. If I answered the question so that it conveyed that idea I should like to correct it. I made no chemical tests further than of illuminating power.

3876 Q. You did not make any tests of this gas to determine its chemical composition as to specific gravity or the amount of the possible ingredients, Marsh gas or otherwise, which entered into it?

A. No.

Q. Of course the specific gravity of the gas is influenced, is it not, by the elements of which it is composed, even with the same candle power?

A. Yes.

Q. And so, too, the calorific value of the gas, the heat units are influenced by the constituents of the gas?

A. Yes.

Q. And a coal gas of a certain candle-power will have a greater value of calorific value will it not, than a water gas of the same candle-power?

A. That I don't know. I never made such tests.

Q. When were these tests made indicated in these statements?

A. They commenced about the first of October and practically all of them were included in the month of October.

Q. 1906?

A. 1906.

Q. What does this mean on the table, State's Exhibit CC, "X.1. 1906"?

A. It means the series was made on the 1st of the 10th month of 1906.

Q. And the similar characters on the other sheets similarly indicate the date?

A. The date on which the series was made.

Q. The hour does not appear to be stated in these tables, at which your experiments were made?

A. No.

Q. Are you able to state the hour at which they were made?

A. I am not.

Q. Were they made in the daytime?

A. Some made in the daytime, some made in the evening, some made pretty late at night.

Q. Were they made in the afternoon or evening, most of them?

A. No, I think most of them were made in the forenoon or evening. The first series I happen to remember was made in the evening.

3877 Q. State's Exhibit CC?

A. Yes, the first series.

Q. Now will you describe in detail the method which you pursued in reaching the candle-powers indicated on these charts. In the first place, assume that you did not use the jet photometer, as you did before the Stevens Committee, did you?

A. I used a jet photometer as I used when working for the Stevens Committee for certain purposes, and I used the same apparatus as I use for determining the absolute candle-power.

Q. As you used then?

A. No, as laid down in the law. The law says, "candles." I should not, as long as working out my ideas—scientific ideas, resort to candles.

Q. What would you resort to?

A. I should consider by all odds the electric standard is the best standard at the present time.

Q. You would not consider a jet photometer was a scientifically accurate instrument?

A. It was not used as a standard.

Q. You would not consider it a scientifically accurate instrument?

A. No, sir, I should not.

Q. You used the ordinary bar photometer?

A. I used the ordinary bar photometer, yes.

Q. Did you yourself make these observations?

A. I did.

Q. Is it a bar photometer which is in use in the laboratory of the university?

A. It is a bar photometer which was put in there for these tests.

Q. Who was the manufacturer of this photometer?

A. The American Meter Company.

Q. Had you had experience in the use of the bar photometer before this was put in?

A. I had.

Q. Extensive.

A. Very extensive.

Q. When was this put in?

A. This was put in about the first of October.

Q. Did you use sperm candles?

A. I did.

3878 Q. How were the standard verified? Were the candles weighed by you?

A. Yes.

Q. Did you find that their weight corresponded with what it purported to be?

A. Yes.

Q. Now, will you state the steps you took in getting the candle-power?

A. In determining the candle-power according to the statute, the burner was placed at one end of the bar, the gas passing through the meter, and in my case with the proper arrangement for measuring the pressure at the tip of the burner and passing through a regulator to maintain the pressure uniform. The burner in question was regulated as to flow of gas until the flow was as nearly five cubic feet per hour as practicable, and then at the other end of the bar is

mounted the so-called candle balance in which two standard candles are mounted upon one arm of the balance and the distance from the candle to the burner to be tested is the length of the so-called bar. The candles are lighted and after they are in proper condition, burning long enough to get in practical uniform condition, the test is commenced and the time of the test is started when the pointer on the candle-balance passes the zero mark. The weight is adjusted first so that the candles are slightly too heavy for a perfect balance, as they burn down they become lighter and as the pointer indicates a perfect balance the experiment commences. Then during the experiment the rate at which the standard burner is consuming gas is observed, and a series of settings of the screen is made on the bar. This series of readings usually consists of a series of ten made approximately one minute apart. The test ordinarily is arranged to last for ten minutes during which time the candles are supposed to burn forty grains. Before the end of the test two small weights equivalent to forty grains are placed in the pan with the candles whereupon the pointer passes again into the light side of the
3879 zero and the experiment is continued until the pointer passes the zero mark again and the time is taken. Then there are two corrections that are to be applied to the average of the settings taken during the test. One is to test for the consumption of gas provided the burner did not consume exactly five cubic feet per hour, and the other is to test the candles which may not have burned exactly at the rate of 120 grains per hour.

Q. You reweighed the candles after the conclusion of the test to see what had been burned?

A. I did not. The amount that has been burned is determined by the addition of the small weights representing what the amount that is supposed to be burned during the test would be if they burned at the normal rate consumed in ten minutes.

Q. Is not the amount usually burned checked up by reweighing the candles at the conclusion?

A. That is practically impossible because that would mean that we would have to start the candles at the beginning of the test, light the candles at the beginning of the test, because you would have to weigh the candles at the beginning of the test; then you would have to light the candles and they would burn irregularly. It takes you some time to get ready and start it up; and if you stop the test by blowing the candles out, that is perhaps more easily possible than starting them up accurately; but the ordinary method, and it seems to me the much better method, much better approximating to something like scientific accuracy, is to determine the loss as is customary by the time required to consume a certain weight.

Q. You refer to the screen. I assume that that is the same as the disc, isn't it, which is moved back and forth on the bar?

A. Yes.

Q. Which gives it the name of the disc photometer sometimes?

A. Yes, it is called the disc photometer. They use all
3880 sorts of screens on the bar photometer, however.

Q. Was not this a disc or corresponding discs on two sides of a triangular block?

A. Some of the tests were made with a disc screen and some of them were made with the star screen. They are essentially identical in operation. Some observers prefer the star shape to the disc and some prefer the disc to the star shape.

Q. Did you make any correction for temperature?

A. Temperature of the room?

Q. Yes, in your experiments?

A. I did not.

Q. You burned, of course, nothing for barometer?

A. No, nothing for barometer, nothing for state of moisture in the atmosphere.

Q. Was the room in which the photometer was located well ventilated?

A. It was a large room, a room about thirty feet spare and sixteen or eighteen feet high, and aired by ventilators, the ordinary ventilator, supposed to be ventilated. I am not prepared to testify as to the efficiency of our ventilating system up there.

Q. Was there sufficient movement of air so that it might have affected the tests, do you think?

A. I think not, no.

Q. Now, in Series VII, Exhibit FF, we observe that you put down a pressure of .14 of an inch. Will a flame under that pressure stand firm in the ordinary room?

A. No, it does not. It is a very flabby, wavy flame.

Q. How did it go in the room where you were making your tests?

A. It was of that character, a wavy, flabby flame.

Q. It is not one that would ever be commercially used or usable?

A. Not if they could get anything else probably.

3881 Q. So that when you compute the value of that commercially on table 7, comparing it with the gas furnished under other pressure, that would be purely theoretical as far as the gas with a pressure of .14 of an inch was concerned, wouldn't it?

A. I don't know as I exactly catch the point. It is a positive fact if they burned it under that pressure they would get that efficiency.

Q. But nobody would ever burn it under that pressure?

A. Well, that is another question.

Q. You would not even get that efficiency in a living room with the current that prevailed, would you, at a pressure of .14 of an inch?

A. You would get the efficiency, you would get the candle power per cubic feet of gas used. People would not like the form of illumination though.

Q. There would be a call for higher pressure, wouldn't there, in that case, Professor?

A. There probably would be.

Q. Now, in the course of an examination of these tables I observe that in practically every instance, perhaps every instance, you give the greatest efficiency for the lower pressure, judged by the candle power for cubic feet per hour burned, or for five cubic feet per hour burned, don't you?

A. I do.

Q. You certainly do not mean to say that the gas burned in an open flame burner shows its greatest efficiency in practical use with a pressure under one inch, do you?

A. At the burner, yes.

Q. Well, I read in your affidavit, and you will correct me if I am wrong, after quoting Doctor Chanler—your affidavit in this case verified June 1st, 1906—you say:

"Doctor Chanler also with accuracy pointed out that gas at a pressure of less than one inch lost much of its illuminating efficiency."

How do you reconcile the two statements?

3882 A. Professor Chandler pointed out with reference to the test I referred to in his case there, the circumstances as to the particular efficiency. The particular pressure at which you get the highest numerical efficiency depends upon several factors; it depends upon the quality of the gas and particularly the gas involved in that particular experiment which possibly President Humphreys specifically pointed out in his testimony. It is impossible to say any more than to state the case for the particular burner under consideration and the particular gas.

Q. Well, you still stand by this statement that Doctor Chanler pointed out with accuracy that the gas at a pressure of less than one inch lost much of its illuminating efficiency, do you not?

A. That was in that case; that was the case cited there to which I was referring, I am confident.

Q. But that was the case where an examination was made of gas and tests made at the various pressures, wasn't it, of gas of the Consolidated Gas Company?

A. I don't know.

Q. Don't you remember he testified to his experiments with gas of the Consolidated?

A. I remember that I took in the affidavit the results given by Doctor Chanler and pointed out certain conclusions from them.

Q. Then in the gas which Doctor Chanler did use it did appear and was pointed out by Doctor Chanler with accuracy that at a pressure of less than one inch that gas lost much of its illuminating efficiency?

A. That is perfectly true, because you lose if you go on down; any gas will lose in efficiency if you go down to the pressure where you practically get no illumination out of it at all.

3883 Q. But, your best results appeared to be obtained, according to these tables, with the gas at a pressure under one inch and very substantially under one inch; in one case .14 of an inch, next case .58 of an inch, .4 of an inch, .3 of an inch, .2 of an inch, and so forth, and yet you have said that with the first of these, gas at .14 of an inch, the pressure would not be commercially useful. Do you mean to announce it as a general proposition that gas such as is now distributed in the City of New York according to your observation will actually show a better result under one inch pressure; or is that merely the result of these particular experiments and depending upon particular circumstances?

A. I think that measuring the pressure at the tip of the burner, that all of the evidence goes to show that the actual candle-power per cubic foot of gas consumed is greater when burned in the proper burner under pressure less than one inch.

Q. But, take your first table, Exhibit FF. You mean to say that gas burned under .14 of an inch pressure was a situation to be advised, would you, for ordinary commercial use?

A. That would depend upon circumstances. These pressures are taken at the burner and it would depend upon the particular burner. The burner that you refer to in question is——

Q. Fishtail No. 5, check removed?

A. Check removed. And it is a burner that is absolutely not adapted to low pressures.

Q. No, exactly. Then you would not advise burning gas at .14 of an inch pressure through that particular burner?

A. Certainly not.

Q. Would you advise the burning of gas at .21 of an inch pressure through that burner for commercial use?

A. I cannot say exactly because I don't know what the pressure is in these burners between the check and the tip. This burner is a rather efficient burner when burned with the check in and what the pressure is between the check and the tip I haven't tested so that I don't know what would be the particular efficiency.

3884 Q. When we come to the next pressure in this same table, Series VII, I find the third pressure .62 of an inch and that the candle-power for five cubic feet pressure is 10.2, but at .97 of an inch pressure, or 50 per cent. more, I find that the candle-power per five cubit feet burned has arisen to 10.3——

A. That burner is very erratic in its behavior, as the evidence shows; and that series was simply put in as an illustration of what happened when somebody gets out of patience with a check burner and pulls the check out.

Q. Now, in obtaining these pressures what process did you pursue in obtaining the exact pressure which you have employed here?

A. They were measured in most cases on the lower pressures, particularly on a delicate *guage* which I think is sometimes referred to as an "arch manometer," from the fact that the divided circle is in the form of an arch over the mechanism. The variations in pressure there can be read very accurately as the total pressure of something like one and one-half inches of water is spread out over a distance of twelve or fifteen inches.

Q. Who assisted you in making the proper tests or did you take them yourself?

A. In most cases I took them myself. In other cases Mr. Edgerton assisted me.

Q. Did you verify all these readings yourself? A. I did.

Q. How did you proceed to get the pressure where you had drawn the gas off to a tank and employed the gas in the tank for your experiment?

A. To control the pressure?

Q. Yes.

A. It was measured in the same way.

Q. How did you control it in that case?

A. By loading the receiver or loading counterweights on it for the low pressures.

Q. Now, you observe taking the first Exhibit CC, Series 7, 3885 that the first four of your five pressures would be below the rate which the law compels the company to deliver.

Mr. Page: Objected to, as assuming something which the law does not provide. The law provides for a pressure in the mains and does not regulate it at the tip.

Mr. Mathewson: Very good. I think that is perhaps fair criticism of the question.

Q. What would be the difference in pressure between the main and the burner?

A. That would depend upon the distance of the burner from the main of pipes connecting the two, and the other consumers in the neighborhood of the burner drawing from the same feed pipes.

Mr. Mathewson: I am very glad the Senator made that objection because it disposes of the suggestion that the service pipes could be meant.

Mr. Page: Oh, no. If you do not know the difference between a service pipe and a house-pipe you had better study it up.

Mr. Mathewson: There isn't very much difference, not where they make these tests at Columbia College.

Q. Supposing you take the ordinary service running to the main in the street at the distance at which the services which you used are from the main?

A. How far from the main?

Q. Yes.

A. I suppose we were practically from fifty to seventy-five feet from the curb. I don't know whether the main is on our side of the street or the other side. That would make perhaps fifty feet difference.

Q. How long was your house-pipe from——

A. I beg your pardon. Perhaps I did not understand 3886 that. I thought you asked our distance from the main.

Q. So I did. And now I ask the length of the house-pipe which runs, I suppose, vertically, something like that up from the service, doesn't it?

A. We were just about on the level with the top of the meter, we were only a few feet above the top of the meter.

Q. What would you think under those conditions the difference would be between pressure in the main assuming it to be in the middle of the street, and the pressure at the burner?

A. Well, if there were only one burner running I should think it would be probably very small. It would depend upon the amount of consumption of gas from the same local pipe as the burner was drawing from.

Q. Take it in the evening as the conditions exist there. You say you made the first experiments in the evening. You know about what illumination is usually in force at that time. What would you think would be the difference in pressure in the main and the pressure at the tip.

A. In our case?

Q. Yes.

A. It would be very slight because we use electricity for illumination entirely in the building and probably not more than one or two gas-burners running in the neighborhood and drawing from the same pipe.

Q. Do you think it would be one-half inch?

A. I should hardly think so.

Q. You never made any experiment to determine that?

A. No. I suppose the stiffness of the meter would come in to a certain extent. I don't know anything about that, either, what that amounts to.

Q. I see in many of these tables like FF you have placed opposite these various items "blows," ditto, ditto, ditto. What do you mean by blows?

A. I mean that the flame under those circumstances was slightly flickering and produced a noise such as is ordinarily referred 3887 to when you say that a flame blows, from the fact that the gas is being forced out of the slit at too rapid a rate.

Q. That is something a consumer could observe?

A. Yes.

Q. I see in State's Exhibit DD, first column, pressure .3 inch. We find opposite that "Flame wavy." What does that mean?

A. That means that the currents of air se-t up by the burner itself produced a wavy motion of the flame.

Q. That would not be commercially usable or desirable for use, would *be*?

A. I think not.

Q. You have referred to various kinds of burners yourself. Some of those you say are regulated for two inches pressure maybe——

A. The Welsbach burner can be regultaed for the particular conditions of pressure, but the ordinary burner has no means of regulation any more than is put on in manufacture.

Q. You can regulate it, can't you, by a check? Aren't there burners manufactured known as high pressure and low pressure burners which are not Welsbachs?

A. I don't know.

Q. If you are going to regulate a burner you may regulate it up as well as you may regulate it down?

A. I presume you could, yes.

Q. Now, I find that instead of one inch which you suggest is sufficient for stoves that Dr. Marks says in his affidavit, that it has been found necessary of late years to increase the gas pressure to about two and one-half inches, which pressure is required for the best operation of both incandescent mantle lights and stoves, and on the stand he repeated he was of that opinion still. Do I understand that you disagree with that proposition?

A. I do.

Q. As a result of these experiments?

A. Yes. I don't think additional pressure is necessary. I think in both cases the stove and the incandescent mantle can be 3888 adjusted to give as high efficiency on lower pressures as they can on two and one-half inches.

Q. Do you know whether the burner which is used by Dr. Love, the City examiner, in his tests, No. 7 Bray is checked or not?

A. I don't know. I understand that it is.

Q. Do you know whether it has any layers of gauze or otherwise in addition to the checkings?

A. I do not.

Q. What sort of a stove did you use in your experiments regarding the efficiency of gas at different pressures in operation of the gas stove?

A. I did not intend to convey the idea I had made specific tests in those cases; the circumstances are in general extremely complicated. I said from my experience with gas burners, meters and stoves. That extends over twenty-five years as a physicist, using them for all sorts of purposes.

Q. Have you made any tests which you can produce here in reference to the pressure in a gas stove at which it will produce the greatest efficiency?

A. I cannot.

Q. You do know, as a matter of fact, do you not, that there is great complaint, large complaint that sufficient gas from time to time is not delivered to operate properly, gas stoves?

A. I have heard such complaints, yes, but I do not know to what it is due.

Q. In other words, that would be remedied, would it not, generally speaking, to some extent, at least, by greater pressure?

A. If the difficulty is due to little pressure it would certainly be remedied by an increase of it, yes. I do not mean to quibble on that answer at all.

Q. No, I understand. I think you are answering fairly. I am not criticising that. Did you allow for altitude in your estimate of pressure, in your test of the pressure? Make any corrections for altitude?

A. Altitude from where?

3889 Q. Above sea level?

A. Whether 150 feet above with a high barometer or 150 below with a low barometer would be the same thing.

Q. You did not make any correction for altitude?

A. No, I made none of those refinements. The things I was after were not hair splitting things.

Q. Not why the pressure was larger or smaller?

A. Not why the pressure was larger or smaller.

Q. Now, in your series 8, second table, State's Exhibit FF, was a check burner used?

A. Series 8, yes; and the pressures recorded in the first column in that case were behind the checks.

Q. Was that set for high or low pressure, do you know?

A. I don't know.

Q. You know that high pressure is set for 1 to 1½ behind the check and low pressure up to about one-half an inch?

A. I don't know. I bought an ordinary check burner.

Q. Of course with the growth of the use of gas as fuel, and of electricity as an illuminant you would recognize the right and propriety of the company to furnish gas of sufficient pressure efficiency to operate fuel appliances, whatever that be?

A. Yes.

Q. Now, in the Welsbach test, what sort of mantle did you use, the mantles of the Welsbach Company or merely mantles which you obtain in the market?

A. I bought the burners and mantles at an establishment on 125th Street that has "Welsbach" in large letters out in front of it, and I asked for Welsbach burners and Welsbach mantles and they had the Welsbach label on them and on the box and the warning against any substitutes for them, so I think they were really Welsbach burners and mantles.

Q. Was the same burner used in all of our tests, that Welsbach?

A. Yes.

3890 Q. When you spoke of a pressure at the tip of the Bunsen burner which is used in ranges, just what did you mean?

A. In that I meant the pressure behind the opening where the gas comes out to mix with the air. In all or nearly all at least of the burners of that type the gas issues from a small opening and draws along the air with it and mixes with it and these mixed gases then finally burn on passing out of the openings of the burner. The pressure referred to is behind the point of opening where the gas comes out to mix with the air.

Q. Was the opening at which you made these tests the end of the horizontal or a vertical tube?

A. A vertical. The tests were made with the Junker Calorimeter, and in that instrument the jet is vertical.

Q. Now, referring to State's Exhibit EE, I observe that a Welsbach in that connection was regulated for 1.54 inches pressure, Series V, if I am correct?

A. Yes.

Q. But it obtained a better result at 2.35 inches pressure didn't it?

A. It obtained a slightly greater candle-power but a lower efficiency or candle per cubic foot of gas consumed.

Q. Then it obtained the highest candle-power, not at 1.54 inches at which it was regulated, but 2.35 inches so far as actual candle-power is concerned?

A. That is quite correct. It is very difficulty indeed to regulate the Welsbach burner, thoroughly satisfactorily, and as far as that is concerned, in the next series also with the Welsbach, if I remember all right, a higher efficiency was obtained at a pressure different from that at which I had regulated it.

Q. What is the explanation of that?

A. The explanation is I did not succeed in getting the proper regulation of gas and air for the burner and mantle which I was using.

3891 Q. Well, is your testimony here as to the pressure which is required for the proper operation of a Welsbach lamp at the highest efficiency based upon these experiments or is that based upon experience?

A. My testimony that within the ranges from an inch to two and one-half inches, and I thought approximately the Welsbach can be regulated to equal efficiency as based upon the experiments which I have made in this connection.

Q. Now, as a matter of fact, isn't it impossible to operate all appliances which an ordinary consumer has provided from his open-flame burners and Welsbach and gas stoves at a single pressure, if he desires the greatest efficiency for each class of apparatus?

A. I think not. I think if he uses the open-flame burner, adopted to the pressure of the gas he was furnished with, and his gas stoves and his Welsbach burners regulated to that pressure that he could run very satisfactorily on the same pressure.

Q. On the same pressure?

A. Yes.

Q. Well, if that is the case, why then, could not the pressure be limited at the meter by turning the cock there down to any point you desired?

A. It could be, provided there were no fluctuations in the pressure outside.

Q. Then, no matter at what point you set the pressure on the part of the consumer, or what point you conceive to be the best pressure for the consumer, there are bound to be fluctuations from that pressure, are there not?

A. Yes.

Q. And then to some extent the consumer must regulate the efficiency of his own apparatus?

A. Yes, if he wants the greatest efficiency, always.

Q. With what character or style of fuel appliances are you familiar as used throughout the City, I mean, for the use of gas?

3892 A. I am particularly familiar with the gas ranges as they are furnished or recommended by the Consolidated Gas Company. I have used one for a number of years in my apartment, and then, in the laboratory we have the ordinary burners and heaters of very great variety.

Q. Do you know of any stoves that are manufactured to operate at one-inch pressure?

A. I don't know as any stoves are manufactured particularly for that pressure.

Q. Well, is it not a fact that stoves are manufactured contemplating a certain pressure and to operate at the highest efficiency at about that pressure?

A. I don't know.

Q. Did I understand your testimony before the Stevens Committee to be in substance that the calorific value varies with the candle-power of gas directly and in the same proportion?

A. Not necessarily in the same proportion, but it is very likely to vary in the same way with the candle-power. It would depend probably, the exact ratio, upon how the increased candle-power was brought about.

Q. Now, you have stated that you assisted Mr. Edgerton in certain experiments as to pressure. What apparatus did you use in that connection, which you said in your testimony was proper apparatus?

A. We used what is known as the Richard Recording Manometer.

Q. Was that the same sort of an instrument that you used in taking these pressures which you have inscribed on the tables?

A. No. This apparatus which was intended for using in tests of this sort had no recording attachment whatsoever, and simply indicated the instantaneous pressure which had to be read off by the observer. In the Richard Monometer the pressure is recorded upon the paper upon a drum and the drum being driven by clockwork, the pressure at any particular hour may be read off with a fair degree of approximation.

3893 Q. Were these tests which were inscribed on these sheets as to the different pressures made consecutively one after the other?

A. Yes.

Q. Within a few minutes of each other?

A. Within half an hour or so, yes. They were run through as rapidly as the tests could be made.

Q. And did you change your pressure apparatus or otherwise adjust it so that it showed the pressure in each instance indicated before you took your candle-power?

A. Yes.

Q. Was it so adjusted so that it would maintain that pressure firmly?

A. If it were not so adjusted and if the pressure varied during the series of tests the pressure was read from time to time and an average pressure was taken.

Q. On what sort of a gauge or by what means did you know exactly what the pressure was at any moment?

A. That was with the arch manometer that I described a few moments ago, where the pointer magnifies the scale of pressure and the pressure can be read off at any instant.

Q. Is that an instrument which has been in use in your laboratory for some time?

A. Not that one, no.

Q. How long has that been in?

A. About a month now.

Q. Did you make any tests to verify it in advance?

A. I did.

Q. Now, what were these pressure experiments or tests which you made in connection with Mr. Edgerton, and what part did you take in them?

A. The tests consisted in maintaining for approximately a month the Richard Manometer in operation so that a continuous record of the pressure might be had, and my part in the operation consisted in looking at the manometer from time to time and changing the sheets every twenty-four hours.

3894 Q. The manometer, of course, is automatic in its action, assuming that the sheets were there?

A. Yes.

Q. And to what was it attached?

A. It was attached to the burner, to a gas hose attachment and a gas pipe in the same room in which these other tests were made.

Q. Do you mean that it was attached to the service pipe or was it attached where the tip was originally located, by the removal of the tip of the burner?

A. It was not attached to such a burner. It was attached to what is known as a hose attachment, which is a brass fixture having a stop-cock extension for the attachment of a rubber hose. They are often put in behind the burners in rooms where people wish to attach a stove or something of that sort.

Q. Of course the burner was kept closed or the pipe sealed?

A. There was no burner there.

Q. Did that connect with a service pipe upon which there were other burners drawing?

A. It did, part of the time, yes.

Q. How many other burners were drawing on that service pipe or could have drawn if lighted?

A. I don't know how may could have drawn. There were probably not more than four or five at the outset that there was any likelihood of being drawn, because the fixtures through the rest of that end of the building are never used for gas lighting as they have electric lighting altogether.

Q. How high above the level of the street would you say this way?

A. The room was about ten feet, I should think.

Q. Do you know what the elevation is at that point above the sea?

A. It is just about 150 feet. The elevation of the room in which we were working is within ten or fifteen feet of one hundred and fifty feet. I don't remember now whether it is the basement 3895 floor or the main floor of the building which is exactly one hundred and fifty feet.

Q. What was the size of the pipe which was attached to the manometer, the hose as you call it?

A. The rubber pipe?

Q. Yes.

A. It was what I think is ordinarily called three-eighths.

Q. Do you know what the size of the service pipe was?

Mr. Kirby: You mean the hose-pipe?

The Witness: The pipe upon which this stopcock was placed?

Q. Yes.

A. That was a half-inch iron pipe.

Q. Is that the main house-pipe or does it join the main house-pipe?

A. It joins the main house-pipe.

Q. What is the size of the main house-pipe, if you happen to know?

A. I think it is a two-inch pipe.

Q. Were there any Bunsen burners in use on this house-pipe?

A. No.

Q. The four or five that you have mentioned as possibly used, were small open-flame?

A. Practically, yes, I think so.

Q. Do you know about what the length of the half-inch pipe was?

A. I should say that it was somewhere in the neighborhood of forty feet. I don't know exactly where it takes out of the main.

Q. Were these all the experiments that you had to do with Mr. Edgerton and the tests, that is, simply recording the pressure for the period that you have referred to?

A. Yes, that was practically all there was.

Q. What period did that cover?

A. That covered a period from about October first, I think, until the present time.

Q. It is still going?

A. Yes.

3896 Mr. Mathewson: That is all.

Redirect examination by Mr. Kirby:

Q. You have been asked, Professor, in reference to the relationship between calorific power and candle-power, and you have stated that it was your opinion that one varied somewhat directly as the other. Is it not a fact that they do vary, one as the other, but that the calorific power lags behind any change in candle-power?

A. The increase in candle-power in general is necessarily brought about by the introduction into the flame of materials that are rich in carbon, and the addition of carbon to the gas in some form or other, and the additions of carbon would necessarily increase the calorific value as the carbon has a calorific value as well as the other gases, and on that account the addition of these materials to increase the candle-power, would increase the calorific value, and that would be approximately proportional, but I have no evidence myself as to whether it would be likely to vary one way or the other.

Q. Mr. Mathewson has asked you in reference to fluctuations of pressure and you have stated that in your opinion, such fluctuations are apt to occur.

Mr. Mathewson: Bound to occur.

Q. Or bound to occur. Is it or is it not your opinion that such fluctuations should be as little as possible and in no event beyond one and one-half inches?

A. It is.

Q. Your attention has been called to a statement giving the results of your experiments with the Welsbach burner, the same being State's Exhibit EE, and especially to the fact that with an increased pressure from 1.54 to 2.35 inches that the actual illuminating power of the flame increases. Does not this table and the results of 3897 your experiments also show that while the illuminating power increased, the efficiency of the flame, that is the candle-power per unit of gas burned, fell from 23.2 to 18.5?

A. It did.

Q. Your attention has been called to the growing use of gas ranges and other appliances to use gas as fuel, and the desire of consumers to have sufficient pressure to supply their demands in this direction. Is it not a fact that you have heard that most of the complaints come from faulty house-piping rather than from any other cause?

A. From my experience I should say that in very many cases at least, if not in the majority of cases, the difficulty is very largely due to improper house installation.

Q. Your attention has been called to an affidavit in which you made reference to the result of certain experiments made by Professor Chanler. Do or do you not know whether Professor Chanler used a Bray check burner in these experiments?

A. I don't know now.

Q. Do or do you not know where he took the pressure readings in his experiments?

A. I do not.

Q. The pressure which you have made reference to, are those taken at the tip of the burner with which you were experimenting, and do or do you not know whether it is customary in most of the photometers in use to take the pressure at this point?

A. I know that it is very common to lead the gas some considerable distance from the pressure gauge and meter to the burner, and I know from my own experience that a very considerable drop in pressure is often brought about by this piping between the pressure gauge and the burner itself.

Q. Do you consider that the proper and more scientific and most accurate way to measure pressure is at the tip rather than at any other point?

3898 A. It seems to me that that is the only proper place to take the pressure, if you are going to determine relations between burning conditions and pressure.

Q. Your attention has been called to certain notes upon your experiments in reference to the flame being wavy and the like. In the course of your experiments did you observe the character of flame of check burners, and if so, was it of this wavy character?

A. And the flame of the check burner is a comparatively wavy flame, in practically all cases, inasmuch as the action of the check is to reduce the pressure so that the gas coming out of the burner under low pressure is not very steady.

Q. From this would you conclude that while a check burner would probably give a flame of higher candle-power efficiency, that such flame would be much more unsatisfactory for general use than the ordinary bat-wing burner?

A. I think most people would prefer a bat-wing burner with a steady solid flame to the ordinary check burner flame which is affected by drafts very easily.

Q. Have you in the course of your observations observed any instances in which check burners have been replaced by the bat-wing or fish-tail burners or where checks have been removed in such check burners?

A. The only case that I remember now is one case where I pulled the check out of the burner myself in the apartment, and I cared for more candle-power even at the sacrifice of efficiency.

Q. You have been asked if you made any corrections in your experiments for temperature or atmospheric conditions, atmospheric pressure and so forth, and you have answered that you did not. Do you think that the lack of such correction in any way affected the correctness or incorrectness of your statement?

A. I do not, for various reasons. The corrections referred to are refinements in determination and can only be satisfactorily applied when investigations of the highest accuracy are carried out 3899 and for one thing I consider such experiments with the sperm candles as out of the question. The chief reason, however, for not making any corrections of that sort in these experiments, was the fact that the series of experiments was carried through in so short a period of time that the conditions of barometric pressures, room temperature, moisture of the atmosphere and carbonic gas in the room could be considered as practically constant during the series and it was essentially with relative effects that I was dealing and not with absolute candle power.

Q. And if such corrections had been made do you think it would to any great percentage have changed the results you obtained?

A. No, they would not have changed the general results appreciably.

Q. Do you know whether it is customary or do you consider it necessary to make such refined corrections?

A. Not in cases of this kind, not in work of this sort. The Act for example, in determining candle-power, makes no reference to any such correction as that.

Q. Your attention has been called to——

Mr. Mathewson: Either as to pressure or candle-power, does it, the Act makes no provision as to pressure or candle-power as to such refinements as that.

The Witness: No, it does not say anything about it.

Q. Your attention has been called to conditions as they may exist in St. Louis and as they may exist in the Borough of Manhattan in reference to stray currents and to possible electrolytic action occurring therefrom. Do you know anything about the conditions in St. Louis with reference to this matter?

A. I do not.

Q. Would you be able to make a comparison with condi- 3900 tions in St. Louis and the Borough of Manhattan with your present knowledge of the conditions as they exist?

A. No.

Q. Nor did you?

A. No.

Q. Your attention has been called to the various electric railways in the Borough of Manhattan and reference has been made to the method in use of returning their circuits. Are you familiar with the circuits of these various electric roads as to whether they are insulated or whether they are not, have you ever made any study of that question?

A. I have never made any study of it and am only familiar with it in a very general way.

Q. So that any conclusions or inferences which might be drawn from your answers to such questions would be other than any deductions made from a knowledge of the situation as it really exists?

A. Yes.

Q. You have been asked whether or not it is a fact that an electric current will follow any path that is interposed which has any conductivity whatever, and you answered that such is indeed the case. Do you want it to be understood from that answer that any appreciable current would follow a path of high resistance if a path of low resistance were there for it to follow?

A. If the resistance were very high, in one case, and low in the other, of course, only a very small fraction would take the path of the higher resistance.

By Mr. MATHEWSON:

Q. But the fixed law would govern, I assume which you have defined, would it not, for currents?

A. Yes.

By Mr. KIRBY:

Q. As a matter of fact, the earth is of relatively very high
3901 resistance to that of a metal conductor, is it not?

A. Yes.

Q. And moist—water in itself is practically a non-conductor, isn't it?

A. Pure water is a non-conductor practically.

Q. And if earth were moistened so as to become mud, I presume that mud would be relatively of a very high resistance compared to a metal conductor, would it not?

A. Yes.

Q. Now, if we had a moist earth which we will call mud, does it necessarily follow that the passing of a current through that mud would set up an electrolytic action therein?

A. The passage of a current if the current actually goes through the mud, we will have no immediate evidence of the action of the current except at the places where the current enters and leaves the mud.

Q. And even there would we have electrolytic action if there were not the necessary solution of salts to permit a decomposition of the substance through which the electric current passed?

A. Well, if there were no salts there of that sort, you would have no action.

Q. You have stated that if there is electrolytic action the point where the harm, if any, will result, will be that where the current leaves the metal conductor, which in this instance, we take to be a gas pipe. Because a current is on a gas pipe, does it, to your mind, follow that the current will leave the gas pipe through the earth?

A. Well, of course, the current will have to get off somewhere, but it may go home to the works and go out through the holder and water tanks and connections of that sort. It may not leave the pipe, strictly speaking.

Q. And is it not more likely to follow the iron of the gas pipe until it reaches some other metal conductor than it would be to stray off into the earth and return in that way?

A. In general it would, yes.

3902 Recross-examination by Mr. MATHEWSON:

Q. Did you make any experiments with the Kern mantle burner?
A. No.

Q. Do you not know that the most efficient mantle burners use pressures above even two and one-half inches?

A. I have heard that there are some burners that use high pressures, but I do not of my own knowledge know anything of them.

Q. What was the size of the burner out of which you took the check in your own case?

A. I think it was a four-foot burner. I don't remember particularly.

Q. Four-foot Bray burner?

A. No, it was not a Bray burner.

Q. Was it a fish-tail?

A. I think it was a fish-tail, but it was something over a year ago and I only remember that the flame was a wavy smallish flame and I pulled out the check and got more candle-power, but I suppose paid more for it correspondingly.

Q. Don't you know that the gas company furnishes according to location and use desired, burners of two, three, four and five feet, adjusting them according to the requirements of the situation?

A. That may be. I did not know it.

Q. Is not the check in the burner intended to equalize the flow and make it uniform?

A. That is the intention of the check, yes.

Q. You said, I think, that where very little gas was used, as at Columbia College in the department which you were experimenting that you thought the difference between the pressure at the main and the pressure at the burner would be very slight. The difference would be very slight, is that correct?

A. I think so, yes. I don't know as I say anything about the loan in pressure in the meters. It was an unknown factor to me,
3903 but otherwise I should think there would be but slight difference in pressure.

Q. All the tables you have presented here except State's Exhibit EE, relate to the open-flame burners, don't they?

A. Yes.

Q. As a matter of fact taking these tables, it appears that five out of the six assumptions on State's Exhibit CC, Series 1, and three out of the six on State's Exhibit CC, Series 2, and three out of four on State's Exhibit DD, Series 3, and three out of four on State's Exhibit DD, Series 4, and four out of five on State's Exhibit FF, Series 7, and two out of five on State's Exhibit FF, Series 8, and three out of five on State's Exhibit GG deal with pressure below one inch?

A. Yes.

Q. And if there is practically no loss between service pipe and the main, they would be pressures below that at which the company under the present law is permitted to deliver gas, would they not?

A. I don't know as I catch the point quite.

Q. Assuming that there would be in these cases practically no difference in pressure between the main and the burner where you made the experiments, that would mean that in all these cases you took pressures below that at which the company would be permitted to deliver the gas, is not that so?

Mr. PAGE: Objected to as an entirely improper because it is assuming that if there would be no difference in pressure there will be no difference, will there be any difference in the pressure?

Mr. MATHEWSON: No, that is not the point.

Mr. PAGE: That is your question.

The MASTER: I will allow it.

Mr. PAGE: Exception.

A. It would.

3904 Q. Is it not true in every one of these tables and series, the greatest efficiency, as you term it, of candle-power, of five cubic feet, per hour, is reached, or appears by these tables for a pressure substantially below one inch?

A. Pressure at the tip below one inch, yes.

Q. And I suppose if there were practically no difference between the pressure at the burner and the pressure at the mains, that would mean the same thing for the main?

A. Yes.

By Mr. KIRBY:

Q. These experiments, the results of which are set forth in State's Exhibits CC, DD, EE, FF, GG, HH and upon the chart accompanying the same, State's Exhibit II, the result set down in the first line under each series is that you deduce the standard at 22 candle-power from five cubic feet of gas burned per hour and upon which the standard of comparisons are based?

A. Yes.

Mr. MATHEWSON: They are in some cases and in some they are not. There are comparisons showing the actual amount of cost.

GEORGE F. SEVER, called as a witness in behalf of the defendants, being duly sworn, testified as follows:

Direct examination by Mr. KIRBY:

Q. Professor Sever, are you upon the faculty of Columbia University?

A. Yes, sir.

Q. And what chair do you hold there?

A. Professor of Electrical Engineering, Junior Professor of Electrical Engineering.

3905 Q. You are also Dean of the faculty of what?

A. Acting Dean of the faculty of Applied Science.

Q. Are you a graduate of any technical schools?

A. I entered the Electrical Engineering Course at the Massachusetts Institute of Technology and was there for four years.

Q. After that what did you do in the way of scientific work or occupation?

A. I spent six years in electrical engineering and electric railroad work and designing with the Thompson-Houston and General Electric Companies, and became connected with Columbia University in 1893, as inspector in the Electrical Engineering Department. Since then I have been pursuing electrical engineering in its various branches, such as electric lighting, electric power, and electric railway.

Q. Do you belong to any scientific society?

A. The American Institute of Electrical Engineers and various other technical societies, and have been a vice-president and manager of the American Institute of Electrical Engineers.

Q. Do you hold any office under the government of the City of New York?

A. Yes.

Q. What is that?

A. Consulting Electrical Engineer to the Department of Water Supply Gas, and Electricity.

Q. How long have you held such an office?

A. Four years.

Q. What are your duties as such official, especially in reference to the streets in the Borough of Manhattan?

A. My duties are to report to the Commissioner at his request on any electrical engineering problem that is brought to his attention either by citizens or by the engineers of his department.

3906 Q. In this connection have you made any special study of possible electrolytic action or corrosion of the water mains or other mains or conductors in the streets of the Borough of Manhattan?

A. To a slight extent.

Q. Have you in the course of your studies or duties as Professor in Columbia University or elsewhere made any special study of the problem having to do with possible electrolytic action and stray currents from power plants or electric railways or other sources?

A. Yes.

Q. Have you made an investigation into the conditions as they exist in the Borough of Manhattan in reference to such problems, the source of such trouble if it did arise?

A. Yes, I have.

Q. Are you familiar with the various electric roads in the Borough of Manhattan?

A. Yes.

Q. And the method with which these roads have been installed and the supplying of power to the moving parts thereof?

A. Yes, I am familiar with all that construction.

Q. Are you familiar with the report of the American Gas Light Association for the year 1906, being a special report of a committee appointed by such association and known as the Committee on Electrolysis?

A. Yes, I am.

Q. And was this report made and did such Committee which made it consist of A. G. Glasgow as chairman, John Williamson, S. P. Curtis and Arthur H. Hall?

A. Yes, it was signed by those members of the committee.

Q. And was Professor Albert F. Ganz, M. E. of Stevens Institute, Consulting Engineer to the Committee?

A. Yes.

Q. And did you in the preparation of this report act in any capacity in relation to the work performed by Mr. Ganz?

A. Quite unofficially, in furnishing him access to all my collection of electrolysis literature, which he freely consulted.

Q. Do or do you not know whether the report of such Committee states——

3907 Mr. Mathewson: Wait a minute. Are you preparing to prove this witness's opinion or are you getting him to quote somebody else's opinion? Because I think the rule is well established that you cannot, on direct-examination of your own witness, present to him books and so on, and ask if he approves of them. That very same question arose before the Stevens Committee when I endeavored to pursue the same course with reference to Professor Chandler, and Senator Page will remember that Mr. Hughes promptly objected and stated that that question had been decided by the Court of Appeals in a case which he himself argued, and that he himself knew what the law was, consequently I was unable to pursue that course although it was stated that on cross-examination you might so examine a witness.

Mr. Kirby: I withdraw the question.

Q. We have in the Borough of Manhattan how many different kinds of electric railroads?

A. We have four.

Q. What are they?

A. We have the system commonly known as the Metropolitan, which is a surface road; the elevated system, commonly known as the Manhattan; the subway system, and a short section of the Union Railway operating with a single overhead trolley.

Q. Of these which is the smallest?

A. The Union Railway.

Q. In regard to number of miles of tracks?

—. The Union Railway.

Q. Where does that operate?

A. It operates from 135th Street and 8th Avenue across town, running east, and crosses the Harlem river on the Madison Avenue bridge.

3908 Q. Will you describe to us the method of construction of the street railway, that is, what you have called the Metropolitan?

A. The Metropolitan or surface system consists of a shallow conduit placed between the tracks in which the two conductor rails carrying current are placed, supported on insulators, held on the frame work of the yokes of the system and the current is kept on those two conductor rails at all times without serious leakage.

Q. This is generally what is known as the double conductor conduit system, is it not?

A. Yes.

Q. And the return system is completely insulated, isn't it?

A. Yes.

Q. And from this system there would be no stray currents, would there?

A. No.

Q. Now, we have the subway. Will you briefly describe the system on the subway with reference to the electric conductors and method of furnishing the current to the moving trains?

A. The Subway consists, essentially, from its operating standpoint, of a regular railroad system supplied with its additional rail commonly known as the third rail, which acts as the positive conductor and carries the current from the various sub-stations of the subway to the moving units or trains. This third rail is carefully insulated by insulators from the ground and from all other surrounding objects. The current, after passing through the motors of the cars, is returned to the sub-stations by the service rails or running rails and additional copper feeders known as negative feeders which are connected with the negative bus-bars at the sub-stations, and the generators. The service rails are supported on wooden ties which in the subway proper are embedded in stone ballast, the stone ballast being placed directly on the concrete floor of the subway. One rail in each track is used for signal purposes and is not used or utilized for carrying the current back to the sub-stations.

3909 Q. This contact rail is bonded, is it not, the joints of the contact rail are?

A. Yes.

Q. What do you mean by "bonded?"

A. The two ends of the rails are connected together by copper bonds or conductors of sufficient capacity to carry the current.

Q. And if such rail joints are bonded with 300,000 cir. mils. copper bond you would consider they were amply bonded for the current which they carry, would you not?

A. Yes.

Q. And they are so bonded, are they not?

A. Yes.

Q. Do you now whether the negative busbars and return feeder cables are adequately insulated from the ground in the subway?

A. In my opinion they are. The practice which obtains there is to connect together all the lead sheaths or coverings on the negative cables or return feeders. In addition to all this, the lead sheaths of the positive feeders are connected together and the current is taken off of them, in case there is any leakage. In addition to both of these precautions the lead sheaths of all the high tension cables are connected together, and current taken off of those, if any leakage occurs, and in all these cases the endeavor is made, and has been made successfully in the case of the subway, to insulate the negative feeders and also the other feeders, both positive and high tension, from the ground in order to prevent the passage of the return current or the leakage current from these lead sheaths to the ground and cause breakdowns.

Q. And what you have just said in this connection is also true of the elevated structure, is it not?

3910 A. Not at present to the same extent. They have already commenced to put the Manhattan Elevated return system and cables on the same basis as the subway, that is by insulating the return feeders and keeping the negative currents, as you might call them, on their own feeders, and cables and structure.

Q. Now the tracks in the subway are laid on stone ballast, which in itself is a non-conductor, is it not?

A. The tracks are laid directly on the wooden ties.

Q. Yes.

A. And they on a stone ballast, and that on the concrete floor of the subway so that——

Q. So it interposes between the current bearing rail and the ground a very high resistance?

A. A high resistance.

Q. A high resistance?

A. Compared with the potential which exists between the service rail, the running rail and the ground.

Mr. Mathewson: Are you referring to the subway or elevated?

Mr. Kirby: I am referring to the subway. I have not got to the elevated yet, except about one question, which I asked him particularly.

Q. In your opinion with such a system as you have described as the one installed and in use in the subway, would or would not you think it highly improbable that currents would stray therefrom, that is, would follow other than the circuits intended for their return to the power station?

A. In my opinion the steps which have been taken and are now in use to prevent currents from straying from the return circuit are successful in preventing this difficulty.

Q. Now, we come to the third electric road, that is the elevated. Will you describe for us, the system which has been installed 3911 or is in operation in the elevated road in reference to the current and the method of supplying the power to its train?

A. In the Manhattan system the current is sent out from numerous substations directly to the third-rail without any additional feeder service and passes through the motors and returns through the following paths: the service rails, which are bonded at all their joints with No. 0000 bonds through the longitudinal girders of the structure; through return feeders of 1,500,000 cir. mils supplementing the other paths; and by the service rails, that is, all the service rails on the Manhattan are used as a return. So we have this arrangement — all the service rails, all the longitudinal girders and heavy copper return feeders, acting as a path to bring back the currents to the negative bus of the substations; in all cases the negative bus is insulated from the ground and other electrical circuits.

Q. That is, the positive supply feeder is the contact rail, isn't it?

A. The contact rail, otherwise known as the third rail.

Q. That is the rail upon which the wheels do not run?

A. Yes.

Q. That is insulated?

A. Yes, that is carefully insulated on what are known as reconstructed granite insulators.

Q. Vitrified clay insulators, is that the same thing?

A. No, that is not the same.

Q. But all insulators of very high resistance and proper for the purpose, in your opinion?

A. Yes.

Q. And the return circuits being in part the rails, have their joints bonded, have they not?

A. Yes.

Q. And these bonds consist of what?

A. They consist of heavy copper of either No. 000 or No. 0000, depending upon the character of the traffic, and the service rails are also bonded to the longitudinal girders of the structure. 3912

Q. Would this mean that the return circuit would be one of great conductivity?

A. Yes.

Q. Is it not a fact that the drop upon this circuit is very small by reason of such great conductivity?

A. The drop, of course, varies with the current employed. If you mean the——

Q. I do not mean when trains are passing over the road and using up current, but I mean the return circuit considered by itself?

A. It would have a very small drop for a comparatively small current, but of course the drop increases directly with the current used.

Q. Certainly, but the drop could be relatively small, would it not, by reason of the great conductivity of the return circuit?

A. Yes, except—relatively small as compared with a great many other things.

Q. Yes, relatively small compared with a system which would not have a bonded rail return or without that rail supplemented by longitudinal girders of an iron or steel structure?

A. Yes, that is so.

Q. And in your opinion, such a system consisting, as you have stated, of a bonded return, bonded rail return, supplemented by part of the structure itself, would be such as to prevent currents in any large or appreciable amount leaving the return placed there for that purpose and doing what is commonly called "straying" therefrom, would it not?

A. It is my opinion that with the construction that has been cited and with the additional construction now so successfully employed on the subway, that the difficulty, if any, from stray currents from the elevated will be practically or almost entirely done away with.

Q. Now, is it not a fact that any stray currents so-called
3913 means lost currents or lost energy or current put to no good use by the source from which they emanate, be it anything, and that therefore every effort should be made, and in your personal knowledge is being made, to prevent the same for this reason, if for no other reason?

A. As related to the Manhattan system?

Q. And any other system from which there might be such stray currents. In other words, do not stray currents mean a loss of energy, and therefore a loss of coal and therefore a loss of dollars and cents?

A. Every effort should be made by operating companies to keep the current on their own property, their own paths of conduction, to diminish their own loss and to prevent trouble with other systems, and other properties.

Q. From your knowledge of the various means and conductors in the street mains and conductors in the streets of the Borough of Manhattan, if it should happen that there should be a stray current or stray currents in the streets, what path do you think the current would take to return to that point where it would reach a plane of the same voltage as that from which it started?

A. It would take the paths or path of greatest conductivity.

Q. And in your opinion would that be a gas pipe or a water main or a lead sheathed cable or lead sheathed cables for telephone or telegraph or other customary purposes?

A. In my opinion it would naturally take the lead sheathed cable path as those paths are continuous and they are large as to carrying capacity and low in conductivity, whereas the gas pipes and water pipes and other subsurface structures have varying conductivities and therefore paths varying in resistance for such currents.

Q. You have spoken of the various electric roads in the city. Are there any other sources which supply electric current in any
3914 considerable amount that you are aware of?

A. Why, the telegraph companies supply simply a small amount of current. That is negligible in this proposition. The Edison Company supplies a large amount of current for the operation of their system, but they endeavor to keep their system free from grounds or connections with the earth except in the case of what is known as the neutral wire on their distribution circuits.

Q. You are familiar with the system which is used by the Edison Company in this borough, are you not?

A. Yes, I am.

Q. And you have spoken of the subway as being a three wire system, and of those three wires one being known as positive, one known as negative, and the third wire being known as neutral?

A. Yes.

Q. Do you know whether or not that neutral wire is what is known as a grounded wire?

A. It is grounded.

Q. What do you mean by a neutral wire and what do you mean by its being grounded?

A. It might be well if I should delineate the general system of the

Edison Company in order to lead up to the description of the neutral wire.

Q. Well, do so. It is rather important.

A. In the main power house of the Edison Company the electric current is generated, transmitted as an alternating current at high pressure to the substations, is then transformed to a low voltage and at the same time changed to a direct current and distributed on their systems for consumers, in a three wire system. That is, there is one positive wire, a neutral wire and a negative wire; the difference of potential between positive and negative wire is twice that between either the negative and positive wire and the neutral. The neutral is connected to the ground for two purposes, the first one being to prevent consumers from receiving electric shocks, which although not dangerous, might startle them, and the second one is to prac-
3915 tically neutralize the potential in the Edison system. In order that this latter idea may be accomplished, currents must pass from one neutral to another through these ground connections, in order to carry out the idea of equalizing the potentials.

Q. And these currents in passing from one neutral to another, pass through such conductors as may be found in the ground and would be stray currents, would they not?

A. Yes.

Q. And would set up such electrolytic or other action as any other stray current might set up?

A. Yes, it would. It might be large in amount, and it might be very small in amount, but would vary with the conditions of load on the system, and the difference of potential which exist between these grounded points.

Q. Do you think it would be possible to so use the system as to have the neutral wires always approximately of the same sort of potentiality so that there would be no current flowing from one to the other?

A. Not under the conditions and circumstances that I have noted.

Q. And those conditions and circumstances are those in use in the Borough of Manhattan, are they not?

A. Yes.

Q. So, then we have four important sources of electrical energy in the Borough of Manhattan, the Metropolitan Street Railway, the Subway, the Elevated and the Edison systems; am I right in that?

A. Yes.

Q. Any other source of electric energy as the same exists at the present time would by comparison to these four sources which I have mentioned be of slight importance, would it not?

A. Yes, they would.

Q. Now, if by reason of the systems now installed by the Metropolitan Street Railway, in the subway and in the elevated, and if such precautions as are being used upon such systems for the pre-
3916 vention of currents therefrom, and by reason of such methods as have been adopted for such prevention and which are to be used supplemental to those now in use in the ways in which you have indicated, if stray currents should appear in the streets of

New York, would you not consider it probable that the same emanated from the circuits of the Edison Company?

Mr. **Matthewson**: I object to that question as being purely a conclusion and involving assumptions upon which conclusions are asked.

The **Master**: I will allow him to answer it. I suppose you propose to connect it later, Mr. Kirby.

Mr. **Kirby**: I think it is connected.

Question allowed; exception.

A. The installations which the subway has made and the Manhattan Company is operating and is to make, in my opinion will prevent stray currents from passing from their property and structures, on to extraneous structures or subsurface conductors. Then there will be in the City a number of sources of stray currents, some large in magnitude and others small. The small ones I have cited; those of the telegraph companies. There is, in my opinion, the possibility of a considerable passage of current between these unbalanced neutrals of the New York Edison Company. There is also another source of current in Manhattan Borough which has not been cited and I think should be mentioned; that is, current passing across from Brooklyn on the Brooklyn Bridge and wandering to a slight extent around the lower end of Manhattan; also passing up the Bowery, both on the elevated and on the surface railway system to the Williamsburgh Bridge and going back to Brooklyn. That I should like to mention as a proper engineering report.

Q. But with all these elements and various sources of electric current before you, do you or do you not consider that the conditions as affecting stray currents with possible electrolytic action therefrom in the streets of the Borough of Manhattan are improving or becoming worse? 3917

A. I think they are improving. I think that if any electrolytic corrosion is noted by any owners of sub-surface structures, including the City itself, it will be only in isolated cases which can be handled by proper precautionary measures locally applied.

Q. I note that you are reported in a report on the City of New York, Manhattan and The Bronx, issued by the National Board of Fire Underwriters Committee of Twenty, November, 1905, as follows:

"Professor G. F. Sever, consulting engineer of the Department of Water Supply, Gas and Electricity, has made a few tests in both boroughs, but the results were never collated. They showed, however, that pipes were only slightly positive to the ground.

The Interborough Rapid Transit Company has made tests on its system, but the results were not obtainable. Some leakage has occurred from the elevated structure, but it is not known to have caused damage. Other companies report no trouble from leakage or electrolysis."

Q. Is that your opinion of the situation as it exists to-day, insofar as set forth in that statement which I have read?

A. Yes.

Mr. **Kirby**: There may be a few more questions I would like to ask. It is five o'clock and we may adjourn, I think.

Mr. **Burr**: Before we adjourn I want to call the Master's attention to City's Exhibit 55, which was ruled out. I refer to the extract from the Tribune, purporting to be a copy of an official communication from the Consolidated Gas Company furnished to all 3918 the papers of that date in question, which appears upon the record. I asked Mr. Garver at the time and I asked Mr. Mathewson to-day whether they would assent to that being an official record or statement of the company, and I understood Mr. Garver to say at the time that apart from his objection to its being immaterial and irrelevant, he was not then in a position to say that it was an authoritative statement. That did purport to be an official statement of the company, and I have asked Mr. Mathewson to-day, and I would like to know whether they are prepared to admit that as an official statement of the Consolidated Gas Company upon the record of this case.

Mr. **Mathewson**: Certainly not. I don't know anything about it and I have no knowledge that it was an official statement or was even a statement handed out by the Consolidated Gas Company. I say that in addition to the proposition that is is utterly immaterial and irrelevant and valueless, so far as this proposition is concerned.

Mr. **Burr**: That is your opinion. I think it is quite an important admission as against interest by the company and therefore if you will not admit it I propose to call all the officers of the company to ascertain by whose authority that was stated at the time or published in every newspaper in the City of New York.

Mr. **Mathewson**: Mr. Burr, I simply don't know anything about it. I never heard of it until you produced the so-called newspaper statement here.

At 5:05 P. M. adjourned until Monday, November 5, 1906, at 10:30 A. M.

Last Exhibits:
Complainant's 256.
City's 63.
State's II.

3919 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *November* 5, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

3920 Mr. BURR: Before proceeding, I wish to state that I received a letter from Professor Bemis giving a list of the changes which he desires to make in his testimony growing out of typographical errors; in the testimony not including the recross-examination of October 30th.

The MASTER: Attend to that some time outside of the hearing, with counsel.

Mr. BURR: I submit this to the stenographer, and will have a copy made.

Mr. MATHEWSON: Before you submit it, I would like to go over it; before the corrections are made, because some of them we may not think are typographical errors.

Mr. BURR: I will have a copy of this made and present it to you. Now, we have arrived at a point in the investigation of the books where Dr. Marks and his assistants are desirous of checking off the sizes of the mains on the map of mains, the books of maps of mains, in the office of the Consolidated Gas Company. On Saturday they were all ready to proceed in that direction, and Mr. Carter and Mr. Simpson, I understand, refused to permit the examination to be made until they consulted with Mr. Mathewson, who was out of town, and they said they would communicate with him this morning. Dr. Marks was there this morning with his people for the purpose of making the examination, and I understand Mr. Carter and Mr. Simpson communicated with Mr. Mathewson, and the result is they have refused to permit the examination of these books of maps to be made. That is a very important matter to us for the purpose of completing the inventory of the property of the company, the item of mains alone representing some $12,000,000, as claimed by the company, and embracing some 822 miles of mains in the 3921 streets of the City of New York. Now, we simply desire from the books that are there, which are in their possession, in the office of the company, to check off the sizes and lengths of mains as testified to by Mr. Simpson in this proceeding, all with a view to verifying the amount of money invested in the business for the year 1905, which is the period on which we are working, and to which Exhibit 94 relates, so that I ask that the company be instructed to permit the accountants and Dr. Marks to make this examination of the maps of mains for the purpose of checking off the lengths and sizes of those.

Mr. MATHEWSON: I think Mr. Burr has put it a little strongly when he says Mr. Mathewson refused this morning to permit the examination, or that Mr. Carter on instructions of Mr. Mathewson did.

Mr. BURR: I said that is what Dr. Marks stated, as he understood it.

Mr. MATHEWSON: The situation is this: The books of the company show the lengths of the mains and the sizes of the different mains, and those books have been checked off, or I understand can be checked off. What it is now desired to examine are not the books at all, but maps showing the main system of the company. In other words, ordinary insurance maps which are employed for that purpose, as I understand it. A map of that character, when you come to feet of mains, and on that small scale, is not anything that you can figure by at all. The accurate figures are in the books of the company, but this is merely a graphic and general illustration for our purposes of where the mains lay without intending to run to a foot, and I do not see that there is anything to be gained by going over those maps. If it was desired to check off the different sizes and lengths from those maps, I am informed by Mr. Carter it would
be a work of months. The books of the company which
3922 show the lengths of mains have been checked, haven't they,
Dr. Marks? The books, the records of the lengths and sizes
of mains, you have?

Mr. MARKS: It is impossible to check them save either by going out and measuring the mains, or by the briefer method, which would occupy about one week of rapidly checking off the lengths and sizes of the mains as laid down from the maps.

Mr. MATHEWSON: Do not these lengths and sizes appear in the books of the company; not on the maps?

Mr. MARKS: Not in the books as yet furnished.

Mr. MATHEWSON: Have you asked for any such books?

Mr. MARKS: I have.

Mr. MATHEWSON: Has there been any objection to that?

Mr. BURR: We have repeatedly asked for the books and the maps from the beginning when we went up there to examine these mains for the period of 1905, and we understood there would be no objection to examining them.

Mr. MATHEWSON: A map is not a primary record.

The MASTER: Mr. Burr says the books are made up from the maps.

Mr. MATHEWSON: No, on the contrary, the maps are made up from the record? If we lay a mile of main, we buy the pipe and pay for it, we know how much we bought, and we know the streets it goes through, and we then put that down on the maps, so it is a secondary record, it is not a primary record at all; we do not put it down and then measure on the map and see how far it is and then enter that into a book. That would be ridiculous.

The **Master**: Under the circumstances I shall have to ask Mr. Burr to furnish something a little more specific than this informal statement. You will have to give me some affidavit or statement of Dr. Marks showing exactly what book they have been 3923 afforded access to containing entries regarding mains and also specify the books to which they have been refused access, and then I will take such statement or affidavit as the Consolidated Gas Company submits for the purpose of determining which is the book of primary entry and decide the matter.

Mr. **Burr**: Of course a map is not a book of account, and a book of maps is not a book of accounts, and I cannot see, nor has Mr. Mathewson stated, any good or valid or substantial reasons for objecting to our inspecting the maps. Any effort we are making is a sincere one to ascertain what is the exact condition of affairs for 1905.

The **Master**: No, but on his statement of the facts, assuming them to be correct, I do not see but what every object you can attain can be accomplished better by checking off the entries in the books than by the maps. As I understand his proposition, these maps serve the same sort of purpose that a progress profile does on a construction contract. The estimates and measurements of the engineers would be the primary evidence as to the amount of work generally, but for the purposes of convenience and easy reference it is customary for engineers to plot out on a progress profile the statement showing the manner in which the work is progressing. Now, it may be quite accurate and it may be only approximately accurate. It is not the original record of what is being done. As I understand him, these maps are of the same character. Now, if that is so, I do not think there is any point in your having access to them. If it is not so, I think you ought to have access to them.

Mr. **Burr**: The books, of course, would not show the location and the maps would. When you consider the testimony in this case that there are 822 miles of mains—some testimony has been to the 3924 effect that there was 790, then again the testimony has been 822 miles—and that there are 422 streets open in the City of New York, in the Borough of Manhattan, we would like to know from these maps where these mains are located, as well as their sizes and lengths.

Mr. **Mathewson**: Oh, I see. That was not included in the original statement.

Mr. **Burr**: I say the books do not show the location of the mains.

Mr. **Mathewson**: I don't know whether they do or not.

Mr. **Burr**: If there is a duplication of the mains, we are entitled to know that.

Mr. **Mathewson**: I don't know that it is very material.

Mr. **Burr**: I am surprised there should be any objection made to the examination of the maps at all.

Mr. **Mathewson**: On the question of duplication, I think it appears by Mr. Simpson's testimony in streets, as distinguished from avenues, there is very little duplication in the streets. In the evidence, as I stated to you, Broad, required services on both sides, and so forth. There are different lines of mains in many instances; properly so.

The Master: Is or is it not the fact that the books to which Dr. Marks and his associates have had access show the location of the mains?

Mr. Mathewson: I suppose so, but upon that point I am not specially informed. I will take it up.

The Master: Then we had better defer action on that until later, and you can do something about that during the day.

Mr. Burr: The time is getting short and Dr. Marks says we can get it all done in a week or ten days.

The Master: My experience shows me where it is a matter
3925 or oral discussion it is so inconvenient and uncertain that for
my own satisfaction I should like to have something down in black and white, showing a little more specifically what is desired, in case there is any objection to it.

Mr. Mathewson: I want to call the Master's attention and counsel- attention to another point in connection with this examination. I stated that counsel might examine the books or by their representatives they might examine the books of the constituent companies making up the Consolidated Gas Company. We find after very careful search that the books of some of the companies are not in our possession. I am informed by Mr. Carter that all the books of these companies never were in the possession of the Consolidated except at one time, if at all, that was at the time of the investigation in 1886, when Mr. Yalden had them, and he is not sure that the Consolidated Gas Company had them then. It seems that the Metropolitan Gas Light Company officials and some other officials of these constituent companies in the progress of the consolidation had the books, and in searching our vaults we are unable to find some of them. For instance, the Mutual Gas Light Company's books, ledgers, journals and cash books cannot be found in our vaults. We are looking for them, and we don't know where they are. We would have supposed that we had them, but we have not evidently. The Knickerbocker Company's books, ledgers, journals, and cash books are also not in our possession. As to the New York Gas Light Company, and the Manhattan Gas Light Company, there are quite a number of books missing, such as the ledger of the New York Gas Light Company from February 1st, 1845, to July 1st, 1857. The other ledgers we find. The Manhattan Company ledger from 1845 to 1848 we do not find. We find the ledgers beginning with 1849.

The Master: I assume they do not want to go back any
3926 farther than that.

Mr. Mathewson: I don't know that they do, but I merely call their attention to the fact so they may determine in view of what they have introduced of Mr. Yalden's figures, which are made up by the examination of all these books, whether they think it is worth while to pursue fragmentary parts of the examination.

Mr. Burr: We wanted an opportunity to examine the Real Estate Account, that is all.

Mr. **Mathewson**: You cannot do it as to two of these companies unless we can succeed in finding the books. They are not in the vaults where all our books are kept, and Mr. Carter says he does not think the books of the Knickerbocker Company were ever in our possession, except as they were while Mr. Yalden was examining them. You can proceed with this fragmentary examination, but I call your attention to the fact, whether it is worth while in view of the facts that you have put in.

Mr. **Burr**: May we look at these books and also the books of the Consolidated Company showing real estate accounts?

Mr. **Mathewson**: You are looking at the books of the Consolidated Company containing the real estate account now, I think.

Mr. **Burr**: At all events it is clear in your mind that we are entitled——

Mr. **Mathewson**: You are looking at the books showing the accounts—I don't know about that, I don't know what you have examined there.

Mr. **Burr**: We are very anxious to look at the books of the Consolidated Gas Company containing the real estate account, also the books of the six original companies showing that account. If we cannot have all those books of the six constituent companies we would like those which are in the possession of the Consolidated Company and the right to examine all the books of the Consolidated Gas Company containing the real estate account. 3927

Mr. **Mathewson**: I do not think there is very much to that as far as the Consolidated Gas Company is concerned because the Consolidated Company has simply taken the appraised value of real estate in 1884 and the books show what it has added to, less what it has sold.

Mr. **Burr**: That should be a very simple matter.

The **Master**: Then that seems to be disposed of.

Mr. **Mathewson**: Supposing you tell your people to examine the real estate account so far as they can in the books of the constituent companies.

Mr. **Burr**: Very well. Have you a copy of that list?

Mr. **Mathewson**: Mr. Carter has.

George F. Sever resumed.

Mr. **Kirby**: I have no further questions of the witness.

Cross-examination by Mr. **Mathewson**:

Q. Professor, I suppose it is fair to assume that Ohm's law prevails in New York City as it does elsewhere and that the current of electricity if it comes in contact with two conductors will follow to a certain extent each conductor, is it not?

A. Yes.

Q. So that the mere fact that there is a conductor met by the current, which would be called an excellent conductor, and other conductors which are not so good would not prevent the escape of stray currents on these less good conductors?

A. No.

3928 Q. So that it is simply a question of the amount or the intensity of the current which escapes, is it not, in considering the transportation system in the City of New York?

A. Yes.

Q. A certain amount of electricity passing over an insulated conductor through the air perhaps, especially damp air, will escape into the air, will it not, so that you do not get at the end of your line the same power with which you stated?

A. Not with the systems that we have in the city.

Q. Do you carry to the end of your line the entire power with which you start or do you lose a part of it in progress?

A. A certain amount of the power is expended in heating the conductors over which the power is transmitted so that the translating device which you desire to operate does not receive all the power which is sent out from the power station.

Q. Take the subway for instance; are the return rails there insulated?

A. They are not intentionally insulated as is the third-rail.

Q. And will not a certain amount of the electricity under the recognized law escape from the rails and follow the other conductors in contiguity?

A. Yes.

Q. Would it not depend to a certain extent as to whether the supports of the rails were damp or not, as to the amount of electricity that would escape?

A. Yes.

Q. And is there not generally speaking always a certain amount of moisture or dampness in a soil like that of New York, which is not a sandy soil?

A. Yes, that is so.

Q. Speaking of the elevated road, you spoke of the other paths of return which were supplemented by an arrangement which you mentioned. What were the other paths of return which you had in mind and which you said were thus supplemented?

3929 A. The paths of the return of the elevated are service rails, the longitudinal girders of the structure and return feeders, copper return feeders connected to the structure and service rails to carry the current back to the negative bus at the sub-stations.

Q. Are the horizontal girders bonded together in the elevated structure do you know?

A. The longitudinal girders?

Q. Yes, the longitudinal girders?

A. Yes.

Q. They are bonded?

A. Yes.

Q. How about the other girders, are they in any way bonded to the longitudinal girders?

A. The transverse girders are not.

Q. And I suppose the same situation would apply to the elevated as to the subway, that a certain amount of current according to the recognized law would escape to the street, would it not?

A. Yes, I think it does.

Q. Do you know whether all the Edison neutral wires are grounded?

A. No, I do not.

Q. You spoke of the bridge from Brooklyn or the two bridges as introducing certain currents or opportunities for stray currents. Then we have the bridges, the surface roads, the elevated, and the subway; and will not the subway which is being constructed under the river to Brooklyn furnish further opportunities for disturbance, electrical disturbance, in the way of electrolysis perhaps, at least stray currents?

A. I think a certain amount of stray currents can be derived from that installation.

Q. What about the Union Railway which operated lines in the northern part of Manhattan, 135th Street, which is an overhead trolley road; wouldn't stray currents be likely to appear from that to a certain extent?

A. They certainly do.

Q. Is that a character of construction which is best qualified to prevent the escape of currents to the earth?

A. No, it is not.

3930 Q. There is not any return system there, is there, of an efficient character which you have described as to the service railways generally, that is the underground trolleys?

A. You mean as comparable with the subway, Manhattan and Metropolitan?

Q. Yes.

A. The return on the Union Railway system is not as good on these other three.

Q. The current returns through the ground there, does it not, to the point of starting, generally in the best way it can find.

A. It returns through the tracks and negative feeders.

Q. Now you have omitted one electric system that is in process of installation, which is the New York Central and the New York, New Haven & Hartford electric transportation system through the tunnel, which electric system, I understand, is to extend to Woodlawn or above. What would be the effect of the immense amount of electricity which will be employed in moving the heavy trains of those two roads from 42d Street up through the city?

A. It will be to introduce into the city another electric railway, the return current for which is to be very heavy and against which there will have to be precaution taken to prevent that current from going into the ground. They have service rails, heavily bonded and return feeders of large carrying capacity to handle this problem.

Q. Do you know whether they intend to employ the same method as is employed in the existing subways?

A. As to what?

Q. As to the return of current.

A. They ought to use lead covered return feeders placed in tile ducts and insulated as far as possible so that the lead sheaths will not be damaged from earth currents or stray currents.

Q. You know that other subways are designed and that the
3931 Rapid Transit Board is considering letting contracts for other
subways, don't you?

A. Yes.

Q. Well now, Professor, is it not a fact, that taking into consideration the operations of the trolley over the bridge, the new Williamsburg Bridge, and the current which may be observable in that connection and the new subway to Brooklyn which is not yet opened, and the contemplated subways and the New York Central and the New York, New Haven & Hartford electrical construction and the other electrical construction which is contemplated and which has very recently been put in, that the number and intensity of stray electric currents is likely to be increased as compared to what it was years ago?

A. There is no doubt about it, sir, unless there are very considerable precautions taken to keep this return current on the conductors of the railroad systems themselves, and if you will pardon me an interjection, I suggest we omit the New York, New Haven & Hartford system which is an alternating current system.

Q. Well, take the methods of return which are now employed, things as they stand; is it not true that the number and intensity of the electric currents which you would be likely to find now in the streets of New York would exceed by reason of these constructions, contemplated and at present, the currents a few years ago?

A. Yes, sir.

Q. And so far as they may have an effect by way of electrolysis, the danger would now be correspondingly greater would it not than it was a few years ago?

A. At the present time it is greater than it was some years ago.

Q. And other things being equal, the danger will tend to increase, will it not, with the duplication and addition of these various
other electrical constructions which are planned to be put
3932 through the streets of New York?

A. I do not think so if proper precaution is taken by these railway companies to maintain their systems in proper and up-to-date engineering condition.

Q. But is it not true that whatever precautions they may take, that in accordance with the law to which I have referred certain portions of the current will get into the street and the entire current will not follow the best conductor back to its starting point?

A. I cannot answer that question by either yes or no because either answer would negative the question.

Q. Give us your view?

A. That it would follow the best conductor back to the station, whatever it might be, but I think with the precautions that are now being taken and should be taken by the railroad companies, that the currents in the ground, or stray currents, will not develop to excessive proportions or extremely dangerous proportions.

Q. You would not mean by that that there might not damage occur in local sections where the soil or the contiguity of pipes rendered that favorable, would you?

A. There may be eventually and always will be certain local troubles.

Q. And you would expect the damage from electrolysis to be greater in present conditions than it was before there was any electric transportation system in the City of New York, would you not, as things now exist?

A. Yes, with all the current that is being generated by all the systems.

Q. Now, Mr. Simpson testified that pittings were observed in the mains of the company at one or two points contiguous to the Brooklyn Bridge and in that section, and that pittings had not been observed until recently there. Would it be probable that those pittings arose from the currents which were due to the operation of the electric system over the bridge?

A. Yes, I should imagine so.

3933 Q. Well, Professor, you expressed some views, did you not, at the International Electrical Congress in St. Louis in 1904 on the subject of the effect of currents of electricity in the City of New York?

A. Yes.

Q. And I will read what you are quoted to have said there and see if this accurately expresses your view. Page 688 of this volume.

Mr. KIRBY: What volume?

Mr. MATHEWSON: Volume III, printed volume.

Mr. KIRBY: Reports of the proceedings?

Mr. MATHEWSON: Yes, International Electrical Congress, St. Louis, 1904, it is endorsed. I am merely reading this because the Professor states it so much better than I could by any question that I think it will be much clearer.

"Professor SEVER: The data which we have collected contains many references to underground conductors other than piping systems, so that I think it is perfectly proper that that phase of the situation should be brought before this meeting. About two years ago when I became connected with the city government of New York, Mr. Jones brought me a cable sheath which he claimed was destroyed by electrolysis. I know that on some cable sheaths in New York City, both in the telephone and power circuits there are large currents coming presumably from the operation of the electric railways. In The Bronx there has been considerable difficulty. In the Borough of Manhattan there has been difficulty which to some extent has been remedied by the co-operation of the officials of the railway company and the telephone companies. I know of one instance where the sheaths were bonded at one point by a heavy copper conductor, to a return of the Manhattan L—approximately 1,500 amperes passed over that wire—sufficiently 3934 heated so one could not put his hand upon it—the Manhattan Elevated road uses its structure completely bonded, its service rails, and a large amount of return feeders, something like six or seven million cir. mils., to get their current back without causing trouble to their own or other conductors. In spite of all their precautions there are still thousands of amperes coming back on the cable sheaths as well as those of other companies. It has been brought to the attention of city officials for their recommendations as there are at times a higher potential than twenty-five volts between the ends of the line and the nearest substation, which is the maximum fixed by the city rules."

I assume that that still expresses the situation, does it not?

A. That is in regard to the Manhattan.

Q. So far as you referred to it?

A. Yes.

Q. When you say "in spite of all the precautions of the Manhattan L there are still thousands of amperes coming back on their cable sheaths as well as those of other companies," do you, or do you not, by "other companies" refer to the other companies having structures in the streets?

A. That is companies whose cable lines parallel the Manhattan L, or companies whose cable lines are connected to those parallel lines.

Q. Might that refer to gas pipes in the street?

A. Any subsurface structures would carry current in proportion to their conductivity.

Q. Have you ever yourself made any surveys to find out the electrolytic condition in New York City, and particularly the Borough of Manhattan?

A. Not in the Borough of Manhattan.

3935 Q. What did you mean exactly when you said that they had already commenced to put the Manhattan Elevated return system on the same basis as the subway?

A. I meant that they are putting in return feeders and insulating the sheaths of these return feeders carefully from the structure and service rails and insulating the negative bus in the substations, in the endeavor to keep the current on those return conductors and away from the ground; that is providing a better path than would be provided through the ground back to the structure and the substation.

Q. In speaking of feeders, you do not mean that the elevated has any return copper feeders back to the power houses in the usual sense in which feeders are understood, do you?

A. Yes.

Q. Have they return feeders of copper?

A. Yes, they have.

Q. Do you know to what extent, and how these feeders are connected and operated?

A. They are connected to the service rails at or near the substations, and taken back to the negative bus at the substations.

Q. Connected you mean at a single point?

A. Yes, at the substations.

Q. Is it not a fact that there is only a general connection between the structure and each substation, bringing back the return, is not that the only return feeder in the case of the elevated?

A. They have additional return copper in some sections besides this connection directly at the substation.

Q. Have you ever examined the continuity of the bonding of the girders to determine whether that was defective on the Ninth Avenue L for instance, due to the pin construction of the girders?

A. I have not examined it specifically.

Q. The elevated structure itself is not insulated from the ground, is it?

A. There is no definite insulation of the verticals or the
3936 uprights from the ground. The uprights are set in concrete,
on concrete foundations, which may or may not be insulators.

Q. It would depend somewhat, would it not, as to whether these bases were moist or dry?

A. Yes, sir.

Q. Well, do you know whether there have been any conferences between the elevated or the Edison Company and the city authorities as to conditions resulting from stray currents?

A. So far as the city is concerned officially, I know.

Q. You don't know that it has ever been officially brought to the attention of the Edison Company that their currents are the currents which may be doing damage, do you?

A. I don't know.

Q. Have you heard that there are differences of potential between the elevated railroad structure and the gas and water pipes and lead cables as great as 12 or 15 volts?

A. Yes, I do know that.

Q. Well, is not that a serious menace to those underground pipes?

A. It may or it may not be.

Q. Well, it might be, might it not?

A. It might be and it might not be. It is not a good thing to exist and from an engineering standpoint should be corrected.

Q. Well, don't you know that the currents are such that the telephone company has been obliged to connect or bond the lead sheaths of their cables to the elevated railroad sheaths and structures in order to protect their telephone cables?

A. Yes, that is so. They are doing it in a number of instances, their lead sheaths acting as part of the return conductor system for these railway currents.

Q. What would the necessity for such action indicate?

A. If they did not do that the current would leave their cable sheaths and eat up the lead and destroy their cables, and they make
this bonding simply as a self-protective device and endeavor
3937 to keep their lead cable sheaths insulated throughout the ducts
so the current will leave only at these predetermined points
of connection.

Q. And of course it must mean that there is some leakage of current, else they would not be obliged to do this to protect themselves?

A. That is very true.

Q. I suppose the gas pipes would be acted upon just as these sheaths of the telephone company, would they not, in the same location?

A. In a similar manner, providing the current went on through them in the same degree and left them in the same degree.

Q. Well, do you know what the copper capacity of the return circuit of the New York Edison Company is?

A. Of the return circuit in the New York Edison Company?

Q. Yes.

A. No, sir. I do not.

Q. Do you happen to know what current is carried by this neutral?

A. No, I do not.

Q. If the current carried back over this neutral is a minimum, and it is of large copper section, would not the drop on the neutral be exceedingly small?

A. I don't think I quite understand the question, sir.

Q. Well, if the current carried back over this neutral is small, and the neutral is of large copper section, would not the drop on the neutral be exceedingly small?

A. Yes, it would.

Q. Would you be surprised if you found it was only a mere fraction of one volt?

A. Why, no, I should not. I should think that was a wise precaution.

Q. Well, under such conditions and if there was only a mere fraction of a volt, and there being an almost perfect return path of high conductivity, would the tendency of currents to stray off be a minimum also?

A. Yes, the tendency would be a minimum.

3938 Q. Well, what is the basis of your suggestion, then, Professor, or perhaps your conjecture, that the Edison system is contributing to the electrolytic situation in the City of New York?

A. Only that if there is a considerable difference of potential between these larger separated neutrals, there would be currents flowing to equalize the potentials.

Q. Yes, if that be true, but if the conditions are such as I have indicated in my last question as to the minimum, then the contribution of the Edison Company to electrolysis would be very slight, would it not?

A. It undoubtedly would.

Redirect examination by Mr. Kirby:

Q. Mr. Mathewson has spoken of the installation now being put upon the lines of the New York Central and the New York, New Haven and Hartford Road, and you have stated that you are familiar with the installation which is being placed on such roads. In your opinion is there any great danger of stray currents from the power which would be furnished over this installation?

A. That is on the New York Central installation?

Q. The New York Central installation and the New York, New Haven and Hartford, both of which have been referred to?

A. I do not consider that in the case of the New York, New Haven and Hartford there is sufficient proof or evidence that there will be any trouble from the alternating current system. The plans developed for the handling of the return current on the New York

Central as at first made I feel are not sufficient to handle the return current, but this is now being modified so as to increase the capacity for taking care of this negative current and the endeavor being made to keep the stray currents out of the sub-surface conductors and off of the cable sheaths.

3939 Q. Ohm's law has been referred to and you have stated that no matter what the conductivity of the material might be so that it is a conductor, a certain proportion of the current will use that as a means of flowing from one point to another. This is true of a current of any intensity, is it not?

A. Yes.

Q. Whether the voltage be high or low?

A. Yes.

Q. And is it not a fact that the harm comes from the amount or intensity of the current rather than from the fact that a current of small or inappreciable amount happens to be on that conductor?

A. Will you read that question, please?

(Question read.)

The Witness: I am afraid I cannot answer that question. That is, the harm develops from the stray currents leaving these sub-surface conductors at some point, and the destruction would be directly as the quantity or intensity of the current.

Q. And if that current was of such a low intensity, as to be of a fraction of a volt or the amount flowing was of such a small amount as to be but a fraction of an ampere, the chances of harm would be very small, would they not?

A. Yes.

Q. So that because a delicate instrument would indicate a current, it does not follow that harm will result from that current?

A. Not if it remains in the sub-surface conductors themselves.

Q. And in electrolytic action we must have a voltage sufficient to set up such action in the electrolyte, whatever that might be, is not that so?

A. Yes.

Q. And that in most instances would mean a voltage of certainly more than one volt, would it not?

A. It has been found that it takes about two volts to electrolyze, that is dissassociate water, but so-called electrolytic action 3940 and subsequent chemical action may occur through smaller voltages.

Q. Would you say with a voltage of less than one volt?

A. In some soils where there is a great deal of salt, and saline matter, the electrolytic action might occur with one volt.

Q. Is it general that such is the case or is that an exception?

A. It is rather the exception and only in those places where the soil has a very low resistance due to these salts.

Q. Attention has been called to the subway return rails and the question has been asked you whether or not they were insulated. While they may not have been intentionally insulated, as a matter of fact, are they not practically insulated from the ground?

A. They are practically insulated from the ground for the voltages which exist between them and the ground. They are placed on wooden ties which are placed on the stone ballast, the latter being placed on the concrete bed of the subway, and the voltage existing between the service rails and the ground is comparatively small, so that this location of the rail is such as to afford a good insulation.

Q. The Union Railway, both in its length of line and in the amount of electricity generated as compared with the other electric roads in the city, has a very small amount of importance, has it not?

A. In the Borough of Manhattan, yes.

Q. Yes, that is what I had reference to?

A. Yes.

Q. An extract has been read from your report to the International Electrical Congress and your statement there in reference to the return of the current mainly had to do with the continuous lead sheaths of such cables for telephones, telegraph, or lighting or power purposes which were in the ground, had it not?

A. Yes.

3941 Q. And it is your testimony that if there be stray currents in the ground, such currents would follow such continuous paths, rather than water pipes and gas mains, which afforded it a more broken path, and a path of higher resistance?

Mr. Mathewson: Is not that all covered by the Ohm's law, that they follow the conductors in proportion to their resistance?

Mr. Kirby: I think my question is plain.

A. Yes.

Q. It has been stated that trouble has been found upon the cables of the Telephone Company and that from such cables conductors have been led for the purpose of carrying off that current and caring for it in a way which would prevent the destruction of such cables; also that the Edison Company by the use of a neutral wire of great size, and therefore large conductivity, would lessen the risk of any difference of potential between the neutral wires. Does this in any way confirm your opinion that the subject of stray currents and electrolytic action therefrom is better understood than formerly, and therefore the danger therefrom is less than formerly?

A. No, I do not think the danger is any less than formerly.

Q. Or is no greater than formerly? I am speaking of the future, Professor.

A. I think with the precautions that are being taken that the danger will be decreased and not increased, and those precautions are being taken and will have to be taken.

Recross-examination by Mr. Mathewson:

Q. You have said that the danger from electric currents or the danger from electrolysis was greater in soil containing saline matter than in other soil. Would not that danger be particularly
3942 present in the lower portions of the City of New York which have been filled in around the water front, and like Canal Street, which was formerly on the level with the river, and sections of that kind?

A. In places of that character the danger is greater, the opportunity for stray currents to produce results is greater.

Q. And where old buildings have been taken down and the mortar more or less mixes with the soil in connection with rebuilding, does not that give a reaction which is favorable to electrolysis?

A. Not so great as the saline locations, as the presence of lime is not so dangerous as salt.

Q. When you said that a current of electricity would follow the line of least resistance, that you do not intend to put in conflict with the Ohm's law, do you, that it will follow conductors, whatever they are, in proportion to resistance, universally?

A. It is exactly the same thing, sir.

Q. So that if there were two conductors in contact with a current of electricity, to put it in that way, the electricity would not all go to the best conductor, would it, or the current?

A. No, not at all, it would divide in proportion to their conductivities.

Q. Now, if it be true that heavy lead cable sheaths have been fused or heated to very high temperature, would not that indicate that thousands of amperes were being carried over the cable sheaths?

A. Yes, but not necessarily due to the stray currents.

Q. No, perhaps not.

A. It may be due to a number of reasons.

Q. That would indicate a large current of considerable intensity?

A. Unquestionably.

Q. And that, whatever its cause, would indicate a dangerous or serious condition, would it not?

A. It would indicate two serious conditions, one that there may be
stray currents there and one that those cable sheaths may
3943 have been burned off owing to some other fault on the line.

Mr. Mathewson: That is all.

Henry H. Edgerton, called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Mr. Kirby: Mr. Master, I produce Mr. Edgerton here as a witness who will give testimony in reference to certain readings that he has taken in regard to the pressure of the gas in the service mains, also with reference to certain deductions which he as a gas engineer will make therefrom. It is our desire that Mr. Edgerton should give testimony upon other matters having to do with this case, that is in regard to the value of plant and the cost of making and distributing gas. But upon these two latter subjects we are not at this time prepared to produce his testimony, and I therefore ask that he be permitted to testify upon the first matter of pressure and that then we may be permitted to put on other witnesses before his testimony in regard to the value of plants; and this for the reason that as yet our engineers have not completed their examination of the inventory of the plants, and placed their values thereon. If there is any objection to proceeding in this way, I am afraid we cannot proceed with Mr. Edgerton.

Mr. Mathewson: Have you any other witness?

Mr. Kirby: I have not.

Mr. Mathewson: I don't know that I have any objection, provided you wind up with Mr. Edgerton on the subject of pressure and have that disposed of. 3944

Mr. Kirby: That is my purpose in bringing him here today. It was my feeling that if we could take this subject up by itself and end it as far as Mr. Edgerton is concerned now, it would save time. But I will qualify Mr. Edgerton as far as possible along all lines.

Direct examination by Mr. Kirby:

Q. Have you ever designed or built gas works?

A. Yes, sir.

Q. Where have you built such works and about when?

A. I built works in part in Fort Wayne, Ind., in 1868, 1869 and 1870, additions; built works on the west side of Chicago in 1871; Sunbury, Pa.; Middletown, Ohio, in 1871; Logansport, Ind., 1872; New Orleans, additions in 1872, 1873 and 1874; Mobile, Ala., 1874, 1875, 1876, additions; Shamokin, Pa., and Plymouth, Tamaqua, Montenoy City, Shenandoah——

Mr. Mathewson: Can you give the dates of these?

The Witness: Those were all in around about 1871, 1872 and 1873. I built those in partnership with Mr. Patton. I was not present at all the building of the works, but in part. I was consulted in regard to the building of the Mutual Gas Works in New York, or the changing it to an oil gas plant in 1872. Also Detroit, Mich., in 1872; addition to Memphis, Tenn.

Q. When was that?

A. Memphis, Tenn., in 1871 and 1872. That was the first works I had anything to do with in oil gas. It was then called naphtha gas. There are others I don't remember.

3945 Q. You have built works since that time, haven't you?

A. Oh, yes.

Q. Do you remember a few of the more important?

A. In 1882 I became connected with the U. G. Improvement Company as engineer and chemist; reconstructed the New Orleans Company—New Orleans Gas Works to water gas in 1882, 1883, 1884; Stamford, Connecticut, 1882; Danbury, Connecticut, 1879 and 1880; Wallingford, 1883; Pensacola, 1883; Waco, Texas, away back in 1874; Logansport, Indiana—I don't know whether I mentioned that——

Mr. Mathewson: Yes, you did.

Q. Any more recently than 1884?

A. Yes; in part; there was no construction of works by me entirely, I don't remember any, since 1884.

Q. Well, what works, if any, since that time were you associated with others in the construction of?

A. I was consulted in the construction of a number of works:

Omaha, Savannah, Reading, Pennsylvania, for the Reading Railroad Company, and also for the Reading Company. I don't remember much down here. In New Jersey, that is, Paterson. In Waterbury I did a little.

Q. Waterbury, Conn.?

A. Yes. That was in the case of the United Gas & Improvement Company's construction.

Q. In your work of designing or constructing these plants, did it in most instances include designs and construction of the distributing system as well?

A. In most cases.

Q. Have you ever operated any gas plants?

A. I have directly, officially, and also as consulting engineer in regard to them.

Q. What works have you operated officially?

A. I operated the Fort Wayne works from 1866 to 1871.

Q. What position did you occupy in those works?

3946 A. Secretary, superintendent and treasurer; I did everything there was about it.

Q. And thereafter did you directly operate any other works?

A. Not as an official. I assisted in operation by my advice in quite a number of works.

Q. What works did you as an advisory engineer or in an advisory capacity help to operate?

A. Mobile, Alabama; New Orleans, Chicago (West Side), and you might say the Mutual in New York City on several occasions; Detroit; Memphis. I now think I omitted to mention a number of works I built up in Minnesota—Faribault, Stillwater, and Red Wing. I again took charge of Faribault in 1901. I also omitted Asheville, North Carolina, and some connection with the Schenectady works also for the General Electric Company; that was in 1904.

By Mr. Mathewson:

Q. I do not understand what that relates to, whether operation of plant or construction, as to Faribault, Schenectady, Asheville?

A. Both, construction and operation. I may state from 1900 to 1905, I was consulted entirely by the General Electric Company for their works, various gas works.

By Mr. Kirby:

Q. Are you operating any gas works at the present time?

A. No. I am operating at Danbury. I am consulted in everything that is done there.

Q. Have you any official relationship with the company there?

A. No, sir.

Q. Simply acting in an advisory capacity to the company?

A. Yes.

Q. Have you ever made any special study of water gas, of oil gas and of oil as an enricher of gas?

A. I omitted to state in that where I acted in advising that I

3947 have also advised in connection with municipal works in regard to the several processes they use or used at one time in the operation of their works.

By Mr. **Mathewson**:

Q. Municipal of New York?
A. Municipal of New York, yes. I omitted that.

By Mr. **Kirby**:

Q. Now, in the main having completed the plants you were associated with in one way or another, will you answer the question that I just asked. The Stenographer will read it.

The **Stenographer** (Reading): "Have you ever made any special study of water gas, of oil gas and of oil as an enricher of gas?"

A. I have.
Q. Have you ever made any special study of the relationship between oil when used as in enricher and the candle-power resulting therefrom of gas oil and the kind and character of such oil as applied to the enriching of illuminating gas, both coal and water?
A. Yes.
Q. When did you commence to make such studies and what work did you do therein and thereafter?
A. When I was studying the use of petroleum products for use in gas making in 1870, using naphtha in the first instance, and as fast as any other product was obtainable, either cheaper or better for the purpose, I made a study of that also.
Q. Were you ever retained by engineers for the purpose of delivering lectures upon this subject or endeavoring to have water gas introduced into more general use, and if so, by whom and when?
A. I was engineer of the Gaslight Company of America for the period of 1874, 1875, and 1876, in the use of petroleum products for making gas, and being then new I was all over the country, interviewing gas managers on the subject and explaining the construction and operation of works; there was then a number of works in operation. I also appeared before the Board of Aldermen endeavoring to obtain franchises for the introduction of gas. 3948
Q. What was the Gaslight Company of America?
A. That was a company organized by the constructor of the Mutual gas plant and Mr. Thompson Dean for the purpose of further utilizing petroleum products for gas making.
Q. Who was the constructor of the Mutual?
A. Hoyt Kennedy & Company.
Q. You were retained by Mr. Kennedy for this work?
A. Yes. Mr. Kennedy was president of the Mutual Company.
Q. Did you have anything to do with the preparation of plans for the introduction of water gas in the Mutual Company's works?
A. I examined all their plans. The works were originally built for coal gas and it became a question of the best method of changing them to the use of naphtha and I came on here to New York and

spent several months in consultation on that subject with Mr. Kennedy.

Q. Did you have anything to do with the installation of the water gas part of that plant?

A. That was not really a water gas plant as first started. It was what we called a naphtha gas plant.

By Mr. MATHEWSON:

A. At the Mutual?

A. Yes, naphtha and coal gas mixed. I think Mr. Kennedy depended entirely on my previous experience and judgment in regard to starting that thing up.

3949 By Mr. KIRBY:

Q. You did not actually instal any of the apparatus yourself?

A. No, I was not contractor; simply consulted in regard to it.

Q. Have you ever examined gas works?

A. I may say that I induced Mr. Kennedy in the first place—my report induced Mr. Kennedy to put in a change from coal gas to naphtha gas.

Q. Did he so state to you?

A. Yes, sir.

Mr. MATHEWSON: I don't think that is very material. The Mutual is not one of the consolidated companies, anyway.

Mr. KIRBY: It is simply a question of qualifications.

Q. Have you ever made any examination of gas plants elsewhere than in the United States?

A. Yes; in Europe, in 1860, '61, '62 and '63 I examined quite a number of plants. In fact I went to Europe for the purpose of looking into the gas business and also went into chemical subjects.

Q. Well, in England what works did you examine?

A. I went first to Liverpool and became acquainted with Mr. King. Mr. King gave me letters to various parties and I went to London and spent a little time there, endeavoring to find out in what particulars we were behind in this country in regard to operation of gas works, and I had been previously employed for two years in the operation of works in this country before I went to Europe, that is why I became interested in the subject in the first place.

Q. Since that time have you made any examination of plants elsewhere than in the United States?

A. No, I have not seen any.

Q. Have you kept familiar with the reports of foreign countries and their method of operation?

3950 A. I have taken the journals devoted to the gas business and looked over those, both French and English, sometimes in German, and I have kept generally posted in regard to their movements and secured plans from time to time of their improvements.

Q. Have you read and are you familiar with the English statutes in regard to gas companies?

A. Reasonably so, yes, sir.

Q. And of the analysis of their accounts, such as set down in Field's Analysis or other analyses?

A. Yes, I have made a special study of gas accounts, in fact took the accounts of a number of works.

Q. What do you mean by "took" the accounts of a number of works?

A. Well, I got adopted the Fort Wayne system of accounting, which was considered a very good model, in Mobile, and partly in New Orleans, and in most all the works I constructed afterwards and had anything to do with operating, unified the accounts somewhat to that system.

Q. Have you ever pursued studies at any scientific school while abroad?

A. I wasn't there long enough to take a course in any school but from the American Legation I secured admission to lectures at *l'Ecole des Mines, l'Ecole Central, l'Ecole des Ponts et Chausses.*

Q. All of them are located in Paris?

A. Yes, very near together.

Q. What sort of studies did you pursue at these schools?

A. I merely attended lectures from time to time and became acquainted with Professor De Ville and a number of other scientific men and according to their advice I went from town to town as a matter of interest turned up.

Q. Did you make any special scientific investigations under Professor De Ville?

A. I was at Vesuvius when he studied the gases there, at the volcanic eruption of 1861, I think it was 1861 or 1862. It was
3951 a study of gases, which run into one another; it is all along the same line.

Q. And you are familiar with the chemical and physical constitents of gas?

A. Yes, and the analysis of gas, and devised apparatus and made it a life study.

Q. Are you familiar with scientific apparatus such as used for photometry and the measure of pressures in gases?

A. Yes, sir.

Q. Have you made frequent use of such apparatus?

A. I used it in its best forms for probably forty years.

Q. Are you familiar with the different kind of gas burners used by Professor Hallock in the experiments about which he has testified in this action?

A. Yes.

Q. Have you made experiments from time to time to ascertain the pressure at the burner tip which would give the highest illuminating fficiency of the flame?

A. Yes.

Q. Have you made experiments from time to time to ascertain the pressure required at the point of issue of gas and gas burning apparatus for heating, cooking, etc.?

A. Yes, sir, I have.

Q. You have seen the results of Professor Hallock and heard his testimony thereon. Do the results which he has obtained coincide in the main with the results of your experiments and investigations?

Mr. MATHEWSON: Objected to, as too general. I think he should ask a specific question, so that I can cross-examine him. I do not think there is any such practice as that of asking if you heard a witness testify and if you agree with his general conclusions.

The MASTER: Not if there is objection to it, Mr. Kirby.

Mr. KIRBY: Well, we will come to it later.

3952 Q. Have you read and are you familiar with Section 2 of Chapter 125 of the Laws of 1906, being an act in relation to illuminating gas in the City of New York, etc.?

A. I don't remember it by sections.

Q. Expressly that part thereof reading:

"The pressure of illuminating gas in any service mains in said city at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches."

A. Yes, I read that. I did not remember the section.

Q. What is your interpretation of the words "service mains" as set down in such statute?

Objected to; the witness's interpretation of a statute.

Q. What to your mind as a- engineer and one who has had to do with the operation, management, designing and building of gas works do the words "service mains" mean?

Mr. MATHEWSON: Same objection. I think the witness can state what kind of mains he tackled in his experiments but I do not think he can testify as to what the statute means.

Mr. KIRBY: I think he is competent to do that. I think it is a relevant and material question.

Mr. MATHEWSON: Objected to on the ground it is his construction of the statute and not competent.

The MASTER: He cannot construe a statute but it is proper for Mr. Kirby to ask him as an expert in the gas business what
3953 the term "service mains" means. If it has any meaning in the gas business show it by him.

Mr. KIRBY: I will so ask him.

The WITNESS: Well, it is a new term that I thought rather an apt term, I propose to adopt it hereafter for I take it to mean the mains——

Mr. MATHEWSON: I object to what you take it to mean. That is not the question. The question is what in the gas business "service main" means, in your experience.

By Mr. KIRBY:

Q. What do you understand that term to mean?

Mr. MATHEWSON: No, I object to what he understands that term to mean if he refers to the statute. The witness is limited to the question which the Master ruled was proper.

Mr. KIRBY: Let the witness go on and complete his answer. He said, "I take it to mean——" Now, what do you take it to mean?

Mr. MATHEWSON: Do you mean what does he take that term to mean, as used in the statute?

Mr. KIRBY: I mean what does he take that term to mean in reply to the question which was put to him?

The MASTER: He was asked to testify what it means in the gas business. If he says it is a new term and then you ask him what he takes it to mean, it virtually amounts to the same thing as your former question, does it not?

Mr. KIRBY: I think not. Answer this question, Mr. Edgerton.

Q. What, in your opinion, do the words "service mains" mean in the gas business?

A. The mains to which service pipes are attached.

3954 Q. Have you made tests and ascertained the pressure of illuminating gas furnished in the Island of Manhattan at various points thereon?

A. I have.

Q. Were the points of observation that you selected at different elevations above the sea level, at different distances from gas holders or holders supplying the gas?

A. I observed at those points I thought likely to give the greatest difference of pressure, the highest point and the lowest point and those most remote as well as a few nearer the works. I have not made as complete a study as I should like.

Q. You have taken these readings right up to the present time, have you not?

A. Up to last Friday was the last I think I took.

Q. Where these pressures were not recorded as being the pressure in the service mains as defined by you, have you made a calculation therefrom or an approximation thereof so as to ascertain what the pressure in the service mains would be?

A. I put the apparatus generally on the services that were not in use at the time, or I instructed the parties not to turn on the gas while the machine was in use or in some places where they used electricity for lighting and had gas merely to back it up, as it were.

Q. And in all these readings, you are prepared to state what in your opinion the pressure would be in the service mains?

A. Yes, sir.

Q. From which the gas is drawn which you used in the experiments?

A. Yes.

Q. Will you describe the apparatus with which you took your pressure readings, and if you have such apparatus with you you may produce it and describe it therefrom.

3955 Mr. MATHEWSON: May I ask the witness if he made these pressure tests with the same apparatus at every place?

The WITNESS: I had two machines so as to take it at one point and take it the same evening at another point so as to connect them.

(The witness produces a machine.)

Q. Now, the name of this machine is what?

A. The Richards Brothers Recording Manometer. The operation of it is just simply——

Q. In your description say what the various things are so that we won't have to put this in as an exhibit.

A. The machine consists essentially of a cylinder about four inches in diameter and six inches high, operated by clock work. On this cylinder is placed a paper ruled in millimetrical lines and a pen is made to traverse on the sheet of paper, the pen being operated by the pressure of the gas, the pressure of the gas communicated to the pen by a diaphragm to which is attached various mechanical devices for transmitting the motion of the diaphragm to the pen.

Q. I notice this chart is ruled in curved lines. Why are those lines not straight?

A. That is owing to the fact that in order to get great sensitiveness of movement the lever holding the pen is operated on very delicate centres and this circular movement of the pen is due to operating from a centre instead of vertically up and down. The clock work of cylinder is arranged to revolve the cylinder once in twenty-four hours thereby giving a continuous reading for a day. The apparatus is sensitive when properly adjusted to about 1-100th of an inch pressure. I have compared this instrument with the absolute column of water *guage* and find it to be perfectly accurate.

3956 Q. And this is an instrument you have used in the experiments?

A. Yes. and one like it; two of the same description.

Q. And you have compared the other instrument to ascertain whether or not it is correct?

A. Yes, I compared it with this one also.

Q. And is that also, in your opinion, correct and in perfect adjustment?

A. Yes, sir.

Mr. Kirby: As it is now one o'clock and I am next to take up about twenty-five of these charts and give the readings from them I think we might take a recess now for lunch.

Mr. Burr: Before we do that I wish to state that Mr. Marks and the head accountant representing Marwick, Mitchell & Company are here from the office of the Consolidated Gas Company and report to me that Mr. Carter refuses to allow them to examine the real estate account as I thought I had understood with Mr. Mathewson this morning before we began that they might. Mr. Carter is also here and I would like to have that matter straightened out.

Mr. Mathewson: Suppose you strike that statement off the record. Mr. Carter and I understood Mr. Marks came here for the express purpose of arranging the matter now.

Mr. Burr: There is no use of arranging it privately unless it is finally understood. I want it on the record. We want to know whether we are going to have this account.

The Master: If there is going to be any more of this discussion back and forth of what has or what has not been refused or permitted I do not care to have it taken on the record because it makes it unnecessarily cumbersome. If you gentlemen cannot agree, each side place its position in writing, submit it to me outside of 3957 this record and I will decide it. But it is an unnecessary waste of time to have discussions as to whether Doctor Marks has or has not been allowed to get all he wants.

Mr. BURR: I fully agree with you. The statement made by Mr. Mathewson was very plain this morning and I thought there was no difficulty in examining the books of the Consolidated with regard to the real estate account.

Mr. MATHEWSON: The real estate account is ready for examination and Mr. Carter has prepared a transcript so as to facilitate your checking of the real estate account. Mr. Carter says the statement of counsel is an absolute misstatement—a mistaken statement of the facts. There has been no such refusal.

Recess until 2.15 p. m.

After Recess.

HENRY H. EDGERTON resumed.

By Mr. KIRBY:

Q. Mr. Edgerton, the experiments or readings which you made upon the pressure of the gas in the manner you have indicated were made upon the instrument you have described and upon a certain chart or diagram placed thereon. I hand you such a chart as is used upon this instrument and ask you if you will describe it, that is what the division of the line means and what the standard is, that is whetner in inches or meters.

A. The charts are in millimeters, but I have ruled a 2½-inch line and also a 1-inch line from the zero point in order to show 3958 the pressure relative to the Act.

Q. I notice that on these charts in some instances you have drawn a line shortly above that on the chart marked zero. Why did you draw such a line?

A. In the use of this instrument it is better to make a fresh zero at every point where the pressure chart is taken for the reason it does not always coincide with the zero of the chart, and for that reason in placing the instrument in position I always make a fresh zero mark to measure from, it being easier to do that than it is to regulate the hand back to zero.

Q. Now you have drawn a line above that which we will call the true zero line, being somewheres around the line indicated by the figure 30 on the diagram.

A. Yes.

Q. What does that line indicate?

A. That indicates the inch line measured from zero.

Q. Now you have drawn another line, still further above this one close to where the line indicated on the chart as 70 is drawn. What does this top line indicate?

A. The top is the 2½-inch line.

Q. Now I notice that at the top of these various diagrams names, such as Columbia University, and so forth, appear. What does that indicate?

A. That indicates the point where the pressure sheet was taken.

Q. And thereafter a date. What does that indicate?

A. The date upon which it was taken, that is the date upon which the registration commenced. It ends off at a day later.

Q. I also notice certain designations such as 3 p. m., 9 p. m. and so forth along the top of the chart. What does that indicate?

A. That indicates the hours of the day and night.

Q. And to find the pressure at any such hour or any intermediate period between the hours you would trace the curved vertical
3959 line down to a point where it intersects the broken line, the line as registered, and read pressure, the pressure in the horizontal lines which would show fractions of an inch. Is that the way you would so use the chart?

A. It shows fractions of a millimeter and can be readily converted into inches. I will add that these charts are all the natural scale, that is, they are on the scale of actual inches, the instrument is so arranged as to show inches and millimeters on the actual scale of inches and millimeters.

Q. In other words, in measuring the pressure either in inches or millimeters you would measure on the curved vertical line instead of on the chord of that curve, which would be a straight line?

A. Yes.

Mr. Kirby: Now, I might state that I am going to ask Mr. Edgerton to describe these charts and that these are all of the charts which he took. In other words, they run chronologically except on such days that he did not take them. In other words, there are no bad ones left out and merely good ones put in.

Q. I show you a chart which is headed Columbia University and dated October 5, 1906, and ask you to state where this was taken and under what circumstances and to take the readings from the time the instrument was started in operation and carry them through for the twenty-four hours giving us in a few words the result of that reading?

A. The first chart in question started October 5, 1906, at Columbia University, in 116th Street, at 3 P. M.

Q. Where was the instrument placed, in what part of the University?

A. In Room 206.

Q. What place is that?

A. It was on the Amsterdam Avenue side, about ten feet above the street level at the point where it is taken.

3960 Q. What did you attach the instrument to, how did you attach it?

A. I attached it to a pipe isolated for the purpose, and so far as I could see no other consumption on the pipe and made sure that the instrument was in perfect adjustment as regards zero and then I compared it with a water pressure gauge to see that it indicated the pressure when it was turned, that it indicated the same point as on the water gauge in comparison, and then having previously wound it up, let it go on its course indicating the pressures as they *are* progressed.

Q. Do you know approximately how high this point is above sea level?

A. From information from Professor Hallock, who told me it was about 150 feet above. I have not had a chance to verify that.

Q. Now, will you take the chart from the beginning.

A. It shows that at 3 P. M. the pressure was, as indicated here, 63 millimeters from zero or 61 millimeters from the instrumental zero. Its pressure continued substantially at that until the hour of 5 P. M. when the pressure began to fall on account of the consumption of gas in that neighborhood. I notice that at the hour of 4:45 they commenced to put the pressure on the governor at the holder as indicated by these vertical lines, lines there, which shows where the man put the weights on the governor and at an interval of fifteen minutes he put on another weight. The pressure still falls until 6:20.

Mr. Mathewson: These weights are for the purpose of increasing pressure?

The Witness: Increasing pressure, but the pressure falls notwithstanding until about 6:20. Then the pressure rises quite rapidly until at 7:30 it has reached the 2½ inch line. It is then continued slightly above that line.

3961 Q. What do you mean by slightly, about how much in inches?

A. About 1-10th of an inch above the line until——

Q. And from time to time dipping down?

A. And from time to time dipping down below the line until 2 o'clock in the morning when it reaches the 2½ inch line and remains at that until about lighting time in the morning, that is 3:30, they put on pressure again for the morning hour lighting, and that sent it up to 1-10th inch above the line and the consumption again reduces it until 7 o'clock when the pressure is reduced for daylight and comes down below the line about 2-10ths of an inch and continues on with slight variations until 3 o'clock in the afternoon.

Q. When you say it comes down below the line you mean the line indicating pressure, the 2½ inches?

A. 2½ inches.

Q. And that is what happened on October 5th at Columbia University in the place you indicate.

A. Yes.

Mr. Kirby: I offer this in evidence.

Chart received and marked State's Exhibit JJ-1.

Q. The next test you have at Columbia University is October 9th, 1906. Was this taken at the same place?

A. Same place and under the same conditions.

Q. And will you in the same way describe the results as indicated by that test and make your description in tenths of an inch if it is convenient for you to do so. What time did this test start?

A. This test starts at 9:30 A. M. The pressure remained below the 2½ inch line with slight variations until the time of lighting up and putting on of the governor, attaining its lowest point at 3962 5:30 P. M., being at that point 21-10ths of an inch and the pressure rises then gradually until 7:30 when it has attained 2 and 6-10ths, remaining at that until 11:30 P. M. when the weight is taken off the governor reducing the pressure to about 2½ inches, at which pressure it continues until 4:30 in the morning, the same as on the previous day. A slight pressure was put on at the governor at 4:45 in the morning and kept on until about 6:30, the lowest pressure of the night being 2 and 4-10ths and the highest 2 and 7-10ths.

Mr. **Kirby**: I offer this in evidence.

Chart received and marked State's Exhibit JJ-2.

Q. The next test you took at the university was one on October 11, but inasmuch as that is to be put in in comparison with another, we will take up the test on October 13th, if you will?

A. On October 13th the test was put on at 9 a. m., but it seems either from not having been properly inked or for some reason the registration does not start until 11:45. This chart presents the same characteristics as the former, attaining its lowest point at 5:45, two and two-tenths inches, and then rising until the highest point during the night at 10 p. m., of two and seven-tenths, the average height being slightly greater than the previous charts.

Q. By "slightly," what do you mean, one-tenth of an inch?

A. About 15-100ths of an inch, I should say on an average. The maximum would be two-tenths.

Q. Now, on October 14th you took a further test at the University, didn't you?

A. October 14th, it was put on at 9 a. m. and presents the pressure remaining below the two and one-half inch line until 2 o'clock.

3963 Q. Does this chart show any material deviation from the indication set forth in the one of October 13th?

A. No, practically the same, only with slightly less variation. It seems as if there was less consumption on the mains during that day. Was that Sunday?

Q. Yes.

A. That accounts for it, being Sunday, showing less variation than there was during the weekdays.

Q. On October 15th, we have another chart. Does that show any material difference from the ones of October 13th and 14th?

A. The only noticeable difference is that it is carried at the lower pressure, it does not rise above the two and one-half inch line except for a short period and this for a distance of one-tenth of an inch.

Q. And October 16th we have another test; wherein does that differ from the others, if at all?

A. The same as the 15th except slightly greater pressure at night, rising two-tenths of an inch above the two and one-half inch line.

Q. And on October 17th you have another test. Does that differ in any material point, and if so, where?

A. No difference except the instrument appears to have been off during half an hour for some change of connection, it states.

Mr. MATHEWSON: What states?

The WITNESS: The chart.

Q. You have noted upon the chart where no indication is given of the pressure, that is due to some change you made in the connection of the instrument?

A. Yes, putting on some photometric apparatus, probably.

Q. What time of the day was that?

A. That would be at 1:15 and lasts until 1:45.

Q. But other than that.

3964 A. There is no essential difference. The maximums are a little greater, perhaps one-twentieth of an inch, than the previous one.

Q. You have another test for the same place on October 18th. Does that indicate any essential difference from the other reading?

A. None whatever except the maxima are almost all between the two and one-half inch lines. They exceeded only in one or two instances.

Q. And by how much and for how long?

A. One-half of a tenth of an inch for a period of half to three-quarters of an hour.

Q. Another reading was made on October 19th?

A. On October 19th it is kept below the two and one-half inch line with the exception at night about 10 P. M. it was about one-fiftieth of an inch above the two and one-half inch line.

Q. On October 20th you have another reading. What does that indicate?

A. It is wholly below the two and one-half inch line day and night.

Q. And October 21st?

A. It is all below the two and one-half inch line.

Q. And in no instance on October 20th as low as what?

A. In no instance lower than two inches.

Q. And on the 21st, no instance as low as what?

A. As low as two and one-quarter. The 21st seems to be another Sunday.

Q. On the 22d what do we find?

A. On the 22d we seem to have another holder in connection with that supply during the daytime and it is substantially below the two and one-half inch line.

Q. And a great many trivial variations?

A. Yes, showing the vacillations of the governor.

By Mr. MATHEWSON:

Q. What do you mean by saying they seem to have another holder?

3965 A. Well, you see the difference between the 21st and 22d in the daytime is very noticeable. It looks to me as if—and I am pretty sure, too—that on the 22d there was some other governor than previously used because there is a continued vibration of governor there.

Q. And that is a deduction you make from looking at the chart?

A. Yes.

Q. You can see by comparing this one with the other?

By Mr. KIRBY:

Q. Now, on the 24th you made another reading. What does that indicate?

A. It is all below the two and one-half inch line except a short period, a period of four hours during the night when it might have exceeded it by a twentieth of an inch on the average; it being a change every quarter of an hour there looks as if some one was attempting a valve regulation and probably it is, for I do not see that the governor regulations should vary in that manner. You notice that almost all these variations occur at intervals of just a quarter of an hour.

Q. Now, on October 24 there is another reading?

A. All below the two and one-half inch line till 7 P. M. when it rises slightly above it until 12 P. M. and then the pressure is reduced and the average is about on the line until 7 A. M., when it descends below.

Q. On October 25th?

A. The registration in this case is all below the two and one-half inch line until 7 P. M. when it rises above and until 12 and then averages on the line during the rest of the night.

Q. I notice this chart is not marked with the hours of the day. When did you start to take your readings?

A. I see that has been omitted in this chart, but I judge from the lowest point being 5 o'clock, as it corresponds with the rest,
3966 that seems to be the hour—no, 6 o'clock, I should say, that seems to be the point where the lowest readings occur there.

Q. It would indicate the peak of the load——

A. It indicates that the peak of the load in that district——

Q. And that point corresponds with the 6 p. m. in the other charts?

A. Yes.

Q. So you would judge that this was commenced as they are at 9 p. m.?

A. Yes.

Q. You made another reading on October 26th. When did you commence on that day?

A. Nine a. m. This chart is somewhat different from the other one, for at various periods during the daytime we filled a small gas holder with gas and it is indicated on the chart by a lowering of about tenths on the pressure. After the minimum was obtained, which was at 6 o'clock, amounting to 2-inch pressure or 20-10ths, the registration remained at the 2 and 1-2 inch line during the rest of the day and night.

Q. Now the comparatively large decrease in pressure as indicated on these charts by the use of a gasometer in drawing off gas for the experiments, which I presume were those of Professor Hallock, would indicate to you, would it not, that there were no other burners or other sources of escapes of gas from the pipe to which you attached your apparatus?

A. Yes, I know there was nothing going on on the pipe, because I examined into that and there was nothing. Also when we turned on the gas holder, it shows here by the dropping that would amount possibly to three or four burners, not more than that, because it was very slow filling. There was nothing else on in the building.

Q. By gas holder you mean the holder——

A. The gas prover.

M-. KIRBY: I offer these charts in evidence.

3967 The charts were received in evidence and marked State's Exhibits JJ-3, JJ-4, JJ-5, JJ-6, JJ-7, JJ-8, JJ-9, JJ-10, JJ-11, JJ-12, JJ-13, JJ-14, JJ-15, JJ-16.

Q. On October 11th you also took readings at Columbia University, did you not?

A. Yes, sir.

Q. On the same day did you take readings at a place known as Columbia Printing House, No. 386 West 125th Street?

A. Yes.

Q. Is 386 West 125th Street at a lower elevation than the point in Columbia University where you took the other readings?

A. Yes, it is about as low a point as I could find on that street.

Q. I understand then it is your best information that Columbia University obtained this gas from the Consolidated Gas Company or that the meter is so marked?

A. Yes.

Q. The gas furnished at the Columbia Printing House is how metered?

A. That man's bill is from the Standard Gas Light Company, but the mains are connected there so they show essentially the same. It is the same gas holder which supplies both, or did at that time.

Q. You have read the testimony here to the effect that the mains are interlocked——

MR. MATHEWSON: No, they are not. That is where you make a mistake. There is no testimony of that sort except that we procure a certain amount of gas from the Standard Gas Light Company under agency agreement and where it is delivered to our main it interlocks in that sense, but there is no interlocking of the Consolidated Gas Company and the Standard mains, you understand that, Mr. Edgerton?

The WITNESS: Yes, I see. I am only struck with——

3968 Q. Wait a moment, we will come to that. Now the chart taken at Columbia University has the same general character as those others which have been placed in evidence and which are marked State's Exhibit JJ-1 and so forth, has it not?

A. Yes.

Q. And the chart taken at 386 West 125th Street shows what in itself and also shows what in comparison with the chart taken at the same time at Columbia University?

Mr. Mathewson: The Master will observe that this 125th Street place is the Standard Gas Company, while at Columbia College it is the Consolidated Gas Company meter, so that what the comparison may be worth I do not quite see. I have no objection to its being put in however.

Mr. Kirby: I pointed out that distinction myself and I wanted to be perfectly fair, but I think you will see the relevancy and importance as this develops.

A. At the bottom of the hill there is a loss of pressure compared with the top of about half an inch during the daytime. When you come to the lighting time, this Columbia Printing House put on one burner and reduced the pressure to 1 and 1-10th inches. Then at 6.20 they put on another burner and reduced the pressure to 7-10ths.

Q. That is the pressure at the point where your instrument was connected and where you took your reading?

A. Yes. And at 8 P. M. it seems his light was turned out and the pressure went back to the normal which is 2 inches and continued along at 2 inches until about 5:45 A. M., when some change was made in the regulation of the gas at the holder which caused it to jump up temporarily to 2¼ inches and it immediately fell back again to 2 inches. 3969

Q. Now, will you take the chart taken at 125th Street at the bottom of the hill and the chart taken at Columbia University at the top of the hill and interpose one upon the other.

A. (Witness does as requested.) I will show you that this gas came from the same place. You cannot see it except by putting it upon the glass, but every movement of the gas holder or the gas in the mains between that Consolidated Gas Company consumer at the top of the hill and the Standard consumer at the bottom are identical.

Q. In other words, the variations in pressure as shown on the chart taken at Columbia University correspond with the variations in pressure taken at the printing office at the bottom of the hill on 125th Street?

A. Except that the average pressure at the bottom of the hill was three-quarters of an inch less than at the top.

Q. And what was the minimum pressure at the bottom of the hill?

A. The minimum pressure on the main was two inches.

By Mr. Mathewson:

Q. At the bottom of the hill?

A. At the bottom of the hill.

Q. Seven-tenths, wasn't it?

A. That was when it was burning.

Q. But we are talking about that whole chart?

A. I thought you were speaking about the pressure on the main.

By Mr. Kirby:

Q. And this seven-tenths of an inch which Mr. Mathewson refers to shows a pressure at what point and due to what in your opinion?

3970 A. The drop in pressure due to the man lighting up his burners. He lit up one burner and it drew it down to one and one-tenth inches and the second burner drew it down to about seven-tenths of an inch.

Q. Drew it down where you had your instrument placed?

A. Yes.

Q. Where was that?

A. That was in the back of his shop not more than twenty feet from the meter.

Mr. KIRBY: I offer those two charts in evidence.

Charts received and marked State's Exhibits KK-1 and KK-2.

Q. Now, on October 12th you took comparative readings at the same places, didn't you?

A. Same places. They are the same general character and almost identical except I arranged with the man not to turn on the gas at night.

Q. Arranged with man where?

A. With the proprietor of the Columbia Printing House not to use the gas that evening so I could get a perfect record to compare with the top of the hill.

Q. So that these two charts show the pressure with no gas being used either at the University or the printing house from the service pipe to which you had your instrument attached. Is that so?

A. That is so. No interference with the registration by the use of gas.

Q. Do these charts show the same minute variations in pressure at both the University and the printing house through the hours at which the readings were taken?

Mr. MATHEWSON: Whether they do or not, it does not seem to me——

A. No. There were different holders on them. They were supplied from different sources.

3971 Q. In the reading taken at the bottom of the hill, what was the pressure variation during the twenty-four hours?

A. The greatest pressure variation in twenty-four hours at the bottom of the hill was three-tenths of an inch at 5:30.

Q. Three-tenths of an inch, what do you mean by that?

A. Three-tenths of an inch water pressure, a column of water.

Q. In other words, was it below one inch?

A. No. I understood you to say the variation.

Q. And what was the minimum?

A. One and seven-tenths inches.

Q What was the maximum?

A. Two inches.

Mr. KIRBY: I offer those two charts in evidence.

Charts received and marked State's Exhibits LL-1 and LL-2.

Q. Now, in addition to these tests which you have testified to, you took readings in various other parts of the country, didn't you?

A. Yes, sir.

Q. Did you make a test at the Grand Union Hotel on August 18th?

A. Yes; August 17th and 18th.

Q. What does that show in a general way, without going into minute deviations?

A. Well, it shows at 7:15 they put on a pressure of three-quarters of an inch at the works and continued it along until 10 o'clock and then at intervals of half an hour they diminished the pressure by .2 until 12 o'clock when it came to the lowest point, then the pressure continued along very evenly, a very fine regulation, until 6 o'clock in the morning and throughout the day; very excellent regulation.

Q. Now, on October 15th, did you take a reading at 3607 Broadway on the fifth floor of that apartment house?

A. Yes. This sheet was one put on by Professor Hallock and handed to me.

3972 Q. That runs through into the 14th, does it not?

A. Yes, Saturday and Sunday, the 13th and 14th of October. This, as I understand it, is considerably higher than Columbia.

By Mr. MATHEWSON:

Q. Where is that?

A. 3607 Broadway, the fifth floor of the house.

By Mr. KIRBY:

Q. How high up is the fifth floor? Have you made any measurements thereof?

A. I did not get a chance to measure that yet.

Q. That shows a variance above and below the maximum of 2½ inches?

A. 2½ inches just about fills the bill.

Q. By "fills the bill," you mean——

A. There is a full variation.

Q. That would be the average that the R points upon that, where it goes above the maximum?

A. Yes.

Q. On October 15th, did you take a reading at No. 1 Platt Street?

A. Yes. That was put on at 5:15 and obtained the pressure of two inches and the minimum pressure was 1.7 obtained at 5:45, maximum 2.4, running until morning with a slight variation.

Q. There is no point in that. Did the maximum rise above two and one-half inches?

A. No, sir.

Q. And at the highest of all points it was above two inches?

A. Yes, sir.

Q. You took another reading at No. 1 Platt Street on October 16th, did you not?

A. Yes, same character as the previous except in the morning a gas engine—in the morning at 8 o'clock a gas engine appears to have been started up in the vicinity and caused a vibration during the day.

3973 Q. But the pressures are still within the two and one-half inch maximum and do not fall below two inches except at one point when it fell two——

A. .16 of an inch.

Q. Now, on October 17th and 18th, you took certain readings at No. 2B Platt Street?

A. That is a consolidated meter there, I was uncertain about that other point.

Q. And what does that show?

A. That shows a general average of two inches, nowhere reaching the two and one-half inch line or getting below one and one-half inch. The water in the main shown at the time of the greatest consumption appears to be a chunk of water there which interferes with things. So I investigated in the neighborhood and I found that the consolidated pipes had water in, very much interfering with the light, and it extended for several blocks.

Q. Now, you took a reading on October 30th, did you not, at 11th Avenue and 50th Street?

A. Yes.

Q. How much does that show?

A. That shows a general average of two inches and a minimum of 1.1 at 6 P. M.

Q. At that point not falling below two inches?

A. Not below two.

Q. And having a maximum not greater than how much?

A. Than two inches.

Q. A maximum of 2.1, isn't it?

A. No, two inches.

Q. Being practically a consonant except for the peak point at 6 P. M.?

A. Yes. This diagram shows a peculiarity; there was a gas engine running in the neighborhood also.

By Mr. Mathewson:

Q. What indicates that gas engine; that drop?

3974 A. No, this jumping here, this zig-zag line. You see the time it started. The peculiarity about this chart is that it is within about six blocks of a gas works and eight blocks from another and yet there is the minimum and it is nearest to the gas works, a very peculiar feature. It indicates that the pressure was maintained by gravity.

Q. Now, these were all the tests or readings which you took with the exception of some few which were done during the——

A. At times of small consumption. I did not consider the charts taken before gas stoves, on top of lighting, as being——

Q. These are the only charts with full runs of twenty-four hours so as to show the indication during the day?

A. Yes.

Mr. Kirby: He had some charts taken for a few hours which he did not really consider a fair test of what was going on and so we did not offer them. I offer these charts in evidence.

Received in evidence and marked respectively State's Exhibits MM, NN, OO, PP-1, PP-2, QQ-1, QQ-2 and RR.

Q. From the result of these experiments of pressure you have made and about which you have just testified, and upon your experience as an engineer, builder and operator of gas plants, in the manufacture and distribution of gas, do you or do you not consider that the Consolidated Gas Company can maintain a pressure in service mains such as you have described them of not less than one inch nor more than two and one-half inches?

A. I think that can be maintained under due precautions.

Q. You consider such a pressure could be maintained without any change in their present distributing system?

A. It would appear so, as far as I have examined the pressures.

Q. Do you consider that by the introduction of certain
3975 changes in the company's system of distribution that a pressure in any service main at any moment of not less than one inch nor more than two and one-half inches could be complied with, with less care and attention, and less risk of a momentary compliance than under the present system?

A. Yes, I do think it can be done.

Q. Do you think it could be done practically without great expense?

A. I think so.

Q. This morning you stated that you had made certain experiments from time to time with regard to candle-power or, rather, illuminating efficiency under different pressures, with regard to the pressure required for the proper operation of gas burning appliances for the purposes of heating, cooking, etc. Did you assist Professor Hallock in the experiments he made and about which he has testified?

A. I did.

Q. Are the results stated by him accurate and correct results of experiments?

A. I think they are substantially the same as my own.

Q. Have you made any other experiments than these?

A. On New York gas?

Q. On New York gas?

A. I experimented on New York gas since 1872.

Q. Experimented upon it for the purpose of finding its illuminating efficiency?

A. Yes.

Q. The proper point of pressure for the consumer along the same lines as the experiments taken by Professor Hallock?

A. Along the same lines.

Q. Have you experimented with illuminating gas elsewhere?

A. I have.

Q. For those same purposes?

A. For the same purposes.

Q. Have you made any experiments upon the Welsbach burner for this purpose?

A. Yes, I interested myself in the Welsbach burner at a
3976 very early date and made continuous experiments on the original burner and all improvements I have been able to hear about or been told of.

Q. Have you used any special apparatus for this work?

A. I have used all known established standards. The Pentane standard, the candle standards, Mobile lamp standard, the Methven standard, and such modifications and improvements in the photometer itself as have occurred from time to time, the revolving disc and various conveniences and appliances that make observations more accurate.

Q. Have you brought forth a standard of your own which you have used in conjunction with these others?

A. I brought out several standards; I first published in 1875 the Mobile lamp standard, now called after me, but I call it the Mobile lamp standard, because I first brought it out at that point. I also brought out and described before the Gaslight Association a standard almost identical, if I may say, with the present Elliott Standard Flat Flame.

Q. Is this standard which you modestly call the Mobile standard, but which is known as the Edgerton standard, in use in any of our scientific schools or by the government?

A. I have heard of its being used in quite a number of places. At one time the United Gas & Improvement Company made use of it, and I noticed in reports from various gas companies that they use it.

Q. Do you know whether it is used by Harvard University or Columbia University in the scientific department?

A. I found a peculiar use of this standard by Harvard University described in a periodical, used in order to standardize the photographic plates of which they make star maps. It is desirable to have photograph plates of uniform density in development and to accomplish that they had to have a standard light and I notice 3977 they adopted this standard. Also the government used this standard in the lighthouse service.

Q. In the course of your work and studies have you experimented with appliances using gas for heating of cooking purposes, relative to the required pressure for the proper use of the same?

A. I have.

Q. And where, when and how long?

A. In the very beginning of my experiments in gas lighting I kept up a set of tests on various heating devices, gas stoves and gas in Fort Wayne, Indiana, I might say in New Orleans, and at Mobile.

Q. In New York City, Borough of Manhattan?

A. New York City and Danbury.

Q. Are you familiar with the different kinds of appliances in general use burning illuminating gas for heating and cooking purposes?

A. I have had to do with almost all of them, most of all the different stoves and heating devices, getting them in and getting them adjusted to the best advantage.

Q. Now from your experience and from your experiments what do you think is the pressure required at the point of issuance of the flame for the proper operation of the appliances using gas for heating and cooking?

A. At the point where the gas issues in contact with the air, and that is where they are using the stop-cock shut off, the pressure rarely exceeds .3 of an inch.

Mr. MATHEWSON: I do not think that was the question quite.

The WITNESS (continuing): Well, it is generally set down to that. Where the wheel or needle valve is used the pressure can be brought to any point that the gas will give, 2 inches or 2½ or ½ an inch or any other pressure, but on most of the stop-cock apparatus it will be found on test that the pressure at the point of issue very seldom exceeds three-tenths, or four-tenths and they will give a good flame.

3978 Q. That gives good and satisfactory results?

A. It is not quite as satisfactory as a slightly higher pressure, but there is no discoverable loss of efficiency, nor is there any trouble about striking back.

Q. What do you mean by striking back?

A. Striking back is a phenomenon where the gas issues so slowly from the point that the light will travel back through a mixture of gas and air and ignite it right at the point where it comes out, destroying the power of the flame to heat up.

Q. So that instead of having a flame which consists of the combination of gas mixed with air, you will simply have gas burning before it has an opportunity to become mixed with the air?

A. Exactly.

Q. So that the first requirement of a gas burner apparatus is to have a pressure sufficient to prevent it from striking back?

A. It is absolutely necessary.

Q. And what pressure did you say was necessary for this purpose?

A. On all ordinary gas stove apertures, a pressure of three-tenths to four-tenths will prevent it striking back.

Q. You consider that a pressure slightly greater than this amount is more satisfactory?

A. Yes, it would be more satisfactory.

Q. What do you mean by "slightly greater?"

A. Oh, inside of an inch it would be satisfactory, perfectly.

Q. Now in regard to the class of apparatus which do not use the burner which you have just been speaking about, but the jet type, is there any danger of striking back?

A. You mean the wheel valve type?

Q. Yes.

A. No, ordinarily with that where it is turned on sharply there is no danger of striking back whatever. If turned on slowly it might do so.

3979 Q. Is it possible to so regulate this class of apparatus so as to be as efficient and as convenient and effective in operation with low as with high pressure, that is, with pressures about an inch and pressures as high as two inches?

A. I think from an inch to two and one-half you could regulate it just as well as though you had any other pressure. I don't see any difference.

Q. So that would be as efficient and convenient for use with one inch as with a higher pressure?

A. Yes. I could explain the reason. Do you want me to explain the reason for the higher pressure?

Mr. Mathewson: I don't think he knows. I shall object to that.

Q. Now, from your experience and experiments with various kinds of open flame burners, what do you find is the most efficient and most convenient pressure to be used in the burner suitable for illuminating purposes?

A. Taking the city test burner to start with——

Q. What do you mean by the city test burner?

A. The one used by the city tester to test the illuminating power of gas.

Q. What burner is that?

A. That is the Bray Slit No. 7. The pressure at the point of ignition there, giving the highest result is from .14 to .18 of an inch. The pressure as required for an argand burner is about .1 inch.

Q. Does this pressure with the Bray give a satisfactory flame?

A. It gives a highly efficient flame but it is a vacillating, bobbing flame, not a stiff flame, such as consumers generally would like.

Q. What would you consider the best pressure not only for efficiency but for convenience and satisfaction of consumers?

A. In this Consolidated gas as made at present, about .6 would be the all-around and most satisfactory point of pressure at ignition.

Q. Go to the other burners, what do you find?

3980 A. With the consumers' burner you stand slightly more but with a loss of efficiency compared with the Bray of about, well, from 22 candles down to 18 or somewhere along there, that would be quite a large loss of efficiency to get a steady flame.

By Mr. Mathewson:

Q. What do you mean by the consumers' burner?

A. The E. H. Lava tipped is a type, excavated head, that is most generally used.

By Mr. Kirby:

Q. Such a one as known as a bat-wing lava tipped burner?

A. Yes. Walking around the streets of New York City I see probably ten of those used to one of any other type.

Q. With regard to the Welsbach burners what did you find?

A. Efficiency in the Welsbach burner adjusted by the photometer so as to obtain the highest point is practically the same between one inch and two and one-half inches. I speak of the efficiency per cubic foot of gas.

Q. Now, it is true, is it not, that the efficiency of a Welsbach increases materially under certain——

A. Under heavy pressures and where you get a blow pipe action making a sort as it were of blast of air you can run the efficiency of the Welsbach up to three times the ordinary efficiency, perhaps higher—four to eight inches, which per cubic foot would be very much higher. I have not verified those higher pressures but I have no doubt they are correct as stated in the tests. I have seen the tests made but I have never used the apparatus myself.

Q. In the ordinary use of gas you never obtained such high pressure, did you?

3981 & 3982 A. No, I have not. I have calculated to try and induce those high pressures by means of individual pressure "boosters," you might call them.

Q. But they are not such pressures as are obtained directly from gas mains in this or any other community with which you are familiar?

A. I failed to obtain any higher results from ordinary pressures. At the highest point of the ordinary pressures and with the most modern pressures in regard to the Welsbach burners, there may be a little less liability to smoke with rich gas.

Mr. Kirby: That is all I have with regard to the subject of pressure and candle-power, and as I stated before I ask to have permission to examine Mr. Edgerton on other subjects.

Mr. Mathewson: I should be glad if we could adjourn now instead of an hour later to-night. I am very anxious to get uptown before closing. I shall not take long to cross-examine this witness; at any rate I can easily conclude in the morning session Wednesday, if that will meet the view of the Master.

Mr. Kirby: That is quite convenient to me.

The Master: Do you want to suspend at half past four?

Mr. Mathewson: I would like to suspend now.

At 3.45 o'clock p. m. adjourned to Wednesday, November 7th, 1906, at 10.30 a. m.

Last Exhibits:

Complainant's, 256.
State's, RR.
City's, 63.

3983 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *November 7th*, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

3984 Mr. Burr: We had some discussion at the last hearing with regard to the City being permitted to examine the maps of the Company showing the mains of the Consolidated Gas Company in the streets. In making such an application I relied upon the testimony of Mr. Simpson, as it appears in this record on page 355, in which he states that these maps show every main of the Consolidated Company in every street in the Borough of Manhattan; and on page 355 we made a demand for an examination of those maps and Mr. Mathewson objected to it because of their bulk. Because of the conflict of opinion with regard to the propriety of examination of the note-books from which the maps were made up, or claimed to be made up, I visited the office of the company on Monday and had an interview with Mr. Addicks and Mr. Carter there. It seems to me quite evident from a cursory examination of the books that it would take a month or two to make up any schedule from those books regarding the mains; but the maps themselves, it is quite plain, will show with very little trouble the exact location of the mains, but will not show, as Mr. Simpson has testified, their distance from the curb without reference to the books. And my expert, Doctor Marks, informs me that within ten days, with a few assistants, he can procure or take from the maps a statement showing the duplications and all the particulars that he desires to have with regard to these mains. I have here a letter from him advising me with regard to that; and he is perfectly willing to consult with Mr. Simpson in case any discrepancy between the statement presented by Mr. Simpson as to the mains, number of miles and sizes; and any discrepancy that may exist between that statement given here and such as may be found to result from an inspection of the maps. I submit that we are entitled to that, as it forms a very important item in the 3985 property of the company, and also forms a very important point in our defense, because we wish to establish if we can that the present arrangement of these mains is not an economical one, but because of duplication and triplication it adds an expense to the cost of gas which the consumers should not be justly required to pay.

The Master: There may be some question as to the materiality of that line of proof.

Mr. Mathewson: I certainly shall make the point that it is wholly immaterial. I wish to say in respect to this application that after the conference between counsel and the Master, we have decided to permit the examination of the maps, but upon this statement: I have carefully examined the character of the maps prepared by Mr. Simpson and others, and find them to be secondary evidence, wholly secondary evidence. They are graphic representations of the records in the books. They are made up from the records in the books by clerks who may or may not in every case be accurate. They are not drawn to a scale on the maps, and if any discrepancy appears between the maps and the books, it would be so much the worse for the maps, because the books would be the exact and original entry and accurate entry. For instance, they do not show the distance from the curb, and the distance from the curb, considering the joints, and the going around corners, might make a difference of 100,000 feet, there being 60,000 corners, I think in New York, perhaps more; something like 20 miles difference in that alone. And the examination of these records will not bind us as an original record. Our opponents have asked to go to the original sources, and we have offered them the original sources, and I want it to be understood in advance that nothing as to dimensions or otherwise appearing upon those maps which may differ from the records 3986 of the books, if there be any difference, would be reliable, but the books alone would be. In other words, they are made from the books, and I do not want counsel to come in here after making a crude measurement of those maps by steel tapes and claim that anything they find is in conflict with the actual records of the Company as to its system.

The MASTER: That seems to avoid any misunderstanding about it.

Mr. BURR: Then what is the disposition of the matter?

The MASTER: Mr. Mathewson says that your men may be allowed to examine the maps.

HENRY H. EDGERTON resumed.

Mr. KIRBY: Shall I proceed?

The MASTER: I thought you had finished.

Mr. KIRBY: I have one more chart to put in which is taken up to 8 o'clock this morning.

By Mr. KIRBY:

Q. I will ask you to describe where that is taken, and during what hours, and what the general result is?

A. This chart is taken at a jewelry store fronting on Battery Park.

Mr. MATHEWSON: What jewelry store, what number?

The WITNESS: I have not got the number. I left my apparatus there and did not get the number, intending to go back and put it on again. It is on Broadway and——

Mr. KIRBY: I will supply the number of the store.

3987 The WITNESS: The record commences on November 5th, 5 P. M., and continues to November 7th at 8 o'clock A. M. The record shows a uniformity of pressure about midway between the 1-inch line and the 2½-inch line, and during the whole course of the registration does not depart from a uniform pressure to the extent of half an inch, except when the party had on a gas heater it went down slightly; so you can fairly say the regulation of pressure was within half an inch, of water.

Q. What was the maximum point on that reading?

A. Two inches on November 5th, and the minimum was 1 and 7-10th inches.

Q. On November 6th?

A. November 6th the maximum was 2 inches and the minimum 1 inch and a half.

Q. The pressure is registered on both sides of this chart?

A. Yes, sir.

Q. You, for the purpose of convenience, did not put upon the apparatus a new card, but merely reversed the one that was on for November 5th?

A. Yes.

Q. In what part of the store was the apparatus placed?

A. In the back end of the store, about 20 feet from the meter.

Q. Is the store on the ground floor?

A. Yes.

Q. That is the street level?
A. Yes.

Mr. Kirby: I offer it in evidence.

Chart received and marked State's Exhibit 88.

Mr. Kirby: Mr. Edgerton has not as yet had time to read over all his testimony, but desires that I should call attention to one important error therein. On the top of page 3980 it states, "with the consumers' burner you stand slightly more, but with a loss of efficiency compared with the Bray of about, well, from 22 3988 candles down to 16 or somewhere along there." That ought not to be 16, but 18. With that correction, while there may be, and probably are, some typographical corrections which we have not noted yet, I am through with Mr. Edgerton, except that I do not want it understood, because I have finished in the matter of pressure, that the matter of pressure will not be referred to when it comes to the question of cost or anything of that kind, because naturally it may be referred to.

Cross-examination by Mr. Mathewson:

Q. Did you ever manufacture any gas-making apparatus, such as benches and retorts and things of that sort?

A. In what is known as the Kerr-Murray Manufacturing Company, Fort Wayne, Indiana, originally started as Murray, Baker and Walker, I gave them the benefit of my experience in regard to planning their apparatus and starting out in business.

Q. Are you a member of that firm?

A. No, sir.

Q. Have you ever been in the business yourself of manufacturing gas-making apparatus?

A. No, sir.

Q. Have you ever yourself as a contractor installed gas-making apparatus?

A. No, sir.

Q. As distinguished from an engineer?

A. I have been both engineer and contractor in numbers of cases.

Q. Do you hold the degree of civil and mechanical engineer?

A. No, sir.

Q. Do you hold a degree as engineer of any faculty?

A. No. I never graduated from any school of engineering, except experience.

Q. When you referred to Fort Wayne, Chicago, Sunbury and so forth, in the early seventies, do I understand that you your- 3989 self were the contractor who built those works, or were you supervising the building?

A. Sunbury, and those towns I mentioned within Northumberland and the adjoining county, myself and Mr. Patton were contractors and engineers both, took contracts for the work and drew up the plans for it and executed the work.

Q. Did you construct the New Orleans works?

A. Yes, sir.

Q. All of them?

A. No, sir. I reconstructed the coal gas addition in 1872-3-4, and drew up the plans and superintended putting it under contract.

Q. Did you stay there until the work was completed in New Orleans?

A. Yes, I was there until it was fired up.

Q. Were you there when the works were started and in operation, or were you absent at that time?

A. I think at the first firing up of the benches in 1874 I was not there. Mr. Forstall wrote me it didn't run well and I went down and straightened it up, and the trouble was the ground was full of water and the benches were saturated with water and he did not seem to realize the amount of time required to dry them out.

Q. You were not there when it was started up?

A. Not when he put the first fires in.

Q. Where is Mr. Patton at present? Is he living?

A. The last heard of him he was living, in Tennessee.

Q. When you say you were consulted as to the Mutual Gas Light Company of New York, do I understand that was a change from coal gas to oil gas or to water gas in 1872?

A. To what was known then as naphtha gas, the same as the present oil gas only they employed naphtha instead of oil.

Q. Do you mean the Wilkinson process?

A. The works did not start on the Wilkinson process. That was added subsequently. The works started under the Gale & Rand process, for which I was subsequently the engineer for the
3990 Gas Light Company of America.

Q. You say this was in 1872, and in 1882 you became connected with the United Gas Improvement Company?

A. Yes, sir.

Q. What duties did you perform in connection with that company?

A. I had certain views with regard to the proper introduction of oil gas and I only cared to go according to my own views as to the way the thing ought to be done. And therefore I only took charge in connection with such works as they built, according to my views, although I was consulted with regard to others.

Q. You say those are only New Orleans and Pensacola, don't you?

A. New Orleans, Pensacola and Wallingford.

Q. How long were you with this United Gas Improvement Company?

A. Nine years.

Q. You were not especially active, were you, while with them?

A. I think I was about as active as anybody connected with it. I say I demurred about making a highly poisonous water gas.

Q. Was that the reason why you left the United Gas Improvement Company?

A. Well, substantially. I think the difference of opinion in regard to the policy of the company was the reason we parted.

Q. You say with them you acted as engineer and chemist?

A. Yes, sir.

Q. What were your duties as chemist?

A. Testing of gas; and one important duty was finding out how to use gas oil, I think that was the most important. Before that it was an entirely waste product and the president of the company had urged on me the use of waste oil and intermediate oil and at last I found means of using it.

3991 Q. You were not an officer of the United Gas Improvement Company, were you?

A. Certainly I was.

Q. What office?

A. Engineer and chemist—always addressed as such.

Q. I don't know whether that is an officer or not, but did you hold any other office except engineer and chemist?

A. Do you mean as director, secretary or anything?

Q. Yes, or vice-president, general manager or anything of that sort?

A. No, sir. I managed all my own business in construction.

Q. I am speaking about the United Gas Improvement Company. You held no position, did you, except engineer and chemist?

A. That is all.

Q. In what cities did you design the mains system?

A. In all those in which I was contractor and in all those in which I was consulting engineer. I was constantly applied to for information with regard to laying of mains and testing of their capacities and advising in regard to new mains.

Q. Did you ever construct a mains system in the City of New York?

A. No, sir. I——

Q. Or in Boston?

A. (Continuing:) I was consulted about it as to what difference they would have to make in the distributing system owing to the gas being heavier than coal gas and what measures they would have to take in regard to it.

Q. Who are "they," you were consulted by whom?

A. The president of the company.

Q. What company?

A. The Mutual Gaslight Company; and Mr. Kennedy and Mr. Leary.

Q. But never consulted about the Consolidated Gas Company, were you, as to the system of mains in New York?

A. Not after the consolidation, and I don't think before, of any account. I talked over it with Mr. Bradley pretty frequently.

3992 Q. A main system was in existence in the City of New York, wasn't it, at the time you were consulted by the Mutual?

A. Yes.

Q. And any changes in their main system had to do with the difference in the gravity of the gas that would be produced as between the old coal gas and the proposed new process, hadn't it?

A. Yes, sir, exactly.

Q. Have you ever installed a system of mains in Boston or any of the other large Eastern cities?

A. I never installed them, never as contractor or engineer, except giving my advice in regard to the introduction of mains.

Q. Except in the case of the Mutual?

A. On application of the Gaslight Company of America for a charter in Lowell. I designed a system of main distribution, which was not carried out however. And also in Providence, R. I.

Q. It is a very small main distributing system in Lowell, anyway, isn't it, as compared with large cities?

A. Yes, sir, small, but the smaller the system the more ability and more particular you have got to be in devising, for the simple reason that the large mains in a large city give a man freer scope than in a small town.

Q. How about a city like New York or Boston where many of the streets are narrow and crooked and where they are already so filled with subway pipes as to make it difficult or impossible to put in bigger pipes; doesn't that introduce an element of great difficulty in laying a main system?

A. I have no doubt it does. I have examined points where I considered there were difficulties to meet when I noticed openings in the street where I saw a man had to mind what he was about to get mains in.

Q. You say that since 1870 or about that time you have made a study of petroleum products. What has been the cost of naphtha from then down as to price? Hasn't it increased very greatly in price?

3993 A. There have been numbers of fluctuations. It has generally increased. Now it is almost out of the question for gas-making although I see numbers of companies still use it.

Q. To a small extent?

A. Well, the last Massachusetts report shows considerable use of naphtha.

Q. If it is under the head of naphtha and is shown to cost five or six cents it cannot be the good grade of naphtha which we ordinarily include in the term "naphtha," can it?

A. No, sir. It is the crudest form of naphtha.

Q. And so, too, the other grades of oil have a tendency to rise in price, haven't they—the better grades?

A. No. I think in those companies where I have had opportunities of knowing exactly the cost the present prices are very reasonable.

Q. About what they were ten years ago, do you think, for 28 and 34 degree oil? Do you think the prices are now about what they were ten years ago in this section?

A. I never got that any cheaper than 3¾ cents, that I remember.

Q. For what, 34 degree?

A. I did not regard the degree of as much importance as some seemed to think.

Q. In other words I suppose you mean that taking two 34 degree oils, one 34 degree oil may be a very much better oil for gas-making than another 34 degree oil, depending on its composition?

A. In my opinion there is no such thing as a 34 degree oil in existence.

Q. Well, taking what is commonly called a 34 degree Beaume test, might not one oil of that specific gravity be much more valuable than another oil for gas-making purposes, of the same gravity?

A. It might be on the earlier forms of gas apparatus, but I do not from my experience see any particular advantage in the exact
3994 degree of the oil provided it is not so heavy as to be difficult to evaporate or turn into a vapor.

Q. My point is this, that take two oils which test 34 degree Beaume, one oil may for gas-making purposes by reason of its composition be better than another oil which tests the same so far as Beaume test is concerned, may it not?

A. I do not think there is any essential difference, if you want my opinion as regards what the difference in these oils is really. I find it is the admixture of parafine in the oil which makes practical difficulties in gas-making and not so much the slight difference in degrees of the intermediate oil.

Q. Do you consider that the heavy oils that are now used are as good for gas-making as the old intermediate oil?

A. I consider them just as good if they do not contain any essential percentage of parafine; that is, parafine that solidifies.

Q. Does the present oil give as fixed a gas as the old intermediate oil.

A. In testing for the fixity of gas it is the capacity to stand cold weather, and I contend that there is no substantial difference between them. Naphtha seemed to give a gas that would stand cold better than heavy oils.

Q. When you say "stand cold" what do you mean, that in the cold weather the candle-power is likely to be dropped as the gas proceeds through the mains?

A. Not through the mains essentially. I think the loss is in the holder.

Q. Well, it is dropped between the manufacturing station and the delivering points somewhere?

A. Yes, quite seriously.

Q. Do you consider Texas oil, commonly so-called, as good as the oil used before the Texas oil came into the market?

A. I have only had two years' experience with Texas oil and I did not like it I must confess, but I did not make any change in the apparatus to meet the difficulties and perhaps it could be done.
3995 It gave about ten per cent. less quality of gas for the same amount of oil.

Q. Now, let us take the subject of pressure. You say that you took your pressures on services not in use at the time. Did you read Professor Hallock's testimony that there were three or four other fixtures connected with the pipe on which he made the pressure tests?

A. Yes, there were.

Q. You don't know whether any of those may have been lighted or not, do you?

A. Yes, I think I do.

Q. How do you know? Did you stand there?

A. I went around and looked.

Q. How often?

A. Well, from the fact I gave orders to have burners lighted to clear that large 100-light meter of the gas that was in it in order to get fresh gas, and so I went around to see they were burning and also saw that they were put out.

Q. Are you able to say from your personal knowledge that some one of those jets may not have been lighted up while these tests were in progress?

A. I think the indications of the chart would show if there was anything lighted during the time they were taken, aside from what I drew from the gas. Even lighting one of the photometer burners would show on the chart.

Q. Would make an appreciable representation on the chart, wouldn't it?

A. Such as I could notice. I don't know as a person would notice it that was unaccustomed, but I think all those charts would show where we drew any gas out.

Q. Did you take these pressures inside the main?

A. Yes, sir. That is, on the house pipe side, as we call it, if that is what you mean by inside.

Q. Yes, and did you take them at the burners in each case?

A. For photometrical observations, did I understand you?

3996 Q. I am referring to the ones on the charts which you have introduced?

A. No, the chart was taken from a pipe by itself but it was attached to pipes that supplied the photometers with gas also.

Q. But in some of these tests shown on your charts they were taken about 125 feet distant. Were your tests then made at the burner?

A. Yes, inside the meter on the consumers pipes.

Q. Were they made from the house pipe?

A. Yes, sir. I lighted burners to see how much effect it had on the pressure, to see how much difference it made on the sheet from the lighting of one or more burners.

Q. When you say that you examined your testing apparatus in advance and that it tests within 0.100 of an inch, you cannot make a test of 0.100 of an inch with a water column, can you?

A. No, sir.

Q. How did you test, then, to determine whether the small fractions were correct or not?

A. Well, for instance, on that chart the pen is fine, probably not more than 0.100 of an inch in width, and whenever I noticed a vibration amounting to the width of that line I should judge it was sensible to that degree. I know it is more sensitive than the water column because I saw the hand move when the water column was perfectly steady.

Q. What allowance do you make for difference between pressure in the house pipes and pressure in the mains?

A. That depends on whether they are burning gas or not. If they are not burning any gas at all it would not make any difference.

Q. Does it make any difference how the cock of the meter may be turned as to the relative pressure in the house pipes and in the mains?

A. Not a bit, if there is no gas burning, unless turned clear off.

Q. Does it make any difference what size of house pipes you have, whether they are very small or very large?

A. Not a particle unless the gas is in motion.

3997 Q. After it is in motion, how then?

A. The pressure will drop as soon as the gas begin to move.

Q. Was the gas in motion or burning at any time during these tests on the charts which you have presented?

A. At the point on the chart it shows where the gas was moving, and where it does not show it I consider the gas was still.

Q. If taken at the building with a full service, with a great many gas jets, the difference between pressure at the burner and pressure in the mains might be half an inch, might it not?

A. Yes, even more; and on small ones lower.

Q. What would be the maximum limit of variation would you say?

—. According to the way the house is piped, there might be an absorption of pressure on large consumption and also as indicated on those charts, of two inches.

Q. Now, you stated in reference to these charts from time to time that at the points you have mentioned weights were piled on. I suppose you conclude that the weights are piled on by the character of the curve that the pen describes in these charts, do you not?

A. Whenever I come to a point on the chart where there is an abrupt rise in the pressure or an abrupt fall I know the pressure has been altered further by a governor or valve.

Q. In other words, your conclusions are based upon the character of the curve described, and you have no information other than that?

A. No information other than the chart itself. I didn't need it.

Q. Referring to Mr. Forstall, didn't you construct the plant in New Orleans outside of this coal gas plant to which you referred?

A. A water gas plant. I constructed a coal gas plant in 1872-3-4, and a water gas plant in 1882-3-4.

Q. Were you there until the water gas plant was started up?

A. Yes, sir.

3998 Q. Were you there when it was started up?

A. I was. I started it myself

Q. You say in referring to these charts that the pressure indication falls with increased pressure?

A. Increased consumption.

Q. You said with increased pressure I think, or else my note is wrong. You mean with increased consumption?

A. Pressure falls as the consumption increases.

Q. Well take the Exhibit KK, sub 2, at Columbia University, October 11, 1906, about 6 P. M. or a little before that, the pressure would be increased, wouldn't it, ordinarily?

A. Well, you see——

Q. No, just answer the question. Ordinarily the pressure is increased about 6 P. M. or a little bit before, isn't —, for convenience of use, for business use, cooking and one thing or another?

A. It is increased at the works.

Q. That is what I am talking about. But the pressures seems to decrease as shown on this chart, do they not?

A. Yes, that is the chart.

Q. In other words the draught of consumers, in spite of increased pressure at the works, shows decreased pressure at Columbia University on this date, October 11th?

A. Yes.

Q. Isn't that what you would commonly expect?

A. Always expect that.

Q. Now the pressure——

A. Excuse me. It does not follow that it will be increased above the two inches and a half by any means.

Q. No, but it is increased?

A. Yes, the holder pressure will be lower and probably is a good deal lower at that point, and there the pressure at the holder might be an inch less and still afford a pressure at that point.

Q. On account of the greater elevation of Columbia University?

A. Yes, sir.

3999 Q. Now we have the Columbia Printing House, Exhibit KK, sub-1, on the same date, October 11th; did I understand you to say that the drop just before 6 P. M. in pressure on this chart was due to consumers lighting a jet?

A. One burner.

Q. One burner then lighted has pulled the pressure down something like two-thirds of an inch on this chart, has it?

A. Yes, sir.

Q. And when a second burner was lighted it brings the pressure down say one-third of an inch more, a little after 6 P. M.?

A. Yes, sir. That is the obstruction of meter. The meter is working hard.

Q. In other words, those two burners, as I make it out here, reduced the pressure about an inch and a quarter, didn't they?

A. In that particular case. Ordinarily it would not affect it but slightly, but the meter being out of order or stiff it moved down.

Q. Did you examine the meter to find if it was out of order or stiff?

A. I didn't have to. That is a perfect indication.

Q. Did you examine the meter to find if it was out of order or stiff?

A. No. I will say it is not absolutely certain; that there might be another cause; it is altogether probable the meter was the cause.

Q. That is your conjecture from what this shows?

A. Yes. I should always take it to mean that the meter was out of order.

Q. But it might be due to the other cause, you have said?

A. Very remotely.

Q. Do I understand you to express the opinion that those two curves on State's Exhibits Sub-1 and Sub-2 are identical except as to the average?

A. Yes, absolutely.

Q. Do you think they are absolutely identical?

A. Same holder.

Q. Now do you know how far from this 125th Street place, which was on a Standard Gas Company's service, there is
4000 any connection between the Consolidated Gas mains and the Standard mains?

A. I have not any other evidence than that, but that is absolute to my mind, that there is some connection.

Q. Supposing you found that there was no connection within ten blocks between the main that goes to Columbia College and the main that goes to 125th Street, no connection within ten blocks of the 125th Street place, does that make any difference in your conclusions?

A. No, not if it was fifteen or twenty blocks away.

Q. You think then such a remarkable concurrence between the locations in these two sheets KK, proves that the same pressure produced it?

A. It relates away back to the holder itself. When you come to superimpose them in the right manner, you will find the curves are absolutely identical. Take this point where there is change of pressure in the holder and then run your eye along that line by superimposing them.

Q. I do not find it any more identical with my eye than in the other curves you have produced here.

A. Have you looked at it in that manner (superimposed)?

Q. Yes, I did. I think it shows for itself, however. You do not need to proceed further with that.

A. Yes. It shows for itself.

Q. Do you know whether there was any jet lighted at this printing house at 125th Street?

A. No, sir, none there. I made an arrangement with a man to keep them turned off and the indication on the chart on subsequent dates shows he did it.

Q. Well, taking Exhibit KK, sub-1, it would appear as though if another jet had been lighted about six o'clock P. M. the pressure would have been reduced to zero, wouldn't it, at that same ratio?

A. That is so.

4001 Q. Taking the whole thing. What would have happened then? Would the lights have gone out?

A. You would probably have heard from them at the office.

Q. What would have been the effect if you lighted one or two more jets which would reduce the pressure to zero; would that make one or more of the jets in danger of extinguishment?

A. No, they would not be both extinguished; just simply die down. There would be some gas coming through, enough to keep the light on.

Q. But they would be reduced to such proportions that they would likely to be extinguished by any draught, wouldn't they?

A. The lower you turn a burner down the more apt it is to blow out.

Q. Yes, I know; but assuming the proportionate rate of reduction in pressure was continued at 125th Street, at the printing house, by the lighting of perhaps two more jets, which would reduce the pressure pretty nearly to the zero point, if not quite, according to your chart, then would it not be true that the flame would probably be reduced to such small proportions that it might easily be extinguished by a draught?

A. Yes, I think possibly it might.

Q. Now, in State's Exhibit LL, taken at the Columbia Printing House, 125th Street, and Columbia University, October 12th, do I understand an identical character in those curves which must indicate that they come from the same holder pressure?

Mr. KIRBY: He stated he did not, on his direct.

Mr. MATHEWSON: He stated that he did on his direct, according to my notes.

A. No, there is no coincidence there at any part.

4002 Mr. KIRBY: That is in accordance with his direct testimony.

Mr. MATHEWSON: I think he did start to make a coincidence and then withdrew from that position. I think that is the fact; I remember it now.

Q. Now, let us take the Grand Union, on August 17th and 18th, Exhibit MM; that appears to go substantially above 2½ inches, doesn't it?

A. Yes, it goes above two and one-half inches, but the weight of it has been put there by the gas company.

Q. How do you know that?

A. Right there you can see it as plain as day.

Q. You can see it rises on this chart, can't you?

A. It don't rise itself, it is by letting on more gas.

Q. This is about nine A. M. the rise begins, eight or nine A. M.?

A. No, it is seven o'clock P. M., quarter past seven the rise began.

Q. Yes, that is right. What is the effect on pressure in the mains of the shutting off of gas ranges which largely operate between six and seven o'clock in the evening, we will say, if you maintain pressure at the works?

A. The effect of shutting off any consumption of gas is to increase the pressure.

Q. So that if it be true that gas ranges are largely in operation from half past five to seven in the evening and they were shut off, or many of them, or part of them, by seven o'clock, it would tend to increase the indication of pressure for the balance of consumers, wouldn't it?

A. That has nothing to do with that.

Q. Wouldn't it?

A. Yes, but it is entirely apart——

Q. It may be but that is another thing. Do not argue with me. This rise in pressure may be due both to the shutting off of the gas ranges and to an increase of pressure at the works, might it?

4003 A. Yes, it might.

Q. And this, you understand, is the Standard Gas Company at the Grand Union Hotel?

A. I inferred it was from the character of the chart and the way the pressures are handled. I did not ask the man for his bill or did not take any measures to find out whose gas it was, but as soon as I saw the chart I made up my mind it was the Standard or some other company, not the Consolidated.

Q. Now, in short, isn't it true that the pressure at different points of a main and at different services changes frequently while the pressure at the works may remain exactly the same?

A. Certainly they will change. They endeavor to meet them at the works.

Q. In other words, changes of consumption over which the company has no control would make changes in pressure at different points of the mains if the company maintained a uniform pressure at the works, would it not?

A. Yes.

Q. How could the company correct any changes due to changes of pressure on account of draughts of consumers except by greater pressure at the works?

A. That is the way to do it, by so arranging the pressure at the works as to meet the conditions in the mains. That is the important point.

Q. Now, let us take State's Exhibit NN showing pressure at 3607 Broadway, October 13th and 14th. Was that a Saturday, October 13th?

A. Saturday and Sunday, I believe. There are two cards there, two sheets.

Q. I see only one here.

A. They have become detached.

Q. Yes, there is another, State's Exhibit OO, October 14th; the difference in pressure at 6 P. M. seems to be very marked between Sunday and Saturday, does it not?

A. Yes, sir.

4004 Q. What would that be due to, difference in pressure at works or difference in consumption?

A. Due to the difference in consumption there.

Q. What would these great irregularities in the chart of October 13th indicate?

A. That is the consumption inside the building, a shortage of pipe, deficiency of pipes within the building undoubtedly.

Q. You don't know whether that is a new or an old building, do you? I see your tests are made on the fifth story?

A. I don't know. It has insufficient piping, that is evident, within the building.

Q. Would not a very heavy draught within the building due to a large number of burners have the same tendency to reduce the apparent pressure as the small piping with fewer burners?

A. Yes.

Q. Now, take No. 1 Platt Street, October 15th, 1906, State's Exhibit PP—you say that a gas engine was started. How do you know that there was a gas engine started there?

A. In the nature of those fluctuations, I do not attribute that to a gas engine; it might be due to some form of a suction of gas off the pipes as I found frequently inside of a building; they will put some form of blower on to draw the gas off and make such an effect as that, but it is violent oscillations of pressure.

Q. Would not the same answer apply to the blurred line shown on State's Exhibit PP, sub-2, October 16, 1906?

A. That is one of those I noticed of the gas in the neighborhood bobbing from water in the mains and I think that was the case there.

Q. You think that was so, but don't you think that the company would have been likely to have received a complaint provided there had been water in the mains to that extent?

A. I asked some of the customers along there and they said they were used to it. I asked in a cigar store why he did not complain and he said it didn't bother him much. It was bobbing and would bother him considerably, I should think, and I asked him 4005 how long it had been going on and he said ever since he commenced to light up in the fall, but he didn't care.

Q. It didn't bother him enough so that he cared?

A. It didn't bother him enough to make him care about it.

Q. Now, you made certain fragmentary tests which you did not complete. Why were they not completed?

A. Well, those tests were marred by drawing off gas in the university and pumping and performing experiments on gas pressure, and required so many explanations to state what was going on there that I thought there would be no use of putting them in.

Q. Have you those fragmentary tests here?

Mr. Kirby: They are in my office.

A. They are simply where the record is marred by having pumps going there to compress gas, and various other experiments we were making, and it obscured the real design of finding what the pressure in the mains was so I left them out.

Q. Were all these fragmentary tests made at Columbia University?

A. All made at Columbia College. All the rest were put in. I didn't exclude any except those where we were experimenting on pressures.

Q. Will you bring those down at the next session or let Mr. Kirby have them?

A. Yes, certainly. It will show just what we were doing.

Q. Now, as to there being a gas engine started up or there being water in the mains, the remarks you have made in reference to State's Exhibit PP would apply to State's Exhibit QQ, would they not?

A. Yes, that was water, it is drawn down here, or using a furnace.

Q. Drawn down where?

A. There at that point (indicating).

4006 Q. Well, that is to say, No. 2 Platt Street, October 18, 1906, on State's Exhibit QQ sub-2; the draw down being about what time of day?

A. Well, this is previous, October 17th at 3 P. M.

Q. It began at 3 P. M.?

A. No, but I say I took that off at 3 P. M. and undoubtedly I put this other sheet on at the same time. This was the 3 P. M. line here.

Q. In other words, the 18th started about 3 P. M., did it?

A. Yes, sir.

Q. Shall I put 3 P. M. there?

A. Hold on, I want to be positive about that because sometimes I could not get in that place. You have separated these sheets; that is not the same.

By Mr. Kirby:

Q. Do you mean you have marked that one incorrectly?

Mr. Mathewson: They are both Exhibit QQ, aren't they, one being sub-1 and the second being sub-2? Let us have this corrected if there is any mistake about it.

The Witness: This should be No. 1 Platt Street. I know absolutely this is No. 2B Platt Street for the reason—QQ 1 and 2, they are both No. 2 B for I asked the man what he had been doing to draw that down there and he said he used a furnace to warm up in the morning and then I got him started and he drew this down for me to show how it occurred and he set his motor going and made a blast and it made a suction of the gas on the pipe and I looked at the meter to see the capacity of it because he was burning a large amount of gas and it drew that down, so I know that this and that are the same because this performance takes place in the evening.

4007 Q. What is the beginning of the second page of QQ, what hour?

A. You can deduce it exactly from here. That movement there takes place at the same time.

Q. If you left off at 3 P. M. doesn't it begin on the next sheet at 3 P. M.?

A. No, I think not, because he told me he had put this on here to warm up his building in the morning, to take the chill off.

Q. How is it possible, if you have them consecutive, that it does not fit on? You didn't have a half a day there in that test which appeared on another sheet and which you omitted surely?

A. I remember at that time I had considerable difficulty to find a place that had Consolidated gas and this man locked up and went away about 5 o'clock and it interfered with putting the sheets on regularly, but those two motions of the pen there are identical, I think.

Q. That is merely a matter of reasoning from these two sheets and they do not seem to me to be identical so I do not think I shall ask you to speculate.

Mr. Kirby: Have you anything to show what time you put the second chart on?

The Witness: Nothing more than the chart.

Q. Now, let me ask you did not the putting on of this stove——

A. Furnace.

Q. Well, whatever you call it—you do not mean a furnace to heat the entire building, do you?

A. It was a furnace that he used to take the chill off.

Q. Putting on the furnace to take the chill off, reduced the pressure there more than an inch, didn't it?

A. Yes, sir. It was urged by a power blower, however, or suction.

Q. Will you look at State's Exhibit SS, Broadway Jewelry Store fronting Battery Park, November 5th, 1906, and state what
4008 this smooch is at the bottom about 9 P. M.?

A. That is where the boy brought the instrument down and the pen was left on the paper and in moving it jarred it.

Q. What boy?

A. Some boy that brought the instrument to me, I don't know his name.

Q. You mean after the test had been completed?

A. It had not any reference to the pen. The pen happened to be at that point.

Q. This does not cover an entire day, does it?

A. They shut that off themselves; it covers from 5 P. M. to 9 A. M. in the morning. The occupants of the building shut that off.

Q. In whose charge did you leave that, the boy at the jewelry store?

A. No, I left it in the charge of the proprietor. He said he would not touch it, but it seems he wanted to put his gas heater on and he thought it would be a good idea to shut it off. However, the test was continued on that day.

Q. On the back of this State's Exhibit SS?

A. Yes.

Q. Now I find that substantially every one of these tests at Columbia University, being State's Exhibits JJ Sub 1 to Sub 16 show the pressure above 2½ inches at one time and another; that is correct, is it not?

A. Yes. They put it up at the works; that is easily enough remedied.

Q. And you have stated it as your opinion upon the strength of these tests among other things that it is possible to maintain a pressure between 2½ inches maximum and one inch minimum in the mains of the City of New York. Have you ever operated a gas plant in the City of New York?

A. No, sir.

Q. Have you ever operated a gas plant in the City of Boston?

A. No, not in the City of Boston.

Q. Have you ever operated a gas plant in any of the great eastern cities like Baltimore, New York, Boston, Buffalo, where you
4009 meet the conditions of temperature and elevation which prevail in New York City?

A. No, sir, I have had just the same conditions, the same kind of weather and same elevation, one place the same as another, 100 feet——

Q. You have taken these tests, some in August, some in October——

Mr. **Kirby**: One in August.
Mr. **Mathewson**: I think there are two marked August.
The **Witness**: Only one.
Mr. **Kirby**: Only one marked Grand Union Hotel.

Q. Well, one in August, and mostly in October and one was within the last day or two. Do you not know that in New York City the differences of consumption and conditions in winter as compared with those in summer and fall make it very much more difficult to maintain a uniform pressure in winter than to maintain it in the summer months or early fall months?

A. There is more difficulty with the summer months, but not with the fall months.

Q. You think it is just as easy to maintain a uniform pressure or a pressure within uniform limits in the winter as it is in August?

A. No, not in August?

Q. Well, as it is in October?

A. Yes.

Q. Don't you know that the variation in pressure appears to be very much greater in the winter months than it is in the fall month of October?

A. No.

Q. And have you proceeded on that theory in stating that the Company could maintain a pressure within the limits specified in
the law, that there would be no more difficulty in the winter
4010 than there would be in October in maintaining a uniform
pressure?

A. Just——

Q. (Question repeated.)

A. I will say in the latter part of October, as soon as the lighting hours become coincident with the time of gas cooking and small heating devices, that the pressure draft would be the same.

Q. You proceeded on that assumption in forming your own views, have you?

A. Yes. I find the same elsewhere.

Q. You proceeded on the same assumption in New York .

A. I think that the draft on the mains would not be any more in a December night than it would be in a November night provided that the various devices were in operation. In fact, there would be more heating devices in operation in November than there would be in December in my opinion.

Q. Then the consumption of gas ought to be as great in October as in December, had it not?

A. It ought to be per hour, per maximum hour.

Q. And you think that the concurrence in winter of one very cold and very dark day with the following day bright and much warmer would be a condition which you might find in equal degree in October, do you?

A. I do not see any difference.

Q. And you have stated that changes of pressure may occur in the mains with no change at the works and you have also said that the Company can care for variations of change in the mains by changing the pressure at the works. What indication will there be at the works of the Company to show the need of change of initial pressure at the works?

A. Well, there will be a slight fall of pressure at the works every time there is a larger draft outside of the works, that ought to indicate to them that the main indication is to be derived from just such things as these charts. They want to take charts and find out.

4011 Q. They cannot stop and go out and take charts at 125th Street, can they, when they are keeping up the pressure at 111th Street, they have got to respond to the pressure as the requirement shows itself at the works, haven't they?

A. Well, the differences from day to day would not be so great but what the charts would indicate how they ought to govern the gas at the works.

Q. Do you mean to say that one day's pressure taken on charts of this kind at 125th Street would indicate exactly how they ought to regulate pressure every other day or for a considerable number of days thereafter?

A. If taken at a time when the gas consumption was likely to be at its maximum, yes.

Q. And then they ought to keep the pressure up to the maximum requirement?

A. They ought to keep it up to the requirement. There is no need of any such pressure as shown on the Columbia chart.

Q. But you say that might be with a pressure at the works of only an inch or an inch and a half?

A. I should say not an inch but an inch and a half, I should think the works would afford that pressure.

Q. Do you mean to say by taking a chart of that kind and taking its indication for one day at 125th Street it would be possible to regulate pressure at the works thereafter on the basis of that chart without regard to the question as to whether subsequent days were darker at an earlier hour, and required a consumption beginning earlier and things of that sort?

A. That should be taken into consideration.

Q. How can you take it into consideration except by manipulating your pressure at the works as the indication occurs at the works of draughts on the mains?

A. The indication at the works is while—every time there was a large draught on the main the indication at the works also showed some slight indication, but not as definite and not giving the 4012 exact information that a series of diagrams would give. I would not necessarily confine myself to one diagram. I should take several. I see those diagrams have great uniformity, and all they had to do was to pull down the pressure in the main to comply with the law.

Q. You don't know what the pressure was at any time between the points where you took this pressure and the works?

A. On the chart there—there is a diagram near the works showing they did pull down.

Q. And you found when they pulled down that a man put on two gas jets and his pressure went down seven-tenths of an inch

A. No, I am not referring to that chart, but to a chart taken near the gas works. I took a chart near the gas works to find out whether they had to keep their pressure above or below the line in order to give it at the distant point.

Q. Well, what about the pressure at the distant points, what about the pressure at a greater distance from the holder than you took your readings, that would naturally fall, wouldn't it?

A. Yes. I have taken them at points most likely to be affected, however.

Q. Were the Grand Union tests taken any nearer the works than 125th Street, so far as the Standard Company is concerned?

A. I don't know the distance from the Grand Union to the Standard holders or point of supply, but I do know they could have pulled that excessive pressure down readily enough.

Q. Didn't you say the Grand Union was nearer the source of supply in your direct testimony?

A. I don't remember that I stated it was relative to the source of supply. I don't remember stating that.

Q. Well, to the works?

A. It is nearer to some of the works but I don't know what.

4013 Q. Do you know whether it is any nearer the Standard works than the place at 125th Street?

A. The Grand Union is on 42d Street and there are works on North River and 42d Street.

Q. You understand those are the Consolidated Gas Company works, don't you?

A. I have not absolute certainty that that was the Standard, but I took it from the diagram that it was the Standard works for the reason that it was governed by a governor exclusively during the night.

Q. The Standard meter, did you observe that?

A. No, I did not look at the meter in that case.

Q. Well, if it be true that the Grand Union is not any nearer the Standard works than 125th Street, your reasoning based on this theory would not apply, would it?

A. I did not take much account of the summer sheets and I did not continue them for the reason that I considered that they would not be of much account in this case on account of the small consumption, so I dropped it.

Q. Will changes throughout the district furnished by gas from one distributing station vary uniformly?

A. I observed considerable uniformity in regard to the maximum draughts, on account of as soon as it is dark in November it is just as dark as it is in December. I don't see that it makes any essential difference whether a dark hour occurs in October or November or December. You have got to light up in each case.

Q. Well, but don't you understand in colder weather you may have gas ranges and gas logs and other things going which you will not have going in October?

A. My experience has showed me that there is more gas consumption for heating in the first cold weather than there is when you get settled cold. That is my experience. When you get settled cold you use coal for heating.

4014 Q. How did you know that this place at No. 1 Platt Street consumed Consolidated Gas?

A. I looked at the meter and saw Consolidated Gas Company property on it or something to that effect.

Q. And the same at No. 2-B Platt Street?

A. No, No. 2-B I referred to. No. 1 I don't think was Consolidated.

Q. Wasn't it Mutual ?

A. I think possibly it was. I don't think it was Consolidated gas for it did not bob with the other. I found there was two gas supplies there, one of which had water in the pipe and the other had not, and I knew there must be some different line of pipe and therefore in the case of No. 2 Platt Street I went and looked at the meter and found it was Consolidated Gas Company's meters.

Q. You understand, don't you, that the Consolidated Gas Company has mains and supplies gas in every street in Manhattan that is opened, including all those in the outskirts as well as those in the thickly populated sections?

A. Yes, I suppose they have.

Q. And you understand that the Mutual and the Standard and the other gas companies confine themselves largely to the more densely populated sections of the city and do not extend to these outskirts streets, or don't you know that?

A. I know the Manhattan Company and the Metropolitan had extended their pipes very much over the city and the new companies arranged to take the new consumption, and I suppose did not extend their pipes so far.

Q. You don't understand the Manhattan extended its pipes to 155th Street and Washington Heights or around there?

A. Within the district that they supply.

4015 Q. I know that. I am talking about Manhattan Island. Now, you say you have made certain tests on heating apparatus, and you find the greatest efficiency in a flat-flame burner to be considerably below one inch?

A. Yes.

Q. Did you read Professor Hallock's affidavit in this case where he quoted Doctor Chanler?

A. Yes, I think I did.

Q. Don't you remember his referring with approval to Dr. Chanler's statement as to the variation in pressure?

A. I think that was based on some peculiar burner that Dr. Chanler used.

Q. Well, it does not appear that it was a peculiar burner, does it, from Professor Halleck's affidavit?

A. No, but it does from the test.

Q. Well, whatever it was, it appears by Dr. Chanler's affidavit, if

Mr. *Mr.* Hallock quoted it correctly, that Dr. Chanler found the greatest efficiency at about an inch and a half, didn't he?

A. Yes, that was evidently a check burner. There is no question about that.

Q. Well, whatever kind of a burner it was, that appeared to be the result, did it not?

A. Yes, I got the same——

Q. Now, as to your experiments with the Welsbach burners, did you try the Kern burner?

A. I used the Kern burner very satisfactorily. I did not try it on this case.

Q. Does not that require a pressure of at least two inches for great efficiency?

A. The Kern burner is constructed on the principle of an exhauster or jet that would give probably a better result at a higher pressure, but it requires low candle-power gas for it. It is not really proportioned for our gases, and for that reason I dropped it out.

Q. Do you mean that the present gas furnished in New York City will not operate the Kern burner satisfactorily?

A. They give a good light but will not give efficiency as compared with the Welsbach for high candle-power gas, surely for the——

Q. For the burning of the same number of cubic feet?

4016 A. No, it will not give the efficiency unless they have altered it within a short period.

Q. But you did find for the Welsbach according to the charts which Professor Hallock presented here, that the greatest efficiency for them was something over two inches, did you not, something like 2.35 inches pressure in one case?

A. According to Hallock, no, I did not find that. I found just as good results with one inch as with higher, by careful adjustment, by watching the photometer; I adjusted by the photometer, you might say, by means of adjustments which consumers could not avail themselves of.

Q. Do you mean you adjusted it from time to time as it was burning?

A. I adjusted the gas and air supply relative to each other by watching the effect on photometric screens to get the maximum light.

Q. You never tried to cook by a gas stove, did you, with the pressure at one inch or under?

A. I have seen cooking done all over town and in towns where they had at the stove less than three-quarters of an inch and it was all——

Q. Did you test it youreslf to find out what pressure they had at the burner?

A. Yes, went all around, went all over the city.

Q. Satisfactory and effective cooking and baking, was it?

A. No, it was not satisfactory in one sense, but it did the business.

Q. If you took time enough?

A. It gave ample heat. The only thing was that it required large pressure to heat them through their small pipes, and therefore, they had to put in additional supply pipes. It was a case of deficient house pipes.

Q. When you say that in your pressure tests for gas stoves you took the pressure at the stop-cock apparatus, was the pressure back of the stop-cock?

A. No, between the stop-cock and the jet.

4017 Q. Is not the important thing, in determining the pressure that the Company is supplying, the pressure back of the stop-cock?

A. That is the point so far as the Company is concerned, but the point for testing whether the gas stove will work, at what pressure it is actually working, is taken between the stop-cock and the jet. That is the real pressure on the stove. The other is controlled by the stop-cock.

Q. If the pressure is the same back of the stop-cock as you found in front of it, would it work efficiently?

A. It would work the same if the stop-cock was fully open and regulated further back.

Q. But it would have to be regulated back somewhere?

A. Yes.

Q. You would not expect the same pressure back of the stop-cock all the way back to the main or the Company's works that you get in front of it, would you?

A. That is the way I tested it. I put on an additional stop-cock back so as to open full pressure on the stop-cock of the stove.

Q. Is not the needle and wheel apparatus which you said took two inches the apparatus ordinarily in use in stoves in the City of New York?

A. No, I think not. I think on the contrary it is the stop-cock. All I have seen have been stop-cocks. I have not seen a single needle valve stove in use. When I looked in the Consolidated Gas Company rooms on 42d Street, I did not notice them there. I approve of that form and was rather surprised not to see any.

Q. Does it not make a difference how large the burners are or how many there are in use in a gas stove as to pressure?

A. It makes a difference as to the size of pipe required to the stove, yes.

Q. I am talking about the ordinary size of pipe which you find in the ordinary stoves?

A. The pipe should be large enough to not draw down unduly.

4018 Q. That is not the question.

A. What was the question?

Q. (Question read as follows: Does it not make a difference how large the burners are or how many there are in use in a gas stove as to pressure?)

A. The pressure on the stove stop-cocks or valves will go down according to draft. If you have one burner lighted it might draw down one-tenth and two burners might draw down two or three-tenths, according to the size of them.

Q. When you say that between an inch and two and a half inches you can regulate pressure as well as at any other limitation, you mean regulate it where?

A. Either at the stove or at the burner. But it would be better to restrict the variation in the house-pipe pressure to a less amount than an inch and a half. That is a very large allowance I think.

Q. If you have pressure sufficient at the meter or if it is too great you can reduce the pressure, can you not, either by turning the stop-cock at the meter or by turning your keys at the burner.

A. The stop-cock at the meter would be a very poor regulation.

Q. Well, it could be done, could it not, if you wanted to reduce it to a certain flow?

A. In my experience I have heard that proposed but I never saw anybody—never knew of its being carried out satisfactorily, for every time you light an additional burner or when the pressure varies outside it would require you to go down and regulate the stop-cock again.

Q. If you regulated it to a minimum point or to a point where it would be sure to let through all you required, you could regulate it within those limits at the meter, could you not?

A. If you had exactly the same number of burners going in use you could.

Q. Assume any number of burners you please, you could regulate at the meter the amount of gas which might be required for a 4019 particular number of burners, could you not?

A. For one given number of burners, yes, that is, in use.

Q. In other words, if there was a constant excess that excess could be cut off at the meter cock, could it not?

A. Not satisfactorily.

Q. Well, it could be cut off there, could it not?

A. I have known it being tried many times, but I never knew of a satisfactory regulation at the meter cock.

Q. Don't you think it could be as satisfactorily regulated at the meter cock as it could be a mile or two miles away at the company's works?

A. Not by a good deal. The variation on the company's mains is what requires regulation, and the other will regulate itself if the main pressures were regulated.

Q. Well, it would not be satisfactory to regulate it at the meter cock because there is not that constant excess to which you have testified. Is not that the fact?

A. The meter cock will stay right at one spot and it is, in my opinion, impossible to regulate any varying consumption at the meter cock.

Q. That is just the point, this is varying consumption, but the question I am asking is this. If the excess pressure were constant and did not vary in the mains on account of consumption, then you could regulate the supply at your meter cock, could you not?

A. The burners remaining the same number in use, yes, if you had just the same number of burners in use and the pressure on the mains or at the meter cock remained the same you could bring it down at the meter cock.

Q. You cannot expect the company to regulate the number of jets which shall be used in any house.

A. I expect them to regulate the pressure at which they are used——

Q. If there is not pressure enough to deliver to the consumer the amount of gas which he requires and no pressure fitted for 4020 the efficient operation of his apparatus, there is no way he can get it, is there?

A. Enlarge his pipes.

Q. Assuming his pipes are of reasonable size to begin with?

A. In my experience that is just where the trouble is. They put more consumption on the house pipes than the house pipes are fitted for.

Q. You don't think the companies ought to take that into account at all in delivering gas to the tens of thousands of buildings in New York City, do you, but ought to deliver pressure exactly as though all the house pipes were large enough, is that right?

A. All companies have rules and regulations about house pipes and ought to see them carried out, that is sure.

Q. But the company has not any regulations as to house pipes that you know of in this City, or any power of enforcing the use of house pipes?

A. Yes, sir, it has. There is just where the trouble is.

Q. You think it has?

A. I am certain every company has.

Q. Will you point out any regulation in the laws of the State of New York which has escaped my notice, providing that gas companies may regulate the size of house pipes?

A. Yes, sir; through their inspectors they have absolute control of it and assume it always.

Q. Will you point out to me the statute which gives them the power to regulate pipes in the City of New York?

A. It is in their own rules and regulations.

Q. Oh, well——

Mr. Kirby: He says the company has rules and regulations in regard to house pipes.

Q. I want you to point out to me any power existing in the gas company by virtue of the laws of the State of New York to 4021 regulate the size of house pipes. Now, can you do that?

Mr. Kirby: The witness is not a lawyer.

A. I don't know the laws but I know as a matter of fact they would not turn on gas on inadequate pipes knowing there would be dissatisfaction.

Q. You don't know what the requirement of the laws of the State of New York is as to the company's being compelled to deliver gas to the consumer along the line, do you?

A. I know that in regard to a great number of companies——

Q. Do you know anything about the laws of New York in that regard?

A. I don't know any specific directions of the law requiring them to furnish gas to inadequate piping. I should think it would be a very crude law that would do it.

Q. Don't you know that great numbers of the buildings in the City of New York were constructed long before the use of Welsbach burners and gas stoves came in?

A. Yes, sir.

Q. Now, do you know of any ideal house piping scheme that provides for each 1-10th fall in pressure for fifty feet?

A. I know of lots of adequate house piping schemes and have seen them carried out, too.

Q. Would it be your advice that the house piping of the City of New York should be done over again wherever the pipes are not of large size and that the company should refuse to supply gas until that is done?

A. They don't require to be done over again. It requires merely an adequate pipe taken from the supply to, for instance, the cooking stove or——

Q. Is it your view in making up your mind on this that the company has any right to shut off gas to a consumer so long as the consumer pays his bills, no matter what the size of the house pipes is?

A. I don't know how that is, I should shut them off until they supplied sufficient pipes.

4022 Q. Well, you would get into a great deal of trouble if you did, I can assure you of that, from experience.

A. I would not think they would compel me to put a pressure on to those which were inadequately piped.

Mr. Kirby: This seems to me to be entirely outside the line of cross-examination.

Mr. Mathewson: I do not think so. He suggests a scheme for house-piping, and we want to find out how it would work.

Q. You said that a blow-pipe action may run a Welsbach to three times its ordinary efficiency. Is not the principle of the gas stove such that the same action would increase the efficiency of a stove?

A. Not noticeably, no. The pressure is too light there. If you increase the pressure until you did that, that blow-pipe action might shorten the flame and increase the intensity of it. That is observed in all sorts of blow-pipe appliances.

Q. It depends does it not, Mr. Edgerton, a good deal on what kind of a burner you use, whether you can get the highest efficiency under one inch or above one inch, even so far as flat-flame burners are concerned?

A. The point of highest efficiency in all flat-flames I have tried is one tested at the point of ignition and is almost identically the same. I should not think it differed to the extent of a fiftieth of an inch.

Q. Not even if it is a check burner?

A. Of course the check burner does not give the pressure at the point of ignition. It is restricted there.

Q. In other words you reduce your pressure by the check?

A. Yes.

Q. And in that case you would get just as good a result with the

4023 pressure in the main at 2½ inches as you would with an unchecked burner when the pressure in the main was an inch, would you not, if you checked it properly?

A. You could but the loss of efficiency would vary with the pressures in the same manner as it does with the unchecked burner. It does not put the consumer in any better position so far as fluctuations of pressure are concerned.

Q. You cannot furnish any system, can you, where the consumer of gas upon a system of mains like New York City will always maintain a uniform pressure at his burner, if he depends upon any possible pressure that the company may put on at its works?

A. You can. Over in the City of New Orleans I put the highest fluctuations at less than five-tenths of an inch.

Q. I am not talking about the amount. I say there is no possible system in view of this differing draught of consumption upon the mains of a company by which if the consumer leaves his apparatus open he will at all times have a uniform pressure at his burners, is there?

A. I think there is just such a system.

Q. So that he will have an exactly uniform pressure at his burner all the time?

A. Within a very small variation, yes, sir.

Q. Well, there will be some variation, will there not?

A. Very slight. It is not necessarily large. I have seen——

Q. But there will be some variation, will there not?

A. A very slight variation.

Q. Do you mean to say, Mr. Edgerton, that you think there should be no regulation of pressure at all between the works of the company and the tips of the consumer?

Mr. Kirby: He has not stated that.

A. I think where there are great differences in elevation that there should be district governors, certainly.

4024 Q. Well in buildings, high buildings, there will be a great difference in pressure between the first and upper stories in that case, will there not?

A. Yes, not great, but——

Q. And will there not be a different pressure practically for every consumer in the district, if there is no regulation by any consumer between the works of the company and the burners of that consumer?

A. There would be a difference in pressure, considerably, in a very high building, but if it was a uniform pressure it would not make much difference because he could adjust *to* it.

Q. And would not it be true that the consumers nearer the works would get a higher pressure than the consumers at the farther end of the district, the consumption remaining uniform?

A. They might have a higher pressure and probably would.

Q. So, would it not be true that, taking a district, if there was no regulation between the works of a company and the burner of any consumer, the consumers as between themselves would all have varying pressure?

A. Not by a proper regulation at the works, there should not be but a very small variation. I have seen it regulated during the burning hours two-tenths or three-tenths of an inch at times.

Q. Oh, at times. That is another proposition.

A. Well, I mean at times when it was difficult to do so. I mean at a maximum variation. I could point out places where it has been regulated within that.

Redirect-examination by Mr. Kirby:

Q. You have testified in reference of these charts that certain of the readings were made when there was no gas being taken from the pipes to which you had your instrument attached and that in those instances the pressure readings show the pressure in the service mains with the exception of such allowance as might have to 4025 be made for difference in elevation between the service main and the place where your instrument was placed. In other readings the charts show a variation, in some instances considerable. And these you have stated to have been occasioned by one gas jet or two gas jets being lighted, in other words, the gas being drawn from the main. Is it your opinion that such a change in pressure as is indicated on the chart from that source is due to the interposition between the service main and your instrument of the meter and the house pipe and if there were a branch pipe; in other words, of everything between the service main and your instrument?

A. Yes, those variations that I note on the charts, some of them abnormal by reason of some obstruction in the meter, are all caused by interferences of that kind. There is no variation there, that is, of any serious amount, caused by variation on the street main. All those ups and downs of large extent are by reason of small house pipes or stiff meter or water in the pipe.

Q. That is, in Chart KK-1, at the hour around six o'clock there is a fall of quite a fraction of an inch noted upon the chart. In your opinion, would that apparent decrease in pressure have registered if your apparatus had been attached directly to the service main?

A. No, that is due to the obstruction caused by the meter being out of order or some other obstruction of that kind.

Q. That is, to some resistance between the service main and the point where your instrument was attached?

A. Yes.

Q. You have stated in your opinion the Consolidated Gas Company could use such charts as these in an effort to better regulate its pressure. Do you mean by that that these charts taken at frequent intervals would be a means of indicating what the pressure would be at any particular point, whether it was uniformly high or uniformly low, and therefore whether the pressure in that dis- 4026 trict could be governed by means of the pressure recorded on the chart?

A. Yes, we use those charts as a means of finding out not only whether the governing is accurate or whether it is deficient and also as to whether the mains are adequate. Now, this chart here, Exhibit KK-2, would indicate that the pressure could be cut down, well, say, half to three-quarters of an inch without causing any trouble with consumers. And that the maximum line running above the two and one-half inches could be kept well within it. It is a question of regulation there. Now, its effect on the lower customer by pulling it down would be inappreciable except for the resistance of his meter or some obstruction in the pipes there. Half an inch could be cut off of the lower point without interfering with the efficient use of gas. And that half an inch taken from the higher point would bring it well within the two and one-half inch maximum.

Q. And so from an observation of that chart, or by a series of charts at the same point, the company could determine whether or not it would be advisable to increase or decrease the pressure so as to keep within one inch and two and one-half inch limits?

A. Certainly, they would be a guide to accomplish it. I am surprised that they have come so close to it as they have.

Q. You have spoken of the maximum hour. What do you mean by the maximum hour?

A. The maximum hour is equivalent to the peak of the load, that is, the hour during which the maximum amount of gas is flowing in the pipes or from the holders.

Q. This might or might not be upon the day of greatest consumption, might it not?

A. No, it might be wholly apart from the day of greatest consumption. The December consumption is great simply because the hours are lengthened, not because there is more gas being consumed in any dark hour of December. In fact, the maximum hour might fall and probably in New York, would fall in November. It would fall at the time of the maximum demand for these temporary heating apparatuses, such as gas logs and stoves, which would not be used in the severe cold weather. 4027

Q. Mr. Mathewson has asked the Master to look at charts KK-1 and KK-2. Will you point out to the Master what you consider are the variations in those two charts which are same?

(Witness here explains to the Master).

Q. Reference has been made to your connection with the New Orleans Gas Works and the installation of the water gas plant there. Did you operate that plant?

A. Yes, sir; I operated it for about six months and was in consultation with the operation for a period of two or three years afterwards.

Q. During the time you were employed by the United Gas Improvement Company the business which you have spoken of on cross-examination as your own business was the company's business, was it not?

A. Yes.

Mr. Kirby: That is all I have on that subject, Mr. Master. There is the matter of oil which was gone into at some length on cross-examination which I do not desire to take up at this time, not having gone into it at all on direct-examination, and I therefore ask that

I may have the right to take up that subject more *in extenso* when we come to consider it in relation to the cost of gas.

Mr. Mathewson: I have no objection.

Recross-examination by Mr. Mathewson:

Q. Is that plant in New Orleans, that water gas plant, in operation yet?

A. No, there have been various changes made. It has operated under several different plans since then.

4028 Q. And when you refer in these charts to the pressure being brought within a certain range you mean at that particular point, do you not?

A. Yes.

Q. Now, don't you know that of these two sheets, Exhibit KK at 125th Street and the other at Columbia College, one is on the Standard mains and the other is on the Consolidated Gas Company's mains?

A. They are connected together.

Q. And do you know whether the pressure comes from the same point or not?

A. Absolutely certainly it does.

Q. You concluded that it does from looking at those charts, do you?

A. Absolutely. I did not take——

Q. Don't you see in looking at these there is a difference of about fifteen minutes in superimposing these to reach the nearest identical lining of curves?

A. No, I do not notice that at all for the plot——

Q. Just keep them on the curved lines there exact. In other words, those lines curve and you must keep these, if you get them exactly at the right point of the proper hour on the same curves?

A. No, sir, not by a long stroke.

Q. Oh, yes, you must. You cannot run them up and down on these curved lines without running them on the curve?

A. That depends where the clock work or the pen has been set. You cannot make those lines coincide. They never do, for you could not, just the way I adjusted that instrument, I could not bring——

Q. Well, we will make that clear later ourselves, if it is necessary. What was the nature of the gas stoves on which you made your tests?

A. I made them on pretty much all the prominent stoves, the needle stove, the stop-cock stove of the——

Q. Can you name a particular make?

A. Detroit Jewell, the Chicago Jewell, and the Stamford.

Q. And the Phœnix?

A. I don't remember trying the Phœnix in regard to pressure at the point of ignition, no.

4029 Q. How long since you have actually operated a gas works directly and what was the last one you did operate?

A. I am operating it now you might say.

Q. I mean operating, the actual manager, working actual manager of a gas works?

A. In which I direct what shall be done and shall not be done?

Q. I do not mean merely a supervisor; I mean a manager of a gas works. You know what that is?

A. I have never been a figurehead. I actually managed the works and directed it, but without official position. You understand a man as consulting engineer may really have the management of the works so far as material results are concerned.

Q. Let us have the latest one you have actually managed and the date?

A. Well, the Danbury Company, I have always been consulted with about the details.

Q. Are you the manager of the Danbury Company?

A. No.

Q. Who is the manager?

A. Mr. Cowperthwait.

Q. What is the last works which you actually managed?

A. I got a letter from him day before yesterday——

Q. That is not the question. Won't you answer the question, what is the latest works at which you were actually manager?

A. Danbury. I am actually the manager there in all its details, so far as the operation is concerned. There is not a step taken which is not referred to me.

Q. You have charge of the regulation of pressure there?

A. To a certain extent. I have recently made alterations in regard to that. I told him to lay a larger pipe. We regulate from the center of the village, and I told him——

Q. Are you on the spot, the operating manager of that plant?

A. I am not on the spot there now.

Q. I know you are not. You understand what I mean.

A. I think they refer every detail of management to me. I have letters in my pocket now in regard to it if you want to see them. 4030

Q. What are the duties of this management?

A. To see that things are carried out in right shape.

Q. Aside from Danbury what is the last one you have actually managed before that?

A. Asheville, North Carolina, just a short time and Faribault, Minnesota, Butte, Montana, Schenectady, advice in connection with it, the General Electric plant——

Q. That I have not asked you about, advice in connection with it. I am now talking about operating manager.

A. So far as that is concerned, no manager operates the plant in the sense you probably wish to state.

Q. Then you have not been an operator have you, put it that way, you have not been an operator of the works, is that right?

A. In many cases I have run the works with my own hands.

Q. In Danbury?

A. Yes, turned it off and regulated it while I was experimenting.

Q. Yes, but generally speaking, while the works are running you have a manager there, haven't you?

A. Yes.

The MASTER: I want to call the attention of the counsel for the defendants that their time expired on the 30th of October and although that matter was brought to their attention at the time and it was stated that it would be necessary to make an application and have a certificate from me, it has not been done. The time cannot be allowed to remain open in this way.

Adjourned to Thursday, November 15th, 1906, at 10.30 A. M.

Last Exhibits:

Complainant's, 256.
City's, 63.
State's, 88.

4031 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *November 19th*, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr.

4032 At the hearing of November 7th Mr. Kirby, on behalf of the defendants, requested an adjournment until the following Monday, November 12th, as his witnesses were not yet finished with the necessary examination of the plants and papers of the complainant. The adjournment requested by Mr. Kirby was granted, but, at the suggestion of the Master, and for his accommodation, it was extended until Thursday, the 15th inst. Subsequently, because of the engagements of the Master, the hearing was further adjourned until this morning, the 19th inst.

Senator Page, on behalf of the State, now requests an adjournment until Wednesday, November 21st, on the ground that his witnesses are not yet ready to testify; and an adjournment is therefore taken to Wednesday, November 21st, 1906, at 10:30 A. M.

NOVEMBER 21ST, 1906.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

HENRY H. EDGERTON resumed.

The MASTER: I want to call attention of counsel for the defendants, now for the third time to the fact that their time to take testimony expired some time ago, and I have not yet been furnished with the papers on which to grant a certificate.

Mr. Burr: I might have saved that announcement if I had been here a moment sooner. Here are the papers.

4033 The Master: I want to say to all counsel, in view of the time we have necessarily lost here recently, that I hope we can get started promptly every day hereafter. Our sessions are not any too long, and if we can get started every morning at 10:30 it will be of some assistance.

By Mr. Kirby:

Q. In your previous testimony you have given us the names of various plants which you have installed and of which you have put in the distributing system. What was your custom in laying the mains and services of those systems in reference to the depth below the pavement which you placed the mains?

A. As most of the works which I have erected were intended for the use of water gas, and as early experiments in regard to those gases showed me that they would stand cold and compression with less serious loss than was the case with coal gas, I took advantage of that fact to incur as little expense in laying the mains as possible and rarely, excepting in exceptional cases, went below the depth of two feet from the top of the pipe, below the surface of the ground or pavement.

Q. And you have laid mains in the streets to carry water gas or a mixture of water and coal gas at an approximate distance of two feet below the surface?

A. Yes, sir.

Q. Have you laid such pipes in climates as severe as that of New York, in winter?

A. Yes, sir. I laid pipe in that line in Minnesota, which is quite as severe as New York.

Q. When pipe was laid by you at this distance below the surface did you find any trouble resulting therefrom during the cold weather?

A. No, sir. I made a number of very severe tests in regard to the stability of water gas subjected to cold. In one case I 4034 remember pumping it at a pressure of forty-five pounds a distance of three miles where the pipes averaged less than two feet below the surface, and then blowing it back from the neighboring town, and in trying it on the photometer found there was no perceptible loss. These experiments were reported in a case before the Corporation's Committee of the Connecticut Legislature, and I think were unchallenged as regards that point.

Q. Did you find any trouble in your service mains owing to the cold when your mains were laid at this distance below the surface?

A. You speak of the service pipes?

Q. In the services.

A. I found that a rather shallow main is a preventive of trouble in services rather than adding to it. If there is a slight amount of moisture in the gas, the moisture is taken out in the cold main and less trouble ensues in the service pipe. I had an opportunity to compare my plants with those of the Minneapolis Gas Company, and in Minneapolis, owing to the cold weather, the mains were laid at a great depth, from five to six feet; and comparing the service troubles in Minneapolis with those of Faribault, a town of about 50 miles from Minneapolis, I found that they had relatively ten times the trouble with services and frozen lamps that we had in Faribault; and in talking the matter over with Mr. Brown, who is president of the Minneapolis company, I called his attention to the fact that the moisture in the gas was frozen out in the shallow mains, in the main pipe, and therefore did not carry on to the services; the mains being of large dimensions, the deduction due to moisture was not noticeable. I compared our complaints of frozen services with those of Mr. Brown's and he admitted that he had been probably on the wrong track in burying his mains so deep in the ground.

4035 Mr. Mathewson: I move to strike out that last statement of Mr. Brown's.

The Master: Strike it out.

Mr. Page: You mean what Mr. Brown said?

Mr. Mathewson: Yes.

Q. And in Faribault how deep below the surface did you place your mains?

A. In Faribault the practice had been to place the mains deep, like in Minneapolis, but I changed that. I found there that the deep pipes were the ones that gave the trouble in services and the shallow ones did not.

Q. And you changed such mains to shallow mains?

A. Some of the main pipes I raised as opportunity afforded to a higher level.

Q. How did you find the trouble in the services from such mains raised to a higher level as compared with services from those mains which were not raised to the higher level;

A. I noticed right along in all my experience with water gas the shallow mains gave less trouble from freezing as regards the service pipes.

Q. Have you in your installation of plants and inspections of the various works around the country observed any instances where mains carrying gas have either been placed a very small distance below the surface or exposed to the air?

A. I have noticed that engineers generally now do not regard it as necessary to shield mains as carefully as they used to. I noticed in Baltimore that the 16-inch mains, I think it is 16 inches, that convey the gas from Sparrow Point to the city of Baltimore are exposed quite freely to the open air, that is, laid above the ground and across trestle works, and along trestle works entirely exposed to the air.

Q. Is this exposure of gas pipes to the open air one which is customary around gas works?

A. Yes, I frequently see exposed pipes around the works
4036 where it is difficult or expensive to keep them under cover.

I also notice that the gas holders are now generally exposed to the weather. The practice of covering gas holders with brick buildings has almost ceased, and that any gas which would stand the cold of a gas holder in connection with the cold water contained in the gas holder tanks would certainly stand a temperature in the main pipe with two feet of soil covering them. I will say, however, that there is according to my tests an appreciable deposition of illuminating matter in the holder, as shown by the fact that in the warm weather after the cold spells the candle power of the gas will rise considerably above the normal unless more new water gas is put into it.

Q. Have you noticed in the Borough of Manhattan any exposed service pipes which are not protected against the weather, but are exposed to the open air?

(No reply.)

Q. Are not the lamp posts themselves such indications?

A. Yes, the lamp risers, the risers in the lamp post are exposed to extreme cold; the service pipes generally are covered or protected. They sometimes pass through open areas, where they are exposed to cold, and when the gas is moist there is the point where we generally find the frost gathers in severe weather.

Q. Could you make any deductions from trouble or lack of trouble in lamp posts as to whether or not there would be trouble in the gas mains if the same were placed closer to the surface than three feet or below frost?

A. The same holds good in regard to lamps freezing out in winter as regards the service of consumers; gas which has been previously dried by the cold mains and deposited, the moisture in the mains is less liable to have any moisture left to deposit in the risers of the lamp posts. 4037

Q. Have you made any observations of the depth of pipe of the Consolidated Gas Company beneath the surface of the street?

A. I have within the last two or three months noticed many openings; I could not tell which were the Consolidated pipes. I could recognize gas pipes from other pipes, but I have seen many places where they were about as shallow as I should care to put them.

Q. What do you mean by that?

A. I would judge not over two feet or two feet six inches below the surface of the road. I do not remember the exact localities now, but I noticed quite a number of points where they were shallow.

Q. And you have bought pipe to use as part of the distributing system of your gas works, have you not?

A. Yes, sir; I have bought considerable quantities of pipe. In fact, I bought about all the pipe for the works with which I was connected.

Q. Are you familiar with the various sizes of pipe and costs thereof?

A. Yes, sir.

Q. Are you familiar with what the costs and weights were in 1884, or thereabouts?

A. Yes, sir.

Q. Are you familiar with the cost of digging the trench within which to lay the pipes, and the refilling of the same?

A. I have taken particular notice of cost in regard to laying of the mains to the smallest details.

Q. Have you made inquiries and informed yourself as to such points in the Borough of Manhattan?

A. I have in regard to certain of the prices, and have taken notes in regard to the quantities that are found of excavation and earthwork, that is being done to lay mains at various points, more particularly down in this salt water main system.

4038 Q. Are you familiar with the cost of replacing the pavements, and have you informed yourself relative to such costs in the Borough of Manhattan?

A. I have consulted with various parties in regard to the costs; yes, sir.

Q. Have you made certain calculations, Mr. Edgerton, in reference to the cost of pipes, and if so, will you state for me your computation, based upon the size and number of feet of pipe as given by Mr. Simpson at page 288 of his testimony, taking them up in order?

A. Yes, sir; I have taken the lengths of mains as shown in Mr. Simpson's testimony and have tabulated them according to sizes. I find there is a slight difference in my total from his of 12,000 feet, which I have not had an opportunity of reconciling.

Q. Will you give us——

A. Mr. Simpson's length of main is 4,344,849 feet. The addition I make is 4,357,279. There is probably an error on my part, which I have not had a chance to correct.

Mr. Mathewson: Yours is higher than his total?

The Witness: Yes, sir; slightly higher. I have divided the mains and lengths as nearly as possible from Mr. Simpson's testimony of those which are now used laid previous to 1884, and those since 1884, and I find that of those laid before 1884 there were two million feet and of those laid and in use since 1884, as near as I can arrive at it from the testimony, 2,349,000 feet.

Q. And you assumed that there were 468 miles of new mains since 1884?

A. That was about the basis of the division.

Q. In other words, you took the testimony of Mr. Simpson as given at page 289?

A. I presume that is the page. I tried to decipher his figures——

4039 Q. Where he states that out of 822 miles 468 miles are new mains which have been laid since the consolidation?

A. Yes.

Mr. Kirby: I wish, in making these assumptions, if there is any correction to this testimony, you would call my attention to it.

Mr. Mathewson: I cannot, offhand.

Q. How many feet, Mr. Edgerton, have you used of 1½ inch pipe?

A. Well, I have left out the 1½ and 2 inch mains. There is a small amount, and of no consequence. I have never, in fact, regarded a 1½ inch pipe or a 2 inch pipe in the light of a main pipe in a large plant. Those two items are left out.

Q. Of the 1½-inch pipe I note there is 1,407 feet and of the 2-inch pipe 635 feet. You have disregarded that in your computation?

A. Yes.

Q. Of the 3-inch pipe, at page 288 it is given as 227,741 feet?

A. 222,741 feet, I have it.

Q. That is right; I misread it. Did you consider that as new main or old main?

A. I took 100,000 feet of that as old main and 122,741 feet as new.

Q. What did you do with the 4-inch pipe?

A. I divided that on practically the same lines—250,000 feet of old and 327,469 feet of new.

Q. That makes a total altogether of 557,469 feet, does it not?

A. 577,469 feet.

Q. That is where you have made the error. It is 557,469.

A. I had not an opportunity to go over these figures and discover where that difference was. I assumed that it was in the dividing of these mains.

Q. In the 5-inch——

Mr. MATHEWSON: Will you give me that 3-inch again? Was it 100,000 of old and 122,741 of new?

The WITNESS: Yes.

4040 Mr. MATHEWSON: And the 4-inch was 150,000?

The WITNESS: 250,000 of old and 327,469 of new.

Q. Now the 5-inch?

A. I wish to explain that this division is pro rata to the total mileage; it is not derived from the testimony in any other way than prorating each size according to the amount of new mains and old mains in the ground. It is a matter of small consequence, the only difference being that to the old main I applied the old weights of mains and to the new main I applied a little heavier weight of main, because years ago we used lighter mains than we do now.

Q. Now the 5-inch, Mr. Edgerton, what division did you make?

A. I have not got that. There was a very small amount of it, 1,799 feet.

Q. And that you ignored?

A. Yes.

Q. The 6-inch main; what division did you make?

A. 1,000,000 feet of old main and 1,129,000 feet of new.

Q. The eight-inch main? What division did you make?

A. 250,000 feet of old main and 278,000 of new.

Q. And of the ten-inch?

A. 30,000 of the old and 41,286 of new.

Q. And of the twelve-inch?

A. 150,000 feet of old and 171,536 feet of new.

Q. And of the sixteen-inch?

A. 45,000 feet of old and 53,900 feet of new.

Q. And of the eighteen-inch?

A. 12,000 feet of old and 17,633 feet of new.

Q. And of the twenty-inch?

A. 80,000 feet of the old and 98,805 feet of new.

Q. And of the twenty-four inch?

A. 20,000 of old and 25,956 of new.

Q. And of the thirty-inch?

A. 60,000 feet of old and 71,583 feet of new.

4041 Q. And of the thirty-six-inch?

A. 11,000 feet of old and 11,242 feet of new.

Q. To these old mains you gave certain weights, did you not?

A. Yes, sir.

Q. And to the new mains you gave certain other weights, did you not?

A. Yes, sir.

Q. Now, will you kindly give us the weights which you used for the old and the new?

A. The old mains I took, as follows:

3-inch main, at 11 pounds per ft.
4-inch main, at 17 pounds per ft.
6-inch main, at 25 pounds per ft.
8-inch main, at 38 pounds per ft.
10-inch main, at 50 pounds per ft.
12-inch main, at 58 pounds per ft.
16-inch main, at 100 pounds per ft.
18-inch main, at 120 pounds per ft.
20-inch main, at 140 pounds per ft.
24-inch main, at 185 pounds per ft.
30-inch main, at 270 pounds per ft.
36-inch main, at 360 pounds per ft.

Q. What was the unit you used to bring forth that result for these old mains?

A. Why, I used those mains which were in general use in the earlier times of gas pipe laying, as iron was high during the seventies and they had a custom of making the mains rather light, and it seemed to have continued. Now that iron is cheaper they seem to have increased the weight of the mains quite a percentage.

By Mr. **Mathewson**:

Q. Who are "they"?

A. The iron founders.

By Mr. **Kirby**:

4042 Q. In reference to the new mains, what weights did you use for the various sizes?

A. They are as follows:

3-inch main, at 12 pounds per ft.
4-inch main, at 18 pounds per ft.
6-inch main, at 30 pounds per ft.
8-inch main, at 44 pounds per ft.
10-inch main, at 55 pounds per ft.
12-inch main, at 72 pounds per ft.
16-inch main, at 110 pounds per ft.
18-inch main, at 130 pounds per ft.
20-inch main, at 150 pounds per ft.
24-inch main, at 200 pounds per ft.
30-inch main, at 260 pounds per ft.
36-inch main, at 360 pounds per ft.

These large pipes demanding about the same as previously.

Q. On page 324 of the testimony Mr. Simpson stated that "the price of pipe in 1884 was $25.00 and something a ton—I will give you the right figures. In 1885, as near as I can get to it, the price of pipe was $25.50, and December, 1905, $28.90; a difference of $3.40 per ton of pipe."

Mr. **Mathewson**: It should be $35.00 in 1884 instead of $25.00. That is a clerical error. In other words, in 1884 pipe was higher than it is now. In 1885 it was a little lower.

Q. Now, Mr. Edgerton, are you willing to accept the figure of $28.90 as the cost of pipe to-day, or, if not, what figure did you use?

A. I used as the cost to apply to these mains $28.90, but I used the short ton instead of the long ton in calculating the cost—short ton of 2,000 pounds.

Q. And you consider that to be the price of the main alongside of the trench?

A. Yes, sir.

4043 Q. That is for the 2,000-pound ton?

A. Yes, sir.

Q. Now, have you upon that basis figured out your price per foot for your new and old pipe?

A. Yes. I have added the total weight in pounds calculated on the basis stated of old pipe and the new pipe together, and arrived at a figure of 210,036,966 pounds, which in short tons would be 105,018,498, which at $28.90 would give an amount of $3,035,034.65. I add to that 10 per cent. for crosses and Ts and specials of various kinds, and I have not had time to go into a computation of specials more in detail than that, and assume an addition of ten per cent. of the total weight would cover the cost of specials and the difference in price between specials and straight pipe.

Q. Ten per cent. would amount to how much?

A. I didn't add it on in that place. With the ten per cent. added it would amount to $3,338,538.11.

Q. Which figure represents the total cost of the pipe, including all specials, all wastage or breakage and everything which goes to make up the amount which would have to be expended to buy the pipe necessary to replace the number of thousand feet of mains you have indicated?

A. Yes, sir.

Q. In taking ten per cent., did your experience lead you to believe that ten per cent. of the cost of pipe would be sufficient to take care of breakage, wastage, specials or such other charges which had to do with the cost of material in the pipe?

A. I should think it would. I do not generally figure it that way. If I had time I would go into it more in detail, taking the different sizes of pipe and adding the specials required in accordance with the distances between streets and making due allowance for breakage in such specials as might be needed for obstructions in the laying
4044 of mains, which method would be more accurate, but I think ten per cent. would more than cover it.

Q. In your opinion, then, if you went into it in the manner which you have suggested, your experience would show you that it would probably be less than ten per cent.?

A. I think so.

Q. In this estimate did you take into consideration the 27.2 miles of mains which are not in use at the present time?

A. I did. They are included in this estimate. In fact, I didn't know which sizes to throw out on that 27 miles of main as lost. I left them in.

Q. Will you assume that the average of those sizes were 6-inch mains and calculate how much difference that would make in your total of three million and odd dollars?

A. It would be natural to assume that there were some of the smaller mains thrown out, and I think it would probably average as low as 6-inch main.

By Mr. **Mathewson**:

Q. Probably average lower, wouldn't it?

A. Well, possibly lower. I think that very little 6-inch main would be thrown out.

By Mr. **Kirby**:

Q. Do you think an assumption that it was 6-inch main would be a fair one?

A. I think that it would be large enough. I don't think that much 6-inch main would be thrown out of this. No, I cannot say——

Q. Well, if this statement were placed before you, that there were 27.2 miles out of this 822.2 which are not in active use, what would you, as a man of experience in those matters, consider as a probable average size of the main represented by the 27.2 miles?

4045 A. Well, I think it would be safer to take the average of 4-inch rather than 6, considering that——

Q. Well, will you assume then four inches?

A. I think that would be safe.

Q. Now, will you make for us a calculation showing how much deduction that would make from your three million and odd dollars?

A. I will make it roughly.

Q. Make it first roughly.

A. Subject to correction?

Q. And then after the testimony is printed you can make it with more refinement, and if you find it different we will request to have the testimony corrected accordingly. I take it that the sliding rule will be accurate within a percentage which is fair.

A. Well, that probably, within one per cent., would amount to 2,472,000 pounds. $33,500.00. I have assumed this to be the old pipe, naturally.

Q. Now, will you make that deduction, Mr. Edgerton, from your other total and see what the result is?

A. Deducting that from the previous total, it leaves $3,305,038.11.

Q. You have made certain computations relative to the cost of excavating the trench in which these mains are laid and the laying of the main therein and the refilling of such trench, have you not?

A. Yes, sir.

Q. In such computation did you use certain size of trench for a certain size of pipe?

A. Yes, sir. I took off the size of cuttings in the asphalt and width of cuttings, observations made through the city and where work is progressing at present, and as to the depth, I compared—or, rather, as to the size of the ditch, I compared my own experience with that of some of the best authorities, and I converted the excavating into cubic yards of lineal foot of pipe, and made out a table of the
4046 cubic yards of dirt that would be removed of paving for each size of pipe.

Q. Now, first, in reference to the size of trench, what size trench did you use for 1-inch and 2-inch pipe?

A. I should use practically the same as the 3-inch, but I have not included that in my estimate.

Q. What size did you use for the 3-inch?

A. The width is 1.833. I converted it into decimals instead of inches; and the depth of the trench of 2.25. That gives cubic yards per foot, .152; 4-inch, the same width, depth 2.33 cubic yards per foot .158.

By Mr. **Mathewson**:

Q. How wide is the 4-inch cut?

A. 1.833 feet. The remainder are as follows:

Inch.	Feet wide.	Depth of trench.	Cubic yards per foot.
6	1.833	2.5	.169
8	2	2.66	.197
10	2.08	3	.231
12	2.33	3.20	.276
16	2.33	3.33	.287
18	2.33	3.53	.304
20	2.5	3.8	.352
24	3	4	.444
30	3.6	4.6	.612
36	4	5	.741

I have made the width slightly greater than I find for the salt water mains cutting the asphalt. I found in many places where the mains are laid the cut in the asphalt was but two inches clear of the width of the bell, and I took photographs of a number of such cases showing measurements and the state of the surroundings in order to show it more clearly. I can present those in the morning.

4047 By Mr. **Kirby**:

Q. Now these widths of trench which you have used are such which your experience in laying mains has taught you to be proper for the purpose, are they not?

A. Yes, sir. I think they will hold the mains very nicely, and with the allowance I have made for caulking holes I think they can be put together in very good shape in those widths.

A. Assuming that the mains were laid more than two feet below the surface, would you still carry this width of main?

A. Yes, I should not make it any larger. I see the practice here is to cut it a little short of what I have given in regard to these deep salt-water mains.

Q. Now you have spoken of bell holes and such, what do you mean by that?

A. It is necesary to have a space around the end of each pipe in order to caulk the lead into the joints, and we call that space the caulking. My practice has been with small sizes to put together and caulk three joints of 3-inch and three joints of 4-inch on the surface of the ground, on a sort of alignment table, and lower the pipe into the trench. In this manner I get rid of a number of small caulking holes. Coming up to the 6-inch, it is possible to lower two pipes together, but as a general thing I put the 6-inch in in single length.

Q. How are these pipes put together? After they are placed together in the trench?

A. The spigot end of the pipe is entered into the bell and the joint is then yarned solidly to a sufficient depth and a gate then made, the lead poured in, the lead driven tightly home with a caulking tool till a perfectly sound and solid joint is made.

Q. Have you made any allowance for doing such work in computing the size of your trench?

4048 A. I have added ten per cent. to the total excavation to allow for these caulking holes and such extra holes for specials, and meeting cases of difficulties, which I considered ample.

Q. In computing the cost of your excavation and refilling and laying, how great a percentage did you consider as that which would represent the excavation of rock in the trench?

A. I have not finished my calculations in regard to the rock. I have taken Mr. Simpson's figures as to the amount and——

Q. What do you mean that you have taken Mr. Simpson's figures as to the amount; what figures did you take?

A. I understood it was ten per cent., I think it was.

Q. And you have assumed, then that ten per cent. of all your excavation would be in rock? Is that correct?

A. That is part of it. Ten per cent. of the pipes being in rock, and not ten per cent. of the excavation, because there would be the pavement to cut through and loose dirt; I presume the rock at two feet below the surface, there would probably be one-half of it.

Q. Will you kindly explain?

A. Taking ten per cent. of the pipe as being laid in rocky ground, the pavement would first have to be removed.

Mr. Mathewson: How much did you allow for pavement, the depth for pavement?

The Witness: Well, nine inches for the blocks, and I should consider the balance below the paving line as rock, although I doubt whether, when pavement is laid in that manner, whether it is laid down solid on the rock, but possibly it may be. It would have to have a bedding to equalize it.

Q. And of that distance from the bottom of the pavement to the bottom of the trench you assumed that ten per cent. would be rock?

4049 A. Yes. As I have stated, I have not calculated that out, but that is the basis on which I should proceed to calculate it.

Q. And you calculated out your rock excavation and refilling?

A. I have.

Q. And you used 90 per cent. of the total material excavated as being earth, did you not? Is that so?

A. I think I calculated the whole of it as dirt, but I think I deducted ten per cent. subsequently. I have not aggregated as yet these figures, for the reason I have yet to add in the lead and yarning, but I think I deducted from the total of excavation ten per cent. for the rock portions; at any rate, it should be deducted.

Q. You have made a computation there assuming that the entire amount of excavation would be through dirt, as I understand it?

A. Yes; the computation is entirely based on dirt, and the idea was to deduct from that the ten per cent. which was supposed to be rock.

Q. And then to add to the total the cost of exvacating the ten per cent. of rock? That was your method of operation?

A. That was the basis.

Q. In the excavating of dirt what price did you use to represent the taking out of the material, the placing of the pipe in the ground and refilling of the dirt?

A. I have only the taking out and the refilling; I have not the items of caulking and pipe laying and leading.

Q. Then for digging out the material and refilling, what price did you use?

A. I took that at 67 cents.

Q. Per what?

A. Per cubic yard; per cubic yard.

Q. And do you consider that price to be one which is proper for the present day——

Mr. Mathewson: Just a minute. The witness has had no 4050 experience in New York at all. He says he is merely getting these figures from other sources.

Mr. Kirby: I think if Mr. Mathewson will allow me to finish my question he will find it is quite proper.

Mr. Mathewson: I thought you had finished.

Q. Do you consider that price, Mr. Edgerton, as one which is proper for present day wages, such as you are familiar with them elsewhere and in accordance with such information as you have obtained relative to conditions in the City of New York?

A. I should think——

Mr. Mathewson: Wait a minute. Does that cover the excavating and refilling?

The Witness: Excavating and refilling. It does not cover the carting away of such surplus that the larger sizes might entail. That is the point I had not come to yet.

Mr. **Mathewson**: I object to the question. The witness is not competent.

Mr. **Kirby**: Well, the Master can rule on that when he comes in. And the witness may answer now, I suppose.

A. I consider that ample. I have looked at conditions here in New York to some extent, and with the New York operations and various engineering operations here for a period of 25 or 30 years, and I do not see why it should cost more than that.

Q. Using such figure of 67 cents, what did you find is the cost of excavating and refilling the various trenches for the various sizes of pipe in the ground and the number of *fact* thereof, as you have testified, as used by you in your computation?

A. The total excavation and filling including the 10 per
4051 cent. for caulking the holes and contingencies is 1,005,730
cubic yards which at 67 cents a cubic yard would be $673,852.50.

Mr. **Mathewson**: That does not include any rock and does not include the carting and dumping, does it?

A. No, sir.

Q. Will you give that a little more in detail?

A. I took the length of each size of pipe and multiplied it by the cubic yard factor per running foot and from that computation got the excavation for each size of pipe.

Q. Will you give the total of your excavation for each size of pipe?

A.—

3	inch	39,300
4	"	88,100
6	"	360,000
8	"	104,000
10	"	16,400
12	"	88,700
16	"	28,400
18	"	9,120
20	"	62,900
24	"	20,400
30	"	80,500
36	"	16,500

Mr. **Mathewson**: Will the Master give us a ruling on that previous question?

(Question read).

Mr. **Mathewson**: I object to the question. The witness is not competent. His own experience of wages had in Danbury is not the slightest criterion of what they are in New York. He has
4052 made inquiries, but I do not think he is competent to testify
on the subject.

The **Master**: I think it is evident, that, strictly speaking, he is not competent; his testimony on wages and so forth is necessarily hearsay; he says so himself; but at the same time, I will allow his testimony to stand and take his computation as a whole for what it may be worth.

Mr. **Mathewson**: The whole testimony of the witness, it seems to me, is assumption and speculation, and assuming how much is new pipe and how much is old; I cannot conceive how it is of any value.

Mr. **Kirby**: Here is a man who has laid pipe all over the United States——

Mr. **Mathewson**: He does not know how much is new and how much is old. It is entirely incompetent.

The **Master**: He says he has inquired about as to conditions here and various elements, and there is no opportunity to cross-examine the sources of his information on that subject. His testimony is evidently hearsay, but I will take the computation for what it may be worth.

Mr. **Mathewson**: Exception.

Q. Have you made any comparison of this price of 67 cents per cubic yard with prices you have made elsewhere and prices you are familiar with elsewhere, and if so, what do you find to be the result of such comparison?

Mr. **Mathewson**: Objected to as irrelevant and immaterial.

The **Master**: I will allow that.

Mr. **Mathewson**: Exception.

4053 A. Yes, I have. It is a considerably larger price than I have used elsewhere, and I find, in comparing the standard authorities, that my costs are larger in respect of excavation, and all the items entering in so far are about double the English prices.

Q. In your computations, giving the cost of excavation of rock, what price did you use per cubic yard?

A. I have not computed that yet. I have taken that at $6.00 a cubic yard.

Q. And have as yet to make that computation on that assumption?

A. On that basis.

Mr. **Kirby**: I think we will save time if we could adjourn now and let Mr. Edgerton make his computation on this rock. It is nearly one o'clock.

Mr. **Mathewson**: It seems to me that the witness should have been prepared to testify here, if he was going to testify on this, without taking up so much time by computation and incomplete items.

Mr. **Kirby**: I do not think we can be accused of taking up any time here. There have been no computations made and the testimony has been the result of his computation.

Mr. **Mathewson**: Yes, there have been quite a number of computations.

The **Master**: We will take a recess until 2:10 P. M.

After Recess.

Mr. **Kirby**: Mr. Master, we find ourselves in this position. We have here Mr. Edgerton, who has this morning given the results of all his calculations that he has made thus far. We 4054
have endeavored during the luncheon hour to make certain

other calculations but find that to bring the total of his results we will have to make certain averages on assumptions, which we do not desire to make. Mr. Edgerton states that with the noise from this adjoining building which is being constructed and with the confusion which is apt to go on during the time of figuring that he is apt to make mistakes in simply multiplying and adding and subtracting, and that in one-tenth of the time off the witness stand he can do it better, more accurately and not have it subject to any corrections which he might have to make if he does the figuring on the witness stand. He has his base prices here; he has given his testimony as far as it goes, and while we have no other witness to go on with I really believe it would save time if we could either adjourn for a couple of hours to enable us to make these computations or else to have the cross-examination as to the accuracy of his base figures postponed and then have him present in a table to-morrow morning the result of those calculations which would be upon the figures he here presents.

The MASTER: He has had since the 7th day of November to make these calculations, and it seems to me you should either be ready to go on with the witness or have another witness here.

Mr. KIRBY: I can go on with the witness in the way I have indicated, but it takes up time and gives poor results.

The MASTER: Undoubtedly, but it should have been done before, and I must say it seems to me that counsel are not dealing
4055 exactly fair with the other side or with me to let this case drag along like this, in view of the pressure we are under to finish it.

Mr. KIRBY: We did not expect to go on with Mr. Edgerton to-day.

The MASTER: I know, but there are five or six other witnesses, real estate experts and what not. The complainants closed their case on the 14th of September and you have had since then to get ready, and it seems to me there is no excuse for not being prepared to go on from day to day, especially as we had a recess a week longer than you asked for the last time.

Mr. MATHEWSON: Mr. Hough, your witness, was here this morning, prepared to go on with his testimony.

The MASTER: I understand they decided not to call him, but they could have known that several days ago, it seems to me, and provided for some other witness who must be ready or who should be ready.

Mr. MATHEWSON: He is one of the two engineers who have been examining the plant for a month, as I understand it. I want to be entirely courteous but I could not go on with the cross-examination of this witness at the present stage.

The MASTER: Cannot you get another witness by telephone?

Mr. KIRBY: It is quite impossible.

The MASTER: Mr. Mathewson would undoubtedly consent to suspend this gentleman's examination indefinitely, and then go on with somebody else.

Mr. KIRBY: There is no one else we can put on to-day. We will go on to-morrow and continuously thereafter. Mr. Edgerton
4056 was brought here to-day to endeavor to put in all of this testimony. He has been working on it but he has not made

his calculations. He has been giving his base figures, and it was only late yesterday afternoon that we came to the conclusion that it would be necessary to put him on to-day by reason of our other witnesses not being ready. From that time until early this morning he and I have worked—far into the night and from very early this morning, in an endeavor to have these calculations made, and it was physically impossible to do more than we have done. During recess we endeavored to do what we could, but you can well see it is not two times two makes four—it is far more than that. We can make these calculations now. We can spend the afternoon in doing it, but I think it is taking up all our time unnecessarily, and we could do it in one-tenth of the time if we had quiet and did it in the usual and customary way.

The Master: There is no point in going on simply for the purpose of filling up the time, if the witness is not prepared with his testimony.

Mr. Kirby: That is the position I am taking. I think it is foolish to waste time by adding up, multiplying and dividing and saying that is -he result. We can do if it is necessary, but it is taking all our time and I think it is not bringing forth any good results. We could have this in tabulated form, not only that which we have given this morning but which we would give if we were prepared for it this afternoon, so it will be spread before Mr. Mathewson in a manner which I think will suit his purpose on cross-examination better than the testimony as it is. I am willing to do anything which
4057 suggests itself to either the Master or which would meet with the approval of Mr. Mathewson, but I think it would be a waste of time to go on in this way.

The Master: Well, I do not think that the case is progressing as it should, I am free to say that, and I shall hesitate very much about making any further certificate for time unless the case is run on a little different basis. When Mr. Mathewson was being pressed here to go on with his case he sometimes had two or three witnesses sitting here waiting so as not to waste any time. If you are going to fall by the wayside with the witness you should have had another one here so as not to waste time. I was called back here and came back at considerable personal inconvenience Monday morning, expecting to go on. Nobody did me the courtesy to even telegraph stating you were not going on. I have lost three days. I think the least that might have been done was to telegraph me so I could put in the time on something else. I came here Monday and have been sitting here three days and not accomplished one and one-half hour's work. I think we had better suspend, Mr. Mathewson. I do not see any point in laboring along and having these calculations made here. All of us can use our time to better advantage. Mr. Kirby is undoubtedly right about that.

Mr. Kirby: We can go on to-morrow at half-past nine or ten o'clock.

Mr. Mathewson: Half-past ten is about as early as any of us can get to work, I think. I will go on though to-morrow at 10 o'clock, if the Master desires.

The MASTER: I think it would be better if we could because 4058 I have got to leave early, and I suppose so will you, for a committee meeting to-morrow afternoon.

Mr. MATHEWSON: All right. I will go on at ten o'clock.

At 2:25 P. M. adjourned to November 22, 1906, at 10 o'clock A. M.

Last Exhibits:

Complainant's, 256.
State's, SS.
City's, 63.

4059 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, THURSDAY, *November* 22, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

4060 HENRY H. EDGERTON resumes the stand and further testifies:

Direct-examination continued by Mr. KIRBY:

Q. Since yesterday, have you refigured your cost of pipes, making the correction which you found in your figures of the 4-inch pipe and adding the 1½-inch and 2-inch pipe which you had not included in your first total?

A. Yes, sir. I also included the 5-inch pipe which was not included in it.

Q. And that gives your total for pipe as how much?

A. 4,345,121 feet. This still differs slightly from Mr. Simpson's figures. I find that it does not add up on——

Q. There is an error of a thousand or more feet, yours being the larger figure?

A. I think so; yes, sir.

Q. And what is the total price of that pipe or cost of that pipe as estimated by you?

Mr. MATHEWSON: Can he give the number of tons.

Mr. KIRBY: Yes.

The WITNESS: 104,873.558.

Mr. MATHEWSON: You had 105,018 yesterday without those missing links in.

Mr. Kirby: But he had 20,000 more feet of one than had been given by Mr. Simpson. He stated he had made an error in that, and that, of course, has been deducted, which makes his grand total less than it was yesterday.

Q. What error was it that you corrected which now makes your total less than it was yesterday?

A. I had 20,000 feet too large an amount on the 4-inch pipe.

Q. And you have deducted that?

A. Yes, sir.

4061 Q. Which pipe you have given at the cost figure of about how many dollars?

A. $3,300,430.

Q. As against how much which you gave yesterday before the correction was made?

A. $3,305,038.11.

Q. Have you figured out the total cost of trenching and filling, exclusive of any rock excavation?

A. Yes, sir.

Q. And what is your total figure?

Mr. Mathewson: You mean on the same basis of the unit figure which he assumed elsewhere?

Mr. Kirby: Yes.

A. $663,394.15.

Q. Have you figured out the cost of excavating rock?

A. Yes, sir. Excavating rock on one-tenth the length of mains costs $371,770.

Q. Now will you give us your method of making this computation or of arriving at this cost?

A. I took the total cubic yards of trenching, which was 990,132 cubic yards; one-tenth amounting to 99,132 cubic yards. From this I deducted for the overlying pavement and bedding, one quarter, or 24,780 yards, leaving 74,352 yards of rock, which I have estimated at $5 per yard, bringing the cost to $371,770.

Q. Have you estimated the cost of lead and yarn which would be used in caulking all of the pipe which would be placed in the ground, including the specials and other connections?

A. Lead and yarn I have estimated at $253,825.

Q. Will you give us the computation which you have made to arrive at that total?

A. I took the amount of lead required for the different sized joints, using the maximum figures in all cases of weights for each class of joints, and in that way arrived at the total weight of the lead, which I multiplied——

4062 By Mr. Mathewson:

Q. What did you find the weight to be?

A. 3,912,800 pounds; which I took at five and three quarter cents a pound; the total weight of yarn, 155,000 pounds, at five cents, equals $7,750; and the total of lead and yarn amounted to $230,750, to which I added for the lead and yarn required for specials ten per cent., or $23,075, making altogether $253,825.

Q. How much did that make your lead alone?

A. The value?

Q. Yes?

A. $223,000, plus ten per cent. for specials.

By Mr. **Kirby**:

Q. Have you also calculated the cost of laying, caulking and other incidental expenses having to do with the putting of the pipe in the ground?

A. Yes, sir.

Q. What do you make that to be?

A. That amounts to $261,758.06.

Q. How did you make that computation?

A. I made that computation of the laying, caulking and tool charge on different sizes of pipe by the running foot.

Q. And what prices did you use per running foot for the different sizes of pipes?

A.—

	Inch.	Cents per foot.
	3	3.7
	4	4.
	6	4.3
	8	4.5
	10	5.82
	12	6.47
	16	8.9
	18	10.4
4063	20	12.53
	24	15.21
	30	20.1
	36	29.2

Q. And using those costs per foot, you get a total of laying, etc., of $261,758.06?

A. Yes, sir.

Q. Have you made a computation of the cost of carting away such dirt from the trenches which you consider could not be packed therein after the pipes were placed in the trench?

A. Yes, sir.

Q. What is your total of that cost?

A. I make that 73,000 cubic yards, which I allow for carting $156,000.

Q. How did you arrive at that number of cubic yards?

A. I took the cubic contents of the different sized pipes above 6 inches.

Q. Why did you not take them below 6 inches?

A. I think that the dirt could all be put back in the ditch below that size.

Q. And the cubic contents of the larger sized pipes was figured at a price of removal of how much per cubic yard?
A. It comes to slightly over $2.00 per cubic yard.

By Mr. MATHEWSON:

Q. Cannot you give it to us definitely?
A. Well, it is 73 divided into $156,000. It would be $2.14.

By Mr. KIRBY:

Q. Now, to these costs, did you add any further figures, excluding for the moment the cost of replacing the pavement?
A. I added for supervision, foremen, guarding, and so forth, $127,000.
Q. Did you add anything else?
A. I add also for carting of tools, $45,000.
Q. Now, you have also estimated the cost of replacing such
4064 pavement as would have to be removed?
A. Before that I have added to the total cost, exclusive of the main pipe itself; I have added for contingencies ten per cent., $140,997.72.

By Mr. MATHEWSON:

Q. I do not understand that. Do you mean that includes replacing pavements?
A. Oh, no.
Q. This is before you come to the pavement?
A. Before I get to pavements. This is contingencies, ten per cent. on everything except the cost of pipe.

By Mr. KIRBY:

Q. Now, have you given us all the charges of every kind which you have considered proper in arriving at the total cost of replacing the mains, such as have been testified to by Mr. Simpson, in the manner that you have stated, with the exception of replacing such pavement as would have to be renewed to place the pipes in the ground?
A. Yes, sir. I think that includes everything.
Q. You have computed, have you not, the cost of replacing such pavement?
A. I have.
Q. And what have you assumed as the kind of pavement and the proportions thereof covering the entire system of mains belonging to the Consolidated Gas Company?
A. I have computed for asphalt pavement on 90 per cent. of the length of mains.
Q. Why did you use that figure?
A. I based that on Mr. Simpson's statement that 90 per cent. was laid under asphalt and pavements of equal cost.
Q. In your observations do you consider that a high or a low estimate?

4065 **Mr. Mathewson**: It is simply a matter of mileage. The record shows just how many miles there are of asphalt and new pavement, and it is not a matter of opinion. I should object to the witness's observation.

Mr. Kirby: I do not think we have any direct testimony as to what it is, more than Mr. Simpson's statement as to what he considers it is.

Mr. Mathewson: The witness, Mr. Simpson, has figures from the departments themselves. We keep track, to the foot, of the miles of asphalt pavement.

Mr. Kirby: It has not been offered in evidence.

Mr. Mathewson: It is testified to by Mr. Simpson, to his knowledge. If the witness testifies that it is right in his opinion, if it is wrong he simply convicts himself of error.

Mr. Kirby: Well, he may run that risk.

The **Master**: You may answer.

Exception.

A. I do not think I am posted enough on their mains to say what percentage of it is under asphalt.

Q. You have assumed in your computations 90 per cent.?

A. I have assumed 90 per cent., as stated by Mr. Simpson.

Q. Now, what width of pavement did you use, compared to the size of trench and within which the pipe was to be laid?

A. I added 6 inches on to the width of the trenches, although I didn't see any evidence in such cases as I looked at that any such amount was necessary or used.

Q. In adding 6 inches, do you mean that you assumed that the pavement to be replaced was three inches on each side of the trench greater than the width of the trench itself?

A. Yes, sir; wider than the width of the cut through the asphalt, through the pavement.

4066 Q. And did you assume that the cost of replacing that asphalt was approximately the cost of replacing all other kinds of modern pavements, such as wood block and the like?

A. I assumed that it would cover it all; and it seems to be rather a large figure to cover it on such an amount of work as was here figured on .

Q. What price per square yard did you give for the replacing, as the cost of replacement of all such pavements?

A. $2.75 per square foot.

Q. For other pavement what cost per square yard did you use?

A. For the remaining one-tenth I used 30 cents per square yard.

Q. Using these costs as your basis of calculation, what total did you arrive at as the cost of replacing the asphalt or equivalent pavement, or the cost of replacing the ten per cent, of other pavements?

A. The cost of the asphalt and equivalent pavement was $2,883,664.32; and the cost of replacing ordinary pavement was $34,953.30.

Q. Now, adding these totals to the other costs which you have given, what do you make your estimate of the cost of replacing or reproducing the mains of the Consolidated Gas Company, laid, as you have testified to, and using the units of price which you have given?

A. The grand total amounts to $8,919,792.55.

Q. In your opinion could these mains be purchased, put together and placed in the ground to-day, with all necessary excavations, refilling and repaving, for the figures which you have given?

Mr. **Mathewson**: I object to that, as the witness is incompetent to testify. He has already testified upon certain assumptions that he has made, information from one source or another, and has given the results. Is it competent to permit him to give his opinion 4067 in addition to that, where he has had no experience here or in New York?

The **Master**: I will allow it, Mr. Mathewson, for the reasons already stated.

Exception.

A. In making up this estimate I have used multipliers of the material and labor very considerably larger than I have been used to, in order to meet the difficulties in New York, and I have in many cases doubled up the cost on portions of it, and I have compared it with what I have considered to be accurate statements from other authorities and other towns in the country, and I consider that the figures given would be found in excess of what is required to do that work, rather than deficient.

Q. In your testimony, Mr. Edgerton, you have made reference to the laying in this borough of salt-water mains, the same being placed in the ground in various parts of the borough at this time, and you have given the width of trench which you observed as being used to hold these mains. Did you make any photographs of such works in a manner to indicate the width of such trench?

A. Yes, sir.

Q. Is the series of six photographs which I show you those of this work?

A. Yes, sir; those represent the width of the trenches as I saw them and the photographs show the width comparing it with a yardstick measure. They were taken in various parts of the city where the work is going on; although they have a somewhat similar general appearance, they were all taken in different localities.

Q. I show you this photograph and ask you if you will state where it was taken, if you know; the size of pipe which was placed in that trench, and if you can testify from the photograph what the width of trench was?

4068 Mr. **Mathewson**: Did he see the pipe put in the trench?

Mr. **Kirby**: Yes. If he did not, I did.

Mr. **Mathewson**: Well, you are not on the stand.

A. I saw the sizes being used and the excess of pipe lay along that trench in various places. This photograph represents the laying of a 12-inch salt-water main.

Q. Where?

A. This was on 13th Street; 12th or 13th Street.

Q. That is 12th Street you have.

A. I have a mark on the negatives which shows the exact locations, which I can tell by referring to my memorandum.

Mr. KIRBY: I will testify it is 12th Street, because it is right where I live, and I recognize the house. Proceed.

The WITNESS (continuing): I found as a general thing in laying these mains that the cut in the asphalt is barely two inches wider than the extreme width of the bell of the mains, and therefore on this 12-inch main, with an 18-inch bell, there are 20 inches cut through the asphalt; in some places as much as 22 inches. I do not think the cut would *would* average over 20 inches.

By Mr. MATHEWSON:

Q. That is the 12-inch main, is it?

A. 12-inch main. I endeavored to show in the photograph the irregularities in the roadbed owing to the damage done by traffic, and as we come into the edge of the trench——

By Mr. KIRBY:

Q. Now, you have laid a yardstick across that trench, have you not?

A. Yes, sir.

4069 Q. And does that indicate how wide that trench is at that part?

A. The yardstick is 36 inches long, and by comparison on the photograph with the total length of yardstick it will be readily seen that the width of the trench on——

Q. (Interrupting.) These other three photographs show the same general results, do they not?

A. Yes, sir; only they are taken in different localities; some of them several blocks apart. They all show the same general width of trench.

Q. And were these trenches all for twelve-inch pipe?

A. Those four were all for a twelve-inch pipe.

Q. And these trenches were not more than 22 inches in width, and in most instances 20 inches in width?

A. Yes, sir.

Q. As indicated by the measurements there?

A. Yes, sir.

Mr. KIRBY: I offer these four in evidence.

Mr. MATHEWSON: I object to them as immaterial and irrelevant. They do not show anything; they merely show a ditch temporarily filled, and everybody knows when they come to replace the asphalt pavement they have to trim it off, always do, and that that does not indicate the width of the asphalt that will go into that cover.

The WITNESS: I have allowed for that, three inches on each side.

Mr. KIRBY: The witness has allowed for that. That is the same that Mr. Simpson allowed. This testimony is not in regard to the width of the asphalt, but in regard to the width of the trench, which is materially different from this estimate of Mr. Simpson's for placing his gas mains in the ground.

Objection overruled; exception.

4070 The four photographs are received in evidence, and marked, respectively, State's Exhibits TT, UU, VV and WW.

Q. I show you two other photographs showing the trench. For what sized pipes were these trenches dug, if you know?

A. The pipe in this case is a 24-inch main, 24 inches internal diameter. And one photograph is taken of a straight run of pipe, showing the location of pipe in the ditch and the width of the trench, and the other was taken at a street corner, an intersection, and is made at a point where there is a very deep excavation.

Q. What do you mean by a very deep excavation?

A. An excavation to carry the mains beneath obstructions.

Q. How deep would you mean by that—three or four feet, or five feet?

A. I think this is about ten feet deep.

Q. What is the width of that trench, the one being ten or more feet deep?

A. That trench is 36 inches.

Q. And how deep is the trench in the other photograph, the straight run?

A. That was five feet from the top of the main to the surface of the ground.

Q. What was the width of the trench?

A. Also the same—3 feet in the narrowest part and about 3 feet 6 inches in the widest, showing a cut there. The photograph shows different widths, as the stone pavement underneath projects into the ditch.

Q. And in these trenches was it necessary to use timbers to brace the sides of the ditch?

A. Yes. In such cases it is necessary to use what we call sheath piling.

Mr. Kirby: I offer those two photographs in evidence.

Same objection; same ruling. Exception.

The two photographs are received in evidence, the photograph showing straight run being marked State's Exhibit XX; the

4071 second photograph being marked State's Exhibit YY.

Mr. Kirby: That is all I have to ask Mr. Edgerton.

Cross-examination by Mr. Mathewson:

Q. Is not Mr. W. E. Mackay of Boston the consulting engineer of the Danbury Company at present?

A. He was called in at Danbury to advocate the lowering of price of gas and turned up a few days afterwards and advocated the lowering of the quality correspondingly, just as is done in many cases.

Q. That doesn't quite answer my question. Is Mr. Mackay the consulting engineer for the Danbury Company at present?

A. No, sir.

Q. Do you claim that you still are?

A. Yes, sir.

Q. Consulting engineer of the Danbury Company at present?

A. They consult me in all cases, and have up to the present moment.

Q. But are you the consulting engineer—is that the term used?—for the Danbury Company?

A. There is no consulting engineer, so far as official title is concerned, for a little company like that.

Q. What is the output of that company?

A. 74,000,000 feet, based on ordinary coal gas quality; we calculate the output on the basis of coal gas.

Q. What kind of gas is it that you furnish and make; is it not oil gas?

A. It is water and oil gas of 35 candle power, tested in our fashion, and 44 tested in the usual way.

Q. Oil gas or largely oil gas, delivered through small pipes at great pressure, is it not?

A. No, the pressure is only two inches at the consumer's meter.

Q. That is the maximum pressure at the consumer's meter, two inches?

A. Two inches is the regular pressure in the burning hours; during the day time there are some manufactured—there may be 4072 times when it is slightly greater than two inches. I never saw it to exceed two and one-half inches.

Q. And the charge for that gas is about $5, is it not about, or something like that?

Mr. Kirby: I object. That is not proper cross-examination.

The Master: I will allow it.

Mr. Kirby: Exception.

A. The charge for that gas, the 44 candle, averages $2.70 per thousand.

Q. The maximum charge is $5, isn't it?

A. The maximum price to small consumers is $3.15.

Q. Since what time has it been below $5 for the maximum charge?

A. Fifteen years.

Q. Have you ever laid any pipe in the City of New York?

A. No, sir.

Q. Have you ever employed any labor in laying pipe in this city?

A. No, sir.

Q. What is the largest size of main at Danbury?

A. Ten inch.

Q. And a comparatively small amount of ten-inch, is there not, compared with the entire mileage?

A. About a mile. I understand it does not take but a small pipe to deliver 44 candle power gas.

Q. Did you lay the ten-inch pipes?

A. I think I was there and looked over the laying of that pipe; I don't remember that I took any contract for it.

Q. How deep is the pipe laid in Minneapolis below the top of the pavement?

A. From five to six feet, as an ordinary thing.

Q. Did you read Prof. Bemis' testimony, that he very recently recommended a gas system to the City of Montreal, with pipe laid six feet below the surface?

A. I did not, but I would not advocate any such pipe laying as that anywhere.

Q. If he did so recommend, you think he did not know 4073 his business, do you, so far as that is concerned?

A. I think he has not investigated it as fully as he might on that particular point.

Q. Now, your estimate of the cost of mains in New York City is not based upon the reproduction of the main system as it now exists here to-day with the same depth at which the present pipes are laid, is it?

A. I don't know the average depth of the present pipe; I have seen numerous cases where they were much shallower than this estimate of mine, that is gas pipes; I don't know whether they were the Consolidated gas pipes.

Q. But your pipes were laid under this estimate at an average depth of two feet, you say?

A. Two feet from the surface of the pavement to the top of the pipe, yes, sir.

Q. So that if the pipes of the Consolidated Gas Company average more than two feet deep your figures would not represent the entire cost of reproduction of those pipes, even if your other figures were correct, would they?

A. They would have to be corrected to the average depth so far as trenching is concerned, yes, sir.

Q. What kind of gas is used in Baltimore where you saw the mains exposed?

A. Coke oven gas, coal gas you might call it. It is rather a low candle power coal gas.

Q. Now, what causes the deposits in the holder when gas cools?

A. Well, the cold is what causes the deposits.

Q. And if the same circumstances are observable in the main the same effect follows in the main, does it not?

A. No, not necessarily.

Q. Do you mean to say cold produces a deposit when the gas is in the holder, but does not when the gas is in the main?

A. The deposit in the holder being on gas that is freshly made deposits out all the condensible matter that would be depos- 4074 ited at the given temperature, and there would be nothing left further to deposit in the mains.

Q. Is not something deposited with every additional decrease in temperature, a greater or less amount?

A. Yes, there is a deposit with decrease in temperature, but I had not estimated there would be a decrease in the mains over the holder.

Q. When you say that the public lamps in the City of New York represent exposed services, are you not aware that on cold nights hundreds—a thousand of the lamps freeze up in New York City in the winter, the public lamps?

A. Yes, I suppose they would. It is for that reason I make the main shallower. I say in that case with the shallow mains the deposit is condensed out of the gas and does not collect in the lamp.

Q. So you think the shallower the main the less liability there would be for trouble?

A. I know it.

Q. If there is no deposit in the main, why are drip pans placed?

A. Drips are placed on the mains usually, they are receptacles for water; there is very little, in my experience, of deposit in the mains except water, and a mere skimming of condensation from the gas is the only thing I have ever observed.

Q. Does not pumping those produce oil as well as water?

A. A mere trace.

Q. In your experience, a mere trace?

A. Yes, sir. In one case I gathered it for a whole winter in three miles of mains and did not get half a barrel on the total output.

Q. What kind of gas was that?

A. Water gas of 44 candles, with a larger percentage of condensable hydro-carbons than would be in the case with 22 candles, by far.

Q. Had that gas been previously condensed or compressed?

A. This amount, I think, was taken out by the compression and cold before entering the pressure mains.

4075 Q. Before entering the mains upon which the services are located?

A. Before entering the mains to take it to the neighboring town; my object being to ascertain how much condensable matter could be pressed out of gas by pressure and cold. The pressure in that case was about 45 pounds per square inch, and the experiment was continued during the whole winter, in order to arrive at the amount of condensation, which was almost negligible, based upon the amount of gas sent out.

Q. Would it surprise you to learn that in New York City the records of this company show as high in cold weather as 30 per cent. of oil from the drip in some cases?

A. I should be very much surprised to find any such percentage indeed, because that would represent more than all the light in the gas; there would not be any light left in the gas with such a percentage.

Q. Perhaps we can take care of that, but it would be contrary to the experience upon which you have been testifying to-day if that proved to be the fact, would it not?

A. If 30 per cent. of all the oil used was condensed in the mains?

Q. No, if 30 per cent. of the drip taken out of the pans was oil and 70 per cent. water, instead of a mere trace of oil?

A. That would be a very extraordinary amount of drip, and would show that the machinery was out of order in such cases.

Q. What machinery?

A. The gas producing machinery. The condition of it determines the amount of drip to a considerable extent. If the gas is not properly fixed and the oil is not converted into gas there will be considerable matter left in the gas.

Q. But you will assume that the gas has been in the holder before it got to the mains, and if there had been any such condition as that, would it not have been deposited at that time?

4076 A. Under those circumstances there must have occurred a large deposit in the gas holders, but it would depend entirely in that case how much the total condensation from that drip would be. If it was stated in quantity, 30 per cent. would not be a large quantity of condensation, taken on a small amount of condensation.

Q. Well, in taking these pipes you have assumed that the same proportion of each size of pipe was what you call old pipe, old prior to 1884, and the same proportion of each size was new pipe. You followed that same proportion through each size of pipe; is that right, in your computation?

A. I followed it generally. I did not in each case compute 468/822nds, you may say, but I proportioned it.

Q. Well, with substantial accuracy?

A. Substantially, and at the end, finding I was in excess by 27 miles on the old pipe, I deducted that 27 miles from the old pipe in order to bring it back to the proportion that was stated by Mr. Simpson.

Q. You have no knowledge as to how much was old pipe and how much was new pipe?

A. Nothing further than the statement of Mr. Simpson.

Q. You don't know what the weight of the pipe prior to 1884 as used by the Consolidated Gas Company was, do you?

A. Only from knowledge of the weights of iron founders as practiced at that time.

Q. You do know the weight of the heavier pipe which you have assumed was used since 1884, do you?

A. In my experience in regard to the weights delivered by various pipe founders and in their catalogues.

Q. You have no other knowledge than that?

A. No; I did not weigh their pipes. I do not believe anybody else did, for that matter.

Q. You don't know whether the Consolidated Gas Company has taken what are the standard weights, or whether they have had special pipe manufactured of special weights, do you?

4077 A. No, sir, I do not. They may have a heavier line of pipe than anybody else, but I don't know whether they exceed the heavy weights used in this country.

Q. Now, don't you know, or have not you reason to suppose that substantially all this small pipe from 1½ inches to 5 inches was installed before 1884, or at that time?

A. Naturally, I would not suppose anybody after 1884 would lay 1½-inch pipe and 2-inch pipe and call them mains.

Q. And yet you have included that as half new and half old pipe in the computation, or a proportion of new and a proportion of old, have you not?

A. No, I have not. I have not included those smaller sizes.

Q. None of them?

A. On the contrary, I deducted the 27 miles of dead mains, I deducted entirely from the small sizes of old mains.

Q. Well, for an average of 4 inches?

A. 4 inches and below.

Q. Yes. Well, did that take up all the old pipe from 1 to 5 inches?

A. It was intended to.

Q. Do you know whether or not it did—did you compute to see?

A. I think 27 miles would cover all the small pipe and run into perhaps the 4 inches.

Q. Now, take the heavier mains, the 30-inch and 36-inch mains, those are very much more expensive than the smaller sizes, are they not?

A. In casting, do you mean?

Q. No, I mean in cost per foot?

A. Oh, certainly, a 36-inch main is more expensive than the average.

Q. Now, as a matter of fact, you assumed that nearly half of the 36-inch main had been laid with lighter pipe prior to 1884 in your computation here, did you not?

A. No, not at all. On the contrary, the heavier mains were heavier in 1884 than they are now. That was my computation, and there is none of the heavy mains deduced in this 27 miles. It is all on light mains.

4078 Q. How about the 30-inch main; is it not the presumption that is practically all new as well as the 36-inch main?

A. No, sir. Referring to the inventory of Mr. Allen made in 1884 I notice quite a percentage of large size mains.

Q. Do you remember what percentage?

A. No, I had not time to figure out the percentage, but there is quite a percentage.

Q. You did not know that all the 30-inch mains is new except about four miles and that all the 36-inch mains is new within the last few years?

A. I intended to go through Mr. Allen's computations there but did not have time to do it. I suppose a large percentage of the larger mains is new.

Q. Assuming that a certain portion of this pipe was what you call old pipe in or prior to 1884 and therefore was of a lighter weight as you have stated, you have taken $28.90 per short ton as the value of the iron value of the pipe. Don't you know that several of these subsidiary companies, that is the six companies forming the Consolidated Gas Company, laid the greater part of their mains between 1860 and 1880?

A. As before stated, I have not computed from Mr. Allen's inventory the percentage. I know that a large percentage of it was laid in that way.

Q. Don't you know, as Dr. Marks testified, that during that period pipe brought as high as $70 a ton in some cases in New York City?

A. I don't know whether it was in New York City. I paid $72 to $76 a ton for pipe in the 70's, and that is the reason it was made lighter, I suppose. They were skimping on it.

Q. But you assumed it was at that time of a lighter weight, but you did not take the additional cost per ton into consideration, did you, which you say was the occasion of the lighter weight?

4079 A. I did not consider it necessary to take the price of pipe in the 70's in order to find out what it cost to lay it to-day, no.

Q. You are assuming then that it would cost less to-day to lay it than it would cost to lay it originally, are you not?

A. I don't think there is any assumption upon that. That is plain enough.

Q. It would cost less to lay it to-day than it cost to install it originally, is that right?

A. I say that is right as a general thing, although looking at these estimates of mine and looking back at some old actualities in those days, I find to my surprise that the pipe laid was very little less than it is now.

Q. I know, but I am speaking as a general proposition. I understand your reply is as a general proposition, and not picking out a specific case.

A. Yes. Pipe at $76 per ton is certainly more expensive than pipe at $28.90.

Q. And the cost of that pipe in the ground originally, the cost of laying it, would represent a total cost greater than the cost of reproduction to-day of the same pipe in the ground, would it not?

A. As before stated, I saw the actual figures of the cost of laying the Mutual pipes, and it differed very little from what it is to-day.

Q. You don't know when the Mutual pipe was laid, do you?

A. Yes, exactly.

Q. Was not the Mutual organized about 1830?

A. No, sir, in 1872 or from 1870 to 1872 the Mutual was built.

Q. Do you mean to say that the Mutual Gas Light Company was not incorporated until 1872.

A. I don't know about the date of incorporation; I am speaking of the building of the works. I was in New York City during the construction of the Mutual works and starting of it, and was consulted about it, so I have reason to remember that.

4080 Q. Now, in computing the length of pipe, do you allow 4 inches for the hub or any other length, or do you assume the pipe to be placed end to end in your computations?

A. Well, my computation is based on the actual length of pipe, whether it is 12 feet length laid or whether 12 feet 4 inches, it does not make any essential difference.

Q. Don't you understand that the figures of the mileage given by the company, 822 miles, for instance, includes the length as the pipes are laid in the ground and therefore duplicates the pipe for each joint?

A. It duplicates the amount that the socket goes in, but that is allowed for in the computation.

Q. Well, how much is that for each joint?

A. It is the weight of 4 inches or whatever the bell covers.

Q. Did you allow for that in addition to the actual mileage in your computation of values here?

A. Yes, sir.

Q. How much do you allow for specials per pound?

A. I allow a little over double the cost for specials over the cost of pipes. The 10 per cent. allowance made for specials would allow of their costing somewhat over double the cost of mains per pound.

Q. How much per pound-

A. It would be 3¾ to 4 cents per pound.

Q. Where delivered-

A. In New York.

Q. Is your computation for pipe delivered alongside the trench or on the dock?

A. At the ditch, and cartage included.

Q. Are not the rates per ton usually computed on the dock and not alongside?

A. They are when you don't know what the destination is, but in—— -

Q. Well, aren't they anyway in New York City?

A. As a general thing a bid on pipe would be, and it would be specified.

Q. How much did you allow for transportation from the dock to the trench?

A. I included that in the cost of the pipe.

4081 Q. Did not you separate the two at all in your computation or in your mind, the cost at the dock plus the cost to deliver alongside, making the total $28.90?

A. No, for the reason that when once pipe is delivered, whether the destination is at the yard or whether in the street, the difference would be comparatively trifling.

Q. How would that be if it came by water, is not the cost consirerably more to deliver it alongside the ditch, than it is delivered on board at the dock in New York City?

A. I estimated to include the cartage to the ditch.

Q. How much did you allow for cartage from the dock to the ditch?

A. I have not the exact figure here. I can get that for you. I estimated the pipe intending that the pipe would be included along the ditch, in an estimate of this kind.

Q. I understand, but don't you know that pipe is as a rule delivered in New York City at the dock and that we have got to reckon with that, and that the boats which bring the pipes cannot deliver it at the ditch?

A. Certainly.

Q. Won't you tell me how much you would allow for the cartage from the dock to the ditch, so I can see what the $28.90 would represent at the dock?

A. I cannot give you that figure just now; I have included it in, however.

Q. Did you actually make a separation and figure it out?

A. I have separated it as nearly as I can.

Q. Can you not remember what the basis of your computation was?

A. No, I do not. I calculated a short ton instead of a long ton on the computation, and that together with the cartage gave me this figure.

Q. You cannot tell how much the cartage was now?

A. No, I can figure it out. I took into consideration the fact that
I had reduced also the price per ton from the long ton to a
4082 short ton of 2,000 pounds, and that made some difference in
the cost of the pipe naturally.

Q. Oh, of course. Now, do you take into consideration the fact that when pipe is ordered it is often necessary to transport it from the dock to the yard and store it, or portions of it, pending use or the opening of a ditch and then load it and recart it to the ditch?

A. In making pipe-laying contracts I have often made with the contractor the provision that he would lay it alongside of the ditch and——

Q. But you know in the City of New York that the ordinances forbid of the opening of more than a certain length of ditch at the same time, so you would not lay your pipe alongside until the ditch is ready?

A. That is the case everywhere, you cannot string it all over the city.

Q. Did you make any allowance then for double cartage of the pipe or some part of it first to the yard and then from the yard to the ditch later?

A. I don't think it involved any double cartage. I do not think it is necessary to make any allowance for double cartage.

Q. You think you can allow pipe to remain on the dock until it is used and then have a single transportation to the ditch, do you, as a general thing, in the City of New York?

A. I think an arrangement could be made in a contract of that size for storage of the pipe, certainly.

Q. Well, if an arrangement was made, that would involve some payment for the use of the dock for that stor-ge purpose?

A. Yes, that is a figure I am not acquainted with, and I supposed that the difference between the long ton and short ton certainly ought to cover such a charge as that.

Q. The difference between the long and short ton may cover a
multitude of sins, but the question is whether in your compu-
4083 tation you intended that to offset these other considerations to
which I am referring?

A. I intended it to cover it, certainly. I would not knock off 240 pounds to the ton without some consideration for it.

Q. Did you not consider that the short ton was worth $28.90?

A. No, I did not, by any means, for the long ton as quoted by Mr. Simpson was $28.90.

Q. But pipe to-day in the City of New York is worth more than $28.90, is it not?

A. Certainly. Just at the end of the year when everybody is hustling to get their jobs done and have delayed, there is a temporary rise in pipe, almost always, and in the fall, and I should not think of asking prices on a large quantity of pipe at the season when everybody was pressing for pipe.

Q. Don't you know that pipe was higher in January, 1906, than it was in October, 1905, or don't you?

A. That must be an exceptional case, when it happened that way.

Q. Now, don't you know that pipe was higher in July last than it was in January last?

A. I am stating the general course of pipes, that it will rise towards the active time in the fall when belated people are engaged in rushing in their mains.

Q. I am asking you this question. Mr. Simpson has testified and you have seen it if you have read his testimony, that it was higher in January, 1906, than it was in October, 1905. Didn't you know that to be the fact?

A. I don't remember his testimony in that respect.

Q. Do you know that to be the fact?

A. State your question again.

Q. That pipe was higher in the first part of 1906, say, January, than it was in October, 1905, which was in the fall?

A. I know that this year there has been a rise in the price of pipe to some extent.

4084 Q. Don't you know that pipe was higher in July, 1906, than even it was in January, 1906?

A. Oh, there is an attempted corner in pipe.

Q. Just answer my question, won't you? I don't know anything about corners, I am talking about what we have to pay for pipe. Read the question.

(Previous question read).

A. All I know in regard to that is that a number of people were holding off from laying pipe on account of the higher prices.

Q. Well, will you answer the question now?

(Question repeated.)

A. That is the only way I knew it, was by people ceasing to——

Q. I do not ask you the way you knew it. Don't you know it, Mr. Edgerton?

A. I did not ask the quotations at that time, no, sir.

Q. Then you do not know it, is that so?

A. I know it from the way I have stated, that I inquired why people were not laying certain pipes and they told me there had been a rise.

Q. How long since you have been in the market as a purchaser for pipe?

A. I have not bought any pipe since 1904, I think it was.

Q. Was that for Asheville?

A. That was for Asheville.

Q. How about the cost of trenching and refilling, do you know what the charge for labor is per day in the City of New York of that character?

A. I have estimated $1.75 for ordinary labor.

Q. For how many hour's work?

A. Ten hours.

Q. You do not know whether the eight hour or ten hour day prevails in New York?

A. I do not know to what extent they draw the difference or line between eight and ten hour work, but the higher priced work I suppose is eight hours and laboring men are on a ten hour basis.

4085 Q. Do you know whether there is any difference in the number of hours work under the city contracts, such as the laying of the salt water mains and the contracts of other corporations?

A. No, I have not the data in regard to salt water mains further than ascertaining how it was done.

Q. How wide a trench did you say a three-inch main would require?

A. I think it was one foot—1.833, which is equivalent to 22 inches, I think.

Q. You have assumed 67 cents a yard as the cost of excavating these trenches. Do you know what the company is actually paying per yard?

Mr. Kirby: Sixty-seven cents for dirt?

Mr. Mathewson: Yes, for dirt.

Q. Do you know what the Consolidated Gas Company is actually paying under contract for the removal of dirt in the City of New York?

A. Digging out of the trench, do you mean or removing it——

Q. Yes, excavating it.

A. I do not. I only know——

Q. You have never made any contracts for the excavation of dirt in the City of New York, have you, under our regulations?

A. No.

Q. Do you know what the City pays per cubic yard for the excavation of dirt for these salt water mains to which you refer?

A. I know, being very much deeper, they probably pay more.

Q. Don't you know what they are paying?

A. No.

Q. Has it not been brought to you that they are paying a dollar a yard instead of 67 cents?

A. Well, I think a dollar and 67 cents would agree very well on the different depths of trench.

Q. You think on account of the greater depth a dollar would be equivalent to 67 cents for what depth of trench?

A. My depths probably do not average half the depth, perhaps not one-third of the depth of the salt water mains.

4086 Q. Well, you are assuming a depth of two feet below the top of the pavement for the top of the pipe, are you not?

A. Yes. I saw their pipes buried five feet to the top of the pipe, and I should say on a great deal of that excavation $1.00 for that would be as cheap as 67 cents would be for handling it two feet. You might in many cases have to rehandle it.

Q. Did you see many cases in which they did have to rehandle it?

A. I saw——

Q. Did you see many cases where the dirt could not be thrown up to the top of the trench to the place where the workman was standing?

A. Yes.

Q. Was it a large proportion of that mileage that you saw?

A. It was mostly at street intersections. I know a man could not stand in a trench when the water main was 5 feet below the surface and there was 2½ feet more added and throw it very conveniently to the top. I don't think he could.

Q. What standard authorities did you consult as to the cost of labor in New York City?

A. I asked the cost of ordinary labor in New York City and I understand it was $1.75 for common labor, ditching.

Q. Now, you have allowed how much for the width of trench on each side of the diameter of the pipe so far as the Gas Company is concerned?

A. I say I have allowed more than I found to be the case——

Q. Well, how much have you allowed?

A. I think it would fairly average 4 inches bigger than the bell of the pipe.

Q. Two inches on each side?

A. Yes.

Q. Don't you know that the City's specifications allow 1 foot on each side of the pipe in all trench work; for example, for a 24-inch pipe a 4-foot trench?

A. They might allow it but they do not do it. I don't know what——

Q. Don't you know that they do allow it?

4087 A. I have only informed myself as to actualities. I don't know what the ordinances may be, no, sir.

Q. Don't you know that it is required to tamp down under all gas mains laid, and that that tamping can only be done inside the ditch?

A. Well, we always settle the dirt very firmly in a gas trench, sometimes by tamping and sometimes by water.

Q. You have got to have width enough of trench so you can do your tamping under the main, havn't you?

A. Not necessarily, I prefer to use water.

Q. Do you know in New York City they do not allow the use of water in place of tamping, or do not you know that?

A. I never knew of a place where they did not allow water for settling.

Q. Well, they do not in New York, and I want to ask you if you did not know it?

A. On the contrary, I was informed that they did allow it and was done.

Q. Your information is that private contractors like the Consolidated Gas Company can use water instead of tamping, is that right, in their trenching?

A. Yes, I think that water is the best way to settle dirt in a trench. It may cost more than tamping, but it is certainly the best way of doing it.

Q. Well, if you do it by tamping you must have your ditch wider than if you use water, must you not?

A. No, I do not think so. If you have got your ditch 4 inches wider than the bell of the pipe, I do not see what is to prevent tamping around the side of the pipe especially in a shallow depth.

Q. What about the slant of your tamping bar, must you not be able to get that in at an angle in order to do the tamping?

A. There is room enough at that depth of ditch to tamp underneath the pipe withe perfect ease.

Q. And with two inches on each side of the pipe?

4088 A. That is the bell. The bell is a good deal larger than the pipe.

Q. Do you have to do any tamping under the bell?

A. Well, the tamping under the bell would be infinitesimal, in fact the rim of the bell extends a distance of about an inch and a half where it is of its largest diameter.

Q. Did you know that in this city the City compels everything to be taken out of its way, all pipes, when it has any work to do in the street, any pipes to lay?

A. Naturally, I suppose that they require obstructions to be removed from necessary work.

Q. At the expense of the company having the pipes there, of course?

A. I do not see that that applies to a new work.

Q. Did you know that in crossing nearly all the avenues with a gas main of 24 inches or 30 inches in diameter it is necessary to go down in almost every instance from ten to twenty feet, or did not you know that?

A. No, I saw plenty of room to go above everything I have seen in laying pipes——

Q. If you were above the pipes running lengthwise of an avenue and placed your pipes on those pipes how near the surface would the 24 or 30-inch main come, do you think?

A. I do not understand that in running pipe parallel with the other you lay them on top.

Q. I am talking about laying mains across an avenue, where there are already pipes, and I asked you if you did not know it was necessary in almost every instance in laying 24 to 30-inch main to go from ten to twenty feet deep in order to get the pipe below the pipe and other obstructions in the street?

A. No, I do not think that would be the case at all.

Q. You did not take that into consideration in your computation of cost?

4089 A. I took into consideration in looking at those intersections at the crossings of the streets, of which there are a number open, that there was no room to put ordinary-sized pipe there.

Q. How many miles of the 822 miles of mains in New York City do you think you have personally inspected through openings of the earth?

A. During the construction of the subway and visits to New York during a period of 40 years I have seen a great deal of it. But I have not seen all of it by any means, and I do not think any other man has.

Q. I will ask you if you knew that in almost every instance in laying a twenty-four to thirty-inch main across an avenue in New York City you have to go from 10 to 20 feet deep in order to do that?

A. No, I will say you would strike the sewers in such cases as that.

Q. Don't you know that the company often has to go under the sewers in laying these pipes across avenues?

A. No, I do not know. I never knew of a case that had to go underneath sewers to lay pipes.

Q. You did not make any allowance for such expensive excavation as that, did you in your estimate of cost?

A. Never. I do not think anybody would allow an estimate for running gas pipes beneath sewers. I would not——

Q. You did not make any allowance for such things as that, did you, as a matter of fact, Mr. Edgerton?

A. No, sir, I never would, nor anyone else.

Q. Well, you did not. Just answer my question.

A. I never estimated a gas pipe going underneath a street sewer, no, sir.

Q. And you did not make any estimate for the necessity of laying your pipes 10 to 20 feet deep in crossing avenues with 24 to 30-inch pipes?

A. No, sir, and I do not think it is——

4090 Mr. Mathewson: I move to strike out the last part of the answer.

The Master: Strike out after all "no."

Q. You said that these salt water mains, some of them had to go down 10 feet, didn't you?

A. I saw a salt water main at the deepest point at the intersection of—there is the salt water main at the intersection of Seventh Avenue and Thirteenth Street (handing photograph). The excavation may have been in that case 10 feet to the bottom of the pipe.

Q. Yes, you did say it was necessary to excavate 10 feet deep, did you not, or that you found a ditch 10 feet deep?

A. I found a ditch 10 feet deep in that particular case.

Q. That is my question. Did you know it cost as much as $100 a foot to cross Avenue C at 12th Street, with a 36-inch main?

A. No, sir, I did not.

Q. Did you know that it cost $40 a foot to cross Sixth Avenue at Fourth Street with a 30-inch main?

A. No, sir.

Q. Do you know what the rules of the Department of Public Works in the City of New York are as regards excavating and back filling and the character of the back fill which must be used?

A. I only know from what I see in their throwing dirt back in the ditch, I did not see that there was any more done in it than I always had been used to doing.

Q. Do you know what the regulations are?

A. No, I do not. I have not read their regulations.

Q. Do you know that the rule is if we take out rock we are not allowed to put back any stones larger than 4 inches, but have to refill with new clean soil, did you know that?

A. No, sir; I estimated that the stones are saleable if they are of any size.

4091 Q. Are not the blasting risks and the care necessary in blasting where you were excavating rock much greater in a city like New York than they are in a small town?

A. The small amount of rock that I have estimated on, I think the 10 per cent. contingency would cover that.

Q. Did you take into consideration in your estimates the great amount of sub-surface structures which must be dealt with in laying gas mains in the City of New York?

A. I did to the extent of laying mains to the depth I have estimated. I did not——

Q. Did you know that in constructing the Rapid Transit Subway at 42nd Street between Park Avenue and Broadway and north of Broadway to 46th Street, a distance of not more than 2,700 feet, the estimate for replacing sub-surface structures such as gas mains, etc., was about $245,000, or did not you know that?

A. I estimated any removal of gas mains by contractors would have to be at their own expense. I am not moving mains, I am only placing them in position and I am not taking care of them afterwards in this estimate.

Q. Did you know that the sub-surface structures in Avenue C were such that it took the company about three months to put its main across Avenue C, including the shoring up of other pipes and excavations and taking care of water which leaked in, etc.? Did you know there were any such difficulties as that to be encountered?

A. I understand on these shallow pipes I did not take into consideration any difficulties further than I saw would be necessary to bury pipes at that distance, which is above the usual obstructions.

Q. Did you know that the surface structures are so large and expensive that it sometimes takes the company weeks to get its main around a single corner on account of caring for other sub-surface structures and the obstructions due to them?

4092 A. From what I have seen of the main laying, I did not see any difficulty about handling them any further than is ordinary in large cities.

Q. You did not know these things, did you, to which I have called your attention, if they be facts, and you did not allow for them?

A. I only allow for what I have seen, and I have seen a good deal of piping.

Q. You know in laying these salt water mains the city has everything removed out of its way, so that their work is comparatively simple, don't you?

A. It looked to me as simple as any work of the kind I was acquainted with. I did not see any trouble about it.

Q. You did not know it was costing the Consolidated Gas Company at the rate of $1,000 a week to get their mains out of the way for these salt water mains, did you?

A. My estimation does not include taking care of the mains after they are laid. It is simply getting them down.

Q. You spoke in reference to the depth of the excavation as though that had to do with the candle-power alone. Are there not other elements that require mains to be placed a certain distance underground except the cold which may affect candle-power?

A. They have got to be put low enough to be safe in respect of breakage or——

Q. Don't you know with the modern pavement in New York City, some of it is 18 inches deep itself, which would leave only 6 inches below the bottom of the pavement and the pipe?

A. Well, I do not see any harm in that.

Q. You do not know that it is often the practice to excavate to the depth of 18 inches before the new pavement and then roll the street with a heavy steam roller preparatory to putting in the pavement?

A. That is very usual. The depth is a little excessive, but I have seen a 12-inch bed and probably 14-inch bed laid for paving.

4093 Q. We will assume there is a depth of 18 inches, and that would leave only 6 inches from the top of the pipe if it were placed only 2 feet deep. Don't you know with only 2 feet of covering and with the heavy steam rollers they use in New York, that would certainly result in an injury to the pipe if there was only a covering of 6 inches?

A. They fill in before they roll.

Q. You don't know then that they often cut down to a depth of about 18 inches and then roll the street preparatory to putting in their pavement and foundation, do you? That had not come before you, had it?

A. Preliminary rolling, no. I do not think it is necessary.

Q. You do know that a covering of only 6 inches above the pipe with heavy steam rollers would almost certainly do injury to the pipes, don't you?

A. No, I do not think it would.

Q. You do not think it would?

A. No, sir.

Q. What about the services? Services are arranged to come out of the top of the pipe, aren't they?

A. Sometimes, and sometimes out of the side.

Q. Is it not better policy to have them come out of the top of the pipe than out of the side?

A. If the pipe is deep enough you can take them out of the top, otherwise at the side.

Q. Do you mean to say that 6 inches would be sufficient depth to take the services out of the t[illegible] of the main and at the same time leave sufficient support for a heavy roller?

A. No more than I should say 90 per cent. of all the services are taken from the side of the main. When the pipe is sufficiently deep they are taken from the top.

Q. Have not you read——

A. When the pipe is shallow they are taken from the side of the main. It is a matter of indifference, the gas will come out in either case.

Q. Have not you read in the Gaslight Journal, if you have
4094 kept up with the literature, that mains have been broken
even two feet below the surface by the heavy steam rollers
which are used now in rolling the streets, in England?

A. There may be occasionally such cases.

Q. You have read of such cases, haven't you?

A. Very rarely.

Q. Now, take this consideration, where in the streets of a city like New York, there is much heavy traffic and much congestion of traffic, you must make more allowance, must you not, than in a smaller place where there is less congestion and less heavy traffic?

A. I do not see any reason for allowing more than they allow in the old country. It is one foot nine there and here I have allowed two feet.

Q. One foot nine below the bottom of the pavement?

A. Below the top of the pavement to the top of the pipe.

Q. What old country is it where they allow only that difference?

A. In England.

Q. What cities?

A. Newbigging gives it as an average.

Q. Don't you know that is all changed now, and that if Mr. Newbigging's suggestion was ever correct, it does not apply at the present time?

A. No, I do not.

Q. Taking now these other pipes in a street, you have observed, have you not, that many other pipes run parallel with the gas mains, as the street is uncovered?

A. Parallel and generally underneath, the water mains lying at a lower level.

Q. They are at a considerably lower level, are they not?

A. Than the gas mains, yes, sir.

Q. And then you noticed that many pipes run side by side with the gas mains and on the same level?

A. I have noticed numbers of gas mains in these subway excava-
tions suspended, yes, sir; and looking in the subway excava-
4095 tion at the time that was going on, we saw them suspended,
and we see them suspended now by iron chains, and I question
whether the majority of those pipes are not shallower than three
feet, those that I saw. I have seen them placed where they were
not two feet.

Q. Well, we have exact figures, so we know and do not have to guess; but have you not observed these other pipes running parallel and on the same horizontal level with the gas pipes?

A. Yes, sir, I have seen those to be duplicated gas pipes.

Q. Outside of gas pipes?

A. No, I don't remember other pipes running parallel outside of gas pipes. I took all those at the higher level to be gas pipes.

Q. If the Consolidated Gas Company has certain gas pipes and there are other gas pipes in the same street and parallel, would you not think that it would be wiser to place the Consolidated Gas Company pipes on the same level as the other gas pipes so that they might not be undermined and sag when the other gas companies want to repair their pipes?

A. Yes, sir; I should place the pipes on the same general level, only that I should place pipes higher than at the height that I have estimated.

Q. Yes, but if you found the other pipes there at the lower level, you would place your pipes on the same level, would you not, if it was not very much lower?

A. No, I should run over the old pipes.

Q. Do you mean you would put your pipe directly over the old gas pipe, lay it on it?

A. No, not lay it on it; you only have to take that into account at intersections. At other than intersections the pipes run parallel.

Q. Do you not know that the yokes and ducts of the trolley companies here, which operate on pretty nearly all the avenues and many of the streets, are at least two feet six inches deep to begin with, and we have to go under the yokes; or didn't you know that?

A. The trolley ducts are in the middle of the street and
4096 the gas mains are usually on the sides of the streets.

Q. But we have to run our pipes across the streets, do we not, across the avenues?

A. In that case you would have to go below, certainly.

Q. You know that the specifications in reference to these salt water mains provide that unless otherwise ordered by the engineer all pipes shall be so laid that the top of the inside of the barrels will be five feet below the grade of the street?

A. That is a provision for salt water main laying, and salt water mains and gas mains are different mains.

Q. Is not that so as to all water pipes, and not salt water pipes alone?

A. Yes, water pipes have to be laid below frost because the water is sometimes stagnant, and it would freeze and burst the pipes if laid above the frost line.

Q. Don't you know that it is further provided in the specifications I have referred to that the trench shall be excavated 2 feet wider than the interior diameter of the pipe and 6 inches deeper than the inner bottom of the pipe?

A. I know they are not doing it.

Q. Won't you answer the question, Mr. Edgerton?

A. No, I do not know those regulations, no sir. Only what I saw.

Q. You cannot imagine, can you, why the City, which has to pay for excavation, should insist in its specifications, that the trench should be excavated 2 feet wider than the interior diameter of the pipe, unless they saw some advantage in a wide trench, and what could the advantage be if not that the pipes would be thoroughly tamped down and otherwise properly treated?

A. I don't know what becomes of that margin, no, sir, between what they say and what they do.

Q. What proportion of the mileage of these salt water mains
4097 have you actually gone over and seen the trench wide open?

A. Well, certainly not a very large mileage. I have gone
over all looking wherever I saw work in progress, and wherever

I saw work that had been finished up, and the blocks put back, I took note of it. I made measurements in many cases besides those mentioned, but those are typical of the whole. It was not any very large percentage.

Q. Now, I understand that the weights which you have given for old and new pipes are simply weights which you have assumed and they are not based on any knowledge of the weights of the pipes which the Consolidated Gas Company actually had in the ground; is that right?

A. They are taken from my experience and from catalogues from these founders, those engaged in the manufacture of pipe at different periods.

Q. And if those weights are less than the pipes of the Consolidated Gas Company actually in the ground and you were to reproduce the Consolidated system as it now is, that would add to the figures given in your estimate, would it not?

A. It would add if they were heavier. I do not see how they can be heavier within any bounds of reason.

Q. Well, we do, and they are heavier, so we do not need to argue that. I am merely asking you questions. Is there any inspection by the city authorities of Danbury which you have to pay in connection with the laying of mains, city inspection?

A. There is city inspection. I don't know as there is any extra charge for it. We have to get permits.

Q. Did you make any allowance for city inspection in the case of laying these mains?

A. Yes; I figured that in here.

Q. In what, in the ten per cent. extra for contingencies?

A. Supervision, foremen and guarding, and contingencies, yes.

4098 Q. Do you now how much the city inspection costs the company?

A. I made inquiries in regard to the number of inspectors required and their compensation.

Q. What did you find their compensation was and how many of them we had to employ?

A. I have forgotten. I have a memorandum somewhere in regard to it. I think it was $1,200 a year, or something of that sort.

Q. Do you remember how many inspectors?

A. I don't remember, but they were portioned out among the companies.

Q. Did you compute how many cents per foot pipe laying costs for city inspection?

A. I did not separate that item because I saw it would not figure very largely, to have to pay the salaries of inspectors.

Q. Have you ever had any experience recently in laying in large cities where city inspection is required and where there are asphalt and modern pavements?

A. I had a tremendous amounting of inspection and fussing around at Asheville.

Q. Well, that is not a very large place, is it?

A. No, but they made a great fuss about it.

Q. Asheville is not a large city according to your view, is it?

A. No, but the pavement was a great object to preserve. It is a sort of resort, and they take great pride in their pavements, and were very exacting in regard to replacing them and cutting through them.

Q. You would hardly compare Asheville with the City of New York, would you, in the congestion of traffic and rock and city inspection and other details taken as a whole, and the size of main, would you?

A. Not in regard to the size of main, but in regard to the rigidity with which they looked after things, I thought they were severer than any place I knew of. They took——

4099 Q. You don't know what you had to pay for city inspection, do you, if you had to pay anything?

A. Well, it was not a large sum, but it made a great deal of trouble.

Q. Now you stated among other things that you laid mains shallow, as I understood it, because the gas was fixed, water gas was more fixed or permanent than coal gas. Was not that condition prevailing, so far as it did prevail, when the Pennsylvania oil was obtainable in quantity and at prices which could be afforded in gas making?

A. All properly manufactured oil and water gas is very fixed in regard to——

Q. Do you mean to say that the water gas as made from the oil now commercially obtainable and useable in gas making is of the same fixity, so to speak, as the gas which was made from the Pennsylvania oil?

A. I think so.

Q. And do you think now that the water gas now that is made from the present oils shows a greater fixity than coal gas of good quality?

A. Yes, sir; properly made. I notice the percentage of tars in some of the gases in condensation looked to me extraordinarily large, and I could not account for it at all except that the gas machinery was deficient in capacity to convert the gas. I have figures in that respect which probably will come up.

Q. Don't you know as a matter of fact that the oil now in use in gas making is so inferior in respect to fixity that in winter, to meet the condition of lower temperature, a substantially greater quantity of oil has to be used to compensate for the drop of candle power?

A. No, sir. Gas properly made now is just as fixed as it ever was.

Q. Are you making any water gas now at all except this water and oil gas at Danbury at which place you say you are manager?

A. I did not say I was manager.

4100 Q. I thought you said you were manager the other day?

A. No.

Q. Well, are you manager at Danbury?

A. No, I am not manager. I am consulted in regard to it because I put up the works.

Q. You are not managing any plant then which is producing water or oil gas, are you?

A. No, I refused to take the management of the works, for I was engaged in other works, and I am not managing the works. I have been offered a position as manager of the works.

Q. How many years is it since you have been actually in management personally of a water gas works?

A. I have been building all the time, I have not been managing only in cases where the works were starting up.

Q. Yes, I am eliminating that. I mean in actual and continuous management, where you have been in actual management of works, how many years is it since you have been in actual management of a water gas works?

A. I have not been manager in any case. I have built the works and run them to start the works and then overlooked them from time to time to see how they were getting on.

Q. So that your work has been rather in constructing and testing than in actual operation of works?

A. Interspersed sometimes with the actual operation of works, so long as it was a question of getting them started.

Q. Precisely, testing them, so to speak.

A. Sometimes the testing lasted for a long time. In the case of New Orleans it lasted for six or seven months.

Q. Do you know how long New Orleans was operated with your plant before your plant was discontinued in use wholly or practically?

A. Well, that is simply part of the plant, part of the operations. I think we ran about two years on the vertical retorts. There were then about forty different people log rolling for different ways of making gas which they sought to introduce in part as a sample there. 4101

Q. You have not been the actual operator and manager of a gas works except in connection with testing them and putting them in condition after construction, for a great many years, have you, Mr. Edgerton?

A. No, I do not operate works, I put them in order, but that includes the operation until they are in order and working satisfactorily.

Q. Now you referred to the cost of lead or the amount which you allow for the cost of lead as $223,000. And you took lead at 5¾ cents per pound. Is not lead 6 cents per pound now instead of 5¾ cents?

A. No, sir.

Q. Where do you get your authority for the statement that lead is 5¾ cents a pound now?

A. I telephoned yesterday to a large operator in lead, handling lead, and he gave me that price.

Q. Who was he?

A. I can get the name. I have forgotten. Phelps-Dodge & Company referred me to these parties, and said they were not handling lead any more, and they referred me to a party who made a specialty of handling lead, and they gave me that figure as the trust price of lead and the street price they said was larger, but that was, as he called it, the trust price.

Q. Well, what was the street price? We have not anything to do with trusts?

A. I don't know why that trust price was quoted lower than the selling price. I suppose it was a mere question of difference between retail and wholesale price.

The MASTER: What was the street price, he asked you?

The WITNESS: I think it was 6¼ or something like that.

4102 Q. Well, that is what is known as spot lead, is it not, the street price?

A. All I know, he offered to sell lead at 5¾ cents.

Q. Don't you know what the meaning of spot lead is, the quotation?

A. I know spot cotton or spot lead or spot anything means on the spot, in handling the actual stuff. But I took it as a large dealer in lead offering that price.

Q. Well, you know the trust only sells in carload lots, don't you?

A. This would be a great many carloads.

Q. Or didn't you know that?

A. This would be a great many carloads.

Q. Oh, yes, and it would take a great many years if you were going to lay down the system of mains in New York City, all at one time, wouldn't it?

A. It would take a number of years, of course.

Q. You don't suppose that the system of mains in New York City ever was or ever could be laid down as a wholesale proposition?

A. No. It could be laid serially, of course, but it would take time.

Q. We are talking of practical things and not of Utopian. Now, let us take the weight of lead. How much weight of lead did you allow for each size joint?

A. As before stated, I took the heaviest. I see I have the results here in total, weights of lead, and the multipliers I have not got down on this paper but they correspond——

Q. You haven't the weight that you used for each joint?

A. I have it somewhere. I haven't it down on that list; but I used substantially the weights,the higher range weights as recommended in here by the Gaslight Association. With the exception of the larger pipes where I used a little heavier weights.

Q. What are you reading from?

A. This is weights given by the American Gas Institute, 1906.

Q. You mean at page 14?

4103 A. Page 14, where it says, "Weights in pounds, from and to." I adopted generally the larger weights and increased some of those on the heavier sized pipes.

Q. What depth of lead did you use on the joint?

A. Well, that varies slightly; it runs all the way from 1⅜ inch to 2½, somewhere along there.

Q. What did you use in your estimate?

A. The depth did not enter into it, because the weight of lead was what I was arriving at. The joints will vary slightly in thickness, some being a little lighter or heavier than the other, this being an average figure.

Q. Did you allow anything for waste of lead which occurs in caulking joints?

A. The waste is very slight, but I should include that in the ten per cent. I have allowed. All the gates—what we call gates, in pouring the lead, are cut off carefully and the surplus lead trimmed off, or if any runs into the ditch through breakage of the——

Q. Do you mean to say you consider it feasible to lay mains of any considerable size by first caulking them together and then lowering them into a ditch?

A. Not any considerable size. I spoke of the smaller sizes, 3-inch, 4-inch, and two joints of six.

Q. If you have the pipe so near the surface of the ground that it heats or cools with changes of temperature, does it not result in expansion and contraction of the pipe?

A. Slight.

Q. Doesn't that have a tendency to weaken the joints and produce leakage?

A. No, sir.

Q. Not at all?

A. Not at all. You have got just as tight a pipe with a shallow depth as you have at the larger depth.

Q. But the greater the change in temperature where the pipe is the greater the contraction and expansion, is that not so?

A. That is taken up on each joint.

Q. Well, isn't it so?

A. Yes.

4104 Q. And the greater the depth the less the change in temperature?

A. Yes. You could go down where there was no change.

Q. Do you mean to say that expansion and contraction have no effect whatever upon the joints of the pipes and have no tendency to produce leakage?

A. Not a particle. I have had the pipe in the open air and watched it for years. It is foolish to talk about expansion and contraction after the experience we have had with pipes, in that respect.

Q. In reference to the laying and caulking of pipes, do you know what labor is worth for laying pipes; what the wage is per man?

A. I thought I assumed it pretty high. I took caulkers at five dollars a day. I was told that was too high, and I suppose it is.

Q. What did you take for the workmen who are laying the pipe?

A. Well, except the men yarning and rolling into the trench, the caulkers are the ones who lay the pipes. They have the chief business of the laying, except the foreman. Yarning is comparatively simple work, caulking is the next, and, of course, the foreman's, on top of that, is most expensive.

Q. Well, what wages did you allow in this case. You said five dollars for the caulker. How much for the yarn man?

A. Two dollars and fifty cents; and I allowed $1.75 for the common laborers. A foreman at five dollars, the same as the caulker.

Q. What proportion of caulkers and laborers would you have?

A. Well, that would depend on the size of the pipe. I averaged that up.

Q. Well, take the 36-inch main.

A. On the 36-inch main you would have, except when lowering into the ditch, which has to be done by derricks, you would have a larger proportion of caulkers; it is more trouble to caulk the 36-inch joints—it would take two men,—than it would the smaller ones. A man to caulk a small joint—he could caulk it alone. With 4105 the larger it is convenient to hasten the work of caulking and to employ a couple of men on it, one on each side, around the top and underneath, one working opposite the other.

Q. Coming to your pavement because of replacing, that you say for the new pavement you have taken $2.75 per square yard. Did you observe from Mr. Simpson's testimony what the actual condition was as to replacing asphalt pavement, that the gas company is obliged to let the asphalt company do that, the asphalt company guarantees the pavement, and has to pay the asphalt company an average of $3.25 or $3.50 a yard for replacing it.

A. I think that is the case. I remember it was $3.25 as stated.

Q. Why did you take only $2.75 per square yard?

A. On account of being these repair jobs here and there, running around with their apparatus and tools, instead of doing a straight job right straight around; it ought to make even more difference than that.

Q. Didn't you know that the charge was exactly the same for a long trench as for a repair job in New York City, for asphalt pavements?

A. There is no such job as involves the total relying. I suppose a man is entitled to deduct for the size of a job in a case of this kind. I suppose they make even better terms than that. I am told they would make terms of $2.50 a square yard.

Q. Who would?

A. The asphalt companies?

Q. Don't you know that by law they are allowed to charge the contract price for all jobs?

A. No, sir. I know nothing about the law on it but if they get an extra job like that and make a good big profit they would be very likely to cut it and would undoubtedly do so.

Q. But we have already seen you could not put down all the mains in New York City as a wholesale job, in the natural course 4106 of events. Now if it be true that the charge of the asphalt company for the replacing of all the pavements over a long trench and the price which they may legally charge, is very much more than $2.75, then that would add materially, would it not, to the figures which you have given as the cost of replacing pavements?

A. Yes, if you had to give them that, but I have been assured they would take it at $2.50 in quantities.

Q. Do you know that the price that the company has been obliged to pay for the replacing of the modern pavement outside of asphalt, was $8.00 for the first yard and $4.00 for all other yards?

A. I saw that in the testimony, yes, sir.

Q. You didn't make any allowance for that? You put that in also at $2.75, didn't you?

A. No, I didn't put that in at $2.75. I know that the first yard is worth double on a small job; the very difference between $8.00 and $4.00 indicates why they charge so much more for the first yard in doing patchwork jobs.

Q. You understand the entire trench costs $4.00 a yard for all the yards except the first, that that is what the company has paid and been compelled to pay to the city?

A. Well, compared with this that is a retail operation; that is, it is a very small operation compared with the length of the mains.

Q. You assumed that the city, if all these mains were to be replaced, would do this for $2.75 for modern new pavement other than asphalt, when they have charged us $4.00 per yard?

A. Yes, I think they would do it for that and be glad to.

Q. You understand that this new pavement is laid by the city itself, except the asphalt, while the asphalt pavement is laid by the asphalt company under the agreement with the city?

A. This pavement you are referring to, concrete pavement?

4107 Q. I am referring to granite on concrete as distinguished from the asphalt?

A. I do not see why it should cost any more.

Q. If it does cost more and we pay the city more for it, why shouldn't you include the actual cost to us instead of assuming a lower figure? Have you any notion that the City of New York would make a concession from the prices which it may legally charge because we want to tear up all the streets instead of a few of them?

A. I think there are always concessions made on large contracts, yes, sir.

Q. Even by the City?

A. Yes, sir; I think the City would.

Q. Is that the only ground on which you put $2.75 down here instead of prices that the company has actually paid?

A. No, basing it on the experience I have had that where a new gas works is constructed the City is always very eager to help it along and they will do a great deal to further it. That has been my experience.

Q. Then you are taking and computing even on that assumption the price on which you think the pavement could be replaced and not the cost which the company has actually been under where it has laid pipe under pavement of that sort?

A. No, not for piecemeal jobs.

Q. Now, do you know the actual cost to contractors of laying down pavements, asphalt, granite on concrete and the wooden block, per square yard?

A. I have consulted quite a number of authorities on it and also the cost to cities, for laying pavements, and have a recent compilation with regard to that, going into it very extensively——

Q. Well, I am talking about the City of New York, not elsewhere, because labor may be higher, congestion of the streets may interfere with workmen, and various other considerations arise?

A. Well, I have allowed what I thought would be a very
4108 considerable margin over what is done in other places.

Q. Well, you have allowed figures that you have taken, or estimates that you have made in getting your total, instead of the total cost to the company, of laying under these new pavements, have you not? Now, won't you give me an answer to that?

A. I have used my own.

Q. And not the figures of the company's own experience?

A. No, I have not used your experience in regard to it; I am using my own.

Q. You say you have never laid any pipes in the City of New York and, therefore, you haven't any experience in the City of New York, have you?

A. Well, not in the City of New York.

Q. Nor in any other big city in recent years in the East, have you?

A. No, sir; but I know their cost——

Q. Well, you think you know. We think you do not. Now, did you know that in replacing the old pavement we had to use sand, use six inches of sand?

A. You always have to use sand when replacing——

Q. Did you know how deep to lay the sand?

A. You have to imbed the pavement in sand and fill in the interstices; always do that.

Q. Do you know how deep we have to lay the sand below the pavement?

A. You have to make a good bed.

Q. How much?

A. It depends upon the kind of pavement.

Q. Do you know how much in New York City for ordinary old pavement, how much the specifications of the City call for?

A. No, I do not. I only know it would make good paving——

Q. But do you mean to say you have made an estimate of cost of laying the old pavement in the City of New York without knowing
how much sand the City's specifications required to be used
4109 under the old pavements?

A. As far as that I gave a figure larger than Mr. Simpson gave in his testimony.

Q. That may be, but I am testing the accuracy with which you made these calculations and your own knowledge. Now, do you know how much per yard sand costs us in the City of New York to put under the pavement?

A. I don't remember. I know that I figured in the cost of paving here as common paving laid in sand, imbedded in sand, as thirty cents.

Q. Do you know how much sand costs per cubic yard, delivered at the works I mean, of course?

A. I don't suppose it is any——

Q. Well, do you know?

A. No. I don't remember what the sand costs. I just estimated it as a whole.

Q. Do you know what sand costs on the dock in New York City?

A. No, sir. It is a matter of small consequence in this figure.

Q. You could not make any computation, could you, that was reliable unless you did know how much sand was required below the block pavement in the first place, and secondly, how much sand cost, could you?

A. Well, after——

Q. Could you make any exact estimate without knowing those details?

A. I just have doubled the ordinary figure, and as the whole total was only $34,953.00 I did not go into figuring out how much the sand cost or any other small detail.

Q. Oh, no, you have $34,953.30. I am trying to find out whether that was an exact figure or a conjecture on your part?

A. No, it was not a conjecture. It is double the figure we would do it for elsewhere. There is 30 cents a yard; that is what it was.

Q. But you don't know how much sand the City's specifications require, nor what sand costs in New York City?

4110 A. There is sand enough to cover it, I know.

Q. Will you answer the question?

A. I didn't think it was of the slightest importance.

Q. Will you answer the question?

A. I don't know what sand costs in the City of New York.

Q. And do you know how much sand the city's specifications require?

A. No, sir, I don't know what they require on that item of $34,000. I know that it is about double what they——

Mr. Mathewson: I move to strike that last part out.

Motion granted.

Q. Do you know how labor in New York City compares with the prices of labor of the same class in Danbury and Asheville and other cities with which you have had experience?

A. They bring the men right from New York, the same class of men they use—"Dagoes." I don't see any difference in the men. They are ordinarily the same men who go back and forth on these jobs.

Q. You think you used the same men the Consolidated Gas Company has on its force, in Asheville?

A. Not the same identical men, but men of the same class.

Q. Don't you know that the Consolidated Gas Company does not use Italians at all in its work?

A. Well, that is where they lose then because they are the best kind.

Q. Well then, the "'Dagoes,'' as you call them, that you have used, evidently have not been people that have been working in the City of New York, were they, in gas mains?

A. They are very good pipe layers.

Q. I know, but that is not the point at all. I am asking if you know how classes of labor, pipe layers and caulkers and so

4111 forth, compare in Asheville with New York City?

A. I thought we were speaking about common laborers. I am not talking about the caulkers. I stated that I allowed $5.00 a day for caulkers. I allowed $2.50 for a——

Q. Do you know how that compares with the other cities with which you have had experience?

A. Why, it is larger.

Q. Do you know what they have to pay for common labor of different degrees in Asheville?

A. Well, I know they are about the same price, $1.75.

Q. Do you have to pay $1.75?

A. Oh, no, you can get "Niggers" there for a dollar a day.

Q. Now, look a minute at these photographs. Who took these? Did you?

A. I did, yes, sir.

Q. Yourself?

A. Myself.

Q. Who is holding the measure?

A. That is Mr. Cowperthwait, a son of the superintendent of Danbury.

Q. A son of the superintendent of the Danbury Gas Works?

A. Yes, sir.

Q. Don't you know it to be a fact here that when a ditch is temporarily covered, as it appears to be in all these photographs, where it is covered at all, that traffic breaks down the edges of the permanent pavement frequently so that when the asphalt company or the city comes to repave that they have to repave many inches wider than the original trench?

A. That is just what I wanted to show—how much came in of that kind? That is what the photographs are intended to show. It shows the bad places——

Q. That is not paved at all in the photograph yet, is it?

A. No, but it shows the holes there and here it goes straight.

Q. Don't you understand that heavy traffic along the street breaks in the edges next to this covering so that if the repaving is not done for weeks afterwards, as it frequently is not, it is broken down on the edge, so that the repavement includes a much broader
4112 space than indicated here?

A. No, I do not.

Q. You did not know that was the experience in New York City, did you?

A. No, the holes shown in these photographs were made independent of that ditch entirely.

Q. Why didn't you photograph a repaved ditch so as to show how wide the repavement actually went?

A. Well, I was looking for those, been on the inquiry to get such cases as that.

Q. But you could not find one?

A. Well, you have got to find one that is recent because it gets worn in so it would not show in the photograph the limits of the paving, but I did find a place where I saw how much trimming was done to make the fresh edge on the asphalt, and I found that I made an excessive allowance for it.

Q. Didn't you know in many instances, in the City of New York, that the repaving of trenches over 30 or 36-inch mains where the repaving was not done promptly after the filling of the trench, required a repaving to the width of six or seven feet, due to the breaking down of the edges of the pavement by the heavy traffic?

A. No. I do not figure on anything like that.

Q. Did you or did you not know that that situation existed in the City of New York?

A. No, I don't know it. I haven't seen it.

Q. Did you make any allowance for sheathing or shoring up of the ditch?

A. No, on a ditch that depth I made no allowance, except the exceptional cases of having to shore on account of a deep ditch I included in the ten per cent. I considered ten per cent. a large allowance for such cases.

Re-direct examination by Mr. KIRBY:

Q. Have you made any comparison of the width of trench allowed by you with the width set down in the report of the 4113 Board of Revision relating to the section, "Distribution of Gas, American Gas Institute, Chicago, 1906"?

A. Yes, sir; I compared them.

Mr. MATHEWSON: What is this, cross-examination? If not, how can you refer your witness to the authorities? That is already settled.

Mr. KIRBY: The authority has been referred to.

Mr. MATHEWSON: Not by me.

Mr. KIRBY: You asked him what the pages there was when you were speaking in regard to the weight of the lead used in the joints—referred to by you and the title read by you.

Mr. MATHEWSON: No, sir, not for a minute. I didn't even know the title. That is not competent.

Mr. KIRBY: It is as competent as the other question.

Mr. MATHEWSON: I didn't ask him any question on the subject.

The MASTER: That seems to be so, Mr. Kirby.

Mr. KIRBY: Well, I will put in the answer under the objection, if I may.

The MASTER: Yes.

Mr. MATHEWSON: Exception.

Q. Did you or did you not find the width of trench taken by you as wide as those given in such report?

A. I think with the exception of some of the larger they are fully as wide and some of them wider. The large sizes are slightly less, on account——

By Mr. MATHEWSON:

Q. Your figures are slightly less?

A. My figures are slightly less, on account of the width I saw in use in New York for laying mains.

4114 By Mr. KIRBY:

Q. By the large sizes you mean 30 and 36-inch?

A. No; from 16 up; 24-inch particularly referred to. This is a

24-inch main on the 3-foot width at the ditch on this photograph (indicating one of the photographs marked in evidence).

Q. The average width of such trench as set down in this report to which I have made reference for the 24-inch main is 40 inches, is it not?

A. Yes.

Mr. Mathewson: It is 44 at the top.

Mr. Kirby: And 36 at the bottom.

Mr. Mathewson: But 44 has to do with the repaving.

The Witness: That is just where the difference comes in. The practice here in New York City is to make it narrower at the top in order to avoid a bill of paving. In the book they make it wider at the top and narrower at the bottom. The paving is not in question. There is an evident desire to avoid large payment for repair of pavement and they cut the pavement just sufficient to let the bell into the ditch. That is about the amount of it. In fact one foreman told me he sometimes cut out for the bell.

Q. Taking these figures and computing them as they are in the table in this report for 24-inch pipe, we have a width on top of trench of 44 inches and a width of bottom of trench of 36 inches. What width of trench did you use?

Mr. Mathewson: Doesn't it appear what he used? Is it necessary to go into that

A. I used 36 inches.

Q. For the 20-inch pipe we have in this table a width at top of trench of 36 inches and a width at the bottom of trench of 32; what width did you use?

A. 30 inches.

4115 Q. In the 16-inch in this table we have width at the top of trench of 32 inches, bottom 28 inches; what did you use?

A. I used 28. The same.

Q. On the 12-inch we have a width at the top of 28, bottom 24; what did you use?

A. 28 inches.

Q. In the 10-inch we have a width at the top of 26, bottom 22; what did you use?

A. 25.

Q. In the 8-inch we have a width at the top of 24, bottom 22; what did you use?

A. 24.

Q. In the 8-inch we have 24 at the top, and 22 at the bottom and your figure was what?

A. 22.

Q. 6-inch, at the top it is 22, bottom 22?

A. Oh, excuse me. It is 24 on the 8 inches.

Q. And for all the other sizes in this table we have a width at the top and width at the bottom of 22; what did you use?

A. 22, I used.

Recross-examination by Mr. MATHEWSON:

Q. So long as the Consolidated Gas Company has to pay the city or the asphalt company for repaving it would be to their interest, would it not, to make the top of the trench as narrow as they could and properly do their work?

A. Certainly.

Q. Now let me call your attention to one or two other things in this book to which Mr. Kirby has referred. See if I quote correctly at page 15:

"Depth of Main. The trench should be dug to approximately the depth at which the main is to be laid, and no fixed rule can be prescribed for the depth at which mains should be laid. In a general way it is governed by these conditions: the question of getting below the frost line, the matter of avoiding obstructions and the question of securing sufficient pitch for drainage. In addition to these the mains should also be laid deep enough to avoid any trouble caused by the jar of traffic on the street. The first three 4116 conditions are purely local, and the frost line has been given as five feet deep for 30 degrees below zero. In order to be below the jar of traffic the pipes should be laid to cover at least three feet deep in large cities where there is heavy traffic and 30 inches in the small town."

Have I quoted correctly from this same book?

Mr. KIRBY: Objected to on the ground that if the other question was incompetent, I think this is incompetent.

The MASTER: It will be allowed.

Mr. KIRBY: Exception.

Q. Did I quote that correctly?

A. I think it is a correct quotation. I differ in regard to the jar of traffic on asphalt pavements.

Q. That is quite obvious, but I merely ask you if this was a correct quotation from this authority, and you say yes, and that is all I have to ask on it.

A recess is now declared to 2.15 P. M.

4117 After Recess.

WILLIAM J. LOGAN, called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Direct examination by Mr. PAGE:

Q. Mr. Logan, what is your occupation?

A. I am president of the Logan Iron Works.

Q. How long have you been connected with the Logan Iron Works?

A. Since 1868.

Q. What particular line of business does the Logan Iron Works do?

A. Contracting and general iron work for oil and gas, boiler works, pipe work.

Q. Do you or does that company build tanks and holders?

A. We build tanks and holders and purifiers, condensers, wrought iron pipe; we have built roofs and smoke stacks, boilers, oil tanks and general appliances.

Q. For how long a time have they built those various appliances of which you have just spoken?

A. Ever since I have been with them and before.

Q. Have you been connected at any time with any gas companies?

A. I was director in the Williamsburg Gas Company and Brooklyn Gas Company and Citizens Gas Company of Brooklyn.

Q. But you have, I understand, never had anything to do with the operation of a gas plant?

A. No.

Mr. Mathewson: That is not the present Brooklyn company?

The Witness: No, the present company is the Brooklyn Union Gas Company.

Q. You were connected with the three companies you mentioned prior to their consolidation with the present Brooklyn Union Company?

A. Yes.

4118 Q. Have you visited the works of the Consolidated Gas Company?

A. I have.

Q. And made an examination of their plant?

A. Yes.

Q. And at such examination or during such examination you made an estimate upon the value of a certain portion of the apparatus?

A. I did.

Q. And as I understand, you did not make a valuation of the buildings?

A. No, I did not.

Q. Nor of the generators for the water gas plants?

A. I made no estimate myself an anything except such as I would be prepared to qualify for reproducing at the price new, and then only in regard to—there was a great deal that I could have made estimates on that I did not do, that was in conjunction with the buildings; roofs, for instance.

Q. Now, in the course of your investigation you visited the 18th Street station or plant of the Consolidated Gas Company?

A. Yes; I did.

Q. For what purpose is that station now used?

A. From general appearances and from what Mr. Riblett told me, the man in charge, only as a distributor station and holder station; there were some repairs going on there, repair shops and so on.

Q. Some portion of the premises used as a repair shop?

A. Yes. There is a small experimental gas works there that was not working, but Mr. Riblett told me that they did use it for testing coal.

Q. Well, outside of the machinery and apparatus necessary for the distributing station and the repair shop and this small experimenting gas station, did you find any other portion of the gas works on those premises?

A. Oh, yes; there is a large purifying house and lots of benches and exhausters and scrubbers and many things of that kind, but they were not in use.

Q. Are you sure about there being benches there?

A. At 18th Street?

4119 Q. At 18th Street?

A. Quite sure. They are not on that schedule.

Mr. MATHEWSON: We found we omitted some things from the schedule after we got through, and that is probably one of them. They are not very extensive, but there are a few things.

The WITNESS: It was only that I might not make a mistake, but I remembered that one end of the house wash gone, that was over the benches, and the benches were all there and condensers and scrubbers and engines and a lot of other things, practically a complete gas works.

Q. You say one end of the building in which the benches were situated was torn out?

A. Yes.

Q. And a portion of the benches had also been taken away?

A. I did not pay attention particularly. There were some that looked as if they had been dismantled in the end towards the river.

Mr. MATHEWSON: Everything that the City took has been taken down, I am told, by Mr. Bradley.

Q. What portion of this 18th Street plant did you particularly value, Mr. Logan?

A. My recollection is only the holders.

Q. Now, will you describe the holders that are there?

A. There are two holders in the house and four holders out in the lot, I think, between 19th and 20th Streets, uptown, and towards the river, that are in the house.

Q. What are the sizes of the holders that are in the house?

A. I did not measure them.

Q. I mean by capacities?

A. Well, I was governed by the capacity given here, 205,000 cubic feet.

4120 Q. You assumed the measurements and capacity as given by Mr. Mayer to be correct?

A. I did.

Q. Now, what do you say is the value of those holders, what would it cost to reproduce them new?

A. The two holders in the house, I valued to reproduce just the holders and the tracks and the guide rails and the columns there of wood and the bottom rollers, for $19,000. The four holders I estimate that to make new of equal capacity——

Q. The four holders are 255,000 cubic feet capacity?

A. Yes, the four holders new with columns of modern construction and holders to correspond in size and description with these with tank iron work and inlet and outlet carried to the drip, at $72,000.

Mr. MATHEWSON: Does the witness include in that the inlet and outlet connections?

The WITNESS: Yes.

Q. Now, these two holders, Mr. Logan, are enclosed in a brick building?

A. Brick and brownstone front.

Q. Yes, brick and brownstone trimmings or front building, which Mr. Mayer values at $155,784. Do they now build buildings around gas holders or in which gas holders are kept?

A. I do not think they do in the United States any more.

Q. And if you were called upon to reproduce or to build gas holders of these capacities you would surround them with an iron frame, wouldn't you?

A. Yes.

Q. What would that iron frame cost which would take the place of this building valued at $155,784?

A. Well, I am only guessing at that; I should say about $6,000 or $7,000 apiece.

Q. Would it be good engineering practice to build holders of that small capacity now, where you need the storage capacity that they use at 18th Street?

4121 Mr. MATHEWSON: If the Master please, I do not wish to interrupt the counsel, but I wish to object to this as immaterial and irrelevant. The plant which we now have has been built up and is the one which must be taken into consideration.

Mr. PAGE: Oh, not necessarily.

Mr. MATHEWSON: That is my view, and I wish to object to that and similar questions as to any hypothetical or ideal plant, without interrupting each time.

The MASTER: Yes. I will overrule it.

Mr. MATHEWSON: May I be considered as having an exception without interrupting each time?

The MASTER: Yes.

A. I think not.

Q. What size holders could you put upon this ground space that they have at 18th Street devoted to holders, and what would they cost?

A. You could put two holders to get the most possible capacity, I should say you might get close to 600,000 feet each. You could put up 500,000 feet, I know.

Q. That is upon the ground that is occupied by the two holders now of 205,000 feet?

A. That is right.

Q. How much would one such holder cost to erect?

A. Well, a 500,000 cubic foot holder there would cost in the neighborhood of between $45,000 and $46,000.

Q. Would that be with the tank?

A. That is with the tank.

Q. And that would be with a steel tank, would it?

A. A steel tank.

Q. And in giving the values which you have given you have not valued the tank because these are in brick tanks?

A. These are in brick tanks.

4122 Q. How about the four holders of 255,000 cubic feet capacity, would you now build larger holders, and what would they cost?

A. Well, I think that on that ground you could put up a 5,000,000 foot holder and tank.

Q. In place of the——

A. Of the four 255,000 feet capacity tanks.

Q. In place of the four which are 1,020,000 altogether?

A. Yes.

Q. It would be more economical to have one holder of a million capacity than four holders of 255,000 capacity?

A. That is to build?

Q. Yes.

Mr. Mathewson: Do you mean in construction or operation?

Mr. Page: Yes, in construction.

A. In construction it would be very much cheaper to have one of one million feet.

Mr. Mathewson: Per thousand of capacity?

The Witness: Yes.

Q. Well, do not let Mr. Mathewson lead you off into strange ways. I asked you whether it would be cheaper to build one holder that would hold a million feet than four holders holding 250,000 feet each?

A. It would.

Q. Without any regard to unit of capacity. Did you value anything else at the 18th Street Works?

A. I think not.

Q. Well, the 18th Street station is not used now as an operating plant for the making of gas, is it?

A. Not that I could see.

Q. Did you also visit the 14th Street plant of the Consolidated Gas Company?

A. I did.

Q. That is a coal gas manufacturing plant, is it not?

A. It is.

4123 Q. And as a manufacturing station is that a modern up-to-date plant or not?

Mr. Mathewson: Is the witness qualified as a gas expert, I mean in the sense that he can answer those questions? It seems to me, not.

The Master: Senator Page, what do you think about that? There may be some question about it. He testified that he manufactured various kinds of gas machinery but never managed a gas plant and he says he was a director in several companies. Do you think that qualifies him?

Mr. Page: I will withdraw the question. I will not press it.

Q. What portion of the plant did you examine, or, you might begin and state what is the first item in that plant that you examined?

A. The first one here is one T. F. Rowland, boiler 60 inch by 16, 8 h. p. boiler it is here; I valued that at $1,800.

Q. Did you include in that valuation of $1,800 the Clarke Steam and Fire Regulator which was separately valued by Mr. Mayer?

A. I did.

Q. What was the next you valued?

A. Cast-iron tank, 32 by 48 by 4 feet 6 inches, over boiler house forming roof. I did not see that. I estimated that from this sheet, and took an average thickness of ⅝ths of an inch thick, and I figured that that is worth $2,500.

Q. The next is a large purifier house?

A. The next is two condensers, two rectangular tubing, cast-iron——

Q. What value did you place upon that?

A. $26,000.

4124 Q. I believe in the large purifier house there are two sets of purifiers that you practically agree with Mr. Mayer in regard to the value. Is that right?

A. Yes.

Q. And also in the small purifier house, that you practically agree and accept his valuation?

A. Yes.

Mr. Page: Mr. Mayer's item for the large purifier house is $46,432 and for the small purifier house $15,987.

Q. What is the next?

A. Two tower scrubbers.

Q. The small boiler house comes before the scrubbers, locomotive boilers 35 h. p.?

A. Yes. I valued that at $1,400.

Mr. Mathewson: Which house is that?

Mr. Page: Small boiler house.

Q. You valued the locomotive boiler 35 h. p., 5 ft. diameter, of shell by 14-7 sixty 3-inch tubings, at what?

A. $1,400.

Q. Now, the tower scrubbers, Mr. Logan?

A. I valued them at $36,000.

Q. Two tower scrubbers 20 ft. diameter by 84 ft. 2 inches over all?

A. Yes.

Q. Capacity each a million cubic feet per twenty-four hours?

A. Yes. One moment, these should be added (indicating).

Q. You did not take that into consideration when you made that valuation?

A. No.

Q. Just take those matters into consideration. As I understand it—what was it, the water tank and wheel?

A. The water tank and inclosed circular stairway are not included in this rate.

Q. Supposing you take your pencil and figure that and see. I call your attention to that and ask whether they are in?

A. I figured away at the scrubbers here at 602,000 pounds at 6

cents, which is a fairly high price, making $36,000. Now,
4125 to that should be added the weight of the tank, that is 14 feet
diameter, that would be 157 feet in the bottom and 132 feet on the sides would be 289 feet, and I suppose that is ¼ inch. If it was quarter inch there with an angle iron top and bottom and flanges and all that sort of thing, it would weigh 4,500 pounds which at 6 cents would be $210. The inclosed circular stairway between scrubbers, I would say, guessing at it would be in the neighborhood of $3,500. That would add $3,710 to that, would make it $39,210.

Q. This tower scrubber is constructed with a double shell. Is that the usual way of constructing a tower scrubber?

A. I don't know. I have never built a tower scrubber. The ordinary scrubbers are not constructed with an inner shell. The tower scrubbers I don't know.

Q. Tower scrubbers, does it mean an upright scrubber or is it for a man's name?

A. No, because it stands upright.

Q. The air condenser, is that the next thing in the retort house that you valued?

A. Yes, one air condenser.

Q. What did you find the value of that?

A. $16,000.

Q. And on that you are $120 higher than Mr. Mayer?

A. Yes, sir.

Q. What is the next thing that you valued?

A. Wooden tank in the yard, two tanks 14-10 lower diameter by 12-10 upper diameter.

Q. I think before we come to that there is the boiler and engine house. Did you not state to me that you thought those figures were right?

A. All I said was that the 55 vertical boiler 4-8 diameter by 11 feet shell 160 2-inch tubes valued by Mr. Mayer at $713 was about right. Then there was another one, 37x6-9, I have no figures here but I think I put that in at $275.

4126 Q. Now vertical boiler 37x6-9, 66 2-inch tubes, 13 H. P. you valued at $275, is that right?

A. Yes.

Mr. **Mathewson**: Does he value this 150 H. P. cylindrical engine following the boiler?

Mr. **Page**: No, not the engine.

Q. You build *tr*acks?

A. Yes. That is $37, isn't it?

Q. $73?

A. Well, $73 if I remember right, that is not out of the way. It is low, if anything.

Q. You referred to the other boiler house. It follows the well house?

A. Well house, one boiler 4 Ft. x 10, yes, that is all right.

Mr. **Page**: He agrees with Mr. Mayer's valuation as to the contents of that boiler house. One boiler 4 ft. x 10 ft. 3, 20-H. P.;

and an 18-inch sheet iron stock, 15 ft. high; 1 Clarke and pressure gauge, being $589 for the boiler, $37 for the stack, $15 for the Clarke and $8 for the pressure gauge.

Q. Is there anything else before you reach——
A. I didn't say anything.
Q. There is another boiler, $2,720.
A. Two boilers, oh, yes. If those boilers are any good they are worth more than that.

By Mr. Mathewson:

Q. $2,720 and $234?
A. Yes.

By Mr. Page:

Q. Then you will accept Mr. Mayer's valuation?
A. Yes.

Mr. Mathewson: Don't you think where he cuts down Mr. Mayer's valuation where he thinks they are worth less that he should add in cases of this sort where he thinks they are worth more? 4127

Mr. Page: I suppose Mr. Mayer made a careful examination and found they were not as good as they should be.

The Witness: I have endeavored right along to give the prices at which I would make new ones for, and I would not make those new ones at any such figures as that.

Q. Now, proceed.
A. Wooden tanks. Same objection on that. I have got them down at $3,000.
Q. Yes; you value them at $3,000 and Mr. Mayer had the value at $2,600.
A. Next is six holders, 345,500 cubic feet capacity; I value them at $180,000; $30,000 apiece. Two more holders, 250,000 cubic feet capacity, I valued at $40,000.
Q. Mr. Mayer values those at $152,000, isn't that right?
A. I have made my prices fit what I would be willing to duplicate them for. The next is one large holder, 3,250,000 capacity; I valued that at $225,000.
Q. The large holder is in a steel tank?
A. Yes.
Q. And that valuation which you give includes the holder, guide frames and tanks?
A. Yes.
Q. These prices that you have given upon the holders are what it would cost to reproduce the holders new?
A. Yes.
Q. On the same ground that is occupied by the six holders of 345,000 cubic feet capacity, how large a holder could you build?
A. You could build one 5,000,000 foot and you could build in place of the other two, one alone of a capacity of half a million or

perhaps 600,000 cubic feet. That is of the six, where the six are located.

Q. Now, the holders of 250,000 cubic feet capacity, where are they situated?

A. Well, I only saw one holder there. I asked where these
4128 were and Mr. Liblett said up at 18th Street, and I only could see one holder there.

Mr. **Mathewson**: There are two there on the same ground, on the same block.

The **Witness**: I only saw one, going up in the car. It may have been shut out from my view in some way. I looked and saw only one. Mr. Liblett said so.

By Mr. **Mathewson**:

Q. Your estimate is on the theory that there are two there?

A. Yes, sir.

By Mr. **Page**:

Q. All these holders at 14th Street, are they of recent construction or have they been built some years?

A. They have been built a great many years, except the three million and a quarter.

Q. Now, these old holders that you value at $220,000, the eight holders together, that would reproduce those holders new to-day?

A. It would.

Q. And that is the value that you put upon them?

A. Yes.

Q. And of course the new holder would have the additional life as compared with the expiration of time since the old holders were put up?

A. It ought to..

Q. How much less than the value of the holder as reproduced new, do you think, the holder is as it stands there to-day?

Mr. **Mathewson**: Has the witness made such an examination as to testify to that? I understood him to say he observed them in passing by on the car.

4129 The **Witness**: No; that is, it was the two on 17th and 18th. No, I walked on the street the first time I was there.

By Mr. **Mathewson**:

Q. Where is it you are talking about?

A. 18th Street, the two small holders, and when I went by I thought I just looked up to see if the holders were there and the next time I was going up in a car and I thought I only saw one. That was in fact only yesterday.

Mr. **Page**: Now, may we have an answer to my question?

By Mr. **Page**:

Q. (Question repeated as follows:) How much less than the value of the holder as reproduced new, do you think, the holder is worth as it stands there to-day?

A. I would not want to say. If I knew the life of the holder and knew the number of years that it had been in use I could proportionate it. It is difficult to say.

Q. Now, we will take up 42nd Street, I think that was next in order. What is the first valuation you made there?

A. Eight purifier boxes, 20 feet by 3 feet deep——

By Mr. MATHEWSON:

Q. In what house is that?

A. Purifier house.

By Mr. PAGE:

Q. 20 by 22 by 3?

A. Yes.

Q. And these wrought iron covers?

A. Yes, $40,000.

Q. What about the next four purifier boxes?

4130 A. Four purifier boxes, 16 by 27 by 3 feet 6, $20,000. Next, four purifier boxes, $3,000.

By Mr. MATHEWSON:

Q. That includes the covers in each instance?

A. Yes.

By Mr. PAGE:

Q. What next did you value?

A. Next are two scrubbers, 8 feet diameter, 18 feet high, $3,000. This is not a copy of the original, and I know I made a price on that multi-tubular condenser. I can make it now or give it later.

Q. Well, give it now?

A. It has not the length of tubes here. I suppose they would be about 12 feet long for that size condenser, or 12 feet 6, 1,040 tubes. I would not care to give that answer yet. I want to be careful about it. It has not the length of tubes nor the size of connections. In a general way, though, I should say that that was——

Q. What is the next thing you estimate?

A. The next thing is one air condenser.

Q. How much did you value that at?

A. $12,000.

Q. Did you include in that valuation the two cast iron floors carried on steel beams?

A. Yes.

Q. How much would be the value of those two cast iron floors carried on steel beams?

A. I haven't the particulars here that I had before.

Q. Those Mr. Mayer in his estimate allowed for as part of the buildings?

A. No, I am not sure about that.

Q. What is the next thing? You can get hold of your details and look that up?

A. No, I couldn't have allowed for those floors, there is no data here. It is bracketed in here and I suppose there were, but those are not my figures where it is bracketed. Next is one cast iron box; I allowed $450 for that.

4131 Q. Cast iron box 7 feet 6 inches by 5 feet 6 inches by 9 feet deep?

A. Yes. These figures were made—to go back, I think that must have been included, judging from this other one, that floor must have been included but I didn't make the figures, all I made the figures on was just the condenser.

Mr. Mathewson: Does the witness mean the $12,000 were the figures he made and that they do not include the floors?

The Witness: It would seem to me as though they included the floors. I didn't make all these figures myself, that was done in conjunction with someone else, and these figures were put down by him. I figured on my part of the work and it is so much in excess of the other that is down here that it looks to me as though they must be included, floors and all.

Q. What is the next thing you estimated on?

A. One multi-tubular condenser 42 feet 6 inches by 5 feet by 14 feet high, 576 4-inch cast iron tubes, $4,000.

Q. What next?

A. There are a number of these things on which I put prices that are not down. I will have to leave those and put them in afterwards, containing those boilers.

Q. Get your data together this evening?

A. I would have to re-estimate them, that is all I can do.

Q. Well, re-estimate them. Go on and give what you can?

A. Under the head of tanks and scales, 1 tank, 5 feet diameter 25 feet long, ¼ seal; I have down at $1,200. The next seems to be gone, too, two wrought iron tanks 9 by 30, 8 feet diameter, 25 feet long, one 30 by 21 feet high, two 31 foot tanks, 1 wrought iron tank, 5 by 25. I will have to make that, too, later.

4132 Q. Return to the holders?

A. Yes. 4 holders 250,000 cubic feet capacity, $120,000.

Q. What would a million foot holder cost, and could you erect a million foot holder on the land space which you have there at 42d Street?

A. I think you could erect five million feet. The million foot holder would cost roughly $90,000.

Q. And you would have the same capacity that is covered now by the four holders?

A. You would.

Q. Would that be for the holder alone, or for the holder and tank, $90,000?

A. It would be for the holder and tank. Well, you had better say $100,000.

Q. Well, which?

A. Well, let it go at $90,000. I will build it for $90,000.

Q. And that is against $223,000 as the present holders and tanks were valued by Mr. Mayer?

A. $223,590, tanks and holders.

By Mr. **Mathewson**:

Q. You do not value, however, the brick tanks here?
A. I have not valued them, no.

By Mr. **Page**:

Q. Take next 44th Street. This is a water gas manufacturing plant, is it, of the Consolidated Company?
A. It is.
Q. You might state what part of the apparatus you have appraised?
A. Well, the same as——
Q. I understand when I say appraised, it is what it would cost to reproduce these identical articles to-day, is that right?
A. Yes. Two scrubbers in the scrubber house, $36,000.
Q. What is the next item?
A. Two rectangular condensers, $28,000.
Q. Cast-iron pipes, 30 feet long, 6 feet 6 wide, 3 feet high?
A. Yes.
4133 Q. What is the next item?
A. Two air condensers, 33 feet long, 7 feet wide, 23 feet high.

By Mr. **Mathewson**:

Q. In what house is that?
A. Under heading of air and salt water condensers. The figure here is $30,000, but I didn't put it down.
Q. Air condensers?
A. I got a record from my office which we got and gave it to the man who put this down and it has probably got mixed with something else, with the change in the present day price. I know that I put a price on these air and salt water condensers, and they will all have to be re-estimated.

By Mr. **Mathewson**:

Q. I did not quite understand what you included in that figure of $30,000, two air condensers. I find them here and one salt water——
A. No, I only referred to the air condensers. The figures are right opposite that and only opposite that alone.

Mr. **Page**: He will go over his figures. He does not seem to be very well prepared on that, and I will go to the holders and spend the rest of the afternoon on those, at the different stations, until he will get these details of the apparatus straightened out.

By Mr. **Page**:

Q. Turn now to the holders at the 44th Street station?
A. Four holders, $140,000.
Q. Of 375,000 cubic feet capacity?
A. Yes, sir.
Q. Now, one holder 2,000,000 feet capacity, two lifts?
A. $120,000. Next, two holders at $18,000, $36,000.

Q. The next is 99th Street, turn to the holders of the 99th Street station if you have them.

4134 A. Two holders, 600,000 cubic feet capacity, $70,000; one holder, $300,000 cubic feet capacity, $26,000.

By Mr. Mathewson:

Q. Do you mean $70,000 each?

A. No, for both.

Q. For two 600,000 feet, the two together for $70,000?

A. Yes. One holder, 100,000 cubic feet capacity, $12,000.

By Mr. Page:

Q. Is that all that there is?

A. That is all I see. I think that is all that there is.

Q. Now, we will take the 63d Street.

A. One No. 3 holder, $160,000.

Q. 65th Street, take that next?

A. Two holders, Nos. 1 and 2, each 325,000 cubic feet capacity, $52,000. Four holders, Nos. 3, 4, 5 and 6, same capacity, $104,000. Two holders, Nos. 7 and 8, each 4,000,000 feet, $400,000. That must be the total.

Q. Now, take the 111th Street station.

A. Two holders, each 5,000,000 cubic feet capacity, at $325,000 each; $650,000 for the two.

Q. Did you include in that 111th Street the connecting bridge and iron work?

A. Yes, sir.

Q. The next, I believe, is 132d Street, is it not?

A. 132d Street, I have $322,000 for the holder.

Q. That is practically a new 5,000,000 cubic foot capacity holder, 5 lifts?

A. Yes, sir.

Q. And what did you value that at?

A. $322,000.

Q. Now, we come to the Inwood, I believe, the last of the holder stations. That is one holder of 60,000 cubic feet capacity, 2 lifts?

A. I cannot make out whether it is $8,200 or $9,200, whether the eight is on top or the nine is on top.

Q. When you were there was this holder in use?

A. It was not.

Q. From the appearance of the tanks and the works would

4135 you say that it had been in use in some time?

A. I would not, there were no works there to amount to anything.

Q. Well, by the works I mean whatever pumps or enginees they had there?

A. Yes.

Q. And would you for any purpose now build a holder of that capacity or size at Inwood, for any use whatever?

A. For the Gas Company's purpose?

Q. Yes.

Mr. **Mathewson**: I object to that, the witness being incompetent to testify on that subject.

Mr. **Page**: He can say whether he would put up a toy thing of 60,000 cubic feet capacity at Inwood.

The **Master**: I will allow it.

Mr. **Mathewson**: Exception.

A. I think not.

Q. Have you valued this Inwood holder?

A. I am inclined to take the lower figure, $8,200, for it.

Mr. **Mathewson**: Had you not better find out surely?

Q. That could be very quickly ascertained, could it not?

A. If Mr. Bradley will tell me what pressure it throws, I can tell you.

Mr. **Bradley**: I don't know that I can tell you offhand.

The **Witness**: It would not throw over 2 inches.

Mr. **Mathewson**: Pressure for gas installation, 6 inches.

The **Witness**: It is worth more than that, then.

Q. Two lifts?

4136 A. I don't care about that. The 6-inch pressure is all I want and the diameter. I would build that to-day for $5,200.

Q. But, as a matter of fact, if you were reproducing a gas plant in the City of New York you woul not rebuild it at all, would you?

A. I would hardly think so.

The **Master**: If you have come to a convenient place we will suspend until 10:30 o'clock to-morrow morning.

Mr. **Page**: Yes, we have finished the holders.

Adjourned to November 23d, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 256.
State's, YY.
City's, 63

4137 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, FRIDAY, *November* 23, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Kirby, Mr. Burr.

4138 Continuation of the direct examination of WILLIAM J. LOGAN.

By Mr. PAGE:

Q. Do you desire to make a correction in your testimony, Mr. Logan?

A. The two million holder at 44th Street I got too low, at $100,000. They were just rough figures last night, and I would not care to say, under present conditions, I would build that for less than $120,000. That was the only thing I noticed. There are some others. The air condenser, the figures marked on my memorandum was $30,000, and I said when I gave that that I thought it was entirely too high. That is under the heading of air and salt water condensers.

Mr. MATHEWSON: Two air condensers, $30,000; what is the correction?

The WITNESS: I find our contract price for that was $14,770, and that it would be about the same price to-day. And then, also, I want to correct on the holders at 21st Street——

Q. Well, I think we struck out all the testimony in regard to that. If you will take up the holders at 21st Street, and give them. Four holders, each 400,000 cubic feet capacity, three lifts, diameter of outer section 88 feet, sixteen cast iron columns. What value do you place on them?

A. $182,000.

Q. Now, the holder of 1,500,000 cubic feet capacity?

A. $94,000. These figures are indistinct, and I have not had a chance to go over them, but that is approximately about right.

Q. You gave it before $84,000.

A. $84,000, was it?

Q. Yes.

A. Well that is a little bit low. The figure here I could not make

out whether it was a seven or a nine. $94,000 seems a little
4139 high; not very much. I would say in going over these things to make these present prices I have had less time to go over the whole of them than I would want to make an approximate estimate even on any one, and in order to follow this out, so I would be willing to carry out this contract price, I would have to give it at that price rather than change it.

Q. Do you want that to stand at $94,000?

A. I would prefer to have that $94,000.

Q. Turn over to the next holder—holder, 149,500 cubic feet capacity?

A. Without the inlet and outlet pipes, $35,240. The inlet and outlet pipes—this I took from our estimate of the weights, but the inlet and outlet pipes were both in one contract for $4,000. For the next holder, it is marked one and one-half million capacity, but it is not as much as that. That is $40,500. Inlets and outlets for both of them, $4,000. It would be fair to divide that equally between them, I suppose.

Q. That includes the steel tanks?

A. That includes the steel tanks, holders and guide frames.

Mr. Mathewson: Would it be fair to add $2,000, then, to each of the holders?

The Witness: I think so.

Q. That includes the steel tanks?

A. Steel tanks.

Q. That is all the holders at 21st Street, is it?

A. Yes.

Q. Now 42d Street; I believe there were some tanks that you wished to figure, were there not?

A. I am not sure what station it was; there were some I did not give. Yes, it was 42d Street.

Mr. Mathewson: The witness gave 42d Street.

Mr. Page: I know; but there were some tanks there that he said were to be figured.

The Witness: It is under the heading of oil and tar storage tanks.

4140 Q. You did not give any figures on that?

A. I did not give any at all. The first two wrought iron tanks, 9 feet diameter by 30 feet long I have averaged 5/16 of an inch thick, at $1,680. Eight tanks, 8 feet in diameter by 25 feet long, at an average of 5/16 of an inch thick, at $4,800. One wrought iron tank, 30 by 21 feet high, $2,440. One wrought iron tank, 5 feet long by 25 feet diameter, $325.

Mr. Mathewson: Is there any objection to the witness giving the thickness?

The Witness: The average thickness is one-quarter inch.

Q. What about these other tanks? Did you value those, these wooden tanks?

A. I did value the wooden tanks in my original estimate. I can do that now. (After referring to paper.) It does not give any depth to them, so I would not be able to. It only gives 31 feet tank, and does not say what that 31 feet is.

Q. The one above there, 38 feet by 15 feet 6 inches?

A. One wooden tank 38 feet by 15 feet 6 inches, I would say that price is about right for that.

Q. That is, $540?

A. $540.

Q. Now, if you will turn to the 44th Street station, one stone water condenser?

A. I made an estimate on that, but it is not here.

Q. Well, can you make one now?

A. Yes, but it would take some time.

Q. How long?

A. And there is another following it, and I would have to make the same. I would say, roughly, that those prices are about right, from my general experience of those things.

Q. Well, take up the next thing—water tower?

A. Marked here as $3,000. That is too high.

Mr. **Mathewson**: What is it we are talking about?

4141 The **Witness**: One water tower tank 20 feet diameter by 20 feet high, ⅜ and ¼ inch.

Q. It says above there "all."

A. When we made these figures together that duplex pump was in there at $3,000. That tank would be worth, assuming it to be ¼-inch bottom——

Mr. **Mathewson**: Will you give us the tank, because there are several here? Is this the one under water towers?

The **Witness**: One under water towers, continued.

Q. One 20 feet diameter by 20 feet, ⅜-inch and ¼-inch shell?

A. $1,200 is not out of the way for that at all.

Mr. **Mathewson**: Well, the estimate was $1,333, without depreciation, as the original cost. $1,200 was after ten per cent. depreciation was taken off.

Q. What price did you give?

A. I said $1,200 was not out of the way.

Q. Now, what was the next thing you valued at 44th Street?

A. The oil tanks under ground; I gave $17,500 for them.

Mr. **Mathewson**: How many are there of them?

A. Seventeen? Do you understand, I have made these on a basis of what I would take it and reproduce them for to-day, as nearly as possible?

Q. Then there is another oil tank below there. What is the value of that?

A. One tank, 8 x 30, that is $1,000.

Q. Now, there are some steel tanks right below?

A. Three tanks, one 10 x 7 feet, one 6 x 10 x 4 feet, and one 6 x 10 x 4 feet 7 inches, $800.

Q. Now, what is the next?

4142 A. The next that is down here is storage tar tanks; the value here is $4,000. That is entirely too much.

Mr. Mathewson: You mean down on your memorandum?

The Witness: Yes. There were only three tanks, 6 x 8——

Q. Before you get down to that, there are some more tanks.

A. There is no value on this, although I know I made a figure on them. Roughly speaking——

Mr. Mathewson: Which are we talking about now?

The Witness: No. 6 and No. 9 oil tanks, 40 feet diameter by 16 feet high, constructed of steel, set in circular pit, capacity 150,000 gallons each. I figure those as of an average thickness of 5-16ths, and they would be worth $2,700 apiece.

Q. That is $5,400 for the two?

A. $5,400 for the two.

Q. Now will you figure the three storage tanks constructed of wrought iron.

A. The size of tanks marked here is 10 inches diameter by 6 feet deep. I assume that must be 10 feet diameter.

Mr. Mathewson: Yes, it is three storage tar tanks, constructed of iron.

The Witness: Yes.

Mr. Mathewson: 8 x 8 x 7 feet 6 inches.

The Witness: And then below is size of tanks.

Mr. Mathewson: 10 x 6 feet.

The Witness: It does not say how many of those there are. It says side of tanks, 10 x 6. I can give you a figure for those three, 8 x 8 x 7 feet 6, if you want it.

4143 Q. Yes.

A. Of ¼-inch iron, they would be worth $250 apiece.

Q. That would be $750?

A. $750.

Q. The next item I see according to this figure——

Mr. Page: Have you got the number of the fuel oil tanks or benches set inside of corrugated iron buildings? It does not seem to be given in the testimony. It seems there are three.

Mr. Mathewson: Three.

The Witness: Those will be worth $190 apiece.

Q. That would be $570?

A. $570.

Mr. Mathewson: What would that make the total under that?

The Witness: $1,320.

Q. Right below there are two steel oil tanks, one 12 feet in diameter by 7 feet high, and one 10 feet diameter by 7 feet high.

A. Of ¼-inch iron, that would be worth $270.

Q. Apiece?

A. One of each, and the one below would be worth $210.

Q. The first one was $275?

A. If there were two of each?

Q. One of each.

A. One steel tank, 12 by 7, would be worth $270. It reads two steel tanks, one 12 feet diameter and one 10 feet diameter.

Mr. Mathewson: No, two steel tanks, 12 feet diameter, 7 feet high, and one 10 feet diameter by 7 feet high. There are two of the 12-foot tanks.

Mr. Page: That would be $540 for those two, then?

The Witness: Those would be worth $320 apiece, $640, and the other would be $210.

4144 Mr. Mathewson: And the three would be how much?

The Witness: $850 for the three. The next is tar separator system, 54 feet long, 15 feet wide, 6 feet 6 inches thick, 8 compartments—$2,500.

Q. If you will turn to the 21st Street plant now, and kindly let us know what you estimated there?

A. Two 60-horse power locomotive boilers, each 72 tubes. That price is not out of the way, $2,440. The price for the steel stacks is not too much.

Q. What is the next that you value?

A. Round wood tank, $360, is very high. I would not value that at over $200. That is under octagonal valve house, 7 feet by 7, round wooden tank.

Q. The next item that you valued is apparatus—retort house, three salt-water condensers; did you value those?

A. $70,000.

Q. Then there is another one—one similar condenser, in course of erection?

A. I don't remember that.

Q. Well, the value of a similar one would be?

A. One-third, or $23,333.33.

Q. The B. & W. boiler?

A. The last I knew of a B. & W. boiler sold for about—I have known them to be sold as low as $11 a horse power, but that was in big lots. I would say $16,500 was not out of the way for that. The last I heard of a fairly big order was $14.

Q. That would be $30?

A. No, there is a thousand horse power there.

Q. What price did you say then?

A. I would say that that was right.

By the Master:

Q. Two Babcock & Wilcox boilers, 500 horse power each?

A. Yes. And the Altman-Taylors are practically the same thing.

4145 Q. Two steel tanks, 7 feet by 110?

A. I should think that that price was about right.

Q. Now we come to some tanks—one round cast-iron tank, 15 feet diameter by 12 feet high. Did you figure on that?

A. $1,500.

Q. And two wrought-iron tanks, 6 feet in diameter by 4 feet 6 inches high?

A. The price would be about right there.

Q. $150?

A. Yes.

Q. What about this wrought iron rectangular tank in the ground, 14,000 gallons?

A. The size is 18 feet by 14 feet, by 9 inches here should be, I suppose, 9 feet.

Mr. MATHEWSON: Yes, nine feet.

The WITNESS: $640.

Q. Now come down to the oil tanks?

A. That price is about right.

By Mr. MATHEWSON:

Q. Won't you give the buildings?

A. It is under "Retort House, 22d Street, continued." One oil tank, 6 feet diameter by 10 feet deep; the price is about right—$176.

By Mr. PAGE:

Q. What do you say about the tank, 10 feet diameter by 30 feet long?

A. For ⅜ metal it would be worth $1,400 apiece.

Q. Ten of them?

A. Ten of them.

Q. $14,000 for the ten?

A. Yes, sir. The next, three-eighths, I assume, that is round tank, 11 by 40 feet long, $1,680. Two wrought iron tanks 8 by 12, ¼ inch, they would be worth $260 apiece; $520 for the two.

Q. Two wrought iron tanks 6 feet diameter by 10 feet high?

A. They would be worth $150 apiece.

4146 Q. $300 for the two?

A. Yes, sir. That is with the ¼-inch shell and bottom.

By Mr. MATHEWSON:

Q. Did you in that estimate include the setting of the tanks in position for work, or is it merely the tank unset?

A. Merely the tank, unset; no connections.

Q. And not transported and set in position?

A. That would be delivered on the sidewalk.

Q. But not set?

A. Not set.

Mr. MATHEWSON: It is not quite possible to compare the figures that the witness gives in that way with Mr. Mayer's estimate, because Mr. Mayer's figure was set.

Mr. PAGE: No. I will ask him to make his calculations with the settings.

The WITNESS: That would be an impossibility, without knowing the conditions of each and every one and how put in. There are some of those that would cost more to put in position than the tanks are worth, according to the location.

Q. These values you give are the values delivered on the sidewalk?

A. For all that may be delivered on the sidewalk. On some of them, some of these that are built in place, those are for in position.

Q. Like the holders?

A. Anything like the holders, that is built in position. Those prices being for put in position.

By Mr. **Page**:

Q. The vertical boiler—did you value that, in shed No. 5, right under your wrought iron tanks?

A. I did not. That is not out of the way for it.

Q. Do you mean that $478 is not out of the way?

A. That is not out of the way.

4147 Q. What is the value of the shaving scrubbers?

A. And there are steel tanks, 20 feet diameter by 30 feet high, 70,688 gallons, $2,000. That is under water power, yard.

Q. Steel tanks, can you give those? Have you those figures. If not, we will pass to something else. Take this new oil tank, 57 feet diameter, 30 feet high.

A. There is no value on that.

Q. You haven't given any?

A. No. All they have got for value there is $3,000 paid on account.

Q. Well, what about that steel tank 7 feet by 20, have you valued that?

A. Yes; $900.

Q. What thickness did you figure that at?

A. ⅜.

Q. Proceed with the others.

A. One steel tank, 20 feet 1 inch by 30 feet 1 inch, 8 feet 8 inches, $2,400; ⅜ metal. Twelve steel tanks 8 by 40, 9/16 inch, $18,000; $1,500 each. Ten steel tanks 11 feet diameter by 39 feet 6, ⅜ steel, $1,800; $18,000. The next are bunched. Steel tank 10 by 9 feet, wooden tank 16 by 15 feet, wooden tank 12 by 15, steel tank 16 by 50 by 2 feet 4 inches, ¼-inch steel; bunched at $3,000.

Q. That is, that is your value on all those tanks?

A. On all those tanks.

By Mr. **Mathewson**:

Q. Two steel and three wooden tanks?

A. Two steel and two wooden tanks.

By Mr. **Page**:

Q. That completes that?

A. Yes.

Q. 99th Street, I think, is the next (page 1535)?

A. $8,745 for air condenser outside of generator house.

Q. Now the salt-water condenser, cast-iron, in four sections, 31 feet long by 4 feet wide by 15¾ inches high?

A. $10,000.

4148 Q. Two 10 feet diameter by 24 feet high scrubbers, wrought-iron construction?

—. $18,000.

Q. In that valuation, do you include both the condenser and scrubber?

A. Certainly. Two 10 feet diameter by 24 feet high scrubbers and two 24 feet 3 inches by 5 feet 2 inches by 15 feet condensers.

Q. Now the tar separating system in the yard?

A. $2,400.

Q. Now the tar storage tanks?

A. Three tar storage tanks, 8x8x8, $720. Next 12 steel tanks, 8x40 feet, $14,400. Two steel tanks, 8 x 60. Oil storage tanks I have got down here, $3,600, but that is evidently wrong. I will have to figure that again.

Q. Well, figure it now, please.

A. No, sir, that is right—$3,600. One drip well tank, $728. Two hot scrubbers, 21 feet high, 8 feet 6 in diameter, $1,920. Two hydrogen scrubbers, 22 feet high, $1,680.

Q. Those are out of commission, those hydrogen scrubbers, aren't they?

A. I believe so. They are so marked.

Q. And the hydrogen scrubber was a part of the old *Tessie du Motay* system that has been abandoned for a great many years, wasn't it?

A. I believe so.

Q. The next item you valued there was what?

A. Boiler house, nothing there. Sturtevant blower, pump, water feeder—those you would have to buy or get quotations on. I did not value those. Next is miscellaneous tanks, one discharge, boiler feed tank, overflow tank, gas oil tank, one fuel tank, one gas oil tank; $1,200 for the bunch.

Q. Is that all?

A. That's all.

Q. Is there anything you valued at the holder stations beside the holders?

A. I am not sure.

Q. Take a look at 63d Street?

A. I don't think there is anything there except the holder that I valued.

4149 Q. There is nothing that you valued at 63d Street, then?

A. Nothing beyond the holder.

Q. 111th Street next. Under the head of yard: One oil tank, 43x20, ¼-inch, $2,200.

—. I would say that that is a value to make a new tank like that and in its place. As it is situated and not for use it is not worth anything more than scrap iron.

Q. What is it, just thrown out in the yard?

A. I do not recall that just now. No, it is not thrown out; it is in position and all, as I recollect.

Q. Well, if the plant is not being operated, there would be no use of that oil tank in a distributing station, would there?

Mr. Mathewson: Isn't that rather a question for a gas expert than a manufacturer of iron work?

The Witness: If they are not making gas they do not want any oil tanks. I should make the depreciation about 95 per cent.

Q. It is worth only so much scrap?

A. That is about all. To cut it down, to rebuild it is not worth the value of what the plates would be worth if you were going to rebuild it, and then you would not have a decent thing when you were through. The atmospheric condenser I have here at $4,000. That same thing pretty nearly applies to that, although the salvage on that would be more.

Q. That is all the apparatus that you valued, is it?

A. Yes, sir.

Q. Now, as I understand it, you were not able to figure the depreciation on these holders because of the fact that the length of time that they had been built was not given: Mr. Bradley has testified that the small holders have been built for forty years or over and that the larger ones have been built within the last twenty years.

4150 Assuming that the small holders have been built for forty years, would you say that a fifteen per cent. depreciation is sufficient?

A. I cannot say that I know what the life of a holder is.

Q. Well, a fifteen per cent. depreciation——

A. Would indicate a life of 240 years nearly. I hardly think they would last that long.

Q. In the valuations that you have given on holders and on apparatus that could be placed in position, what is your value based upon, the holder constructed and turned over to the company and the apparatus placed in position ready for operation?

A. The holders, large enough to be built in place, to be turned over to them complete. Small tanks and so forth to be delivered on the sidewalk.

Q. But on everything else the price that you have given is the price that you would build it for and turn it over to the company complete?

A. Yes.

Q. Have you taken into consideration in your value of holders and tanks an element of engineering?

A. I have not. That is, it is taken in, of course, but it is included in that price I have named.

Q. In the price named you have included engineering charges?

A. Yes.

Q. So that you would not add to your value, as you have given a five per cent. for engineering charges?

A. No.

Q. What do you say in regard to the necessity of charging interest on the holders?

Mr. Mathewson: I object to that. I think that is a conclusion that the witness is not entitled to draw, whether we are entitled to charge interest or not.

Question withdrawn.

Q. Would it be a proper charge for interest during the construction of the holder?

Objected to as a conclusion on which the witness is not competent to express himself.

4151 Mr. Page: I will withdraw the question again.

Q. Mr. Mayer has testified you should add five per cent. interest charge to the cost price of the holder. Do you agree with Mr. Mayer in that statement?

A. I do not.

Mr. **Mathewson**: The question was asked whether the company in the construction of the plant was entitled to add to its capital in the plant interest on the money during course of construction, interest which accumulated, and Mr. Mayer added five per cent on that theory, not on the theory that the contractor was to add five per cent. to the price.

The **Witness**: I did not understand it that way either. May I explain? I assume that this five per cent.——

The **Master**: You may explain, if you like. I think Mr. Page is entitled to ask the witness whether or not in getting at his figures he took into account any question of interest on capital during the period of construction, and, if not, to have him state, why not. Knowing that Mr. Mayer did take it into account and did state his reasons, I think this witness should have the same opportunity, and I think we should save time by letting him make his explanation. You may proseed, Mr. Logan, with the explanation you were about to make.

The **Witness**: I think that an allowance to the company should be made for the interest, but not at five per cent., because none of this work would take two years, and the estimate of five per cent. was for one-half of the time. None of this work would take—the
4152 largest sized holder ought to be built in nine to ten months, so that would only make the interest charge at the rate of five per cent. per annum for one half the time, and a great deal of this work could be done in a few weeks, some in a few months, so the interest account would be inappreciable.

Q. Now for the holders, that is, anything under a million-foot capacity—how long would it take to construct the small holders they have got, running from 250,000 to 400,000 or 500,000 cubic feet capacity?

A. Well, under favorable circumstances, up to half a million could be built in three months—you might run into six; but a fair and reasonable time for building up to a half a million feet holder would be between four and five months. For a million-feet holder it would be fair to allow at the outside seven to eight months. It could be completed though in considerably less time if everything went well.

Q. And on a five million holder, how long a time would that take?

A. Well, it would take close onto a year.

Q. And you think it would be fair to add to the price you have given interest at half of the period you have named in each period?

A. I think so.

Q. Now, on the other apparatus that you have valued, would you add anything to your figures for engineering?

A. No.

Q. Or interest?

A. I am outside of the interest question. That is something for the gas company, but I think five per cent. is too much for the gas company to add on that small stuff.

Q. And, as I understand it, all the values that you have given are of new work, and you have not taken into consideration the present condition of this plant as to depreciation?

A. I have not.

Q. Your figures are to purchase and deliver in place the apparatus and holders new?

4153 A. With the exception of the small stuff delivered on the sidewalk.

Q. The figures that you have given are such as you would be prepared to execute the contract for?

—. They are.

Q. If you were required to figure in competition, would you have given these figures?

A. I think I would have shaded these figures somewhat.

Q. You think you have given full prices?

A. I have intended to, and I think I have.

Cross-examination by Mr. Mathewson:

Q. Does the Logan Iron Works manufacture apparatus other than gas apparatus?

A. Yes, sir.

Q. Where are their works located?

A. In the 17th Ward, City of Brooklyn.

Mr. Mathewson: I think I will take these in the order Mr. Mayer testified.

Mr. Page: The 14th Street station first?

Mr. Mathewson: Yes.

Q. Referring to the 14th Street plant, Mr. Logan, you give a valuation for one cast-iron tank, 32 feet by 48 feet by 4 feet 6 inches in the boiler room at $2,500?

A. Yes.

Q. At what weight did you compute that tank?

A. I think, roughly speaking, it must have been 50,000 pounds.

Q. Well, if the weight was 90,000 pounds——

A. It would be $4,500.

Q. Now, referring to the condenser house, you give the valuation of two condensers No. 2 rectangular tubular cast-iron tubes, and so forth, 44 feet by 15 feet by 6 feet 2 inches at $26,000?

A. That is right.

Q. At what weight did you assume that?

A. It must have been 520,000 pounds.

4154 Q. Supposing it were 590,000 pounds weight?

A. 590,000 pounds?

Q. Yes.

A. It would be $29,500.

Q. Did you value the contents of the purifier house?

Mr. Page: I think he said he agreed with Mr. Mayer.

Q. Large purifier house, two sets, consisting of eight purifying apparatus.

Mr. Page: He gave the valuation on that.

Q. You gave a value for the entire contents of the purifier house and said you agreed with Mr. Mayer, didn't you?

A. I gave $48,000.

Q. And Mr. Mayer's figure was $48,876?

A. It is here $46,432.

Q. That is with the depreciation off, but for cost new you would not disagree substantially with Mr. Mayer's valuation of $48,876, would you?

A. I would not.

Q. And so too as to the small purifier house following, the contents of which Mr. Mayer valued at $16,828 new, or $15,987 after taking off 5 per cent. depreciation; I understand that you would not quarrel with those figures?

A. Of Mr. Mayer's?

Q. Yes.

A. No.

Q. $16,828 new?

A. I would not say that they were too much.

Q. Now, in the boiler house you value locomotive 35 H. P. 5 foot diameter, and so forth, at $1,400?

A. Yes, sir.

Q. Mr. Mayer's valuation was $1,918 without depreciation. What sort of a locomotive boiler did you assume that to be?

A. An ordinary locomotive boiler.

Q. Any special make?

4155 A. Such as we have made ourselves; ordinarily when we have them now we find that we can buy them cheaper than we can make them.

Q. Erie boilers?

A. No, I think you can get an Erie boiler for a great deal less than $1,400.

Q. This is a more expensive boiler than what is known as an Erie in your estimate?

A. Yes, sir, in my estimate I base it on what we would build it for.

Q. Did you inspect this engine yourself?

A. The engine or boiler do you mean?

Q. The boiler.

A. I only glanced at it to get a general idea.

Q. Referring to the yard, you gave a blanket valuation of $39,210; two tar scrubbers, and a circular stairway; what weight did you assume for the two scrubbers?

A. The weight in the schedule here.

Q. How much is that?

A. 603,262 pounds; I called it roughly 600,000 pounds, at 6 cents a pound.

Q. If the weight of those scrubbers was over 325,000 pounds, that would make a difference in the value somewhat would it not?

A. It would make a difference of $1,500 apiece.

Q. Was your valuation of this boiler a valuation delivered on the sidewalk or at the works of the company, or was it the value installed?

A. Installed, ready for use?

Q. Yes.

A. It was the boiler such as called for there. In *case a* like that we would deliver, if there is a chance for the trucks to get to the place, we deliver at or near the foundation, but we usually call that sidewalk delivery.

Q. Exactly. That is what I mean, but it does not include labor and expense of setting of the boiler?

A. There is no setting of a locomotive boiler.

Q. No, putting it on foundation?

A. That we call placing; the setting means brickwor*d*, if it is enclosed, the room.

4156 Q. You have included no brickwork or anything of that sort?

A. No.

Q. Simply the delivery of the completed boiler?

A. Simply the delivery of the completed boiler.

Q. One air condenser in the retort house annex, you have valued at $16,000 and Mr. Mayer's valuation is $16,335. If Mr. Mayer, after a careful inspection, made that valuation, you would not assume to say that it was too high, would you, $335?

A. I would not say. In ordinary estimates I would say that that was very close.

Mr. PAGE: That is, that Mr. Mayer was nearly right.

Mr. MATHEWSON: Or that Mr. Logan was nearly right.

The WITNESS: If we were bidding for it I would a great deal rather that he was $16,300 and that I was $16,000; I would get the job.

Q. Does this figure of yours for the air condenser in the retort house include the setting of that or sidewalk delivery?

A. That includes setting.

Q. Referring to your valuations under boiler and engine house of one 155 horse-power vertical boiler, $713, that is a figure also for sidewalk delivery, is it not, the same as this case of the other boiler?

A. Did I name a price on that?

Q. $713.

A. I simply said that that was about right; I think I said. I am not sure.

Q. Yes, Mr. Mayer's figures was $713 with three per cent. off for depreciation.

A. $713 is not out of the way, either.

Q. And the $75 for the sheet iron stack, you would not consider out of the way new?

A. No, I would not.

4157 Q. Now, the boiler under the boiler house and well, 37 inches by 6 feet 9 inches, you valued at $275 as against $350 for Mr. Mayer. Your $275 is for sidewalk delivery?

A. Practically sidewalk delivery.

Q. So, too, as to the boiler below, under boiler house 4 feet by 10 feet 3, 20 H.P., which you valued at $589?

A. I did not value it, I said the figures were not out of the way. I do not mean to spar with you——

Q. I understand, you are quite fair. His figures were $607 or 3 per cent. off for depreciation, $589; you would think his figures were about right?

A. His base figures, I could not pass on the depreciation without knowing it; the three per cent.—it might be as good as new.

Q. But his base figures of $607, new, you would not say was out of the way?

A. It is fair.

Q. And I think you said the same as to the 18-inch sheet iron stack which he appraised at $38. Now, under the boiler house later appear two 32 H.P. horizontal boilers which Mr. Mayer appraised at $2,860 and $234 respectively, and I understand you to say that you think those figures are fair?

A. Under the circumstances, may I make a comment?

Q. Yes.

A. That is a very expensive kind of boiler and you do not get the efficacy that you would in boilers of the ordinary type.

Q. But assuming that particular boiler?

A. That particular boiler there is not too high if it were to be duplicated.

Q. Referring now to holders at 14th Street, after giving a valuation for the six holders, you give a valuation for two holders at $40,000. What did you assume to be the weight of those two holders, 86 feet in diameter and 250,000 cubic feet capacity each, the total weight of the entire construction of holders, guide frame and connections which you valued?

4158 A. I am not exactly sure of the divisions of weight. I figured the holders at 8 cents a pound and the frame at 6 cents.

Q. Do you remember what weights you used for the holders?

A. That is the base, I should say, or figure. What I did was to take an estimate from my books of a 250,000 foot holder throwing about what the usual pressures are. Then there are different pressures——

Q. This threw 4¾ inches. Isn't that a little more than you reckoned on?

A. I think not. I can estimate that, but the frame I could not give you right off.

Q. Supposing you assumed that the holders were 4¾ inch pressure and that the total weight of the structure of holders, guide frames and connections was 730,000 pounds?

A. For the two or one?

Q. For the two.

A. How much?

Q. 730,000 pounds for the holders, frame and pipe connections?

A. It would figure more than $40,000.

Q. It would figure more than $40,000?

A. Yes.

Q. Mr. Mayer gave an estimate of $52,091. Assuming those weights to be accurate and the pressure as I have stated, would not $52,091 be a fairly low valuation?

A. It would not be low, it would be a fair valuation.

Q. Now, let us refer to the holder with a capacity of 3,250,000 feet which you valued yesterday at $225,000. Did you take into consideration that the tank has a double thickness of plate for a height of fourteen feet from the bottom?

A. It has not a double thickness of plate.

Q. Hasn't it?

A. It is two thicknesses of plate, but it is only the normal thickness.

Q. Well, that is what I referred to, two thicknesses of plate. Does not that increase the cost of labor to construct a tank of that sort?

A. It does, but the tank is not as good as if it were one thickness.

4159 Q. But I am asking for the reproduction of this particular tank?

A. It certainly would, it would increase the cost, but it is no benefit to the tank, it is a detriment.

Q. What weight did you assume?

A. I did not assume any weight, at all, because I would not reproduce a tank like that.

Q. No, but——

A. And there are other things besides that. There is double rivetting that I would not use, and the column supports which extent down are not built according to the present practice.

Q. Assuming that tank were to be reproduced as it is regardless of whether you would not build one like that and that it has 7.2 inches pressure, would you not consider Mr. Mayer's valuation of $262,224 to reproduce that new, as it is, a fair figure?

A. I would call that a fair figure for this reproduction, but would call it bad practice to reproduce it.

Q. Forty-second Street, I think, comes next in order. Referring to the 42nd Street plant now, you gave a valuation of $3,000 for four purifiers 7 feet 6 by 10 feet 6 by 3 feet with four wrought iron covers in connection. Did that include connections and supports?

A. I made these figures in conjunction with someone else. I think they included only the connections from the boxes to the center seals.

Q. Did it include the placing of the boxes in position?

A. Oh, yes, sir.

Q. Have you in mind what weight you gave to the purifiers and covers?

A. No, I have not.

Q. Well, assuming that the weight was, say 59,000 pounds, and that it included only the supports and connections, which you think would you then consider that $3,308 for the reproduction of those purifiers and covers was out of the way?

A. I would consider it about 10 per cent. too high.

4160 Q. Even if you included all the supports and connections?

A. I am taking it, assuming it is 39,000 pounds.

Q. No, 59,000 pounds.

A. No, I would not consider that figure high at all.

Q. You would consider it pretty low, wouldn't you, on the whole?

A. Yes, it is not high.

Q. Under condenser and scrubber house I find your valuation for one cast iron box 7 feet 6 inches by 5 feet 6 inches by 9 feet at $450. What weight did you assume there?

A. For what?

Q. For this box.

A. Which are you referring to now?

Q. Condenser and scrubber house.

A. What are the dimensions, 18 feet diameter by 18 feet high?

Q. No, I am not referring to the scrubbers at all. I am referring to the last item, one cast iron box, 7 feet 6 by 5 feet 6 by 9 feet deep, which I think you valued at $450.

A. That is right.

Q. What weight did you assume for that box?

A. 9,000 pounds.

Q. If the weight were, say, 14,000 pounds?

A. It would be worth about $700.

Q. Will you refer now to the oil and tar store tanks, two wrought iron tanks 9 feet in diameter by 30 feet long, you fixed a valuation of $1,680 and assumed a 5/16th inch shell. What weight did you assume for those two tanks?

A. 28,000 pounds.

Q. 28,000 pounds.

A. For each.

Q. And how much for the eight wrought iron tanks?

A. 80,000 pounds.

Q. And how much for the one wrought iron tank following that?

A. 34,000 pounds.

Q. And how much for the wrought iron tank following that, 5 feet diameter by 25 feet long?

A. 5,500 pounds.

Q. What is the price per pound which you assumed?

A. Six cents.

4161 Q. Can you tell me how that 6 cents was divided up?

A. How do you mean, divided up?

Q. I mean how much for material and how much for labor and how much for setting, or did not this include setting in the case of these tanks, or delivery only?

A. That would include putting them in place for the large ones; not for the small ones.

Q. Can you give me the d[illegible]s in the same way Mr. Mayer testified, showing what proportion [illegible] the price per pound you assigned for labor, or have not you done that?

A. Not now. I could do it.

Q. Did you figure it out in taking this six cents, or take a general figure?

A. I took a general figure; we are constantly building these things, and all we separate is so many pounds of material at so much a pound, so many day's labor, total so much, at such a rate per day, and add the two together and tack on our profit. And the practice we have to-day, and we are building lots of tanks now to-day, is at that rate of 6 cents a pound. I give that from experience. It gives a profitable remuneration on those tanks.

Q. You could divide it up as Mr. Mayer did?

A. Of course.

Q. I would like to have you do so at recess, if you have time.

A. That is a matter of days to get that together.

Mr. PAGE: But have not you at your works that computation?

The WITNESS: At our works it is largely, so to speak, a matter of experience. For instance, last year we were building tanks for 5 cents a pound and glad to get them, and then when they fixed an extra price on iron, we have to add on a little more, and we add just as much as we think they will stand without losing the job. To-day it is 6 cents a pound.

4162 Q. But when it gets down you cut your price?

A. Yes, we have to cut them down, but of course we have to have a figure below which it would be unsafe to go; but I would not undertake to go into that as fully as Mr. Mayer has. It would be a matter of days to get that; you would have to take a number of different ones; for instance, while I have taken the same rate for this 5 by 25 foot tank per pound, there would be less money in it for us than there would be in the bigger ones at the same rate. Some of this tank work I have taken, for instance, all the way through at 6 cents. Some of it I would be very glad to build for less than that and some I would want more.

Q. Is there any difference in the expense of erecting a tank in a holder in the ground as compared with erecting it above ground?

A. Certainly.

Q. Which is the more expensive?

A. Building it in a hole.

Q. Assuming that these two tanks weighed, say, 30,750 pounds instead of 28,000 pounds?

A. They would be worth $845.

Q. Supposing the eight tanks weighed about 90,000 pounds instead of 80,000 pounds?

A. They would be worth $5,400.

Q. And if the one tank weighs 48,000 pounds instead of 34,000 pounds?

A. It would be $2,880.

Q. The same way as to the last tank to which I have referred, the five-foot tank, 25 feet long, supposing that weighed 6,500 pounds instead of 5,500?

A. It would be worth $390.

Q. That is on your basic figure of 6 cents a pound?

A. Yes.

Q. Have you based your estimate of 6 cents a pound to cover all kinds of tanks on the average on New York labor conditions as they exist to-day?

A. Yes, sir.

4163 Mr. MATHEWSON: I think we might suspend at this point.

The MASTER: How long will you take after luncheon, Mr. Mathewson?

Mr. Mathewson: I do not think I shall take over half an hour with the witness.

Recess until 2:00 P. M.

After Recess.

William J. Logan, resumes the stand and further testifies.

Cross-examination continued by Mr. Mathewson:

Q. We will take up 44th Street next. Were your figures for scrubbers for sidewalk delivery or for scrubbers placed in position?

A. Scrubbers placed in position. That refers to all the scrubbers, I presume?

Q. Yes, at all the stations?

A. At all the stations.

Q. It does not, however, include the foundation for the apparatus?

A. It does not.

Q. And it does not include foundation in the case of any of the apparatus to which you have testified?

A. In no case.

Q. Neither at this station nor at the other stations to which you have testified?

A. There are no foundations in any of the prices I have given.

Q. And no connections?

A. To a limited extent the connections to the outside, in the usual way; such connections as apply are immediately attached to the apparatus itself outside, so to speak, in a general way—outside of the immediate apparatus itself. In the holders that would be the inlets and outlets to the drips, all the foundations and the other
4164 apparatus. Take a scrubber for instance, that takes only the
flanges, no connections beyond that, and the same applies to the gas tanks and all that—I do not mean gas tanks, I mean tanks—simply includes flanges and so on to make connections.

Q. And other connections than these which you have mentioned, which are really part of the apparatus used, you have not included in your figures?

A. Well, it has been designated as other connections. In no sense have I——

Q. What price per pound did you take in estimating scrubbers at the various stations?

A. I think six cents, except where—I cannot go all over them.

Q. No, but take the 44th Street station, for instance; the two scrubbers there, which you place at $3,600; how much per pound?

A. Six cents.

Q. And six cents includes both the material and labor?

A. It does.

Q. Taking the two rectangular condensers, 30 feet by 6 feet 6, which you estimated at $28,000, what price per pound did you assume there as a unit?

A. At 44th Street, I don't really know on what that was based. This figure was made on those condensers with all the tubes, and I think I assumed about the number of tubes that would be in there; probably wrought iron.

Q. You did not examine specifically to determine the number of tubes?

A. No, I could not tell anyhow. The condensers are closed so you could not see them.

Q. Do you remember what weight you assumed for those condensers?

A. My recollections is—I may be wrong about that—it was the same base price, six cents a pound.

Q. Did this include the setting?

A. Erecting in position, yes.

4165 Q. Isn't the material in condensers more expensive than the corresponding material in the scrubbers?

A. You mean the wrought iron tubes?

Q. Yes.

A. I think it is.

Q. Didn't you then allow, and are you sure you did not allow a higher price per pound for the condensers than you did for the scrubbers?

A. I remember that I took the price per foot in making this—I had to estimate about how many tubes there would be in there, in the regular way, and I knew about the price of tubes.

Q. Well, assuming that the entire weight of condensers would figure out say, 375,000 pounds?

A. Including tubes?

Q. Yes; 375,000 pounds; in that event Mr. Mayer's estimate of $31,752 to reproduce the two condensers new would be fair, would it not?

A. At 375,000 pounds?

Q. Yes.

A. At sixe cents a pound that would be—well, it might or might not, I would not be able to tell that without making the figures. I would not call it absolutely excessive.

Q. Do you remember whether you took the same price per pound in estimating the value of the air and salt water condensers at this plant?

A. The value of estimating the salt water condensers, I put in at exactly what I furnished them, and in looking over the price compared with to-day thought it was fair. I would be glad to have a contract at the same price to build them to-day. I would like to duplicate them at that.

Q. And you did not figure at the price per pound in this connection?

A. Oh, yes, I figured the price per pound. I looked at it and compared with the rates we pay to-day and it seemed to me fair and equitable.

Q. Do you remember what the price per pound was?

A. The highest price was eight cents.

4166 Q. And I assume——

A. No, I am wrong. I remember in the elbows that went over the arch, that join the two together, the price was 10, but that was a small part of it.

Q. And in all the other stations, in valuing similar apparatus, I assume you took the same price per pound?

A. Well, there is only one other station that uses the same apparatus as you are now speaking of, and that is 99th Street; and the most we had in our estimate there was eight cents.

Q. Referring to the contents of "Water tower" one 20-foot diameter by 20-foot tank, ⅜-inch and ¼-inch steel, Mr. Mayer's estimate of the new is $1,333, and he gives a little lower figure after taking off depreciation. Would you consider that his figure for a reproduction of that tank new was out of the way?

A. And his estimate is how much?

Q. $1,333.

A. I would consider that as no more than an ordinary difference in estimating.

Q. Did you estimate any weight there in determining your value?

A. Oh, yes.

Q. What was the weight?

A. Well, I have forgotten. Roughly, 20 feet in diameter would be 315 feet in the bottom, a little under that, and the sides would be 63½ by 20, which would be 1,270, and 315, call that roughly 1,600 feet, and average it all the way through at 5/16 would be 20,000 pounds and at six cents a pound it would be $1,200.

Q. And if the weight was more than 20,000 pounds I suppose the value would be correspondingly greater?

A. It would.

Q. Referring to the "pump house," two oil tanks, No. 6 and No. 9.

A. Where does that come after this last which we had?

Q. Oh, that it quite a distance on. It is under the heading "pump house, oil tanks."

A. I have it.

Q. You assume them to be ⅝?

A. 5/16.

4167 Q. 5/16 thick?

A. Yes, sir.

Q. And you figured that on the stand I think this morning, your valuation of $5,400, did you not?

A. I am not sure.

Q. Did you assume a weight there?

A. I think I did.

Q. What weight?

A. Well, the area of the bottom, 1,258 feet, the area of the side would be roughly 2,000 feet, that would be roughly 3,300 with 10 per cent. allowance, would be roughly 3,600, at twelve and a half pounds, would be 45,000 pounds.

Q. For the two tanks or for one?

A. For the one tank.

Q. That would mean only 90,000 pounds for the two tanks.

A. Then you have got to put in angle irons and so on at six cents, which would be $5,400. What did I give it as?

Q. $5,400. But don't you think you have underestimated the weight there?

A. I will take the contract for it at that price if it averages 5/16.

Q. If it averages 5/16?

A. Yes.

Q. Well, as a matter of fact, if, instead of weighing 90,000 pounds, there are 150,000 pounds of weight there, of course that would increase your $5,400 very materially, wouldn't it?

A. If the weight is how much you say?

Q. Well, take 156,000 pounds.

A. If they weighed 156,000 pounds they have got more metal than I would consider they need. If it weighs 154,000 pounds at 6 cents a pound, it is worth $9,240.

Q. Do you allow for a top on the tank in your estimate of weight?

A. I didn't, but the top is usually made light.

Q. Did you allow for laps and rivets?

A. I did; 10 per cent.

Q. Well, if the weight was 156,000 pounds Mr. Mayer's figure of $9,750 might be exact?

4168 A. Might be exact. If the weight is that it is not out of the way.

Q. Now, taking the three-story tar tanks under the heading of "Storage Tar Tanks," you have a value under there of $1,320, to wit: $750——

A. For the three rectangular tanks?

Q. For the three rectangular tanks, and $570 for the fuel oil tanks?

A. That is right.

Q. Making six, all told?

A. That's right.

Q. You estimated that, assuming that the thickness was one-quarter inch, I understood you?

A. I did.

Q. Well, if the weights were nearly 26,000 pounds for the three tar tanks and say 3,700 for the fuel oil tanks, Mr. Mayer's figures of $1,613——

A. They are more than that here, sir; $1,756.

Q. No, that includes another item of "tanks and building rest on wooden structure." No, I think you are right. Mr. Mayer's figures of $1,756 wouldn't be out of the way, would they, say for 25,800 pounds and 3,750 pounds?

A. That would be 62,000 pounds roughly. There is something wrong about that.

Q. No, that would not be 62,000, it would be about 29,000. They would not be out of the way, would it?

A. No, it would not.

Q. So, too, in the steel tanks to which you testified under "Oil and pump house," three of them, two 12 by 7 and one 10 by 7 where you gave a valuation of $850?

A. That's right.

Q. What would be the value of those or would Mr. Mayer's valuation be out of the way, $1,218 new, provided they weighed say 19,500 pounds?

A. It would be a little high.

Q. What would you have it?

A. $1,140.

Q. Proceeding to the holders, I direct your attention to the two holders of 125,000 cubic feet capacity, 72 feet 6 inches outer diameter, including the eight round columns. Do you remember 4169 what weight you assumed for those holders and columns?

A. I would not want to say right now. I would say roughly I have estimated more weight, but take that at eight cents a pound it would be in the neighborhood of 450,000 pounds for the two. I must have assumed greater weight.

Q. Do I understand in that weight you did not include any connections except those immediately pertinent?

A. Inlets and outlets, everything out to the drip.

Q. Now, we will take up 21st Street. In the boiler house for two locomotives 60 H. P., Mr. Mayer makes the estimated cost new $2,710 and by taking off some depreciation reduces it to $2,440 as the present value. Would not Mr. Mayer's figures for the original cost new be a fair one?

A. I think it a little high. You can build a locomotive, 60-horse power, and it would cost more than that, but you can build one for less. That is based on general experience. I have made no figures. This particular thing I would not want to say. The boilers may be worth to reproduce to-day what Mr. Mayer figures them but I would say you could build them cheaper.

Q. You think you could build boilers that would do the work for the figure that you gave, which was $2,440, which you set down here?

A. I say it is not out of the way.

Q. Do you manufacture wooden tanks?

A. No, but I get in competition with them a great deal and sometimes order them.

Q. I see you have estimated this wooden tank at only $200 and Mr. Mayer at $360—octagonal valve house, one 7-foot by 7-foot round wooden tank?

A. Yes. I made out the estimate with the area of the bottom to be forty feet and the area of the sides to be 22 by 7, which gives 154 plus 40, which is 194, and 10 per cent. to it would be, 4170 roughly speaking, 210; one-quarter inch stuff, 2,100 pounds, angle iron around top another 110, that would be 2,210 at six cents a pound, $132.

Q. Why one-quarter-inch?

A. It would serve the purpose.

Q. We are talking about a round wooden tank?

A. I mean in competition with those things, in my experience, that a wooden tank, a small one, is about the same price as iron.

Q. But you have never manufactured them yourself?

A. I never have.

Q. You did not critically examine this wooden tank?

A. I did not. The wear and tear on a wooden tank, however, is greater than it is on an iron one; they do not last.

Q. Do you know whether that was a tank for a gas holder or not?

A. I do not. I don't know that I saw it even.

Q. Now, let us go to the "retort house" on 22d Street, and take the three salt water condensers which you figured at a value this morning of $70,000. What figure did you take as your unit value for material and labor?

A. My recollection is five cents a pound.

Q. Do you remember what weight you assumed for it here?

A. Under the circumstances that would be 1,400,000 pounds.

Q. If, as a matter of fact, the condensers weigh 1,875,000 pounds or more than Mr. Mayer's figure——

A. It would be $93,500.

Q. The same as the one similar condenser partly completed which you put at $23,333 as against $30,700?

A. I don't think I put the price on it. I said if the three were worth $70,000 why the other one would be worth one-third, which would be $23,333.

Q. And if it were corresponding to the heavier weight the last one would be worth the $30,700 Mr. Mayer testified?

A. It would be.

4171 Q. Under the "pump house" you give the two wrought iron tanks 8 feet by 12 feet at $520, assuming a one-quarter shell?

A. Yes.

Q. Do you remember what weight you assumed in computing that?

A. I cannot tell. There would be 50 feet in the bottom, 300 feet in the sides which is 350, 10 per cent. of that making 380, and then with the angle iron and so forth it would be 4,000 pounds roughly, at 6 cents, which would be $240. I must have added some more.

Q. Supposing the weight of those two tanks was 9,600 pounds?

A. Worth $576.

Q. Taking the unit figure at 6 cents per pound?

A. Six cents per pound.

Q. And the two wrought iron tanks below, 6 feet by 10?

A. The capacity of them is 4,500 gallons, that is rough. Fifty feet makes 375 gallons a foot, at 12 makes 4,500. That is the capacity for 10 feet high.

Q. Well, whatever the capacity, assuming the weight of those tanks was about 5,400 pounds, then the estimate of $300 would be raised?

A. $324 apiece for 5,400 pounds; $648 for the two.

Q. Now, turn to the holders at this station and take the four holders, each 400,000 feet capacity; what pressure did you assume in your estimate of $182,000 as the value of the four?

A. I don't remember, but I should imagine from the figures here somewhere in the neighborhood of 7½.

Q. It would raise your figures if the pressure was actually 8.7?

A. It would. That is assuming I based it on that. I am not sure as to what that basis was.

Q. Do you remember what weight you estimated for the holders with inlet and outlet pipes and columns, the entire structure of the four?

A. I should say roughly 2,600,000 pounds.

Q. 2,600,000 pounds?

A. Yes.

4172 Q. Well, assuming that the pressure in these holders for gas inflation is 8.7 inches and that the total weight of the holders, guide frames, connections, would be over three million pounds; in that event Mr. Mayer's valuation of $219,400 to reproduce new would not be out of the way, would it?

A. It would not.

Q. The 99th Street plant we will take next. "Condenser and Scrubber House," you valued two 10-foot by 24-foot scrubbers and two 24-foot three by 5-foot 2 by 15-foot condensers with 3-inch vertical tubes in sides of same and the total estimate you made was $18,000?

A. That's right.

Q. You did not assume the same value for the condensers per pound of weight that you did for the scrubbers, did you?

A. The cost would be increased by the cost of tubes. I had a list that I had made at the time and figured up approximately on what I think the number of feet of tubes would be at the market price with the profit on and added, that would be a little bit more than six cents a pound; that is, I mean for the total it would be more than six——

Q. Do you remember what weight you assumed in the scrubbers?

A. What price did I have on the scrubbers?

Q. With the scrubbers and condensers, together, $18,000?

A. What weight I assumed on the scrubbers?

Q. Yes.

A. I don't know. I can rough it.

Q. Or in the condensers?

A. I do not.

Q. Did you figure on cast iron or steel in the condensers?

A. I don't remember.

Q. It would make a difference, wouldn't it?

A. It would be cheaper for cast iron per pound than wrought iron.

Q. Or steel?

A. Well, I mean steel when I say wrought, as we don't use any wrought iron.

4173 Q. Well, if the scrubbers had 68,000 pounds of material and the condensers, say, 320,000 pounds, then Mr. Mayer's figures, of course, new, $20,100, without depreciation, would not be out of the way, would it?

A. 68,000 at six cents would be $4,080, and the other is how much?

Q. Say, 320,000 pounds?

A. No. It would not be out of the way.

Q. Now, in the "yard," three storage tanks, which you figure at $720. Do you remember what weight you assumed for those?

A. I do not. There are 8 by 8, sixty-four times five, 320, 10 per cent. for laps and rivets would be roughly 350; ten pounds to the foot, bringing it up to 3,500; the angle iron around the top would be 280, would bring it up to nearly 3,900 pounds, at six cents a pound, would be $234.

Q. For one?

A. That is for one.

Q. Now, supposing the three to weigh 12,000 pounds?

A. Then they weigh more than they ought to.

Q. Supposing they did weigh that?

A. Then they are worth $720.

Q. $720, as the value?

A. 12,000 at six cents a pound is $720.

Q. How about the twelve steel tanks below, supposing them to weigh 240,000 pounds, what would be the value?

A. $14,400.

Q. Did you assume that they did weigh that in getting $14,000?

A. I did. I based all those on six cents.

Q. Do you remember what weight you assumed in the two oil storage tanks just below which you valued at $2,600?

A. I assumed 60,000 pounds.

Q. Turn now to the holders and tell me again what value you placed upon those two 600,000 cubic foot holders with three lifts?

A. $70,000.

4174 Q. Do you mean for the two?

A. Yes.

Q. What pressure did you assume?

A. I fancy I assumed in the neighborhood of 7½ to 8 inches.

Q. What weight did you assume for the entire construction, holders, lifts, columns, as specified?

A. Roughly speaking I should say somewhere in the neighborhood of a million pounds.

Q. A million pounds each?

A. No. Both.

Q. Won't you reflect a moment and see whether you included one million only for the weight of the two three lift holders, including the lifts and the columns? Isn't there a mistake somewhere there?

A. I say I assumed that by dividing by 7, taking that as an average price.

Q. Didn't you assume a two lift instead of a three lift in your computation?

A. I have forgotten just now how that was made out, whether made for two or for three lifts, if it was figured on the weight. I am taking the lump sum I figured and divided by 7 so as to get about—this is a matter I cannot recall in a minute.

Q. I ask you particularly because you are very far from Mr. Mayer's evidence as to these holders and very near his evidence in almost all the others, and I thought there must be some discrepancy that was not visible?

A. You mean with regard to the weight?

Q. No, I mean as to value. Mr. Mayer's testimony was $59,674 for each holder, and yours is only $70,000 for the two. Now, let us see——

A. Wait a moment. I want to carry out on that. Mr. Mayer's estimate is $59,674 for each holder?

Q. For each holder. Now, let me see if you have the description right. Two holders, 600,000 cubic feet each, three lifts, diameter of outer centres 100 feet, second section 98 feet 6 inner section 97 feet; height of lift 27 feet 6 inches, 16 wrought iron 4175 column centres. Now, won't you compute that?

A. Can Mr. Mayer tell me what pressure that holder throws?

Q. 7.2 inches.

A. You say there is a wide discrepancy. I will just figure it roughly; 7,854 feet in the bottom; 7.2 at 5.2 roughly would be about 37 pounds per inch—and call it 8,000 instead of 7,850, would be $29,600 for the holder alone. And then the frame, roughly speaking, would be about one-third of the cost, $9,900 more; and then the inlets and outlets roughly would be in the neighborhood of $2,000. That would bring it up to $41,500. I do not think my figure is much out of the way at $70,000.

Q. Assuming that the weight of one of these holders with its guide frames and connections, including all the connections and not merely those which you have in mind was 820,000 pounds?

A. One of them?

Q. Yes. Then the value would not be out of the way at $59,674, would it?

A. I think it would be high.

Q. Even at that weight?

A. Yes. I would be very glad indeed to build them for 7 cents a pound. It would not be worth much more.

Q. How do you assume that the guide frame is one-third the weight of the holder?

A. I only guessed that—I did not say one-third the weight.

Q. One-third the price I should have said.

A. I said one-third the price, because we do not figure that at the same price we do the other.

Q. Is not sixteen columns more than the normal for a 100-foot diameter holder?

A. Yes, it is.

Q. And that would account for considerable weight, would it not?

A. Yes, it would.

Q. 18th Street, referring to the two holders at this 18th 4176 Street station, capacity 205,000 cubic feet each with two lifts, what weight did you assume in estimating the value at $19,000?

A. I did not estimate any weight at all. I took from our estimate books—or rather in this I took the same rough figuring I had done and afterwards verified it by our estimate book by a holder of 200,000 feet capacity that we bid for, and took the holder out of it and then added for the tracks and the columns and the tank iron work, inlet and outlets.

Q. But you did not estimate on this particular holder otherwise than by comparison?

A. These original figures I thought I had too low, and so I compared—this was after this thing was brought to me. As I have said many times before, I did not have much time on it and I looked and found it was not far out of the way.

Q. What pressure did you assume?

A. I have forgotten, but I should say roughly in the neighborhood of 3¾ to 4 inches.

Q. Assuming that the pressure was 5 to 5 1-5 inches?

A. It would be worth more money.

Q. And assume that the weight of the entire construction of the two holders, was, say, 395,000 pounds?

A. 395,000 pounds?

Q. Yes, in that event with that pressure would not they be worth $29,800 to reproduce new?

A. No, I do not think so. At an average of 7 cents, which is about what I would be willing to do it for, and call it instead of 395,000 pounds 400,000 pounds, it would be $28,000. That is over rather than under what I would bid for them to-day, taking it all together.

Q. Take the four holders below, each 255,000 cubic feet capacity, will you tell me what pressure you assume there and what weight you assumed for the four holders?

A. My recollection is somewhere in the neighborhood of 4 inches; I am not sure about that, but I can tell you later just exactly what was figured on. 4177

Q. Assuming that the pressure was 4.8 and the weight of those four holders was over 370,000 pounds apiece, and you assume 7 cents as the——

A. It would be $25,900 or $103,600 for the whole.

Q. That would be very close to Mr. Mayer's figure of $105,378?

A. I have no figure on his.

Q. But if that be his figure?

A. I do not think it would be out of the way.

Q. So, too, if you took the other holders, the previous two holders of 105,000 cubic feet capacity at 395,000 pounds in weight, with their frames and connections, that would give a value at 7 cents per pound of——

A. $27,650.

Q. Would it not be a little more than that?

A. No.

Q. You say that it is not the custom now to cover gas holders with buildings. You know that it was the custom at one time or frequent practice to do so?

A. It was the frequent practice.

Q. And was considered at that time good engineering?

A. I assume so or it would not have been done.

Q. So, too, while you say that a large holder, holding a million cubic feet, can be built for less than four holders holding 250,000 feet each, you find as a general rule, that gas companies that have been built up and have been increasing their consumption in the past have a great many small holders on their hands, don't you?

A. Yes.

Q. At 65th Street the two holders, Nos. 1 and 2, 325,000 cubic feet capacity each with two lifts, you estimate at $52,000. I assume that you took there also the 7 cents per pound as your unit figure, didn't you?

A. I would have to assume the same thing.

4178 Q. And do you know what weight you assumed for the two holders with their frames and connections so far as you included connections?

A. It would be somewhere in the neighborhood of 735,000 pounds.

Q. Supposing the weight of the entire construction was 805,500 pounds?

A. It would be $56,350—500 pounds did you say?

Q. 805,500 pounds.

A. $56,350.

Q. In that event Mr. Mayer's estimate of $57,197 would hardly be out of the way substantially, would it?

A. No.

Mr. Page: In other words, if you assume the same figure as Mr. Mayer does and use the same multiplier, you would produce the same result?

Mr. Mathewson: I wanted to see if our mathematics were good.

Q. 111th Street. The contents of yard, oil tank 43 feet by 20 feet, which you estimate at $2,200 to reproduce, what weight did you assume in that tank?

A. Well, I fancy somewhere in the neighborhood of 35,000 or 36,000 pounds; 36,000 pounds would be $2,160.

Q. Did you figure that with the top on the tank?

A. I am not sure. I do not remember.

Q. You don't remember that any top was included do you?

A. I don't remember; if there was not, there should have been.

Q. Well, do you remember what unit figure you assumed there as the price per pound?

A. Six cents.

Q. Take the atmospheric condensers of cast iron pipe filling 30 inches diameter in ten sections with cast iron base, what unit price did you assume there?

A. My recollection is 5 cents, but I am not sure.

4179 Q. Do you remember what weight you estimated?

A. There would be 80,000 pounds.

Q. And, of course, if your weights are too low, the estimates should be correspondingly raised?

A. Certainly.

Q. 132d Street, one holder, 5,000,000 cubic feet capacity, did you take 6 cents there as the base?

A. No, I just roughed that; that would have taken too much time to estimate it. I based that estimate on the cost of the holder which we built at 21st Street, which cost a little over $40 a thousand and I assumed—it is above $40 a thousand, and I figured with the increase in material and increase in labor that about $60 a thousand would be about the right price of it, and I took $60 for 5,000,000 feet and called it $300,000.

Q. Do you know how much pressure that holder throws?

A. I don't, but I would assume somewhere in the neighborhood of 13½ or 14 inches.

Q. Assume it throws 15.4 inches, that would raise the price a little?

A. Not on my figures. I have margin enough to take care of that.

Q. Did you assume any special weights for that?

A. No, I did not. I will say that I would be very glad indeed to take a contract for it at my figures.

Q. Including the connections which you have defined?

A. I have added them on there I think, $322,000 is my total.

Q. $325,000, is it not?

A. $322,000.

Q. The next and last is the Inwood station. You referred at once place to apparatus that was not in use. Do you remember what that was?

A. Well——

Q. Was it a hydrogen scrubber?

A. I think so, I think that was referred to as not being in use.

Q. It was being repaired, was it not, when you saw it?

A. I do not call to mind. I would not pretend to remember accurately each and every one of those things in that schedule.

4180 Q. You said that it seemed to you or that you thought it was out of use; were you not informed that it was in use as an oil scrubber?

A. If so, I have forgotten.

Q. And was merely under repair.

A. If so, I have forgotten.

Q. You had not any personal knowledge, of course, as to what use it may be put to or is being put to?

A. No.

Q. Now, referring to this various apparatus respecting which I have questioned you, I understand that your examination of it was not one of great care, was it, of the individual items of apparatus?

A. Well——

Q. You did not go through the works and examine carefully each item of apparatus, did you, respecting which I have just questioned you?

A. I think I saw each item. I would not——

Q. But you did not measure the thickness of the shells and the thickness——

A. I did not measure the thickness of anything.

Q. And your views as to weights are based upon your general estimates and not upon specific measurements, so far as that goes?

A. Largely so.

Q. You said in your direct-examination that someone assisted you in marking these figures. Who was your assistant, Mr. Logan, or who acted with you?

A. Mr. David Leavitt Hough.

Q. Did you ever know a holder to be taken out because it had actually rusted out and become worthless?

A. I have heard of such things.

Q. Did you ever know one in your own experience?

A. I have seen stuff that had been a holder that was all rusted out.

Q. You have never had occasion to move one that was all rusted out?

A. I have never had occasion to move one and found it was rusted out.

4181 Q. I mean, of course, where a holder has been continuously in use and taken care of and not abandoned?

A. I am not old enough to know what the life of a holder would be for coal gas, if it was taken care of on the outside. If you let it go without painting and taking care of it, it will rust out.

Q. But the depreciation, from the outside, if it is not taken care of——

A. But the depreciation comes from the outside and if it is taken care of—it is good for I don't know how long.

Q. So far as your observation goes, for an indefinite time?

A. Older than I am, there are holders in use older than I am.

Q. The 5 per cent. which Mr. Mayer added was 5 per cent. interest on the money involved in the construction of the entire plant, both manufacturing, holders and otherwise; you would not expect plants like those of the Consolidated Gas Company, including the manufacturing plants, as well as the holders, could be reproduced under two years, would you?

A. Some of the plants, I think, could be reproduced under two years.

Q. You think the entire plant could be?

A. No, it could not be reproduced in that time even.

Q. So that if you are considering the entire plant, half of two years' period would not be excessive, would it?

A. Considering the entire plant, no.

Q. Is it not true even in holders that the time required to get the tanks ready, to construct the tanks, the foundations, etc., frequently exceeds the time required for the construction of the holder itself, in your experience?

A. You cannot practically do any work in erecting the tank until the foundation is completed.

Q. And the laying of the foundation is a matter sometimes of great difficulty?

A. Sometimes great difficulty——

4182 Q. And a long period——

A. One moment. There are lots of foundations on which we have erected tanks where they did not commence the erecting of the foundation until we had commenced getting the work ready in the shop.

Q. And sometimes it is the other way?

A. And sometimes it is the other way.

Q. You said that no engineering charge was to be added to the figures that you have given. You mean no engineering charge as far as your concern is concerned, don't you?

A. That is what I mean, but I do not see how the gas company can be put to any expense for engineering charges if they approve of the plans that are submitted by me, except the inspection and supervision of the work while it is going on.

Q. You have never been in the gas business, have you, Mr. Logan, operating a gas plant?

A. No.

Q. And do you know that company constructing a plant has to lay out plans to supervise the work and to arrange for drainage, to make sewer connections and various other things which add the percentage in final cost of plant to the actual amount paid to the contractors who actually put up material and apparatus, don't you?

A. If they design and do all that preliminary work that you say, there is a cost on the part of the gas company for it.

Q. An engineering expense on the part of the gas company?

A. Yes.

Q. And what that would be or the proper amount for them to charge you have not had experience of, practically?

A. In a general way I would say that in a construction, this is my comparison, that is all——

Q. I am not asking you for your opinion. I say you have never had experience in a gas works so that you are able to say?

4183 The MASTER: He has already said that.

Mr. MATHEWSON: I have nothing further.

Redirect examination by Mr. PAGE:

Q. While you have never had the experience of running a gas works as a gas engineer, you have been a director of gas companies for a good many years, have you not?

A. I was director of the Williamsburg Gas Company for, I think, three years, and the Brooklyn Citizens Company for perhaps two years.

Q. And in connection with your business of supplying certain portions of gas plants, you have had a good deal to do with being around a gas plant and constructing it when the gas plant has been in course of construction, have you not?

A. Yes.

Q. And you are still quite largely interested, if not a director, in gas companies?

A. I am interested; I would not say largely.

Q. Of course, that is a relative term. The weights that were given by you in your direct examination upon these various apparatus, holders, tanks and so forth, are the weights that you have found in your manufacture of gas apparatus, that such apparatus weighs, are they not?

A. Based on what I thought would be satisfactory for the purpose.

Q. The weight of this apparatus has been computed by you and not assumed, has it not?

A. With the exception of the tar scrubbers, I assumed that from their weight.

Q. Where they gave the weight you assumed the weight.

A. Yes.

Q. But all the other weights that you have given here have been a matter of computation?

A. In a rough way, yes, sir.

4184 Q. That that has been made here has been in a rough way, but you did prepare, did you not, and give to Mr. Hough, who has been spoken of here, your estimate upon this portion of the plant which you have valued here to-day?

A. That and others besides.

Q. In that you made the detailed calculation?

A. I did.

Q. And that is not available to you at present?

A. It is not. The details were all destroyed when we were through with them. We checked up one with the other and they were destroyed.

Q. Now, as I understand, neither you nor Mr. Mayer have weighed this apparatus?

Mr. Mathewson: How does he know about Mr. Mayer?

Mr. Page: Mr. Mayer has testified that he did not and that his arrival at weights was a matter merely of computation, in answer to a question asked by me.

Q. Now, your computations have been based upon your actual experience?

A. They have.

Q. In the manufacture of various apparatus?

A. They have.

Q. And the weights that you have given are such as are used by you for those various apparatus?

A. They are.

Q. And if Mr. Mayer would make a mistake in the calculation of the capacity of a tank by one-half, you would prefer to rely upon your own calculations, would you not, as to the weight of the apparatus?

Mr. Mathewson: I object to that. I don't think there is any such testimony.

The Master: I will allow it.

Mr. Mathewson: Exception.

4185 A. Decidedly so.

Q. And where the thickness of the apparatus has been given in the schedule furnished by Mr. Mayer, you have taken that thickness, have you not?

A. I have.

Q. As I understand, in estimating the values of your holders and tanks you have estimated connections except those that are known as yard connections, is that right?

A. I have estimated all except the yard connections; the immediate connections to the tanks I have estimated.

Q. And the yard connections were separately estimated by Mr. Mayer in the schedule that he furnished you, were they not?

A. They seem to be; that is, in those schedules they are specified.

Q. That is, there are yard connections specified in those schedules?

A. There are.

Q. Now, when Mr. Mathewson has asked you to assume certain weights and compute your price upon those weights as assumed and you have stated that if those weights were correct Mr. Mayer's figure was not out of the way, were the weights given by Mr. Mathewson such as actually obtained in the manufacture of the particular article that he was questioning you about?

A. As a general statement, I would say no.

Q. Well, the question was general. At one of the stations there is a double tank construction for a holder. Do you remember which station it is?

A. The 14th Street station.

Q. Did you ever know of any other gas holder being erected in a tank of that construction?

A. I never did.

Q. If you were called upon to reproduce that plant to-day would you repeat all the errors that have been made in the past?

4186 Mr. Mathewson: What is the use of asking a question of that kind? There is not any evidence that they were at the time they were constructed.

Q. Is such construction a practical construction, having a double tank?

A. When you say double tanks, there are such things as double tanks; this is a tank with double thickness of shell.

Q. Yes, that is what I mean, a tank with double thickness.

A. Is there any? That is the only one I ever knew or heard of.

Q. That is not exactly the question. (Question repeated.)

The Master: Well, it appears to be practical, because it is there.

The Witness: It appears to be practical, because it is there and working.

Q. Well, that does not make it practical.

A. Well, it is there and working. I would not consider it good practice to use it there.

Q. That is what I should have said, good practice, instead of practical. Now, in regard to surrounding your holders with brown stone trimmings, a gas company that would build a tank and holder to-day and surround it with a brick house and spend $155,000 for a house to surround it, would be doing a foolish thing, would they not, in the light of experience?

A. I would think so.

Q. It would be foolish waste of money?

A. I would think so.

Q. And a frame that would surround the holder as built to-day would cost about how much?

A. To cite this particular instance, there would have to be a frame for each one.

Q. I know, but I cite this house that had two holders in it.

A. I would say roughly that the frame work for those two would cost in the neighborhood of $10,000. 4187

Q. That would be sufficient for all practical purposes, that would be the only thing that would have to be added if you removed the house?

A. That is all, for the purpose of using the holder, that would have to be added.

Q. Now, if you were reproducing a plant to-day for the distribution of the gas, 10,000,000,000 cubic feet of gas or 13,000,000,000 cubic feet of gas, you would not build this large number of small holders, would you?

A. I would not.

Q. And you would not say that to rebuild a large number of small holders instead of a few large holders was economical construction, would you?

A. I would not.

Q. And while you have given the prices which it would cost to reproduce those holders to-day, you would not consider that the reproduction of them was a proper thing to do?

A. I would not.

Q. In regard to this hydrogen scrubber which has been somewhat considered in the past, you observed, did you not, that upon the schedule that was given to you it was marked "out of commission"?

A. It had some mark to indicate that it was not being used, I do not remember just the phraseology.

Q. So if it was temporarily being repaired when you were at the works, it must have been temporarily being repaired when Mr. Mayer was at the works?

A. It would seem so.

Mr. Mathewson: This is all argumentative.

Mr. Page: Oh, yes, that is argumentative, but it is not assuming the existence of a fact which does not exist, as your question did.

The Master: As I remember it, when Mr. Mayer was on the stand, there was something said to the effect that that statement meant that it was summer time and in the winter time, 4188 the supply being larger than the summer time, it was not necessary to use this apparatus in the summer time.

Mr. Page: This hydrogen scrubber was at 99th Street, was it not?

Mr. Mathewson: I think that was all gone over, Senator, by somebody who knew about it, and this witness evidently does not know anything about it. It is not worth talking about. It is a little bit of an item.

Mr. Page: No, it is only $1,400.

Q. You spoke about the life of a gas holder that was used in a gas plant. Is there any difference in the life of a gas holder that is used in a water gas plant and one that is used in a coal gas plant?

A. I think there is. There might be.

Q. You think that the life of a holder in a coal gas plant is longer than it would be in a water gas plant?

Mr. **Mathewson**: Just a minute. I do not like to have a question put that way. I think it is pretty leading, and I do not think the witness has said anything to warrant it. I do not think he has had any experience which would warrant such a reply.

The **Master**: Well, it is introductory, I suppose, merely. I will allow it.

Mr. **Mathewson**: I except.

A. I do.

Recross-examination by Mr. **Mathewson**:

4189 Q. Will you explain why a holder used in a water gas plant, if well taken care of, will last a shorter time than a coal gas holder?

A. In a general way I have heard——

Q. Well do you know?

A. Do I know?

Q. Yes.

A. Not from my own personal knowledge, but I have heard in my experience, moving around among some of the gas men, I have heard them say it would not last, I have heard some of them say it was eaten out.

Q. You have not heard of a gas man who has had to dispose of a water gas holder, have you, because it was eaten out inside?

A. I do not recall any at present.

Q. Don't you know that in water gas there is an oil accumulation in the holder which contsantly lubricates the holder as it moves up and down on the lift.

A. I understand that there is oil goes in the inside of the holder; but that it is deposited on the sides, I am not so sure.

Q. If it lies on the top of the water and the holder goes up and down it would be bound, would it not, to accumulate on the sides of the holder?

A. Yes, it would probably act that way.

Q. That would tend in your experience, to protect it, generally speaking?

A. Yes.

Q. Have you ever in your experience known a water gas holder well taken care of, properly cared for from the outside to be abandoned because it had rusted out?

A. I cannot say that I have.

Q. You have been asked as to the building of small holders and so on, and whether you would build small holders to-day. Is it not your experience in all business that hind sight is better than foresight sometimes?

A. It is.

Q. Do you know of any instance in which Mr. Mayer has made a mistake of 50 per cent. in the testimony that he has given?

A. Without going absolutely into details, I would have to say no. He may have made it, however.

4190 Q. Oh, yes, we may have. Of course we are all fallible.

A. There were some figures you gave me on the assumption——

Q. But you do not find in any case that your estimates are 50 per cent. outside of Mr. Mayer's?

A. I do not recall just now. I won't say but may be there may have been.

Q. You found in a great many instances that your estimates were higher than his?

A. I did.

Q. And in a great many other instances that they were very close?

A. Yes.

Q. And in very few instances was there any considerable difference, is not that right?

A. Yes, but I would not want to say as to the 50 per cent. to cover that exactly.

Q. Knowing the cubic contents of steel or iron apparatus, it is easy, is it not, to compute with substantial accuracy the weight?

A. It is.

Q. And if an engineer measures apparatus both as to length and breadth and also as to thickness, his estimate of the weight, assuming that he was able to multiply, would be much more accurate than one who made a general estimate from inspection of the apparatus alone, without thus measuring?

A. A man fortified with all the dimensions should be able to make one more nearly accurate than one without the dimensions.

Q. And except where the dimensions appeared in this schedule which you have had, you did not make any measurements of dimensions?

A. I made absolutely no measurements whatever.

Q. And your estimates of weight where you have used them was merely as to weights which such apparatus might produce, which would take the place of the apparatus which you were valuing?

A. They were made according to general practice for making those such as I have done.

4191 Q. And you know, do you not, that different apparatus manufactured by different manufacturers differs somewhat in weight?

A. Yes, sir, it certainly does.

Q. And that apparatus constructed at one period, say ten years ago, differs from the weight of apparatus manufactured to-day, in some cases?

A. No question about that.

Q. So to get exact weights you would have to measure and also get the length, breadth and thickness of the columns and holders and sizes of the tanks and other apparatus?

A. A man should have those.

Q. And you did not have all those details in your estimates of weight here?

A. I did not have those details on which to base my estimates of weights.

By Mr. PAGE:

Q. But you did in every respect except in some cases as to thickness of the shell, did you not?

A. Those thicknesses where they were given, I used them.

Q. But you had all the other dimensions which were given on the schedule?

A. Where the sizes and thicknesses were given I used them.

By Mr. MATHEWSON:

Q. You had no data as to the thickness of the material in the different scrubbers and condensers had you?

A. I think not. Some of them, there was.

Q. And was it not the exception where you had any thicknesses upon which to compute weight in dealing with apparatus respecting which you have testified?

A. With regard to the bulk, in many of the estimates I have made I would—that is the bulk, so I would say I had nothing to govern me to be pretty close to what was there. I do not want to say 4192 that it was the exception. Where the weights were given, in a great many of those things it is not necessary to know the weight; for instance in the holders, if you have the pressure given we could figure——

Q. But you did not even have the pressure in the holders, did you?

A. No, I did not have the pressure in the holders.

By Mr. PAGE:

Q. But you had before you all the details which Mr. Mayer gave here in his testimony?

A. I had.

JAMES L. WELLS, called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Direct-examination by Mr. PAGE:

Q. Mr. Wells, where do you reside?

A. I reside at 604 Tremont Avenue.

Q. What is your occupation?

A. Real Estate.

Q. In the City of New York?

A. Yes, sir.

Q. Where is your office?

A. 141 Broadway.

Q. How long have you been engaged in the real estate business in the City of New York?

A. Over thirty years, about thirty-three years.

Q. What has been your particular line of business, relating to real estate?

A. I have dealt in real estate generally as an auctioneer, broker and appraiser. I am not a speculator in real estate.

Q. What official positions have you held, Mr. Wells?

A. I have represented the city in various capacities at different times; I have been a member of the city government and the State government; my life has been principally devoted to the real estate business.

4193 Q. Yes, but particularly, you have been President of the Board of Taxation and Assessment, is that what it is called?

A. I was Commissioner in the Department of Taxes and Assessments under the administration of Mayor Strong, and I was President of the Department under the administration of Mayor Low.

Q. For how many years under Mayor Strong's administration were you a member of the Board?

A. Mayor Low was two years, and I was nearly three years under Mayor Strong.

Q. Besides that, I believe you were a member of the Charter Revision Commission, were you not, that revised the Greater New York Charter?

A. I was a member, yes, sir.

Q. Have you examined the various properties of the Consolidated Gas Company shown on Exhibit 48?

A. I have examined all from the map, but I have not yet personally examined all the properties for the purpose of testifying, although I have seen all the properties.

Q. Will you take up first the Block 1643, corner of 116th Street and Lexington Avenue, the southwest corner, have you examined that property?

A. I have.

Q. What is that, vacant property?

A. It is a vacant plot on the southwesterly corner of 116th Street and Lexington Avenue, having a frontage of 80 feet on 116th Street and 100 feet 11 inches on Lexington Avenue.

Q. What is that property worth?

A. In my opinion it is worth $71,000.

Q. How did you arrive at that result?

A. I value the corner 25 feet by 100 feet and 11 inches at $30,000. I value the next lot to the corner at $20,000, the next 4194 lot to that at $17,000, and the remaining five feet at the same proportionate rate, which would be $3,500, making a total of $71,000.

Q. Passing to Block 1642, that is the northwest corner of Third Avenue and 114th Street?

A. It is.

Q. That property has buildings on it, has it not?

A. Yes, almost covered with buildings.

Q. Will you give the dimensions of that as you have it?

A. I have only appraised the land. The northwesterly corner of Third Avenue and 114th Street has a frontage of 25 feet 2¾ inches on Third Avenue and 100 feet on 114th Street. The property on 114th Street adjoining it on the west has a frontage of 50 feet and 5 inches at a depth of 100 feet 11 inches.

Q. Now, what value do you place upon the land?

A. I value the land at $62,500.

Q. Do you make any additional allowance for the value of the lot that adjoins the lot that fronts on Third Avenue?

A. I did not.

Q. Is there any additional value to a lot that abuts on the rear of a corner lot as this does?

A. In many cases there is that additional value, but I do not think so in this case.

Q. And why not in this case, Mr. Wells?

A. It would add additional value if the same owners controlled the frontage on Third Avenue to a point northerly 100 feet 11 inches from the corner of Third Avenue and 114th Street.

Q. There would be an additional value then on account of plottage?

A. On account of plottage, and on account of the availability for improvement, but very little can be done with that corner lot compared to what could be done if there was 50 feet or 100 feet.

Q. Have you examined the property at Irving Place and 15th Street, Block 870?

A. I have.

Q. Did you value the land and buildings there or land only?

A. I only valued the land.

4195 Q. Well, of what does that consist in the way of land?

A. That land consists of a plot 84 feet front on the easterly side of Irving Place and 155 feet 6 inches on the southerly side of East 15th Street.

Q. And what value did you place upon that land?

A. I valued that at $203,854.

Mr. Mathewson: Land only?

The Witness: Land only.

Q. How did you arrive at that valuation?

A. I made an arbitrary division of the land, taking Irving Place as the prominent frontage and dividing the plot up into 25 x 100 foot lots and 9 feet over; I divided the land in the rear on 15th Street into two 25 x 84 foot lots and a lot 5 feet 6 inches by 84 feet, simply for the purpose of ascertaining the value by the uniform measurement of city lots.

Mr. Mathewson: Will you give the valuation of the corner as distinguished from these other lots?

The Witness: I can, yes, sir.

Q. Will you state the valuation which you placed upon the corner lot?

A. I placed a valuation of $60,000 on the corner lot and on the lot next to the corner, $42,500; and the next lot on Irving Place, $40,000, and the next 9 feet at the same rate per lot as the $40,000, which gave me $15,000; I value the lots on East 15th Street at the rate of $22,500, and inasmuch as they were only 84 feet deep I took 92 per cent. of the lots value for 25 feet by 100 feet, so that I had for the first lot on East 15th Street, $20,700, for the next lot $20,700, and for the small strip of 5 feet 6 inches I had $4,554, or in other words I valued the frontage on Irving Place 84 x 100 feet at $157,900, and the frontage in the rear of that on East 15th Street, 55 feet 6 inches at $45,954, making my total of $203,854.

4196 Q. Block 239, which was the corner of Hester and Elizabeth Streets?

A. That lot has a frontage of 100 feet on the northerly side of Hester Street and 150 feet on the easterly side of Elizabeth Street.

Q. And what value did you place upon that?

A. On the whole plot, $142,500.

Mr. Mathewson: Land only in each case?

The Witness: I have not appraised any buildings in any case.

Q. And how do you arrive at that result Mr. Wells?

A. I divide it into 25 by 100 foot lots, facing four of them upon Hester Street and two of them upon Elizabeth Street.

Q. And what values do you give to the separate parcels?

A. I value the corner lot at $37,500, the next lot to the corner at $25,000, and the next two lots at $22,500, and I value the two lots on Elizabeth Street at $17,500 each.

Q. Block 972 is an irregular piece of ground on East 15th Street, west of Avenue B, that is vacant land, is it not?

A. It is. Well, there is an old building of some kind on it; I could not get upon the ground. I could only see the property by looking through the fence.

Q. Will you give the land value of that?

A. My estimate of the value is $22,000, provided it is of the shape shown in the diagram; it does not appear like that shape on the ground, but that may be on account of the fences.

Mr. Mathewson: Yes, that is it, on account of the fences.

The Witness: The fences do not follow the line of the diagram.

4197 Q. Well, you have made your calculations based upon the showing on the diagram?

A. I have.

Q. According to the statement of the Consolidated Gas Company?

A. I have.

Q. Now, you might state how you have arrived at the result of $22,000?

A. That plot has a frontage of 13 feet 3 inches on 15th Street, commencing 300 feet west of Avenue B at a point 313 feet 3 inches the boundary line runs in a diagonal direction southwesterly along the line of old Stuyvesant Street, as it formerly existed, to a point; then it runs south 10 feet 6 inches and then easterly 75 feet 7 inches and then southerly 3 feet 5½ inches, and then easterly again 74 feet 5 inches and then northerly, so the diagram says, 106 feet 8½ inches; but you cannot see that little strip of land 3 feet 5½ inches as shown on that diagram, and it does not show that way on the tax maps; that would appear to encroach on the other lot fronting on 14th Street.

Mr. Mathewson: Perhaps the other lot encroaches upon us, Mr. Wells.

The Witness: That may be. It is very difficult to find out how that line runs in there. I went through the tenement house on 14th Street and got to the rear of it, and I went through the tenement house on 15th Street to see the other portion of it, but there is a tight board fence there and everything——

Q. Assuming the diagram to be correct, as all of our testimony has been based on that assumption, will you state now, how you arrived at the value of $22,000?

A. Well, I took 13 feet 3 inches by 106 feet 8½ inches and I valued that at $53,000; and the balance of the land I compute by the well-known Hoffman rule. It is a long calculation; you 4198 can do it in several ways; you can take it up and divide it into lots or average it; the shortest way is to average the dimensions. It averages about 50 feet south of the southerly line of 15th Street, and I took that portion of the Hoffman rule to estimate it.

Q. Now, Block 985, which runs from 17th to 18th Street, 188 feet west of Avenue C?

A. That has a frontage of 350 feet on the southerly side of East 18th Street and 350 feet on the northerly side of East 17th Street. It is situated 138 feet east of Avenue B; it makes in all 28 lots each 25 by 92 feet, fourteen fronting on each street.

Q. Are those vacant lots or are they used for some purpose?

A. Those are used for gas purposes.

Q. The gas holders, I believe, are on those. And what value do you place upon that plot?

A. I value the lots on 17th Street——

Q. What is the total first?

A. $213,150. I valued the lots on East 17th Street at $7,500 each and the lots on 18th Street, 14 of them, at $7,000, and I add 5 per cent. for plottage.

Q. And Block 982?

A. I have not gone any further with them. The rest of my work is home.

Mr. Page: Then we will have to suspend. Before we adjourn, I want to say that I have subpœnas for the various directors. Will you produce them, or shall we subpœna them?

Mr. Mathewson: What about?

Mr. Burr: Two things, we think they are very essential witnesses for the defense to begin with——

Mr. Mathewson: Do you mean with reference to that newspaper article?

Mr. Burr: Yes, that is one of them, and in regard to franchises and oil.

4199 & 4200 Mr. Mathewson: I cannot conceive any theory on which you can subpœna them or get anything out of them if you do; it seems to me you are wasting your own time or our time. I do not think I can agree to produce them, but if you will give me an idea of what you want, I will submit it to the officers of the company.

Adjourned to Monday, November 26th, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 256.
State's, YY.
City's, 63.

4201 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Monday, *November* 26, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

4202 James L. Wells resumes the stand and further testifies.

Direct examination continued by Mr. Page:

Q. Did you visit the premises, Block 982, Lots 13, being corner of Avenue C and 14th to 15th Street?

A. I have visited it.

Q. Have you made a valuation or appraisal of the land there?

A. I have made an appraisal of the land.

Q. What price do you set upon it?

A. I value the property at $300,000.

Q. That is used for holders, is it?

A. Yes, sir. There are some brick buildings on it also that I made no estimate of the value of.

Q. Now you may state how you arrived at that result.

A. I valued the lot which is the northwest corner of 14th Street and Avenue C, lot 25x103 feet 3 inches, at $14,500, and the adjoining lot at $10,000. I am facing my lots on 14th Street and not on Avenue C. I value fifteen lots west of this on 14th Street at $9,500 each on the average, which makes $142,500. I have remaining a parcel of land 9 feet 10½ inches in width, 103 feet 3 inches in depth, which I value at the rate of $9,500, and that gives me $3,686. I face four lots on Avenue C, making the corner of 15th Street, and I value the corner, a lot 28 feet 3 inches by 100 feet, at $11,000. Lot fronting on Avenue C, adjoining the corner, I value at $8,500 and the two remaining lots on Avenue C at $8,000 each, making $16,000. I value thirteen lots on East 15th Street at $7,000 each, making $91,000, and the 9 feet and 10½ inches remaining at the rate of $7,000 a lot, which is $2,753. That makes a total of $299,939, and I call it $300,000.

Q. Now we will take Block 989, lot 1, which is between
4203 15th and 16th Streets, on the east side of Avenue C.

A. Block 989, lot 1, is on the easterly side of Avenue C, extending from East 15th Street to East 16th Street and extending back on the streets 235 feet on each street.

Q. Did you value that property?

A. I valued that property at $139,500.

Q. How did you arrive at that valuation?

A. I valued a lot, 28 feet 3 inches front by 100 feet in depth on the northeasterly corner of Avenue C and 15th Street, at $11,000, and a lot adjoining the corner, 25 by 100, at $8,500. I valued the corner lot, 28 feet 3 inches by 100 feet, on the southeast corner of Avenue C and 16th Street, at $12,000; and the lot adjoining at $8,500; and four other lots facing Avenue C, each 25 by 100 feet, at $8,000, making $32,000. I value five lots on the north side of 15th Street, in the rear of the lots facing on Avenue C; these lots are 25 feet front each by 103 feet 3 inches in depth at $6,000, $30,000. I have remaining on 15th Street a small plot, 10 feet front by 103 feet 3 inches in depth, which I value at the rate of $6,000 a lot, which gives me $2,400. I value five lots on the south side of 16th Street, each being 25 feet front by 103 feet and 3 inches in depth, at the rate of $6,500 a lot. Total, $32,500. I have remaining on 16th Street a strip of land, 10 feet front by 103 feet 3 inches in depth, which I value at the rate of $6,500 a lot, or $2,600. That gives me my total of $139,500.

Q. Take Lot 26, same Block 989.

A. Block 989. Lot 26. That parcel is situated on the westerly side of Avenue D and extends from 15th to 16th Street, has a frontage on Avenue D of 206 feet 6 inches, frontage of 191 feet on East 15th Street and 191 feet on East 16th Street.

Q. What value did you place upon that?

A. I value that property at $96,480.

Q. How did you arrive at that valuation.

4204 A. I arrived at the valuation by facing all the lots on the street in preference to the avenue and divided them as follows: I value the lot 25 by 103 feet 3 inches on the northwest corner of Avenue D at $8,000, and the lot adjoining, same size, $6,500. I value five lots, each 25 by 103 feet 3 inches, on 15th Street, at $6,000 each, making $30,000; and the remaining strip, 16 feet in width by 103 feet 3 inches in depth, I value at the rate of $5,000 a lot, which makes $3,240. I value the southwest corner of 16th Street and Avenue D, being a lot 25 by 100 feet and 3 inches, at $8,000, and the lot adjoining, same size, $6,500; and six lots west of that, each 25 by 103 feet 3 inches, at $6,000 each, making $30,000; and the remaining strip, 16 feet wide by 103 feet 3 inches in depth, at the rate of $6,000, $3,240, giving my total of $96,480.

Q. Now, take Block 991, Lot 26, being property east side of Avenue D, running through to Tompkins Street, from 15th to 16th Street.

A. It is the entire block bounded by Avenue D, Tompkins Street, 15th and 16th Streets. That has a frontage——

Q. What value did you place upon that?

A. I valued that at $123,500.

Q. How did you arrive at that valuation?

A. I divided the block into four separate parcels, as that appears to me the natural way of subdividing the block if the block were placed upon the market in parcels. Plot A, situated on the southeasterly corner of 16th Street and Avenue D, having a frontage of 75 feet on 16th Street by 103 feet 3 inches on Avenue D, I value at $19,000. Parcel B, situated on the northeasterly corner of 15th Street and Avenue D, and facing the lots on the streets in preference to the avenue, gives me 125 feet on 15th Street by 103 feet 3 inches on Avenue D, I value at $32,500. Parcel C, being situated on the southwesterly corner of 16th Street and Tompkins Street and having a frontage on Tompkins Street of 112 feet 2½ inches and 4205 130 feet 2½ inches along its southerly lines, and thence northerly 103 feet 3 inches, and thence easterly along 16th Street 84 feet 2 inches, I value that $35,500. Parcel D, situated at the northwesterly corner of Tompkins Street and 15th Street, consists of a plot having a frontage of 112 feet 2¼ inches on Tompkins Street, 120 feet 8 inches on 15th Street, 103 feet 3 inches in the rear, 80 feet 2½ inches on the northerly side. This I value at $36,500, which gives me the total of $123,500.

Q. Now take the block just south, this being Block 991, Lot 1. Does this diagram which was put in evidence, Exhibit 48, correspond with the tax map?

A. It does not.

Q. What difference is there?

A. The tax maps show the distance on the southerly side of 15th Street between Avenue D and Tompkins Street to be 268 feet 6 inches, and the map furnished me shows the distance to be 278 feet 7 inches. The tax maps show the distance on the northerly side of 14th Street, between Avenue D and Tompkins Street, to be 355 feet 10 inches, and the map furnished shows it to be 371 feet 1 inch. The distance on Avenue D agrees with the map furnished—the tax map and the furnished map agree——

By Mr. MATHEWSON:

Q. When you said that this exhibit did not agree with the tax map you referred to Block 991, Lot 1, didn't you?

A. That is the only one. There is, I think, just a very slight difference—yes, there is a slight difference.

Q. It is not material?

A. I think not, sir.

Q. What is the width of 15th Street?

A. Avenue D is about 60 feet wide, and 15th and 16th Streets are each 60 feet wide.

Q. To the curb?

A. The official street.

4206 Q. To the curb?

A. No, not to the curb; to the house line.

By Mr. PAGE:

Q. You have assumed the exhibit to be correct?

A. I have.

Q. And now you may give the value.

A. The value of this plot is $199,500.

Q. Now you may state how you arrived at that result.

A. I face the lots on 14th Street, 15th Street and Tompkins Street and on Avenue D. I value the northeast corner of 14th Street and Avenue D, 25 by 103 feet 3 inches, at $11,000, and the lot adjoining at $8,000; and eight lots east of those on 14th Street at $7,000 each; making $56,000. I value the southeast corner of Avenue D and 15th Street, being lot 25 by 100 feet 3 inches, at $8,500, and the adjoining lot at $6,500; and six lots east of those at $6,000 each; making $36,000. I value the northwest corner of Tompkins Street and 14th Street, being a plot 112 feet 1¼ inches by 84 feet 10 inches on its northerly line and 103 feet 3 inches on its westerly line, and 121 feet 1 inch along 14th Street, at $39,000. I value the southwest corner of Tompkins Street and 15th Street, being a plot 112 feet 1¼ inches on Tompkins Street and 78 feet 7 inches on 15th Street by 103 feet 3 inches on its westerly line, and about 124 feet 10 inches on its southerly line, at $34,500. This makes the total, as I stated before, of $199,500.

Q. Now, Block 988, there is nothing else on that, is there?

A. There is nothing else on that. Block 988, that is the entire block bounded by East 14th Street and East 15th Street, Avenues C and D.

Q. What valuation do you give to that?

A. $402,500.

Q. How do you arrive at that result?

4207 A. I faced the lots in this block on Avenue C, 14th and 15th Streets, and not on Avenue D, except the sides of the lots. I value the northeast corner of 14th Street and Avenue C, facing it on 14th Street, being lot 26 feet front by 103 feet 3 inches in depth, at $13,500; and the adjoining lot at $9,000; I value twenty-three lots to the east on 14th Street, each lot being 25 feet front by 103 feet 3 inches in depth, at the average value of $8,000 each, which gives me $184,000; I value the northwest corner of 14th Street and Avenue D, being a lot 25 feet by 103 feet 3 inches, at $11,000, and the lot adjoining at $8,500; I value the southeast corner of Avenue C and 15th Street, being a lot having a frontage of 28 feet 3 inches on Avenue C by 101 feet in depth, at $11,000, and the lot adjoining on Avenue C at $8,500, the two remaining lots at $8,000 each, making $16,000; I value 21 lots on 15th Street, each 25 feet front by 103 feet 3 inches in depth, at $6,000 each, which makes $126,000; I value the southwest corner of 15th Street and Avenue D, having a frontage of 25 feet on 15th Street and 103 feet 3 inches on Avenue D, at $8,500; the adjoining lot facing on 16th Street at $6,500. The total is, as stated before, $402,500.

Q. I understand you have faced all the plot that fronted on 14th Street—that is, all the front of the entire block on 14th Street?

A. I did, in preference to the avenue.

Q. And the 106 feet on the 15th Street and Avenue C, you faced on Avenue C?

A. I did so; yes, sir.

Q. You have taken into consideration the fact that all this property, blocks 982, 989, 991 and 988, are in common ownership in making your valuations?

A. I have.

Q. And you have added to the valuation on that account?

A. I have. I have given that a fair consideration.

4208 Q. Now, we will turn to Block 688, between the marginal street and Tenth Avenue, West 16th and West 17th Streets.

A. I have that, sir. Do you want me to give the dimensions?

Q. Yes, you might give the dimensions that you valued.

A. This block has a frontage on Tenth Avenue of 184 feet, on the marginal street 197.6 feet, on West 16th Street 286.20 feet and on West 17th Street 357.29 feet.

Q. What value did you place upon that?

A. $300,350.

Q. How did you arrive at that valuation?

A. I valued the two corners of Tenth Avenue at $17,000 each, $34,000.

Mr. Mathewson: Which way did you run those lots?

The Witness: Faced them on Tenth Avenue. I value each lot adjoining the corners at $13,000, which made $26,000; three other lots on Tenth Avenue at $12,500 each, which made $37,500; then there is a strip 9 feet by 100 feet to make up the total at the rate of $12,500 a lot, which is $4,500. I value four lots on the north side of West 16th Street at $9,500 each, total $38,000; four lots on the south side of West 17th Street at $9,500 each, making $38,000; and another lot on the south side of West 17th Street, 25 feet by 109 feet in depth in the rear of the marginal street lots, I value at $10,000; the northeast corner of the marginal street and 16th Street, being a lot 25 feet by 86.20 feet, I valued at $17,500; and the southeast corner of marginal street and 17th Street, being a lot 25 feet wide on the average, it is diagonal there, by 132.29 feet in depth on its longest side at $20,000; and five marginal street lots at an average of $14,000 each, they differ in depth, making $70,000; and
4209 the remaining strip, about 9 feet wide, at $4,850, which gave me my total of $300,350.

Q. You have, as I understand, laid these lots out for your own estimation of valuation?

A. I plotted the parcel, disregarding the present lot lines.

Q. You may take Block 689, lot 17.

A. Do you want the dimensions?

Q. That is the entire block?

A. The entire block.

Mr. Mathewson: As now existing?

The Witness: As now existing, yes, sir.

Q. West 17th to West 18th Street, Tenth Avenue and the marginal street?

A. Yes.

Q. You may proceed.

A. Do you want the dimensions?

Q. Yes, I think you had better give the dimensions to identify your valuation.

A. This is the entire block between Tenth Avenue, the marginal street, 17th and 18th Streets. It has a frontage of 184 feet on Tenth Avenue, 197.26 feet on the marginal street, 380.47 feet on West 17th Street and 451.55 feet on West 18th Street.

Q. What value did you place upon that?

A. $371,350.

Q. How did you arrive at that valuation?

A. I valued the two corners at Tenth Avenue at $17,000, making $30,000; the two lots adjoining the corners at $13,000 each, $26,000; three other lots on Tenth Avenue at $12,500 each made $37,500; one lot 9 feet wide, that is, a strip 9 feet wide by 100 feet in depth, at the rate of $12,500, $4,500; I valued eight lots on 17th Street, 25 feet front by 92 feet in depth, at $9,500 each, which made $76,000; eight lots on 18th Street, each 25 feet front by 92 feet in depth, at $9,500 each, $76,000; one lot on 18th Street in the rear of the marginal street lots, 25 feet front by 109 feet in depth, at $10,000. I valued
4210 the northeasterly corner of the marginal street and 17th
Street, the lot on the square, about 25 feet average width and longer along the street, because there is an angle there, and a depth of 80.47 feet, at $17,000; the southeast corner of the marginal street and 18th Street, being a lot 25 feet wide on the average and a little longer on the marginal street front because it is an angle, and 136.55 feet in depth, at $25,000. I valued five other lots on the marginal street at an average of $13,100 each, making $65,500, and the remaining strip, 9 feet wide, at $4,850, giving me my total of $371,350.

Q. Now, take Block 690, lot 12.

A. Block 690, lot 12. This is an irregular shaped piece of property, but it comprises nearly all the block bounded by Tenth Avenue, marginal street, West 18th and West 19th Streets, excepting about 145.82 feet on 19th Street, and that distance is not continuous; there are parcels out of it, parcels out of the 19th Street front.

Q. As shown on Exhibit 48?

Mr. MATHEWSON: 125 feet, all told.

The WITNESS: No, I make it more than that; I make it 145 feet, because there is 20 feet on the corner; there is a little bit of a strip there on the corner.

Mr. MATHEWSON: Yes, quite right.

Q. Well, there are two parcels of 50 feet each that are out and one of 25 feet, and the corner, 20 feet 8 inches?

A. Yes, the corner, 20.82 feet, the corner of the marginal street and West 19th Street.

Q. What valuation did you place upon this property?

A. I valued that property at $386,350.

4211 Q. Now, you may proceed to give the method of arriving at this valuation.

A. I valued the two corners on Tenth Avenue at $17,000 each, making $34,000; two lots on Tenth Avenue adjoining the corners at $13,000, making $26,000; three lots on Tenth Avenue at $12,500, making $37,500, and the remaining 9 feet on Tenth Avenue at the rate of $12,500 a lot, which would be $4,500. I valued eleven lots on 18th Street at $9,500 each, $104,500; eight lots on 19th Street at $9,500, making $76,000; I valued the northeasterly corner of the marginal street and 18th Street at $17,000, and the southeast corner of the marginal street and 19th Street at $20,000. That is, including this little piece, which I afterwards deduct. I value five lots on marginal street at an average of $13,100, $65,500, and a strip 9 feet on the marginal street, $4,800, gives me a total of $389,850, from which I deduct $3,500, because the lot on the southeasterly corner of the marginal street and 19th Street has a piece of front out, which gives me my total of $386,350.

Q. Block 691.

A. Block 691, Lot 11. I valued that at $146,850.

Q. How did you arrive at that result?

A. Northeasterly corner of marginal street and 19th Street, $17,000; southeasterly corner at $21,000; I valued the lot adjoining the northeasterly corner of 19th Street at $13,000 and the lot adjoining the southeast corner of 20th Street at $15,000 and the next lot south of that at $13,000; next lot south of that at $13,500; and the strip 9 feet in width I valued at—there is a little difference there—I want to correct it—I shall have to correct my total, too—at $4,500; next lot south at $12,500, one lot on 19th Street at $9,500 and three lots on 20th, one at $9,500, one at $10,000, one at $8,000, making $27,500, that is $142,350, in place of what I stated before.

4212 Q. In place of $146,850?

A. Yes.

Q. Block 666, Lot 3?

A. Block 666, Lot 3 and Lot 12, I have placed no value on those because I assume from the information that I have that the title to this land is vested in the city; the lots do not now appear on the tax map.

By Mr. **Mathewson**:

Q. You have made no estimate of what the value was before they were taken by the city?

A. They were taken off the tax maps in November, 1904.

Q. But I say you have made no estimate of what their value was before they were taken off?

A. I cannot see them, only on the map.

Q. No, I suppose not?

A. I have made no estimate.

By Mr. **Page**:

Q. The next is Block 716, Lot 14?

A. This is a parcel having a frontage of 75 feet on the northerly side of West 18th Street and a depth of 92 feet; the parcel is 275 feet east of Tenth Avenue. I valued it at $36,000.

Q. That is the land without the buildings?

A. Yes.

Q. How did you arrive at that?

A. Three lots, each 25 by 92 feet, $12,000 each.

Q. What kind of a building was on there, have you noted that at all?

A. I have not it noted here; I have it in my notes taken at the time I went over the ground; I have only the land here.

Mr. **Mathewson**: I understand this witness in all his testimony regards the land only and does not take into consideration the buildings.

The WITNESS: I have not taken into consideration any buildings.

4213 Q. On Block 766, Lots 3 and 12, being two blocks, you find that the tax maps have been corrected by eliminating them, do you?

A. The tax maps have been corrected by the surveyor of the Tax Department, making a note on the official tax map, showing that they were taken, and the date is mentioned when he made his correction on the map.

Q. And what date was that?

A. November, 1904. That is always done on receipt of a letter from the Corporation Counsel.

By Mr. MATHEWSON:

Q. You did not observe any note that they had not been paid for, did you?

A. No, sir.

By Mr. PAGE:

Q. Block 715, Lots 51 to 59?

A. Block 715, is Lots 51 and 59, I have it.

Q. Well?

A. These two numbers combined show a parcel 225 feet front on the southerly side of West 18th Street, 150 feet east of Tenth Avenue. They are divided that way, but it is 225 feet.

Q. What value did you place upon this?

A. $108,000.

Q. And how did you arrive at that valuation?

A. Nine lots frontage, at $12,000 a lot.

Q. Block 951, Lot No. 35?

A. That is a parcel situated on the south side of East 20th Street, 94 feet west of Avenue A. It is a parcel having a frontage of 176 feet on the street and a depth of 92 feet. My value for that is $52,000.

Q. How do you arrive at that value?

A. I valued it at the rate of $7,500 a lot, or $300 a front foot.

Q. We will take Block 952, Lots 7, 29, 30, 33, 34 and 35. What was the total of your valuation?

A. $333,800.

4214 Q. Now you may give your method of arriving at that result?

A. The property consists of nearly the entire block between First Avenue, Avenue A, 20th Street and 21st Street, except a strip 96 feet wide on each street, and a frontage of 184 feet on First Avenue. The First Avenue front is out. I valued two corners on Avenue A, 25 x 100 feet, at $28,000; those lots are 25 feet front by 100 feet in depth. Two lots next the corners, at $11,000 each, $22,000; three lots facing on Avenue A, at $10,000, making $30,000; the remaining 9 feet by 100 feet at the rate of $9,500 a lot, $3,600; sixteen lots on East 20th Street at $7,500, and the remaining 17 feet on East 20th Street at the rate of $7,500, $5,100; sixteen lots on East 21st Street at $7,500 a lot, $120,000; the remaining 17 feet on East 21st Street at the rate of $7,500 a lot, $5,100, which gives me a total of $333,800.

Q. Take Block 953, Lot L.

A. 953, Lot 1——

Q. That is the entire block?

A. That is the entire block bounded by First Avenue, Avenue A, 21st Street and 22d Street. I valued that block at $435,700.

Q. How do you arrive at that result?

A. I valued the two corners on First Avenue at $16,000 each, $32,000; two lots next the corners at $12,000, $24,000; three lots on First Avenue at $11,000 each, $33,000 each; lots 22 feet 6 inches by 100 feet on First Avenue at the rate of $11,000, $9,900; the two corners on Avenue A, at $14,000 each, $28,000 two lots next the corners, at $11,000 each, $22,000; three lots at $10,000 each, $30,000; lot 22 feet 6 inches by 100 feet, at the rate of $10,000, $9,000; sixteen lots on 21st Street, at the rate of $7,500 a lot, $120,000; the remaining 13 feet by 98 feet 9 inches on East 21st Street at the rate of $7,500 a lot, $3,900; sixteen lots on East 22d Street, at the rate of $7,500 a lot, $120,000; strip 13 feet front on 22d Street, at the rate of $7,500 a lot, $3,900, making the total of $435,700.

4215 Q. Block 979, Lot 1.

A. Block 979, Lot 1: I have assumed that to be the entire block between Avenue A, marginal street, East 21st and East 22d Streets.

(Question withdrawn.)

Mr. **Page**: We seem to have reached our limit with this witness at present. He says he can get ready and finish to-morrow morning Mr. Burr had expected to have some witnesses to-day, but they are not ready.

Mr. **Mathewson**: I shall ask that some witness be called, Mr. Master.

Mr. **Burr**: Then I shall ask you, Mr. Mathewson, can you produce Mr. Carter? I can use him on further cross-examination this afternoon.

Mr. **Mathewson**: Hardly on cross-examination. You are in your own case. Mr. Carter's cross-examination is finished.

Mr. **Burr**: No, the idea was if we wanted any further cross-examination it must be at the expense of our own time, and I want to examine Mr. Carter with regard to the franchises regarding which he gave some testimony in response to your questions. I wish to examine him also with regard to certain complaints which he signed, and as to what those complaints contained. The complaints I refer to being applications or actions in proceedings to have the assessment upon special franchises reduced, &c.

Mr. **Mathewson**: I don't know what the proposition is, but our case is closed and if Mr. Burr wishes to present testimony in his case, why, I presume he can do so.

Mr. **Burr**: I think the understanding was that we might have any time desired as long as we consumed our own time, and that 4216 we could have either Mr. Bradley, Mr. Simpson or Mr. Carter for further cross-examination.

Mr. Mathewson: On the contrary, before we closed our case, and when you were finishing on cross-examination, I think the Master suggested that further cross-examination might come out of your own time. Our case is closed. There is no witness under cross-examination—not by you—there may be by me.

Mr. Burr: I know, but you remember we were compelled to allow you to finish without interruption. That was the order of the Court and the idea was if we needed further cross-examination it must come out of our time.

The Master: Unless you show some stipulation or understanding on the record that the cross-examination of any of those witnesses was left unfinished you will have to call Mr. Carter as your own witness. No doubt the other side will produce him without subpœna.

Mr. Burr: Yes. Well, will you produce Mr. Carter this afternoon?

Mr. Mathewson: If you wish Mr. Carter and call him as your witness I imagine he will appear, but I think he would like to know what you are going to examine him on.

Mr. Burr: I have stated it—regarding what he knows respecting the valuation of the franchises.

The Master: Have you anybody else you can produce now with whom to fill up the time?

Mr. Page: No.

Mr. Burr: I want to say that Mr. Freidman of our office is in negotiation with Mr. Beets of Sherman & Sterling for the purpose of simplifying the production of evidence regarding the title to the marginal streets, and it will save an immense amount of documentary 4217 evidence and so forth if they can succeed in arriving at a stipulation which will be mutually satisfactory. Mr. Friedman is a very sick man and can only spend half a day in our office daily, and I am doing this as well as I possibly can through him, in this regard: He was here this morning and said he would have the whole matter in shape to-morrow morning. I expect it would be in shape this afternoon, but if Mr. Mathewson will produce Mr. Carter this afternoon I will consume as much of the time as may be necessary in the examination of Mr. Carter with regard to this particular matter of franchises and——

The Master: Will that close your case, Mr. Burr?

Mr. Burr: Oh, no.

The Master: In view of this application and Mr. Burr's apparent surprise that the close of his case should be regarded as near, I want to state, having in mind the last extension, which was until December 10th, that except for some very cogent cause shown, which I do not now anticipate, I shall decline personally to certify to the necessity of any further extension of time after that date.

Mr. Burr: We have subpœnaed various officials of the Consolidated Gas Company and expected them here to-day, our accountants are getting their report, our engineers are ready to continue their examination of the plants and report upon the value of the same. All of that takes time. We have been working night and day to hasten the completion of this case, and are just as anxious as counsel on the other side or the Master to bring it to a speedy completion, but there is a limit to human endurance and I do not think 4218 we can be accused of laches or neglect in prosecuting the defense of this case.

Mr. MATHEWSON: Do I understand neither Mr. Marks nor Mr. Lacombe have yet been up to the plant?

Mr. BURR: Mr. Marks, since you ask the question, and Mr. Lacombe, have made a visit to the plants, which I was writing you about for the past two weeks, to enable them to pass upon certain vouchers, and that enabled them on last Saturday to pass upon those vouchers. The passing of the engineers upon these vouchers necessitated the accountants to go all back over their accounts, so that they were not able to present their accounts to-day as I expected. They are working at it and will have it out in a few days. Now they are asking to go through the plants with an inventory such as was supplied, for the purpose of putting a valuation upon each particular piece of apparatus and coming here and testifying what in their opinion is a fair and reasonable valuation of each piece of apparatus, including the holders and plants of the Consolidated Gas Company.

Mr. MATHEWSON: I would like to say that the Master knows that when the engineers had permission to go to the works, and they have been there ever since all they cared to; and now to have the accountants held up and have the valuation of plants held up because two witnesses want to go to work now and value the different pieces of apparatus, which is an utter impossibility, of course, in the time at their disposal, is not just, and I do not think it is proper. It is a delay that we should not be subjected to. These accountants were expected to complete their work and be ready to proceed 4219 long ago, and they could have been if they had conducted the thing with discretion and proper consideration, I think. I shall certainly object to suspending this proceeding for the purpose of further investigations by the accountants or further valuations by the engineers.

Mr. PAGE: I, of course, expected the Gas Company would take such an attitude. The counsel for the Consolidated Gas Company knows very well the reason why Mr. Hough was not called as a witness, that after having made the examination he refused to give us the valuations that we desired, because of an evident friendliness to the complainant in this action.

Mr. MATHEWSON: Do you want to say that?

Mr. PAGE: I do. If you are going to make these statements I will make mine.

Mr. MATHEWSON: I have made no such statement.

Mr. PAGE: I know you have not made any such statement but I am making mine. Of course I do not know what has influenced him to take the position which he did, which took me entirely by surprise and has rendered it necessary to get other engineers on the work. We met the same trouble in securing real estate experts, that after having secured them and they having retained our papers for some time they returned them stating that they did not wish to testify as against the Consolidated Gas Company.

Mr. Mathewson: I know nothing about that. I know nothing about Mr. Hough or the reasons why he does not testify, nor does the complainant. Nor as to any of these real estate experts. But what is the matter with the accountants? Why cannot they go 4220 on? They are not valuing anything. They have been at the books there for six weeks or such matter; they must have been able to find out whether Exhibit 94 represents actual disbursements or not. Then it is a question, if there are any items to be objected to by way of argument, whether they are allowable in the cost of gas or not. I cannot see any reason for holding that up.

The Master: You remember counsel thought it would not take them thirty days to put in their entire case on the defense originally.

Mr. Burr: They will explain the delay when they present their report, which will be in a few days.

Mr. Mathewson: When I object to the time and the adjournments I object to it not because this company has any desire, and I do not think they have evinced any desire, to treat this situation unfairly; but we are suffering, we are suffering delay, we are suffering great loss and embarrassment by reason of this case being unclosed; other suits are being brought against us by the dozen—mandamuses and injunctions. We are being embarrassed and put to expense in innumerable ways that it is difficult for the Master or other counsel to appreciate. They could not appreciate fully without our taking any amount of time to make it clear.

The Master: All I can say, gentlemen, is that I am at your disposal at any time or at any hour.

Mr. Page: I apply now for an adjournment until to-morrow morning.

The Master: I have always been anxious to prosecute this case Saturdays and any other time that would tend to get it out 4221 of the way. I do not know anything about what the effect on the Gas Company is, but the instructions of the Court to speed the case were explicit, and it is not only a question of my personal convenience and my other business, but I think it must affect all counsel in the case alike. I cannot see any reason why instead of trying to waste time apparently, we should not be solicitous of saving it.

Mr. Burr: I must take exception to the statement of the Master that we are trying to waste time apparently, because I know to the contrary. We have been trying to hasten the conclusion of this case as much as any men can possibly desire or attempt.

The Master: Well now, you will go on at two o'clock, will you, Mr. Burr?

Mr. Burr: If Mr. Mathewson will have Mr. Carter here.

Mr. Mathewson: I cannot produce him. I will tell him you desire him as your own witness on some franchise matters and I imagine he will come.

Counsel now arrange by telephone to have Mr. Carter present at 2:15 P. M. to-day.

At 1:00 P. M. adjourned to 2:15 P. M.

4222 After Recess.

Robert A. Carter, called as a witness in behalf of the defendant, the City of New York, testified as follows:

Direct examination by Mr. Burr:

Q. (Handing paper.) Mr. Carter, I show you this paper and ask you if that is your signature appearing on page 10 and again on page 11?
A. Yes, sir.
Q. This paper to which your signature is attached on the pages named is the complaint in the matter of assessment and valuation for taxation of the special franchises of the Consolidated Gas Company before the State Board of Tax Commissioners, is it not?
A. Yes, sir.
Q. For what year?
A. For the year 1905, apparently. It might be well to confirm that.
Q. Verified the 20th day of March, 1905. This action was brought to have modified or set aside the assessment for the year 1905, was it not?
A. I presume it was an application for the reduction of the assessment, Mr. Burr, that is my understanding of it.

Mr. Burr: I will hand it to Mr. Mathewson, so that he may see that that is exactly what it is.
Mr. Mathewson: I think that is generally correct.
Mr. Burr: There can be no doubt that this is the complaint in the proceedings brought by the Consolidated Gas Company to have reduced the assessment of 1905, placed by the State Board of Tax Commissioners upon the special franchises.
The Master: Well, does it not show on its face what it is?
4223 Mr. Burr: Well, there was some doubt about it, and I showed it to Mr. Mathewson.
Mr. Mathewson: Mr. Carter knows more about it than I do.
Mr. Burr: I ask to have it marked for identification.
Paper marked for identification City's Exhibit 64.

Q. (Handing paper.) Look at this paper which I hand you and be good enough to say whether the signature there is your signature?
A. Yes, sir.
Q. You signed this paper on behalf of the Consolidated Gas Company?
A. Yes, sir.
Q. As appears at folio 24, and you verified it as appears by the last page?
A. Yes, sir.
Q. This is the complaint in the proceeding before the State Board of Tax Commissioners to have the assessment of 1906 reduced, is it not?
A. Yes, sir.

Mr. Mathewson: What was the date of the verification of that?

Q. The date of the verification appears to be the 26th day of March, 1906. Is that correct, Mr. Carter?

A. Yes, sir.

Mr. **Burr**: I ask to have paper marked for identification

Paper marked City's Exhibit No. 65 for identification.

Q. In the 1905 complaint, City's Exhibit 64 for identification you say "the value of complainant's special franchises in the City of New York does not exceed the sum of $4,261,156; the excess of the said over-valuation is therefore $26,238,844." Will you explain, if you please, how you arrived at those figures?

4224 *The* **Mathewson**: The petition, I think, Mr. Master, shows exactly what the argument was, and the basis upon which that estimate of the witness, so far as it was the witness's estimate, if at all, was reached. It seems to me the paper itself is the best evidence of that, if it is pertinent evidence at all.

Mr. **Burr**: We are entitled to know the facts upon which Mr. Carter based that assertion in this sworn paper.

Mr. **Mathewson**: But the paper——

The **Master**: The paper is not in evidence.

Mr. **Mathewson**: The law provides itself that you shall set forth in the petition, your grounds, and they are there set forth, and the question now is, what are the grounds. I say the paper itself shows.

Mr. **Burr**: I ask him if it is not a fact that in this paper he did make the statement I have given, that is that the value of the complainant's special franchises in the City of New York does not exceed the sum of $4,261,156, and I asked him upon what he bases that statement.

The **Master**: Well, did he say that he did make that statement in the paper?

Mr. **Burr**: Yes.

Mr. **Mathewson**: That is the petition of the company merely verified, as is any pleading, by an officer of the corporation.

Mr. **Burr**: Won't you let Mr. Carter do some testifying. We can get along much faster.

Mr. **Mathewson**: That is not testifying. I am merely calling attention to the fact that it is not Mr. Carter's petition. It is the company's.

The **Master**: You may answer it, Mr. Carter.

Mr. **Mathewson**: Exception.

4225 A. I should not like to testify offhand as to how those figures were reached, without having some opportunity to consult whatever original data or memoranda there may be available in connection with this complaint. I think that the amount named is approximately the value of the tangible property—I will correct that—the valuation placed upon the tangible property in the report to the State Board, based upon the cost of reproduction, less depreciation for the purposes of taxation.

Q. I call your attention to a statement in the verification signed by you to this paper: "Deponent has been continuously engaged in the gas business since the year 1877, having been employed by the

Consolidated Gas Company and one of its predecessor corporations in various capacities from that of junior clerk to that of general accountant; and deponent has also been for several years connected with the Consolidated Gas Company in an official capacity, having served that company as comptroller and as secretary. Deponent is thoroughly familiar with the gas business in the City of New York and especially in the Borough of Manhattan in said city. Deponent knows the extent and nature of the special franchises possessed by the Consolidated Gas Company and by all the other gas companies operating and doing business in the Borough of Manhattan and is familiar with the business and operation of all said companies. Deponent has made a careful and thorough study of all details of the gas business and is familiar with the intrinsic and relative value of the special franchises possessed by the different gas companies in the Borough of Manhattan in said city." That is a correct extract from your verification, is it not?

A. Yes.

4226 Q. And that was true at the time you swore to it?

A. Yes.

Q. And it is true now, is it not?

A. It is true now I believe.

Q. Well, have you any recollection as to how you arrived at that figure, Mr. Carter?

A. No recollection as to those specific figures, Mr. Burr; some recollection as to the general theory upon which that amount was stated; as advised by counsel, that this property and all other property that the company might own for the purpose of taxation possessed a value such as they would bring if sold under ordinary circumstances, and my impression is and my recollection is that counsel advised us that if sold under ordinary circumstances, the franchises, however valuable they might be to the Consolidated Gas Company as a going concern, would have some such value as its plant would have if scrapped—practically none.

Q. Did you arrive at it by taking the original amount fixed in 1884 as you have testified heretofore, for the complainant, $7,781,000, and allowing for depreciation from that amount—did you in other words, by allowing for depreciation on the original valuation fixed upon these franchises in 1884, arrive at the figure $4,261,156?

A. I am not aware that that was done, Mr. Burr. I have no recollection that that method was pursued at all. In fact, I think I can testify very plainly that it was not.

Q. You stated in this complaint further: "There is no method or evidence by which the value of the intangible right to lay and maintain mains and pipes in the streets can be determined. There exists no market or demand for such right, permissions and franchises. The price at which complainant's franchise or rights would sell under ordinary circumstances is merely nominal. The municipal authorities of the City of New York have never fixed any amount as the consideration for granting such a franchise, and the right to lay mains and pipes in the streets has always been procurable from said municipal authorities without the payment of any monetary consideration therefor. The number of said 4227 franchises which may exist at any time have never been limited by said municipal authorities. The value of said right to occupy the streets does not exceed the cost of procuring such a right from the city and that cost is nominal." Is that a correct extract from this sworn complaint, and did you so state?

A. Yes, sir.

Q. Was it true then, and is it true now to the best of your knowledge, information and belief?

A. For the purposes of that statement, I have no reason to change it.

Q. Well, it was true when you swore to it, was it not, Mr. Carter?

A. Yes, sir.

Q. And it is true to-day?

A. True to-day, with this diefference, I think you will find a difference between that and the next application for a reduction, Mr. Burr.

Q. We will come to that.

Mr. **Mathewson**: In City's Exhibit 65 for identification?

The **Witness**: City's Exhibit 65 for identification, we recognized the fact that the Supreme Court of the United States confirmed a valuation——

Mr. **Burr**: I move to have that striken out. Mr. Mathewson is not examining the witness.

Mr. **Mathewson**: You asked him whether it was true or not, and he said it was with this modification. Can you let him finish it?

The **Witness**: I must modify it with respect to such modification as appears in our next application. 4228

Q. I will ask you about the next application when the time comes, but what I ask you now is whether that specific statement was true when you swore to it and whether it is true now?

A. It is true now except with the modification that appears in the next application by the company for the valuation of its special franchises.

Q. In other words, you would be understood as saying it was true then and is true now subject to some modification that you made in some subsequent paper that was subsequently sworn to by you?

A. Exactly.

Q. Have you any data in your custody or under your control showing the manner in which you arrived at this figure of $4,261,156?

A. I am not aware whether I have or not or whether that figure may have been reached by counsel, having before him whatever facts were available; and having arrived at the figure, why, I naturally would accept his conclusions in subscribing to that document.

Q. But I understood you to say in your sworn verification that you yourself were entirely familiar with the valuation of the special franchises and that they are correct and full and so forth?

A. As I have already stated, where advised by counsel that there is one valuation of property that is owned and operated by a going concern and there is another value of property which it would bring if sold under ordinary conditions and circumstances, and that it is the latter value that is generally supposed to be its value for the purposes of taxation.

Q. Well, you say that you believe, you are not certain, but that you think you arrived at that figure, $4,261,156, as the result of consultation with counsel?

A. Why, most decidedly, it was by consultation with counsel, because we——

4229 Q. I understood Mr. Mathewson to say he knew nothing about this matter and disavowed any connection with it a moment ago?

A. Mr. Mathewson was never counsel for the company in any of these special franchise proceedings.

Q. Then you refer to other counsel?

A. Yes, sir, I refer to other counsel.

Q. Can you give me the names of such counsel?

A. Yes, sir; Boardman, Platt and Soley were our counsel in these proceedings.

Q. You have no independent recollection at this moment of how you arrived at that $4,000,000?

A. No, I have not, Mr. Burr.

Q. Can you say positively that it was the result of consultation with counsel that that figure was fixed?

A. Positively, yes.

Q. Do you recall the particular time and place where the amount was agreed upon?

A. Are you referring now to 1905?

Q. I am referring now to 1905.

A. Well, as I always have had interviews with counsel in that case in the office of counsel, it could only have been there.

Q. And what is your best recollection—that you suggested the amount or that they suggested the amount?

A. Absolutely, that they suggested it.

Q. They suggested it and you swore to it?

A. That is the case.

Q. The assessment fixed in 1905 was $30,500,000, was it not? That was the assessment which you sought to have reduced by this proceding to which I have referred and in which this is the complaint, referring to City's Exhibit 64 for identification?

A. My recollection is that that was, Mr. Burr, the tentative assessment.

Q. Here it is right here (indicating).

A. Well, of course, I assume that that is right, that that is the tentative assessment.

4230 Q. $30,500,000?

A. Yes, sir.

Q. And you claim that that was an over-valuation by $26,238,844?

A. That is the amount stated in the complaint.

Q. As being the over-valuation?

A. As being the over-valuation.

Q. Now, the amount of the tax for 1906 as appears by this complaint, City's Exhibit 65 for identification, was $31,900,000; is that a fact?

A. That is the case, yes, sir.

Q. And the company claimed that that assessment was erroneous and illegal, did it not?

A. Well, as to the terms, I cannot subscribe to that exactly. It was an application, I understand, for a reduction of the assessment and certain allegations.

Q. Well, this was the complaint?

A. If that will show me the terms "erroneous and illegal" I will tell you whether the document states it.

Q. Exhibit 65 was the complaint in the proceeding to compel a reduction of that tax of $31,900,000, was it not?

A. I think not to compel a reduction. I think it was an application for a reduction and I do not think it could be compelled by any such application.

Q. Well, was not this an action to have the tax declared illegal, erroneous and unequal.

Mr. MATHEWSON: Merely a petition filed with the State Commission.

Q. Well, a petition—a proceeding; I should not have said action. This is the language, is it not, "erroneous, unequal and illegal"?

A. That is the case, yes, sir.

Q. And in the verfication to this complaint you made the same statement with regard to your familiarity with the gas business and the value of special franchises and the fact that you had 4231 made a careful and thorough study of all the details of the gas values and you were familiar with the intrinsic and relative values of special franchises possessed by the Gas Company in the City of New York and the different boroughs of such city, as you did in the other complaint to which I have referred and from which I have quoted specifically; that is true, is it not?

A. That is the case, yes, sir.

Q. Now, in the complaint in the proceeding regrading the assessment of 1906, you say:

"The said assessment of $31,900,000 largely exceeds the value of complainant's special franchises. The true value of complainant's franchises in the City of New York and the amount for which same would sell under ordinary circumstances does not exceed the sum of $14,000,000. The extent of the said over-valuation is $17,900.000."

Upon what basis did you fix the sum for this year at $14,000,000?

A. That was the amount of an assessment, I think the first assessment against the company's special franchises which had been confirmed by the Supreme Court of the United States for approximately that amount.

Q. You think that the Supreme Court of the United States meanwhile, between the first complaint and the second complaint, between Exhibit 64 for identification and Exhibit 65 for identification, had fixed the sum of $14,000,000 as a proper tax on your special franchises, do you?

A. Not exactly $14,000,000. $13,900,000, if my memory serves me.

Q. Do you know or can you state offhand what was the amount of the special franchise for 1905 as fixed finally?

A. To the best of my recollection it was $27,300,000.

4232 Q. In the complaint, Exhibit 64 for identification, you state:

"If the value of the tangible property in the streets, $4,261,156 is deducted from the amount of the assessment, the assessment upon the intangible element of the special franchises alone is $8,599 for each cubic foot of space occupied by the mains and pipes of the complainant in the streets of said city."

Was that true at the time, or did you believe it to be true?

A. Just a calculation. It must have been true. I did not make the figures myself, but I assume they were correctly made.

Q. Well, your idea was, and the understanding at the time you swore to this paper was, that $4,261,156 represented the value of the tangible property in the streets?

A. No. It was a valuation placed upon the tangible property in the streets assuming certain conditions in the laying of the mains and certain depreciation in value as indicated by the report to the State Board of Tax Commissioners.

Q. And that is the idea you had in mind when you swore in paragraph first of this complaint, Exhibit 64 for identification:

"The value of complainant's special franchises in the City of New York does not exceed $4,261,156."

A. I assume that to be the case, especially if those figures agree.

Q. Now, for the year 1906 how much of the $14,000,000 which you say is the true value of complainant's special franchises in the City of New York, how much of that $14,000,000 was embraced in the tangible property or represented by the tangible property in the street?

A. I don't know.

4233 Q. Well, do you know whether a different theory was adopted in making up the petition of 1906 from that adopted in making up the petition for 1905?

A. Only such differences as the complaint itself would indicate.

Q. In 1905 the $4,261,156 which you stated was the value of the tangible property in the streets was claimed by you to be the value of the special franchises. Now I ask you in 1906 where you say that $14,000,000 is the proper or true value of complainant's special franchises, what part of that $14,000,000 is made up of the tangible property in the streets?

A. There is no separation of it in the complaint, and I would have no information other than was contained in the complaint regarding the complaint, Mr. Burr.

Q. Have you any independent recollection as to how you arrived at the $14,000,000?

A. I have already testified that the $14,000,000 was almost exactly the value of the special franchises, including the tangible property in the streets, which had been confirmed by the Supreme Court of the United States.

Q. But you have no independent recollection of how much of that $14,000,000 was represented by the tangible property in the streets?

A. The Supreme Court of the United States never indicated it.

Q. You are familiar, I suppose, with the decision?

A. I am familiar enough with it to know that.

Q. But you know that in that assessment of $14,000,000 which you claimed was correct, the tangible property in the streets was embraced?

A. That is my understanding.

Q. Do you remember verifying, Mr. Carter, a petition dated July
15th, 1903, for the purpose of obtaining a writ of certiorari
4234 to review the assessment made by the State Board of Tax
Commissioners of the State of New York for the year 1903
against the Consolidated Gas Company?

A. No, sir, I do not recall the incident, but I can identify my signature if it is on the paper, Mr. Burr.

Q. Well, I only have the copy. Wouldn't you from the copy?

A. No, sir, that is not my signature.

Q. That is a copy of the original, that is the only paper I have at present. Would that not refresh your recollection?

A. No, it would not.

Q. This is a copy served upon the State Board of Tax Commissioners as appears by the admission of service of the Clerk of the State Board. If there is any doubt about it I will have the original produced. You must have the original, I suppose, or must have it on file. That is the copy that was filed and served on the Board.

Mr. Mathewson: I have no reason to doubt that this — a copy, Mr. Burr. I am utterly unfamiliar with it myself, and that is the most I can say.

Mr. Burr: I will have it marked for identification.

Paper marked for identification City's Exhibit 66.

Mr. Mathewson: I have no objection to your questioning the witness on it, subject to verification later, if you wish.

Mr. Burr: Yes, subject to comparison and confirmation later.

Q. Did you in pursuance to Section 43 of the Tax Law of the
State, and within 30 days after the said section took effect, make a
written report to the State Board of Tax Commissioners as to each
of the special franchises owned by your company, and as to
4235 all matters required by said section to be reported to the said
State Board, as appears in this paper or petition to which I
have referred and which has been marked for identification City's
Exhibit 66?

A. I assume that this paragraph refers to some prior similar report made in some previous years. As I did not make the report and have not it before me I cannot possibly testify positively of my own knowledge as to what was done, but I presume that the law was complied with and that the report covered those points.

Q. But if you signed this petition at the time which this copy purports to have been signed and verified by you, that is, on July 15th, 1903, the statements there contained in it were true at that time and they are true now?

A. I have no doubt of it. I of course have no knowledge of that particular paper which you have there. It purports to be a copy of a document that I have seen, but of course I have no knowledge that it is.

Q. But if this statement to which I have called your attention appears in the original statement sworn to by you, that was a true and correct statement at the time and is true and correct now, is it not?

A. Yes, sir.

Q. If you in such petition made this statement:

"Your petitioner further shows that in said reports and supplemental reports made as aforesaid your petitioner duly reported to the said State Board that the tangible property included in the special franchises consisted of pipes and mains laid under said streets, highways and public places, and the value thereof based upon the cost of reproducing the same as required by said State Board."

Was that a true statement at the time you made it?

4236 A. If there was such a statement in the document signed by me, was it true?

A. Unquestionably, except, Mr. Burr, that may have been modified in testimony on the stand. I think now, particularly with respect to the cost of services, that I have testified myself that there was some mistake made in arriving at that value and that it was an error and in that respect I would say that the statement would be subject to such modification.

Q. Further, you said, that:

"Such assessment is erroneous by reason of over-valuation and the extent of such over-valuation is $13,972,743."

Do you recall the fact that you made such statement?

A. I do not recall it, Mr. Burr.

Q. Do you recall that you made any such statement as that, independent of this paper?

A. I unquestionably made some statement, but as to the figures named in it I haven't the faintest recollection in the world.

The Master: I do not quite understand the object of all this. I do not quite see, Mr. Burr, on what theory you call this witness and ask him whether statements made in written documents, which he admits were signed by him, were true. Why do you not put the documents in evidence and have done with it? It seems to me it is an unnecessary waste of time. I suppose that you want to show that the witness, acting on behalf of this complainant, has made statements which conflict with other evidence in the case. Why is not the best way to show that by putting the documents in evidence?

Mr. Burr: They are rather bulky.

4237 The Master: Well, it is taking up twice as much time as is necessary to put it in in any other way.

Mr. Burr: I wanted the witness's particular attention drawn to some statements in these documents, without offering the whole document in evidence, as I deemed the introduction of the whole document was unnecessary. He has placed values on the special franchises in these various petitions and complaints, and I was anxious to ascertain the basis on which he arrived at those figures.

Q. Now, the assessment tax placed by the State Board for the year 1903 was the sum of $17,985,000, was it not?

A. You cannot say that it was or was not from that document. I presume it was. My recollection was that it was approximately that amount, but I should want some other data to testify from than that document.

Q. Did you not state in this document:

"Your petitioner further shows that thereafter and on or about the third day of March, 1903, the said State Board still claiming to act pursuant to the tax law of the State and still claiming that the said pipes of your petitioner and the right, permissions and franchises to construct, maintain and use the same were subject to assessment in the City of New York, finally determined the value of said franchises to be the sum of $17,985,000, and on or about March 3, 1905, filed with the Department of Taxes and Assessments in the City of New York a written statement of such valuation as finally fixed and determined by said State Board and duly verified by the Secretary thereof, and at or about the same time gave notice in writing to your petitioner that such written statement had

4238 been filed with the clerk of the City of New York.

Now, if said statement appears in the original of this petition of which I have shown you a copy, was that a true statement?

A. And bearing my signature?

Q. Yes.

A. Yes, sir, unquestionably.

Q. What I want to arrive at and ask you to explain is how you arrived at the sum of $13,972,743 as being the excess over the true value when the valuation had been placed as I have stated and read from this paper at $17,985,000, the difference apparently being $4,012,257?

A. Well, without some data before me I could not testify as to how we arrived at that difference.

Q. Can you procure the data upon which you have computed these various valuations as I have called them to your attention?

A. Well, if they were made by counsel I can ask counsel for them and possibly procure them.

Mr. MATHEWSON: We doubt very much if they would be preserved. I do not know, but I do not believe now that we could tell just how that was made up.

Mr. BURR: I would like to know as a matter of fact and I think the Master would also like to know upon what basis these valuations varying from year to year were made up; also as to the data, whether it is destroyed, or no longer in existence, and whether there is anyone who can explain the basis or theory by which such valuations were arrived at.

Mr. MATHEWSON: The witness on the stand explained how one was arrived at. I suppose the same answer would apply in each case.

4239 The WITNESS: I think it would, Mr. Mathewson. I would say that the same theory applied in each case and that the same figures were used as the actual value for the purposes of taxation of the tangible property, that is, approximately the same figures, and in the year to which Mr. Burr is now referring it is probably the amount he names, but he is using a document not having my signature and therefore not having been actually verified by me as to its correctness of course I cannot possibly confirm figures that are there.

Mr. Burr: I state to you when examining you from these papers that this paper already marked for identification as City's Exhibit 66 is taken from the files of the State Board of Tax Commissioners, and purports to have been the copy served by Boardman, Platt & Soley upon that Board, and it is submitted to your attention subject to confirmation later on. If there is any mistake in any of the statements that I have read from that paper you are at liberty now or at any time to correct them, and it is always on the assumption that these statements are contained in the original paper that I am assuming to examine you.

The Witness: And where it is possible for me to answer I am answering, with that proviso, assuming these statements are correct copies of the original document bearing my signature; and, with respect to the particular items which you referred to, I presume the same fact obtains in respect to this 1903 application for a writ of *certiorari* as did in the 1905 application for a reduction of the assessment where the——

Q. You say you presume, but have you any independent recollection of the manner and the circumstances by and under 4240 which this amount of $4,012,257 was arrived at as being correct for the year 1903?

A. As for that year, I do not think testimony has been taken in the present and previous hearings, but certainly with respect to the other years, 1904 for example, a great deal of testimony has been taken as to how those figures were reached, and Mr. Simpson has testified, I think, as he was the man who made the figures up, and I have nothing to add to his testimony.

Q. I am asking you now whether you have any data upon which your figures are arrived at?

Q. Have you preserved yourself any data——

A. I think that figure would appear in the special franchise tax report which the company files every year with the Tax Commissioners and concerning which a great deal of testimony has been given by the company.

Q. I call your attention to Schedule D in this case, page 402 of Exhibits, and the item which appears there upon that page of "Contracts, rights and so forth, $7,781,000." Was this $4,012,257 embraced as part of that $7,781,000, or was it in addition to that $7,781,000 as appears there in Schedule D?

A. What is the figure you have in mind?

Q. I have in mind the figure which you stated was the correct and true valuation of your rights in the streets for 1903, $4,012,257, and I had in mind also the "contracts and rights" which appear in Schedule D, page 402, in this case, and stated at $7,781,000——.

A. And the question is what?

Q. Was $4,012,257 embraced in that $7,781,000, or is the $4,012,257 in addition to the $7,781,000?

A. I think it is independently entirely of the $7,000,000.

Q. Independent?

A. Yes, sir.

Q. It is embraced in this $7,781,000 as appears in Schedule D just referred to?

4241 Mr. **Mathewson**: The witness already testified to that at great length.

Mr. **Burr**: This is my witness, Mr. Mathewson.

Mr. **Mathewson**: I know, but he has already testified as to what that was long ago.

Mr. **Burr**: I object to these interruptions. You insisted I should call Mr. Carter as my witness. I have called him and I am asking a plain, simple question, and it is unnecessary to have any interruption, statement or additional testimony.

Mr. **Mathewson**: You examined him by the hour on that very subject, cross-examined him and finished with him.

The **Witness**: Do I understand that you want me to repeat what I have previously state- with respect to this item of assets?

Q. You say that this $4,012,257 which you claimed was a correct value of the franchises in 1903 is in addition to this sum of $7,781,000 as it appears on Schedule D, that amount on Schedule D purperting to be the amount of your franchises and rights?

A. The amount that you named $4,012,257 is entirely independent of the value placed upon the contracts, rights and other intangible property of the company.

Q. Very good. Now let me ask you how did you arrive at this figure $7,781,000 as the value of your rights?

A. I never did arrive at it. It was the value at which those intangible assets were carried on the books of the company. I never arrived at it; I am simply giving the value as it appears on the books of the company?

4242 Q. You mean to say you have carried that figure continuously on your books since 1884?

A. That is the case, yes sir.

Q. Without any variation whatever?

A. None whatever.

Q. And that arbitrary figure you have carried up to the present time on your books, is that right?

A. Yes, sir.

Mr. **Mathewson**: It was not an arbitrary figure. It was an amount at which they were appraised in 1884.

Q. In the complaint verified by you, City's Exhibit 65 for identification, you stated:

"The rights, permissions and franchises of the complainant and occupying the streets in the City of New York exist under certain laws specified in complainant's report to the State Board for the year ending June 30th, 1899, and complainant has acquired no new or different rights, permissions or franchises since the filing of said report."

Was that true and is that true still?

A. That is my understanding, yes, sir.

Q. Now, there was also a petition for a writ of *certiorari* to review the assessment imposed upon your company by the State Board of Tax Commissions for the year 1904, was there not? You know that as a fact?

A. There have been writs issued for every year and we have never succeeded in getting any reduction of the assessment, nevertheless.

Q. The State Board of Tax Commissioners fixed and determined the value of the special franchises of the Consolidated Company for the year 1904 at some $21,900,000, did they not?

A. That is my recollection, yes, sir.

4243 Q. In this petition for a writ of *certiorari* which I show you and which purports to have been signed by you and verified by you as Secretary of the Consolidated Gas Company, it is stated that "said assessment is erroneous by reason of over-valuation and the extent of such over-valuation is $17,829,160." Can you recall now, Mr. Carter, any facts by which you can state how you arrived at that later figure which I have just named of $17,829,160 as being the excess over the true valuation of your special franchises for the year 1904?

A. In the first place I assume that the question carries the same modifications as in all previous instances where you present a copy, assuming the copy to be correct?

Q. Yes.

A. Assuming it to be correct I have no doubt the stated excess is as it was given in my statement. It was arrived at I presume in the same manner as in previous years and other years to which you have referred. The excess of the assessed value over the value of the tangible property is given in the special franchise tax report.

Q. In other words, they had imposed a tax of $21,900,000 and you claimed that that was $17,829,160 in excess of the proper valuation. In other words, you claimed that the true value was $4,070,840?

A. For the purposes of taxation, yes.

Q. That was for the year 1904?

A. That was for the year 1904.

Q. The original assessment for that year was $22,000,000, and in the complaint filed with the State Board you claimed that was $18,129,160 in excess of the true value, or that the true value was $3,870,840?

A. Well, you are reading from a document there. If it so appears in the original unquestionably that is the case.

Q. And you are not able now, as I understand it, to state 4244 why there are these variations from year to year in what you claim to be the true value?

A. None other than I have given. I think that the figures given would be found each year in the report of the company to the State Board of Tax Commissioners.

Mr. **Burr**: I will offer this for identification, being similar petition for the year 1904.

Marked City's Exhibit 67 for identification.

Q. I call your attention to page 30 of Yalden's report already in evidence in this case and point out to you as appears in the table on said page that the $7,781,000 to which you have referred, and which appears upon Schedule D in this case as being the value of the contracts, rights and franchises of the Consolidated Gas Company in 1884, was apportioned as follows among the constituent companies:

New York	$1,417,000
Manhattan	2,329,000
Metropolitan	1,863,000
Municipal	1,175,000
Knickerbocker	528,000
Harlem	469,000

In other words, the valuation of the franchise claimed to be held by the New York is 18.2 per cent. of the total amount; of the Manhattan is 29.9; of the Metropolitan 23.9; of the Municipal 15.1; Knickerbocker 6.8; and the Harlem 6 per cent.; is that not so?

Mr. **Mathewson**: It shows whether it is so or not.

A. I don't know anything about it myself.

Q. Well, if that computation is not correct will you please take the pains to correct it?

4245 Mr. **Mathewson**: No. If that is a matter of argument or computation on your part I do not think this witness should do it.

Mr. **Burr**: You are forgetting this is my witness and I am asking him to do me a favor and not as a matter of right. I ask him if he will be kind enough to compute that and if he finds my figures as I give them incorrect will he be kind enough to correct me, not Mr. Mathewson. You have become so used to this situation, Mr. Mathewson, that you fail to recognize the condition as it exists this minute.

The **Witness**: I will be glad to do that, Mr. Burr.

Q. I call your attention to Exhibit 385 before the so-called Stevens Committee as it appears upon page 2433 of the record in that investigation——

Mr. **Mathewson**: You remember you are examining this witness on direct and not cross-examining him. You also have perhaps lost your bearings a little in presenting various documents.

Mr. **Burr**: Oh, no, not at all.

Q. I call your attention to exhibit 385, which purports to be a statement of the status of the real estate, plant and property, as shown under the following headings on the books of the company and under the heading "As per Schedule June, 1884, Franchises and Rights," which appear to be $7,781,000; is that not correct?

A. That is the case, yes, sir.

Q. And under the column "Additions to November 11, 1884," there is no addition apparent upon this exhibit to the item of "franchises and rights," is that true?

A. That appears to be the case.

4246 Q. So that the status December 31st, 1904, of the franchises appears to be $7,781,000 still in this exhibit, and as to increases under the column "Increase" the same figure appears?

A. No.

Q. No, that is the total. This is the status here. The total is given under the column "November 11, 1884," as $7,781,000 and under the column "Status December 31st, 1904," also the figure $7,781,000?

A. That is the case, yes, sir.

Mr. Burr: That exhibit was introduced by Mr. Mathewson at a hearing before the Stevens Investigating Committee.

Mr. Mathewson: If you want the fact, it has been testified over and over again that there is not the slightest question about it that the rights and franchises have continued at the same figure from 1884 down to this date, at $7,781,000 on the books of the company and in the balance sheet and everywhere else, so far as I know.

Q. Can you state whether in arriving at the proper valuation as your attention has been called to the subject for the years 1903, 1904, 1905, you eliminated the franchises of the New York, Manhattan and Metropolitan Companies?

A. In arriving at the proper values, I did.

Q. Well you have stated the proper valuation of your franchise rights for 1904 for instance at $4,070,840, again at $3,870,840, in 1905 at $4,012,257. I say in arriving at any of these totals did you take into consideration, or in arriving at that figure if you now recollect the fact, that any of the franchises upon which this valuation of $7,781,000 had been fixed in 1884 have since expired?

A. Oh, I am sure that nothing of that sort was considered.

The Witness: Of course, Mr. Burr, in accepting your
4247 phraseology of "proper value" as quoted from that report,
perhaps I ought to qualify that in my answer as the value,
or the amount which, according to our statement, should not be exceeded in valuing the franchises for the purposes of taxation; not a proper value in any other sense.

Q. What I was anxious to get, Mr. Carter, was this. The fact appears to be, and it has been stated several times, that the original amount at which these franchises appear upon your book was $7,781,000, and they still have been carried right along on your books at the same figures. Now, this $4,000,000 in the various complaints you have addressed to the Court and to the State Board of Taxation, you claim, represents your rights in addition to the rights represented by the $7,781,000, is that true?

A. In addition, I should say.

Q. This Exhibit 1 appearing on page 40 of the complainant's affidavits in rebuttal in this case, purporting to be a statement of assets. book values and liabilities, October 31, 1905, was that a statement showing the entire assets of the company? Does that statement contain the item of franchises embraced in the item Plants and Property?

Mr. Mathewson: I object to this as improper in direct-examination, asking the witness whether he swore so and so, or whether it does not appear in some of his affidavits. It is not a matter of any importance in this particular instance, but I do not like to have such a precedent established.

The Master: I will allow it.

Mr. Mathewson: Exception.

A. It does include that item, Mr. Burr.

Q. And I think you stated in your affidavit, made in this 4248 case, on page 31, that all of the assets in that exhibit represents actual value and are in no sense fictitious. I call your attention to the paragraph (handing book).

A. Yes, sir, that is the case.

Q. The figure that you included the franchise at in the statement was $7,781,000?

A. Yes, sir.

Q. On page 27 of your affidavit, Mr. Carter, you quote a statement of the Committee with regard to these franchises.

A. You are referring to the Committee of 1886?

Q. Yes.

A. Reference is made in my affidavit to the report of the majority of the Committee in reference to the valuation placed upon the rights and franchises of the company in 1884. Do you wish me to read the paragraph, Mr. Burr?

Q. I mean to say you quoted that in your affidavit?

A. Yes, I have quoted.

Q. With approval?

A. Yes, sir.

Q. And you still approve that statement?

A. Yes, sir.

The Master: Now, Mr. Burr, I am frank to say that I cannot permit much more of this. It does not seem to me that it is in any sense direct-examination of the witness or part of your case. If you are going to try and prove to me the value of these franchises, that is not the way to do it. If you want to prove that Mr. Carter said something outside of Court, different from what he said here, put in the evidence. How it makes out your case to call him here and put in his opinion of these old affidavits on the record, I do not see.

Mr. Burr: I am trying to arrive——

The Master: I know, but it is virtually cross-examination, as to which the witness has already been examined in chief and on the cross, and you cannot make anything else out of it.

4249 Mr. Burr: I called him for further information on this subject of the franchises, and called his attention to several statements that have been made with regard to the franchises, what they purport to be, and what they claim the valuations are, all depending upon the situation as it changes from year to year. I want to get from Mr. Carter some lucid statement, if I possibly can, of the basis on which they claim these franchises to be worth so much one year and worth so much another year——

The Master: It is not a question of what they claim. You are here to prove what the franchises are worth, and you are proving that these people——

Mr. Burr: I will take their statements for it.

The Master: Your proving that these people have made contradictory statements at some other time does not show what they are worth.

Mr. Burr: I suppose, of course, that you will take notice from what has been presented here in all these various petitions and proceedings, what their claim has been as to what their franchises represent.

The Master: Certainly.

Mr. Burr: And what their value is, and whether they represent tangible or intangible rights. Now there is a statement by Mr. Carter that the $4,000,000 is in addition to the $7,781,000.

Mr. Mathewson: And why not, so long as you represent the State and City, consume some time in reconciling the statements of the State Tax Board that for the purposes of taxation they are worth $31,900,000, but for the purposes of fixing the price of gas, they are worthless and of no value at all?

4250 The Master: What I said was not addressed to the merits of the matter, but as to the manner of proof. I do not think this is proper examination in chief of a witness called by you.

Q. I only want to ask you one question, Mr. Carter. Mr. Zollicoffer and Mr. Gawtrey in 1900 and 1901 were your superiors, were they not?

A. Yes, sir.

Q. Mr. Zollicoffer was secretary and Mr. Gawtrey was president or vice-president, was he not?

A. He was president, yes, sir.

Mr. Burr: That is all I want to ask you now, Mr. Carter.

The Master: You may cross-examine.

Mr. Burr: It is understood that Mr. Carter is to get the statements or data on which these various figures were based, if he can.

Mr. Mathewson: I have not any understanding with him. You can reach any understanding with your own witness that you can. I have no control over him now.

Q. You are not now saying that you are so adadvised by counsel, are you?

A. I may have to later.

Cross-examination by Mr. Mathewson:

Q. Referring to the petitions for a reduction of the franchise assessment or petitions for writ of *certiorari* to review the franchise tax assessments prior to the year 1906, you had not the advantage, had you, of the decision of the Supreme Court of the United States as to the taxation of these franchises, or as to whether they should be taxed at all?

A. That is the case, yes, sir.

4251 Q. And did you not, in these various petitions, or rather the company in these various petitions, raise the question among others, that the act was unconstitutional and that the assessment of these franchises for taxation should be nothing beyond the mere tangible property?

A. That I understand to have been the theory in a general way, Mr. Mathewson.

Q. And did you not also raise the question specifically in these petitions that these taxes as assessed were unequal and discriminatory as against the Consolidated Gas Company as compared with other real estate?

A. That question was raised, yes, sir.

Q. And did all these facts enter into the form of the petitions as presented, and the substance of those petitions?

A. Yes, sir.

Mr. Burr: You mean all these claims?

Mr. Mathewson: All these considerations.

Q. Now, if you look at page 402 of the Exhibit book, Schedule D, it appears that the tangible property in the streets, that is, mains, was specified at how much for the year 1905, in the report to the State Tax Board?

A. The report appearing upon the page that you give me, Mr. Mathewson, is for 1904.

Q. Well, 1904?

A. Would you like me to find 1905?

Q. No, that will do.

A. In 1904 the valuation was given as $4,261,156.39.

Q. Now, in the petition for reduction in the year 1905 for the 1905 taxes, City's Exhibit 64 for identification, it appears that the company states that the special franchises should be assessed at only $4,261,156, which is the identical amount, is it not?

A. That is the case, yes, sir.

4252 Q. In other words, that is just the value of the tangible property as fixed in that report?

A. As fixed in that report, yes, sir.

Q. Now, do you know how that sum of $4,261,156 was arrived at, except from Mr. Simpson's testimony that that represented bare cost of material plus labor in laying in soft dirt?

A. I have no other information than that and there is none to be had but that.

Q. Did you know that the charter of the City of New York provided that in the assessment of real estate an amount should be placed opposite the real estate at which it would in ordinary circumstances sell?

A. Yes.

Q. And not in its original cost?

A. No, sir.

Q. Nor its structural value?

A. No, sir.

Q. Nor its cost of reproduction?

A. No, sir.

Q. And did you know that under the Franchise Tax Act that these special franchises and also the mains and services were defined as real estate?

A. They were so defined, yes, sir.

By Mr. **Burr**:

Q. Did you know that they were so defined?
A. I know that they were, yes, sir.

By Mr. **Mathewson**:

Q. And were you so informed by counsel at that time?
A. Yes, sir.
Q. What is your view that these franchise rights, if sold in ordinary circumstances and separate from the tangible property of the company would bring their actual value as to an operating company?
A. Decidedly not. They might bring no value whatever; there might be no bidders for them whatever under those conditions, whereas, as an asset of a going concern they might have a very large value.

4253 Q. And is the same true of mains and services?
A. Identically.

Mr. **Burr**: I object to that and ask you to have those answers stricken out, as being purely speculative. There has been no evidence here that any such condition was existing.
Mr. **Mathewson**: You asked the theory on which this witness arrived at this particular transaction or the company did.
Mr. **Burr**: I asked him but he said he did not know and has no data to find out.
The **Master**: I will allow it.
Mr. **Burr**: Exception.

Q. When you say that the Supreme Court of the United States confirmed the assessment of about $14,000,000 against the special franchises of the company by their decision between your 1905 and 1906 reports, is it not true that that proceeding went through the courts of the State of New York, including the Court of Appeals as well as the Supreme Court of the United States?
A. That is the case, yes, sir.
Q. And were you successful in reducing the assessment?
A. We were not, and have never been.
Q. And did not that apply to an early tax, say, the tax for the year 1899?
A. Yes, sir.

Mr. **Burr**: What applied?
Mr. **Mathewson**: The $13,000,000 or $14,000,000 assessment.

Q. Now, it has been drawn to your attention that following your petition in the year 1905 to reduce the assessment of your special franchises from $30,500,000 the Board actually reduced the assessment to $27,300,000?
A. Yes, sir.

4254 Q. Did the Board under your 1906 petition reduce your assessment of special franchises a dollar below the $31,900,000 at which they fixed the tentative value?

A. Not a dollar.

Q. And this petition in 1906 and the decision of the Board of 1906 was subsequent to the finding of the Supreme Court of the United States that the Franchise Act was constitutional, was it not?

A. Yes, sir.

Q. Now, I want to ask you whether these various subjects and considerations to which Mr. Burr has called your attention modify in any way the testimony which you have heretofore given as to the cost of any property of the company?

A. No, sir.

Q. Nor its cost of reproduction?

A. No, sir.

Q. Or its present structural value?

A. In no respect.

Q. Is it not true, Mr. Carter, that as secretary of the company you are called upon to sign from time to time large numbers of papers which you yourself do not prepare?

A. Yes, sir.

Q. And of which you are only generally informed?

A. That are prepared by counsel and submitted to me for official signature, very frequently.

Q. Now, it has been called to your attention that the $7,781,000 of value in franchises with which the company started in 1884 was divided among the six companies at the time of consolidation for some purpose in a certain proportion. Is not that in accordance with the sales of the various companies, if you remember?

Mr. Burr: I object to that unless this witness knows of his own knowledge.

Mr. Mathewson: That is what I am trying to ask him, if he remembers.

Mr. Burr: I think he has already testified that he does not.

The Master: He can say, if he can remember.

4255 The Witness: My impression is that it recognized the ratio of the volume——

Mr. Burr: I object to his stating his impression. He asked for facts, and I insist upon him giving them.

Mr. Mathewson: I asked for his best recollection.

The Witness: My recollection is that it recognized the ratio of the volume of business of the companies, the ratio of the total.

Q. Will you look at this affidavit in rebuttal to which Mr. Burr called your attention and show me the paragraph to which he drew your attention and asked you if you did not quote and if you believed that to be the fact?

A. On page 27 of my affidavit in rebuttal——

Mr. Burr: Embracing——

Q. No, no, the report of the Committee of 1886, that is what you asked him, if it was not a report. Will you please read the paragraph to which attention was drawn and which you did quote?

Mr. Burr: I have no objection to his reading that paragraph, provided he commences from the paragraph to which I referred, that is the statement made by him with regard to the paragraph he is now proceeding to quote.

Mr. Mathewson: You drew no attention to it.

Q. Very good, you may read that paragraph. What did you say in your affidavit preceding the paragraph which you quoted from the Commission's report?

A. After referring to the character of the franchises, "Including
the privilege of laying their mains in the King's Highway"
4256 and their recognition by the Court as probable, the Com-
mittee goes on.

Q. Now, will you quote the paragraph of the Committee's report?

A.—

"Thus the question for your Committee to decide was this, was the $7,781,000 more than the fair aggregate value of the franchises and rights of these six companies? We are forced to the conclusion that it was not; that the franchises of the New York, Manhattan, Metropolitan and Municipal Companies were worth much more than that sum, and that if these companies saw fit to give a part in their franchises to the stockholders in the Harlem and Knickerbocker companies, it was a matter which interested only the stockholders of these companies."

Q. Now, the Committee's finding, therefore, that $7,781,000 was much less than the value of the franchises referred to the franchises of only four of the companies, did it not, out of the six?

A. That is the case, yes, sir.

Mr. Burr: I object to that. The Committee's report speaks for itself. The witness's characterization of it is not proper.

The Master: That is right, if he is asked to characterize it; but if it is before him, and he is asked to state what it contains that is only in line with the great majority of the questions you asked him about these exhibits for identification.

Mr. Burr: Yes, he may state what it contains without characterizing it.

Mr. Mathewson: That is it exactly; I am not asking for information outside of that.

The Witness: Only the franchises of the New York, Manhat-
tan, Municipal and Metropolitan are stated, and it is stated
4257 that their value is more than the sum at which the value of all
the franchises——

Mr. Burr: The inference is that the other two franchises were worth nothing.

Q. And those four companies do not include the Harlem Company, do they?

A. No, sir; nor the Knickerbocker.

Q. And is it not the claim of the Consolidated Gas Company that the Harlem has a perpetual franchise above 79th street for the whole city?

A. Yes, sir.

Q. And does it in your opinion follow that if some of the franchises at present have expired, without conceding that fact, that the balance of the franchises now are worth less than $7,781,000?

A. Well, hardly, no, sir.

Q. In connection with these various petitions to which your attention has been called, I want to ask you whether when you signed them it was your understanding that those petitions, dealing with valuations for taxations, stated the original cost of the property with which you were dealing or the cost of reproduction or the actual structural value of the property to the company as a going concern?

A. No, sir.

Redirect-examination by Mr. Burr:

Q. Then you have some recollection independent of the data as to what you meant by these various figures that you adopted and stated in these various papers to which I called your attention?

A. I think I stated so in reply to your question, Mr. Burr.

Q. And Mr. Mathewson has asked you if you are not in the habit of signing a great many papers without knowing exactly what they are, papers presented by counsel?

A. No, I don't think he answered the question in that way.

4258 Q. I understood the inference was that you might not have known exactly what you signed in those papers. You do not mean to make any such claim, do you?

A. Perhaps it would be well to have Mr. Mathewson's question read and my reply, so I would know exactly what I did testify.

Q. When you sign a paper and you swear in that to your special knowledge of the matter that that paper purports to refer to, you mean exactly what you say, do you not, in that affidavit?

A. Yes, sir. But there are a great many affidavits which come to me that I do not have opportunity or time to study very closely or very carefully, and I am therefore obliged to depend a great deal upon counsel, and do so.

Q. I called your attention to your affidavits attached to these petitions in which you stated you had special knowledge in regard to these special subjects and transactions and I asked you, quoting the statements, if those statements were true at the time you signed those affidavits and you stated they were and that they were true today?

A. I might add that most of my knowledge on that subject would be such as I derived from counsel in the proceedings.

Q. What did you mean by using the words "Special franchises" in verification of the 1905 and 1906 complaints?

A. The understanding of the term, "Special fra-chise"?

Q. Yes.

A. Why, it was a name given by the Act of the Legislature to our right to occupy the streets and to the tangible property in the streets, that is my understanding of it.

By Mr. Mathewson:

Q. You know that in the present charter of the City, the Greater

4259 New York Charter, there are limitations respecting the granting of franchises, making them more difficult to obtain and providing that they shall be limited to 25 years and so on?

A. Yes, sir; that there are such limitations and that the value of existing franchises must be therefore greatly enhanced.

By Mr. **Burr**:

Q. May I ask one question of Mr. Carter. I want to call your attention to City's Exhibit 55, being a statement appearing in the Tribune of April 15th, 1904, and ask you whether you know that that was an official statement issued by the Consolidated Gas Company at that time?

A. I know nothing about it, Mr. Burr, whatever. I should say it was not an official statement because as such I should expect to have some knowledge of it. As I have not, I am forced to the conclusion that it is not.

Q. Are you acquainted with Mr. Harry C. MacDona?

A. No, sir; I do not recall ever having met him. I know him by reputation and by name, but that is the extent of my acquaintance or knowledge of him.

Q. Is he not entered on the books of your company as an employee?

A. His name appears as a special counsel with a retainer; not I should say as an employee, but his name appears for convenience sake on the pay-roll.

Q. Was he not an employee of the Consolidated Gas Company on April 15th, 1904?

A. That I am unable to say without—I can find that out for you, but I really do not know.

Q. Do you mean to say, Mr. Carter, that that statement in the Tribune or in any of the papers of that date was never called to your attention heretofore?

4260 A. It was in connection with this case, because I understood you had asked some question about it and I read it then for the first time.

Q. Do you know whether any disavowal of that statement was ever issued by the Consolidated Gas Company?

A. I have no knowledge of the original publication of it, nor have I of any disavowal of it.

By Mr. **Mathewson**:

Q. You have seen a great many things published respecting the Consolidated Gas Company which were not so and which you have never seen any official disavowal of?

A. I should say so. We carefully avoid all disavowals and all other newspaper discussion.

Q. I will ask you whether Mr. MacDona, so far as you know, was ever granted authority to outline the position of the company?

A. I am sure he was not, because there has been no record of it, and if he had been there would have been such a record.

By Mr. **Burr**:

Q. Was not this statement to which I called your attention appearing in the Tribune on the 15th of April, 1904, the day immediately preceding the public hearing before the Mayor on the Remsen Gas Bill, April 16, 1904?

Mr. **Mathewson**: I object to that as immaterial.

A. It is a question of dates. This is unquestionably April 15th. If you can say that the hearing before the Mayor was on April 16th, I should have to testify it was the day before, but that would be all.

Q. You have no special knowledge about the date of that public hearing?

A. None whatever.

4261 & 4262 Q. But that was the date of it just the same.

Mr. **Mathewson**: Well, you do not want to testify to that?

Mr. **Burr**: That was the date of the hearing. The Court will take judicial notice of that.

Adjourned at 4:45 P. M. to Tuesday, November 27, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's 256.
State's, YY.
City's, 67.

4263 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, Tuesday, *November* 27, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Freedman.

4264 Mr. **Burr**: While I intended to, it seems I did not take an exception to your Honor's ruling that I was bound to call Mr. Carter as my own witness, on page 4216. I will now take an exception.

The **Master**: Note an exception.

Mr. **Burr**: Continuing on the subject of franchises, to which I called Mr. Carter's attention yesterday, I desire to read into the record extracts from the testimony of Harrison E. Gawtry, President of the Consolidated Gas Company, the complainant herein, as the same appears in the printed report of the case entitled "The People of the State of New York *ex. rel.* Consolidated Gas Company of New York, respondent against State Board of Tax Commissioners, appellants; John Cunneen, Attorney for Appellants; Messrs. Boardman, Platt & Solely, attorneys for Relator-Respondents. This record is the printed record in the Court of Appeals.

I read from the same as contained in the printed volume in the Law Institute entitled Cases in the Court of Appeals, special franchise tax cases. July 1902-July, 1903. Volume 2127. I read from page 35 of the printed record:

"HARRISON E. GAWTRY, sworn for the plaintiff, testified:

Examined by Mr. PLATT:

Q. Where do you reside? A. No. 18 West 11th Street, New York.

Q. You are the President of the Consolidated Gas Company? A. Yes, sir.

Q. How long have you been president of that company? A. Since January, 1894."

Mr. BURR: On page 38:

"Mr. PLATT: In the return to the writ of *certiorari* in this 4265 case appears the following sentence: 'That, among other things, respondents ascertained that the relator had heretofore claimed the value of its franchises to be upward of $7,000,000.' I want to ask if counsel himself can tell me what is referred to in that sentence?

Mr. FIERO: That is an application which was made for reduction of assessments, I think, in 1899, to the Local Board of the City of New York, where it was set out for the purpose of obtaining a reduction that the franchises were worth $7,000,000. We shall want to present that document sooner or later.

Q. You understand that that statement in the return refers to a statement which was made in the annual tax statement of the company to the New York City Department of Taxes and Assessments for 1899? A. Yes, sir.

Q. That was made on the blank of the New York City Tax Department, in accordance with their requirement? A. Yes."

Mr. BURR: On page 41:

"Q. What did that $7,781,000 represent? A. It represented the good will of the Consolidated Company; the right to exist as a corporation; contracts with the City, etc.

Q. The right to make and sell gas? A. Yes, sir.

By the REFEREE:

Q. The right to occupy the streets, I suppose; was that included? A. Yes, sir.

By Mr. Platt:

Q. In making the returns to the Tax Commissioners, did the $7,781,000 have reference to the franchise? A. To all those items.

Q. In fact, everything that the company had except the tangible property? A. Yes, sir.

4266 Q. The company made on Form 2 of the State Board of Tax Commissioners, under date of December 20th, 1899, a supplemental report, showing the cost of reproduction of the tangible property in the streets; it shows the cost of reproduction at $4,100,364.93; the statements in this report are true? A. Yes, sir.

Q. Is that cost of reproduction of the pipes and tangible property in the streets made up on the basis of new pipe? A. What new pipes would cost."

Mr. Burr: And continued on page 42:

"Q. Of the same diameter and same length put down would cost? A. Exactly.

Q. That is, what would it cost to put them down at the time the report was made up? A. Yes, sir.

Q. That did not then represent the actual value of the pipes as they stood in the street at that time; did not represent the cost of putting them in new? A. At that time.

Q. What reduction would you make, from your knowledge as an expert in the business, for depreciation? A. I should say all the way from 10 to 20 per cent.

Q. A great many of these pipes of the company had been down a great many years? A. Yes, sir.

Q. Going back for how long a period? A. Sixty years.

Q. Varying all the way from sixty years down to date? A. Yes, six months.

Q. You think it is at least 10 per cent.? A. I should say 10 per cent. was a very conservative estimate.

Q. The pipes and property in the streets was assessed the
4267 previous year by the local assessors at $5785,000; how do you
explain the difference? A. The first year that mains were taxed as real estate the local assessors fixed a valuation per foot for each size named, as I understand it, and that has never been varied, and as additional mains have been laid from year to year the report has been made to the department, and the tax has been fixed upon the old estimates of the cost per foot.

Q. Has the cost of construction decreased since that time? A. I should say at least 25 per cent."

Mr. Burr: Also on page 43:

"Q. I understood you to say in arriving at the value of the tangible property in the streets for the purpose of these reports no allowance was made for the depreciation by reason of age. A. I don't think there was.

Q. Who made up those figures? A. Mr. Zolikoffer, the secretary of the company.

Q. Did you assist in the preparation of those figures? A. No, sir."

Mr. Burr: And on page 44:

"Q. Then you have no personal knowledge on that subject? A. On the special subject; no, sir.

Q. You don't know whether any such allowance was made or not? A. I do not."

Mr. Burr: On page 45:

"Q. A question or two about this item of $7,000,000, which you explained on your direct examination; that you say in 1884 represented what? A. It was put down for the good will of the 4268 constituent companies, any contracts they might have had and did have with the City, the right to exist as a corporation.

Q. In short, all of their intangible property; it included all their franchises, did it not? A. It included everything.

Mr. Burr: And on page 46:

"Q. Have there been any new franchises conferred upon this company since 1884? A. No.

Q. So whatever franchises you had then you have now? A. Yes, sir."

Mr. Burr: Page 47:

"Q. They have asked you concerning an estimate made about the franchises of this company in this blank to the City of New York authorities; you don't regard the value of the franchises of a company fluctuating with the value of the stock, do you? A. No, sir."

Mr. Burr: Page 49:

"Q. What was the value of the stock of this company on the second Monday of January, 1900?

Objected to as incompetent, immaterial and irrelevant; objection overruled; exception.

A. I cannot state the value of the whole stock of the company at the time stated. On Monday, January 8, 1900, according to the best reports I have been able to obtain of transactions on the New York Stock Exchange, 387 shares of the stock of the Consolidated Gas Company were sold at $193 per share; this price was not representative of the value of the whole stock of the company, but merely represents the amount that speculators on the Exchange were 4269 willing to pay on that day for that number of shares; the stock was being speculated in about that time, and the stock varied according to the speculative demand and supply very largely, from about 160 to 220 or 230; it would be impossible to estimate the value of the whole stock of the company, or any large amount thereof, from the sales of the Stock Exchange on any particular day; if any large amount of stock were offered on the market at one time, undoubtedly the price would decline largely and *vice versa,* and if the whole capital stock were offered, it is doubtful whether there would be any market for it; certainly no one can state what the value would be."

Mr. Burr: When Mr. Carter procures the data which I have asked him for, I propose to examine him in regard to that further. That is all I have at present on the question of special franchises.

Mr. Burr: Mr. F. Augustus Schermerhorn appears here in pursuance to a subpœna, and at the request of Mr. Mathewson we stipulate that he may appear at eleven o'clock on Monday.

Mr. **Mathewson**: No, do not put it at the request of Mr. Mathewson it is stipulated he may appear here on Monday at eleven o'clock, or any other time.

Mr. **Burr**: What do you desire to do, Mr. Mathewson?

Mr. **Mathewson**: I am not prepared to make any stipulation respecting it. The witness says he will come later, if you want him.

The **Master**: That ought to be sufficient for your purpose, Mr. Burr. Excuse him until Monday.

Mr. **Burr**: Well, you are excused until Monday, Mr. Schermerhorn.

4270 We will now take up the subject of marginal streets, and Mr. Freedman of our office will present the evidence for the city in that regard.

Mr. **Freedman**: The title to all the lands under water from high water mark out into the North, East and Harlem Rivers was vested at a certain time in the Mayor, Aldermen and Commonalty of the City of New York under the ancient charters and statutes of the Legislature.

Mr. **Mathewson**: I must object to this, Mr. Master, as being conclusions of the witness. It seems to me that the documents, and so on, that contain this are the best evidence.

Mr. **Burr**: You have the documents, have you?

Mr. **Freedman**: I have.

Mr. **Burr**: Well, produce the documents, please, to justify any statements you make.

The **Master**: That is hardly the way to prove title, Mr. Burr. If he makes any claim about the title, introduce the grants and statutes in evidence in the ordinary way.

The **Witness**: I offer in evidence the Dongan Charter of 1683, with special reference to Section 3, contained on page 198 of David T. Valentine's compilation of the laws of the State of New York, relating particularly to the City of New York, which is as follows:

"And I do, by these presents, give and grant unto the said Mayor, Alderman and Commonalty of the said City of New York, all the waste, vacant, unpatented and unappropriated lands, lying and being within the said City of New York, and on Manhattan's Island aforesaid, extending and reaching to the low water mark, in, by and through all parts of the said City of New York, and Manhattan's Island aforesaid, together with all rivers, rivulets, coves, 4271 creeks, ponds, waters and water courses in the said City and Island, or either of them, not heretofore given or granted."

Received in evidence as City's Exhibit 68, but not marked.

Mr. **Freedman**: We offer in evidence the Montgomery Charter of 1730, and refer particularly to Section 37, contained on page 244 of the same compilation, consisting of a confirmation of the Dongan Charter in words and language as follows:

"And also to make laws and rules for the governing and well ordering of all the ferries now erected or established, or hereafter to be erected or established round the said Island of Manhattan's, and all the waste, vacant, unpatented and unappropriated lands lying and being within the said City of New York and on Manhattan's Island aforesaid, extending to low water mark."

And also to Section 38, contained on page 245 of the same compilation, as follows:

"And also, we do further, of our special grace, certain knowledge and me*er* motion, give, grant, ratify and confirm unto the said Mayor, Alderm*an* and Commonalty of the City of New York and to their successors forever, all that space of ground and soil of Hudson's River now lying and being under the water of the same river, to begin at a certain place near high water mark near the south end of a piece of up-land, which lies between the said river and a piece of meadow ground or marsh, being the first piece of meadow ground
or marsh near Hudson's River, to the southward of Green-
4272 wich, and from whence the above named run of water called
Bestaver's Killitie or Rivulet, runs into Hudson's River, from
which place of beginning to extend or run to the south side of the street, which runs from the parade before our fort in New York to Hudson's River, south 18 degrees, 30 minutes west, on a straight line, the distance being 125 chains, from which line to run a perpendicular breadth of, and to comprehend 400 feet from low water mark into Hudson's River, the same containing 82 acres and one-half acre or thereabouts. And also, all that space of ground and soil of the East River, from the north side of Corlaer's Hook to Whitehall, beginning at two large stones set on the south side of a small creek, in a marsh on the north side of Corlaer's Hook; from whence to the easter-most point of Corlaer's Hook, the distance on a straight line running south 15 degrees, 30 minutes east, is 40 chains and two rods; from thence to Whitehall, on a straight line, running south, 78 degrees, 30 minutes west, the distances is 152 chains, from which two lines to run a perpendicular breadth of, and to comprehend 400 feet from low water mark into the East River, the same containing 127 acres or thereabouts."

Received in evidence as City's Exhibit 69, but not marked.

Mr. **Freedman**: From Kent's Comments on the Charter and Rights of the Corporation, it appears that Bestaver's Killitie, from the best information obtainable, was located on or about the foot of Charlton Street, North River.

The defendant, the City of New York, offers in evidence Chapter 584 of the laws of 1732, contained on pages 250 and 251 of the
same compilation, and especially refers to the third section
4273 thereof. That is, the act confirming the two charters, the
1730 Act, the Montgomery Charter and the Dongan Charter,
and it is as follows:

"And be it enacted by the authority aforesaid, that all and singular letters patent, grants, charters, and gifts, sealed under the great seal of the Colony of New York, heretofore made and granted unto the Mayor, Aldermen and Commonalty of the City of New York, and are to all intents and puropses, hereby ratified and confirmed."

Received in evidence as City's Exhibit 70, but not marked.

Mr. **Freedman**: I offer in evidence Chapter 115 of the Laws of

1807, and especially refer to Section 15 thereof, found on page 808 of the same compilation, which is as follows:

"And whereas, for the purpose of duly regulating and construct*ion* slips and basins, and for running out wharves and piers, it is essential that the right to the land under water, below low water mark, should be vested in the corporation of the City of New York.

Be it therefore further enacted, that it shall and mav be lawful for the Commissioners of the land office, and they are hereby directed to issue letters, patent, granting to the Mayor, Aldermen, and Commonalty of the City of New York, and their succesors forever, all the right and title of the people of this State to the lands covered with water, along the easterly shore of the North or Hudson's River, contiguous to and adjoining the lands of the said Mayor Aldermen and Commonalty, within the said City of New
4274 York, at and from low water mark, and running four hundred feet into the said river from Bestaver's Killetjie or River, to the distance of four miles to the north along the easterly shore of the said North or Hudson's River; and also all the land covered with water, along the westerly shore of the East River or Sound, contiguous to and adjoining the lands of the said Mayor, Aldermen, and Commonalty, at and from low water mark, and extending 400 feet into the said river, or Sound, from the north side of Corlear's Hook, at the northerly boundary of the lands covered with water, whereof the said Mayor, Aldermen and Commonalty are now seized, to the distance of two miles to the north, along the westerly shore of the said East River, or Sound; Provided always, that the proprietor or proprietors of the lands adjacent shall have the pre-emptive right in all grants made by the corporation of the said City, of any lands under water granted to the said corporation by this Act."

Received in evidence as City's Exhibit 71, but not marked.

Mr. Freedmen: I offer in evidence certified copies of letters patent granted under and pursuant to the provisions of said Act.

Received in evidence and marked City's Exhibit 72.

Mr. Freedman: Defendant offers in evidence Chapter 58 of the Laws of 1826 and especially refers to the 1st Section thereof, which is as follows:

"Be it Enacted by the People of the State of New York,
4275 represented in Senate and Assembly that it shall and may be lawful for the Commissioners of the Land Office, and they are hereby directed to issue letters patent, granting to the Mayor, Aldermen, and Commonalty of the City of New York, and their successors forever, all the right and title of the people of this State to the lands covered with water along the easterly shore of the North or Hudson's River, contiguous to and adjoining the lands of the said Mayor, Aldermen and Commonalty within the said city of New York at and from low water mark, and running 400 feet into the said river, from a point on the easterly shore of said river, four miles north of Bestaver's Killitje, and extending therefrom north along the easterly shore of said river, to Spyden Duyvil Creek, otherwise called Kingsbridge Creek or Harlem River; and also all the land covered with water along the westerly shore of the East River or

Sound contiguous to and adjoining the lands of the said Mayor, Aldermen and Commonalty, at and from low water mark, and extending 400 feet into the said river or sound from a point on the westerly shore of said river or sound two miles north fr-m Corlaer's Hook and extending therefrom north along the westerly shore of the said East River or Sound, to Spyden Duyvil Creek, otherwise called Harlem River: provided always that the proprietor or proprietors of the lands adjacent, shall have the pre-emptive right in all grants made by the corporation of the said city, of any lands under water granted to the said corporation by this Act."

Received in evidence as City's Exhibit 73, but not marked.

4276 Mr. Freedman: I offer in evidence letters patent issued under and in pursuance of said Act, conveying the property therein described.

Received in evidence and marked City's Exhibit 74.

Mr. Freedman: I offer in evidence Chapter 166 of the Laws of 1826, and refer particularly to the first section thereof, contained on page 825 of the same compilation, which is as follows:

"Be it enacted by the People of the State of New York, represented in Senate and Assembly, that Tompkins Street, along the East River, as laid out and approved by the Mayor, Aldermen, and Commonalty of the City of New York, shall be the permanent exterior street on the East River, between Rivington Street and 23rd Street; and East Street on the said river, between Grand Street and Rivington street, as laid out and approved as aforesaid, shall be the permanent exterior street, as so laid out and approved; and that all grants made or to be made by the said Mayor, Aldermen, and Commonalty shall be construed as rightfully made to extend thereto; and that all the provisions of the Act, entitled 'An Act to reduce several laws relating particularly to the City of New York into one Act,' passed April 9, 1813, and the several Acts amendatory thereof and in addition thereto, shall be construed to apply to said Tompkins Street and East Street."

Received in evidence as City's Exhibit 75, but not marked.

4277 Mr. Freedman: Defendant offers in evidence map produced from Department of Public Works, City of New York, bearing endorsement in blue lead pencil, "East River shore, Corlaer's to 28th Street, March 7, 1825;" and it bears the endorsement on the front of it, "In Common Council, March 7, 1825, upon the report of the Finance Committee on recommendation of Peter G. Stuyvesant, this map was presented and was accepted and approved by the Board. J. Martin, Clerk;" the map being of Tompkins Street, and especial reference being made to that portion of the map which shows Tompkins Street between 12th and 16th Streets. An extract from such map will be furnished to the attorney for the complainants.

Mr. Mead: Do you claim that this map proves itself?

Mr. Freedman: I think so, under the Common Council endorsement, and as an ancient document.

Mr. Mead: You have not proved that endorsement.

Mr. Freedman: It is right on the face of it.

Mr. **Mead**: It does not appear where the map came from.

Mr. **Freedman**: We produced it from the Department of Highways, as stated.

Mr. **Mathewson**: The complainant produced certain ancient transfers and assignments relating to said grants signed by Okie Hall and others, which I understand the City does not admit, although the signatures are well known. Accordingly, we will not admit the signatures on this map, but we are willing to reciprocate if ours are admitted.

Mr. **Burr**: The grants to which Mr. Mathewson has made reference have not been accepted because they are mutilated, and the mutilation is apparent upon their face, and they are improperly acknowledged, and that is apparent upon the face of them.

Mr. **Mathewson**: This map is not acknowledged at all.

Mr. **Burr**: I offer this map in evidence.

Mr. **Mathewson**: I object to it as not proven.

4278 Mr. **Freedman**: Mr. Hatton is right here, and can testify he brought that down from the department.

The **Master**: It is understood that the map came from the proper custody, of course. Mr. Hatton may be called later, so as not to interrupt the orderly procedure.

Mr. **Mead**: I think it should appear it has been in that custody thirty years.

Mr. **Freedman**: No, twenty years, under the Section of the Code.

Objection overruled; exception.

Received in evidence as City's Exhibit 76, but not marked.

Mr. **Freedman**: We offer in evidence Chapter 182 of the laws of 1837, on page 842 of the same compilation, and particularly refer to Sections One and Three of the same, which are as follows:

"**Section** 1. The Thirteenth Avenue, as laid out on a map made by George B. Smith, City Surveyor, bearing date March 10th, 1837, and approved by the Mayor, Aldermen and Commonalty of the City of New York, by a resolution passed in Common Council, on the 28th day of March, 1837 (which map is filed in the office of the Street Commissioner of the City of New York), shall be the permanent exterior street or avenue in the said city along the easterly shore of the North or Hudson River, between the southerly line of Hammond Street and the northerly line of 135th Street."

* * * * * * *

"**Section Three.** The Mayor, Aldermen, and Commonalty of the City of New York, shall be, and they are hereby, vested with all the right and title of the People of this State, to the lands 4279 covered with water along the easterly shore of the North or Hudson's River, between Hammond Street and 135th Street, and extending from the westerly side of the lands under water, heretofore granted to said Mayor, Aldermen, and Commonalty of the City of New York, by letters patent, in pursuance of the Act, Entitled 'An Act Relative to Improvements in the City of New York,' passed February 25, 1826, to the westerly side of the said Thirteenth Avenue. And the said letters patent shall be construed so as to grant to the said Mayor, Aldermen and Commonalty of the City of

New York, and their successors forever, the said lands under water easterly of the westerly line of the said Thirteenth Avenue."

Received in evidence as City's Exhibit 77, but not marked.

Mr. Freedman: I offer in evidence a map entitled "A Map showing the projected exterior line of the City of New York extending along the Hudson River from Hammond Street to 135th Street."

The name Hammond was changed to West 11th Street. It is signed, "New York, March 10, 1837, George B. Smith, City Surveyor," and especial reference is made to that part of the map which lies between 41st and 46th Streets westerly of 11th Avenue.

Mr. Mead: Do you offer the whole map? There is a whole lot in there as to ownership.

Mr. Freedman: No; as to 13th and 12th Avenues.

Mr. Mathewson: Same objection to this map as to the offer of the preceding map.

The Master: It will be received on the same understanding. Exception.

Received in evidence as City's Exhibit 78, but not marked.

4280 Mr. Freedman: This map is approved by the 1st section of the Act which recites the Act under which it was made, that the map made by George Smith, bearing date March 10th, 1837, and approved by the Mayor, Aldermen and Commonalty of the City of New York, by a resolution passed in Common Council, on the 28th day of March, 1837 (which map is filed in the office of the Street Commissioner of the City of New York), shall be the permanent exterior street or avenue in the said City along the easterly shore of the North or Hudson River, etc.

Mr. Mathewson: And how is it proved by the map?

Mr. Freedman: We give the title, we give the date, we give the distance, which shows that it is the very map referred to in this section.

Mr. Mathewson: No, there is no evidence that this is that map yet.

The Master: That is a matter of argument. Proceed.

Mr. Freedman: We offer in evidence Chapter 285 of the Laws of 1852, at page 859 of the same compilation, which authorizes the City to lay out and fix the permanent exterior street on the Harlem River, passed April 14, 1852, which is as follows:

"The People of the State of New York, represented in Senate and Assembly, do enact as follows:

"Section 1. It shall be lawful for the Mayor, Aldermen, and Commonalty of the City of New York to lay out and fix a permanent exterior street, along the shore of the Harlem River in the City of New York, between the East River or Sound and the North or Hudson River, and to cause a map thereof to be made; and which map, when approved of and ratified by the said the Mayor, Aldermen, and Commonalty, shall be filed in the office of the Street Commissioner of said City. 4281

Section 2. The several streets and avenues of said city, as laid out on the map or plan made by the commissioners appointed by the Act entitled 'An Act relative to improvements touching the laying out of streets and roads in the City of New York, and for other purposes,' passed April third, eighteen hundred and seven, or as subsequently established by law, shall be continued and extended along the present lines thereof, from their present terminations on the said map or plan respectively to the said exterior street and permanent line.

SECTION 3. The mayor, aldermen, and commonalty of the City of New York shall be, and they are hereby, vested with all the right and title of the people of this State to the lands covered with water along the shore of the said Harlem River, from the East River or Sound to the North or Hudson River, and extending from low water mark to and including the said exterior street or permanent line.

SECTION 4. The proprietors of all grants of land under water, or owner or owners of all lands adjacent to those hereby granted, shall have the pre-emptive right in all grants which may be made by the said, the Mayor, Aldermen, and Commonalty of the City of New York, if any, of the lands under water granted to them by this act, adjacent to and in front of the said lands under water heretofore granted by the said the Mayor, Aldermen, and Commonalty of the City of New York.

SECTION 5. This act shall take effect immediately."

Received in evidence and marked City's Exhibit 79, but not marked.

4282 Mr. FREEDMAN: We produce in evidence a map entitled, "A Map of the Exterior Street in the City of New York Along the Shore of the Harlem River from 89th Street on the East River to the North or Hudson River, laid down in conformity with the exterior line as established by the Harbor Commissioners by virtue of the Act of the Legislature passed April 15, 1857; survey, in accordance with a resolution of the Common Council approved 1858, made by H. L. Southward, City Surveyor, 1858/9."

It bears the endorsement also, "E. A. T., September 12, 1859, Street Commissioner H. F. K. Received, Street Commissioner's Office, 10th September, 1859, M. Lully (?), Deputy Street Commissioner;" also the endorsement: "Adopted by the Board of Aldermen, September 26, 1859, adopted by the Board of Councilmen, October 20, 1859, approved by the Mayor, October 28, 1859, signed by D. T. Valentine, Clerk of the Common Council."

Same objection; same ruling; exception.

Mr. FREEDMAN: The scale is 100 feet to the inch, and it refers particularly to that portion of the map between 110th and 114th Streets.

Received in evidence as City's Exhibit 80, but not marked.

Mr. FREEDMAN: We offer in evidence from the approved proceedings of the Board of Aldermen, a resolution adopted by the Board of Aldermen, September 26, 1859, and adopted by the Board of Councilmen October 20th, 1859, and approved by the Mayor, October 29, 1859, approving this map.

Mr. MEAD: Have you got it here?

Mr. FREEDMAN: No, I haven't got it here.

Mr. MATHEWSON: I object to this until the resolution is produced and we see what it is.

4283 Mr. FREEDMAN: We will furnish copies.

Mr. MATHEWSON: I know. I think we have got to determine whether it is permissible or not by seeing what the resolution is.

The MASTER: The ruling will be reserved on that until it is produced.

Mr. FREEDMAN: Now we offer in evidence—I think we stated that there would be no interruption outside of taking this documentary proof, so Mr. Hatton would have to come from the Department of Highways to prove these maps, unless Mr. Mathewson will concede them. Mr. Hatton is here now and can testify.

The MASTER: Is this all?

Mr. FREEDMAN: There are the water grants.

The MASTER: Go on and put them in and call Mr. Hatton afterwards.

Mr. FREEDMAN: We offer in evidence from Liber H, page 410 of Water Grants, produced from the Comptroller's office, a grant to Hezekiah Bradford, dated June 22nd, 1846, of land under water between 14th and 15th Streets and East River, with the map thereto attached. The grant is from the Mayor, Aldermen and Commonalty of the City of New York to Hezekiah Bradford, dated the 22d day of June, 1846, and covers premises extending from high water mark out to Tompkins Street and between 14th and 18th Streets.

Mr. MATHEWSON: Do you mean 14th Street or 18th Street?

Mr. FREEDMAN: It extends on the Tompkins Street front from 14th to 18th Streets, and on the high water mark between 14th and 15th Streets.

Mr. BURR: Will you have a tracing of this map made?

Mr. FREEDMAN: Yes, sir; I will have a tracing of the entire water grants and a tracing of the maps made.

4284 Mr. MEAD: It has not been proved yet.

Mr. FREEDMAN: It proves itself; it is under seal.

Mr. MATHEWSON: Is it acknowledged?

Mr. FREEDMAN: It does not seem to be acknowledged.

Mr. MATHEWSON: Then I will object. The deed is not proven.

Mr. BURR: Have you the original of this deed?

Mr. MEAD: I could not say. I never had anything to do with it.

Mr. MATHEWSON: There is no question but what these water rights were substantially vested in the Consolidated Gas Company?

Mr. FREEDMAN: There is no question that whatever rights are in these grants became vested in the Consolidated Gas Company. I have not examined the *inter sese* conveyances at all.

Mr. MATHEWSON: If it will be conceded that these water grants subsequently became invested in the Consolidated Gas Company, as they were, I will withdraw objection to the proof of these deeds, and so forth.

Mr. FREEDMAN: I do not think there will be any objection to admitting or conceding that whatever title was obtained under these water grants became vested in this gas company.

Mr. Mathewson: That is all. It will simply save us the trouble of putting in a lot of mean conveyances.

Mr. Freedman: Yes.

Mr. Mathewson: In view of that, and as it will save us the trouble, I think we will withdraw, and I do withdraw, the objections to these grants.

Mr. Burr: Then the objections to the grants that have been heretofore interposed are withdrawn?

Mr. Mathewson: Yes, on Mr. Freedman's concession.

4285 Mr. Freedman: It is hereby conceded by the City that whatever title was conveyed by the Mayor, Aldermen and Commonalty under and pursuant to the water grants introduced in evidence in this action subsequently became vested in the Consolidated Gas Company by various mean conveyances.

Mr. Mathewson: And that refers not only to the deeds which you have produced, but those which you propose to introduce?

Mr. Freedman: Yes, I say the water grants referred to in the testimony here.

Paper received in evidence as City's Exhibit 81, but not marked.

Mr. Mathewson: We understand that the City will produce and will inform us respecting any other or further grants relating to these companies from the City which Mr. Freedman has produced, and which he is about to produce.

Mr. Burr: I think you should concede, in view of these concessions, that the Tompkins Street which appears upon the map attached to this grant to Bradford, is the Tompkins Street which appears on your Exhibit 48.

Mr. Mathewson: I know of only one Tompkins Street, but whether it may have been widened or changed, or some other thing, I do not know. If it has been, the City has that all in its possession and can produce it.

Mr. Freedman: So far as my investigations are concerned, from 1809 down to the present time, it has never been widened, and its position has not been changed, and these grants were made with reference to the Tompkins Street as laid down on the map.

4286 The defendant, the City of New York, offers in evidence counterpart of a water grant to John J. V. Westervelt, contained in Liber H, page 471, of the land between 44th and 45th Streets, together with the map accompanying said grant. The grant extends from high water mark out to the easterly side of 13th Avenue, which is the exterior line established by law, and from the centre of 44th Street to the center of 45th Street in front of the land of John J. V. Westervelt.

Received in evidence as City's Exhibit 82, but not marked.

Mr. Freedman: The defendant, the City of New York, offers in evidence counterpart of a grant from the City of New York to John J. V. Westervelt of the land between the center line of 45th Street and the center line of the block between 45th and 46th Streets, extending from high water mark out to 13th Avenue, the exterior line established by law, dated the 1st day of May, 1850; signed by the grantee, together with map attached thereto.

Received in evidence as City's Exhibit 83, but not marked.

Mr. **Freedman**: The defendant, the City of New York, offers in evidence grant made by the Mayor, Aldermen and Commonalty of, the City of New York to Francis B. Cutting and Charles C. King, dated 18th of July, 1850, of premises extending from the center line of the block from 45th to 46th Street to within about 32 feet of the southerly line of 47th Street and extending from high water mark out to Thirteenth Avenue, the exterior line established by law, together with map attached thereto.

Received as City's Exhibit 84, but not marked.

Mr. **Freedman**: The defendant, the City of New York, offers in evidence grant from the Mayor, Aldermen and Commonalty 4287 of the City of New York to Charles E. Appleby, dated August 27th, 1857, contained in Liber I, page 193 of Counterparts of Water Grants, of land between the center line of 41st Street and the center line of 42d Street, extending from the original high water mark out to the Thirteenth Avenue, the exterior line as established by law, and the map attached thereto.

Paper received as City's Exhibit 85, but not marked.

Mr. **Freedman**: The defendant, the City of New York, offers in evidence grant to the Harlem Gaslight Company, contained in Liber I, page 514, of land between 110th and 111th Streets, and the Harlem River, dated the 20th day of August, 1870, and the map thereto attached, extending from the center line of 110th Street to the center line of 111th Street, extending from the original high water mark out to the bulkhead and pier-head line.

Paper received as City's Exhibit 86, but not marked.

Mr. **Burr**: Mr. Hatton is going. It is not necessary for him to be called under your withdrawal of your objection?

Mr. **Mathewson**: No. These are all the grants to which your concession related? You have put them all in now which you have here?

Mr. **Freedman**: Yes.

Mr. **Mathewson**: Then I withdraw any objection that I have made to the proof of these originals, they being, of course, accessible to us whenever we desire, and you to furnish us copies.

Mr. **Freedman**: Yes.

The **Master**: Do I understand you are all finished with the exception of your Doctor Marks matter?

4288 Mr. **Burr**: Why, no; I have subpœnaed all the Directors——

The **Master**: I mean outside of the directors.

Mr. **Burr**: Then I have my accountants. Their report will be ready, I expect, by Monday.

The **Master**: Are we to have two sets of accountants? Is Senator Page to introduce accountants' testimony?

Mr. **Burr**: No, he has no accountants. The City has had their set of accountants at work since October.

James L. Wells resumed.

By Mr. **Page**:

Q. I believe Block 979 is the next. Have you viewed that property?

Mr. **Mathewson**: He covered that, did he not?

The **Witness**: No, I commenced on it and then we stopped.

Q. Block 979 is the block between Avenue A, marginal street, 22d and 21st Streets.

A. I have that block, and I have appraised that block, including a small portion shown on the map as No. 29.

Q. Shown on what map?

A. On the tax map, as being assessed to the City.

Q. But in your computation you have included that?

A. I have included that in the ownership of the gas company.

Q. What total valuation did you give?

A. My total is $413,406.

Q. How did you arrive at that total?

A. I valued two corners of Avenue A at $12,500 each,
4289 $25,000; two lots adjoining, $10,000 each, $20,000; three lots on Avenue A, $9,000 each, $27,000; one lot on Avenue A, 22 feet 6 inches front by 100 feet in depth at the rate of $9,000, $8,100; I valued the plot on the southwesterly corner of marginal street and 22d Street, about 173 feet along the center line of the block by 98 feet 9 inches in the rear and containing about 17,000 square feet, at $51,000; I valued a plot on the northwesterly corner of marginal Street and 21st Street, 151.25 feet on 21st Street, by about 125 feet along the marginal street and about 73 feet along the center line of the block and 98 feet 9 inches in the rear, and containing 11,074 square feet, at $44,296; I valued 20 lots on 21st Street, at the rate of $6,500 each, $130,000; sixteen lots on East 22d Street at an average of $6,750, $108,000, making $413,406. This assumes that the company has a frontage on marginal street from 21st Street to 22d Street.

Q. Well, even if the City had taken the plot, they would still have a frontage?

A. They would, but not the entire frontage. I say this assumes that the company has a frontage on the marginal street from 21st to 22d Streets.

By Mr. **Mathewson**:

Q. But there is no independent owner between the company and the street?

A. There is no independent owner.

By Mr. **Page**:

Q. Now Block 978.

A. Block 978 is the entire block between Avenue A, Avenue B, 20th and 21st Streets, with the exception of a parcel known as No. 332 Avenue A, being 23 feet wide and 70 feet in depth.

Q. At what did you value the property, excluding that
4290 one lot which you mention?

A. I valued that at $368,265.

Q. How did you arrive at that valuation?

A. I made an independent sub-division of the block, making the lots as nearly as possible 25x100 feet, and I valued two corners of Avenue A at $12,500 each, making $25,000; two lots next the corners, each 25 by 100 feet, at $10,000, $20,000; one lot, 50 feet south of the corner of 21st Street, 25 feet by 100 feet, at $9,000; one lot, 17 feet by 100 feet north of No. 332, at the rate of $9,000, making $6,120; a small plot in the rear of No. 332, 23 feet by 30 feet, I valued at $1,325; that comes that way (indicating) and would be the rear of that lot; and one lot, 19 feet by 100 feet, at the rate of $9,000, $6,840; twenty lots on East 20th Street, at $6,750, making $148,500; twenty lots on East 21st Street, at $6,500, $143,000; one lot, 16 feet by 100 feet, on East 20th Street, at the rate of $6,750, making $4,320; one lot 16 feet by 100 feet on East 21st Street, at the rate of $6,500, $4,160.

Q. Now, you may take Block 987.

A. Block 987, I value it as shown on the schedule furnished me.

Q. Exhibit 48?

A. Yes, Exhibit 48, which shows that the block has a frontage of 184 feet on Avenue B, 84.54 feet on East 21st Street and 238.78 feet on East 20th Street. For the purposes of this appraisement I divided it into two parcels, taking the center line of the block, and I valued the northerly portion which contains about 9,025.20 square feet at $31,588, and the southerly or lower portion that contains 16,120.24 I valued that at $56,420, making $88,008.

Q. That is, assuming the size of the block as shown on Exhibit 48?

A. Yes, sir, and assuming that the company has a frontage on marginal street from 20th to 21st Streets.

Q. Block 1090, Lot 23, being a parcel on the north side of 42d Street, 100 feet west of Eleventh Avenue, and 150 feet by
4291 100 feet 5 inches.

A. There is six lots frontage in that parcel, and I valued it at $72,000.

Q. How did you arrive at that valuation?

A. $12,000 a lot.

Q. The next parcel is 1071, being on the north side of 42d Street, distance 225 feet east of Eleventh Avenue, 100 feet by 100 feet 5 inches.

A. Four lots frontage in that parcel. I valued it at $50,000, being $12,500 each.

Q. Block 1070.

A. 1070, Lot 5.

Q. Being the parcel on the north side of 41st Street, 100 feet east of Eleventh Avenue, 200 feet by 98 feet 9 inches.

A. I valued that parcel at $76,000. There are eight lots *lots* fronting on the street.

Mr. Mathewson: $9,500 a lot?

The WITNESS: Yes, sir.

Q. Now block 1089?

A. 1089 is the block bounded by Eleventh Avenue, Twelfth Avenue, West 41st Street and West 42d Street.

Q. In making your valuation have you assumed that the City owned Twelfth Avenue, or that the company owned Twelfth Avenue?

A. I assumed that the City owned it.

Q. Now, what value do you give on that assumption?

A. $584,500.

Q. You may state how you arrived at that result.

A. I valued one lot on the southwest corner of Eleventh Avenue and 42d Street at $17,500, and the adjoining lot at $12,500; the next lot at $11,000; two lots in about the center of the front on Eleventh Avenue, each 23 feet 9 inches by 100 feet, at the rate of $9,500 each, $19,000; one lot on the northwest corner of Eleventh Avenue and 41st Street at $14,000, and the adjoining lot at $10,500; the 4292 next lot at $10,000; twenty-eight lots on 42d Street at $11,500 each, making $322,000; and twenty-eight lots on 41st Street at $6,000 each, making $168,000; total, $584,500.

Q. Block 1092.

A. 1092 is the greater part of the block between Eleventh and Twelfth Avenues and 44th and 45th Streets. The frontage on Eleventh Avenue being out.

Q. And in valuing this block did you assume that the City owned Twelfth Avenue or the company owned it?

A. I assumed that the City owned Twelfth Avenue.

Q. You may give the total value of that block?

A. I value the block at $422,500.

Q. You may proceed to give how you arrived at that valuation.

A. I valued twenty-four lots on 44th Street at $7,500 each, $180,000; twenty-three lots on 45th Street at $7,500 each, $172,500; and eight lots on Twelfth Avenue, $70,000.

Q. Block 1093?

A. Block 1093, lot 1, is the greater portion of the block between Eleventh and Twelfth Avenues, 45th and 46th Streets.

Q. 500 feet on 46th Street and 575 feet on 45th Street?

A. Yes, forty-three lots. I valued them at $7,500 each, making $322,500.

Q. And in this case you have also assumed that the City owned Twelfth Avenue?

A. I have.

Q. Is Twelfth Avenue under water now?

A. A portion of it is; the greater portion of it is, I think.

Q. Now, block 1457?

A. 1457, No. 6, is about the center of the block bounded by First Avenue, Avenue A, 62d Street and 63d Street.

Q. What value did you place upon that?

A. I valued that at $149,230.

Q. How did you arrive at that value?

A. I valued ten lots on 62d Street t $7,500 each, making

$75,000; and eight lots on 63d Street at $8,000 each, making
4293 $64,000; I valued 16 feet 6 inches on 62d Street at the rate
of $7,500, $4,950, and 16 feet 6 inches on 63d Street, at the
rate of $8,000, $5,280, which gave me the total, $149,230.

Q. Block 1455?

A. Lot 13. It is practically the easterly half out of the block bounded by First Avenue, Avenue A, 60th Street and 61st Street.

Q. You may give the value of that.

A. I valued that at $185,500.

Q. How did you arrive at that result?

A. I valued the two corners on Avenue A at $12,500 each, making $25,000; two lots next the corners at $10,000 each, $20,000; four lots on Avenue A at $8,500 each, $34,500; eight lots on 60th Street at $6,500, making $52,000; one lots 13 feet wide by 100 feet deep on 60th Street at the rate of $6,500, $3,380; eight lots on 61st Street at the rate of $6,000, $48,000; one lot 13 feet wide by 100 feet in depth on 61st Street at the rate of $6,000, $3,120.

Q. Now, block 1474, lot 24?

A. That is a small triangular piece of land at the northeasterly side of Avenue A and 60th Street; it has a frontage of 64 feet on 60th Street and 114 feet 5 inches on Avenue A.

Q. And 30 feet on 61st Street?

A. No, it does not go through.

Q. Thirty feet on its northerly line, I mean; is that what you have it?

Mr. Mathewson: It is more than that.

The Witness: I don't know just what it is on the map. It shows that way on mine (indicating). The testimony says that there is 5,230 square feet, but I cannot make that out. The City assesses it for a lot and one-ninth of a lot, 1 lot and .09. It is nearly two lots.

Q. What did you assume?

A. I have assumed 5,230 feet because of the difference be-
4294 tween the two diagrams and my inability to find out that
northerly dimension.

Q. What was the value you placed upon it?

A. $20,920.

Q. That is, assuming that there is 5,230 square feet?

A. Yes.

Q. Proceed with block 1177.

A. 1177 is the irregular block bounded by West End Avenue, the yards of the New York Central Railroad, West 65th Street and West 66th Street.

Q. What value did you place upon that?

A. I valued that property at $170,757.60.

Q. How did you arrive at that result?

A. I valued two corners at West End Avenue at $13,000 each, $26,000; two lots adjoining the corners at $10,000 each, $20,000; four lots on West End Avenue at $9,000 each, $36,000; fifteen lots on 65th and 66th Streets at $5,000 each, $75,000; and two gores along the railroad yards containing 6,878.8 square feet, $13,757.60, making my total of $170,575.60.

Q. Block 1157?

A. 1157, lot 1, is the entire block bounded by Amsterdam Avenue, West End Avenue, West 65th Street and West 66th Street. The block is 800 feet in length.

Q. By 200 feet 10 inches in width?

A. By 200 feet 10 inches in width.

Q. What value do you place upon that?

A. $596,000.

Q. How do you arrive at that result?

A. I valued two corners on West End Avenue at $14,000 each, $28,000; two lots next to the corner at $10,000 each, $20,000; four lots at $9,000 each, $36,000; two corners on Amsterdam Avenue at $25,000 each, $50,000; two lots next the corners at $14,000 each, $28,000; four lots on Amsterdam Avenue at $12,500 each, $50,000; forty-eight lots on 65th Street at $8,000 each, $384,000, making a total of $596,000.

4295 Q. Now, Block 1156, Lots 45 and 46.

A. I valued that parcel at $32,000, four lots at $8,000 each.

Q. Block 1670, Lot 1.

A. 1670, Lot 1, that is the entire block between Second Avenue and First Avenue, 98th and 99th Streets.

Q. What value do you place upon that block?

A. $463,000.

Q. How do you arrive at that result?

A. I value two corners on Second Avenue at $17,500 each, $35,000; two lots adjoining the corners $13,000 each, $26,000; four lots at $12,000 each, $48,000; two corners on First Avenue at $14,000 each, $28,000; two lots adjoining the corners at $10,000 each, $20,000; four lots on First Avenue at $9,000 each, $36,000; and thirty-six lots on 98th and 99th Streets, at $7,500 each, $270,000; making $463,000.

Q. The next is Block 1692, I have here.

A. I valued that at $191,114.

Q. You may give your method of arriving at that valuation.

A. That is the block bounded by First Avenue, marginal street, East 98th and East 99th Streets. I gave the value, did I not?

Q. Yes. The question is how you arrived at that value?

A. I valued two lots on two corners of First Avenue at $13,000 each, $26,000; two lots adjoining the corners at $8,500 each, $17,000; four other avenue lots at $8,000, $32,000; eight street lots at $5,000 each, $40,000; and a plot on the northwest corner of marginal street and 98th Street at $38,010; and on the southwest corner of marginal street and 99th Street at $38,104, making $191,114.

Recess until 2:15 P. M.

4296 After Recess.

James L. Wells resumes the stand and further testifies.

Direct examination continued by Mr. **Page**:

Q. Take up next Block 1683, Lots 18, 34 and 35.

A. Block 1683 consists of plot—one parcel is at the northwest corner of First Avenue and 111th Street, and the other parcels together form a plot 50 by 100 feet and 11 inches on the south side of 112th Street, 175 feet west of First Avenue.

Q. What is your total valuation?

A. $90,500.

Q. How did you arrive at that?

A. I valued a lot on the northwest corner of First Avenue and 112th Street at $15,000 and the adjoining lot at $12,000, and the next adjoining lot at $11,000; and I valued seven lots on the streets, at $7,500 each, which made $52,500; giving the total of $90,500.

Q. Now, take Block 1682.

A. Block 1682 is the greater part of the block bounded by Second Avenue, First Avenue, 110th Street and 111th Street. The property is situated on the west side of First Avenue extending from 110th Street to 111th Street and running back on each street 475 feet. I value that parcel at $371,000.

Q. How do you arrive at that?

A. I value the southwest corner of First Avenue and 111th Street at $17,500, and the lot adjacent to it at $13,000, and four lots at $12,000, making $48,000. I value the lot on the northwest corner of First Avenue and 110th Street at $17,000, and the lot adjacent to that at $13,000. Fifteen lots on 110th Street at $8,500, making $127,500; and fifteen lots on 111th Street at $9,000, making $135,000; making my total of $371,000.

Q. Now, take Block 1704, Lot 1.

4297 A. That is the entire block between First Avenue, Pleasant Avenue, 110th Street and 111th Street. I value that block at $364,500.

Q. Proceed to give us how you arrive at that.

A. I valued the northeast corner of First Avenue and 110th Street at $13,500, and a lot adjacent to the corner at $11,000; four other lots on Pleasant Avenue at $10,000, making $40,000; the northeast corner of First Avenue and 111th Street I valued at $15,000, and the lot adjacent——

By Mr. **Mathewson**:

Q. Wasn't that the southwest corner instead of the northeast corner?

A. Yes, sir, it is the southwest.

Q. At how much?

A. $15,000. And one lot adjacent at $12,000, and a lot on the northwest corner of Pleasant Avenue and 110th Street at $11,000; a lot adjacent at $8,000; the southwest corner of Pleasant Avenue and 111th Street at $13,000; 16 lots at 111th Street at $7,000, making $112,000; and 16 lots on 110th Street at $5,500, making $88,000; which makes my total of $364,500.

By Mr. PAGE:

Q. Now, you may turn to the property, Block 1712 if you have that?

A. I have that, 1712. That is that little piece. I am unable to find any testimony as to area. I have approximated the area at 13,462 square feet.

By Mr. MATHEWSON:

Q. Under water?

A. No, it is not all under water. It includes some of the land under water but how much I do not know. I have taken the whole parcel.

4298 Q. Do you take in that computation the line from 110th to 111th Street?

A. I did, sir.

Q. Running out——

A. Running out to the dotted line in the atlases, which is the bulkhead line, as I understand it.

By Mr. PAGE:

Q. Now, what valuation did you place on that?

A. $53,848.

Q. Block 1999, Lot 1?

A. That consists of nearly all the block bounded by Broadway or the Boulevard, 12th Avenue, 132d and 133d Streets, about nine lots out on the Boulevard front. I valued that property at $346,200.

Q. Now, you may state how you arrived at that?

A. I valued Twelfth Avenue corners at $12,500 each, and the two lots adjoining the corners at $10,000; two 25-foot front lots at $8,000 each, and two lots each 23 feet 9 inches front at $7,600 each; and I value 45 street lots on 132d and 133d Street-, 23 of them on 132d Street and 22 on 133d Street, at $6,000 each, making $270,000, giving me my total of $346,200.

Q. Now, we will take block 2175?

A. Lots 15, 18, 22 and 100. That consists of a very irregularly shaped piece of land running from Broadway southeasterly to Jerome Avenue. I estimate that there is in those four parcels 65,253 square feet, or about 26 lots, and I value the plot at $89,375.

Q. I understand, Mr. Wells, that where there is property in large parcels you have taken into consideration the plottage in the figures that you have given rather than giving them separately?

A. I have, yes, sir.

By the MASTER:

Q. Have you computed the totals?

4299 A. No, I have not had the opportunity. I will furnish the...

Mr. PAGE: We will do that.

Cross-examination by Mr. Mathewson:

Q. How long were you connected with the Department of Taxes and Assessments?

A. I was there during Mayor Strong's administration, the greater part of three years; and during the entire administration of Mayor Low, two years.

Q. It was not the custom in those days, was it, to appraise land at its full value in the City of New York, particularly the Borough of Manhattan?

A. The deputies took an oath that they would appraise it at what it would sell for in their judgment under ordinary circumstances.

Q. I am asking you?

A. I found many discrepancies between full value and the percentage at which——

Q. (Interrupting.) Didn't you find as a rule that the valuation for assessment was less than the value you would place upon that property if you were appraising it for a private owner?

A. Yes, sir; in many cases.

Q. Isn't that true in the majority of cases?

A. It was at that time.

Q. And when you say at what under ordinary circumstances the property would sell, exactly what do you mean? What manner of sale?

A. I mean what a willing purchaser is ready to give and what a willing seller is ready to accept.

Q. You had only a small part of this land appraised at the hearing last Friday?

A. I only appraised a small portion.

Q. And when we adjourned or when you suspended yesterday there was still a considerable part of the land that you had not yet appraised, is that right?

A. A considerable portion that I had not completed my figures on, but I had made my examinations.

4300 Q. Yes, but I mean you had not at that time considered the figures you would place on it?

A. Not fully, no sir.

Q. How long have you taken altogether to make up your figures on this property?

A. I have been actively engaged on it for about three weeks.

Q. In making up the figures or in examining the property?

A. No, in examining the property and preparing the necessary documents and posting myself with regard to the property, familiarizing myself with it.

Q. Isn't that a rather short time to make a thorough appraisal of so many pieces of property of such large extent?

A. Not unusually short.

Q. Wouldn't it have been preferable to get a longer time if possible?

A. I would not have been obliged to work so hard. It would have been preferable for me in that respect.

Q. Will you turn to page 1 of Exhibit 48, and consider Block 1643 at the corner of 116th Street and Lexington Avenue?

A. Yes, sir.

Q. When you took your corner lot there, how did you run it?

A. I faced it on 116th Street.

Q. So that it was only 25 feet deep on the avenue?

A. Oh, no. It was 100 feet deep on the avenue.

Q. The corner lot?

A. The corner lot would be 25 feet on 116th Street and 100 feet deep on the avenue.

Q. Is that the usual method of plotting?

A. I considered that would be the better method in this instance, for 116th Street is a much wider street than Lexington Avenue.

Q. Is it as much of a business street as Lexington Avenue, or are neither business streets?

A. Well, neither are as much business streets as Third Avenue, but they are both growing into business.

4301 Q. Take the next block, Block 1642, at the northwest corner of 114th Street and Third Avenue?

A. Yes, sir.

Q. Do you mean to say that the fact that you have a frontage on both Third Avenue and on Lexington Avenue, an L-shaped piece of the character you see here, does not make an additional value to the property?

A. If there is any additional value I took it into consideration when I made my appraisal of it. That is not the natural arrangement of the land.

Q. You do it in many cases because there is an additional value, but you do not think there is in this case?

A. I do not think there is.

Q. Don't you think those two lots, 50 feet wide facing on the street, are of additional value because they are of a plot which extends out and faces on Third Avenue?

A. No, I do not, not for the final improvement of the property.

Q. Isn't a piece of property facing on a street and *and* an avenue in that way, L-shaped, usually more valuable on that account, and having two entrances?

A. It depends upon the conditions affecting the property—the location, character of business and so forth.

Q. Isn't it generally true?

A. Not always.

Q. Isn't it generally?

A. People usually feel so about a lot.

Q. Now, take the property at Irving Place and 15th Street, Block 870. What did you give for the value of the street lots there?

A. $22,500 for 25 by 100 feet.

Q. But some of the streets you put down lower than that, didn't you?

A. I don't understand your question.

Q. Some of the lots. The next lot is $20,700, you say?

A. No. I think you have that incorrect. There are two lots here, 25 by 100, at $22,500. Then I took 5½ feet by 100 at that rate and made it $4,950.

4302 Q. Well, on page 4195, if I read correctly, you say for the next lot $20,700?

A. No, I think——

Q. "For the first lot $20,700, for the next lot $20,700."

A. Well, that was after estimating that they were short lots. I took the basis of a lot as $22,500, 25 by 100 feet, and as these lots were only 84 feet in depth I allowed 92 per cent. of that amount for the 84 feet.

Q. How about lots on Irving Place?

A. There I made the lots full depth.

Q. What value would you place on a single lot?

A. I placed a value of $60,000 on the corner.

Q. And an interior lot?

A. $42,500 next to the corner and $40,000 for the one next to that, and there were nine feet over that I allowed for at the same rate.

Q. Hasn't the city acquired some lots on East 15th Street very recently?

A. I understand that the city has been acquiring property in that neighborhood.

Q. Hasn't it paid very much higher rates for that property in June, 1906?

A. The city often does that, sir.

Q. Well then as a matter of fact have they not in this case?

A. I think they have paid higher, but there were buildings and it is difficult to ascertain what they did pay.

Q. The old buildings, at say from 125 to 131 East 15th Street, would not add much to the value, would they, in the purchase of that property?

A. They had a rental value in there.

Q. But not for the uses of the city?

A. No, not for the uses of the city, but the city had to pay for them, because they were taking them from citizens.

Q. Don't you know that some of those lots, 23 by 100, with old buildings, worth perhaps not over $3,000 to $4,000, did sell at from $30,000 to $48,000?

A. No, I don't know it.

4303 Q. Have you the records of what the city paid for 129 and 131 East 15th Street?

A. Yes, sir. I have the record here of all those transactions.

Q. Well, what did the City pay for 131 East 15th Street, 23 by 100?

A. It would take me some time to find that. My records show that they bought on 16th Street.

Q. Yes, and they bought on 16th Street and they paid there for 126 East 16th Street, $40,000, didn't they, including the old building?

A. I have a record of a sale at 138, 140, 146, 150.

Q. You haven't the record of the sale at 126 East 16th Street to the City, of 128 East 16th Street?

A. I have a record of No. 131.

Q. 131 East 15th Street, isn't it?

A. 131 East 16th Street.

Q. What is the dimension of that lot?

A. 23 feet front by 92 feet in depth, and it had on it a five-story brick building, sold to the City of New York.

Q. For how much?

A. The record says for $48,000.

Q. Well, property in 16th Street would not be as valuable as it is in 15th Street, is it, at the location of the Consolidated Gas Company's building?

A. No, I think not.

Q. And you have no idea that the value of that building would represent the difference between the $48,000 and the $20,700 as you fixed for the value of the Consolidated lot, have you?

A. I had not estimated the building was worth as little as you say.

Q. It would not be worth so much that it would make up the whole difference between $20,700 and $48,000 would it, as it would ordinarily sell?

A. The building was assessed for over $10,000.

Mr. Mathewson: Will the stenographer repeat the question?

4304 The Stenographer (reading): "It would not be worth so much that it would make up the whole difference between $20,700 and $48,000, would it, as it would ordinarily sell?"

A. That I don't know. I have made no estimate of it and I pay very little attention to values made through condemnation proceedings.

Q. Well, these were old buildings, were they not?

A. They were fairly good buildings.

Q. But they were pretty old?

A. Yes, sir. All those buildings in there are old. It is an old section of the city, but it was a condemnation proceeding.

Q. Well, by condemnation proceedings you refer to the proceedings where the parties are heard and where it is supposed to be impartial and the commission makes an award or finding?

A. But the opinion there is another man's opinion, not mine. I have been asked to give my opinion. They have given their opinion based on testimony, and other things.

Q. Did you allow anything for plottage in this Irving Place property, Block 870?

A. I included that in my estimate of the value of the lots.

Q. How much did you allow for plottage?

A. Plottage runs all the way from 5 to 10 per cent., 10 per cent. being the extreme allowance, I think.

Q. In this case how much did you allow?

A. I don't know how much if you itemize it in that way. No one would consider this plot in separate lots except for the purpose of ascertaining the value. No one would sell it in separate lots.

Q. Well, you must not say that because if we did sell it in separate lots that would reflect upon you?

A. It would ruin the property to sell it in separate lots.

4305 Q. It would be worth more as a whole than in individual lots?

A. It is worth more as a whole. The new building law makes it so.

Q. Now, Block 239, at the northeast corner of Elizabeth and Hester Streets, you valued the street lots there, the Elizabeth Streets lots——

A. No, I faced the lots on Hester Street, four of them.

Q. Yes, and then you face lots on Elizabeth Street?

A. Yes, two of them.

Q. And valued them at $17,500 each?

A. The two on Elizabeth Street in the rear of the Hester Street front.

Q. And what do you value the lowest priced lots on Hester Street?

A. $22,500.

Q. Has not property in that vicinity sold for as high as $26,500 a lot within the last year or two, with buildings which were practically worthless?

A. Yes, it may have been so in that vicinity, but that is not the corner of Hester and Elizabeth.

Q. Well, how far is 174 Hester Street from this?

A. I don't remember the distance. I went and looked at the property. Not very far away. This is No. 80 Elizabeth Street——

Q. Hester Street?

A. 157-9 Hester Street.

Q. Did not 174 Hester Street, a lot 25 by 100 feet, sell for $26,500?

A. I think so, sir, but I know nothing of the circumstances under which it was sold.

Q. Let us take the next block, 985, between 17th and 18th Streets, east of Avenue B. Did you allow 5 per cent. for plottage, do I understand——

A. Well, I never seperated the plottage from the value I placed upon the lots. I consider the lots worth so much in a combination such as this.

Q. You include your plottage in the valuation of individual lots?

A. I do. I put a higher value on them for that purpose. My judgment is that they would sell for those figures if sold in proper parcels.

4306 Q. Well, just exactly what did you mean when you said, "I valued the lots on East 17th Street at $7,500 each, the lots on 18th Street at $7,000, adding 5 per cent. for plottage?"

A. I thought the lots on 17th Street were a little better than those on 18th Street when I examined them.

Q. Why?

A. I thought the surroundings were better.

Q. Outside of the existence of the gas works?

A. Yes; better buildings on 17th Street than on 18th Street, that is, opposite these lots.

Q. Can you point out any sale of these lots in that immediate vicinity, any vacant lot, that has sold as low as $7,000 within the last year or two?

A. No, I do not think I can find any. No. 616 was sold at about that figure.

Q. No, 616 what?

A. No. 616 East 17th Street.

Q. When?

A. It was sold on the 1st of February, 1904, the Record shows.

Q. Well, the other witnesses have testified that values have very substantially increased within the last two or three years. Don't you agree with them?

A. There is a stronger market, very much stronger, but that is in certain localities.

Q. Well, generally speaking, rents have advanced, have they not, and the value of real estate in New York have advanced in the last two or three years?

A. Very much so in some neighborhoods.

Q. Is it not so in that particular neighborhood?

A. There is a stronger market in that neighborhood; that is, you can sell property more readily than you could some years ago.

Q. This lot to which you have referred as sold in 1904——

A. That had a six-story brick building on it.

Q. And it was a single lot and not part of a plot, was it not?

A. Yes, but it was a six-story brick tenement house with a store.

Q. Are you familiar with the sales from 518 to 524 East
4307 16th Street, made, I think, in April, 1906?

A. No, I have not those; I have from 528 to 536, made in March, 1904.

Q. Well, I am getting nearer the present date.

A. Some of those sales I could not find.

Q. I have a record of the sale here of those lots at $50,000, three lots at $50,000, with old buildings which are said to have been worth perhaps $12,000; that would make $12,750 for the land if that be true. Have you not some record from which you can say whether that is correct?

A. In a great many sales the considerations are nominal and it is very difficult to determine what they bring, as you can only approximate that by determining the age of the buildings on the property and finding out what percentage somebody has loaned on the property.

Q. Yes, but I am assuming that the sales were made at the price I have suggested. If that be true, that would be a substantially higher valuation than you make, would it not?

A. Yes, but you cannot assume those things unless you know them to be so.

Q. I am assuming that it be so, that is a higher valuation than you have made?

A. Well, a practical real estate man would not make the assumption.

Q. Well, I am making the assumption.

A. Well, you have a right to.

Q. I say if it be true that sales were made at that price in that section, it would be a substantially higher figure than your present estimate, would it not?

A. It would be higher, but one would have to inquire into the circumstances of the sale; there may have been a fictitious consideration in the deed, as often is the case.

Q. I am assuming that it did sell for that price and that that was not the consideration named, because the other witnesses, if you have read their testimony, testified, did they not, that they took into consideration sales which they knew of, and sales which they 4308 actually found had disregarded the nominal consideration?

A. I have looked up all the sales that took place in the neighborhood in the last three years.

Q. Then you do not find these sales that took place——

A. Give me the number again, please.

Q. 518 to 524 or 522.

A. I find 521 East 16th Street. 514 to 516?

Q. Nos. 518, 520, 522 and 524?

A. I find 526.

Q. Well you are just outside 518 to 524 East 16th Street, which sold in the spring of 1906.

A. 514 to 516, I have that; 518 to 524 I have.

Q. Did not that property sell for $50,000?

A. The *Real Estate Record* does not show it did. It says "nominal consideration."

Q. So that you have not the record——

A. It was sold subject to a mortgage of $39,000.

Q. The mortgage was $39,000?

A. It was, but it was 75 feet front and there were four 4-story brick tenements on it.

Q. Were those tenements not old 4-story brick buildings?

A. I did not examine them, sir. It was a nominal consideration.

Q. Let us take the next block, 989, lot 1, facing on Avenue C, which you have appraised at $139,500. Are you aware that that plot is assessed for taxation at $155,000?

A. Yes, sir.

Q. Or much more than you have estimated it?

A. Yes, sir, I have it.

Q. So, too, with Block 989, Lot 26, which is on the westerly side of Avenue D, between 15th and 16th Streets, it seems to be valued by you at $96,480, and it is assessed for taxation at $96,000?

A. Yes, sir. Merely a difference of opinion between two men who valued the property.

Q. Why did you face all the lots on the street in Block 989, Lot 26, instead of part on the Avenue?

A. Because the streets are very much better than Avenue 4309 D. Avenue D is an insignificant street there.

Q. Are the streets wider than Avenue D?

A. No, they are about the same width. They are the same width, but the condition of Avenue D—the streets are paved; 16th Street is paved with asphalt and 15th Street with granite; and Avenue D is old fashioned cobblestones, not even Belgian Block, but old fashioned stones.

Q. Is Avenue D a business street above and below this property?

A. There is more business above and below than on this block.

Q. Naturally, but there is more business on Avenue D than on the side streets, is there not?

A. Not on this portion; there is very little on Avenue D between these points.

Q. I understand, but these are the works of the Consolidated Gas Company?

A. Yes.

Q. But above the works of the gas company and below them Avenue D is better, is it not?

A. It is.

Q. And it is a business street?

A. More so than it is here.

Q. And it is a business street, more business than the side streets?

A. Yes, but here there is more business done on 15th Street and 16th Street than there is on Avenue D, and in my opinion values are stronger on those streets than on this portion of Avenue D.

Q. If these plots were to be sold and to be used for business purposes, don't you think the business houses would naturally front on Avenue D?

A. What kind of business houses?

Q. Oh, such business places as you find below 14th Street and above 16th Street on Avenue D?

A. I think not under the present surroundings; I paid especial attention to look at that point.

Q. What dod you mean by present surroundings, the presence of the gas company there?

A. No, the present way in which 15th and 16th Streets
4310 are built up.

Q. How did you happen to divide Block 991, Lot 26, into 4 plots instead of into lots in your valuation?

A. Because I thought that was the more reasonable way of subdividing it; it would spoil that block to sell a lot out of it, it would spoil it for business purposes.

Q. Would it not spoil any of these other blocks to sell lots out of them, which you treated in a different manner?

A. No, in some cases those large blocks could be sold in parcels. It is customary now with buyers to buy more than one lot at a time for permanent improvement.

Q. Take Block 991, Lot 1, the plot on 14th Street. Did you observe that that was assessed at $180,000?

A. I observed that, yes, sir.

Q. As a matter of fact, while you found some little variation between the measurements of this plot as appearing on Exhibit 48 and the tax maps, your observation led you to think that the dimensions on Exhibit 48 were correct rather than the tax map, did you not?

A. Yes, I thought so, from making a plottage of the block.

Q. Now, I observed in Block 988, which is the entire block between Avenues C and D and 14th and 15th Streets, you faced your lots on Avenue C to some extent?

A. Yes.

Q. But in Block 982, immediately west of Avenue D from that, I think you faced them all on the street, did you not, on 14th Street, did you not?

A. Yes, I think I did there.

Q. Well, what is the difference? They are directly across the street from each other?

A. It is a better street there probably, there must have been something I saw in going upon the property. What was the other number?

4311 Q. 982, directly west across Avenue C.

A. Yes, but 982—one has a frontage on 14th Street and the other block has not.

Mr. Page: No, wait until you examine them.

Q. Both has a frontage on 14th Street and both on 15th Street?

A. Yes, that is true, but I faced all the lots on 14th Street, because 14th Street is a wider street than Avenue C and much more of a thoroughfare, but when you come around to this other block, I faced them the same.

Mr. Page: Well, that is his point, that you made a difference there in facing some on Avenue C and some on 14th Street.

Q. I understand you faced them relatively in the same manner?

A. Relatively in the same manner. I thought you were comparing between 14th and 15th Streets.

Q. No, 14th Street is more of a thoroughfare and lots on 14th Street are more valuable than on 15th Street and the other streets, are they not?

A. Yes, sir.

Q. Now, in considering Block 982, if I am correct, you figured the street lots at $9,500 each, as facing on 14th Street?

A. $9,500 each.

Q. And you valued the lots in Block 988 as facing on 14th Street at only $8,000.

A. That is true.

Q. Although they are only separated by Avenue C?

A. And at some distance.

Q. Do you consider there is any such difference in value between lots on 14th Street?

A. I do, there, yes, sir.

Q. Is it not true that the nearer you get to the river and bulkheads in a place like that, the more valuable your lots are?

A. Not always, sir.

4312 Q. Well, is it not generally true?

A. I do not think so in this case.

Q. Is it not generally true, not in this case, but as a general proposition?

A. I do not think I can answer as to its being generally the case; it is sometimes but not always the case.

Q. Can you point out any single lots that have sold on 14th Street within that vicinity within the last year at as low a figure as $8,000?

A. I find that No. 606 East 14th Street was a five-story tenement and store, was sold for $15,825.

Q. Yes, do you know how good a tenement and store that was, how much the building added to the value of the lots?

A. A five-story house and four-story brick on the rear.

Q. Do you know how old it was?

The Master: When was that sold?

The Witness: In April, 1904.

Q. Well, I asked you within the last year or so?

A. Well, the same property was sold in 1906 subject to a mortgage of $11,900.

Q. Do you know what the price received was?

A. No, the consideration was nominal.

Q. Do you know how old that building was?

A. No, I think it was an old building, but in fairly good condition.

Q. I observe that in the testimony of Messrs. Thompson and McHale that in the sale of property or estimating the value of property they allow only $4,000 or such a matter, if my recollection is correct, for the value of these old buildings or old tenements per lot of 25 feet, where the buildings are old; is not that your reading of their testimony, or have you not read it?

A. I have read their testimony. They may have made that
allowance for some buildings in some particular location, but
4313 it is not a general rule.

Q. You do not know what the value of that old building was on the lot which was sold, to which you have referred, do you?

A. No, I do not, sir.

Q. Referring to all the property at East 14th Street and 15th Street, is it not true that considerable value is added to that property by the fact that it is all in the hands of a single owner?

A. I took that into consideration when I valued it.

Q. Did you take into consideration, that the bulkhead rights opposite were owned by the Consolidated Gas Company also, as affecting the value of the upland?

A. On Tompkins Street? I did not take into consideration that the bulkhead rights there were owned by the company.

Q. What addition would you make for plottage in the case of Block 988, which is an entire block, what percentage should be allowed for plottage?

A. From 5 to 7 per cent.

Q. Well, taking all that property together would not 10 per cent. be a moderate estimate for plottage value?

A. No. 10 per cent. is a pretty large estimate on the value of land.

Q. You do not think it would be as much as that?

A. I do not. Plottage is a very indefinite item.

Q. But it is an item that is recognized by real estate men?

A. It is an item that is recognized by real estate men, but everybody differs on it. If it did not, there would be no sales.

Q. Will you now turn to page 3 of Exhibit 48 and direct your attention to Block 688 as it now exists, after the improvements, which you valued at $300,350. You valued the interior lots here, if I am correct, in reading the testimony, as low as $9,500 each?

A. On the side streets.

Q. Can you point out the sale of any lot in that vicinity as low as $9,500 for the lot within the last year?

4314 A. No. 415 West 16th Street, with a five-story brick tenement on it sold for—no, it sold for a nominal consideration; it sold subject to a mortgage of $12,000. I thought I had the natural consideration there. No, there have not been any sales on that street in the last year except where the consideration was nominal.

Q. Is it not true that property in that neighborhood has very largely increased in value in the last two or three years?

A. It has increased.

Q. Very largely increased in the last two or three years?

A. There is a better market, particularly on the avenue; it has increased on the avenue and on the marginal street, but not so much on the side street.

Q. Well, are you not familiar with the sale of 418 to 420 West 16th Street in 1902?

A. I have not gone back as far as that.

Q. You have not your records as far as that?

A. I have records, but I have not the records here.

Q. Let us take a more recent one, *445* (No. 445 is a stenographer's error. The question asked was in relation to 455.) West 16th Street, between Ninth and Tenth Avenues, a lot 25 by 92 feet deep with no buildings except a two-story frame building, said to be of no value; did not that sell in 1906 for $13,250?

A. No, I looked for that sale and could not find it. I think there is a mistake in the designation of the street, because I looked for it and my assistants looked for it.

Q. Well, it may — that the individual from whom I received the information may have had information which is not spread upon the record as to the actual consideration?

A. No, I think it was copied wrong, because in some cases we found buildings with that number on a different street. It is probably a little mistake in copying it.

Q. You do not find anything that corresponds to this?

A. No, I do not in this case, but I did in the other. Those things are so apt to occur that——

4315 Q. Referring to your valuation of $300,350, would it surprise you to know that the Company within a very short time, had received an inquiry as to whether they would sell that land for $500,000, with the statement that it was believed that it could be obtained?

A. I am never surprised at any statement in regard to real estate.

Q. You would not be surprised, then, if they received an offer of $500,000?

A. I would like to know who made the effer and the conditions.

Q. Oh, yes, that is all right——

A. I would not express any surprise——

Q. If you found buyers ready to offer $500,000 for that plot, would not that influence your judgment as to the accuracy of your valuations in this immediate section?

A. Why, I think it would some, yes, sir.

Mr. Page: I do not suppose that Mr. Mathewson assumes that the statement that a broker has said that he thought he could get some one to pay that is an offer of that amount.

Mr. Mathewson: Not at all. The suggestion came from the proposed buyer.

Q. Will you take Block 689, Mr. Wells, being between 17th and 18th Streets. There also you make the interior lots worth $9,500?

A. Yes, sir.

Q. Does not the value of the lots increase as you proceed towards 22d and 23d Streets, where the big ferries are located?

A. Yes, as you get beyond 18th Street, I should think they might.

Q. But I see, taking Block 690, which is above 18th Street, that you still continue to value the street lots interior lots at only $9,500?

A. Well, but that was a plot which was very much mutilated by pieces being taken out of it.

4316 Q. Have you made an additional allowance for plottage by reason of the entire ownership of these three blocks, 688, 689, and 690?

A. One reason was that many of these lots are further away from Tenth Avenue; it is a much longer block.

Q. But taking the blocks the same distance from Tenth Avenue, did you not make $9,500 the valuation in each case?

A. The average valuation.

Q. $9,500?

A. Yes.

Q. But you made it for each individual block, $9,500, did you not, in giving your valuation?

A. I did, that is about the value there.

Q. But they do become more valuable above 18th Street?

A. I think they are becoming more valuable as you get above 18th Street, as you approach the ferries, but not very much.

Q. I see in Block 691, which is between 19th and 20th Streets, you still keep the value of the interior lots in your estimate at $9,500?

A. Yes, but that was on account of the poor condition of the street, I think; some of those streets are in a terrible condition.

Q. But are not the lots in Block 691 very close to the marginal street?

A. Yes, they are.

Q. And that marginal street——

A. But my recollection of that is that it was a very disagreeable neighborhood there at the present time, exceedingly disagreeable neighborhood. You could not cross the street on account of the water in the street; I think that is the street.

Q. What do you mean by water in the street?

A. Well, they are improving the marginal street, and the water had come down one of these streets and formed quite a puddle.

Q. You mean one of the side streets?

A. I mean one of the side streets.

Q. But you would not take that as a controlling feature, a temporary puddle like that?

4317 A. It is temporary, but the general appearance of the neighborhood; the neighborhood in some of those streets is very bad.

Q. But is it any worse in 20th Street than it is in 19th Street?

A. Yes, I think so.

Q. On the marginal street?

A. Yes, that is my recollection; the marginal street is not improved all the way along there.

Q. But it is in process of being improved?

A. Yes, there is some work being done, but the City is doing it very slowly in some parts.

Q. Has there not been a very great increase in value in the last two or three years from 19th to 23d Streets?

A. Not so much in the side streets as there has been upon the marginal street and Tenth Avenue.

Q. Yes, but between 10th Avenue and the marginal street, it means an increase in value, provided values increase in both Tenth Avenue and the marginal street, of course?

A. But the increase has been mostly east of Tenth Avenue.

Q. Is it not true that if you have a large increase in value in two avenues, that the side streets running through from those avenues also increase in value?

A. That is generally the case, yes, sir.

Q. Block 716, which is 75 feet wide only, you estimate at $12,000 per lot?

A. Yes, that is between Ninth and Tenth Avenues.

Q. Is the reason for that difference the fact that it is located between Ninth and Tenth Avenues instead of between Tenth Avenue and the marginal street?

A. Not at all. That land is upland, it is not filled-in land. Much of the land I have been talking of is filled-in land. This is above high water mark.

Q. Is it not a fact that the land in the blocks west of Tenth Avenue abut on a street which has a water front, an element in determining value?

4318 A. Yes, sir; a business street; the marginal street will be a great business street.

Q. Is it not true, too, that the greater part of the water front property of New York, which faces on marginal streets is located on filled-in-land?

A. A great deal of it, and it must necessarily be so, but it affects the value on side streets.

Q. What valuation did you place on Block 715, which is directly across the street from Block 716, per lot?

A. I think about the same value; the same value.

Q. Just $12,000 a lot?

A. $12,000 a lot.

Q. Does not the fact that there is quite a large parcel in Block 715 add to its value on account of plottage?

A. Well, I think that $12,000 is the value of a lot, when you consider plottage added—plottage is such an indefinite term——

Q. Have you a record of any vacant lot in the immediate vicinity between those two avenues which sold within the last year for $12,000?

A. No, I do not know of any vacant lot in that plot that sold at that price. I don't know that there are any vacant lots to be sold, excepting these, that is, that could be sold without buildings upon them. The sales that have taken place there, with the exception of one, 110 West 18th Street, which sold for $12,100 in May, 1906, and that had a three-story and basement tenement house on it, were for nominal consideration, as I find them; I have one sale, 410 West 18th Street, which sold for $12,100.

Q. When was that?

A. March 30, 1906, 129 feet 6 inches west of Ninth Avenue.

Q. To whom was that sold? Have you the record?

A. It was sold to the Prudential Real Estate Company.

Q. It was sold in foreclosure?

A. It was sold in foreclosure, yes, sir.

Q. Have you any record of any sale—private sale—by ordinary negotiation? 4319

A. I have not except at nominal considerations.

By the MASTER:

Q. Was that a full-sized lot?

A. No.

By Mr. MATHEWSON:

Q. What was the size?

A. It was 20 feet 6 inches by 92 feet.

Q. Your estimate of $12,000 is for a 25-foot lot?

A. Yes.

Q. With a depth of 92 feet?

A. Yes.

Q. I see in this Block 951, on the south side of East 21st Street, west of Avenue A, Block 952, between 20th and 21st Street, west of Avenue A, and Block 953, between 21st and 22d Streets, west of Avenue A, you appraised interior lots at $7,500?

A. So it seems.

Q. Can you point out any sale of lots within the last year in that vicinity at $7,500 equally well located?

A. Perhaps not within the last year.

Q. Well, have you not a sale which took place in 1904, 436 and 438 East 19th Street——

A. I have 426.

Q. 50 by 92 feet, vacant lot?

A. No, I have not that. I have a sale of 426 which took place in 1905.

Q. You have not the record of 436-438 East 19th Street between First Avenue and Avenue A?

A. No, 508-510 I have.

Q. Sold in March, 1904?

A. Well, sold in June, 1906, that is the only sale I have. That is not an actual consideration.

Q. Well, have you not your records for 1904 here?

4320 A. These records were prepared from the Real Estate Record, the records for 1904, 1905, 1906, were all examined, and those that have actual considerations were culled out of the Record.

Q. Have you not made any examination except from the Real Estate Record?

A. I cannot interview the buyers.

Q. Don't you in any case where the Real Estate Record shows a nominal consideration, ascertain frequently what the actual consideration was?

A. So far as we are able in our office; we have not time to run around and interview the buyers; there is no other way of doing it. We approximate the value, considering the mortgage upon the property very often.

Q. Well, the mortgages upon the property are placed at various per cents. of the true value, in accordance with the prudence of the lender and the rate of interest he gets, are they not?

A. That is true. You can find out the limit both ways of loaning and come to a conclusion as to what amount was the percentage that was loaned upon the property; that is the only way.

Q. I find I have a memorandum of the sale of 436 and 438 East 19th Street, between First Avenue and Avenue A, 50 by 92 feet, vacant, at $16,100, or $8,050 per lot in March, 1904. Won't you see if you can find that?

A. I have not it.

Q. If that sale be genuine at that price, that would represent a larger price per lot than you h[illegible] assumed for the interior lots in any one of these lots, would it n[illegible]?

A. Was it vacant?

Q. Vacant.

A. Was it an exchange?

Q. A sale, as I have it.

A. I know, but you cannot judge from that.

Q. I say, assuming it to be so, that would be a higher valuation than you make now?

A. It would be mathematically a higher valuation.

Q. And you have said that property has increased in value within the last two or three years?

4321 A. I did not say it had increased here in value. I said there had been a general increase in the value of real estate.

Q. Has there not been a general increase in value——

A. Not in all real estate.

Q. Let me finish my question. Has there not been a general increase in value in this particular section, East 23d Street and north and south for several blocks within the last three years?

A. You were questioning me on 19th Street.

Q. Yes, I say north and south from 23d Street for several blocks?

A. Not a very large increase.

Q. Didn't you allow an additional allowance for plottage here by reason of the fact that the company owns the entire block in one case and virtually the entire Block 953?

A. I am not talking about different blocks.

Q. I am going to name it.

A. You are through with 951?

Q. My inquiry was as to all three, because you claimed $7,500 for an interior lot in the case of all three blocks, 951, 952 and 953, and I was saving time in taking them together.

A. I did not comprehend your question.

Q. I ask you whether you have made an allowance for plottage by reason of the fact that Block 951 and Block 952, which is nearly an entire block, and Block 953, which is the entire block, were all in the same ownership?

A. I do not think plottage would apply in the same way.

Q. Why not?

A. Because after you own so much property the plottage begins to cease; the ownership of so much creates a dull neighborhood.

Q. You would not call it dull around the gas plant, would you?

A. Not in the smell, it is not; it is a dull neighborhood; while all that property is occupied for gas purposes, it is a dull neighborhood.

4322 Q. Do you mean to say that the ownership of all this property on East 20th Street and 21st and 22d Streets in a single ownership does not add to the value of that property in the hands of the owner?

A. No, I do not think the plottage applies beyond the block.

Q. You read what other witnesses said, did you not, in which they——

A. I know, but I am not praising the other witnesses.

Q. I know, but I ask you if you did not read what they said?

A. I read it.

Q. Well then, do you disagree with them on that subject?

A. I think I disagree with them on that.

Q. Did you observe that Block 951, which you valued at $52,500, was assessed at $50,000, or substantially what you appraised it?

A. Yes.

Q. And did you observe that Block 952, which you valued at $333,800, was actually assessed at $340,000, or something more than your appraisal?

A. I did.

Q. Did you observe that Block 953, which you appraised at $435,700, was appraised for taxation at $500,000?

A. Yes, sir, I observed it.

Q. And in spite of the fact that you have been connected with the Tax Department, that has not any influence on your judgment?

A. I did not make assessed values in the Department. Deputies are employed to do that, sir, and it shows how they differ. It is a difference of opinion.

Q. So, too, taking Blocks 979, 978, 987, which are in a single ownership, you think that the single ownership does not add to the value of three blocks aggregated on the basis of plottage, do you?

A. Not beyond the block, not beyond the individual and particular block.

Q. And did you observe that Block 978, which you valued at $368,265, was assessed at $369,000, or a little more than your value?

A. Yes, it is assessed about $750 more than my valuation.

4323 Q. Did you observe that Block 987, which you valued at $88,000, was assessed at $86,000?

A. Yes, but in that case the city assessed less land than I did.

Q. The tax map of the city shows lightly less in that case, does it?

A. Yes.

Q. How much?

A. Well, it shows that there is a strip along that lot 23 feet 9⅜ inches at 20th Street and 7 feet 6½ inches at 21st Street. It was assessed by the City of New York, and I do not make the city's assessed value what you do. I find it to be $79,700 for the part that the city assessed as gas company property.

Q. What is the $86,000, the assessment of the whole block?

A. I presume so.

Q. Well, we think we own the whole block?

A. I gave you the benefit of it.

Q. You did not find anybody else in possession between ourselves and the street, did you, no business going on?

A. I don't know whether your fence along there—there is a large board fence along there; I don't know whether it is on the line or not. There is in that neighborhood a strip that has not been asphalted. The rest of the marginal street is covered with asphalt, but there is a strip there between the fence that is not improved.

By Mr. PAGE:

Q. And that is the portion that is assessed to the City, is it?

A. That is the portion that the assessment really says is assessed to the City of New York, but I have included that in my valuation of the whole plot.

By Mr. MATHEWSON:

Q. Of Block 987?

A. Block 987. I plotted that with that in.

4324 Q. Do you think that the proper way to sell Block 987 is to divide it into only two parcels instead of selling it off into blocks?

A. I do, most decidedly; I am positive on that.

Q. Will you refer to page 5 of the Exhibit 48 and take Block 1089?

A. Yes, sir.

Q. Between 41st and 42d Streets?

A. Yes.

Q. Running west from Eleventh Avenue, you took the block as extending only to the line of Twelfth Avenue, did you?

A. In my estimate I did.

Q. Did you find the Company in possession of the land clear through to the bulkhead line?

A. I don't know. I passed through the Albany Day Steamboat Line.

Q. Didn't you observe the Company was in possession of all that property with merely a right of way, which has been described in evidence, to the steamboat line?

A. I found a tramway for coal extending over what would be Twelfth Avenue.

Q. Used by the Company, apparently?

A. I presume so. It was not in operation when I was there.

Q. Was the property fenced in at all?

A. The property was fenced in. There was a passageway.

Q. Including the street, except the passageway?

A. I don't know as to the location of the fences, whether they are on the line of the avenue or not.

Q. Well, it was apparently fenced in, as near as you could judge?

A. But approximately the easterly fence was on the line of the avenue.

Q. You appraised the pier there, and the water rights?

A. No, sir, I went in the ferry house and examined it.

Q. You give there only $11,500 as a valuation for the interior lots on 42d Street?

A. Yes, sir.

Q. Isn't property on 42d Street increasing in value?

A. It is going to increase in value there. It has not increased much yet, but it is going to.

Q. There is a ferry located there, isn't there?

A. Yes, sir.

4325 Q. Have you a record of any sale of a lot on 42d Street or thereabout within the last year at as low a price as $11,500?

A. I have a record of a plot 19 feet 7 inches by in depth half the block, with a four-story stone front dwelling on, which sold in 1904 for $10,700.

Q. Where was that?

A. No. 526.

Q. You haven't any nearer record than that?

A. I have a record in 1905 of No. 417, having been sold in January, 1905. The lot was 20 by 100 with a four-story brick tenement and store, sold for $16,500.

Q. Auction sales?

A. No, sir; executor's sales.

Q. Not at auction?

A. Apparently not, sir.

Q. Would you be sure they were not executors' sales made at auction?

A. If they were it would still further confirm my opinion that it was a fair price, because executors' sales at auction bring better prices than executor's sales at private sales.

Q. Has not property at 14th Street largely increased in value in the last three years?

A. No, but there is a better market for it and it is going to increase largely with the improvements that are going on there.

Q. Did you reckon the corner of Twelfth Avenue as a corner lot or as an interior lot in your estimate?

A. I reckoned it as an interior lot because of the ungraded condition and the unsettled condition of things right there. I could not arrive at it in any other way.

Q. Even if it be ungraded and unsettled is not the corner lot with the prospects that go with it on such a broad avenue as Twelfth Avenue, more valuable than an interior lot?

A. I am unable to appraise prospects.

Q. You do it every day, don't you?

A. No, sir.

Q. Is not the corner lot on an avenue such as Twelfth Avenue is laid out apt to be more valuable than an interior lot?

A. Yes, usually; but I have taken an average of the lots 4326 there of so much. I do not say that each lot is worth that.

Q. Do you mean to say that interior lots, if you were to define these lots, are actually worth less than $11,500 and the corner worth more?

A. On account of the conditions there I do not believe that any of that property would bring any more money than I have placed the valuation at. There is a bad neighborhood back of it.

Q. Don't you think a corner lot, assuming as you did it is not a corner yet, and having it understood, as you did, that Twelfth Avenue was to be opened on a city street, and that it did not belong to the gas company, would bring more than an interior lot?

A. Probably it would. But there is no physical corner there yet.

Q. Well, we must assume the one thing or the other, that the street belongs to the company or that it does not, and if it belongs to the city you have a corner lot?

A. I would naturally face those lots on 42d Street and not on Twelfth Avenue and I took the entire plottage on 42d Street and appraised it at so much a lot.

Q. But if Twelfth Avenue were to be cut through would not the lots there naturally be faced on Twelfth Avenue in that case?

A. No, sir; they would still be faced on 42d Street.

Q. How about being faced on 41st Street. Wouldn't that half of the block face on Twelfth Avenue if you were to plot it after Twelfth Avenue were cut through?

A. If any one was selling that property they would not sell less than 100 feet square on 41st Street. Then a man could face his lot either way as the development justified.

Q. Would not the development as a rule and in your judgment justify facing the lots on Twelfth Avenue, for the half of the 4327 block from 41st Street to the middle line?

A. Not in the immediate future.

Q. Not even if Twelfth Avenue were cut through?

A. No, because there have got to be a great many other changes in that neighborhood to make Twelfth Avenue of any importance. The slaughter houses on 41st Street have a very bad effect upon all property in that neighborhood.

Q. Do you mean to say that a corner lot on 11th Avenue is now only worth $17,500, in your judgment?

A. In that neighborhood?

Q. Taking Block 1071, across 11th Avenue, you have 4 lots which you appraise at $50,000, or $12,500 per lot?

A. 1071, yes, sir; $12,500 per lot.

Q. Are lots worth more there?

A. They are.

Q. Than they are nearer the ferry?

A. On that side of the street.

Q. On the north side of the street—on that side of the street they are worth more?

A. Business side of the street there.

Q. How about their proximity to the ferry; does that add or detract from their value?

A. It does not add very much. People that go to the ferry pass by without stopping in the stores.

Q. Does it add anything?

A. It may add something. There may be some transient trade there.

Q. Wouldn't you say it added something?

A. Very little.

Q. Wouldn't you say it added something?

A. It might add something.

Q. Then won't you look at plot 1091 which is nearer the ferry, between 11th Avenue and the ferry, north side also, 150 feet, or six lots. You valued that at only $12,000 per lot although it is nearer the ferry, as against $12,000 for Block 1071, which is on the north side of the street as well. Why should that be?

4328 A. Well, while they were nearer the ferry I did not consider the lots were as good lots as the others.

Q. Why not? There is just as much land in them?

A. Just as much land but a much poorer bottom to build on.

Q. Isn't it made land in each case?

A. There is not so much made land in 1071 as there is in 1090.

Q. Isn't it made land?

A. No.

Q. Are not all the lots on 1071 located in made land?

A. I think not, sir. I think they are east of the high water mark and north of the little stream that ran in there originally.

Q. Now, turn to page 6, Blocks 1092, 1093, 44th to 46th Street, between Eleventh Avenue and the North River. You did not in taking these two blocks either make any valuation for a corner lot facing on Twelfth Avenue, although you excluded Twelfth Avenue from the ownership of the complainant company, did you?

—. I did not.

Q. I see that you value interior lots in Block 1093 at $7,500?

A. Yes, sir.

Q. And also in Block 1092?

A. Yes, sir.

Q. Are lots on 44th, 45th and 46th Streets all of the same value?

A. About the same value. I judge so.

Q. Can you give me a record of a sale of any lot within the last year in this immediate vicinity at as low a figure as $7,500?

A. There was a sale of No. 499 West 44th Street; it sold for about $9,500, as far as I can figure it.

Q. Between what avenues is that?

A. It was 200 feet east of Tenth Avenue.

Q. A 25-foot lot?

A. No, a 20-foot lot by 100 feet 4 inches, and had on it a four-story brick tenement.

Q. Was that an auction sale?

A. It does not appear to be.

4329 Q. Do you know whether it was or not?

A. I do not know. I think it is a private sale.

Q. Are you not familiar with sale of lots on Eleventh Avenue, 617 to 621, between 45th and 46th Streets, vacant, in 1906, at the rate of $12,000 a lot?

A. No, I have a record of a sale in 1905, 617 to 621. There was a two-story brick dwelling on it.

Q. At what figure?

A. Nominal.

Q. Well, haven't you a record of those sales, 1906, the house being vacant or abandoned, at $37,000?

A. No, I do not appear to have that, sir.

Q. Will you turn now to page 7 of Exhibit 48 and consider Block 1457?

A. Yes, sir.

Q. Where you appraised street lots at $8,000, if I am correct. Will you see if I am?

A. I appraised the lots on 63d Street at $8,000 and those on 62d Street at $7,500.

Q. Why the difference?

A. 63d Street is a better Street.

Q. Well, you appraised the lots in Block 1455, which is between 60th and 61st Streets, at $6,500, on the street, did you not?

A. Yes; a different location of the street.

By the MASTER:

Q. I understand that in that block also that any allowance you made for plottage is included in your price per lot?

A. Yes, sir.

By Mr. MATHEWSON:

Q. How much did you allow for plottage in this case?

A. I cannot separate all the different elements in this case, Mr. Mathewson. Probably in the neighborhood of 5 per cent.

Q. Did you make any individual figures first and then add 5 per cent.?

A. No, I did not.

Q. Is the same true of Blocks 1092 and 1093 respecting
4330 which I called your attention a few moments ago?

A. Yes.

Q. You say that the property between 60th and 61st Streets is not so well located as on 62d Street or 63d Street, but hasn't it an additional element of value as property facing on Avenue A or nearer Avenue A?

A. Yes, and I have allowed for that.

Q. But even after allowing for that you gave a lower rate per lot?

A. For the back lots, further back. There were conditions there that justified that difference in the value. There is a great deal of rock on the lots on 61st Street; that is one reason; 6 or 8 feet of rock.

Q. How does rock affect the value of lots as compared with made land?

A. It is a more solid investment.

Q. Is rock more deleterious in estimating the value of the lot than the fact that a lot is made land?

A. It depends a great deal upon the man and the rock. I can give you examples both ways.

Q. Are you familiar with the sale of 417 East 61st Street, which was directly opposite the gas property, with an old two-story house of little value, 25 by 98 feet, under foreclosure, in 1906?

A. I have a record of that sale.

Q. It sold for $9,000, didn't it?

A. It sold for $9,000; a two-story frame tenement on it.

Q. Don't you recall that that two-story building was of very slight value?

A. I don't remember the building.

Q. A two-story frame tenement building would not be a very valuable building, would it?

A. Not very.

Q. Are you familiar with the sale of No. 1108 First Avenue, between 60th and 61st Streets, in 1905, a one-story shed only on the land?

A. No, sir, I am not familiar with that. I would have had it if it had an actual consideration, I think.

4331 Q. Well, have you any record of the sale of 1103 Avenue A, recently?

A. No, sir, I have not.

Q. At $23,500?

A. Oh, that had a large tenement house on it.

Q. Well, whatever it had I am referring to the sale of that number?

A. I think I have seen that sale but I have not a record of it here.

Q. Wasn't that an old tenement house?

A. No, sir; I think not.

Q. Do you know the value of the tenement house on it?

A. No, sir; I made no examination of it.

Q. Now, will you look at Blocks 1177 and 1157, on page 8 of the Exhibit 48. If I understand you correctly street lots, interior lots in Block 1177 west of West End Avenue you apprasied at only $5,000, while between West End Avenue and Amsterdam Avenue in Block 1157 you appraised them at $8,000?

A. Yes, sir.

Q. Do you mean to say there is any such difference?

A. Yes, sir.

Q. (Continuing:) As 62½ per cent. in the value of interior lots?

A. I think so, sir; because these lots abut up against the railroad track. The railroad track is against the grade of the street, but you cannot cross the track; it terminates in a *cul de sac.*

Q. But it is open at one end, across West End Avenue?

A. Oh, you can go out on West End Avenue, but it is not a continuous street, it is only 34——

Q. You think the interior lots in Block 1177 west of West End Avenue are worth only 62½ per cent. the value of lots in Block 1157?

A. Yes, because the other part is a built up neighborhood and is a continuous thoroughfore.

Q. You give the corner of Amsterdam Avenue in Block 1157 as $25,000 and the lot next to it as only $12,500, if I understand you correctly?

A. Yes, because I think very large corners would have that difference in value.

4332 Q. But don't you think that the lot next to the corner has a greater value than 50 per cent. the value of the corner?

A. 50 per cent. is usually considered a very high addition to make for the corner; usually 33⅓ to 50 per cent.

Q. But if you took the lot next to the corner at $12,500 and added even 50 per cent. to it, it would make a value of only about $18,000 for your corner instead of $25,000, wouldn't it?

A. Yes, but that is a built up neighborhood there and there are new buildings going up there and it is quite prominent; that makes the increased value.

Q. You gave the value of a corner as $25,000?

A. Yes, sir; and $14,000 for the next lot.

Q. $11,000 less for the next lot?

A. That is what I did there.

Q. Well, that isn't the proportion you carried in estimating the lot next to the corner in other cases, is it?

A. Not always; no, sir.

Q. For instance, in Block 1683, you took a corner at $15,000 and the lot next to the corner at $12,000?

A. There is no universal rule. It all depends on judgment.

Q. And in Block 1704 you took the corner at $13,500, and the next lot at $11,000?

A. There was some reason for it when I went on the ground.

Q. What is the special reason for reducing lots next to the corner on Amsterdam Avenue, which is a business street, to one-half the value of the corner lot?

A. I cannot tell what it is now, for I have not the memorandum, but there was something that induced me to do it when I visited the property.

Q. Amsterdam Avenue is a business Street?

A. Yes, a business street.

Q. A broad avenue?

A. A broad, 100-foot avenue.

Q. Doesn't it seem to you an excessive reduction without some special consideration that you have in mind unless there was a good reason for it?

4333 A. I cannot recall the reason. There was a good reason for it at the time.

Mr. Page: Would it be a special reduction, or an excessive valuation of the corner over the next lot?

Mr. Mathewson: Well, I am quite willing to have that question put.

Q. Referring to your appraisal of lots in Block 1177 at $5,000, as being west of West End Avenue, are you familiar with the sale on 66th Street, only 50 feet east of the railroad track, 40 by 100, in May last, for $13,000 or at the rate of $8,100 per lot, vacant, directly across the street from these lots you appraised for $5,000?

A. No, I haven't any such sale.

Q. Well, if lots were selling on the north side of 66th Street, west of West End Avenue, at $8,100 per lot, the lots on the southerly side would be worth more than $5,000, wouldn't they, directly across the street?

A. If they were selling for that, but I don't think that sale is the evidence of their value, for I don't know anything about the sale.

Q. Now, turn to page 9 of Exhibit 48, Block 1670, between 98th and 99th Streets, First Avenue and Second Avenue. What did you allow for plottage by reason of the ownership of the entire block by the Company?

A. I am unable to separate the plottage from the amount that I have placed upon the lots. That is, I am unable to separate it as a distinct item.

Q. Is the same true as to Block 1692 across the street?

A. Yes, sir. I don't think anybody can separate them.

Q. In Block 1670 you figure a corner at $14,000 on First Avenue, as I understood you?

A. That is true.

4334 Q. And Block 1692, just across First Avenue, you figure a corner on the same avenue at $13,000, would you not?

A. So you would on Broadway.

Q. I merely ask you whether that is the case?

A. Yes, sir.

Q. Do you consider the easterly side of First Avenue less valuable than the westerly side there?

A. I do.

Q. Isn't one side as much a business street as the other, above or below the gas works?

A. Just about, now. There is very little business there.

Q. You figured street lots on 88th and 89th Streets west of First Avenue at $7,500, and street lots——

A. One moment. I figured lots on 98th and 99th Streets, between First and Second Avenues——

Q. At $7,500, interior lots, did you not, the cheapest lots?

A. Yes; I averaged them at that.

Q. And you figured them across First Avenue, Block 1692, on the same streets, at only $5,000?

A. That is true; a very different character of lots there.

Q. Do you mean 50 per cent. should be added to the value of lots in one block to represent the actual value of similar lots there?

A. I think so there, when you consider the character of the soil and the location.

Q. Isn't the property between First and Second Avenues made land, to a considerable extent?

A. Between First and Second Avenues?

Q. Yes.

A. Yes; there was an old brook or stream ran up there.

Q. And also it is made land between First Avenue and the River where you gave your $5,000 lots?

A. That is true.

Q. The foundation is just as good in one place as in another?

A. No, hardly.

Q. Well, why not?

A. Oh, there were other elements that came in.

4335 Q. Is not the fact that the property abuts this marginal street and is next to the bulkhead line one element in favor of value in Block 1692?

A. It is.

Q. And still you put the interior lots in 1692 at $5,000 against $7,500 in 1670?

A. 1692?

Q. Yes.

A. I think not, sir.

Q. Well, let us see if you did not?

A. That is the block fronting on marginal street and I divided that in large parcels.

Q. Didn't you give any valuation for it individually, interior street lots there?

A. I think not, sir. I estimated 1692 in this way——

Q. The question was whether you did not estimate the interior lots or some of them there at $5,000?

A. I made the plot northwest corner of marginal street and 98th Street $38,000, and on that plot I divided the frontage on marginal street by the center of the block.

Q. And you had certain lots figured in this Block 1692 at $5,000, did you not?

A. I think not in my testimony, sir. I testified that there are 10,877 square feet in the northerly portion and 10,860 feet in the other.

Q. You gave a corner lot in 1692 at $13,000 and some street lots at $5,000, unless my figures are wrong?

A. Ah, on First Avenue?

Q. Yes.

A. Oh, I thought you were talking about the portion fronting on marginal street.

Q. Oh, no.

A. On First Avenue I appraised southeast corner of 99th Street at $13,000.

Q. And you had interior lots there at $5,000 each, did you not?

A. No, not on the First Avenue front.

Q. No, but street lots?

A. Yes, between the rear of those lots and the rear of the marginal street lots.

Q. And these are the ones I am comparing with $7,500 street lots in Block 1670?

A. Yes, that is true.

4336 Q. Now, are you familiar with the sale of 227 to 231 East 98th Street in 1905, 75 by 100 feet, with sheds only, at $40,000?

A. I have a record of it here, for a nominal consideration, which is subject to a mortgage of $5,000.

Q. Don't you know that the sale of the three lots 75 by 100 feet was $40,000?

A. No, I do not. The record shows it was sold subject to a mortgage of $5,000 for a nominal consideration.

Q. And you made no investigation, I suppose, further than observing the record, did you?

A. That is all, sir.

Q. Now, take page 10, Block 1683, northwest corner of First Avenue and 111th Street.

A. Yes, sir.

Q. Do you figure a corner there at $15,000?

A. That corner, yes, sir; because it was opposite to the entrance of Jefferson Park; I gave a special value for it there.

Q. Well, Block 1682, which is the block immediately below, you figure the corner at $17,500, do you not?

A. Yes, that is opposite Jefferson Park, too, but it is a better street.

Q. What is a better street?

A. 111th Street.

Q. But 111th Street, the northwest corner of 111th Street, which you figured at only $15,000 is on the same side as the southwest corner of 111th Street, both being on First Avenue?

A. Both on First Avenue, but there is that difference in my opinion in the value of the two parcels.

Q. How so, because they are on the same street at exactly the same point, are they not?

A. Yes.

Q. Both on First Avenue and 111th Street?

A. Yes, sir.

Q. And you have stated the fact that the northwest corner is opposite this park makes it more valuable than it is otherwise worth and yet you have appraised the southwest corner at $17,500 and
4337 the northwest corner at only $15,000?

A. And I presume I should have reversed them. I made them on a general diagram and may have copied them incorrectly. Those are the values of those two corners.

Q. Is that the only explanation you can now give?

A. That is the only explanation I can now give.

Q. I see you value interior lots on Block 1683 at $7,500 and interior lots on Block 1682 at $8,500, $8,500 on 110th Street; is not 111th Street as good a street as 110th Street?

A. 111th Street is a better street.

Q. Then why do you appraise interior lots on 111th Street, on Block 1683, at only $7,500, while you have interior lots on 110th Street, in Block 1682, appraised at $8,500 or a thousand dollars a lot more?

A. Well, 1863 is between 111th and 112th Streets, and 1682 is between 110th and 111th Streets.

Q. Quite so, but I am taking the lots facing on 110th Street out of Block 1704, and you appraise those at $8,500, although you appraised the lots in Block 1683 facing 111th Street which you say is a better street at only $7,500?

A. That is true. There were only two of them, though.

Q. The fact that there were only two would not make the thousand dollars difference in a lot, would it, in a better street?

A. I found I did not make it exactly that. I appraised the seven lots, giving an average of $7,500, including a portion of the land on 112th Street.

Q. Well, there are only two lots on 112th Street?

A. Yes.

Q. That is a very small part of the entire plot?

A. Yes, and I made an average of all the lots there, seven of them, at that figure.

Q. Now, don't you think that the lots on 111th Street facing this park are worth more than $500 beyond the value of lots on 110th Street?

4338 A. No, I think that is about the difference between the two.

Q. Now, look at Block 1704 a moment, which is directly opposite the park. There you have appraised interior street lots on 110th Street, if my figures are correct, at only $5,500, whereas you have appraised the interior street lots on 110th Street in Block 1682 just across First Avenue at $8,500?

A. Yes, but this block is a very poor block in comparison.

Q. Which is?

A. 1704.

Q. But that is opposite the park, isn't it?

A. A portion of it is.

Q. Isn't it all opposite the park?

A. No, it is not.

Q. Well, facing the park?

A. Oh, the whole block looking at it one way is, but the entrance to the park is through 111th Street; no entrance to the park through 110th Street.

Q. But the block is opposite the park for its whole extent?

A. Yes; the 111th Street front is.

Q. Now, taking Block 1682 on 110th Street, you give the value of interior lots between First and Second Avenue as $8,500?

A. Yes.

Q. But the interior lots in Block 1704 on 111th Street which face the park you give at only $7,000?

A. That is so.

Q. Why is that if it is more valuable? Because it faces the park?

A. I did not say that it was more valuable than the lots on the other block there. I said they were more valuable than the lots on 110th Street on the same block.

Q. You don't think, then, being opposite the park makes the lots any more valuable than they are on the opposite block?

A. More valuable than the lots on 110th Street in that neighborhood.

Q. Can you point out the sale of any lot within the last
4339 year in that vicinity at as low a price as $5,500?

A. On the streets?

Q. Yes, any full lot at a figure as low as $5,500?

A. The only sales I have in that locality during the past year are sales of plots upon which buildings were situated.

Q. Now, let me call your attention to this; aren't you familiar with the sale of 308 to 320 East 110th Street, west of First Avenue and directly opposite?

A. I thought you were asking me about First Avenue.

Q. No, I am asking about the street, 175 by 100, 308 to 322 East 110th Street, with only sheds, selling in 1905 at $74,550, or at the rate of $10,650 a full lot.

A. No, I am not.

Q. Don't you find a record of the sale of that property in November, 1905, on your memoranda?

A. No, sir.

Q. I have another record of a sale, 324 to 326 East 110th Street, west of First Avenue, and also directly opposite the Gas Company's property, 50 by 100, with sheds only, as selling in July, I think in 1905, at $19,300, or at the rate of $9,600 per lot. Cannot you find a record of that in your memoranda?

A. No, I haven't that record.

Q. Can you point to any sale?

A. No, I cannot.

Q. Now, will you turn to page 11 of Exhibit 48, Block 1999. There you appraise the interior lots at $6,000 per lot. Can you give me any sale in the immediate vicinity within the last year at as low a figure as $6,000 per lot, between 132d and 133d Streets, east of Twelfth Avenue?

A. No, the nearest sale I have made was on the corner of Broadway and 132d Street. I sold four lots there in October.

Q. At 132d Street?
A. And Broadway. That is my nearest sale.

4340 By Mr. Page:

Q. Was that the Boulevard or old Broadway?
A. The Boulevard. That is a sale I made myself.

By Mr. Mathewson:

Q. Have you a record of a sale on the south side of 132d Street, midway of the block, between Broadway and Twelfth Avenue?
A. No, I have not.
Q. 130 by 100, vacant, sold in 1904?
A. No, I have not. I have not the records with me as far north as that.
Q. You haven't any record of a sale there at $8,800 per lot?
A. Not with me.
Q. Property in that neighborhood has been increasing the last two or three years?
A. Very much indeed, on the Boulevard and near the subway stations.
Q. And between the Boulevard and Twelfth Avenue?
A. Not so much, excepting in very good blocks there have been a great number of sales, large amount of building.
Q. This property is located very near the Boulevard and runs through to Twelfth Avenue, Block 1999?
A. It has great disadvantages, such as the Riverside structure—the viaduct on Twelfth Avenue and the viaduct portion of the subway on the Boulevard and then it descends very abruptly from 133d Street south, and these streets descend abruptly to Twelfth Avenue.
Q. But all that property has partaken of the general advance in property, hasn't it?
A. Yes, but the property that has had the largest amount of advance has been property further north on the Boulevard.
Q. But the presence of the subway and the opening of the subway, even though it does crop out now and then, has on the
4341 whole increased the value of property in that section?
A. It has wherever the subway has been built.
Q. And it has been built right close to this property?
A. Yes, sir, very close.
Q. Now, will you take finally Block 2175, page 12, of the exhibit, which is an irregular piece, which you have appraised at $89,375.
A. Yes, sir.
Q. Is it not true that with the opening of the subway and general advance, prices have advanced in that section very largely in the last two years?
A. Very largely.
Q. Did you figure for a lot on Sherman Avenue, how much that would be worth?
A. Yes, sir.
Q. What did you figure a lot on Sherman Avenue to be worth?
A. I figured them to be worth what they sold for to-day, $5,500 apiece.

Q. $5,500 apiece?

A. Yes, what they have sold for to-day.

Q. On Sherman Avenue at this point?

A. Yes, sir, just about that point.

Q. Has not this plot a greater value than ordinary because of the fact that it fronts not only Sherman Avenue but has a large frontage on Kingsbridge Road?

A. The Broadway front or Kingsbridge Road front is worth about the same as Sherman Avenue. Perhaps—well it is a little further away from the subway station, but they bring about the same in the market, notwithstanding the fact that Broadway seems to be in much better condition.

Q. Now, Mr. Wells, on what basis did you value this property, on the basis of the presence of the gas works there?

A. That has something to do with creating the condition of any neighborhood.

Q. And if the Gas Company were to sell off for general improvements this property, thereby of course disposing of the gas works, that would immediately result in an increase, would it not? 4342

A. It would by the building operations that would come in that neighborhood.

Q. Would not it, by the very fact that the property was to be sold, thereby necessarily disposing of the gas plant, result in higher prices than you have estimated for the value of the property as it now stands?

A. I think I have given the fair market value of it to-day, even in——

Q. If the gas plant were removed from the property, don't you think it would sell for higher figures than you have given?

A. People in going around in this examination, people would speak about the gas plant being removed, and it seems to be pretty generally understood among them, and notwithstanding that fact, these values that I have given to-day are about the values that I think property is bringing in the neighborhood.

Q. You mean by private negotiation?

A. Private negotiation, although I think it probably brings better prices at public sale than at private negotiations.

Q. So at public sale if these plots were put up and sold, you think it would bring more than at private sale?

A. Yes, if the property were well advertised and you had a good auctioneer.

Q. You are not an auctioneer?

A. I am.

Q. Don't you think that 42d Street property next to the ferry, if it were known that the company's plant were to be removed and the neighborhood were to be improved in that regard, would sell for higher figures even at private sale than you have suggested?

A. I do not think the ferry is any difference there—makes any different conditions than the ferries do in the other streets in the city; the people rush past the property without improving it much in the way of trade.

4343 Q. Don't you remember they used to say the same thing about 42d Street and the Grand Central Station, that that was of no value, as a business street, because people rushed past it to the station?

A. Yes, but conditions have changed, there is a different class of people and different growth.

Q. And was not real estate very dead on 42d Street comparatively a few years ago on that account or for some other reason?

A. The subway has had a very beneficial effect, and the millions that have gone into new buildings have had an effect on 42d Street.

Mr. PAGE: And the general movement of business property uptown.

The WITNESS: I made an appraisement for the Rapid Transit Commission for the damage done by constructing the subway, and I made a pretty thorough examination of 42d Street at that time. Forty-second Street to-day is very different from what it was when the subway commenced.

Mr. MATHEWSON: That is all.

The MASTER: We will adjourn until 10:30 to-morrow morning.

Mr. BURR: I would like to have noted on the record before we adjourn, that the following directors of the Consolidated Gas Company were duly served with subpœna to appear to-day. Messrs. Sterling, Baker, Schermerhorn, Palmer, Tilford and Pyme. Of these gentlemen Mr. Schermerhorn actually did appear and was, at his own request, excused until 11 o'clock on Monday; so I ask that it be noted on the record.

Mr. MATHEWSON: Mr. Tilford called me up and said that the gentleman who served him said that he need not appear to-day unless it was convenient, and I told him under those circumstances I thought he would be safe in not appearing. 4344

Mr. BURR: I understand Mr. Sterling is to appear here at 11 o'clock to-morrow. If you can kindly arrange to have the other gentlemen here at the same time——

Mr. MATHEWSON: I do not think I can, for I do not know their addresses, and I am not in communication with them. I do not believe I can, really.

Adjourned to Wednesday, November 28th, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's 256,
State's YY,
City's 86.

4345 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, at Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *November* 28, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Garver, Mr. Kirby.

4346 Mr. Wells appeared and handed in, as per agreement yesterday, the total of the valuations given by him as follows, the same being exclusive of bulkheads, water rights and land under water, as follows:

Consolidated Gas Company.

Valuation of Land, by James L. Wells.

Block.	Lot.	Valuation.
1643	56, 57, 58	$71,000
1642	32, 33	62,500
870	54, 56, 59, 60	203,854
239	1, 5	142,500
972	45	22,651
985	7, 19, 20, 39, 40	213,150
982	13	299,939
989	1	139,500
989	26	96,480
991	26	123,500
991	1	199,500
988	1	402,500
688	21	300,350
689	17	371,350
690	12, 40, 42, 43, 44, 45, 48 49, 50, 51, 53	386,350
691	11	142,350
666	3, acquired by the city.	
666	12, acquired by the city.	
716	14	36,000
715	51, 59	108,000
951	35	52,800

	952—7, 29, 30, 33, 34, 35	333,800
	953—1	435,700
	979—1	413,406
	978—1, 2, 3, 5, 6	368,265
	987—37, 41, 42, 43, 51	88,008
	1090—23	72,000
4347	1071—10, 11, 12, 13	50,000
	1070—5	76,000
	1089—1	584,500
	1092—1, 28, 38, 38½, 39	422,500
	1093—1	322,500
	1457—6	149,230
	1455—13	185,500
	1474—24	20,920
	1157—21	170,757.60
	1157—1	596,000
	1156—45, 46	32,000
	1670—1	463,000
	1692—1	191,114
	1683—18, 34, 35	90,500
	1682—8, 11	371,000
	1704—1	364,500
	1712—2	53,848
	1999—1	346,200
	2175—15, 18, 22, 100	89,375
	Total	$9,664,897.60

Mr. Burr: I wish to state, Mr. Master, that I have had a consultation with Mr. Mathewson and with Mr. Garver, relating to the statement printed in the *Tribune* which we offered in evidence here and which has been marked City's Exhibit 55; and, as I stated yesterday, we have already issued subpœnas to all the directors of the company so as to examine them with regard to the statements contained in that printed publication, but from my conversation with Messrs. Mathewson and Garver it seems quite likely that we may be able to arrive at a stipulation which will obviate the necessity of bringing those gentlemen here. We are all anxious to hurry the conclusion of this case, and everything that can be done to hasten its conclusion I know you will appreciate, so we have determined to ask you
4348 this: we will endeavor to arrive at a stipulation which will be entirely satisfactory during the morning session here, and ask for an adjournment until the afternoon.

Mr. Mathewson: I understand, Mr. Master, that these witnesses would take up considerable time if they were called, and I understand that counsel for the City is willing to proceed on Friday provided a stipulation is not reached to-day, so we would lose, perhaps, no time between now and Monday anyhow. That being the case, it seems to me that we might be justified in making no opposition to the request.

Mr. Burr: If we cannot arrive at a stipulation that will be mutually satisfactory, I will agree to go on and examine these witnesses

Friday. If we can arrive at a stipulation that will be mutually satisfactory, then, as I stated yesterday, I will be ready to proceed on Monday with the accountants.

The **Master**: The suggestion is you should have a recess, then, until one o'clock?

Mr. **Burr**: Say the usual time for re-assembling—2.15.

The **Master**: As to that, the suggestion was the other day that Mr. Mathewson expected to leave town this afternoon on an early train—four o'clock—and we would have to suspend a little earlier than usual. I think if you can get together on a stipulation you should be able to do it by half-past one and you can come in here at that time and proceed.

Mr. **Burr**: Yes, I think so.

The **Master**: Is Mr. Wells' examination completed? Is there to be any redirect from him?

Mr. **Kirby**: I understand his examination is completed.

The **Master**: Have you any other witness you can go on with now?

Mr. **Kirby**: I have not, sir.

4349 The **Master**: Well, then, under these circumstances there is nothing to do but to suspend until 1.30, and you can work on the stipulation meanwhile, if you can.

I desire to say to counsel again with regard to the suggestion of going on on Monday that I am entirely willing to sit Friday and Saturday, and I think it right that you gentlemen should recognize the importance of speeding this cause, because I am very confident it will not be possible to extend the time beyond December 10th, and, including Saturday next week, you have only six working days—Monday will make seven—and, allowing proper time for cross-examination, you gentlemen will have to get in the rest of your evidence much quicker than you have been doing lately.

Mr. **Burr**: We will be ready with the accountants' report Monday, both as to Exhibit 94 and the real estate account. The situation regarding the examination of the plant by additional engineers is unfortunate, but they have started. I have Mr. Lacombe and Dr. Marks, and Senator Page and Mr. Kirby have procured Mr. Edgerton; they are now examining the plants, so that it will be a matter that will later on appeal to the discretion of the Court if it is satisfied they are hastening such examination as much as they possibly can. With that exception we will close this case next week.

The **Master**: It won't appeal to my discretion. No further extension will be granted beyond the time I named, which I consider ample under the circumstances. If you gentlemen choose to work short hours and not work Saturdays, and spend time as you did yesterday putting in documentary evidence that might just as well have been put in at some other time, that is your look-out. If you get any further time it will have to be from the Court, and I doubt very much if you get it.

4350 Mr. **Burr**: Well, next week it may be necessary to work all night. It has almost gotten to that point now.

Recess until 1:30 P. M.

After Recess.

1:30 P. M.

Mr. **Burr**: I have consulted with Messrs. Mathewson and Garver, in pursuance of the arrangement made this morning, and we have finally arrived at an agreement which reads as follows:

Admission of the complainant, to be entered on the record, and in consideration of such admission the defendant, the City of New York, withdraws the subpœnas issued to compel the attendance and giving of testimony by the directors of the complainant on the subject of said admission:

First. Complainant concedes that City's Exhibit 55 (appearing on page 2965 of the evidence) fairly and truly stated complainant's attitude April 15, 1904, under the conditions which then existed, as to the proposed construction and use of the Astoria plant, and as to the other matters therein referred to, and same may be put in evidence of such attitude then and under such conditions.

Second. The so-called Remsen East River Gas Bill of 1904 did not become a law, and no similar legislation or bill has since been introduced or become a law.

Third. Complainant at the time of making of the oil contracts heretofore offered in evidence herein and marked City's Exhibits 10 and 30, had thirteen directors, of whom William Rockefeller was one, and said William Rockefeller was at the same 4351 time and still is a director in the Standard Oil Company, being the company with whom said contracts were made, but at the said time and for several months prior thereto the said Rockefeller was and had been in Europe.

Mr. **Burr**: I now offer in evidence the said City's Exhibit 55, heretofore ruled out, under this stipulation, as evidence of the attitude of the complainant then and under such conditions.

The **Master**: Was it ruled out or marked for identification?

Mr. **Burr**: It was excluded.

Mr. **Mathewson**: Then it may be marked in evidence.

Mr. **Burr**: It may be marked as received. The objection is withdrawn, as I understand.

Mr. **Mathewson**: We now offer it and we do not object, under the stipulation.

The **Master**: And it keeps its mark.

Mr. **Mathewson**: I suppose there is no objection to calling attention to the fact that this exhibit which has just been offered contains some errors not covered by the stipulation; *i. e.*, it refers to fourteen plants of the Consolidated Gas Company, which, of course, are a great many more plants than the Consolidated had; and I think it refers to the Astoria plant as being five times larger than any other in the world, which I think is perhaps out of the way in amount; at any rate, it is in evidence just exactly how many plants the company has and just how large the Astoria plant was.

Mr. **Burr**: Yes.

Mr. **Mathewson**: I call attention to that so that it may be observed.

Mr. Burr: That obviates the necessity for the calling and 4352 examination of these twelve witnesses for whom subpœnas had been issued, and many of whom had been served. I will be ready to — on Monday morning with the accountants.

The Master: You have not anything further this afternoon?

Mr. Burr: I have nothing further this afternoon.

The Master: Note on the record that Senator Page and Mr. Kirby are not present and have no witness, and there being nothing further ready we will adjourn until Monday morning at 10:30 A. M.

Mr. Mathewson: I understand that counsel for the defendants can have no testimony ready until Monday morning.

The Master: They so stated to me, that they could not go on until Monday.

Adjourned till Monday, December 3d, 1906, at 10:30 A. M.

Last Exhibits:

Complainants' 256.
State's Y Y.
City's 86.

4353 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *December* 3, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page.

4354 James Hall, recalled as a witness in behalf of the defendant, the City of New York, testified as follows:

Direct-examination by Mr. Burr:

Q. Where do you reside?
A. Philadelphia.
Q. What is your business or avocation?
A. Chartered accountant.
Q. How long have you been so engaged?
A. Between thirteen and fourteen years.
Q. Where, in this city or in Philadelphia?
A. In Scotland, England, Africa and America, and all over the States.

Q. Have you examined the books of many corporations of various kinds and descriptions?

A. Quite a large number.

Q. In the United States and in Europe and in other countries?

A. Yes, sir.

Q. Where did you graduate?

A. I am a member of the Institute of Accountants and Actuaries, Glasgow, Scotland.

Q. Any other societies or institutes?

A. No.

Q. On behalf of the City of New York, the defendant in this case, have you made an examination of the books of the Consolidated Gas Company for the year 1905 for the purpose of verifying the exhibit produced here by the complainant, known as Exhibit 94?

A. I have.

Q. What books did you examine?

A. I examined all the vouchers and ledgers, journals, consumers' ledgers, wages and pay rolls, labor tickets.

Q. How long were you engaged in this examination?

A. Between five and six weeks.

Q. Besides Exhibit 94, did you make an examination of the real estate account of the Consolidated Gas Company as it appeared in the books of the constituent companies? 4355

A. Yes, so far as we got those books.

Q. Did you also make an examination of the items going to make up the amount of three million and odd dollars as the same appears on Exhibit 80?

A. I did.

Mr. Mathewson: What is that?

The Witness: Sundry creditors, October 31st, 1905, I think it is.

Mr. Burr: The item of sundry creditors, $3,357,037.95, as it appears on Exhibit 80.

Mr. Mathewson: And what is Exhibit 80?

The Witness: I think that is your statement of operations, October 31st, 1905.

Q. Now, have you prepared a report as the result of the examination so made by you of the books of the company regarding Exhibit 94 and Exhibit 80, and the real estate account?

A. Yes, sir.

Q. Is this book which I hand you the report which you made?

A. It is.

Q. Do you remember what you found as the result of such examination to be the total cost of manufacturing and distributing gas sold to private consumers in the City of New York by the Consolidated Gas Company during the year 1905?

Mr. Mathewson: Just a moment. I think that that is a conclusion.

Mr. Burr: I was going to ask him how he arrived at it. I can either go one way or the other.

Mr. Mathewson: I do not think that is a proper question. This witness is not in the gas business and he cannot testify what should

4356 or should not be included, according to Mr. Marks' affidavit and testimony. He can testify, it seems to me, what the items are that he objects to, and we can determine whether they are properly chargeable or not.

Mr. **Burr**: He is testifying now as to what result he arrived at from an examination of the books of the Consolidated Gas Company, so far as Exhibit 94 is concerned, which he was authorized and instructed to do.

Mr. **Mathewson**: He was not authorized to draw these conclusions you have asked him, and this great big conclusion in one, it seems to me, is improper.

Question read.

The **Master**: You can modify that question so as to be unobjectionable, I think. In view of the rulings already made, I will let the witness testify as to what the results of his computation show from data derived by him from the books of the company, as to the cost of gas, if the theory on which he made these computations is also shown.

Mr. **Burr**: I will withdraw the question.

Q. What day was it you started in to make this examination?

A. October 12th.

Q. What was the first thing you did?

A. Called for the vouchers and ledgers.

Q. Did you make an examination of the vouchers?

A. We did.

Q. For what purpose?

A. For the purpose of determining whether or not they were proper charges against operation, in the manufacture and distribution of gas.

Q. What else did you do?

A. Checked all the postings of the operating ledger with the view of determining whether all the vouchers had been produced; tested the consumers' ledgers in order to test the quantity of gas sold and distributed.

4357 Q. Does this report which you have identified correctly set forth the figures which you obtained from the books of the company and the result of your examination of said books?

A. It does.

Mr. **Mathewson**: I do not think it is of very much importance whether it does or not. I assume you do not propose to try to offer that report here?

Mr. **Burr**: That is just what I do propose to do.

Mr. **Mathewson**: I shall certainly object to it. I do not think counsel or the Master will want to wade through that report and find what the witness finds in regard to Exhibit 94. I am not speaking for the Master, but so far as I am concerned I shall object.

Mr. **Burr**: On this record here now we have Yalden's report and you had in the Gas Commission Teal's report. Now we will have the report of these gentlemen who have been designated to examine the books of the company to verify your Exhibit 94.

Mr. Mathewson: We never had Yalden's report; you offered that yourself, and I think the Master suggested that it was of doubtful value, but he would accept it. We did not offer Teal's report. He was put on the stand by the Commission and testified.

Q. What does this report contain?

A. It contains the result of our examination of the books of the company in detail and our reasons for rejecting certain items improperly chargeable against the manufacture and distribution of gas, and our reasons for omitting others.

Q. There are certain exhibits attached to this report. Will you explain them, please.

4358 Mr. Mathewson: I object to this. The report that has been passed to counsel by the witness, I judge from its volume is certainly very voluminous. It does not seem to me it is very difficult to point out whether Exhibit 94 shows the actual facts, and secondly, what items in Exhibit 94 are objected to and excluded by this witness. Whether they should be excluded or not is another proposition, without going into this immense volume.

Mr. Burr: That is what I propose to do by first calling his attention to these exhibits.

Q. What does Exhibit B show?

A. Statement of the quantities of gas manufactured, purchased and sold during the year 1905.

Q. Are these figures appearing on these exhibits taken from the books of the Consolidated Gas Company?

A. They are.

Q. What does Exhibit C show?

A. Exhibit C represents Exhibit 94 submitted by the complainant, an exact copy.

Q. Just as it was submitted by them?

A. An exact copy.

Mr. Mathewson: What does it relate to?

Q. What does Exhibit D relate to?

A. The same exhibit amplified and showing our adjustments.

Mr. Mathewson: What was Exhibit C?

The Witness: Exhibit 94.

Q. You might explain a little more in detail what you mean by showing your adjustments, as I understood you, referring to Exhibit D.

Mr. Mathewson: We are going to mix up the record dreadfully, if I may suggest it, because we have already Exhibits C, D,
4359 and so forth. Why not call it Schedule C, or something like that.

Mr. Burr: I think I made it distinctly understood that I was referring to the exhibits annexed to the report which he has in his hand, and which he has spoken of as having been made from the books of the company, and I am now referring to Exhibit D, which he says shows the summary of the operations for the year ending October 31st, 1905, amplified and adjusted.

Q. I ask you to be a little more specific as to what you mean by amplified and adjusted.

The MASTER: Is not this getting at it a little wrong-end-to, so to speak? I understand Mr. Mathewson's objection, and it seems to me it is entitled to some weight. If you are going to attack Exhibit 94, you want to prove in the first place by some substantive proof what particular features of it you criticise and what the nature of the criticism is. Then, having done that, having made some primary proof of that kind to lay the foundation by, it may be proper to take in all these other tabulations and computations as a summary result of the witness' testimony; but I do not quite see how, without laying any foundation by any testimony of the witness, you can go to work and ask him to make a general statement of a schedule here which you have not even introduced in evidence yet.

Mr. BURR: I merely asked him. My object in asking these questions was to meet the objection of Mr. Mathewson by asking him to identify the exhibits and papers which accompanied this report. I will proceed, then, to find out what, if any, items of Exhibit
4360 94 he has eliminated, and then we will get to the reasons for it, and then we will get to the conclusion as the result of such elimination, if he can support it. But I am trying to satisfy the objection made by Mr. Mathewson, and I think we will save time by getting him to identify first his report, after telling what labor he has expended upon it, and then what it purports to contain and what are the exhibits attached to it, and then I will proceed to ask him in regard to what he found as the result of all this examination and what was the conclusion which he arrived at with regard to Exhibit 94 by any elimination of any items in that exhibit, and then state his reasons and explain his reasons, and then offer the report and the figures and exhibits accompanying it.

The MASTER: You will probably get at the same result, but I don't know.

Mr. BURR: If you think it will save time, I will pursue the identification of these papers which accompanying the report and will ask him directly about the report.

The MASTER: It would make it much more intelligible to take up the Exhibit 94 and go through it, item by item, and find what he criticises in it, and then if he has *has* any detailed tabulations which support his conclusions put them in. I do not assume you are going to put in any long narrative report and offer it in evidence with the assumption that it will be received in place of oral testimony.

Mr. BURR: Oh, no.

The MASTER: Your tabulations will be all well enough, but not the other.

Q. Take Exhibit 94, Mr. Hall, appearing at page 2300-A,
4361 and tell the Court exactly what you did with regard to the various items which appear in that exhibit, and as to what items, for instance, you rejected, and your reason therefore, and what items you retained and your reason therefor.

A. Items 1 to 33, I do not take any exceptions to those items. Item 34, Repairs to Apparatus——

Q. What did you do with that?

A. We found certain vouchers which I considered were improperly charged to this account, being more correctly construction. I submitted them to the Advisory Board of Engineers for their opinion——

Mr. MATHEWSON: Just a minute. I don't know — the Board of Engineers are. A board of our engineers?

The WITNESS: No, the City engineers.

Q. In making this examination of the books of the company for the year 1905, were you aided in any way by a Board of Advisory Engineers, and, if so, you may state who constituted that board?

A. Well, Mr. Charles F. Lacombe, the Chief Engineer of the City; Dr. Marks and Mr. H. H. Edgerton.

Q. In case of any doubt in your mind in regard to any of these vouchers, did you submit them to the Board of Advisory Engineers?

A. I did.

Q. Was that item eliminated?

A. $2,133.98 eliminated.

By Mr. MATHEWSON:

Q. Out of the totals of?

A. $169,197.39.

By Mr. BURR:

Q. That made the amount allowed by you $167,063.41?

A. Yes, sir.

Q. What difference did that make in the cost per thousand cubic feet?

4362 A. .02. I may say here that we have assumed a different method of computing gas per thousand feet than that adopted by the Consolidated.

Q. What method did you assume?

A. The cost of gas we divided by the actual manufacture, and the total cost of manufactured and purchased gas by the quantity manufactured and purchased, and the sale and the distributing expenses by the quantity sold to private consumers.

Q. How did that effect this item 34?

A. By about .03 cents.

Q. In other words, so far as that item is concerned on Exhibit 94 as presented by the Consolidated, .62 cents was allowed as the cost per thousand cubic feet of gas?

A. Yes.

Q. The amount claimed was $169,197.39. According to your revision, that amount should be $167,063.41, and the cost per thousand cubic feet of gas instead of 1.62 should be 1.57; is that right?

A. Yes, sir.

Q. Decreasing the amount charged to the cost per thousand cubic feet of gas, .05; is that right?

A. Yes, sir.

Mr. MATHEWSON: I thought .02 of a cent.

The WITNESS: The other .03 of a cent applied to the different mode of calculation.

The MASTER: As I understand, the reduction is made up of two elements: first, the difference in that item 34 and then, second, the difference in the method of calculation, each of which affects the final result?

A. It does; yes, sir.

By Mr. MATHEWSON:

4363 Q. In order to inform myself, may I ask a single question, whether in your computation getting the 1.57 cents you divided by all the gas made by the company, including even the gas which was used by the company in its own business for lighting and so forth?

A. Yes.

Q. And not merely the amount of gas which was made and which was started into the mains?

A. No. I afterwards allowed for the leakage or difference, excess over sales or whatever you call it.

Q. Well, I am simply talking about your divisor here.

A. Yes, I know.

Mr. BURR: It states in the exhibit. The difference in the divisor he calls attention to it at the top of page 1.

By Mr. BURR:

Q. What is the next item?

A. Account 35. Repairs to buildings. The amount entered by the company was $24,900.69, or .24 of a cent per thousand cubic feet. We allowed $24,812.19, rejecting $88.50.

By Mr. MATHEWSON:

Q. What are "we"?

A. Well, I.

By Mr. BURR:

Q. Making the cost per thousand cubic feet .23 of a cent?

A. .23.

By Mr. MATHEWSON:

Q. What was the amount eliminated on that item as going to construction?

A. $88.50.

By Mr. BURR:

Q. And a decrease per thousand cubic feet of .01?

A. Yes, sir.

4364 By Mr. MATHEWSON:

Q. Was any part of that due to the method of calculation?

A. Well, the .01 would really enter into that. The $88.50 would not come to an appreciable fraction of a cent.

By Mr. **Burr**:

Q. What was the next item?

A. Item 43; cost of manufacturing gas purchased under agency agreements, $997,039.89, or 34.82 cents per thousand cubic feet.

Q. That was the way it appears in Exhibit 94 as presented by the company?

A. It does.

Q. What disposition did you make of that item?

A. I rejected $142,580.32, representing——

Q. With that deduction the amount you allowed was——

A. $854,459.57.

Q. Or how much per thousand cubic feet?

A. 29.14 cents.

Q. Which would make a difference and a decrease of——

A. 5.68 cents.

Q. In the cost per thousand cubic feet of gas?

A. Yes.

By the **Master**:

Q. That 5.68 cents also includes such allowance as is to be made by reason of different methods of computation?

A. It does.

Q. Have you segregated or separated in any way the percentage which is due to the eliminated items and the percentage which is due to the difference in the methods of computation? In other words, what are the factors going to make up that 5.68, if you have them?

A. .03 cents, the profit added to the cost of gas purchased. The remainder would apply to that different computation.

4365 By Mr. **Burr**:

Q. What was the next item which you eliminated?

A. Item 47, repairs to gas stoves.

The **Master**: He was about to state what that reduction of $142,580.32 represented, I think. Would you mind asking him that?

Q. What was this amount $142,580.32, which you deducted from the $997,039.89 appearing upon Exhibit 94 as presented by the company?

A. It represents ten per cent. of the manufacturing cost of the gas purchased by the Consolidated, and five per cent. of the amount expended for new construction work on account of the New Amsterdam Company building new works, and the Consolidated give them five per cent. on the construction value.

By Mr. **Mathewson**:

Q. That was five per cent. interest paid, wasn't it?

A. Yes.

By Mr. **Burr**:

Q. That ten per cent. to which you have referred, is that the ten per cent. profit allowed by the agreements in evidence here, the agency agreements?

A. Yes, sir.

Q. That is, the ten per cent. profit allowed by the Consolidated Gas Company to the subsidiary companies under the agency agreements which are in evidence here—you eliminated that ten per cent.?

A. Yes.

Q. And that ten per cent. makes part of this $142,580.32 which you have thrown out or rejected?

A. Yes.

4366 By Mr. Mathewson:

Q. And the balance is five per cent. interest on——

A. On the New Amsterdam construction.

By Mr. Burr:

Q. What was the next item which you eliminated?

A. Item 47, repairs to gas stoves, $55,954.35.

Q. That was the amount presented by the company in the Exhibit 94?

A. It is.

Q. And that amount so presented by the company represents, according to the Exhibit 94 as presented by the company, .42 of a cent as applied to the cost of a thousand cubic feet of gas?

A. Yes.

Q. Now, what disposition did you make of that item?

A. I took the rents received by the company, deducted the depreciation written off by them, and brought the balance into credit as an offset of the charge of $55,000.

Q. The divisor in this case was what?

A. 13,012,384,090.

Q. And what was the result which you obtained as against the result claimed by the company in this exhibit?

A. A credit of $11,413.27.

Q. That made the cost per thousand feet of gas what?

A. There would be a credit of .09 of a cent.

Q. Or a difference of between what the company claims and what you found, of what?

A. .51 of a cent.

By the Master:

Q. That is on the other side of the account, then?

A. Yes, sir.

Q. In respect to that item you would make the cost more than the company does, is that it?

A. No; it reduces the cost.

4367 Q. Then all these others in red ink, are they contrary?

A. They represent credits.

By Mr. Burr:

Q. What was the next item?

A. Account No. 49, repairs to services, $89,033.46.

Q. When you say $89,033.46, that is the amount which appears upon Exhibit 94 as claimed by the company?

A. Yes.

Q. What did they claim as the cost per thousand cubic feet of gas?

A. .67 of a cent.

Q. What did you find?

A. $87,183.15.

Q. In other words, you eliminated from that amount claimed by the company $1,850.31?

A. Yes, sir.

Q. Making any difference in the cost of one thousand cubic feet of gas?

A. No; none.

Q. What did that $1,850.31 represent?

A. That is the operations on account of services increased and extended.

Q. What was the next item?

A. Repairs to buildings, $15,116.68.

Q. What is the number of it?

A. No. 51.

Q. What does that item appear to be on Exhibit 94?

A. Repairs to buildings.

Q. I mean to say what is the amount claimed by the company?

A. $15,116.68, or .11 of a cent.

Q. Cost per thousand cubic feet. What did you do with that item?

A. I rejected $2,845.75 and admitted $12,270.93, or .09 of a cent.

Q. Making the cost per thousand cubic feet——

A. Of .09 of a cent per thousand.

Q. Or a difference between that claimed by the company and what you found of——

A. Of .02 of a cent.

Q. What was the next item which you rejected?

A. Item 53, street lamps $289,259.09, representing 2.18 cents, as claimed by the company.

4368 Q. What did you do with that item?

A. I rejected it.

Q. That made a credit, did it? What was the result of the rejection of that item, as far as the cost of a thousand cubic feet of gas was concerned?

A. A difference of 2.18 cents per thousand.

Q. What was the next item?

A. Item 54, interest on consumers' deposits, $51,391.52, representing .39 of a cent.

Q. As appears on Exhibit 94?

A. Yes, sir.

Q. What did you do with that item?

A. Rejected it.

Q. As a result of the examination of the books?

A. Yes, sir.

Mr. Mathewson: Does he mean that he found by the books that no such amount was paid out?

The **Witness**: No.

Mr. **Mathewson**: Then it is not on account of the examination of the books. It is simply on account of his theories.

Mr. **Burr**: Well, he would not have rejected it without getting the information, whatever it was, from the books, from an examination of the books.

Mr. **Mathewson**: It is not on account of an examination of the books that he rejected it.

The **Witness**: It is on account of my theory.

By Mr. **Burr**:

Q. That was rejected?

A. Yes, sir.

Q. Making the cost per thousand cubic feet of gas at what figure?

A. .39 of a cent.

Q. A decrease?

A. A decrease.

Q. What was the next item?

4369 A. Account 58, Expense, General Office, charged by the company at $339,999.51, or 2.56 cents per thousand.

Q. What did you do with that item?

A. I admitted $308,923.56, or 2.37 cents, and rejected $31,075.95, or a decrease of .19 of a cent.

Q. What was the next item?

A. Account 61, advertising and legal, $105,800.02, or .80 of a cent per thousand cubic feet as charged by the company.

Q. What did you do with that item?

A. I admitted $42,398.37, or .32 of a cent, and I rejected $63,401.65, or .48 of a cent; a decrease.

Q. What other item did you eliminate?

A. Account 62.

Q. What was that?

A. Real estate rents, charged by the company at $42,674.71, or .32 of a cent. I admitted $42,049.71. I rejected $625. It makes no difference in the computation.

Q. What was the next item?

A. The Account 65, insurance, $54,031.83, or .41 of a cent per thousand. I admitted $53,879.39 and rejected $152.42. No difference in the computation.

Q. What was the next item?

A. Account No. 66, taxes, $965,843.88, or 7.27 cents.

Q. What did you do with that item?

A. I admitted $743,151.26, or 5.71 cents per thousand, and I rejected $222,692.62, or 1.56 cents per thousand; decrease.

Q. What was the next item?

A. Account 67, contingent expenses, $1,328,316.37, or 10 cents per thousand. I rejected $1,160,888.53, or 8.71 cents per thousand, decrease; admitting $167,427.84, or 1.29 cents per thousand.

The **Master**: Was there any item out between 62 and 66?

Mr. **Mathewson**: 65. Insurance.

Q. Any other item?

A. Yes. I made an addition to the cost of .73 of a cent 4370 per thousand on account of leakage or excess of make-over sales. I made a further reduction of .04 of a cent on account of discounts not entered by the company in Exhibit 94.

Q. What was the result of the elimination of these items or a modification of them that you have testified to, as to the general result?

A. My deductions make the cost 52½ cents per thousand as compared with 74.81 cents per thousand in Exhibit 94.

By Mr. MATHEWSON:

Q. Per thousand sales?

A. No, per thousand cubic feet.

Q. Per thousand cubic feet what?

A. Per thousand cubic feet of gas manufactured and distributed.

Q. Sales?

A. No, partly arrived at on sales and partly on make.

Mr. MATHEWSON: We do not get anything from consumers except on sales.

The WITNESS: Or a difference of 22.31 cents.

Mr. MATHEWSON: The witness did not exclude fixed charges, I judge. He has not commented on that.

The WITNESS: Item 69, I did exclude that; that $972,423.44; 7.32 cents per thousand.

By Mr. BURR:

Q. Embracing fixed charges, you have now stated all the items which you have modified or eliminated?

A. I have.

Q. And you have also stated the items which you have allowed for leakage and discount?

A. Yes.

Q. And that shows that you have stated, according to your 4371 computation, a cost per thousand cubic feet of gas of 52.50 cents, as against 74.81 cents claimed by the company?

A. Yes, sir.

Q. How much does that make in actual figures?

A. $6,922,738.45, or 52.50 cents per thousand feet; a difference of $3,014,192.08, or 22.31 cents per thousand cubic feet.

Q. In arriving at this result you examined all the various accounts relating to all the various items which you have specified?

A. I did.

Q. And have you attached to your report statements in regard to each of these items as taken from the books of the company?

A. I have.

Q. Now take the accounts as they appear on Exhibit 94, Nos. 1 to 33; what is the total? Items 1 to 33 represent what?

A. Total material and labor employed in manufacture.

Q. And the amount of those 33 items, as appears by Exhibit 94, presented by the company, is what?

A. $3,101,832.24, or 29.77 cents per thousand.

Q. As to those 33 items, what disposition did you make of them?
A. I admitted all those charges as proper.

The MASTER: He stated that already, Mr. Burr, at the outset of his testimony.

Mr. BURR: There is some slight variation I wish him to explain.

Mr. MATHEWSON: One is on the gas made and the other on gas sold. That is all.

Q. Now you examined the items comprising that total, did you?
A. I did.
Q. And you found them correct?
A. Yes, sir.
Q. And did you make an analysis of the manufacturing records which contain in detail the manufacturing averages and results?
A. I did.

4372 Q. And those manufacturing records, where do they appear in connection with your report? Are they annexed to it?

A. Yes, sir; in Exhibit E.

Q. Item 34, repairs to apparatus; where does amount charged under this classification, together with the amount improperly charged, as you claim, to operating expenses, the same being correctly construction items, appear?

Mr. MATHEWSON: Are you asking what constitutes this $2,133.98 which he eliminated?

Mr. BURR: I am speaking about item 34, repairs to apparatus.

Mr. MATHEWSON: He stated he eliminated $2,133.98. It seems to me that all we are interested in is knowing what it consists of.

Mr. BURR: That is all I am going to give you, as they appear, by stations.

Mr. MATHEWSON: Do you intend to give us the totals or the items?

Mr. BURR: Yes, the totals represented by labor and material, total cost and the amount rejected and the amount allowed for each of your five stations.

Mr. MATHEWSON: Why not have the witness testify to it. You ask if it is contained in his report, and I judge you are going to offer his report, but that report has a lot of other arguments, such as Dr. Marks indulged in.

Mr. BURR: You have no reason to make any assertion as to other arguments such as Dr. Marks indulged in, and I move that that be stricken out.

Mr. MATHEWSON: I will admit that that is an assumption.

Mr. BURR: I am going to give you now what you seem desirous of getting; that is, the items going to show the details from which he makes up the conclusions that he has arrived at.

The MASTER: Yes, let him state it.

4373 A. In that account I rejected $2,133.98. The details are found in Exhibit D, Schedule 2. The vouchers were submitted by me——

Q. Never mind that. The account 35, repairs to buildings; where do the details of the amount rejected by you appear?

A. Schedule 3 of Exhibit D.

Q. Item 36, repairs to tools and implements?

A. I admit that account.

Q. But you have incorporated in your report a statement of the cost of manufacture per thousand cubic feet of gas manufactured at each station, so far as that item is concerned?

A. I have.

Q. And it appears upon page 10 of your report, does it?

A. It does.

Q. Also does the same apply to item 37, expenses?

A. Yes.

Q. And item 38, distribution?

A. Yes.

Q. And item 39 is, as you say, a proper charge, is it?

A. Yes.

Q. What have you to say as to account 40, profit and loss adjustment.

A. It is a proper credit.

Q. And you have a table making up item 41, annexed to your report, distributing station expense?

A. Yes.

Q. And the same appears on page 11 of your report?

A. Yes.

Q. Item 42, station cost of gas, you have that account annexed also, have you?

A. Yes.

Q. That account represents the total of the preceding Nos. 1 to 41, does it?

A. Yes.

Q. You have also annexed to your report in connection with item 43, cost of manufacturing gas under agency agreement, copies of the agency contracts or agreements, have you not?

A Yes, sir.

Mr. Burr: They are already in evidence here, I believe.

4374 Q. Have you noted any difference in the agreement between the New Amsterdam Gas Company and the Standard Company?

A. Yes.

Q. If so, state what.

Mr. Mathewson: Just a moment. The contracts are in evidence here. And what difference does it make whether the witness has noted any difference between those contracts or not?

Mr. Burr: As affects this account.

The Master: Let him answer it if it is going to be connected with something affecting this account.

Mr. Mathewson: It refers to the interest, I suppose, on construction.

Mr. Burr: I move that Mr. Mathewson's supposition be stricken out.

Mr. Mathewson: I consent to that.

A. There are two differences in the contracts. The contract with the New Amsterdam is similar to the Standard with the exception that it states that the amount of station repairs is added to the cost, and the Standard contract does not bear that. The New Amserdam contract also provides for interest at five per cent. on the amount expended on construction work of the new station.

Q. Where do the details of the quantities of gas purchased from these subsidiary companies, together with the total cost and the rate per thousand cubic feet of gas, appear?

A. Schedule 4, Exhibit D, annexed to my report.

Q. Account Item 44, total cost at holder——

Mr. **Mathewson**: The next one he objected to any part of was 47 after 43; repairs to gas stoves.

4375 Q. Did you find any variation in the figures given by the company and the figures found by you from an examination of the books with regard to your account 44, total cost at holder?

A. Yes, sir.

Q. What variation?

A. The variation is the repairs to apparatus account, repairs to buildings account and gas purchased under agency agreements.

By Mr. **Mathewson**:

Q. That was merely changing the total by deduction of the items to which you have already testified?

A. Exactly.

By Mr. **Burr**:

Q. You made the total cost at the holder how much?

A. A difference of $144,802.80, or 1.83 cents per thousand.

Q. Well, the total cost?

A. The total cost as given by me $4,452——

Q. Yes, but taking this $144,802.08 out?

A. $4,307,328.46.

By Mr. **Burr**:

Q. As against the $4,452,131.26?

A. Yes.

By Mr. **Mathewson**:

Q. How many cents did you say that was?

A. 1.83.

By Mr. **Burr**:

Q. What did you find the average manufacturing cost of the subsidiary companies to be for 1905?

A. 29.14 cents per thousand.

Q. What did you find the average cost of the Consolidated——

4376 Mr. **Mathewson**: Would you mind letting the witness state when he says 29.14 per thousand what he means, whether on sales, manufacture, gas received, or what, because it makes considerable difference?

Q. What do you mean by 29.14?

A. It is cost per thousand cubic feet of gas purchased from subsidiary companies.

By Mr. **Mathewson**:

Q. The cost to the Consolidated or the cost to the subsidiary companies?

A. The cost to the subsidiary companies before adding the ten per cent.

By Mr. **Burr**:

Q. Now, if the cost to the Consolidated was the same, what saving would the Consolidated have *a*ffected during the year 1905?

A. $492,008.86.

Q. Take item 45, expense, $490,855.36; how is that classified?

A. Under branch office expenses, meter shop expenses and street department expenses.

Q. And have you a statement showing the subsidiary details of these amounts annexed to your report?

A. No, sir. This is all I have.

Q. Well, you have the subsidiary details with regard to these amounts as they appear on page 15 of your report?

A. Yes.

Q. Account 46, distributing; how is that item made up, that item of $281,524.12?

A. Distribution, $258,383.65; distribution, general office pumping drip, $16,579.27; distribution, taking pressure, $6,653.98, and a credit of $92.78 on account of general office distribution.

Q. Have you an analysis of that account?

A. Yes.

Q. Where does that appear?

A. Page 16 of the report.

4377 Q. What does that analysis show?

A. It shows the labor expended setting meters, jobbing work, labor work setting stoves and material used in the ho*d*-er.

Q. At each station?

A. At each station.

Q. That is at Hester Street, 114th Street, Avenue A and 66th Street?

A. Yes, sir.

Q. Some of this work is of a permanent character, is it not?

A. It is.

Q. And might it not be properly chargeable to construction account?

A. It might.

Q. But you have allowed the claim as made by the company for what reason?

A. The distribution written off on similar work in previous years would approximately offset any expenditures in the present year.

Q. You have allowed the distribution to be general office, pumping drips?

A. Yes.

Q. And you have a statement of the details of that on your report at page 17?

A. Yes.

Q. Also distribution, general office (C) and distribution, general office (D)?

A. Yes.

Q. Now the repairs to gas stoves, Item 47; how is that divided?

A. Labor, $30,641.83; material, $25,312.52; total, $55,954.35.

Q. Now, will you state the reasons for your treatment of that item as you have stated in your previous examination some little while ago? Did you eliminate that from Exhibit 94?

A. Yes. The practice of the company and the practice of all gas companies is not to make——

Mr. MATHEWSON: I move to strike out "the practice of all gas companies"——

The WITNESS: Well, the general practice of all gas companies——

Mr. MATHEWSON: I move to strike that out.

4378 Q. Do you know what the general practice is in regard to that?

Mr. MATHEWSON: The witness does not and cannot know.

Mr. BURR: Wait a moment. You do not know everything, Mr. Mathewson; nor do the officers of your company know everything as to the gas business. I have had occasion to remind you of that once or twice before during the hearings in this case.

Q. Do you know what the general practice is in regard to this item, in regard to the treatment of this item, so far as other gas companies are concerned, that have come to your experience?

Mr. MATHEWSON: Objected to.

The MASTER: I will allow him to state, from an accounting standpoint, what the general practice is. He is asked from his experience as an accountant, as I understand it?

Mr. BURR: Yes.

The WITNESS: It is not to make any profit on the merchandise branch of the business, simply to use that as an auxiliary for the furtherance of the sale of gas.

Q. And is it not a fact that they look to the profit from the sale of gas to reimburse them for any loss connected with the sale of fuel appliances?

A. They do.

Q. What was the conclusion you came to as the best way, having this mind, in which to deal with this item of repairs to gas stoves?

A. To take, as an offset, the rentals received from these gas stoves after deduction of the depreciation written off by the company.

Q. In this case, how much did that amount to for 1905?

4379 A. $122,322.60, rentals received; depreciation as written off, $54,954.98; leaving a balance of $67,367.62.

Q. What is the result of that treatment of that item, so far as Exhibit 94 is concerned?

A. To bring a credit into Exhibit 94 of $11,413.27, being the difference between the amount as stated in complainant's Exhibit 94 and the amount brought out by me.

Q. That is the difference between $55,954.35 and $67,367.62?

A. It is.

Q. Now is this credit offset in any way?

A. It is.

Q. Where does that offset appear?

A. Account No. 45, for stoves, $13,324.32; stoves, collecting, $1,904.32; then account No. 46, for stove setting, $25,331.94, on account of labor, excluding material; and also account No. 58, for general office, new business account, $60,575.28, and in office account, $5,590.22; and also the proportion applicable to gas stove business of the general office expenses.

Q. Now, item 48, repairs to mains, what is that item of $126,110.31 for the year 1905 made up of?

A. Labor and material in three shops, Hester Street, 66th Street and 111th Street; total labor, $88,887.58; total material, $37,222.73.

Q. A total of how much?

A. $126,110.31.

Q. Did you find any statement as to the mileage in the books of the company?

A. No, that was supplied by the officials at my request.

Q. And what was the information which they gave you upon that subject?

A. The mains laid December 31st, 1904, 815.974 miles; laid during the year 1905, 11.327 miles, total 827.301. Taken up during 1905, 2.873; abandoned during 1905, 19.834, mains December 31st, 1905, 804.594.

Q. That gave an average mileage of 810.284 during 1905?

A. It did.

Q. What was the average cost of maintenance?

A. $155.63 per mile of main.

4380 Q. In your examination did you find certain charges in respect to relaying pavements, and if so, state what you did with regard to those items?

Mr. Mathewson: Mr. Burr, you are examining the witness with reference to items that he says he made no objections to, and which consequently stand. Do you think it is worth while to go into those details?

Mr. Burr: There are some items which we have grave doubt about, and yet to be on the safe side, beyond all peradventure of doubt, we have allowed them, and I am going to ask him to state them and to state his reasons.

Q. Did you find such items in respect to charges for relaying pavements?

A. I did.

Q. Did they contain specific information to satisfy you as to what accounts they should be charged against?

A. They did not.

Q. And in consequence did you take any action on the matter?

A. Submitted the matter to the Board of Advisory Engineers.

Q. And what conclusion did they come to?

Mr. Mathewson: I object to that.

The Master: Is not that stretching it a little far?

Mr. Burr: To save time, it is a continuous story, and we will have the engineers, and it may be stricken out if I do not connect it with the action that they concluded to take.

The Master: If you want what they concluded about it, you had better have them here to testify. It does not add anything to his testimony now that I can see. He may state what he did and how he arrived at it.

Q. In consequence of that consultation what did you do?

4381 A. I admitted them as operating charges.

Q. How does the street main capital account appear in the books?

A. On December 31, $7,433,800.57. Added during 1905, $83,548.08, total $7,517,348.65. Depreciation written off $90,561.54. At December 31st, 1905, $7,426,787.11.

Mr. Mathewson: That is, as they stand on the books on December 31.

The Witness: Yes.

Q. Item 49, repairs to services, how is that account distributed in the books?

A. Over the stations at Hester Street, 66th Street and 111th Street, divided into labor, $46,403.37, material $42,630.09, total $89,033.46.

Q. What is the statement of the number of services appearing on the books?

A. December 31, 1904, 88,685; installed during 1905, 2,745; total 91,340. Cut-off during 1905, 4,921 at December 31, 1905, 86,509.

Q. What does the capital invested appear to be?

A. On December 31, 1904, $1,221,831.83. Added during the year, $37,797.54, total $1,259,629.37; depreciation during year $37,401.00; at December 31, 1905, $1,222,228.37.

Q. What was that equal to per service?

A. $14.13.

Q. Did you make any special examination for the purpose of satisfying yourselves that the charges to both operating and construction account were proper?

A. I did.

Q. What did you do?

A. I examined all the pay-roll tickets.

Q. What did you find?

A. That a considerable number of extensions and increases to services had been charged to operating expense.

Q. Instead of what?

A. Capital.

4382 Q. Or construction?

A. Or construction.

Q. The labor on this work is detailed where?
A. Page 20 of the report.
Q. In Schedule 5, is it not?
A. In Schedule 5.
Q. Annexed to your report?
A. Yes.
Q. And briefly made up of what?
A. The Hester Street branch, $609.14; 66th Street, $107.71; 111th Street, $1,133.46, total, $1,850.31.

Mr. Mathewson: Those are the details of the rejected items to which you have heretofore testified?

The Witness: Yes.

Q. The material used was not recorded on these payroll tickets, was it?
A. Not the money value of the material.
Q. And were you able therefore to determine what additional amount should be added on this account to the cost of labor?
A. No.
Q. And in consequence the operating charge fails to be adjusted, does it not, is adjusted in what manner?
A. By the deduction of $1,850.31.
Q. Or equal to what, per average service?
A. The average charge to operating, 99.5 cents per service.
Q. For the year 1905?
A. Yes.
Q. Item 50, repairs to meters, what are the two items which go to make up that charge?
A. Labor and material.
Q. What were they?
A. Labor $126,069.90; material $46,855.62, total $172,925.52.
Q. And have you got the totals of meters in use and on hand during that period, can you state what number there were of ordinary meters?
A. In detail?
Q. Yes.

A. The ordinary meters in use December 31st, 1904, were
4383 286,566. December 31st, 1905, 296,981. Set locked in
1904, 27,104, in 1905, 27,746. In stock 1904, 1,968, 1905,
2,310. At repair shop 1904, 17,037, 1905, 19740. At factories
1904, 99; 1905, 609. Total 1904, 332,774; 1905, 347,386. Prepayment meters——

The Master: Mr. Burr, I do not see the force of putting all these details on the record here, as part of the witness' testimony, if you are going to offer these schedules and tabulations annexed to this report.

Mr. Burr: I think that is all I will ask him about that. All these items are detailed in the schedule as he has stated, annexed to his report.

Q. In arriving at the cost per thousand cubic feet for manufacturing and distributing the gas did you take into account the amount of the leakage?
A. Yes.

Q. Including the gas used by the company? By the way, what did you find to be the amount of gas used by the company?

A. 64,077,056 feet.

Q. What did you find the amount of leakage to be?

A. Inclusive of that amount, 300,990,555 cubic feet.

Q. Did you include that as a distribution charge at the average cost of manufacture?

A. Yes.

Q. And your method of entering the leakage differs from that adopted by the company, does it not?

A. It does.

Q. In what respect?

A. The company dealt with the quantity distributed and we deal with the quantity manufactured.

Q. They use as their divisor the quantity manufactured less the leakage?

A. Yes.

Q. While you adopt the quantity manufactured, is that right?

A. Yes.

4384 Q. And that adjustment amounts to how much per thousand cubic feet?

A. .73 cents.

Q. Now, what was your practice in this examination in cases where there was any doubt existing regarding the correctness of the company's allegation of its charges?

A. In all cases, we gave the company the benefit.

Q. Can you state a few of the items in which you pursued that course?

A. Yes. General office salaries and expenses, properly should be proportioned over the general work of the office in connection with sales of gas to consumers to construction work, and investments in other companies. It was not so treated.

Q. In other words that $99,807.42 you have taken and you have not charged any proportion of it to construction work or to revenue received from investments in other securities?

A. No portion.

Q. Has anything been charged to the revenue from street lighting contracts on account of general office expenses including distribution?

A. Nothing.

Q. The total of these expenses amounts to what?

A. Approximately $1,375,000.

Q. What is the proportion of gas sold for street lighting purposes?

A. Approximately 2 per cent. of the total.

Q. Is it not a fact that a number of doubtful charges in the repair account were conceded to the company?

A. Yes.

Q. All the expenditures in connection with the stove department have been admitted?

A. Yes.

Q. And what is your criticism, if any, with regard to that account as it appears here on the books, why in your opinion was it doubtful, if it was so doubtful in your mind?

A. Which account?

Q. The expenditures in connection with the stove department.

4385 Mr. MATHEWSON: He has testified to that, stove repairs and how he offset the rents of stoves.

Q. You have allowed the total amount of bad and doubtful debts, haven't you?

A. Yes.

Q. Is that a doubtful account, in your opinion?

A. It is.

Q. Why?

A. Bad and doubtful debts are not a proper charge against the distribution of gas, especially when the company has a provision by which it can have a deposit.

Q. Do you mean especially where there is a provision of law which permits them to take a deposit from every consumer?

A. Yes.

Q. And do you consider the price of 52.50 cents as determined by you a liberal allowance under these circumstances?

Mr. MATHEWSON: I do not think that that sort of generalization is allowable.

Mr. BURR: He has stated what he did and what allowances he made with regard to doubtful accounts.

Mr. MATHEWSON: Whether or not it is liberal I think depends upon other circumstances.

The MASTER: I do not think that is of value, Mr. Burr.

Mr. BURR: In his experience as an accountant, and having in mind the various accounts he has adjusted, and what action he took in regard to these doubtful accounts, I think I am entitled to get at what was in his mind when he arrived at that conclusion, whether or not it was, in view of all those circumstances, a liberal allowance.

The MASTER: What deduction did he make?

4386 Mr. BURR: These deductions he has stated as having been doubtful.

The MASTER: Item 55, is it not?

Mr. MATHEWSON: Bad and doubtful debts, no, he allows that.

Mr. BURR: No, he says they have allowed that but he is strongly of the opinion it should not be allowed. Then with regard to these other items of repairs in the stove department, the manner in which they kept that account and the other items which he claims should properly have been charged to the construction account instead of against the repairs, they allowed——

The MASTER: I so understand, but what is the question about, what in his mind would be a liberal proportion?

Mr. BURR: No, I ask whether the amount he had allowed as the proper charge of gas under these circumstances is or is not a liberal allowance.

Mr. MATHEWSON: 52.50 cents, and he has testified how he arrived at it.

The MASTER: I will exclude it.
Mr. BURR: I withdraw it.

Q. Now, with regard to Exhibit 80, you have made up the details also of the sundry creditors, $3,357,037.95, have you not, Mr. Hall?
A. I have.
Q. And that appears as annexed to your report?
A. It does.

Mr. BURR: There is just that item on Exhibit 80, sundry creditors. He has made up a detailed statement of what the total embraces.

Q. Now, Mr. Hall, did you examine the real estate account? I think you have already stated that you made an examination
4387 of the real estate account. What did you do, how did you examine this account, what books did you refer to, or what were given you?
A. All the books of the companies merged as the Consolidated Company, November 11th, 1884, with the exception of those belonging to the Knickerbocker Gas Light Company and the Metropolitan Gas Light Company.
Q. Those you did not have?
A. No.
Q. You could not find the books, or the officers informed you, did they not, that the books were lost or mislaid?
A. Yes.
Q. And in the absence of these books the scope of your investigation was limited, was it not, necessarily?
A. It was.
Q. And did you therefore consult any other report with regard to this real estate?
A. Consulted the report made by Mr. J. Yalden, an accountant in New York City, made in 1885.
Q. And which is in evidence in this case?
A. It is.
Q. And what have you to say with regard to Yalden's account as the same affects the Metropolitan Company?
A. I have simply adopted Mr. Yalden's figures for the Metropolitan Company.
Q. What do you purport to show by this report?
A. The original cost with the buildings and improvements added of all the real estate acquired by the merged companies prior to November 11th, 1884, with the appreciation written up, also prior to that date and the appreciation written up on that date, the date of the consolidation; and I further show the additions and improvements made by the Consolidated Gas Company and the profit over the cost to them of the properties they sold.
Q. And what do you purport to show by the various Exhibits A to F inclusive, attached to your report?
4388 A. A to E inclusive, the real estate taken over by the Consolidated Gas Company by the various merged companies;

Exhibit F, the real estate acquired by the Consolidated Gas Company up to December 31st, 1905.

Q. Since November 11th, 1884?

A. Since November 11th, 1884.

Q. What did you find the original cost to be including additions and improvements, from such examination?

A. Up to December 31st, 1905?

Q. Yes.

A. Up to December 31st, 1905, $4,118,267.38.

Q. What did you find the original cost including building- and improvements to be, November 11th, 1884?

A. $3,377,971.10.

Q. So the original cost of additions and improvements from November 11th, 1884, to December 31st, 1905, appears to be $740,296.28?

A. Yes.

Q. That makes up your total of $4,118,267.38?

A. It does.

Q. What appears to be from such examination the appreciation in the real estate account of the merged companies prior to November 11th, 1884?

A. $1,584,963.37.

Q. How is that divided among the constituent companies?

A. A credit of Manhattan Gas Light Company for depreciation, $21,706; a charge of New York Gas Light Company, $866,696.23; Metropolitan, $739,973.14.

Q. What did you find the amount of the appreciation on the transfer to the Consolidated on November 11th, 1884, to be?

A. $5,369,065.53.

Q. So, adding to the $3,377,971.10, the original cost of buildings and improvements, the appreciation less depreciation prior to November 11th, 1884, of $1,584,963.37, and the appreciation written up on transfer to Consolidated Company on November 11th, 1884, of $5,369,065.53, what do you find the book value to be of
4389 the real estate taken over at that time, November 11th, 1884?

A. $10,332,000.

Q. Now, adding to that $10,332,000 the additions and improvements to December 31st, 1905, less cost to the Consolidated Gas Company of property sold, $740,296.28, what do you make the total?

A. $11,072,296.28.

Q. Is there any item to be deducted from this?

A. Yes, profit over the cost to the Consolidated Companies of the properties sold $142,378.

Q. You have not deducted, I believe, any of the amounts awarded to the Consolidated Gas Company by the city for property taken by it in condemnation proceedings?

A. No.

Mr. Mathewson: Which has not been paid over you mean?

Mr. Burr: I think I remember of your speaking of that before.

Mr. Mathewson: Well, he has taken into account the moneys which have — awarded in condemnation proceedings if they have been received by the company?

The WITNESS: Certainly.

Mr. BURR: But it claimed that you have not received this money.

Mr. MATHEWSON: No, no. You asked him whether he had deducted any amount received in condemnation proceedings, and he said no. I think there is a distinction. He has deducted the money received in condemnation proceedings where the money has been paid over.

The WITNESS: Where anything has been paid over.

4390 Mr. MATHEWSON: But he has not deducted any amount awarded in condemnation proceedings where the company has not received it?

Mr. BURR: I guess there is no doubt of it.

Q. Whatever the company has received by the sale of real estate or the acquisition by anybody of its real estate since 1884, does it appear in this account?

A. To the end of 1905.

Q. Where does that appear? Where does the list of property transferred by the Consolidated Gas Company to any person appear?

A. Page 6.

Mr. BURR: I offer this report in evidence, all excepting Exhibit A, which is attached to the report, regarding Exhibit 94; such Exhibit A being minutes of the meetings of the several engineers and which I do not claim forms part of this report.

Mr. MATHEWSON: I object to the report as evidence. The witness has testified to certain deductions which he has made and to the details of them so far as he has been asked, and he has stated that certain schedules here showed the details. If there is any offer it seems to me it should be of those schedules. But this has an immense amount of details with reference to which there is no dispute at all. It has general observations and statements here and arguments that the witness has deduced. I cannot cross-examine the witness on that book, I confess, Mr. Master, without a considerable interim, if it is accepted. Has the Master looked at this?

The MASTER: Yes, I have glanced it over. Undoubtedly there is a large portion of this or some portion of it that is inadmissible. All these statements in the report itself as to conclusions arrived 4391 at by the Advisory Board, I understand Mr. Burr does not claim are evidence.

Mr. BURR: That I will make a matter of subsequent examination of these engineers.

The MASTER: The exhibit which constitutes the minutes of that Board are not offered, but in the body of the report itself are several references to conclusions arrived at by the Board which are equally objectionable. And I do not suppose either that any data assumed by the witness from the report of Mr. Yalden some years ago are evidence. But on the whole, Mr. Mathewson, I think, for the purpose of convenience, this report had better be received, and the schedules annexed to it also, as a summary statement of the results of the witness' examination of the books. Of course in so far as the report contains references to the Advisory Board, that will be deemed to be excluded just the same as the exhibits are which contain their minutes.

Mr. Burr: Yes, I will depend not upon his allusions to those reports or to the action of the engineers in such reports, but upon the testimony of these engineers themselves whom I will call to testify.

Mr. Mathewson: It seems to me there is something else to be considered here which has not been suggested. You will see by turning to page 3 of the report, how narrow is the scope of the items objected to. Now, is it worth while to put in this vast amount of detail which has no relation to those items at all upon items as to which there is no dispute, and is it fair to us to virtually spread upon the records of the Court the details of our business which we have thrown open to him and which the witness has verified and
4392 the items of which he says are all right, like the costs of meters, and everything of that sort?

The Master: I have assumed, without looking at this report carefully, that these schedules here have reference simply to the items as to which the witness has testified he made a different calculation.

Mr. Mathewson: Not at all.

Mr. Burr: Oh, yes.

The Master: And I noticed, in one or two cases, that he had, for the purpose of convenience, reproduced exhibits already in evidence, as for example, Exhibit 94, and the agency agreement; they are also in evidence, are they not?

Mr. Burr: Yes.

The Master: But I assumed that was merely for the purpose of convenience, and did not make any particular difference. If, however, it is the fact that there are included in these schedules a great many items that have no bearing on these specified differences set forth on page 3 of the report, that is a different question. I will have to look at it and see.

Mr. Burr: There is no such thing as that. The object of putting in this information is so that the Court might have before it all the figures which justified the conclusions which they have arrived at in their report, and the comments which they make with regard to the keeping of these various accounts and to justify their statements that in many respects the accounts which they have allowed are, to say the least, very doubtful.

Mr. Mathewson: Take item 52, tools and implements.
4393 No objection is made to that. Here it appears in the schedule showing it in detail.

Mr. Burr: It is impossible in a work of this kind to say "leave out this and leave out that." They were called upon to examine the books here and they have made a comprehensive and intelligent report and have given their figures to justify the conclusions at which they have arrived. I cannot castrate this report and take out of it all that is in my opinion immaterial to it and at the same time expect the Court to value it as a continuous and intelligent report.

This is done for the benefit of the Court and for the information of the Court.

Mr. Mathewson: Item 45, page 14, there is no objection to item 45, and we have at page 14 and page 15 a page or two showing details of wages paid and all that which if our friends and our employees get hold of it in their unions and figure up, we will have a strike on our hands among other things.

Mr. Burr: They cannot figure up the totals there. We are not giving the rates.

Mr. Mathewson: And on page 15 you will see, respecting which no objection is made——

Mr. Burr: We have endeavored to give you a fair report, giving you credit where credit is due and criticising where criticism is due. I think it will so appeal to the Court.

Mr. Mathewson: But that is not the point. There are many items in here as to which there is no objection.

Mr. Burr: How can it hurt you, then?

Mr. Mathewson: Yes, it can hurt us. We do not want to virtually spread the transcript of our books upon the public record, nor does any other company, especially so in regard to an item that no objection is made to. It is idle.

4394 The Master: There is force in that. It will be necessary to go through this Exhibit and weed it out.

Mr. Burr: There is not anything there which is not necessary to the report itself and to the full understanding of it.

The Master: I assumed in what I said before in regard to these schedules that they were all like this item No. 49 where the witness has set out here in great detail as Exhibit D the details or the particulars of the payroll tickets, showing the way he made up the modification of the company's figures in Exhibit No. 94. I do not know that they are of any great value to me; but as a voucher for the correctness of the witness' conclusions, they are properly part of his testimony.

Mr. Burr: Yes.

The Master: And I assumed that all these exhibits or schedules were of the same kind. Now if it is a fact that there is a lot of material here that has reference to items that this expert witness has not seen fit to make any change in, I do not think they ought to be received. If they are not of enough importance to make a change in, why speak of them at all?

Mr. Burr: I think it is due to him to permit him to say what accounts he deemed doubtful.

The Master: He has said so and stated here.

Mr. Burr: And the reasons why he allowed them. It cannot do any harm to the company. They seem to have a particular aversion to having anything spread upon this record in regard to their books, and we know the fight we had to get this examination, and now we have got it and now we are giving them all the information our accountants obtained from this examination. And you find 4395 upon Mr. Mathewson's cross-examination there will not be anything superfluous. I presume that is the reason this gentleman, who is a competent and careful accountant, has come fully buttressed with schedules attached to his report to justify his findings.

The **Master**: I will exclude all the schedules that do not have reference to the disputed items. If he wants to have the material for use on cross-examination, well and good, but I will exclude it as evidence. It will be necessary to go through this and weed out exactly what is admitted and what is not. You did not offer the minutes of the Advisory Board?

Mr. **Burr**: No.

The **Master**: I will treat those in the same way; these schedules that do not have reference to the disputed items, if such there be, ought to go out.

Mr. **Burr**: Then you strike out all the schedules with regard to which this witness has commented and claimed that they were doubtful?

The **Master**: Well, I don't know as to that; some of them he has changed or pointed out discrepancies in, some accounts that he claims were doubtful, I think.

Mr. **Burr**: I do not see, without butchering this report, how you are going to do that or rule out any portion of it.

The **Master**: You will have to butcher the report——

Mr. **Burr**: Particularly when it is conceded it cannot do them any harm.

The **Master**: If admitted at all, it is only for convenience. You cannot expect that a private report of a firm of accountants addressed to the attorneys who employed them is evidence against the opposite party. 4396

Mr. **Burr**: Not unless it can be proved and justified to be correct, that is what we are here for.

The **Master**: You can call the witness and have him justify the figures and prove them correct, but the private report to his employer cannot be made evidence against the other side unless it is competent.

Mr. **Burr**: Not unless it is competent as your Honor has well said, but I claim that all he has attached to his report is competent, because they justify the conclusions at which he has arrived, and I offer it, and if you consider there is anything that is objectionable and should not be put in, I will take an exception; but I understand the balance is received as an exhibit.

The **Master**: If he simply picks up an item and says, "I have allowed this, but at the same time I have grave doubts about it," I do not see that it is material and relevant, if the other side objects to it, to receive here a vast quantity of tabulation showing the reason for the witness' doubt on the subject.

Mr. **Mathewson**: There are large numbers of these respecting which he has made no doubt. You see he takes the items, whether he is in doubt or not and puts in tabulations respecting them and he states what he finds as to the Massachusetts Gas and Electric Light Commissioners' doings and things like that in this report.

The **Master**: Of course I may think differently about this after

I have gone through this carefully myself, but simply glancing at it here, that is my disposition about it.

4397 Mr. **Kirby**: There is another point in regard to the admission to the entire report and that is this: That while there may be certain items in Exhibit 94 which the accountants have found to be correct so far as the additions of the accounts going to make it up are concerned, that nevertheless, the schedules, the detailed schedules which he has given, give us the opportunity, and give the engineers the opportunity to make comparison with testimony which is already upon the record, and with testimony which may hereafter be placed upon the record as to whether or not such charges for material, or labor, or for anything else, are correct and proper; and for that reason it is certainly relevant to this case.

Mr. **Mathewson**: We cannot assume that you intend to rebut the syndicate conclusions of this witness and of Messrs. Marks and Lacombe and Edgerton, the so-called Board of Engineers who have collaborated in getting this up, as I judge. I do not think it is fair to assume that, Mr. Kirby.

Mr. **Kirby**: That has nothing whatever to do with the position which I am taking.

Mr. **Burr**: I think I have made myself clear as to the reasons.

The **Master**: I understand the reason so far as the suggestion of Mr. Kirby is concerned, is one of convenience merely, it is not one of evidential force. No doubt it would be very convenient to have all this in its present form, but it is a question of whether, against objection, it is evidence in the suit.

Mr. **Kirby**: No, it is not merely a matter of convenience. It is a question of this, that anything and everything which goes to 4398 make up any item in any exhibit should be in evidence here, the same as the exhibit itself, whether those items are held to be correct or incorrect.

Mr. **Burr**: The reason I press my offer of this report in evidence is because I contend there is nothing attached to that report which is not necessary to a full understanding and appreciation of it and which is not properly a part of it.

The **Master**: You can point out which particular ones of these schedules you specially object to, Mr. Mathewson: and then I will pass upon them.

Mr. **Mathewson**: Then I will have to have an opportunity to go through them.

The **Master**: Yes.

Mr. **Burr**: It is received in evidence subject to the objection of Mr. Mathewson to certain schedules attached to it; is that the way it stands?

Mr. **Mathewson**: Why that? Why not let me look over them in the first instance?

The **Master**: Either mark it for identification or else do it that way. I am going to receive the substance of it, I mean the detailed schedules that support the witness' testimony as to his rejected or modified items. If there is anything else here that is not material, I will exclude it and you can have it separate. As far as the report itself goes, in my glancing over it I do not see anything here except some few references to this Advisory Board and their conclusions but what might properly be received, in my judgment, as a summary of the witness' examination of the books.

Mr. **Mathewson**: Is it competent for the witness in this 4399 report to testify what the Massachusetts Electric Light Companies allow per meter for repairs and things of that sort?

The **Master**: That is what I had reference to. I saw that. That is clearly incompetent, of course

Mr. **Burr**: That is the reason for the action of the advisory engineers with regard to a certain item, and they will explain the reason for making that comparison. This report is to be taken in connection with the promised testimony of the advisory engineers with regard to items which are therein referred to as having been passed upon by that Board, and of course such statements are received subject to being stricken out if I do not call those witnesses.

The **Master**: It is to be regretted that this was not prepared, all this material here, in a different shape so it could be properly offered in the usual way.

Mr. **Burr**: We regard as part of this offer the testimony of the engineers. Their testimony and this report makes a complete whole as to what we undertook to do, that is, to examine these books for the year 1905, so far as those books should be examined in connection with Exhibit 94.

Mr. **Mathewson**: Professor Bemis, in his testimony, testified as to certain computations and then presented the schedule which was attached to that at the time, and not a mass of testimony with it. In other words, he testified and then merely submitted the table to show the details. It seems to me that is—where is Exhibit E, may I ask?

The **Witness**: I do not think you will find it there, that is incomplete.

4400 Mr. **Burr**: Here, I will let you look at this copy.

Mr. **Mathewson**: Here is Exhibit E, items 1 to 33. The Committee says and the witness testified at the outset that he found those vouchers correct, and the company's figures correct. Items 1 to 33, about half the items. Now, schedules are presented here known as schedule E No. 1, schedule E No. 2, and Nos. 3, 4 and 5, and the Master will see—I have them here, I do not know that they are in your copy—but they appear later, all these schedules in reference to those items going into detail, almost without limit I was going to say, all those pages on that subject, spreading out in great detail these things which are found to be correct and respecting which there is no question on anybody's part. I ask, is it fair to us to spread all that detail out in addition to its being unnecessary and immaterial? The witness accepts the items.

Mr. **Burr**: All those statements were necessary to enable the engineers to pass intelligently upon the propositions that were presented to them by the accountants.

The **Master**: Then it will come in as part of their testimony.

Mr. **Burr**: Then there cannot be any harm done.

Mr. **Mathewson**: But they have admitted them.

Mr. **Burr**: They needed those for comparison and could not go blindfolded as you expect possibly. There is nothing here which is superfluous; it is a plain straightforward account and the figures are presented to justify the conclusions which have been 4401 arrived at. We have not skimped anything but have given you the benefit of the full examination which we have made. And I do not see that the objection that this information should not go on this record is a tenable one at all. It cannot do them any harm according to their own admission, and it is necessary for us for the purposes of having this account fully understood. This is not a sacred organization or an elecmoysnary institution, and the results should be known.

Mr. **Mathewson**: But our company has the same right as any other company or corporation. We do not claim any sacredness, but we claim we are as good as other people. I would like to have the Master look at Schedule E.

The **Master**: I saw them, but of course if excluded they have got to be printed, Mr. Mathewson. What I am considering is the best way of getting at this. There is no question to my mind about the propriety of excluding them. There are several matters in this report and the only question is whether it might not be better for the purposes of convenience to take the report in the form it is offered rather than confine the actual exhibit, as marked, to the schedules referred to by the witness in his testimony this morning. If we do that, it will be necesary to cut this report up and give each one of these schedules a separate number without reference to the report.

Mr. **Mathewson**: Well, I think if I may be permitted to say so, that it is a shame, when we give the accountants the opportunity as they have had there and when they go through these items and confirm our manufacturing records, the first thirty-three items, half of all of them, as an expenditure of $4,000,000, that for pur- 4402 poses of curiosity of somebody it should be insisted upon spreading upon the record here, which will be a public record and accessible to everybody in the world, the details of that business which has been found to be correct and to which no objection has been made. I say it is not right, and it is not treating us fairly. It is something that any corporation, no matter what it is engaged in, would object to most strenuously. And when we say we have no objections, of course, we could not object where items are objected, to the details going in, I think we have gone as far as we ought to go. I do not think it is right. I do not think it is right for the other side to insist upon presenting those details in this public fashion. We might just as well file our books in court. We are entitled to the same fair treatment as any other corporation engaged in an industrial business, certainly as to those items where no question is raised. I am sure that our officers and our directors will feel most keenly the spreading on the record here of details which have no earthly relation to items respecting which there is any objection at all.

Mr. **Burr**: That is your view of it, that they have no relation. I say they are very important and pertinent to this report. Of course you view with alarm and consider it a shame that there should be any information obtained from your books at all, and you have objected to the spreading on this record of your coke and oil and coal contracts, and we have accommodated you to some extent, and now you do not want anything to appear on the record regarding this examination which we had to fight tooth and nail for.

4403 Mr. Mathewson: Nonsense, we gave you the examination. We have given you everything and have allowed thirty or forty men there for five or six weeks appropriating anything and everything they wanted to in the office. Now, you want to spread on the record the details of items respecting which there is no dispute at all. I say it is not right, it is not fair, and it is not decent treatment.

Mr. Burr: I need only say in that connection that this is not a private firm or corporation, it is a public utility corporation in which the City of New York has a large interest.

Mr. Mathewson: And any item which is questioned, you are putting the details in here without any objection on our part.

The Master: What else is there besides this Exhibit E to which that same thing is applicable.

Mr. Mathewson: I do not know, Mr. Master. I could not tell without looking through this. It is perfectly obvious it contains an immense amount that the witness has not testified respecting, but just what it is I cannot tell without looking through it. Now here is something——

The Master: It seems a pity to waste time considering this matter if there is anything else that can be done. If you can go on and cross-examine, I will look at this.

Mr. Mathewson: I can go on and cross-examine all right. But it is now after 1 o'clock.

The Master: I will look over this report. I find in it more than I had supposed that is open to objection. We will take a recess now.

Recess till 2:30 P. M.

4404 After Recess.

The Master: After looking over this report, I have decided that I shall, for the purposes of conveniences, admit it in its present form, exclusive of the schedule Exhibit A which Mr. Burr excluded from his offer, and excluding, also, the various tabulations Exhibit E. In excluding Exhibit E I do so without prejudice to it being offered and received later in the course of the examination of any other witnesses to whose testimony it may be pertinent and material.

In receiving the report in its present form it is to be understood that there should be deemed excluded therefrom, so far as purposes of evidence go, all statements of action taken by the so-called Board of Advisory Engineers. It is proper to have it stated, of course, that the witness made certain disposition of certain items in accordance with instructions received by him from the Advisory Board of Engineers and in so far as concerns such statements the report is proper, but there should be excluded from it all abridgements or extracts from proceedings of that Board. And also, in making the foregoing disposition of the matter, it would necessarily exclude from the report the statement of the witness in the report as to his reason for annexing the Schedule E, which has been excluded. Now, with these limitations the report is received as being a summary of the results of the work that the expert accountant has been called to testify to, as the result of his examination of the books.

Mr. **Burr**: As the Master said, I have not offered the minutes of the Board of Advisory Engineers. Regarding the exclu- 4405 sion of any other part of this report, whether the same be in the body of the report or in the schedules annexed thereto, you will give me the benefit of an exception.

The **Master**: In giving it to the Stenographer for printing you eliminate Exhibit A and you also eliminate the other exhibits, Schedule E, and those can be offered later in connection with the testimony of other witnesses, if you desire.

Mr. **Burr**: But I understood that under the rule even if the whole thing is excluded it will be printed.

The **Master**: If you wish to do it that way.

Mr. **Burr**: So as to make it a complete whole I will have it printed except that Exhibit A, and ask the Stenographer merely to note that Exhibit A is the record of the minutes of the Board of Advisory Engineers and is not offered in evidence, but with regard to all other parts, I shall ask to have it printed and then I shall again renew my offer later in this hearing, after I think I have supplied what in your Honor's mind may be lacking now with regard to those other schedules.

Mr. **Mathewson**: I except.

Mr. **Burr**: And the schedules which you have excluded by your ruling now I ask to have marked for identification so that they may have a specific number for that purpose.

Mr. **Mathewson**: Is it necessary so long as the whole thing is to be printed to have them marked for identification? You can offer them subsequently.

Mr. **Burr**: I think that suggestion is a good one. If I overcome the objection the Master has now they will be received.

Mr. **Mathewson**: I except to the admission of this report 4406 except so far as it relates to the schedules and tabulations respecting the items which the witness has excluded in his computations from the operating cost of gas. Will the Master permit that exception?

The **Master**: I understood I had already excluded those Schedules E, which were the ones to which your objection was chiefly directed.

Mr. **Mathewson**: I think there were some shorter schedules in the body of the report, or tabulations perhaps rather than schedules, and my objection relates to those as well as to the schedules to which you particularly refer.

The **Master**: It is hardly worth while to chop the report up in those small particulars, as I am receiving it mainly for the purposes of convenience anyway. You can take an exception to it.

Mr. MATHEWSON: I understand that so far as probative force is concerned I shall waive no rights upon preceding examining upon points which this witness has not been examined upon.

The MASTER: No.

Mr. KIRBY: Exception to the ruling excluding such parts of the report as were offered.

Received in evidence and marked City's Exhibit 87.

JAMES HALL resumes the stand and further testifies.

Direct-examination continued by Mr. BURR:

Q. In that 52.50 cents was there any allowance made for depreciation?

A. Yes.

Q. How much?

A. $222,382.82, equal to 1.71 cents per thousand feet.

4407 Q. Well, deducting that allowance for depreciation, what do you make the cost per thousand cubic feet?

A. 50.79 cents.

Q. Was there any allowance for renewals?

(Question withdrawn.)

Q. Was that $1.71 cents actually spent?

A. No.

Q. What did you find with regard to that from the books of the company?

A. Depreciation.

Q. In which account did you find that?

A. Depreciation account.

Q. Calling your particular attention to Item 67, Contingent expenses, $1,328,316.37, or ten cents per thousand cubic feet of gas sold, how was that entered in the books of the company?

A. Charged to contingent expenses, credited to reserve account, called Renewal and Contingency Account.

Q. Was that a natural expenditure or was it a bookkeeping entry?

A. Bookkeeping entry.

Q. Was the other a natural expenditure or was it a bookkeeping entry?

A. A bookkeeping entry.

Q. How about 1903 and 1904, bookkeeping or actual?

A. So far as I could observe from trial balances, bookkeeping entries.

Q. At the close of 1905 how much was debited to this reserve account?

A. $282,219.67.

Q. Did that represent any actual expenditure?

A. No.

Q. What was it?

A. Depreciation on certain plant accounts detailed here; plants, services, mains, meters, etc.

Q. Do you know whether that was entered in the form in which you found it as the result of any official action on the part of the company?

A. Yes; a resolution of the directors and officers of the company.

Q. The resolution appears entered upon the books of the company?

A. Yes.

Q. In connection with that account?

A. Yes.

4408 Q. Have you made that resolution a part of your report as it appears upon page 34?

A. I have.

Q. And this amount of $282,219.67 which was the subject of that resolution as you have testified, is the amount which appears in Exhibit L on page 418 of exhibits under the head of "Renewals, Total, 1905"?

A. Yes.

Q. And that amount did not represent an actual expenditure?

A. It did not.

Q. What did you do, Mr. Hall, a little more particularly, with regard to leakage?

A. I took the leakage as taken from the company's books as a charge against the distribution of gas.

Q. And as to the item of taxes, what disposition in detail did you make of that?

A. On page 33——

Q. In your report you have shown on page 33 the disposition which you made with regard to the item in detail?

A. Yes, sir.

Q. Is there anything that you desire to add to what you have written here in this report, with regard to that item, or does that fully explain the disposition which you made of that item of taxes, and the reasons therefor?

A. That fully explains.

Q. And does the same apply to the item of lamp repairs and have you in your report fully explained your reason for your disposition of that item?

A. I have.

Q. Now, in connection with your elimination of the ten per cent. paid by the Consolidated to the subsidiary companies, did you make any effort to find out what was the proportionate depreciation and taxes of the subsidiary companies applicable to the gas supplied to the Consolidated?

A. I did.

Q. And what success did you meet with?

A. I was refused any detail in connection therewith.

Q. By whom?

A. Mr. Carter.

Q. Can you give the leakage by months?

A. No.

4409 Q. How did you arrive at the leakage?

A. Detailed in Exhibit B.

Q. That fully appears in Exhibit B, does it?

A. Yes, sir; commencing with the balance on hand according to the company's record, January 1st, 1905, added to the quantities manufactured, the quantities purchased; deducted quantities sold to consumers, street lamps and other companies, took into account the stock at the end, and the balance was the leakage, including the gas used by the companies themselves.

Q. I notice in this exhibit to which you are referring, Exhibit B, there are certain entries in red ink and certain entries in blue ink. What do those represent or why have you put them in those colored inks?

A. The green ink represents the total manufactured——

Q. Is that green ink or blue?

A. Green—the total manufactured and total purchases. It is to show as a matter of convenience the totals under each classification. The red ink at the end, it would appear from that that the gas had been overdelivered; they delivered more gas than they had ever made.

Q. To what extent?

A. To the extent of that 117,000,000 feet plus the unmetred gas at the end of that month.

Q. Will you give us the figures showing that from this exhibit?

A. At the end of June they appeared to have over-delivered 117,461,270 cubic feet.

Mr. Mathewson: Where is that?

The Witness: Exhibit B. And at the end of July, 197,808,540 cubic feet; at the end of August, 94,143,629 cubic feet; at the end of September, 36,371,207 cubic feet; and it appears they got 4410 back with a balance on hand at the end of October and succeeding months.

Q. Does this amount 52.50 cents include any allowance for the Consolidated plant, for the use of the plant?

Mr. Mathewson: You mean any return on capital?

Mr. Burr: Yes.

A. No.

Q. Referring to your analysis of the item "sundry creditors" $3,357,037.95, will you point out where that appears in Exhibit 80?

A. Accounts payable, under accrued charges, $3,281,711.52, and again accounts payable, under accrued charges, balance, $75,326.43.

Cross-examination by Mr. Mathewson:

Q. What is your age, Mr. Hall?

A. Twenty-nine.

Q. How long did you say you had been in the accounting business?

A. Between thirteen and fourteen years.

Q. Are you a chartered accountant?

A. I am.

Q. How long have you been such?

A. Six years.

Q. How long have you been in America?

A. A year.

Q. Have you been with Marwick, Mitchell & Company all that time?

A. Yes, sir.

Q. Have you ever been in the business of manufacturing and distributing gas?

A. Never did anything else except accounting.

Q. Are you an engineer?

A. No.

Q. Have you ever examined the accounts of any gas company for the purpose of determining the cost of gas before you examined the Chicago companies?

A. Not for that purpose.

4411 By Mr. BURR:

Q. You mean you have, but not for that purpose?

A. Not for that purpose, yes.

By Mr. MATHEWSON:

Q. Did you have any Board of Advisory Engineers in Chicago when you made your examination there?

A. No.

Q. Have you ever kept the accounts of any gas company?

A. No.

Q. I see in the letter of January 22, 1906, to the Hon. Lynn H. Young, Chairman of the Committee of Gas, Oil and Electric Light of the Common Council of the City of Chicago, you stated—or Marwick, Mitchell & Company stated:

'No allowances however included in either statements' " (referring to your statements), for the wear and tear which is generally conceded to occur in excess of that which is covered by renewals."

What did you mean by the wear and tear that is generally conceded to occur in excess of that which is covered by renewals?

A. Depreciation.

Q. So that as an accountant you would agree with Mr. Yalden that there must be a certain allowance for depreciation beyond the actual expenditures for current renewals, would you not?

A. On certain items.

Q. Well, to a greater or less extent according to the character of the plant with which you are dealing?

A. Yes.

Q. And as an accountant do you take into consideration the fact that not only is machinery being deteriorated by wear and tear but that it is from time to time superseded and put out of use in favor of newer machinery?

A. Sometimes.

4412 Q. And that also is an element which must be taken into account, is it not?

A. To a certain extent.

Q. But so far as you are concerned you have never been, as I understand, in any gas business, so that you know by experience how much should be allowed in a gas business——

A. Will you repeat that.

Q. (Continuing:) for——

The **Master**: He has already said that, Mr. Mathewson.

Mr. **Mathewson**: Then I shall not repeat it.

Q. In Chicago then you proceeded on your own responsibility without the advise of engineers, did you?

A. Yes.

Q. Now, I find at page 3 of the report, City's Exhibit 87, you summarized the items which you have excluded from the operating cost of gas or from the total operating and fixed charges which amount to 74.81 cents according to Exhibit 94 is that right?

A. Yes.

Q. And your total is 22.31 cents?

A. Yes.

Q. Now, of those deducted items of 22.31 cents, how much is made up of contingencies, interest on funded debt and cost of street lamps?

A. 17.79 cents.

Q. So that outside of those three items of contingencies, interest on funded debt, and cost of street lamps, being respectively 8.29 cents, 7.32 cents and 2.18 cents, how much do the other items which you have excluded amount to?

A. 4.54 cents.

Q. With reference to the station cost of the gas made by the Consolidated Gas Company, Items 1 to 33 inclusive of Exhibit 94, showing, "Net amount of Material and Labor, $3,101,832.24, you have excluded nothing, but have divided by what divisor in reaching your cents per thousand? 4413

A. The quantity manufactured, 10,657,810,000 cubic feet.

Q. Is that corrected to a standard temperature of 60 degrees, or is is the uncorrected?

A. Corrected.

Q. All corrected, is it?

A. Yes.

Q. And do I understand that in the total of gas made you include the gas which has been used by the Consolidated Gas Company itself in lighting its own plant, and so forth?

A. Certainly.

Q. In that event you must introduce subsequently an item on the other side for gas received?

A. I do.

Q. So that as a matter of fact if your computation is correct and the computation of the company is correct upon its theory, there would be no practical difference in the end, would there?

A. Nothing serious.

Q. Do you know how the 29.10 cents in Exhibit 94 is reached opposite, "Net Amount of Material and Labor"?

A. Yes.

Q. What is the divisor in that case?

A. The quantity manufactured.

Q. The same thing that you have used?

A. Yes.

Q. Then there is no difference between you and the Company up to that point?

A. With this exception they do not carry the calculations down to the end, to the finish, on that basis they stop short there.

Q. On what?

A. They stop short on that point.

Q. Well, I am talking as to the items down to Number 33, "Net Amount of Material and Labor."

A. We agree there.

Q. And you understand that this litigation deals with what we may charge consumers for gas?

A. Yes.

4414 Q. Which is delivered to the consumers?

A. Yes.

Q. In other words, that our calculations have to be made on the number of thousand feet of sales?

A. Not in the case of manufacture.

Q. Well, we do not obtain anything from the consumer for the amount manufactured unless we deliver it to him? You understand that?

A. I understand that, but you——

Q. Now, if you divide the expenditure down to item 33, to wit, $3,101,832.24 by the amount of gas manufactured by the Consolidated, less the item of leakage, which means the amount which reaches the consumer's meters, you would obtain the 29.77 cents which the company expends, would you not?

A. Yes.

Q. Now, Item 34, repairs to apparatus $169,197.39, you allow in the cost of gas, less $2,133.98?

A. Yes.

Q. That latter amount is excluded on what theory?

A. On the theory that the amount going to make it up is properly chargeable to construction, not to operation.

Q. Will you point out in this report the details of that small sum?

A. Schedule 2 to Exhibit D.

Q. Did you exclude these on your own initiative or upon instructions from the three engineers whom you have mentioned, or some of them?

A. On the advice of the three engineers.

Q. The vouchers that you examined indicated that these expenditures had been made, did they not?

A. Oh, certainly.

Q. And in fact as to all the items in Exhibit 94, they appeared to be correct according to the books and records of the company, do they not, and your exceptions were only to their application to operating cost or otherwise?

A. That is so.

4415 By Mr. Burr:

Q. That was not true of renewals?

A. Renewals is simply a book entry.

By Mr. **Mathewson**:

Q. How much do you say this $2,133.98 amounted to in cents per thousand?

A. .02 of a cent.

Q. Now, on Exhibit 94, Item 34, repairs to apparatus in total appears to have been carried in the cost per thousand of gas made at 1.59 cents and in the cost per thousand sold as 1.62 cents. Now, when you say that you deducted .05 of a cent, you mean, do you not, that you deducted .05 of a cent from the 1.62 cents to reach your 1.57 cents?

A. I do.

Q. But dividing by the gas made you would get an amount only .02 of a cent lower than the 1.59?

A. Yes.

Q. And presumably if you had divided by the amount of gas sold you would have gotten 1.60 cents instead of 1.62 cents for that item?

A. Yes.

Q. So that on this item No. 34, of repairs to apparatus, there is only a difference of about .02 of a cent, whether you count it on gas made or gas sold, as between you and the Consolidated Company's computation?

A. Yes.

Q. Now, on Item 35, repairs to buildings, $24,900.69, you have excluded, as I understand it, only $88.50?

A. Yes.

Q. This is also on the theory that that might be applicable to construction?

A. Yes.

Q. That is so small that you could hardly indicate in cents per thousands?

A. Not very well.

Q. Where are the items of that $88.50?

A. Schedule 3 of Exhibit D.

Q. The next item which you have excluded, or any part of
4416 it, is item 43, Cost of Gas Manufacture, under agency agreement, $997,039.89, which appears in Exhibit 94 as 34.01 cents per thousand of gas made and 34.82 cents of gas sold. You state you eliminated the ten per cent. profit on the gas manufactured by the companies under the agency agreements?

A. Yes.

Q. What do you mean by profit in that connection?

A. The 10 per cent. represents profit, including a certain allowance for depreciation and taxes.

Q. You do not mean to indicate that it would be profitable for the company to sell gas at the cost of labor and material, plus three cents, from your investigation of the books of gas companies, do you?

A. I don't indicate that.

Q. Now, will you indicate to me how you reached that?

A. The ten per cent. is simply an arbitrary charge. You are allowing profit. The purpose of this examination is to determine the cost of manufacturing gas.

Q. The purpose of this suit, you know, is to determine what we are entitled to charge consumers for the gas which we sell?

A. Yes.

Q. Now, will you indicate how you reached your 29.14 cents as the cost to the other companies under the agency agreement after deducting ten per cent. and five per cent. on the New Amsterdam construction? Where is that indicated?

A. Schedule 4 to Exhibit D.

Q. In Exhibit D, Schedule 4, I find a column headed, "Manufacturing Cost Plus 10 per cent." Who is responsible for the term "manufacturing costs"?

A. It so states in the agreement.

Q. It states what the Consolidated Gas Company shall pay?

A. As the manufacturing cost.

Q. You find that headed in the books of the company material and labor used to manufacture, do you not, or rather in the statements of the company?

4417 A. I don't recollect what the statement was, but the agreement states manufacturing cost, does it not?

Q. The agreements state, do they not, material and labor plus 10 per cent. as the price which the Consolidated Gas Company shall pay?

A. No, I think it is manufacturing cost.

Q. Don't you remember whether the amount paid by the Consolidated Company under these agreements is to be the material and labor plus 10 per cent. additional?

A. It states here cost of gas materials used and labor furnished in manufacturing gas, together with the so-called station repairs.

Q. Precisely. Do you mean to say the material and labor is the total cost of manufacturing gas?

A. Plus the station repairs.

Q. Have you got in any station repairs?

A. It states so in the agreement.

Q. Have you got in any station expense beyond the station repairs.

A. Exactly what is in it I don't know. Permission was refused, I was not allowed to examine it.

Q. One moment. Don't go into that. Have you got anything in there or is there anything included so far as you have observed, except material and labor and repairs?

A. I have not observed anything. I have not seen the details.

Q. You know, do you not, that there are additional expenses in the manufacture of gas known as station expenses?

A. There are very small expenses under that head.

Q. And you know there are distribution expenses at the station, do you not?

A. They do not enter into the manufacturing cost for this purpose.

Q. Do not the distributing expenses at the station enter into the station cost of gas?

A. No, I do not think so.

4418 Q. Won't you look at Exhibit 94 and see if there is not a distribution item 38, $31,855.34 that enters into the station cost of gas as you have computed it?

A. There is a very small fraction there.

Q. You do not understand that this item which you call manufacturing cost includes any taxes or insurance at the station, do you?

A. I admit it does not include taxes.

Q. Or insurance?

A. I cannot say whether it does or not. It may. As I state, we have not been afforded access to the detailed statement.

By Mr. Burr:

Q. Do you mean it may or it does?

A. It may or it may not.

By Mr. Mathewson:

Q. Is it your information that it does?

A. I have no information on the subject.

Q. Did not Mr. Carter show to your representative in his room a statement from these companies showing the details of the cost at which the gas was delivered to the Consolidated Company?

A. He held a statement out and said it is none of your business what is in it.

Q. He did not show you——

A. He simply held it up before me and would not let me take a copy.

Q. Was it not compared in detail to show whether the total corresponded with the items?

A. The total might have been compared but there was no information taken from it. We were not allowed to take it.

Q. Did not Mr. Carter tell you that he would not let you take that paper away, but that you could compare it there to your heart's content?

A. No, he would not allow us to take a copy.

Q. You did compare it so that you found the total amount 4419 represented the sum of the various items, didn't you?

A. The total did, but what was in the total we did not know.

Q. Did not you see what the various items related to when you took the total?

A. No.

Q. Did you yourself examine it for that purpose?

A. No.

Q. Do you know why your representative who did examine it did not take such details as he pleased from it?

A. He was not allowed to.

Q. That is your information?

A. Yes. The message came back it was none of our business what the composition of it was.

By Mr. Burr:

Q. Who examined that?

A. One of my assistants, Mr. Murtha.

By Mr. **Mathewson**:

Q. In getting the 29.14 cents, how much was taken off representing the 10 per cent., how much representing the interest on the construction of the New Amsterdam Company?

A. Interest 10 per cent. $85,445.96.

Q. How did you get that?

A. It was the amount shown in their books.

Q. Shown on the books of the Consolidated Company?

A. Yes.

Q. Did it show as the 10 per cent. on their books or did you divide and get the 10 per cent. or multiply?

A. It showed as the 10 per cent.

Q. When you compare the cost of gas to the Consolidated Gas Company and the cost of gas manufactured by these other companies under agency agreements, in order to make a just comparison you must know exactly what items were included in it, must you not?

A. It would be better.

4420 Q. And you do know, do you not, from Exhibit 94, from your information that some items of expenditure which were included in the Consolidated cost of 32.42 cents at station on gas made are not included in the cost of 29.14 as you have computed it to the subsidiary companies?

A. No, I do not know that.

Q. Don't you know that there are no distribution costs at the station included in the 29.14 cents?

A. Not except your statement.

Q. In other words, you do not know whether they include the same items or not?

A. That is so.

Q. If the Consolidated cannot manufacture all the gas which it delivers and obtains a large portion of its gas from other companies and it becomes necessary to determine how much the Consolidated Gas Company is entitled to charge to consumers for all its gas, you must take into account, must you not, the entire amount which it has to pay to acquire the gas which it does not itself manufacture?

A. No.

Q. You do not think that makes any difference?

A. They are only entitled to take what it costs the subsidiary companies for this purpose.

Q. Well, but do you include then the capital of what you call the subsidiary companies, that is, the companies under the agency agreement, in determining what the capital of the Consolidated Gas Company is?

A. I have not thought anything about the capital of the Consolidated Company.

Q. You would have to, would you not, if you excluded this three cents or ten per cent.?

A. No, not necessarily.

Q. Do you mean to say that the capital which produces three billion feet of gas which is obtained under the agency agreements is entitled to no return but bare cost of labor and material?

4421 A. It is entitled to a return as I have already stated. We would have added in the depreciation and taxes if we knew what they were, but in the manufacturing cost the capital does not enter.

Q. When you come to determine the capital which the Company is entitled to a return upon you must include the capital which produces this three billion feet which it obtains from other companies?

A. Yes.

Q. Now, as to the five per cent. which is paid on the New Amsterdam construction, which was undertaken in order to furnish a portion of this gas under the agency agreement, that would be a proper expenditure, would it not, if the gas had to be obtained?

A. No.

Q. It would not be a proper expenditure under any conditions?

A. Not under the cost of manufacture.

Q. Would it be a proper expenditure no matter where you classified it?

A. By the Consolidated Gas Company?

Q. Yes.

A. It is a proper expenditure but not under the cost of manufacture.

Q. So it would be a proper expenditure to pay the 34.04 cents to the other company that manufactures under the agency agreement, would it not, if the Consolidated Company had to have the gas, no matter how you classify it?

A. Oh, yes, the classification does enter into it.

Q. Yes, it does as you classify it. Now taking the cost at the holder which the Consolidated Company figures for its own gas at 33.17 cents, on gas sold (item 42) you have made a deduction if I understand of only .02 of one cent to that point.

A. No, I made a deduction of 1.83 cents.

Q. Oh, no, that relates to the cost of gas under the manufacturing agreement, does it not?

A. Total cost of gas at holders.

4422 Q. I am speaking now of Item 42, the Consolidated Gas Company's own station cost?

A. Station cost, yes.

Q. And I say you have deducted up to that point only .02 of one cent?

A. Yes.

Q. So that would leave on the basis of sales 33.15?

A. Yes.

Q. Now, let us take the next item which you criticise, Item 47, repairs to gas stoves $55,954.35. I understand that you do not question the propriety of that expenditure?

A. Not at all.

Q. And you understand that Exhibit 94 is a statement of expenditure and not of income, appears to be, does it not, or charges against expense and not income?

A. Yes, but the gas stove expense is not a charge. I should bring the rents into credits.

Q. That is another question. I am coming to that in a moment, Is it not a fact that repairs to gas stoves are included in operating cost of gas under both the forms of the Massachusetts Gas Commission and the forms of the New York State Gas Commission?

A. I cannot say.

Q. You do know that repairs to gas stoves are included under the English system of accounting, in which I suppose you are instructed, as part of the operating cost of gas, don't you?

A. As also rents are brought into the credits.

Q. But under the English system no balance is brought in, is it? In other words, on one side appears among operating costs the expenditures for repairs of gas stoves and on the other side among receipts appears receipts for rent for gas stoves, do they not?

A. Yes. But you must remember——

Q. Is not that the way?

A. The English accounts are not prepared on the same basis as this or for the same purpose.

Q. Well, we have heard a good deal about them, and as you came from the other side, I was inquiring a little further.

4423 You do not find in the English accounting that a balance is struck between the repairs of gas stoves and the receipts from gas stove rentals on the other side and merely the balance carried into the ac-ount, do you?

A. No.

Q. Do you know of any gas company where the method is not to include the repairs to gas stoves among the expenses and then put on the other side among receipts the rentals from gas stoves?

A. Yes.

Q. You do know a company where they carry in merely a balance?

A. Yes.

Q. On this side?

A. Yes.

Q. What company?

A. I cannot name it.

Q. Now, you know that some companies have no gas stove rentals at all and yet have repairs to gas stoves among their operating expenses as an aid to the sales of gas, don't you?

A. If they do not have rentals, then they have the profits from the sale of the stoves.

Q. Don't you know that there are companies which have never been in the business of selling stoves at all which still have repairs to gas stoves among their operating costs?

A. Which they charge to the consumers?

Q. Yes. Just the same as they charge the repairs to his fixtures generally.

A. They charge that to the consumer and the consumer pays it; that is the jobbing department of the business.

Q. No, you misunderstand me. Don't you know that there are companies which do not sell gas stoves at all, but which have in their cost of gas not specially charged to the consumer except as they get it from the price of gas, the amount which they expend for repairs to gas stoves, as well as repairs to gas fixtures of the consumer?

A. I have never seen a company like that.

4424 Q. You have never known such as case as that?

A. No.

Q. Don't you know that in the City of Boston there are stove repairs but no stove receipts?

A. I don't know anything about Boston.

Q. If the company was not in the business of renting stoves, then it would have, would it not, expenditures for stoves with no off-setting items of receipts?

A. Which would be paid by the consumer.

Q. Well, the consumer pays everything when he pays his gas charge?

A. No. He would be billed for the repair of that stove.

Q. But in Boston, we will say, he is not billed for the repair of that stove. That would go, would it not, the same as repairs on any other apparatus, into a part of the cost of gas?

A. No.

Q. What would become of it?

A. I don't think it would be a fair charge against the cost of gas under those conditions.

Q. In spite of the fact it is the practice of large companies, you do not think that is right?

A. No, I do not.

Q. Where would it go or what would become of it according to your theory?

A. For the purpose, it may be charged against profit and loss, but it is not a charge against the manufacture and distribution of gas.

Q. Pretty nearly every account goes into profit and loss at the end of the year?

A. Well, that is not the cost of manufacturing and distributing of gas.

Q. Do you consider the expenditure for repairing the fixture of the consumer, the ordinary burner, as a charge against the price of gas?

A. Yes.

Q. Why not then repairing the fixture which is also a burner on his gas stove?

A. No.

Q. Why not?

A. You are making a profit on the sale of this stove.

4425 Q. I am assuming we do not sell the stoves at all, as is the case in many companies; why then is there any distinction between repairing his burner which he uses for an open flame and repairing the burner in the stove which he used for the gas for cooking, what is the distinction?

A. It appears to me there is a distinction.

Mr. Burr: I call Mr. Mathewson's attention to the fact that he has already elicited that Mr. Hall never ran a gas works.

Mr. Mathewson: I understand; that is quite obvious.

Mr. Burr: And never operated a gas plant.

Mr. Mathewson: That is also obvious.

Q. Let us take item 49, repairs to services $89,033.42. I understand that you have eliminated there $1,850.31?

A. Yes.

Q. That I think you said was an amount so small that figured in cents per thousand it was hardly appreciable?

A. Hardly appreciable.

Q. But will you tell me where the detail of that small deduction appears if you have given it?

A. Exhibit D, schedule 5.

Q. Now, the next item, any portion of which you exclude, is No. 51, repairs to buildings, $15,116.68, of which you exclude $2,845.75 or .09 of one cent. Where does the detail for that appear?

A. Schedule 3 to Exhibit D, the last four items.

Q. Is that on the theory that these last four items—beginning with Hester Street branch, is that right?

A. Yes.

Q. Were really construction and not repairs?

A. Partly that. Of this $1,678.13 was charged against the revenue received from other properties, from rented property.

4426 Q. Is the only reason you exclude them because there were revenues from rented properties on the other side of the account?

A. Yes.

Q. Now, Mr. Hall, when we are determining the profits of the company in its gas business and the amount remaining applicable to return on capital, it would make no difference, would it, whether in repairs to gas stoves, for instance, the repairs to the stoves were placed on one side of the account and the receipts from stoves on the other side of the account, or whether a similar account were deducted from each side of the account originally, when you came to subtract the expenses from the receipts, the profits would appear the same in either case, would they not?

A. It makes a difference when you come to determine the cost of the manufacture and distribution of gas.

Q. I understand that is your view. I am going a little further than that. Take any one of the items to which we have referred. Like expenditure in care of street lamps, if you exclude that from expenditures in the operating cost of manufacture and distribution of gas, you must exclude the similar amount from the receipts on the other side of the account when you are striking the balance to find your profits, must you not?

A. Yes.

Q. And the amount of the balance will be just the same whether you include the item of street lamps in the operating cost of gas and include the corresponding receipt among receipts or whether you exclude it from the operating cost of gas and exclude the corresponding amount from receipts, will it not?

A. The balance in the profit and loss account would be the same.

Q. It is merely a difference of method in treating the items from an accounting standpoint when you come to figure up what your profits are, is it not?

4427 A. It is a very serious difference when you come to determine the cost of manufacturing and distributing gas to the private consumer.

Q. Well, that may be, but I say when we are determining the profits in our gas business it would be just the same one way as the other?

A. Yes.

Q. And if you exclude it from one side of the account you must exclude the corresponding item from the other side, must you not?

A. Naturally.

Q. Were these various items so far excluded on the advice of the engineers?

A. Several of the charges, the repairs to building accounts, repairs to apparatus were, the others I excluded myself.

Q. Referring to Item 53, the next one which you have questioned, street lamps, $289,259.09, did you know whether the expenditure for street lamps was included in the operating cost of gas by the Massachusetts Gas Commission and New York Gas Commission?

A. I did not study the Commissions.

Q. Was that excluded under the advice of the engineers?

A. It was not.

Mr. Burr: But they agreed with your exclusion of it, did they not?

The Witness: They were not consulted.

Mr. Burr: I think they have already testified about it.

Mr. Mathewson: Yes, I think they have, and therefore I shall waste no further time.

Q. Have you read Prof. Bemis' testimony and Mr. Marks' testimony in this regard?

A. No.

Q. Now, in reference to these rentals which you say were offset in connection with the repairs to buildings, in getting the sum which you have excluded, if the rentals are offset, then, of course, the buildings must be included in the capital of the company when you begin to figure the return to which it is entitled on capital? 4428

A. You get the return from the rent of those buildings.

Q. Whatever it may, you have already applied that now to reduction of operating expense, or an offset on certain items?

A. I have charged the expense against the revenue; I do not bring the rent of those buildings in as a credit, I simply eliminate the charges.

Q. But however you may treat that, if the rents received from buildings are to be credited in the Company's Gas business, it is entitled of course to a return on the capital invested on the buildings on the other hand when you come to figure that?

A. Yes, quite so. The rental on the buildings gives them a return on the capital invested in the buildings.

Q. Now, the next item which you have excluded is 54, Interest on Consumers' Deposits, $51,391.52. You know that the receipt of deposits of that character reduces the amount of bad debts of a company naturally?

A. Yes.

Q. And if that be the case, and these consumers' deposits be a sort of insurance fund against bad debts, as one of the witnesses stated, why is not the payment of interest on those deposits a proper payment like any other insurance item?

A. Because you have the use of the money as working capital.

Q. If we do not have the use of the money as working capital then it would be a proper charge in the operating cost of gas, would it not?

A. No, under no conditions.

Q. Why not, if it is an insurance fund, paid to reduce the amount of bad debts?

A. Because you have the use of the money.

Q. Well, but assume that we could not use it, that it was in a trust fund, or something else, would not we then be entitled?

A. You can invest it.

4429 Q. You don't know where we can invest it to get six per cent., do you?

A. You can get pretty near it.

Q. I wish you would tell me privately afterwards where you can invest it at that rate?

A. I think I can.

Q. Now, this next item of bad and doubtful debts, $82,995.11, you did not exclude, but you made some comments on it. Do you happen to know how much of a deposit under the laws of the State of New York the company can exact?

A. I understand two months.

Q. And don't you know that frequently consumers use in one month more than they ever have in two preceding months, so there is a loss even if the company takes a deposit?

A. It would be rather exceptional.

Q. Well, $82,000 is not an exceptional amount of bad debts upon a business of more than $13,000,000, is it?

A. It could be considerably reduced, I think.

Q. Well, you say you have never operated a gas plant?

A. No.

Q. And have never tried?

A. Have never tried.

Q. Do you know of any company that has any less than .63 of one cent per thousand in bad debts?

A. Yes.

Q. Which?

A. I cannot state that.

Q. And you appreciate that if we did not take deposits from consumers upon which we are bound to pay interest that the bad debts would be very largely increased as a natural course, would they not?

A. Yes.

Q. And do you remember whether you asked from the company information as to the amount of bills for gas which the company was obliged to extinguish from consumers' deposits which had been made with it?

A. I talked the matter over with them.

4430 Q. And didn't you get the figures?

A. I certainly saw figures.

Q. It amounted to $70,000 or $80,000 or such a matter, did it not?

A. I don't recall.

Q. Now, let us take Item 58 of Exhibit 94, expense of general office, $339,999.51. You excluded from that $31,075.95, if I understand you correctly?

A. Yes.

Q. Will you point out the place of the report where you detail that?

A. Schedules 6, 7 and 8 of Exhibit B.

Q. Schedule 6 which amounts to $25,671.74, covers does it not, expenditures in 1905 attributable to the investigation of the Company by the Legislative Committee in the Spring of 1905?

A. Yes.

Q. Attorney's fees, stenographer's charges, expenses, printing of one kind and another in connection with that?

A. Yes.

Q. It is your view, is it not, that the Company in connection with a matter of that kind is entit-ed to employ counsel and to take the ordinary steps to protect itself and its stockholders within reason?

A. At the expense of the stockholders.

Q. Well, let *let* us see about that. How about the attorney's fees that the Company ordinarily pays, I see you have included those?

A. That is a necessary charge against any business.

Q. Certainly. Do you mean to say that if a company appears before a Legislative Committee that that is not a legal expense which it is entitled to charge in ordinary operating expenses, but which must be specially borne by the stockholders out of their dividends?

A. Yes, sir.

Q. What authority have you for that proposition?

A. That does not enter at all into the cost of manufacturing and distributing gas, it is not a necessary expense. It is an expense by the stockholders to protect their own interest.

4431 Q. But how about the fees of counsel for appearing and in contesting a tax which is imposed on the Company?

A. There are certain necessary charges.

Q. There are certain necessary charges?

A. Yes, for ordinary business.

Q. Well, isn't it a matter of discretion with directors and officers as to what they contest or in what cases they appear?

A. Certainly.

Q. And do you mean to say appearance before a Legislative Committee is in any different category than appearance before a tax commission, in order to argue against the imposition of a tax?

A. It is.

Q. Well, why is it?

A. It is an expense, as I said, against the stockholders. They are fighting for their own interests, to keep up the price of gas then. It does not enter into the cost to the consumer.

Q. In other words, if the Company think that the price of gas is to be lower than is just, they are not entitled to ap-ear by counsel and make their argument unless it comes out of the stockholders themselves?

A. Not at the expense of the consumer.

Q. Don't you know that in England Parliamentary investigation expenses are always allowed and charged in the operating cost of gas?

A. Not in a case of this kind, they would not be.

Q. Will you point out any case in which it has been disallowed in England?

A. I cannot, but it would not be allowed in a case of this kind by any competent public accountant.

Q. Well, you say it would not. I want you to point out any case where it has been disallowed?

A. I cannot.

Q. Don't you know it has been in many cases allowed in England as part of the operating cost, the legal expense in a Parliamentary investigation?

A. It would not be in a case of this kind.

4432 Mr. Mathewson: I move to strike that out.

The Master: Strike it out.

Q. (Question repeated.)

A. No, I do not.

Q. You don't know whether it has been or not, do you?

A. No, I do not.

Q. Did you exclude this on the theory that it was a special charge and not likely to be repeated?

A. Yes.

Q. You did not find there in the expenses of 1905, any expense on account of the hearing before the Gas Commission, which began sometime in October, 1905, and was largely completed during the calendar year 1905, did you?

A. I think I did. I think there were some.

Q. Anything substantial?

A. I don't recall the particular amounts as I took them out. If they were there, they are out, and they could be identified.

Q. The greater part of all these expenditures took place before the hearing before the State Gas Commission began, which proceeded finally, I think, beginning about the 20th of November, 1905, did they not?

A. They appear to be. I see the last item there is State Gas Commission.

Q. Yes. $2,870.43 out of $25,671.74.

A. Yes.

Q. And of course you do not find anything there in connection with the present suits which were begun in May 1906?

A. No, there would be nothing under that.

Q. Does it not begin to look to you as though this was an exceptional expenditure, but one which the Company was currently undergoing from year to year?

A. No, I do not think that is continuous.

By the MASTER:

Q. You think if they conducted themselves properly they would not ever be investigated? 4433

A. I assume so.

By Mr. MATHEWSON:

Q. Now, as we are dealing with the present in a sense, is it your view that the legal expenses of the Company before the State Gas Commission when the law expressly provides that the Company may be and shall be heard by counsel is not a proper charge in the operating expense of the Company?

A. No.

Q. You do not think it is?

A. No, it is not.

Q. And you do not think the expense for counsel in these present actions would be?

A. No.

Q. Now I see in Exhibit D, Schedule 7, part of the excluded $31,075.95, you have $1,604.21 on account of five items ,including stenographic work and subscriptions to National Civic Federation. Do you exclude these various items on the same theory?

A. On the principle that they are extraordinary expenses, some of them, and some of them are not chargeable against operating at all, the cost of fitting up an office.

Q. Well, which are not?

A. The first and fifth.

Q. Well, divide them according to the theory you have just en*n*unciated, which of them are extraordinary expenses and therefore not liable in operating expense?

A. Second, third and fourth.

Q. And the first and fifth are not allowable because they are not——

A. They are charges to capital and the first one is a charge to Astoria, according to the voucher.

Q. Well, that would be $85.50?

A. Yes.

Q. And $369.21?

A. Yes.

Q. Or a total of how much, if you have your pencil handy?

A. $454.71.

Q. You do not think they would be chargeable to operation even if they were not extraordinary expenses? 4434

A. Under no conditions.

Q. They then should go to increase capital account?

A. Yes.

Q. And wherever you have excluded items on the ground they are not proper operating expense, but should have been charged to construction, by so much the capital account of the Company should be increased?

A. Naturally.

Q. And that would be true for as many years as such items have been charged by the Company in a similar manner?

A. No.

Q. That is, if they are not chargeable to operating expense but are to construction, in any case, those items should not be added to increased capital, whenever they were expended, of course?

A. Yes.

Q. Now, let us see Exhibit D, Schedule 8, where we have $3,800, making the balance of $31,075.95 which you excluded from Item 58. This appears to be damages on account of an accident, that is, explosion at a holder at 21st Street. It is true, is it not, that this represents payment to three men for injuries received at the explosion of that holder?

A. Yes.

Q. Well, now, why should not they be charged to operating expense?

A. Because they are not an operating expense, they are part of the cost of building that holder.

Q. You think they should be charged to capital account and the cost of the holder increased by the ordinary cost plus these $3,800 worth of damages?

A. In the ordinary course they would be.

Q. Well, the whole holder was destroyed at that time. Would you add the damage by destruction of the holder plus the damages received by these men plus the cost of the new holder as the
4435 cost of the new holder?

A. That is a loss of capital, yes, sir.

Q. Well, what is loss of capital except operating expense if you wear out a piece of apparatus and it has to be charged off?

A. Will you repeat that, please?

Q. (Question repeated.)

A. A loss of capital is not an operating expense.

Q. Do you mean to say that if a piece of apparatus wears out or depreciates in use that the amount of that depreciation is not chargeable in operating expense?

A. Ordinary wear and tear is chargeable or ordinary depreciation.

Q. But if it blows up instead of wearing out in the ordinary way you do not think it would be chargeable to operating expense?

A. It is not.

Q. Supposing a piece of apparatus becomes obsolete and has to be replaced by another piece of apparatus, you would charge off the cost of the apparatus to depreciation, would you not?

A. Yes.

Q. And the cost of the new apparatus to construction and the difference between the two would represent your addition to capital account, would it not?

A. Yes.

Q. So that the cost of the old apparatus in that case which you charge off would be in effect an operating expense, would it not?

A. It would be if provided for by your depreciation from year to year.

Q. Yes, in other words, that provision for depreciation is part of the operating expenses of a company?

A. Certainly.

Q. Don't you know as a matter of fact that explosions big or little in a gas company and injuries to employees are ordinary and usual incidents of a gas business and not anything extraordinary?

A. Not the explosion of a holder in course of construction.

4436 Q. Well, supposing this holder had not been in course of construction but had just been completed, how then about the payment of $3,800.

A. If the holder was in operation and being used, any accident happening them as naturally an accident might, would be in the course of the company's business.

Q. And that would be chargeable then to operation?

A. Yes.

Q. Now, referring to the next item, 62, Real Estate Rents, you exclude from the $42,674.71 only $625, if I understand?

A. Yes.

Q. And that is not appreciable in figuring the cents per thousand?

A. No.

Q. In which exhibit are the details of that?

A. There are no details given; that represented the rent of an office for three months.

Q. So that we really may disregard that?

A. Yes, it does not make any particular difference.

Q. In reference to the next item to which you object, or any portion of it, Item 65, insurance, $54,031.83, you exclude only $152.44 and that also is negligible virtually, is it not?

A. Yes.

Q. And you have not produced details?

A. No.

Q. Let us take taxes, $965,843.88, will you point at where I will find the details of the $222,692.62 which you have excluded from that item?

A. Page 33 of the report.

Q. Of the total taxes of the company to make up this sum last mentioned you exclude taxes on income from investments in other securities, $5,257.48; taxes on real estate from which the company draws rent, $2,928.85; taxes on dividends in excess of four per cent. $120,000; interest on unpaid taxes, $4,506.29, total $222,692.62. Now, the first item is excluded by the company's computation. Why do you deduct taxes on real estate from which the company draws that $2,928.85?

4437 A. It is a charge against the rents received from the properties from which they drew those rents.

Q. Have you not applied the real estate rents against repairs?

A. No.

Q. Did you not in getting the $1,600 and odd dollars to which you have testified previously?

A. No.

Q. Do you not appreciate that *it* begin business where large parcels are required, several city blocks for instance, it is economy in the operation of a company to acquire the entire block even if there may be some particular which they cannot use at the moment?

A. It might be.

Q. Well, in that view, the real estate which they thus acquire, assuming it to be a prudent investment in the business, would be part of the capital upon which the company would be entitled to earn a return, would it not?

A. In that proportion that it earn a return from the rent of the building.

Q. Well, but the return from the rent of the buildings would be credited for whatever it might appear to be?

A. Yes.

Q. And you could conceive of a situation, could you not, in which if the company received no rent from the building it might be economy for the company to own a small lot where it owned all the rest of the block and made noises and smells and other nuisances which might be complained of if the property was in the hands of other persons?

A. Yes.

Mr. **Burr**: This is all speculation.

Q. And if the company employs this land or is entitled to include this land as part of its capital prudently in the gas business and the rents received from real estate are credited, why should it not be entitled to charge the amount which it pays for taxes?

4438 A. It is entitled to charge it against the rents.

Q. Entitled to charge it to profit and loss as you have proved, is that right?

A. Yes, against the rents and not to the consumer.

Q. It would make no difference in the profit of the company if the items balanced, whether this was included in the cost of gas and the corresponding item in the receipts and whether they were taken from either side?

A. Yes, but it makes a difference in the cost of gas.

Q. Yes, you can figure the cost of gas down to nothing by offsetting enough items on each side and have $4,000,000 left clear.

A. No, I did not follow that out.

Q. But the point is the more of these items which you take out of the operating cost of gas and at the same time take the corresponding amount out of receipts, the lower you are reducing the apparent cost of gas or operating cost of gas in every instance, is not that so?

A. Yes.

Mr. **Burr**: And the converse is true?

The **Witness**: Exactly.

Q. Now, where do you get the $120,000 which appears at page 33 of your report under "taxes on dividends in excess of four per cent."?

A. On page 33, these are the same items the company used.

Q. Then with the exception of the $2,928.85 taxes on real estate from which the company draws rent, the only item left in which there would be a difference is $94,506.29 interest on unpaid taxes. On what theory did you exclude that particular operating expense, Mr. Hall?

A. Well, it was not an operating expense?

Q. Well, why?

A. That is merely a book entry on your part in the meantime.

4439 Q. Well, but you understand, do you not, that the tax has been assessed?

A. Yes.

Q. And is adjudged against us at present?

A. It is a tax of previous years, consequently not a charge against 1905.

Q. You understand that interest has been running against this tax and that it has accrued in previous years up to 1905?

A. Yes.

Q. And this covers only the portion of that interest accruing in 1905?

A. Yes.

Q. And if we make an expenditure for counsel fees in contesting a tax which the company believes to be an improper one, you are entitled to charge, you have said, the counsel fees as part of the operating expenses?

A. Ordinary counsel fees, I said.

Q. Well, we have no extraordinary counsel fees in our company?

A. Contesting taxes would be.

Q. And wasn't a portion of this interest, amounting to $94,506.29, actually paid in 1905?

A. I do not recall whether it was actually paid or not.

Q. Whether it was actually paid or not would make no difference, would it?

A. None.

Q. The point is that being interest on taxes which are contested, the company would not be allowed to charge that as an operating expense?

A. Certainly not.

Mr. Burr: And he said on former years.

The Witness: Those are taxes of former years.

Q. Well, assuming it was a tax assessed in 1905?

A. Yes.

Q. And interest has been running for a part of 1905 on that tax which we are contesting?

A. We admit the 1905 tax.

Q. How is that?

A. We admit the 1905 tax.

Q. Do you admit any interest accrued on taxes of 1905?

A. No.

4440 Q. So that it does not make any difference whether it was the tax of 1905 or some other year, whether you allow the interest or not?

A. We would not allow it in any case.

Q. In other words, if the company sees fit to contest a tax, considering that it is a prudent action to contest it in the courts, while they are entitled to charge their legal fees they are not entitled to charge interest if they have to pay the tax with interest ultimately, is that right?

A. No, it is not.

Q. Is that right?

A. No, it is not right. They are not entitled to charge the legal fees in that connection.

Q. Oh, they are not entitled to charge the legal fees?

A. No, not in that connection.

Q. Just explain a little, I do not understand you?

A. That is purely speculative, the matter of contesting those taxes.

Q. You mean when you go into the courts you are going into speculation?

A. It is purely speculation when you are contesting the tax.

Q. Is it your view that if a tax is assessed against the Consolidated Gas Company, which its officers and directors believe to be doubtful, and are so advised by counsel, that the company is not entitled to contest the tax in the interest both of their stockholders and consumers?

A. They are at liberty to contest the tax. But it is in the interest of the stockholders.

Q. And also of the consumers if it prevents the piling up of heavy taxes, because taxes are chargeable as part of the operating cost of gas?

A. They are charged as part of the operating cost of gas.

Q. So indirectly it affects consumers as well as stockholders?

A. Not when gas is selling at a fixed rate.

Q. But the point which we are trying to determine in this case is what is the proper price to be charged for gas? 4441

A. Yes.

Q. So as to meet the proposition?

A. Yes.

Q. Let me ask you again, isn't it your view that the counsel fee in contesting a tax under advice of counsel is properly chargeable as an operating expense to the company?

A. If you are contesting the present year, but in this case you are contesting past years.

Q. I do not quite see the distinction, but I think I will get at it. Supposing the company pays this year to counsel a fee for contesting a tax which was assessed in 1904, the contest being made in 1905, is it your view that they could not charge to the operating cost of gas the fees for counsel in contesting that tax?

A. No, you cannot charge it——

Q. You cannot charge it in 1905 because it was a 1904 tax.

A. Exactly.

Q. But you could charge it so long as the charge did not exist and the services had not been rendered in 1904?

A. I don't think you could charge it to arrive at the cost of this gas.

Q. So that you reduce it to this: that you never can charge counsel fees in the operating cost of a gas company unless performed in the very year in which the tax is assessed and in relation to that particular tax?

A. No, I don't say so.

Q. Well, I wish you would explain a little because I am hazy as to your theory. When can you charge a counsel fee for contesting a tax in the operating cost of a gas company, and when can you not?

A. You can charge to the operating cost the ordinary, general expenses of the business; not such items as counsel fee for contesting a franchise tax?

Q. You can never charge that?

A. Not against the cost of operation.

Q. No matter whether the tax is assessed in the particular year with which you are dealing or not? 4442

A. No.

Q. And no matter whether the services in contesting the tax are rendered in the particular year?

A. No.

Q. And the same theory applies in your view, does it, to the further expense of protesting a tax, that is to say to the interest which would accrue on it?

A. That is right.

Mr. **Burr**: I believe you have already stated that it is the fixed principle of the Company to contest all taxes.

Mr. **Mathewson**: I have never said anything of the sort. On the contrary, we are paying taxes largely, and I think we are the largest taxpayer in the City of New York, or at least have been for a long time.

Mr. **Burr**: When you pay.

Mr. **Mathewson**: Yes, when we pay and as we pay. How does the city stand as a payer of its debts, as far as the Gas Company is concerned?

Mr. **Burr**: We are perfectly willing to pay you when you are willing to accept.

Q. Now, take the next item to which you object, No. 67, contingent expenses, (includes renewals and replacements) $1,328,316.37. I understand that in effect you rejected the whole of that and then substituted for it $167,427.84?

A. Yes, plus the depreciation from the gas stoves, making $222,382.82.

Q. And that amounts to how much?

A. 1.71 cents per thousand feet of gas distributed.

Q. Do you mean the gas sales?

A. Gas sold to the consumers.

Q. Now let us see where you deal with that. Is that on
4443 page 34 of your report?

A. 34 and beginning of page 33.

Q. Now I understand you to say that the renewals and replacements which appear as part of the 10 cents are not actual expenditures?

A. It is stated so in the books depreciation.

Q. Now let us see. You understand by the Company's books that 10 cents per thousand feet was charged in its accounts to represent actual renewals and replacements plus a contingent or reserve fund, the 10 cents to cover all that I have stated have you not?

A. An arbitrary charge to cover that.

Q. You understand that at the conclusion of the year, into that account is written the amount of renewals and replacements?

A. No, I do not.

Q. You did not understand that?

A. No.

Q. Didn't you know that a portion of this $1,328,316.37 was covered by items written in representing renewals and replacements at the end of the year?

A. No.

Q. The balance only of that sum representing what might be called a contingent or reserve fund?

A. No, I did not.

Q. Now let us look at page 34 of your report for a moment. You have "plant" $3,424. That represents, does it not, the cost of sundry plant and apparatus, dismantled, to make room for new plant, and apparatus plus the cost of dismantling, less what was recovered from the sale of old apparatus as scrap or from its use as repair material. Also the book value of plant and apparatus sold, less the amount recovered?

A. It so states.

Mr. Burr: That is quoting from the resolution?

Mr. Mathewson: Yes:

4444 Q. In other words, when a piece of apparatus was worn out and abandoned you found that the cost of that, as appears in the book, was charged off?

A. Yes.

Q. It would be depreciation, if you please to put it so, whatever you please to call the account?

A. Yes.

Q. And if other apparatus were acquired within the year, that the cost of that other apparatus was charged to capital or construction?

A. Yes.

Q. So that the cost of the old apparatus would represent a replacement or depreciation?

A. No, it would represent a depreciation?

Q. If you take the new apparatus at the cost which is charged to capital, that represents to a certain extent replacement of apparatus which has been charged off or is worn out, and become useless, does it not?

A. This particular amount is charged off as depreciation, as the entry appears here.

Q. Yes, I understand, but I simply ask you as to the facts; is not my statement a fair one?

A. Do you mind repeating it?

Mr. Mathewson: The Stenographer will repeat it.

The Stenographer (Reading): If you take the new apparatus at the cost which is charged to capital, that represents to a certain extent replacement of apparatus which has been charged off or is worn out and become useless, does it not?

A. Yes.

Q. So that if apparatus amounting to $3,424, which is the amount mentioned, is abandoned, and apparatus representing $10,000 is installed, that $10,000 expenditure would represent the expense of $3,424 of replacement and apparatus abandoned, would it
4445 not?

A. No. It would represent a depreciation of the old apparatus.

Q. Yes, a depreciation, and if you please to put it in another way, it would represent a replacement to that extent?

A. You might call it that. I wouldn't.

Q. Well, that is what we do call it?

A. Well it is wrong.

Q. Well, in that event it would not be a mere charge off without any corresponding effect on capital account because the capital account would be increased only by the difference between the cost of the new apparatus and the cost of the old apparatus which is charged off?

A. It might be in that particular case.

Q. And if that be the case there is no criticism on your part, is there?

A. There is a criticism.

Q. What is it?

A. That account was depreciation. This account marked here.

Q. You mean it is headed, "Depreciation" in the company's books.

A. No. It is depreciation.

Q. If a greater expense is made for apparatus than this $3,424, isn't the apparatus of the company replaced to the extent of $3,424, even if you consider it first charged off to depreciation?

A. Then your accounts are not properly kept?

Q. Do not worry about that; we will take care of that. Just answer the question.

A. It must be in that particular case of plant.

Q. Well, let us take mains and see what about them: Mains, $90,561.54. That appears to be the cost of mains abandoned during the year and of mains replaced during the year.

Mr. Burr: The book value of mains abandoned.

Mr. Mathewson: Yes, very good. Abandoned during the year, and of mains replaced during the year with mains of larger 4446 capacity, less the value as scrap of the old mains taken up.

Q. Now you find, do you not, that if mains were replaced by larger mains, the cost, as appeared on the books, of the mains taken up was charged off to depreciation?

A. Yes, sir.

Q. And you found, did you not, that the cost of the larger mains which was installed, was charged to construction?

A. Yes.

Q. And the net result is that your cost of main, cost of new main, is a replacement of old main abandoned, to the extent of $90,561.54?

A. No, sir.

Q. And that only the balance represents new construction and capital account, isn't that so?

A. No, that is a depreciation of your old mains.

Q. Let us forget the words and get at the substance. As a matter of fact, if you have $90,000 worth of mains which are charged off and you get $100,000 of new mains within that year, so far as your main account is concerned, it means that you have charged off $90,000 worth of mains, that you have replaced them by the new mains and that you have carried $10,000 more to capital account, doesn't it?

A. Yes.

Q. So that it makes no difference at all whether you call this depreciation or not. If you have put down $100,000 of new mains you have replaced $90,000 worth of mileage, and it does not show in the capital account at all, and you have charged $10,000 more of mains at cost into the capital account, because it is beyond the cost of the mains which were replaced, isn't that right?

A. That is what it comes to, the net result.

Mr. Burr: Are you speaking of an assumed condition or from the books of the company?

Mr. Mathewson: No, I am speaking of the exact condi- 4447 tion, the substance and not the words. It has been testified over and over again what the situation is, and I do not care what you call it, that is the fact.

Q. Now, we have services, for the book value of services taken up or cut off or abandoned in the streets, $37,401.00. That you say is depreciation?

A. Depreciation.

Q. But don't you find in the company's method of keeping its accounts, that if it put in other services new that year to the extent of $50,000, that it would carry into capital account only a difference between the $37,401 and the $50,000 as an increase to capital?

A. That may be, but it does not alter——

Q. But don't you find that to be the fact?

A. Yes.

Q. So that as a matter of fact of that $50,000.00 expended for services $37,401.00 would be a replacement of services to the same extent as they were charged off to depreciation, isn't that so?

A. That is your way of looking at it.

Q. With your way of looking at it this $37,401 would represent an actual expenditure for new services, wouldn't it?

A. No, sir. That is a depreciation of the old services.

Q. But if new services are put in, or new mains are put in, to the value of the services or mains charged off, and do not go to increase the capital account, but the capital account is increased only by the difference between the mains or services charged off and the total expenditures for constructing mains and services, then as a matter of fact it amounts to a replacement of the mains and services up to the extent of the mains and services charged off, doesn't it?

A. I do not see it that way.

Q. Doesn't it amount to the same thing?

A. No, I do not see that.

4448 Q. What do you mean by depreciation in a case like this where a main of 6 inch diameter is replaced by a main of 30 inch diameter?

A. When you lift the old main out of your books that is depreciation. The new main is straight construction.

Q. But if the main is put down it is a replacement of the old main to the extent of the old main?

A. No, a new main is straight-out construction work.

Q. But it does not yet appear as within the capital account?

A. No, because you necessarily must take the old main out of the books.

Q. Precisely, and then does not the whole expenditure for mains represent a renewal of your mains value to the extent of the mains charged off, and doesn't it represent additional capital to the plant beyond the amount of mains charged off?

A. It represents additional capital.

Q. Is my question answered in the affirmative?

(Question repeated).

A. The plant represents additional capital.

Q. And does not the expenditure, excluding the plants, represent in effect a renewal or a replacement of your mains value to the extent of the mains charged off?

A. No, the expenditure represents absolutely new construction.

Q. But doesn't it represent a renewal or replacement of mains value which you have lost or abandoned to the extent of what you have lost or abandoned?

A. No, I don't see it that way.

Q. If a railroad lays a 100-pound rail instead of a 60-pound rail, does that 100-pound rail have to be charged to new construction or to additional capital?

A. Additional capital. The 60-pound rail would naturally be written off as depreciation.

4449 Q. Would not the cost of a 100-pound rail represent an investment of the 60-pound rail to the extent of the original cost of the 60-pound rail?

A. It might.

Q. Would it?

A. No, the 100-pound rail is new construction.

Q. Wouldn't it represent a replacement of the 60-pound rail to the extent of the value of the 60-pound rail?

A. Yes.

Q. And if you put in a 36-inch main in place of a 6-inch main, does not the same hold true?

A. Yes.

Q. And if you put in $100,000 worth of mains and lose or abandon or charge off $60,000 worth of mains in the same period, wouldn't that represent a replacement in your capital account of $60,000 worth of mains charged off plus $40,000 more to new capital?

A. It represents an additional capital of $40,000. It represents $40,000 worth of new capital?

Q. Won't you answer the first part? Doesn't it represent a replacement in your mains account of $60,000 worth of mains which you had lost by charging of- other abandoned mains to depreciation?

A. No, I won't say that.

Q. Forget you are an accountant and just give me an answer to the question in ordinary terms. You have lost $60,000 worth of mains because they have been abandoned?

A. Yes, sir. That is depreciation.

Q. You have now put in $60,000 worth of mains which brings your capital account, so far as capital account is concerned, up to the original level?

A. Yes.

Q. And you put in $40,000 worth of mains which now appear in your books as new or additional capital or construction?

A. Yes, sir. That $100,000 represents new construction.

4450 Q. But is not $60,000 of that in effect a replacement of that amount in your mains value, so that it brings your capital merely up to the level at which it stood before you charged off the $60,000 of old mains?

A. It brings your capital up to that level, but your $100,000 is new construction and $60,000 is depreciation.

Q. Is not replacement of a 60-pound rail by a 100-pound rail on a railroad new construction also?

A. The 100-pound rail is new construction.

Q. Or does it replace the 60-pound rail to the extent of the value of the old 60-pound rail abandoned?

A. If you look at it that way, it may, but that is not the way to look at it.

At 5 P. M. adjourned to December 4, 1906, at 10.30 A. M.

Last Exhibits:

Complainant's, 256.
State's, Y.Y.
City's, 87.

4451 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucien L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *December* 4, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

4452 Mr. Burr: I want to note a correction on page 4364 of the record. The figures 1.08 on the third line from the bottom should be .03.

James Hall resumes the stand, and further testifies:

Cross-examination by Mr. Mathewson (continued):

Q. You included in depreciation and as an operating charge items to the amount of $222,382.82, if I understand you correctly?
A. Yes.

Q. And the reason you deducted from the total amount of depreciation charged off, to wit, $282,219.67 the sum of $59,836.85, was because you conceived that that sum represented charges applicable to the years prior to 1905?
A. Yes.

Q. Now, the reason why a depreciation account is allowed in an operating expense is, is it not, that a company is entitled to keep up its property, to maintain its property?
A. It is.

Q. Now, a depreciation account, speaking technically, is never an account of expenditure, is it?
A. No, sir.

Q. It is the marking off or down of apparatus or property disused or lost, or which should come out of the property account as a living asset?
A. Yes.

Q. Now, the expenditure comes in, does it not, when you come to produce more property by new construction to take the place of the property which has been marked off by depreciation?
A. Yes.

Q. And when you make an expenditure for new construction equal to the amount which has been marked off in depreciation you have then replaced in the property account a similar amount of property and brought your total property account back to the former figures?

A. Provided the items can be identified one with the other.

4453 Q. Oh, yes, assuming that. And then any addition to new construction would represent an addition to property account?

A. Yes.

Q. Up to the extent of the amount of the items charged off to depreciation this new construction would merely represent a replacement of property account to the extent which it had been charged off to depreciation?

A. Always provided there was a connection between the items.

Q. Now, let me show you Complainant's Exhibit 79, showing the treatment of the accounts from 1884 down to date. In this case you see in one column the valuation at the time of the consolidation in 1884?

A. Yes.

Q. And then in the second column you see "construction since consolidation?"

A. Yes.

Q. And in the third column you see "depreciation (renewals) since consolidation"?

A. Yes.

Q. And the net increase appears to be, does it not, the difference between the total construction and the amount which has been marked off in depreciation fund, or whatever you please to call it?

A. That appears to be so.

Q. So that in that case the net increase of property in the case of plant in this exhibit would appear to be $3,904,937.31?

A. It would.

Q. While to new construction, $5,132,620.41 was applied, $1,227,683.10 to replace items which had been marked off in depreciation, leaving the balance $3,904,937.41 net?

A. Not necessarily.

Q. Well, that would be the effect of it?

A. That would be the effect of it.

Q. And so, too, for each one of the other items of property appearing in Complainant's Exhibit 79; they appear to have been treated in the same way, do they not?

A. They do.

Q. And the marking off of depreciation on the property of the corporation where it is proper makes available a fund for the 4454 purpose of replacing that value in property by new construction?

A. Yes.

Q. And that is where the actual expenditure comes in?

A. In the new construction account.

Q. And the amount expended in new construction to keep up or replace the property marked off to depreciation would, of course, exactly equal the amount marked off to depreciation?

A. Not necessarily.

Q. To keep the property up to its original value? Wouldn't it?

A. Do you mind repeating the question?

The STENOGRAPHER (reading): And the amount expended in new construction to keep up or replace the property marked off to depreciation would, of course, exactly equal the amount marked off to depreciation, to keep the property up to its original value, wouldn't it?

A. Yes.

Q. Now, are you familiar with Field's Analysis?

A. I have seen it. I have studied it to a certain extent.

Q. You were speaking yesterday about investigating expenses. Will you look at this Field's Analysis for 1905, and see whether "Law and Parliamentary Expenses" are not included there?

A. They are.

Q. In the operating cost of gas?

A. They are; but, as I stated yesterday, this was prepared for a different purpose.

Q. Don't you know that the parliamentary expenses there referred to are parliamentary committees and investigations?

A. I understand what they are.

Q. That is true, isn't it?

A. Yes, that is quite true.

4455 Q. And these parliamentary investigations, as a rule, are for the very purpose of determining the price which may be charged by different companies for gas, in investigating their conditions of manufacture generally, are they not?

A. I understand so.

Q. Now, the $282,219.67 of items charged off for depreciation, less the $59,836.85, which you deducted from that amount in reaching your net figure of 1.71 cents appear at pages 34 and 35 of your report?

A. Yes.

Q. In figuring 29.14 cents as the average cost of gas to the companies delivering it to the Consolidated Gas Company, including cost of labor and material and whatever is stated in the agency agreements, did you take into consideration the fact that one of the companies, the Central Union Company, did not maintain gas of the candle-power required by the Consolidated Gas Company for all the year 1905?

A. I did not study the question of candle-power.

Q. Your attention was not drawn to that fact?

A. It was not.

Q. As to leakage; you say that you have included in this 52.5 cents an allowance for leakage amounting to .73 of a cent?

A. Yes.

Q. Will you tell me how you obtained that figure?

A. Take the amount of the leakage of 300,000,000 odd cubic feet, the cost of manufacture 31.69 cents, and divide by the amount distributed.

Q. By leakage you include unaccounted-for gas?

A. Unaccounted-for gas.

Q. And gas used by the company itself?

A. Yes.

Q. You spoke of the difference between the 29.14 cents at which you figured gas of the other companies and about 34 cents at which price the Consolidated Company paid for it as return on capital. You do not mean that that was return on capital of the Consolidated Gas Company? 4456

A. No; the subsidiary companies.

Q. And so far as the Consolidated Gas Company is concerned, it expended, did it not, according to the records, the amount specified in Exhibit 94, which is 34.82 cents per thousand feet of sales, in order to procure the gas?

A. Yes.

Q. How much did you deduct from that figure to get your 29.14 cents? I mean in dollars and cents?

A. $142,580.32.

Q. Now, as we are dealing with the price at which the Consolidated Gas Company can sell its gas, and not return on capital of the other companies, will you divide that amount by the amount distributed, sold by the Consolidated, of 13,283,000 feet, and let me know how much that amounts to in cents per thousand on the entire sales of the Consolidated?

A. Approximately 1.1.

Q. Then if that was to be added to your 52.5 cents, that would make 53.6 cents?

A. It would.

Q. Now, the 53.6 does not include any amount to equalize the repairs and renewals in the year 1905 with the average for the previous twenty years, as was done by Professor Bemis and the other witnesses, does it?

Mr. Burr: Will you point out where Professor did it?

Mr. Mathewson: Is there any doubt that he did do it? I cannot point it out now.

The Witness: I do not know anything about Professor Bemis' evidence.

Q. I supposed you had been in consultation with Professor Bemis?

A. I have not.

Q. You didn't know, then, that he did it that way?

A. I didn't know what his evidence was at all.

Q. I see. I assumed you were familiar with it. Well, that does not include anything to equalize the depreciation or repairs and renewals, whatever you please to call them, for the year 1905, with the average of the twenty years prior to 1905, does it? 4457

A. In my opinion, the depreciation written off here is for the purpose of averaging it to what you consider your fair average depreciation.

Q. What is your basis for supposing that is the fair average depreciation?

A. The statement appearing in the books on page 34.

By the **Master**:

Q. You mean the resolution of the Board of Directors?
A. The resolution of the Board of Directors.

By Mr. **Mathewson**:

Q. Is that the sole foundation for that belief on your part?
A. Yes.
Q. Now, as a matter of fact, you yesterday examined State's Exhibit L, by which it appears that the total amount of the repairs and the depreciation fund (or renewals—as they are denominated) was 7.34 cents for the year 1905, did you not?
A. No.
Q. You did not see this?
A. No, I did not see that.
Q. I think it was shown you?
A. I saw it in another connection.
Q. Now, it appears that the repairs and depreciation (or renewals) for the year 1905 amounted to only 7.34 cents, and it also appears in evidence that for the twenty years preceding 1904 they averaged 10.89 cents, or a difference of 3.55 cents below normal in 1905, below the average. An equalization, I think, was added by each witness, at any rate by some. Will you now add 3.55 cents, which would equalize for the twenty preceding years to the 53.6 cents, if you can do it in an instant, and tell me what that would make if they are averaged. 57.15, isn't it? 4458
A. 57.15.
Q. That would be 57.15 cents, would it not?
A. Yes.
Q. Did you make any allowance in your cost for the additional enrichment due to the 22 candle power gas?
A. Before you get away from this, I do not say that I add this 3.55.
Q. I understand you do it at my request.
A. Yes, at your request I make that computation.
The **Master**: Acting as his computer?
The **Witness**: Acting as his computer.
Q. I am merely adding to see where we get with respect to the computation of the other witnesses.
A. I do not wish to take any responsibility for it.
Q. Did you make any allowance in your cost for additional enrichment due to 22 candle power gas, whereas only 20 candle power gas was required for the first half of 1905?
A. No, I find in your records that the candle power averaged 25 to 26.
Q. Well, however that may be, that is in evidence and you need not to trouble yourself about that proposition. You have never run a gas business and you do not know what margins there may be necessary in this locality.

Mr. **Burr**: He is only telling you what appears by your books.
Mr. **Mathewson**: That is already in evidence by another witness.

Q. The Gas Commission, as the papers in evidence show, figure 1.8 for additional enrichment, for the additional candle power of 22 candles, as against your 20 candles. Will you take two-thirds 4459 of that, or 1.2, and add it to 57.15, and see if it would not give you 58.35?

A. It would.

Q. And if we add to that the 2.18 for street lamp maintenance, following the forms of the Massachusetts Gas Commission and the New York Gas Commission, that would make, would it not, 60.53?

A. Yes.

Mr. Burr: I do not see that this is a proper cross-examination. He is assuming, if he puts back all these things he has eliminated, it will indicate a certain figure. I do not see that it proves anything.

Mr. Mathewson: I am seeking if he proceeded on the basis of the two Gas Commissions it would not produce a certain result. I think I am through, with one or two more questions, on this line.

Q. Did you observe in connection with this Chicago investigation that Professor Bemis allowed 3 cents for reserve or contingent fund or for the depreciation, which you said you had not estimated but which must be allowed in Chicago?

A. I don't recall P*or*fessor Bemis' evidence in Chicago.

Q. Well, I will say to you that he allowed according to the testimony 3 cents for depreciation or reserve there in addition to actual depreciation charged off, and also before the Gas Commission in New York a similar 3 cents last winter. Now, if we assume the same reserve fund to be permissible and add to it 60.53, that would make a total of 63.53, would it not?

A. It would.

Q. That would exclude repairs to gas stoves and interest on consumers' deposits and the taxes to which you object and the general office expenses which you have ruled out, would it not?

A. It would.

4460 Q. And it also would exclude all fixed charges of the company upon its outstanding obligations or return upon capital?

A. Yes.

Q. Will you now turn to the portion of your report dealing with the leakage month by month upon which you commented yesterday?

A. Exhibit B.

Q. You found that upon your basis of computation in June, July, August and September there would apparently be an amount of sales exceeding the amount manufactured, did you?

A. Yes.

Q. Now take the month of June, for example. You know, do you not, that the meters are read all through the month of June at different periods?

A. Yes.

Q. And that a meter read on the 3d of June would carry a period from the 3d of May to the 3d of June and be largely in May?

A. Yes, I know that.

Q. And that what you get in this kind of a computation is simply an average reading which would occur as of the middle of each month?

A. Yes.

Q. And that the amount therefore of the sales as it is produced by these meter readings is not the amount of actual sales for the month with which you are dealing?

A. I recognize that.

Q. While the make, on the other hand, is the actual make for the actual month?

A. That is true.

Q. So that there might be a discrepancy and would be some discrepancy between the two?

A. One practically offsets the other, under ordinary conditions.

Q. Well, there would be some discrepancy?

A. There naturally is, yes.

Q. Take, for instance, the calendar month of April; that has thirty days?

A. Yes.

Q. And you get thirty days' make?

A. Yes.

Q. On the other hand, if you take the month, the average reading as April 13th, you would get from March 13th to April 13th, which would be 31 days; that would be a very substantial difference, would it not? 4461

A. It would.

Q. When you take the entire year, however, you find by the figures which you quote on Exhibit B, that the leakage is 2.21 cents, as I see, which corresponds with the company's figures, does it not?

A. It does, a difference of three million feet, I think.

Q. A trifling difference?

A. A trifling difference.

Mr. Burr: Which way?

The Witness: Our leakage is less than the company's. I took into account the stock on hand at the beginning and end, which they did not.

Q. The company's was 2.22?

A. Yes; there was very small difference.

Q. Nothing more than would be likely to occur in casting it up?

A. No.

Mr. Burr: He says he took into account the amount of gas on hand, which the company did not.

The Witness: The company did not.

Mr. Mathewson: Yes, I see.

Q. Will you turn to the figures that you have made on the real estate account of the constituent companies forming the Consolidated in 1884? Where is it?

A. At the very back of the reports, the last one, page 3.

Q. In making the figures you took the cost of the real estate as it appears on the books of the constituent companies, did you?

A. Yes.

Q. And you took their figures of charges for depreciation and charges for appreciation?

A. Yes.

Q. Did you go through with great care and see what pro-
4462 portion has been charged off for depreciation, what percentage
year for year, percentage on the value of the property?

A. Would you mind repeating that question?

(Question repeated.)

A. I did not work out the percentage; I went over the account with care.

Q. Is it not the case that in a great many instances of charges for depreciation you could not tell from the books of the companies whether it related to real estate or not?

A. No.

Q. You accepted Yalden's figures as to the Metropolitan Company, you say?

A. I did.

Q. Did you also accept his report in excluding the Knickerbocker Company?

Mr. Burr: How do you mean, excluding the Knickerbocker Company?

Mr. Mathewson: Any assets of the Knickerbocker at the time of the consolidation.

A. The Knickerbocker assets were included in the Municipal Company assets, in the Municipal Company books.

Q. But beyond what they were included in the Municipal Company's books, you assumed no assets for the Knickerbocker, did you?

A. No assets.

Q. Let us take the Manhattan Gas Light Company. It appears by its books that the buildings and improvements stood originally at $1,378,691.45, does it not?

A. Yes.

Q. You know that land was bought in 1835, something like that?

A. Yes.

Q. And yet the accounts of the Manhattn Gas Light Company, just prior to November 11th, 1884, showed a valuation of buildings and improvements and land actually $21,700.00 less than the original cost; is that right?

A. Yes.

4463 Q. Now, when you show in the third column appreciation
on transfer to Consolidated on November 11th, 1884, you find that this appreciation was written up on the books of the constituent companies, don't you, at that time?

A. It was not written up in the books of the constituent companies; it was that difference between the book value and the price at which the Consolidated took it over.

Q. Did you find any record in the books of the constituent companies of that appreciation?

A. In some cases.

Q. And, of course, you have no means of knowing what the increase in value of the land of the Manhattan Gas Light Company from 1834 or 1835 down to 1884 was?

A. No.

Q. And the same would apply to the other five companies?

A. Yes.

Q. How do you know whether your data as incorporated in the first column on page 3 of this schedule relating to real estate as showing what the real estate of these constituent companies cost agree with the figures of Mr. Yalden?

A. They do not.

Q. In what respect do they differ?

A. The Manhattan Gas Light Company's figures differ; the Harlem Gas Light Company's figure differ, and the New York Gas Light Company's figures differ.

Q. In what way do they differ?

A. Mr. Yalden included in the Manhattan Gas Light figures certain apparatus amounting to $1,994,745.29. I excluded that.

Q. What about the other two companies to which you referred?

A. In the Manhattan a reference to Mr. Yalden's report gives the most of the figures; in the Harlem Gas Light Company Mr. Yalden did not include certain charges which I included. I make the figures considerably higher than Mr. Yalden does. Then in the case of the bulkheads and office buildings at Harlem, I could not 4464 determine the cost to the company, consequently I allowed what the Consolidated paid for them.

Q. As a matter of fact, while your first column is headed "Original Cost, Buildings and Improvements," it really refers to the real estate, the land with whatever buildings there were on the land?

A. Yes.

Q. And so, too, as to the other columns on page 3 of this schedule, they likewise relate to the land plus any buildings thereon?

A. The real estate only.

Q. Not buildings which formed part of the plant of the company, the manufacturing plant?

A. So far as I could determine, no.

Q. But they do include the general office buildings of the company and other improvements of that kind as might have existed outside of the buildings which form the plant of the company?

A. They do.

By Mr. Burr:

Q. Does not that all appear in Rowland's appraisement, and does it not also appear in these schedules attached to your report on the real estate, what real estate was transferred on the 11th of November, 1884, by these companies to the Consolidated?

A. It does.

By Mr. Mathewson:

Q. While you have headed this first column, "Original Cost," your information comes wholly from the books of the constituent companies, does it not?

A. It does.

Q. And you found it was very difficult in some cases to ascertain original costs, didn't you?

A. Yes, sir, in one case.

Q. Which case was that?

4465 A. The Harlem Gas Light Company, and in that case my figures differed from Mr. Yalden's to the amount of $180,000, giving the company the benefit.

Q. And did you not find the books of the constituent companies entirely satisfactory in every detail?

A. In that one case, I did not; in the others, they were very well kept.

Q. You were informed, were you not, that in reference to the Metropolitan Company's books and some others which were not to be had, a careful search was made and the company was unable to find them in their files?

A. I was.

By Mr. BURR:

Q. You do not know whether a careful search was made or not?

A. No.

Mr. MATHEWSON: I did not ask him that, but whether he was so informed.

By Mr. MATHEWSON:

Q. In other words, there was no refusal to give them, so far as you have observed?

A. So far as I observed. I was informed that a careful search had been made.

Q. Do you mean to say that you found the real estate account of the Knickerbocker Company in the books of the Municipal Company?

A. A study of Yalden's report states so.

Q. Well, but did you find it in the books of the Municipal Company?

A. I cannot distinguish it.

Q. You cannot?

A. No.

Q. Now, yesterday, if I understood you correctly, you said that the general practice of gas companies was not to make any profit on merchandise business, which would include stove sales, and you subsequently said that the company should not charge gas stove repairs to operating expense because the company makes a profit on 4466 the sale of the stoves. How do you reconcile those two theories or answers?

A. The point is, the companies certainly aim to make a very small margin of profit, and they do not run the business to get a return on capital invested in gas stoves.

Q. They do make some profit, or are supposed to?

A. A very, very small margin.

Q. And that is the explanation, and the only explanation, is it, of the two replies to which I have called your attention?

A. Yes, the company aims to come out just on the right side.

Q. Don't you know that some companies put stoves in at no charge whatever to the consumer, merely for the purpose of inducing a large consumption of gas?

A. The selling price of that stove includes the putting in.

Q. I am speaking about putting in the stove at no cost or price whatever to the consumer, delivering the stove gratuitously to the consumer and allowing him to use it gratuitously for the purpose of increasing the sales of gas.

A. I never heard of such a case.

Q. Now, did the Municipal Company's accounts indicate the location of the real estate shown on the books of that company, the cost of which you undertook to ascertain?

A. I would prefer to refer to my original data to answer that.

Q. Have you not your original data here so that you can tell?

A. No.

Q. You did have a schedule of the real estate of both the Knickerbocker and Municipal Companies, did you not, so that you would have been able to ascertain whether the Knickerbocker real estate was included in the Municipal schedule?

A. I can ascertain that with reference to that data.

Q. Haven't you done so, so that you can reply now?

4467 A. I did go into it, but I do not recall just at the moment.

Redirect examination by Mr. Burr:

Q. Mr. Mathewson has asked you did you find the books of the constituent companies very satisfactory. I ask you did you find the books of the Consolidated Gas Company very satisfactory?

A. In some ways.

Q. And in some ways not?

A. And in some ways not.

Mr. Mathewson: Do not lead him. He is your witness; let him testify.

Q. In what way did you find the books unsatisfactory?

A. Unsatisfactory?

Q. Yes.

A. There did not appear to me to be a proper method of accounting for the stock and material purchased.

Q. Will you explain that a little more in detail?

A. When the material was purchased it was charged up to the account, for example, repairs to apparatus or meters, whereas it ought to be charged to a stock account, and then when used charged out to the different accounts, the different operating or construction accounts of the company.

Q. Was that a proper method of keeping that account or a loose method of keeping that account?

A. It appears to me to be a loose method.

Q. A method, would you say, whereby the company——

Mr. Mathewson: Wait a minute. Supposing you let him testify about this. I want his views, if we are going to have them, and not yours. He saw the books and you did not.

Q. Would you say by that method the company would lose money?

4468 Mr. MATHEWSON: Well, is not that a little bit extreme?

Mr. BURR: What is the difference between well-kept books and ill-kept books, between loose methods and strict methods?

The MASTER: You may ask him if you choose what the effect on the business of that method would be.

Q. What would be the effect on the business of the Consolidated Gas Company through the books being kept in that manner which you have described, with regard to that particular account?

A. There would be a tendency of storekeepers and superintendents to take advantage of the company.

Q. Because they could take advantage of the company without being readily discovered?

A. Exactly, because no correct note is kept of stock which goes in and goes out, so far as my information goes, it is that no stock books are kept, consequently they cannot check up the quantity of stock on hand.

Q. And did you discover that each station kept its own books, its own set of books, showing repairs, or what method did you find was adopted and carried out by the Consolidated Gas Company in regard to labor and material used at the station?

A. My information is, from Dr. Marks and Mr. Lacombe, that station books are kept.

Q. In adding these figures which Mr. Mathewson has asked you to add to your 52.50 cents, do you wish to be understood as approving the addition of those figures?

A. Certainly not.

The MASTER: He made that very clear, Mr. Burr.

Q. Are you aware of the circumstances under which these figures were presented in this case?

A. I am not.

4469 Q. Or in any other case?

A. I am not.

Q. I want to ask you in regard to the mains, the abandoned mains of 1903 and 1904; where were those charged up or when were they charged up in the books of the company?

Mr. MATHEWSON: The statement shows in 1905, $59,000, and we have gone all over that.

Mr. BURR: So that you apparently understand that, Mr. Mathewson?

Mr. MATHEWSON: Yes, it is perfectly clear in the report as to his charging them off; that is lucid.

Q. You were asked with regard to wear and tear. Is wear and tear allowed for in the 1.71 cents which you have allowed in your 52.50 cents?

A. It appears to be, from the resolutions from the company embodied in the report.

Q. You refer to the resolution appearing on page 34 of your report?

A. I do.

Q. Your attention was called to the stove repairs yesterday. Does the company treat all its receipts separate from its expenditures?

A. It does not.

Q. Does it not, as a matter of fact, deduct the amount it receives from jobbing, including its profit, from the cost of operating?

A. Yes.

Q. And as a matter, does it carry over the balance of the jobbing account to the cost of distribution?

A. It does.

Q. Then, according to that, it treats the receipts from jobbing and stove rentals in a different manner?

A. It does.

Q. If all the charges and credits which appear in the account of the Consolidated Gas Company for its stoves were included in one account, what would be the result shown?

A. The expenses would amount to $217,635.40 and the
4470 rents $122,332.60, leaving a balance at the debit side of $95,-
302.80, or .75 cents per thousand cubic feet of gas distributed.

Q. So that the 52.50 cents, cost of gas as found by you, actually includes .73 cent for cost of the stove department?

A. Yes.

Q. Is the full amount of the tax assessed for 1905 included in the cost of 52.50 cents?

A. Yes.

Mr. Mathewson: He means applicable to the gas business; those other items were excluded.

Mr. Burr: He means just what he said.

Q. That being so, if there was an additional charge made on account of the cost of contesting the levy of previous years' taxes, the accounts of 1905 would bear more than their fair proportion, would they not?

A. They would.

Q. Can depreciation always be equalized by actual expenditures in each year?

A. Would you mind reading that?

Q. Can depreciation always be equalized by the actual expenditures in each year?

A. No.

Q. As a matter of fact, the expenditures for renewals will exceed the average allowance required in some years, will they not?

A. They would.

Q. And in other years they will be less than the requirements?

A. Yes.

Q. How, in your opinion, should this discrepancy be equalized?

A. By forming a renewal fund each year and charging up to that fund all renewals and replacements, that renewal fund to be a fair average for previous years.

Q. That is, by charging a sum equal to the difference between the average amount required and the actual expenditures?

A. Yes.

Q. And when the expenditures exceed the requirements, what would be done with the excess?

A. Stand to the debit of renewal fund.

4471 Q. Charged to reserve or renewal fund account?

A. Yes.

Q. That is, the fund created for that purpose in previous years?

A. The fund created for that purpose in previous years.

Q. When does an allowance for depreciation or contingencies first appear on the books of the company?

A. You refer to the 10 cents per thousand?

Q. I refer to the 10 cents per thousand.

A. May, 1905.

Q. Does that appear in any schedule annexed to your report?

A. No, not annexed to it; it is referred to in the body of the report (handing book); it is referred to there.

Q. Is that allowance of ten cents, in your opinion, an excessive amount?

Mr. MATHEWSON: Wait a minute. This witness is not in the gas business and is not an engineer, and he is asked whether an allowance of ten cents per thousand for contingencies in the gas business is an excessive allowance or not. I submit he is incompetent.

The MASTER: Is that competent?

Q. Can you say whether or not that is an excessive amount?

Mr. MATHEWSON: Wait just a minute. The witness is not entitled to reply to that because it is for the Master to say whether he is competent on his qualifications shown here.

The MASTER: It does not seem to me, in view of his statement, he is competent.

Mr. BURR: I will withdraw the question. We have already gone over that very thoroughly.

Q. What is the name of the account in the Consolidated
4472 Gas Company to which the charge of $282,420.83 finally
deducted under contingency and renewal account were originally made?

A. Depreciation.

Q. You say the renewal and contingency account first appeared in the books of 1905?

A. It did.

Q. What is the amount included by you in the account for 1905 for repairs, and what is the amount per thousand cubic feet?

A. Repairs amounted to $715,151.44, or 5.61 cents per thousand cubic feet manufactured and distributed.

Q. Are any renewals and replacements included in these expenditures?

A. Yes.

Q. And is the amount of these repairs and renewals along with the amount included as depreciation sufficient, in your opinion, to have kept the plant in a thorough state of efficiency and to have replaced all waste which may have taken place during the year?

Mr. Mathewson: Objected to, as the witness is wholly unqualified.

Mr. Burr: This does not require a gas expert or professor to answer.

Mr. Mathewson: Yes, it does.

The Master: He can answer it if you think it is of importance, simply from the standpoint of an accountant, comparing it with other plants, but I do not think it amounts to anything unless he can show that the ratio of those things in the gas business is the same in every other business which he examines.

Mr. Burr: I will ask him what he bases his answer on.

The Master: How is his answer of value unless you do show that?

Mr. Burr: I will ask for the reason.

4473 Mr. Mathewson: I would like an exception, on the ground that the witness is incompetent to reply.

The Master: I will let him answer.

Mr. Mathewson: Did you sustain the objection or overrule it?

The Master: I overruled it and you except.

The Witness: What is the question?

(Question read.)

Mr. Mathewson: I did not understand that he was to ask that question. I except to that. That is clearly incompetent.

The Master: One moment. I will sustain the objection. You can take it over the objection.

Mr. Burr: And I except.

Q. What is the answer?

A. It does.

Q. On what do you base that statement?

Mr. Mathewson: Same objection and exception.

The Master: Same ruling.

Exception.

A. The fact that in all large corporations the repairs in any well sustained plant practically keep it up to date and the margin of depreciation is trifling, it would be very, very small in a large corporation, and that margin is provided for in the depreciation written off by the company.

Q. That is in that 1.71?

A. Yes, sir.

Q. And therefore, in your opinion, there is no further allowance necessary to offset the gradual depreciation caused by wear and tear in the capital assets, which you admit should be made good out of revenue?

A. No.

Mr. Mathewson: Objected to both as leading, and as the witness is incompetent to testify.

4474 The Master: Objection sustained.

Mr. Burr: Exception. You called his attention to the situation as found in his report at Chicago, and I called his attention to it as he found it here, and am asking whether any additional allowance should be made over the 1.71.

Mr. Mathewson: I have not asked him any such questions.

The Master: The question was asked and it is ruled upon. There is no need of further discussion.

A. There is no further allowance required.

Q. Is there anything in the accounts of the Consolidated Gas Company submitted to you to show that an amount equivalent to $3,424, charged on account of plant to the contingency and renewal account, was actually expended during the year 1905 on the replacement of old plant by new?

A. Do you mean by a similar piece of plant—do you mind repeating that?

Q. (Question repeated.)

A. No.

Q. I am especially referring to the items as they appear in the resolution attached to your report on page 34.

A. Yes.

The Master: I do not understand what you mean by an amount equivalent to the amount of $3,000.

Mr. Burr: Well, I mean was that amount or any such amount.

The Master: An amount equivalent to the amount of $3,000 is $3,000, is it not?

Mr. Burr: Yes. I will change that.

4475 Q. To show that the amount of $3,424 charged on account of plant to the contingency and renewal account was actually expended during 1905 on the replacement of old plant by new?

A. No.

Q. Is there anything in the accounts of the Consolidated Gas Company, as submitted to you, to show that the amount of $90,561.54 charged on account of mains to the contingency and renewal account was expended during 1905 on the replacement of old plant by new?

A. No.

Q. I ask you the general question, was there anything in the accounts of the Consolidated Gas Company, as submitted to you, to show that the amounts respectively, of $37,401.00 for services, $25,646.20 for meters, $31,570.89 for meter cocks and connections; $5,338.62 for horses, wagons and harness; $8,140.87 for office furniture and fixtures, and $24,483.65 for tools and implements, were actually expended during 1905 on the replacement of old plant by new?

A. No.

Q. And the same situation applies to gas stoves and automobiles?

A. It does.

Q. Gas stoves, $54,954.98, and automobiles, $697.92?

A. Yes.

Q. In your testimony yesterday, Mr. Hall, at the bottom of page 4433 and top of 4434 you were asked:

"Q. You do not think they would be chargeable to operation even if they were not extraordinary expenses? A. Under no condition.

Q. They then should go to increase capital account? A. Yes.

Q. And wherever you have excluded items on the ground they are not proper operating expense, but should have been charged to construction, by so much the capital account of the company should be increased? A. Naturally.

4476 Q. And that would be true for as many years as such items have been charged by the company in a similar manner? A. No."

Will you be a little more explicit in regard to what you actually mean?

A. Let me see it, please? (Testimony handed to witness.) (Reading) "Q. And wherever you have excluded items on the ground they are not proper operating expense, but should have been charged to construction, by so much the capital account of the company should be increased," with regard to items which should originally have gone to construction only, with regard to items such as legal expenses, which we excluded.

Q. But you had in mind only those items——

A. Only the construction charges I had in mind.

Q. Which should have been properly charged to construction?

A. Yes.

Mr. MATHEWSON: We concede that we ought not to capitalize legal expenses, and that is why we charge them in operating expenses. We have to do one or the other.

Q. For what purpose do you understand Field's Analysis is prepared?

A. For the purposes of comparison and for the purposes of complying with State requirements.

Q. Statute requirements?

A. Statute requirements.

Q. Mr. Mathewson has called your attention to situation claimed by him to exist in regard to the meters in June and July and the met-red gas in June?

A. Yes.

Q. What have you to say as to that?

A. Were the met-red gas at the end of any month taken into account my statement as submitted in Exhibit B would be decidedly different, and would be altered. Of course, the unmet-red gas in one month offsets the unmet-red gas in any other month. Were the total sales for any other month taken in, take the month of December, all the met-red gas for the month of December, the result would be quite different; there would be no such balance as I give here. 4477

Q. Turning to Exhibit B, showing the gas made, purchased, sold and so forth, will you add the gas made and purchased in June, 907,163,250 feet, July, 615,470,770 feet, August 689,883,910 feet, September 906,466,471 feet, October 1, 199,791,920 and see if it amounts to 4,318,776,321 feet?

Mr. Mathewson: Were those figures taken from the schedule Exhibit B?

The Witness: That appears to be right.

Q. Now, add the gas sold during those months; June, 1,024,624,520 feet; July 813,279,310 feet; August, 784,027,539 feet; September, 942,837,678; October, 1,089,808,184, and see if it amounts to 4,654,577,221?

A. It does.

Q. Does this include any gas used by the company or lost by leakage or condensation?

A. No.

Q. Subtract from the sales of gas the feet of gas made and purchased during those five months, June, July, August, September and October and see if the excess of sales over gas made and purchased was 335,800,910 feet?

A. It was.

Q. Is this excess of sales over 42 per cent. of the total sales in August?

A. It appears to be about 42 per cent.

Q. How much gas was on hand June 1st?

A. 24,268,390 feet.

Q. How much was on hand November 1st?

A. 109,983,736.

Q. Was the increase in gas on hand 85,715,346 feet?

A. It was.

4478 Q. Add this to the excess of sales over gas made and bought of 335,800,910 feet, and does the total amount to 421,516,256 feet?

A. Yes.

Q. Is this the real increase of gas made and bought over sales in five months?

Mr. Mathewson: Whether or not it is appears from these figures what it is.

Mr. Burr: From that exhibit.

A. Repeat that question.

Q. Does this appear to be the real increase of gas made and bought over sales in five months as appears by that exhibit?

A. The increase of sales over gas made and bought?

Q. Increase of gas made and bought over sales in five months?

A. No.

Q. What does it show?

A. It shows you have sold more than 421,000,000 feet in excess of what you have made.

Mr. Mathewson: And bought.

Q. That is the same thing, isn't it?

A. I probably took it up wrong.

Q. Is this over half of the total sales of either July or August?

A. Yes.

Q. Would in your opinion therefore a difference of two or three days in the meter readings account for this excess of gas made and bought of over fifteen day's consumption?

A. No.

Q. What is the explanation that you can give?

A. That is what I cannot give. I have been trying to find out what its explanation is for some time past.

Q. Never have been able to get any explanation from the company?

A. I cannot get it.

4479 Q. Now, your attention has been called to the real estate accounts. You examined, as I understand, carefully all the books and data which were submitted to you on that subject by the officers of the Consolidated Gas Company?

A. Yes.

Q. And you have stated in your report there the books which you examined and the books which were missing?

A. Yes.

Q. And the manner in which you have arrived at the conclusions stated in your report?

A. Yes.

Mr. Burr: That is all.

Recross-examination by Mr. Mathewson:

Q. Do you mean to say that the company makes no correct note of the material and supplies that it receives?

A. Nothing that I could consider a correct note.

Q. Don't you find that it has a record of the supplies which it has received and the amount of such supplies?

A. I have not seen it.

Q. Do you mean to say that they have no record of the supplies or material which go out to make repairs?

A. I understand they have.

Q. You understand they have?

A. They have, yes.

Q. And you do know that every particle of material which is used in repairs or new constructions is accounted for and they have a note of it?

A. I understand so.

Q. Did you visit the branch station and see what accounts they had there?

A. I was not allowed to.

Q. You did not have time to, did you?

A. I could have made the time if I had been permitted.

Mr. Burr: He made the demand and was refused.

Q. Well, how did you make the demand?

A. The demand was made in my behalf by Dr. Marks, I understand.

4480 Mr. Burr: And I make it also and you objected because he was not a gas engineer.

Mr. Mathewson: We never made any objection to his going to the stations at all.

The Witness: I would have been delighted to have gone there.

Q. As to jobbing items, being placed in the cost of gas, did you know that jobbing was done without any profit but at a cost to the company?

A. The profit was ten per cent. in some cases.

Q. For jobbing?

A. For jobbing.

Q. Do you think, that the company, according to the figures you examined, makes a profit on jobbing?

A. In certain pieces of jobbing they made a profit of ten per cent.

Q. Over cost of labor and material?

A. Over the amount of the bill they paid to Smith Brothers for doing the work.

Q. What was that?

A. Several heaters and other pieces of appliances on which Smith Brothers did the work and supplied the material, the company billed out at a profit of 10 per cent.

Q. This was the case in which you say they carried the balance in to the cost of gas?

A. Yes.

Q. In other cases, don't you find as a general rule that the jobbing was done at cost?

A. As a general rule, the small jobbing.

Q. When you say that the taxes of the company are included in the 52.5 cents which you stated, you do not include all the taxes of the company, do you, whether assessed on the securities of other companies or otherwise?

A. Excluding those assessed upon the securities of other companies, yes.

Q. And also excluding interest?

A. Excluding interest, yes.

Q. When you say that 10 cents per thousand appears in
4481 the company's books first in May, 1905, you find, do you
not, that the custom of charging 10 cents per thousand to cover depreciation and contingent expenses and so forth was at that time entered so as to cover the year from January 1st?

A. It was.

Q. The system was changed on January 1st?

A. It dated back to January 1st.

Q. When you gave your opinion over objection that the amount for repairs and depreciation was sufficient to keep the property up, you said among other things that in large companies the depreciation was small. What company have you ever managed, gas company or electric company?

A. Never managed any companies.

Q. Have you read Professor Bemis' testimony in the Boston case as to the amount expended even by English companies for repairs, depreciation and so forth?

A. I have not.

Q. You did not know that he testified it was nearly 13 cents for large English companies, then?

A. I don't know anything about his testimony.

Q. Do you know what the English companies do charge for depreciation and repairs and renewals per annum?

A. No.

Q. Don't you know that many of them charge more than 12 cents?

A. I do not.

Q. Did you not figure out that with your repairs at 5.61 cents and depreciation at 1.71 cents it amounted to only 7.32 cents per thousand?

A. I did.

Q. Don't you know that large electric companies frequently have to virtually scrap and rebuild their electric plants within ten years time by reason of the progress in the art?

A. Yes.

Q. Don't you know that in the gas business there have been processes which 20 years ago were considered excellent, which
4482 were totally discarded within 10 years and other apparatus had to be substituted?

A. I did not know it.

Q. Your experience as an operator of gas works has been nothing?

A. I never operated a gas works.

Q. And you never constructed a gas works?

A. Never.

Mr. Burr: I believe he said the same about electric light companies also.

Mr. Mathewson: Yes.

Q. Now referring to page 34 of your report and the charge to depreciation of $3,424 for plant in 1905 do you mean to say that a similar amount or greater was not expended in new construction in 1905?

A. I did not.

Q. Well, if it was, then whatever depletion of plant arose, the $3,424 charged to depreciation would be replaced by the new expenditure to that extent, would it not, in order to bring the plant up to the same figure it stood originally?

A. What I did say was there was no identification between a particular article of plant, the new item which went in, and the depreciation of those old items.

Q. But that would not make any difference as to charging the $3,424 into depreciation and into operating expense?

A. None.

Q. And the same answer would be true of all the other items, pages 34 and 35, would it not?

A. Yes.

Q. Now, you have stated that in arriving at a proper charge for depreciation, as you term the account, it is necessary to take a term of years, is it not, in order to arrive at a fair average?

A. Yes.

Q. And if you were examining a gas property for an individual purchaser and found the amount charged for depreciation in the
last year very much smaller than the average for a larger term
4483 of years you would not think of advising the purchase, would
you, on the basis of the expenditure of the last year alone?

A. I would not.

Q. You would want to make an average?

A. I would.

Q. Now, when you say that this Exhibit B shows greater sales for certain months than the apparent make, you mean to say that the books of the company do not show what the explanation of that is so far as you have gone?

A. I do.

By Mr. **Burr**:

Q. You have had no opportunity of comparing renewals for instance as claimed by the Consolidated Gas Company to have been made for the past 22 years, to obtain any average, have you?

A. I have not.

Q. When you say that you understand that such accounts were kept with regard to stock and material as Mr. Mathewson has referred to, that was what you were informed by Mr. Carter?

A. Yes.

Q. Was the situation?

A. Yes.

Q. Of that you know nothing of your own knowledge?

A. Of my own knowledge I know nothing.

Q. And as a matter of fact you had a good deal of difficulty with regard to a considerable number of vouchers for material, didn't you?

A. I had.

Q. In ascertaining what disposition was made of the material represented by those vouchers?

A. Yes.

Q. And that as a matter of fact was the occasion for referring the matter to the Board of Advisory Engineers?

A. It was.

Q. And it was long after that that you discovered a separate set of books was kept in the stations?

A. Yes.

Q. Mr. Carter never gave you such information when you
4484 applied for information in regard to that, did he?

A. He did not.

By Mr. **Mathewson**:

Q. You did not know that the books of the several stations were produced before the Gas Commission and have been produced here?

A. I did not.

Q. You were not informed by your counsel or by your client or by anybody else?

A. I was not. I asked the question of the Secretary and he informed me there were no books.

Q. No books kept at the stations?

A. He did, that there was no account kept of the stock of material.

Q. At the general office, didn't he?

A. He did not qualify it.

By Mr. **Burr**:

Q. You asked for information on that subject and he told you that there was no account kept of it?

A. Exactly.

By Mr. **Mathewson**:

Q. You do not mean to say he told you there were no books kept at the several stations?

A. He said no account of what went into the repairs.

Q. You mean to say he told you there were no books kept at the several stations, account books?

A. He made the statement there was no note kept of that stock, which was the question I asked him.

Q. That was all?

A. Yes, and reiterated the statement.

By Mr. **Burr**:

4485 Q. And that was the reason for inspecting the plant for the purpose of ascertaining where this material went to?

A. Yes.

By Mr. **Mathewson**:

Q. And you were not informed by Doctor Marks, who was present all through the Gas Investigation, and with whom you consulted, that the station records of the Company did show those things and that they were put in evidence before the Gas Commission, were you?

A. I was not.

Q. And was not your talk with Mr. Carter with reference to the accounts at the general office?

A. With reference to all accounts.

Q. Now, as a matter of fact, referring to this renewal or depreciation account since 1884, you were at liberty to examine that if you had time, were you not? It was not denied you?

Mr. **Burr**: We are only permitted to examine for the year 1905.

A. My instructions were for the year 1905 and that I had no access to books of previous years.

Q. You did not know that the repairs and renewal accounts from 1884 down to date was subject to your inspection, and you were not informed by your counsel to that effect?

A. I was not.

Q. It was not denied you, was it?

A. I didn't ask for it.

Mr. **Burr**: Will you let us——

Mr. **Mathewson**: Wait a moment. I submit that I should get through with this matter first.

The **Master**: I am tired of this whole question of the refusal to

permit inspection of books and plant. I have nothing else but that reiterated for weeks and months and I do not like to waste any more time on it. Now let Mr. Mathewson finish his cross-examina-
4486 tion, and Mr. Burr may then redirect the witness on that point as long as he desires.

Mr. **Mathewson**: Your Honor will remember it was expressly provided and stipulated when we settled this that that account would be subject to inspection if they desired it.

The **Master**: I told the parties early in the sessions that they could have any books they wanted and if they did not get them I would see that they got them. That is the reason it is irritating to have so much time spent on the question as to what books have or have not been refused.

Mr. **Burr**: Do I understand that they had no objection to this account being examined?

Mr. **Mathewson**: I am not going to make any further statements. I have gone over and over the matter and got sick of having you state refusals were made when I know they were not made. If you read the record, I prefer to refer to that.

Mr. **Burr**: My recollection is that the Master said we would be confined to the year 1905, and later on if we could show there was any necessity for going further we could come in here and apply to him, particularly with reference to having another year examined with reference to 1905.

Mr. **Mathewson**: That is another proposition.

Mr. **Burr**: That is the way that matter has remained to the present time. I am through with this witness.

By the **Master**:

Q. I notice that in your report here you say in regard to
4487 Item 69, "Fixed Charges," that you have excluded that as not coming within the scope of your inquiry as to the cost of manufacturing and distributing gas. Will you just explain to me what you did consider the scope of your inquiry was?

A. It was to determine exactly what it cost to manufacture and distribute gas to the private consumer of New York.

Q. You mean in the abstract or what it cost this Company?

A. What is cost this Company.

Q. And, as I understand, then you took in no account of any question involving capital invested at all?

A. I did not.

Q. Not at any point?

A. Not at any point.

Q. As I understand, while you allowed certain taxes, you excluded all consideration of franchise taxes?

A. No, sir; I included franchise taxes at the amount they were assessed for the year 1905, $406,000, page 33 of the report.

Q. But the charges in connection with franchise litigation you did not include?

A. I did not include.

Q. And what is your theory about that?

A. The franchise litigations were in respect to litigations of past years.

Q. And, therefore, although paid in the year 1905, were not considered as part of the expenses of the company?

A. That's it.

Q. Then suppose the company litigated its franchise tax for 1905 and they did not pay the bills until 1907?

A. As a matter of fact, sir, I do not think the franchise tax or any expense in contesting it is a fair charge against the consumer. Assuming the rate of gas to be 80 cents or 90 cents, any saving would be to the benefit of the stockholder, not to the consumer.

4488 Q. Very possibly. But assuming that the franchise tax or some other tax was ordinarily litigated from year to year, if you selected any one year, for instance, like 1905, and did not make any allowance for litigation on that account, wouldn't you be rather underestimating the ordinary expenses of the company?

A. I do not think so. I do not consider franchise litigation normal expenses for this purpose.

Q. How long did you say you were working on this investigation?

A. I was at the office of the company between five and six weeks and another week in our own office preparing the report; between six and seven weeks.

Q. And did you start at work as soon as you were retained on behalf of the defendant?

A. The day we got instructions, yes, sir.

By Mr. Burr:

Q. And you worked night and day, didn't you?

A. Yes.

Q. And it took you all that time to examine the year 1905, Exhibit 94?

A. It did; and the real estate.

Q. Did you have time to do anything else but that during those six weeks that you have been actively employed with the shift of from twenty-three to thirty-three men?

A. By working longer hours I might have done a little more.

Q. As a result of that continued examination you arrived at some conclusions, did you not, with regard to the necessity of further examination of some items for the purpose of testing those items as they appear in the books for the year 1905?

A. I do not follow you.

4489 Q. I say, as the result of the examination of the books for 1905, did you not, as a matter of fact, arrive at some conclusions with regard to the necessity for examining certain accounts in the books for previous years, for the purpose of testing the accuracy of those same accounts as they appear in this year, 1905?

A. I did.

Q. Particularly with reference to the oil and renewals?

A. Yes.

Q. And do you still think it absolutely essential to a correct and thorough understanding of these accounts that a comparison should be made of those accounts in the books of other years?

A. I do.

Q. Of some other year?

A. I do.

Mr. Burr: We now ask you to consent, in view of this, which I reserved until this time, to a comparison and examination of the books of the Consolidated for some year since 1900, for the purpose of testing the oil account, and for the right to examine the books for the past fifteen years to ascertain the exact condition of the renewals account.

(No response from counsel for the complainant.)

Mr. Burr: I make that application to the Master. We are ready to proceed at once to carry out that——

The Master: Specify the books.

Q. In what books would the oil account be kept, Mr. Hall, for the past years?

A. Operating ledgers in the general office; manufacturing records.

Q. What books would the renewals account be kept in?

A. Operating ledger.

Q. So that if you had the operating ledger for say the year 1902 you could obtain all the information you desired with regard to the oil contracts and the oil supplied and used by the company during that year?

A. With the assistance of the subsidiary books.

4490 Q. What books would those be?

A. Manufacturing records.

Q. Those manufacturing record- woulds consist of what books?

A. The five stations, showing the manufacturing records, the averages, the quantities they buy and the Beaume test and so on.

Q. Showing the amount of oil and the kind of oil used in the manufacture of the gas?

A. Yes.

Q. What book or books would the renewals appear in?

A. Operating ledgers.

Q. That would also apply to the subsidiary books?

A. Yes.

Q. What books would those be?

A. General books and vouchers.

By the Master:

Q. How long would it take to make this examination?

A. Renewals and repairs for fifteen years, and one year of oil?

Mr. Mathewson: Repairs and renewals for twenty years. If anything, take the whole period. Depreciation account I suppose you refer to.

The Witness: From ten days to a fortnight.

The Master: Then it is useless to pass upon it. Defendant's time expires on Monday. I shall not certify any more unless you can get all counsel to stipulate to withdraw all the other witnesses and to devote the rest of your time to this matter so as to finish up on Monday. The application is merely academic as far as I am concerned.

By Mr. Burr:

Q. You could finish the examination of the oil account by 4491 the end of the week, couldn't you?

A. Yes. And to a certain extent the repairs and renewals by the end of the week; we could do something by the end of the week.

Mr. Mathewson: If the Master please, the matter of oil is as to what we are paying for oil. It is what we are paying. It has been suggested we ought not pay so much. That is another proposition. It is not what we paid for oil in 1903 or 1904, or what we could get oil for then. It is what we have to pay for it now, and the idea of examining in 1902 the oil account to know what we have got to pay for oil now is ridiculous.

The Master: It seems hardly worth while to discuss it in view of the situation the case is in. I assume that counsel have got all that they can do to get through with the witnesses they have on hand, and it certainly seems a useless waste of time and money to start in on a further examination of these voluminous books without any prospect that there will be any opportunity for the witness to come and give the results of his examination.

Mr. Burr: He says he believes he could have his report on the question of oil ready and be able to testify regarding it on Monday—have it ready by the end of the week and be ready to testify on Monday. It would be very short. And probably something on the question of renewals he would have by Monday and be able to testify regarding.

The Master: Will you and counsel for the State unite in a stipulation on the record that the case shall be closed in all respects this week and nothing left but to take up this witness and that 4492 will close the cases of both defendants?

Mr. Burr: I understood we had even under the limitation in your certificate until Monday, didn't we?

The Master: Yes.

Mr. Burr: I say if his report is in to me on Saturday and he is ready to testify on Monday I do not think we should stipulate that we shall close the case as a condition for allowing him to testify Monday.

The Master: But I assume the counsel for the State may very possibly, if you have other witnesses, or the State has other witnesses, raise objection to your taking up this witness on Monday with an unfinished witness on the stand left over from this week, provided you understood you were absolutely to close your case on Monday.

Mr. Burr: Well, we will see what can be done in that regard?

The Master: You had better consider it and if there is any prospect of the evidence resulting being used I shall grant the application. If there is not I think it is hardly worth while to waste time over it.

Mr. Mathewson: But certainly there would be no sense in going back to 1902 in any event, as to oil.

The Master: I should have to look into it far enough to be satisfied of its materiality.

Mr. Mathewson: Everybody knows oil is going up. Ten years ago you could buy naphtha for what we could buy only half that grade of oil now.

Mr. Burr: In view of the statement of counsel for com-
4493 plainant we have strong reason to believe that the amount
paid for oil is excessive and that the Consolidated are in receipt of a rebate from the Standard Oil Company, and that is what we want to have a comparison for.

Mr. Mathewson: I think we went over that very thoroughly with Mr. Cuthbert. He went into all that.

Mr. Burr: I would not have alluded to it again if you had not made your little speech.

Mr. Mathewson: You may repeat it all you desire, Mr. Burr.

Charles F. Lacombe recalled on behalf of the city.

Direct examination by Mr. Burr:

Q. During the progress of this examination of the books by the accountants, Marwick, Mitchell & Company, you, I believe, acted as chairman of the Board of Advisory Engineers, composed of yourself, Dr. Marks, and Mr. Edgerton?

A. Yes, sir.

Q. And the purpose of that organization was to aid the accountants, I understand?

A. Yes, sir; purely.

Q. You kept records of the proceedings of the various meetings that you held?

A. Yes, certainly. We kept minutes clear through.

Q. And you were in constant communication with the accountants, were you?

A. Yes.

Q. Do you recall what matters were submitted by the accountants, to you, for your consideration, growing out of their examination of the books?

A. Well, a very large number of detailed items going into very
nearly everything, operating, construction, stoves, meters, and
4494 what the Consolidated Gas Company calls distribution ac-
counts. Those were the principal items that I remember.

Q. Now, will you take them up in their order as they were passed upon by you and tell us what you did or what the Board did?

Mr. Mathewson: Is that material?

The Witness: May I have the minutes to refresh my memory with?

Mr. Burr: Yes, here they are.

Mr. Mathewson: I object to it on this ground: it appears from the witness' qualification and his previous testimony that he is not an expert in the gas business, has never managed a gas business, never constructed a gas plant, he is not practically familiar with the business, and he is not competent, according to my view, which in this instance concurs with that of Dr. Marks, to testify on this subject.

The **Master**: Well, I think in view of Mr. Lacombe's official position and experience here that his testimony can be regarded as competent on the general subject, but the question is objectionable in the form in which it is put. It is certainly not material to bring out by this witness the action of a so-called Board of Advisory Engineers or have him describe what they did. What I will allow is for you to take up the various questions that were raised and you can ask him, taking up those questions, I say, what his opinion is, based on his knowledge and experience as to the matters involved, but that is entirely irrespective of any action of the Board. That is not evidence for any purpose. You can take this up just as new matter, these various questions that were suggested there, and ask him what 4495 his opinion is as an engineer on those subjects, based on his knowledge and experience. That is all you are entitled to.

Mr. **Burr**: I wanted to first show just exactly what the situation was, it being desirous of having an honest and accurate account for the year 1905, that we did everything possible to aid the accountants to arrive at that conclusion, and that this Board of Advisory Engineers was organized for the purpose of helping them out wherever any matter relating to the practical operation of the gas works arose, with regard to which the accountants themselves needed advice or were at all in doubt. It does seem from their report, and Mr. Hall has testified, that various matters were referred to the engineers, and you have stricken out or refused to allow the report so far as it refers to the action taken by the Board of Advisory Engineers. I am now producing Mr. Lacombe, the Chairman of that Board, to state what action was taken with regard to these various disputed items.

The **Master**: I understand you are and I have ruled it is not competent in that form.

Mr. **Burr**: He can state what action he took upon the matters referred to by the accountants.

The **Master**: I do not care what action he took at all. His action is not material. You can ask him, as I say, his opinion as to the various questions involving expert knowledge or experience.

Mr. **Mathewson**: To shorten this, after looking it over, I do not know that I should object to the marking in of these reports, assuming that Mr. Lacombe says they are statements of actual pro- 4496 ceedings, as I assume he will; and that they represent what was done, if that meets Mr. Burr's views.

The **Master**: It will certainly save a great deal of time.

Mr. **Burr**: Yes, that is satisfactory.

Mr. **Mathewson**: That would not be admitting the weight which would be given to the advice of these gentlemen, but that they gave it.

The **Master**: Of course, you take the chance of their not all being produced here for cross-examination.

Mr. **Mathewson**: Yes, I know I take that chance.

Mr. **Burr**: Then I understand the objection is withdrawn as to the introduction of those minutes?

Mr. **Mathewson**: Yes.

Mr. **Burr**: So the stenographer, instead of marking that as that Exhibit A, minutes of the Board of Advisory Engineers, that Exhibit A is to be printed with the rest.

Mr. **Mathewson**: As to the action of the Board without, as I said, admitting the weight that would be attached to these.

The **Master**: That being done, the references in the body of the report to the action of the Board might be still allowed to stand and the report considered as in.

Mr. **Burr**: The statements in the body of the report are to the effect that these matters were referred to the Board of Advisory Engineers and these minutes show what action was taken upon those matters.

Mr. **Mathewson**: Very good.

Mr. **Burr**: Then I will ask Mr. Lacombe this one question, whether these various schedules that are attached to the report, 4497 particularly schedule E, were not necessary in helping you arrive at the conclusion which you did.

A. Well, this particular schedule was not. It was not referred to. There were schedules.

Q. You consulted the schedules that were prepared by the accountants, did you not?

A. Only such as they submitted to us.

Mr. **Burr**: Well, whatever they were. Now I have no other witnesses here. Of course I assumed we would go on with Mr. Lacombe now. I will tell you what I propose to do and consult with my friend Kirby and find out what he is able to do this afternoon. We will be ready to testify to-morrow morning with regard to the examination of the 14th Street plant. That is, I will be able to give testimony with regard to the valuation of the 14th Street plant, so that you may have your people here for that purpose, Mr. Mathewson, to-morrow.

Mr. **Mathewson**: What goes on this afternoon?

Mr. **Burr**: I do not know now.

At 12:38 P. M. no other witness being present, an adjournment was taken to 2 P. M.

4498

After Recess.

Mr. Page also present at afternoon session.

Mr. **Burr**: I desire to recall Mr. McHale for the purpose of testifying as to Block 989, page 2 of Exhibit 48. The city claims that by reason of the deeds and grants heretofore introduced in evidence the complainant has no title to a certain portion of that block.

MARTIN MCHALE, recalled on behalf of the City.

Direct examination by Mr. BURR:

Mr. MATHEWSON: You refer to the water grants which have been put in here recently?

Mr. BURR: Yes. A map is being prepared showing exactly the situation as we claim it exists by reason of these grants.

Mr. MATHEWSON: Showing no title to which block?

Mr. BURR: 989.

Mr. MATHEWSON: You mean Block 989, Lot 26?

The WITNESS: This is the property right here, indicating on Exhibit 48, page 2.

Mr. BURR: A copy of the water grants and maps are being prepared by Engineer Waters and we will present them later on. Meanwhile I want to use Mr. McHale's diagram, and ask him what change he desires to make in his testimony, if any, with regard to the valuation of that plot, assuming that this red line marked on this diagram, running through Block 989, shows that the Consolidated Gas Company does not own the section of that block embraced between the red line extending from 15th to 16th Street, and to the east of that line. 4499

A. I wish to change my valuation from $105,032.63 to $36,463.28.

Mr. BURR: I will ask to have this diagram marked for identification. When we have a copy of the original map presented by the engineer, it may be seen whether this shows the situation correctly or not.

Marked for identification, City's Exhibit 88.

By Mr. MATHEWSON:

Q. That is on the assumption that the company owns what is south of the red line?

A. Yes, sir.

Mr. BURR: South and west.

The WITNESS: On the assumption that the company does not own on the north of the red line.

By Mr. BURR:

Q. And the difference, then, is to be subtracted from the total valuation which you find as the valuation of the real estate?

Mr. MATHEWSON: It is not unless the Master finds we have not any title to the land. He has already testified that would be the difference, assuming that we do not own it.

Q. There is another correction I believe you wish to make as regards the valuation of some plot?

A. Yes, I made a mistake of $115,200 in Block 1704.

Q. That is your testimony as it appears upon page 2803 of the record?

A. Yes. My original figures on that property were $281,584. There was a mistake made in addition. It should be $396,784.

4500 Cross-examination by Mr. **Mathewson**:

Q. Then the net result would be to increase your total by an amount equal to the differences between this last amount——

A. There is a mistake of $115,200, to increase my total.

Q. That would be an increase of your total?

A. No, sir.

John M. Thompson recalled on behalf of the City.

Direct examination by Mr. **Burr**:

Q. You have already testified with regard to the valuation of Block 989, as the same appears on Complainant's Exhibit 48, page 2.

A. Yes, sir.

Q. Assuming that the diagram marked for identification, City's Exhibit 88, correctly shows the situation as to the title and ownership of the parcel by the Consolidated Gas Company, what change, if any, would that make in your valuation?

A. I should think that that property there is worth——

By Mr. **Mathewson**:

Q. Do you mean Block 989, Lot 26?

A. Yes, sir, Block 989, part of lot 26, I should think that to be worth $34,270.

By Mr. **Burr**:

Q. Instead of?

A. Instead of $99,530.85.

Q. Do you wish to make any correction further than that in your previous valuation?

A. Not any change in the valuation but there is an error in addition in Block 1704.

4501 Q. What is the correct amount?

A. The correct addition is $396,784 instead of $281,584.

Q. As appears in your former testimony?

A. Yes, sir.

Q. On page 2803 of the record?

A. Yes, sir.

Cross-examination by Mr. **Mathewson**:

Q. That would make an increase in your total then of $115,000 and odd more than as you originally testified?

A. $115,200.

Mr. **Burr**: That is all the testimony I have to-day. I will have the engineers to testify as to the values of the plants to-morrow.

Charles D. Chamberlain, a witness, called on behalf of the State, being first duly sworn, testified as follows:

Direct-examination by Mr. Page:

Q. Where do you reside?

A. Cleveland, Ohio.

Q. What is your occupation?

A. I am Secretary and Treasurer and General Manager of the Globe Oil Company of Cleveland, Ohio.

Q. What is the business of the Globe Oil Company?

A. The manufacture and dealing in different kind of petroleum and its products; other oils.

Q. Do you manufacture and sell, or does the Globe Oil Company manufacture and sell, what is known as gas oil?

A. Yes, sir.

Q. What is gas oil, as distinguished from any other sort of oil?

A. Gas oil is the term that we apply to oil that is used for enriching coal gas by gas plants, and is not a distinction of absolute quality for differentiation because the gas oil can be a higher or lower gravity, according to the facilities that the gas companies
4502 have for vaporizing the oil or gasifying the oil and rendering it into a fixed gas. And gas naphtha is sometimes used for designating the higher grades such as 54 to 63 gravity, and then gas oil usually runs from 34 to 36 gravity, but it is a distillate oil. That is, a product of the still. Some gas companies can use a lower gravity oil, in which case we sell crude or residual oils of 28 to 30 or 32 gravity.

Q. Well, 28 gravity oil, do I understand then, is practically a crude oil?

A. Crude oil or a residual oil from which the lighter portions of the crude have been taken.

Q. Now, in the oil fields of Ohio and Pennsylvania do they produce a 28 gravity oil?

A. You mean as a crude oil?

Q. Yes?

A. No. The gravity runs lower in Ohio than it does in Pennsylvania. The gravity in Ohio runs from 34 to 38, sometimes as high as 39 in its crude state, and in Pennsylvania the average gravity is about 45, running from 41 to as high as 47.

Q. From what section of the country is the crude oil of 28 degree gravity obtained?

A. There is some 28 degree gravity crude oil obtained in Kansas, Indian Territory and some from some parts of Texas. I give this on information.

Q. Then as I understand, the 28 degree oil except such as may come from the Texas, Kansas or Indian Territory fields is residual oil after the lighter oils have been distilled?

A. Yes, sir, generally.

Q. Now, is the 34 degree oil a residual oil?

A. No, the 34 degree is a distillate oil.

Q. Well, if you take the Pennsylvania oils that run so much lighter and distil from that the lighter portions, you then obtain a 34 degree oil that they would sell in this way?

A. No, the Pennsylvania crude is of too high values to 4503 sell the residual portions in that way. They would obtain a 34 degree distillate oil of little value from the distillation of Pennsylvania oils, but I would not have in mind any case where they would make a residual oil of the Pennsylvania products.

Q. Are you familiar with the prices at which oil is sold?

A. In a general way, yes, sir.

Q. Are you familiar with the prices at which oil is sold for export?

A. Yes, sir.

Q. What gravity oil is exported?

Mr. Mathewson: From Ohio or Pennsylvania? What do you mean, abroad?

Mr. Page: I mean export, exported from this country.

The Witness: Yes, it is 44½ gravity usually and what is known as 73 Able test or Standard white.

Q. That is a refined oil?

A. Yes, sir.

Q. At what price does that oil sell in large quantities for export?

A. To-day's quotation is 4.40 in New York, 4.35 in Philadelphia.

Q. That is 4.40 cents per gallon?

A. Yes, 4.40 per gallon.

Q. Do you know how that price corresponds with the price for the last year?

A. It is very nearly the average of the last year as I remember the quotations.

Q. You think there has been very little fluctuation?

A. Very little. I presume it has been as high as 4¾ within the year; I would not say absolutely, but it has run within the year, well about four—well, I guess, 4.65 is the highest I remember its having reached, and from that down to 4.35, that is about the lowest.

Q. Well, for gas making purposes, oil of 44½ degrees would produce better results, there would be less residual and more il- 4504 luminant obtained than from the lower gravity oil?

Mr. Mathewson: Is Mr. Chamberlain in the gas business also?

Mr. Page: No, he is in the oil business.

Q. Well, of course, I know that the higher gravity oil is more easily volatilized; I have — shown that in talking with gas men with whom I have been dealing.

By Mr. Mathewson:

Q. But you never had experience yourself in the use of oil in gas making?

A. No.

By Mr. Page:

Q. It is your experience that you have acquired in selling oil to gas men?

A. Yes, sir.

Q. And you are familiar with the fact that at first the very highest, naphtha was the oil that was used in making gas?

A. Yes, I have sold a great deal of naphtha for gas making.

Q. Until that became so expensive that they could not use it?

A. Yes.

Q. And that the higher degree, that is, naphtha, which was a very high degree, was the best for gas making purposes.

Mr. MATHEWSON: Just a moment. The witness said he sold it for that purpose. It does not seem to me he can testify it was the best, if he has not had experience in the gas making business. It would depend upon candle-power and one thing and another.

Mr. PAGE: It has been testified in this case that the best gas was made from naphtha, but it could not be used now on account of the price.

4505 Mr. MATHEWSON: No, he said he sold it for gas making, and it was the best because it was easily volatilized.

Mr. PAGE: I will not press it.

Q. What is the price of 34 degree Beaume oil?

A. The last that I sold I sold at 3.15 cents delivered, about twenty-five miles from the point of shipment; I think the rate of freight was about five cents a hundred pounds.

Q. What would be the price free on board at Cleveland?

A. It would be about three cents there.

Q. Are you familiar with the freight rates from Cleveland to New York?

A. The present rate——

Q. On oil I mean.

A. On oil, as I remember, it is twenty and one-half cents; the point of shipment was Findlay, Ohio, however, and the rate from there is 22 cents.

Q. 22 cents on what?

A. On 100 pounds.

Q. Can you get that in any way reduced to gallons?

A. Yes. A 50-gallon barrel would weigh 325 pounds. It would be a little over a cent and a quarter a gallon.

Q. As I understand, that is the freight rate of freight shipments as charged by the railroad companies to the independent refiners?

A. Yes, sir.

Q. And has nothing to do with the rates that may be charged to the Standard Oil?

A. No.

Q. And it does not take into consideration delivery by pipe line?

A. No.

Q. And delivery by pipe line is much cheaper than delivery by railroad?

A. Yes, sir.

Q. Do you know the price of 28 gravity oil?

A. 28 gravity oil would be about a quarter of a cent cheaper than 34 gravity.

Q. How do the prices that you have given for 34 and 28 degree gravity oil correspond with the prices during the last year?

4506 A. They are slightly higher than they have been heretofore by perhaps a half a cent a gallon, taking the lowest market price within the last year, it would be fully half a cent, perhaps five-eighths of a cent more than the prices I have given now.

Q. Have you had read to you the contract between the Consolidated Gas Company and the Standard Oil Company which appears on page 977 of the printed record in this case?

A. Yes, sir.

Mr. MATHEWSON: Which is that, the present contract?

Mr. PAGE: The 255,000,000 gallon contract.

Mr. MATHEWSON: Can you give me the date of that?

Mr. PAGE: The contract was dated November 1st, 1905, that is the one in existence now.

Q. And have the prices that you have given for 34 degree Beaume and 28 degree Beaume oil been for similar oil as described in this contract?

A. Well I presume so. What is known as 34 degree gravity distillate gas oil is I think commercially recognized to be about the same by all companies. The 28 degree I am not certain as to what it might be. It might be Texas, it might be heavy residual oil made from any of the other crudes and it might be a distillate oil from the Texas crude, so I would not be certain about that.

Q. To be positive I suppose it would be necessary for a person familiar with oil to have a sample of the oil which this Company is now using?

A. Yes, it would be desirable to have a sample of both, before being absolutely certain as to what they are.

Q. Well the price that you have given would be an oil which would answer this description as specified in the contract: "The gas oil we expect to furnish will be homogenous oil and of a gravity as agreed upon," that is 34 and 28 degree? 4507

A. Yes, and homogenous there, I suppose, refers to the fact that it is not a mixed oil, that is, it is not an oil of higher and lower gravities united for the purpose of obtaining 34 degree, but cut out of the still at very near 34 degree gravity; within one or two degrees each way; because if it were a mixed oil and not homogenous, the lighter portions would vaporize and leave too much of a residual and it would interfere with the distillation of it.

Cross-examination by Mr. MATHEWSON:

Q. How long have you been in the oil business, Mr. Chamberlain?

A. About 22 years.

Q. All the time in Ohio?

A. Yes.

Q. You have never been engaged in the gas business?

A. No, sir.

Q. Does your company own oil wells?

A. No, sir. That is, the Globe Oil Company does not. I am interested in a company that does.

Q. From what section does the oil come in which you deal?

A. It comes from various sections; we buy oil from the Pennsylvania districts, some comes from Southern Ohio, and some comes from the Findlay districts.

Q. Do you deal with the Standard Oil Company?

A. No, sir.

Q. I observed in the press the other day that the Government suit in St. Louis against the Standard Oil Company recites that 90 per cent. of the oil in the United States is owned or controlled by the Standard Oil Company. Is that about right?

A. I don't know that that is the statement that is made.

Q. I so read it, and I ask you whether that is about right?

A. If you are referring to the producing of oil, I should
4508 say no. If you refer to the manufacture and sale of oil, I
should say that it was very nearly; perhaps a trifle high; perhaps 85 would be nearer; however, I would not be able to give any figures to substantiate it.

Q. If the officers of the Government preliminary to this suit in St. Louis made a careful investigation and make that assertion in their papers, that would be entitled to considerable weight, would it not?

A. I should give it credence, yes, sir.

Q. Now, you do not mean to say that all gas oil can be economically converted into a fixed gas, do you?

A. All gas oil?

Q. Yes, can be economically converted into a fixed gas?

A. Now, you refer to the different quantities or grades of gas oil?

Q. Yes?

A. I would not think that they could all be equally economically converted.

Q. Is crude oil used for gas making?

A. Yes, sir, very largely.

Q. In the west?

A. Yes, sir.

Q. You do not know of any place in the East where high candle power is required, where crude oil is used in gas making, do you?

A. I am not familiar with any, no, sir.

Q. Do you know what quality of oil is exported for gas making?

A. I do not. I don't know anything about the export of oil for gas making purposes.

Q. It is a matter of common knowledge, is it not, that various manufactured products are sold abroad, in some cases at lower figures than they can be produced in America?

A. I have heard of those things, yes, sir.

Q. You have no doubt about it, have you?

A. I have no doubt about it.

Q. On what railroads are the freight rates 22 cents per 100 pounds from Findlay to New York?

4509 A. I spoke of that rate, I think it is all on the trunk line roads.

Q. That includes the entire freight from point of production?

A. Yes.

Q. Or the rate from Cleveland only?

A. No, from Findlay, that is my remembrance of it.

Q. You speak of the delivery of oil by pipe line being much cheaper. It is not your experience, is it, that the seller of any commodity, no matter what his facilities for transportation are, sells for a lower figure than he can dispose of this product and get a good profit?

A. He generally tries to get the highest market price.

Q. Do you know anything about the harbor delivery and storage, and how that affects the ultimate cost of delivery by pipe line as compared with freight?

A. I don't know just what you are getting at. Do you mean the lighterage charges across the bay?

Q. Yes, and the storage charges on oil pipes up, so to speak, at a terminal by pipe line?

A. I don't know what they are, no, sir.

Q. Have you ever bought oil in the City of New York?

A. No, sir.

Q. Referring to the contract of November 1st, 1905, between the Consolidated Gas Company and the Standard Oil Company to which your attention has been drawn, it provides, you observe, for the delivery of 255,000,000 gallons of oil. That is a very large order, is it not?

A. Yes, sir.

Q. How long a period is that?

A. I did not notice.

Q. Two years and eight months?

A. Yes, it would be about 2,000,000 barrels a year.

Q. That is a larger order than your company ever filled, is it not?

A. Yes, sir.

Q. This contract also calls for homogenous oil as you indicated. If you had to provide homogenous oil of the character you 4510 have described instead of oil of the same degree of test obtained by mingling other oils at your own convenience you would expect that a somewhat higher charge would be made for it, would you not?

A. Oh, no, I do not think so. In the higher oils there is very little danger of their mixing anything higher than that because the higher oils would go into the water white or prime white.

Q. Anything higher than which, the 28 or 34?

A. No, anything higher than would make homogenous oil at 34; say it would run down to about 41 or 42, and would go into prime white oil and then from that on down to 31, would average perhaps about 34, 34 to 35 gravity.

Q. And you observe that 40 per cent. of this 255,000,000 gallons must be 34 degrees Beaume?

A. Yes.

Q. And only 60 per cent. 28 degree and you observed the 34 degree is to be delivered exclusively during the months of November, December, January, February and March of each year and the 28 degree gravity during the months of March, April, May, June, July, August, September, October and November of each year?

A. I did not notice that.

Q. Look at it (handing book) and see if it does not say so, is that correct?

A. Yes.

Q. It would take very large distilling facilities, would it not, to provide for that contract?

A. Yes, sir.

Q. And would not the fact that all of this high grade oil has to be delivered within these few months in the winter, and perhaps accumulated and stored for that purpose, tend to make the contract more onerous on the contracting party, the Standard Oil Company?

A. Well, it is rather more advantageous to the parties delivering, because it would be taken during the time when the most refined oil is marketed, that is, during the winter. It is more advantageous to deliver that oil in the winter than in the summer. 4511

Q. But do you know what the expenses for storage are? I think you said you did not?

A. Not in the harbor, no, sir. The expense of storage at the refinery, of course, would be the interest on the investment, that is practically all.

Q. It would make a difference to the purchaser of the oil, whether the company which was to deliver it, had very large storage facilities, would it not?

A. They would have to rely upon the fulfillment of the contract, yes, sir.

Q. And especially if they only had 24 or 48 hours' supply on hand which the consumer must himself *could* provide for?

A. He would have to provide to protect his contract, of course.

Q. Do you know of any other independent producer as distinguished from the Standard Oil Company and the company which it controls which has ever undertaken to fill an order for 255,000,000 gallons of these gravities within this period?

A. I could not state, no, sir.

Q. You have never known of such a case?

A. No, sir, not that I can testify to.

Q. Do you contend that kerosene oil, as used in lamps and the like, is more economical as to gas making than gas oil made from Pennsylvania or Ohio oils?

A. Well, on that question I don't know that I can testify, not being a gas maker; but I know that gas companies have preferred in buying to get the lighter gravity oil.

Q. Will you define the term of residual oil as you used it?

A. Yes, it is the oil that is left in the still after distillation.

Q. The freight rate to which you have referred would be merely to the harbor line of New York, would it not? In other words, it would not carry the oil into the tank of the gas company in New York? 4512

A. No.

Q. And whatever additional charges there would be in that connection, you do not know personally?

A. I know that there is a lighterage charge of three cents usually exacted in New York harbor on delivery to the New York side, that is, New York proper; but I don't know anything about the facilities for receiving the oil after it is delivered here; I don't know anything about that.

Q. Do you know what per cents. would be distilled at the several distillation temperatures?

A. I am not familiar with the making of gas, no, sir.

Q. When you speak of what is left in the still, you mean final distillation?

A. No, distillation down to the point of 28 gravity in the still. That would be partial distillation, taking off the benzine and the lighter oil, the water white oil. Of course final distillation leaves nothing but coke in the still.

Q. How much oil does the Globe Company sell per annum of 34 degree Bea*mue* homogenous?

A. I cannot tell you.

Q. Well how much of 28 degree homogen-ous?

A. I cannot tell you that, either, not now. I can send it to you if necessary.

Q. Can you not state approximately?

A. No, I don't think I could. I haven't it in mind. I have not kept track of it. It is not our principal business.

Q. Would it be 100,000,000 gallons?

A. No.

Q. Would it be 50,000,000 gallons of 34?

A. No.

Q. Would it be 25,000,000 gallons of 34 homogenous in a year?

A. No, I don't think so.

Q. And you cannot be any more definite in regard to 28 degree?

A. No.

Q. Do you sell more 28 degree or 34 degree?

A. I think more 28.

4513 Q. Do you insert in your contracts the word homogen-ous in selling oil usually?

A. We usually comply with the specifications; if they are in the specifications of the gas company of course it is inserted.

Q. If they are not in the specifications of the gas company you never suggest homogenous, do you?

A. It would not be to our advantage anyhow.

Mr. Mathewson: That is all.

Mr. Page: Now, if the Master please, we have a witness and he can answer a great many of Mr. Mathewson's questions, but it is necessary, as has been shown by this witness, for us to have a sample of their oil of the 34 and 28 degree, and I would make an application for a quart of each for which we will pay at the current rate described in this contract, which is higher than we could buy it in the market probably, but nevertheless we will pay it. And to be sure, we would like to help draw it. Have you any objection to that Mr. Mathewson?

Mr. Mathewson: I do not think that I am called upon to say anything about that subject. We have contracted for 34 degree oil, if we do not get it, we are getting cheated. What we contracted for was 34 and 28 degree oil, and if it appears that it is something else, which I have no notion it would be, we would simply have an action for damages, perhaps. I do not see how it affects this case.

Mr. PAGE: Brother Mathewson knowns that I do not have any desire to affect the very pleasant and cordial relations existing between the Consolidated Gas Company and the Standard Oil Company, and I would hate to throw a firebrand which would in any way affect those relations. But the purpose is entirely different; it is not to help them in any suit for damages but it is to enable us to ascertain the exact quality of oil they are using so that another witness can go on the stand and say what he would furnish that identical oil for, and that is what I will do if they give me that information. 4514

The MASTER: That is a matter for you and Mr. Mathewsen to arrange by stipulation, if possible; if not, by application to the Court. I do not know that I have any power to compel them to furnish you with oil any more than I would permit the inspection of the plants. The books and papers are a different matter. The two quarts of oil I think are *ultra vires* as far as I am concerned.

Mr. PAGE: Mr. Burr suggests that we already have the right to inspect the plant and the supplies on hand and this is part of the supplies on hand, but I prefer to inspect it by the way of experts. As I understand, then Mr. Mathewson refuses to let us have the sample.

Mr. MATHEWSON: Senator, don't understand so much as that, but this proposition is one which I would like to consider a little, and it seems to me it is wholly immaterial. I cannot see the bearing on the case, provided you should get your sample and you should prove we are being cheated in the oil we are getting.

Mr. PAGE: But I might show that this contract, and which is probably the fact, is a hokus pokus contract with a higher price named than you are paying, and that everybody else can get it at a lower price than you are paying.

Mr. MATHEWSON: There is the contract for certain oil. The question of whether it is a provident contract or not or whether it should be set aside——

4515 Mr. PAGE: But the City and State have a right, in fixing the price which you shall charge for your product, to hold you to paying no more than the market rate for your material, and this contract you know is the result of one which was cancelled, having a large portion of it still undelivered and having a higher rate fixed; whether for the purposes of this case or not, I *no* not know.

Mr. MATHEWSON: It appears in the evidence that that was delivered currently, and that we could not call for the required gravity under the old contract in the winter.

The MASTER: Is there anything further with this witness?

Mr. PAGE: As I understand, the Master's ruling is that he has no power to grant that.

The MASTER: I have no power to compel them to do it if they do not want to.

Mr. **Page**: I do not suppose the Court would have any more power than you have.

The **Master**: Well, the Court might take the power, whether it has it or not. The Court could lock a man up for non-compliance with his order, and I cannot without application to the Court, so that is the distinction.

Mr. **Burr**: Will they produce a barrel of oil in response to a subpœna *duces tecum?*

Mr. **Mathewson**: How much would you pay us for the oil that you want for a sample per gallon?

Mr. **Page**: We have offered to pay the contract rate.

Mr. **Mathewson**: We would expect to make a profit.

4516 **Emerson McMillen**, recalled as a witness in behalf of the defendant, the State of New York, testified as follows:

Direct examination by Mr. **Kirby**:

Q. Mr. McMillan, you have already testified as a witness in this case, have you not?

A. Yes, sir.

Q. I believe you are President of the American Light and Traction Company, are you not?

A. Yes, sir.

Q. And does this company control the gas companies operating in Milwaukee, Detroit and Grand Rapids, Michigan?

A. Yes, sir.

Q. Is it the fact that in the City of Milwaukee such gas company furnishes a yearly output of gas of 2,142,397,000 cubic feet and sells 2,010,016,000 cubic feet, is that the fact?

A. That is about the figure.

Q. What is the average price such company receives for its gas?

Mr. **Mathewson**: I object to that. It seems to me that is no criterion of what gas can be produced for here. Testimony of the same sort was offered before the Gas Commission, and even they excluded it as being without value. Conditions are different, materials are different, the cost of labor likely is quite different.

The **Master**: That is all so, Mr. Mathewson, but we have taken a great deal of testimony in one form or another involving the conditions of the gas business in other cities, and of course everybody realizes that the conditions in those two places are the same, and that this may raise a lot of collateral issues, but, however, I think all the testimony ought to be regarded as some value, and I will take it and give you an exception.

Mr. **Mathewson**: Exception.

4517 A. I will have to look at my figures to get the exact amount. I think I have got them here (referring to paper) for the twelve months ending October 31st, the average price was 85.44 cents.

Q. You have a certain price there for the first one thousand feet used in any one month, haven't you?

A. Yes, sir. The price prevailing at present and the price prevailing for some years was and is $1.00 for the first one thousand feet; 90 cents per thousand feet for the next 25,000 feet and all over the twenty-sixth thousand feet, 80 cents, for the gas consumed in any one month through one meter.

Q. That is for illuminating purposes?

A. That is for illumination. And for fuel, the first ten thousand feet was and is 80 cents a thousand; the second ten thousand feet 70 cents a thousand and all over twenty thousand feet is 60 cents per thousand feet. Now, the average of those for the twelve months ending October 31st, was 85.44 cents per thousand feet.

Q. Have you made any reduction in price in Milwaukee, the same to go into effect after January 1st, 1907?

A. We have.

Q. What are such prices to be after January 1st, 1907?

A. The prices which have been officially fixed by the Board of Directors and announced to the public is that gas used for any and all purposes for the first ten thousand feet will be 80 cents; the second ten thousand feet 70 cents, and all over twenty thousand feet 60 cents, from and after January 1st.

Q. If these prices had been in use for the twelve months ending October 31st, 1906, what would the average price have been during those past twelve months?

A. 77½ cents.

Q. Did the prices in use up to November 1st, 1906, give you a satisfactory return upon your capital invested?

4518 Mr. Mathewson: Is not that a little bit extreme? I think I shall object to that.

The Master: I think that is a little objectionable, as to form.

Mr. Page: The Master recalls that this witness was called as an expert as to what was a satisfactory return, by the complainant.

The Master: Hardly satisfactory, was it?

Mr. Page: What he should expect to get.

The Master: What the market conditions were, as respects gas securities and what investors required as a return. I think you could show the same thing as regards this company and how its securities sold and were disposed of and on what basis.

Mr. Page: It was not on that theory that they offered it at all.

Mr. Mathewson: The earning power of capital invested.

The Master: Ask him what the return was. You can get it in that way.

The Witness: Then he objects.

Q. Was the reduction which your company has made and which goes into effect on January 1st, 1907, a voluntary reduction on your part?

A. Yes, sir.

Q. Now, one of your companies sells gas in the City of Detroit, doesn't it?

A. Yes.

Q. Can you tell us the number of thousand cubic feet of gas made and sold in Detroit by your company?

A. During the twelve months ending October 31st, it made 2,288,447,700 feet and it sold 2,121,765,300 feet.

Q. What was the average price which you received for the gas sold?

A. 81.66 cents.

Q. And the candle-power of that gas was what?

A. The average was 18.2.

4519 Q. And what was the average candle-power of the gas at Milwaukee?

A. 17.

Q. One of your companies makes and sells gas in the City of Grand Rapids, doesn't it?

A. Yes.

Q. And how much gas was made and sold there for the twelve months ending October 31st, 1906?

A. It made 739,158,400 feet and sold 670,016,500 feet.

Q. And what was the average price received for that gas per thousand?

A. 87.76 cents.

Q. And the average candle-power?

A. 18.3.

Q. And the prices in Detroit and Grand Rapids were those set by your company and were voluntary on their part, were they not?

A. The prices in Grand Rapids are voluntary on our part, yes. The price in Detroit is less than the average of last year, but the price now, the highest price is 80 cents, while the average for the twelve months was 81 cents. We made a reduction in April.

Q. What was the reduction from?

A. Previous to the middle of April we sold illuminating gas at 90 cents and fuel gas at 80 cents. The reduction was made to 80 cents all around for the first fifty thousand, 70 cents for the second fifty thousand, 60 cents for the second one hundred thousand and 50 cents for all over that.

Q. And those reductions were voluntary on part of the company?

A. Yes.

Q. Have you figured what the average price would be under the reduced rates?

A. The reduced rates if they had applied last year, the average would have been 79 cents. The very low rates cut no figure now. We hope to get power for that business after a while.

Q. You anticipate an increased consumption by reason of the reduction in price?

A. Yes.

4520 Q. Has there been any reduction in Grand Rapids from the figures for the twelve months ending October 31st, 1906?

A. Yes, it would be a little bit hard to explain, as we have adopted in a very large measure there a system known as the "readiness to serve"; the consumer pays so much for having his meter set there per month and so much for capacity, so much per light for that meter, and then he pays 50 cents for his gas after that, and we figure that it would reduce our profits on the quantity that they consumed previous to that about $40,000 or $50,000 a year, the reduction that we made would cut that a big figure.

Mr. MATHEWSON: Was that in Detroit?

The WITNESS: In Grand Rapids. I would like that on record, that we did that because we thought we were making too much money.

Q. But you anticipate that satisfactory results will result therefrom?

A. We expect to get it back, yes, sir.

Q. Where you have reduced your prices it has been your experience, has it not, that the amount of gas sold would increase owing to this reduction?

A. Nearly uniformly so, yes.

Q. If it did not increase you would consider that an exception to the general rule, would you not?

A. Yes.

Cross-examination by Mr. MATHEWSON:

Q. You find that consumption increases even when you do not lower the price, don't you?

A. Yes, sir.

Q. So that you would not consider all increase of consumption is due to a lowering of the price?

A. By no means; perhaps not half of it.

4521 Q. Do you know what the consumption per capita is of each of your companies to which you have referred?

A. I could hardly state them now, but I know about.

Q. Can you tell about?

A. Yes. That is of these companies that have been named? They are running about—Milwaukee and Detroit, I think, a little less than 6,000, Grand Rapids a little more.

Q. 6,000 feet per capita?

A. Yes.

Q. It is testified that the consumption at present in the Island of Manhattan is over 9,000 feet per capita, or higher than any other city in the world. Would it not be true that the higher consumption you get per capita the less opportunity there would be for increased consumption per capita beyond that?

A. Absolutely, yes, sir.

Q. And would not that be something to be taken into consideration when you are estimating what increase there might be per capita in the future?

A. Yes, sir.

Q. Would not the situation be affected also by the fact that Manhattan Island is surrounded by water and this company has no franchises in the suburbs outside, while in the case of Detroit and Milwaukee and cities of that character there is a suburban growth which the companies can annex constantly?

A. But which they dislike to annex as a rule.

Q. But it finally reaches a point where it is extremely profitable?

A. It reaches a point where they have to, to keep some other people from getting it. It helps street railways, but is bad for gas companies and electric light companies.

Q. You say a certain amount of meters is charged?

A. That is fixing the person for readiness to serve, we fix a charge of 50 cents for that service.

Q. And you know no such charge can be made in New York City?

4522 A. We do not make them there except by contract with each party. We are not required to do that.

Q. And you know in New York they are not permitted to make meter charges, don't you?

A. We do not call it a meter charge, but that is what it is in effect.

Q. And if you were comparing prices in cities where such a meter charge could be made with a city where it is impossible to make such a meter charge, that of course would have to be taken into consideration?

A. Yes. I do not lay any stress on the charges. You notice Grand Rapids averages 80 cents, even with this readiness to serve.

Q. And what is to be considered as nearly the average price which you get for your entire output?

A. That is the average price between these charges I speak of?

Q. And the average price is the important element?

A. Yes.

Q. You say that the Milwaukee gas is 17 candle power, about. Tested where?

A. It is tested of course, these records that we have are tested at our stations.

Q. You refer to 17 candle power at your station?

A. Yes.

Q. And maintaining an average of 17 candle power at your station don't you find that the candle power at the station sometimes drops below 15?

A. At the station?

Q. Yes.

A. No.

Q. It would at the consumers' in some instances?

A. It might, but we do not test it out there.

Q. Is that coal gas or water gas?

A. Chiefly coal gas.

Q. You have stated that these prices are prices which you have fixed voluntarily. Is it not a fact that in Detroit the prices 4523 were fixed pursuant to an arrangement which you made with the city by which your franchises were renewed or confirmed or something?

A. No.

Q. Is it not true in either one of the three cities?

A. No. In Detroit under our franchise we would have been compelled to make some reduction within a couple of years and we made it in advance of the time and asked the city to repeal a clause of the franchise that required us to report the quantity of illuminating gas sold each year; we would agree to report all of it, but we did not want to separate it, for it required us to keep two meters; and then we wanted the privilege of charging less than eighty cents and it took us about six months to get the privilege of reducing the price.

Q. In Milwaukee the gas is coke oven gas, is it not, largely?

A. A portion of it is.

Q. In which gas is regarded as a residual?

A. In the coke oven, yes, sir.

Q. Is there any law forbidding you to raise the price of gas again in any one of these three cities if you find that such conditions arise that it cannot be profitably delivered at these prices?

A. We could not raise the price of gas in Detroit until the expiration of the present franchise.

Q. How about Milwaukee and Grand Rapids?

A. In Milwaukee we have a perpetual and exclusive franchise where the price is not mentioned; it has been litigated and sustained by the Supreme Court.

Q. You would make an allowance, of course, if you were obliged to deliver in Milwaukee or in any one of these three cities gas testing 22 candle power, from your works with a penalty of $1,000 for every time the candle power fell by such test below the 22, as against the gas which you do now furnish, would you not?

A. I could not sell it at the same price at all, no.

4524 Q. Now you were almost asked what return you were earning in Milwaukee on your investment. Have you any objection to stating?

A. I am not almost persuaded to answer.

Q. Would you rather not state it?

A. I would rather not, yes, sir.

Q. Well, it is true is it not that your four and one-half per cent. bonds in Milwaukee are selling at about 93 or such a matter?

A. Well, I think that is the price they sold at the last that were sold. I don't know of any bonds sold at any price at the present time.

Q. Is it not true that the earnings were sufficient several times over to pay the interest on those bonds?

A. I prefer not to answer that question unless it is essential to do so.

Q. It is true, is it not, that the price of bonds depends to a considerable extent on the margin of earning capacity over the amount required to pay the interest on the bonds?

A. Yes, sir, and the character of the franchise.

Q. And in Milwaukee you say it is perpetual and exclusive?

A. Yes sir.

Q. Now, in Detroit you say the candle-power is 18 and a small fraction on the average; that also is at your works, is it?

A. At our works, yes, sir.

Q. And at Grand Rapids, 18 and a fraction, that is also at the works?

A. Yes, sir.

Q. Your experience in the gas business shows that conditions in the East in cities like New York, for instance, are substantially different from those prevailing in many regards in the manufacture and distribution in Western cities like Grand Rapids, Detroit and Milwaukee, does it not?

A. Yes, very much different.

Q. And you would not be willing to take any one of those three cities as a criterion of what you could afford to manufacture 4525 and sell gas in the City of New York, under conditions here prevailing?

A. I am not familiar with the conditions prevailing here now, I could hardly answer that question in a way which would be of any value to you. Years ago I was, but I know nothing of the conditions here now.

Q. Have you a franchise tax in the case of any of these cities?

A. In fixing the value of the property they took into consideration the value of the franchises. I think in the two largest of those cities, Detroit and Milwaukee, they put them something like two and one-half million dollars, the assessors themselves, but as I remember it, it is lumped, it is not put down as a separate item.

Q. Do you remember what your taxes per thousand are in the City of Grand Rapids?

A. I am not sure about that, I can tell you, but I cannot remember. What city did you ask for?

Q. Grand Rapids, or in any one of the three.

A. I have not got the details. I have got a great many details here which speak about the average of all the works we have, but not separately. I think in those two places the taxes are about 6 cents a thousand.

Q. Isn't it true that the cost of material and labor differs in different parts of the country?

A. We find it so, very materially so.

Q. And when you were in the City of New York and managing the Standard and East River Gas Companies, didn't you find that the expenses in many directions, as, for instance, laying mains and services, of repairs and maintenance, would cost far more than they did in the western cities?

A. Yes, sir.

Q. In view of the questions which you have been asked in the testimony to-day, do you desire to change your testimony at all 4526 as heretofore given as to the return which an investor in gas properties expects to earn on the investment?

A. No, sir.

Q. From your knowledge of the gas business, is it not true that that you would not be able to express an opinion as to the price at which gas could be manufactured and delivered in the City of New York with an adequate return upon capital, without a very careful consideration of details in New York?

A. No, sir; I would not want to.

Q. That depends finally and fundamentally, does it not, upon the conditions prevailing in each community as to the cost of material, cost of labor, character of pavements, burdens placed upon the company in the way of taxes and otherwise and all the other elements which differ in different cities, is that a fair statement?

A. Absolutely correct, yes, sir.

Redirect examination by Mr. **Kirby**:

Q. If you were considering the cost of producing and distributing gas in the City of New York, you would take into consideration these elements just spoken of by Mr. Mathewson, but would you not also take into consideration the cost at which you find you can produce and distribute gas in other cities?

A. I do not believe I get the gist of that question.

Q. If you were considering the cost of producing and distributing gas in a certain locality, would you not take into consideration the cost of producing and distributing gas in other cities with which you were familiar, as well as those elements of labor, material and such to which Mr. Mathewson has just referred?

A. He named about all, I think.

Q. Would you not take into consideration the density of the community or of the population, the amount of gas sold, and of mains?

A. I would. It is an important element.

4527 Q. And would you not consider that a large sale per mile of mains would be more advantageous as affecting the cost than a small amount of gas sold per mile of mains?

A. Yes. Very much prefer to have the larger sale It produces the interest on the investment.

Q. That is, a large consumption per capita is an element going to reduce the cost and distribution of the gas?

A. Yes, sir.

Q. Mr. Mathewson has made reference to the value of certain gas securities and the franchises which your companies have in the cities spoken of. Would you consider that where a franchise was doubtful or questioned by the municipality in which the company operated that a less return would be expected from the company's securities than if such franchises were not doubtful or questioned?

A. Well, I certainly would not expect to sell securities of a company located in a city where the franchise was in doubt at as good a price as I could sell it where the franchises were beyond doubt.

Q. In Milwaukee where a small portion of the gas which you use is coke oven gas, do you, or do you not, consider that your purchase of coke oven gas raises the price of your gas over that which it would be if you manufactured gas in place of your coke oven gas used, as respects the cost?

A. Let us reason a little bit. He did not ask me whether that reduced the cost or increased it.

Q. He did not.

A. Do you want to?

Q. I know what his argument is going to be and therefore I press the question.

A. Let us leave the coke oven out.

Q. Well, I had hopes it would be left out, but Mr. Mathewson asked the question and I think he might withdraw the question and we will leave the record stand without it. I do not want to go into it.

4528 Mr. **Mathewson**: I merely asked if part of the gas was coke oven gas.

Mr. **Page**: And which gas was a by-product?

Mr. **Mathewson**: Coke oven gas is a by-product, always, I believe. I do not understand there was any objection to my question.

The **Witness**: It is a residual with the manufacturer, but it is a principal with the purchaser.

By Mr. **Page**:

Q. And you buy it?

A. We buy it, yes, sir.

Q. What do you pay per thousand feet for the coke oven gas that you buy?

A. I won't tell you.

Mr. **Page**: I would rather have the record stand that way than have Mr. Mathewson's idea of it.

The **Witness**: I do not want to be disrespectful, but I should prefer not to tell.

Mr. **Page**: I have not asked that you be compelled to answer.

By Mr. **Mathewson**:

Q. You have stated that you were furnishing coal gas of the candle power that you have described in these cities; could you furnish to consumers a gas of 22 candle power tested a mile from your works at least—straight coal gas?

A. No; couldn't make it.

Q. You would have to enrich in water gas in that case, wouldn't you?

A. Yes, sir.

By Mr. **Kirby**:

4529 Q. And in these companies where the gas is furnished it is enriched so that it will be of the candle power indicated, is it not?

A. Yes.

By Mr. **Mathewson**:

Q. I desire to ask you whether there is natural gas in any one of these three cities to which you have referred?

A. Not at present; there has not been in any of them for three or four years.

Q. There was formerly, in Detroit?

A. In Detroit, formerly.

By Mr. **Page**:

Q. As I understand, the density of population, the amount of gas delivered per mile of mains, the amount of gas delivered per meter or consumer, is a very important element in determining the price which could be or should be charged for gas, is it not?

A. Yes, sir.

Q. In any of the cities that you have testified to is there as great a density of population, as large a sale per mile of mains, or as large a sale per meter as in the City of New York?

A. I should think not. Certainly not such a sale per mile of main, and I should think not as large per meter as in New York.

Q. And the per capita has been stated by Mr. Mathewson to be the largest sale of any city in the world, in the City of New York here to-day?

A. I don't know of any larger.

By Mr. Mathewson:

Q. Do you remember the sales per meter of these companies?

A. In the neighborhood of 30,000 a year per meter, I think.

Mr. Mathewson: Ours is only 34,000 feet per meter.

4530 The Witness: I can remember when our figures varied all the way from 30,000 to 35,000.

By Mr. Page:

Q. How many miles of main can you recall that you have in Milwaukee?

A. I think it is between 300 and 400.

Q. And Detroit and Grand Rapids, if you can recall?

A. Detroit would not be very far from the same, and Grand Rapids would not be more than half as much; less than half as much.

The witness is now excused.

Mr. Burr: The accountants inform me, since considering the matter during recess, that if they are afforded facility they can examine certain accounts for the year 1902 and report and testify regarding the same on Monday. Repair and renewal accounts, depreciation, legal and advertising, general expense, gas stoves, and oils.

The Master: That is what they said this morning.

Mr. Burr: Yes.

The Master: Well, what about the other questions that I suggested; that is, how it fits in with your associate, the State's plans, to have Monday taken up for that purpose? Also, what is there now to show me as to the materialty of this when it is done? I want some sort of succinct statement to indicate how in determining the reasonableness of the cost of gas at the present time a comparison of costs in past years as far back as you propose to go is going to be of service.

Mr. Burr: The testimony already in the case would tend to show that these items for 1905 were at least suspicious because they 4531 are so large. Take the question of the oil. Now, we believe that that is a very excessive price.

The Master: If I built a house in 1905 and had built a house of the same kind in 1900, would the fact that it cost me more in 1905 than it did in 1900 be necessarily suspicious? Might it not be at least more expensive in one year than in the other?

Mr. Burr: This is a little different. This is a public utility corporation whose expenses in one year are so much and in another year so much larger. We are entitled to have you know the exact situation for both years so that you might see the situation as the examination of the books shows; and we claim as a matter of argument upon that situation that these accounts to-day are most excessive, and that these prices that are paid are excessive in these various items and that they should not be charged to the cost of gas.

The **Master**: It may be. I do not say that you cannot show it, but I do not see how it necessarily follows from the fact that it was lower five years that the prices are excessive.

Mr. **Burr**: But to have the matter fairly presented we ought to have the benefit of a comparison with a prior year, in 1902.

Mr. **Mathewson**: If the Master please, I confess it is not necessary for me to add much to the statement of counsel, but it would be simply preposterous to go into the price of oil in 1902 to prove what we ought to get it at in the market to-day. Even 1904 is not the criterion, because their own witness has testified this afternoon that oil is up five-eighths of a cent beyond what it was a short time ago, a year ago, something like that, and it would consume time to absolutely no purpose.

4532 Mr. **Burr**: It is not consuming your time; it is consuming our time.

Mr. **Mathewson**: Well, it is. It is consuming our time.

Mr. **Burr**: Now, on that point, Mr. Master, we want to have an opportunity to compare the company's accounts before its investigation with them as they appear since its investigation.

Mr. **Mathewson**: The contracts as to oil are in evidence, covering, I think, the whole of the year 1904, or practically that, which was a period before any investigation was thought of. That was begun in 1905 and the resolution introduced in the Legislature in 1905, so that if it were pertinent at all, 1904 would be reasonably near and more valuable; but even that, it seems to me, would be wholly valueless, in view of the fluctuating prices of oil. It does not seem to me it makes any difference what we had to pay for oil in 1902 or in 1895. It is what oil is worth now and what we prudently can get it at.

Mr. **Burr**: It shows how much and what kind of oil you are using.

Mr. **Mathewson**: We had a lower candle power to take care of, also had a law which permitted us to have tests once a week and no penalty affixed unless three successive tests, a week apart, showed each time a candle power below 20.

The **Master**: Mr. Burr, unless you can show me something a little more specific, your application does not commend itself to my discretion very much. I do not think——

Mr. **Burr**: I cannot make it any more specific than I have made it; that, I think in justice to the defendants we are entitled to have a comparison of the accounts named for another year besides 1905. 4533

The **Master**: And another thing, especially when made at this stage of the case, when defendants are finishing up their case. If there was anything so very important about this it ought to have been revealed before this time, it seems to me.

Mr. **Burr**: We could not be in a position to make the application until the accountants had reported. They only finished their report this afternoon, by testifying to-day.

Mr. **Mathewson**: These oil contracts were put in by us months ago.

Mr. Burr: Months ago I asked for this examination and it was refused. It does not come out of your time, it will come out of our time. If these accountants can report on Monday on a few items, I think it would be wise to permit us to have it done.

The Master: You object to it, Mr. Mathewson, do you?

Mr. Mathewson: I do, most strenuously. It is impossible to do it, in the first place, as far as we are concerned, in that length of time, even to get out the vouchers for such examination as has been suggested by counsel.

The Master: How much of a force are you going to employ there?

Mr. Burr: The same force as they had before.

The Master: If I were at all satisfied of the materiality I would run the risk of the inconvenience and all that, but the difficulty in my mind is that I do not see how it is of any importance.

4534 Mr. Burr: It is important to show, for instance, whether the method of operation was different in 1902 from what it is at the present time, and whether the change in that method of operation has increased the cost of the manufacture and distribution of gas.

The Master: Assume there was a difference. What difference does that make? The question that I have got to decide is, what the conditions are to-day. Now, what they have done in the past, whether good, bad or indifferent, I do not see how it affects the question before me.

Mr. Burr: It will throw some light on it, if, as we claim, their expenses are enormous or unnecessarily excessive.

The Master: If that is so, there are plenty of ways to show it without trying to prove it out of their own mouths. Prove it by somebody else.

Mr. Burr: I think their books will show that.

The Master: I do not see that it is competent evidence as to value.

Mr. Burr: Well, I cannot do anything more than make the application.

The Master: If you can show me how you are prejudiced in any material way by not having it, or can satisfy me that the evidence would be such as I deem admissible when it does come here, that will be another thing.

Mr. Burr: If a condition of things appears, that they were economically conducting their business in 1902, in comparison with the method in which they are conducting their business now, that is something you should know. If there is any justification for the expense they are putting the company to to-day——

4535 The Master: It might be something interesting to know, but I do not think that would be of any assistance to me in determining the issues raised by this suit. The reason I hesitate is that I am loath in this case now to refuse any reasonable source of information. I think I have tried to be liberal in allowing testimony, even testimony about which I had grave doubts, but this involves a good deal of inconvenience to the complainant, on your own showing, and the time is very short. You have got other witnesses to examine before your time expires and I do not think that the importance of it is sufficient to justify me in asking that order now. I will deny the application, Mr. Burr, and let you have an exception to my ruling.

Mr. BURR: I take an exception.

Mr. KIRBY: We have no other witness this afternoon, Mr. Master.

The MASTER: None at all?

Mr. KIRBY: No, sir, none at all. It is after four o'clock.

The MASTER: Mr. Burr, you have no other witness?

Mr. BURR: I will be, as I explained, ready in the morning to proceed with Dr. Marks.

The MASTER: There being no other witness ready we will adjourn until to-morrow at half past ten.

Mr. PAGE: In order that we may make our preparations, are we going to sit Saturday of this week?

The MASTER: If you like. I am at your service. I made no other engagements.

Mr. PAGE: I shall be glad to sit Saturday, and we will be prepared to go on.

At 4:10 o'clock P. M. adjourned to December 5, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's 256.
State's YY.
City's 88.

4536 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 6) pages, numbered from 3667 to 4535 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appell*ee*-, as the same remain of record and on file in my office (Vol. 6).

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

65380

VOL. IV.

TRANSCRIPT OF RECORD.

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vs.

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APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED MAY 16, 1908.

(21,176, 21,177, 21,178.)

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Wm. H. Childs	5682	4036
Edward H. Wardwell	5699	4048
George W. Doane	5715	4058
Charles G. Franklin	5736	4071
Frederick J. Down	5737	4072
Albert Riblet	5738	4072
Thomas W. Varle	5739	4073
John W. Lieb, Jr	5761	4088
Alexander Maxwell	5773	4095
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Alexander Maxwell (resumed)	5802	4113
Albert F. Ganz	5826	4128
Alexander Maxwell (recalled)	5889	4168
Colin C. Simpson (recalled)	5894	4071
Oscar H. Fogg	5899	4174
Walter R. Addicks (recalled)	5924	4191
Alfred E. Forstall	6155	4335

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4537 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *December 5th*, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr.

U. S. Circuit Court, Southern District, N. Y. Filed June 24, 1907. John A. Shields, Clerk.

4538 Mr. MATHEWSON: A request was made yesterday by one of the counsel for the defendants for leave to sample the oil which the company is using. I saw no objectiion to it personally, except that it seems to me to be immaterial, but I felt that it was a little outside of counsel's province and I desired to consult the officers of the company. I have to say this morning that, subject to the objection that it is immaterial, we have no objection to its being done. But in order that no question shall arise, I would like to have it understood that the sample shall be drawn in the presence of a representative of the defendants; that the sample which is drawn shall be equally divided between the defendants and ourselves; and that the defendants shall indicate the plant at which they want the sample drawn, and they can draw the sample at any plant they please to designate from the oil just as it is being fed to the machines, so that there can be no doubt about it. Is that a fair suggestion?

Mr. KIRBY: That seems to be fair, and it is quite satisfactory to the counsel for the defendants, who made the request, and to the defendant.

Mr. MATHEWSON: I should say this, that during this cold weather for some time we have been using, as I understand, nothing but the 34-degree or above oil, and I do not think we have any 28-degree oil at all from which samples can be drawn. That is something that we have no control over, but that, I understand, is the situation.

Mr. KIRBY: I presume, however, that such oil could be obtained at Bayonne.

Mr. MATHEWSON: I do not know, but we are talking about the oil delivered to us under the contract.

Mr. **Kirby**: I mean designated by you as such as would be delivered under the contract.

Mr. **Mathewson**: I don't know about that, no. I would 4539 not like to say that, because I don't know. The question was whether we are receiving the oil as prescribed under the contract, and I do not see how that can be tested except by testing the oil which we are receiving, because I may say that all the oil as the company receives it, every tank, is tested by the company.

Mr. **Kirby**: I believe that is so from your books that we have had the opportunity to see.

Mr. **Mathewson**: And you can see by drawing oil at Bayonne, if you found oil of less gravity than we require we would simply say that if it had been tendered to us we would have rejected it.

Mr. **Kirby**: Very good. Then shall I arrange with Mr. Addicks or Mr. Bradley about it?

Mr. **Mathewson**: Yes, you had better telephone Mr. Addicks, as he is the officer with whom I spoke.

Mr. **Kirby**: I shall make the arrangement with him as soon as I am through with these two witnesses, who will only take a very few moments.

Edwin Craven Midgley, called as a witness for the defendant, the State of New York, being duly sworn, testified as follows:

Direct examination by Mr. **Kirby**:

Q. Mr. Midgley, on the days of November 28th and November 30th, did you, with one Michael Gilmore, who, I believe, is sitting at your right here, make an inspection of certain openings in the street in the Island of Manhattan for the purpose of ascertaining how far below the surface of the street were such gas pipes as you observed in such openings?

A. Yes, sir.

Q. And did you observe any of such pipes to be 24 inches 4540 or less below the surface of the street?

A. Yes.

Q. Did you make a list of such pipes?

A. I did.

Q. Is the schedule which I show you (handing paper) one giving the location, the size of such main, and the depth of such main below the surface of the street?

A. It did.

Q. Will you state the results shown upon such list?

Mr. **Mathewson**: Let me see it; it is not necessary to have him repeat it.

Mr. **Kirby**: I want it to go in in connection with his testimony.

The **Witness**: I found fourteen places in which the gas mains were two feet or less below the surface; there are thirteen in this list and the one which I found yesterday.

EXHIBIT A.

List of Some Gas Mains Which Are Laid Two Feet or Less Below the Paving Surface.

Location of gas mains.	Size of main.	Depth below surface of street.
S. E. cor. 7th Ave. and 135th St.	16 inches.	20 inches.
N. E. cor. Broadway and 112th St.	6 "	24 "
S. E. cor. Park Ave. and 60th St.	10 "	23 "
N. W. cor. 2d Ave. and 60th St.	4 "	22 "
S. W. cor. 2d Ave. and 62d St.	6 "	20 "
S. W. cor. 2d Ave. and 62d St.	6 "	18 "
S. W. cor. 13th St. and 6th Ave.	12 "	12 "
N. W. cor. 1st Ave. and 40th St.	6 "	20 "
N. W. cor. 6th Ave. and 14th St.	6 "	23 "
S. E. cor. 6th Ave. and 11th St.	16 "	15 "
Whitehall and Water Sts.	6 "	15 "
S. W. cor. 8th Ave. and 35th St.	12 "	15 "
N. W. cor. Fulton and Pearl Sts.	...	11 "

Q. Where is the one which you just spoke of, which is not upon this list?

4541 A. That is at the northwest corner of Tenth Avenue and 42d Street—no, it is the southeast corner of Tenth Avenue and 42d Street.

Q. What was the size of that main?

A. There are two mains there, one 12-inch main, 16 inches deep, and one 6-inch main, 22 inches deep.

Q. Did you find any mains besides those which were slightly above two feet in depth below the surface of the street?

A. I found three others at a depth of two feet—between two feet and two feet four.

Q. Are they indicated on this schedule I hand you (handing paper)?

A. They are.

Mr. MATHEWSON: How deep?

The WITNESS: Between two feet and—well, the deepest was two feet four inches.

EXHIBIT B.

List of Some Gas Mains Which Are Laid Between Two Feet and Two Feet Six Inches Below the Paving Surface.

Location of gas mains.	Size of main.	Depth below surface of street.
N. W. cor. Broadway and 119th St.	6 inches.	2 ft. 2 in.
Clairmont Ave. and 119th St.	6 "	2 ft. 4 in.
N. W. cor. 40th St. and 1st Ave.	20 "	2 ft. 2 in.

Q. Now, Mr. Midgley, in making this inspection, or in such instances as you did not, did Mr. Gilmore make these measurements?

A. In every case.

Q. How did you make the measurements?

A. We obtained a plank or straight edge of some kind and placed it across the trench and used a rule to measure the depth from the top of the main to the under edge of the plank, the straight edge which would be level with the pavement.

Q. Did you observe other pipes in the street at the time 4542 you made these inspections?

A. Yes, we visited a great many of them and in most cases we observed pipes of one sort or another.

Q. And in all instances you did not observe gas pipes?

A. Not in all instances, no.

Q. And how did you ascertain which were gas pipes or mains and which were not?

A. I relied chiefly on Mr. Gilmore's knowledge of the mains, and with that, and by a process of elimination of any other mains, we arrived at the gas mains.

Q. What do you mean by process of elimination?

A. We would find the position of the water mains.

Q. How would you find that position?

A. By the manholes; the covers were lettered along the street.

Q. Lettered in what way?

A. D. P. W. or Croton Water.

Q. Having found the water main, what would you eliminate?

A. The subways and salt water mains which are being put in on certain streets and the steam pipes.

Cross-examination by Mr. MATHEWSON:

Q. One of these pipes which was laid at a depth of 24 inches or less from the surface, according to your schedule, was at the corner of Whitehall and Water Streets, wasn't it?

A. Yes.

Q. Now, is it not true that every instance of these thirteen which was only 24 inches or less in depth was at the corner of the street?

A. Certainly, practically every opening we examined was at the corner of a street.

Q. Well, every one on this schedule was at the corner of a street?

A. Yes.

Q. How many openings altogether did you examine in the streets?

A. I did not count them, but I went to a good many.

Q. And these are all the measurements that you took, 4543 shown in these two schedules?

A. I took only measurements—I regarded the measurements of such as were less than 2 feet 6 inches below the surface. I was not interested in any others.

Q. No. You found a great many more that were more than 2 feet 6 inches below the surface, didn't you?

A. A good many.

Q. At the corners of the street also?

A. At the corners of the streets?

Q. As well as in the streets and not at corners?

A. There were very few openings in the streets which were not at corners, which disclosed gas pipes. They were mostly too far out from the curb.

Q. Were not the surfaces of the streets where these occurred curved, that is, convexed upward?

A. Very slightly, I presume; there is a curve on every street.

Q. Did you take a measurement from the curb to these various pipes?

A. In all cases.

Q. Have you such measurements?

A. I have (producing paper).

Mr. KIRBY: Just read it.

Mr. MATHEWSON: No, I do not think it worth while to read it yet.

Q. I suppose this relates to these schedules?

A. Yes, in every case I took a measurement.

Q. Do you know whose gas pipes these were, whether of the Consolidated Gas Company or other companies?

A. I was informed in some cases that certain mains were the Consolidated Gas Company's or the Standard's.

Q. Who informed you?

A. Mr. Gilmore.

Q. Did you measure to the top of the pipe in each case?

A. Yes.

Q. The top of the pipe at the highest point of the pipe?

4544 A. Well, as far as could be judged by the eye, it was at the highest point.

Q. Was it down to the run of the pipe or was the measurement to the top of the pipe where it is nearest the surface, including the flanges or fixtures?

A. Do you mean the bells?

Q. Yes.

A. No, we never took a measurement to the top of the bell; it was always to the straight run of the pipe.

Q. You found that the pipe was nearer the surface at some one point where you made the measurements than it was at some other point, didn't you?

A. No, we did not——

Q. You merely took what appeared to be the highest point to the eye, as you say, and made your measurements that way?

A. No, the place we took the measurement in nearly every case was the best place to take a photograph, at one end of the trench, and the best place to see the street surface.

Q. Are these openings still existing?

A. I could not say.

Q. Have you any objection to pointing out to our representative the particular pipes shown in these schedules?

A. I have no objection whatever.

Mr. **Mathewson**: Assuming that they cannot be identified by us otherwise, Mr. Kirby, you have no objection, I presume?

Mr. **Kirby**: Absolutely none.

Q. Now, can you give me any estimate of the number of measurements which you made and which you did not include on these two schedules?

A. On a very rough guess I should say about as many again, perhaps slightly more; but not very many more.

Q. What is your business?

A. I am employed in the office of Kirby & Wood; I am employed in Mr. Kirby's office.

4545 Redirect examination by Mr. **Kirby**:

Q. Are you a graduate of any university or school?

A. Cambridge University.

Q. What course did you take while there?

A. Engineering, special and general.

By Mr. **Mathewson**:

Q. Did you measure the width of these trenches at the top?

A. In a few cases, but as the gas main in most cases ran across the trench and not along it, with either a trench for a subway or the salt water system, I did not take very many of such measurements.

Mr. **Kirby**: I will give Mr. Mathewson more information along that line——

Mr. **Mathewson**: Is there any objection to me having a copy of the location of these pipes which the witness says he has, and hasn't spread on the record?

Mr. **Kirby**: I am going to put in evidence the schedule, which will give all this detailed information, and which will save the trouble of Mr. Midgley going around, or anybody else.

By Mr. **Kirby**:

Q. Have you prepared a schedule showing the result of your and Mr. Gilmore's inspection of these mains, giving the distance from the curb, such observations as you made as to whether or not the mains were those of the Consolidated Gas Company, and Mr. Gilmore's and your own conclusions as to whether or not you were absolutely sure that the mains examined were or were not the Consolidated Gas Company mains?

A. I have.

Q. Is this schedule which I show you the result of your inspection in that regard?

A. It is.

4546 Q. Did you find these mains to be in good condition? By that I mean were they under repair at the time you examined them?

A. Well, I do not feel that I am called upon to judge of that. I can only say there was only one or two instances that I smelled any gas.

Q. Were the workmen, as a rule, working upon the gas main which was exposed, or other work?

A. No, in very few instances were they working on the gas mains.

Mr. Kirby: That may be spread upon the record.

Inspection of Gas Mains, Nov. 28th, 1906.

1. N. W. cor. Broadway and 119
6-inch Main runs under sidewalk 11 feet 2 inches W. of
W. Curb line 27 inches deep Sure
Stop cock cover Con. Gas. Co.
Water Main runs 3 feet E of gas main.

2. Clairmont Ave. and 119 St. Con Gas
28 inches deep 6 inch main Sure
3 feet 6 inches E. of W. Curb.

3. 7th Ave. and 135 St. S. E. Cor.
6-inch Main Consol. Gas Ribbed 2½ inches by ½ inch.
20 inches deep Sure
3 feet 6 inches N. of S. curb line
Trench 22 inches wide.

4. N. E. Cor. Broadway and 112 St.
6-inch main, 24 inches deep. Laid under sidewalk. Sure
7 feet S. of N. curb and 11 feet E. of E. curb.
Valve box on sidewalk.

5. S. W. cor. Broadway and 62 St.
6-inch main under sidewalk Sure
11 feet W. of W. curb.

4547

6. S. E. cor. Park Ave. and 60th St.
10-inch main 23 inches deep. Wrought Iron (Standard) Sure
11 feet 4 inches W. of E. curb.

7. N. W. cor. 60th St. and 2nd Ave.
4-inch main 22 in. deep Sure
2 feet 9 inches S. from N. curb.

8. S. W. cor. 2nd Ave. and 62nd St.
6-inch main 20 inches deep Sure
4 feet N. of S. curb.

9. Also Elbow curves over other main 18 inches deep Sure
9 feet E. of W. curb.

10. S. W. cor. 13th and 6th Ave.
12-inch main. In his opinion a gas main but not positive
12 inches deep
10 feet E. of W. curb.

11. Corner of Fulton and Pearl Sts.
Main 11 inches deep
Water main runs down middle of St.

12. N. W. corner 40th St. and 1st Ave.
3 ft. N. of corner 7 feet 4 inches E. of W. curb Sure
6-inch main—Consolidated—Ribbed Spirally
20 inches deep.

13. 20-inch main 1 ft. West of #13
26 inches deep Sure
Water main in these cases 15 feet E. of W. curb.

14. N. W. corner of 6th Ave and 14th St.
6-inch main, 23 inches deep
3 feet 6 inches S. of N. curb
In G.'s opinion a gas main, but not sure, as could not locate water main.

4548

15. S. E. corner 6th Ave. and 11th St.
16-inch main with 4-inch outlet 8 ft. E. of W. curb Sure
15 inches deep
12 in. Salt water main, trench averages 2 ft. wide.

16. Corner of Whitehall and Water St-.
9 feet W. of E. curb Sure
6-inch main 15 inches deep—shows plug
Water main 1 ft. West.

17. S. W. corner 8th Ave. and 35th St.
12-inch main 13 feet E. of W. curb
15 inches deep. Not absolutely sure

By Mr. Mathewson:

Q. Were the streets paved in every instance?

A. The greater number were asphalt streets. I think there were one or two up in the far north which were macadamized.

Q. The plank to which you have referred was laid across on top of the pavement whatever it was?

A. It was.

By the Master:

Q. For how long a time have you been engaged in this work?

A. I took two days.

By Mr. Mathewson:

Q. These are all the measurements for location which you have made, which are shown on this schedule?

A. Yes.

4549 MICHAEL GILMORE, called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Direct examination by Mr. KIRBY:

Q. Mr. Gilmore, at the present time are you in the employ of the Department of Water Supply, Gas and Electricity of the City of New York?

A. Yes, sir.

Q. What position do you there hold?

A. Inspector of lamps and gas.

Q. When did you enter the employ of the City?

A. In 1903, in March; March 4th, I think it was.

Q. Prior to that by whom were you employed?

A. The Consolidated Gas Company.

Q. And as such, what duties did you perform for that company?

A. Fitting serves and stand-pipes and resetting lamp-posts.

Q. To perform such duties it was necessary for you to know a gas main when you saw it, was it not?

A. Yes.

Q. And it was to these gas mains that you made your fittings of the services to the houses or lamp-posts or whatever it might be?

A. Yes.

Q. How long were you employed by the Consolidated Gas Company?

A. 11 years.

Q. Are you the Mr. Gilmore spoken of by Mr. Midgley as having spent the days of November 28th and 30th in measuring the depth of certain gas mains below the surface of the street?

A. Yes.

Q. Will you describe how you went about ascertaining whether or not the pipe, the depth of which you measured, was or was not a gas main?

A. Well, the same as Mr. Midgley stated, the first thing I looked for was to get a line on where the water main was by looking for the manhole cover with the Department of Water *of* Supply on, 4550 and then outside of the subways, all other pipe is considered gas pipe.

Q. When you would find the pipe itself, which by this process of elimination you would consider as being or which ought to be a gas pipe, would you look at the character of the pipe for the purpose of ascertaining whether or not it was a gas main, to your mind?

A. In some cases we did.

Q. And in those cases did you come to the conclusion that where you made the measurements you were positive that it was the gas main?

A. Yes.

Q. Now, there were three instances, were there not, as set down in this schedule, in which you were not positive, but which, in your opinion, you believed to be a gas main?

A. Yes.

Q. And those were the ones set down on this schedule as No. 10, the main at the southwest corner of 13th Street and Sixth Avenue; No. 14, northwest corner of Sixth Avenue and Fourteenth Street, and No. 17, southwest corner of Eighth Avenue and 35th Street?

A. Yes.

Q. In each other instance your were positive it was a gas main?

A. Yes.

Q. And came to such conclusion by reason of your experience and training in such matters and through the manner that you have stated?

A. Yes, sir.

Cross-examination by Mr. MATHEWSON:

Q. The measurement was made down from the plank to the highest point of the plank in each case?

A. Yes, sir.

Q. Who did the measuring, you or Mr. Midgley?

A. Mr. Midgley sometimes and sometimes I made the measurements, between the two of us.

Q. When you made it, what sort of a rule did you have?

A. Two-foot rule—three-foot rule.

4551 Q. Did you have a telescopic rule so you could put it directly against the plant in the middle and pull it down until it struck the main, or vice versa?

A. No, sir; just an ordinary three-foot rule.

Mr. KIRBY: A yardstick?

The WITNESS: A yardstick.

Q. Did you put the rule on the top of the pipe and then note the reading at the bottom of the plank?

A. Yes.

Q. Or did you put the rule in any case up against the bottom of the plank and then conclude where the top of the pipe would come on the rule?

A. No, we put it on top of the pipe and held it up to the stick.

Q. What were your duties while you were with the Consolidated Gas Company?

A. Refitting of new lamps and refitting of new services and standpipes to the lamps.

Q. You were not connected with the mains department, the laying of mains?

A. No.

Q. How do you know a gas pipe from any other pipe in the street, from any other pipe of the same size and material?

A. Well, generally, the water main is laid in the center of the street and it has "Department of Water Supply" on it or "Croton Water"; all other mains near the curb are considered gas mains.

Q. And that was the rule you proceeded on in determining these were gas pipes?

A. In some cases.

Q. Was that not the case in most cases?

A. No.

Q. How else would you know?

A. By the spiral running around a 6-inch main, which indicates the Consolidated Gas Company mains.

Q. A spiral?

A. A mark running around a 6-inch main.

4552 Q. That indicates a Consolidated main?

A. Yes, sir.

Q. Where did you learn that?

A. In my business, in the gas business.

Q. With the Consolidated Gas Company?

A. Yes.

Q. And when in this schedule, which has been spread upon the record, I find the word "sure," that means, if I understand you correctly, that you felt very sure those were gas mains?

A. Those were gas mains, yes, sir.

Q. Is it your contention that no other company but the Consolidated used these spirals in indicating its pipes?

A. Yes, sir, that is running around.

Q. That is your understanding?

A. Yes, sir.

Q. When you were with the Consolidated Gas Company, how did you know the pipes of the Consolidated for the purpose of connecting them up where they came within your province? Were they pointed out to you by a foreman?

A. No, sir.

Q. How did you know them?

A. I did know them.

Q. You did not?

A. I did know them.

Q. Do you mean to say you know the mains of the Consolidated from the mains of any other company when they are exposed?

A. When they are exposed.

Q. When you went to make your connections while you were with the Consolidated Company, how did you know that the mains were the Consolidated Gas Company's mains?

A. On the north side of street, three feet or four feet from the curb, is the Consolidated; on the south side of the street, three or four feet from the curb, is the New Amsterdam; outside of that, or wrought iron pipe, is the Standard.

Q. You mean to say that is universal?

A. That is universal.

4553 Q. All through the city?

A. Pretty nearly all through the city.

Q. And that was the way you determined which were the mains of the Consolidated in making connections?

A. Yes, sir.

By Mr. Kirby:

Q. You spoke of measuring the distance from the highest point of the main to the surface of the street. Do you mean by that that you measured from the top of the bell?

A. We measured from the top of the pipe where you tap. We put a rule on the center like this here (indicating); we put it on the top of this right here and then we hold the stick over the pavement and get the level.

Q. But you would not measure where two pipes join or come together, and where there was an edge or bell?

A. Do you mean at the hub?

Q. Yes.

A. No, sir.

WILLIAM D. MARKS, recalled on behalf of the City:

Direct examination by Mr. BURR:

Q. Since your last appearance here as a witness I believe you have been acting as one of the Advisory Engineers to the accountants engaged in making an examination of the books of the Consolidated Gas Company?

A. I have.

Q. And you have also made an examination of the plants of the company, or some of them?

A. With Mr. Lacombe I examined the meter shop and also one of the fitting or jobbing shops.

Q. For what purpose?

4554 A. As a member of the Advisory Commission, being taken to these two shops by Vice-President Addicks for the purpose of examining their methods of doing work and keeping account of it at the shops; the meter shop and the jobbing shop.

Q. Was that visit the result of any difficulty which, as a member of the Board of Advisory Engineers acting in connection with the accountants, you experienced?

A. Yes, sir.

Q. And it was for the purpose of verifying those vouchers that that visit was made by both yourself and Mr. Lacombe with President Addicks to these shops?

A. As members of the Advisory Commission we were confronted by a very large number of vouchers which did not go into detail or definitely indicate their use after disappearing into these shops, and it was for the purpose of finding out how this material was handled that we applied directly to Mr. Addicks, Vice-President, and had from him an explanation which was very satisfactory and clear.

Q. That explanation or information you were unable to obtain before that time?

A. We made a number of applications before that, failing to obtain the information, and have particularly charged the accountants—Mr. James Hall in charge—with the question of what became—in fact, we made a record of our query, which is noted in the minutes of the Advisory Commission. I can read that, if you wish.

Q. No, that is all in evidence here. Whatever you did with regard to those disputed or doubtful vouchers, your action appears in the minutes of the Board?

A. It does.

Mr. Mathewson: Mr. Master, I do not intend, if I can help it, to waste time in putting in any rebuttal evidence. The Master knows very well, I think, from what has appeared here that we offered long ago to permit an inspection of any apparatus, if the vouchers
4555 were pointed out which were in doubt, and we were not given a list of the vouchers. I do not like to have the witness appear and say he never had any opportunity——

Mr. Burr: I do not like to have statement appear on the record, because it is not true. The vouchers were spread out for your examination.

The **Master**: Do not let us have any further argument on this subject.

Mr. Mathewson: I do not care anything about your statement that my remark is a misstatement. I did tell the truth, and you can say anything you please. It does not worry me at all.

Mr. Burr: I can return the compliment.

Q. Is it or is it not a fact that these various vouchers which were recognized as disputed or doubtful by the accountants and by your Board of Advisory Engineers were laid aside for the inspection of the officers of the Consolidated Gas Company, and their attention specifically called to those vouchers?

A. They were. I saw them on either Mr. Addicks' or Mr. Carter's table the day on which Mr. Lacombe and myself went for the purpose of seeing Mr. Addicks directly.

Q. Was their attention called to the specific vouchers in writing or orally, if you recall?

A. Mr. Hall was instructed in writing to place these vouchers, and a list of them, I think, although—no, no list, but simply to select these vouchers as mentioned and place them before the officials of the Consolidated Gas Company.

Q. Now, in addition to that occupation since your last ap-
4556 pearance here have you also been engaged in making an examination of the maps of mains?

A. I have.

Q. Those maps of mains number how many volumes?

A. The maps of mains shown by the Consolidated Gas Company number twelve volumes, of which Mr. Simpson said that two volumes——

Q. I only want to know how many volumes there were, how many maps in each volume, so that the Master can get an idea of the magnitude of the task you undertook to accomplish?

A. (Continuing:) Of which Mr. Simpson said that two, volumes 9 and 10, devoted to The Bronx, had very little in them, and would not interest us. We accepted his statement and figured on those volumes. Of these twelve volumes there were about three hundred and ten maps, each mapping a certain portion of the Island of Manhattan.

Q. And do you recall the testimony in this case that there were mains belonging to the Consolidated Gas Company in every street in the City of New York?

A. I do.

Q. So that you have practically made an examination of the mains of every street in the City of New York, so far as they are shown by the maps of the company? I mean on the Island of Manhattan?

A. On the Island of Manhattan, so far as they are shown by the maps of the company, and measured them.

Q. Have you been engaged in any other work since that time that I speak of, when you last appeared here as a witness? I mean in connection with this case?

A. I have also been engaged in the appraisal of the 14th Street coal gas station of the Consolidated Gas Company.

Q. Have you just finished that appraisal?

A. I have.

4557 Q. That work that you have described as having been engaged on has kept you pretty busy since the time you appeared here as a witness, has it not?

A. With a number of assistants, amounting to about eight, and myself, we have toiled uninterruptedly.

Q. About how many hours a day?

A. I should say an average of fourteen hours a day, working time.

Q. And from your observation of counsel for the city, have you any hesitation in saying he has worked the same number of hours in the same business; that is, in the trial of this case?

A. What is that?

Q. Is it or is it not a fact that counsel worked about the same number of hours preparing for the trial of this case during that time?

A. Counsel has been ever with us.

Mr. Mathewson: The counsel has been here a considerable part of the time and you have not, Doctor. I do not see how that can be.

Mr. Burr: The Doctor is speaking of the time I have spent here, the time I spent with him and the time I spent with the other experts in this case. The point is, I want to show there has been no *laches* or neglect on the part of either——

The Witness: I referred more particularly to the meetings of Mr. Burr before attending the session in the morning, the meetings at noon, and then in most cases the whole of the evening as well.

Q. Well, you say you have made an examination of the 14th Street plant?

A. I have.

Q. Before proceeding to that subject, Doctor, I want to call your attention to a particular item in the accounts to which your especial attention was called by Mr. Mathewson when you last appeared here. I refer to the charge, depreciation, $282,219.67?

A. Yes.

4558 Q. And you recall the examination of Mr. Mathewson in that regard, do you?

A. I do.

Q. And the inquiry made of you as to the reason for your rejection of the 2.12, contingent per thousand, which Mr. Carter adopted, and the adoption by you of another figure for a lesser amount?

A. I do.

Q. What do you find, as a matter of fact, from the examination of the accounts in the books of the company?

A. I find that the $282,219.67 did not represent an actual expenditure as I had suspected, but that it represented a cross entry to depreciation made by order of the Board of Directors of the Consolidated Gas Company, January 30, 1906. And, further, that this $282,219.67 cross entry, not representing any actual expenditure whatsoever, as I suspected——

Mr. Mathewson: Oh, I move to strike that out, "as I suspected." This is virulent from the beginning.

The Master: Strike it out.

Mr. Burr: Exception.

The Witness (Continuing): Was $60,000 in excess of the proper cross entry, because depreciated mains for 1903 and 1904 were introduced into the depreciation for the year 1905, leaving a balance of about $220,000 charged by cross entry to depreciation, or an average as deduced by the accountants of 1.71 cents per thousand cubic feet of sales.

Q. In other words, you stated to Mr. Mathewson, at that time, your reason for rejecting that amount and adopting the smaller amount, as your testimony appears on page 3686, where you say: "I explained as fully as I was able my reasons for that selection. I do not think I can add anything to it." And you are confirmed in your——

4559 Mr. Mathewson: Whether he is confirmed or not appears, doesn't it, from what the fact is? Is there any use in rehearsing his prior testimony?

Q. Do you see any reason to change your testimony in that regard as a result of the examination of the accountant or does it confirm what you previously testified to?

A. It confirms.

Mr. Mathewson: Objected to as——

The Witness: It confirms my previous testimony.

Mr. Mathewson: Wait a minute when I object. I object to it as incompetent, immaterial and irrelevant.

Objection sustained. Exception.

Q. When did you begin to make an examination of the 14th Street plant?

A. During the early part of last week. I cannot fix the date exactly.

Q. How long were you engaged in it?

A. In the actual inspection of the plant, almost all of the week.

Q. And have you since been engaged in tabulating the result of such examination and inspection?

A. I have.

Q. Have you finished the tabulation of the mains this morning, or will you have them ready to-day?

A. I have finished the tabulation of the mains for the Island of Manhattan and The Bronx, as stated in the estimate from Mr. Simpson and the book figures. I have gotten the lengths in feet and miles of each size, but I have not yet quite completed the computation of the value of these mains. That should be completed within a few hours.

Q. In making this examination of the 14th Street plant, were you assisted by anyone?

4560 A. In examining the 14th Street plant I was assisted by Chief Engineer Lacombe and by Mr. H. H. Edgerton.

Q. What is the total amount of your appraisel of the buildings and apparatus of the 14th Street station?

Mr. **Mathewson**: Has the witness made a schedule of the 14th Street station?

Mr. **Burr**: Yes, sir.

Q. Regarding the schedule, Doctor, how was that made up? How was the schedule made up?

A. I have not answered the other question. I should like to find the figures, first.

Mr. **Mathewson**: I object to this question on the ground that the witness is incompetent and not proven expert sufficiently enough to testify on that subject.

Mr. **Burr**: All his qualifications have already been gone into.

Objection overruled. Exception.

A. $1,454,664.00 for the buildings, holders, and manufacturing apparatus of the 14th Street station.

Q. How did you obtain this?

A. From a catalogue furnished by the Consolidated Gas Company, a bill of material or an inventory was drawn off for the use of the three engineers appointed. From the testimony given by Mr. Mayer the values fixed were placed on this bill by a careful reading of the testimony, as Mr. Mayer's inventory as a whole was not put in evidence. This bill of material or inventory was taken and the prices fixed by the gentlemen named, Messrs. Lacombe, H. H. Edgerton, and, so far as the iron work was concerned, by President Logan of the Logan Iron Works. With the exception of myself, 4561 no one member of the Committee of four fixed all the prices or the prices on all the different parts of the works. For the purpose of obtaining a clear comparison of the views of each of the gentlemen named, their values were put down in a tabulated form, giving the value for each item as given by or estimated by each member of the Commission. Then, in addition to this, the inventory by Thomas L. Rowland, 1884, shown in Senate Document 97, was analyzed for the purpose of obtaining his values of such details as were in existence in 1884, and from this comparative tabulation, which is in rather too bulky a form for ordinary use, I drew off a brief statement of the value of the works, making it $1,454,664.

Q. Now will you give us the details?

Mr. **Mathewson**: Do you mean the detailed valuations of the different classes——

Mr. **Burr**: A summary; the totals.

Mr. **Mathewson**: Mr. Master, I shall have to object to this testimony as to valuation. It is not the testimony of this witness apparently, as to what he believes the present value or the cost of reproduction of these works is; it is evidently conglomerate, made up from various things and considerations and men; and, besides that, he puts in here Mr. Logan's valuations, as he says they are; whereas Mr. Logan himself has been on the stand and testified, and you will remember that Mr. Logan in many instances said that he thought the figures which Mr. Mayer had given as present value less depreciation, were not too high. I then asked him whether the figures which Mr. Mayer gave as the original cost of them were too high, if he considered new value, and he said no, he thought they were right.

I do not know what figures the witness has used here, and 4562 I do not think it is of any importance, but, I submit, you cannot prove the value of a plant by any such method of testimony as this. It is utterly impossible to cross-examine this witness as to what was done by Mr. Rowland or what his theory is, or what Mr. Lacombe's theories are.

Mr. **Burr**: You misunderstood the witness. The witness says that for the sake of convenience he has arranged the schedule. You asked him with regard to a schedule or inventory, and he proceeded to tell you what sort of an inventory he has here before the Master, and he tells you he has arranged the various valuations on the schedule. He is about to testify to his own valuation of the matter, his own consideration of the plant and apparatus.

Mr. **Mathewson**: I move to strike out the witness' testimony that the value is $1,454,664.00, of the 14th Street plant, in view of his statement as to the method in which that was made up.

The **Master**: He has said that he himself had valued all the articles, and he was the only one that did. Now, it is perfectly proper for him to come and testify as to his own valuation on those articles, and that he will be restricted to. Of course, he cannot testify about any average made by comparison of his figures and those of the other members of the so-called Advisory Board. I do not understand that he proposes to do that. If he does that, the objection is sustained.

Mr. **Burr**: There is no such intention. He is going to state his own valuation of this plant and give his reasons for the valuations.

The **Master**: But the fact that he was sustained or confirmed in any way by any of these others is entirely incompetent and 4563 irrelevant. He dwelt on that at some length, but that does not cut any figure here.

Mr. **Mathewson**: He says the iron work, which is part of this, was valued by Mr. Logan, and not by him.

The **Master**: That was redundant and irrelevant, but let it go, in view of what Mr. Burr says, that he is going to testify to his own valuation.

Q. Will you give us in a little more detail the valuation amounting to $1,454,664.00 which you have placed upon this plant?

Mr. **Mathewson**: Let me see. I would like to ask a question in advance, whether I understand that the valuation that *you* placed upon this property is $1,454,664.00?

A. It is.

By the **Master**:

Q. And the statement you are about to present is a detailed statement of your own figures, which results in the aggregate to that sum?

A. It is.

By Mr. **Burr**:

Q. Now, will you proceed?

A. I have visited every building and every piece of apparatus, for which figures are given, at least twice; and have checked the figures given by others and fixed my own at the same time.

Referring to apparatus visible from 1884, although liberal, my valuation of their structural cost is $1,706,294. The retort house——

4564 By Mr. **Mathewson**:

Q. What is that $1,706,294?

A. My valuation of the property in existence in 1884.

Q. Which is still in existence?

A. Yes, still visible and in existence; my valuation of that is $1,706,294. In this I agree with Rowland's valuation. The depreciation on this property is estimated at fifty years, since the retort house and the principal appurtenances to it were built in 1853, according to the testimony of Mr. Mayer.

The depreciation is .85 of 1 per cent., or 42½ per cent., giving $725,175 depreciation, and leaving a balance of $981,119.

There has been added since 1884, my valuation:

(71)	1 stack 24 benches 6s	$50,000	
(72)	4 stoking mach. (Bronder)	16,000	
(73)	1 stocking mach. (Bronder)	4,400	
(74)	1 stoking mach. (De Brower)	10,500	
(76)	1 Ross Drawing Mach	5,000	
(77)	3 Extra engines	700	
(87)	1 Isbell Porter scrubber	7,000	
(88)	1 Hunt Aut. Ry. (coke passage)	8,000	
(90)	2 sixty-ton Coal Hoppers	3,000	
(100)	Exhauster House App. (15th St.)	8,000	
(101)	2 fifty H. P. boilers	3,000	
	Total additions	116,000	
	Depr. 12 yrs. at .85 of 1%, say 10%	11,600	
			$104,400

4565 Yard & Holder pipe connections in 1906	$146,895	
In 1884	82,178	
Increase Value Yard Connections	$64,717	
Depr. 12 yrs. at .85 of 1%, say 10%	6,472	
		58,245
Holder & steel tank, 3,250,000 c. ft.	$225,000	
Foundation for steel tank	50,000	
		275,000
Coal Hopper Bldg.	$7,000	
Exhauster House, 15th St.	19,500	
Boiler House, 15th	3,400	
Boiler House, 15th, new (practically completed)	6,000	
		35,900
No depreciation.		
Total estimated present value of buildings and apparatus		$1,454,664

By Mr. Burr:

Q. You have not been able to make any examination of any other plants of the company for the purpose of placing a valuation on them?

A. I have had no time to do so.

Q. Although you stand perfectly willing and ready to do so?

A. I am.

Q. You have here a schedule, have you not, giving the valuation you have placed upon each piece of apparatus in this plant or station?

A. I have it here.

4566 Mr. Burr: This is all I can ask this witness with regard to the plant. I expect in an hour to have the mass of detail with the amounts tabulated and the results totaled, but I submit I have no more questions to ask him now upon the valuation of the plant, and Mr. Mathewson is at liberty to examine him with regard to that.

Cross-examination by Mr. Mathewson:

Q. You remember that it was assented that certain engineers should be permitted to examine the plant of the Consolidated Gas Company for the purpose of estimating their value, that being something like two months ago? You remember that, do you not?

A. I do not.

Mr. Burr: Objected to. I do not know what he desires to show by this.

Mr. Mathewson: You have gone into this complaint about not being able to see——

The Master: Objection overruled. Proceed.

Mr. PAGE: The objection is, I suppose, that the question assumes a fact that does not exist.

The MASTER: No ground of objection was stated.

Mr. BURR: I object to it as incompetent, irrelevant and immaterial, and because, as the Senator says, it assumes a state of facts which does not exist here.

Objection overruled; exception.

Q. You do not remember that?

A. As far as I remember, I most positively do not.

Q. Do you remember that any arrangement was made several weeks ago that several engineers named by the defendants might examine the plants of the Consolidated Gas Company and 4567 that the Consolidated Gas Company consented to that; do you remember that?

A. I remember——

Q. Do you remember that? That is the question.

A. I don't remember that specifically. I remember visiting the works about——

Q. That is not the question. I asked you whether you remembered that an arrangement was entered into by which certain engineers were permitted by the Consolidated Gas Company to examine the plants of the company for the purpose of making an estimate of values?

A. What engineers?

Mr. BURR: Do you refer to Messrs. Hough and Logan?

Mr. MATHEWSON: I had nothing to do with the naming of the engineers. I refer to an arrangement by which the defendants were entitled to send engineers to the plants of the Consolidated Gas Company, to inspect those plants for the purpose of testifying as to their value.

Mr. BURR: You need not examine this witness with regard to that. We concede that was the fact.

The WITNESS: That matter was arranged by counsel amongst themselves, and I have never had any definite statement from any of the counsel so far as I am individually concerned.

Q. You do remember that it was also arranged that the defendants' experts might have an opportunity to examine the books of the Consolidated Gas Company respecting the cost of gas, and so forth?

A. I do.

Q. And you were in charge there, were you not?

A. I was.

Q. And you were not appointed for the purpose of inspecting the plant in order to determine their value at that time, were you?

A. I was assigned in charge of the accounts distinctly.

4568 Q. Now, you subsequently came to Mr. Carter, did you not, several weeks ago and asked him for permission to examine the plants, because, you said, there were certain vouchers which you could not determine whether to charge to construction or to repairs or replacements until you examined the apparatus involved?

A. That was all related in a letter addressed to Mr. Burr.

Q. But in substance that was the fact, so far, wasn't it?

A. As near as I can remember, yes.

Q. And did not Mr. Carter tell you subsequently that if you would give him a list of the vouchers which you doubted, with the items which you had a question about, that you might inspect that apparatus to see where the application should be made; do you remember that, in substance?

A. There was a statement that there was a list required from Mr. Carter.

Q. Do you remember telling him at that time that you would not give him any list, the first time you discussed it?

A. I don't remember saying that I would not give him any list. I told him it would be a very difficult and very tedious operation, and had the vouchers sent to him.

Q. You did not at that time consent to give him any list?

A. I had the vouchers sent to him.

Q. You did not consent at that time to give him any list or to name the vouchers?

A. I repeat exactly what I have said to you, that I told him it would be very difficult indeed, because it involved a large number of vouchers, which were subsequently sent to him.

Q. Did you tell him at that time when this first came up, several weeks ago, that you would give him a list of the vouchers or that you would give him the particular vouchers to which question was made?

A. I never told him that I would give him a list, but, after
4569 consultation with Mr. Burr, I sent the vouchers to him.

Q. Don't you remember that subsequent to that conversation you were in Mr. Burr's office when Mr. Burr called me up on the telephone and asked why Mr. Marks could not inspect the plant, and weren't you informed that I told Mr. Burr that what we wanted was a statement of the vouchers which were in question, so that we could get which were doubted, and in that event you should be permitted to inspect the apparatus involved in those vouchers, to determine what their obligation should be? Don't you remember something like that?

Mr. Burr: I object to that, asking this witness to testify to a conversation between Mr. Burr and Mr. Mathewson over the telephone.

The Master: If he cannot answer the question he can say so.

A. Why, of course, I cannot answer it.

Q. Were you informed by Mr. Burr at that time that my position was that if you gave a list of the vouchers or told us which the items were that were questioned that you might inspect the plant as to those items? Weren't you so informed by Mr. Burr, in substance?

A. I recall Mr. Burr mentioned, and I don't know at that time mentioning the fact that this request had been made, and my reply being that the number of vouchers involved were so large and so numerous, being classifications of vouchers which required a general examination because they were general classification work, that it was impossible, and finally I think it was my suggestion that all of the vouchers of which we were in doubt should be sent down for Mr. Carter's examination, which was done, I think.

Q. No matter about that, you are getting ahead of the story. 4570 Weren't you informed that some days subsequent to that a conference took place in the office of the Master at which Mr. Burr was present and at which I was present, at which the same subject was brought up and that I repeated before the Master that if a statement was given of the vouchers to which objection was made, or if we were informed what they were, that Mr. Marks might inspect the plant to determine what their application should be? Weren't you informed of that?

A. I was not present at the time.

Q. Weren't you informed of that? Be good enough to answer the question?

A. I was not present at the time and I shall state what I have told you in a general way, but cannot recollect this specific instance as following the conversation you name.

Q. And after Mr. Burr informed you of the purport of this conversation before the Master did you not then request Mr. Hall to write and say that the vouchers to which exception was made were spread out on the table or were accessible to the Consolidated?

A. If Mr. Burr so directed me I certainly did.

Q. You did at any rate thereafter request Mr. Hall, you say, to write a letter stating what the vouchers were or where they could be identified, didn't you?

A. Why certainly I did.

Q. And don't you know that immediately after that letter from Mr. Hall was received that you went and found the vouchers, hundreds of them, perhaps a thousand, and spread them out on the table and we were told that those were the vouchers?

A. That was a matter of Mr. Hall's.

Q. Isn't it your information that that was done?

A. I saw those vouchers, I think, I cannot swear to it posi- 4571 tively, resting on either Mr. Carter's or Mr. Addicks' table in the office of the Consolidated Gas Company.

Q. Weren't you informed that in spite of the fact that no specific vouchers were pointed out in that thousand vouchers that the Consolidated Gas Company was instructed by me to waive all technicalities and let you examine in reference to the whole thousand?

A. No, I was not.

Q. At any rate you were permitted thereupon to make an investigation?

A. Through the kindness of Mr. Addicks, yes.

Q. Now, when you say you were a member of the Advisory Board of Engineers, who appointed this Board of Engineers, or who constituted them a Board?

A. By direction of the Corporation Counsel that Board was named and approved.

Q. It had no official existence except as it was appointed by the Corporation Counsel, had it?

A. No, they were on the same footing as the accountants.

Q. Now, as a matter of fact, you found an item of $282,000 which was charged to depreciation, you say, of mains in 1905, which you reduced by something over $59,000, on the ground that there were certain mains which should have been charged off in 1903 and 1904 included in the amount, is that right?

A. The accountants said so, with the approval of the Advisory Board of Engineers.

Q. You approved it?

A. I did, as a member of the Board.

Q. Do you know whether in fact those mains were abandoned before 1905?

A. The accountants' statement was accepted by the Board.

Q. Do you know anything about it except what the accountants said to you?

A. What they stated on the record, that was all.

4572 Q. Do you know anything about it except what the accountants said about it?

A. What they stated on the record is all we know, and we believed that.

Q. If, as a matter of fact those mains were a proper asset of the company and were considered to be a proper asset in 1903 and 1904, there was no reason why they should have been charged off earlier than they were, was there?

A. That is purely an academic question.

Q. You cannot answer it?

A. No.

Q. And if they should have been charged off in 1903 and 1904 instead of 1905, then it would swell, of course, the depreciation charge for 1903 and 1904 to a corresponding amount?

A. It would.

Q. When did you begin the examination of the 14th Street plant?

A. The early part of last week; I am not exact on that statement; I would have to look it up to be certain of the day.

Q. Cannot you tell the exact day, try to think?

A. No.

Q. Try to think and let me know, as nearly as you can recall what day you began?

A. Not without reference to my notes, which are not here.

Q. Will you get your notes so you can tell what day and hour, as nearly as you can, you began this examination?

A. This afternoon, yes.

Q. When did you complete it?

A. Practically finished it last Saturday afternoon.

Q. Do you mean to say that within that period you made a complete inventory of the 14th Street plant?

A. A complete inventory, alleged, was furnished us by the Consolidated Gas Company.

Q. The inventory that was furnished you was the inventory made by Mr. Mayer, one of the witnesses for the complainant, was it not?

A. I don't know who made it. There were no figures attached to it.

Q. Were you not informed who made it?

A. I was not. It was in wretched shape, a jumble.

4573 Q. Too bad we were courteous enough to give it to you, if it was so bad. You say that from a catalog furnished by the Consolidated Gas Company an inventory was drawn off. What catalog was that?

A. There was a bunch of seven papers—of eleven papers handed to us, one to Mr. Burr, which has since disappeared——

Q. You do not charge us with taking that I suppose?

A. It was impossible to do anything with it in that shape and it was then drawn off in the proper form of a bill of sale or inventory.

Mr. MATHEWSON: I move to strike out the word "proper."

Mr. BURR: Well, in the form of a bill of sale.

The WITNESS: In the form of a bill of sale or inventory, for the purpose of using it.

Q. Is this the document you now show me?

A. That is the document.

Q. What was the catalog which you referred to? Was it the inventory which Mr. Mayer used?

A. No, indeed. Mr. Mayer would not have furnished anything like that.

Q. Were the catalog and inventory which were furnished by the Consolidated Gas Company identical, or what was the distinction?

A. The catalog only was furnished; there was no inventory in the proper sense of the word, completed in figures.

Q. What I am getting at is, were there two documents delivered to you, one a schedule of the property at 14th Street and the other a catalog or do you refer to the same papers when you use inventory and catalog?

A. When I speak of the Consolidated Inventory or catalog I mean one and the same paper.

Q. Well, you have not so spoken of it before. You do
4574 mean one and the same paper, do you?

A. Yes, which has no figures upon it.

Q. In other words, this catalog or inventory was a list or purported to be a list of the property at 14th Street as the Consolidated had it from Mr. Mayer, did it not?

A. I don't know how the Consolidated had it.

Q. Well, as the Consolidated had it, to put it that way?

A. As the Consolidated had it, yes.

Q. Did I understand you to say $1,454,000 was a figure arrived at by consultation of the gentlemen named by you and also by examining Mr. Rowland's figures?

A. I stated that——

Q. Was my understanding correct?

A. No.

Q. Well, it was not then reached by conference between you gentlemen, is that right?

A. It was not reached. They are my own figures.

Q. Did you value the iron work yourself?

A. I did.

Q. Did you value it independently of Mr. Logan?

A. I checked every one of Mr. Logan's figures and——

Q. Did you agree with Mr. Logan in every instance to a cent?

A. I did not.

Q. In this $1,454,000, so far as it includes property acquired since 1884, are not your figures identical in every instance with Mr. Logan's figures for the same items?

A. No, except in the case of holder and steel tank, the $225,000 fixed by Mr. Logan, being checked, was adopted by me.

Q. Did you not adopt his estimate of $50,000 for foundation for steel tanks?

A. I did not. I figured that myself.

Q. What do you mean by "Logan est." after "foundation for steel tanks," followed by the figures $50,000?

A. The typewriter put that one line too low.

Q. Ought that then to be opposite holder and steel tanks?

A. Yes.

4575 Q. What was Mr. Logan's estimate for the foundation for the steel tank referred to?

A. He did not make any estimate, stating that it was a very expensive foundation, merely.

Q. Will you point out any other item specified here which was not in existence in 1884 which Mr. Logan valued and which you have valued at a separate figure?

A. I do not see any item in that inventory which was valued by Mr. Logan subsequent to 1884 where I specifically gave a great deal of attention to his work; it was the holder which I understood he was a builder of which commanded my attention.

Q. Will you point out any one of the items which you have valued as added since 1884 here where your valuation is different from Mr. Logan's, if Mr. Logan made a valuation of it?

A. In the items shown there, there is nothing which I can find which relates to Mr. Logan's work or refers to it, excepting the holder. $225,000.

Q. Then that is the only item that you find that you took Mr. Logan's valuation as he gave it?

A. Checked it and took it.

Q. Now, so far as the property which you think existed in 1884 and which still exists is concerned, you took Mr. Thomas F. Rowland's valuation of 1884?

A. Yes, after checking it.

Q. And you figured depreciation of $725,175?

A. Yes.

Q. How do you know that the apparatus which you had in mind and included in that and the property in general is exactly the same now as it was then?

A. Well, the names of things is a matter of common consent, and I find them in the same spot.

Q. Did you have any information as to the measurements of these different pieces of apparatus by Mr. Rowland except what appeared on the schedules in evidence as showing Mr. Rowland's appraisal? 4576

A. I have no further evidence than the statement made in Mr. Rowland's appraisal.

Q. Do you know whether any part of that apparatus has been renewed or replaced since 1884?

A. I assumed that a great deal of it had been repaired.

Q. You found the apparatus working, didn't you?

A. Yes.

Q. And still you take off $725,175 of depreciation out of the $1,706,294, total valuation. Is that correct?

A. Yes.

Q. If parts of the apparatus have, from time to time, been renewed, then a new life starts for that apparatus, doesn't it?

A. You mean repaired?

Q. I mean renewed or repaired?

A. Why, yes.

Q. And then the 50-year life which you assume, or whatever life you have assumed would not apply as dating from 1884 would it?

A. To the apparatus as a whole.

Q. Yes.

A. Yes, it would.

Q. Would it to those particular items?

A. To the particular repairs, no.

Q. What life did you assume for this apparatus?

A. The retort house was built in 1853——

Q. What life did you assume for it?

A. And I assumed a life of 50 years.

Q. Then the life would have expired three years ago. Did you give any valuation for it at all now?

A. I beg your pardon?

Q. Then the life would have expired three years ago, if you gave a life of 50 years and it was built in 1853?

A. I misunderstood you, I don't think I answered your question correctly. You asked me what life I assumed, for instance for a retort house?

Q. Yes. I will ask you that.

A. If you will take the annual depreciation of .85 of one per cent. which applies to a building or a piece of apparatus kept in perfect repair, you will find that that will give a life of about 110 years, by dividing it. 4577

Q. Are not the retort house walls apparently in perfect condition to-day so far as substantial strength is concerned?

A. Indeed no; in many cases the brick is in very bad shape.

Q. It looked to you as though it were about to fall down, or anything of that sort?

A. Oh, no, just crumbling away.

Q. What is it made of?

A. Brick and iron.

Q. And if any part of it starts to tumble, I suppose new brick can be substituted, can they not?

A. They can.

Q. That would be a repair, would it not?

A. Yes.

Q. Were not the other buildings in use and supporting the apparatus which they were designed to support?

A. What other buildings?

Q. Fourteenth Street plant.

A. Some of the substantially built buildings were in good shape and others mentioned in the inventory were simply wrecks; the sheds more particularly.

Q. Oh, the sheds?

A. Yes.

Q. Wooden sheds?

A. For instance the shed with the stack, the stack was truncated at a height of about four feet above the ground and the shed itself was standing in all sorts of shapes.

Q. That was the wooden shed, was it?

A. No, there was corrugated iron and there was a wooden roof and there is either tin or tarred paper on top of it, and there was a brick wall on the outside of it and——

Q. Did you go through each one of these pieces of apparatus and make your estimate for the depreciation for each individual piece?

A. I am talking of the buildings. You mean——

4578 Q. I am referring to the whole property, buildings, apparatus and other property. Did you go to each individual piece of apparatus and make a separate estimate of its condition so far as each particular piece was concerned, as Mr. Mayer did in his testimony?

A. Will you allow me to explain how I did depreciate each piece?

Q. No. I want to ask you that question and have it answered. It is simple, I think.

A. I examined each piece with a view to depreciation.

Q. Did you set a depreciation upon each piece of property in making up your estimate?

A. You mean each building?

Q. I mean each individual piece of property separately, as Mr. Mayer did.

A. In the case of figures given by Mr. Rowland, I am liberal enough to assume that it has been kept in perfect repair and gave a depreciation due to inadequacy and obsolescence.

Q. You found that Mr. Yalden testified in 1884 that the property was virtually as good as new?

A. As I assumed myself, in my depreciation, that the property has been kept in perfect repair.

Q. Now let me repeat the question: Did you go over each individual item of apparatus and property and set opposite each item the amount of depreciation for that particular item as you found it exists, and if so, will you produce the memoranda which you so made?

A. In the case of buildings——

Q. Can you not answer my question yes or no?

A. Certainly, I did not go over every piece of property and put down depreciation.

Q. Now, Mr. Rowland's testimony was as to the value of this property in 1884, as you understand it?

A. Yes.

Q. And your testimony at present, if you adopt his figures, would be upon the basis of the valuation of 1884, would it not, so far as the property still remains?

A. So far as I have used his valuation, yes.

4579 Q. Where is the balance of your estimate beyond the $981,119 which is Rowland's valuation less your assumed depreciation? You took what value, the present value?

A. I took entirely my own estimate and checked out by comparison with Mr. Mayer more particularly and——

Q. The present value or what value?

A. The present value.

Q. The cost of reproduction now?

A. The actual structural cost.

Q. So that even assuming that you are right regarding the existence of the property in 1884 which you assume to exist now, your total does not represent the cost of reproduction now, but is a conglomerate made up of the cost in 1884, or the value at that time as estimated by Mr. Rowland, plus the present value of the balance of the property, is that right?

A. I would say that is about it.

Q. And when you use the term "structural cost" in your testimony, that is what you mean, is it, so far as this total of $1,454,000 is concerned?

A. I mean to give the valuation of an intending purchaser intending to operate the works in $1,454,664.

Q. How did you estimate the value of the iron work in the various heavy pieces of apparatus where the value depends upon weight as one of the items?

A. For instance in the case of tar scrubbers, there was a concurrence or agreement as to weight between Mr. Mayer and Mr. Rowland and also Mr. Logan. We had no time to rework these weights, we had to accept the figures given by Mr. Mayer and——

Q. What did you assume to be the weight of the tar scrubbers?

A. I have not Mr. Mayer's figures here.

Q. What did you assume to be the cost per pound of delivery of those delivered?

A. I would have to look up my notes to answer that question.

4580 Q. Did you make any assumption?

A. Yes.

Q. How did you make up your price per pound, what were the details of that computation whatever it was?

A. You refer to the price per pound for what?

Q. Tar scrubbers?

A. If you want, I can give *give* you those figures this afternoon. I have not got them with me.

Q. You have not bought or installed any apparatus yourself other than as you have testified in your original examination, have you, Doctor?

A. Do you mean iron?

Q. Gas apparatus. Have you had any experience, in other words, in the purchase of apparatus or construction of gas apparatus since your original testimony here?

A. Why, no, but you are speaking of purchasing iron.

Q. Well, scrubbers are iron, are they not?

A. Yes.

Q. That is quite right. I asked you——

A. But all iron is not scrubbers.

Q. I asked you what you estimated to be the weight of those tar scrubbers and what you estimated to be the price per pound delivered, and I would like to have the price per pound itemized so as to see how you made that up, referring to the price of the iron and the labor and so on?

A. Referring to the weight, I told you that I had accepted the figures given accordingly by Mr. Mayer and Mr. Rowland; referring to the price per pound, if you wish I will give you that this afternoon.

Q. I can tell whether they agree, the figures of these two gentlemen, when you say what they are. Let us take one stack, 24 benches, 6's; what did you put that in at, $50,000?

A. That is put in as $50,000.

Q. Present value?

4581 A. Present value. It is new, to all intents and purposes, a new stack. Mr. Mayer's figures are $49,980.

Q. Then why down below do you take off depreciation 12 years at .85 of one per cent., say ten per cent., $11,600, which is a deduction from the one stack of 24 benches as well as all the other property in that house?

A. Will you allow me to explain the method of depreciation?

Mr. Burr: That is what he asked for.

Q. I asked you why you take it off if you say that stack of benches is as good as new?

A. In all cases of depreciation I use the word with its accurate meaning, of a lowering of value. Depreciation results from several causes. The most ordinary one is decay or wear and tear, as observed. There is another factor which is inadequacy, owing to the increase of the business. There is also another cause of depreciation, obsolescence, which is due to changes in the arts and in the methods and in the general growth of scientific knowledge; if a works built at a certain period is kept in perfect repair, meaning by that, always restored to their original condition, and in good working condition, there remains, assuming that, a depreciation due both to obsolescence and to inadequacy, and that is this depreciation which I have given you here of .85 of 1 per cent. annually.

Q. That is entertaining, Doctor, but you stated a few moments ago, that these items in addition to the $981,119 represented the cost of production now, and you put one stack, 24 benches, $50,000?

A. Yes.

Q. And you say that is as good as new?

A. It is being reset.

Q. It was reset in 1906, wasn't it?

A. Being reset now.

Q. As good as new, very good. Now, the four stoking machines, you put down at $16,000? 4582

A. Yes. $16,000.

Q. And that is exactly the cost as given by Mr. Mayer, is it not?

A. Mr. Mayer's figure was $15,200.

Q. No, that is the $16,000, which he gave as the cost, less five per cent. depreciation, or $15,200?

A. Yes.

Q. Your valuation new is exactly the same as his?

A. Exactly, and I assumed them to be in perfect repair.

Q. Your next item, one Brouder stoking machine, $4,400, I see is exactly the same as his estimate?

A. Yes.

Q. One De Brower, $10,500, your estimate I see is exactly the same as his estimate new?

A. Yes.

Q. Your next item one Ross drawing machine, you give a valuation of $5,400, in which you are exactly the same as Mr. Mayer?

A. In which I agree with Mr. Mayer.

Q. The next is three extra engines?

A. Yes, small engines.

Q. $700?

A. I agree with Mr. Mayer there, it is $705 on his.

Q. One Isbell Porter scrubber $7,000. Mr. Mayer's estimate is $6,860 without depreciation?

A. Yes, I practically agree with him.

Q. The next one is Hunt Automatic Railway, $8,000. Do you agree with Mr. Mayer on that?

A. Practically. I am slightly less than his.

Q. Yes, his is $8,075.

A. $8,059.

Q. That is after depreciation of 2 per cent. is out, the $8,059. Two 60-ton coal hoppers, $3,000. His estimate was $3,315 wasn't it?

A. Yes.

Q. How many pounds did you assume there were in those hoppers?

A. These 60-ton coal hoppers?

Q. Yes.

A. How many pounds of what?

Q. How much they weighed?

4583 A. Well, they are very large structures, and they are up at the upper end——

Q. That may be, but what was your estimate of weight in your computation?

A. I will figure that out and bring it along for you.

Q. Did you figure that out before?

A. Yes, in a general way. Of course you understand you cannot walk around works——

Q. I understand, but I wish you had your memorandum with you, it would have saved me some trouble. What were the hoppers made of?

A. They seemed to be a composite arrangement.

Q. Describe them as nearly as you can.

A. They were covered with dirt and pyramidal in shape and came down to a point where they were able to dump coal, that is about as near a description as I can give.

Q. How were they sheathed?

A. That would be difficult to say.

Q. You did not find that out?

A. You could not in the time allotted.

Q. And you did not, of course?

A. No.

Q. Do you know whether——

A. However, I did not suppose——

Q. Do you know what the thickness of shell was?

A. In that case?

Q. Yes.

A. Well, I looked at it. I can tell you from my memorandum what I thought it was. As I do not differ with Mr. Mayer at all in the matter to amount to anything——

Q. His valuation is $3,315 new?

A. And mine was $3,000, there is about 10 per cent. difference between us.

Q. Take the exhauster house apparatus, 15th Street?

A. $8,000.

Q. Is that the same as Mr. Mayer's?

A. It is a little over his.

4584 Q. Two 50-horse-power boilers following you put at $3,000?

A. Yes, and I see Mr. Mayer's figure is $3,094.

Q. Do you know whether the amount you took off for depreciation was as great as Mr. Mayer's or less?

A. Somewhat greater.

Q. So that speaking generally, of the items which you valued as added since 1884 and which make all of the $1,454,664, with the exception of the $981,119 which you attributed to 1884 apparatus, your figures are the same as those of Mr. Mayer where he valued it?

A. To all practical purposes, on the structural cost. I am in agreement with Mr. Mayer. Will you permit me to call your attention——

Q. Let me ask you another question. You did not make any estimate of the present cost of reproduction of the property which was in 1884 and which you assumed to be still in existence and which you valued at $1,706,294, original cost, did you?

A. I did not. I estimated its present value.

Q. Have you the details of your valuation here, showing item by item what the values were?

A. These that I have here are only rough memoranda. The details which I have handed you over there—may I add one thing?

Q. No, this does not give the details of the valuation amounting to $1,706,294 for the 1884 apparatus.

A. May I make a correction here now? In looking over these details, I think that I omitted to put in four small purifiers, $16,000.

Mr. PAGE: That is without depreciation?

The WITNESS: Depreciated 10 per cent., net $14,400, making the total valuation $1,469,064.

Q. Now, Doctor, I would like to have you give me the schedule or memoranda showing in detail the items which you included in the $1,706,294 valuation?

A. I will try to explain that to you——

4585 Mr. MATHEWSON: I do not care to take the space to spread it on the record.

Mr. BURR: Does that appear in your schedule?

The WITNESS: The first column of my comparative schedule is a reproduction of Rowland's valuation of 1884 as given on pages 818 to 825, Senate Document 47, 1886.

Mr. BURR: And which is in evidence here?

The WITNESS: And which is in evidence.

Mr. BURR: Introduced by the Complainant?

The WITNESS: Introduced by the Complainant.

Q. Have you not made a memorandum of that and opposite placed your values making the $1,706,294? Have you not drawn it off and cannot you give me a list of that so I can see just what property you include in the description?

A. All the property given by Rowland in the first column. There are matters I would not like to have anybody see except you, Mr. Burr, on this. I will, if you like, tear off this and this, and put it in.

Mr. MATHEWSON: We have the Mayer and Rowland and Logan values in. If there is anybody not already in evidence, tear that off. There is no objection to my having those, is there?

The WITNESS: I would prefer you should not have these.

Mr. MATHEWSON: I do not care for those. All I care for is the list of the property——

4586 The WITNESS: There is one of them (handing paper). I will give you the next.

Q. Well, but you have not got your values in here in all these cases as to this apparatus?

A. I will give you this (handing another paper). Those are Rowland's valuations which have been gone over by me and accepted or——

Q. But in many items, Doctor Marks, there appears to be no valuation opposite?

A. It did not exist in that case.

Q. You mean the apparatus did not exist?

A. The apparatus or building did not exist at that time.

Q. Then you have not included any values for apparatus in Mr. Rowland's exhibit that you do not find now existing?

A. Oh no, I accepted Mr. Rowland's exhibit as a whole.

Q. Do you mean to say in Mr. Rowland's exhibit there are certain buildings or other property included and valued which did not exist then?

A. There are certain buildings omitted from Mr. Rowland's exhibit or inventory which were not in existence in 1884, but are in existence now.

Q. And you have valued those separately?

A. And I have valued those separately, accepting Mr. Rowland's as a whole, after going over it with a great deal of care and checking it out.

Q. I understand these two sheets that you have given me are the items making up the total of $1,706,294?

A. They are, yes.

Mr. Mathewson: I will ask to have those marked for identification, so if I should use them later, they can be identified.

Paper marked Complainant's Exhibit 257 for identification.

Mr. Mathewson: I have a few more questions as to these items since 1884, and I will ask you to bring your details this afternoon, and I will postpone my conclusion, as I cannot proceed without them. I shall be very brief then, I think. 4587

Recess until 2.15 P. M.

After Recess.

William D. Marks resumes the stand and further testifies:

The Witness: During lunch time I have re-worked the holder foundations which was an item of $50,000, and two tar scrubbers, an item of $42,706, and I am prepared on those two. On the hopper there are so many figures; it needs so many different kinds of wood and iron that it requires an engineer's pocket book and an hour or two this evening to prepare that.

Cross-examination (continued) by Mr. Mathewson:

Q. My question was whether you actually worked out these values that you gave in advance, with your weights and prices per pound before you and whether you examined and found out what the character of these items was; for instance, what kind of iron or steel was used; whether before you testified this morning you had made an examination?

A. Oh, yes.

Q. As to each particular item, and figured it out in detail?

A. Yes. You must recollect I have been at this sort of job thirty-five years.

Q. When you spoke about your not knowing this morning what the hopper was sheathed with, you said it was covered with dirt?

A. On the outside.

4588 Q. Well, a hopper is away up in the air isn't it?

A. Yes.

Q. And the dirt to which you referred was the ordinary soot or blackening of a gas works, wasn't it?

A. Everything—dust, coal dust, cinders and everything else.

Q. And you did not take occasion to mount and examine and scratch the sheathing to find out what it was made of?

A. No, I accepted Mr. Mayer's statements as to materials and checked them roughly.

Q. Now, in reference to your figures for the holder, 3,250,000 cubic feet capacity, respecting which you accepted Mr. Logan's valuation of $225,000——

A. For the iron.

Q. (Continuing.) ——Instead of Mr. Mayer's valuation of $262,224 for the value of that holder new, everything included, did your $225,000 include the iron work of that holder proper alone?

A. The $225,000 included the steel tank and the holder, but not the foundation.

Q. What did you take to be the weight of that holder, including the tanks and pipes, in making that computation?

A. In that matter I left it entirely, the weights, to Mr. Logan, and checked by dividing the capacity into Mr. Logan's price.

Q. You assumed his weights?

A. I accepted the weights without question.

Q. You did not make measurements yourself of length, breadth and thickness of the parts from which you might compute the exact weights?

A. I accepted Mr. Mayer's length, breadth and thickness without criticism.

Q. But Mr. Mayer did not state what the thickness was in the description which you have of that item, did he?

A. It was not necessary to know the thickness because I accepted Mr. Logan's figures in that matter.

4589 Q. You accepted his estimate without special measurements on your own part?

A. I did.

Q. And did you know what pressure that holder threw?

A. I did not ask.

Q. What price per pound, including the value of the permanent frame, did you assume in computing the value?

A. I did not ask, I accepted Mr. Logan's figures and made a capacity check.

Q. You have valued the foundation for steel tank at $50,000 and have stated that those are your figures, and not Mr. Logan's estimate?

A. I have.

Q. How many yards of excavation did you allow?

A. Excavation?

Q. Yes.

A. 200 feet diameter, 8 feet deep, 9,309 cubic yards at fifty cents; $4,654.

Q. The excavation you fixed then at only $4,654?

A. $4,654.

Q. How much per yard did you allow for taking that dirt out?

A. Fifty cents.

Q. Do you mean to say you allowed only fifty cents for taking it out and taking it to the dump and disposing of it?

A. I do.

Q. You have not done any contracting of that sort in the City of New York recently, have you?

A. I have not.

Q. Did you allow for any piles under that foundation?

A. 3,000 piles at $7.50 each, driven; $22,500.

Q. That was the sum that Mr. Mayer allowed for piles, wasn't it?

A. I thought Mr. Mayer's price was $5.00. I do not know.

Q. No, $7.50. How much concrete did you allow for?

A. Six inch concrete, 150 feet diameter, circle in centre, 327 cubic yards.

Q. 327?

A. 327 cubic yards; 2 foot ring, 21 feet wide around the outer edge, 847 cubic yards. Then in place of the brick wall I allowed——

4590 Q. Wait a minute. How many yards of concrete, all told?

A. One thousand five hundred yards of concrete, all told.

Q. You did not measure the amount of concrete, did you, but accepted the figures of Mr. Logan in that regard?

A. I accepted Mr. Mayer's figures.

Q. As to the number of yards of concrete?

A. I did not, as to the dimensions of the foundation.

Q. In the retaining wall how many thousand brick did you allow, and at what price?

A. I assumed a two-foot concrete wall for that, allowing 326 cubic yards, assuming that the cost would be the same.

Q. Well, how much did you allow then for the cost, for the concrete instead of brick?

A. At $7 per cubic yard; $2,282.

Q. Well, Mr. Mayer's figure is $3,750 of brick and you were not then reproducing the foundations exactly as they now are, were you?

A. Mr. Mayer estimates brick work at $25 per thousand laid. To me that appears to be an overestimate, at the present rates.

Q. You estimated concrete instead of a brick wall as it exists?

A. Yes.

Q. How about the blue stone coping? How many feet, and at what price?

A. I let that go along with the extra thickness of the concrete wall.

Q. Mr. Mayer's estimate of the blue stone coping was 390 cubic feet at $3.50, so that the retaining wall and the coping together, according to his estimate, amount to over $5,000?

A. Yes.

Q. And for both you allowed $2,250?

A. Yes; for both $2,282. About one half of it.

Q. How deep did you figure the excavation?

A. I took an excavation at about eight feet since the wall was carried down to a depth of seven feet.

4591 Q. Does that make up your exact total of $50,000?

A. Oh, no. The total is as follows:

Piling	$22,500
Concrete work	10,500
Excavation	4,654
Total	$37,654

Allowance to contractor for profit and contingencies, the difference between that and $50,000.

By the **Master**:

Q. About what per cent. is that which you allow for contractor and contingency?
A. About 33 per cent.

By Mr. **Mathewson**:

Q. Have you ever done any excavating on the Island of Manhattan?
A. No.
Q. Never constructed anything on the Island of Manhattan?
A. Never. I have the two tar scrubbers if you care for them. They are an important item.

Mr. **Mathewson**: That is all.
Mr. **Page**: I would like to ask Mr. Marks one or two questions as to the plants.
Mr. **Burr**: I have no objection to your asking a question.
Mr. **Mathewson**: I have another question or two.

By Mr. **Mathewson**:

Q. Your investigation discloses that Mr. Mayer had prepared his valuations with great thoroughness, didn't it?
A. Of the structural cost.
Q. And in regard to the valuations for structural work you substantially agreed with him? 4592
A. With him; and I think most of the others did, except in the case of the gas holders.

By Mr. **Burr**:

Q. I do not want to dwell at any length upon this question about the vouchers, but as a matter of fact was not the situation this: That when a period arrived that the accountants, acting with the Board of Advisory Engineers, were unable to ascertain from certain vouchers themselves what way they had been charged up in the books of the company and whether they were properly charged to one account or another, it was deemed advisable to have an inspection of the plants for the purpose of ascertaining the method adopted by the company in that regard; that is, whether these repairs of a certain kind were really construction, or should be charged really to construction instead of to operating account; is that the fact?
A. That is the fact. We wished to learn of the disposal of that material.

Q. Whether it was in the plants themselves on storage in the storerooms, or whether it had been used in the plants, actually used?

A. Yes.

Q. And for that reason a certain number of these vouchers were set aside for the purpose of having Mr. Carter or some other officer of the company examine them?

A. Yes.

Q. As they had expressed a desire to examine them?

A. Yes.

Q. And finally that having been done it was arranged with Mr. Addicks that a quick inspection of the plants should be had for the purpose of observing the manner in which those repairs or materials were treated?

A. Mr. Addicks took us to see not the generating plants, but two of the shops—the meter shop and one of the jobbing shops.

4593 Q. And in that way gave you a general view of the system adopted by the company in treating these repairs?

A. Yes.

Q. Now, the fact that at this late day you are called as an expert to testify as to the value of the plant arises quite unexpectedly, does it not?

A. It does.

Q. It was not intended that you should testify, and you heard me so state a long time ago at one of these hearings, did you?

A. I did.

Q. And the idea was that you were to act in an advisory capacity with the accountants as it was then stated?

A. It was.

Q. And the fact you are here now testifying is due to the fact that one of the experts called by the State was not accepted by them, as you understand?

A. It is as I understand.

Q. So that there has been no neglect or delay on your part in doing any duty that was assigned to you to do?

A. None whatever, so far as I have been able in the time permitted.

Q. You have stated the amount of depreciation which you have allowed upon the 14th Street plant. Will you be good enough to state upon what you state that depreciation and how you arrive at it?

A. First of all, I did not assume the attitude of an engineer, but that of an intending purchaser wishing to purchase the plant and to continue to operate it, believing that to be the attitude in which the company to-day is. It would not in that case be fair to assume the actual structural cost of the gas works going back so many years, regardless of depreciation, or, on the other hand, to assume the scrap cost of the works and stock, and the buildings and apparatus idle, without intention to make further use of them.

4594 Q. Now, you say you have not estimated the actual structural cost of the buildings and apparatus, nor have you estimated the scrap cost of the abandoned works. On what basis have you estimated the present value of these works?

A. On the basis of the structural cost, less actual depreciation.

Q. Then how have you determined the depreciation?

A. In determining the depreciation in the correct sense of the word, the first consideration would be the visible decay of the apparatus due to wear and tear. The second consideration would be its adequacy or inadequacy to the purposes for which it is used to-day; and the third consideration would be its obsolescence, meaning by that the methods of manufacture and the methods of transmission of power, the general changes, and the growth of technical knowledge as applied to gas making, the progress of the business since the design and building of the works and whether or no the works are kept up to date.

Q. Can you give me an example of the depreciation due to decay and wear and tear?

A. Yes. For instance, a brick building with a slate roof might have its life fixed at 100 to 120 years. Although kept in perfect repair all the time, still the decay and the changes of time would probably have made it earn its cost in the time mentioned and warrant its replacing, because of the apparent wear and tear, the rusting of the trusses, the decay of the bricks, the movements of the foundations, although all the time every repair that was possible might have been done to it.

Q. Is there anything more you desire to say on that point?

A. Regarding the depreciation due to decay I would also mention the case of a boiler. It is usual amongst engineers to assume the life of a boiler kept in perfect repair to be somewhere in 4595 the neighborhood of fifteen years, although this life will very largely depend upon the quality of the water which is used in it and the severity of the services required of it.

Q. Will you give a case of depreciation due to inadequacy?

A. In his testimony Mr. Simpson states that at present the Consolidated Gas Company does not lay down any mains less than eight inches in diameter and that for many years he has not laid any mains less than six inches in diameter, in a street in Manhattan. For this reason it would appear as though the one and one-half inch, the two-inch, the three-inch, the four-inch and five-inch mains were regarded by the Consolidated Gas Company as being inadequate for the demand of the present day. Ultimately they will have to be abandoned and the mains depreciated by the cost of these small mains.

In the case of the retort house the water appeared to be within six feet of the floor level—of the retort house floor, preventing deep excavations. The roof of the retort house is so low that the present benches reach very nearly up to the trusses, that is to say, to the bottom of the trusses; and, therefore, if larger benches than the present direct fire six retort benches are required, such as are now being used—I mean the regenerative benches, with a larger number of retorts of about twice the total height, it would be necessary to raise the roof of the retort house fifteen or twenty feet before putting them in. The present retort house is inadequate to the needs of the manufacture of coal gas up to the present date; that is, after the methods of the present day.

It is obvious also that many of the smaller holders occupy much more ground and give very little capacity and they are not adequate and will have to be abandoned and replaced by larger holders suited to the needs of Manhattan to-day and its business.

4596 Q. Now can you give me an example of depreciation due to obsolescence?

A. Yes. At various points in the 14th Street Works are located small and inadequate engines and steam boilers used for the purpose of pumping, or grinding coal or handling coke and operating coal handling machinery. There is but one gas engine in use for these purposes. These little old steam engines and boilers are extravagant to the last degree in their use of coal and heating, taking ten or twenty times as much as an economically designed gas engine or a large condensing steam engine. These small steam engine boilers are obsolete because they should all be replaced either by gas engines or electric motors operated by a generating station, driven by economical gas engines or steam engines of a large size.

Q. And it appears to-day there are other factors than mere decay and wear and tear entering into depreciation. Does Mr. Mayer appear to have taken into consideration anything else than decay in his depreciation?

Mr. **Mathewson**: Objected to. Mr. Mayer has testified and what he took into account his testimony shows. I do not think the witness can characterize it.

The **Master**: That seems to be a valid objection, Mr. Burr.

Mr. **Burr**: I think he can say from his experience——

The **Master**: You can say that in your brief.

Q. Well, does Mr. Mayer's depreciation appear to be small, even if based on that factor alone?

A. Mr. Mayer's depreciation, even if based on decay alone, appears to me to be small.

4597 Q. Assuming the existing works to be kept in perfect and thorough repair, covering all decay and wear and tear that occurs, would the buildings and apparatus in your opinion still be subjected to a depreciation?

A. Yes, there is still a depreciation charge due to inadequacy or obsolescence. It should be averaged as a percentage of the structural value of the works and written off every year.

Q. In the books of the company during 1905, what did you observe as to depreciation?

A. During that year the depreciation fixed by the Board of Direcfors on January 30, 1906, appears to correctly amount to about $1.71 per one thousand cubic feet of gas, or about .85 of one per cent. of the structural cost of the works, the whole works, actually, while the works themselves appear to have been amply repaired in the operating portions used for the purpose of generating gas.

Q. When you say that $1.71 appears to .85 of one per cent., upon what figure per thousand structural cost do you figure that?

A. $1.71 per thousand cubic feet of gas is placed against $2.00 investment per annual thousand cubic feet of gas and makes .85 of one per cent. on $2.00.

Mr. **Burr**: Now, if you want to ask any questions with regard to the 14th Street plant, Senator, I have no objections.

By Mr. **Page**:

Q. Do I understand, Mr. Marks, that you took the valuations in the Rowland inventory as they are stated and set them down upon this schedule which you prepared?

A. I did.

Q. And you accepted that valuation as the basis upon which you would figure your depreciation?

A. I made a rude check of the scrap sum stated by Mr. Rowland in 1884, and on finishing that check, item by item, it appeared 4598 to me a very liberal valuation, but at the same time a consistent one which I could accept, subject to depreciation.

Q. And I do not suppose that you refigured that entire inventory, did you?

A. It was out of the question. No mortal living could do it in the time allowed.

Q. And was the same true of the statement of values as given by Mr. Mayer?

A. It is. Mr. Mayer does not differ largely from my own figures of structural cost. You may say for all ordinary purposes they coincide, with the exception of the gas holders, and even there they do not differ largely. It is the question of depreciation entirely.

Q. Assuming some of the dimensions given by him to be correct and the prices per unit as given by him to be right you arrive at substantially the same result?

A. Yes, sir.

By Mr. **Burr**:

Q. Now, Doctor, we will take up the subject of the mains. I understand you made a very careful examination of the maps of mains which are on file in the office of the Consolidated Gas Company?

A. I have.

Q. Those maps, as I understand, show the mains in all the streets as they exist in the Borough of Manhattan?

A. They do.

Q. You have accepted as being correct the statement with regard to the mains in the Borough of The Bronx?

A. I have, that is the value of the mains in the Borough of The Bronx.

Q. Now, will you be good enough to state what was the nature of the examination you made and what was the result of such examination of these maps?

A. The maps are contained in 12 volumes of Insurance maps of the Island of Manhattan and of The Bronx. Employing as- 4599 sistants, every line of mains laid down on these maps was measured by means of steel tapes——

Mr. **Mathewson**: Measured on the maps?

The **Witness**: Measured on the maps by means of steel tapes. These assistants measured not only the straight pipe or distances, which probably across a folio would amount to 30 inches; they were also instructed to bend these steel tapes and to follow around each and every crooked piece or connection. It is possible to stand a steel tape on edge and follow the most tortuous piece of pipe, that you can get hold of in that way. Every bend and every piece of crooked pipe as well as every straight piece of pipe was measured and the scale on the map, too, was measured with a steel tape; the object of that being to allow for the coming and going of the paper which would contract or expand the scale at the same time that it would contract or expand the paper on which the pipes were laid down. It appears that here is a possible error of about one-eighth of an inch in 36 inches, but that error may be either positive or negative; it may be an error over in one case or an error under in another case; and the error would be only a fraction of one per cent. in the measurements made on the map. These measurements were taken and they were laid down on a series of charts; each map having its separate chart or sheet. The locality of the pipe, that is to say the side of the street which it was upon, the street itself, the street at the beginning and the street at the ending and the side of the street at the beginning and the side of the street at the ending are all marked in the notation.

Q. Together with the number of the volume and the number of the map?

A. Yes.

Q. In the first column?

A. In the first column. Then off to the right are a series
4600 of columns marked, One and One-Half Inch, Two Inch,
Three Inch, Four Inch, Five Inch, Six Inch, Eight Inch,
Ten Inch, Twelve Inch, Sixteen Inch, Eighteen Inch, Twenty Inch,
Twenty-four Inch, Thirty Inch, Thirty-six Inch.

Q. And what appears in all those columns?

A. In each of those columns appears the length of pipe which was of the diameter given at the top, and this was carried out in the case——

Mr. Page: Expressed in feet?

The Witness: Expressed in feet.

Q. As they appear to be in each street named in the first column?

A. As they appear to be in each street named in the first column. Each and every map had its transcript in the form of a sheet or chart made in this way, amounting to something over 300 maps. Each one of these charts was laid down by two men, and then when finished was placed in the hands of two other men, with instructions to go over the work independently for the purpose of checking any possible oversight due to fatigue or carelessness. Everything has been worked through in this way. Each volume of maps is bound together and the first sheet contains a recapitulation stating the total number of feet of each size of main contained in that volume.

Q. Have you fully described these charts now?

A. Yes.

Q. Will you take this recapitulation on each one of them and state what it is, what it appears to be?

Mr. Mathewson: Well, which is the recapitulation?

The Master: Excuse my making the suggestion, but why could

you not offer that recapitulation in evidence in connection
4601 with his testimony and put it in without taking time to question about it and have all the detailed sheets marked for identification, if counsel do not object? There is no reason for putting them all in.

Mr. **Burr**: I will accept that suggestion.

Mr. **Mathewson**: I don't know what these charts purport to show more than the witness has stated. I should like to know what else they show before I know whether I will object.

The **Witness**: The recapitulation is as follows——

Mr. **Mathewson**: Please do not give the totals and so forth until I see the schedules you propose to offer.

Mr. **Burr**: Then I offer these recapitulations.

The **Master**: Have you not a summary made of the whole thing?

Mr. **Burr**: Yes, but we have a recapitulation or summary of each map, and I want to offer that in evidence together with the summary of those recapitulations or summaries, the general summary, instead of as you say—I do not wish to encumber the record with all this vast amount of stuff here, but I want to get in evidence the recapitulation of each volume of maps.

The **Master**: Show them to Mr. Mathewson and see if he objects.

Mr. **Mathewson**: Have you the final recapitulation of everything?

The **Witness**: Yes, these three sheets contain the final recapitulation of everything.

The **Master**: All I want to do is to abridge it as much as
4602 possible. It is perfectly obvious that none of us wants all those details. It will make so much more to handle, entirely apart from any question of expense.

Mr. **Burr**: I offer in evidence the summaries of the maps as they appear on these ten groups or charts or volumes.

The **Master**: He offers ten pages consisting of summaries of the ten schedules to which these summaries are severally attached, and he has offered, I understand, a general recapitulation of the summaries.

Mr. **Mathewson**: I object, Mr. Master, to this testimony on the following ground: It appears that the maps which Doctor Marks has measured are not the primary evidence. It appears that the mains are transcribed upon the maps from the specific records kept by the company of the mileage and the laying of mains, and they are not transcribed frequently until long after; perhaps a year after, in many cases, before they appear in the books. So that if any discrepancy appears the primary source of information is the books and not these maps. They would be no more the primary record than would the map of an insurance company be a primary record as to what policies it had outstanding; its policy records and its ledgers being the original record, and the clerk in the insurance office merely trying to transcribe that accurately, or more or less accurately, upon the insurance map. Therefore, these computations taken from the maps cannot in the nature of things be accepted as primary evidence or as good evidence as against the books.

Secondly, the method of measurement which has been adopted by the witness, assuming that the maps were primary evidence, would be so wholly unreliable that I think it is obvious that the tes-

4603 timony would be valueless as against exact records which are kept and from which the maps are made up.

The MASTER: Have you offered the general summary yet, Mr. Burr?

Mr. BURR: I am offering them all together.

The MASTER: I mean the general one that contains the results, the recapitulation of all the schedules.

Mr. BURR: Yes, and in connection with what Mr. Mathewson has said, I want to say that the evidence is here that these maps correctly show each gas main in the City of New York, and that the books are not necessary except for the purpose of ascertaining their distance from the curb, and that is not what we are concerned about. We are only concerned with the length of mains and the size of the mains——

The MASTER: Is not all the information you wish, for the purpose of argument, contained in your general recapitulation, the gross results of all your figures?

Mr. BURR: You see the great volume of material which we have here and out of that volume of material I only wish to offer the first page, showing the summary of each volume of maps; and then the recapitulation of that summary. I think for a proper understanding of the situation it would be necessary to have that. At present I will content myself with offering those three sheets.

The MASTER: These three sheets contain the gist of what you want to show by this tabulation?

Mr. BURR: Yes.

The MASTER: I will overrule the objection and take these

4604 three sheets that are offered. I should not take any more, I think, in view of the fact that the competency of this testimony is so more than doubtful; I would not be justified in encumbering the record with any great amount of detail for these figures. Manifestly you cannot show what the number of mains in a street is by making an abstract from a book which some person in the office of that company made up to purport to show. It is some evidence, possibly, but it is not evidence of such a grade that would justify us in encumbering the record with these details.

Mr. BURR: It seems to me it correctly shows the situation, when the superintendent of mains testifies that it is correct.

Mr. MATHEWSON: He was testifying upon another point, whether mains were spread on the maps so they could be identified——

Mr. BURR: His testimony was that it correctly shows the mains in the city.

The MASTER: I will overrule Mr. Mathewson's objection. Those three sheets are allowed in evidence.

Mr. MATHEWSON: Exception.

Sheets received in evidence and marked City's Exhibits 89, 90 and 91.

Q. Will you state the general conclusion arrived at from your examination as to the number of miles in use, and the number of miles not in use, the number of miles abandoned, if it shows them, and whatever other information that general summary marked in evidence City's Exhibits 89, 90 and 91 may show?

A. Referring to City's Exhibit 91, the total actual mains on the Island of Manhattan are found to be 731.49 miles. In the Bronx they are estimated at 5.51 miles, being somewhat in excess of
4605 the actual mains down in The Bronx. Disused mains in the Island of Manhattan amount to 43.68 miles, as marked on the map. The abandoned mains as shown on the map amount to .05 miles; but it appears from the maps as if the abandoned mains had been erased and apparently were abandoned and no record kept of them. That, however, is a mere surmise.

Mr. Mathewson: I move to strike it out, then.
The Master: Strike it out.
Mr. Burr: Exception.

The Witness: The total of all mains, active, disused and abandoned, in the Island of Manhattan is 775.22 miles and in The Bronx somewhat less than 5.51 miles. The figures for The Bronx are taken from page 1988, printed testimony, Exhibit 85, October 31st, 1905, before the New York State Gas & Electric Commission in which The Bronx mains are valued at $47,450.37.

Referring to City's Exhibit 90, the final recapitulation of all the mains shown in the 10 volumes marked 1, 2, 3, 4, 5, 6, 7, 8, 11 and 12 is as follows:

2 inch	3,969.60	feet.
3 inch	138,057.22	feet.
4 inch	477,561.87	feet.
5 inch	430.27	feet.
6 inch	1,945,509.85	feet.
8 inch	468,847.20	feet.
10 inch	69,635.34	feet.
12 inch	305,248.17	feet.
16 inch	82,094.15	feet.
18 inch	32,771.97	feet.
20 inch	143,368.16	feet.
24 inch	35,391.73	feet.
30 inch	140,233.42	feet.
36 inch	19,163.95	feet.
For the Bronx	29,111.	feet.

4606 Referring to City's Exhibit 89——

The Master: Is it necessary, those things being in evidence, to have all these spread upon the record?

Mr. Burr: I thought for the purpose of the examination to have the one single line of figures, as the totals, on the record. That is all he is giving; otherwise we could not clearly understand them in the testimony.

Q. What does City's Exhibit 89 show?

A. Referring to City's Exhibit 89, the comparative cost of the Consolidated Gas Company's mains in the streets of New York City, from Mr. Simpson's figures——

Q. Do you need to read all that? That is in evidence, that shows what you stated?

A. Yes.

Q. You might state the difference, if any, existing, if you have not already stated, between the mains as found by your examination of the map and the mains as testified to by Mr. Simpson, and the difference, if any, in the valuation as stated by Mr. Simpson, and the valuation as stated by you.

Mr. Mathewson: No, he has the valuation on Mr. Simpson's mileage, as compared with the valuation on his mileage.

Mr. Burr: Very well, the statement shows for itself.

The Witness: Recapitulation, Exhibit 89. The measurements from the map shows 91.39 miles less of mains in the streets of Manhattan than are given by Mr. Simpson in his affidavit.

Q. What are they given by Mr. Simpson's affidavit as being?

A. In Mr. Simpson's affidavit the number of feet is 4,344,849.

Q. And what are they as easured from the map?

4607 A. Measured from the map, 3,862,282.9 feet. The cost of laying the mains from map measurement under cobble pavement would appear to be $7,141,231.51.

Mr. Mathewson: Of the mileage which you have measured on the map?

The Witness: Yes.

Mr. Burr: That is all I desire to ask him.

Mr. Mathewson: Does Senator Page desire to ask any questions?

Mr. Page: No, I do not desire to ask any questions.

Cross-examination by Mr. Mathewson:

Q. Referring to the 14th Street plant, I have figured up the depreciation which you have taken out of your valuations $725,175, $11,600, $6,472 and $14,400, and my computation shows the total to be $744,687. Do I understand you to testify that in spite of the depreciation charged off and the amount expended in repairs and replacements, that the 14th Street plant still shows a depreciation beyond that, in your opinion, to the extent of $744,687?

Mr. Burr: I thought you had finished with the 14th Street plant?

Mr. Mathewson: No, I had two or three questions but I did not wish to interrupt you.

A. I make the depreciation $744,687 due to obsolescence——

Q. No matter what it is due to. You have already explained that. I ask you whether you still find, in spite of the amount expended for repairs, renewals and replacements during the past twenty 4608 years, an additional depreciation in the plant to the extent of $744,687 due to the various causes which you have enumerated?

A. I do.

Q. And depreciation is a charge to operating account in that the company must maintain its property or should maintain its property, is it not?

A. Yes, of .85 of one per cent. each year.

Q. But a company is entitled to take care of its depreciation by a charge to operating expenses as it currently occurs, isn't it?

A. Certainly, to the extent of .85 of one per cent.

Q. Well, whatever it is in any particular case?

A. Yes.

Q. And whether that depreciation occurs from one or the other causes to which you have referred?

A. Yes.

Q. Now, we will turn to the subject of mains. I understand that the first five columns of City's Exhibit 89 show the number of feet of each size of main according to Mr. Simpson's testimony, and the cost of the mains, assuming that they are of the lengths testified by Mr. Simpson?

A. Yes.

Q. According to your estimate of value?

A. Yes.

Q. And the last three columns show respectively the number of feet which you have obtained by measuring the maps?

A. Yes.

Q. And the cost of that number of feet of mains according to your testimony, assuming this same unit of cost as you did in your previous computation?

A. Yes, according to the chart which I have already offered as to the cost of laying mains.

Mr. Burr: You mean which was offered in evidence some time ago?

The Witness: Yes.

Q. Now, City's Exhibit 90 shows the sizes of mains and the mileage of each size according to your measurements of the maps, divided as to each volume of maps, is that right?

A. Yes.

4609 Mr. Burr: When you referred to the chart, the chart showing the cost of laying mains, you referred to the diagram showing estimated cost of laying mains in 1905 already in evidence, did you not?

The Witness: Yes.

Q. But upon Mr. Simpson's mileage and upon the mileage which you assumed upon measuring the maps, you used the same unit figure of cost?

A. The same unit figure of cost from the chart already offered in evidence.

Q. And as to City's Exhibit 91, that also shows lengths obtained by measuring the maps divided as to sizes and divided into active, disused, abandoned, and total, respectively?

A. It does.

Q. Where did you get the mileage of "disused" mains, what is the basis of your division of the mains into active, disused and abandoned?

A. The disused mains are marked disused on the maps; the abandoned mains are marked abandoned on the maps.

Q. And the balance you took as the active mains?

A. The balance I took as the active mains.

Q. Do you know whether these entries on the maps were made prior to December 31st, 1905, or since, in any particular case?

A. I have no means of identifying the date of those entries.

Q. Nor the date upon which these mains were abandoned or disused?

A. No means of identifying.

Mr. Burr: Other than the testimony given in that regard by Mr. Simpson?

The Witness: Yes.

Q. Into how fine divisions of an inch was the steel tape which you used divided?

A. Usually into tenths of an inch; sometimes 16ths.

4610 Q. Well, do you mean you used different tapes?

A. There were different tapes used at the outset. I don't know how it settled down at the end.

Q. You don't know how fine the divisions were?

A. I know they were no finer than a sixteenth; there would be no use in using finer than that.

Q. Were they all as fine as a sixteenth?

A. I think they were not. They were not at the outset, but the sixteenth was recommended.

Q. What were they at the outset, one-eighth inch?

A. One turned up that was one-eighth, but I objected to it, but I think it was replaced by a sixteenth, but I am not certain on that point.

Q. You say you followed around the crooked places, you mean the corners?

A. Yes.

Q. And do you understand that the company draws to a hair's breadth around a corner in indicating the location of its mains so as to get the exact and true lengths around corners?

A. Of course I cannot say. I know that they ought to.

Q. Well, you don't know whether they do?

A. No, of course not.

Q. And the difference in going round a corner, governed by the system of curves would be very substantial if it were aggregated for thirty or forty thousand corners, would it not?

A. No, because the maps passed many corners, the tape being laid across the folio wherever possible and the measurements being taken from this side clear out to the other side of the volume, and the tape bent in and held in, and where a curve occurred, being set on edge, and carried around that curve, not spread out straight, but carried around that curve so as to keep the tape right on top of the pipe. There were many measurements as much as thirty inches in length.

Q. But your assumption was that in indicating a turn of the corner of a street the company has laid out its mains to the fraction of an inch upon an exact scale as to distance from the corner of the curb? 4611

A. No, I made no such assumption.

Q. Then if the pipe goes farther from the curb that it would be indicated on the map, it would be a longer pipe, would it not?

A. I studied that matter pretty carefully——

Q. Would it not?

A. Not necessarily, because what you would gain in one cross street in one direction you would lose in the other. All the pipes are brought to an intersection if possible, and if you come too close to the curb measuring that way, if you measure around the other way you would gain that difference. It would not make much difference.

Q. If the pipe did not stop right there, that reason would be asserted by you, but if the pipe stopped there it would not?

A. Come to a dead end?

Q. Yes.

A. Yes, of course, but there were very few comparatively.

Q. Do you know when these maps were made as compared with the actual laying of the pipe?

A. I do not.

Q. You don't know how long the entries were made in the map after mains were laid in any instance, do you?

A. Certainly not.

Q. Did you figure the scale on the maps with the City records to ascertain whether they scaled up with the City records of distances?

A. The appearance of the maps——

Q. Just answer that question, Professor. I am not asking about the appearance of the maps, but I am asking a distinct question.

A. We measured the scale——

Q. Measured the scale with a map?

A. With a steel tape.

Q. Did you measure the scale as to its own map to see whether the results coincided with the engineering records of the city as to distances?

4612 Mr. Burr: You mean for the purposes of comparison?

Q. For the purposes of verifying the exact distances of the map.

A. You mean did I verify the map itself as compared with a city map?

Q. Yes, and the scale as to its own map by comparison with any other map?

A. No, certainly I did not compare the maps with the city maps.

Q. Did you figure the width of the streets by the scale shown on the map and compare in any instances the widths so indicated with the city record as to the width of the streets?

A. I did not compare the maps with the city records in any way, shape or form.

Q. Were your measurements in a block say between Fifth and Sixth Avenues as transcribed upon your final conclusions here, simply the distance of that block as indicated on this map by your steel tape?

A. According to the scale given on the map.

Q. Did you make any allowance for flanges or balls where one pipe goes over another in joints?

A. Won't you make that a little clearer?

Q. Did you make any allowance for flanges of the main where one shuts over the other?

A. You mean the bell and spigot, don't you?

Q. Yes, I am not familiar with the technical names.

A. It did not have to be.

Q. Well, you did not make it, that is the question?

A. If I did I would make a blunder.

Q. Very well. You did not make that blunder then.

A. No, I did not.

Q. That is what I have been trying to discover. When you compared your mileage on City's Exhibit 89 with Mr. Simpson's mileage and state that there is a difference of 91.39 miles, did you take your mileage of active mains alone?

A. I don't know what Mr. Simpson's figures are.

4613 Q. No, I asked what you took——

A. In the case of the map measurements the mileage of active mains was taken, in the case of the map measurements.

Q. You deducted from Mr. Simpson's total of 822 miles, simply the active mains as you measured them on the map?

A. That is right.

Q. And as shown on City's Exhibit 91, did you not?

A. That is it.

Q. You did not include the mains which are disused either temporarily or otherwise, did you?

A. I did not..

Q. You excluded the abandoned mains?

A. Yes.

Q. Now how many miles of mains did you find disused but not abandoned?

A. Forty-three miles of mains were disused.

Q. 43.68?

A. 43.68.

Q. And if you add 43.68, that is the disused mains but not abandoned, to your active mains, how many miles will that make, all told?

A. It is all totaled in City's Exhibit 91.

Q. Well, it will make 775.17, will it not?

A. Yes.

Q. As against Mr. Simpson's mileage of 822?

A. I thought it was 795, finally.

Q. No, Mr. Simpson's mileage of mains including active mains and temporarily disused but not abandoned mains was 822 miles, you will remember. Now if you take your total of active mains plus the mains marked on the map disused but not the mains abandoned, you will get a total of about 775 miles, so that the difference between you and Mr. Simpson on the same basis would be the difference between 775 and 822, would it not, in round figures?

A. Apparently, yes.

Q. How many miles would that be, if you are quick at figures?

A. Forty-seven.

Q. Now 47 miles is not much more than five per cent. of 4614 the total of 882?

A. Just about 6 per cent.

Q. And you stated, did you not, heretofore that a difference of five per cent. between the records and the measurements on a map would not be an unexpected discrepancy?

A. I think it was a few per cent.

Q. Did you not say five per cent.?

A. I don't think I said five per cent.

Q. Do you say five per cent. now?

A. I should say about one per cent. now, after going into the matter very carefully, would be the extreme allowable error due to measurements.

Q. Did you not state in the presence of Mr. Simpson and others here some time ago when the question of examining these maps came up that an allowance of five per cent. for difference would not be excessive between the records and the measurements on a map?

A. I may have done so, but I have decidedly changed my opinion since and believe that one per cent., after investigating the thing, either way, would be the extreme allowable error.

Q. Did you not state to Mr. Simpson that you expected your measurement of the map would come within about five per cent. of the accurate result?

A. If I did so—and I do not know that I did so—I have decidedly changed my opinion since and believe our measurements to be correct within one per cent.

Q. Did you attempt in any way to verify the accuracy of the scale of the maps on which the mains were laid down and on which you took your measurements?

A. Every scale was carefully measured with a steel tape as stated for the purpose of finding out whether or not the shrinkage of the paper had made it different from what it was at the time that the scale was drawn by the draughtsman on the map.

4615 Q. That is not the question. Did you attempt to verify the accuracy of the scale of the map on which the mains were laid down in any way?

A. As I stated before, I accepted the scale on the map.

Q. Would not the purposes of the Company be served as to graphical record of the mains laid whether the maps were exact to a fraction of an inch or not?

A. I think not, no; it would be bad engineering of the worst kind.

Q. You know the Company keeps an exact record, do you not, to which it refers when it has to repair or replace mains, showing exactly the distance from the curb and all the other measurements in detail?

A. It has so been stated to me.

Q. You have spoken of holders and some other apparatus which you stated were not now adequate for the requirements of the Company. Were they not good practice when they were put in many years ago, as the gas business then stood?

A. I fancy they were about the best in the country at that time.

Q. You spoke too about the $282,000 which the Company charged in depreciation for the year 1905, and by a reduction for mains which you thought should have been charged off in two previous years you got about $222,000 or 1.71 cents per thousand. Now you know, don't you, that that was not intended to include the depreciation due to apparatus becoming obsolete and the advance in the art, but that those contingencies were covered in the 10 cents contingent fund according to the testimony of Mr. Addicks. Do you recall that?

A. I beg your pardon, that 10 cents I never did understand the meaning of.

Q. You recall his testimony to that effect, don't you, whether you understood the point or not?

A. Yes.

4616 By Mr. Burr:

Q. That struck you as a novel proposition when you first heard it, did it?

A. It was great.

By Mr. Mathewson:

Q. You don't know that that ten cents a thousand was something advanced by Professor Bemis originally, as he testified, twenty years ago?

A. (Laughing.) That is great, that ten cents is.

By Mr. Burr:

Q. I omitted to ask you a question with regard to the mains. What did you find as the result of the examination of the map as to the duplication or triplication or quadruplication of mains in the street?

A. I have not had an opportunity to go over the charts or abstracts as thoroughly as I would like to have done.

Q. You have just received them?

A. I have just received them within the last hour or so, but during the progress of the work I noticed many instances of where there were a very large number of small mains along streets. If I remember rightly, I say this subject to correction, on six or eight blocks on Broadway there were five or six mains on each block, and I think on the cross streets such as Canal Street and Grand Street, there were in many cases as high as four mains on a single block. With a little time I could look it up.

Q. And you could give the Master the percentage of duplication or triplication of the mains as the result of that examination?

A. Yes.

Q. I wish you would do that over night, so we can have it tomorrow morning if possible.

A. Yes, but every one is worked out though, and I may not be able to get it so soon.

4617 Q. In view of the report of the accountants offered in evidence here, do you desire to modify or amplify or explain in any way any of the testimony heretofore given by you?

A. Referring to my cost of the manufacture of gas, the cash cost at 53.16 cents, I would say that I thought at the time that it was rather high, but as it was based wholly on expert knowledge and arranging a selection of figures without a knowledge of the books I presume it is not worth while to go over the work and change it now.

Q. In other words, you believe the careful examination made by the accountants more accurately states the actual cost than your statement upon the figures given as they appeared at that time, in this case?

Mr. Mathewson: I object to that question as the witness is incompetent and the evidence immaterial.

The Master: Well, Mr. Burr, I do not consider it of any great value. If you want to show any facts that have been brought to his notice by reason of the accountants, investigation which lead him to modify his former estimate of the cost of gas; I think that would be proper, but I do not think general questions like this are proper and I do not think the answers you get to them are of any great value.

Mr. Burr: I was only bearing in mind the fact that he was with the accountants while they were making up their accounting and so forth. I don't know whether it is very material.

The Master: I understand the purport of it is that he does not find anything in the testimony of the accountants that modifies his former testimony except to make him think that his estimate was too high if anything; that is the substance of it. 4618

Mr. Burr: Yes. That is all I have to ask him now.

By Mr. Mathewson:

Q. Speaking of duplication of mains, it was mostly on the avenues and on Broadway where you found any duplication of mains beyond a line of main on each side of the street, wasn't it?

A. There and in addition in some of the crosstown streets down in the lower end of town.

Q. Particularly the large and important streets like Canal Street?

A. Yes, speaking generally, of course.

Q. Where there are railroad tracks and other obstructions of that kind largely?

A. That I have not gone into carefully enough—you are aware of the fact that I only succeeded in getting these data after tremendous efforts.

Q. The details of your measurements and computations which are included in the summaries City's Exhibits 89, 90 and 91, appear in these—how many are there of these?

A. There are ten volumes.

Q. These ten volumes?

A. Some 340 sheets.

Q. Being 340 sheets which you have before you?

A. Yes.

Mr. MATHEWSON: I will ask that these be marked for identification, and I assume that when copies are made we can all have access to them?

Mr. BURR: Yes. I am reserving the right to call the Doctor to testify still further in regard to the duplication when he has had a chance to go over these papers.

Papers marked City's Exhibit 92 to 101, inclusive, for identification.

4619 The MASTER: Have you anything further to-day, Mr. Burr?

Mr. BURR: Nothing further to-day.

HENRY H. EDGERTON, resumed, testified as follows:

By Mr. PAGE:

Q. Mr. Edgerton have you made an examination of the plant and works of the Consolidated Gas Company at 14th Street?

A. Yes, sir, such an examination as time would allow.

Q. By whom were you accompanied in this examination?

A. Doctor Marks and Mr. Lacombe.

Q. Was there any representative of the Gas Company with you?

A. There was a young man connected with the office who went around with us, by the name of Ross.

Q. With what were you furnished for the purpose of that examination?

A. We were furnished as I understood with Mr. Mayer's schedule and measurements of appar-tus.

Q. And did you accept that schedule as far as it gave details as correct?

A. I did. I may say that in a few instances I checked off measurements. We did not have time to check all those measurements, and I took all those as correct as put down in his list except perhaps a few I checked off, those that struck me as requiring it.

Q. Did you make any estimates yourself when you checked them off?

A. Only rough measurements. I did not carry along any other appliances than a small rule, a small measuring rule it was, chiefly used to measure thicknessess of iron in some places and that 4620 was about all. I did not carry it any further. I believe I measured sizes of retorts in some instances.

Q. Did you visit the office building of the works?

A. Yes, sir, I went through the office.

Q. Did you note the contents of the building?

A. I noted the contents of the office. They seemed to be all there. I did not attempt to value it in any other way than put a depreciation charge on account of the appearance of the furniture and some of the contents of the office.

Q. That is, you assumed the value as given by Mr. Mayer in his testimony to be correct as to the office furniture?

A. Yes, sir.

Q. Or what it would be new?

A. I thought that was as near as I could get it without taking considerable time and trouble to verify it.

Q. Was this furniture new furniture?

A. It did not have that appearance, no, sir.

Q. Did it have the appearance of having been in use for some time?

A. All that I noted seemed to have been in use for a long time.

Q. From your examination of that office furniture what would you say would be the proper depreciation taking into consideration the fact that the furniture is now in use and not giving what it would bring at a sale, I mean?

A. From my experience on selling furniture, I should not think it would bring very much. I put a depreciation of 40 per cent. on the whole.

Q. That is the actual depreciation from wear and tear, is it?

A. Well, no; I do not think it looks actually lower than that, to the extent of 40 per cent.; I wouldn't say that. It looks damaged like furniture that has been in use a long time, and I do not think it would sell for one-quarter the valuation scheduled.

Q. No, that is what I said. It was not what it would bring at a sale but what you considered it was worth, considering its
4621 depreciation from use and its condition; is that right?

Mr. **Mathewson**: I think you are leading a little, Senator. I do not think the witness said that.

A. The depreciation on furniture of such articles as are mentioned in this list, the physical depreciation, is rather hard to get at without taking into consideration what it would bring if you had to sell it.

Q. Well, you said that it would bring, if sold, about 25 per cent.?

A. I doubt that it would bring anything like 25 per cent. of its valuation if sold, from my experience in buying and selling second-hand things.

Q. But you place a depreciation of 40 per cent. upon this?

A. Yes, sir.

Q. Now, we will take the next item, the T. F. Rowland boiler, 60 by 16, 80 horse-power?

A. This boiler is put down in my list as 60 by 16 by 0.

Mr. **Mathewson**: 80 horse-power.

A. Yes, but taking the factor of 80 horse-power and without considering depreciation, take it at $1,800.

Q. That is that a boiler of 80 horse-power, T. F. Rowland boiler, would be worth new $1,800?

Mr. **Mathewson**: I object to the witness testifying as to values, and I do not think that he is competent to do so. I make the objection that he is not qualified.

Mr. **Page**: I was not here at the time Mr. Kirby examined the witness as to his qualifications, but he told me he had covered his qualifications as to valuation at that time. If he has not I will proceed to qualify him.

4622 The **Master**: Well, Mr. Mathewson, the witness, as I recall, testified to a very considerable experience in the gas business and in the installation of gas plants, and it seems to me that he is qualified under the rules, as I remember it. I dare say that the Senator would not object, if you want to cross-examine Mr. Edgerton further now, to stop for that purpose. My recollection of the testimony is that he is qualified and I shall have to overrule your objection.

By Mr. MATHEWSON:

Q. How recently have you bought boilers in the City of New York of the T. F. Rowland type?

A. I have been pricing boilers and getting figures on boilers almost every day. I have made drawings of boilers.

Q. Have you bought any T. F. Rowland boilers lately?

A. The only T. F. Rowland boiler I know of especially, is when I met Mr. Allen many years ago. He had made what he called a Sampson-Fox, a corrugated boiler. He had brought the patents from England and commenced the construction in this country of the Sampson-Fox corrugated furnace. Now, I do not remember that this was a Sampson-Fox boiler, this 80 horse-power boiler; although in this work I have seen so many boilers and I have seen quite a number of Rowland's corrugated furnace boilers, which is really a marine boiler, that I could not say whether this was or not.

Q. Are you a manufacturer of gas apparatus?

A. No, sir, but I have drawn plans and started, as I said before, the Murray Manufacturing Company into the business of manufacturing.

4623 Q. I understand that you have designed, but you have never been a manufacturer or seller of gas apparatus, have you?

A. I have contracted to sell it, yes.

Q. As a manufacturer?

A. Not as a manufacturer; no, sir.

Q. What do you mean by contracted to sell it?

A. Well, I buy it from various parties having the apparatus, and design it and contract and sell it to the companies, or have sold it to individuals at times.

Q. Is that a large part of your business now, selling gas apparatus?

A. It is the only part of it I have got, putting in gas apparatus.

Q. How much gas apparatus do you sell in a year?

A. I have not sold any, except buying it from parties manufacturing it. I have not sold any recently.

Q. Are you establishing any plant at present anywhere?

A. No, sir.

Mr. MATHEWSON: I submit the witness is not competent to testify as to the value of this apparatus in the City of New York.

By Mr. PAGE:

Q. Does the same class or type of gas apparatus change its value very materially from being bought in the City of New York than what it would be in any other city?

A. I don't think so. I have noted that the conditions here are stated to be very peculiar, but I would not think it made any difference in the length of a two-foot rule or the weight of iron——

Q. Your impression is, if a machine was worth a certain sum in Philadelphia, and that same machine was worth a certain sum in Connecticut, and the manufacturer would charge the same sum for that machine in Boston, that the value in New York City would be the same?

4624 A. Yes, sir, I have bought a great deal of machinery in New York City at different times and I never noticed anything peculiar about it.

Q. Do you know of any manufacturer of gas machinery that manufactures it solely for the New York market?

A. Well, some few manufacturers seem to have the run of the New York market, but I don't think it is for any reasons of New York conditions other than——

Q. Other than the relations between the contractor and the Company?

Mr. MATHEWSON: No, Senator, you are going a little too far with these leading questions. Every question substantially you have asked of this witness has been leading. I do not think it is fair.

Mr. PAGE: I am sorry if I follow in the footsteps of Brother Mathewson. I apologize most abjectly, if that is the fact.

Mr. MATHEWSON: There is no relation between this Company and any contractor. They take bids for everything and endeavor to get the very lowest price from every contractor.

Q. How many years have you been in the gas business?

A. Forty-five years.

Q. And in that time have you erected gas plants?

A. I have erected probably one hundred gas plants during that time.

Mr. MATHEWSON: He testified fully as to the gas plants he had erected on direct, Senator, in various places.

Mr. PAGE: I know, but you have objected that he is not qualified. Now I am going into his qualifications.

4625 Mr. MATHEWSON: I admit his qualifications on that subject. I asked him on a further subject here. I do not care if you want to go all over it again.

Mr. PAGE: Do I understand you withdraw your objection about not being qualified?

Mr. MATHEWSON: No, I spoke of his testimony now and the testimony he has heretofore given. I do not think he is qualified.

Q. Have you been engaged in the manufacture of gas, and the running of gas companies?

A. I have not for quite a number of years been engaged in the manufacture of gas, but I have been thrown in close relation with a great number of gas companies and counseled them in regard to their operations and given my experience to them in regard to not only the use of apparatus but methods of keeping track of the business, books and so forth.

Q. Have you kept yourself informed as to the progress of the art of the manufacture of gas, the changes that have been made from time to time?

A. I have.

Q. Have you had any other business within the last forty years except that connected with gas making?

A. Nothing whatever except the construction and operation and consultation in regard to the operation of gas works.

The MASTER: I will overrule your objection, Mr. Mathewson. Exception.

Q. Is there any boiler on the market at present known as the T. F. Rowland boiler?

A. I know of none except that Sampson Fox furnace. We have always understood he had the patents.

Q. Is T. F. Rowland manufacturing to-day?

A. I think the Continental Iron Works which he founded is running.

4626 Q. Well, you put your valuation on the boiler as an eighty horsepower boiler?

A. An ordinary eighty horsepower boiler. I did not consider that it was one of the corrugated boilers.

Q. And the value of $1,800 that you gave then was based upon a boiler of eighty horsepower?

A. Yes, sir.

Q. Of that general type, is that right?

A. That is correct.

Q. And did you make an examination of that boiler?

A. I examined all the boilers in a rather cursory manner, and I cannot disassociate now the particular examination of that boiler from a number of others, but I think I must have considered it somewhat depreciated in value.

Q. Well, did you figure any depreciation in value in that?

A. Yes; 25 per cent. We were not given the length of years of these boilers—in fact, not on any of the apparatus, so that the depreciation had to be visible; and, of course, in an inspection of the boilers for depreciation, so far as a thorough inspection goes, so far as a letting down and taking the hand holes and manholes off and going into it thoroughly, we did not possibly have time to do it and could not do it while they were in use.

Q. Did you ask the age of that boiler?

A. We asked the age of that apparatus from time to time of this young man, but he had only been there two years.

Q. And he could not inform you?

A. And he did not appear to know anything about it.

Q. What next did you examine? Did you examine this cast iron tank, 32 by 48, 4 feet 6, over boiler?

A. Yes. Well, I have seen those tanks in use before on top of buildings like that and I expressed the opinion that I did not believe it was in use at all or been used, for years before they went

4627 out of date; so Mr. Lacombe went up to it and found——

Mr. MATHEWSON: Let us hear what you did?

The MASTER: The question is what next did you examine? Did you examine this cast-iron tank?

A. Nothing further than to take his report of the tank. I agreed with that.

The MASTER: Then it is easy enough to say no.

The WITNESS: Well, I examined the stuff he scooped up from the tanks, and it never had water in it, and they were then engaged in pumping it in very vigorously.

Q. Did you see Mr. Lacombe go up to this tank?

A. Yes, I saw him go up the ladder, circle around over the top of the tank and collect specimens of the rust on the insides of the tank.

Q. And when he came down from the ladder did he show you what he had found?

A. He had his hand full of it and inside of his glove and pulled off his glove and showed it. I considered after that it was not necessary for me to go up and get a handful, and took his views on the subject.

Q. Is this construction one that is in use now, having a cast-iron tank over a boiler house?

A. No, I have not seen a tank of that kind in many years. I saw one in New Orleans in 1873 where they have a relatively mild climate and do not have to warm them up in the winter, and we converted it into a sprinkler for shower baths for the men. That is the only use we could think of for it.

Q. In 1873 you say that was, and was it then an obsolete type of manufacture?

A. Yes, it was of no account.

4628 Q. What value did you put upon that tank?

A. I put $2,500 on it.

Q. Upon what was that valuation based?

A. Well, that was based upon a rough calculation of the size of the tank, but mostly on the fact that it was not worth anything anyhow, except for junk.

Q. Well, does that $2,500 represent the value with depreciation off, or is that the value that you figure it would cost to reproduce the tank?

A. I have an idea that is with depreciation. I have not the full figures I made on the subject here.

Q. Then we will turn to the next item, which is the engine——

A. Engine room and fan wheel, I did not attempt to value; it is a thing that a man is apt to go to the manufacturer to get, and I did not have an opportunity to do that. The 50 horse-power engine, I put down at $1,500 .

Q. What is that valuation? Is that a valuation as depreciated, or is it the valuation of what it would cost to reproduce it?

A. Well, it is a small, slow-running engine, 40 horse-power, and a very old engine—old type of engine. I should not value it at any more than $30, a horse-power.

Q. Then is there any depreciation written off from that?

A. Yes, sir; 25 per cent.

By Mr. MATHEWSON:

Q. Do I understand that $1,500 is the valuation after depreciation is taken off, or before?

A. Before.

By Mr. PAGE:

Q. Two small boiler feed pumps; did you value those?

A. No, I did not set a value on those. The jet photometers I took
with depreciation at $65.00. Those jet photometers are al-
4629 ways corroding and wearing out and requiring new drums,
floats. I can buy them new for $130.

Q. That was then in the condition you found it, at $65.00?

A. Yes. They were in such bad shape I could not use them.

Q. What is the next?

A. The next is sink. I did not look at the sink.

Q. Now, what about that McKenzie exhauster?

A. The McKenzie exhauster, that is quite durable; I valued that at $700, allowing $224 for depreciation in an approximation to the apparent state of it. I took it that the exhauster had been operating there quite a long time. There is, however, no very important amount of depreciation on the exhauster, if they are kept in repair.

Q. I do not quite follow you. Is $700 the value with depreciation off?

A. Yes, sir.

Q. Then we will take the exhauster house; one No. 9 Root exhauster?

A. As before stated I put only a small depreciation on that, from the fact that they are very durable; it is 15 per cent. depreciation. I took the value of Mr. Mayer with 15 per cent. depreciation.

By Mr. MATHEWSON:

Q. Well, what would that leave?

By Mr. PAGE:

Q. Mr. Mayer's valuation was $1,980 and you would take off 15 per cent. for depreciation?

A. Yes.

Q. Have you figured that?

A. I have not figured out the depreciation items. I went from this plant to another and did not have an opportunity to do that; and I did not have time to prepare at all the depreciation figures. $1,980 is the price of a new one also, as I quoted a No. 10 to-day at $1,980.

4630 Q. The price was $1,980 and you took off 15 per cent. or
$297 for depreciation?

A. Yes, sir.

Q. Which leaves $1,683?

A. Yes, sir.

Q. Now, the Huntoon governor?

A. I did not recognize that as the Huntoon governor that I was acquainted with, but I took the same depreciation off.

Q. And you took the $75 valuation?

A. From Mr. Mayer.

Mr. Mathewson: Mr. Mayer's valuation is $150, not $75.

The Witness: I do not think that was a Huntoon governor, as I understand it. I have used Huntoon governors but this does not appear, I think, to be one. The Huntoon governor on exhausters as I have seen them are merely to prevent rapid fluctuations in the exhaust of gas. There is a little pressure wheel made to revolve in oil so as to check any too sudden changes in admitting the steam. I understand the steam is governed in an exhauster pipe, a drum containing gas, and the pressure of gas is on that drum; it acts on the steam. If the exhauster is running too slow the steam would be turned on so rapidly that it will cause a jumping up and down of the exhausters, and Huntoon's invention consisted in putting this little retarding wheel or fan running in oil, in order to slacken or lessen the variation, in order to make it draw a straight line.

Q. Well, I understand that this was a different type of governor than you had usually seen as a Huntoon governor?

A. Yes. It was governor, but it had all the appearances of a regular steam governor, but it did not have the Huntoon attachment, so far as I could see.

Q. Well, as to its physical condition, I understand you took 15 per cent. off for depreciation? 4631

A. Yes, sir. I did not attempt to value that particular governor.

Q. Then assuming the value was as given by Mr. Mayer at $150, you would give the value as $127.50, with depreciation, is that right?

A. Well, I don't know about that.

Q. Well, I made the calculation that 15 per cent. is $22.50 of that amount?

A. It is put down here at $75.00 and looking at the machine I thought $75.00 was enough for that thing. It is just a little gas drum about two feet in diameter and all that it operates is a steam valve. I did not question the value at $75.000 but I would question it at $150, I think.

Q. Now, take the No. 6 Root exhauster?

A. I have bought Huntoon governors.

Q. We are away from the Huntoon governor now. One No. 6 Root exhauster?

A. I took the valuation of Mr. Mayer and 15 per cent. depreciation. Those two Root exhausters seem to be doing all the work, and the McKenzie exhauster is a sort of—well an emergency exhauster, but I suppose they are working alternately.

Q. Well, you found it in such condition that you put a valuation of how much for physical depreciation?

A. Fifteen per cent.

Q. Another Huntoon governor: the testimony there would be the same as to the former one?

A. Yes, sir.

Q. It is the same type of governor?

A. Yes, sir.

By Mr. **Mathewson**:

Q. Are you sure that is the same type of governor? Did not this impress you as a Huntoon type of governor?

A. I saw so much machinery there, that is, several days
4632 ago, that I would not be positive, but I think it is the same governor. Of course in going through works at the rate we went it is rather difficult to retain a recollection of all, unless it is put down and some remark made about it in the margin. I put it down as the same.

By Mr. **Page**:

Q. Then we will take the photometer, standard bar?

A. Well, that photometer I know would be worth about $500. I bought that type, but on examining it I found they had some extras in it. They had a new standard of light, Pentane standard; $75.00; so the depreciation on that was very small and I put it the same, $650. They also had in connection with an extra meter—there was a duplicate meter, which is new; worth $100.

Q. And with the extra meter you would say $650 was a fair valuation, would you?

A. Yes, I should think that that covered all the depreciation on account of these extra parts.

Q. What is the next?

A. The next, machine shops. I checked off all the apparatus there and found everything in apparent working order and being used; however, there is depreciation on all that class of apparatus, tools, and I assessed 25 per cent. depreciation throughout the machine shop and the blacksmith shop.

By Mr. **Mathewson**:

Q. The new value you would put as Mr. Mayer did and take off 25 per cent. depreciation?

A. Yes.

Q. The same in the smith shop—take his figures with the 25 per cent. off?

A. I didn't have a chance to value all those different small items there and price them as new, but I am perfectly satisfied that there was that amount new there in value, in the shop, and also
4633 in the blacksmith shop. The material there new would certainly have cost all it is valued at.

By Mr. **Page**:

Q. Now, take the condenser; two condensers, No. 2 rectangular tubing, cast iron tubes, 44 by 15, by 6 feet 2 inches, 648 tubes, 4 inches diameter, eleven feet long, connections 30 inches; what value do you place on that?

A. I did not place a value on that condenser. I wanted to make a more thorough inspection and have some measurements made as a guide to pricing it; and therefore as I did not allow any measurements except what I could make with my little rule, or rather did not allow any assistants to measure, I was not able to calculate that condenser.

Q. Did you ask to be allowed to have an assistant measure-?

A. Yes. Young Mr. Ross not only said he was instructed to not allow anything of the kind but he interned a boy of fourteen along with me—I took him along to keep him out of mischief, and he considered him there for some obnoxious purpose and kept him in the exhauster house while we were making the examination.

Q. Did you have any assistants with you to make these measures or this particular measure?

A. Yes; I had two young men came down equipped with measuring apparatus to make measurements and Mr. Ross telephoned in regard to it and told us it would not be allowed. I could not make a calculation on an apparatus like that off-hand.

Mr. MATHEWSON: The only suggestion that has come to me, Senator, was that Mr. Edgerton wanted to take along some men to make notes for him.

Mr. PAGE: That was at 42d Street.

4634 Mr. MATHEWSON: Oh, well, that was the first I heard and the first I have heard.

The WITNESS: We made measurements at 42d Street without any question and trouble, but I wanted assistants to measure as it hampered me so much to make them individually and it kept me so slow and long over the apparatus and I wanted to get around in time and had very little time and I wanted some assistants to do the measuring and then turn the figures over to me.

Mr. MATHEWSON: Well, you understand that subordinates are bound by general instructions that sometimes are unwise.

By Mr. PAGE:

Q. Well, are there such dimensions given here that you could make a valuation? If you can, you can make it during recess and supply it?

A. There are quite a number of dimensions given here and I could make an approximate valuation on them. In fact I don't see anything out of the way in that calculation, considering the wrought iron tubes and all in this condenser. I took that at a much higher figure than I did the cast-iron work alone. On the other hand I should assess a larger depreciation on any wrought iron in contact with gas than I would cast-iron, on account of its liability to corrosion.

By Mr. MATHEWSON:

Q. Then I understand the substance of it is that you think Mr. Mayer's figures are fair for reproduction, after you take——

A. Taking the weight at 54,000 pounds, as put down here, I do not think those are put out of the way for a multi-tubular condenser which this is. It seems it is not a cast-iron condenser;
4635 it has only a cast-iron base and sides.

By Mr. **Page**:

Q. As I read it, it has cast-iron tubes?
A. I supposed it was wrought iron tubes.

By Mr. **Mathewson**:

Q. Do you say if it had cast-iron tubes the depreciation would be less?

A. Yes; less. The wording here is misleading in regard to the condenser, multi-tubular or any other kind. It is two rectangular, tubular, cast-iron, 648 tubes, 4 inches diameter, 11 feet long, connections 30 inches. I took it at first that this was a cast-iron arrangement and come to look at it more closely I considered it was a regular multi-tubular condenser which is generally made of wrought iron tubes.

By Mr. **Page**:

Q. Well, we will pass that and you may be ready with that tomorrow. What is the next valuation that you put down?

A. The next is a machine shop shed containing a variety of drills, planers, lathes and various machines, which seemed to me new to be fully worth $1,800, but I put on that 25 per cent. depreciation on the tools.

Q. Now the large purifier house?

A. That was part of the apparatus that I wanted to remeasure more particularly. I made a rough calculation according to the dimensions they gave me, 2,550 boxes which would bring out $20,400 as to boxes and cover simply; and as there were only two cranes for hoisting it seemed to me as excessive, the valuation put on by Mr. Mayer; and I desired to remeasure that and go 4636 into it more fully. That is one of the points I wanted to remeasure.

By Mr. **Mathewson**:

Q. Do you wish to put any valuation on it now?

A. I could not put any reliable valuation on that the way it stands, without a remeasurement.

By Mr. **Page**:

Q. What dimensions do you need?

A. The thickness of the iron, the amount of planing surface, how many flanges and plain surfaces there are, and I could not get at the depth of boxes either; they were full of material; and the light they furnished to go down into the cellar would not enable me to go measure the depth of boxes; they seemed to have light—electric by the way—that showed so dimly that you could not see—and I determined to remeasure it, and had the young man come down for that purpose. I will say this, however, that these purifiers are shallow lime purifier boxes, and they are not of a modern type or oxide of iron.

Q. What is the difference in value between lime construction and oxide of iron purifier boxes?

A. The oxide of iron purifier boxes are generally made deeper, you can put more material in them and concentrate your purification into a smaller surface.

Q. That is, you can purify more, you mean, by them? You can purify more gas?

A. Yes, use more purifying material by deep layers. You cannot use deep layers of lime because it puts a heavy back pressure upon the gas, but gas travels through the iron mass with much greater facility and therefore you can make it deeper and hold more, and these boxes would be of slightly more costly operation and more expensive than for iron purification. In other words, with half the money I could construct an iron purification set. 4637 & 4638

By Mr. Mathewson:

Q. But we want the valuation of this particular apparatus?

A. That is what I was trying to get at.

By Mr. Page:

Q. In order to get a valuation on the reproduction of this particular apparatus, you would have to have the additional item of dimensions, the thickness of the iron, and the planed surfaces?

A. The thickness of the iron, the number of planed surfaces and also I should not provide for a double riveted cover of the purifying box. This was a very expensive way to put a box together, double riveted, like a boiler, as if to stand an enormous pressure. I do not think I ever saw a double-riveted purifying cover before; very fanciful. There are other dimensions given here.

At 5:18 P. M. adjourned to December 6, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 257.
State's, ZZ.
City's, 101.

4639 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK CITY, *December* 6, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

4640 HENRY H. EDGERTON resumes the stand and further testifies:

Direct examination (continued) by Mr. PAGE:

Q. Did you look at the apparatus in the small purifying house?

A. Yes, sir.

Q. One set of four boxes, 16 by 25 by 3 feet 2, 20-inch center seal, and two hydraulic cranes on track?

A. $13,464.

Q. Do you include in that valuation the supports as specified——

A. Yes, sir; everything that is specified here. I was not able to measure it and I include all the data given in this description.

Q. Was there any figure off that for depreciation?

A. No, I have not taken anything off that for depreciation. That is the cost.

Q. Well, would you take anything off?

A. I think in regard to the purifiers a percentage ought to be taken off on account of being lime purifiers instead of oxide.

Q. Well, as to the physical condition of the purifier, would you take anything off from the price that you have given, for depreciation?

A. They are old purifiers. I suppose you could very well deduct 10 per cent. for physical deterioration. There is nothing that particularly wears out about a purifying box except what we call the trays.

Q. Then 10 per cent. you would say for depreciation, would you?

A. Yes; I think that would be a fair figure.

Q. Now, proceed to the meter house.

A. I have no prices on those meters. I have been trying to get them, but I have not been able to get prices on that size meter.

Q. What do you say as to the age of those meters?

4641 A. Well, the cases seem to be old cases, with new drums, I think. I think those cases were cast by Gratz, if I remember rightly; that would make them thirty years old, at least. The apartments and drums are a more recent construction, and I suppose the drums have been renewed. I could not learn anything from the young man in regard to them.

Q. Then if in Mr. Rowland's schedule there would appear a meter of this size, of meters of this size—two 16-inch diameter by 13, you would think that it was the case of this meter with new drums, the drums having been renewed?

A. That is what I take it. I should make a depreciation of 25 per cent. on five years' use on the drums. That would be allowing as long a lifetime for the drum as I would find they would probably last.

Q. Well, can you express that in figures at all?

A. No, I have not been able to divide that at present, the case and drum, because I have not got the data for it.

Q. What about the No. 4 gas meter?

A. That is what is known as a proportional meter. I do not think that that meter is in use, but I have no price on that. The next is four King's pressure gauges.

Q. Yes, that is a small item; you may give it.

A. Well, those I have put at $12.00 for an ordinary arch gauge. A fine arch gauge would cost double that, according to how it is made.

Q. Did you notice how this was made?

A. No, I did not. The arch gauges are of the same appearance.

Q. Well, pass it. Now, one locomotive boiler and tools given here as 35 horse-power, 5 feet diameter shell by 14 feet 7, sixty 3-inch tubes. What did you value that at?

A. Rating it by the horse-power, $1,050.

4642 Q. Now are the dimensions as given correct for a 35 horse-power boiler?

A. No, it seems the dimensions would indicate a large horse-power boiler. I put that by the dimensions there as $1,400.

Q. That is, if the dimensions as given were not correct the boiler would be worth $1,400; if the horse power given is correct it would be worth $1,050, is that right?

A. Yes, sir.

Q. What do you value the contents of the valve house at; two 9-inch American meter gauges, one large American meter gauge, one 8-inch recording gauge, and one pressure indicator?

A. $89.

By Mr. MATHEWSON:

Q. $89 for the whole four?

A. Yes. I claim that the pressure gauge $50, and the ordinary arch gauge at $24, and the large gauge $20; and the pressure indicator as shown there is nothing but a little clicking telegraph relay or magnet, and cost about $5.00. There are some wires passing in there that I don't know whether they are calculated in or not. I do not know what the length of them is, but what is visible of it is a signal key and a magnet.

Q. And what you valued was——

A. Simply the signal key and magnet. The wires I do not know about. The kind it is I did not know, I therefore could not include anything for the wiring.

Q. Now, we will take the retort house. Four coal stacks of 30 benches each, 15 back to back, 6 retorts to bench, direct fire——

A. I gave the value of those stacks at $42,500 each; $160,000 for the four. And $36,500 for the so-called regenerative benches.

Q. What do you mean? That is the one below, one coal gas stack of 24 benches, isn't it, 12 back to back, six retorts to bench?

A. (No answer.)

4643 By Mr. **Mathewson**:

Q. How much was that?

A. $36,500. I deduct from that 14 dead benches, let down for renewals, at $450; $6,300, and allowing the average lifetime of three years for the 120 benches, I deduct one-third as the current depreciation on those, or $18,000, leaving $182,000.00 net.

Q. What would that be for each one, the $160,000 for instance? Did you separate those on that item, four coal stacks?

A. Do you mean by the separate bench, each bench?

Q. What did you take off each one for depreciation?

A. I took the depreciation figure as the number of benches that were dead.

Q. In money?

A. $6,300.

Q. That would make how much for the $160,000?

A. Off the $196,500.

By Mr. **Page**:

Q. What he wants to know is how you would divide that, how much of that $6,300?

A. Well, the dead benches are let down for renewals of the small type; that is, from $160,000 it would leave $153,700.

By Mr. **Mathewson**:

Q. And the other would stay as it is?

A. The others are not in use. Renew all except the mouthpieces on four or five of the benches.

Q. They were set in 1906, weren't they?

A. They looked like new work.

By Mr. **Page**:

Q. Which one of these benches was set in 1906?

A. The stacks, 24 benches, back to back.

Q. What do you mean when you say the "so-called regenerative"—half depth?

A. There was half depth setting, not properly regenerative
4644 benches, as I understand it.

Q. Well, are they what is technically known as half depth regenerative benches?

A. They are not regenerative benches at all in the sense that the air is heated by alternating between hot flues and then changing the current of air to those that have become hot. The regenerative bench is one in which the air is heated before it goes to burn the gases.

Q. How are the retorts placed in these benches, the six retorts in relation to each other?

A. In the new benches they are right over each other, leaving a wide space between the retorts, which is quite an unfavorable construction for getting the best results out of coke fire. I saw this construction adopted away back in 1874 when I built the New Orleans plant. Those I drew in—they call it drawing the retorts together as they go up, not one over the other, and the results from those benches are very much superior to larger retorts set one directly over the other.

Q. And in a modern construction that had been used, for how many years has the building of the retorts so that one will not be directly over the other or drawing them in, as you expressed, been done?

A. I saw them in use in the old country in 1862, and I first adopted it in this country in New Orleans in 1873. I think I was the first one to adopt that construction.

Q. And is that construction now in very general use?

A. It is the construction that gives results.

Q. That is not quite an answer to the question. The question was whether that construction was in general use now; in New York, I mean.

A. Well, I see a great many retort houses built with retorts built directly one over the other, but I think the majority fill in
4645 that middle space with retorts, either by setting eight retorts or seven retorts.

Q. Now, take the four stacks of 30 benches each; of what construction is that?

A. In those benches the retorts are drawn in so that if they were of ample size they would make a very good direct fire bench; but the retorts are small and short compared with the best construction; in fact, they are very old; they were old when they were built, in construction or method.

Q. I believe this retort house, the testimony is, was built in 1853. Now do you mean——

Mr. Page: Is that right, Mr. Mathewson?

Mr. Mathewson: It was reset in 1906, the one stack of 24 benches, that is the date I find note of.

Q. When you say it was old at the time it was built, did it date back to that time, or at the time of consolidation?

A. At the time of the construction of the New Orleans plant, I was acquainted with Mr. Farmer's construction at that time and saw his benches and had data in regard to their workings. I refer to about the period of 1874. His setting was also employed in Mobile, Ala., where I was consulting engineer.

Q. Is this type of bench what is known as the Farmer type?

A. No, this is modified. Mr. Farmer did not, so far as I know, adopt this present arrangement of retorts, drawing them in.

Q. How is it as to the size of the retorts?

A. The retorts are very small, 12 by 20 retorts, 8 feet 6 inches in length.

Q. If you were rebuilding this plant, would you rebuild these particular benches in the style of construction they are?

4646 Mr. Mathewson: Objected to as immaterial and irrelevant.

Mr. Page: Well, you are asking to have them reproduced, reproduction values.

Mr. Mathewson: Well, this particular plant is what we are claiming on, not some other plant.

The Master: Well, the same thing is got at in another way I suppose by showing, as has been testified in several instances here, that the devices were antiquated and not modern. I think the question in that form is objectionable, and I will sustain the objection, but I do not think it is important so far as you are concerned.

Mr. Page: Exception.

A. I would not think of constructing those benches at present.

Q. Is this type of bench an economical type in producing results?

A. I notice by the accounts that this type of bench produces about 34,000 feet per day per bench. If I remember rightly, I noticed in the accounts it is known as retorts in action. That would exclude such retorts as were lying off to burn carbon. My recollection is that the New Orleans retorts averaged 56,000 feet daily for the year. Those benches were built in 1873 or 1874.

Q. And that was a direct fire bench, was it?

A. Direct fire bench. The small return from the bench also entails a relatively small return per man employed in the retort house.

Q. And as compared with the new construction of regenerative benches, how is it in regard to fuel?

A. My recollection is that these benches consume nearly half the coke produced.

Q. Nearly half the coke produced from those benches do 4647 you mean?

A. Yes, sir, and a good bench would consume 20 to 25 per cent. of the coke produced, or less than half the coke consumed in these benches.

Q. What is the next you have got?

A. The tracks running the length of the building and outside 20 feet for charging and drawing machines.

Mr. Mathewson: Where is that, in the yard?

The Witness: Retort house.

Mr. Page: After the stoking and drawing machines and turntable there are the tracks.

Q. Take up these tracks, six lines of tracks running the length of the building and outside 20 feet, drawing and charging machines, 70-pound rails on 6 by 6 cross-ties, these on 6 by 8 stringers. What value do you place upon that?

A. $4,830.

Q. Without depreciation?

A. Without depreciation.

Q. If constructed in the manner here described with cross-ties running clear across those widely spreading tracks and placed on stringers, I find the timber is by far the larger proportion of the cost, amounting to $3,076. That would be exposed to a large depreciation, and I do not suppose you could allow more than ten years lifetime to that wood.

Q. Well, what depreciation, then, do you say you would give to the $4,850?

A. I would give 10 per cent. for a year.

Mr. Mathewson: What would that be in dollars?

A. That would be $307 a year. I do not know how long that timber has been in there. I made inquiry, but I could not ascertain.

4648 Q. Are these timbers exposed or visible?

A. They are not exposed, not visible; they are buried, but taking the position——

Q. Where were they, beneath the floor?

A. Beneath the floor of the retort house. But I have noted in trolley roads and other places where the timber is buried and supposed to be durable it still rots out.

Q. I understand then that you are unable to put a depreciation further than it would be at the rate of 10 per cent. per year on the timber portion?

A. On the timber portion.

Q. What about rails?

A. Rails that weight and apparatus of that weight running over it would be very slight. I do not suppose it would amount practically to anything.

Q. Take up the coke track, four lines of coke track, running the length of the retort house, with 3½-inch rails, 35 pounds?

A. I have not figured that out. I see I have overlooked that.

Q. Well, if you have not go- it, pass on to the next thing that you have.

A. Two coke dumping inclines 32 feet long by 16 feet high, 3-foot gauge. I put that at $500.

Q. Apiece or for the two?

A. $500 apiece.

Q. That would be $1,000 for the two?

A. Yes.

Q. Did you figure any depreciation on that?

A. No, I did not. I did not know the time they had been in use. There was no visible depreciation that I could notice.

Q. With the amount of coke that they have in the works, what is the effect of this coke dumping incline 16 feet high?

A. I think that dumping the coke that high is detrimental; it adds to the percentage of breeze. I saw evidences in the yard of a very large percentage of breeze in the coke, much larger than I had been used to seeing, and I have no doubt much of it is due 4649 to dumping from that height to the ground.

Q. Did you value those engines?

A. Two 7-horse-power engines $400.

Q. Is that with depreciation or without?

A. Without depreciation; 20 per cent.

Mr. MATHEWSON: Two engines, how much?

The WITNESS: $400.

Mr. MATHEWSON: Each?

The WITNESS: No, for the two.

Q. What depreciation did you put upon that?

A. 20 per cent.

Q. $80 that would be?

A. Yes.

Q. And you would value them at $320?

A. Yes, sir.

Q. Did you value the dumping cars?

A. No, I did not value those dumping cars.

Q. Proceed to the next item.

A. The next item, two coke dumping appliances, 20 feet long 40 feet high, I did not see them.

Q. Proceed to the next thing you did see and value. Tower scrubbers, is that it?

A. Yes.

Q. Tower scrubbers, 20 feet in diameter by 84 feet 2 inches over all, capacity of each 1,000,000 cubic feet per 24 hours.

A. I valued that by the weight of the scrubbers given here, 603,000 pounds at an average of six cents.

Mr. MATHEWSON: Weight given where, Mr. Edgerton?

The WITNESS: On this inventory.

Mr. MATHEWSON: Do you mean the weight given by the company or put in by somebody else?

4650 Mr. PAGE: We do not know where it came from. The weight is 603,262 pounds.

The WITNESS: I could not make the calculation of those scrubbers' weight without a good many more measurements than I have got here, but I did not think that weight was out of the way.

Q. What valuation did you put on them?

A. $36,195.

Q. Did you include in that the water tank surmounting the tower?

A. I took this to be the total weight of the whole apparatus.

Q. What depreciation did you place upon that?

A. As far as appearances went there was very little physical depreciation. But the depreciation from antequation or falling out of use would be considerable for the reason that while those tower scrubbers take out ammonia, they are not as advantageous as the more recent rotary washer scrubbers.

Q. In what way are they not?

A. The washer scrubbers use the liquor over and over again and gets it in a more concentrated state and they are generally superseding the coke tower scrubbers.

Q. What about the ammoniacal liquor that is produced from a tower scrubber or from these tower scrubbers if you noticed it?

A. By the use of the tower scrubber by water and you can take the ammonia out of the gas but not in such good shape to save it. The action of the tower scrubber is more to use the ammonia as a purifier than it is to get the concentrated ammoniacal liquor, whereas the washer scrubber would give a better and more concentrated liquor.

Q. Commercially then, the ammoniacal liquor from the tower scrubber is not as valuable as the ammoniacal liquor from the rotary scrubber?

4651 A. No. It is true the ammoniacal liquor can be pumped over and over again in a tower scrubber and there is the attempt made to concentrate it in that way, but it is not as successful as the other.

Q. Did you make any examination of the ammoniacal liquor in these particular tower scrubbers?

A. I just made a—

Q. I do not mean an analysis.

A. I just made an ordinary test by the nose and tasting it; I did not make any determination at all.

Q. Are these tower scrubbers in use in modern plants to-day or plants that are built within the last few years?

A. I believe I introduced the tower scrubber in 1873 and 1874 and it was considered an improvement at that day, but I do not think they stand any chance of competing with the rotary scrubber.

Q. That does not exactly answer the question. I want to know whether they have passed out of use or are they still used in building plants, is what I meant by my question?

A. I do not remember seeing any recent building with tower scrubbers. The tower coke scrubber is also used for a tar scrubber for scrubbing tar, but it does not require any such capacity as it does for ammonia water.

Q. Well, what did you say the depreciation was?

A. Fifty per cent.

Mr. Mathewson: On these scrubbers?

Q. That would bring——

A. The day I was there one scrubber was out of use.

By Mr. Mathewson:

Q. I thought you said a few minutes ago you thought they were in good condition?

A. I said the depreciation was on account of antequation.

4652 By Mr. Page:

Q. Well, 50 per cent. will be $18,097.50, would it not?

A. $18,097.50, yes, sir.

Q. Did you value the foundation on which these scrubbers rest?

A. Yes.

Q. Foundations four inches thick, 34 by 64——

A. Four feet thick.

Q. No, 34 by 64, supported on 300 *plies*, brick circular wall to top of concrete, 6 feet of concrete to the ground level.

A. I made as exact a computation as the description would allow and arrived at $4,582.

Q. Any depreciation on it?

A. No, I did not assess any depreciation on it.

Q. We have an Isbell Porter Standard Scrubber?

A. I have not the price on that.

Q. And you never bought one of the Isbell Porter scrubbers?

A. No, I have priced them but I have forgotten the price of them.

Q. Assuming the price that is given by Mr. Mayer to be correct, which I presume is about $8,000—is it not?

Mr. MATHEWSON: Isbell Porter, $6,860.

Mr. PAGE: Without depreciation?

Mr. MATHEWSON: Yes, and 2 per cent. off for depreciation $6,723. That was his net.

Q. Assuming the price given by Mr. Mayer of $6,860 to be correct, don't you calculate anything for depreciation on account of the age and condition of this scrubber?

A. And on the time and everything in connection with ammonia water or with which ammonia water has a contact, there is a percentage of depreciation.

Q. I think the testimony is that this was installed in 1892?

A. I understood it had that age of 14 years. I put 20 per cent. for 14 years.

4653 Mr. MATHEWSON: It does not appear whether any repairs or replacements had been made since that time though.

The WITNESS: Well, what corroding goes on is very slight. What goes on is internal and you could not see it on the outside, that is true.

Q. That would be $1,372 off for depreciation, would it?

A. $1,372. I did not question the price, so I presume it was obtained from the party.

Q. Well, we are assuming that. Mr. Mayer, as I understand, did obtain it. What is the next thing that you valued?

A. Air condenser.

Q. What value did you place on that?

A. $15,067.

Q. Was that with or without depreciation?

A. That is without. I should not—it is all cast iron pipes and cast iron throughout and coated with tar, probably next to the hydraulic mains, and the depreciation on that, physically, would be very slight.

Q. Take the next thing that you valued?

A. This gas engine house and arrangement I did not value.

Q. Take the next that you did value?

A. Boiler and engine house with 55 horse-power vertical boiler.

Q. 55 horse-power vertical boiler?

A. Yes.

Q. What is the value of that?

A. I allowed $1,100 with $600 depreciation, leaving $500 as the value of that boiler.

Q. What did you value it new, did you say?

A. $1,100.

Q. And with depreciation $500?

A. $600.

Q. The depreciation was $600 but the value with depreciation was $500?

A. Yes.

Q. Now, the 50 horse-power engine?

A. I valued that at $1,000. That is an old-fashioned oscillating engine and there is about 25 per cent. depreciation, $250, leaving $750.

4654 Q. What is the next, boiler house and well, one vertical boiler?

A. One vertical boiler 13 horse-power, $250. I based that on 13 horse-power; depreciation 25 per cent.

Mr. Mathewson: I do not understand whether the $250 is after he has taken out the depreciation or before.

The Witness: No, it is before.

Q. That would be $62.50 for depreciation, leaving $187.50?

A. Yes, $62.50.

Q. Proceed?

A. The well house pump I did not value. It was for pumping up into——

Q. As long as you did not value it, pass to the next thing that you did, was it the boiler in the boiler house?

A. Boiler in the boiler house, 20 horse-power, $360. Stack $67.50 depreciation $21, $46.50. The clock I did not see or the pressure gauge. The valve house——

Q. Was there any depreciation on that boiler and stack?

Mr. Mathewson: He has given the stack depreciation $21, net $46.50.

The Witness: I think the boiler will last forever the way it is now. I do not think it has been used.

Q. Well, do you mean by that it is an abandoned boiler?

A. I think so, yes, sir.

Q. Then would you say that an abandoned boiler was just as good as a new boiler?

Mr. Mathewson: If it had never been used it would be, would it not? He says he does not think it had ever been used?

The Witness: This was in the well house and had a banked fire
on and when we went back to the works, they were pump-
4655 ing from that house into the rectangular tank as described,
and it connects with the tank, but I do not think that tank
was used for any purpose, no, sir.

Q. This particular boiler is connected with the iron tanks that cover the roof of the boiler house, is that it?

A. Yes, they showed us the connections on the map.

Q. Well, do you value this at—pass on to the next.

A. I don't know how I could put a depreciation on.

Mr. Mathewson: You might on the theory that we might use it some time and it will deteriorate.

The Witness: I do not believe that thing is in use.

Q. Proceed. What is the next?

A. Valve house, one 8-inch Bristol recording gauge; I should think that is worth $50. And the large gauge $24, $74.

Q. Is there any depreciation on this?

A. I would have to know the length of time they have been in use. There is quite a good deal of depreciation, but I have not calculated it.

Q. Proceed to the next.

A. Exhauster house, $2,550 for the exhauster and engine. I got that from the building.

Mr. Mathewson: One McKenzie exhauster is that it?

Q. Do you mean this New York Safety 14 by 16 engine direct connection to No. 10½ Root exhauster 180 R. P. M., what is that?

A. Revolutions per minute.

Q. That is how much?

A. $2,550. I do not understand whether this additional Root Exhauster No. 10 was the one spoken of or an additional exhauster.

4656 This is what I noted as the pumping house, and here called the exhauster house. They have two exhausters in there, or three in fact.

Q. Well, there are three here. What did you value at $2,550, is the point we are after?

A. The engine and the exhauster.

Mr. Mathewson: The Root exhauster?

The Witness: The Root exhauster. That was pumping 2½ pounds pressure. I suppose that is the power pumps.

Q. What depreciation did you place upon that, if any?

A. Well, that looked all in fine order, everything in that building, and I did not put any depreciation on it, without knowing the length of time it had been in use.

Q. What about that additional 10½ Root scrubber?

A. That is correct, $1,600. Also the McKenzie exhauster, $3,000 is correct.

Q. $3,050 is the way it is given here.

Mr. Mathewson: Do I understand he agreed with the $3,050 or that he made a separate valuation?

Mr. Page: I do not understand it that way, but that he agreed with the $3,000 given here.

Mr. Mathewson: It is given here as $3,050.

The Witness: That is right, it was an error in putting it down.

Q. What next did you value?

A. Exhauster house contents, 30-inch valve standards, running through the floor, I think that is correct, I think that is a moderate estimate.

Mr. Mathewson: $525?

The Witness: Yes, sir. The photometer complete with addition of Pentane standard lamps and meter $650. There would 4657 be $500 and $75 and the extra meter would be $100.

Mr. MATHEWSON: $650 is right then, is it?

The WITNESS: I think that is a little bit low. Those meters are worth $100.

Q. Then we will say $675?

A. $675.

Q. Is there any depreciation to be taken off the contents of this exhauster house?

A. No, that looked as far as visible to be in perfect condition and no depreciation could be assessed unless one knew the age.

Q. Very well then. Proceed to the boiler house. Two 50 horsepower corrugated horizontal boilers and stacks, each 3-inch tubes, 14 feet long, diameter of shell 5 feet 6 inches by 16 feet long.

A. These are of the type that I spoke of, the Sampson-Fox type, and it is a more expensive boiler. I put that down at $2,000 for the two, $1,000 each. That is the value with depreciation, for they had all the appearance of having been in use quite a time.

Q. $2,000 is the value with depreciation? Is that right?

A. Yes, sir, that is right.

Mr. MATHEWSON: Have you any objection to his stating in this connection what it is without depreciation?

The WITNESS: I allowed a large amount for those boilers, $30 per horsepower.

Q. That would be $3,000?

A. That would be $3,000. $1,500 apiece. They are marine boilers really.

Q. Did you value the stack?

A. I did not. That stack appears to be new.

Q. Proceed with the next thing that you have. Tanks in the yard, ammonia tanks?

4658 A. No, I could not make any calculation on that for they are not measurable.

Q. Proceed to the next?

A. A 50-horsepower, two-cylinder, oscillating engine, I put at $1,000, and for the boiler $700, $1,700; depreciation 60 per cent., $1,000.

Q. $1,700 for the two?

A. Yes.

Mr. MATHEWSON: That is 50 horsepower, oscillating engine with cast iron walk, 8 by 6 inches by 6 feet 5 inches?

The WITNESS: I am speaking of the engine.

Q. You valued the engine at how much?

A. $1,000 and the boiler at $700, making $1,700, and I took $1,000 off for depreciation, $700.

Q. What was the next thing that you valued there? That is all of the apparatus, is it not, except the tanks and holders. You have not valued those yet?

A. I have obtained bids on holders, but they did not give the bids for exactly this size, therefore I will have to——

Q. You made an examination of the tanks and holders at this plant, did you?

A. Yes.

Q. What did you find in regard to the holders?

A. Those small holders are practically out of use. They are lying dead in the yard. They were raised up during the time we were examining the plant and repainted with tar, but otherwise they were practically dead holders lying there without being used.

Q. Which holders were they that were in this dead condition? Identify them in the plant.

A. There were six holders in the yard between 14th and 15th Streets, I think it was, and Avenue D, or facing the office building; in fact in the same yard in which the purifier house stands.

4659 Q. Was there anything about the holders from which you could tell whether they had been in use or not?

A. Well four of the holders were grounded when I first went there and had been on the blocks. No. 1 holder I shall call it, the one farthest from Avenue D was raised up to about half the contents of the inner section and there was a band of 8 inches of rust and dirty water on the top or on the sides rather, indicating that it had been down, and down for some time; in fact these holders were too small to be of any use——

Q. Did you observe that on any of the others?

A. Yes.

Q. What one?

A. On all of them that were raised up so you could see it.

Q. As we do not know which ones were raised up, will you state? Did they inflate all of these while you were there?

A. They inflated and painted three of them on Thanksgiving Day, that is Thanksgiving Day and the day after.

Q. Did you see them after they were inflated and before they were painted?

A. Yes, sir, I saw those that were inflated and they all had the marks of prolonged settling in the water, such a mark as would be made on a gasholder when the water is gradually settling on the surface and leaving the dirt which gradually settles on the surface of the water, indicating they had been there for some time.

Q. Did you comment on this, you or Doctor Marks, in the presence of a representative of the Company?

Mr. Mathewson: I object to that. We had no representative there for the purpose of fixing the policy of the Company or dealing with that subject at all.

The Master: I do not know that it is of any materiality but I will allow the question.

Mr. Mathewson: Exception.

4660 A. It was commented on between all parties——

Mr. Mathewson: Just a minute.

Q. The question is whether it was commented on in the presence of this Mr. Ross who was the representative of the company.

A. Yes, I think Dr. Marks made remarks about it, and also Mr. Lacombe, we spoke of it several times.

Q. How soon thereafter were the tanks painted?

A. They were painted on the next day, Thanksgiving Day, when we came around the day after Thanksgiving, one had been painted and they were vigorously at work on another.

Q. You examined the buildings of the plant did you?

A. Yes, sir. I did not make calculations of the——

Q. No, you have not made calculations as to their value, but in what condition did you find the buildings?

A. The buildings were very old, and while not what you might call dilapidated, they have evidence of use and repairs. For instance, the retort house has trusses placed across it at intervals which I took to be to repair some settlement or disarrangement of the supporting columns. I think no doubt these trusses were introduced subsequent to the building. I noticed on the water table on both 14th and 15th Streets, notwithstanding the building was said to be sustained upon a double pile foundation, there was quite a perceptible wave; I did not measure it; it is not a straight line water table by any means or straight line; I think a level put over it accurately would show considerable deviation from the horizontal. The brick fences were anchored inside of the yard to keep them from falling out into the street. They lean outward about between 6 and 10 inches at different points towards the street, at the top, particularly on the 14th
4661 Street side. The ground level within is filled several feet higher than the street level, though, and I suppose this was caused by frost. The walls are anchored to the columns of the holder and also ground anchors to keep them from going over farther.

Q. Well, was there anything else you observed about the building?

A. I thought the coal storage building seemed to be in very poor condition and also the open storage yard; the coal storage over which they have the coal handling apparatus.

Q. Did you make any estimate of the depreciation of these buildings?

A. I could not make an estimate of the depreciation with any degree of accuracy, no. I think they are buildings that would be considered as out of date and would need considerable repairs. The mortar in the wall and various places was not pointed up and was washed out near the gutters; in fact, it was about the most dilapidated coal gas plant on a large scale that I have seen.

Mr. Mathewson: I move to strike that last statement out.

Mr. Page: I think it is competent.

The Master: No, I will let it stand.

Mr. Mathewson: Exception.

Q. Have you made any computation or examination as to the results of the operation of the plant in the production of coal gas and the cost of it?

A. I have taken from what we call the carbonizing reports of the works.

Q. Have you got those here? Produce them if you have.

(Witness produces papers.)

Q. Have you made an examination of City's Exhibit T for identification with respect to the 14th Street plant?

A. Yes, sir.

4662 Q. I think these are from month to month?

A. Those are the monthly carbonizing sheets from the different stations and they are aggregated in this statement.

Q. That is something that you had made up?

A. This was claimed by the accountants I think to have been made up by Deloitte, Plender and Griffith. Mr. Cuthbert thinks it must have been made up by the Gas Company and aggregated from that. He said it was the same typewriter. I had got it from Mr. Gans.

Q. Well, that is something that you got from Mr. Gans, was it?

A. That is something I got from Mr. Gans, I having requested him to have such a statement made up by the accountants, and I supposed it was made up by the State accountant, but Mr. Cuthbert says it was made up by the company.

Q. In making your examination, you have used the summary that I now hand you, have you?

A. Yes, sir. I looked this over with reference to the operations of the stations, in dollars and cents; and also compared it with the cubic feet of output.

Mr. Page: I ask that this be marked for identification.

Marked for identification State's Exhibit ZZ.

Mr. Page: You might put on the record that State's Exhibit ZZ for identification was prepared by and produced at the request of the counsel for defendant, by Mr. Carter, of the Consolidated Gas Company.

Mr. Mathewson: I think that is so. It looks so. If there is any correction of that, I will make it later. I have not been able to get in communication with Mr. Carter. He is not at the office.

4663 Q. In the computations that you have made did you consider the corrections on page 15, which appear to be made in lead pencil, as being a correct statement, and as a correction of the typewritten matter?

A. I did not use the figure in that column. I used the figures in the column of gas made, for the purpose of making comparison between the operations of the different stations; not on the gas sold but on the gas made.

By Mr. Mathewson:

Q. So that the pencil corrections cut no figure in your computations at all?

A. No, sir.

By Mr. Page:

Q. Now, from an examination of this record what do you find in regard to the operation of the 14th Street plant, as to cost of production?

A. The average cost of production of the 14th Street plant is 37.85 cents.

By Mr. Mathewson:

Q. Where does that appear, if you will refer to the paper?

A. That is compiled from State's Exhibit T.

A recess until 2 P. M.

4664 After Recess.

Henry H. Edgerton resumes the stand and further testifies.

Direct-examination continued by Mr. Page:

Q. Now, Mr. Edgerton, have you made the computation in regard to the cost of the production of gas at the 14th Street station?

A. I have taken the cost stated in State's Exhibit ZZ, for identification, cost at the 14th Street station, gas made, 37.98 cents.

Q. Have you made a similar computation as to the other stations, and if so which one?

A. I have made a computation on the 21st Street, 44th Street and 99th Street stations, showing a cost of 31.05 cents.

Q. Making a difference in the cost as against the 14th Street station of how much?

A. 6.83 cents. Now, taking in consideration the gas made at the 14th Street station ,1,490,909,000 and multiplying it by the excess of cost at the 14th Street station, we arrive at the sum of $101,929.08 as the difference in cost as against the 14th Street station during the year.

Q. Now, you may proceed with what you were stating?

A. Taking in consideration the loss, which is virtually also a loss in profit on the whole business of $101,929.08, and capitalizing that at 5 per cent., I arrive at the sum of $2,038,581.60 as the impairment on capital of the whole business due to the operations of the 14th Street station.

Q. What do you mean by that expression, "the whole business"?

A. Well, I mean that if the 14th Street station had not been operated at all, and the gas could have been made at the cost of the other stations, they would have had $101,929.08 more of profit on the year's business. 4665

Q. I understand, but you refer that to the impairment of capital due to the 14th Street station, $2,038,581.60?

A. Well, that was interest at 5 per cent. on their capital.

Q. What I want to know is whether that is on the business of the company when you said "the whole business," or whether it is an impairment of capital, or what it is. I just wanted to know what you meant by the use of that phrase "the whole business;" whether you referred to the plant or to the capitalization?

A. Well, the whole business of gas production and sales in New York City; the united plants.

Q. Upon this computation then at what would you value the 14th Street plant?

A. I think that computation virtually wipes out the 14th Street plant.

Q. Well, then, this to this extent would go the reduction of the value of the 14th Street plant?

A. Yes, sir.

Q. In fact, it costs the company that much more to produce gas than it would if they had a plant equally efficient with the other three; is that the idea?

A. Yes, sir; or they could buy gas to advantage from other companies.

Q. Have you made a similar examination as to the cost of gas to the Central Union Gas Company?

A. I had a statement from the accountants of the cost of gas at the Central Union, if I remember.

Q. I show you Exhibit 21 in the record of the case in the Supreme Court in the matter of the complaint of H. Brown and others, customers of the Central Union Gas Company, papers on appeal from order made by the Commission of Gas and Electricity of the State of New York, and ask you if——

4666 A. It appears from this account that it seemed to contain all the elements of cost of gas in the holders, less amounts received from tar, coke and residuals, placing the cost of gas in the holders at 26.57 cents.

Q. From your experience in the manufacture of gas, seeing that the Central Union manufactures 1,596,410,000, would a larger plant be able to produce a better result if operated with the same efficiency and with the same efficiency of apparatus?

A. Undoubtedly.

Q. From your experience and from your investigation as to the cost price of other modern and up-to-date companies, what would you say it would cost an efficient, modern plant, efficiently and economically managed, to produce gas and put it in the holder in the City of New York?

Mr. Mathewson: I object to that, in addition to my previous objection in regard to the witness' competency. He is not shown to be familiar with the conditions in the City of New York, or to be familiar with the price of labor or the price of materials here, and I submit it is simply a case of conjecture and not evidence, unless he is so qualified. He concedes he has never operated a plant in the city.

The Master: He may answer it.

Mr. Mathewson: Exception.

A. Considering the immense amount in New York City of gas and the prices prevailing here as shown in the accounts of the companies which I have looked over, and comparing it with the results and apparatus of a similar kind in other cities I think the price cost per thousand could be reduced to 24 cents.

Q. For a 22-candlepower gas?

A. Yes, sir.

4667 Q. Would you or would you not consider then that 24 cents would be the more correct figure to use in comparing the efficiency of the 14th Street plant than the 31.05 that you derived from the operation of the three other stations?

Mr. Mathewson: Objected to on the further ground that this is a conclusion that the witness is not entitled to draw, even if he were an expert on costs.

Question allowed. Exception.

A. I think a figure of 24 cents should be adopted as a basis as soon as the company is provided with a properly equipped, modern plant in order to make a gas at that price; yes, sir.

Mr. Page: I offer in evidence the Exhibit 21 of the Central Union referred to in a question just put by me, contained on pages 207 and 208 of the papers on appeal referred to, down to the point on page 208 where the first total is given.

No objection.

Received in evidence and marked State's Exhibit AAA.

Mr. Page: You may cross-examine, Mr. Mathewson.

Cross-examination by **Mr. Mathewson**:

Q. In referring to State's Exhibit ZZ for identification, you have been dealing in each case with the cost per thousand made, have you not?

A. Yes, sir.

Q. You do not refer to the 42d Street coal gas plant of the Consolidated Company. Does it not appear from this exhibit that the cost per thousand made is 34.87 cents per thousand of make at 42d Street?

A. Yes, sir.

Q. And you took 14th Street for comparison with the three
4668 water gas stations because it showed a higher cost than the
other coal gas station, didn't you?

A. I did not. I am going to take and put 42d Street through the same process.

Q. That is reserved for a later date?

A. Yes, sir.

Q. Then the difference between the cost at the 14th Street station for the year 1905 and all the other stations of the Consolidated Gas Company is not 6.83 cents, is it?

A. No, sir; it is comparing them with those stations I have named; 21st Street, 44th Street and 99th Street, because those are the only up-to-date plants that you have got.

Q. Those are all water gas stations, are they not?

A. Yes, sir.

Q. And if you compare the cost at 14th Street with the other four stations, including 42d Street, the difference would be less than 6.83, would it not?

A. Somewhat less.

Q. Now, isn't it considered good policy, in view of the fluctuation of the cost of various materials that enter into the production of coal gas and the production of water gas, to have a mixed plant as some witnesses have testified, half coal and half water?

A. Yes, I believe in a mixed plant of an efficient type.

Q. Isn't it true that there is always a difference between the cost of gas produced in a coal gas plant and in a water gas plant in the same city?

A. Yes; it would be according to the cost of materials.

Q. But they probably never would coincide, would they? Either the coal gas or the water gas would cost more in the holder than the other?

A. Yes, the coal gas would generally cost the less because it is a lower quality and more cheaply produced.

Q. But don't you understand that the coal gas which is produced at the 14th Street station and at the 42d Street station is 4669 raised to the same candlepower as the water gas by enrichment, and that it has to be in the City of New York?

A. I understand it ought to be. I think, however, that it lags slightly behind the water gas stations in quality.

Q. Why do you think so?

A. I have made an examination of the reports of the candle-powers, both at the works and the inspector's candle-powers, and my impression is there is quite a notable difference in favor of the water gas stations. That is my impression.

Q. You know, do you not, that the 14th Street coal gas is enriched by oil gas which is produced at 21st Street and sent down to the 14th Street station?

A. Yes.

Q. And that the two gases are mixed before they are ever put in the mains?

A. Yes.

Q. And you know that the city examiner has a test station on the mains coming from 14th Street, do you not?

A. Yes. I found that he had, under different names the different stations represented in his testing office.

Q. And if the coal gas sent out from 14th Street were a 22-candle-power, or so near 22 candle-power as to be likely to fall below it, that would show in the tests of the city examiner made upon the 14th Street mains, wouldn't it?

A. Yes; I think it is always above, and most always above the 22 candles, but not as much above as the water gas plants.

Q. Now, you have said that the difference of 6.83 cents between the cost of three water gas stations and the cost of the 14th Street coal gas station, if applied to the output of 14th Street, would equal $101,000, and that that capitalization at 5 per cent. would be two million dollars. Will you tell me how much $101,000 would amount to in cents per thousand on the entire output of the Consolidated Gas Company, dividing by the amount of its sales, which 4670 are 13,283,000,000?

A. Well, that would require to be figured up.

Q. Cannot you tell me roughly, in a moment? I would like to know what difference that would make on the selling price of our gas?

A. About .76 of a cent.

Q. About three-quarters of a cent. Now, isn't it true that not only does the cost of gas in a water gas plant vary from the cost of gas in a coal gas plant, but that the cost of gas in either a water gas or coal gas plant fluctuates from year to year?

A. Yes, certainly.

Q. Do you know Mr. Cowdery of St. Louis, or do you know who he is?

A. Yes.

Q. Have you seen a statement of Mr. Cowdery to the effect that he has known the cost of gas to fluctuate in a single year as much as fifteen cents a thousand, in the same plant?

A. On the cost in the holder?

Q. No, cost at the burner?

A. Well, that involves a great many more considerations, I suppose; other conditions; it involves taxes and a great many things beside the cost of manufacture. The cost of manufacture of gas is remarkably steady in a given locality, as long as the price of materials remains the same.

Q. But do the prices of material and labor remain the same from year to year in a large city generally, in your experience?

A. Very close.

Q. Do you mean to say that labor and material are very close now to what they were seven years ago in New York City, or don't you know?

A. Well, as applied to gas manufacture?

Q. Yes, I mean gas manufacturing.

A. I think on the whole there is very slight fluctuation in the price of material, so far as my experience goes.

Q. You haven't had any experience in New York City within the last seven or eight years, have you?

4671 A. I followed the operations in gas, yes, sir; pretty closely.

Q. You don't know how much the company has to pay or had to pay in 1905 for oil, as compared with 1897, do you, for the same amount of enrichment?

A. No, I don't know what they got in 1897.

Q. Do you know how the wages of caulkers and other employees of the Gas Company compare now with what they were ten years ago in New York City?

A. I have heard the comparisons made. I don't find that there is any great fluctuation in the price.

Q. Do you know yourself?

A. I cannot say that I know of my own knowledge. I only gather it from inquiry.

Q. Now, you say that this $2,038,000 which you would get by capitalization at 5 per cent., $101,000, would virtually wipe out the 14th Street plant. If you wipe out the 14th Street plant you would have to invest somewhere else, wouldn't you, in order to produce the same amount of gas, if the company produced it?

A. I should have invested long ago in that direction.

Q. That may be, but that is not the question. Would not they have to have further capital and further property to produce the gas which they would lose at 14th Street?

A. Yes.

Q. That would not mean a net reduction of $2,038,000 in the capital of the company, would it?

A. No; the capital remains the same, but its earning powers would be impaired to that extent.

Q. How could the capital remain the same if you wiped out the 14th Street plant and built another plant to produce the same amount of gas? What would become of the 14th Street investment? Would it be charged off to depreciation?

A. It ought to be, yes.

4672 Q. Then your theory is that the 10.89 cents which the company says it has expended in repairs and renewals for the past twenty years has not been sufficient to take care of proper depreciation; is it?

The WITNESS: In my examination of the books——

Q. No, answer the question.

MR. PAGE: I submit the form in which that question is put enables the witness to correct an erroneous theory, if he conceives it to be such, that the counsel has assumed as a theory.

Mr. MATHEWSON: I am asking whether that is his theory or not. That is susceptible to a yes or no answer, I think.

The MASTER: Yes.

The WITNESS: Will you please read the question?

The STENOGRAPHER (reading): "Then your theory is that the 10.89 cents which the company says it has expended in repairs and renewals for the past twenty years has not been sufficient to take care of proper depreciation; is it?"

A. I should think that that amount would more than take care of repairs and depreciation; decidedly more than take care of it.

Q. You think it would?

A. Yes, sir.

Q. Then if the company has spent 10.89 annually in repairs and depreciation for the last twenty years, and you find the plant depreciated now to the extent of $2,038,000 notwithstanding, how do you reconcile that?

A. Very readily. I looked at the books and I found that one of these items was charged as a depreciation item, and it was under the head of renewals; and I found extending back during a series 4673 of years other items under the head of renewals, and I suppose, and I had a right to suppose that those are the same character and therefore they had sufficient to renew that works twice over.

Q. That is the whole supposition, is it? That is the whole basis of your theory, is it? Depreciation as a charge is never an expenditure, is it?

A. No, sir.

Q. But where an amount is charged to depreciation and money is received representing that, then the company expends up to that in new construction, doesn't it, without adding anything to its capital account? In other words, if it expends another similar amount it has simply brought its capital to the point where it was before the depreciation was charged off; isn't that right?

A. My idea of the depreciation fund is that it is set aside as a fund.

Q. Well, let us approach it in another way; we will assume that the company charges off in a period of five years $1,000,000 to depreciation; it puts in new construction to the amount of $1,000,000; that brings the capital back, doesn't it, exactly to the point which it would occupy if no depreciation had been charged off and no new construction had taken place?

A. If the money had been spent on the thing depreciated and not another construction I said they can get it back.

Q. Would not the total plant be of the same value, no matter what part of the plant you expend this money on?

A. Well, that would not be my way of thinking it.

Q. No matter what you think. Won't you answer my question?

A. I don't think it would. I think the depreciation should be spent in the direction of the material depreciation to restore it rather than some other direction.

4674 Q. Let me put it again: assuming that a company in a period of five years charged off $1,000,000 to depreciation upon the various operations of its plant, and that within that same period it expended $1,000,000 in new construction. Would not the total plant value stand at exactly the same figure as though no depreciation had been charged off and no new construction had taken place?

A. It would stand at the same figure, yet——

Q. Well, that is the question. Now you have answered the question.

Mr. Page: I think he has a right to explain if he wishes.

Mr. Mathewson: I think he can do so on redirect. I do not want him to waste time answering questions I have not asked.

Mr. Page: I will take the ruling of the Master on that.

The Master: He has answered the question.

Q. Don't you mean the capital would be the same? Wouldn't it be true that the total capital value would be the same as it was originally?

A. The total capital value would be the same, but if the money was spent in the wrong direction it would not be the same, in the sense that it had been—I will give an example: if you spent the money on mains and allowed an old retort house to go on depreciating instead of renewing that particular thing, their earning capacity would be very much influenced by it.

Q. I am not talking about the earning capacity; I am speaking about the capital value of your plant.

A. The value of the plant is dependent upon the earning capacity, I mean.

Q. Let me show you Complainant's Exhibit 79. Take, for instance, the item of mains, which on November 11, 1884, appear to

4675 be valued at $5,233,962.10; it appears that there has been construction since consolidation of $3,549,249.15, and depreciation has been charged off to the extent of $841,060.22. Now, you observe that the net increase which has been added to the capital is simply the construction since consolidation, less the depreciation of $841,000.22. In that case, does not that amount to a renewal in the mains account of the amount which has been charged off to depreciation by an actual expenditure?

A. Yes; in the mains.

Q. Isn't it so in each one of the other items which appear on Complainant's Exhibit 79, with the sole exception of office furniture and fixtures, where the depreciation has been greater than the addition by about $30,000?

A. Yes, that is true, but it does not——

Q. Well, you have answered the question now. So that an expenditure always goes in construction which takes the place of depreciation and not in the charge to depreciation itself, does it not?

A. Yes.

Q. Assuming that the Company did not construct a plant to take the place of 14th Street, if that were abandoned, you said they might buy gas. Didn't you observe that the amount that the Company had to pay for gas which they did procure under agency agreement was greater than the 31.05 cents and was in fact between 33 and 34 cents?

A. I knew it was higher. I do not take that into consideration.

Q. So that if they were able to procure gas at the same rate that they have heretofore procured it there would not be a difference between that price and the cost at the 14th Street amounting to as much as 6.83 cents per thousand feet, would there?

A. No, sir; but they seem to know how to make it cheaper.

Q. Well, that is another thing. We may hire you to do it before we get through.

A. Very well.

4676 Q. You spoke about the Central Union and that the cost to the Central Union you have stated was 26.57, according to an exhibit which has been offered here. You know that is for the nominal year ending October 31st, 1905, do you not, or don't you know it?

A. Yes, I knew that all those Commission reports ended on this October 31st year, I believe it was.

Q. Did you know that only four months of that period was under the law requiring 22 candle power?

A. I know that the law did not go into operation until the——

Q. First of July, 1905?

A. First of July.

Q. Then if the year ended October 31st, two-thirds of that year would be under the old 20 candle-power law, would it not?

A. I understood there was no 20 candle-power really established here, it was a 22 candle-power rate.

Q. You understood that the penalty was affixed only in case 20 candle-power was produced, didn't you?

A. Yes, I believe they are only penalized at 20 candles, and I suppose they kept it higher than 22 candles.

Q. Why did you suppose? Did you make any examination of the city examiners' records to find out?

A. Yes, there was quite an amount of gas went out higher than 22 candles.

Q. But you found it frequently went below even 20, didn't you?

A. There were occasions, yes, sir.

Q. Have you read the testimony of those representing the Central Union Gas Company before the Gas Commission as to the candle-power the Central Union maintained during the eight months prior to June 1st, 1905?

A. No.

4677 Q. You did not know that they testified that they did not maintain even the 20 candle-power which they conceived to be required by the law, in view of the fact that there was no inspection as to candle-power in the Borough of The Bronx where the Central Union was operating?

A. I did not know they were taking advantage of that.

Q. You did not know that they testified that 26.57 cents would be the cost if they maintained the candle-power, did you?

A. The cost would be slightly greater.

Q. It would depend whether it was slightly greater or otherwise as to what candle-power the Central Union did maintain during the first eight months of that period?

A. In any raising of candle-power, there is a very slight increase in cost.

Q. It has been testified here by various witnesses that a raise of candle-power of 5 would make about 5 cents difference in the cost of gas?

A. Five candles is obtained from a gallon of oil.

Q. Yes, and a gallon of oil costs between four and five cents, according to the records here, does it not, so far as these companies are concerned, at any rate?

A. It is so said.

Q. And did you know that the Central Union product was divided between coal and water gas and that the market for coke was very much better at their plant so that they received a much higher price for coke than the Consolidated got for its coke in the city, or did you not know that?

A. I knew that the market for coke in the city as charged was very low. I suppose they had a very poor sale.

Q. Did you read that the Central Union happened to have customers immediately at hand who took their coke without storage or transportation, at a price substantially higher than the Consolidated was able to get?

A. Yes, but the Consolidated has consumers at hand also.

4678 Q. You understand it was impossible, according to the testimony, to get as good prices for the coke produced by the Consolidated in New York City, Manhattan, as it was by the Central Union in The Bronx?

A. Yes, but I did not believe it.

Q. You have never bought or sold any coke either in The Bronx or in Manhattan within the last five years?

A. No, but I have——

Q. Well, have you?

A. No, sir.

Q. Now, you say a larger plant ought to produce a better result. It ought to produce a better result provided everything else is equal, ought it not?

A. Well, other things being equal, yes. I do not see that there is——

Q. Well, if you had a more expensive apparatus and a higher capitalization per thousand than the Central Union, that would to some extent offset the lower cost of gas, would it not?

A. To the extent that the capitalization is higher, requiring a greater margin.

Q. And the coke conditions and candle-power maintained would also have some effect upon the result?

A. It would have effect; it is all susceptible of calculation as to what it would be.

Q. Now, you say that gas should be manufactured in the City of New York at 24 cents per thousand feet, in spite of the facts to which I have called your attention respecting the Central Union, which for this deficient candle-power gas cost 26.67 cents, do you?

A. I think so, yes, on the scale that they——

Q. Will you name any city where the gas is produced at 24 cents in the holder, including repairs and expense and distribution as to works, as well as labor, and material and enrichment, and so forth, up to the holder?

A. Yes, I think that if I remember rightly, New Bedford has as low a price as 24 and a fraction.

Q. What is the candle-power at New Bedford? Is not the legal candle-power in Massachusetts, including New Bedford, 16 candles instead of 22?

4679 A. Yes, but very few make 16 candle gas. It exceeds that candle-power.

Q. Yes, and so our gas here, so we never, in any instance, fall below it. But is not the legal standard in Massachusetts 16 instead of 22 candle?

A. That is the legal standard, but it is not a marketable gas.

Q. You do not claim they maintain 22 candle power in New Bedford, even on the average or usually?

A. I don't think they do. If I remember rightly they maintain about 18 or 19 candle power.

Q. Now, will you be good enough to divide here this 24 cents which you have said should be the cost in New York, indicating how much should be the cost for coal, how much for oil, how much for labor and the other elements that go to make up the cost in the holder?

A. Well, I made this cost up from the operations in other cities and——

Q. Well, you have not named any other but New Bedford. You may quote anything from New Bedford, if you can, in giving these items?

A. That is public—the people are making gas cheaper and selling it cheaper and they do not want their prices quoted, as they gave them in confidence, and therefore you cannot use their figures. But I——

Q. Well, I shall ask you to state what your details are of the 24 cents per thousand feet in the holder, including also repairs, distribution at the holder and at the distributing station and the ordinary expense?

A. I will have to take time to make up such a statement as that.

Q. You do not mean to say that you have given this 24 cents without making up a statement?

A. As far as that is concerned I had the prices of these other companies in view, and being smaller and some of them not as well situated as New York, I had a right to assume that they could
4680 do as well in New York, and I presume they will with their new works.

Q. Well, the testimony is not that way; but is there any one of these companies to which you have referred that maintain 22 candle power gas, which never allow it to fall below 22 candles, tested at least a mile from their works?

A. No, I do not think any of them have quite that candle power on the average.

Q. I shall expect you to state what these companies are, Mr. Edgerton, if any weight is to be given to your evidence on that ground?

A. Well, I may get leave to use some of those figures; I think probably I can, because they are selling gas cheaper and they probably won't care to make a secret of it.

Q. You are not able to divide up this 24 cents then on the stand at present, are you, to show what you assigned to each element?

A. No, I should take time to do that and be very careful about it. I only made the statement of 24 cents based on other cities where they——

Q. I want to know what the other cities are and what the conditions are which prevail?

A. The conditions did not seem to be any more favorable than New York, except the question of candle power.

Q. There is one question that seems to be more favorable, and that is candle power?

A. Yes, I think you should receive credit for any excess over 22 candles, certainly.

Q. You spoke about the gas manufactured at Danbury, in a previous examination. You do not refer to that gas, do you, where you said you were chief engineer?

A. I said I constructed the works.

Q. No, but you said you were virtually managing it now,
4681 didn't you?

A. I said they referred almost all questions of management to me, sir.

Q. As a matter of fact, that is a sort of oil-water gas, is it not, of something like 35 candles?

A. Yes, 35 candles according to our test, and 44 according to the test with a large burner.

Q. What do you mean by a large burner, Argand?

A. No, giving a large flame, say, about 25 candle flame. We test the gas with a 14 candle flame.

Q. What price does Danbury receive?

A. It averages $2.70.

Q. What is the high and what is the low price?

A. The highest price is $3.15 and the lowest price is $1.75 for that quality of gas, 44 candles, per thousand.

Q. As a matter of fact, you sell your gas at Danbury on the basis of 14 candle power, don't you, with an additional pro rata charge for anything beyond that?

A. 14 candle power it was originally, but it is now 17.6 owing to the——

Q. Will you explain just what that is? Do you make your charge on the basis of 17 candles?

A. 17.6 candles.

Q. And you have an arrangement in your meters, by which the consumer, if he gets 34 candles, pays twice as much, don't you?

A. No, there is no peculiar arrangement of the meter except this: the bill is registered at the rate of one cent an hour for 17.6 candle light and a discount is made from that of 40 per cent.; that is the highest price paid; and I think there is 10 per cent. for cash. The price has been lowered recently. I have not heard to what extent.

Q. But for anything above 17.6 candle the effect of the arrangement is that the consumer pays in proportion to his additional candle power?

4682 A. He pays strictly by the candle power of the gas, yes, sir.

Q. And if the candlepower was 35.2 which would be twice 17.6, he would pay twice as much?

A. Well, understand, we maintain as closely as possible a stated candlepower during the month and he pays the sum that the average candlepower is kept as near as possible——

Q. It is adjusted to 17.6 candlepower?

A. As near as we can get it. In the winter time it may run something below and in the Spring and Summer it runs somewhat above.

Q. In other words, for 500 feet of gas delivered at 35 or 36 candlepower the consumer would be charged for a thousand feet of gas at 17.6 candles?

A. No, he is not charged in that way. It is registered directly on the light.

Q. Yes, I know, however it is registered, that is the effect of it, is it not?

A. The effect of it is he pays according to the candlepower.

Q. And for 500 feet of 36 or 35 candlepower gas he would virtually pay for a thousand feet of 17.6 candle-power; that is the way it is figured, is it not? You deliver him 500 feet of 35 candle-power gas and he pays for one thousand feet on the theory that he pays for 17.6 candle-power.

A. He pays at the rate of two feet an hour. His burner would burn two feet an hour in place of five; that is all there is of it. It is a simple matter of calculation. We do not need to quibble about it.

Q. I am not trying to do that, I am trying to get the facts. You deliver 500 feet if the candle-power is 35 and he is charged for one thousand feet on the theory that you are entitled to charge the gas at 17½ or thereabouts, is not that the effect of it?

A. That is not the proper way of stating it. We do not do anything of the kind.

4683 Q. He pays in direct proportion to the increase in candle-power in substance, doesn't he?

A. That is it substantially.

Q. And therefore the charge is made on a candle-power basis?

A. On a candle-power basis, just the same as all gas ought to be sold.

Q. If a rise in candle-power is only a slight additional expense as you stated a few minutes ago, why is the charge made up proportionate to the increase in candle-power, no matter how much, in the case of Danbury?

A. The charge is made the same all the time. The idea is to keep the candle-power at the same point. We do not alter every month's bill or rate of charge according to the candle-power of that month.

Q. I understand that. Is that the best answer that you can make?

A. If your question implies that there is a constant changing or shifting according——

Q. No, it does not imply anything of the sort.

Mr. Page: Read the question.

Mr. Mathewson: I will ask it in this form.

Q. You stated a few moments ago that the increase in candle-power in New York involved a slight increase in the cost of the gas. Why then in Danbury is it sold for an additional price directly proportionate to the increased unit which you assumed based upon a standard of 17.6 candles?

A. It is sold at a price to produce a profit without any reference to the point you mention. I do not exactly get the purport of your question, but if you mean to say why we do not give this additional candle power for nothing or why we charge for the additional candle power——

Q. No, I do not intend to ask any such thing, Mr. Edgerton. If you cannot answer the question I shall not push it further.

4684 You stated that you were the inventor of a process of gas manufacture. Was not that a process of gas manufacture by retorts, a sort of oil gas process?

A. Oil and water gas. That is a good many years ago.

Q. It was a good many years ago, wasn't it?

A. Yes.

Q. Are any of the plants which you designed and put in operation under this process working to-day?

A. Yes, sir. Danbury is working to-day.

Q. Any other Danbury?

A. No. They have been pretty much chased out of existence. There is no chance of working plants, with promoters scouring the country and grabbing everything they can get hold of. I had a plant operating at Wallingford and operating well and successfully, and they were never left at peace. There were promoters there, and there was not a month in the year, when some schemer was not there to get them to change their plan of operation, not a month in the year, and sometimes not a week.

Q. Trying to induce them to put in a poorer process than yours?

A. Yes, and it showed it, because they have gone to pieces, and they pay no more.

Q. And the owners of gas plants which you put in under this process have been persuaded by promoters to substitute other processes for yours in every place except Danbury?

A. Well, I will give you the history of New Orleans, now you are asking about this. The New Orleans Company paid the construction works $700,000 of bonds through the operation of my plant; they raised the interest payment from 5 per cent. to 6 per cent. They were persuaded by promoters to water their gas down and decrease the illuminating power and went into the hands of receiver. That was about the end of their day.

4685 Q. How long was your process in operation in New Orleans?

A. Quite a number of years, long enough to pay up all the bonds and increase the interest from 5 to 6 per cent.

Q. Then they found it advisable to substitute some other plant, did they, some other process?

(No answer.)

Q. Do you remember what year New Orleans went into the hands of a receiver?

A. About three years ago, I think it was, two or three years ago.

Q. How many years before that was your plant in operation in New Orleans?

A. It was only operated in substance for a number of years——

Q. How long before that time was another process and plant substituted for yours in New Orleans?

A. Oh, they commenced experimenting on various processes from 1890, along in there somewhere, I think. I saw it in Brown's Directory. I did not keep very close tab on the matter, but I saw it put down in Brown's Directory as my process for quite a number of years. I don't——

Q. Now, do you understand that the New Orleans Gas Company, the operating company in the City of New Orleans, actually did go into the hands of a receiver at all?

A. That is my understanding.

Q. Do you state that to be a fact?

A. I think they made some sort of an arrangement by which they got out by some deal or arrangement, but that was stated in some engineering paper that I saw, that they had——

Q. That is the basis of your information on the subject, is it?

A. No. There is a young man that I put in charge of the plant in Asheville, North Carolina, who told me it was the worst busted thing he ever saw.

Q. New Orleans?

A. Yes.

4686 Q. And he told you the New Orleans Company went into the hands of a receiver, the operating company?

A. He told me they could not pay their lease. That is just like all those promoted concerns, they bust sooner or later.

Q. Let us take the property at 14th Street respecting which you testified. You say you put the furniture, at $1,875 cost new, according to Mr. Mayer, at 40 per cent. depreciation, and you say that it will not sell for its original price or anything like it. Is it not true in your experience that second-hand furniture, even if you have it only for a few days, brings but a fraction of its original cost if it is sold as second-hand furniture?

A. That is just it. I was taking the value of it, but I could have purchased an outfit like that for one-quarter of the sum.

Q. Second-hand?

A. Second-hand.

Q. Why did you put 60 per cent. instead of 25 per cent. as the present value?

A. Well, I thought the furniture was useful as it was, and although furniture equally good could be purchased at far less, the fact that it was about as useful and good for the purposes of the company, it was not entitled to that depreciation.

Q. You were never in the furniture business, were you?

A. No, but I know what it is to sell furniture.

Q. Yes, second-hand furniture. Do you mean to say that the contents of this office building as recited in the schedule that you have before you could be purchased new for less than $1,875?

A. I presume not. It might cost more than that.

Q. Did you not find that all the desks seemed to be solid and in use, and sufficient for the purposes of the company?

A. Yes, that is the reason I did not consider it depreciated as I could have bought such furniture second-hand.

4687 Q. And your valuation then was on the basis of second-hand furniture, was it?

A. Not entirely. I assumed that as second-hand, looking the furniture over, that it could be purchased at one-quarter of that, but as it was still as useful for ordinary use, the depreciation of 40 per cent. would not be out of the way.

Q. Did you not find that these desks were in use and were apparently sufficient for the purposes of the company?

A. Yes.

Q. You did not see any of them breaking down, did you?

A. No, there was nothing the matter with them.

Q. The iron safe seemed to be all right, didn't it?

A. Yes, an iron safe is a pretty lasting piece of furniture.

Q. Will you point out the items there which has been broken down or which appeared not to be serving their purposes all right?

A. I do not claim that they were not serving their purposes. I suppose some of the chemical apparatus might be broken down. In fact, it would be impossible in the time that I made that round that I should look minutely into all those. I just took a glance over all the furniture.

Q. Have you bought any Rowland's boilers lately?

A. No, sir.

Q. Did you get any quotations from the makers of the Rowland boiler as to the price for which they would install an 80 horse-power boiler of the dimensions specified here?

A. I did not, because I consider the Rowland boiler too expensive for ordinary use.

Q. You do not deny that the cost of a Rowland boiler if you were to get a Rowland boiler of that character would be $2,109, as Mr. Mayer stated, do you?

4688 A. No, that would be over—I say $25 a horse-power. I think that was a high price for a boiler for such uses.

Q. I am talking about a T. F. Rowland boiler, this particular brand of boiler of the dimensions specified here and of 80 horse-power. Have you any doubt that that would cost new $2,109, if you wanted to buy that kind of a boiler?

A. I did not quote Rowland on it. I think very likely they would charge that, because it is a very expensive boiler to make.

Q. Let us take the cast iron tank which you say you saw on the roof, $4,275, according to Mr. Mayer. You valued it at $2,500. Was not your valuation due to the fact that it was not in use, as you thought?

A. I figured that out as any iron work, I think it came to a few dollars over $2,500, calling it ¾ inch thick and allowing for flanges, and I think I allowed 6 cents a pound on that computation.

Q. How much did you assume that it weighed?

A. I did not assume it, I calculated it at ¾.

Q. How much did you calculate its weight was?

A. I am mistaken in the figure I employed as a multiplier. 72,348.

Q. Pounds?

A. Yes.

Q. At 6 cents would be how much?

A. I stated that wrong. It is 3½ cents.

Q. You took it at 3½ cents?

A. Yes. It is not wrought iron work, it is a casting.

Q. Will you tell me how that 3½ cents is divided between the various elements of the price of material, shop labor, freight——

A. I did not figure that up. I figured it in bulk, for I did not have time to go into all the minutiæ. I took 3½ cents; $70 a ton is sufficient to make a tank.

4689 Q. Well, we are talking about this tank. Did you measure the thickness of it?

A. No, I did not measure the thickness of it, it is ¾ inches thick.

Q. Assumed?

A. Yes, I assumed ¾ inch as sufficient.

Q. Will you tell me how much of that 3½ cents you allowed for the average price of material to make a tank of that sort?

A. Well, it was all iron, iron casting, I thought that was ample.

Q. How much do you allow of that 3½ cents for the average price of material without any labor at all on it?

A. You mean of the iron itself?

Q. Yes.

A. Iron would not be worth any more than——

Q. The average price of material in the shop?

A. Not more than a cent.

Q. Not more than one cent?

A. Yes.

Mr. Page: Do you mean the casting or the raw iron?

The Witness: Do you mean the pig iron?

Q. I mean the material, pig iron.

Mr. Page: Start back at the ore, why don't you?

Q. Well, take the finished casting without any further labor on it; take it at that stage, the finished casting. How much per pound would you allow for that?

A. I did not divide it up, but I suppose two and one-half cents a pound would be the casting price.

Q. That would be one cent to cover shop labor and freight and drayage and labor of erection?

A. Yes.

Q. Do you think that one cent would cover those items?

A. I think possibly, yes.

Q. Not possibly, but do you think it would?

4690 A. I took that lumped, at $70 a ton, sufficient to cover that kind of work.

Q. I am trying to get you to go into details?

A. I cannot do that because I did not make a detailed calculation in that way, for there is no chance without accurate measurements of the tank, and the actual thickness of the tank, and I do not really suppose it was three quarters inch thick, in the first place, because it is only four feet deep and three-quarters of an inch thick would be rather heavy plate.

Q. You said probably two and one-half cents for average price of material in the casting. Now how much would shop labor be, do you think, or have you not ever manufactured apparatus of this kind so you can tell?

A. I have seen details of shop labor. I did not put that in there.

Q. Can you state how much the shop labor would be on that?

A. No, I cannot. I know they put——

Q. Can you tell how much the freight would be from the place of manufacture?

Mr. Page: If you give us the place we might ascertain.

Mr. Mathewson: He has given the value, I think I will ask him to state.

The **Witness**: I did not suppose they went any great distance. It never entered my head that they went to Havana or any distant place.

Q. Well, they probably did not go to Havana, they might go there for cigars. Let us come down to casting. What allowance did you make for freight? You must have assumed it came some distance and was not made in the shops of the Consolidated Gas Company?

A. I am taking cast iron delivered in shapes that are planed to a certain extent, I think $70 a ton would cover it.

4691 Q. How much per pound for freight?

A. It depends where it came from.

Q. Oh, well, assume any reasonable place, not Havana.

Mr. **Page**: He says he did not make that calculation.

The **Witness**: There was no freight, nothing more than a lump sum.

Q. You did not include any freight in your 3½ cents?

A. I did not divide that up into shop labor, the number of bolts, the number of surfaces planed?

Q. Did you include any shop labor in your 3½ cents?

A. I included that thing put up there for 3½ cents per pound.

Q. Taking the price of material at 2½ cents, I want you to tell me how much of the one cent remaining is shop labor, freight and drayage, and how much is the labor for erection, just those four items.

A. I stated that was the lump price. I could not go into the details of it.

Q. Could you cast such a plate ¾ of an inch thick successfully, do you think, or could it be successfully done ordinarily?

A. Plates are cast ¾ of an inch thick, thousands of them, every day.

Q. Of this size?

A. You do not suppose that tank is all in one piece, do you?

Q. I am asking you a question?

A. It depends what size——

Q. Don't you know what the sizes are of the plates in that tank?

A. No.

Q. You did not observe that?

A. No, I know they made them as big as they could to get them together.

Q. Would not the iron chill in running a plate of that thickness or size, or are you not able to state?

A. Of what size?

4692 Q. Of the size the plates were there as you observed it?

A. I said I did not go inside of the tank and observe the size of the plates. I simply took it that would cost—a plant as large as that, they could successfully cast the plates and flange plates——

Mr. **Page**: What was the question, would not the iron chill?

Mr. **Mathewson**: Yes.

The WITNESS: Whether plates of that thickness are cast every day? Thousands of them.

Q. Of the size of the plates that are there?

A. Well, the size of the plates that are there I don't know anything about.

Q. I do not care anything about thousands of other plates. I am talking about the plates here. Let us confine ourselves to the subject in hand?

A. If I had been allowed to go there and look in the tank and take the size of the plates I could have made an estimate——

Q. You say there was a new engine there that was connected with that tank, don't you?

A. I don't think there is a new engine.

Q. Did you not say there was a new engine there which you say you thought never had been used and which you were informed was connected with that tank in some way?

A. No, I said there was an old boiler fired up there and banked.

Q. What was this new engine connected with, what tanks?

A. I think the only item I mentioned to you of apparently new work was in what they call the exhauster house, or what I should call the pumping station. I did not see a new thing around the place so far as I saw, I don't remember mentioning anything new.

Q. One more question then about this tank. If the plates were small there would be a greater weight of flanges and also an increase in shop and erection labor, would there not? 4693

A. Yes. I made a calculation that a plate could be cast, that is, three-quarters of an inch thick, and adding ten per cent. for the flanges, that would make that tank—I have seen tanks made without any planing whatever, simply caulked in, and I presume it is fair to assume that that tank is caulked in with iron filings.

Q. How could you compute ten per cent. for flanges, unless you knew the size of the plates, because the amount of flanges depends on the size of the plates?

A. All those questions—we will say 10 per cent. for laps and rivets, in wrought iron work, and we assume a given amount for flanges, not taking it to be anything out of the ordinary, that there were some extraordinary flanges, and some extraordinary plates. I took it just as an ordinary tank plate. I will say this, that the older form of tank plates were very frequently put together just simply with iron cement.

Q. I don't care about what happened in any other case except in this particular tank, so if you have got through with this, I will go on to another subject. Take this one small engine, Novelty Iron Works, which you place at $1,500 against Mr. Mayer's $3,000. Did you get a price on an engine and if so from whom?

A. Anybody knows that a 50 horse-power engine can be bought at $20 a horse-power at any day of the year, a perfectly span new engine.

Q. Does it make any difference what the brand is?

A. There is a great deal better engine than that, for that is an old engine.

Q. Did you make any inquiry of the Novelty Iron Works or whoever manufactures that boiler now as to their price for an engine of that description?

4694 A. No, the Novelty Iron Works as I remember it died off years ago. I haven't heard a thing of them for at least twenty-five years.

Q. I covered that by saying whoever manufactures that engine at present.

A. Yes, I have got prices from dozens of people.

Q. Will you give me the name of any concern manufacturing the Novelty engine from whom you made an inquiry before your testimony here as to the price of an engine of that description?

A. The Buckeye engine makes a very much better engine than that.

Q. That is not the question. Won't you be good enough to answer my question, or I will never get through with you, if you do not. Will you give me the name of the concern from whom you made an inquiry and which is now manufacturing that engine, as to the value before your testimony here?

A. No, I did not consider it necessary to make a Novelty engine. It is a steam engine of a certain horse power, and it is an old inferior engine compared with engines that I can get at $20 a horse power. That is a simple proposition.

Q. You then appraised some other engine and not this particular engine, did you.

A. I appraised a better engine——

Q. Did you appraise this particular engine? Do you mean this particular engine can be purchased new from the manufacturers and installed at less than $3,000, and if so give me the name of the concern that manufactures it or will do it?

A. I don't think, as far as I remember the engine, I don't think there is a concern in the United States making that engine. I don't suppose such an old engine is made by anybody. The present engines are much superior.

Q. Did you include in your figures the cost of installation
4695 of the engine, the erection of it, or was it sidewalk delivery
as Mr. Logan testified respecting some of his items?

A. Well, say 50 horse-power at $20, at which I can buy a better engine, is $1,000, and I assessed that at $1,500, I think $500 will cover putting that engine [illegible] position, I suppose; I am satisfied it would.

Q. That is not the question. (Question repeated.)

Mr. Page: I think the witness has answered.

A. My answer would be that I assume that $20 per horse-power for a better engine, and that was $1,000, and I allowed for this engine $1,500, which would put it in position and pipe it up and do everything you wanted to do, and there was a depreciation on it which I called 25 per cent.

Q. Do you put the same depreciation on one type of engine as on another?

A. No, I put a larger depreciation on some engines than others. The faster the engine goes, the wear and tear is probably greater;

the greater the piston speed, although it is a matter which is of small difference.

Q. Did you find the engine in operation?

A. The engine was going when I was there, yes, sir, and running smoothly.

Q. No outward indications of deterioration were there, as you observed?

A. No, there is nothing—unless an engine is actually broken down, there is nothing shown outside. The wear and tear on an engine is the cylinders which have to be rebored or——

Q. You did not observe any pounding, did you?

A. No, the engine was moving well enough. I did not hear anything wrong about it. It was a slow moving engine, if I remember rightly.

Q. Is it not also true as to the McKenzie exhauster and the No. 9 Root exhauster, that they, so far as the outward appearances are concerned, were in perfect working conditon? You have 4696 appraised them at the same price new as Mr. Mayer?

A. All those things looked well enough outside. The moving parts are all inside, and the wear and tear takes place, barring accident, in the inside.

Q. Is $150 higher than the cost of a Huntoon governor?

A. I have bought a Huntoon governor, exhauster and all for less than $150. It all depends on the size.

Q. How many years ago?

A. Several years ago. I guess the old man is dead now.

Q. You have not bought a Huntoon exhauster of this size in the last two or three years for less than $150?

A. I don't know whether they are made now. I don't believe that governor is less than twenty-five years old.

Q. Aside from that, you have not bought a Huntoon exhauster of this size in the last two or three years for less than $150?

A. I don't know that a Huntoon governor is made anywhere, I don't suppose you can find one.

Q. It was a well known character of governor and had a high reputation?

A. Years ago it was considered a very good thing. It is to prevent vibration in an exhauster. I first saw it in operation in the Mutual Works in New York; they were cracking it up then; and I became afterwards acquainted with Mr. Huntoon, and in talking about prices, he made an exhauster, governor and all included, for $150.

Q. What kind of exhauster?

A. A jet exhauster.

Q. What size was the governor?

A. It was a small affair. But a governor, understand, does not have to be in proportion to the size any more than the Governor of New York has to be any bigger than the Governor of South Carolina.

Q. It was not a governor of the size of this governor, was it?

A. Just about the same size, I don't think there was any difference in the size of the drum.

4697 Q. What is a jet exhauster?

A. That is just where you exhaust gases by a jet of steam going through an aperture and drawing the gas with it. It has been used for a good many years.

Q. It is not a very elaborate piece of apparatus is it?

A. It is not very elaborate, but it is quite useful. There are great numbers of them in use, the exhausters and blowers at present.

Q. Now is it not also true that the No. 6 Root exhauster and the one drill press in the machine shop to which you have referred and which you valued new at the same price as Mr. Mayer, showed no outward evidences of being out of repair?

A. The Root exhauster you are inquiring about?

Q. Number 6?

A. No, the outside of an exhauster, unless it is broken down, does not show the wear and tear its interior has, but the blades revolving in the cylinder wear away and are taken up by springs and also the cylinder itself in which it operates is worn away.

Q. Are there any blades in a Root exhauster?

A. Yes, sir, there are blades in a Root exhauster. Did you ever see inside of one?

Q. How many?

A. There are two blades for each one of the revolving discs. You have got to run it with blades. Where did you get your information there was not any?

Q. I did not get any information. I am trying to get information from you, but seem to have had very poor success, because you don't seem to know very much about it, if you want to know.

Mr. Page: I object to counsel making these statements to the witness.

The Witness: I will make a sketch for you if you want me to.

4698 Q. Let me call your attention to the smith shop. Take the four forges, four anvils and so forth, $430, and the other items in the smith shop which you valued new the same as Mr. Mayer; is it not true that those were apparently in good condition?

A. An anvil always looks all right.

Q. But you took 25 per cent. depreciation off for that?

A. Well, it was in bulk, for all the shop, which includes emory wheels which wear out, and tubes, and stocks.

Q. Were those emory wheels worn out?

A. An emory wheel does wear out.

Q. Were those worn out? Of course an emory wheel does wear out.

A. I could not of course examine everything, I took it from the appearance, that 25 per cent. depreciation was all right. The price seems all right, but it certainly was a most decrepit place, if you want to know the truth. I never saw anything in the way of a blacksmith shop even out in the country that looked so worn out.

Q. Will you define which of the items in this smith shop were worn out? Give us the names of them. Tell us how they were worn out. How about the forges, were they worn out?

Mr. **Page**: I do not think the question is fair, in that the witness has not said they were worn out.

The **Witness**: They had the appearance of a tramp.

Q. Were the forges not in good condition for operation?

A. I don't think they were. I don't think I ever saw one——

Q. Did you see them operating?

A. I saw them blowing away.

Q. Didn't they seem to be doing the business?

A. They were doing the business, but taken at the price
4699 it is assessed at, a depreciation of 25 per cent. seems to me very small.

Q. I am trying to find whether it is small or not, and I am therefore asking you whether those four forges did not seem to be doing the business for which they were designed.

A. I don't think there were but two of them in operation. I did not notice any——

Q. Did you notice any outward evidence of decrepitude, did you?

A. Yes, I did.

Q. Well, what was it?

A. A geenral woe begone, played out condition.

Q. Bellows broken?

A Have you ever been——

Q. In a blacksmith shop?

A. In a blacksmith shop.

Q. A great many of them.

A. They look dirty all of them.

Q. Yes, that is likely.

A. But these were not anything recent, they were not even blower forges, but old bellows type.

Q. No matter what the type was. We are taking the type as we find it. I ask you if these four forges were in condition to operate, and if two of them were not operating?

A. I think two of them were operating.

Q. Did you observe any difference between the two that were operating and the two that were not?

A. No, not so particular as that.

Q. You have said the four anvils were all right. How about the set of blacksmith tools, were they not all good quality so far as you observed?

A. I took it from the general appearance, of course, I could not pick up, in the time I had, every piece of tools, and I don't suppose any person would, but I took it from the general appearance.

Q. Did you examine any of the tools to see whether they
4700 were of the proper material and were still fit for use?

A. I looked at them as narrowly as passing through and spending ten minutes in the shop would allow.

Q. Tell me which tools were not in good condition and proper for immediate use?

A. I am not certain that any of the tools could not have been used, or they would not have been worth anything.

Q. Tell me which tools were not in good condition and not ready for immediate and efficient use.

A. Well, I will—the four sets of blacksmith tools, of course, we know they wear out——

Q. Of course, they may wear out, but I am talking about these tools there as they are now, Mr. Edgerton. Won't you tell me which of those tools were not in good shape and ready for efficient and immediate use?

A. I do not say that they could not be used. Tools may be very much depreciated and still be useable. I have seen——

Q. Did you observe whether there were any chisels there and whether they were excessively blunted for use or anything of that sort?

A. I did not notice the chisels as particular fixtures.

Q. The grindstone seemed to be in good shape, didn't it?

A. I do not look at it in particular, I looked at things generally.

Q. We will pass now to the condenser house. I think you agreed with Mr. Mayer in $29,106 on that and also——

A. No, I say that I could not make a measurement of that because they would not let the men do it. There is a number of things I could not personally pass on in the inspection, and I got two young men to go and look into it more particularly and make measurements, and they were not allowed to do so, and that is the reason I could not calculate that.

Q. Yes. That was not our fault. Now, let us take——

4701 Mr. Page: I don't know whose fault it was.

Mr. Mathewson: No suggestion or notice was given to us about a thing of that sort. If it had been, the thing could have been arranged. You cannot expect us to allow people to wander around our office around through these plants without authority or credentials.

The Witness: The young men telephoned about it, is all I know, and they sent the men away.

Q. Let us take the small purifier house, one set of four boxes, 16 feet by 25 by 3 feet 2 inches, 20-inch connections, 24-inch cups and 20-inch center seal supports and two hydraulic operator cranes on tracks laid on floor. You give a value of $13,464 as against $16,828 by Mr. Mayer, and besides that you suggest 10 per cent. for depreciation. Were not those boxes in good shape so far as you could observe outwardly?

A. No, they are somewhat damaged. The covers show signs or rusting at the water line, and I inpected those a little more carefully, and I thought a depreciation of 10 per cent. was not too much on that work.

Q. How many pounds did you assume there were of material in those items in the small purifier house?

A. I only calculated that small purifier house as minutely as the data would allow me to do. I could not get any closer.

Q. How many pounds of weight did you assume there were?

A. I calculated at 30 pounds to the square foot, 13,200 pounds with an addition of 10 per cent. for the flanges and sides, 82 feet and 3.16 feet, 15,540 feet, 67,290 pounds, I put the cover in at 10 cents. I took 8 pounds per square foot as the weight of the cover. I suppose that is in excess.

Q. How many pounds all told do you figure it?

4702 A. Well, there are different classes of work there. There is wrought iron and also cast iron and I am trying to separate it here. It is rather mixed up, because I did not expect——

Mr. Page: I suggest that he can give his computation right through, if you wish, it will be shorter.

Mr. Mathewson: All right, if it will be shorter. What I want to know was the number of pounds here divided into wrought and cast iron and what you computed the price per pound.

Mr. Page: Supposing you give your computation beginning as you have it there.

The Witness: That is the way I was figuring it. Wrought iron top and sides of cover, area 442 feet, sides 164 feet, 606 square feet at 8 pounds a foot at ten cents a pound, that is the data on the cover.

Q. How many pounds would that make all told?

A. I did not add the wrought iron into the other work. I do not do it and nobody does.

Q. I know that. I asked you to give me the number of pounds divided between wrought and cast iron.

A. You understand this is all on one box?

Q. Well, add it all together, wrought iron and cast iron together, and the price per pound at which you computed.

A. Cast iron I took at $80 a ton, four cents, $1,883.90 is the cost for one box, and it appears that $533.20 is the wrought iron work. That brings it to $9,535.60. Supports, $1,600, $11,135, and the frames, bulk, $1,009.60, making altogether $12,240.20 and I add on that 10 per cent., $1,224, making $13,464.

Q. Do you take 30 pounds to the foot regardless of the size of your cover?

A. Well, the cover I only take as 8 pounds, I took 30 pounds on the cast iron.

4703 Q. You did not get those figures from the Logan Iron Works, did you?

A. No, I did not. I did not get any figures——

Q. Would it not make a difference in your calculations if you were informed that Mr. Logan testified that those boxes would cost about $16,000 or practically what Mr. Mayer's figures were?

A. Well, constructor's figures are always a little safer on their side than the engineer's, and generally the engineer's figures are a little lower than a man who is taking contracts, yes. But I will say this, that I have made estimates on a great deal of work and I don't remember a case where the work was not taken at below my estimate, but they were made in a more careful manner than this, in regard to having drawings and absolute details throughout, which makes some difference. I did not have an opportunity to verify these measurements, and might have left some things out.

Q. You understand Mr. Logan did not have an opportunity to verify the measurement but simply took——

A. Well, he lumps things in his head, I know he does things pretty fast in his head.

Q. A very bright man, isn't he?

A. Very bright. I am not as bright as he is at figures.

Q. Consider the boiler house. One locomotive boiler 35 horsepower $1,400 you give as against $1,918 for Mr. Mayer. Did you give a valuation of that particular locomotive boiler and tubes or of a locomotive boiler and tubes which you thought would do the same work?

A. Well, I applied—a locomotive boiler does not differ one very much from another. It is just simply the name as applied to a boiler that has a locomotive fire box and a little more expensive construction than——

Q. As a matter of fact locomotive boilers produced by some concerns are more valuable in the market than locomotive boilers 4704 produced by others, are they not?

A. Oh, yes, there is skimping work done on all sorts of work.

Q. As much as 30 per cent. difference in the quotations of boilers of different makers?

A. A man gets a reputation for fine work, and he can charge a little more for it if he can get it.

Q. And the boilers of some makers seem to stand better and be more valuable than the boilers of other makers, don't they?

A. Yes. I have my preference in regard to makers of boiler works, and would give somewhat more for their work than I would for other makers.

Q. Take the valve house, 2 No. 9 American Meter gauges, 1 large American meter gauge, 1 No. 8 Bristol recording gauge and 1 Pressure indicator. You put them all together at an original cost of only $89?

A. Yes.

Q. As against $335 for Mr. Mayer. Now, did you price No. 9 American Meter gauges of any maker before you took the stand?

A. No, I have bought so many of those things I just took my own figures on them.

Q. What is the market price now for American Meter gauge No. 8?

A. Well, that means a 9-inch needle.

Q. Yes, nine inches?

A. Well, they make several grades of gauges. There is a gauge made for a photometer——

Q. Well, meter gauges made for the purpose for which these were used?

A. Well, that is a very ordinary arch gauge, and I put them down at $12 apiece. I did not put any depreciation on them whatever. I took them just as they were.

Q. Well, one large American meter gauge, is $45 a fair price for a large American meter gauge?

A. That was a large show gauge, you could see at some distance.

I don't think it would make that amount of difference. I
4705 put it at $20 including depreciation. I think it was just
made in that way to see a little further off.

Q. Can you name any concern which makes an American meter gauge of that size and quality for $20?

A. I don't think they would sell it new for that, no.

Q. Don't they sell them new for forty or forty-five dollars?

A. Yes, a first-class gauge.

Q. What concern would be the proper concern to get the price from?

A. The American Meter Company for the American meter gauge.

Q. Let us take No. 1, 8-inch Bristol recording gauge, how much did you allow for that?

A. I allowed $50 for that, that is $5 more than for my fine French recording gauge.

Q. The pressure indicator, how much did you allow for that?

A. $5.00.

Q. You allowed nothing for anything except for a lever or something which they——

A. A signal key and a ticker.

Q. You did not allow anything for the connection between that and the point where the indication was made?

A. I tried to do that. I asked the young man where the wires went and what there was of it, too, but he did not know beans about it.

Q. It certainly would be more than five dollars each if everything was considered?

A. It might have been. There might have been a mile of wire in there.

Q. And what it would cost to install that wire, or the method of its installation, you had no information of?

A. No, I tried to get it, but could not get it.

Q. Let us consider these coal gas stacks of 30 benches each and the
coal gas stacks of 24 benches. Where are there in the United
4706 States any regenerative furnaces in accordance with your
definition as to the change of air current from cold to hot
flues?

A. I don't know of any. I have not seen one—that is——

Q. Do you mean to say in modern construction retorts are not placed over one another?

A. That is a very poor construction.

Q. I did not ask that question. I asked you whether in modern present construction retorts are not frequently placed one above another?

A. They frequently are, but I am positive on that point.

Q. Don't you think there are as many with retorts one above another, as with retorts drawn in?

A I think on account of the way in which they are put in, I think it is likely there are as many, perhaps more.

Q. Is it not true there is an advantage in regenerative benches to have the combustion space between the retorts wide?

A. No, sir, on the very contrary.

Q. You think that is a disadvantage, do you?

A. Yes, you might as well——

Q. Is it not a standard construction, one retort above another if charging and discharging machines are used?

A. It comes handy for that purpose, but the charging and discharging machines can be used just the other way, only that you have to move the machine a little for the retort to accommodate putting it into the retort, where there is one right above the other, it is convenient for the men.

Q. It is more convenient to have them one directly above the other where you are using charging and discharging machines, isn't it?

A. It is a little handier for the men. I don't consider I would give up much for their convenience on that score.

4707 Q. Does it not make a great difference as a question of economy from installing new benches whether you are starting a plant *de novo* or whether you have an existing plant which is still in good working order?

A. Do you mean whether it is more economical to run an old plant?

Q. No, does it not make a great difference as to the question of economy from installing improved benches whether you are starting *de novo* or have an existing plant which is still in good working order?

A. There is a little trouble in starting up new works, certainly, but after you get it once gaited as we call it, and get the hang of it——

Mr. Page: I don't think you catch the question.

Q. No. But if you throw out your old benches you lose so much property, if they are in working order, don't you?

A. Yes.

Q. If you purchase new benches to put in their place, you are either increasing your capital or are presenting a large charge for depreciation which comes out of the consumer of your product finally, that is so, is it not?

A. The relation of the bench-work, I don't exactly catch the idea, I must say.

Q. If you have old benches and desire to substitute new when you throw away your old benches it is so much loss of capital, and when you put in your new business, that is a new expense, that is right, is it not?

A. That is the repair, all bench-work is charged to repairs.

Q. No, we are assuming the benches are discarded and not repaired. You suggested putting in some other form of benches. I say if we have benches which are still in good working order and you cast them out and put in a new type of bench you are losing capital, you are destroying it to a certain extent, are you not, and putting in a new investment? 4708

A. Yes, but the advantages are better in comparison with the disadvantages.

Q. But you are increasing your capital upon which you have to pay a return or else are charging a large sum to depreciation which comes out of the consumer of your product ultimately, is not that right?

A. Yes, but in this case we divide that. I find that the stack which had to be altered to accommodate an improved bench, and which has been altered there, by the way, in this very retort house, when you get in with the half depth bench, that when the stacks are rebuilt, they could just as well put in the very best setting as to put in their old setting.

Q. Yes, I am not defining the amounts, I am simply calling your attention to the fact, and asking you if it is not the fact that the installation of new benches is more of a problem where you have old benches installed and still in working order than it is where you are building a new plant with no old benches to discard?

A. Yes, it is to this extent, that you have to tear down in the summer time and rebuild your stack, and it is more troublesome and involves tearing down as well as building up. But as all economy in gas production has almost centered in the retort house, the gain is very much greater than any loss conferred on interest and on capital.

Q. You have said in New Orleans they obtained their 5.25 to 5.30 feet per pound from the coal there used. Is there not a great difference in the quality of the coal as to the production of coke?

A. Yes. I see the same mines entered into the quality of your gas coal as we used to get in New Orleans, apparently. There was a quantity of the same quality of coal.

Q. You have not tested any of our coal, have you?

A. No, you seem to have good coal.

4709 Q. Don't they use the same kind of coal here that they use in Newark when you were there, after you left New Orleans?

A. I visited Mr. Vanderpool in Newark many times, but I was not more than cursorily acquainted with the operation of the works.

Q. You did not have any part in the management of the Newark works?

A. No.

Q. How much per bench did you allow in these four coal gas stacks of thirty benches each?

A. For replacement?

Q. No, for cost, for reproduction now?

A. For putting in a new setting, I allowed $450. The mason told me that the Consolidated could buy material so much cheaper they could do it for $350.

Q. What mason was that?

A. Well, I don't like to involve the mason in trouble.

Q. I would really like to know because we would like to go to the mason and get our work much cheaper than other people?

A. That is the trouble. He said you could do it one hundred dollars cheaper. He said you get it $100 cheaper.

Q. I won't press you for the name of the mason unless you want to tell it, but I ask you to?

A. I don't know. They might go to him and might not.

Q. You have never done any masonry work in New York City yourself, nor never had a contract for any?

A. Not in New York City, no, sir.

Q. Well, go on then if you will, and finish the answer?

A. I say for renewal benches, $450, and for the stack or oven work and iron work, it would amount to about one thousand dollars a bench.

Q. Does that apply to a renewal and reproduction of the benches entire, including the arches?

A. That includes arches for thirty benches, yes, sir.

Q. The whole thing, benches and arches?

A. No; that is just the arches.

4710 Q. Well, how much per bench for benches and arches altogether? In other words, four coal gas stacks of thirty benches each, fifteen back to back, six retorts to bench, direct fire, 12 by 21 inches by 8 feet 6 inches, with an arch six feet, division wall 14 inches, and wall 3 feet 2 inches, length of stack 112 feet; what is the total for one of those benches, including everything that I have just recited, and the iron work, including setting?

A. $1,417, I think. I have not calculated it at per bench, but that figure appears to be the division by thirty of the total amount or the cost of the stack.

Q. You said the iron work cost $1,000, did you not?

A. The iron work of stack; the iron work of ovens or stack. We call a collection of ovens a stack, and that is including iron work. If you want the details: door, $180; mouth pieces at $25.00, $180; stand pipes at $10, thirty hydraulic mains at $60; thirty settings at $450; bars and door frames and ash pans make up the balance.

Q. So that your total valuation is $42,500 per stack?

A. Per stack.

Q. And four stacks I figure would be $170,000, do I not, instead of $160,000 which you gave?

A. You are right; there is a mistake there. Yes, $170,000.

Q. Are your prices based on New York labor prices for masons?

A. Yes.

Q. How much did you allow as a rate?

A. I took this from a man that did bench work for me here, a contracting man, and he offered to do it for that.

Q. What is the rate of wages?

A. I don't know what he paid his men.

Q. Do you know the rate of wages for men in New York?

A. For that kind of work I paid $6 a day.

4711 Q. Do you know what the rate is in New York City according to the Union—not the Central Union?

—. No, I did not go further than to find out from this contracting man what he would put in benches for.

Q. And you assumed, too, in this computation that the Consolidated Gas Company would obtain its material at lower than the general market price, did you?

A. $100. He stated that the Consolidated would obtain the material $100 less than he could get it; $100 per bench.

Q. Less than he could get it?

A. Yes.

Q. And you have assumed that in your computation?

A. No, I have put it at what he could get it, $100; they would save $3,000 on the job compared with what I computed.

Q. You have not made any reduction on account of the supposition that the Consolidated could get it for less than the usual price?

A. He was very fixed on that price. He seemed to talk very feelingly about it.

Q. You did not want to give his name?

A. I would like to. I will ask him, however.

Q. You have valued at $36,500 the one coal gas stack of 24 benches which Mr. Mayer valued at $58,800 to reproduce new. On what basis did you figure to get that result?

A. I put the prices on those benches at $1,500. I suppose that that is owing to a correction I made on the other from getting the amounts paid, and I suppose that would be—well, taking into consideration everything, about $100 in buying material; I suppose it would cover it, but I took that at $1,500. I know there would be more than that difference between that and the smaller retort; not much more. I think the advantage of the Consolidated in buying material would cover it.

4712 Mr. Page: Well, eliminate that, and if you have got to change your calculation, do so.

The Witness: The difference was in the calculation of the price of brick work laid. I have charged for No. 1 brick for building stack. I think I will make this $200 difference on a setting.

Q. So your $36,500 would be changed in that event to what?

A. $40,800.

Q. Now, that was reset in 1906 and you deduct nothing. Do you observe that of the other stacks one was wholly reset in 1904, two in 1905, and one-half reset in 1904?

A. Well, I never heard of benches being set in that way. They do not take and let down a whole range or benches because one "busted" up, they let down the ovens that are out of order, unless it is for isolating it, but drop it out as it becomes so that they cannot mend it.

Q. But, did you observe that statement in the schedule you have?

A. I observed that statement. I did not agree with any such manœuvering.

Q. Well, you do not agree with that statement, you do not believe that it is so; that is the point, is it?

A. I do not believe benches are renewed in that way.

Q. And if they were renewed within the last two years, sixty-four stacks, then there would be no depreciation such as suggested?

A. Certainly there would be a depreciation on running a stack; that is a current depreciation; that is allowing a long lifetime to such benches, of three years, and taking a number of them I think it is a moderate allowance.

Q. They seemed to be in good shape, didn't they?

A. Well, there were "all sorts and conditions" of benches there;

those that were dead, those that were getting that way, and some of them were ready to "give up the ghost," as I saw them, that were in operation.

4713 Q. That were in operation?

A. Yes.

Q. Those that are being used now in making gas were ready to "give up the ghost"?

A. Yes, they were about dying out, I judge that by the leakage of the retorts, shown by the gas coming out of the chimneys, and the condition of the front of the benches from throwing water on, quenching the coke, and quite a number of indications as to the state of the benches leaking in the retorts.

Q. At the same time you know they are producing more gas at the 14th Street plant of the required candle power than they ever did before in their history, or didn't you know that, in these poor retorts? Did you know that? Wasn't that your information?

A. No, I didn't get that information from what I saw there. I have been around retort houses too long. There is a third——

Q. And if it makes gas in large quantities and of the required candle power your theory is that it ought not to, considering their character?

A. It might have been worse than it is now. That is true. I do not dispute that.

Q. These figures that you have now given are your final values then as to these four stacks of thirty benches and the one stack of twenty-four benches, are they?

A. Yes, sir; subject to any error in computations. I have run over these computations only once and have not had time to verify any such great number of them, and I would like to have the privilege of going over the arithmetical part; but the basis of it is correct.

Q. You speak here of two tower scrubbers, 20 feet diameter by 84 feet 2 over all, and make some observations on the use of those scrubbers. Isn't it true that tower scrubbers are valuable in conjunction with so-called washer scrubbers, being used before the latter,
4714 for the purpose of taking out the carbonic acid and sulphurreted hydrogen by means of the ammonia?

A. Well, there is a rumor to that effect. I have heard a great deal of taking out ammonia with the carbonic acid that is in the gas and having them unite, but they fly apart, they do not stay in that shape. The ammonia is volatile. In fact, I do not think it can be claimed at all.

Q. Did you ever try that?

A. Yes.

Q. In your own experience?

A. Yes, I have been through that I guess about——

Q. Well, did you ever try tower scrubbers for that purpose?

A. I instituted tower scrubbers; I am the inventor of them.

Q. You do not mean to charge us with negligence in purchasing something you invented?

A. I put them in New Orleans first and they were taken to England and brought back here.

Q. And you think they are not a good construction?

A. I thought at the time they answered very well to take the ammonia out of the gas, but as far as saving the ammonia to the best advantage I do not think they do. The ammonia can be taken out by a better way.

Q. Now, did the $36,195 which you gave as the cost of reproduction, include everything in the "yard" at 14th Street, where the two tower scrubbers are? Does that $36,195 include everything except the foundations?

A. I took simply the weight of the scrubbers and the appurtenances as given here.

Q. My simple question is whether your valuation includes all the items under the term "yard" except the foundations, for which you gave a separate valuation? I assume that it did.

A. Well, the trays, I don't know whether that is calculated there. If those are iron trays I suppose it is included in the weight of the iron. If they are wooden trays, which I doubt, why they might be extra.

4715 Q. Now, let us take the next item, foundations, 4 feet thick, 34 by 64 and so forth, supported on 300 piles. What length did you assume for those piles in your computation?

A. I took them at $7 a pile.

Q. It makes a difference, the length of the pile, doesn't it, as to the cost of the pile and the cost of driving it?

A. Well, that is a pretty expensive pile. I took the highest price that I saw given for New York work in a number of instances where New Yorw work was mentioned. I will refer you to Gillette——

Q. How long piles did you assume?

A. The ordinary length of pile that it would take to support that weight. It depends on the friction of the ground. I suppose 35 or 40 foot pile would do.

Q. Did you assume a 35 or 40 foot pile?

A. No, I only assumed a cost of $7 apiece per piles.

Q. Did you include the cost of driving as well as the cost of the pile?

A. I took $3 apiece for driving the pile; sawing off, $150, timber capping, $450.

Q. In figuring the arches of your coal tacks, how many bricks did you assume that a man would lay of that character of work in a day?

A. This man told me that he would take it for that.

Q. No, that is not the question?

A. I put the construction up to him in sizes and dimensions, and everything about it and asked him what he could get the bricks for and lay it for.

Q. The question was how many bricks you assumed a man would lay in a day in that character of construction?

A. Oh, he would not lay more than—if he did it carefully he would not lay more than eight hundred bricks a day.

4716 Q. Did this man to whom you were talking, and whose name is not stated, see these particular stacks and arches?

A. He knows them well; knows all about them.

Q. Did you take him to see them?

A. No, sir.

Q. Is he familiar with them?

A. Perfectly.

Q. Now give us his name?

A. Well, it would not be fair for me.

Q. Did this man figure on using union labor, do you know?

A. This man is one of the best masons I know and I don't know whether he uses such labor as is current. I suppose he uses union labor.

Q. You don't know?

A. That is a matter I did not inquire of him.

Q. Referring to this Isabell-Porter scrubber in the scrubber house, your valuation for original construction is the same as Mr. Mayer's. Doesn't that seem to be in good condition?

A. Yes, the only thing about the age of that in depreciation will have to take place inside. I have given that a lifetime of seventy years.

Q. You don't know in any case, do you, or in reference to any piece of apparatus which you have valued to-day, how much had been expended in repairs or replacements or renewals on it by the Consolidated Gas Company since its original construction?

A. I know the general results.

Q. Won't you answer the question?

A. I saw the vouchers and repairs, and what they spent the last year, every one of them.

Q. (Question repeated.)

A. This identical apparatus?

Q. Yes.

A. Well, I don't recall.

Q. Well, do you know how much was expended in repairs or renewals upon any particular piece of apparatus that you have valued since its original erection?

A. No, I cannot say that I can identify where the repairs went; that is the trouble. We could not.

4717 Q. Well, you were not one of the accountants on the books, were you?

A. No, I was one of the Advisory Board of Engineers.

Q. Appointed by the Corporation Counsel or somebody else?

A. Yes.

Q. How many pounds of material did you estimate there was in the air condenser in the retort house annex, in computing your valuation of $15,067?

A. The statement I have here is 112 feet long and 8 feet——

Q. Your description is doubtless all right, but how many pounds did you assume?

A. Well, there are 163,050 pounds of castings in that part, that is the rectangular shape at the bottom; cast iron pipes 132 feet, 74,000 pounds. No, I made a mistake; it is 132.66, 20-inch pipes, 74,000 pounds; 264 flanged end on the pipe, and 264 flanges on the faced joints on the rectangular vessels in it, and the 6-inch cast iron pipe, 18,500 pounds. You see I have not allowed, therefore, for the flanges and that amounts to——

Q. Well, without going into great detail, Mr. Mayer's figures are about $1,000 more than yours, that is $16,335. Allowing for the flanges, his figures would be about right, wouldn't they?

A. We differ very little on that.

Q. Wouldn't you be willing to accept his figures as far as allowing for the flanges? Without special computation, was his about fair?

A. He computed from better information, drawings and one thing or another of that sort. I should, yes.

Q. Referring to the boiler house and well, one vertical boiler, 37-inch, 6 feet 9 and so forth, you computed $250 on the horse power. If you computed on the dimensions, would any different result be reached in your view?

4718 A. Well, I took a look at the dimensions and it seemed in excess of the thirteen horse power, yes, sir; but I did not compute it.

Q. Well, assuming the dimensions to control and the amount of material necessarily involved, assuming the dimensions to be right, you would not quarrel with the $350 valuation of Mr. Mayer, would you?

A. Well, I don't think it would make any such difference as that.

Q. Well, it would be $300 in that case?

A. It would be a lump figure. I would have to really calculate it.

Q. I know, but it is a small item and I only ask you generally.

A. I suppose the difference might amount to $50 on the size and being larger in horse power. Boilers are allowed in horse power at different rates.

Q. Does that include connections and erection?

A. Well, the price of the boiler includes all the trimmings and gauges.

Q. Does it include the erection or simply the delivery?

A. Well, that depends on how you make it.

Q. Yes, I know, but in your estimate?

A. Well, I considered that they deliver—that they will deliver a boiler for that; yes, sir.

Q. And then the erection would be something to be added by the company in the final cost, wouldn't it?

A. That is a vertical boiler standing on end, those little boilers like that, so I do not figure very much for erection.

Q. Whatever it is; it might not be much. Wasn't that boiler apparently in good shape, as far as the outside appeared?

A. There is a whole outfit of boilers which had a worn aspect; it looked as if they were pretty well along in life.

Q. In what way did they look worn?

A. Doors and such things as show the wear and tear, like furnaces, ash pans.

4719 Q. Was it in operation?

A. It had a banked fire in it.

Q. Then it looked as though it had been in operation?

A. It looked as if somebody was getting it in operation, yes.

Q. Look at the boilers above in the boiler and engine house; $1,100 for 55 horse-power engine you give, with a depreciation of $600. Do you mean to say if an engine had depreciated to between 50 and 60 per cent. it could be used with safety?

A. You can use an engine up to the time——

Q. This is a boiler.

A. Oh, a boiler. I thought you said engine.

Q. No, 50 horse-power vertical boiler. Do you mean to say you think that boiler if still in use would have depreciated $600 on that $1,100 original value?

A. Well, I thought the boiler was pretty nearly extinct, yes.

Q. It would be difficult, wouldn't it, to get an insurance company to insure a boiler after careful inspection if it was deteriorated as much as that?

A. It would. They would probably cut down the pressure that they would alow on such a thing as that.

Q. Did you learn what pressure was carried?

A. No pressure at all.

Q. It was not in operation at the moment you saw it?

A. No, sir.

Q. Now, about the 50 horse-power? Two cylinder——

A. I think this is a well—maybe I was mistaken on that.

Q. Under "boiler and engine house," the first item, one 55 horse-power vertical boiler, 5 feet 8?

A. Yes, I recognize that by that oscillating engine. It was the antique——

Q. I am talking about the 55 horse-power vertical boiler?

4720 A. The engine and boiler was certainly a very antiquated type. I have never seen anything in operation quite so old for many years.

Q. Then this was in operation, was it?

A. Well, I say that the oscillating engine was in operation. I took it for the well boiler, which is a boiler house and well just immediately beneath in connection with the well.

Q. Was this the boiler of that oscillating engine?

A. Yes. There was one engine there that took steam from across the road. However, that is not the one. They had a boiler but it did not boil; they were taking the steam from elsewhere.

Q. Now, in the boiler house below I have one boiler four feet by ten feet three; tools for coils, valued at $360 on the horse power, you say. Wouldn't that engine, taking its dimensions and the amount of material, be worth more than $360 if there is nothing said about horse power?

A. Yes, I think that would be a thirty horse power engine at least.

Q. And did you observe that Mr. Logan had accepted Mr. Mayer's figures as to valuation on that?

A. No, I did not look into Mr. Logan's figures at all.

Q. If he had, that would influence your judgment to some figures, wouldn't it, as to values?

A. I don't know. The more they agreed in values, the less influence it would have.

At 4:55 P. M. adjourned to December 7, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 257.
State's, AAA.
City's, 101.

4721 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *December* 7, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Page, Mr. Burr.

4722 Continuation of the cross-examination of HENRY H. EDGERTON.

By Mr. MATHEWSON:

Q. Under boiler house at 14th Street you valued one 50 horsepower, two-cylinder, oscillating engine, including cast-iron walk around the engine, at $1,700, but you deduct $700 for depreciation on the boiler of the engine. Did not that appear to be in good condition, so far as outward appearance went?

A. I think that depreciation was on the oscillating engine and boiler combined.

Q. I understood you yesterday to say that the depreciation was on the boiler, but I understand you to-day that it was on everything combined.

A. Yes, it was said to be built in 1882.

Q. Did it not appear to be outwardly in good condition so far as you could observe?

A. No, I could not say that it had the appearance of being in first-class order by any means.

Q. What was there out about it that you saw?

A. Well, I don't remember at present. I took the whole thing in conjunction; I thought it was the most antiquated arrangement I had ever seen lately, anyhow.

Q. Was it because it was antiquated that you made this deduction, or because it was physically deteriorated, so far as you could see?

A. A thing that had been in use that long, of course, had got internal deterioration that would not show altogether on the outside. We know that——

Q. But I am getting at what you saw, Mr. Edgerton, and not what you assumed was the condition on the inside. Is it not true that so far as outward appearances were concerned, disregarding the question of antiquation, that the machinery seemed to be in good condition outwardly?

4723 A. I don't believe that I could have put that depreciation on it unless it was in pretty poor shape, because——

Q. Can you tell what it was that attracted your attention as being out of order about it or as being worn out?

A. I think, in the case of that engine and boiler, I called the attention of Mr. Lacombe and Mr. Marks to the appearance; it seemed to me to be very much depreciated.

Q. I am trying to get at the exact feature which was not in good repair or in good order or showed wear and tear. In other words, what was it that seemed to be deteriorated or depreciated in your eyes?

A. Well, throughout, the oscillating engine had a worn-out appearance. I could not particularize in what particulars, because I spent probably ten minutes in looking over that thing, and still I could not at present, there are so many engines and boilers to examine there. I could not tell in what particular that I considered it out.

Q. That, I think, covers everything which you commented on at 14th Street regarding which I wished to question you, except the small holders. You speak of six small holders.

A. There were eight.

Q. Eight, yes.

A. Yes, six in one yard and two adjacent.

Q. You say those holders were used up; is that the expression you used?

A. I don't think I used that expression. I think that I stated that the holders were of such small capacity that they were of no account for a business so immense as the Consolidated.

Q. But, leaving that out of the question for the moment, were not those holders in good condition when you saw them?

A. Well, there were places where the tar had scaled off; it did not look so much out of condition, as I judged from the fact, 4724 being grounded, that one was blocked up to keep it from going down into what I took to be either mud or slime at the bottom of the tank. When I see a holder fixed so as not to allow it to settle down to the full extent on the blocks, I know that there is something down there that may possibly stick to it, so when they attempt to raise it it will make an extra pressure.

Q. Well, so far as the shell of the holder itself was concerned, it seemed to be in good condition, did it not, except that pieces of tar had scaled off here and there?

A. Yes, there is not any appearance of its being out of condition further than that.

Q. And you say they were being repainted with tar when you were there, is that right?

A. Yes, they were painting them with tar.

Q. You have no knowledge that those holders are permanently out of use, have you, or are not being used in the times of large production and output?

A. It is now a time of large production, and when I saw them out of use for several days, and knowing also that the using of them would be of no account for such a business as the Consolidated has, I took it that they were laid out permanently. Also, the fact that they had been settled down to the bottom of the tanks and the water line having been impressed on them for a space of eight or ten inches——

Q. Well, the fact they were being repainted with tar would indicate, would it not, that they had not been abandoned and put to scrap?

A. Well, I say this, that no one paints over with tar in the winter time; tar is a substance that is only applied to holders in the summer, on a hot day. We raise the holders on a hot day and apply the tar in order to let it bake there, and it is an extremely unusual thing—in fact, I have never seen a holder painted with tar in the winter time; it is so long in setting that it would throw the 4725 holder out of use anyhow. After a holder is painted with tar it has to be kept up long enough or else it will blister up when it is let down into water, and that alone would throw it out of use for the time it would take to dry off.

Q. And how long would it take to dry off?

A. If the tar was not thinned——

Q. Well, assume that it was thinned——

A. It was not thinned, this was daubed on, thick tar. It might take two weeks to dry thoroughly.

Q. Now, Mr. Logan states that the cost of reproduction of these holders to be $180,000, and Mr. Mayer says it would be $178,885. Is it fair to assume that the cost of reproduction of those holders would be about $180,000, as these gentlemen testify?

A. Holders and tanks? Yes, combined.

Q. No, but this valuation is given both by Mr. Mayer and by Mr. Logan as the cost of reproduction of those holders or tanks, the tanks being separate.

A. Then it is about twice too big, if that is the case. I have bids on holders now, including tanks, at that rate.

Q. How much do you calculate that those holders weigh?

A. Well, I have not made a calculation of the weight of the holders.

Q. How can you tell what the holders are worth until you know what they weigh and the amount of material in them?

A. We know very approximately the cost of a holder from the rate of its contents per thousand. Now, I have bids on a holder and tank erected at $100 a thousand capacity, smaller than that holder, and therefore that holder should be erected at $85 or $90 per thousand.

Q. We are talking about these particular holders. Do you know how much they weigh, or have you any figures as to what they did weigh?

A. I wanted to get that, and constructed a gauge on pur-
4726 pose, but they had those holders counter-weighted so as to cut
me off on that. If they would take those counter-weights off, I could tell very exactly, within two or three per cent.

Q. How about the guide frames which go with the holders, are they made of cast iron or wrought iron?

A. Cast iron columns.

Q. Would not they cost more than wrought iron?

A. They would cost somewhat more, and would not be as good.

Q. I am not talking about that. They would cost more than wrought iron, would they not?

A. I think they would. If you figure out those particulars, they would cost some more.

Q. What pressure did you assume these holders threw?

Mr. Page: You will remember that this witness did not value these holders.

Mr. Mathewson: No, but he said they were dead and out of use, and he rejected them.

Mr. Page: He did not have to calculate the pressure on a holder that was dead and out of use.

Mr. Mathewson: We will see about that.

The Witness: As I stated, I had prepared a very delicate gauge to take the exact weight of the holder, but the fact of their being counterbalanced prevented that being used.

Q. You have just said that these holders could be reproduced for half the amount which Mr. Logan and Mr. Mayer said it would cost to reproduce them?

A. Yes.

Q. Now, I want to know in making that reply what pressure you assumed these holders threw? You must have assumed something?

A. I went by the capacity of the holder in my estimate,
4727 and if they are an extra heavy holder, I should be obliged
to——

Q. If you don't know what the weight of those holders is, you cannot tell what it would cost to reproduce them, can you?

A. To reproduce them of that weight?

Q. Yes.

A. I assumed they were ordinary weight.

Q. If you don't know what the weight of these holders is, you cannot tell what it would cost to reproduce these holders, can you, Mr. Edgerton?

A. I know this——

Q. Won't you answer that question? I think that is perfectly easy to reply to.

A. I could not calculate to reproduce exactly the weights unless I knew what they were; that is plain enough.

Q. Do you know what the wages are for laborers and mechanics for holders in the City of New York?

A. No, sir.

Q. Now, you said something yesterday about tower scrubbers not being in good construction, if I understood you. Did you?

A. I said that they are superseded in their function to a great extent by a better piece of apparatus; that was the washer scrubber or rotary scrubber.

Q. Well, now, in order to get something easy, I have a book here published in 1903, entitled "Self Instruction for Students in Gas Manufacture, Published in London," in which it says at page 44——

Mr. PAGE: I object, unless it is shown to be written by some standard authority, some one recognized as such.

Mr. MATHEWSON: The balance of the heading is, "Being Answers to Questions based on the Ordinary Grade Syllabus and Gas Manufacture of the City and Guilds of London Institute, by Mentor, Second Edition."

4728 Mr. PAGE: You might as well bring in on the question of law this "Pocket Lawyer" they are selling on the street.

Mr. MATHEWSON: That would be better than some law we get.

Mr. PAGE: That is undoubtedly so, but, nevertheless, I would rather take my law from Mr. Mathewson than from a book which was bought on the sidewalk, with no name on it, and it would undoubtedly have more weight. As I understand, you can refer on cross-examination to standard publications that are published of statements of well-known authorities, but anonymous publications set up as scientific works, I do not think can be used.

Mr. MATHEWSON: Well, it appears from the preface that the editor of the *Gas World* arranged with a gas engineer and chemist of knowledge and experience to write for that journal, that is, the *London Gas World,* a series of articles on self-instruction for students of gas manufacture. These have here been brought together in book form, so it appears that is, in book form, articles which appeared in the *Gas World,* and my friends on the other side have introduced the *Gas World* analysis of accounts as being something to bank upon. I think perhaps it is sufficient so I can ask questions about it.

The MASTER: Does it appear that the witness ever heard of that publication?

Mr. MATHEWSON: I don't know whether he has or not. It is published by the *Gas World* of London.

Q. You have heard of the *Gas World* of London, haven't you?

A. Yes, sir.

4729 Q. That is a very important and standard publication, isn't it?

A. Yes, sir; but I have not been perusing instructions for students lately, anyhow.

Q. Referring to this, I find this statement at page 44: "The tower scrubber, a sketch of which is shown in the figure upon page 45, is the apparatus most commonly employed in the elimination of ammonia." Do you still think that it is not commonly employed for that purpose, or most commonly employed for that purpose?

A. That would depend on whether they wanted to save their ammonia or simply wanted to get rid of it out of the gas.

Q. That is not the question. I ask you whether you still maintain that the tower scrubber is not the apparatus "most commonly employed in the elimination of ammonia"?

A. I don't believe there is a dozen of them in the United States.

Q. Then you do not agree with this?

A. No, I do not.

Mr. PAGE: That is English construction; maybe in England it is.

The WITNESS: In the first place, I have——

Q. Don't they use this most commonly in England?

A. In England it is still used quite commonly, because the smaller towns want to get rid of ammonia without going to the expense of trying to save it. It is a question of——

Q. However that may be, don't they get more ammonia from a ton of coal in England, as a rule, than they do in the United States?

A. I think they do, but they do not get it out of that scrubber.

Q. In spite of the fact that this is the form of apparatus most commonly employed in the elimination of ammonia, is that right?

A. Well, elimination and saving ammonia are two different things; you can eliminate a thing without saving it.

4730 Q. Passing that distinction, did I understand you to say that ammonia did not combine with carbonic acid?

A. Not a bit of it. It combines, and then any sort of a reagent coming in contact with carbonate of ammonia will throw it out of combination. I have experimented a good deal in trying to wipe out ammonia in gas by means of carbonic acid, which is also in the gas, and making it stick together, but I never——

Q. Then ammonia will combine with carbonic acid gas, won't it?

A. It will not stay there; besides, carbonate of ammonia is a volatile thing, and goes along with the gas——

Q. Will ammonia combine with carbonic acid gas?

A. It will combine with carbonic acid gas, and then afterwards disappear in the form of vapor.

Q. It will combine with carbonic acid gas, will it not? That is the question, because I understood you to say yesterday it would not.

A. Not combine and stay there in the form of carbonate of ammonia. It is not eliminated——

Mr. PAGE: Was your question general, or limited to the gas?

The WITNESS: If you want to go into the chemistry of the thing, I will follow it up.

Q. No; my question was as general as your testimony yesterday on the subject, in speaking of scrubbers. Do I understand you to say that you were the originator of the tower scrubber?

A. Yes, sir.

Q. Where did you first instal a tower scrubber—in New Orleans?

A. In New Orleans.

Q. That was in 1873?

A. In 1873; plans were made in 1871 and 1872.

4731 Q. Was it not in 1872 that Mr. Forstall saw you in reference to plans for New Orleans, the fall of 1872?

A. No, I had the plans finished in 1872. He saw me in 1871.

Q. Sure about that?

A. Oh, very sure. I can give you the exact place where I met him and the correspondence on the subject.

Q. Where did he meet you in reference to the designing of these works?

A. Fort Wayne, Indiana.

Q. Fort Wayne, Indiana?

A. Yes, sir.

Q. Was he alone when he met you?

A. He was alone. I don't remember——

Q. Was not his son with him?

A. His son was a baby then, pretty near.

Q. Was he a baby then?

A. Well, he was not anything very big when I first saw him.

Q. Was not this young man here, who is Mr. Forstall's son, with him, when he saw you?

A. No, sir; Mrs. Forstall, I think, was with him, but there was no son.

Q. Now, I have a book here, printed in London in 1878, entitled "*King's Treatise on the Science and Practice of the Manufacture and Distribution of Coal Gas*," edited by Thomas Newbigging, C. E., member Institute Civil Engineers, author of the *Gas Managers' Handbook*, and W. T. Fewtrell, F. C. S.; you have heard of that work, haven't you?

A. Oh, yes. I had a copy of it 35 years ago, nearly.

Q. And there seems to be a history of scrubbers here. I find on page 366 the statement: "In 1848 Mr. F. C. Hills obtained a patent for an apparatus of a somewhat complicated nature, in which the 'tower,' the 'tumbler' and the 'revolving perforated arms' also cropped out;" and it appears that in 1871 Mann & Walker obtained a patent on a tower scrubber, and the tower scrubber itself, with the legend "Mann & Walker's Patent," is pictured at page 371. Now, if that be correct, isn't your assumption wrong that you introduced the tower scrubber in New Orleans in 1873 first, and that the idea was
4732 then transported to Great Britain?

A. No, sir, I don't think so. I have obtained patents on things that have not been made, and that tower scrubber was not constructed in 1871.

Q. It appears, does it not, that the patent was obtained in 1871?

The MASTER: That is what he said.

A. The patent may be obtained. That does not construct the scrubber.

Q. Then the idea of the tower scrubber or the theory of it you do not claim was originated by you the first of any one in the world, do you?

A. No, although I thought of the tower scrubber long before I built it, I can tell you that.

Q. Did you get any patent on it?

A. No, sir, I didn't think of patenting it.

Q. It appears at page 366 that the tower was employed by Mr. Hills in 1848. Was that before you thought of it?

A. Yes. It depends on what term you apply to a tower or what they mean by it. Some men might call—the idea is simply this, that the old construction of scrubbers limited them to a very limited height, and I called Mr. Forstall's attention to the fact that I had long figured that it would be a great deal cheaper and better to continue those up to a great height instead of limiting them to nine or ten feet; and I wanted to put it outdoors in New Orleans, but they thought that was too much of a novelty; but we put scrubbers thirty-three feet high, and at that time it was considered an entire novelty in the business by everybody.

Q. Now, it appears at pages 371 and 372 of this work that the Gas Light and Coke Company requested Messrs. C. and W. Walker to communicate with William Mann in endeavoring to improve the scrubber, and it appears that the first scrubbers 4733 constructed at the Beckton works were made of wrought iron boiler plate, twenty feet diameter and thirty feet high, being parallel cylinders from bottom to top; and I am informed that the scrubbers at the Beckton Works were erected in 1869 or 1870. Have you any knowledge on that subject?

A. I don't think the Beckton Works were completed at that time.

Q. Well, it appears in the following paragraph that soon after—that is, after the Beckton Works were constructed, the efficacy of scrubbing became the object of much consideration, and in 1871 a patent was obtained for improvements, which is the Mann patent to which I have referred.

A. No. In 1871 I had drawn it out and was engaged in getting it under contract. It follows that frequently after a thing is successfully introduced in this country, like compression of gas for cars, that it travels over to the old country, has the stamp of approval, and then there is always some Englishman crops out who thought of it before.

Q. But your first scrubbers were erected in 1872, here?

A. Yes.

Q. So that if they were erected in Beckton in 1869 or 1870, that was certainly some years before you erected any tower scrubbers here?

A. I disagree with you about the time of erecting them at Beckton.

Q. Well, assuming that to be so——

A. Yes. Assuming they were constructed before they were, yes.

Q. Assuming they were constructed at Beckton in 1869 or 1870, that was several years before you erected any tower scrubbers anywhere, wasn't it?

A. It was, but my recollection is pretty definite that the construction of the Beckton works was completed after those scrubbers were erected.

4734 Q. But you observe, do you not, the point to which I call attention, that it was some time afterward, in 1871, that the patent was obtained? That is, after the Beckton works had been constructed?

Mr. PAGE: They invited these two men to co-operate.

Mr. MATHEWSON: And then they say that the first scrubbers constructed at the Beckton works were twenty feet diameter, thirty feet high; and the following paragraph states that soon after the efficacy of scrubbing, and so forth, was considered, and in 1871 a patent was obtained, evidently after the Beckton scrubbers were erected; and the Mann & Walker patent, as you know, was obtained in 1871, and was a patent for tower scrubbers as shown in this cut.

The WITNESS: Yes; it does not make any difference about the precise form of the scrubbers.

Q. But it would appear from that, would it not, that the Beckton scrubbers were erected before 1871?

A. I don't think so.

Q. All right.

A. I think the Beckton works were finished after I finished mine.

Redirect examination by Mr. PAGE:

Q. What months are the months of largest production in a gas works?

A. Well, the months of November, December and January are the months of largest production in almost all localities.

Q. Well, applying that to the New York conditions that we have heard so much about, would that be so here?

A. Undoubtedly.

Q. And the highest load for the year has to be carried by the works in those months, does it?

A. Yes, sir.

4735 Q. And at that time is the entire apparatus that is feasible for use and maintained for use in use?

A. Everything is supposed to be in action at the time of the largest output.

Q. Well, in regard to the gas holder, if a gas holder has been abandoned for use, you would still keep that holder in sufficient repair so that it could be used in case of emergency, would you not?

A. Yes, sir, particularly if my holder capacity was only about two-thirds of the day's output.

Q. Now, this oscillating engine and boiler that Mr. Mathewson questioned you about, that was stated to have been built in 1882. Is there a depreciation that is recognized by engineers on engines and boilers, based on the average life of the apparatus?

A. Y-s, sir.

Q. And although an engine or boiler may be kept in good condition in outward appearance, still would it be depreciated by the fact that it had been in use for a number of years?

A. Yes, sir; it is bound to be depreciated beyond what is visible on the outside; the wear and tear in the cylinders, and the pistons and valves become out of order; and, although an old engine may be kept in apparent repair and good condition, it is still given out throughout.

Q. Was this taken into consideration by you when you made your valuation of depreciation, or was it based entirely upon the physical appearance?

A. I took both. Where I saw a boiler and engine not only having the appearance of considerable age, I also took into consideration the general appearance of it in regard to its repairs.

Q. Now the "built in 1882" seems to refer to the boiler. What would you say, from the type of the two-cylinder oscillating engine, as to its probable age?

4736 A. Well, it was the most antiquated appearing thing in construction that I have seen in New York City. I was wondering where it could have been got from. I don't know anybody that builds such an engine nowadays.

Q. Is it a type of engine that is being built today and commonly used?

A. No, the last oscillating engine I ever saw was on a steamship about forty years ago, in use.

Q. Until you saw this one?

A. Until I saw that.

Q. This is a general question: when you throw out the old benches and build new, what is the process? How much, I mean, do you have to tear down and how much do you build?

A. Well, if we have an old form of bench in which the oven is not wide enough to make the modification required, we have to rebuild a stack, and in my opinion a stack should be rebuilt every fourteen years anyhow, unless it is an extraordinary well built stack; it gets out of order and chinks in the brick work—cracks, that cannot be very well daubed up and kept tight and leakages in the bypassage in the draft, and, therefore, the stack itself should be rebuilt before it is entirely dilapidated.

Q. Well, take it that time; say once in fourteen years or thereabouts, you would tear down the whole stack, wouldn't you?

A. I would tear down the stack and rebuild it on account of the difficulty of keeping them in efficient condition.

Q. What about this operation that you referred to that ought to be done once in about every three years?

A. That is rebuilding the ovens with retorts; three years would be a long average lifetime.

Q. What do you do at that time?

A. At that time the retorts are taken out and all blocks taken out and fire-brick to the level of the ash pan; sometimes a course or two above the ash pan may be left in up to the bearing bars; it depends on how much it is racked, and it is built up from that point.

4737 Q. Now, that removes everything then inside of the arch, does it?

A. Everything.

Q. Then if the company desired to change their construction and make modern benches at that time, it could be done with comparatively little additional expense, could it not?

A. Yes, I have seen changes of that kind. The size of the oven might limit the size of the retort, and in this case in 14th Street I see they have retorts drawn in; but the time to make a thorough improvement is in the summer time, by tearing down the stack, that is not a very expensive operation and it would be well repaid in a very moderate time.

Q. Now, the time having arrived at which it is necessary to reset the bench, you say with a comparatively little additional expense you could rebuild the stack?

A. Yes. The rebuilding of the stack is nothing formidable.

Q. And this work is done practically every summer, is it not?

A. Some of the retorts are reset each summer? About one-third would naturally be renewed in each year.

Q. Then without interruption of the supply of gas, inadequate apparatus could be changed to new apparatus in three summers, could it not?

A. Yes, perhaps even more rapidly than that if it was a matter of importance.

Q. I mean without changing the time that is now taken for repairs and that is without laying off any more of the apparatus than is now laid off in the summer for repairs?

A. That is right.

Q. Outside of the oven how much is there of a stack—of about what proportion of value does that bear, can you tell, to the whole stack?

A. It would depend a little upon the thickness of the division of the walls.

Q. Well, take this division that you have at 14th Street, which you have worked out, I understand?

4738 A. Yes; it would be about one-third, a little over; perhaps one-third of the expense would put in new stacks.

Q. About one-third additional expense?

A. Yes.

Q. Then if this fund that has been spoken of as a depreciation account that has been utilized by extensions, mains and building new apparatus, had been expended in those retort houses, some portion of it, it could have been changed into a modern up-to-date construction, could it?

A. I think so.

Q. And when I refer to the depreciation I mean the depreciation which Mr. Mathewson assumed was to be charged as against this apparatus, but had been expended in extensions and plants.

Mr. **Mathewson**: "New construction," I think was the term I used.

Mr. **Page**: Yes.

A. Yes, I should expend the money in putting in the very best order the generating plant as of first importance.

Q. How about this $280,000. I think it was that was spoken of as having been charged off to depreciation by the Consolidated Gas Company in the year 1905. Would that have been sufficient to rebuild this?

A. That would have been sufficient to have built a very much superior construction to what they have for an output such as they now make.

Q. What kind of a construction would that have given?

A. Well, that would have given a construction that would have minimized in use of coke and the output per bench, output per man.

Q. Still that does not state what kind. You say it would give a construction that would result in these economies, but I say what kind of a construction could they have put in?

4739 A. They could have enlarged their ovens, perhaps it might have been necessary to have dropped one of them or used more at the ends to have accommodated the larger sized oven and the larger sized retort, just as they did in the case of this setting of 24 benches. Twenty-four benches occupies the space formerly occupied by the setting of 30 benches. By a proper setting of larger retorts they would make very nearly the economy of the best plants.

Q. Well, would that give you a "generative" fire, as they have got it here. I suppose it should be a regenerative fire.

A. No, it would not be possible to put in a full depth of generative bench there without considerably more expense.

Q. No, I mean by that, the kind of a bench they have got here, 24 benches is put here as "generative" fire. I believe you said it was a modification of a half depth.

A. Yes, it is a half depth; it is not a full regenerative fire. It is one that would undoubtedly economize on the use of coke, but owing to the retorts setting one directly above the other, I think that it would not have any good——

Q. No, you are speaking of this particular one now, about that construction; but I say you could build a half-depth regenerative modern retort?

A. Yes, a very good and efficient bench could be put in in that space.

Q. And it would effect a large saving in the cost price of gas, would it?

A. Yes, sir; a very large saving could be effected by increasing the amount of coal gas and diminishing the amount of——

Q. No, but what I am speaking of is, would it be a saving over the cost of coal gas produced by that plant, over the plant which they are operating now. These four stacks of 30 benches each?

A. Yes, sir; a very large saving could be effected.

4740 Q. Now you stated in answer to a question of Mr. Mathewson that the retorts drawn in as you have shown made a more efficient bench that where the retorts were placed on- above the other. Will you explain why?

A. I examined very fully into that question when I built the New Orleans plant, and it arose in this way, that we thought that many benches of six retorts did not give the result of my old Ft. Wayne setting with five retorts, and that led to an investigation as to the cause of the five retort bench, giving a greater production per bench and per man that a six retort; and I visited the Nassau and Brooklyn and other works, having the one retort over the other of large size and arrived at the conclusion that it was a mistake to leave the large open space above the fire unprovided with a retort capacity, and the only way to avoid this loss in a bench of sixes would be by drawing in the retorts as they went upwards in the bench until we have them within four to six inches of each other at the top, and the result of the setting was to give—a largely increased yield.

Q. That is particularly so, is it not, in the direct fire bench where you have the retort come in direct conflict or contact with the heat or flame, if it reaches that height? I do not suppose it does.

A. The retort gets right in direct contact with the radiation of heat from the direct fire. I can illustrate it in a simple way, that if you wanted to boil a pot on the stove you would set it over the fire instead of putting it on one side, and the temperature of the gases arising directly off the furnace is higher than after it has lost by radiation going up the arch. I think, however——

Q. How is it with the regenerative apparatus where they have a chamber for combustion of coal gas and the air gas?

4741 A. Well, it is the same in that respect only I think care has to be exercised, because in managing a regenerative fire it is possible to melt everything down. I have seen arches in Washington at the gas works with the tile all doubled up with the heat, arising from the fact that you can push a regenerative fire to a tremendous temperature; but it still holds good that you want to fill up your bench space with retorts as closely as possible to get the greatest output out of the bench.

Q. So that from your experience of both types of apparatus you think that the best construction is the one with the retorts drawn in rather than the retorts set one above the other?

A. Most decidedly. It is illustrated right down at the 14th Street works. They have a new and enlarged retort set one over the other and they are lying there dead. They have been completed and had no fire in them, whereas they are firing smaller retorts which are drawn in and keeping them under fire, and keeping this improved bench with a regenerative fire out of use, and they have discovered rather too late that they were not set in right, I presume.

Q. Mr. Mathewson cross-examined you to quite a large extent upon your method of selling gas in Danbury and something as to the prices that you charged. Your remarks given here on the cost of production were not based upon the Edgerton process of gas production, were they?

A. No, sir.

Q. I mean cost of production applied to the 14th, 21st, 44th, 99th Streets and Central Union stations?

A. No, sir, I think possibly the examination in regard to the price charged for gas in Danbury has left the subject somewhat muddled.

Q. Yes, I was going to ask you if you desired to make any further explanation. I did not understand very well what your method of charge was, and I do not know as it has become very clear upon the record just what the theory is, so will you state it?

4742 A. The theory is in regard to charging for high candle power gas that every candle is worth as much as any other candle; a candle of fifteen candles is worth fifteen; a candle of eighteen candles is worth eighteen; a candle of twenty candle power is worth twenty; each candle is as good as the other with proper burners; therefore, when Danbury gas was put at forty-four candles of course the high price per thousand feet would not suit, it would bring a prejudice of the customer against the gas, and therefore we stated the price at so much an hour and registered the hours of gas burned for fourteen candle light. Now, it takes only two feet of gas at Danbury to supply the same gas that is usually supplied by five feet of coal gas, and therefore the actual price per thousand to the consumer is higher but it has always been rated to the consumer and stated to him at a coal gas price, so he could compare his price at Danbury with prices elsewhere. That method was very satisfactory, and the same was employed at New Orleans and it was one of the most popular features in connection with the introduction of high candle power gas, because it reduces the cost directly to dollars and cents so the consumer knew what he had to pay for a given light without having to compute it by means of cubic feet. Very naturally the system was attacked to delude the consumer——

Q. Never mind that part of it. What is the effect on the bills of the consumer?

A. The effect is the bill to the consumer is less. The average output in Danbury to a consumer is 9,000 feet of gas per year, and the average water gas in Massachusetts of a number of towns of similar size would be about 19,000, and the coal gas about 23,000. In fact, the consumption of gas goes on in the ratio of the candle power always.

4743 Q. The bigger the candle power the less the consumption in cubic feet?

A. The greater the candle power the less the consumption.

Q. That is, what the consumer wants is illumination, and if he has a low candle power gas, he has got to use more gas to obtain that illumination than he could obtain with a small quantity of high candle power gas?

A. That's it exactly. The common idea of candle power is very erroneous, as it is generally supposed that a thirty candle power gas would be twice as bright as a fifteen candle power gas. As a matter of fact, the thirty candle power gas does not show any brighter at all, or very little brighter, than a fifteen candle power gas. The consumer uses only half of it to give the same light. That is really the practical effect of candle power in gas. That is demonstrated very completely in comparing the output of the Scotch Gas Companies with those of the English Gas Companies. The average bill in Glasgow being about $18.00 and——

Q. You haven't those papers here, have you?

A. No.

Q. Well, we won't go further into that. I was going to examine you later on this question of candle power. All I want to know is just exactly what the theory of the Danbury was?

A. It is simply that stated, that gas is valued on the candle power on the basis that one candle is as good as another.

Q. The cost price of coal gas is somewhat regulated by the price that you received for your residuals, is it not?

A. The cost price of coal gas is almost dependent upon whether you have a favorable market for residuals or whether they are properly marketed.

Q. What do you find on an examination of the prices received by the Consolidated Gas Company for its coke as compared with
4744 other cities that you have had experience with, and their statistics in the regard to which you have examined them.

Mr. Mathewson: I object to this, Mr. Master. What you can obtain for coke in other cities is absolutely no criterion of what you can obtain in any other city. You can obtain in some cities, for instances, as was testified, in Chicago, $5.50 for coke. It is utterly impossible, as everybody knows, to get that price here. It seems to me that what you can get for coke some other place where the competition with coal is different and other features come in, is absolutely valueless as evidence here. It is what coke can be sold for in New York City, not what it is worth in Chicago.

Mr. Page: If it can be sold for $6.00 in Boston, I suppose we would be entitled to know it.

Mr. Mathewson: That may be. It may be that the competition there with anthracite coal is different.

Mr. Page: Or it may be they apply better business methods to get their market for coke and to hold their market.

Mr. Mathewson: They cannot apply any better business methods than we do here.

Question allowed. Exception.

A. I have uniformly found that the handling of gas coke to advantage is dependent upon looking up the market adapted for it. I have seen in a number of places where I have been called into consultation about works that they have had piles of coke on hand and selling it at low prices. My experience with coke as fuel is such that I am perfectly satisfied that gas coke of a fair quality, usually rates $1 a ton higher than anthracite coal at the same point.
4745 It is a perfectly smokeless fuel, it ignites with facility, so that it requires scarcely more draught to burn coke than to burn charcoal, while anthracite requires a heavy draught, and it is a common thing to see coke burning as fuel with a draught no higher than two feet. The best and most important market for gas coke is for household use and heaters. For that purpose it is twice as good as anthracite coal, but in very few localities do you find people who understand the handling of coke in a household heater or what is commonly called a furnace. The fact that it requires so much less draught is apparently against it by those who handle it for they leave the draught open and burn it too fast. The fire box of the furnace wants to be kept jammed full of coke, kept up, and the draught manipulated in such a way that you have barely the width of a penknife blade in cool winter weather of draught at the bottom, and in that way you get a fire that consumes the fuel on the spot; the gases are all burned. A little draught is admitted above——

The Master: Isn't all this a little beyond the scope of your question, Senator?

Mr. Page: I think it is.

The Master: Unless you show that people are educated up to that. The witness admits that most people do not know about it.

Q. Then if you were handling coke in a city where they had not been instructed in this, you would apply the same methods that have been used in the introduction of gas stoves by educating the people somewhat in their use.

Objected to as improper, as to what the witness would do under similar circumstances.

The MASTER: I do not think it is very important. Does 4746 not that follow as a matter of course?

Mr. PAGE: The only point I was making was that the company had devoted a great deal of time to the education of the people in gas stoves but they have not done anything with their coke, have not sought any market for their coke or tried to make a market for it.

The MASTER: That is a matter of argument.

Q. The use of coke is not confined to that of household fuel, is it?

A. No, it is a fuel that I have introduced without difficulty into a number of other uses than the furnaces and heaters, boilers. Laundrymen, of course, take it. Brewers are very good users of coke. I raised the price of coke to a brewer in Butte from six dollars a ton to nine dollars a ton by simply showing him how to stop wasting fuel. Also in public buildings. I have never had any trouble about introducing it to any use where they have janitors who will take the trouble to manage it rightly. As an illustration, a house can be heated with five-eighths the pounds of coke that can be heated by anthracite. I have made experiments in that. I got rid of the coke not only for the companies I was connected with but for neighboring companies. Take the case of Minneapolis: they had an oversupply of coke and were selling it very cheap and could not get rid of it. I brought carloads down and introduced it in neighboring towns just to break up a corner on anthracite when anthracite was high, and when they found out how to use coke it made quite a permanent market.

Q. I think in answer to a question by Mr. Mathewson, in regard to the Consolidated buying gas, you stated that they bought gas at a higher price than they manufactured it?

4747 Mr. MATHEWSON: No; than the 31.05 cents which he said was the average of the water gas stations.

Mr. PAGE: Well, at a higher price than the 31.05?

Q. Assuming that this operation of the Consolidated goes through with its subsidiary companies as a purchaser of gas, do you find that they do pay more?

A. No, my recollection is that deducting their own profit on their own product they pay less than these other companies.

Q. Your attention was called to Exhibit 79 by Mr. Mathewson, and you started to make an explanation in regard to the figures. If you desire to explain what you said at that time you may do so?

A. The point I wished to call attention to at the time was based on the idea that it was a matter of indifference whether the money from a depreciation fund was spent on one part of the plant or whether on another. It amounted to the same and they had the same results, whereas the money that they spent should be on those parts where the depreciation mostly occurs and where it is most important to spend it. As an illustration, the money spent in extension of mains is not as important as it would be in decreasing the cost of gas production at such stations as 14th and 42d Streets, but to make a more crude illustration: A man's doors and windows have gone out of repair; it would be more important for him to spend his money repairing them and in keeping them in order than it would be to buy a horse and buggy. It might not be the same outlay but it would be more important.

Mr. MATHEWSON: That is a very close parallel.

The WITNESS: That is not overdrawn. Perhaps I might 4748 draw a better parallel, but that in a rough way served to illustrate. Certainly if I knew how to make gas at thirty cents a thousand I would be loath to continue to manufacture at thirty-eight cents.

Mr. MATHEWSON: I do not think that was part of the question, but I am not going to move to strike it out.

Q. I just asked is there any further explanation? At the time you started to make some explanation and Mr. Mathewson stopped you?

A. I have forgotten now. I think that was the point, that it was a matter of indifference where it was spent.

Mr. PAGE: That is all I wish to ask Mr. Edgerton on what might be called the redirect on the subjects covered, so if you have any re-cross-examination on this subject you may proceed.

By Mr. MATHEWSON:

Q. Referring to these stacks, you said that you fixed the cost of a bench to $1,417 and the setting only $450, so that when you come to reset your benches that would not renew the iron work, which is the greater part of the value of a bench, would it?

A. Well, the iron work does not require renewing only to the extent that any modification made in the location of the retorts might require modification. You could accomplish that without throwing out everything in the plant.

Q. If you change the relative location of the retorts, it requires entirely new iron work, doesn't it?

A. No, I don't think so.

Q. Do you mean to say that it would not require entirely new iron work if you had drawn in instead of one over another?

A. No, sir; it would require modification of the iron work, 4749 it would require a new location of the dips and on top of the hydraulic, but I think that a great deal of the iron work could be utilized. Of course if one did not regard expense at all he might throw it all out and start new, but——

Q. You have said that the cost of coal gas depends in considerable measure upon what you get for the residuals. That means particularly what you get for your coke, doesn't it?

A. Coke, tar and ammonia, but the coke is the principal thing.

Q. Now anthracite coal in the West is higher than it is in the East, isn't it?

A. Somewhat, yes, sir.

Q. And coke sells for a higher price in the West than it does generally in the East, doesn't it?

A. Generally. I have seen coke sacrificed in the West at just such prices as in New York.

Q. Don't you know that the price for coke in Chicago at the recent investigation there was stated to be $5.50 per ton?

A. I think I saw something of that kind, yes, sir.

Q. And have you not known that coke sold in various cities in the West, such as Milwaukee and others, as high at $5.75 a ton?

A. That is where they had worked up a market, yes, sir. Ordinarily it is sacrificed the same as here.

Q. No matter what the reason is, the point is it does sell for those prices, or has sold for those prices; is not that right, according to your information?

A. No. I bought coke in the West at six cents a bushel at Minneapolis. That would be as low a price possibly as here. But the price of coke depends entirely upon the demand for it, like anything else.

Q. And it has sold as high as the prices I have indicated, has it not?

A. Yes, sir.

4750 Q. And does not the gas coal in the West cost less than in the East, say in Chicago and Milwaukee and cities of that kind?

A. It depends how far West and what coal you use.

Q. Gas coal such as is commonly used in Chicago and Milwaukee and neighboring cities.

A. I think in an equal distance from a coal region it is about the same.

Q. Don't you think gas coal is cheaper there than it is in the East, generally speaking?

A. No, I don't think it is. I have paid for gas coal in the West as high as $5.50 a ton for good gas coal. It is more a question of railroad freights.

Q. And don't you know that in selling coke we have in the East to compete with pea coal, whereas in the West the competition is between coke and the larger sizes of anthracite?

A. And natural gas.

Q. Yes, and don't you know that wherever coke is sold that it has to be sold at a lower price than anthracite coal in order to make a market for it?

A. No, that is the very point I made. I can make a market for coke that will sell large quantities of it a dollar higher than anthracite coal.

Q. Is not the labor of handling coke, as compared with anthracite, much greater on account of the greater bulk and greater care required in handling it?

A. I don't think there is any particular difference. There might be a slight difference. It shovels a little easier.

Q. Will you give me the name of any management in the United States, any company, that has been and is able to get anthracite coal prices for coke at that place?

A. Yes indeed, I can. That is just what I was getting at.

Q. Let us know what the company is.

A. Well, in New Orleans I bought anthracite coal at $7 a ton.

Q. That was in 1873, wasn't it?

A. No, that is when we changed to water gas in 1884 and——

Q. In 1884?

A. Yes.

4571 Q. Let us come down to within the last ten years.

Mr. Page: Let him finish his answer.

Mr. Mathewson: Very good.

The Witness: There I had an excellent coke market well established and worked up, and coke was sold at $5 a load. Now that coke in weight would produce a price higher than anthracite coal right there in New Orleans, and they were begging me for it to that extent that people waited for it to be drawn out of the retorts in order to get a supply many times.

Q. Why did you change to your oil gas process then if you were getting such enormous prices for your coke, which would reduce the price of the coal gas?

A. That was the very thing which entered into consideration and was fully considered.

Q. You know New Orleans has not made any coal gas for eleven years, don't you?

A. I know that. I changed it to water gas myself.

Q. Will you give me the name of any management in the United States of any company which is now getting prices for coke equal to the prices of anthracite coal in that place?

A. Why, I am not posted in regard to their exact relative prices now, but I know what has been and can be done where a coke market is worked up.

Q. Don't you know that many cities in the West have been obliged to and do fix the price of coke substantially below anthracite in order to get rid of it at all?

A. No, I do not.

Q. You know that anthracite coal is not used in England to any considerable extent, do you not?

A. Well, they have very little of their Welsh anthracite to use.

Q. Is it not true that in England until the introduction of water gas, coke was piled up in nearly every coal-gas plant in Great 4752 Britain because they could not obtain any market for it at all at a decent price?

A. The market of coke for domestic use in England I always understood to be a good one. Coke piles up at times in a gas works from the enormous production of gas, but it is worked off at other times.

Q. Did you not know and do you not know it to be a fact that until the introduction of water gas in Great Britain, which consumed coke in its operations, coke was a drug on the market and substantially every large coal-gas plant in Great Britain had great piles of coke undisposed of?

A. They may have charged too high, but——

Q. Don't you know that to be a fact?

A. No, I do not, and I do not believe it is, either. I know that that may be the pretence for the introduction of water gas, that that makes the only market for coke, but I have been over railways in England, north, south, east and west, and they used coke entirely for their locomotives and find it a good fuel.

Q. Where all works are coal-gas works, the amount used by locomotives would not consume the entire supply, would it?

A. Well, the amount used by locomotives where it is confined to coke will make a very great inroad into it, there is no doubt about that.

Q. Have you not known or heard of cases in the West where, on account of the prices they are able to get for coke, they more than offset the original cost of their gas coal, so that the material costs them really nothing?

A. I think there are such cases, without doubt, for coke, properly marketed, will bring a surprising price.

Q. You don't know of any such prices received in the East, do you, as $5.75 per ton for coke on the general market?

A. Not, but there ought to be.

4753 Q. Now you say that you find that the cost of gas to the Consolidated Gas Company of the gas manufactured under the agency agreement is less than 31.05c. Will you look at Exhibit 94 (handing book) and say what the cost is according to this of the gas made under agency agreements, the cost per thousand made? *A.* Is it not 34.04 cents?

A. Well, I——

Q. Well, is that right?

A. That is what that paper says, but——

Q. That is Exhibit 94, is it not?

A. Yes, but there are a great many things in Exhibit 94 that do not hold water.

Q. That may be, but is not that so in Exhibit 94?

A. It is so stated, but I——

Q. Wait a minute. Answer my question.

Mr. Page: He wants an answer to his question.

The Witness: That is stated there, yes, sir.

Q. Have you information that the Consolidated Gas Company did not actually pay 34.04 cents per thousand for the gas which they received? Have you any information to the contrary?

A. I have a——

Q. Have you any information to the contrary, that is the question?

A. I have not directly, but I have the information that that included 10 per cent. profit which they got back.

Q. Well, you thought they got that back, did you?

A. I understand so.

Q. And you do not think that the company is getting gas cheap if it gets it at fair cost of labor and material plus about three cents more, do you?

A. I think it is getting it very cheap, but——

Q. Well, that is all I have to ask on that point. Now I am going to see if I understand your theory of depreciation correctly, and I have tried to state it as I understand it. Is this right, that, 4754 in spite of the plant being kept in the best possible physical condition by current repairs, there is in your opinion a depreciation of asset value constantly accruing which is in direct proportion to the ultimate working life of the part of the plant in question?

A. I don't remember stating it in that way——

Q. Well, is that right in substance?

A. Well, I do not get your idea.

Mr. MATHEWSON: Please read the question again. I think perhaps it is clear.

Question read.

The WITNESS: Do you want an answer to that without any explanation.

Q. Yes, in the first place, if that is your understanding.

A. No.

Q. That is not your understanding or theory?

A. No.

Q. Just state what it is in a few words, without illustration, but briefly.

A. If you refer in this to the depreciation on the plant as I have assessed it, is that the idea?

Q. No, speaking of plants generally, is not your theory that, in spite of the expenditure for current repairs, there is a constant additional depreciation accruing in direct proportion to the ultimate life of the plant or apparatus which you have in mind?

A. Oh, well, that is clear enough; yes, there is a depreciation going on.

Q. And this would be in addition to the cost of any repairs currently made on the plant and should be charged each year to operating cost?

A. No, not to operating cost, by a long chalk.

Q. Why not, if it is depreciation?

A. It is not a part of the operating expense and not so charged.

Q. And do you mean to say that depreciation of a plant is 4755 not part of an operating charge to be made up from the sale of your product in order to maintain your plant?

A. That is true. It has to be made up from a sale of the product, but it is a fund; depreciation is not a vouchered account, and it is not money spent and has no business to be included in money spent. It should be set aside.

Q. We will waive the form of bookkeeping——

A. But that is very important.

Q. But the substance is that the amount of depreciation should be charged up or accounted for somewhere, and of course it must be taken into account in the sale of your product and covered by it so as to maintain your property?

A. Certainly, that is an axiom. I have no objection to that, only it is the way of carrying it on that I object to. It must be a fund, and not touched for anything.

Mr. **Mathewson**: That is all.

Mr. **Page**: I have sent for the book on the Boston investigation. I want to ask just one or two questions.

By Mr. **Page**:

Q. Have you examined that record of the Boston investigation, the investigation of the Boston Gas companies, with relation to the prices shown there to be received for coke in Boston?

A. I looked it over, yes, sir; I did not read the whole; that part relating to coke I noticed.

Q. Did you notice that one of those companies received $6 a ton for coke?

A. I think it was something over $6.

Q. And paid a trifle over $5 a ton for anthracite?

A. I think that is about the way it would figure. Anthracite is cheap there; we pay about that figure along the Sound, inland.

Q. And that the other company received $4 for its coke, 4756 being the two companies that were reported on. (Book produced.) I can give you the exact figures now, I think. That the Boston Gas Light Company received $4 a ton for coke and buys anthracite coal at $5.10.

Mr. **Mathewson**: Give me the page of that volume; what is it, if you do not mind?

Mr. **Page**: This is the hearing before the Board of Gas and Electric Light Commissioners, published in 1905 of the Investigation of 1904.

Q. And that the Bay State Gas Company charged $6.23 a ton for coke and bought their anthracite coal for $5.09. That is at page 235.

A. Yes, I noticed that statement.

Q. That is, it is put in as the price paid for coke used in generators, is that right?

A. That is right.

Q. Also the coke used in boilers?

A. Yes.

By Mr. **Mathewson**:

Q. Referring to these Boston gas companies you have never had the management of any company in Boston, have you?

A. No.

Q. You don't know anything about the circumstances under which this coke was obtained, do you?

A. I don't, only as stated there.

Q. Let us take the Boston Gaslight Company; it appears that the

the coal used in generators cost $5.10 per ton on page 273, does it not?

A. Yes.

Q. And it appears that coke used in generators, coke used in retorts and coke used in boilers is down at only $4 per ton, that is correct, is it not?

A. I did not notice that.

Q. Boston Gaslight Company, is that all coke that is referred to in this statement?

A. Yes.

Q. (Handing book.) $4?

A. Yes.

4757 Q. Don't you know that the Boston Gaslight Company produces that coke itself and does not buy it in the market and that this $4 a ton is merely a charge upon the Company's own books for its use of coke which it itself produces in the same station?

A. Yes, but it is incumbent to charge coke at the market price.

Q. No matter what it is incumbent to do, because you don't know what was done. But I ask you if that is not the fact which I have just stated in the previous question?

A. I know a coal gas company does not have to buy coke if it produces it.

Q. And it has a water gas plant attached to that?

A. Yes.

Q. So that this is not an actual purchase, but merely a book transaction in the books of the company as you understand it?

A. Yes, but it——

Q. Yes. Won't you just answer my question and stop?

A. Yes.

Q. Now we find, taking the Bay State Gas Company, that there was coal used in generators, 13,335 tons at $5.09 per ton. Now was not the amount of coke used in generators only 42 tons at $6.23 (handing book)?

A. Yes.

Q. And all the other coke that you find there is coke used in boilers, 17.8 tons at $6.23, is not that all the coke that appears in the statement?

A. All I noticed.

Q. Don't you know as a matter of fact that coke was obtained from the Boston Gas Light Company's Commercial Point plant at the time of the coal strike, when everything was out of sight in the way of fuel?

A. It is very possible, I don't know.

4758 Q. And don't you know that that includes the cost of placing upon the charges at the Commercial Point Works, the transportation across to the Bay State Gas Works and the unloading at the Bay State Gas Works and transportation to the generators, as well as the actual price which the Boston Gas Light Company received for the coke?

A. I suppose it included all expenses of getting it to generators.

Q. And don't you know that?

Mr. Page: The question is do you know of these facts in regard to that particular coke?

The Witness: No, I do not. I just take it for granted that the price of the coke there is delivered to the generator.

Q. Now, don't you know that the Bay State Gas Company produces no coal gas whatever but only water gas, and did at that time?

A. The Bay State is such a mixed affair, I guess nobody knows exactly what it does.

Q. Well, you don't know do you?

A. No, nor nobody else.

Q. I am referring, of course, to the Bay State Gas Company of Boston?

A. Yes, well, it is a very mixed situation.

Q. Is not your information that the Bay State Gas Company produce no coal gas but only water gas?

A. They produce water gas, I know that, but what it is doing now, it is producing water gas and stocks.

By Mr. Page:

Q. In regard to the price that the Boston Gas Light Company charged, you do not think that the Company charged itself a higher price for coke than the market price at which it was selling to its consumers, do you?

Mr. Mathewson: I object. That is too speculative.

Mr. Page: It is right on the line of your questions and it
4759 is directly responsive and in the same manner.

Mr. Mathewson: No, I asked him did he not know those things.

Q. I will say, don't you know, that the gas company does not charge itself more for coke than it charges its consumers.

Mr. Mathewson: I will ask that the question be limited to that particular case.

The Master: I do not see the value of that. He may ask him if he knows what the consumers pay. The other is a mere matter of opinion and argument. He does not know anything about what the gas company might charge. The fact is entirely competent, I agree with you Senator, about that, but I do not think that his opinion about it is of importance.

Q. Then we will turn over to page 274 and find where it states there the amount of coke produced to-day by the Boston Gas Company and at what rate?

A. Coke produced is 18,338.4 tons, at $4 charged.

Mr. Page: If the Master please, I shall want to examine Mr. Edgerton later on the 42d Street plant, and somewhat on candle power and pressure, and possibly upon the theory of distribution.

Mr. Mathewson: I thought he had finished his testimony on pressure.

Mr. Page: What is that?

Mr. Mathewson: And I cross-examined him on that, on the statement that that was all over. Mr. Edgerton testified respecting pressure and I was requested to cross-examine on the theory that that examination had been concluded.

4760 Mr. PAGE: As to pressure?

Mr. MATHEWSON: Yes, he had made tests of pressure in one place and another, and candle power.

Mr. PAGE: Not on that. It is on the relation of candle power and pressure, not on pressure. That particular subject has been exhausted, I take it. It is not to go into that same question again.

The MASTER: You want to suspend his examination and take up another witness, is that the idea?

Mr. PAGE: Yes, I have a witness who will take only a few minutes and then I understand Mr. Burr will have his witness here this afternoon.

MARVYN SCUDDER, called as a witness in behalf of the defendant, the State of New York, being first duly sworn, testified as follows:

Direct-examination by Mr. PAGE:

Q. What is your occupation?

A. My occupation is reporting on stocks and bonds; knowing about quotations, sale price, bid price, asked price; and to enable me to be able to refresh my memory and be better equipped for doing that work, I have collected a financial library which I began some five or six years ago, and which dates back to 1885, containing quotations that appear in the financial papers through- the United States, records of auction sales, brokers' sheets, giving offers and bid prices and other information of that nature, pertaining to sales of securities both listed and unlisted.

4761 Q. You have what might be called an information bureau in regard to stocks and securities?

A. On financial subjects.

Q. On financial subjects?

A. Yes.

Q. Where is your office located?

A. Located at 52 Wall Street.

Q. Under what name is your business conducted??

A. The Investors' Agency.

Q. Is that an incorporated Company?

A. Incorporated.

Q. Have you made an examination of the financial records with particular relation to the sales of stocks of gas companies in the United States?

A. I made such examination.

Q. As to the dividends paid per annum on the stocks and the selling price of the stock?

A. Yes, sir.

Q. And what that netted to the investor on his investment?

A. Yes, sir.

Q. You may state such companies as you have.

A. Peoples Gas Light & Coke Company of Chicago; dividend rate per annum 6 per cent., as of December 31st, 1905; price of stock 100¾; net to the investor at that price 5.98 per cent.

Mr. MATHEWSON: 5.98 and something over, was it not? What was the per cent.?

The WITNESS: I have only carried it out to two decimal places in each case; 5.98.

United Gas Improvement Company of Philadelphia, 8 per cent., 188½; 4.38 per cent.

Consumers' Gas Company of Toronto, 10 per cent., 207; 4.85 per cent.

Detroit City Gas Company, Detroit, 5 per cent., 200; 2.50 per cent.

Laclede Gas Company, St. Louis, Missouri, common stock, 5 per cent.; asked price, 105; no bid; 4.76 per cent.

4762 Lowell, Massachusetts, Gas Company, Lowell, Massachusetts, 10 per cent., 245; 4.08 per cent.

Consolidated Gas Company of New York, 8 per cent., 181; 4.42 per cent. That gives the comparative figures.

Q. Now, the Consolidated Gas Company, can you give the average price by years per share and the dividends paid?

A. Yes, sir. The average for the year 1901 was 213.48; it would be a little more than that, I might say, but I have only carried it to the two decimal places.

Q. Well, it is 213.48 plus?

A. Yes. Average for 1902, 221.45 per share; average for year 1903, 194.19 per share; average for year 1904, 204.40 per share; average for year 1905, 195.77 per share.

Q. Can you give the dividends?

A. I would have to refer to the Manual of Statistics which I have here to refresh my mind as to the dividends.

Mr. MATHEWSON: That is already in evidence. We can figure that out.

Q. Yes, you need not take any time on that.

A. I might say in case a question might arise upon the dividends for the year ending December 31, 1905, I am taking the rate of the Consolidated as of that date. It is 8 per cent. Of course, I thought the question might arise as to whether that was the total amount paid during that year. Of course, as I say, this is the rate.

Q. That is, there were two quarterly dividends of 2½ per cent. One the latter end of 1904 and one in the early part of 1905, that raise the dividend for the year?

A. Yes.

Cross-examination by Mr. MATHEWSON:

Q. You are the owner of this Investors' Agency?

A. I am part owner of it.

4763 Q. Stockholder?

A. Stockholder, yes, sir.

Q. What is your age?

A. Twenty-one.

Q. Then I judge that this information back to 1885 was not obtained by you from your own accumulation, but from a library which you have examined so far as the previous years are concerned?

A. Part if it was, yes, sir.

Q. And you have no objection if we desire it, to showing us the records from which you get the information?

A. No, sir, I am prepared to do that.

Q. Now, as a matter of fact, the last ten years has been a period of high prices in stocks, a great part of it, has it not?

A. Yes, sir.

Q. Usually high prices and in a very large number of stocks, of record high prices, has it not been, so far as your knowledge goes?

A. So far as my knowledge goes, I would say within the last ten years the prices have been pretty high.

Q. And for the last two years and at the present time prices are very high as compared with quotations of many years ago, are they not, stock exchange securities in general?

A. As compared with——

Q. Years ago?

A. Yes, sir, I should say so. They vary with different men in different cases.

Q. Will you tell me what the quotations for the Consolidated Gas stock is now at this period of high prices?

A. I am not prepared to give the figure on that.

Q. Is it not about 138?

A. Somewhere in that neighborhood. I have forgotten the exact figures.

Q. Has it not been your experience that the quotations of stocks of corporations in Wall Street depend upon many things besides the actual rate of dividend paid?

A. No question about that.

4764 Q. Is it not true that a stock which is paying 8 per cent. and is laying up large surpluses right along will sell at a very much higher rate than a stock which is paying 8 per cent. and barely earning it?

A. Not necessarily. There might be other——

Q. There might be other features?

A. Yes.

Q. But other things being equal, it would be so, would it not, according to your experience?

A. It would be likely to be so. I think——

Q. And you have made these computations simply to show the dividend which was paid in each case, have you not?

A. No, sir, I have made these computations with the idea of giving what large gas stocks sell for, giving the figures on that.

Q. And giving the basis of their dividends?

A. I have included that in the computation.

Q. And you have not shown the present or net earnings on the selling price of the stock, but only dividends paid?

A. I did not take that feature up in this particular matter here.

Q. The Pennsylvania Railroad is a public service corporation and is considered high class and rather a standard corporation?

A. By some people, yes.

Q. Is it not generally by the public?

A. As a stock investment?

Q. Well, I mean as a corporation, as a good type of public service corporation in management and standing?

A. Well I would not say that without a qualification, no, sir.

Q. You are not in the investing business but are in the statistical business?

A. I am in the statistical business, yes, sir. I make records in regard to investments.

Q. And does not your record show that while the Consolidated Gas stock sold for 241½ in 1897 and 241½ I think in 1887, it sold between those dates as low at 92½?

A. I would have to consult my records to answer.

4765 Q. Have you the record here for the sales of 1892 and 1893?

A. I have not, unless I go to——

Q. You know it has fluctuated very largely and has shown a fluctuation of more than 100 points, don't you?

A. Yes—excuse me before I answer that question. Did you say 1897?

Q. Yes, I referred to 1897 and 1884 for the 24½.

A. I have not those records here.

Q. And then I referred to 1892 and 1893 as selling at say 92½, but your answer perhaps is sufficient. That fluctuation in the price of the Consolidated Gas Company stock in the last fifteen or twenty years have shown more than 100 points?

A. I am not prepared to swear to that.

Q. Would not that be so from your recollection?

A. I should say that was so, but I am not prepared to swear to that absolutely, because I have not looked it up in this particular case, and I want to be very sure about my figures before I swear to them.

Redirect examination by Mr. Page:

Q. You know that the Consolidated Gas Company to-day is on a dividend basis of 4 per cent.?

A. The Consolidated Gas Company to-day?

Q. Yes, is paying a dividend of 4 per cent. to-day instead of 8 per cent. as it did formerly.

A. Well, to-day, yes, sir, but [illegible] is of——

Q. So if the quotation is as Mr. Mathewson says it is, and I have no doubt it is a fact, 138, it does not net on that price 4 per cent. to the investors?

A. No. That is of to-day. This is a computation for December 31st, 1905.

By Mr. Mathewson:

4766 Q. And you know also that the Consolidated Gas Company, speaking of it as a gas company, has a considerable part of its capital invested in securities of electric companies and their prospects come into the quotations of the Consolidated stock, do they not? What is your information in regard to that?

A. I know about that. The New York Edison Company——

Q. You know that, do you?

A. I realize that a good part of their assets are in stocks of other companies.

Mr. MATHEWSON: That is all.

Recess until 2.15 P. M.

After Recess.

WILLIAM D. MARKS recalled on behalf of the City.

Direct examination by Mr. BURR:

Q. When you ended your testimony a day or so ago, you were to have prepared a table showing the duplication or the triplication of the mains in the streets of the city, so far as your examination of the maps had gone. Have you done so?

A. I have.

Q. Will you state in what way you have prepared the statements which you have before you, and what they represent?

A. On the Island of Manhattan there are 6,000 street blocks; that is to say, 3,000 building blocks. Of these blocks 3,353 are occupied by one main; 56 per cent. of the total.

By two mains, 1,815 blocks are occupied; 30.2 per cent of the total.

By three mains, 548 blocks, 9.1 per cent. of the total.

By four mains, 235 blocks; 3.9 per cent. of the total.

4767 By five mains, 47 blocks ¾ of one per cent. of the total.

By six mains, two blocks, no percentage figured.

Total, 6,000 blocks and 100 per cent. checked.

The details are attached on eighteen sheets giving the location of each and every block and reference to the map and to the volume.

Q. How long has it taken you to prepare this?

A. Since leaving the witness chair, three to six of my assistants have been working in relays day and night without cessation up to an hour ago.

Q. Now, I think you have already been asked a question, during the progress of this trial as to whether in your opinion this was proper of economical construction, so far as the mains were concerned?

Mr. MATHEWSON: He has been asked and he has given his estimate of what a system would cost of single mains. He has been all over that.

Q. I say you have already expressed your views upon that subject.

A. I have.

Q. And your views, after an examination of these maps remain the same as to whether it is economical or uneconomical?

A. They remain substantially the same.

Q. And that is?

A. That is, that if it were necessary to substitute a system of mains involving one main or two mains according to the necessities of the case they could be installed at a less cost and with a great advantage to the Company and the consumers.

Mr. Burr: I will not take the time to read or have the Doctor read each street.

4768 Mr. Mathewson: If you want to offer it, why not offer this part of it and have the other sheets as you did before marked for identification so counsel can have access to them, if they desire?

Mr. Burr: Very good. I came prepared to have the Doctor identify each block in every street in the city from these papers, but I think the simpler way will be to offer in evidence, as I do, the sheet Page 1-A, containing table showing the sizes of the Consolidated Gas Company's mains in the streets of New York City as the Doctor has described them, and the other sheets, being eighteen in number, I ask to have marked for identification.

Mr. Mathewson: I make the same objection to this that I did to the other, that the map from which this is prepared is not original evidence and that it is not material or relevant evidence in any case, this being the property as it exists.

Objection overuled. Exception.

The first sheet is received in evidence and marked City's Exhibit 102.

The remaining sheets are marked for identification, respectively, City's Exhibits, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120.

Q. Calling your attention to the testimony given by you on page 4607 and 4608 in response to a question of Mr. Mathewson as to the depreciation which you claimed amounted to $744,687 in the 14th Street plant, you were asked this question by him:

"Q. And depreciation is a charge to operating account in that the Company must maintain its property or should maintain its property, is it not? A. Yes, of .85 of one per cent. each year?"

4769 Will you be good enough to explain that a little more in detail as to what you mean?

A. The .85 of one per cent. annually allowed for depreciation was obtained from a resolution of the Board of Directors of the Consolidated Gas Company, dated January 30th, 1906, referring to the year 1905.

By Mr. Mathewson:

Q. You do not mean annually, do you, Doctor?

A. .85 of one per cent. annually. This .85 of one per cent. resulted from the assumption that $2.00 per annual thousand of sales was the proper investment, and that 1.71 cents per thousand of sales should be allowed for depreciation. This depreciation being due not to decay or wear and tear, but due to inadequacy of obsolescence. This .85 of one per cent. annually is to be charged to the cost of making gas, but it is also to be credited to the capital account or assets, reducing them by that amount. Taking .85 of one per cent. for fifty years it amounts to 42½ per cent. The question whether or no this percentage has been charged off on the books of the Company during the fifteen preceding years——

By Mr. Burr:

Q. Preceding 1905?

A. Preceding 1905; (continuing) is one which I cannot determine, having had access to the operating accounts only for the year 1905.

Q. You were asked this question further by Mr. Mathewson:

"Q. But a company is entitled to take care of its depreciation by a charge to operating expenses as it currently occurs, isn't it? A. Certainly, to the extent of .85 of one per cent.

4770 "Q. Well, whatever it is in any particular case? A. Yes.

"Q. And whether that depreciation occurs from one or the other causes to which you have referred? A. Yes."

Does that clearly express your views on that subject or do you desire to add anything further?

A. That precisely expresses my views although I may not have made myself as lucid as I could have. I think, however, my previous explanation will cover that ground.

Q. What have you to say to the allowance claimed by Mr. Addicks as to a contingent fund of ten cents in this connection?

A. Referring to the ten cents per thousand cubic feet of sales, except in so far as 1.71 cents for 1905 is concerned, it appears to me unjustifiable.

Q. Why?

A. Because it is excessive and not required; 1.71 cents per annual thousand cubic feet of sales being the result of the action of the Board of Directors of the Consolidated Gas Company for the year 1905.

Mr. Burr: I think that is all I want to ask the Doctor.

Cross-examination by Mr. Mathewson:

Q. This tabulation, City's Exhibit 102, is by blocks only?

A. Yes, sir.

Q. And not by mileage, either as obtained by you from the measurements of the map or from Mr. Simpson's testimony?

A. It is not by mileage.

Q. Now, it appears, does it not, that between 86 and 87 per cent. of the blocks have only one main or two mains?

A. About 86 per cent.

Q. 86.3 per cent. according to your figures?

4771 A. Yes; 86.3 per cent. of the blocks are occupied by one or two mains.

Q. And is it not true that in the cases where there are the greatest number of mains those cases are as a rule on the avenues, or Broadway?

A. Yes.

Q. And did you make any distinction as between the mains upon which services are carried and mains which are known as supply mains upon which there are no services but which are to conduct gas to a distant point before entering the mains on which services are located?

A. Not in City's Exhibit 102.

Q. You used the term "booster" system?
A. Never.

By Mr. Burr:

Q. Where does that information appear that Mr. Mathewson has asked for regarding the subject of mains?

Mr. Mathewson: I did not ask for any information. I merely asked if there was any distinction made in this mileage. He presented it.

Q. Is there any distinction made in the other exhibits already introduced?

A. In the three hundred and ten abstracts from the maps that is clearly shown.

Robert L. Waters, a witness called on behalf of the City, being first duly sworn, testified as follows:

Direct examination by Mr. Burr:

Q. What is your business or profession?
A. City surveyor.
Q. How long have you been a city surveyor in this city?
A. Upwards of thirty years.
4772 Q. Are you familiar with the city maps of all kinds?
A. Yes, sir.

Q. Will you look at the chart or diagram I show you and state what that is, if you know?

A. It is a map showing all the streets lying from between 12th and 16th Streets, both inclusive, and from Tompkins Street to Avenue A, showing also the lines of the high water and low water.

Q. It is a correct transcript, is it, of the City's Exhibit 76, the original map?

A. It is a correct copy of the original map. I don't know what the number of the exhibit is.

Q. Well, the original map we offered and it was numbered City's Exhibit 76. You made this copy from the map on file in what office?

A. The office of Public Works.

Q. That is a map containing the statement which appears upon this copy, is it, to which you referred?
A. Yes, sir.

Q. And that is a correct transcript of the statement appearing upon the original map?
A. It is.
Q. The copy was made by you?
A. Personally.

Q. And this is a true, a correct and an accurate copy of the map referred to insofar as the same refers to the locations described upon this map or included in this map or diagram?
A. It is.

Mr. Burr: I offer it in evidence.

Mr. Mathewson: Just what does this show anyway?

Q. This is a tracing from the map offered in evidence here marked City's Exhibit 76?

A. Well, this map is not taken direct from a tracing of the official map; that tracing has to be taken in pencil. We are not allowed to use inks.

Q. And this is taken from the pencil tracing?

A. This is taken from the pencil tracing.

4773 By Mr. **Mathewson**:

Q. And this interior tracing, irregular, in blue ink, is the tracing from that map, Exhibit 76?

A. Yes, sir.

Q. How about the balance of the map here?

A. What is shown on this map is all taken from the official map.

By Mr. **Burr**:

Q. And this map is over twenty years old, is it?

A. Yes.

Q. That is, it has been on file in that department for over twenty years?

A. Yes, sir.

Tracing marked "Tracing of City's Exhibit 76."

By Mr. **Mathewson**:

Q. Were all these lines on the original map?

A. Yes, and on the same scale, yes, sir.

By Mr. **Burr**:

Q. Describe what the paper is which I now hand you.

A. This is a tracing of the map showing all the streets, including 40th Street up to 46th Street inclusive, lying between Tenth Avenue and Thirteenth Avenue, both inclusive, showing the high and low water lines; also grant of land to John J. V. Westervelt; and also a pier and bulkhead with the distances on the grants; also the block distances on the streets and on one side of Tenth Avenue and one side of Twelfth Avenue, and also showing the depth of water below high water on the line of the Hudson River.

Q. And is this tracing of the original map made in the way you have described the other, Exhibit 76?

A. Yes.

4774 Q. Have you correctly and accurately placed upon this tracing the endorsement which appears on the original map heretofore offered but not marked in evidence City's Exhibit 78?

A. I have.

Q. And is that tracing a true and accurate tracing of such original map?

A. It is.

Q. Is that map over twenty years old to your knowledge?

A. Yes, sir.

Q. Has it been on file in the Department of Public Works for a longer period than twenty years?

A. Yes, sir.

Mr. Burr: I offer in evidence that tracing as being a correct tracing of maps heretofore offered, "A map showing the projected exterior line of the City of New York, extending along the Hudson River from Hammond Street to 135th Street, signed New York, March 10, 1837, George B. Smith, City Surveyor," and special reference being made to that part of the map which lies between 40th and 46th Street, west of Eleventh Avenue.

Paper marked tracing of City's Exhibit 78.

Mr. Burr: As to the prior tracing, City's Exhibit 76, it is received in evidence, I understand, as a correct copy of the original map offered but not marked in evidence heretofore, bearing the endorsement, "East River Shore, Corlaer's Hook to 28th Street, March 7, 1825," and it bears the endorsement on the front of it, "In Common Council, March 7th, 1825. Upon the report of the Finance Committee on Recommendation of Peter G. Stuyvesant, this map was presented and was accepted and approved by the Board. Peter J. Martin, Clerk," the map being of Tompkins Street, special reference being made to that portion of the map which shows
4775 Tompkins Street between 12th and 16th Street.

Q. (Handing paper.) What does this show?

A. 109th Street, 110th Street, 111th Street and 112th Street, First Avenue and Avenue A, and a portion of another street lying easterly of Avenue A which is supposed to be an exterior street, but there is no name on this portion of the map. It also shows First Avenue and part of Avenue A.

Mr. Mathewson: What is the date?

The Witness: 1858.

Q. Was that copy made by you or that tracing made by you?

A. Yes, sir.

Q. Does that contain a true and correct copy of the endorsements appearing upon the original map?

A. It does.

Mr. Burr: I offer it in evidence, being an extract from map heretofore offered in evidence, but not marked, City's Exhibit 80.

Paper marked "Tracing of City's Exhibit 80."

Mr. Burr: I offer this as a copy of the resolution approving the Southard map, being the map just introduced as City's Exhibit 80.

Paper marked City's Exhibit 80-A, (the same to be appended to City's Exhibit 80.)

Mr. Burr: I offer in evidence copy of the grant, City, Exhibit 81, appearing on page 4285 of the testimony.

Paper marked copy of City's Exhibit 81.

Q. (Handing paper.) What paper is that which I hand you now, please describe it and tell us what you know about it?

A. Map showing all the streets from 14th to 18th Streets,
4776 both inclusive, from Tompkins Street to Avenue B, inclusive; also showing the grant of land to Hezekiah Bradford, dated 22d day of June, 1848.

Mr. Mathewson: That was part of the deed, wasn't it.

Mr. Burr: Yes.

Mr. Mathewson: The witness simply says that he made this tracing, does he?

Mr. Burr: Yes.

Mr. Mathewson: The witness does not know whether they were attached to the maps or not?

Mr. Burr: The witness does not identify those but identifies the maps as correct tracings.

Mr. Mathewson: In each case the grant was offered in evidence including the maps, so it is a mere matter of having a copy offered instead of the original.

Mr. Burr: And having the grants spread upon the record.

Mr. Mathewson: Supposing you offer them one at a time and then ask Mr. Waters if he made accurate copies of the maps attached to the original grant. That will satisfy me.

Mr. Burr: Then I ask to have copy of City's Exhibit 82 marked, with the map accompanying the same, also City's Exhibit 83 and the map accompanying the same; also City's Exhibit 84 and the map accompanying the same same; also City's Exhibit 85 and the map accompanying the same; also City's Exhibit 86 and the map accompanying the same.

Papers received and marked copies of City's Exhibits 82, 83, 84, 85 and 86.

Q. (Handing paper.) I hand you City's Exhibit 88 for identification in this case. Will you say whether that diagram was
4777 made by you?

A. It was.

Q. What does it represent?

A. It shows 14th, 15th and 16th Streets, Avenue C and Avenue D and Tompkins Street, one side of Tompkins Street.

Q. And that is an extract from what map?

A. It is also—the red lines upon that map are the lines taken from the water grant map of that section; the black lines lying East of the red lines are taken from Complainant's Exhibit 48, page 2.

Q. What does this red line represent?

A. It represents the line of Tompkins Street.

Q. Does it show what that line cuts off?

A. Yes, sir, on the block line between 15th and 16th Streets, Avenues C and D.

By Mr. Mathewson:

Q. The line of Tompkins Street according to what survey?

By Mr. Burr:

Q. From what map was this tracing made?

A. The water grant map.

Mr. Mathewson: You mean the red lines?

The Witness: Yes.

Q. That is the map you have identified to-day and which had been offered in evidence as City's Exhibit 81?

A. Yes, sir.

Mr. Burr: I offer that in evidence. I merely had that made for convenience so that when testifying to the altered valuation, Mr. McHale and Mr. Thompson, might use it, but Mr. Walters now produces the correct tracing from the original map, and this he testified is correct.

Paper marked City's Exhibit 88.

4778 Mr. **Burr**: We expect to have blue prints ready for you to-morrow, Mr. Waters states. You can have those in the meantime for any purpose you desire.

Mr. **Mathewson**: I do not know that I will want them in the meantime, but I will want to use a blue print within the next few days, that is all.

Cross-examination by Mr. **Mathewson**:

Q. Have you compared each one of the maps here with the original and made it from the original to which it related in each case?

A. I made each one personally.

Q. And they are accurate copies of the maps?

A. They are, yes, sir.

Mr. **Mathewson**: Now, Mr. Master, I have not objected to the marking of these copies because the original maps came in in order to show water grants, but I do want to place upon the record that if they are introduced for the purpose of showing a want of title of the Company to its property, which it is now using, I object to it as immaterial and irrelev*ena*t and not in issue in this case. I assume the Master does not propose to try an ejectment suit here. It is a question of the valuation of the property. I make the statement so that my position may not be misunderstood at any moment.

Mr. **Burr**: I do not suppose you claim a return upon any property that you are not legally entitled to.

Mr. **Mathewson**: We claim a return upon the property and investment and resources which are in the gas business.

The **Master**: I suppose I shall have to assume that any 4779 property of which the Gas Company is in possession and is using and occupying, they have the right to use and occupy either by one form of title or another, unless I have actual notice to the contrary.

Mr. **Mathewson**: And may I ask counsel how, if we were to be excluded from land at one point or another, upon which our plant is now placed, it would be possible to avoid crediting us with an equal amount of land that we would have to get somewhere else and put up a plant of producing that capacity?

Mr. **Burr**: The situation is this, in a nutshell, you have already admitted that the title was originally in the city, and it remains for you to prove that you received it from the city, or any of your grantors received it.

Mr. **Mathewson**: You missed my point. If we hold a block here which belongs to the city and it could be held that we could be rejected from that, we must have credit for land somewhere else, because we have to get land somewhere to manufacture our gas, and you could not get away from that proposition, if any of our manufacturing plants were on someone else's land.

Mr. Burr: That is another matter. These maps show the situation as it is to-day.

Q. Now, Mr. Waters, referring to City's Exhibit 76, it is in evidence that the manufacturing plants of the Consolidated Gas Company are upon the blocks 14th to 15th Streets. You have seen the plants there, haven't you?

A. I have been in that section.

Q. And the Manhattan Company was incorporated, if I recollect about 1830 or such a matter. How long have you lived
4780 in New York City?

A. Well, in New York City for nearly sixty-five years. That is, what is Greater New York.

Q. You do not remember the time when there were not gas plants at 14th and 15th Streets?

Mr. Burr: Objected to as immaterial and incompetent. He cannot prove adverse possession by this witness. We simply called him to prove that these tracings are copies of the map.

The Master: I will let him answer.

Mr. Burr: Exception.

A. My earliest recollection places the plants down at about 111th Street.

Q. Yes, that is another plant, but do you remember any time when the Manhattan Gas Light Company, which was incorporated about 1830, did not have a manufacturing plant at 14th and 15th Streets?

Mr. Burr: Objected to because it is assuming something that the witness has not testified to.

The Master: He may know something about it.

By Mr. Burr:

Q. Do you know that this Company was incorporated in that year?

Mr. Mathewson: I will put it this way, if you object.

By Mr. Mathewson:

Q. It is in evidence that the Manhattan Gas Light Company was incorporated about 1830 and that one of its plants was located at 14th and 15th Streets and that it went into the Consolidated
4781 Gas Company in 1884. Do you remember any time when there was not a gas plant at 14th and 15th Streets?

Mr. Burr: I make the same objection to this question.

The Master: Same ruling.

Mr. Burr: Exception.

A. I cannot place the plant at 114th and 115th Streets.

Q. No, no, 14th to 15th Streets, not 114th to 115th Streets.

A. Oh, 14th and 15th Streets? No, I do not recall any time but what there was a plant there at 14th and 15th Streets.

Q. In your avocation as a surveyor you have been generally familiar with the City of New York and been over almost every section of it 30 or 40 years ago?

A. Pretty much.

Q. Generally, yes.

A. Yes.

Q. Did you make a survey of this property at 14th and 15th Streets now, Mr. Waters?

A. No, I did not.

Q. These maps that have been produced here today, both those affixed to the grants and the detached maps correctly show or purport to show the situation at the date of the map and not the present situation as to streets and property on the water front?

A. That is all.

Q. Do you know, taking City's Exhibit 78, whether Twelfth Avenue has actually been cut through below 46th Street, or whether it is laid out or is used at all by the public?

Mr. BURR: Objected to as incompetent, irrelevant and immaterial and this is not proper cross-examination, this witness not being called except for the purpose of identifying these exhibits as being true accurate extracts from the original maps offered in evidence.

4782 The MASTER: Well, Mr. Mathewson, can examine him if he chooses to take the risk of making him his witness, on these matters.

Mr. BURR: Exception.

A. What street did you say?

Q. Twelfth Avenue.

A. Between what streets?

Q. Do you know whether it is cut through below 46th Street at all?

A. If my memory serves me, I think not.

Q. Don't you remember a gas plant at 41st to 42nd Street and another from 44th to 46th Street, west of Eleventh Avenue, ever since you have been a city surveyor? Is it thirty years?

A. City Surveyor, yes. I remember there were gas plants in that vicinity, but I could not say the exact location.

Q. About that location?

A. Yes, there were gas plants there.

Q. I see that in City's Exhibit 80, Avenue A is indicated east of First Avenue. Exhibit 48 shows an avenue there known as Pleasant Avenue instead of Avenue A. Are those identical streets do you know?

A. Yes, sir, Avenue A was changed to Pleasant Avenue.

Q. And in 1857 there appears to be shown on this map a gas works on 111th Street?

A. There was a gas works there then.

Q. Referring to City's Exhibit 88, the red line, in order to identify it otherwise than by color is the easterly end of the block bounded by 14th and 15th Streets, Avenue C and Avenue D, is it not?

A. Yes, sir.

Q. And the diagonal line running northwest from near the northwesterly corner of Avenue D and 15th Street and coming out about one-third of the way from Avenue D to Avenue C on 16th Street?

A. Yes.

4783 Mr. Burr: To be accurate, this is a black and red line.

Q. And the irregular lines shown on these City's exhibits interior to the outside lines are in blue?

A. Yes, sir. There is one map that has black irregular lines on.

Q. Yes, I see that there are some of them that have black lines as well as blue.

A. Yes. Those are supposed to show the lines between the upland and the salt meadow, I should take it to be.

Q. The black lines are——

A. The black irregular lines.

Q. And the blue irregular lines?

A. Are the water lines from the original maps.

Q. High water mark?

A. I presume there would be originally a high water mark and original low water mark.

Q. And you did not make these original maps yourself?

A. No, sir.

Q. And you merely draw your conclusions?

A. Yes.

Mr. Mathewson: That is all.

Mr. Burr: I offer in evidence certified copy of deed dated November 18th, 1882, from Everett Peppenell Wheeler, and Lydia L., his wife, Mary Hannah Smith, and Reverend Cornelius B. Smith, her husband, and said Everett Peppenell Wheeler and Mary Hannah Smith, individually and heirs at law of David Everett Wheeler, to the Metropolitan Gas Light Company to the City of New York. I simply desire to read in the consideration expressed as follows:

"Witnesseth, that the said Everett Peppenell Wheeler, Mary Hannah Smith and Cornelius B. Smith, three of the parties of the 4784 first part, by virtue of the power and authority to them given in and by the said last Will and Testament, and for and in consideration of the sum of Eighteen thousand five hundred and sixty dollars, lawful money of the United States of America, to them in hand paid by the said party of the second part." Transferring the property described in the said deed. The deed is dated November 18th, 1882, and was received in the office and recorded November 29th, 1882, at 1 P. M., Samuel Taylor, Clerk.

This covers the Shadyside property, that is the upland. Attached to the deed is a certificate dated the 4th day of December, 1906, reading as follows:

State of New Jersey, *County of Bergen, ss:*

I, John R. Ramsey, Clerk of the County of Bergen in the State of New Jersey, and also Clerk of the Circuit and Common Pleas Courts, in and for said County (Courts of Record), do hereby certify that I have compared the copy of the record of the Deed hereto annexed, with the original record thereof in Liber H-11 of Deeds, at pages 44, &c., in my office at Hackensack, in said County, and that the same is a true copy thereof, and of the whole of such original record.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of said Courts and County, at Hackensack aforesaid, this fourth day of December, one thousand nine hundred and six.

[SEAL.] JOHN R. RAMSEY, *C.*,
By W. S. DORUM, *D/C.*

Paper marked City's Exhibit 121.

4785 & 4786 Mr. Burr: I offer in evidence grant dated January 6, 1883, from the State of New Jersey to the Metropolitan Gaslight Company of the City of New York, conveying to the party of the second part, the Metropolitan Gaslight Company of the City of New York, the land under water and Shadyside. I read on the record the recital as to the consideration: "And, whereas, the said Commissioners, having due regard to the interests of navigation, have agreed to grant the lands hereinafter mentioned, and determine that $7,291.35 is a proper compensation to be paid to the State for the lands hereinafter conveyed."

The same being duly certified by J. R. Ramsey, Clerk of the County of Bergen, in the same manner as previous deeds, City's Exhibit 121.

Paper received in evidence and marked City's Exhibit 122.

Mr. Burr: That is all I can do to-day. I desire to say for Senator Page and Mr. Kirby that they will be ready to-morrow with some of their witnesses who are on their way here by train, and they are expecting their arrival hourly.

At 3:50 P. M. adjourned to December 8, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's 257.
State's AAA.
City's 122.

4787 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *December 8th,* 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

4788 GUSTAVUS T. KIRBY, a witness called on behalf of the State, being first duly sworn, testified as follows:

Direct examination by Mr. PAGE:

Q. What is your business?

A. I am a lawyer, sir.

Q. Where is your place of business?

A. 2 Wall Street.

Q. Pursuant to the understanding that you were to receive a sample of the oil used by the Consolidated Gas Company, did you visit the works of the company?

A. I did; the 21st Street works of the company, Avenue A and 21st Street.

Q. On what date?

A. On Wednesday, December 5th.

Q. Whom did you meet there?

A. Dr. Elliott, the chemist of the Consolidated Gas Company.

Q. Now you may state what you did.

A. With him I went to the operating floor of the station and there, in the presence of Dr. Elliott and myself, about four quarts of oil were drawn from the pipe which entered into the enriching apparatus.

Q. Did that go into the low water gas generators? The oil is an enriching——

A. Into the low water gas generators.

Q. Then it was taken from the feed pipe?

A. From the feed pipe to that apparatus.

Q. What else did you do?

A. About two quarts of this oil was placed in a can which I retained, and the balance was retained by Dr. Elliott. We then went to the pump, which I was told by Dr. Elliott was taking the oil from the tank and forcing it through the pipes to the various apparatus,

and for us at this point about four quarts of oil were drawn. As in the other instance, two quarts were furnished to me, which I placed in a can, and the balance was retained by Dr. Elliott. The
4789 first can was marked by me, "Can A," and the second can was not marked at all. I then took these cans to my office at No. 2 Wall Street and there——

Q. One minute. Was it stated to you what gravity oil this was?

A. It was stated to me that this was the high gravity oil. I requested them to also furnish me oil of about 28-degree gravity, or such as they used at other times than at present. Dr. Elliott stated they had none in the yard at that time, and it would be impossible for him to furnish me any.

Q. When you said 28-degree oil such as they had used at other times, did you mean the 28-degree oil that was called for under the contract?

A. I so stated to Dr. Elliott. He informed me he had no knowledge of any contract or what was in it, but he did know what I meant when I said 28-degree oil, and he considered that as the oil which they were not using. The oil which he designated as 34-degree oil I took samples of.

By Mr. Mathewson:

Q. Who stated this was the high gravity oil?

A. Dr. Elliott. I also talked over the telephone with Mr. Bradley about the low gravity oil, and I talked with Mr. Bradley over the 'phone enough to recognize his voice when I hear it, and I know it was he who was speaking, and he stated to me that they could not furnish me any 28-degree oil at this time. That is, by "they" I mean the Consolidated Gas Company.

Q. Did he give any reason more than that they did not have it?

A. None, other than that they did not have it.

Q. Now you may state what you did with these samples of oil?

A. I brought them down to my office at No. 2 Wall Street, and there Mr. James Boyd, who is here present, wrapped them up.
4790 I wrote a letter to Mr. Lewis Emory, Junior, Bradford, Pennsylvania, and turned over the oil and the letter to Mr. Boyd, with instructions to him to deliver them to Mr. Emory at Bradford.

Cross-examination by Mr. Mathewson:

Q. Mr. Elliott told you that the reason he could not give you the lower gravity oil was because the company was not at present using it, didn't he?

A. And because they had none in their yard or anywhere that he knew.

Q. He told you the company was not in the present cold weather using it?

A. Yes, that at this time the company was not using the low gravity oil.

Q. And Mr. Mathewson, counsel for the company, also stated that to you before you went up to draw the samples, did he not?

A. I was not surprised when Dr. Elliott so stated, and was not surprised for the reason that Mr. Mathewson had stated as he has just said.

Q. Do you know who Mr. Emory, of Bradford, is?

A. I have heard of Mr. Emory, of Bradford, Pa., for some little while as a man prominent in matters having to do with oil, being an oil producer and vendor, being proprietor of a company that has a pipe line to Philadelphia.

Q. Well, the samples were given you as asked for and at the place designated, were they not?

A. They were, sir.

JAMES D. BOYD, a witness called on behalf of the State, being first duly sworn, testified as follows:

Cross-examination by Mr. Mathewson:

4791 Q. What is your occupation and where is your place of business?

A. My occupation is bookkeeper, at 2 Wall Street.

Q. Did you receive a sample of oil from the preceding witness, Mr. -irby?

A. I received two cans of oil from Mr. Kirby at his office, 2 Wall Street; one can marked "A," that is, marked on the cork, and the other was blank. I wrapped those two cans up in a package and took Mr. Kirby's instructions as to the delivery of them.

Q. Where did you go with them?

A. I took the Erie Railroad train to Bradford, Pennsylvania, at 7:30, I believe, at night. I took the cans in my possession and kept them there until I reached Bradford, Pennsylvania, next morning. I then inquired for Mr. Emory at Bradford and was told that his office was 41 Main Street. I went to 41 Main Street and was told there I might find Mr. Emory at the acid works in South Bradford. I took the cans and letter of Mr. Kirby to the acid works, saw Mr. Emory probably about 11:30 or 11 o'clock, or thereabouts, and he told me he would see me later at his office at half-past one, 41 Main Street. So I met that Mr. Emory and his son at his office, 41 Main Street, and opened the package in there, and they sent for Mr. Scott——

By Mr. MATHEWSON:

Q. Are the two gentlemen to whom you delivered those two samples of oil present here now?

A. Yes, sir.

Q. What were their names?

A. Mr. Lewis Emory, Jr., and I think Mr. Delavan Emory. I am not sure as to his name. It was Mr. Emory's son.

Q. In whose office are you a bookkeeper?

A. Gould & Wilke's office, 2 Wall Street.

4792 By Mr. PAGE:

Q. Did you deliver these packages in the same condition that they were in when you received them?

A. Yes. I wrapped them myself and I delivered and opened them myself.

Q. And they had not been opened from the time you got them until you delivered them?

A. No, sir.

By Mr. MATHEWSON:

Q. Were they stopped by cork in each case?

A. Yes, sir; I tied the corks in. And they were in exactly the same condition.

Q. Were the corks driven in originally or simply pressed in?

A. Simply pressed in, simply put in the stopper in the can.

DELAVAN EMORY, a witness called on behalf of the State, being first duly sworn, testified as follows:

Direct examination by Mr. PAGE:

Q. Where do you reside?

A. Bradford, Pennsylvania.

Q. What is your occupation?

A. Oil refiner.

Q. How long have you been engaged in that business?

A. Since July, 1891.

Q. And your works are at Bradford, Pennsylvania?

A. Yes, sir; I am manager of the works; the Emory Manufacturing Company is the name of the firm.

Q. What is your particular part of the business?

A. I am the manager.

4793 Q. Were you present at the time these two cans of oil were delivered by Mr. Boyd, the witness preceding you on the stand?

A. Yes, sir.

Q. Did you receive one of the cans?

A. Yes, sir. Both cans were opened there in the presence of my father and myself. We sent to the works for our superintendent and he brought the hydrometer jar, Beaumé hydrometer and thermometer to our office and we weighed or took the gravity of the oils contained in the two cans, one can marked "A" and the other can was blank; no mark at all.

Q. What did you find was the test of that oil?

A. 34 gravity; a fraction over 34.

Q. What else did you do with the oil?

A. We offered to make no other test except the odor, the smell of the oil.

Q. What did you discover by the odor?

A. It was not anything like any oil we made from Pennsylvania crude. I should judge it was an oil produced by what is the low grade crude oil; produced from a low grade crude oil.

Q. Could you tell by that means whether it was a Pennsylvania oil?

A. Yes, sir; I could tell by the odor it was not Pennsylvania oil.

Q. And when you speak of Pennsylvania oil what in the trade does that mean? What is supposed to be the Pennsylvania oil?

A. It is the oil that is produced in western New York, Pennsylvania, West Virginia and southeastern Ohio, and bears a price of $1.58 a barrel.

Q. That is the crude oil at the well?

A. Yes, sir.

Q. Those oils have a para-fine base, have they?

A. Yes, sir; they contain no sulphur.

Q. Well, will you produce, if you have it, a portion of the oil that was in the can "A"?

A. (No answer.)

Q. You made some tests of the other can, did you, the one without a mark?

A. Yes; they were both the same.

4794 (Witness now produces a bottle containing a fluid.)

Q. The sample you now produce is from can "A"?

A. Yes, sir; it is so marked on the cork.

Mr. **Page**: I offer the sample in evidence.

Mr. **Mathewson**: I have objected previously to this line of testimony as immaterial and irrelevant, and I think the Master decided to accept it. I make the same objection to this testimony now.

Objection overruled; exception.

Received in evidence and marked State's Exhibit BBB.

Q. Have you a sample of a similar grade oil taken from the Pennsylvania field?

A. Yes, sir. (Producing another sample.)

Q. What is the sample you now produce?

A. 34 gravity pressed distillate, used for fuel and gas oil.

Mr. **Page**: I offer this sample in evidence.

Received in evidence and marked State's Exhibit CCC.

Q. From what field would you judge from its appearance and smell the sample of oil, State's Exhibit BBB, came?

Mr. **Mathewson**: Is the witness shown to be competent to judge?

A. I could not state from what field, but I am positive it is not from Pennsylvania for the reason they do not sell 34 distillate for gas oil, the Standard Oil Company or any other people. That is wrong, I did not mean to say that.

Q. Well, just correct it. How do you want to correct it?

4795 A. I will have to explain the process a little bit. In the Bradford oil these neutrals are—in the lubricating trade the neutrals are sold by the test, and the neutral oil from our Bradford oil or a 34 from our Bradford crude lacks viscosity, or will not answer the trade requirement for lubricating oil of 34 gravity, and for that reason we sell it for fuel oil; but the Standard Oil Company, they have a trade in which they use all their Pennsylvania neutrals, I assume, for lubricating oil.

Q. Now, are you familiar with the oil that is produced and sold in large quantity for export, which is a 44 degree oil?

A. Yes, sir.

Q. Have you a sample of that?

A. (Producing sample.) It is an export oil, 45 degrees, according to the rules of the Produce Exchange; 44½ degree or better.

Q. Do you know at what price this oil is sold in the New York market?

A. It is sold for 4.4 cents per gallon f. o. b. tank steamer, New York Harbor.

Q. Can anybody buy this that wishes to do so in the market?

A. Yes, sir.

Q. Not alone for export, but buy it for any purpose at that price?

A. Yes, sir.

Q. At what price do you sell this oil in Philadelphia?

A. We sell it for $4.35, the regular official quotation, f. o. b. tank steamer in Philadelphia, or rather at Marcus Hook, eighteen miles below Philadelphia.

Mr. Page: I offer this sample in evidence.

Received in evidence and marked State's Exhibit DDD.

Q. Referring to State's Exhibit DDD, is that a refined oil?

A. It is what is known as a 73 Able standard white oil, refined.

4796 Q. Wherein does this differ from the 34 degree oil, State's Exhibit CCC?

A. This is a finished product and the other is a distillate.

Q. What do you mean by a finished product?

A. An oil that has gone through all the processes of refining and is ready for the lamp.

Q. Besides having had drawn off the distillate, it has been refined?

A. Yes, sir; been treated.

Q. That naturally adds to the cost of the oil?

A. Yes, sir.

Q. Have you the distillate from which this is refined?

Mr. Mathewson: From which this particular oil was refined that you offered?

Mr. Page: No, that character of oil——

(Witness produces another sample.)

Q. Is this part of the same?

A. This is further along in the process.

Q. It is the same oil?

A. It is the same product. From this we obtain the export oil (referring to bottle last produced).

Q. That is the same gravity?

A. All the properties are the same in this except the color.

Q. And this is the distillate oil of which Exhibit DDD is the refined oil?

A. Yes, sir.

Mr. Page: I offer this sample in evidence.
Received in evidence and marked State's Exhibit EEE.

Q. At what prices does State's Exhibit EEE sell in the New York market?

A. It is not sold in the New York market. At least, we do not sell it here.

Q. Where do you sell it? In Philadelphia?

A. We do not sell it as distillate. We sell it as 73 Able standard white oil.

4797 Q. Well, you only sell the refined product, then?

A. Yes, sir.

Q. How much does the refining add to the cost?

A. Probably one-sixteenth cent a gallon.

Q. And is there any 28-degree oil produced and sold for gas-making purposes from Pennsylvania oil?

A. No, sir.

Q. Why not?

A. 28-degree oil produced from Pennsylvania oil is sold as cylinder stock, a light gravity and low fire-test cylinder stock, and from the para-fine, 28-para-fine oil, which is sold for more money than is obtained for the gas oil.

Q. That is, the 28-degree Pennsylvania oil is more valuable than the 34-degree?

A. Yes, sir, for the reason that it is a lubricating oil.

Q. And brings a higher price in the market?

A. Yes, sir.

Q. But you know that there are gas oils of 28 degree Beaumé?

A. I never heard of it being that low, no, sir. We never had any inquiry for gas oil of that gravity.

Q. Well, you manufacture at your refinery Pennsylvania oil entirely?

A. Yes, sir.

Q. Do you at your refinery distill anything but the Pennsylvania oil?

A. Yes, sir. We have nothing but Pennsylvania oil. Yes, sir. That is all we refine, Pennsylvania oil.

Q. Do you know what is the base of the Texas and Indian Territory oil?

A. Asphalt.

Q. Are you familiar with the price of oil at the wells?

A. I know the Pennsylvania price.

Q. That is all you are familiar with?

A. Yes, sir.

Q. You might describe the process of distillation by which these different degrees oils are produced?

A. This oil is produced by placing the oil in——

Q. You refer to Exhibit EEE?

A. Yes.

4798 Q. That is the refined produce. I was asking for the distillation process. The oil comes from the well, and where is it put then?

A. Into stills, and fires lighted and the vapors arise from the oil and are condensed.

Q. Pass through a worm?

A. Pass through a worm and go into the various distillate tanks.

Q. What comes over first?

A. Benzine, the lightest product.

Q. Then what comes off next?

A. Then comes the heavy naptha, and then comes, we call it, the top cut of the export oil.

Q. That is as the temperature increases, the heavier oils are volatilized, is that it?

A. Yes, sir. Then after the first cut of this export oil comes the water white cut, which is about from 52 down to 41 gravity. Then after water white oil is off, steam is introduced into the bottom of the stills, and this 34 gravity oil is thrown off by steam. This oil is then cracked up again or granulated and it is then pumped through stilling machines. The cold distillate is then——

Q. What is that process for, to remove the para-fine?

A. To remove the para-fine, and it is put into filter presses and the para-fine extracted, and the oil that remains is this 34 distillate; that is one process and the other process where we get the tar, there is no steam introduced into the bottom of the still at all. The whole mass evaporates down to about 22 gravity.

Q. What is the most profitable oil?

Mr. MATHEWSON: I object to that.

Q. Or grade of oil?

Mr. MATHEWSON: I object to that as wholly immaterial and irrelevant.

4799 The MASTER: I do not see the materiality of it, but I suppose the Senator will connect it with something later. I will allow it.

Mr. MATHEWSON: Exception.

Q. (Question repeated as follows: "What is the most profitable oil or grade of oil?")

A. Benzine.

Q. What next?

A. Then comes the cylinder oil.

Q. That is lubricating oil?

A. Yes, lubricating oils.

Q. What degree is that?

A. They run about 24 to 28 gravity.

Q. Then what next?

A. Then the water white.

Q. What does that run from in gravity?

A. Water white in about 47 gravity.

Q. Then what next?

A. The wax oil.

Q. That is the para-fine?

A. No, sir; that is the neutral oil.

Q. Oh. the wax oil you say?

A. Yes, the wax oil.

Q. What degree is that?

A. 34 to 36 gravity.

Q. Then what?

A. Then the export oil, 73 Abel; Abel is the name of the cup in which tested.

Q. 73 degrees Fahrenheit?

The WITNESS: Yes, sir; 73 degrees Fahrenheit on the Abel cup; we call it 73 Abel oil.

Mr. MATHEWSON: What gravity is that?

A. 44½ gravity is the official gravity.

Q. What next?

A. Tar.

Q. That about exhausts the product, does it not?

A. Yes.

Q. When you say a 45 degree oil or a 34 degree oil, does that mean an oil entirely of that degree or could it be fractionated into different degrees?

A. It could be fractionated.

4800 Q. That is in this 44 degree oil, if you should fractionate it, you could obtain some higher degree?

A. Yes.

Q. Is there any oil until you get down to the tar, or even then I suppose, that cannot be fractionated into several different degrees of Beaume test?

A. After you get down to coke in the still.

Q. I thought that when we had reached tar, we had reached the end of the product?

A. You reach the end of the product in the crude stills. The tar is——

Q. What comes next?

A. The tar is run on specially constructed stills, heavier bottoms and heavier stills and through a different condensing process.

Q. Then what do you obtain by that?

A. The first distillate we obtain is what we call gas oil.

Q. Then what do you get?

A. Then we get an intermediate oil, para-fine oil and heavy para--fine oil—or distillate I mean, intermediate distillate and heavy distillate.

Q. What are those used for?

A. We extract wax from the para-fine distillate and after the wax has been extracted the oil is put into reducing stills and run to what ever gravity is required, either 24 degrees, 28 or 23 para-fine.

Q. What is that used for?

A. Lubrication.

Q. Then of all of the oil that comes from the tar the gas oil is the cheapest, is it?

A. Yes, sir.

Q. You hav*ing* said the lubricating oils were rather expensive, before?

A. Yes, sir.

Q. Gas oil is known as a refuse, is it not, or not——

A. No, there is nothing lost in petroleum except the gases which you cannot condense. There is a use for everything.

Q. You have not produced the gas oil yet?

A. No, sir.

4801 Q. Produce the sample of gas oil.

(Witness produces sample.)

Q. What is this sample that you now produce?

A. Gas oil obtained from Pennsylvania tar.

Q. Of what degree is that?

A. That particular sample is 40 degree Beaume.

Mr. PAGE: I offer it in evidence.

Sample received in evidence and marked State's Exhibit FFF.

Q. Is the oil State's Exhibit BBB a product from the tar?

A. Which one is that?

Q. The first one.

The MASTER: That is the New York sample.

Mr. MATHEWSON: Yes, from the Consolidated.

The WITNESS: I could not say as to that.

Q. What is this sample that you now produce?

A. Pennsylvania tar.

Mr. PAGE: I offer it in evidence.

Sample marked State's Exhibit GGG.

Q. What does that tar sell for?

A. 2¾ cents per gallon, tank price, works.

Mr. PAGE: You may cross-examine.

Cross-examination by Mr. MATHEWSON:

Q. How long have you been in the refining business?

A. Since 1891.

Q. What is your firm or concern?

A. Emory Manufacturing Company.

Q. Is that a corporation?

A. No, sir.

Q. Are you one of the firm?

A. No, sir.

4802 Q. Do you have entire management of the works?

A. Yes, sir.

Q. Where are they located?

A. At Bradford, Pennsylvania.

Q. How long have you had such entire charge?

A. Since 1896.

Q. Are you a chemist?

A. I have taken a course in chemistry, yes, sir.

Q. Do you hold any degree?

A. No, sir.

Q. Are you an engineer?

A. No, sir.

Q. Have you ever been connected as manager or in other responsible positions with any gas company?

A. Not a manufacturing gas company.

Q. Did you make tests yourself showing 34 degree for Exhibit BBB?

A. Yes, sir.

Q. What did you use to make the test?

A. Hydrometer and thermometer.

Q. What hydrometer?

A. Beaumé.

Q. Whose manufacture?

A. We used—I could not say just what one it was, but it was either a Carbondale Instrument Company's or Tagliablue.

Q. You spoke about a thermometer. Did you make any use of that in your tests?

A. Yes, sir.

Q. What use?

A. Made a correction for temperature.

Q. Did you make a correction?

A. Yes, sir.

Q. What was the temperature?

A. 74.

Q. And what did the test show at 74?

A. 35, a little over 35, I don't remember just what was in the stick.

Q. And can't you tell exactly what it showed at 74 degrees or 75 degrees?

A. I cannot remember just what it was. There are the corrections for it in the books.

Q. But I am trying to ascertain what the corrections were?

A. There is a regular book for that.

4803 Q. Haven't you any data here from which you can tell the temperature?

A. Well, roughly in the hydrometers, for each degree above 60 they add one to the reading, and each 10 degrees they add one to the hydrometer reading.

Q. Well, was that what you did in this case?

A. Yes, sir.

Q. You——

A. I took the reading on the hydrometer, 35.4 at temperature 74.

Q. And then to reach your standard temperature which was what?

A. I substracted 1.4 from it.

Q. Well, you stated in the direct examination that it was a little over 34. Then you could not have substracted 1.4.

A. It was about 34 gravity.

Q. Corrected to what temperature?

A. 60.

Q. Have you ever dealt in oil from the Kansas fields?

A. No.

Q. Nor in the fields of Southeastern Ohio?

A. Yes, sir.

Q. Do you deal in that oil?

A. Yes, sir.

Q. Do you buy and sell it?

A. Yes, sir.

Q. Have you ever dealt in oil from the fields of the other part of Ohio?

A. Not directly, no, sir. Our firm has.

Q. Have you dealt in oil of any of these fields except Pennsylvania, Western New York and Southeastern Ohio and West Virginia?

A. No, sir.

Q. Have you ever dealt in Texas oils or Indian Territory oils yourself?

A. No, sir.

Q. And the most you can do is to state then that sample BBB you think is not from any of the territories which you have mentioned; that is, Pennsylvania, Western New York, Southeastern Ohio or West Virginia?

A. Yes, sir.

Q. Further than that you could not state?

A. I could not tell, no, sir.

Q. Is not there sulphur in Ohio oil?

4804 A. Yes, sir. Not in the Southeastern, not in Monroe, Jefferson or Washington Counties.

Q. What do you call Southeastern Ohio, those three counties?

A. As to crude, it is the oil for which $1.58 per barrel is paid, the same as Pennsylvania oil.

Q. But I am talking about the territory. You say Southeastern Ohio. Do you mean the three counties you have just mentioned as Southeastern Ohio?

A. In the oil region we call it Southeastern Ohio.

Q. But I am trying to find out what you mean, because that is rather a broad term. The Southeastern Ohio, as you used the term now, in reference to this oil production, includes the three counties you have named?

A. Includes Jefferson County, Monroe County and Washington County, that I am familiar with in Ohio.

Q. Do you mean to say there is no sulphur in any of the oil produced in any of those counties?

A. No, sir.

Q. You do not mean to say so?

A. I know there is not.

Q. Then you do mean to say there is not?

A. I do mean there is no sulphur there.

Q. How about Southwestern New York?

A. That is what is known as Pennsylvania oil.

Q. Any sulphur there in any case?

A. No.

Q. Nor in West Virginia?

A. No, sir.

Q. And none in any of the Pennsylvania oils?

A. No, sir.

Q. Now the sample Exhibit CCC, which has been introduced here, if I understand you, is a distillate oil; is that right?

A. Yes, sir.

Q. Distilled from tar?

A. No, sir, distilled from crude.

4805 Q. And you say that it is a 34-gravity distillate and is used for fuel and gas oil?

A. Yes, sir.

Q. Then gas oil is not all produced from tar?

A. No, sir.

Q. It is produced by distillation from the crude oil?

A. Yes, sir.

Q. And the most of the gas oil that you are familiar with is produced by distillation from the crude oil, is it not?

A. Yes, sir, at least in our works. I am not familiar with any other refinery except ours.

Q. Now, the Emery Manufacturing Company is what is known, speaking of oil producers, as an independent concern, in that it has no relations with the Standard Oil Company, is it not?

A. No, sir, it is not.

Q. It is not a trust or anything of *our* sort?

A. No.

Q. Have you a pipe line?

A. Yes, sir.

Q. What is the name of that?

A. Emory Pipe Line.

Q. And it runs from where?

A. It is local, collecting lines, in the Bradford oil fields.

Q. And your operations in production are confined to the Bradford oil field, are they?

A. I have no production.

Q. Well, the Emery Manufacturing Company, or do they not produce oil?

A. No, sir, they do not produce oil.

Q. They simply refine?

A. Yes.

Q. And can you say from your own knowledge what the oil is which is sold by the Standard Oil for lubricating oil?

A. What the crude or different parts——

Q. Do you know what the description is?

A. They sell all kinds of lubricating oils.

4806 Q. You say there was a certain kind the Standard Oil Company sold for lubricating oil?

A. They sell neutrals, cylinder oils and paraffine oils and all grades of oils.

Q. Different grades for lubricating?

A. Yes, sir.

Q. There is not any special grade for lubricating oil, is there?

A. They have special oils for special purposes.

Q. To meet different machinery conditions?

A. Yes, sir.

Q. In reference to this export oil which you say is quoted at 4.4 cents f. o. b. the tank boat, New York Harbor, have you ever sold any export oil for use for gas making?

A. No, sir.

Q. Nor any of it in New York City, have you?

A. We have sold export oil on board the vessel in the harbor.

Q. That does not include the transportation across the Bay?

A. No, sir that is the price f. o. b. vessel.

Q. Of course it would not include the charge for unloading at the dock and the transporting to the place where it was used in New York City?

A. It would include the lighterage charge f. o. b. vessel.

Q. But it would not include the transportation across the harbor?

A. No.

Q. Or from the dock in New York to the place where it was to be used?

A. No, sir.

Q. Nor storage, of course?

A. No, sir.

Q. How much of this export oil 4.4 cents does your company sell in a year, say in the past year f. o. b. New York Harbor?

A. We do not sell any in New York Harbor.

Q. How much in Philadelphia Harbor at 4.35 cents?

A. About twelve to fifteen thousand barrels a month, 50 gallon barrels.

Q. How much would that be in a year, how much in a year do you deliver of that export oil, 4.35 cents f. o. b. Philadelphia?

A. It is not always the same, it depends upon the ships and the sales.

4807 Q. Generally?

A. Twelve thousand to fifteen thousand a month, one hundred and fifty thousand to one hundred and sixty thousand barrels a year, possibly more.

Q. How much does a barrel hold?

A. Fifty gallons, a refined barrel.

Q. A what?

A. We call a refined barrel 50 gallons and a crude barrel 42 gallons.

Q. This would be a refined barrel?

A. Yes, sir.

Q. And the difference between the export oil Exhibit DDD and the yellow oil from which oil Exhibit EEE would be, you say, only 1-16 cent per gallon?

A. Just across the shade, yes, sir.

Q. Now, I understand that No. 28 degree test Beaume oil which is produced from Pennsylvania oil sells for more than the 34 gravity oil?

A. More than the 34 gravity fuel oil, yes, sir.

Q. Well, more than the 34 gravity oil which you have introduced here as Exhibit CCC?

A. Yes, sir.

Q. How much more per gallon would it sell than Exhibit CCC?

A. We would not sell 28 gravity steam refined oil for less than 5¼ or 5½ cents a gallon at our works.

Q. And what would that mean f. o. b. New York Harbor if it was to be transported here? ?

A. In tank cars it would be 1.05 cents a gallon additional.

Q. Have you ever analyzed Texas or Indian Territory oils to know whether the base is asphalt there?

A. Yes, sir, I have analyzed Texas oil.

Q. And you found that to be so?

A. Yes, sir.

Q. When you speak of the most profitable oils in the treatment of petroleum, exactly what do you mean, the most profitable to the refiner?

A. Yes, sir.

Q. Well, what elements enter into that?

A. The price.

4808 Q. Well, expense of treating?

A. No, sir.

Q. You simply mean the price at which they are sold?

A. Yes, sir, the highest price.

Q. So what you mean when you say the most profitable oil, is that benzine sells for the highest price, and lubricating oils, 24 and 28 degrees next highest, and water white 47 degrees, next highest price, wax oil, 34 to 36 degrees, next highest, and then the export 73 Abel, is that it?

A. A-b-e-l, yes, sir.

Q. 44½ degree next, and then comes the tar and the distillates, if you distill the tar?

A. Yes, sir.

Q. And when you speak of the oil being the cheapest as you gave the list, you merely begin at the other end of the scale and go up?

A. The lower price, yes, sir.

Q. Will you tell me the percentages of production of these various oils which you have given in order of their selling price in a given quantity of petroleum?

A. Take 100 gallons of petroleum, we get 12 per cent. of benzine; the next, I believe, was the lubricating oils?

Q. Yes.

A. Fifteen per cent. of lubricating oil.

Q. And the next was water white, 47 degrees?

A. From our Bradford crude, we get about 12 per cent.

Q. And then the wax oil, 34 to 36 neutral oil?

A. The price of that is not the highest, but the wax at the price of the oil brings it up next in value.

Q. Well, altogether, how much does that amount to in percentage between the oil and wax?

A. I should say about 20 per cent. of that.

Q. And then the export 73 Abel?

A. About 6 per cent. lost, and the balance would be the export. It would be the difference between that and the 100 per cent. There would be 6 per cent. lost.

Q. Then 65 per cent. would be the export?

4809 A. No, 6 per cent. lost, leaves 6 there, and the balance would be the export.

Q. That would leave 65 per cent.?

A. It would not be that high, would it?

Q. No, 35 per cent.

A. Yes.

Q. And 6 per cent. is lost?

A. Yes, sir.

Q. What about the tar?

A. The tar comes in another process, that is the cylinder oil process.

Q. But where does that percentage come here, in reference to tar?

A. No, the other way it is 12 per cent. benzine and about 70 per cent. in refined and the balance would be tar and loss.

Q. In other words you mean there is about 12 per cent. of benzine and 70 per cent. of refined oil?

A. In the different processes of refining, yes, sir.

Q. This would make about 82 per cent.?

A. Yes, sir.

Q. And the balance is loss and tar?

A. Yes.

Q. Where does the tar come from?

A. From the crude.

Q. In what process?

A. In running to tar, we call it.

Q. And what percentage of the whole 100 per cent. original would you consider as tar?

A. About 7 per cent. tar.

Q. Now what portion of that 7 per cent. is gas oil if you distilled gas oil from tar?

A. About 12 to 15 per cent.

Q. About 12 to 15 per cent. of the 7 per cent?

A. Yes, sir.

Q. That would be 12 per cent. of 7 per cent., which would be about one per cent. of the crude, is gas oil, from tar?

A. Yes, sir.

Q. If you run it in that way?

A. Yes, sir.

Q. What is the benzine used for?

A. It is used for making gasoline, principally.

Q. For motor cars?

A. Yes.

4810 Q. And the demand for motor cars and so on has raised the price of benzine almost out of sight in the last few years, has it not in the last few years?

A. Yes.

Q. Now, do you know anything about the Muskogee oil, greenish in color?

A. Yes, sir.

Q. Is it not true that Muskogee oil, which is an Indian Territory oil has a parafine base?

A. Yes, sir, but there is very little of Muskogee oil produced.

Q. Well, are you sure that there are no other oils produced there and in Texas that has not a parafine base as well as the Muskogee oil?

A. Not that I know of. The Muskogee is the only one.

Q. As far as your information goes?

A. Yes, sir.

Q. Of course you have not examined all the wells in Texas and Indian Territory, and your statement is from information and not from actual tests, is it not?

A. I have examined the Muskogee oil and I have examined the Texas oil.

Q. There are various fields in Texas, are there not?

A. Yes, sir, several of them.

Q. Do you mean to say you have examined all of them?

A. I have examined oil from Spindle Top, the first well they drilled there.

Q. How much crude oil does the Emery Manufacturing Company handle in a year?

A. Do I have to answer that.

Q. You would rather not answer that?

A. I don't think that——

Q. I say would you rather not answer it?

A. Yes. It is published. We use about 1,200 barrels a day in our works, of forty-two gallons.

Q. How much 34 degree oil do you produce?

A. About 20 per cent.

Q. And the 28 degree gas oil, would be this additional one per cent. that we were discussing?

A. Yes.

4811 Redirect examination by Mr. PAGE:

Q. That additional one per cent., is that a 28 degree gas oil?

A. No, sir.

Mr. MATHEWSON: I did not intend to mislead you. I was thinking of the 28 degree oil.

Q. What degree oil is that?

A. Our gas oils, from 38 to 40 degrees.

Mr. MATHEWSON: That is from the tar?

The WITNESS: Yes.

Q. The tar is a distillate from the crude oil?

A. No, it is a residual, it is not a distillate.

Q. Well, when you put it through the next process, whether it is called distillation or not?

A. Yes, sir, it is called distillation.

Q. In your first process you distill these illuminating oils which you spoke of?

A. Distill the crude oil and the second we distill the tar.

Q. And then the residual is put through another process and you distill the tar?

A. Yes, sir.

Q. So that everything except coke is really a distillate of the crude oil, is it not?

A. Yes, sir.

Q. In the price that you have quoted on the 34 degree oil, you included the lighterage charge?

A. We include the terminal charge.

Q. I mean 45 degree, or whatever it is, this 73 Abel?

A. It includes the terminal charge.

Q. And you said also, I believe, f. o. b. on the steamer, which would include the lighterage charge?

A. The steamers go alongside of oil yards, alongside the pier.

Q. .Well, it includes the charge to the steamer for dockage, does it, is that what you mean by terminal charge?

4812 A. No, if it is shipped in tank cars, the oil is unloaded in the storage tanks, and allowed to stay there until the steamer comes to load, and the man owning the pier gets the charge from the steamer.

Q. You deliver it alongside, f. o. b., then?

A. Deliver it into the ship.

Q. Then this price includes the storage charge?

A. Unloading the tank cars.

Q. And unloading the tank cars?

A. And pumping the oil from the storage tank into the vessel.

By Mr. **Mathewson**:

Q. Is the tar distilling process which you have described, and from which you get this one per cent. of gas oil, supplementary to the process which you first described?

A. Yes, sir.

Q. It is not an independent process apart from the process that you first described?

A. It is an independent process from the crude, yes.

Q. I think you have answered the question both ways. Won't you make it clear? I don't understand, quite. I asked you first is the tar distilling process by which you obtained the one per cent. of gas oil supplementary to the process which you first described?

A. No, sir, it is not supplementary.

Q. Or is it an independent process?

A. It is an independent process.

Q. Apart *for* the process you first described?

A. Yes, sir.

Q. Is not the tar obtained by the first process?

A. Yes, sir.

Q. Then it is an independent process?

A. Yes, sir, both.

Q. What makes the difference between the white Exhibit DDD and the yellower Exhibit EEE from which Exhibit DDD comes?

A. Exhibit EEE is a white distillate.

Q. I understand that, but what element is it which is eliminated to produce the white oil?

4813 A. The color or impurities are absorbed by sulphuric acid.

Q. Do you know what the impurities are which are so absorbed?

A. No, sir, nor anybody else, I guess.

By Mr. PAGE:

Q. Your gas oil which you produce in the independent process from tar could be produced in the same distillation, could it not?

A. Yes.

Q. Without treating it in an independent process?

A. You could not get this oil FFF from the crude, you get this from the crude, Exhibit CCC.

Q. And the Exhibit CCC is of more value or brings a larger price than the Exhibit FFF?

A. Not with us; it brings the same price.

LEWIS EMERY, JR., called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Direct examination by Mr. PAGE:

Q. Senator Emery, where do you reside?

A. Bradford, Pennsylvania.

Q. What is your occupation?

A. Oil producer and refiner and several other lines of business.

Q. What is your position in the Emery Manufacturing Company?

A. I am the proprietor of it.

Q. You say that you are also an oil producer?

A. Yes, sir.

Q. And where have you wells, Mr. Emery?

A. In nearly all the oil fields.

Q. Have you in the Indian Territory?

A. Yes.

Q. And Texas?

A. Yes, sir.

Q. Do you have in the different Texas fields?

4814 A. No, really there is not very much field there now, it is pretty well played out.

Mr. MATHEWSON: Did he name the fields?

The WITNESS: I can name you the fields which were producing oil in large quantities.

Mr. MATHEWSON: No, but I did not know in what fields you said you operated.

The WITNESS: Well, they were in Matagorda and Humble.

Q. You are familiar with the prices paid for oil in the different sections?

A. Yes, sir, wherever we have production, and with the prices where do we not produce.

Q. What is the price at the well of what is called Pennsylvania oil?

A. $1.58. There are some grades of oil in Pennsylvania field that bring a higher price than $1.58 at the wells.

Q. Is that a 42-gallon barrel?

A. Yes, sir. There are only one or two fields, there is the Tiona field, I think that is the only field.

Q. The price $1.58 is per barrel, is it?

A. Per barrel of 42 gallons each at the well.

Q. What are the prices paid for Texas oils at the well?

A. I don't know, I have a list here I think some place.

Mr. Mathewson: Well, I think the witness should testify from his own knowledge. He ought not to testify from circulars.

The Witness: Well, the last we sold over there about two months ago, we got 35 cents for it.

Mr. Mathewson: At the wells?

The Witness: Yes, sir, at the well.

4815 Q. Now, what is the price in other fields where you have wells?

A. In the Kansas field, according to the gravity, 32 gravity brings 39 cents. We have a very large production there for which we obtain 39 cents. It is sold, at least, on gravity.

Q. And the Indian Territory?

A. The same, Kansas and Indian Territory, based on gravity. It is known as Kansas in the market, not as Indian Territory.

Q. Do you know of 28 degree gas oil?

A. No, sir, I do not.

Q. There is none of that 28 degree gas oil produced from the Pennsylvania oil?

A. No, sir. That is in the lubricating gravities, in the Pennsylvania oils.

Q. Do you know whether that would be a lubricating gravity in Texas oil?

A. No, I do not.

Q. Do you know as to the gravity of the crude oil, the difference between Texas oils and the Pennsylvania?

A. The difference in gravity, yes, sir.

Q. Will you state what that is?

A. The Texas runs about 23 and that of Pennsylvania ranges from 40 to 45.

Q. From your knowledge of the Texas oil and your knowledge of the Pennsylvania oil, could you produce the 34 degree gas oil from Texas oil at a lower price than you could from the Pennsylvania oil?

A. Yes, sir.

Q. And sell it at a much lower price?

Mr. Mathewson: Whether you could sell it for a much lower price? It is not a question of ability; it is the inclination. I suggest that it is a conclusion.

Q. Well, it could be produced for very much less?

A. I didn't understand your question.

4816 Q. I say it could be produced for very much less?

A. You mean per barrel?

Q. Per gallon.

A. In manufacturing it or the production of the oil, the cost of production.

Q. Take the cost of production of your Texas oil, could you produce a 34 degree gravity oil at a much less price?

A. Are you referring to the cost of producing it or refining it?

Q. Both combined; at a less price than you could from the Pennsylvania oil?

A. That is very problematical. I don't know what it costs to produce a barrel of Texas oil on an average. It has been an uncertain field and an expensive one.

Q. I refer to the prices you have given as to the selling price at the well——

A. If you refer to the cost of manufacture, buying and purchasing and manufacturing it, you can produce oil much cheaper than for an oil you pay 35 or 40 cents than $1.58.

Q. That follows from the difference in the price of the crude oil?

A. Certainly.

Q. Now, as to the lubricants and the degree of the lubricating oil, how does that vary with the figures of the crude oil? Would you get as much lubricating oil from a Texas oil of from 23 to 28 degrees Beaume as you would from the Pennsylvania oils which run 40 to 45?

A. Lubricating oils?

Q. Yes.

A. I don't know. We never run any lubricating oils on any oils of Texas at all, and I don't know what the percentage of lubricating oils is. I do not know anything about it. Certainly the quality is not there. The prices are very much cheaper in lubricating oils made from Texas oils than they are made from the Pennsylvania oils.

Q. Did you make an examination of this sample, exhibit BBB?

A. I closely observed when the examination was going on, I observed every moment. I did not handle the instruments but I saw it.

4817 Q. Did you subject the oil to the test of smelling it?

A. I did.

Q. Can you tell from that where the oil came from?

A. It is an oil that contains sulphur. It is not a Pennsylvania oil, in my judgment.

Q. Are there any other facts that lead you to the same conclusion, that is, that it is not a Pennsylvania oil, besides the smelling it?

A. No, I don't know that there is. That can be ascertained from what we call the "chilling" process; tell very quickly.

Q. But you did not subject it to that?

A. No, sir, we did not. We could tell whether they are asphalt oils or para-fine oil by the "chilling" process.

Q. Are there any other fields in which that you are familiar with the prices of the crude oil at the well?

A. Yes, sir.

Q. In keeping yourself informed as to the quotations?

A. Yes, sir. In Indiana I know the prices there, and we have a production in Ohio and in Illinois.

Q. Outside of what is known as Pennsylvania oil?

A. Yes, sir.

Q. Give those prices?

A. We also have a production in Eastern Ohio; that is produced from what you call the white sand oils; Western Ohio and Indiana oils are produced from Trenton limes, which contain the su*pl*hur.

Q. What are the prices of those oils that contain the sulphur?

A. Ohio oil brings 85 cents, Indiana 85 cents, and Illinois 67, or 64 at the present time. There is a grade of oil in Ohio in the Lima district that brings 90 cents. That is per barrel of 42 gallons each.

4818 Q. From these oils also the 34 degree oil could be refined and produced at a less price than from the Pennsylvania oils, could it not?

A. Yes, sir, certainly.

Q. And how about the 28 degree?

A. Well I don't know that product.

Q. Well, 28 degree is an entirely different product?

A. Yes, an entirely different product. I don't know how they get it, I don't know what it is, I never saw any of it.

Q. The Standard Oil Company have agreed to furnish within two years and eight months 255,000,000 gallons of oil, 40 per cent. of which must be 34 degree Beaume oil. Could that amount of oil be produced in the Pennsylvania field, in the Pennsylvania oils?

A. It could be produced, certainly. There is a production in Pennsylvania, in the Pennsylvania field, of 62,000 barrels a day or 2¼ millions a year. It could be produced from the oil, but whether it could be produced from the tar—possibly it could be produced from the tar, based on one per cent.

Q. That is from the entire field of the Pennsylvania oil?

A. Yes, sir, that is the entire production of the Pennsylvania oil.

Q. Could it be produced from the wells owned or controlled by the Standard Oil Company in the Pennsylvania fields?

A. Oh, no, not from their wells, because they are transporters; they are not as a rule producers. They have got production, but not sufficient, I assume, to produce all the gas oil that they sell.

Q. From what you know of the oil market for Pennsylvania oil, knowing what others buy and what others take from that field, would it be possible to fill this contract?

A. Now, that is a very broad question. They certainly could, because they could fill that by taking the whole body of oil. There is no question about it. They could run it all into you, as 4819 far as that is concerned, but if you are getting down to the question of getting it from the tar or getting it from what we call a tar distillate, that is another thing.

Q. Could they furnish 34 degree oil at less than five cents a gallon?

A. Could they?

Q. Without losing money?

Mr. Mathewson: Objected to.

The Master: I think you are getting pretty far, Senator.

Mr. Page: I think so myself. I certainly misunderstood what the witness told me in my office.

Q. What is meant in the oil market by a homogen-ous oil?

A. Well, I suppose it is a kind that is very seldom used, and I suppose it is an oil distilled, take the crude oil distilled, and all the qualities coming from that distillation when mixed give homogeneous, but the term is something that is very unusual and I do not understand it. We understand about homogen-ous steel but I never saw that in a contract and I never saw the term used before in my life.

Q. It really has no——

A. I don't see any significance to it, it is not a trade term.

Q. Could you take State's Exhibit EEE and mix *taht* with a 28-degree gravity oil and produce a 34 degree gravity gas oil?

A. Yes, sir.

Q. And that would be a lower priced oil than the 34 degree oil of the Pennsylvania fields, would it?

A. It would be a lower price.

Q. An oil that could be sold at a lower price or would it be produced at a lower price?

A. If you take the Pennsylvania product, do you mean?

Q. Not taking 28 degree Pennsylvania?

A. Yes, sir; a less price.

4820 Q. Taking the 28 degree oil from other fields?

A. Yes, sir.

Q. You have read or heard read the contract between the Standard Oil and the Consolidated Gas Company that is in evidence here?

A. I saw a portion of it, relative to the price, yes, sir.

Q. Is there anything in that contract that leads you to suppose or believe that it does not call for Pennsylvania oil, and if so state what?

Mr. MATHEWSON: If there is anything ambiguous in the contract it might be susceptible——

The MASTER: I think that question is objectionable, Senator.

Mr. PAGE: I will withdraw the portion which says "If so, state what".

A. It does not specify what field it is to come from.

Cross-examination by Mr. MATHEWSON:

Q. You spoke of Texas oil and their selling at 35 cents at the well. What gravity?

A. About 23.

Q. And you say that the supply is pretty nearly gone in Texas?

A. Yes. It is principally confined to the stocks.

Q. "Petered out", as the expression is?

A. Yes.

Q. Is all Texas oil of the same gravity?

A. All that I know of.

Q. The same in Kansas and Indian Territory?

A. No, sir.

Q. Well, I mean is all Kansas oil the same gravity?

A. No, sir, that varies. There is some down there as low as 18 degrees.

Q. Eighteen to what?

A. Up to 32. There is a little up there produced at 37.

Q. And when you say 39 cents you refer to the 32 gravity oil?

A. Yes, sir.

4821 Q. How about Indian Territory?

A. Same thing. It is all sold on gravity.

Q. You said that you did not know of a 28 degree gas oil?

A. No, I do not.

Q. If a contract was made for gas oil of less than 28 degrees you would expect it to run over 28 degrees, wouldn't you, in test, on the average?

A. It would be 28 or above.

Q. You would expect it to be above, wouldn't you?

A. No, not necessarily. I would expect it to be according to the contract. It can be made so.

Q. When you say then that you do not know of 28 degree gas oil, what did you have in mind?

A. I don't know. This is a merchantable product in our works.

Q. When you were asked whether 34 degree oil could be produced from Texas oil down to the final delivery, including the production and the refining and the transportation to a given point, say New York City, I understood you to say that that was something that you could not tell?

A. No. I said it could be produced cheaper.

Q. What were you about to say in that line?

A. I don't know.

Q. Didn't you say you could not tell?

A. No, I said I could tell. I said when you get down to ask as to the cost of producing oil in the Texas field that I could not answer that. The misunderstanding was whether producing a refined product or producing it from the earth.

Q. Can you get as much 34 degree gravity oil out of a gallon of Texas oil as you could out of a gallon of Pennsylvania oil?

A. No, because there is more—there is a larger percentage of base product. It is asphalt and tar and so forth.

Q. Taking a gallon of Pennsylvania oil and a gallon of Texas oil, the value of the 34 degree oil that you would get out of the 4822 Pennsylvania oil would be greater than the value of the 34 degree oil which you get out of the Texas oil?

A. Based on the cost of crude, certainly. That does not mean but what you could produce it very much cheaper from the Texas oil.

Q. No, it may not, but it would not be in proportion to the cost, because if you have Texas oil at 35 it is only 23 gravity.

A. If you take it in the proportion to the cost, why Texas would be away down below it. Produce it for half the money; less than half the money.

Q. You could produce it at the wells?

A. No, sir; produce it as a product, 34 oil.

Q. If the refinery was in Texas?

A. Yes, transportation is no more from there than it is from our place, by ship.

Q. You have to transport it to the ship from the Texas oil fields?

A. Yes.

Q. And then ship it?

A. We send oil to Germany to-day cheaper than we can send it from our refinery to New York.

Q. You sell it in Germany cheaper than you do in New York?

A. Yes.

Q. So that the price of oil exported is not necessarily the price at which you can purchase it in the United States?

A. No, sir.

Q. And that is so of many things?

A. There is a combination in the United States that they won't permit in Germany or any other foreign country. That is what we are fighting against.

Q. That is true of a great many other things?

A. Yes, we take the cake in this country for sole proprietors. That is what we are against.

Q. You are an independent producer?

A. I am, sir; and a refiner.

4823 Q. And a competitor of the Standard Oil Company in that field?

A. Yes, sir.

Q. Supposing you took Pennsylvania oil and mixed it with a small portion of oil from another field which had sulphur in it, then, of course, the mixture would show sulphur, no matter how small the admixture of other oil might be?

A. Certainly, there would be some sulphur in it.

Q. In other words, it would not indicate that all of the oil came from outside Pennsylvania, from the fact that in a particular oil you found some sulphur?

A. I think the tars all run together and are distilled—the tar from Texas, tar from Pennsylvania, tar from Ohio. It makes just as white a candle and makes just as good wax, if there is any wax in it.

Q. You were asked whether an admixture of the 28 degree oil with Pennsylvania 34 degree oil would not cost less than the 34 degree oil. As a matter of fact you would take Pennsylvania oil 28 degree and Pennsylvania oil 34 degree, it would cost more than the 34 degree I mentioned, wouldn't it?

A. It would on your prices, yes, sir. The prices you get for it.

Q. It would on the price you get for it?

A. No; not if they buy their oil in Texas at 35 cents.

Q. No, I am not talking about Texas. I say if you take 28 degree oil produced in Pennsylvania and mix it with a 34 degree oil produced in Pennsylvania, the mixture would be worth more than a 34 degree oil alone of the same quality?

A. I say not based upon your contract.

Mr. Page: My question was as to a mixture of 28 and 45, not 34.

Q. Well, you take the export oil, 44½ degrees produced in Pennsylvania and mix with it Pennsylvania oil of 24 and 28 degrees and the mixture would be worth more than the same quantity of 44½ degree oil straight, wouldn't it? 4824

A. When we get up into those gravities it is lubricating oil and it is more valuable. We do not do that.

Q. I know you do not do that, but if you did do it the mixture would be more valuable than the export 44½ degrees?

A. It depends entirely upon the price of the lubricating oil, the price of the goods.

Q. Yes, but your son has testified that you get more for the oils of 24 to 28 degrees?

A. Certainly we do.

Q. Than you get for the export oil of 44½?

A. Certainly. It is on account of the viscosity.

Q. Then a mixture half and half we will say of 44½ degree oil and of the 24 to 28 degree oil would be——

A. Of all lubricating oil, you mean?

Q. Yes, would be worth more.

A. Because our lubricating oil brings a higher price than the 34 does.

Q. And it brings a higher price than the 44½ export?

A. Now, I will say yes, but if you take this gas oil and mix it with lubricating oil you will get a less price.

Q. Which gas oil?

A. This, this gas oil.

Q. That is Exhibit FFF, from your tar product?

A. Yes. That is what I suppose that the gentleman (Mr. Page) meant in his question.

Mr. Page: My question was not based on the 28 degree Pennsylvania oil. I excluded that.

Mr. Mathewson: I understand.

The Witness: Now, I say yes, if you take 28 degree lubricating oil it brings a higher price than the illuminating, but we do not do that. This is what we sell for gas oil (Exhibit FFF).

Q. I understand, but if you were to do that the mixture would be worth more?

4825 A. Yes, but in our 28 oil and the 28 from Texas or Kansas, there is just as much difference as there is difference between day and night.

Q. So it has been testified.

A. Yes. You see, if I may be permitted to answer that question a little bit further: There are 200,000 and odd barrels of oil handled every day now, of the pipe lines from the wells. The other they put in storage or manufacture. Of that there is only 62,000 barrels of high grade oil per day.

Q. What do you mean by high grade oil?

A. I mean the Pennsylvania, $1.58. All the rest are second-grade oils running down as low as 28 or 26 cents a barrel.

Q. I see it is alleged in the Government suit against the Standard Oil Company in St. Louis that the Standard Oil Company sells, as I recollect, over 90 per cent. of the entire product of the United States in petroleum oils?

A. I think so. I would not be surprised if that was so. We cannot ship ten rods from home hardly, on the railroads.

Q. The contract dated November 1st, 1905, between the Standard Oil Company and the Consolidated Gas Company to which reference has been made, calls for 40 per cent. of 34 gravity, with the privilege to the company by a certain notice of taking 45 to 50 per cent.?

A. Yes.

Q. Now, when you say that the Pennsylvania oil fields would produce enough in two years and eight months to furnish that amount of oil, 34 degrees Beaume, do you refer to the fields that are controlled by the independent producers or by them and the Standard Oil Company together?

A. I referred to the fact that they could deliver you any amount of oil under that contract if they only ran it down to 28 and gave it to you.

Q. From the Pennsylvania field?

4826 A. Certainly they could, if they distilled it down to 28 and gave it, yes; distilled it down to 28 and give you the balance, give you any quantity of it.

Q. Does the Standard Oil Company control then, substantially, the greater part of the output of the Pennsylvania fields?

A. They control the transportation of it.

Q. Do they not control the output?

A. No, sir.

Q. Don't they sell the output of the greater part of the Pennsylvania field?

A. Certainly they do. I am talking about the controlling of the production. You are talking about the control of the market. They have the control of the market, supreme.

Q. I am talking about the control of the output when it goes to the consumer, and ask——

A. Yes, certainly.

Mr. Page: That is the same as the market.

The Witness: They make the market. That oil to-day is worth more money that we get for it, but they have the ability to get more out of these gas companies because they are the sole proprietors of this transportation and they oblige the producer to sell his oil for less than it cost.

Q. That oil to which you just referred is export oil, DDD, isn't it?

A. They would make more money entirely if they used the crude oil.

Q. That is the export oils DDD, to which you referred?

A. Yes, and we are selling that at less than they are paying you for this oil product distilled, which we used to throw in the streams.

Q. And less than it is worth, you say?

A. Less than it cost, and the other they are selling at a great deal more than it costs, an enormous, big profit.

By Mr. Page:

Q. What is the price at which you sell that 34 degree gas 4827 oil which is made from tar?

A. No, that is not made from the tar. That is a distillate—it is a neutral. This is the tar (Exhibit EEE).

Q. The neutral is Exhibit CCC?

A. That's it. Now, they will get about 20 per cent. of that stuff out of your products, if you want it.

Q. The question is at what price does that sell?

A. What we sell it for?

Q. Yes.

A. 3¼ cents.

By Mr. MATHEWSON:

Q. Where?

A. At the works.

Q. How much f. o. b. Philadelphia?

A. Well, we add to that $1.05 for freight per gallon and that makes it 4.30.

Q. That would mean delivered on the other side of the harbor?

A. That means in Jersey.

Q. And does not include the lighterage and the transportation form the dock on this side to the consumer?

A. No, sir.

At 1:15 P. M. a recess was declared till 3 P. M.

After Recess.

HENRY H. EDGERTON resumed.

By Mr. PAGE:

Q. Mr. Edgerton, have you given some consideration to the question of delivering gas in the City of New York at a more uniform pressure?

A. Yes, sir.

Q. In what way should the gas be delivered to the mains from which services are taken off at a more uniform pressure than it is now?

4828 A. The system would involve a few high pressure mains running up to 15 or 20 pounds or to such a pressure as would not impoverish the gas to any appreciable extent, and govern the pressure of the gas into the service mains of the company by means of a governor or by means of valves, regulated by hand or a workman if preferred, although the governor would be the most equal method and its action could be watched by a watchman at the important points.

Q. Taking into consideration the New York condition, where would you place those high pressure mains?

A. The high pressure mains run on each side of the City, being made of the largest diameter near the most important and congested districts, and running parallel with the shore, running from the Battery to the Ship Canal. I have estimated on the delivery of 8,000,000 cubic feet per hour under a pressure of 15 pounds in two mains of 24 inches diameter. The mains could be reduced from 24 inches to 20 inches, 16 and 12 inches toward the ends. And from these mains deliver by the governors into the larger mains and also into the service mains. There would be no need in this provision of which I speak to lay pipes across the City having any considerable pressure at all. The present piping being so nearly adequate to delivering an equal supply, that governing them into the large cross-mains would be all that is required. By such a system as this I am satisfied that the pressures could not only be controlled within a variation of an inch and a half, but possibly one-fifth of that. I have put in such a system, and I find that by using that in connection with the governor in the low pressure mains that the gas can be supplied with the greatest regularity, much more so than by using large mains as supply mains.

4829 Q. By the supply mains——

A. I mean what some one called trunk mains.

Q. How would you proportion these mains? You stated, starting with a 24-inch main and after that proceeded some distance, with a 20-inch main and a 16-inch main.

Q. Well, the question of proportioning the sizes would be dependent upon making observations in the district and ascertaining where the greatest amount needed to be delivered. Of course, I could not more than suggest the length of the 24-inch main on each side, it probably would be restricted within three or four miles in length, possibly less.

Q. And do you think that those pressure mains could be connected with the present system of pipes without great changes in their distributing system?

A. It would not require any change at all in the distributing system, only a due regard to the points of introduction of the gas by means of the governor and the selecting of a governor of a reliable character to handle the gas.

Q. What do you say as to the operation of this system after it was installed, the cost of operation?

A. I may say to begin with, to explain, that as early as 1871, after having made analysis of the gas, and ascertaining the permanent character of the gas, and that it did not lose but very little light on compression, I introduced a system of compressed gas on railroad cars, first, and that led to finally the use of the compression system as a means of distribution. The beginning of it as a means of distributing to low pressure mains, was in 1889, and it has continued successfully ever since. Also I used the same system as applied to manufacturing gas in one locality and transferring it to another locality. That has given data in regard to the cost of compression which is sufficiently reliable. I have made a calculation that,
4830 assuming the greatest output in New York City to be 8,000,-
000 of cubic feet in the heaviest hour's output, taking a pressure of 15 pounds per square inch, the cost per horse-power of one-half cent per horse-power hour, the cost per hour during the heaviest hour would be about $30 for compressing all the gas in New York City. I have also been in consultation with parties furnishing very large compressors to the natural gas fields, and have made quite a number of investigations in the use of those pumps, so that I know they op-

erate quite as well on a large scale, and better even, than they do on the small scale on which I first introduced them.

Q. Is there anything more that you desire to say on that subject that has not been covered by my questions?

A. Well, I might say that I saw in New York an arrangement for pumping gas through mains, the only difference being that the pumping was carried at such moderate pressures that they did not develop anything like the economy that the system is capable of. For illustration here, I have taken the amount of gas delivered with a loss of one inch water pressure to three thousand yards of main pipe, 24-inch main pipe.

Mr. MATHEWSON: Where, here?

The WITNESS: No, this is simply to give a basis. They would deliver about 92,000——

Mr. MATHEWSON: I shall object to that.

Q. That is just a verification of your figures?

A. It is to show the immense economy in main investment that could be accomplished by putting the gas at a little higher pressure than the ordinary pressure. The delivery increases through a pipe a little over the square of the diameter of the main and therefore——

4831 Q. What do you mean by that?

A. I mean a main of 8 inches would take more than four times as much gas as a main four inches.

Q. Under the same pressure, do you mean?

A. Under the same pressure. Then again——

Q. As you increase your pressure how does that increase the delivery?

A. As you increase the pressure it increases by the square root of the pressure, not directly but of the square root very nearly.

Q. You say you have observed some pumping of gas in this City. Where, in the works of the Consolidated do you mean?

A. Yes, I saw them have an exhauster, a gas handling station at the 14th Street Station in which they have engines and a pump of lower capacity; that is, it is in the form of an exhauster and is used to transfer gas around the mains in various directions. I did not note all the connections they had on a board which indicates it, but I saw the station was for the purpose of delivering gas independent of delivering it through ordinary mains, I took it to be. I also read a paper by Mr. Bradley in regard to pumping in downtown.

Q. Mr. Bradley I believe stated that they pump now to the lower districts I think, from one of their uptown districts, from 14th or 21st Streets, to Canal Street, didn't he?

Mr. MATHEWSON: I think to Bowling Green.

Mr. PAGE: It supplies the lower part of town.

Mr. MATHEWSON: It goes to Bowling Green.

A. The capital investment for a thousand feet of gas, to deliver gas in that manner, if carried at 15 pounds pressure would be something like—well, I have not the figure here, but it would be less than one-fifth.

Q. One-fifth of what?

4832 A. One-fifth of the cost of delivering it under the ordinary pressure now used.

Q. Are such systems of delivery under high pressure as you have described and then distributing it to mains to which services are attached at a much lower pressure, in use?

A. Yes, sir, there are quite a number of such cases. They are pumping gas now, in a great many localities; in fact, I have not been able to keep track of them, but there is a large number in the journals and other sources of information are daily showing an increase in that direction; several papers have been written and read before association meetings in that regard.

Q. And it is a well known system of distribution?

A. Perfectly.

Q. And as you have indicated, could be applied to New York conditions?

A. In fact, it has got to be applied here. There is no more avoiding it than there is avoiding—it has got to be done in order to keep up with the increase of consumption in New York. It is the only available means of doing it.

Q. Have you made an examination of the station record book at 21st Street station, which is Complainant's Exhibit 243?

A. Yes, sir.

Q. And a similar book at 44th Street station, which is Complainant's Exhibit 244, and of the 99th Street station, which is Complainant's Exhibit 245?

A. Yes, sir.

Q. Now, in regard to Exhibit 243 of the 21st Street station, have you made extracts from that?

A. Yes, sir, I have a recapitulation here of their monthly results during the year 1905, showing the amount of gas made and corrections for temperature, total gas sent out to consumers, oil gas to 14th Street, 18th Street, 42d Street, maximum output and minimum, fuel used in generators and in the boilers, oil used per thousand in gallons, oil used, candle power at the station corrected for temperature, candle per gallon of oil used, gravity (Beaume) of oil,
4833 amount of oil and all the other data of importance; drip
oil. It is comprehended in these two sheets.

Q. Never mind giving all that. I do not care for all those things. It is part of Exhibit E of City's Exhibit 87?

A. Yes.

Q. Now, Mr. Edgerton, have you prepared in convenient form and from this exhibit a comparison of candle powers, yield and quality of the water gas?

A. Yes.

Q. And upon that stated the City Inspector's tests for candle power for the same period?

A. Yes.

Q. You may state how the City Inspector's candle power was arrived at.

A. I took the City Inspector's candle power from the records at Mr. Lacombe's office, the City Inspector——

Q. The City Inspector makes tests, however——

A. They are made once a week.

Q. Up to July 1st?

A. Up to July 1st, and from that on they were made daily except occasionally on Sundays——

Q. Then up to the month of January as stated you arrived at that by taking the average of the tests for that month?

A. Yes. In regard to candle power, I have both the candle power at the station and the candle power by the City Inspectors, also the average gravity of the oil in gallons of oil used per thousand cubic feet.

Q. Taking the candle power at the works, did you take the corrected candle power as stated on Exhibits 243, 244 and 245?

A. Yes.

Mr. Page: I will offer this in evidence.

Mr. Mathewson: I have no more objection to this than I had to the original exhibit. I make the same objection.

The Master: Same ruling.

Mr. Mathewson: Exception.

Paper marked State's Exhibit HHHH.

4834 Q. From this exhibit, as a person having experience of the manufacture of gas, what do you find with respect to the heavier and lighter oils?

A. While there are some anomalous results reported here, I find that there is no great difference in results. Take the month of April——

Q. What do you mean by that?

A. In results from the oil. Taking April, for instance, there was an average gravity of 33.80.

Mr. Mathewson: At the 21st Street station?

The Witness: At the 21st Street station. I may explain about getting the average gravities——

Q. No, go on with your statement.

A. 33.80. The oil used was 4.47.

Q. Gallons per thousand of gas made?

A. Yes. Candle power corrected at the station 25.07. Taking an extereme difference, the average gravity of oil in July of 28.38, the gallons of oil, 4.83, the candle power is 27.72.

Q. That is the heavier oil, 28.38, produced more gallons of oil per thousand——

A. More candle power.

Q. With a slight increase?

A. There is a slight increase in the gallons of oil per thousand, but taking the month of October, for instance, 29.70, with 4.66 gallons, the candle power still keeps up to 26.38. The most instructive comparison, perhaps, is shown between April and May. April has practically the 34 degree oil; the gallons are 4.47——

Mr. Mathewson: That is a mistake. I don't know whether there are any others, but that is 4.49, according to the exhibit attached to the report.

Mr. Page: For April?

Mr. Mathewson: Yes, 4.49 and not 4.47.

The Witness: Well, that is all the better.

4835 Mr. Mathewson: That may be, but I am simply calling attention to the fact that the present exhibit is not in that regard accurate.

Mr. Page: Then correct it.

The Witness: Well, correcting it to 4.49 the candle power corrected at the station was 25.07 and in May, using 29.53 oil and 4.51 gallons, the candle power is 25.50.

Q. I call your attention to the month of June?

A. The month of June——

Q. Where the same average gravity oil was used as in May?

A. Yes, and in gallons per thousand 4.45 and candle power 26.85.

Q. And the loss in the city test in both of those, in one it is 3.38 candle power and the other 3.67?

A. Yes, but the most significant loss is on the month of May, where there is a loss of 5.09.

Q. What deduction do you make for these facts, Mr. Edgerton?

A. I can fairly say that that coincides entirely with my own experience in regard to the use of oil, that I would not give any preference to that lighter oil; in fact, the heavier oil contains a larger body of carbon and would stand more water gas.

Q. Does it show from their actual operations that practically the same result and the same variations are produced from each oil?

Mr. Mathewson: If they do, it seems to me the exhibit itself does show it. If it does not, it does not. I object to that as a conclusion which it is not fair for the witness to draw.

The Master: Well, you can ask him if that is his conclusion from the figures shown on that exhibit and to state his own opinion on it as an expert.

Mr. Page: Yes.

4836 Mr. Mathewson: I object to that also.

The Master: That I will allow him to do.

Mr. Mathewson: Exception.

A. Yes. There is essentially no difference.

Q. If you have anything else you want to point out on this——

A. 21st Street station is not the only one showing that. Taking the 44th Street station in the month of April the average oil was 34.48, gallons per thousand used 4.38, candle power 23.48. In May with practically 30 degree oil, 30.08, and using 4.40 gallons, gives a higher candle power, 24.14.

Q. Comparing the month of July with the month of November, what do you find?

A. The month of July, the oil averaged 29.01 and the candle power 28.06, but in the month a larger amount of oil was used.

The most anomalous results were shown in November and December, in my judgment, where the lighter oil is shown to manufacture gas tested by the City Inspectors of higher candle power than it is tested at the works.

Q. That is in the month of December?

A. That is in the month of December.

Q. The month of November shows a very slight variation?

A. The month of November a very slight variation, and I do not think anybody ever found such a case before. It is the uniform result throughout the country, no matter whether you use naphtha or the lightest oil, that you have always got to use more candle power in the winter and that there is a loss from condensation of illuminating power in the holder and to some slight extent in the mains, and here we have the anomaly that this oil raises the candle power higher in the mains than at the stations. I think that would require very considerable explanation. In fact the conditions
4837 here are reversed; candle power loses in the summer time and stays steady in the winter. It is remarkable.

Q. What is there in the heavier oil that in your experience has made it as good if not preferable to use than the lighter oil?

A. In various forms of apparatus the heavier oil has got more carbon and will stand more water gas and will give a higher result in candle power, than the lighter; although it gives a less number of cubic feet per gallon, it can be diluted more largely with the blue water gas than the lighter oil.

Q. What is there in the oil that gives it its illuminating value?

A. The carbon.

Q. And you find in the heavier oils more carbon?

A. They are more rich in carbon except when used in the Welsbach burner, and in that case it is the intensity of heat of combustion.

Q. Yes, the quality of the flame has nothing to do with the light from a Welsbach burner, has it?

A. No.

Q. That is the reflection from the incandescent of the mantle largely?

A. That is true, however, it is always the same increase or ratio of light with the Welsbach burner as it is with the common burner. I have tested gases varying all the way from 11 candles up to 40 candles with the common burner, and the same variation will be noted, if the Welsbach is properly adjusted, on the Welsbach burner.

Q. Referring to the same exhibit, what do you find with regard to the production of tar, the percentage of tar?

A. Following the use of 20,058,206 gallons of oil during the year——

Q. At what station?

A. At the 21st Street station, the residual oil or tar is 4,183,891 gallons or 20.81 per cent.

4838 Q. What did you find at 44th Street?

A. I found at 44th Street 24.7 per cent. and at 99th Street 25.8 per cent.

Q. How does that result of the percentage of tar correspond with your experience and with your observation of other plants?

A. I think that is an excessive amount of tar.

Q. Upon what do you base that?

A. Upon my own experience I have had the tar separated from water very carefully and at Danbury our tar amounts to five per cent. on the amount of oil used, tar drip.

Q. How is it at Lowell, if you have made any study of that?

A. At Lowell it is stated in the Massachusetts report as 3.70; at Fall River 12.1 per cent.; that was from the Massachusetts report of —I think it was the 20th Massachusetts report. I am not so certain about the Massachusetts figures, however, as I am about the Danbury results.

Q. From your experience, is from 5 to 10 per cent. about normal?

A. I think 5 to 10 per cent. would cover all the loss from different apparatus, although I noted that the loss is still greater as made by the Consolidated Company in its retort process, amounting in some cases to about 33 per cent., one-third.

Q. What is there in the production of carburetted water gas that would lead to the excessive percentage of tar?

A. Well, in the operation of alternating machines, in which the Lowe process of type——

Q. Was that the process that was used in these various stations of the Consolidated Gas Company?

A. Yes, sir, that is, it is used in the stations except in the retort stations that I saw.

Q. I mean, of course, these three stations in which you have used the comparison. I do not mean the coal gas stations?

4839 A. Yes, sir. I have not visited the stations, but I had reliable information that that is the machine they use.

Q. Now answer the question.

A. I am perfectly well acquainted with the machine and have seen it in many localities. The operation is to blow up the heat in a generator containing coal and by the addition——

Q. I know, but what is there in that operation that produces the excessive tar?

A. Well, it is the variation in the heat, when the oil is first turned into the machine there is a higher heat, no matter how it is managed, and there is a tendency to make a little carbon.

Q. From what element does the tar come?

—. It comes from the oil. It is a product—it shows the non-decomposition of all the oil in the gas. The machines from time to time are known to kick, as it is called, that is, the passages get clogged up and work into channels and gases escape decomposition in that way and they frequently have to be cleaned out, and towards the end of their time of proper duty they refuse to decompose the oil into gas.

Q. Then does a large amount of tar show an inefficient operation of the plant?

A. Yes.

Mr. Mathewson: Well, whether it does or not depends on the accuracy of the facts which he has testified, it seems to me, and a conclusion that somebody else can draw.

The MASTER: I think he might be proprely asked if in his opinion it would necessarily show an inefficiency. I think I will take that.

Q. In your opinion does a large percentage of tar as is shown from the operation of these plants necessarily follow from an inefficient operation either of the plant itself or from the management of it?

4840 A. Assuming the statements in the paper to be correct, it shows a very poor average operation, I should call it.

Q. And in a large production of tar there is a waste of the oil, is there not?

A. Always considered a waste, only to the extent that you can use it afterwards. Now we have methods for separating and using some of it.

Q. Yes, I know, but do you get as valuable a result from distilling tar in your gas generators and selling the tar as you would in applying the same amount of oil to making gas?

A. Not by any means.

Q. Then it represents a distinct loss in operation, does it?

A. It is not a valuable tar for sale, that coal tar is sold at a very low price.

Q. (Question repeated).

A. Yes.

Cross-examination by Mr. MATHEWSON:

Q. The use of high pressure pipes to overcome the variation in pressure would not overcome the variation due to altitude, would it?

A. Partially, that is, it would overcome it entirely if you would separate it off in sections, that is put valves in and then feed from your high pressure mains into the mains along at the different levels, which could be readily done.

Q. You never figured out how many sections it would require in the City of New York, considering the different points of elevation here?

A. I would only think it necessary to put in comparatively few from what I have seen. The variation from Columbia College down to 125th Street is a tolerable variation, I don't think it shows over one-third to one-half of an inch.

Q. That is not the only elevation in the City of New York that requires special treatment, is it?

4841 A. No, I saw a greater elevation on Washington Heights, down to 125th Street.

Q. And there is a deep cut running through Washington Heights, below Kingsbridge, separating the high altitude of Fort George from the high altitude of Fort Washington, on the other side of the island?

A. I am not acquainted with that particular locality, I don't remember it. However, I should not think it was necessary to treat separately over a variation less than, say, 100 feet.

Q. Would not the pressure at every point where the high pressure mains were attached to the distributing mains have to be kept down to a pressure not exceeding two and one-half inches?

A. Yes, sir.

Q. The effect would be simply to increase the point at which an initial pressure of two and one-half inches in the distributing mains was established?

A. That is just it, that is what would be the difference.

Q. Now, you speak about a pressure of 20 pounds in pressure mains. Do you mean 20 pounds to the square inch?

A. Yes.

Q. What would be the effect of that pressure on the distributing mains to consumers' meters if a governor broke down or the pressure was let into the distributing mains?

A. Well, there would be, by properly locating the governor, there would not be much effect. You have the outlet to the holder, it would blow the holder up in the nearest locality and raise the holder—no, I doubt whether that would be a proper safeguard, because the holders here are weighed to such an extent, they would require to be counterbalanced in order to make that workable. That is not impossible, however; I have seen it done on holders. You would have to have free access to the holder, but I have seen the pressure let loose in a large main from a governor without increasing it very greatly. They could take the precaution also of having a small opening in the governor, so that in any possible arrangement of the governor there would be only a certain amount of gas go through anyhow. There could not be any excessive amount of gas. Also a governor can be made, and is made, which any breakdown will shut off at that point. 4842

Q. A midnight consumption and a maximum hour's consumption is very difficult. How could you arrange that?

A. How could I arrange that?

Q. Yes.

A. You are not obliged to pump as soon as your output is well within hand, but you could proceed without the use of the pressure main; a pressure main is only intended for the maximum demand.

Q. Is it not well known in the gas system that you have to bank up pressure so-called against the hours of heavy consumption in order to keep up with your consumption, and is it not true that if a consumption once gets away from you, you can hardly catch up with it?

A. Well, that is just it, bank it up. It banks it up more than an inch and a half, 15 pounds of a pressure is really a power to bank up, for all you want.

Q. And that pressure would be great enough to blow up a holder if it got into it, the holder being weighted as ordinarily, would it not?

A. Well, the only thing——

Q. Well, would it not? Just give me an answer direct for once, Mr. Edgerton.

Mr. Page: Do you mean that they would reverse the pump and put it into the holder instead of into the main?

Mr. Mathewson: No.

A. It would raise the holder in the same manner that the
4843 exhauster would raise it. It would be a matter of indifference whether the exhauster at the works was raising the holder or the pressure was raising it.

Q. The holder does not support any such pressure as 20 pounds to the inch?

A. Yes, it would support 200 pounds or any other pressure—that is not the holder itself but the main.

Q. I am talking about the holder. Would it not take the top off the holder?

A. No, sir, not by any means. There could not any such action happen as that if you tried.

Q. What about the effect of this in the distribution mains, with a pressure of 20 pounds, would it not blow the meters out?

A. It would blow the meters out if you had high pressure enough.

Q. Would not that be high enough pressure?

A. Yes, sir, it would if it got into the mains, but——

Q. If it did get into the mains and did blow the meters out it would be a pretty serious situation, would it not, in the houses?

A. It would be, if anything of the kind could happen.

Q. Do you know of any great city where such a system as that is in vogue with a 20 pound pressure?

A. Well, I don't know exactly the pressure they pump to, but I know that they have distribution of both natural gas and artificial gas which they lead into the mains by the use of governors.

Q. I am trying to get at something definite. Do you know of any great city where they operate under a pressure of twenty pounds to the square inch on illuminating gas?

A. I don't think it has been carried up to twenty—Oh, yes, it has been carried higher than twenty pounds on illuminating gas and water gas.

Q. Give us the name of a great city in which such a system is in operation; because it must have been discovered by some engineer, if it is practicable, perhaps.

4844 A. So far as—I have not visited the places, but I know it is in operation in a number of places.

Q. Give us the names of a few of these large cities. I want to get a large city where that is in operation.

A. How big do you want?

Q. Well, give us the largest one you know of.

A. Well, New Orleans feeds it from a pressure main pumping around the city. That had been described in some of the proceedings of some associations, I believe.

Q. What is the pressure per square inch at the opening from this feeding main to the distributing main in New Orleans?

A. I don't know.

Q. Well, you know it is not twenty pounds to the square inch, do you?

A. No, I think it is probably as much, if not more than that.

Q. You don't know?

A. They have a six-inch pipe, and to distribute any amount of gas through a six-inch pipe around the city would require more pressure, I should think, than I have been calculating on.

Q. Well, do you know?

A. No, I do not.

Q. And is it not true that a pressure of even less than twenty pounds to the square inch, if it got into the distributing mains and services would blow out the gas at the burner if it were lighted?

A. Yes, but it could not get in there.

Q. Won't you be good enough to answer my questions and not try to argue with me? I asked you if that pressure got into the distribution mains and services, would it not blow out any gas that was lighted at the burner?

A. If you got twenty pounds certainly.

Q. Well, that is the answer. Now, what other city besides New Orleans that is of any size where you can mention any such system as twenty pounds to the square inch pres-ure in vogue?

4845 A. Well, while I was examining into the natural gas question, they were pumping about 100,000,00 feet into Chicago, and I was informed that they had sixty-odd millions of distribution there through a pressure system reduced in this man-er by a governor.

Q. That is natural gas, is it?

A. Yes. All gases follow exactly the same law in regard to compression and in regard to blowing up meters.

Q. Tell us again about Chicago. I did not quite catch that. What is the arrangement in Chicago according to your information?

A. My information is that they feed into a relatively low pressure main, that is, a main where the pressure is measured in ounces instead of inches of water, the way we do, and they pump a distance of about 130 miles. I have seen on the record something like 168,000,000 a day.

Q. Is it your information that there is a pumping main in direct conjunction with the distributing mains in Chicago with a pressure equal to twenty pounds to the square inch at the point where it enters the distributing main?

A. No, it is nearly 300 pounds.

Q. At the point where it enters the distributing mains?

A. Not at the point of the mains, but where it is reduced.

Q. I am talking about the distributing main which may be reduced twenty-five or thirty miles out of Chicago?

A. Perhaps.

Q. I am talking about the pressure at the point where it enters the distributing mains. Do you mean to say that the pressure you think is twenty pounds to the square inch at the point where it enters the distributing main?

A. Not where it enters, but where it is governed.

Q. Well, at the governor, separating it from the distrib-
4846 uting main?

A. Yes, more than twenty pounds.

Q. Where is that governor?

A. I don't remember the location of the governor.

Q. Have you ever seen it?

A. Not that I know of.

Q. Is that illuminating gas or is that gas used for fuel?

A. It is used for fuel and runs through the low pressure pipes.

Q. Is it illuminating gas?

A. No.

Q. Do you know whether these cities of that character, that is which had natural gas, have cast iron meters instead of ordinary meters?

A. They have a high pressure meter because they use pressure by the ounces, whereas you use pressure in the ordinary distributing mains by inchs.

Q. They have iron meters?

A. Yes.

Q. Now, you say that you would put one main up each side of the City of New York. Up what avenue would you run it?

A. I would run it along the water front as near the gas holder as it conveniently could be.

Q. Well, which ones? You are familiar with conditions here apparently?

A. I have not picked out the precise avenue and location for these mains. That is a subject I have not entered into. I know they will have space enough to do it.

Q. You think it would be a good thing to run it up along West Street, where the main would be generally on the level with the water, and on made ground?

A. I would not use such a locality now.

Q. If you come up on that route, do you think there is room enough in Broadway to run another large main on that street?

A. I would not propose to run it up Broadway or the central district at all.

Q. I thought you said you would run through the congested districts. Now, I want to know what avenue?

4847 A. I mean parallel with the congested districts so as to feed up as nearly into the cross-town mains as possible.

Q. You have not gone so far as to determine which avenue you would run this on?

A. No, sir.

Q. And you have not examined these avenues, to ascertain whether there is room to put high pressure mains of large diameter up those avenues, have you?

A. While looking around on the mains question I saw room enough to put more than 24-inch main in various localities. I didn't note any great congestion of mains.

Q. In the City of New York you did not notice any great congestion of mains?

A. Nothing that I considered insuperable to laying another pipe.

Q. You do not think the mains in New York are very much congested then, in the streets?

A. Not so much as they are in some of the natural gas districts where they are supplied with natural as well as artificial gas.

Q. What sort of a main would you put in, wrought or cast iron, for your main?

A. Wrought iron.

Q. What did you mean when you said that the capital investment for 1,000 feet, if 15 pounds pressure was used, would be less the cost of delivering it under the pressures now used?

A. I mean that the capacity under an increased pressure would be increased five times by using a little pumping during the congested hours, during the hours of greatest demand.

Q. But when you got in into the distributing mains, if you got the pressure between 2½ and one inch there, you would not distribute any more gas through that, would you, than if you kept the pressure in the distributing mains 2½ to one inch, without any intermediate mains? In other words, the amount of gas that
4848 you would deliver from your distributing mains, assuming the same number of services in operation, and the same number of burners, would be exactly the same, whatever produced the pressure in the distributing mains, wouldn't it?

A. Yes.

Q. In fact, your theory is, you would distribute more gas if the pressure was higher and came direct from the holder to the distributing mains?

A. No, that is not the idea at all. I mean to say that it would not increase the cost of the present main system, but would deliver an extra quality of gas or the increase at one-fifth the capital expense that would be required to go on under the present system, to meet the increased demand.

Q. At one-fifth the capital expense applied where?

A. Applied to new mains. That is, as the demand for gas increases your mains would have to be increased to meet it, and it would be about one-fifth the expense.

Q. You mean for future consumption?

A. For future and present. It would make it more equitable. I do not say it would make it cheaper for the present output, but it would make it more reasonable.

Q. But you would use the mains now in operation and put in other mains. That would mean a larger capital investment, wouldn't it?

A. For the price of main, yes, sir.

Q. Did you figure on wrought iron mains in your reply to which I have just called attention?

A. Yes; that is, the wrought iron mains would be a little less expensive than the cast iron mains and the wrought iron main would be much thinner than the cast iron main.

4849 Q. Have you ever operated a high pressure system of the kind you suggest in any great city in the East?

A. No, sir.

Q. So that your views are not based on your own experience in that regard in such a city?

A. Not in a large city.

Q. And don't you know that where these high pressure systems are used as a rule they are in small places?

A. Everything of that kind has to begin in small places.

Q. Now, let us take the question of candle power. Refer to State's Exhibit HHHH. You understand, don't you, that for the first six months, January to June inclusive, the city inspector made tests but once a week, that is to say, about four tests in each month?

A. Yes.

Q. You understand that, don't you?

A. I understand that.

Q. Now, what about the candle power of the Company corrected that you have stated to be for January, for instance, 25.14, 21st Street station; was that average obtained by taking four candle power readings made by the Company in the month, or by taking 30 candle power readings and averaging the whole 31?

A. I don't remember whether the full number of observations were taken a month, but I suppose thorough observations were taken, as they ought to be, by the inspector.

Mr. Mathewson: I move to strike out, "as they ought to be by the inspector."

Motion granted.

Q. Now you said that you made up that portion of the exhibit, Schedule 3 of the accountant's report, for Mr. Hall, didn't you?

A. That is, I supervised the starting out, directed the young man what to do.

4850 Q. Do you mean to tell me that you don't know whether this 25.14, January, for the 21st Street station, represents the average candle power of thirty-one days or of four days?

A. Well, I know that it does not represent four. Once in a while an observation might be missed. I looked over the candle power columns very carefully but whether an observation had been left out or not I don't remember.

Q. Do you know what hours the Company made the observations which were averaged at 25.14 candles?

A. I do not.

Q. Do you know at what hour the City Inspector made his inspections, four or five of them, which averaged 21.24 for January?

A. No, sir. My directions were to take at the time of the greatest output of gas.

Q. Now, if the days on which the City Inspector happened to make his four or five inspections the candle power of the gas happened to be lower than normal, there would be no fair comparison between a candle power at the Company's works which was taken by the average of every day in the month, and the average of the City Inspector which happened to be taken on those four or five days, would there? Do you think that is a scientific comparison at all?

A. The best I had. I do not approve of making observations once a week.

Q. That is all right, but do you consider that a scientific and fair comparison where you do not know how many days the City Inspector's 21.24 represents and you do not know the hour of the day when the observations were taken and you don't know whether those tests were fair average days for the month or not?

Mr. PAGE: Objected to as including more elements than he said. I have not asked him anything about the City Inspector.

4851 A. I did not predicate very much on the City Inspector's report on those early days. I do not believe I even referred to them.

Q. Yes, you do. You show the loss in the last column between correct candle power and city's candle power and testify as to the difference in the loss in one case or another as though it might be due to the character of the oil instead of due to the particular days on which the inspector happened to inspect?

A. No, I don't remember, only on April or May I think I ran down toward the daily inspections.

Q. And you did find that in April with an average gravity of oil of 33.80 the loss according to this unscientific method was 3.38 candles between corrected candle power of the company and the City Inspector, didn't you?

A. That is put down here, yes, sir.

Q. Do you know whether the City Inspector corrected for temperature or not?

A. Yes; it so states on his inspection.

Q. Does it state that he corrected for temperature prior to July, 1905?

A. I think they are stated here. Corrected and sworn to.

Q. You found by this method that with the lower gravity oil 29.53 used in May the loss was 5.09 as against 3.38 candles the previous month when a higher grade of oil was used, didn't you?

A. Yes, sir.

Q. You stated that the results were not entirely consistent, did you not?

A. I did.

Q. You would not expect them to be consistent, would you, unless you knew what days the City Inspector examined upon and took the observations of the company on the same days at the same hours at its works?

A. It does not require the same hours exactly. I think the observations ought to be taken when the current of gas is going out for lighting.

4852 Q. At substantially the same time in order to make a comparison and show loss of candle power between the works and testing station?

A. Not exactly the same time.

Q. I asked as to the same time. Oughtn't it be?

A. That is assuming the gas in the holder is a very different quality. I do not think it is necessary to be very particular about that. The nearer they are together the better, but then you have got to allow for the time, and distribution and all that kind of business could not be allowed for. The gas is about an average.

Q. The gas is going into the holder every day?

A. All the time.

Q. And don't you know that you cannot make a comparison which will show loss of candle power between the works or between the holder and the inspecting station with any scientific accuracy without testing at substantially the same time at the works or holder and at the testing station?

A. Well, it would be better to do it in that way.

Q. Don't you know that it frequently occurred in testings prior to the new law that the average of the city inspector who examined only four times a month would be found to be higher than the average of the company which examined every day in the month, due to the fact that the inspector happened to make the test when the average was high, and not the average test, or didn't you know that?

A. I didn't know that, but I didn't put any great weight on those first observations.

Q. Now, let us go down to the 44th Street station. You say that according to this method of comparison which you have taken, there seems to be in November a slight difference of .22 of a candle power between the average of the company at the works and the city inspector. You know the contract for the higher grade 4853 oil went into effect November 1, 1905, don't you? You remember that is the date of the contract?

A. I heard it so stated, yes, sir.

Q. You observe that in November when this small difference occurred, the average gravity of the oil, according to you was 34.25, while in October, a month before, it was 29.95, and the loss in candle power was 2.42?

A. Yes.

Q. And considering the fact, referring to December, at the 44th Street station, that the tests may have been taken at different hours by the company at the works, than the hours of the city inspector's tests, and that there was certain gas in the holder at that time which may have been made the day before, isn't it quite possible that there might have been a difference of .05 of one candle power without much difficulty?

A. I could not understand that. Any difference in the hours could not make any such anomaly as shown there.

Q. And referring to the 99th Street station, do you not observe that November and December there by the corrected candle power of the company and the city inspector's averages differed but very little, .12 of one candle power in one case and .09 in another?

A. Yes, plus. The city inspector showed a higher candle power than the gas at the station.

Q. Did I understand you to say that you have used 28 degree oil in preference to 34 degree oil to make a high candle power gas?

A. Yes, sir. I have used a heavier oil to a certain extent. I do not think there is any doubt but a heavier oil will make a higher candle power gas.

Q. Have you ever operated a low water gas plant in this section?

A. I have not operated a plant. I have been in close connection with them for days and weeks together.

Q. You said that if tar was left that wouldn't be so valuable. There is more carbon in tar, isn't there than in ordinary 4854 gas oil?

A. There is more carbon in it, yes.

Q. You said that the illumination depended, didn't you, on the amount of carbon in oil?

A. It does depend on the amount of carbon, but it has got to have sufficient hydrogen to float it.

Q. Then it depends on the hydro-carbon rather than the carbon, to be technically exact?

A. I spoke of carbonization matter as the source of the light, and always has been spoken of as such.

Q. Didn't you speak of the hydro-carbon as the source of the illumination ordinarily in the art?

A. I will say the illuminants, but the carbon itself really is the source of the light, the heating part of the carbon, and it depends on the amount of decomposed hydro-carbon.

Q. But there is no carbon in the oil, is there?

A. Combined.

Q. That is hydro-carbon in the oil?

A. Combined with the hydrogen.

Q. That is the hydro-carbon, isn't it?

A. Certainly. I never heard it stated any other way than carbon. Hydro-carbon is the chemical composition but the carbon is the source of light. I spoke of it as the source of light.

Q. Does the weather have any effect on the illuminating power of the gas and the efficiency of 34 degree oil as compared with 28 degree oil?

Mr. Page: Will you divide your question?

Mr. Mathewson: Let the witness divide it.

A. Do you mean whether it would stand cold weather any better than—the light oil would stand cold weather any better than the 28? I don't understand it, if that is what you mean?

Q. Yes.

A. I have not seen any practical difference, no.

4855 Q. And you think that no matter how cold the weather is that the 28 degree oil is just as efficient in producing a fixed gas to maintain its candle power under those conditions of temperature as a 34 degree oil, do you?

A. I think, if properly decomposed into fixed gas it would be just as well.

Q. With low apparatus?

A. With low or any other apparatus.

Q. Well, do you mean with low apparatus?

A. Yes.

Q. You consider then that the oil is better for gas making purposes simply because it contains a greater proportion of carbon, do you?

A. Combined carbon. That is, it has the hydrogen to carry it into a gaseous state. Understand the distinction I make between the carbon and hydro-carbon is simply that the light is due to the carbon entirely and not to the hydrogen. The heating part of the carbon particles when the gas is decomposed by heat.

Q. You know, do you not, that the Consolidated employs certain of its tar deposits for fuel in lieu of coal?

A. Yes, they all do that. I think at Danbury we were the first to separate tar so as to use it successfully in the boiler.

Q. Do you mean to say at Danbury there was only about 10 per cent. of tar drip?

A. Less than that.

Q. What became of that? Did you use that?

A. We used that for firing the boilers.

Q. Didn't you have your tar run into the river at Danbury?

A. It did at one time. We had a small portion, simply a portion that was carried off owing to the fact that cold water and the tar is hard to separate, but by heating it up with a provision they have now the tar and water separate so that now it runs off.

4856 Q. Wasn't Captain McKay called in an consulting engineer on the elimination of the trouble from the tar running into the river, and installing a system of purification and so forth in Danbury?

A. I never heard of his advising to tar at all. It has been talked over for a number of years by myself and the superintendent, but there was so small an amount manufactured that when a lawsuit came up compelling them to act they acted.

Q. Captain McKay was called in, wasn't he?

A. I don't remember that he was. I wasn't there.

Q. You met him in Danbury, didn't you?

A. I met him in Danbury in regard to this price matter, yes.

Q. And soon after that the trouble from tar running into the river was eliminated?

A. Oh, that was years ago.

Q. Hasn't he been consulting there for five years or more?

A. Not that I know of. I know that Mr. Merritt would consult with Mr. Addicks or anybody else he can talk to on the question of gas.

Q. Did you ever meet Captain McKay more than once?

A. I never met him but once.

Q. Did you ever discuss any engineering matters in reference to Danbury with him, or he with you?

A. I remember one time he was around there trying to "raise hell" about the price.

Q. You didn't know he was employed by the company to "raise hell," if you put it that way, did you, instead of their relying upon your advice?

A. The exact information in regard to the matter is this, that for a long series of years since 1892, the superintendent of Danbury and myself have been arguing and urging a decreased price to the small consumer. There was a large difference in the price of gas for large and small consumers and it had got to be out of proportion.

4857 Q. I am asking about Captain McKay and the tar running into the river, and his position as consulting engineer and in conferring with you. I do not care about anything else.

Mr. Page: I think your question was broader than that. You asked if this man had been called in as consulting engineer generally for some time past.

Mr. Mathewson: Well, let him answer that but we do not want a treatise on the subject.

A. It is a very short story, if you will let me tell it.

Q. I asked if he has not been called in as consulting engineer on one case or another for the past five years and been paid for it?

A. I never heard of him being called in until he came down and advocated a reduction of price and then turned up a few days afterwards, and said it would be better to reduce the quality at the meter. That is his way of reducing cost to the consumer.

Q. That is your answer, is it, to the proposition that you were not consulted by Captain McKay in reference to these engineering matters regarding which he was brought in?

A. I never consulted with him; never knew, in fact, he had been consulted. I know that the plan of purifying the gas with iron as adopted in Danbury was exactly after my plan.

Q. Are you a part owner of the Danbury company?

A. No, I haven't a cent of stock in the Danbury company.

Q. Don't you know that Captain McKay has been employed and has been paid repeatedly within the last five years to advise them as an engineer with reference to the plant?

4858 A. If it has been done, the superintendent didn't know anything about it, nor anyone but the president, and I don't think any director knew about it. I know this, that Mr. Merritt, the president, talks gas with Mr. Higgins or with you or Mr. Addicks. Anybody that turns up, he confers with on gas matters.

Q. Are you in receipt of compensation from the Danbury Company now as consulting engineer?

A. No, sir; I never did. What I put in there, except to produce a gas plant, I gave them and give them a proper steer and now they have got it so that I reckon that it will turn out as it did in New Orleans.

Redirect examination by Mr. Page:

Q. Mr. Mathewson asked you if the pressure of 20 lbs. in the main would not blow up the gas holder. Was it your idea——

Mr. Mathewson: I didn't ask him any such question, Senator.

Q. Was it your idea that the gas would be pumped away from a holder or toward the holder?

A. Pumped away from the holder.

Q. Then to get into the holder, it would have to go back through the pump, wouldn't it?

A. It might go back into some of the other holders, but it would be a relief to the gas if the pressure on the holder was not too great or if the governor or holder did not interpose. However, there are half a dozen mechanical devices, that could provide for an outlet from the excessive pressure of the gas, back into the holder by passing the governor. We have that appliance in nearly all our exhausters, with the exhauster pumps, to pass without producing too great a pressure on the holder side; we have a by-passage that 4859 lets it go around and back again. The same mechanical appliance could be used in this case. I do not think it would ever be necessary, but if any one was nervous enough to choose to employ it they could do so.

Q. And he says if this tremendous pressure gets into the services and meters, that it would blow them up. Now are there mechanical devices for taking care of that.

A. Yes, sir. There are thousands and thousands of customers using gas under pressure where they have individual pressure reducers. I did not approve of them at the outset, but they have been used safely for such a period of time that——

Q. And this high pressure service is used very largely to transmit gas to suburban districts, is it not, in the City of Chicago now?

A. Yes, sir. It has been used by the Pintsch system, and by various systems. I employed it at Asheville to pump gas from the works to the holder in the city about three miles, through a two-inch pipe. The whole supply depends on that.

Q. Now, these high pressure mains would not connect directly with the services?

A. Not at all. They are distinct from the services and even from the mains. They are absolutely a valve, a valve in between the high pressure main and the large mains into which to deliver, an absolute valve there that stops off the pressure and it is only opened when the pressure goes down in the large main.

Q. I understand there are governors so made that if any accident happens it shuts the valve and closes the——

A. Yes, the governor is made so that upon any accident that could possibly happen the governor drops and shuts off the gas supply at that point.

Q. Then these various difficulties that Mr. Mathewson suggested had been foreseen and been provided for by mechanical devices, had they?

A. Yes, sir.

Q. In these very systems?

A. Yes, and operated for years.

4860 Q. Now have you not in this paper, State's Exhibit HHH, set down the observation of one day as against the observation of another day. Have you? You have taken the average of the month?

A. It is the average of the month and the average of the year and therefore it cuts up all variations to the extent of the number of observations.

By Mr. Mathewson:

Q. Did I understand that if you divided the City into districts you would supply gas to some districts only from a high pressure main or a supply main?

A. I would supply through the high pressure system, pumping as long as there was congestion, as long as there was a demand for gas or fall of pressure, but as soon as that was relieved and the gas flowed slowly there would not be any need of any pumping.

Q. Yes, I understand, but you would send the supply there to that district through one of the high pressure mains?

A. No, not necessarily at all. The low pressure main could carry it. It would not involve the disuse of the present low pressure mains there. It would be just simply having an independent supply to the districts where there was a large demand.

Q. Didn't I understand that the low pressure mains would be shut off from each other in these districts. They would have to be, wouldn't they?

A. Only on districts where there was a large difference in the elevation, and even in that case the district governor at that point could take care of it during the low pressure time.

At 4.45 P. M. adjourned to Monday, December 10, 1906, at 10.30 A. M.

Last Exhibits:

Complainant's, 257.
State's, HHH.
City's, 122.

4861 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *December* 10, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

4862 MR. BURR: I noticed, Mr. Master, that on page 4269 the full number of pages to which I referred in the case of The People of the State of New York *ex rel.* Consolidated Gas Company, respondent, against the State Board of Tax Commissioners, appellant, as the same appears in the cases in the Court of Appeals, Special Franchise Tax Cases, Volume XXI-XXVII, July, 1902-July, 1903, in the *Law Institute,* it stops short at page 49 and does not include the pages as marked 55, 56 and 57, which I asked to be added:

"A. The appraisement referred to consisted of elaborate statements made by experts as to each constituent company, of the tangible property of each company, in great detail, giving the value as to each, of every main, meter, service, all plant, machinery, furniture, offices and whatever tangible property there may have been; these all together aggregated $27,649,060, as before stated; they contained no references to or appraisement of the franchises, or business or contracts, or good-will of the constituent companies; there were also valuable patents, which were not mentioned or valued in the appraisement; the Consolidated Company, in 1884, issued $35,430,060 of its stock to purchase all of said tangible property, and all of the franchises, business, contracts, patents and good-will of the constituent companies; the difference between the above amounts, namely, $7,781,000 was considered to represent, at that time, the franchises, and business, and contracts, and patents, and good-will—everything, in fact, except the tangible property; the word "franchises" was used (but not in the inventories as a general word 4863 to cover the whole, for which the $7,781,000 of new stock was issued, and not as representing any particular franchises as the word is being used to-day.

"Q. Please state by whom this appraisement was made, and, if you know, the purpose in stating the value of the franchise?

"Objected to as incompetent, immaterial and irrelevant. Objection overruled; exception.

"A. There was no appraisement of franchises, as I have already stated; the appraisement of the tangible property was made by several different experts in that line—builders of gas works, machinery, etc.; I cannot remember who all of the persons were; one of them was an officer of the Continental Iron Works.

"Q. Is any mention made in that document of the good-will of the companies, or of the right to exist as a corporation, or of contracts with the City, or of the right to make and sell gas?

"Objected to as incompetent, immaterial and irrelevant. Objection overruled; exception.

"A. No; because no appraisement of those matters was made—the appraisement was made only of the tangible property."

Mr. Mathewson: In going over the testimony of last Saturday hastily, I observe on page 4846 one question which reads: "I am talking about the control of the output when it goes to the consumer." The question should be: "I am talking about the control of the output so far as it concerns the consumer," instead of "when it goes to the consumer." I would like to have that corrected.

4864 Henry H. Edgerton resumed.

The Witness: I stated the selling price of coke at Butte at $9 by the gas company. That was coke bought, Connellsville coke, for water gas trials, and their own gas coke they sold at $7.35, which is about $2.35 a ton more than the best coal in Butte at that time. I also want to correct a statement in regard to the meter at 14th Street station being made by Gratz. It should be at the 42d Street station. I found in looking over my 42d Street inventory that the Gratz meter was located there.

Q. On page 4746, Mr. Edgerton, you said: "I saide the price of it at Butte from $6 to $7.35."

A. That involved selling it in measure instead of weighing——

Q. Well, that is all right; we have that correction made now. Of course you will have an opportunity to read over your testimony and make any typographical corrections and so forth. Now, Mr. Edgerton, you were asked by Mr. Mathewson whether you could give the elements of cost price of gas at 24 cents in the holder. Have you made that computation?

A. Yes, sir.

Q. Will you state it?

A. It amounts, in adding up the details, to 23.26 cents, in case of making a certain percentage of coal gas and water gas.

Q. What is the percentage of coal gas and water gas?

A. That would be leaving out nearly all of the water gas. I have not calculated the percentages, but it seems practically an enriched coal gas. And there is another calculation based on the Central Union results, which I brought to 22.92 cents.

Q. Now you state the first computation is of an enriched coal gas. You may state exactly what you mean by that.

4865 A. The basis of the gas, that is, it is almost entirely composed of 14 candle power coal gas, and to that we add oil gas enough to restore the candle power to above 22 candles and enough water gas to carry the oil vapor through the super-heater. I heard it proposed on very good authority by an eminent engineer that the oil gas could be made in the Lowe machine without any water gas to carry it through, by simply flooding the machine with oil when it was hot and using an excessive amount of oil to make up for leaving out the water gas, but I have my doubts about such an operation, and I have added a percentage of water gas in order to carry it through.

Q. You may give the details of that computation of 23.26 cents.

A. That involves bituminous coal at $3.20 a ton and a yield of 10,600 cubic feet to the short ton of 2,000 pounds. The other elements are the marketing of the coke at $4 per ton and——

Q. Give your amounts there as you have them. Do not skip around.

A. I did not think you wanted all the details.

Q. Yes, give us the details.

A. The cost of coal unloading, charging, drawing and yarding and quenching and labor of gas making and purifying I have at 36.12 cents. Superintendence at ½ cent. Coke and breeze made, 66 per cent. of the total weight of coal, or 1,320 pounds per ton of coal used. I used for fuel for the manufacture of the gas 20 per cent. of the coke made. The return from residuals I put at: Coke, 19.8 cents per thousand cubic feet; tar, 12 gallons at 5.65 cents; ammonia return, 4.7 cents, being altogether 30.16 for residuals per thousand. I see the Central Union has 29.06 cents. This gas will be about 14-

candle power. Enriched with oil gas to 22-candle power, taking oil
at 4.23, generator coal at 20 pounds per thousand, labor of making
oil and water gas three cents per thousand. Repairs to appa-
4866 ratus, buildings, 4.5; purifying material, lime, .75 cents;
oxide, .25 cents; oil and waste, .37 cents; water, .17; general
expense at works, half a cent; repairs to oil gas apparatus, 2 cents
per thousand, half a cent, making 23.26.

Q. On the basis of 10,000,000,000 cubic feet of yield, what would you say of half a cent allowance for superintendence?

A. Well, while I was making these figures I did not take the enormous output into consideration. I was figuring more on the smaller output which they have at the Central Union. That figure for superintendence would be rather excessive on the total output; it would be something like $50,000, I think, on the total output of the Consolidated.

Q. And 4½ cents for repairs on the same basis would be somewhat in excess of the experience of the Consolidated Gas Company, even?

A. I think it would, although in running new machinery and gaiting it up, and getting everything in order, it would possibly run up to that while it was in a state of experimental—not exactly an experimental stage, but gaiting and getting in first-class running order. I state this because I recommended the use of sloping retorts and inclined retorts at Lynn, and for the first year there was some disappointment about the results, but after getting everything in shape and getting the men accustomed to the handling it turned out very nicely.

Q. After you get your apparatus gaited, an allowance of that much would be somewhat excessive, would it not?

A. Yes, the repair of apparatus and buildings; it would be more even than the old-fashioned coal gas methods, but would amount in the——

Q. So that you have a margin in those two figures, do you, in
superintendence and of repairs, quite a large margin?
4867 A. It seems so on the output of the Consolidated.

Q. That is for a plant which would produce 10,000,000,000
feet?

A. Yes, on the output of 10,000,000,000 feet, it would be $450,000 a year for repairs at works?

Q. And what was the experience of the Consolidated?

A. I think their repairs on their present works come to about $297,000 at the works, on the repairs of buildings and labor and material.

Mr. Mathewson: Where does he get that $297,000? Is that from any of these exhibits or accounts?

The Witness: I got it from the account made up by the gas company that you were looking for the other day to verify.

Mr. Mathewson: Do you mean the statement of operations for the year 1905?

The Witness: Yes, sir. I simply added up the station repairs.

Q. Of the different stations as shown on——

A. On pages 13, 14, 15, 16 and 17, the five stations.

Mr. PAGE: State's Exhibit ZZ, for identification.

Q. You may state why you took coke at $4.00 a ton?

A. I have found that coke is not a bad generator fuel. My first experience in that direction was to provide the New Orleans Water Gas Plant with coke. Then I sent Alabama coke to Danbury and had put it through a test, and I have found there that although it was more bulky than the coal, that it gave very excellent results; and, furthermore, I found that coke had been used through-
4868 out the West for generation of the water gas or blue gas portion of the product, and also in Massachusetts; in fact, wherever they had an excess of coke. Lynn got along with 32.8 pounds generative fuel; Cambridge, 31.8; Worcester, making due allowance for the portion used of hard coal, 35. All those figures compare very favorably, pound for pound, with the use of anthracite.

By Mr. MATHEWSON:

Q. Do you get those figures that you are now giving from the Massachusetts report to the Gas Commission?

A. Yes, sir.

Q. On what year?

A. This is the twenty-first Annual Report.

Q. The last printed report?

A. I think it is the last one. It might have been from the twentieth Annual Report.

By Mr. PAGE:

Q. Proceed. You say it compares favorably. Have you got any figures of plants that have used anthracite?

A. Yes. We have right in the same tabulation: Fall River shows the best results at 32.2 anthracite, and the next is based at 34.6 anthracite. Of course, the smaller plants used more. These, using coke or coal, I quoted the best results from the use of both fuels used in large plants.

Q. What deduction do you make from that?

A. I make the deduction that until the market could be worked up for coke among the multitude of small consumers that coke could be used to a very considerable extent in making water gas.

Q. And that would be a saving to the company on what?

A. On the present selling price of coke of nearly a dollar a ton.

Q. What about their anthracite?

4869 A. And it would save on anthracite 23 cents a ton, for the anthracite is put in the account, I believe, at $4.23 a ton.

Q. Therefore, from the use of this coke in the generating apparatus they would save the $4.23 on anthracite, and for that reason you have given us a value of $4.00; is that as I understand your testimony?

A. Yes; I found $4.00 would be saved, seeing it displaces anthracite, pound for pound. The use of coke in the generator is detrimental in some respects, and in some respects advantageous. It is a lighter fuel, and therefore it is more bulky, but, on the other hand, the porosity of the coke aids to a certain extent in decomposing the steam. The only precaution necessary being it shan't be overcharged with duty; that is, that it should be run at a slightly lower rate.

Q. Now, you may proceed to the other computation you made, and describe what it is, and your method of arriving at the price.

A. The computation based on the Central Union results is the make, one-half of water gas of 28 candles and one-half of 16 candle coal gas, in this case.

Q. Enriching the coal gas with the 28 candle water gas?

A. Yes, sir.

Q. Well, proceed.

A. In detail?

Q. Yes; we want to get it on the record.

A. Water gas 5½ gallons of oil at 4.23 cents, 23.2 cents; coke or coal at $4.20 per ton, 2½ cents; labor of gas making and coal handling, 3 cents; labor of purifying material, lime, .75 cents; oxide, .25; repairs to apparatus and buildings 2 cents; the water gas part that means; general expense at the works, .7 of a cent; superintendence, 5. The coal gas net as before——

4870 By Mr. Mathewson:

Q. Is this the water gas?

A. Yes, that amounts to 31.7 cents. The coal gas net as before, 6½ cents.

Repairs to apparatus and buildings, coal gas——

Q. I do not think I understand you.

A. That is on the coal gas after deducting residuals, 6½ cents.
Repairs to apparatus and buildings, 4½ cents.
Purifying materials, lime and oxide together, 1 cent.
Oil and waste, .37.
Water, .17.
General Expense at the works, .5.
Making, 12.94.
That is the coal gas. And the cost of the combined gas, 22.32, to which I add the difference in oil between 4 cents and 4.23 cents, which is .6 of a cent, making altogether 22.92. You see, I took this figure of oil from the Central Union price, which was 4.04, but I see I have made the correction above in the price of oil. In fact, corrected it twice.

By Mr. Page:

Q. So this last .6 of a cent should be deducted?

A. Should be deducted.

Q. Making the cost what?

A. 22.32 cents.

Q. I notice you have carried the same price of superintendence and repairs to coal apparatus as you did in the former. Would your answer be the same, that is, as to a plant producing the 10,000,000,000 capacity, that that would be excessive?

A. Yes, concentrated as the works would naturally be to combine the operations, I think that allowance for superintendence would be excessive.

Q. And as to repairs?

A. Repairs also probably would be less.

Q. Well, it would be less to the same extent that it was in your other computation?

4871 A. Certainly. I think I have made a rather excessive allowance there for repairs.

Q. I noticed that you used both lime and oxide purification. Why is that?

A. The oxide purification takes out only the sulphureted hydrogen, and the lime will take out the carbonic acid as well as the sulphureted hydrogen, thereby adding to the illuminating power of the gas nearly one candle for every per cent. of carbonic acid taken out. I allow for this for the reason that I think ultimately that this plan of operation will be carried out.

Q. I understand that each per cent. of carbonic acid in gas reduces the luminosity by one candle?

A. Yes, sir, that is my result. I have seen results from other experiments making slight difference, slightly less than that; but my tests show that with this per cent. of carbonic acid in the gas that the amount of illuminating power is less, with a flat flame burner.

Mr. Page: This is in response to a question asked on your former cross-examination, Mr. Mathewson. Would you care to cross-examine him on that, or shall I go ahead with some other subject?

Mr. Mathewson: I think I should rather have you finish with the witness if you can, Senator.

Mr. Page: Certainly.

Q. Have you made any computation as to the quality of the Central Union gas to find its candle power for the year ending October 31st, 1905?

A. I made such a computation as is often made by gas men; that is, taking the quality of coal gas at 14 candles and taking the quality of the water gas as based upon the amount of oil used, and
I find that the mixture of Central Union gas would give 23.1
4872 candles; that is, based on the 670,000,000 of coal gas at 14
candles, and 925,892,000 of water gas at 5.05 gallons of oil.
Adding those candle powers together, I find——

Q. Wait a minute. The 925,892,000 of water gas at 5.05 gallons would give what results?

A. 25¼ water gas; and the average of the two would be for the two 23.1, as near as it can be calculated.

Q. Now, Mr. Edgerton, have you made a computation as to the efficiency of the 42nd Street plant, as compared with the results of the other stations of the Consolidated?

A. Yes, sir. The gas in the holder at the 42nd Street plant as given in Exhibit ZZ for identification is 34.96 cents, and the average cost of 21st, 44th and 99th Streets, at 31.05 cents, leaving a difference in favor of water gas of 3.91 cents. That difference in the output of the 42nd Street plant amounts to $48,454.47, which capitalized at 5 per cent. gives $969,089.

Q. That is the theory of depreciation for lack of efficiency, the details of which you gave in regard to the 42nd Street plant?

A. Yes, sir. That is, those plants lagged behind in efficiency to that extent.

Q. And to that extent an intending purchaser would be getting a plant that would cost to reproduce gas $48,454.47 more than the other plants of the Consolidated operating in the same city?

A. Yes, sir.

Q. That loss you capitalized at 5 per cent.?

A. Yes, sir.

Q. Now, have you made a similar computation in regard to the 21st, 44th and 99th Street plants as compared with any other companies in the city of New York?

A. I made a computation comparing those plants with the results at the New Amsterdam, taking the results of Consolidated as 31.05 and the New Amsterdam at 28.06.

4873 Mr. Mathewson: I think the witness ought to state where he gets this 28.06, because I do not think it is in evidence. I suppose he has not examined the books.

Q. First, is the New Amsterdam a water gas plant solely?

A. I so understand; it is so shown in the accounts of the testimony before the Commission.

Q. In the New Amsterdam case?

A. In the New Amsterdam case.

Q. You have examined the record in that case, have you?

A. I examined the account, made up by the State's accountants, said to be drawn from that report.

Mr. Page: It could not be made up by the State's accountant.

The Witness: The cost of the gas, Consolidated Water Gas plant, averaged 31.05, and for the New Amsterdam, 29.01.

Q. That figure you get from Exhibit 336 in the New Amsterdam record before the State Gas Commission, printed on Appeal pages 573, 574?

A. Yes, sir.

Q. Now you may proceed with the computation based upon that basis.

A. The difference in the cost is 2.04 in favor of the New Amsterdam, and multiplied into the output at the Consolidated makes $161,724.24 and that——

Q. Is that the entire Consolidated?

A. The three water gas plants of the Consolidated. It is 5 per cent. on the sum of $3,234,484.

Q. Have you finished your computation?

A. Yes, sir.

4874 Mr. Page: We offer in evidence this exhibit 36 before the State Gas Commission, printed in the book on appeal, pages 573 and 574, down to and including the first total on page 574.

Received in evidence and marked State's Exhibit I.I.I.

Q. Referring to State's Exhibit I.I.I., will you state as to the percentage of tar produced by the New Amsterdam operation as compared with the percentage of tar produced by the Consolidated?

A. It would be 11.4 per cent.

By Mr. MATHEWSON:

Q. On what, or of what?

A. Of the oil used.

By Mr. PAGE:

Q. As against what percentage of the Consolidated plants?

A. 20.81 per cent. of the 21st Street, 24.7 per cent. of the 44th Street; 25.3 per cent. of the 99th Street.

Q. Did you make an examination of the 42nd Street plant of the Consolidated Gas Company?

A. Yes, sir.

Q. When did you make that examination?

A. I don't remember exactly what days now.

Q. Since making that examination have you had an opportunity to compute or to make the necessary computations?

A. No, I checked off the items as given here as to sizes of quite a number of apparatus they never allowed us to measure, and I have not had an opportunity to go into that at all in regard to checking off and as to the quantities. I only had an opportunity to——

Q. And the reason being you have been almost continuously on the stand since then?

A. Well, more, too, figuring up, and engaged in figuring up various data and looking for information we required in the 4875 case. I really had no time to go over this—I can say however in regard to that portion of 42nd Street which includes the dock and all the woodwork that——

Q. What do you mean by all the woodwork?

A. The woodwork is the trestle which carry the coal handling apparatus, it is very dilapidated indeed; in fact, it is in a condition which would require renewal at no very distant period. I should think the depreciation on that woodwork that is exposed to the weather that I saw there was fully 60 per cent. of its value. In fact, it would require an absolute renewal within a very limited period of time throughout. Also the handling of the coal along that dock is an expensive carriage. It is all done by men pushing carts and heavy wheelbarrows. The usual economy in practice in coal handling is by making the coal carry its own weight down an incline. This is neglected at that point and men have to be employed to push it. I have put in apparatus similar in which the loaded car of coal down a slight incline would carry the empty car back, and it is a very long trestle work and I suppose there are really more men employed there in pushing the coal and handling it in that way than in the other portions of the works. That is corroborated by the yield of gas per man at the works. Otherwise the works are in better shape than the 14th Street station, as they have full depth regenerative furnaces, double stage charging, and I should suppose it would make quite superior results in regard to the output of gas per retort and per man were it not for the charges due to handling the coal.

Q. The criticism which you have made upon the question of coal handling, I understand is in the schedule under the head of "Buildings, Coal Sheds and Runway Overhead," is that it?

4876 A. Well, the brick work. I speak of this portion here where it says—I see these runways are not valued very highly on the inventory.

By Mr. **Mathewson**:

Q. You mean by Mr. Mayer?

A. I mean by Mr. Mayer. If that includes all, of course the runways are certainly very dilapidated and the trestles are certainly very dilapidated. If the whole is comprehended in this $1,000, I do not think that would be out of the way. I had not noticed his valuation.

By Mr. **Page**:

Q. Well, is the whole thing included in that?

A. Well, it would require further investigation. After the making of this inventory I was filled with work of various other kinds, running here and there and making out tables, and I have had no opportunity——

Q. In connection with this case and in connection with the testimony you have been giving here?

A. Yes, sir. I have simply been working night and day and it was utterly impossible to go over the details which are given.

Q. If you had a little more time it would be an easy matter for you, from the notes that you have made, to testify in regard to this matter, wouldn't it?

A. Yes, I made rather ample notes.

Q. How much time would you need?

A. I would like to rest a little bit. I cannot say.

Q. Well, answer the question if you can.

A. Why, I could go over those papers in a couple of days, I presume, by working the same way that I have been working and working day and night.

Q. Can you from the notes that you have state the condition of the apparatus as you found it without giving the detailed figures?

4877 A. I found, as in the case of the 14th Street works, that only about two-thirds of the apparatus was in action in the generating plant. The purifier house is very old, and the roof is dilapidated; you could see daylight through it in a number of places.

Q. What about the apparatus in the purifier house, was that in pretty good shape?

A. The purifiers I should not allow very much depreciation on. They are in fair shape, although very old and constructed for lime, which they are also using now; they are using lime purification there to some extent. The meters I was speaking about, which I stated were of a very antiquated make and which I ascribed to 14th Street, would require considerable depreciation unless the drums have been recently renewed. You understand, the depreciation on station meters goes on within.

Q. Have you got it there?

A. No, I have not got it here.

Q. Take it as you go along, take the sheets one by one.

A. Those are computed at $10,875. I should allow some depreciation on them unless the drums have been renewed recently, and that I could not tell.

Q. In the schedule that was furnished you at 14th Street it stated what drums they had in the meter, and from that you were able to state that they were of a more recent construction?

A. Yes.

Q. Is there anything on this that would indicate that other drums have been put in?

A. No, there was no other indication or statement that they had renewed the drums, and the cases, as I said before, were of Gratz & Company, of Philadelphia; they must be forty years old, all of that.

Q. What have you to say about these benches?

A. The retort benches were of a much better type than the 14th Stre-t station and ought to give superior results, but there were one-third of them out of action. 4878

Q. Due to what?

Mr. Mathewson: Does he know?

Mr. Page: If he does not, he can say so.

A. Well, there were quite a number of them dropped, that is dropped for resetting, but one stack of them—one side of one stack, they were engaged in firing up at the time I was there, that is there was smoke coming out and they were putting fire under them. And I went back a couple of days afterwards to see if they were getting along any, and I saw they were not.

Q. What do you mean by that, that you went to see if they were getting along any and you found they were not?

A. I found the fire was not pushed, it was simply smoking and smouldering along in the same condition as on the previous day. I didn't know whether they had really made up their mind to fire the stack or were simply drying it out.

Q. Were they making gas in it?

A. No, it was not in a condition to make gas. It was just barely warm.

Q. And the same on each occasion?

A. Yes.

Q. Were the doors open?

A. It was not being pushed at all——

Q. The question was, were the doors to the retort open?

A. No, the indication about that is in these regenerative types, they put coke in and it fires up, and it takes about—well, after a bench is fairly dry, they would be simmering along for some little time before they put heat in them.

Q. Had these benches recently been reset or anything of that sort?

A. Yes, I think they had been reset.

4879 Q. What have you to say as to the physical condition of the benches?

A. They were in fair condition, those that were in operation, and I looked in all those I had an opportunity, except where the lids were off and they had a fair heat on and they were in fair condition except the oil gas portions. Those were filled with carbon. The oil gas was made in retorts about 20 feet long and what we call a through-and-through setting, seven to a bench, and from what I saw of those it looked to me as if they were in bad condition for making oil gas; in fact the results from them are poor also.

Q. Have you your notes here of this station? Why don't you take those?

A. Those were notes taken down by Mr. Midgley, as I was examining. I don't have them here; I do not suppose I was going to testify in detail in regard to the 42d Street station until I had an opportunity of figuring it up.

Q. Well, can you go on at all or not on this apparatus, Mr. Edgerton?

A. I do not like to go into details on apparatus I have not figured up, no, sir.

Q. What have you got to say about the condition of the buildings?

A. The retort house building is in very fair condition; there is nothing to be complained of about the condition of the retort house. The purifying house, as I said, the damage was in the roof and the roofs of a number of other buildings, coal sheds and so on, are not in good order.

Mr. Page: I do not see that it is really profitable to continue this examination.

The Witness: As I stated, I had no idea that any details were to be gone into in regard to 42d Street.

Q. And it is impossible for you to testify in regard to this 42d Street plant without sufficient time to calculate from the notes 4880 that you have or speak from the notes that you have already made, the value of the articles and the element of depreciation based upon the physical appearance, physical condition, is that it, Mr. Edgerton?

A. That is so. I took along a gentleman with me and he made the notes while I looked over the buildings, and my intention was to go over them rather thoroughly and figured out comparative costs.

Q. Have you been able, in the time you have not been on the stand, to make any examination of the 21st, 44th and 99th Streets plants?

A. I have had hardly time to eat my meals.

Q. Will you answer the question, please?

A. No, sir.

Q. How long would it take you to make an examination of those other portions of the plant and make the computations?

A. I think I could make an examination of the salient features, and as I have some plans to calculate from in regard to some of the apparatus contained, I could make it within ten days. I have more definite information in regard to the Lowe machinery and the setting of brick work which they put inside and the details connected with it.

Mr. MATHEWSON: By Lowe machinery you mean water gas machinery, as compared with coal gas machinery?

The WITNESS: Water gas machinery, yes. Coal gas machinery has been rather out of date for many years and engineers have not given it as much attention on this side of the water as they have water gas.

Q. Well, do you mean that in a week or ten days you could complete the examination and complete your computation and be ready to testify?

4881 A. I coul,d on the salient features, without going minutely into all these little outhouses and buildings that are listed here.

Q. That is by taking that portion of the apparatus that would be liable to depreciation, and that would constitute an important element in the value of the plant?

A. Yes, skipping over the minor matters and going only into such as were of importance.

Q. Mr. Edgerton, you used an expression in answer to one of Mr. Mathewson's questions, that there is no such thing as 34 degree oil, or some such phrase as that. What do you mean by that?

A. I meant that it was a misnomer to call any oil a 34 degree or 28 degree oil; the fact is that it is a mixture of a great range of oils; it is impossible to have an oil of any one degree, a 34 degree oil might range over from 47 down to 25, owing to the different component parts.

Q. You did not mean that there is no such think known commercially as 34 degree oil?

A. No, but I meant——

Q. If I understand you, and if Mr. Mathewson will not object, you mean there is no oil of 34 degrees alone or any particular degree alone.

A. No.

Mr. MATHEWSON: It is what they call a "blend"' in whiskies, or don't you know?

The WITNESS: It is a matter of the greatest difficulty to isolate a single degree of oil; it would require fractionation and refractionation and redistillation a number of times and then you would only end up with a small percentage of the amount you started with.

Q. And it is the average which gives it its commercial degree, as shown by the hydrometer?

A. That is all, as shown by the hydrometer, and for that reason all this particularization about degrees of oil in my experience is just simply empirical. I know how it originates; it is from the men handling the apparatus; if anything is out of order it is——

4882 Q. You mean degrees of oil for use in gas making?

A. In gas making. They very commonly say the oil is bad. They say if the machine is kicking, they say it is bad oil, and that relieves them from any more care or trouble about it. For that reason, I have had to make quite an examination into the oil feature in water gas and I find that the difficulties in handling oil are due to other features than simply whether it contains a certain quantity or one fraction or the other.

Q. What degree of oil do you use at Danbury?

A. Any degree, it doesn't make any difference, so that they can get it in a vapor, and it goes through the retorts. The heavier the oil the higher candle power gas it will make for the same number of cubic feet.

Q. What price do you pay at Danbury for your oil?

A. 4.2 cents, I think it is.

Q. What price have you been paying heretofore?

A. Well, I have paid, I think, as low as 3½ or 3¾. I found that at Norwalk what would be called by the generality of gasmakers, a superior oil was 3¾ cents——

Mr. MATHEWSON: Just a moment. I am going to object to the testimony of this witness about Norwalk unless he knows something about it. We have had a good deal of this, and it seems to me it is time to stop.

Mr. PAGE: Well, you have had very little so far about Norwalk.

Q. What is Norwalk?

A. Well, South Norwalk is the center of distribution for a great quantity of oils. They have about a dozen large tanks there, the Standard Oil Company, and they distribute from that point to the various users throughout Connecticut and some parts of Massachusetts.

4883 Q. Have you recently visited the tanks in the yards at South Norwalk?

A. Yes, sir, I have seen them twenty times within the last year, I reckon.

Q. Have you obtained within the last month or two samples of oil from South Norwalk?

A. I did. I took a sample of oil right out of the Standard Oil Company's tank, delivering it to the electric light station.

Q. And what price was that oil?

Mr. MATHEWSON: Just a minute. Is there any evidence that this witness knows what price the oil was, and to whom, and what grade of oil? What is it? It seems to me that is objectionable, and I object to it. The witness has not been shown to be competent.

The MASTER: It does not seem to me it is very material, unless you get it down a little closer to the question here.

Mr. PAGE: Well, of course, we cannot do everything at once. That oil was brought down here and tested and fractionated.

Q. Did you inquire the price of the oil at the time you got it?

A. Yes, sir; I got it from the superintendent. It is a public matter there, it is a municipal plant there and their accounts are published.

Mr. MATHEWSON: I suppose then the superintendent can testify, and if the accounts are published, they can be produced?

The WITNESS: Yes, I can get you the accounts and can get you the bills.

Q. When you say the superintendent, is that the superintendent of the works or the superintendent at the tank yards?

A. The superintendent of the electric light plant or manager.

4884 Q. And he told you that he paid?

A. Yes, showed me the price and told me all about their contracts, and told when they had changed them and——

Q. Other than that do you know the price that the Standard Oil Company charges for that particular grade of oil at South Norwalk?

A. No, I don't know the price for any other parties except that electric station.

Q. This sample of oil, whatever it was, that you obtained there at South Norwalk, you brought here to New York, didn't you?

A. Yes, sir.

Q. To whom did you deliver it?

A. I delivered it to Professor Sherman of Columbia University, and directed a fractionation of it, directed freezing tests and Beaume tests and all the tests that are usually applied to oil.

Mr. PAGE: We will produce, if we are given an opportunity, this superintendent who will testify to the price of this Norwalk oil.

Q. Did you also bring down a sample of the oil that you use at Danbury?

A. Yes, sir.

Q. And did you deliver that sample to Professor Sherman?

A. I did. That was a sample of January 6, 1905. I think we were getting it at a little better price then than now.

Q. January 6, 1905?

A. Yes. We have at Danbury—I picked out from among the samples, there were about a dozen samples brought down. We make it a practice at Danbury to keep samples of the tanks. We have samples for four or five years back, I think, over a hundred of them.

Q. Do you know the price at which that oil was sold in 1905?

A. No, sir, but I can get that. I think it was a little less than at present.

4885 Cross-examination by Mr. MATHEWSON:

Q. Now, you figured an ideal cost price of 23.26 cents at the holder for gas of the Consolidated Gas Company to be manufactured under assumed conditions and I understand that that gas was to be chiefly enriched coal gas, is that right?

A. Yes, sir. The first——

Q. Enriched 14 candle power coal gas you said?

A. Yes, sir.

Q. You assumed then that the coal gas itself would produce about 14 candle power unenriched, did you?

A. Yes, sir, as the ordinary way of testing it with the argand burner.

Q. Well, don't you know that gas is tested with a flat frame burner in New York and not with an argand?

A. Yes, that is for the reason that the New York——

Q. No matter about the reason. I am asking you whether you know that to be the fact?

A. I know it is, and I introduced it myself, that is, I was instrumental in getting the flat frame burner introduced.

Q. What would be the candle power of gas tested in a flat frame burner which showed 14 candle power tested on the argand burner?

A. It would be about 11 candles, 11 or 12 candles, with the best flat flame burner.

Q. What proportion did you assume would be this coal gas enriched and what proportion water gas in your final mixture?

A. One calculation is half-and-half——

Q. No, this 23.26 cents. The enriched coal gas; my impression is that you said you added a little water gas to it in your estimate?

A. Oil gas.

Q. Oil gas?

A. I added a little water gas to the oil gas.

4886 Q. Well, now let me know how much of your mixture would be coal gas, how much oil gas, and how much water gas?

A. It would be about—I have added 225 cubic feet of that mixture to the thousand.

Q. Which mixture?

A. Of the mixture of oil gas.

Q. And water gas?

A. Oil gas 70 per cent., and water gas 30 per cent.

Q. And this mixture composed of oil gas 70 per cent. and water gas 30 per cent. amounts to how many feet per thousand of the coal gas?

A. About 225.

Q. 225 feet mixed with a thousand feet of unenriched coal gas, is that right?

A. Yes, sir.

Q. Well, do you mean that this 225 feet of oil and water gas is mixed with one thousand feet of unenriched coal gas or that one thousand feet of the mixed gas is made up of 225 feet of oil and water gas and 775 feet or enriched coal gas?

A. Yes, you are right, 225 feet of the thousand are this mixture and 775 feet of the coal gas.

Q. You know that about four-fifths of the present output of the Consolidated Gas Company is water gas, don't you?

A. Yes.

Q. So that in order to produce more than three-quarters coal gas of the total output it would be necessary to reconstruct the water gas plants to a considerable extent, would it not, and substitute coal gas apparatus for it?

A. No, I assumed that the coal gas would be made at the new works.

Q. At the Astoria works?

A. At the Astoria works, and the water gas would be made over here, that is, water and oil gas, that would be made in the water gas works.

Q. Well, that would be a substitution, would it not, if you simply take the present manufacturing capacity of the Consolidated Gas Company and reproduce it in coal gas?

4887 A. You would have to make an additional amount of coal gas to what you are now making, certainly, very largely.

Q. How would you mix them in that event and where?

A. Well, they would have to be mixed over on this side, they would have to make their arrangements to mix them before entering the holder properly.

Q. It is in evidence that the present output of the Consolidated Manufacturing plant is, say, ten and one-half billion feet, and they sell more than three billion additional per annum and that the first unit at Astoria will produce four billion feet or only one billion feet per annum more than the gas manufactured for the Consolidated by other companies. Then there would be no great surplus manufacturing capacity of coal gas in that event, would there?

A. No, I assumed in this that they would go on with the——

Q. And put on other units?

A. Yes.

Q. Even in that event it would take a considerable expenditure and certainly another unit in addition to the first unit at Astoria with a capacity of 4,000,000,000 cubic feet before you could get your production up to 77½ per cent. of coal gas as against 22½ per cent. of oil and water gas, would it not?

A. Yes.

Q. And it would virtually mean therefore the abandonment of the water gas stations in New York in large measure, no matter where that manufacturing capacity was replaced, if you were to get that proportion of coal gas, would it not?

A. They would have to shut down to a considerable extent on the water gas production, certainly, to make the addition of coal gas.

Q. I would like to have you give me again the elements which make up the cost of this unenriched coal gas, not deducting 4888 any residuals. We will do that later. Give it to me sufficiently slowly so I can follow it, please.

A. You add to the cost of coal gas up to the——

Q. I am trying to get coal gas in the first place.

A. Do you want me to go through all the details?

Q. Yes. You figured, if I understand you correctly, and assumed the same item in your later computation, that the net cost of material and labor after deducting residuals would be only 6½ cents?

A. 6.46.

Q. Now I want in the first place the cost of the material and labor in detail and secondly the items in detail which you deduct to produce that remainder of 6.46 cents.

A. Bituminous coal $3.20 a ton, yield, 10,600 feet to the ton, that is 32.2 per thousand.

Q. Short ton?

A. Yes, sir. Cost of unloading 10 cents per ton, charging and drawing coke, .44 cents, handling and yarding, 4.48 cents.

Q. Now give me the details of the 4.48 cents divided into the different classes?

A. I put that at, putting coal into the retort at 2.24 and drawing coke, quenching and yarding and handling coke at the same, that is 2.24 cents per thousand feet of gas; that included the purifying.

Q. Is that what is known as yard labor?

A. Yes, that would comprehend all the labor except some under the term of general expense at works, which would include some labor, one-half cent 36.62 cents.

Q. Then if I understand correctly your total expenditures you figure in the unenriched coal gas are as follows.

A. No, that is what is wrong. It is not the total expenditure for unenriched coal gas.

Q. Well, the expenditures for unenriched coal gas, but not the total expenditure.

A. Yes.

Q. You put bituminous coal at $3.20 per short ton 30.2
4889 cents, figuring a production of 10,600 feet per short ton; un-
loading, ten cents a ton equals 1.44 cents per thousand; charging 2.24 cents per thousand; drawing coke, quenching and handling and all yard labor, 2.24 cents per thousand——

A. No, that does not include all yard labor. I said there was half a cent more.

Q. Except superintendence?

A. No, a half cent in general expense at works.

Q. By labor it includes all except half a cent for superintendence and half a cent for expense in general expense?

A. Yes.

Mr. Page: It includes .5 of a cent for superintendence.

Mr. Mathewson: That is brought in later.

Q. Then .5 of a cent for superintendence?

A. Yes.

Q. Making a total of 36.62 cents, is that right?

A. That is so, but it does not bring the total until it gets into the holder.

Q. I have not got to that point yet. What rates did you charge for labor in the yards in computing this 2.24 cents?

A. $1.75 for ordinary labor and $2.50 for gas labor, gas makers.

Q. How many hours per day?

A. Two shifts 12 hours.

Q. Each?

A. Yes.

Q. Now, how many men did you allow, the same number that the Consolidated is now employing or did you not know how many they are employing in that connection?

A. I allowed a compromise between the amount they employed in their coal gas works, that is a yield per man, I think, of 24,000 feet, but this is based upon inclined retorts and handling an entirely different apparatus. It is much more economical than the ordinary

coal gas plant. In fact, it is based on about 3 cents for labor,
4890 for retort house labor and for other handling besides that.

Q. You find no inclined retorts at present in the Manhattan plants, however?

A. No.

Q. And didn't you know that in the construction of the Astoria plant, after a long consideration, that not all inclined retorts were installed there?

A. I understood they were about half and half, that is, they were going to try half horizontal and half inclined.

Q. Now let us take the additional items, to be added to the 36.62 cents to make the total cost in holder before residuals are deducted.

A. That is exclusive of the oil gas enriching?

Q. Yes.

A. Repairs to apparatus and buildings 4½ cents; purifying material, lime .75; oxide .25.

Q. That is a total of one cent?

A. A total of one cent for purifying material.

Q. Without labor?

A. Without labor, oil and waste .37 cents, such water as is required around for washers and so forth, .17 cents. General expense at works, which includes odds and ends of labor and draying, expressing and such items as I generally put into general expense, .5 of a cent. Those are the coal gas items.

Q. That makes how much, added to your 36.62 cents?

A. I do not add them—I then after——

Q. Won't you do so now? I would like to proceed from that point.

A. 43.16.

Q. Now that is the total of your unenriched coal gas before residuals are deducted, is it?

A. Yes.

Q. Now will you be good enough to tell me what your residuals are in detail?

A. I allow 1,320 pounds of coke per ton of coal, coke and breeze.

Q. And you figure the price received at how much?

A. I deducted from that 20 per cent. as the amount they used in firing the retorts and the balance I take at $4.00 a ton valuation, making——

4891 Q. Does that include the breeze?

A. Yes, that includes a percentage of the breeze. I used that——

Q. Making how many cents per thousand?

A. Making 19.8 cents per thousand.

Q. 19.8 cents per thousand for coke?

A. For coke. Tar, 12 gallons at 5 cents——

Q. Makes how much per thousand?

A. 5.65 cents.

Q. Per thousand feet of gas 5.65 cents for tar is that right? That must be a mistake, is it not? You said 5.68, I thought, before.

A. Yes, that is erroneous. It is based on a ton.

Q. Well, that 5.65 cents was based on a ton of coal, which was an error, was it not?

A. Well, the twelve gallons is based on a ton of coal, yes.

Q. Won't you correct that error and see what it should be?

A. It is .56 of a cent.

Q. .56 of a cent, is it not, instead of 5.65 cents?

A. Yes, although that seems to me to be a low figure for tar return.

Q. Well, we are taking your own figures and correcting the error which you made in your first computation, keeping your other figures; the result would be .56 of a cent, would it not?

A. Yes.

Q. Now, what is the next item of residuals?

A. Ammonia liquor.

Q. And how much of that do you allow and at what price?

A. Well, now, that price is at about 28 pounds of sulphate of ammonia to the ton. I have not—I got that by allowing 50 cents per ton receipts. I do not think that would correspond exactly. In fact, it would probably be a little higher. I had to figure that out last night without having got hold of the wholesale price of sulphate of ammonia, and therefore I put that in there at 50 cents on the ton.

Q. Well, fifty cents on the ton of what?

A. On the ton of coal.

4892 Q. On the long or short ton of coal?

A. Short ton of coal.

Q. Well, that is 4.7 cents, is it, on that computation?

A. 4.7 cents.

Q. Now, is that all the residuals that you deducted in your computation?

A. That is all.

Q. Well, that makes how much for residuals—is that .47 of a cent or 4.7 cents?

A. .47 of a cent, according to that calculation.

Q. So that makes a total of how much for all residuals?

A. 20.83 cents.

Q. Is it 20.83?

A. Yes, 20.83.

Q. Now, if you deduct 20.83 from your total cost of material and labor which was 43.16, you get a net cost for the unenriched coal gas of how much?

A. 22.33.

Q. And if you deduct 20.83 from your 36.62 which you used in your original computation, you have a remainder of how much?

A. From 36.62?

Q. Yes, and if you subtract your residuals from 36.62, because you did deduct your residuals before from 36.62, and you got a balance of 6.46 as the net cost of labor and material before some other items were put in—I want to find what that should be?

A. 15.79.

Q. So that instead of being 6.46 cents as you said on your direct-examination, it should be about 150 per cent. greater than that, or a total of 15.79?

A. 15.79. There must be some error there still, for I have not compared that with the Central Union residuals of 29.06——

Mr. MATHEWSON: Well, perhaps the Central Union made a mistake and got too much, but we will take your figures, and if that disposes of the coal gas unenriched, we will pass on to the oil gas.

At this point a recess was taken to 2:15 P. M.

4893 After Recess.

HENRY H. EDGERTON resumes the stand and further testifies:

Cross-examination continued by Mr. MATHEWSON:

Q. In your computation you gave unloading as ten cents a ton, or as 1.44 cents per cubic foot. The number of cubic feet in a ton is 10,600 you stated?

A. Yes.

Q. How do you get 1.44 cents by dividing ten cents by 10,600?

A. That is an error in the decimal points there. It should be——

Q. It cannot be an error in the decimal point, because it would not be 1.44 cents regardless of the decimal point, would it?

A. Well, I will tell you how that occurred. I can see there an error plainly. I took discharging at 15 cents a ton, and then I come to consider in figuring it up I had coal unloaded at 12 cents a ton, at $3, in Butte and various other places. It was 10 cents a ton in Danbury for unloading coal, and so I changed that to 10 cents a ton accidentally in place of 15. The price of $1.44 was got from 15 cents a ton.

Q. Then 1.44 cents is error?

A. Yes, that should be 14.4.

Q. No, it would not be 14.4, would it? Suppose you divide 10 cents by 10.6, because there are 10,600 cubic feet, are there not?

A. Yes. I say in the first calculation, judging 15 cents for unloading and dividing by 10.6, I got 14.4, and with the cost of unloading to 10 cents, would bring it to——

Q. .94 cents?

A. No, it would be .94.

Q. Yes.

A. That is, I mean .094.

Q. Now, what do you make it?

A. I make it .094.

4894 Q. .09. Now, as a matter of fact, if you divided 10 by 10.6, doesn't it give .94 instead of .094. It is about one-tenth, isn't it, a trifle less than one-tenth?

A. No, it is 10 cents on a ton and there are 10,600 cubic feet to a ton.

Q. So that your final figures are .094?

A. Yes.

Q. Then your computation should be corrected in that respect, should it not, as it now stands?

A. Yes, sir. I think it needs correcting in several particulars.

Q. Then if you divide 15 cents by the amount of gas that one ton produces that could not have produced with accurate division 1.44 cents, could it?

A. I think pretty nearly.

Q. Well, could it? If dividing 10 cents by 10,600 or 10.6 produces .09, how could dividing 15 cents by 10.6 produce 1.44?

A. Well, it is a mistake in the position of the decimal point, I see.

Q. It is a mistake even if you divided 15 cents by 10.6 originally, wasn't it?

A. I don't know as it is out of the way.

Q. Supposing you divide 10 by 10.6?

A. 15 by 10.6.

Q. That is 1.44, isn't it?

A. That is 1.44.

Q. Then if you divide 10 cents by 10.6, it would not be .09, but it would be .94, would it not?

A. No, sir.

Q. Will you divide 10 cents by 10.6 and see if that does not give .94 instead of .094?

A. No, that would bring, if you multiply them back—you would get ten cents, instead of that you get one dollar.

Q. Well, what do you get by dividing 10 cents, then, by 10,600?

A. I get .094.

Q. Well, now, that is what you would get if you divide 10 cents
by 10.6. Now, I am willing to take your answer. Ten cents
4895 per ton would be how much per thousand if a ton produces
10,600 feet?

A. That would be 9 cents, I think.

Q. .94 of a cent, wouldn't it?

A. Yes, sir.

Q. Now, you took $4 per ton as the value of coke residual, on the theory that it would be used instead of anthracite coal under the boilers or under the apparatus producing coal and water gas, didn't you?

A. I proposed to use it in the generators, yes.

Q. Well, the generators mean coal and water gas, don't they?

A. Yes, sir.

Q. You did not find that the coke actually sold for $4 a ton by the Consolidated Company, did you?

A. No.

Q. And you made this allowance on the theory that it would be used under the generators?

A. A portion of it, yes.

Q. Now will you tell me whether if you produced the amount of enriched coal gas which you proposed and only 225 feet out of each thousand of water and oil, whether you would use more than 5 per cent. of your total production of coke under the oil and water gas generators?

A. Well, you would not use a very large percentage of it.

Q. It would not be more than 5 per cent. at the outside, would it?

A. I have not figured that up. I think it would be a little more than that.

Q. And what you did not use under the coal and coke generators you would be obliged to sell, would you not?

A. Yes.

Q. And if we produced that amount of coal gas it would make more coke on the market than there is now, wouldn't it?

A. Yes, sir. Still, I consider $4.00 a ton would be——

Q. I understand what you consider. I am getting at the figures now. Now, let us take the sulphate. What price did you expect to get for that in these conclusions of yours?

4896 A. Well, my calculation was made up yesterday. I did not have access to any market figures about those prices, and I supposed my prices balanced the Central Union, but I found this error in calculation had thrown them out somewhat, and that is what misled me.

Q. Well, do you want to revise your calculation as to that?

A. Yes, I think that it should be revised to the prices of products here. This morning I tried to get a price on one of these products, and yesterday I took that from recollection, from what my experience was.

Q. What did you take in this computation from recollection as the price for sulphate?

A. I took the yield of the sulphate, I think, about thirty pounds to the ton of coal, and——

Q. Thirty pounds to the short ton?

A. Thirty pounds to the ton of coal; twenty-eight to thirty pounds.

Q. Well, how much does that mean per long ton?

A. That would mean slightly more than about ten per cent.

Q. It would make between thirty and thirty-five pounds per long ton, wouldn't it?

A. Yes, I think twenty-eight pounds would be a fair statement of that.

Q. Was that what you assumed in your computation?

A. I think it was about twenty-eight pounds.

Q. Then per long ton that would mean nearly thirty-one pounds, wouldn't it?

A. Yes, sir.

Q. Don't you know that the general experience in this country is a little over twenty pounds, instead of thirty-one pounds of sulphate?

A. No, I don't know that. I tried——

Q. You know they get a little more in England than they get here because they run lower heats?

A. I don't know as they get any more. I should think it would be about the same, with the same care.

4897 Q. Well, you found there was more sulphate than was actually obtained, didn't you by the works in New York?

A. I don't know as they make any sulphate at all. I didn't see any evidence down there. I think they trade off their ammonia liquor and sell it as liquor.

Q. Now, give me the name of any company here or hereabouts, a large company, that is producing thirty-one, or anything over thirty, or even thirty, pounds of sulphate per ton?

A. Well, I don't remember since the New Orleans Company gave up making sulphate of any figures in connection with it. I have forgotten. My recollection, however, was that they made as much as that, but it has been quite a number of years; I would not be positive about it.

Q. Don't you know as a fact that the average obtained per long ton of sulphate in this country does not much exceed twenty pounds per thousand feet?

A. I should think that was a very small yield.

Q. That may be so, but don't you know that that is the fact?

A. No, I do not.

Q. What price did you calculate for sulphate?

A. Well, I had not access to prices. As I say, I was trying to quote the market this morning on it to see if I could confirm my price. I found since, though, that the price here is $4 and a fraction a hundredweight.

Q. That is the price you used in your computation?

A. No, I didn't use that price; I used a lower price, but that is the price here. I don't know that it would be called a wholesale price. It is the best price I could get.

Q. What price did you use in your computation?

A. I did not use a price on sulphate, because it is based more on the liquor than the sulphate, because most gas companies here sell their liquor, and do not treat it for sulphate. It requires a special plant, a sulphuric acid generating plant and a lot of paraphernalia. 4898

Q. Where do you get in, in your statement of expense here, the cost of producing the sulphate from the liquor?

A. Well, I have not gone into producing the sulphate from the liquor. The gas company here does not do that, and they are somewhat at sea about that, so we have to go into it in another way. I looked at the Central Union sales of liquor, and, seeing that it corroborated their sales for residuals, corroborated my own offhand figures. I did not look farther into it. I took the ammonia at——

Q. But if you sell sulphate and regard it as a residual, you must include in the expense the cost of producing the sulphate from the liquor?

A. Certainly.

Q. Where is there in this statement of "cost to holder" which you have presented, where is that expense provided for?

A. I did not go into details of that expense of making sulphate of ammonia. I did not consider it that way. I looked at it just as most of the companies sell it. They sell it as a liquor. I do not think that there are very many manufacturing plants in the country that turn it into sulphate of ammonia.

Q. Well, did you allow fifty cents per ton for the liquor?

A. I allowed an amount for the liquor that I consider was justified by the receipts of the Central Union.

Q. Well, what is that amount that you allowed, regardless of where you got it?

A. I got it from this book somewhere.

Q. Which book?

A. The Central Union printed case on appeal. I got this more to back up my offhand estimate. "Ammoniacal liquor and receipts therefor, $17,514"; page 210. And that is based upon 670,518,000 cubic feet of coal gas.

4899 Q. What do you mean by saying you took fifty cents per short ton and dividing that by 10,600 feet produced by a ton you got .47 cents? What was it that you computed at fifty cents per ton? The ammoniacal liquor?

A. The value of the ammoniacal liquor proceding from a ton of coal; but I see I have made an error there, in that it is too low.

Q. What is too low?

A. The fifty cents.

Q. Do you know of any company hereabouts that gets fifty cents per ton for ammoniacal liquor?

A. That is all. I have got the $17,514——

Q. From the Central Union?

A. From the Central Union.

Q. Outside of that you don't know of any company hereabouts that gets fifty cents per ton for ammoniacal liquor?

A. Per ton of coal, you mean? . I based it on the ton of coal.

Q. You based it on fifty cents per ton of coal?

A. Yes. I see there is an error.

Q. The Central Union does not get any such figure as that, does it?

A. I think they get more, according to their statement here; $17,514.06.

Q. Won't you look at the Central Union record to which you have referred and see if the Central Union does not get about three cents per thousand feet?

A. I think they get calculated out according to that 2.62 cents; yes, sir.

Q. And if you multiplied 2.62 cents by the number of cubic feet in a ton, number of thousands, that would be multiplied by 10.6, wouldn't it?

A. Yes, sir.

Q. Wouldn't that give only twenty or thirty cents per ton instead of fifty cents? Just figure that out and see how much that would be, multiplying that by the number of thousands produced by the ton at the Central Union coal gas works? 27.77 cents, wouldn't it?

A. Yes, sir.

4900 Q. 27.77 cents, that would be the result instead of fifty cents, wouldn't it?

A. Yes, sir.

Q. Now let us take the subject of tar. You computed tar at how much; five cents?

A. Five cents a gallon.

Q. Don't you know that that is very much greater than the market price for tar in the City of New York?

A. Oh, I just had a quotation in quantity at nine cents.

Q. Had a quotation of what?

A. I simply telephoned to a large dealer.

Q. Let us have the name of the dealer? Tell us the name of the dealer, will you?

A. That I have forgotten. It was just through the telephone communicated; it was to see how it varied from my figures.

Q. That was for refined tar in the City, wasn't it, that you got the quotation, and not for tar liquor that had been produced by a gas company in that shape?

A. The inquiry was for coal tar, just the ordinary coal tar, and no refining about it, because when it is refined it is not coal tar any more.

Q. Was that the price at which this concern to which you telephoned could purchase the ordinary coal tar or the price at which they were selling the ordinary coal tar?

A. That was the best price. That I understood to be the buying price; I understood it was such a price as could be obtained.

Q. Try and think of those people, because we would like to make their acquaintance. Try to think for a minute. I want to know who that is that is willing to give that price.

A. A third party put me in communication with them over the telephone, just simply to see what difference there was between my own assumption of the cost price of tar and what they really obtain here in the city, to get New York City conditions, if possible.

4901 Q. Was it a price for a large amount of coal tar, or was not any amount stated?

A. The idea was to get their price for a large amount.

Q. Did you yourself talk with these people over the telephone?

A. No, I don't think I did.

Q. Who did?

A. Mr. Kirby did, I think.

Mr. Mathewson: I wonder if Mr. Kirby, who sits here, would mind giving us the name of the concern that would pay that price?

Mr. Kirby: I will give it to you, but not on the record.

Q. You don't know, then, that the price which the companies are able to obtain for coal tar in the City of New York exceed little, if any, 2 cents instead of 5 cents, do you?

A. Well, I never knew of tar being sold at any such low prices.

Q. You never sold any in New York nor bought any, did you?

A. Everything seems to be different here from everywhere else.

Q. Well, it is different in some respects, in a good many items, of course?

A. All items the company buys are dearer, and everything they sell cheaper.

Q. How much coal tar did you ever sell from one plant, do you think?

A. Well, I sold altogether, I think that I sold some 100,000 gallons at Butte, maybe more than that, because they took the Helena supply also at 17 cents a gallon. I sold it at $5 a barrel and considered that a very low price where there was any asphalting going on and I should think you have plenty of it. I guess the middlemen must milk you out pretty well there on prices, for with all the asphalting going on and the use of coal tar——

4902 Mr. MATHEWSON: I move to strike out this testimony of the witness now as to the quotation he got for coal tar, on the ground that the witness did not get any such quotation, but it was gotten by another gentleman who is not on the stand. I cannot very well follow this up and cross-examine through this witness as to facts collected by some one else.

The MASTER: I suppose you are entitled to have it stricken out. I do not see what particular advantage it has. It appears on the fact of it that it is not of any great value. If it is stricken out I suppose the Senator can insist upon its remaining on the record anyway and getting his exception.

Mr. PAGE: Yes, I would take the exception because of all the concealments that have been made from the record of the names of parties that are dealing with the Consolidated Gas Company, and in view of our submitting to it it hardly seems that such a rule should not apply to the other side in one instance.

Mr. MATHEWSON: On the contrary, in the case of every person with whom we have dealt the contract is in evidence here, filed with the Master, and shows exactly with whom it is, and it is subject to your inspection. It merely has not appeared at length on the minutes.

Mr. PAGE: I will submit Mr. Kirby as subject to your inspection. He says he will tell you.

Mr. MATHEWSON: Very good.

Q. That, I think, exhausts the subject of the enriched coal gas. Now let us take the oil gas. Do I understand that you manufacture the oil gas separately and the water gas separately and then mix the two, making 225 feet out of each thousand of the total mixture?

4903 A. I have here at the rate of thirty cubic feet of water gas to seventy feet of oil gas, and propose to use 225 feet of that mixture to bring up the thousand.

Q. I understand that. Let us take the 70 per cent. of the 225 feet which is oil gas. Please give me the details of the cost of that oil gas?

A. Oil is reckoned at 2 gallons at 4.23 cents, that is 8.46 cents; generator coal per thousand feet of that mixture of gas, 20 pounds per thousand.

Q. Which mixture, I am talking about the oil gas now.

A. Well, that mixture, oil gas and water gas, it takes less actually—I have used actually twenty-eight pounds per thousand make and on a small scale compared with that.

Q. Yes, at what price?

A. I took that at $4.00 a short ton. That amounts to one cent per thousand.

Q. That is coke that you took, assuming it would come from the coal gas plant?

A. Well, coke or coal. Then I put in for labor .3 of a cent for that amount, 225 feet.

Q. .3 for what?

A. For that proportion of oil and water gas 225 feet. I do not add it in for a thousand because this calculation for a thousand is based on the whole amount. It is only based here on this 225 feet. It would be 1,000 divided by 225 and multiplied by .3, would be actual labor for the oil and water gas parts.

Q. Labor is .3 of a cent, is it?

A. Labor is .3 of a cent for 225 feet, that is the proportion.

Q. But we are not getting at the oil gas at all. Can you not give us the oil gas and water gas separately? Seventy per cent. of your 225 feet was going to be oil gas. I am trying to get at the cost of that oil gas.

A. That is the way I got at it here. I charged the percentage——

Q. You said you computed seventy per cent. of the 225 feet as oil gas and thirty per cent. of the 225 feet as water gas, and now 4904 I am taking the cost of each.

Mr. Page: But they are to be made in the Lowe apparatus, so the water gas is to carry the oil gas through the super-heater, and it cannot be separate labor because the water gas, the steam goes into one end of the generator and the oil at the top and they mix up and go into the super-heater.

Mr. Mathewson: I understand, unless he separates it by some way of apportionment——

Q. You did separate it, did you?

A. No, I proportioned the cost per thousand on the whole body of the gas on the basis of 225 feet for the oil and water gas. That seemed to be the most feasible way of carrying it out, for it then brought the price per thousand of the whole product. And, by the way, I am not sure that I deducted that 225 feet of oil gas and—whether that should not have been added to the thousand of coal gas, making the combined gas 1,225 instead of one thousand feet. However, that would require a new examination.

Q. Can you not tell, because that is quite important in our comparison?

A. Well, it is important both ways. I have stated it at 225 feet of oil and water gas and 775 feet of coal gas. But from the way it is put in here I am a little uncertain whether that should not have been added, for I have calculated the total cost of the coal gas up to that point at 14 candle gas and it would depend entirely whether that 225 feet would enrich the thousand or the 775 feet. I would have to revise my calculation in that respect.

Q. If it were going to enrich a thousand feet of coal gas you would require a higher candle power oil gas than if it were going to 4905 enrich 775 feet?

A. Well, this is of a very high power.

Q. I understand, but it would require more enriching to enrich a thousand feet of coal gas than 775 feet, of course?

A. Yes.

Q. Let us try to make sure now just what your amount of coal gas to be enriched is, whether 775 feet or whether 1,000 feet?

A. Well, I would have to go into an extended calculation on that, of the proportioning of the candle power of those two gases and dividing——

Mr. PAGE: Can you do it now, Mr. Edgerton?

The WITNESS: I do not like to undertake that in the confusion, my mind is a little confused on other matters and in figuring out, I am not sure about it, whether it is the 1,225 feet or 1,000 feet. It would require going into a detailed calculation on the——

Q. Now, as a matter of fact, Mr. Edgerton, you figured your two gallons of oil at 4.23 cents per gallon or a total of 8.46 cents as producing 225 feet of gas, didn't you?

A. No, it would take a great deal more gallons than that.

Q. How many feet of gas did you figure that would produce, 70 per cent. of 225?

A. It would increase the number of gallons of gas and water gas by the ratio between the 225 feet and the thousand feet. I have not got this down here. It has been calculated off of the books——

Q. But how many cubic feet did that two gallons of oil amounting to 8.46 cents represent?

A. I will have to figure that up. What is the question?

Q. How many cubic feet do the two gallons of oil at 8.46 cents represent or produce? You have said it was not the 225 feet. Was it seventy per cent. of the 225 feet?

4906 A. Well, the two gallons of oil alone at the maximum yield would be about 140 feet of gas, that is allowing seventy feet to the gallon.

Q. Of what candle power?

A. Well, that would be according to whether it was used pure or whether diluted with water gas.

Q. Well, used pure for the present?

A. Well, the candle power would be decreased, using it pure. It is increased by putting some water gas in it.

Q. Just give us 140 feet of pure oil gas?

A. Well, figured in the combination——

Q. No, not figuring in any combination.

Mr. PAGE: Give it pure if you know what it is.

Q. What candle power will be produced in 140 cubic feet of gas produced by two gallons?

A. About sixty used alone, but used with other gases——

Q. I have not got to that. Please answer my question and we will get there ultimately, I assure you. What candle power will these two gallons producing 140 feet yield, or what candle power will that pure oil gas be?

A. Well, burned in the best flat flame burner it would be about sixty candles.

Q. Why do you take two gallons producing only 140 feet in this comparison? What are the 140 feet? I understood you to say that the oil gas was about seventy per cent. of the 225 feet?

A. Yes.

Q. It would be much more than 140 feet?

A. It would be slightly more, yes. It would be——

Q. It would be 157½ feet, would it not, seventy per cent?

A. Yes, it would not be—no it would be a greater amount than that.

Q. Seventy per cent. of 225 feet would be 157.5 feet, would it not?

A. Yes. You are calculating on the 225 feet?

Q. Then seventy per cent. of the mixture of 225 feet mixed oil and water gas would not be oil gas, would it?

4907 A. Thirty per cent. would be water gas and seventy per cent. would be oil gas.

Q. Well, would it be seventy per cent. oil gas?

A. Not quite, no. There is a slight difference there. I supposed it was a yield per gallon that I got, to——

Q. You generalized it, didn't you?

A. No, I have got out of oil all the way from——

Q. Well, in this computation you generalized it, didn't you?

A. I did not take any one result, I took a computation of the average results. It is not based on any particular result.

Q. Then we are going to get 140 feet, I judge, of oil gas out of this, that will leave how much water gas?

A. 85 feet.

Q. You cannot give the additional elements beyond the oil in producing the oil gas separately, can you?

A. I gave the coal and labor, but it is a figure implied in the whole mixture of gas, that is, the coal and oil.

Q. And when you gave the coal and labor as one cent, you said it was one cent per thousand feet. Did you mean one cent for 225 feet?

A. No, it is one cent based on the whole mixture of gas, that is, it would be the increased amount.

Q. On what whole mixture, oil and water?

A. Oil and water and coal gas, the whole thing is calculated on the basis——

Q. We have got rid of the coal unenriched gas. Now, I am trying to get the oil and water gas which are made separately and mixed together with the coal gas.

A. I would have to go into another calculation entirely to meet your views on that. It is calculated on the basis of the whole mixture of gases.

Q. Well, I do not understand why you took two gallons of oil and figured on the basis of 225 as to your oil if you figure 1,000 feet in your other elements of cost?

4908 A. Well, the statement of 225 feet is just based on that percentage of mixture. The actual cost per thousand is based on the thousand feet of the whole gas. I made no calculation here on the separate costs of the oil gas. That was put in on the basis of being a thousand feet enriched gas or 1,225, it may be here, for I may have added that. I would have to calculate whether the 225 would give the candle power required.

Q. And you do not know now, do you, whether it is 1.225 feet or 1,000 feet?

A. I could not go it without aliquoting and making the proportion of candle power of 14 and the oil and water gas——

Q. Do anything to satisfy yourself because that is a matter of importance, to know whether you used the oil and water gas mixed with 775 feet or 1,000 feet for purposes of enrichment.

Mr. Page: Take your time and figure it.

The Witness: I do not care to figure it in that way, for it took me a long time, I was four or five hours struggling with these figures and consulting different handbooks and memorandums to get that, and now to figure it out on some other basis——

Q. I am not asking you to figure it out on some other basis. I am merely asking you whether your final result is produced here by mixing 225 feet of oil and water gas mixture with 775 feet of coal gas or with a thousand feet of coal gas?

A. Well, I say that involves calculating out the candle powers of the oil and water gas and the coal gas and ascertaining whether it requires that amount to bring it above the 22 candles; it is the only method we have, and it involves there—as it has water gas in it and oil gas and coal gas, it involves quite an amount of figuring.

4909 Q. I know, but you certainly must have known what the total mixture was or else you could not have told how much enrichment you needed to bring it up to the required candle power, must you not?

A. I did, but I have not kept the figures on this book. I had separate papers on which I figured it out.

Q. Have you the memorandum in that book so far as you can give any details?

A. I have only a memorandum of the results. There is a large amount of figuring to be done outside of what is in the books.

Q. Have you any objection to my seeing those figures to which your attention has just been called, to see whether I could get anything out of it?

A. No. (Handing book.)

Q. Are those the figures there?

The Master: That does not convey much to the record.

Mr. Mathewson: I know it does not. I am thinking of putting it on the record, if necessary.

The Witness: These are results which have been corrected and twisted in such a shape that I cannot tell. I would have to go to work, Mr. Mathewson, and figure over quite a little to make out that the mixture of gas, oil, coal and water gases, which would go fairly above a 22 candle power gas, to find out whether that is 225 on a thousand or 225 of the thousand. I do not think it is clear there, it is not clear to my mind which way I have got it.

Q. Can you not tell at once by taking the candle power of the mixture and the candle power of the coal gas?

A. No, you cannot tell at once. It is quite a—you would have to consult——

Q. You stated that the candle power of pure oil gas produced as you have indicated would be sixty candles?

A. Yes, sir.

4910 Q. Can you tell the candle power of the entire 225 feet taken as a whole?

A. No, because the candle power of the oil gas is a shifting figure. As you put the water gas in it you increase the candle power up to a certain amount and after awhile you decrease it by putting in further water gas.

Q. But you must have taken that all into consideration?

A. I did, as I say, I have not the figures here and cannot carry them in my head.

Q. How can you tell how many feet it would require to enrich unless you knew the candle power of the 225 feet?

A. As I say, I had to calculate all those matters out in detail before I commenced to figure on the cost.

Q. And you have not any details here from which we can check your figures?

A. No, I cannot give you those until I figure them out and it would take——

Mr. MATHEWSON: I would like to have this marked for identification, and will you give us a copy of that data just as it is there? And perhaps we can figure something out of it.

Page marked Complainant's Exhibit 258 for identification.

Q. Your specialty has been the manufacture of this very rich oil gas or oil and water gas, has it not?

A. Yes.

Q. And yet you cannot give us here even the candle power of that 225 feet which you used to enrich the coal gas, is that right now?

A. Well, now, there are several elements entering into consideration——

Q. I know, but can you?

A. No, I cannot, but——

4911 Q. And you cannot tell whether the 225 feet was used to enrich 775 feet of coal gas or one thousand feet of coal gas, can you?

A. Not without going into a detailed calculation of it.

Q. Do you include any superintendence in the cost of the 225 feet?

A. Well, the only special feature I have in regard to the oil gas produced is the 2 cents per thousand for repairs and I calculated the same superintendence, superintendence at 50 cents, which is excessive, would cover that portion of the oil gas, yes.

Q. How could that be, if the oil and water gas were manufactured in New York and the coal gas or most of it was manufactured in Astoria as you have suggested?

A. Well, there are $50,000, I think that would divide a man up so that he could cross the river.

Q. $50,000 have you allowed solely for superintendence?

A. Yes.

Q. Does not the $50,000 include anything else except the superintendent's salary?

A. The superintendent and his aids. It is the superintendence, including not only the general but the different assistants. I think I stated before this morning that that was quite a large figure.

Q. You have allowed for repairs to apparatus how much?

A. Apparatus and buildings 4½ cents.

Q. And you said that that was the experience of the company this past year, was that right?

A. No, I said it was a little more than they had charged up in their books.

Q. Is it not true that the cost of maintenance in a coal gas plant is substantially greater than that of a water gas plant in the way of repairs?

A. Yes, it is somewhat greater on the apparatus. The buildings would not be anything different of any account, only slightly.

4912 Q. Did you take into account the fact that the repairs and replacements of the Consolidated Gas Company for the year 1905 were abnormally small and very much less than similar expenditures for the average of the past twenty years, or didn't you?

A. I saw that——

Q. Did you take that into account in your computation?

A. I don't remember that I looked at the back years on this particular point, but I thought the figure was a large one anyhow.

Q. In comparing coke at $4.00, did you take the short ton and compare it with what the company paid for anthracite which was $4.23, in your testimony?

A. I don't remember what I said about that. I called attention——

Q. You only said it just before luncheon. Don't you remember that you did say that the company appeared to pay $4.23 for anthracite?

A. I think that was the price I mentioned.

Q. Don't you know that was a long ton and not a short ton, and therefore that the comparison was not exact?

A. Well, the tons are mentioned there indifferently, without stating whether they are long or short.

Q. You have not read the testimony, which states that the long ton is used constantly in the computations of the company, have you?

A. No, I took it as a short ton.

Q. Is it not customary to deal with coal by the long ton in your experience?

A. No, everybody that I have talked with on the subject will say a short ton in figures.

Q. If the anthracite is measured by the long ton and the coke by a short ton, a comparison would not be fair, would it, without taking into consideration the difference?

A. I took it that both of those were on the basis of the short ton.

Q. But I call your attention to the fact that the coal is a long ton and that would not make a fair comparison, would it, without taking into consideration that fact?

A. No. And also a——

4913 Q. Well, "no" is the answer. That is all the question I asked you. The coke you say could be used for the production of water gas and would be as good as anthracite, pound for pound or substantially so. Then it would be your view that the company had been reducing its profits by using anthracite at a higher price instead of coke at a cheaper price, would it not?

A. Yes, that is it exactly.

Q. You have given the cost of fuel for water gas manufacture at 2½ cents per thousand in your mixed computation, dealing with some Central Union comparisons, figuring with coal or coke at $4.20 per ton. Now, that would mean, would it not, only 13.37 pounds per thousand?

A. What figure do you refer to there?

Q. I am speaking about your water gas production which you made up in a subsequent statement here in a comparison with the Central Union coke or coal at $4.20 per ton, 2.5 cents per thousand?

A. Yes.

Q. Now, if you take coal or coke at $4.20 per ton and compute that to be 2½ cents per thousand that means, does it not, only 13.37 pounds of fuel for each thousand feet of gas?

A. Are you calculating a long ton or short ton, which do you use?

Q. Well, which did you use?

A. I used a short ton throughout.

Q. Very good, take a short ton. For a short ton it would be a little smaller?

A. Well, it would come to 4.62.

Q. It would amount to what, how much in pounds?

A. Well, you turn it around. What was the amount then?

Q. The question is whether it is not true that coal or coke at $4.20 per ton, figured at 2½ cents per thousand means 13.37 pounds of fuel for each thousand feet of gas produced on the long ton and on the short ton whether it does not mean only 11.9 pounds
4914 of fuel per thousand feet of gas?

A. Yes, I have evidently taken it on the thousand pounds. There is an error there.

Q. In other words, it is simply impossible to assume that 11.9 pounds of fuel produces a thousand feet of gas, isn't it?

A. Well, I have taken it at 22 pounds to the thousand feet, but in the calculation, in the carrying out, it was erroneous. The coal and coke is stated at 4.20 a ton, at 22 pounds to the thousand.

Q. In other words, let us put it in in another way. Did not every one of the Massachusetts companies that you mentioned before luncheon require 30 pounds or more of fuel to generate each thousand feet of gas?

A. Well, I stated over 30 pounds.

Q. And if you compute on that basis, instead of the coal and coke amounting to 2.5 cents per thousand, would it not, on a basis of 30 pounds, even, amount to more than 6 cents per thousand for fuel instead of 2.5 cents?

A. Well, in this case the gas is so much higher quality that they do not use—the higher quality you get the less fuel you have to use per thousand. It takes a less proportion of water gas and larger proportion of oil. I do not think that is out of the way, for I have used 28 pounds as I stated, I have been down as low as 28 pounds of coal to a thousand in Danbury, only running half a day.

Q. Do you mean to advance the proposition then that 11.9 pounds of fuel will produce a thousand feet of gas or generate it?

A. No, I say it is 22 pounds.

Q. Then instead of being 2.5 cents it should be on the basis of 22 pounds how much?

A. A short ton, 4.62.

Q. Instead of 2.5?

A. Yes. If the figure is carried out.

4915 Q. Have you got any allowance for boiler coal in your cost of production? You have only mentioned what was used under the generators?

A. No, I omitted the boiler coal.

Q. Now, you use from 12 to 15 pounds of boiler coal don't you per thousand?

A. No.

Q. How much?

A. It depends upon the scale, all the way from six or eight pounds to twenty pounds according to the scale of operation.

Q. Don't you know that where you use coke instead of anthracite coal that the capacity of the machine is much less, say, sixteen to twenty?

A. The capacity of the machine is less. I so stated. That is, that you had to run slower.

Q. Now, I understand you to say that in this computation you have produced or assumed to produce a gas at 22 candle power at the works?

A. 23.1.

Q. In your Central Union computation you say you took one-half coal gas at sixteen candles and one-half water gas at twenty-eight candles and the average is exactly twenty-two, is it not?

A. Well, that is Central Union, but I have allowed here a larger amount of oil than at the Central Union, five and one-half gallons in place of 5.05.

Q. Did you not allow five and one-half at Central Union?

A. No, 5.05 is the amount which the Central Union used.

Q. In comparing with the Central Union so far as you did compare, taking up that second computation, you got an average of exactly 22 candle power at the works for coal gas at sixteen candles, half coal gas at sixteen candles and half water gas at twenty-eight candle power?

A. No, that would be——

Q. Exactly twenty-two, would it not?

A. Twenty-two candles, yes, sir.

Q. You did not make any allowance for the candle power 4916 which must be maintained above 22 candles in the mains at least a mile from the works and maintained at such a margin that never in any instance would the candle power fall below twenty to twenty-two candles a mile from the works?

A. I intended to make an allowance of twenty-three candles at the works, that is true.

Q. But you overlooked that in your final computation, did you not?

A. By raising the candle power of the coal gas I thought it would bring it to above twenty-two; it brings it to twenty-two.

Q. Did you make any allowance in taking your Central Union figures for the fact that the Central Union statement from which you took those figures covered only four months of the twenty-two candle power rate and eight of twenty candle power?

A. Well, in calculating their figures out——

Q. Did you make an allowance for that?

A. Yes—I made the calculation here which I stated this morning of 23.1 candles.

Q. Central Union?

A. Yes, sir, on the whole. I took 670,000,000 of coal gas at 14 candles and 925,000,000 — at twenty-five ¼ candles.

Q. But you stated in your direct examination that you mixed one-half coal gas at 16 candies with one-half water gas at 28 candles?

A. That was the change I proposed. This Central Union figure is based on 925,000,000 of water gas and 670,000,000 of coal gas, just as they actually make.

Q. Then that is not the computation which you have given us on the record this morning, is it?

A. No, that is simply to ascertain the quality of the gas.

Q. I am talking about the computation which you placed on the record this morning. You did take half coal gas at 16 candles and half water gas at 28 candles?

4917 A. I intended to make a computation of half coal gas and half water gas, that is about the same as the Central Union, it is not exactly, it is more coal gas and less water gas.

Q. Where would you get your 16 candles out of coal gas when it only yields about 14 candles?

A. The idea — to restrict the use of coal gas to a lower point.

Q. I know, but where do you get your 16 candles in your coal gas when you have stated it only makes about 14 on the average?

A. If you restrict the yield on the average somewhat you can get 16 candles.

Q. You can get less gas per ton of coal?

A. Yes.

Q. Then you would have to have more tons of coal proportionately to produce that amount of gas, would you not?

A. Yes.

Q. But you did not use an[illegible] more tons of coal in your computation per thousand of gas, did you[illegible]

A. I took the coal gas as the previous computation——

Q. In other words, in getting the cost of the coal gas that you mixed with the water gas, you took the computation concerning which I previously examined you?

A. Yes.

Q. And you did not take any greater number of tons of coal to get this coal gas per thousand feet that you did in your first computation, did you?

A. No, I omitted to add for the enriching or for the 16 candle power coal gas, that is true.

Q. And also the cost of your coal gas in this Central Union comparison, contains the same errors as to value of residuals and so forth, which the computation in the previous case incorporated, does it not?

A. Well, no, it——

Q. Does it not? Did you not take exactly the same figure, starting with fuel and labor, less residuals, 6.5 cents? Was not that the first item in the production of your coal gas?

4918 A. I took the net cost of the coal gas of the Central Union or very close to it, the Central Union item for net cost was 6.64 cents.

Q. Did you not say coal gas as before?

A. I think I did. I might say substantially net as before, or the same as Central Union. I do not see any essential difference, a small fraction of a cent.

Q. I want to know whether the figures you took for the labor and material, 6½ cents in this Central Union comparison, was taken from the Central Union statement or whether it is, as you have stated, the same figures which you employed in your previous computation, which you pointed out were erroneous in some particulars?

A. It is neither. It is midway between; it is a compromise. That is, this Central Union figure was 6.64 and my previous computation was 6.46, and this is 6.50.

Q. Then your total Central Union ideal computation, as I will call it, producing a certain result, you proceeded to compare with the cost of the gas to the Consolidated Gas Company for the year 1905. Did you observe that the cost to the Consolidated Company covered the calendar year 1905 and therefore six months of the twenty-two candle power requirement, while the Central Union figures only covered four months of the twenty-two candle power requirement and two-thirds of the twenty candle?

A. Yes, I had it down for a difference in oil for that reason of .6 of a cent.

Q. Did you also take into consideration the testimony of the Central Union officers that they did not maintain in The Bronx during the first eight months of this period even the twenty candle power required by law?

Mr. Page: I do not think they stated that. I have just 4919 read it, so if Mr. Mathewson is to testify, I would prefer he would read from the testimony on the record.

Mr. Mathewson: It has been spread upon the record.

Mr. Page: I know, you have spread it several times.

Mr. Mathewson: It has been read verbatim.

Mr. Page: They said they tested it at the works and not farther away and that they maintained sufficient candle power at the works——

Mr. Mathewson: And they were asked if it did not mean something less than that somewhere else, and they said it did.

The Witness: If it gets richer in the pipes like in the case we had the other day——

Q. Perhaps it does. It must have, if they met the law. Well, I will ask you if you took into consideration the fact moreover that the Central Union Company did not maintain a mile from the works even the twenty candle power standard for the first eight months of the year ending October 31st, 1905.

A. I say I took into consideration about the candle power——

Q. I know you said you took into consideration one thing, but I ask you if you took into consideration this question?

A. No, I do not think it was so, for the contract states they were to maintain the legal standard.

Q. What contract? You mean the statute?

A. No, the contract they make for selling gas to other companies.

Mr. Page: To the Consolidated.

Q. It appears in evidence that gas was delivered solely to lamp posts up there, so that the amount which you found was delivered by the Central Union to the Consolidated or for account of the Consolidated was extremely small, was it not, or did you not observe that? 4920

A. Yes, I noticed it was a small amount.

Q. And you observed it was delivered solely to public lamps?

A. No, I did not notice that. However, I added .6 of a cent to the computation on account of the——

Q. What was the basis of your addition of .6 of a cent, how did you figure that out?

A. In order to make the difference of oil at higher candle power, that is, I took it to be a reasonable addition to bring it on par with——

Q. Can you explain any more in detail your computation? Well, I will not press it, if you haven't it at hand. Did you not say that the .6 which you allowed this morning was for a correction for the price of oil and not for any additional enrichment?

A. I believe so.

Q. Now, which is right, your present statement that it was for additional enrichment, or your statement this morning that it was an allowance for the difference in the price of oil?

A. I think it would cover both, for .6 of a cent is a large sum, based on your output. It is $600,000——

Q. You stated this morning it was to allow for the difference in the price of oil. Was that the correct statement, or was it to allow for something else?

A. I don't remember making that statement this morning, for it was not in the other allowance, but I made it this afternoon. I see it is the second calculation here as being as it is, an amount of $60,000. I should think it would cover the difference in oil and light—as a matter of fact, I calculated the Central Union at 23.1 candles, but I see that I omitted to account for the difference between 14 candles and 16 candles.

4921 Q. That would add somewhat to the cost, would it not?

A. Yes, sir.

Q. Now, let us take the comparison with the New Amsterdam. You figured the New Amsterdam or took it from the Exhibit as 29.01 and you compared it with the Consolidated water gas station which you found 31.05. Did you take into consideration the fact that the Consolidated 31.05 was for the calendar year and covered six months of the 20 candle power standard while the New Amsterdam exhibit was for the year ending October 31st, 1905, and covered only four months of twenty-two candle power and eight months of the twenty candle power?

A. Yes, but I observe the candle power of the New Amsterdam in the tests that I was looking over by the inspectors was held up higher than the Consolidated as a general thing.

Q. Well, did you make any allowance for the additional period of twenty-two candle power which the Consolidated Exhibit covered, as compared with the New Amsterdam?

A. I think the New Amsterdam average is 23.73. I did not see the necessity of doing that.

Q. I am talking about the Consolidated. Did you make any allowance from the fact that their exhibit covered twenty-two candle power exceeding the twenty-two candle power period of the New Amsterdam?

A. They did not need it.

Q. Well, did you make it?

A. No, sir; the New Amsterdam is 23.73.

Q. You did not make any allowance for the fact that during two months of the period covered by the Consolidated there was a difference in the cost of oil by reason of the use of 34 gravity instead of 28 beginning with November 1st, 1905?

A. No, sir. As stated I did not take any stock in that gravity or difference.

4922 Q. Now, you stated that the 42d Street plant of the Consolidated showed a cost at the holder for the year 1905 of 34.87 cents and compared that with the water gas stations of the Consolidated, 31.05 cents, and you found a difference in the 42d Street cost, computed upon the output, of $48,454 and you capitalized that at five per cent. Now, will you tell me how much of the $48,454 would amount to per thousand feet of sales on the total Consolidated output of 13,283,000,000, about?

A. On the Consolidated's manufacture it would amount to about .48 of a cent, I think. Of course a larger divisor makes a smaller result.

Q. On the total sales of 13,283,000,000, which is what we are dealing with. It would be about .35 of one cent, would it not, roughly?

A. .37 I make it.

Q. Well, you then compared the New Amsterdam cost of 29.01 for the nominal year with the Consolidated Water Gas Stations and found a difference of $161,700 or thereabouts. If that be divided by the total sales that would amount to a little over one cent on all sales of the Consolidated, would it not?

A. A cent and a quarter about. That does not alter the sum they might have lost, though.

Q. You understand, do you not, that the Central Union plant is a modern, comparatively new, up-to-date plant for a mixture of water and coal gas virtually under a single roof and all the product sent out from a single plant.

A. I believe so.

Q. That, other things being equal, would tend to some economies impossible in widely scattered plants?

A. No, I think my impression is that it is a good thing to divide up these very large stations because you get some competition of management.

Q. Now Professor Bemis, in his testimony, says that putting the production into one large station like Astoria would cheapen the production. You think it would make it more expensive, 4923 do you, and that it would be advisable to have smaller plants instead of one large plant?

A. No, I think for some reasons it would be cheaper, but the competition in management of plants where they are very large is an incentive to getting a little better result.

Q. If you mix coal and water gas it is better, is it not, to have them immediately contiguous or produced in the same plant?

A. Yes, certainly.

Q. So that that element existing in the Central Union Works, that would be an element favorable to a reduction in cost where the water gas and coal gas plants are really under a single roof, would it not?

A. Not so much in cost as the certainty that a mixture could be made. I think they will have to devise some very efficient way of securing uniform gas from those two separated works, for I have seen it tried and it requires some management beside throwing the two gases together.

Q. And is there not a greater variation of candle-power necessarily to be provided for when coal and water gas are made at different plants, miles apart, and distributed in the mains as compared with the making of coal and water gas at a single station, as you might say, and mingling it at that point?

A. Yes, they should be mingled before going into the gas holders at all.

Q. If possible?

A. Yes. That can be done in this case.

Q. Now the coke in the case of a water and coal gas plant contiguous goes direct from the retorts to the generator house does it not?

A. Yes.

Q. And that saves cartage and breakage of coke, does it not?

A. It does.

Q. Did you know that the New Amsterdam plant was a new and up-to-date plant in every particuar for water gas?

A. I inferred, from its having better results, that it was 4924 either up-to-date or better managed.

Q. Well, you know that it is a new and up-to-date plant?

A. I know that it is newer, yes.

Q. And you know that the gas of the New Amsterdam Company is produced at that single plant, don't you, or is not that your information?

A. I believe so. I have not absolutely definite information on that.

Q. Now, in reference to your 42nd Street examination or the examination of the 42nd Street plant, you first went down about December 2nd, about two o'clock, did you not? And left about four?

A. I left before dark.

Q. Well, you went about two and left about four?

A. Yes, that was preliminary.

Q. And did you go more than one other day?

A. Two other days.

Q. Well, you went the next day, didn't you?

A. I think I went three days. In the first place to——

Q. Did you go more than two days?

A. Yes, I think I went three days.

Q. Sure about that?

A. Yes.

Q. Did you go with the same young man as a guide each time?

A. No, I went alone first.

Q. That was on December 3d, from two to four. Well, you went December 4th, the next day, and left about four o'clock that day?

A. I continued until after dark. I left about dark or a little before dark.

Q. Now, do I understand that in making your oil gas it makes very little difference what quality of oil you use?

A. I think there is a difference in oil, but not as regards the degree of the mixture or the average degree of the mixture. I do not see any particular difference there.

4925 Q. You mean that a low gravity oil at 28 will do just as well as 34?

A. It should do with proper apparatus and management.

Q. Then I assume you buy as cheap oil as you can, don't you, if one does just as well as the other?

A. That is the way I should do.

Q. Is that the way you do in Danbury?

A. Just as cheap as we can get it. The trouble we can't get it——

Q. The 28 gravity oil?

A. Sometimes, and sometimes it runs 34. It did run up to 34 without any request at all, and I did not notice any particular advantage in it, however.

Q. But if one oil is cheaper than another and the lower gravity oil is just as good, you naturally buy the cheaper oil, don't you, when you can get it, if there is any difference in the price at all?

A. I only learned of this new theory within the last few months.

Q. I understand, but my question is not as to that. I say you use where you can get 28 degree oil cheaper than 34, you get the 28 degree, don't you?

A. Yes, certainly, but we did not make any provisions about the exact gravity in the oil. It was to be an oil free from very heavy matter, that is all.

Q. What do I understand in Danbury you charge for the rich gas without reducing it to the 17.6 candle standard, how much does it amount to per thousand feet?

A. They have reduced it now until the highest price is $2.65.

Q. That is without reducing it to the 17.6 candle?

A. Yes, that is for 44 candles tested as we do test it. The price has been recently reduced but I am glad to say the quality is to be kept where it was.

Q. Is it not true that tar produced by different plants contains a larger or smaller proportion of water in the mixture or emulsion, if you call it so?

4926 A. It contains a little—formerly we used to get a great deal of water mixed and now they have a provision for filtering it and getting the water out.

Q. Do you know whether there is any different method for extracting the tar in the New Amsterdam works than there is at the Consolidated?

A. There must be, there seems to be some better way.

Q. Well, do you know how much the Consolidated residual differs as to pure tar from the New Amsterdam?

A. I do not—I do not from inspection of the tars; but I suppose all gas companies try to free the tar from water now so as to burn it.

Q. Would it make any difference in your opinion as to the amount of tar, if the result in candle power compared favorably per gallon of oil?

A. No, if they get as good a quality of gas I should not make any difference except that they ought to make more of that quality.

Q. Referring to this Danbury Company to which you have again referred to-day, I want to call your attention to your previous testimony as to the depth of the main. Mr. Charles H. Merritt is the president of the Danbury Company, is he not?

A. Yes.

Q. Now, will you look at this letter from Mr. Merritt (handing paper) and see whether he does not state that it is the custom of that company to have 3½ feet of dirt over the top of the pipe?

A. He may state it is the custom, but I don't think he ever looked at 10 feet of the main pipe.

Q. Well, that letter appears to be from him and he appears so to state, does he not?

A. Well, as a matter of fact——

Q. The question is, whether that appears to be a letter from Mr. Merritt, and whether he does so state in the letter?

4927 Mr. Page: What is stated in the letter I suppose appears from the letter?

A. Yes. Well, I differ from that.

Q. And does he not further state in this letter that the question was referred to the superintendent of the Danbury Company and that the information comes from the superintendent also?

A. I don't think the superintendent ever saw anything of the kind.

Mr. Mathewson: Well, I offer this letter in evidence.

Mr. Page: I object to that. If Mr. Merritt is to testify, he should appear here and be subjected to cross-examination.

Mr. Mathewson: No, you have letters here from all sorts and descriptions of people.

Mr. Page: I have not produced the letter and I object to the admission of this. It is not competent and is purely hearsay, and if Mr. Merritt is to testify we should have an opportunity to cross-examine him.

The **Master**: I will exclude it.

Mr. **Mathewson**: Exception.

Q. Does the president state, as I have stated in my question, as to the depth of the dirt over the pipes in Danbury?

Mr. **Page**: That is objected to, as having been already excluded.

Mr. **Mathewson**: I am not offering the letter again, but I am asking whether he so states.

Mr. **Page**: I object to it as being incompetent. Mr. Mathewson can read it and see whether it so states just as well as asking
4928 the witness. It does not require an expert on handwriting
to read a typewritten letter.

The **Master**: I will exclude it.

Mr. **Mathewson**: I will take the answer to the question. Exception.

The **Witness**: It so states but I do not think Mr. Merritt knows anything about it. I never saw him along the line of pipe and never saw him look at a pipe.

Q. Did you ever know the Superintendent to go over the pipes?

A. I know he looked at them all the time they were laying them, but——

Q. Does not Mr. Merritt say, "Following your inquiry of me as to the depth we laid our gas mains, to fully make sure of the proper answer the question was referred to our superintendent, who informed me the custom of this company is to have three and one-half feet of dirt over the top of the pipe.

Mr. **Page**: Same objection.

The **Master**: Same ruling.

Exception.

Q. Have I quoted correctly?

A. Yes, I know, but——

Q. Have I quoted that correctly?

A. You may have quoted it correctly, but——

Q. Well, have I quoted it correctly. Will you take the letter and let the question be read, if you have any doubt of it.

A. Yes, he so states, but——

Q. Now, you said something about Faribault, and that the pipes out there, as I recollect, were about two feet deep; at any rate, they had about two feet of covering; was that right?

A. No, sir. I said they were buried down an uneven depth, and I ordered them to be laid shallower. They were trying to lay them
below the frost line, and I found no use in that; in fact,
4929 raised them somewhat, on account of the inconvenience of
having to get down to them.

Q. Do you know how deep they are actually laid?

A. Some of the old pipes may lay deep. I did not speak in regard to the pipes laid before I went there.

Q. Are there any pipes laid three feet under ground in Faribault?

A. Yes. My directions were not to pay any attention to——

Q. I have a letter here which appears to be from the Secretary of the Faribault Gas & Electric Company, on the paper of that company, isn't it? That is what it appears to be, is it not?

Mr. Page: I object to that.

Mr. Burr: I join in the objection.

Objection sustained. Exception.

A. Yes.

Q. Now, does not the secretary of that company say in this letter that "The writer knows of no instance where the mains are less than three feet underground?

Same objection. Same ruling. Exception.

A. Yes.

Mr. Mathewson: Have I not a right, Mr. Master, in an examination where the witness himself has referred to the depth of mains underground to call his attention to a communication from the company itself, and to ask him whether that modifies his views at all on the subject?

The Master: Yes, but if the letter is objected to as incompetent——

Mr. Mathewson: I am not offering the letter. I am merely asking the witness to identify it, and whether it is a letter from the company.

4930 The Master: I understand, but you cannot do indirectly what you cannot do directly, and get the contents of an incompetent letter on the record by cross-examining the witness.

Redirect-examination by Mr. Page:

Q. Mr. Edgerton, do you know of your own personal knowledge that pipes are laid at Faribault at less than three feet?

A. In plenty of instances. I have directed that the idea of laying pipes below the frost line be stopped, and all the pipes that I saw laid there were laid according to a given dip; sometimes they might dip; they were a depth of two feet to two and one-half feet, but it was only on account of getting grip, and furthermore, I showed the fact that we had less freezing or less services frozen on shallow pipes than the old type pipes of any one case.

Q. I think you have testified to all that. I asked merely whether you knew of your own personal knowledge that such pipes had been laid?

A. Yes, and my instructions were to lay no others, and Mr. Cowperthwait had no business to lay a pipe at any other depth.

Q. What Mr. Cowperthwait? Were they in Faribault?

A. I had charge of Faribault and directed everything that was to be done there, and I gave him specific instructions to pay no more attention to that rigamarole about deep pipes.

Q. Do you know of your own personal knowledge that the pipes at Danbury are laid at less than three feet deep?

A. I know of three miles of pipe that I laid myself that there is not a bit of it that lays over two feet below the surface of the ground, and in many other cases I have seen—walking down Main Street, I saw a pipe right opposite Mr. Merritt's house, the man that wrote that letter, right opposite his house, that was not over 2½ 4931 feet deep. I saw the men taking up what was an abandoned main, also of 3-inch pipe, which did not lay more than two feet deep, and I have looked on pipes at Danbury at dozens of times which were not three feet deep and plenty of them I have seen at two feet deep. I state that positively.

Q. In relation to the question that was asked you, whether you took the station cost of the Consolidated companies for the year 1905, and you took the station cost of the New Amsterdam and Central Union for the nominal year ending October 31st, 1905, I call your attention to Exhibit 93, which purports to be a summary of operations for the nominal year ending October 31st, 1905, of the Consolidated Gas Company, and Exhibit 94, which is a summary of the operations for the calendar year, and call your attention to the station cost in Exhibit 93, and ask you to state what it is?

A. 32.68.

Q. And for Exhibit 94, what is the station cost given?

A. 32.42.

By Mr. MATHEWSON:

Q. Gas made, in each case, isn't it?

A. Gas made, yes, sir.

By Mr. PAGE:

Q. Therefore, the year 1905 cost less than the nominal year ending October 31st, 1905, according to these two exhibits, did it?

A. Yes, sir.

Q. Now, in arriving at your result of the coal gas made according to these theories, if you increase your tons from short tons to long tons would you also thereby increase the amount of gas that you had obtained?

A. Certainly.

4932 Q. That is, the 10,600 cubic feet of gas per ton was estimated on a short ton, was it?

A. Yes, sir; 5.2 cubic feet to the pound.

Q. And a ton of 2,240 pounds would produce how much more gas?

A. 11,648; a difference of about 1,000 feet.

Q. That is the 14 candle power gas?

A. Yes, sir.

Q. So that would increase proportionately if you took a long ton and would not change the result?

A. No, sir; it would increase the proportion of coke and breeze, and also the other figures where I figured on a 2,000-pound ton; that is, it would increase the yield on the same ratio.

Q. It would increase the yield on the same ratio?

A. Yes, sir.

Q. And except in the item of coal handling it would not change your other items of expense, would it?

A. No, there does not occur to me any change that would be brought about by that changing of the ton.

Q. When you made this estimate, did you make it with the idea that it was to be applied to the existing plants of the Consolidated, or was — to be a modern up-to-date plant placed in the most convenient manner?

A. Why, I assumed that this would be a modern plant; of course it was based on that.

Q. You did not expect to save a part of the present works and modify that value, did you?

A. No, sir.

Q. Well, have you any desire or wish to modify your testimony that a modern plant could produce 22 candle power gas at twenty-four cents or less?

A. No, I think that I have made, simply in making this without having access to some of the information I desired, I have made a slight discrepancy here, and I think still that, by a careful 4933 examination, that in time to ascertain all the facts involved that gas could be made at twenty-four cents. I see that correcting my estimate to the Central Union figure it amounts now to 26.30 cents. I made this calculation on Sunday and did not have access to any large amount of information that I required. I had to be ready to put it in to-day and worked on it last night until 12 o'clock. This morning I tried to get some additional information, but I could not get at it.

Q. Will you state how these bottles of oil were marked that you brought and delivered to Professor Sherman?

A. They were brought to me from——

Q. The bottles of oil or the samples of oil, I mean?

A. I marked one "Standard Fuel Oil," that I got in South Norwalk; and the January 6th oil was from Danbury, and the November 24th oil was from a tank delivering to the Mutual on 21st Street —they said they were going after they delivered to the Mutual——

By Mr. Mathewson:

Q. Were there just three samples of this oil?

A. There were a number of other samples, but there were none of any account, there were some of the old Danbury samples brought down, extending back to 1904.

Q. Were they marked in any way?

A. They were all marked.

Mr. Kirby: These are the only three we had analyzed. If you want the others you may have them.

Q. Did you draw this sample at Norwalk yourself?

A. Yes, sir; out of the Standard oil tank.

Q. Who was present when you did it?

4934 A. The driver and the superintendent of the electric company, Mr. Winchester; I think he was there; and the engineer was there, I am certain; I am not so certain about Winchester; he came in shortly afterwards, I think.

Q. What tanks, if there is more than one tank there, did you draw it from?

A. I drew it from the tank coming from the Standard Oil Company and feeding into and delivering oil in a certain tank of the electric light company.

Q. Did you draw it from the tank of the oil company or the tank of the electric company?

A. The tank of the Standard Oil Company; and I have got a photograph of it if you want it.

Q. What sort of a receptacle was it in?

A. A long tank drawn by two horses, quite a large-sized tank.

Q. No, I mean the sample?

A. The sample was in a glass bottle.

Q. Did you draw the sample at Danbury yourself?

A. No, I have drawn a number of them; those samples, I say, extending back over——

Q. Well, did you draw this particular sample yourself at Danbury?

A. I could not tell you that. Many of those samples I drew myself and some of these other——

Q. Well, you cannot swear that this particular sample from Danbury you drew yourself?

A. No, I cannot swear to that.

Q. Then you cannot swear as to the day on which it was drawn except as somebody told you, can you?

A. No. It is labeled. I will look and see if it has my handwriting on that bottle.

Q. That would not mean that you drew it yourself, would it?

A. Yes, that would mean that I drew it myself out of the tank.

4935 Q. What about the sample of the oil in New York; where did you draw that sample?

A. I did not draw that sample; that was given to me by a man, a reliable man, who told me he drew it right out of the tank from the barge, where they were pumping up from the barge.

Q. Where?

A. At the Mutual works.

Q. Where?

A. I think it is at the foot of 11th Street; somewhere on the East Side there.

Q. Where?

A. I think it is the foot of 11th Street, somewhere on the east side there.

Q. But you have no information except what is given you by this man who informed you, is that right?

A. That is all. He told me that was drawn right straight from——

Q. Who drew it? Who is the gentleman who drew this New York sample?

A. He is an acquaintance, a friend of mine.

Q. What is his name?

A. I do not care to tell that. It is not necessary to know that.

Q. Well, I am inclined to think it may be necessary. I ask you what his name was?

A. The sample was given to me by somebody on the barge. I have forgotten the name of the man.

Mr. MATHEWSON: Do you want to withdraw that if you do not want the name given, Mr. Kirby?

Mr. KIRBY: We may produce the man himself.

Q. Well, I will ask you again to give the name of the man who drew the sample, and take the ruling, or who gave the sample to you, and take the ruling of the Master if there is any objection to it.

The MASTER: You can answer, Mr. Edgerton.

Mr. PAGE: I object. If Mr. Edgerton has any objection 4936 to giving it, I will withdraw the sample and withdraw further testimony in regard to the sample.

The MASTER: That seems to dispose of it.

Q. Now, Mr. Edgerton, in reference to the long and short tons, those producing the coal gas in your assumed plant in New York would be bituminous coal?

A. Certainly.

Q. I asked you no question about bituminous coal. I asked you if you did not compare coke at $4.00 a ton, short tons, with anthracite at $4.23 per long ton; you understood that, didn't you?

A. Yes, I understood the anthracite price was $4.23 on the short ton.

Q. You understood I asked you nothing at all as to bituminous as comparing with long or short tons, and you stated it was a short ton; that is right, isn't it?

A. I figured on short tons throughout.

Q. Now, of course the more pounds of bituminous coal you take, the more gas they will produce; that is conceded, I suppose?

A. Yes.

Q. You estimate that your computation of labor, less residuals, in the first place amounted to about 6 cents, and after you had made the corrections for residuals, the balance amounted to something like 15 cents. You do not call that a slight discrepancy, do you?

A. Well, I do after correcting the errors that I made in my prices, yes.

Q. But, as a matter of fact, the long or short ton use would not affect any errors that you made of that character?

A. Not that, but it is affected by the fact that I made an error in the prices, in referring to the prices of material here, and the Central Union, and it made quite a large difference.

Q. Now, as you have been asked further about Faribault, I read

4937 this from the letter which you have identified as a letter of the company, and ask you if that does not modify your statements as to the pipes in Faribault——

Objected to.

Q. (Reading:) "Our main feeders are in most instances from five to seven feet below the surface. In order to keep below the frost line in this part of the country it would be necessary to have pipe in no instance less than five feet. Such mains as we have at a depth of from three to three and one-half feet are in outlying districts, where the consumption is light, and are of wrought iron in every instance, so that we have experienced no difficulty with broken mains."

Now, I have quoted that correctly, haven't I?

Mr. PAGE: I object, as before.

Q. And I ask whether that does not modify your statements which you put on the record in your redirect-examination as to the depth of mains at Faribault?

Same objection. Same ruling. Exception.

A. No. I know better.

Q. And if they are three feet under ground it would indicate that they have not followed your advice at Faribault, wouldn't it?

A. They did follow my advice. I saw the mains laid there.

Q. When?

A. In 1901, 1902, 1903. I have not been there since 1903.

Q. You don't know whether they have been taken up and relaid at a greater depth or not since, do you?

A. I know that I should have heard of it.

Q. Well, except in that way, you do not know, do you?

A. Well, all communications from Faribault about management are referred to me, and have been, and up to a very recent 4938 period; and I will say this, that this young man does not know about Faribault mains to the extent I do, for he is secretary——

Mr. MATHEWSON: I move to strike out the witness' answer as not responsive.

Motion granted. Exception.

Q. Now, I ask again, you have no personal knowledge, have you, as to what mains have been taken up and relaid in Faribault within the last four years, or three years, since you were there, in 1902 or 1903?

A. Since I was there in 1903, I have not—1903? Yes. I have not paid personal attention to it, but I would know if there were any mains——

Mr. MATHEWSON: I move to strike out "But I would know if there were any mains."

Motion granted. Exception.

By Mr. Page:

Q. Do you know as a matter of fact that this oil marked "January 6th, 1905," was the oil that was being used at that time by the company at Danbury?

A. Yes, sir.

Mr. Mathewson: Objected to. Of course the witness does not know if he did not draw it and was not present when it was drawn and was not present when it was used. The man who gave it to him may have got it somewhere else. If we had been present when it was drawn I would not have the slightest objection; as it is, I must object.

The Master: I do not see how he can testify to that, if I remember his testimony rightly.

The Witness: This is not my tag.

4939 By Mr. Mathewson:

Q. Not your writing on the tag, is it?

A. No, it is one Mr. Cowperthwait put up.

By Mr. Page:

Q. Is it the custom of the Danbury company to take samples of the oil as each shipment comes in and keep them in some certain place?

Mr. Mathewson: That is objected to as immaterial.

Question allowed. Exception.

A. That is the custom.

Q. Did you take this bottle from the place where such oil is kept in the Danbury works?

Mr. Mathewson: Objected to as immaterial.

Question allowed. Exception.

A. I did not take the sample myself, no. I ordered it taken from my closet where I kept samples.

Q. Did you keep those samples yourself?

A. I kept them under my eye; they were right in the office where I did all my laboratory work, and they have, I suppose, one hundred bottles of those samples extending quite a number of years back, of oil, because I have been making it a subject of looking into oil with reference to the qualities of gas made from it for quite a number of years.

Q. You say you ordered it taken from that closet?

A. Yes, sir.

Q. Who gave it to you?

A. The son of the superintendent came up specially to bring those samples to me from Danbury, and no other person except myself or his father has access to the office that I know of where they are kept.

4940 By Mr. Kirby:

Q. This oil marked "Standard Fuel Oil," November 20th, 1906, is the oil delivered to you by Dr. Sherman, is it not?

A. Yes.

Q. And the oil in bottle marked "January 6, 1905," was the sample of Danbury oil that you delivered to Dr. Sherman, is it not?

A. Yes.

Q. It is the sample of oil you testified to getting in Danbury?

A. Yes, I took that up there personally and we tested that first with a hydrometer, Beaumé, and I directed him to make as careful a fractionation as possible, in fifths.

HENRY CLAPP SHERMAN, a witness called on behalf of the State, being first duly sworn, testifies as follows:

Direct examination by Mr. KIRBY:

Q. I understand you are an analytical and consulting chemist?

A. Yes, sir.

Q. Are you upon the faculty of any university?

A. I am upon the faculty of Columbia University.

Q. What position do you hold there?

A. Adjunct Professor of Analytical Chemistry.

Q. Have you any scientific degree?

A. I have the degree of Bachelor of Sciences from the Maryland Agricultural College, Master of Arts from Columbia University, and Doctor of Philosophy from Columbia University.

Q. Did Mr. Edgerton, the gentleman who has just left the witness stand, deliver to you certain samples of oil under seal, being the oil, some of which is in this bottle marked "Standard Fuel Oil, 4941 November 20, 1906," and the other in the bottle marked "January 6, 1905"?

A. He did.

Q. And did you make certain tests of the oil as to its specific gravity?

A. I did.

Q. Did you fractionate that oil?

A. I did.

Q. Did you make chilling tests upon the two samples to ascertain the amount of solid matter therein or to show what such tests would indicate?

A. I did.

Q. Will you give the result of the test of the oil marked "Standard Fuel Oil, November 20, 1906," as to specific gravity, the same being reduced to a Beaumé scale?

Mr. MATHEWSON: Objected to as immaterial and irrelevant; the results of such an examination not being relevant to the issues here.

The MASTER: Well, I will take it.

Exception.

A. I have the result of the density determination by means of the hydrometer on the Beaumé scale, and the results of the specific gravity determined by means of the specific gravity bottle. The results by the hydrometer were 31.3 degrees Beaumé at 70 degrees Fahrenheit, corresponding to 30.3 degrees Beaumé at 60 degrees F. The specific gravity determined at 60 degrees F. by means of the specific gravity bottle was 0.8744.

Q. Did you fractionate this oil?

A. I did.

Q. And in how many fractions?

A. Into five fractions; the first, second, third and fourth fractions being distilled; the fifth fraction being the residual oil.

Q. And what was the result of such fractionation into these five
fractions which you have spoken of, giving specific gravity
4942 by balance, by bottle and also reduction to Beaumé scale.

A. The specific gravity by the Westphal balance for the

First fraction	was	0.832
Second "	"	0.870
Third "	"	0.880
Fourth "	"	0.8855
Fifth "	"	0.899

The specific gravity determined by the specific gravity bottle was for the

First fraction	0.8321
Second "	0.8708
Third "	0.8807
Fourth "	0.8862
Fifth "	0.9007

Q. And reduction to the Beaumé scale gave what results?

A. The results shown by the specific gravity bottle reduced to the Beaumé scale gave for the:

First fraction	39.5
Second "	31.7
Third "	29.8
Fourth "	28.7
Fifth "	26.1

Q. That is, that this oil, which before fractionation in a Beaumé test of 30.3 was fractionated into five fractions in the manner you have stated, showed it to be made up of oils varying in specific gravity from 39.5 to 26.1, or to 26.1 for the specific gravity of that which was not distilled over?

A. For the gravity Beaumé corresponding to the specific gravity for that which is not distilled over.

Q. Now, did you apply a chilling test to this oil?

A. I did.

Q. To what temperature did you bring the oil?

4943 A. The oil was brought to a temperature between O, F. and minus 5 degrees F., and held at that temperature in the first test for one hour.

Q. And what was the result?

A. This sample marked "Standard Fuel Oil" showed no change in appearance, and on opening the burette in which the oil was contained during this exposure to the low temperature——

Q. Did it clog up the opening?

A. It did not clog the opening. At the opening of the burette the oil began to flow out at once.

Q. Which indicated to you what condition of the oil as respects paraffine or such other substance which might have been its base? Was much or none contained therein?

A. That there was none which we described at this temperature during exposure of one hour.

Q. Now, did you apply a similar test to the oil marked "January 6th, 1905"?

A. I did.

Q. What was the result of those tests?

Mr. Mathewson: Objected to. That is the one which the witness did not draw.

Objection sustained. Exception.

Mr. Page: We ask that this testimony be taken subject to our subsequently connecting it directly, and if we do not do so it may be stricken out.

Mr. Mathewson: It seems to me that that is not the way to produce testimony.

The Master: I think the best thing is to exclude it, and let it go at that. You can take it on that basis if you desire.

Mr. Page: I will take an exception.

The Master: It seems to me you have got to do so much connecting to make this testimony material anyway it is hardly worth while to go into it at length.

4944 Mr. Kirby: We will put it in under the rule, Mr. Master.

Q. Did you test this oil for specific gravity?

A. I did.

Q. What was the result?

A. The result of the determination of the density by the Beaumé hydrometer was 34.5 degrees Beaumé at 70 degrees F., corresponding to 33.5 degrees Beaumé at 60 degrees F. The specific gravity determined by the specific gravity bottles at 60 degrees F. was 0.8572.

Q. And the fractionation showed what?

A. Showed for fractions, specific gravity, by the Westphal balance:

First fraction	0.769;
Second "	0.850;
Third "	0.8695;
Fourth "	0.882;
Fifth "	0.905.

The specific gravity by the specific gravity bottle for:

First fraction	0.7709;
Second "	0.8514;
Third "	0.8712;
Fourth "	0.8833;
Fifth "	0.9065.

Q. Which, being reduced to the Beaumé scale, gives what result?
A. Gives for the:

First fraction	53.4	degrees	Beaumé;
Second fraction	35.5	"	"
Third fraction	31.6	"	"
Fourth fraction	29.3	"	"
Fifth fraction	25.1	"	"

Q. It also indicates that this oil was made up of various
4945 gravities, and not all of one gravity of 33½ degrees Beaumé?
A. It does.

Q. Did you subject this oil to a chilling test?

A. I did.

Q. What was the test, and what did it show?

A. The test was made in the same manner as the test with the sample marked "Standard Fuel Oil," two burettes being exposed side by side for one hour at a temperature between 0 degrees F. and minus 5 degrees F. The two burettes were of the same form and of approximately equal diameter, and filled to the same depth in one case with the "Standard Fuel Oil," in the other with the sample marked "January 6th, 1905." On removing the burettes from the freezing mixture the sample marked "Standard Fuel Oil"——

Mr. Mathewson: Do you mean that?

The Witness: I understood the object of this question was to compare the results of these two oils. On removing the burettes from the freezing mixture the sample marked "Standard Fuel Oil" showed no change in appearance and ran out freely upon opening the burette. The sample marked "January 6th, 1905" showed no deposit, but was slightly turbid, and did not run out immediately upon opening the burette, but began to run in a few seconds, as the substance became warm by contact with the air of the room.

Q. Did you make a further test of these oils by chilling them and noting the result?

A. I made a second chilling test with these two samples of oil, using the same burettes, but with the burettes reversed, that is, with the sample marked "Standard Fuel Oil" placed in the burette previously used for the sample marked "January 6th, 1905," and *vice versa.*

4946 Q. What was the result of that?

A. The burettes were then exposed to a temperature of about two degrees below zero for two hours, at the end of which time the sample marked "Standard Fuel Oil" was not perceptibly changed in appearance, and ran out from the burette in about fifteen seconds when the latter was opened at the room temperature immediately after removing from the freezing mixture. The sample marked "January 6th, 1905," was turbid, and upon opening the burette under the same conditions, the oil required a few seconds before beginning to run, and about one hundred seconds to run out completely from the burette.

Cross-examination by Mr. MATHEWSON:

Q. What percentage of oil did you get from the different gravities from 39.5 down to 26.1 Beaumé, referring to "Standard Fuel Oil"?

A. The first fraction from the Standard Fuel Oil was one-fifth of the volume of the sample taken from the fractionation.

Q. 20 per cent.?

A. 20 per cent. by volume.

Q. Very good.

A. The second fraction was also 20 per cent by volume; the third fraction was also 20 per cent. by volume; the fourth fraction was also 20 per cent. by volume.

Q. And, of course, the fifth?

A. The fifth was the residue remaining in the flask. It was impossible to pour it out so fully as to measure 20 per cent.

Q. Were these tests 39.5 to 26.1 Beaumé of the five fractions reduced to sixty degrees temperature or taken at that temperature?

A. They were taken as nearly at 60 degrees F. as tests upon small volumes can be made.

Q. Well, what do you mean by that? Didn't you take the exact temperature?

A. The exact temperature was taken at 60 degrees and the tests are the specific gravities at 60 degrees F. 4947

Q. But you separated this oil into five fractions, did you not?

A. I did.

Q. And then you took the specific gravity of each fraction?

A. I did.

Q. Isn't it necessary to know the temperature of each fraction at the time you test it in order to get the accurate result reduced to 60 degrees?

A. It is.

Q. Did you take the temperature of each fraction?

A. I did.

Q. And do you mean to say that each fraction tested just 60 degrees, or did it test some other degree at some other figure?

A. The tests were made at 60 degrees.

Q. So that there was no reduction?

A. There was no reduction.

Q. How did you know that the temperature was 60 degrees at the test? What test did you make to ascertain the temperature before taking the gravity of the five fractions?

A. The temperature was determined by means of thermometers. The temperature in the case of the determinations of the Westphal balance were taken by means of a thermometer, obtained with the balance, the whole apparatus having been tested and certified by George Westphal.

Q. What was the total material that you began with in reference to "Standard Fuel Oil"? Was it a full bottle?

A. The bottle was not completely full.

Q. How much of it have you used up?

A. I should say that the bottle contained about three times that amount.

Q. Three times what there is now in it?

A. Yes. The residue I should judge to be about one-third of the amount which was delivered.

4948 Q. What is the meaning of the tag, "Filter Before Testing," if you know?

A. Mr. Edgerton requested me to filter the oil before making the tests.

Q. Did you?

A. I did.

Q. You did not test the oil as it is in the exact shape in which it was delivered to you, then, did you?

A. The oil was filtered in the presence of Mr. Edgerton, so that the oil as finally delivered to me by Mr. Edgerton was in exactly the state in which I made the tests.

Q. Oh, yes, but this oil here does not represent the oil as it was originally brought by Mr. Edgerton, but it represents the oil after it had been filtered; is that it?

A. After it had been filtered.

Q. And this sample is after it had been filtered?

A. After it had been filtered.

Q. Was this a continuous single test reaching all your conclusions by a single sitting, so to speak?

A. Do you refer to all the results as I have given.

Q. I refer to the "Standard Fuel Oil."

A. To all of the results which I have given of the Standard Fuel Oil?

Q. Yes.

A. No.

Q. Well, give me some further detail on that, if you will.

Mr. Kirby: What do you mean.

Q. You say it was not all at the same time. Were there long intervals and, if so, what were the intervals between the different parts of your process?

A. There were intervals varying from a few hours to a few days between the different operations in the examination.

Q. Were your samples kept sealed between the various steps in the tests?

A. They were kept in a locked closet.

4949 Q. Were the samples sealed or stopped, carefully stopped?

A. They were carefully stopped.

Q. With cork?

A. With cork.

Q. Can you give me the temperature of the distillation fractionating the oil into the five parts?

A. I can give you approximately the temperature at the end of the distillation of each fraction.

Q. Yes, that is what I mean.

A. Do you wish the approximate temperature at the end of each distillation of each fraction from the sample marked "Standard Fuel Oil"?

Q. Yes.

A. At the end of the distillation of the first fraction the temperature was about 495 degrees F.; at the end of the second about 555 degrees F.; at the end of the third about 600 or 605 degrees F.; at the end of the fourth about 645 degrees F.

Q. Did you also filter the second sample dated "January 6th, 1905"?

A. I did not.

Q. Will you give me the percentages of each distillation thrown off by each distillation and the temperature at the conclusion of each?

A. Each fraction was 20 per cent. by volume of the sample taken for the fractional distillation, and the temperatures were, at the end of each distillation, of the first fraction about 470 degrees F.; at the end of the distillation of the second fraction about 550 degrees F.; at the end of the distillation of the third fraction about 620 degrees F.; and the end of the distillation of the fourth fraction about 668 degrees F.

Q. What do you mean when you speak of the oil handed you as being made up of a single oil or being made up of a combination of oils?

Mr. KIRBY: He has not made such a statement, Mr. Mathewson.

Mr. MATHEWSON: You asked him whether this was not a mingled oil, a mixed oil.

4950 Mr. KIRBY: I asked him whether this oil was not made up of oils of different gravities.

Mr. MATHEWSON: I think that means the same thing.

Q. What do you mean by saying this is an oil made up of different gravities?

A. I mean that the sample I tested consisted of constituents having different gravities.

Q. That does not mean that the oil, as it comes from nature, might not have different gravities when it was distilled or the fractions might not show different gravities when it was distilled, does it?

A. Will you kindly repeat the question?

Q. Does that necessarily mean when there are distillations showing different gravities that it is a mixture of five oils, artificially produced?

A. It does not necessarily mean that it is an artificial mixture, if that is an answer to your question.

Q. It may be a natural product as it appears?

A. Certainly.

Q. In other words, the mixture might have been done by nature instead of by man, for all the distillation shows?

A. It might.

By Mr. KIRBY:

Q. But it does mean, does it not, that this distillation is not all 34 degree oil?

A. Certainly. The products of the distillation are not all 34 degree oils.

By Mr. **Mathewson**:

Q. Taking the oil as it stands, "Standard Fuel Oil," it does mean that the oil as you tested it, after filtering, showed 30.3 Beaumé at 60 degrees?

A. 30.3 Beaumé at 60 degrees F.

4951 Q. And the other 33.5 degrees Beaumé at 60 degrees?

A. Yes, sir.

Q. Will you give me the length of time that the distillation of each one of these fractions consumed?

A. No, I cannot give you the length of time consumed.

Redirect-examination by Mr. **Kirby**:

Q. In filtering this oil marked "Standard Fuel Oil, November 20, 1906," what did you filter it through?

A. Through ordinary filter paper.

Q. And what did that remove, if anything?

A. Suspended matter, and perhaps water.

Q. No constituent part of the oil itself?

A. Some of the oil remained in the filter paper, but there is no reason to suppose that it would remove more of one constituent than of the others in the oil.

Q. What was the purpose of the filtration?

A. To remove the foreign matter before testing the oil.

Q. That is, what we would com-only call dirt?

A. Dirt.

Recross-examination by Mr. **Mathewson**:

Q. And tar?

A. I saw no evidence of tar.

Q. The filter would not remove tar or any of it, would it, Professor? How is that?

A. It would depend entirely upon the conditions under which you attempted to remove the tar with filter paper.

Mr. **Mathewson**: I ask to have these two bottles marked for identification and left with the Master, subject to our inspection and testing, if we see fit.

The bottle labeled "Standard Fuel Oil, November 20, 1906," is marked for identification, Complainant's Exhibit 259.

4952 The bottle labeled "January 6, 1905," is marked for identification, Complainant's Exhibit 260.

Mr. **Burr**: I also have a couple of letters that I would like to submit to Mr. Mathewson and the Master. You will recollect that Professor Bemis testified that Lynn reduced the rate voluntarily to ninety cents, and that his information was that it had also quite recently reduced the price to eighty-five cents, he believed, October 1st.

(Mr. Burr then presented a letter on the subject and made a statement as to its contents, which, by direction of the Master, was stricken from the record on Mr. Mathewson's motion, and objection to its competency.)

Mr. **Burr**: And I except now to the striking out, and ask that this paper be marked for identification.

Marked for identification, City's Exhibit 123.

Mr. **Burr**: I have here a letter from the acting Director of the Department of Commerce and Labor, Bureau of the Census, to certify to the correctness of the statements made by Professor Bemis as regards the growth of the population of the City of New York, and in contradiction of the conclusion arrived at by the Herring-Burr-Freeman report to which Mr. Mathewson referred.

Mr. **Mathewson**: Same objection.

The **Master**: Mark that for identification also.

Mr. **Burr**: I offer that in evidence. It is an official document.

Mr. **Mathewson**: I object to it as incompetent.

Objection sustained. Exception.

4953 Paper marked for identification, City's Exhibit 124.

Mr. **Burr**: I offer in evidence the Referee's report filed in the County Clerk's office, in an action brought in the New York Supreme Court, New York County, entitled The People of the State of New York against The Union Gas Light Company of the City of New York and another; J. M. Varnum, Attorney for Receiver; filed August 7th, 1875. And I ask to have spread upon the record those parts which I have marked in the copy, which I will hand to the Stenographer. It is offered for the purpose of showing that in this proceeding the real estate and franchises of this company were valued at a certain figure, some Five Hundred and Fifty Thousand Dollars in 1875, which was much less than the value of the franchises as stated in Yalden's Report, or in the report of the Committee of 1886, Senate Document 47, I think it was.

Mr. **Mathewson**: Objected to as incompetent evidence and immaterial and irrelevant, and it relates to a corporation which was not one of our constituents.

The **Master**: I will take it for what it is worth.

4954 New York Supreme Court.

THE PEOPLE OF THE STATE OF NEW YORK
against
THE UNION GAS LIGHT COMPANY OF THE CITY OF NEW YORK and Another.

To the Justices of the Supreme Court:

I, Elias J. Beach, the Referee appointed herein by an order made by this honorable Court on the second day of August, 1875, and to whom it was by said order referred "to examine and report as to the truth of the facts stated in the petition of the Receiver of the Union Gas Light Company bearing date on the 28th day of July, 1875, and as to the nature and character of the property described in said petition, the value thereof and the advisability or inadvisability of allowing the whole of the same to be sold together by the said Receiver by private sale or negotiation" do respectfully report to this Honorable Court.

That, after having been first duly sworn, due notice of the time for the hearing of the matter so referred to me as aforesaid was given to all the parties to this action and to the creditors of the Union Gas Light Company, as appears by the notice of trial with admission of service thereon endorsed hereunto annexed and marked "Exhibit 'N' ".

That upon the time appointed for the commencement of such reference, to wit, the 4th day of August, instant, there appeared before me Mr. F. J. Fithian of Counsel for the Attorney-4955 General the plaintiff's attorney herein, Mr. J. M. Varnum of Counsel for, and in behalf of the Receiver of the Union Gas Light Company, the petitioner herein, Mr. R. M. Harrison of Counsel for and in behalf of all of the defendants herein and Messrs. Foster & Thompson of Counsel for Messrs. J. Boorman, Johnson & Company, General creditors.

That in accordance with the provisions and directions of the said order of appointment, I duly summoned before me and examined under oath in relation to the matter so referred to me, such of the officers, creditors and stockholders of the Union Gas Light Company, and such other persons as I deemed necessary and proper in order to fully satisfy and inform myself on the matters so referred to me as aforesaid, and that the names of the witnesses so examined by me are as follows:

Robert M. C. Graham, John Sickels, J. Boorman Johnston, Thomas F. Rowland, Henry Morgan, William Foster, Junior, and James M. Varnum.

That certificates under the hand of the Clerk of this Court showing and certifying that Charles Edgar Appleby had been appointed Receiver of the Union Gas Light Company by an order made herein on the 15th day of June, and that on the 16th day of June, 1875, he duly made and filed his bond as such Receiver, were produced and exhibited to me.

That the testimony of each of the said witnesses, taken under oath, was reduced to writing and duly subscribed and sworn to by each witness, and all of said testimony is annexed to this report for the full information and satisfaction of this Court, and is marked "Depositions."

That upon said reference a paper was presented to the 4956 Referee, signed by all the unsecured creditors of the Union Gas Light Company, and sworn to by them asking that the prayer contained in the said Receiver's Petition be granted; all of which will more fully and clearly appear by reference to the said paper hereunto annexed and marked "Exhibit A."

A copy of the Inventory filed by the Receiver showing the assets and liabilities of the Union Gas Light Company referred to in the testimony of R. M. C. Graham is hereunto annexed and marked "Exhibit No. 1."

And after examining the witnesses above named and taking such other and further proof as I deemed proper and necessary in the premises, and after due consideration thereon, I, Elias J. Beach, as Referee as aforesaid, do report to this honorable Court, as follows, viz.:

First. I find generally that all material facts stated in said Receiver's petition are true.

Second. I find that Charles Edgar Appleby, the Petitioner herein was on or about the 15th day of June, 1875, duly appointed the Receiver of the Union Gas Light Company of the City of New York; that he has given and filed the bond required of him as such Receiver by said order of appointment, and has in all particulars duly qualified and entered upon the performance of his duties as such Receiver, and that on or about the 28th day of July, 1875, he duly made and filed in the Office of the Clerk of this Court an Inventory of the Assets and Liabilities of the said Union Gas Light Company and that the said Inventory was just, full and true.

Third. I find that the assets of the said Union Gas Light Company consist of the following, viz.:

4957 *1st.* A block of land situate in the 12th Ward of the City of New York, bounded and described as follows: Beginning at the point of intersection of the Easterly side of the Second Avenue and the middle line of 99th Street; thence running along the said middle line of 99th Street, crossing the First Avenue to the Harlem River as laid down on Randall's Map; thence along the Harlem River as laid down on said map to the middle line of 98th Street; thence Westerly along the said middle line of 98th Street to the Easterly side of the Second Avenue; thence along the said Easterly side of the Second Avenue to the place of beginning: Together with pre-emptive and other rights in and to the lands under water in front of said premises. That upon the said land and premises buildings and works for the manufacture of gas have been commenced, but the same are now in an unfinished and incomplete state, and which buildings and works cover the greater portion of the said land and premises.

2nd. A right to lay mains and pipes in and along the streets, public avenues and other public places in and of the City of New York, which right the Union Gas Light Company has acquired and holds by intermediate assignments and transfers from the Anthracite Gas Lighting & Heating Company, to which Company and its assigns the said right and license was granted by the municipal authorities of the City of New York by an ordinance duly passed by the Common Council September 17th, 1863, and amended subsequently by the said Common Council and approved by the Mayor of the City on or about the 29th day of May, 1865.

3rd. An interest in a contract made by the Union Gas Light Company with William Foster, Junior, and certain other grantees of a grant from the State of New York, and known as, and described in, Chapter 944 of the Laws of this State, passed June 12th, 1871; by which contract the said Company undertakes to manufacture gas for illuminating purposes, and to lay mains and pipes to conduct that gas through and along streets, highways, and certain other public places, specified in that grant, which 4958 are situate in those parts of the City of New York above and north of the centre line of Seventy-ninth Street, and also in the whole of Central Park in said City.

4th. That there are also among the assets of the said Company certain unpaid cheques of Cornelius S. Bushnell amounting in the aggregate to the sum of about $17,611 81/100 (Seventeen thousand six hundred and eleven and 81/100 dollars), which are considered by the Receiver after diligent inquiry to be bad and uncollective debts.

5th. That there are also in the office of the Company at No. 1½ Pine Street certain articles of office furniture of a value not exceeding Three hundred dollars ($300).

Fourth. I find that the liabilities of the Union Gas Light Company are as follows:

1st. Judgments, being liens upon the real estate of the Company, amounting with interest to about Forty-six thousand dollars, *$46,000.*

2nd. Bonded Indebtedness and interest thereon secured by mortgage upon the real estate and franchises of the Company, apparently about Five hundred and seventy-five thousand dollars, *$575,000.*

(The full amount of this claim is not admitted by the Receiver of the Union Gas Light Company to be due, and this sum is therefore subject to reduction upon compromise or settlement).

4959 *3rd. Unpaid Taxes and Assessments* upon said real estate amounting with interest to about Eleven thousand six hundred dollars, *$11,600.*

4th. Other valid claims against the said Company unsecured by lien, about Ninety-seven thousand nine hundred dollars, *$97,900.*

5th. There is also a claim of Twenty-one thousand dollars ($21,000) made by J. B. Johnston & Company in liquidation against the said Company on account of overdue coupons, no part of which is admitted by the Receiver to be due.

That the total amount of the claims of every description against the Union Gas Light Company, not including the said rejected claim of J. B. Johnston & Company in liquidation, is about the sum of Seven hundred and thirty thousand five hundred dollars, *$730,500*

Fifth. I find that the real estate of the said Company set forth is of a value not exceeding Two hundred thousand dollars ($200,000) excluding buildings and works for the manufacture of gas thereon erected, or in course of erection; that the said works are of great extent, covering the greater portion of said property and were erected at great expense, but that the same are now, and have been for several years, in an incomplete and unfinished state, and will require a further expenditure of at least one hundred and fifty thousand dollars ($150,000) to put them in working order so as to make gas, not including the expense of laying of any mains, building fences or filling in ground, and that said works and buildings would be of but little value for any other purpose than the manufacture of gas; and that the said real estate would be but little, if any, enhanced in value to any ordinary purchaser by reason
4960 of such buildings and works being erected thereon, unless
such purchaser should desire to use the same for the manu-

facture of gas, which he would be unable to do unless he had also acquired rights and franchises for laying mains and conducting gas, &c., and it is probable that any person purchasing the said real estate for any other purposes, would regard the works and buildings thereon erected as a drawback rather than an advantage to said land, by reason of the great expense incidental upon removing them to make room for other buildings. I also find that the said property is now in danger of great waste and deterioration, by reason of the washing away by the water of the East River of the fillings of the bulkhead erected upon the water front of said premises, which washing away, if suffered to continue much longer, will entail very large expense upon the owners of said property for necessary repairs to said bulkhead and the filling behind the same.

Sixth. That, the value of said land would be much greater to any person acquiring also the rights and franchises of the Union Gas Light Company, and especially as the large expenditures heretofore made for works and manufactures would then be of use and importance to the person or persons so acquiring it. That the value of the rights and franchises owned by the said Company hereinabove set forth apart from its real estate, cannot be exactly nor approximately ascertained by any ordinary method of computation and is incapable of estimation, but that their relative value is in a great measure dependent upon the ownership of land and gas works which could make them of pecuniary value and use, nor would such incorporeal rights and franchises be of any considerable or appreciable absolute value to any person or persons not also acquiring
4961 the land and appurtenances.

Second. And I find that the said real estate with its appurtenances, and the said rights and franchises of the Union Gas Light Company, are so united as a whole and each part so depends upon the others for its relative value that a sale thereof separately and in portions would not realize as large a sum as a sale of the same in entirety, and I therefore report that it is advisable that the said real estate and franchises of every nature should be sold together by the said Receiver.

Eighth. And I find that if the said property and franchises were sold as a whole in entirety at public auction or vendure, there would be great danger and hazard, by reason of the peculiar character of the property, as hereinabove set forth, that it would be sold at a sacrifice and for much less than could be realized at private sale, and that the bidders would probably be so limited, as to practically defeat the purpose of a public auction, and I therefore report that it is advisable for the interests of all parties that the Receiver should be allowed to sell the whole of the said property together by private sale or negotiation, subject however to the approval of this Court.

Ninth. And I further find and report the probable value of the whole of the real estate and buildings and works thereon erected, and the rights and franchises of the said Union Gas Light Company, if sold together, would be about the sum of Five hundred and twenty-five thousand dollars ($525,000), which would be a just and fair price therefor.

4962 *Tenth.* And I further find that the property and estate of the Union Gas Light Company are constantly decreasing in value, by reason, not only of the damage being done by water to the real estate, as above set forth, and of the injury to the works and machinery by the weather, but also by reason of the interest constantly accruing upon the large indebtedness of the Company, and of the necessary current disbursements for the care and protection of the said property; and I also find that the mortgage bondholders threaten a foreclosure of the mortgage upon the said property and franchises unless some action is speedily taken towards the payment of the said indebtedness, and that one of the judgment creditors has advertised the said property for sale under an execution under his judgment and that the same will be probably sold upon the 19th day of August, instant, unless some settlement is made prior thereto; and that if such sale be made under foreclosure or at sheriff's sale, great loss and injury will be likely to accrue therefrom to all other persons being creditors or stockholders of said Company; and I therefore find that the allegations contained in the Receiver's Petition, as to the necessity and desirability of having such sale effected without unnecessary delay, are true.

And in recapitulation I would briefly report the following as my

Conclusion

upon the matters referred to me, viz.:

First. That the material facts stated in the Receiver's Petition are true.

4963 *Second.* That the nature and character of the property of the Union Gas Light Company is as set forth in said Petition (except as hereinbefore noted).

Third. That is is advisable for the interest of all parties that this Court should allow the real estate with the buildings and appurtenances and all the franchises and incorporeal rights of every kind of the said Union Gas Light Company which are the subjects of legal sale and transfer, to be sold together by the Receiver.

Fourth. That it is advisable for the interests of all parties that this Court allow such sale to be made by the Receiver by private sale or negotiation, but subject to the approval of this Court, and that such sale should be carried out without unnecessary delay.

Fifth. That the probable value of all of said property does not exceed Five hundred and fifty thousand dollars ($550,000) and that a just and fair price therefor would be about the sum of Five hundred and twenty-five thousand dollars ($525,000).

Sixth. That the Receiver of the Union Gas Light Company should be authorized and directed by this Court to negotiate a contract for the sale and proper transfer legally of the real estate, buildings, works, incorporeal rights and franchises of every kind of the said Union Gas Light Company of the City of New York, which are the subject of legal sale and transfer, and that such a sale be negotiated for the highest possible price, but not for less than the sum of Four

hundred and seventy-five thousand dollars ($475,000), with-
4964 out the further direction of this Court, and upon such terms
as are likely to effect the true interests of the Bondholders and other creditors and of the Stockholders of the said Union Gas Light Company, and that such negotiation be undertaken without unnecessary delay, and that the same, if any be effected, be, with its particulars, forthwith reported to this Court in accordance with the rules and practice thereof.

All of which is respectfully submitted.

New York, August 7th, 1875.

ELIAS J. BEACH, *Referee.*

* * * * * * *

Testimony of R. M. C. Graham, who being duly sworn, testified as follows:

I am the President of The Union Gas Light Company. I am also a Creditor of the Corporation to the amount of about $60,000—am familiar with the character of the property of the Corporation. It consists of the following items or particulars. I have before me a copy of the Receiver's Petition in this proceeding and have read over the several specifications therein contained and each of them and am personally acquainted with each of the specifications therein stated and know each and all of them to be true, and if I should proceed to give other or independent evidence on these points, it would be merely a recapitulation of the statements contained in that petition which I now adopt as a part of my testimony.

* * * * * * *

I have before me a copy of the Receiver's Inventory which covers not only the assets, but also the liabilities of said Company, as shown
by Schedule A, which schedule gives an accurate statement
4965 of the claims and liabilities of said Company and I desire to
make that schedule a part of my testimony.

Q. What do you estimate or consider the reasonable value of the Real Estate franchises and contract specified in the Petition provided you deem yourself competent to make an estimate?

A. The Real Estate with the franchises and the contract and specified as 1st, 2nd, 3rd in list of assets in the Receiver's Petition. If taken together are worth in my judgment the sum of $575,000. If these properties were divided and sold separately the whole would not be worth near as much as I have named. The buildings are only suitable for Gas purposes and the buildings and land as now situated becomes much more valuable by having the franchises connected with and covered by the same ownership. If the land and buildings as they now are were sold separately, there is great danger that the whole Real Estate with the buildings such as they are would not bring more than the bare land, the value of which would be about $200,000, and if any increase for the buildings could be obtained it would be small. I do not deem myself competent to fix any value on the franchises or contract. They are of such an exceptional nature depending upon so many extraneous circumstances that I would not be willing to fix any value on them.

Q. Have you considered the question as to the advisability or inadvisability of allowing a sale of the Real Estate franchises and contract together as one property by the Receiver and if so please state any fact or matter relating thereto?

A. I have considered that question and devoted considerable time upon the investigation of that subject and have sought the aid of gas experts and am satisfied that the best interests of the Stockholders, Creditors and all interested parties would be materially promoted by authorizing and allowing the Receiver to make sale 4966 of the whole property, with the franchises to one purchaser and I can perceive many advantages that might accrue by permitting the Receiver to negotiate or contract for a private sale of this property. I have considered the question of a sale by auction and think that more of sale would be hazardous as there might be little or no competition. There is a large amount of interest constantly accruing against the Company with Taxes and Water Rates and a very considerable expense for watching, protecting and the preservation of the property. One of the Bulkheads or rather the Bulkhead on the North side of the property has broken ground and is washing away; unless soon repaired very large injury will be likely to be done to that portion of the property filled in.

R. M. C. GRAHAM.

Subscribed and sworn to before me this 4th day of August, 1875.

ELIAS J. BEACH, *Referee.*

* * * * * * *

Testimony of James Boorman Johnson, who being duly sworn testified as follows:

I am a member of the firm of J. Boorman Johnson & Co. in liquidation and as such a Creditor of the Union Gas Light Company on account of money loaned and advanced to such Company amounting to about the sum of $56,000.

* * * * * * *

Q. What in your judgment would be the value of the Real Estate belonging to this Company without reference to the franchise or the particular buildings now on said land?

A. From $150,000 to $200,000.

4967 Q. What would be value of this property as a whole, taking in the building works, franchises and all as one property for the purposes of carrying on the business interest on this property?

A. Between $500,000 and $600,000, I can place no separate value on franchises but know that much money has been expended in the buildings, fixtures and appurtenances for the manufacture of gas. I am also a stockholder to the amount of 187 shares.

* * * * * * *

Testimony of John Sickels, who being duly sworn, testifies:

I am the secretary of the Union Gas Light Company and also a Stockholder and Creditor of such Company. I am well acquainted with its assets and liabilities and have read the foregoing deposition of Mr. R. M. C. Graham the President of such Company and have a personal knowledge of each of the statements therein contained and such deposition is in all respects true, and I concur in the views and opinions therein expressed, not only for the reasons therein stated but for others, and I hereby adopt such deposition as a part or portion of my own.

JOHN SICKELS.

Subscribed and sworn to before me this 4th day of August, 1875.
ELIAS J. BEACH, *Referee.*

Adjourned to August 5th, 1875 at 1 P. M.
E. J. B., *Referee.*

* * * * * * *

4968 Testimony of Thomas F. Rowland, who being duly sworn, testified:

I am the owner of the Continental Iron Works at Greenpoint, L. I., and have been and am largely engaged in the manufacture of gas machinery for companies in New York, and familiar with the value of all Gas Works. Have been engaged in that Department for the past eight years. I am the owner of about 900 shares of the capital stock of Union Gas Light Company. I constructed the building and works of that Company so far as they have progressed. I stopped work there about the time of the Panic, about the Fall of 1873, and the Company since then has not been in a condition to resume operations. The buildings and works aside from the land have so far cost about $890,000, but the machinery is much injured by rust and otherwise and has largely depreciated in value. The works as they now stand would not be of any value to a purchaser except to be used for Gas Works. It would cost about $150,000 to perfect the works and put them in a proper condition for work—this does not include the filling-in of ground, the building of any fences or the laying of any mains.

I think it would be very hazardous to sell this property at auction or to sell the Real Estate separately or the franchises separately, but that all this property should be sold together as one property and as necessary for one enterprise.

I think it would be most conducive to the interest of creditors, stockholders and all parties concerned to authorize the Receiver to negotiate for a private sale of this property together.

I think the sum of $500,000 would be a favorable price at this time and I would advocate a sale at that price if no better one could be obtained.

4969 The works will naturally and necessarily depreciate in value provided they are not completed and put in operation. I mean the machinery and appurtenances.

THOS. F. ROWLAND.

Subscribed and sworn to before me this 5th day of August, 1875.
ELIAS J. BEACH, *Referee.*

* * * * * * *

Schedule B.

Assets of the Union Gas Light Company of the City of New York.

I.

Real Estate.

A block of land in the 12th Ward of the City of New York, bounded southwardly by 98th Street, northwardly by 99th Street, westerly by the Second Avenue, and easterly by the East River or Harlem Branch thereof, with all water or other rights appurtenant or appertaining thereto; being property conveyed to the said Union Gas Light Company by Cornelius S. Bushnell and wife, by deed dated Dec. 6th, 1871, and recorded Feb. 15th, 1873, in Liber 1190 of Conveyances, page 64; together with the buildings and works for the manufacture of gas thereon erected, which latter are in an incomplete and unfinished state.

II.

Personal and Other Property.

1. Certain franchises or rights to lay mains in streets, avenues, &c., in the City of New York, acquired by the Union Gas
4970 Light Company by intermediate assignment from the Anthracite Gas Lighting & Heating Company, to which and its assigns the said right and license was granted by the municipal authorities of the City of New York, by an ordinance passed by the Common Council September 17th, 1863, and amended subsequently by the said Common Council and approved by the Mayor of the City of New York on or about the 26th day of May, 1865.

2. An interest in a contract made by the Union Gas Light Company with William Foster, Junior, and certain other grantees of a grant from the State of New York, and known as, and described in Chapter 944 of the laws of this State, passed June 12th, 1871, by which contract the said company undertakes to manufacture gas for illuminating purposes, and to lay mains and pipes to conduct that gas through and along streets, highways and certain other public places specified in that grant, which are situate in those parts of the City of New York above and north of Seventy-ninth Street and also in the whole of Central Park in said City; which contract bears date February 25th, 1874.

Mr. Burr: I understand it is not necessary, although the complainant has offered various statutes, to offer them. The Court will take judicial notice of them.

The Master: Yes, if they are public statutes.

Mr. Burr: Particularly those which we have referred to in our pleadings, such as the act against monopolies, the act forbidding discrimination against the City and several others.

Also I desire to say that we have submitted to Mr. Mathewson copies which we have procured from Messrs. Boardman, 4971 Platt & Soley of the certiorari proceedings which have been heretofore offered and testified to by Mr. Carter, for the purpose of enabling him to see whether the quotations and extracts from such papers to which Mr. Carter's attention was called were true and correct extracts from the original papers.

I also offer in evidence the so-called Remsen Gas Bill, to which reference was made in City's Exhibit 55 and regarding which a stipulation has heretofore been entered into and entered on the record of this hearing, the stipulation reciting that that bill was defeated and that no subsequent legislation was passed in this State; so that the Court may be informed of the nature of the Remsen bill, which is referred to simply in that statement as "The Remsen Bill." It being entitled "An act to amend Chapter 338 of the Laws of 1892, entitled 'An act to authorize the East River Gas Company of Long Island City to supply gas and electricity in the City of New York,' so as to authorize the said company to lay and maintain mains and pipes in that portion of the Borough of Queens included in the former city of Long Island City."

Mr. MATHEWSON: I do not think it is of the slightest importance and relevancy and I object to it. It never becomes a law.

Mr. BURR: In other words, the point I want to make by the introduction of that bill is this. That whatever remedy was sought to be applied to the existing conditions or conditions as they then existed was not applied because the bill failed to be approved by the Governor and that the condition that then existed still continued to exist, whatever that condition may have been, and they 4972 were careful to say that Exhibit 55 clearly and truly stated the attitude of the gas company at that time.

The MASTER: I think that is rather ancient history, Mr. Burr. I will exclude it.

Mr. BURR: It may be ancient, but it may also be very material.

The MASTER: I do not think it is material and I will exclude it.

Mr. BURR: Exception. That is all the evidence which the defendant, the City of New York, can offer to-day. At the same time, I wish to apply for an extension of time, and I want to call the Master's attention to the situation as it exists here at this moment. In the decision of Mr. Justice Lacombe——

The MASTER: There is no use of spreading any long motion of this kind on the record because I advised Counsel over a week ago that I could not grant any further extension, and that is the end of it.

Mr. BURR: I am not going to spread any long statement on the record.

The MASTER: I understood you were about to review the situation and make some motion.

Mr. BURR: No. I want to state my position in just a few words. I say Mr. Justice Lacombe in his decision says "Under the authorities in fixing the rate to be charged for 'public service' by private corporations two elements of calculation are of fundamental importance. What is the true present value of the property embarked in the enterprise? And what, in view of the risks of the business, is a fair annual percentage of return thereon."

We have not now before you what in our estimation is the true present value of the property embraked in the enterprise, 4973 by reason of the fact that we have been unable to complete the examination of the plants of the Company——

I want to say also that this is not due to any neglect on our part. This is a case of vast importance and through no fault of our own the engineers that were employed by the State were not accepted and that should not place the City of New York in the position which it evidently does by reason of the fact that without a further opportunity we will be deprived of an opportunity to examine the remaining plants. This is a great case, involving as the Judge says, a little later on in his opinion, the interest of—he says, "This Court fully appreciates the importance of a prompt disposition of this cause, which not only presents questions of grave importance, but which also (including the other causes heard at the same time) affects the interests of nearly half a million of households." Under those conditions, unless it fairly appears that we have been guilty of laches or neglect, it seems to me a short adjournment or extension of time for the purpose of enabling our engineers, who have been testifying right up to this present moment, to have further opportunity to examine these plants for the purpose of testifying as to their present value, which seems to be thought of importance in Judge Lacombe's opinion, would be a serious position in which to place the defendants, and would be, in my opinion, a substantial denial of justice.

Furthermore, to-morrow I expect to have some testimony with regard to the question of oil. The witness will be here in the morning, I am informed.

Mr. Mathewson: It does not appear that the City has 4974 engaged any engineers at all. The State engaged engineers.

Mr. Burr: It does appear that Doctor Marks has already examined the 14th Street station and has testified that he has——

The Master: I do not care to listen to any further discussion on this subject. If you have any further evidence, produce it. If not——

Mr. Page: Do I understand that the Master rules that we cannot make an application?

The Master: Not at all, but having called attention to the fact that an elaborate argument of a motion was not necessary, and Mr. Burr assuring me that he did not intend to make any, he thereupon proceeds to go on and make one, after which Mr. Mathewson naturally insists upon his right to reply, and then I suppose Mr. Burr will want to be heard again, and then I suppose you will want to be heard, and I want to give you all notice now that it is useless.

Mr. Page: I thought your remark was being addressed to me, because I was about to say something.

The Master: I was talking to Mr. Mathewson and not to you.

Mr. Page: I would like to get the application on the record,

without making any elaborate argument or statement, that as appeared from the testimony of Mr. Edgerton to-day, he had been engaged in the examination of the plants and had completed the physical examination of the 42d Street plant and could complete the examination and be ready to testify as to the details of all within ten days; that the condition which has arisen, as the Master knows, has arisen since he made his announcement that he would not grant the extension, and that the engineer whom we had employed
4975 and who had made the examination failed to give us the results that we had employed him to give—I do not mean in amounts but as to the methods of computation; and that we having been engaged and having Mr. Edgerton on the stand up to to-day, I would ask for an extension of ten days, that is for us, and at the end of the ten days, if the extension would not be granted, we would be enabled to produce that evidence at that time; further that the sample of oil is now in the hands of a chemist and an oil expert, the sample of oil that was produced here, and we would like an opportunity to put in the results of that examination which is being conducted to-day and that we had supposed would be completed in time to put in to-day.

The MASTER: That application I will deny. If, for the purpose of straightening up this oil question or closing up any other matter that you have unfinished, Mr. Mathewson chooses to let either of you gentlemen use any of the time allotted to him for rebuttal, that is another matter; there is no objection, as far as I am concerned, to that. If, however, he wants all of his time for rebuttal and objects to your putting in any further evidence after the expiration of the time which is now expiring, why, that would seem to dispose of it.

Mr. PAGE: I feel under the circumstances that the importance of the evidence to the defendant, and the fact that this case has been tried more rapidly than any equity case that I know of, involving anything like the issues involved here, and that we have been diligent in proceeding from day to day; that it is a matter that should rest with The Master, and that we should not be thrown on
4976 the courtesy of adverse counsel. It seems to me that the denial of this right be an exercise of power which The Master should not assume the responsibility for.

The MASTER: You understand, gentlemen, I have no power to dispose of the matter finally. My only function is to certify to the Court my own opinion about it from my supposed familiarity with the progress of the case from day to day. There is nothing to prevent your applying to the Court for an extension of time on such papers as you may determine and making such representations as you think will appeal to the Court for that purpose. It may well be, in view of what Mr. Burr states about the further extension and what you state about your oil question——

Mr. PAGE: My application is also for a further extension.

The MASTER: It may be on those grounds the Court will see fit to give you further time. But so far as my personal feeling about certifying a further extension is concerned, my position was taken several days ago and I have not seen anything to change it, more especially as some part of this evidence seemed to me of very doubtful materiality at best; some of these comparisons of other oils around here and all that, unless further connected than the evidence is now, seems to me to be of very doubtful materiality.

Mr. Page: I agree with you on that proposition, and it was to connect that that we wished to put in this analysis of the oil that they are actually using. As far as the oil is concerned, I 4977 think that the evidence we have produced unless connected more closely, will not be of much weight.

The Master: It seems to me, as far as my attitude was concerned, you knew this oil question was in the case months ago. You had the contract, and had the oil question before me months ago and claimed they were paying too much for the oil; and if you wanted to make an examination, you had months to do it. It did not depend upon the examination of the plant or anything else, you could have produced all this oil testimony weeks ago as well as you could on Saturday and to-day. As to the question of the inspection of the plants, I have gone over that again and again. The application was made to Judge Lacombe as early as August for an inspection of the plants and you gentlemen did not see fit to press it, and from my standpoint the defendants have been guilty of laches in this matter. I have certified all the extensions of time that I am willing to. In view of my instructions received from the Court repeatedly to speed this cause, I took considerable responsibility the last time in giving a much longer extension than any the Court gave during the summer; and as I told you, I cannot in justice to myself certify any further extension under these circumstances. But there is nothing in that fact to prevent you gentlemen making such application as you may be advised to the Court.

Mr. Burr: I think the testimony of all the witnesses we have called shows we have not been guilty of laches or negligence but we have been working night and day to present the case within 4978 the time fixed, and it has been in the preparation for the presentation of testimony that a great part of the time has been taken up. The complainant did not bring its case until it was entirely ready. You remember how they denied us the right to look at the plants, and yet one of the great questions in this case is what is the present value of the plant; and we did not get at that until we started in with the defense. Mr. Mayer's testimony is that he took seven weeks night and day with a large force of assistants——

The Master: I have decided it, and you might talk here for two weeks and I would not change my opinion.

Mr. Burr: I simply stated that in view of the statement that we were guilty of laches. We have all been working as hard as we could.

Mr. Page: I will take an exception.

Mr. Burr: I will also take an exception. I understand then, that as far as the defendants is concerned, our case is ended. We have no further opportunity to put in any further testimony except by permission of the Court.

The Master: Nothing except by permission of the Court, unless you want to sit this evening, which I do not want to do very much, unless you do.

Mr. **Burr**: Then the other side starts in to-morrow with their rebuttal?

Mr. **Page**: I suppose, Mr. Mathewson, that you will extend your grace and courtesy far enough—there are a number of exhibits that have been prepared by the Consolidated Gas Company, and I am not sure, without going through and checking up, as to whether those exhibits have all been put in evidence or not. If any exhibit prepared by the company that we desire to be put in evidence is found, I suppose you will have no objection, will you? 4979 & 4980

Mr. **Mathewson**: No, I do not think so, Senator. I cannot imagine that I would. I do not want to stipulate absolutely, but you show them to me and I will decide.

The **Master**: Put them in *nunc pro tunc*.

Mr. **Page**: Yes, because some of my originals have been carried off and copies left in their place, and I had to go over them and check them.

Mr. **Burr**: When do we proceed again?

The **Master**: When do you want to go on with your rebuttal? You have fifteen days as I recall it. You can take some of that in resting up, if you like, or go on to-morrow.

Mr. **Mathewson**: I shall hardly be able to go on to-morrow. There are a great many exhibits which are voluminous and I have had no opportunity to look at them while this case has been going on. I think I ought to have a week to prepare. I will ask until Thursday morning, and if I am able to proceed then I will do so; if not, we can ask for a further adjournment. If I am able to proceed then, I will. I am anxious to begin and finish as early as it is possible. If I find I am unable to do so, I can ask for a further adjournment, if that meets with the Master's views. If the Master has any engagements or plans which would require time on his part, that is something, of course, that Counsel would consider.

At 6 P. M. adjourned to Thursday, December 13th, 1906, at 10:30 A. M.

Last Exhibits:

Complainant's, 269.
State's, III.
City's, 124.

4981 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *December* 17, 1906.

Met pursuant to adjournment.

Present: The Master, Mr. Page, Mr. Kirby, Mr. Burr, Mr. Mathewson, Mr. Garver.

4982 The MASTER: You may note on the record that the last hearing was adjourned until Thursday, December 13th, 1906, at 10.30 A. M., and was then further adjourned by me, on account of other engagements, until this morning.

I have received this morning from Judge Lacombe the following memorandum with directions to place it on the record:

"United States Circuit Court, Southern District of New York.

CONSOLIDATED GAS COMPANY

vs.

MAYER, Attorney-General, THE CITY OF NEW YORK, and Others.

LACOMBE, *C. J.:*

Upon application by defendants for extension of time to complete proof, the Master is directed to make the following disposition:

The taking of all testimony is suspended until Wednesday, December 26th, on which day the defendants may put in the testimony of

A. The witnesses (2) who obtained certain samples of oil and brought them to the chemist.

B. Mr. Stillwell, who made analysis of oil, and

C. Two witnesses to testify to grade and value of oil.

The direct testimony of A., B. and C not to exceed one day.

4983 On Thursday, December 27th, the defendants may examine on the direct such witnesses as they may call 'to close up loose ends of incomplete testimony.'

On January 3d defendants may proceed to examine.

A. Witness Edgerton; B., Witness Marks: as to value of plants 21st Street, 42d Street, Inwood, 99th Street, 44th Street, 111th Street, 122d Street, Chelsea.

The direct examination of A and B, however, shall not occupy more than three days.

After the close of defendants' case the plaintiff may have four days before beginning rebuttal.

This may be entered on record.

E. H. LACOMBE."

The **Master**: I will say for the information of counsel that it may be necessary for me to apply for a modification of these directions, because, supposing that the rebuttal would proceed this morning and be completed before January 1st, I have already an engagement to sit in another case of considerable importance, three days, January 2, 3 and 4. If counsel in that case are ready and expect to proceed I shall have to ask for such modification of this order as will leave me free on January 3d and 4th, instead of proceeding as herein directed. If, however, the counsel in that other case are not ready, or want an adjournment, then I shall proceed as herein directed.

Mr. **Burr**: There is no 122d Street plant; that should be 132d Street, I think.

The **Master**: If it is agreed it may be so entered on the minutes.

The change is consented to.

4984 The **Master**: So in accordance with that direction, the hearing this morning will be adjourned to December 26th, at 10.30 A. M.

Mr. **Garver**: The Judge seems to have failed to have taken down the names of the witnesses who are to be called. I think it is only fair that we should know who those witnesses are, as we may want to have some rebuttal on that point.

Mr. **Page**: You will have four days from December 26th until January 6th for that; you can get your rebuttal ready in that time.

Mr. **Burr**: I cannot say who the persons are I will call on that point.

Mr. **Garver**: For instance, "two witnesses who obtained certain samples of oil"; you know who those persons were?

Mr. **Kirby**: They were simply messengers, that is all. What their names are, whether Jones, Brown or Smith, I do not know.

Mr. **Garver**: And the two witnesses to testify to the grade of oil?

Mr. **Burr**: I said I would have one from New York and one from Philadelphia, but I do not know their names.

Adjourned to December 26th, 1906, at 10.30 A. M.

Last Exhibits:

Complainant's, 260.
State's, III.
City's, 124.

4985 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Hon. Arthur H. Masten, Special Master.

New York, *December 26th*, 1906.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

4986 **Albert E. Winchester**, called as a witness in behalf of the defendant, the State of New York, being duly sworn, testified as follows:

Direct-examination by Mr. **Kirby**:

Q. Where do you reside?
A. At South Norwalk, Conn.
Q. Are you connected with the electric light company there?
A. The Municipal Electric Works.
Q. What is your position with that company?
A. General superintendent.
Q. As such do you have charge of the purchasing of oil, and are you familiar with the price you pay for the same?
A. Yes, sir.
Q. Are you acquainted with Mr. Henry H. Edgerton, the witness who has appeared in this case?
A. Yes, sir.
Q. Did you meet Mr. Edgerton in South Norwalk on December 5th of this year?
A. I believe it was that date.
Q. Do you purchase your oil from the Standard Oil Company?
A. Yes, sir.
Q. What is the kind of oil which you purchase?
A. Fuel oil.
Q. Where is this oil delivered to you and how?
A. It is delivered by tank wagons in our storage tank at the works.
Q. And it is delivered each day?
A. Generally speaking, yes, sir.
Q. What exception would there be from daily delivery?
A. Very stormy days and Sundays and holidays.
Q. Was December 5th a very stormy day or a Sunday or a holiday?

A. I think not; a pleasant day.

Q. What was the price you paid for this fuel oil?

4987 Mr. MATHEWSON: Objected to as immaterial and irrelevant.

The MASTER: What is the object of this?

Mr. KIRBY: We have put in evidence here the testimony of Mr. Edgerton to the effect that he obtained from the works of the Municipal Electric Works at South Norwalk a sample of fuel oil and brought the same to New York and delivered it to Dr. Sherman, and the testimony of Dr. Sherman who made the acknowledgment thereof as to what that oil consists of, as shown by chemical analysis. Mr. Winchester told us that they purchased their oil from the Standard Oil Company, and that it is delivered to them at their works, and now I ask him what the price is they pay for that oil under their contract, and it tends to show from that and the other testimony that the Consolidated Gas Company is paying too much.

The MASTER: I will allow it.

Mr. MATHEWSON: Exception. I should like to ask whether the witness has the entire contract here.

The WITNESS: What is that?

Mr. MATHEWSON: Have you the entire contract with the Standard; is it in writing?

The WITNESS: We have a contract in writing, yes, sir.

Mr. MATHEWSON: Have you got it here?

The WITNESS: I have it not here. I have no right to carry documents which belong to the municipality.

Mr. MATHEWSON: I shall object.

4988 Q. Your contract calls for fuel oil?

A. Yes, sir.

Q. And no other specification is mentioned in this?

A. No, sir.

Q. What is the price you paid for it.

Mr. MATHEWSON: Objected to.

The MASTER: As I stated the other day, it seems to me it is very open to question as to whether it is proper testimony in any aspect. Now the least you can do is to let Mr. Mathewson get his objection on record.

Mr. MATHEWSON: I object to the witness giving the terms of this written contract. What the terms or qualifications are may have a very material effect.

The MASTER: I do not understand he is undertaking to do that. I will let him testify to any matter he has any knowledge of. If he knows what the oil is and what he pays for it, he may testify.

Mr. MATHEWSON: Exception. May it be stricken out that it contained such a stipulation and nothing else?

The MASTER: Yes.

Mr. KIRBY: That was brought forth by your objection——

Q. Do you know how much you pay for this oil?

A. Yes.

Q. How much is that?

A. 3¾ cents a gallon.
Q. Do you know what you paid for this oil prior to October 25 last?
A. Prior to October 2d?
Q. Prior to October 2d.
A. 3¼ cents.

Cross-examination by Mr. Mathewson:

Q. Can you procure a copy of this contract?
A. I might be permitted to.

4989 Mr. Kirby: The Standard Oil Company has the contract.

Mr. Mathewson: What is that? We are not the Standard Oil Company. I don't know whether we could get a copy of them.

Q. Will you produce a copy of that and send it to your counsel for submission to me?
A. If it is required, of course, I will do the best I can. I don't know whether it is a proper thing for us to allow a city document to pass out of our hands or not.
Q. Well, a certified copy of it, if you can?
A. I will endeavor to do so.
Q. Did you see Mr. Edgerton strain this oil or anyone else strain this oil, the sample of which was taken?
A. I saw no oil strained.
Q. Where was the sample taken which Mr. Edgerton took away?
A. I believe it was taken when the oil was being delivered in the tank.
Q. Where, at your place?
A. Yes.
Q. Was it taken from the tank wagon or after it got into your tank?
A. I understand it was taken from the tank wagon.
Q. Did you see it taken?
A. No, sir, I did not.
Q. Has the Standard Oil any tank near South Norwalk?
A. Yes, they have a distributing station.
Q. How much do you use in the course of a year of that oil?
A. Well, that is problematic; we are using, perhaps, in the neighborhood of 440 to 450 gallons a day.
Q. Do you mean on an average?
A. I think so. Our load is such that it is rather a difficult statement to make. The average commission from one part of the year to the other——
Q. Can you not give us a general idea of how much you use in a year?
A. I can guess, I guess.
Q. Give us the best view you have on that?
A. You will understand, of course, this is merely an estimate.

4990 Q. Yes.

A. I should say in the neighborhood of 150,000 gallons a year, estimated.

Q. Do you find the use of that more economical than the use of coal?

A. Yes, sir.

Q. What sort of coal do you refer to?

A. Any coal that we are able to procure.

Q. Can you use either soft or anthracite coal?

A. Yes, sir.

Q. For what quality of oil does your contract call?

A. I am not an oil expert.

Q. I understand, but you merely mean to say that you get gas oil at 3¼ to 3¾ cents?

A. I said fuel oil.

Q. Fuel oil, I mean.

A. Yes, sir.

Q. You don't know whether the oil runs even in gravity or not?

A. No, sir; I look for results.

Q. For use as fuel?

A. Yes, sir.

Q. You don't know whether there is anything in the contract with reference to gravity, or what the provisions are, but merely that it is fuel oil?

A. To the best of my belief, it is not stipulated as to what the gravity shall be.

Q. How do you determine that this is more economical than coal for use as fuel, and what are the comparative results?

A. We are producing something that we sell.

Q. Yes.

A. We have to know something in regard to the cost of that production; we have the two, we have the steam on the one hand and the oil power apparatus or oil engine on the other, and compare the two; the cost is approximately about fifty per cent. of that of steam.

Q. Fifty per cent. of that of steam?

A. Yes, generally speaking.

Q. Using what kind of coal under the boiler?

A. Bituminous coal.

Q. At what price?

A. At $3.50.

4991 ARTHUR DE FOREST COWPERTHWAITE called as a witness in behalf of the defendant the State of New York, being duly sworn, testified as follows:

Direct-examination by Mr. KIRBY:

Q. Where do you reside?

A. Danbury, Connecticut.

Q. You are the son, are you not, of the superintendent of the Danbury and Bethel Gas & Electric Co.?

A. Yes, sir.

Q. Are you acquainted with Mr. Edgerton, a witness who has appeared in this case?

A. Yes.

Q. Did you, in pursuance of a request of Mr. Edgerton, go to the works of the Danbury Company on December 5th or 6th, and there obtain a sample of oil and take it to Mr. Edgerton in New York?

A. Yes, sir.

Q. Just tell us where you went to, what you got, and what you did with it?

A. I went to the office of the works and unlocked the cabinet where the oils are kept and transferred the oil into other bottles and labeled them as I transferred them as they were labeled on the bottle; then I wrapped them up and brought them down to Mr. Edgerton, and took them to Mr. Edgerton at the Murray Hill Hotel.

Q. From whom did you obtain the key to unlock the cabinet?

A. My father, Mr. George E. Cowperthwaite.

Q. Did you take a sample from a bottle marked January 6th, 1905?

A. I did.

Q. (Handing bottle.) And is this the bottle to which you transferred part of that oil?

A. Yes, sir.

Q. And is that the bottle that you delivered to Mr. Edgerton at the Murray Hill Hotel?

A. Yes, sir.

4992 Q. Such bottle being marked Complainant's Exhibit 260 for identification December 10, 1906. Did you place that tag thereon yourself?

A. Yes.

Q. And that is your handwriting?

A. Yes.

Q. Did you have this bottle with you all the way from Danbury to New York?

A. Yes.

Q. Did you put anything in it?

A. Nothing except the oil in the first place?

Q. You delivered it to Mr. Edgerton in the same condition as that which it was after you had placed the oil in it from this other bottle?

A. Yes.

Cross-examination by Mr. Mathewson:

Q. You did not draw this oil which you found in the bottle in the closet at Danbury from the tank yourself, did you?

A. No, sir.

Q. You have no knowledge when it was drawn or who drew it, except from the label on the bottle, have you?

A. That is all.

Q. Did you take it up and pour a portion of the bottle which you found in the closet carefully into this bottle marked Complainant's Exhibit 260 for identification?

A. I did not mark that tag.

Q. No, that is not the question.

A. I poured all the oil in the bottle that I had into that bottle.

Q. This present bottle, Complainant's Exhibit 260, contains all the oil that you found——

A. Did contain it; I don't know whether it does now or not.

Q. It did contain all the oil that you obtained from the bottle in the closet?

A. Yes.

Q. Did you rinse out the bottle in the cupboard?

A. No, not in the cupboard, it was full of oil.

Q. Did you rinse it out to get whatever dregs there might be and pour them into this bottle here?

A. No.

Q. Whatever residuum there was in the bottle at Danbury you left it there?

4993 A. I could not very well rinse it out with water; I poured it all out, there wasn't any left in the bottle.

Q. Wasn't there more oil in this bottle, Complainant's Exhibit 260 for identification, than there now is?

A. I don't remember whether there was or not, because some of the bottles were full and some were not, and I don't remember whether that one was or not.

Q. How many other bottles were there in the closet, do you think?

A. There might have been anywhere from 20 to 25.

GEORGE ELY COWPERTHWAITE, a witness called on behalf of the State, being first duly sworn, testified as follows:

Direct-examination by Mr. KIRBY:

Q. Do you reside in Danbury, Connecticut?

A. I do.

Q. Are you superintendent of the Danbury & Bethel Gas & Electric Company?

A. Superintendent of the gas department.

Q. How long have you been such?

A. Since 1880.

Q. Is it the custom of your works to take samples of oil when the same is received by you from the concern from which you purchased it?

A. We take them occasionally; we do not sample every tank, but take them at intervals.

Q. When that is taken how is it taken, and what happens to the sample?

A. The men that unload the tank fills the bottle and brings it in to me.

Q. What do you do with the bottle?

A. Why, I label it, unless he has already labeled it, and put it away.

4994 Q. Where do you put it?

A. Well, I put them in a cupboard in my office until I get it filled. Subsequent to that I put them in storage up in the attic.

Q. After it is placed in that cupboard who has access to it?

A. I do. Nobody else.

Q. Is the cupboard locked?

A. It is locked.

Q. Who keeps the key?

A. I do.

Q. Have you in any way made any changes in the oil which was placed in the bottles which were put in this cupboard to which you have made reference?

A. No, sir.

Q. Do you remember your son, who has just testified, getting the key of that cupboard from you on about December 5th of this year?

A. I do.

Q. Did he tell you for what purpose he desired the key?

A. Yes.

Q. Did he say he wanted to take certain samples of the oil there and deliver them to Mr. Edgerton in New York?

A. That was what he said he wanted them for.

Q. Did you ever receive and place in that cupboard any oils other than those which are taken from the tanks, delivered to you from the concern from which you purchased your oil?

A. That is all.

Q. From whom do you buy your oil?

A. Standard Oil Company.

Q. Are you familiar with the price that you pay for that oil?

A. Yes.

Mr. Mathewson: I object to the testimony of the witness as to the price paid for oil in Danbury on the same ground as with reference to South Norwalk.

Objection overruled.

Exception.

Q. Now, will you state what you paid to the Standard Oil Company for the oil which you used? 4995

A. 4¼ cents a gallon.

Q. You pay that to-day?

A. Pay it now.

Q. Did you pay the same price in January, 1905, as at the time this sample of oil was taken?

A. The same price.

Q. And there has been no change in price from that time until now?

A. No change.

Q. Have you any knowledge of the price which other gas companies are paying for gas oil?

Mr. Mathewson: I object to that, Mr. Master.

The Master: He can state whether he has any knowledge.

A. Yes, I have.

Q. Do you know how much the Williamsport Gas Company, at Williamsport, Pennsylvania, pays for their gas oil?

Mr. Mathewson: Of course, what they pay in Williamsport, Pennsylvania, the center of the oil regions, for oil, without any specifications of quality, degree or anything else in addition, of course, would be idle, but I would like to ask this witness a question or two as to his knowledge in advance, if you consider that as admissable on any possible theory.

The MASTER: Mr. Kirby, it seems to me that is getting a little more remote than there is any justification for

Mr. KIRBY: Notwithstanding Mr. Mathewson's suggestion that Williamsport is in the center of the oil region, I think it can be shown there is no reason why oil should be less in Williamsport than it would be in Danbury. Freight has to be paid to both points, and if Williamsport does in fact receive its oil at a lower price than 4996 Danbury there must be some other reason for it than the closeness to the oil fields; and while the testimony may not have that weight which we hope that it has, it certainly is of importance to show that the Consolidated Gas Company is paying more for its oil than the companies situated in and around New York do, and it is for that purpose that I offer the testimony.

Mr. MATHEWSON: You remember your own witness testified that transportation was 1.05 from Pennsylvania here, to say nothing of Connecticut.

The MASTER: I do not appreciate the force of it myself. You can cross-examine him for a moment, Mr. Mathewson, to see whether it is worth while to take the testimony, anyway.

By Mr. MATHEWSON:

Q. Have you ever bought oil in Williamsport recently, for use in Williamsport?

A. No oil for use in Williamsport.

Q. Have you any knowledge as to what oil sells for there, except as some person has told you?

A. No person has ever told me.

Mr. MATHEWSON: It seems to me if he has bought none himself and nobody has told him——

Mr. BURR: He may state how he knows, I suppose?

Mr. KIRBY: I will bring out how he knows all right, if I am given the opportunity.

By the MASTER:

Q. What is the source of your knowledge as to the price of oil in Williamsport?

A. I received a bill made out to the Williamsport Gas Company by the Standard Oil Company, sent to me.

4997 Q. Sent to you by mistake?

A. I think so.

Mr. MATHEWSON: I press my objection.

The MASTER: I will exclude it, Mr. Kirby.

Mr. KIRBY: Exception. I will put it in over the Master's ruling.

By Mr. KIRBY:

Q. And did you, subsequently to the time that you received that memorandum giving the price of oil at Williamsport, Pa., communicate with the works at Williamsport, Pa., in relation thereto?

A. Yes. I wrote to——

Mr. **Mathewson**: He says yes. Now, I object to any further statement. I do not think that it is material, as to what the communication was or anything about it.

Q. Did you receive any reply from Williamsport to your communication?
A. Not from Williamsport. I received my reply from the Standard Oil Company.
Q. And is it from this communication which you received from the Standard Oil Company that you know the price which was set down in that memorandum was, in fact, the price paid at Williamsport?
A. I got my information from a bill made out to Williamsport. The letter from the Standard Oil Company did not quote the price, as I recollect it.
Q. Did it deny that the price set down in that bill was the price.

Mr. **Mathewson**: Well, no matter. I object to that.
Objection sustained; exception.

Q. Is that the communication you received from the Standard Oil Company (handing paper to witness)?

4998 Mr. **Mathewson**: I object to that all as incompetent, immaterial and irrelevant.
Objection sustained; exception.

The **Witness**: Am I to answer this?
The **Master**: Yes, the answer will be noted.
The **Witness**: Yes, I recognize this as the reply I received to my letter.
Q. From whom is that letter?
A. C. M. Higgins, manager Standard Oil Company, Naphtha Department.
Q. Do you remember the price set down on the bill which you received?
A. 3.37½.

Mr. **Mathewson**: I had no opportunity to object to that before the witness replied, and I interpose an objection now, on the ground that it is immaterial, irrelevant and incompetent.
Objection sustained.
Mr. **Kirby**: Exception.
Mr. **Kirby**: I offer this letter in evidence.
Mr. **Mathewson**: Same objection.
Objection sustained; exception.
The **Master**: Mark it for identification.
The paper is marked for identification, State's Exhibit JJJ.
Mr. **Kirby**: And I also offer in evidence this bottle, Complainant's Exhibit for Identification No. 260.
Mr. **Mathewson**: I object to this bottle of oil also as immaterial and irrelevant.
The **Master**: I overrule that objection and take it for what it is

worth, without going into the question of how far it has actually been traced from the tank to this office.

Mr. MATHEWSON: Exception.

4999 Received in evidence and marked State's Exhibit KKK.

Q. Do you remember the context of the letter which you wrote to the Williamsport Gas Company which brought forth this reply, State's Exhibit for Identification JJJ?

A. I have a carbon copy of it in my pocket.

Q. What did that communication state?

Mr. MATHEWSON: I object to that as incompetent, irrelevant and immaterial.

Objection sustained.

Mr. KIRBY: Exception. I will place it in over the Master's ruling.

Q. Will you read that?

A. It is dated, "August 6, 1906, Williamsport Gas Company, Williamsport, Pa.

"DEAR SIR:

"Enclosed please find invoice of Standard Oil Company for tank of gas oil. It was mailed to us by mistake. You ought to be congratulated on the price. How did you get it? They charge us 4¼ cents. Won't you let us know the gravity of this? Where it is shipped from, and what the freight per gallon is, and oblige,

"Yours truly,

"G. E. COWPERTHWAITE."

Q. Do you know who the president of the Williamsport Gas Company of Williamsport, Pa., was, on August 6th, 1906?

A. According to Brown's Directory of Gas Companies, it was Mr. Gawtry.

Q. What was his first name, do you know?

A. I think it was Louis.

Q. Your impression is that it was Mr. Louis B. Gawtry?

A. That is my recollection.

5000 Cross-examination by Mr. MATHEWSON:

Q. You mean by that that your recollection is that that is the name you saw in Brown's Directory?

A. That is my recollection, yes, sir.

Q. What date? What was the date of this directory?

A. The last directory issued, I don't remember the date of it.

Q. Was it one issued since August 6, 1906?

A. I couldn't tell you.

Q. It covered the year 1904 or 1905, didn't it, instead of 1906?

A. Why, it would not cover 1904. It might have been 1905. It was the last directory that was issued. That is all I can answer about it.

Q. Is it one that you have up at Danbury?

A. Yes.

Q. Do you know when you bought it?

A. I could not give the date that we bought it. We take it every year.

Q. Why don't you buy your oil for less than 4¼ cents at Danbury?

A. I would like to.

Q. You have to pay whatever the Standard Oil Company charges you for it, don't you?

A. I think so.

Q. How much do you use in a year?

A. About three hundred thousand gallons.

Q. Were you present when this sample, State's Exhibit KKK, was drawn?

A. I don't know.

Q. You don't remember that you were, do you?

A. No.

Q. Do you know whether it was drawn from the top or the bottom of the tank?

A. I do not.

Q. Do you know whether it was drawn from the wagon that delivers it, the tank wagon of the Standard Oil Company, or whether it was drawn from your own tanks?

A. Ordinarily they take it from the company's tank. I did not see it taken.

Q. From the Danbury Company's tanks?

A. No, from the Standard's tank.

5001 Q. Has the Standard a tank at Danbury?

A. There is at the time they are unloading one, there is a tank car.

Q. Oh, from the tank car, or from the tank wagon, which?

A. Car; railroad car.

Q. Do you know Captain McKay of Boston?

A. I do.

Mr. Kirby: I object. This is not proper cross-examination of this witness.

The Master: I do not know that from anything that appears yet. It may be very material. I will allow it.

Exception.

Q. Do you know he has been consulted in reference to various matters in reference to the Danbury work?

Same objection. Same ruling. Same exception.

A. Yes, sir.

Q. Within how many years past?

A. I think he has been consulted this year.

Redirect examination by Mr. Kirby:

Q. I have been handed a list or a directory of directors in the city of New York. I see under the name of Louis B. Gawtry, 4 Irving Place, "Williamsport Gas Company, President and Director." That is the same name which you made reference to, is it not?

Mr. **Mathewson**: I object to the question. That is secondary evidence of the poorest kind, even if it were material, it seems to me.

Objection sustained.

5002 Mr. **Kirby**: Exception. Now, you may answer.

A. That is the same name.

Recross-examination by Mr. **Mathewson**:

Q. And you observe that the date of this edition was April 1st, 1906, do you not, of the directory of directors?

A. April 1st, 1906.

Henry H. Edgerton, recalled on behalf of the State.

Direct examination by Mr. **Kirby**:

Q. On the day which the witness Kirby has testified that he brought two cans of oil from the works of the Consolidated Gas Company to his office at No. 2 Wall Street, did you pour out from the can, the cork of which was marked A, a certain portion thereof into a bottle, and did you subsequently deliver that bottle to Mr. Albert G. Stillwell, the gentleman sitting in the back of the room here?

A. I did.

Mr. **Mathewson**: Hadn't you better identify that by the Exhibit number?

Mr. **Kirby**: The same being State's Exhibit BBB, December 8, 1906.

Q. And the sample which you delivered to Mr. Stillwell was in the same condition as that when you drew it from the can which Mr. Kirby handed to you?

A. Yes, sir.

Cross-examination by Mr. **Mathewson**:

5003 Q. Did you pour it from the top of the bottle which you gave him, or from the top of the sample which Mr. Kirby gave you?

A. I poured it from a tin can, the first that came out.

Q. Where did you deliver it to Mr. Stillwell?

A. I think at his office at 36 Gold Street, if I recollect.

Albert G. Stillwell, a witness called on behalf of the State, being first duly sworn, testifies as follows:

Direct examination by Mr. **Kirby**:

Q. Are you a chemist?

A. I am.

Q. Are you a graduate of any scientific school?

A. I am.

Q. Of what school?

A. Columbia University; the school of Applied Sciences.

Q. You hold a degree from that school?

A. Yes; Bachelor of Science.

Q. Are you at the present time carrying on a laboratory in the City of New York?

A. I am.

Q. What is the name of that laboratory?

A. Stillwell Laboratory.

Q. As such are you one of the official chemists of the produce Exchange in this city?

A. I am.

Q. Do you know the name of the other chemists that hold the same position?

A. Yes.

Q. What is that name?

A. Stillwell & Gladding.

Q. Were you formerly connected with that concern?

A. I was.

Q. When with them, and as such, have you made analyses of oil, and particularly of gas oil?

A. I have.

Q. From the Texas and other oil fields?

A. Yes.

Q. Did Mr. Edgerton, who was just upon the witness stand, deliver to you a certain sample of gas oil?

A. He did.

5004 Q. And did you make an analysis thereof?

A. I did.

Q. And did you come to certain conclusions from that analysis as to whether or not such oil was from the Pennsylvania oil fields?

A. I did.

Q. And is the result of that analysis and your conclusions therefrom set down in this statement which I hand you?

A. It is; they are.

Mr. Kirby: I offer such statement in evidence, or rather, it may be incorporated in the testimony as an answer of the witness.

Mr. Mathewson: It seems to me that the statement presented incorporates some conclusions and statements on which the witness has not been shown qualified, but as it is in convenient form I won't object to it on that ground, provided it may be understood that I do not waive objections [illegible] ncompetency.

The Master: You had better take it and then you can cross-examine on it.

The Witness: The result of my analysis, and my conclusions therefrom, is as follows:

Certificate of Analysis of a Sample of Petroleum Gas Oil Marked S. T., Received from H. H. Edgerton, 12/13/06.

Analysis.

Specific Gravity of Oil at 15.50 C. 0.8535 equal 34 Baume, using table given by Sadtler in Industrial Organic Chemistry.

Distillation in fractions of 20 per cent.

	1st.	2nd.	3d.	4th.	5th.
Temp. C, to	268	268–330	330 up		
Sp. Gr.,	0.8004	0.8500	0.8620	0.8686	0.8860
Baume,	45.	34.5	32.5	31.2	28.

5005 Distillation by temperatures.

Temp., C to	150	150–300	300–360
Per cent.,	4.50 per cent.	43.00 per cent.	43.00 per cent.
Sp. Gr.,	......	0.8390	0.8700

Sulphur: 0.730 per cent. and 0.091 per cent. average 0.082 per cent.

Oil will not flow at 5 F. On warming just flows at 14 F.

Original oil shaken up with sulphuric acid is greatly decolorized and acid is darkened.

Conclusion.

In distillation by 20 per cent. fractions, the range of gravities in the various fractions indicates that the oil is a *natural* oil, or not one distillate, distilled in narrow temperature limits and having definite gravity. This is proved by the fact that the second fraction, distill-g between 268 and 330, was redistilled and all came over in same ange of temperatures.

In distillation by temperatures, the practical absence of naphtha (under 150 C.) and the absence of non-volatile tar or coke (proved by distillation of fraction left in retort to complete dryness, with no residue left) proves that this oil is a distillate taken between these two limits.

The acid test on the oil shows that the oil is not refined after distillation.

Reasons for thinking this is not a Penn. oil:

The average analysis of Penn. oil given by Stillman is as follows:

5006 Naphthas to 150 C.	16.50 per cent.
Illuminating oils, 150-300	54.00 per cent.
Heavy oils, 300 up	17.00 per cent.
Paraffin	2.00 per cent.
Tar or coke	10.00 per cent.

If we eliminate the naphtha and tar or coke from Penn. oil and compare with sample under test, we have.

	Penn. oil.	Sample.
Illuminating oils 150-300	73.47%	45.00%
Heavy oils 300 up	26.53	55.00

This shows that an oil containing less illuminating oils than a Penn. oil, or else a mixture of oils has been used.

The sample tested smells of sulphur, while Penn. oil on best authorities obtainable should have none or at most but a trace.

Sample tested by analysis shows 0.082 per cent. sulphur.

A test for sulphur in a crude oil would show higher than in a distillate, as the sulphur hangs back in the higher boiling fractions.

Peckham in Report of Production, Technology and Uses of Petroleum states that sulphur in Penn. oil is very low.

Watts Dict. of Chemistry states that sulphur is absent in Penn. oils. The sulphur in Ohio oil averages 0.50 per cent.; in California is heavy; in Texas is heavy; in Louisiana, 0.36 per cent.; while in oil from Pennsylvania districts, comprising Pennsylvania, Western New York, West Virginia, and Southern Ohio, it is absent or at most only present in traces.

The conclusion reached by above tests on this oil is, that it is not a straight Penn. oil, but a mixture of Penn. oil with oil from other districts.

A. G. STILLWELL.

5007 Cross-examination by Mr. Mathewson:

Q. What do you mean in this statement by the expression "original oil shaken up with sulphuric acid is greatly decolorized and acid is darkened?"

A. Some of the oil was put into a test tube and shaken up with a small percentage of sulphuric acid.

Q. Some of this particular oil?

A. Of this oil, yes. By "original" I mean in its original condition as distinct from one of the distillates.

Q. When you distill oil for a certain period with rising temperature you throw off a certain portion of the oil between the two temperatures, do you not?

A. Yes.

Q. And it may be that taking a 34-degree oil you will throw off certain products by distillation between certain temperatures that will test 40, and other products 34 and others 28 degrees, and so on?

A. Yes.

Q. They averaging 34?

A. Yes.

Q. Now, you can take any one of those fractions and re-distill them, can you not, taking the 28-degree fraction, for instance, and you may get some oil which will test 34 and other oil which will test 28 and others, 23, in the same fraction?

A. You would possibly, but with qualifications—limits.

Q. Yes, of course, within certain limits.

A. I mean limits as to temperature.

Q. But as you take each fraction produced by an original distillation and distill those fractions you will from each get a production of a higher and lower degree?

A. Oh, yes.

Q. Than the gravity of the fraction which you are testing?

A. If there was much range of temperature in the original distillation from that fraction.

Q. And you can continue to re-distill fractions even obtained from the second distillation, with similar results, within 5008 certain limits?

A. They would be decreasing all the time.

Q. But you would not get a uniform gravity?

A. Not absolutely.

Q. And in order to get an oil which would not by distillation result in additional fractions of higher or lower degree you would have to distill and re-distill and re-distill again almost without limit, wouldn't you?

A. No, it could be limited in the first distillation by controlling your temperature, that is, limited within very small limits. You never can re-distill an oil of a certain fixed gravity and get an absolute definite gravity for the whole of the oil that comes over as you can with water, for instance.

Q. And then you would have to take a fraction of re-distilled oil, and then you would get results within certain degrees of gravity for the fractions resulting?

A. Yes, sir.

Q. And you would have to go through that process some time and through various steps before you would get what would be called a fixed oil as to gravity, would you not?

A. You never could reach a fixed point—the only way to do it would be to limit your temperature. You cannot go by the gravity at all. An oil distilled within limits of two or three degrees temperature coming over, and if it had a fixed gravity, the distillate, that distillate re-distilled would split—there would be very little difference in the degrees of the fractions of the distillation, because it would still come over practically within those limits of temperature, but if the limits were fifty degrees, you would keep on splitting all the time.

Q. And that would continue almost *ad infinitum*, wouldn't it?

A. Yes.

Q. You speak of "average analysis of Pennsylvania oil 5009 given by Stillman." Those averages you obtain from a work or article by Stillman, do you?

A. Yes, his *Engineering Chemistry*. It is a standard article—a standard in our profession.

Q. And where you refer to Pennsylvania oils, or tests of Pennsylvania oils, in your previous statement, which has been spread on the record, you refer to Stillman's results?

A. No, I have analyzed oils that were represented to me as Pennsylvania oils. I have never been able to trace them back to there. I have such analyses and did not bring them because I did not suppose they would be competent, for that reason.

Q. But as far as your particular statement is concerned, which is your testimony to-day, where you speak of Pennsylvania you refer to Stillman's results with illuminating oils, heavy oils and so forth?

A. Oh, yes, that is Stillman's, that is continued from the first page of my statement to-day.

Q. And where you say "sample tested" you refer to the sample of the Consolidated Gas Company's oil?

A. Yes. That was the sample given me by Mr. Edgerton.

Q. And you state at the end "the conclusion reached by above test on this oil is, that it is not a straight Pennsylvania oil, but a mixture of Pennsylvania oil with oil from other districts." That I assume was your conclusion?

A. Yes.

Q. Not the conclusion of any of these books?

A. No; conclusions based on the tests and references consulted.

Re-direct examination by Mr. Kirby:

Q. Such analysis as you made on that oil which is stated to you to be Pennsylvania oil confirms the analysis of Stillwell as set down in that statement, does it not?

A. Within practical limits. From the different districts they are not absolutely the same. It is supposed to be an average from the different parts of the district. 5010

Recross-examination by Mr. Mathewson:

Q. Oil from different Pennsylvania districts differs somewhat in test?

A. Yes, oil from wells aside of each other will differ more or less.

Q. I see that no temperature is stated for the fourth and fifth distillations in your statement spread on the record. Will you explain the reason for the omission?

A. In the first place the putting down of the temperatures at all was simply for my own record; it has nothing to do with the analysis where you distill by fractions. And the reason it was omitted in the fourth and fifth was because the thermometer I had in at that time did not register over 360, I think, or 350. In a subsequent distillation you will see that the temperature has been carried out in all of the distillates.

Q. You did not take the temperature at Fahrenheit in this case?

A. No. I can convert any of those now if you want me to, if you want them in Fahrenheit, by a little figuring.

Q. Will it take you more than a moment?

A. No.

Q. Very good, suppose you do so.

(The witness now does some light amount of figuring, and then hands Mr. Mathewson a paper.)

Mr. Mathewson: I will read your answer now, as you have figured it, and you will kindly tell me if I am correct. The answer is 15.50 centigrade equals 60 degrees Fahrenheit; is that right?

The Witness: Yes.

Q. 268 centigrade equals 514.4 degrees Fahrenheit.
5011 330 degrees centigrade equals 626 degrees Fahrenheit.
150 degrees centigrade equals 302 degrees Fahrenheit.
300 degrees centigrade equals 573 degrees Fahrenheit.
360 degrees centigrade equals 680 degrees Fahrenheit?

A. Yes.

Q. When you spoke of your thermometer as registering up 350 to 360, you referred to centigrade?

A. Yes.

Mr. Kirby: Mr. Master, that is all the evidence I have to offer now. Senator Page will be here with a witness for the State at 12:30. It is now 12:10. We can either wait, or if you prefer, and if it is convenient to counsel, we might adjourn now till 1:30, instead of adjourning at 1:00 o'clock to 2:15 as usual.

At 12:10 p. m. a recess was declared until 1:30 p. m.

5012 After Recess.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

Henry C. Hazzard, called as a witness in behalf of the defendant, the State of New York, being duly sworn testified as follows:

Direct examination by Mr. Page:

Q. Where do you reside?

A. 196 Lenox avenue, New York City.

Q. What is your occupation or position?

A. I am a lawyer by profession; I at present hold the position of Secretary to the State Commission of Gas and Electricity.

Q. Do the various companies file with the State Commission of Gas and Electricity reports.

A. They do.

Q. Have you the statement that I asked you to prepare.

(Witness hands paper to counsel.)

Q. Have the Consolidated Gas Company and its associate companies filed such reports with the Commission?

Mr. Mathewson: I would like to know what you mean by "associate companies."

Mr. Page: Strike out "associate companies."

Q. Have the Consolidated Gas Company, the New Amsterdam Gas Company, the Standard Gaslight Company, the Mutual Gaslight Company, the Central Union Gas Company and the Northern
5013 Union Gas Company filed such reports?

A. They have not filed any such reports as I have here before me.

Q. Have they filed any reports for the year ending June 30, 1906?

A. No, sir.

Q. Has demand been made on them for the filing of such reports?

A. Yes.

Mr. Mathewson: Objected to as immaterial and irrelevant.

The Master: How is it material?

Mr. Page: It is not very material, as I see.

STATE'S EXHIBIT LLL.

Excerpts from Reports of Gas Companies for Year Ending June 30, 1906

Name.	Locality Supplied and Population.	Kind of Gas.	Cu. Ft. Gas Produced During Year.	C. P.	Gas Oil Used During Year (Gals.)	Average Cost of Oil per Gal.
Brooklyn Borough Gas Co.	31st Ward, Brooklyn, and Fish Terrace and Manhattan Terrace in 32d Ward. Population probably 20,000	Water	119,471,000	22 to 27	670,760	$0.03076
Kings County Lighting Co.	30th Ward, Boro. Brooklyn, and part of 31st Ward same Boro. Population	Coal & Water	350,647,000	22.08	1,395,488	.03125
New York & Richmond Gas Company	1st, 2nd, 3rd & 4th Wards of Boro. of Richmond. Population about 65.000.	Coal & Water	181,850,800	24	832,405	.026512
Queens Boro. Gas & Electric Co.	5th Ward, Boro. of Queens, Town of Hempstead, Villages of Lawrence, East Rockaway, Cedarhurst, Woodmere, Hewletts, Lynbrook & Oceanside. Population 8,000 to 12,000 in winter and 50,000 to 60,000 summer	Water	84,624,000	22	421,346	.0325
Binghamton Gas Works.	Binghamton & Lestershire. Population 48,000	Coal Water	20,273,100 134,587,100 154,860,200	20 to 21	487,653	.0350
Mohawk Gas Co., Schenectady	Schenectady. Pop. 58,387.	Coal Water	76,914,246 104,405,144 181,319,390	18	398,460	.0358
Power Co. Newburgh Light, Heat &	Newburgh. Pop. 26,500	Water	68,699,600	22	274,981	.0325
Rochester R'y & Light Company	Rochester and Towns of Brighton & Yates. Pop. 188,530	Coal Water	313,653,400 437,527,600 751,181,000	20	2,018,807	.035
Fulton Co. Gas & Electric Co.	Cities of Johnston and Gloversville. Pop. 28,517.	Water	79,208,400	22.43	316,808	.035

Q. Mr. Hazzard, do these reports give the population served by the various companies, the kind of gas they manufacture, whether coal or water gas, the number of cubic feet of gas produced during each year, and the candle power of gas, and the gas oil used each year, and the average cost of oil per gallon?

A. They do.

Q. What companies have you produced the reports of pursuant to my notice?

A. I have here the verified reports of the Brooklyn Borough Gas Company, Kings County Lighting Company, the New York & Richmond Company, the Queens Borough Gas and Electric Company, the Binghamton Gas Works, the Mohawk Gas Company, the Newburgh Light, Heat and Power Company, the Rochester Railway and Light Company and the Fulton County Gas and Electric Company.

Mr. PAGE: I have had Mr. Hazzard prepare a table. It would be the shortest way, probably, to put that right in if there is no objection.

Mr. MATHEWSON: You have not asked any question, have you?

Mr. PAGE: No, I submit this to you to see if you have any objection.

5014 Mr. MATHEWSON: I will not have any objection to that method, but I shall object to the information which is included there.

Q. Have you prepared a statement from these reports which you have specified, showing the details that I asked you about?

A. I have.

Q. Is this the statement that you prepared? (Handing paper.)

A. That is the statement.

Q. Is that an accurate and correct transcript from the reports of the facts therein stated?

A. It is.

Mr. PAGE: I offer that in evidence.

Mr. MATHEWSON: Objected to as immaterial and irrelevant and incompetent; incompetent, not because it is not a true copy from the reports, but that a statement by any third party to some other third party *when* we are unable to have present and cross-examine on the statement of this first third party is incomplete as against us.

The MASTER: We had that up before, and that was recognized in the case of other evidence that we allowed. Of course that is to be taken into consideration in weighing the evidence, that you have no opportunity for cross-examination.

Mr. MATHEWSON: You can very easily see that we have no opportunity for cross-examination of these people who have filed these reports.

Mr. PAGE: Quite true, but they are official reports.

The MASTER: I will take it, as I have other similar evidence.

Mr. MATHEWSON: Exception.

Paper received and marked State's Exhibit LLL.

(Here follows State's Exhibit LLL marked p. 5014*a*.)

5015 Mr. MATHEWSON: I will ask to have these reports marked for identification and left with the Master.

Mr. PAGE: These are the originals.

Mr. MATHEWSON: Then we should have copies.

Mr. PAGE: I will have copies made.

The original reports were marked Complainant's Exhibits 261, 262, 263, 264, 265, 266, 267, 268 and 269 for identification, respectively.

Cross-examination by Mr. MATHEWSON:

Q. Under the heading, "Cubic feet produced during the year," does that refer to gas made or gas sold?

A. Gas made.

Q. Is there any separate report made of gas sold in this blank, do you remember?

A. Yes, sir.

Q. Will you turn to candle power, as to the Brooklyn Borough Gas Company.

A. Page 26.

Q. I find "candle power of gas supplied to consumers, 22 to 27"; do you know whether that is a city test or whether that is at the works?

A. I know nothing more than is contained there.

Q. And this does not state, does it?

A. No, sir.

Q. I see for the Brooklyn Borough Gas Company, gas oil used during the year is stated at 670,760 gallons. Do you know what kind or grade of oil that was? Is there anything in the report which shows?

A. There is nothing in the report to show.

Q. Now take the Kings County Lighting Company, coal and water gas 350,617,000 feet; have you a record of how much was coal and how much was water gas?

A. No.

Q. And the same is true of the New York & Richmond Gas Company, it is not?

A. Yes, sir.

Q. You have no record in your report, have you, as to the method pursued in making these tests for candle power?

5016 A. Some of these records state that information very briefly; take for instance, the Newburgh Light, Heat & Power Company report, which I pick up by chance; it states that the candle power was determined by jet photometers, and the test is made hourly.

Q. There is no statement in the report, of course, of the experience of the man who made the test, even with the jet photometer, is there, Mr. Hazzard?

A. There is not.

Mr. PAGE: In the Kings County Company report it is stated by reading on the bar photometer.

Q. And in the case of the Kings County Company there is no record in the report as to who made the test, or whether the *idn*ividual who made it was experienced and competent, is there?

A. No, sir.

Q. You have the reports of a great many other gas companies in the State of New York, have you not?

A. Yes, sir.

Q. How did you come to select these particular reports to present here?

A. Well, I tried to pick out the reports of those companies operating in the largest cities in the State and producing water gas.

Q. Well, some of these companies produce coal gas as well, I observe.

A. Produce both.

Q. You did not produce the report of the Brooklyn Union Gas Company. That is the largest company except the Consolidated Gas Company in the State?

A. I did not.

Q. And the next largest city in the State is Buffalo. You have not produced Buffalo, have you?

A. The reports of the Buffalo companies are not yet filed.

Q. How about Rochester—that is here?

A. Yes.

Q. How about Syracuse?

A. The Syracuse report is not filed.

Q. Albany?

A. The Albany reports are not filed.

5017 Q. So that the largest cities have not yet filed their reports; is that correct?

A. That is substantially correct.

Q. Were you requested to bring the reports of companies which showed a low average cost of oil per gallon?

A. I was not.

Q. What was the character of the request which induced the production of these?

A. Senator Page saw me last Friday and we looked over the reports which I have brought here to-day, and possibly three or four reports in addition to these; the other reports were defective in certain respects or deficient.

Q. In that they did not show a higher cost for oil?

A. No, sir; in that they failed to show the amount of gas produced during the year, or failed to give some other information, and possibly the information in regard to the price of oil may have been higher, but I don't remember as to that.

Q. You did find in a great many of the reports filed by various gas companies throughout the State of New York that the cost of oil was higher than in any of these that have cited?

A. I have not, Mr. Mathewson.

Q. None?

A. I won't say none; in some instances they are higher; they run as high as 4.3 cents, I believe, if I remember; possibly higher, but to my memory they run as high as 4.3 cents.

Mr. MATHEWSON: Senator, there is no objection, I suppose, to my having access to the balance of these reports in the office of the Commission, is there?

Mr. PAGE: They are public records.

Q. There is no objection to that, is there, Mr. Hazzard, to our seeing them?

A. None at all, Mr. Mathewson.

5018 Q. All these reports which you have here to-day are for the year ending June 30, 1906?

A. Yes, sir.

Q. And your data taken therefrom of course covers the same period?

A. Yes, sir.

Mr. PAGE: We offer State's Exhibit ZZ for identification in evidence.

Paper marked State's Exhibit ZZ in evidence.

HENRY H. EDGERTON resumed.

By Mr. KIRBY:

Q. In making up the schedules which have been placed in evidence showing the amount of gas oil used at the Twenty-first Street Station by the Consolidated Gas Company and the candle power as recorded by the records of the company of that station, did you make schedules from the books of the company for December, 1902, December, 1904, and February, 1905?

Mr. MATHEWSON: Do I under- that the witness took these off from the books of the company?

Mr. KIRBY: Yes.

The WITNESS: I checked them off.

Mr. KIRBY: He has placed in evidence other schedules similar to these for a different period, and I intended at that time to place these in also, but I overlooked these at the time.

Mr. MATHEWSON: I do not understand quite how this witness examined our books for 1902 and 1904, which I thought were outside of the period which the Accountants covered.

The WITNESS: The book was marked as an exhibit. Those 5019 books were what we call ordinary carbonizing reports.

Mr. MATHEWSON: The books were offered as exhibits only covering the years specified, that is the nominal year and the actual year 1905, and were not exhibits at all for any other period. I do not know that there is anything here that would take much if any time to rebut, but I call the Master's attention to the fact that this is quite outside of the period covered by the exhibits or the period in which the Accountants were examining them. I do not think it should have been done.

The MASTER: Cannot it be stated in some way exactly from what books these were taken, so we will know about it?

Q. Do you remember?

A. The books are the reports of the manufacturing accounts kept at the works, as a general thing, and kept in duplicate at the central office, showing the amount of oil used, material used throughout, and the gas made, and quality of gas without any reference to the cost.

By the Master:

Q. What I want to get at is, was this the same book that contained the figures of that kind for the year 1905?

A. Yes.

Q. It contained the figures for a number of years, did it?

A. Yes, sir.

Mr. Mathewson: I offered the portion of the book in evidence as the record will show, covering the year 1905, at the conclusion of my case, so that there might be no question as to the original evidence being before the court; but the other pages were not offered at all, and they are not evidence, nor in evidence.

5020 Mr. Page: While the offer may have been limited he offered the book, he did not offer specific pages of it.

Mr. Mathewson: Yes, I did, Senator.

Mr. Page: You did not.

The Master: We have confined our inquiry with the single exception of the old real estate values, to the question of the operation for the year 1905. Now, if we are going to open up the vista of going into 1902, 1903 and 1904, at this last stage of the case——

Mr. Kirby: I am going to ask no questions about it whatever.

The Master: The trouble is Mr. Mathewson may ask questions about it, and we do not want him going into court and asking for further time on the ground that you have opened up this new subject at this late day.

Mr. Kirby: These are taken from their own exhibits in the case.

Mr. Mathewson: No, it is not an exhibit at all. On page 2217 I asked the following question:

"Q. Have you the station records of the Consolidated Gas Company for 1905, of the material used, and so forth? A. Yes."

That is the record which the witness produced.

"Mr. Mathewson, I offer in evidence the Fourteenth Street Station records, produced by Mr. Carter," I had asked him if he had produced them for 1905.

"I also offer in evidence the Forty-second Street Station record for 1905. Book received in evidence and marked Complainant's Exhibit No. 241.

"Mr. Mathewson: Of course, I only offer the year 1905.

5021 Some of these books cover a longer period, that is, some portions of them. I also offer in evidence part of the Forty second street record for 1905, which is contained in this volume." And so, while to save time at that time the particular pages were not stated, it was explicitly stated that the record for 1905 was offered only.

The Master: Under those circumstances I sustain your objection to two of these and overrule it as to the other. There is one here for

February, 1905, which I will admit, and the ones for December, 1904, and for December, 1902, I will exclude.

Mr. Kirby: We take an exception.

Statement for February, 1905, received in evidence and marked State's Exhibit MMM.

Mr. Kirby: I offer the other two, under the rule, as exhibits.

The Master: Mark the one that is admitted as an exhibit and the other two for identification.

Mr. Page: Are these excluded exhibits to be printed?

The Master: I suppose they will have to be.

Statement for December, 1904, marked State's Exhibit MMM for identification.

Statement for December, 1902, marked State's Exhibit OOO for identification.

Q. Mr. Edgerton, in your testimony of December 10th you gave the result of your computation as to the cost of a mixture of gas consisting of 775 cubic feet of coal gas of 14 candle power and 2,225 cubic feet of oil and water gas of 50 candle power, the result being a mixture which you said would give a candle power of over
5022 22 candle. In the computation, the results of which you gave on December 10th, did you use a long or a short ton of coal?

Mr. Mathewson: The witness stated he did not know whether he had a thousand feet of one kind of gas or 775 feet.

Mr. Kirby: We will straighten this all out.

Mr. Mathewson: But you said he used 775.

Mr. Kirby: Purporting to show——

Mr. Mathewson: No, he said he could not tell.

Q. Are you able to tell now whether your total at that time was one thousand feet or 1,225 feet?

A. Yes, I find the particular data as to which I was confused was as to whether 1,225 feet would give 22-candle power gas; therefore I had to look over the calculations I had made in regard to the necessary amount of rich oil gas to furnish 22-candle, and I found that it would require 225 of the thousand feet, not on the thousand feet, so that the mixture was based on 775 feet of coal gas and 225 feet of rich oil gas.

Q. But the figures which you gave were not based on a thousand cubic feet, but on 1,225?

A. They were based on—well, really on neither one; either would have required a correction to bring it to the cost of a thousand feet, for I had neglected to take into account the volume of the rich gas in the mixture.

Q. So that your mixture was not in fact one thousand cubic feet?

A. No, it was——

Mr. Mathewson: What is that?

(Question and answer repeated.)

The Witness: Well, the mixture was one thousand cubic feet, but I say I neglected to take into account the volume of the enriching gas in the calculation of the cost.

5023 Q. So that the calculation was not for a thousand cubic feet of gas of more than the 22-candle power?

A. No, not accurately stated, it was not.

Q. Have you made a computation of the cost of one thousand cubic feet of gas, 775 cubic feet of which is coal gas and 225 feet of which is oil and water gas of a candle power of 50-candles, the coal gas having a candle power of 14-candles, and the resulting mixture having a candle power of 22.1 candles.

A. I have.

Q. And in such computation, have you used the long or short ton of coal?

A. My present computation is the long ton of coal; the former computation was based on the short ton.

Q. Have you made any other changes in units or cost per unit, or cost of labor in this computation to which you are now referring from that which you gave on December 10th?

A. No, I have simply corrected the December 10th calculation for the error in regard to considering it a short ton instead of a long ton and also correcting for the volume of the enriching gas. I find, however, there is a slight difference there in the repairs to apparatus and buildings, in looking the estimate over and comparing it with New York conditions or results obtained here in New York, I considered I had got that a little too high.

Q. And you have used what figure here in place of the one you used in your former computation?

A. I used three and one-half cents at present as against four and one-half in the former computation, that is per thousand cubic feet.

Q. Does this table which I hand you show the result of your computation?

A. Yes, sir; the result of my present computation, making the corrections I have referred to, is as follows:

5024 COST OF 1000 CUBIC FT. COAL GAS—14 C. POWER.

Soft Coal, $3.20 per ton of 2240 lbs.; average yield 5 2/10 cu. ft. per lb. = 11.648 cu. ft. per ton coal.

S. R.

Cost for coal = 3.20/11.648 = 27.45	27.47
Cost for unloading = 11.2/11.648 per ton, .961	.961
Cost for labor, gas-making and purifying:	
Cost labor per ton .522c. 4.48	4.48
Cost Supervision—Supt. and foreman	.50
Cost repairs to apparatus, building	3.50
Cost purifying material lime, 56c. per bu. 23 M. c. f. per bu.	.75
Cost purifying material—Oxide	.25
Cost for oil and waste and sundries	.37
Cost for water	.17
Cost for general expenses at works	.50
	38.951

Less residuals—	lbs.		
For 66% coke and breeze	1478		
Less 20% for firing retorts	295.6		
	lbs.		
Salable	1182.4		
		¢	
@ 4.00 per ton 2000 lbs.	2.3648	20.31	
	11.648		
Tar 13.45 gallons @ 5c		6.72	
Ammonia liquor 56/11.648		4.80	
		31.83	31.830
Cost			7.121

5025 COST OF 1000 FT. OIL AND WATER GAS, 50 C. P.

Oil, 888 gals. at 4.23	37.60
Gen. coal at 4.36 per long ton, using 20 lbs. per M	3.87
Boiler coal, 6 lbs. per M	1.16
Labor	1.78
Lime	.75
Oxide	.25
Oil and waste	.37
Water	.17
General expense	.50
Repairs	1.50
Sup.	.50
Cost	48.45

COST OF MIXTURE OF 775 CU. FT. 14 C. P. COAL GAS AND 225 FT. OF 50 C. P. OIL AND WATER GAS.

(Such mixture giving 1000 cu. ft. of 22.1/10 c. p. illuminating gas).

1000 cu. ft. of 14 c. p. coal gas costs	7.121
775 cu. ft. of 14 c. p. coal gas costs	5.5187
1000 cu. ft. of 50 c. p. oil and water gas costs	48.45
225 cu. ft. of 50 c. p. oil and water gas therefore costs	10.901
Total cost of 1000 cu. ft. of 23.1/10 c. p. mixture	16.419

The WITNESS: The change from short ton to the long ton involved several corrections in regard to the yield of tar and coke. In fact, it made a difference in the quantities throughout. It
5026 may be affected by the difference in the weight of a ton of coal.

Q. Do you consider this mixture of 775 cubic feet of 14-candle power coal gas and 225 cubic feet of 50-candle power oil and water gas as one which is practical to be made, do you not?

A. That represented in my opinion the extreme—the best results that could be obtained by combining water gas and coal gas—oil gas and coal gas, yes.

Q. Have you also made a computation, having all the corrections throughout, of a mixture of 500 cubic feet of 16-candle power coal gas and 500 cubic feet of 28-candle power oil and water gas, the mixture making in your opinion a gas of over 22 candles?

A. Yes, sir, I have.

Q. And is this statement the result of your computation?

A. Yes, sir.

Q. What do you find the result of that computation to be?

A. I find the same to be as follows:

COST OF 1000 CU. FT. COAL GAS 16 C. P.

Soft coal $3.20 per ton of 2240 lbs.
Average yield 4.75 cu. ft. per lb.
= 10640 cu. ft. per ton.

Cost for coal = 320/1064 =		30.08
Cost for unloading 11.2/10640 =		1.053
Cost for labor, gas-making and purifying—		
Cost labor per ton	$.522	
Cost labor per 1000 cu. ft. 522/10640 =		4.91
Cost Supervision—Supt. and foreman		.50
Cost repairs to apparatus and buildings		3.50
Cost purifying material—Lime, 56c. per bu.—23 M. cu. ft. per bu.		.75
Cost purifying material—Oxide		.25
Cost for oil and waste and sundries		.37
Cost water		.17
Cost for general expense at works		.50
		42.083

5027

Less residuals—

	lbs.	
For 66% coke and breeze	1478	
Less 20% for firing retorts	295.6	
Salable	1182.4	
At $4 per ton 2000 lbs =	2364.8	
Per M. cu. ft. gas made =	$\frac{23648}{10640}$	= 22.220
Tar 15 gals. per long ton at 5c. per gal. = per M. c. f. =	$\frac{75}{10640}$	= 7.049
Ammonia liquor, 56c. per ton = per M. c. f.	$\frac{56}{10640}$	= .5263
		34.532
Cost		7.551

COST OF 1000 CU. FT. OIL AND WATER GAS 28 C. P.

Oil 5.5 gals. at 4.23	23.265
Gen. coke at 4.48 per long ton, using 22 lbs. per M	4.400
Boiler coal, 6 lbs. per M	1.160
Labor	1.780
Lime	.750
Oxide	.250
Oil and waste sundries	.370
Water	.170
Gen. expense	.500
Repairs	1.500
Supervision, etc	.500
	34.645

5028 COST OF MIXTURE 500 CU. FT. 16 C. P. COAL GAS AND 500 CU. FT. 28 C. P. OIL AND WATER GAS.

(Such mixture giving 1000 cu. ft. of 24 c. p. illuminating gas, 2 c. p. extra due to lime purification).

1000 cu. ft. of 16 c. p. coal gas costs	7.551	
500 cu. ft. of 16 c. p. coal gas costs		3.7755
1000 cu. ft. of 28 c. p. oil and water gas cost	34.645	
500 cu. ft. of 28 c. p. oil and water gas cost		17.3225
Cost of mixture		21.0980

Q. I notice that in this computation for this mixture you use more oil for the thousand cubic feet of water gas than you did in the other mixture, the other mixture being 50-candle power oil and water gas. Why do you use more oil in this mixture?

A. Well, I think that it requires more oil to bring water gas to the standard than it does coal gas.

Cross-examination by Mr. Mathewson:

Q. I find that the page of your memorandum book, Complainant's Exhibit 258 for identification, is headed "Based upon enriched coal gas, with only cost of coal gas—improved works;" is that right?

A. Yes; that was a mere memorandum for myself.

Q. I understand, but that contemplated therefor enriched coal gas made by improved works under the assumed conditions which you testified to, didn't it?

A. Yes, sir.

Q. Now let us look at your testimony to-day in comparison with
your figures given at that time and appearing on that page of
5029 your memorandum book. You figured then, you say, the
short ton?

A. Yes, sir.

Q. And you have bituminous coal at $3.20 per ton?
A. Yes.

Q. I see that you still keep $3.20 per ton as the price for coal, although you have increased the amount to 2240 pounds; is that correct?

A. Yes, sir.

Q. Well, if a short ton of coal is worth $3.20 at that time, a long ton of 2240 pounds would be worth something more than 10 per cent. additional, wouldn't it?

A. Yes, but I took this price per ton from the Company's—from what the Company paid, and as they buy by the long ton I did not increase it, naturally. I saw I had made an error in taking their price based on a short ton, and we are used in the West to basing everything on a short ton.

Q. Well, you have the yield per ton in your statement as 10,600 feet, while in your present statement you give the yield as 11,648 cubic feet per ton. How is that?

A. Well, that is simply due to the increased number of pounds. That is 2240 pounds. That is about the same yield per pound; I think it was 5.2.

Q. That was with the oil added, wasn't it?

A. No, that was just the——

Q. Wasn't that after the addition of the oil gas at Twenty-first street?

A. No, coal alone.

Q. Did you find any such record in the Company's statement that it would average about 11,648 cubic feet per ton?
A. Yes.

Q. From their coal?
A. Yes.

Q. Do you mean to say that was the Company's average, 11,648 feet per long ton?

A. I think it was 11,719; I think it was.

Q. Average at Twenty-first street before any oil gas was added to it?

A. Not at Twenty-first street, but at Fourteenth street.

5030 Q. Well, at Fourteenth street—I should have said at Fourteenth street in my previous question. "Cost of labor per ton 4.48 cents;" what labor is that?

A. That's all, charging and drawing and handling coke.

Q. What rate of wages did you contemplate in that figure?

A. $1.75 and $2.50; $2.50 for the gas makers, high-priced men; $1.75 for yard men and such as were engaged in less skillful occupations.

Q. "Superintendent and foreman, .5;" what did you assume the salary of the superintendent and foremen to be on that computation?

A. Well, that would provide for a number of foremen and a general superintendent, and amounts on the whole output to about $50,000 a year. I put that as adequate to keep the works supplied with foremen and superintendent.

Q. Before you allowed for repairs to apparatus and buildings, 4.5 cents. You have now reduced that to 3.5 cents. Have you any exhibit before you now that you did not have before you when you answered and stated it [illegible] 4½ cents?

A. I have the same exhibits, but I have not examined them quite as minutely, and in looking over the cost of repair to apparatus and buildings through the various exhibits, it seemed to me I had got my figure excessive.

Q. You figured out, therefore, a cost before deduction of residuals of 38.951 cents, did you not?

A. Yes, sir.

Q. Now when you say in deducting residuals "For 66 per cent. coke and breeze," what do you mean exactly by that? 66 per cent. of what?

A. 66 per cent. of the weight of the coal is the usual average of coke and breeze on the various gas coals used in Pennsylvania.

Q. Less 20 per cent. for filling retorts?

A. That should be "firing" retorts.

5031 Q. Do you mean to say twenty per cent. of the 66 per cent., or twenty per cent. of the original one hundred per cent.?

A. Twenty per cent. of the 66.

Q. That is one-fifth of 66 per cent. off?

A. Yes.

Q. "Salable $4.00 per ton, two thousand." You use the short ton in that case, do you not?

A. Yes, I use that in regard to the value of coke, because most of the figures I have had in regard to the matter of coke are based on the short ton, or rather on the bushel, and converted into short tons. I always endeavor to sell coke by the measure rather than by the weight.

Q. That is $4.00 per ton for all the coke produced except that used in firing retorts?

A. Yes.

Q. Isn't it true that ten per cent. of coke is breeze, or something like that?

A. No, that would be a large percentage of breeze, rather large, I think.

Q. Then if you get ten per cent. breeze out of the coke, that would not sell for more than one dollar a ton, would it?

A. Well, I think they will use and get the full carbon value in using the breeze around the works. Even with the breakage of the coke it is not all inferior fuel, if it is properly handled, and you can use that percentage at the works and get the full value.

Q. Have you assumed, therefore, that the twenty per cent. taken out of the production of coke for firing retorts will include all the breeze?

A. No, sir, not all the breeze; just its ordinary percentage. The firing in this case is done in the generator producing the gas first, and there is no loss practically there. That can all be drawn right from the retorts into the producers.

Q. I am reaching this point; part of this coke is breeze and will not bring $4.00 a ton if it is sold; that is conceded, I suppose.

A. Yes.

5032 Q. Now, I am asking you whether you assume that no part of the coke sold is breeze?

A. No, I don't think you could get full value with the breeze. The idea of this estimate is that the breeze could be used in the producers or in the boiler fires.

Q. Then your idea is that it would be used by the company and would not be sold, and in that case you would have to deduct something from the amount of your coke sold, wouldn't you?

A. No, whatever is used by the company—I consider that a sale, that is, it is charged at the same rate as coke charged and handled, just the same as coke sold to the operation of the works—you have to have it enter into your accounts in some fashion, and therefore it would be charged to operation at the same—well, that is the total value for that purpose anyhow.

Q. Then all the coke made would be charged into the cost of gas at four dollars, wouldn't it, on that theory?

A. Well, it is practically, because if you did not have that twenty per cent. deducted from the coke in order to arrive at the salable coke you would have that much more. It is practically charging it to the——

Q. Let me see if I understand you. After you have deducted the twenty per cent. of the 66 per cent. of coke and breeze for firing retorts you still have left a certain amount of coke and breeze; that is right so far, isn't it?

A. Yes.

Q. And you have put down "salable at four dollars a ton, two thousand pounds." I understand you to say that that is not to be sold, but is to be used by the company or that some part of it is to be used by the company?

A. Yes, the breeze part could be used. I think that is perfectly available for the generators.

5033 Q. You think it should be charged to the company if it is so used in its manufacturing cost at four dollars per ton for the breeze?

A. Just the same as fuel value, as such.

Q. But you have not included this amount in your cost of gas at all, have you?

A. It is the same thing, deducting from residuals. If I had not deducted that twenty per cent. you would have had just that much more coke and I would have turned right around and——

Q. I am not talking about the twenty per cent.; I am talking about the proportion of what is left after the twenty per cent. is taken out, which is breeze?

A. No.

Q. You have not included that in your cost of gas at all as you would have to if it were used by the company, have you?

A. That I think was included in the boiler fuel, yes. There was some charge there for boiler fuel.

Q. Show me the item which includes that, Mr. Edgerton. Do you mean to say that it was used for boiler fuel in making the oil gas?

A. The boiler coal is six pounds to the thousand.

Q. Boiler coal?

A. Boiler fuel or coal.

Q. Do I understand now that you want to change your statement in here under the "cost of a thousand feet, oil and water gas, 50 candle power," from "boiler coal" to boiler fuel?

A. Well, I have considered both coke and coal fuel. I think they are interchangeable.

Q. Oh, well, that may be. I am taking your own terms. I find under the heading, "cost of a thousand feet, oil and water gas, 50 candle power," the expression "boiler coal." Now I want to know whether that is coal or whether it is something else?

A. Well, we use coal or coke and screenings for boiler fuel right along every day.

5034 Q. But I find in this statement you have very carefully specified coal in one place, coke in another place and breeze in another place. You have distinguished them. Now I want to know whether this item, under the "cost of a thousand feet, oil and water gas, 50 candle power," of "boiler coal" is correct or whether you want to change it so as to read differently?

A. You might make it fuel instead of coal.

Q. I am not going to do anything. I want to know whether you want to make any change in that regard?

A. I don't see any use for it.

Q. Then the coke is not included under the item "boiler coal," is it?

A. I wouldn't say it was exclu-ed.

Q. Well, is it included?

A. Well, as far as that is concerned we use it I say with whatever comes to hand. If we have screenings and breeze and coal it is put into the use of the boilers or into the use of the cupolas or generators indiscriminately.

Q. I will ask you again this question: under the term "boiler coal" do you mean coal, or do you mean in whole or in part breeze, screenings?

A. I meant fuel of any kind that was useful for a boiler.

Q. But in relation to the previous statement where you say you have some breeze left that is not worth for sale in the market four dollars a ton, you suggested it might be used for boiler fuel. Now, I ask you whether this item "boiler coal" contemplates the use of that breeze as boiler fuel?

A. Yes, certainly we intended to use the breeze as boiler fuel.

Q. Then "boiler coal" does not mean boiler coal but boiler fuel, is that right?

A. Fuel and coal are used indiscriminately.

Q. Well, what does it mean here?

A. It means boiler fuel, that is what it means.

5035 Q. Very good. Now, under this same heading, "cost of a thousand feet, oil and water gas, 50-candle power" we have generator coal at $4.30 a long ton, using twenty pounds per thousand. Have you figured out to see whether twenty pounds per thousand does not mean 100 per cent. efficiency for that fuel, assuming it to be solid carbon and without any waste whatever even for ash?

A. No.

Q. Have you figured that out?

A. No, I know what can be done with it.

Q. Well, have you made any computation to find out whether solid carbon with no ash used at an efficiency of 100 per cent. would be any thing better than twenty pounds per thousand?

A. Why, running only half the time I made it for twenty-eight pounds in little Danbury, and I thought twenty pounds was a liberal allowance here.

Q. Now, I want you to show any place where you have used twenty pounds only per thousand for generator coal, the results that you have got right here; let us have the place.

A. I say I have used the average of the month, running over half the time or twelve hours a day, twenty pounds a thousand, for making rich gas.

Q. Making rich gas such as you use?

A. Yes, making rich gas. It does not take anything like the amount of coke per thousand to make rich gas that it does to make poor gas.

Q. Isn't it fundamental that the more you make blue gas the more fuel you have to put into it?

A. Yes, that is just the trouble. This is not blue gas; it is 50-candle power gas. There is nothing blue about that.

Q. Do you mean to say this rich gas you use requires less fuel?

A. I mean exactly that. A great deal less, that is what is the matter.

Q. Have you within the last year or so handed to a Mr. Miller certain figures and estimates relating to the experience at Danbury, and if so will you be good enough to look at those sheets and
5036 see if they are in substance the sheets that you handed to Mr. Miller?

A. Yes. There is coal per thousand (indicating).

Q. Just answer the question?

A. Yes, certainly.

Mr. Mathewson: I ask to have these sheets marked for identification.

Marked for identification Complainant's Exhibit 270.

Q. Now will you look at the last sheet, which is headed "figures furnished by H. H. Edgerton," and say whether the coal per thousand in the carbonized report of the Danbury Gass Works which you say uses this system does not run from 28.08 to 45.72 for the year ending May 1, 1905, according to that statement?

A. Yes, sir, running half the time or less.

Q. Well, that is the fact, isn't it?

A. Yes; 28 pounds.

Q. One month, November, 1904, this would appear to be, you get 28.08?

—. Yes, sir. How many hours was that?

Q. And the average is 34.25, isn't it, per thousand feet?

A. Yes, sir, for the year, running 3,400 hours total for that year?

Q. Well, I am talking about per thousand feet?

A. Well——

Q. And it appears that the candle power at Danbury, average for a year, instead of being 44, as I understood you to testify, is 35.76 candle, isn't it?

A. Yes, that was with a two-foot burner, not tested by Mr. Love.

Q. Well, these are figures you gave to Mr. Miller?

The **Master**: Yes, he said so.

5037 Q. And you were conferring with him with a view to showing him how favorable a process this was and getting him to install it at another place, were you not?

A. No, sir; no, no.

Q. Were you?

A. No, sir; there wasn't a word said about installing at any other place, or any other process.

Q. What was the object of giving these to Mr. Miller then?

A. I directed those to Mr. Bradley. I don't remember Mr. Miller in the case.

Q. Mr. Bradley, the chief engineer of the Consolidated Gas Company?

A. Yes, I don't remember addressing anything to Mr. Miller.

Q. Weren't those figures delivered in reference to a proposed plant at Hyattsville, near Washington, with a view to the possible installation of a plant there of the character of the plant at Danbury?

A. Well, those figures——

Q. Well, wasn't that the fact?

A. I gave those figures to several people, but I suppose these are the figures that came through Mr. Bradley. I don't know how you got hold of any Hyattsville.

Q. Weren't these delivered to them in connection with a proposed plant at Hyattsville, and weren't they delivered to Mr. A. S. Miller, general manager of the Consolidated Gas, Electric Light and Power Company of Baltimore?

A. No.

Q. And who was also president of the Hyattsville Company?

A. There is no Hyattsville Company that ever I heard of. That is, the papers were given to Mr. T. J. Hayward, of Bartlett, Hayward & Co., and he turned them over to Mr. Miller, and said go down and see Mr. Miller and explain them to him, and I went down there and explained the figures to Mr. Miller.

Q. And they were given in connection with the proposed plant at Hyattsville?

A. Yes. Not proposed to Mr. Miller, however.

5038 Q. Now, your charge at Danbury to consumers is figured out on a basis of 44-candle power in making your adjustment, isn't it?

A. Yes; 17.6, yes, 44-candle.

Q. And is this a true statement with these figures upon it, a true statement of the candle power of Danbury for the year ending May 1, 1905?

A. Yes, sir, the tests are very carefully made, but they are made with a two-foot burner, as I tell you, instead of a 5-foot.

Q. Isn't the two-foot burner the most favorable burner to test with as far as candle power is concerned, for the gas?

A. Oh, no, I can bring you forty-five candles out of the same gas by simply putting on a large burner and putting it under the same pressure or a little more than the inspector does in New York City; I can get forty-five candles out of it readily.

Q. More pressure?

A. No, by less pressure.

Q. Does it not produce a smoky gas under less pressure?

A. No, not any smokier than the Consolidated gas, so far as I can determine.

Q. I do not ask you to make comparisons, does it or doesn't it produce a smoky gas?

A. No, a very brilliant, clear flame; a very fine flame, that I don't think would give off any smoke in ordinary use.

Q. Then you figure out for your coal gas, fourteen candle power, residuals amounting to 31.83 cents?

A. Yes, sir.

Q. Which you deduct from 38.951 cents to leave an actual cost of coal gas in the holder of only 7.121 cents; that is correct, isn't it?

A. That is right.

Q. On the other hand, the cost of the oil and water gas upon this assumed basis you compute at 48.45, is that right?

A. Yes, I think that is correct.

Mr. KIRBY: Per thousand cubic feet?

Mr. MATHEWSON: Per thousand cubic feet always.

5039 Q. And you get the total cost of a thousand cubic feet of 22.1 candle power at only 16.419 cents in the holder, is that right?

A. Yes, that is right.

Q. And you really think that it is feasible and practicable to manufacture gas in the City of New York, such as we have to deliver here in the holder at that figure, is that right?

A. In those proportions, yes.

Q. Well, these proportions are the ones you assumed in the computation?

A. Yes.

Q. They are not mine. And this you understand allows only one-tenth of a candle above the figures required by law?

A. No, there are about two candles above. They allow there for the mixture as proposed, but I take out by the use of lime two per cent. of carbonic acid which usually accompanies the gas, and that would account for about two candles difference. In other words, by taking out the carbonic acid to the amount of two per cent the candle power would be increased. Those figures are based on the candle power with the carbonic acid remaining in the lime, .75 of a cent is intended to take it out.

Q. Do you mean to say that the cost that you have allowed for purification is sufficient if you were going to take out the carbonic acid?

A. Yes, I think so. The material.

Q. And is this 22.1 candle power at the works of the Company or at the station of the City, a mile from the works?

A. That is at the works.

Q. What amount of lime do you allow in this purification including the extraction of the carbonic acid?

A. I think it was about 25,000 feet to the bushel of slaked lime, something like that.

Q. And how much a bushel?

A. I have forgotten. I haven't the price of lime, the strength of it,
how much it would lose and how much it would swell in slak-
5040 ing. I think it is shown down here as 56 cents. That is not
the slaked lime, though. That is unslaked lime.

Q. What wages did you allow for labor in the oil gas computation of 1.78 of a cent?

A. Well, I had that a little higher, but after consulting the records of the Consolidated Company and taking into consideration the large amount of gas that would be made I cut down to within a half a cent of there cost; it is a half a cent more than the cost of the Consolidated at present.

Q. For labor in producing what kind of oil gas?

A. Labor in producing oil and water gas. This is really a cheaper gas, as far as labor is concerned, as far as I can see, than the other forms of gas.

Q. Did you figure on this oil gas, in supplying New York, to be manufactured at one works or in various works at different points?

A. It ought to be made at one works really if you want to do it right.

Q. Is that what you figured on in this estimate?

A. Yes, it could be done at the same works in such a large scale, but the mixing would present some difficulties. However, if they would mix them thoroughly before they entered the holder it would be all right. If they let it get to the holder and attempted to mix it in the consumers' pipes, or the mains, it would have inequalities.

Q. Well, now, I see that in your statement dealing with the mixture consisting of 16-candle power coal gas and 28-candle power water gas you figured on the cost of the coal gas to be 7.51 cents and of the oil gas to be 34.645 cents, and the cost of the mixture in the holder to be 21.098 cents per thousand. That is about five cents higher than the result from mixing 14-candle power coal gas with
50-candle power gas?

5041 A. Yes, I think that would be a less economical mixture
than the other on account of the——

Q. Then the more water and oil gas you used and the less coal gas, the higher the cost of the mixture, is it?

A. Yes, undoubtedly; it takes less oil to illuminate coal gas than it does to illuminate water gas.

Q. Now, I see on your second statement under "Cost of one thousand cubic feet coal gas, 16-candle power," you stated that the average yield is 10,640 cubic feet per ton of coal.

A. Yes.

Q. The coal costing $3.20 per ton, but in your former statement you say that the coal costing $3.20 per ton you assume will produce 11,648 feet, or more than one thousand feet per ton more; how does that happen?

A. Well, in that case, as always happens in coal gas, the higher we drive the yield the more we exhaust the yield. The lower the candle power of the gas. In one case I am making 14-candle power gas at which I got 11,648, and the other making 16-candle power gas and cutting off the yield we get the higher candle power of 16.

Q. You mean to say that without adding to the volume of the gas by oil gas or water gas you can simply drive out of the coal 11,648 of 14-candle power gas or 10,640 cubic feet of the 16-candle power coal gas, taking the same coal, do you?

A. Yes, that would be about the way it would run. I have made many experiments in regard to that; it is a good many years ago, but they hold, I think, just as good now.

Q. When you are speaking of candle power, what burner did you use in computing the candle power that you have used in these statements?

A. The London Argan D.

Q. You do not use a flat-frame burner such as is used in New York by the City testing inspector?

5042 A. No. At about 18 to 19 the two burners give the same result.

Q. Did you get your 22.1 on the Argand or the flat-frame, or do you contemplate getting it on the Argand or flat-frame?

A. On the flat-frame. The Argand would not give 22 with that gas.

Q. Now will you look at Complainant's Exhibit 258 for identification, which was the page of your memorandum book, and say whether your 36.12 which you testified to the other day should not be 39.12? In other words, didn't you make a mistake of three cents in the addition of the figures that you took?

A. No, that was scratched out. It was part of it—the addition comes to 36.12. This figure was scratched out because the labor of gas purifying was—it was opposite that line, but it does not foot up—you will see it foots up 36.12, leaving that out.

Q. Leaving out the three cents which appears in there?

A. Yes. It is a duplication.

Q. And isn't it true that in connection with the repairs to apparatus and buildings you stated in your previous testimony 4½ cents as the amount, applying it to 225 cubic feet of gas?

A. No, that was applied or intended to be applied to the whole mixture.

Q. But it was not in the figures on that page, was it?

A. Yes; repairs to apparatus and buildings is intended to cover both coal gas and the oil gas, and so shows here.

Q. Well, if you have labor in gas making and purifying, three cents, meaning a thousand feet, as you stated in first computation and crossed it out, then for 225 feet it would be something like one-quarter of three cents, wouldn't it, or .75 of a cent instead of .3 of a cent?

A. Yes, that rose in this way: I took the cost of making 5043 a thousand feet and taking the cost of labor at three cents, from my judgment, and looking over the data of the Consolidated Company I found owing to the large product they made so much less, I thought I had that too high really and cut it down.

Q. Now, the repairs in works where machinery is used for handling coal would naturally be larger than in works not equipped with so much machinery and where hand labor was used, would they not?

A. Yes. I think I allowed for that.

Mr. Mathewson: That is all. I would like to have that page which is marked Complainant's Exhibit 258 for identification printed, if these exhibits for identification are to be printed.

Mr. Page: Are you having the Danbury record printed?

Mr. Mathewson: Yes.

Mr. Page: What I had marked for identification and had printed were some papers which were offered in evidence. Now here are some memoranda Mr. Mathewson produces from his pocket and asked the witness some few questions about, they are marked for identification and he wants them printed. I really should insist on his putting them in evidence, he having cross-examined the witness on them. I do not see they are proper in the case at all.

The Master: Isn't that so, Mr. Mathewson?

Mr. Mathewson: I rather think it is so. I probably shall offer them later in the day. I will withhold offering them until I reach my case, which would be more in order. I offer in evidence, however, the page of witness's book, Complainant's Exhibit 258 for identification, so that it may go in at this point.

5044 The Master: Was that particular page Exhibit 258, or was the whole book Exhibit 258?

Mr. Mathewson: Just that one page.

Received in evidence and marked Complainant's Exhibit 258, December 26th, 1906.

Redirect examination by Mr. Kirby:

Q. Referring to Complainant's Exhibit 258, we find the statement "labor, gas making and purifying, three cents." Do I understand there was a memorandum of yours and that through the three-cent item you have drawn that line for the purpose of erasing it?

A. Yes.

Q. And that that cost is included in other items and not added in that total of 36.12 cents appearing immediately thereunder?

A. Yes, sir.

Q. Opposite the item "Tar, 12 gallons at 5 cents" I find .600, then on the same line 5.65, then on the same line .56?

A. Well, that is all an error there. That 56 is on the basis—is incorrect—some figuring I did here on the jump.

Q. And which is not the correct conclusion?

A. No.

Q. What is the correct conclusion there?

A. I think it is 5.65, as originally put down.

Q. Is that also true of the item "Ammonia Liquor?"

A. Yes, sir.

Q. Where the figures 4.71 have been changed to .47?

A. Yes.

Q. So that your original statement of 23.26 cents was only in error and that you used the short ton of 2,000 pounds instead of the long ton of 2240 pounds and did not have a mixture of only 1,000 cubic feet of gas?

A. That is true. I had not allowed for the bulk of the enriching gas nor have I allowed for the long ton; I have a short ton, and with those two exceptions that is very nearly accurate. There
5045 may be some trivial decimal errors there in arithmetic, but it is substantially correct.

Q. Now in your statement of the cost of 1,000 cubic feet of 14 candle-power coal gas you state the yield of gas from a ton of coal to be 11,648, and in your statement of the cost of 1,000 cubic feet of 15 candle-power gas you state your yield to be 10,640 cubic feet from a long ton of coal. This yield is based upon the result of your investigation as to the yield from coal, is it not?

A. Yes

Q. And when you state you have referred to the figures of the Consolidated Company you did so only as a matter of reference and for confirmation, did you not?

A. That's all. They seem to agree very well with my own experience in regard to the yield, correctly given.

Q. And you consider that from a ton of coal it is possible to obtain coke which is salable, that is, contain none but a very small proportion of breeze, which will consist of that which is left after deducting 66 per cent. of the ton and deducting 20 per cent. therefrom for firing of retorts?

A. Yes. That is possible. In fact, it has been done in practice.

Recross-examination by Mr. Mathewson:

Q. Do you mean to tell me that you confirmed from the Consolidated records the proposition that from 20 pounds of generator coal you get one thousand feet of gas?

A. No.

Q. You did not find any such result there, did you?

A. No.

Q. Well, I want you now, you are so particular about this, to give me a company that is doing that now, getting one thousand feet of gas from 20 pounds of coal; just give me the name of the company doing it; I mean of this water oil gas?

A. Well, of the water gas, I consider when I am operating
5046 at 28 pounds and running only half the time and keeping the fire up in the meantime, and with a loss of radiation, that twenty pounds would be an ample allowance, running all the time.

Q. But we have seen that the average at Danbury, according to this statement you presented, showed nearer thirty-five than twenty-eight pounds for the year.

A. Yes, but it is running only a small portion of the time; that is, it is running less than half the time.

Q. Well, the average so far as it was running—you have referred to the fact it was only running half the time—was not twenty-eight and a fraction, but was nearer to thirty-five, according to this statement, wasn't it?

A. Yes, but the management——

Q. Well, that is the point. Now, will you show me any company producing this amount of gas with the use of only twenty pounds per thousand feet of gas produced, not reasoning from what some company is doing, or as to what they might do under other circumstances, but give me the name of one company producing this kind of gas and using only twenty pounds of fuel per thousand feet under the boilers?

A. Not under the boilers.

Q. No, I mean generator coal. Strike out under the boilers.

A. Well, you give me works running twenty-four hours, and I will do it.

Q. I ask you to name to me the works that are doing this.

A. I didn't know of any works running twenty-four hours doing it, or twenty hours would do it. Have you got those figures there as to the twenty-eight pounds? No, this twenty-eight pounds in November was only running on 360 running hours during the month.

Q. Yes, I understand that you reason something from that.

A. Yes, and you can reason a good deal from it, too.

5047 Q. Too much, we think. Did they balance up the coal pile at the beginning and end of the period to which you refer, November, 1904?

A. Yes, and the gas has to stand the shortage.

Q. What?

A. The gas account has to stand all the shortage besides because of the electric——

Q. That may be, but I am asking you if for that particular month they balanced up the coal pile at the beginning and end of the month so that they know how much they use exactly to a pound or a few pounds?

A. Pretty near it.

Q. I find in this statement, Complainant's Exhibit 270 for identification, that the amount of coal used for the year has been stated, but not for the separate months, the balanced coal.

A. It is oil I guess you are talking about, isn't it? I don't see any balance about coal. I see the oil is stated; the inventories are taken at the end of the fiscal year of the coal and whatever shortage comes in there comes on the gas.

Q. I understand that is so for the year, but you do not balance your coal pile each month, do you?

A. No, we could not do that.

Q. Well, you don't do that, do you?

A. Stock on hand is not taken each month, but it is weighed carefully into the generators and they use more than ordinary care in making that out. I watched it frequently and have had weights put on the scales and tested them; in fact, I don't know a place——

Q. At Danbury?

A. Yes. I don't know a place where as much care is taken as you will see there in regard to oil. Shortage on oil is stated to be due to the clogging up of the oil gauge pipes. It was quite a while before I found out what was the matter; and there is a great deal of care exercised in their quantities and weights.

5048 By Mr. **Kirby**:

Q. You desire to give an explanation of how a decreased quantity of coal can be used in making this very rich oil and water gas. You may so do.

A. The chief function of the fuel in making a rich oil gas is simply to decompose the oil vapors into gases. There is very little coal used except for fuel. But the function of coal as a fuel in making water gas is not only to furnish the heat for the decomposing of the water, but also all the carbons for the carbonic oxide and carbonic acid entering into the gas; and it is found by the most ordinary observation and tests that while one takes a very moderate — of heat to decompose the oil gas, that a very large quantity is taken to make the water gas part for that reason. It not only serves the decomposing, but also has to form the body of the gas. In the case of oil, the oil forms the body of the gas and not the coal.

By Mr. **Mathewson**:

Q. Didn't you say somewhere in your testimony that this twenty pounds per thousand feet was for blue gas?

A. No, if I did I misunderstood you; I didn't mean to. Blue gas takes a great deal more than twenty pounds per thousand, there is thirty per cent. of blue gas in it, or about that.

Q. How many pounds of coal would be required for all blue gas with no oil in it at all, Mr. Edgerton?

A. Well, there are various—it is according to how it is made; there are various processes. Some come as high as thirty thousand feet.

Q. I am getting not claims, I am getting your views on the subject; give us your own views.

A. Well, I don't remember of making any blue water gas alone in any of the works, except occasionally just for getting samples
5049 to test. It is made always in a mixture with the coal gas, or oil gas, and the only way we arrive at it is by analysis of the gas as to what percentage of blue gas there is in it. I used to make them entirely separate and record in a separate meter; but they were still made in the same vessel; but there are processes depending on blue gas alone; I think about thirty thousand feet to the ton is the highest that has ever been got out, and I rather doubted whether that was possible.

Q. To the long or short ton?

A. The long ton I believe that was. They made it down in——

Q. You never had any experience yourself, you say, in getting out blue gas?

A. I investigated works where they were doing it, but I never ran them. I went down to Bridgeport and got samples of gas; they were making it there and I had samples from various points, I don't remember just where. I made analyses of them and had statements of the cost of making it.

Mr. Page: The point having been raised as to these State's Exhibits NNN and OOO which were copied from the carbonizing book of the Twenty-first Street station, from that portion which Mr. Mathewson states is not in evidence, I asked him whether he would produce those books so we could offer those particular parts. I understand he is willing to accept these copies as being correct copies, but insists upon some objection that if the books were here they would be immaterial and irrelevant. Is that it?

Mr. Mathewson: Yes, I have objected to Exhibits NNN and OOO on the ground they are outside of the period under consideration and are not taken from any exhibit in evidence, and that that period was never offered in evidence, and I insist upon that objection. I do not
make the objection that these are not accurate transcripts
5050 from the books, assuming, of course, that we have an oppor-
tunity to verify it and call it to the Master's attention if we find it to be incorrect. I think that covers it.

The Master: What is the matter with that?

Mr. Page: The only thing then is I think they should be marked in evidence the same as if we produced the book here. We would have a right to subpœna the book and offer this testimony.

The Master: I understand the proposition is that these sheets should be treated here as if they were the original books, and as I understood, I excluded that.

Mr. Mathewson: Yes.

The Master: What do you gain by marking the original book?

Mr. Page: I understood you excluded it because it was not part of the exhibit.

The Master: No, but because it included part of the year 1902 and 1904, and the part that Mr. Mathewson introduced of that book was simply the year 1905.

Mr. Page: But that makes it competent if we want to offer another portion of that same book, does it not?

The Master: That may be, except that throughout this case we have kept clear of going into periods anterior to the year 1905, for the purpose of not broadening the issues to be tried.

Mr. Page: I know that has been the contention of the Consolidated Gas Company, that we could not look at anything except for the one year, but I do not so understand the issue, but that it was what it cost them to make and sell gas, and if they put in evidence their carbonizing record for the year 1905 and claim that they have to use a higher grade of oil and we can show by the same book that
in 1902 and 1904 they used this oil and produced candle
5051 power results from a different oil, I think that bears on the
statement that they have put in already. It is a basis of comparison.

The MASTER: Well, it may be, but I do not see what you gain by having the original book here under this situation.

Mr. PAGE: I do not if they are willing to waive the production of the book.

The MASTER: He does not make any point about their being copies.

Mr. PAGE: Yes, he says they should not have been copied at all.

The MASTER: I do not see what difference it makes. It is excluded anyway. If you had the original book here I would exclude it just the same. If you gentlemen have taken as long as you have to analyze the accounts for 1905, if you were to go back through all these books it would take until 1950 to analyze them.

Mr. PAGE: That is true, if we attempted to go through all the books, but we have simply taken a half a dozen items from these pages. I wish an exception to the ruling. We have nothing to offer to-morrow so far as the State is concerned, but we would like to get credit for that day so if we need another day in putting in the value of the plant it can be added on to our time.

The MASTER: What about Mr. Burr?

Mr. BURR: I regret to say that our worthy friend, Professor Bemis, is dangerously ill at his home in Cleveland and I have been in receipt of dispatches and letters from his people saying that he is more than anxious to come on, but his physician will not consider his coming on at his time. Dr. Marks I have not been able to see, because he is actively engaged in examining the plants. I do not suppose that I will take more than a couple of hours in gathering up the loose ends which the court referred to, and if it is entirely agree- 5052 able I suggest that the time which we might occupy to-morrow in gathering up these loose threads might be more properly credited to us if you will, from the 3rd of January; it will only make a difference of half a day. I want to say about Professor Bemis, all I wanted, for instance, was to put in, in better shape, in view of your ruling upon those letters which I produced here, the testimony as to the reduction of the cost of gas in Lynn, and the testimony of the growth of ppoulation of the City of New York; and really I do not believe that I would need more than an hour if you would say that we might have, in lieu of to-morrow, an hour in addition to the time set after the 3rd of January. I would be content as far as I am concerned and I join in the request of Senator Page in view of our practically having arrived at the termination of all the evidence that is ready to be submitted now, we having another day at our disposal, you might give us the benefit of this new day at the time we are putting in the evidence as to the value of the plant.

The MASTER: Do I understand that none of the defendants are prepared to do anything more now, until the day set by the court for the taking of the testimony of the value of the plants?

Mr. BURR: So I understand.

The MASTER: Is that true as to both sides?

Mr. PAGE: Yes.

Mr. MATHEWSON: I understand the Senator has stated that he has concluded except as to the value of the plant.

Mr. PAGE: Yes.

The Master states that owing to his engagements on the 2nd, 3rd and 4th of January the hearing will have to proceed on the 5th.

Adjourned to January 5, 1907, at 10.30 A. M.

Last Complainant's Exhibit 270.
Last State's Exhibit OOO.
Last City's Exhibit 124.

5053 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and the City of New York, Defendants.

Before Arthur H. Masten, Special Master.

JANUARY 5TH, 1907.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

5054 The MASTER: Are you ready to proceed, gentlemen?

Mr. PAGE: I see Mr. Burr wants me to put upon the record that I am not ready to proceed this morning. We finished the examination of the plants and are having the results of that examination tabulated so that we can put the testimony in in tabulated form in a very short time. That tabulation is not entirely completed. It will be on Monday morning.

The MASTER: How about you, Mr. Burr?

Mr. BURR: Mr. Master, I had understood and, in fact, it was arranged, that counsel of the State would proceed with the examination regarding the valuation of the plants to-day. That was distinctly understood, and I only heard to the contrary last evening, so that although Dr. Marks has been working continuously upon the subject matter since the last hearing, he is not entirely finished. However, if the State is not prepared to go on as they had intended, I will go ahead as far as I possibly can with Dr. Marks.

The MASTER: Very good.

Mr. PAGE: As I understand, Mr. Burr was communicated with about 12 o'clock yesterday and told that we could not go on.

Mr. BURR: I am not going to enter into any question of veracity about the time. I did not know anything about it until yesterday afternoon when Mr. Kirby telephoned me.

Mr. PAGE: I do not desire any controversy about it, I am sure.

Mr. BURR: I should have had a little more notice about it.

William D. Marks, resumed, testified as follows:

5055 Mr. **Page**: I think we should have some understanding, as to the methods of proof here, whether we are to go on immediately after the conclusion of Dr. Marks' direct-examination, or whether there is a record kept of the time and the cross-examination is to follow and we are to have our time on the direct.

The **Master**: Mr. Mathewson is entitled to be heard on that. It can be done either way. He can cross-examine as soon as Dr. Marks gets through and I will keep track of the time, or he can have the direct-examination of both of these witnesses for the city and the State finished and then have them reappear for cross-examination, whichever is satisfactory.

Mr. **Burr**: If I may make a suggestion, I think the latter plan would be better, to get the whole testimony in in regard to the valuation of the plants and then you can start in to cross-examine.

Mr. **Mathewson**: I think perhaps that would be the better plan. I cannot, however, quite say what my view will be until I see in what shape the witness is presenting his testimony. I suppose these two witnesses, Dr. Marks and Mr. Edgerton, covered the same plants, but whether they pursued the same methods, I cannot say.

Mr. Burr: I do not know what plants Mr. Edgerton has covered, but I know Dr. Marks has covered all the plants.

Mr. **Mathewson**: And Mr. Edgerton I suppose has done the same.

Mr. **Page**: Yes.

Mr. **Mathewson**: If the Master can suspend the ruling upon this until Dr. Marks has proceeded somewhat I would be very glad.

The **Master**: Very well.

5056 Mr. **Mathewson**: I will say, Senator, that my present feeling is, in view of the fact that the same plants are to be covered, that I would prefer to have you complete your direct testimony and see how much time is consumed, and then we can examine the witnesses on the cross, when recalled.

By Mr. **Burr**:

Q. Doctor, since the last hearing at which you appeared have you been engaged in making an examination of the remaining plants of the Consolidated Gas Company?

A. With the exception of 14th Sreet, I have been continuously engaged.

Q. I said of the remain*ed*r. You have been already examined in regard to the 14th Street plant?

A. I have.

Q. Did you make a personal examination of all the plants?

A. I made a personal examination of every plant in detail.

Q. All the apparatus?

A. All the apparatus.

Q. And the buildings?

A. And the buildings.

Q. And the holders?

A. Holders.

Q. And the tanks?

A. And the tanks and all.

Q. How long were you engaged in making the examination of these plants other than the 14th Street plant?

A. Actual physical examination?

Q. Yes.

A. Of the plants?

Q. Yes.

A. I can give you the date of each examination if you like.

Q. How long were you engaged in the examination of the plants, the number of days and number of nights?

(Witness refers to papers.)

Q. Well, about how many days?

A. From December 17th until the end of the month.

5057 Q. Until the end of December?

A. Until the end of December.

Q. Since that time have you been engaged in computing and making up the results of your examination during the time which you stated?

A. All of that time, from the beginning until coming to this meeting, I have been continuously engaged when not in the building, in either making or supervising computations.

Q. And you have prepared a statement showing each building and each item of apparatus and the value given by you to each building and to each item of apparatus and to everything else that is embraced in the work as far as machinery or other things that are used in the manufacture of gas at the various stations are concerned?

A. I have. I have prepared such an inventory.

Q. And you have given a value to each of these items appearing in those inventories so prepared by you?

A. I have.

Q. Taking out—I believe you testified at the last hearing that the value of the 14th Street station in your judgment was $1,469,064?

A. I did. That included depreciation.

Q. That is less depreciation?

A. Depreciation off.

Q. Will you give me the value of each station, the grand total as you found it of each station less depreciation?

Mr. Mathewson: I make the same objection to the witness' testimony that I think I have made heretofore, that he is not qualified as competent to testify as an expert as to these values.

The Master: Objection overruled.

Mr. Mathewson: Exception.

Q. What did you find the actual present value of the 21st Street station?

A. $2,094,746.

5058 Q. And the 42d Street station?

A. $821,468.

Q. Now, as to the Inwood station?

A. $10,596.

Q. The 99th Str-et station?
A. $568,751.
Q. 44th Street station?
A. $1,230,336.
Q. 111th Street station?
A. $838,147.
Q. 132d Street station?
A. $493,164.
Q. 18th Street station?
A. $223,627.
Q. 63d Street station?
A. $392,796.
Q. 65th Street station?
A. $1,205,997.
Q. Making a grand total of how much?
A. A grand total of $9,348,692.
Q. Including the 14th Street station?
A. Including the 14th Street station.
Q. That in your opinion is the value of all these plants and apparatus, less depreciation?
A. The actual present value of the buildings and gas-making apparatus in the plants to-day.

By Mr. MATHEWSON:

Q. You include the gas distributing apparatus, the holders?
A. Yes, making and distributing—the holding apparatus, I should say, not distributing.

By Mr. BURR:

Q. Taking the matter up in a little more detail, Doctor, referring to the 21st Street station; what did you find to be the total actual cost of buildings and structures to be?
A. The cost of buildings and structures, excavations of walls, etc., $743,700.
Q. Give me that in detail. You have lumped the two items. I want to get the specific item. What did you find the total actual cost of buildings and structures to be?
A. $723,500.
Q. And the excavation and walls?
A. Excavation and walls, etc., $20,200.
5059 Q. Making a total of?
A. $743,700.
Q. What did you find the total gas manufacturing machinery, apparatus and contents subjects to depreciation to be?
A. $594,000.
Q. And what did you find the value of the gas manufacturing machinery, apparatus and contents without depreciation to be?
A. Meaning by that apparently new machinery installed lately, $520,250.
Q. What was the valuation of the yard connection?
A. I adopted the figures given by Mr. Mayer, as it was impossible in the time allowed to go over them; $218,200.

Q. Gas holders and tanks, what did you value those at?

A. $630,900.

Q. The total of these amounts is how much subject to depreciation?

A. Subject to depreciation, $2,186,800.

Q. What do you figure the depreciation at?

A. Depreciation is figured at thirty-two years——

Q. Thirty-three years, is it not?

A. Thirty-three years, at .85 of 1 per cent. per year or about twenty-eight per cent., amounting to $612,304.

Q. Deducting that depreciation from the amount given, $2,186,800 leaves how much?

A. Leaves a balance of $1,574,496, which, added to the machinery relatively new, gives a total actual present value of the 21st Street station, machinery and buildings of $2,094,746.

Q. In other words, adding that $1,574,496 to the $520,250 which you have given as the valuation of the gas manufacturing machinery, apparatus and contents without depreciation gives you a total of $2,094,746?

A. That is it.

Q. As the actual present value of the 21st Street station, machinery and buildings?

A. It does.

5060 Q. Doctor, you have, of course, studied the valuation that has been placed upon all these various items that you are testifying to, as given by Mr. Mayer?

A. I have.

Q. Now, are there any of these buildings regarding which Mr. Mayer has testified which have already been appraised by Rowland?

A. Quite a number of them which were in existence in 1884.

Q. The same buildings that Rowland appraised in 1884 are still in existence and were appraised in 1906 by Mr. Mayer?

A. They were.

Q. I call your attention to this station, 21st Street, and ask you whether the sheds there, Nos, 2, 3, 4, 5, 6, 7, 8, 9 and 10 were in existence and appraised by Rowland in 1884?

A. They were.

Q. What is the valuation given by Rowland in 1884 for those sheds?

A. $246,349.

Q. With depreciation?

A. With depreciation.

Q. What is the value which Mr. Mayer has placed upon it?

A. $677,183, in 1906.

Q. So there is an excess in valuation by Mr. Mayer of $430,834 over the valuation placed by Rowland in 1884?

A. There is.

Q. What did you find the condition of the scrubber house to be—the shed?

A. In the case of the shaving scrubber house, -he roof had entirely vanished, the floor remained there in portions but it was rotted and in a wretched condition.

Q. In the retort house, what did you find?

A. In the retort house I found 32 benches of sixes, of which 36 were fired and 156 were idle, and also 20 benches of sixes, of which none were fired and 120 were idle.

Q. And in the 22d Street retort house?

A. Twenty benches of sixes, of which none were fired and 120 were idle.

Q. What did you find the percentage of retorts used to be?

A. The percentage of the total number of retorts in actual use was 11½ per cent., about.

Mr. Burr: If the Master thinks it will facilitate matters
5061 and will be a more orderly arrangement I can have him say
this is his statement with regard to the 21st Street station, and have that as his answer to that. He may incorporate it here, and the same way with regard to the other stations. I will give Mr. Mathewson copies of them.

The Master: Is there any objection to that Mr. Mathewson?

Mr. Mathewson: No, I think that would be the better plan.

Mr. Burr: That will be a saving of time and give you an opportunity to go over the figures, because I have a great mass of detail in addition to this in these statements which will be subject to your cross-examination, but this will give you the idea of valuation he has placed upon each item and how we have arrived at it and you can bring out on cross-examination what you desire. In other words, then, if it pleases the Master, I will say that he has prepared a statement showing the valuation placed by him upon all the items in the 21st Street station, and that this statement which I now hand the stenographer shows that, the first page being a summary.

Mr. Mathewson: I think the witness perhaps ought to testify he did prepare these items.

Mr. Burr: Yes, I will bring that out.

Q. You have also prepared a statement showing the valuations placed by you upon each item, including buildings and apparatus of the other stations, have you not?

A. Yes.

Mr. Burr: So I wil- hand the stenographer the itemized schedules showing valuations placed by Dr. Marks on each of the
5062 buildings, and each and all of the apparatus at the following
plants: 14th Street, 42d Street, 44th Street, 21st Street, 99th Street, 18th Street, 63d Street, 65th Street, 111th Street, 132d Street and Inwood.

5063 RECAPITULATION OF INVENTORY OF 14TH STREET STATION OF THE CONSOLIDATED GAS COMPANY, 1906.

(See testimony before Master, pages 4564 and 4584.)

Total actual first cost of buildings and structures (inventory 1884)................	$1,706,294	
Depreciation (50 years at .85 of 1%) 42½%.	725,175	
		$981,119
Gas Machinery and Appr. added since 1884 (actual cost)	132,000	
Depreciation (12 years at .85 of 1%) 10%..	13,200	
		118,800
Actual cost Yard and Holder connections in 1906 (Meyer)	146,895	
Actual cost Yard and Holder connections in 1884	82,178	
Actual cost additions to yard connections..	64,717	
Depreciation 10%	6,472	
		58,245
Actual cost of holder and steel tank (no depr.)	225,000	
Actual cost of foundations for holder (no depr.)	50,000	
		275,000
Actual cost of new buildings added (no depr.)........		35,900
Actual present value of buildings and apparatus.......		$1,469,064

NOTE—

Stocks	Benches	Retorts	Fired	Idle
4	120	720	540	180
1	24	144	none	144
		864		

December, 1906. Per cent. of total retorts used, 62%.

5064 RECAPITULATION OF INVENTORY OF 42ND STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual first cost of buildings and structures (1863)	$425,810.14	
Total actual first cost of walls & fences	3,540.26	
Total actual first cost of bridges, dumps, etc.	4,900.00	
		$434,250
Total Gas Manufacturing Machinery and App. and Cont.		515,400
Total Yard connections (Meyer)		134,000
Total Gas Holders and Tanks		210,000
Total, All Buildings, Apparatus, Yard connections & Holders		$1,293,650
Depreciation (43 years at .85 of 1%) 36.5%		472,182
Actual present value of 42nd Street Station		$821,468

NOTES—December, 1906.

Retort House,		Benches	Retorts	Fired	Idle
"	#1,	60	360	180	180
"	#2,	6	36		36
"	#3,	14	84		84
"	#3,	20	140	56	84
"	#4,	4	24		24
			644	236	408

Capacity of Works employed 37 per cent. of total.

5065 INVENTORIES OF THE BUILDING AND APPARATUS OF THE FORTY-SECOND STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
	1863.		
1	Valve house and vault under yard	$1,346.89	
2	Vault, planking, pumping and sheet piling	367.20	
3	Meter house	225.53	
4	Purifying house	25,536.00	
5	Purifying house extension	2,040.00	
6	Engine and meter house	11,357.15	
7	Vaults	1,026.00	
8	Toilet	51.43	

9	Bench foundations and retort house..	112,692.48	
10	Condenser and scrubber house........	11,787.22	
11	Retort houses Nos. 2 and 3...........	63,175.90	
12	Vault	3,881.25	
13	Exhauster, engine and scrubber house.	15,493.46	
14	Retort house No. 4 (Experimental)..	4,631.12	
15	Vault S. of No. 1 retort house, NO of Nos. 2 and 3...................	27,031.10	
16	Vault between purifying house and Ex. H. and S. house.............	2,126.93	
17	Shed	604.80	

1887.

18	Coal shed No. 1....................	25,393.50	
19	Coal shed No. 1. Runway overhead		$1,000.00
20	Coal shed No. 2....................	92,589.96	
21	Carpenter shop,		

1863.

22	Brick fence on 11th Avenue.........	1,546.20	
23	Brick fence on 42d Street...........	1,994.06	

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24	Main bldg., stable and wagon shed...	18,395.32	
25	East extension to above.............	996.95	
26	Another extension to above..........	1,173.47	
27	Building used for storing hay, etc.....	2,332.40	
28	Harness house	546.13	
29	Coke storage, weigh office...........	213.59	

1886.

30	Iron bridge crossing 12th Ave........		1,500.00
31	Deodorizing house (frame)..........	634.30	
32	Cribbing and earth filling for 8 oil tanks,		
33	Pump house on pier (frame)........	160.00	
34	Timber ash dump.................		1,000.00
35	Timber retaining fence around coal store		1,400.00
		$425,810.08	$4,900.00
	Solid walls, not computed in cubic feet	3,540.36	
		4,900.00	
		$434,250.34	

5067 INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE FORTY-SECOND STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

DAILY CAPACITY, 4,500,000.

	Apparatus only.	Act. cost.
36	Valve house 1863,	3,000.00
37	Purifier house (8 purifier boxes 20 x 3)	24,000.00
38	4 purifiers 16 x 27 x 3 ft. 6 in........	12,000.00
39	Purifiers, 7 ft. 6 in. x 10 ft. 6 in. x 3 ft.	3,000.00
40	2 hydraulic floor cars..............	1,200.00
41	1 hand power floor car for 16 ft. x 27 ft. pur.	500.00
42	Hand power floor car for 6 ft. 6 in. x 10 ft. 6 in......................	300.00
43	Engine and meter house, 148 ft. x 48 ft., McKenzie exhauster...........	3,500.00
44	3 meters	12,000.00
45	Added for Dep.	
46	Retort house No. 1 (60 benches, 6's).	180,000.00
47	Condenser and scrubber house (2 scrubbers 8 x 18)................	3,000.00
48	1 W. I. Multitubular condenser.....	9,000.00
49	1 air condenser	11,000.00
50	1 C. I. Box 7 ft. 6 in. x 5 ft. 6 in. x 9 ft. (out of use)	
51	Retort house, 2 and 3 (6 benches of 6's)	36,000.00
52	20 benches of 7's.................	54,000.00
53	Exhaust engine and scrubber house 1 Greenfield engine 8 x 8...........	1,600.00
54	2 large McKenzie exhauster (see 126)	3,400.00
55	1 horizontal engine, 16 x 30.........	3,000.00
56	1 Greenfield engine, 8 x 8...........	400.00
57	1 rotary washer, 8 x 21 [illegible] 8 in......	7,000.00
58	1 Greenfield engine, 10 [illegible] 20........	600.00
59	Rotary washer, 8 ft. x 21 ft. 8 in.....	10,000.00
60	1 Multitubular condenser, 42 x 5 x 14	10,000.00

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61	2 oil gas scrubbers, 5 x 23...........	5,000.00
62	Added for depreciation.	
63	1 oil gas condenser.................	1,800.00
64	Retort house No. 4 (Expt. benches)..	10,000.00
65	Vault (1 small drip pump).........	100.00
66	2 Continental boilers...............	3,000.00
67	Breaching and steel stack...........	500.00

68	1 Continental boiler	2,700.00	
69	Breaching and stack	400.00	
70	2 small boiler pumps	200.00	
71	1 Knowles air compressor	700.00	
72	2 feed water heaters (See 118)	600.00	
73	1 Greenfield engine, 8 x 8	400.00	
74	1 vertical drill press	100.00	
75	1 pipe cutter	300.00	
76	1 bench lathe,		
77	Carpenter shop, contents	1,000.00	
78	Coke storage yard, contents	1,500.00	
79	Tank and scale, total	1,700.00	
80	Water meters	100.00	
81	Coal hoisting apparatus, total	75,000.00	
82	Oil and tar storage tanks (2 W. I. tanks, 9 x 30)	2,000.00	
83	8 W. I. tanks, 8 x 25	6,000.00	
84	1 W. I. tank, 30 x 21	3,300.00	
85	1 wooden tank, 30 x 15 ft. 6 in.	500.00	
86	Pile foundations	600.00	
87	1 W. I. tank, 5 x 25	400.00	
88	1 wooden well 20 x 25 x 8	200.00	
89	1 wooden well 20 x 20 x 8	200.00	
90	1 wooden well, 18 ft. 9 in. x 7 ft. 6 in. x 8	100.00	
	Lining for tanks	4,000.00	
91	Pile foundation for wooden T.	500.00	
92	Deodorizer house	4,000.00	
			515,400
93	Pipe and connections	134,000.00	
94	4 holders, of 250,000 C. F. cpa	90,000.00	
95	4 brick tanks and foundations	120,000.00	
			210,000
96	Steel tank holders,		

5069 RECAPITULATION OF INVENTORY OF THE 44TH STREET STATION BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual 1st cost of Buildings & Structures	$222,734		
Total actual 1st cost of Walls	29,000		
		$251,734	
Total Gas Mfg. Machinery App. & Cont. (Subject to Depreciation)		279,500	
Total Gas Mfg. Machinery App. & Cont.			$132,000

Total Yard Connections (Meyer's figures)		99,910
Total Gas Holders and Tanks		600,000
Total (Subject to Depreciation)	531,234	
Depreciation (30 years at .85 of 1%) 25%	132,808	
		398,426
Actual present value of 44th St. Sta.		$1,230,336

Note—Ten double benches of retorts (60 single length retorts) idle. It was impossible to locate all the oil tanks as Mr. Hawthorne, Supt., could not find them. Meyer's figures accepted.

5070 INVENTORIES OF BUILDINGS AND APPARATUS OF FORTY-FOURTH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Governor House	3,136.08	
2	Valve House	1,229.66	
3	Carpenter Shop (See 27)	2,215.20	
4	Lumber Shed (See 27)	462.00	
5	Purifier House	58,622.36	
6	Water House & Office Bldg.	11,093.91	
7	Condenser & Scrubbing House	11,938.98	
8	Engine, Exhauster & Blr. House	16,408.51	
9	Gen. & Boiler House	29,817.16	
10	Retort House	33,906.60	
11	Coal House (See 16)	86.40	
12	Concrete Mixer & Eng. Bldg.	180.00	
13	Storage Tar Tank Bldg.	86.40	
14	Oil Pump House	1,468.94	
15	Tar Separator System		2,000.00
16	Coal Shed (See 150) (11)	10,006.02	
17	Scale Building (See 16)	32.40	
18	Water Tower	1,099.56	
19	Exhaust & Boiler House	1,890.00	
20	Lime & Oxide Storage Shed	4,368.00	
21	Purifier, Meter & Storage House	22,146.59	
22	Stable	6,672.00	
23	Tool-shop	1,563.33	
24	Store House	1,509.36	
25	Small Brick Bldg.	300.00	
26	Shed	104.00	
27	Blacksmith-shop 3 & 4	420.00	
28	Pipe House		
28	Pump House	16.80	
30	Walls, Fences & Pavement		26,000.00

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31	Shed at Oil Storage Tanks	56.40	
32	Salt Water Condenser Foundations		
33	Hot Gas Scrubber Foundation.......		
34	Air Condenser Foundation..........		1,000.00
35	Underground Drainage Tank in Yard.	1,271.40	
36	Forced Draught Fan Room.........	38.40	
		222,732.44	29,000.00
	Walls	26,000.00	
	Values Not Computed c. f...........	3,000.00	
		$251,732.44	

5072 INVENTORIES OF BUILDINGS AND APPARATUS OF THE FORTY-FOURTH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY (1906).

	Apparatus only.	Act. cost.	Dep. cost.
37	Governor House, 15 floor stands....		No Depr.
38	One 24″ Smith & Sayre Gov......	1,600.00	
39	Ganges and Furniture............		
40	Valve House, Contents...........		
41	Carpenter Shop, Contents.........	100.00	
42	Purifier House, Contents	40,000.00	
43	Meter House, and Office Building 2—14 x 14 Station Meter.......	12,000.00	
44	One 16″ Wylie Prop. Meter and One Small Meter..............	1,600.00	
45	Office Furniture	1,400.00	
46	One Bar Photometer, etc..........		
47	Condenser and Scrubber House, 2 Scrubbers	5,000.00	
48	2 Rectangular Condensers	30,000.00	
49	1 Westinghouse No. 25 Gas Meter		
50	1 Revolving Condenser		
51	Engine Ex. and Blr. House (2 Vertical Engines)	2,000.00	
52	2 Payne Engines, 14 x 14........	4,000.00	
53	1 Horz. Buckeye Engine, 14½ x 14	2,000.00	
54	2 McKenzie Exhausters	3,500.00	
55	3 No. 10 Sturtevant Mont. Blowers.	1,800.00	
56	1 Blast Gate Valve, etc...........	300.00	
57	1 Comp. Dup. Worth. Pump......	700.00	
58	1 Davidson Pump, No. 10........	800.00	
59	Engine Exhauster and Boiler House (1 Knowles Dup.).............		
60	1 Spence Automatic Damper Rwy..		
61	1 McClellan Oil Purifying Tank...		
62	1 Gild & Garrison No. 4 Pump....	2,000.00	
63	1 Blake-hunt, Jet Condens........		
64	Counter Shafting, Pulleys, etc......		

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65	Generator & Boiler House (2—2 ft. 6 in. U. G. I sets).............		29,000.00
66	4 U. G. I. *stes*, 12 in.............		75,000.00
67	4 Hazleton Purcupine Boilers.....		13,000.00
68	2 Hydraulic West		4,000.00
69	C. I. Charging Floor.............		11,000.00
70	Retort House (10 benches 6's back to back)	40,000.00	
71	2 A. & T. B. & W. Tyle Boilers....	7,500.00	
72	2 Hazleton Purc. Boilers.........	6,700.00	
73	No. 1 #10 Sturtevant Boiler......	600.00	
74	1 Armington & Sims Eng., 10½ x 12	1,000.00	
75	1 #4 Garrison Pump, 8 x 4½ x 10	200.00	
76	1 Beryman Heater	200.00	
77	Air and Salt Water Condensers (2 Air Condensers)	14,500.00	
78	1 Salt-Water Condensers	10,000.00	
79	1 Salt Water Condensers..........	8,000.00	
80	Coal-hoisting App., etc. (1 Hunt Hoisting Eng.) (16)..........	8,000.00	
81	Water-tower (1 Blake Comp. Dup. Pump)	1,800.00	
82	1 Worthington Dup. Pump.......	500.00	
83	1 Steel Tank, 20 x 20............	2,000.00	
84	Exhauster and Boiler House (1—24 in. McKenzie Exh.)...........	1,800.00	
85	1 Greenfield Reversing Engine, 8 x 8	500.00	
86	2 Vert. Boilers, 3 x 9............	500.00	
87	Lime & Oxide Shed Contents......	2,500.00	
88	Purifier Shed, 4 C. I. Purifier Boxes, etc.	18,000.00	
89	Meter House (1—14 in. diam. Met.)	6,000.00	
90	24 in. Connections and the Necessary Gauges	1,100.00	

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91	24 #7 Sturtevant Blowers, Dismantled	400.00	
92	3 Dismantled Walking-beam, Eng.		
93	Stable, 23 Stalls, 158............	400.00	
94	Tool-shop Contents	1,500.00	
95	Store House, and Annex, Cont....	400.00	
96	Oil Tanks Under Ground (13 Tanks, 18 x 30)..............		
97	3 Tanks, 12 x 35...............	14,000.00	
98	1 Tank, 12 x 7..................		
99	Tanks Over Ground, 1—8 x 20...	800.00	
100	Filter Press House, Contents.....	900.00	
101	Tar and Oil System Various Tanks	700.00	

102	Pump Shed, Contents	300.00	
103	Blacksmith Shop, Contents (27) ..	300.00	
104	Pump House (1 Worth, dupl.) ...	500.00	
105	1 #10 Cameron	400.00	
106	Oil Tanks	10,000.00	
107	Concrete Mixer House (1 Sturtevant Engine)	200.00	
108	1 Concrete Mixer	400.00	
109	Storage Tar Tanks, total	18,000.00	
110	Oil Pump House (2 Steel Oil Tanks)		
111	2 Davidson Single Pumps, 9 x 9 x 12		
112	2 Cameron Pumps, 12 x 7 x 13 ...		
113	1 Worthing Dupl., 7½ x 4½ x 10.	3,000.00	
114	1 Cameron #8		
115	1 Worthington Dupl., 6 x 5¾ x 6		
116	1 Cameron #9		
117	Tar Separator System	2,000.00	
118	Scale House	300.00	
119	Draught Fans (Forced)	1,000.00	
120	Totals	279,500.00	1,320,000.00
5075			
121	4 Holders, 375 c. f. cap. (125) ...	300,000.00	
122	1 Holder, 2,000,000 c. f. cap. (126)	225,000.00	
123	1 Holder, 125,000 c. f. cap. (127)	75,000.00	
124	1 Holder, 125,000 c. f. cap. (127)		
125	4 Brick Tanks, 93 x 32		
126	1 Brick Tank, 185 ft. 3 in. x 41 ft. 5 in.		
127	2 Brick Tanks, 75 x 32		
		600,000.00	

5076 RECAPITULATION OF INVENTORY OF 21ST STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total Actual 1st Cost of Bldgs. and Structures (Av. date 1874)	$723,500		
Total Actual 1st Cost of Excavation and Walls, etc.	20,200		
		$743,700	
Total Gas Manufacturing Mach. App. and Cont. Subj. Depreciation		594,000	
Total Gas Manufacturing Mach. App. and Cont. Without Depreciation			$520,250

Total Yard Connections (Meyer's Figs.)...	218,200	
Total Gas Holders and Tanks............	630,900	
Total Subject to Depreciation.............	$2,186,800	
Depreciation (33 Years at .85 of 1 per cent.) 28 per cent.........................	612,304	
		1,574,496
Actual Present Value of 21st St. Station, Mach. and Bldgs.		$2,094,746

NOTE—

Meyer's Valuation of Sheds 2, 3, 4, 5, 6, 7, 8, 9 and 10 in 1905.................	$677,183 with dep.
Rowland's valuation of Sheds 2, 3, 4, 5, 6, 7, 8, 9 and 10 in 1884..............	246,349 with dep.
Excess in Valuation by Meyer............	$430,834

Roof gone. Floor rotted to shaving Scrubber House (shed).

NOTE—December, 1906:

Retort House	Benches	Retorts	Fired	Idle
Old R. H. (88)......	32	192	36	156
R. H., 22d St. (130)..	20	120	00	120
		312	36	276

(Per cent. retorts used 11½ total.)

Water gas apparatus appears to be in operating condition throughout.

With the exception of $520,250 value of Machinery not depreciated most of the remainder appears old and dirty.

All of the Buildings are sound, but require small repairs.

5077 INVENTORIES OF BUILDINGS AND APPARATUS OF TWENTY-FIRST STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

DAILY CAPACITY, 2,400,000 Water Gas; 3,500,000 Oil Gas.

	Buildings only.	Total cost.	Values not computed.
1	Stove, Storage and Meter Proving Shop	$27,890.63	
2	Meter, Repair Shop and Office, 1890	31,947.82	
3	Stove, Repair Shop..............	10,187.25	
4	Stove, Cleaning Room............	714.00	
5	Prepaying Meter, Repair Shop.....	4,483.50	
6	Storage Room	1,530.00	
7	Wash Room	459.00	
8	Boiler House	5,800.00	

9	Oil Storage House	117.60	
10	Lead and Yellow Metal Storage House	374.00	
11	Fire Hose House	10.50	
12	Valve House 1883,	1,370.25	
13	Octagonal Valve House	2,436.88	
14	Valve House 1880,	279.00	
15	Tinsmith Shop	2,074.80	
16	Store Room, Triangular Building		$100.00
17	Paint Shop, Triangular Building		100.00
18	Office 1860,	10,681.20	
19	Engine Room, Machine Shop and Gangway 1865,	32,810.00	
20	Engine Room	10,124.40	
21	Machine Shop	1,690.00	
22	Foundations for Benches		
23	New Shop Bdg., Blacksmith, 1890	2,009.25	
22	Old Retort House	3,805.20	
24	Old Carborator House 1860	2,021.61	
25	Generator House (over Machines 6-13) 1865,	36,975.00	
5078			
26	Building over Boiler, and Coke Storage	69,591.55	
27	Generator House, 22d St. 1873,	60,384.00	
28	Bench Foundations	..	
28	Retort House, 22d St. 1865,	77,872.51	
29	Pump House 1865,	3,208.62	
30	Sheds, S. of 21st St., two 1874,	20,935.53	
31	Shed No. 3 1874,	20,935.53	
32	Shed No. 4	20,935.53	
33	Shed No. 5	20,935.53	
34	Shed No. 6	20,935.53	
35	Purifier House	38,381.80	
36	Condenser and Scrubber Houses	38,381.80	
37	Purifier House (10)	38,381.80	
38	Meter House 1884,	27,820.80	
39	Shaving and Scrubber House (9) 1874,	11,118.70	
40	Exhauster House 1884,	19,853.63	
41	Coal Shed (1) N. of 21st St.	43,350.00	
42	Water Tower	785.40	
43	Excavation, Cribbing, etc., for 12 Oil Tanks	..	
44	Excavation, Cribbing, etc., for 10 Separate Tanks	..	
45	Foundation for Oil Tank	..	
46	Foundation for Steel Tank		20,000.00
		$723,500.15	$20,200.00
	Not Computed in c. f.	20,200.00	
		$743,700.15	

5079 INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE TWENTY-FIRST STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

DAILY CAPACITY, 24,000,000 Water Gas & 3,500,000 Oil Gas.

	Apparatus.	Act. cost.	Dep't cost.
47	Repair Shops (3 Engines—85 h.p.)	2,500.00	
48	Remainder of Apparatus (Mayer).	14,000.00	
49	Boiler House, two 60-h.p. Boilers..	2,000.00	
50	One 3-inch Worthington Meter...	50.00	
51	Two 24-in. by 30-in. Steel Stacks..	100.00	
52	30 c. y. Firebrick Blocks..........	800.00	
53	Oil Storage House, Contents (Meyer)	50.00	
54	Lead and Yellow Metal Storage House	250.00	
55	Fire Hose House...............	250.00	
56	Valve House, Photometer Closter and P. B....................	650.00	
57	Three Gas Pressure Gauges......	..	
58	One Bristol Recording Gauge.....	..	
59	One Electric Pressure Indicator...	300.00	
60	Octagonal Valve House, 1-7x7 Wood Tank..................	360.00	
61	Five Gas Lamps................	40.00	
62	Tinsmith Shop Rigging..........	550.00	
63	Store Room, Paint..............	50.00	
64	Office Building, Furniture.......		
65	Chemical Laboratory, Contents...	4,500.00	
66	Engine Room (1 Knowles, com. p.)	800.00	
67	One Blake, Com. p.b. Feed Pump.	1,000.00	
68	One Cameron Pump.............	300.00	
69	Two (120) Connesville Exhauster.	6,000.00	
70	Two Horizontal Buckeye Engines.	6,000.00	
71	Three McKenzie Exhausters......	5,000.00	
72	Three Rowland Vertical Engines, 12x12	3,600.00	
5080			
73	Two 10-inch Link Belts..........	..	
74	One 10-inch Four-Ply Leather Belt	400.00	
75	Two McKenzie Oil Gas Exhausters	2,500.00	
76	Two 6x7 Vertical Engines.......	400.00	
77	One Armington & Sims Engine, 10½x12	1,200.00	
78	Three Buckeye Horizontal Engines	12,000.00	
79	Three Sturtevant Blowers, No. 16.	6,000.00	
80	Two Cameron Pumps, 14x7x33...	1,200.00	
81	One Slate Gauge Board..........	100.00	

82	Steam and Water Pressure Gauge.	4,500.00	
83	Three 22-inch, Two-Ply Leather Belts, 60 p.	400.00	
84	Blast Piping.	1,000.00	
85	Machine Shop (1 Greenfield Engine, 10½x12)	1,000.00	
86	Three Tons Cast-Iron Pulleys, etc. (10c.)	600.00	
87	Remainder of Contents (10c.)	300.00	
88	Old Retort House (16 Benches of Sixes)	64,000.00	
89	One Worthington Duplex Pump.	200.00	
90	Two Cameron Pumps	100.00	
91	Smith Shop (Contents)	1,400.00	
92	New Shops, Bldg. (Contents)	800.00	
93	Old Corbonator Shop (1 English Duplex Air Compressor)	2,500.00	
94	One Cameron Pump, 16x20	2,500.00	
95	One Knowles Pump, 20x18x24	4,000.00	
96	Two 5,000 Rect. Tanks	..	
97	Two 1,000 Gal. Rect. Tanks	300.00	
98	One Steam Trap.	..	
99	Retort House, 22d St. (3 salt water condensers)		90,000.00
100	One Similar Condenser	..	..
101	Generator House over Machines, 6 to 13 App. new		140,000.00
5081			
102	Cast-Iron Floors and Columns, Sur. Machines		47,500.00
103	Hydraulic Elevator		$4,000.00
104	Two Cameron Pumps		200.00
105	Blast Piping, Water Piping, etc.		250.00
106	600 Feet Industrial Rwy		300.00
107	Bldg. over Boiler and Cold Storage (Two B. & W. Boilers)		16,500.00
108	Two New Boilers (Foundations)		19,800.00
109	Two A. & T. Boilers, 500 h.p.		16,500.00
110	Two Steel Stacks, 7x110		3,400.00
111	Two Breeches for Above Stack		900.00
112	One Additional Stack, ⅓ Complete		500.00
113	Two Armington & Sims Eng., 10½x12		2,200.00
114	Two American Co. Fan Blowers.		1,000.00
115	Three Filter Presses (Johnson & Co.)		
116	One Centrifugal Tar Elementer		1,200.00
117	One Horizontal Engine, 7x9	250.00	
118	One Round C.I. Tank, 15x12	2,300.00	
119	Two W.I. Tanks, 6′x4′6″	150.00	
120	One W.I. Rect. Tank, Innground.	700.00	
121	Three No. 4 Cameron Pumps	700.00	

122	2,000 ft. Industrial Rwy........	1,000.00	
123	Gen. House, 22d (Water, Gas Appar.) New.................		100,000.00
124	One Experimental Oil Gas Apparatus	12,000.00	
125	Six Hazleton Boilers, 250 h.p.....	23,000.00	
126	One Cameron Pump, 6x3x6......	..	
127	One Cameron Pump, 6x4x6......	250.00	
128	One Worthington Pump, 6x4x6..	..	
129	Gas, Steam, Tar and Oil Piping..		47,500.00
130	Retort House, 22d St. (20 s. Benches)	40,000.00	
131	Forty Enameled Wash Basins, etc.	2,400.00	

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132	Two Tar Separating Tanks (6c.).	3,000.00	
133	One Worth. Duplex Pump, 10x6x10	300.00	
134	Two Cameron Pumps, 14x12x12..	900.00	
135	One Cameron Pump, 10½x12x21.	500.00	
136	One Worthington Duplex Pump, 7½x6x10	250.00	
137	Two Cameron Pumps, 6x3x6.....	150.00	
138	One Cameron Pump, 6x10.......	250.00	
139	One Oil Tank, 6x10............	150.00	
140	Pump House (2 Worth. Dup. P-mps)	300.00	
141	One Cameron Pump, 10½x12x25.	500.00	
142	One Blake Dup. Pump, 7½x6x10.	250.00	
143	Two Knowles Dup. Pumps, 6x4x7 and Piping.................	400.00	
144	Two Cameron Pumps, 6x3x6.....	200.00	
145	One Cameron Pump, 12x9x14....	400.00	
146	Two W.I. Tanks, 8x12..........	600.00	
147	One Foster Pump, 9x6x12.......	400.00	
148	Two W.I. Tanks, 6x10..........	350.00	
149	Sheds 2, 3, 4 and 5 (Elevator)....	..	
150	Shed No. 5, One Cameron Pump, 14x7x18	..	
151	One Hydraulic Elevator.........	7,000.00	
152	One Vertical Boiler, 5x8.........	..	
153	One Accumulator..............	..	
154	P-rifier House, App............	60,000.00	
155	Condenser and Scrubber House (2 Scrubbers)	10,000.00	
156	Six Condensers (1 in course of erection)	80,000.00	
157	One Oil Gas Meter, 10x10........	3,000.00	
158	Shed (1 Hydraulic Elevator))....	1,000.00	
159	Six Shaving Scrubbers..........		18,000.00
160	Eng. Exhauster, Piping, etc......		1,500.00

161	Purifier Shed Apparatus.........	84,000.00	
162	Meter House (2 13 ft. c.i. Meters)	12,000.00	
5083			
163	Two 19-foot W.I. Meters........	22,000.00	
164	One 19-foot C.I. Meter..........	10,800.00	
165	One 16-inch Wiley Prop. Meter...	..	
166	Exhaust House No. 2 (McKenzie Exhausters)	3,900.00	
167	One McKenzie Exhauster, 36-inch.	2,200.00	
168	Three Rowan Vert. Engines, 12x12	3,000.00	
169	Coal Shed (1 Bucket Elev., etc.).		4,000.00
170	Underground Conveyor..........		5,000.00
171	One Greenfield Vert. Eng., 10½x12	1,000.00	
172	Water Tower Yard, Steel Tank...	2,000.00	
173	Retort House Yard (Steel Tank, 14x9′2″)	600.00	
174	Steel Tank, 10x9...............	300.00	
175	Steel Tank, 14x4′6″............	500.00	
176	One New Oil Tank, 57x30.......	3,000.00	
177	Steel Tank, 7x20x9′9″ (not found)		
178	Steel Tank, 20′1″x38′1″x8′8″ (Tar Separator)	1,500.00	
179	Twelve Steel Tanks, 8x40........	18,000.00	
180	Ten Steel Tanks, 11′x39′6″......	17,000.00	
181	One Steel Tank, 10x9...........	400.00	
182	Two Wooden Tanks............	1,100.00	
183	One Steel Tank, 16x50x2′4″.....	..	
184	Total	$594,000.00	$520,250.00
185	Four Holders, 400,000 c.f. Capacity	320,000.00	
186	One Holder, 1,500,000 c.f. Capacity	225,000.00	
187	Four Brick Tanks, 89′6″x24′2″...	See 185	
188	Brick Tanks, 171′x37′2″........	See 186	
189	Two Steel Tank Holders (429,500)	85,900.00	
		$630,900.00	

5084 RECAPITULATION OF INVENTORY OF 99TH STREET STATION BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual first cost of buildings and structures (1881)...........	$130,377		
Total actual first cost of walls and foundations	12,600		
		$142,977	
Total actual first cost of gas app. (sub. to depr.)		188,200	
Total actual first cost of gas app. (not depr., new)			$79,800

Total actual first cost of yard connections (Mayer)	55,248	
Total actual first cost of gas holders and tanks	232,500	
Total, subject to depreciation	618,925	
Depreciation (25 years at .85 of 1%) 21%	129,974	488,951
Actual present value of 99th Street Station		$568,751

NOTE—

11 benches double length retorts not used.
6 vacant arches in this stock.
1 hydrogen scrubber, not found.
Works appear generally very neat and well cared for.

5085 INVENTORIES OF BUILDINGS AND APPARATUS OF THE 99TH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Engine house, boiler ho., pump house, machine shop, retort and accumulator house	43,610.60	
2	Generator house	13,921.84	
3	Foundations for air condenser		1,000.00
4	Foundations for salt water condenser,		
5,	Office building	5,893.24	
6	Meter house	8,213.40	
7	Purifier house	27,453.60	
8	Lime house	2,551.50	
9	Valve house and drip pump house	60.00	
10	Valve house No. 1	21.20	
11	Valve house No. 2	21.20	
12	Valve house No. 3	21.20	
13	Valve house No. 4	21.20	
14	Condenser and scrubber house	8,213.40	
15	Exhauster house	4,320.34	
16	Tar separator system 4 ft. deep	1,000.00	
17	Pump pit	94.32	
18	Tar storage foundation		100.00
19	Coal shed	15,588.30	
20	Filter press house	91.00	
21	Walls around works, 800 ft	8,000.00	

23	Cover over doors of oil tank in ground, frame shed	281.25	
24	Foundations under hot scrubbers in yard,		
22	Fences, 1750 ft.		2,500.00
		130,377.49	3,600.00
	Walls	9,000.00	
	Value not computed in c. f.	3,600.00	
		$142,977.49	

5086 INVENTORIES OF BUILDINGS AND APPARATUS OF THE 99TH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Apparatus only.	Act. cost.	Dep. cost.
25	Generator house apparatus		56,000.00
26	Charging floor		8,000.00
27	Air Condenser	8,000.00	
28	Yard (salt water condenser)		10,000.00
29	Office, bldg., furniture, etc.	2,000.00	
30	Meter house (1-16-in. station meter)	10,000.00	
31	1 13 ft. 6 in. station meter	6,000.00	
32	Purifier house, apparatus	32,000.00	
33	Lime house, contents	100.00	
34	Valve house and drip pump house		
35	Valve house,		
36	Valve house,		
37	Valve house,		
38	Valve House	100.00	
39	Condenser and scrubber house (2 10 x 24 high scrubbers)	5,000.00	
40	C. I. condensers	16,000.00	
41	Exhauster house (1 McKenzie engine No. 5)	1,800.00	
42	1 Greenfield vertical engine, 9 x 9	500.00	
43	Tar separating system in yard		2,200.00
44	Pump pit (1 Knowles 6 x 7 x 12),		
45	1 Knowles pump, 8 x 10 x 12,		
46	1 Davidson pump, 8 x 4 x 12	800.00	
47	1 Cameron pump, 4½ x 4 x 6,		
48	Yard, 3 tar storage tanks	700.00	
49	Yard below ground, 12 steel tanks,		
50	2 wall storage tanks of steel	20,000.00	
51	1 drip-valve tank	600.00	

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52	Coal shed, 2 hydraulic lifts........	4,500.00	
53	2 platform scales.................	300.00	
54	Yard, 2 hot scrubbers of steel......		1,600.00
55	2 hydrogen scrubbers (1 missing)..	700.00	
56	Engine house, 2 Sturtevant horiz. Engines, 10 x 12..............		2,000.00
57	1 Armington & Sims horiz. engine, 10 x 12......................	1,200.00	
58	3 Sturtevant No. 10 gas blowers...	1,700.00	
59	2 No. 2 McKenzie exhausters, with 20-in. connections	3,700.00	
60	2 Greenfield vertical engines, 9 x 11	1,000.00	
61	2 Knowles dupl. pumps, 6 x 4 x 7..	200.00	
62	Boiler house, 2 batteries, B. & W. type, etc.	19,000.00	
64	2 batteries, stack and bricking. ..	2,000.00	
65	1 Sturtevant steel plate blower.....	1,300.00	
66	1 Gould & Garrison engine, 4½ x 8	200.00	
67	1 Paterson & Berryman feed water heater	200.00	
68	Carborator house, used as pump house,		
	House and machine shop, contents.	3,900.00	
69	Pump house, total contents........	800.00	
70	Retort house, 11 benches of 6's (R-14-b)	40,000.00	
71	Accumulator house and 1 accumulator,		
72	1 salt-water tank,		
73	1 Davidson single pump, 14 x 8 x 14	2,000.00	
74	Yard, tar tanks.................	400.00	
75	Filter press, H-2 Johnson Filter Presses,		
76	1 ten-ton Howe scale............	300.00	

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77	Miscellaneous tanks and boiler house	1,200.00	
78	Retort house, 22 benches,		
79	Total	188,200.00	79,800.00
80	2 holders, 600,000 c. f. (83)	150,000.00	
81	1 holder, 300,000 c. f. (84).......	52,500.00	
82	1 holder, 100,000 c. f. (85).......	30,000.00	
83	2 brick tanks,		
84	1 brick tank,		
85	1 brick tank,		
	Total	232,500.00	

5089 RECAPITULATION OF INVENTORY OF 18TH STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total Actual 1st Cost of Buildings, and Structures, Bldgs...	$53,890.91	
Total Actual 1st Cost of Solid Walls	4,559.00	
Total Actual 1st Cost of Other Structures	7,480.00	
		$65,929.91
Total Actual 1st Cost of Gas . Making Appr.		15,000.00
Total Actual 1st Cost of Yard Connections (Mayer's)		21,987.00
Total Actual 1st Cost of Gas Holders and Tanks.........		286,000.00
Total Actual 1st Cost Subject to Depr.		388,917.00
Depreciation (50 years at .85 of 1%) 42½%		165,290.00
Actual Present Value of that part of 18th Street Station in use..		$223,627.00

NOTE.

Mayer's valuation, Brick and Brownstone Bldg. for holders (1905)	$155,784
Rowland's valuation, Brick and Brownstone Bldg. for holders (1884)	45,241
Excess valuation, Brick and Brownstone Bldg. for holders.	110,543

Apparatus not in use:

The principal items of abandoned apparatus appear to be (so far as visible)

5090	In Retort House..............	60 benches 6's or 360 retorts.
	In Purifying House..................	12 Purifying Boxes.
	In Yard	2 Tower Scrubbers.
	In Yard	Multitubular Condensers.
	In Meter House	2-14 ft. Meters.

Also a vast amount of scrapped machinery.

See Mayer's testimony as to part of plant, Test. before Master, Page 1381.

5091 INVENTORIES OF BUILDINGS AND APPARATUS OF THE 18TH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed·
1	5 Frame Sheds..................		
2	Engine, Valve and Exhauster House	2,350.50	
3	Valve House	836.00	
4	Boiler Houses	921.69	
5	Wagon Shed and Paint Shop......	567.00	
6	Wagon Shed	441.00	
7	Brick and Brownstone Bldg. Holders	48,774.72	
8	Coal Storage Yards between 18th and 19th Streets...............		1,040.00
9	Coal Storage between 17th and 18th Streets		1,440.00
10	Brick Walls in Yard.............	959.00	
11	Timber Coal Hoisting Trestle.....		5,000.00
12	Coal Yard between 18th and 19th Sts.	3,600.00	
		53,890.91	7,480.00
	Walls................	4,559.00	
	Values not computed c. f......	7,480.00	
		65,929.91	

	Apparatus cost.	Act. cost.	Dep't cost.
13	Engine and Valve H—1-20 in. McKenzie Exhauster	1,600.00	
14	1 Greenfield Vert. Engine, 8 x 10..	500.00	
15	Counter Shafting, Pulleys, etc......	100.00	
16	3 Kings Pressure Gauges.........	100.00	
17	1 Arch Gauge, Fire App. etc......	100.00	
5092			
18	Building, Contents	200.00	
19	Boiler House, 1 Horz. Tubular Boiler	2,000.00	
20	1 Small Worthington Dupl. Pump..	100.00	
21	Pressure Gauges, Water Columns, etc.		
22	Lockers	100.00	
23	Stable, 12 Stalls	200.00	
24	1 Box Stall and Lockers..........		
25	Coal Storage Yard Trestle Work...	10,000.00	
		15,000.00	

26	Pipe Connections	21,987.00
33	2 Holders, 205,000 each (Housed).	82,000.00
34	2 Brick Tanks ($200)...........	
35	4 Gas Holders, 255,000 each......	
36	4 Tanks, 200	204,000.00
		286,000.00

5093 RECAPITULATION OF INVENTORY OF 63RD STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual first cost of buildings and structures	$983	
Total actual first cost of walls (outside)..	3,520	
		$4,503
Total gas machinery, app. and contents............		5,050
Total yard connections (Mayer)..................		7,887
Total gas holder and tank......................		419,000
Total all manufacturing plant....................		$436,440
Depreciation 10 per cent........................		43,644
Actual present value of 63rd Street Station.........		$392,796

Note—

The buildings are a lot of tumble-down sheds.
Depreciation of holder estimated from appearance.

INVENTORIES OF BUILDINGS AND APPARATUS OF THE SIXTY-THIRD STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Engine Room	336.00	
2	Valve house	252.00	
3	Boiler house	395.25	
4	Brick walls around property.......	3,520.00	
		$983.25	
	Walls	3,520.00	
		4,503.25	

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	Apparatus only.	Act. cost.	Dep. cost.
5	Engine room, 1 30 h.p. Morris engine, Rev. 10 x 8..............	1,300.00	
6	1 Sturtevant exhauster, connections, etc.	800.00	
7	Valve house, No. 1 photometer....	650.00	
8	Boiler house, No. 1 66 x 16 Cont. Iron Works boiler	1,200.00	
9	1 Simplex Blake pump, 10 x 6....	400.00	
10	1 Metropolitan injector	50.00	
11	In the yard, 1 Dup. pump, 12 x 6..	300.00	
12	1 drip water tank..............	350.00	
		5,050.00	
13	Pipe and connections, 225-24 in. to 30 in.,	7,887.00	
14	80 1½ and 2,		
15	Valves.........................		
16	1 No. 3 holder, 3,000,000 c. f. cap.............		152,000.00
17	Retaining wall, 200 ft.		
18	Brick tank		267,000.00
			419,000.00

5095 RECAPITULATION OF INVENTORY OF 65TH STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total Actual 1st Cost of Buildings & Structures (1884)..	$9,740			
Total Actual 1st Cost of Walls.	34,000			
		$43,740		
Total Gas Manufacturing Machinery, App. & Cont...		10,350		
Total Yard Connection (Mayer)		20,406		
Total Gas Holders Not Depreciated				$880,000
Total Gas Holders Subject to Depreciation		333,000		
			$407,496	
Depreciation (23 years at .85 of 1%) 20%.............			81,499	
				325,997
Actual present value of 65th St. Station				$1,205,997

NOTE—The two holders of 4,000,000 cubic feet capacity each appear modern and in excellent condition and as I have not been able to learn their date of erection are not depreciated.

It is impossible in the brief time given to examine the retaining walls—their cost appears excessive.

5096 INVENTORIES OF BUILDINGS AND APPARATUS OF THE SIXTY-FIFTH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Engine & Valve House...........	1,745.00	
2	Exhauster House	5,103.00	
3	Boiler House	2,380.80	
4	Boiler House, Extension..........	512.00	
5	All Walls Around Property.......	[42,706.17]* 34,000.00†	
		9,740.80	
	Walls	42,706.17	
		[52,446.97]* 43,740.80†	

	Apparatus only.	Act. cost.	Dep. cost.
6	Engine & Valve House, contents, Exhauster House, one..........	400.00	
7	Rowland Vertical Engine, Small....	1,000.00	
8	1 30 in. McKenzie Exhauster......	2,000.00	
9	1 Photometer Furniture, etc.......	1,000.00	
10	Boiler House, New Hor. Tub. Boilers, 48 x 10..................	2,000.00	
11	1 Hor. Tub. Boiler, 48 x 12.......	1,600.00	
12	1 #2 Niagara Feed Pump.......		
13	1 #4 Korting Injector	100.00	
14	1 Steel Stack with Connections....	200.00	
15	Boiler House Extension, 1 Hor. Tubular Inside Fire-box, complete	2,000.00	
16	1 #5 Korting Injector...........	50.00	
		10,350.00	

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17	Connections, 68 & 30.............	16,327.00	See 28.
18	1½ in. & 2 in....................		
19	13 in. Valve....................		
20	16 in. Valve....................		
21	2 Holders, 325,000 c. f...........	55,000.00	
22	4 Holders, 325,000 c. f...........	100,000.00	No. Depr.
23	2 Holders, 4,100,000 c. f.........		400,000.00
24	6 Brick Tanks	178,000.00	
25	2 Brick Tanks		480,000.00
		333,000.00	880,000.00

[* Figures enclosed in brackets erased in copy.]
† Corrected Jan. 8, 1907.

5098 RECAPITULATION OF INVENTORY OF 111TH STREET STATION, CONSOLIDATED GAS COMPANY, NEW YORK CITY.

Total actual first cost of buildings and Structures,			
Buildings not depr.			$20,921.53
Buildings depreciated		$64,290.70	
Walls and fences depr.		4,010.00	
Total actual first cost gas mach., app. (depr.)		93,000.00	
Total actual first cost of gas mach., app. (not depr.)			20,900.00
Total actual first cost yard connections (Mayer)			27,068.00
Total actual first cost gas holders and tanks			704,737.00
Subject to depreciation		$161,300.70	
Depreciation (36 years, at .85 of 1%)	30%		
Depreciation, neglect and decay	30%		
	60%	96,780.00	
			64,520.70
Actual present value of 111th St. Station			$838,147.00

NOTE—

The old retort and generator houses and their contents are open to the weather through large openings in the roof.

The fences, walls and apparatus at the wharf are falling into decay.

The 21 benches of the retorts are old fashioned, and can never be used satisfactorily.

Capacity equivalent to 242 single retorts.

5099 INVENTORIES OF BUILDINGS AND APPARATUS OF THE 111TH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Office (17)	5,931.25	
2	Exhauster house	18,352.82	
3	Boiler house	2,568.71	
4	Hoisting engine house	81.90	
5	Scale house	351.00	
6	Stable	8,400.00	
7	Boiler, coal storage		600.00

8	Generator house	9,331.20	
9	Wooden tool shed	1,418.63	
10	Retort house (R. inc. Mains)	36,900.00	
11	Foundations for old oil tanks		1,000.00
12	Blacksmith shop (machine shop)	1,679.60	
13	Fences		270.00
13	Fences around holders		1,140.00
15	Fences around old works		1,000.00
16	Brick walls on 1st Ave	197.12	
		85,015.11	4,010.00
	Walls	197.12	
	Values not com. in c. f	4,010.00	
		89,222.23	
	Apparatus only.	Act. cost.	Dep. cost.
17	Office bldg., contents (1)		2,500.00
18	Exhauster house, 42 valve stands		700.00
19	2 No. 11 vertical Root exhausters		900.00
20	Paine Revers. Motion engine, 16 x 16		3,600.00
5100			
21	Two thirty-six Connely gas governors		4,500.00
22	1 Cockraine feed water heater		400.00
23	Steam exhaust gauge, piping, etc		1,600.00
24	1 photometer		800.00
25	Boiler house, 1 G. steel stack		500.00
26	Breech for stack		200.00
27	3 boilers, 66 in. x 66 ft		5,000.00
28	1 Knowles pump, 6 x 4 x 7		100.00
29	1 11½-in. Hancock inspirator		100.00
30	Hoisting engine house, contents	1,100.00	
31	Scale house, contents (Scale)	300.00	
32	Stable, 32 stalls	600.00	
33	Tool shed	300.00	
34	Retort house, 16 benches of 6's	64,000.00	
35	5 benches of 5's	17,500.00	
36	Blacksmith shop, contents	200.00	
37	Yard oil tank, 43 x 20	3,000.00	
38	Atmospheric condenser	6,000.00	
		93,000.00	20,900.00
39	24 in. x 36 in. connection,		
40	11½ in. to 4 in.		
41	Valves,		
42	2 holders, 5,000,000 cap.		
43	Foundations for holders		704,737.00

5101 RECAPITULATION OF INVENTORY OF 132ND STREET BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual 1st cost of Buildings & Structures....	$30,000	
Total actual 1st cost of Chimney................	3,000	
		$33,000
Total gas machinery and apparatus.............		18,450
Total yard connection (Meyer).................		47,714
Total gas holder and tank.....................		394,000
Actual present value of 132nd St. Station........		$493,164

5102 INVENTORIES OF BUILDINGS AND APPARATUS OF THE 132ND STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Governor & Boiler House.........	30,000.00	
2	Boiler Chimney.................		3,000.00
		30,000.00	3,000.00
	Value Not Computed, c. f.......	3,000.00	
		33,000.00	

	Apparatus only.	Act. cost.	Dep. cost.
3	Governor & Boiler House, 1 #11½ Vertical Exhauster.............	3,000.00	
4	One 16½ x 24 Hor. Buckeye Engine	3,000.00	
5	One 24 in. Connelley Gas Cov.....	1,200.00	
6	3 B. & W. Boilers and 2 Batteries..	8,000.00	
7	One 6 x 4 Knowles Dup. Plunger Pump	150.00	
8	One #6 Cockrane Feed Water Heater	500.00	
9	One #10 Steel Plate Breeching....	750.00	
10	One 3 in. Crown Water Heater....	150.00	
11	One #12½ Metropolitan Injector..		
12	One Blow-off Tank, 3 in. x 10.....	100.00	
13	One 8 in. Hudson Exh. Head.....	1,500.00	
14	Toilet, etc......................	100.00	
15	Connections	18,450.00	
16	Valves		
17	One Holder, 5,000,000 Cap........	347,000.00	
18	Foundation for Holder...........	47,000.00	
19	Total Value of Bldgs.............	349,000.00	
20	Total Value of Apparatus.........		
21	Total Value of Connections........	47,714.00	
22	Total Value of Holders...........		

5103 RECAPITULATION OF INVENTORY OF INWOOD STATION BUILDINGS AND APPARATUS, CONSOLIDATED GAS COMPANY.

Total actual 1st cost of Building (1889)	$1,373
Total Gas Machinery	2,300
Total Yard Connections (Mayer)	923
Total Holders 1 Tank	6,000
Actual present value of Inwood Station	$10,596

Note—Holder not in use (boarded tank) and counter weights taken off.

INVENTORIES OF BUILDINGS AND APPARATUS OF THE INWOOD GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

	Buildings only.	Total cost.	Values not computed.
1	Exhauster & Valve House, 1886	1,372.80	
	Apparatus only.	Act. cost.	Dep. cost.
2	Exhauster & Engine Blr., 1898	2,000.00	
3	Connections		
4	80—1 to 12 W. I. connections		
5	Valves	300.00	
6	1 Holder, 60,000 c. f. cap., 1889	12,000.00	No value
7	Brick Tank	6,000.00	
8	Total Value of Buildings (Meyer)		
9	Total Value of Apparatus (Meyer)		
10	Total Value of Connections (Meyer)		
11	Total Value of Holders (Meyer)		
		20,300.00	

5104 Mr. Burr: I think that embraces all of them, Doctor.

The Witness: That embraces all.

Q. Take for instance the 21st Street station, the recapitulation there, you state on the second line "average, date 1874," referring to the buildings and structures. What do you mean by that?

A. Looking over the detailed items of the subsequent sheet the buildings are mentioned as having been built in 1860, in 1865, in 1873, 1874, 1883, 1890. As near as I could figure it, 1874 was the average date of the buildings, of all the buildings.

Q. Now then, in the schedule annexed to the recapitulation of inventory at 23d Street, buildings and apparatus, in the first column you have given buildings only, have you—you have taken the buildings alone?

A. The buildings alone.

Q. And the first column shows the total cost or value as given by you?

A. It does.

Q. Now, there is another column I noticed headed "Values not computed;" what do you mean by that?

A. There are certain portions of the buildings which could not very well be computed, such as—for instance foundations for a steel tank, $20,000, two little walls coming across the corner of the land and forming the small storehouse, the cubical or hollow contents of these details could not be obtained as could the cubical or hollow contents of the buildings.

Q. Point out some instance in that inventory of the buildings at the 21st Street station of which you are speaking about—foundation for steel tank?

A. Foundation for steel tank.

By Mr. MATHEWSON:

5105 Q. Does this $20,000 cover the last four items on that column, 43, 44, 45, 46?

A. It does not. Oh, yes, it does. It does. My typewriter substituted a row of zeros instead of putting in a bracket as I had put in in my original.

By Mr. BURR:

Q. In the next page showing the apparatus only, the first column shows the actual cost or value as placed by you on each item of the apparatus?

A. It does. The cost new.

Q. And the second column shows the depreciation?

A. It shows what is called the depreciated cost. I mean by that cost from which no depreciation is taken.

By Mr. MATHEWSON:

Q. Do you mean that that second column is the value after depreciation is deducted?

A. Referring to item 99 three salt water condensers, $90,000, it means that there is no depreciation taken from that price at all in the final summation.

Q. And that is true also as to items 101 and 102?

A. Yes.

Q. And the other items which appear?

A. And the subsequent items as far down as——

Q. 169 and 170?

A. 170 is the last item.

By Mr. BURR:

Q. And that is true of all the schedules which you have made and which you have handed to the stenographer regarding each of the stations?

A. That same method has been adopted with regard to each station.

Q. Have you prepared as the result now of your examination of the plants and of the mains a final estimate of the actual present value of the total investment in the works of the Consolidated Gas Company?

A. I have.

5106 Mr. Mathewson: That includes your previous estimate on mains and so forth?

Mr. Burr: Yes, and the previous testimony that has been given.

Q. By the works you mean the plants?

A. Yes, everything.

Mr. Burr: With the exception of explaining to you the other schedules which are for your information and which he has here, that will make Dr. Marks' testimony complete.

By the Master:

Q. What did I understand you to give as the total valuation of all these plants, including the buildings and apparatus, connections and holders?

A. $9,348,692.

Mr. Mathewson: That is after deductions of depreciation?

Mr. Burr: Less depreciation.

Q. Does that exclude or include so much of that 18th Street plant as was taken by the city in condemnation?

A. It excludes so much of the 18th Street station as was abandoned by the Consolidated Gas Company.

Mr. Mathewson: That is the same thing. The city took it.

Mr. Burr: That appears upon his summation of each station.

Mr. Mathewson: Do these estimates show the total estimate of the Doctor without deduction of these depreciation percentages which he has assumed?

By Mr. Burr:

5107 Q. The schedules of inventories which you prepared for each individual station, do these show the grand total without depreciation, and also with the depreciation?

A. The original structural value of every building and of every piece of apparatus is given in detail but not footed up in detail in every case. The depreciation is not given for each detail but given for the summation of all the details in each plant.

Mr. Mathewson: I do not think you quite understand what I had in mind and what I think Mr. Burr asked—that was whether the schedules show a total for plant and buildings without depreciation corresponding to that total of $9,348,692 after deduction of depreciation?

A. They do not.

By Mr. Mathewson:

Q. The totals could be figured from your schedules, could they—you have given the cost?

A. Yes.

Q. The final estimate was prepared by you and shows what are the total value of the——

A. The total actual structural cost of the Consolidated Gas Company's gas works, $23,460,020. The actual apparent present value of the Consolidated Company's investments as $31,122,452.

Q. And then what do you make the estimated cost per annual thousand cubic feet of sales based on structural cost of land and structural cost of buildings and so forth?

A. The investment per annual thousand cubic feet of sales appears to be $2.02, of which $1.18 is based upon the structural cost of land and buildings, apparatus and holders, and $0.84 is based upon the structural cost of street mains, value of services and meters.

Q. And this summary which you have perpared shows the details, upon which you base those conclusions?

A. It does, and it is as follows:

5108 FINAL ESTIMATE OF THE ACTUAL PRESENT VALUE OF THE TOTAL INVESTMENT IN THE WORKS OF THE CONSOLIDATED GAS COMPANY, NEW YORK CITY.

R. E.—		
Original cost of land to six merged Companies, City Ex. 87, p. 1562...............		$3,377,971.10
Balance cost of land transactions, Consolidated Gas Company, since 188-, City Exh., 87, p. 1576...............		740,296.28
Total....................		$4,118,267.38
Abandoned (not paid for) City's condemnation (estimated) ..		
Bulkheads at 16th, 17th and 18th Streets, Hudson R.....	$317,100.00	
Land at 18th St. Station, Parcel 4, Exhs. 48 and 49........	875,916.37	
		1,193,016.37
Actual structural (original) cost of land used for gas making.		$2,925,251.00
Mfg. Plants—		
Actual present value of operative buildings and gas apparatus		9,348,692.00

St. Mains—			
Actual structural cost of Street Mains, City Exh. 89........		$7,141,232.00	
Allowance for 620,019 ft. of obsolete 2-3-4 and 5 mains..			
Cost of 620,019 ft. 6-in. mains under new pavement ..	$1,641,655		
Cost of 620,019 ft. of Removed 2-3-4 and 5 mains....	624,435		
		1,017,220.00	
			6,124,012.00
Cost Mains in Bronx, Comp. Ex. 91......................			47,450.00
Services—			
Cost Services, Comp. Exh. 81, p. 350 (Oct. 31, 1905, Co.'s Books)			1,212,071.00
5109 Meters, Etc.—			
Cost Meters and Misc., Comp. Exh. 81, p. 350 (Oct. 31, 1905, Co.'s books).........			3,802,544.00
Total actual structural cost Cons. Co.'s Gas Works......			$23,460,020.00

(NOTE.—See Marks' Test. before Master, p. 2353, fixing $23,644,030.)

Increase in Value of Land—		
Estimated present value of land, Thompson's Est., p. 2902, Test.	$10,486,356.15	
McHale's Est., p. 2871, Test...	10,689,013.14	
Average	10,587,685.00	
Less Structural cost of land for Gas making	2,925,251.00	
Increased value accrued upon land owned by Company....		7,662,434.00
Apparent present actual value of Consolidated Gas Co.'s invests		$31,122,454.00

CONSOLIDATED GAS COMPANY.

Estimated cost per annual 1,000 cu. ft. of sales 1905.

Structural cost of land......	$2,925,251	
Structural cost of Bldg., Apparatus & Holders.......	9,348,692	
Total divided by 10,419,461 M.	12,263,943	Gives per annual M.$1.18
Structural value of street mains	6,171,462	
Structural value of services..	1,212,071	
Structural value of Meters...	3,802,544	
Total divided by 13,283,164 M.	$11,186,077	Gives per annual M.$0.84
Structural investment per annual M. (See Test. p. 2335.)		Gives per annual M.$2.02

5110 By Mr. **Burr**:

Q. Did you prepare yourself the statements which you have handed in to me and which I have handed to the stenographer?

A. I did, personally, with my own hand.

Q. In addition to what you have handed me you have also prepared in detail, have you not, inventories of the buildings and apparatus of the various works of the Consolidated Gas Company, showing so far as you have been able to ascertain regarding buildings the date of installation or erection, the actual cost as given by Rowland in 1884, the cost given by Mr. Mayer in 1906, the cost with depreciation shown given by Mr. Mayer in 1906, the ground area, the cubical contents of the superstructure, cost per square foot, cost per cubic foot, cubical contents including basements, cost per cubic foot and total cost?

A. I have.

Q. And these you have here with you now, have you?

A. I have.

Mr. **Mathewson**: I do not understand that that schedule you just referred to you intend to put on the record at all. I do not think it would be valuable and I do not think it is possible to take Mr. Rowland's figures on buildings and apply them to the buildings as they exist to-day, without taking into account the replacements and additions and one thing or another that have been made and say they are comparisons with the same buildings, and for that reason, among others, I should object if you wanted to offer it. So far as a tabulation is concerned, that is another thing.

Mr. **Burr**: The buildings in Rowland's appraisement were
5111 described and the sizes given just the same as Mr. Mayer has
described them and given the sizes in 1906.

Mr. Mathewson: They have differed materially, many of them, in construction, in one way or another. In addition, Mr. Mayer, when he estimated put the foundations of apparatus in his cost of buildings while Rowland did not, as I understand it.

Mr. Burr: I ask to have these various inventories marked for identification.

The papers are marked as follows:

21st St. plant, City's Ex. for identification	125
42d St. plant, City's Ex. for identification	126
99th St. plant, City's Ex. for identification	127
44th St. plant, City's Ex. for identification	128
Inwood plant, City's Ex. for identification	129
111th St. plant, City's Ex. for identification	130
132d St. plant, City's Ex. for identification	131
18th St. plant, City's Ex. for identification	132
63d St. plant, City's Ex. for identification	133
65th St. plant, City's Ex. for identification	134
14th St. plant, City's Ex. for identification	135

Mr. Burr: That is all that I desire to ask of Dr. Marks, and under the agreement which seems to have been arrived at, the next in order is the testimony of the other witness with regard to the valuation of these plants.

Mr. Mathewson: You mean Mr. Edgerton?

Mr. Burr: Mr. Edgerton.

Mr. Mathewson: I understand that Mr. Edgerton's figures are completed and that they are merely being tabulated and written out.

Mr. Kirby: That is quite so, Mr. Mathewson. Mr. Edgerton has prepared schedules in somewhat different form to be sure,
5112 from those of Dr. Marks, but none the less giving the details as in pretty much the same method used by Dr. Marks. They are not as yet from the typewriter, and we will not be in a position to present them until Monday morning. They will give the cost, the depreciation and the value of the buildings and the apparatus, the holders and tanks and the yard connections, following the order used by Mr. Marks.

The Master: And you will put them in succinctly as Mr. Burr has done, just calling a witness and putting the schedules in?

Mr. Kirby: Yes, Mr. Master.

The Master: Then your direct-examination will not take say over an hour?

Mr. Kirby: Probably half an hour.

Mr. Mathewson: Do I understand that that ends all the defendant's cases?

Mr. Kirby: It ends our case.

Mr. Burr: It ends my case except I may want to read some evidence on the record. That is all.

The Master: How about the suggestion of something about Prof. Bemis that was made at the last hearing?

Mr. Burr: I have received a letter from Dr. Bemis saying that he

is convalescent. He is anxious to come on but we are not anxious to have him come on until he has entirely recovered, it being a malignant disease which he has suffered from. I wanted to get in simply, and I think Brother Mathewson could well afford to allow it in without any more ado, the authenticity of the letters showing the increase in population, the ratio of increase in population in the Borough of Manhattan, City of New York, coming from the
5113 public officials of Washington, and the letters showing that there has been a reduction in the price of gas at Lynn. Now, that is all that I would have to call him to give testimony regarding, and I would not like to hold up or hold our case unclosed for that reason. I think Mr. Mathewson on second thought can well say that he has no objection to allowing us to put*ting* them in. With that exception, and calling your attention to various papers, that would be the end of our case. We ought not consume—we will not consume Monday in finishing up our defence.

Mr. Mathewson: I think, Mr. Master, in view of the terms of the Court's order and in view of the manner in which the defence is introduced that I should not cross-examine these witnesses until they have completed their testimony on value of plants. I do not see how I very profitably could do so.

The Master: Well, that seems to have been the sense of opinion among counsel, that you had better have both statements in as to values.

Mr. Kirby: It is quite immaterial to us. We can go on on Monday morning with Mr. Edgerton and our testimony will be put in in the manner which I have indicated, or if Mr. Mathewson prefers he can take up the cross-examination of Dr. Marks.

Mr. Mathewson: No. Mr. Kirby, it may be quite likely that the cross-examination of one witness on a certain point may bring out the situation clearly so that I would not have to touch the next witness, at all on that same point, and I do not think we would gain time. Besides, I think that I am entitled under the order
5114 of the Court, as it is construed, and also as it is Mr. Burr's view, to have your testimony first presented and then I will cross-examine.

Mr. Kirby: Very good, sir.

The Master: Can you proceed, Mr. Burr, with such documentary evidence as you say you want to put in? You said you were going to read something in evidence. Can you do that now?

Mr. Burr: No, I can do that on Monday. I haven't even made up my mind that it will be necessary.

The Master: Then apparently there is nothing more we can do to-day, in which case we will adjourn until Monday, January 7, 1907, at 10.30 A. M.

Adjourned to January 7, 1907, at 10.30 A. M.

Last Exhibits:
Complainant's 270.
State's OOO.
City's 135.

5115 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 7, 1907—10.30 a. m.

(Met pursuant to adjournment.)
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

5116 Henry H. Edgerton, recalled on behalf of the State.

Direct examination by Mr. Page:

Q. Have you inspected and examined all the plants of the Consolidated Gas Company on the Island of Manhattan?

A. Yes, sir.

Q. Have you made an appraisal of these plants exclusive of the real estate upon which they are situated?

A. I have.

Q. In making this appraisal did you make up an inventory of your own, or did you adopt the inventory furnished by Mr. Mayer?

A. I used Mr. Mayer's inventory and his measurements with the exception of a few where I made my own and checked—I did not have an opportunity to enter into all the measurements.

Q. Did you make some measurements yourself?

A. I did.

Q. Did you compare these measurements with those given by Mr. Mayer in his testimony or in his inventory as furnished?

A. Yes.

Q. Did you find the measurements given by Mr. Mayer to be in all instances correct?

A. No, sir; not in all instances, no, sir.

Q. In making your appraisal of the yard connections did you inspect and examine the yard connections?

A. As much as was possible, but most of these connections were underground and therefore in regard to the value of the yard connections I had to base it on the capacity of the plant as is usually required for the output of gas for the plants. That is, there is a certain factor that will give the ordinary connection necessary for gas and tar throughout the works, and I adopted that in place of a complete measurement of the connections. Another reason being that those works have been changed a number of times. They

started out as coal gas works, and then changed to Tessie du Motay process works, and then into Lowe process works, which in-
5117 volved undoubtedly a considerable amount of duplication.

Q. How long have you been engaged in making your appraisal?

A. About three weeks, in addition to the time taken before this last effort to get an appraisal.

Q. When did you complete the appraisal and preparation?

A. I completed it on Friday up — the point of getting it together and having it typewritten and put in shape on Friday evening.

Q. Have you made any change in your appraisal since Friday evening?

A. No, sir, I have not; except I started out to correct certain errors I saw in the typewritten report in regard to a duplication of some of the amounts, particular cases where Mr. Mayer's appraisal and my own had been added together.

Q. During the time that you have been engaged in making your appraisal have you been in consultation with Mr. Marks, the expert for the city?

A. No, sir, I have not. I have not met Dr. Marks except at the first station—the 14th Street station, where we went through together with Engineer Lacombe.

Q. Now, have you the appraisal as prepared by you?

A. I have.

Q. Will you explain how this has been prepared—I mean the manner of this arrangement?

A. The work has been taken station by station and the buildings aggregated, the apparatus, following the division adopted by Mr. Mayer, and then the details calculated out and corrected by myself and aggregated into this typewritten copy.

Q. Now, in the 14th Street station, how have you prepared your values of apparatus?

A. In regard to the 14th Street plant there was some of the apparatus that I was not enabled to calculate and I adopted Mr. Mayer's figures for the reason that I had not any opportunity to make a calculation of my own.

5118 Q. And how about your former testimony as to the 14th Street plant?

A. Yes, substantially, as far as I checked it off and compared it, it agrees with my former testimony in regard to the 14th Street station, and is entered in the appraisal in that shape.

Q. And you have, as I understand, for such items of apparatus on which you agree with the figures given by Mr. Mayer, or as to certain machinery where you had not the information, adopted Mr. Mayer's appraisal and carried that out in this appraisal of yours?

A. I have. There were many small items and some large ones that I was unable to calculate out or get an account of on account of the number.

Q. You have figured as to each item the depreciation by reason of physical deterioration?

A. I have. I put on the depreciation figure as near as I could arrive at it. I had some trouble in arriving at some of the machinery on account of the depreciation going on interiorly and not knowing exactly the age the depreciation figure is put down according to its appearance and the amount of usage it apparently had.

Mr. PAGE: Now, we will offer in evidence the schedule which the witness has prepared.

Mr. MATHEWSON: It is offered as part of his testimony rather than to have him repeat it orally?

Mr. PAGE: Yes, that is the idea, as long as you are going to take time to cross-examine him I thought that would be the better way.

Mr. MATHEWSON: Yes; I have no objection to taking it in in that way. I object, however, on the ground that the witness has not been shown competent to testify to values in the City of New York.

Objection overruled.

Exception.

The WITNESS: My schedules of the various plants are as follows:

5119

CONSOLIDATED GAS COMPANY.

Value of all Plants January, 1907.

Fourteenth Street	$1,405,966.00
Forty-second Street	1,008,801.25
Forty-fourth Street	1,110,878.00
Twenty-first Street	2,176,492.00
Ninety-ninth Street	544,708.00
Eighteenth Street	234,886.00
Sixty-third Street	623,740.00
Sixty-fifth Street	892,171.00
One Hundred & Eleventh Street	900,406.00
One Hundred & Thirty-second Street	457,524.00
Inwood	11,772.00
Total	$9,367,344.25
Add to above values for engineering, superintendence and inspection, 3 per cent	281,020.00
Add for interest on moneys necessary to be used during construction, 4 per cent	374,693.00
Complete value	$10,023,057.25

FOURTEENTH STREET PLANT.

Summary of Values, January, 1907.

Buildings	$334,960.00
Apparatus	498,806.00
Yard Connections	25,500.00
Holders and Tanks	546,700.00
	$1,405,966.00

5120 FOURTEENTH STREET STATION BUILDINGS.

Office Building (Mayer, p. 1351).

42 ft. x 32 ft. 6 in. x 23 ft. 9 in.

Cost to build, complete, new materials...	$5,750	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$4,890

Pay Room (Mayer, p. 1351).

2 Story brick building, 12 in. wall, 28 ft. 1 in. x 13 ft. 1 in. x 23 in.

Cost to build complete, new materials...	$3,000	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$2,550

Building Over Alley (Mayer, p. 1351).

1 Story, 11 ft. wide, 28 ft. 1 in. x 10 ft. 10 in.

Cost to build complete, new materials...	$650	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$550

Store Room (Mayer, p. 1351).

2 Story building, 21 ft. 9 in. x 28 ft. 1 in. by 23 ft. high.

Cost to build complete, new materials...	$2,800	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$2,400

Boiler Room (Mayer, p. 1351).

1 Story building, 28 ft. x 44 ft. x 28 ft. high.

Cost to build complete, new materials...	$3,500	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$3,000

5121 Engine Room (Mayer, p. 1351).

2 Story building and attic, 44 ft. x 13 ft. 10 in. x 24 ft. 9 in.

Cost to build complete, new materials...	$4,800	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$4,080

Exhauster House (Mayer, p. 1351).

2 Story building, 28 ft. 1 in. by 20 ft. 6 in. x 23 ft. high.

Cost to build complete, new materials...	$4,200	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$3,570

Machine Shop and Store (Mayer, p. 1351).

47 ft. x 28 ft. x 23 ft.

Cost to build complete, new materials...	$4,200	
Depreciation by reason of physical deterioration, 15 per cent.		
Value.		$3,570

Smith Shop (Mayer, p. 1351).

35 ft. x 52 ft. 2 in. by 23 ft.

(Dimensions stated in Schedule as 38 ft. x 52 ft. 2 in. x 23 ft., latter used in making estimate).

Cost to build complete, new materials...	$5,300	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$4,500

Condenser House (Mayer, p. 1351).

1 Story building, 54 ft. 1 in. x 34 ft. 6 in. x 27 ft. high.

Cost to build complete, new materials...	$7,500	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$6,400

5122

Shed (Mayer, p. 1351).

1 Story building, galvanized iron sides, 38 ft. 3 in. x 38 ft. x 11 ft. 6 in. high.

Cost to build complete, new materials...		$3,000	
Depreciation by reason of physical deterioration, 10 per cent.			
Value.	$2,700		
Deduct for unnecessary Pile Foundations	1,000		
			$1,700

Large Purifier (Mayer, p. 1351).

Purifier House, 67 ft. x 127 ft. x 24 ft. high.

Cost to build complete, new materials...	$33,000	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$28,000

Small Purifier House (Mayer, p. 1351).

40 ft. 5 in. 67 ft. x 16 ft. 6 in.

Cost to build complete, new materials...	$11,500	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$10,000

Oxide House (Mayer, p. 1351).

37 ft. 10 in. x 67 ft. x 16 ft. 6 in. high.

Cost to build complete, new materials...	$6,300	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$5,400

METER HOUSE (Mayer, p. 1351).

33 ft. 7 in. x 40 ft. 4 in. by 24 ft. high.

Cost to build complete, new materials...	$6,000	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$5,400

5123 CENTER SEAL HOUSE (Mayer, p. 1352).

16 ft. x 16 ft. 2 in. x 14 ft. 9 in. high.

Cost to build complete, new materials...	$1,500	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$1,350

CENTER SEAL HOUSE (Mayer, 1352).

(Dimensions as above.)

Cost to build complete................	$1,500	
Depreciation bv reason of physical deterioration, 10 per cent.		
Value		$1,350

BOILER HOUSE (Mayer, p. 1352).

1-story brick building 15 ft. 2 in. x 38 ft. 10 in. x 16 ft. 6 in.

Cost to build complete, new materials...	$4,500	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$4,000

VALVE HOUSE (Mayer, p. 1352).

1-story and basement brick building, 12 ft. 3 in. x 21 ft. 4 in. x 12 ft. 6 in.

Cost to build complete, new materials...	$1,000	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$900

RETORT HOUSE (Mayer, p. 1352).

1-story brick building, 185 ft. 9 in. x 245 ft. 4 in. x 22 ft. 9 in.

Cost to build complete, new materials...	$80,000	
Depreciation by reason of physical deterioration, 20 per cent.		
Value.		$60,000

5124 SCRUBBER HOUSE (Mayer, p. 1352).

1-story brick building, 48 ft. 3 in. x 12 ft. x 16 ft. 5 in.

Cost to build complete, new materials...	$2,100	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$1,800

BRICK WALL AROUND HOLDER YARD.

(Mayer, p. 1352).

North wall, 351 ft. 2 in. long; south wall, 366 ft. 6 in.; west wall, 207 ft.

Cost to build complete, new materials...	$13,500	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$10,800

WALL BETWEEN AVES. C & D (Mayer, p. 1352).

23 ft. 7 in. on 14th Street and 245 ft. 4 in. on 15th Street, etc.

Cost to build complete, new materials...	$9,000	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$7,200

SHED (Mayer, p. 1353).

75 ft. 6 in. x 21 ft. 6 in. x 17 ft.

Cost to build complete, new materials...	$3,500	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$3,200

SHED (Mayer, p. 1353).

(Dimensions as above.)

Cost to build complete, new materials...	$3,500	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$3,200

5125

COKE STORAGE (Mayer, p. 1353).

131 ft. 6 in. x 63 ft. 8 in.

Cost to build complete, new materials...	$9,500	
Depreciation due to physical deterioration, 25 per cent.		
Value		$7,000

GAS ENGINE HOUSE (Mayer, p. 1353).

1-story brick building, 13 ft. 3 in. x 41 ft. 6 in. x 11 ft. 3 in.

Cost to build complete, new materials...	$1,000	
Depreciation due to physical deterioration, 10 per cent.		
Value		$900

COAL HOPPER (Mayer, p. 1353).

21 ft. 6 in. x 36 ft. x 32 ft. 7 in., 1 story.

Cost to build complete, new materials...	$4,000	
Depreciation due to physical deterioration, 10 per cent.		
Value		$3,600

COAL SHED (Mayer, p. 1353).

1-story brick building, 184 ft. 5 in. x 206 ft. 6 in. x 26 ft. 6 in.

Cost to build complete, new materials... $70,000
Depreciation by reason of physical deterioration, 10 per cent.
Value $63,000

RIGGING HOUSE (Mayer, p. 1353).

2-story building, 22 ft. long x 13 ft. 6 in. x 20 ft. high (end of coal shed).

Cost to build complete, new materials... $700
Depreciation by reason of physical deterioration, 10 per cent.
Value $630

5126 SMALL OFFICE BUILDING (Mayer, p. 1353).

10 ft. x 10 ft. x 10 ft. high.

Cost to build complete, new material.... $100
Depreciation by reason of physical deterioration, 20 per cent.
Value $80

COAL & COKE STORAGE (Mayer, p. 1353).

Walls of various dimensions as set down in testimony.

Cost to build complete, new material.... $20,000
Depreciation by reason of physical deterioration, 20 per cent.
Value $16,000

BOILER ENGINE HOUSE (Mayer, p. 1353).

1-story brick building, 11 ft. x 25 ft. x 20 ft.

Cost to build complete, new material.... $2,500
Depreciation by reason of physical deterioration, 10 per cent.
Value $2,250

BOILER HOUSE (Mayer, p. 1353).

16 ft. x 28 ft. 1 in. x 11 ft.

Cost to build complete, new materials... $1,200
Depreciation by reason of physical deterioration, 15 per cent.
Value $1,000

CIRCULAR BRICK BUILDING (Mayer, p. 1353).

11 ft. diameter, 54 ft. high.

Cost to build complete, new materials...	$1,500	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$1,350

5127 BOILER HOUSE (Mayer, p. 1353).

1-story frame building, 32 ft. 5 in. x 16 ft. x 11 ft. 6 in.

Cost to build complete, new materials...	$1,300	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$1,100

VALVE HOUSE (Mayer, p. 1353).

1-story frame building, 12 ft. 4 in. x 10 ft. 4 in. x 9 ft. 6 in.

Cost to build complete, new materials...	$200	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$170

EXHAUSTER HOUSE (Mayer, p. 1353).

1-story and basement brick building, 50 ft. 8 in. x 43 ft. 4 in. x 20 ft. 3 in.

Cost to build complete, new materials...	$15,000	
Depreciation by reason of physical deterioration, 5 per cent.		
Value		$14,250

BOILER HOUSE (Mayer, p. 1354).

1-story brick building, 27 ft. 8 in. x 32 ft. x 20 ft. 2 in.

Cost to build complete, new materials...	$3,500	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$3,000

COKE OFFICE (Mayer, p. 1354).

1-story brick building, 9 ft. 5 in. x 15 ft. 5½ in. x 13 ft. 10 in.

Cost to build complete, new materials...	$650	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$550

5128 BOILER HOUSE (Mayer, p. 1354).

1-story brick building, 18 ft. 5 in. x 19 ft. 2½ in. x 17 ft. ½ in., or an average of 16 ft. high.

Cost to build complete, new materials... $4,000
Depreciation by reason of physical deterioration, 15 per cent.
Value $3,400

CLAY MILL & STORAGE (Mayer, p. 1354).

1-story frame building, 17 ft. ½ in. x 29 ft. 6 in. x 12 ft. 3½ in. x 20 ft. 3 in. x 19 ft. ½ in. x 14 ft. 9 in.

Cost to build complete, new materials... $850
Depreciation by reason of physical deterioration, 20 per cent.
Value $700

STORAGE SHED (Mayer, p. 1354).

1 open frame shed, 33 ft. 5½ in. x 40 ft. x 9 ft. 10 in.

Cost to build complete, new materials... $900
Depreciation by reason of physical deterioration, 15 per cent.
Value $750

SHED (Description as above).

36 ft. 1 in. x 19 ft. 4 in. x 8 ft. 11 in. high.

Cost to build complete, new materials... $400
Depreciation by reason of physical deterioration, 15 per cent.
Value $350

STABLE (Mayer, 1354).

2-story brick building, 50 ft. x 32 ft. 1 in. x 26 ft. 11½ in.

Cost to build complete, new materials. $5,000
Depreciation by reason of physical deterioration, 15 per cent.
Value $4,250

5129 STORAGE SHED (Mayer, 1354).

1-story open frame building, 19 ft. 6 in. x 84 ft. 11 in. x 11 ft. 4½ in.

Cost to build complete, new materials... $1,000
Depreciation by reason of physical deterioration, 10 per cent.
Value $900

CARRIAGE ROOM, CALLED SHED NO. 1.

(Mayer, p. 1354).

1-story frame building, 19 ft. 10 in. x 19 ft. 10 in. x 10 ft. 4½ in.

Cost to build complete, new materials...	$400	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$360

PUMP HOUSE (Mayer, 1354).

1-story frame building, 11 ft. x 13 ft. 2 in. x 8 ft. 6 in.

Cost to build complete, new materials...	$175	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$160

STORAGE SHED (Mayer, p. 1354).

1-story brick building, 20 ft. 9 in. x 46 ft. 8 in. x 12 ft. 10 in.

Cost to build complete, new materials...	$1,300	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$1,100

ANOTHER STORAGE BUILDING (Mayer, p. 1354).

1-story brick building, 21 ft. x 36 ft. 4 in. x 12 ft. 10 in. high.

Cost to build complete, new materials...	$1,800	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$1,400

5130 ANOTHER STORAGE SHED (Mayer, p. 1354).

25 ft. 10 in. x 31 ft. 2 in. x 10 ft. high.

Cost to build complete, new materials...	$400	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$320

FENCES (Mayer, p. 1355).

Distances as set down in testimony and in schedules.

Cost to build complete, new materials...	$5,000	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$4,200

PAVING AND HOLDING YARD (Mayer, p. 1355).

11,140 sq. ft. of brick laid flat.

Cost to build complete, new material....	$1,400	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$1,100

BOILER HOUSE (Mayer, 1355).

1-story brick building, 18 ft. 4 in. x 20 ft. x 20 ft. 9 in. long.

Cost to build complete, new materials...	$3,000	
Depreciation by reason of physical deterioration, 15 per cent.		
Value		$2,500

WEIGH OFFICE (Mayer, p. 1355).

1-story and basement brick building, 16 ft. 5 in. x 26 ft. 6 in. x 13 ft. 2 in.

Cost to build complete, new materials...	$2,000	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$1,600

5131

STORAGE BUILDING (Mayer, p. 1355).

1-story brick building 8 ft. x 7 ft. 11 in. x 7 ft.

Cost to build complete, new materials...	$175	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$120

ANOTHER VALVE HOUSE (Mayer, p. 1355).

10 ft. x 7 ft. x 12 ft.

Cost to build complete, new materials...	$130	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$100

ANOTHER BOILER HOUSE (Mayer, p. 1355).

14 ft. x 20 ft. x 15 ft.

Cost to build complete, new materials...	$450	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$360

PILE FOUNDATIONS NORTH SIDE OF FIFTEENTH STREET.

No specifications given.

Value ....

PORTION OF NEWLY ERECTED BOILER HOUSE IN COURSE OF CONSTRUCTION.

FOUNDATIONS FOR TOWER SCRUBBERS.

(Mayer, p. 1355).

Cost to build complete, new materials...	$7,000	
Depreciation by reason of physical deterioration, 5 per cent.		
Value		$6,600

5132 FOURTEENTH STREET STATION.

Recapitulation.

Value of all buildings complete, together with all foundations contained therein or thereunder, whether the same be for the buildings or for the apparatus....	$324,960	
Add for grading, paving, draining and various improvements..............	10,000	
Value of above......................		$334,960
Value as given by Mr. Mayer (p. 1355).		691,961

CONSOLIDATED GAS COMPANY, FOURTEENTH STREET STATION.

OFFICE BUILDING.

Contents:

(Mayer, p. 1356; Edgerton, p. 4620.)

Cost as per Mayer................	$1,781.00	
Depreciation, due to physical deterioration, as per Edgerton, 40 per cent..		$1,068.00

STORE ROOM.

Contents:

(Mayer, p. 1358.)

As per Mayer....................	100.00

BOILER ROOM.

(Mayer, p. 1358; Edgerton, pp. 4621 & 4626.)

Rowland Engine.		
Cost, new and complete	$1,800.00	
Depreciation, due to physical deterioration, 25 per cent.		
Value		1,350.00
1 Clark Steam & Fire Regulation Regulator.		
Value as per Mayer		25.00

(Edgerton, p. 4628.)

Cast Iron Tank.		
Value, with depreciation off		2,500.00

5133 RETORT HOUSE.

(Mayer, p. 1411; Edgerton, p. 4642.)

4 Coal Stacks of 30 Benches each.		
Cost to build, complete	$160,000.00	
Depreciation, by reason of physical deterioration	6,300.00	
Value		153,700.00
1 Stack of 24 Benches.		
Cost to build, complete	$36,500.00	
No depreciation value		$36,500.00

Mr. Edgerton has included in his appraisal the hydraulic mains and iron work, doors, etc., to all the benches, the same as Mr. Mayer, p. 1414.

Stoking Machines.

(Mayer, p. 1414.)

Value as per Mayer	15,200.00 4,180.00 9,975.00

Drawing Machines.

Value as per Mayer	24,500.00 5,130.00

6 Turn-Tables.

(Mayer, p. 1415.)

Value as per Mayer	3,780.00

6 Lines of Track.

(Mayer, p. 1415; Edgerton, 4647.)

Cost to build, complete	4,830.00	
Depreciation, 10 per cent. per year, at least	307.00	
Value not exceeding		4,423.00

Coke Tracks.

(Mayer, p. 1416; Edgerton, 4648.)

Depreciation, not given.
Value per Mayer.................. 1,350.00

5134 2 Coke Dumping Inclines.

(Mayer, p. 1416.)

Cost to build new.................. 1,000.00
Depreciation, not given.
Value not exceeding............... 1,000.00

2 7-H. P. Engines, etc.

(Mayer, p. 1416; Edgerton, 4648.)

Cost, new......................... 400.00
Depreciation, 20 per cent.
Value 320.00

9 Self-Dumping Coke Machines.

(Mayer, p. 1417.)

Value as per Mayer................ 1,125.00

2 Coke Dumping Inclines.

(Mayer, p. 1416.)

Value as per Mayer................ 22,070.00

Coke Drums, etc.

(Mayer, p. 1417.)

Value as per Mayer................ 380.00

To which Pipe.

(Mayer, p. 1417.)

Value as per Mayer................ 50.00

EXHAUSTER HOUSE.

Contents.

(Mayer, p. 1417; Edgerton, p. 4629.)

No. 9 Root Exhauster.

Cost new, including engine, etc., as per Mayer 1,980.00
Depreciation, 15 per cent.
Value 1,683.00

2 Huntoon Governors.

(Edgerton, p. 4631.)

Cost, new....................... 150.00
Depreciation, 15 per cent.
Value 128.00

5135 1 No. 6 Root Exhauster.

Value as per Mayer................	1,078.00	
Depreciation, 15 per cent.		
Value		917.00

1 Photometer Stand & Bar.

(Edgerton, p. 4632.)

Value		650.00

CONDENSER HOUSE.

(Mayer, p. 1418; Edgerton, p. 4633.)

2 Rectangular Condensers.

Value as per Mayer................		$29,106.00

LARGE PURIFIER HOUSE.

(Mayer, p. 1419; Edgerton, p. 4635.)

2 Sets.

Value as per Mayer................		46,432.00

SMALL PURIFIER HOUSE.

(Mayer, p. 1419; Edgerton, p. 4640.)

Cost	13,464.00	
Depreciation, 10 per cent.		
Value		12,119.00

2 Tower Scrubbers.

(Mayer, p. 1421; Edgerton, p. 4649.)

Cost, etc.........................	36,195.00	
Depreciation, due to physical deterioration, none.		
Value		36,195.00

Foundation for Scrubbers.

(Mayer, p. 1421; Edgerton, p. 4652.)

Value	6,860.00	
Depreciation, 20 per cent.		
Value		4,582.00

Isbell-Porter Scrubber.

(Mayer, p. 1422; Edgerton, p. 4652.)

Value		5,488.00

5136 2 No. 2 Cameron Pumps.

Value as per Mayer................		110.00

2 Station Meters.		
(Mayer, p. 1422; Edgerton, p. 4640.)		
Value as per Mayer................		1,600.00
1 No. 12 Westinghouse Gas Meter.		
(Mayer, p. 1423.)		
Value as per Mayer................		$225.00
King's Pressure Gauge.		
Value as per Mayer................		35.00
Iron Grating Platform around Meter.		
Value, as per Mayer................		315.00

WATER HOUSE.

(Mayer, p. 1423; Edgerton, p. 4621.)

Rowland, 80 H. P. Boiler.		
Cost new.........................	1,800.00	
Depreciation, 25 per cent.		
Value		1,350.00
Clark's Steam Fire Regulator.		
Value as per Mayer................		25.00
Cast Iron Water Tank.		
(Mayer, p. 1424; Edgerton, p. 4626.)		
Value		2,500.00

ENGINE ROOM.

(Mayer, p. 1424; Edgerton, p. 4628.)

Fan for Blowers.		
Value as per Mayer................		250.00
Engine, Novelty Iron Works.		
Cost	1,500.00	
Depreciation, 25 per cent.		
Value		1,125.00
2 Water Feed Pumps.		
Values as per Mayer................		100.00
5137 Jet Photometer.		
Cost new.........................	130.00	
Depreciation, 50 per cent.		
Value		65.00

Mackenzie Exhauster.

Cost	924.00	
Depreciation	224.00	
Value		700.00

Sink.

Value as per Mayer		25.00

STORE HOUSE.

Contents.

(Mayer, p. 1426.)

Value as per Mayer		100.00

MACHINE SHOP.

Contents.

(Mayer, p. 1426; Edgerton, p. 4632.)

Cost, new	700.00	
Depreciation, 25 per cent.		
Value		683.00

SMITH SHOP.

Contents.

(Mayer, p. 1426; Edgerton, p. 4632.)

Cost	408.00	
Depreciation, 25 per cent.		
Value		388.00

Grindstone.

Value as per Mayer		356.00

Shed Contents.

(Mayer, p. 1426; Edgerton, p. 4635.)

Cost	1,800.00	
Depreciation, 25 per cent.		
Value		1,350.00

5138 CENTER SEAL HOUSE.

Pressure Gauges.

Value as per Mayer		140.00

Cast Iron Runway.

Value as per Mayer		258.00

BOILER HOUSE.

(Mayer, p. 1427; Edgerton, p. 4641.)

Value		1,050.00

VALVE HOUSE.

Contents.

(Mayer, p. 1427; Edgerton, p. 4642.)

Value	89.00

RETORT HOUSE ANNEX.

Air Condensers.

(Mayer, p. 1428.)

Value as per Mayer................	15,067.00

COKE PASSAGE.

Contents.

(Mayer, p. 1428.)

Value as per Mayer................	8,059.00

GAS ENGINE HOUSE.

Contents.

(Mayer, p. 1428.)

Value as per Mayer................	3,597.00

COAL HOPPER.

Contents.

(Mayer, p. 1428.)

Value as per Mayer................	3,249.00

5139

COAL SHED.

Contents.

(Mayer, p. 1428).

Value as per Mayer..............	6,064.00

RIGGER HOUSE.

Contents.

(Mayer, p. 1428).

Value as per Mayer..............	565.00

BOILER AND ENGINE HOUSE.

Contents.

(Mayer, p. 1428; Edgerton, p. 4653.)

55-H. P. Vertical Boiler.		
Cost	1,100.00	
Depreciation	600.00	
Value		500.00
50-H. P. Engine.		
Cost	1,000.00	
Depreciation, 25 per cent.		
Value		750.00

1 25 feet Iron Stack.		
Value as per Mayer................		73.00
1 Feed Water Pump.		
Value as per Mayer................		54.00

BOILER HOUSE AND WELL.

Contents.

(Mayer, p. 1428; Edgerton, p. 4654).

Vertical Boiler.		
Cost	250.00	
Depreciation, 25 per cent.		
Value		187.50
Well House.		
(Mayer, p. 1429).		
Value as per Mayer................		1,042.00

5140 *Addendum.*

(Mayer, p. 1429; Edgerton, p. 4654).

Boiler.		
Value		360.00
Stack:		
Cost	67.50	
Depreciation	21.00	
Value		46.50
Clock:		
Value as per Mayer................		15.00
Pressure Gauge:		
Value as per Mayer................	$800.00	
Valve House.		
Contents, (Mayer, p. 1428; Edgerton, p. 4655.)		
Value		74.00
Exhauster House:		
Contents, (Mayer, p. 1427; Edgerton, p. 4655.)		
New York Safety Engine:		
Value		2,550.00
Mackenzie Exhauster:		
Value as per Mayer................		3,050.00

King's Pressure Gauge:		
Value as per Mayer		35.00
Photometer		675.00
Valve Stand.		
Value as per Mayer		525.00
Root Exhauster:		
Value as per Mayer		1,600.00

5141 BOILER HOUSE CONTENTS, *Addenda.*

(Mayer, p. 1429; Edgerton, p. 4657.)

Two 50-h.p. Boilers:		
Cost	3,000.00	
Depreciation	1,000.00	
Value		2,000.00
Two Stacks:		
Value as per Mayer		234.00

YARD CONTENTS, *Addenda.*

Ammonia Tanks, etc.:	
Value as per Mayer	2,636.00

COKE OFFICE CONTENTS, *Addenda.*

(Mayer, p. 1430.)

Value as per Mayer	185.00

BOILER HOUSE CONTENTS, *Addenda.*

(Mayer, p. 1430.)

One 50-h.p. Engine:		
Cost	1,700.00	
Depreciation 60 per cent.		
Value		1,000.00

CLAY MILL & STORAGE, *Addenda.*

Contents:

(Mayer, p. 1430.)

Value as per Mayer	460.00

STABLE AND YARD, *Addenda.*

(Mayer, p. 1430.)

Value as per Mayer	455.00

PUMP HOUSE, *Addenda.*

Contents:

(Mayer, p. 1430.)

Value as per Mayer................ 235.00

5142

STORAGE SHED, *Addenda.*

Contents:

(Mayer, p. 1430.)

Value as per Mayer............... 415.00

WEIGH OFFICE, *Addenda.*

Contents:

(Mayer, p. 1430.)

Value as per Mayer................ 395.00

CONSOLIDATED GAS COMPANY—FOURTEENTH STREET PLANT.

Recapitulation.

Value of all apparatus and contents of plant as above.. 498,806.00

Mr. Mayer (p. 1358) gives total value of the apparatus and contents of the building mentioned above as.... $578,940.00

CONSOLIDATED GAS COMPANY—FOURTEENTH STREET STATION.

Connections to the Appliances in the Plant.
(Mayer, pp. 1358 and 1359.)

Cast iron pipe, diameter from 2 in. to 30 in., 1,079.58 tons, 22,523 feet.
Cost new
Depreciation
Value

Wrought iron connections, diameters 1 in. to 4 in., 7,425 feet.
Cost new
Depreciation
Value

Valves—6 1-in., 12 1½-in., 7 ¾-in., 10 1¼-in., 4 2-in., 22 4-in., 5 6-in., 3 10-in., 17 12-in., 4 16-in., 14 24-in.

Three way valves—48 20-in., 67 30-in.

5143

RECAPITULATION.

Cost of all of the above pipes, valves, etc.
Depreciation,
Value,

Value of all of the above yard connections and connections to appliances.......................... $25,500.00

Mr. Mayer (p. 1359) gives a value of all of above connections as $146,895.00

CONSOLIDATED GAS COMPANY.

GAS HOLDERS, INCLUDING TANKS.

Fourteenth Street Station.

(Mayer, p-. 1359 and 1591.)

Six holders, 345,500 cu. ft. capacity (Mayer, 1591 and 1359.) Description as given		
Cost to build new....................	146,600	
Depreciation, 30 per cent.		
Value		$102,600
Two holders, 250,000 cu. ft. capacity each (Mayer, 1591 and 1359.) Description as given		
Cost to build new....................	27,360	
Depreciation, 40 per cent.		
Value		17,100
Brick tanks for above six holders (Mayer, 1591 and 1359.) Description as given		
Cost to build new....................	144,000	
Depreciation, 10 per cent.		
Value		129,600
Two brick tanks Specifications as given		
Cost to build new....................	42,000	
Depreciation, 10 per cent.		
Value		37,800
5144 Holder with steel tank (Mayer, 1359, and as set down in schedule.) Capacity 3,250,000 cu. ft.		
Cost of holder, diaphragm and steel tank.	$244,000	
Depreciation, 10 per cent.		
Value		$219,600
Foundation, concrete ring, etc.		
Cost	40,000	
Depreciation, ...		
Value		40,000

RECAPITULATION.

Cost of all of the above holders and tanks..........	546,700.00
Mr. Mayer (p. 1359) gives value of all holders, with tanks, as	$789,604.00

FORTY-SECOND STREET PLANT.

Summary of Values, January, 1907.

Buildings	$432,806.00
Apparatus	370,357.25
Yard Connections	22,950.00
Holders and Tanks	182,688.00
	$1,008,801.25

CONSOLIDATED GAS COMPANY—42D STREET STATION.

BUILDINGS:

	Cost to build.	Depreciation due to physical deteoriation.	Value.
Valve House and Vault in Yard. (Mayer, pp. 1362-1434.) Octagonal brick building, 21 ft. 10 in. x 12 feet high	$4,000	15%	$3,400
Meter House. (Mayer, 1362-1434.) 1-story brick building, 10 ft. 8 in. x 22 ft. 3 in. x 9 ft. 6 in. high	700	10%	650
5145 Purifier House. (Mayer, 1362-1434.) 1-story frame building, 160 ft. x 76 ft. x 20 ft.	34,000	20%	28,000
Purifier House. (Mayer, p. 1434.) Extension to main building	2,000	20%	1,600
Engine and Meter House. (Mayer, 1362-1434.) 2-story brick building, 14 ft. 6 in. x 59 ft. 6 in. x 28 ft.	16,000	10%	14,500
Vaults. (Mayer, p. 1434.) Cost and value included in estimate of vaults all taken together as hereinafter set down.			
Toilet Building. (Mayer, 1362-1434.) 5 ft. 6 in. x 5 ft. 6 in. x 8 ft. 6 in. Value included in Engine and Meter House.			

Retort House.			
(Mayer, 1362-1434.)			
261 ft. 2 in. x 62 ft. 2 in. x 27 ft. high	$109,000	15%	$93,000
Condenser and Scrubber House.			
(Mayer, 1362-1435.)			
2-story brick building, 23 ft. 2 in. x 60 ft. 2 in. x 42 ft. high	19,000	10%	17,000
Retort House, Nos. 2 and 3.			
(Mayer, 1362-1435.)			
100 ft. 4 in. x 118 ft. 3 in. x 24 ft. high Including vault for the same building (south side).	73,000	15%	62,000
5146 Exhauster, Engine and Scrubber House.			
(Mayer, 1362-1435)			
1-story brick building, 28 ft. 6 in. x 100 ft. 4 in. x 24 ft. high	22,000	10%	20,000
Vault.			
South of No. 1 Retort House and north of Nos. 2 and 3 Retort Houses. (Mayer, 1435)	32,000	15%	27,500
Vault.			
Between Purifier House and Exhauster, Engine and Scrubber House. (Mayer, 1435)	4,000	10%	3,600
Shed.			
(Mayer, 1362-1435)			
12 ft. x 140 ft. x 12 ft. high	1,000	20%	800
No. 1 Coal Shed.			
(Mayer, 1363-1435)			
1-story brick building, 171 ft. x 90 ft. x 21 ft. 9 in. high	44,000	10%	40,000
Coal Shed with runway overhead.			
(Mayer, 1363-1435)			
2 runways 9 ft. wide, 170 ft. long	300	10%	270

No. 2 Coal Shed. (Mayer, 1363-1436) 89 ft. 9 in. x 171 ft. x 29 ft. High.	55,000	10%	50,000
Carpenter Shop. (Mayer, 1363-1436) Small room partitioned off in 2d story of No. 2 Coal Shed.......			150
Brick Fence on 11th Avenue. (Mayer, 1363-1436) 195 ft. 10 in.; 9 ft. above grade; 16 in. thick. Wrought iron picket fence figured in with brick fence............	3,700	15%	3,150
5147 Brick Fence on 42nd Street. (Mayer, 1363-1436) 235 ft. 3½ in. long.............	4,500	10%	4,000
Stable and Wagon Shed. (Mayer, 1363-1436) 98 ft. 9 in. x 67 ft. 10½ in. x 18 ft. high, main building........	17,000	10%	15,500
Eastern Extension to Above Building. (Mayer, 1363-1436) 32 ft. 10½ in. x 30 ft. 4 in. x 10 ft. high	2,600	10%	2,350
Another Extension to Above. (Mayer, 1363-1436) 32 ft. 10½ in. x 26 ft. 6 in. x 14 ft. high	3,050	10%	2,700
Storage Building (for hay, etc.). (Mayer, 1363-1436) 34 ft. x 24 ft. 6 in. x 20 ft........	3,600	15%	3,100
Harness House. (Mayer, 1363-1436) 16 ft. 6 in. x 16 ft. 6 in. x 18 ft. high	1,400	10%	1,260
Coke Storage Office. (Mayer, 1363-1436) 15 ft. 4 in. x 7 ft. 4 in. x 13 ft. 6 in. .... **Mayer's value taken.**			467

Iron Bridge Across Twelfth Avenue.			
(Mayer, 1363-1436)			
Span 100 ft. x 12 ft. wide	5,000	10%	4,500
Frame Building for Deodorizing Purposes.			
(Mayer, 1363-1437)			
26 ft. x 20 ft. 4 in. x 12 ft. high... Mayer's value taken.	890		801
5148 Cribbing and Earth Filling for 8 Oil Tanks. (Mayer, 1437)	2,438		2,200
Frame Pump House.			
(Mayer, 1363-1437)			
20 ft. x 10 ft. x 10 ft. Mayer's value taken.	320		288
Timber Ash Dump.			
(Mayer, 1363-1437) Mayer's value taken.			2,500
Timber Retaining Fence Around Coke Storage.			
(Mayer, 1363-1437)			
700 ft. Mayer's figure taken.	2,800		2,520

FORTY-SECOND STREET STATION.

Recapitulation.

The value of all the buildings, vaults foundations for buildings and apparatus	$407,805	
Add for grading, drains and other improvements	25,000	
Value of all		$432,806
Value stated by Mr. Mayer for above (p. 1364)		598,848

5149

CONSOLIDATED GAS COMPANY.

FORTY-SECOND STREET STATION.

APPARATUS.

VALVE HOUSE.

Contents.

(Mayer, p. 1446)

1 6-ft. governor, etc., cost new.......	$1,500.00	
Depreciation, due to physical deterioration	300.00	
	1,200.00	
Value		$11,200

PURIFIER HOUSE.

Contents.

(Mayer, p. 1448)

8 purifier boxes as described, cost new.	32,750.00	
Depreciation, due to physical deterioration, 5 per cent.		
Deduction, due to unnecessary weight, 10 per cent.		
Value		$28,000.00
4 purifier boxes, etc., dimensions, etc., as given.		

(Mayer, p. 1449)

Cost, new	16,560.00	
Depreciation, 5 per cent.		
Value		15,742.00
4 small purifiers, etc.		

(Mayer, p. 1449)

Dimensions, etc., as given, cost, new..	2,955.00	
Depreciation, 5 per cent.		
Value		2,807.25
2 hydraulic floor carriages.		

(Mayer, p. 1450)

Value, as given by Mayer...........		1,400.00
1 hand power floor carriage.		

(Mayer, p. 1450)

Value as given by Mayer............		523.00
1 hand power floor carriage.		

(Mayer, p. 1450)

Value, as given by Mayer...........		$280.00

5150 ENGINE AND LEADER HOUSE.

(Mayer, p. 1451).

1 Mackenzie exhauster.		
Value, as given by Mayer.............		3,230.00
1 13 ft. 6 in. cast iron station meter.....	5,700	
1 11 ft. 6 in. cast iron station meter.....	4,000	
1 10 ft. 6 in. cast iron station meter.....	3,500	
Cost, new	$13,200	
Depreciation, 15 per cent.		
Value		11,250.00
Station meter (Mayer, p. 1452). (Taken from addenda)		
Value		1,500.00

RETORT HOUSE.

(Mayer, p. 1452).

60 benches of sizes, etc., 3 stacks, etc.		
Cost to build, new, complete.........	138,000	
Depreciation, due to physical deterioration, 6½ per cent.		
Value		127,000.00

CONDENSER AND SCRUBBER HOUSE.

(Mayer, p. 1455).

2 scrubbers, as per description.		
Value, as per Mayer..................		2,964.00
1 wrought iron tubular condenser. (Mayer, p. 1456)		
Cost, new	$15,000	
Depreciation, 5 per cent.		
Value		14,250.00
1 air condenser (Mayer, p. 1456).		
Cost, etc.	8,600	
Depreciation, etc., 2 per cent.		
Value		8,400.00
Cast iron box, dimensions as given.		
Value		635.00

5151 RETORT HOUSE, Nos. 2 & 3.

(Mayer, p. 1457.)

6 benches of sixes, generative furnaces cost, etc.	$13,800	
Depreciation, 6½ per cent.		
Value		$13,000.00

14 benches of sixes, direct fire in one range, cost, etc.	23,800	
Depreciation, etc., 6½ per cent.		
Value		22,300.00
20 benches of sevens, cost, etc	50,000	
Depreciation, etc., 6½ per cent.		
Value		46,800.00

EXHAUSTER ENGINE HOUSE.

(Mayer, p. 1458.)

8 x 8 Greenfield engine, cost, new	770.00	
Depreciation, etc., 15 per cent.		
Value		640.00
2 large Mackenzie exhausters.		
Value, as per Mayer		2,550.00
1 16 x 30 horizontal engine, cost, new	2,000.00	
Depreciation, etc., 15 per cent		1,700.00
8 x 8 Greenfield engine, belting, shafting and pulleys, cost, etc	770.00	
Depreciation, 15 per cent.		
Value		640.00
1 8 x 16 rotary washer.		
Value, as per Mayer		5,145.00
1 10 x 10 Greenfield engine, etc.		
(Mayer, p. 1459.)		
Cost	880.00	
Depreciation, 15 per cent.		
Value		748.00
1 Eclipse washer.		
Value, as per Mayer		4,116.00
5152 1 tubular condenser.		
Value, as per Mayer		3,675.00
2 oil gas scrubbers.		
Value, as per Mayer		1,025.00
1 cast iron oil gas condenser.		
(Mayer, p. 1460.)		
Value, as per Mayer		$1,437.00

RETORT HOUSE, No. 4.

(Mayer, p. 1460.)

4 benches of sixes, cost, etc...........	$10,000.00	
Depreciation, etc., 75 per cent.		
Value		2,500.00

VAULT.

CONTENTS.

(Mayer, p. 1461.)

1 small pump.		
Value, as per Mayer.................		84.00
2 Continental boilers, 16 h. p., complete, with foundations, etc., cost, etc.......	1,700.00	
Depreciation, 30 per cent.		
Value		1,190.00
Breeching and steel stack.		
Value, as per Mayer.................		428.00
1 Continental boiler, 105 h. p., complete, etc., cost	1,800.00	
Depreciation, 30 per cent.		
Value		1,260.00
Breeching and stack for same.		
Value, as per Mayer.................		428.00
2 small boiler feed pumps.		
Value, as per Mayer.................		158.00
1 Knowles air compressor.		
Value as per Mayer		630.00
5153 2 feed water heaters.		
Value as per Mayer...........		540.00
1 8 x 8 Greenfield engine, cost.........	770.00	
Depreciation, 15 per cent.		
Value		700.00
1 vertical drill press.		
Value, as per Mayer.................		$80.00
1 pipe cutter.		
Value, as per Mayer.................		340.00
1 bench lathe.		
Value, as per Mayer.................		40.00
Various small articles.		
(Mayer, p. 1462)		
Cost, etc.	$1,000.00	
Depreciation, etc., 15 per cent.		
Value		850.00

CARPENTER SHOP.

CONTENTS.

(Mayer, p. 1463.)

Value, as per Mayer	1,425.00

COKE STORAGE YARD.

CONTENTS.

(Mayer, p. 1463.)

Value, as per Mayer		1,323.00
Tank and scales.		
Value, as per Mayer		1,187.00
Water Meters.		
(Mayer, p. 1463)		
Value, as per Mayer		100.00
Coal Hoisting Apparatus, etc., Machinery and Buildings.		
(Mayer, p. 1463 and schedule)		
Cost, new, as per Mayer	55,000.00	
Depreciation, 70 per cent.		
Value		15,000.00

5154 OIL AND TAR STORAGE TANKS.

(Mayer, p. 1464).

2 wrought iron tanks.	
Value, as per Mayer	$1,868.00
8 wrought iron tanks.	
Value, as per Mayer	5,714.00
1 wrought iron tank.	
Value, as per Mayer	3,302.00
1 wooden tank.	
Value, as per Mayer	540.00
Piles under wooden tank.	
Value, as per Mayer	650.00
Wrought iron tanks.	
Value, as per Mayer	415.00

1 wooden well.
Value, as per Mayer.................. 150.00
Value, as per Mayer.................. 415.00

Piles under wooden tanks.
Value, as per Mayer.................. 519.00

Lead lining to tanks (Mayer, p. 1463).
Value 4,364.00

DEODORIZER HOUSE.

(Mayer, p. 1466).

Cast iron purifier.
Cost, new, per Mayer............... $4,760.00
Depreciation, 75 per cent.
Value 1,200.00

RECAPITULATION.

Value of all apparatus and contents as above at 42d Street station $370,357.25
Mr. Mayer gives as his value of all of above apparatus and contents (p. 1364)...................... 551,743.00
(Mayer, p. 1364).

5155 CONNECTIONS TO THE APPLIANCES IN THE PLANT.

Cast iron pipes and connections from 3 in. to 13 in. in diameter, 18,129 feet.
Cost, new ....
Depreciation
Value ....

Steel rivet pipes from 20 in. to 24 in. in diameter, 540 feet.
Cost, new ....
Depreciation
Value ....

Wrought iron pipes, 3 in. and less, 2,800 feet.
Cost, new ....
Depreciation
Value ....

Valves.
3 30 in., 34 24 in., 11 20 in., 15 16 in., 25 12 in., 3 10 in., 10 8 in.........
Cost, new ....
Depreciation
Value ....

RECAPITULATION.

Value of all of the above yard connections and connections to appliances	$22,950.00
Mr. Mayer (p. 1364) gives a total value of all of above connections of	134,157.00

HOLDERS AND BRICK TANK.

4 holders, 250,000 cu. ft. capacity. (Mayer, 1591 & 1364) Description as given.		
Cost	$73,900	
Depreciation, 10 per cent.		
Value		$66,500
5156 4 brick tanks for above holders. (Mayer, 1591 & 1364) Description as given.		
Cost	120,000	
Depreciation, 5 per cent.		
Value		114,000
1 steel tank holder. (Mayer, p. 1591-2)		
Value, as per Mayer		2,188

RECAPITULATION.

Value of all of the above tanks and holders	$182,688
Mr. Mayer (p. 1592 and 1364) gives value for above holders and tanks as	225,778

FORTY-FOURTH STREET PLANT.

Summary of Values, January, 1907.

Buildings	$261,743.00
Apparatus	357,485.00
Yard Connections	51,850.00
Holders and Tanks	439,800.00
	$1,110,878.00

FORTY-FOURTH STREET STATION BUILDINGS.

GOVERNOR HOUSE (Mayer, pgs. 1366 and 1516).

Octagonal building, 11 ft. 2½ in. between parallel sides; 16 ft. high.

Cost to build complete with new material	$3,300	
Depreciation, add to physical deterioration, 10 per cent.		
Value		$3,000

VALVE HOUSE (Mayer, pgs. 1366 and 1516).

Octagonal building, 9 ft. 7 in. between parallel sides, 18 ft. 6 in. high.

Cost, etc. $2,875
Depreciation, 10 per cent.
Value $2,600

5157 CARPENTER SHOP (Mayer, pgs. 1366 and 1516).

Two-story brick building, 26 ft. by 35 ft. 6 in. by 30 ft.

Cost, etc............................. $3,350
Depreciation, 10 per cent.
Value $3,000

LUMBER SHED (Mayer, pgs. 1366 and 1516).

25 ft. by 28 ft. by 22 ft.

Cost $415
Depreciation, 10 per cent.
Value $370

PURIFYING HOUSE (Mayer, pgs. 1366 and 1516).

One-story brick building, 155 ft. 9 in. by 65 ft. 8 in. by 30 ft.

Cost, etc............................. $28,000
Depreciation, 10 per cent.
Value $25,000

METER HOUSE (Mayer, pgs. 1366 and 1516).

Two-story brick building, 43 ft. 9 in. by 45 ft. 1 in. by 37 ft. 6 in.

Cost, etc............................. $14,000
Depreciation, 15 per cent.
Value $12,000

CONDENSER & SCRUBBER HOUSE.

(Mayer, pgs. 1366 and 1516.)

44 ft. 10 in. by 49 ft. 8 in. by 32 ft. 10 in.

Cost, etc............................. $14,700
Depreciation, 5 per cent.
Value $14,000

ENGINE, EXHAUST & BLOWER HOUSE.

(Mayer, pgs. 1366 and 1516.)

Cost, etc............................. $27,250
Depreciation, 5 per cent.
Value $26,000

5158 GENERATOR & BOILER HOUSE.

(Mayer, pgs. 1366 and 1516.)

Two-story brick building, 139 ft. 9 in. by 65 ft. 10 in. by 27 ft.

Cost, etc.	$44,830	
Depreciation, 15 per cent.		
Value		$38,000

RETORT HOUSE (Mayer, pgs. 1366 and 1516).

One-story brick building, 207 ft. by 65 ft. by 21 ft.

Cost, etc.	$32,000	
Depreciation, 15 per cent.		
Value		$27,500

COAL HOISTS (Mayer, pgs. 1366 and 1516).

Wooden frame structure.

Value	$228

(Mayer figure taken.)

CONCRETE MIXER & ENGINE BUILDING.

(Mayer, pgs. 1366 and 1516.)

25 ft. by 16 ft. by 9 ft.

Value	452

(Mayer's Figure taken.)

STORAGE TANK BUILDING.

(Mayer, pgs. 1366 and 1516.)

12 ft. by 12 ft. by 12 ft.

Value	$342

(Mayer's Figure taken.)

OIL PUMP HOUSE (Mayer, pgs. 1366 and 1517).

28 ft. 9 in. by 18 ft. 9 in. by 27 ft. 3 in.

Cost, etc.	$3,300	
Depreciation, 15 per cent.		
Value		$2,800

5159 TAR SEPARATORS (Mayer, pgs. 1316 and 1517).

Foundations, etc.

Cost, etc.	
Value	$1,775

(Mayer's Figure taken).

COAL SHED (Mayer, pgs. 1316 and 1517).

Frame structure, 118 ft. 9 in. by 69 ft. 9 in. by 32 ft. high.

Cost, etc.	12,000	
Depreciation, 25 per cent.		
Value		$9,000

SCALE BUILDING (Mayer, pgs. 1367 and 1517).

Cost, etc.	$200	
Depreciation, 10 per cent.		
Value		$180

WATER TOWER (Mayer, pgs. 1367 and 1517).

Two-story circular brick building, 20 ft. diameter by 25 ft. high.

Cost, etc.	$2,260	
Depreciation, 10 per cent.		
Value		$2,000

EXHAUSTER HOUSE (Mayer, pgs. 1367 and 1517).

Two-story brick building, 25 ft. by 27 ft. by 20 ft.

Cost, etc.	$4,000	
Depreciation, 15 per cent.		
Value		$3,400

LIME SHED (Mayer, pgs. 1367 and 1517).

104 ft. by 75 ft. by 14 ft.

Cost, etc.	$2,000	
Depreciation, 10 per cent.		
Value		$1,800

5160 PURIFYING AND METER HOUSE.

(Mayer, pgs. 1367 and 1517.)

Brick building, 132 ft. 3 in. by 65 ft. by 25 ft. 6 in.

Cost, etc.	$35,600	
Depreciation, 15 per cent.		
Value		$30,000

STABLE (Mayer, pgs. 1367 and 1517).

60 ft. by 45 ft. by 20 ft.

Cost, etc.	$15,000	
Depreciation, 10 per cent.		
Value		$13,500

TOOL SHOP (Mayer, pgs. 1317 and 1517).

One-story brick building, 37 ft. 7 in. by 26 ft. by 16 ft.

Cost, etc.	$1,500	
Depreciation, 10 per cent.		
Value		$1,350

STORE HOUSE (Mayer, pgs. 1367 and 1517).

Brick building, 24 ft. by 24 ft. 3 in. by 16 ft. 3 in.

Cost, etc.	$1,200	
Depreciation, 25 per cent.		
Value		$800

SMALL BRICK BUILDING.

(Mayer, pgs. 1367 and 1517.)

10 ft. by 10 ft. by 20 ft.

Cost, etc.	$400	
Depreciation, 15 per cent.		
Value		$340

FRAME SHED (Mayer, pgs. 1367 and 1517).

10 ft. by 8 ft. by 8 ft.

Cost, etc.	$250	
Depreciation, 5 per cent.		
Value		$235

5161 BLACKSMITH SHOP (Mayer, pgs. 1367 and 1517).

Frame building, 15 ft. by 35 ft. by 16 ft.

Cost, etc.	$500	
Depreciation, 60 per cent.		
Value		$200

PIPE HOUSE (Mayer, pgs. 1367 and 1517).

Value (as per Mayer)	$55

PUMP HOUSE (Mayer, pgs. 1367 and 1517).

Value (as per Mayer)	$44

BRICK WALLS AROUND WORKS.

(Mayer, pgs. 1367 and 1517.)

(Includes all improvements.)

Value	$35,000

ALL BRICK WALLS & TIMBER FENCES.

(Mayer, pg. 1517.)

Value (as per Mayer)............	$2,860

SHED OVER OIL TANKS.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$188

FOUNDATIONS FOR SALT WATER CONDENSER.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$489

FOUNDATION FOR HOT SCRUBBER.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$353

FOUNDATIONS FOR AIR CONDENSER.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$752

5162

BRICK DRAINAGE TANK.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$2,032

DRAUGHT FAN ROOM.

(Mayer, pgs. 1367 and 1517.)

Value (as per Mayer)............	$98

RECAPITULATION.

Value of all buildings, including all foundations for buildings and apparatus..........................	$261,743

(Mr. Mayer has given as to value of above, pp. 1368 & 1518, $407,767.)

APPARATUS.

(Mayer, p. 1368.)

Value, as per Mayer.................	$1,520.00

GOVERNOR HOUSE.

(Mayer, p. 1520.)

Value, as per Mayer.................		1,572.00

POWER HOUSE.

(Mayer, p. 1520.)

Contents.		
Value, as per Mayer.................		48.00

CARPENTER SHOP.

Contents.		
Value, as per Mayer.................		95.00

PURIFIER HOUSE.

(Mayer, p. 1520.)

8 purifier boxes, as described.		
Cost	28,000	
Depreciation, due to physical deterioration, 10 per cent.		
Value		25,000

5163 METER HOUSE.

(Mayer, p. 1520).

Contents.		
2 14 ft. x 14 ft. station meters, as described.		
Cost, etc.	$10,000	
Depreciation, etc., 15 per cent.		
Value		8,500
1 16 in. Wiley proportional meter and 1 small meter as described.		
Cost	6,000	
Depreciation, 15 per cent.		
Value		5,000
Office Furniture.		
(Mayer, p. 1521)		
Value, as per Mayer.................		760.00
1 bar photometer.		
(Mayer, p. 1521)		
Value, as per Mayer.................		650.00

CONDENSER AND SCRUBBER HOUSE.

CONTENTS.

(Mayer, p. 1521).

2 scrubbers, as described.		
Cost		
Depreciation, etc.		
Value		$2,400.00
2 rectangular condensers as described..	2,400	
Cost, as per Mayer..................	31,752.00	
Depreciation, 15 per cent.		
Value		26,000.00
1 Westinghouse gas meter.		
(Mayer, p. 1523)		
Value, as per Mayer................		350.00
5164 1 Pelouze & Andouin condenser.		
Cost new	1,260	
Depreciation, etc., 15 per cent.		
Value		1,071.00
Value, as per Mayer................	$1,197	

ENGINE, EXHAUSTER & BLOWER HOUSE.

2 vertical engines, made by Rowland, as described.		
Cost, new	$1,320	
Depreciation, etc., 10 per cent.		
Value		$1,188
2 Payne engines, as described.		
(Mayer, 1524)		
Cost, new	$2,750	
Depreciation, etc., 10 per cent.		
Value		2,475
1 horizontal Buck-eye engine as described.		
(Mayer, 1524)		
Cost, new	$1,800	
Depreciation, 10 per cent.		
Value		1,620
2 McKenzize exhausters.		
Cost, per Mayer..................	3,410	
Value, as per Mayer................		3,410
3 No. 10 Sturtevant blowers, as described.		
Value, as per Mayer................		1,800

1 steel blast flue.	
Value, as per Mayer................	290
1 comp. duplex pump, as described.	
Value, as per Mayer................	670
1 Davidson pump, as described. (Mayer, 1525)	
Value, as per Mayer................	772

5165 EXHAUSTER HOUSE AND BLOWER HOUSE CONTENTS.

(Mayer, 1525).

Knolls duplex pump.	
Value, as per Mayer................	$656
1 Spencer automatic damper.	
Value, as per Mayer................	250
Value	75
1 McClellan oil purifier tank.	
Value, as per Mayer................	53
1 Gild & Garrison pump.	
Value, as per Mayer................	210
1 10 x 16 Blake pump.	
Value, as per Mayer................	650
Counter shafting, pulleys, etc.	
Value, as per Mayer................	135

GENERATOR AND BOILER HOUSE CONTENTS.

(Mayer, 1525).

2 8 ft. 6 in. U. G. I. Co. sets.		
Cost, new	$20,000	
Depreciation, 10 per cent.		
Value		$18,000
4 12 ft. U. G. I. Co. sets.		
Cost, new	52,000	
Depreciation, 10 per cent.		
Value		47,000
4 Hazleton porcupine boilers, 200 h. p. (Mayer, 1526)		
Cost, new	10,000	
Depreciation, 15 per cent.		
Value		8,500

2 hydraulic lifts.		
(Mayer, 1526)		
Value as per Mayer		
Cost, new	2,000	
Depreciation, 10 per cent.		
Value		1,800
5166 Cast iron charging floor.		
(Mayer, 1527)		
Value, as per Mayer	112.34	
Not included in this schedule, as it appears as part of building.		
Retort.		
(Mayer, 1526)		
10 benches of sixes as described.		
House standing not down.		
Cost, new	21,000	
Depreciation, 15 per cent.		
Value		18,000
2 Altman & Taylor boilers.		
(Mayer, 1528)		
Cost, new	5,000	
Depreciation, 5 per cent.		
Value		4,750
2 horizontal porcupine boilers.		
(Mayer, 1528)		
Cost, new	5,000	
Depreciation, 10 per cent.		
Value		4,500
1 No. 10 Sturtevant Blower.		
Value as per Mayer		$600
1 Armington & Sims Engine.		
Cost, new	1,200	
Depreciation, 10 per cent.		
Value		$1,080
1 No. 4 Garrison Pump.		
Value as per Mayer		$190
1 Berryman Heater (Mayer, 1529).		
Value as per Mayer		$195
Air and Salt Water Condenser (Mayer, 1529).		
Value as per Mayer		$10,290
1 Salt Water Condenser (Mayer, 1529).		
Value as per Mayer		$8,036

5167 Coal Hoisting Apparatus. (Mayer, 1529.)		
Value as per Mayer...............		$7,876

WATER TOWER CONTENTS:

(Mayer, 1530.)

1 Blake Pump.		
Value as per Mayer.................		$1,740
1 Worthington Pump, etc.		
Value as per Mayer...............		$423
1 Tank.		
Value as per Mayer...............		$1,200

EXHAUSTER AND BOILER HOUSE.

1 24-in. McKenzie Exhauster.		
Cost as per Mayer..................		$1,705
Value		$1,615
1 8 x 8 Greenfield Engine.		
Cost, new	$700	
Depreciation, 15 per cent.		
Value		$585
2 Vertical Boilers (Mayer, p. 1530).		
Value as per Mayer................		$399

LIME AND OXIDE SHED CONTENTS.

(Mayer, 1530.)

1 Knoll's Compressor.		
Value as per Mayer................		$2,750

PURIFIER SHED.

(Mayer, 1530.)

4 Cast Iron Purifier Boxes as Described.		
Cost, new	$13,000	
Depreciation, 10 per cent.		
Value		$11,700
5168 2 Hydraulic Carriages.		
Cost new	$2,000	
Depreciation, 10 per cent.		
Value		$1,800

METER HOUSE CONTENTS.

(Mayer, 1531.)

1 14-ft. Diameter Meter, Continental Iron Works.		
Cost new	$5,000	
Depreciation, 15 per cent.		
Value		$4,250
2 Sturtevant Blowers.		
Value as per Mayer		$360
3 Dismantled Beam Engines.		
Value as per Mayer		$863
Cost new as per Mayer	$1,150	
Depreciation, 90 per cent.		
Value		$115

STABLE CONTENTS.

(Mayer, 1531.)

23 Stalls.	
Value as per Mayer	$437

TOOL SHOP CONTENTS.

Value as per Mayer	$1,463

STORE HOUSE AND ANNEX CONTENTS.

(Mayer, 1531.)

Value as per Mayer	$420

OIL TANKS UNDER GROUND.

(Mayer, 1531.)

Value as per Mayer	$14,232

5169 OIL TANKS OVER GROUND.

(Mayer, 1532.)

Value as per Mayer	$846

FILTER PRESS HOUSE CONTENTS.

(Mayer, 1532.)

Value as per Mayer	$850
Tar and Oil System.	
Value as per Mayer	$1,662

PUMP SHED CONTENTS.

(Mayer, 1532.)

Value as per Mayer.................. $358

BLACKSMITH SHOP.

(Mayer, 1532.)

Value as per Mayer.................. $287

POWER HOUSE CONTENTS.

(Mayer, 1532.)

Worthington Pump.
Value as per Mayer................ $468

Cameron Pump.
Value as per Mayer................ $360

OIL TANKS CONSTRUCTED OF STEEL SET IN CIRCULAR PIT.

(Mayer, 1532.)

Value as per Mayer.................. $9,263

5170 CONCRETE MIXER HOUSE CONTENTS.

(Mayer, 1532.)

1 Sturtevant Blower.
Value as per Mayer................ $157

1 Concrete Mixer.
Value as per Mayer................ $380

3 Storage Tar Tanks.
(Mayer, p. 1533.)
Value as per Mayer................. $1,756

OIL PUMP HOUSE.

CONTENTS.

(Mayer, p. 1533.)

2 Steel Tanks.
Value as per Mayer................ $1,218

2 Davidson Pumps.
Value as per Mayer... .... $275

2 Cameron Pumps.
Value as per Mayer................ $314

1 Worthington Pump.
Value as per Mayer................ $197

1 Cameron Pump.
Value as per Mayer................ $314

1 Wothington Duplex.
Value as per Mayer................ $128

1 Cameron No. 9.
Value as per Mayer................ $325

Tar Separator System.
(Mayer, p. 1534.)
Value as per Mayer................ $2,250

1 10-ton Scale.
Value as per Mayer................ $300

Force Draft Plant.
Value as per Mayer................ $950

5171 RECAPITULATION.

Value of all apparatus and contents of plant as above. $357,485.00
Mr. Mayer (pp. 1368 and 1534) gives value of above as $409,175.00

CONSOLIDATED GAS COMPANY.

FORTY-FOURTH STREET STATION.

(Mayer, p. 1368.)

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

Cast iron pipe—4 in. to 36 in. diameter, 9117 feet.
Cost, new ....
Depreciation,
Value ....

Steel riveted pipe—16 in. to 30 in. diameter, 600 feet.
Cost, new ....
Depreciation,
Value ....

Wrought iron pipe—1½ in. to 12 in. diameter, 8,702 feet.
Cost, new ....
Depreciation,
Value ....

Valves—68 ½ in., 37 2 in., 36 2½ in., 45 3 in., 58 4 in., 10 5 in., 34 6 in., 7 7 in., 18 8 in., 4 12 in., 9 16 in., 12 20 in., 77 24 in., 1 30 in.

RECAPITULATION.

Value of all the above yard connections and connections to appliances	$51,850.00
Mr. Mayer (p. 1369) gives a value for all of above connections of	99,910.00

5172 HOLDERS AND BRICK TANKS.

4 holders. 375,000 cu. ft. capacity each (Mayer, 1592 & 1369) Description as given.		
Cost	$75,000	
Depreciation, 10 per cent.		
Value		$67,500
1 holder. 2,000,000 cu. ft. capacity (Mayer, 1592 & 1369) Description as given.		
Cost	84,000	
Depreciation, 10 per cent.		
Value		75,600
2 holders. 125,000 cu. ft. capacity (Mayer, 1592 & 1369)		
Cost	25,250	
Depreciation, 10 per cent.		
Value		22,700
4 brick tanks for first four of above holders (Mayer, 1592 & 1369) Description as given.		
Cost	124,000	
Depreciation,		
Value		124,000
1 brick tank for 2,000,000 ft. capacity holder (Mayer, 1592 & 1357) Description as given.		
Cost	100,000	
Depreciation,		
Value		100,000

5173 2 brick tanks for 125,000 cu. ft. holders
(Mayer, 1592 & 1369)

Description as given.		
Cost	50,000.00	
Depreciation,		
Value		50,000

RECAPITULATION.

Value of all of the above holders and tanks	$439,800.00
Mayer (p. 1592 & 1369) gives a total cost of all holders, with their accompanying tanks, etc., as	814,929.00

5174 TWENTY-FIRST STREET PLANT.

Summary of Values, January, 1907.

Buildings	$646,708.00
Apparatus	913,284.00
Yard Connections	146,400.00
Holders & Tanks	470,100.00
	$2,176,492.00

BUILDINGS.

STOVE SHOP.

(Mayer, pp. 1370 and 1475.)

1-story building, 212 ft. 6 in. x 50 ft. x 20 ft.		
Cost, etc.	$27,000	
Depreciation, 20 per cent.		
Value		$21,600

METER SHOP.

(Mayer, pp. 1370 and 1475).

1-story brick building, 212 fe-t 6 in. x 50 ft. x 20 ft.		
Cost, etc.	$31,500	
Depreciation, 10 per cent.		
Value		$28,300

STOVE REPAIR SHOP.

(Mayer, pp. 1370 and 1476).

1-story and part 2-story building, dimensions as given.		
Cost, etc.	$15,500	
Depreciation, 20 per cent.		
Value		$12,000

STOVE CLEANING ROOM.

(Mayer, pp. 1370 and 1476).

51 ft. x 14 ft. x 20 ft.
Cost, etc. $750
Depreciation, 10 per cent.
Value $675

5175

DIAPHRAGM ROOM.

(Mayer, pp. 1370 and 1476).

Value included in Stove Repair Shop.

PREPAYMENT METER REPAIR SHOP.

(Mayer, pp. 1370 and 1476).

Costs, etc. $5,500
Depreciation, 15 per cent.
Value $4,750

STORAGE ROOM.

(Mayer, pp. 1370 and 1476).

20 ft. x 51 ft.
Cost, etc. $1,200
Depreciation, 15 per cent.
Value $1,000

WASH ROOM.

(Mayer, pp. 1370 and 1476).

12 ft. x 51 ft.
Cost, etc. $800
Depreciation, 10 per cent.
Value $720

BOILER HOUSE.

(Mayer, pp. 1370 & 1476).

Brick building, 40 ft. x 58 ft. x 20 ft.
Cost, etc. $7,900
Depreciation, 20 per cent.
Value $6,300

OIL STORAGE HOUSE.

(Mayer, pp. 1371 & 1476).

12 ft. x 14 ft. x 7 ft.
Cost, etc. $200
Depreciation, 5 per cent.
Value $190

5176 LEAD HOUSE.

(Mayer, pp. 1371 & 1476).

22 ft. x 17 ft. x 10 ft.

Cost, etc.	$460	
Depreciation, 5 per cent.		
Value		$440

FIRE HOSE HOUSE.

(Mayer, pp. 1376 & 1476).

5 ft. x 5 ft. x 6 ft.

Cost, etc.	$40	
Depreciation, 5 per cent.		
Value		$38

VALVE HOUSE.

(Mayer, pp. 1371 & 1476).

21 ft. 9 in. x 28 ft. x 11 ft.

Cost, etc.	$2,300	
Depreciation, 15 per cent.		
Value		$2,000

OCTAGONAL VALVE HOUSE.

(Mayer, pp. 1371 & 1476).

Brick building, 10 ft. 3 in. between parallel sides, 25 ft. high.

Cost, etc.	$2,600	
Depreciation, 10 per cent.		
Value		$2,350

ANOTHER VALVE HOUSE.

(Mayer, pp. 1371 & 1476).

Brick building, 15 ft. 6 in. x 10 ft. x 12 ft.

Cost, etc.	$640	
Depreciation, 10 per cent.		
Value		$575

5177 TIN SMITH SHOP.

(Mayer, pp. 1371 & 1477).

26 ft. x 28 ft. x 25 ft.

Cost, etc.	$2,900	
Depreciation, 15 per cent.		
Value		$2,500

STORE ROOM.

(Mayer, pp. 1371 & 1477).

Cost, etc.	$300	
Depreciation, 15 per cent.		
Value		$255

PAINT SHOP.

(Mayer, pp. 1371 & 1477).

Cost, etc.	$300	
Depreciation, 15 per cent.		
Value		$255

OFFICE BUILDING.

(Mayer, pp. 1371 & 1477).

47 ft. 4 in. x 51 ft. x 26 ft. 6 in. high.

Cost, etc.	$14,000	
Depreciation, 5 per cent.		
Value		$13,300

ENGINE ROOM, MACHINE SHOP & GANGWAY.

(Mayer, pp. 1371 & 1477).

150 ft. x 74 ft. x 46 ft. x 44 ft. x 25 ft. high.

Cost, etc.	$39,300	
Depreciation, 10 per cent.		
Value		$35,000

5178

OLD RETORT HOUSE.

(Mayer, pp. 1371 & 1477).

306 ft. x 54 ft. x 23 ft.

Cost, etc.	$35,000	
Depreciation, 15 per cent.		
Value		$30,000

FOUNDATIONS FOR BENCHES IN OLD RETORT HOUSE.

(Mayer, p. 1477.)

Value included in appraisal of Old Retort House.

NEW SHOP BUILDING.

(Mayer, pp. 1371 & 1477).

47 ft. x 57 ft. x 15 ft.

Cost, etc.	$5,000	
Depreciation, 3 per cent.		
Value		$4,850

OLD CARBURETTER HOUSE.

(Mayer, pp. 1371 & 1477).

38 ft. square.

Cost, etc.	$6,000	
Depreciation, 20 per cent.		
Value		$4,800

GENERATOR HOUSE.

(Mayer, pp. 1371 & 1477).

204 ft. x 50 ft. x 30 ft.

Cost, etc.	$63,500	
Depreciation, 15 per cent.		
Value		$54,000

5179 BUILDING OVER BOILER AND COKE STORAGE.

(Mayer, pp. 1371 & 1478.)

307 ft. 3 in. x 68 ft. x 25 ft. high.

Cost etc.	$40,000	
Depreciation, 15 per cent.		
Value		$34,000

GENERATOR HOUSE (22d Street).

(Mayer, pp. 1371 & 1478.)

204 ft. x 74 ft. x 30 ft.

Cost etc.	$65,500	
Depreciation, 15 per cent.		
Value		$55,000

RETORT HOUSE (22d Street).

(Mayer, pp. 1371 & 1478.)

307 ft. 3 in. x 74 ft. x 25 ft.

Cost, etc.	$42,000	
Depreciation, 15 per cent.		
Value		$36,000

PUMP HOUSE.

(Mayer, pp. 1371 & 1478.)

Two-story brick building, 20 ft. x 38 ft. x 29 ft. 4 in.

Cost, etc.	$4,500	
Depreciation, 10 per cent.		
Value		$4,000

NO. 1 SHED.

(Mayer, pp. 1371 & 1478.)

185 ft. 6 in. x 66 ft. x 28 ft. 6 in.

Cost, etc.	$30,000	
Depreciation, 50 per cent.		
Value		$15,000

5180

NO. 2 SHED.

(Mayer, pp. 1371 & 1478.)

Cost, etc.	$30,000	
Depreciation, 50 per cent.		
Value		$15,000

NO. 3 SHED.

(Mayer, pp. 1371 & 1478.)

Cost, etc.	$30,000	
Depreciation, 50 per cent.		
Value		$15,000

NO. 4 SHED.

(Mayer, pp. 1371 & 1478.)

Cost, etc.	$30,000	
Depreciation, 50 per cent.		
Value		$15,000

NO. 5 SHED.

(Mayer, pp. 1371 & 1478.)

Cost, etc.	$30,000	
Depreciation, 50 per cent.		
Value		$15,000

PURIFIER HOUSE.

(Mayer, pp. 1371 & 1478.)

185 ft. 6 in. x 66 ft. x 44 ft. high.

Cost, etc.	$38,000	
Depreciation, 20 per cent.		
Value		$30,000

CONDENSER AND SCRUBBER HOUSE.

(Mayer, pp. 1372 & 1478.)

185 ft. 6 in. x 66 ft. x 44 in. high.

Cost, etc.	$40,000	
Depreciation, 20 per cent.		
Value		$32,000

5181

PURIFIER HOUSE.

(Mayer, pp. 1372 & 1478.)

185 ft. 6 in. x 66 ft. x 44 ft. high.

Cost, etc.......................... $38,000
Depreciation, 25 per cent.
Value $30,000

METER HOUSE.

(Mayer, pp. 1372 & 1478.)

92 ft. x 72 ft. x 28 ft. high.

Cost, etc.......................... $17,000
Depreciation, 15 per cent.
Value $15,000

SHAVING SCRUBBER HOUSE.

(Mayer, pp. 1372 & 1478.)

185 ft. 6 in. x 66 ft. x 35 ft.

Cost, etc.......................... $22,000
Depreciation, 30 per cent.
Value $15,000

EXHAUSTER HOUSE.

(Mayer, pp. 1372 & 1478.)

Two-story brick, 64 ft. 4 in. x 49 ft. 10 in. x 41 ft. 3½ in. high.

Cost, etc.......................... $20,000
Depreciation, 10 per cent.
Value $18,000

COAL SHED.

(Mayer, pp. 1372 & 1479.)

150 ft. x 68 ft. x 34 ft. high.

Cost, etc.......................... $35,500
Depreciation, 25 per cent.
Value $26,000

5182

WATER TOWER.

(Mayer, pp. 1372 & 1479.)

Circular brick building, 20 ft. diameter, 25 ft. high.

Cost, etc.......................... $4,500
Depreciation, 50 per cent.
Value $2,250

Excavating, curbing and leveling for 12 Oil Tanks.

(Mayer, pp. 1372 & 1479.)

Value as per Mayer's appraisal......	$8,118

Excavation for 10 Separating Tanks.

(Mayer, pp. 1372 & 1479.)

Value as per Mayer's appraisal......	$8,462

One foundation for additional Oil Tank.

(Mayer, pp. 1372 & 1479.)

Value as per Mayer's appraisal......	5,000

One foundation for Steel Tank.

(Mayer, pp. 1372 & 1479.)

Value as per Mayer's appraisal......	980

TWENTY-FIRST STREET STATION.

RECAPITULATION.

Value of all buildings with new material complete, including foundations for buildings and all apparatus.......	$621,708	
Add for sewers, drainage, flagging grass plots and other miscellaneous improvements, including surfacing, etc.	25,000	
Value of all the above................		$646,708
Value given by Mr. Mayer for above, page 1372.....................		$1,579,695

5183

CONSOLIDATED GAS COMPANY.

TWENTY-FIRST STREET STATION.

APPARATUS.

(Mayer, pp. 1372, 1485.)

Value of engines and all apparatus as described (pp. 1485, 1486) down to contents of boiler houses.		
Cost, as per Mayer.................	$31,900.00	
Depreciation, 15 per cent.		
Value		$27,000.00

WATER HOUSE.

Contents.

(Mayer, p. 1487.)

2 60 h. p. boilers.		
Cost, as per Mayer	2,710.00	
Depreciation, 20 per cent.		
Value		2,200.00
1 3 in. Worthington water meter.		
Value, as per Mayer		50.00
2 steel stacks.		
Value, as per Mayer		96.00
Fire brick blocks.		
Value, as per Mayer		780.00

OIL STORAGE HOUSE.

Contents.

(Mayer, p. 1487.)

Value, as per Mayer	50.00

LEAD HOUSE.

Contents.

(Mayer, p. 1487.)

Value, as per Mayer	$250.00

5184

FIRE HOUSE.

Contents.

(Mayer, p. 1488.)

Value, as per Mayer	250.00

VALVE HOUSE.

Contents.

(Mayer, p. 1488.)

Photometer closet, etc.	
Value, as per Mayer	650.00
Pressure gauges.	
Value, as per Mayer	10.00
Bristol Recording Gauge.	
Value, as per Mayer	35.00
Electrical pressure indicator.	
Value, as per Mayer	250.00

OCTAGONAL VALVE HOUSE.

(Mayer, p. 1488.)

Value, as per Mayer..................		400.00

TIN SMITH SHOP.

Contents.

(Mayer, p. 1488.)

Value, as per Mayer..................		550.00

STORE ROOM.

Contents.

(Mayer, p. 1488.)

Value, as per Mayer..................		60.00

5185

OFFICE BUILDING.

Contents.

(Mayer, p. 1488.)

Cost, as per Mayer....................	1,650.00	
Depreciation, 20 per cent.		
Value		1,320.00

CHEMICAL APPARATUS—COMPLETE LABORATORY.

Cost, as per Mayer....................	4,000.00	
Depreciation, 20 per cent.		
Value		3,200.00

ENGINE ROOM.

Contents.

(Mayer, p. 1489.)

Knowles feed pump.		
Cost, as per Mayer................	840.00	
Depreciation, 10 per cent.		
Value		756.00
Blake compound feed pump.		
Cost, as per Mayer................	996.00	
Depreciation, 10 per cent.		
Value		900.00
Cameron pump.		
Value, as per Mayer...............		286.00
Connersville exhausters.		
Value, as per Mayer...............		5,753.00

2 Buckeye engines.		
Cost, as per Mayer.................	6,182.00	
Depreciation, 15 per cent.		
Value, as per Mayer...............		5,355.00
3 Mackenzie exhausters.		
Value, as per Mayer...............		5,000.00
5186 3 Rowland engines.		
Cost, as per Mayer................	3,642.00	
Depreciation, 15 per cent.		
Value		3,100.00
2 leather belts.		
Value, as per Mayer..................		275.00
1 leather belt.		
Value, as per Mayer...............		85.00
2 Mackenzie exhausters.		
Value, as per Mayer...............		2,607.00
2 vertical engines.		
Value, as per Mayer...............		388.00
1 Armington & Simms engine.		
Cost, as per Mayer................	1,155.00	
Depreciation, 15 per cent.		
Value		980.00
3 Buckeye engines.		
Cost, as per Mayer................	12,144.00	
Depreciation, 15 per cent.		
Value		10,323.00
3 Sturtevant blowers.		
Cost, as per Mayer................	5,950.00	
Depreciation, 15 per cent.		
Value		4,900.00
2 Cameron pumps.		
Value, as per Mayer...............		1,126.00
1 slate gauge board.		
Value, as per Mayer...............		120.00
Steam water pressure gauges, etc. (Mayer, p. 1491)		
Value, as per Mayer...............		4,500.00
3 belts.		
Value, as per Mayer...............		396.00
Blast piping.		
Value, as per Mayer...............		1,094.00

5187

MACHINE SHOP.

Contents.

(Mayer, p. 1491).

Cost, as per Mayer	5,935.00	
Depreciation, 10 per cent.		
Value		5,350.00

OLD RETORT HOUSE.

Contents.

(Mayer, p. 1492).

2 stacks of 8 benches of sixes, 32 single benches.		
Cost to build, new	48,000	
Depreciation, 10 per cent.		
Value		43,200.00
Worthington duplex fire pump.		
Value, as per Mayer		170.00
2 drill pumps.		
Value, as per Mayer		152.00

SMITH SHOP.

Contents.

(Mayer, p. 1492).

Value, as per Mayer	$1,376.00

NEW SHOP BUILDING.

Contents.

(Mayer, p. 1492).

Value, as per Mayer	823.00

CARBURETTER SHOP.

Contents.

(Mayer, p. 1492).

Air compressor.	
Value, as per Mayer	2,612.00
5188 Cameron pump.	
Value, as per Mayer	2,612.00

Knowles pump.		
Value, as per Mayer...............		4,180.00
2 rectangular pumps. (Mayer, p. 1493)		
Value, as per Mayer...............		283.00
2 rectangular tanks.		
Value, as per Mayer...............		77.00
1 steel trap.		
Value, as per Mayer...............		50.00

RETORT HOUSE ON 22D STREET.

CONTENTS.

3 Salt water condensers, dimensions as given.		
Cost, as per Mayer................	$92,120	
Depreciation, 10 per cent.		
Value		$82,900
1 similar condenser.		
Cost, as per Mayer.................	30,700	
Depreciation, 10 per cent.		
Value		27,600

GENERATOR HOUSE.

Machines 6-13.

CONTENTS.

(Mayer, p. 1493).

8 sets Lowe water gas apparatus with 12 ft. generators, 16 ft. high; 11 ft. carbureters, 16 ft. high; 11 ft. superhouse, 25 ft. high; 8 wash boxes, 4 ft. high.		
Cost, new	$132,000	
Depreciation, 10 per cent.		
Value		$118,880
5189 Cast iron floors and columns surrounding machines.		
Value, as per Mayer.............	47,520	
Not included in apparatus, as value as set down in building schedule.		
2 hydraulic elevators.		
Value, as per Mayer..............		3,800

2 Cameron pumps.	
Value, as per Mayer	162
Small gas piping, etc.	
(Mayer, p. 1494)	
Value, as per Mayer	279.00
Industrial Railway.	
(Mayer, p. 1494)	
Value as per Mayer	342.00

BUILDING OVER BOILER AND COKE STORAGE HOUSE.

CONTENTS.

2 Babcock & Wilcock boilers, 500 h. p.		
Cost	$12,000.00	
Depreciation, 5 per cent.		
Value		$11,400.00
2 new boilers, 600 h. p.		
Cost, new	15,000.00	
Depreciation, none.		
Value		15,000.00
2 A. & T. boilers, 500 h. p.		
Cost	12,000.00	
Depreciation, 5 per cent.		
Value		11,400.00
2 steel stacks.		
Value, as per Mayer		3,440.00
2 breeches for stacks.		
(Mayer, p. 1498)		
Value, as per Mayer		887.00
5190 1 additional stack.		
Value, as per Mayer		573.00
2 A. & S. engines.		
Cost, as per Mayer	2,310.00	
Depreciation, 15 per cent.		
Value		1,965.00
2 fan blowers.		
Value, as per Mayer		902.00
3 presses.		
Value, as per Mayer		2,422.00
1 tar head.		
Value, as per Mayer		440.00

1 horizontal engine.		
Value, as per Mayer		250.00
1 cast iron tank.		
Value, as per Mayer		2,320.00
2 wrought iron tanks.		
(Mayer, p. 1496)		
Value, as per Mayer		150.00
1 wrought iron rectangular tank.		
Value, as per Mayer		626.00
3 No. 4 Cameron pumps.		
Value, as per Mayer		784.00
200 ft. Industrial Railway track.		
Value, as per Mayer		1,649.00

GENERATOR HOUSE ON 22D STREET.

CONTENTS.

(Mayer, p. 1496).

5 sets Lowe water gas apparatus.		
13 ft. x 16 ft. 6 in. generators.		
Cost, new	$77,500	
Depreciation, 10 per cent.		
Value		70,000
5191 1 experimental oil gas apparatus.		
(Mayer, p. 1497)		
Cost, new	8,000	
Depreciation, 90 per cent.		
Value		800
6 Hazelton boilers, 250 h. p. each		
Cost, new	18,000	
Depreciation, 5 per cent.		
Value		17,100
1 Cameron pump.		
Value, as per Mayer		82
1 Cameron pump.		
Value, as per Mayer		85
1 Worthington pump.		
Value, as per Mayer		87
Item No. 13.		
(Mayer, p. 1497)		
Pipe charging station, etc.		
Value, as per Mayer		47,520

RETORT HOUSE ON 22D STREET.

(Mayer, 1497).

20 single benches of sixes.		
Cost, new	$30,000	
Depreciation, 10 per cent		
Value		$27,000
40 enameled wash basins.		
(Mayer, 1498)		
Value, as per Mayer		2,420
2 tar separater tanks.		
Value, as per Mayer		3,226
1 Worthington pump.		
Value, as per Mayer		299
5192 2 Cameron pumps.		
Value, as per Mayer		836
1 Cameron pump.		
Value, as per Mayer		522
1 Worthington pump.		
Value, as per Mayer		337
2 Cameron pumps.		
(Mayer, 1500)		
Value, as per Mayer		161
1 Cameron pump.		
Value, as per Mayer		275
Oil tank.		
(Mayer, 1500)		
Value, as per Mayer		176

PUMP HOUSE CONTENTS.

2 Worthington pumps.	
Value, as per Mayer	338
1 Cameron pump.	
Value, as per Mayer	522
1 Blake pump.	
Value, as per Mayer	237
2 Knoll's pumps.	
Value, as per Mayer	356
2 Cameron pumps.	
Value, as per Mayer	161

1 Cameron pump. Value, as per Mayer		366
2 wrought iron tanks. Value, as per Mayer		620
1 Foster pump. Value, as per Mayer		388
2 wrought iron tanks. Value, as per Mayer		345

5193

SHED Nos. 1, 2, 3 and 4, CONTENTS.

(Mayer, 1501)

1 elevator. Value, as per Mayer		$1,195
1 Cameron pump. Value, as per Mayer		444
1 elevator. Value, as per Mayer		1,995
1 boiler. Value, as per Mayer		478
1 accumulator. Value, as per Mayer		1,196

PURIFIER HOUSE CONTENTS.

(Mayer, p. 1502)

8 boxes, 22 x 36 x 3 top with wrought iron covers, cast iron columns and beams.		
2 sets of hydraulic lifting gears and 2 36 in. centre seals.		
Cost, new	$43,000	
Depreciation, 5 per ce		
Value		41,000

CONDENSER AND SCRUBBER HOUSE CONTENTS.

(Mayer, 1503-4-5).

2 scrubbers and 6 condensers.		
Value, as per Mayer, after making corrections and deductions (p. 1505)	$92,280	
Less	16,380	
		81,900
1 oil gas meter. Value, as per Mayer		3,850

Steel tank.
(Mayer, 1509.)
Value, as per Mayer............... $1,850

12 Steel tanks.
(Mayer, 1509-1512.)
Value, as per Mayer............... $16,270

10 Steel tanks.
(Mayer, 1509.)
Value, as per Mayer............... $15,115

Steel tank.
(Mayer, 1509.)
Value, as per Mayer.............. $1,475

RECAPITULATION.

Value of all apparatus and contents of plant as above $913,284.00
Mr. Mayer gives value of above (p. 1372) as...... $1,139,677.00

CONSOLIDATED GAS COMPANY.

TWENTY-FIRST STREET STATION.

(Mayer, p. 1373.)

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

Cast iron pipe.
8 in. to 36 in. in diameter, 6,624 ft.
Cost new ....
Depreciation,
Value ....

5197 Steel riveted pipe.
16 in. to 36 in. diameter, 4,772 ft.
Cost new ....
Depreciation,
Value ....

Wrought iron pipe.
1½ in. to 12 in. diameter, 1,550 ft.
Cost new ....
Depreciation,
Value ....

Valves.
16 12-in., 5 16-in., 1 18-in., 18 20-in., 48 24-in., 113 30-in., 27 36-in., 12 36-in. regulator valve.

RECAPITULATION.

Value of all of the above yard connections and connections to appliances........................ $146,400.00

Mr. Mayer (1373) gives value for all of above yard connections, etc., as........................ $218,201.00

HOLDERS AND BRICK TANKS.

(Mayer, 1592 and 1373.)

4 Holders, 400,000 cu. ft. capacity.

(Mayer, 1592 and 1373.)

Description as given.

Cost........................ $115,700

Depreciation, 10 per cent.

Value........................ $104,100

1 holder, 1½ million cu. ft. capacity.

(Mayer, 1592 and 1373.)

Description as given.

Cost........................ $72,000

Depreciation, 10 per cent.

Value........................ 65,000

Brick tanks for 400,000 cu. ft. capacity holders.

(Mayer, 1593.)

5198 Description as given.

Cost........................ $118,000

Depreciation, 0.

Value........................ $118,000

Brick tank for 1½ million cu. ft. holder.

(Mayer, 1593.)

Description as given.

Cost........................ $110,000

Depreciation, 0.

Value........................ $110,000

Brick tank for 149,500 cu. ft. holders.

(Mayer, 1374.)

Description as given.

Value........................ $15,000

Brick tank for 280,000 cu. ft. holder.

(Mayer, 1374.)

Description as given.

Value........................ $15,000

Holders in steel tanks.		
1 holder, capacity 149,500 cu. ft.		
(Mayer, 1374.)		
Description as given.		
Cost	$16,500	
Depreciation, 10 per cent.		
Value		$15,000
Holders in steel tanks.		
1 holder, capacity 280,000 cu. ft.		
(Mayer, p. 1374.)		
Description as given.		
Cost	$31,000	
Depreciation, 10 per cent.		
Value		$28,000

RECAPITULATION.

Value of all of above holders and tanks	$470,100
Mayer (1374) gives value of all of above holders, with their tanks, as	$665,910

5199 NINETY-NINTH STREET PLANT.

SUMMARY OF VALUES, JANUARY, 1907.

Buildings	$187,461.00
Apparatus	178,067.00
Yard Connections	33,550.00
Holders and Tanks	145,630.00
	$544,708.00

CONSOLIDATED GAS COMPANY.

99TH STREET STATION.

BUILDINGS.

ENGINE HOUSE, BOILER HOUSE, PUMP HOUSE, MACHINE SHOP, RETORT & ACCUMULATOR.

(Mayer, pp. 1374 & 1535).

5 houses under one roof, 273 ft. 3 in. x 57 ft. 5 in. x 28 ft. brick building.		
Cost, etc.	$77,000	
Depreciation, 10 per cent.		
Value		$70,000

GENERATOR HOUSE.

(Mayer, pp. 1375 & 1535).

2 story brick building, 69 ft. x 67 ft. 4 in. x 24 ft. 6 in.		
Cost, etc.	$28,000	
Depreciation, 10 per cent.		
Value		$25,000

FOUNDATIONS FOR ONE AIR CONDENSER.

(Mayer, pp. 1375 & 1535).

Value, as per Mayer's appraisal	$900

FOUNDATIONS FOR SALT WATER CONDENSER.

(Mayer, pp. 1375 & 1535).

Value, as per Mayer's appraisal	$368

5200

OFFICE BUILDING.

(Mayer, 1375, 1535).

2 story brick, 42 ft. x 30 ft. 8 in. x 30 ft. 6 in.		
Cost to build complete, new materials.	$7,500	
Depreciation, by reason of physical deterioration, 15 per cent.		
Value		6,500

METER HOUSE.

(Mayer, 1375, 1535).

1 story brick, 52 ft. x 39 ft. x 27 ft.		
Cost to build complete, new materials.	$8,700	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$8,000

PURIFIER HOUSE.

(Mayer, 1375, 1535).

1 story brick, 124 ft. x 61 ft. 6 in. x 30 ft.		
Cost to build complete, new materials.	$20,000	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$18,000

LIME HOUSE.

(Mayer, 1375, 1535).

1 story brick, 75 ft. x 15 ft. 9 in. x 18 ft.		
Cost to build complete, new material..	$3,400	
Depreciation, by reason of physical deterioration, 15 per cent.		
Value		$2,900

5201

VALVE HOUSE.

(Mayer, 1375, 1535).

10 ft. x 12 ft. x 10 ft.		
Cost to build complete, new materials.	$80	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$72

FOUR VALVE HOUSES.

(Mayer, 1375, 1535).

Octagonal frame buildings, 8 ft. between parallel sides.		
Cost to build complete, new materials, $150 each	$600	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$540

CONDENSER AND SCRUBBER.

(Mayer, 1375, 1535).

1 story brick, 52 ft. x 39 ft. x 27 ft.		
Cost to build complete, new materials.	$8,900	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$8,000

EXHAUSTER HOUSE.

(Mayer, 1375, 1536).

1 story brick, 42 ft. 8 in. x 27 ft. x 25 ft.		
Cost to build complete, new materials.	$6,000	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$5,400

5202

TAR SEPARATOR SYSTEM.

(Mayer, 1375, 1536).

Cost to build complete, new materials.	$1,350	
Depreciation, by reason of physical deterioration, 5 per cent.		
Value		$1,280

PUMP PIT.

(Mayer, 1375, 1536).

23 ft. x 13 ft. 8 in. x 10 ft. deep.

Cost to build complete, new materials.	$600	
Depreciation, by reason of physical deterioration, 5 per cent.		
Value		$570

TAR STORAGE.

(Mayer, 1536).

Value, as per Mayer..................	$128

COAL SHED.

(Mayer, 1375, 1536).

1 story brick, 125 ft. x 46 ft. x 18 ft.

Cost to build complete, new materials.	$10,000	
Depreciation, by reason of physical deterioration, 15 per cent.		
Value		$8,500

FILTER PRESS HOUSE.

(Mayer, 1375, 1536).

1 story frame, 13 ft. x 20 ft. x 7 ft.

Cost to build complete, new materials.	$250	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$225

5203

WALLS AROUND WORKS.

(Mayer, 1375, 1536).

Brick walls, 663 ft. of wall, average height 10 ft. 12 in. thick.

Cost to build complete, new materials.	$5,000	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$4,500

TIMBER FENCING.

(Mayer, 1536).

Dressed lumber, [illegible] ft. high.

Cost to build complete, new material..	$800	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$720

COVER FOR DOORS OF OIL TANK.

(Mayer, 1375, 1536).

Cost to build complete, new materials.	$400	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$360

FRAME BUILDING.

(Mayer, 1376)

7 ft. 6 in. x 125 ft. x 6 ft.
Foundations under hot scrubbers.
(Mayer, 1376, 1536)

Value, as per Mayer's Appraisal......	$498

5204 NINETY-NINTH STREET STATION.

RECAPITULATION.

Value of all buildings complete, including all foundations for buildings and apparatus	$162,461	
Add for drainage, flagging, grading, paving, surfacing, lawns and other miscellaneous improvements	25,000	
Value		$187,461
Mr. Mayer's appraisal of all of above (p. 1376)		248,247

APPARATUS.

GENERATOR HOUSE.

(Mayer, 1538.)

Four sets of 10-ft. U. G. I. low water gas apparatus with 24-in. take-off mains, each set consisting of 10-ft. diameter by *by* 14-ft. high generator with 3 19½-in. diameter coaling towers.

One 10-ft. diameter by 11-ft. high carbureter with necessary water and oil connection.

One 10-ft. diameter by 22-ft. high superheater with necessary stacks, 36-in diameter by 20-ft. high over all. One 8 ft. 6 in. diameter by 4 ft. hot wash box.

These sets have necessary hot gas valves with air jackets, also necessary generators, carbureters and superheaters, interlocking gears. Also motors, gear apparatus, coal guards, etc.

Cost new	$45,200	
Depreciation, 10 per cent.		
Value		$40,500

The Water Gas Apparatus (Mayer, 1539) is valued at $56,000 and $8,167 for the charging floor. The apparatus was installed in 1904 and price was obtained from the U. G. I. Imp. Co.

5205 OUTSIDE GENERATOR HOUSE.

(Mayer, 1539.)

Air condenser.

Value, as per Mayer...............	$7,615

Salt Water Condenser.

(Mayer, 1540.)

Value, as per Mayer...............	$9,845

OFFICE FURNITURE.

Cost, as per Mayer..................	$2,000	
Depreciation, 20 per cent.		
Value		$1,600

METER HOUSE.

(Mayer, 1540.)

1 13 x 6 station meter.

Cost new........................	$7,900	
Depreciation, 15 per cent.		
Value		$6,700

1 13x6 station meter.

Cost new........................	$5,700	
Depreciation, 15 per cent.		
Value		$4,900

PURIFIER HOUSE.

(Mayer, 1514.)

Two sets of 4 purifiers 21 x 20 ft. x 3 ft. deep. Three layers of trays for each box. Size of connections 24 in. Two center seals, diameter 6 ft. and 5 ft. deep. Two hydraulic lifts for purifier covers constructed of steel. Size 15 ft.

Cost new........................	$25,000	
Depreciation, 5 per cent.		
Value		$24,000

LIME HOUSE.

(Mayer, 1541.)

Value, as per Mayer..................	$100

5206 VALVE HOUSE CONTENTS.

(Mayer, 1541.)

Value, as per Mayer...............	$30
Another valve house.	
Value, as per Mayer...............	$30
Grip house.	
Value, as per Mayer...............	$30
Another grip house.	
Value, as per Mayer...............	$30
Another valve house.	
Value, as per Mayer...............	$30
Another valve house.	
Value, as per Mayer...............	$30
Another valve house.	
Value, as per Mayer...............	$10
Another valve house.	
Value, as per Mayer...............	$10
Another grip house.	
(Mayer, 1541.)	
Value, as per Mayer...............	$4,420
Cast iron condenser.	
Value, as per Mayer...............	$15,680

EXHAUSTER HOUSE CONTENTS.

(Mayer, 1542.)

1 Exhauster.		
Value, as per Mayer...............		$1,865
Greenfield engine.		
Cost new........................	$825	
Depreciation,		
Value		$685

5207 TAR SEPARATING SYSTEM IN YARD.

(Mayer, 1542.)

Value, as per Mayer..................	$2,250

PUMP PIT.

(Mayer, 1542.)

2 Knoll pumps.		
Value, as per Mayer...............		$265
1 Davidson pump.		
Value, as per Mayer...............		$215
1 Cameron pump.		
Value, as per Mayer...............		$145
Tar Storage.		
Value, as per Mayer..............		$675
12 Steel tanks.		
(Mayer, 1542.)		
Value, as per Mayer...............		$13,837
2 Oil storage tanks.		
(Mayer, 1543.)		
Value, as per Mayer...............		$3,271
Another steel tank.		
(Mayer, 1543.)		
1 Crib valve tank.		
Value, as per Mayer...............		$602
2 Hydraulic lifts.		
Value, as per Mayer...............		$4,200
2 Platform scales.		
Value, as per Mayer...............		$300

YARD CONTENTS.

(Mayer, p. 1543.)

2 Hot scrubbers.		
Value, as per Mayer...............		$1,625
5208 2 Hydrogen scrubbers.		
Cost as per Mayer..................	$1,560	
Depreciation,		
Value.		

ENGINE HOUSE.

(Mayer, 1546.)

2 Sturtevant engines.		
Cost new.........................	$1,200	
Depreciation, 15 per cent.		
Value		$1,020

1 Armington & Simms horizontal engine.		
Cost new in place	$1,200	
NOTE—All values for engines and apparatus are in place.		
Depreciation, 15 per cent.		
Value		$1,040
3 B. F. Sturtevant gas blowers.		
Value, as per Mayer		$350
2 McKenzie Exhausters.		
Value, as per Mayer		$3,726
2 Greenfield vertical engines.		
Cost new	$2,000	
Depreciation, 15 per cent.		
Value		$1,700
2 Knoll pumps.		
Value, as per Mayer		$210

BOILER HOUSE CONTENTS.

2 Batteries B. & W. type boilers, etc.		
Cost new, including stack and breaching	$14,000	
Depreciation, 5 per cent.		
Value		$13,300
1 Sturtevant blower.		
(Mayer, 1549.)		
Value, as per Mayer		$1,250
5209 1 Gould & Garrison pump.		
Value, as per Mayer		$175
1 Patterson & B. feed water meter.		
Value, as per Mayer		$265

CARBURETER HOUSE CONTENTS.

(Mayer, 1547.)

(Used as pump house and machine shop.)

Value, as per Mayer	$3,510

PUMP HOUSE CONTENTS.

(Mayer, 1548.)

Value, as per Mayer	$820

RETORT HOUSE.

(Mayer, 1549.)

11 through benches of sixes, back to back.
Cost new.........................
Depreciation,
Value ....

CUMULATOR HOUSE.

(Mayer, 153.)

Value, as per Mayer............... $960

1 Steel water tank.
(Mayer, 1553.)
Value, as per Mayer............... $347

1 Davidson pump.
(Mayer, 1553.)
Value, as per Mayer............... $370

Wooden tank.
Value, as per Mayer............... $375

Filter Press House.
(Mayer, 1553.)
Value, as per Mayer............... $1,700

Howe scales.
Value, as per Mayer............... $300

5210 Miscellaneous tanks.
(Mayer, 1553-1554.)
Value, as per Mayer............... $1,154

RECAPITULATION.

Value of all above apparatus, contents of plant........ $178,067.00
Mr. Mayer (pp. 1376-1554) gives the value of all above apparatus as.................................. $268,177.00

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1376.)

Cast iron pipes.
4 in. to 36 in. diameter, 5,861 feet.
Cost new.......................
Depreciation,
Value ....

Steel riveted pipes.
30 in. diameter, 339 feet.
Cost new........................
Depreciation,
Value ....

Wrought iron pipes.
1½ in. to 10 in. diameter, 5,552 feet.
Cost new........................
Depreciation,
Value ....

Valves.
4 3-in., 4 4-in., 24 3-in., 25 4-in., 13 6-in., 10 8-in., 10 10-in., 2 12-in., 18 16-in., 18 20-in., 30 24-in., 1 30-in.
Cost new........................
Depreciation,
Value ....

RECAPITULATION.

Value of all the above yard connections and connections to appliances................................	33,550.00
Mr. Mayer (p. 1377) gives a value for all of above connections of................................	55,248.00

5211 HOLDERS IN BRICK TANKS.

(Mayer, 1377 & 1593).

2 holders, 600,000 cu. ft. capacity, description as given.		
Cost	$54,600	
Depreciation, 15 per cent.		
Value		$46,400
1 holder, 300,000 cu. ft. capacity, description as given.		
Cost	16,300	
Depreciation, 15 per cent.		
Value		13,850
1 holder, 100,000 cu. ft. capacity, description as given.		
Cost	7,350	
Depreciation, 20 per cent.		
Value		5,880
Brick tanks for above:		
2 brick tanks for 600,000 cu. ft. capacity holders.		
Cost	33,000	
Depreciation,		
Value		33,000

Brick tank for 300,000 cu. ft. holder.		
Cost	27,000	
Depreciation,		
Value		27,000
Brick tank for 100,000 cu. ft. holder.		
Cost	19,500	
Depreciation,		
Value		19,500

RECAPITULATION.

Value of all of the above tanks and holders	$145,630
Mr. Mayer (p. 1593 and 1377) gives value for all these holders and tanks as	262,106

5212 EIGHTEENTH STREET PLANT.

SUMMARY OF VALUES, JANUARY, 1907.

Buildings	$77,781.00
Apparatus	6,505.00
Yard connections	2,800.00
Holders & tanks	147,800.00
	$234,886.00

EIGHTEENTH STREET.

FIVE FRAME SHEDS.

(Mayer, p. 1378, 1556).

Cost to build, complete, new materials	$80	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$72

ENGINE AND EXHAUSTER HOUSE.

(Mayer, 1378, 1556).

1 story brick, 36 ft. 6 in. x 19 ft. x 15 ft. 6 in., all 30 ft. high.		
Cost to build complete, new materials.	$4,850	
Depreciation, by reason of physical deterioration, 5 per cent.		
Value		$4,600

VALVE HOUSE.

(Mayer, 1378—1556).

1 story brick, 19 ft. x 22 ft. x 20 ft.		
Cost to build complete, new materials..	$1,185	
Depreciation, by reason of physical deterioration, 5 per cent.		
Value		$1,125

5213

BOILER HOUSE.

(Mayer, 1378, 1556).

1 story brick, 46 ft. 2½ in. x 14 ft. x 14 ft. 3 in.		
Cost to build complete, new materials.	$1,875	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$1,690

WAGON SHED & PAINT SHOP.

(Mayer, 1556).

Cost to build complete, new materials..	575	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$520

WAGON SHED.

(Mayer, 1378-1556).

21 ft. x 28 ft. x 15 ft.		
Cost to build complete, new materials.	$650	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$585

BRICK AND BROWNSTONE BUILDING CONTAINING GAS HOLDERS.

(Mayer, 1378-1556).

Cost to build complete, new materials...	$72,000	
Depreciation, by reason of physical deterioration, 25 per cent.		
Value		$54,000

COAL STORAGE YARD BETWEEN 18TH AND 19TH STREETS.

(Mayer, 1378-1558).

520 ft., about 9 ft. high.

Cost to build complete, new materials.	$950	
Depreciation, by reason of physical deterioration, 50 per cent.		
Value		$475

5214 COAL STORAGE YARD BETWEEN 17TH AND 18TH STREETS.

(Mayer, 1378-1558).

720 ft., about 9 ft. high.

Cost to build complete, new materials.	$1,800	
Depreciation, due to physical deterioration, 50 per cent.		
Value		$900

BRICK WALLS IN YARD BETWEEN 17TH AND 18TH STREETS.

(Mayer, 1378-1558).

12 in. thick, 180 ft. long.

Cost to build complete, new materials.	$1,150	
Depreciation, due to physical deterioration, 20 per cent.		
Value		$920

1 timber coal holding trestle.

(Mayer, 1378-1558)

Value, as per Mayer's appraisal.....	$3,744

600 ft. of brick retaining wall.

(Mayer, 1378-1558)

Wall, 12 in. thick, about 9 ft. above grade.

Cost to build complete, new materials.	$5,200	
Depreciation, by reason of physical deterioration, 20 per cent.		
Value		4,150

RECAPITULATION.

Value of all buildings complete, including foundations for buildings and apparatus	$72,781	
Add for grading, sewers, piping, flagging and other miscellaneous improvements	5,000	
Value of all of above................		$77,781
Value as given by Mr. Mayer (p. 1379, 1558) (probably including holders).		182,901

5215 CONSOLIDATED GAS COMPANY.
18TH STREET STATION.

APPARATUS.

FRAME BUILDING IN HOLDER YARD CONTENTS.

(Mayer, 1558).

2 vertical boilers.
Value, nothing.

ENGINE HOUSE AND VALVE HOUSE CONTENTS.

(Mayer, 1558).

1 McKenzie exhauster. Value, as per Mayer..............	$1,505
1 Greenfield engine. Valve, as per Mayer...............	418
Counter-shafting, etc. Value, as per Mayer...............	80
3 King pressure gauges. Value, as per Mayer...............	105
1 Arch gauge, etc., etc. Value, as per Mayer...............	130

BUILDING CONTAINING PRESSURE GAUGES CONTENTS.

(Mayer, 1559).

Value, as per Mayer.................	167

BOILER HOUSE CONTENTS.

(Mayer, 1559).

1 horizontal tubular boiler. Value, per Mayer	$1,815

Pressure gauges.		
Value, as per Mayer..............		25
Locker.		
Value, as per Mayer.................		50

STABLE CONTENTS.

(Mayer, 1559).

Stalls.		
Value		$250
Locker.		
Value, as per Mayer................		60

5216 COAL STORAGE YARD.

(Mayer, 1559).

Trestle work, etc.		
Cost, new	$9,500	
Depreciation, 80 per cent.		
Value		$1,900

RECAPITULATION.

Value of all apparatus and contents of yard as given above...............	$6,505
Mr. Mayer (pp. 1379 and 1560) gives the value of above as............	14,019

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1379.)

Cast iron pipes, 20 in. in diameter, 1,809 ft.

Cost, new ....
Depreciation.
Value ....

Wrought iron connections, 1 in. to 3 in. in diameter, 360 ft.

Cost, new ....
Depreciation.
Value ....

Valves, eight, 1-in.; three; 2-in.; four, 16-in.; twenty-six, 24-in.

RECAPITULATION.

Value of all of the above yard connections and connections to appliances	$2,800.00
Mr. Mayer (p. 1379) gives the value of above connections as	21,987.00

5217 HOLDERS IN BRICK TANKS.

(Mayer, p. 1379)

2 holders, each of 205,000 cu. ft. capacity, description as given.		
Cost	$21,320	
Depreciation, 50 per cent.		
Value		$10,700
4 holders of 255,000 cu. ft. capacity, description as given.		
Cost	53,000	
Depreciation, 30 per cent.		
Value		37,100
Brick tanks and foundations for above holders:		
2 brick tanks for the first mentioned holders of 205,000 cu. ft. capacity Cost of these tanks is included in value of building which surrounds them.		
4 brick tanks for the 4 255,000 cu. ft. capacity holders, description as given.		
Cost	103,000	
Depreciation, 3 per cent.		
Value		$100,000

RECAPITULATION.

Value of all of the above tanks and holders	$147,800
Mr. Mayer (p. 1379) gives the value for above holders and tanks as........	$209,743.00

5218 SIXTY-THIRD STREET PLANT.

SUMMARY OF VALUES, JANUARY, 1907.

Buildings	$8,540.00
Apparatus	379,600.00
Yard connections	2,800.00
Holders and tanks..................	232,800.00
	$623,740.00

BUILDINGS.

ENGINE ROOM.

(Mayer, 1382-1571)

Frame building, 24 ft. x 28 ft. x 10 ft.		
Cost to build complete, new materials.	$770	
Depreciation by reason of physical deterioration 10 per cent.		
Value		$700

VALVE HOUSE.

(Mayer, 1382-1571)

Frame, 16 ft. x 30 ft. x 10 ft. 6 in.		
Cost to build complete, new materials.	$600	
Depreciation by reason of physical deterioration 10 per cent.		
Value		$540

BOILER HOUSE.

(Mayer, 1383-1571)

17 ft. x 30 ft. x 15 ft. 6 in.		
Cost to build complete, new materials.	$900	
Depreciation by reason of physical deterioration, 10 per cent.		
Value		$800

5219 BRICK WALL AROUND PROPERTY.

(Mayer, 1382-1571)

10 ft. above grade, 5 ft. 6 in. below grade.		
Cost to build complete, new materials:	$5,000	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$4,000

RECAPITULATION.

Value of all buildings, including foundations for buildings and apparatus.	$6,040.00	
Add for grading, sewers, piping, flagging, and other miscellaneous improvements	2,500.00	
		$8,540.00
Value of all of above		
Value of above, per Mayer's appraisal (pp. 1383-1571)		11,429.00

APPARATUS.

ENGINE ROOM.

(Mayer, p-. 1383 and 1571.)

1 30-h. p. Morse engine.		
Cost new and erected...............	$300	
Depreciation, 15 per cent.		
Value		$255
1 Sturtevant exhauster.		
Value as per Mayer...............		735

VALVE HOUSE.

CONTENTS.

(Mayer, pp. 1383 and 1571.)

Value as per Mayer.................	$650

5220

BOILER HOUSE.

1 boiler.	
Value as per Mayer................	$1,125
1 pump.	
Value as per Mayer................	340
1 injector, etc.	
Value as per Mayer...............	45

YARD CONTENTS.

(Mayer, pp. 1383 and 1571.)

1 pump.	
Value as per Mayer...............	$314
1 tank.	
Value as per Mayer................	332

APPARATUS.

RECAPITULATION.

Value of all above apparatus..........	$3,796
Mr. Mayer (1383 and 1571) gives the value of above apparatus as.........	4,828

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1382.)

Cast iron connections, 24 in. to 30 in. diameter, 225 feet.		
Cost new		
Depreciation,		
Value		
Wrought iron connections, 1½ in. to 2 in. diameter, 80 feet.		
Cost new		
Depreciation,		
Value		
Valves, 2 24 in., 4 30 in.		
Cost new		
Depreciation,		
Value		

5221

RECAPITULATION.

Value of all of the above yard connections and connections to appliances..	$2,800
Mr. Mayer (p. 1383) gives value of above connections, etc., as...............	7,887

HOLDERS WITH BRICK TANKS.

(Mayer, 1383 and 1572.)

1 3,000,000-ft. holder, description as given.		
Cost	$129,320	
Depreciation, 5 per cent.		
Value		$122,800
Brick tank and foundation, description as given.		
Cost	110,000	
Depreciation.		
Value		110,000

RECAPITULATION.

Value of the above holder and tank.		232,800
Mayer (1384 and 1572) gives total value for holder and tank of...........	$420,367	

SIXTY-FIFTH STREET PLANT.

SUMMARY OF VALUES, JANUARY, 1907.

Buildings	$42,650.00
Apparatus	6,206.00
Yard connections	8,415.00
Holders and tanks	834,900.00
Total	$892,171.00

BUILDINGS.

ENGINE HOUSE.

(Mayer, 1384-1572.)

Frame building 20 ft. x 38 ft. x 20 ft.		
Cost to build complete, new materials.	$2,640	
Depreciation, by reason of physical deterioration, 15 per cent.		
Value		2,300

5222 EXHAUSTER HOUSE.

(Mayer, 1384-1573).

2 story brick building, 27 ft. x 42 ft. x 45 ft.		
Cost to build complete, new materials..	$7,300	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$6,600

BOILER HOUSE.

(Mayer, 1384-1573.)

1 story brick building, 24 ft. x 32 ft. x 21 ft.		
Cost to build complete, new materials.	$2,600	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$2,400

BOILER HOUSE EXTENSION.

(Mayer, 1384-1573.)

1 story brick, 16 ft. x 20 ft. x 16 ft.		
Cost to build complete, new materials.	$960	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$850

BRICK WALLS AROUND PROPERTY.

(Mayer, 1385-1573.)

2164 ft., averaging about 12 ft. at different heights.		
Cost to build complete, new materials.	$35,000	
Depreciation, due to physical deterioration, 20 per cent.		
Value	28,000	

SIXTY-FIFTH STREET STATION.

RECAPITULATION.

Value of all buildings complete, including foundations for buildings and apparatus	$40,150	
5223 Add for grading, sewers, piping, flagging and other miscellaneous improvements	2,500	
Value of all of above...............		$42,650
Value of above, as per Mayer's appraisal		51,183

CONSOLIDATED GAS COMPANY.

SIXTY-FIFTH STREET STATION.

APPARATUS.

ENGINE AND VALVE HOUSE CONTENTS.

(Mayer, pp. 1385 and 1572)

1 beam engine.		
Cost, erected	$300.00	
Depreciation, 15 per cent.		
Value		255.00

EXHAUSTER HOUSE.

(Mayer, pp. 1573 and 1385)

1 Rowland engine, etc.		
Cost, new	$1,320.00	
Depreciation, 15 per cent.		
Value		$1,118.00
1 Mackenzie exhauster.		
Value as per Mayer................	1,738.00	

1 Photometer, furniture and plumbing.		
Value as per Mayer		1,000.00
Brick tanks for above holders.		
6 brick tanks for holders of 325,000 cub. ft. capacity, description as given.		
Cost	147,000	
Depreciation,		
Value		147,000
2 brick tanks for 24,000,000 cub. ft. holders, description as given.		
Cost	320,000	
Depreciation,		
Value		320,000

5224 BOILER HOUSE.

(Mayer, pp. 1574 and 1385.)

2 horizontal tubular boilers.		
1 horizontal tubular boiler.		
Value for the 3, new and set up	$2,325.00	
Depreciation, 5 per cent.		
Value		$2,200.00
1 feed pump.		
Value as per Mayer		57.00
1 injector.		
Value as per Mayer		38.00
1 steel stack.		
Value as per Mayer		171.00

BOILER HOUSE EXTENSION.

CONTENTS.

(Mayer, pp. 1574 and 1385.)

1 horizontal tubular boiler.		
Cost, new	$1,400.00	
Depreciation, 5 per cent.		
Value		$1,325.00
1 injector.		
Value as per Mayer		42.00

APPARATUS.

RECAPITULATION.

Value of all above apparatus	$6,206.00
Mr. Mayer (pp. 1574 and 1585) gives as value for the above apparatus	10,159.00

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1385.)

Cast iron pipe, 16 in. to 30 in. diameter, 750 feet.

Cost, new ....
Depreciation,
Value ....

5225 24 in. pipe, 260 feet.

Cost, new ....
Depreciation,
Value ....

Wrought iron pipe, 500 ft., 2 in. and less in diameter.

Cost, new ....
Depreciation ....
Value ....

Valves, 23-30 in., 4-16 in.

RECAPITULATION.

Value of all of the above yard connections and connections to appliances	$8,415
Mr. Mayer (p. 1385) gives as value for above connections	20,406

HOLDERS IN BRICK TANKS.

HOLDERS IN CONCRETE FRAMES.

(Mayer, 1386 and 1575.)

2 holders, 325,000 cub. ft. capacity.		
Description as given:		
Cost	$32,800	
Depreciation, 10 per cent.		
Value		$29,500
4 holders, same size as above, description as given.		
Cost	65,600	
Depreciation, 10 per cent.		
Value		59,100
2 holders, 4,000,000 cub. ft. capacity, description as given.		
Cost	294,000	
Depreciation, 5 per cent.		
Value		279,300

5226

RECAPITULATION.

Value of all of the above tanks and holders............	$834,900
Mayer (1577 and 1386) gives value for all holders and tanks of	1,212,873

ONE HUNDRED AND ELEVENTH STREET PLANT.

Summary of Values, January, 1907.

Buildings	$64,085.00
Apparatus	42,421.00
Yard connections	16,800.00
Holders and tanks..........................	777,100.00
Total	$900,406.00

BUILDINGS.

Office Building.

(Mayer, 1356-1578.)

2 story brick, 50 ft. x 25 ft. x 31 ft. 6 in.		
Cost to build complete, new materials.	$5,240	
Depreciation, due to physical deterioration, 15 per cent.		
Value		$4,500

EXHAUSTER HOUSE.

(Mayer, 1386-1578.)

1 story brick, 66 ft. x 54 ft. x 27 ft. 4 in.		
Cost to build complete, new materials.	$19,600	
Depreciation, due to physical deterioration, 20 per cent.		
Value		$15,000

BOILER HOUSE.

(Mayer, 1386-1578.)

44 ft. 3 in. by 32 ft. 3 in. x 18 ft.		
Cost to build complete, new materials.	$3,000	
Depreciation, due to physical deterioration, 15 per cent.		
Value		$2,500

5227

HOISTING HOUSE ENGINE.

(Mayer, 1386-1578.)

Frame shed, 13 ft. x 18 ft. x 7 ft.		
Cost to build complete, new materials.	$160	
Depreciation, due to physical deterioration, 10 per cent.		
Value		$140

SCALE HOUSE.

(Mayer, 1386-1578.)

12 ft. x 15 ft. x 13 ft.		
Cost to build complete, new materials.	$375	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$335

STABLE.

(Mayer, 1387-1578.)

Brick building with basement, 75 ft. x 32 ft. x 25 ft.		
Cost to build complete, new materials.	$7,800	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$7,000

COAL STORAGE.

(Mayer, 1387-1578.)

Area 67 ft. x 52 ft.		
Cost to build complete, new materials.	$330	
Depreciation, by reason of physical deterioration, 10 per cent.		
Value		$300

GENERATOR HOUSE.

(Mayer, 1387-1578.)

1 story brick 72 ft. x 48 ft. x 27 ft.		
Cost to build complete, new materials.	$7,400	
Depreciation, by reason of physical deterioration, 50 per cent.		
Value		$3,700

5228

WOODEN TOOL SHOP.

(Mayer, 1387-1578.)

48 ft. 6 in. x 65 ft. 9 in.

Cost to build complete, new materials. $1,700

Depreciation, by reason of physical deterioration, 10 per cent.

Value $1,500

RETORT HOUSE.

(Mayer, 1387-1578.)

Brick, 200 ft. x 52 ft. x 22 ft.

Cost to build complete, new materials. $26,000

Depreciation, by reason of physical deterioration, 40 per cent.

Value $15,000

FOUNDATION FOR OIL TANK.

(Mayer, pp. 1387-1578.)

43 ft. diameter, 11 ft. high, of brick, 12 in. thick.

Cost to build complete, new materials. $2,760

Depreciation, by reason of physical deterioration, 10 per cent.

Value $2,500

BLACKSMITH SHOP.

(Mayer, pp. 1387-1578.)

Brick, 26 ft. x 34 ft. x 19 ft.

Cost to build complete, new materials. $2,600

Depreciation due to physical deterioration, 20 per cent.

Value $2,000

FENCES, STABLE YARD.

(Mayer, pp. 1387-1578.)

270-ft. wooden fence 8 ft. high.

Cost to build complete, new materials. $350

Depreciation, by reason of physical deterioration, 20 per cent.

Value $280

5229 FENCE ABOUT HOLDERS.

(Mayer, pp. 1387-1579.)

1140 ft., 8 ft. high.		
Cost to build complete, new materials,	$650	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$525

FENCE AROUND WORKS.

(Mayer, pp. 1387-1579.)

1000 ft., 8 ft. high.		
Cost to build complete, new materials,	$1,200	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$980

BRICK WALL ON FIRST AVENUE.

(Mayer, pp. 1387-1579.)

56 ft. x 8 ft. high.		
Cost to build complete, new materials,	$400	
Depreciation due to physical deterioration, 20 per cent.		
Value		$325

ONE HUNDRED AND ELEVENTH STREET.

RECAPITULATION.

Value of all buildings complete, including foundations for buildings and apparatus	$56,585	
Add for grading, sewers, piping, flagging and other miscellaneous improvements	7,500	
Value of all of above................		$64,085
Value of above per Mayer's appraisal (pp. 1387-1579).		$107,981

5230 CONSOLIDATED GAS COMPANY.

111th Street Station.

APPARATUS.

OFFICE BUILDING—CONTENTS.

(Mayer, pp. 1574 and 1387.)

Office furniture, etc.		
Value as per Mayer		$2,125

EXHAUSTER HOUSE.

(Mayer, pp. 1574 and 1387.)

42 valve stands.		
Value as per Mayer		$636
2 exhausters.		
Value as per Mayer		5,870
2 Payne reversible engines.		
Cost, new, set up	$4,000	
Depreciation, 15 per cent.		
Value		3,600
2 Connelly governors.		
Value as per Mayer		4,500
1 copper and feed water heater.		
Value as per Mayer		345
Plumbing, piping, etc.		
Value as per Mayer		$1,610.00
Photometer, etc.		
Value as per Mayer		$805.00

BOILER HOUSE.

CONTENTS.

(Mayer, pp. 1579 and 1388.)

Steel stack	
Value as per Mayer	$507.00
Breech for stack.	
Value as per Mayer	157.00
3 boilers.	
Value as per Mayer	5,432.00

1 pump.		
Value as per Mayer		105.00
1 inspirator.		
Value as per Mayer		65.00

5231 HOISTING ENGINE HOUSE.

(Mayer, pp. 1388 and 1580.)

1 Lidgerwood hoisting engine.		
Cost, new	$750.00	
Depreciation, 15 per cent.		
Value		$640.00

SCALE HOUSE.

CONTENTS.

(Mayer, pp. 1580 and 1388.)

1 wagon scale.	
Value as per Mayer	$195.00

STABLE.

CONTENTS.

(Mayer, pp. 1580 and 1388.)

Stable fittings, etc.	
Value as per Mayer	$1,105.00

TOOL SHOP.

(Mayer, pp. 1580 and 1388.)

Lockers, 4 beam engines, etc.	
Value as per Mayer	$1,778.00

RETORT HOUSE.

(Mayer, pp. 1580 and 1388.)

1 stack, 34 benches of 6 retorts each, retorts 20 ft. long.		
Cost, new	$65,300	
Depreciation, 90 per cent.		
Value		$6,500.00

BLACKSMITH SHOP.

CONTENTS.

(Mayer, pp. 1581 and 1388.)

Value as per Mayer	$350.00

5232

YARD.

CONTENTS.

(Mayer, pp. 1581 and 1388.)

Oil tank.	
Value as per Mayer	$1,652.00
Atmospheric condenser.	
Value as per Mayer	4,444.00

RECAPITULATION.

Value of the above apparatus and contents of plant	$42,421.00
Mr. Mayer (pp. 1389 & 1582) gives value of all of above apparatus (p. 1582) as	$74,914.00
and on page 1389	$103,446.00

The lower figure is obviously the correct one.

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1389.)

Cast iron pipe, 24 in. to 36 in., 550 feet.

Cost, new ....
Depreciation,
Value ....

Wrought iron pipe, 1½ in. to 4 in., 760 feet.

Cost, new ....
Depreciation,
Value ....

Valves, 41 36 in., diameter 1 24 in.

(Mayer, p. 1369.)

RECAPITULATION.

Value of all of the above yard connections, and connections to appliances.	$16,800.00
Mr. Mayer gives value of all such connections as	27,068.00

5233 TWO HOLDERS, WITH ACCOMPANYING TANKS.

Two Holders in Steel Tanks (Each of five million cubic feet capacity.)

(Mayer, 1389.)

Description as given.		
Cost, etc.	$702,200	
Depreciation, 3 per cent.		
Value		$681,100

FOUNDATION FOR ABOVE.

Description as given.		
Cost, etc., for 2 holders	$96,000	
Depreciation,		
Value		$96,000

RECAPITULATION.

Value of above holders, and foundations for same	$777,100
Mr. Mayer (p. 1389) gives the value of above holders and foundations	$704,737

ONE HUNDRED AND THIRTY-SECOND STREET PLANT.

Summary of Values, January, 1907.

Buildings	$24,540.00
Apparatus	14,514.00
Yard connections	25,170.00
Holders & Tanks	393,300.00
	$457,524.00

BUILDINGS.

1 Governor and 1 boiler house.

(Mayer, 1389-1585.)

Brick building, 100 ft. x 49 ft. x 29 ft.		
Cost to build complete, new materials.	$21,000	
No depreciation.		
Value		$21,000

5234

BOILER CHIMNEY.

(Mayer, 1390-1585.)

Value, as per Mayer	$3,040

RECAPITULATION.

Value of all buildings, including foundations for buildings and apparatus.	$24,040	
Add for grading, sewers, piping, flagging and other miscellaneous improvements	500	
Value of all of above		$24,540
Value of above per Mayer's appraisal (p-. 1390-1585)		29,776

APPARATUS.

GOVERNOR AND BOILER HOUSE.

CONTENTS.

(Mayer, p-. 1585 & 1390.)

1 vertical exhauster		
Value as per Mayer		$2,910.00
1 Buckeye engine		
Cost new and erected	$2,000.00	
Depreciation, 15 per cent.		
Value		1,700.00
1 in. Connolly governor		
Value as per Mayer		1,375.00
3 B. & W. boilers and 2 batteries		
Cost to build, new	5,100.00	
Depreciation, 5 per cent.		
Value		4,845.00
1 Knowles pump		
Value as per Mayer		143.00
1 Cochran feed water heater.		
Value as per Mayer		505.00
1 steel plate breeching		
Value as per Mayer		750.00
1 Crown water meter (Mayer, p. 1586)		
Value as per Mayer		$165.00
5235 1 injector		
Value as per Mayer		78.00

1 blow-off tank	
Value as per Mayer...............	73.00
1 exhauster head, etc.	
Value as per Mayer...............	1,885.00
Toilet & wash basins	
Value as per Mayer...............	85.00

RECAPITULATION.

Value of all of above apparatus and contents of plant..	$14,514.00
Mr. Mayer (at pages 1586 & 1390) gives the value of above apparatus as..........................	18,979.00

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1390.)

Cast iron connections, 20 in. to 36 in. pipe, 2,400 feet.

Cost, new
Depreciation,
Value,

Valves: Nine 36-in.; seven 30-in.; six 24-in.; four 20-in.

Cost, new
Depreciation
Value,

RECAPITULATION.

Value of all of the above yard connections and connections to appliances	$25,170.00
Mr. Mayer (p. 1391) gives for the above connections of.	47,714.00

HOLDERS WITH ACCOMPANYING TANKS.

1 Holder (of five million cubic feet capacity) In steel tank (Mayer, 1391) Description as given.		
Cost to build	$356,100	
Depreciation, 5 per cent.		
Value		$338,300
5236 Foundation for above:		
Cost, etc.	55,000	
Depreciation,		
Value..........................		55,000

RECAPITULATION.

Value of above holders with steel tank and foundation...	$393,300
Mayer, p. 1391, gave value of above holder, tank, and foundation as	393,965

INWOOD PLANT.

Summary of Values, January, 1907.

Buildings	$2,900.00
Apparatus	827.00
Yard connections	545.00
Holders & Tanks	7,500.00
	$11,772.00

INWOOD.

EXHAUSTER AND VALVE HOUSE AND DWELLING.

(Mayer, 1391-1589.)

1 story building, 22 ft. x 24 ft. x 11 ft. 4 in. and 24 ft. high.		
Cost to build complete, new materials.	$3,050.00	
Depreciation by reason of physical deterioration, 20 per cent.		
Value		$2,400

RECAPITULATION.

Value of all buildings, complete, including foundations for building and apparatus	$2,400	
Add for grading, sewers, piping, flagging and other miscellaneous improvements	500	
Value of all of above		$2,900
Value of above per Mayer's appraisal (pp. 1391-1590)		$3,230

5237 EXHAUSTER HOUSE.

CONTENTS.

(Mayer, p. 1590 & 1392.)

1 6 in. Mackenzie exhauster.		
Value		$250.00
1 Smith & Sayre vertical engine.		
Cost, new and erected	$220.00	
Depreciation, 15 per cent.		
Value		187.00

1 12 in. governor.		
Value		50.00
1 upright tubular boiler.		
Cost to build, new	200.00	
Depreciation, 5 per cent.		
Value		190.00
Steam pipe connections and fittings and pressure gauges.		
Value		100.00
1 Cameron pump.		
Value		50.00

RECAPITULATION.

Value of all of above apparatus and contents of plant	$827.00
Mr. Mayer (p. 1392 & 1590) gives the value of all of above apparatus and contents as	$1,640.00

CONNECTIONS TO THE APPLIANCES IN THE PLANT.

(Mayer, p. 1392.)

Cast iron pipe, 6 in. to 12 in, 170 feet.

Cost, new,
Depreciation,
Value,

5238 Wrought iron pipes, 1 in. to 2 in. diameter, 80 feet.

Cost, new,
Depreciation,
Value,

Valves: Six 6-in.; four 12 in.

Cost, new,
Depreciation,
Value,

RECAPITULATION.

Value of all of above yard connections and connections to appliances	$545.00
Mr. Mayer (p. 1392) gives value for the above connections as	923.00

CONSOLIDATED GAS COMPANY.

INWOOD STATION.

HOLDERS, WITH ACCOMPANYING TANKS.

Holders in brick tanks (1,060,000 cu. ft. capacity, Mayer, 1392).		
Description as given.		
Cost, new	$3,100	
Depreciation, 10 per cent.		
Value..........................		$2,800
Brick Tank and Foundation for Above.		
Description as given.		
Cost to build.....................	$5,200	
Depreciation, 10 per cent.		
Value..........................		$4,700

RECAPITULATION.

Value of above holder, with tank and foundation.....	$7,500.00
Mr. Mayer (p. 1392) gives value of above brick tank and foundation as	$17,984.00

5239 Q. Are you able from your knowledge and experience in the construction of gas plants to state what would be the fair and reasonable cost in the Borough of Manhattan of a coal gas plant per thousand cubic feet daily capacity?

Mr. Mathewson: I object to that on the ground that the witness has not been shown to be competent to make such an estimate in the Borough of Manhattan; and, certainly, I did not know that that was a subject that we were to go into to-day. I thought it was the valuation of these plants only that we were to take up.

Mr. Page: You see, we have got a whole day and a half still in which to examine Mr. Edgerton, if we care to, I suppose, and it is necessary for the further closing up of the estimate he gave as to the cost of production of gas by certain methods, and I wanted to show what it would cost to produce a plant that would make the gas that he testified to.

Mr. Mathewson: The principal objection is the witness is not competent and has not been shown competent to testify to that.

Mr. Page: And we have the testimony of Mr. Mayer upon that point.

Mr. Mathewson: No.

The Master: I think the second ground of objection is good, that this hearing was set down for a certain specified purpose; as I recall the direction of the Court, to put in some appraisals as to the values of these plants based on this witness's examination, and if I understand the direction of the Court right, his testimony is limited to this specific point. Now you have covered that.

5240 Mr. **Page**: Well, then, we will take an exception, and take the testimony under the rule.

The **Master**: All right.

Mr. **Mathewson**: Well, I will urge my objection that the witness has not been shown to be competent to give an estimate as to the cost of the construction of a plant on the Island of Manhattan, a coal gas plant to furnish the gas. He has had no experience here, concededly.

The **Master**: The disposition of that is academic. I sustained the other objections, and Page excepts, and we will have to take the answer of the witness.

Mr. **Page**: Now, you may read the question.

The **Stenographer** (reading): Are you able from your knowledge and experience in the construction of gas plants to state what would be a fair and reasonable cost in the Borough of Manhattan of a coal gas plant per thousand cubic feet daily capacity?

The **Master**: Of course, if you think this matter is of sufficient importance to justify taking the time and trouble in so doing, you are entitled, if you wish to prevent this going on, to decline to go on further and certify the record to the Court, if you think it is of enough importance to do so, and that would bring up the question as to whether the Senator has a right to have this set down on the record. Under the circumstances, it will take more time probably than the thing is worth.

Mr. **Mathewson**: I think my rights will be sufficiently protected by the exception, Mr. Master, without the delay that the other course would entail, and I leave it in that shape.

A. I think I can give it quite approximately to what the actual cost would be.

5241 Q. Will you state?

Mr. **Mathewson**: Same objection to this.

Mr. **Page**: All this line is taken subject to the same objection and ruling and exception, I presume, is it not?

The **Master**: Yes.

Mr. **Mathewson**: Very good; that satisfies me.

The **Witness**: I think a coal gas plant would cost about between $250 and $270 per thousand daily capacity.

Q. What is it that makes the range of $250 to $270?

A. Well, it would be according to the style in which it was built. If it was built in the plainest and still substantial manner, it might be reduced to $250; and if it was somewhat elaborated and made of such construction as we frequently see put in gas plants where they want to, as you may say, put on some style, it may be as high as $270.

Q. What would you estimate the cost of a 22 candle power water gas plant per thousand daily capacity? I mean by that a water gas plant capable of producing gas of 22 candle power.

Mr. **Mathewson**: Situated in the Borough of Manhattan?

Mr. **Page**: Yes.

A. I think that ought to be accomplished within the limit of $125 to $130 per thousand daily capacity, maximum.

Q. What would you estimate the cost of an oil and water gas plant to produce 50 candle power gas per thousand cubic feet of daily capacity?

A. About $100 per thousand; that is, if built on a very large scale; if built on a moderate scale those prices would be somewhat increased.

5242 Q. Are these estimates which you have given the cost to reproduce plants which would manufacture the gas that was testified heretofore as to the cost price?

A. Yes, sir; that is my opinion.

Q. And the various mixtures of coal and oil and water gas, and of the water gas, of which you have testified?

A. Yes, sir.

Mr. PAGE: That is all. The case is in your hands, Mr. Mathewson, as far as this witness is concerned. When are you going to cross-examine him?

Mr. MATHEWSON: That is all for you, is it?

Mr. PAGE: Yes.

Mr. MATHEWSON: Is there any further testimony on behalf of the other defendants?

The MASTER: Have you anything further, Mr. Burr?

Mr. BURR: What is the situation now?

Mr. PAGE: We have finished.

Mr. BURR: I have not anything further.

Mr. MATHEWSON: About Mr. Edgerton, I shall not want him probably until about two o'clock. I cannot get a chance to look at these things. I do not quite see how I will be able to look at these things and begin the cross-examination before to-morrow morning. In other words, if I get through with Mr. Marsh this morning, it would be hardly possible for me to get anything to eat and look at these things. Would it not be well to postpone Mr. Edgerton's cross-examination until to-morrow morning?

The MASTER: You are the best judge of that.

Mr. PAGE: It is within our time. You can use it as you wish.

Mr. MATHEWSON: Yes. Of course I consented to putting 5243 this testimony in in this shape, and the result is that while it takes time to look at it, we save time in the long run.

Mr. PAGE: We are agreeable to anything you wish.

The MASTER: He only wants to know whether you will want Mr. Edgerton to sit around here all day?

Mr. MATHEWSON: I think he had better come to-morrow morning.

Mr. PAGE: Very well.

WILLIAM D. MARKS, recalled for cross-examination, testified as follows:

Mr. MATHEWSON: Before Mr. Page and Mr. Kirby go, as they represent the Gas Commission of the State of New York, or the members of it who are defendants, I ought, I think, to call the attention of the Master to the fact that while the secretary of the Commission brought here these documents in the custody of the Commission, and you will recall, was to permit us to examine the reports in the office, and counsel assented, we are having some difficulty in getting permission, and we have now been held off for a couple of weeks, and have not been able to see them.

Mr. PAGE: I am glad you brought that up.

Mr. MATHEWSON: We just got a letter from Mr. Hazzard this morning.

Mr. PAGE: I did not hear of that difficulty until the other day, and I went down to see them, but the Commissioners had gone away. I will give you full access to them if I have to get an order from the Governor.

5244 Cross-examination by Mr. MATHEWSON:

Q. Doctor, I think you said that you do not manufacture gas apparatus; did I ask you that question?

A. I do not, sir.

Q. Nor are you in the business of a seller of gas apparatus, are you?

A. I do not sell any machinery; I am a consulting engineer.

Q. And have you ever constructed a gas plant in the Island of Manhattan?

A. Never.

Q. You say you began the inspection of these plants from the 17th of December?

A. 21st Street, if I remember rightly—no, the 42nd Street.

Q. Yes. And your inspection of the plants covered more or less of the time from the 17th of December up to what date?

A. Up to December 31st; that is to the last day in the year.

Q. Inclusive?

A. My continuous inspection——

Q. No, but was it December 31st inclusive?

A. Inclusive, if I remember rightly.

Q. Now, you began at 42nd Street on the 17th of December and on the first date, December 17th, you came about half-past one and remained until five, didn't you?

A. I can give you the exact hour; if I remember rightly, I examined the walls, the outside of the buildings, located the matter geographically and reported to the office somewhere about one o'clock, after going the rounds outside, so as to topographically enlighten myself as to localities.

Q. That was without entering the works?

A. Without entering the works. It was necessary in order to get a clear idea and know how everything lay, on my first visit to them.

Q. You first went into the 42nd Street Works on December 17th and was there from about 1.30 P. M. to 5 P. M., were you not?

5245 A. Well, I cannot recollect exactly; I know I was there during the afternoon.

Q. That was about right, wasn't it?

A. Yes, it seems about right.

Q. And you returned on December 18th at 10.30 A. M., and remained until about 3.30 P. M., is that right?

A. That appears to be about the whole time that I was on the interior of the works; I subsequently visited and walked around the outside for the purpose of getting a general idea of the condition of the walls and buildings from the exterior.

Q. Well, having finished with the 42nd Street plant, which next did you inspect?

A. The next appears to be on December 19th, 21st Street Station.

Q. And on that day you entered the plant about 11 o'clock in the morning, didn't you?

A. It is marked here 11 A. M.

Mr. Burr: On the morning of the 19th.

The Witness: Of the 19th. I should say to you that that entry in every case was preceded by a general topographical survey, going around all the physical property.

Q. That is walking around the streets outside of the works?

A. So as to locate the various pieces of property.

Q. You mean walking around in the different streets outside of the works so as to see the outside of the works from the street?

A. That is it, to locate them in their relative position.

Q. Well, we will understand that as to each plant without your repeating it?

A. Yes.

Q. Now, you entered the 21st Street plant on December 19th at 11 A. M., for your examination. What time did you leave on that day?

5246 A. The last entry is for the retort house December 19th, 5 P. M., that means after 5 o'clock.

Q. Yes. Then on December 20th you went again in the morning, remaining until about 12 o'clock noon, making the actual time spent in the 21st Street Works on December 19th and 20th about eight hours. That is correct, is it not?

A. Leaving between 12 and 1 on the same day.

Mr. Burr: What was that, the 20th of December?

The Witness: The 20th of December.

Q. Making about eight hours for the two days at the 21st Street plant?

A. It was all that was possible under the circumstances——

Q. I know that, Doctor, but——

A. I think about that, yes.

Q. You made no actual measurement during this inspection of the 21st Street plant, did you?

A. I paced off some of the greater distances as given by Mr. Mayer and generally found them correct.

Q. But you took no actual measurements by tape?

A. No, used no tape; it was impossible.

Q. In this or any of the plants?

A. In none of the plants did I use any.

Q. And such measurements as you made were eye measurements or paced measurements or something of that sort?

A. Yes.

Q. And is it not a fact that you found Mr. Mayer's descriptions of sizes of apparatus and plants were substantially accurate so far as they were given in the schedules which you had?

A. I think that Mr. Mayer's measurements were correct in all cases that I examined. There were a few typographical errors, the locality of which I cannot recall now, which at first appeared to be incorrect and afterwards in the summations showed that they 5247 were typographical errors and not original mistakes; at least it appeared so to me.

Q. Now, you went from 21st Street to the 44th Street plant, did you not?

A. 44th Street plant is marked December 21, 10 to 11 A. M.

Q. 44th Street plant, 10 to 11 A. M., December 21st?

A. December 21st.

Q. Was that the entire time that you were inside the 44th Street station?

A. Oh, no.

Q. Very good, give us the rest?

A. I visited the exterior and boiler house December 20, between 4 and 5 P. M.

Q. Well, as a matter of fact, were you not at the 44th Street plant from about 2.15 Thursday until about 4.15 of that day and then on the following morning you were present from about 11 to 12 o'clock, did you say, or 10 to 11?

A. I am looking that up. I was there at the engine and exhauster house December 20, at 2 P. M.

Q. Yes. And you remained in the plant how long on that day?

A. Until between 4 and 5 o'clock on December 20th.

Q. Well, that would make how many hours for the two days, about?

A. Apparently on December 21st, between two and three hours, and on December 20th, between four and five hours, or three and four hours, I don't know which.

Mr. Burr: Say altogether about eight hours.

The Witness: Something like that.

Q. Well, Doctor, won't you think a moment and see if it is not the fact that you arrived there on the 20th at about a quarter past two and left about a quarter past four, making two hours; and then on the next morning you arrived at about half-past ten and left about 12:15, which was about an hour and three-quarters?

5248 A. Oh, it may have been; it is simply a question of seeing and identifying things as rapidly as possible, that is all.

Q. What plant did you next visit?

A. The 99th Street station appears as checked December 21st, 1 P. M.; that must mean between 1 and 2; that is the first.

Q. Were you in the 99th Street plant at any other time than that, which you have just stated?

A. Not inside of it, but outside of it forming an opinion as to depreciation twice subsequently.

Q. That is walking around the outside of it in the street?

A. Pacing the length of the walls; examining the brick work and the roofs, and generally forming an opinion as to its antiquity.

Q. How much time did you spend in the interior inspection?

A. On one day traveling to and from the office, nearly three hours. On another day about two. I don't recall the day. I was sorry to go, but I——

Q. But I mean about the exterior of this plant?

A. I should say a couple of hours altogether.

Q. After the 99th Street plant you examined what plant?

A. On December 22nd, I examined the 111th Street station, the Inwood station, the 132nd Street station and 65th Street station.

Q. What time did you enter the 111th Street station and how long a time did you spend in the station?

A. Apparently, I entered the 111th Street station at noon, 12 o'clock——no, at 11 o'clock.

Mr. Burr: Your answer is that you entered there at 11 o'clock?

The Witness: At 11 o'clock, and I examined the last detail of the stable between 1:30 and 2.

Q. Then you went to 132nd Street, you say, and how long a time did your examination there consume on December 22d?

5249 A. Between 2 and 3 P. M.

Q. And then at Inwood, what time did you take?

A. Between three and four; and 65th Street between four and five.

Q. At 65th Street you arrived on December 22d at 4:15 and remained until five, did you not?

A. I said between four and five. I have it marked here.

Q. Well, then, what station did you then visit after the 65th Street station?

A. The 63rd Street station on December 24th, 10 A. M. There may be something wrong about that, that may have been December 23rd.

Q. No, it was December 24th, according to my memorandum. December 23rd was Sunday, you know?

A. I did not know that, because it did not make any difference in my works since I have been connected with this trial.

Q. Then on December 24th you visited the 63rd Street station, and you were in that station from about 10:30 A. M. until 11 A. M. on that day, were you not?

A. That was about as recorded.

Q. Now, how about 18th Street?

A. 18th Street was reached December 24th, at noon.

Q. And how long did you remain at 18th Street station? You remained there until about one o'clock, didn't you?

A. It must have been a little after one, sir. I see it is marked one here.

Q. That is not the reason you think it was after one, is it?

A. Between one and two it would be always marked one, and if two o'clock, between two and three, and so on.

Q. Have you testified what time you spent in inspecting the 14th Street plant, which is the only one left?

A. I did in my testimony mention the fact that I spent with others, I think, the better part of a week.

5250 Q. In the 14th Street plant?

A. In the 14th Street plant.

Q. Now, to be quite fair to you, it was absolutely physically impossible, was it not, to have examined all these plants, excluding 14th Street, within the time that you had to examine them and verify measurements of apparatus and the descriptions generally of the apparatus in the detail which Mr. Mayer had described it in his schedules?

A. I could not have made those measurements in as many months as I used days, apparently.

Q. And your observation of the apparatus, so far as you could make it in comparing it with the data and descriptions which Mr. Mayer gave, proved Mr. Mayer's data to be so substantially accurate that you were willing to accept his descriptions as fair descriptions of the apparatus?

A. The physical descriptions in no case did I find to be out; although they may have been out, in no case that I investigated were the physical measurements and descriptions given by Mr. Mayer wrong.

Q. Now, Mr. Mayer in his appraisal of the plants divided the property into four classes: buildings, apparatus and contents, connections and holders; is it not the fact that as to the last three classes, that is to say apparatus and contents of buildings, connections and holders Mr. Mayer's estimate of first cost or actual cost new was substantially correct, according to your judgment?

A. I accepted Mr. Mayer's statement as to yard connections without any criticism at all, based on my general results on the measurements on the other apparatus inside of the building. His apparatus as far as structural or first cost was concerned, with a few—and I think those were not large—exceptions, did not differ essentially from such figures as I could obtain.

Q. And the same was true as to the first cost of holders, was it not?

A. In the case of holders the difference was somewhat

5251 greater, but it was not a serious difference.

Q. So that we may say, speaking generally, that you accepted his values of yard connections, and that as to apparatus and contents and holders, Mr. Mayer's testimony as to first cost or original cost was substantially correct, according to your view?

A. It was.

Q. And that you differed with him chiefly as to the amount of depreciation that should be allowed on first cost, considering the present condition of the machinery?

A. And also the valuation of the buildings?

Q. Yes, but I am leaving buildings out?

A. Yes.

Q. Then leaving buildings out, you would quarrel with Mr. Mayer's figures as to apparatus and contents and holders with reference only to the amount for depreciation that should be allowed off original cost?

A. That is right.

Q. That reduces the subject, then, to the question of this depreciation and the cost of buildings. The statement that you have put in as part of your evidence shows your estimate of the original cost of buildings, as well as of depreciation, does it not?

A. It does.

Q. The duties of a consulting engineer do not include the construction as a contractor of buildings, do they?

A. It is an injury to a consulting engineer to become a contractor.

Q. But you have not as a contractor constructed buildings in the Island of Manhattan?

A. Never.

Q. Nor as an owner of buildings?

A. Nor as an owner.

Q. In reference to the 14th Street plant, the valuation of $1,460,064 at page 5063 of the testimony appears to be reached on a different basis from that which you have chosen in passing upon the value of the buildings and apparatus in the case of the other
5252 plants; that is right, is it not?

A. That is right. That is, it differs in this respect, that in the 14th Street plant I accept in a lump sum the figures given by Mr. Rowland, while in the case of all the other stations I verified each and every item. While at the 14th Street station there were three men engaged in overlooking the apparatus, at all the other stations I was alone; with the result that it was quite possible to accomplish many times the amount of work that you could where there were three.

Q. In other words, for the 14th Street plant you took the appraisal of Mr. Rowland as to certain buildings and apparatus as $1,706,294?

A. Yes.

Q. And you deducted from that depreciation on the basis of fifty years expiration at .85 of one per cent. per annum, making 42½ per cent., or in dollars $725,175?

A. Yes.

Q. And left a balance of $981,119. I am correct so far, am I not? That is page 5063?

A. Yes.

Q. And then you added to that what you considered property added since 1884?

A. Yes.

Q. Bringing up your total to $1,464,064?

A. Yes, I did.

Q. Now, Doctor, did you figure up the amount which you have taken off by way of depreciation from the cost of these plants in order to reach your total of the $9,348,692 shown at pages 5058 and 5108 for all the plants?

A. I turned in a completed schedule of those.

Q. Yes, but I did not see the total of your valuations of plant before deduction of depreciation?

A. Nor did I obtain that.

Q. Well, now, I will ask you if you will not in a moment, in order to form a basis for our computation, figure up the amounts which you have deducted for depreciation. If you will take a piece of paper, I have it here, and I think I can assist you so we can get it in a few minutes?

5253 A. There was a complete schedule in good shape turned in yesterday.

Q. Yes, it is on the record. Now, taking these appraisals of the different plants in order; if I am correct, you deducted for 14th Street (p. 5063 of the record), for depreciation, three items, to wit, $725,175, $13,200 and $6,472, making a total——

A. One moment.

Q. Making a total of $744,847 total depreciation, deducted from first cost?

A. Yes, sir.

Q. Now, for 42nd Street (p. 5064 of the record) you deducted depreciation of $472,182?

A. $472,182.

Q. And for 44th Street (p. 5069 of the record) you deducted a depreciation of $132,808, and for 21st Street (p. 5076 of the record) you deducted depreciation 28 per cent. of the plant, or $612,304?

A. Correct.

Q. And for 99th Street (p. 5084 of the record) you deduct 21 per cent. of the plant, or $129,974?

A. $129,974.

Q. And from the 18th Street (p. 5089 of the record) you deducted 42½ per cent., or $165,290?

A. $165,290.

Q. And from the 63rd Street station (record, p. 5093) you deduce 10 per cent., or $43,644?

A. $43,644.

Q. And for 65th Street (record, p. 5095) you deduct 20 per cent., or $81,499?

A. $81,499.

Q. And for 111th Street (record, p. 5098) you deduct 30 per cent. for depreciation and 30 per cent. for depreciation, neglect and decay, amounting to 60 per cent. of the entire plant, or $96,780?

A. $96,780.

Q. And for the 132nd Street station, I find no deduction (record, pp. 5102-03)?

5254 A. The 132d Street station exceeds Mr. Mayer's valuation by about three thousand dollars, being entirely new and in excellent condition.

Q. And at Inwood (record, p. 5103) you seem to have made a deduction, as nearly as I can make it, of the difference between $20,300 and $10,596; that is, original cost and the value as you state it, or $9,704. Is that right, or is the depreciation greater than that? It was not clear.

A. I make it $9,704.

Q. Now, won't you tell me how much depreciation that makes, all told, that you have deducted from first cost?

A. Unless I made some error in addition, $2,488,832.

Q. Well, that is within a few hundred dollars of my hasty computation, Doctor, and it is undoubtedly substantially correct. We will take it without further verifying.

A. Two and one-half millions.

Q. Now, will you add that amount of depreciation to your $9,348,692 which you have as the net value, and say what that would make for the original cost?

A. $11,837,524.

Q. Now, Mr. Mayer's figures of original cost, which you have stated you approve in substance, he testified was the amount which the company would actually have to pay to contractors to instal the plant and apparatus. You understand that to be the case, do you not?

A. I so understood Mr. Maver.

Q. Now, there is an engineering item, including the grading, sewering, laying out of the plant, inspection, superintendence, and other items, which the company has to meet in addition to that which Mr. Mayer and other witnesses have testified was relatively ten per cent. That is a fair figure, isn't it, Dr. Marks, ten per cent.?

A. No, it is not in the case of an inventory. In the case of an estimate an engineer will add ten per cent., five per cent. or fifteen
per cent. for things he has not foreseen. In the case of an
5255 inventory the apparatus is all there for examination, and you
are expected to give its valuation, as Mr. Rowland did, without any additional percentage.

Q. I am not referring now to the things which are unforeseen, but to the things which are foreseen. It is true, is it not, that a company in establishing a plant must necessarily have an engineering force which lays out the plant; it must have inspectors and superintendents; it must have grade and cut a field; it must drain, and it must do many other things which it does not pay the contractor for who instals the plant or builds the building; that is clear, isn't it?

A. Yes.

Q. Now, supposing that that amounts to ten per cent., as the other witnesses have testified, in addition to this contractor's payment, that would mean an additional expense to the company?

A. The drainage of a plant bears no relation to the apparatus upon it. There is no ten per cent., or five per cent., or fifteen per cent.

Q. No, I am speaking about the expenditure that the company must go to in order to have its complete plants in working and operating condition in addition to the bills which it pays the contractor for simply bringing the apparatus and installing it and erecting the building?

A. Yes.

Q. Yes. Now, those additional items of engineering expense in laying out the plant originally, which the company has to pay, and draining, which is always part of a plant on low ground, and the cutting and filling and grading, which, of course, is paid for?

A. Yes.

Q. (Continuing). The company has to meet additionally, and I am now trying to get at what that would mean, plus the valuation of the plant representing the amount paid to the contractors to instal
it. Now, if ten per cent. is a figure for those things, those ad-
5256 ditional expenses to the company before it gets started, that
would mean something in addition to the $11,837,524, which you have mentioned, an additional expense to the company, wouldn't it?

A. If that is not included then there would have to be an additional allowance.

Q. Well, from your observation, Mr. Mayer did not include it, but expressly excluded it, and added the ten per cent. subsequently, and in that he was confirmed by Dr. Humphreys, who said that his experience was nearer fifteen per cent. Now, won't you add ten per cent. to this $11,837,524, and see what that would make, assuming that ten per cent. is to be taken into consideration?

A. Acting as your computer, $13,021,476.

Q. Well, everyone seemed to concede, including Mr. Logan, that the construction of a plant of this kind would take *in toto* more than two years, and it was assumed therefore that the interest for one year at say five per cent. was a low figure. We have not added any interest yet, and how much would five per cent. amount to in this valuation of plant, if you will be good enough to act as my computor, and add it, Doctor?

A. $13,612,952.

Q. Now, that excludes, I understand, the 18th Street plant, which was taken by the City——

A. Abandoned.

Q. Whether it has been paid for or not. Yes, and where does your foundation of apparatus come in in this total? Did you include your foundation of apparatus in your valuation of buildings?

A. In every case more than included. I was exceedingly liberal.

Q. Then we will take those up one at a time, but as a matter of fact they are included in the buildings?

A. Except where I have specifically named them in my inventory.

Q. Now, refer to page 5063 of the record, where you de-
5257 duct for depreciation, fifty years, at .85 of one per cent.,
amounting to 42½ per cent. for the 14th Street plant, and follow the same method of computation in other plants. I understand you get this .85 of one per cent. by taking the depreciation charged off as shown in City's Exhibit 87 (Exhibits, p. 1466) amounting to a little over $220,000, and assuming that to be the depreciation rate fixed by the directors of the Consolidated Company in the resolution which is described in the Exhibit, is that right?

A. I cannot answer that directly. It is the very least depreciation that could be admitted.

Q. But let us get at how you reach the .85 of one per cent. Didn't you testify heretofore that you reached that by assuming a capitalization of two dollars per thousand and applying this depreciation shown at page 1466 of the Exhibit book to that, on the ground that that was a normal depreciation?

A. On the ground that that was the very lowest depreciation. I will explain to you——

Q. You took the .85 of one per cent. on the ground that that was the rate fixed by the Board of Directors in this resolution?

A. Yes.

Q. Now, in order to be consistent, because we must be that whatever else we are, let us look at that page 1466 of Exhibits for a minute and see if that does not deal with depreciation on not only plant which we are now dealing with, but mains, services, meters and so forth—you remember that it does?

A. Oh, yes.

Q. Now, let us take the amount for plant which was charged off for depreciation that year, which was $3,424. Will you put it down there? And now will you divide that by the valuation of plant, excluding ten per cent. for the company's engineering and miscellaneous expenses and the five per cent. for interest, to wit, $11,837,524, or compute it in any other way that you please, so that we 5258 can see whether on plants the directors did charge off .85 of one per cent. in 1905, even assuming a two dollar per thousand valuation. In other words, what per cent. did the company charge off in the year 1905 of the valuation of plant, even as you have given it, $11,837,524 original value?

A. The two dollars of which I spoke included everything, beginning with the real estate and ending with the meter structural cost.

Q. Yes, I know; that is a general proposition. We are now coming down to this direct resolution and seeing how much depreciation on plants the directors charged off, you having stated in a previous statement that you assumed that they charged what they thought was a fair rate for depreciation?

A. Yes. Now it would be impossible to take a single entry for a single year of the single operation of a plant as an average. It is quite fair to take the average depreciation throughout the whole plant straight through, covering, as I say, everything from the building straight through to the meters, as has been done here. In other words, that single entry would be absurd for the very simple reason that the United States Government in reckoning its depreciation on brick buildings gives from one to one and one-quarter per cent. or one and one-half per cent., and on wooden buildings from two to two and one-half to three per cent. That is what is known as the Tiffany Estimate Standard.

Q. And if the Government expends on its buildings to offset that depreciation the proper amount year by year it can keep those buildings in repair and in good condition for an indefinite period, can it not?

A. Possibly it might, but in checking up——

Q. You do not understand when the Government charges off those rates to depreciation it spends nothing to make good that depreciation but merely allows the building to rot away year by 5259 year, do you?

A. Oh, no, but it fixes the life of the building.

Q. I will come to the buildings a little later. I am now on another point. Do you mean to say that you can take a single year for depreciation or for repairs and renewals spent on a plant and say that that necessarily represents a fair average?

A. I beg your pardon. I accepted it as the very lowest possible figure that can be——

Q. Yes, you understood that that was on a fair average for depreciation which the company had shown by its experience for the past twenty years, didn't you?

A. Had that been left to me to fix the depreciation I would certainly have fixed it at one per cent. or a trifle over it, as a matter of my own judgment.

Q. But we are now speaking about the amount which is to be charged to depreciation year by year as a normal amount?

A. Yes.

Q. In order to get that you say you would have to take the average of a considerable period, the same as Mr. Hall said, wouldn't you?

A. Why, certainly. All of the whole outfit for any one year, not any particular item of the outfit.

Q. But could you take the depreciation or the repairs and renewals even for the whole outfit of the company for a single year and say that they represent in every case an average, a normal rate?

A. You could not, but you might accept it as the minimum, lowest allowable amount, which happened to be fixed by the Board of Directors in this case .85 of one per cent.

Q. And if that was less than the average or normal amount it would be as Mr. Hall said and as I think you said and certainly as Prof. Bemis said, equalizing in considering the cost of gas by adding to it a sufficient amount to make up a fair average?

A. Something of that sort, yes.

5260 Q. Now you have taken from that the year 1905, in computing this .85 of one per cent., and will you tell me how much per cent. the company charged off in 1905 on the plant—my original question; whether it is right or wrong is another proposition?

A. Do you refer to the $11,837,524.

Q. Yes, your original cost, because the cost of depreciation would cut off the value.

A. Why, it is a very small fraction of one per cent.

Q. It is about .02 of one per cent., isn't it?

A. Nearer .03.

Q. Well, call it .03 of [illegible] per cent?

A. .03 of one per cent.

Q. How much depreciation would that amount to if applieed to your $11,837,524?

A. Well, that is the same thing, I have just given it to you.

Q. Yes, but I say computed on that—that would be then $3,424, wouldn't it?

A. Yes.

Q. Instead of your depreciation of .85 of one per cent.?

A. Yes.

Q. What would that be, .85 of one per cent.?

A. On that amount?

Q. Yes. It would amount to a little over $100,000, wouldn't it?

A. $100,617.95.

Q. Now, as a matter of fact, if you take the depreciation item applying to an entire plant you would be unfair to buildings, would you not, because buildings do not depreciate so rapidly as meters and services and horses and wagons, and things of that sort, which form a part of the property of the company, do they?

A. Buildings do not depreciate as rapidly as the items you mention, but far more rapidly than other items that are used in a gas plant.

Q. Such as what?

A. Gas mains, for instance.

Q. But not so fast as apparatus in the plant?

A. But that depends altogether on the characteristics of the apparatus and the material from which it is made.

5261 Q. Now, in your testimony respecting 14th Street, as shown in the tables at page 5063 of the record, you show 42½ per cent. of the total amount for depreciation on property of 1884. Do you take into account that large sums have been expended in replacements and renewals of certain depreciation on those plants within the last twenty years?

A. I have es-imated in every case that all the money that was necessary to keep the buildings in the most perfect repair possible had been expended and this depreciation gave for .85 of one per cent. a total life of nearly one hundred and twenty years to each building and to each piece of apparatus, from which I assumed that it would have outlived its usefulness, become obsolete and inadequate.

Q. That then, is not physical deterioration, but presents the possibility of abandonment or disuse at some future time; is that right?

A. It represents obsolescence or inadequacy within one hundred and twenty years from the time of its installation.

At 12.55 P. M. a recess for lunch was declared until 2.15 P. M.

5262 Afternoon Session.

William D. Marks resumed.

By Mr. Mathewson:

Q. I find that you testified quite fully in reference to what this .85 of one per cent. covered in depreciation as to the 14th Street plant, and I assume that the same theory applies where you have applied .85 of one per cent. to the other plants?

A. Yes.

Q. So that it will not be necessary to ask specifically about those?

A. No.

Q. I also examined you quite at length on cross-examination in reference to this statement in regard to the 14th Street plant, which you have now put in in this tabulated form.

A. Corrected within the figures as it was finally corrected in my testimony.

Q. Yes. Now, take the 42nd Street plant, a summary of which appears at page 5064. You found that plant, as well as the 14th Street plant and the other manufacturing plants, in operation, did you not, Doctor?

A. I did.

Q. And it is your information, is it not, that those manufacturing plants are making as much or more gas than they ever did before, and have made it at a lower cost within the last year?

A. That would be purely hearsay.

Q. You heard the testimony to that effect of Mr. Bradley, or one of the other officers, and you have no information to the contrary?

A. I have no information to the contrary.

Q. Now, you take the total actual first cost of buildings as $425,810.14. You say that included foundations of apparatus. Will you be good enough to state, referring to the different houses constituting those buildings as they appear on page 5065 of the
5263 record, what foundations you included in each case?

A. Referring to the 42nd Street station, and to the inventory items 1 and 2, there are——

Q. Just say what they are, because they are referred to in other places. Do you mean the valve house?

A. The valve house and vault have no specific allowance for foundation. Item 3, meter house, includes an allowance for the meter within it. Items 4 and 5, purifying house and extension foundation, and foundation for boxes and brick piers, is pretty nearly all the allowance for foundations; it is a frame building.

Q. Foundation for apparatus or foundation for the building?

A. For the building and for the apparatus.

Q. For what apparatus?

A. The purifying boxes; the building in that case is a one-story frame building, roof trusses given away and supported, and most of the timber work in process of decay and sagging.

Q. My question, Doctor, was simply what foundations of apparatus you included in your estimate of building in each one of these cases; that was all.

A. Yes. Item 6. Engine house, meter house and office, includes the allowance for foundation for exhausters, for horizontal engine, and for three meters. There was a special extra allowance in that case on account of the multiplicity of foundations in that case.

Q. What was the extra allowance included in that?

A. There was special extra allowance in that case of something like $2,168 in addition to the cost of the rest of the building. Usually it is included within the figures given. Item 9, retort house and retort house basement and bench foundations, that is for sixty benches; there was a special computation made in that case too, amounting to some twenty-eight thousand dollars of the total given of $112,692.

Mr. Burr: For foundations?

5264 The Witness: For foundations. Item 10, condenser and scrubber house, there was an allowance made for two scrubbers, air condenser and a cast iron box, use unknown. Item 11, retort houses No. 2 and No. 3, there was an allowance made for six benches of six, fourteen benches of six, including also the walls of the basement.

The MASTER: What do you mean, for foundations?

The WITNESS: For foundations, yes, sir.

Q. Can you give the amount of that allowance?

A. The amount of the allowance for the walls of the basement and the retort benches foundations amount to $20,465.

Item 12, vault under the sidewalk. There is no allowance for foundation there, merely for the vault itself.

Item 13, exhauster, engine and scrubber house, both the foundations and the buildings are lumped there.

Q. Foundations for what?

A. For the exhauster and for a Greenfield engine, a No. 10 Mackenzie exhauster, two large Mackenzie exhausters, one 16 x 30 horizontal engine, one 8 x 8 Greenfield engine, rotary washer, Greenfield engine, a multitubular condenser, two oil gas scrubbers, an oil gas condenser. In other words, as I remember it now, you may say the whole basement almost was filled in so closely with foundations for various pieces of apparatus.

Q. Did you separate the allowance for each foundation, or did you compute separately the foundation for each piece of apparatus?

A. No, in that case that was beyond me. I just lumped it. The cellar was filled in, if I recall it rightly; I do not remember it exactly, but I think the cellar was just filled in.

5265 Q. Do you remember whether these foundations were brick or stone or cement, or what they were, respectively?

A. If I remember rightly, every one of these pieces of apparatus had a cut stone cap to a foundation underneath it, and this was figured as being ordinary foundation work in the way of stone. I have not got those figures with me, but I think it was figured the same as the building; that is, the cubical contents.

Q. How much did you allow for excavation for the foundations of these several pieces of apparatus?

A. The foundations in a case of that sort being adjacent to a place where it required a great deal of filling in, at the outside could not have cost for excavation fifty cents a cubic yard; that was my judgment in the matter. Of course, it was largely judgment. They required the dirt elsewhere there.

Q. In the case of these various plants, 42nd Street and others, did you allow for rock excavation in reference to holders or other apparatus?

A. In the matter of the holders, you will find that practically as far as the tanks were concerned in round figures I accepted, having no other means, either the estimate of Mr. Mayer or of Mr. Rowland very closely.

Q. Well, take the excavation for the foundations of the buildings and foundations of the apparatus which you have included in buildings. Did you allow for rock excavation in those cases?

A. In no case, in the cast of buildings, did I allow for rock excavation; always fixing the work at what might be called regulation prices for heavy excavation.

Q. Well, but rock excavation is much more expensive than dirt excavation, isn't it?

A. Rock excavation will cost you about five dollars a cubic yard blasted out.

Q. What do you call regular excavation, dirt excavation?

5266 A. Either at ten cents per cubic foot, making $2.70 a yard, or at fifteen cents it would make about $4.00 a cubic yard, and one or the other of them have been used, including both the excavation and the structure inside the excavation.

Q. Did you allow for the piling in these foundations of these various works?

A. In every building where I could learn—I accepted this on faith entirely—that piling had been used in the foundations, I used fifteen cents per cubic foot for the buildings, in the place of ten cents which I would have used in the case of ordinary foundation.

Q. In the case of ordinary foundation as you term it, what did you allow additional to your ten cents for a unit figure for dumping privileges, etc., in relation to the earth which was removed?

A. You mean in each station?

Q. Yes, did you make allowance for that?

A. Of course, this is hasty work, but so far as my judgment went, every bit that could be dug in any of these tidewater stations was worth a great deal to the company itself; they ought to have been very glad to get it, to build out over the lowland back of their bulkheads and into their piers.

Q. But even that would involve some transportation——

A. A haul of a few hundred feet.

Q. And so on?

A. Yes.

Q. A great many of these plants you found had no bulkhead next to them that they were using or that apparently belonged to them, didn't you?

A. Not where I noticed a large amount of excavation, except for gas holders.

Q. Well, for whatever it may be?

A. Yes, I say except for gas holders.

Q. But you made no special allowance for that?

A. No, I did not.

Q. Now, you might proceed with these various buildings.

A. Fourteen is the next, retort house No. 4, marked "Exhibits." It should be experimental retort house.

5267 By Mr. Burr:

Q. Does that need to be corrected?

A. Yes.

Q. Instead of Exhibits it should be Experimental?

A. Yes.

Q. What do you mean by Experimental?

A. It is a little retort house with three benches in it which apparently is used for all sorts of experiments and at the present moment has some mysterious arrangement in it not in use. That also is all lumped in one computation at $4,631.12.

By Mr. **Mathewson**:

Q. You did not separate that into its items?

A. No.

Q. I suppose about all the chance you had was to make a general survey and then a general estimate, was it?

A. I visited the cellar of this experimental retort house and examined the foundations to see if there was anything there and found that it was practically abandoned and used as a water closet by the men. Going on down as far as brick fence, Item 22, all the other foundations have been included in the estimate for the buildings, foundations for trestles and that sort of thing, and not separately computed.

Q. That is, you made a lump estimate for the building including the foundations without computing each separately?

A. Yes, without computing each separately, making a lump estimate. In the case of most of these foundations where I learned that they were very heavy indeed, my time being preposterously limited, I made as good an estimate as I could of what was below ground; but always in that case included the walls of the building which supported the building, as well as the foundation for the machinery, although I visited every one of them and looked at them very carefully.

5268 Q. Can you tell me now where and to what extent you allowed for pile foundations in these various plants?

A. Now, let us see. Item 11, retort houses 2 and 3 pile foundations, an allowance of 5 cents per cubic foot for the capacity of the whole building. Item 10, condenser and scrubber house, pile foundation, allowance of 5 cents per cubic foot for the capacity of the whole building.

Item 9, retort house, allowance of five cents per cubic foot for the whole building.

Item 1, valve house, allowance of five cents per cubic foot for pile foundations.

Item 20, coal shed No. 2, allowance of five cents for pile foundations.

Item 31, deodorizer house shed, an allowance of five cents for pile foundations. Those are all I can find on my computation.

Q. Will you give me the basis on which you computed this five cents—per cubic foot, was it?

A. Per cubic foot, yes, sir. The computation of buildings by means of the cubic foot capacity, except where the buildings are very closely of the same general dimensions of building is incorrect and untrustworthy. Taking a building 50 feet long, 50 feet wide, and 25 feet wide, with walls twelve inches thick, and bricklaying at $25 per thousand kiln count, and the roof at 30 cents per square foot, we find the cubic contents of that building to be 18,750 cubic feet, and the cost $1,525, or 8.1 cents per cubic foot. Taking another building 100x30 feet x 25 feet high, with walls 16 inches thick and at prices of brickwork and roof the same, its cubic contents are 75,000 cubic feet and its cost for the plain building as $4,358, or 5.8 cents per cubic foot——

Q. That is on your estimate of cost?

A. Yes. Taking a building 200 feet long by 60 feet wide 5269 by 25 feet high, with walls twenty inches thick, and the cost of brickwork and of roofing being the same as in the previous cases, its cubic contents are 300,000 cubic feet, and its cost is $12,284 or 4.1 cents per cubic foot. This is a simple building with the foundations extending in brick five feet below the surface of the ground, the walls rising twenty feet about the ground and surmounted by a slate roof, and is what might be called a rough type of the retort house, such as you see.

Q. You mean the building which you have supposed in your testimony, or some particular building at this 42d Street plant is of that character?

A. It is of the general type of the retort house, is what I am speaking of.

Q. You have not quite told me yet on what basis you computed the five cents per cubic foot on account of piling. I mean five cents per cubic foot for the entire contents of the building in this particular case?

A. Referring now to what I have just explained, 10 cents is taken instead of 4.1 cents in the case of a retort house with ordinary foundation.

Mr. Burr: That is, you allow ten cents.

The Witness: I allow 10 cents in the place of 4.1 cents in a retort house with ordinary foundations. But when you get to pile driving, and I know this from practical experience, there are many factors enter in to make it slow, troublesome and costly, and so I simply added fifty per cent., or five cents per cubic foot for the cost of any building that had to be put up on piles.

Q. How deep did you assume the piles to be, how long?

A. I had but one or two opportunities to learn anything in regard to the nature of the piling there, and on that I based my pile work at from five dollars to $7.50 apiece for piles.

5270 Q. Well, that would be piles of how long?

A. Oh, twenty to twenty-five feet, or thirty, not large piles, just ordinary small piles such as would be driven under a wall.

Q. Now, you found some re-enforced concrete foundations, didn't you, for buildings or apparatus in the various plants of the Consolidated?

A. If I remember rightly at the 65th Street station there was a very elaborate statement of heavy stone wall and of concr-te work, and of interior retaining walls, all of which required a considerable amount of time for computation and for checking out, amounting to a considerable amount of money.

Q. Well, did you find any re-enforced concrete foundations under ground?

A. Pardon me. A re-enforced concrete is a concrete that is braced with wrought iron.

Q. Yes. Well, on your own definition, did you find any re-enforced concrete foundations underground?

A. I did not.

Q. Then, of course, you did not make any allowance for any, not having found them.

A. Not having found them, and it would not make very much difference in either case.

Q. Well, what figure per cubic yard yould you put on re-enforced concrete foundations under ground?

A. About seven dollars per cubic yard plus the cost of any iron that was worked into them, if I could find how much that was.

Q. The whole thing would be eight dollars and something per cubic yard?

A. No, it might be more and it might be less; I really don't know.

Q. How about re-enforced circular concrete tanks underground; didn't you find any such tank or tanks?

A. I did not, but all the difficulty in regard to that is obviated by the fact that I did not vary largely in my figures from the figures given.

5271 Q. No, I am speaking now about the buildings and not the apparatus. Simply the buildings on which you and Mr. Mayer disagreed, and the foundations for building and apparatus which you stated you included in the cost of buildings, did you not?

A. Yes, sir.

Q. Now, what did you allow for concrete floors on the ground six inches thick?

A. They were put down at seven cents per cubic yard.

Q. Seven cents per cubic yard?

A. Per cubic yard laid.

Q. How much would that be per square foot?

A. Well, don't you see, it would be fifty-four square feet; twenty-seven cubic feet multiplied by half, and it would be fifty-four, and seven dollars—did I say seven cents?

Q. Yes?

A. Seven dollars.

Q. That is a different proposition; I thought the other was remarkable. How much would that mean per square foot, if you were simply taking the surface six inches thick? That would be half of a cubic foot, would it not?

A. Fifty-four square feet multiplied by one-half a foot gives you twenty-seven cubic feet, that would be about thirteen cents per square foot area.

Q. Six inches thick?

A. Yes.

Q. What did you allow for reinforced concrete floor with beams and expanded metal, if you found any such?

A. I have just stated to you that I did not discover any such, nor was I told of any.

Q. No, this is another proposition?

A. If I were asked anything of that sort I would require considerable time to calculate it, depending on the span, on the amount of iron used and on the loading which was expected to go on the floor; it is quite an intricate engineering question.

Q. You did find some face bricks selected from common bricks in some of the stations?

5272 A. I recall in one of the offices only. To be frank about the matter, I rather neglected the walls on the outside of the buildings, I was so busy with the apparatus.

Q. Well, you did not make any allowance for face bricks, did you, above the common brick?

A. I did not, no.

Q. Well, what grade would you allow for common bricks laid per thousand?

A. I did allow twenty-five dollars per thousand laid; it is too much it should have been twenty dollars per thousand laid.

Q. Now, can you give me the detail by which you reached the twenty-five dollars per thousand of common brick laid, what did you assume to be the average price for bricks?

A. The average price for bricks now, all hard-burned red, stock bricks of good durable quality would be somewhere between ten and twelve dollars a thousand, perhaps over. A bricklayer laying as he would lay there, would lay somewheres between one thousand and twelve hundred in a day of eight hours, to which he confines himself ordinarily.

Q. Do you think he would under the Union rules in the City of New York? Have you had any experience?

A. Pardon me, before I go any further. Of course, in regard to elaborate buildings like four-story fronts he would lay somewhat less. If he were laying pressed brick or Philadelphia pressed brick, as it is called, he would be held down or would hold himself down to about four hundred bricks a day; but if he were throwing brick into a foundation and slushing up as he went along without pointing on the outside he would be allowed to lay from fifteen hundred to two thousand, perhaps more, during the day.

Q. In New York City?

A. In New York City.

5273 Q. You have not had any bricks laid for you in New York City recently?

A. I have not, but I have looked up the matter very carefully, and this is authoritative.

Q. I wish it were. How much would you pay a laborer per day for laying bricks at that rate?

A. The actual cost would be for the bricklayer in the neighborhood of——

Q. Per thousand of brick, I mean.

A. For the bricklayer in the neighborhood of five dollars; for the hod carrier, if there was a hod carrier, in the neighborhood of thre- dollars and fifty cents, and for the day laborer probably in the neighborhood of one dollar and seventy-five cents to two dollars, and the total cost of laying this brick handled in that way, assuming it to be the plain rough common work that is done around gas works, might be about six dollars, somewheres between six dollars and seven dollars per thousand, making eighteen dollars or nineteen dollars a thousand so far.

Q. How much would you allow the labor per thousand?

A. The labor is paid by the day, the hod carrier is paid by the day, and the bricklayer is paid by the day.

Q. Yes, I understand, but we are reducing it now to a thousand?

A. And I said that all three of them together would make the cost of laying one thousand brick somewhere between six dollars and seven dollars a day.

Q. How much would you allow for the bricklayer himself in daily wages?

A. The bricklayer would probably insist on five dollars or five dollars and fifty cents as nis absolute right, and the hod carrier would stand out for three dollarst and fifty cents, and the common laborer one dollar and seventy-five cents.

Q. And if a bricklayer laid only eight hundred bricks in laying the
wall of a building instead of a thousand or twelve hundred,
5274 that would increase the cost per thousand of brick, of course?
A. Yes, but I am assured that the very, very common kind of work that is required in gas works is allowed to be built much more rapidly, particularly where you are on the ground, and where you throw in and slush up your brick as you go along.

Q. In building gas buildings above the ground bricklayers do not work in that fashion, do they?

A. Well, it is pretty rough work that I have seen about these buildings, these retort houses—they are just struck joints—half-inch joints, too, at that.

Q. Don't you know that every brick is rubbed into position and joints are struck in these gas structures above ground?

A. Haven't I been inspector for that work, with the specifications calling for everything of that sort, and I know exactly what they do do.

Q. Don't you know that it is done in the buildings of the Consolidated Gas Company?

A. I have seen the brickwork and I know just how near it was to being done as the theory calls for. It was very rough work in a good many places.

Q. You found, did you not, that the brick had been rubbed into position and the joints struck in every case above ground?

A. The bricks varied so much in quality in some of the walls, particularly at 21st Street, if I remember rightly, that they worked out for half their depth in the face of the wall.

Q. That was because the mortar may have worked out?

A. The brick was not hard, red stock; it was the commonest kind of brick.

Q. But the laying of the brick is what we are talking about now?

A. Yes. And I allowed six dollars for that.

Q. Didn't you find that those bricks so far as you observed, had been rubbed into place, and a joint struck?

A. I said they were all struck joints.
5275 Q. How much did you allow per thousand for cement?
A. I allowed the balance of the twenty-five dollars, put that as anywhere between eighteen or nineteen dollars and twenty-five dollars.

Q. How much of that would be cement?

A. Well, cement was worth, in those days when that was built——

Q. No, we are talking about *now;* that is what we are discussing.

A. With the exception of the new buildings at 132d Street, I have figured on the actual cost of what is known as cement mortar, which was made by using a lime base, mixing sand in it, and then mixing a half a barrel of cement in just before it was used, and that cost about one dollar.

Q. One dollar per thousand of brick?

A. No, I mean a half barrel of cement.

Q. How much would that be per thousand of brick, according to your theory?

A. The lime, cement and sand would be three or four dollars, according to my figures. I think the mortar in it would be about twenty dollars really, but I allowed twenty-five dollars.

Q. You have got considerably more than twenty dollars if you allowed three or four for cement and sand and mortar already. Now, how much would you allow per thousand of brick for foremen?

A. That was included in the six dollars—six or seven dollars.

Q. How much for timekeeper and hod hoisting?

A. All included in the six dollars or seven dollars.

Q. And the hod hoisting also?

A. All that sort of thing.

Q. How can you include hod-hoisting apparatus and scaffolding in your cost of labor?

A. Because it is put in in making an engineering estimate and because of those reasons instead of sticking to the twenty dollars we simply put it at twenty-five dollars.

5276 Q. That would be material, wouldn't it? The hod-hoisting apparatus and the scaffolding would be material instead of labor, would not it?

A. Oh, no; no; that is simply what might be called day work, that hoisting apparatus and the scaffolding and that sort of thing. Unless a regular contractor has it you lose it.

Q. Did you go into details in your figuring of values of buildings as to the cost of windows, say twelve inch by eighteen inch panes, one-quarter American glass?

A. In the very limited time at my disposal it was totally impossible to do anything of the sort.

Q. How much did you allow for tar and gravel roof, five-ply, having two-inch plank, how much per square foot or square yard, either one?

A. A tar and gravel roof laid on sheeting, it is a good roof too, costs on an average of four cents per square foot.

Q. Four cents?

A. Four cents per square foot; and a tin roof costs on an average of about eight and one-half cents, and a slate roof costs on an average of about ten cents a square foot.

Q. How about slate laid on boards or terra cotta?

A. Ten cents.

Q. Well, I understand that in your estimate, in making your estimate of the value of these buildings you did not go into any of these details in making up your computation, but made a general estimate in the time at your disposal?

A. I had to, yes, in the time I had.

Q. In reference to the foundations, did you take into account the cost of steam pump sheet piling?

A. That was all allowed for in the exceedingly liberal addition of fifty per cent. wherever there was a question of piling in a foundation.

Q. Is that also true as to temporary blocking and shoring?

A. In the case of water works, if you know what I mean 5277 by a hydraulic work, like piling, anything of that sort, I intended in the rapid work which I was forced to do to more than cover it all by the allowance of fifty per cent.

Q. Did that include the permits for the use of the streets which we had to get and pay for, or didn't you know that there was any such?

A. No; I didn't include it.

Q. How did you compute the cubical contents of these various buildings, by taking the dimensions as they were given in the statement furnished by Mr. Mayer?

A. I did.

Q. And did you allow anything for the space taken up by the roofs, if the roofs were not flat—I mean, taken up between the top of the walls and the elevated roof if the roof part was not flat?

A. In some cases, where I recall it, the ceiling was peaked, and the peak was not given, assuming the peak to be one-quarter the span above the level of the side walls, the height was increased by one-eighth the height of the walls in order to get the cubical contents in a liberal way, so as to avoid any possibility of making them too small.

Q. Now, taking the first building at 42nd Street, the valve house and vault, Mr. Mayer, computing in detail, made the cost per cubic foot 31.9 cents for the building, and you make it fifteen cents, or only half as much. Will you state again exactly how you make up that fifteen cents?

A. The very best building in the plant of the Consolidated Gas Company appears to me to be the governor and boiler house of the 132nd Street station. That being the case, and the figures being known to the Consolidated people, as well as to Mr. Mayer, it was proper to assume that the actual cost of that building was somewhere near right, and the cubical contents of an analogous building which was not much too small would be somewhere near right. The 5278 actual cost of that building is given by Mr. Mayer of the Consolidated Gas Company at 26,736, which, divided by the cubical contents, from Mr. Mayer's measurements, gives an average of 13.2 cents per cubic feet of contents. That, then, gave me what might be called the best standard, the highest standard of quality that was in existence in the Consolidated Gas Company, and the computations which I made will show you that the very simplest, plainest buildings were far below that, though in using fifteen cents per cubic foot I felt moderately safe in feeling that I was more than liberal in my dealings with the buildings.

Q. But you say you took ten cents in the case of the 42nd Street building, to which I called attention, and added thereto five cents additional for the foundations of apparatus?

A. Yes, sir; that is where piles came in.

Q. Were there any foundations of apparatus of similar kind and character involved in your 132d Street building?

A. Calling your attention to that, to the five cents additional for pile buildings, included buildings of very great size, of the retort house, and condenser house size, and on the smaller valve house size, and the finish in the case of retort houses, of condenser houses does not exist, while the finish in this new valve and engine house at 132nd Street was exceedingly nice and attractive.

Q. What did you call the finish?

A. The hall, the wainscoting, the tiled brick, the staircases, the cemented floors, the general appearance of this building at 132nd Street.

Q. Now, fifteen cents seems to be the highest rate per thousand cubic feet, reckoned on the cubic capacity, that you have allowed for any building. Isn't it?

A. I think it is.

Q. In any one of the plants?

A. Yes.

Q. Now, don't you know that a great part of the cost of
5279 building an oven—the most difficult and most troublesome
part, results from the laying of the foundations; that is,
whether it may be rock or may be soft foundation where you have to use piling, or go down a great depth?

A. Certainly. I think that was the reason of my addition.

Q. And are you aware that this 132d Street building, which cost between thirteen cents and fourteen cents, had a foundation comparatively shallow in coarse sand, with no rock on one hand and no piling on the other hand required?

A. Of course I had only the scant examination that was allowed me. It looked like an ordinary foundation, but it was very well finished as compared with the other buildings.

Q. But the finish of a building would bear comparatively small relation to the additional cost of foundations if you had to drive seventy or eighty foot piles or excavate a good deal of rock, wouldn't it?

A. Oh, dear, no. The style of finish you see here in New York in some of these buildings would run the cost of these big buildings up to thirty, thirty-five, forty, forty-five or fifty cents a cubic foot.

Q. I understand that is so in office buildings and that sort of thing, but I am referring now to the ordinary gas buildings, such as this 132d Street building. There is no mahogany finish there?

A. Oh, no, but it is a long way the best of the lot.

Q. But if you had pile foundation, or a foundation where excavation of rock was necessary, a similar building would cost very much more than thirteen cents, wouldn't it, if you had to go to the additional expense for this expensive foundation, and assuming also that the 132d Street building had no rock nor piles to deal with, but was a shallow foundation on good soil?

A. Well, with a rock foundation, and a building of that
5280 sort you have a very decided gain in economy, because the
rock you blast can be used in building the building and probably would be used both for foundations and building the building, and for that foundation is where the cost runs in.

Q. What did you figure for a similar building at 111th Street station—I mean similar to the 132d Street building, of course—exhaust and engine building at 111th Street? Exhauster house, it is "Item No. 2, buildings, 111th Street"?

A. Item No. 2 Exhauster house and basement, six-inch concrete floor, $18,532.82.

Q. Per cubic foot you allowed?

A. Fifteen cents per cubic foot.

Q. In other words——

A. In other words, I put it on a par with the 132d Street station.

Q. Now, do you not know that at the 111th Street station it was necessary to go down with a broad foundation, something like eighteen feet on one side and produce a much more expensive building on the whole, therefor-, than the 132d Street building?

A. I did not know that, but I was liberal because its finish is not equal to the 132d Street building.

Q. Do you think the difference in the finish could offset going down eighteen feet with a foundation, as against a shallow foundation or an ordinary foundation for the 132d Street property?

A. I could not answer that definitely without a careful study of the plant and quantities.

Q. Those would all be details which it would be necessary to take into consideration and compute upon if you wanted to reach your exact result?

A. Yes.

Q. And I see in each of these cases, that in each one of the plants you reach the value of the buildings by assuming a certain cost per cubic foot, either fifteen cents or ten cents or five cents and multiplying the cubical contents by that. That is the way you reach
5281 your value of the building?

A. Yes.

Q. You do not reach the value of a building by some other process and then divide it by the cubical contents in order to find how much it would be per cubic foot in your computation?

A. I did not, no. I took the outside valuations per cubic foot, to be on the safe side.

Q. How much did you consider that the wages of carpenters are per day in New York City?

A. I don't know.

Q. How much for slaters?

A. I know the cost of slate per square foot.

Q. Slater?

A. I say I know the cost of slating per square foot but not the price of the slaters.

Q. Nor slater's labor?

A. No.

Q. Plumber?

A. No.

Q. Plumber's helper?

A. No.

Q. Painters?

A. I did, but I have forgotten. Mighty little paint around gas works.

Q. Do you know what masons get?

A. About the same as bricklayers.

Q. Well, that would be about how much you think?

A. Somewhere between four dollars and five dollars, according to the locality.

Q. Don't you know that you have to pay nearer six dollars per day to a mason in New York City, or was not that brought to your attention?

A. I have inquired within a very short time and was told that masons and bricklayers kept even.

Q. And haven't you learned that we have to pay laborers about three dollars a day in this kind of work instead of $1.75?

A. Not around gas works.

Q. Is it your idea that the Union permits a man to work in laying stone work at a gas works in New York City at any lower price than laying stonework anywhere else, of the same character?

A. I think you have confused laborers with hodcarriers 5282 and mortar mixers. In some cases the demand is as high as $3.50.

Q. But you have no idea, have you, and you do not mean to suggest, that the Union permits its men to work cheaper per day on the gas company's work than on work for anyone else?

A. The gas work is comparatively rough compared with the many very carefully built buildings——

Q. But the rate of wages per day is the same, according to your information, wherever a Union man works in New York City, for the same character of work?

A. On the same character of work, yes.

Mr. Burr: I think the Doctor might state what he has in mind when he says laborer.

Mr. Mathewson: Very good.

By Mr. Burr:

Q. Whom have you in mind when you speak of laborers?

A. I thought Mr. Mathewson had confused laborers, who are men without any skill of any sort or kind, who are lifters and carriers, with mortar mixers and hodcarriers, who are in a limited way skilled men in their own line and they demand good pay and get it.

By Mr. Mathewson:

Q. But you do know that a mason—and when I say a mason I mean Union masons in New York, as they are the only kind that we know anything about—and stone layers receive the same wage per day, wherever they are at work laying stone?

A. I am under the impression that those who do labor work, just the roughest kind of work, do not get as well paid as those who do the finest kind of masonry that is done in our buildings here. 5283 I refer to our stone-faced buildings, a very high class of work required in our larger and finer buildings.

Q. Now, what I have asked you in reference to these buildings at 42d Street and your method of computing values and the theories upon which you have proceeded in computing these values of different buildings and structures which you have included in your estimate, cost of buildings, applies to all the stations, doesn't it?

A. It does.

Q. Referring to the 42d Street buildings as a whole, I see your total for buildings, original cost, or actual cost without depreciation is $434,250, if my figuring is correct, against six hundred thousand dollars or such a matter, or more than that sum, for Mr. Mayer—at least, yours is very much lower than his, isn't it?

A. $434,250.34 is the sum total of the structural cost of the buildings, solid walls and uncomputed structures.

Q. Now, I see that in your apparatus at 42d Street and also in computing the value of apparatus at other stations you have put in the value of the different apparatus at round figures like three thousand dollars, valve house, purifier house (p. 5067) $24,000 for purifiers, $12,000. I suppose those round sums are inserted, because it was impossible within the time at your disposal to make more definite estimates, wasn't it?

A. Why, it would be a mere pretense on my part to pretend to the accuracy of a refined estimate in the brief time permitted.

Q. Did you make inquiries from the makers of the various apparatus, that is, engines and so forth, as to what they would sell engines and install them for?

A. I did not, but I have been buying engines for thirty-five years, and there has been rarely a year in which I have not had more or less to do with the purchase of and the sale also of engines, and I have a pretty fair idea of what the stuff was worth when I looked at it.

5284 Q. And your figures were for the delivery of the apparatus at the companies?

A. Yes.

Q. And any difference between your figures and the original cost of Mr. Mayer would be made up perhaps by the expense of setting by the company after delivery, or something of that sort?

A. Something of that sort; but I think in most cases of apparatus my figures were somewhat higher than Mr. Mayer's. I think you will find that with the exception of the gas holders that the general machinery and casting work is exceeded in almost every case.

Q. And, of course, you did not take the trouble in these various items of apparatus to compute the weight, except so far as it may have been stated by Mr. Mayer or appeared from the dimensions?

A. In three or four cases I had more than three or four, I had one of my assistants do some figuring on Mr. Mayer's weight and in every case corroborated them and I dropped them.

By Mr. Burr:

Q. That is, you accepted his figures?

A. I dropped the computation. I did not go any further after that.

By Mr. Mathewson:

Q. And you found, too, I judge, that his cost in cents per pound for this apparatus which he used, taken in conjunction with the weight to be the original cost, was proper as far as you could judge?

A. Assuming thin castings, as thin as they could well be made, Mr. Mayer's figures appeared to me to be about right, and I was willing to assume those right straight along. Assuming Rowland's castings or those of the same kind that he used to make there is a pretty big profit in some of them.

5285 Q. Now, when you referred in the 42d Street plant (p. 5064) in your notes on the retort house to certain retorts being fired and certain idle, just what do you mean—that these were not in operation at the time you looked at the plant?

A. That's it, yes.

Q. On what day was this at 42nd Street.

A. Somewhere between the 17th and 31st of December.

Q. It was the date which you have given in your prior testimony as the date of your investigation there?

A. Yes.

Q. Now, you assume at 42nd Street, that forty-three years' depreciation has gone on, upon the theory which you have mentioned, at .85 of one per cent. per annum, a total of 36.5 per cent. for the value, and in getting this forty-three years I assume you subtract 1863, which you gave as the date of the buildings, from the present year, because that leaves just forty-three years?

A. Yes.

Q. Now, as a matter of fact, you don't know how much has been spent in replacement or repair or renewal on those buildings during the period from 1863 down to date, do you?

A. I looked at that apparatus just as sharply as I could, and it was the main thing I feel strong on.

Q. But this is buildings which you art taking this off from——

A. I mean apparatus and buildings—I looked at it all, just as sharply as I could in the limited time I had, and it was pretty much alike; there wasn't much difference in it.

Q. Well, you understand, Professor, that it is in evidence that since 1884 alone there has been expended in renewals, offsetting some amount of depreciation marked off, amounting to $1,227,683.10, and there has been expended for repairs to buildings, amounting to $1,275,749.03, and to apparatus $4,865,362.51, or a total of between $7,000,000 and $8,000,000 since 1884, according to Exhibit 79?

5286 A. That .85 of one per cent. assumes the keeping in perfect repair of both buildings and of the apparatus and the expenditures of all sums necessary for that purpose.

Q. And the same is true as to the other plants where you have pursued the same course and theory?

A. Yes.

Q. Have you any knowledge as to when those buildings all were constructed upon which you base your 1863 estimate?

A. No, sir, except the statistics found in the testimony of Mr.

Mayer, and in many cases a general judgment, or from looking at the buildings sharply to fix if I could in my mind any difference, any discrepancy that might appear in the buildings, as if one had not some different age from another, to see if one was of different age than another.

Q. Now, referring to the 21st Street plant (record, p. 5076), your estimate of the average date on those structures, 1874, was based upon the same considerations as on 42nd Street, wasn't it? That is to say, what you got from Mr. Mayer's testimony plus your own generalizations?

A. In the case of the 21st Street station, reference (referring now to the buildings) to Rowland's inventory called my attention to the fact that many of the buildings used for stove storage, meter repair shop, stove repair shop, stove cleaning room, prepayment meter washroom, and so on, had their foundations, or were in part built anterior to 1884, and that Mr. Mayer's figures of 1890, the date when they were built, probably were not wholly correct, although he was probably informed on that point. I was not informed, because of the fact that everybody who was assigned to act as guide was instructed also to be absolutely a deaf mute.

Q. Well, I do not think that is quite right. I will merely say that, naturally, the officers of the company could not escort you around, and, moreover, there isn't an officer of the company now who probably knows of his own knowledge when each one of those buildings was built, and so that anything your guide might have said would have been simply a speculation, and we were not willing they should speculate. 5287 & 5288

A. The result was that they would——

Q. They did not know and could not tell?

A. One of them didn't know when he entered the works even.

Mr. Mathewson: Well, we knew when you entered them, because he informed me.

It is now four P. M. Mr. Burr is desirous of getting away, and I think, therefore, that we might adjourn until the morning.

At 4:00 P. M. adjourned to January 8th, 1907, at 10:30 A. M.

Last Exhibits:

Complainant's, 270.
State's, OOO.
City's, 135.

5289 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

January 8th, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

5290 Continuation of the cross-examination of William D. Marks.

By Mr. Mathewson:

Q. Referring to page 5067 of the record, apparatus of the 42d Street plant, I observe an item numbered 45, reading "added for Dep." That means what?

A. When Mr. Mayer made his inventory he, in several instances, took off 25 or more per cent.; afterwards in his revision he recanted and took off only 5 per cent. This is an error due to the stenographer running down over Mr. Mayer's list and putting in "added for Dep.," and omitting to put anything opposite it, because I had crossed it off.

Q. That represents a case where Mr. Mayer had testified that after a further and more careful inspection, and learning that apparatus had been renewed, or was more recent than he had supposed, he put on a lower figure for depreciation?

A. I presume something of that sort.

Q. And wherever we find a similar memorandum in your testimony, it means the same thing?

A. It means the same thing, only it should have been crossed out. I am responsible entirely for the final recapitulations. There are a number——

Q. It does not mean anything so far as the totals go?

A. It does not mean anything.

Q. I find Item 50, you have one cast box 7 feet 6 inches by 5 feet 6 inches by 9 feet, marked out of use?

A. Marked out of use, yes.

Q. And you give no value to that?

A. And left out.

Q. You omit that from your valuation?

A. Yes.

Q. I see Item 76, page 5068, one bench lathe with no amount following it.

A. I have a very vivid record of that bench lathe. I saw it 5291 in operation and it was the oldest thing I have seen in many a long year.

Q. You left it out then and gave no value to it?

A. Yes, no value to it.

Q. And wherever we find in this testimony items opposite which there appears to be no amount, either under this or the other stations, to put a general question, you have omitted those from the totals which you have given, of course, or they do not go to make up the totals?

A. I have. May I make a correction right here? On page 5096, Item 5, all walls around property, $42,760.17 should be changed to $34,000, as given in the second item on page 5095.

Q. That $42,760.17 ought to be what?

A. Changed to $34,000.

Q. Exactly $34,000?

A. In round figures.

Q. Well, would not that change your total?

A. That would change the total. That is due to the failure of the stenographer to correct as directed after my revision, omitting at that point.

Q. The total would be what, instead of $52,446.97?

A. It would be the difference between those. I will work that out if you like. That would change on page 5096 the totals of $52,446.97 to $43,740.80.

The Master: Does that effect your grand total, or is the $34,000 in the grand total?

A. Not at all. It was simply a neglect of the stenographer to go back and correct it in the itemized details.

Q. Referring to the 21st Street plant, page 5076 of the testimony. where you say Mayer's valuation of sheds as compared with Rowland's valuation, I assume that you took simply the description from Rowland's inventory; you had no further information as to what he appraised in that inventory, had you? I mean, of course, that attached to Senate Document 47 of 1886, which has been of- 5292 fered in evidence here.

The Master: Can you not answer that question from memory without taking time to look it up?

The Witness: Yes.

The Master: He wants to know whether you had any other sources of information besides that schedule.

The Witness: None.

Q. When you speak of the number of retorts at 21st Street fired and idle, do you refer to a count which you made at the time you visited the plant?

A. I do.

Q. And when you say that the apparatus or most of the apparatus except the $520,250 worth from which you take no depreciation appeared old and dirty, you could not tell how old the apparatus was by its simple exterior appearance except by information as to when it was purchased?

A. Except in machinery which in some cases showed a considerable amount of wear.

Q. And as to the apparatus being dirty, it was in operation, was it not mostly?

A. Yes. It did not look to me—take particularly the tar tank and a good deal of the tar filter process, as if it had been recently used; in fact, you take some of the machinery there, the tar filtering machinery did not look as if it had been used for years.

Q. Don't you know that the 21st Street station has shown a large increase in output and has been operating to its full capacity? You remember the testimony to that effect?

A. I remember the testimony to that effect, and I also
5293 stated that the water gas apparatus appeared to be in operating condition throughout.

Q. And you know that some oil gas is made there which is sent down to 14th Street and mixed with the coal gas?

A. Yes.

Q. The fact that machinery may not be physically clean in a gas works does not necessarily mean of course that it is rotting away or physically deterioriated, does it?

A. No, not in all cases anyhow.

By Mr. Burr:

Q. What do you mean by saying old and dirty here?

A. I meant that it was old, a good deal of it, and all of it dirty; it was the prominent characteristic of everything around the 21st Street station.

Q. Did you mean by dirty that it detracted from its value as a working plant?

A. I do, it always does. It increases wear and tear.

By Mr. Mathewson:

Q. Well, a gas plant in operation is not a place, anyway, to go to in order to keep pure white linen clean, is it?

A. No, but the 99th Street station was exactly the reverse of that.

Q. Well, that makes a good average. Referring now to the 99th Street station, page 5084 of the testimony, you have a note, eleven benches double length retorts, not used. Do you mean that they were not in use when you called on the occasion you stated?

A. Yes.

Q. And where such notes appear as to any station, it refers to the fact that they were not in use at the time you called, as you had testified?

A. That is so.

Q. What about the six vacant arches in the stack—I suppose it means stack instead of stock?

A. Yes. They were vacant. For what reason, of course,
5294 I could not learn, under the instructions of my guide, at the various works.

Q. Well, you did not hear any instructions given to your guide, did you?

A. No, but I saw the result.

By Mr. Burr:

Q. You did not select the guide, Doctor, did you?

A. No.

By Mr. Mathewson:

Q. Referring to the 63d Street apparatus, page 5093, you state that the buildings are a lot of tumble-down sheds. Nothing but sheds there?

A. There may have been a brick wall supporting the roofs of some of those tumble down sheds, or tumble down roofs of the tumble-down sheds; everything was in an inchoate condition there, evidently of the most temporary character and fixed up.

Q. And you found that not a very large value was placed on it, did you not?

A. Yes.

Q. As to the depreciation of the holder estimated from appearance, what was the appearance of the holder?

A. About ten per cent. off from new.

Q. Yes, I know, but you say it was depreciated in appearance. What about the appearance of the holder?

A. Well, it had that amount of apparent wear and tear about it, as near as I could judge from the looks of the thing.

Q. It was in opertion, was it not?

A. Yes.

Q. Take next the 55th Street station, page 5905. That station you have corrected now so that the totals or figures on page 5095 conform with those on page 5096?

A. I have, yes.

Q. Going back for a moment to the 21st Street station, was it, you spoke of one of the sheds there being dilapidated?

A. Roof gone.

5295 Q. Roof gone, etc. What shed was that?

A. If I remember rightly, Shed Number 6.

Q. Now, referring to the 111th Street inventory at page 5098, I am unable to find on the following two pages the totals which you incorporate at page 5098 in the summary. I wish you would point them out to me?

A. $20,921.53, items 2 and 3.

Q. That is buildings without depreciation, $20,921.53?

A. Those are items 2 and 3 added together.

Q. That is to say on page 5099?

A. On page 5099.

Q. What about item 4, hoisting engine house?

A. Hoisting engine house $81.90, is out at the end of the wharf and is a wooden building containing an engine——

Q. I know, but that is all right. I think that appears perhaps, but why have not you added that into your total of buildings and also the scale house $351 and the stable, $8,400, on page 5099, which would make a total of something like $30,000 for buildings instead of $20,291.53?

A. The buildings depreciated on page 5098 are all old buildings. The stable is a very old stable, and the hoisting engine house is a very old wooden shanty.

Q. The $20,921.53 on page 5098 is the sum of items 2 and 3 on page 5099?

A. Yes.

Q. Give me the buildings which make up the $64,290.70 on page 5098 which you put under "Buildings Depreciated."

The Master: It is all the rest, is it not, Mr. Mathewson?

The Witness: It is intended to be all the rest except the walls and fences.

Q. Where do the walls come in? I see you have put over
5296 on page 5098 walls and fences depreciated $4,010, and you
have on page 5099 walls, values, etc., not computed in cubic
feet $4,010. That is the same item, is it not?

A. Yes.

Q. Where does the $197.12 come in, as part of the $64,290.70? I refer to the walls, $197.12?

A. You refer to item 16?

Q. Well, it follows, between 16 and 17. Yes, it appears also to be item 16 as well. It looks as though——

The Master: It does not balance within $10 either, those two sets of figures.

The Witness: This inventory on page 5098, 111th Street, is the correct revised—overhauled work; these detailed inventories on page 5099 were left to the stenographer to be straightened out as marked by me and evidently were not in some cases, as we have already found out.

Q. But it is intended in each case that the summary or recapitulation of inventory for each plant shall actually coincide with the details shown later in reference to that plant?

A. Yes and should coincide.

Q. And if it does not in this case it is simply an error?

A. It is simply a stenographic oversight, that is all; these were made up from my figures.

Q. Well, I think the rest of it I understand there. Let us look at the Inwood station, page 5103. In the recapitulation the first item of $1,373 corresponds within twenty cents with the $1,372.80 in the detail below?

A. Yes.

Q. That is the same item, is it not?

A. The same item.

Q. In reference to apparatus——

A. Four and five.

Q. The next item in the summary is total gas machinery $2,300?

A. Yes.

Q. Where is that below?

A. 2, 3, 4 and 5.

5297 Q. Items 2, 3, 4 and 5, $2,300?

A. $2,300.

Q. You exclude then wholly the holder?

A. As of no value.

Q. As of no value, which cost new $12,000?

A. Yes. That is due to the fact that it has been left there idle, boarded in——

Q. Is not there gas in it?

A. There may or may not be gas in it. You cannot tell. It is down and fastened down practically; the counterweights are taken off of it and are lying on the ground and dismantled.

Q. At any rate you have excluded it entirely?

A. Yes.

Q. The rest is clear I think. What do you mean by the holder being fastened down?

A. The counterweights are taken off of it; it is a very elaborately gotten up and very small holder, having double counterweights for the lower lift and single counterweights for the upper lift and quite elaborately braced columns for the purpose. It is evident that the engineer who designed it meant to make it throw a very light pressure or else that it was originally a very heavy holder, and taking these counterweights off simply set the thing down, you may say, solid. Then around the edge of the tank between the tank and the holder are cut and jammed in at a slant a lot of boards to prevent toads and things from hopping into the tank. It is jammed there.

Q. Well, now, Doctor, let us take page 5108 and page 5109, in which you have made a summary of values, and do a litle figuring on it. You make the total of those figures $31,122,454?

A. Yes.

Q. You take the original cost of land to the six merged companies, that refers to the books of the six companies as you understand?

A. As explained by Marwick, Mitchell & Company.

Q. And the second item is clear, balance of cost of land

5298 transactions. And then we come to abandoned land?

A. Yes.

Q. How do you get the valuation of $317,100 for bulkheads and $875,916.37 for land at 18th Street taken by the City?

A. You will note on page 5108 that I speak of this as a final estimate.

Q. Yes?

A. These are the estimates given to me from the Corporation Counsel's office of the valuation placed upon this land by experts for the City in the litigation at present, I believe, going on between the City and the Consolidated Gas Company.

Q. Well, the point is, those are the estimates of the City or figures given you by the City's counsel?

A. By the Corporation Counsel.

Q. You are not a real estate man yourself and have not made an appraisal?

A. I am not a real estate expert.

Mr. BURR: And the company may recover more than is given here, that is conceded.

Mr. MATHEWSON: Lots of things may happen.

Q. That leaves a net for land of $2,925,251 at that point?

A. Yes.

Q. Now, you add to that your value, after taking out your depreciation, for the plants of the company, including buildings, holdings, yard connections and apparatus, amounting to $9,348,692?

A. Yes.

Q. That is your testimony. Now, when we come to the street mains, you remember that the $7,142,232 was the value of the mains as you computed them upon the mileage which you had deduced from your measurement of the maps?

A. Yes, that is of active mains.

Q. Active mains?

A. Active mains.

5299 Q. And you remember that the 822 miles of mains which Mr. Simpson testified were active or not abandoned, upon your estimate of value would have been something over $8,000,000 for original installation, a little over $8,000,000?

A. I think it was very close to $8,000,000.

Q. Yes, it was very close, but a trifle over?

A. Yes.

Q. Now, why do you deduct something, that is $1,017,220, from the value which you found for our active mains in obtaining the $6,124,012 of mains which you proceeded to credit us with?

A. Superintendent of Mains Simpson testified that at no time within the last sixteen or seventeen years had anything less than six-inch mains replaced the existing mains, meaning by that inferentially that five-inch mains and below that were obsolete——

Q. Well, but he testified, you remember, that in replacing mains now he would replace, if he had to do so, with larger sizes?

A. Yes.

Q. But he also testified that we had in use still a great number of these small mains and it so appeared. Now, do you think it is fair, when we are actually using those and they are concededly active mains, to deduct $1,017,220 from your previous own valuation of active mains?

A. The doubt in my mind, placing myself in the attitude of a prospective purchaser, an attitude which I believe was what Judge Lacombe desired in any estimate, was whether or no it would be proper to throw out altogether the 2, 3, 4 and 5-inch mains which are actually in use——

Q. In spite of the fact that we are actually using them?

A. They are actually used.

Q. Yes?

A. Or to throw out the difference between the six-inch mains which Mr. Simpson testified was the least size that you put in, and I decided in fairness to the company, instead of throwing out the two, three, four and five-inch mains, that I would throw out only the difference between six-inch mains of the same length and these smaller sized mains. The—— 5300

Q. But as a matter of fact you say that the cost of the two, three, four and five-inch mains would be only $624,435, and you have therefore thrown out in the neighborhood of twice as much as those mains were worth, because those mains would be worth according to your estimate very much less than the difference between those and the six-inch mains of the same mileage?

A. Because in replacing six-inch mains you would have to dig into asphalt pavements, and undoubtedly anybody who purchased these works for the purpose of operating them would end up by doing that in the course of time.

Q. I understand, Doctor, but the effect of this is not only to throw out the value of our six-inch mains, which was $624,435, but actually to throw out $1,017,220 from our active main value as you have computed it, is it not?

A. It is facing the facts as they are.

Q. Well, at any rate we have got at the theory and we will proceed a little further. After you get the structural value of plants, as you call it, by your figuring amounting to $23,460,020 you take the estimate of Thompson and McHale, an average, and add to your land value enough to bring the $2,925,251 which you originally allowed up to the average of Thompson and McHale?

A. Yes.

Q. That is $7,762,434?

A. Yes.

Q. Which makes your total of $31,122,454?

A. Yes, sir.

Q. Now, we have not any working capital here, and you will recall that you took several Massachusetts companies which you said were the nearest you could get in situation to the Consolidated and at page 3777 you said, that on the same basis of working and active capital which they were employing, the Consolidated would
5301 require $6,375,918.52. Will you be good enough to take these figures? If you wish to refer to that page to verify the amount I will present it, but perhaps you remember it?

A. I recall the total working capital.

Q. Now, will you be good enough to add that to the $31,122,454 and say what total that would give?

A. $37,498,372.52.

Q. But this does not include plant enough to produce all the gas which the Consolidated Gas Company sells, and you stated in your direct-testimony that in addition to the Consolidated Company's property in Manhattan, we would have to allow on the basis of two dollars per thousand for additional capacity plant of the value of $5,097,389.56, at page 2353 of your testimony. Now, will you kindly add that to the last previous amount?

A. $42,595,762.08.

Q. Now, if, as a matter of fact, we consider this plant which will produce the three billion or four billion feet which the company sells, but does not make, as located at Astoria, and we find that it costs more than four dollars, according to the testimony, per thousand feet instead of two dollars, and if we take, therefore, the actual cost of the Astoria plant, that would mean an addition of about five million dollars more? In other words, if four dollars was correct instead of your two dollars, wouldn't it, for additional plant, be just about $5,097,389.56 more as you remember you computed that on the basis of two dollars?

A. Taking your figures, as a matter of computation.

Q. That would be so, would it, if four dollars was correct instead of two dollars?

A. Yes.

Q. So that would be about five million dollars more, because the testimony is that Astoria costs over four dollars instead of two dollars per thousand feet, and that would make a total of how much?

A. $47,595,762.08.

5302 Q. Now, won't you be good enough to add to that this $1,017,220 which you took out on account of active mains, two, three, four and five inch, actually in use?

A. $48,612,982.08.

Q. And if you take the mileage of mains of Mr. Simpson, 822, instead of the mileage which you computed from the measurement of the map, and your valuation of a little over eight million dollars for such 822 miles, assuming the mileage to be correct, that would mean an addition of about nine hundred thousand dollars more on account of mains than your computation for the active mains, and if we added that nine hundred thousand dollars to that last total that would give what?

A. I compute for you $49,512,982.08.

Q. Yes, and we are not quite through yet, Doctor, because we have not yet in this valuation the engineer and superintendence expenses, and the sewering and draining and cutting and filling, and so forth, which the engineers have testified would cost the company ten per cent., and if we assume that that be so, your figures should show it. Ten per cent. would be $1,193,872. Would you favor me by adding that?

A. $50,706,854.08.

Q. But we have not added any interest yet of five per cent., being the average which seemed to meet almost everybody's views, and you testified that that was $656,624, and that added to the last figure would make how much?

A. $51,363,478.08.

Mr. Burr: I think it is very objectionable in having the Doctor act purely as a computor. You might as well argue this in your brief, Mr. Mathewson.

Mr. Mathewson: I am practically through. I might say I am through, but it seemed to me that by consecutively taking the Doctor's computation it was quite fair.

5303 A. Acting as your computor, $51,363,478.08.

Q. Now, Doctor, in this little book which you wrote and of which you kindly favored me with a copy, I find that in your estimate of construction of an electric railway, for instance, or similar design, you have not only "preliminary and legal expenses" in there, and "grading and bridging" at a large amount, but you finally, at the end, add ten per cent. for delays and overseeing only; that is, ten per cent. of the cost of the plant, including in such cost the "preliminary and legal" and the "grading and bridging;" that is correct, isn't it?

A. Yes. That, however, is an estimate in the inception of the construction of a railway. It differs entirely from an inventory in which everything to be inventoried is either in sight or on record.

Q. Oh, I quite appreciate that, Doctor, but if we are going to work to construct a gas plant new, I think you conceded yesterday that the company would have to have engineering, they would have to lay out the plant, they would have to have superintendence, they would have to drain the ground, especially if it was this low ground; they would have to cut and fill, they would have to do some sewering, and they would have to do various other things, which is a charge upon the company beyond what they would pay contractors merely for building the buildings and installing the apparatus; that is right, isn't it?

A. All of which I allowed in my figures.

Q. And I am approaching now from the company's standpoint—but you did not allow in your estimate of figures for cost of apparatus delivered, as you testified, the engineering expenses in getting street permits and in drawing the design for its own plant originally, no part of which would go to any contractor?

A. All of that was allowed for both in the street mains and also in the figures given by me, and liberally allowed for.

5304 Q. But I am talking about the plant itself?

A. About the plant itself.

Q. Didn't you testify yesterday that your estimate of the valuation of these pieces of apparatus was the estimate of the value delivered at the plant? You had not added any part of the engineering expenses of the company as distinguished from the engineering expenses of the contractor?

A. Very possibly. A most liberal allowance was made in the figures which I have put down in the items for the various forms of detached expense, particularly the case of the buildings, where I added fifty per cent. and five cents per cubic foot for pile foundations. It was an overwhelming addition from my point of view, made simply with the object of being fair, and more than was liberal.

By Mr. Burr:

Q. And that is true all through your estimate?

A. That is true all through, from beginning to end, street mains, buildings, apparatus——

By Mr. Mathewson:

Q. Will you take one single piece of apparatus? Take, for instance, the engines which have been installed, in your testimony here and in your schedule, and tell me how much of that you allowed for engineering expenses of the company in sewering its plant and grading its plant and designing its works and expense of street permits, and things of that sort?

A. Taking the——

Q. I want you to do this; I want you to point out some specific item, so that I can test it by the maker of the apparatus and see if that includes this additional expense which the company has to go to, and which the contractor does not receive?

A. Taking the street mains——

Q. No, you are here valuing the plant.

5305 A. We are talking of street permits, if I understood your inquiry.

Q. No, I am simply talking about permits around the buildings while they are constructing the plant, for placing the material on the sidewalks, and so forth. I am confining myself to your testimony respecting valuation of the plant. If you referred to the street permits when saying that you excluded the engineering expenses, why, I have no further questions to ask, if you understood me to mean that?

A. You spoke of street permits?

Q. Yes.

A. For them as well. Do you wish them?

Q. When we construct a plant we have to pile material in the street all about the plant and we have to have permits for that purpose?

A. A mere trifle.

Q. Oh, no, not a trifle at all; a very substantial, as you would know if you erected buildings in New York City. But you referred when you said you had included engineering expenses, street permits, etc., to the mains, rather than to these individual pieces of apparatus?

A. The matters of the street permits to which you are referring certainly included more than ample allowance for them all. With regard to the street permits for piling brick on lots, they have a great abundance of room.

Q. Well, you said you allowed nothing for street permits?

A. I allowed nothing at all. As far as regards the sewering and general work, and particularly the difficulty of sub-aqueous construction, where piling is involved, I regard my allowance as abnormally great, far too great.

Q. Let us eliminate street permits, and I ask you to point out one of these pieces of apparatus, engines, or something else to which you have testified, and tell me how much you were allowed there for engineering expenses of the company, the cost of steam
5306 pumping, sheet piling, water in the boilers, temporary blocking, the sewering and other things which the company does not leave to the contractor, but which the company has to expend itself in laying out and supervising the construction of a plant?

A. I tell you that in those matters the foundation and buildings, and also the machinery——

Q. I am talking of apparatus?

A. And also the apparatus that in order to more than cover it I added fifty per cent. or five cents per cubic foot to every building that had pile foundations.

Q. That is a different proposition, I am not talking about the pile foundations because you would have to pay the contractor to put in the piles. I am simply talking about the expenses of the company itself; that is, its own engineers for laying out its plant, for supervision, for superintendence, for draining its land, and for various other things which would go into the company's expense, delays, overseeing, etc., which you add ten per cent. for in this particular structure?

A. It is quite possible for the company who has kept its records of this to make those statements if they wish to do so, no mortal man lives who can do more than I have done, just make more than a liberal allowance for any proper extra expense.

Q. That is not the point. Can you point out any piece of apparatus there and tell me how much you allowed there for that engineering as distinguished from the amount which goes to the contractors on that piece of apparatus?

A. I have answered you as fully and completely as it is in the power of any engineer to answer you unless he has access to your books.

Q. Well, I am talking now about your allowance?

A. And I have done it by more than a liberal allowance for space.

5307 Q. Is that the best and final answer you can give?

A. It is.

Mr. Mathewson: All right. That is all.

Redirect examination by Mr. Burr:

Q. I notice in your testimony that you have referred to some unused plants or parts of plants, and the consequent unavailability of output. Can you give me a little more in detail what the total summary of that is?

A. In going over these plans I noticed, as I went along, a number of retorts which were out of use in the various buildings and stations. These are out of use in December when it is supposed, if at any time in the year, that the apparatus of the gas company will be in full operation. The following is the estimate of unused gas retorts and the capacity. At the

14th Street station, retorts not used..........	324
42d Street station " " "	408
44th Street station " " "	60
21st Street station " " "	276
99th Street station " " "	132
111th Street station " " "	242
Total retorts not used..............	1,442

By Mr. Mathewson:

That is the summary of the individual items in your previous tables, isn't it?

A. Yes, these 1,442 retorts, assuming the lowest four hour charge of about two hundred pounds would carbonize twelve hundred pounds of coal a day each or 1,730,400 pounds of coal. This

1,734,400 pounds of coal at five cubic feet of gas would give 8,652,000 cubic feet of gas a day, or assuming two hundred days to the year an annual capacity of 1,730,400,000 cubic feet. This, 5308 assuming the total structural cost to be about two dollars, leaves out of use apparatus to the amount of $3,495,408. I have not included 360 abandoned retorts in the 18th Street station.

Referring to page 5109, Consolidated Gas Company, estimated cost per annual one thousand cubic feet of sales for 1905, and adding 1,730,400,000 cubic feet to 10,419,461,000 cubic feet, it would give when divided into $12,263,943, an average cost per annual thousand of $1.01 for the gas which would be manufactured by the Consolidated Gas Company's own works, and that would result, adding eighty-four cents for the distributing system, in an average cost of $1.85, instead of $2.02 per annual thousand cubic feet of sales. In taking five cubic feet of gas to the pound of coal——

Mr. Mathewson: Don't you think you have gone about far enough on this? It seems to me so.

Mr. Burr: I have asked him a question. Let him finish.

Mr. Mathewson: I think he has finished.

The Master: He is answering no question that I can see. I do not think that it has anything to do with the redirect-examination or anything that we are supposed to be proceeding on now under the order of the Court. This is not as to the value of the plant at all. He is making an oration now of what might be done with the plants he has not valued.

Mr. Burr: I object to the use of the word "oration" and I except to your ruling that he should not proceed, if you rule that way.

The Master: I have not ruled that way, Mr. Burr, but Mr. Mathewson draws attention to the fact we are getting pretty wide of the mark, and I think we are. If the Doctor is about 5309 through I suppose there is no objection to his finishing it.

By Mr. Burr:

Q. Have you about concluded?

A. That is about all that is necessary.

Q. I understood you to say yesterday that you knew the cost of slating, but you did not know the price of slaters. What did you quite mean by that?

Mr. Mathewson: I merely asked yesterday whether he knew and he said he did not. Now I suggest it is not proper to go and look up afterwards and be able to tell to-day what the cost of slaters is. I asked him in reference to his estimate yesterday, the basis upon which he made that, and he did not know.

The Witness: I could not recall at the moment the slaters' daily wages. It appears to be about forty cents per hour with a helper at twenty cents per hour (page 525 of *Gillette's Handbook of Gas Data*). The cost of a square foot of slate roof appears to be ten cents from the same authority.

Q. Will you be good enough to tell the Master a little more in detail what method you pursued in arriving at the unit of gas in reference to these various buildings and apparatus?

A. The statement that the buildings of different sizes have a uniform cost per cubic foot is radical and fundamentally wrong.

Mr. MATHEWSON: If you will permit me to interrupt, the witness stated in detail exactly that yesterday, Mr. Burr, and began with exactly the same words, and then went on to say that he took 5310 the 132d Street building as typical and then proceeded to use that as a sort of a unit for the others.

Mr. BURR: I agree with you. He may start from the same point, but I asked him to elaborate a little.

The MASTER: If that is objected to I will sustain it. I do not like that kind of redirect-examination, Mr. Burr. It gives a witness too much latitude. If you have anything you want to bring out, ask the specific question, but if you ask him to explain to me a little further, he might go along for an hour and the other side have no redress. The complainant is entitled to have these questions put in a legal form. If you want anything brought out to strengthen this witness's testimony on his redirect-examination, ask him the questions, but it is not fair for the other side if they object for you to give the witnes- a question and have him run through a discourse lasting ten or fifteen minutes at a time.

Mr. BURR: It understood I was in a court of equity, and this gentleman had undertaken to explain why he made a certain allowance and arrived at a certain figure as a unit of cost.

The MASTER: I shall have to hold you down to questions.

Mr. BURR: Mr. Mathewson cross-examined with regard to it, and I was getting for your benefit a little more of the detail. If you do not desire it, I won't ask him further.

The MASTER: I will take my chances on such questions as you ask him, rather than give him the discretion in the matter, a discretion that few witnesses can exercise property, so far as my experience goes.

Mr. BURR: Very well. I take an exception.

5311 By Mr. MATHEWSON:

Q. Referring to these retorts——

Mr. BURR: I object to that. I am excluded from asking anything, and now you begin.

Mr. MATHEWSON: I am going to ask as to the retorts—a matter you brought out on redirect, when he told of the retorts not in use, how many per thousand, how much money, and all that.

Q. You understand, do you not, Mr. Marks, that your totals of output per annum for these retorts which you found not in use, and your estimates of values of plant, etc., were based upon these retorts being out of use during the entire year, and no gas being made in them during the entire year? In other words, your computation of the total amount of gas was possibly only assuming that they produced no gas during the year?

A. No. It was based upon another view than this, at a period of maximum demand during the year.

Q. Well, but they were out of use, in other words, practically for the entire year? You might just as well not have them, according to your computation?

A. If you cannot use them at the time of the maximum demand you might just as well not have them.

Q. Don't you know you have to put retorts out of use for scurfing constantly?

A. Yes.

Q. And even in the time of great production you have to put some out of use, and the more gas you produce the more scurfing is required?

A. That is all allowed for, you know, in the two hundred days instead of three hundred and sixty-five.

Q. Well, that is true, isn't it?

A. Yes.

Q. So that, even in the period of greatest production you do not continuously have them working, or have every retort working, but some necessarily are out of condition for scurfing from time to time, isn't that so? 5312

A. With an able engineer, there are mighty few in December that are out of use for scurfing. Things are fixed.

Q. How about from November to January, when your use of gas is great? Isn't it necessary to put retorts out of use for scurfiing in well-managed gas plants during that period at all?

A. A few, a very few, possibly.

Q. What percentage?

A. Perhaps a fraction of one per cent. Everything is kept going full tilt.

Q. Except a fraction of one per cent.?

A. If you are posted on your job.

Q. (Question repeated.)

A. Yes; in the month of December.

Q. Do you know whether a shortage of gas coal has existed within the last thirty or sixty days which has affected the operation of retorts abnormally?

A. It would not affect the existing conditions of retorts if it did exist.

Q. I am asking you about the operation of retorts, *there* being out of use or not out of use for a few days at a time, that would, would it not, so far as coal gas plants are concerned?

A. Not at all. In a well-managed company a good manager would have his stores of coal piled up sky-high by November.

Q. Do you know of any gas company in this country which did have its coal stored up sky-high at the time of the coal strike in 1902 and 1903? And don't you know that every company practically in the country that amounted to anything had to scrape for coal, and pay almost any price for it?

Mr. Burr: Objected to as incompetent and irrelevant, and it embraces two or three questions; it is indefinite.

Question allowed. Exception.

A. It is too indefinite to answer. There are all kinds 5313 of managers, and they were having all kinds of times then.

Q. I am asking about all kinds, because I am referring to the plants in general. And you cannot answer it?

A. To plants in general?

Q. Yes?

A. No.

By Mr. Burr:

Q. What do you mean by the two hundred days that you spoke of in relation to these gas plants?

A. There are three hundred and sixty-five days in the year, but it is necessary for the purpose of scurfing, repairing, taking out retorts, renewing them, and for all the various breakdowns and troubles that occur in a gas works, to make an allowance. This two hundred days a year is not a theory; it is a condition which has been found by long use, by experience in gas works.

Mr. Mathewson: That is conceded. Every witness has said that.

The Witness (Continuing): And that, therefore, when you find the daily capacity of the works, we will say, to be a million, its annual capacity would be two hundred million, and not as some folks would think, three hundred and sixty-five million cubic feet.

Q. So you have made allowance in your figures for this scurfing that Mr. Mathewson has spoken of?

A. For every kind of catastrophe and trouble and cleaning and fixing and alterations that is ordinarily known to occur in gas works.

Mr. Mathewson: It is not a question of allowance for that.

Mr. Burr: That is all. Now, Mr. Mathewson, have you finally arrived at a conclusion as to those two letters I handed to you?

5314 M-. Mathewson: Yes. I shall not object to their going on the record in view of the broad way in which the case has been treated by the Master and the Court, assuming you won't object to similarly good information on our part.

Mr. Burr: I am not certain whether I offered this in evidence before or not. It is the so-called "Remsen Bill" I so offer it now.

Mr. Mathewson: It is not claimed that this bill ever became a law or affects the situation. It is objected to as incompetent, immaterial and irrelevant.

The Master: I will exclude it.

Mr. Burr: Exception.

The Master: It may be marked for identification.

Marked for identification City's Exhibit 136.

Mr. Burr: I want to offer in evidence the compilations of Dr. Marks with regard to the inventory, being the sheets marked heretofore City's Exhibits for identification 125 to 135, both inclusive.

The Master: Those are what, the details?

Mr. Burr: Yes.

Mr. Mathewson: I object to this, Mr. Master. It has not been offered in evidence so that I might have cross-examined upon it.

Mr. Burr: I beg your pardon. You have been cross-examining, since you had him under cross-examination, from those sheets that I have already handed you.

Mr. Mathewson: No. Secondly, the sheet contains numbers of things which are not in his own testimony; for instance, "Rowland's actual cost in 1884," which may or may not purport to be something which he has taken from the schedules here in evidence, and which I question very seriously, and I might have to go into this
5315 in detail. Here is "Mayer's cost." I don't know whether that is so or not, whether that is the original cost of depreciation. It appears to be original and the following is depreciation. I don't know that I have any very serious objection to this thing if it is to simply cover Mr. Mayer's own details. Or if it is to take in Mr. Mayer as well, which is in testimony here, but as to the summarizing of what is supposed to be Rowland's valuations as though they were parallel with these valuations of Mr. Mayer and Mr. Marks, whereas they are not at all, but the buildings have been changed and Rowland did not include the foundations of apparatus with his buildings and other things, it is not proper and it is entirely misleading.

The Master: I do not see that it can come in here, not having any evidentiary force. That is, Mr. Marks and Mr. Mayer have been here subject to cross-examination, and Mr. Rowland has not.

Mr. Burr: You understand the purpose of that elaborate series of schedules is for the purpose of informing you by comparison as to the various valuations that have been placed upon the same identical things from 1884. Dr. Marks is still here, and if you doubt the correctness of his figures as to what he assumes and states there to be the Rowland valuation, he is here to be cross-examined. If you doubt your own witness, Mr. Mayer, as to the correctness of the figures placed by Mr. Marks in that inventory, he is here to be examined as to that. You know the figures he has given there which Mr. Mayer has presented are absolutely correct. You have yourself offered in evidence a different part of this inventory, the
5316 Rowland inventory, and he has taken from this inventory now in evidence the figures or his values.

Mr. Mathewson: He has not, and you have not proved and cannot prove that the buildings Rowland appraised in 1884 are in the same condition to-day that they were then, because there has been something like eight million dollars in repairs and replacements on the buildings since 1884.

Mr. Burr: We will leave you to prove that.

Mr. Mathewson: Secondly, what Rowland has included in his appraisal of buildings, whether he included foundations of apparatus or not, is quite another proposition, and they were both included by Mr. Mayer and Mr. Marks. You offered these sheets to me the other day, saying they would be of assistance, and I said they would be and they might shorten my examination, and they have been used simply for that purpose.

Mr. Burr: And you have shortened it?

Mr. Mathewson: They have avoided a lengthy cross-examination probably, and I certainly object to any testimony of this witness which would be merely taken in as Rowland's valuation as compared with the valuations of buildings which he has seen to-day.

The MASTER: You can hand that in in the form of a brief. I should imagine it might be of some assistance, but I do not see that it is evidence, Mr. Burr. I think it is well enough off as it is, marked for identification.

Mr. MATHEWSON: This shows the cost per cubic foot, which Mr. Marks has assumed in reference to each one of these buildings, and the corresponding value of the buildings, multiplying the cost per cubic foot, assumed by the cubical contents which he has figured out.

5317 Mr. BURR: The valuation Mr. Rowland placed upon all these various plants and buildings, as I already stated, is in evidence now. The method by which Dr. Marks arrived at his valuation is shown in elaboration here, and more in detail than in the inventories that are already part of his evidence.

Mr. MATHEWSON: I am not going to object if you want to offer the details here of Dr. Marks' estimate of the valuation of these different buildings, which appear in the sheets which you handed me, but I shall object distinctly to your coupling the Rowland valuation with that save they were valuing exactly the same thing at the same time.

Mr. BURR: I will accept that offer. There is no objection then to that part of the inventory which shows Dr. Marks' valuation and the details of his valuation. The only objection is to coupling with that the Rowland valuation and, as I have already stated to the Master, Rowland's valuation and inventory is already in evidence here so for your own assistance and guidance and aid, I insist that they both should be received at the same time.

Mr. MATHEWSON: You mean Rowland's?

Mr. BURR: Yes.

Mr. MATHEWSON: If Mr. Rowland had been here and seen these buildings at this time as they now exist and had put a valuation on them, I would not for a moment object to your putting his valuation in one column and another witness's in the next column, for comparison, but you are not comparing the same things.

Mr. BURR: Why did you introduce that appraisal at all, then?

5318 Mr. MATHEWSON: Simply to show the value of the property and how the stock was issued at the organization of the company, as we were by law required to do.

Mr. BURR: Has it no other bearing or effect upon this case?

Mr. MATHEWSON: I won't say that. That was the primary object for which I have offered it. You think it has various objects, you so argued it?

Mr. BURR: Still I insist in offering those schedules in evidence.

The MASTER: Where in the record was the Rowland valuation?

Mr. BURR: The buildings are still existing, they are of the same dimensions as Rowland gave, and we would be entitled to show, if you were putting this in evidence for the purpose of justifying your capitalization in 1884, that those buildings no longer existed, if they did not exist, wouldn't we? Mr. Mayer has given the dimensions of all these buildings, they are still in existence and we have taken them just as given by Mr. Rowland in 1884 to Mr. Mayer in 1906. Dr. Marks is here ready to be cross-examined as to whether he has with accuracy given the valuation given by Rowland in 1884.

Mr. MATHEWSON: It is not necessary to cross-examine him. They are in evidence and you can do so if you choose in your brief.

Mr. BURR: You can.

Mr. MATHEWSON: No, we do not have to from your exhibit.

Mr. BURR: It is not my exhibit.

Mr. MATHEWSON: You are trying to make it such. It is one you are putting in here now.

Mr. BURR: I didn't have the pleasure of knowing Mr. Rowland.

The MASTER: Where is the so-called Rowland inventory in the record?

5319 Mr. BURR: Starting at page 179 of the Exhibit Book.

The MASTER: Well, I will take it, Mr. Mathewson, in view of what took place in regard to these other Exhibits 70 and 79; and give you an exception.

Received in evidence as City's Exhibits 125 to 135, respectively, and so marked.

Mr. BURR: I also offer in evidence the papers that have been previously marked for identification, City's Exhibits 103 to 120, both inclusive, being the schedules of mains as made up by Dr. Marks from the maps of the Consolidated Gas Company.

Mr. MATHEWSON: Those details of mains.

The MASTER: Didn't we argue that all out at great length?

Mr. BURR: No, we had no discussion with regard to them at all, because I simply had them marked for identification.

Mr. MATHEWSON: I think it was understood the summaries should go in, and not worth while to spread that immense detail on the record.

Mr. BURR: Well, I am putting it in and offer it as part of my case for the defendants in this action.

The MASTER: Is there any objection?

Mr. MATHEWSON: No, if the Master thinks it is a proper part of the case. I think it is utterly useless for the purposes of general evidence.

Mr. BURR: That may be in Mr. Mathewson's opinion, but it does not follow that it will be eventually useless.

Mr. MATHEWSON: I think you will find it will be worse than useless.

Received in evidence as City's Exhibits 103 to 120, respectively, and so marked.

5320 HENRY H. EDGERTON recalled for examination.

Cross-examination by Mr. MATHEWSON:

Q. Have you ever constructed any buildings in the City of New York?

A. No, sir.

Q. Have you ever done any excavating work or had any control of any excavating work or foundation building in the City of New York?

A. No, sir.

Q. Have you ever constructed a gas plant in the City of New York?

A. I advised in regard to the construction in the early days——

Q. Yes, the Mutual, you have testified to that?

A. Yes.

Q. But have you ever constructed a gas plant in the City of New York except so far as you advised as to the Mutual in the 70's?

A. No, sir.

Q. Have you ever built any structures in the City of New York?

A. No.

Q. Have you ever employed labor in the City of New York for construction purposes?

A. No, sir.

Q. Or for manufacturing purposes?

A. No. I have taken laborers from New York, that is, got gas men from here and employed them elsewhere.

Q. Now, you say that you have inspected all the plants of the company?

A. Yes.

Q. Will you tell me when you went to the 14th Street plant, when you entered it and how long you spent there and when you left?

A. I don't remember the exact date it was when I first got their permission to go in, and I went there I think three days in succession and spent probably four hours a day.

Q. That was the 14th Street plant?

A. Yes.

Q. That was the only plant that you had examined up to the time of the recess taken on the 10th of December, wasn't it?

A. I think so.

5321 Q. Now, what was the next plant that you examined after, I mean the plant after the first one, was it 42d Street?

A. I think 42d Street.

Q. Now will you tell me what day you went to 42d Street and what hour you went to the plant and when you left?

A. I can't tell the exact date without referring to some suggestions or memorandum that I haven't at hand. Possibly I went there an hour of the day and spent some time in getting in touch with it. I think the superintendent was out and I had to wait till he came back.

Q. You entered the plant on January 3d at about ten and remained till half-past ten, didn't you?

A. Oh, that was just merely to measure some thickness of some purifier metal and various others—to examine the docks. I had been there three times previous to that.

Q. Then you give me the date and the time you spent each time?

A. I think I spent about three hours.

Q. Can you give me the date?

A. No, I don't remember the date. I visited so many plants that I can't tell the exact dates of each. I spent probably four hours on my first visit to the 42d Street plant and possibly three or four hours on the second visit and then on the third I was there a couple of hours and in January I was there a short time just to check off things I had overlooked.

Q. About half an hour?

A. About half an hour. That was to measure the thickness of iron and see the condition of the docks again.

Q. Now, as to the 99th Street plant, you went there on Sunday, December 23d, didn't you, in the morning?

A. Yes. I went there. I don't remember the exact date. It was Sunday.

Q. Sunday, December 23d?

A. Yes.

Q. You went in the morning and remained till about half past twelve, did you not?

5322 A. I don't remember the exact time. I went from there to the——

Q. Wasn't that about the time you were there?

A. I wasn't there over two hours, I shouldn't suppose.

Q. And then you went to the 132d Street station, did you not, and you spent about two hours at the 132d Street station on the same day?

A. I didn't go to the 132d Street on that day.

Q. When did you?

A. I went to 132d Street several times and I cannot remember the exact dates.

Q. It was January 3d, I think, that you went to 132d Street, wasn't it, and remained from about twelve-thirty to two-thirty?

A. I think about that time.

Q. Now, on January 3d you also went to the 111th Street station, did you not, about two-thirty and remained how long?

A. Long enough to measuse up the pressure on the gas holders, that was my object in visiting those stations.

Q. Well, how long did that take, half an hour?

A. I don't suppose it took over an hour to measure the gas holders for pressures where I was facilitated at all.

Q. Now, the 63d Street station you visited on January 1st, did you not?

A. I don't remember the date I visited it. I took the pressure of the gas holders and looked around.

Q. How long were you there?

A. I don't think I was there over an hour. It was in the evening.

Q. The 65th Street station you also visited on January 2d, did you not, from about quarter of three till quarter past five?

A. 65th Street I think I visited two, possibly three times. I was there taking a count of the iron work and taking some photographs
of stations and holders and not having a gas fitter along to do
5323 some of the alterations required to take the pressures on the
holders I had to visit it again. I made two visits to 65th
Street.

Q. You visited it twice to take the pressure on the holders?

A. Yes, sir. I also was there to take a look at it before.

Q. Did you go inside before?

A. No, I didn't go inside; I went with a view of seeing what the state of the gas holders was, whether they were in use.

Q. How long were you inside the works altogether—two hours?

A. Probably five hours altogether, on both occasions.

Q. On all occasions?

A. Taking it altogether, I was there long enough to see all that I wanted.

Q. Now, as to 63rd Street, you visited the 63rd Street station on January 1st, did you not?

A. I think possibly, although I don't think that was the date. I measured the pressure on the holders; I think that was subsequently.

Q. How long were you inside the 63rd Street station?

A. Probably an hour and a half.

Q. All told?

A. Yes.

Q. Now, as to the 21st Street station, you went there, did you not, on December 23rd, about eleven o'clock, first?

A. I don't remember the date. I think it was likely about that date.

Q. And you remained until about two o'clock, did you not, on the day that you went?

A. I think that was about two hours, or two and one-half hours, going through that station.

Q. Then you called again at 21st Street on the first day of January, didn't you?

A. I called again and spent two or three hours there.

Q. And all that covers your inspection of the 21st Street station?

A. I think I was there once more.

Q. Well, was it before or after?

A. I think I made three visits there; I won't be sure about that, but I had to make several visits, you know, in order to get the gas holders.

5324 Q. In order to get the pressure?

A. Yes.

Q. How long were you there on the third occasion, if you did go a third time, an hour?

A. I am not positive about it. I think the two occasions embraced about all the inspection I gave to 21st Street personally.

Q. How long were you there on the second occasion? On the first you were there about two and one-half hours, you say?

A. Yes.

Q. And on the second occasion how long were you there in that station?

A. I had two gentlemen with me the first occasion. I think we went to 21st Street, and one on the second occasion.

Q. I know, but that is not the question. How long were you there on the second occasion?

A. I think between two and three hours.

Q. On the second occasion?

A. Yes. Possibly that.

Q. Now, respecting the 44th Street station, you went there first, did you not, on December 19th?

A. The first station I visited after 42nd Street was 44th Street.

Q. That was December 19th, wasn't it?

A. I have forgotten the date. I did not put those down. I didn't have any idea there was any importance in what date I went there.

Q. I do not care particularly as to the date. I am merely getting the time, whether it was December 19th or December 20th. You remained there for what period? You left about half-past one, didn't you, and when did you arrive?

A. On the first occasion I went there to measure the holders and make some measurements around the place, and I don't think I got those—I visited it again, taking a few of other parties and measuring the holders. I spent quite a little time in 99th Street, six or eight hours altogether.

Q. Did you go more than twice?

5325 A. I think possibly I did. I don't think I got all the measurements I wanted first.

Q. Isn't it a fact you went December 19th and remained until about half-past one o'clock P. M., going in the forenoon some time about eleven o'clock?

A. I wasn't there, not at the station, the first day.

Q. And the second day, didn't you arrive about twenty minutes of twelve and leave about half-past one?

A. I didn't take note of the time.

Q. Well, about that, wasn't it?

A. Possibly. I got through.

Q. Now, take the 18th Street plant. You visited that, didn't you, on December 20th, or about that?

A. Somewhere along there.

Q. And you arrived there, did you not, about half-past two in the afternoon?

A. It was in the afternoon. I stayed there till two, I suppose. I suppose I spent three hours around the 18th Street station.

Q. Did you go into the Inwood station, inside that station?

A. No, sir.

Q. 132nd Street station?

A. Yes, sir.

Q. How long did you spend there in that station?

A. Possibly three hours.

Q. I think I asked you about that, and you said it was possibly from half-past twelve to half-past two. Now, does this cover the time you spent in the various stations of the Consolidated Gas Company?

A. Oh, no. I have been in those works from time to time ever since 1873 or 1872.

Q. I refer to going there for the purposes of the testimony here.

A. This is for this examination, to see what was there, yes, sir. That comprised the time which I used for looking over and comparing these inventories.

Q. And to see the condition of things now?

A. Yes.

Q. You never made an examination for the purpose of testifying so far as the Consolidated Gas Company plants were concerned before, did you?

5326 A. No, sir, not for the purpose of testifying. I have visited them one hundred times, though.

At 1:05 P. M. a recess for lunch was declared till 2:20 P. M.

After Recess.

Henry H. Edgerton resumed.

By Mr. **Mathewson**:

Q. Which plants of the Consolidated Company were you inside of within the past ten years, before the beginning of this suit?

A. I think I have been in most all of them.

Q. Well, name them?

A. I don't—that is not the holder stations, but the works.

Q. Well, 14th Street?

A. Yes, I have been in 14th Street.

Q. 21st Street?

A. I don't remember 21st Street—yes, within ten years I have been in the 21st Street station.

Q. Within five years?

A. I don't think I have within five years, no sir.

Q. 42d Street?

A. Yes, I have been in 42d Street within ten years.

Q. Within five?

A. No, sir; I don't think I have.

Q. 44th Street?

A. It may possibly be ten years ago; I know they were using the Tessa de Moto process at the time I was there last.

Q. 99th Street?

A. I have not been in 99th Street since Balmore was there years ago—no, that was the Harlem. I have not been in there, no, sir, for years.

5327 Q. And the holder station you say you have not been in before the suit?

A. No.

Q. But in these visits years ago to some of the manufacturing stations you did not go for the purpose of making an engineering inventory?

A. No, sir; I was just looking at their apparatus and seeing what they were doing and accomplishing and so on.

Q. In a general way?

A. Yes, sir.

Q. Now, you say you tested some measurements and in some instances you found Mr. Mayer's measurements did not coincide with yours. Taking them altogether was there any substantial difference?

A. No, I don't remember any. I think there was in the width of a condenser in one place and some others, which were immaterial. I did not check off, however, only those that I judged from my eye to be different from the measurement.

Q. And when you give your view of the cost of a coal gas plant at $250 to $270 per thousand daily capacity and for a water gas plant, $125 to $130, and an oil and water gas plant, 50-candle power, at $100 per thousand, what do you include in the word plant in those totals?

A. Everything.

Q. Do you mean land?

A. No, sir; not land; everything that is in the shape of construction.

Q. Do you mean manufacturing plants, holders, connections and apparatus?

A. And apparatus throughout.

Q. For the manufacturing portions of the plant?

A. Yes, sir, and storage.

Q. How much holder capacity do you allow as related to the generating capacity in your estimate?

A. The holder capacity I predicated generally upon the maximum day's output?

Q. Did you allow holder's capacity equal to the maximum output?

A. Not in this case.

Q. What did you allow?

A. I allowed 45/67ths.

5328 Q. In both coal and water gas?

A. Yes. I cut it down for this particular case for the capacity as I found it, that is the holder capacity relative to the manufacturing capacity.

Q. That is lower than the customary capacity in a coal-gas plant, is it not?

A. Yes, sir.

Q. About one day's holder capacity for a coal-gas plant is the rule, is it not?

A. That is the rule, maximum.

Q. And what about water gas?

A. Water gas could be shaved closer on account of the great rapidity with which it can be generated; but at the same time I allowed a maximum day in that case.

Q. 45/67ths?

A. 45/67ths, and I took 67,000,000 as the maximum output.

Q. And 45,000,000 as the holder capacity?

A. And 45,000,000 as the holder capacity.

Q. How about the oil and water gas, the same thing?

A. Well, the oil and water gas capacity is based upon 22 candles, that is a 22-candle gas. If I should make 50-candle gas for enriching purposes I should prorate it to the 22 candles.

Q. Now, you were examined somewhat at length in reference to the 14th Street plant when you were on the stand before, were you not, Mr. Edgerton?

A. Yes, sir.

Q. And does the schedule which you now present in relation to the 14th Street plant here duplicate the figures which you gave on your previous examination?

A. I believe so, with the exception that I did not get in the holders and some of the plants; I believe the purifier boxes were left out.

Q. And they have been included in your present estimate?

A. Yes, sir; I think they are included; they are intended to be.

Q. You show in your recapitulation of the 14th Street plant $498,806 for the value of the apparatus and contents as 5329 against $578,940 by Mr. Mayer or about $80,000 less for you. Was this estimate of Mr. Mayer the estimate without depreciation, I mean without deduction of depreciation?

A. I believe it was—no, I believe his estimate included depreciation.

Q. That is depreciation deducted?

A. Yes, sir.

Mr. KIRBY: But did not include addition for——

Q. But you deducted very much more depreciation than he did, did you?

A. I think my depreciation is somewhat larger than his, yes, sir.

Q. Is not the chief difference between your figures and his as to value of apparatus at 14th Street the difference in your allowance for depreciation? In other words, the original cost new does not differ greatly, does it as between your figures and Mr. Mayer's for apparatus at 14th Street?

A. I do not think it differs greatly. I cannot——

Q. Have you the totals figured up of the value of buildings, apparatus, yard connections and holders at these various stations reproduced new without depreciation so that we can compare that total with Mr. Mayer's?

A. No, I think only the value of apparatus with depreciation is carried into the recapitulations.

Q. I see that in your schedules of the various plants throughout in many places you say "value as per Mayer," and then carry into the second column of these schedules the depreciated value which he gave.

A. No, I carried out my own figure of depreciation.

Q. But in many cases you will observe you say "Mackenzie Exhauster at 14th Street, page 10, as per Mayer $3,050." That is the depreciation value given by Mr. Mayer, is it not?

A. Yes, sir.

5330 Q. And in such cases as that, if we were to determine the original cost, we would fill in in the first column where you have filled in nothing, Mr. Mayer's value new undepreciated?

A. That would be correct. I think his depreciation value on those was very slight, however.

Q. And where you give a depreciation value of a piece of apparatus not according to Mr. Mayer, and yet have nothing in the first column which represents original cost, you then would put in the first column the same value as you put in the depreciated value column, would you not?

A. I don't know as I have any such, Mr. Mathewson.

Q. I think perhaps there may be one or two there, probably insignificant, but if there are any, that would probably be right, would it not?

A. I think so. I do not——

Q. I think I observed one or two, but I think you probably left out the words "per Mayer" in that particular instance.

A. It is possible, because I have not checked this off very thoroughly. I have still to make a few corrections here. I have a tabular statement of some of them, but I have not had an opportunity to examine it minutely enough to check off all the errors.

Q. Take the 14th Street plant yard connections on page 2 of the summary, it seems to be; it would be page 15 of the 14th Street plant if the pages did not stop at 12——

The MASTER: I suggest you make as little reference to these pages as you can, because I understand that that is all to be printed, and if it goes in the minutes it will be confusing.

Mr. MATHEWSON: All the pages I have referred to so far are the typewritten schedule that I have, and not the printed schedule.

5331 Mr. KIRBY: I might state that these pages could be followed in the printing, because the buildings, the apparatus and the yard connections of each station are all numbered, commencing 1, 2, 3 and so on.

Mr. MATHEWSON: I will simply then refer to the recapitulation of the connection at the 14th Street station.

Q. You have valued them at only $25,500, whereas Mr. Mayer's value is $146,895, which Mr. Marks says he considers correct and has adopted. Now, do I understand that your $25,500 is based on your consideration of the capacity of the plant and the connections which you would usually find in a plant of such capacity?

A. That is based upon a factor which is the result of the aggregation of the experience of a number of gas men in regard to the value per unit of output.

Q. I am talking about you, so far as you are concerned; do not bring in any other gas men, because we cannot examine them. That is based upon an estimate by you based upon the capacity of the plant, then?

A. Yes, sir.

Q. And it is not based on any particular mileage of connections or individual consideration of these different items in the connections, is it?

A. Well, in looking around the plants, I had no reason, unless there was a duplication of pipes, to consider that the ordinary allowance for the proportion of valves and connections would be too small.

Q. No, but if you take Mr. Mayer's schedule showing the pipes and size of valves that exist, etc., and the number of feet as shown in his schedule, it certainly would amount, if figured up, to more than $25,500, to reproduce, would it not?

A. Certainly. I took that to be, however, a case that happens in many plants, that as they grow there is a duplication of parts. 5332 It frequently happens that as a plant grows and connections are enlarged that there is a certain amount of duplication.

Q. That is almost necessarily the case, is it not, as a plant grows and is enlarged from time to time?

A. They put in larger pipes, and the smaller pipes go out of use and it does not pay to rip them out, the foundations, etc.

Q. And you took that into consideration instead of the pipes in Mr. Mayer's schedule, and the connections?

A. Yes, I did not see how such a very large amount of pipe could be used to connect the apparatus, no.

Q. Did you include all the tar and drain pipes and steam pipes and water pipes?

A. Yes, that allowance includes all these tar and drain pipes, that is such as are used in connection with gas; not for sewage purposes.

Q. But upon your own estimate of what they might be instead of upon Mr. Mayer's testimony as to what connections there actually are there?

A. Yes. I consider that sufficient to convey the gas around the works and take the tar off, in a new plant.

Q. Let me call your attention to the six holders at 14th Street which you valued at $146,600. Mr. Logan's valuation is $180,000 and Mr. Mayer's $178,885. Now, in view of the experience of these gentlemen in the construction of holders in the City of New York are you still prepared to say that it would cost only $146,600?

A. I happened to have——

Q. I merely ask you whether in view of their testimony and their experience in New York City you still, on second thought, wish to say that the value of those holders, cost of reproduction, would be only $146,600?

A. That is the whole question? *A.* Yes.

5333 Q. Now, take the two holders following, which Mr. Logan valued at $40,000, and you valued at nearly one-third off, or $27,360; in view of Mr. Logan's experience, do you still feel that your figure is right?

A. Yes, Mr. Logan sells the holders and I buy them.

Q. What?

A. Mr. Logan sells holders and I buy them. I buy them as cheap as I can get them.

Q. And Mr. Logan has had experience in installing holders in the City of New York?

A. Yes, and I get bids on installing holders in the City of New York, too.

Q. It is a question of what kind of holders they may be. Can you tell me what weight you allowed for the six holders in computing your value of $146,600?

A. I could not get at the weight of those holders, but I based my estimate of the values of those holders entirely on what I had a bid for the construction of similar holders, only heavier.

Q. That would require us to examine somebody else, and we are now examining you. What weight did you assume in your computation of $146,600?

A. I had a bid for a No. 12 iron——

Q. No, no, no. That is not the question. I say what weights did you assume those six holders to be in material, entire construction, including the holder and the guide frame and connections, how many pounds of material?

A. I did not put it into pounds, because I could not measure it.

Q. Well, how many pounds would it represent in weight if the value was $146,600, because the value of a holder depends upon its weight, does it not, and the amount of material in it?

A. Yes.

Q. Let us see. What would you say the weight of these holders was, to equal $146,600?

A. I have not figured that up at all. I based it entirely on the capacity of the holder. As I say, those holders are counterbalanced, and I went there several times to take the pressures on them,
5334 and was always frustrated, in one way or another.

Q. Now, how were you obstructed, Mr. Edgerton?

A. Well, I went there with my apparatus, pressure gauges, and was going to measure them, and they—one thing is, they are out of use, and I asked Mr. Riblet to fill them up, and he said he could not then. I know better. I know——

Mr. Mathewson: I move to strike out "I know better."

The Master: Well, he said he could not fill them up.

Q. Do you mean that those holders are out of use, Mr. Edgerton?

A. I never saw them used at all.

Q. Well, do you mean to say that they were or are out of use?

A. Decidedly. I have gone to that place now about six or seven times to see those holders used, night and day, and never saw them in use. There were four or five of them sometimes down.

Q. Did you take any measurement of the holders at 14th Street?

A. I did of the big holders, but these small holders are absolutely out of use.

Q. Well, you are quite mistaken as to that——

A. He told me something about their being used at night, and I went down there at night or in the morning, because I wanted to see if there was anything in it, because I had made my mind up from observations that those holders were not in use. In one of them the water was down about fifteen feet, and it is perfectly absurd to say they are in use.

Q. What about these two holders you valued at $27,360? You have not the weight of those holders either, have you?

A. They are out of use now; they could not possibly be weighed. In the process—in regard to the two holders over in the other yard, 250,000 feet, I say that the water was down about fifteen feet
5335 in one of them when I examined it, and they were counterweighed. We would not have been able to ascertain the pressure. One of them, I believe, was up about four or five feet.

Q. I merely asked you whether you had the weight, or can you state the weight you assumed for those two holders?

A. I did not figure out the weight at all, because I did not have the data. I had to put it on the capacity, and I figured that cost out entirely on capacity per thousand, comparing with prices I have obtained.

Q. Does not the construction of the guide frame considerably alter the weight of the holder, or has not it something to do with the weight, holders of a similar capacity?

A. Oh, you can put——

Q. Just answer the question. It is a straight question, I think?

A. The weight of the guide frame has to do with it, certainly. The guide frame is part of the construction.

Q. Did you estimate the weight of the guide frames in the case of those holders?

A. Not in those holders, no, sir.

Q. How many cents per pound would you allow for the material in those holders?

A. I allowed from 6.6 cents to 7 cents a pound. I took Mr. Mayer's figures in regard to the cost on such as I could ascertain the weight of.

Q. Now, Mr. Mayer's value for the holders appears to be $789,604 including the tanks, and Mr. Marks says that he considers that a fair valuation, as you heard. Do you still think that $546,700, or thirty per cent. or more off, is the value?

A. Yes, sir.

Q. Does the price per pound remain the same whether the holders are in a steel tank or brick tank?

A. The price per pound would be slightly larger in a brick tank, that is of the whole apparatus.

5336 Q. How much larger, Mr. Edgerton?

A. I should not allow more than half a cent a pound for the difference between the holders and tank.

Q. Would the 6½ cents per pound be for brick or steel tanks?

A. That is the price that is generally used there for the holders themselves, and in some cases I used a slightly larger figure, 7 cents, and I think in one case 7.1 cents.

Q. Is that for brick or steel tanks?

A. That is for a brick tank.

Q. Now, referring to 42d Street apparatus, and the contents of purifier house, we have eight purifier boxes, with covers, which Mr. Logan valued at $40,000, and Mr. Mayer at $37,840, new. Your valuation is about twenty per cent. less than Mr. Logan's or $32,750. Will you tell me how many pounds of weight you assumed those purifier boxes, covers, connections and supports represent?

A. I can tell you the data on which I figured it out.

Q. Well, I would like the weight and the cents per pound which produced your $32,750.

A. I think it was five cents per pound for that plain cast iron work, ¾ of an inch thick at the bottom and ⅞ of an inch thick flanges, and I took eight pounds to the square foot as the weight of the covers——

Q. Being wrought iron?

A. Wrought iron. $1,500 is the cost of a centre seal and $800 the cost of a hoist, I think; that is my recollection of the elements which entered into those boxes.

Q. How many pounds of material did you make out for the boxes and covers, the whole thing which you valued at $32,750?

A. Cast iron sides and bottom, 40,110 pounds; columns and supports, 5,520 pounds; wrought iron covers, 5,213 pounds.

Q. Each?

A. This is for one purifier and multiply it by eight.

Q. Very good. Continue, or is that all?

5337 A. I-beams, supports, 4,600 pounds; trays, it all amounts to $2,609.38.

Q. How many pounds does it represent altogether for one purifier box with covers, etc., which you multiply by eight?

A. There being different classes of work, I did not add them together, but will do so.

Q. If it will not take you more than a moment, I would be glad of the total?

A. 55,443 pounds, that is exclusive of centre seals or carriages.

Q. And including the centre seals and carriages, how much would it be, and connections, if you have not included those?

A. Figuring out the weight of centre seals is rather complicated. I took it at the price of $1,500 for those centre seals, which would cover a centre seal of that size.

Q. You did not compute the weight of the center seals?

A. I did not compute the weight of the center seals, no, sir.

Q. Did you put in the carriages by weight?

A. No, the weight of the carriages. I took them, well, at about the same price Mr. Mayer does. I don't think my price differs from his.

Q. What price did you take for the carriages?

A. I think they were eight hundred or nine hundred dollars apiece.

Q. New?

A. New, yes. All this was new. I think Mr. Mayer's weights exceeded mine by the proportion of 69,000 to 57,000 or 59,000, something like that; they were a little more than mine.

Q. Now, about the four purifying boxes below with connections, supports and covers; Mr. Logan valued those new at $20,000, and you at $16,560, or nearly twenty per cent. less?

A. Those were four boxes about the same area, I think.

Q. Did you compute that on the same basis as to cents per pound of value for material?

5338 A. Yes, I took—all the purifier boxes are computed on the same data.

Q. Will you give me the details of the cents per pound which you assumed for your cast-iron work, including the cost of material, shop labor, weight, etc.?

A. Erected on the spot I think I figured it at five cents.

Q. How did you make that up in detail?

A. It would average about that.

Q. How much average price of material per pound?

A. You mean dividing it up as to shop labor and all that?

Q. Yes.

A. I did not attempt that. I was not doing shop work. I say this is on what I know from buying that kind of apparatus, the prices they put on and charge for it. I did not attempt to go into any shop details about it.

Q. Now from a manufacturer's standpoint as to what labor he would have to employ or materials to produce the result.

A. Right straight through I go on a theory that I am a buyer of gas works.

Q. I understand, and you do not divide that five cents up into details?

A. No, I do not know how they get at their figures, I know what I can buy them for when I get them.

Q. The same is true of each case where you have used a certain number of cents per pound as your multiplier?

A. Yes. I have classified the various details of the gas machinery into prices per pound as I got it from various parties, and I make up my mind from that, adding on these extraordinary New York conditions—of course all these prices, you understand, seem very high to me; I will say that, frankly, they are 20 per cent. higher than I am used to.

5339 Q. Well, they seem very low to us, so it makes a fair proposition perhaps. As you say you found Mr. Mayer's descriptions and dimensions substantially or generally correct, I judge that the difference between your valuations and his must rest largely in the number of cents which you allow per pound in cases where you were able to estimate the weight?

A. May be in the price per pound possibly, and in some of the weights, as I say, his weight of the purifier boxes was higher than mine.

Q. When did you last purchase any purifier boxes in New York City?

A. I have not bought any purifier boxes in New York City. I say that I have added on—in fact my figures or multipliers differ very little from Mr. Mayer's, as I recall it. I think his was 5.6 cents on that work and mine was 5 cents.

Q. How lately have you bought any purifier boxes anywhere?

A. I have not bought any lately. I do not use them in that shape. Those purifier boxes are out of date, anyhow.

Q. That may be, too; that is another story.

A. I could not get any figures on them one way or another.

Q. They were in use, were they not?

A. Yes.

Q. Now, as to the apparatus, Mr. Marks testified that Mr. Mayer's figures he considered substantially correct as to cost, they differing only in depreciation. Do you differ with Mr. Marks in that conclusion as to the 42d Street station?

A. I judge I do, from my view of it. He——

Q. Now, as to connections at the 42d Street station, you have them valued at only $22,950, while Mr. Mayer's value, approved by Mr. Marks, is $134,157, or something like six times as great. Did you make your estimate of these yard connections also on the capacity of the plant, instead of taking the descriptions of the connections actually existing?

A. Well, nobody could figure up any value from those descriptions. I had to throw that aside at once.

5340 Q. And as a matter of fact you did not take dimensions or have dimensions, but simply made an estimate as you did in the case of the 14th Street plant, is that right?

A. I estimated on the basis of the valves and connections required for a works of that capacity.

Q. Well, that is what you have said as to 14th Street, and you pursued the same course at 42d Street, didn't you?

A. Yes, sir.

Q. And each one of the other stations as to connections?

A. Yes, except on the holder stations. There I could figure in detail on the valves and pipes. I think I figured there on the details. It was not complicated with old stuff.

Q. Which station was that?

A. The old stations. Understand, these old stations are complicated with an immense amount of dead timber.

Q. How are these purifiers out of date, in what way?

A. Well, at the present date they will build them deeper; instead of shallow purifiers three feet in depth, they will build them six or seven feet, or even more, and put it in the depth instead of area.

Q. Do you mean to say that purifier boxes of that size are not erected to-day, or substantially that size?

A. They might where they use lime, or if they were old-fashioned folk, yes.

Q. Well, there are a great many purifier boxes of that sort existing, are they not, in plants which have grown up in the past?

A. Yes, that is the old style of box, all right.

Q. And if you think greater depths are better, cannot these be deepened?

A. I saw some effort to——

Q. Well, cannot they be? That is a simple question, not what you have seen, but *it is* not possible to deepen them?

A. They had better build new ones than try to deepen those.

Q. They could be deepened, could they not?

5341 A. You could use the cover, but the sides could not be adapted; you could put in new sides and deepen the sides and use the bottom perhaps, jack them up.

Q. Well, you know as a matter of fact, that it is something that is done every day in that business, to deepen purifier boxes, do you not, that it is constantly done?

A. Well, I have seen it tried, yes. I do not like it much——

Q. Yes, I know. It is constantly done, is it not?

A. — think I have put up second hand purifier boxes——

Q. Won't you answer my questions, Mr. Edgerton, and we will get on so much faster?

A. Yes.

—. Now, as a matter of fact, you testified in regard to the 14th Street plant, that a great deal of this apparatus, in fact nearly all of it, I think practically, and perhaps all of it, was apparently in use and it seemed to be doing the business, but that while it looked well enough on the outside you thought there must be some interior depreciation. Is that a fair statement of what you meant to say?

A. No—in regard to engines and exhausters and a lot of things of that kind, but there is plenty more of the large apparatus, that is very much depreciated on the outside, and as far as being all of it in use, it is very far from being all in use.

Q. But in the smaller apparatus, respecting which you testified at 14th Street that your depreciation represented a loss of life, or interior deterioration, the same testimony would be given by you respecting the corresponding items, or the depreciation which you have allowed for corresponding items in the other plants, would it not, generally?

A. Yes. I cannot see the insides of those machines, that is true.

Q. I am merely trying to find whether it is necessary to examine you on the other items in other plants of a similar character. Your method of depreciation would be substantially similar on the
5342 same items in other plants?

A. Well, on those exhausters and engines I should say I have put on a depreciation which would involve generally an overhauling of them and putting them in first-class order, which I considered that depreciation factor would about cover.

Q. Now, in reference to the holders at 42d Street, the first four, 250,000 cubic feet each, Mr. Logan's valuation of the holders is $120,000 and your valuation of these holders is only $73,900. Doesn't that shake your confidence in the figure which you have given?

A. No, sir.

Q. What weight did you assume for those four holders, including their guide frames, connections and the entire construction?

A. Those holders weighed more than I was told the pressure would account for. Mr. Mayer gave it, I think, 4½ inches; I found 5.2 inches.

Q. How many pounds did you calculate that would mean on the entire structure, including the guide frames and connections?

(Witness searches for a book.)

Q. Well, can you tell me how many cents per pound of weight you allowed in computing your value of $73,900 for those four holders?

A. 6.6 cents, I think, I figured on that holder shell, and I had the pressure at 5.2, and measured the submerged iron counter-balance by the water in the cup and then allowed for the levity of the gas in the holder .650 of air.

Q. But 6.6 cents, how many pounds would that leave for $73,900, about? It would be about 1,120,000 pounds, wouldn't it, Mr. Edgerton?

A. Yes.

Q. And didn't you allow the same unit value per pound for the guide frame and the connections as you did for the shell?

5343 A. No, I did not. That guide frame is a kind of a filligree casting, and I took that at, I think, four cents a pound; cast iron frame.

Q. I suppose taking the tanks and holders in the aggregate, the fact that Mr. Marks agreed with Mr. Mayer's total substantially as to original cost would not affect your view that the value was $40,000 or $50,000 less, would it?

A. No, accepting Mr. Mayer's figures would not affect my figures at all, nor my method of getting at it.

Q. That is true, I suppose, in every case where they agree?

A. In every case where they agreed. I looked at the thing in my own way and he looked at it in his.

Q. On the 44th Street plant?

A. I have explained there I do not think Mr. Marks in his——

Q. Well, I guess Mr. Marks is construing his own testimony?

A. I just went around with him on one works. I did not notice him figuring at all on that.

Q. In the 44th Street plant, the value of the connections you make $51,850; Mr. Mayer, approved by Mr. Marks, makes it $99,910. Is that still your view?

A. Yes. I allowed a little more for connections, on account of the water gas plant.

Q. Let us take the holders here at 44th Street, as you suggested taking up some others. Mr. Logan valued the four holders at 44th Street at $140,000; you value those same four holders at only $75,000, or at about fifty per cent. of his valuation. Now, will you tell me how much the entire weight of those constructions was, according to your computation?

A. Those holders, ninety-five feet six inches diameter, weight 203,300 pounds.

Q. Each?

A. Each one; and the guide frames at one-third the cost of the holder, I put that there to guide frames, I could not get particulars of them, and did not calculate that part, but took it at one-third the cost of the holder.

5344 Q. Do you mean one-third the cost or one-third of the weight?

A. One-third of the cost.

Q. What would that make for a guide frame for one of the holders?

A. Do you mean in weight?

Q. No, I mean——

A. $4,466.

Q. For each holder?

A. For each holder.

Q. What weight would that represent? Can you tell, about?

A. It would be about 100,000 pounds.

Q. Doesn't it make a good deal of difference how many columns there are in a guide frame as to the proportion of value of the guide frame to the holder?

A. Oh, yes. You could put a good many guide frames around there; the more guide frames you put the more cost it would be.

Q. Columns, you mean?

A. Yes, columns.

Q. Do you remember how many there were here, number of holders?

A. I think twelve. I think I have only got eight down here on Mr. Mayer's figures. Twice, I think, where he has sixteen, I have twenty once.

Q. Was this the case?

A. I do not state the number here.

Q. How many cents per pound did you take for the value of that holder?

A. 6.6 cents.

Q. What weight did you take for the connections for each holder?

A. 40,000 pounds.

Q. And how many cents per pound for that?

A. Two cents, plain pipe castings, except I allowed for valves in my calculations and connections.

Q. Doesn't the fact that Mr. Logan valued this at $140,000 he being familiar with New York conditions, shake your confidence in your estimate of only $75,000 for those four holders?

A. Not a bit.

Q. Well, let us take the next holder, 2,000,000 cubic feet capacity. Mr. Logan's valuation was $120,000 and yours is only $84,000, new. Would you make that same reply as to your judgment in that regard?

5345 A. Yes, I say constantly that I am a buyer in this case instead of a seller, and it makes a difference.

Q. But there has to be a seller wherever there is a buyer, and the price is the same whichever side you look at it, isn't it?

A. You have to come to the same price to get a trade, I guess.

Mr. Mathewson: We find it so in our business, at any rate.

The Witness: I do not think Mr. Logan would be much of a seller at those prices.

Q. You know the Logan Iron Works has a pretty large business in such things?

A. No; on the contrary, I have seen mighty few of his holders. I see holders of every other make. The only holders I have seen of Logan's are right down here among these works. I have been pretty well over the country with regard to holders, and I see thirty of other makers to one of Logan's, certainly.

Q. Have you bought holders set at the prices you have given anywhere in the country within the last ten years, of that capacity?

A. Less than that. I say this price is twenty-five per cent. or thirty per cent. greater than the bids I have right in my pocket.

Q. Where? Where have you bought one in the last ten years of this capacity, and weight?

A. I don't say that capacity. As the capacity gets greater the price gets less.

Q. Well, I am trying to deal with this particular holder?

A. I have not bought a holder of that capacity in the last ten years; no, sir.

Q. How about the holders of Bartlett, Hayward & Company, or Mr. Mayer? You have seen those in a great many places, haven't you?

A. Yes, and bought them just as cheap as I am talking about.

5346 Q. They don't seem to have much difficulty in selling them, as far as your observation goes, in other places? You see lots of them?

A. Yes, you see plenty of their holders; indeed you do.

Q. Now, again, on the 21st Street plant, four holders, valued at $182,000 by Mr. Logan, valued by you at only $115,000, while the valuation of Mr. Mayer is $219,400, or just about twice your figure. You heard the testimony, or read it, given by Mr. Mayer, didn't you, as to that being a fair value?

A. On 21st Street, four holders?

Q. Yes.

~~A. Yes,~~ I took his own figure of weight.

Q. In view of his ~~experience~~ and the holders you have seen about the country, you are still prepared to say that those particular holders, of that weight, could be installed to-day for half his price, or $115,700?

A. Yes, less than that.

Q. How many pounds did you assume there were in the total construction of those four holders, including the shell, guide frames and connections?

A. That holder threw 8.91 inches.

Q. And Mr. Mayer's pressure was only 8.70. You found a little higher pressure in that case, didn't you?

A. Yes.

Q. And how much did you compute the weight of the holder to be?

A. 282,000 pounds at 6.6 cents.

Q. How much for the guide frame?

A. 164,700 pounds.

Q. A guide frame for 164,700?

A. Yes, sir.

Q. How many columns? Aren't there sixteen cast-iron columns?

A. Yes, sixteen, I think. That is right, I counted those.

Q. Are those cast iron?

A. No, those are, I think, steel. No, cast iron, cast-iron columns.

Q. Do you mean to say that in your judgment the weight of the guide frames and columns was only 164,700 pounds for each holder?

A. Yes.

Q. As it stands there?

A. Yes.

5347 Q. Did you measure those guide frames and compute their value?

A. I did.

Q. And computed their weight?

A. Yes, sir.

Q. Now, let us have the details of that computation?

A. — haven't anything more here than 164,700 at four cents; cast-iron girders 16,150 pounds, and guide rails 960 pounds.

Q. Cannot you give us the dimensions from which you computed a weight of only 164,700 pounds for each guide frame, including columns?

A. No, I have not carried that out on the memorandum of this cal*uc*lation. I notice it amounts to more than one-third of the cost of the shell. However, that is considered an ample allowance for guide frames.

Q. How thick did you figure the cast iron in the columns?

A. I think it was an inch thick.

Q. Well, are you sure about it?

A. That is what I allowed for cast iron, unless I found—there were some of those columns that looked like cast iron, which, when I saw a hole bored in them I found to be steel.

Q. What did you find to be the diameter and height of these columns?

A. In this computation here I have not carried that out. I have not got it down on the pages as a resumé of my calculations. It shows the weight of each part, the cost of each part and the total cost of the holders and inlets and outlets. I think that perhaps an inlet and outlet I carried out, four of them which we examined. I see it is four cents here, a pound.

Q. Did you include any iron work for the brick tank?

A. Yes, that is included.

Q. What weight for that and what price?

A. It is not put down here separate.

Q. Now, will you look at the apparatus under 99th Street station
for a moment. We have four sets of ten feet U. G. I. Lowe
5348 water gas apparatus, which Mr. Mayer valued, including the
floor, at $64,167. I find that you value those at $45,200, and
I find a note underneath as follows: "The water gas apparatus (Mayer 1539) is valued at $56,000, and $8,167 for the charging floor. The apparatus was installed in 1904 and price was obtained from the U. G. I. Imp. Co." What does that mean?

A. United Gas & Improvement Company.

Q. What is the meaning of that note? Explain will you a little more fully what you mean by that?

A. I took it out of the description of Logan.

Q. What descr*pi*tion?

Mr. Kirby: That was included there so as to tally up with the building.

Q. Then you do not mean that you obtained your price and value of $45,200 from the U. G. I. Company?

A. No, sir.

Q. The note, following your figure, I thought it might have referred to this?

A. No, it was Mr. Mayer's, I think.

Q. Now, near the end of the apparatus schedule of the 99th Street station under "retort house" I find "eleven through benches of sixes, back to back, cost new blank dollars, depreciation blank per cent., value blank dollars." I find nothing carried down either in the columns of "original cost" or of "present value, less depreciation"?

A. That is an omission. I noticed that last night but I had not the data right at hand to supply that. That is an omission, sir.

Q. Well, for the purposes of completing the schedule is it fair to insert Mr. Mayer's valuation in that case, as you have in many of the others, or do you wish to fix a value differing from his?

A. 99th Street, I should like to put in my own value on that. I don't know how it came to be omitted. I have some corrections to make on these on deductions and additions and I would like to put in the value of those benches. 5349

Q. Can you supply that now?

A. I can.

Q. Very good, I should be glad to have you do it and we can fill it in and the record will be complete.

A. (The witness computing.) $39,900.

Q. For eleven benches?

A. For eleven benches and eleven empty arches.

Q. New?

A. New.

Q. Did you observe Mr. Mayer's addenda, Item 1, that instead of eleven there were twenty benches?

A. Yes, I say, I added eleven arches together with the iron work for eleven——

Q. That will be $39,900?

A. They are just the same practically as 44th Street. $39,900.

Q. That is ten per cent. you allowed there, wasn't it, for depreciation?

A. The depreciation on benches in cases is based on depreciation of one-third of the $150 for retorts and setting as applied to the holder and it amounts to 6½ per cent. on going apparatus.

Q. Well, what would you say as to this? I merely wish you to fill the records by saying what depreciation you apply to this?

A. 6½ per cent.

Q. And that would give a net figure of how much?

A. $37,307.

Q. Now, did you take into account there Mr. Edgerton, that the material was all on hand to set those eleven empty arches, absolutely new material, and merely required the setting, in making your estimate?

A. No, sir, I noticed that in one other case, that was at 42d Street, and there had not been anything done there toward doing the setting, and I thought if they had done it up to that time they were possibly reconsidering it.

Q. So you made no allowance in those cases?

5350 A. No, sir; I saw it was not done, and if they had the material when Mr. Mayer was there it was still there, and what material I saw piled up in the empty arches has not anything to do with that setting at all.

Q. You mean it had not?

A. At 42d Street.

Q. You do not mean not at 99th Street?

A. No, I don't remember that.

Q. Now let us look at 18th Street station for a minute. The first item in apparatus, "two vertical boilers"; you have said, "value nothing"; you have allowed no value either new or as depreciated in that case, have you?

A. No, I did not. I agree with Mr. Mayer on that.

Q. Did he allow any value for it?

A. No, it was burned out, scrap.

Q. Let us take the 18th Street connections. Mr. Mayer, computing from the schedule of connections, including length and sizes, finds a value of $21,987 for the 18th Street connections; and is it a fact that your estimate is only $2,800, about ten per cent. of his?

A. Yes, that is a peculiar case. There was no output at the station to base any calculation on, based on output, and as it was out of use and no output to base connections on, the retort house dismantled, and everything gone to scrap, I just "scrapped" it.

Q. Well, you know the company sends in about three million feet a day there, don't you—or didn't you know that?

A. I think $2,800 would cover what it would require to send into the gas holders, yes, sir.

Q. So you didn't there place a value on the basis of cost of reproduction, at all, did you?

A. No, I did not in regard to connections.

Q. Assuming that Mr. Mayer's figures as to dimensions and descriptions of connections in these various others was correct and you were to compute the cost of installing them new as they 5351 are now without regard to whether they would all be necessary if the plant were to be now constructed, you would not calculate, would you, this estimate of the cost new, in those connections?

A. I think I might differ a little. I think on those holder stations, where they are new, there is some difference, where I computed them.

Q. There would not be a large difference without depreciation and assuming they would all be reproduced as they exist to-day?

A. It should not be large, and I took the prices of valves, the New York prices, and prices of pipe, and computed——

Q. Do you know whether it is steel riveted pipe in these new stations?

A. No, I do not. I computed on the basis of cast iron pipe.

Q. And not steel riveted?

A. I saw riveted pipe for blowers.

Q. Steel riveted pipe would be more expensive, wouldn't it?

A. Yes, I think it would, although not much. That cast iron pipe would be a great deal heavier, but you could take advantage of that making the lighter pipe with steel.

Q. Do you know the price of pipe to-day per ton?

A. I have not priced any to-day, no, sir.

Q. Well, within the last few days?

A. I think it is a little higher than——

Q. About $32 a ton, isn't it, now?

A. Something like that.

Q. Now, here again at the 63rd Street station I find Mr. Logan's value of holder is $160,000—the three million foot holder—and yours is only $129,320. Is there any explanation of that except your different estimate of weight of material or unit value?

A. I have Mr. Mayer's unit of value, I think, on that, and I weighed the holder. I do not see where we could differ.

5352 Q. Well, Mr. Mayer's value is $160,374, and Mr. Logan's is $160,000 exactly?

A. That is the 63rd Street holder?

Q. Yes.

A. I make it only $129,320.

Q. Can you explain the discrepancy there, if you took Mr. Mayer's unit price?

A. Well, that is the holder where I valued the guide frame away up.

Q. What did you value the guide frame at there?

A. $48,000.

Q. What weight did you assume the guide frame to be?

A. There are twenty-four Phœnix columns, I think, there.

Q. One hundred and twenty-two feet high?

A. Yes, 41,000 pounds at five cents.

Q. You do not mean only 41,000?

A. For each panel—each bay, they call them; there would be twenty-four of them at that.

Q. That would be how much for weight of the guide frames then on there?

A. Twenty-four times forty-one.

Q. That would be 984,000?

A. Yes.

Q. What did you compute the weight of the holder to be, the shell?

A. I guess I must have got that pretty close. The shell was 1,209,271 pounds.

Q. Does not a guide frame of that character cost more than other guide frames, aside from the weight?

A. Yes, it is more than half the cost.

Q. Was it double or single bracing, if you noticed?

A. Oh, it was braced tight throughout. I can show you how it looked. It was braced like that (exhibiting a photograph).

Q. Well, would you call that double or single bracing?

A. I would call that sextuple.

Q. Did you allow for all that bracing in your estimate?

A. I tried to.

Q. Did you know that that——

A. (Interrupting:) Those diagonals are a double band there, so that would make it double sextuple (indicating on the photograph).

5353 Q. You allowed for such?

A. Yes, that has been allowed for.

Q. And you think the weight you have given for the guide frame will allow for and cover all that bracing?

A. Yes, I think so. The photograph was taken as a memorandum to be sure to get things in.

Q. Taken by you in other instances also?

A. Yes.

Q. Did you take into account, Mr. Edgerton, that the 63rd Street holder was placed in solid rock, where it had to be, where rock had to be taken out?

A. That is the cheapest kind of holder to build—a tank.

Q. Did you know that fact or take it into consideration, whatever effect it may have?

A. I did. The gas holder tank is calculated out somewhere in the calculation. By the way, I notice they make that seven foot thick at the bottom, I suppose with the idea of holding the rock up. Five feet is ample.

Q. That may be what that sextuple bracing is put in for, to keep the rock up, to do a thorough job while we are about it?

A. Well, it is a fine thing if you can pay for it.

Q. Mr. Edgerton, the two holders at the 65th Street station, which Mr. Logan valued at $52,000 and Mr. Mayer at $57,000, I see you value at only $32,000, and the same about the four holders at that station which Mr. Logan valued at $104,000 and Mr. Mayer valued at $140,000, and you valued them at only $65,600 or a fraction in each case. Did you go over those holders also and get your estimate of weight?

A. No, those are calculated by the cubic contents. Not having the weight, I based those on the cost per thousand cubic feet for holders of that——

Q. What did you estimate that those holders would throw in pressure?

A. Well, I say I did not estimate on that, that the price we allowed them to throw a good pressure.

5354 Q. Well, what weight?

A. In the bid which I have they could on a two lift holder——

Q. No matter about that, I don't care anything about the bids you have. I want to know what pressure you consider those holders throw?

A. They should throw 5.6; along there somewhere.

Q. That is your supposition, that they do about that, is it?

Mr. Kirby: You have reference to the two small holders?

Mr. Mathewson: The two and the four holders; not the four million foot holders.

A. For the price I have estimated in there they would throw a pressure of 5½ inches; 5.6.

Q. And at the same unit price for material which you have suggested previously?

A. No, I think that would be somewhat lower, because it is a lower scale bid or figure.

Q. Such as what?

A. It would be a pretty low figure. I do not think it would come over—it would not come over five cents probably.

Q. For everything, including the shell, the frame and the connections?

A. Including the shell and the frame. This is a brick tank.

Q. But there are pipe connections, aren't there?

A. Yes, inlet and outlet, that is always included.

Q. Did you figure on wrought iron or cast iron columns?

A. This is on wrought iron, modern holder.

Q. Now, the two holders following at this plant, 14,000,000 capacity, Mr. Logan values at $400,000 to reproduce and Mr. Mayer at $398,645, substantially similar figures, and your figure is $294,000, or over $100,000 less. Can you explain such a great discrepancy as that?

A. Well, there is the weight of the holder, the shell at Mr.
5355 Mayer's price, 1,078,000 pounds at 6.6 cents and the guide
frame is the same as that Phœnix guide frame $48,000.

Q. Well, let us take the shell in the first place; what is the weight of shell do you understand?

A. 1,478,000 pounds.

Q. Well, that is evidently a clerical error, because that is not the weight Mr. Mayer testified to?

A. Well, he may have included the guide frame.

Q. No, shell alone. Well, we will have to get this thing to agree. What did you figure as the weight of the guide frame in the case of the two big holders?

A. Well, this is one of them, got about the same guide frame——

Q. Well, what weight would you say?

A. Well, that would be like that other one we figured.

Q. Something over 900,000 pounds?

A. What I figured before.

Q. That was 984,000 pounds?

A. Yes.

Q. What weight would you figure for the pipe connections, for those holders each?

A. 62,000 pounds.

Q. Are you aware, or does it appear, that that weight is only one-half the weight which Mr. Mayer found for the pipe connections, or haven't you that in mind?

A. I think he said that there were two sets of connections there. I never heard of two sets.

Q. You figured on only one set?

A. I didn't figure on two inlets and two outlets anywhere.

Q. So if there are two sets of connections of course his weight would be higher than you considered if you were reproducing the holder and connection as it now is?

A. Yes, if I were putting in two sets of connections in a gas holder, I would expect to have them double one set.

Q. Is this not a steel plate guide frame of a different character, instead of Phoenix columns and a different value from the previous frame?

A. Well, there was one Phoenix column and the other of
5356 substantially the same character. I didn't see any particular
difference, I took the photograph of that also, but I haven't
it here.

Q. You know this is a patented construction known as "ribbon plate" construction, don't you? Isn't that the description of that guide frame?

A. There is a patent on pretty nearly everything new and I didn't know they had a patent on a guide frame, except those where they did it without——

Q. No, on the holder plating, I didn't mean to say the guide frame, if I did—"ribbon plating," and isn't "ribbon plating" much more expensive?

A. You mean to put ribbons in between——

Q. No, don't you know what "ribbon-plating" is?

A. No, I do not.

Q. On a holder?

A. No.

Q. And don't you know it is much more expensive and is considered better than the ordinary construction?

A. I don't know of it being better. We have had holders tight for a good many years, and that is all we want of them.

Q. Well, where the sheets extend in one length from leg to leg. Aren't you familiar with that construction?

A. From upright to upright, you mean?

Q. Yes; are you familiar with that construction?

A. Well, that is a pretty good fancy, I don't know as it is any better, no, I am not acquainted with it.

Q. You are not familiar with the cost of that particular construction?

A. No, sir. I didn't know it was any different, I thought it was the regular construction.

Q. Where have you ever bought yourself, or been in charge of, a four or five million foot holder?

A. I never had charge of a four or five million foot holder.

Q. Did you assume the same figures for values of material in the
case of these four million foot holders which we are
5357 & 5358 now considering, which you assumed in the case of the
other holders?

A. I think where Mr. Mayer stated 7.1 cent- I multiplied it by 7.1 cents instead of 6.6 cents.

Q. Well, that was the case with these two holders, wasn't it?

A. I don't know which holder that was. I think it was the 132d Street holder.

Q. Then, if you and Mr. Mayer differ in regard to the value of a holder, or you differ with Mr. Mayer and Mr. Logan, because they are practically the same, it must be on account of the different weight of material which each assumes, must it not?

A. Yes; that's it. We do not disagree as much as is supposed.

The WITNESS: I find, Mr. Mathewson, that I have a photograph here showing those two different styles of framing, with a memorandum. I think this sextuple was rather the best style, and I should prefer it, without going into the details. It does not show it so clearly, but there are the two holders.

Q. The sextuple as opposed to the double sextuple, if you were to build?

A. Yes.

Q. The double sextuple would be more expensive to build, I suppose, wouldn't it?

A. I suppose so. It appears to be so.

Q. In other words, it has a greater amount of bracing material, of course, than the simple sextuple?

A. Yes, but as a matter of fact, holders are built now days without any of that at all; they go right up in the air without any bracing at all.

Q. Yes, and sometimes they fall down, don't they?

A. No, I don't think that that condemns it at all; I think that is done very commonly; none of that framing is on them.

Adjourned to 10:30 A. M., January 9, 1907.

Last Exhibits:

Complainant's 270.
City's 136.
State's OOO.

5359 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant.
vs.
JULIUS M. MAYER, as Attorney General of the State of New York, WILLIAM TRAVERS JEROME, as District Attorney of New York County, FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and the City of New York, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January* 9, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

5360 Mr. BURR: Mr. Mathewson has produced the two letters to which reference was made the other day by me, and which have already been marked for identification. I now offer them in evidence. I believe there is no objection to them.

Mr. MATHEWSON: I stated yesterday that, expecting similar courtesies, etc. I would not object.

The MASTER: They take their same numbers.

Papers received and marked City Exhibits Nos. 123 and 124.

HENRY H. EDGERTON resumed.

By Mr. MATHEWSON:

Q. Mr. Edgerton, you spoke yesterday of some bids that you had. I do not understand that you are now constructing any holders in the City of New York?

A. No, sir, but I——

Q. Wait a moment, do not answer anything but the question. And I do not understand that you have been employed to construct any holders here in New York City, have you?

A. No, sir.

Q. What method did you adopt in computing the values of the buildings in the different plants? In other words, did you get the cubic capacity of the buildings?

A. I calculated that in some cases, in order to ascertain what sort of a comparison that would make with the estimates of the buildings; but these buildings, as I computed them, were on the basis of the brick work, foundation and the actual material entering into the construction of the buildings.

Q. Was that so in all cases of buildings that you gave?

A. Yes, sir.

Q. How about the foundations, how did you know how deep they were?

5361 A. I did not absolutely know. I was taking the estimates or inventory of Mr. Mayer as a guide to the depth of the foundation. I supposed that he either had drawings or some more exact means of informing himself than I had. I want to say right here, though, that I introduced piling into quite a number of buildings that at present have no evidence of having been piled at all, or if they had been piled, that they have sunk and got out of shape in a way which would indicate that there was no piling. On making inquiries in regard to the buildings in the immediate vicinity I found buildings much higher—that is, three stories higher—that were not on piles, and standing better than the building on the opposite side of the street said to be on piles.

Q. Now, did you adopt Mr. Mayer's figures as to the depth of foundation and character of foundations, or his description so far as he gave it in reference to all the buildings?

A. Yes, sir, in reference to all the buildings and foundations.

Q. How about the foundations of apparatus, which he included in the value of buildings? How did you determine how much to include for that?

A. I included foundations for apparatus that had any foundations; I found in many cases there was said to be foundations for machines where there was no machine on the foundation, therefore I could not calculate the foundation under a machine for dipping and cleaning gas stoves, or for sewing up leathers, or some little, trifling matter as that. I suppose those foundations were in there at a time when the building was used for other purposes.

Q. Well, that does not quite answer the question. I asked you how you determined the amount to allow for foundations of apparatus?

A. By his description in all cases where there was anything on a foundation to need it. I say in those places where there was nothing on the foundation or requiring a foundation I did not
5362 calculate it, and there was no definite description by Mr. Mayer. It just said foundation for machinery.

Q. There were very few instances of this?

A. There were quite a good many in 21st Street, right straight through each range of buildings, foundation for machinery, and no machinery on the foundation.

Q. In some cases you did not find any machinery on the foundation, and in those cases you did not calculate anything for the expense of putting the foundation there originally?

A. No, sir.

Q. Take the foundations of the apparatus which you found in position. How did you determine the value of those foundations?

A. Small foundations are easily determined by the size and apparent weight of the machine.

Q. Did you measure the foundations as to depth, or test them in any way as to depth, or their character, except so far as they appeared on the surface, as you might say?

A. The foundation of an engine or a small machine or upright boiler, or something of that sort is of very little consequence.

Q. A good many of them might be of considerable consequence, and I am asking you whether you had any other information except what you saw with the eye?

A. And what we read from Mr. Mayer's description.

Q. Yes, and read from Mr. Mayer's description. And you refer to the schedule which Mr. Mayer furnished to you and Mr. Marks, through counsel for the company, I suppose?

A. Yes.

Mr. Kirby: And the testimony?

Mr. Mathewson: Well, no, I say when he refers to the schedule he refers to that.

Q. In referring to the schedule you mean the one Mr.
5363 Mayer furnished you through the counsel for the company, I suppose?

A. Yes.

Q. So that you did not pursue the method which Mr. Marks pursued in determining the cubic contents of the buildings, in computing your values?

A. I calculated the cubic contents merely out of curiosity, to see how it did compare with the calculation of actual quantities. I did not use it as a factor at all.

Q. Did you compute separately the slating and glazing work, and carpenter work, and the roofer's work, and the stone work, and stair work, the same as you did the brick work?

A. All those were accounted for. All the additions to the buildings of every description were accounted for.

Q. My question was whether you computed—you said in reference to the buildings and walls that you computed the brick work.

Now, I am asking you whether you separately estimated the slate work and other classes of work?

A. Certainly. Carpenter work; so far as the windows and openings are concerned, they are taken as equal to the brick work which they displaced.

Q. What about floors and stairs; did you compute those separately?

A. Floors are computed. So far as stairways are concerned, the allowance is undoubtedly made for them. I did not, except in the case of gasholder framing, and where the stairs are carried up as a matter of some consequence, I did not notice any stairways there that amounted to more than a very small fraction. That would be included in the——

Q. Well, whatever they were, did you compute each one of the separate items—of the individual items separately, such as carpenter work, so much, including material so much and labor so much; brick work so much, including bricks so many, and labor 5364 in laying, so much; slating, so much, including material so much, and labor so much?

A. Yes.

Q. Did you compute those all separately?

A. All separately. They all went in as a separate item.

Q. Won't you take a typical building, say the generator house at Twenty-first Street, which you valued new at $65,500, and with depreciation of fifteen per cent. off at $55,000, and give me the details of that figure. It is page 6 of the Twenty-first Street station.

A. I will say in regard to that generator house, the description given by Mr. Mayer was rather obscure, and it needed—this building had evidently been altered, the roof raised, quite a number of changes and additions made to it, and it is now supported on columns.

Q. That is since 1884, is it, you would think?

A. I think it was possibly done to accommodate the Lowe process generators.

Q. In other words, the building is now, so far as you can make out, distinctly different from what it was in 1884, is it not?

A. Yes.

Q. You found a very great amount of new foundation in that building, did you not, put in apparently within the last fifteen or twenty years?

A. Well, I am uncertain about that. There are no descriptions to give any idea of whether those generators were placed on foundations in part that were there before or whether they were special foundations built up for them.

Q. Of course the water gas apparatus requires a foundation under it and a substantial one, and it could not be operated efficiently without foundations under it?

A. No more substantial than the previous retort foundations, or stacks of any account.

Q. Well, don't you know that the water gas apparatus are not located on the same spots as were the previous retorts?

5365 A. There would be possibly a little difference. They would run over onto the space in front of the retorts to some extent, but then there would be plenty of foundation there for them. I was not able to determine that by any measurement of my own, and I do not see how anybody else could, unless they had plans.

Q. Let us have your detail for that house?

A. There is one building there 204 x 74.

Q. I am referring to that. You describe it as 204 x 74 x 30 feet?

A. By 30 feet; yes. There are 460,000 brick, 394 cubic yards of excavation, 18,000 pounds of cast iron columns, 150 steel girders at 2,960 pounds, 3,990 cubic feet of stone footings, 5,700 iron trusses and purlins, 113,960 pounds. And there is the roof factor, 16,606 square feet of slate roofing, 204 lineal feet of ventilators, 408 lineal feet of cast iron gutter; foundation for machinery, cubic contents, 204 x 74 x 30, 452,880 cubic feet; 11,620 feet of cast iron floor pieces, 204 x 74 x 22, 332,000 pounds. By the way, I think there is something due probably to come out of that; I think those generators and apparatus took up part of that space. Steel to carry the same, 204 x 74 x 5, 227,000 pounds. Then there are 48,502 columns, figured in the adjoining generator house. This generator house and the other standing contiguous have got columns there that form, as it were, a sort of a party wall, that is, it is to be divided between two; and I find the probability is Mr. Mayer may have thrown them into the generator house, or in some cases they may have been divided between the two houses.

Q. Did you put them into this generator house?

A. It is figured in the adjoining generator house.

Q. The columns are?

A. Yes, sir. Here is the situation there, Mr. Master, in regard to that (indicating). This is an old building of very large extent.
5366 If the roof has been raised to accommodate different machinery in the following changes that I have spoken about hitherto in changing processes from one process to another, it would involve that much of this building, and apparently that is where the roof was raised and these columns put in here from point to point. Now, those columns, I say, in this generator house are figured over in that one, in that case. Here are three roofs; th-y run in this shape here. There is one roof there and supported on those columns and in that shape. Here are the only walls, in front and back, and there are the columns. So there are two lines of columns running down completely through that building, and I was at a loss to know whether that was previously supported on brick walls, which it may possibly have been, or whether it was supported on columns. If it was merely supported on brick walls, those walls had to be torn down, and a good deal of throwing away of material, which may account for a considerable duplication of material in the construction of that building. That is not only from building up, but from tearing down the old building. I think very likely that all went into the cost of construction of that building.

Q. Well, you don't know whether it went into cost of construction or not, do you?

A. I don't see where it could go if it did not.

Q. Well, you don't know anything about that?

A. Well, I know what is always done in those cases.

Q. You don't know what has been done in this case, whether it has been charged to construction or charged up to depreciation, do you, as a matter of fact?

A. I have——

Q. Well, do you know?

A. I know a great deal about the way they kept their accounts.

5367 Q. Do you know whether this tearing down at 21st Street was charged to depreciation or not on the company's books?

A. Following the system that I saw on the company's books——

Q. Do you know in reference to this building we are talking about?

A. Not in this building, no, sir.

Q. Very well, let us not have any remarks made about it now. Now, this roof was raised and these changes were made when the Lowe apparatus was put in, within the last twenty years, apparently, were they not?

A. Yes. There have been three sets of machinery put in there.

Q. Was the roof of this building new?

A. It was apparently new, yes, sir; that is, I mean to say it did not look as old as some of the roofs.

Q. Did it not look like a new roof at that time?

A. It did. The trusses looked as if they were of recent construction. The other buildings, some of them, had that spiderweb construction that we used to adopt, and this was a little more modern type.

Q. Have you given all the detail of your figures?

A. For that particular building?

Q. Yes. Did you make this calculation, or did an assistant make it for you?

A. The calculations were originally made by Mr. Robert S. Woodward in the office while I was present there and with my assistance, and we checked over and consulted about the various prices, and he prompted me up on New York conditions, which seem to be so unfavorable.

Q. Will you let me see your sheet from which you are reading your detail a moment?

Mr. Kirby: That can go right in the testimony as it is, or I will have a copy prepared and furnish you.

Mr. Mathewson: Very good.

Q. Does this total up the $65,500 to which you have testified?

A. $65,500, including $10,000 for foundations.

5368 Q. What do you allow for carpenters per day, do you remember without referring to any sheet? I would like to have your recollection.

A. No, I have not. It is put down here as——

Q. No, not what it is put down at, but do you know what carpenters are paid in the City of New York of your own knowledge?

A. No, not of my own knowledge, they vary.

Q. Now, I will ask you what rate you reckoned on?

A. Sixty cents an hour.

Q. How many hours a day?

A. I don't know as it makes any difference if a man works—if his pay is based on the hour, whether he works eight hours or ten hours.

Q. Perhaps it may. How many hours a day do you compute?

A. Well, the price set by the hour does not make, as I say, any difference. I suppose eight or ten hours a day.

Q. What would you assume that meant per day for a carpenter?

A. That would be $4.80 for eight hours.

Q. How much for slaters?

A. Slate roofing is calculated on the basis of thirty cents per square foot.

Q. But how much per day for slaters?

A. I have no memorandum.

Q. How much for slaters' helpers per day?

A. In regard to the slate, I say it is computed on the square foot, at about fifty per cent. greater than I have had it done for.

Q. You say you have never had any of this done in the City of New York?

A. No.

Q. Now we are talking about New York. How much per foot did you allow for slate roof?

A. Thirty cents.

Q. How much of that was labor and how much slate?

A. The slate would be worth probably from 8 to 14 cents per square foot, according to the quality of it.

5369 Q. How much did you allow here out of the 30 cents for the slate?

A. About ten cents.

Q. And about twenty cents for labor?

A. That would be the difference.

Q. How much do you allow for plumbers per day?

A. Well, as far as the plumbing is concerned, I do not see that it enters in there. There are pipe fitters; it would be 45 cents an hour, and helpers 30 cents.

Q. And how much for painters?

A. Well, as regards painters, a coat of paint is always provided to be put in there when you send the iron work. This is a question of iron-work. I do not suppose there is any extra charge. I have not made any extra charge for iron-work which has been already painted.

Q. Well, you found woodwork painted and various things painted. How much would you allow for a painter per day, or did you not allow anything for painting?

A. I did not see any woodwork painted in there.

Q. Then you allowed nothing for painting in the plants?

A. I will not say plants. I say there, it is all iron-work and steel-work that has been painted.

Q. I am not talking only about this building, but about all the buildings of the various plants. What did you allow for painting; what did you allow for a painter's wages per day? You certainly found painting in some of the plants?

A. Well, a gas plant, no, as far as that is concerned, except perhaps an office building or something of that sort. There is very little painting to be done.

Q. Don't you know, Mr. Edgerton, that as a matter of fact all the steel-work and iron-work is painted after it is put in position, and frequently two coats of paint?

A. Yes. Well, that is put on by—if that is provided, it is put on by the contractor. The erection of a gas holder, unless it has
5370 special terms, or if it is put on by the company, it goes into their ordinary working expenses.

Q. How much do you allow per day for a painter?

A. I have not any allowance for a painter there.

Q. How much for a mason per day?

A. Same rate as the bricklayers, 70 cents an hour.

Q. That would be how much per day, $5.60 for eight hours?

A. Yes, $5.60.

Q. And how much did you allow for an ordinary laborer, I mean a laborer in building construction work?

A. Twenty cents an hour.

Q. That would be $2.40 a day?

A. Twelve hours, yes, if you get them that long.

Q. That would be $1.60 a day for eight hours?

A. Yes, and ten hours would be $2.

Q. How many bricks did you estimate one mason would lay on the average in a day?

A. He would lay about one thousand bricks a day, I suppose, on the average. They can lay a great deal more, but then——

Q. How many laborers did you assume would be required for, say, four masons?

A. Now, as a matter of fact, we know how much that work cost complete per thousand when we know the price of brick and price of labor, and, therefore, at $20 or $21 per thousand, it includes laying and mason work and lime and sand.

Q. You don't know that when you know the price of brick and the price of labor, unless you know how many laborers you have got to have and what their wages are, and I ask you, for instance, what proportion of helpers or laborers you require as compared with the number of masons to keep the masons employed?

A. That is the mason contractor's business.

Q. To establish that $20 or $21 a thousand?

A. Well, that is the price that I have found some of the very most efficient contractors in town offer to do that kind of work for.

5371 Mr. **Mathewson**: I move to strike that out as not responsive and not proper testimony.

The **Master**: Strike it out.

Q. Now, I would like to have you, if you can, give me the details of $21.00 per thousand for brick laid, showing how much is material and how much is labor, and how that labor is divided between masons and masons' laborers?

A. Well, that ordinary brick was $7.50 and the difference between that and $21.00 is labor and mortar and lime.

Q. I know, but I would like to have you divide it up. Can you do it?

A. No, I do not believe anybody else can except a contractor.

Q. Well, you cannot, that is the point. Do not testify for somebody else.

A. No.

Q. How many masons would you consider there should be for each foreman required?

A. Well, now that is a matter that I did not go into at all, in connection with this construction. It is not necessary. It is simply superfluous and is just talk.

Q. Did you make any allowance for time keeping on the job?

A. I made an ample allowance for inspectors.

Q. How much did you allow out of this $21.00 for time keeping on the job?

A. I allowed as shown in the exhibit there and shown in the inventory and appraisal, I allowed some $300,000, I think it was, for inspection and various overlooking of the plans.

Q. That includes, then, the keeping of time on the job and the superintendence, does it?

A. Yes, plenty of it.

Q. What did you allow as the value of Portland cement?

A. $1.75 a barrel. That is rather an excessive allowance unless they have to cart it to the place, but these works are built right along the dock front.

5372 Q. How much per thousand brick?

A. I say, as to the cement and sand required, we have the mixture in building the various parts requiring cement, such as tanks, and it is included in the cost of brick work at so much per thousand brick. I have not pretended to separate that off. Some use more and some less. It provides for grouting the brick work as it goes up, and for the sufficient use of cement for the different classes of work.

Q. What mixture of cement and sand did you include in this $21.00? What proportion?

A. Well, sometimes it is one to one and sometimes one to two.

Q. Yes, but so far as you were concerned in reaching your $21.00 a thousand, what did you allow?

A. One of cement and two of sand is the ordinary proportion, unless a man——

Q. Was that what you allowed in getting the $21.00?

A. $21.00 a thousand, yes.

Q. One of cement and two of sand?

A. Yes. In some cases one of cement and one of sand, it depends upon where it is located in the tank.

Q. How about this building that we have been discussing, at Twenty-first Street, the generator house?

A. Except in the foundation, that was not used——

Q. Just tell me how much there was, what proportion there of cement to sand you employed for the work?

A. It is built with mortar; we do not employ any sand above the ground level or any cement, except in extraordinary cases. Some engineers want all cement put in a building and others——

Q. You did not allow any cement above the foundation, is that right?

A. No.

Q. And in the foundation, or wherever you did use cement, you allowed one part of cement and two of sand.

A. Yes.

5373 Q. Was that not the proportion you allowed in substantially all the buildings you examined, or foundations?

A. That is an excessive allowance——

Q. That is not the question. Won't you be good enough to answer the question. In your figures you have given here, is not that the proportion, one of cement to two of sand, that you allowed in the foundations of substantially all of the buildings?

A. I tried to tell you that I did not proportion cement at all, except in extra cases of tanks. If you will let me tell you how to draw out and specify for different kinds of work, that is a different point. I estimated right straight ahead, based on a thousand of brick work complete.

Q. Twenty-one dollars?

A. Yes, sir.

Q. Without goin*ing* into the details of figuring out the amount of cement and the amount of sand, or the proportion, is that right?

A. We do that——

Q. Is that right?

A. Yes.

Q. And did you allow any cement in any of the buildings for the foundations, or did you consider mortar as used in every case?

A. Mortar is generally used——

Q. That is not the point, what is generally used. I am asking now what you contemplated or used in your estimates of values which you have given here?

A. I provide just simply for mortar.

Q. Now, in reference to the apparatus at these various stations, did you compute the weight of the apparatus and the various items of apparatus and compute the full value of them, based on the weight multiplied by a certain number of cents per pound?

A. Yes.

Q. In every case?

A. Not in every case. In the case of a purifier box, if it differed slightly only in size and depth, I computed it according to the ones that I had computed in detail. That is, say a box is 20 x 22 and another box is 22 x 22, the alteration was merely made in the 5374 bottom, or the extra amount added on that that would require for that amount of iron at the rate in which I found it in each case.

Q. But, as a matter of fact, when you got back to the bottom, that also was computed on an assumed weight, multiplied by a cost per pound of that weight?

A. Yes.

Q. Now, what classes of apparatus, if you will state, did you compute in that way, according to that method?

A. All I computed were computed by weights and by units of material.

Q. But what classes of apparatus, did you compute?

A. All I computed, that is, every one of them, I don't know what classes, every class; that is, the generators and superheaters and carburretors and purifiers and all the framing that I computed; it was all computed by weight except in those instances where I told you I could not get at the weight.

Q. And those which were not computed by weight included the rest of the apparatus, such as engines and pumps and so forth?

A. Engines and pumps were computed as a unit for the price of an engine and allowing for setting up; of course, I did not compute the parts of an engine nor the weight of a cylinder or piston rod. I took it as a complete thing.

Q. So I understood. And you think you have named the general classes of apparatus for which you did compute a value by taking what you assumed to be the weight and the value per pound of material?

A. Yes. I did not assume the weight, I calculated it.

Q. Yes, what you took to be the weight, put it that way?

A. Yes.

Q. Do I understand that you measured every single piece of apparatus in all these plants at the time of your disposal for this recent examination?

A. I checked off in a number of cases Mr. Mayer's measurements, and in a number of others I took it where I had not any reason to doubt it. 5375

Q. Will you give me the details of the value of the building in 132d Street, the exhauster and engine house respecting which Mr. Marks testified, and which he said he took as a unit from which he estimated other buildings?

Mr. Kirby: Do you mean the brick building 100 x 49 x 29? Because it is called in the testimony governor and boiler house.

The Witness: That is the only house there. There is nothing else there. It has got to be it.

Q. It is described in the testimony or in the schedule as governor and boiler house, 100 x 49 feet by an average of 29 feet high. You gave the value at $21,000, and I would like you to give me the details of that and your method of computing it in such detail as you employed.

A. Excavation, 53,900 cubic feet, 2,000 cubic yards. Boiler——

Q. At what price?

A. At 50 cents. That is shallow excavation. Boiler room, 700 cubic yards and fittings—743 cubic yards at fifty cents. Concrete footings, 990 cubic feet; intermediate boiler and exhauster room, 90 cubic feet; boiler and exhauster room footings, 300 cubic feet; floor exhauster room, 20 x 30 equal 600 cubic feet, 1,680 cubic feet. The floor of the exhauster room is concrete, it is 20 x 30 feet. There is common brick of foundation wall, 5,529; intermediate of walls, 420; main walls, 9,536; pilasters, 44; corbels, 249; intermediate walls, 1,372; gables, 500. Total, 17,650 feet; less openings, 16,150. Then there is some glazed brick, 100, 25—approximately 4,000 glazed brick at $25. Paving brick, 4,000 at $10. Fireproof concrete arches, area on the main floor, 4,900 square feet, at fifty cents. Cement floor in the exhauster room, 5376 20 x 30, 600 square feet; main floor, 2,800 square feet. Total, 3,400 square feet. Glazed coping, 298 lineal feet; bluestone window sills, 9 x 6 x 1, 130 feet; water table, 260 cubic feet, at fifty cents.

Q. When you say 9 x 6 x 1, what do you mean by 1? One what?

A. Nine feet by—— I don't quite understand that. I suppose it was in feet, 9 feet by 6 inches by 1 foot, I suppose. The lintels the same. Two hundred and sixty cubic feet water table. Exhauster room checker plate floor, 50 tons. Wall plates, cast iron and miscellaneous anchors, trusses and perlins, 14 tons, 64 tons, making 128,000 pounds at five cents. Windows and doors: Window area, 700 square feet, at 25 cents; fireproof doors, 2 x 2-6 x 7-6 steel. Steel stairs: One outside stairs, 30 running feet; inside stairs, 40 running feet; outside platform, 300 running feet; square feet, I suppose that means, 140 feet. Sheet metal monitors, 7 feet high, area 13 x 94, 1,200 square feet. Roofing: Skylight, 300 square feet; flashing copper, 298 x 12 x 1 (that is 12 inches), 298 square feet; 298 square feet gutters; main roof, tar and felt, 3,700 square feet at 6 cents. Slate 10 cents, 3,700 square feet. Terra cotta tiling, main roof tiled, 3,700 square feet. Painting and incidentals there is 10 per cent., that is a summary. The building is $22,000; with the foundation, $22,700.

Q. With the foundations $22,700?

A. Yes; with the foundations $22,700.

Q. What about your foundations for machinery?

A. Well, here is machinery foundations: One, 10 x 20 x 5, 1,000 cubic feet; one 10 x 10 x 5, 500 cubic feet, and one 10 x 15 x 5, 750 cubic feet; 2,250 feet altogether.

Q. That would make how much all told?

A. $700 for those foundations.

Q. $700 for those foundations. I thought you said $2,250 for the foundations?

5377 Mr. Kirby: That was the number of cubic feet.

The Witness: Yes, that was other foundations. This is 100 cubic yards at $7.

Q. What is?

A. $7 a cubic yard for foundation work is $700.

Q. That makes how much, that is the foundation work of buildings or machinery?

A. For machinery.

Q. That makes $22,700, you say?

A. There is a deduction here; $22,700 it is figured in one place.

Q. Your schedule appears to have a value now of only $21,000 instead of $22,700?

A. It is put down here at $22,700, and I say from some reduction or other it is made $21,000 in another place or $21,100.

Q. What was that reduction?

A. I guess I can trace it out there.

Q. Are those detail sheets that you are puzzling over in your handwriting?

A. No, this is not all my handwriting. Some of the calculations were made by other people. I did not pretend to make it all, but I checked it off; but there is a difference frequently occurs in a multitude of figures.

Q. Yes?

A. Well, you have them there in your own summaries, where they have been added and subtracted in a hundred places.

Q. Yes, but I am asking you now for the detail and how you get $21,000 in the schedule if $22,700 is on the detail, what that reduction represents?

A. That summary undoubtedly is not based on—it is an offhand summary. As far as the detail goes, we have here summing up to $21,100, and that is what it was put at. It is possible that I read off there, blocked out as the summary was, an offhand estimate made before the thing was completed, but according to detail here it foots up $21,100.

Q. Now, let us have that detail.

A. And 10 per cent.——

5378 Q. Let us have the detail?

A. It figures up $18,600 for material; then there is $1,860 added to that, making $20,460.

Q. For what?

A. Ten per cent.

Q. That is 10 per cent. of $18,600?

A. Ten per cent. is $1,860 on $18,600. That makes $20,460.

Q. What does that 10 per cent. cover, what is it intended to cover or represent?

A. Ten per cent. is a very usual figure to add on to an estimate to cover contingencies and engineering and unfor-seen or possibly omitted things. It is not an unusual figure to add to an engineering estimate of this kind to wind up.

Q. What about the contractor's profit, how much profit did you allow the contractor there on that cost of labor and material which would install a building?

A. Labor and material amounting to $18,600.

Q. And 10 per cent., $1,860?

A. Well, 10 per cent. would cover—there is less there in that after material summed up in the manner I have described a sum of $2,500.

Q. Eighteen hundred and sixty dollars of that would be the 10 per cent. and the difference between that and $2,500, or $540, would represent the contractor's profit?

A. No, when contractor takes brick work at $21.00 a thousand he has figured it in that he can do it and have a little money left himself.

Q. In other words, you have not figured any contractor's profits there separately, unless and except as it may be included in the value of the material which you have specified as $18,600, is that right?

A. There are some 15 per cent. added there which would cover not only contingencies, but any——

Q. I know—but you have said that 10 per cent. was $1,860, and that was added as an extra thing. Now that leaves $540 of the $2,500 that you mention, but you say that would not represent the
5379 contractor's profits because the contractor's profits would be included in the $18,600 value of material placed.

A. Some part of that is contractor's work that you can take finished at that figure, and the other is included in the $1,860 and the further sum of $640.

Q. Five hundred and forty dollars?

A. Or $540.

Q. Now, won't you tell me in which of these items of material placed the contractor's profit is included? By the way, would 15 per cent. be fair for contractor's profit on the whole?

A. A contractor told me——

Q. No, not what they told you. I am asking you, would 15 per cent. be a fair contractor's profit?

A. You can get it done for a great deal less than that.

Q. Would 15 per cent. be a fair contractor's profit?

A. It might be for the Consolidated Gas Company.

Mr. Mathewson: I move to strike that out.

The Master: Strike it out.

Q. Would 15 per cent. be a fair contractor's profit?

A. I have answered his question, 15 per cent. is his own assumption of profit, and it is an excessive one, and I have tried to say that it is not fair.

Q. Very good, you could say no, and that would answer the question?

A. No.

Q. Two letters would answer the whole question. Now, won't you take those items which make up the $18,600. You have given me the schedule of the number of bricks and so forth, but you have not given the values making up the $18,600 in detail You said so many bricks and so much a thousand.

A. 2,743 cubic yards of excavation at fifty cents, $1,370.

Q. Now, the next item is what?

A. Concrete footings, $480. Common brick, $4,760. Glazed brick, $100.

5380 Q. What did you allow for glazed brick, $25?

A. Yes.

Q. Give the prices in each case for the material?

A. It is $25. I gave the prices in the other statements.

Q. No, you did not in most cases, you merely gave the amount.

A. Glazed brick at $25. Paving brick——

Q. How many thousand glazed brick?

A. 4,000; 4,000 paving brick at $10.

Q. How much all told for that, $40?

A. It would be $400; 4,900 square feet of fireproof concrete arches on main floor, 4,900 square feet at 50 cents would be $2,500 about. Cement floors, 3,400 square feet.

Q. At how much a foot?

A. At eight cents a foot.

Q. How much?

A. $520. Glazed coping, approximately, 298 lineal feet, that is $10. Blue stone window sills, $130; 260 cubic feet at 50 cents; steel, $6,400—64 tons at five cents a pound; windows, 700 square feet, at 25 cents, $175; fireproof door, $40; steel stairs, $165.

Q. Did you have any weight for those stairs in your memorandum or any further description than merely steel stairs?

A. Thirty running feet outside stairs, and 40 running feet of inside stairs, and 300 running feet outside platform.

Q. That would be $25 for the outside stairs, $40 for the inside stairs and $100 for the running platform.

A. No, $100 is the total cost of it you know. It is not $100 a foot.

Q. That is what I say?

A. $165 total.

Q. Yes.

A. Sheet metal monitors, 94 feet, at $5, $470. Copper flashing in gutters, 298 square feet, $200; main roof, tar and felt, 3,700 square feet, at 6 cents, $220; slate, 3,700 feet, at 10 cents, $370; terra cotta
tile, main roof, 3,700 square feet, 15 cents, $500; painting,
5381 $150. That totaled up $16,100, to which, adding the con-
crete arching, $2,500, makes $18,600.

Q. Now, about that concrete arching, what would the details of that $2,500 be?

A. That was 4,900 square feet.

Q. At 50 cents?

A. At 50 cents. I got that in, too.

Q. Then that does not go into your total of $16,100, but goes into your total of $18,600?

A. Yes.

Q. Then you add 10 per cent. to $18,600, which is $1,860, for engineering and so forth, and get $20,460?

A. That is correct, yes, $540, yes, that is added altogether, $2,400.

Mr. Kirby: No, not $2,400.

Q. What do you add to the $18,600 to get your total on that memorandum, your final total?

A. I say I add $2,400.

Q. Well, what does that $2,400 represent?

A. It represents $1,860, the 10 per cent. and the $540.

Q. And taking the $1,860 which is the 10 per cent., what does the additional $540 represent which makes up your total of $21,000?

A. It is that $700 included in here.

Q. But if you add your machinery foundations, which you say are $700, to your $20,460, that makes $21,160, does it not?

A. Yes.

Q. Is that what it should be, $21,160, instead of $21,000, as your schedule states it, or what is the explanation. I am not trying to catch you, but merely to find out.

A. In a thing of this kind it is not like a man scrambling for a penny on the floor, it is a round figure of as near as possible an estimate of the cost of that thing. We do not treat with two or three or five or ten dollars. That $120 there, or $100——

Mr. KIRBY: $160, is it not?

The WITNESS: $160, it is dropped off there.

5382 Q. But as a matter of fact if you add your estimate of machinery foundations, which is $700, to your $20,460, it makes a total of $21,160?

A. Yes.

Q. Now your machinery foundations are figured out how? Give me that, if you will. One 10 x 20 x 5 equals 1,000 cubic feet; one 10 x 10 x 5 equals 500 cubic feet; one 10 x 15 x 5 equals 750 feet, or a toal of 2,250 cubic feet, which you have assumed to cost how much per cubic foot in reaching your $700 for the value?

A. 100 cubic yards, $7; there is an excessive allowance right there.

Q. Yes, 100 cubic yards at $7.

A. This 100 cubic yards would be 2,700 cubic feet. I guess you have got your $160 right there.

Q. I have not got any $160, you are the one that made these figures up. If you will let me take this just a second?

(Paper handed to counsel.)

Q. Then the difference between the $20.460 and the $21,000, or a little more, is made up, not by contractor's profits, but by $700 which you allowed for the cost of foundations for machinery, is it not?

A. Yes.

Q. Very good. Then do I understand that the contractor's profit of 15 per cent., or whatever per cent. is fair, the contractor's profit is included in the cost price as you have given it of each one of these previous items; that is to say, brick laid, painting and the rest, as you have given them?

A. No.

Q. Then have you got a contractor's profit still to add?

A. The contractor's profit is in that 10 per cent.——

Q. No, you said that was engineering and other expenses, that was frequently added for unfor-seen things.

A. And contingencies.

5383 Q. Now, you do not want to change that and put your contractor's profit into the 10 per cent. in addition to what you first stated?

A. Contractor's profits are divided there into some parts. I say a contractor offered to do that brickwork at even $20, $21 a thousand and he furnishes——

Q. I will ask you a question on which I think you can very easily answer, yes or no. You have given the value of excavation here at a certain figure, $1,370. Is the contractor's profit included in that $1,370?

A. Well, I think you can get a contractor to do it for that, yes.

Q. Well, is it included in the estimate here, in the $1,370?

A. Shallow—no, I don't know as a fair contractor's profit is included in that.

Q. Now, take the concrete, which you have figured at $480, do you mean to say that the contractor's profit is included in that $480? *A.* What rate is it at per cubic yard?

A. $7, I think.

Q. (Handing paper.) Don't you remember without looking it up?

A. I think it was $7, yes, I think he could do that.

Q. Did you mean to include a contractor's profit in the $480?

A. Yes.

Q. Take the common brick work, $4,760. Did you mean to include the contractor's profit in that?

A. I have had it offered to me for that.

Q. That is not the question, Mr. Edgerton. I shall have to ask the Master to ask you to answer the questions directly.

The Master: Yes, Mr. Edgerton, that is a proper request to make. I do not see why you cannot give your mind to these questions. I do not see why you should waste our time by sparring with the question.

The Witness: Well, I am not doing more than half the sparring.

5384 Q. Referring to common brick cost, which you have given as $4,760, is your contractor's profit included in that?

A. Yes.

Q. Take the glazed brick, is your contractor's profit included in that?

A. That is a small item.

Q. Well, is it?

A. No.

Q. Paving brick, is the contractor's profit included there?

A. No.

Q. Take the cement floors, $520?

A. I can shorten that up by saying that the contractor's profit, so far as my information goes, will be included only in that brick work, and we will say that concrete work. That would cover a reasonable profit. The balance of it and the smaller items would not, unless possibly the iron work there at the price stated.

Q. What profit do you include in those items for the contractors, what percentage of profit?

A. Five cents a pound for ironwork would include a contractor's profit.

Q. What perecentage of the contractor's profit on the price of labor and material to the contractor do you allow?

A. I think that ten per cent. would cover all that would be charged on that kind of work. Five cents for the ironwork would certainly cover it, for checker plate flooring.

Q. Five cents a pound?

A. Yes, sir.

Q. And you would say in percentage 10 per cent.?

A. The proportion would vary there, according to the size of the job.

Q. Did you in the other buildings employ the same unit figures as to value, cost and so forth, which you have given here in reference to this 132d Street building?

A. It would depend on the character of the building. That is a very superior building, compared with most of them.

Q. So that you took lower unit figures in the case of most of the other buildings, did you?

5385 A. Some of those buildings that were of the plainest description, and I used substantially the same unit for some parts. I would not use that floor plate unit there throughout, no. There is a difference in most of this construction throughout; they are in a different character of building, as you can readily see by looking over them.

Q. Well, you have the same details of the other buildings of the plants, haven't you?

A. The same size of brickwork and coping as applied to that building there at 132d Street would not be applicable to others because it is a superior character of building.

Q. Well, you have the details or some details as to these other buildings, have you not, throughout the plants?

A. Yes.

Mr. **Kirby**: I am quite willing, Mr. Mathewson, to offer in evidence the detailed estimates of all these buildings, or to have them marked for identification. They are all here.

The **Master**: Mark them for identification.

Mr. **Mathewson**: Yes, because there are a number that we may not touch at all. I may want to test his method in some building.

Mr. **Kirby**: They are all here, and I think that one who is familiar with the subject will be able to make out the method which is used and the unit value. There is a good deal on here which would need explanation; for instance, in this building where the summary of $22,000 led Mr. Edgerton astray in his first testimony, which, I think, he has straightened out.

Mr. **Mathewson**: I suggest they may be marked for identification and then I shall only have one or two questions to ask.

5386 Mr. **Kirby**: I will leave here this afternoon an envelope marked with each station, with the calculations of the buildings in it. There are a lot of other memoranda in these envelopes which I do not care to leave.

Mr. **Mathewson**: The original calculation?

Mr. **Kirby**: Yes, and we can have them marked for identification.

Q. Now, I call your attention for a moment to your summary of all the plants headed "Consolidated Gas Company value of all plants, January, 1907," showing a total of $9,367,344.25; that is after the deduction of the depreciation, as you have computed it?

A. Yes, sir.

Q. Now you have added to that, I see, for engineering superintendence and inspection only 3 per cent. Is that intended to include the entire allowance for general engineering, drawing plans, grading, paving, curbing, sewerage and drain pipes, temporary fences, operating tools and other utensils, water for holder tanks and apparatus required for operation of the plants, as well as miscellaneous extra expenses contingent and so forth, delays in construction due to strikes and one thing and another; is that 3 per cent. to cover all that contingent expense?

A. That does not cover the engineering inspection that the company furnishes.

Q. That is what I mean; all the company expenses in addition to the cost payable to the contractor for installing the apparatus and plants, whatever it is?

A. No.

Q. Let me ask you about this interest during construction at 4 per cent. You assumed that the plants as they now stand could be constructed within less than three years in ordinary course?

A. Two years.

Q. Well, then you take 4 per cent. instead of 5 per cent., assuming that the average would be one year at 4 per cent., do you?

A. Well, that is the time the average payments would become due.

5387 Q. In other words, you assumed a rate of 4 per cent. instead of 5 per cent. for money during construction?

A. Yes—no; I assumed 5 per cent. for the money, 5 per cent. interest on the money, but that it would not require all the money.

Q. No, but if it took two years to complete the plants, that would mean an average of about a year, would it not?

A. Well, a little less. I allowed a little less than a year for the use of the money.

Q. Well, will you tell me how you arrived at your 3 per cent. for engineering, superintendence and inspection, or, in other words, the expenses that the company is put to itself in connection with the plant?

A. I arrived at that when I was examining the books of the company by comparing with the Astoria plant. I saw that there was much less charged up in salaries to the engineering force for that plant than I had any idea was the case. I thought it took a great deal more.

Q. You would have thought about 10 per cent. from your experience was a fair figure for all these incidental engineering expenses?

A. No; when they did it. They do not do the engineering. Mr. Mayer or the contractors' engineers are the men who make all the plans. They do not have anything to do except the general work. There is not a plan that they make up as a general thing.

Q. There is not? You do not think there was any general planning at all to create that great Astoria plant and to provide for the running of the lines, and the filling and location of the tanks and the testing of the ground, and the thousand and one things that you would have to do?

A. Yes, there are a thousand and one things to do, but it is not done by their force. I know the proportion——

Q. Don't you know they were planning for years in the Astoria plant, in reference to the Astoria plant, figuring it out, before
5388 they ever let a contract and called a contractor into it?

A. They stated they were thinking of it for sixteen years.

Q. Didn't you know that they were planning for years, actually preparing the plans, and that it took years to prepare the plans ultimately?

A. No, I know it would not.

Q. Well, you are not able to divide up this three per cent. into any items of cost?

A. That covers more than ever I knew of a person getting from a gas company for general planning, and aside from the contractors and engineers. You understand, of course, all the detail work of planning is done by the contractor's engineers. Do you suppose the holder plans and those things are made by the company?

Q. Do you suppose in laying out the plans of the Consolidated Gas Company that they called upon the contractors to plan or formed their own plans as to the character of plant before they went and asked for bids?

A. No, sir; they called on contractors for their plans every time.

Q. You were not on the inside, I suppose, and you did not know anything about this; this is simply your surmise?

A. I know that is the case right straight along.

Q. Is it not your surmise?

A. No surmise about it. I know the contractors——

Q. Do you know what was done in the case of the Astoria plant of the Consolidated Gas Company, whether it was planned by the company or contractors?

A. No——

Q. Answer my question.

A. I was right in there and saw the figures they charged to the engineering of that plant.

Q. Do you know whether the plans for the Astoria plant were drawn by the company or whether they were drawn by the contractors? Answer that question yes or no.

A. I know the general plans were drawn by the company——

5389 Q. Very well.

A. The general plans, yes.

Q. How about this three per cent., do you include not only the general engineering but also the paving and curbing there?

A. The paving and curbing has been allowed for very liberally in those different plants in the addition made there under specific name; but that $281,000 represents a great deal more money than was paid out for any planning by the Consolidated Gas Company to anybody.

Q. We are not talking about he Astoria plant, this is an estimate which you have made of the value of ten or eleven separate plants on the Island of Manhattan, planned at different times and in the past. Now, you say that three per cent. would cover all the expenses of the company outside of the contractor's charges?

A. Yes, sir.

Q. In all those plants?

A. And more too.

Q. That is your opinion?

A. Yes, sir; that is my opinion. It is based on forty years of experience in the gas business.

Q. It is not based on any experience in New York City in constructing plants here, is it?

A. Why, Mr. Mathewson, I have seen these plans made out by the contractors in each case.

Q. You have seen the plans made out by the contractors for the New York Gas Light Company which was built in 1825?

A. I saw the plans made for a great deal of that apparatus.

Q. Did you see that?

A. The original plans, no.

Q. Did you see the plans made out for the Manhattan Company plant, which was organized about 1830; did you see those plans when that was built?

A. No; but I saw plans from the time I commenced to take an interest in the gas busineess, and I know absolutely that the planning of details of gas holders, machinery, and even retort settings, and the whole of the individual parts of a gas plant are planned
5390 entirely by people independent of gas companies and outside of them.

Q. I am talking about the Consolidated Gas Company and its plants, meaning the plants of the constituent companies and as they have been improved to date. Have you, in a single instance, seen their plans so that you know just what the plans of the company originally covered?

A. I know a good many of them.

Q. Have you been over one of them?

A. One of them, yes. I have seen dozens of the plans and copied from them.

Q. Of this Consolidated Gas Company?

A. Of this Consolidated Gas Company and these retort house settings and the whole paraphernalia there, I have seen from time to time the plans. I got them when Mr. Farmer made plans, when Mr. Sebatten directed the plans made and on until the time of the Smiths, when the Tessie Demmoto process came in. I saw how they were put in and I state this without any reservation: The engineering of those plants, except the general arrangement and telling where to put pieces, comes from the genius and work of those engineers who are employed by contractors. Now, you will find that is so.

Q. You think that the outside contractors who construct the buildings and plants have to do the sewering and draining of the property?

A. No; I say that is all right, there is a certain general——

Q. They do not have anything to do with the curbing of the street?

A. No.

Q. They do not have anything to do with the original grading?

A. Well, frequently they give plans for that. They give plans for the tanks and gas holders, for the apparatus; for nine-tenths of all expenditure incurred in that work the planning is made by the genius of independent engineers and not the regular company engineers.

5391 Q. Did you see any plans or do you know who made the plans in reference to the laying out of the Twenty-first Street works as they now exist; have you got any information about those?

A. I know in the plans for the Lowe apparatus they had no finger in the pie in connection with it and that is——

Q. If you know as much about that, don't you know that the Twenty-first Street plant was erected under the superintendence of Dr. Humphreys here, and don't you know he was constantly engaged with Chief Engineer Bradley and his assistants for a long time in planning and laying out that plant, or don't you know about that?

A. So far as that is concerned, it may be raising a roof or something like that——

Q. No, my question is clear enough. You pretend to have great knowledge on this. Do you know that which I have just stated, or don't you know it, as to the Twenty-first Street plant?

A. I know that that does not contravene what I say, I do know the very fact that they employed an outside engineer in that case shows they did not do it themselves.

Q. Well, they paid them, not the contractors who put in the machinery, did they not?

A. In some particular cases, yes. In that $281,000 I include all the engineering required for, outside of the special detail plans that are always gotten up by the contractors.

Redirect-examination by Mr. Kirby:

Q. Mr. Edgerton, outside of the specific apparatus which you have mentioned as that which you consider was designed in detail by the contracting engineer; the three per cent which you have just made reference to, being in addition to the total value of plants, is for the general laying out of these plants, the buildings, and 5392 all work connected therewith, including superintendence and inspection, is it not?

A. Yes, sir.

Q. And am I right in saying that that amount is based upon what you consider proper from your experience and the experience of others which has come to your knowledge in such matters?

A. I have never heard of anybody getting more than that ratio or that proportion.

Q. You have spoken of having made appraisals of certain apparatus, such as engines, pumps and so forth, by taking the price which a contractor would erect them for. Does that also apply to benches, generators and so forth, or were they calculated by weight and the cost per unit?

A. The report benches were calculated out in detail and confirmed by getting the figures of what that kind of work had been done here for and what contractors were willing to do it for who would do it in good shape.

Q. And you have used in the calculation of work upon these benches and such other parts of the work as you have made reference, as well as upon the buildings and foundations and tanks and holders and all apparatus where a price for a specific apparatus itself was not used, certain costs of material, certain costs of labor, and certain costs of material in place. You have given some of these. Have you a table showing just what units you did use?

A. Yes, sir.

Q. (Handing paper.) Is that it?

A. That is the table.

Mr. **Kirby**: I will offer it in evidence.

Mr. **Mathewson**: Let him state it as part of his evidence.

Mr. **Kirby**: Very well.

The **Witness**: The cost of labor and cost of material which I used were as follows:

5393 Consolidated Gas Company.

Schedule of prices for *materials*, for *labor*, and for *certain material erected*, the same as given, being those used in appraising value of the plants of the Consolidated Gas Company.

Materials.

Cement, Portland	$1.75 per barrel.
Cement, Rosedale	$1.00 per barrel.
Lime	$1.40 per barrel.
Sand	$1.25 per cubic yard.
Gravel	$1.50 per cubic yard.
Broken stone	$2.50 per cubic yard.
Steel shapes, f. o. b., New York	.01.345 per lb.
Steel plates, f. o. b., New York	.01.895 per lb.
Brick, ordinary building	$7.50 per 1,000.
Brick, pressed	$12.00 to $20.00 per 1,000.
Fire brick, No. 1	$20.00 to $30.00 per 1,000.
Special shapes, blocks and tiles	$1.00 per 100 lbs.
Slate, depending on size and quality	.08 to .14 per sq. ft.
Blue stone, dressed	$1.50 per cub. ft.
Timber—spruce, maple, oak or yellow pine	$20.00 to $35.00 per 1,000 B. M.
Piles	.15 per lin. ft.
Cast iron	2½c to .03½ per lb.
Retorts	$20.00 each.

Labor.

	Per hour.
Bricklayers	$ .70
Bricklayers' laborers	.37½
Rockmen	.20
Drillers	.37½
Drillers' helpers	.18¾
Steam engineers	.35 to .43
5394 Carpenters	.60
Laborers	.15 to .20
Blacksmiths	.37½
Blacksmiths' helpers	.21⅞
Hoisters	.31¼
Teams	.60
Riggers	.40
Steel erectors	.70
Stell erectors' helpers	.30 to .50
Machinists	.40
Pipe fitters	.45
Pipe fitters' helpers	.30
Concrete mixers and barrel men	.31¼

Materials Erected.

Excavation—	
Ordinary earth	$1 to $1.25 per cubic yard
Rock	$2 to $4 per cubic yard
Concrete	$6 to $8 per cubic yard
Brickwork—	
Ordinary brick	$14 to $20 per 1,000
Pressed brick	$20 to $40 per 1,000
Lumber	$35 to $60 per 1,000 ft. B. M.
Steel	3½c to .05 per lb.
Cast iron, rough	.04 per lb.
Cast iron, planed	.05 per lb.
Steel plates	.05 to .07 per lb.
Slate roofing, including sheathing and wood purlins	.25 to .30 per sq. ft.
Blue stone	$1.60 to $2.25 per cub. ft.
Lantern ventilators	$3 to $10 per running foot.
Piles	$6.50 to $8 apiece

Q. Do I understand that the prices which you have given are
those which you have ascertained, and which, tested by your own
knowledge and experience in such matters, seem to you to
5395 be correct and proper for the material and labor which you
have referred to?

A. Not only that, but I took the trouble to consult with people who have done work——

Mr. **Mathewson**: I do not think that is the question. I shall object to this testimony as to third parties.

Q. You can say yes or no to that.

A. Yes. I think it is more than adequate in some cases.

Q. You have referred to the Twenty-first Street plant and have spoken of certain foundations which were mentioned in the schedule and which you did not figure in your appraisal. Did you see any indication of these foundations in the plant when you were there?

A. No, sir. No indication and nothing to stand on a foundation that required the supporting of any weight of any amount. In fact, I saw in a number of cases they were supported on the floors and no indication of any requirement of foundation underneath to support those small articles.

Q. You have also spoken of the piling under certain of the buildings, questioning whether or not they were there. You did, however, in figuring the cost of these buildings, use specifications as given by Mr. Mayer, did you not?

A. Yes, piling was put in where he stated, but I state myself, explicitly, that I do it under protest, for I do not believe there is any piling there.

Q. You have also referred to the amount allowed for painting where such painting was necessary. Do you consider that that is included in the 10 per cent. which has been added to the net cost of buildings?

A. There is no painting to be done of any consequence, except where it has been provided for. The painting of all that apparatus is a thing the company takes care of after the contractors have put it up.

5396 Q. Outside of the apparatus?

A. It goes into their operating expense, if they paint it from time to time.

Q. Outside of the apparatus, in reference to the buildings and such parts thereof as would need painting, do you consider that the 10 per cent. you have added is sufficient to include what might have to be paid for painting if there were any?

A. Yes, that was intended to cover any omissions and contingencies, but if there was any evidence of apparatus requiring painting I think I would have seen it.

Q. Yesterday you were asked by Mr. Mathewson in reference to the Forty-second Street holders and you stated that you could not find the detailed estimate of the cost of those holders. Have you them at hand now?

A. Yes.

Mr. **Kirby**: If you would like the details of that, Mr. Mathewson, I will have him put it in.

Mr. **Mathewson**: Did I not ask him about another holder afterwards?

M. **Kirby**: Yes.

Mr. **Mathewson**: I understood he said he proceeded similarly in the case of all holders as to price of material and details and so forth. I do not know that I care to ask him any further.

Q. Give us the detailed estimate of that holder?

A. It was commonly found that there was an extreme difference between my estimate and Mr. Logan's and somebody else——

Mr. Mathewson: Mr. Marks was the other person.

The Witness: Well, Mr. Marks did not pretend to go over those.

Mr. Mathewson: Well, he has testified himself as to what he did.

5397 Q. Proceed and give the details.

A. That holder, as calculated by myself, weighs more by the pressure by 7-10 of an inch than as given by Mr. Mayer; in other words, it has a pressure of 5.12 and that calculated out and corrected is equivalent to 188,700 pounds, and I found that in that estimate I took it at ten cents a pound.

Mr. Mathewson: That is each holder, is it not?

The Witness: It is No. 4 holder; there are four similar holders.

Mr. Mathewson: You are referring to the four holders Mr. Logan gave at $120,000?

The Witnes: Yes.

Mr. Mathewson: $30,000 each?

The Witness: Yes. That holder at 188,700 pounds would be Mr. Mayer's figures, $12,475, and $4,800 for the guide frames and cast iron work that would be $17,225.

Q. For each holder?

A. For each holder, so I think I have allowed there on that $73,900. It comes out at $68,868 according to the memorandum which I used.

Q. For the four how much?

A. $68,868, and including the tank iron work, brings it up to $73,900.

Q. The figure set down in your appraisal?

A. Yes.

Q. In placing the value upon these holders you ascertained the weight in a certain way or by a certain method. What was the method you pursued?

A. I took, by the most accurate gauge I could get constructed, the pressure on the holder, the water pressure; that is an exact balance with the total weight of the moving parts of the iron work of the holder; in other words, the water supports the total weight of 5398 the holder, and by taking the cubic feet of water displaced by the weight of the holder, we have 62.4 pounds, which I have allowed, although that was slightly in excess, which gives quite exactly the weight of the moving parts of the holder with due correction. I have taken into consideration the levity of the gas, that is the difference between the weight of the gas and air and the submerged iron of the holder and also the water in the cups, deducting the water in the cups and allowing for the difference in weight of iron and water and above water. That gives us as accurately as it is possible to calculate it the weight of the moving parts of the holder, which includes all the sheeting and all the internal frame work and the guide rollers and everything connected in fact with the moving parts.

Q. Now, in calculating the weight of the framework did you assume the thickness of material to be as stated, or did you, in some instances, measure it for yourself?

A. In the case of where it could be measured, for instance, where there was a hole drilled in any of the columns so as to admit of measurements, I measured it. I found some of the holders were girded with steel columns of one-half inch thickness, and in some cases they were cast-iron and open-work framing like that of the Forty-second Street holders. I believe in one or two cases cast-iron columns, which I stated I calculated at one inch in thickness, but I find I calculated one and one-quarter inch.

Q. Did you make these measurements in a rough way or were they of such character as were proper in an operation of that kind?

A. I made them as carefully as they could be measured, particularly the weight of the gas holder itself.

Q. In measuring the frame-work did you measure that, did you use a rule?

A. I measured them by caliper and mechanic's steel rule, and in the cases of thickness of iron and steel, Mr. Woodward in one
5399 case, went inside of the gas holder column with considerable difficulty and got the thickness of the thimbles by which they were held together, and in every case I think I have made full allowance for the weight of those holders in framing and also in the prices applied.

Q. Your attention has been called to certain statements in your appraisal where you state the value as per Mayer or per Mayer. Now, I take it, that when such statements were made it was not necessarily because you agreed with Mr. Mayer, but because you either lacked time or opportunity of information to value the apparatus yourself; is that so?

A. Yes, throughout, as stated as per Mr. Mayer, it was on apparatus that I had not made estimates on. I could not for want of time, as I stated in undertaking it, I should have time to inspect and calculate out only the larger parts.

Q. Referring to the generator and boiler house, the schedule of apparatus of the Forty-fourth Street station, I note, two 8-foot 6 U. G. I. Co. sets, which you give a value of $18,000; for 12-foot U. G. I. Company sets to which you give a value of $47,000. Underneath these items I see one condenser and so forth, and then down three lines, total for two above items, no depreciation, $72,438. Am I right in stating that the inclusion of $72,438 is an error and that the appraisal of the benches themselves is as set down immediately above that?

A. Yes, sir; that is an error, the insertion of $72,438.

Q. I used benches where I should have said U. G. I. sets?

A. Yes.

Q. You have testified that you figured the value of your yard connections, so-called, by a formula which your experience taught you to be the correct one. Would it not have been possible for you to have figured these connections from the information in the testimony or in the schedules?

A. No, sir.

5400 Q. Why not?

A. Why, in reference to connections it says so many feet from such a size down to another size, that is lumped altogether, except in certain cases of the holder stations.

Q. Does it state the number of each size pipe in detail?

A. It states 22,525 feet of that particular Fourteenth Street station. He has given the number of tons but——

Q. Now, other stations, is the weight given?

A. Not always. It is generally simply the aggregate number of feet. For instance, the Twenty-first Street station, cast iron pipe, 18 to 36 inches in diameter, 6,624 feet; also steel-riveted, 16 to 36 inches, 4,772 feet; then again, wrought iron pipe, 1½ to 12 inches, 1,550 feet.

Mr. Mathewson: Are you referring to the testimony or to the schedule which you had?

Mr. Kirby: The schedule and testimony are both the same. This is for the Twenty-first Street plant.

Q. This value which you have given for the yard connections you consider ample for the plant of the usual kind and character mentioned, would you not?

A. Yes, sir, and in many cases that cost of the pipe at the rate of $6.50 per thousand cubic feet daily capacity is nearly as great as the cost of the whole apparatus, generating plant; and in Mr. Mayer's estimate the cost of connection would much exceed the cost of a generating plant.

Q. The value which you have given would take care of all pipe connections, valves, etc., which would be necessary for the works of the various kinds, would it not?

A. Yes.

Q. And if there should happen to be other pipes than those which you have figured up in such plants, would you consider that 5401 such valves, pipes, etc., were necessary for the proper operation of that plant?

A. No, sir; they probably got in there due to the duplication of parts, owing to the constructing and reconstructing and changing the process of gas-making.

Q. You have given to Mr. Mathewson a general idea of the number of days which you spent inside these plants. Was this the only time which you spent in examining them? Did you make any other examinations except those you mention?

A. Well, I don't think that it gives an adequate idea of the time I spent in the plants, no, by his hour to hour business. There were a number of plants that I visited quite a number of times, and I had with me two assistants to go over portions of it, and I do not think that the timing of Mr. Mathewson really represents all the time I was around those plants; and I was there at times when they did not know anything about it, that is to see about gasholders, whether they were in use or not.

Q. You mean by that at times other than those mentioned you saw the plants from the outside of the walls?

A. Yes; the gasholders, in regard to whether certain gasholders were in use.

Q. Did you yourself, or did you have any photographs made to assist you in the examination of the kind of apparatus, holders and what not?

A. I did. I had some views taken and was also assisted by a plumber to get at the pressures of the gasholders.

Recross-examination by Mr. Mathewson:

Q. You stated correctly yesterday the amount of time you spent inside the plants, in answer to my question, Mr. Edgerton?

A. I thought in the main that comprehended the time inside. I did not entirely agree with it. I did not tabulate it in any way that would give me an exact idea, but I stayed there all the time I wanted to. 5402

Q. That is another thing. I called your attention yesterday to the hours which I understood you spent in the plant, and I understood you to say that was substantially correct. That was right, was it not, inside the plants?

A. I did not have any definite memorandum or data to contradict it.

Q. That accorded with your recollection as you stated it yesterday, did it not?

A. I did not remember anything to the contrary.

Q. Do you want to change your testimony of yesterday?

A. No.

Q. At this Forty-second Street holder, where there was such a difference between you and Mr. Logan and the others, you say that you took the pressure and you found the pressure higher than that given by Mr. Mayer; that would indicate, as I understand you to say, a greater weight of material than he assumed?

A. Yes.

Q. In other words, the higher the pressure is the more weight of material it indicates in the holder?

A. Certainly.

Q. Per unit?

A. Yes.

Q. Where did you take that pressure, where did you apply your pressure gauge?

A. I went three times; twice I applied it at the ground level and once I crawled up on top of the holder and took the pressure on top, and I took it on the inlet pipes and on the outlet pipes also.

Q. What was the difference between the top and the ground in pressure?

A. There was, I think, about three-tenths or four-tenths; three-tenths.

Q. And which was the higher?

A. The pressure at the top of the holder. I took that pressure because that agreed with the pressure of the correction for levity of the gas.

5403 Q. You found, then, the weight in each of the four holders to be 188,700 pounds?

A. Yes.

Q. What did you compute to be the weight of the guide frame of this holder, including the columns?

A. That guide framing I took at one-third the weight of the holder. I computed that at one point at one time, but I have not the computation here.

Q. And the figures you are giving here are your general conclusions that it should be one-third the weight of the holder?

A. Yes, I think that would be correct, although I did not——

Q. You did not, then, figure each girder and all the trusses in detail?

A. I did figure that at one inch thick. That is cast iron with openings. I measured that and similar ones also at the——

Q. You have the details here?

A. No, I have not come across the detail of that figure.

Q. As to the weight of pipe and connections, what did you figure that to be for the holder?

A. That came in as the difference between $68,868 and $73,000.

Q. Yes, but what did you figure to be the weight of the connections?

A. I don't remember.

Q. You say you took ten cents as the price per pound for the entire construction?

A. I did in the first instance, but made a correction on that and took it at 6.6 cents.

Q. Yes, which is the unit you have used in computing your $73,000 value?

A. It is the 6.6—that is, it comes up to that, barring the weight of the tank iron and inlets and outlets.

Q. What do you mean by barring those?

A. I mean those are separate items, represent the value of them. I have only the value of them here which represents the difference between $68,868 and $73,000.

5404 Q. I understood you to say yesterday that you computed the holders generally upon the same general theory as to price of material and the weight of guide frames?

A. No; they were computed in different ways. There was some of those—the shells were all computed on the same basis.

Q. 6.6 cents?

A. 6.6, except in one case it was 7.1 cents.

Q. Do you remember which one that was?

A. That was the one in which Mr. Mayer gave his high figure on the construction. I have forgotten which one it was.

Q. Sixty-fifth Street?

A. Possibly.

Q. Well, that was the one with the many braces, was it not, the patented construction?

A. Yes.

Q. And as to guide frames, as a rule you consider them one-third the shell?

A. No; the guide frames are computed by weight of material in all instances where I could and in others the weights were duplicated. For instance, where a holder of a Phoenix column figured out to as much weight, it was adopted on the other holders of the same construction.

Q. What proportion of these were you able to or did you take actual measurements by reason of finding holes and otherwise?

A. I got measurements of pretty nearly all of them, I think, except one.

Q. Actual measurements of thickness of iron and height?

A. Yes, and diameter of columns and length, and so on.

Q. Did that include girders and diagonal braces as well?

A. Yes.

Q. In each one?

A. Yes; that is, the measurements I took. I did not calculate them all out.

Q. In what proportion of the guide frames here do your figures represent actual computations of weight and so on from actual measurements of columns, girders, trusses, braces, and so forth?

A. I took measurements of nearly all of them. I say they 5405 are not calculated all out. Some of them, they are very intricate.

Q. I ask you what proportion were calculated out and made the basis of the figures of value you present here now; was it a quarter of them?

A. I cannot just say the proportion. I think I stated in the testimony right along where I took a proportion yesterday when I was testifying.

Q. Well, but I did not go over one-tenth of them yesterday, so you could not have stated. I ask you now, what proportion of the whole would you think you have calculated out and made the value here given the result?

A. Do you want me to go over the whole list?

Q. No; I merely asked you what proportion?

A. I think over two-thirds of them were calculated out. I think some of those columns were the only ones left out.

Q. And in two-thirds of the cases where you have given values of holders, does that include the value of frames based upon such calculation and not based upon the theory that the frame was one-third as much as the shell?

A. Yes; I think that I gave the calculations on at least two-thirds. I could divide it better by saying that the column guide frames were not calculated in every case like the other guide frames. They were taken at a proportion of the whole.

By Mr. Kirby:

Q. You did calculate out certain guide frames, did you?

A. Yes.

Q. And where you say that the column guide frames were not calculated, what do you mean?

A. I mean that in going around the first time, and, in fact, the second time, I was not able to get at the measurement of those 5406 guide frames; and then I discovered that some of them had holes drilled in them, by which I could get the thickness of the iron, and then I calculated them out.

Q. Then you did, in fact, calculate them?

A. I calculated out, I suppose, two-thirds of those guide frames.

Q. And where you did not take measurements of every small part of that guide frame, what did you do?

A. If it did not have a counterpart in some other guide frame of the same construction, I calculated it as a proportion of the weight of the whole, taking Mr. Logan's, I think it was, proportion and my own figures as a guide as to what proportion the guide frame would bear.

Q. I do not mean the guide frame as a whole, but I mean the small parts thereof; you did not measure every part of every guide frame, did you?

A. No, not necessarily. One column or one girder or one bay or rail of a guide frame establishes the whole business; if it had sixteen columns, and one column calculated out so much, together with its girder and cross and guide rails and the wall plates, we multiply that by the number of columns.

Q. But in this two-thirds of these frames, which you did calculate by measurement, you did measure the details of one bay, or whatever you call it, to get the unit, and then multiplied that by the number of those parts which should be in the total frame, did you not?

A. Yes; which are duplicated.

Q. In those which you did not calculate in that way you took as the cost of the framing one-third the cost of the shell or other parts of the holder?

A. Yes.

Q. That is one-third of the cost and not of the weight?

A. Yes.

Q. And where you have mentioned, in reference to the Forty-second Street holder, one-third the weight, you mean one-third the cost?

A. Yes.

5407 By Mr. Mathewson:

Q. You had a man to help you with these measurements, did you not?

A. Yes, sir; several men.

Q. How many, on the average, just for the measurements, I mean, who did the measuring?

A. Three.

Q. You, yourself, and three men?

A. Yes, sir.

Q. You did not confine yourself to measuring; what proportion of your time did you put in in measuring, or did they put in while they were in the plant ?

A. Oh——

Q. A small part, wasn't it?

A. A small part, in taking the pressure, sometimes we were delayed in it, climbing up to the top of the holder would make some delay.

Mr. Mathewson: I have nothing further.

Mr. Burr: I have only one thing to call to the Master's attention. On page 4,284 of the testimony, the stipulation which was made between the city and Mr. Mathewson regarding deeds and grants, we made mutual concessions, and the language on that page is, you say: "In view of that, and as it will save us the trouble, I think we will withdraw, and I do withdraw the objections to these grants. It should be maps and grants. Have you any objection to that?

Mr. Mathewson: No, I have no objection.

Mr. Burr: Will your Honor take judicial notice of the distances on the East River and North River, or will that be the subject of a stipulation? Will it be conceded that a distance of two miles north from Corlear's Hook on the East River extends to and above Twenty-third Street, East River, and that the distance four miles north of Bestavers Killitje at or near the foot of Charlton Street extends to and above Forty-sixth Street, North River? This concession
5408 is asked for, for the reason that there is nothing in the case to
show the distance of each river to which the Letters Patent of 1807 extend northerly from the southerly point mentioned in the said Act. As a matter of fact, this distance extends on the East River pretty close to Thirtieth Street, and on the North River within a couple of blocks of Seventy-second street, as scaled on the city's map.

Mr. Mathewson: As to the fact, there will be no difficulty about that, but I cannot concede this because I don't know it.

The Master: I cannot take judicial notice of it, but I assume if one of Mr. Mathewson's engineers happens to know about it, he will probably concede it.

Mr. Mathewson: Yes, you arrange with Mr. Mead and Mr. Booraem about that.

The Master: I understand the defendants' case is closed now?

Mr. Kirby: So far as the Attorney General and the State Gas Commission and the District Attorney of the County of New York is concerned, it is closed.

Mr. Burr: The city rests.

The Master: Then according to our discussion the other day, I understand you want to have a recess until Monday, the 14th instant, at 11 a. m.

Mr. Mathewson: Yes, that will be the four days which the Court seemed to think was fair.

Adjourned to Monday, January 14, 1907, at 11 a. m.

Last Exhibits:

Complainant's 270.
State's OOO.
City's 136.

5409 United States of America,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages, numbered from 4537 to 5408 inclusive (Vol. 7), contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office. (Vol. 7.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

5409½ Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York, WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

JANUARY 14, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

U. S. Circuit Court, Southern District N. Y. Filed June 24, 1907, John A. Shields, Clerk.

5410 **Mr. Burr**: Professor Bemis has recovered his health and is here from Cleveland. He calls my attention to the fact that a number of corrections should be made in his testimony. I have sent a copy of the corrections to Mr. Mathewson and will give him a copy of some additional corrections to which the Professor has called my attention this morning. I merely state this, so that the figures on which Mr. Mathewson may base his rebuttal shall be correct. I explained the matter to Mr. Mathewson over the telephone, and I think he understands the situation.

Another thing I want to suggest is this, that inasmuch as this is to be rebutted, to save time and for the convenience of all of us, the particular testimony which is to be rebutted should be called specifically to the attention of counsel and the witness. That is, I mean, the record has grown so immense that it would be well to call attention to the page of the testimony which you seek to rebut.

Mr. Mathewson: I do not know that I can do that in all cases. I can in many cases, but a good deal of the testimony for the defendants is so general and from so many witnesses that it would be, I think, not of any advantage to do that. For instance, on the subject of pressure and one thing and another.

Mr. Burr: Well, wherever it is possible I think it would be to the advantage of us all if that could be done.

Mr. Mathewson: Yes, I will do what I can in that regard, of course.

Herbert J. Long, called as a witness in rebuttal in behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside, Mr. Long?

A. Pittsburg.

5411 Q. With what corporation are you connected?

A. The Monarch Water Heater Company.

Q. Is that the manufacturer of the apparatus that is generally known as the Monarch Water Heater?

A. Yes, sir.

Q. Does the business of that company cover the United States generally, or a section?

A. The entire United States.

Q. A large business, is it?

A. Why, it is considered such; that is, in comparison with other gas appliances.

Q. How long have you been secretary and treasurer of the company?

A. I have been since June 1st, 1906.

Q. You have been in the business for seven or eight years?

A. Not quite seven; six and one-half years connected with the company.

Q. To whom does this company sell its apparatus, to direct customers or the retail trade?

A. In most cases direct to customers, by means of agents in the field, our own representatives.

Q. Individual consumers of gas?

A. To individual consumers; in the larger cities, where it will pay to have a representative, we sell direct.

Q. Is this apparatus to be operated by gas?

A. Exclusively with the use of gas.

Q. Now, have tests been made as to the pressure at which this gas water heating apparatus shows its efficiency and below which it is not efficient?

A. Yes, and that has been necessary——

Mr. **Burr**: Objected to. What connection has that with the matter in hand?

Mr. **Mathewson**: You have introduced testimony here by Mr. Edgerton and by Professor Hallock and some others, particularly Mr. Edgerton, in this regard, that the most efficient pressure is under one inch.

5412 Mr. **Page**: For illuminating purposes?

Mr. **Mathewson**: No; and for other purposes too; that a range and other apparatus can be operated at a pressure under one inch satisfactorily.

The **Master**: I will allow it.

Mr. **Burr**: Exception.

The **Witness**: Your question was whether we had made tests?

Q. Yes.

A. I will answer yes, and that it has been absolutely necessary in our business to make tests in every locality, not only in cities, but in parts of cities where we develop the sale of heaters, on account of the fact that lack of pressure destroys the efficient operation of the machine.

Q. What do you find to be the minimum pressure required for the operation of that apparatus?

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial.

The **Master**: Same ruling.

Mr. **Burr**: Exception.

A. We find that we will not install knowingly on lines having less than twenty tenths.

Q. That is, two inches of pressure?

A. That is two inches of pressure.

Q. Taken where?

A. Taken inside the house. We usually take our test on any gas bracket that is available in the house, inside the meter.

Q. And at a point where it is intended to instal the apparatus?

A. As close to that as it is possible to get. We also specify that pipes shall be run of a certain specific size or the guarantee does not hold good with the pressure.

Q. Have the tests which have been made been confined to one place or have they been made over the country generally?

5413 A. Covering a period of seven years, they have been made all over the country by our representatives and in many cases experts sent out from the factory.

Q. And if after an apparatus is installed, less than two inches of pressure develope at the apparatus, what is it necessary to do? Can you operate the apparatus efficiently?

A. Well, it is necessary to operate the apparatus and get the highest efficiency we can get from a lower pressure, and if the customer is satisfied with it, he retains it. If, however, it is not coming up to the guarantee, in many cases it has been necessary to remove the heaters.

Q. Do you guarantee where a pressure of less than twenty tenths is obtained?

A. We do not guarantee the apparatus to come up to its best service.

Q. As a matter of fact do you know that it does not.

A. Yes, we know it does not or we would not make such an absolute ruling.

Q. Have you taken any tests in the City of St. Louis as to high and low pressure at the same time?

A. I have personally done that on account of variations in pressure. I have personally made a trip to St. Louis on that account and found variations of from fifteen——

Mr. **Page**: What relevancy has it?

Mr. **Mathewson**: Let him finish it, and I will tell you.

Mr. **Page**: Objected to as wholly irrelevant and immaterial.

The **Master**: I cannot tell that yet. I will let him proceed.

Mr. **Page**: Exception.

The **Witness**: I found—I will not say simultaneously, but as fast as I could get from one point to another, a difference of 5414 fifteen to eighteen tenths and other places as high as forty tenths.

Q. That is fifteen tenths and forty tenths at practically the same moment?

A. Yes, as fast as I could travel from one point to another.

Mr. **Page**: I renew my objection and move to strike out the answer.

Mr. **Mathewson**: Mr. Edgerton testified that as to the City of St. Louis particularly the pressure could be kept with certain limits there, and in reference to the high pressure system of mains which he said was there and which was similar to something which he advocated, and I am showing that the pressure even there is not between the limits which the law here requires. He was the one who brought in St. Louis.

Mr. **Page**: I do not remember any testimony by Mr. Edgerton as to the pressure system of St. Louis.

Mr. **Mathewson**: He testified that a high pressure system was in force in St. Louis. I think it was from him, or one of the other witnesses, certainly.

The **Master**: I will let it stand for the present without prejudice to move to strike it out later if at the close of the case it should transpire there is not any connection established.

Mr. **Page**: Exception.

Q. In the various tests which were made, what was found to be the most economical pressure for the operation of the water heater.

A. Well, we have found the higher the pressure the greater the economy and the operation of the heater.

Q. That is, there is less gas required to produce the heat?

A. There is less gas required to produce the desired heat; to produce the desired temperature; for instance, in Los Angeles 5415 we have found where they carry as high as forty tenths almost constantly, we get the best results, the most economical result from the water heater.

Q. What is the character of St. Louis as to elevation, etc., and other characteristics governing the control of pressure?

A. I have not statistics, but it struck me as being a particularly level city. I go there frequently; I should think it would be exceeding- favorable.

Mr. **Kirby**: I move to strike that out.

The **Master**: Same ruling.

Mr. **Kirby**: Exception.

Q. Has your company any connection with any gas company?

A. None whatever.

Mr. **Mathewson**: That is all.

Cross-examination by Mr. PAGE:

Q. What is this water heater which you manufacture, what is it used for?

A. It is an apparatus which is composed of a series of copper coils through which the water passes, under which is placed a Bunsen burner using gas, and it is designed to supply domestic hot water to the various fixtures in a house or apartment or building, and it is operated automatically.

Q. That is, when you turn on the water it turns on the gas?

A. It automatically turns on the gas and heats the water instantaneously as it passes through the coil.

Q. And what you use is a Bunsen burner?

A. We use a Bunsen burner.

Mr. PAGE: I do not think we need to ask anything else. I suppose it will be conceded that Bunsen burners will operate better under a high pressure than under a low pressure. 5416

The WITNESS: Might I make a suggestion as to another reason why we required the higher pressure?

Q. Yes. Anything that is peculiar to this apparatus.

A. Well, it is possibly peculiar to this apparatus, and that is that we find in the operation of the heater, the use of the gas with the heater, if the pressure is too low, it tends to pull upon the main in such a manner that we would not get proper service, so if we have low pressure we are utterly unable to operate the heater. Many times we are unable to operate it for any service if the pressure is low, and other times it will operate with poor service.

Q. How did you make the tests which you spoke of having made yourself?

A. We use a *guage* and attach it to the ordinary cocks or gas bracket that is usually in the basement.

Q. Are you an engineer?

A. Well, I had no college degree as an engineer. I am a mechanical engineer and have designed several improvem-nts to the heater and have taken out several patents on them, and studied—I spent about three or four years after leaving school on survey work and things of that kind, but have not a college degree.

Q. Does this apparatus have a pilot light that is burning all the time?

A. Yes, it has a constantly burning pilot.

Mr. PAGE: That is all.
Mr. BURR: No questions.

Redirect examination by Mr. MATHEWSON:

Q. What is a pilot light?

A. Well, my definition of a pilot is a small jet which is burning constantly for the purpose of igniting the main burner when required. 5417

Q. A very slight——

A. The smaller the consumption the better for us; we aim to turn it down as low as we possibly can.

Q. It burns half a foot an hour or——

A. From a minimum of half a foot an hour it often runs as high as a foot an hour.

Q. Referring to Bunsen burners, are not the Bunsen burners you use of the same principle of the Welsbach and Bunsen burners used in gas stoves?

A. It is exactly the same principle, we use a vertical tube.

Q. The air mixed with gas in certain proportions?

A. Yes.

Q. Do you know any reason why the operation should not be the same as to pressure?

Mr. Page: That is objected to. I do not know that he knows anything about it.

The Master: I will allow it.

Mr. Page: Exception.

A. From my personal experience and others I should judge that the same condition would hold good in both cases.

Mr. Mathewson: That is all.

Colin C. Simpson, recalled in rebuttal on behalf of complainant.

Direct examination by Mr. Mathewson:

Q. You have testified before in this case, have you?

A. I have.

Q. Will you not at the outset state somewhat more at length than you have heretofore, your experience in the business of laying gas mains, and your knowledge of the condition of subsurface structures in New York City. 5418

Mr. Page: I think he has testified very fully.

Mr. Mathewson: I do not think he has testified quite so fully as he can.

A. May I read this right off (indicating paper)?

Q. If that is what you want to say, yes.

A. I have made a specialty of the business of main and service laying for twenty-eight years (four years in Vienna, Austria, laying water mains and twenty-four years in Manhattan). Have personally watched the exposing of approximately 90 per cent. of the Consolidated, New Amsterdam, Mutual and Standard mains. Have supervised the laying of the greater part of the Consolidated Gas Company's mains. Also watched the laying of practically all of the New Amsterdam and Standard mains, and about 30 per cent. of those of the Mutual. I have watched the building of underground telephone and electric light subways from their very inception. I have also watched the laying of all large water mains—30-inch, 36-inch and 48-inch—since 1889. And the building from start to finish of the Rapid Transit Subway. I have kept records of all mains laid by other gas companies for the last seventeen years. I have watched the laying of all mail tubes and the construction of the cable and underground trolley systems of all surface railroads, also the excavations for the Pennsylvania and New York Centrals Terminals.

I designed and had laid under my personal supervision the 48-in. gas main on Avenue A, between sixty-second and seventy-first streets, New York City, which (with the exception of the 60-inch gas main in Long Island City) is the largest gas main in this country 5419 to-day; and in conjunction with our Chief Engineer, Mr. William H. Bradley, designed the 60-inch gas main in Long Island City, from our new Astoria plant to the tunnel crossing the East River under Blackwell's Island and personally supervised the laying of same. This 60-inch main is three miles long, is the largest gas main in the world to-day, and is now being successfully operated. This main was laid under extreme conditions; many of the streets through which it passed were not even graded, necessitating in some places going down to a depth of twenty-five feet, and in other places making "Fills" of from ten to fifteen feet high. At Broadway and Van Alst avenue it was necessary to go under a large trunk sewer——

Mr. Page: I suppose all those mains laid over in Long Island——

Mr. Mathewson: He is showing his experience.

Mr. Burr: Yes, and he has made statements as to the operations of the mains meanwhile. He says it is now being successfully operated, and I think that is hardly rebuttal. It is something we will have to find out about still more.

The Master: He may proceed.

The Witness (continuing): At Broadway and Van Alst Avenue it was necessary to go under a large trunk sewer, and we here reached a depth of 29 feet and had to contend with tide water and a live underground stream. In crossing Sunswick Creek it was necessary to provide large culverts to take care of the tidal flow of the Creek.

There has not been a single sub-surface structure of any consequence constructed on the Island of Manhattan during the last seven- years which has not necessitated my rigid inspection, as there 5420 are probably no streets in Manhattan which do not contain at least one gas main, and to protect these it is necessary for us to most carefully watch all underground work.

In fact, I can assert that I have a better general knowledge of subsurface conditions in Manhattan than any other one person.

Q. Are the estimates which you have made and which you are producing to-day based upon theorizing, or are they based upon your own absolute knowledge and experience?

A. My absolute knowledge and experience and from actual data of cost that I kept.

Q. Now, I understand, Mr. Simpson, from your previous testimony that the mileage of the mains of the Consolidated Gas Company, the details of sizes, is kept in the books of the Consolidated Gas Company?

A. Yes, sir.

Q. I don't mean the maps, of course, but the books and records?

A. The books.

Q. And whenever any main is laid, has your department a record of that laying, including the length of the main and the size and so forth?

A. Yes, sir.

Q. And does it report them to the Accounting Department after laying that main?

A. Yes, sir.

Q. How often?

A. Once a month.

Q. And those reports then are entered in the Accounting Department, are they?

A. They are.

Q. From the original records which you used on it and sent up?

A. No; they are entered in the original record in my department, and the data is given to the Accounting Department from my record.

Q. You say that since the formation of the company you have been over and seen at least 90 per cent. of the present main mileage of the company. Have you ever found an instance where the 5421 main, as disclosed on the records of the company, was not found in the street when you came to uncover that place?

A. Never; not in any one single case.

Q. And is it your judgment, therefore, that the records of the company are correct as to mains?

A. It is, sir.

Q. Have you ever had any report from any of your superintendents or any men employed by you that any main which appeared on the records of the company was not found when they were uncovering the street for the purpose?

A. Never.

Q. Where is the distance of the main from the curb recorded on the maps or in the records of the company?

A. On the books of the company, not on the maps.

Q. It does not appear on the maps, does it?

A. Doesn't appear there at all.

Q. How about the depth and the exact measurements between given points?

A. All on the books, not on the maps at all.

Q. None on the maps?

A. No, sir.

Q. How and when are mains placed on the maps?

A. Well, as soon as reports are received they are placed on the books, and as soon as placed on the books they are put on the maps.

Q. Are they put on the maps from the records of the company, or are the records of the company made up from the maps?

A. No; they are put on the maps from the records of the company.

Q. So that as between the maps and the records of the company, if there was a divergence, which would be correct?

A. The books would be correct.

Q. Now, when you send up to the Accounting Department a record of a main, do you give any detail or do you have any detail as to its length and the bounds, and as to those used and that are not used and all that?

A. Yes, sir.

5422 Q. And are those records kept?

A. Yes, sir.

Q. And is it possible for a main to get on the books of the company that is not actually laid?

A. Absolutely impossible.

Q. Now, in case of a fire or other accident, where would you go to get the detail of the main as to distance from the curb, the exact length, the depth, etc.?

A. To the books.

Q. Not to the maps?

A. I would go to the maps first to see what size main was on that side of the street, and then I would go to the books to find the location of it, distance from the curb, depth, etc.

Q. What use, then, do you make of maps such as the company keeps and such as were examined by Mr. Marks?

A. They are used for ready reference as to what size of mains are on certain streets and what side of the street they are on; only for that.

Q. Reference was made to your testimony in this case where you stated that the maps were correct, or you believed the maps to be correct. Do you remember your testimony in that regard?

A. I remember being asked if the maps were correct, and I said yes.

Q. Will you explain a little further to what extent you intended to be understood?

A. Well, I mean to say that they are correct. I did not see anything incorrect about them. I do not say they were drawn to scale or anything of that kind, but they were correct in so far as any mains that are in the ground are concerned, and there is nothing on those maps that does not belong there.

Q. And that was the extent of your meaning when you made that statement, wasn't it?

A. Yes, sir.

Mr. Burr: I hardly think that that is proper rebuttal, to have him qualify now, at this late date, a positive statement which 5423 he made in the beginning of this inquiry and upon which we relied and upon which we based our application for an examination of those maps, relying upon the truthfulness of the statement which he made as early as page 339 of the record.

Mr. Mathewson: Oh, you made your examination after he stated and I stated over and over again, in reference to these maps, just what he is now testifying to.

Mr. Page: The State did not rely upon the accuracy of any of the statements of Mr. Simpson.

Mr. Mathewson: They are quite accurate.

The Master: Proceed, gentlemen.

Q. Do you wish in any way to modify or qualify the previous statement that there were eight hundred and twenty-two miles of mains at the time you testified?

A. No, sir.

Q. Now, let us refer to the maps which Dr. Marks examined. The maps on which the company keeps its mains indicated are ordinary insurance maps, are they not?

A. Insurance volumes, yes, sir.

Q. And do they have a scale indicated on the map?

A. They are supposed to be drawn to scale.

Q. Have you examined the maps to see whether they agree with their own scale?

A. I have.

Q. Do they agree with their scale?

A. No, sir.

Q. Did you find in any instance that they agreed with your scale, where you measured?

A. No, sir; not a single instance.

Q. Was the actual distance longer than it showed on the map or shorter?

A. Shorter in every case.

Q. You mean the map showed a shorter distance than the actual distance?

A. Than the official measurements.

Q. So that their measurement would show less mains than actually existed?

A. Yes.

5424 Q. Now, have you examined these schedules and charts as presented by Mr. Marks, beginning with City's Exhibit 92, and from there continuing down to City's Exhibit 103, and perhaps there may have been other numbers that I have not mentioned, but I refer to all these schedules.

A. I have gone over them, yes, sir.

Q. Gone over parts of them?

A. Yes, sir.

Q. Will you state whether you found inaccuracies in those schedules, and if so, state in detail the character of the inaccuracies.

A. Why, the inaccuracies are so many that if I am allowed I will have to read them off, they are so many. In the first place, as before stated, the maps do not agree with the scale given. In every instance observed by me they are shorter than the official lengths. All the mains on five complete maps, Nos. 118, 119, 120, 121, 122; of Volume 6; have been entirely omitted.

In taking some of the volumes and comparing pages at random, there are numerous mains on the maps which do not appear at all on Prof. Marks' Exhibits.

There are also numerous cases where the lengths, as given by Prof. Marks, are shorter than actually shown, on the maps measured, even measuring on the maps themselves, according to their own scale.

There are also a number of instances where the sizes, as given by Prof. Marks, are incorrect; a 30 inch main is stated where it should be 36 inches; 3-inch main is stated where it should be 6-inch, 4-inch main given where it should be 8-inch, etc., etc., etc., the error in every case being against the company.

As the mains are not placed upon the maps to scale, this would affect the measurements given at every point where the main ends at its connection with the transverse main, because of the
5425 varying distances from the curb. In most every instance the mains are at a greater distance from the curb than would be indicated by the map. In considering the total number of such

cases, the actual increase in length over that scaled would be an appreciable item.

In addition to the errors above noted, numerous mistakes may be found in the exhibits themselves: of which the following are instances:

Mains entered on the Detailed Sheets, but entirely omitted from the Summary Sheet and, therefore, not included in the addition, or in the figures appearing on Page 4605 of the present testimony.

Mains appearing on the Summary Sheets from 50 to 1,000 feet short of their lengths as given on the Detailed Sheets.

Mains appearing in a column of the Summary Sheets which have not been totaled and, therefore, not included in the figures appearing on page 4605.

Mains appearing on the Detailed Sheets under a certain size, but appearing on the Summary Sheets under the heading of a Smaller Size.

Mains appearing on the Detailed Sheet as disused, when the main as described is shown on the map as in use, and should be included with the active main.

Cases when the active and disused totals appear on the Detailed Sheet, but the disused has been transferred to the summary Sheet and added in with the active main, while the correct length of active main, in each case much greater than the disused, has been left out entirely.

Discrepancies between the Summary Totals and the Totals given on Page 4605 of the testimony—amounting to 20,129.6 feet, against the company.

Q. That is something like four miles in that instance?

—. Yes, sir.

5426 Q. Does there appear, as far as you can observe, any possible kind of error which could have been made which has not been made?

Objection.

The Master: I think that is hardly allowable, Mr. Mathewson.

Q. Now, referring to these various classes of errors and discrepancies, did you find any instance in which the errors and discrepancies were not against the interests of the company?

A. Not one single instance.

Q. Now, let us take the first instance. You say in every instance observed by you the lengths shown on the map are shorter than the official lengths?

A. Yes, sir.

Q. Where did you get the official lengths?

A. From the official card of the city, giving street widths and block measurements.

Q. This is data of the City of New York?

A. Yes, sir.

Q. Have you a schedule showing some instances according to your measurement where the distance is shorter than the official length?

A. Yes, sir.

Q. Is this paper which you produce such a statement?

A. Yes, sir. It is as follows:

5427

Measurements of Map Distances in Insurance Volumes.

Taken by Mr. C. C. Simpson.

Measured on line of—	From—	To—	Official length.	Volume scales.	Volume is short.
8th Avenue	S. P. line, 145th Street	N. P. line, 150th Street	1399 ft. 2 in.	1394 ft. 0 in.	5 ft. 2 in.
131st Street	W. P. line, 5th Avenue	E. P. line, Lenox Avenue	895 ft. 0 in.	890 ft. 0 in.	5 ft. 0 in.
Amsterdam Avenue	N. P. line, 110th Street	S. P. line, 105th Street	1449 ft. 2 in.	1403 ft. 0 in.	46 ft. 6 in.
8th Avenue	N. P. line, 81st Street	S. P. line, 76th Street	1421 ft. 8 in.	1405 ft. 0 in.	16 ft. 8 in.
Manhattan Avenue	N. P. line, 109th Street	S. P. line, 105th Street	1147 ft. 4 in.	1135 ft. 0 in.	12 ft. 4 in.
Lenox Avenue	N. P. line, 115th Street	S. P. line, 110th Street	1409 ft. 2 in.	1362 ft. 0 in.	47 ft. 2 in.
77th Street	E. P. line, 2nd Avenue	W. P. line, 3rd Avenue	810 ft. 0 in.	786 ft. 0 in.	24 ft. 0 in.
78th Street	E. P. line, 2nd Avenue	E. P. line, 1st Avenue	750 ft 0 in.	729 ft. 0 in.	21 ft. 0 in.
West End Avenue	N. P. line, 100th Street	C. P. line, 96th Street	1145 ft. 8 in.	1130 ft. 0 in.	15 ft. 8 in.
Lexington Avenue	S. P. line, 115th Street	N. P. line, 120th Street	1409 ft. 2 in.	1383 ft. 0 in.	26 ft. 2 in.
33rd Street	W. P. line, 2nd Avenue	E. P. line, 1st Avenue	850 ft. 0 in.	845 ft. 0 in.	5 ft. 0 in.
10th Street	W. P. line, 1st Avenue	E. P. line, Avenue A	813 ft. 0 in.	785 ft. 0 in.	28 ft. 0 in.

5428 Mr. Page: I think it would be well probably if we should have just one or two of those volumes brought down and a demonstration given that they are shorter.

Mr. Mathewson: Very good. It can be done without any difficulty. Will you go ahead, Mr. Simpson.

The Witness: Now, I may say that in each case in here, of course, the entire page is wrong; because, you understand, these things are all straight lines, and if I take one avenue and that avenue is short all the rest of the avenues are short, too, and I have only taken here what I actually scaled myself.

By Mr. Page:

Q. When you referred a moment ago to the "official card of the City," that was a card issued by what or whom?

A. By the Bureau of Highways.

By Mr. Mathewson:

Q. Now, you have stated that all the mains on five complete maps, Nos. 118 to 122 of volume 6, have been entirely omitted?

A. Yes, sir.

Q. Have you a statement of those mains, the detail?

A. I have, sir; the sizes and number of feet.

Q. Now, will you please state that?

A. ——.

A. The mains on maps Nos. 118, 119, 120, 121 and 122 do not appear in Prof. Marks' exhibits.

These mains, by actual street distances, are as follows:

	3-inch	840 feet
	4-inch	25,918 feet
	6-inch	53,733 feet
	8-inch	18,187 feet
	10-inch	3,331 feet
	12-inch	8,413 feet
5429	16-inch	2,631 feet
	20-inch	6,238 feet
	24-inch	560 feet
	30-inch	10,200 feet
	Total	128,051 feet

Or 24.25 miles.

Q. Now, your estimate that the total sum of pipe by Mr. Marks, excluding abandoned mains, was about 780 miles, against 822, or 41 miles difference?

A. Yes, sir.

Q. And this would account for about twenty-four or twenty-five miles at one jump, wouldn't it?

A. Yes, sir; or more than half of it.

Q. You say in checking some of the volumes and comparing at random there are numerous other mains on the maps which do not appear at all on Professor Mark's Exhibit. That is outside of these five pages, isn't it?

A. Yes, sir.

Q. Have you a schedule of such omissions?

A. Yes, sir.

Q. So far as you have examined the schedules?

A. Yes, sir.

Q. Will you state that for the record?

A. I have not all of them. I have a statement of some of them.

Q. Yes, I mean a statement of some of them, as an example.

A. Shall I state volume number and map number, or just the street and "from" and "to" and "where"?

Q. Well, the street, from, to or where will do for me, unless counsel for the other side want the volume.

Mr. Burr: I would rather have the volume, in addition.

Q. Have you it all on this statement?

A. Yes, sir. It is as follows:

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5430 & 5431

Some Mains Omitted from Prof. Marks' Exhibits.

Volume No.	Map No.	Street or avenue.	Side.	From—	Side.	To—	Side.	Maps shows by scale.		
								No. of feet.	Size main.	
4	77	39th Street......	South	Park Avenue.....	E....	Lexington Ave..........	W ...	417	6 in.	01
4	77	41st Street......	South	Lexington Ave...	E....	Third Avenue...........	W....	461	6 in.	02
4	83	49th Street......	North	Lexington Ave...	E....	Third Avenue...........	W....	468	6 in.	03
4	83	49th Street......	South	Park Aveuue.....	E ..	Second Avenue	W....	1,206	10 in.	04
6	105	Broadway	East......	52nd Street.......	C. L..	57th Street..............	N.....	1,400	6 in.	05
6	109	Avenue A.......	East......	63rd Street.	C. L..	57th Street..............	C. L..	1,569	12 in.	06
7	142	115th Street.....	North	Broadway........	W...	Riverside Drive.........	E.....	555	6 in.	07
8	155	76th Street......	North	Fifth Avenue.....	E....	Lexington Ave..........	W....	935	6 in.	08
								102	4 in.	09
								439	6 in.	010
8	155	76th Street......	North	Third Avenue....	W. ..	Third Avenue...........	W....	60	4 in.	011
8	156	78th Street......	North	Fifth Avenue.....	E....	Third Avenue...........	W....	468	6 in.	012
								35	3 in.	013
								432	4 in.	014
								938	6 in.	015
8	157	86th Street......	South	Fifth Avenue.....	E....	Madison Ave............	W....	450	4 in.	016
8	159	Avenue A	West.....	77th Street.......	N....	79th Street..............	S.	494	6 in.	017
8	160	85th Street......	South	First Avenue.....	C. L..	Avenue A...............	W....	681	6 in.	018
		Total..						11,110 feet or 2.10 miles.		

5432 Q. This sample which you have presented shows a total of 11,110 feet, or something over two miles?

A. 2.10 miles.

Q. Is it the fact that entire blocks were left out of the mains?

A. Yes, sir, not entire blocks only, but in some cases the entire width of the page, for instance, such as 1206-feet, 1400-feet, 1569-feet.

Q. Now, you say there are also numerous cases where the length is given by Professor Marks as shorter than actually shown on the maps, even if measured by their own scale?

A. Yes, sir.

Q. Have you illustrations of these errors that you have discovered?

Mr. Burr: Of course, I expect to be furnished with copies of these statements for the purpose of enabling me to cross-examine.

Mr. Mathewson: You shall have them before I get through, before they are printed; and you can proceed with your cross-examination from them right here.

Q. Will you present this for the record?

A. Yes, sir. It is as follows:

(Here follows table marked pp. 5433 and 5434.)

SOME MAINS INCORRECTLY SCALED FROM MAPS WHICH APPEAR ON PROF. MARKS' EXHIBITS.

Volume No.	Map No.	Street or Avenue	Side	From	Side	To	Side	Given on Marks' Exhibit		Should be		Difference	Map
								Feet	Size	Feet	Size	Feet	Reference
6	105	Eighth Avenue	E.	52nd Street	C.	57th Street	C.	1255.89	12 in.	1335	12 in.	79.11	D 1
6	105	Broadway	W.	52nd Street	C.	57th Street	C.	1297.06	10 in.	1364	10 in.	66.94	D 2
6	111	Fourth Avenue	W.	57th Street	C.	62nd Street	C.	567.07	8 in.	568	8 in.	.93	D 3
								55.51	6 in.	750	6 in.	694.49	D 4
7	148	120th Street	N.	Amsterdam Ave.	W.	Broadway	E.	739.94	6 in.	808	6 in.	68.06	D 5
7	148	121st Street	S.	Amsterdam Ave	E.	Morningside Ave.	W.	395.49	6 in.	424	6 in.	28.51	D 6
7	148	121st Street	N.	Amsterdam Ave.	W.	Broadway	E.	739.94	6 in.	807	6 in.	67.06	D 7
7	148	122nd Street	S.	Amsterdam Ave.	W.	Broadway	E.	739.94	6 in	810	6 in.	70.06	D 8
7	148	123rd Street	N.	Amsterdam Ave.	W.	Broadway	E.	739.94	6 in	810	6 in.	70.06	D 9
7	148	123rd Street	N.	Morningside Ave.	C.	Amsterdam Ave.	E.	790.97	6 in.	871	6 in.	80.03	D 10
7	148	124th Street	N.	Amsterdam Ave.	W.	Broadway	E.	739.94	6 in.	810	6 in.	70.06	D 11
7	148	124th Street	N.	Morningside Ave	C.	Amsterdam Ave.	E.	790.97	6 in.	871	6 in.	80.03	D 12
7	148	125th Street	S.	Morningside Ave	C.	Broadway	E.	1603.26	6 in.	1745	6 in.	141.74	D 13
8	154	74th Street	S.	Second Avenue	W.	Third Avenue	E.	629.80	6 in.	642	6 in.	12.20	D 14
8	154	75th Street	S.	Second Avenue	W.	Third Avenue	E.	614.90	6 in.	642	6 in.	27.10	D 15
8	154	75th Street	N.	Second Avenue	W.	Third Avenue	C.	637.25	4 in	660	4 in.	22.75	D 16
8	154	76th Street	S.	Second Avenue	W.	Third Avenue	E.	614.90	6 in.	642	6 in.	27.10	D 17
8	154	76th Street	N.	Second Avenue	W.	Third Avenue	~~N.~~ E	614.90	4 in.	630	4 in.	15.10	D 18
8	157	86th Street	N.	Fourth Avenue	E.	Third Avenue	W.	557.75	6 in.	962	6 in.	404.25	D 19
8	158	79th Street	N.	Third Avenue	C.	First Avenue	C.	60.30	6 in.	52	6 in.		
								546.06	6 in.	570	6 in.	23.94	D 20
								661.61	6 in.	795	6 in	133.39	D 21
8	158	81st Street	S.	Third Avenue	E.	First Avenue	W.	1329.22	6 in.	1388	6 in.	58.78	D 22
8	158	85th Street	S.	Third Avenue	E.	First Avenue	C.	632.28	6 in	653	6 in.	20.72	D 23
								689.76	6 in.	716	6 in.	26.24	D 24
8	158	Second Avenue	W.	79th Street	C.	86th Street	C.	201.18	12 in.	1886	12 in.	1684.82	D 25
8	158	Second Avenue	E.	79th Street	C.	86th Street	C.	1753.14	30 in.	1886	30 in.	132.86	D 26
8	158	Second Avenue	E.	79th Street	N.	86th Street	C.	1785.48	10 in.	1855	10 in.	69.52	D 27
8	158	First Avenue	W.	79th Street	N.	86th Street	C.	1785.48	6 in.	1855	6 in.	69.52	D 28
8	160	83rd Street	N.	First Avenue	C.	Avenue A	W.	250.41	6 in.	645	6 in.	394.59	D 29
8	160	83rd Street	N.	Avenue A	E.	East River		398.73	6 in.	1050	6 in.	651.27	D 30
8	161	88th Street	N.	First Avenue	C.	Avenue A	W.	328.14	6 in.	645	6 in.	316.80	D 31
								31.01	4 in.	31	4 in.		D 32
8	161	Avenue A	W.	88th Street	C	92nd Street	N.	502.54	6 in.	1053	6 in.	550.46	D 33
8	162	~~27~~th Street 87	S.	Second Avenue	W.	Third Avenue	E.	633.75	6 in.	642	6 in.	8.25	D 34

Total Difference 6166.90

5435 Q. Now, the differences run from the fraction of a foot up to 1,684 feet, so far as you have shown on this statement you have just read in evidence?

A. Not a fraction of a foot in any case. I did not look for that at all. Oh, yes, in one case it was .93.

Q. .93 of a foot, yes, and up to 1,684 feet in one case?

A. Yes, sir.

Q. And the total of this illustration is 6,166.9 feet, or something over a mile, isn't it?

A. Yes, sir.

Q. In some cases the mains tie to transverse lines and there is no accurate statement on the map or any statement of the distance of the mains from the curbs?

A. No, sir.

Q. Has that resulted in an inaccuracy of main distances in such instances where you have examined?

A. Yes; because the curb line is not even shown on the map. It is only the house line that is shown.

Q. Have you a table or an illustration of some of these differences?

A. I have a table of a few of the absolutely thousands of cases of that kind—every street corner where a main stops.

Q. That is what I mean as an illustration; and this schedule which you now present, is that an illustration of that character of error?

A. Yes, sir.

Q. And this particular sheet shows a difference of 813 feet, due to these circumstances?

A. Yes, sir. The schedule is as follows:

Measurements Scaled from Insurance Volume Maps, Showing Inaccuracy of Main Distances where Ends Tie to Transverse Lines.

Main on—	From—	To—	Volume Scale.	Key Book.	Difference in Feet.	Affects Mains.	Total ft. Affected.
W. S. Ave. A	72nd St	77th St	On Line	8′ S. W. C	8	4	32
W. S. 1st Ave	73rd St	76th St	On Line	4′ E. W. C	4	3	12
E. S. 2nd Ave	73rd St	78th St	On Line	4′ W. E. C	4	3	12
E. S. 3rd Ave	72nd St	78th St	On Line	5′ W. E. C	5	3	[illegible]
E. S. 5th Ave	72nd St	78th St	7 ft. Inside	5′ W. E. C	12	7	84
E. S. 4th Ave	72nd St	78th St	2 ft. Inside	4′ W. E. C	6	4	24
N. S. 79th St	3rd Ave	5th Ave	7 ft. Inside	7′ S. N. C	14	5	70
S. S. 79th St	3rd Ave	Lex. Ave	5 ft. Inside	4′ N. S. C	9	2	18
S. S. 79th St	4th Ave	5th Ave	5 ft. Inside	6′ N. S. C	11	3	33
E. S. 5th Ave	80th St	83rd St	9 ft. Inside	4′ W. E. C	13	5	65
E. S. 5th Ave	83rd St	88th St	12 ft. Inside	4′ W. E. C	16	6	96
S. S. 79th St	1st Ave	Ave. B	7 ft. Inside	4′ N. S. C	11	4	44
S. S. 86th St	1st Ave	Ave. B	2 ft. Inside	3′ N. S. C	5	2	10
E. S. 5th Ave	89th St	94th St	11 ft. Inside	4′ W. E. C	15	6	90
W. S. 4th Ave	96th St	97th St	On Line	4′ E. W. C	4	1	4
W. S. 4th Ave	97th St	98th St	2 ft. Inside	4′ E. W. C	6	1	6
W. S. 3rd Ave	95th St	98th St	5 ft. Inside	6′ E. W. C	11	4	44
E. S. 5th Ave	94th St	99th St	9 ft. Inside	4′ W. E. C	13	6	78
E. S. 2nd Ave	93rd St	98th St	On Line	8′ W. E. C	8	5	40
E. S. 1st Ave	99th St	104th St	On Line	4′ W. E. C	4	5	20
W. S. Park Ave	99th St	102nd St	On Line	4′ E. W. C	4	4	16
							813

The above cases are taken from the first part of Volume Eight.

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5437 Q. Now, you have also said that there are a number of instances, so far as your examination goes, where the sizes as given by Professor Marks are incorrect?

A. Yes, sir.

Q. Thirty-inch main is stated where it should be thirty-six-inch main, and so forth?

A. Yes, sir.

Q. Have you an illustration of those errors?

A. Yes, sir. The illustration is as follows:

5438 & 5439

Some Errors in Sizes of Mains in Prof. Marks' Exhibits.

Volume No.	Map No.	Street or Avenue.	Side.	From—	To—	Prof. Marks' Sheets Give		This should be		
						Feet.	Size.	Feet.	Size.	
4	83	Third Avenue....	West..	C. 47th Street....	C. 52nd Street........	1280	4-in.	974 ft.	4-in.	S. 1
								307 ft.	6-in.	S. 2
								19 ft.	6-in.	S. 3
7	152	Seventh Avenue..	East...	C. 125th Street....	C. 130th Street.... ...	1309.02	3-in.	1304 ft.	4-in.	S. 4
8	154	74th Street.......	South..	W. S. 1st Avenue.	E. S. 2nd Avenue.....	674.53	4-in.	674 ft.	6-in.	S. 5
8	155	78th Street.......	South..	E. S. 4th Avenue.	W. S. 3rd Avenue.....	950.30	3-in.	960 ft.	6-in.	S. 6
8	172	111th Street......	South..	C. 5th Avenue....	C. 3rd Avenue.........	2006.25	30-in.	2026 ft.	36-in.	S. 7
11	255	152nd Street	....	W. S. Broadway..	C. Amsterdam Avenue.	943.67	4-in.	100 ft.	4-in.	S. 8
								30 ft.	4-in.	S. 9
								818 ft.	8-in.	S. 10
6	109	First Avenue.....	West..	C. 63rd Street....	C. 57th Street.........	1585.35	8-in.	1571 ft.	6-in.	S. 11

PAGE BOUND VERTICAL IN BOOK

5440 Q. All these errors here and those to which I have previously called your attention appear on the face of the maps themselves?

A. They do, sir.

Q. The dimensions of the mains here appear on the map correctly?

A. Yes, sir.

Q. They have been incorrectly taken off by Mr. Marks?

A. Yes, sir.

Q. Have you also prepared a table illustrating some of the other errors to which you have testified as differences between the detailed schedules and the summary sheets of Professor Marks' exhibits?

A. Yes, sir.

Q. And mains appearing on the detailed schedule have been omitted from the summary sheets?

A. Yes, sir.

Q. And mains appearing in detail of a certain size have been put down on the summary sheet under a smaller size?

A. Yes, sir.

Q. And mains appearing on detail schedules as disused where the main described is shown on the map as being in use?

A. Yes, sir.

Q. And mains appearing in a column of the summary sheet which has not been totaled, and therefore not included in the totals given on page 4605?

A. Yes, sir.

Q. Is this the result of the examination of the entire number of schedules, or merely an illustration?

A. Merely illustrations all the way through. We have not gone through the whole thing.

Q. Do you desire to spread that on the record as an illustration of those discrepancies?

A. Yes, sir. The illustration is as follows:

5441 SOME OF THE DISCREPANCIES EXISTING BETWEEN THE DETAILED SCHEDULES AND THE SUMMARY SHEETS OF PROF. MARKS' EXHIBITS.

(Errors in length.)

Vol. No.	Map No.	Schedule No.	Schedule gives—	Summary gives—	Error. Against company.
1	8	10	71.41 ft. 3 in.	21.41 ft. 3 in.........	50.00 ft.
8	162	143	4693.43 4	4593.43 4	100.00
6	112	111	1771.00 4	1271.00 4	500.00
6	113	112	1796.25 6	1716.25 6	80.00
6	114	112	6730.10 6	6530.10 6	200.00
8	173	156	5048.50 4	4048.50 4	1000.00
					1930.00 ft.

Mains Appearing on Detail Schedules, but Omitted from Summary Sheets.

Vol. No.	Map No.	Schedule No.	Schedule gives—	Summary gives—	
1	21	27	862.50 ft. 20 in.	....	862.50 ft.
4	73	78	1588.81 30	....	1588.81
7	144	127	1333.33 20	....	1333.33
7	147	129	1128.46 8	....	1128.46
6	114	114	1331.25 10	....	1331.25
					6244.35 ft.

Mains Appearing on Detail Schedule as a Certain Size, but Shown on the Summary Sheet Under a Smaller Size.

Vol. No.	Map No.	Schedule No.	Schedule length.	Gives size.	Summary length.	Gives size.
			ft.	*in.*	*ft.*	*in.*
1	13	17	375	24	375	20
3	36	68	575	20	575	18
7	(142½–143)	126	1310.28	16	1310.28	12
11	240	163	1302.07	30	1502.07	24

5442 *Mains Appearing on Detail Schedules as Disused, Where the Main Described is Shown on the Map as Being in Use.*

Vol. No.	Map No.	Schedule No.	Schedule gives—
7	182	120	1316.25 ft. 20 in. disused........... 1316.25 ft.

Mains Appearing in a Column of the Summary Sheet which have not Been Totaled and Therefore Not Included in the Totals Given on p. 4605.

	Entries on summary sheet not included in the total amount to—		
Summary sheet No.	Length.	Size.	Error. Against company.
7 A	5975.66 ft.	10 in....................................	5975.66 ft.

Volume No.	Schedule No.
7	125

The entries credited to Map 142 on the Summary Sheet, should really be credited to Map 141, as proved by checking from the Detail Schedule. The mains appearing on the Detail Schedule—and belonging to Map 142 do not appear on the Summary at all. This is an error against the Company of:

3569.63 ft. of 6 in.
1742.40 ft. " 8 in.
50.51 ft. " 12 in.
1352.98 ft. " 30 in.

6715.52 ft.................................... 6715.52 ft.

Volume No.	Map No.	Schedule No.
4	77	82

The active 4-inch main is entered but not totaled on the detailed schedule. It amounts to 2,087 feet (about).

The 4-inch disused main is 987.86 ft. and this is shown on the summary sheet as active.............. .... 1,097.14 ft.

5443

Volume No.	Map No.	Schedule No.
5	90	92

The active 3-inch main appears on the detailed schedule as 1135.49 ft., and the disused 3-inch main as 769.80 ft. The disused length is shown on the summary as the active main.. 367.69 ft.

The main mileage given on page 4605 of the testimony does not agree with the totals as taken from the summary sheets, as shown by the following table:

Size of main.	Total length as given in tesmony p. 4604.	Total length as taken from the summary sheets and added.	Difference.	
2 inch......	3,969.60	3,969.60		
3 “	138,057.22	138,057.24	.02	
4 “	477,561.87	478,601.87	1,040.00	
5 “	430.27	430.27		
6 “	1,945,509.85	1,957,798.85	12,289.00	
8 “	468,847.20	468,832.15		+ 15.05
10 “	69,635.34	69,859.68	224.34	
12 “	305,248.17	305,248.17		
16 “	82,094.15	82,869.15	775.00	
18 “	32,771.97	33,834.72	1,062.75	
20 “	143,368.16	147,202.60	3,834.44	
24 “	35,391.73	36,279.88	888.15	
30 “	140,233.42	140,233.42		
36 “	19,163.95	19,163.95		
			20,113.70	
		less......	15.05	
				20,098.65

Total error against the Company in the above noted cases........................... 43,745.26 feet.

5444 Q. And the errors shown on this sheet, which you have just presented, amount in total, do they not, to 43,745.26 feet, or something like eight miles, isn't it, or a little over?

A. Yes, sir; 43,745.26 feet.

Q. Now, you have another table, haven't you, relating to this subject?

A. Yes.

Q. Will you state what it is? What is this first table you have before you?

A. It is a summary of the errors made by Mr. Marks in giving the length of the mains.

Q. As to the mains, so far as you examined?

A. Yes, sir.

By the MASTER:

Q. You mean a recapitulation of the statements already made here?

A. Yes, sir: The summary is as follows:

5445 The mains, active and disused, as given by Mr. Simpson, at Oct. 31st, 1905, amount to a total of			4,344,849.00

Mains scaled from Maps by Prof. Marks.

Active	3,862,282.90		
Adding disused at Oct. 31st, 1905	147,158.00		
		4,009,440.90	

Adding for

Maps 118, 119, 120, 121, 122—five in all—not scaled by Prof. Marks (see sheet)		128,051.00	
Some of the mains omitted from Prof. Marks' exhibits (see sheet)		11,110.00	
Some of the mains incorrectly scaled by Prof. Marks (see sheet)		6,166.90	
Prof. Marks allows for the Bronx (see page 4605)		29,111.00	
Some of the errors noted in comparing the detail schedules with summary sheets (see list)		43,745.26	
			4,227,625.06
Leaving, according to Prof. Marks' statement, and not including other uncorrected errors, a difference of...			117,223.94

—which is equal only to 2.69 per cent.

Q. You now produce another sheet?
A. Yes, sir. It is as follows:

5446 The mains, active and disused, as given by Mr. Simpson, at Oct. 31st, 1905, amount to a total of			4,092,913.36

Mains scaled from Maps by Prof. Marks.

Active	3,862,282.90		
Disused	230,630 40		
		4,092,913.30	

Adding for

Maps, 118, 119, 120, 121, 122 (the pages omitted) 5 in all, not scaled by Prof. Marks. (See sheet)		128,051.00	
Some of the mains omitted from Prof. Marks' exhibits. (See sheet)		11,110.00	
Some of the mains incorrectly scaled by Prof. Marks. (See sheet)		6,166.90	
Prof. Marks allows for the Bronx. (See page 4605)		29,111.00	

(Prof. Marks' total did not include the Bronx mains, which are nearly six miles.)		
Some of the errors noted in comparing the detail schedules with the summary sheet (see list)......................	43,745.26	
		4,311,097.46
Leaving, according to Prof. Marks' statement, and not including other uncorrected errors, a difference of...		33,751.54

—which is equal to only 77/100 of 1 per cent.

Q. How does that differ from the table which has been placed on the record just before this last one?

5447 A. On this second sheet in place of the 230,630.04 feet of disused mains, I have taken only the disused mains that we are carrying on our books, amounting to 147,158.00.

Q. That is to say, in place of the disused mains given by Professor Marks, you have reduced that to the amount of disused mains we actually have on our books?

A. Yes. That brings the difference down to 117,223.94 or 2.69 per cent.

Q. That, of course, would increase the difference if you cut out a portion of the mains?

A. Yes.

Q. Leaving the active mains in each case as scaled by Mr. Marks and as they appear upon our records for the purpose of comparison?

A. Yes, sir.

Q. How near did Mr. Marks state to you that he thought he could come on scaling the maps to the exact mileage of the mains?

A. His exact words were, "I think I can come within 5 per cent. of it;" and my reply was, "You cannot come within 15 per cent."

Q. Isn't it the fact that since November 17th, 1906, when Mr. Marks made his examination, or began it, that mains have been added to the maps which were on the records of the company before that, but which had not been transferred to the maps?

A. Yes, sir.

Q. And does this schedule which you now present show what those were?

A. Yes, it does, and it is as follows:

5448 & 5449

Memo. of Mains Entered on Insurance Volume Maps Since November 17th, 1906.

Size.	Side.	Street or Avenue.	From—	To—	Feet. No. of.	Volume Entered in.	Vol-ume.	Map.
8 in..	East..	St. Nicholas Pl..	13 ft. N. N. C. 150th St............	6 ft. N. S. C. Edgecombe Ave.....	1,210	12/ 4/06	11	256
6 in..	North.	152nd Street....	8 ft. W. E. C. St. Nicholas Place...	30 ft. W. W. C. St Nicholas Pl...	62	12/ 4/06	11	256
6 in..	South.	136th Street....	18 ft. W. W. C. Convent Ave......	261 ft. W. W. C. Convent Ave....	243	12/ 4/06	11	243
6 in..	South.	157th Street.....	3 ft. E. W. C. Broadway...........	6 ft. E. E. C. Wall Riverside Drive.	534	12/ 4/06	11	260
6 in..	North.	170th Street.....	24 ft. W. W. C. Ft. Washington Ave.	310 ft. W. W. C. Ft. Washington Ave.	296	12/ 4/06	12	261
6 in..	South.	156th Street.....	4 ft. E. W. C. Broadway...........	4 ft. E. E. Wall Riverside Drive..	650	12/ 4/06	11	260
6 in..	North.	145th Street.....	237 ft. W. W. C. Broadway.........	368 ft. W. W. C. Broadway.......	131	12/ 4/06	11	254
6 in..	North.	35th Street......	3 ft. E. E. C. Lexington Ave.......	12 ft. W. W. C. 3rd Ave..........	440	12/ 4/06	4	74
6 in..	North.	45th Street......	10 ft. E. E. C. 1st Ave.............	362 ft. E. E. C. 1st Ave...........	362	11/19/06	4	3
8 in..	North.	54th Street......	W. C. Line 10th Ave..............	4 ft. W. E. C. 11th Ave...........	844	11/19/06	6	103
					4,772			

5450 Q. How many feet are there?
A. 4,472 feet.

By the **Master**:

Q. Those were not taken into account by you in making your examination?
A. No, sir.

Mr. **Page**: They were taken in by him when he gave his 822 miles.

The **Witness**: Certainly not. This is since I gave my testimony.

Mr. **Mathewson**: I am merely illustrating that the maps would not at any time exactly coincide with the record of the books, because there are mains in the books which have not been transferred to the maps, probably at all times, more or less.

Mr. **Burr**: I understand this is merely offered for the purpose of comparison. It is not now claimed that they have more miles of mains?

Mr. **Mathewson**: No. We are simply claiming the mileage of mains which appeared on October 31st, 1905, as Mr. Simpson has testified, but of course your measurements made last November must represent some little different mileage from that, undoubtedly.

Mr. **Burr**: That is an assumption of yours, isn't it?

Mr. **Mathewson**: It must be. I think it is a fair one, though. But as you attempted to attack the 822 miles we are meeting it in that spirit.

Mr. **Page**: Then I understand that these four thousand feet that you put in now were things that were on the books of the
5451 company and entered into the 822 miles, but had not been transferred to the maps.

The **Witness**: No, sir.

Mr. **Mathewson**: No, Senator.

Mr. **Page**: Then do you claim since October 31st that you have laid those additional mains which had not been transferred to the maps when Mr. Marks made his measurements, but have since been transferred to the maps? If that is so why should they enter into the calculation at all.

Mr. **Mathewson**: Yes, I think so. They do not enter into the calculation. All we are claiming is 822 miles which we had on October 31st, 1905, not including mains put in since, because we cannot follow it up to the very date, else we would never get through with this action.

Mr. **Page**: What are these mains added since? What does that show? If it had been added since and had not been put on the maps, or been added to the books since and added to the map since——

Mr. **Mathewson**: You do not understand the case, Senator. On the 17th of November when Professor Marks made his examination there were certain mains which had been laid and which appeared in the records of the Engineering Department. Those mains are not placed upon the maps until after they are laid and after they appear in the Engineering Department records, so you would always probably find by the company's records a few more mains than appeared on the maps, because they are not transferred to the maps for perhaps a week or a month after they appear in the record of the company. It is done at convenience by draughtsmen. That 5452 is the point. It is merely to illustrate the impossibility of the kind of a comparison, even from that standpoint, which Mr. Marks seeks to make in checking our book record of mains.

Mr. PAGE: Illustrations are all right, but testimony that certain additions were made or existed at that time, it seems to me, should be more comprehensive.

Mr. MATHEWSON: We will put it in, if you want it on the record.

By Mr. MATHEWSON:

Q. That is a correct statement, is it, Mr. Simpson?

A. It is a statement of mains entered on our maps since Professor Marks made his measurement, that is all it is.

Q. But those mains were in your books when Professor Marks made his measurements, were they not?

A. No, sir.

Q. None of them?

A. None of them. This is an alteration of the map since Professor Marks made his measurement.

Mr. MATHEWSON: Then in that view I do not see that it is material. It is not material for the purposes of a comparison.

Q. Isn't it a fact that there are frequently mains on the records of the company which have not yet been transferred to the maps?

A. There isn't a — where you wouldn't find them.

Q. So that an examination of the map, even if correct as to scale and everything else, would not show exactly the same figures as the books, as a rule? It would show a smaller figure, wouldn't it?

A. It might neither show it in any. These reports are sent in and it does not mean to say immediately they are received 5453 they are entered in the book or on the maps from the books. The draughtsman who enters them up might have important work on hand for a week before he could enter them and in that case they would not be on the maps, but the record would be in the office.

Q. But you would know what they were?

A. Yes, and the amount of mains we had at that time would be the book records plus the reports sent in and not entered on the books, if there were any.

Q. Now, Mr. Marks presented the schedule showing his estimate of cost of original installation of pipes according to the size?

A. Yes, sir.

Q. And he stated that in cases where mains were laid by contract that 15 per cent. should be allowed beyond the rate where they were laid by the company. Have you prepared a schedule showing the value of the mains, original installation, based upon Dr. Marks' figures, even deducting the disused mains and taking only the 795 miles of active mains?

A. Yes, sir.

Q. Is that the computation which you have in your hand?

A. Yes, sir. It is as follows:

5454 ESTIMATE OF INSTALLATION VALUE—OCTOBER 31st, 1905.

(Based on mileage at that date at Prof. Marks' prices.)

Size.	No. of feet.	Price per foot.	Amount.	
1½″	1,407			
2″	4,365	$ .925	4,037.63	
3″	222,741	1.07	238,332.87	
4″	557,469	1.22	680,112.18	
5″	2,799	1.42	3,974.58	
6″	2,129,088	1.625	3,459,768.00	
8″	528,040	2.095	1,106,243.80	
10″	71,286	2.41	171,799.26	
12″	321,536	2.937	944,351.23	
16″	98,901	3.78	373,845.78	
18″	29,633	4.28	126,829.24	
20″	178,803	4.757	850,565.87	
24″	45,956	5.645	259,421.62	
30″	131,583	7.71	1,014,504.93	
36″	22,242	9.695	215,636.19	
				$9,449,423.18

Deducting the mains disused at October 31st, 1905, calculated on Prof. Marks' prices as follows:

Size.	No. of feet.	Price per foot.	Amount.	
2″	125	.925	115.63	
3″	53,444	1.07	57,185.08	
4″	49,388	1.22	60,253.36	
5″	38,151	1.625	61,995.37	
6″	3,017	2.095	6,320.62	
10″	738	2.41	1,778.58	
12″	265	2.937	778.30	
20″	1,813	4.757	8,624.44	
24″	34	5.645	191.93	
30″	183	7.71	1,410.93	
				198,654.24
				$9,250,768.94

To which is added 15 per cent. of the cost of those mains laid by Contract....................................	433,753.53
	$9,684,522.47

The books of the Company carry this cost, including also the 27.871 miles of main disused but not abandoned, at only $7,852,151.03.

5455

MAINS LAID BY CONTRACT.

(Taken over at Consolidation.)

Size.	Feet.	Price.	Value.	
1½″	1,275			
2″	2,844	$ .925	$2,630.70	
3″	2,051	1.07	2,194.57	
4″	19,692	1.22	24,024.24	
6″	410,867	1.625	667,658.88	
8″	155,072	2.095	324,875.84	
10″	13,482	2.41	32,491.62	
12″	87,490	2.937	256,958.13	
16″	48,085	3.78	181,761.30	
20″	3,353	4.757	15,950.22	
24″	3,474	5.645	19,610.73	
30″	22,635	7.71	174,515.85	
				$1,702,672.08

LAID SINCE CONSOLIDATION.

(Up to October 31st, 1905.)

Size.	Feet.	Price.	Value.	
20″	19,085	$4.757	$95,068.65	
24″	7,039	5.645	39,735.15	
30″	108,765	7.71	838,578.15	
36″	22,242	9.695	215,636.19	
			$1.189,018.14	
				$1,189,018.14

Total	$2,891,690.22
15 per cent. of same	433,753.53

NOTE.—Based on mileage at Oct. 31st, 1905.

Prof. Marks' prices.

5456 Mr. PAGE: Is this a computation made up from Dr. Marks' testimony?

Mr. MATHEWSON: No, not entirely. It attacks his testimony as to certain elements, the cost of laying a main, and applies it to the 795 miles of active main, and also makes the addition for the mains laid by contract where the cost would be 15 per cent. more, and Mr. Simpson, I shall ask in a moment as to how that is made up, the contract part.

Mr. PAGE: Isn't that a matter for a brief, instead of testimony?

Mr. MATHEWSON: No, I don't think so. I think it is fair testimony.

Mr. Burr: It is merely a computation.

Mr. Mathewson: No, it is more than a computation.

Q. You know what portions of the mains of the company were laid by contract, do you?

A. I do.

Q. And Mr. Marks' testimony was that 15 per cent. should be allowed additional where mains were laid by contract to the figures that he gave?

A. Well, his testimony was that you must deduct 15 per cent. from the prices he gave because the mains were not laid by contract.

Q. Were some of the mains of the company laid by contract?

A. Yes, sir.

Q. To your certain knowledge?

A. Yes, sir.

Q. And have you included in this statement the mains that were laid by contract, by the figures which Dr. Marks gave for mains laid by contract?

A. Yes, sir.

Q. And the other mains, have you included at the figure which Dr. Marks gave for mains laid by the company and not by contract?

A. Yes, sir.

5457 Q. Isn't it a fact that some of the mains were laid by contract beyond those that you have included at contract prices in this schedule?

A. Yes, sir.

Q. Do you know exactly how much they were?

A. I do not.

Q. So you have not attempted to include or estimate?

A. I have not attempted to include those.

By Mr. Page:

Q. Where you state mains have been laid by contract, is the amount that is entered upon this schedule the exact amount of the contract price as paid by the company?

A. No, sir. I have taken Professor Marks' price here. You see it shows on the top.

Mr. Page: I object to this then. It does not seem to me as relevant or material in any way.

The Master: I allowed some testimony the other day for the defendant which was very much of the same general character as this, and therefore I will now allow this testimony.

Mr. Page: Irrespective of that point, if they wish to attack his estimate of contract price, why not do it by showing what the contract prices were?

Mr. Mathewson: We are not attacking them in any way.

Mr. Page: I would like to get a few facts and not have only an estimate as has been given so far as to the value of mains.

Mr. Mathewson: You seem to be trying to protect the City's witness.

Mr. Page: No, I am not. I am trying to get the evidence in in some shape where it will be of value.

Mr. MATHEWSON: Mr. Marks testified as to the cost of installation of different sizes of pipes. We have taken his own schedule and included as contract mains only the mains that we knew 5458 were laid by contract, and in that case we have included Mr. Marks' own figures for the amount where they are laid by contract, and we are showing upon his own figures that the cost of the mains is what they appear in this schedule.

Mr. PAGE: We now have in the case three different valuations of the same mains, given by this witness, for different purposes prepared. Now, if we are going to have something accurate as to contract price and laying mains, to rebut Mr. Marks, it seems to me, it should be the actual cost price, if you want to show that his price was wrong in any way.

The MASTER: I said I would admit it as I had admitted other similar testimony.

Mr. PAGE: Exception.

By Mr. MATHEWSON:

Q. And according to those figures of Mr. Marks, what would be the cost of original installation of these 795 miles of active mains?

A. $9,684,522.47.

Q. That is nearly two million dollars more, is it not, than the $7,852,151.03 at which the company carries on its books the 795 miles of active mains, plus 27.871 miles of disused mains?

A. Yes, sir.

Q. Referring to your map measurements again, on the map the mains are made to run in a straight line to appearances, are they not?

A. Yes, sir.

Q. Do they, in fact, run in straight lines through the blocks?

A. We try to run them in straight lines wherever we can.

Q. Is that in every case possible?

A. No, sir.

Q. You have to curve around man-holes and one obstruction or another?

A. Yes, sir.

Q. In every such case does it not give a greater length of main than would appear from the straight line on the map?

A. Yes, sir.

5459 Q. Even if the scale of the map were correct?

A. Yes, sir.

Q. Is it occasionally the case that they turn to go around man-holes, or, rather, thousands of such cases?

A. Without any question there are thousands of such cases to-day in New York.

Q. And is the construction around a man-hole more or less expensive than the construction of straight pipe to that same extent?

A. It is at least 50 per cent. more expensive.

Q. Did you find that any allowance for such things as that was made by Mr. Marks in his figures or schedules?

A. No, sir.

Q. Again, as to the disused mains on the map not abandoned, where a main is disconnected, it is indicated on the map, isn't it, by a scratching out?

A. By an erasure.

Q. The main is still there, isn't it?

A. In the case of those gaps, yes, sir.

Q. And the erasure merely indicates that the connection has been severed?

A. That the main is disconnected at that point.

Q. Did you observe whether, in measur-ng the maps, Mr. Marks or his assistants excluded these places where these erasures were?

A. I did, sir.

Q. As a matter of fact, mains are there, are they not?

A. Yes, sir.

Q. Did you yourself see the maps and measurements so that you know?

A. I saw Professor Marks' measurements.

Q. Now, about what proportions of these measurements of Mr. Marks' and these schedules from Exhibit 92 to Exhibit 103 did you examine in testing their accuracy?

A. Well, we went over between 10 and 20 per cent. of the maps in the volumes.

Q. You haven't been over then 20 per cent. of the schedules for the purposes of comparison?

5460 A. Certainly not more than twenty, and I don't think 20 per cent. even.

Q. Supposing the same ratio of error continued throughout the balance of the schedules as you discovered in the 20 per cent. you examined, how would that bring out the totals of mains as compared with the actual mileage of the company?

A. I think Professor Marks would give us more mileage than we actually claim.

Q. Fifty or one hundred miles, in the same ratio?

A. Yes, sir.

Mr. Page: What do you complain of, if he gives you more mileage?

Mr. Mathewson: We do not. We are pleased with the whole situation ourselves.

At 12:55 p. m. a recess was declared for lunch until 2:15 p. m.

5461 After Recess.

Colin C. Simpson resumed.

By Mr. Mathewson:

Q. In referring to these valuations which have been the subject of attack by the defendants in their testimony, is the price of pipe to-day higher or lower than it was when you made the computations which were attacked, that is in 1906?

A. It is a great deal higher.

Q. And if the mains were to be computed on the cost of reproduction to-day it would raise your $12,656,000 how much, perhaps?

Mr. **Kirby**: I object to this, Your Honor.
Mr. **Mathewson**: Well, all right.

Q. It would raise it on the basis of present prices, would it not?
A. At least 15 per cent.

Mr. **Kirby**: And next year it might be 20 per cent. lower?
Mr. **Mathewson**: Precisely. I am merely showing that the tendency of materials is upwards.

Mr. **Kirby**: And the tendency of mechanical devices is downwards, which equalizes the cost.

Q. Now, having disposed of Mr. Marks, or, rather, his testimony, let us look at Mr. Edgerton's testimony for a few moments. The testimony to which I am directing particular attention begins at page 4,033, with regard to the depth of mains, pages 4,033 to 4,035. Mr. Edgerton says that he has found a shallow main a preventive of trouble in services rather than adding to it. Have you had any such experience as that a shallow main prevents trouble with services?

A. I have had the opposite experience.

5462 Q. Did you ever hear the theory advanced until Mr. Edgerton gave it?

A. Never.

Q. What is the experience of the company with its services in the City of New York in cold weather?

A. That the shallower a service is, the more trouble we will have from it, and the deeper a service is, the less trouble we will have from it.

Q. Was the winter of 1903-'04 a particularly severe winter, do you remember?

A. 1903-'04? No, I do not remember. 1904-'05 I remember.

Q. Was there not a severe winter two or three years ago?

A. 1904-'05 was a very severe winter.

Q. Did you find it necessary in many cases during that winter to take up the pavement and thaw up the ground around your shallow services?

A. Yes, sir.

Q. Where the services were deeper, did you have as much trouble?

A. No, sir.

Q. What do you say to Mr. Edgerton's statement that frost does not interfere with service pipes when the mains are shallow, or does not so seriously affect them?

A. Well, I do not agree with him at all.

Q. Do you know of any city where it is the custom to lay shallow service pipes in a high altitude, in order to take advantage of the cold, so to speak?

A. I never heard of the theory before. I have heard the opposite.

Q. In regard to lamp risers, what is your experience as to the number of lamps frozen out in cold weather in New York?

A. It has been common in severe winters in New York during a prolonged cold snap to have absolutely thousands of lamps out in one night.

Q. And is it necessary to keep a large gang of men continuously at work thawing out these frozen stand pipes?

A. Not only a large gang, but large gangs of men in every district.

5463 Q. By stand pipes you refer to risers, as Mr. Edgerton calls them?

A. Risers.

Q. What is the cover at which the mains are laid in Manhattan, if possible?

A. They average, the Consolidated mains average a cover of 2 feet 9 inches.

Q. And how deep do you lay them where you can do so?

A. From four feet to three feet six inches; the minimum I allow when it is possible to lay them at that depth is three feet six inches.

Q. Is it possible in the island of Manhattan to adhere to any fixed rule as to depth?

A. No, sir.

Q. Why not?

A. On account of the multitude of sub-surface structures.

Q. In this very severe winter of two or three years ago what was the condition of the ground as to depth of freezing as compared with the normal year?

A. The frost that winter reached in places four feet three inches deep, which is deeper than I have ever known it in Manhattan before in my twenty-five years' experience.

Q. And the average winter is how deep?

A. Last winter it did not reach twelve inches.

Q. But the average is not over two feet six inches, is it?

A. It is generally a very severe winter when it reaches three feet in depth.

Q. So that in the average winter the mains are not frozen, that is to say, the frost does not extend down more than to the top of the mains, does it?

A. No, sir.

Q. Isn't it true that during this severe winter of two or three years ago the pipes of the company were frozen throughout substantially the whole winter, that is the frost below the pipes and the pipes surrounded by frozen earth?

A. There was, I should say, at least 80 per cent., between 70 and 80 per cent. of our mains were surrounded by frozen earth, mains and services.

5464 Q. Now, Mr. Simpson, in this severe winter, when your mains were frozen up, according to Mr. Edgerton's theory, as I understand it, that that should produce some precipitation of moisture so you would have less trouble with the services than usual, what is the fact? Did you have less trouble during that winter or more trouble than usual with your services?

A. I don't quite understand the question, Mr. Mathewson.

Q. (Question read.) In other words, did you have more trouble or less trouble with your services the year that your mains were frozen up with frost four feet deep, or did you have less trouble than you do when the mains are not frozen up?

A. No, sir, the deeper the frost got the more trouble we had, and the climax came when the frost got down to four feet three inches deep, the most trouble of all.

Q. Then what was the condition as to your services?

A. Then they were freezing by the thousand.

Q. And you did not find the fact that at the mains were embedded in frozen earth was helping your services at all?

A. Not one bit.

Q. Do you know at what depth the mains in the City of Montreal were to be placed according to Mr. Bemis' estimate?

A. I know from my own knowledge; I have been out there and have seen them.

Q. Well, what?

A. They do not allow any main to be laid less than four feet to four feet six inches, and where they can get deeper they do it; when they can get to six feet they do it.

Q. On account of the temperature?

A. On account of the frost in the ground.

Q. Now, Mr. Edgerton, at page 4037 says in general that he has followed the cost of digging trenches in which to lay pipes, and the refilling of the same in detail. Does his description or theory apply, or can it apply, to pipes in large places and under New York conditions?

A. No, sir, it cannot.

5465 Q. Would a situation that would apply in Danbury or Asheville apply in New York City at all?

A. It might in some instances; I don't know——

Q. As a general proposition?

A. As a general proposition it would certainly not.

Mr. Kirby: The witness is not familiar with the peculiar conditions of Danbury, I suppose?

Mr. Mathewson: Well, he is with small places in general.

Q. In laying such large pipes as this company is laying, thirty-inch, thirty-six-inch and forty-eight-inch, you require, do you not, derrick men and large derricks and other material that you do not require in laying smaller mains?

A. Yes, sir.

Q. Now, Mr. Edgerton in his estimate of pipe referred to the cost of pipe laid beside the ditch. Are you permitted in New York City to lay your pipe beside the ditch while you are opening the ditch on one side of the street?

A. We are not allowed to cart any pipe into the street until we have a permit, and our permit is issued on the condition that we commence work within twenty-four hours after the receipt of the permit.

Q. Where do you have to place your pipe when you open a trench on one side of the street?

A. On the opposite side of the street.

Q. And it cannot, therefore, be delivered at the trench, but has to be rolled across the street when you get ready for it, is that right?

A. Yes, sir.

Q. Are you permitted to open a trench of unlimited length in New York City?

A. No, sir; we are limited to six hundred feet.

Q. That is less than three blocks.

A. Two blocks. Two blocks is five hundred and twenty feet.

Q. Are you entitled to open more trench until that is filled?

A. No, sir.

5466 Q. Mr. Edgerton said he had made no allowance, so I understood it, for bridging. What is true as to bridging in laying mains here?

A. Mr. Edgerton did not mention anything about bridging.

Q. Very good. Will you mention something about it?

A. We are required to keep open every street we cross, and in running a line up an avenue we have a street every two hundred and sixty feet, and to keep that street open we naturally have got to bridge, bridge for both wagon traffic and for passengers.

Q. Did you find any allowance for bridging in Mr. Edgerton's estimates?

A. Not one cent.

Q. Now, in taking the length of pipe, Mr. Edgerton divides the length of three and four-inch pipe between what he calls old pipe of a certain weight and new pipe of a certain other weight. What is the fact as to that small pipe; is that new or are you laying that small pipe now?

A. I have been laying pipe for the Consolidated Gas Company for 25 years, and I have never used any other weight than what I have quoted in my testimony.

Q. But as to the size of pipe, are you putting in three, four or five-inch pipe now?

A. No, the only three or four-inch pipe I have laid in my time has been—it might possibly be called mains, but they are short lines down an alley or a courtyard, where there are three or four houses in the court or alley, a blind alley, we would run in place of a service pipe to supply these houses, and naturally a pipe that supplies four or five houses is called a main and not a service.

Q. But outside of that have you laid anything less than six-inch pipes since 1889?

A. No, sir; absolutely none.

Q. So that small pipes would all be old pipes?

A. All have been laid prior to my time.

5467 Q. Of course, it does not follow from that that the company is not using and cannot use three, four and five-inch pipe where it exists, to send gas through it?

A. Not at all.

Q. Of the thirty-inch pipe Mr. Edgerton assumed 60,000 feet to be old and 71,583 feet to be new, in estimating weights. As a matter of fact how much of that pipe was old, old before consolidation?

A. I can not give you offhand the only thirty-inch pipe that was in existence before consolidation.

Q. Just look and see the total. I do not care about the detail.

Mr. Kirby: What do you mean by the old and new?

Mr. Mathewson: I am assuming Mr. Edgerton's estimate. He said he estimated a certain amount was laid before 1884, when the lighter weights obtained.

Mr. Kirby: You mean lighter weights used prior to that date?

Mr. Mathewson: Exactly so.

The Witness: I can tell you offhand what thirty-inch main was laid before consolidation. The only thirty-inch was a thirty-inch main that ran from 109th Street and Second Avenue to Sixtieth Street and Second Avenue, through Sixtieth Street to Lexington Avenue; outside of that the Municipal Company had one on Forty-sixth Street which ran from the Municipal Works at Forty-fifth Street and Eleventh Avenue to Forty-sixth Street and Third Avenue.

Q. Well, it is not over 20,000 feet or such a matter?

A. It is less than 20,000 feet all told.

Q. Of old thirty-inch pipe?

A. Of old thirty-inch pipe.

Q. Of the thirty-six-inch pipe Mr. Edgerton gave 11,000
5468 feet as old and 11,242 feet as new. Is it not a fact that every
inch of that has been laid within the past three years?

A. A thirty-six-inch gas main was not known in New York up to three years ago. We laid the first one which was ever laid in New York.

Q. Mr. Edgerton has given in his computation or has assumed certain weights for pipe. Do you find that the weights for pipe which he assumed correspond with the actual weights of pipe that the company has employed?

A. In hardly a single instance does he agree with us at all.

Q. Have you prepared a schedule showing the size and weight of the pipe used in the Consolidated Gas Company?

A. I have.

Q. As compared with Mr. Edgerton's figures?

A. Yes. Shall I call them off?

Q. I do not think it is necessary. Supposing you say they are as follows:

The Witness: They are as follows:

Weights Per Foot of Cast Iron Pipe.

Size.	Con. Gas. Co. Includes hub.	Edgerton's Weights. Old.	New.
3-in.	13	11	12
4-in.	19	17	18
5-in.	0	0	0
6-in.	32	25	30
8-in.	44	38	44
10-in.	57	50	55
12-in.	74	58	72
16-in.	114	100	110
18-in.	136	120	130
20-in.	160	140	150
24-in.	215	185	200
30-in.	311	270	260
36-in.	425	360	360
48-in.	660	0	0

5469 Q. In other words, are the weights which Mr. Edgerton assumed in general smaller or larger than the weights the company has in the ground?

A. In practically every case they are a great deal lighter.

Mr. Kirby: So I may understand this exactly, are these weights of Consolidated Gas Company, including hub?

The Witness: Yes; including the hub.

Q. For what pipes are they, old or new?

A. There is no old and new. We make no distinction. We have used the same weight for twenty-five years. There is no such thing as old and new.

Q. I see you have opposite the forty-eight inch main 660 pounds for the Consolidated Company weight and zero for Mr. Edgerton's weight. Did he give any weight for that?

A. He did not give any weight for that. I may say we had no forty-eight inch mains in the ground as of October 31, 1905.

Q. Now, of the six-inch pipe alone, practically half of the company's mains are of that size, are they not?

A. Yes, sir.

Q. And what weight does Mr. Edgerton give for six-inch pipes?

A. He gives for old twenty-five pounds per foot, and for new thirty pounds per foot.

Q. Whereas the weight which company actually uses is what?

A. Thirty-two pounds per foot.

Q. And if you take the weight given by him of the new mains it shows a difference of two pounds, and that minimum difference would amount to more than 400——

A. 4,000,000 pounds.

Q. To more than 4,000,000 pounds on the six-inch mains?

A. Yes sir; four and one-half million pounds, about.

Q. Now, Mr. Edgerton suggested that the reason for the use of
heavier pipe, than he assumed was because pipe had become
5470 cheaper since it sold at \$60, or \$70, or \$80, prior to consolida-
tion. You say that there has been no change in weights?

A. In weights?

Q. Of pipe.

A. None.

Q. And what governs the weight of pipe which you require to put in the ground, the price of traffic conditions?

A. The weight is governed by external conditions that have to be contended with.

Q. Traffic conditions?

A. Traffic conditions, disturbance of the soil; as a matter of fact, with the things we have to contend with. If it was only a matter of internal conditions we could get along with stove pipe; it would be plenty heavy enough for our pressure.

Q. But, as a matter of fact, traffic conditions are burdensome in New York, heavy traffic?

A. Yes, sir. As a proof of that, in numerous cases we use thirty-six and forty-eight inch mains the same weight as water pipe is used, and I know of numerous instances in New York where thirty-six inch and forty-eight inch Croton mains have been broken, not by internal conditions, because the pipe is tested anywhere from 250 to 300 pounds to the square inch, and they never have any more than seventy pounds, and in every case it has been due to external conditions.

Q. Now let me ask you, Mr. Simpson, whether the company uses any heavier pipe than your experience and knowledge has taught you is necessary to meet these conditions in New York City?

A. It certainly does not. It uses pipe—the weight of pipe we are using to-day results from numerous conferences between the Chief Engineer, Mr. Bradley, other engineers in the gas business in New York City, and other men taking care of gas mains.

Q. From your knowledge of New York conditions and New York
traffic and the exterior conditions generally, would you con-
5471 sider it safe or advisable to put in lighter pipes than the com-
pany is now employing?

A. I would not consider it safe at all.

Q. Now, Mr. Edgerton at page 4,042 of his testimony, in explaining some discrepancies, as I understand it, stated he figured his calculations on the short ton at $28.90 and that you figured on the long ton at the same price. Is that correct?

A. No, sir.

Q. What is the fact?

A. I figured on a short ton in every case. In no part of my testimony did I mention the long ton at all.

Q. Have you prepared and have you here a statement of the weight of the Consolidated Gas Company's pipe in the ground by size, mileage and net tons?

A. Yes, sir.

Q. The total is how much?

A. 122,018.4 net tons or short tons. It is as follows:

Size.	No. of feet main.	No. of feet pipe.	Weight per foot.	Net tons
1½-in	1,407	1,436	7 lbs.	5.0
2-in.	4,365	4,456	10 lbs.	22.3
3-in.	222,741	228,866	13 lbs.	1,487.6
4-in.	557,469	572,799	19 lbs.	5,441.5
5-in.	1,799	1,849	26 lbs.	24.0
6-in.	2,129,088	187,638	32 lbs.	35,002.2
8-in.	528,040	542,561	44 lbs.	11,936.3
10-in.	71,286	73,246	57 lbs.	2,087.5
12-in.	321,536	330,378	74 lbs.	12,223.9
16-in.	98,901	101,621	114 lbs.	5,792.4
18-in.	29,633	30,448	136 lbs.	2,070.5
20-in.	178,803	184,391	160 lbs.	14,751.2
24-in.	45,926	47,551	215 lbs.	5,111.7
30-in.	131,583	136,152	311 lbs.	21,171.6
36-in.	22,242	23,015	425 lbs.	4,890.7
Totals..	4,344,849	4,466,407		122,018.4

5472 Q. And in your computation you have figured on the short ton delivered to the dock, plus any cost of handling and stacking, have you?

A. And delivering to the work—no, I beg pardon, not on the value of the pipe. The value of the pipe I have figured the cost delivered on the dock and the carting to the yard and the stacking in the yard.

Q. The cost of the pipe to you before you send it out to the ditch?

A. Before it is sent out to the ditch?

Q. Have you prepared a schedule showing the extent of the error of Mr. Edgerton as to the weight of pipe?

A. Yes, sir.

Q. Comparing each size?

A. Yes, sir.

Q. And is this it (handing paper)?

A. Yes, sir.

Q. The first is the summary and the second paper is the detail?

A. Yes, sir. It is as follows:

5473 *Difference in Weights of Pipe as Used by Consolidated Gas Company and as Calculated by H. H. Edgerton.*

Size.	Total weight as calculated by Mr. Edgerton.	Total Weight Consolidated Gas Co. Standard.	Difference.
1½			
2	74,820	100,273	25,452
5			
3	2,572,892	2,895,633	322,741
4	9,784,442	10,591,911	807,469
6	58,870,000	68,130,816	9,260,816
8	21,732,000	23,233,760	1,501,760
10	3,770,730	4,063,302	292,572
12	21,050,592	23,793,664	2,743,072
16	10,429,000	11,274,714	845,714
18	3,732,290	4,030,088	297,798
20	26,020,450	28,608,480	2,588,030
24	8,891,200	9,880,540	989,340
30	34,811,580	40,922,313	6,110,733
36	8,007,120	9,452,850	1,445,730
	209,747,116	236,978,344	27,231,228

27,231,228 lbs. at $28.90 net ton........................$393,491.13

5474 Edgerton's total weight of pipe, claimed to include the 1½ in., 2 in., and 5 in., and with his excess of 20,000 feet of 4 in. corrected, is given as (p. 4060) 104,873,558 net tons or 209,747,116 lbs.

Calculating the mil-age of old and new pipe as apportioned by him, and on his weights, as follows (exclusive of 1½ in., 2 in. and 5 in.):

Size of pipe.	New.			Old.		
	Number of feet.	Weight per foot.	Total weight.	Number of feet.	Weight per foot.	Total weight.
1½						
2						
3	122,741	12	1,472,892	100,000	11	1,100,000
4	307,469	18	5,534,442	250,000	17	4,250,000
5						
6	1,129,000	30	33,870,000	1,000,000	25	25,000,000
8	278,000	44	12,232,000	250,000	38	9,500,000
10	41,286	55	2,270,730	30,000	50	1,500,000
12	171,536	72	12,350,592	150,000	58	8,700,000
16	53,900	110	5,929,000	45,000	100	4,500,000
18	17,633	130	2,292,290	12,000	120	1,440,000

	Size of pipe.	New.			Old.		
		Number of feet.	Weight per foot.	Total weight.	Number of feet.	Weight per foot.	Total weight.
5475	20	98,803	150	14,820,450	80,000	140	11,200,000
	24	25,956	200	5,191,200	20,000	185	3,700,000
	30	71,583	260	18,611,580	60,000	270	16,200,000
	36	11,242	360	4,047,120	11,000	360	3,960,000
		2,329,149		118,622,296	2,008,000		91,050,000

Gives a total of

New	118,622,296
Old	91,050,000
Total	209,672,296

which deducted from the 209,747,116 lbs. leaves 74,820 lbs., which presumably represents the total weight of the 1½ in., 2 in. and 5 in., not calculated in the above because no weight per foot has been stated.

Calculating this 1½ in., 2 in. and 5 in. on our weights, as follows:

1½ in.	1,407 ft. at 7 lbs.	9,849
2 in.	4,365 ft. at 10 lbs.	43,650
5 in.	1,799 ft. at 26 lbs.	46,774
		100,273 lbs.

5476 Q. And what does that show as to totals, in a word?
A. The difference between the weight used by the Consolidated Gas Company and those used by Mr. Edgerton amount to 27,231,228 pounds.

Mr. Kirby: This is a calculation of the difference between the weight as given by Mr. Edgerton and the weights as given by Mr. Simpson?

Mr. Mathewson: Precisely.

The Witness: No, they are not the weights as given, but the weights actually used.

Mr. Kirby: The weights which you testify were used and the weights which Mr. Edgerton assumes?

The Witness: They are the weights we have used.

Q. Now, what have you got to say as to Mr. Edgerton's estimate of width of cuts required for different sizes of pipe?

A. The widths are entirely too narrow.

Q. Is it possible to lay pipe in cuts of that width?

A. In some instances which he has given, the cut does not allow us to put the pipe in the trench.

Q. As an illustration, what?

A. On the sizes of eighteen, twenty, twenty-four, thirty and thirty-six inch, with a sheathed trench, there is not room even for the barrel of the pipe to go between the ranges, let alone the hub.

Q. Have you any modification to make in your estimate as to the width of trench actually required, after reading Mr. Edgerton's testimony?

A. None whatever.

Q. Is it often possible to lay any size of pipe on any of the streets of the city without coming in contact with some other sub-surface structures running parallel with it, which necessitates alterations or widening of the trench?

5477 A. With a gas pipe it is not, because with the gas pipe you are given a position by the city and you must take that position whatever is in your way.

Q. So far as the salt water mains of the city are concerned, what is the rule as to other pipes?

A. They go where they please.

Q. And are you compelled to remove your pipes?

A. We are in every instance that comes in their way.

Q. Furthermore, as to the laying of salt water mains, or other pipes by the city, may they lay them and do they lay them down the middle of the street?

A. They are laying the salt water mains now in the middle of the street in many instances.

Q. Is the company permitted to lay its pipe in the middle of the street?

A. No.

Q. What do you say as to Mr. Edgerton's statement, that it is practicable to put small sizes of cast iron pipe, such as three and four-inch, together, before lowering them into the trench?

A. I never heard of it done before he gave his testimony.

Q. Would you consider it practicable in New York City?

A. I would not dream of trying it.

Mr. **Burr**: That does not answer the question.

The **Witness**: Well, I do not consider it practicable at all.

Q. It would be a little different proposition if you were using screwed wrought iron pipe?

A. Yes, sir, that is frequently done; the pipe is screwed together and lowered into the trench.

Q. But in New York the pipe of your company is cast iron?

A. Cast iron, hub and spigot pipe.

Q. If you were to try to do that, lower it into the trench after screwing it together, would it be necessary to rub every joint and employ more men than it would in laying it otherwise?

5478 A. It would cost a great deal more money than laying it otherwise. I do not believe you could lay it that way without having to re-caulk the joints.

Q. Would the cost be greater or less than laying it in the usual way?

A. It would be greater.

Q. What do you say as to Mr. Edgerton's assumption of sixty-seven cents as the price per cubic yard for cost of excavation?

A. We cannot get excavation done in New York City for that.

Q. Sixty-seven cents per cubic yard?

A. No, we cannot.

Q. Do you know that from experience?

A. I know that from experience.

Q. What are you paying at present for excavation?

A. We are paying on one contract to the contractor the actual price he is being paid by the city.

Q. What is that?

A. Ninety-five cents per cubic yard.

Q. That is on Ninth Avenue in connection with the alteration necessary to the gas pipes on account of laying the thirty-six inch Croton main, is it?

A. Yes, sir.

Q. Will you look at page 4051 of the testimony. Taking his width of trench and depth of trench as per his testimony on page 4051, his yardage of 900,126 cubic yards, plus 10 per cent. for bell holes, or a total of 990,140 cubic yards, that would be the total, would it not, in place of his 914?

A. He gives 990,000 yards, does he not?

Q. That total should be what?

A. According to my measurements it should be, in place of 990,140.3 yards, 1,623,626.18 cubic yards.

Q. Now, Mr. Edgerton states that he computes rock excavation at $6 a yard, and on page 4,061 in giving his final figures, he computes 74,252 yards of rock as costing $371,770. Is that computation made at $6 per cubic yard, which he states?

A. No, sir; at $5 per cubic yard.

5479 Mr. **Kirby**: It so states.

Mr. **Mathewson**: Precisely. He states on page 4,053 that rock excavation cost $6.00, and when he comes to compute he uses $5.00.

Mr. **Kirby**: I called attention to that error at the time Mr. Edgerton put in his testimony, that he used $5.00 and that was the basis of his computation.

Mr. **Mathewson**: Look at page 4,053 and see if he does not say $6.00.

Mr. **Kirby**: He did, and it was by reason of that that I, in opening the case on November 22nd, called attention to it and said it was $5.00 and not $6.00.

Mr. **Mathewson**: Very good, which is the unit that Mr. Edgerton actually desires to assume.

Mr. **Kirby**: He has used $5.00 in his computation, and if he says $6.00 he intended to say $5.00.

Mr. **Mathewson**: Do you mean to say the first $6.00 was a clerical error or did he change his views?

Mr. **Kirby**: Yes. He did not change his views.

Q. On page 4,061 Mr. Edgerton has expressed his views as to the amount of lead necessary and has stated the price which he assumes to be 5.75 cents per pound. Can lead be bought and handled for that money in New York?

A. It could not at the time Mr. Edgerton testified. The day before Mr. Edgerton testified we got quotations for the very trust lead that Mr. Edgerton quoted. Our quotations were 5.95 cents delivered in our yard.

Q. That excludes handling?

A. That excludes handling and storage and interest.

Q. And carting to the works?

5480 A. No, not carting to the works, but just the handling and storing in the yard and interset.

Q. What would you say would be a minimum cost of the lead, six cents, or more or less?

A. Six cents would be rather low than high.

Q. If you assume six cents per pound, and take your actual weight against Mr. Edgerton's assumed weight for lead, it would make a difference of how much for lead?

A. Mr. Edgerton figures a total of lead required for straight pipe and specials of 4,304,080 pounds at 5¾ cents a pound. Taking our actual weights as are being used to-day and have been used for the last twenty or thirty or more years, the weight of lead would be 6,542,015 pounds.

Q. A difference of how many pounds and how much in money—well, it would be a difference of how much in money?

A. $147,220.90.

Q. Do you use, Mr. Simpson, any more lead than your experience shows you is necessary?

A. We do not, sir.

Q. Now, referring to Mr. Edgerton's testimony on page 4062 as to the cost of laying pipe per running foot of the different sizes, what criticism have you to make of his figures in that regard?

A. On all sizes Mr. Edgerton is too low; he is especially low on the larger sizes, where he seems to have either disregarded the fact that a derrick gang is necessary or else has forgotten it.

Q. Have you here an actual statement of the cost of laying thirty-six inch mains from East One Hundred & Eleventh Street to West 131st Street?

A. I have.

Q. Will you state what the actual cost is in detail?

A. It is as follows:

5481 Thirty-six Inch Main from East 111th Street to West 131st Street Stations; length, 12,254 feet; laid in 1904.

The total cost of yarning, running and caulking the joints* on this line was $5,920.90, an average cost per foot of	$.4832

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*The number of joints on this line was 1,208, an average of one joint every 10.14 feet. This is a transfer main, direct between the stations, with no connections en route, and the total number of joints is much less than would be the case with a distribution main, having specials set in at the intersecting streets.

Rolling the pipe to the skids, lowering it into the trench, entering, leveling and blocking up required force of,

8 pipe and derrick men, $2.25 each	$18.00
2 men entering, levelling and blocking, $2.25 each	4.50
1 pipe and derrick foreman, $3	3.00
A total per day of	$25.50

This gang was engaged in the actual work of laying pipe for 133¾ days, equal to a total cost — $3,410,625 for 12,254 feet, or a cost per foot of	$.2783
Making a total cost per foot for laying and caulking of	.7615
As against Mr. Edgerton's estimate of	.2920
A difference per foot of	.4695

Q. Have you prepared a statement showing the difference upon Mr. Edgerton's figures as compared with the facts in laying the different sizes of pipe from six inches to thirty-six inches?

A. Yes, sir.

5482 Q. According to the mileage of the company?

A. Yes. It is as follows:

Mr. Edgerton's estimated cost per foot for laying and caulking pipe are much lower than this work can be done for in New York City.

Size.	Edgerton's price.	Cons. Gas Co. price.	Diff.	No. of feet.	Amount.
6	.043	.065	.022	2,129,088	46,839.94
8	.045	.089	.044	528,040	23,233.76
10	.0582	.105	.047	71,286	3,350.44
12	.0647	.152	.087	321,536	27,973.63
16	.0890	.220	.131	98,901	12,956.03
18	.1040	.265	.161	29,633	4,770.91
20	.1253	.320	.195	178,803	34,866.58
24	.1521	.425	.273	45,956	12,545.99
30	.2010	.570	.369	131,583	48,554.13
36	.2920	.762	.469	22,242	10,431.50

A total difference of.................................... $225,522.91

Q. Are you able to compare Mr. Edgerton's figures with actual bids to the city for laying pipe of similar size in connection with these water pipes?
A. Yes, sir.
Q. You might read it.

Mr. Kirby: What knowledge has the witness of actual bids to the city?

Q. What knowledge have you of actual bids to the city?
A. This was obtained from the city contract clerk.

Mr. Kirby: I object to it.
Mr. Mathewson: The city is a defendant.
Mr. Burr: What was the question?
(Question read.)
5483 Mr. Burr: Actual bids accepted by the city or merely proposals?

Q. Were they accepted by the city?
A. Bids accepted by the city.
Q. Will you state it?

The Master: Is your objection to the competency of it?
Mr. Kirby: My objection, in the first place, is that it is not the best evidence, and in the second place, it is not relevant.
Mr. Mathewson: I suppose it is subject to verification. The city is certainly able to cross-examine on that.
The Master: I will allow it. Of course, if you insist on having the records of the city contract clerk brought here or having that clerk to produce those things——
Mr. Kirby: No, I do not object to anything of that kind.
Mr. Burr: That, of Course, would be the best evidence, but I assume that Mr. Simpson is in a position to swear to the accuracy of what he is about to offer.
The Witness: I am not in this case, no sir.

Q. You had them got from the City Contract Clerk?
A. I had them got from the City Contract Clerk.

Mr. Burr: Then I object. If you bring some one here who got it from the clerk——

The Master: Yes.

The Witness: The man who got it is here.

5484 Mr. Kirby: We had to go to a great deal of trouble in bringing men down here from Danbury, who brought the oil down——

Mr. Mathewson: Do you object to it on this ground, Mr. Kirby.

Mr. Burr: I do not urge the technical objection, but I think at least you should have the man who got the paper from the Contract Clerk, to see that it is correct.

Mr. Kirby: Take it subject to that testimony, as we did.

Mr. Burr: Yes, subject to confirmation by this man who obtained it.

The Master: That is the best way to do it.

Mr. Mathewson: Very good, perhaps that is shorter.

Q. Now, will you state, Mr. Simpson?

A. For laying six-inch pipe, Bid A, 16 cents per foot; Bid B, 16 cents per foot; Bid C, 20 cents per foot.

Q. What is Mr. Edgerton's allowance for the same?

A. I haven't it here on this.

Mr. Kirby: Mr. Edgerton's allowance was for laying gas mains and not water pipes.

Mr. Mathewson: But it is the same thing, for laying.

Mr. Kirby: No, it is not the same thing.

The Witness: For twelve-inch Bid A, 20 cents per foot; Bid B, 35 cents per foot; Bid C, 40 cents per foot.

Q. That is simply for the laying?

A. Laying the pipe, that is all.

Q. That is labor per lineal foot?

A. Labor only, yes. That is all Mr. Edgerton gives. Mr. Edgerton gives the laying of the pipe and caulking, without any other consideration.

5485 Q. And the total including the labor per lineal foot, excavating and filling the trench per lineal foot, totals for the six-inch pipe, Bid A, 38.50; Bid B, 27.08; Bid C, 40?

A. Yes, sir; without paving.

Q. And the same as to the twelve-inch pipe, Bid A, 37; Bid B, 51, and Bid C, 66 cents?

A. Yes, sir.

Q. Also without paving?

A. Without paving.

Q. Have you the details showing the difference of $147,220.90 in the cost of the lead as between that actually used by the company and the weights used by Mr. Edgerton for lead?

A. Yes, sir. It is as follows:

5486 On Page 4062 Mr. Edgerton gives the weight of lead required for straight pipe		3,912,800 lbs.
plus 10 per cent. for lead in specials		391,280 lbs.
		4,304,080 lbs.
4,304,080 lbs., calculated at 5¾ cents lb		$247,484.60
As given in totals	$223,000	
+ 10 per cent	22,300	
		$245,300.00

Calculating on a joint every 10 feet (allowing for Specials), and on the weights per joint actually used by the Consolidated Gas Company, the total

Size.	No. of joints.	Weight per joint.	Total weight.
3	22,274	5	111,370
4	55,747	6	334,482
6	212,908	9	1,916,172
8	52,804	13	686,452
10	7,128	17	121,176
12	32,154	20	643,080
16	9,890	30	296,700
18	2,963	32	94,816
20	17,880	35	625,800
24	4,595	65	298,675
30	13,158	90	1,184,220
36	2,224	103	229,072
			6,542,015 lbs.

At 6c lb., or	$392,520.90
A difference of	$147,220.90

5487 Q. Now, on page 4,063 Mr. Edgerton states that he allowed $2.14 for carting earth from the trench without dumping. What is the actual cost?

A. Fifty cents a yard.

Q. And for carting and dumping together about $1 a yard?

A. Carting about fifty cents and dumping about fifty cents.

Q. So in that case Mr. Edgerton is more than twice as high as the fact, isn't he?

A. Yes, sir.

Q. Have you the figures showing what difference that would make?

A. Some eighty-six thousand dollars.

Q. Now, Mr. Edgerton calculates the cost of replacing asphalt at $2.75 per square yard. Do you know what the City allows per square yard for pavement over the salt water mains?

A. Yes, sir.

Q. How much?

A. $3.50 a square yard.

Q. On page 4,067 and following, regarding the widths of trenches for salt water mains, Mr. Edgerton has selected some cases and presented them here, but has he shown in any case the width of asphalt required to be paid for by the contractors?

A. I cannot find any case where he has shown it.

Q. Have you taken any measurements as to the width of trench for these salt water mains on your own account?

A. Yes, sir; a number of them.

Q. Have you them here?

A. I have.

Q. Have you prepared a tabulation of those you have measured?

A. Yes, sir, those that I measured personally.

Q. Is that it (handing paper)?

A. Yes, sir. It is as follows:

5488 *Measurements of Pavement Openings for Trench for Salt Water Mains, Taken by Mr. C. C. Simpson, November 23rd, 1906.*

Location.	Width of cut only.	Pavement, kind.	Size main.	Edgerton's.	
				Trench.	Repaving.
3rd Avenue, W. S. 45 ft. S. S. C. 14th St.......	9 ft.	Block...	24 in.		
3rd Avenue, W. S. 80 ft. S. S. C. 14th St.......	9 ft. 9 in.	Block...	24 in.	3 ft.	3 ft. 6 in.
3rd Avenue, W. S. 90 ft. N. N. C. 13th St.......	12 ft. 9 in.	Block...	24 in.		
3rd Avenue, W. S. 80 ft. S. S. C. 13th St.......	8 ft. 9 in.	Block...	24 in.		
3rd Avenue, W. S. 30 ft. N. N. C. 12th St......	7 ft. 2 in.	Block...	24 in.		
Narrowest bet. 12th and 14th Streets.					
13th Street, 20 ft. W. W. C. 3rd Ave...	7 ft. 6 in.	Block...	24 in.		
13th Street, 50 ft. W. W. C. 3rd Ave...	5 ft. 3 in.	Block...	24 in.		
13th Street, 80 ft. W. W. C. 3rd Ave...	5 ft. 4 in.	Block...	24 in.		
13th Street, 200 ft. W. W. C. 3rd Ave..	4 ft. 8 in.	Block...	24 in.		
12th Street, 25 ft. W. W. C. 3rd Ave...	4 ft.	Asphalt.	12 in.	2 ft. 4 in.	2 ft. 10 in.
17th Street, 280 ft. E. E. C. 5th Ave...	8 ft. 5 in.	Asphalt.	12 in.		
17th Street. 240 ft. E. E. C. 5th Ave...	8 ft.	Asphalt.	12 in.		
17th Street. 200 ft. E. E. C. 5th Ave...	4 ft. 6 in.	Asphalt.	12 in.		
17th Street. 165 ft. E. E. C. 5th Ave...	5 ft. 6 in.	Asphalt.	12 in.		
5th Avenue, W. S. 70 ft. N. N. C. 20th St.....	7 ft. 8 in.	Asphalt.	24 in.		
5th Avenue, W. S. 125 ft. N. N. C. 20th St....	7 ft. 8 in.	Asphalt.	24 in.		
5th Avenue, W. S. 50 ft. S. S. C. 21st St......	8 ft. 1 in.	Asphalt.	24 in.		

5489 Q. Now, this paper which you have just presented shows the actual width of cut which you measured as compared with the width of trench and repaving which Mr. Edgerton has assumed, does it not?

A. Yes, sir.

Q. For instance, I find the first one, the width of cuts, Third Avenue, west side, near Fourteenth Street, the width of cuts you measured was 9 feet, that is exclusive of any additional width in repaving, is it not?

A. Yes, sir, that is the actual width of the trench.

Q. What was the width allowed by Mr. Edgerton, three feet?

A. Three feet.

Q. Another one on Third Avenue near Fourteenth Street, the width is 9 feet 9 inches, is it not, against Mr. Edgerton's three feet again?

A. Yes, sir.

Q. And what is the width allowed by Mr. Edgerton in each of those cases? I see you have only put down the width once to cover a large number.

A. There are only two sizes of pipe given here, that is 12-inch and 24-inch, and 3 feet is the width for 24-inch and 2 feet 4 inches for a 12-inch pipe.

Q. Assumed by Mr. Edgerton?

A. Yes, sir. You will see these are all 12-inch where this starts, and these are all 24-inch, the three-footers (indicating).

Q. Mr. Edgerton criticises the width of a cut which you allow, and I want to ask you whether in actual fact the width that you allow is as much as the charges of the Asphalt Company which you have paid on the average?

A. The width of trench repaving that I have allowed falls in a great many cases far short of what we have had to pay the asphalt companies.

Q. And on the average?

A. Even on the average I think it is rather below it than above it.

Q. Referring to the 30-inch main which the company is laying in 136th Street from Lenox Avenue to Seventh Avenue, a 5490 distance of 750 feet, what have you to say as to the facts shown there as against Mr. Edgerton's estimate?

A. That was a main which was laid some years ago, it is not being laid now.

Q. Yes, laid some years ago.

A. The asphalt paid for by the Consolidated Gas Company measured 5.9985 feet in width, as against Mr. Edgerton's estimate of 4.1 feet.

Q. Now, have you any photographs here of these trenches which you measured or any that you examined, referring to the salt water mains regarding which photographs and measurements were presented by the defendants?

A. Yes, sir. The first one I have was taken on Third Avenue, between Thirteenth and Fourteenth streets, the first item on that sheet.

The width is on the back, and our width of trench and Mr. Edgerton's width of trench is given.

Q. Just state the width.

A. On Third Avenue, west side, 45 feet south of south curb of Fourteenth Street, actual width is 9 feet for a 24-inch salt water main. Mr. Edgerton's trench width 3 feet; the Consolidated Gas Company's width 5 feet for that size pipe. I might say that that is a 6 foot rule I am holding.

Q. And that is a temporary pavement?

A. That is a temporary pavement, that is pavement just put down, hand-paved, over the actual trench.

Q. As a matter of fact, is the repaving done by the city or by the asphalt company immediately after the gas company fills its trench, on putting down a gas pipe?

A. No, some of the cases Mr. Edgerton testified to in his testimony months ago have not been repaved yet.

Q. What is the effect of leaving these trenches with temporary pavement which the gas company has to put over the trench
5491 awaiting the final repaving on the edge of the trench?

A. Both edges of the trench are worn away.

Q. And broken down?

A. And broken down, and it is necessary to repave a wider trench than otherwise would be necessary.

Mr. Mathewson: I offer that in evidence.

Photograph received and marked Complainant's Exhibit 271.

Q. Does this correctly represent the width of the trench as shown by the temporary paving which is in the middle of the picture?

A. It does.

Q. Take the next one, Mr. Simpson?

A. Fifth avenue in front of No. 160. The cut varies in width from seven feet four inches to eight feet one inch for a twenty-four-inch salt water main. Mr. Edgerton allows three feet width of trench, and the Consolidated Gas Company five feet.

Mr. Mathewson: I offer that in evidence.

Photograph received and marked Complainant's Exhibit No. 272.

The Witness: This is Fifth Avenue between Seventeenth and Eighteenth Streets, the width of cut is nine feet ten inches for twenty-four-inch salt water main. Mr. Edgerton allows three feet, the Consolidated Gas Company asks for five feet, and there is the asphalt plainly shown there.

Mr. Mathewson: I offer that photograph in evidence.

Photograph received and marked Complainant's Exhibit No. 273.

Q. Take the next one.

A. Fifth Avenue, south curb of Twenty-first Street, width of trench, eight feet one-inch for a twenty-four-inch salt water
5492 main. Mr. Edgerton's width three feet; the Consolidated Gas Company five feet.

Mr. Mathewson: I offer that in evidence.

Photograph received and marked Complainant's Exhibit No. 274.

The WITNESS: The next is Third Avenue, west side, fifty feet south of south curb of Fourteenth Street, width of trench nine feet for twenty-four-inch salt water main. Mr. Edgerton allows three feet and the Consolidated Gas Company five feet.

Mr. MATHEWSON: I offer that in evidence.
Photograph received and marked Complainant's Exhibit No. 275.

The WITNESS: The next is Ninth Avenue, fifty feet north of the north curb of Sixteenth street; *twenty-* thirty-six-inch water main; width of trench seven feet three inches. Mr. Edgerton's width four feet; Consolidated Gas Company's six feet six inches. That pipe is now being laid and the trench is still open.

Mr. MATHEWSON: I offer that in evidence.
Photograph received and marked Complainant's Exhibit No. 276.

Q. What is the next one?
A. Third Avenue, west side, ninety feet north of north curb of Thirteenth Street. Width of trench twelve feet nine inches for a twenty-four-inch salt water main. Mr. Edgerton's width three feet; Consolidated Gas Company's five feet.

Mr. MATHEWSON: I offer that in evidence.
Photograph received and marked Complainant's Exhibit No. 277.

The WITNESS: Here are two photographs that belong in a
5493 pair. In the one case it is the trench that opens up on top,
and the other is the same location and shows the width to
which the trench had to be repaved when they got through.

Q. The first one showing the width on top refers to what place?
A. Gansevoort Street west of Hudson, twelve feet west of the west curb, looking east. Twelve-inch main.

Mr. MATHEWSON: I offer that in evidence.
Photograph received and marked Complainant's Exhibit 278.

The WITNESS: And that is the same place, but showing when they got through, that they had to repave that much.

Mr. MATHEWSON: I offer that in evidence.
Photograph received and marked Complainant's Exhibit No. 279.

Q. In other words, is it not true that the opening at the cut does not represent the full width of the opening down below, by reason of cave-ins and so forth, frequently?
A. In no case does the repaving have any reference at all to the width of the cut on top. With all the asphalt companies and all the Pacific and granite block pavement, if we open a cut two feet on top, and undermine the bank on each side, they allow for repaving it, repaving the entire width of the widest part of the trench, the same as shown in that case there. They are three or four feet wide, and they have to repave seven or eight feet.
Q. The last two exhibits you referred to?
A. Yes.

Mr. MATHEWSON: Perhaps we do not need to offer any others. We have some others.

5494 Q. You do not claim that every part of the trench for a salt water main is of this same width?

A. No, sir.

Q. But this is what goes to make up the average?

A. Yes, sir.

Q. And is it not true that cuts for putting down mains of any kind, as a rule, are ragged more or less and irregular, so that you have to cut out in repaving more than the width of the trench?

A. In connection with that, here is a very good proof of that in this photograph here.

Mr. Mathewson: I will offer that in evidence as illustrating the witness's statement.

Photograph received and marked Complainant's Exhibit 280.

Q. Describe the place, if you will?

A. Fifth Avenue, eighty feet south of the south curb of Nineteenth Street, twenty-four-inch salt water main. The trim for the asphalt on the west side is six inches and east side five inches, against Mr. Edgerton's allowance of three inches on each side. The actual width and the irregularity are not shown at all. It is taken just to show the——

Q. In other words, the measurement you have just given is in the narrow part where you saw the measurements made?

A. It only shows the width of the trim of the asphalt. This is the trim where it is trimmed off of the concrete five inches on one side and six on the other.

Q. Now, taking for a further example the large main laid downtown in 1904, before any investigation was had; the width allowed by Mr. Edgerton for the ditch would be 4.1 feet?

A. Yes, sir.

Q. And what was the actual width average of the repaving?

A. The actual width of repaving was 8.08 feet.

5495 Q. Or, in round figures, twice Mr. Edgerton's allowance?

A. Twice Mr. Edgerton's allowance, and more than what I called for.

Q. And do you remember what the average price of that asphalt pavement was there?

A. $3.44 per square yard.

Q. Have you any cuts or drawings, Mr. Simpson, illustrating the width of trench as compared with the size of the pipe which is being put in, allowing only the margin which Mr. Edgerton says is proper?

A. Yes, sir; they are big drawings. That is the full size drawing of the trench and pipe.

Q. To scale?

A. Well, it is the full size of the scale, you know. That is the actual size of it; the large circle is the hub.

Q. And the shaded circle is the——

A. Is the barrel of the pipe.

Q. What would be the width of the trench which Mr. Edgerton allowed?

A. 2.33 feet is the width given there—2⅓ feet.

Q. In sheathing that trench, how wide sheathing do you have?

A. I have allowed for two-inch sheathing, which is the smallest I or anybody else would use that knew about the business, and three-inch ranges.

Q. Is that the situation you frequently meet where you would have to use that sheathing?

A. Very frequently.

Q. Would the pipe go in that trench?

A. The pipe you see (indicating on sketch) would not pass the ranges.

Q. Would the hub of the pipe go in with the sheathing even if there were no ranges?

A. The hub of the pipe would not pass the sheathing even.

Mr. Mathewson: I offer this in evidence.

Received in evidence and marked Complainant's Exhibit 281.

5496 Q. Now let us see another pipe.

A. (Producing another sketch.) This is drawn to the full scale, twenty-inch pipe; two feet——

Q. The same result follows here?

A. The same result, that the barrel of the pipe would not pass inside the ranges, and the hub of the pipe would not go inside the sheathing.

Mr. Mathewson: I offer this in evidence.

Received in evidence and marked Complainant's Exhibit 282.

Mr. Mathewson: I will simply offer those other pipes, and I ask you to answer as to the thirty-six inch pipe.

Q. State about the blocking and wedges?

A. Mr. Edgerton has not allowed in any case one cent for blocking and wedging, which has to be used in every instance, especially on the larger sizes of pipes. All the sheathing and ranges are drawn to full scale.

The diagrams as to the twenty-four inch pipe, thirty inch pipe and thirty-six inch pipe are now offered in evidence.

Received in evidence and marked Complainant's Exhibit- 283, 284 and 285, respectively.

Q. (Indicating Exhibit 285.) This is the thirty-six-inch?

A. Yes, sir. There (indicating) is the line of the ranges, and there is the outside barrel of the pipe. You see there the entire distance between the outside of the pipe, and the hub is three inches, whereas the bottom or rammer takes up five inches, and no rammer could pass through there at all, and the barrel of the pipe even would not pass those ranges.

Q. So that you have to have a rammer to get down in there?

A. I have got to have room to put a man in there and use a rammer.

5497 Q. And there is about an inch left and no space at all left to put the rammer in?

A. That's it.

Q. Have you a rammer here?

A. I have.

Q. Let us see it, such as you would use for the thirty-six-inch main?

A. This (producing a long, wooden object) is a dummy rammer, actual measurement of the other one, and it is the standard rammer in this country to-day—in this city and country, which measures a little over five and one-half inches—five and three-quarter inches. It is round, you know.

Q. And that has to be used in what way?

A. That is used straight up and down like that for ramming (indicating). The tamping bar——

Q. How long is the bar?

A. This is the actual length.

Q. Well, about how long?

A. About five feet long.

Q. The man who rams has to get his rammer down at some sort of an angle?

A. Yes, the rammer is held at an angle like that (indicating).

Q. An angle of say fifteen degrees?

A. Pretty nearly forty-five degrees.

—. In order to ram it down thoroughly?

A. In order to get under the farthest barrel of the pipe.

Q. Now, this that you have produced is a regular rammer (indicating an iron implement brought into the room)?

A. A standard rammer as used by our company and practically all the gas companies in the country to-day.

Q. And the head of the rammer is circular?

A. Yes.

Q. What diameter?

A. Five and one-half inches full, or five and three-quarters.

Q. And the rod is an inch and a half?

A. About an inch and a quarter.

Q. You have to get that rammer in underneath the pipe?

5498 A. Underneath the lowest edge of the most extreme curve of the pipe.

Q. Mr. Edgerton spoke something about laying a pipe by pudding or puddling in connection with the relaying of the pipe. What is puddling in refilling?

A. Puddling is throwing in the earth loose, and then filling the cut with water, like a water settling of the earth.

Q. What do the rules of the Street Department or of the Department of Highways, whatever Department has charge in the City of New York, require as to refilling?

A. The rules themselves do not forbid puddling, but we have been repeatedly forbidden to puddle, and the rules themselves specify how the back fill shall be put in. I have got the regular rules here.

Q. Of the City of New York?

A. Yes, sir. "General Rules and Instructions for Opening and Refilling Trenches Made by Private Corporations and Individuals. Issued for the Guidance of Inspectors," by William Brookfield, Commissioner of Public Works. They have never been altered since; they are the same rules in force to-day.

Q. The Commissioner of Public Works in the City of New York?

A. Yes, sir.

Mr. Burr: I object to that as not competent evidence, not proper proof of the existence of those rules.

The Witness: They are in existence to-day.

The Master: For the sake of convenience in view of the witness' statement I will take it as it is, and then you can have formal proof submitted, Mr. Mathewson, if it is insisted upon.

Mr. Mathewson: We insist that this is proof. These are rules that have been delivered to us by the Department of Public Works of the City of New York, which have never been revoked.

5499 Mr. Burr: You are trying to prove the adoption of certain rules at a certain time and their continued existence up to a certain time.

Mr. Mathewson: No. A state of affairs once proved to exist is presumed to continue.

Mr. Burr: You have not proved they were legally adopted.

The Witness: I asked the question of Chief Engineer Olney of the Department of Highways three weeks ago, and he told me that puddling absolutely would not be permitted in any instance.

Mr. Burr: Exception.

The Master: I will dispose of it in that way. If it is insisted upon it will be easy enough to produce somebody here from the department.

Mr. Burr: Exception.

The Witness (reading): Rule No. 3. "The refilling of the trenches must be done in horizontal layers of from four to six inches, which must be thoroughly compacted by hand ramming until it is firmly and sol-dly replaced. There shall be two rammers to one shoveller, and in case the refilling is thrown in faster than it can be rammed, the inspector must stop the shovelling until the ramming is satisfactory."

Q. Is that a quotation from the rules delivered by Mr. Brookfield, Commissioner of Public Works of the City of New York?

A. Yes, sir; and embodied in my rules in my department, of which you have got a copy there.

Q. Have those rules ever been changed?

A. Never, sir.

Q. As to the depth of pipe required by the city, have you a proposal or bids or estimates issued by the City of New York in 1905, providing for the depth of pipe and the filling underneath?

5500 Mr. Kirby: What kind of pipe?

Mr. Mathewson: Water pipe.

Mr. Kirby: I object.

The Master: That is preliminary, I suppose. We will wait and see what is to be brought out.

A. I have.

Mr. Burr: As I understand, this paper handed Mr. Simpson is a blank proposal issued by the city to the contractors, and there is no evidence at all that it has any bearing upon the laying of gas pipes. It may have been for some special situation that the commissioner of that department was called upon to get specially for this form. No proof that whatever clause is in that proposal is a general clause adopted by all departments where laying of pipes is concerned.

Mr. Mathewson: Isn't it some evidence of what this city considers the proper depth below the surface of the pipe to free it from settlings of the surface?

The Master: No, I do not think so, Mr. Mathewson.

Mr. Mathewson: Very good. I understand the Master thinks it is not competent, and I therefore will not press it.

Q. At page 4089 Mr. Edgerton states he did not know it was ever necessary to go under sewers in laying gas pipes. What is the fact in the island of Manhattan?

A. It is very rarely we can cross an avenue to-day with any pipe larger than eighteen inch without having to go under one, and sometimes even three sewers.

Q. How deep do you sometimes have to go below the surface in cases of that kind?

A. Sometimes reach a depth of close onto or full twenty feet.

5501 Q. Now, certain testimony was presented here by Mr. Midgely, saying that he had measured the depth of a certain number of mains of the company at street corners, and he found these depths to be two feet to two feet and two inches, in certain cases, which were about one-third of the number of measurements that he made. Have you examined those instances in which he found the depth as little as I have stated?

A. I have not been on the spot.

Q. No, but have you examined this list?

A. Yes.

Q. Do you find every one of those to be at a street corner or crossing?

A. Yes, sir.

Q. What is the case at a street corner or crossing, which brings the pipe higher than the average, if it is brought higher?

A. Well, at practically every street crossing in Manhattan there is so much congestion that it is a question of taking any gas pipe of any account over everything, or under everything. There is no room to get through, and the practice with small pipes where you can still maintain some cover is to go over. With a large pipe where no cover could be maintained it is best to go under everything.

Q. And these are small pipe?

A. In every instance, except the twenty inches, small pipes.

Q. And would you consider that the fair average of the depth at which pipe is carried between streets?

A. It certainly is not.

Q. And the larger pipes, you say, have to go down under?

A. Down under everything.

Q. Is that the reason none of the large pipes are found here in these schedules?
A. Probably, yes.

Mr. Burr: I object to that answer. If he does not know, he can say so. And I move to strike it out.
Answer stricken out.
Mr. Mathewson: I will put the question in another way.

5502 Q. Would measurements of this character and of that depth reveal or disclose the larger and more expensive pipes that have to go underneath?
A. In very rare cases only.
Q. How about crossing avenues where electric companies are now operating with the underground trolley? Do you not have to go underneath?
A. Yes, sir.
Q. Mr. Edgerton at page 4,090 advanced a suggestion that in taking out rock, stone is salable. Is this the case as to such rock as you excavate in New York?
A. I have never sold a square inch. I never knew of a square inch of rock being sold from a trench in New York City.
Q. Is it of a character which is salable?
A. No, sir; it is not.
Q. Is it possible, in laying your mains here, to blast off rock in great masses, so that it can be sold for any purpose like building?
A. No, sir; it comes off, in every case in a trench of that character, in small pieces.
Q. Have you ever been able to sell the rock?
A. No, sir; never.
Q. Have you tried to make sales of rock and see what could be obtained for it?
A. We have always tried to get the cheapest price we could for having it carted away.
Q. Have you tried to sell it sometimes?
A. I don't remember having tried to sell it.
Q. Have you ever received any bid for it?

Mr. Burr: He says he never tried to sell it.
Mr. Mathewson: I ask, have you ever received any bid for rock of that kind?
The Witness: No, sir.

Q. Mr. Edgerton allowed nothing for the carting and dumping of the rock. The number of yards excavated by him at 5503 $1.00 a yard, how much would that amount to?
A. Fifty cents a yard for cartage and fifty cents a yard for dumping. $74,252.
Q. Mr. Edgerton, at page 4,105, made the suggestion that the asphalt company had made arrangements for repaving the trench for less cost than the contract price was here. Have you ever had any experience of that kind?
A. Never, sir.

Q. Has the company ever, during your experience, been able to pay a cent less than a contractor was allowed to charge by the City?

A. Never one cent.

Q. Have you produced here, accurate to scale, sketches showing the condition of certain streets in New York City at certain points?

A. They are all avenues at certain crossings; yes, sir.

Q. Showing the difficulties in the way of the crossing of the street with pipes of the Gas Company?

A. Yes, sir.

Q. How many of them are there?

A. I don't really remember how many there are.

Q. This one is Broadway and Bleecker Street, looking North?

A. Yes, sir.

Mr. Mathewson: I offer that in evidence.

Mr. Burr: One moment.

By Mr. Burr:

Q. Did you make these sketches yourself?

A. They were made under my supervision.

Q. From measurements taken by you?

A. No, sir; measurements taken under my orders.

Q. Can you specify, of your own knowledge, that the measurements appearing upon these charts or diagrams are correct?

A. I haven't any doubt but what they are correct.

Q. Can you swear they are correct?

Mr. Mathewson: I suppose every drawing you put in
5504 here was not drawn in every line by your witness, was it?

A. These drawings were all made by employés in my department, under my direction.

Q. Were you present when the measurements were made in each case?

A. I was not; no, sir.

Q. Therefore you cannot say that the measurements as they appear upon these charts or diagrams are correct dimensions or measurements. You believe they are, but you don't know, isn't that the fact?

A. I think that is right.

Mr. Burr: Well, I object to them.

The Master: If that objection is pressed I will receive them on the same understanding as before, and you will have to bring somebody here who made the measurements before you get through, Mr. Mathewson.

Mr. Burr: Exception.

Received in evidence and marked Complainant's Exhibit 286.

By Mr. Mathewson:

Q. What is this one?

A. West Broadway at Canal Street, looking North.

Mr. Mathewson: I offer it in evidence.

Received in evidence and marked Complainant's Exhibit 287.

Q. I will ask you as to all of these if you are yourself familiar from your records or data with the fact that the sub-surface structures appearing here are in the street, and with the general location of them—I mean in these various sketches?

A. Yes, sir.

Q. And, without exact exact measurements, do they conform generally to your knowledge of the situation there? 5505

A. My general knowledge only. Of course, I have no detailed knowledge of every corner.

Q. This is Broadway at Morris Street, looking north, isn't it?

A. Yes, sir.

Mr. Mathewson: I offer this one in evidence.

Received in evidence and marked Complainant's Exhibit 288.

Q. This one is Sixth Avenue and Fourteenth Street, is it?

A. Yes, sir.

Mr. Mathewson: I offer it in evidence.

Received in evidence and marked Complainant's Exhibit 289.

Q. This sheet is Third Avenue and Fourteenth Street, looking North, is it?

A. Yes, sir.

Mr. Mathewson: I offer it in evidence.

Received in evidence and marked Complainant's Exhibit 290.

Q. The paper you now present represents Fourth Avenue at Fourteenth Street, showing the subway going across the entire street from houseline to houseline, doesn't it?

A. Yes, sir.

Mr. Mathewson: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 291.

Q. Also this one shows Ninth Avenue at Fourteenth Street, looking north?

A. Yes, sir.

Mr. Mathewson: I offer that one in evidence.

Received in evidence and marked Complainant'e Exhibit 292.

5506 Q. And this is Twenty-third Street and Second Avenue, looking north, is it?

A. Yes, sir.

Mr. Mathewson: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 293.

Q. Referring to the last exhibit, Complainant's Exhibit 293, what room does that show for more pipe?

A. It shows that as far as the street is concerned between curb lines, that there is no room, unless one went under everything, to lay even a three-inch pipe and get any cover on it.

Q. And this paper you now show me is Second Avenue and Forty-second Street?

A. Yes, sir; the same conditions exist there.

Mr. MATHEWSON: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 294.

Q. These sketches or drawing which have just been offered are only a few of many that have been made under your supervision, are they not?

A. They are.

Q. And do they show generally and substantially similar conditions in various parts of the city?

A. At every crossing of every avenue in New York City, south of 125th Street.

Q. And these are merely illustrative that you have introduced?

A. Yes, sir.

Q. Now, referring to the testimony that you have just given, have you prepared in convenient shape the calculation showing the difference in cost of paving between the cost as the company has found it and Mr. Edgerton's estimate?

A. Yes, sir; it is as follows:

5507 Mr. Edgerton states (p. 4066) that "the cost of the asphalt and equivalent pavement was.........	$2,883,664.32
Based on 90 per cent of the mileage of each size, with an allowance of 6 in. over and above the trench widths stipulated by him, at $2.75 per square yard.	
Based on the above figures, the number of square yards (excluding the 1½ in., 2 in. and 5 in. pipe, which he claims has been included in his total, but which has been disregarded here because he gives no trench widths), would be 1,090,572.5 square yards at $2.75..	2,999,074.37
or, by his own figures, a shortage of........................	115,410.05
Calculating the repaving required on 90 per cent. of the mileage of each size, at the widths submitted by Mr. Simpson, and a cost of $3.25 per square yard, the total would be 1,448,744.3 square yards at $3.25..	4,708,418.98
Deducting Mr. Edgerton's figures as given on p. 4066, and above.................	2,883,664.32
A difference of for paving alone of.........................	$1,824,754.66

(The detailed calculation of these items will be found below.)

5508 CONSOLIDATED GAS COMPANY. MR. H. H. EDGERTON.

Size.	Total feet of trench.	Width of repaving.	Total square feet.	Width of trench.	Total square feet.
1½	1,407	2 ft. 6 in.	3,165.7		
2	4,365	2 ft. 6 in.	9,826.3		
3	222,741	3 ft. 0 in.	601,400.7	1 ft. 10 in.	367,455.8
4	557,469	3 ft. 0 in.	1,505,166.3	1 ft. 10 in.	919,656.6
5	1,799	3 ft. 0 in.	4,857.3		
6	2,129,088	3 ft. 0 in.	5,748,537.6	1 ft. 10 in.	3,512,356.5
8	528,040	3 ft. 6 in.	1,663,326.0	2 ft. 0 in.	950,472.0
10	71,286	3 ft. 6 in.	224,550.9	2 ft. 1 in.	133,447.4
12	321,536	3 ft. 6 in.	1,012,838.4	2 ft. 4 in.	674,260.9
16	98,901	4 ft. 0 in.	356,043.6	2 ft. 4 in.	207,395.4
18	29,633	4 ft. 0 in.	106,678.8	2 ft. 4 in.	62,140.4
20	178,803	4 ft. 6 in.	724,152.2	2 ft. 6 in.	402,306.7
24	45,956	5 ft. 6 in.	227,482.2	3 ft. 0 in.	124,081.2
30	131,583	6 ft. 0 in.	710,548.2	3 ft. 7¼ in.	426,328.9
36	22,242	7 ft. 0 in.	140,124.6	4 ft. 0 in.	80,071.2
			13,038,698.8 square ft.		7,859,973.0 square ft.

1,448,744.3 square yds.
at $3.25
$4,708,418.98

To which is added 90 per cent. of the total mileage, at a width of 6 in. .... 1,955,182.0 square ft.

9,815,155.0 square ft.

1,090,572.5 square yds.
at $2.75
$2,999,074.37

NOTE.—These calculations are based on 90 per cent. of the total feet of trench.

5509 The WITNESS: Mr. Edgerton, taking his average of trench width at $2.75 per square yard, allows $2,883,664.32. His figures would reach according to his own calculation $2,999,074.37, and taking his own width of trench and his own price at $2.75 per yard, or by his own figures, a shortage of $115,410.05. Taking this repaving at the width of trench as given by him and a price of $3.25 per square yard, it would amount to $4,708,418.98, or $1,824,754.66 in excess of Mr. Edgerton's figures.

Q. Your statement is now the summary of the detail which has been spread upon the record?

A. Yes, sir.

Q. Have you also prepared the figures showing the difference between Mr. Edgerton and the actual cost to the company as to excavation?

A. I have shown the difference between the figures of Mr. Edgerton's excavation and the figures as given by him in my testimony. They are as follows:

5510 CONSOLIDATED GAS COMPANY'S DIMENSIONS.

	Trench. Total feet.	Width.	Depth.	Cubic feet.
1½	1,407	2 ft. 0 in.	2 ft. 10½ in.	8,074.25
2	4,365	2 ft. 0 in.	2 ft. 11 in.	25,494.84
3	222,741	2 ft. 6 in.	3 ft. 0 in.	1,670,558.33
4	557,469	2 ft. 6 in.	3 ft. 1 in.	4,292,510.44
5	1,799	2 ft. 6 in.	3 ft. 2 in.	14,256.19
6	2,129,088	2 ft. 6 in.	3 ft. 3 in.	17,298,847.22
8	528,049	3 ft. 0 in.	3 ft. 5 in.	5,417,490.40
10	71,286	3 ft. 0 in.	3 ft. 7 in.	756,618.80
12	321,536	3 ft. 0 in.	3 ft. 9 in.	3,617,287.50
16	98,901	3 ft. 6 in.	4 ft. 1 in.	1,412,307.86
18	29,633	3 ft. 6 in.	4 ft. 3 in.	440,795.83
20	178,803	4 ft. 0 in.	4 ft. 5 in.	3,161,242.93
24	45,956	5 ft. 0 in.	4 ft. 9 in.	1,091,444.44
30	131,583	5 ft. 6 in.	5 ft. 3 in.	3,799,468.79
36	22,242	6 ft. 6 in.	5 ft. 9 in.	831,309.05
				43,837,906.87 cubic feet.
				1,623,626.18 cubic yards.

1,623,626.18 cubic yards
@ $.95

$1,542,444.87

	$1,542,444.87
	154,244.48
+ 10 per cent. for Bell Holes =	$1,696,689.35
Edgerton's total cost for excavation (900,126 cubic yards + 10 per cent. for bell holes) is 990,140.3 yds. at 67c. or....................................	663,394.15
A difference of....................................	$1,033,295.20

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5511 FIGURES USED IN EDGERTON'S CALCULATIONS.

Size.	Width of trench in feet.	Depth in feet.	Cubic yards per foot.
3	1.833—1 ft. 10 in.	2.25—2 ft. 3 in.	1.52
4	1.833—1 ft. 10 in.	2.33—2 ft. 4 in.	1.58
5			
6	1.833—1 ft. 10 in.	2.50—2 ft. 6 in.	1.69
8	2. —2 ft. 0 in.	2.66—2 ft. 8 in.	1.97
10	2.08 —2 ft. 1 in.	3.00—3 ft. 0 in.	2.31
12	2.33 —2 ft. 4 in.	3.20—3 ft. 2½ in.	2.76
16	2.33 —2 ft. 4 in.	3.33—3 ft. 4 in.	2.87
18	2.33 —2 ft. 4 in.	3.53—3 ft. 6 in.	3.04
20	2.50 —2 ft. 6 in.	3.80—3 ft. 9½ in.	3.52
24	3.00 —3 ft. 0 in.	4.00—4 ft. 0 in.	4.44
30	3.60 —3 ft. 7¼ in.	4.60—4 ft. 7½ in.	6.12
36	4.00 —4 ft. 0 in.	5.00—5 ft. 0 in.	7.14

TRENCH DIMENSIONS.

CONSOLIDATED GAS CO.			MR. H. H. EDGERTON.			
			Width.		Width.	
Size.	Width.	Depth.	Feet in decimals.	Feet and inches.	Feet in decimals.	Feet and inches.
1½ in.	2 ft. 0 in.					
2 in.	2 ft. 0 in.					
3 in.	2 ft. 6 in.	3 ft.	1.833—1	10	2.25—2	3
4 in.	2 ft. 6 in.	3 ft.	1.833—1	10	2.33—2	4
5 in.	2 ft. 6 in.	3 ft.				
6 in.	2 ft. 6 in.	3 ft. 3 in.	1.833—1	10	2.50—2	6
8 in.	3 ft. 0 in.	3 ft. 5 in.	2. —2	0	2.66—2	8
10 in.	3 ft. 0 in.	3 ft. 7 in.	2.08 —2	1	3.00—3	0
12 in.	3 ft. 0 in.	3 ft. 9 in.	2.33 —2	4	3.20—3	2½
16 in.	3 ft. 6 in.	4 ft. 1 in.	2.33 —2	4	3.33—3	4
18 in.	3 ft. 6 in.	4 ft. 3 in.	2.33 —2	4	3.53—3	6
20 in.	4 ft. 0 in.	4 ft. 5 in.	2.50 —2	6	3.80—3	9½
24 in.	5 ft. 0 in.	4 ft. 9 in.	3.00 —3	0	4.00—4	0
30 in.	5 ft. 6 in.	5 ft. 3 in.	3.60 —3	7¼	4.60—4	7½
36 in.	6 ft. 6 in.	5 ft. 9 in.	4.00 —4	0	5.00—5	0

5512 The WITNESS: Mr. Edgerton allows 900,126 cubic yards plus 10 per cent. for bell holes, or a total of 990,140.3 cubic yards at 67 cents a yard, against my measurements of 1,623,626.18 cubic yards at 95 cents a yard, which makes a difference between Mr. Edgerton's figures and mine, and which brings my figures $1,038,295.20 more than Mr. Edgerton's on the excavation of trenches.

Q. Your figures, you stated, are based on the fact?

A. On the trenches as we have dug them and made them for years.

Q. And you found it necessary to make them?

A. Yes, sir.

Q. Now, there is a crossing on avenues by a street every two hundred feet?

A. Every two hundred feet, yes, sir.

Q. And in view of these sub-surface structures that you find isn't it nearly always necessarily a case either of extreme width or of extreme depth, and often of both, in crossing those streets?

A. Yes, sir; in practically every instance.

Q. Have you also tabulated the figures showing the value, or cost of sheathing in the trench, which Mr. Edgerton did not include in his testimony?

A. Yes, sir.

Q. That deals with the larger sizes of pipes?

A. It is the value of sheathing left in the trench.

Q. And that amounts to how much?

A. $50,505.82.

Q. As left in the mileage of the company?

A. Left in the mileage of the company?

Q. Yes, that applies to the mileage of mains of the company?

A. No, it is just an additional expense in laying mains that Mr. Edgerton has not taken into account.

Q. Precisely. As applicable to the mains of the Consolidated Gas Company?

A. Yes, sir. The details follow:

5513 VALUE OF SHEATHING LEFT IN TRENCH.

Size of main.	Feet of board measure per lin. foot of main.	Price per 1,000 feet B. M.	Price per foot of pipe.	Number of feet.	Value.	
16″	1.750	35.00	.06125	98,901	$6,057.69	
18″	1.987	35.00	.06955	29,633	2,060.83	
20″	2.150	35.00	.07525	178,803	13,454.93	
24″	2.375	35.00	.08312	45,956	3,819.86	
30″	2.725	35.00	.09537	131,583	12,549.10	
36″	3.163	35.00	.11071	22,242	2,462.41	
					$40,404.82	
						$40,404.82
Plus cost of driving sheathing at $8.75 per 1,000 feet, Board Measure......................						$10,101.00
						$50,505.82

Q. Now, as an illustration on that, what about the thirty-six inch main between 111th and 131st Streets?

A. In this case we laid a thirty-six inch main in 1904 and were compelled to leave in the trench 38,766.75 feet of board measure of sheathing.

Q. Why were you compelled to leave it in the trench?

A. In some cases it is not wise to draw it on account of endangering the pipes of our own system or water pipes or something of the kind. In other cases, we are by the city forbidden to draw the sheathing. Then again, in that soil where you are down deep it is not wise to draw the sheathing because sometimes you have to dig up your main for some future purpose, it is well to have the sheathing in.

Q. Now, have you made a computation of the cost of sheathing which is not left in the trench?

A. Yes, sir.

Q. For the different sizes of pipe?

A. Yes, sir. It is as follows:

5514 Mr. Edgerton has made no allowance for the cost of sheathing, which on all pipe 16 in. diam. and larger, is necessary on 50 per cent. of the mileage and on sizes under 16 in., on 10 per cent. of the mileage.

Size.	10 per cent. of mileage.	50 per cent. of mileage.	Feet board measure per foot of main.	Total feet board measure.
6 in.	212,908		16.20	3,449,109.6
8 in.	52,804		16.87	390,803.5
10 in.	7,128		17.65	125,809.2
12 in.	32,153		18.60	598,045.8
16 in.		49,450	20.65	1,021,152.8
18 in.		14,816	21.28	315,295.1
20 in.		89,401	22.05	1,971,303.1
24 in.		22,978	23.50	539,983.0
30 in.		65,792	25.60	1,684,262.0
36 in.		11,121	28.10	312,500.0
				10,908,264.

10,908,264 feet at $20 per M. feet B. M. =	218,165.28
Labor, at $8.75 per M. feet B. M. =	95,847.28
	$314,012.56

This calculation is based on

Lumber at..................	$35.00	per M. feet.
Less salvage.........	15.00	" " "
Net cost...............	$20.00	" " "

Labor—Average rate $2.05 per day.

(The loss by cutting and wastage, the cost of pulling sheathing and carting to yard are allowed for in the Salvage Credit.)

5515 Q. It shows what?

A. That with our system to-day in New York City I have estimated the cost of sheathing at $314,012.56, deducting for any possible salvage we might obtain.

Q. Is that also from the company's experience and your own knowledge in that regard?

A. Yes, sir.

Q. Did you find that Mr. Edgerton made any allowance for blocking and wedges?

A. Not one cent.

Q. Have you made a computation of the cost of blocking and wedging?

A. Yes, sir.

Q. As to the Consolidated mains?

A. Yes, sir. It amounts to $40,784.17. The computation is as follows:

VALUE OF BLOCKING AND WEDGES.

Size.	Size block.	Size wedge.	Cost per lineal foot. Blocking.	Cost per lineal foot. Wedges.	Total.	Number of feet.	Amount.
3		14 x 2½ x 3 in.		.0053	.0053	222,741	1,180.53
4		14 x 2½ x 3 in.		.0053	.0053	557,469	2,954.59
6		14 x 2½ x 3 in.		.0053	.0053	2,129,088	11,284.17
8		14 x 2½ x 3 in.		.0053	.0053	528,040	2,798.61
10		14 x 2½ x 3 in.		.0053	.0053	71,286	377.82
12	1 ft. 4 in. x 3 in. x 6 in.	14 x 2½ x 3 in.	.0125	.0053	.0178	321,536	5,723.34
16	1 ft. 4 in. x 3 in. x 6 in.	14 x 2½ x 3 in.	.0125	.0053	.0178	98,901	1,760.44
18	1 ft. 4 in. x 4 in. x 8 in.	14 x 2½ x 3 in.	.0222	.0053	.0276	29,633	817.87
20	1 ft. 6 in. x 4 in. x 8 in.	14 x 2½ x 3 in.	.0250	.0053	.0303	178,803	5,417.73
24	1 ft. 6 in. x 4 in. x 8 in.	14 x 3 x 4 in.	.0250	.0100	.0350	45,956	1,608.46
30	2 ft. 0 in. x 4 in. x 8 in.	14 x 3 x 4 in.	.0334	.0100	.0434	131,583	5,710.70
36	2 ft. 6 in. x 4 in. x 8 in.	14 x 3 x 4 in.	.0417	.0100	.0517	22,242	1,149.91
							$40,784.17

Calculations based on

Spruce Blocking 37.50 per M. Board Measure.
Oak Wedges 14 x 2½ x 3 1.6c each.
Oak Wedges 14 x 3 x 4 3.0c each.
One block and two wedges to six feet of pipe.

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5517 Q. And have you made a computation as to the cost of bridging for which Mr. Edgerton did not make allowance?

A. That is only a rough estimate. It is what I consider would be a minimum, absolute minimum cost of the bridging of streets and hydrants necessary for the laying of our main system.

Q. That is how much?

A, $30,000.

Q. Now, have you taken Mr. Edgerton's estimate of the total cost of reproduction or replacing the mains of the Consolidated Gas Company as given on page 4,065, to wit: $8,919,792.55, and made additions to his calculation of the items in which he has erred or which he has left out?

A. Yes, sir.

Q. Is that it?

A. Yes, sir. It is as follows:

5518 Mr. Edgerton's estimate of the total cost of reproducing or replacing the mains of the Consol. Gas Co. is given as (p. 4066).....................			$8,919,792.55
The following items, on which he has made no calculation, should be included:			
Difference in pipe weights as estimated and as actually used..................	$393,491.13		
Plus 10 per cent. for special wastage, etc., as calculated by Mr. Edgerton...	39,349.11		
		$432,840.24	
Difference in asphalt pavements on both price and width	$1,824,754.66		
Difference in earth excavation, on price, width and depth.	1,033,295.20		
Value of sheathing left in trench, and labor at $8.75 per M ft. B. M....	50,505.82		
Value of blocking and wedges....................	40,784.17		
Difference in lead actually used and as calculated, both price and amount..	147,220.90		
Cost of sheathing trenches, 10% of mileage under 12", 50% over 12".......	314,012.56		
Difference in cost of laying and caulking, actual as against estimated.....	225,522.91		

Cost of bridging............	$30,000.00		
Cost of carting and dumping rock....................	74,252.00		
		$3.740,348.22	
		$4,173,188.46	
To which is added 10% for engineering supervision, and expense, cost of city inspection, interest on and wear and tear of tools and plant, possibilities of obstruction on streets which would delay the work, serious obstruction met with under ground, including sub-surface structures, clerical expense, suits for damages and other undistributed expenses..................		$417,318.85	
		$4,590,507.31	$4,590,507.31
			$13,510,299.86

5519 Q. And making these corrections, the cost of the reproduction of the mains instead of $8,919,792.55 would be how much?

A. $13,510,299.86.

Q. And that is nearly a million dollars more than your estimated cost of reproduction?

A. $900,000 more.

Q. That includes, however, the cost of carting and dumping the carting at $2.14 instead of your cost of carting and dumping at $1, and some other errors, which would reduce the total?

A. Yes, sir, and possible underestimates on my part.

Q. You mean in making up your total of $12,656,000 for reproduction?

A. Yes, sir, and in a good many cases I have been too conservative.

Q. Have you been dealing with pressure in mains and seen the effect of the pressure and of gas escaping from mains under pressure during the last twenty-five or thirty years?

A. I have, yes, sir.

Q. What have you to say as to the feasibility of distributing or putting gas through the City of New York under a pressure of twenty or thirty pounds as suggested by Mr. Edgerton?

A. I should be very sorry to have charge of the mains when we had such pressure as that, as he is dealing with.

Q. Have there been accidents to the mains of the company which have allowed the escape of gas within recent times?

A. A great many accidents to the mains with the present pressure we are carrying.

Q. Will you give me some illustrations?

A. The most recent one I recall was on October 13th at Forty-third Street and First Avenue. In that case the Consolidated Telegraph

and Electric Subway Company were laying a subway along one side of our twenty-inch gas mains. They fired an unusually heavy blast, it broke the mains and the gas immediately caught fire and blazed to the very top of the tenement houses alongside, and except for
5520 the promptness of our men—the watchman we had there was seriously burned and had to be taken away in an ambulance—and we had some men working around the corner a block away, and the superintendent of the district happened to be crossing First Avenue and saw the blaze from a mile away, and drove right down. So by a combination of circumstances, being ready, we were able to put the fire out nine minutes after it happened.

By Mr. PAGE:

Q. Do you claim that that was due to the pressure?

A. That was due to the gas in the main being ignited, and the pressure on the gas in that main was two inches or 1/14 part of a pound. Now, the only reason that the block was not put on fire was on account of the prompt work of our men who happened to be there. By the time we had the stoppers in and the gas turned off, the windows of the tenement house alongside and a saloon—the glass was all cracked and ready to break in. In another two minutes the windows would have gone, and the whole place also, and you wouldn't have been able to get near the place.

By Mr. MATHEWSON:

Q. What would be the result of an accident of that kind if the gas were coming through under a pressure of twenty or thirty pounds instead of 1/14 of a pound?

Mr. BURR: Objected to as being hypothetical. He has not shown he has any experience in the effect of gas explosions or the effect of fire arising, as he has testified in this particular instance in the gas mains. I do not think that is competent testimony.

5521 The MASTER: He testified he had some experience with escaping gas. I think it is permissible to ask him, as an expert, what in his opinion would be the effect of gas escaping under a greater pressure than such as he has seen.

Exception.

A. I know in this case here, with a pressure of two inches, the matter would have been very serious indeed if our men had not been on the spot and put it out. If the pressure was twenty pounds, or 560 inches, I don't know what would have happened. There was a hole in the side of the pipe four feet long by eighteen inches wide.

Q. Would that, in your judgment, have been a very serious situation, or wouldn't it?

A. I don't believe the firemen themselves could have got within 300 feet of the place, and nothing in the world could have possibly saved that block.

Q. Well, you saw the results of the explosion which took place in front of this building on Wall Street a short while ago, or of the settling of some pipes, or something like that?

A. Yes, sir.

Q. Would that same effect possibly have broken a gas pipe in settling?

A. It was just a chance that the gas pipe was not broken. If the gas pipe had been nearer to the break it would have broken. In this case we happened to lie closer to the curb, and the water main broke and our gas pipe did not.

Q. If the gas had been going through the main in Wall Street at the pressure of twenty or thirty pounds and it did break, would you apprehend serious consequences from that?

The Master: That is getting a little remote.

Mr. Mathewson: Very good.

5522 Q. Well, I will ask whether, in your judgment, from your knowledge of pressure and your dealings with it and observation of its effects, it would be possible, by any such system as Mr. Edgerton has outlined, to maintain the pressure even under his system at every point and at all hours, within a limit of two and one-half and one inch as he testified?

A. I am morally certain it would not be possible.

Q. Assuming, however, that mains were to be put in as suggested by him, and valves put in wherever possible in order to equalize the pressure, have you computed what would be the cost to-day of such a system?

A. I have.

Q. How much, in your judgment, would it cost to put that in?

A. Do you mean the exact figures?

Q. Well, about.

A. Over four million dollars.

Mr. Kirby: Are you going to leave it to me to prove all the details of these four million dollars?

Mr. Mathewson: No; not if you want the details.

Q. Is this the detail to which counsel has referred as making up your total?

A. Yes, sir.

Q. That involves valves where?

A. It involves in the first place section valves on all the main lines; it involves, of course, additional valves to shut off or confine the gas to certain areas. Probably the only pipe that could be used would be flanged steel pipe, we would have to use expansion joints every five hundred feet, or according to the conditions. We would not be able to take such runs of pipe; we would have to go down and around and under foundations so there would be an expansion joint required every five hundred feet. The detail is as follows:

5523 *IN RE* TO MR. E.'S SUGGESTED HIGH PRESSURE MAINS.

74,000 ft. of 24-in. flanged steel pipe at $10.00 per ft....	$740,000
Labor, cartage, laying, etc., on above at $15.00 per ft...	1,110,000
148 expansion joints at $800.00 each..................	118,400
74 section valves and vaults for same at $200.00 each...	14,800
36,550 ft. of 20.-in. flanged steel pipe at $7.00 per ft....	255,850
Labor, cartage, laying, etc., at $11.00................	402,050
73 expansion joints at $500.00 each..................	36,500
36 section valves and vaults for same at $150.00.......	5,400
14,660 ft. of 16-in. flanged steel pipe at $5.50 per ft.....	80,630
Labor, cartage, laying, etc., at $7.00 per ft............	102,620
30 expansion joints at $300.00 each..................	9,000
15 section valves and vaults for same at $100.00 each...	1,500
For additional trunk line leading from high pressure main to the various areas, and then "letting go" through governors to each district, allowing for 25 areas and a 16-in. steel main, 2,500 ft. long to supply each area:	
62,500 ft. of 16-in. flanged steel pipe at $5.50 per ft.....	343,750
Labor, cartage, laying, etc., at $4.50 per ft............	281,250
125 expansion joints at $300.00 each................	37,500
Connections, valves (other than section valves), governors and vaults for these valves and governors	50,000
5524 70,000 yards of new paving at $3.25 per yard..	227,500
Making a total of.........................	$3,816,750
Add for contingencies of all kinds, 10 per cent.........	381,675
Grand total..............................	$4,198,425

By Mr. **Burr**:

Q. What was that computation made by you?

A. By me; yes, sir.

By Mr. **Mathewson**:

Q. Mr. Edgerton testified he would use cast iron pipe. Would that in your judgment be the pipe to use if you were to try that experiment?

A. I would not use cast iron.

Q. Why not?

A. Because the same thing might happen as you had at First Avenue and Forty-third street. If you laid a pipe of that kind you would have to use every precaution possible, and using cast iron pipe would not be taking any precaution.

Q. You are not familiar are you, with any city where the gas is delivered to consumers in the city by running the mains around through the city under twenty or thirty-pound pressure?

A. No, sir; I am not. Of course, I know of instances of gas being delivered to small country towns through small high-pressure mains and then reduced inside the towns.

Q. Would the danger in such a town as that, even if introduced into the town, be as great as in New York City where we have this congestion of traffic, buildings, etc.?

A. Certainly not. In New York there are houses every foot of the way. In the country work you might have a house every mile or sometimes every two miles.

5525 Q. Let me ask you generally, aside from the possibility of maintaining the pressure between two and one-half and one inches at every point and at every time under Mr. Edgerton's system, would you consider that a safe or wise system to install under the pressures indicated in the City of New York with the conditions here existing—under pressures of twenty or thirty pounds?

A. No, sir; I would not consider it safe or wise.

Mr. Mathewson: I think that is all.

Cross-examination by Mr. Kirby:

Q. I take it that your statement headed "In regard to Mr. E's suggested high-pressure mains" that the cost as computed by you is your idea as to how those mains should be put down, where put down and how connected?

A. No, sir; I took the route suggested by Mr. Edgerton in his testimony. He suggested a main on the east side of the city and the west side of the city, and I took the only available avenues on the east and west sides.

Q. That is, you used no figures given by Mr. Edgerton except at his suggestion that there would be a main on each side of the town?

A. I used the size suggested by Mr. Edgerton, 24, 20 and 16. Twenty-four to start with, reducing to 20 and 16, and the location suggested by him.

Q. But the joints and valves and excavation, and the repaving and all matters of that kind are figures in which you have used your own——

A. I informed myself on the actual cost of the pipe, actual cost of expansion joints, valves.

Q. And this statement includes entirely your own figures on those matters?

A. Yes, sir.

Q. I notice here you se- out for contingencies of all kinds 10 per cent. I find no mention in the statement of any amount for sheathing or blocking and wedges, or sheathing left in the trench or matters of that kind? 5526

A. No, sir.

Q. Is that included in the 10 per cent.?

A. Yes.

Q. You have spoken of a certain accident that happened to one of the mains in which a pressure was maintained of about two inches. That accident was from an external cause, entirely, was it not?

A. Yes, sir.

Q. Suppose instead of being about 1-14 part of a pound pressure there, there had been, say 14-14, or a full pound pressure, what do you consider the consequences would have been then?

A. They would have been very serious indeed.

Q. The windows would have probably been melted, would they not?

A. They would.

Q. The tenements would probably have been on fire, would they not?

A. Yes.

Q. And there would have been grave danger?

A. Yes, sir.

Q. If the happy circumstances you refer to had not existed there would have been far more danger, would there not? If your workmen had not been on the job and your superintendent in sight of the conflagration?

A. It would have taken longer to put the fire out.

Q. Are there any mains of the Consolidated Gas Company in the city where as high a pressure as one pound is maintained?

A. There is one main in the city where that pressure has been maintained.

Q. And that is maintained every day, is it not?

A. No, sir.

Q. How often?

A. For two or three hours a night, in winter time, and then it is only for a very short time.

Q. What do you mean by the winter time?

A. Well, the months, from say, the middle of November—the first of November till the 15th of February about.

5527 Q. Have you ever made any experiments at all directed toward finding out how gases under as high a pressure as twenty pounds would act if an effort were made to ignite them?

A. I have not.

Q. Mr. Edgerton, in his testimony relative to the installation of a high pressure system, made reference to governors?

A. Yes, sir.

Q. Did you allow for the installation of governors in your estimate of the cost of the system which I have referred to?

A. I think I did.

Q. Are you aware that a governor is constructed which, when the pressure becomes lower than a certain point, that the gas is automatically shut off?

A. Not automatically shut off. You mean the pressure is automatically reduced.

Q. Automatically shut off?

A. Reduced.

Q. Reduced, and, in some instances, automatically shut off if the governor is so adjusted?

A. You mean the gas is put out altogether.

Q. I do.

A. It would be a pretty poor governor, I should think. I wouldn't want to use such a governor.

Q. A governor could be, and many of them are so adjusted, that on the sudden releasing of pressure the gas would be automatically shut off or brought down to a merely nominal pressure, is that not the fact?

A. I really do not quite understand your question. Do you mean that if you are trying to govern a certain district, or a certain town, and reduce the pressure from high pressure to low pressure, is that what you are talking about? That is, bring the gas up to the town under high pressure and reduce it to low pressure after it has reached town?

Q. Well, that is one kind of governor. We will assume that we have installed this high pressure system and that we have at various points on the main a governor which is so adjusted that if
5528 the pressure on one side of that governor was suddenly reduced that the governor would automatically close so as to prevent any great flow of gas from that side of the governor where the pressure was reduced. Now, I ask if you are not aware that such governors are made and are in use?

A. Wouldn't it necessitate the use of two governors acting simultaneously, or one would only act on the end the gas was coming from?

Q. It might.

A. Well, I am not familiar with a governor of that kind at the present time.

Q. But such would not appear to be either impossible or unusual?

A. You mean to say if your main was working under a pressure of twenty pounds and that main was broken and the gas escaping that the governor would shut itself?

Q. That is what I mean.

A. I don't know of any such governor, no, sir.

Q. It does not appear an impossible proposition to you, does it?

A. It is an improbable proposition to me. I do not say it is impossible.

Q. In other words, you could not employ an automatic shut-off valve to a gas main?

A. A governor passing gas at twenty pounds pressure would have to be opened up to let the gas go through, and stay open.

Q. Well, I won't argue the point with you, Mr. Simpson, I think it is very plain.

A. Well, I would be glad to answer the question if I could understand what you are trying to get at. I certainly am not trying to evade the answer.

Q. You have presented here a statement showing the estimated cost of bridging. Did you include such cost in your first estimate of the value of the mains of the Consolidated Gas Company?

A. I did, sir.

Q. Under what items did you include it?

A. Divided it up among the items of labor and material.

5529 Q. Didn't state it specifically, did you?

A. No, sir.

Q. Did you include that of blocking and wedging?

A. I did, sir.

Q. Where did you include that?

A. The same way.

Q. Did you include that as sheathing?

A. I did.

Q. In the trench?

A. Yes, sir.

Q. And left in the trench?

A. Yes, sir.

Q. Where was that included?

A. The same way, labor and material.

Q. Taking for example your statement in reference to the blocking and wedges, do I take it from this that you consider that every foot and every size of pipe has to have a block placed thereunder and wedges inserted?

A. Not every size. Every size of pipe has to be blocked in some way. In the smaller sizes we have no blocking only wedges. In the larger sizes we use wedges on top of the blocking.

Q. All pipes laid in the city have blocks laid thereunder?

A. Yes, sir.

Q. None of them are laid directly on the soil?

A. I have never had pipes laid that way; wouldn't allow them to be laid that way.

Q. And that has been the invariable custom for the twenty years you have been connected with the company?

A. It is the invariable custom in the gas business in any city of any size for either gas pipes or water pipes.

Q. You have always done it here?

A. Yes, sir.

Q. Do you know whether or not the pipes which were laid prior to the time you became connected with the company were laid in that way?

A. I have not the slightest doubt they were.

Q. Do you know?

A. I do know.

Q. How do you know?

A. Because I have seen lots of them taken up and seen the blocking and wedges taken up.

5530 Q. And every bit of pipe laid in the City of New York has blocks laid under?

A. Not every foot, I allow for blocking every six feet, two blocks and two wedges to each length of pipe.

Q. Just explain that a little more fully. Two blocks and two wedges?

A. No, sir. One block and two wedges to every six feet of pipe.

Q. At what point on the pipe does that block come?

A. The first block would come back of the hub and the second block about the middle of the pipe, the middle of the length.

Q. So that in no instance would the pipe lay next to the ground?

A. Oh, yes sir, the pipe lays next to the ground, of course, the blocks are countersunk in the ground.

Q. Are you familiar with the pipes of the East River Gas Company?

A. The East River Gas Company? Yes, sir.

Q. Were they laid in this wise?

A. They were.

Q. Are you sure of that?

A. Certainly.

Q. Did you lay them?

A. I saw them laid.

Q. Are you familiar with the weights of pipe of that company?

A. The weights of pipe of the East River Company?

Q. Yes.

A. I am. I will say familiar, I know of the weights of them.

Q. Are they the weights which you have used in your estimate?

A. They are not there.

Q. That is part of the Consolidated Gas Company's system, is it not?

A. No, sir.

Q. In no part?

A. No, sir.

Q. Using none of the mains of the East River Gas Light Company?

A. No, sir; not one inch.

Q. A part of it?

A. No, sir.

Q. Those pipes are laid in the Borough of Manhattan, are they not?

A. Yes, sir. I would like to correct that statement, Mr. Kirby,
if I may. When I said they were using lighter pipe they
5530a used lighter pipe till the time I was in charge of their mains
and from that date on they have used the same weight of
pipe that we have used.

Q. It is a fact, is it not, that it used lighter pipe?

A. Lighter pipe; yes, sir.

Q. Is it not a fact that the weight of the three-inch pipe that they use is the same as that given by Mr. Edgerton, eleven pounds?

A. They haven't used any three-inch pipe.

Q. Is it not a fact that the weight of four-inch pipe they used was the same as that given by Mr. Edgerton?

A. No, sir.

Q. Is it not a fact that the weight of their four-inch pipe is eighteen pounds?

A. No, sir; their four-inch pipe runs nearly to nineteen, the same as ours.

Q. Then, if we have a report of the East River Gas Company appearing in the *American Gas Light Journal* for November, 1898, that it was eighteen pounds for four-inch pipe, the same would be correct, would it?

A. The report might be correct as far as the weight of pipe called for. They might have asked for eighteen and got eighteen and three-quarters, or eighteen and seven-eighths.

Q. A statement by the company that their four-inch pipe was of a weight of eighteen pounds and paid for such, would be correct?

A. I think so.

Q. Are you aware that their six-inch pipe is the same weight as that given by Mr. Edgerton?

A. It is the same weight given of the new pipe by Mr. Edgerton, thirty pounds; not the old, they never used it.

Q. And that their eight-inch pipe——

A. Eight inch runs forty-two pounds to the foot against our forty-four, or used to run, but does not now. I say they are using the same weights we used.

Q. Is it not a fact that their twelve-inch pipe has a weight of seventy-two pounds to the foot?

A. Against our seventy-three, yes.

5530*b* Q. And Mr. Edgertons' seventy-two for his new pipe?

A. Yes; one pound difference between that and ours.

Q. And that twelve-inch pipe weighs 148 pounds as against Mr. Edgerton's 150 for his new pipe?

A. Yes, sir.

Q. And that their thirty-six inch pipe weighs 360 as against Mr. Edgerton's 360 for both old and new?

A. Yes, I know that the thirty-six inch pipe they laid was entirely too light, and I commented upon it at the time and thought they would have serious trouble with it before they got through.

Q. Have they?

A. They have had quite a little trouble with the joints.

Q. What effect on the joints has the lightness of pipe?

A. None whatever.

Q. You are familiar with the firm of R. D. Wood & Company, of Philadelphia, are you not?

A. I know there is such a concern.

Q. Never bought pipe from them?

A. No, sir.

Q. Do you know whether or not they have furnished pipes to be laid in the City of New York?

A. I do know it.

Q. Are you familiar with the weights of such pipe?

A. They make pipes to all kinds of weight.

Q. Are you familiar with the weight of their pipe which has been laid in the City of New York?

A. I am not.

Q. You know that they have furnished pipe that has been laid in the City of New York down to three inches in the weight of eleven pounds?

A. No.

Q. And that they have furnished four-inch pipe in the weight of fifteen pounds?

A. No.

Q. Or furnished six inch pipe which would weigh twenty-five pounds?

A. No, sir.

Q. Or eight inch pipe which would weigh thirty-eight pounds?
A. No, sir.
Q. Or ten-inch pipe which would weigh fifty pounds?
A. No, sir.

530c Q. Or twelve inch pipe with a weight of fifty-eight pounds?
A. No, sir.
Q. Or sixteen inch pipe with a weight of 100 pounds?
A. No, sir.
Q. Or twenty inch pipe with a weight of 140 pounds?
A. No, sir.
Q. Or twenty-four inch pipe with a weight of 125 pounds?
A. No, sir.
Q. Or thirty inch pipe with a weight of 325 pounds?
A. No, sir.
Q. Or thirty-six inch pipe with a weight of four hundred pounds?
A. No, sir.
Q. All of the pipe of the Consolidated Gas Company has not been aid since you became connected with the company, has it?
A. No, sir. The greater part of it has.
Q. Where did you get your knowledge of the weight of such pipes s were in the ground when you came to the company?
A. From pipes taken up here and there belonging to all the contituent parts of the company.
Q. You have no direct knowledge of those weights, have you?
A. I have got direct knowledge of it for twenty-five years back.
Q. Many of the pipes were laid prior to that time, were they ot?
A. Some of them were, yes, sir.
Q. You have no direct knowledge of those weights, have you?
A. Except that I am familiar with the weights the other comnies used and always have been.

Mr. Mathewson: He was connected with one of the constituent mpanies, you know, long before the Consolidated was formed.
The Witness: The Municipal and the Knickerbocker.

30d Q. How long have you been familiar with the laying of pipes in the Borough of Manhattan, City of New York?
A. Twenty-five years.
Q. We have here your statement as to the cost of sheathing. It tes that such sheathing is necessary on 50 per cent. of the mileage, all pipes sixteen inches in diameter, and on sizes under sixteen ches, on 10 per cent. of the mileage.
A. Yes, sir.
Q. Has not the sheathing anything to do with the depth at which pipe is laid?
A. Yes, sir—not solely that, but it has partly to do with that.
Q. But your 50 per cent. is based upon the depth which you state Consolidated Gas Company pipes are laid, as well as the diameter it not?
A. The 50 per cent. is based on my knowledge of when sheathing

is necessary. It is not so often necessary with small sizes of pipe as it is with the larger sizes.

Q. And is not that true largely because of the fact that the largest sized pipes are laid deeper beneath the surface of the street than the smaller sizes?

A. The bottom of the trench, of course, is deeper than the smaller pipe.

Q. And is not that the reason?

A. One of the reasons; yes, sir.

Q. So if the trench were not as deep as that you have used, the percentage would be less?

A. It would depend entirely on the depth of the trench and the character of bank you are working in and the structures you are contending with alongside of your trench.

Q. Of course, you use no sheathing where there is a rock excavation, do you?

A. No, sir.

Adjourned at 5 p. m. to January 15th, 1907, at 11 a. m.

Last Complainant's Exhibit 294.
State's 000.
City's 137.

5531 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 15, 1907—11:00 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

5532 Colin C. Simpson resumed the stand, *as* further testified.

Cross-examination by Mr. Kirby (continued):

Q. Let us take up the method of laying mains such as the Consolidated uses in the city. You first remove the pavement, then dig your trench in the usual way, as to the general character of the earth or other material which you excavate. How deep do you go before you put in the sheathing?

A. You haven't started at the beginning. What size of main do you mean?

Q. Twelve-inch main, we will assume.

A. Twelve inch main on an avenue?

Q. On an avenue, yes.

A. I would apply for the permit first for doing that work, and then dig a big test hole along the line to see whether the main could be laid in that place. If it could not be laid there I would have to do one of two things—get the permit changed, if it could be changed, or else arrange for altering the structures which come in our way, or having the structures altered which come in our way.

Q. Now, we will assume that it is possible to put a main down in the avenue which we selected. What is the first physical act which is done?

A. The first physical act is, of course, to remove the pavement, whatever it is. Then excavate. As the excavating is going on, if it is necessary to sheath the sheathing is put in as the excavation progresses.

Q. When is it necessary to sheath?

A. It is necessary to sheath in almost every case in a deep trench.

Q. What do you mean by a deep trench?

A. Any trench over three feet six, to four feet deep.

Q. Is that so in all characters of soil?

5533 A. In New York City it is not safe to go beyond that depth without sheathing—in hardly a single instance.

Q. That does not hold true in rock, does it?

A. No.

Q. Now, we have our trench dug and sheathing put in in such cases as you have suggested——

A. I did not get through. With a shallow trench, if you have a main——

Q. What do you mean by that?

A. A trench two feet nine covered from the top of the pipe. A trench three feet deep even. If there is any sub-surface structure running parallel and close to our trench it is then necessary to sheath too, to take care of that structure. If we are running alongside or near a sewer, as is often the case when there are two sewers one on each side of the street, it is also necessary to sheath.

Q. Yes.

A. If any filled in soil is around, any bad or loose soil, it is always necessary to sheath with any kind of trench. Where the ground is filled in with broken rock it is also necessary to sheath.

Q. Now, we have our trench dug and what happens?

A. When the trench is dug?

Q. Do you make any efforts to level it up in any way?

A. Oh, yes; the bottom is leveled. If it is a main twelve-inch and above we put the pipe in, get the blocking in first and start laying the pipe. The pipes are put in, put together, yarn the joints and caulked.

Q. You spoke of putting the blocking in?

A. Yes, sir.

Q. Now, on what size pipes do you use blocking?

A. Anything above twelve inches.

Q. And where do you use it?

A. We use it back of the hub and midway——

Q. No, why? What is the object of blocking?

5534 A. It is not good practice in the gas business to put pipes in without blocking.

The Master: That is hardly an answer, Mr. Simpson.

The Witness: Well, it is considered necessary.

Q. Necessary for what?

A. Necessary for a support for the pipe.

Q. You have leveled up the bottom of your trench, have you not?

A. You have.

Q. Your pipe rests therein?

A. Yes.

Q. What object has the blocking then?

A. You can never level your trench as level as the pipe itself would be.

Q. Then it is for the purpose of leveling the pipe?

A. No; it is for the purpose of giving a firm support to the pipe.

Q. Does or does not your pipe rest on the bottom of the trench?

A. Can I make a little sketch explaining to you what I am getting at? That (indicating on a piece of paper) may be the bottom of the trench, but it may not be a straight line like that (indicating); it may be uneven. Now, there might be a little hump there and the pipe would rest on that, and would have no rest here and no rest there (indicating); that it, no rest at the ends; whereas, if there is a block there and a block there (indicating) and that is the hub there (indicating) the length of pipe rests on that, and the next block comes under the next length of pipe.

Q. So if your trench was dug so that the bottom would be level there would be no need of blocking?

A. If the trench were dug in good clean soil, and could be made absolutely level so the pipe would rest its entire length on that, blocking would not be necessary.

5535 Q. And the longer the length of pipe which rests upon a level surface the better support there is; is that not so?

A. Yes.

Q. And are you not aware that in practice, which is recommended by certain authorities, that the laying of pipe upon a trench without blocking is advised as against laying it upon blocking?

A. I have not heard of it.

Q. It would not surprise you to learn that many miles of pipe have been laid without blocking?

A. Not a bit. I would lay it in the country myself.

Q. Why would you if a trench was level?

A. If I could have ideal soil in New York I would not bother about blocking.

Q. What is the peculiar fact about the soil here which prevents you from getting the bottom of a trench level?

A. I do not suppose there is a cubic foot of ground in New York that has not been only dug over once but repeatedly dug over and over again, and in every street almost the character of the soil changes. You might have sand in one street, you have clay in another, you have got rock in another, you have got filled-in rock in another, you have got garbage filled in another.

Q. How does that in any way change the ability to level up the trench?

A. It forces us to make a rule that all pipe shall be blocked and not leave whether the pipe shall be blocked or not to the foreman who is doing the job.

Q. What size pipe do you lay by hand, and what size do you commence to use a derrick for?

A. Commence to use a derrick at 16 inch.

Q. Why do you use a derrick for that size?

A. Because it is easier to handle the pipe.

Q. And the number of men which would be necessary to lay a pipe of that size would be such as make it more expensive than if you used a derrick?

5536 A. It is cheaper to go to the expense of using the derrick and the derrick gang than it would be to try to put the pipe in without the derrick.

Q. What is the difference between the price of labor such as would be used in laying the pipe by hand and such as would be employed in using the derrick?

A. It would depend entirely upon the composition of the gang, a derrick gang. You take men at $2.00 or $2.25. The men in sheathing might get $1.25; some of them $2.00.

Q. Do you pay any of your men as low as $1.50?

A. No, sir. I stated $1.75. $1.90 is the least we pay.

Q. What did you mean when you spoke of $1.75?

A. Because some time ago we used to pay $1.75.

Q. As late as last July?

A. Yes, sir.

Q. When did you change to $1.90?

A. Two months ago, or about a month ago.

Q. In the statement which you made yesterday, in reference to the allowance for the cost of sheathing you state that in all pipes sixteen-inch diameter and larger, fifty per cent. of the mileage must be sheathed?

A. Yes, sir.

Q. And on sizes under sixteen inches, on ten per cent. of the mileage?

A. Yes, sir.

Q. Would you use under ordinary conditions sheathing on a trench for a pipe of six inches in diameter?

A. Under ordinary conditions?

Q. Yes.

A. It would depend upon what the conditions were.

Q. Straight laying?

A. It would depend entirely upon what the conditions were alongside of the trench. I might have to sheath if I went down only two feet with a six-inch pipe.

Q. But ordinarily you would not?

A. If there was nothing nearby I would not, or if the soil was perfectly good and safe.

5537 Q. In reference to the sheathing left in the trench, if you did have to sheath, for a shallow trench such as we have spoken of?

A. Yes, sir.

Q. Would you leave the sheath in that trench?

A. In some cases I would have to.

Q. In many cases?

A. Quite a few, yes.

Q. In as many cases as though the trench were a deep one?

A. No, probably not.

Q. As a matter of fact, most of the sheathing is left in deep trenches?

A. In deep trenches.

Q. Where it may be useful if an excavation is made at another time for repair or other purposes?

A. What do you mean by shallow and deep trenches? What do you refer to?

Q. Such as I made reference to, a trench of four and a half feet, or something of that kind.

A. I have testified on trenches two feet nine covered, and four feet to four feet six, and trenches where we go down seventeen or nineteen feet.

Q. Well, we will use a deep trench in the way you have used it. The deeper the trench, the more apt you would be to leave the sheathing in, would you not?

A. Yes, sir.

Q. You have presented a statement showing a comparison of the cost of laying and caulking pipes as given by Mr. Edgerton and as given by you?

A. Yes, sir.

Q. Your testimony being under the heading "of Consolidated Gas Company price?"

A. Yes, sir.

Q. In your testimony it also appears as to what your cost of laying is, exclusive of caulking?

A. I don't know that I gave any testimony exclusive of caulking.

Q. On page 312 of the record you testified and presented a table with reference to the cost of laying pipe. Will you explain what those figures include?

5538 A. Why, this one dollar and fourteen cents represents the entire value of labor and material for laying one and one-half inch pipe on a new pavement. That twenty-nine cents represents the entire cost for labor and material in laying one and one-half inch pipe under old pavement, and so on, all the way down. This column here is the entire cost of pipe, labor and material. That column (indicating) is for the old pavement, and that is for the new pavement (indicating another column).

Q. Including caulking?

A. Yes; except that ten per cent.

By Mr. MATHEWSON:

Q. Does that refer——

A. That refers to my big sheet.

Q. Has that the addition for the additional values of pipe and so forth, which you added at the end?

A. No, sir; that does not include the ten per cent. you know.

By Mr. KIRBY:

Q. What do you mean by your ten per cent.?

A. The ten per cent. for engineers and the cost of pipe as of December, 1905.

Q. What is the cost of pipe as of there in this statement on page 312 of the record?

A. October 31, 1905.

Mr. MATHEWSON: If you have his whole sheet there you can easily see it is the trench. I do not think you were here when it was put in. You will see he made these additions to the additional value of pipe and other things, following the schedule, and he subsequently testified that that did not, as it obviously did not, include all the expense.

5539 Mr. KIRBY: I understand the ten per cent. is not in there.

The WITNESS: And the cost of laying is not in there.

By Mr. MATHEWSON:

Q. Whatever was or was not in there you explained in your testimony?

A. Yes, sir.

By Mr. KIRBY:

Q. If, Mr. Simpson, you ascertained that the price of labor in some other city was the same as that which you have stated you would pay those engaged upon laying the pipe, would you expect that the cost of laying the pipe in that other city would be as great as that which you use here?

A. No, sir.

Q. You would not?

A. No, sir. I know it would not.

Q. Some more peculiar New York conditions?

A. Yes, sir. The proof of that is that I can lay mains cheaper in the Bronx than I can in Manhattan—also in Long Island City, and have been and am continually doing that.

Q. What is your cost of laying mains in the Bronx?

A. It will run probably—I cannot give you the exact figure offhand—but it will run anywhere from ten to twenty per cent. below in New York.

By Mr. MATHEWSON:

Q. Below Manhattan?

A. Below Manhattan.

By Mr. KIRBY:

Q. And you pay your labor as high there as in Manhattan?

A. Yes, sir.

Q. That is straight pipe laying?

A. Yes, sir.

5540 Q. You have made reference to the price of laying waterpipe. Is it not a fact that it generally costs more to lay water pipes than it does gas mains of the same diameter, the actual laying of the pipe?

A. Not one cent more.

Q. Is it not heavier?

A. Yes, sir.

Q. Does it not cost more to caulk it?

A. Not a bit more.

Q. Does it not have to be caulked for heavier pressures?

A. No, sir. It is not caulked for any more pressure than we caulk ours. In fact our pipe is more thoroughly caulked than a water pipe.

Q. Then that would infer negligence in caulking water pipe?

A. I am not criticising contractors or anything of that sort.

Q. Is it necessary to caulk gas mains better than water pipes?

A. It is necessary to put in the best work that can be put in.

Q. Is it not as necessary to put in the best work that can be put in on water mains?

Mr. Mathewson: That is a conclusion of this witness.

A. I should say yes, it is. It ought to be done.

Q. Water mains carry more pressure than your gas mains, do they not?

A. A great deal more pressure.

Q. And the trouble from pressure generally comes in the joints where there is caulking, does it not?

A. Yes, sir.

Q. The first thing that happens is that the caulking is blown out?

A. Rarely blown out. The joints will start leaking.

Q. Would leak at that point?

A. Yes. But you must remember that a leaking water joint will often "make up" of itself; it will rust up, whereas a leak-
5541 ing gas joint won't. When a gas joint starts to leak the gas iteslf lubricates the opening, and does not let it rust until it is recaulked again.

Q. And if the leak in the water main is sufficient to let the water flow that aggravates the leak so that in time we have a large flow of water rather than a small trickling which might rust up the joint?

A. Yes. If it is a strong leak it won't rust up the joint. If it is "bleeding" only it will rust up the joint.

Q. Water pipe certainly is not generally a heavier pipe than a gas pipe or main, is it?

A. Water pipes run slightly heavier in New York City than gas pipes, up to a size of twenty-four-inch. From twenty-four-inch up we use—under thirty-inch—thirty six and forty-eight, we use the same weight as water, but thirty-inch very nearly the same weight. The difference is so slight it would not make any difference in the handling at all.

Q. Would it surprise you to hear that the weight of water pipe laid in the City of Boston runs many pounds lighter per foot than that which you have given as being used by the Consolidated Gas Company for their gas mains?

A. You have got to tell me which water pipe. They use there five or six different weights. They have got four weights to my knowledge; four distinct weights.

Q. Would it surprise you to know, for instance in thirty-six-inch mains put down in the City of Boston to carry water, the weight thereof was 391.6 pounds as against your 425?

A. No, it would not surprise me at all.

Q. Nor that the weight of their thirty-inch was 290.2 against your 311 pounds?

A. No.

Q. Nor that the weight of their twenty-four-inch was 200.6 as against your 215?

A. On the lightest schedule of weights—they have four schedules of weight there, and when you get to the heaviest schedule it 5542 is the heaviest pipe used for water pipe, I think, in this country to-day; the top weight.

Q. But these weights to which I have made reference are not such as used here? These are weights that are used in Boston, are they not?

A. I would not be surprised. I do not know positively. I know they have four weights, four scales of weights, and they use each scale under different conditions.

Q. And would it or would it not surprise you to know that these pipes to which I have made reference are designed to carry a pressure of over forty pounds?

A. It would not surprise me a bit. The pipes that I have there—our pipes are tested to a pressure of over one hundred and fifty pounds to a square inch. We do not have to deal with internal pressures at all; it is the external pressures we are looking out for.

Q. If it were that the report of a certain committee to which we have already made reference in the previous testimony, being the report of the Board of Division, relative to the distribution of gas, made to the American Gas Institute of Chicago, in 1906——

Mr. Mathewson: When has he referred to that?

Mr. Kirby: You referred to it and I referred to it when Mr. Edgerton was on the stand.

Mr. Mathewson: Oh, yes. This witness has not referred to it.

Mr. Kirby: I said the previous testimony.

Q. (Continuing.) Giving a weight of lead for joints and gas pipes, such as those used by Mr. Edgerton, would you be inclined to change your opinion that Mr. Edgerton had not used sufficient weight of lead?

A. No, sir; I would not.

5543 Q. Nor if the water pipes to which I have made reference in Boston used less lead for their joints than that which you have used for the joints of the pipes of the Consolidated Company?

A. Would it change my opinion?

Q. Would that in any way change your opinion?

A. No, sir; it would not.

Q. I think you stated yesterday that the cause of the breakage was generally from external causes?

A. External.

Q. Rather than from any internal pressure?

A. Yes.

Q. And that I presume might be the pressure of the weight of the earth or such material as was on top of the pipe?

A. Yes.

Q. By reason of the breakage in a water main the earth was sifting out underneath, or something of that sort?

A. Yes. In the water mains that I have seen break, it has been due to the pipe being improperly blocked.

Q. Now, there is some wrought iron gas pipe or main in this city?

A. Yes, sir.

Q. Not all cast iron?

A. No, sir. We haven't any of it.

Q. The Standard, I think, use wrought iron?

A. The Standard is all wrought iron, ten-inch and below.

Q. Your statement in reference to the necessity for bridging in the laying of pipe is one which you applied anywhere where there is traffic either by pedestrians or vehicles?

A. It would only apply to a city similar to New York, where you have got a crosstown street every two hundred feet.

Q. Well, you wouldn't need as much in a country village, but I suppose you would need some?

A. It depends on whether they would allow you in a country village to block the street and have the people go around the
5544 other way. You cannot do that in New York.

Q. It is a question of the people's desires?

A. It is a question of the demands of the city authorities.

Mr. MATHEWSON: This is a city regulation. We cannot help that.

Q. You have said that you have never made sales of rock taken from the trenches?

A. Yes, sir.

Q. Have you never sold rock or earth taken from the trenches for the purpose of fill?

A. I only know of one case of rock being sold in New York City in connection with any of our work, and that was in excavating for a new holder at 63rd Street and Avenue A. We had some good rock there, and some of it was sold at fifty cents a load, but never in connection with main work.

Q. Is it not the custom of contractors in the city when they are excavating a cellar or for other underground purposes, to make sale of the earth or rock excavated for use as fill in low lying lots?

A. No. The man who has got low lying lots to fill will always demand from fifty cents up per yard for dumping privileges.

Q. And you know of no instance?

A. I know of no instance in all my experience where one cubic foot of rock has been sold from trench work. I never heard of it.

Q. Now, the price which the owner of a low lying lot would charge for the privilege of dumping thereon is much less than that which you would have to pay for the dumping from a dock?

A. We have often paid a little more in low lying lots, because it was cheaper on account of saving a long haul to the dump. We
might have to pay fifty cents at the dump and it would cost
5545 fifty cents to cart, and if we get a low lying lot owner it would
cost us perhaps sixty cents to dump and maybe not more than
twenty cents to cart.

Q. Now, coming to this rammer, which you made reference to yesterday, and which has a circular end about six inches in diameter——

A. Five and three quarters.

Q. Five and three-quarters, to be exact. You do not pretend that you ram down the earth on the lower section of the main as it lays in the trench, do you, with this?

A. No, sir.

Q. That is only for pressing or pounding down the earth which is left in the main on top of the pipe?

A. We use the tamping bar—we use the rammer after we are through with the tamping bar.

Q. Which is this?

A. This is the rammer. The tamping bar is used first.

Q. In cutting your trenches, do you give them that width which is necessary to care for the caulking of the bell, or do you make a larger opening at that point?

A. We do not use bell holes in work in New York City, and especially on avenues. There are so many drip pots and different fittings to go in, that we have the trench wide enough to do the caulking without allowing for bell holes.

Q. And that enables you to take off the many other connections you have to from the mains, without making additional width of trench for that purpose?

A. You mean for the service connections?

Q. Yes.

A. Yes, sir.

Q. Now, referring to these drawings, showing cross sections of various streets and taking, just for example, Complainant's Exhibit 288, being Broadway, at Morris Street, looking north, I note here a section marked 31, which I take it is of the Subway?

A. It is of the Rapid Transit Subway.

Q. And between the top of the subway and the surface of
5546 the street I note two circular sections, marked 7 and 9, which
in the reference index it states are "gas mains?"

A. Yes, sir.

Q. I also notice a section of a pipe lying almost to the bottom of the subway, marked *l*, and in the reference index being marked as a "sewer?"

A. Yes, sir.

Q. The gas company's mains did not in those instances go under that sewer, did they?

A. No, sir.

Q. Are the mains in their present position the same as before the subway was built?

A. No, sir. That whole thing was rearranged when the subway was built, rearranged by the contractors for the subway.

Q. And at their expense?

A. At their expense.

Q. Taking, as another example, Complainant's Exhibit 289, Sixth Avenue and 14th Street, looking north, I notice a section marked 7, which on reference to the key I see is "Consolidated Company's gas mains"?

A. Yes, sir.

Q. I notice in the middle of what I take to be Sixth Avenue a section marked 19, which by reference to the key I see is a "four-foot sewer?"

A. Yes, sir.

Q. I think I am right in tracing this gas main so that the same runs over the sewer, do I not?

A. Yes, sir. But you can see if a main were carried out on a straight line it would come to the middle of the sewer. We do not go under a sewer where it is possible to go over it.

Q. There is no doubt about that. Now, in many of these cross sections, these drawings, in fact, in almost all of them, I notice either cross sections of the Rapid Transit subway or conduits for the Metropolitan Street Railway system, or pillars, that is the foundations for the support of the elevated railroad columns; I take it that 5547 neither the subway nor the conduits for the street railway system were built prior to the time when most of the mains of the Consolidated were in the ground, and your mains had to be removed when these structures were built; is that a fact or isn't it a fact?

A. It is a fact.

Q. And when they were removed it was at the expense of the contractor of the company putting in the subway or the railroad?

A. Yes, sir.

Q. You have placed in evidence certain photographs and made a statement relative to the size of various openings, which you have measured, and which you have stated were made for the purpose of putting down some of the mains for the new salt water system?

A. Yes, sir.

Q. Taking up the first of these, Third Avenue and 14th Street, west side, the width of cut is given as nine feet, whilst the size of the main is but twenty-four inches?

A. Yes, sir.

Q. You do not contend that in laying the twenty-four inch mains that a cut to the width of nine feet would be necessary, do you?

A. It was in that case.

Q. At this specific point?

A. Yes, sir. You can see down the entire block there. It is all the same; in fact, it goes from 14th way down to 11th Street the same way.

Q. Well, I cannot see very far, and in the little distance I see it very soon becomes much shallower, right under the truck, which is marked with the name of a roofing company. I think it is considerably narrower.

A. It may look narrower, but it is the same width all the way down. I went over it all the way and picked out a typical part. I did not pick out an extreme part or a narrow part; just an average part.

Q. Did you find any parts of that trench which were less than nine feet?

5548 A. There were parts which might have been less than nine feet, but there were many places where it was over nine feet.

Q. And if you had continued you might have found trenches for the twenty-four inch main which were considerably less than nine feet?

A. I didn't find any.

Q. Did you go to any of the places pointed out by Mr. Edgerton as having the width of trench which he testified to?

A. No, sir.

Q. You have no reason to believe that the trenches were not the width he indicated, have you?

A. I don't believe that it would show the trench that had to be repaved that he indicated. It might have been the trench that the contractor dug, and in that case I have given the maximum, which shows the trench might be two feet wide on the job, and yet the contractor might have to pay for six feet of paving before he gets through. I mean in those two photographs I presented.

Q. So these photographs in this detail simply have reference to the paving which has to be done, and not to the width of trench which would have to be dug to instal the main?

A. Oh, I beg your pardon, it refers to the width of the trench.

Q. Are you prepared to state that this trench at Third Avenue and 14th Street, Complainant's Exhibit 271, was dug nine feet wide?

A. Yes, sir.

Q. For the purpose of putting the twenty-four inch pipe therein?

A. Yes, sir.

Q. Did you see that trench when it was open?

A. I did, sir.

Q. And what was the condition of the excavation?

A. There were two or three mains in the way that had to be moved, and in moving those mains it was necessary to make a wide trench. Just what I have been testifying to; you cannot find a *palce* in New York where you can dig down where you do not have to widen your trench out.

5549 Q. And that is the reason these are all wide?

A. Yes, wherever they go down they have to move subsurface structures, and therefore must have a wide trench.

Q. If it happened the entire street were filled with mains, and you for some reason desired or it was necessary for you to put your main in the position occupied by some one of those, it might be the entire street would have to be ripped open so as to move them around to fit yours in?

A. It might be, yes. In fact, it was so on some of the avenues where the Rapid Transit went, that they could not have rearranged the pipe system unless they had the whole thing open.

Q. You have stated these are all for salt water mains?

A. All salt water mains.

Q. Will you show me any one of them that is in the middle of the street?

A. I don't know whether I can show you one of those, but I have got some of the others that are in the middle of the street. I have got some photographs taken.

Mr. Mathewson: There is one down the middle of the street.

Mr. Kirby: I am asking as to these which are in evidence, and he shows me the one marked Fifth Avenue, Complainant's Exhibit 280, and that is the one which is nearest the middle of the street of the photographs which have been marked in evidence.

The Witness: Yes, sir.

Q. Is it not a fact that in putting down the salt water system this happened in many instances, that the streets have not had the pavement removed for a considerable period after the trench had been filled in?

A. The pavement removed?

5550 Q. The pavement replaced?

A. Yes, sir; in a great many cases.

Q. And that, I think you have already testified, has resulted in the edge of the asphalt, or whatever the pavement is, being worn or so that the necessity of replacing a larger width has occurred, where, if the asphalting had been done at once, the width would have been less?

A. Yes, sir.

Q. You made reference to the laying of certain large mains, I think it was on 126th Street?

A. Yes, sir.

Q. Do you know how long it took to lay that main?

A. How long it took? Well, you mean from the commencement of the work to the finish of the work?

Q. Yes.

A. It took practically, as I remember now, I should say, about three or four months, the greater part of the summer.

Q. And do you know how long it was after that trench was filled that it was repaved?

A. I don't exactly remember. I know it would not have been very long, because we do not allow a trench to remain unpaved very long.

Q. Do you do your own paving?

A. No, sir.

Mr. Mathewson: He refers to the temporary pavement we have to put over the trench.

Q. Do you put a temporary pavement over the trench?

A. Yes, sir.

Q. I do not have reference to that. I mean the replacing of the asphalt so the street would be in the condition it was in before you put down your main. Have you control over that?

A. Yes, sir.

Q. And what control is it that you have over it?

A. We send to the Asphalt Company that has the contract for the street, and if they do not come at the time we send for them again and look them up again.

5551 Q. And they charge you for the actual area replaced?

A. Yes, sir.

Q. Are you familiar with the character of pipe which is put down for the salt water system?

A. Yes, sir.

Q. What kind of pipe is it?

A. Cast iron.

Q. What kind of joints?

A. Hub and spigot.

Q. How is it caulked?

A. The same as gas pipe is caulked.

Q. It is laid by contract, is it not?

A. Yes, sir.

Q. Do you lay most of your mains by contract?

A. No, sir.

Q. Do the work yourself?

A. Yes, sir. The only mains we ever laid by contract since consolidation are the larger sizes, 30's and 36's, and 24's and one 20 inch.

Q. You have spoken of the price of lead, Mr. Simpson; is it not the fact that the price of lead varies often and greatly.

A. I don't know whether you call it varying, it is going up all the time; it never seems to go down.

Q. It has been higher than it is to-day, has it not?

A. Well, it might have.

Q. Was it not higher within the past six months than it is to-day?

A. I do not think so.

Q. Have you any record, Mr. Simpson, showing the actual depth of all your mains?

A. Yes, sir.

Q. Have you ever figured out the average depth of those mains for the different sizes of pipe?

Mr. MATHEWSON: You mean below the top of the pavement.

Mr. KIRBY: Below the top of the pavement.

A. I have had no need to figure; I have known it all along. I have seen them all, or practically all, and have been for so many years familiar with them that I know it without figuring it out.

5552 Q. And so when you give that depth, you refer to the ordinary laying of that main or pipe, and not to such instances where it would have to go over or under, or around obstructions?

A. I am referring to an average depth. There are, of course, many cases where the mains are far deeper than the average of two feet nine inches, and many cases where the mains are less than the average of two feet nine inches.

Q. So when you say two feet nine inches you take into consideration those cases where a main may have had to go under a sewer at a corner?

A. Yes, sir.

Q. Or where it had to be dropped under a subway or something of that kind?

A. Yes, sir.

Q. And if that were twenty or thirty feet it might happen?

A. Yes, sir.

Q. Of course, it would make the average depth considerably more?

A. It would come in the average of two feet nine inches that I gave.

Q. If I understood your testimony correctly, you stated that you had examined some 90 per cent. of the mains, not only of the Consolidated Gas Company, but of the other gas companies in the Borough of Manhattan?

A. Yes, sir.

Q. I understood you correctly?

A. Yes, sir.

Mr. Mathewson: He said he had seen them.

Q. Or seen them, or inspected them?

A. Yes. They followed the same practice we did.

Q. Do you know how many miles of mains there are of the Consolidated Gas Company and these other companies?

A. Yes, sir.

Q. How many miles are there?

A. In Manhattan?

Q. In Manhattan?

A. In rough figures fifteen hundred, a little over fifteen hundred.

5553 Q. Do you mean by that active mains, or mains in the street?

A. Active mains.

Q. Corresponding to the 795 or whatever figure it is?

A. That fifteen hundred miles, of course, includes the twenty-seven miles of disused mains we have; it is fifteen hundred and some odd miles; I can give you that exactly.

By Mr. Mathewson:

Q. That means excluding abandoned mains?

A. That means excluding abandoned mains.

By Mr. Kirby:

Q. But including the 27 miles of disused mains of the Consolidated Gas Company?

A. Yes, sir.

Q. You having to-day 795 miles of active mains?

A. Yes, sir.

Q. Mains actually in use?

A. Yes, sir.

Q. Have you ever laid your mains under the side walks in the uptown district?

A. No, sir. I have never laid them, but up until 19 years ago the City did not allow any gas main or water main to be laid under a macadamized street and in every case they would compel us to go under the sidewalks, so up to some years ago we had quite a few streets where the mains were under the sidewalks. At the present time the only streets they are under the sidewalks for any length at all are on 72nd Street on the west side, 72nd Street on the east side, 124th Street between Mt. Morris Park and Third Avenue and part of 110th Street, and in Broadway they have been taken out and laid in the middle of the street. That is about all; and a short stretch on 116th Street, between Third and Fourth Avenue.

By Mr. MATHEWSON:

Q. Did you mean laid in the middle of the street or under
5554 the sidewalk on Broadway?

A. They used to be under the sidewalk, but they are now in the street.

Q. You do not mean they are in the middle of the street?

A. No.

Q. Because the trolley cars are in the middle?

A. Yes. We have a small one in the middle of the street on Broadway, to supply the lamps.

Q. That is upper Broadway?

A. Upper Broadway, yes.

By Mr. KIRBY:

Q. Can you give us approximately the mileage of your mains, or rather the number of thousand feet of your mains which go under sewer or other deep conduits in the street?

A. No, sir, I could not. It would not amount to very much in mileage, because where we have to go down we come up again as soon as we can.

Q. Are those instances many?

A. They are getting more every day; I think you will find in my testimony I have testified that at the present time we are unable to cross avenues with any large size pipe without going down very deep.

Q. Those instances would likely be impressed upon your memory, would they not, where you have had to go down?

A. Yes, sir; some of them.

Q. Now, in your estimate for excavating and other operations which go into the laying, you have figured that on the average depth of trench which you have used, have you not?

A. Yes.

Q. And that is true of excavation for such deep holes as might have to be made to carry your gas mains under sewers and the other obstructions?

A. In connection with the larger sizes?

Q. Yes.

A. Yes, sir.

5555 Q. Am I not right in assuming that at such point the cost of excavation is very heavy and the deeper down you go the greater the cost?

A. Yes, sir.

Q. And more handling of dirt and rock and such things?

A. Yes, sir.

Q. Taking up the troubles which you have referred to occurring in your stand-pipes or risers or street lamps during cold weather, will you tell me what is the cause of trouble in gas pipes when cold weather comes?

A. What is the cause of trouble?

Q. Yes, what does the cold do?

A. The cold, well the actual visible trouble is a formation of what looks like hoar frost inside the pipes, and if the cold continues this hoar frost gradually works towards the center and at last closes the pipe up altogether.

Q. And what enables that hoar frost to form?

A. What enables it to form?

Q. Yes, outside of cold. Is it moisture contained in the gas?

A. I suppose it is moisture in the gas.

Q. Could it be anything else but moisture?

A. I do not think so.

Q. It is not an unusual and uncommon hoar frost, it is the same as that which you would find where there is moisture present and cold comes in contact with it?

A. Yes, sir.

Q. If there were no moisture present are you of the opinion that there would still be hoarfrost formed in these pipes?

A. I do not think I am competent to answer on that; I am not much of a chemist.

Q. It would seem reasonable to you, would it not?

A. Any answer I would give you would be pure guessing.

Mr. Mathewson: He is not a chemist and is not a manufacturer of the gas. He simply observed conditions.

5556 Mr. Kirby: It is not a question of chemistry.

Q. Do you have this trouble from the stoppage of flow of gas, which it ultimately amounts to, I presume, at the time of great cold, or at the time of a thaw immediately after a cold spell?

A. We have it—the trouble you are talking about we have at the time of great cold. There is another trouble develops at the time of thawing which is another trouble altogether.

Q. What is that trouble?

A. The trouble at the time of the thaw is with this condensation or I mean this hoarfrost thawing out, and if the pipe is at all trapped, collecting in the trap of the pipe and sealing the gas off. There might be enough hoarfrost form in the pipe to seal a trap in the pipe, and yet it might not be formed all the way to the center, so as not to let the gas*t* through, so we find that in hundreds of cases.

Q. Do you ever find your risers frozen solid at about a point where they leave the earth?

A. Frozen solid?

Q. Yes. After a thaw, that is, does the hoarfrost ever develop, and water run down, and striking the cold earth, freeze at that point?

A. No, sir.

Q. Then the trouble during a thaw is when it comes from a trap filling up and in a way choking up——

A. Sealing off the gas.

Q. What happens to these——

By Mr. **Mathewson**:

Q. Would not an elbow effect the same result, or I suppose any sort of a bend?

A. No, the pipe has got to be trapped, you know. If there is a fall all the way back to the main, of course it would not stay there. The best evidence of that, you know, we pour in alcohol in the
5557 lamp stand pipes to thaw the hoarfrost out and it runs back into the main.

By Mr. **Kirby**:

Q. Do you use alcohol to remedy trouble of this kind?

A. Wood alcohol.

Q. You do not use anything else?

A. If the wood alcohol does not work, we use a rod very often.

Q. Never use salt water?

A. No.

Q. What happens? You have spoken of these traps, as I understand it, if at various points along the main there is a trap placed for the collection of moisture which precipitates in the service pipes or in the mains, it flows back to the main, which has a slight dip and which will carry it back to the trap; am I right?

A. No, the traps are things which should not be there; we don't know of them until this thing happens and the service pipe seals off or the lamp seals off after a frost. We know there is some stoppage or that these traps are sealed with water.

Q. You do not mean an intentional trap?

A. No.

Q. But by reason——

A. Of the settlement of the ground or something, a trap is developed in the pipe.

Q. Do you have intentional traps in various parts of your distributing system?

A. We have drip pots on our main system and in some cases where it is impossible to have the service drip back to the mains there are house drips, as we call them, in the house.

Q. What is the purpose of these drip pots?

A. To take care of the moisture in the gas, the condensation.

Q. What happens to the contents of these drip pots in cold weather?

A. Nothing happens to them.

Q. They are pumped out?

A. We pump the drips summer and winter. Men are
5558 going around all the time pumping them out. The house drips are taken care of by shopmen who go around and empty them. They have records of them and take care of them.

Q. And this is done through all the months of the year?

A. Yes, sir.

Q. They do not freeze up in the winter so they can not be pumped?

A. I have known cases of their freezing up, certainly.

Q. But it is an exception and not the rule?

A. The exception.

Q. Now, have you a record in your department showing the number of complaints or troubles of street lights which are out during the various months of the year?

A. Well, we have—it could be got up in some way, I suppose. We do not keep any separate account of the number that are out.

Q. Can you tell the number of street lights which were out and the number of hours thereof during the month of January, 1904 and also the month of January, 1905?

A. We could find it out easy enough.

Q. You have not that data at hand?

A. I have not that data at hand.

Q. Nor a comparison for any other two months?

A. No, sir.

Q. Mr. Simpson, in measuring the distances as laid down on these insurance maps which your company uses to plot your mains upon, didn't you measure from, say, the corner of an avenue and one street to the corner of another avenue and another street distant several blocks therefrom, or did you only measure the length of the block from one corner to the next corner without crossing the street?

A. I took several kinds of measurement. Some cases I measured across the entire page and took the difference as given by Mr. Marks from point to point, as given by him on this sheet, and I compared that with the official record. In other cases I took just single blocks also as given by him. 5559

Q. And did you find these maps were correct in the width of their streets?

A. I did not measure it at all to see if they were the correct measurements of the street.

Q. You have made certain criticisms of Dr. Marks' statement of distances, using as an illustration a length of pipe running around a block and s-ating, very properly, that if that pipe is distant six feet from the curb, it is greater in length than one which is only distant three feet from the curb. As a matter of fact, pipes are not laid in that way, are they? They are running in straight lines down an avenue or across a street?

A. Either I do not understand you, or you did not understand me. I said that wherever the pipe ended at an intersection or a street, that in every such case his measurement must be wrong, because that pipe, neither on the avenue nor on the street was put down to scale.

Q. Have you many pipes which simply run a block or two blocks?

A. Do you mean many pipes that end at a certain point, like I am talking about?

Q. Yes.

A. Thousands. You can see them at one glance at the volumes; there is not a page where you will not find several instances.

Q. Did you calculate the number of feet which instances of that kind would make?

A. No, I took a few instances and the actual distance from the curb, and the distance as given apparently in the volume.

Q. It would make only a very few feet on each block, would it not?

A. It might amount to—it depends entirely on how that is laid down on the map and how far it is from the curb.

Q. It could not amount to more than the distance of the mains as actually in the ground, that is the distance from the curb 5560 as the main is actually laid, and the distance from the curb as assumed by Dr. Marks?

A. It would amount to this difference, that if his volume shows that main ending at three feet from the house line and, as a matter of fact, that main were ten feet from the curb, as they frequently are, it would make a difference of ten feet less three, plus the width of the sidewalk, in every case.

Q. And instances where pipes are laid in that way, compared with the total length of pipe in the city, are very small, are they not?

A. The cases that I am talking of—are you talking about the number of instances of that kind?

Q. Yes.

A. As I said before, there are thousands of them in those volumes.

Q. The number of instances brought down to the number of feet of pipe represented by those instances?

A. What the difference would be I could not say. It would be a tremendous calculation. It might amount to hundreds of thousands of feet, and might only amount to a few thousands.

Mr. KIRBY: That is all I have to ask Mr. Simpson.

The MASTER: Mr. Burr: You may cross-examine.

Cross-examined by Mr. BURR:

Q. Referring, Mr. Simpson, to Complainant's Exhibit 286, and the other purporting to be a diagram showing the situation at various points regarding the number of sub-structures in the streets, are you sure the scale of feet as given here is correct?

A. I will not say that I am sure.

Q. But I think you said yesterday that from your own knowledge you knew of the situation at various points described on these diagrams?

A. I said from my own knowledge I knew of the situation 5561 in a general way. I *and* not familiar with every detail of it, of course.

Q. Are you quite sure there are thirteen gas mains at Broadway and Bleecker Street, as appears on this exhibit, Complainant's Exhibit No. 286?

A. That is counting the mains on Bleecker Street and the mains on Broadway?

Q. I am speaking of the situation of the locality as it appears on that diagram?

A. This shows the mains on Bleecker Street and the mains on Broadway.

Q. Well, do they not number thirteen?

A. They evidently do, thirteen, yes, sir.

Q. Some of those are the mains of the old companies that existed as long ago as 1823?

A. I doubt it very much.

Q. Well, take the Mutual, how long has those mains been in the ground?

A. The Mutual dates back about, I think, to 1872.

Q. And the Equitable?

A. The Equitable dates from 1883; they started laying mains then.

Q. Can you give the sizes of the mains at that point?

A. Do you want me to call off the sizes?

Q. Yes.

A. One four-inch, seven six-inch, and five eight-inch.

Q. The column headed "Reference" on each of these diagrams is explanatory of the location of the various mains, and so far as the gas mains are concerned, to your knowledge it states accurately the size of the mains?

A. Yes, sir.

Q. What points in the street are there to your knowledge and from your experience where there are a greater number of gas mains converging than thirteen?

Mr. MATHEWSON: At a single corner, I suppose?

Mr. BURR: I said converging at a single point.

5562 A. You mean taking a street and avenue together?

Q. Yes.

A. Third Avenue and Forty-second Street.

Q. How many on Third Avenue and how many on Forty-second Street at that point?

A. Ten on Third Avenue—nine on Third Avenue and seven on Forty-second Street.

Q. That is sixteen at that point?

A. Yes, sir.

Q. How many of those were laid, if you know, since the subway was built?

A. The Rapid Transit Subway?

Q. Yes.

A. None.

Mr. MATHEWSON: That does not go to Third Avenue.

Q. There is no subway at that point, is there?

A. No.

Q. How many of them have been in the street at that point since 1865?

A. In 1865 there would be two on the street and two on the avenue.

Q. What size were those mains?

A. There was a Metropolitan twenty-inch on Forty-second Street—there was at that date; of course, it has been changed since that time; and a Metropolitan four and a Metropolitan six on the avenue and a Metropolitan on the north side of Forty-second Street at that time; that is in 1865.

Q. Yes. Now, when the frost penetrates into the ground say four feet, does it in addition to affecting the mains affect the services?

A. Yes, sir.

Q. How far——

A. I won't say in addition, because I have never yet known of a case of a main being what you might call affected by the frost, not stopped or anything.

Q. A main is not affected?

A. No, sir.

5563 Q. I understood you to say that hoarfrost gathers about it. Were you speaking of pipes and not mains?

A. Yes, sir, service pipes. Of course, if the cold snap is prolonged enough it would eventually stop up a main, too, I suppose, if it kept on; I don't know. In the case of the smaller services it stops up.

Q. The service pipe runs from the main through the building line to the house?

A. Yes.

Q. How much inside of the building line does the service pipe run?

A. We run generally three feet.

Q. That then connects with the meter?

A. Yes.

Q. And I suppose that the effect of the frost is felt outside the building line and not inside of it?

A. It is felt inside the building line if the pipe is not protected, or if it is exposed to cold weather.

Q. After you put the service pipe in you never take it out, do you?

A. After we put the service pipe in we never take it out?

Q. Yes.

A. Yes, very often.

Q. For what purpose?

A. If the service shows any signs of wear we put new pipes in, or they might want a larger pipe, and we take it out and put in a larger one.

Q. But you do not take it out because a man changes from gas to electricity, do you?

A. No.

Q. It is practically left there forever, as long as it is serviceable?

A. Yes, sir.

Q. When did you first see the maps to which reference has been made, and from which Dr. Marks took his measurements?

A. When did I first see them?

Q. Yes.

A. In 1889.

Q. Had there been a series of maps in existence before that time?

A. Yes, sir.

Q. What became of those maps?

A. I could not say.

Q. Do you know why new maps were procured?

A. Yes, sir.

5564 Q. Why?

A. I took charge as general superintendent of mains and the system of maps they had then was a separate map for each of the old companies, comprising the Consolidated Gas Company, and I thought it better to have them in this form that we have them now.

Q. And then these maps were made under your supervision?

A. Yes, sir.

Q. And of course you intended that they should be as accurate as it was possible to make them?

A. As far as printed to scale is concerned.

Q. In every respect?

A. No, sir, I intended——

Q. You did not——

Mr. Mathewson: Let him finish his answer.

The Witness: I intended them to be accurate as showing our main system by the size and the streets on which we had mains, but did not make any attempt or give any orders that the mains should be put on there to scale, or for them to adhere to the right distance from the curb.

Q. Did you give positive orders not to do that?

A. No, I did not.

Q. Whom did you employe to make those maps?

A. One of my draughtsmen, a man named St. Aubyn who is now in Philadelphia.

Q. How long were they engaged in making the maps?

A. It took him, I should say, about seven or eight months.

Q. How many maps are there altogether?

A. Eleven in Manhattan and the Bronx—twelve.

Q. That is, twelve volumes of maps?

A. Twelve volumes, yes, sir.

Q. How many individual maps are there?

A. Oh, I don't know, I never counted them.

Q. Three hundred or fifty or four hundred?

5565 A. No, there must be — thousand, I should think, must there not?

Q. You remember when Dr. Marks testified here and had marked for identification the maps of mains or schedule of mains which he prepared from your maps, as he testified?

A. Yes.

Q. And immediately thereupon a copy of that schedule of mains was handed to you through Mr. Mathewson?

A. No, sir. I have never seen anything but that schedule which we had in court here.

Q. That is what I am speaking of.

Mr. Mathewson: That is Exhibits 92 to 103?

The WITNESS: It was never handed to me at all. I sent down here and asked Mr. Mathewson if I could look through them and check them up, and I sent down here for them.

Q. And you got them?

A. Yes, sir.

Mr. MATHEWSON: But he did not get them immediately after they were in. I think it was when we adjourned before Christmas. I have had them, there is no doubt about that, and I have had them here for cross-examination of witnesses, but you asked him if he got them as soon as they were put in, and I say he did not and he says he did not.

Q. How soon did you get them after they were put in?

A. It might be two days, possibly three days.

Q. How long were you engaged in comparing them with the maps in your possession?

A. How long?

Q. Yes.

A. Well, off and on ever since.

Q. That is about how long, a month?

A. Well, some days we did not do anything with them at
5563 all and other days we did; I couldn't give the exact time.

Q. Well, it is about a month since you received them?

A. I suppose it is about that.

Q. And you have been engaged in comparing the schedules as prepared by Dr. Marks with the actual maps in your possession off and on ever since, as I understand you?

A. Off and on, yes; not continuously.

Q. And I understood you to say yesterday, at that, you had only succeeded in comparing about 20 per cent. of the schedules made by Dr. Marks?

A. That is all.

Mr. MATHEWSON: He said he had compared 20 per cent., not that he had succeeded only in comparing 20 per cent.

Q. That is the point, that although you tried to do more, it was all you were able to do?

A. No.

Mr. MATHEWSON: He did not testify that at all.

The WITNESS: I only did what I wanted to do. I looked to see what kind of errors were made, and when I found a bunch of errors on something, I stopped on that and went to some other kind.

Q. Have you read the testimony of Dr. Marks at all in regard to these maps?

A. Yes.

Q. Do you recall his testifying that before the maps were measured that the scale was proven?

A. I remember his testifying something about the scale; just what it was I don't remember.

Q. Have you got a volume of the maps here?

A. Yes, sir.

Q. Will you produce volume 6?

5567 Mr. MATHEWSON: Dr. Marks expressly testified that the scale was not proven, and that he did not test it by any official maps at all.

(Volume produced by the witness.)

Q. Take the map—what does this 111 mean?

A. Page 111.

Q. What does 107 mean?

A. No, that means 111 is a continuation of that.

Q. This is page 107, volume 6 of the maps?

A. Yes.

Q. Where does the scale appear?

A. Here (indicating).

Q. Will you measure it?

A. Measure the scale?

Q. How did you determine the accuracy of the scale?

A. I took, for instance, from that point to that point (indicating).

Q. From the line marked East Fifty-second Street?

A. It does not make any difference; say from that point to that point (indicating).

Q. From the top to the bottom of the map?

A. Yes. I then compared it with the scale to see how much it gave me according to that scale there, and then I compared that with the official record.

Q. Now, this map is done in colors?

A. Yes, sir.

Q. Do you know what the various colors represent?

A. Yes, sir.

Q. What do they represent?

A. Various sizes of mains, that is an eight, that is a six, that is a four, that is a sixteen, that is a sixteen, that is an eight and that is an eight and a six, and so on (indicating).

Q. But the buildings are all colored, also, every building, every piece of real estate is colored?

A. Yes, sir.

Q. What does that mean?

A. That is done by the man who provides the maps, to indicate different kinds of buildings. That pink there indicates a 5568 brick building, the yellow you will find indicates frame buildings, and those are frame buildings there (indicating); and that indicates a tenement house or an apartment house or a flat. Those are private residences (indicating).

Q. And as each piece of property changes, it is changed in your map, is it not?

A. Yes, sir.

Q. What is the object of keeping this so thoroughly with regard to the houses and apartments and buildings?

A. What is the object?

Q. Yes.

A. Well, because this is a map for reference.

Q. Well, in other words, you, I understand, Mr. Simpson, follow up the buildings in the City of New York for the purpose of introducing the gas, do you?

A. Yes, sir.

Q. And do you consult this map or any other book?

A. No, sir, we have men out in the district to do that, and this is done by the people who sell you the maps.

By Mr. MATHEWSON:

Q. What is done?

A. This pasting on alterations to buildings.

Q. That is, indicating the character of buildings?

A. Yes, sir. If a building—for instance, this is pasted on now (indicating). They come once a month and paste in all the changes in the buildings.

By Mr. BURR:

Q. And you, I understand, keep in touch with the Building Department, and keep in touch with all the new buildings that are going up and make your gas connection at the proper time with each building?

A. Yes, sir.

Q. That is done throughout the whole island of Manhattan, is it not?

A. Yes, sir.

5569 Q. Now, then, you have this system of coloring to show the character of the mains in each street?

A. Yes, sir.

Q. As it appears upon each one of these maps?

A. Yes, sir.

Q. Can you tell offhand what these various colors mean as to the sizes of mains?

A. Yes, sir.

Q. Did you find in Dr. Marks' compilation of his schedule, as taken from these maps, any inaccuracy as to the duplication or triplication or quadruplication of mains in the streets?

A. I did not look at it at all, never thought about it.

Q. So you have nothing to say as to the accuracy or inaccuracy of his statement in that regard?

A. No, sir, nothing at all.

Q. Now, when you abandon a main, or when you disuse a main, what do you do on this map?

A. We make an erasure. If this main here were to be abandoned, we would make a little erasure there and there (indicating), and write on it the year it was abandoned or disused.

Q. Can you point out in the series of maps you now have here in the Master's office the location of the seventy miles of abandoned mains which you have testified to?

A. Yes, I can, if you will have the patience to go through all the volumes.

Q. You could show that, could you?

A. Yes.

Mr. Mathewson: Seventy-five miles that were abandoned above the 822?

The Witness: Yes.

Mr. Burr: Which is it, 822 or 795?

Mr. Mathewson: You know as well as I do; 822 includes the mains which were called active mains and those which were disused for some purposes exclusive of the abandoned mains, which were some seventy or eighty miles more. The testimony is that 5570 the abandoned mains included would make 880 or 890 miles, my recollection is.

Q. I notice here at this point, East Fifty-second street, between Fifty-second and Fifty-seventh Street and Third Avenue, on Third Avenue, there are how many mains, four, five?

A. Five, yes, sir.

Q. These breaks in the line showing the main, has that any particular significance?

A. It indicates the system.

Q. The system?

A. Yes, sir.

Q. It indicates the company to whom the mains belong?

A. Yes, sir, before consolidation.

Q. Take Third Avenue at this point, can you tell off-hand by the coloring there, and the appearance of those lines what mains they are and what companies they belong to?

A. Yes, sir, that is a six-inch Metropolitan.

Q. The red line?

A. The red line. That was a six inch Knickerbocker.

Q. That is the yellow?

A. Yes, but made a Metropolitan; that is a sixteen-inch Municipal.

Q. One is orange and the other is yellow?

A. No, they are supposed to be the same color. That is an eight-inch Municipal and an eight-inch Metropolitan.

Q. The eight-inch Municipal is the blue line?

A. They are both blue lines.

Q. And the other one is what?

A. Metropolitan.

Q. Now, you read Dr. Marks' testimony that within the time allowed him he had these mains measured by means of a steel tape upon each map?

A. Yes, sir.

Q. And you heard him testify that so far as these corners to which you have referred are concerned, he got the dimensions of those corners through curving the steel tape?

A. No, sir, he did not say that at all. He said where there 5571 wasn't a straight line that he curved his tape, put it on edge that way; for instance, if that main went around that way in a curve, he would place his tape on edge like that (indicating).

Q. Well, it would be possible to get the dimensions of the curves by standing the steel tape on edge, wouldn't it?

A. No, sir, because that curve is not drawn to the scale.

Q. Assuming that the scale was all right?

A. Assuming these mains were put in to scale, you could get it, but that curve from start to finish might be one hundred feet or twenty feet, the length of the curve.

Q. And I understand you to say that when you make a change in the main you report to the head office and there shortly after it is entered in the books, that is the system, and from the books it is entered in the maps?

A. When a main is laid or any alteration made, it is sent to me and it is entered on the books and on the maps.

Q. Do you remember when your attention was first called to this matter of the mains you testified on page 338 of the record that those maps correctly set down the exact situations with regard to the maps.

Mr. MATHEWSON: Suppose you let him see what he did testify to.

Mr. BURR: I will read it. You were asked: Q. And it is part of your duty, is it not, to keep a record of what work is done upon every main in every such street? A. Yes, sir. Q. And for that purpose you must have a very accurate record of the work that is done on such mains? A. It is not kept in detail in the way you mean. I get the pay roll every week and it is entered up in the pay roll what is expended for new mains, repairs, overhauling 5572 and so on, sub-divided under those headings. Q. I understood you to say you had a map showing accurately the whole system of mains in the City of New York? A. We have maps showing the entire system of mains on the Island of Manhattan belonging to the Consolidated Gas Company, one system of maps. Q. And have you another system showing the mains of the other companies? A. We have copies of maps of their-, or of maps we made ourselves before the other companies were consolidated. Q. So taken together for your proper information you have a complete record through these maps of every main in the streets of the City of New York? A. Yes, sir; every gas main. Q. Every gas main, that is the only main I am speaking of? A. Yes, sir."

Mr. MATHEWSON: All of which is so, but he does not say they are drawn to scale.

The WITNESS: This is an accurate map we have of our system of mains. It does not say it is drawn to scale.

You were asked:

"Q. Where is that series of maps? A. In my office."

A. Yes, sir.

"Q. Mr. MATHEWSON: Those were the ones that weighed a quarter of a ton, that Senator Page asked me about. Q. Does that map show the date of the putting down of each main? A. No, sir; no dates at all. Q. In order to understand that map one would have to possess the book which you have with this accurate record you spoke of? A. No, not to understand it. If you wanted to get the 5573 distance from the curb and the depth you would have to have the book."

A. Exactly.

Q. So that with that exception these maps are accurate?

A. Yes, sir.

Q. How is it that you testified yesterday that in every instance you examined these maps the scale is defective?

A. I am not saying for one minute that they are drawn to scale. I continued to tell you that they are not drawn to scale.

Q. Do you wish the court to understand that all these maps are inaccurate in the scale of feet as shown?

A. These maps are absolutely correct as showing on any one street what gas mains there are belonging to the Consolidated Gas Company. I never pretended that they showed the distance from the curb or the length of main there was there, but if this map shows, as it does here, that there are two six-inch mains on Fifty-fifth Street between Second and Third Avenues, that is absolutely correct; there is not a main on these volumes that should not be there.

Q. I notice on this map on page 107 there is a scale of feet given.

A. Yes, sir.

Q. And also a metric scale?

A. Yes, sir.

Q. Decameters and hectameters?

A. Yes, sir.

Q. Do you wish to be understood as saying that both these scales are inaccurate?

A. I have not bothered with that at all, I am using the one used by Dr. Marks.

Q. The one you have used is inaccurate?

A. Yes.

Q. And every scale of feet you examined in your examination of 20 per cent. of Dr. Marks' work you found to be inaccurate and against the company?

A. Yes.

Q. Short?

A. Yes.

5574 Q. And do you now say that every scale of feet on these maps is inaccurate and short?

A. No, sir.

Mr. Mathewson: He says he has examined 20 per cent. How can he say as to the others? The presumption is that they are.

Q. Did you ever examine the scale of feet of these maps prior to the examination you have made because of the schedule of mains given by Dr. Marks?

A. No, sir; I never had occasion to. I never used these maps for getting distances or anything of that kind. Never dreamed of doing it.

Q. These are kept at the main office of the company?

A. These are kept at the main office of the company for nothing but ready reference, showing the size of mains on a street and the side of the street they are on. That is purely all they are for.

Q. I thought you said, in your direct testimony, when you were first questioned about these, or Mr. Mathewson did in your presence, that it would take six months to make a copy of these maps?

A. A copy? I don't remember of speaking of making a copy of the maps.

Q. Don't you remember we asked for these maps when you were first on the stand?

A. Yes.

Q. And they were referred to as weighing ten tons, and that it would take six months to examine them?

Mr. **Mathewson**: Half a ton, do not make it ten.

Q. Do you remember being asked about the seventy miles of abandoned mains, Mr. Simpson, when you were first examined on this inquiry, and that you testified then that there was no way that you could tell where the seventy miles of abandoned mains were
5575 located?

A. No, sir, I said it could be picked out, but it would take a long time.

Mr. **Burr**: I will continue my examination after recess.

At 1 p. m. adjourned for recess until 2.15 p. m.

After Recess.

Q. What do you say was the total difference in feet between your measurements and Dr. Marks' schedule?

A. You mean to start with, before we found any errors.

Q. Yes.

Mr. **Mathewson**: Mr. Simpson's was not by measurements. He gave no measurements.

A. I just take Mr. Marks' testimony, that is all. Professor Marks, in his testimony allowed us 3,862,282.90 feet of active mains, and 230,630.40 feet of disused mains, making a total of 4,092,913.30 feet against our total of 4,344,849.00 feet.

Q. That would make a difference of how many thousand feet. Something like 251,936 feet?

A. 251,935.70 feet. And from that should be deducted though, the 29,111 feet that Mr. Marks' allows for the Bronx.

By Mr. **Mathewson**:

Q. That 29,111 was not in his total?

A. No, he allowed it for the Bronx, but did not put it in his total. Leaving 222,824.70 feet.

5576 By Mr. **Burr**:

Q. Now, is that your understanding of the only difference between Dr. Marks' figures and yours with regard to these mains?

—. ——.

A. That is the only difference between your claim and his figures, as to mileage?

A. Yes, sir.

Q. How many miles would that represent?

—. Do you want it roughly or exactly?

Q. Roughly.

A. About between forty-three and forty-four miles.

Q. Now, you have stated that you have found from an examination of the maps that there were five maps omitted?

A. Five maps omitted.

Q. What maps were they?

A. Pages 118, 119, 120, 121 and 122 of Volume 6.

Q. How many miles do they represent?

A. 24.25.

Q. And the total was forty-four miles?

A. Forty-four, yes, sir.

Q. That makes a difference of twenty miles?

A. Yes, sir.

Mr. BURR: Now, in all fairness, it is proper I should say that we have found that Mr. Simpson is correct in that regard; that we did omit the five maps. The young men who had the compilation had them on their original notes, but in some manner or in some way due to the magnitude of the thing they omitted those five maps, and it is only proper to say that; but you will appreciate the great undertaking Dr. Marks tried to accomplish in taking the measurements of this vast number of maps.

Q. Now, the accountants' report, Mr. Simpson, is that December 31st, 1905, from the books of the company, there appeared to be 804,594 miles of mains (page 1449 of exhibits). I show you 5577 the statement as presented in that regard. I am speaking of the report of Marwick, Mitchell & Company, the accountants?

A. Yes, sir.

Q. As it appears in City's Exhibit 87; is that correct?

A. I would not say offhand it is correct.

Mr. MATHEWSON: Of course, Mr. Burr, the main mileage as we had it out yesterday differs from you in that if we abandon a main that comes out and then the new main goes in, and that represents those since the 31st of October, which was the date of our main mileage of 822; and December 31st, some mains had evidently been abandoned or cut off and other mains had been put in. Undoubtedly, that represents the difference.

Mr. BURR: What I would like to have clear is: is there any doubt that the mileage, as given by the accountants and taken from the books of the company as such mileage appears on that date, is correct?

Mr. MATHEWSON: I don't know. I don't think Simpson could tell offhand.

The WITNESS: I could not tell offhand. I will look it up.

Mr. MATHEWSON: I will have Mr. Simpson or somebody else look it up and he can answer the questions?

Q. Now, Dr. Marks gave the total active mains in Manhattan as 731.49 miles by his measurements, and to that must be added, as I have already stated, the five maps omitted, 24.25, which would make a total of 755.74.

A. What about the Bronx.

Mr. **Mathewson**: That is the Bronx.

The **Witness**: No; he said Manhattan only.

5578 Q. The Bronx is omitted from this?

A. No, sir. It is not included in Mr. Marks' total at all.

Q. Well, we will assume for the present that the Bronx was omitted from it.

A. (No answer.)

By Mr. **Mathewson**:

Q. That would make how much—five and one-half miles more?

A. About five and one-half.

By Mr. **Burr**:

Q. Then the total disused mains was 43.68; abandoned .05, which would make the total 799.48?

A. Yes, sir.

Mr. **Mathewson**: That is Dr. Marks' total?

Mr. **Burr**: Yes.

Q. And if you include the Bronx it makes 804?

A. Yes.

Mr. **Mathewson**: Always state whether it does according to yours, or does according to Mr. Marks' figures.

The **Witness**: According to Mr. Marks' figures the Bronx was not included, the 29,111 feet.

Q. And the 804 miles would be his total putting in the Bronx, and putting these five maps omitted in?

A. Yes.

By Mr. **Burr**:

Q. I call your attention to City's Exhibit 91, as it appears on page 1538. You will see that Dr. Marks has given there for Manhattan 731.49; for the Bronx, 5.51; total, 737. So you will see he did not include in that 731.49 the Bronx.

A. I said he did not include them. He left it out.

Q. Your figures were 795?

A. Yes.

5579 By Mr. **Mathewson**:

Q. And 24.25 would make 761.25 for his measurement of active mains?

A. There was a whole lot more things here that he did not get out. Here is a clear omission, you know. An omission in the schedules, eight miles alone.

By Mr. **Burr**:

Q. Marwick & Mitchell give 804.59 as the number of miles in their exhibit, to which I have called your attention. Dr. Marks gives 731.49 miles in the Borough of Manhattan. He allows for the five maps omitted 24.25; total, 755.74; total disused mains, 43.68; abandoned, .05, making a total of 799.48, to which if you add the Bronx 5.51 gives 804.99, or exactly what Marwick & Mitchell gave.

Mr. **Mathewson**: That is the barest kind of a coincidence. In these schedules Mr. Simpson has presented here there are miles more omitted besides that which he points out; besides those maps, whole blocks here and there.

The **Witness**: The one item of the scale alone would——

Q. Now, if before measuring the mains on the maps the correctness of the scale was tested and the measurement of the mains was made by a correct scale, that would make some difference in your claim as to the difference, wouldn't it? If the scale was corrected before the measurements were made?

A. I am absolutely convinced that if those maps were drawn to a scale and an attempt was made to measure the length from those maps I do not believe there is a human being in the world to-day could get the thing correct in less than six months' hard work.

5580 Q. Of course, we did the best we could under the circumstances; you understand that, Mr. Simpson?

A. I suppose so.

Q. And you are now reiterating what I think you called attention to in the early part of your testimony, that it would take six months to measure these records and maps of mains?

A. I know *I* could do it in six months.

Q. And did you take these examinations yourself of these corrections?

A. Some of them I made myself, on some of them I had the examinations made and attention called to them, and then checked them up after they were shown me. I may say I have all the volumes in court with reference to that matter there, and you may check up anything you may want to check up now.

Q. Have you any explanations to give as to why the maps do not agree, as you claim, with the scale given?

A. Yes, sir; because the man that made the maps explained to me that it was due at first to the shrinking of the paper, and then the ruling of the paper, pasting it on the linen back and ruling it.

Q. Making allowance for the shrinking of the paper it would be possible then to correct the scale?

A. No, because your paper shrinks one way, and your scale shrinks the other. You take a line running up and down the page, and your scale runs across the page, so that both shrink differently.

Q. Who took the photographs of the trenches, or openings?

A. The first one was taken by Mr. Fogg and the others were taken by Mr. Bennett.

Q. Who is Mr. Fogg?

A. Mr. Fogg is one of my engineers.

Q. Who is Mr. Bennett?

A. He is a gentleman connected with the Consolidated Gas Company.

Q. Have you a photographic department there?

A. No. We have a cemera, a large apparatus, and we have three or four official photographers.

5581 Q. Did you give any instructions to the photographers as to what you wanted him to do?

A. I did sir; I told him to take photographs of certain localities showing exactly the conditions existing there.

Q. And you pointed out the spot you wanted photographed?

A. I did not point out the spot I wanted photographed. I pointed out the blocks.

Q. Well, for instances, where you photographed yourself you had pointed out that spot?

A. I stood on the spot myself, yes, sir.

Mr. BURR: I merely desire to impress upon the mind of the Master and to disabuse any impression that might have been received from the statement yesterday that in all cases these things were against the company—Dr. Marks' figures, shortages, etc., that these maps were omitted. We find that the five maps omitted is the fact, and as I say you will appreciate the——

The MASTER: Oh, I think I understand it.

Mr. BURR (Continuing): The magnitude of the job Dr. Marks attempts to do in connection with the examination of the books and the appraisal of the machinery and property of the plants.

Mr. MATHEWSON: And counsel and the Master will also appreciate the force of my suggestion at the time that the work was utterly idle and useless and without value and would be.

Mr. BURR: That is all I want to ask, Mr. Simpson.

Redirect examination by Mr. MATHEWSON:

Q. Mr. Kirby called attention to the fact that the company employed one main where the pressure was as high as a pound and you stated that that continued only for a short distance. As a matter of fact is that not a trunk main from which no services are drawn? 5582

A. It is.

Q. Running down town?

A. It is a main leaving Twenty-first Street Works and runs downtown to Beaver Street—has only one connection off it between Twenty-first Street and Beaver Street.

Q. And that not a service?

A. No, sir. That is a twenty-inch.

Q. And the pressure falls to about $2\frac{1}{2}$ inches to the end. *Q*. So that the high pressure continues only for a very short distance?

A. The high pressure continues, what you might call high pressure does not continue for more than half a mile from the works.

Q. When you testified that one block and two wedges were used to every six feet of pipe you said that so far as the main laid under your supervision was concerned that you knew that from the laying, as to the balance of the pipe which was laid before you took charge, that was the result of your observation, was it?

A. Yes, sir.

Q. At what time did the East River Gas Company begin to use the heavier mains the same as are used by the Consolidated, and by whose advice and how many years ago?

A. Began about five or six years ago.

Q. And upon whose advice was the heavier main employed after that?

A. Mine.

Q. Now, in reference to the weights of the main, you testified, I think, that about one-half the present mileage or more than half had been laid new since 1884, either as new construction or in replacement of smaller pipe?

A. Yes, sir.

Q. As to the old mains which have not been replaced, isn't it the fact that hundreds of thousands of feet of the old mains have been taken up?

A. Hundreds of thousands of feet, yes.

5583 Q. Have you had occasion to use those mains which were taken up from time to time in repair work?

A. Some of the sizes, yes, sir.

Q. And in that case were they weighed by the company before being sent out?

A. Yes, sir.

Q. And did you find——

A. That is the mains, the pipe is weighed——

Q. And did you find that that old pipe, so weighed ran below the weight which the company is using now?

A. No, sir.

Q. So that all your tests, and all your observations, teach you that the old pipe was as heavy as the present?

A. Yes, sir.

Q. Now, Mr. Marks, and possibly one other witness, testified as to a hypothetical system of mains involving one main in a street. If that were to be installed, would it, in your judgment, cost more or less than the present system of mains as carried on the books of the company, $7,852,000?

A. It would cost a great deal more.

Q. And what would be the effect as to services, the length of services, and so forth?

A. It would necessitate running a great many long services, 50 per cent. of them would be long.

Q. If you have to lay your mains on the side of the street, wouldn't that mean you would have to run some of your services in together, and over, around, or beyond the sub-surface structures, from the one side of the street to the other?

A. It certainly would.

Q. What has been the effect of that in reference to the length of service—to increase or reduce the size?

A. To reduce them.

Q. Would you consider such a system advisable, quite aside from the matter of expense and installation, a single main system throughout the city?

A. I would not, sir. I would say furthermore as far
5584 as the avenues were concerned it would be impossible, and in
a great many of the streets it would be impossible.

Q. (Handing papers.) While we are on this subject of pressure, have you received complaints from the Chief Engineer of Light and Power of the City of New York, Mr. C. F. Lacombe, who has testified here, in reference to the pressure which you have maintained within the last few months?

A. Yes, sir.

Q. Are these the letters to which you refer?

A. Yes, sir.

Q. Will you read the first one on the record, the first date?

A.—

"BUREAU OF LAMPS AND GAS.
NEW YORK, *November* 5, 1906.

Consolidated Gas Company, 4 Irving Place, City.

GENTLEMEN: The following is a copy of letter received from the Gas Consumers' Association which is self-explanatory:

"Mr. C. F. Lacombe.

DEAR SIR: We find that the trouble with the lights at the Pumping Station, 179th Street and Amsterdam Avenue, is due to the insufficiency of pressure of gas in the service and the regulators are in no way to blame for the trouble. We met the inspector of the Consolidated Gas Company here by appointment and demonstrated this fact to him conclusively.

Yours very truly,
(Signed) W. S. FURMAN, *Mgr.*"

Kindly give the above matter your early attention, and report on same.

Very truly yours,
(Signed) C. F. LACOMBE,
Chief Engineer of Light and Power."

5585 Q. That means the city pumping station?

A. Yes, sir.

Q. What was the second letter?

A.—

"DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY.
CITY OF NEW YORK,
13-21 PARK ROW, *Dec.* 12, 1906.

Consolidated Gas Company, 4 Irving Place, City.

GENTLEMEN: On November 5th we wrote you in reference to poor pressure at the Pumping Station, 179th Street and Amsterdam Avenue, and requested you to correct same.

As we did not hear from you in reference to this complaint, we had one of our inspectors make an inspection on December 5th and he found that the trouble had not been remedied.

Will you kindly give this matter your immediate attention, and *notify us when corrected?* I am,

Very truly yours,
(Signed) C. F. LACOMBE,
Chief Engineer of Light and Power."

Q. Did you thereupon make investigations as to the pressure being maintained there?

A. I had investigation made.

Q. And did you have the pressure gauged?

A. I went up and looked over the ground myself, and had a record pressure gauge set.

Q. What was the pressure you found, thirteen tenths or one and three-tenths?

A. I found the pressure at the nearest street lamp was one and three-tenths inches.

5586 Q. Now, in reference to sheathing, Mr. Simpson; is it not true that sheathing is required to support the other structure in the street and the traffic passing as well as to maintain the material which you may put in?

A. Yes.

Q. Is it possible to get a trench absolutely level and at the same time solid enough to support your main at the outset without blocking or wedging?

The Master: Did he not testify pretty fully about that, Mr. Mathewson?

Mr. Mathewson: I don't know that he did exactly as to that.

The Master: I think Mr. Kirby put him through that pretty fully.

Mr. Mathewson: I was going to ask him if that would not require the excavation mathematically for the point required on the bell in each case, if he was to lay it flat on the earth, or else the pipe would rest on the bells at the ends and the rest of the pipe would not touch the earth.

Q. Is not that so?

A. Yes, sir.

Q. When you spoke about not leaving the foreman discretion in reference to blocking or wedging, will you explain a little further what you had in mind as to the cases which do not require, in your judgment, blocking and wedging? Are they many or few, and what have you in mind?

A. Well, I meant that in practically every instance that blocking and wedging was necessary; that it is possible that you might here and there in New York find a block or part of a block where the soil was so good and the conditions were so good that you might possibly get along without blocking, but it would not be advisable to leave it out, in my opinion.

Q. Would those instances be so few as to cut an insignificant figure in the total, or would they be large?

A. It would not make a difference in the total of $250—not $50 even.

5587 Q. In the whole system?

A. No.

Q. If you took the whole system of mains together, would it make a difference of more than $1,000?

A. No; it would not take off $50 from the $50,000 I allowed for blocking and wedging.

Q. In reference to the operation of this tamping bar and rammer, did I understand you to say that the rammer was only to be used on the top of the main, or is it to put down beside the main?

A. Not only on top, but beside the main.

Q. How much room is required to operate that in width of ditch?

A. You have got to have room enough for a man to stand and enough room to pass the head of the rammer down between the pipe and side of the trench.

Q. And as to the tamping iron?

A. The tamping iron would require about twice as much room to handle, or more than twice as much as the hammer, because it has to be held at an angle and used at an angle.

Q. How much in width would you say for an ordinary depth of trench, say three feet or four feet?

A. I should not think you could use a tamping bar to advantage in a ditch four feet deep without having at least eighteen-inch play room between the side of the pipe and the side of the trench on any pipe of any size.

Q. Take those few instances in which in your judgment it might be possible to lay the main without blocking and wedging, is not there danger there from subsequent construction which are coming in those streets and in leaving the main resting on earth without blocking?

A. No, sir. The blocking would not make any difference in that case at all.

5588 Q. You stated you could not caulk gas mains too carefully for gas; as a matter of fact, compared with water mains, will not gas escape where water will not?

A. It will——

Q. And have you complaints as to gas odors and otherwise which escape from mains from time to time?

A. A great many of them.

Q. Have you noted within recent years complaints of the city officials as to the leakage of water being very great in New York City?

A. I have read a great deal of it.

Q. On the other hand, how does the leakage of the Consolidated Gas Company or unaccounted-for gas compare with other companies that you know of?

A. I think if not the smallest it is one of the smallest of any large city in the world.

Q. Do you remember that the unaccounted-for gas by the Exhibits was about 14 per cent. in 1884, and it has now been reduced to about 2 per cent.?

A. Yes, sir; about 2 per cent.

Q. And if by reason of insufficient caulking, gas was allowed to escape and the unaccounted-for gas increased, that would raise the cost of gas per thousand feet sold, would it not?

A. It would.

Mr. Burr: That is all speculation. I do not think it is proper rebuttal, Mr. Master.

Mr. Mathewson: I am asking questions on the line which you and Mr. Kirby did fully. You referred to water and gas mains, and I have shown the situation. Ours are good, and apparently the water mains are bad, according to the reports of your own officials.

Mr. Kirby: You have not given the reason why.

Mr. Mathewson: I do not have to.

Q. In reference to the pipe used in Boston for water mains, Mr. Kirby read you some weights which were lighter than those used here?

A. Yes.

5589 Q. And you said that there were at least four weights used there?

A. Yes.

Q. How about the heavier weights, how do they compare with the weights of the Consolidated Gas Company?

A. They are far heavier than those we use.

Q. Is there any general rule which can be promulgated as to the weight of pipe required in the distribution system of a gas company without taking into account the local conditions as to traffic and other structures fully and all the details?

A. No, sir; none whatever.

Q. Do your pipes sometimes break even now with the weight which they have?

A. Very often.

Q. What would be the effect of lighter pipe in that regard?

A. We would have more broken than we have now.

Q. And the replacing of pipe in a situation of that sort would be a matter of large expense, would it not under the present pavements?

A. It would be very large.

Q. In reference to the rock at Sixty-third Street which you said was the only instance you recall where it was disposed of, that was taken out in excavation for a holder, was it not?

A. Yes, sir.

Q. In large blocks?

A. Large blocks. I may add that the man who bought the rock picked out such such pieces as suited him as to size and grain and so on.

Q. You also stated that when the subway was built and the trolley conduits were constructed, that the Consolidated Gas Company was paid the expense of moving mains or some expense for rearranging?

A. Yes, sir.

Q. Was not the company put to a good deal of expense in addition to anything that was paid by these subway or trolley companies?

A. It was, yes, sir.

5590 Q. In what lines?

A. We were only paid for any actual work performed. We were not paid one cent for the patrolling and watching of the work to see that they did not injure our system.

Q. And the inspection?

A. And the inspection.

Q. And the rearrangement of mains in your own records, to show the changed conditions, did they pay for that?

A. No, sir, did not pay for that at all.

Q. Your attention was called to the fact that one of the photographs which you have presented showed salt water mains in the middle of the street. Have you photographs that show that here?

A. Yes, sir.

Q. (Handing photograph.) Will you look at these two photographs and say whether they show that condition?

A. On Thirteenth Street, west of Third Avenue, the main is almost exactly in the centre of the street; in fact, it is exactly in the centre.

Mr. Mathewson: I offer that photograph in evidence.

Photograph received and marked Complainant's Exhibit 295.

The Witness: And this other one, Seventeenth Street, between Fifth and Sixth Avenues, the cut is also exactly in the middle of the street.

Mr. Mathewson: I offer that in evidence.

Photograph received in evidence and marked Complainant's Exhibit 296.

Q. It has been testified to by you that the edges of the pavement broke down where a ditch is temporarily covered and some time elapses between the closing of the ditch and the final repavement by the asphalt company of the city. As a matter of fact, in your computations, how much did you allow beyond the width of the trench on each side for repaving?

A. Three inches.

5591 Q. Is three inches the width which is actually repaved, or the minimum or maximum?

A. It is the minimum.

Q. Then the average in fact would be greater than that?

A. In nearly all cases it will run between four and six inches, some times as much as a foot on each side.

Q. Then your estimate is lower instead of above the average of your experience?

A. Yes, sir. One of these photographs shows five inches on one side and six on the other for the salt water main.

Q. Which is that?

A. That one there (indicating).

Q. That is Complainant's Exhibit 280?

A. Yes, sir. One side is five inch trim and the other side is six inch.

Q. Is it possible, Mr. Simpson, in your judgment for anyone to make an accurate or even approximately accurate estimate of the cost of installation of mains in the City of New York without a long and thorough study and exact knowledge of conditions still existing?

A. It is not any more than it would be possible for me to go to Boston or Chicago, or any place like that, and make an estimate there. I could not do that, and I would refuse to do it, unless I had gone into the thing very thoroughly.

Q. In spite of your wide experience generally?

A. In spite of my twenty-five years' experience in New York City.

Q. Mr. Burr has asked you with reference to the schedules, city's exhibits 92 and 103. In comparing them with the maps in reference to the mains you did compare, why didn't you endeavor to examine all of those 350 or 360 pages and compare them?

A. To start with, I knew that it was an absolute impossibility to get any correct data in the way Mr. Marks went at it; in the second place, the errors I found were so many and so glaring, and 5592 they were of so many varieties, that there was not time to take all the errors that were there. I took a few of each kind just as an example.

Q. In order to test the accuracy of the general work?

A. No, in order to prove that I was right and that they could not make those measurements. I knew it was not accurate before I started.

Q. In reference to these twenty-four or twenty-five miles which were omitted in one lump, were they active or disused mains?

A. Active.

Q. You have been asked in reference to services of the gas company where electricity is introduced to a building, and have stated that they were, as a rule, left. Why are they left?

A. Because they are in practically every case needed.

Q. Is the gas still connected with the house?

A. If not needed for illuminating purposes, in addition to the electricity, they will need it for fuel purposes, or heating purposes, gas ranges and so on.

Q. Now, you have the maps here which Professor Marks examined, have you not?

A. Yes.

Q. And are prepared to test the accuracy of any schedules which you presented?

A. Yes, sir.

Q. I will ask you to test one of them before the Master. Is that your sheet?

A. What one shall I take? Pick out one?

Q. Well, take this 5th Avenue one—no, take one later than that; take the one on Lenox Avenue, 115th to 110th Streets, which I have checked on this sheet.

A. Get me volume 8, Lenox Avenue, between 115th and what street?

Q. It is described there.

A. Lenox Avenue from the north property line of 115th Street to the south property line of 110th Street. Now, that reaches from the north property line of 115th Street to the south property line of 110th Street. The south property line of 110th Street is 5593 here (indicating). The north property line of 115th Street is there (indicating), that is 24 14/16 inches.

Q. Twenty-four and seven-eighths?

A. Well, Mr. Marks gave it in sixteenths. The official measurement for that——

Mr. **Marks**: What do you mean by the official measurement?

The **Witness**: On this card (indicating) the distance of streets and avenues and blocks and so on. From Ninety-sixth to 125th Street the blocks are 201 feet 10 inches long. There are five blocks, 1,009 feet 2 inches; there are five sixty-foot streets.

Q. Are there not six?

A. No; there is a 100-foot street coming. Five sixty-foot streets, that is 300 feet; there is one 100-foot street, 110th Street, so that the distance there officially is 1,409 feet 2 inches. 24 14/16 of the scale, I will take twice ten inches first for convenience sake; ten inches is 550 feet; twice 550 feet is 1,100 feet. Now, I have got 4 14/16 inches, that is 270 feet exactly; is it not, Professor?

Mr. **Marks**: 267 or 268.

The **Witness**: Well, 267; I said 270, which makes 1,367 feet against the official scale of 1,409; that is the difference. Now, I want to call your attention, Mr. Mathewson—of course, that refers to the mains on that avenue, too, and on that avenue and that avenue (indicating).

Q. That is on Lenox, 7th and 5th?

A. Yes; it takes every avenue which is on that page, and I have only quoted one or given the exact figures.

Mr. **Burr**: Why is 5th Avenue given on that map?

The **Witness**: Does it make any difference if it is a
5594 straight line, whether I measure from this side of the page
or from that side? Would it not come to the same thing?
These lines are perfectly straight across here, and straight across
there (indicating).

Q. Of course there might be a slight difference in measuring in this manner due to the personal equation, but not enough to affect the general proposition that the measurements are incorrect, is that right?

A. No. If you want to get it within the finest kind of point, you have to have a very bright light, and one man holding one end and another man the other.

Q. And that you have not here?

A. No; the light is not bright enough; it is very hard to read these sixteenths of an inch.

By Mr. **Burr**:

Q. While you have the map there, I understood you to say these maps were made by—what was his name?

A. Who drew the map?

Q. Yes.

A. Do you mean who drew the mains in?

Q. Yes; I asked you to give me the name of the man who drew the maps.

A. I gave you the name of the man who put the mains in.

Q. These are insurance maps?

A. Yes.

Q. These purport to be insurance maps of the City of New York surveyed by Perris & Brown, 55 Liberty Street, 1889; that is right, is it not?

A. Yes, sir.

Q. And when you spoke of the gentleman under you having made these maps and having been engaged in making them, you simply referred to his placing on these maps the mains?

A. Yes, sir.

Q. And when you say that the paper shrank, therefore affecting the scale, if the paper is shrunk, it would affect the whole map, would it not?

A. What I meant was if the paper shrank this way——

5595 Mr. MATHEWSON: Say it shrunk lengthwise.

The WITNESS: If the paper shrunk lengthwise and the scale is running across the book, it would make a difference.

Q. Do you know in which way the paper has shrunk in any instance?

A. I have not any idea. It shrinks in the printing and in the backing.

By Mr. MATHEWSON:

Q. In some cases, Mr. Simpson, where these pasters are put on these maps by the makers of the maps, where the character of buildings changes, do not the pasters extend out over the mains?

A. Very often.

Q. So as to cut them off?

A. Yes, sir, very often.

Q. Have you, then, to redraw the mains?

A. Yes, sir.

Q. And on these very maps, are not there instances of that character where a main appears to be cut off by a paster, whereas a main actually exists there?

A. By looking over the volume you could find several instances, and I suppose, of course, as we come across them——

Mr. BURR: I think that should be stricken out. He said you could find by looking over the volume——

The WITNESS: Well, there are several instances.

Mr. BURR: Then say so.

The WITNESS: Well, there are several instances which you can find by looking through the volumes. Of course, it is our practice whenever we come across those to put the mains on again.

Mr. MATHEWSON: If you want to see one, I am told there is one on page 107 of Volume 6.

5596 Q. Now, Mr. Burr has drawn your attention to the fact that, taking Mr. Marks' figures as computed out, and adding to them the Bronx mains and the amount of the five maps omitted and the disused mains, Mr. Marks reaches a total of 804.99 miles, which is substantially the amount given as of a different date by the accountants Marwick, Mitchell & Company or Mr. Hall. Does the 804.99 take into account other errors which you have discovered, even so far as you have examined and which appear in your comparisons of totals to which you have referred?

A. No, sir, it does not.

Q. So if there is any such correspondence as that it is a coincidence, isn't it?

A. Merely a coincidence.

Q. Is there any doubt from the figures, from your own information and records, that the amount of active mains of the company on October 31, 1905, actually amounted to the figure you have given, 795 and a fraction?

A. Not the slightest doubt.

Q. And if there appears more disused mains than the twenty-seven miles and a fraction which you gave, that would indicate merely, would it not, that some mains which were marked disused on the maps have since been abandoned, and have not yet been marked off?

A. Yes, sir.

Mr. Mathewson: That is all.

By Mr. Burr:

Q. I will ask a question which I should have asked before. I understood you to say, when Mr. Mathewson asked you as to what experience you had, and if you would rehearse that story again, that you took occasion to say that the mains from Astoria were now in successful operation—did I understand you correctly?

A. Yes.

5597 Q. Will you tell me how they are being successfully operated to-day?

A. By conveying gas from Astoria to Ravenswood and through the tunnel to New York.

Q. Well, they are conveying gas from the first unit at Astoria?

A. Yes, sir.

Q. To where?

A. To Ravenswood in Long Island City.

Q. Through whose mains?

A. Through the sixty-inch main that I was talking about.

Q. Well, to whom does that belong, whose main is it?

A. Well, I suppose it belongs to the East River Gas Company of Long Island City.

Q. And where does that connect, at Ravenswood?

A. Yes, sir.

Q. With what main does it connect there?

A. It connects there with the works and the tunnel.

Q. And is that the East River Gas Company's main, too, in the tunnel?

A. Yes, sir.

Q. So that the Astoria plant is making gas and transferring it to the Borough of Manhattan through the sixty-inch main owned by the East River Gas Company at Ravenswood and extended through the tunnel under the East River?

A. I don't know that it is owned by the East River Gas Company;

it was laid by the East River Gas Company; that is one of the things I don't know.

Q. Where does it connect with the Consolidated in Manhattan?

Mr. MATHEWSON: That all appears in evidence, where the tunnel from Ravenswood connects with the Consolidated Gas Company.

Mr. BURR: This is something which has recently happened.

The MASTER: Do not discuss it at length, he may answer.

Q. Where does it connect?

A. At a great many points.

5598 Q. The main in the tunnel?

A. The main going through the tunnel connects with several mains of the Consolidated Gas Company in Manhattan.

Q. What are they?

Mr. MATHEWSON: Is it worth while going all over this? It was all asked on the direct. It is merely additional gas going through the tunnel which has recently been manufactured.

The WITNESS: It connects with a thirty inch main which connects with every gas plant or station of the Consolidated in Manhattan. It also connects——

Q. At what point does it connect with that main?

A. Seventy-first Street and Avenue A.

Q. With what other?

A. A twenty-four inch main going to the New Amsterdam Company.

Q. Where?

A. Fortieth Street and 1st Avenue. It also connects with a thirty-six inch main going across town belonging to the East River Gas Company.

Q. You are now receiving gas to-day in that way, are you, through those mains?

A. Yes, sir. I don't know that we are receiving any gas from Astoria through those mains; I don't know what is being done with it.

Q. Where do you think it comes from?

A. It might come from the Ravenswood plant; they have a big works there at Ravenswood, making twenty-five million a day.

Q. Then you don't know that the gas is coming from the Astoria plant?

A. I know that gas is going from the Astoria plant through that main.

Q. And you suspect it comes over by way of Ravenswood?

A. Yes, sir.

Q. Now, you say that the company seeks or is ambitious to reduce the size of its services?

A. No; it seeks to reduce the length of the services, but not the size.

5599 Q. I do not mean the number, but the extent, so far as length is concerned?

A. The length of it, it does.

Q. In other words, Mr. Mathewson called attention to the fact, as he claimed, that if there was a single main in the street you would have to have longer services?

A. Yes, sir.

Q. And the idea of the company was that you should have shorter services; therefore you got as close to the curb as you possibly could?

A. Yes, sir.

Q. Have you not claimed that the reason that the company does that is because after the services are put in the services no longer belong to the company but belong to the owner of the real estate?

A. I never said so in my life.

Q. Did you not so testify in a tax proceeding?

A. No, sir; never.

Q. In an attempt to evade taxation, that the company should not be taxed for these services because after having been put in the building they belong to the owner and not to the company?

A. No, sir; never testified to anything of the kind.

Q. Did you ever hear of any one testifying to that effect for the company?

A. No, sir.

Q. You have said very frankly that you saw Dr. Marks undertake to make the measurements on these mains and you knew from the very beginning that he could not get any correct data, because of the manner in which he started to get the information that he thought the maps contained?

A. I knew he could not from the time he had.

Q. Oh, not from the method he pursued?

A. Yes, from the method he pursued, too; from the time and method.

Q. Did you call his attention to the incorrectness of the method he was pursuing?

A. I told Professor Marks that the maps were not drawn to scale in my office, and it was after a conversation of that kind I called his attention to several of that kind, and he said that he thought he could come within 5 per cent. of being correct.

Q. Didn't he tell you he was going to correct the scale?

A. He might have, but it would not make any difference.

Q. But you would not swear he did not tell you he was going to correct the scale as he went along?

A. I would not swear that he did not, and would not swear that he did.

Mr. Mathewson: He himself testified that he did not compare this scale with anything else, or correct it officially, or compare it with official scales—there is not much use of following this out. Look up his testimony. I asked him particularly about that, and he said no, he did not test this by official maps, the length or the scales.

Q. Is it not a fact that you used pebbles—or, I mean, cobble stones—instead of blocks to support your pipes?

A. I would like to catch any one of my men trying it; he would lose his job.

Q. What is the real object of putting the blocks in, so that they can support the pipe, or is it to give a space there in which the caulking may be done?

A. No, it is to support the pipe and give the pipe a good firm bed to rest on.

Mr. **Burr**: That is all.

By Mr. **Kirby**:

Q. Does the Consolidated Gas Company have any other main in which it carries a pressure approximately that of the main which we have been speaking about to-day?

A. No, sir; nor anywhere near approximating it.

5601 Q. What is the highest pressure you have in mind beside this one?

A. I should say the highest pressure we have on any other main—do you mean transfer or service main?

Q. Transfer main.

A. In a transfer main you might at some place near the station get to possibly nine or ten inches with an exhauster pushing it.

Q. You did not understand from Mr. Edgerton's testimony, did you, that he contemplated taking his services direct from this high pressure main?

A. No, I did not.

Q. In putting down these mains, that is, in digging your trench, how do you make room for your bell?

A. I allow room for the bell when I make my trench; I have room for the bell. If the trench is narrow at the bell I will widen it out.

Q. And what do you do at the bottom of the trench?

A. Open up for it.

Q. So that in no way does the pipe rest upon the bell itself?

A. No.

Q. And such blocks as you use are not laid in to support the pipe to a height that will take the weight off from the bell?

A. No.

Q. Your blocks are countersunk, are they not?

A. Yes, sir.

Q. And the bottom of the trench scooped out for that purpose?

A. Yes, sir.

Q. And your blocks rest upon the very ground which the pipe rests upon, do they not?

A. Yes, sir.

Q. And you seek in every case to get as much of the pipe as possible upon the ground, do you not?

A. We do.

Q. You have said that you considered it inadvisable to use lighter pipe. Have you ever used any lighter pipe?

A. No, sir.

Q. You said the same would break before the other would break?

A. Yes.

5602 Q. Upon what do you base that conclusion if you have not used it?

—. Upon my knowledge of the conditions.

Q. I presume that you mean in regard to leaving services in the ground when the use of gas is either discontinued in whole or in part, that no change whatever is made, that the service r-mains there as it was formerly?

A. No, sir; all our services are renewed, all services that have gas in them are renewed when they show any signs of deterioration.

Q. But they are not if they are not changed?

A. No; except if it is necessary to change them on account of size or anything of that kind.

Q. You do not take out a large one and put a small one in its place?

A. No, sir; we never do that.

Mr. Kirby: That is all.

By Mr. Mathewson:

Q. Assuming, Mr. Simpson, that gas is being made and sent out from Astoria, do you know of any way that the Consolidated Gas Company could get it to its mains in the City of New York, except by some temporary arrangement, of sending it round through the Ravenswood tunnel?

A. I know there is no other way.

Q. Pending the completion of the other tunnel direct from Astoria?

A. Yes, sir.

Mr. Kirby: There is one other question I omitted.

By Mr. Kirby:

Q. You have mentioned having taken pressure at a certain point in the city, where was that point?

A. I do not think I mentioned having taken pressure. I mentioned that I was familiar with pressures all over the city and have seen them taken.

5603 Mr. Mathewson: At the nearest lamp in reference to Mr. Macombe's complaint.

The Witness: I said I had the pressure taken there.

Q. You did not take the pressure there?

A. No; I had a *guage* set there.

Q. Did you set the *guage*?

A. No, I had set it by my orders, and the chart brought to me after twenty-four hours.

Q. Where did you have that placed?

A. The nearest lamp post to the pumping station.

Q. Where was that?

A. About forty feet west of the station.

Q. Where is the station?

A. One Hundred and Seventy-ninth Street and Amsterdam Avenue.

Q. What sort of a *guage* did you order set there?

A. Bristol Recording G*uage*.

Q. And how was it set?

A. I ordered them to set it on top of the lamp post. I ordered them to test the *guage* with a water *guage*, and if it was correct to bring me the chart.

Q. You did not do any of the work yourself?

A. No, sir.

Q. Did not attach it?

A. No, sir.

Q. Or see it attached?

A. No. I went up and looked over the ground and saw the situation at the pumping station.

WILLIAM H. WHEELOCK, recalled in rebuttal, in behalf of the complainant, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Mr. Wheelock, have you read the testimony of Messrs. Thompson and McHale and Wells?

A. I have.

5604 Q. And you observed the valuations that they gave for the company's lands between Sixteenth and Twentieth Streets and west of Tenth Avenue?

A. I noticed them, yes.

Q. As it now exists after the city improvements?

A. I noticed them, yes; I don't remember them.

Q. It is the claim of the defendants that the company is entitled to include in its capital only the portion of the land which remains. Will you state whether you agree with the valuation of these gentlemen for the defendants, and if not, what valuation you placed on those blocks from 688 to 690, inclusive, being shown on page 3 of Exhibit 48?

Mr. BURR: Let me understand. Is this what he has already testified about?

Mr. MATHEWSON: No, he has not testified. He is simply rebutting the values he gave to that particular property. We showed the value of the property as a whole, and you claimed we should be entitled to include in our capital only the portions which are left, and I am now asking whether he agrees to the testimony of your witnesses as to the value of what is left, and if not, what his valuations for those parts are.

The WITNESS: Beginning with block 688, do you want me to state what my total was before?

Q. Yes.

A. Block 688, I gave a value of $844,000.

Mr. BURR: Your first valuation was $844,000?

The WITNESS: Yes. That was prior to the taking by the city. Now, the remaining portion is $400,000.

Q. Block 689?

A. I testified to a value of $808,500 and as the block stands at present my valuation is $471,500. Shall I go on?

Q. Yes.

5605 A. Block 690, I testified to a valuation of $453,500. As the block stands at present, my value is $483,000, an increase of $29,500.

Q. That is on account of the marginal streets now making a street frontage, where originally there were interior lots?

A. Yes. Block 691, my valuation before was $340,000. As the block is at present my valuation is $186,500.

Q. Those are all the blocks which are affected by the improvement there?

A. Yes.

Q. And the difference is how much, between the valuations?

A. The net difference is $1,392,500.

Q. And if you deduct that from your original total of $15,499,500 that would leave a net now of how much?

A. $14,107,000.

Q. And in getting this difference of $1,392,500, do you not take into consideration that block—what are those which were taken out entirely?

A. Well, the two blocks that were tackn out entirely were number —I don't believe I have the numbers here, but the blocks between Eleventh and Thirteenth Avenues.

Q. Those two small triangular blocks?

A. Yes, and from Sixteenth to Eighteenth Streets.

Q. And you wipe those valuations out entirely?

A. Yes, sir.

Q. Your original valuations were $127,500 for one of the blocks and $63,000 for the other block?

A. Yes.

Q. And $297,000 for the bulkheads?

A. That is right.

Q. And those three blocks you count as zero?

A. Yes.

Q. And the net difference of all the property which you have now mentioned as originally valued by you, including lots and bulkheads, was greater than your present valuation of the same by $1,392,500?

A. Yes, $1,392,500.

5606 Q. The witnesses for the defendant had their attention called to an award of $900 per front foot for bulkhead at Twenty-second Street, but stated that they could not find that any award had been made, that being the figure to which Mr. Greene testified. Do you know whether that award was actually made?

A. Yes. I know that it was made, and that the money has been paid to the original owners of the property. The award was confirmed on April 27th, 1906, and the total of that award was $45,600. It covered eighty feet eight inches of the bulkhead running northward from Twenty-second Street, and the owner of it, to whom the money was paid, was Francis L. Ogden.

Q. Now, on page 2775 of his testimony, in regard to block 716, lot 14, Mr. Thompson put no value on building. Aren't the buildings there of value in your judgment?

A. That is on what page of exhibit 48?

Q. On page 3. It is the stables on the north side of West Eighteenth Street.

A. I put a value on those buildings of $4,000.

Q. Do you find that Mr. Thompson, in his estimate of value, if Twelfth Avenue be excluded from the company's property at the Forty-second Street plant and at the Forty-fourth Street plant, allows any corner values?

A. I could not find that he did.

Q. What would be your judgment as to an estimate if you assumed Twelfth Avenue to be excluded as to whether corner values should be allowed?

A. If Twelfth Avenue be excluded it means it is a north and south through traffic street, at least, to a certain extent, and that property facing on that street should have a value and that corners should be figured in the same way that corners are on other streets, which I figure at 60 per cent. over interior lots, and in some cases 100 per cent., but in that case 60 per cent.

5607 Q. As to Shadyside, the New Jersey property, Mr. McHale, at page 2,871, gave a certain valuation?

A. Yes.

Q. Will you state whether that is the valuation which is correct in your judgment, and, if not, what you would base your criticism on?

A. I would put a value on that property of $300,000. I was influenced somewhat by prices paid in the neighborhood that I could find out, and I took into consideration the price paid by Batterson & Eisele for the marble works just north of this property, where $120 per running foot was paid for only meadow land. I was also influenced by the fact that the railroad paid in condemnation proceedings $1,200 per lot, 25 x 100 feet, and also by the fact that the next lot north of the Batterson & Eisele marble yard, so far as I can learn, cannot be bought for $140 a running foot.

Q. What would that indicate as to Mr. McHale's valuation?

A. That, in my judgment, they are too low.

Q. On page 2,885 Mr. McHale was unable to give information as to the rent received by the city for 187 feet between 109th and 110th Streets. Can you tell what that is?

A. I think I have a record of it. The city rented to Burke & Meyer 187 feet between 109th and 110th Streets at $1,800 a year; that is, at the rate of 4 per cent. on a capital value of $45,000, or at the rate of $240 a front foot of bulkhead.

Q. Assuming that the company were to be excluded from 12th Avenue, that is the Forty-second and Forty-fourth Street plant, I want to ask you whether, in your judgment, they could obtain contig-ous or neighboring property of a similar extent for less than the valuation that you placed on the property included in 12th Avenue?

Mr. BURR: I object to that as immaterial, incompetent and irrelevant.

5608 Mr. MATHEWSON: No, the cases say that the cost of replacing is an element, almost a controlling element.

The MASTER: I do not exactly see how that comes under the head of rebuttal, Mr. Mathewson.

Mr. MATHEWSON: In this way: We are using 12th Avenue, it is conceded, and the valuation given by our witness was including 12th Avenue. Now, the defendants say you may be excluded from 12th Avenue; it is a public street. If we are excluded from 12th Avenue then we have got to get land somewhere else to use. In other words, the amount of land we require for use in our gas business. And the question is whether we could replace it elsewhere or whether the value of the land required in our gas business would be any less if we were excluded from that land, and the cases as I understand them hold that it is entirely pertinent and valuable to inquire whether the company could acquire its land, replace its land for any less than the valuation placed on the land. In other words, they desire to exclude us from 12th Avenue. If they do, we must have other land. Can we get it for any less valuation than the valuation which Mr. Wheelock placed on the 12th Avenue property?

Mr. BURR: The only question here is what was the value of the land which you claim to own. Now, the valuation was placed upon all this land by Mr. Wheelock in the beginning, and then valuations were placed on the same land by Messrs. Thompson, McHale and Wells. Now, Mr. Wheelock is called to rebut if he can, any statement that they made in regard to the value of any particular 5609 piece of property. Strictly speaking, this is not rebuttal at all; it is going over his testimony in a great degree.

Mr. MATHEWSON: Not at all.

Mr. BURR: With regard to the changed conditions——

The MASTER: Did this exclusion of 12th Avenue originate with the defendant's witness?

Mr. MATHEWSON: They asserted and claimed and put in maps showing that we cannot use that property and can be excluded at any time.

The MASTER: Not with the real estate experts, but other evidence offered on behalf of the defendant?

Mr. MATHEWSON: Yes, since our people testified; and they have advanced this and called Mr. Wells and shown our water rights and claimed that we were squatters and cannot use that land. If we cannot, we are entitled to have other property, and if we are excluded from that, according to their contention, my question is whether we could acquire a similar amount of land to use in this city for less than the valuation he placed upon the land from which we are excluded?

Mr. KIRBY: No facts have been brought forth which were not known before the complainant closed their testimony in this action.

Mr. MATHEWSON: We did not know you would make that claim.

Mr. KIRBY: You knew what the conditions were?

The MASTER: I will allow it.

Mr. BURR: Exception.

Mr. KIRBY: Exception.

A. I do not think you could replace the land for anything like the figures I have placed upon it.

5610 Q. I will ask you the same question in reference to the property shown on page 2 of Exhibit 48, being block 991.

lots 1 and 26, that is the two lots between Avenue D and Tompkins Street, and the northeasterly one-half measured diagonally of block 89, lot 26; whether, if the company is excluded from that property, it can in your judgment acquire other property contiguous or in that vicinity for anything less than the valuation you placed upon the property from which they would be excluded?

Mr. Burr: Same objection as before.
Mr. Kirby: Same objection.
The Master: Same ruling.
Mr. Kirby: Exception.
Mr. Burr: Exception.

A. I do not believe they could, I am positive they could not.

Q. Referring to block 642, lots 32 and 33 at the northwest corner of Third Avenue and 114th Street, Mr. Wells testified that he did not consider that the value of that plot was increased by the fact that it faced both on Third Avenue and on the side street; in other words, the L-shaped plot. What would be your view as to that?

A. I think there is hardly a case where property fails to enhance in value where it has an L either on a street or an avenue. There are cases where the enhancement of value is much greater owing to the improvement of the street or avenue, but as a general proposition it increases the value of the plot.

Q. Is there anything which indicates to you that this would be any exception?

A. No.

Mr. Burr: I want to say here, if you are going to pursue this much longer, this is not rebuttal——

Mr. Mathewson: I am all through.

5611 Mr. Burr: He calls witnesses to testify to the value of land and give their reasons, and they are cross-examined as to why they give certain valuations. Our witnesses are called and they are cross-examined as to the justness of their values——

The Master: But he says he is through with this now.

Mr. Burr: If he is through he is through.

Q. In the course of my examination of Mr. Wells I asked if he was familiar with the sale at 166 East 114th Street, a lot 16 feet 8 inches by 100 feet, with a building worth about $2,000 and land $6,500, sold in 1902 for $8,500, or at the rate of $12,000 for a full lot. He replied that he had no record of such a sale. Are you able to say whether there is a record of such a sale?

A. I found it in the *Record and Guide*.

Q. And the same as to Mr. Thompson. I asked him at page 2,748 whether he knew of a sale of 2089 Third Avenue in 1900 for $45,000, and he said he could find no record.

A. That is also in the *Record and Guide*.

Q. I also asked Mr. Thompson on the same page with reference to the sale of 2091 Third Avenue, 25 by 100 feet, sold in 1901, at $31,000, and he could find no record of it. Is there such a record?

A. There is in the *Record and Guide*.

—. I also asked Mr. Thompson at page 2752 with reference to the record of a sale of 126 East Seventeenth Street and 128 East Seventeenth Street, the first 25 feet 6 inches by 100 and the next 24 feet 9 inches by 100, the first sale being for $40,000 and the second for $50,000, the buildings in each case worth about $5,000, sold to the city in 1906, and he knew of no such record. Is there a record of such a sale?

A. There is in the *City Record* of June 27th, 1906.

Q. To whom?

A. To the City of New York.

5612 Mr. Burr: What was the date?

The Witness: The record of June 27th 1906.

Q. I also asked Mr. Thompson, at page 2754, as to a sale at 174 Hester Street, between Mulberry and Mott, 25 x 100 feet, with old three-story buildings of no value, selling in 1905 at $26,500. No record was found by Mr. Thompson?

A. It is also found in the *Record and Guide*.

Q. I likewise asked Mr. Wells in reference to the record of a sale of No. 518-524 East Sixteenth Street, between Avenues A and B, 75 feet by 103 feet, with four old buildings, sold in 1906, at about $50,000; buildings worth about $3,000 each, and Mr. Wells stated that he found no record. Do you find such a record?

A. I have such a record. It did not come from the *Record and Guide*, however, I know it to be a fact that the price quoted of $50,000 is correct.

Q. That would leave about $38,000 for the land, or $7,250 a lot?

A. Roughly, yes.

Q. I also asked Mr. Thompson, at page 2758, as to the record of a sale of 606 East Fifteenth Street, between Avenues B and C, 25 x 100 feet, with an old four-story tenement.

A. Yes, I have that.

Q. For $11,500, building about $2,500?

A. Yes, roughly.

Q. And so, too, as to 606 East Fourteenth Street, between Avenues B and C, a lot 25 x 100 feet, sold at $15,825 in 1904. Mr. Thompson was unable, at page 2760-1 to inform me as to that. Is there a record of such a sale?

A. There is, in the *Record and Guide*.

Q. And the value of the building in that case is about $4,000?

A. Yes, sir, roughly.

Q. Now, at page 2771, I asked in reference to a scale of 455 West Sixteenth Street, between Ninth and Tenth Avenues, lot 25 x 92 feet, with two-story frame building of no value, which was sold in June, 1906, and he could not give the price. Are you able to state or have you found a record?

5613 A. I know that the price was $13,250. It does not appear in the *Record and Guide*.

Q. Now, I asked Mr. Wells, at pages 4319-20, as to a sale of 436-438 East Nineteenth Street, between First Avenue and Avenue A, 50 x 92 feet, vacant, sold in 1904 at $16,100, and Mr. Wells could find no record of it?

A. It is in the *Record and Guide*.

Q. So, too, on page 2794, I asked Mr. Thompson in reference to

537-9 West Fortieth Street, between Tenth and Eleventh Avenues, a lot 50 feet wide by half the block, with one story sheds of no value, selling in 1901 at $16,000. Mr. Thompson had no record. Is there such a sale?

A. It is in the *Record and Guide*, yes.

Q. At page 4329, I inquired of Mr. Wells as to a sale of lots 1617 and 1619-1621 Eleventh Avenue, between Forty-fifth and Forty-sixth Street, 75 x 100 feet, vacant, sold in 1906 at $37,000. Mr. Wells had no record. Do you find a record of such a sale?

A. There was a nominal consideration given in the *Record and Guide*, but I know that the price was as stated, $37,000.

Q. Now, I also inquired of Mr. Wells and of Mr. Thompson in reference to 1108 First Avenue, Mr. Wells at page 4320, and Mr. Thompson at page 2798, the sale being between Sixtieth and Sixty-first Street, 25 x 100 feet, with a one-story shed of no value, selling at $10,000 in 1905. Mr. Wells had no record and Mr. Thompson was not able to state the price of the sale.

A. It is in the *Record and Guide*.

Q. As stated, at $10,000?

A. Yes, as stated at $10,000.

Q. I called Mr. Thompson's attention to a sale on Sixty-sixth Street, north side, fifty feet east of the railroad tracks, 40 x 100 feet, sold in 1906, at $13,000, vacant, at the rate of $8,100 per lot, and Mr. Thompson, at page 2800, stated that he had no
5614 record, and Mr. Wells, at page 4333 had no record. Do
you find that recorded?

A. There is no consideration given. I was mixed up on that sale, but I know that the price was as stated.

Q. I also inquired of Mr. Thompson, at page 2801, in reference to the sale of 227-231 East Ninety-eighth Street, between Third and Second Avenues, 75 x 100 feet, sheds of no value, sold in 1905 at $40,000, or at the rate of $12,500 per full lot, and Mr. Thompson stated that he had no record and Mr. Wells, at page 4336 similarly stated. Is there a record?

A. It is not a *Record and Guide* quotation. The Title Guarantee and Trust Company, who drew the deed and searched the title, gave me the price.

Q. As stated?

A. As stated.

Q. Also at page 4339 I called Mr. Wells' attention to 308-322 East 110th Street, west of First Avenue, opposite the gas company's property, with sheds of no value, sold in 1905, at $74,550, or at the rate of $10,650 per lot. Mr. Wells, at page 4339, stated that he had no record of that.

A. I don't know whether that is a *Record and Guide* sale or not. We were half brokers in that, and the price is as stated.

Q. I also, at page 4340, inquired of Mr. Wells as to a sale between Broadway and Twelfth Avenue, south side of 137th Street, vacant, in 1904, for $50,000, or at the rate $8,800 per lot, and Mr. Wells had no record. Do you find any record?

A. It comes from the *Record and Guide*.

Q. Did you observe the method pursued by Mr. Wells and Mr.

Thompson and Mr. McHale in reference to plottage, stating that they included the plottage in individual lots without figuring first the value of a parcel on the ordinary basis, and then adding a percentage for plottage?

A. Yes.

Q. You have read that?

A. I have read that testimony.

5615 Q. In your judgment is that a proper or approved method of estimating the value of a plot, including plottage, a large block?

A. I can only say that it is my custom and also the custom of our office, and in a great many other cases I have heard of, to take a unit value and plottage in those cases is added after, as a last final touch to the figure.

Q. Are you familiar with such a method as was employed by these gentlemen?

A. No, personally, not.

Q. Has the individual lot itself any plottage value?

A. No, I cannot see that it would have.

Q. Now, the defendant's witnesses, one of them testified as to the sale of the bulkhead property to Dugro above Forty-ninth Street; are you able to find any record of that sale?

A. I find no record in my office. I have also applied to the people who attend to Judge Dugro's real estate work, as a rule, I don't know as they would in this case, and I cannot find any record of this, and neither has the Lawyers' Title Company, nor the Title Guarantee Company.

Q. You have made investigations and inquiries so far as you could and could not find it?

A. I would not say so, so far as I could, but where I usually go to get records, and they have not it.

Q. Assuming that a sale was made without any additional or unexpressed consideration at the figure suggested, would a single sale of that character in view of the other sales and leases with which you are familiar and to which you testified, be a true criterion to the value of bulkheads?

A. I can only answer in this way, that finding the sales and leases which I did, if I came across a sale of this kind at the price given I would have to know all about it before it would influence me, because it is very much below anything that I could find.

Mr. Mathewson: That is all.

Cross-examination by Mr. Burr:

Q. Mr. Wheelock, you know Messrs. Thompson and McHale, I suppose?

5616 A. I have met Mr. McHale in connection with Columbia College work some years ago, and Mr. Thompson I saw here for the first time when he testified.

Q. Do you know them in the real estate business; do you know Mr. McHale?

A. Yes, sir.

Q. And you know his connections and associations in the real estate business?

A. Yes.

Q. Do you think he is a competent real estate expert?

A. He is so thought.

Q. I suppose your attention was specially directed to their testimony by counsel for the complainant, after they had testified?

A. I heard some of Mr. Thompson's testimony and the rest I read.

Q. Read for any special purpose?

A. To acquaint myself with it.

Q. In other words, you were notified that you might be called upon to rebut their testimony?

A. Yes.

Q. And with that in view you familiarized yourself with all they had said in regard to this property?

A. Yes.

Q. And with regard to these sales that Mr. Mathewson has called your attention to, you hunted up the records as far as you could and you found these in the *Record and Guide,* that you have spoken of being in the *Record and Guide?*

A. Yes, prior to my own examination here before you.

Q. There are some, I understand you to say, you did not know about yourself?

A. No.

Q. Now, were they in the *Record and Guide?*

—. I said there were some not in the *Record and Guide,* but which I myself personally or my office did know about.

Q. Which are those?

A. The first one I testified to this afternoon, I think, was 518-24 East Sixteenth Street, the next one 445 West Sixteenth Street. The next was 550 West Fortieth Street. I think I testified to that
5617 one. The next was Sixty-sixth Street, on the north side, fifty
feet east of the railroad track. The next 227-231 East Ninety-eighth Street. I think that is all. There may be one more, but I did not find it. The rest were all *Record and Guide* sales.

Q. Well, I understood you to say that you knew that $1,800 was the rent received by the City——

A. Oh, well, that is a lease.

Q. For 187 feet between 109th and 110th Streets?

A. Yes.

Q. Do you mean to say you know that of your own knowledge?

A. Neither of the tenants told me so; I find a record of it.

Mr. Mathewson: Where do you find a record of it?

The Witness: In the Dock Department's books; I cannot give you the page.

Q. Do you know what were the conditions of that lease?

A. No.

Mr. Burr: I move to strike out the testimony in regard to that.

The Witness: I only know it was a two-year lease at $1,800 a year.

Mr. Burr: The witness testified with regard to 187 feet between

109th and 110th Streets as to the rent received by the city. It now appears that that is in the shape of a lease, and I asked him if he knew the conditions which were stated in that lease and he states that he is entirely unfamiliar with the conditions, and all he knows is the amount, and I move to strike out his testimony in that regard.

Mr. MATHEWSON: No, he said he knew it was $1,800 a year for a two years' lease, and he found the record in the Dock De-
5618 partment Records of the City of New York.

Mr. BURR: If he is going to testify about that at all, it is not within his own knowledge and he cannot speak except as to the amount, and there being a written lease, the lease is the best evidence, and I move to strike it out.

Mr. MATHEWSON: You produced your own Dock Department records and proceeded to testify as to leases from those very books, and your witness, McHale, testified he could not find the record of such a thing, and that he did not know the rent received, and I asked him if he knew the recent received and he said he did, and he found it in your own books.

Q. Do the terms and conditions appear in the books which you looked at?

A. No, simply the term of the lease and the amount of the lease and the name of the tenant and dimensions of the property.

Q. Did you say you got that from a book or from one of the tenants?

A. I say I did not get it from either of the tenants. I got it from the Dock Department Records.

Mr. BURR: I move to strike out his testimony, the lease being the best evidence, and containing the terms and conditions under which the rate of rental is fixed.

The MASTER: I will let it stand. Of course, the lease would be the best evidence, no doubt about that.

Mr. BURR: Give me an exception.

Q. Now, these various parcels which you have described as not being in the *Record and Guide*, but of which you had knowledge, what kind of knowledge did you have?

A. In some instances, either I myself, or my office acted
5619 as broker or part broker.

Q. Which ones did you act as broker?

—. I have given them already in the testimony.

Q. 518 East Eighteenth Street, did your firm act as broker there?

A. What number is that?

Q. 518, 520, 522 East Eighteenth Street?

A. We were interested in that sale.

Q. Well, interested in knowing that it went through? or how? Or in knowing the price?

A. Knowing the price.

Q. I assume you are interested in all sales in knowing the price. Did you have any special interest in this?

A. Largely where we are paid for putting them through.

By Mr. Kirby:

Q. How were you interested in this case?

A. Being paid a commission for putting it through.

By Mr. Burr:

Q. You helped put it through and you were paid for acting as broker?

A. Yes, sir.

Q. Does that apply to 445 West Sixteenth Street?

A. No, I don't think we had anything to do with that sale.

Q. How do you know what the consideration was in that sale?

A. My knowledge of that sale and several that are here comes from the company with which we are connected. We have records of the contracts that are closed in that office, that is the Title Guarantee and Trust Company, where the contracts are drawn by them and where we have access to those contracts.

Q. Do you mean to say there is a written contract in existence?

A. On file, yes, sir. The title has gone through long ago, but the copy of the contract is there or the original, as the case may be.

5620 Q. Did you see the original contract there?

A. I did not, no.

Mr. Burr: I move to strike out his testimony as to that.

Mr. Mathewson: Real estate experts qualified here by asking them whether they are familiar with the sales through their own offices, by examination of the *Record and Guide* and other sources of information, and they always qualify by showing such general familiarity. The defendant's witnesses testified as to the same things, and here is the *Record and Guide*, which is testified as being the established record to which real estate men have recourse, repeatedly quoted by the defendant's witnesses on the stand as to what they found, and any sources of substantial inquiry, recognized sources of inquiry and pertinent in a case of this kind. What weight is to be given to them is another proposition, and I submit that the motion to strike out should not be granted. For whatever they are worth, they are here and they are the recognized and only way in which you can reach a valuation.

The Master: It would seem proper to me, I think that motion will have to be granted.

Mr. Mathewson: Exception.

Q. Now, as to the Sixty-sixth Street piece of property, how did you obtain your information there? Were you a broker there?

A. We were part broker in that sale and received a share of the commission.

Q. Did you assist in the negotiations looking to the sale?

A. Yes.

Q. Did you assist at the close of the sale?

A. I don't remember whether our office was represented at the passing of title. We certainly negotiated the drawing of 5621 contracts and exchanging of them and signing of them. We rarely attended to the passing of title.

Q. What kind of property was that?

A. Vacant property.

Q. Can you produce the contract?

A. No, we do not keep any contract. We are only brokers.

Q. Well, will you produce the contract?

A. Only with the permission of the buyer and seller.

Mr. Burr: I move to strike out his testimony with regard to that property also.

Motion denied. Exception.

Mr. Kirby: The State also excepts.

Q. Now, as to 550 West Fortieth Street?

A. I think we have no interest in that. I do not think we have any interest in that.

Q. What is the source of your information there?

A. Title Company again.

Q. You were informed by someone in the Title Company that such and such an amount was paid?

A. I would like to say that we get a great many figures from the Title Company in this way: That Mr. Charles S. Brown, my senior, is President of the Bond and Mortgage Company, a subsidiary company of the Title Guarantee & Trust Company, and that he passes on all the loans made by the Title Guarantee & Trust Company of property which is closed in their office, and that large lists of sales are submitted to him every week, with lots of plots or single properties mentioned, the prices at which they are being sold for the mortgage which is wanted by the person buying, and although the statements that come to us from the Title Guarantee & Trust Company are not sworn to, we take them as being correct authority for it, for we have found that in a large number of cases the 5622 prices shown on that list are accurate. The values we suppose are just as accurate as those we happen to know about.

Q. But the terms and conditions under which a piece of property is bought——

A. We know nothing as to terms or conditions governing the sale of the property.

Q. But that has a great deal to do with the sale, the terms and conditions existing?

A. There are a great many sales where a special feature or special condition will cause the price to be high or low.

Q. You would not venture an opinion upon a piece of property, would you, unless you knew all about it?

A. Certainly I would. I would know whether the price paid was fair. The *Record and Guide* sales usually show the prices paid.

Q. You would not venture an opinion upon property unless you knew all about the property?

A. No.

Q. And if your attention was called to a sale of property in that neighborhood or thereabout to affect your judgment, you would want to know all about that sale, wouldn't you?

A. I should if it differed very much from the values which I believed to rule.

Q. And as a matter of fact, you do not know anything about the terms and condition of this sale other than the price?
A. No, I do not.

Mr. Burr: I move to strike out his testimony with regard to that piece of property.
Motion granted. Exception to Complainant.

By Mr. Mathewson:

Q. Is this one where you have the record in your office?
A. No, this is not, except as it comes from the Title Guarantee & Trust Company for the purposes of mortgage. It is a statement made by the Title Guarantee & Trust Company of the price paid.

5623 Mr. Mathewson: Exception.

By Mr. Burr:

Q. Now, take 227 and 231 East Ninety-eighth Street. Did you act as broker there yourself?
A. No.
Q. You did not have that sale?
A. No, not personally.
Q. Where did you get your information?
A. I will tell you in just one minute.
Q. Is that 227 to 231?
A. Yes. That comes partly through the Title Guarantee & Trust Company and partly through the broker who did make the sale.

Mr. Burr: It was hearsay, and I move to strike it out.

By Mr. Mathewson:

Q. Was that according to the *Record and Guide?*
A. No, sir.

The Master: Strike it out.
Mr. Mathewson: Exception.

Q. As to all the pieces of property which Mr. Mathewson claimed he cited as comparisons to the experts for the State and City, you obtained your information regarding those from the *Record and Guide,* if I understand you correctly?
A. I did, yes, sir.
Q. And you know nothing at all about those pieces of property except the consideration as it appears in the *Record and Guide?*
A. I don't think there is a single one where I know anything about the conditions governing the sale.

Mr. Burr: I move to strike out his testimony with regard to those.
5624 Mr. Mathewson: May I ask a question or two of the witness?
The Master: Yes.

By Mr. **Mathewson**:

Q. Is the *Record and Guide* the recognized organ of real estate transactions in the City of New York?

A. Yes.

Q. Is it constantly consulted and relied upon by brokers and real estate dealers with regard to property sold and prices received?

A. Yes, sir.

Q. Is it the same record to which you and the witnesses for the defendant referred as the *Record and Guide* when they mentioned it?

A. Yes, sir.

Mr. **Mathewson**: If the Master please, the question is put to the witness——

The **Master**: You need not argue. Motion denied.

Mr. **Burr**: Exception.

Mr. **Kirby**: Also objected to as not rebuttal, and I except.

Q. You say Batterson & Eisele, the marble works there, paid $120 per running foot there for meadow land at Shadyside?

A. Yes, sir.

Q. Where did you get that information?

A. That is indirect information from the broker who made the sale; also a record of it in the Jersey office, which I have not myself seen.

By Mr. **Mathewson**:

Q. What Jersey office—of your firm?

A. No, I mean in the record office. I have not seen that. I have a record of the page——

By Mr. **Burr**:

5625 Q. So you know nothing about it as to the terms and conditions except you were informed by the broker who made the sale?

A. That is all. That also applies to the condemnation proceeding; there is a public statement of the price paid, which I have not seen.

Mr. **Burr**: I move to strike out that testimony.

The **Master**: I cannot tell about that unless I see exactly what they say about it.

Mr. **Burr**: You mean in regard to Shadyside.

The **Master**: Yes. My copy of the testimony is at the binder's. I will let it stand for the present and you can make another motion in a brief or at the close of this matter when I get the record here in this case back. I do not recall what those gentlemen said or what investigation they had made as to their sales, or what knowledge they had of sales in connection with the Shadyside property. If their testimony as a whole was to the effect that they did not know of any other sales over there, and Mr. Wheelock testifies here that the sales are a matter of record, I would be disposed to let it stand.

Q. Did you find that Shadyside sale to Batterson & Eisele before you testified here that first time?

A. Yes, I did.

Q. Do you know where Batterson & Eisele are now? They are located in that neighborhood, I mean?

A. Yes; they are approximately—well, as near as you can judge by land over there, I should say three long blocks north along the river front—as well as you can divide into blocks out there.

Q. They have a plant right there?

A. Yes. Marble works.

Q. This is rather an extension of the existing plant?

5626 A. I judge not. I judge that—yes, I think it is. The buildings which they have there are much older than the sale recorded.

Q. Now, as to the condemnation proceedings which you said you had received information from other people, what information did you receive in regard to them?

A. The Standard Oil Company property over there, and part of that was taken by the railroad; and also——

Q. That is, you were informed?

A. This I know to be a fact, that it was taken. I also know that two other strips of property were taken there. I don't know whom they belonged to. I was told of that. I can say the strips were taken, however, and the record shows it, which I have not seen, but which I am told brought $1,200 a lot.

By Mr. MATHEWSON:

Q. You mean the record in the public office?

A. Yes.

By Mr. BURR:

Q. You did not see the public record, but you were told that was the price paid?

A. Yes.

Q. How recently were you there?

A. I should say about three weeks before I first testified, roughly; that was the time I was over there.

Q. And by whom were you informed?

A. By one of the commission who acted as part broker in the sale of part of the land and acted as expert in this proceeding.

Q. But that is the sole information you have?

A. That is the only information I have.

Mr. BURR: I move to strike out his testimony with regard to that.

5627 The MASTER: I make the same disposition as to that. I will let it stand for the present until I look at the record in this case.

Exception.

Q. Now, you gave a valuation of $4,000 for cer-ain buildings that Mr. Thompson would not put any valuation on at all. Why did you value them at $4,000.

A. Because, in my opinion, they were buildings that were useable, rentable, suitable to the neighborhood that the owners if they did not choose to use them could rent them. I think that was in Eighteenth Street, north side, if I remember rightly, wasn't it?

Q. Yes. Do you know if there is any basement to that building?

A. I don't think there is in either of the buildings there.

Q. Do you know if there is any roof on it?

A. Yes, I know there is a roof on both. There was when I was there. I don't know that there is to-day.

Q. When were you there?

A. During the month prior to my first testimony.

Q. What is it used for?

A. Building on the east side, two-story brick stable, 20 x 92—12 stalls on ground floor, hay above. On the west side, two-story brick building in front on the street used as a garage, size approximately 25 x 28. Second floor used for living rooms of the firm. In the rear of this are sheds of frame, and tar roof.

Q. Have you just merely put a valuation on the brick and mortar that constitutes the buildings or have you put a valuation considering the business they are adapted for and the probable amount they earned?

A. The latter is the basis on which I figured them.

Q. What would stalls rent for in that neighborhood?

A. I should suppose——

Q. No, do you know?

A. No, I don't know.

5628 Q. You never rented a stall or stable over there in that neighborhood, did you?

A. I think not.

Q. Are you quite sure?

A. Positive.

Mr. Burr: I move to strike out his testimony with regard to that. Motion denied. Exception.

Q. With regard to this Francis L. Ogden award, you say there was a bulkhead 80 feet 6 inches which on April 27, 1906, was paid for at the rate of $900 per foot, making a total of $45,600?

A. I believe that was the total, yes.

Q. Will you figure up 80 feet 6 inches at $900 per foot? Have you got your dimensions correct?

A. Well, I thought I had. I copied it from my map, but very possibly I am in error. That does not multiply up straight.

—. How much does it amount to?

A. The award was on the basis of $900. My multiplication is wrong. I would like a chance to correct that from my own record- in my office. I have not got them here.

Q. I won't pursue that, with that understanding, that you may have an opportunity to get the correct figures. Now take Block 688. You say that you valued it as it was at $844,000 and as it is at $400,000. Will you give us the basis of this later valuation?

A. That is the most southerly block.

Q. Well, whatever you have it there?

A. 688?

Q. Yes.

A. The length of that block on West Sixteenth Street is 286.21

feet, according to this description. On the marginal street it is 195 feet. On Seventeenth Street I make it 357.29 feet and on Tenth Avenue 184 feet. I take a unit of value for the marginal street of $15,000, for Sixteenth Street of $11,500, for Seventeenth Street of $11,000, for Tenth Avenue $15,000. On the marginal street, the
junction of the marginal street and Sixteenth Street I divide
5629 it into a corner 25 x 100, which at a price of $15,000, plus
50 per cent. for the corner, makes $22,500. I add for extra
depth $562, or a total of $23,062.

The interior lot remaining upon the marginal street being 72 feet 6 inches by 100 feet I value at the basis of $15,000 a lot or $600 per front foot, at $43,500, the average depth being 120 feet I add $4,350, which is 10 per cent., and make that plot $47,850; or for the corner of marginal street and Sixteenth Street 100 by 97 feet 6 inches on the marginal street, irregular, $70,912.

Tenth Avenue frontage, two corners at a unit of $15,000, plus 50 per cent., or $4,500.

There are 134 interior front feet at the same unit of $15,000, or $600 per front foot, making $80,400, or a total for Tenth Avenue of $125,400.

On Seventeenth Street there are 86.31 feet by 92 feet in depth, which I now considered to be 100 feet, at the rate of $440 per front foot equals $37,972. I then deduct for depth 3 per cent., or $1,139, making a total of the plot 86.30 by 90 feet, $36,833.

The next on Seventeenth Street is a plot 71 by 92 by 35, average width 53 feet, so we have a plot 53 by 100 at $440 per front foot, which equals $23,320. Then adding because of the width in front $3,000 we have $26,320, and deducting 3 per cent. for the depth of the plot, which is only 92 feet, we have a total for a plot 71 by 92 of $25,531, or a total for Seventeenth Street of $62,364.

On Sixteenth Street there are 86.21 feet by 100 feet in depth, which at $460 per front foot equals $39,652, and taking 3 per cent. off for the shortness of the lot we have a total for Sixteenth Street of $38,463, or a total for the block of $363,139, to which is added 10 per cent. for plottage, making a total of $399,452, which I have called $400,000.

Q. You add your plottage at that point, do you?

A. Yes, sir.

5630 Q. That is your method of computation, so far as plottage is concerned?

A. Yes, it varies in various cases, the amount of plottage, but the method is the same.

Q. Is that the method pursued by Mr. Thompson and Mr. McHale?

A. No, I think not.

Q. You said you and your firm pursued a method satisfactory to you, but you do not mean to be understood as claiming that because they have adopted that method that every person adopting another method would be at fault?

A. Not at all. I said we had adopted it and used it and a great many others did; I have heard of various methods, but we prefer this one.

Q. This is the method you have adopted, however, as an appraiser, is it?

A. Yes.

Q. During all your experience?

A. Yes.

Q. How long has that been?

A. I cannot state exactly when that began, but in various proceedings which are on record in the last four or five years and before that in my own office—I was able to judge of value.

Q. I mean since you have been acting and testifying as an appraiser?

A. Yes.

Q. The past four or five years?

A. Roughly.

Q. You would not say three years, would you?

A. No, I would rather not.

Q. Now, your former valuation of block 689 was $808,500?

A. Yes.

Q. And you value it at the present at $471,500?

A. That's right. The value is arrived at in the same way.

Q. What is the reason for the difference?

A. The reason for the difference is that the block as it now appears on the map is smaller than it originally was.

Q. To what extent?

A. On West Seventeenth Street 380.47 feet as against 800
5631 feet originally. On Eighteenth Street there are now 451½
feet, roughly, as against 800 feet. That is the difference in size, without going into the angles.

Q. I would be obliged to you if you would give me the exact dimensions of the property as you figured on the basis of $808,500, and the exact dimensions of block 689 as you figure it to-day?

A. Certainly. On the basis of $808,500 the dimensions were then 800 x 184. The dimensions now are 451.55 on Eighteenth Street, 184 feet on 10th Avenue, 380.47 feet on Seventeenth Street, and 195 feet on the marginal street. There may be an inch more or less on the marginal street because it is a diagonal line.

Q. Before we proceed with that further, give me the dimensions of block 688 as it existed when you valued it at $844,000, and what the present dimensions are?

A. Originally 800 x 184, and now the dimensions on West Sixteenth Street are 286.21 on Tenth Avenue 184 feet. On Seventeenth Street 357.29, and 195 feet on the marginal street.

Q. Now, be kind enough to proceed and give me the details of your present valuation of block 689?

A. My marginal street unit is $14,500; Seventeenth Street, $11,000; Eighteenth Street, $10,500; Tenth Avenue, $14,500.

Considering first the corner of marginal street and Seventeenth Street the corner itself 25 x 100, the unit is $14,500, plus 50 per cent. or $21,750; adding for depth $543 we have $22,293.

The plot north, being an interior plot, 72 feet 6 inches in front, at the rate of $580 per front foot, which is the same unit, $42,050; adding 10 per cent. for an average depth of 120 feet, $4,205, or a total of $46,255; making a total for the corner of the marginal street and Seventh Street $68,548.

5632 The corner, corner of marginal street and Eighteenth Street, the corner itself, 25 x 100, the unit is $14,500, plus 50 per cent., which equals $21,750.

The interior plot, 72 feet 5 inches x 100 feet, at $580 per front foot, which is the same unit, equals $42,050, or a total for that half of the marginal front of $63,800.

On Tenth Avenue there are two corners, the unit is $14,500, plus 50 per cent., which equals $43,500.

An interior, 134 feet, $580 per front foot, total, $77,720, or a total for the Tenth Avenue valuation of $121,220.

On Eighteenth Street there is first a plot 180.50 feet at the rate of $420 per front foot, which is the unit of $10,500 per lot, equals $75,810. Deducting on account of the shortness of the lots $2,274, we have a total of $73,536.

The next plot on Eighteenth Street, 71 x 100 x 35, average in width 53 feet, considering the plot, therefore, as 53 x 100 feet, at $420 per front foot, equals $22,260; adding for the extreme width in front $3,000, makes $25,200, and deducting on account of the shortness of the lot we have $24,500, or a total for Eighteenth Street of $98,036.

On Seventeenth Street, 180.5, at the rate of $440 per front foot, equals $79,420; deducting 3 per cent. for depth we have $77,038, or a total for the block of $428,642, to which is added 10 per cent. for size, making a total of $471,506, which I have called $471,500.

At 5.05 p. m. an adjournment was taken to Wednesday, January 16th, 1907, at 11 a. m.

Last Exhibits:

Complainant's, 296.
State's, 000.
City's, 236.

5633 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; **William Travers Jerome**, as District Attorney of New York County; **Frederick E. Gunnison**, **John C. Davies**, and **Lucian L. Shedden**, Constituting the New York State Commission of Gas and Electricity, and **The City of New York**, Defendants.

Before Arthur H. Masten, Special Master.

January 16th, 1907.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

5634 **William H. Wheelock** resumed.

By Mr. **Burr**:

Q. I think we finished last night, Mr. Wheelock, with your detailed statement with regard to block 689. Will you be kind enough to give me the accurate dimensions of block 690 as it was when you placed the valuation of $453,500 on it?

A. On 18th Street the property faced 525 feet; on the westerly line it was 184 feet; on the easterly line it was 184 feet; and the total of the 19th Street block was 400 feet. There were various lots out on 19th Street. At present the block is 474.73 feet in length on 18th Street, 195 feet on the marginal street and 184 on Tenth Avenue and 525 feet on 19th Street, deducting 125 feet for the plots marked out, or 400 feet owned by the gas company on that street.

Q. Your present valuation is $483,000, is it not?

A. $483,000.

Q. Will you give me the details of that $483,000, Mr. Wheelock?

A. I used a unit on the marginal street of $14,000; on the 18th and 19th Streets, $10,500, and on Tenth Avenue $14,000. Beginning at the corner of the marginal street and 18th Street, the corner is 25 feet by 100; the unit of $14,000 plus fifty per cent. equals $21,000; adding for extra depth 2½ per cent., we have a total for that corner alone, $21,525.

The next plot to the north is 72 feet 6 inches by 100, which at $560 per front foot, or $14,000 a lot, figures $40,600; adding ten per cent. for extra depth, being an average of twenty feet, we have for that plot seventy-two feet six inches by 120, $44,660, making a total of $66,185.

The corner of the marginal street and 19th street is divided as
follows: Corner lot 25 x 100 feet at the unit given plus fifty
5635 per cent., equals $18,000, $3,000 being taken out for the loss
of the corner itself. The next plot, 72 feet 6 inches x 100

at $560 a front foot, being the original unit of $14,000, equals $40,600, or a total of $58,600. On Tenth Avenue, the two corners which have a unit of $14,000, plus fifty per cent., equals $42,000. The interior 134 feet, $560 per front foot, equals $75,040, or a total for the Tenth Avenue frontage of $117,040.

The 18th Street frontage, there are 274.75 feet at $420 per front foot, or a unit of $10,500 per lot, equals $115,395. Three per cent. is deducted on account of the shortness of the lots, making a total of——

Q. How short is it?

A. Ninety-two feet deep, making a total for 18th Street of $111,936.

On 19th Street there are 274.75 feet minus 125 feet owned by other individuals, which leaves a balance of 149.75 feet owned by the Gas Company, which at $420 per front foot equals $62,895; three per cent. being deducted for the shortness of the lots, which are again ninety-two feet deep, we have $61,009.

The next lot, 71 x 135 feet, shows an average width of 53 feet, therefore 53 by 100 feet at $420 a front foot equals $22,260; on account of the extra width in front, I add $3,000, making a total of $25,260; and deducting three per cent. for the fact that the lots are only ninety-two feet deep, $24,503, or a total for the 19th Street frontage of $85,512. Total for the block $439,273, to which is added ten per cent. for size, making a total of $483,200, which I have figured at $483,000.

Q. Upon what basis do you deduct three per cent. from a lot that is 92 feet long?

A. It is more or less a matter of individual judgment, partly based on scales.

Q. What scales?

A. Our own scales; not particularly made by anybody.

5636 Q. Does that apply to a similar deduction in block 689 and 688 and all throughout?

A. Yes, I have used that throughout.

Q. Give me the dimensions of block 691?

A. 691 originally was 350 feet on each street by 184 feet on 11th Avenue and 184 on the easterly line. At present it is 119 feet on 19th Street, 190.08 on 20th Street, 184 feet on the easterly line and 195 feet plus or minus a few inches on the marginal street.

Q. Will you give me the details of your valuation?

A. The unit on the marginal street is $14,000; on 19th Street, $10,500; on 20th Street, $11,000. Using the marginal street we have two corners plus 50 per cent. added to the unit value of $14,000, makes $42,000. 145 interior feet at $560 per front foot, or the original unit of $14,000 per lot, equals $81,200 or a total for the marginal street front of $123,200. On 19th Street there is a plot 19 x 100 x 54½ x 100 which therefore averages 36 feet 9 inches x 100, which at the rate of $420 per front foot or the unit of $10,500 per lot, makes $15,435. There is deducted $1,250 because of the width in the back and narrowness of the lot in front, making a total of $14,185. Three per cent. is again deducted on account of the lots being 90-2 feet deep, and we have $13,760 as the total for 19th Street.

On 20th Street there is left a lot 90 x 100 x 54½ feet x 100, or an average of 72¼ x 100, which at $440 per front foot or $11,000 per lot equals $31,790. The sum of $2,000 is added for extra width on the street making $33,790. Three per cent. is again deducted for the shortness of the lot making a total for 20th Street of $32,777, or a total for the block of $169,737. To this is added the same amount for size, making a total for the block of $186,710, which I have made $186,500.

Q. I think those were all the plots that you re-appraised?

A. Yes.

5637 Q. Being back to block 688 and the valuation that you
placed upon the different lots comprising that plot, will you
tell me how you arrived at your lot valuation?

A. Unit values do you mean?

Q. Yes.

A. Well, a great many things make up unit value.

Q. Well, in that particular case what entered into your mind?

A. The result of my inspection of the neighborhood, and the character of the property and what I saw going on, and what sales I could find and what records we had.

Q. For instance, will you tell us what you saw going on?

A. Very little change in the last three or four years; tenement houses, some stables and some factories, and a tendency to grow up in factories.

Q. Will you tell me what new factories you saw going up there?

A. I don't know that I can name them. There was one built by the National Biscuit Company which occupies the entire front of the block; I am not sure what block it is, but it is within two squares of this property.

Q. How new is that factory?

A. I should say it was just being completed.

Q. How far away is that factory from the property on block 686?

A. I said I could not give the exact location; I think within two squares. I have not been to the property since before my last testimony.

Q. I presume you mean two blocks by two squares?

A. Yes.

Q. Did you see any other improvements taking place in the neighborhood?

A. I saw the improvements being made by the city, the marginal street and new wharves.

Q. What improvements did you see being made by the city?

A. Simply the work going on in making the marginal
5638 streets and the completion of the wharves, those that are not
already finished; the paving of the marginal street was not
being made at that time and I doubt if it is now.

Q. Then you simply surmised that the improvement in the marginal street was going to be made?

A. No, I found that the property had been taken by the city, the streets laid out and fences erected.

Q. Had the streets been laid out physically, Mr. Wheelock?

A. I don't know that I can define the term "physically"; if you mean that wagons are going through?

Q. Yes.

A. They are; with difficulty, yes.

Q. Now, that marginal street that you refer to; you say a wagon could get through with difficulty?

A. Yes.

Q. Did you see any wagon going through there?

A. Yes, I saw some ice wagons going through there.

Q. That is, going down to the dock, was it not, crossing the street?

A. I cannot remember what streets I saw them going between, but they were going north and south—16th or 17th Street.

Q. You did not see any wagons going in the direction of 20th Street from 16th Street through that street, did you?

A. It was either 16th or 17th Street where I saw the wagon going.

Q. As a matter of fact, is not that street fenced up?

A. Not that I remember, when I was there.

Q. When were you there?

A. I walked through or along the marginal street from the beginning of the company's property to the end of it.

By Mr. MATHEWSON:

Q. You did not climb any fences?

A. Not that I remember.

By Mr. BURR:

Q. You did not see any fences?

A. Not at those points, no, sir; there may have been south of it.

5639 Q. Where did you see the fences?

A. I did not see any, except the fences that were built between the blocks dividing the streets from the prop-rty which had been taken; there were some rough board fences there, but they did not interfere with travel north and south with me, going the same direction.

Q. Block 691, between 19th and 20th Streets, can you tell me where the nearest improvement is to that block?

A. Well, what do you mean, tenements or——

Q. Any kind of an improvement. What do you mean by an improvement?

A. There are structures directly opposite, on 19th Street.

Q. What kind of structures?

A. Old buildings, some sheds and some three-story tenements, and —well, that is the character of the improvement on the north side, I should say, of 19th Street, as I remember it.

Q. Would you describe it as an adequate improvement in that neighborhood?

A. In that location I should think that factories might be a better form of improvement even now.

Q. Were they not very old buildings?

A. Yes, sir; most of them very old.

Q. They are cold water tenements, are they not, as a matter of fact?

A. Yes, I doubt if there is any modern tenement.

Q. Are they not known as barracks?

Mr. Mathewson: I object to that.

Mr. Burr: They are the oldest kind of cold water tenements.

The Witness: There were very poor buildings in the neighborhood.

Q. With regard to block 690, where are the improvements there?

A. I think on the most easterly plot marked out on that map that there are two old buildings, that is my recollection; and the
5640 single lot next width to that, which is marked out, my impression is that it is vacant.

Q. What was left of that?

A. I don't remember.

Q. That I see you have also marked out?

A. Yes, it is not owned by the gas company.

Q. Is not that an old four-story tenement house?

A. It may be; I am not clear as to that, I don't remember that very accurately.

Q. Those buildings, would you characterize them as adequate improvements for that neighborhood?

A. Hardly as good as the neighborhood would warrant now.

Q. And take block 689, will you tell me where the improvements are in that neighborhood?

A. The gas company owns that entire block.

Q. And block 688?

A. The same is true of that.

Q. Are there any improvements on the block next to block 689, and if so what are they?

A. In which direction?

Q. East?

A. East, oh, yes.

Q. What are they?

A. The Tenth Avenue front, if I remember correctly, is built up with old tenements and some yards and further east there are better buildings, towards Ninth Avenue still, a good many yards and old tenements; the general character of the improvements there is poor, very poor.

Q. So that you cannot, as a matter of fact, mention a single new improvement in that whole neighborhood, can you, Mr. Wheelock?

A. Only the one that I have spoken of.

Q. And that is two blocks away?

A. Yes.

Q. Now, Tenth Avenue, south of Fourteenth Street, what is the character of the buildings there?

A. South of Fourteenth Street the Astor ownerships and various estate ownerships have created a better class of buildings, especially a little farther to the east, where large factory buildings have 5641 been put up on long leases to responsible tenants and the character of the improvements is better, stronger.

Q. There is a cold storage plant?

A. Yes, a good many——

Q. And an ice plant?

A. Yes, there are a good many such plants in that neighborhood. There were wine merchants and cold storage plants and biscuit factories and various things.

Q. And the Gansevoort Market is there?

A. Yes. It is hardly an adequate improvement, though.

Q. But as a matter of fact, all that property south of Sixteenth Stdeet is more valuable than the property you have been speaking of just above Sixteenth Street or between Sixteenth and Twentieth Streets because of those improvements?

A. It is a little better improved, yes; the estates up there have improved their property.

Q. So as the result of your computation with regard to these four plots you make a difference in your total valuation of $1,392,500?

A. That is right.

Mr. Mathewson: No, not those four plots; those four plots plus those other two plots taken, and the bulkheads, the whole thing.

The Witness: Yes.

Q. What was it you said with regard to the Dugro transfer that Mr. Thompson had spoken of in his testimony? You said you could not find any record of it?

A. I said I could not in my place, and I did not make a very diligent search, but the transfer companies where I went had no record of it. I do not doubt such a transfer exists, but I could not find it.

Q. I think you said yesterday that you had spoken with Judge Dugro's real estate representative and that he knew nothing at all about it?

5642 A. No, I said I had spoken with the people who usually carried through his sales, and I meant by those the title companies.

Q. What title company?

A. I spoke with the Lawyers' Title and Title Guarantee & Trust Company. Mr. J. Ray Cleveland, of the Title Guarantee & Trust Company, knows a good deal of his real estate business but not all necessarily.

Q. As a matter of fact, is not that title company searching the title now for Judge Dugro for that particular piece?

A. Not that I could find, Mr. Burr.

Q. Did you read Mr. Thompson's testimony with regard to that particular part?

A. Yes, I did.

Q. Do you recall that he stated the title did not go through at that time, though the price had been agreed upon because there was a squatter upon the property?

A. I remember the fact now that he said there was a squatter there.

Q. Don't you recall the fact that Mr. Thompson had the original contract with him here?

A. No, I do not. I do not doubt that it is so, I do not doubt that the sale went through, all I say is that I did not find a record of it, although I have not used every means of finding out.

Q. You have no idea of impugning the statement made by Mr. Thompson?

A. Not at all.

Mr. Mathewson: There is no such idea.

The Master: That is sufficiently clear; it has been stated three or four times.

Q. Have you got the records of the Dock Department showing the lease of that bulkhead property which you refer to?

A. I have the Dock Department's publications in my office.

Q. That is the 187 feet between 109th and 110th Streets, that I have reference to.

5643 A. Yes. By the way, Mr. Burr, can I correct the error that was made?

Q. Yes, when I come to it. I am informed by Messrs. Thompson and McHale that they do not find any such record in the Dock Department book.

A. I think I can show it to them. I have no record of the page. Mine is a book about that thick (indicating).

Mr. Mathewson: That is about four inches thick?

The Witness: Yes.

Q. Do you know whether the land under water went with that bulkhead?

A. It must have.

Q. And some upland?

A. Not that the record shows.

Q. Will you get that book?

A. Yes, I can produce it.

Q. Now, then, you may correct those dimensions, the transfer to Mr. Ogden, I think it was.

A. Yes. I said the bulkhead was 80 feet 8 inches long. I was in error in copying it; it was 50 feet 8 inches. The consideration was $45,600. I verified that by an inspection of the certified copy of the award.

Q. You say that if Twelfth Avenue was in existence you would allow sixty per cent. for a corner lot over an inside lot?

A. I would at Forty-second Street and also at Forty-fourth, Forty-fifth and Forty-sixth Streets.

Q. Why?

A. Simply a matter of judgment.

Q. Upon what do you base your judgment?

A. Why, exactly the same reason as I have given before in the testimony. I would in different parts of the city add various amounts to the inside lot value, of lots on the corner, all the way from forty to one hundred per cent.

Q. Doesn't that allowance go as low as twenty-five per cent.? 5644

A. I cannot recall any place where we put it at twenty-five, but I do recall forty.

Q. Well, outside of your own experience, do you recall where it has been done, where it is as low as twenty-five?

A. I don't know how others have made up their figures, but I don't remember instances at twenty-five per cent.

Q. You have not paid any attention to how others arrived at their figures?

A. Well, I have not asked other appraisers how they arrived at their figures.

Q. In what section of the city do you allow forty per cent. for corners?

A. Well, the sections where there is very little building, say for instance, in the west and south of Dyckman Street would be a case where there is very little building, where the advantage of a corner are comparatively slight, and because there are on that hilltop no buildings also—it is rather hard to pick a section offhand, but there are various sections of the city where the advantages of the corner are less than other places, and, in my view, forty per cent.

Q. Haven't you in mind any section built up where you allowed forty per cent.?

A. No, I don't think I have.

Q. Will you give me an illustration of any sale or place that you allowed forty per cent.?

A. I don't think I can. I simply have done so. I don't remember all the appraisals I have made, but I remember figuring as low as that at various times, but I cannot give you an instance. We make from thirty to fifty appraisals a day.

Q. Do you know how Batterson & Eisele bought their property at Shadyside for the marble yard, whether there were any buildings on that property?

A. I don't know, I don't think there were any at all.

Q. But you don't know anything about it, do you?

A. No. I wasn't there at the time and you cannot see what may have been there before, but I should think there were no buildings, from the character of the land. It does not look as though there had ever been a foundation put on it. 5645

Q. Now, you say, in your opinion, that if the Gas Company was excluded from Twelfth Avenue and Forty-second and Forty-third Streets that they could not obtain contiguous property of the same extent at less value than those placed by you on that property which they now have.

A. That is my opinion, based on actual work.

Q. Have you made any attempts to secure property in that neighborhood?

A. I have made attempts in various neighborhoods for corporations. I bought 12,000,000 for the Pennsylvania Railroad.

Q. I am speaking of this particular contiguous neighborhood that you have reference to?

A. I think I have, yes, for the Gas Company.

Q. Where and when?

A. It is over at that place, or in Sixty-sixth Street. No, it is not in that section, Forty-fourth and Forty-sixth Streets.

Q. So that your statement, in response to the question by Mr. Mathewson, that the company could not obtain property contiguous to the property that you valued at the figures that you placed upon their properties, was merely a guess, wasn't it?

A. No. We have various small plots for sale all through the city, and there are some even adjoining or close to this plant, if I remember correctly, but we have no large plots for sale and they could not be acquired. It is my belief that they could not be at the same price.

Q. There is no property there for sale at all, is there?

A. I think we have four or five small plots in that section for sale. We sold some in that vicinity.

5646 Q. When you say a "section" what territory does that embrace?

A. Within a block and a half one way or the other, north and south.

Q. Could you give me an illustration of any lots that you have for sale there and what the price is?

A. No, I haven't any record of this. I simply remember in a general way the records of my office.

Q. Will you produce those records when you produce that book of the Dock Department?

A. Of property for sale?

Q. Yes.

A. I think I can; yes, sir.

Q. Now, take up the property, block 991, lot 126, Avenue D and Tompkins Street. You also ventured an opinion there that the company could not get property in that neighborhood at the prices you have placed upon block 991?

A. I would say the same in any section of the city.

Q. That is merely a general opinion. Do you base the opinion with regard to 991 upon any property you have tried to acquire?

A. I have no specific facts to bring forth in that section at all. This is merely based upon my experience throughout the city.

Q. What is the nearest piece of property that you have to block 991 for sale?

A. I can't tell you, I haven't my records here of my office.

Q. You have at your office?

A. I believe complete records, yes.

Q. Will you produce them?

Mr. Mathewson: I am not going to ask the witness to produce records. I do not think it is necessary or pertinent.

Mr. Burr: I hardly think it is, because he says he does not know anything about it.

The Master: He can do as he likes about that, you know. I shall not direct him to appear for further cross-examination unless very good cause is shown.

5647 Mr. BURR: I shall not ask him unless he is willing to complete his examination.

Q. Mr. Wheelock, yesterday you said, with regard to that piece of property at 114th Street and 3d Avenue, that it had some extra value because of its "'L" shape?

A. I think it has a little, yes.

Q. Upon what do you base that opinion?

A. The same as before. It is observation of what takes place in the city, what we can see being done with plots. With Ls generally there are advantages of light and additional space, and it is on two streets; advertisements, various things.

Q. Well, you must have something to base your statement upon. Do you know of any sale or any actual occurrence where there was an increased valuation placed upon an L-shaped piece of property, by reason of its connection with the corner?

A. By reason of its connection with the corner? Yes; I do remember the consideration given, but there is a very clear case in my mind where my cousin, Austin G. Fox, owned a lot next west to the northwest corner of Sixteenth Street and Broadway and it was bought by the Bank of the Metropolis; they paid a very large price for it.

Q. Was Mr. Austin G. Fox acting for you when he bought the Pennsylvania property, or were you acting for him when you bought the Pennsylvania property?

A. He had nothing to do with the Pennsylvania property.

Q. I understood you to say you had some experience in buying the properties in the neighborhood of the Pennsylvania improvements?

A. Yes, I bought two-thirds of all they bought.

Q. I understand Mr. Austin G. Fox was the one that bought it?

A. He had nothing to do with it.

Q. Now, this particular piece on 114th Street and Third Avenue, this L-shaped piece of property near Third Avenue, has no
5648 connection at all with the corner, has it?

A. I don't know what you mean by "connection." The two are adjacent and contiguous.

Q. It is 150 feet from the corner, I understood?

A. It is exactly 100 feet. It begins 100 feet westerly from the northwest corner of 114th Street and Third Avenue.

Q. Well, it is 100 feet from the corner?

A. Yes.

Mr. MATHEWSON: The corner lot is 100 feet deep?

The WITNESS: The corner lot is 100 feet deep.

Q. There are only 25 feet on Third Avenue, and then there are 150 feet 5 inches on 114th Street; is that right?

A. That is two dimensions of the plot. In fact, there is a little more on Third Avenue than that.

Q. Twenty-five feet 2¾ inches?

A. Yes, that's right.

Q. Then that L is 100 feet and 11 inches in depth?

A. Yes.

Q. But it has no connection with the property on Third Avenue other than the 25 feet 2¾ inches at the corner?

A. No, not that I could find out. The Consolidated Gas Company does not own any more there. I would like to say, Mr. Burr, that the value of a plot of that shape is actual not only to the people who own it but speculative for the uses that it may be sold for. It abuts four parcels on Third Avenue and may be used in connection with any one of the four, and that is always an element of speculative value which is taken into consideration in appraising property.

Q. In a tenement house neighborhood does extra depth count for anything?

A. As a rule very little unless it amounts to more than ten feet or so.

5649 Q. Isn't this a tenement house neighborhood?

A. Generally, yes.

Q. You say that 126 and 128 East Seventeenth Street was sold to the city for $40,000 and $50,000 respectively?

A. Yes.

Q. Where did you get that information?

A. The *City Record.*

Q. Have you had any experience in selling the City of New York property?

A. Yes.

Q. From that experience don't you know that the city always pays more than the value of property at private sale in order to save the expense of condemnation proceedings?

Mr. Mathewson: I object to that as irrelevant.

Question allowed; exception.

A. As a rule, that is so. Sometimes it is not. I had a number of plots for Carnegie libraries where they did not pay more.

Q. In reply to a question of Mr. Mathewson's you said Mr. Thompson stated on his examination that he did not know of the sale of 174 Hester Street?

A. I do not think I said that, I think it appears he did know the sale, but didn't know the consideration. If I remember it all right, it appears Mr. Thompson has a record of the sale, but not of the consideration.

Mr. Mathewson: Yes, that is precisely the question I put, and if the stenographer has it otherwise it is a stenographic error.

Mr. Burr: You were asked this question by Mr. Mathewson (page 5612): "I also asked Mr. Thompson, at page 2754 as to a sale at 174 Hester Street, between Mulberry and Mott, 25 by 100 feet, with old three-story buildings of no value, selling in 1905 at $26,500. No record was found by Mr. Thompson." As a matter of fact Mr. Thompson testified as regards that.

5650 Mr. Mathewson: My question was that there was no record of the price. The stenographer must have left it out, because I find it here in my notes as I asked the question.

Mr. Burr: You said it was three stories, when as a matter of fact, Mr. Thompson stated it was five stories.

Mr. Mathewson: That may be. My question was subject to any correction the witness wanted to make.

Q. I call your attention also to the question Mr. Mathewson asked regarding No. 606 East Fourteenth street, in which he stated that Mr. Thompson could obtain no record of the sale of the property, when, as a matter of fact, at page 2758 of Mr. Thompson's testimony, he testified fully with regard to the sale. Your information was incorrect that he didn't know anything about it?

A. It is not true he testified at that place to 606 East Fifteenth Street.

Mr. Burr: At page 2785 it is 606 East Fifteenth Street.

Mr. Mathewson: At pages 2760 and 2761 his testimony is as to 606 East Fourteenth Street, and the witness was correct and my question was correct.

Q. I want to call your attention to another mistake. You were asked, Mr. Wheelock, with regard to 455 West Sixteenth Street, and your attention was called to the fact, as stated by Mr. Mathewson, that Mr. Thompson knew nothing of the record of the sale?

Mr. Mathewson: No; no price. Now you are wrong again.

Mr. Burr: Could not give the consideration.

5651 A. That is right.

Q. It is 445 instead of 455, isn't it?

A. There must be a mistake.

Mr. Mathewson: I did not ask about 445 West Sixteenth Street and had no note of it at all during my examination.

Mr. Burr: I simply go into it so that the record may be straight.

Mr. Mathewson: Just make a note that the record should be corrected.

Q. Mr. Thompson stated that there was a nominal consideration in his testimony, isn't that so?

A. I think he did. That is, that was one of the sales where the source of my information was not admissable, I believe.

Mr. Mathewson: The Title Guarantee & Trust Company. That is excluded already, Mr. Master.

Q. You were asked by Mr. Mathewson whether you knew of the sale of Sixty-first Street, north side, 50 feet east of the railroad track, which, I understand him to claim, Mr. Thompson had testified he knew nothing about, when, as a matter of fact, Mr. Thompson only denied the fact that the lots sold for $8,100 each.

A. I think that is right.

Q. Is there any record of the consideration, to your knowledge?

A. There is a record of it which is satisfactory to me, but not to you, Mr. Burr.

Q. I do not understand that you dispute the correctness of the method pursued by Mr. Thompson and Mr. McHale with regard to the plottage, and so forth?

A. I have nothing to say about that whatever.

5652 Q. You in your own office and in your own experience pursued a different method?

A. That is all.

Q. But you do not question the correctness of their method?

A. I have not, and I do not wish to.

Q. Making this allowance of three per cent. for shortage, what rule did you follow—just a matter of judgment?

A. A matter of my own judgment, and some scales which we use in our office, which are made up by various people connected with our office, and taken from other lists outside.

Q. Does that conform to the Hoffman rule or the Neill rule?

A. I don't think the Hoffman rule goes into deductions for lots which are short. It gives a value of rear portions and front portions of lots in relation to the whole lot, but you can deduce a rule from that and that has been in use in our office, together with the Neill rule, also other rules that have no name.

Q. What is the difference between the Neill Rule and the Hoffman Rule?

A. Mr. Neill gives more value to the front of the lot in proportion to the rear.

Q. Is that the only difference?

A. The only difference that I remember specifically.

Cross-examination by Mr. Kirby:

Q. Assuming a gas company owns the entire block with the exception of the corner property and one of the same size in the middle of the block, would you consider that the corner property was of 40 per cent. more value to the company than the one in the middle of the block?

A. Assuming that the company owned all but the corner, do you say?

Q. All but the corner and a property of the same size in the middle of the block?

A. I do not think I catch your meaning.

5653 Q. We are assuming that a gas company owns the entire block with the exception of a property of, say, 100 x 50 feet on a corner, and another property of the same size in the middle of the block; do you consider that the corner property is worth 40 per cent. more to the gas company than the one in the middle of the block?

A. They do not own it. How can it be?

Q. Would it be worth it if they were purchasing it?

A. That depends. If it had no use for it in addition to its plant it probably would not pay more than that. If it could use it and add it to its plant it would pay anything up to 100 per cent. to get it.

Q. Would it not pay anything up to 100 per cent. to get property in the middle of the block?

A. Possibly considerations governing the purchase might govern the price unduly.

Q. Can you see any reason why it should pay more for the corner property, other things being equal, than it would for the other property?

A. Certainly; advantages of light and air and the future.

Q. For the purposes of future business do you think it would pay more?

A. If you mean to put a gas holder on it I doubt if it would.

Q. You have given us to-day certain unit values which you use in getting the total of your appraisals on this property which has been taken by the city. Do those unit values differ from those which you use in making your appraisal of the entire property, including that which has been taken by the city and of which you have already testified?

A. The street units are the same; Tenth Avenue units are the same. I had to establish a marginal street unit because when I testified before there was no marginal street, and the land was interior property.

5654 Q. And are those marginal street units higher or lower than those of the street units which you use in the other parcel?

A. They are higher than the street units naturally.

Q. And why?

A. Simply because they face a water front, a very wide street with large dock improvements.

Q. Are these improvements there at this time?

A. Some.

Q. What?

A. Docks.

Q. Where are these docks?

A. From Fifteenth Street north.

Q. Are they being used?

A. Some are, some are not; they are not leased yet.

Q. Wherein do these unit values which you have given differ from those on streets facing the water front northward of this property? Are they higher or lower?

A. My values north of the gas property to Twenty-first Street would be considerably higher.

Q. Would these values which you have given for this property be higher or lower than those immediately to the north?

A. Immediately to the north there would be a gradually increasing scale as you go north.

Q. And to the south?

A. Equally. It would increase a little more rapidly two blocks to the south.

Q. Are these values higher or lower than those of the avenue value which you used in your previous appraisal?

A. If I remember correctly, they are within $1,000 of the Tenth Avenue value.

Q. $1,000 which way?

A. Increased value to Tenth Avenue.

Q. Have you based these values upon the expected rental values of these docks which are not as yet being used?

A. I have already given my basis of value all the way through.

Q. With the exception of this marginal street have you noted any different conditions in coming to your present unit values 5655 than those which were in existence at the time you based your appraisal of the entire property?

A. No, I have not changed them in any particular.

Redirect examination by Mr. Mathewson:

Q. In your estimate of values of Eighteenth Street, I assume you took into account all these improvements in character of buildings and the tendencies to which you have testified?

A. Yes, sir, and also what I hear is going on and not yet bought up.

Q. And in all your estimates you took into account your general information and knowledge?

A. Yes.

By Mr. Burr:

Q. You are testifying then with regard to something you have not specified here, with regard to what you hear is going on or proposed to go on?

A. Oh, yes, gossip in the neighborhood always affects our judgment, general opinion.

Q. Then your valuation is based upon gossip, is it?

A. Partly.

The Master: Oh, Mr. Burr, do not waste time.

Mr. Burr: I won't waste any time after that answer.

Mr. Mathewson: I may say at this point that I shall not ask the witness to bring any records from his office. I do not consider it pertinent or necessary in the absence of instructions from the Master. As to the Dock Book to which reference was made, I will ask him to send it to me and show it to you, Mr. Burr.

Mr. Burr: You may accentuate or minimize your testimony in your own fashion.

5656 Datus F. Brown, a witness called in rebuttal on behalf of complainants, being first duly sworn, testifies as follows:

Direct examination by Mr. Mathewson:

Q. Where do you reside?

A. Albany, N. Y.

Q. Are you connected with any concern dealing in gas stoves?

A. Yes, sir, Rathbone, Sard & Company.

Q. Where is their business?

A. Albany, New York, and Aurora, Illinois.

Q. Have they dealings outside the State of New York?

A. Yes, sir.

Q. In gas stoves?

A. Yes, sir.

Q. Over the country generally?

A. Throughout the world.

Q. Are they makers of gas stoves and appliances?
A. Yes, sir.
Q. What is your position?
A. Manager of the Gas Stove Department of the business.
Q. Do you know whether your company has made tests from time to time as to the minimum point of complete efficiency of their gas stoves?
A. Yes, sir, we have.
Q. During years past?
A. We always find it necessary to do that.
Q. And have they made these tests in reference to the actual cooking and baking and use of the apparatus practically?
A. Yes, sir.
Q. What pressure at the apparatus do you find as the result of these tests is required for the efficient operation of your apparatus?

Mr. Burr: Objected to as incompetent, immaterial and irrelevant.
Question allowed. Exception.

5657 A. About 20-10 to 35-10; what is known as 2 to 3½ inches.
Q. Do you notice a loss of efficiency when you get below 20-10?
A. Yes, sir.
Q. And if you get to 15-10 what sort of a flame do you notice, as to being weak or wabbly or strong, or otherwise?
A. It is a very weak flame.

Mr. Burr: If this witness is called in rebuttal, I would like to know what the object of these questions is; what is the particular point this witness is called to rebut?

Mr. Mathewson: I think it was shown before when a previous witness was on the stand. We presented a proposition that we could not maintain the pressure between an inch and *and* 2½ inches, and if we could we couldn't give service to the consumers. Mr. Edgerton comes in and testifies that one inch pressure is sufficient for the operation of gas apparatus and apparatus generally. We are rebutting that by practical men.

The Master: Proceed.

Mr. Mathewson: That is all.

Cross-examination by Mr. Kirby:

Q. What is the name of the stove that you manufacture?
A. "Acorn."
Q. Are they on sale in the City of New York?
A. No, sir.
Q. Do you know how many are in use in the City of New York?
A. We have not a large number in use. We have not been fortunate in getting into this market.
Q. What kind of burners do you use?
A. Ordinary type burner—star-drilled top, with a drilled oven burner.
5658 Q. Which is an adaptation of the Bunsen burner, is it not?

A. Yes, sir; blue flame burner.

Q. Where did you make these tests of which you speak as to the pressure required?

A. Albany, New York.

Q. What kind of gas?

A. It is what is known as a coal and water gas; it is the coal gas enriched for candle power with oil.

Q. What is the candle power?

A. Our candle power up there runs about 20 or 22, I don't remember just what.

Q. Did you ever measure it?

A. No, sir. I have been at the works, however, and Mr. Dunn told me what the candle power was.

Q. But you don't know?

A. I couldn't testify, no, sir.

Q. At the time you made these pressure tests did you at the same time make tests of candle power?

A. No, sir.

Q. You don't know whether the candle power varied while the pressure test was being made, do you?

A. It may have. Not likely.

Q. How did you make your test for pressure, with what apparatus?

A. The ordinary pressure *guage*.

Q. What do you call the ordinary pressure *guage*?

A. The pressure tube—trap—weighted.

Q. Would you call such an instrument one that would register within one-tenth of 1 per cent?

A. That would be as close as we figure, I am sure.

Q. Would you figure as close as that?

A. No, I don't think so.

Q. How close would you figure?

A. Well, I can't say as for that. We use the ordinary pressure *guage*. I am not a scientific man; I am simply practical.

Q. What is the name of the apparatus?

A. I couldn't say. We use various pressure *guages* such as are on the market.

5659 Q. Did you make these tests yourself?

A. Yes, sir.

Q. Have you a record of the result thereof?

A. They are usually kept.

Q. Have you those records?

A. No, sir.

Q. You are speaking then just from memory?

A. I am speaking from memory.

Q. When were the last ones you made?

A. At the time our salesmen were in. I think it was about January 3d of this year.

Q. What was the test that you used and upon which you based your conclusion that the most efficient pressure is from 20/10 to 35/10?

A. It was with reference to the efficiency of burners.

Q. How did you make it?

A. We had a case where a gentleman claimed that our burner was not efficient, and his test was bringing to a boiling point ten pounds of water. Our burners, at the ordinary pressure, would consume——

Q. What do you mean by ordinary pressure?

A. Well, say 20/10. We consume about ten and one-half feet per hour. In order to bring the given quantity of water to boiling temperature we found we had to use a large amount of gas per hour and that by using a burner, for instance, that would consume fourteen feet per hour, or putting pressure back of the gas that would enable us to use that in our burner, we could raise this quantity of water to the boiling temperature with less gas than where we use it under low pressure or less gas pressure. The matter came up with reference to a test we had at Pen Yan, New York.

Q. Did you also make experiments as to how close to the flame the receptacle containing the water should be placed for the higher efficiency?

A. Yes, sir.

Q. And does that make any difference?

A. Yes, sir.

5660 Q. Does that make any difference with different pressures?

A. Yes, sir.

Q. What point did you use in your various tests of pressures?

A. We tried to establish, as near as possible, the centre of what we call the purple light.

Q. Did you keep any record of the various distances from the flame or the receptacle in the different experiments which you conducted?

A. Yes, sir.

Q. Do you remember those?

A. We tried from 1¼ inch, 1⅜ inch, 1½ inch. We found with our pressure 20/10, that we were keeping up in our experiments, that about 1⅜ inch with 20/10 pressure was the proper distance.

Q. Now, did you endeavor also to adjust the gas burner of the range so as to give the highest efficiency?

A. Yes, sir.

Q. And this also makes a difference, does it not?

A. Certainly.

Q. And with a high pressure the gas could be adjusted in its flow so that you would have a high efficiency, would it not?

A. Yes, sir.

Q. Where did you attach your apparatus to make the reading of pressure?

A. It was just before the gas entered the range.

Q. What point is that?

A. Just where the gas entered the supply pipe at the back of the range.

Q. On which side of the cock turning on the gas?

A. On the supply pipe side.

Q. Was the cock turned during the taking of these experiments?

A. I hardly understand you.

Q. Was the cock upon the gas range turned during the making of these experiments?

A. Only if you turned it off and on.

Q. Did you take any experiments with the pressure below 20/10?

A. Yes, sir.

Q. What is the pressure of gas as furnished to the burner in Albany?

5661 Mr. Mathewson: He stated as near as he knew, didn't he?

Mr. Kirby: No.

Q. Do you know?

A. From about fifteen tenths to thirty-five tenths.

Q. How did you get a constant pressure for your tests?

A. We have a little separate tank weighted down to give us the proper test.

Q. And it was from this tank that you took the gas to make your experiments?

A. Yes, sir. We used it for testing both high and low pressure, both natural and artificial.

Q. Do I understand you in saying there is no difference in efficiency between twenty tenths and thirty-five tenths?

A. The location of the cooking vessel would have something to do with that, sir, according to what you wished to accomplish. There are various things to be accomplished in a gas range, the cooking of the top burners, the use of the oven, the broiler, toasting, roasting; we find for accomplishing all these things our minimum pressure would not be less than twenty tenths because cutting down your burner with a valve and lessening the orifice, if you attempt to turn down your burner you do not get good results. If your burner is highest it is wide open, which would be a waste of gas We might perhaps cut that pressure a little, very little, and get a good result. An average of twenty-five tenths I consider the best possible result.

Q. That is, the range could be left without adjustment of any kind and produce the best average result at that rate?

A. Yes, sir.

Q. Are you familiar with the operation of gas ranges and heating apparatus in Great Britain?

A. No, sir.

5662 Cross-examination by Mr. Burr:

Q. You have had no experience in operating gas plants, hav you?

A. No, sir

Q. Does the candle power of the gas affect the stove at all?

A. Not as much as pressure.

Q. How much does the candle power of the gas affect it, if at all?

A. I could not speak as to percentage of efficiency.

Q. But you would say that in addition to the pressure the candl power of the gas would enter into the efficiency of the stove or th amount of efficiency in the stove in some degree?

A. Yes, it will, certainly, but not to as great a degree as the pressure. I simply said this because I test in different parts of the country. We have a factory at Aurora, and I test on gas over there and I test in the gas at Albany and various places where I go, to see about the efficiency of our stoves, and I have found this, that we get better results where high pressure is maintained and less with reference to the candle power of the gas.

Q. The size for instance of the supply pipe has something to do with the stove?

A. Well, you are enabled to main- a better and more even pressure which is necessary if you use a supply pipe.

Q. If you had a larger supply pipe you would be able probably to do with 15/10 pressure, and with a smaller one would you require 20/10 pressure?

A. No, sir.

Q. Why not?

A. Because you cannot use gas in ordinary appliances under 15/10 pressure and get as good results as you will above that. You cannot gain in pressure by putting it in a large pipe.

Q. Is it not a fact that the price of gas has been reduced in Albany recently?

A. I don't know, sir.

By Mr. Kirby:

5663 Q. I take it where you do not intend to increase the size of the supply, it is an advantage in that it maintains a more even pressure than would otherwise be maintained?

A. That is all.

Q. And to maintain an even pressure is a great advantage in the efficiency of a gas stove?

A. With a good sized supply pipe, no question about that.

Q. And in these experiments which you have made around the country, you generally found the gas supply was about an inch pressure, didn't you?

A. The average is about 18/10.

Q. That is measured at the stove?

A. Yes, sir; in the manner we ordinarily measure.

By Mr. Mathewson:

Q. Your test for pressure with the ordinary "U" tube?

A. Yes, sir.

Q. Where the water stands in the tube and the difference between the height of the water on one side of the tube and the other represents the pressure?

A. Yes, sir.

Mr. Burr: That is objected to as leading. Why not let him tell the method he pursued in making this test.

Mr. Mathewson: You asked him, and I asked him if he used the ordinary "U" tube of a certain character.

Q. When you speak of gas being adjusted at the range in the case of these tests, do you mean it was adjusted as between the amount of gas and air required to render the efficient burning?

A. I don't remember answering that.

Q. You said the gas was adjusted at the range in each case of your tests, as I recall your statement, before your test or at the time of the test. When you say gas adjusted do you mean gas adjusted as between the apparatus and gas and air to get the best burning efficiency?

A. Yes, sir.

5664 **John M. Brock**, called as a witness on behalf of the complainant, in rebuttal, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside?

A. 204 Percy Street, Flushing, Long Island.

Q. Are you connected with any concern that handles gas ranges?

A. Yes, William M. Crane Co.

Q. Where are they?

A. Their office and store rooms are at 1131 Broadway.

Q. New York?

A. Yes, and their place of manufacture at Peekskill.

Q. Are you head of the sales department of that company?

A. That is my position, sales manager.

Q. How long have you been there?

A. With the Crane Company?

Q. Yes.

A. Three years and three months I would say, to be accurate.

Q. How long an experience have you had in this business?

A. Between eight and nine years.

Mr. **Kirby**: You mean the gas range business?

The **Witness**: Yes, and the handling of gas appliances.

Q. In connection with the gas stove business, has your company and have you made experiments and tests as to the pressure under which your stoves operate efficiently, the minimum pressure?

A. We are making experiments at all times, especially at this season of the year, when we are producing and introducing new goods.

Q. Do you make your experiments with New York City gas?

A. We make experiments with both Peekskill and New York City gas; my experiments are made with New York City gas.

5665 Q. Will you state what the result of your experiment is with New York City gas as to the minimum pressure required for efficient operation of the gas range?

A. I find that when I get below a pressure—I might in explanation say that I take my pressure at two points, at the street side of the meter, or at the point where the service enters a building, before it enters the meter; the pressure there that I find works at the best advantage at that point is 25 to 30 tenths, at the gas appliance, taking my pressure at that point where, supposing we are testing before the gas enters the upper manifold, before it enters the range at all, I either put a T in or a U g*ua*ge or Thorpe g*ua*ge, or take my pressure at the top manifold, and there I prefer and find that I have the best results by working under a pressure at that point of 18 to 22 tenths.

Q. 18 to 20 would be the minimum?

A. I would say yes.

Q. Have you made any tests in reference to baking and cooking, as well as tests as to the best pressure in raising water to a required temperature?

A. In raising water I find a better advantage is had by increasing the pressure, if possible, about 5 tenths, I would say; I find it is necessary in heating water in the appliances that we manufacture, and such as I have tested, to increase that 5 tenths, but, of course, we operate under a less pressure.

Q. And that refers to water heaters?

A. Yes.

Q. But taking the use of the gas range for cooking, what results do your tests disclose as to the efficiency in actual use of the ovens or stoves for cooking and baking, as to pressure?

A. The tests we make most, of course, are baking tests, or as we call them, biscuit tests. I find if I operate with a pressure of less than 18 tenths, say 15 or 12 tenths, I will speak of 12 because that is a test I made recently. In making my biscuit test the finished
article, after baking a considerably greater length of time,
5666 and a greater consumption of gas, the finished article is not
at all inviting in appearance; the top of the biscuit instead of being flat, as we desire it, is raised in the center and droops off to the edges; there is a crust formed entirely over the biscuit, which has the effect of cutting the roof of your mouth; I don't know of any better way to say it. Then when we break our biscuit open the interior of the biscuit, instead of being flaky, as we like to have it, is hard and unpalatable.

Mr. Kirby: What pressure biscuit is this?

The Witness: About 12 tenths.

Q. So you would not consider that in your experience an efficient pressure to cook biscuits, at any rate?

A. I would hate to have our stoves g*ua*ged by that product.

Q. Without going through the details as to the cooking of meat, do you find similar results when you get below 18 and to 20 tenths?

A. My experience with steak is that it is steamed out, and white on the top if baked with a slow heat, and we cannot get that rich gravy that is produced when meat is roasted at a proper heat.

Q. In other words, you cannot cook it properly?

A. No, I cannot.

Q. Have you had any experience as to the point of flashing back?

A. Where my pressure is very low the burner is more apt to snap back. If I open my air port to get a perfect flame the burner is very apt to snap back at the first lighting.

Q. What is your experience as to Welsbachs?

A. When you ask me that, my experience with lighting has not been as much.

Q. You have not had as much experience as you would like, to testify?

A. I have not had much.

5667 Q. Then I will not ask you as to Welsbachs. Is your concern willing to guarantee efficient operation of the stove that they install with a pressure of less than twenty tenths?

Mr. **Kirby**: I object to that.

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial.

The **Master**: I will allow it.

Mr. **Burr**: Exception.

Mr. **Kirby**: Exception.

A. I would not want to put out a stove and promise any kind of results at all and guarantee them with pressure less than sixteen tenths; I would sooner put it that way.

Q. And at sixteen tenths you would not consider the results as good as at twenty?

A. Not by any means.

Q. You mean as to the results obtained by the stove and consumption of gas both, so far as concerns the consumer?

A. I could not do my work as efficiently or economically with gas pressure below that.

Q. You mean by that the consumer could not?

A. No.

Cross-examination by Mr. **Kirby**:

Q. Your tests have not been directed toward the heat units developed by the gas burned so much as toward the kind and character of cooking which the gas would do, are they?

A. We never make our tests so definite as to take in actual heat units; our tests are made by boiling tests, boiling a pound of water to see how much gas is required and how much time is required.

Q. In making a tests which has to do with boiling a certain quantity of water, there is a great deal of heat which does not go to heat the water, is there not?

5668 A. Well, there is a certain loss of heat at the side of the cooking utensil, and there must be; and I think the way we construct our burners to-day we overcome that a great deal, especially the burner we make, that is one of our advertising claims.

Q. And you have never made any tests which would take into account those lost heat units as well as those which are used in heating the water?

A. I would not know how to make an appliance to make such a test; I have never seen one.

Q. That would be a scientific test beyond your experience?

A. I think it would be a scientific discovery.

Q. But such tests are made and the heat units lost are so small that they can be allowed for by proper proportioning, can they not?

A. Not in any tests I have made.

Q. In taking your pressures you have stated the two points where you took your pressure?

A. Yes.

Q. One between the meter and the service main?

A. Yes.

Q. And one between the bracket to which I take it the hose or pipe of the gas range——

A. No—the iron pipe.

Q. And the iron pipe and the stopcock to turn the gas into your range?

A. At the side of the range is what we call an open manifold, it is practically the end of the pipe system on the range, and that is joined to the gas supply with a union, that is the point I sometimes put my test.

Q. And that point is on the side of the cock away from the range?

A. Before the gas enters the range.

Q. Have you ever made any tests between that stopcock and the point of ignition in the range?

A. I don't think I have; I don't think I have ever tapped into a burner proper. I tap between those points at the oven manifold.

5669 Q. Now, differences of construction in ranges would produce different results, would they not, as far as the pressure which would be required for highest efficiency is concerned?

A. There might be, I would hardly think it would be so it would be of any importance, though.

Q. If the oven of a range were so constructed that it would not contain the heat, you would have to look to the flame wrapping around it, as it would around a receptacle in which water was being heated, you would look for a higher pressure for greater efficiency, wouldn't you?

A. As ovens are constructed to-day, with the two styles, the flues or direct heat, I think it would have no bearing. The heat is carried through a series of flues or directly into the oven.

Q. The effort by you is to use all the heat possible?

A. Well, without preventing perfect combustion, and smothering of your flame.

Q. What is the name of the stove you manufacture?

A. We manufacture the "Vulcan" line of appliances, and also sell the "Perfect" line of appliances.

Q. What kind of a burner does the Vulcan stove use?

A. We use a circular burner drilled open at the center with the flame produced directly from the center, a pipe burner drilled.

Q. Is that an adaptation of the Bunsen burner?

A. It is the regular blue flame burner which all ranges use, I believe.

Q. And do you use a needle valve on your ranges?

A. No, a fixed orifice.

Q. And you use a stopcock valve?

A. We would have to use some means to stop the gas off, certainly.

Q. But it is not a needle valve?

A. No.

5670 By Mr. **Burr**:

Q. Does the size of the orifice affect pressure?

A. We regulate the orifices to meet the pressures at different points.

Q. At what different points?

A. Some different towns operate under different pressures.

Q. Do you find a difference in the quality of the gas in the different towns?

A. I think there is a difference in the quality of gas. There is some variation in candle power.

Q. Do you adapt your stove to the quality of the gas?

A. We take into consideration pressure, which seems to be the only thing to be considered.

Q. The quality of the gas does not affect the stove at all, does it?

A. We do not build stoves taking that into consideration, because I do not see any need of it.

Q. You have been building stoves for three years?

A. I never built any stoves at all myself. I have sold a great many of them and handled a great many.

Q. Do you sell any to the Consolidated Gas Company?

A. Quite a number.

Q. Are you acquainted with Mr. Brown, the gentleman just on the stand here?

A. I know him, yes.

Q. Does he sell stoves to the Consolidated Gas Company?

A. I believe his testimony answered that.

Mr. MATHEWSON: I do not think he testified to that.

Mr. KIRBY: He said he wanted to, but had not.

Mr. MATHEWSON: Yes, I think that is something like it.

5671 Re-direct examination by Mr. MATHEWSON:

Q. Are not these stoves which your concern is selling, and which you have described, and which Mr. Brown sells, the ordinary gas stoves such as are generally used, gas ranges?

A. They compare with any that I know of, there is only one that I know that is radically different.

Q. They are common and usual patterns?

A. Yes.

Q. Has your concern a large bus-ness over the country?

A. As manufacturers of gas appliances generally, taking in the variation of lines, I think we are the largest in the country.

Q. As to the quality of gas affecting results, is it not the fact that the amount of air which you introduce, or allow to be introduced with the gas, is adjusted in accordance with the quality of the gas so as to get a proper mixture?

A. Yes.

Q. And that would take care of itself in that way?

A. Yes, and it is adjusted through our efforts.

Q. In reference to the pressure regarding which you testified in reply to my question, I referred, of course, to the pressure at the apparatus. I supposed that is what you referred to?

A. Yes. I spoke about two, one at the apparatus and one at the street.

Q. But in your testimony you always referred to the pressure at the apparatus?

A. Yes.

Q. Is it not the fact that in the experience of the company in New York, it is not infrequently necessary to take out stoves because you cannot get pressure enough or they will not operate efficiently?

A. We lose a great many orders in our retail department because we cannot use the appliance at all. Take gas heaters, and logs, and grates, because we cannot get sufficient pressure.

5672 Q. In the City of New York?

A. In the City of New York.

Q. Do you find any disquisition as to the number of heat units which are being produced is of much value in a case where the housewife cannot cook her biscuits with the pressure she gets?

A. In fact, that question of heat units, and I claim to be a practical gas man, is so far foreign to me that I do not want to testify anything about it.

Q. What you testify is as to actual results?

A. As to actual results.

Re-cross-examination by Mr. Kirby:

Q. Mr. Mathewson has opened up a new field in regard to gas ranges. Do you take it that the reason for the inability to use gas ranges and logs efficiently is due to too small housepiping?

A. We find that sometimes, we find that we cannot get the supply owing to the pipe being too small, but if we had a little better pressure we could get it through that particular pipe.

Q. And you could get it through a very small pipe if you had enough pressure?

A. I don't know how far we could, but I think we could work down as far as one-half or three-eights.

Q. You would need four, five or six inch pressure for that?

A. No, I think thirty tenth, or three inch pressure would give us what we wanted.

Q. That would not be so if you had a good many apparatuses for this small pipe you speak of?

A. I do not think our plumbers would pipe houses to the extreme you are mentioning.

Q. You have never made any tests as to the calorific power of gas of different candle powers, have you?

A. No.

5673 By Mr. Mathewson:

Q. Is it not a fact that complaints have been very numerous lately as to pressure in the operation of gas stoves?

A. We had a district in Harlem, I am not prepared to say exactly, but it was within the last four or five months, we simply had to refuse to take any more orders there. We could not help them out, and it was due to lack of pressure, and we had to turn down every order; and in a number of cases I know the gas stoves have been taken out and coal stoves put in.

By Mr. **Kirby**:

Q. And Harlem is a district which has been built up comparatively recently, and the houses are fairly new on the average?

A. And proper size piping.

Q. What do you mean by proper size pipe?

A. We have a scale figured out; I am not prepared to say exactly what that scale is, but it is figured from a series of tests. When we start on a line of 100 feet, I will say 100 feet, but I do not intend this to be exact—we would say we have to use an inch pipe. If we start with 150 feet we would have to increase it to one and one-quarter inches; and that is taken into consideration when the house is piped.

Q. And that is taking into consideration a pressure at the meter of how much?

A. I think that is based on about twenty-five tenths; I would not want to say that that is positive.

Q. So if the house were piped properly in accordance with your scale there would be no troubles such as those you speak of?

A. And proper consideration given to the number of appliances which were going to be taken off that line.

By Mr. **Burr**:

Q. Do you say that Harlem has been recently built up?

5674 A. I think there has been a great deal of building recently; my experience in New York only dates back three years.

By Mr. **Mathewson**:

Q. Of course, the house piping is regulated by the city authorities?

A. I think so.

Q. And we have no control over that?

A. No.

By Mr. **Kirby**:

Q. But the city has no control over the size of the pipe, has it?

Mr. **Mathewson**: That is it, they specifically require it.

The **Witness**: I think they require what size of pipe must be used.

Q. It cannot be less than so much?

A. No.

By Mr. **Burr**:

Q. The trouble in the apparatus in Harlem has only been in the last four or five months?

A. No, I wouldn't say that. I say we had a series of trouble which started about four or five months ago. I think we are having some complaints still about that.

Q. But you had no complaints before that?

A. I am speaking of this particular time four months ago. I do not care to go beyond that. I know it was brought to my attention particularly:

By Mr. **Mathewson**:

Q. Is it not a fact that since the new pressure law went into effect on July 1st, 1905, you have had great numbers of complaints?

Mr. **Burr**: Objected to as leading; all this is leading.

The **Master**: It is rather leading.

5675 **John W. M'Clellan**, called as a witness in behalf of the complainant, in rebuttal, being duly sworn, testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Where do you reside?
A. 909 Seventh Avenue.
Q. City of New York?
A. Yes.
Q. Are you connected with any company manufacturing or distributing gas appliances?
A. Yes, sir.
Q. What company?
A. Manhattan Gas Heating Company.
Q. What is your position there?
A. General Manager.
Q. Do they manufacture gas grates?
A. We manufacture grates, fireplace grates.
Q. Logs, as they are called?
A. Yes, we might say—they are manufactured under a contract, but they are meanufactured from our design, and from our constructions.
Q. Do you sell grates to the general public?
A. Yes.
Q. To the consumer at retail?
A. Yes.
Q. You do not find that the gas companies are purchasers of grates in large numbers?
A. Very few in late years.
Q. How about water heater apparatus, do you sell that?
A. We sell only a water heater made by the Michigan Stove Company.
Q. Has your company made tests as to the minimum pressure at which full efficiency can be obtained by your apparatus?
A. On gas g-ates and logs.
Q. What is the minimum for efficiency there without flashing back?
A. We do not care to put in a gas grate or gas log under a twenty tenths pressure.

5676 Q. Do you find a higher pressure than that better?
A. Yes.
Q. Are you able to state as to water heaters; is your experience sufficient so you can say what minimum you would consider?
A. Only in a way that if we are putting on water heaters, if we

do not get a twenty tenths pressure; we certainly would not put them on and guarantee them.

Q. You refer to conditions in New York City?

A. Yes, sir, in New York City, Manhattan.

Q. And before you install such apparatus does your company make an examination to ascertain the pressure that may be expected?

A. If we suspect there is—you can tell ordinarily what the pressure is or we can tell, we are so accustomed to putting in grates and logs, we can tell by opening the cock; if we suspect there is a low pressure we put a test gauge on, and if the pressure runs under twenty or eighteen or twenty tenths, we would just as soon not put them in.

Q. You will not guarantee them under twenty?

A. No. We get more trouble from the apparatus if we put it under a low pressure. We would rather lose a sale and not bother with it. It gives us more trouble.

Cross-examination by Mr. Kirby:

Q. Do you make these tests of which you speak?

A. I personally make quite a good many of them, yes, sir.

Q. Where have you made them?

A. Are you speaking now of testing our own apparatus?

Q. Yes.

A. At our place of business, 909 Seventh Avenue.

Q. And how do you test them?

A. We have an apparatus down stairs where we test, and we test with an ordinary U-*gua*ge, I think it is one of Gleason's
5677 make; it runs up to 4½, 4½ I think is the maximum water test.

Q. At what point do you test the pressure?

A. Do you mean at what point do we test our heater?

Q. Yes.

A. Well, our object, of course, is to get a heater or burner that will run as low an amount of gas as we can and give a good result, and we have been obliged in the last two years to make our burner smaller. We make a face burner, or an asbestos burner, the regular size we used to run 17½ here and 23 inches high. Under the low pressure we find we can cut off 3 to 6 inches here (indicating).

By Mr. Mathewson:

Q. In width, do you mean?

A. No, in the height, and instead of having a 22 row, we run now about 16 and 17 row burners, in order to have the burner work under the same conditions now as we used to have a large burner work three years ago.

By Mr. Kirby:

Q. So you endeavor to regulate all your apparatus in accordance with the pressure which you expect to be supplied to it?

A. We have been obliged to, by reason of the low pressure, but the customer demands even a larger burner in order to heat a room.

Q. Now, he could burn more gas, could he not?

A. In a larger burner?

Q. Yes.

A. Yes, a larger area, provided you opened the orifice below.

Q. You took these pressure readings yourself, in some instances?

A. I have, yes, sir, quite a number of them.

5678 Q. You used a "U" tube, such as has been spoken of this morning?

A. Yes, I think ours is made by Gleason.

Q. Was that pressure taken at the meter?

A. No, sir; taken at the apparatus.

Q. Was it taken right by the stopcock to the apparatus?

A. Well, we have an arrangement, for instance the stopcock is here, here is a pipe running off here, that we put the gauge on, and the pipe continued with a T and the pipe continues off here (indicating) with the burner or apparatus, as you might say (indicating).

Q. So that the pipe which is connected to the "U" tube and to the Gleason tube, or whatever tube you use, is attached within, say, six inches or a foot of the stopcock of the apparatus?

A. Well, now, probably three feet.

Q. You have never made any test as to the calorific power of gases of different candle powers, have you?

A. No, I cannot say that I have. Our candle powers run about the same here.

Q. And you have never made any tests to show the number of heat units which would be developed by a gas in the City of New York burning at different pressures, have you?

A. No, sir, I have not.

Q. Your water heating apparatus carries a pilot light, doesn't it?

A. Yes, sir.

Q. By that you mean a light which is burning all the time?

A. Yes, sir. Well, what I speak of as water heaters is a heater that attaches to a boiler. We have sold a few of those large automatic heaters, but very few of them. We sell a great many of the ordinary heaters that attach to a boiler to heat a 40, 60 or 80-gallon tank.

Q. Well, those have a pilot light?

A. Yes, but it is not kept lighted all the time. It is only on the large automatic ones it is kept lighted.

5679 Q. And the burner for such apparatus is similar to those which you have heard described here this morning, or has it any peculiar features?

A. I think the burner is the ordinary Star burner or drilled burner.

Q. Have you ever taken any pressure readings between the stopcock of the apparatus and the point of ignition of the flame?

A. That is, you mean at the meter and at the flame?

Q. No; I mean between the stopcock to the apparatus and the point of ignition of the flame in the apparatus?

A. Of the water heater.

Q. Of the water heater.

A. No, sir, only on our own grates that we manufacture.

Q. Where did you test them?

A. Our own grates?

Q. Yes.

A. In our shop.

Q. And at what point of the grate?

A. Well, do you mean for heat units?

Q. Yes.

A. No, sir, only in comparison with thermometers in front of them; we have made some tests with thermometers as to the different sizes of the burners which we make for the gas grates. Do you know what an ordinary gas grate is?

Q. I do.

A. With the asbestos front?

Q. Yes, I am well familiar with it. Have you ever made any tests with pressures at the meters that Mr. Brock has made reference to?

A. No, only at the apparatus.

Q. Nor of the loss of pressure between the meter and apparatus?

A. No, sir; there would be very little difference, I should judge, between the——

Q. It would depend entirely upon the house-pipe, wouldn't it?

A. Something of that sort and the location of the meter.

Mr. KIRBY: That is all.

Mr. BURR: No questions.

5680 Redirect examination by Mr. MATHEWSON:

Q. Under a pressure of twenty-tenths or above, the pressure is sufficient so that the flame rises and covers your grate front without carbonizing, doesn't it?

A. Under a twenty-tenths pressure for the large size burner it would hardly cover the fulltop of the burner with twenty-four rows; we have been obliged to cut them down.

Q. Why you cut down when you have a lower pressure is because the lower pressure will simply cover the upper part of the grate with carbon and soot and it will be ineffective?

A. No, there would be no carbon, providing we cut the burner down.

Q. That is what I mean?

A. There might be a little dirt raised on the upper part.

Q. That is what I mean, you cut down the size of the burner capacity?

A. We have been obliged to on account of the low pressure. We had to in most all of our burners.

Q. In the City of New York?

A. Yes. Outside we have had few or no complaints, only in this city, New York and Brooklyn. We have had some complaints over in Brooklyn.

At 1.05 P. M. adjourned to January 17th, 1907, at 11.30 A. M.

Last Complainant's Exhibit 296.
State's 000.
City's 236.

5681 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

JANUARY 18, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

5682 The MASTER: Note on the record that the adjournment on the afternoon of the 16th was at the request of Mr. Kirby, who had an imperative engagement, and counsel not objecting thereto; and that the hearing on the 17th was necessarily postponed on account of the engagement of the Master in the trial of a case in the Supreme Court.

WILLIAM H. CHILDS, called as a witness in behalf of the complainant, in rebuttal, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Where do you reside, Mr. Childs?
A. 53 Prospect Park West, Brooklyn.
Q. Are you an officer of the Barrett Manufacturing Company?
A. I am vice-president.
Q. It is a company which purchases coal tar and ammoniacal liquors from the Consolidated Gas Company?
A. Yes, sir.
Q. Are you an officer of the American Coal Products Company?
A. I am vice-president.
Q. How long have you been in this business?
A. Fifteen years.
Q. Are you familiar with coal tar and the prices which are obtained for it, and the market prices?
A. Yes, sir.
Q. Both the raw product as received from companies and the price of the finished product after it has been treated or manufactured by the companies?
A. Yes, sir.
Q. What proportion of the coal tar of the United States do the companies of which you are an officer handle?
A. In excess of eighty per cent.
Q. It appears that the price received by the Consolidated Gas Com-

pany from your company is 2.24 cents per gallon for coal tar, 5683 the raw product. Is that lower than the market price in the City of New York?

A. No, sir.

Q. Do you know of any way in which the company could obtain a higher price than that in the City of New York from anybody?

A. No, sir.

Mr. BURR: Does he know whether the Consolidated Gas Company could get a higher price, is that what you mean?

Mr. MATHEWSON: I will put it in another way, if you object.

Q. Do you know of a way in which anybody in the City of New York could sell coal tar, the raw product, at a higher figure than the amount you pay the Consolidated Gas Company?

A. Not to average higher than that, no, sir.

Q. The value of coal tar depends upon the value of what products?

A. Do you mean in the purchase of it?

Q. Yes.

A. It is bought on a sliding scale, based on the value of pitch and dead oil, that is, creosote oil.

Q. And does the value of pitch and dead oil in the City of New York depend upon the market elsewhere?

A. Yes, sir.

Q. Where?

A. The foreign market.

Q. It is regulated by the foreign prices, in fact, then, isn't it?

A. Yes, sir.

Q. In the interior of the country, where freight is to be added to the cost of importation from a foreign country, what effect has that circumstance on the price of coal tar?

A. It does not affect it except to the extent of the foreign prices plus the freight; but the freight into the interior of the country is less than the freight from England or Germany to New York 5684 plus the New York freight from New York to the interior; that is, the through freight is less than the combined freight.

Q. So that the effect is as to the interior of the country, that, other things being equal, the coal tar will be worth a little more than in New York?

A. If it were dependent entirely upon the foreign price; in the interior of the country there is a large overproduction.

Q. Is coal tar a product which is scarce, or is it made in large quantities?

A. Very large quantities.

Q. Is it produced by gas companies alone, or by coke ovens as well?

A. There is more produced by coke ovens than by the gas companies.

Q. Now as to oil tar, is the market price and the value of oil tar as great as coal tar?

A. No, sir.

Q. How much less in New York?

A. In the purchase price—you are referring to the purchase price?

Q. Yes, I refer to the raw product as it comes from the gas companies.

A. About one-half cent per gallon less.

Q. Now, after your company receives the coal tar respecting which Mr. Edgerton testified, what do you do with it?

A. It is distilled.

Q. Have your companies large and extensive plants for that purpose?

A. Yes, sir, very large.

Q. Do they manufacture it into the final products which they sell?

A. Yes, sir.

Q. Do you have in that connection not only plants, but fleets of boats and other property?

A. Yes, sir

Q. You have stated that you take the coal tar from the Consolidated Gas Company. Do you take all the oil tar that they produce?

A. No, sir.

Q. Would you do so?

A. No, sir.

Q. It is used for burning, isn't it?

A. Yes, sir; we could not possibly handle it.

5685 Q. Now, Mr. Edgerton has testified that he made inquiries in the City of New York, I think from your concern, and found that five or five and one-half cents was the price for coal tar. What does that five or five and one-half cents refer to?

A. It is the retail price.

Q. Retail price of what, the finished product?

A. Yes, sir.

Q. Is that the price of the raw product as it comes from the gas company before you distil it and manufacture it?

A. No, sir, not in any quantity. For a few barrels——

Q. Is it possible to obtain that price in the City of New York for the raw product as far as your experience goes?

A. It could not be obtained.

Q. Did you ever know of a case where it was obtained in quantity?

A. No, sir.

Cross-examination by Mr. Kirby:

Q. Mr. Childs, what was the price you said you paid to the Consolidated Gas Company for their coal tar?

A. 2.24 cents. This is in 1905.

Q. What price did you pay them therefor last July?

A. A trifle less than that.

Q. What price did you pay them last November?

A. Approximately the same; I could not give you the exact figure, but it would vary very slightly; there are only slight variations during the year.

Q. Do you pay this price to them delivered at their yard?

A. We take it from their yard.

Q. How do you take it away?

A. In lighters, tank boats.

Q. Who delivers it on board the boat?

A. I think they do.

Q. Your price is, then, delivered on board; is that true, Mr. Childs?

A. I am not sure whether they do the pumping or we do; we have facilities for pumping on all our boats and I think in some cases they do it and in others we do.

5686 Q. What uses do you make of this tar?

A. We distil it and use part of it in the saturation of roofing papers and sell a large amount in the form of pitch for street paving work and some of it is sold for the purpose of making briquettes of pitch and coal, and most of the pitch is used in the roofing business, gravel roofing, perhaps you would understand it better.

Q. It has a great and growing use, hasn't it?

A. Yes, sir.

Q. I believe your company is the Barrett Manufacturing Company which manufactures what is known as Tarvia?

A. Yes, sir.

Q. Which is coming into general use for the purpose of spreading upon macadam roads to improve them?

A. And laying the dust. There were 5,000 barrels used last year for that purpose.

Q. And such use is growing in your opinion, is it not?

A. We hope so.

Q. Your company is a successful one, I take it?

A. I presume so.

Q. As a matter of fact it pays 10 per cent. dividends upon its capitalization, does it not?

Mr. Mathewson: Is that worth while, to inquire into that? I do not think it is pertinent, and I object to it. Supposing it does?

The Master: Has the witness any objection to answering?

Mr. Mathewson: I have not any objection to his answering, if he cares to.

The Witness: As a matter of fact it does.

Mr. Mathewson: Mr. Kirby is trying to prove that ten per cent. is a fair return for an industrial company.

Mr. Kirby: Yes, when it buys at this price and sells at a very large increase in price.

5687 Q. This distillation which you speak of, what are the products you get from that distillation, not coal tar?

A. No. Coal tar is the crude product.

Q. And that which you get from that is not known as coal tar, it is quite a different thing, is it not?

A. Yes, sir.

Q. It is not for the purpose of purifying the coal tar or driving any foreign matter out of it?

A. Some of it is, and some of it we sell as refined coal tar; Tarvia, for instance, is treated that way.

Q. But the product which you purchase from the Consolidated Gas Company is what is known as coal tar?

A. Yes, sir.

Q. And when a substance is sold on the market under the name of coal tar, it is your understanding that it is the same as that you buy from the Consolidated Gas Company?

A. Very little is sold in the form we buy it from the Consolidated Gas Company.

Q. It is quoted as such, is it not?

A. It is not the same quality.

Q. Wherein does it differ?

A. Coal tar differs much in quality, their coal tar is not suitable for the ordinary purposes that ordinary coal tar is sold for as coal tar.

Q. What do you mean by ordinary coal tar?

A. I mean coke oven tar, for instance.

Q. Do you purchase coke oven tar?

A. We do.

Q. How much do you pay for that?

A. Our average over the United States for nine hundred thousand barrels of coal tar and gas house tar in the year 1905 was 2.28 cents.

Q. That is four-tenths of a cent over and above that which you pay the Consolidated Gas Company?

A. Yes——

Mr. MATHEWSON: Four one-hundredths.

The WITNESS: Yes.

5688 Mr. MATHEWSON: Including this superior coke oven tar and all qualities?

The WITNESS: Yes, that is for all qualities.

Q. I take it you are familiar with the paper known as the *Oil, Paint and Drug Reporter*, are you not?

A. I see it occasionally.

Q. I call your attention to a quotation therein, on page 31 of the issue of July 23, 1906, Coal Tar in Oil Barrels, 50 gallons, $4.50 to $4.55. That makes a price per gallon of between eight and nine cents, doesn't it?

A. Including the barrel.

Q. No, excluding the barrel?

A. I think that price is including the barrel.

Q. That price is including the barrel, but 50 gallons at $4.50 to $4.55 is between nine and ten cents?

A. Counting the value of the barrel, which is $1, which is two cents a gallon from that for the price of the barrel.

Q. That would be between seven and nine cents?

A. It would be just seven cents in that quotation.

Q. Between $4.50 and $4.55, seven and a fraction thereover, which would be represented by the difference between $4.50 and $4.55. Do you figure in that the cost of a new oil barrel?

A. Of what is paid for the barrel, of what is paid for the oil barrel on the other side. Those are importations, I understand.

Q. But when they use barrels for this purpose they are not new barrels, are they?

A. No.

Q. Are you giving the figure of an old barrel such as would be used?

A. Old barrels over there are worth a dollar a barrel. May I ask the quantity of that importation?

Q. There is no quantity mentioned here. I am simply giving you the quotations for the prices of coal tar set down in the schedules there.

5689 A. Is not there the quantity? Is there not a final number of dollars and cents obtained for such an amount of tar, which would show how much the quantity was?

Q. I fail to find it here.

Mr. **Mathewson**: Have you any objection to the witness seeing it?

Mr. **Kirby**: Certainly he may, with great pleasure. (Handing paper to witness).

The **Witness**: It is not a shipment, that is a quotation.

Q. I call your attention to a quotation in the same journal under date of November 5, 1906, Coal Tar in Oil Barrels, 50 gallons, $4.40 to $4.60. That is a correct quotation, is it not?

A. That is what it reads there. I never saw any quotations before by that paper, and I do not think they are an authority.

Q. This journal gives quotations on oils, paints, varnishes, etc., drugs, acids, fertilizing material, and is a trade paper for that purpose, is it not?

A. Not for the coal tar business, no, sir.

Q. You have no reason to doubt the authenticity of such quotations, have you?

Mr. **Mathewson**: What do you mean by the authenticity of such quotation?

Mr. **Kirby**: As such quotations are usually given in a paper of this kind, either stocks or bonds or other matters.

Mr. **Mathewson**: No doubt it appears in the matter that you are calling attention to perhaps, but I do not know what you mean by the authenticity of the quotations.

Mr. **Kirby**: I asked him if he doubts it, and if so, why.

The **Witness**: They are not an authority.

Q. Which paper is the authority?

A. There is none.

5690 Q. Where would you go to find the quotation for sales or prices of coal tar?

A. I would ask the price of the dealers that sell it.

Q. Have you asked such prices?

A. No, sir. We sell it.

Q. You are not the only ones who sell it, are you?

A. No, sir. All those prices are maximum—few barrel lots.

Q. I call your attention to the heading at the top of this quotation: "Wholesale Prices Current. Note: Our quotations are those of importers and manufacture for original packages in large lots. For broken lots higher prices are asked."

Mr. **Mathewson**: What about that, is it some question, or are you reading the paper into the record?

Mr. **Kirby**: Mr. Childs has stated that such prices he understood were for small lots. I am reading the quotation from the paper to show——

Mr. **Mathewson**: You cannot do that unless some question is asked. I move to strike it out.

Q. I ask you whether you now wish to change your answer that it is for small lots?

A. I know it cannot be for anything else.

Q. But you do doubt the authenticity of such statements?

A. I know they are not authentic.

Q. You are familiar with the paper, are you not?

A. I simply know there is such a paper. We never use it.

Q. Your company is the Barrett Manufacturing Company of Philadelphia?

A. No, sir—New York and Philadelphia. They may advertise in it; I don't know.

Q. I call your attention to the *Oil, Paint and Drug Reporter* of November 25th, 1906, and to page 16 thereof and ask you if that is an advertisement of your company?

5691 A. It is an advertisement of our chemical department, yes, sir.

Q. That is part of your company, is it not?

A. Yes, sir. I never saw it before.

Q. I call attention to the advertisement in the issue of Monday, November 19th, 1906. The last page thereof:

"Carbolic Acid; Barrett Manufacturing Company."

A. Yes.

Q. And I ask you if that is your company?

A. Yes, sir.

Q. You here state that you are "Exclusive producers and the only manufacturers in this country of all grades of carbolic acid," and so on. That is a statement of your company, is it not?

A. That is our company's advertisement; yes, sir.

Q. And as a matter of fact, in all of these issues which I have here I find an advertisement of your company. So your company is familiar with this Journal?

A. I said I was not familiar with it.

Q. But you are an officer of this company?

A. I am. I never saw those advertisements before. I did not know we advertised in it.

Q. Are you familiar with the market quotations of coal tar?

A. I am familiar with the prices at which we sell them, yes, sir.

Q. I asked you if you were familiar with the market quotations?

A. I don't think there are any such things as market quotations.

Q. Then you are not familiar with any market quotations of coal tar?

Mr. **Mathewson**: I think he has answered the question. I object to further pushing on that.

Q. Are you familiar with the prices obtained abroad on 5692 the sales of coal tar by the gas company?

A. No, sir

Mr. **Mathewson**: I object to that as immaterial and irrelevant anyhow.

Mr. **Kirby**: The witness has stated that the price depended on the price in the foreign market.

The **Master**: Well, he says no; that is an answer.

Q. What basis do you use in your conclusion that your price is based upon the price obtained in the foreign market?

A. I did not say so.

Q. Then the foreign market has nothing to do with the price here?

A. On the contrary, it has everything to do with the price of importations of pitch and oil. I am not talking about coal tar; I don't know what they pay.

Q. Pitch and dead oil, you have testified, come from coal tar, have you not?

A. Yes, sir.

Q. And what percentage of the bulk does pitch represent?

A. If it was all distilled, about sixty-five per cent.

Q. And dead oil?

A. About thirty per cent. more, twenty-five to thirty per cent.

Q. Making ninety-five per cent. of the total, the price of coal tar would be a proper basis of comparison of the price of these two, would it not?

A. No, sir.

Q. Are you prepared to state the price obtained abroad for pitch and dead oil?

A. I can give you the price of pitch in certain parts abroad.

Q. Do you know whether there is any duty in this country on the importation of coal tar?

A. I do not think there is.

Q. Do you know whether there is any duty on the importation of pitch?

A. I do not think there is.

5693 Q. Do you know whether there is any duty on products from coal tar?

A. Only on the very finer products which are not manufactured in this country.

Q. Do you know the freight from England to this country?

A. Only approximately.

Q. Would the freight on coal tar from England here be as much as a cent a gallon?

A. I should think it would be more than that.

Q. Do you think it would be as much as two cents a gallon?

A. I think about two cents, probably.

Q. Which would mean that to meet such prices as you pay the

Consolidated Gas Company, the coal tar would have to be sold in England for less than a quarter of a cent a gallon, would it not?

Mr. MATHEWSON: That is a conclusion.

The WITNESS: You are confounding the retail price obtained by shipping it here and the price paid the producer.

Q. You pay the Consolidated Gas Company 2.24 a gallon, don't you?

A. We do, yes, sir.

Q. If the freight, as you have just stated, of coal tar from England here is more than two cents, it would mean that to meet the market which you make in this way, the companies there would sell at less than .24 of a cent?

A. The freight on coal tar has nothing to do with it. It is the freight on pitch and dead oil. The prices are based on pitch and dead oil. Coal tar is not imported except in very small quantities.

Q. The freight on coal tar and on pitch and dead oil would be approximately the same; their weights do not differ very much?

A. Approximately the same.

5694 Q. So that the freight on a gallon of one would be approximately the same as the other?

A. Approximately.

Q. Do you wish it to be understood that there is no trade paper which gives quotations upon the market value of these products, which quotations would be recognized?

A. No. I do not know of any trade paper which gives authentic quotations of the market value of pitch and dead oil in this country.

Q. Do you know of any abroad?

A. Yes, there are several that give the prices over there.

Q. They would not be authorities on the prices here?

A. No.

Q. Do you know whether or not those papers state the price of coal tar in England at less than one-quarter of a cent a gallon?

A. I should not think they would. There is nothing to indicate that they would. The price of coal tar here has nothing to do with the price which we pay the Consolidated—has nothing to do with the freight on coal tar here. In other words, the freight on coal tar has nothing at all to do with what we pay to the Consolidated for the — based on the price of pitch and dead oil.

Q. Do you also buy the ammonia from the Consolidated Gas Company?

A. Yes, sir.

Cross-examination by Mr. BURR:

Q. Mr. Childs, was the price for coal tar higher in 1906 than it was in 1905?

A. No, sir; a little lower, a trifle

Q. In other words, you got more in 1905 from the Consolidated Gas Company for coal tar?

A. We paid them more.

Q. You paid them more than in 1906?

A. I think so; a little more, I think.

Q. You don't happen to have the exact difference in 5695 amount of price, do you?

A. No, I haven't the exact difference in mind, but I should think it might be one-eighth cent less than in 1906; that would be my impression.

Q. And as to 1904, did you pay less or more that year than in 1905?

A. I couldn't tell you without looking. The prices have not varied a great deal.

Mr. MATHEWSON: The contract is in evidence, Mr. Burr.

Redirect-examination by Mr. MATHEWSON:

Q. Do you not at all times pay to the Consolidated Gas Company the full market value for their coal tar?

Mr. BURR: Objected to as calling for a conclusion.
Mr. PAGE: That is objected to.
Question allowed.
Exception.
Mr. PAGE: He stated there is no market price.
Mr. MATHEWSON: Market value.

A. We are obliged to under the contract.

Mr. BURR: I move to strike that out.
Motion granted.
Mr. MATHEWSON: Exception.

Q. Well, explain a little more fully.

The MASTER: I assume by "market value" you mean market price. It was in that aspect that I allowed the questions.

A. The price paid the Consolidated is dependent upon the price at which we sell pitch and dead oil. We sell pitch and dead oil at prices which are governed by the imported price of those two articles.

Q. And you are referring now to the written contract be- 5696 tween your company and the Consolidated?

A. Yes, sir.

Q. And that contract is in evidence. So that what you pay to the consolidated depends upon the price you get for pitch and dead oil, which are the products which you get from the coal tar?

A. That is right, sir.

Q. Now, you say that while you pay the company, the Consolidated, 2.24 cents the average throughout the United States is 2.28 cents. Does that 2.28 cents include the inferior quality of coal tar which you obtain from the coke ovens, and also any coal tar which you obtain at higher prices by reason of its being in the superior and subject to freight rates?

A. Yes, sir.

Q. If you were not paying the full value for coal tar would it not be possible for companies on the other side to come in and overbid you if they saw a profit?

Objected to as speculative.
Objection sustained. Exception.

Q. What are the quotations, so called, which have been called to your attention? For the raw product or for the refined and manufactured product?

A. I am sure I don't know what they are.

Q. You are familiar with the prices, are you?

A. Yes.

Q. Did you ever know of any such price, or do you know of such?

A. Only for a few barrels at a time.

Q. What proportion of the entire product in the United States does your company sell of these refined products manufactured here?

A. I should think in excess of 80 per cent.

5697 Q. What do you mean when you say that the price which you obtain in New York for pitch and dead oil, and consequently the price that you pay for your coal tar, is governed by the prices paid?

A. The large purchases of dead oil have always been in the foreign market and we consequently are obliged to meet the foreign price. There is no other market for it except for creosoting purposes, and we consequently have to meet those prices. In pitch we have to meet the foreign price in order to sell our product.

Q. Do you know whether there is any tariff duty in England as to pitch and dead oil produced here?

A. I do not think there is.

Q. Nor coal tar?

A. No, sir.

Recross-examination by Mr. Kirby:

Q. By your statement that you base your price to the Consolidated on the price you get for your refined products, you mean the prices you would get for your pitch and these other substances with chemical names mentioned here?

A. No, sir; it has nothing to do with it.

Q. You mean to say the prices you get for pitch and dead oil?

A. Only.

Q. Now, by the market price which you establish and get for these, do you mean the price for which you sell them to others than yourself, or which you get from yourself when you use them for the purpose of manufacturing Tarvia and other products?

A. Prices we receive from other people.

Q. What proportion of the coal tar which you purchase do you use in your own products?

A. The bulk of it.

Q. Almost all of it, do you not?

A. Not all of it. Tarvia is not used in our own products.

Q. You sell the Tarvia?

A. We sell it, but it is not pitch or dead oil.

5698 Q. No, but coal tar, is used in almost the total amount by yourself?

A. Yes, the bulk of the material is refined, if that is what you mean.

Q. What percentage would you say of the coal tar which you purchase do you in some way use in your own products?

Mr. MATHEWSON: Do not they have to use all of it.

A. I don't know what you mean. Would you call pitch and dead oil our own products?

Q. Yes, I would.

A. Well, the bulk of it then, we use in our own product.

Q. Ninety-five per cent. of it?

A. I wouldn't want to state the percentage, but the bulk of it.

Q. From this coal tar you produce these various substances to which I called your attention in an advertisement in this journal: Benzol, Toluol, Solvent of Heavy Naphtha and other coal tar oils?

A. In very small quantities; yes, sir.

Q. Also carbolic acid?

A. Very small quantities.

Q. Also that which goes to make up this Tarvia, whatever it is?

A. Yes, sir.

Q. Many others?

A. In a very limited degree, yes, sir.

Q. From coal tar, in addition to these substances which you have mentioned by name, there are numerous other chemical compounds produced?

A. Innumerable.

Q. And you produce them?

A. No, sir.

Q. Or employ that part, pitch and dead oil, which you get from coal tar?

A. It comes from the 5 per cent., yes, sir; in the pitch and dead oil; the pitch and dead oil represent about 95 per cent. of the distillation; the 5 per cent. goes into the finer products.

5699 Q. Do you manufacture those finer products?

A. We do not; only a few of them.

Q. And that constitutes the largest part of that 5 per cent., does it not?

A. I don't know. I am not familiar enough with the chemical end of it to tell you. I don't think so. They come from the lighter oils; all these finer products come from the light oils.

By Mr. MATHEWSON:

Q. Mr. Kirby has asked you if you did not use this coal tar in your own products, and you said yes. You use it in refining the products which you sell, do you not?

A. Yes, or in saturating paper, one or the other.

Q. And you sell those products?

A. Absolutely. That is the reason we use it.

Q. There are buyers of coal tar besides yourself, are there not?

A. Yes, sir.

Q. You are in competition with them, are you not?

A. We are.

Q. Do you know of any others paying a higher price for coal tar in the City of New York than yourself?

Mr. Kirby: Objected to.
The Master: Hasn't that been asked before?
Mr. Mathewson: Very good.

Edward H. Wardwell, a witness called on behalf of complainant, in rebuttal, being first duly sworn, testified as follows:

Direct examination by Mr. Mathewson:

Q. Where do you reside?
A. In New York; New Jersey and New York.
5700 Q. Are you connected with the Barrett Manufacturing Company?
A. I am.
Q. What is your position?
A. I am secretary of the company and manager of—my principal position in that company is as the manager of ammonia department.
Q. How long have you been in that business?
A. Thirty-five years; thirty-six, probably.
Q. You are familiar with the contract with the Consolidated Gas Company?
A. Yes.
Q. It appears that the Consolidated receives 28.83 cents per gallon for its ammoniacal liquor per ton of coal carbonized.

Mr. Kirby: Is the contract based on that?
Mr. Mathewson: Yes, it is based on that, I think.

The Witness: Well, not directly; it is based on a certain yield, the net price received by them depends upon the amount of ammonia they succeed in giving us per ton.
Q. Sulphate of ammonia?
A. Equivalent to sulphate of ammonia.
Q. And it appears they receive 1.36 cents for ammoniacal liquor per pound of sulphate?
A. I suppose that would be correct. It varies. The settlement varies according to the price of sulphates.
Q. But as an average price?
A. Yes, sir.
Q. Assuming that to be correct, I want to ask you whether that is a fair price for that liquor?
A. I consider it a very full market price.
Q. In the City of New York?
A. Taking into account the form in which we receive the liquor and the expense we have for collecting it and so forth.
Q. Now, you take that liquor on a chemical test, do you not?
A. Yes.
Q. Showing the actual ammonia as indicated?
5701 A. The theoretical contents in the ammonia charged to us; not in reference to what we can take out practically.

Cross-examination by Mr. **Page**:

Q. Are you the Mr. Wardwell who was connected with the Standard Oil Company?

A. I beg your pardon?

Q. Are you the Mr. Wardwell who was connected with the Standard Oil Company?

A. No, I am not, unfortunately.

Q. Was he related to you?

A. So remotely that I should not be able to trace it. I believe though they did come together somewhere near the time of the Mayflower.

Q. You say that this price which you pay for ammoniacal liquor to the Consolidated Gas Company is the fair market price. Is there a quotation anywhere in existence of the market price for ammoniacal liquors?

A. I don't think there is. I don't know of any.

Q. What do you mean by market price? How do you arrive at it?

A. I arrive at it, that I think that is as much as other people pay. It is as much if not more than I individually am paying outside of New York.

Q. What prices do you pay for sulphate of ammonia?

A. In this contract we pay for the ammonia, a sufficient quantity of ammonia to represent a pound of sulphate of ammonia, a certain price according to the market value of sulphate at that time for that month; it rises and falls.

Q. What was the market value of sulphate of ammonia in July, 1905?

A. That I have not the figures of here. I do not remember.

Q. What was the price of it in November, 1905?

5702 A. I couldn't tell you, in the neighborhood of three cents.

Q. How near three cents?

A. It may have been a little over or a little under three cents. I cannot tell. It varied frequently.

Q. Was it as high as 3.18 cents?

A. I think it was at one time.

Q. During the year 1905?

A. If my memory serves me, I should think it was during 1905 that the highest price was reached for several years. However, I am not positive about those dates.

Q. You say you fixed your price here according to a theoretical test?

Mr. **Mathewson**: No, he didn't say that.

Q. What do you mean by a theoretical test?

A. I mean a test which shows the theoretical value of this liquor, every bit of it; and a test which also shows——

Q. What is the standard of ammoniacal liquor?

Mr. **Mathewson**: Won't you let him complete his answer?

Mr. **Page**: Certainly. I will withdraw the last question until he completes his answer, if he has not completed it.

The WITNESS: This test also indicates the presence of the amount of material which is reckoned as ammonia which is not ammonia, which we have to get rid of, but the Gas Company gets the benefit of that. It is known as the distillation test, made by their own chemist.

Q. A distillation test is the exact test for ammonia, isn't it?

A. Exact test for the contents of the ammonia contained in the ammoniacal liquor; what is known as the distillation test is inaccurate.

Q. Of the ammonia that is in the ammoniacal liquor?

5703 A. And of the alkaloids which are similar to the ammonia, they are also present; they are counted as ammonia, but they are not ammonia.

Q. How do you get, by distillation, the alkaloid?

A. Because they are very similar in character to ammonia. They are distilled off.

Q. What other alkalies are there that would evaporate by distillation that you find by this test?

A. Ammonia and pyridine are the only volatile substances.

Q. In this distillation test, did you distill the ammonia over sulphuric acid?

A. No, sir; nothing of the sort.

Q. How do you do it?

A. A measured quantity of ammonia is placed in a flask with a certain quantity of lime or caustic soda sufficient to decompose all the salts of ammonia contained in the liquor. The great bulk of the ammonia contained in the ammoniacal liquor from the gas works is in a compound form, carbonates and sulphides and so on, and by this distillation those forms are broken up and the ammonia is carried over into sulphuric acid and converted into a sulphate to determine the exact amount of the ammonia. Your question, as asked, whether it was done over sulphuric acid, did not seem appropriate. I could not answer it that way.

Q. Now, this is a very simple operation, isn't it, this distillation test?

A. Simple, but it has to be conducted by very intelligent and careful men to be accurate. A matter of a half a pound represents 50,000 gallons.

Q. The price the Consolidated Gas Company is receiving for its ammoniacal liquor is determined by this test?

A. The quantity which they are to be paid for is dependent upon that.

Q. And the quantity regulates the price because if there is a certain percentage of ammonia in the ammoniacal liquor then 5704 they receive a certain price for it?

A. Yes.

Q. So this test really determines the price they shall receive for their ammoniacal liquor?

A. I should say it came back to that.

Q. And you, the purchasers, are the ones that make this price?

A. No, sir; the Gas Company makes it in their own laboratory with their own chemist. Dr. Elliott has the supervision of that, and I take for my own protection against the Gas Company an average sample of the liquor received from them during the year and send it to analytical chemists and take their tests.

Q. Then you wish to change your testimony which you gave on direct examination that the price was governed by a theoretical test that you took?

A. Oh, no, I didn't say that. I said the Consolidated made the test. I expressly said—made in the laboratory of the Consolidated Gas Company.

Q. My recollection may be wrong or yours may be. At any rate, the testimony is there and it will show.

A. Well, that is w-ong, because I don't make the tests.

Q. Now, this test which you have spoken of is the exact process of the manufacture of sulphate of ammonia?

A. No, sir; not exact. It is, in a way.

Q. Wherein does it differ?

A. Only in the manufacture of sulphate of ammonia——

Q. Well, with the exception that in making the test you use a very small quantity, and in manufacturing you use a large quantity?

A. Yes, we use a large quantity and a small quantity of lime in manufacturing sulphate of ammonia. The volatile ammonia salts would be driven over and decomposed in the saturation of the acid, and it wouldn't be necessary to do it with lime as is done in this test.

Q. Then the manufacture of sulphate of ammonia is a simpler operation than this test?

5705 A. In the plain operation of it, yes. None of them are very simple.

Q. I said more simple.

Mr. Mathewson: And the witness said "none of them are very simple."

A. I do not consider it a simple operation to make the test you speak of. The test by which the value of liquor is determined. But the general principle of the operation is the same.

Q. It is not very intricate; it is a simple matter of distillation?

A. It is distillation.

Q. Any man that can light a lamp or build a fire under the flask, can set the thing going and can distil, can he not?

A. Yes, he can. There are lots of them do it.

Q. There is no intricate machinery that has to be handled in making the test?

A. There is some very good machinery, some very good apparatus in order to do it successfully or properly.

Q. Now, having ascertained that sulphate of ammonia, will you please take the price that you have given and give us the operation by which you arrived at the price you are to pay the Consolidated Gas Company for its ammoniacal liquor?

A. Well, the test as applied by the gas company determines the amount of ammonia, the percentage of ammonia per gallon of liquor. It determines it by finding out how much sulphuric acid the ammonia in a gallon of liquor will utilize. Upon that I base a calculation as to how many pounds of sulphate of ammonia can be obtained per gallon of liquor, and we take so much per pound for that ammonia. If they deliver, say 50,000 gallons of liquor which will by test show a product of six ounces or seven ounces or eight ounces of sulphate of ammonia per gallon, the total figures 5706 up so many pounds of sulphate and we pay for that.

Q. Do you figure, then, how much you pay per gallon of the ammoniacal liquor?

A. No, I could figure it, but I never did.

Q. I mean when you pay for it?

A. No. Yes, certainly; the bill is rendered for so many gallons of liquor, so many ounces and strength equal to so many pounds of sulphate of ammonia and that is what we pay for. Of course, the gallons of liquor have to be taken into account, but I came near answering what I did not mean. I did not take into account the value per gallon. We do not figure it that way.

Q. How do you fix your value of your sulphate of ammonia?

A. The market price.

Q. Where do you go to obtain the market price?

A. We obtain the price from the brokers and dealers, importers of sulphate of ammonia in this market——

Q. And do you send around yourself or is the*ir* some price current, or a trade paper?

A. Well, this drug journal reports the prices of sulphate of ammonia. If you were buying it you would pay probably a pretty good price, but we send to the trade and they give us an average price during the month, and——

Q. You give your quotations?

The Master: You do not let him finish, Senator.

The Witness: We take the quotations given us by other dealers and it is part of the contract, I believe, with the gas company, that we shall deal with the gas company on the basis of the average price as determined by the actual business done during the month, and that we learn from what we do ourselves and also what the 5707 importers do. They give us their price and we make up our reports on that. The gas company has the right to verify that, and can verify it at any time by going to the market.

Mr. Page: I would like to strike out the last part of it. It may be interesting, but I think it is entirely immaterial and irrelevant as to what the gas company can do.

The Master: Strike it out.

Mr. Mathewson: Exception.

Q. Are you through with your answer so that I can propound another question?

A. I am, sir. I won't talk so much the next time.

Q. Now, you give your quotations yourself, don't you, to this drug paper, the *Oil, Paint and Drug Reporter?*

A. I do not. I do not think they come to us for quotations. They may, possibly.

Q. And yet you are the largest manufacturer in the United States on those particular things, is that right?

A. I have not stated any such thing as that. We are not.

Q. Well, I supposed that you would agree with the man that was on the stand last time.

Mr. MATHEWSON: Of coal tar. That is quite another proposition.

The WITNESS: That is very different.

Q. Well, if you will allow me to finish a question as well as you finish an answer—I say he testified in regard to that, in regard to coal tar, that you were?

A. Yes.

Q. Is that the only particular in which you have this preeminence?

A. I don't know anything else that we sell except coal tar and ammonia; coal tar in its various forms and products.

5708 Q. What about your ammonia, you are a very large purchaser of that?

A. The Barrett Company manufactures ammonia products only here in New York. They manufacture tar products all over the country.

Q. And so far as the New York market is concerned, you are a pretty large dealer, aren't you?

A. Yes, sir.

Q. Then when we come to the New York conditions that we have heard of so frequently, your company and their price would have quite a controlling effect on the market, wouldn't it?

A. Well, it might.

Q. Are you familiar with the prices of sulphate of ammonia as late as November of last year?

A. I do not follow the prices of sulphate of ammonia very closely. I am not manufacturing any sulphate of ammonia at the present time and my department of the business is not selling any sulphate of ammonia.

Q. Well, are you the man that fixes the price that has to be paid to the Consolidated Gas Company for its products?

A. No; I cannot say that I am. The information comes through the regular office channels, and I do not see it half the time.

Q. Who is that man?

Mr. MATHEWSON: The contract in evidence in that regard regulates the prices.

Mr. PAGE: It does not show the man who has to fix it.

Mr. MATHEWSON: It has been in force for years, and is in evidence.

Q. Are you familiar with *Newbigging's Hand Book for Gas Engineers and Managers?*

A. I don't think I ever saw it.

Q. A very interesting book——

Mr. MATHEWSON: But not very accurate.

5709 Mr. PAGE: Not for the purposes of the Consolidated Gas Company.

Mr. Mathewson: Not for any purposes.

Q. I call your attention to this: "The manufacture of sulphate of ammonia from the ammoniacal liquor is becoming general in gas works, and properly so, as the process is both simple and profitable. * * * The apparatus required in its manufacture is neither complicated nor costly; the process is free from danger (though fatal accidents have occurred through the carelessness or the use of imperfect appliances) and an intelligent laborer can learn it in a week's time."

Do you agree with that statement?

A. Not wholly, no.

Q. You do in the main though?

A. Well, I should think that somebody might write that that didn't know much about it.

Q. Have you ever heard of Thomas Newbigging?

A. No.

Q. Do you consider yourself superior in the knowledge——

A. No, not at all.

Q. Of chemistry?

A. Only that statement is put in such general terms that it does not seem to me to have much value.

Q. No, it would not be valuable to a manufacturer of sulphate of ammonia to have the gas companies going into the business of manufacturing it; is that what you mean?

A. No. That didn't occur to me.

Mr. Mathewson: I object to that. It is hardly worth while to spread that on the record.

Cross-examination by Mr. Burr:

Q. What are you paying to-day for ammoniacal liquor?

A. I can't tell you. I haven't seen the basis of percentage for last month. The accounts are settled once a month, based upon 5710 the average price of sulphate during the month. I was away from business and I did not see it at all.

Q. Does that suffer much of a fluctuation in price?

A. Well, it fluctuates. It is hardly ever exactly alike.

Q. About how high or how low from a given figure?

A. The highest I remember for several years has been about 3.18 to 3.20, and the lowest for two or three years I should say at least has been 2¾.

Q. What is the highest price you have ever paid the Consolidated Gas Company for its ammoniacal liquor?

A. I can't tell you.

Q. Do you mean you cannot recall?

A. No, I cannot recall.

Q. Did you have anything to do with the making of any of the contracts with the Consolidated Gas Company for the purchase of this liquor?

A. Yes, I had something to do with their negotiating those contracts, arranging the terms, the method of test and all that.

Q. Do you remember the first contract you made with the Consolidated Gas Company?

A. It is a good while ago.

Q. Did you make a contract in 1899 with the Consolidated Gas Company?

A. Very possibly. I do not remember the date.

Q. Has it been your object to make the contracts for a year or for a series of years?

A. Usually for five years or ten years we used to make them.

Q. What has been your object in making a contract for five years?

A. Because we had to expend a very large amount of money in plants, machinery and facilities for handling the business, and if we had only a contract from year to year our works would be put up at auction every year for another bidder.

Q. And if you get an agreement at a low price you want
5711 to hold on to it as long as you possibly can?

A. Naturally. We want an agreement at good prices. We want to preserve our plants. I have lost two or three plants in my own individual experience by losing the contracts. It became scrap iron where I had an expensive plant.

Q. You made a contract, I understand, on June 24th, 1898, which was continued until June 12th, 1903; is that correct, to the best of your recollection?

A. I presume it is. I don't recollect dates, but I presume that is correct.

Q. You do not recall the price fixed, do you now, by the contract?

A. I think the price fixed at that time was the price of the present contract, at least, the contract that is running now.

Q. And the contract which covers the coal tar also covers the ammoniacal liquor, does it?

A. That is a separate contract. I never had anything to do with that.

Q. You hadn't anything to do with the coal tar?

A. No.

Q. Mr. Carter testified, on page 977 of the record, that the average price received during the year 1904 was 1.34 cents per pound of sulphate. Does that agree with your recollection?

A. I should think that was right; it must be right if he states it.

Mr. Mathewson: I think that is 1.36. If it is 1.34 I think it is a clerical error. You will find a number of figures in going through the record where slight errors have been made. I merely call your attention to it, because I think that is the fact.

Mr. Page: It is 1.34 in Exhibit 94, so if it is to be corrected in the testimony it should be corrected in the exhibit.

Mr. Mathewson: Very likely one was read from the other in answering the question. It is simply my recollection that
5712 it is 1.36; that is all. It is not a material difference. I may be wrong.

Q. It was also asked, "What average price per gallon or per ton of coal carbonized did you receive for coal tar for the same period?

A. 28.59 cents. Q. Per pound? A. Per pound of coal carbonized." Do you recall anything about that?

A. For ammonia?

Q. No, for coal tar?

A. I don't know anything about it.

By Mr. PAGE:

Q. The production of ammonia in the United States and its use has very largely increased, hasn't it, in the past few years?

A. Yes.

Q. And in the six years from 1898 to 1904 you know there has been an increase of 350 per cent. in the product.

A. I know it was a large increase, because the coke oven industry was getting under way in those years and is accountable for pretty much all the increase in the amount of sulphate manufactured. There is very little manufactured by the gas companies in this country.

Q. And the price has continued to rise, hasn't it, notwithstanding?

A. It has remained very firm, and has been strong in spite of the increase of sulphate of ammonia, fertilizing industries taking more sulphate of ammonia than we anticipated.

Q. Do I understand that this price that you have given of 1.34 or 1.36 is per pound of sulphate, in the question that was read to you by Mr. BURR?

A. That is what it figures out that we paid. It is for ammonia enough, a sufficient quantity of ammonia to make a pound of sulphate of ammonia. We get it in the form of a liquor containing about 1 per cent. of ammonia—1 to 1½ is a maximum.

5713 Redirect examination by Mr. MATHEWSON:

Q. And the ammoniacal liquor that you thus obtain you have stated you had to manufacture and convert into the products which you sell?

A. Yes.

Q. Now, the quotation has been read to you of 3 three cents or such a matter for sulphate of ammonia. Isn't that the manufactured product?

A. That is the finished product ready for market in boxes and barrels, whatever it is shipped in.

Q. It is not for enough ammoniacal liquor to produce that sulphate?

A. No, sir; the acid has to be purchased and other things.

Q. Now, as a matter of fact, I will ask you if the figures specified in the contract to which counsel has called your attention was, at the time of the making of the contract, fair in your judgment?

A. I consider that very fair. In fact, the utmost that I could advise my company to pay, that is what I was guided by.

Q. Is there not a sliding scale which gives the company an advantage if they show a higher grade of ammoniacal liquor or if the sulphate shows a higher price in the market?

A. There is a sliding cost on sulphate; it goes up; they get proportionately more.

Q. And if their liquor is richer they get more, it means the same thing?

A. There is a limit to the strength of the liquor. I don't think the old contract specifies that they shall have any advantage in the strength of the liquor.

Q. They took an average strength?

A. It was agreed that if the liquor went below a certain strength, what is known as six-ounce liquor by distillation test, that then there should be some negotiation, some reduction of value, because the——

Q. As a matter of fact, sulphate of ammonia is imported, isn't it?

A. Very largely.

5714 Q. And you are in competition with the foreign sulphate?

A. All the time. It regulates the price.

Q. Do you make sulphate of ammonia largely, or is the product that you make from this ammoniacal liquor anhydrous?

A. I am manufacturing anhydrous and strong aqua-ammonia. For the last year or so I have not manufactured any sulphate.

Q. Now, in testing ammonia, isn't it a very delicate operation, if you desire to get results—testing am-oniacal liquor?

A. Testing the value?

Q. Yes, sir.

A. It is an operation which requires the very greatest care and skill, which I would not entrust to anybody but a skilled chemist.

Q. And as to the manufacture of the raw product to produce your products, doesn't that require a man of skill and experience to get good results?

A. Well, I don't think they could be done by a man who was not skilled; in fact, that is what I am paid for.

Q. You would not want to trust a common laborer to do that and expect good results, would you?

A. The successes in that line of manufacture depend very largely upon the character of the apparatus and the handling of the business obtained by the director of the plant.

Q. And has your company in existence a large and expensive plant for the purpose of producing these products?

A. Quite large. I suppose about $300,000 we have invested in the ammonia plant alone.

By Mr. **Burr**:

Q. Your object in buying this am-oniacal liquor is to get it as cheaply as you possibly can, isn't it?

A. Naturally.

Q. Having such an expensive plant?

A. And yet, that is not quite true, because we have aimed
5715 always to pay a price so fair and so full that we would not be liable to be beaten by competitors. It was for the safety of our business to pay the full values. Those have been my instructions, in negotiating these contracts, from the officers and directors

of the company, to pay just as much as I could possibly recommend them to pay.

Q. But, so far as this record shows, there was no competition in 1889 or 1901, when you arranged the continuance of that old contract?

A. I don't know what the competition was. They didn't tell us who were bidding against us. There were bids against us, I believe.

Q. You have no knowledge yourself that there was any competition?

A. The officers of the Gas Company have never been so frank with me as that.

George W. Doane, called as a witness in behalf of the complainant in rebuttal, being duly sworn, testifies as follows:

Direct examination by Mr. Mathewson:

Q. Mr. Doane, are you an officer of the National Coal and Coke Company?

A. I am president.

Q. Which is it, "Coke and Coal" or "Coal and Coke"?

A. "Coke and Coal."

Q. That is the company, is it not, of which the Consolidated Gas Company owns all the stock, which has been referred to as the Carting Department of the Consolidated Gas Company?

A. It is.

Q. Does it take the coke of the Consolidated Gas Company and sell it?

A. It does.

Q. So far as the Consolidated does not use its coke in its water gas apparatus.

A. Yes, sir.

5716 Q. It has been put in evidence as to the prices that were obtained for coke by the Consolidated in 1905. In addition to those prices which are paid to the Consolidated Gas Company by the National Coal and Coke Company, the National Coal and Coke Company also pays its profits and dividends to the Consolidated Gas Company, does it not, except such amounts as may be reserved for working capital?

A. It does.

Q. So that ultimately the Consolidated Gas Company gets the benefit of all the profits of the National Coal and Coke Company?

A. All the profits that they have.

Mr. Page: I suppose this can be reprinted in your brief, Mr. Mathewson. It is entirely argumentative.

Mr. Mathewson: We will see.

Q. Now, a criticism has been made by Mr. Edgerton in reference to the price received for coke in the City of New York. I want you to state what efforts, if any, the National Coal and Coke Company, through yourself or under your direction, have been making in the sale of coke and as to the possibility of getting higher prices for it than you are getting?

A. As I understand it, the National Coal and Coke Company was organized for the purpose of increasing the market for coke. And, of course, as we increase the market for the coke, we are able to get a better price. But the price of coke is regulatd by the price of anthracite coal. If we get the price of coke too high, we cannot sell it. We have got to confine it at a point at which the local public will take coke in preference to anthracite coal, and our endeavor is to familiarize people who are not using coke with the use of coke and with the advantages of it, and to assist them to make experi-
5717 ments which will induce them to use coke. We do that by the medium of canvassers and salesmen, by advertising and printed matter and by assisting them in making experiments. We even go so far, where we feel encouraged, to give them coke and to assist them in making the experiments. And where their boilers are not suited for the use of it, we go to the extent of advising them to change their grate bars, so they will be enabled to burn the screenings to the best advantage, to get the most economical results from it.

Q. Are these efforts to familiarize the public with coke and induce them to burn it continuous?

A. They are.

Q. Will you state what the disadvantages are of coke as compared with anthracite, in view of the suggestion that coke ought to sell for substantially anthracite prices.

A. Coke is a free burning fuel; it is porous in its character, and as it is ordinarily used in the same appliances that are used for anthracite coal, it burns so much more freely and rapidly that the consumer cannot get the same economical advantages from the use of coke that they can from coal, and that is what makes it difficult to install coke. As fuel is used in domestic houses and even in business concerns, it is more or less under the control and direction of employees, and they will not and cannot be made to take the amount of supervision or the regulation of the drafts of coke which enable it to burn with economical advantage, and the result is that coke has got to be marketed and always will be in New York City at a materially less price than anthracite coal. There are other disadvantages about coke. Coke is more bulky to store. It is more difficult to handle, and all of those work against the installation of coke and make it more difficult to market it.

Q. If the draft is left on, as you call it, coke being a quick burning fuel, what is the effect on the grate bars?

5718 A. You have an intensely hot fire and the result is that the grate bars and bricks are speedily melted down. We often have consumers who give up the use of coke and give that as the reason for it, that they have ruined their furnaces and stoves, and will not use it any longer.

Q. So as to furnaces, you can load up a furnace with anthracite coal, can you not, so it will keep the fire in all night?

A. Very difficult to do it.

Q. I am referring to anthracite coal?

A. Yes, with anthracite coal, yes.

Q. How is it with coke?

A. It is very difficult to do it with coke. It requires the closest kind of regulation, and careful attention, so that the fire will last over night. I have tried it in my own house during the coal strike, and found it of the utmost difficulty to do it by giving it the most careful personal attention, and in the average house they cannot do it; and that militates against its use for domestic purposes.

Q. Now, Mr. Doane, there is at present a shortage of coal in New York, is there not, and coke, by reason of the coal famine in the west?

A. There is a shortage of bituminous coal.

Q. On account of the coal famine in the west it is being rushed in that direction?

A. Yes.

Q. Has that rendered it possible for you temporarily to make any advance in the price?

A. Yes, sir.

Q. How much?

A. We are selling it now at $3.35.

Q. That is 10 cents advance?

A. That is 10 cents advance within the last month. The previous advance was in October, 1905.

Q. What is going to be the effect on the coke market and the price to be received for coke by throwing on the market the product of the Astoria unit when it is in full operation?

5719 A. It is going to be an extremely difficult matter to market the coke for anything like the price we have been getting.

Q. Do you think it will be possible, so far as you can see, to market coke at any higher prices than were received in 1905?

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial, being merely a conclusion of the witness and purely hypothetical and not in rebuttal to any evidence that has been presented here.

Mr. **Matherwson**: Yes, Mr. Edgerton testified that we ought to get, I don'- know how much, for coke, just as much as anthracite coal, and all that.

The **Master**: I will allow it.

Mr. **Burr**: Exception.

A. Not in any large quantity.

Q. Is it not a fact that what is known as free-burning anthracite sells for less than normal anthracite?

A. I don't think here in New York there is much difference between the free burning anthracites and the harder grades of anthracite. I think I am accurate about that. I think that the price ruling here by the retail dealers is a uniform rate, $6.50 a ton at the present time.

Q. When your company receives coke from the Consolidated Gas Company it has certain expenses in connection with it before and in connection with the sale, has it not?

A. Oh, yes, large expenses.

Q. How do results, so far as the Consolidated Gas Company, compare in reference to its receipts from coke as a residual since the organization of the National Coke & Coal Company, with the results so far as the Consolidated Gas Company before that? That is, are they now more favorable or less so?

5720 Mr. BURR: Objected to as incompetent, irrelevant and immaterial, not being proper rebuttal.

Objection overruled. Exception.

A. The company, as I said, was organized for the purpose of widening and broadening the market for coke. Since then we have marketed all the coke that the Consolidated Gas Company has for sale. At the time of the organization of the company there were large quantities of coke stored in all the stations; in some of the stations they were very much congested; at one time we had between thirty thousand and forty thousand tons of coke in storage. That works to great disadvantage, because it means additional handling to the Consolidated Gas Company, trimming of piles, the waste of coke from breakage and disintegration leading to a much larger percentage of screenings and breeze, which is sold at a reduced price.

Q. The result of the work of the National Coal & Coke Company?

A. And the selling price of coke has been raised from $2.75 to $3.35 in that time.

Q. The result of the work of the National Coal & Coke Company is the better selling of the coke and at a higher price per ton?

A. It has added largely to the profit of the coke business.

By Mr. BURR:

Q. And to the credit of the president of the company, I presume?

Mr. MATHEWSON: Unquestionably so. That is all.

Cross-examination by Mr. PAGE:

Q. Besides being president of the National Coal & Coke Company, what are you other offices?

5721 A. I am president of the Northern Union Gas Company, vice-president of the New Amsterdam Gas Company.

Q. What about the Central Union?

A. I am not an officer in that company.

Q. Are you besides being vice-president of the New Amsterdam Company, the general manager of that company?

A. Vice-president and general manager.

Q. How many canvassers and salesmen did you employ in the year 1905?

A. I should say they averaged four or five.

Q. Did you pay them anything?

A. Certainly.

Q. Will you take the State's Exhibit U for identification and find out under what item that payment is given?

A. They are all under the head of expense.

Q. Now, let us analyze that head of expense. How much salary did you get?

A. $500.

Q. $500?

A. Yes.

Q. Were your canvassers paid in proportion to the salary paid to the president?

Mr. Mathewson: Are you claiming he has been extravagant?

Mr. Page: It may be. That depends entirely.

Q. How much of that $13,830.10 of expenses was paid——

A. Mr. Brewster's salary, I think, is—I may not be strictly accurate, but probably near enough for your purposes; I did not fortify myself for that—I think he is paid $2,000 a year.

Mr. Mathewson: Who is he; what is his office?

The Witness: He is the general man in charge of the office; he spends half to three-quarters of his time outside visiting customers and that sort of thing. Then Mr. Miller is paid a salary of 5722 $1,200 a year. And there is another young man whose name I do not catch who is paid $12 a week. Then Mr. Fox, at 42nd Street Station, I think, is paid $3 a day, and then we have another man whose name I do not catch whose salary, I think, would be between $2.50 and $2.75 a day. That covers the four men.

Q. You, of course, devote little of your time to this National Coal & Coke Company?

A. I give a good deal of it to it; part of every day; particularly at the present time.

Q. Were any of these men that you have spoken of, canvassers?

A. They all act in a canvassing capacity; some of them, in addition to their salaries, get a commission for all business they bring in. And then, in addition to that, I might mention, too, that we have a standing offer of 25 cents a ton as a commission to certain men who are not in the employ of the company, for business which they influence and divert towards the company. We have a Chinaman, for instance, who has done very good work among the Chinese laundries; we pay him a commission of 25 cents for every ton of coke that he places on the books. That, I think, is the same commission that the coal people pay for the sale of coal.

Q. Well, all of the expenses, I suppose, of your office amounted to $13,830.10 a year?

A. That is right.

Q. In 1905?

A. Yes, I presume that is right.

Q. That includes, you say, salaries for your canvassers, the officers' salaries of the company and, I suppose, stationery?

A. And stationery.

Q. And books?

A. And books.

Q. And all the ordinary office expenses?

A. And all the ordinary office expenses.

5723 Q. Doesn't it include some rents?

A. No, we do not pay any rent in that; it is a separate item there, is it not?

Q. I see $1,800, so it does not include that?

A. No.

Q. You say you have also sent out very largely advertising matter and circulars?

A. Yes, sir.

Q. Did you send out any in the year 1905, or is it something you have recently begun?

A. Yes, we sent out in 1905, I should say, two or three hundred thousand.

Q. And was not that the first time that you had sent out any?

A. No, we have done that for a number of years, several years. I think we have done more of that perhaps within the last two years than before that.

Q. What were those, postal cards that you mailed to people?

A. No, they were printed matter calling attention to the advantage of coke. They were not in any sense postal cards at all. Calling attention to the advantages where it was for sale, what could be done with the fuel, and calling attention to the price and inviting people to communicate with the office and give us an opportunity of demonstrating to them the advantage of coke.

Q. How did you distribute those, through the mail?

A. They were put in every gas office, and as the receipted bills were sent out to the consumers throughout the district, they were inclosed with their bill, besides being mailed direct from lists that we had prepared. But the advantage to the coke company in having them sent out that way was that we saved postage, and we got communications in the hands of the people all over the city.

Q. I noticed that this extensive advertising in the year cost $111.25. That included the cost of the printed matter and postage?

A. No, I do not think any of that went into that. I think that
advertising is what the term advertising would mean, some-
5724 thing paid for a newspaper insertion or something of that
character.

Q. Then are we to charge up this to expenses?

A. That printing would also go into the expense item.

Q. That would also go into the expense item of $13,830.10?

A. Yes.

Q. In so far as you sent out matter in the mail, did you put a 1-cent or a 2-cent stamp on them?

A. I should imagine the Consolidated Gas Company would have to put a 2-cent stamp on its letters.

Q. I am not speaking of the Consolidated Gas Company. You said you also sent out from a list yourself?

A. Yes, those would go in a 1-cent envelope, those containing our own matter exclusively.

Q. Have you got any of those circulars with you?

A. Not with me, no. I would be glad to send you one if you would like to see it.

Q. You say the price of coke is dependent somewhat upon anthracite?

A. Entirely so.

Q. That is, if one rises and falls the other rises and falls?

A. Not entirely that, because an increase of 25 to 50 cents in anthracite coal would not make any appreciable difference in the market for coke, but if anthracite coal should cost $10 a ton, we, of course, would get a very much increased price for our commodity. But an increase of 25 to 50 cents would not make any difference, I do not think.

Q. Then you do come in competition with anthracite coal?

A. Entirely so, entirely so, entirely so.

Q. What has the shortage in the bituminous market got to do with the increase in price?

A. It has reduced the amount of coke which we have had for sale, consequently as we have had less coke for sale we can insist upon getting an increased price.

Q. That is, there being a shortage in the bituminous coal in the west, it has reduced the amount of coke which you handle?

5725 A. Produced here in New York City. We have less coke to handle.

Q. Do you mean to say that the Consolidated Gas Company has been making less gas and using less coal by reason of this shortage?

A. They have been using less bituminous coal and making less coke.

Mr. MATHEWSON: We are very seriously crippled at our coal gas plant now.

Q. Now, what is the difference between anthracite prices and coke prices?

A. Anthracite coal, just at present, is selling for $6.50. In April, you will probably remember, the coal people reduced their sel-ing price of coal.

Q. Yes.

A. I think last April it was $5.75. Then they added ten cents a ton a month until they got to $6.25; then it stood at that price until recently, and now the anthracite people, during the time when carting is difficult in the street, charge twenty-five cents more, so the selling price at the present time is $6.50. The price we are getting now is $3.35 for a load, which is what we call a chaldron.

Q. Yes, fifteen hundred pounds?

A. It does not weigh fifteen hundred pounds; as a matter of fact, it weighs nearer fourteen hundred than fifteen hundred, but in round numbers we call it fifteen hundred pounds. I think an average of eighty thousand loads of coke weighed fourteen hundred and forty pounds or fourteen hundred and fifty pounds. What does it amount to per ton?

Q. How much is it per chaldron?

A. $3.35. If the chaldron weighed fourteen hundred pounds it would be $4.71 per ton, and if it weighed fifteen hundred it would be $4.40.

Mr. MATHEWSON: Long or short tons?

The WITNESS: Short ton, two thousand pounds.

5726 Q. I understand that you anticipate that the manufacture or starting of the Astoria plant is going to break the coke market?

A. It is going to make it more difficult to market coke at anything like the present prices.

Q. Do you expect the National Coal and Coke Company will handle the Astoria coke?

A. I think they will sell what coke is sold at retail in New York; they have all the plant and all the equipment, I imagine they will.

Q. The ovens of the Astoria company will produce a higher grade of coke, will they not, than those that are being used at the Fourteenth and Forty-second Street plants?

A. I hope so, but at the present time the grade is very inferior.

Q. Well, that is a new plant, just starting up?

A. Yes, I imagine it will be better coke later on, but at the present time there is a great deal of complaint about the coke. It is dirty and smoky and it does not give the satisfaction the old coke did. Some people have refused point blank to use it.

Q. Can this coke which is produced by you be used in the manufacture of iron at all, pig iron?

A. No, I do not think so, it is too porous for that, too soft.

Q. That manufactured by some other gas company is used in iron and it can be in copper and some other metals?

A. I do not think so. It may be that the Otto coke is used, but to a very limited degree; the Connellsville coke is what they want. It brings $7 a ton in the New York market, what little is sold. It is used for metallurgical purposes.

Q. Have you heard of the plan to build some large iron plant on the shores of New York Bay, in which will be utilized some of the iron ores from New Jersey?

A. No, that has not come to my knowledge.

Q. You have not looked into that as a possible field?

5727 A. We will, if there is an opening there, we will be after it. If there is any opportunity to market any coke there, we will be after it.

Q. In Astoria they will produce more coke by a great deal than is being produced now by the various companies on the Island of Manhattan, will they not?

A. Yes, sir.

Q. And you expect to be the selling agent. Have you made any investigation at all to see how you are going to dispose of this large quantity?

A. We are, we are working on this problem now. I am, that is the reason I made the remark I did some time ago.

Q. Before they entered into the building of this large plant which would make this large amount of coke, was any investigation made by you to see what you were going to do with the product?

Mr. Mathewson: This National Coal & Coke Company has been in existence since 1901 or 1902, and Mr. Doane is not an officer of the Consolidated Gas Company and the Consolidated Gas Company began the construction of the Astoria plant before the National Coal & Coke Company was incorporated. What the Consolidated Gas Company figured as to disposing of their product, Mr. Doane does not know, except it may be as hearsay from time to time.

Q. As the proposed selling agent of the stock of coke which is to be produced at Astoria have you received any information from the officers of the Consolidated Gas Company as to the places that you could dispose of this large amount of coke?

A. I have been looking around myself to find places.

5728 Q. But I say, have any of the officers of the company communicated with you the results of any investigation they may have made?

A. Yes, I have had conferences with them and am having them now.

Q. And is it your expectation to build up the sale of the coke of Astoria with this sending Chinamen around at 25 cents per ton and ways of that kind, or is there some large wholesale place that will take your product?

A. There will have to be built up a trade very much in excess of what John Chinaman uses. At the present time I have made no effort to market any coke outside the Island of Manhattan. Of course, contiguous to Manhattan there are Brooklyn and Jersey City and all the places that can be reached from the river and all of those we expect to tap, and we hope to get a class of trade here in New York that we never have had.

Q. Do you expect to furnish to the Long Island Railroad or Pennsylvania Railroad any of your coke?

A. Well, that is something that has been spoken of. We have for a number of years sold a large quantity to the New York & New Haven. The New York & New Haven have taken from us for a good many years. The Central are taking some now.

Q. Do you know anything about the price of coke in Jersey City?

A. We sell some coke in Jersey City, but as we cart from New York, and that involves the paying of the ferriage, etc., it makes the cost high; I could not tell you just exactly what we are getting for coke there; it is considerably in excess of what we get in New York.

Q. Have you any competitor in the coke business in the City of New York?

A. I would hardly style them as a competitor; there is a little lot of coke sold here which is brought from Camden, and there is some Pennsylvania coke sold here which is used for metallurgical purposes that our coke, as I said before, is not suitable for, 5729 so I would hardly call them a competitor. It is used for that specific purpose. Outside of that, our coke has practically no competitor.

Q. The Otto coke you spoke of is sold to private consumers, is it not?

A. Very small amounts, a very small amount; there is a man over on the east side that has issued an advertisement as having that coke for sale, and we have tried to ascertain what business he was doing there, and we have not been able to locate but two consumers of ours that have used his coke, and one never duplicated the order. I do not think he does anything; he is a coal dealer over on the east side.

Q. Would it surprise you if that man gets as high as $5.50 per ton for his coke?

A. If he does, he does not sell much, if any, very little; he may sell a load or two and do something like that; we could get as much as that for ten or fifteen loads.

Q. More of the Otto coke is sold in Jersey City than here?

A. Yes, because they have a yard over on the Hackensack River, very likely.

Q. Do you know the price they are getting for their coke in Jersey City?

A. Only in a general way. They have two or three carts that are carting bagged coke in paper bags, that they sell for ten cents a bag, and I don't exacly know how much it weighs; I have the data at my office; they are doing a little business with tenement house people. They tried to introduce that same trade in New York City, and we were very glad to see them do it, because in New England they do some trade of that character. We have had in mind that there was a possibility of developing some of that trade in New York. They tried to introduce it in New York, but they have sold very little, and they have apparently been so discouraged at their efforts that they have stopped it. We have gone to those people who 5730 bought it, and they said they would not buy it any longer, that the people who bought it in bags were dissatisfied, and there was not anything in it, and so far as I know they are not doing any business here. But in Jersey City there is a different trade from what there is in New York, but I think they only have three or four wagons.

Q. At ten cents a bag, that would amount to six dollars per ton?

A. Yes, I should imagine it would be about that, but it is very expensive to handle it that way. We tried for several months to sell coke in that way, and we spent nearly $4,000 in making the experiments, and I think as the result of that $4,000 expenditure we sold not over 1,500 loads of coke.

Q. You have no idea of the extent of the business of the Otto Company in New York City, have you?

A. I think I have; I do not think they are practically doing anything here now.

Q. That being a relative amount, if they have sold since October, 10,000 tons, would you consider that a small amount?

A. No, I should think that was a pretty good amount. I know very well they have not done it.

Q. How do you know that?

A. We have men whose business—who are detailed for the purpose of following their wagons in New York, and the Otto people have tried to sell us coke. They have come to us and quoted coke as low as $2.95 a ton to me, and have been very anxious for us to take hold of it. There is quite a little Otto coke going into Brooklyn, but it does not come to New York. Of course, in Brooklyn at the present time we have no facilities for delivering coke there, so we are very glad to see them sell it there. I pass their yards every day and am familiar with the amount of coke which they have on storage and which they appear to be handling.

5731 Q. Now, I will ask you whether you know the price which is received for coke in Brooklyn?

A. The price in Brooklyn ranges from $3.50 to $4, according to the distance from the ferry, so I have been advised.

Q. Is that per load?

A. That is per load.

Mr. **Page**: That is all.

By Mr. **Burr**:

Q. Mr. Doane, do you buy or deal in any other coke than the Consolidated Gas Company's coke?

A. None whatever.

Q. Have you been president since the organization of this company?

A. No, it was organized in 1901, the beginning of 1901, and I became president, I think, in the beginning of 1902.

Q. Can you state what year you were the most successful in the operation of the business of this company?

A. I don't know that I know how to answer that. I think in the business——

Q. When did you begin to make more money during the time that you have been president?

A. The times we have made the most money was when we were handling coke for the railroad. The railroad trade was particularly profitable, because we had a station at 42nd Street, and the cartage from 42nd Street to the railroad station was a comparatively short one, and taken in trucks in large quantities it was very profitable, and there were a couple of years when the earnings of the National Coal & Coke Company showed more than in other years; but I personally do not judge of the success of the Coke Company alone by the money it is earning. It is by the results we accomplish in developing and extending the use of coke, that is the purpose for which it was instituted.

5732 Q. You organized that and it attends to the disposal of the coke of your own company, the Northern Union?

A. The Central Union disposes of its own coke.

Q. And who disposes of the Northern Union?

A. They do not make any coke; they buy the gas from the Central Union.

Q. How about the New Amsterdam?

A. They make no coke. It is a so-called water gas station.

Q. Did you attend to the disposal of the coke before the organization of this company by the Consolidated Gas Company?

A. Before the organization of the coke company?

Q. Yes.

A. No.

Q. Had nothing at all to do with it?

A. No.

Q. And the only experience you ever had was since you have been president of this company?

A. Yes. I ought to modify that. I was secretary and treasurer of the New York Gas Light Company for a good many years and they manufactured coal gas entirely for a good many years and they marketed all their output of coke in New York, and as secretary and treasurer I did have general charge of that.

Redirect examination by Mr. MATHEWSON:

Q. The trade of the railway company was lost for what reason, do you know?

A. The installation of the electric plant.

Q. Now, with reference to delivering your product in Jersey City or Brooklyn, or anywhere outside of Manhattan, would that mean an additional investment in plant?

A. Yes, that would mean that we would have to have depots established at those points, which we undoubtedly will.

Q. What is the effect on coke of handling it, loading it and unloading it and transporting it by lighters and otherwise?

5733 A. Every time you handle coke it breaks; that increases the percentage of screenings or breeze, which has to be sold at a very much reduced figure.

Q. So, in dealing with the sale of coke outside of Manhattan, you would have to obtain a large enough price to take care of the extra amount of capital and the extra cost of transportation and the extra amount of loss by breakage, and so on?

A. Yes.

Q. In reference to handling the Astoria coke, if that assumes large proportions, will that require an addition to your plant and facilities?

A. It will.

Q. At what price is the National Coal and Coke Company selling the coke to the consumer?

A. At the present time?

Q. Yes.

A. $3.35.

Q. In the Island of Manhattan?

A. In the Island of Manhattan.

Q. Now, you spoke about the Central Union coke. Were the conditions at the Central Union plant in the Bronx favorable or unfavorable for receiving a larger price than was received in Manhattan?

A. They have always been able to market their coke at a better advantage than we have downtown.

Q. State some of the reasons.

A. I think one of the principal reasons is that they manufacture a moderate amount. They have a large territory to supply, which is made up of a class of people that are somewhat different from those living in tenement houses downtown, although the character of that district now is changing in that respect. They also have an opportunity to market a good deal of coke among contractors and builders. It is a particularly desirable fuel to use in portable boilers, and one of our large sources of income down here is in that way. It is a quick fuel, and these portable boilers in the street can get up steam in a very few minutes by the use of coke, and it seems to be a very popular fuel among those classes of people and they have a large 5734 amount of trade in the Bronx, where the building interests have been active for a long time. Those seem to be sufficient to enable them to market this coke without any difficulty.

Q. And do they market it as a rule without storage and cartage?

A. And without storage; they are exceedingly well situated in that district. They load their coke from bins and the result is that their percentage of breakage is very much less than it is where it has to be transported on boats or on the water as taken out on elevators, etc.

Q. Do you know of any concern that is selling coke in large quantities in the City of New York to retail consumers at any higher price than you are obtaining for your coke?

A. There is none selling large quantities at any price.

By Mr. Burr:

Q. But they are, in selling in small quantities?

A. Small quantities, of course. Connellsville coke is sold here in small quantities at a very much larger price, but that coke I understand costs $5.35 on landing here.

By Mr. Page:

Q. That is an entirely different coke?

A. Yes, it does not compare with gas house coke, it is a different fuel entirely.

By Mr. Mathewson:

Q. Could this other coke to which you refer be sold in large quantities in your judgment, that is in such quantities as the Consolidated Gas Company produces, at an average figure higher than you sell yours?

A. No, it is impossible.

At 1.20 P. M. adjourned to 2.30 P. M.

5735 After Recess.

George W. Doane resumed.

By Mr. Mathewson:

Q. Your attention was called to what coke was selling for in small lots or otherwise, as the testimony shows, in Brooklyn and Jersey City. Why did not the National Coal & Coke Company send its coke across the river and sell it there to get this price?

A. We had no conveniences in Jersey City for the storage of coke, and any coke we sent there would have to be sent from New York.

Q. How about Brooklyn, too?

A. And the long cartage and ferriage involved, etc., has never proved it to be an attractive trade to us for the price we could get; and the same reason applies to Brooklyn.

Q. Is there any coal-gas plant in Brooklyn in operation that you know of?

A. I am under the impression that there is no coke made there now.

Q. So that coke sold there would have to be transported from some other point?

A. Transported from a large distance.

Q. Yes. And do you consider that the company would get less if it went to the expense of transporting?

A. We would net less if we delivered coke over there than we would in Manhattan.

By Mr. PAGE:

Q. Do you know what the Kings County Company make?

A. Is that the South Brooklyn Company? They used to make coke, but not now. It is entirely a water-gas plant, if you mean that station down——

Q. Fifty-ninth Street?

A. Yes, way down there. They are not making any coke at all there now.

5736 By Mr. BURR:

Q. Is that also true of the Flatbush Gas Company?

A. I would not want to say positively about that.

CHARLES G. FRANKLIN, a witness called on behalf of complainant, in rebuttal, being duly sworn, testifies as follows:

Direct examination by Mr. MATHEWSON:

Q. How long have you known the plant of the Consolidated Gas Company at 44th to 46th Streets, west of Eleventh Avenue, in the City of New York?

A. Since 1876, I think.

Q. And for how long a period has the company occupied the land which is the bed of the projected 12th Avenue, and shown on Exhibit 48 btween 44th and 46th streets?

A. Since 1876 or 1877.

Q. Has that been fenced in and used by the company since that time?

A. It has been fenced in and used by the Municipal Company all that time.

Q. And subsequently by the Consolidated Gas Company?

A. Subsequently by the Consolidated Gas Company.

Mr. BURR: No questions.

Mr. PAGE: No questions.

5737 **Frederick K. Down**, a witness called in behalf of complainant, in rebuttal, being first duly sworn, testifies as follows:

Direct examination by Mr. **Mathewson**:

Q. Are you the manager of the 42nd Street plant of the Consolidated Gas Company?

A. Yes, sir.

Q. How long have you known the plant upon 41st and 42nd Street, west of 11th Avenue?

Mr. **Burr**: May I inquire what the object of this testimony is?

Mr. **Mathewson**: You threw in some suggestions or maps and so on, which purported to show that the company was not entitled to the use of this land, not entitled to it, and I think we discussed that the other day when the testimony was introduced.

Mr. **Burr**: I submit he cannot prove adverse possessions against the city by this witness or Mr. Franklin.

Mr. **Mathewson**: That is a matter of argument, of course.

Question allowed. Exception.

A. I have known it since 1862.

Q. Now, on Exhibit 48, there appears to be indicated a projected avenue between the bulkhead line and the bulk of the plot. For how long has the company been in occupation and enjoyment of that section covered by the proposed street?

Mr. **Burr**: I object to that question as incompetent, immaterial and irrelevant.

Question allowed. Exception.

A. Since 1870.

Mr. **Burr**: No questions.

Mr. **Page**: No questions.

5738 **Albert Riblet**, a witness called on behalf of the complainant, in rebuttal, being first duly sworn, testifies as follows:

Direct examination by Mr. **Mathewson**:

Q. Are you the superintendent of the 14th Street plant of the Consolidated Gas Company, East River and 14th Street?

A. Yes, sir.

Q. I show you Exhibit 48 and refer to the blocks between Avenue D, Tompkins Street, 14th Street and 16th Street, and also refer to the plot on the westerly side of Avenue D, between 15th and 16th Streets. How long have you known that property?

Mr. **Burr**: That is objected to as incompetent, immaterial and irrelevant; on the further ground that the company, the complainant in this case, cannot establish its title to the property in question by such testimony as this witness is called upon to give.

Question allowed. Exception.

A. I have known that property since 1866.

Q. How long has the company been in the occupation and enjoyment of those three parcels which I have indicated?

Mr. BURR: Same objection to this witness's testimony all the way through.

Mr. PAGE: We join in the objection.

Same ruling. Exception.

A. I am positive since 1866.

Q. And been fenced in?

A. During that time always fenced in.

Mr. MATHEWSON: I have produced original deeds to the Manhattan Gas Light Company covering the 14th Street property, 5739 including the portions to which I have directed Mr. Riblet's attention, and offer them in evidence.

Mr. BURR: I object to these as being incompetent, immaterial and irrelevant.

Objection overruled. Exception.

Received in evidence and marked Complainant's Exhibits 297, 298, 299, 300.

THOMAS W. VARLEY, a witness called on behalf of complainant, in rebuttal, being first duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. What is your business?

A. Consulting engineer; electrical.

Q. How long have you been in the business of electricity?

A. Since 1888.

Q. Have you made tests as to electric currents, as to intensity and direction, etc.?

A. I have.

Q. How many years have you been in that business, or done that work?

A. That particular line since about 1895.

Q. In 1902, before the installation of the electric mode of propulsion on the elevated railways, did you make tests generally throughout the Borough of Manhattan as to electric currents and directions and power?

Mr. PAGE: Before you answer that I wish to object on the ground that this is not proper rebuttal. This is a subject that was taken up by the complainant in its direct case, and if they did not give such evidence as they wanted to at that time that is their misfortune. We did not open up any new subject in our defense, but 5740 merely called witnesses on the testimony they had given.

Mr. BURR: I make the same objection. The testimony given here by the complainant was through Mr. Addicks, Mr. Simpson and Professor Humphreys, covering certain conditions which they claimed because of what they discovered as to electrolysis. We made the best answer we could to the alleged facts they presented. Now, they are calling other witnesses at this time to go more extensively into that feature of their case, and I submit that that is not proper rebuttal, but is part of their main case.

Mr. Mathewson: If the Master please, the situation is this: Certain evidence was put in as to electrolysis and the damage done by it. In their case the defendants called Professor Seever and gave testimony in which they endeavored to establish that the electric difficulty did not come from the electric railway, and they have put in evidence which intimated that the grounding of the New York Edison Company might be found to be the cause of the electrolysis existing. I am now rebutting this by a demonstration that the electrolysis did not come from the Edison Company, and that it does come from the elevated, to rebut the exact propositions of the defense, and that is all.

Objection overruled.

The City and State except.

Mr. Page: I suppose the objection and exception can relate to the whole testimony here? We won't have to repeat it?

The Master: Yes, it may.

5741 Q. Did you make the tests indicated on this map and prepare the map or have it prepared under your immediate supervision?

A. I did.

Q. Describe the map and say what the different colored lines indicate, and what the different figures on the map indicate?

A. The colors are the difference of potential in reference to gas, and that is, the gas mains are positive, according to the colors, to the elevated structure and street railway. For instance, the green color here means that the gas main is negative to the street railway or the elevated along that line, and the red means that the gas mains are positive. The figures being the difference in potential between those points. Red where the gas is positive; green where it is negative.

Q. As to the gas mains?

A. As to the gas mains.

Q. And I see different points where these figures appear to indicate the points where you made your tests?

A. Yes.

Q. And are they a true statement of the difference in potential as you discovered it?

A. They are.

Q. Was the New York Edison Company operating at that time?

A. It was.

Q. And indicate about where, or state where, on the map?

A. Well, there are a number of places.

Q. Well, they are principally——

A. Their principal place is 38th and 39th Streets, East River, somewheres along in here.

By the Master:

Q. What is the significance of these hatchings on some of the lines?

A. That is a kind of erratic condition; very near neutral condition, practically neutral.

By Mr. **Mathewson**:

Q. So there is no difference in potential indicated along 5742 those lines?

A. That is the reason the figures are not shown, they are not put on.

Q. Close to the plant of the Edison Company at 39th Street, was there any difference of potential indicated?

A. No, only what you see. It was not there, or it was too slight to put on, very slight, indeed.

Q. Not appreciable?

A. Not appreciable.

Q. What is the meaning of your expression positive to the pipe or negative to the pipe?

A. Merely that the polarity is such that if you connect a wire between the pipe and the rail the current will flow from the pipe to the rail if the pipe is positive.

Q. And if negative?

A. Vice versa; backwards.

Q. Did you note the direction of the currents in these tests in making up your potentials as positive and negative?

A. We did.

Q. Now, the lower part in these green lines indicates immunity, doesn't it, from such difference?

A. Where it is green that shows it is immune from current leaving the pipe. If there was any at all it would be immune from it.

Q. Now, I see a red batch down here by the City Hall, or next to the entrance to the Brooklyn Bridge.

A. Exactly.

Q. And the electric cars were then running over the Brooklyn Bridge at that point, were they not?

A. They were.

Q. Now, after the Manhattan Elevated Railway was in operation, that is, a year later, in May, 1903, did you make further test and make another map?

A. I did.

Q. This map was made in May, 1902?

A. In 1902. Not exactly in May. It extended over two or three months.

Q. About that?

A. About that.

Mr. **Mathewson**: I offer that in evidence.

5743 Received in evidence and marked Complainant's Exhibit 301.

Mr. **Page**: I presume that as this is all new matter we will have an opportunity to rebut this, won't we, Mr. Master?

Mr. **Mathewson**: We do not consider that this is new matter. If it had been I assume it would have been excluded.

Q. Now is this the map which you prepared as the results of your tests made about May, 1903?

A. It is.

Q. Do the figures here, and do the green and red lines, indicate the same things as in the preceding map?

A. The same as before.

Q. Now, the red area as indicated on this map would be the danger area to the pipes, wouldn't it?

A. Yes, sir.

Q. And the green area would represent what?

A. The safe position for the pipes.

Q. I see the same red area here in the vicinity of the Brooklyn Bridge that was indicated on the previous map?

A. The same condition, yes, sir.

Q. And I find red areas on the avenues where the elevated railroad runs generally, and in some other sections, is that right?

A. Yes, sir.

Q. That would indicate, would it not, that the current was leaving the pipes in this down-town red area section?

A. It would indicate that it would be possible to leave it.

Q. A difference of potential?

A. Yes, sir; a dangerous condition.

Q. Now, the New York Edison Company had a distributing system all through this section in 1902, as well as in 1903, did it not?

A. Yes, sir.

Q. And sub-stations at one point and another?

A. Distributed throughout the city.

5744 Q. Do you find now a "danger area," as you call it, indicated by the red line near the station of the Edison, which was not there in 1902?

A. Yes.

Q. For Thirty-ninth Street. Was there any difference in conditions so far as the Edison Company was concerned at those two periods, so far as you will recall it?

A. I don't think so.

Q. Were you connected with the Edison Company?

A. Yes, sir.

Q. No difference?

A. No, sir.

Cross-examination by Mr. Burr:

Q. How are those maps made up? Did you have original data from which the maps were made?

A. Yes, sir.

Q. How long did it take you to make the examinations necessary to make that map which you are now testifying regarding?

A. Three or four months; maybe five.

Q. What was the procedure that you adopted?

A. To take actual readings with instruments, follow all along the line of the street, railways and elevated and cross-town.

Q. Have you got the book showing such readings?

A. Yes, sir.

Q. Were you assisted by anybody?

A. Yes, sir.

Q. By whom?

A. Some employees of the Edison Company.

Q. Do you know their names?

A. Yes, sir.

Q. Will you let me have them?

A. In the 1902 or 1903, which do you mean?

Q. Well, the first map.

A. 1902?

Q. Yes.

A. A man named Noe.

Q. What position has he with the Edison Company?

A. I don't know exactly what position, except he is there. He was assigned to me to help me on that work.

5745 Q. Did he point out the various distributing stations of the Edison Company to you and the various connections with those stations?

A. He did not have to.

Q. What particular part, then, did Mr. Noe take in getting up the data from which you made the first map which you produced here?

A. He did the actual reading of the instruments and working generally with me.

Q. Were you employed by Mr. Noe?

A. No.

Q. By whom were you employed?

A. New York Edison Company.

Q. Was Mr. Noe the only gentleman from the Edison who helped you to make up that first map?

A. Well, there may have been one or two laborers; I don't remember their names though.

Q. They were all brought to your aid by Mr. Noe?

A. No, they were set especially for me to use. I picked him out as somebody out of the ordinary.

Q. You thought he was fully familiar with the operation and work of the Edison Company and could give you all the information you needed?

A. No, I preferred him to help me out as knowing how to read instruments and that.

Q. With regard to the second map, who assisted you to get the data from which that was prepared?

A. A young man named Strong.

Q. Also of the Edison Company?

A. Yes.

Q. And some more laborers?

A. Yes.

Q. Practically under the same conditions as the first map was made?

A. The very same.

Q. And you were employed by the Edison Company to make that second map just as you were the first map?

A. Yes, sir.

Q. And you still have in your possession the original data from which both maps were made up?

A. I have.

5746 Q. Do you know whether the conditions which now exist have changed in any iota or in any character or degree from the conditions as they existed at the places on those maps in 1902 and 1903?

A. Well, 1903 has changed since 1902.

Q. In what respect?

A. Why, the red lines have extended down into the city; the danger zone, you might say, has increased.

Mr. Burr: That is all I have to ask with regard to that point.

Cross-examination by Mr. Page:

Q. When did the water-side station of the Edison Company begin its operations?

A. I am not sure; I think it was around 1900 or 1901.

Q. Did they abandon in 1900 and 1901 the various stations for manufacture that are scattered throughout the city?

A. No, it was just started up then, and that was sort of an auxiliary; they could not abandon the others.

Q. When did they abandon the others practically and manufacture all their electric currents at the water-side stations?

A. I don't think they have abandoned them yet.

Q. What sub-stations do they run?

A. They may be abandoned. I don't know as they are abandoned.

Q. Do not they manufacture current now at the water side, transmit it at a large voltage to these sub-stations and there reduce it?

A. I don't think they do manufacture it all there. Of course, I am not a member of the Edison Company and I would not state that with assurance, but I am sure they do not manufacture it all there.

Q. You are willing to admit they manufacture some?

A. Oh, yes; a great deal of it.

Q. Well, for that much, thanks. When was the three-wire system of lighting introduced in the City of New York? Can you tell that?

5747 A. That came a short time after Mr. Edison first put his plant in operation in New York City.

Q. When was this used in New York City for common or general use?

A. What year?

Q. Yes.

A. I couldn't say offhand; too far back.

Q. Can you approximate?

A. About probably 1890.

Q. Then I understand you to say that when the Edison system was first installed it was a three-wire system?

A. No, I don't say that.

Q. You said ever since the Edison system had been installed in New York City——

A. No, ever since about it was installed—the first ones he installed were two-wire. He didn't come to use a three-wire till later. It was a discovery of the three-wire system after using the two.

Q. And that was some years after the two had been used?

A. Some, but not very long.

Looking at this map (1903) I find that starting downtown and running up as far as Manhattan Avenue——

Mr. Mathewson: I do not think the second map was offered in evidence. I now offer it.

Mr. Burr: I ob-ect to the intr*do*uction of the map as incompetent, immaterial and irrelevant.

Objection overruled. Exception.

Received in evidence and marked Complainant's Exhibit 302.

Q. Looking at this map (Exhibit 302) I find that starting downtown and running up as far as Manhattan Avenue and Broadway it appears to be entirely a danger point?

A. Yes, sir.

Q. All red?

A. Yes.

Q. What elevated structure runs up Broadway?

A. That refers to the street railway and to the gas mains.

5748 Q. And that has no relevancy to the elevated structure?

A. Not on that particular one, no.

Q. Now, in making these tests what instruments did you use?

A. Weston.

Q. Weston what?

A. Voltmeters.

Q. Anything else?

A. For all those readings shown there, Weston Voltmeters.

Q. Now, as I understand, this red shows the intensity of the electric current that was flowing through those pipes?

A. No, sir.

Q. That was flowing between the pipe and the rail?

A. No, sir.

Q. Then tell us what it does show?

A. It shows the difference of potential between those points.

Q. Well, what points, for instance?

A. Gas pipes and the street railway or the elevated, as shown.

Q. Now, what do you mean by "shows the difference in potential between the street railway and the gas pipe;" what do you mean by it; interpret it into ordinary language?

A. When you say there is a difference of potential between two points, a volt, you mean there is a stress, an electrostatic stress of one volt, in electric terms. I don't know how *you* would pronounce it for you unless you might say a pressure between two points on a water pipe or between two water pipes.

Q. We will try and get it in this way—when the pressure is heavier on the gas pipe than it was on the railroad——

A. Where the gas pipe is marked red it means the gas pipe is elevated electrically above the surroundings.

Q. Let us get off the elevations and stick to the pressure you were talking about.

A. Pressure is an elevation.

Q. Not necessarily. Men are elevated sometimes when they are not under pressure, but let us use this phrase, if you will 5749 kindly stick to one particular illustration long enough for us to get that interpreted, and then we will take the elevation afterwards, if you wish; but there where it says "2" on the red line, for instance, on Complainant's Exhibit 302, does that mean that there is a greater pressure by two volts on the gas pipe than there is on the rail?

A. It means just as I say, a difference in potential between the gas pipe at the point and the rail at that point, of two volts.

Q. Now, you say there is a difference of two?

A. Yes.

Q. Does that mean there are two volts more on the gas pipe than there are on the rail, or two volts more on the rail than there are on the pipe?

A. Two volts more on the gas pipe.

Q. That is, that the gas pipe is carrying two volts more of current than the rail?

A. No, you cannot state it that way. You are mixing up electrical terms.

Q. Do you mean that the current is leaving the gas pipe and passing to the street railway system?

A. I mean it can do so.

Q. But you do not mean it was?

A. Well, I cannot see what is taking place under the ground.

Q. The instruments that you had then would not show whether currents were passing from the pipes back to the rail?

A. Not in that test.

Q. Would it in any case?

A. Yes, other tests.

Q. I mean in any you have shown on this map?

A. Not on that test, no.

Q. That is all we want, just what is put in here. Now, what do you say the green means?

A. It means the gas is of a lower potential, the way you put it, than the surroundings.

Q. No, that is the way you put it.

A. Then I will put it that way.

Q. That means what?

A. It means that the current could flow the other way.

5750 Q. That the current could flow from the street railway to the gas pipe?

A. To the gas main.

Q. Then all this map shows is the electric potentiality of the pipes at different places, is that all?

A. Relative to its surroundings.

Q. Relative to what surroundings?
A. Street railway or elevated, and such.
Q. Did you make any tests in regard to the subway?
A. The subway was not built then.
Q. By subways, I mean those that carry the telephones—electrical conductors?
A. Yes.
Q. Did you make any measurements in regard to those?
A. Yes.
Q. At the same time?
A. Yes.
Q. That is not shown on this map?
A. That is not shown on this map.
Q. And the relative potentialities of those are not shown as compared with this, in any way?
A. No, they are not shown.
Q. Then, as I understand, all this shows is that there is current flowing through these red lines or red pipe of such potentiality that it might possibly go back to the street railroad or elevated structure?
A. It is not current flowing necessarily, it shows its possibility, but if the current did flow, it would flow as you say.
Q. Then, as I understand, this map is based entirely upon possibilities, and not upon facts, is it?
A. Based upon facts of dangerous conditions.
Q. That is, that it is possible?
A. Exactly.
Q. That there is a possibility of something there, but it does not show anything that actually does exist?
A. Not on those figures, no.
Q. And there is nothing to show on this map from what source these stray currents that have electrified the pipes flow, is there, the currents, I mean, from what source they come?
A. Not on that particular map.
5751 Q. Nor on Exhibit 301?

Mr. Mathewson: 302, is it not?
Mr. Page: This is 302 and the other was 301.

Q. Is that right (previous question repeated)?
A. Not on that map.

The Master: Then he asked you what was the case regarding the preceding map, No. 301.

A. The preceding map has no dangerous area except the extreme end and this end.

Mr. Mathewson: You mean at the north end and south end?
The Witness: Yes.

Q. Then these two exhibits merely show a difference in potentialities, and do not show the flow of any current, nor the source from which the current comes in any way?
A. No.
Q. Now, just in what way did you make these measurements?

You say the difference between the gas pipe and the street railway. What part of the street railway?

A. The right part, where they stand side by side.

Q. Where what stand side by side, the rails of the street railway standing side by side with the gas pipes?

A. Standing right along the same section of the street as the gas pipe and the elevated pillars.

Q. Where was your test for potentiality made on the street railway?

A. Between the street railway and the point on the gas mains in the same section of the street, a cross section.

Q. A street railroad is made up of rails, is it not?

A. Yes, sir.

Q. And, also, there is some place where there is a conductor for electric current?

A. Yes.

Q. Now, where is your difference in potentiality between
5752 the conductor or the rail?

A. On the rail and on the pipe.

Q. Where on the elevated railroad structure?

A. On the pillars.

Q. Did you lay these pipes bare to make the tests?

A. Of the gas pipes?

Q. Yes.

A. No.

Q. How did you get at it?

A. Street lamps.

Q. Street lamps?

A. Yes. Of course, there are some cases where the pipe is exposed where you could do it, but, as a rule, street lamps.

Q. What do you mean by that, by street lamps?

A. Well, the street lamps come right up from the gas mains and that would serve as the potential conductor for you.

Q. Couldn't there have been a stray current from some other source to the lamp that would not come through the pipe?

A. I was not after that. I was after——

Q. I know you were not after it, but I am asking what could be?

A. It would depend upon the difference you want; if you want a difference in potential between the gas main and street railway and the lamp connected with the gas main——

Q. Assuming this fact, that conneted with that lamp or near the bottom of the lamp there was a leadcable carrying a current, could not that electrify this lamp and would not current flow from the gas main?

A. That would not disturb your test between the gas main and street railway. You would get that condition, no matter what caused it.

Q. It would be a test between the gas lamp and street railroad, would it not?

A. Yes, between the gas lamp and the street railroad.

Q. And not necessarily between the main and street railway?

A. Well, you will have gas mains or gas lamps—if by any chance they made no contact you would have to select another lamp; 5753 that is the only change we made in testing gas lamps, by taking a contiguous lamp across the street or something like that; but even if the gas lamp was connected with a cable, as you say, that would still act as the potential for that gas main for you, and would give you for the gas main what you are after.

Q. Take this three-wire system of the Edison Company, you have got a neutral wire there that you ground, have you not?

A. Yes.

Q. And if your current becomes unbalanced as between your other two wires, the current flows on the neutral wire, does it not, to the ground?

A. Yes, not necessarily to the ground; it flows on the neutral wire.

Q. Where does it go? It might go to a lamp post, might it not?

A. I don't think so.

Q. Then what do you do with it; it flows, it has to go somewhere, it flows along the neutral wire and it is grounded?

A. It flows between points of differential potential.

Q. Here is your neutral wire. As soon as it has a wire to travel on, the current will travel on that wire, won't it?

A. Not necessarily; if the wire connects two points of different potentiality then it will. The wire may be there and no current.

Q. I know, but I say, your two wires, and the current becoming unbalanced, the very purpose of having that wire is to carry off and so restore the balance between the wires?

A. Yes.

Q. And therefore, this neutral wire then absorbs the difference, if you may so express it, between the other two wires, and that current passes along that neutral wire, doesn't it?

A. Yes.

Q. And that neutral wire is carried down into the ground, is it not?

A. No, it is carried back to the station.

Q. How?

5754 A. It is continuous, keeping increasing all the way to the station, taking it up at different places as it goes along, one continuous wire.

Q. How does it get back to the station, do you mean that the third wire in this building runs back to the station?

A. Exactly.

Q. Through what?

A. Through the Edison three-wire system, neutral wire.

Q. Then that third wire is not grounded, is it?

A. Yes, sir.

Q. If it is a continuous wire running back to the station, where is it grounded?

A. It is grounded at the junction boxes and the station.

Q. Now, supposing you have these neutral wires running back and you have another neutral wire and there is a difference in potential of those two neutrals—that is, we call them neutral, meaning the third wire——

A. Yes.

Q. And there is a difference in potential, may there not be a flow from one neutral to the other through the earth?

A. No, not necessarily.

Q. No, not necessarily, there is not necessarily any flow here, but is not that a dangerous condition?

A. If there is a dangerous difference in potential there might possibly be so, surely.

Q. Well, is it not possible to be?

A. It is possible if there is a dangerous difference in potential. If there is a difference in potential there is a chance of current flowing.

Q. And is it not likely that the systems in different buildings would not be unbalanced to the same extent, and, therefore, your neutrals would always have a different potentiality?

A. In buildings the neutral is not grounded.

Q. You just said they were from this building, and, for instance, you said it went back and was grounded through the junction boxes, and I don't know what else.

A. Not in the building.

Q. No, but I said the wires from this building.

5755 A. The wires in any building are insulated. After leaving the building then you might have a ground.

Q. Well, that is what we are talking about. Now, are those the wires, the wires from this building that you are speaking of that are insulated and carried back to the Edison station?

A. They are.

Q. And that refers to the neutral as well as the other?

A. To the neutral, yes.

Q. Did you make any measurements at all as to the difference in voltage on the lamp posts and the voltage on the main itself; did you make any such tests, where you had taken a test of a lamp post, did you make a test on the mains?

A. That is between the lamp posts, do you mean, or along the main, or along a pieces of main, or what do you mean?

Q. Between the lamp post and the main, whether it was a piece of the main or along the main, whether you made any tests, I don't care, but whether you did make any tests between the potential on the lamp post and on the main?

A. Only as between two lamp posts.

Q. Then, we understand this represents the difference in potential between lamp posts and the street and not on mains, is that it?

A. Not necessarily. It means the mains.

Q. The only results you obtained were on the lamp posts, were they not?

A. No, I said the mains had been taken also where we could get them; the trouble is the mains are buried and you can't get them. These act as potential points.

Q. How many such tests did you make where the main was actually bared?

A. Well, in that case the main was bared, I should say, at every elevated station anyway, and a number of points between; I don't remember how many.

Q. Why at the elevated station?

A. The elevated stations were lit by gas then.

5756 Q. That is a service pipe up to the elevated station, isn't it?

A. Yes.

Q. So you did not take them there on the mains?

A. Well, that is quite a different condition from the lampposts, that is all, that is a straight screw connection.

Q. Then we will go back to the original question. Where, along that map, on Exhibit 302, point out any place where you took the measurement actually on the main in the street?

A. I cannot do it on that map.

Q. Can you do it on the other map, on Exhibit 301?

A. No, I cannot do it on the map. I would have to go back to the original records to see that?

Q. Were there many of them?

A. I do not think so.

Q. Well, were there any?

A. Yes, there were some. New York is always dug up, so you can get a number of chances.

Q. Wherever you were fortunate enough to find a place where the main was bared you took the measurement on the main, didn't you?

A. Yes.

Q. And not on the lamppost?

A. Yes.

Q. Now, you are not able to state whether the results of those measurements were represented on this map in green or in red, are you?

A. No.

Q. Those actual measurements of potentials which you took in the mains themselves?

A. No.

Q. Do you know whether these lampposts you took the measurements of were attached to Consolidated Gas Company mains or Mutual Gas Company mains or Standard Gaslight Company mains?

A. I could not tell you offhand.

Q. Well, you paid no attention to that, did you?

A. No, we took them right straight along, one after the other.

Mr. Page: That is all.

5757 By Mr. Burr:

Q. What was the object of your employment, was it to ascertain by this examination, which you say you made at these various points, what the effect of the Edison wires was upon the gas mains in the street?

A. No.

Q. What was it?

A. To find what the condition of the street was in general for anything, if there was any dangerous condition.

Q. Dangerous condition to what?

A. To the gas mains.

Q. You were employed by the Edison Company to ascertain whether there was a dangerous condition to the gas mains?

A. Yes, sir.

Q. In 1902, and again in 1903?

A. Yes.

Redirect examination by Mr. **Mathewson**:

Q. In Map 301, I observed a red or danger area near the Brooklyn Bridge, to which I called your attention, and the other red or danger area was along the route of the 135th Street overhead trolley and radiating from there for some distance, was it not?

A. Yes, sir.

Q. This upper end?

A. Up and down, yes. There is 135th Street (indicating).

Q. And do you know the overhead trolley line runs through 135th Street?

A. Yes.

Q. Once currents are let loose, assuming that they are by the elevated or trolley system, or by any other force, they would run along the conductors in a way, would they not, including the rails of street railway lines that cross?

A. Any chance at all they get for a good conductor they would follow it.

Q. And up Broadway on those rails?

A. Everywhere there is a good conductor.

5758 Q. Are you personally familiar with any substantial change in conditions in the streets of New York, electrically, between 1902 and 1903, except the electrification of the elevated railways to cause such a change?

A. No change.

Q. When it comes to test the difference in potential between the gas mains and rails you would connect your instrument both to the gas mains and to the rail in some way, wouldn't you?

A. Exactly.

Q. If there is a rod running up from the gas main, either in the shape of a service or a lamppost, it would simply save running your wire so much farther, wouldn't it?

A. Exactly.

Q. Would it make any difference in potential, so far as your test is concerned?

Mr. **Page**: Let the witness testify.

Q. The lamp service, I should say?

A. These tests I made on the lamppost were not on the shell of the lamp; there was a pipe inside, which we were very careful to get at.

Q. You made your tests on the lamp service?

A. On the regular lamp service, on the pipe that feeds the lamps.

Q. Would they show the difference in potential, between the rail and main, as though you ran your wire down to the main itself?

A. Yes, sir.

Q. And the same in the case of the service?

A. And the same in the case of the service.

By Mr. Page:

Q. I understand you to say that according to your idea all of these red lines in the upper part of New York City come from the 135th Street overhead trolley?

A. This map?

Q. Yes, 301.

A. 1902?

Q. Yes. In 1902.

A. Yes. I don't know, I surmise it does, from the indications.

5759 Q. And you think that the red line running up Amsterdam Avenue is electrified from the 135th Street trolley?

A. Yes, sir.

Q. And you think running on down Amsterdam Avenue and the Boulevard on the west side down to practically 65th Street?

A. Something like that.

Q. Or 69th Street?

A. Yes.

Q. It comes from this overhead trolley on 135th Street?

A. It comes from the upper districts, yes.

Q. As an electrical expert, how do you figure that from the 135th Street here the lines on Second Avenue, Third Avenue and Lexington would be more heavily electrified than they would on Madison Avenue, which is in direct contact with it?

A. They all come from the Bronx, over the different bridges, and they are all tied in metal-ically there, and so are connected.

Q. Does that explain why Madison Avenue, which is in direct connection with the Bronx and with the 135th Street trolley line, should be less an area of danger than the avenues to the east?

A. No, not necessarily.

Q. I ask you as an electrical expert that knows all about this very difficult subject, to say why that is.

Mr. Mathewson: But it is not. You are quite turned around. It is not more heavily electrified over there, it is less; if you will look at the map you will see you have misread the figures by inadvertence.

Q. Let us go down here to 100th Street, and there it ends and you get a neutral pipe, and on the other avenues it runs clear down to Eighty-sixth Street, that is what I am referring to. I am getting to the red and green.

A. They follow the metallic structures down the different streets.

5760 Q. Well, the metallic structure here is the gas pipe, isn't it?

A. Well, it is the gas pipe and street railroad, it follows both. Where it is red it means there is more on the gas pipes than on the others. It shows a higher potential.

Q. Where there is red and green on each street, what does that mean; that there are two gas pipes, one having a positive and the other a negative potential?

A. No, that is the distinction between the elevated and surface. The smaller figures are the elevated and the heavier the surface, with reference to gas mains.

Q. Now we will take the avenue where we have—take Third Avenue. You have, I notice, a green line and a red line running down that same avenue?

A. Yes.

Q. What does the green line mean and the red mean?

A. In that case the green means the pipes are negative to the elevated and positive to the street railways.

Q. And the red means negative to the street railway and positive to the elevated?

A. The red means the gas mains are positive to the street railway in that case.

By the MASTER:

Q. You can read those colors in connection with the size of these figures, whether they are large or small?

A. Yes.

By Mr. MATHEWSON:

Q. Where they are parallel, running along together?

A. Yes, in the same street.

Q. Now, as a matter of fact the Bronx is operated by the overhead trolley generally, isn't it?

A. Yes.

5761 Q. And it is possible that currents may come down over the Third Avenue bridge as well as the Madison Avenue bridge?

A. Yes, over all the bridges, the steel structures.

Q. The 135th Street line is part of that general Bronx system, is it not?

A. Exactly.

Mr. MATHEWSON: That is all, so far as I am concerned.

JOHN W. LIEB, JR., called as a witness on behalf of the complainant, in rebuttal, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Mr. Lieb, what position do you hold in connection with the New York Edison Company, if any?

A. I am the third Vice-President and Associate General Manager.

Q. What experience have you had in electrical business, electricity for lighting and kindred subjects; very briefly?

A. Beginning with 1880, I graduated from the Stevens Institute of Technology as a mechanical engineer and became connected with

Mr. Brush, of the Brush Electric Company in Cleveland; then went with the Edison Electric Light Company and was Mr. Edison's personal assistant in connection with experiments and the installation of the old Pearl Street station in New York City in 1882. I went abroad for ten or twelve years as the chief engineer and technical director of the Italian Edison Company, which I assisted in establishing, and I had charge of the construction, designing and operation of power plants of different kinds all over Italy. In 1894 I returned to the Edison Electric Illuminating Company and occupied various positions, as associate general manager, general manager and third vice-president and general manager of
5762 the Edison Electric Illuminating Company, and then third
vice-president and associate general manager of the New York Edison Company, the position I to-day occupy.

Q. Are you practically familiar with the testing of electric currents and their effect and the circumstances under which they may operate?

A. I am.

Q. I call your attention to Complainant's Exhibits 301 and 302, being the two maps which have been just put in evidence, and ask you whether between 1902, when the first map was made, and 1903, when the second map was made, there was any change in the stations or method of operation of the New York Edison Company that could account for the difference in potentials as shown on those maps?

A. No, sir.

Q. I will ask you to what you would attribute the red or danger area at the upper end of the city as shown on Exhibit 301?

A. I would attribute that—and I made tests to determine that, or had tests made under my direction to determine that fact—that the danger areas in the upper part of this city were due to the return currents that were flowing back from the upper part of Manhattan across the bridges and across the Harlem River back into the Bronx. I will say, in order to bring that matter out clearly, at my request the power house of the Metropolitan Street Railway Company, which was operating at the time, in the neighborhood of 140th Street and Lexington Avenue, was closed down completely for a period; so that the only current that was left in the upper part of the city was that which came directly over to operate the 135th Street line, and what was left then with this power house on Manhattan thrown out of service was practically a very narrow circle of influence, due directly to the return on 135th Street alone.

5763 Mr. PAGE: You said 140th Street and Lexington Avenue; you mean 140th Street and Lenox Avenue, don't you?

The WITNESS: I was not sure whether it was Lexington or Lenox. Make it Lenox, 146th and Lenox Ave.

Q. As to the danger area which was shown around the City Hall, to what would that be attributable in your opinion?

A. That is due very directly to the return currents which are going back to Brooklyn, some of them over the bridge and some of them into the earth, and through the East River back to the Borough of Brooklyn.

Q. Now, aside from your testimony that there was no change in the Edison Company between the dates when these two maps were prepared, which would account for their changed indications, was there anything, so far as you are aware, other than the electrification of the elevated railroad, which did account for the change in 1903, as shown by Exhibit 302, as compared with 1902, and by Exhibit 301?

A. There was not.

Q. Didn't you make it your business to keep familiar with the electrical conditions and changes in the Borough of Manhattan during that period?

A. That is part of my business, sir.

Q. It was suggested in the testimony of witnesses for the defendants that electrolytic conditions, if they existed, might be due to the current or method of operation of the Edison Electric Company. Aside from these comparisons that are made on these maps have you anything to say on that subject, briefly, whether in your judgment that is so?

Mr. Page: I remember, if the Master please, that most of those sug-estions were made in the questions of counsel, and my recollection was that Dr. Sever did not rise to the opportunity I gave 5764 him on that line, but if they wish to rebut the questions of counsel——

The Master: I do not recollect what his testimony was.

Mr. Mathewson: He brought that in specifically.

Mr. Page: Counsel did, I remember, but I had sort of a recollection that counsel was disappointed at the answer of the witness.

Q. I will merely ask you generally, if you will answer in a word, whether that could have been responsible for the condition?

A. In my judgment, and as the result of my experience and numerous tests made at my instigation and under my direction, it is my judgment that the neutral return wire of the Edison three-wire system in New York City has nothing to do with the electrolytic conditions in the Borough of Manhattan as shown by these maps.

Q. Would these maps indicate to you, as an expert, that the Edison system was having any effect in that direction?

A. These maps would not give me the necessary evidence to have a definite judgment on that.

Q. You speak from your own knowledge, outside of the maps?

A. I speak from, specific tests made at my request at different times, which were made for that specific purpose.

Cross-examination by Mr. Page:

Q. Now, you say that the electrolytic condition of New York City is in no way due to the Edison Company?

A. In no substantial way, no way that——

Q. That there are no stray currents?

Mr. MATHEWSON: Let us have the answer first.

5765 The WITNESS: In no substantial way that would affect what would be denominated as the electrolytic conditions which would be likely to produce electrolysis, or which would give rise to a dangerous difference of potentials.

Q. What precautions have you taken—or have you taken precautions from time to time against electrolytic action?

A. Every precaution known to the state of the art.

Q. And have those been from time to time?

A. Continually.

By the MASTER:

Q. I think the Senator would prefer to have you describe them. I would be glad to have you do it.

By Mr. PAGE:

Q. Yes, and state when you first took the precaution and what you did from time to time.

A. It may be necessary for me to go a little far afield. As has been brought out here, the original Edison system installed in New York City here was what was known as the two-wire system; that was installed in 1882 and 1883. After that system had been in operation several years the three-wire system was invented by Mr. Edison, and subsequent installations in New York City and America generally, and abroad, were made by the three-wire system. The two-wire system in the lower part of New York City was kept operative for a long number of years. Parts of that system were still in operation only three, four or five years ago. On the introduction of the Edison three-wire system it was, as a general rule, operated without specific grounding, as it is called, of the neutral. Each outgoing feeder from the operating power houses and all of 5766 the mains and services were operated with three wires. In the case of the mains and services these three wires were of the same conductivity; in the case of the feeders the outgoing and the return wires were of greater cross section than the return, each feeder carried directly back from the system and from the nucleus of main where it was attached, carried back the return wire, directly back into the power house. The purpose of the neutral wire was to take care of any unbalancing that there might be between the currents carried by the two legs or branches of the system. The extent to which that unbalancing takes place depends upon the subdivision of the installation itself in the houses and of the number of customers that might be connected to one of the other leg or branch of the three-wire system.

In New York City that subdivision is carried out so fine, it is carried out to such an extent, that unbalancing does hardly exist. I know of no place where the translating devices used on the system are to such a large extent connected to the outside wires, and therefore, have nothing to do with the neutral. The neutral in New York City is substantially a return only for lighting circuits, and for 110-volt translating devices. So that the subdivision is so fine that the neutral carries an insignificant amount of current. The amount of copper which is provided naturally by the type of construction which I have explained is such that the cross section of copper which is provided for the insignificant amount of current that comes back over that neutral wire is many hundred times the amount of copper which is provided for the outside legs.

Later, it became the practice of companies operating the three-wire system to so call ground the neutral. The grounding of the neutral in the Edison three-wire system has nothing whatever to do with providing a by-path or any kind of a path for the current
5767 through the ground to come back to the Edison station. The grounding of the neutral is merely a precautionary measure. At first that precautionary measure was not recognized by the Board of Fire Underwriters and electrical rules generally, but as experience has been extended, the wisdom of grounding the neutral has been so far demonstrated, also from the standpoint of the insurance authorities, that the grounding of the neutral is not only permissible but is in many conditions rendered obligatory. The Edison three-wire system, as it is in New York, has been and can be and could to-day within twenty-four hours' notice be rendered absolutely independent of the ground; that would not affect the operation of the system in any way in the slightest. The grounding of the neutral is merely there is a precautionary measure in case there should develop a very serious short circuit generally on the system, which might bring the neutral wire and the outside wire on one side at the same potential and bring, therefore, between the middle wire and the remaining outside wire the full potential of the system, double what it is normally intended for, and produce in such a contingency serious results.

With the change which took place in 1894 or 1895 in New York City in the substitution of cables for the Edison three-wire system, a change took place, and instead of using for the Edison feeder system conductors with three wires, the main feeders consisted of two wires only, and the neutral was brought back to the station independently. That resulted in the development of what is known as the tree neutral, which is a system of return conductors that is independent of the outside wires and is more efficient. It enables any local unbalancing, if such there be, any minimum amount of it, to be compensated for locally without running back to
5768 the station and out again; and pursuing the same course of very large copper sections for the Edison neutral, which was the practice when the tubes were used, with three-wire conductors, there is to-day in New York City a neutral provided for each and every substation which is immensely, as I said before, many hundred times larger that the outside conductor for the purpose of carrying back to the station the infinitesimal amounts of current that comes back over the neutral conductors. We have a direct measure of that in so far as our machinery generally does not send current into the neutral at all. Our machinery has its terminals on the outside wire, and we have small balancers set in the stations of comparatively insignificant capacity as compared with the generating station that take care of that small amount of neutral current. The amount

of current that is sent back and forth over that neutral is, therefore, a matter of daily registration and accounting, and it is absolutely insignificant. That is the story.

Q. Now, let us see if we can get this. You say in 1883 was the first installation of Edison lighting in New York City, and that was the two-wire system?

A. September, 1882, the first general distribution of current for lighting power by underground conductors.

Q. And for a number of years that was a two-wire system?

A. Yes, for quite a number of years.

Q. Then, when you say that an independent third-wire return was abondoned for some different system in 1894, you are mistaken on your second date, are you not?

A. No, I said that the Edison three-wire tube system, the two Edison tubes were no longer used generally after 1894, and the cable conductors were used instead of Edison tubes, was my statement.

5769 Q. When was the three-wire system generally installed?

A. Well, in New York City——

Q. Take it particularly in the lower portion of this city.

A. I think the installation—I was not here at the time, so I can only speak generally as to the conditions here—I should think that so far as I know, the third wire system began to be generally used between possibly 1885, 1887 and 1890. My memory does not serve me quite correctly as to the exact date. I know I installed it in Milan, Italy, in connection with the Edison Lighting system there in 1886 or 1887.

Q. Do you remember when it was that the Board of Fire Underwriters of this city required all buildings to be rewired with the Edison three-wire system rather than with the two?

A. I was not here at that time.

Q. Was — not within the last four or five years?

A. That is not within the time of my connection with the New York Edison Company, sir.

Q. Well, do you mean that the last four of five years was not, or the time it was required was not?

A. Any questions that have existed as regards the Edison three-wire system and the Board of Fire Underwriters, to my knowledge, obtained between 1882 and 1893, while I was abroad; not since my return in 1894.

Q. Now, is the present practice to ground the neutral wire or any portion of it?

A. Absolutely, some places even by absolutely bare neutral conductors without any insulation whatever. It is absolutely the only safe and proper practice in the case of a three-wire system.

Q. And I understand that the amount of current that gets back to the station over these wires is an infinitesimal quantity?

5770 A. It is, where the subdivision of the power or lighting units, as is the case in New York City, where almost——

Q. We do not care for all that explanation over again.

A. Well, that is the reason for it. The——

Q. Yet the fact is, that over these grounded wires or whatever you call them, very little current goes back to the station?

A. Peculiarly so in New York City.

Q. Now, you say there might be a serious short-circuiting, and it is for that purpose that you have this wire grounded. Now, if this serious short-circuiting should occur, would it create a dangerous difference of potentiality on the subsurface structures?

A. It could not under present conditions. The results would be entirely different than what they would if the neutral were not grounded. In other words I——

Q. Well, would that throw your neutrals out of balance?

A. If there were a short circuit on one side of the system, decidedly so in such a contingency, and it is only for that contingency that the neutral is grounded.

Q. Now, I judge from these many changes that you have spoken of in your seeking to establish a return system, that you have given considerable attention to the gathering up of your stray currents and bringing them back home, is that right?

A. It is my business to be posted and familiarize myself with anything that has to do with the operation of our system.

Q. And you think that now you have got that pretty well perfected, so that most of the current that goes out from the Edison Company is brought back to the power house over your own return circuit?

A. I think that that has always been so, and now more so than ever.

Q. And that has been the purpose of electrical engineers operating any system?

5771 Mr. MATHEWSON: How does he know what the purpose is?

The WITNESS: The purpose of electrical engineering is to obtain the results desired in the best possible way at the lowest possible expense.

Q. And all this current wandering around over the inside and over the gas pipes represents just that much loss to the company that originated the current, does it not?

A. Not necessarily, that is not necessarily a question of loss.

Q. Well, when the current strays off in this way don't you lose?

A. No, I would like to explain that by a case. If there was a system necessary to return current from Harlem down to the Battery, and you had suppositionally only a very small wire, if you could allow other conducting mediums to participate in carrying that current back from Harlem to the Battery, it would be a distinct source of saving and not of loss.

Mr. MATHEWSON: Say, a gas pipe?

The WITNESS: Any convenient thing that might serve as a conducting medium.

By Mr. PAGE:

Q. Is that why you put in a neutral of such large cross-sections, that it would gather up these stray currents of other people and bring them back to you?

A. No, to make sure that all of ours were safely carried back.

Q. Every competent electrical engineer would try to carry back his own current, wouldn't he?

A. Well, he might make an effort in that direction, but the problem is not in all cases quite as simple a one as it is in the case of the Edison three-wire system. For instance, in the case of an overhead trolley system the problem is a very much more difficult one. 5772

Q. And that is the most difficult probably, the overhead trolley, is it not?

A. Yes, that is one of the problems.

Mr. Page: I think that is all.

Cross-examination by Mr. Burr:

Q. In other words, you claim that although there may be other stray currents, these stray currents do not belong to you?

A. No, sir, they do not. I make that statement emphatically.

Q. And was it for the purpose of ascertaining the existence of any of these stray currents that you had those examinations made by Mr. Valey in 1902 and 1903?

A. The purpose of that examination was to obtain information for myself and the company as to the general underground conditions obtaining in New York City, the potentials which were developed with different substructures, and to inform myself of their different stages and development as other elements by stages became operative.

Q. Well, your investigation was particularly addressed as to the effects of any wandering current belonging to you from the gas mains, wasn't it?

A. Not alone, sir, they were also addressed toward the conditions which might obtain as to other structures, subsurface structures, and elements other than gas pipes.

Redirect examination by Mr. Mathewson:

Q. If you found currents flowing back to a station producing electricity, those being discovered by tests as to the direction of the current and the points to which they were tending, would that indicate where those currents originated or from what source they came?

A. Well, such stray currents as would come back right directly, and could be traceable right directly to a power station or a substation, would indicate that there was a condition at that power station which was responsible for that returning. 5773

Q. Or if the current and its direction was taken at the structure which carried the current?

A. Yes.

Alexander Maxwell, called as a witness on behalf of the complainant, in rebuttal, being duly sworn, testified as follows:

Direct examination by Mr. Mathewson:

Q. Mr. Maxwell, what is your business?

A. Electrical engineer.

Q. Connected with what concern?

A. The New York Edison Company.

Q. Did you make last April a map of a certain portion of the city north of Canal Street, running along the North River up as far as West 4th Street and east to Broadway, showing currents of electricity at various points with their intensity and direction?

A. Yes.

Q. Is this the map (handing paper)?

A. Yes, sir.

Mr. PAGE: What is this proposed to rebut?

Mr. MATHEWSON: Professor Sever testified as to the bonding of the elevated railway, etc., so that no current which could do harm could escape, he thought, from the elevated railway.

Mr. PAGE: When that system was completed?

Mr. MATHEWSON: No, as it is now. He described the bonding, how it was done. I propose to show, or will endeavor to show briefly, that he was mistaken, that it is escaping and doing exactly what he says it could not do.

5774 Mr. PAGE: Professor Sever's testimony was as to a complete system of bonding on the subway, and that they had commenced to establish that on the elevated, and when it was completed there would be no escape.

Mr. MATHEWSON: I remember distinctly he testified as to the elevated and how it was bonded and protected.

Mr. PAGE: On page 3912, referring to the elevated road, "it is my opinion that with the construction that has been cited and with the additional construction now so successfully employed in the subway the difficulty, if any, from the elevated stray currents will be practically, if not almost entirely, done away with."

The MASTER: I do not know what is intended to be shown by this witness, but assuming that Mr. Mathewson intends to show the result of certain observations as to existing conditions, would you not consider that to be proper rebuttal of the expressions of the expert, Mr. Sever, to the contrary? Mr. Sever testified in his opinion that certain things would result, and if he puts a witness on the stand who has made certain specific observations to the contrary, would that not be rebuttal?

Mr. PAGE: This examination has not been made since the testimony?

Mr. MATHEWSON: That is a single page. If you read the record there you will see that his testimony was to minimize any effect from the currents from the elevated road. There is no doubt about it at all. I am directing this, and the following testimony, directly to that point. It is not any general testimony.

The MASTER: I am disposed to overrule the objection. I may be wrong without the record before me.

5775 Mr. PAGE: Well, I will take an exception. I suppose the objection that I have made that this is not proper rebuttal and that they testified on their direct case and brought up this question of the present condition of electrolysis, and the necessity of their having a large reserve because of the depreciation occasioned by it—

it seems to me they had all these investigations and they should have put in this testimony at that time, and they are no part of their case in rebuttal.

Mr. **Mathewson**: We are rebutting specific testimony of your witnesses as to specific structures.

The **Master**: I will allow it.

Mr. **Page**: Exception.

Q. What does this map show, Mr. Maxwell?

A. The direction and magnitude of current flowing on lead cable sheaths.

Q. Along the line of the elevated railway?

A. Yes, sir.

Q. As shown on this map marked elevated railway?

A. Yes.

Q. And did you test those currents to see to what point they were returning?

A. Yes, sir.

Q. And do these dotted lines along here so indicate?

A. No, sir; the arrow indicates.

Q. The arrow indicates?

A. Yes, sir.

Q. What was the direction of the current coming from this line along the elevated?

A. Towards the Spring Street substation of the elevated road.

Q. Did you trace it along to that point?

A. Yes, sir.

Q. Are there any other structures, or figures or letters that do not explain themselves on that map which you wish to explain?

5776 A. I think not, except that this dotted line here is the negative feeder from the substation to the west side elevated, that is about all.

By Mr. **Burr**:

Q. What street does that dotted line run through?

A. That is Spring Street.

Mr. **Mathewson**: I offer it in evidence.

By Mr. **Burr**:

Q. When was that map made?

Mr. **Mathewson**: In April, 1906.

Mr. **Page**: I want the Master to bear in mind that date, because this is admitted, I presume, on the assumption that it contradicts the prophecy of Mr. Sever, which has been made this winter.

Mr. **Mathewson**: And Mr. Marks' testimony, that there was no such thing as electrolysis which came from the elevated, etc.

Paper received and marked Complainant's Exhibit 303.

By Mr. **Mathewson**:

Q. Now, did you, in July, 1906, examine, lay bare and take up certain lengths of gas service pipe close to the pillars of the elevated railway within the section indicated by this map?

A. Yes, sir.

Mr. PAGE: This is objected to. Certainly we have not brought any gas pipes in here.

Mr. MATHEWSON: We do not have to proceed exactly along the tangible line; we can produce evidence that is competent.

Mr. PAGE: As I understand it, in the direct case they have got to produce whatever evidence they have. They cannot put a 5777 man on the stand and say there is such a thing as electrolysis, and then come along afterwards and put in all the evidence they had in their possession at the time.

The MASTER: You need not argue to me that it is the business of the complainant to exhaust his case when he presents it. The only thing is, it seems to me, so far as I can now judge and according to my best recollection of the testimony, that there were some new suggestions brought out in your case about the relations of the elevated road to some of these other structures and this question of electrolysis, and it seems to me, as I now recall, that this is proper rebuttal.

Mr. PAGE: Mr. Simpson testified distinctly as to certain places along the elevated road that he discovered this electrolysis.

Mr. MATHEWSON: Under the Brooklyn Bridge?

Mr. BURR: Two instances, one on Church Street and the Brooklyn Bridge.

Mr. MATHEWSON: Due to the Brooklyn Bridge?

Mr. PAGE: No, due to the elevated railroad.

Mr. BURR: And we met that contention by whatever testimony we could offer. Now, this opening up the whole subject of electrolysis is what they should have done in the beginning.

Mr. MATHEWSON: I do not want to argue it at length, but it seems to me so clearly in rebuttal where you bring evidence trying to negative different propositions as responsible for the electrolysis, like the Subway, it could not do it; the elevated, no, nothing serious could happen from it; and Mr. Marks' testimony to the same effect 5778 if we can show that that particular elevated is doing damage, not the general proposition that there is electrolysis, but this particular testimony, it is competent.

Mr. PAGE: That is what you are bringing in now, bringing in your pipe to show that.

Mr. MATHEWSON: No, at this particular place.

Mr. PAGE: They produced a witness who knew very little, and they opened it up and left it, and if they had the witnesses who knew more they should have exhausted their case on a subject which they opened up themselves, and not have reserved the principal part of their case for rebuttal when they claim we shall not rebut their rebuttal testimony.

Mr. MATHEWSON: We did not know you were going to discriminate and say it did not come from the elevated. This shows that the testimony your witnesses gave was utterly incorrect, and it undermines the value of all his conclusions.

Mr. Burr: Objected to as incompetent, irrelevant and immaterial and not proper rebuttal.

The Master: Objection overruled.

Exception to the defendant.

Q. And have you those pieces of pipe in court?

A. Yes, sir.

Q. Now, the first one to which I call your attention is the one taken up at 432 West Broadway. Did you take up a pipe there?

A. Yes.

Q. Was that a one and one-quarter inch gas service pipe?

A. Yes, sir.

Q. Will you produce that?

A. That is the pipe (producing pipe).

Q. Are there pittings in that pipe?

A. Yes, sir, these and a number of other lighter pits (indicating).

5779 Mr. Mathewson: I ask that that be marked as an exhibit?

Mr. Burr: I object to this being received in evidence because the testimony already in this case is that pitting may be due to other causes than electrolysis.

Mr. Mathewson: That we will show, if you will give us a chance.

Mr. Burr: You are showing some pittings and you want to show that those are due to electrolysis and nothing else, before it will be proper.

Objection overruled. Exception.

Pipe received in evidence and marked Complainant's Exhibit 304.

Q. Have you indicated by a drawing the location of that pipe as related to the elevated pillars, with the distances?

A. Yes.

Q. Is Fig. 1 that drawing?

A. That is Fig. 1 in this blue-print.

Q. And did you check the measurements so that you know they are correct?

A. Yes.

Q. Those were marked under your supervision, taken up, and then the measurements that were made by you were under your direction transcribed to this Fig. 1, were they?

A. Yes.

Q. So does that accurately indicate the situation?

A. Accurately, yes, sir.

Mr. Mathewson: I offer it in evidence.

Mr. Burr: I make the same objection to that.

Objection overruled. Exception.

Paper marked Complainant's Exhibit 305.

Q. Fig 1 shows the location of this pipe and electrical readings, is that so?

A. Yes.

5780 Q. Is this true with each other drawing which you present in regard to each of these other pipes you have referred to?

A. Yes, there is a drawing to cover each of the samples of pipe.

Q. Did you also take up a three-inch gas service at 476 West Broadway?

A. Yes, sir.

Q. Are there pittings on that?

A. Yes.

Q. Will you produce that?

A. Yes (producing pipe).

Q. Will you show us the pittings in that pipe?

A. There, and there, and there (indicating). Those are the pittings in that pipe.

Q. The pipe just previously shown was pitted through, do you remember?

A. That one, I think, has a hold in it. I don't remember at the moment but my impression is that it has.

Q. Is this pitted through, that you have, or merely pitted into the metal?

A. It is merely pitted into the metal. I do not think it is through in any place.

Mr. MATHEWSON: I offer that in evidence.

Same objection. Same ruling.

Exception.

Pipe received in evidence and marked Complainant's Exhibit 306.

Q. And this Figure II., which I show you, represents the same matter in reference to the location?

A. The electrical and location measurements both for this exhibit.

Mr. MATHEWSON: I offer that in evidence.

Mr. BURR: Same objection.

The MASTER: Same ruling.

Exception.

Paper marked Complainant's Exhibit 307.

Mr. MATHEWSON: I understand you have the same objection to all of this testimony?

The MASTER: Yes.

5781 Q. Did you also remove a one and one-half inch service pipe from 454 West Broadway?

A. Yes.

Q. Will you produce that?

A. Yes.

(Producing pipe.)

Q. That is pitted in some places through the pipe?

A. No, sir, that is not through, but it is very deeply scored.

Q. Wait a moment, I have a memorandum that it is. Just see if the pipe or fitting is not pitted through in some spot or spots?

A. Very nearly through in a number of places. I do not find that it is clear through anywhere, no sir.

Mr. MATHEWSON: I offer that in evidence.

Same objection and ruling.

Exception.

Pipe marked Exhibits 308-A and 308-B.

Q. Is figure III the figure showing the electrical and location measurements in regard to that pipe?
A. Yes, sir, the same as in the previous cases.

Mr. Mathewson: Now, I offer that in evidence.
Same objection and ruling.
Exception.
Paper marked Complainant's Exhibit 309.

Q. Did you also remove a nipple and coupling from a two-inch service from 414 West Broadway, which shows deep pitting?
A. Yes.

(Producing pipe.)
Mr. Mathewson: I offer that in evidence, also the corresponding drawing.
Same objection and ruling.
Exception.
Pipe received in evidence and marked Complainant's Exhibit 310.
5782 Drawing received in evidence and marked Complainant's Exhibit 311.

Q. Did you also remove an inch and a quarter service pipe at 448 West Broadway, and if so, produce it?
A. Yes, sir.

(Producing pipe.)

Q. This shows a hole pitted entirely through, does it not?
A. Yes, sir, clear through the wall of the pipe.

Mr. Mathewson: I offer it in evidence.
Same objection and ruling.
Exception.
Pipe received in evidence and marked Complainant's Exhibit 312.

Q. Figure V gives the same measurements for this pipe?
A. Yes.

Mr. Mathewson: I offer it in evidence.
Same objection and ruling.
Exception.
Paper received in evidence and marked Complainant's Exhibit No. 313.

Q. Did you also remove an inch and a half service 454 West Broadway?
A. Yes, sir.
Q. Produce that please?

(Witness produces pipe.)

A. This included a fitting.
Q. That shows pitting?
A. Yes, sir.
Q. In various places, does it not?

A. Pretty generally all over the whole length of the pipe.

Mr. Mathewson: I offer that in evidence together with the accompanying drawing.

5783 Mr. Burr:
Same ruling.
Exception.
Pipe marked Complainant's Exhibit 314.
Drawing marked Complainant' Exhibit 315.

Q. Did you take a 2½-inch valve and fittings from the gas pipe at 476 West Broadway?
A. Yes, sir.
Q. Will you produce that please?
A. That is No. 7, I think.
Q. Yes.

The pipe is produced.
Mr. Mathewson: I offer that in evidence.
The Witness: This is the service from 476 West Broadway.
Received in evidence and marked Complainant's Exhibit 316A and 316B.
Mr. Page: Wasn't Exhibit 306 from 476 West Broadway?
Mr. Mathewson: Yes. This is some more.

Q. Then this last exhibit appears on the second sketch (Exhibit 307)?
A. Sketch 2; yes, sir.
Q. Did you also take a one-inch gas service from 496 West Broadway?
A. Yes, sir.
Q. Produce that please?
A. This is the one inch service from 496 West Broadway (producing same).
Q. Does that show pitting entirely through the pipe?
A. Yes, sir. There is a hole in it in one place.
Q. And is the location and measure of that shown on this figure 7?
A. Shown in figure 7; yes, sir.

Mr. Mathewson: I offer that in evidence.
Received in evidence and marked (pipe) Complainant's Exhibit 317, and (drawing) Complainant's Exhibit 318.

5784 Q. And this appears on F-gure 7, does it?
A. Yes, sir.
Q. Have you also a one-inch gas service which you took from 496 West Broadway, a further one?
A. Yes, sir.

At 5 p. m. adjourned to Saturday, January 19th, 1907, at 11 a. m.

Last Exhibits:

Complainant's, 318.
State's, 000.
City's, 236.

5785 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January 19th,* 1907—11:00 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Page, Mr. Kirby.

5786 JOHN W. LIEB, JR., recalled for further examination.

Cross-examination by Mr. BURR:

Q. Do I understand you correctly to say and to mean that stray currents from your wires can be accurately located, and were accurately located as a result of the examination made by Mr. Varely in 1902 and 1903?

A. I stated that we had made careful tests to locate and to measure differences of potential in all parts of our system, with a view to learning what the electrolytic conditions might be as affected by the grounding of our neutrals in our feeder junction boxes. That was my statement.

Q. And I understood you to say, as a result of that examination, that you had no wandering currents?

A. Not of any significance, no sir.

Q. So that if there was any damage, in other words, due by reason of wandering currents to the mains of this gas company, or to any other gas company, it could not be attributed to you?

A. Yes, sir.

Q. That is the point?

A. That is my statement, yes sir.

Q. And I further understood you to say that in your opinion those wandering currents which may or may not cause damage to the mains were currents belonging to other companies, the subway company and the L structure, and currents which came across and affected the northern part of the city, coming over from the Bronx?

A. I made that statement, excepting in reference to the subway; I don't think I referred to the Rapid Transit subway in any way.

Q. In other words, in order to make it clearer, speaking now to you as an electrical authority, is it possible to locate the currents which affect the mains in the streets of the city?

A. Not in all cases directly. We located in these surveys, 5787 making a survey first under one set of conditions, then a variable condition came into effect, to wit, the operation of the elevated railroad, their electrification; then we made another survey showing a changed condition of affairs, a kind of "before and after using" test, and, therefore, it is logical, other conditions having remained the same, to attribute the changed conditions to the new factor which had come in. In others of our surveys which have been referred to and which will probably be referred to in detail later, we were able to make a very direct, exact and local designation of where the currents came from and where they went to.

Q. Now give me the particulars of that, as that is what I wanted to clear up?

A. In examining the electrolytic surveys that have been presented in evidence, and still others that were made, we were led to believe that among the points where destructive electrolysis was likely to be at work, and the points at which the conditions for such electrolytic destruction were favorable, was, among others, the neighborhood of Spring Street and West Broadway. We were led to that conclusion——

Q. Was that because of the presence of the elevated structure at that point?

A. It is because of the presence immediately near there of a substation of the elevated railroad, which sent its current on the elevated structure, and in conjunction with the elevated structure itself. We were led to this conclusion not only by the potential tests that have been referred to but also by the fact that we actually found the lead covered cables of the New York Edison Company carrying consid-r-able currents. Therefore under my instructions our people were instructed to at once inspect the lead cables of the New York Edison Company and the sub-surface structures immediately in front 5788 of the sub-station of the Manhattan——

Q. What do you mean by the Manhattan.

A. The Manhattan Elevated Railroad.

By Mr. Mathewson:

Q. What station?

A. Near Spring Street and Broadway—West Broadway.

Q. You can refer it to anything you have here, if you wish (witness consults a blue print).

Senator Page: What exhibit is this?

Mr. Mathewson: Complainant's Exhibit 303.

The Witess: They at once investigated the Edison lead covered cables that ran along in front of that station, and they found this condition of affairs as found by this Exhibit.

Mr. Mathewson: Do not call it an exhibit—this pipe.

The Witness: Well, this pipe. This is a piece of a high tension conductor of the New York Edison Company's system, and shows here (indicating) a very characteristic pitting which was to be recognized at once as electrolytic in its character——

Mr. Burr: I object to the characterization.

Mr. Mathewson: This man is an expert. You have asked him a question.

Mr. Burr: I have not asked him to characterize the symptoms or things which he sees on that pipe. I am asking—in fact, I think Mr. Lieb is going a little beyond what I have asked him. I have not asked him with regard to what conditions you find that pipe to have and to present at this moment. The point I have tried to clear up is whether it is possible for you, representing the Edison Com-
5789 pany, having shown to your own satisfaction at least that your wandering currents do not affect the gas mains, whether it is possible for someone on behalf of the Consolidated Gas Company, equally capable with you, to locate the wandering currents, which they claim affect their mains.

The Witness: I am coming right to that in one moment. I am leading up to show how we were able to locate them, and show you physically the process of location. Here we found a perforation which ruined this piece of cable and, therefore, it was cut loose——

Mr. Mathewson: Will you show that to the Master, the perforation on this lead?

The Witness: That is a high conductor cable (showing pipe to the Master), and it is very heavily insulated with paper insulation. It carries 6,600 volts. Alongside of it there was another which also is in this same category. Now, this cable was located in this position in reference to the power house. The power house was immediately right in front of this place——

Mr. Mathewson: The centre of the pipe.

By Mr. Burr:

Q. That is, the Manhattan power house was directly in front of this pipe?

A. In the street, yes, sir; and the current that was running and traveling on this lead cable was found to be coming down this lead cable to this point——

By Mr. Mathewson:

Q. That is, the middle of the pipe?

A. Yes. The current came down the lead pipe to the point
5790 indicated by the major electrolytic pitting, when it left the pipe to go into the elevated railway power house, and there was no current flowing beyond that.

Q. Now, just show the pitting from one end to the other where the current was flowing, and this end being perfectly smooth?

A. This is where the current came down and here is where it left the pipe to go into the power house (illustrating and indicating). Beyond this by measurements there were no currents found to be flowing in the lead pipe (indicating point of major pitting).

By Mr. Burr:

Q. So that made it certain in your mind that the current which affected that pipe came from the substation of the Manhattan L?

A. Yes, sir.

Q. And can these wandering currents be controlled?

A. Within limit.

Q. Are they not being controlled to-day by the Manhattan L?

A. No, sir.

Q. Are they not installing a system to control the wandering currents on the Manhattan L?

A. I understand that changes and improvements are now in progress of being done with that end in view.

Q. But from an inspection made by you on behalf of your company you can easily locate the wandering currents that were affecting your mains or pipes or conduits?

A. I could very easily make tests so as to determine if any such conditions obtained and if they were due to our system.

Q. Or if the pitting effects which you have described here on your pipes were caused by anybody else you could locate those other currents belonging to other companies?

A. Yes, within certain limits, of course. That is owing to the fact that we can in any given section remove our—what we might call intentional connections to ground and render our system entirely isolated, which——

5791 Q. And that would be true equally as well with regard to the northern part of the Borough of Manhattan as with regard to the southern part?

A. Yes, but it is not possible with some of the other systems, so that their localization is rather more difficult.

Q. But if you wanted to know where the damage was coming from to your pipes you could locate from whence that damage arose or where it came from?

A. Yes.

Q. Now, with regard to Mr. Maxwell, Mr. Maxwell has been in your employ for some years?

A. Yes.

Q. The reason I call your attention to it is, in reading over the testimony of Mr. Simpson I see that Mr. Maxwell is the man to whom Mr. Simpson called attention in the two instances of Spring and Church Streets, and at the Brooklyn Bridge in the two pittings of which he spoke in his direct examination, so I suppose that is the same Mr. Maxwell who was consulted in that regard?

A. I suppose so, because Mr. Maxwell is in charge of our Testing Department, and I sent him to Mr. Simpson to confer with him relative to the opening of the street for the purpose of these investigations.

Q. So that whatever knowledge Mr. Maxwell has now with regard to this matter, Mr. Simpson had at the time he testified?

Mr. Mathewson: How does he know that?

Mr. Burr: He knows I don't want him to tell the impossible. I do not assume he is a mindreader.

Mr. Mathewson: Well, exactly.

Q. Do you know whether Mr. Simpson has that information which Mr. Maxwell procured from the examination of these pipes?

A. I have reason to assume a lot of it he didn't know anything about.

5792 Q. Do you know whether Mr. Simpson knew of the examination made by Mr. Varely in 1902 and 1903?

A. Oh, yes, he knew that that work was under way.

By Mr. Page:

Q. The pitting by electrolysis is occasioned by the current leaving the pipe or conductor?

A. Yes.

Q. And not by it entering it?

A. No, sir.

Q. On West Broadway you have these lead sheathed cables?

A. Yes, sir.

Q. Running the full length of it?

A. Yes, sir.

Q. And the currents that travel along down West Broadway to the power house at Spring Street would leave the cable at the power house?

A. Yes.

Q. And would enter the cable or get from the cable if it came from the elevated structure along the line above that?

A. I did not quite catch that.

Q. I say if it came from the elevated structure it would enter the point——

A. At some point above, that is very true.

Q. So lead is a much better conductor of electric current than iron, is it not?

A. I am quite sure in my mind as to the relative conductivity of lead and iron. Copper of course is very much better than either. Off-hand I think—well, I am not sure. I am not sure enough to make a statement as to that, which has the better conductivity of the two. That is a well known physical fact, that——

Q. What is?

A. That each has a definitely assigned conductivity, and any text book or reference book which shows what it is, what the relative conductivities are. I haven't in mine exactly their relations in the scale of conductivity. I can answer that question right offhand by asking one of our people, if you will permit me to, if you wish to get that information.

5793 Q. It is just as you prefer, Mr. Lieb.

The Witness: Professor?

Mr. Gans: Lead is about 9 and iron from 10 to 15.

Q. Now, interpreted in to English that means what?

A. That the conductivity—the resistance—I will have to ask the Professor whether he means in that statement the relative resistance.

Mr. Gans: Yes, or reversely, conductivity; the question was of resistance.

The Witness: That if the resistance of a given length of iron pipe were 9 or 10, the resistance of a given length of the same section of lead would be 10 to 12 or 13.

Q. I think you have that just reversed. Professor Gans says lead is about 9 and iron from 10 to 15.

Mr. **Gans**: Copper being 100.

The **Witness**: Then the conductivity of lead, 10 to 12 per cent. more than the same section of iron.

Q. And where there are two mediums of conductivity, the electricity follows the line of least resistance, does it not?

A. Yes, sir, generally.

Q. And would go on the lead in preference to the iron if they were in the same street?

A. Yes, and if both had the same cross sections of conducting medium, yes.

Q. What do you mean by cross section of conducting medium, do you mean the thickness of the pipe?

A. Yes, sir.

Q. For instance, thickness of the iron pipe as compared with the lead pipe?

A. Yes. If iron were the poorer conductor, if there happened to be more of it, of course it might overbalance its lesser conductivity.

5794 By Mr. **Mathewson**:

Q. Referring to the improvements which are in process on the elevated, and to which Professor Sever also referred, I will ask you whether in your judgment those improvements will insulate the elevated structure so that currents will not escape to the street?

A. I anticipate that they will result in an improvement of the conditions.

Q. Yes, that is not the question quite; whether it will insulate the structure so that some current will not escape to the street?

A. There may still be some; that is a question to be verified by further tests after the changes have been made.

Q. Referring to these lead pipes, which you have produced, could the pitting, as indicated there, possibly be due to the Edison current which is carried within the pipe as insulated?

A. No, sir.

Q. And referring to the charts introduced by Mr. Maxwell and to which you referred, what is there in those charts or the measurements or figures which indicates that the current comes from the elevated (handing paper)?

A. There are a number of indications here on Complainant's Exhibit 303, notably, which show the facts that all of the current in this section——

By Mr. **Burr**:

Q. What section is that?

A. Well, around about the Manhattan sub-station (indicating).

Q. When you show with your hands making a circle, describe the areas you desire to embrace?

A. Well, practically the area covered by the map.

Q. Complainant's Exhibit 303?

A. Yes. All of this map. The arrows indicate that in the territory covered by the map all of the currents are coming and tending

towards the elevated railroad substation, as you see here (in-
5795 dicating). You see all these arrows are coming in here, this goes up and this goes down, and this goes in this direction, and this goes in that direction, and this you see comes here and this here (indicating) they are all tending to return to the sub-station.

Q. The elevated sub-station?

A. Yes. And a similar condition of affairs i*n* indicated by these other charts.

By Mr. **Mathewson**:

Q. In reference to the different conductivity of lead or iron, Ohm's law, I think it is, is it not, states that a current will not all follow the line of greatest conductivity but that it will divide up among different conductors inversely in proportion to their conductivity?

A. That is true.

Q. Or in direct proportion to their conductivity?

A. That is true.

Q. And so even if there were both lead and iron of the same diameter each would carry a current in proportion to its conductivity?

A. Yes.

By Mr. **Burr**:

Q. Have you a sample of this soil from which the two pipes were taken which you have just had in your hand, those lead pipes, or can you tell the kind of soil they reposed in?

A. If my memory served me right, there were samples of that soil taken; I believe also that it was subjected to analysis.

By Mr. **Mathewson**:

Q. You have not it here?

A. No, sir; I have only a vague recollection of the circumstances.

By Mr. **Burr**:

Q. You did not take those up yourself I understand?

A. I did not.

5796 Q. So that you cannot say yourself as to where the exact location was that these pipes were taken.

Mr. **Mathewson**: I have some one who can.

A. I was not present when these were removed, no, sir.

By Mr. **Page**:

Q. Your answer to Mr. Mathewson's question that where there are two conductors of different conductivity, that the current will divide up, supposes, does it not, that both conductors are continuous?

A. Certainly.

Q. And not broken by joints?

A. Certainly.

Q. And if there is a continuous conductor that would be of greater conductivity, that is continuous, and another conductor of less conductivity that is broken by joints, the condition would be different?

A. Yes, that would bear on the effect of the general expression of their conductivity as a whole.

By Mr. Mathewson:

Q. If the joints were conductors also that would not make any difference, that would be like a continuous sheath?

A. No, if the joints were ample in section and material, the joints might be as good a conductor as the body of the pipe.

Q. Mr. Burr interrupted you just as you were about to say what those pittings were on the lead pipe; that is to say, to what action they were due. Can you from your experience and knowledge of the electrical business say whether those pittings are due to electrolytic action or something else?

A. In my judgment they bear all the earmarks of electrolytic decomposition.

By Mr. Burr:

5797 Q. I would rather that you should ask that question than that I should, but, having answered it, I want to ask about that. What leads you to believe that that is entirely or substantially due to electrolytic condition?

A. Well, my general experience, we having seen very many cases, we having seen the effects of actually passing current through lead conductors and seeing their effect and comparing them with the effects which were produced by ordinary depreciation due to subsoil conditions alone.

Q. Well, what do you mean exactly by pittings?

A. I mean the removal of the material in spots, giving it the appearance of being eaten out, not uniformly.

Q. Have you ever had any experience with gas mains at all?

A. Not excepting the seeing of the effect of both electrolytic decomposition and subsoil condition alone in iron pipes as they are laid in the ground, and——

Q. Are you aware that gas mains were affected in a similar manner, that is so far as pitting is concerned, before the introduction of electricity?

A. As I said before, the character of the pitting is somewhat different, and the electrolytic pitting has different characteristics from the ordinary sub-soil pitting or depreciation.

Q. Don't you know the character of the soil affects the duration of the main, or affects its condition?

A. It does to a degree, yes, sir.

Q. And causes pitting?

A. It may cause pitting, depending upon the character, but not pitting of this character.

Q. And it is not true that the action where there is no electricity, but where the pitting is caused by the soil, that that is due to electrical agency, by each of the numerous particles of carbon being in contact with the iron, which, aided by the moisture, forms little batteries and produce the rapid decay?

A. I would consider that to be rather hypothetical. I
5798 should not look for electricity as an operating agent, but simply consider it was a chemical action.

Q. I call your attention to a book which I hold in my hand, entitled *Gas and Gas Works*, by Hughes & O'Connor, published in London by Crosby, Lockwood & Son, in 1904, in which this statement appears, and ask you if you agree with the statement which I read:

"There are, however, certain destructive agencies which materially affect the durability of mains; thus it is said that the worst of all ground in which pipes can be laid is 'that containing ashes, cinders and moisture; in these the pipes are speedily covered with marks throughout, similar to pock marks, some of which eventually penetrate the metal. This action is undoubtedly due to electrical agency, by each of the numerous particles of carbon being in contact with the iron, which, aided by the moisture, form little batteries, and produce the rapid decay.' In sandy, saline ground a coat of oxide forms itself on the exterior, which materially diminishes the thickness of the iron of the pipe, but the metal does not alter in its nature. In made ground, cast-iron pipes become rotten and soft. Lastly, in clayey soil the iron is kept in an extraordinary state of preservation, and we have known pipes to be embedded in clay, with a view of their preservation. Therefore, the duration of mains depends entirely on the soil in which they are laid."

Do you agree with that proposition as laid down there?

A. I agree wtih that largely, excepting the somewhat hypothetical bringing in ordinary chamical action—bringing in electricity as an agent. I think that is hypothetical. I have seen just those
5799 conditions that are referred there, depreciation of iron in contact with ashes and water in the attempt to convey material, wet ashes, in conveyors without being in the ground at all; I consider that a mere case of chemical action.

Q. Have you ever seen pitted pipe from breweries or ice manufacturing establishments?

A. Not that I remember.

Q. Do you know that boiler plates pit in the presence of purest water?

A. Yes, sir.

Q. Do you know of any causes outside of what you have just stated of pitting where there could not be any extraneous current of electricity?

A. Well, I have said that I believed that pitting of a certain character could proceed without the interposition of a current of electricity.

Q. Can you say what pitting would have happened to your pipe exhibit here, assuming there was no extraneous electric current?

A. I would say the condition would be not at all as shown in the exhibits.

Q. By that you embrace all the exhibits, these pipes, do you?

A. Yes, I refer to them all.

Q. Can you describe accurately what the difference is in the pitting arising from extraneous electrical currents, and what arises from internal action of the soil and so forth, as I have mentioned?

A. Well, it is a little hard to describe that in words, it being rather an appearance; but in general a pitting that is caused by subsoil conditions is apt to be more of the character of a flaky—larger areas are involved. The material is more apt to come away in flakes, more like the ordinary rusting, or oxidation of iron. It is very much less likely to be in clearly defined removal holes of the material with a clear cut eaten contour. These effects are somewhat different. One is apt to be flaky and the other is apt to be more of the char-
5800 acter of a true pitting, and very seldom will you find a merely chemical pitting that has the shape of a hole; quite a local hole with clearly defined sharp contours, as is apt to be the case with electroyltic corrosion.

By Mr. **Mathewson**:

Q. Sort of a crater?

A. Yes, a volcanic crater is a fair analogy of the effects that are observable.

By Mr. **Burr**:

Q. Mr. Simpson testified, he being the superintendent of mains of the Consolidated Gas Company, that in all his experience he saw only two instances of what might be called pitting, and of course he did not claim to be an electrical expert, and did not know whether that pitting was actually due to the action of electricity or not, but he said inferentially that that is what he understood from Mr. Maxwell. Now, as a matter of fact there are not a great many cases of pitting in the City of New York, are there?

A. Having seen a very large number of tubes, iron tubes, Edison tubes, removed from various sections of the city I have observed very, very little of that. I have in my experience observed some cases of that where pipe in very peculiar soil, which were the detritus of past ages, and giving a very strong acid re-action, as well as that might interest the archæologist. I have seen in such soils rather unusual cases of iron pipe being eaten up, but that is not the case in New York City.

Q. Mr. Simpson says there was one case two years ago right in front of the Brooklyn Bridge, right in front of the Park Row entrance, and the other was at the corner of Church Street and Spring. Those are all the cases he was able to find, though he had
5801 seen ninety per cent. of the mains of the Consolidated Gas Company.

Mr. **Mathewson**: Not within the last two or three years, since this electrical condition has existed. Our claim is that the situation is now present, that we have got to provide for it in the future, that it is just occurring, beginning and begun. That is the point, not that it was fifteen, twenty or ten years ago.

Mr. **Burr**: But I understand it has been obviated and removed so far as this witness' company is concerned and——

Mr. **Mathewson**: Not at all.

Mr. Burr: And that the other companies are adopting precautions which will remove in so far as the L structure is concerned.

Mr. Mathewson: No.

Q. Have you explained as fully as you care to the difference between pittings caused by wandering electrical current and pittings caused by subsoil conditions?

A. My description is as near as I can put it in words, from the very numerous cases that I have seen and have seen illustrated.

By Mr. Mathewson:

Q. It is much easier to detect the difference in the character of pittings than it is to describe it, is it not?

A. Yes, sir.

Q. It is a matter of the eye?

A. Yes, it is fairly well defined, it is characteristic.

Mr. Burr: If it can be seen, I should think it could be described.

Mr. Mathewson: It is difficult to describe some things we can see.

5802 Q. These services or pipes which have been here presented and which have been put in evidence and the others which are here are all wrought iron, aren't they, if you know?

A. Yes, they are.

Q. While the mains of the Consolidated Gas Company are cast iron?

A. Yes.

Q. Now, the electrolytic action when it reaches dangerous proportions would be first observable in its effect on wrought iron, would it not?

A. Yes.

Q. That is more subject to deterioration than cast iron?

A. Well, there are other elements. Cast iron, due to its making, has a kind of thin coat which acts for a certain time as a kind of protective coating, so that electrolytic corrosion does not take hold of a gas pipe quite as quickly on account of the difference in the service presented.

Alexander Maxwell resumed.

By Mr. Mathewson:

Q. You said at the conclusion of yesterday's testimony that you also had a one-inch gas service which was also taken from 496 West Broadway?

A. Yes, sir.

Q. And the location of that with the electrical readings also appear on Figure 7, I think, which is Complainant's Exhibit 318; is that right?

A. Yes, sir, that is correct.

Q. Now, there is a hole in this pipe, is there not?

A. Yes, sir.

Q. Is that the long pipe?

A. Yes, sir.
Q. Will you point out the hole up there?
A. Here (indicating).
Q. That is quite a distinct hole, isn't it?
A. Yes, sir.

5803 Mr. Mathewson: I offer the pipe in evidence.
Mr. Burr: Same objection.
The Master: Same ruling.
Mr. Burr: Exception.
Pipe received in evidence and marked Complainant's Exhibit 319.

Q. Did you also take a two-inch service pipe from in front of 428 West Broadway?
A. Yes, sir.
Q. Will you produce that pipe?
A. Yes.

(Witness produces pipe.)
Mr. Burr: Do I understand Mr. Maxwell is the man who removed the pipes?
Mr. Mathewson: Yes, he saw them removed and labelled them and everything. I will ask a general question as to that a little later. I offer that pipe in evidence.
Mr. Burr: Same objection.
Same ruling. Exception.
Pipe received in evidence and marked Complainant's Exhibit 320*a* and 320*b*.

Q. There is a hole in this pipe 320*a*, is there not?
A. Yes, sir.
Q. Where the wire goes through?
A. Yes, sir.
Q. And that is found, as to electrical readings and locations, on Figure 8, which I show you, is it not?
A. Yes, sir.

Mr. Mathewson: I offer that in evidence.
Paper received in evidence and marked Complainant's Exhibit No. 321.

Q. Now, Mr. Maxwell, to be brief, I want to ask you whether you pointed out the pipes in each one of the instances where you have introduced pipes here, for the workmen to remove?
A. Yes, sir.
5804 Q. And you selected the pipe at that point?
A. Yes, sir.
Q. Was it removed under your supervision?
A. Yes, sir.
Q. Were these different pieces of pipe marked and tagged in your presence?
A. Yes, sir.
Q. And you know they came from the locations which are indicated?
A. Yes, sir.

Q. And which are shown on these exhibits which you have testified?

A. Yes, sir.

Q. Now, what led you to go to this particular section and have pipes uncovered for the purpose of examining them?

A. I had previously made electrical potential readings which indicated that section of the city as a section in which I would be quite likely to find electrolytic action.

Q. The conditions so far as your readings before removal of pipe showed them, seemed favorable, did they, for such action?

A. Yes, sir.

Q. You had previously made tests at Grand Street and West Broadway, had you not?

A. Yes, sir.

Q. And did you find there two gas pipes, two six-inch gas pipes, one of wrought iron and one of cast iron, do you remember?

A. Yes, sir.

Q. What was the character of the wrought iron pipe as to being offset around the joints?

A. The offset around the mains, that is, in the two laps, was of wrought iron, and the straight run was cast iron.

Q. Does this figure, which I show you, show the results of the electrical tests at that point?

A. Yes, sir.

Mr. Mathewson: I offer that in evidence.

Same objection and ruling.

Exception.

Paper marked Complainant's Exhibit 322.

5805 Q. In addition to these wrought iron services—they are wrought iron, which you have introduced, all of them?

A. Yes, sir.

Q. In addition to these wrought iron services, did you take out or have taken out two lead sections of Edison cables—do you call it?

A. Yes, sir.

Q. Which have been commented upon here and produced here this morning by Mr. Lieb?

A. Yes, I took them out myself.

Q. Will you state where they were located?

A. On the north side of Spring Street between West Broadway and Thompson.

Q. Where, in relation to the substation of the elevated road?

A. The pitted portions which I have here were immediately in front of the elevated substation or within a few feet on either side.

Q. Those two sections that have been introduced?

A. Yes, sir.

Mr. Mathewson: I offer them in evidence.

Same objection and ruling.

Exception.

The pipes were received in evidence and the long section of pipe marked Complainant's Exhibit 323 and the short section of pipe marked Complainant's Exhibit 324.

Q. Now, Mr. Maxwell, you noticed the location of the pittings on these service pipes, did you not, in relation to the elevated pillar, that is to say as to how the pittings were turned, in what direction?

A. Yes, sir.

Q. I will ask you whether the location of the pittings on the services as they lay in the ground relative to the elevated pillar were such as in your judgment would indicate that current was leaving the services and going to the pillar?

A. Quite conclusively, I should say.

5806 Q. How close were the services to the pillars, do they appear on these small maps

A. I think the distances are very generally given; ordinarily three, four or five feet——

Q. Quite close?

A. Six or seven feet in some cases.

Cross-examination by Mr. PAGE:

Q. In order to have the condition that you say, of the current leaving the pipes and going to the elevated structure, the pipes would be positive to the structure, would they not?

A. Yes.

Q. Now, these cables, sections of which you have brought here, are regular cables of the Edison Company that are laid throughout the streets of New York?

A. Yes.

Q. And as I understand it, these are not laid in sections, but are practically a continuous cable?

A. Yes.

Q. Will you take Exhibit 320-B and tell me where you discover the electrolytic action there?

A. Yes, sir. I should say that that was electrolytic action (indicating).

Q. I understand your testimony to be that the electrolytic action takes place on the side of the pipe from which the current leaves it?

A. Yes.

Q. And not on the opposite side?

A. No.

Q. Turn it over. What do you find on the opposite side?

A. Some further action.

Q. Action of what kind?

A. Electrolytic action.

Q. Then as I understand it the current was leaving this pipe in two different directions, is that right?

A. Well, not quite as you state it.

Q. Well, how do you state it, there are opposite sides of the pipe, both showing electrolytic action?

A. Yes, sir. The greater action on the side which was towards the L pillar, the heaviest action.

5807 Q. Yes, but there was also a lighter electrolytic action on the other side?

A. Yes, sir.

Q. And the currents must have been leaving this side then to produce this action?

A. This way, I should say (indicating).

Q. What do you mean to say, that it perfo-med a somersault, and started out this side and jumped over?

A. Probably.

Q. Is it probable?

A. It is the only possible explanation, I should say.

Q. On what do you base that, as to that being the only possible explanation?

A. Well, that the pitting or scoring is evidently electrolytic and that the current, in my opinion, went to the L pillar, and if it went on the off-side of the pipe it must have turned around through the ground and straightened itself out to get to the pillar.

Q. Yes, it must, I suppose, if it did that. Then you think that the current left the pipe, passed through the ground over the top of the pipe to go to the pillar?

A. Yes, sir.

Q. Now, is not the ground of higher resistance than the pipe?

A. In general.

Q. And don't you think it would go on around the pipe, out on the other side rather than pass through the ground, which was of higher resistance than the pipe?

A. Not in this particular case, I should say; no, sir.

A. As I understand, electrolytic action produces a distinct pitting, while ordinary oxidation covers a larger surface and shows a scaling off?

A. Yes, in general.

Q. Now, on one side of that pipe you say it shows a distinct electrolytic condition?

A. Yes.

Q. That is, on this side?

A. Yes, sir, there (indicating).

5808 Q. Now, do you observe the same on the other, or might that be occasioned by oxidation and the gripping of the tongs in unscrewing it?

A. I should say that that was not oxidation.

Q. That covers a surface of some inch and a half, does it not?

A. Yes, roughly.

Q. And on this side it covers a somewhat larger surface?

A. Yes, sir.

Q. Now, we notice, turning the pipe in this way, there are some marks of deterioration. What are those occasioned by?

A. They are not so definite; I should say that they were probably electrolytic, possibly due to oxidation.

Q. Then I understand that not alone was the electric current leaving this side, but it was also leaving the opposite side and also shooting up into the air from out of the pipe?

A. Yes, sir—up in the earth, not in the air.

Q. Well, up in the earth.

Mr. Mathewson: You understand Senator, that this witness has not been called to testify to anything except pipe and the identification of it. I am not introducing him as an expert on this particular subject, and while, if you care to go on I have not any objection——

Mr. Page: Yes you have, he testified this was electrolytic action.

Mr. Mathewson: I did not ask him any such thing. I asked him about the pipe, and if it showed a hole through it. I have not asked him a word as to whether it was electrolytic action or not. He said those charts showed the readings of the location and the electrical readings. I am calling attention to the fact that you are making him your own witness on this subject.

5809 Mr. Page: Not at all, I will take the risk of that on the record. You cannot put a witness on to swear he has taken the readings, and who swears the electricity has left the pipe, and that this is the result of electrolytic action, and then escape cross-examination.

Mr. Mathewson: He has not sworn to anything of that kind.

Mr. Page: Yes he has.

The Master: Well, do not argue about it, gentlemen. He is entitled to cross-examine the witness.

Q. We find, proceeding down about twelve inches, another eruptive condition, we might say, what do you think that is?

A. That might be due to electrolysis, and probably is; possibly oxidation.

Q. Let us see, that is about on a line with the first that you spoke of, is it not?

A. Yes, sir.

Q. Turn around about half way on the pipe from there and we find a considerable pockmarked condition. What is that? Is that electrolytic or oxidation?

A. For those I should say probably oxidation; possibly electrolysis.

Q. Are not these small places more clearly defined and nearer a round hole, or nearer a hole with those edges, or whatever it was that Mr. Lieb said?

A. Yes, sir; they fit Mr. Lieb's definition better.

Q. These fit Mr. Lieb's definition better than the other one you have spoken of, do they not?

A. Yes, sir.

Q. Now, Mr. Lieb is a very eminent expert, is he not, on electricity?

A. Yes, sir.

Q. And if you find a condition in a pipe where the description more nearly answers his description of the effects of electrolysis than these larger places that you specified, would you not be in-
5810 clined to think that these small places were the places where the electrolytic action has taken place?

A. I should say not in this particular exhibit.

Q. You will notice that the extension from the place that you first selected as being surely electrolytic, or what you thought was electrolytic action on top of the pipe, extends continuously for about six inches?

A. Yes.

Q. Now, we will take a look at this, which is Complainant's Exhibit 320A. I understand you are very positive that this hole is occasioned by electrolysis.

Mr. MATHEWSON: He has not stated so at all. I merely asked him if there was a hole and he said there was. He has not stated what it was due to. You are examining him about something he has not testified to on his direct examination.

Mr. PAGE: I am afraid you don't know the questions you asked and the answers he gave.

The MASTER: Well, he can answer it now, or if he cannot he may say so.

Mr. MATHEWSON: I submit this is not cross-examination, and we did not present this man as a witness on that subject.

Q. I call your attention to a place, well, within an inch and a half, of that, where there appear to be some pit marks?

A. Yes.

Q. What do you think that is occasioned by?

A. It is hard to say.

Q. Does that look like electrolytic action to you?

A. Not particularly. It might have been. The exhibit was chosen for the other action there.

Q. Chosen for what other action?

A. The action on the other section of it, which I took to be electrolytic. This was included as part of the pipe.

5811 Q. Comparing this exhibit 320-A with 320-B, the portion that you have stated to be undoubtedly electrolytic, you find great similarity?

A. Only a general similarity. I would say there are a number of points of difference.

Q. Can you say that these depressions or holes are occasioned by electrolysis or by erosion, I mean by erosion, rusting?

A. I would hardly care to state it as to these two holes.

Q. On the opposite side of this pipe we find also opposite to the hole a condition of erosion. Is this the case where the electricity was shooting out in all directions and went out on that side of the pipe?

A. That question is very hard to say. This is evidently an exceedingly old service pipe.

Q. Wrought iron service pipes will rust, won't they?

A. No doubt of it.

Q. Laid in any kind of earth. All of these exhibits that you have produced were taken within one block, were they not, except the last cable?

A. One or two—the higher numbers, 496, may go two blocks; I am not quite sure.

Q. How long ago did you remove them?

A. July, 1906.

Q. Between what streets did you take them?

A. As I just said, between Spring and either Prince or Houston, the most of them were between Spring and Prince.

Q. Did you make any observation of the soil there is there?

A. Generally, I saw it, of course.

Q. Is it filled in or is it the original soil?

A. It is the natural soil.

Q. Is it such as the archaeologist would be interested in, as Mr. Lieb said?

A. No, sir.

Q. Now, this long pipe up here, which is Complainant's Exhibit 319; there is a great deal of oxidation on that pipe throughout, isn't there?

5812 A. There is a great deal of oxidation on some parts of it, yes, sir.

Q. Well, extending pretty well the length of the pipe?

A. Yes, sir.

Q. Now, this hole that we discover is a long, narrow hole, that is, when I say long, of considerable length for its width?

A. Yes, sir. .

Q. It is not a distinct pitting, is it?

A. Well, when it goes through it ceases to be a pit, when it comes to be a hole. I think before it went through it would have been a fairly distinct pit, yes, sir.

The Master: It is about an inch long.

The Witness: Yes.

Q. Don't you find that all around this hole there is considerable oxidation?

A. I am not sure that that is oxidation.

Q. Well, just press that with your thumb nail above and see what you think of it?

Y. Yes, it is very soft.

Q. The pipe is very soft, it shows evidence of considerable oxidation, does it not?

A. It might not be oxidation.

Q. Well, what might it be?

A. Where the metal is removed, that might well be due to electrolytic action; I think a great deal of that loose material is dirt and earth caked on there.

Q. Then your idea is that the condition that we find this pipe in all through here is due to electrolytic action?

A. No, no. A good portion of that pipe was within a building, and is undoubtedly oxidation; in the air it was, a portion of it.

Q. What portion was in the air and what portion in the soil?

A. This portion down here, this lower end, was in a vault, and if I am not mistaken the wall came through in this neighborhood, or it went through the wall, rather.

5813 Q. Can you tell from the difference in oxidation which part of it was in the earth and which part was in the air?

A. Yes, sir, I should say there was quite a marked difference there from the appearance of the pipe there and there and from there up (indicating).

Q. From here up, which is about half way the length of the pipe, and leading towards—what would you call that up there, the hub joint?

A. It is a coupling.

Q. That is, it is cut off on the other side of a joint so it gives that appearance as if it were sticking out?

A. Yes, sir.

Q. Is there not in that end of the pipe a very distinct oxidation all the way from the place where you say it enters the soil?

A. Yes, there is oxidation, although it is not distinct, I should say. A great deal of those irregularities, a great many of them were caked earth. The pipes have not been cleaned; they are practically in the same condition now as when they were taken out of the street.

Q. You can pick this pipe to pieces with your finger nails, can't you?

A. I have not tried it. There is a piece of it, yes.

Q. Now, we find this condition obtaining throughout the length of pipe which was in the soil, of great oxidation, don't we, and places that were quite some pitted. Now, throughout the length is that the action of electrolysis or of oxidation, do you think?

A. The only points I would care to definitely fix upon as electrolysis are some of these deeper marks in the neighborhood of the holes.

Q. You think because there is a hole it must be due to electrolysis, and if there is considerable depreciation throughout that must be due to oxidation?

A. I did not state it quite that way.

Q. Well, you can state it any way you want to.

5814 A. I think that hole and those pittings are electrolytic.

Q. What pittings?

A. In that neighborhood right there (indicating).

Q. Well, there is a more distinct pitting below, is there not, than there is at that point?

A. That is of an altogether different character, from here down, those are irregularities, perhaps they are pits, I should say they were not electrolytic.

Q. What is the very distinct characteristic which conveys to your mind that this one spot must be the result of electrolytic action, whereas similar conditions throughout the pipe do not suggest to you that they are electrolytic?

A. I do not quite understand the question.

Q. (Question repeated.)

A. I do not think the conditions throughout the pipe are similar.

Q. Well, what is the difference, that is the point. Tell us the characteristics of electrolytic action that you see in that one spot?

A. Well, if it can be described, the pits are of quite a different character there within the line down there and what that evidently was before that went through, it would be quite different from the surface of the pipe there and three (indicating).

Q. And you refer to a straight line directly in line with the hole, a straight line about an inch and a half in length by a sixteenth of an inch in width, do you?

A. Yes, sir.

Q. Now, wrought iron pipe is welded, is it not, along the seam?

A. Yes, sir, to the best of my knowledge.

Q. And there is apt to be more deterioration along the seam than there is in the other part of the pipe, is there not, if it is subjected to oxidation?

A. I am not sure of that.

5815 Q. If that should be the case and you should find that this hole which is long and narrow and this long and narrow streak below being in the same line, would that convey to your mind that it might be along the seam?

A. I think I would want to have it more definitely shown than that; you say it was along the seam.

Q. Now, we will take this Exhibit 320A. Are not the characteristics of this part that you thought was not electrolytic very similar to the conditions around the hole in this Exhibit 319?

A. Not exactly, I should say; no, sir. I should say that this was more nearly similar to the other section.

Q. Well, what about this hole; do you think it is similar to that?

A. Not in all respects, no, sir.

Q. Then you think there is a substantial difference between the hole in Exhibit 320A and the hole in Exhibit 319?

A. Yes, sir.

Q. And such as would suggest to your mind that they arose from different causes?

A. Yes, sir.

Q. How did you remove this Exhibit 320B from the other section?

A. It was cut off.

Q. Cut off here?

A. Cut off there (indicating).

Q. And unscrewed there?

A. And as I remember it, unscrewed there.

Q. And, of course, you did not unscrew it with your own hands?

A. No.

Q. Used a pipe screw?

A. Yes, a pipe tongs; yes, sir.

Q. And was this part Exhibit 320A a part of the same pipe?

A. Yes.

Q. Did these join?

A. They go on through the coupling, I think; I think they were joined in that manner, as nearly as I remember it.

Q. I find a very similar condition on Exhibit 320A as on Exhibit 320B, that the parts that show—I believe you claim electrolytic action on both sides of the coupling, is not that so?

A. Did I claim that?

Q. Yes.

A. I think not.

5816 Q. Did you not claim that the electrical current was gyrating through the ground, climbing over the top of the pipe and going all around, so as to leave both sides of the pipe at the same time?

A. It left the two points, it probably made contact with the earth, giving preference to the part nearest the elevated pillars.

Q. Don't you find the same condition on the coupling on Exhibit 320-A that you do on Exhibit 320-B?

A. The pipe is all eroded on the coupling, but it looks quite different to me.

Q. Don't you think this action may be occasioned by the gripping of pipe tongs on an old rusty pipe?

A. Hardly, because we chose these exhibits as they lay in the ground before the tongs was put on them.

Q. Here is where the tongs did go on, is it not?

A. I think not. Of course my memory is not exact on that particular point. As I remember it, the way these pipes laid, I think the tongs would have gone on there (indicating).

Q. That is the portion of the pipe which you thought presented some distinct pitting that you think resulted from electrolytic action and looked very much like it, is it not?

A. That was not the distinct part of it, no sir. This was the distinct part of it, in my opinion (indicating).

Q. Yes, I know that was the distinct part, but the other was a very suspicious part, wasn't it?

A. Well, I think I said it might have been electrolytic.

Mr. **Mathewson**: You ought to have taken your hand and not put the nippers on.

Mr. **Page**: No, I don't think he would have produced as good an exhibit for your purposes if he had.

Mr. **Mathewson**: I think he would if he chose the pipe before the tongs were put on at all.

5817 Mr. **Burr**: These are all wrought iron services, are they?

Mr. **Mathewson**: Yes.

Q. You made this map, Complainant's Exhibit 303, did you?

A. Yes, sir.

Q. I understand that you made tests throughout the city and selected this as probably the most fruitful field. Did you find similar conditions in other parts of the city?

A. Yes, sir, in some parts of the city.

Q. What parts?

A. In the neighborhood of railway substations generally.

By Mr. **Mathewson**:

Q. Elevated railway?

A. Elevated railway, yes, sir.

By Mr. **Page**:

Q. Just state where?

A. The particular substations, do you mean?

Mr. **Mathewson**: Where are the elevated substations?

Q. No, I do not say where are the elevated railway substations, but at what elevated railway substation did you find a similar condition existing?

A. In the neighborhood of the 53rd Street Interborough, and to a slight degree in the neighborhood of the East 34th Street elevated station; my tests were not very extensive around the 34th Street station.

Q. Have you got the results of your experiments in those other stations?

A. I am not certain about the 34th Street. I have some material relating to 53rd Street.

5818 Mr. Page: That is all.

By Mr. Burr:

Q. When you speak of the Interborough stations and Manhattan stations, you mean substations belonging to the same line?

A. Yes, sir. I think I have used the word indifferently; it is the elevated railway substations that I refer to.

Q. Now known as the Interborough Rapid Transit?

A. Yes.

Q. Do you remember when you took up the pipe to which your attention has been called at 342 West Broadway?

A. 432 West Broadway?

Q. Yes.

A. One of these exhibits, do you mean?

Q. Yes.

A. I can tell you the month.

Q. The pipe is marked Exhibit 304. Do you remember the day when you took it from that locality?

A. I do not remember the exact day without referring to my notes, no, sir.

Q. Well, you do recall that it was in July?

A. Yes, sir.

Q. Or was it in April?

A. July.

Q. And after you removed these pipes, were they all removed in July, by the way?

A. Yes, sir.

Q. In the early or latter part of July?

A. Early in July.

Q. Did you call Mr. Simpson's attention to these pipes?

A. Not personally, no sir, not that I remember.

Q. When was it that you had the conversation with Mr. Simpson regarding the pipes and mains of the Consolidated Gas Company?

A. My memory is not quite clear. I saw Mr. Simpson once in May, I know, and I had seen him earlier, but I cannot place the date exactly.

Q. You say you did not see him personally. Do you know who called his attention to these pipes and when?

5819 Mr. Mathewson: There is no testimony that anybody called his attention to them. On the contrary, Mr. Lieb said he doubted it had been. Do not ask your questions in such a way as to mislead the witness.

Mr. **Burr**: I beg your pardon, I am not misleading the witness. He says he does not know personally that Mr. Simpson saw these pipes, and I ask him if he knows indirectly that Mr. Simpson saw these pipes.

The **Witness**: No, sir.

Q. You had no talk with Mr. Simpson with regard to these pipes at all?

A. No, sir, these pipes.

Q. With regard to these pipes. Have you had talks with regard to any of the pipes and services with Mr. Simpson since July?

A. I think not.

Q. You would not be sure?

A. I am pretty sure.

Q. Do you recall the two instances of pipe that you spoke with Mr. Simpson regarding the one at the Brooklyn Bridge and the other at Church Street and Spring?

A. No, sir; I do not recall that at present.

Q. Did you ever have any such conversation with him?

A. Quite possibly.

Q. But you have no recollection of it?

A. Not at the moment, no, sir.

Q. Do you know what was the character of the soil—I think you said it was not filled ground, it was natural soil at this point?

A. I recognized it as natural soil; I am hardly an expert on that, perhaps.

Mr. **Mathewson**: What point is that.

Mr. **Burr**: West Broadway.

5820 Q. Do you know the character of the soil you took all these pieces from? Was the soil in each instance natural soil or filled in soil?

A. In each instance natural soil, to my best memory.

Q. Have you ever seen a pitted pipe which was not at all affected by electricity or which it was not claimed was affected by electricity?

Mr. **Mathewson**: That is a pretty broad question.

Q. In other words, did you ever see a pipe removed from the ground in the City of New York before the use of electricity in the City of New York?

A. Well, I guess I have seen numbers of pipes removed before electricity was introduced in New York; yes, sir; I was not taking notice of pipes in those days.

Q. Has your attention ever been called to a pipe which it was claimed was corroded or pitted or affected in any degree through electric currents, wandering currents, or to another pipe which was affected solely by subsoil conditions?

A. I don't know that that comparison has ever been brought to my direct attention. I have a pretty definite idea of the difference between the two actions myself.

Q. Do you know whether the soil from which you took Exhibit 320A was wet or dry? And I will ask you the same question with regard to 320B?

A. That seems a little difficult to state offhand; it is a matter of degree altogether as to the wetness or dryness.

Q. Well, what is your recollection of it?

A. It was not swampy.

Q. Was it a moist soil?

A. As a matter of fact, it would be a little hard to tell what it would be under normal conditions. We were working on excavation and July was rainy, if you remember, and there was a great deal of surface moisture from time to time. The soil as we saw it, 5821 it was, of course, very wet sometimes, but I do not think that represented its normal condition at all. Really I don't know.

Q. Can you say whether if there was free acidity in the moisture in the soil if pitting would be caused quicker than through electrolysis?

A. Repeat that question.

Q. If there was free acidity in the moisture in the soil, would not this cause pitting quicker than electrolysis?

A. In my opinion that would not cause what I recognize as pitting.

Q. If the soil contains salt and chlorid of magnesium, would not this have more action in the iron pipe than electrolysis?

A. In this case also it will be of a different character, I think, as to the degree of the action I don't know.

Q. How long had each of these pipes been in the ground before you took it up?

A. I have no certain knowledge on that.

Q. Do you know what the usual length of life of the pipe buried in the soil is, which is not acted on electrically?

A. No, sir.

Q. Have you ever made any tests as to the effect of electrolysis on iron pipe?

A. I have made—not on pipes; I have made laboratory tests as to the effects of electrolysis on iron samples, that is all.

Q. In damp soil which is slightly acid, would not there be action between any two different metals, whether they were charged with electricity or not?

A. That has been stated, I believe. In my opinion the action would be slight.

Q. What depth or under what conditions were the pipes you have referred to and brought here as exhibits at the time they were removed from their surroundings?

A. I do not quite catch that.

Q. At what depths and under what conditions were the pipes you have referred to and brought here as exhibits at the time you 5822 removed them from their surroundings?

A. They were in general three to four or sometimes five feet under the street surface, as I remember it. I do not quite understand how you mean by the conditions other than that.

Q. I think you have stated already what you found as to their proximity to the elevated pillars?

A. I see, yes sir. They were in general quite near the elevated pillars.

Q. Have you had much experience or any experience with gas mains or gas services before this observation of yours at these points from which these pipes were removed?

A. No, sir; I should not say that I had had any very especial experience with gas mains before that time.

Mr. Mathewson: Or gas services, Mr. Burr said.

The Witness: Or gas services.

Q. Have you ever made any relative tests as to the different action of pipes corroded by acid and mineral salts in relation to the relative effect and speed of destruction, compared with a pipe affected with electrolysis, and if so, under what conditions?

A. No, sir; I have never made the tests, excepting as related to electrolysis.

Q. Upon what do you base your comparisons, then?

A. Not on direct tests. I say I based the comparison on a general impression as to the extent of local galvanic action.

Q. On a general impression instead of a scientific test?

A. Well, the general impression, I suppose, has been derived from numerous other scientific tests of other people which I have encountered from time to time.

Q. You have received an impression from other people without knowing whether it was an erroneous or correct impression and acted upon that impression?

5823 & 5824

A. Well, the impression would be drawn probably from authorities, writers of treatises and that sort of thing.

Q. Well, that is a probability upon a probability.

A. It certainly is not as good as a direct test.

Q. You were not called upon to make any examination with regard to gas mains, were you, but only with regard to these services?

A. Well, sir, I made some tests on gas mains.

By Mr. Mathewson:

Q. Referring to these different sketches, showing the location of the different pieces of pipe which you took out, where you show the letters A, B and C, that refers to mains?

A. Yes, sir.

Q. A main at A or at B?

A. Yes, sir.

Q. And where the cross pipe ends at A or B, that means a service comes out of that main?

A. That the service was connected to that main at A or B.

Q. How old are you, Mr. Maxwell?

A. I was twenty-eight years old in May, 1906.

At 1:00 P. M. adjourned to Monday, January 21st, 1907, at 11:00 A. M.

Last Exhibits:

Complainant's Exhibit 322.
State's Exhibit 000.
City's Exhibit 236.
260—396

5825 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 21, 1907.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

5826 Albert F. Ganz, a witness called on behalf of complainant, in rebuttal, being first duly sworn, testified as follows:

Direct examination by Mr. Mathewson:

Q. Where do you reside, Professor?
A. Hoboken, New Jersey.
Q. What position do you hold at present?
A. I am Professor of Electrical Engineering and head of the Department of Electrical Engineering in Stevens' Institute of Technology, Hoboken, New Jersey.
Q. And before that did you occupy the double chair of Physics and Electricity at Hoboken, in Stevens' Institute?
A. I was Assistant Professor of both Physics and Applied Electricity before that time.
Q. What degree do you hold in engineering?
A. The degree of mechanical engineer.
Q. Were you the electrical expert employed by the American Gas Light Association within the past few years to make an extended investigation of electrolysis and its effects throughout various parts of the United States?
A. I was so employed by the Committee on Electrolysis of the American Gas Light Association, and in conjunction with them I rendered a report on this subject of electrolysis to the American Gas Light Association.
Q. In that connection, in addition to your general knowledge on the subject of electrolysis and its appearance and effect, did you make a special study of the subject?
A. I did, most extensively. I reviewed all the reports and papers on the subject that had been written to date, including not only those in America but also the important ones in England and Germany, and in fact I collated the important data which had been
5827 published by that time and condensed it and it is in that condensed form published in our report to the Association. I

also myself translated the report made by the German Commission appointed to investigate this same subject, and a condensed translation of this is also published in this report. In addition to that I made a number of laboratory experiments for the purpose of familiarizing myself perfectly with the phenomena and verifying many of the facts which I knew, but which I wanted to be perfectly sure of.

Q. To confirm them by personal experiments?

A. Actual scientific experiments.

Q. Did your investigations by appointment of this Committee on Electrolysis of the American Gas Light Association extend generally over the country in many places, or was it confined to one?

A. The investigations of the reports which I referred to before were scattered all over this country.

Q. At page 3913 of the testimony Professor Sever refers to stray currents, and he is asked whether they do not mean a loss of energy and, therefore, a loss of coal and, therefore, a loss of dollars and cents. Have you read Professor Sever's testimony in this case?

A. I have.

Q. What is your answer to that proposition, in your judgment?

A. I would say that Prof. Sever's answer implies yes, while as a matter of fact the straying of currents from their proper return conductors affords a saving of energy and of coal, and not a continued loss of coal, and for the following reasons: Let us suppose the Manhattan Elevated, for example, was perfectly insulated so that all the return current would pass back to the power station over their own return conductors, that under those circumstances the loss of energy due to the drop in voltage was say ten per cent., and then let
5828 us assume a second case where the structure was so poorly insulated that half of the return current passed through the ground and back to the station, then the loss in energy would only be five per cent., and therefore, the straying of the currents under the circumstances cited really means a gain in energy and not a loss.

Q. At page 3915 Professor Sever states, if I understand him correctly, that the Edison neutral is grounded so as to neutralize the potentials in the system; is this the object?

A. No, sir.

Q. What is the purpose?

A. The Edison neutral in New York City has such an abundance of copper that there is substantially no potential difference set up between grounded points of the neutral, and, therefore, there is no object whatever in grounding the neutral for the purpose of returning any neutral current. The object of grounding the neutral is as a safety measure for the consumer and a safety measure to assure continuity of service. Without such grounding there would be a considerable additional hazard both to life and from a fire standpoint to the consumer, and it is for that reason that the neutral is grounded.

Q. Now, at page 3916 Mr. Sever refers to the passage of the current of the unbalanced neutrals of the New York Edison. Are there any ground currents due to that cause?

A. I should say that there were no ground currents of any substantial character due to the Edison neutral, because the copper provided for the return of this Edison neutral current is so large that the path shunted through the ground from these grounded ends of the neutral would substantially take no current.

Q. Did you make any tests, investigations, yourself, to determine as to the situation of the New York Edison Company, as to its 5829 stray currents or dangerous currents?

A. I was detailed by the Consolidated Gas Company to make as extended an investigation of the Edison neutral as I considered necessary to establish the fact or the facts in the case, and I made such an investigation covering a period of several weeks, and I found the conditions such as I have stated.

Q. At page 3935 Prof. Sever refers to the return feeders on the Manhattan Elevated Railway structure. Are there any return feeders?

A. There are no return feeders in the sense that that term is used. The only copper that is used to connect the structure with the negative bus bar of the station are the bare copper conductors right at the substations, but there are no return feeders paralleling the structure such as are used in the subway.

Q. Prof. Sever also says that the New York, New Haven & Hartford electrical system which is being installed for local service uses an alternating current. (3931, 3938.) Now what is the fact in reference to this installation?

A. The New York, New Haven & Hartford Railroad will employ alternating current from Woodlawn out, and it will employ the direct currents used on the New York Central Railroad from Woodlawn to the Grand Central station, and therefore, so far as the effect of stray currents on the Island of Manhattan is concerned, the New York, New Haven & Hartford is just as much a menace to the piping system as the New York Central in the territory in which our pipes are located; it employs direct current exactly as the New York Central.

Q. At page 3939 of the testimony Prof. Sever refers to the amount of voltage required to produce electrolysis. What is your view on that subject?

A. The statement Prof. Sever makes is that it takes from 5830 one and one-half to two volts to electrolyze water. That is the fact, however, only if the current passes through water from a non-oxidizable anode, but it is not the fact when current passes from an oxidizable anode, as, for instance, from iron or from lead. In the latter case or cases the iron or the lead is oxidized and furnishes a source of electromotive force in itself, so we have no electromotive force counteracting the current due to that electrochemical action. We only find in practice, and this I know from personal experiment, that when a current passes from an iron pipe, say, through the ground to another iron pipe, but that it meets small counter electromotive forces which I should say amount to one-half volt, from my experience, and these are due to changes in the densities of the electrolytes produced by the current itself and are not due to the same cause which produces the counter electromotive force of one and one-half to two volts as stated in the previous answer of Dr. Sever.

Q. Dr. Sever at page 3941 states in substance that a current would follow lead sheath rather than water and gas pipes. Do you concur in the accuracy of that statement?

A. No, sir. A current of electricity will always divide itself between all the paths open to it in the direct ratio of their respective conductivities.

Q. Is that what is known as Ohm's law, or somebody else's law?

A. It is an application of Ohm's law to divided circuits and it is exactly the same case as, for instance, if we had a cylinder containing gas under pressure and there were several leaks in that cylinder and one of the leaks were a large leak and the others small leaks, where we would have gas escaping from every one of the leaks. Just in the same way with electric current, it will divide itself between all
possible paths and, therefore, if a current straying in the
5831 ground finds open to it a lead sheath and a gas pipe, it will
divide itself between the two in direct proportion to the conductivities. It is a fact that the lead sheathings of cables are continuous conductors and do not have joints like gas pipes. On the other hand gas pipes are buried in the ground and make better contact with the ground than do the lead sheaths, and for that reason we may expect considerable currents on gas pipes, in spite of their joints.

Q. Is the return rail system of the subway as highly insulated to the ground as Professor Sever has described?

A. It was originally so highly insulated, that is the structure which Professor Sever has described, is substantially the structure which was installed. Since that time, however, connections have been made between the rails at different points, and the metal of the structure itself which is grounding the return system and thus making it possible for stray current to get into the pipes.

Q. That is the present situation?

A. That is the present situation.

Q. You saw and examined the other day the map showing the electrostatic condition in May, 1902, or about that time, as presented by Mr. Varley, being complainant's Exhibit 301, did you?

A. I did.

Q. And did you also see the map (Complainant's Exhibit 302) here later and presented by Mr. Varley, showing the different situation as to electrostatic conditions?

A. I did.

Q. In view of the testimony that no substantial change took place in conditions during the period except the installation of electricity on the elevated railway, what, in your judgment, would the change in the electrostatic condition be due to?

A. To the installation of electricity on the Manhattan Elevated Railway.

Q. Now, it appears that the danger lines, meaning the red
5832 lines on the map, were not only down the lines of the Man-
hattan Elevated according to the 1903 map, but also appeared on the rails along Broadway and in certain streets where the elevated does not run. Would that naturally follow?

A. It would.

Q. Did you also see this map showing section of the City (map, Complainant's Exhibit 303), showing certain electrical conditions in the territory between Canal Street, Hudson River, 14th Street and Broadway?

A. I did.

Q. Indicating the direction of currents to the elevated sub-station?

A. Yes.

Q. Did you also examine the various service pipes and the two lead cables which were put in evidence during Mr. Maxwell's testimony?

A. I did.

Q. And the several charts or scales showing the electrical readings as between the services and the mains with which they were connected and the elevated pillars where they were respectively taken out?

A. I did.

Q. Meaning the charts which have been marked in evidence?

A. I understand.

Q. And did you hear the testimony that all those services were taken out within a space of about two city blocks?

A. I did.

Q. And in this very location which is covered by Complainant's Exhibit 303?

A. Yes, sir.

Q. Did you find on these wrought iron service exhibits any pittings or any other marks which in your judgment were due to electrolysis?

A. I found numerous pittings which indicate electrolysis, and taken together with the location of these pipes in the ground and with the electrical readings which were taken before they were taken out, and also taken together with the measurements of currents showing that current was flowing toward the sub-station located 5833 in this very street, taking all this evidence as a whole I consider it as a positive conclusion that the pittings were due to electrolysis; and, further than that, it is my opinion that even the excessive rusting, in a large measure at least, was due to the action of stray currents which were passing at that point, because it is well known that the effect of stray currents produces, or, rather, increases the chemical action.

Q. If you found a single instance the proof would be less positive of the strength of electrolysis, wouldn't it, or would it still be clear?

A. It would depend upon the circumstances which surrounded that single instance.

Q. But if you found the condition existing in 1902 as indicated, and then the change in 1903, and you then found this map, Exhibit 303, showing the directions of currents as they there existed, and if you then found within the space of two blocks the difference in potentials between the services taken out and the elevated pillars in that immediate section, service after service within that short distance, would not that all taken together amount, in your judgment, to an absolute demonstration that it was electrolysis?

A. It would in my judgment be an absolute demonstration.

Q. Now, will you take the first gas service which was taken out, being the 432 West Broadway example, and point out from the pipe, and illustrate by the readings on the chart, Complainant's Exhibit 305, the electrolytic action.

Mr. Burr: What is the number of that exhibit?

Mr. Mathewson: That must be pipe, Complainant's Exhibit 304?

A. I find in the center of the long part of this pipe one pitting which at the bottom goes entirely through the pipe, and also a number of other pittings, which are, however, not so sharply marked as this particular one. This kind of pitting, that is this kind of hollowing out in local parts, is characteristic of electrolytic corrosion. I would, however, not base an opinion only on the object itself, but this pipe was taken out from the locality shown in Fig. 1 on the blue print, Complainant's Exhibit 305. This service pipe was connected to the gas main marked A in this print, Complainant's Exhibit 305. This gas main was found to be positive to the elevated pillar by one to two volts. This same elevated pillar was located about four feet away from this service pipe. The measurements shown in the large map, Complainant's Exhibit 303, indicate that stray electric currents were actually flowing in the underground metal in the vicinity of this street, and all converging towords the Manhattan Elevated sub-station. A further experiment made on this same street as illustrated in blue print, Exhibit 322, shows that when a gas pipe in the street was connected by a copper wire to the elevated pillar with an ammeter in circuit a large current of 90-amperes was drawn over this wire. That clearly indicates that the potentials which existed between the pipe and elevated pillar on that street were not merely electrostatic potentials, but that they were potentials due to currents, and when the points between which these potentials were existing were connected by a conductor a current flowed. Now then we know that the ground which connected the service pipe with the elevated pillar is an electrolytic conductor and therefore with the potential difference that does exist by measurement a current must have flown, and that, taken together with the actual pitting found, is evidence that this pipe was corroded by electrolysis. The remainder of the pipe is generally rusted. It is my opinion that current was leaving the pipe to a small extent all over the pipe and aggravating the chemical actions and aggravating, therefore, the general rusting and the general deterioriation of the pipe.

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Q. And you find in the case of each other service pipe here, do you not, a similar difference, not exactly the same difference, but a similar substantial difference in potential between the pipe and the elevated pillar, as shown by these different exhibit sketches?

A. I do.

Q. And when you find that there are ten or twelve such cases of similar pitting, difference of similar potential within this space of two blocks, what effect does that have on the general conclusion which you have stated from the single instance?

A. It only strengthens it. In fact, I should say it was the most positive evidence that you could possibly get, because you cannot get down in the ground and watch this destruction. The evidence necessarily is this kind of evidence.

Q. Now, will you look at those two lead pipes behind you which have been put in evidence and are exhibits 323 and 324. Lead pipes do not rust, do they, as wrought iron does?

A. Of course that depends on what you mean by rust. They are chemically destroyed, and in that sense you might say they rust.

Q. But you do not find the same rusting that you do on wrought iron so that some not well-informed person might attribute a pitting either to rust or to electrolysis. The character of a lead pipe is substantially different, isn't it?

A. Yes, sir.

Q. Now, will you look at Exhibit 323, and do you observe that that pipe shows the pittings which you have described for half its length and then is smooth the balance of its length?

A. I do.

5836 Q. Now, if it were in the soil and that action were due to the soil alone, there would not be any such difference as that, would there, in the appearance of the two parts of that section?

Mr. Burr: I will ask you to let him state himself what he finds there. Of course I do not think it makes much difference.

The Witness: Shall I answer the question.

Q. Yes.

A. The chemical actions which occur in the soil ordinarily produce a more uniform corrosive effect than is here shown. These particular pittings are characteristic of electrolytic action. They are always found when electrolysis takes place.

Q. And did you hear the testimony as to the location of that lead pipe, Exhibit 324, in relation to the sub-station of the elevated?

A. I did.

Q. And upon that testimony and upon the examination of the pipe, to what would you say those pittings were due, and from what source would you say that the current came that did it?

A. Undoubtedly to currents which strayed from the Manhattan Elevated return and by way of this pipe went back to the sub-station in the street and in front of which this pipe was removed.

Q. And would that action be known as electrolysis?

A. Yes.

Q. I will ask you, in view of the exhibits that have been presented and the electrostatic condition which has been shown and the number of the instances which have been produced within a small area, the pittings on these wrought iron pipes and on the lead pipes could have been produced, so far as the testimony shows, by any other agency except electrolysis?

A. None in my opinion.

5837 Q. And electrolysis from the elevated railway currents?

A. That is my opinion.

Q. Now, counsel for the defendants in the examination of Mr. Maxwell extracted considerable entertainment from the suggestion that if you had a pipe, a gas main, laying some distance from an elevated pillar, that the current must come from that pipe at the point nearest the pillar and if it did do so or if it did not do so, it would not come from points on the other side of the main, and that if it was assumed to come from points on the other side of the main or on the top of the main, that would be ridiculous. What is the fact about that?

A. The fact is it might leave the pipe in any number of places around its circumference, depending entirely on the conductivity of the soil in various places surrounding the pipe. For instance, let us assume that the pavement above the pipe had been cracked——

Mr Burr: What is that paper?

Q. Just a moment. I show you a sketch. You can use this, and then I will offer it perhaps. Assume that the circle surrounded by the points A, B and C is a main, and the points A, B and C are on that main and that the street surface is where I have indicated by the line above, and that the elevated pillar and foundations are in the upright positions which I have indicated. Now, will you express yourself on the subject regarding which I just questioned you?

A. By the law of divided circuits, and assuming that the pipe makes uniform contact with the soil and also that the soil is of uniform conductivity, current will leave the pipe at every point of its circumference and go to the elevated pillar. The strongest current under those circumstances would of course be from a point 5838 nearest to the elevated structure. However, with the soil in the street we do not have that uniform condition and it may well be that the path from the point C, for instance, to the elevated pillar may, due to some accidental reason, be a better path than the path from B directly opposite to the pillar. Both paths may exist and all three in fact may exist, and more may exist, and the current may leave the pipe in just so many places and produce just so many pits.

Q. Assuming, of course, that the pipe was positive to the elevated pillar, as has been testified was the case with these exhibits which have been presented?

A. That of course is my asumption.

Q. Let me show you Complainant's Exhibit 320-A. There appears to be a hole in this pipe on the side lying towards the elevated railway, according to the testimony?

A. Yes.

Q. And on the opposite side of the pipe there seem to be some irregularities?

A. Yes, it is all over here.

Q. Would it be an unusual or uncommon thing for a pipe lying in soil like that in New York City to have the current start at point A on this diagram and arch over the pipe on the opposite side?

A. Not at all.

Q. Or at point C, and arch under the pipe?

A. Yes.

Q. It would not be an extraordinary thing but a very common thing?

A. Yes.

Q. And, therefore, if there are also pittings on the back of this pipe, which are also due to electrolysis, is there anything inconsistent in the science or the art in that?

A. Not at all.

Mr. Mathewson: I will offer this in evidence, it may be placed on the record for purposes of illustration.

5839 Paper received in evidence and marked Complainant's Exhibit 325.

Q. Testimony was given, Professor Ganz, by Professor Bemis, and some of the witnesses for the defendants, in reference to an expected very great increase in the sales of gas, which I assume would be affected by the cheapness or efficiency of other illuminating apparatus. Can you tell me whether there are improvements now in progress, or virtually attained in connection with incandescent lamps that would increase such efficiency and cheapness of that illuminant?

Mr. Kirby: I object to that; it is opening up a field into which we could go until next summer. It is not proper rebuttal.

Mr. Mathewson: I have only two or three questions on that line.

Mr. Burr: I object to it as not proper rebuttal.

Mr. Mathewson: I will say that I merely desire to show by the witness that there are two or three lamps of very much greater efficiency——

Mr. Kirby: And there are several gas lamps in the same way, and if you should bring in this we would have to bring in others, and where would we end?

Mr. Mathewson: If the Master is in doubt about it, I shall not press it. It seems pertinent to me.

The Master: At first blush to me it does not seem to be rebuttal evidence. I do not recall exactly what Professor Bemis testified to, but it may be you are quite right, and that there is some specific fact to which he testified that you may rebut.

5840 Mr. Burr: I assume it is the testimony of Dr. Marks and Professor Bemis, that the reduction in the price of gas invariably means increased consumption.

Mr. Mathewson: Yes, a very large increase, they have stated, and my purpose was to show that even if their assumption be correct as to the general theory, that there are discoveries which have been just made and devices made in the electric lighting business which would have a tendency to cut down the output of gas by the use of this cheaper electric lighting. That is exactly the point, but if the Master has doubt about it, I shall not press the question.

The Master: I am inclined to think that objection is good.

Mr. Mathewson: Very good, then I shall not press the question.

Q. Now, I will ask you whether you examined each one of these exhibits of wrought iron pipe offered during Mr. Maxwell's testimony?

A. I have.

Q. In addition to those which you have specified on the table this morning?

A. I have examined each one of them.

Q. And whether you found on each one of them pittings in your judgment due to electrolysis by currents from the elevated railroad?

A. The pittings and corroded condition of the pipes taken together with their location and the electrical readings taken from them indicated to my mind that the corrosion was at least to a large extent due to electrolysis derived from stray currents from the Manhattan Elevated Railroad.

Q. Generally, Professor, while the situation of electrolysis in New York until very recently has been more favorable than
5841 in many cities, I assume, what is your view as to the future danger of electrolysis by reason of the evidences which you have seen here as affecting the pipes of the Consolidated Gas Company?

Mr. BURR: I object to that as being too remote and speculative.

The MASTER: I will allow it.

Mr. BURR: Exception.

A. My opinion is that stray currents are now flowing from the elevated to the gas pipes, and off from them and that in the future they will continue to flow, and that some destruction is going on; whether that destruction is serious or not I do not know. You probably will not find out until the pipes are dug up, as they were in this case, and examined.

Q. What would be the tendency due to these increased currents and increased electrical construction to which reference has been made as to the New York, New Haven & Hartford and the New York Central and the subways?

A. They would increase the hazard from stray currents considerably.

Q. And would it be your view or not that damage is to be expected in the future for which provision must be made to a greater or less extent?

A. I do not think the damage can be prevented. I believe there is sure to be continual damage in the future.

Mr. MATHEWSON: That is all.

Cross-examination by **Mr. KIRBY**:

Q. I presume that you agree with Mr. Lieb that the Edison Company has been making and is to-day making efforts on
5842 their part to prevent stray currents from their curcuits?

A. It is my opinion that the Edison Company has, right from the beginning, had such an abundance of neutral copper in the ground that there never was any danger from stray currents, and I do not think that their improvements are made—or rather their additions of a neutral feeder are made for the purpose of preventing stray currents; they are simply for the purpose of making their system as effective as possible.

Q. And as a corollary to making their system as effective as possible, comes the fact that the danger from stray currents is minimized?

A. It does.

Q. Is it also not a fact that the elevated railway structure or those who control the elevated system are making efforts to-day to prevent stray currents from their structure?

A. They are making efforts inasmuch as they are substituting for the uninsulated connecting return cables at the sub-stations, insulated cables.

Q. And will this, in your opinion, improve the situation?

A. It will improve it.

Q. So that the condition in the future would be better than it is to-day?

A. The condition of the Manhattan elevated with the improvements indicated will be better in the future than it is to-day.

Q. And have been in the past?

A. And have been in the past; excepting, perhaps, in so far that the Manhattan may increase its capacity and therefore may be using larger currents, and also excepting this important point, that the Manhattan Elevated depends for the return of its current largely on the bonding of its structure and bonding of its rails; and when there bonds are new they make good contact as a rule, but as the bonds become old they are likely to deteriorate in their contact, and while they are now substituting insulated cables for the 5843 uninsulated ones at the substations, the bonding may, due to vibration of the structure and due to natural causes, become less efficient and therefore the structure itself and the rails themselves may become less efficient return conductors, and for that reason we might expect a larger increase in the stray currents.

Q. But this increase of current upon the structure itself, and decreased conductivity of the structure due to faulty bonding, is purely problematical, is it not?

A. Not at all problematical, in view of the fact that a large part at least of the electrolytic damage from single trolley railroads has in the past been due to poor bonding which was good at first and became defective through use. That has always been the experience.

Q. Take the increased use of current, have you any definite knowledge or information as to whether more current will be used in the future than is being used to-day?

A. No.

Q. Take the question of bonding, have you any information or knowledge as to whether or not those in control of the elevated railway system will not use their efforts to keep their bonding in good condition and repair?

A. I have no doubt they will use their best efforts, but even their best efforts will not enable them to locate defective bonds; it is a most difficult thing to locate, and there are so many in the elevated structure, it is, in my opinion, impossible to keep them all in effective condition.

Q. But the general conductivity of the whole structure can be kept up, can it not?

A. That is problematical; I don't know. It is a riveted structure with bonds, and whether or not the conductivity can be kept up or not is a question only time can decide. It is certainly nothing like as good a return as, for instance, we have in the subways, 5844 where a continuous copper return feeder is used—you could not compare the two.

Q. Then there is but little danger from the subway?

A. There is very much less danger from the subway than from the Manhattan elevated. How much danger there is from the subway nobody knows.

Q. That is also problematical?

A. That is in a sense problematical, yes.

Mr. **Mathewson**: Do you mean there would be less danger in the subway return than there would be in the elevated after they instal this new bonding system, or as it now is?

Mr. **Kirby**: I will ask him.

Q. The subway system is a continuous cable return, is it not?

A. In the subway system they have continuous cable returns attached to various points in the rail system and conducting the current back from those points. Whether or not all the current will return by those paths depends upon the potential differences which exist between the points in the subway which are grounded in the way I have described before. If those points can be kept at the same potential or substantially so, within one volt, I put that as the safe limit, if it can be kept within that limit, in my opinion there will be no currents which could be considered dangerous.

Q. And that is the intention and that will be the effort, will it not?

A. I don't know what their intention is.

Q. It is, in your opinion, a possible engineering result, to keep such points within the range of potentiality of which you speak, is it not?

A. It is an engineering possibility, but I do not know of a single case in this country where it is accomplished.

Q. It is accomplished in the Edison circuit, is it not?

5845 A. That is not a railway circuit. You must remember that in a railway circuit, all the current that is used has to return by the grounded conductor, whereas in the Edison system a very small fraction of all the current that is used is returned by the neutral grounded conductor and the mass of copper there employed is such that there will be no appreciable potential difference to do any damage.

Q. But in the subway system the return is by the rails and copper return cable, is it not?

A. Yes, but that does not say that all the current is going back by that path. For instance, suppose all the return cables were of the same cross section and one was a short cable and the other was a long cable, there would be still a potential difference between the ends of those cables, and if those ends should be grounded to the structure—whether they are or not at those points I don't know—but if they should be, there would be a stray current due to that cause.

Q. The reason, I presume, for grounding of the currents at certain points to the structure itself is to take advantage of the conductivity of the structure, is it not?

A. Not at all. The reason is to make it safe for workmen to work in the subway and prevent an electrostatic charge from making the rails at a higher potential than the ground. It is not at all for the purpose of making the structure the return. It was found necessary simply as a precautionary measure.

Q. Will you take up, if you will, the piece of pipe, I think it is Exhibit 324. Looking at that pipe I see it appears to be pitted along practically its whole length. Do I understand you to say that is all due to electrolytic action?

A. I did not say that. I said that the fact that the pipe was carrying current in the neighborhood of the Manhattan substa-
5846 tion in Spring Street, and that the pipe was positive to the ele-
vated pillar in that neighborhood, and the fact that these pittings—that pittings do occur which are of an electrolytic appearance —taking all these things together, I say it is conclusive evidence that at least a part of it is due to electrolysis.

Q. What would the other part be due to on that lead sheathed cable?

A. The effect of electric current when it passes from a metal into an electrolyte is to produce an acid condition and set up chemical action. Some of this may be due to secondary chemical action from that cause; I do not know.

Q. Have you made any analysis of the earth at that point?

A. I have not.

Q. Have you been informed, or do you know, whether there is any acidity at that point?

A. If there was no acidity there originally, the current would take good care to make it acid.

Q. You do not know, that is a conclusion?

A. I know that an electric current in the presence of salts, which are always found in the ground, such as chlorides, nitrates and sulphates, and the like, always produces an acid condition at the point where the current leaves the metal.

Q. Do you know whether or not there was an acid condition at that point where this pipe was taken from, and if so, how do you know it?

A. Not from tests, no.

Q. Then you are not prepared to say whether that was so or not?

A. I am prepared to state that if currents as is shown left the pipes at these points and went into the soil, the soil containing the usual salts, that acids were formed at these points.

Q. You don't know whether or not it contained the usual salts?

A. It always does.

Q. You are not prepared to say the soil did at this point, are you?

A. No.

5847 Q. You are not prepared to swear that it contained other
than the usual salts, are you? You do not know anything about what the chemical makeup of the soil was at that point?

A. I know nothing about the chemical makeup of the soil at that point.

Q. Am I to understand you that the current was leaving the entire length of that cable?

A. Yes.

Q. And that from one point to the end it has created a certain broken condition of the surface? Now, point out if you will, what is due to electrolytic action if you can, and what is due to other action?

A. I cannot point it out. Nobody can.

Q. Is there any point there at which you are more positive than the rest that it is due to electrolytic action?

A. Yes, we find from experience that when the corrosion is concentrated at local points producing pits or deep depressions, that that is the result of electrolysis, whereas the ordinary chemical actions produce a more uniform destruction. Further than that, if acids were present which would chemically act on that, they would all the more act electrochemically, that is, the current would act worse in the presence of acids and make the conditions tremendously worse than they would without.

Q. And where we have this acidity in the earth or salts, am I to understand that there may be electrolytic action without any flow of current to or from that point from an outside source?

A. Why, no, I did not say that. I said that from the evidence presented, the current was leaving this pipe.

Q. Yes, but I am not speaking of the evidence presented; I am speaking of this little electrical action which you have spoken of which might be produced when there was acid or salts present. I am asking if that is a condition which might obtain, and if electrolytic action might take place without there being any current to start up that action, such current coming from an outside source. 5848

A. I do not understand your question.

Q. We will assume we have this condition, which you have made reference to, where we have an acid earth.

A. Yes.

Q. Suppose we had two metals in that earth, could there be electrolytic action set up between those two, that is, could a battery be made?

A. Oh, yes, that is possible if the conditions were just right. If you had two metals which were so located with reference to each other in this acid earth as to produce galvanic action, that could certainly be produced, yes.

Q. What was this pipe lying next to, do you know?

A. Well, it was drawn out of a subway duct, which, as I remember it, was iron; it may possibly have been tile. I do not recollect at the moment.

Q. What would be between this lead-sheathed pipe and this iron or tile duct?

A. Probably some water.

Q. Well, then, do you know whether it was water or not?

A. I do not.

Q. Is water supposed to be present there?

A. It is not supposed to be, but it gets in.

Q. Suppose it was not there, could such corrosion take place?

A. No.

Q. Then would you say that is due to the decomposition of water and electrolytic action set up by the water that this pitting is present?

A. I did not say that. It is not the decomposition of water that makes it, it is the salts held in solution by the water to which is due the damage. I should say that certainly there was a solution of some kind, something wet between this and the duct, in which it was lying, without a doubt.

Q. It could not be produced in any other way, you think?

A. If the ducts were perfectly dry and this were lying in perfect contact I do not believe it could be produced, no.

5849 Q. The duct is intended to be dry, is it not?

A. It is intended to be dry, yes.

Q. Have you examined any service pipes or wrought iron pipes taken out of the city streets besides those which have been put in as exhibits?

A. I do not recall whether I have examined any taken out of the streets in New York. I have examined them in other places.

Q. If you have not examined them taken out of the streets of New York or out of the neighborhood from which these pipes came, how are you prepared to state that the rust on these pipes has been largely increased by electrolytic action? What comparison have you to make so as to draw your conclusion?

A. I have the facts given in the testimony in regard to the electrical readings; that is, that these pipes were all positive to the elevated pillar; further than that, that the gas pipe, or rather the gas main, was actually carrying current leading up to this district where these pipes were removed. On one of these pipes (complainant's Exhibit 307) a flow of current was actually measured on the service pipe, Exhibit No. 7. The map, Exhibit 303, shows that on underground conductors generally in this neighborhood currents were flowing generally in the direction of the Manhattan sub-station. And all these things, taken together and taken together with the pittings and the corrosion that we observe, are as conclusive evidence as can be possibly obtained.

Q. That there is electrolytic action going on?

A. That there is electrolytic action going on.

Q. Yes, I quite understand your point in that regard, but that is not at all responsive to the question which I asked you.

A. I do not understand your question.

Q. My question is this, you have stated that rusting of
5850 these pipes is due, in your opinion, or has been increased, in
your opinion, by electrolytic action?

A. Yes.

Q. Now, you are not familiar with the soil there. You don't know whether it is an acid soil or what salts may be contained therein. You have not seen the pipes taken out of the ground from that point or even in the city. You have not observed rust thereon, to what extent it may be or has been, and still you give a conclusion as stated.

Now, I want to know upon what comparison you base your conclusion?

A. From the fact that any soil, so long as it is damp or wet, is an electrolytic conductor, and these service pipes were lying within a few feet of an elevated pillar and were positive to that pillar, before the ground was removed there was unquestionably a flow of current through that ground. There could not be anything else. Of course, when the ground was removed the flow of current was interrupted because the circuit through which the current was flowing was interrupted. It was therefore manifestly impossible to measure the current flowing on these pipes, for the reason the current was interrupted by taking the pipes out of the ground. The only reason we have is that there was damp ground between the two and a potential difference in the manner indicated.

Q. You never made any comparison of pipes lying in this ground which were not subjected to electrolytic action and pipes which had been, in your opinion?

A. In this ground, no.

Q. Or in any other ground in the city?

A. Not in this city, no.

Q. You have spoken of currents flowing along the pipes. How do you know it was flowing along the pipes?

A. They were measured and are shown on some of these exhibits.

5851 Q. Do you mean to say if you take and put an ammeter between a pipe and an elevated pillar and get a reading across, that there is current flowing on the pipe or to the elevated pillar?

A. No, sir, I did not say that.

Q. How do you come to your conclusion?

A. My conclusion is based not on that exhibit, but other exhibits.

Q. What exhibit?

A. I will show you.

Mr. MATHEWSON: Current flowing along the pipe, he said.

Mr. KIRBY: Well either one.

The WITNESS: Take, for instance, this same exhibit I had last (indicating). There is an actual current of .95 amperes flowing along that pipe. It was found by measuring the drop along the pipe, along a measured length of the pipe.

Q. Now, taking this Exhibit 307, you say it was found by measuring the drop along the pipe?

A. Yes.

Q. Will you kindly point out the point where that reading was taken and what it is and what other elements enter into your conclusion that there was current flowing along the pipe?

A. The electrical readings were taken by Mr. Maxwell, and he has testified that these electrical readings were taken by himself and were correct.

Q. That is all right. Now, what were the readings and where were they taken?

A. They were taken on Exhibit 307 on this particular pipe, as shown. Mr. Maxwell will have to answer that question as to exactly what point. It is quite immaterial, so far as this case is concerned.

Q. That is not it. I want you to do so, but you seem unable to point out where the readings were taken, what particular points and what they were and upon what elements you based your conclusion that there was currents flowing in that pipe? 5852

A. I based it upon this evidence here, Complainant's Exbitit 307. That states specifically on that exhibit the current flowing equals .95 amperes from the main towards the house, and this has been put in evidence by Mr. Maxwell, and he has testified that these readings are correct, and he is competent to make these measurements, and, therefore, I have a right to consider this is the current.

Q. You have just stated that this exhibit, coupled with Mr. Maxwell's testimony, is to the effect that the current flowing from the main towards the house is .95 amperes?

A. Yes.

Q. If I remember his testimony, it was to the effect that he put an ammeter across from the pipes to the elevated railroad pillar, or whatever it might happen to be?

A. No, that is a mistake.

Mr. Mathewson: That was another thing, that is where he got the difference in potential there.

Mr. Kirby: No, you do not read difference of potential with an ammeter.

Mr. Mathewson: Another place he testified about that.

Q. Then you cannot tell me from this exhibit and from the testimony which you have listened to how Mr. Maxwell got his result, which is set down there, can you?

A. I am simply taking these exhibits for what they are.

Q. But you cannot tell me and answer my question from this exhibit and from Mr. Maxwell's testimony which you were here and listened to, how he got his conclusion that there was .95 amperes along that pipe?

A. I cannot answer it until I read over his testimony again. I do not remember whether he has testified in detail how he made this particular measurement, but I know he is perfectly competent to make such a measurement, and as long as he states that the current is .95 amperes, I take it he made it in the proper and correct way. 5853

Mr. Mathewson: He stated those were the correct electrical readings.

Q. Now, I show you Complainant's Exhibit 322, and call your attention to the statement thereon, as follows: Pipe connected to L pillar through an ammeter, pipe positive 90 amperes, 2.2 volts; pipe negative 10 amperes, .8 volts. Do you mean to say that reading with an ammeter in that way means a flow of current from the pipe to the elevated railroad pillar?

A. No.

Q. It simply means that when an ammeter which carries a conducting wire from the pipe to the ammeter which in itself is a conductor, and then to the pillar, in other words, when an ammeter is interposed between the pipe and pillar, there is a flow of amperes indicated.

A. It means more than that.

Q. It means that and more?

A. Yes.

Q. But it means that?

A. Yes, and I would like to explain what it means more, if I may.

Q. I think I understand what it means more. I have no objection to your explaining it, if you want to.

A. I would like to explain. If there was simply a high resistence connection between the gas pipes and elevated structure at some point, we might get a potential reading, but when we put an ammeter across we would not get any considerable current. The fact that we would get a considerable current in an ammeter connected between the pipe and elevated pillar indicates that there is a contact somewhere else between that pipe and the elevated pillar, and, therefore, it indicates that we have not merely an electrostatic potential, 5854 but we have a condition which is most favorable for the flow of current.

Q. As a matter of fact, there are risers which go up from most of these gas mains, to most of the elevated stations onto the structure itself, are they not?

A. Yes.

Q. That would be an excellent contact, would it not?

A. Yes.

Q. Far better than the flow of current through the earth?

A. That is comparative. I could not answer that question.

Q. Most things are by comparison. The result of all your testimony is by comparison and deduction?

A. Yes, in general, I should say very much better.

Q. We have looked at this piece of lead pipe and the pittings in it. Do you think that if, instead of the lead pipe occupying the position which this one did, Exhibit 324, it had been wrought iron pipe that the evidences of electrolytic action would have been practically the same?

A. Not quite, because the rate of corrosion of lead is about three times that of wrought iron; that is to say, a given time and a given current will remove three times as much lead as it will iron.

Q. But is the evidence, that is, the marking in one characteristic of that in the other, or do they differ, and if so, how do they differ?

A. I do not believe there is a substantial difference.

Q. You do not believe there is?

A. I do not believe there is a substantial difference.

Q. So that if a wrought iron pipe was subjected to an electrolytic action of the same intensity as a lead pipe or sheath covering of a cable and the time for the wrought iron pipe was three times that for the lead, you would expect to see practically the same result?

A. Under ordinary conditions, yes.

5855 Q. Is there any method by which, after a lead cable or wrought iron pipe has been removed from electrolytic corrosion, you can tell whether the corrosion has been recent or a long time removed?

A. Not that I know of.

Q. After a wrought iron pipe has been subjected to electrolytic action in the soil, I take it that it immediately becomes rusted at that point, does it not?

—. Well, the electrolytic corrosion is a form of rusting; it is a very broad term, rusting.

Q. If you subject, for instance, either lead or say, wrought iron particularly to electrolytic action, such action as would be damaging, which I take it is the current flowing away from the pipe, there is a deposit being taken from the pipe to something else instead of a deposit being made on the pipe, and you broke your current and looked at the pipe you would find it brightened where the electrolytic action was taking place, would you not?

A. Do you mean at a point where the current left the pipe?

Q. Yes.

A. Find it brightened?

Q. Yes, the pipe would look clean and new?

A. No.

Q. How would it look?

A. Rusty.

Q. What would rust it?

A. The acids produced by electrolysis.

Q. The acids would immediately attack it and rust it?

A. Yes.

Q. While the electrolytic action was going on, however, there would be no rust present, would there?

A. Rust is a broad term, and includes all erosion.

Q. The place would look bright and clean?

A. That is a hypothetical question, Mr. Kirby, which I cannot positively answer. I do not believe anybody knows.

5856 Q. Then we will go on a little further, and our electrolytic action is either going on or has stopped and, as you state, corrosion takes place and the point becomes rusted. You would dig your pipe up and it looks also rusty. Suppose that pipe had been subjected to electrolytic action ten years ago and it had stopped, and you took it up today, could you tell the difference in appearance between that pipe and one which you took up yesterday?

A. No, sir.

Q. And in which the electrolytic action had been present the day before yesterday?

A. No, sir.

Q. Now, coming to this pipe here, Complainant's Exhibit 320-A, about which we have had some testimony as to current leaving from the various sides thereof, I want to know if you agree with Mr. Maxwell that these various points are due to electrolytic action? Here is a hole right through it. I think it is the only hole through the pipe. You think that is due to electrolytic corrosion, don't you?

A. Looking at the pipe just by itself, and only showing what is shown there, I would not be willing to form any conclusion whatever as to the cause of that corrosion; but only when we consider the relation of the pipe to its position in the ground and the electrical reading taken thereof, all that taken together is evidence that it is electrolytic corrosion, but not the appearance of the pipe itself; but it is a fact which we get from general experience that electrolytic corrosion produces marked pittings, which are rather different in appearance from the ordinary corrosion that takes place in the ground, and such pittings I have examined in many instances, and they are characteristic. But I would not be willing to swear that a given pitting taken by itself and without any other evidence was a sufficient proof of electrolysis.

Q. In other words, it might be due to ordinary chemical action, such as rusting, or if there were more acid in the earth, due to more energetic chemical action?

A. I should say I did not know.

5857 Q. So you are not prepared then to take up any one of these pipes, except possibly this lead cable, and swear that examining them by themselves you would say that the pitting and rusting and other evidence of deterioration thereon was due to electrolytic corrosion, are you?

A. I would say that these exhibit pipes in many instances show the pittings which are characteristic, strongly characteristic, of electrolysis, but I would not be willing to swear that from the appearance of the pipe itself we could substantially say it was electrolysis.

Q. Let us take complainant's Exhibit 328, and point out to me, if you will, the pittings which are to you strongly characteristic of electrolytic action. That is what I want to see.

A. Well, this pitting in which there is a hole, this pitting over here, around which there is a long blotch (indicating).

Q. Let us mark them. Now, the one I have marked with a ring around it in lead pencil?

A. Yes.

Q. Now, how about this on this side (indicating)?

A. I don't know anything about them, the evidence is not good enough there to make anything positive at all.

Q. How about this one?

A. I don't know.

Q. Or this one?

A. I don't know.

Q. Well, we have two on which you feel quite positive?

A. No, I am not so positive about either of them as evidence in itself.

Q. But they are strongly characteristic of electrolysis?

A. They are strongly characteristic of electrolysis, but not so strong as some of the other exhibits.

Q. Let us take some of the other exhibits. If you will hand me that short piece of pipe over which we had some somersaults flying around Saturday. Take this pipe, 320-B, what strongly 5858 characteristic evidence of the electrolytic corrosion do you see on that?

A. I do not think there is any very strong evidence of what I would say, in itself and taken by itself, was evidence of electrolytic corrosion, no.

Q. Now, if I may have Mr. Mathewson's diagram, Exhibit 325. Turning for a moment to that exhibit, which has some three points marked thereon, am I to understand from your testimony that current from the point A would by preference take the path of the earth to the elevated pillar, rather than flowing through the iron pipe itself and leaving by point B?

A. I did not say so. But let us suppose, for instance, that there is a rock between the pipe and the pillar, in between here (indicating), then certainly the path from A over to the pillar, or from C over to the pillar, is better than B to the pillar.

Q. But point B being the point facing the pillar has been testified to by Mr. Maxwell as being the point where the electrolytic pitting took place.

A. That would be, under ordinary conditions, the place where the worst pitting would take place. It does not follow that all the pitting would take place there. It is my opinion that electrolytic corrosion and pitting go together, you cannot separate them. And it is my strong opinion that this corrosion from electrolysis is taking place all over there. The reason we get pitting, as that is understood today, is that at some point in the pipe or other there is a better conduction to the ground, and therefore a strongly localized current, and it is for that reason that the chemical action at that point is concentrated and aggravated and therefore produces a stronger and deeper pit than it does more uniformly.

Q. Well, let us look at Exhibit 324 again. Do you find any evidence of that current leaving, except from one side?

A. No, sir.

5859 Q. Would you agree with Mr. Maxwell that one of the strong evidences of electrolytic corrosion in the pipe would be the pittings along the straight line running parallel with the pipe, or rather not twisted around the pipe, but running down its length?

A. I would expect to find the greatest electrolytic destruction at the point nearest to the pillar, provided, of course, that the ground around here was uniform. There may be a wall between however and a dozen reasons why the path is better from some other spot.

Q. And the earth is generally other than uniform, there are stones and pebbles and things like that in it?

A. Yes.

Q. So we could expect to see current come from any and all parts?

A. Yes.

Q. And that being so, the pittings would not be in a regular straight line, but from everywhere?

A. Not as a rule, if they were in the ground, no. But this lead pipe was in a different condition, it was not in the ground, but was resting in a duct, and therefore was making contact at the bottom and not along other points.

By Mr. Mathewson:

Q. And the lines are where it was making a contact with the duct?

A. Yes. I have explained that already.

By Mr. Kirby:

Q. In this pipe shown in Exhibit 325 the distance between point A and the pillar and point B and the pillar, as far as the relative conductivity of those two paths is concerned, is infinitesimal, is it not? Take these pipes here, they are one inch pipe and two-inch pipe——

A. Yes, but the fact is this——

5860 Q. Well, that is so, is it not, it is infinitesimal, if you measure the conductivity of the earth between A and the elevated pillar and between B and the elevated pillar?

A. Yes, but that is not what counts. It is the surface contact with the ground and not the conductivity of the earth itself.

Q. So that if you had your good surface contact at A with the pillar you might have almost all your current leaving at that point as against B where the surface contact was poor?

A. Under that assumption yes, although I ordinarily would not expect it so, for this reason, too, that the effect of the current in the electrolization of the iron, increases the conducting path, so that once the action is started it is aggravated at that point and continues by preference at that point rather than at any others.

Q. But if we had this pipe buried in uniform earth and each point of the surface insured equal contact with the earth and a difference of potential between that pipe and the elevated pillar, we would expect to find the current, if there was a flow of current, leading from the point B and going to the elevated pillar, would we not?

A. The current would leave from all points, but the largest amount of the current would flow from the point B, or in the immediate vicinity of that point, but some current would flow from all points.

Q. The larger amount would mean almost the entire amount, would it not?

A. Probably, yes.

Q. So then, to have an appreciable current flowing from any other point you would have to have a poor contact of the pipe with the earth at some point or a non-conductor like a pebble, or something of that kind resting against the pipe, or some unusual condition?

A. Yes.

Q. When this pipe was taken up I do not suppose you were present?

A. No.

5861 Q. You are not aware of the nature of the ground, whether any gas pipes, or any other things were in the soil at that point?

A. No.

Q. If there had been an acid condition of the moisture, which you state must have been present in that tube in which the lead pipe was drawn, I suppose that might have produced that result?

A. It would facilitate electrochemical action even more than chemical.

Q. If there was no current?

A. It might.

Q. It might, might it not?

A. Possibly.

Q. You have spoken of the law of divided currents. The law of divided currents is what Mr. Mathewson is pleased to speak of an Ohm's law, is it not?

A. It is an application of Ohm's law.

Q. By that you mean that no matter how bad a conductor anything may be, and how low a potential there may be, that nevertheless there is a part of the current which goes through that conductor as compared with some other?

A. Yes.

Q. When we come to the Edison circuit, we find that this neutral is such a good conductor that notwithstanding the fact that the earth, which is a poorer conductor, is also present as a return, that the current almost in its entire amount returns by the neutral rather than by the earth?

A. That is so.

Q. So that while the law of divided current applies, it practically means that where we have the earth, a poor conductor under circumstances such as I have suggested, it carries a current which can be disregarded?

A. Not exactly, Mr. Kirby. We have another element to consider in this connection, and that is the counter-electromotive force, which is produced when a current enters a pipe and leaves a pipe. There is some counter-electromotive force.

Q. We have it when it enters or leaves a cable in the same way, don't we?

A. What do you mean by cable?

5862 Q. I mean copper.

A. Oh, no, it is due to electrolysis, and that prevents any voltage which is much below, say, half a volt, of producing any current which would be at all measurable from flowing on to and off the pipe.

Q. So, as a matter of fact, it would be easier for a current to stray from a copper cable than it would to stray from a lead or iron pipe?

A. No, not at all.

Q. They would be both the same?

A. Yes.

Q. That is what I tried to bring out and you seemed to disagree with it?

A. No, I don't believe you understand me yet.

Q. Yes, I think I do.

A. I hope you do.

Q. This balancing of the Edison circuit is one which every effort is made to bring about, is it not?

A. Yes.

Q. And is it done mechanically?

A. Mechanically?

Q. Yes.

A. You would have to explain what you mean by that.

Q. How is the circuit kept within balance?

A. All current due to the installation of lamps and other devices, is as nearly as is possible balanced between positive and neutral and negative and neutral.

Q. And as long as that condition prevails there is no danger of flow from one neutral to another, the potentiality of the two is practically the same?

A. Yes.

Q. Now, you have stated that this neutral is grounded?

A. It is.

Q. Grounded to take care of unusual conditions which may exist?

A. It is.

Q. I suppose the throwing out of a certain number of large office buildings suddenly by the breaking of a cable or some unfor-seen accident would throw the system out of balance for the time being?

5863 A. No, sir, because every office building in the city that I know of is wired on the three-wire plan, and it would not disturb the balance of the system in the least.

Q. Well, then, what are these hazards of which you spoke?

A. I will give you some instances. Suppose this system was not grounded and a man in his residence had a lamp cord and that cord on one side came in contact with the ground; a ground would be established on that side of the circuit and nothing particular would happen. Now, suppose that the same man or some other man in some other house came in contact with the other side of the circuit, he would receive a shock of 240 volts, and if on the other side of the circuit an accidental ground connection were made, there would be a serious short circuit due to the 240 volts. On the other hand, if the Edison neutral is grounded as thoroughly as it is, as soon as the first man gets a ground by one of his lampcords coming in contact with the ground, and the fuse automatically breaks open that circuit and the dangerous position is immediately thrown off the circuit automatically, and it further makes it impossible for anyone standing on the ground and coming in contact with either wire, of receiving a voltage greater than 120, whereas in the other case he would receive 240. You make a service continuous and safe by grounding of the Edison neutral wire.

Q. Have they not somewhat the same reasons as the subway as to being grounded?

A. Somewhat the same reasons, yes.

Q. Now, when this circuit is thrown out of balance there is a difference of potential set up between the neutral wires, is there not?

A. Of course, in order that the current may flow through the neutral wires there must be a difference of potential to make
5864 it flow, but that difference of potential would in all cases be a fraction of a volt.

Q. And according to the law of divided circuits there would be a current flowing?

A. Not an appreciable current through the ground.

Q. But a current?

A. Because if the circuit which includes the ground pipes and with which pipes again we have to deal, this counter motive force would be there and therefore the current electro would be of the character of ordinary earth currents.

Q. You have never made any measurements in the city or had any measurements made to ascertain whether there was any difference in potential between the grounded neutrals of the Edison system, have you?

A. I have made over one hundred measurements myself.

Q. Have you found any such difference of potential?

A. The average of the maximum potential that I found was about .4 of a volt and those were under the worst conditions possible.

Q. How high did you find any of them going?

A. I cannot say how high I found any potential difference due purely to the Edison neutral system, because the grounded ends of the neutrals partake of the potential of the ground due to all causes, and when I had, for instance, one terminal near the elevated structure at one side and the other terminal near the elevated structure somewhat off at a distance I found the highest potential difference of 1.3 volts momentarily. I traced in one or two cases however railroad currents.

Q. I suppose you are willing to agree with Mr. Lieb that it is possible to ascertain whether or not these currents do come from the Edison system?

A. Your question is too broad to answer.

Q. Assume that you found a difference of potental between say
a gas main and a street railroad rail or any other point in the
5865 city's streets, is it possible for you to ascertain whether or not
that difference of potential comes from the Edison system?

A. I think so, yes.

Q. The charts 301 and 302 do not show any differences of potential as late as I may say these pipes were removed, do they?

A. Well, the last chart was taken in 1903, and these samples were removed in the past year.

Q. So I understood. You have made reference in your direct examination to the answer of Sever (Record, p. 3941). I will ask you to listen to me read the question and the answer, and ask you to state the reasons which led to the conclusion which you have already given.

"Q. And it is your testimony that if there be stray currents in the ground, such currents would follow such continuous paths rather than water pipes and gas mains which afforded a more broken path and a path of higher resistance? A. Yes."

Q. Now, do I understand from your testimony that if there were interposed for the transferring of electric current a continuous lead sheath of a cable, whether for power or telegraph or telephone work, and a pipe joined every few feet that the current would by preference take the broken path of the pipe rather than the continuous path of the lead-covered cable?

A. The current would divide itelf in proportion to the conductivities in every single case. The fact that the pipe is divided by joints makes its total resistance, of course, higher than if not so divided. On the other hand, the pipe is buried in the ground surrounded by moisture. There is, therefore, a conducting path around
each joint, and for that reason and also for the reason that gas
5866 pipes have very much larger cross-sections than cable sheaths,
some current will flow along the gas pipes.

Q. But this surface contact resistance, which you have already spoken of, comes into play at every joint, does it not?

A. The surface and the resistance is a very variable element, and it is sometimes very high, at other times very low, or it varies in one case. I have seen pipes where consecutive joints were destroyed on the positive side thereof; the current left and jumped over each joint, the joints being of high resistance.

Q. That is not an unusual condition, is it?

A. It is not unusual, although not very common.

Q. Now, I also turn to page 3038, and as to the testimony there you also made certain criticisms of Dr. Sever's testimony. Dr. Sever stated as follows:

"Q. Mr. Mathewson has spoken of the installation now being put upon the lines of the New York Central and the New York, New Haven & Hartford road, and you have stated that you are familiar with the installation which is being constructed. In your opinion, is there any great danger of stray currents from the power which would be furnished over this installation? A. That is on the New York Central installation.

"Q. The New York Central installation and the New York, New Haven & Hartford, both of which have been referred to? A. I do not consider that in the case of the New York, New Haven & Hartford there is sufficient proof or evidence that there will be any trouble from the alternating current system. The plans developed for the handling of the return current on the New York Central, as
at first made, I feel are not sufficient to handle the return cur-
5867 rent, but this is now being modified so as to increase the ca-
pacity for taking care of this negative current and the endeavor being made to keep the stray currents out of the sub-surface conductors and off the cable sheaths."

Is that in any way contrary to your conclusions upon the same system?

A. No, except that, as I have already stated, that the New York, New Haven & Hartford, in common with the New York Central, uses direct current and not alternating current from Woodlawn in.

Q. Now turn to page 3935, on the top of the page, and I read as follows:

"Q. What did you mean exactly when you said that they had already commenced to put the Manhattan Elevated return system on the same basis as the subway? A. I meant that they are putting in return feeders and insulating these return feeders carefully from the structure and service rails and insulating the negative bus in the sub-stations in the effort to keep the current on those return conductors and away from the ground; that is, providing a better path than would be provided through the ground back to the structure and the sub-station."

Does that differ in any way from your conclusion upon the subject in hand?

A. It does. I do not understand that they are putting in any return feeders whatever. What they are doing is to substitute for the uninsulated connections at the sub-stations and the structure, insulated ones, but not return feeders in the sense that there are any copper conductors paralleling the structure and serving to return current along the structure.

5868 Q. That is, they are insulating the negative bus in the station from the ground?

A. In the station, yes; but inasmuch as the negative bus at the station is connected with the structure and the structure is grounded we have a ground connection right at that point and at every pillar along the structure.

Q. But the return cable from the bus to the structure or from the structure to the bus is being insulated, whereas formerly it was bare?

A. Yes.

Q. And that is for the purpose of confining the current to the cable and preventing any from straying therefrom?

A. It is for that purpose, yes.

Q. On page 3913 of the record Prof. Sever has stated, in answer to a question:

"A. Every effort should be made by operating companies to keep the current on their own property, their own paths of conduction, to diminish their own loss, and to prevent trouble with other systems, other properties."

Do you agree with that statement?

A. Why, yes.

Q. Now, you say that answer implies something. What implication do you give to it?

A. Well, the question asks whether the stray currents do not mean a loss of energy and therefore a loss of coal and therefore a loss of dollars and cents, and I had reference to that. They must make every effort to keep the current on their own property because they would have loss from electrolysis of their own cables, for instance.

Q. Then I take it from your answer that it does not mean a loss of energy or a loss of coal if the current strayed?

A. It is a saving in coal and a saving in energy if the system is so grounded that a considerable part of the current returns by way of the ground, and not a loss. I gave an instance in my direct 5869 examination: for instance, if the Manhattan Elevated were perfectly insulated and the current in returning experienced a drop of voltage corresponding to a loss of 10 per cent. in energy, and that on the other hand it was so thoroughly grounded, that one half of the current returned by way of the ground, we would reduce our loss to 5 per cent. and therefore we would save 5 per cent. of energy and coal.

Q. Well, that would simply mean, would it not, that any company which would have a condition of that kind would be taking advantage of return systems of other companies which might be in the ground?

A. They certainly would.

Q. Is that an effort which is being made by the various companies using or supplying power in the city?

A. Not an effort by the companies supplying power in the city, no. They are incidentally doing it in some cases, however.

Q. And trying to stop it in other instances?

A. They are making some efforts that have been described to minimize it, but that won't stop it.

Q. And never have been able to stop it?

A. Never will be able to stop it.

Q. And never have been able to stop it?

A. The Manhattan Elevated has only been in operation a few years. It is my opinion they never will stop it entirely, and it is also my opinion that the methods they are adopting now will not entirely stop it, for the reasons I have already stated.

By Mr. **Mathewson**:

Q. You mean it has been in operation electrically only a few years?

A. Electrically I mean, of course.

5870 By Mr. **Kirby**:

Q. These experiments which you have spoken of as having been made by you, were they laboratory experiments?

A. I have made both laboratory experiments and I have made electrolytic tests out in the ground in Jersey.

Q. You haven't made any tests here in the city?

A. I have made tests in the city, measuring potential differences between the Manhattan Elevated and the——

Q. (Interrupting.) But you never made any electrolytic tests?

A. Yes, electrolytic tests.

Q. You never made any tests upon electrolytic action in itself?

A. I don't know what you mean by that.

Q. Well, you have made laboratory tests where electrolytic action has been set up, and where you observed the form of electric current and the deposit of the electrolyte?

A. Yes.

Q. Have you ever made any such tests outside of the laboratory?

A. No.

Q. Not even in Jersey soil?

A. I have made measurements on pipes and so forth as I dug them from the Jersey soil.

Q. And such would or might not show a flow of current?

A. They did show a considerable flow of current and pittings.

Q. And from that you would make deductions as to whether or not those pittings were due to electrolytic action?

A. Decidedly.

Q. Would you make analysis of the soil at the same time to ascertain what the change would be in that soil, or what it was originally?

A. I did not make such analyses, no.

Q. And wouldn't you consider it an advisable thing to do in substantiation of your conclusions as to what electrolytic action would do? 5871

A. It is perhaps advisable, but not at all necessary.

Q. As a matter of fact, isn't it customary in conducting such experiments to very carefully analyze the soil or test it for its acids, or to see what salts may be in it, both before and after?

A. Not at all in the ordinary experiments.

Q. But where making experiments to come to a positive conclusion, wouldn't you consider it advisable?

A. I did do it in my laboratory experiments.

Q. But you did not carry such refinements to the experiments made outside of your laboratory?

A. No, sir.

Q. Isn't it customary to carry those refinements into all experiments of this nature?

A. No, sir.

Q. You would not consider it better practice to so do?

A. I should consider it better practice, but it is not customary, for this reason, that the results obtained in thousands of soils that have shown uniformly and without exception that when a current leaves pipes for these soils we get electrolytic corrosion, and very careful experiments made in Germany by this Commission of which I spoke, show that in all the soil they examined had this condition and constituency that when the current leaves we get destruction corresponding to the current.

Q. I do not think there is any question of disagreement on that point, but is it also not a fact that in these experiments which you have spoken about as having been made in Germany and accompanying the report as to the amount of current, the pittings and such, there is a report giving the chemical analyses of the earth in which the conductor was buried and the change which was due to the flow of current to that earth?

5872 A. The experiments were conducted on a very elaborate scale by Prof. Haber, of Carlsruhe. He made a large number of both chemical and electrochemical researches and they were embodied in this report, and I am familiar with the report.

Q. Then I am right, there were chemical analyses made?

A. Yes, in that particular case, but in this country I have examined hundreds of reports on electrolytic surveys, and I do not recall any at the present time in which analyses of the soil were given. It is not the customary thing at all.

Q. But probable in the future that such refinements will be used by you?

A. No. In view of the light that we have got on the subject from these very German experiments it is not necessary.

Q. But advisable. Now, you have spoken of your report to the Committee on Electrolysis of the American Gaslight Association. That is the same report to which I have made reference in the examination of Professor Sever?

A. Yes.

Q. I understand I am right in saying that you worked with, or Professor Sever worked with you, in that matter to some extent?

A. I called on Dr. Sever, who was very kind to me in opening up his entire electrolytic library, which is very extensive, and I copied down all the important articles, and promptly obtained copies myself, and then I went further, and saw a lot of other friends, and read over a lot more articles, and I got together everything that could be obtained from every possible source, because I wanted to make this report as complete and comprehensive as I could make it.

Q. Making use of such eminent experts and authorities as you could find?

A. Yes.

Q. Professor Sever included?

A. Yes, one of them; one of the important ones.

At 1:15 p. m. a recess was declared until 2:30 p. m.

5873 After Recess.

Albert F. Ganz resumes the stand for further examination.

Cross-examination by Mr. Burr:

Q. You say, Professor, that a neutral is grounded as a safety measure for the consumer. What do you mean by that exactly?

A. If the neutral were not grounded, then when an accidental ground occurred on one side of the system, the consumer standing on a grounded spot and coming in contact with the other side would receive a potential of 240 volts, whereas with a grounded neutral, the highest potential that any consumer can ever receive by coming in contact with either side of the circuit while standing on the ground, is 120; and further than that, as I have explained, by thoroughly and completely grounding the neutral and accidental ground which may be produced on the consumer's premises, can immediately correct itself by the safety fuse burning out when it occurs.

Q. In other words, it is a precautionary measure to prevent damage to the consumer, or to his property, is it not?

A. And also to protect the service mains in the street, and so assure continuity of service, yes. In addition to that, I might add that if the neutral were not grounded and by some accident one side of the circuit should come in contact with the neutral conductor, then the double voltage would be thrown onto the one side of the circuit with disastrous results.

Q. Does electrolysis affect only mains and services?

A. Electrolysis will affect any and every metal from which current passes to the ground.

5874 Q. So that a person living alongside of the elevated railroad whose property was affected by electrolysis would be able to trace it to the source from which it came?

A. He would not necessarily be able to trace it to the source from which it came, no.

Q. Why not?

A. Because it takes rather elaborate instruments, in some instances, to trace a current. Currents are not in themselves traced, they do not carry any characteristics, and it takes several experiments to determine where they come from.

Q. Very true, and by those experiments you located these stray currents affecting as you claim the service pipes which have been offered in evidence here, to the substations of the elevated railroad?

A. Yes, sir.

Q. Now, with the same experiments a person residing along the line of a railroad whose property was affected or injured through this electrolysis would be able to trace it to the same source?

A. Not so easily, because the substation of the elevated is the centre to which all the current emanating from that substation must return, whereas a person living alongside of the structure itself does not live in such a favorable locality for receiving stray currents.

Q. I understood you to say this morning that electrolysis not only would be found along the line of where the subway was constructed, but in other streets where it was not constructed?

A. I made no such statement, at least not in the terms you have used. If you will refer to my testimony and tell me where I made such a statement I will explain it.

Q. When were you detailed by the Consolidated Gas Company to make the investigation of the effect of electrolysis on the mains and services?

A. On December 24, 1906.

5875 Q. Have you ever made any investigations for them prior to that?

A. Not on behalf of the Consolidated Gas Company, no.

Q. But you had on behalf of the Edison Company?

A. I had been conducting experiments not especially with that in view, but for other purposes for the Edison Company. I was retained last summer by the Edison Company to make certain other investigations in connection with their waterside plants; that involved making tests of this character at that point.

Q. From my notes I see that you stated that the effects as shown on these pipes to which reference was made and your attention especially called this morning, were due to the installation of elecictrity by the Manhattan Railway, and this was true even on streets where the L-road does not run, do you recall making that statement?

A. I do; and that particular street is the street on which the substation is situated, and, therefore, in greater danger; pipes in that street are in greater danger than pipes in many other parts of the city adjacent to the L structure. It was one of the most dangerous spots in the city.

Q. Had you had any experience with the mains or services of the Consolidated Gas Company or any gas company in the City of New York prior to the investigation which you made on the 24th of December?

A. No, sir.

Q. Do you know that there are mains and services in the streets of the City of New York which have been there for a period of fifty to seventy-five years?

A. I have heard such statements made.

Q. You heard Mr. Maxwell say, with regard to these particular pipes or services, that they were in his opinion extremely old pipes; do you agree with that statement?

A. I don't know.

Q. In fact, you cannot say whether they are forty, fifty or seventy years old?

A. I cannot.

5876 Q. Do you know how long it is since the electrification of the L road in the City of New York?

A. Yes, sir.

Q. How many years ago is it?

A. It was between 1902 and 1903, operation began somewhere in that time.

Q. Would you swear from a mere examination of these pipes produced in evidence that they were not in the same condition in the year 1900 as they are today?

A. You mean from the appearance of the pipes and nothing else?

Q. Yes.

A. I would not.

Q. You could not?

A. No.

Q. I think you said in reply to a question by Mr. Kirby that you did not know the character of the soil either from which they were taken?

A. Not specifically. I do know in general what the character of street soils is, and especially in New York, where it is generally known that salt is present.

Q. Well, I am speaking and having especial reference to these exhibits here.

A. No, sir.

Q. And you say that these service pipes brought here as exhibits were connected to the mains? Do you know that of your own knowledge or is that the result of the information given by Mr. Maxwell?

A. It is the result of the information given by Mr. Maxwell in his testimony.

Q. So that as I understand all that your testimony says and all that you mean to say is that in your opinion, and that opinion is based upon the readings and the maps here made by these other gentlemen, Mr. Varley and Mr. Maxwell, the pittings on the pipes produced here are as a result of electrolysis?

A. It was in part due to electrolysis, yes.

5877 Q. When you say that currents escaped from the L road through poor bonding, what do you mean exactly by that?

A. I mean that the L road depends upon its structure and the surface rails to bring the current back, and that if the bonding which unites the elements of the structure, is defective in any way then potential differences would be set up between parts of the structure and these parts, being grounded through the pillars, are thus able to set up stray currents to the ground.

Q. When you speak of poor bonding do you use it as synonymous with defective bonding?

A. By either poor or defective bonding I mean bondings in which the bonds do not properly connect the pieces electrically together.

Q. Well, that is due, is it not, to negligence or carelessness on the part of the people operating the L road?

A. Not necessarily. It may be due to accident. Vibration at a specific point may loosen the bond, and other natural causes may make a bond defective in its contact at such point.

Q. Can that accident be guarded against?

A. Not entirely, no.

Q. However, can it be provided for or guarded against?

A. Nobody knows.

Q. That is a pretty broad statement, "Nobody knows," Professor.

A. Well, I think it is true.

Q. Now is it or is it not a fact that water pipes are more liable to be affected by wandering electric currents than pipes containing gas?

A. It is not a fact.

Q. What is the difference?

A. No difference.

Q. That is, it will not affect the wataer pipe as much as it will the gas pipe, if there is no difference in the situation?

A. I did not say that. I said the pipes being otherwise equal, whether they contained gas or water it makes no difference substantially, perhaps with this one exception, that if a pitting is
5878 nearly through the pipe then the pressure of the water might
dislodge the remaining part of the iron and produce a leak, and that leak, of course, would wet the soil and make it a better conductor for the current to the works, whereas gas flowing through the mains at perhaps one-seventh of a pound pressure would not escape so readily and not impress itself so quickly, and it is for that reason that gas pipes may be undergoing a great deal of destruction before anybody knows it, whereas water pipes make themselves almost immediately known.

Q. This lead cable to which you have referred this morning, that is not placed in the ground, is it? It is placed, as I understand it, in a conduit?

A. In a tiled conduit.

Q. What is the object in placing it in the tiled conduit?

A. The object is to make it possible to withdraw the cable and substitute a new one when this becomes defective, and in general the object of tile construction is to have subterranean passages into which cables carrying conductors for electricity may be drawn or withdrawn at will, for the same reason that in modern house wiring we instal pipes and draw wires into those pipes. We do not have to tear up the street to replace the cable.

Q. It is stated in a work written by Hughes and O'Connor, entitled

Gas and Gasworks, published in London by Crosby, Lockwood & Son, in 1904, that the duration of mains depends entirely upon the soil in which they are laid. Does that conform to your opinion?

A. I should imagine that was so.

Q. Calling your attention to complainant's Exhibit 324, you say there is current along the length of the lead-covered cable?

A. I do.

Q. Now, when a draught of warm moisture-laden air in summer flows along the cooler interior of a buried duct, it deposits moisture, and if in addition manure dust and street dust enter the duct
5879 also, will not this solution of manure corrode and even pit the lead cable, without the aid of an electric current?

A. It might do so.

Q. Is it not a fact that white lead, carbonate of lead, is made by corroding common lead with manure, and is not this done without electricity?

A. I am not familiar with the process.

Q. Have you ever seen pitted pipes from breweries or ice manufacturing establishments?

A. No, sir.

Q. Do you know that boiler plates pit in the presence of the purest water?

A. I do.

Q. Do you know of any case of pitting where there could not be any extraneous current of electricity?

A. Well, boiler plates is an instance that you have just cited yourself.

Q. Outside of that?

A. I do not recall any.

Q. Can you say what pitting would have happened to these exhibits, assuming there was no extraneous electric current?

A. No, sir.

Q. Now, the gas mains of the Consolidated Gas Company are cast iron, are they not?

A. I understand they are.

Q. And the service pipes are wrought iron?

A. Yes.

Q. Is there not, in the presence of moisture, an amount of galvanic action between cast iron and wrought iron?

A. In the presence of moisture there is galvanic action between any two metails which are in any way different.

Q. That answers the question. I refer simply to cast iron and wrought iron?

A. A slight action.

Q. And this action may be caused by the junction of two metals with any damp material, may it not?

A. Yes, but these junctions have existed for all the ages.

Q. If there were salt or free acid in such moisture this action would be aided?

5880 A. It would, but so would the action of electric current be still more if aided.

Q. But you admit that the action would be aided if there were salt or free acid in such moisture?

A. Certainly I do.

Q. Is it not a fact if wrought iron and cast iron were joined by a drop of pure water there would be enough current passing from one to the other to deflect a galvanometer?

A. If the galvanometer were of sufficient sensitiveness, yes.

Q. And such galvanic action would produce electrolysis, would it not?

A. It would produce a slight amount of electrolysis, yes.

Q. Would it not produce the same pitting of the pipe as shown on these exhibits?

A. That is not the general experience, and I may say for this reason, that while, of course, electricity has been commercially used only for a comparatively few number of years, yet these galvanic currents of which you are speaking have existed as long as pipes have been in the ground, and any galvanic current which could be produced thereby have also existed long before we knew anything of electricity, and it was also a fact that we did not notice these pittings to any extent before we had these railroads straying currents into the pipe and producing the pitting.

Q. Is galvanic destruction of iron in pipe any different from electrolytic destruction of iron in such pipe?

A. Why, it is the same thing, of course.

Q. Exactly what action takes place when an iron pipe is destroyed by electrolysis?

A. The current in leaving the pipe and going to ground decomposes the salt present in the ground, forms an acid and the acid attacks the iron and forms again a salt; that same action is then continued, and it is for that reason that the electric current when it passes from a pipe to the ground produces this serious pitting, this 5881 serious corrosion, because the production of the electrolysis always reproduces the same conditions which are needed for this action.

Q. What becomes of the iron?

A. It goes into solution as oxide or chloride, or sulphide, or whatever compound, depending upon the nature of the soil in which the action takes place.

Q. Might not the condition of these pipes in evidence here be caused by galvanic action?

A. Galvanic action is electrolytic action; it is one and the same thing.

Q. Well, then it might have been caused by galvanic action?

A. The evidence in the case shows that currents were flowing along the gas pipes in this vicinity, that there was a potential difference between each service and the elevated pillar which was positive, and ground, which is always moist, was present between this elevated pillar and between these pipes and, therefore, a current must have flown, and therefore I can say positively that there was electrolytic action due to the stray currents.

Q. I am speaking of the appearance of the pipes themselves; you could not tell but what their present condition might have been caused through and from galvanic action?

A. I said this morning in my testimony that the pipes themselves, taken alone separately, are not sufficient evidence, although some of them show pittings which experience has taught are very characteristic of electrolytic pittings from stray currents.

—. The testimony is here that all the exhibits shown come from two square blocks. Does not this indicate a local condition for these two square blocks and not for the whole city?

A. The other evidence shows that this vicinity has decidedly a local condition caused by the stray currents from the Manhattan Elevated Railroad.

Mr. Burr: That is all.

5882 Cross-examination by Mr. Kirby:

Q. Wherein do electrolytic pittings from stray currents differ from electrolytic pittings which may set up from and are formed by the pipe as one of the elements, and some other pipe or substance as another element, and the moist earth in between as the electrolyte; wherein would the pittings differ in one case from the other?

A. In degree; because the electromotive force which could possibly be set up between the pipes as mentioned would be so low it could not produce in my opinion the serious pittings we find when stray currents due to variable voltage——

Q. But the characteristic marking in one is identical with that in the other?

A. One would naturally expect them to be the same, and yet——

Q. Well, they are the same?

A. I don't know that they are. I notice that the experience has shown that when corrosion is produced by stray currents we have decided pittings, whereas the ordinary corrosion in pipes due from moisture while undoubtedly due to some galvanic action, does not show such pittings and it is only due to the fact that stray currents flowing at comparatively high voltage produce a greater intensity at the point where they leave the pipe.

Q. Would the pittings be deeper in one point than the other?

A. No, though generally they would be deeper with stray currents.

Q. If we had no stray currents, but if there remained the local galvanic action for a couple of years it might be the same depth, might they not?

A. If you assume that during all that time the current left from the same spot and there was no change in that——

Q. Assume that.

A. Yes, of course.

Q. So, as a matter of fact, no matter what the source is, 5883 the result produced has the same general characteristic?

A. It may have, yes.

Q. Now, you have said that since the use of electricity has come into effect the pittings and destruction due to the electrolytic causes were such as they had never been before. What experience have you had in the examination of pipes buried in the ground which would lead you to make such a statement?

A. The experience gained by examining several hundred reports, and examinations of others made in this country, in England, in Germany, and made in my capacity as consulting engineer for the Electrolysis Commission of the American Gaslight Association. In addition to that I have examined probably one hundred or more—several hundred pipes myself at different times in order to familiarize myself with conditions. I made all these investigations of other reports so as to get a broad view of the situation and see—learn what the effects were not only in this vicinity but in all other vicinities.

Q. Didn't you read in those reports that pipes had been entirely destroyed where there had been no outside source of electric current at all?

A. Oh, yes, they may be so destroyed. In fact, I know that in the direct vicinity of gas works they sometimes are destroyed, due to the local condition which existed in such places, and may be also destroyed in other localities where there are some conditions favorable thereto.

Q. Did you read the Report of Investigations made in the City of New Orleans in 1869-1870-1871 to the effect that entire services had been destroyed where, and at that time, there was no other source of electricity in the City outside of galvanic action which might have been set up entirely locally between the pipe and the surrounding substances?

5884 A. I do not remember reading such a report, but you are speaking of the services being destroyed, and I have not claimed at all that in my experience such services and mains are not destroyed by ordinary chemical action. I have only claimed that these peculiar pittings are not as a rule found.

Q. By ordinary chemical action do you mean action which differs from that which would result in galvanic action set up between the pipe and some other substance, with the earth or moist soil or whatever it might be as the electrolyte?

A. The two actions go right into each other. Electro-chemistry and chemistry are not divided by any sharp line.

Q. So you would not be able to say whether it was a real chemical action, an actual subject of loss?

A. No.

Q. Or that it would be combined with electro-chemical action or merely electro-chemical action by itself?

A. No.

Q. It might be one or all?

A. Yes.

Q. And that it might pit or be partially destroyed or entirely destroyed dependent upon the intensity of the current and the local conditions.

A. Yes, but it has been the general experience that this peculiar pitting is only found where there are stray currents.

Q. Well, before the use of electricity was had, was not such pitting observed in pipes?

A. Only in very rare instances, not as customarily as observed now when we have stray currents. Such rare instances were undoubtedly due to the local action in which currents were actually got up in some way or another.

Q. Those might be set up by the pipes and some other substance forming a battery, and the soil being the electrolyte?

A. Yes, under extraordinary circumstances, yes.

5885 Q. The elevated road, as you have stated, is making considerable effort to bond its rails and members of the structure. I pressume that the up-keep of such system would be part of its maintenance, would it not?

Mr. Mathewson: Is that pertinent? Does it make any difference whether they charge it to capital or maintenance?

Mr. Kirby: I think so.

Question allowed. Exception.

A. They are not making any particular effort at the present time or have not made any particular effort since the road was first electrified to improve the bonding to my knowledge. The bonding was installed when the system was electrified as part of the construction. The only change being made now is, as I have said before, in substituting insulated cables for uninsulated ones which connect the negative bus bar at each substation to the structure itself. The bonds will unquestionably deteriorate. That is, they will not always make as good contact as they may perhaps when first installed, and it will be an extremely difficult matter for the railroad company to so keep track of every one of those bonds as to keep them in perfect condition.

Q. I presume it is an extremely difficult matter for the railroad company to keep track of each rivet in its road, and yet, with proper maintenance, it keeps the entire structure in good working condition, does it not?

A. It is a very different matter. The bond may be good to all appearances, it may be riveted up tight, and yet an oxidizing coating may have formed between the material of the bond itself and the material of the structure, forming a higher resistance, and, therefore, a bad conducting point, although mechanically it may be a good point.

Q. And you can always test the resistance of the various bonds, can you not by——

5886 A. You can make a test determine the resistance of the bonds and bond contracts, yes.

Q. And if it shows a higher resistance than a bond of that size ought to have, it would lead an electrical engineer to suppose something was faulty there, would it not?

A. Yes.

Q. And a remedy could be applied, could it not?

A. Yes.

By Mr. Burr:

Q. May not those conditions to which you have referred calculated to entirely destroy services—may they not have existed in the two blocks from which these exhibits were taken?

A. I don't know what you mean.

Q. Well, you referred a few moments ago and, I understood, agreed with the proposition that through galvanic action these services might be entirely destroyed?

A. Services might be destroyed through galvanic action.

Q. Now, I say might not those galvanic conditions calculated to entirely destroy services have existed in the two blocks from which these exhibits were taken?

A. They might have existed, but if they did those conditions would be all the more favorable to the destruction due to stray currents from the Manhattan Elevated Railroad, which were present by the evidence here shown.

Q. As a matter of fact, galvanic action produced by the junction of cast iron and wrought iron would destroy the wrought iron probably within the course of four months, and certainly within a very few years?

A. No, sir. The galvanic action set up by the combination of wrought iron and cast iron is of such a low electro-motive force that the electrolytic action which that would produce, would, in my opinion, be insignificant.

5887 Redirect examination by MATHEWSON:

Q. As to the elevated railroad, there is a bond on every girder, supposed to be, is there not?

A. As I understand it, yes.

Q. And that would make a very great number of bonds to look after, would it not?

A. An enormous number.

Q. Is it not a fact as to the elevated railroad the fact that the structure is what is known as a pin structure on some of the lines would conduce to the straying of currents and the loss of conductivity?

A. Yes.

Q. Now, as a matter of fact, is it not true that it is not in the resistance in any single conductor but the total from its point of leakage to conductors and back through the earth to final destination which governs the flow of current?

A. Yes, sir.

Q. Is it your view that the elevated even when the proposed changes are made will be a greater danger in the straying of currents than the subway as at present bonded?

A. Decidedly so.

Q. Is it not your experience that in sub-surface conduits or vaults generally there is present moisture?

A. Always.

Q. You would make no exception of the ducts in which these lead cables are, would you, from your general experience?

A. No, sir.

Q. You say that the maps show currents in other streets than the streets where the elevated is located, and you referred to Spring Street, where the sub-station is. The question which I asked on my direct examination is whether the currents shown as existing by the red line on the map of 1903, where those red lines appeared on other streets than where the elevated runs, as, for instance, up Broadway, might not also have come from the elevated currents?

5888 A. The red lines do not represent currents but positive potentials and they, in my opinion, are due entirely to the elevated railway.

Q. You said that in your investigation of the currents of the Edison Company you discovered a maximum of .4 of a volt. Is such a voltage as that dangerous or in-ocuous?

A. The .4 was the average of the maximum values, and I should say that such a value was entirely harmless.

Mr. Mathewson: That is all.

By Mr. Burr:

Q. I just want to call your attention—are you acquainted with Dr. Elliott of the Consolidated Gas Company?

A. No, sir.

Q. If Dr. Elliott of the Consolidated Gas Company in a proceeding against the city entitled, "In the matter of opening West Farms Road and Westchester Avenue to Southern Boulevard and Boston Road" last month stated that a small amount of salt in solution would corrode, would you agree with that proposition?

A. I could not say anything unless you give me further details.

Q. If he stated with regard to the mains and services that it would corrode them in a very short time, it may be a month or two, or it might possibly be a year, but certainly within a year they would have to have very serious repairs, would you agree with that statement?

A. I don't know.

Q. What did you mean by pin construction as referred to by Mr. Mathewson in bonding?

A. I mean instead of being riveted throughout, the 9th Avenue L is occasionally put together by pins, which do not make as good contact as a riveted structure would, the pin being for the purpose of enabling expansion to take place, just as, for instance, we have on some bridges.

Q. Don't they use solder?

A. Hardly.

5889 By Mr. Kirby:

Q. In your answer to Mr. Mathewson's hypothetical question having to do with the entire flow of current, you also intend that that depends upon the resistance which is interposed as well as the point from which——

A. That, of course, includes that.

Q. That should be included?

A. Surely.

Q. And you do not mean by that that the flow of current from any one point depends upon the difference of potential to some other point and the conductivity of the substance which is between?

A. No.

Q. You could not tell by looking at the outside of a rivet whether it was rusted inside, could you?

A. No.

Q. And no one else could?

A. No.

ALEXANDER MAXWELL, recalled for further examination, testified as follows:

By Mr. MATHEWSON:

Q. Referring to Exhibit 307, the question has been raised as to the method of determining the measurement of .95 amperes from main toward the house. This is the line from the main towards the house line and not towards the elevated, is it not?

A. Yes, sir.

Q. Did you determine that by running a wire from the main to the elevated pillar or in some other manner?

A. I made that measurement as indicated in this sketch (indicating).

Q. Just describe it if you can?

A. This measurement was made by taking the drop in milli-volts across or along a measured length of the service pipe and calculating the current from tables giving the resistance of that pipe.

5890 Q. So it was a measurement of current?

A. Yes, sir; that was the purpose of the measurement.

Q. And the measurement of current on the surface pipe would be certainly as heavy, would it not, as it would along the mains from which the service pipe came?

A. Yes, sir.

Q. The question has been asked about moisture in the ducts. When these lead pipes were drawn out did you happen to observe the manhole through which they were drawn, whether there was moisture within that or not?

A. Yes, sir, I was there when this cable was drawn out and the manhole had moisture in the bottom and the manhole was evidently moist.

Q. You did not see any manure in it, did you?

A. No, sir.

Q. The question has been raised as to the services which ran up from the main to the Manhattan Elevated stations. Are those risers insulated or uninsulated?

A. Those I have seen are insalated.

Q. Special insulating joints, are there not?

A. Yes, sir.

Q. And did you make any measurement of difference of potentiality as between the sections on each side of the joint?

A. Yes, sir, I read the difference of potential between the station side and the main side, that is the side connected to the gas main and found considerable difference of potential.

Q. How did you find that compared between the difference in potential in the elevated columns and the mains as you took it in the street close by?

A. They were in exact comparison practically.

By Mr. KIRBY:

Q. Have you your readings of the difference of potent-al across these joints in the risers?

A. I have them, yes, sir.

5891 Q. Can you tell us how great a difference there was?

A. Not for any particular case without referring to the original reading.

Q. Did you go all the way up to the risers or simply take the bottom joint?

A. I read across the insulator, from one side of the insulator to the other side.

Q. Where is that insulator placed with reference to the ground?

A. Two or three feet above the ground ordinarily.

Q. Did you not go farther up on the structure?

A. No, sir, not for that measurement.

Q. Did you not make any measurement on the risers then or at another joint on the other side of the insulator?

A. To include another joint?

Q. Yes.

A. No, sir.

Q. So you don't know whether or not there was any difference in potential between the joint immediately above the insulator and the joint immediately above that?

A. I don't believe I catch your question.

Mr. MATHEWSON: There is only one insulated joint.

Mr. KIRBY: I know that.

Q. You took a reading across that insulated joint?

A. Yes, sir.

Q. So we have the difference in potential in the riser underneath, that is, the under side of the insulator and on the further side of the insulator?

A. Yes, sir.

Q. Now, we will go up fifteen feet on the riser, and we will assume that we desired to take a reading at that point, between that point and, say, ten feet above that. Did you take any such readings?

A. No, sir.

Q. Did you make or have any analysis made of the substance which — in the duct out of which Exhibit 324 was drawn? 5892

A. What substance?

Q. The moisture that was there?

A. No, sir.

Q. Or dust or whatever it might be. It was moisture, wasn't it?

A. All ordinary water what I saw.

Q. You did not analyze it, did you?

A. No.

Q. Did you test it with litmus papers to see whether it had any acid reaction or not?

A. No, I could not say.

Q. Where is the pipe which accompanies this Exhibit 307, what pipe is that?

A. Can you tell me what the exhibit number is which corresponds to Exhibit 307?

Mr. Mathewson: 306.

(Pipe produced.)

Q. Referring to Exhibit 306, I understand you that this is the pipe set down on Exhibit 307 as the one upon which you took readings of the voltage at different points?

A. Yes, sir.

Q. Now, did you remember where on this pipe you took, say, your first reading?

A. No, I could not say.

Q. How far distant were those points?

A. Probably as far apart as I could get them.

Q. Probably six feet apart, the length of this pipe, say?

A. As nearly six feet as I could get it, I don't remember.

Q. And those readings gave you a difference in voltage of 1.4 volts?

A. Oh, no, that is another measurement altogether. That is the difference in potential.

Q. Then this statement down here of .95 amperes is simply the deduction which you made from the readings which you took, applying it to certain tables which you had, to give the resistance of a pipe of this diameter?

A. Yes, sir.

5893 Q. Did you make any allowance for the increased or decreased resistance which the pipe might have by reason of the condition it is in?

A. No, sir.

Q. What tables did you use?

A. Some tables that I obtained indirectly and which I believe were originally computed by Mr. Knudson.

Q. For what kind of material was that table prepared?

A. Wrought iron pipe.

Q. Did it give different diameters of pipe?

A. Yes, sir.

Q. Different thicknesses of pipe?

A. Standard thicknesses; that is, it was for standard pipe.

Q. Do you know whether or not this pipe is standard pipe?

A. No, sir.

Q. And then this result of .95 of an ampere is simply without correction of any kind for those matters I speak of?

A. Without those refinements, yes, sir.

By Mr. Burr:

Q. Do you recall at what side that pipe, Exhibit 324—how it lay in the conduit, which was the bottom of it?

A. This would be the bottom (indicating).

Q. The side on which the corrosion is was the side which lay on the bottom of the conduit?

A. Yes, sir.

Q. Do you wish to be understood as saying positively that there was no dust or other street refuse in that conduit?

A. I did not see any.

Q. Well, you did not look for any, did you, just pulled the lead pipe out?

A. Yes, sir. Of course I could not see the length of the conduit.

5894 COLIN C. SIMPSON, recalled for further examination, testified as follows:

By Mr. MATHEWSON:

Q. What kind of pipe does the Consolidated Gas Company use in its services, standard pipe or otherwise?

A. Standard pipe only.

Q. Do you know of any instance where it has used anything but Standard pipe?

A. On service pipes, no, sir.

Q. Is there anything to indicate that that pipe before you to which Mr. Maxwell has just testified is not standard pipe?

A. No, sir, nothing at all.

By Mr. KIRBY:

Q. What do you mean by standard pipe?

A. What is sold in the market as standard weight pipe.

Q. What weight is that?

A. I could not tell you offhand from my head.

Q. Do you know what weight that pipe is, Exhibit 306?

A. I do not. I know if it is a Consolidated Gas Company's service, it is nothing but standard pipe.

Q. Do you know when that pipe was put in?

A. I do not.

Q. Do you know when it was taken out?

A. I do not.

Q. You did not know that these experiments were being made?

A. Which experiments?

Q. The electrolytic experiments?

A. Which ones are you talking about?

Q. All we have been hearing about the last two or three days?

A. I have not heard all of them.

Q. Did you know that any experiments were being made for the purpose——

A. I did—for the purpose of what? You did not finish your question.

5895 Q. For the purpose of being put in evidence in this case?

Mr. MATHEWSON: They were not made for the purpose of being put in evidence in this case.

The WITNESS: No, not for the purpose of being put in evidence in this case.

Mr. Mathewson: No notion of them until you put in your case and we had to rebut it.

Q. Then these pipes were removed without any knowledge on your part?

A. It depends where the pipes were removed from. If you will tell me where they came from, I will tell you whether I had any knowledge of it.

Q. This pipe was removed from 456 West Broadway.

A. If 456 West Broadway is at Spring Street and West Broadway they were removed with my knowledge.

By Mr. Burr:

Q. Mr. Simpson, you recall that when you were here a day or so ago on the stand, I called your attention to the question of services, you stating that the company could not put a main in the middle of the street because it would lengthen the service, and I asked you then whether you remembered stating that the services were, after being placed in the buildings, of no further utility to the company, that is, they became property that if the gas were discontinued you abandoned the property, the services themselves.

Mr. Mathewson: No, he did not testify to any such thing——

5896 Q. One moment. I asked you if in a tax proceeding you did not testify so, and you said no, it must be somebody else——

Mr. Mathewson: I object to this.

Q. The case I had reference to is in the Supreme Court, entitled the People *ex rel* the Consolidated Gas Company against James L. Wells, and others, in Special Term, Part IV, November 17, 1905, where you appeared as a witness, do you recall that?

A. Yes, sir.

Q. And did you testify in that proceeding: "That it would cost ten times as much to take out services as we could get for the material. Q. In other words, it would not be worth taking up and carrying home? A. Not by any means. Q. Is that the reason why you stated you did not take out the three thousand services you referred to as being discontinued in a certain period as was mentioned by counsel for the respondent? A. Yes, sir. We never take out—we have probably sixty thousand of them to-day which are discontinued and they are not worth taking out." Was that your testimony on that occasion?

A. I would like to qualify my answer——

Q. Was that your testimony on that occasion?

A. I testified that where services were cut off from the mains and were no longer fit for use we never took them up; I never testified that a good service was abandoned.

Q. I am not referring to that, but to services that were discontinued.

A. We repeatedly, with two or three services in the building, we replaced one of them, and the other two or three which are no more fit to use would have to be replaced at large expense, and we cut them off at the main and abandon them.

Q. Did you so testify, and if you did, is it correct?

5897 A. I would have to look over my testimony and be very careful about it before I answered that question.

Q. Look at your testimony (handing book).

A. I may say in the first place that we could not or did not lay mains in the middle of the street because it took longer services. I testified that we did not because the city would not give us a permit, and on your question whether it would pay us, I said it would not, because we would have a longer service from each side of the street.

Q. Then I called your attention to this testimony and you testified you never made such statements as I quoted, but that it must have been somebody else.

Mr. Mathewson: He did not. He made no such statement.

The Master: It is hardly cross-examination of any direct examination brought out here to-day, but now that Mr. Burr has caught him—when I say caught, I mean caught him here in the room—he may proceed.

Mr. Mathewson: How is it possibly pertinent? What difference does it make whether we abandon services which are useless or not? Of course we do, and they are marked off the property, too.

Mr. Burr: That is what you say when you want to avoid taxes, but when you want to capitalize they all appear.

Mr. Mathewson: How does it help your case?

Mr. Kirby: That is a matter of argument.

Mr. Mathewson: It is a waste of time.

Q. Well, I will not consume any more time now. Any time I would be glad to let you see the original papers.

5898 A. Very well, but I want to look at this testimony. I have been on the stand a good many times in the last three or four years and I would not say what I testified to at any particular time. I know we have thousands and thousands of services cut off from the mains that are no longer of use, and the value of the material taken up might be fifteen cents and the cost of taking them up would be more than $15, and we would not be stupid enough to take that material up, no question about that. But a good service that is still connected with the main and still going into the house and ready to supply gas at any time is always left and is kept on our book as a service. If it is cut off at the main and abandoned it is taken off our books.

Q. Did you not claim in that proceeding that the services became the property of the owner?

Mr. Mathewson: That is the inside service in the building. It is a legal question whether it is or not.

The Witness: If it is abandoned and he wants to take it he is welcome to it. We do not want it if it is an abandoned service.

By Mr. Mathewson:

Q. Where a service is abandoned, as you have indicated, it is taken off the books as an asset, is it not?

A. Yes, sir.

By Mr. **Kirby**:

Q. You mean that you report to the other department of the company that it has been abandoned?

A. Not only that, but I take it off my schedule of services at the same time, and it is reported down stairs, too.

5899 **Oscar H. Fogg**, called as a witness in behalf of the complainant in rebuttal, being duly sworn testified as follows:

Direct examination by Mr. **Mathewson**:

Q. Mr. Fogg, when Mr. Simpson was on the stand some days ago certain sketches were introduced in evidence showing the condition of the streets at various points, certain drawings or maps showing the mains of the company, subways and other structures. Were they prepared by you or under your direction at Mr. Simpson's request?

A. They were.

Q. And so far as the location of the mains is concerned, of course, the company has a record of that itself?

A. Yes.

Q. So far as the subway is concerned, was that drawn in from the maps of the subway company or their tracings?

A. Which subway do you refer to?

Q. I mean any of the subways where they occur?

A. The Rapid Transit Subway or others?

Q. Either one.

A. From the record of the company in every case.

Q. Did these measurements come out so as to take up the width of the street and fall into systematic order as you have them?

A. Yes.

Q. And are there manholes and hydrants and valves at one point and another by which you can test the accuracy of your map by the measurement of the manholes?

A. To a very great extent.

Q. And did you check up the sketches with the known dimensions and locations of manholes, valves and hydrants where they appeared?

A. Yes, in this way, with the various sections that are shown on city records, were taken from the city record by our men and verified by the street locations wherever that was possible.

5900 Q. Exactly. And the completed work, as so testified, the sketches which are introduced in evidence are the drawings?

A. Yes, sir.

Q. Did you take certain photographs, or were photographs taken under your direction of the work actually in progress, showing the laying of the mains and the difficulties?

A. Yes, sir.

Q. The first one you show me is Manhattan Street east of Amsterdam Avenue, is that the trench for the laying of a main?

A. Yes.

Q. Gas main or water main?

A. Of a gas main.

Q. All these photographs were taken either by you or in your presence?

A. Yes, I think they were all taken by me.

By Mr. **Mathewson**:

I offer that in evidence.

Photograph received in evidence and marked Complainant's Exhibit 326.

Q. Was this other taken at 112th Street west of Second Avenue?

A. Yes.

Q. What sort of a main is that being laid?

A. Gas main.

Q. What size, do you remember?

A. 36 inches in diameter.

Mr. **Mathewson**: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 327.

Q. And this is one at 112th Street across Lenox Avenue?

A. Yes, sir.

Q. What does that represent?

A. That is a special flat steel box, which was necessitated by the shallowness of the Rapid Transit tunnel.

Q. In laying your main?

A. In laying our main, to replace the cast iron pipe ordinarily used.

5901 Mr. **Mathewson**: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 328.

Q. This place which I show you now represents the intersection of 116th Street and St. Nicholas Avenue and Seventh Avenue?

A. It does.

Q. Are those chains supporting pipes of one kind or another, while the mains are being laid?

A. Yes, sir.

Mr. **Mathewson**: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 329.

Q. And is this photograph which I now show you a photograph of St. Nicholas Avenue and 116th Street, looking north?

A. It is.

Q. And that also shows the work in progress supporting the different pipes?

A. It does.

Mr. **Mathewson**: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 330.

Q. Is this pipe laying at 111th Street east of Third Avenue, which I now show you?

A. Yes, sir.

Q. What size main is that?

A. 36-inch.

Mr. Mathewson: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 331.

Q. Where is this work proceeding in the cut I now show you?

A. That is at the northeast corner of Broadway and Manhattan Street.

Mr. Mathewson: I offer that photograph in evidence.

5902 Photograph received in evidence and marked Complainant's Exhibit 332.

Q. And this photograph that I now show you represents Broadway south of 131st Street, east side, does it not?

A. Yes, sir.

Q. What are the logs in the trench?

A. They are put on the rock after it has been prepared for blasting.

Q. The ordinances require you to cover the rock before blasting?

A. Yes, sir.

Mr. Mathewson: I offer that photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit 333.

Q. Where is this work going on in the one I now hand you?

A. That is on the east side of Broadway and Manhattan Street.

Q. Do you know what size main is being laid there?

A. 36-inch gas main.

Q. And the sheathing braces appear there?

A. Yes, they do.

Mr. Mathewson: I offer the photograph in evidence.

Photograph received in evidence and marked Complainant's Exhibit No. 334.

The Master: Are there any there where the blocks appear?

Mr. Mathewson: Do you mean underneath?

The Master: Yes.

Mr. Mathewson: I doubt if there are. These are taken from above. I do not think any of them show the bottom of the pipe as laid.

Mr. Mathewson: That is all.

Mr. Kirby: Before taking up the cross-examination of Mr. Fogg I should like to have it stated on the record that the defendants move to strike out all of the testimony that has been put on record in reference to electrolysis, on the ground that the same is not proper rebuttal. 5903

Mr. Burr: I understand it was taken subject to the same objection we made to the other witnesses on electrolysis, that it was not proper rebuttal.

Mr. KIRBY: And I now not only object to it but move to strike it from the record.

Mr. BURR: And I make the same motion.

The MASTER: Motion denied.

Mr. BURR: Exception.

Mr. KIRBY: Exception.

Cross-examination by Mr. KIRBY:

Q. Are you in the employ of the Consolidated Gas Company?

A. Yes, sir.

Q. In what department?

A. The Department of Mains and Services.

Q. Have you ever laid mains?

A. Yes, sir.

Q. Are you familiar with the method of work of laying mains?

A. I am.

Q. What position do you occupy in reference to that part of the work?

A. I am an engineer employed by the company.

Q. Do you have charge of the men putting the mains in the ground?

A. At times, supervision of the work.

Q. Now, taking up these photographs, referring you to Complainant's Exhibit 326, showing an excavation at Manhattan Street, east of Amsterdam Avenue, will you kindly state if you know the size of the main that is now in that trench?

A. 36-inch.

Q. Was that trench excavated for the purpose of putting down another main or for putting that main in?

A. That main only.

5904 Q. How is that main supported, does it lie upon the bottom of the trench?

A. It lies upon blocks.

Q. Can you see those blocks in this photograph?

A. I don't know, I doubt very much. That would be under the main, and I do not think you could.

Q. Is that the figure of a man that I see there?

A. Yes, sir.

Q. That man seems to have his hand at about the center of the pipe, does he not?

A. It appears so, yes, sir.

Q. He is standing up, is he not?

A. Yes, he is standing up.

Q. It would, therefore, appear that there is considerable excavating underneath the main, would there not?

A. No, I do not think so.

Q. You said the size of the main was how much?

A. 36-inch.

Q. Well, the man is more than 36 inches high, is he not?

A. His head is considerably higher than that.

Mr. Mathewson: You cannot figure on perspective when you are photographing down in that manner.

Q. Is it your testimony that the man is standing on a level with the bottom of that pipe?

A. That I cannot say.

Q. So that it might be that that excavation is lower than the bottom of the pipe?

A. It is possible; I don't say so.

Q. But from this photograph and from your impression, you could not inform us just how that pipe was laid in that trench?

A. I cannot because the photograph is rather indistinct there. It is a very hard place to take one clearly. It does not look clear to me from here.

Q. You see another pipe running more or less diagonally across the trench?

A. Yes, sir.

5905 Q. Held temporarily in place, I suppose, by chains thrown over a beam laid across the trench?

A. Yes, sir.

Q. Do you know what that pipe is, what purpose it serves?

A. Yes, that is a 16-inch water main.

Q. And was there prior to the putting down of the 36-inch gas main?

A. It was.

Q. That does not run the entire length of the trench, does it?

A. No, about the point I indicate here on the photograph it enters the ground again.

Q. That is the point where the chain supports it?

A. No, a little beyond where the chain supports it.

Q. It leaves the trench?

A. At a point beyond the chain, yes sir.

Q. So this position is one where the digging and laying is complicated by the water main crossing the trench?

A. Well, not to any great extent, no; that did not enter into any very great consideration at that point.

Q. Then the interference with the digging by that main would amount to practically nothing?

A. That would not have forced *as* down to that depth. There were considerable other substructures beyond that which do not appear in the photograph that forced us to make that trench in that way.

Q. But this did not cause any great care to be taken on your part?

A. Only the necessity of taking care of it and protecting it, because it was exposed in the trench.

Q. Turning to Complainant's Exhibit 327, showing an excavation at 112th Street west of Second Avenue, I ask if you know the size of this main shown on this trench?

A. That is a 36-inch gas main.

Q. And that has just been placed in the trench?

A. Yes, a comparatively short time, and it is all *for* in the process of construction.

Q. Not for repair or anything of that kind?

A. No.

5906 Q. I see no pipes or anything laid within the trench?

A. No.

Q. Do you know the width of these joists, which are thrown across from one side of the trench to the other?

A. Do you mean the width of the joists, between the sheathing or rangers?

Q. You see here the sheathing on one side, and here the sheathing on the other side. Going across from one side to the other I notice a piece of wood, which I call a joist; I don't know what you may call it; is that a proper designation?

A. A brace or joist.

Q. Now, that brace, we will give the length of that brace the distance from one side of the trench to the other, and we will call the height the vertical dimension of it; can you tell me the height of that brace?

A. I think it is about twelve inches high, as you express it, there; that would be the width ordinarily.

Q. My first designation, therefore, is more correct than the one I have been led into?

A. Yes.

Q. That is resting upon the top of the pipe, is it not?

A. No, within a short distance of it, not right on top of th- pipe.

Q. This photograph is too indistinct on the side to show the nature of the bottom of that trench, is it not?

A. Well, the light is so that it would not show it, is rather a clear photograph, but it does not show that owing to the darkness on the side of the pipe.

Q. You would have had to take that by flashlight to bring that out?

A. Yes, I suppose so.

Q. I notice on this joist running across the trench that there is a cable or rope of some kind. Is that for the purpose of supporting the pipe?

A. That is the rubber band, pouring band which has been laid over the pipe after they hav- poured the joint.

Q. I do not mean that, that is nearer the foreground of the
5907 photograph than I referred to. That is the crosspiece.

A. No. They are the iron clips or clamps which hold the rubber band together at the top.

Q. Can you give me the approximate distance from the point here at the top of this brace to which I made reference to the top surface of the ground here?

A. No, I cannot. That is very much foreshortened in the picture, and I would not be able to do more than guess at it.

Q. Would you think it was more than twice the distance of the cross-piece, twice the height of the cross-piece, or the width?

A. I do not believe so.

Q. The width being the term which we have agreed upon as more correct than the height?

A. Yes.

Q. This triangular arrangement which I notice over the trench is, I suppose, the bottom of the derrick with which the pipe is lowered into the trench?

A. Yes.

Q. Now, coming to Exhibit 328, showing an excavation at 112th Street across Lenox Avenue, this oblong box which I see is really an oblong wrought iron pipe, is it not?

A. It is a riveted steel box.

Q. For the purpose of carrying the gas over the subway structure?

A. That is right.

Q. And that in turn will be connected with the gas main?

A. Yes, sir.

Q. By a joint bringing it down to the particular dimensions of the main?

A. That is right.

Q. Do you know the width of that box?

A. Three feet four and a half inches inside.

Q. That would mean the over-all dimension would be several inches more?

A. You are referring to the width, from this part to this part (indicating)?

Q. Yes, across the trench?

A. Three feet four and a half inches inside.

Q. Is that inside or outside dimension?

A. Inside as I remember it.

5908 Q. Do you remember the width of the flange on either side?

A. Not exactly, I think it was about four inches.

Q. So that would be eight inches added to the inside dimension to get the full width of the box?

A. Yes.

Q. Here we observe the bottom of the trench, do we not? The sun seems to be reflected upon the bottom of this trench?

A. It is at a point beyond the subway wall.

Q. Now, I fail to notice any blocking upon the bottom. Can you point out any to me?

A. No, sir, there is none there.

Q. I fail to notice any sheat-ing on either side of the trench. Can you point out any to me?

A. There is not any there. There would not have to be any there. The subway roof was altered and a special construction was necessary to take the pipe and the flat pipe was laid directly on the subway roof and a special concrete base put in and steel I-beams set in the concrete base.

Q. Yes, but the bottom of the trench which we see beyond that is not sheat-ed?

A. No, that is not ready for the pipe.

Q. But the excavation has been partially made, hasn't it?

A. Partially made, it is not down to grade there, I don't think.

Q. You don't know whether or not it is down to grade?

A. Yes, I am quite certain it is not.

Q. Is there more excavation to be done?

A. Yes.

Q. Do you know how much?

A. No, not definitely.

Q. It is pretty nearly down to grade, is it not?

A. No, there is enough more to come out to permit the laying of a 36-inch pipe to pass under the hub of the water pipe which you see exposed. It had to be cut out.

5909 Q. This water pipe had to be removed?

A. Yes.

Q. You are sure that is a water pipe? Is not that a gas pipe?

A. No, that is a water pipe. It is a water pipe which goes into a dead end, just south and we had to cut it out at that point.

Q. Coming to Exhibit 329 showing an excavation at the intersection of 116th Street and St. Nicholas and Seventh Avenues, are these pipes I see supported by chains those which have been put in, or where is the pipe which has been put in?

A. The man in the picture is standing on the pipe which has just been put in or lowered into the trench.

Q. Do you know how deep the trench is at that point?

A. To the bottom of the trench is about eleven feet deep, measured from the street surface, or pavement surface.

Q. And does the trench continue here? What is this I see over the man's head?

A. That is the construction under the railway, where it was necessary to tunnel. We were not allowed to open and it had to be tunneled out and the railroad was over it.

Q. So there is a deep hole some eleven feet to the bottom or the top of the pipe?

A. To the bottom.

Q. Up to this point where the ragged edges indicate the tunnel?

A. That point is just at the south rail of the street railway company.

Q. Is this through dirt or rock, do you know?

A. Through very hard dirt.

Q. Is there any sheat-ing here?

A. There is none necessary at that point because of the very great hardness of the dirt; it was unusually hard.

Q. Coming to Complainant's Exhibit 330, showing an excavation at 116th Street, St. Nicholas Avenue and Seventh Avenue looking north——

A. That is practically the same point as the photograph you have just been looking at *it*.

Q. The largest pipe indicated here and the one lowest
5910 down in the trench is the pipe you have just put in?

A. Yes.

Q. Again there is no sheathing indicated?

A. No, only the bracing of the dirt that has been loosened up above by the derrick legs.

Q. No necessity to use sheathing?

A. Not at that point. Just that one point from the south side of the street railroad tracks to the north side for a short distance it is very hard.

Q. Does this indicate any blocking?

A. The blocking is there, it does not show in this picture, maybe. Every foot of the main was blocked, or every six feet; I think I can safely say that I saw every length of pipe blocked.

Q. Are these two pipes shown here above the larger pipes gas mains or water mains?

A. I know that one is a gas main and I think that both of them are. One of them I am sure of. This one here (indicating).

Q. The next is Complainant's Exhibit 331, showing an excavation on 111th Street east of First Avenue. Is this a daylight photograph?

A. Yes, that is rather a poor photograph; strong sunlight and overexposed, I guess.

Q. I cannot make anything out of that.

A. This is the main here, and this is a pump. We were down to tidewater there.

Q. How far down were you in this excavation?

A. In its deepest parts we were down about twelve feet to the bottom of the pipe. At the part you are indicating with your finger, which is just where the main starts to go down, we had a cover of only three feet and some inches.

Q. What was the object of dropping the pipe at this point?

A. It was necessary to go under a sewer, some gas mains, a water main, subways and possibly some others; that is all I remember now.

5911 Q. And the size of this main was what?

A. 36 inches.

Q. None of the drawings which have been put in evidence and which were prepared under your supervision give a cross section of the avenue at this point, do they?

A. No, we did not go uptown that far with them. I don't think anything has been put in evidence above 42nd Street, and this was at 111th Street.

Q. Coming to Exhibit 332, showing excavation at the corner of Manhattan Street and Broadway, is there some tunneling being done here also?

A. No tunneling, no, sir. We are under a very large structure there. A subway manhole was here (indicating), and the subway entering on both sides, north and south, which rather gives the appearance of being tunneled, but it is actually a concrete structure. We turned right at that point, and did not follow right directly under the subway.

Q. And that meant tunnel work?

A. No, possibly only right under the crosswalk.

Q. Well, looking in the upper left hand corner of the photograph I notice several outlines of large stones or rocks, or what not. Did your trench continue in that direction?

A. No, sir.

Q. Your trench turned off to the right?

A. Followed the line of the subway shown here in this section (indicating).

Q. By here you indicate a block supported by a wire cable around a joist above?

A. That is a subway, the electrical subway; that is the concrete covering, protective covering, around the ducts which you see there.

Q. That is the Edison Company?

A. I don't know whether it is the Edison Company; it is one of the electrical companies.

Q. Either that or the Consolidated Telegraph, etc., Company?

A. I suppose so; it is one of those companies.

5912 Mr. Mathewson: Or the telephone company?

The Witness: I don't know just which one. A manhole is right there.

Q. And you followed under that subway?

A. Right at that point in crossing it, yes; crossing it and following the same general direction.

Q. And went underneath because there was not room enough between the top of this and the surface?

A. No, right above the point in the picture is a large subway manhole which we could not get past without going under it. The subway itself did not drive us down, but the manhole did.

By Mr. Mathewson:

Q. Do you mean the railroad subway, or subway for the surface railroads?

A. I mean the subway, properly speaking, the electrical conduits which were inclosed in this case with concrete.

Q. For the street railroads?

Mr. Kirby: No, he means the subways carrying conductors, either for the Edison system or the telephone system, or the telegraph system, some one of the constructions carrying the electric conductors in the street.

The Witness: Yes.

Mr. Kirby: And I asked him if he knew which subway it was and you heard his answer.

By Mr. Kirby:

Q. This main drops down at this point, does it not?

A. No, sir, that is deep there already, it does not drop at the point where you can see it.

Q. How deep is that?

A. I know about what it was.

5913 Q. Is it ten feet?

A. No, it is nine feet.

Q. Here we have Exhibit 333, showing an excavation at the corner of Broadway, south of 131st Street, east side. There is no pipe in that trench at all, is there?

A. No, that is between street intersections.

Q. You mean by that this is running along——

A. It is running north at a point north of 10th Street, or it is between the north curb of 130th Street and the south curb of 131st Street.

Q. Is there any traffic along this avenue?

A. Yes, some.

Q. I notice rock piled up on the left hand side of the trench as we look at the photograph. That was taken from the excavation?

A. It was.

Q. Is this rock on the right hand side, or is that soil?

A. Soil, and may be smaller rock, which is not big enough to hand out in pieces, and it is thrown out by shovels.

Q. Is it your custom to throw your rock on one side and your soil on the other?

A. It is necessary to cart the rock away. For that reason, in that case, it was put on one side of the trench, where it could be reached from the roadway; there is no roadway on the right side of the trench in that picture.

Q. Do you mean there is a sidewalk there?

A. There is a sidewalk, no roadway for wagons.

Q. What do you mean by roadway for wagons?

A. I mean that the wagons could not go on the sidewalk.

Q. Why could they not go on the street?

A. They could.

Q. Then there is a roadway?

A. I say there is no roadway on the right side of the trench, so that the rock has been piled on the left side of the trench so the wagons could reach it and move it. The trench is at a comparatively short distance from the curb on the right side. 5914

Q. And they could not load from each end, do you think?

A. From each end?

Q. Yes.

A. I mean that the wagons could not get in on this side (indicating). We have already thrown our earth here, and we are in rather close to the curb, and we cannot approach the trench from that side.

Q. Do you know how far it is from the immediate foreground of this photograph, to where I think I see a fence across it at the end of the open part?

A. No, not definitely. It is apparently about half the length of the block, I should say about one hundred feet.

Q. Has any pipe been put in this trench at this time?

A. No, the trench has not been gotten ready for it at this stage.

Q. Do you know where it commences?

A. In the street. No, this is Broadway, south of 131st Street.

Q. Where does that start, do you know?

A. That is a continuation of the trench that has been shown from time to time in the photographs. Do you mean right at this particular point?

Q. Yes, how far to this point have you laid your pipe?

A. I think at the time I took that photograph we were within a very short distance of it; in fact, we were held up—I remember quite clearly now the fact that we were within a short distance of this and the nature of the rock there and the trouble we had with it compelled us to stop the pipe work. I think the end is within comparatively short distance of it.

Q. A block?

A. Less than that.

Q. This dirt I see here will be thrown back in the trench?

A. The clean dirt in which there is no stone.

5915 Q. And the rock over here is going to be removed?

A. Will have to be.

Q. If there had been no rock, you would simply have tossed it all up on this side?

A. Yes.

Q. What is the character of the pavement here, do you know?

A. At that time it was macadam on a Telford base.

Q. Was it to be replaced by other pavement?

A. Yes. I don't know just how soon after we completed the work; it has been since replaced with an improved pavement.

Q. When was this photograph taken?

A. 1904, September, the latter part, or it may have been the first part of October. It was within a month either way.

Q. Most of these photographs were taken at the same time?

A. No, they were taken from the start right through the work. We started in April, and it was finished in October, all of the same year, though.

Q. Now, we come to the last one of these, Exhibit 334, showing an excavation at Broadway, north of Manhattan street, east side. Is it the same gas main?

A. The same main.

Q. And a continuation of the same trench?

A. It is.

Q. And is this macadam road here?

A. Yes, that is macadam.

Q. This main is being laid right up to the curb, is it not?

A. Yes, we were forced right up to the curb there by the other structures in the street, a big water main, the foundation of the Rapid Transit viaduct or the piers, which were very extensive, and spread out, and it was the only possible location there, and even then we had to go very deep.

Q. What is that, running along the right hand side of the trench?

5916 A. That is the same subway which was shown in another picture, that we had to carry in the trench and support.

Q. And naturally your trench had to be wide enough to permit the pipe to pass between one side of that subway and the other side of the trench?

A. Yes, that is right.

Q. Do you know the width of that trench?

A. No, I don't remember the exact width of the trench.

Q. Do you know the depth of the trench at this point?

A. At that point it had the same depth as the other picture we looked at a little while ago, just around the corner the pipe is about nine feet cover.

Mr. Mathewson: Nine feet to the top of the pipe, do you mean?

The Witness: Nine feet to the top of the pipe.

Q. Are there any obstructions other than this subway or the manhole to the same that you encountered along that length of trench?

A. Yes, sir, a 36-inch water main just—it does not show there. It is at a point just north of the derrick.

Q. And you went under the water main?

A. And we went under the water main.

Q. There was not space enough to go over it?

A. No, sir.

By Mr. Burr:

Q. When did you say these photographs were taken, in 1904?

A. They were taken between the 22nd of April and the 28th of October, 1904.

Q. Was the object in taking these photographs at that time to show some especially difficult work?

A. Oh, no.

Q. What was it?

A. Merely as a matter of interest as the work went along and as a matter of record.

5917 Q. You do not mean to say you photographed the whole work, do you?

A. Well, so far as I found time and wherever it was convenient, yes. I took photographs along the line at intervals from time to time as I say for a matter of record.

Q. In addition to being engineer of the mains are you the official photographer of the company?

A. Not yet.

Q. You hope to?

A. I hope so.

Q. I notice in this Exhibit, Complainant's Exhibit 333, that there has been blasting there evidently, as the result of which there is a great deal of rock piled on the side?

A. Yes, that is true.

Q. What do you do with the rock after you take it out as it appears there?

A. It is loaded into wagons and driven away and dumped.

Q. Sold by the company, do you know, or do you know anything about it?

A. I have never heard of its having been. It was not on that work. I never knew of it having been sold.

Q. Did you dump it some place or give it away?

A. It is dumped at the same dumps where the earth is carted to, the excess earth when it is necessary to cart excess earth from a trench.

Q. Where is that point?

A. Various city dumps. I don't know their exact location.

Q. This Exhibit 334, is that immediately below the viaduct structure?

A. It is directly to the east of the viaduct structure, yes, sir.

Q. On Broadway?

A. On Broadway.

Q. What do you say was the particular use of this steel box as it appears on Exhibit 328?

A. It was to convey the gas, a special construction necessitated by the shallowness of the roof of the Rapid Transit subway in Lenox Avenue where we didn't have space enough to get the ordinary cast iron main across at that point.

Q. In other words you were able to convey the gas by that 5918 method at a comparatively shallow depth?

A. No. By that method we got more cover than would have been possible in any other way, getting the same capacity, that is the same capacity for the conveyance of the gas.

Q. Well, because of the fact of that iron structure you were able to convey gas at comparatively shallow depth in comparison with the large, round main that you speak of?

A. No, that is not the case. This was the only possible way of making that crossing at that point. It would not have been possible to put a cast iron pipe 36 inches internal diameter across there at all. The best possible thing to do was to put some special construction there that would give the same capacity for the conveyance of the gas and would permit of more cover. The construction or the height of the Rapid Transit roof at that point made it utterly impossible to give the proper cover on even this box.

Q. How much covering did you have?

A. We had about 16 inches. That was too little, but as much as possibly could be gotten.

Q. What was the depth of the trench at that point?

A. That is where the trench has been excavated for the connecting ends to go down to their normal depth. We went to the proper cover as soon as we could get away from the subway.

Q. I mean the immediate part of the trench in which that box was sunken?

A. There is no trench at that point. We have laid the roof apart, cut out the concrete construction of the roof, set in three-inch I-beams and constructed a special roof for the subway, but properly speaking there is no trench at that point.

Q. How long have you been engaged in looking after the mains of the Consolidated?

A. I have been employed by the Consolidated Gas Company since the early part of 1904.

5919 Q. Do you weigh the mains before you put them in the ground?

A. No, sir. We record their weight which is already marked on the pipe.

Q. When, before they are taken to the place at which they are to be sunk?

A. Yes.

Redirect examination by Mr. MATHEWSON:

Q. Referring to Exhibit 336, as a matter of fact, you went down in different parts of this trench or in laying this main as deep as fifteen or twenty feet, didn't you?

A. In two places that I remember we reached a depth of between eighteen and nineteen feet to the bottom of the trench.

Q. Didn't you have to go under four 40-inch water mains and a lot of sewers?

A. We had to go under seven 48-inch water mains in one place and a valve chamber besides in one intersection.

Q. Is it part of your duty to supervise the laying of pipes when a pipe is blocked?

A. Yes, sir, it is.

Q. You say each length has two blocks, one back of the hub and the other about the middle?

A. Two blocks to every length and a block to every special; a piece of cut pipe receives the same blocking as a full length would provided it is over six feet.

Q. Now, in reference to Complainant's Exhibit 330, it appears that the pipe is running in several different directions there?

A. Yes, sir.

Q. As a matter of fact, that is the junction of St. Nicholas Avenue, 116th Street and Seventh Avenue?

A. Yes, sir; three streets.

Q. And does that account for the direction of the pipes?

A. This is north, running north on St. Nicholas, that is on Seventh, and that following St. Nicholas in a general line (indicating directions of pipes on photographs).

Q. Do you remember how many sewers you went under in that whole job?

A. I could remember it more quickly by taking it by intersections we went under the first sewer at——

5920 Q. Tell somewhere near, you need not recite them?

A. Five.

Q. As a matter of fact, is it not true that this job uptown was in a wider street than most of the streets downtown?

A. Yes, sir.

Q. And that the congestion of structures under the surface was correspondingly less than downtown?

A. Yes.

Q. And if you were laying a pipe up Broadway in the lower part of the city, instead of up Broadway in the upper part of the city, the obstructions would be comparatively greater than as shown in the photograph?

Objected to as incompetent, immaterial and irrelevant.
Question allowed. Exception.

A. Very much greater down town.

By Mr. Burr:

Q. What do you mean by the "valve chamber" to which you made reference?

A. The valve chamber I spoke of was a brick chamber enclosing four blow-off valves and the blow-off connections from a sixty, two thirty-six and one forty-eight inch water main where they blow-off into the sewer to carry away the sediment from the bottom of the main. They house their valves in a brick chamber at some particular point—I suppose they do it generally, I don't know.

Q. Do you know of any place in the lower part of New York where you have to dig lower than twenty feet?

A. Lower than twenty feet?

Q. Yes.

A. I have seen intersections or parts of intersections exposed throughout the lower part of New York where I don't see how it would be possible to get in a pipe any shallower than that, and I have seen one pipe in the course of construction where I know the depth was that great.

5921 Q. That is the depth to which I understand you claim you were compelled to go at these points shown by these photographs, or some of them?

A. That is the depth, yes. In some cases it is greater than I notice.

By Mr. Kirby:

Q. How many feet of pipe have you laid in the lower section of the city?

A. Laid none.

Q. You had charge of the laying of this pipe in the upper sections?

A. I did.

Q. You had charge of the laying of pipe in——

A. In New York, yes; supervision of it.

Q. Have you ever had charge or supervision of laying pipe in the lower section?

A. No, not particularly laying. I have had supervision of alteration work on account of the Rapid Transit subway in the lower part of the city, seen the mains laid, followed them up and inspected them.

Q. If you were obstructed by a manhole of the subway construction it would not go any lower down than was necessary to get under it, would you?

A. No.

Q. When you get to a sewer do you ever use such construction as shown in Complainant's Exhibit 328?

A. It has been used, I have never used such construction. It has been used in the city, I have seen it in the ground.

Q. You did not use any on this uptown job?

A. No, it would not have been any advantage. The points where we were forced down by sewers there were other sub-surface structures there that would have necessitated a special construction throughout, and it would be a very expensive piece of main work.

Q. Such flume work as shown in Exhibit 328 is not in itself an expensive thing, is it?

A. Yes, it is.

5922 Q. More expensive than cast iron pipe?

A. I don't know as to that. I know it is necessarily more expensive, requires more care to make and get tight.

Q. It is lighter, isn't it, and less material in it than cast iron?
A. Per running foot?
Q. Yes.
A. Very much.
Q. That would cheapen it in that regard?
A. In that respect without regard to the method of construction.

By Mr. MATHEWSON:

Q. Referring to this Complainant's Exhibit 328, and the average steel pipe, wasn't it necessary to have several steps made to get the end of this pipe to your main?
A. It was.
Q. And taking the job as a whole, isn't this very much more expensive construction than the laying of a similar amount of pipe?
A. I should consider it was very much more so.

By Mr. KIRBY:

Q. You don't know as a matter of fact?
A. I know as a matter of ordinary judgment that it must be, that the alteration where a subway roof existed necessitates a large expenditure of money, the construction of the iron top alone setting in the concrete.
Q. As for the relative cost of flume and pipe and cost therefor you never made any calculations to balance one against the other to see?
A. I have not made any calculations, no.

At 4.45 adjourned to January 22nd, 1907, at 11 A. M.

Last Exhibits:

Complainant's, 334.
State's, 000.
City's, 236.

5923 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York, William Travis Jerome as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 22, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

5924 Mr. Mathewson: I call attention to the fact that State's Exhibit MMM at page 1658 of the Exhibit Book has a clerical error in printing; it represents as printed, February, 1902; it should be 1905, and so appears in the original exhibit. I have a carbon copy of it right here.

Mr. Burr: I notice on page 1660 the year is given as 1902. Does that have to be corrected?

Mr. Mathewson: That is all right.. Mr. Edgerton compared February, 1902, with December, 1904, and February, 1905.

Mr. Kirby: I will not have a chance to look at that now. If it is not a correction I will let you know.

Walter R. Addicks, recalled as a witness in behalf of the complainant in rebuttal, testified as follows:

Direct-examination by Mr. Mathewson:

Q. Mr. Addicks, Mr. Edgerton presented, and there were put in evidence, three exhibits, State's Exhibit MMM, State's Exhibit NNN, and State's Exhibit OOO, pages 1658 to 1660, inclusive, of the Exhibit Book. I find that Exhibit MMM is indicated as representing 21st Street station, February, 1902, as printed. Is that an error, and what should it be?

A. It should be February, 1905, as appears in the original Exhibit MMM, of which you furnished me a copy.

Q. And generally speaking, the figures there, so far as they are tested, compare with February, 1905, do they not, and 1902?

A. Except as to some errors.

Q. Well, I mean generally?

A. Yes, sir.

Q. Now, take State's Exhibit MMM, representing February, 1905,

and I find a column headed candle power at station, average
5925 24.95 candles. Is that correct for that month?

A. It is.

Q. And gas oil used, 1,756,027 gallons?

A. That is correct.

Q. How about the amount under gas made, which appears on the exhibit at 400,007?

A. It is 400,004 in my copy.

Q. That means 400,004 thousands of cubic feet?

A. Yes.

Q. Is that amount correct which Mr. Edgerton said that he found?

A. It is incorrect.

Q. What do the books show in fact?

A. Carburetted water gas 384,604.

Q. In other words, this 400,004 includes the oil gas made at 21st Street and which is sent to the 14th Street station as well as the gas actually made at the 21st Street station and sent out from there, does it not?

A. Yes.

Q. Now, if this table were correct you should, by dividing the gas used by the number of thousands of feet produced, get the result in the final column showing the gallons per thousand of 4.57, should you not?

A. Yes.

Q. Do you get 4.57 if you divide the gas oil used as stated by Mr. Edgerton in Exhibit MMM with the gas made as stated by Mr. Edgerton in the same exhibit?

A. It would make the gas oil used 1,828,000 when the actual amount used was 1,756,000 gallons; I am leaving the small numbers out.

Q. So that the exhibit does not check?

A. It does not.

Q. Now, take State's Exhibit NNN for identification, representing the 21st Street station for December, 1904——

The WITNESS: May I say that I reversed your question; Mr. Burr will understand that instead of dividing the make into the
5926 gas oil, I multiplied the gas oil into the make, getting the number of gallons of oil. I reversed your question unintentionally.

Q. Take State's Exhibit NNN for identification representing the 21st Street station for December, 1904. I find under the column gas made in thousands 406,366; is that correct?

A. It is not.

Q. What is the amount of gas made?

A. 468,193.

Q. Corrected or uncorrected?

A. Corrected.

Q. That does not include oil gas?

A. No, sir, that is water gas.

Q. Is the average of the candle power at station, 24.83, correct?

A. Yes, sir.

Q. How about the gas oil used, 2,232,181 gallons?

A. That is correct.

Q. Is the 4.77 gallons per thousand made correct?

A. Not as appearing, as dividing the gas made into what we use, 4.77; but 4.77 as a matter of fact is correct so far as the amount used is concerned, but it would not divide out on his figures.

Q. In other words, that figure is taken by Mr. Edgerton from the books as correct as to gallons per thousand, but his figures as to gas made, which should check out, are incorrect?

A. I will say there is no explanation of how he got that figure.

Q. You cannot find any?

A. No.

Q. Take State's Exhibit OOO, page 1660.

A. I have it.

Q. Under gas made, December, 1902, appears in thousands 406,366. That is exactly the same amount as appears for the 21st Street station for December, 1904, Exhibit NNN, is it not?

A. Why, yes; I did not notice that before.

Q. Is it right, for December, 1902?

A. It is not.

Q. What is the amount for December, 1902?

A. I have the amount, 390,777 thousands.

Q. Corrected or uncorrected?

A. Corrected. The figures I have taken are corrected figures.

5927 Q. Are you able to find where for December, 1902, Mr. Edgerton could have got any 406,366?

A. I do not recall it now.

Q. Is the candle power at stations average 23.89 correct?

A. Yes.

Q. Now, as to gas oil used, Exhibit OOO, which Mr. Edgerton introduced shows an amount in December, 1902, of 19,535,338 gallons, is that correct?

A. About 10,000,000 gallons out.

Q. More than that, is it not, about 17,000,000 gallons out of the 19,000,000 gallons out?

A. Yes, 17,000,000 gallons out. I presume the error is in the——

Q. Explain if you can, how the error apparently occurred under the column gas oil used, as it appears in the exhibit?

A. I do not think it is an error of Mr. Edgerton's, I think it is an error of the typewriter. I think you will find the two 3's—between the 5 and 8 you will find two 3's instead of one, so it will read 1,953,538.

Q. That is the amount you would suppose was intended to be put in that column, is it, instead of the 19,535,328?

A. Yes, in that column only.

Q. If you will look at Exhibit OOO for a minute it would appear that on many days the company used 5 gallons, or about that per thousand feet, but on several days here, according to this exhibit they used only 3.58 gallons or 3.64 gallons. That would indicate a great discrepancy.

Q. Was there this discrepancy in fact?

A. No, sir.

Q. Why not?

A. Because Mr. Edgerton omitted to put in all the oil.

Q. What did he omit?

A. He omitted 108,543 gallons.

Q. Of what?

A. Of naphtha.

Q. Have you an exhibit here showing the amount of naph-
5928 tha which should have appeared, but which was omitted in
Exhibit OOO?

A. I have.

Q. Now, introducing this naphtha at the proper dates, the gallons per thousand run substantially uniform for every day in the month, that is, very close to five gallons per thousand, do they not, instead of showing the great discrepancy which Exhibit OOO showed as to gallons per thousand upon the different days of the month?

A. I should think it would be very nearly the same average. There might be some slight differences as compared with the other days.

Q. Now, as a matter of fact, the gallons per thousand as stated in Exhibit OOO, average exactly five. Is that the true average, if you divide the water gas made, the true amount, as you have corrected it, into the oil used?

A. Into the amount of oil used, that Mr. Edgerton said was used?

Q. No, the amount actually used?

A. It is 5.2 and approximately 8, a shade under, I think.

Q. 5.28 gallons instead of 5?

A. Yes.

Q. Now, Mr. Addicks, have you corrected these Exhibits MMM and NNN and OOO in tables that you have, showing the whole thing in toto?

A. Yes, sir.

Q. And you have also prepared for the purposes of comparison a statement made out covering the same point for December, 1905?

A. Yes.

Mr. Mathewson: I will ask you to spread those on the record.

Mr. Burr: I do not know that the statement for the month of December, 1905, is properly rebuttal. Just as counsel stated, it is merely for the purpose of comparison. The corrections which he makes upon the various exhibits are of course concededly proper re-
buttal, but to go into another month and make another state-
5929 ment for that month, in the year 1905, is not, it seems to me,
strictly rebuttal. It is merely for the purposes of comparison,
and that opens up another question.

Mr. Mathewson: It opens up another question, perhaps, which has been brought out by Mr. Edgerton, who claimed that low grade oil would carry candle power just as well as high grade oil, and I propose to show by taking the three months which he presents in these exhibits, that December, 1905, that the drop in candle power between the works and stations varies exactly as the grade of oil you use.

The MASTER: I will allow it.

By Mr. MATHEWSON:

Q. I will first ask for Exhibit MMM, for February, 1905, as it would be if corrected to the proper amount?

A. State's Exhibit MMM, if corrected to true figures, should be as follows:

5930 CONSOLIDATED GAS COMPANY.

21st Street Station. February, 1905.

	Water Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gallons per M.
1	15,680	25.36	69,821		4.45
2	16,091	24.76	81,007	30	5.03
3	15,886	25.10	79,397	30	5.00
4	14,095	24.85	70,793		5.02
5	10,608	25.73	48,808	29	4.60
6	15,042	25.14	68,741		4.57
7	15,486	24.48	77,789		5.02
8	15,167	24.88	67,346	29½	4.44
9	14,353	25.24	69,441		4.84
10	14,618	25.33	66,092	29	4.52
11	13,222	24.98	59,955		4.53
12	8,720	24.52	37,712	29½	4.32
13	13,156	23.84	63,055		4.79
14	16,347	25.27	76,884		4.70
15	15,443	25.05	71,113	29½	4.60
16	14,682	25.10	71,130	29½	4.84
17	14,017	24.75	62,174	29	4.43
18	12,031	24.09	65,636		5.45
19	10,523	25.09	48,953	29½	4.65
20	13,710	25.74	65,513		4.78
21	14,566	26.16	61,113		4.20
22	11,742	25.11	49,481	29½	4.21
23	15,082	24.87	38,860		4.39
24	14,029	24.58	61,090		4.35
25	11,307	24.41	47,528		4.20
26	10,339	24.69	50,318	29½	4.87
27	13,465	24.70	61,487		4.57
28	15,197	24.88	64,790	29	4.26
	384,604	24.95	1,756,027		4.57

Q. Now, have you State's Exhibit NNN?

A. I have.

Q. Containing the correct figures?

A. I have. It is as follows:

5931

CONSOLIDATED GAS COMPANY.

21st Street Station. December, 1904.

	Water Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gallons per M.
1	17,114	24.38	73,501	29	4.30
2	16,135	24.91	77,263		4.79
3	13,937	24.49	68,183		4.89
4	11,407	24.03	56,480	29.5	4.95
5	16,607	24.25	75,595		4.55
6	15,531	24.11	74,814	29.5	4.82
7	16,124	24.37	71,014		4.40
8	16,105	23.75	74,027		4.60
9	16,133	23.61	78,562	29.5	4.87
10	15,505	23.59	78,618		5.07
12	16,100	25.68	74,297	31	4.61
11	12,019	24.42	59,370	32	4.94
13	15,669	25.09	74,034		4.72
14	15,205	25.77	72,917	31	4.80
15	17,345	24.63	79,533	31	4.59
16	16,082	24.90	77,576		4.82
17	14,303	24.31	67,860		4.74
18	10,832	24.82	55,771	30	5.15
19	15,252	25.48	77,200		5.06
20	16,327	25.17	80,414		4.92
21	16,230	25.12	79,306	30	4.89
22	16,513	24.44	80,593		4.88
23	16,848	25.37	78,439	30	4.66
24	15,116	24.34	72,415		4.79
25	11,024	23.83	53,539		4.86
26	11,955	25.48	59,617		4.99
27	16,815	25.98	79,974	30	4.76
28	14,954	25.99	77,193		5.16
29	16,506	25.62	61,760		4.87
20	15,078	25.93	77,871	29.75	5.16
31	13,422	25.85	64,445	30	4.80
	468,193	24.83	2,232,181		4.77

5932 Q. And State's Exhibit OOO?
A. Yes, it is as follows:

CONSOLIDATED GAS COMPANY.

21st Street Station. December, 1902.

	Water Gas made M.	C. P at station.	Gas oil used.	Naptha.	Total.	Specific gravity.	Gallons per M.
1	12,640	26.45	63,418		63,418		5.02
2	12,523	26.74	63,161		63,161		5.04
3	12,991	25.68	65,806		65,806	38	5.07
4	13,847	23.60	70,135		70,135		5.07
5	13,808	23.02	71,322		71,322		5.17
6	12,356	24.44	63,011		63,011	37	5.10
7	12,062	22.30	60,861		60,861	37	5.05
8	14,229	26.04	73,311		73,311		5.15
9	14,099	24.38	71,461		71,461	37	5.07
10	13,687	27.29	70,211		70,211	37	5.13
11	13,543	26.04	71,811		71,811		5.30
12	12,418	25.49	67,561		67,561	38	5.44
13	11,996	23.75	62,461		62,461	38	5.21
14	12,184	23.51	60,571		60,571	38	4.97
15	12,610	23.09	63,111		63,111		5.00
16	13,139	24.43	61,444	4,167	65,611		5.00
17	12,520	26.23	50,787	14,753	65,540	37	5.24
18	11,809	25.87	46,302	19,273	65,575		5.55
19	12,354	24.30	110,622	14,433	125,055	38	5.14
20	11,484	23.48	41,094	16,517	57,611		5.02
21	10,945	23.45	39,836	15,000	54,836		5.01
22	13,434	23.19	50,807	13,583	64,390	37	4.79
23	13,555	25.84	63,411	7,384	70,795		5.22
24	13,300	23.55	63,602	3,433	67,035	38	5.04
25	12,313	22.97	60,683		60,683	39	4.93
26	12,801	21.96	67,215		67,215	37	5.25
27	11,531	21.66	59,949		59,949		5.12
28	10,229	22.09	54,465		54,465	37	5.32
29	11,551	21.50	59,915		59,915		5.19
30	12,272	21.44	59,529		59,529	36	4.95
31	12,547	22.35	65,665		65,665	37	5.23
	390,777	23.89	1,953,538	108,543	2,062,081		5.28

Q. And now, have you the statement for December, 1905, on the same basis?

A. I have. It is as follows:

5933

21st Street Station. December, 1905.

	Water Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gallons per M.
1	18,163	26.72	92,364	34.8	5.09
2	15,755	26.53	74,912		4.75
3	14,226	26.44	67,786	34.4	4.76
4	19,158	26.51	91,817		4.79
5	19,372	26.56	94,532	35.	4.88
6	19,737	26.84	99,086		5.02
7	19,796	26.76	97,686		4.93
8	17,075	26.65	85,711	35.	5.02
9	15,405	26.40	75,181		4.88
10	16,094	26.00	77,589	34.8	4.82
11	17,611	26.69	80,978		4.60
12	18,889	26.63	84,177		4.46
13	19,003	26.80	81,875	34.	4.30
14	19,376	26.51	83,892		4.33
15	18,920	26.73	80,946	34.5	4.28
16	18,238	25.99	83,281		4.57
17	14,861	26.49	71,981		4.84
18	18,210	26.79	82,751	34.	4.54
19	19,739	26.75	89,462		4.53
20	19,808	26.83	88,150		4.45
21	20,608	26.35	94,103	34.3	4.57
22	20,141	26.89	90,409		4.49
23	17,758	26.75	77,545		4.37
24	14,169	25.82	67,817		4.77
25	15,379	26.45	70,663		4.59
26	18,393	26.20	82,855	34.7	4.50
27	19,641	26.58	92,469		4.71
28	18,884	26.39	84,007	34.7	4.45
29	18,699	26.55	82,757		4.43
30	16,922	26.13	65,263		4.43
31	15,009	26.15	63,313		4.22
	555,039	26.51	2,555,358		4.60

5934 Q. Now, taking these four sheets which are just spread on the record for December, 1902, December, 1904, February, 1905, and December, 1905, have you made out a table showing the gravity of the oil used in each one of those months, the candle power at the station, the candle power by the city's test, and the drop between the station average and the city test average?

A. Yes.

Q. Is that it (handing paper)?

A. Yes.

Q. I will ask you to spread this on the record.

A. It is as follows:

Year.	Gravity.	Candle power.		
		Station.	City test.	Drop.
Dec., 1902	36-38	23.89	21.80	2.09
Dec., 1904	29.5-32	24.83	21.08	3.75
Feb., 1905	29-30	24.95	20.06	4.89
Dec., 1905	34.5-35	26.51	23.39	3.12

Q. Now, taking 1902, December, the gravity of the oil was highest, was it not, from 36 to 38 gravity?

A. Yes.

Q. And the station test was how much?

A. 23.89.

Q. The city test averaged how much?

A. 87.80.

Q. And the difference between the average station test and the average city test of how many candles?

A. 2.09.

Q. The next highest grade of oil was used in December, 1905, was it not?

A. Yes.

Q. From 34.5 to 35 gravity?

A. Yes.

Q. And the station test average was what?

A. 26.51.

Q. And the city test?

A. 23.39.

Q. A drop of how many candles?

A. 3.12.

Q. Now, the third highest was in December, 1904, when the gravity ran from what?

A. 29.5 to 32.

Q. And the station test?

A. 24.83.

Q. And the city test?

A. 21.09.

5935 Q. A difference in the average of how much?

A. 3.75.

Q. The lowest grade oil in February, 1905, showed a drop between the average of the station test and the City test of how much?

A. 4.89.

Q. Now, as a matter of fact in December, 1902, to which State's Exhibit OOO relates and where you used 5.28 gallons per thousand even of the highest grade oil, from 36 to 39 degrees, was there in use the present improved Lowe apparatus, or was that the previous apparatus which was replaced?

A. Only in part. There were a large number of retorts making gas in the old fashioned way, making a blue gas and oil gas in retorts and mixing them together instead of mixing them in a carburet*te*r, as in the Lowe type process.

Q. Was that changed after 1902?

A. Yes.

Q. When?

A. 1904.

Q. Now, let us see how that follows out. How many gallons per thousand did you use in 1902, December? 5.28 you said, I think.

A. Your question is with regard to 1902?

Q. Yes.

A. 5.28.

Q. And in 1904, December, you used an oil of lower specific gravity, running from 29½ to 32 only, and used how many gallons per thousand?

A. 4.77.

Q. About half a gallon per thousand less, is it not?

A. Yes.

Q. Was that made possible by your new apparatus?

A. Yes.

Q. Now, take February, 1905, State's Exhibit MMM, the average at that time was 4.57 gallons, a drop of .2 of a gallon below December, 1904, for each thousand feet, was it not?

A. Yes.

Q. And of a specific gravity a trifle lower than used in December, 1904?

A. That is right, 29 to 30.

5936 Q. And that was a period of 20 candle power gas?

A. Yes.

Q. Now in December, 1905, how many gallons per thousand were you using?

A. Only .03 more, 4.60 of the higher grade oil.

Q. And that is, you were using more oil and of a higher grade?

A. Yes.

Q. That was within the period of the 22 candle power gas?

A. Yes.

Q. Do you remember what sort of a month for weather December, 1905, was?

A. The warmest December in 14 or 15 years; 1891 I think was warmer than that.

Q. And what effect would that have on the amount of oil used to produce the required candle power?

A. It should tend to have the minimum quantity of oil for the given month.

Q. Taking up now, Mr. Addicks, the subject of oil, what do you estimate the requirements for oil to be for the companies whose supply is derived from the contract of November 1st, 1905, in evidence?

A. During what years?

Q. 1907 and 1908, the quantity required?

A. 107,420,460 gallons.

Mr. Kirby: This is simply a repetition of the terms of the contract, is it not?

Mr. Mathewson: No, the contract does not specify how much shall be used. Of course the first year there was less oil used and required, and there was less cande power and less sale; and I am simply asking him to estimate the quantity of oil he thinks will be required in 1907 and 1908.

By Mr. KIRBY:

Q. That is the amount you estimate all the companies will
5937 require in the year 1907?

A. 1907 and 1908.

Mr. MATHEWSON: No, one year.

Mr. BURR: That is for each year?

By Mr. MATHEWSON:

Q. From when to when?

A. From one year then to the other. You can take any period you please.

Q. That is for each year?

A. Yes. I think specifically that is the calendar year from January to December. I can give it to you exact if you would like to have it.

Q. Referring to the amount actually received and used, under the contract, can you tell me how many gallons were taken under that contract for the last ten or eleven days, from December 21st to December 31st, 1906?

A. We received 4,604,020 gallons from December 21st to December 31st, inclusive, 11 days.

Q. Now, as bearing on the supply of oil required, storage capacity and other circumstances, will you state what the situation of the company's plants was as to oil within the last month?

A. December 21st we got within six hours of being out of oil at 21st Street station. It was on account of heavy fogs at that time. We had an emergency shipment come in of about 60,000 gallons which would last about fifteen hours. This oil was destined for some other point and happened to be in the river at the time close to the works.

Q. At what capacity was this 21st Street works running at that time?

A. About 20,000,000 cubic feet per day, and the works had to be slacked off, to make less gas.

Q. Was the situation saved by the clearing up of the weather?

A. It cleared off in the afternoon and we got another cargo of oil in. The cargoes were all delayed on account of fogs.

5938 Q. Is this an isolated instance or did a similar situation arise in 1905?

A. A similar situation arose in 1905.

Q. On December 20th, how much did all the consolidated plants combined have on hand in oil as to days, number of days' supply?

A. Estimated, two and a half days.

Q. As to the quantity of oil of course the greater the quantity required to produce a candle power the greater the storage capacity required?

A. Yes.

Q. So other things being equal, is it desirable to have, say, four gallons of oil that cost five cents or five gallons of oil that costs four cents, if they produce the same result?

A. Four gallons that costs five cents is preferable.

Q. There being a smaller amount to handle, a smaller amount of storage and smaller transportation?

A. Yes, sir.

Q. Do you agree with Mr. Edgerton that the specific gravity of the oil has no relation to the candle power that you can produce with it?

A. I do not. It is affected by other things.

Q. So that gas produced by a high grade oil does not carry its illuminating power any better than gas produced by low grade oil?

A. My opinion is it is apt to carry better with a higher gravity.

Q. In reference to Mr. Edgerton's suggestion, or the suggestion of several witnesses for the defense, that the company might make a contract for oil that would yield a lower average price and yet be sure of its supply, what is your view on that subject?

A. My view is that the company could not.

Q. You made the oil contract, you stated, did you not?

A. I did.

Q. Isn't the first consideration certainty of supply?

A. Absolutely.

5939 Q. Who provides the supply and most of the storage and the transportation by rail and the harbor transportation under your present contract?

A. The contractors.

Q. That is, the Standard Oil Company?

A. In this case, yes, sir.

Q. And that relieves the company of maintaining a fleet for the transportation of oil, doesn't it?

A. It does.

Q. What about the storage capacity?

A. It enables a minimum storage to be carried on Manhattan Island.

Q. Would it mean an addition to your capital expenditure if you had to provide these facilities that are now given you?

A. It would.

Q. What would be required, if you will state, if you were to make contracts, getting your oil where you could?

A. There would be the necessity of a fleet of barges and tugboats, and to have certainly not less than three months' supply of oil.

Q. Now, evidence has been introduced here from reports of various companies showing the price that they pay for oil. Do you find any record of the grade of the oil which these companies receive in the reports?

A. I have not had access to the reports.

Q. The evidence discloses no grade as to the oil, does it?

A. Not so far as I am able to learn. I have endeavored, through Mr. Humphreys, to get those reports, but I have not succeeded in getting them so far or in getting access to the reports of the other companies up to date.

Q. You have not yet been able to get them from the Gas Commission?

A. No, sir. We were assured we could get them.

Q. You are still trying?

A. Yes.

Q. In order to illustrate the size and requirements of those companies will you make some illustration, if you have prepared one?

A. I made an illustration of the quantity of oil that we re-5940 received in eleven days of something over four and one-half millions, and how long that oil would last the companies that were spread out on page 5014-A, introduced by the secretary of the Gas Commission. This amount of oil that came to us in eleven days would last the Brooklyn Borough Company six years and nine months, the Kings County Company three years and three months, the New York and Richmond five years five and one-quarter months, Queens Borough Gas and Electric ten years eight and one-quarter months, the Binghamton Company twenty-four years, the Mohawk Company eleven years and three months, the Newburgh Company fifteen years and nine months, the Rochester Company two years and three months, the Fulton Company fourteen years and three months.

Q. And isn't it quite a different proposition where you require such an immense amount of oil from what it would be if you required a few thousand gallons and could skirmish around the country for it?

A. It is.

Q. Now, as a matter of fact, assuming that you would require 100,000,000 gallons of oil in 1907 instead of the 107,000,000 and more to which you have referred, have you made a computation as to what in your judgment would be the expense to the company in maintaining a fleet of boats and storage facilities either in New Jersey or on Manhattan Island and a return on the capital invested per annum which would have to be added to the cost of the oil as now received, if the company were to cut loose from the present contract and skirmish for oil?

A. I have.

Mr. Burr: That is objectionable, I think, in its form. It assumes a great many things; it assumes skirmishing for oil, for in-5941 stance, and a lot of other things that are not, it seems to me, proper, and I do not think it is proper or fair rebuttal; it is a speculative attempt on the part of this witness to prognosticate what might occur in the years 1907 and 1908. Now, as a matter of fact, there might be a great fall in the price of oil that year, and it is a question, and has been a question throughout this whole case, whether by competition, by giving an order for a small part of the oil that the company requires to one company and another part to another company, the Consolidated could not get better prices.

Mr. Mathewson: We will meet that a little later in this testimony. If we got all the oil in the country outside of the Standard Oil Company it wouldn't be enough.

Mr. Burr: And some companies might be willing to deliver the oil in their own barges.

Mr. Mathewson: There are none.

Mr. Burr: Well, that is your statement.

Mr. Mathewson: Well, we will prove it later.

Mr. Kirby: We will have to bring witnesses to rebut a good many of these estimates, I suppose, as to whether or not some other company would build a fleet of barges itself, and pay the storage or not, if they had a contract with the Consolidated.

Mr. BURR: I suppose that we have traversed a good part of the ground already. Mr. Addicks, if I remember, testified he was obliged to make this contract with the Standard Oil because they could not make a contract for so large an amount of oil with the other companies, and he testified that was the best price available, that they were completely at the mercy of the Standard Oil.
5942 That is the fact, according to their contention. We showed by comparative data that other companies in this State and other States along the tide-water received oil for a less amount. They may explain the difference, as Mr. Addicks has tried to explain, that they may not use the same grade of oil, or that for some other reason there is a special exemption as to them in price, but here we are going into the realm of speculation as to what will happen in 1907.

The MASTER: The question has been answered. Read the question, Mr. Stenographer.

The question is now read.

The MASTER: I will allow it.

The State and City except.

Q. You state, in the first place, you would require a storage capacity of ninety days, did you, or three months, to be safe?

A. Yes.

Q. At present where is the storage capacity for the oil which the company receives?

A. Located at the various stations in the borough where the oil is used.

Q. You mean so far as the company is concerned, in the City of New York?

A. Yes.

Q. Well, that storage is limited, as you have stated?

A. Yes.

Q. Where are the storage tanks from which the oil comes which you use?

A. A good deal of it is at Bayonne. That is backed up further by pipe lines.

Q. Do you know of any other storage tanks in the vicinity of New York than the Standard Oil supply—which is ample, isn't it?

A. I do.

Q. What?

A. The Standard Oil is ample to supply us, as shown by the actual supply for years. There are other storage tanks in the vicinity of New York.

5943 Q. Of large capacity?

A. My information is that it is about five million gallons total.

Q. In other words, that is about what you receive in eleven days?

A. Yes.

Q. Would you feel safe to rely on any such storage capacity as that?

A. I would not.

Q. Now, will you give your statement as to what your computation is?

A. With the tide-water storage per gallon, in cents, .53303 cents per gallon.

Q. A little over half a cent a gallon?

A. Yes, sir. With Manhattan storage .6484.

Q. And in making this computation what rate of return did you assume on the capital which would have to be invested?

A. The same as the Gas Commission quoted and Mr. Hughes used in the Stevens' Investigating Committee, 8 per cent.

Q. Now, we will take some of the oil which was to be delivered by these independent refiners who testified on the other side. What did Mr. Emory testify would be the cost of Pennsylvania oil at Jersey City?

A. On page 4827, that 34 gravity oil was quoted at 3.25 cents per gallon, Bradford, plus 1.05 cents for freight, making 4.30 cents per gallon.

Q. Now, that means, as he testified, on the other side of the river?

A. It does.

Q. And that does not include storage, does it, or transportation across the river?

A. No. I would qualify, so far as calling attention to their testimony is concerned, that I think one of the Emorys (junior) stated that the freight included a storage, but not the putting into a tank for use.

Q. Oh, yes, I understand? But not storage in the sense of storage for a gas company in large supplies; and railroad freight rates as given do not include any storage whatever nor do they include the use of cars.

A. The shipper must supply his own cars.

5944 Q. Supposing we get it to Jersey City at 4.3 cents per gallon for 34 degree Baume oil?

A. Yes, sir.

Q. If you add to that the expense per gallon which you have computed, assuming that you have storage in New Jersey where it would be cheaper .533, what would it make the total cost of the oil to the company?

A. Under the date of December 22, 1906, 4.833.

Q. What is the average cost of the oil which you now use?

A. 4.524.

Q. That would cost more than you now pay, would it, on that computation?

A. Yes.

Q. Did Mr. Emory show what the capacity of his works was, or did you compute it?

A. Yes, based on the quantity of crude that they handled and on the percentage obtained, the quantity of 34 gravity oil appears to be 10,080 gallons per day, and in addition to that a 40-degree oil amounting to 1,008 gallons obtained from the oil tar by distillation.

Q. That would be how much?

A. About 11,000 gallons, roughly.

Q. A day?

A. A day.

Q. That would be insignificant in the requirements of the Consolidated Gas Company, wouldn't it, and other gas companies in Manhattan?

A. Well, that would be about 121,000 in eleven days where we receive over four million and a half gallons.

Q. As to the 73 Able, as it is called, of 44½ gravity oil, which it was testified was known as export oil and which it was said was quoted at 4.4 cent in New York, do you understand that that oil can be obtained for domestic use at that price in any quantity?

A. From information and belief, no.

Q. Have you made inquiries to find out?

A. Yes.

Q. It is known as export oil, isn't it?

5945 A. Well, it is oil for export. 73 Able is not used in this country for illuminating purposes, being of a low fire test—and when I say the country I mean in the City of New York—I don't know whether it is used in the country or not. My information is that it is not used in the City of New York.

Q. What is the fire test?

A. Open fire test of 112. 73 Able represents the flashing point with the particular cup which is used for testing the oil. It is a parliamentary standard.

Q. Would it, in your judgment, be a proper thing if you could get it in New York, or a safe thing, to have an oil of that inflammable character stored in tanks to the extent that the company would require it?

A. Certainly not. You are referring now to the three months' supply?

Q. Yes.

A. Certainly not.

Q. Would you expect that the city would consent to the storing of it here?

A. No, sir.

Q. As a matter of fact, what was the quotation for export oil of this character, known as 73 Able, when you made the contract of November 1, 1905?

A. 4.80.

Q. Not 4.40?

A. No, sir.

Q. Isn't it 4.40, including from that time to this?

A. Yes, sir.

Q. That is the average for the whole time?

A. I have it for twelve months as 4.591. That does not include the high 4.80.

Q. No. Well, this quotation of 4.8 cents, or 4.4 cents, is from the Jersey side, isn't it?

A. It is.

Q. And if you could get it in New York, and if it could be got and if the city would allow its use, it would cost, adding the additional expense per gallon which you have described, .533 or .6488 of a cent, how much?

A. As of December 2nd, 1906, based on 4.40, the figure used heretofore in the case, the tide-water storage would be 4.933; Manhattan, 5.048.

5946 Q. It isn't worth while, perhaps, to say much about Texas oil. Mr. Emory's testimony is that it "petered" out, couldn't be had; but Mr. Chamberlain of Ohio appeared here and testified in reference to oil which was not Pennsylvania oil. What was the testimony as to the cost of 34 degree oil of that character?

A. At page 4505 he testified that the price of oil in Findlay was 3 cents; also testified that the freight was a little over 1¼ cents a gallon, based on 22 cents per one hundred pounds; 22 cents per one hundred pounds is 1.56 cents per gallon, so that the price would be 4.56 cents per gallon, and not 4¼ as he stated, for 34 gravity oil. I would like to add, however, that the 22 cents per one hundred pounds of freight is incorrect. It was 21.5, which would make a very slight difference. He probably spoke from memory.

Q. Findlay is on the Pennsylvania Railroad, isn't it?

A. They have connections. I have gotten a freight rate from the Pennsylvania Railroad.

Q. The freight rate specified is to the other side of the harbor, Jersey City?

A. Yes, sir.

Q. And to that 4.56 you would have to add to give the oil to the Company in Manhattan—the transportation and whatever storage was required which you stated would be .53 in one case and .64 in another?

A. Yes, and in addition to that you would have to supply the tank cars if the shipper did not supply the tank cars for 3 cents.

Q. Assuming all these things, how would the cost of that oil compare with the cost of the oil you now get?

A. Well, 4.56 is higher than our average of 4.52, even in Jersey, and conceding the statement that 28 degree oil was worth ¼ cent less than 34 degree, taking ¼c off 4.56 leaves about 4.30. And the price of 28 degree oil is 4.28 in Manhattan and not Jersey, making without any other computation the 28 degree gravity oil higher than we are paying here.

5947 Q. Without storage or transportation on the Jersey side?

A. Yes, sir.

Q. And if those were to be included, what would be the result, larger or smaller?

A. It would be additional by upwards of—well, the figures I gave a little over .5 or a little over .6 of a cent respectively, for the two kinds of storage. I want to say that these figures you know are based on about December, 1906. Mr. Chamberlain's statement was that he sold oil—the last he sold—it is doubtful as to whether his price of three cents was in December or might have been six months away, but the Emory figure was as of December, 1906, as I read the testimony.

Q. Well, taking the cost of the export oil as it was on December 31, 1905, the day before you made the contract with the Standard

Oil Company, it would produce, wouldn't it, for 34 degree Bradford oil testified by Mr. Emory at 5.18 cents a gallon with tide-water storage, or 5.29 cents a gallon with Manhattan storage?

A. That is right. Increasing his figure of 4.30 at tide-water proportionately to the difference between 73 Able at the time he testified and the 1st of November, 1905.

Q. And th- 73 Able or export oil, if it could have been obtained in quantity, would have cost how much?

A. May I finish that answer?

Q. Yes.

A. My figure is, it would cost 4.64 in Jersey.

Q. And the 73 Able or export oil, it could have been obtained in quantity would have cost how much?

A. 5.33, tide-water; 5.44 with Manhattan storage, leaving out decimals.

Q. Let me ask you if these figures which have been produced by the defendant's witnesses and your consideration of them since, have modified your view as to the impossibility of getting an adequate and
pure supply from any other source than the Standard Oil
5948 Company?

A. It has not, sir; it has strengthened it.

Q. Will you elaborate a little on that, and indicate why it cannot be obtained from independent sources to advantage.

A. In the first place you ask me the question in regard to 34 degree oil from the Emory people at Bradford—I should further say that the apparent monthly capacity for 73 Able which they sell entirely at Philadelphia, was 525,000 gallons based on their monthly capacity of handling crude oil, and based on their percentage of 73 Able according to their testimony in one gallon of crude. They stated, however, they sold 750,000 gallons in one month. If so it must have been the manufactured product plus storage. That does not indicate that the Emorys could furnish any substantial amount of 73 Able oil for our use any more than 34 gravity. Mr. Chamberlain does not indicate he had any 34 or 28 gravity oil, but said he would not make any statement as to how much he could sell. In order to determine definitely how the situation stood throughout the United States, I consulted Bulletin 57, Census of Manufacture, 1905, which on page 43 states that the crude petroleum refined was 66,982,862 barrels of crude, of 42 gallons each. At page 8 of Commissioner Garfield's report to the President, dated May 2, 1906, there he states the independent refiners' manufacture of refined would be 11.54 per cent. of illuminating oil, and other oils in about the same proportion.

By Mr. **Burr**:

Q. Have you got that report here?

A. I have, sir. Multiplying 66,982,862 barrels by .1154 gives 7,730,822 barrels of 42 gallons to be manufactured by the independ-
ent refiners. This is equivalent by my computation to 324,-
5949 694,524 gallons of crude. On page 4808 of the testimony
Mr. Delavan Emory, as of December 3, stated that he had ob-

tained twenty per cent. of the 34 to 36 gas oil from 100 gallons of crude, that he obtained one per cent. additional from the tar (see page 4809), and, on the same page, that he obtained 35 per cent. of 73 Able, 21 per cent. of 324,694,524 gallons is equal to 68,185,850 gallons, assumed to be 34 degree Baume gas oil, assuming that every gallon of oil manufactured in the whole United States would yield the exact quantity of this particular gravity that the given quality of Pennsylvania crude yields, which is less than the amount of oil required by the Consolidated Gas Company substantially, by two-thirds, if we could obtain every gallon of it as computed.

By Mr. **Mathewson**:

Q. By two thirds?

A. Less by one-third.

Q. That is, it would be less by one-third if you could get that same result from all the oil in the United States and if you could get every gallon of it here in the City of New York?

A. Yes, sir. Taking, however, the 35 per cent. into the same quantities we would apparently have 113,643,083 gallons of 73 Able, which would be, you might say, just sufficient for our wants if we could get every gallon of it here and at a price.

Q. And if you could get the Able for domestic use instead of for export?

A. Yes, without disturbing the export market.

Q. Did you read the testimony of Mr. Emory that that was quoted for export at the figures given at less than the cost of production?

A. I did.

Q. And have you any reason to suppose that the independent refiners would put it here to you at less than the cost of production?

5950 A. I have no information except general judgment that we would not be apt to obtain it.

Q. Now, in addition to the consideration that you have advanced, the contract with the Standard Oil Company contains a stipulation of their insertion that they would give you this oil at the price stated, the stipulation being that they should furnish to you all the oil that you required, doesn't it?

A. That is my memory of it, yes, sir.

Q. Have you any information that you could get the oil which you required from them at the present price in the absence of such a stipulation as that, to take all you required?

A. That is a stipulation which they insisted on in making a price. Unquestionably the price would be higher if such a stipulation was not there.

Q. And if you could get any amount of oil from the independents would it not be necessary in your judgment to get substantially all your oil from the Standard Oil Company?

A. Yes, unquestionably.

Q. So that if they raised the price by the omission of the present stipulation to which I have called your attention it would be raising the price on the great bulk of the oil you would have to use anyway?

A. My judgment is the oil would certainly cost us more than it does under present conditions.

Q. Is this stipulation one that is inserted in other contracts with you also or in other contracts generally with gas companies, if you happen to know?

A. Well, it is familiar, the provision having seen a number of contracts.

Q. Now, in regard to the price made by other companies for oil, is it possible without knowing a great deal more than the testimony discloses, to make any comparison between their prices and the price of oil that the Consolidated pays—any intelligent comparison that would be valuable in this investigation, in your judgment?

5951 A. Only the comparison that the relation of so many cents bears to so many cents, but that would have no relation to the gas business.

Q. In other words, where oil is quoted at 3½ cents a gallon and it does not appear whether it is 23 degree oil, or whether it is drainings, is it possible to determine its value as compared with 34 degree homogeneous oil costing something over 4 cents?

A. Well, to my mind, it would not.

Q. Referring to the comparisons relating to oil used by the various companies, will you state some of the factors which are involved and which would be essential for comparison?

A. I have enumerated a number here:

First. Is the candle power furnished as stated?

Second. Whether the candle power is taken on a bar photometer or whether on a Lowe jet photometer, or a Jones jet photometer, or a Knox jet photometer, which is similar to the Jones? If taken on a bar photometer, whether the results all corrected for temperature and pressure of atmosphere?

Third. Whether the temperature of the photometer room is normal?

Fourth. Whether the candle power is determined at the station or over a mile from the works?

Fifth. Whether the make of gas is corrected for temperature of the gas passing through the station meter, and if so, how such temperatures were obtained and the number and nature of the readings.

Sixth. Whether results are figured on the make corrected or uncorrected, or on the sales.

Seventh. The percentage of unaccounted-for gas.

Eighth. Are the oil figures based on small supply tank measurements, or on oil meter measurements, or oil storage tank measurements, or on gallons of oil that are paid for? I might say
5952 you may find in some of Mr. Edgerton's figures where he gave
some figures of so many gallons lost.

Ninth. The gravity of oil has a bearing which depends somewhat on the atmospheric temperature; in other words, upon whether the oil which is used produces a fixed gas at all normal temperatures and pressures met with in the given locality.

Tenth. A gravity oil which is obtained by every heavy tar products mixed with light gasolene products must give different results from a homogeneous oil which consists of constituents that by their closer relationship by gravity are perhaps more easily heated are acted upon more similarly by the same temperature, such temperatures as are met with in gas manufacture.

Eleventh. The inspection by sworn inspectors by a public authority, at least a mile from the works, is an influence not to be neglected.

Twelfth. The frequency of such inspections is of importance.

Thirteenth. The penalty for violation, particularly when it is grossly excessive, is of vital importance, since the company must maintain such a safety margin that under no circumstances can the test fall below the standard.

These are some of the influences that relate as to oil and candle power. I have no doubt there are many others that I have not mentioned.

Q. Up the State, if I understood Mr. Emory correctly, there are sections where oil is produced. In other words, Pennsylvania oil, he testified, comes from Pennsylvania and some part of New York State, and a few places in the southeastern part of Ohio. Would not the proximity of the oil wells influence the price of any grade of oil which might be used by a company near those oil wells in New York State?

A. They might.

5953 Mr. Burr: That is purely speculative. He has no knowledge of the working of the mind of the Standard Oil people or other oil producers.

The Master: I do not think I would dwell on that aspect of it, Mr. Mathewson, except in argument.

Mr. Mathewson: No, I do not propose to. I merely wish to show that some of these companies were operating in a region where oil is produced.

Mr. Burr: The Standard Oil Company, according to your own statement, is evidently taking advantage of your situation to get all that it possibly can.

Mr. Mathewson: I think that is according to your statement. I have not made any statement I think on the subject, except to answer yours.

The Witness: I think Mr. Chamberlain showed that his sales were at short distances from wells and low freight amounts and the price of oil was less in that case than it would be in our case. He expressly stated it in cents per gallon.

Q. In addition to what you have stated here, must you not take into consideration the distance from the oil fields, and freight and things of that sort?

A. That should have a material bearing, but the long haul clause might possibly have a bearing as to the price at two places which were quite far distant from a single place.

Q. Doctor Marks made certain comparison of the prices of oil in New York cities, saying he got his information from Brown's Directory, and he gave only a few cities whose average, I think, was 3.65 cents per gallon, wasn't it?

A. I don't recall his figures. That sounds familiar.

Q. Did you find he had omitted a great many towns mentioned in Brown's Directory?

5954 A. I made some notations also from Brown's Directory in the absence of being able to get the information from the Gas Commission.

Q. Will you supply what you got from the same?

A. Yes; Cooperstown, Fort Plain, Granville, Huntington, Patchogue, Port Henry, Port Jervis, Sag Harbor, Saratoga, Suffern and Watertown varied from 4.12 to 7 cents a gallon. Now, dividing the number of towns by the price; it is not multiplying the make and the use of oil and dividing either in that way. The average price of twenty-six companies in 1905, which included all of Mr. Marks' companies, was 4.25 cents per gallon, as against the Consolidated 4.08 cents per gallon in that same year.

Q. And you don't know whether that 4.25 cents per gallon represented oil of 23 degrees gravity or some other gravity?

A. I know nothing about it whatever, except those figures.

Q. As a matter of fact, what is the truth as to the candle power maintained up the State as compared with New York City, according to your information?

A. I had those figures in my mind exactly, but I do not recall now.

Q. More or less?

A. I cannot recall definitely. My impression is it was less up the State, but then the question of where they tested their gas and all the considerations I gave you would make it idle, it seems to me, to make a comparison.

Q. I agree with you. There were four small companies mentioned as operating within the limits of the Greater City of New York: The Brooklyn Borough, Kings County, New York and Richmond, and the Queens Borough Gas and Electric Company. Have you made such investigations as you could in reference to the oil used by them and the result?

A. I have.

Q. Well, take the Brooklyn Borough.

5955 A. In the first place I found that Brooklyn Borough is not tested by the city for candle power as yet. It is a low gravity oil they are using, no gravity is specified, it comes from the Long Island Refinery. According to the report, page 5014-A, that the secretary of the Gas Commission put in, calculated by me, it gives the make and also gives the gallons of oil, showing 5.61 gallons per thousand. They are not using quite that, I think, now. I think it is nearer 5.52.

Q. As against your use of 4.6?

A. Dependent on whether ours is corrected or uncorrected. Uncorrected in one of our works would be as low as 4.27.

Q. And you don't know whether they are maintaining their twenty-two candle power in the absence of inspection there or not, do you?

A. I do not know that they are not. The price of oil to them has been increased over the price that was given of 3¼ cents, I think, to 3.625, an increase of 20 per cent. This oil would be utterly unacceptable to the Consolidated Gas Company. I might add on the question of oil, if you have an oil that drops in candle power, I mean that condenses—you will find that condensation throughout your whole system right up to the burner very frequently, and particularly so in the meters, so that if you have a grade of oil of that description it is not only the question of what the oil costs but irrespective of any inspection by an authority it would be objectionable because of maintenance of the plant outside.

Q. Does that company use any great amount of oil as compared with the Consolidated Gas Company, or don't you know?

A. They only use 670,000 gallons per year, and, as I stated before, our eleven days' supply would last them six years and nine months.

5956 Q. Take the Kings County Company——

Q. Now, take the Kings County Company. The Kings County Company uses in the year how much?

A. They use 1,395,488 gallons, by the testimony heretofore introduced. They are tested by the city; the tests were commenced on August 6th——

Q. That eleven days' supply would last the Kings County Company three years and three months you testified, is that right?

A. Yes, sir. The tests of their gas began on August 6th, 1906, and they have been below the standard of 22 candle since then for that part of August fifteen times, or at the rate of 17.61 for the full month; for September 5 times, for October 5 times; for November 8 times; for December 8 times; a total of 41 times, and allowing for the full month of August, 43.61 times, which would be an average of 8.72 times monthly. If they maintained that average for twelve months it amounts in fines at the customary rate of a thousand dollars if they were required to make 22 candle power gas, to $104,640, which divided into the amount of oil used represents 7½ cents a gallon on fines, irrespective of the amount they pay for oil.

Mr. Kirby: That is all very interesting, but I hardly think it is relevant.

Mr. Mathewson: I think it is pretty relevant, if you undertake to proceed on that theory.

The Witness: The price of oil was 3.125 cents which made 10/625 cents a gallon as the cost of oil under those conditions. I find that this oil is a Texas product of low specific gravity and they stated that when it was cold they sent the candle power as high as possible.

Q. Well, that is the Texas oil that you refer to that has petered out and could not be got any way, Mr. Emory says, in large quantities?

5957 A. Yes. This, I understand, is from the Gulf Refining Company, its refinery is in Texas at Port Arthur. This information I obtained from page 58 of the Garfield Report in May, 1906. They also had tanks at Beverley, as well as at Bayonne.

Q. Is this the company which you said, according to your information, had a total storage capacity in Bayonne or Jersey City of only five million gallons?

A. Yes, sir. The division I understand to be 1,750,000 gallons of gas oil and the rest were refined and fuel oils.

Q. Considering your knowledge of that oil and the results as to candle power, aside from the fact that it could not be got in large quantities, would you consider it wise for the Consolidated Gas Company to purchase it even at the price specified for this other company?

A. My information confirms my judgment heretofore, that I should not recommend the Consolidated Gas Company under any circumstances to purchase that oil, even if the oil was available.

Q. Take the New York and Richmond Company——.

A. Pardon me, I said under any circumstances I mean these circumstances. The New York & Richmond Company, I also consulted the city tests, and I find that they were below 20 candle power.

Q. Well, the tests did not begin there until the 20th of April, did they?

A. That is correct. They were up to candle power in July, and in August they had one failure, September 2, October 1, November 1 and December 9.

Q. How many times in the six months?

A. Fourteen times for the six months, which is at the rate of 28 times a year, which at the customary thousand dollar fine would be $28,000. Dividing that by the number of gallons, 832,405 would
represent 3.364 cents on the price of oil. Adding the actual
5958 price as stated in the testimony, 2.651 makes a total of 6.15
per gallon. My information is that in that case there is no gravity clause, that they obtain what they can, that it is from residual products and heavy material, and they are using now in excess of six gallons a thousand and have also abandoned the use of that oil, and are now obtaining *the* a lighter gravity oil.

Mr. Burr: This is objectionable, of course, the greater part of it, as being merely hearsay, and then again as being entirely outside the widest scope of rebuttal. It is a refinement of calculation that Mr. Addicks has indulged in that has been undoubtedly of great interest to counsel and to himself, but it does not affect the main issue here at all. We might as well assume that they would correct their methods if their methods were not proper in April or in August, and that if for the balance of the year they would be correct, and that they would not have this dropping of the candle power that they had before. It is all a mere matter of consmuption and speculation and is not a rebuttal.

Mr. Mathewson: These are the companies which you yourselves cited, and it certainly shows that the oil they are using is not maintaining their candle power, and as to its being hearsay, it is information derived—and I do not think it becomes counsel to be very technical in that regard, in view of the way in which Dr. Marks and Prof. Bemis presented their information, and inquiries of Mr. Richards of the Boston Gas Company, or Mr. Schaff of the Commission, and asking the secretary or treasurer of the Cleveland Company what they paid for oil, in other words, general information.

5959 Mr. Burr: There is another element that enters into this whole matter, that we cannot diagnose just here, which is, the human element, the man running the works, whether they are run economically or not, or whether the proper use was made of the oil or not, and unless you have that, you cannot make any definite finding on the result of these speculations.

The Master: Do not discuss it further, gentlemen. I will allow the testimony.

Mr. Burr: Exception.

Q. Now, the last of these is the Queensborough Gas Company. Do you know when the candle power tests began in that section?

A. October 22, 1906.

Mr. Burr: My objection lies to all this testimony, Mr. Mathewson.

The Master: Yes.

Q. What is your information as to the gallons of oil used to produce the candle power, say, in December?

A. In December it was 6.51, in October 5.27 and November 5.76.

Q. They did not begin the tests until October 22, 1906?

A. No, and it is shown in the statement on page 5014, my calculation is they were using last year about five gallons only.

The Master: Is my recollection right, that reference was made here, in the course of the defendants' case, to some of these candle tests of Professor Love, or some other candle tests on file in the City department, without making formal proof of them here?

Mr. Mathewson: Yes.

5960 Mr. Burr: We got the candle tests from the books of the Consolidated Gas Company themselves.

Mr. Mathewson: They are available, of course, and are public records, and the public record can be produced if it is considered necessary, but I suppose it is hardly necessary.

The Master: In so far as Mr. Burr's objection goes to the question of competency and that this is hearsay, there may be something in it, unless the fact that the witnesses on the other side used similar sources of information, and they were not put to strict proof.

Mr. Mathewson: They did, undoubtedly.

Mr. Kirby: We used similar sources of information in that; instead of bringing down the City records or Professor Love to testify that the statements in the City records were in fact the results of his tests, we referred to them and gave the tests as purported to be made by him.

Mr. Mathewson: Yes.

Mr. Kirby: So far as saying whether or not this superintendent reported that he had given up using an oil for which the contract was in existence at the time we had our testimony placed upon the record, why we never had a thought, nor did we ever try to put such clearly hearsay testimony.

Mr. Mathewson: You were not here during most of the time——

Mr. Kirby: I have been here since August 18th.

Mr. Mathewson: Testimony was put in freely by Dr. Marks and Prof. Bemis, and over my objection the Master stated it was an equity case and he would accept it for what it is worth.

Mr. Burr: I am not objecting to that so much, Mr. Mathewson, as to the tests of the City; any document you find or state as being the result of the official tests of the City, that is one thing, but when Mr. Addicks testifies that he is informed that they only use so much oil and that so and so is going to be done, that is another matter, and I think that is clearly outside the purview of the case. 5961

The Master: I think that is true. I think that should be eliminated. I think it is proper rebuttal for him to take the same sources, the City tests, that you did, and to show where they would land in the case of these companies you referred to in the course of your defense, but he ought not to interject anything in there which is purely hearsay in the sense of information from officials.

Mr. Mathewson: May I ask whether we are to be excluded now from presenting information which the witness has obtained in the same manner as Mr. Bemis and Dr. Marks obtained their information, inquiries of the officials of companies and investigations? It is utterly impossible to bring the whole nation here, and if you will recall it was admitted for what it was worth over my objection.

The Master: Yes, it was in some sporadic cases, but, of course, the question of whether an elaborate series of calculation based solely on that kind of information should be admitted may be another thing. I am disposed to allow it, as I did the other, for what it may be worth up to a certain amount.

Q. I will ask you——

The Witness: May I say a word?

Q. Yes.

A. These calculations, Mr. Master, are not based on anything that was told me; they are based on the City tests and based on the amount of oil that was put right in the case here on the other side on page 5014. 5962

The Master: I so understood that it was the City tests you were testifying about.

The Witness: Yes, sir; but the amount of oil is already testified about by the secretary of the Gas Commission.

Mr. Kirby: I do not object to any deductions made upon that testimony, nor have I objected——

Mr. Mathewson: And you do not ask us to bring the City test books here which are open to your inspection?

Mr. Kirby: No, no more than you have asked us to bring those books here; but so far as the other statements are concerned, the statements for what it is worth, we should have the sources from which Mr. Addicks got his information.

The Master: We will go on, and if there is any objection to be made it may be more specific.

Q. You know this Queens Borough Company consumes a very small amount of oil?

A. It is only 421,000 gallons used according to page 5014A.

At 1:05 P. M. adjourned until 2:20 P. M.

5963 After Recess.

Walter Addicks resumed.

By Mr. **Mathewson**:

Q. The Queens Borough Gas & Electric Company uses what kind of oil, if you know?

A. Texas Distillate from the Gulf Refining Company.

Q. The same oil as one of these other companies you mentioned?

A. The same as the Kings County, at least I so understand it is the same oil.

Q. Have you the contract between the Queens Borough Gas Company and this Guffey Oil Company?

A. I have (producing paper).

Q. Is this the original contract which you produce?

A. Yes, sir. It confirms the price of oil as compared with——

Q. The time of this contract is between April, 1905, and April, 1906, is it?

A. Yes.

Q. And has it a provision that the liability of the first party, that is, the Gulf Refining Company, of Port Arthur, Texas, ceases when a shipment is delivered to the railroad company?

A. Yes, it does.

Mr. **Burr**: I object to that as irrelevant, incompetent and immaterial. I do not see what bearing it can have.

Mr. **Mathewson**: You have shown they are paying so much for oil, and I am showing the terms under which they get it, and the contract.

Mr. **Kirby**: The contract itself would be the best evidence.

Mr. **Mathewson**: I offer the contract in evidence.

Mr. **Kirby**: I object to the contract as irrelevant and incompetent and not proper rebuttal.

Mr. **Burr**: I also join in that objection.

The **Master**: I will allow it.

5964 Mr. **Burr**: Exception.

Mr. **Kirby**: Exception.

(Paper received in evidence and marked Complainant's Exhibit 335.)

Mr. **Mathewson**: I suppose there will be no objection to substituting a copy, as we have of the other papers.

Mr. **Kirby**: Not as far as I am concerned.

Mr. **Mathewson**: I call attention to the further provision:

"In case of strike, fire, failure of railway or vessel service, as public or private carriers, or any unavoidable act of God, or Providential cause happening to either party of the contract, the suffering party may, at its or their option, suspend terms and conditions of this contract for a reasonable period, and no liability for damages shall attach against either party on account thereof."

Q. Mr. Addicks, as the responsible executive officer of the Consolidated Gas Company, would you consider the making of a contract with any company having those provisions, for the Consolidated Gas Company?

A. No, sir, I should not.

Mr. BURR: Objected to as incompetent, irrelevant and immaterial.

The MASTER: It seems to me that is open to objection. It is a matter of argument. I am capable of drawing that conclusion from facts, if it is warranted.

Mr. BURR: I move that the answer be stricken out.

The MASTER: If you regard it as of sufficient importance we will strike it out.

Q. Now, the Standard Oil Company has a pipe line to Bayonne, has it not?

A. Yes, sir.

5965 Q. So that it is independent of railway transportation?

A. Yes, sir.

Q. Do you know of any other company that has pipe lines to New York harbor?

A. I do not.

Q. Reference was made to Williamsport oil, the price of oil to the Williamsport Gas Co., 3.375 cents. Have you any information as to the gravity of that oil, whether it was below or above 28?

A. The information was that it was about 26, but no gravity, I understand, was specified in the contract.

Q. If it be that, 3.375, what is the freight to Jersey City, per gallon?

A. 15 cents a hundred pounds.

Q. How much a gallon does that make?

A. I approximate it at 1 cent a gallon.

Q. That would make a total at Jersey City of 4.375 on the Williamsport basis, would it not?

A. Yes. Heretofore I gave an exact figure for I think 22—I could figure it out exactly.

Q. Well, it is about that, is it not?

A. Yes.

Q. In other words, would it be more or less than we are paying in New York City for our 28 degree oil?

A. It would be more. That was in the evidence, Mr. Mathewson, the 3.375. I am simply adding the freight.

Q. Testimony was given by Mr. Bemis I think in reference to Lowell, Massachusetts, and the oil which was used there, and he made some observations as to information that he derived. Do you know or have you obtained information as to the candle power that that oil produces per gallon?

A. The information is that it is about 4½ candle power to the gallon of oil.

Q. How much does the Consolidated Gas Company get from its oil in candle power?

A. Uncorrected, with uncorrected gas, from 5.73 to 5.98 in 1905. The corrected would be from 5.42 to 5.74.

Q. In reference to Lowell and the other Massachusetts cities, what is the standard fixed by law for candle power?

5966 A. 16 candle power, and an examination not oftener than once a week, but based on the number of millions of feet sold. The exact amount I do not recollect. And the penalty of one hundred dollars for three successive violations, and no penalty if violation should be twice in succession.

Q. Do you happen to know the gravity of the oil at all?

A. No, I do not recall. I thought I knew, but——

Q. Considering the candle power required and the meagreness of the tests and penalty, what would you say as to the requirement as compared with a city like New York which requires 22 candle power? Would it require a higher or lower gravity of oil in Massachusetts to maintain the same candle power?

A. In my judgment it is very much less important, the question of gravity.

Q. You testified that you were consulting engineer for the Boston companies and chief engineer for some of them, too?

A. Yes. I was chief engineer of all but one, I think.

Q. And Mr. Bemis has testified in reference to the price paid for oil in Boston, and information that he obtained from the officers of the Boston Consolidated Company. What was your information obtained from the same sources in reference to the character of that contract? Does it call for any specified gravity of oil?

A. It either called for no limitation of gravity or a gravity between the limits of 28 and 34; I cannot recall now which that was, but it enabled the contractor furnishing the oil to furnish oil at 28 gravity so far as the contract shows.

Q. The legal requirement of candle power is what?

A. The same as in Lowell, 16 candle, with a penalty for three violations to maintain candle power, but the tests there are 5967 certainly once a week, because the quantity of gas made is such that the inspectors test every week.

Q. And what is your information as to the satisfactoriness of the oil that they are using?

A. Their chief engineer told me they are having a great deal of difficulty with his oil.

Q. Even to maintain the candle power required?

A. To maintain sufficient candle power to enrich his coal gas——

Mr. Kirby: I object to all these answers. "The chief engineer told me"——

Mr. Mathewson: Your own witness, Prof. Bemis, has produced a statement from Mr. Richards, and said Mr. Richards told him——

Mr. Burr: We presented it in the form of a letter.

Mr. Mathewson: Is a letter stating such a fact any more proof than an oral statement? Not a particle.

Mr. Burr: We presented a written document from the Commissioners of Gas and Electricity in Massachusetts, and a letter from the president of this Consolidated Gas Company in Boston, himself. Mr. Addicks says he may have told him a number of things. I do not think it is proper.

Mr. **Mathewson**: The president may have told Mr. Bemis a vast number of things. I do not think you can put in such informaton as that and exclude us from the same sources.

Q. As a matter of fact, Mr. Addicks, do you know whether the gas of the Consolidated Gas Company of Boston is coke oven gas to a considerable extent?
A. I do.

Mr. **Kirby**: I object to this as improper rebuttal.

5968 Q. How much is?

Mr. **Kirby**: I object.
The **Master**: I will allow it.
Mr. **Kirby**: I except.
Mr. **Burr**: I object to it also and take an exception.

Q. I do not care for the exact proportion, but is it a half or such a matter, or more?

Mr. **Burr**: Objected to as incompetent, irrelevant and immaterial and not being rebuttal.
Objection overruled. Exception.

A. During the time I was connected with the company it was a matter of some sixteen hundred million of gas, and from the information obtained from the Boston Gas Company, and I think Mr. Bemis also testified to the same thing from the Gas Commissioner's report, the gas obtained from the New England Gas and Coke Company up to June 30, 1906, for one year, was 2,261,945,000 feet of gas, going to the Boston Consolidated, all of which, however was not used in Boston, some 432,000,000, not exceeding 432,040,000 were sent to auxiliary companies.
Q. Does the Boston company do any electrical business?
A. It does. I was chief engineer of that concern for some time.
Q. From the Massachusetts report to which reference has been made, and from the sales of gas of other companies, is it possible to figure the profit that is made in that direction?
A. It is.
Q. How much is it per thousand feet of gas sold?
A. 4.6 cents a thousand on the gas sold by the Boston Consolidated Gas Company and sold to its own consumers.
5969 Q. What proportion of the assets, according to the Massachusetts electrical report, do you figure is devoted to the electrical business?
A. Something over $700,000, I should say between $700,000 and $800,000 out of a total of $24,366,000.
Q. Of total assets?
A. Yes, sir.
Q. Now, reference was made, or a statement was made, by one of the defendants' witnesses, I think it was Mr. Bemis, that the legal maximum fixed by the Massachusetts statute for the Boston company was 90 cents for its gas which must be of a standard of 16 candle power. Is that correct, according to your understanding?

A. A maximum of 90?

Q. Yes.

A. Yes, I think that is correct.

Q. And it was then stated that the company had reduced the price to 85 cents?

A. That is correct.

Q. Now, have you from Mr. Richards, from whom Prof. Bemis obtained his information, any information as to whether that experiment has resulted profitably or not?

Mr. BURR: I object to it as incompetent, irrelevant and immaterial and not being proper rebuttal. He stated the fact that there had been a reduction. As to the ramifications which may make it unprofitable, that is another subject.

Mr. MATHEWSON: I propose, if I can show it by this witness, as I think I am entitled to under the circumstances, that while it has been reduced, the president states in a public statement to the Legislature or Tax Commissioners that the company, for the fiscal year ending June 30, will not be able to pay 7 per cent., even if it does that on the reduced figure.

Mr. BURR: It will be conceded that not more than six months have elapsed since the reduction, and if this is a report to the Tax Commissioners we have seen various reports and various kinds of 5970 reports to the Tax Commissioners which vary greatly from reports made to other sources.

Mr. MATHEWSON: Well, I have not.

The MASTER: Mr. Mathewson, evidence of that kind does not commend itself to me very much. If we are going to have very much more of it I will have to take up the question and see exactly how far in this record the other side have laid themselves open to the question of opening the door to this kind of evidence. My recollection was that some of the hearsay evidence of this kind which they put was with your consent or without very strenuous objection. Now, if they choose to object to it here and press the objection it puts a different aspect on it. The evidence is all clearly incompetent and of very doubtful value for any purpose.

Mr. MATHEWSON: I do not feel that the original evidence was of very great importance.

The MASTER: I think I so stated when I admitted it.

Mr. MATHEWSON: And if counsel do not intend to argue, here is a company paying large dividends and prosperous on an 85-cent rate, I have nothing further to say on the subject. I am merely anticipating, perhaps, any such argument, and if they are prepared to make it I can show, possibly from the same source that Professor Bemis got his information, that it has not proved a success and that the earnings are showing a very small percentage. That is the situation.

Mr. BURR: I have merely shown that the price, as Mr. Addicks now admits, is 90 cents, the maximum legal price, and that it was reduced to 85 cents. As to whether that 85 cents has proven profit-

able or not, that is also a question as to the manner or method
5971 by which the company has conducted its business.

The **Master**: I have all I can do with the price of New York gas, and the Boston gas does not interest me so much.

Q. I should like to qualify my reply as to 90 cents. I should add that under the law they have a right, while they have reduced it to 85 cents, to increase it to 90 cents whenever they see fit, so they are perfectly safe in the matter.

Q. If they do not like the experiment they can go back?

A. Yes.

Mr. **Mathewson**: Is the question excluded?

The **Master**: I shall exclude it I think.

Mr. **Mathewson**: I will take an exception.

Q. Now, in reference to Lynn, Massachusetts, to which defendant's witnesses referred, that is both a gas and an electric business, is it not?

A. It is.

Q. And is it possible without a complete analysis to make a comparison with a company which is doing a gas business alone, as to the returns which it is procuring, or should procure, upon a proper distribution of charges?

A. Not in my judgment.

Q. Now, Mr. Edgerton, I think it was, made reference to the fact that the Bay State Gas Company, one of the Boston Gas Companies, had a main leading out of its station above ground supported on piles. This was cited as confirmation of the theory that exposed pipes were good things. Do you know about that main, and do you know the results or effects of leaving it exposed?

A. I know the main, but I do not recall that Mr. Edgerton cited it.

Mr. **Kirby**: There was no such testimony.

The **Witness**: He stated that a main close to the surface of
5972 the ground was advantageous for the distribution of gas.

Q. Very well, exclude the assumption that he stated this. I will then ask you on the general question of the effect, of weather on exposed mains as related to the distribution of gas?

A. I have had personal experience with an exposed main. In the case of the Bay State Gas Company of Massachusetts, of which I was then chief engineer, there was quite a distance between the works and where the main entered the public street, which was marshy, and piles were driven and a base put on the piles and a 30-inch main put above that, so it was entirely above ground, a space above and below. The distance, as I recall, was, I think, about a quarter of a mile. We had so much trouble with our loss in candle power in sending the gas through this main that we were not enabled to enrich coal gas at Commercial Point with it, although we started out with 25 candle power. Accordingly we dredged material from the bay and covered this main about three feet deep with earth, and from that time on we had no difficulty.

Q. How deep were gas mains laid in Boston, so far as your knowledge went and under your administration?

A. We endeavored to average three feet in depth.

Q. Was that considered a minimum depth if conditions had permitted, or was there anything that prevented your laying them deeper still?

A. We took the plane that existed above the water pipes and laid our pipes in that plane, if I may use that expression, the water pipes taking a lower plane than our own. If we could have taken the water pipes position we would have preferred it.

Q. What, from your experience and judgment in the gas business, is your judgment as to the propriety of laying mains
5973 as shallow as possible, or with a very shallow covering of
earth, say, eighteen inches from the street?

A. Given no difficulty with traffic, and mains in the south, for instance, where we would have no trouble with frost, I would not object to shallow mains particularly, provided there was enough drainage which could be obtained for the services. But in northern latitudes I should prefer to have them four feet deep rather than three feet deep. It would be better for the distribution department as well as better for the gas, in my judgment.

Q. Reference has been made to the weight of pipe used in the City of Boston, and did you hear Mr. Simpson questioned as to the different weights, or whether they were used at the weights indicated by counsel for defendants in Boston?

A. I did.

Q. Are the gaspipes in Boston as light as that weight?

A. Gas pipes in Boston are heavier than the weights given by Mr. Simpson in New York.

Mr. Burr: When you say pipes you mean mains and services both?

The Witness: No, sir; I am only referring when I make the statement to cast iron main pipe.

Mr. Mathewson: That is what Mr. Simpson was questioned respecting.

The Witness: I have these figures if you would like to have them for comparison.

Q. Very good. What are the figures?

A. The weight of pipe is figured in Boston on the basis of twelve foot for sizes from 4 to 12 inches. In New York, 4 inch is also figured on a 12 foot length, which is 228 pounds, and in Boston 260 pounds. Six inch in New York is based on 12 feet 4 inch
length, weighing 394 pounds, and in Boston it is 400 pounds
5974 on the basis of 12 feet. Eight inch in New York is 543
pounds. Boston it is 600 pounds. Ten inch in New York 703 pounds on a 12 foot 4 inch length, and in Boston 800 pounds for 12 feet. Twelve inch in New York 913 pounds, based on 12 feet 4 inches length, and in Boston 1,000 pounds based on 12 feet. In the larger sizes 16 inch 12 feet 4 inches in New York, 1,406 pounds; in Boston 12 feet, 1,485 pounds; 18 inch 12 feet 4 inches in New York, 676 pounds, and in Boston, 1,800 pounds; 20 inch in New

York, 2,000 pounds, leaving out the question of length, and in Boston 2,100 pounds. The same difference would apply; 24 inch, 2,688 pounds, 2,700 pounds in Boston; 30 inch, 3,887 pounds in New York, Boston, 4,000; 36 inch 5,312 pounds in New York as against 5,700 pounds in Boston.

Q. I want to ask you whether in view of the traffic conditions in the City of New York and the sub-surface structures which have to be dealt with and other features which affect it, you would consider it wise or proper to use any lighter weights of gas pipes than the Consolidated Gas Company is now using?

A. In New York City?

Q. In New York City?

A. No, sir, I would not.

Q. Did you go into the subject when you first came to New York as an officer of the Consolidated Gas Company some years ago with Mr. Simpson as to the weight of pipe and consider the subject carefully at that time?

A. I did.

Q. And was that your conclusion?

A. Yes, sir.

Q. As to the cost of distribution which it has been suggested perhaps could be reduced, has there been any change in the wages which you have been obliged to pay your men within the last few months?

Mr. BURR: Objected to as incompetent, irrelevant and immaterial.

5975 Mr. KIRBY: The same objection, and it is not proper rebuttal.

The MASTER: Objection overruled.

Exception to the defendants.

A. Yes, sir; there was an increase of substantially 10 per cent.

Q. In what departments?

A. In all departments all men receiving less than $2,000 a year.

Q. What was the occasion of this increase?

A. In one of the stations of one of the other companies the men had a meeting with the idea of demanding increased pay, and at one of the shops also in New York they sent a round robin to the management, and the matter had been considered frequently by the management for the last two or three years, realizing the situation that really existed, that the cost of living had gone up and we realized that the demand of the men would be a fair one, and we met the question at once rather than meet a question of possibly a strike and trouble.

Q. How much in total would the increase involve, what additional expense about?

A. It was about $225,000 at the time it was considered. I think that based on last year, 1905, it would have been somewhere in the vicinity of $180,000 a year, which would on the sales at that time be about 1.4 cents a thousand, but I have alr-ady stated previously that the difference in labor cost of .78 of a cent, I believed it would not be maintained.

Q. That was what you estimated originally?

A. Yes, the difference in labor between one period and another, saying that .78 cents would be taken up and probably .62 cents a thousand additional.

Mr. **Burr**: I move to strike out that testimony with regard to the increase in wages, Mr. Master, because it is immaterial and 5976 irrelevant, and it is not rebuttal, and it is plain to be seen that we have been confined here during this inquiry to a certain period very well defined, and were not permitted to go into any other period. If they saw fit for any reason to increase the wages given to affect this inquiry may be 25 per cent., it would have no bearing on the testimony which has been given here all these months as to the situation as it existed during different periods.

Mr. **Mathewson**: You have brought into evidence what would happen in the future as to the Astoria operations and what would happen in the future as to increased sales, and you have done nothing but deal with the present and the future. You have to anticipate the future in any order that is applied here. You cannot deal with the past.

The **Master**: I will allow it.

Exception.

Q. I will ask you whether this increase in wages had anything to do with this inquiry or not?

A. Absolutely nothing in any way, shape or form.

Q. One of the witnesses for the defendant spoke of Huntoon governors——

The **Witness**: One moment. May I add something in regard to the question about the shops?

Q. Yes, if it is pertinent in your judgment.

A. There were ordinarily in our shops between four and five hundred men; in 1905 the company had to discharge 301 men and there resigned from those shops of their own accord 294 men, of which 126 definitely resigned for better positions, making a total change in the shops of 595 men in that year, or more than the average 5977 of the entire number of men employed. I meant to give you the influences that were bearing upon us in regard to that.

Q. In other words, did you find it possible to obtain good men constantly at the prevailing rate before this increase?

A. No, we were met by this situation by the men. Huntoon governors may be obtained of the Wilbraham Green Blower Company of Philadelphia. Such governors have been purchased within twelve months by the Astoria Light, Heat & Power Company.

Q. So they are not obsolete and out of date?

A. They are still used.

Q. Reference was made to the item of a few tons of coke which were charged by one of the Boston companies in the production of gas at $6.23 per short ton. Do you know whether that was an exceptional price for coke, and to what it was due?

A. I do.

Q. Very good, state it.

A. That coke was transferred under my personal direction from the Commercial Point Works of what was then the Boston Gas Company to the Bay State works, to the Calf Pasture works of what was then the Bay State Gas Company. Some three thousand tons were obtained during the coal strike, and we took that at $6.23 at the Commercial Point wharf when coke was selling at that time during the coal strike at $7.50 to $8.50 per ton, and anthracite coal from $15 to $20 a ton, with no customer allowed to receive more than one-half ton.

Q. That explains that $6.23 at that t-me?

A. That was in 1902-03, and the small amount that you see in that following year was simply something that was in the pile and that was used up during the following Gas Commissioner's year, but the vast bulk of it you will find in the preceding year in the report.

5978 Q. Does that represent the usual and ordinary price of coke in Boston?

A. No, it does not, not from the Boston company.

Q. Is the Astoria plant of the company now in operation?

A. It is.

Q. How long since it began to produce gas?

A. The 3rd of December, I think, was the time it started, about 11:50 A. M.

Mr. Burr: The 3rd of December?

The Witness: I think it was Monday, the 3rd of December, at 11:50 A. M.

Q. A suggestion has been made as to oil, that the fact that we make coal contracts with various parties to supply anthracite coal in quantities should be a precedent for making contracts with separate individuals for the oil supply. What is the distinction which governs, Mr. Addicks?

A. Well, in the first place, the customary contract is for all your supply in oil, and in the next place, there are not the people in the market to supply that oil the same as the coal. In the case of the coal companies there are a great many coal companies who can supply a very large amount of coal, but even such companies do not pretend to supply all the coal, nor do they bid for all the coal. They usually bid stipulating not exceeding so many thousand pounds. And as I stated, I think before those contracts are placed not only do we distribute them to the various people who can supply the kind of coal that we want, to wit, West Virginia and Pennsylvania coal, West Virginia being the cheaper coal ordinarily, but also, with reference to the railroad supplying it, as we are dependent entirely upon rail supply, and not upon pipe lines as well. We have to pick out shippers who can supply both by the Pennsylvania and the Baltimore & Ohio, so if there is trouble with one we can get it from the other.

5979 Q. There are a great many large coal companies, are there not, substantially on a parity?

A. Yes, sir. But they do not supply all their product to one person. If they supplied all their coal to us one year and then lost the contract with us they would have no business the next year.

Q. And if you had a contract with a company which operates over one line of railway and there is a strike on another line you are not shut off entirely?

A. No, sir, we get from the other railroad.

Q. What have you to say as to the criticism on the tar and ammonia contracts? How is the company's price governed, I mean the price which it receives?

A. That was governed in the usual way with which I am familiar in such contracts as I recall it. The Boston contract was on the same basis in former years when we had a good deal of tar and ammonia before the coke oven plant started.

Q. The company receives an increased price as the value of the product distilled from the tar or from the ammonia advances the market?

A. Yes, sir.

Q. A sliding scale?

A. A sliding scale.

Q. Mr. Marks referred to certain retorts at Fourteenth and Forty-second Streets not being in use when he examined the plants. Will you state why they were not in use?

A. In 1905 we had coal on hand for fifty-eight days, and this year, on account of the failure of the coal companies to deliver coal, we only had at the same time twenty-one days' supply on hand, and the production had to be restricted to prevent our running out of coal.

Q. That is due again, is it not, to the shortage in the West of bituminous coal, or don't you know about that?

A. That is my information, but I cannot state it as a fact. I believe that to be it.

Q. Is it necessary to shut down or cool retorts out for any purpose in ordinary circumstances?

5980 A. Not when you have a water gas plant to take the variation in the output. If you had all coal gas you would have to shut your retorts down temporarily from day to day.

Q. What about scurfing?

A. Well, it is always understood that a certain proportion of the retorts are out of service constantly to remove the collection of carbon which collects in all coal gas retorts. That amounts in New York practice from 2½ to 3 per cent., probably would never be lower than 2 per cent.

Q. Did you read Mr. Edgerton's testimony that the Fourteenth Street coal gas plant was a dilapidated old plant?

A. I think I heard Mr. Edgerton say that.

Q. What have you to say to that?

A. Well, I think Mr. Edgerton is in error in his statement. I have no doubt, Mr. Mathewson, to cover that statement, if I sent a force to whitewash there Mr. Edgerton would go there and say what a magnificent plant it was.

Q. As a matter of fact, a coal gas plant is not as clean as a water gas plant in appearance?

A. No, it is not as clean, and particularly in the retort house the ventilation is apt to be poor and the coke is all over the place, and not only that, but in a coal gas plant they are very apt to preserve their material by painting it with tar, and if there is anything more distressing than another, it is seeing an entire plant painted with black. It is depressing to the eye. If it were painted with whitewash or a paint of cheerful color he would have had an entirely different impression.

Q. Let us take Mr. Edgerton's depreciation method, without going into many details. How did you find he treated the generators at Ninety-ninth Street, Forty-fourth Street and Twenty-first Street, and when were they installed respectively?

5981 A. I read Mr. Edgerton's testimony that he applied a uniform 10 per cent. depreciation on all the water gas generating apparatus, which included the generator, carburetter and superheater. Well, 10 per cent. would happen to be 5 per cent. for two years on the apparatus that was installed in 1904. But at Forty-fourth Street and Twenty-first Street they were gas generators, that I have ascertained in the case of Forty-fourth Street, they were installed in 1899, and in the case of Twenty-first Street they were installed in 1891, so that his method of application of depreciation seems to me it is not—it is rather peculiar, to say the least.

Q. In other words, in Twenty-first Street there were some generators installed in 1891, some in 1899 and some in 1904, is that right?

A. Yes, sir.

Q. And all those at Forty-fourth Street and Ninety-Ninth Street were installed in 1904?

A. No, there were some—I am wrong, at Twenty-First Street. There is an error in your copy. There were at Twenty-first Street, 12 and 13 foot sets, and they were installed in 1904 and 1899. The 12 foot sets in Forty-Fourth Street were installed in 1904 and the eight feet 6 inches sets in 1899.

Q. And they are all given a depreciation of ten per cent. alike, are they?

A. Yes, sir.

Q. Did you read the testimony of the defendants' witnesses in reference to the single main system throughout the City of New York, its advisability in lieu of the system as it exists now, with duplicate mains to some extent?

A. I think I heard that testimony or read it, I cannot say which.

Q. What would be your view as to the wisdom of a single main system in New York City?

A. Well, applied specifically to the single main system on every street in New York it would be a perfect absurdity. The avenues north and south should all have duplicate mains. 5982 Fourteenth Street, Forty-second Street, Seventy-second Street and similar streets should all have duplicate mains. Where there is a car line, like Eighteenth Street, it certainly should have duplicate mains, and on such narrow streets, I mean the ordinary streets we have and very long blocks, like between the avenues, it is an open question, in my mind, whether it would not be advisable to have a main on each side of the street, it is only a case of cost of installation.

Q. It is a question of just and operating cost?

A. Ye, sir.

Q. In reference to the avenues in some places there are more than two mains on the avenues it appears. Is it not a fact that mains are run on some of the avenues which are known as supply mains, and are not mains from which services are drawn for service on those avenues?

A. The larger mains for furnishing additional gas to the mains to which services are connected, would naturally run on the avenues and on many of the cross streets as well.

Q. The transfer mains?

A. Well, I am not referring to the transfer mains in that case, I am referring to such mains as would give gas to the smaller mains. In addition to that there would be mains required to connect the various works together, which would be pumping mains; they might have a pressure at one time and possibly a slight vacuum at another. It is not wise in my judgment to attach service to the larger mains.

Q. And the smaller mains on the avenues, even if they were set on either side of the street, would not be sufficient to take care of consumers, and at the same time act as supply mains, transfer mains or pumping mains?

A. Certainly not.

5983 Q. In reference to the high pressure, system which Mr. Edgerton advised, I will ask you whether in your judgment it would be either safe or wise or economical to instal such a system in the City of New York?

A. It would not, sir.

Q. In addition to the cost of the mains and governors, which Mr. Edgerton computed at something over four million dollars, would there be any other expenditure?

A. There would.

Q. For what purpose?

A. Installation of the power plant and pumping machinery necessary to supply the gas to the high pressure main system that Mr. Edgerton has testified to, and unless many of our stations should be wiped out entirely, I don't know whether Mr. Edgerton had any idea of concentrating them at one or two points or not; I do not think it is feasible, and I presume he did not—but it would require such plants at our various distributing stations, the larger ones, that would cost a very large fixed charge annually, which would run up into the hundreds of thousands of dollars. I am in the midst of that investigation now.

Q. It would amount then to several cents a thousand on the present output of gas?

A. Yes, I think so.

Q. Reference has been made to the sale of coke. Mr. Doane testified as president of the National Coal & Coke Company and was asked as to whether any thought had been given to the marketing of the coke which came from the Astoria works when they are in full operation. Has that subject received attention from you and the other officers of the Consolidated Gas Company?

A. It has.

Q. Have you from time to time in the past conferred with Mr. Doane and advised with him and in favor of the coke company?

A. I have and for a long period—

5984 Mr. **Burr**: I object. This has become monotonous. Mr. Mathewson puts words right into the mouth of the witness, "didn't you do so and so and so," instead of asking him what he did.

Mr. **Mathewson**: I will ask him now what he did.

Q. I will ask you now what the company has been doing in that regard recently and what they are now doing?

A. We have been having a house to house canvas of every house and block in New York, laying out an entire system to determine exactly where all the fuel is consumed in every part of New York City with the idea in the case of Astoria to displace coal in every place available.

Mr. **Burr**: I submit this is not proper rebuttal, what they have done since the testimony of the defendants with regard to coke, a recent matter that they have evidently instituted an investigation into the situation that exists in New York.

The **Master**: I will allow it.

Mr. **Burr**: Exception.

A. I think it has been under way now a year and a half, so far as the current uses of coke are concerned, the coke business has been cared for by the demand of to some extent by the water gas works, and it has been in addition a question of soliciting. The price of course has to govern, whether we can sell coke against anthracite coal, or not, and the price has been increased or decreased during the time I have been in New York based upon the supply and demand. If we can get more for coke we will increase it, and where we have been compelled on account of the situation to make a concession, we have made concessions at times.

5985 Q. Have you material or advertisements actually prepared in your offices to put out as soon as the Astoria coke is on the market in quantity?

A. Yes, sir.

Mr. **Burr**: I object to what they propose to do to sell their coke in future as soon as they get located in the Astoria plant.

Mr. **Mathewson**: Those questions were expressly asked from Mr. Doane by you or Mr. Kirby as to what was being done to dispose of the Astoria coke

Mr. **Kirby**: Well, he answered that.

Mr. **Mathewson**: I am trying to ask the witness. You do not seem to want information about it.

The **Master**: If you regard this handbill as of persuasive force put it in; I will let you.

Mr. **Mathewson**: No, I merely asked whether they have prepared advertisements and made other arrangements. The answer is what?

The **Witness**: The answer is, yes.
Mr. **Burr**: I suppose it may be assumed they never did before.

Q. In reference to other Massachusetts cities besides Boston and Lowell, to which attention has been called, with the same statement as to price of oil, have you any information in the case of any of those cities, or do you get any from the record as to what their gravity is and the character of the oil otherwise than it is merely gas oil?
A. I don't recall any, Mr. Mathewson.

Mr. **Mathewson**: That is all I have to ask of Mr. Addicks, at present at any rate.

5986 Cross-examination by Mr. **Kirby**:

Q. To whom, Mr. Addicks, is the larger amount of coke sold in the City of Boston?
A. What company?
Q. I don't mean company. I mean is it sold to householders or for manufacturing purposes?
A. The company of which I was chief engineer?
Q. Yes, sir.
A. Householders; that is to say, when I say householders, I mean the current trade, similar trade in that New York.
Q. Do you know to whom the New England Gas & Coke Company disposes of the greater part of its coke?
A. At one time I think the majority of it—I won't say the majority, but the very largest consumer they had probably were the railroads—I won't state exactly. I think they are now selling it less to the railroads and more to others, but I won't state that as a positive conclusion.
Q. Whom do you mean by others?
A. Well, the other sources of coke to whom they sell a lot of it, bagging trade and every other trade, they may have trade outside of Boston, in towns outside of Boston.
Q. Would you consider it a fair statement that they dispose of over two hundred thousand gross tons per year for domestic and industrial services?
A. I will have to figure first, two hundred thousand gross tons?
Q. Yes.
A. What are you referring to now?
Q. 1905.
A. This is gross tons, is it not?
Q. Yes.
A. Two hundred thousand, yes, I should think that would be a high figure.
Q. You think it would be twice as much as the figure which you have in mind?
A. Two hundred thousand would be twice as much as the figure I have?
Q. It would be twice as much as the figure you have in mind?

A. I wouldn't like to say without referring to my notes
5987 as to how much coke that they make.

Q. Then you would be inclined to disagree with the following statement that the large output——

Mr. Mathewson: Are you going to read the statement after you have asked him and he says he thought that was a high figure? Is it proper to then read the statement as though it were evidence and ask him again?

Mr. Kirby: Instead of reading the statement I will ask him this question:

Q. Is it your information that the New England Gas & Coke Company produces as much as four hundred thousand gross tons per year of coke?

A. Well, I figure about 360,000, here on this paper, but I was taking 300 days in the year. There are 65 more days. They might produce 400,000.

Q. And you do not consider that half of the amount produced is disposed of for domestic and industrial service?

A. I thought we were treating the domestic part of it, Mr. Kirby. Now you are introducing industrial service. What do you mean by industrial service?

Q. For other than firing of locomotives, and those uses to which you referred in your first answer?

A. Well, of course, you know that I had in mind that about 60 per cent. of their coke was used by the locomotives. You are, of course, taxing my memory to keep these things in mind. If 360,000 tons would be obtained of this, it was, in my mind, about 60 per cent. of that went to locomotives. Then I said that I thought the locomotive service had been reduced to some extent, but I didn't remember how much.

Q. Then you would not be inclined to disagree with a statement that, say, 150,000 tons were used for domestic services?

A. Now you are talking domestic services and leaving out industrial.

5988 Q. Yes, I am leaving out industrial now?

A. Well, I wouldn't want to take any position on it at all until I knew the source from which the information was given.

Q. Well——

A. As to what weight to give to the statement.

Q. And I will read the statement which Mr. Mathewson has suggested I should not read. I have before me the book issued by the United Coke & Gas Company of New York, entitled "A Short Treatise on the Destructive Distillation of Bituminous Coal," with reference to by-product coke ovens, New York, January 1st, 1906, and on page 101 thereof I find the following statement: "The large output of the New England Gas & Coke Company averaging always some 200,000 gross tons per year were disposed of for domestic and industrial service, a similar amount being used for firing locomotives, particularly in suburban service, because of its smokeless nature."

A. Some of those statements I think are correct. I don't know how accurate the information is from this source, as they are not the people who own the New England Gas and Coke Company, although they are the people who own the patents under which the New England Coke and Gas Company was built. As regards the service in the locomotives I think it is correct; that is, it is used more particularly on local service rather than on long distance service. As regards where the remainder is used, I know in a general way it is used for firing boilers and is used for domestic use in a small way, and it is used in a bagging trade which is quite large. I know the time I was there it was shipped to numerous outside towns, but just what those shipments are I did not at that time know, nor have I since kept track of.

5989 Q. Do you know how many gross tons of coke the Consolidated Gas Company produced during the year 1905?

A. I can't tell you offhand, no, sir.

Q. Can you tell me approximately?

A. No, I don't think I would trust my memory to tell you even approximately.

Q. Do you know how many gross tons of coke it is expected to produce at Astoria each year, or during the first year you are in complete operation with your present installation?

Mr. Mathewson: The first unit?

Mr. Kirby: The first unit.

A. Well, that would be based—I have not made any distinct figures on how many tons will be produced under the ordinary conditions of affairs. I can tell you approximately what would be produced.

Q. What is that approximate amount?

A. Take four thousand million feet of gas on the basis of ten thousand feet to a ton, that would be about four hundred thousand tons of coal, basing one-half ton of coke to one ton of coal it would be about two hundred thousand tons of coke approximately, I should say.

Q. Or just about the amount——

A. The figure which you use. It is a rough calculation and I don't know whether I made on error or not, but it looks that way.

Q. How long has this canvass, this house to house canvass of which you have spoken, been going on?

A. I think for a year and a half, or more.

Q. How many men have you had employed?

A. Only one in that.

Q. An employee of the Consolidated Gas Company?

A. No, he is employed by the Coke Company.

Q. How many men had you employed before that time, or have you no knowledge of that?

5990 A. Well, I have no doubt I have had knowledge, but I have forgotten in the multiplicity of the other things.

Q. This is the first canvass of the kind which has been made within your knowledge?

A. No, I won't say that either, because I have an indistinct recollection in my mind that something similar was done once before, but I won't be positive.

Q. Have you made any effort to find a large consumer such as a railroad company, or factory, or one who would in that way take the place of a large consumer for part of the product of the New England Gas & Coke Company?

A. Well, Mr. Kirby, you are assuming that the coke of the New England Company is the same coke we had over here.

Q. Oh, no, I am not.

A. Well, it is a very different proposition, of course, the proposition of our coke and the proposition of the New England Gas & Coke Company.

Q. That is not quite the answer?

A. Yes, I know it is not. The New England Gas & Coke Company has taken one of our consumers rather than our company able to take their consumer. I think it is due partly to their competition that we lost part of the railroad trade. Now, we have not made an effort up to date to endeavor to have a railroad company use coke in their locomotives, if that is what you mean. We have endeavored, irrespective of Astoria, to get the industrial trade, if I may use that expression—that is to say, the boiler use of coal in New York both for coarse and more particularly for fine.

Q. This house-to-house canvass, I take it, is more for the purpose of obtaining this domestic use in the furnaces or ranges or things of that kind rather than under boilers?

A. Our purpose was to determine just where coal was used, my idea being that it would give us a line on just where we would go to do the best work and the quickest work and the greatest hope of getting business, that is my point of view of it. 5991

Q. So that as yet there has been no real effort made to get the business?

A. Oh, yes, but not the business of the future of Astoria, because we are not ready for it yet. It is useless for me to build up a trade in anticipation and run right out and say we cannot supply the trade when we built it up.

Q. So that one of the chief necessities to establish a good coke business is to always have coke on hand to supply the demand?

A. Well, you want to have it—it all depends, of course, on the size and the constancy with which you make your gas. Now, take this case of the shortage of coal at 14th Street. If you have that condition arise I think it is apt to injure your trade; if you do not furnish your customers constantly when required they have to go outside to get their coke, and it is not a good thing for your trade. Of course, the reverse of that, Mr. Kirby, is true also, and we don't want to pile coke up unnecessarily.

Q. But your efforts will be to do two things, first to obtain consumers for the number of thousands of tons of coke which you produce in each year, and next to produce that coke so there will never be a shortage under the demand that you have at any one time?

A. Yes; particularly if the shortage is in the direction in which it would be an important one to keep the man supplied with his fuel. There might be some places where you could cut off from time to time.

Q. In your criticism of Mr. Edgerton's testimony in reference to a high pressure distributing system, you state that the cost of installing such a system would be great. I presume it also follows that there would be some savings on such a system over one
5992 where gas was distributed at a lower pressure: a small main
under the high pressure will carry more gas than a main of the same size under low pressure, will it not?

A. Well, your statement is correct, but you have two parts to your question. One supposes it is not a saving, and in the next place you say a small main under large pressure will carry as much gas as a large main under low pressure. I know of no saving that would be made by such a system. That is No. 1. No. 2, your statement is correct, that if you put a main under pressure you can carry more gas through that main.

Q. I presume it is also true that the smaller the size of pipe to distribute a certain number of cubic feet of gas, the lower the cost of such pipe or distributing system?

A. That depends entirely upon the amount of attention that is to be given and how often it is to be renewed.

Q. Now, we are coming to the question of maintenance and not installation.

A. Oh, well, a small main may cost more than a larger main to install.

Q. Are you prepared to state that a main carrying gas under a pressure of from ten to fifteen pounds would cost as much as a main to carry the same number of cubic feet of gas under a pressure of from two to five inches?

A. It might.

Q. Are you prepared to state that it would?

A. No, I am not prepared to state that it would. Mr. Edgerton heretofore has discussed, I think, thirty pounds pressure, he has gotten to ten now.

Q. Well, let us say twenty-five pounds.

A. Well, Mr. Kirby, if you take high pressure mains all over the city, of course you are going to add to the capital and you have got to carry a main under pressure in all directions, whether you need it in certain directions or not. I understood this was to effect equalization of pressure. I am talking now about the gen-
5993 eral system. You take a mile of pipe from this spot where
we are, one mile, and put it under twenty-five pounds pressure, and neglect entirely maintenance, neglect entirely increase of capital, everything but the mere sending of that gas one mile, as far as cost of investment in that pipe is concerned, it would be apt to be less than a pipe with a lower pressure made of the same material.

Q. The main for the high pressure gas would be less in diameter, would it not?

A. Less in diameter, yes.

Q. Would it have the same weight as one for low pressure gas?

A. It might or might not.

Q. How high a pressure do you consider that your present mains can carry without danger?

A. I don't think it is safe to carry any more pressure than we are carrying at the present time with our highest pressure main. I would not care to carry much over that. It is not only the cost of a main but the question of the results of an accident in case a high pressure main should be ruptured; it is not a question of the material in the main if it is not ruptured.

Q. Do you consider that a gas main should be more strongly constructed to carry a certain definite pressure than a water main to carry a pressure of the same amount?

A. I never had to compare heretofore the pressure of a gas main with a water main. Under the same pressure gas will leak where water will not, but that is a mere question of the joint and not a question of the main.

Q. Otherwise you see no reason to make a distinction, would you?

A. Well, you are referring now to capital, not a question of maintenance.

Q. No, I am referring to the purchase price of pipe; what piping would cost.

5994 A. I think if you eliminate cast iron pipe and restrict your inquiry to wrought iron pipe and eliminate also the possible accidental leakage from a screw joint, we will say that a wrought iron pipe would carry gas as safely as water of the same pressure, providing, however, there is no corrosion or deterioration of the wrought iron pipe.

Q. Do you know the difference in the carrying capacity of a main of a certain definite size in one instance, where say the pressure is two inches, and in another where the pressure is twenty pounds?

A. No, not offhand.

Q. You have spoken of the 10 per cent. depreciation factor used by Mr. Edgerton on various water gas apparatus. Am I to understand that you consider 10 per cent. depreciation on the apparatus installed in 1904 too high?

A. I should not find any depreciation.

Q. That apparatus has been in use since the time of its installation, hasn't it?

A. Undoubtedly.

Q. How often do you have to reline such apparatus?

A. A portion of it every year.

Q. Do you know how much that relining costs?

A. I haven't it in mind, no.

Q. Do you know what proportion to the entire cost of the apparatus it is ?

A. I can't tell you offhand.

Q. Is there any part of that apparatus which has to be repaired or renewed?

A. It is a regular annual, semi-annual, or every three months possibly, operation; and then carburetter brick might be necessary; it depends on all the conditions and all the service and everything of the kind. That is constantly being done.

Q. Superheater bricks?

A. Not so often.

Q. Well, they have to be renewed?

A. Yes.

Q. And the apparatus does deteriorate?

A. Why, it is as good as it was before when we replaced those bricks. It is a matter of ordinary current repairs.

5995 Q. Do you in appraising an apparatus usually take no depreciation therefrom when certain parts thereof have to be renewed from time to time?

A. I should not ordinarily take depreciation off a piece of apparatus in constant use, it having no evidence of anything but proper care and proper maintenance, for the repairs as ordinarily conducted in the gas business, which is a business which has to have its apparatus in constant good condition to operate twenty-four hours a day.

Q. That is so even if the repairs have not been made or are necessary at the time of that inspection?

A. If I saw anything that specifically required renewal, and there was evidence that the apparatus was not maintained as I am accustomed to see it maintained, why then I should be apt to take note of it, but if it is maintained in the ordinary gas business as I know it must be maintained, why I think that it is fair to assume that the machine is in first-class repair.

Q. Then it would be due to its physical appearance that you would base your deterioration factor?

A. Everything that I could ascertain from an inspection of that, but I don't think that I or anyone else can look at a piece of apparatus which is running apparently perfectly smooth and in perfect condition, bearings in good condition, the machine doing excellent service, and say that has deteriorated so much per cent. It is to me an absurdity, plain and simple.

Q. Assume to your knowledge that the interior had not been cared for, that the renewal of these bricks which you have spoken of had not taken place, and that such renewal was necessary, would you use any depreciation factor there?

A. The renewal bricks you speak of I should not consider in depreciation for a moment. They are mostly normal yearly repair and have nothing to do with the apparatus at all.

5996 Q. And because that would be charged up to your repair account you would not consider it was a depreciation factor on the apparatus?

A. That is, anything that has a normal condition, is in constant use, the machine put together with the idea that that shall be done casually and continuously, I could not consider that depreciation for a minute.

Q. When it requires renewing it is not as good?

A. Perfectly; just as good as though just put up.

Q. When it needs money to be expended upon it to have it in a running condition—

A. Just as good, sir. In fact, it might be better.

Q. Going to the 14th Street, we have some, in fact many retorts there, for the production of coal gas, have we not?

A. Yes.

Q. Are those retorts of the same general character that you have installed at Astoria?

A. Well, I cannot recall whether all the retorts at 14th Street are single length retorts or not. I am inclined to think they are single retorts. If so they have the same general character as far as shape is concerned. The mere question of putting in single retorts or otherwise is a matter that can be done either way.

Q. Are they the same size?

A. No, I think they are smaller.

Q. Which is the smaller?

A. 14th Street.

Q. Why didn't you install that size at Astoria?

A. Well, the size at Astoria is—as a matter of fact, I didn't pass upon the size of the retorts at Astoria.

Q. If you had would you have put in the size at 14th Street?

A. I don't remember exactly what is at 14th Street, and I don't remember the exact size at Astoria. My impression is they are something like 16x26, but I don't remember distinctly. If so, that is a very good size. If the size of retorts at 14th Street is less than that, and the settings would permit a larger retort, I would 5997 be inclined to put in a larger retort, provided the furnaces would burn off the coal necessary to that larger retort. It is a mere question of the size of the furnace and the amount of coke used in the furnace, and how much coal you can burn off.

Q. You have some inclined retorts at Astoria, have you not?

A. Yes, we have.

Q. You consider that a more modern type of retort than the horizontal retort?

A. No.

Q. Why were they installed?

A. The inclined retort and a horizontal retort and a vertical retort were all illustrated in the early history of the gas business away back in 1802, and 1803, as far as retorts are concerned. The inclined retort has been adopted within the past ten years, and it has been installed in a number of places. The horizontal retort, with the modern machinery, is pressing to-day very hard, and I would not like to characterize one or the other as the more modern. As a matter of fact, the two types were installed to determine the best type to use for the remainder of the work. That is the reason they were installed.

Q. Have you any results this far which would lead you to believe that the inclined retort had any superiority over the horizontal retort?

A. Not so far; we cannot tell. If I were asked to state to-day which I would put up in place of the inclined or horizontals, I would not be prepared to tell you.

Q. You would not, however, install such retorts as you have at 14th Street?

A. Certainly not. When you say retorts, I am taking the whole thing, if you say the whole thing includes all.

Q. I mean the whole thing, the stacks of benches as we have it at 14th Street.

A. I don't want to fence with you about it. If you take the whole thing I will say, very frankly, certainly I would not.

5998 Q. I presume you had nothing to do with the contracts which were entered into between the Consolidated Gas Company and the Barrett Manufacturing Company in reference to the sale of tar and ammonia or ammoniacal liquor, did you?

A. I don't think that I had anything to do with the final making of that contract. I knew about it at the time, but I don't recall having anything to do with making that particular contract.

Q. Do you know whether or not any effort was made to obtain a better contract or a contract with other parties than the Barrett Manufacturing Company?

A. Well, I cannot answer that, yes or no. I know I figured on it very carefully myself to see what I could do in the matter personally. I couldn't suggest anything better.

Q. Are you familiar with the current market prices of coal tar or ammonia sulphate?

A. Well, I was thirty days ago, or sixty, but I couldn't tell you now positively what they are.

Q. Your coal is purchased from several companies, is it not?

A. Yes.

Q. And the companies bring their coal into New York over several lines of railroad?

A. At least two, I don't know how many more. I think only two, two general systems.

Q. What two systems are those?

A. I have in mind the Baltimore & Ohio Railroad and the Pennsylvania. I don't know what other lines they might bring coal over.

Q. And you consider that a safeguard which is worth considering in awarding your contract for coal?

A. Yes.

Q. Do you consider that there might be a strike on one of those lines and not a strike on the other?

A. Well, I can't say that a strike on one would not result in a strike on the other.

Q. Was that an element which entered into your consideration in awarding those contracts?

5999 A. Yes, I did have in mind that a strike on one would not necessarily mean a strike on the other. For instance, the Pennsylvania Railroad one time swept off every bridge along the Juanita River. Their traffic was transferred to other roads. That was an incident, you know.

Q. But you would be inclined to have your coal coming into New York over as many lines as possible?

A. Not necessarily as many—a reasonable security. We have a stock of coal on hand, or attempt to, as well.

Q. Your oil comes from Bayonne?

A. I don't know that it does entirely. Some of it may come from Philadelphia. I think those two sources are the principal sources.

Q. It comes from Philadelphia by rail?

A. I don't know; I can't answer that definitely. I know a great deal of it does come from Bayonne, but if I said it all came from there, some of it might come from Philadelphia by tank steamers.

Q. But by far the greater proportion, in your opinion, comes from Bayonne?

A. I should judge so. It is the most natural place.

Q. Do you know how that oil does get to Bayonne?

A. I only know from Commissioner Garfield's report more than anything else. I haven't read it all, but I have read considerable of it.

Q. You have stated——

A. I judge there were pipe lines from there.

Q. You have stated that the storage capacity of this gas oil in tanks of the Standard Oil Company was backed up by their pipe lines?

A. Yes, I knew of their pipe lines there.

Q. Do you know how many pipe lines there are coming into Bayonne?

A. I read it a few days ago, and my impression is there are either two or three into New York City.

6000 Q. Two or three into Bayonne?

A. I think there are at least two into Bayonne, but it would be a question of refreshing my mind.

Q. Coming from the same field?

A. I cannot answer as to that definitely.

Q. Following the same general route?

A. I can't answer that definitely. I will give you the report, if you would like to have the information.

Q. Those pipe lines do not carry gas oil, do they?

A. Well, I presume not; probably carry crude, I should think. I cannot say that they do not any of them carry gas oil.

Q. It is your opinion that they do not.

A. That is my impression.

Q. Now, as a matter of fact, gas companies purchase their oil not from the wells but from the refineries, is that not so?

A. Ordinarily, I think, in the East.

Q. The gas used by the gas companies is not the crude product, is it?

A. No, not in the East.

Q. Is that so in any part of New York State?

A. I don't recall any case where it is true.

Q. Do you know of any large refineries at all situated in the western part of this State?

A. I shall have to again refer to the report. The report gives every refinery there is. I can hand you that if you like to have it.

Q. But it does not necessarily follow, does it, that the close proximity of a gas works to an oil well means it is able to purchase its oil any cheaper than one that would be a thousand miles away but right next door to a refinery?

A. Well, I would be inclined to think the one that was nearest the well would have cheaper oil.

Q. And upon what reasoning do you base your conclusion?

A. If they couldn't get it I should think they could get the crude.

6001 Q. Would you advocate the use of crude oil?

A. Some crude oils I have had very good results with.

Q. Is crude oil cheaper or as cheap as gas oil?

A. We do not buy crude oil to-day.

Q. You do not believe you can?

A. Not in the East.

Q. No, I don't think so either?

A. I am glad we agree.

Q. In building your retorts, your benches, and preparing the same, and in doing work of that character, do you employ your own labor?

A. Consolidated?

Q. Yes, the Consolidated?

A. Well, I can't tell you offhand whether those are their own men or whether they go out and get other men. I don't believe I can answer that question definitely.

Q. What is your impression?

A. My impression is that much of it is done through our men, but whether we go outside and get some of it I can't tell you at the moment. I should think it would depend upon the size of the job. It might be they would have to go outside but the effort would be to do it undoubtedly with their own men.

Q. Wouldn't the effort be to do it as cheaply as possible?

A. Yes.

Q. Now, is it not a fact that you can and have done such work cheaper by doing it under contract than by doing it with your own men?

A. I can't answer that as to the Consolidated Gas Company.

Q. Can you give me the date when this 10 per cent. increase in wages went into effect?

A. I think I can.

Q. When?

A. From memory, on or about the 1st of December, 1906.

Q. Did I understand you in saying that the condition of the streets in New York were worse than that of Boston, as concerns the laying of pipe—gas mains? 6002

A. I don't recollect making a reply to a question that was framed in that way.

Q. What would you say if such a question were framed in that way?

Mr. Mathewson: Do you frame it in that way?

Mr. Kirby: I consider it framed.

A. What is the question?

Q. Do I understand you in saying that the condition of the streets in New York was worse than that of Boston, as concerns the laying of pipe, gas mains?

A. Yes and no.

Q. Now, to what conditions does you- yes refer and to what does your no refer?

A. I think there are some small parts of Boston where it might be just as complicated as New York. Take the very bad part of Boston and the very bad part of New York and on the average New York is a great deal worse than Boston.

Q. The streets of Boston are considerably crookeder than those of New York, are they not?

A. I think if you take the same relative age of the territory—I mean the age of the district, I don't think I should like to differentiate as between the lower part of New York and parts of Boston, because I think I could start in one part of New York and land in the same spot occasionally as in Boston.

Q. Is it not a fact that in laying mains in congested parts of the City of Boston more special joints are needed than in laying mains of the same length in the congested part of the City of New York?

A. Well, in this way, that the congested part of Boston may not be exactly the same character as the congested part of the City of New York. For instance, perhaps the most congested part of the City of Boston is Tremont Street in the vicinity of West,
6003 and Tremont Street is a comparatively straight street there
at that point. It might not require more specials. On the contrary, down around the old north end part, Salem Street and Hull Street, it is pretty crooked. I don't know as it is any more crooked than some streets in New York. They are very similar.

Q. All these weights which you gave for gas mains in Boston, are they the weights of the mains laid by any one company?

A. Those are the weights in Boston proper. There are other weights for the suburban companies.

Q. Now, which company put down these weights that you have first given the weights of?

A. This is for Boston proper and some part—probably some parts of Roxbury there, and Boston proper. I will give you the weights of the suburban if you would like them.

Q. When were those mains to which you have already made reference put down?

A. Well, the date on this is January 27th, 1897.

Q. You mean the date on what?

A. These weights which I have given to you.

Q. Do you know from what source these were derived?

A. This is marked "Approved, W. R. Addicks, Chief Engineer," so that I think I had something to do with it; but the weights of pipe that I give are the weights that were commonly used in the Boston company. There was one exception to that.

Q. You mean by that the Consolidated Company?

A. No, I mean the Old Boston Gas Company for years. One exception is the six-inch main, which, in some cases, instead of weighing four hundred pounds to the length it weighed as much as 460 pounds to the length, but I did not allow any more pipe of that weight to be laid. The other weights were what were nor- 6004 mally used by the Boston company and adjacent towns before I was there, unless it be some little change in the sizes to make it more uniform.

Q. Have you any knowledge of the weight of mains used by the other gas companies in Boston than the Boston Company?

A. Yes, I have; the outside companies, such as Dorchester and the South Boston, I think it was, and it was part of Roxbury.

Q. Are those weights higher or lower?

A. They are lower.

Q. Was the Boston Company the only Boston company which gave service in the City of Boston proper at the time?

A. Yes, sir. No, they were not the only ones. The Bay State had some large mains there, and the Brookline came in with their mains.

Q. And have you any knowledge of the weights of mains as made by the Brookline Company?

A. Not specifically, but in general terms I have.

Q. Have you any knowledge of the cost of the laying of those mains?

A. Not from memory, no.

Q. That main went through some of the most congested streets in the city, did it not?

A. Very little. They did not go into the old part of Boston—the north end district, for instance. They went into the Back Bay, they went into a few of the streets in the West End, they went into the South Bay District, and ran through Boylston Street, and then up in Tremont Street; their office is there; they reached a point up there, but did not go down into the worst part of the city.

Q. And furnished gas to consumers in the vicinity of Tremont Street, did they not?

A. Not further north than West Street, I believe.

Q. And is now a part of the Association, do you call it?

A. Boston Consolidated Gas Company. This is also signed by the Chief Engineer of the Brookline Company, J. A. Gould.

6005 Q. You have spoken of a quarter of a mile of pipe and I think it was 36-inch main?

A. 30.

Q. Belonging to the Bay State Gas Company and running from its works to, I take it, a public thoroughfare or something of that kind, and which main was originally laid along the ground?

A. Above the ground.

Q. Above the ground?

A. Yes, sir.

Q. That the gas, as it entered such length of pipe, had a candle power of about 25 and it lost a considerable part of its candle power in flowing through this one-quarter mile of main. Was that so at all the periods of the year?

A. Well, I said that the gas went to the Commercial Point Works to enrich coal gas, I think you will remember. I don't think I said that was a quarter of a mile. The part exposed, I said roughly, was about a quarter of a mile, but the length of main to the Commercial Point Works, I think, would be about three or three and a half miles. This trouble of candle power was only to an extent; whereas the main we had to cover was due to winter service and not to summer service.

Q. That is, during the summer there was no appreciable loss of candle power?

A. I don't say there wasn't an appreciable loss of candle power, but it was not a loss which made it absolutely essential to do something about, to wit, cover the main.

Q. Was there any more loss there than there would have been if that main were underground?

A. The very fact that we did cover it and had no further trouble with the loss of candle power shows plainly that was so.

Q. And during the month of July one year when it was uncovered and the month of July of the following year when it was covered, how was it?

A. I don't recall what the conditions were in the month of July. It never disturbed me, because it was winter entirely when our trouble was with it.

6006 Q. It was cold?

A. Yes, sir.

Q. If it had been in the South or somewhere where they had no cold, you would as lief have had it above the ground as under it?

A. I think in any pleasant or moderately warm weather; I don't think there would have been very much difficulty with it, no, sir.

Q. Would you have had any difficulty with it I mean, as far as concerned loss of candle power?

A. I won't say there would not have been a loss of candle power. Even wherever the weather could get as low as forty degrees, I won't say there wouldn't be a loss of candle power, and whether it would not be wise to cover the pipe even under those conditions; but under northern conditions it was wise.

Q. Have you any knowledge of what the average temperature of the earth in that part of the city was?

A. Well, I knew that at one time, but I do not believe I can tell you offhand. It is somewhere around 54, I think.

Q. You would not be far wrong in saying 55?

A. I don't know. I am only trusting my memory. I cannot say anything about that. I am speaking now of the average temperature below the frost line. Our mains were frequently surrounded by frost in Boston.

Q. How deep does the frost go in Boston?

A. It varies.

Q. Generally it goes down as low as three feet?

A. I won't say it don't possibly; but I should say it averages a foot deeper than New York, at a rough figure.

Q. Four feet?

A. I think four feet would be exceptional.

Q. Do you remember how great a loss in candle power you found in this three miles of pipe, before and after this quarter-mile section was above the ground?

A. No, I cannot give you the exact figures. I only remem-
6007 ber the fact that during the time that we had it exposed we had to use oil at our Commercial Point Works for enriching purposes for the coal gas in addition to the water gas, which was an expensive piece of business, and after we had covered it we could drop our oil.

Q. Are you prepared to give any reason for this?

A. I simply give the reason that the temperature carried the gas down to such a point that it resulted in the condensation and forced out the hydro-carbons.

Q. And these hydro-carbons being condensed precipitated themselves?

A. Yes, and were pumped out the drips. If they had remained in the gas and been carried on through and mixed with the coal gas they would have reached the consumer.

Q. So the carburetted water gas had to have added to it oil gas in a sufficient amount to keep the candle power of what you required for immediate purposes?

A. No. The oil gas was added to the low candle power coal gas as made in the retorts raising the candle power of the coal gas to a normal condition, and then they added the carburretted water gas. Now, if the candle power is sufficient from the carburetted water gas there is no necessity of putting that oil gas in the coal gas.

Q. What character of gas were you carrying through this pipe?

A. Carburetted water gas.

Q. Unenriched?

A. Oh, no, carburetted water gas.

Q. Enriched to what candle power?

A. 25.

Q. 35?

A. 25. That was about our average.

Q. Would it, in your opinion, have been possible to so reduce this carburetted water gas as to have prevented the precipitation of the hydrocarbons which gave it its illuminating power.

Mr. Mathewson: You mean as they were precipitated in
6008 going through this particular piece of pipe?

Mr. Kirby: Yes.

A. I don't know of any other way of doing this.

Q. The only method you knew of and used was to add more oil so as to raise the candle power?

A. And I said I might cover the main. We covered the main so as to avoid adding that oil. But even with any additional oil our candle power dropped so low that it was necessary to cover the main irrespective of the exact quantity of oil we used.

Q. Where was the holder which contained this gas situated, relative to this exposed section of the pipe? Was it close to or far from it?

A. The holder was not over 500 feet from the meter house, and this gas passed from the holder to the meter house and then out towards the street that I have described. Now, when I come to think of it I think in addition to that 30-inch main being exposed there were parts of the holder inlets and outlets which were exposed in the same way, but I cannot recall just how many feet that was.

Q. As a matter of fact there is generally a considerable piping around the gas holders which is exposed, is there not?

A. I don't recall any ordinarily either in a steel tank or in a brick tank.

Q. The holders themselves were not exposed to cold, were they?

A. Yes.

Q. They were not housed in as we have noted one or two small holders of the Consolidated?

A. No, our holders were a million cubic feet apiece, 1,100,000, and they were too large to house in.

Q. And the holders are not as a rule housed in to-day, are they?

A. Some comparatively modern holders are housed in in New England within my knowledge, yes, sir; and the holders in Boston holding 400,000 and 600,000 feet were housed in.

6009 Q. Comparatively small holders?

A. One three-lift holder holding 600,000 cubic feet and the others were 400,000-feet holders; they were all housed in in the city proper.

Q. For architectural beauty?

A. No, anything but that. They were done that way so they never had to clean the holder from snow, and the gas would go in and out of it without having to constantly change the resistance.

Q. That is due to the weight?

A. Due to the weight of snow, so the works would make into the holder from the station with certainty, and, in addition to that, it took very much less coal to take care of it; less attendance and less maintenance, that was the purpose.

Q. You have spoken of the depth of mains in Boston, and you said three feet. Do you mean at the bottom of the trench?

A. No, I am speaking of the top of the pipe.

Q. I presume the traffic conditions in Boston are just as severe upon mains as they are in New York?

A. There are parts of it where I think it would be just as severe.

Q. There is considerable old cobble pavement in Boston, is there not?

A. Very little of it now. The macadam pavement, there is a great deal of that; that is particularly in the Back Bay district, however, and part of the South End; but in the other parts of the city it is pitch and pebble with a concrete base to a great extent now; large block pavement.

Q. The main purpose of the New England Gas and Coke Company is the production of coke, is it not?

A. Yes.

Q. It sells gas as a by-product?

A. Yes.

Q. You have spoken of the company at Lynn, Massachusetts, and stated it does a gas and electric business, and also of the

6010 Boston company, stating that it does a gas and electric business. In the Lynn company, you have stated, it is not possible to make comparison without a proper distribution of the charges?

A. Not possible for me to make a comparison without knowing how things are distributed.

Q. You didn't have data to your hand to enable you to make such a comparison?

A. No; I took up the question of the Lynn company in a most general way, and dropped it another time outside of those cases.

Q. Now, the Boston company; will you give me the method which you pursued and the basis which you used in coming to your distribution of assets? You stated that over $700,000 of the $24,366,000 of assets is invested in the electrical part of the business?

A. I added those up when I was asked the question.

On page xx, Gas and Electric Light Commission, 1906, Public Document 35. Total assets of the books of the company $24,366,520.14, in which you will find shown the real estate, machinery, etc., as follows:

Real estate, electric	$110,000
Steam plant, electric	150,000
Electric lines	315,000
Transformer	45,000
Electric Meters	47,165
Arc lamps	23,143
Due from electric light and power	16,125

Horses, wagons, etc., I do not recall charging that in, and other gas and electric material on hand, $226,000. A part of that I considered. I only said between seven and eight hundred thousand dollars, because I did not know what it was

6011 Q. And how much of the $226,733.38 given as the value of other gas and electric material on hand did you use as an asset of the electrical business?

A. I simply took a round figure as you see between seven and eight hundred thousand dollars; but I have done it heretofore, it was not in this copy; I thought I would find it here, but I do not. I took the $226,000 out of the $24,000,000 as I remember it, and then took the amount of the electric capital in this and compared it with the total capital and then distributed the same proportion of the $226,000 into the electric and gas relatively. As I remember, that is the way I did it.

Q. What did you think the item of electric lines refers to, amounting to $315,151.90?

A. I should say that was their plant in the street.

Q. In conduits?

A. They have very little conduits. Nearly all over head in Brookline; the only underground is what I think they put in in Beacon Street for a very short distance. They have not even got an underground coming out of their own station where their wires are. Oh, yes, they also — some on Commonwealth Avenue.

Q. You have no knowledge of the accuracy of the distribution of these assets other than that which is contained in the statement?

You take it for granted that the real estate electric, and the real estate gas, with the figures given in this statement, are correct?

A. I think, after an examination of three or four months of the companies, with an idea of capitalization, that those figures were obtained for, late in 1904 and early in 1905, it is a fair apportionment, as I remember it at the time.

Q. Assuming that your conclusion is as has been given will you also state how you arrived at your figure of 4.6 cents per thousand?

A. Certainly.

Q. And what that figure means?

A. The profits from that business were about $130,000.

6012 Q. And where do you get that statement from?

A. I get that statement from Mr. Richards.

Q. How did he give it to you, and when?

A. I think he gave it to me by telephone and confirmed it by letter, I would not be sure. I have it noted by telephone from Mr. Richards on Thursday, August 16th, 1906. I don't know that that refers to every bit of information, because I have a note here that it came from a letter of such and such a date that $130,000 came from Mr. Richards as the earnings for the electric company.

Q. For what period?

A. Gas Commissioners' year ending June 30th, 1906. I also obtained the information that they sold 432,040,000 to auxiliary companies. .

Q. That you obtained in the same way?

A. Yes, I think you will find that Mr. Bemis has used almost—has used these same figures, but I will not be sure about it.

Mr. Bemis: Substantially so on gas.

The Witness: Yes. They bought that from the New England Gas & Coke Company for 23 cents and sold it to the auxiliary companies at 36.02 cents. Now, I did not take the difference between 23 cents and 36.02 cents as their profit, because I happen to know from my knowledge of the company that all the gas obtained from the New England Gas & Coke Company is purified by the Consolidated Gas Company, so if they sell that gas to auxiliary gas companies they expend on it the purification, which with them amounted to 5.91 cents per thousand for purification and handling. So I added that amount to the 23 cents and took the difference between those two amounts, what it cost them for their gas and what they sold it to auxiliary companies, and obtained a profit on that amounting to $30,718. That added to the $130,000 made

6013 $160,718, which divided by the amount sold to the private consumers in the city and including what was used in their own works, which was 3,497,482,000 feet, gives 4.6 cents a thousand.

Q. Where did you get your figures dealing with the cost of purification?

A. I had general knowledge of that from my own knowledge previously and this exact figure was given to me by Mr. Richards, so I am quite familiar with the figure.

Q. Which figure did he give you?

A. 5.91.

Q. He gave you the cost per thousand?

A. For purification and handling.

Q. What do you mean by handling?

A. Oh, well, they took it into their gasholder and sent it out from their gasholder.

Q. Have you the two figures which went to make up that total of cost of purification and the cost of handling?

A. No, I have not.

Q. Your general knowledge would tell you that the cost of handling and the cost of purification would come to that amount?

A. Between six and seven cents, possibly a little over seven cents. I have the exact figure of that in 1905, when I investigated the Boston situation. I have it down to dollars and cents, and if you would like to have it I will give it to you.

Q. Is that cost of purification generally the same as it would be, say, in the works of the Consolidated Gas Company?

A. Oh, no indeed, not for a minute.

Q. Is it higher or lower?

A. Away beyond it.

Mr. Mathewson: What is away beyond it?

The Witness: The six or seven cents.

Q. And why is it so abnormally high?

A. Because you are having Dominion coal which is simply impregnated with sulphur from end to end, and you have to use
6014 lime for purifying. You have to have three sets of purifiers. You have to have a twenty-grain limitation by law on sulphur, and you have to put up lime purifiers and take out every trace of carbonic acid, and have to have lime boxes which have been fouled by sulphur, sulphide boxes, to take out the bi-sulphide of carbon, and then you have the boxes after that the same as we ordinarily use in the gas works in New York for water gas, the oxide boxes, and it is a very expensive operation.

Q. Does this operation free the gas from carbonic oxide?

A. Yes, substantially it does.

Q. And from carbonic acid?

A. Did I say carbonic oxide in that other statement?

Q. Yes.

A. I meant to say carbonic acid. It does remove substantially the carbonic acid, the lime does.

Q. And this information also came in over the telephone?

A. That I am giving to you now?

Q. The 5.91, is it?

A. 5.91, yes; and I think—I won't say that that particular figure was confirmed by letter, but I think so. It is substantially correct, anyhow. I might as well tell you, Mr. Kirby, if I had not that figure I would have simply subtracted 23 from the average, say 36, and got a larger amount to take off and made it more than 4.6, but because I knew the purification item, I did not do it.

Q. You divided the 4.6 up into the profit on the electrical business by dollars?

A. No; I divided the profit of the electrical business, plus the

profit of the auxiliary gas company business, and divided it by the sales, the sales in Boston of the Boston Consolidated Gas Company; in other words, if they had not had those sources of return they would have had to have 4.6 larger profits on the gas that they sold in order to pay the same dividend; that is the only point I
6015 am bringing out. They could not have sold gas for the price at which they did, an average of 92.15, and make the profit they did and pay the dividends they did. They would have had to have 97.7 cents.

Q. Then you consider it a valuable auxiliary to have an electric plant as part of the business?

A. Well, I certainly would be very glad indeed. I don't think there is any gas plant to-day that would not be very glad to have an electric plant, whereas twenty years ago they did not want to see them. Now they would be very glad to have them, but there is no electric plant in our case, if you will remember, Mr. Kirby, there is no capital involved in it.

Q. How did you get your information as to Lowell, Massachusetts, in reference to the candle power of the gas, and the amount of oil used?

A. I got it from the superintendent.

Q. In what manner?

A. I got a telegram from him; I telegraphed him and got a telegram from him. I want to say, Mr. Kirby, as a sad thing at this time, that the superintendent died on the 3rd of January.

Q. How did you get your information as to the character of the oil used at Williamsport?

A. I asked Mr. L. B. Gawtrey if he could give me some information in regard to this.

Q. And he got it; he told it to you?

A. Yes, he told me that—he found that there were no gravity requirements.

Mr. MATHEWSON: He has not been connected with the company for a considerable time, Mr. Kirby; he and his associates have sold out long ago.

The WITNESS: He still knew the superintendent, however, or manager.

6016 Mr. MATHEWSON: Yes, but he is not a manager or director of the company or even a stockholder now.

Q. You are not aware how he got the information?

A. I think he went to the present owners and got it that way. He did not remember what it was when I asked him.

Q. Some one told him and he told you?

A. Yes, that was the best information I could get.

Q. Who informed you that the gravity was 26 degrees Beaume?

A. I think I asked Mr. Higgins about that and also confirmed it in any way.

Q. Mr. Higgins is who?

A. Of the Standard Oil Company. My impression is he told me it was about 26, I will not be sure whether Mr. Gawtrey told me that or Mr. Higgins.

Mr. **Mathewson**: He is the one who had the correspondence with the Danbury man.

The **Witness**: Yes, the man who wrote the letter which was produced here.

Q. You knew Mr. Higgins before you knew he had written to Danbury?

A. Yes, I tried to find out what I could.

Mr. **Mathewson**: It was put in evidence.

Mr. **Kirby**: Yes, marked for identification.

Q. Did you also obtain from Mr. Gawtrey the freight rate from here to Williamsport or from Williamsport here?

A. No, I got that from the Pennsylvania Railroad.

Q. Did Mr. Gawtrey and Mr. Higgins inform you where the oil was shipped from which went to Williamsport?

A. Yes, I think Mr. Higgins said so.

Q. And what did he tellyou?

A. That it came from Philadelphia.

6017 & 6018 Q. And was it shipped from Philadelphia to Williamsport?

A. Yes.

Q. Do you know the distance from Williamsport to Philadelphia?

A. No.

Q. Do you know the difference in distance from Williamsport to Philadelphia and from Williamsport here?

A. No, except I know one is 90 miles, I don't know how far the other is.

Q. You know that Philadelphia is 90 miles from New York?

A. Yes.

Q. Do you know the difference in freight rate from Philadelphia to Williamsport and from New York to Williamsport?

A. No.

Q. You have added to the price of the Williamsport oil a freight rate from Williamsport to New York, have you not?

A. Yes.

Q. If someone were purchasing this oil in New York do you think they would ship it from Philadelphia to Williamsport and from Williamsport to New York?

A. No, but I assumed it would come from the Philadelphia fields and not from the Texas fields. I believe it was Texas fuel oil, the oil that was used.

At 5 P. M. adjourned to Wednesday, January 23rd, 1907, at 11 A. M.

Last Exhibits:

Complainant's 335.
State's 000.
City's 236.

6019 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; **WILLIAM TRAVERS JEROME**, as District Attorney of New York County, **FREDERICK E. GUNNISON**, **JOHN C. DAVIES**, and **LUCIAN L. SHEDDEN**, Constituting the New York State Commission of Gas and Electricity, and **THE CITY OF NEW YORK**, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January* 23, 1907.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

6020 **WALTER R. ADDICKS**, resumes the stand and further testifies:

Cross-examination by Mr. KIRBY (continued):

Q. Last night, Mr. Addicks, we were speaking about your coal coming in over at least two railroad lines. Your oil, I take it, comes in over the pipe lines of the Standard Oil Company, does it not? Comes to the coast in that way, does it not?

A. I presume it does. From all the information I have it does, Mr. Kirby. It comes some by rail as well, for aught I know.

Q. And you consider, I presume, a pipe line a cheaper means of transportation than by rail?

A. I don't know anything about that. I know, in a general way, about it, but the matter does not concern me at all.

Q. Then you do not consider it a valuable or an important point that the Standard Oil pipe line makes the Standard Oil Company practically independent of railroad rates?

A. As a matter of certainty of supply it is very valuable, but when it comes to how much of it goes through the pipe line or how much by the railroad, I have only the information I can obtain from Garfield's report. I have no other information.

Q. And you would still be of the same opinion of the importance of the pipe line if the cost of transportation by that line were greater than by railroad?

A. Yes, certainly, as far as certainty of supply is concerned; so much additional facility for getting oil.

Q. You have given us certain information, relative to the cost of oil, of the various three or four other gas companies in the City of New York, the gravity of that oil, the amount used per thousand cubic feet of gas produced, and so forth. Will you tell us 6021 in what manner you obtained that information? Was it told you, and, if so, by whom?

A. Yes, I talked with the managers of the companies.

Q. And such information was given to your individually?

A. Yes, sir; more or less.

Q. What do you mean by more or less?

A. I mean to say I got more information from some than I did from others.

Q. But it was all obtained in that way?

A. Not all obtained in that way.

Q. What was not obtained in that way?

A. Well, you ask the particular thing, and I will tell you whether I obtained it in that way or not.

Q. Here we have the Brooklyn Borough Company. You state that they use, if my notes are correct, 5.61 gallons per thousand; from whom did you obtain that information?

A. Mr. Macy in person; confirmed by memoranda.

Q. Memorandum taken by you?

A. No, sir; by Mr. Macy.

Q. You also stated, in regard to the Brooklyn Borough, that the price of their oil had been increased; how did you obtain that information?

A. Mr. Humphreys told me so.

Q. Do you know how he knew—you mean Mr. Humphreys of that company?

A. Yes. He is manager of the company. I suppose he knows.

Q. When we speak of Mr. Humphreys here we mean——

A. I talk of Dr. Humphreys then. I don't know as he is any relation or not.

Mr. Mathewson: That 5.61 gallons also appears in one of the State's Exhibits, from the figures.

Mr. Kirby: Very good, then.

The Witness: Mr. Kirby will find the number of gallons does not appear—may I correct you, Mr. Mathewson? It does 6922 not appear in the State's Exhibit, but the number of gallons of oil appears and the number of feet of gas appears, and it is a matter of dividing the one by the other, but it does not appear as 5.61.

Mr. Mathewson: But it is to be deduced from the figures already in evidence.

The Witness: I referred to that yesterday in my testimony.

Q. How did you obtain your information of the oil used by the Kings County Company, and the Texas product?

A. I obtained it from the State's Exhibits.

Q. And also that it was furnished by the Gulf Refining Company?

A. No, I talked with the manager of the company.

Q. How did you obtain the storage capacity of the Gulf Refining Company?

A. I asked a personal friend of mine who had knowledge of the situation there, and I asked him what the storage capacity was, and he told me he thought it was about that, and I stated that same thing.

Q. Have you any knowledge as to where the Western gas companies mentioned in the State's Exhibits purchased their oil from?

Mr. Mathewson: Which State's exhibit is that?

Mr. Kirby: The State's exhibit giving the amount of oil and price thereof, the one to which reference has been made, the one stating the number of gallons of oil used, the number of cubic feet of gas produced, the one put in by the Secretary of the Commission—I mean the Western New York companies.

A. I don't know whether I can really state where they do get it from. I don't recall at the moment.

6023 Q. You have no knowledge of freight rates to these points of the use of gas oil, from the place of purchase, have you?

A. No. The information is given in the Garfield report, various freight rates from various points, I know that, but I have not had occasion to use it.

Q. Referring to page 5951 of your testimony, where you give the factors which you consider are involved in the comparison relating to oil used by the different companies, I note thirteen factors.

A. Some of the factors.

Q. Referring to the second one specifically, "whether the candle power is taken on a bar photometer or whether on a Lowe jet photometer, or a Jones jet photometer, or a Knox jet photometer, which is similar to the Jones? If taken on a bar photometer, whether the results are corrected for temperature and pressure atmosphere?" On what kind of a photometer are the tests of the Consolidated Gas Company taken?

A. The recorded tests, on a bar photometer.

Q. Those tests which are set down in your statement on pages 5934, 5933, 5932, 5931, and 5930; have you any knowledge as to how the candle power at stations was obtained? Was that by the use of the bar photometer?

A. Yes, I think that is true, Mr. Kirby.

Q. And do you know whether or not they were corrected for temperature and atmospheric pressure?

A. I think they were, but I don't know how far back they were. I don't know about 1902, but I think you will find the record of 1904 and 1905 corrected. I won't say as to 1902.

Q. Do you know as to December, 1905?

A. No, I can't tell you definitely. I think they were all corrected.

Q. Do you know how such tests are made by the city?

A. Yes.

6024 Q. How are they made?

A. They are corrected for temperature.

Q. Are they taken upon a bar photometer?

A. Yes, sir, I so understood it. They would be worthless if they were not. The law requires it so, I suppose they are obeying the law.

Q. Do you know whether the tests at the city stations and at the works of the Consolidated Gas Company were taken with the same kind of apparatus and in the same manner, with the same corrections and with the same kind of a burner?

A. Well, I think they are. I think they are both—whether they are both 100-inch bars or not I cannot say; some may be 60, some 100. I think they are taken with the same number of Bray burner; if I recall correctly it was No. 6. That burner is not the same as used in Massachusetts. In Massachusetts they use the Sugg table top burner, which is either No. 5 or No. 6, so they differ in that respect, and with lower candle-power of coal gas in Massachusetts they use the Argand burner, but I think the practice in New York is not to use the Argand burner under any circumstances.

Q. The tests for candle-power in New York City are, of course, for candle-power above 20 and have been for many years back?

A. Yes.

Q. Then you are not positive that the tests are made in the same manner, but are not prepared to state they are not made in the same manner?

A. I have not specifically examined the record in regard to the tests you refer to. If I had examined them specifically I would say unhesitatingly, yes, but as I have not specifically examined them I qualify it to that extent. I have no doubt they are the corrected candle power.

Q. You consider they are close enough in their method to use as a basis of comparison between candle-power at the station and
6025 candle-power at the works, do you not?

A. Well, they are the records that are on record, as exhibiting the candle-power. I am merely taking the conditions as they appear.

Q. You have used such tests in the table which you here presented, have you not?

A. Yes, I have simply taken the records that Mr. Edgerton has put into the case. He put the candle-powers in himself, and I have taken those and added the candle-powers taken by the city, and used those put in by Mr. Edgerton and by the city.

Q. Mr. Edgerton put in no table for December, 1905?

A. No; with that qualification.

Q. That is entirely prepared by you?

A. Yes, it is simply a copy of the same report that Mr. Edgerton was supposed to put in. He made a comparison originally in that same way, and I simply followed his lead.

Q. Going to our fifth factor here, "whether the make of gas is corrected for temperature of the gas passing through the station meter, and if so, how such temperatures were obtained and the number and nature of the readings?" I take it that the production of gas at any station, as given by the Consolidated Gas Company, is not merely the reading of the station meters, but that it is the reading corrected to what it would be if the gas, instead of being at the temperature where it was when it passed through the meter, was at the same standard temperature assumed by you?

A. Sixty degrees.

Q. Sixty degrees Fahrenheit. What is the average temperature of gas as it passes through the station meter in the works of the Consolidated Gas Company? Is it above eighty?

A. I don't recall, Mr. Kirby, what the temperatures are; they were different for different works.

Q. Would you think it was higher than eighty in any one instance?

6026 A. Well, if the thermometer was one hundred degrees in the summer, it might readily be above eighty.

Q. Then the outside temperature has considerable effect upon the gas as it comes from the gasmaking apparatus and passes into the holder?

A. I think it has some effect, yes. You have all the windows open in the summer. In the winter perhaps it may or may not have an effect; it depends on how thoroughly the various buildings are maintained in temperature by artificial means.

Q. Would gas coming directly from the gasmaking apparatus be as quickly affected by outside temperatures as to have some decided effect upon the temperature of the gas as it passed through the station meter?

A. Well, the effect—won't you read that question?

Question read by stenographer.

A. I don't know whether you intend to cover as broad a field with that question as you would seem to, to my mind. Will you put that into another form so as not to make it quite so complicated in its reply. I will explain to you why, if you want me to.

Q. What would you consider the temperature of gas would be as it comes from the gasmaking apparatus before it passes through the station meter or before it starts on its way to the station meter?

A. 1600 degrees; in a water gas plant.

Q. Now, it loses a very large part of that temperature, does it not, before it gets to the station meter?

A. Yes.

Q. So that if there were no atmospheric influences, no change of temperature, rather, assuming, say, that the temperature remains constant at 60 degrees?

A. In the atmosphere?

6027 Q. In the atmosphere; what would you consider the average temperature would be when it reached the station meter?

A. Well, of course, that depends upon what you condense and what your scrubbing capacity might be for a given make of gas.

Q. Well, in a properly proportioned plant?

A. And in the winter?

Q. I say we will assume outside temperature of 60 degrees?

A. Yes.

Q. Constant?

A. Then I am inclined to think it would be—of course, it is hypothetical, but I am inclined to think it would be somewhere between 60 and 70 degrees.

Q. If instead of having an outside temperature of 60 degrees we had an outside summer temperature of 100 degrees, or even more; would the temperature of that gas be materially increased?

A. I don't know.

Q. Then you are not as strongly now of the impression as you were a few moments ago that the outside temperature would have considerable effect upon——

A. Just as strong.

Q. Would it or would it not have it?

A. I think it would have an effect, but you asked what the average temperature would be. I never met with just those conditions, and I cannot recall exactly what the effect would be with 100 or 120 as constant temperature, or even 90.

Q. Would it raise it two degrees, do you think?

A. I really don't know what effect it would have. It would depend on how much water you use in the condensers, how close your meter was to the condensers, as to how quickly you measured it after the gas had been condensed to any temperature that you choose to carry it. If you choose to carry it down to sixty you would have to have water for this outside temperature. If you could have water of such a low temperature that you could bring it to sixty, 6028 and if you should measure it at once you would have the measurement of sixty, it wouldn't make any difference what happened to the gas after it passed to the meter.

Q. The outside temperature, however, you consider has a material effect upon the gas as it passes to the meter?

A. I think the average temperature, as a rule, of gases in the summer time would be higher than they were in the winter time in any well regulated gas works.

Q. That is due to the temperature of the outside air?

A. That is due to the fact that the temperature of the outside air is higher in summer than it is in winter.

Q. Is there any other point in the distribution of illuminating gas where the amount thereof is measured by the meter?

A. Yes.

Q. Where is that?

A. On the premises of the consumer.

Q. Is that corrected for temperature?

A. It is not.

Q. Have you ever made any investigations to ascertain what the average temperature would be of the gas passing through the consumer's meter?

A. I have.

Q. Is it above or below 60 degrees?

A. I will qualify that statement—not of the average gas passing through, but what the temperature was in some particular cases.

Q. Yes.

A. I don't recall what the figures are.

Q. As a matter of fact, most meters are placed in a temperature warmer than that of the outside air, are they not? In cellars of houses and hallways of apartment houses?

Mr. MATHEWSON: Doesn't that depend on the season of the year?

Mr. KIRBY: Yes, very much so; warmer in winter, cooler in summer.

6029 A. I think their usual places may or may not; they are certainly apt to be warmer than the outside air, but not necessarily as warm as the remainder of the house.

Q. And we endeavor to keep our houses here at about 70 degrees, don't we?

A. That depends on whether you are an Englishman, an American, a mixture or a countryman, or have been brought up in the city.

Q. Except in the room where this hearing takes place?

A. I think sixty-five is more agreeable than seventy, personally.

Q. Sixth. "Whether results are figured on the make, corrected or uncorrected, or on the scale?"

A. If you make it "sales" it will be better. Of course, those sales also would be qualified as to whether the meters were cared for by the gas company or whether they were neglected. If they were neglected that would be apt to be to the benefit of the consumer.

Q. Seventh. "Percentage of unaccounted-for gas" is a corollary following from 5th and 6th, is it not?

A. Yes; they would have some effect, one with each other; but on the other hand the actual condition of the system might have some effect when you based it on the actual cost of oil for what you obtained so many thousand feet of sales, the per cent. unaccounted for would be possibly considered. That is the reason I probably put that in there.

Q. Going to No. 9: The gravity of oil has a bearing which depends somewhat on the atmospheric temperature, in other words, upon whether the oil which is used produces a fixed gas at all normal temperatures and pressures met with in the given locality. Will you kindly explain that a little more fully?

A. Well, simply in this way. Down in Georgia I should
6030 think that you would be apt to use a very much heavier oil, one that had a larger percentage of vapors in the gas than you would if you were in the latitude of New York City.

Q. And for what reason?

A. Well, it is a very complicated question to my mind.

Q. You do not mean my question? You mean your answer?

A. No, I do not mean my answer. I mean your question involves a complicated proposition. My view of gas is that it has various gases, vapors, from hydro-carbon products, some of the constituents of which may be of gas at a certain temperature and which, when you get into a lower temperature, may be deposited from two causes, either that they naturally go to a fluid state at a lower temperature, or the gas may contain many vapors that when the temperature is lowered they drop out as in liquid form, the same way as in the atmosphere when you get a certain condensation of aqueous vapor you drop out the rain in the lower temperature of the atmosphere. I am not prepared to state definitely what the causes of the phenomenon may be. I don't know any more than I know what electricity is, possibly.

Q. It simply comes to this, does it not, that you believe that in a place where the mean temperature is higher than some other place where the mean temperature is lower, that you can use an oil of lower specific gravity, that is, a heavier oil?

A. As we should meet it in the gas business, yes; and to make it specific the products from that oil, whatever they may be, in the higher temperatures may be vapors that can be carried by the gas and burned, whereas in a lower temperature they would be apt to be deposited in the pipes and be pumped from the drips as liquid hydrocarbon.

6031 Q. Now, of course, this has nothing to do with the actual make of the gas. The temperature in the, say Lowe, water gas apparatus, or in the apparatus of whatever name it may be, is the same, whether it is made in Georgia or Montreal is it not?

A. I would rather have you specify what the name of the other apparatus is.

Q. I mean comparing Lowe with Lowe, or Jones with Jones, or whatever the other names may be, size for size?

A. I think in general we will assume the same apparatus. Of course, I would not like you to assume the retort process and the cupola process. I am giving you a general proposition. When you come to consider the results obtained by this oil that you are choosing, as to whether it is gas made from the cupola process or made from the retort process, I think other conditions arise which I should have to make as my fourteenth proposition, perhaps.

Q. Then, assuming it was made with no particular apparatus, we get our gas to the meter where you would have the readings corrected to a temperature of 60 degrees and then into the holder, and then out through the mains, through the service mains to the service, to the consumer. It is, in your opinion, by reason of the low temperature in this northern climate that an oil which would be proper to be used in the South would not be advisable to be used in the North; that is, something happens to the gas after it comes from the manufacturing apparatus; am I right in that?

A. In a general way.

Q. Can you, in a general way, tell me what does happen?

A. No, I can't tell you what happens to the gas in pipes. I can only tell you by my personal experience what my judgment is. I cannot tell you what happens. I never saw gas except when it was hot, in the gas machine; we never see it from the time we make it until we burn it.

6032 Q. Will you tell me what your personal experience and judgment is?

A. It is that a low gravity oil will not produce a stable product under a given temperature and pressure that a higher gravity oil will within certain limits.

Q. What leads you to that conclusion?

A. My experience up to date, Mr. Kirby.

Q. What have you noticed which has given the experience of which you speak? Is it such loss in candle power which you referred to yesterday, or anything else in addition to that, and if so, what?

A. I cannot specify particularly except my general knowledge and general experience, accumulations of past years.

Mr. Mathewson: Isn't that the summary of the whole thing? The estimate is that the candle power drops where the low gravity oil is used more easily and more quickly in low temperatures than where the high gravity oil is used.

Mr. **Kirby**: I ask whether he can give me any reasons other than those he has already mentioned.

The **Master**: He has answered, and says that his general experience is all he can go by.

Mr. **Kirby**: I now have his answer.

The **Witness**: I understand he wanted to know how I reached this conclusion. I have given him an answer from information gleaned from time to time, not by one specific instance or necessarily a series of specific instances. It is an accumulation of experience and knowledge that leads me to that conclusion.

Q. You are familiar with the Pintsch system of making illuminating gas?

A. I know what it is, yes.

6033 Q. This gas is generally used in railway lighting, I believe?

A. Its principal use in this country, so far as I know it.

Q. And as such it is subjected to rather low temperatures, is it not, in the winter time?

A. In the trains, probably.

Q. Have you ever made any experiments on loss of candle power in this gas to such temperature changes?

A. Mr. Kirby—not answering your question, but you have not stated that it was also under a pressure of several atmospheres——

Q. Quite true.

A. But I have made no such experiments personally, no.

Q. Now, the tenth factor which you state is as follows:

"A gravity oil which is obtained by very heavy tar products mixed with light gasoline products must give different results from a homeogeneous oil which consists of constituents that by their closer relationship by gravity are perhaps more easily heated or acted upon more similarly by the same temperatures, such temperatures as are met with in gas manufacture."

Will you explain to me what you mean by a "gravity oil" obtained by very heavy tar products mixed with light gasoline products"?

A. I referred to a mixture of the later products in the still with those of the earliest products in the still.

Q. And such oil if fractionated would show what?

A. I don't know what it would show if fractionated.

Q. If you had an oil of that character or an oil which you desired to find out whether it was of that character, to what test would you subject it for the purpose?

6034 A. I don't know as I am sufficiently familiar with such an oil to say just what the results would be. I only referred to the mere question of the higher and lower results of distillation from the fact that if you had a very high gravity product and put that through the gas machine, and you found that certain heats in the generator would handle it best by practice, and you took the other part of that product and put it in the gas machine you would probably find that different heats were required to handle that. Now, then, take those two products and put them in the gas machine simultaneously. I think you would have such extremes that you would not get satisfactory results out of the product; that is all I meant by that statement.

Q. Have *you* any of the oils which you have made mention of as those used by the various companies, been of a character that you have just referred to, that is an oil which is obtained by very heavy tar products mixed with light gasoline products, or don't you know?

A. Well, I understood that those that have no gravity mentioned are liable to that situation; whether they are in that situation, I don't know, but in one case I understand that they discovered there was considerable of the very heavy material.

Q. How was that discovery made?

A. Well, I don't know definitely how the discovery was made.

Q. Was an analysis made of the oil?

A. I will not say as to that.

Q. If an analysis had been made of the oil, you are not able to state wherein such analysis would differ from that made of what you call homogeneous oil?

A. Well, I think you would find possibly something like this, you would probably find two products, one possibly of all gasolene and the other all very heavy gravity oil; that is what I would expect to find.

6035 Q. Gasolene?

A. Is of very light gravity.

Q. Gasolene is more expensive than gas oil, is it not?

A. Yes.

Q. Than the heavier products of the distillation, is it not?

A. Than the heavier products?

Q. Yes.

A. Yes, I so understand. I have had my principal information from your own witnesses in that regard.

Q. You have no reason to doubt it, have you?

A. No.

Q. Just what do you mean by homogen-ous oil?

A. Well, a homogeneous oil is of the nature of one the opposite to what I have mentioned, that is to say, it is the result of distillation.

Q. One which when fractionated would show a very small range of gravities?

A. I cannot say in various oils exactly what the range would be, but relatively very much different from the very highest gravities and very lowest gravities; I cannot give you the extremes.

Q. But one which was confined, say, if we made ten fractionations and found that such showed a range of over five degrees, Beaume gravity, and one which for the same number of fractionations showed a range of over ten degrees, you would consider the first one more homogeneous than the second, would you not?

A. No, I don't know that I would. I should think they might be equally homogeneous, the two oils. The mere question of having in the distillation—take any gravity, say, forty gravity, you might have forty-two or forty-four gravity, mixed with thirty-six, and they may be both straight run homogeneous oils, and might average forty gravity.

Q. Supposing we had one averaging forty gravity, and we had

forty-two, forty-four, forty-six, forty-eight and thirty-eight,
6036 thirty-six, thirty-four and thirty-two, would that be?

A. Those are not very wide ranges.

Q. Would that be as homogeneous an oil as the first one you referred to?

A. Well, that perhaps might differ with the various oils; I don't know what the upper or lower limits might be.

Q. Then a wide range to you would have but little to do with the homogeneous character of the oil?

A. Yes, but I think the very low range might have some of these very heavy products in possibly.

Q. Then it comes down to whether or not the oil contains these heavier products of which you speak?

A. Well, more or less, and what the gravity would be of the heavier products.

Q. And these heavier products——

A. I am referring now, of course—it would depend somewhat upon what the gravity of oil is; of course, if you have a low gravity oil, you have more of those products, but if you have a lighter oil you have less.

Q. Where do you consider the heavier products commence as regards to degrees, Beaume test?

A. I am not prepared to say.

Q. Twenty-four degrees?

A. I am not prepared to state at the moment. I have not it in mind.

Q. These heavy tar products you consider are deleterious in a gas oil?

A. That they are in a gas oil.

Q. Yes.

A. The products that are not gassified in the gas generator, I doubt very much if they are present to any extent in the ordinary lighter grade gas oil.

Q. And should not be?

A. Well, preferably not. I should think.

Q. Do these heavy products indicate themselves in any way in the manufacture of gas, other than in the candle-power of the gas produced?

A. Yes, I think they would be apt to indicate themselves in the distribution system and in the gas meters.

Q. In what way?

A. Condensation.

6037 Q. Condensation which would be what?

A. Hydro-carbons; I don't know what they would be.

Q. Tar?

A. Various hydro-carbons.

Q. That which is commonly called tar, oil tar?

A. I don't know—well, what is usually called drip oil.

Q. If there were a large proportion of this drip oil in the form of precipitated hydro-carbon, you would consider that the oil you were using was not proper for the purpose?

A. Or not proper apparatus, perhaps, to handle it.

Q. It might be one or might be the other or might be both?

A. Possibly.

Q. Now, the reason that 73-degree Able oil is not sold in this State is because the laws of New York require a test higher than that which 73-degree Able oil can stand?

A. That is my understanding. I believe the laws are not so severe over on the other side.

Mr. MATHEWSON: It may not be the only reason that it is not sold here; it may be a matter of price, because they sell it cheaper abroad than they sell it here, according to Mr. Emery.

The WITNESS: As a matter of fact, you know, Mr. Kirby, gasolene is sold under certain conditions, but as I understand it, 73 Able is sold for illuminating, in lamps.

Q. The statutes of the State of New York in regard to the use of illuminants in lamps or for such purposes are such that the fire test to which the oil is to be subjected is higher than that which 73 Able oil will stand?

A. I understand that is so, but I have not got the exact figures.

Q. And it is your information, is it not, that the requirements of the foreign market for the use of oil for such purposes are not as stringent as those of this country, especially New York? 6038

A. That is my one understanding. I am not stating it as a definite fact; it is my belief, however.

Q. Did I understand you to state in reference to your contract with the Standard Oil Company that you would have had to pay a higher price if your contract did not contain a clause that all of your oil would be taken from the Standard Oil?

A. I have always understood that with the Standard Oil Company that their contracts are based on all the product; I am not acquainted with any other contract with the Standard except on that basis.

Q. So if you had taken part of your oil from the Standard, you consider you would have to pay a higher price therefor than if you had taken all?

A. Yes, with other disadvantages.

Q. I take it that if you had offered to you for gas making purposes two oils, one of 34 degrees and the other of 44½ degrees, you would prefer the 44½ degrees, wouldn't you?

A. At the same price?

Q. Yes, at the same price?

A. Under New York conditions?

Q. Under New York conditions?

A. At the same time of the year?

Q. At the same time of the year?

A. Possibly; may be yes, and may be no.

Q. What is the specific gravity of the naphtha which you use?

A. I do not think any naphtha has been used since I have been here.

Q. It was formerly considered that naphtha was desirable if not absolutely necessary to make a high candle power gas, was it not?

A. Well, that depends upon the apparatus you are using. I cannot answer that yes, nor can I answer it no.

Q. To do away with use of naphtha, an apparatus has been designed so as to use a lower gravity oil, has there not?

A. No, that was not the reason for it.

6039 Q. But by change of design of the apparatus it becomes possible to use a lower gravity oil than naphtha with a relatively better result?

A. Some apparatus may improve the result with low gravity oil and other apparatus do not have to be changed if you use naphtha or other oils.

Q. Which apparatus do you use?

A. The cupola superheater type, reversed steam.

Q. Is this kind of apparatus one in which you can use naphtha and low gravity oil with equal advantage or is it one which gives better results with the low gravity oil or naphtha?

A. I think that it is a piece of apparatus that you can generally get better results from any kind of oil than any other apparatus except possibly the high gravity naphtha of ten or fifteen years ago; in that case you may get equal results probably if not better with some other apparatus.

Q. What was the character of the apparatus in 1902?

A. Where.

Q. At the 21st Street plant?

A. Retort process, and some Lowe machines.

Q. Were the Lowe machines different in any way from those in use now?

A. They are in use now.

Q. The same identical machines?

A. Yes.

Q. Any additions there?

A. Yes.

Q. The same kind and character of machine?

A. The same character but not the same dimension machine.

Q. Larger?

A. Smaller.

Q. Just as efficient?

A. Well, I think a smaller generator is more easily cleaned than a larger one; to that extent, possibly, a small machine may be better in the long run, with repairs and from other considerations. The primary difference, Mr. Kirby, the one is twelve foot and the other is thirteen. There is one foot difference in the generators.

6040 Q. But this difference in size would produce no difference in the relative efficiency of the two sizes, would it?

A. I have not analyzed the oil results on the two sizes carefully enough to state that as an absolute statement, which I would rather make here.

Q. In 1902 some naphtha was used in the 21st Street station, was it not?

A. Apparently, yes.

Q. Do you know the gravity of this naphtha?

A. I do not recall it, no. I don't know whether it is on the records or not, but if it is on the records and I saw it, I don't recall it.

Q. Well, you are not prepared to state that if you had your choice of two oils, each of the same price, one of 44 and — other of 34 degrees that you would take the 44 degrees in preference to the 34?

A. You have not qualified your question sufficiently for me to answer the question, so I am not prepared to state.

Q. Under the identical conditions as to delivery—if you had two contracts offered you, one such as you have at the present time, mentioning 28 degree and 34 degree oil, and another one similar, only with the substitution of 38 degree and 44 degree instead of 28 and 34 degree?

A. You have not got enough elements in it.

Q. Each offered by the Standard Oil Company?

A. I am much obliged to you for that, but you would have to qualify it further.

Q. You do not think that is sufficient for an answer in that form?

A. No, sir.

Q. And to be used for the same purposes as that to which you put the 28 and 34 degree oil, which you now obtain?

A. If you will add the question of average temperature or minimum temperature, etc., I will try to answer you.

Q. Well, used here in the City of New York by your com-
6041 pany. I don't think I can go any further than to say con-
ditions absolutely the same in all respects?

A. I will not give you a definite and absolute answer to that, specifically as to the use of one or the other. My judgment is that the 44 gravity oil would probably give better results during the winter months than the 34 degree, and the 34 gravity oil, or even lower would give substantially good results in the summer time. That is the best I can answer your question. At the same price, as between 34 and 44 degrees it would be hard for me to choose, in the summer time. In the winter time I think the 44 degree would possibly be better. I want to qualify it further. The question of danger of handling oil might be an element in the choice, as to danger from accidental ignition in the tank.

Q. Upon whom is the risk of handling under your present contract?

A. After we receive the oil the risk is on us; before we receive the oil the risk is on the contractor.

Q. You have stored naphtha upon your plants, have you not?

A. We have underground tanks principally.

Q. Have you ever had any fires therefrom?

A. Yes, sir, very serious.

Q. In New York City?

A. Yes, sir, in New York City.

Q. How recently?

A. A number of years ago.

Q. Do you know where?

Mr. Mathewson: We have not had any since perhaps 1902, Mr. Kirby, and could not have had any.

The Witness: I cannot give you the date; it was before the time I was here.

Q. It is more than ten years ago, is it not?

A. I cannot say more than ten years ago; I should say 6042 it was probably ten years ago, but I do not know definitely. It occurred at the 44th Street works.

Q. Now, you have spoken of the deterring influences which you consider unsurmountable in your getting oil from smaller companies, and have stated you would have to skirmish around the country in an endeavor so to do?

A. I did not say skirmish around the country.

Mr. Burr: Mr. Mathewson stated that in his question.

The Witness: Mr. Mathewson asked me that question.

Q. Well, it has been so hard to distinguish between the questions and answers that I may have been misled. I suppose such skirmishing around would cost money?

A. I think if we had to go around we would have had to have buyers out, and facilities to take the oil we bought in those small quantities, and try to ship it to New York. It would be quite an undertaking.

Q. And quite an expense.

A. Yes, it would be quite an expense.

Q. Let us come to this fleet of boats and the tanks and so forth in which to store your oil, if you made deliveries of such oil on your own account rather than had the Standard Oil Company do it. Can you give me in a little more detail than you have such estimate?

A. I would be very glad to answer any question you may wish to put to me on that subject.

Q. Well, you have the details all worked out, haven't you?

A. I have my rough notes of the details, yes, sir.

Q. Well, inasmuch as you cannot give us the information without questions as to each branch of it, we will have to take it up a 6043 little longer than we might do otherwise. How many barges did you consider would be necessary?

A. That depends somewhat on whether the storage is in Jersey or in Manhattan.

Q. We will assume, first, the storage in Jersey, and then the storage in Manhattan. First give the number for the Jersey storage, and then the number for the Manhattan storage?

A. Probably five in one case and ten in the other.

Q. Five where the storage was in Jersey?

A. Five in Manhattan and ten in Jersey.

Q. And how large would each barge be?

A. Not exceeding 200,000 gallons.

Q. Is that the size which the Standard Oil Company uses in making deliveries to you?

A. No, I think they use various sized barges.

Q. Do you know whether they have any barge of that size?

A. Yes, they have barges running larger than that; they also have some smaller.

Q. They use barges of larger capacity than this in making delivery to your works, don't they?

A. Some of them, yes, sir.

Q. Do you know how many barges they have detailed for the purpose of supplying your plants?

A. No.

Q. Is it as many as five?

A. I think—how many they have?

Q. Yes?

A. No, I cannot tell you how many they have; they have various ones; we get one barge and then we get another, and then another; I don't know what business they are in other than our own.

Q. Was it upon the number of barges which the Standard Oil needed for your purpose that you based your estimate, or was it, upon other information which you had?

A. I based it on my own judgment to a great extent.

6044 Q. You have never had any experience in transporting goods by water, have you?

A. Yes, I have had some experience.

Q. What experience have you had?

A. I have transported water-gas tar by water.

Q. Where and when?

A. Some few cargoes in Boston from one works to the other.

Q. Other than that though, you have had no experience, have you?

A. In transporting on water? I have been on the water a great deal and had a good deal of experience in boats and their management, etc., quite a little.

Q. Yes, we can imagine what such experience has been.

A. I have been in command of a vessel in New York harbor and have had some experience.

Q. How many tugs did you think would be needed for this purpose?

A. Three in one case, probably, and five in the other, the smaller number of tugs can go with the smaller number of barges.

Q. Did you estimate that this fleet would be large enough to also take care of the oil to be furnished to the other companies on the island of Manhattan?

A. I figured on 100,000,000 gallons, which would include those, but reduced to cents per gallon, which would, therefore, only involve each one independently of the other; that is to say, it would be the average price per gallon and they would all get the benefit of the increased quantity naturally; that is as far as transportation is concerned.

Q. Did you figure out the cost of these barges yourself?

A. Yes, I figured out my estimate of the value of the barges.

Q. Did you obtain bids for the same?

A. I did not obtain formal bids, no.

Q. Did you obtain information from shipbuilders as to the cost of building, or did you figure it out yourself?

A. I got information from two sources of the probable cost of barges such as I figured.

6045 Q. Shipbuilders?

A. Yes.

Q. How great a storage capacity did you give?

A. Three months.

Q. And for what degree of oil?

A. Either, the same storage capacity would do for either.

Q. Yes, one would be larger than the other, would it not?

A. No.

Q. You would not use the same number of gallons of 34 degree as you would of 28, would you?

A. I would not store it that way; I would have three months' supply on hand for the maximum day's consumption irrespective of the degree of oil; that would not influence me one way or the other.

Q. But either Mr. Mathewson in his question, or you in your answer, inferred that a higher degree oil would necessitate less storage capacity, as you had to use less of it for the purpose?

A. Well, that would not be measurable in this calculation.

Q. Then that really is not an important element which enters into consideration of the relative merits of the 34 and 28 degree oil?

A. The variations in the sales might readily compensate for any difference in oil. I merely took the amount of oil used in a given three months; as a matter of fact I do not recall what gravity it was at the time, but that would not influence me particularly. A tank more or less would not be of material difference.

Q. Nor would that be so if you used naphtha instead of gas oil?

A. No, I don't think that would be an element worthy of consideration, except so far as naphtha is concerned, of course, the danger of storage when naphtha is concerned is greater than in the lower gravities.

Q. There is no reason why gas oil should not be stored in the Island of Manhattan, is there, so far as fire is concerned?

6046 A. In small quantities, in reasonable quantities. I should be very sorry if it were considered an improper thing to store it, because it is an essential thing for us to store it. But in very large quantities, such as three months' supply I certainly would not recommend the company to do it.

By Mr. MATHEWSON:

Q. Did your estimate as you have given it, include the additional precautions, etc.,which would be required for naphtha if you were storing naphtha?

A. As a matter of fact it would make no difference to me in the precautions I would take in handling either, but I think the risk would be greater than with the other; I would take the same precautions in either case.

By Mr. KIRBY:

Q. If gas oil as a matter of fact is thrown upon a fire produced by the burning of wood, say, it would put it out, would it not?

A. I never tried it. I never would like to. I never fool with oil in such a way. I suppose it depends upon the quantity of oil and the size of the fire, you might have 100,000 gallons of oil and drop it upon a small fire and put it out.

Mr. **Mathewson**: So with gas running out of a burner tip, it will put out a match for the moment.

The **Witness**: Yes.

Q. Do you know what the flashing point of gas oil is?

A. Yes, I think it is less than 120—pardon me, no, I am thinking of something else. Somewhere around 140 and 150, 34-degree oil is. I don't know what 28 degree is. That is my impression.

Q. I think it is about 200, is it not?

A. I think I have the exact figures somewhere, but I am depending upon memory.

6047 By Mr. **Mathewson**:

Q. Does it not depend upon the character of the 34-degree oil to some extent? Will all 34-degree oil flash at the same point?

A. No, I don't think it would necessarily. It depends upon where the oil is obtained, I should think.

By Mr. **Kirby**:

Q. You have never made any experiments?

A. I personally, no.

Q. And there never has been any made by those in the employ of the Consolidated Gas Company?

A. I made the inquiry in regard to the flashing point of our 34 gravity oil at the time I was investigating the flashing point of 73 Able, and may impression is it was something between 140 and 150, the oil that we are using at the present time, that is my impression, as against 112 for the 73 Able.

Q. In the tanks which you would erect for the storage capacity of this oil did you figure in the cost of land upon which they would be situated?

A. I did.

Q. You did not consider that the Consolidated Gas Company had any land to-day which might be used for that purpose?

A. No. If such land was utilized I figured the value of the land at present that we have, I figured it on the basis of our present land, not on the purchase of any land or the price we would have to pay, but on the basis of the value of our present land. Whether we would have any piece of land to use, I don't think we would have any to use in that direction.

Q. Have you investigated the sale of residuals and the prices obtained therefor elsewhere than those sold by the Consolidated Gas Company for the purpose of making a comparison with the prices obtained by you?

6048 Mr. **Mathewson**: You mean elsewhere than in New York City.

Mr. **Kirby**: Either in New York City or out of it.

A. I have made comparisons with Boston and Boston experience.

Q. From such investigations as you have made do you consider the result of the Barrett contract for your coal tar and am-oniacal liquor a good one for the company?

A. At the time in which I considered it, as I recall, it resulted in higher returns than we would have obtained in Boston, and it was more advantageous to the company than the Boston situation.

Q. I note in Field's Analysis of Accounts, etc., for 1905, that the London gas companies obtained an average of 48 cents per ton of coal for ammonia. Do you consider that a better or worse result than the Consolidated Company obtained?

Mr. MATHEWSON: Is that very important, Mr. Master, what they got in London? It does not seem to me that that touches us very closely.

The MASTER: Well, I will let him go into the question of what they get in London, but it seems to me that particular question asked of the witness is not of very great value. If the London price appears to be more than the New York price, the question as to whether he considers it better or worse is not of very great importance, is it?

Mr. KIRBY: Well, I presume that is a conclusion, and rather an obvious one.

The MASTER: You can ask him if he knows whether they got that price in London and whether that affects his opinion as
6049 to the advantageousness or reasonableness of his contract here.

Q. Have you any reason to doubt the statement which I make, first in regard to tar, that the Gas Light Company, Commercial Company and South Metropolitan Company obtain an average of 1.37 pence for their tar and 2.09 pence for their ammoniacal liquor and sulphate of ammonia per thousand cubic feet of gas sold? You have no reason to doubt that statement, have you? If so, I hand you Field's Analysis and show you the figures therein (handing book).

A. I am perfectly willing to take your statement, if those are the figures. I don't know whether they are or are not, of course. That is about 2.74 cents and 4.18 cents per thousand.

Q. Yes.

A. But that would not modify my opinion; no, sir.

Q. That tar is not per thousand, that is per gallon.

A. You said per thousand.

Q. The ammoniacal liquor and sulphate of ammonia is per thousand, and the coal tar is per gallon.

A. I first understood the tar was per gallon, and then afterwards that you said per thousand.

Mr. MATHEWSON: Look at the book.

Mr. KIRBY: Yes, I thought I had expressed it as it is stated here. Put the question in this way.

Q. The London Metropolitan companies, as set down in Field's Analysis of Accounts, for the year 1905, received an average of 1.37 pence per gallon for tar and an average of 2.09 pence for ammoniacal liquor and sulphate of ammonia per thousand cubic feet of gas sold.

A. That seems to be correct.

Q. And your answer is that that fact does not, in any way, change your opinion?

6050 A. I think the situation in London and the situation in New York are not such that I can compare them as to results. I am already on record in that same direction.

Mr. Mathewson: And I suppose you understand, Mr. Kirby, that when you speak of gallons in Field's Analysis, you mean an Imperial gallon, which is 20 per cent. larger than the American gallon.

Mr. Kirby: I think we have threshed that out to the end.

Mr. Mathewson: There is nothing to thresh out.

Mr. Kirby: That point was taken up with Professor Bemis, or someone in your cross-examination, as to the amount per gallon, and it has been spoken of in previous testimony in this case as to the statement in Field's analysis.

Mr. Mathewson: Yes, I am simply calling attention that that gallon is different, and no comparison is correct unless that is taken into account.

Q. Coke contains about the same amount of carbon as anthracite coal, doesn't it?

A. No, I think not.

Q. How much less?

A. There is more ash in coke than there is in anthracite coal, as I recall it.

Q. Any appreciable amount?

A. Well, that is pretty hard—I am not a walking text book, I should say 4 or 5 per cent. difference.

Q. But you think that is true with domestic anthracite, I mean by that, the free burning coal, and not the hard Lehigh, which might be used for other than domestic purposes?

A. I think the free burning Lackawanna coals are apt to have more ash in them than the harder coals. Perhaps the harder coals might have more slate in them, but my impression is there
6051 is several per cent. difference in the amount of ash in coke in even these free burning anthracite coals. I should not like to make a statement to that effect unless I could consult reference books or notes on it. That is simply an impression.

Q. Mr. Doane has stated that coke is a freer burning coal than anthracite coal, it is more easily ignited and requires less draft. Is not the requiring of a less draft a positive advantage in that a less percentage of heat goes up the chimney?

A. Well, that is draught for any particular fuel. If you took a fuel that burns twenty-four pounds of air to the pound of fuel, of course, you can get a certain maximum flame temperature in your boiler, and if you burn it with twelve pounds you will get a very much higher maximum temperature and more efficiency in your boiler. I am using those figures from memory. I think the twenty-four is about practice and the twelve is about theory, and the maximum in the furnace would be about 800 degrees difference, all this is from memory, I have not looked it up for ten years. So that the less amount of air you use for a given fuel, the more economical results you will get from that fuel, but simply because a certain fuel requires less air than some other fuel you would not say there was any question of economy there. I should say there was the same saving in economy by not using twice as much air on the second fuel as against the theoretical quantity. The principal objection to my mind in a free-burning coke would be such a free-burning coke that the ordinary leaks around the doors would give more air than required. That is the only thing I can think of.

Q. Do you know whether the Barrett Company and National Coal & Coke Company market the by-products of the Central Union Gas Company?

A. What is that?

6052 Q. Do you know whether the Barrett Company, with whom you have your contract for coal tar and ammoniacal liquor, also purchases the coal tar and ammoniacal liquor or sulphate of ammonia from the Central Union Gas Company?

A. The first question included another company?

Q. Yes, and I separated them so you may have less difficulty in answering them.

A. My impression is that the Barrett Company buys the by-products from the Central Union.

Q. Do you know whether the National Coal & Coke Company market the coke of the Central Union Gas Company?

A. I don't recall what that company is—

Mr. Mathewson: Mr. Doane testified that the National Coal & Coke Company sold nothing but the coke of the Consolidated Gas Company.

The Witness: Oh, I was confusing in that question the United Coal & Coke Company, which erects our Hoffman ovens.

Q. No.

A. You mean our National Coal & Coke Company?

Q. Yes.

A. No, they do not handle Central Union coke.

Q. You have spoken of the recent increase of wage being ten per cent. to all those receiving less than two thousand dollars a year. Will you point out to me under Exhibit 94 under what item this increase would be shown?

A. I cannot identify properly every item, but I would name a number that I believe would appear. Under the head of coal I should expect it to appear in cartage and labor handling——

Q. Would the entire $225,000 a year be distributed over those items?

6053 A. Pardon me, I was commencing to give them to you. Do you want to cut me off with th- two items?

Q. I do not. I beg your pardon. I thought you had finished.

A. In residuals it would appear in all three of those items, probably.

Mr. Mathewson: You mean all three of the items under the head of residuals?

The Witness: Yes—no, it might not appear under the one, coke loads, as that does not include any handling of the loads of coke.

That is net coke. I am not positive but that there might be some item of labor under the heading tar and the four items that follow under residuals. Under the head of coke used, tons, the labor and cartage would be affected; cartage and labor under the heading beginning naphtha; and in the fuel oil which includes drip oil, labor, that would be affected; in the repairs to apparatus, buildings, tools and implements, in so far as labor is involved; in expense; in distribution; in experiments; in distribution, station expense; in cost of manufacture under agency agreement, in so far as the labor would affect other companies; following on down in expense, and in all the items appearing there excepting street lamps, interest on consumers' deposits and bad and doubtful debts; profit and loss adjustment; expense to the general office; vacation and sickness; automobiles, if any item of labor appears in there; I do not recall for the moment. Those are some of the items.

By Mr. Mathewson:

Q. Would it not appear in the item, ten cents for renewals and contingencies as that ten cents includes replacements?

6054 A. It would appear in the contingencies so far as contingencies are concerned, not only the amount I gave heretofore, but the additional amount at this time, amounting to the full amount, upwards of $180,000. What I would like to specifically except is that it would not include any labor that was used in the direction of improvements other than replacements, but they do not appear on Exhibit 94.

By Mr. Kirby:

Q. In crediting to the cost of producing gas at your different stations, the amount obtained for your residuals, you have used, I take it, the amount paid to you by the Barrett Manufacturing Company, or the other concerns to which you sell your residuals, or to yourself, where you use them yourself, and make a credit therefor, and reduced it to a cost per thousand cubic feet of gas made and sold, have you not?

A. Mr. Carter can better testify to specific details of that kind, Mr. Kirby, than I can, but I will testify as well as I may on the subject in that direction.

Q. If Mr. Carter is better informed I would much rather leave that examination to him.

A. He handles the books, but the tar is charged to us, a certain amount. I am uncertain to one item, particularly, and that is as to the tar we burn, how that is charged.

Mr. Kirby: I would much prefer, if Mr. Carter has a better knowledge of the subject, to examine him, but by reason of the testimony which has been put in as to the price obtained as to these residuals, there are some few questions as to how the amount is produced.

The Master: Mr. Mathewson has said that he would produce Mr. Carter here.

Mr. Mathewson: Yes, and will ask him as to the residuals.

6055 Mr. Kirby: I do not want, then, to take up any further time of Mr. Addicks on that subject.

At 1 P. M. a recess was taken until 2:30 P. M.

After Recess.

Walter R. Addicks resumes the stand and further testifies:

Cross-examination by Mr. Kirby (continued):

Q. Just one more question in reference to depreciation, if I may. What would you consider a fair depreciation on a piece of apparatus costing $2,100 which every three years requires repairs to the extent of $450?

A. Every three years requires them?

Q. Yes.

Mr. Mathewson: When? When first put in?

A. You do not care to specify the apparatus, of course?

Q. No.

A. You do not apply it to the gas company either?

Q. No, not necessarily.

A. Given a mere proposition, irrespective of where it is being used, how it is being used, what maintenance is ordinarily put on it, if you have a piece of apparatus costing $2,100 and assuming that the $450 is put upon the apparatus in every year, assuming there is no suspense accounts, I should say that the depreciation would be—assuming also that the wear and tear is gradual, that the depreciation would be—the original value would be $2,100, and one-
6056 third of $450 the first year, two-thirds of $450 the second year, and as the third year the repairs would be made it would bring it back to $2,100 again.

Q. What has the suspense account to do with depreciation?

A. Well, I mean by suspense account in that sense that you are not providing for repairs on that apparatus each successive year in anticipation of the final. That is what I am referring to.

Q. Well, assume that when we got to the third year we would have had to expend upon it $450 and would set that proportion aside each year, would that have anything to do with the depreciation on the apparatus itself?

A. The third year you would not have to obtain from your earnings your full $450, but you would have spread it in repairs during the three years.

Q. It simply has reference to the source from which you take the money to make the repairs with?

A. Yes, as to whether one year or three years.

Q. Taking up your testimony of yesterday (page 5925) you state in reference to the oil gas at 21st Street—or, rather, Mr. Mathewson stated—in other words, this 400,004 includes the oil made at 21st Street and which is sent to the 14th Street station, as well as the gas actually made at the 21st Street station and sent from here, does it no?

A. Yes. It includes oil gas.

Q. You are quite positive that the deduction from 400,004 to 384,604 is not due to correction for temperature?

A. I have not got my original because the stenographer has not returned it to me.

Mr. MATHEWSON: It is 384,604.

Q. I refer to page 5930 of your testimony where the total of water gas made for the month of February, 1905, is given as 384,604?

A. I have to assume that that is correctly reported from the one I gave.

6057 Q. Well, assuming that is correctly reported?

A. I checked that, Mr. Kirby, as including the oil gas and not the corrected gas, and I have no reason to believe that my statement is not absolutely accurate, that that represents the gas made, including the oil gas, and is not the uncorrected; that this figure is not the corrected carburetted water gas with the corrections due to temperature excluded.

Q. That is, that 400,004 would be the total of the water gas uncorrected and the oil gas?

A. No, I do not say that the 400,004 is the water gas uncorrected, whether it is corrected or not corrected, but the 400,004 included the oil gas made for the 14th Street station, whether it was corrected or uncorrected, because this 400,004 I do not recall at the moment, but if it were the corrected or whether it is the combination of the corrected oil gas and uncorrected water gas, or corrected water gas and uncorrected oil gas, I don't know; but the figure I gave is the carburetted water gas made, corrected for temperature.

By Mr. MATHEWSON:

Q. That is 384,604?

A. Yes, sir.

By Mr. KIRBY:

Q. 384,604 for February, 1905. Very good. Now for December, 1902, have you that statement?

A. I have, yes. I have not got the corrected one.

Q. The total of the first column there being 390,777, is also only for the carburetted water gas and includes no oil gas, am I right in that?

A. Oil gas for the 14th Street station?

Q. Does it include any oil gas?

A. Well, such oil gas as would be in carburetted water gas.

Q. But outside of that not?

A. No, it is not included.

6058 Q. Now, likewise with the third column, the candle power at the station, I am right, am I not, in assuming that those candle power readings are for the carburetted water gas as enriched and it does not include any readings upon the oil gas sent down to the 14th Street station?

A. No, I should say not.

Q. That is, it is the readings on the gas which came from the Lowe apparatus?

A. No, it would probably be the readings from the Lowe plus the retort and oil process which was in use in 1902.

Mr. MATHEWSON: There were some Lowe sets there, Mr. Kirby, and some retorts at 21st Street, besides those producing the oil gas for 14th Street.

Q. The gas as tested with the tests as set down in this statement on page 5932, is that which went into the holder at the 21st Street station and was then distributed to the consumer?

A. I cannot tell you whether the test is at the inlet or the outlet of the holders.

Q. Well, either into the holder or from the holder?

A. It is the make of gas at that station, not the make of some other station added to it. It is the gas made there in that station and sent to the consumer.

Q. And it was not enriched after the time of testing before going to the consumer?

A. This would be an enriching product itself, this would not be enriched but it might enrich some other gas.

Q. Do you know whether or not this gas with the candle powers here set down was sent out to the consumer?

A. This was before I was here—1902.

Q. Well, go to the 21st Street station, February, 1905, when you were here?

6059 A. I cannot be any more particular. It is the make of the gas of the station. I do not make personal tests.

Q. But you are familiar with the tests?

A. Yes, I am familiar with the tests of the gas of every station where there is such a test.

Q. You have set down here a table on page 5934 of the testimony, giving December, 1902, and December, 1904, February, 1905, to December, 1905, giving the candle power test at the station and the candle power at the city testing station and I note that for December, 1905, that you give the candle power at the station 26.51?

A. What year is that?

Q. December, 1905.

A. Yes.

Q. Which is the same as that appearing as the average of the tests during the month of December on the table set down on page 5933 of the testimony ?

A. Yes, that is right.

Q. So that you have made comparison of the candle power with the test of gas taken at the city testing station?

A. That is right.

Q. So that am I not right in assuming that that is the same gas tested at the station and then which went to the city testing station and was there tested?

A. That is the gas which the City Inspector reported as having tested of the gas at that station. You can take his report of it.

Q. So that this gas had no further enrichment or treatment of any kind from the time it was tested at the station?

A. Well, I only know that the city inspector in his laboratory reports to us he had tests of certain gas as 21st Street gas. We have not access to his laboratory and don't know what he does in his laboratory.

Q. What do you mean by 21st Street gas?

A. Haven't you seen the different tests?

Q. Yes, but I want to know what you mean by 21st Street gas when you speak of it as such?

6060 A. That is simply the gas reported by the inspector as having tested 21st Street gas.

Q. What do you mean when you said 21st Street gas in any of these tables?

Mr. MATHEWSON: Those are Mr. Edgerton's tables. We are taking his figures. It is not our method at all.

Mr. KIRBY: This was December, 1905. Mr. Edgerton had nothing to do with that whatever.

Mr. MATHEWSON: His method was pursued in making up the figures.

A. It is simply a report of the months of 1905, the similar report for those months which Mr. Edgerton took prior to that. That is all.

Q. Where did you get these readings of candle power as set down in the third column of your statement, December, 1905?

A. From the same source Mr. Edgerton got those as set down here.

Q. Do you know where that gas is obtained to make those candle power tests with?

A. It must have been obtained only from the station where the gas is made.

Q. The gas as it goes into the holder or as it comes out?

A. If the gas is going out of the holder, if it is enriched with any other gas, it certainly would not be the candle power of the station. It would be that gas which was being made by the station.

Q. And would be so indicated upon your records, would it not?

A. Yes, the very fact of "candle power at stations" would indicate that to me.

Q. That is what I assumed and asked you, and now we know.

A. That is the fact.

Q. Now, December, 1904, I think has been referred to by Mr. Simpson as being an exceptionally cold month. Is that in 6061 accordance with your impression?

Mr. MATHEWSON: You are mistaken. Mr. Simpson did not mention any month. He said that winter or some other winter was an exceptionally cold winter taken throughout. He did not say December was exceptionally cold.

Q. Do you know whether or not December, 1904, was colder than December, 1905?

A. I know that December, 1905, was the warmest December since 1891.

Q. Then December, 1904, would naturally be a colder December than that of December, 1905, would it not?

A. Yes.

Q. And it is also your impression that the winter of 1904 and 1905 was exceptionally cold, is it not?

A. Well, I don't know whether it is 1904 that December was colder or 1903.

Q. If Mr. Simpson has so stated you would be inclined to concur in that conclusion?

A. My impression is that Mr. Simpson did not differentiate between 1903 and 1904.

Q. As a matter of fact both of those winters were cold winters?

A. 1903 and 1904?

Q. 1903 and 1904, and 1904 and 1905?

A. I can't remember whether it was 1902 and 1903 or 1903 and 1904, but it is one of those two. There were successive cold winters, but whether the coal strike year was one of the cold winters or not I cannot recall at the moment.

Q. Am I right in inferring from your testimony that you advanced the proposition that high gravity oil so enriches the gas that the gas holds its candle power better than when a low gravity oil is used?

A. I think, to put it more accurately, that the higher gravity oil gives gases and vapors which are not so apt to be condensed by a low temperature as the low gravity oil. 6062

Q. And you also advance the proposition, do you not, that where you use a high gravity oil that the loss of candle power in the mains is less in cold weather than where you use a low gravity oil?

A. I think it is apt to be. Of course, there are limits to all degrees.

Q. I call your attention to State's Exhibit HHHH, page 1585 of Exhibits, and to 21st Street station. This is for the year 1905, as the testimony of Mr. Edgerton shows? I note in December, 1905, the average gravity of oil was 34.49, candle power at the station 26.51, city inspection candle power 23.37, showing a loss in candle power between the works and the city inspectors' stations of 3.14 candles. I call your attention to January of 1905, where the gravity of oil used was 30, the corrected candle power at the works 25.14, city inspectors' test 25.24, showing a loss of 3.9 candles. Does that carry out your conclusion with reference to loss of candle power in the mains, whether a high gravity of oil is used as against a low gravity of oil?

A. Not as conclusive as in some other cases you will notice. There is a larger number of gallons of oil used in January than in December, and a larger loss of candle power in January than in December.

Q. And a lower gravity oil in January than in December of 4.49 degrees?

A. Yes.

Q. I call your attention to the reading of April, where you used a gravity of oil as high as 33.8, where the test at the station was 25.07, and by the city inspector 21.69, showing a loss of 3.38; and then in July of the same year, where we have an average gravity of oil used of 28.38, candle power at the station 27.72, city inspectors' candle

6063 power 24.61, showing a loss of 3.11 candles. Does that carry out your conclusion as to loss of candle power being greater with low gravity oil than with high?

A. The loss of candle power in the case of this higher grade oil is a little greater than in the lower, although with the lower gravity oil there were 4.83 gallons used in place of 4.49 of the higher gravity, but you are coming now into the summer weather where we use either gravities as a rule. I would like to call your attention further to 44th and 99th Streets.

Q. Yes, I would like to call your attention to any statements there which carry out your conclusions.

A. Well, I will call your attention to the fact that the losses shown as of November and December in 44th Street are very much less than the higher gravity oil, as a rule, than with the lower gravity oil.

By Mr. MATHEWSON:

Q. How about April there?

A. In April, in that case, the loss is 1.71, whereas in December here, 34, it was considerably smaller than that.

By Mr. KIRBY:

Q. December, of which you have just spoken, December, 1905, 44th Street station, I see a note that the candle-power, as tested at the station, was 24.21, while at the City Inspector's office it was 24.26 or a gain. How do you account for that?

A. Well, that occurs at times, in many stations on the same day. I would further say this, that this variation, even with 34 gravity and 29, gravity illustrates to some extent that it is preferable to use an even grade of oil during a given season and not change from one to the other, on account of the fact that the gas makers will have to accustom themselves to change of gravity. You notice in March and April and in May they went up in gravity and then went back again.

6064 By Mr. MATHEWSON:

Q. That is 21st Street?

A. That is 21st Street. And it is true of April in 44th Street, and it is more uniform throughout the year at 99th Street, although there is considerable variation in 99th Street from month to month.

By Mr. KIRBY:

Q. Again I call your attention to the fact that these readings are averages for the month, so that this gain in candle-power in December would indicate that it was not one or two isolated readings but the readings over that entire period which show a gain of .05 candles rather than an extraordinary result, is it not?

A. Well, that shows the average gain.

Q. A gain in the mains?

A. Yes. It is a little different between—that is, 44th. Well, the difference in 99th, there is a slight difference in the apparatus of 99th and 44th Streets. The same thing is true in the 99th Street station; there is a gain.

Q. In the same month?

A. Yes, sir; in the same month; December; also in November.

Q. You do not advance the proposition, do you, that gas is apt to gain in candle power from the station to a point a mile or more away?

A. No, but I would say that two observers would not be able to read candle power closer than half a candle, if on the same bar, so while there might apparently be an increase in candle power there might not be any increase at all, simply the difference between two observers—a personal error.

Q. If the error was only that of .05 candles, it would?

A. It is a pretty small difference.

Q. It would mean then there would be no loss in candle power from the station to the city testing station?

6065 A. Not necessarily that, but there might not be any loss.
You notice in 30 gravity oil here, just before, in October, that there is a loss. No, there is no loss in that case either. Quite a number here where the—— Yes, there is a loss in November, but with the high gravity oil there was no loss.

Q. Well, if these tables with their rather extraordinary results in some parts thereof show anything, do they not show a substantial agreement with Mr. Edgerton's testimony that condensation products are largely lost in the gas holder during cold weather, and that during the first warm weather of spring those products are re-evaporated, enrich the gas at the station and are again deposited in the colder mains on account of their instability?

A. I would not draw that conclusion from that, as it does not seem a material drop in the candle power in November and December to indicate a very large accumulation of oil on the top of the surface of the water. As far as any pickings of oils on the surface of the water, I am doubtful if that occurs materially. I can conceive that it might occur if there were oils in the line of main, where if the gas going through was below saturation that hydro-carbons might be picked up. I can't quite see how a material picking up the vapors in a gas holder where the gas is 150 feet high and the area is the area of a 100 or 200 foot tank, I don't quite see how it is possible for material picking up of the hydro-carbons. I never have been able to follow that as a theory.

Q. The large surface of holder exposed to the sun would produce a substantial increase in temperature of the gas contained in the holder, would it not?

A. On the portions of the holder immediately adjacent, yes; it does make a difference, quite a considerable difference, but I don't think that it extends very far down into the middle of the gas
6066 holder. It does not affect the entire body of the gas in a very
large holder. On a very small holder, such as Mr. Edgerton has probably been accustomed to, it might produce an impression, but I do not believe it does here.

Q. The larger the holder the larger the area of surface exposed?

A. That is true, but the volume would be greatly increased proportionately.

Q. The gas leaves the holder at approximately the bottom thereof, does it not?

A. The gas leaves the holder at the level of the water, wherever that may be.

Q. That is not close to the top, is it?

A. Well, it is close to the top of the inlet and outlet of the holder, and in a steel tank is level with the top of the tank, and if you have the holder fully cupped, five lifts of forty feet each, it would be about 200 feet high. The gas would come in the inlet, go into the holder and go out at the outlet pipe if coming in and out at the same time. Just how far that gas will go into the holder I don't know.

Q. The outlet pipe being about the level of the water?

A. The inlet and outlet pipes are just about far enough above the water so that when it is in use the water won't flop over into either the inlet or outlet.

Q. The precipitated globules or oil——

A. Condensed hydro-carbons.

Q. The condensed hydro-carbons would be upon the surface of the water, would they not?

A. They lay on the surface of the water, and when they get to a certain amount they are taken off.

Q. And the gas warmed by contact with the holder which, in turn, is in contact with the warm outside air or which has the rays of the sun playing upon it, would pass over this water upon which would be floating these precipitated hydro-carbons, would it not?

A. Yes. Of course, you understand they are at only one
6067 point. The gas itself is over the whole surface.

Q. Oh, yes.

A. And if that gas is not saturated with vapors, and the warmer the gas is the less saturated it might be, it might pick up a certain amount, but I am not able to subscribe to the theory that that is of appreciable moment. That is all.

Q. It would be more appreciable than it would be in buried mains where the temperature of the surrounding earth is in the spring less than the temperature of the air surrounding the holders, and where those mains are not subjected to the heating power of the sun?

A. I think it would be more noticeable in the mains, if you had mains filled with them. As a matter of fact, we do not have mains filled with them. The mains are continually pumped and, therefore, what condensation accumulates from time to time is removed as rapidly as possible.

Q. So if any candle power or hydro-carbon were picked up it would be picked up in the holder?

A. Well, I think, to a greater or lesser extent, yes.

Cross-examination by Mr. Burr:

Q. When you say, at page 5934, that the city test averaged 21.80, where did you obtain those figures?

A. What date; what time?

Q. December. Mr. Mathewson said, "Q. Now, taking 1902"——

A. December, 1902.

Q. Yes. "The gravity of the oil was highest, was it not from 36 to 38 gravity? A. Yes. Q. And the station test was how much? A. 23.89. Q. The city test averaged how much? A. 21.80." How did you arrive at that average?

A. I requested that at the office of the company and they furnished me with copies of the city's tests and the dates thereof.

6068 Q. Have you got those figures?

A. I have. This is December, 1902, we are discussing?

Q. Yes.

A. December 5, 20.57; December 12, 23.89; December 20, 22.12; December 26, 20.62; average, 21.80.

Q. Now, you have stated that you estimated the requirements for oil for the companies whose supply is derived from the contract of November 1st, 1905, to be 107,420,460 gallons for the period from 1907 to 1908.

Mr. Mathewson: For each year?

Q. Or for each year?

A. No, that is not each year. That is for that year.

Mr. Mathewson: For what year?

The Witness: For the year 1907. That is to say, twelve months, taking the twelve months, of the entire twelve months.

By Mr. Mathewson:

Q. Not for two years?

A. No, I thought you said for each year.

Q. No, that is what I mean.

A. It is for one year.

By Mr. Burr:

Q. From a period in 1907 to the same period in 1908?

A. It would cover a winter and summer and spring and autumn. If you commence at autumn you go to the autumn of the following year. Covering the winter season is what is referred to.

Q. That, you say, would be the amount?

A. That is the estimated amount probably used at that time.

Q. Upon what do you base that amount and which companies do you refer to?

A. I based—shall I tell you just how I arrived at it?

6069 Q. If you please?

A. Years of 1905, 1906, 88,770,000 gallons, and for each year increasing about 10 per cent. of the amount of oil used.

Q. Well, do you know what the 1905 figure was based on?

A. 1905? Yes, I do. Some figures of use of oil at that time for those months, simply a rough estimate to get at about how many gallons to put into a contract. We do not use our oil always within the time of the contract. We are allowed sometimes to extend over.

Q. The testimony here is, as I understand it, that the coal and oil purchased by the Consolidated Gas Company, and the contracts for which are in evidence here, such coal and such oil is used by all the constituent companies forming the Consolidated Gas Company—I mean used at all the stations of the Consolidated and by all the subsidiary companies with which the Consolidated Gas Company has contracts?

A. No, that is not true.

Q. Do you say that the fact is not true or that that is not the testimony?

A. Well, I don't know whether the testimony is to that effect or not, but if so, I don't agree with the testimony.

Mr. MATHEWSON: No, it is not. I think what Mr. Burr has in mind is that this contract of 225,000,000 gallons for convenience was negotiated in one contract and it was to cover the supply for the Consolidated and part of which the New Amsterdam was to receive and part the Standard and part the Central Union.

The WITNESS: That is correct, but there is an agency agreement between the Mutual and the Consolidated, if I remember rightly, and that does not include the Mutual.

6070 By Mr. MATHEWSON:

Q. You mean agency agreement for the purchase of gas under that agreement?

A. Yes.

By Mr. BURR:

Q. But the coal and oil which you arranged for under the contracts and which are now in evidence are used by your varaious stations and by the companies that you have agency contracts with?

A. Well, we have agency contracts with those who use it.

Q. The three companies Mr. Mathewson just named?

A. Yes, but not all we have agency agreements with.

Q. Now, what I would like to know, if you can give me the data, is how much oil is used by each station of the Consolidated, and how much by each of those three companies.

Mr. MATHEWSON: Mr. Master——

The WITNESS: I could not give you that offhand, to save my life.

Mr. MATHEWSON (continuing): You will remember this question came up in reference to this contract for oil and counsel were permitted to examine the books of the company including their oil receipts, to show just exactly how much went to the company; the same as to coal; and their accountants have been on the books for something like three months——

The MASTER: The witness says he cannot give it.

Mr. MATHEWSON: But he is asking for information that is already on the record, in any event.

6071 The WITNESS: Wait a moment. I think I can answer such a question as you need now.

Q. Please do so.

A. You ask for 1905 and 1906.

Q. Yes.

A. I can't tell you that. I haven't my estimate for 1905 and 1906. I can only give you 1904 and 1905.

Q. Well, give me that.

Mr. Mathewson: What date, begin and end?

The Witness: Beginning October 1, 1905, and ending September 30, 1905. Each station?

Q. Yes, please?

A. On account of—

14th Street	3,309,082
21st Street	19,079,656
42nd Street	2,033,608
44th Street	10,385,722
99th Street	6,190,864
Standard	11,781,978
New Amsterdam	23,236,488
Central Union	4,689,166
Total	80,706,564

I have not got the Mutual on my list.

Q. Now, when you assume ten per cent. yearly increase in oil since that time, is that based on ten per cent. of yearly increase of sales of gas or what?

A. No, simply a rough figure on the use of oil to make a contract which will certainly cover the oil we require under any circumstances. As a rule, so far as my experience goes, the oil extends over to several months afterwards.

Q. Well, has that been your experience since you came into the Consolidated, that the consumption of oil has incerased by that amount, ten per cent. each year?

A. I don't recall what it is. We simply took a round
6072 figure to get a full figure for the amount and then I deter-
mined on, I think, 250,000,000. If you add those together
it will make more than 250,000,000. It makes—the total of the figures I have here makes 292,000,000 and I took 254,000,000.

Q. So when you spoke of the requirements of oil for the companies whose supply is derived under the contract of November 1st, 1905, you had these stations and these companies, the Standard, New Amsterdam, Central Union and Mutual in mind?

A. Not the Mutual, no, sir.

Q. But with that exception, you had the stations and other companies in mind?

A. Yes, sir, because I referred to that contract which it has already been stated covered all those companies.

Q. You in your capacity as active manager of the Consolidated and vice-president and chief engineer, as I understand——

A. I am not chief engineer, Mr. Burr.

Q. Well, in your official capacity you undertook the negotiation of the oil contract?

A. Yes.

Q. And as I understand, you did the very best that you could under the circumstances as you found them to exist?

A. I made the best effort I could, yes, Mr. Burr.

Q. And you found as the result of your investigation that there was no other company beside the Standard Oil which could supply the quantity of oil which your company required?

A. I knew that, Mr. Burr, before that time.

Q. And therefore, if the Standard Oil Company saw fit to charge you 5 cents or 6 cents you would be obliged to pay it, there is no redress?

A. In the absence of not having a coal gas plant large enough to drop the use of water gas, I think that is a fair statement; that is one of the reasons I am anxious to have the coal gas plant at Astoria so we will be independent of everybody.

6073 Q. From your experience in Boston and here, the consolidation of companies is largely based upon the assumption that such consolidation will result in an economy of cost of operation.

A. Well, my view has always been that it causes an economy of construction in the future.

Q. And in the operating expenses?

A. It would tend to reduce that, but the point I have always had strongly in mind is that you can start and lay out your plant with a uniform idea; you do not have to duplicate mains. Take New York, with several companies, you might have to lay mains for two companies, whereas one main might be laid of slightly larger size to accomplish the object of both companies. The division of a company, I called attention to that in Boston, if I recall it, one company might be weak in a certain district where another company might be strong. And if mains have got to be laid independent it seems to me it is a waste of capital; and the same thing is true of works. When you come to the actual maintenance of the plant, it reduces it in the future and reduces it, to some extent, in the present, particularly in the principal officers of the company.

Q. Yes, but as I understand it, consolidation seeks to bring under one general head and one general department what formerly extended under various heads and various departments and thus save expense of the operation?

A. That is the tendency, certainly.

Q. And where small companies are obliged to pay large prices for various supplies, the aggregate of these companies, requiring a far greater quantity, would result in reduced prices, that was the idea?

A. That depends upon what you are buying, of course.

Q. That is the idea of consolidation, is it not?

6074 A. I never have considered consolidation in the sense of reduction in large quantity supplies. I have looked at it entirely from the operating standpoint, of labor and capital account. I have never looked at that point of view.

Q. From your experience you would not say that consolidation would result naturally in the increase in the price of the supplies?

A. No, but it might mean this, that you might consolidate two stations or two companies that were both buying sufficiently large quantities of a thing to get the same price; therefore consolidation would not affect economy in that direction. On the other hand, you might have a very small company and a very large company, and consolidation would reduce the cost to the smaller company but not affect the cost to the larger one.

Q. In procuring the supply of oil you found to be necessary here, why did you not open up negotiations with various companies for the supply of each particular station and each particular company that you have named, and thus open up competition?

A. It would not have occurred to me to do that, Mr. Burr.

Q. It could be done?

A. Well, I don't think it could be done; but, however, if you say so——

Q. Well, could it be done?

A. I don't think so.

Q. Why not?

A. Because I do not think you could obtain it. I have been through the experience already outside the Standard Oil Company myself. I have bought oil from outside.

Q. Do you mean to be understood as saying that with all the other independent companies in existence to whom you have made reference and the Standard Oil that by such means you could not open up competition between the Standard Oil Company and
6075 these other companies for the supply that you need at these various stations and various companies?

A. To be perfectly frank with you, I would not undertake it. I would not undertake the responsibility.

Q. But you would not be understood as saying it could not be done?

A. Well, I do not believe it can be done.

Q. What is the next largest gas company in the City of New York to the Consolidated?

A. Now, are you speaking of the Consolidated as the Consolidated *versus* the New Amsterdam, or do you mean the various affiliated companies of the Consolidated Gas Company?

Q. I mean in the City of New York.

Mr. Mathewson: In the Greater City?

Mr. Burr: In the Greater City.

The Witness: I think the Brooklyn Union would be the next largest.

Q. Do you know what kind of oil that company uses?

A. I am not in touch with what oil they are using at the present time.

Q. You are not the engineer or consulting engineer for that company?

A. No. Years ago I was consulting engineer for several of the small Brooklyn companies, but that was a good many years ago.

Q. Are you familiar with their output of gas, the quantity per annum?

A. I saw it in the course of their investigation, but I do not recall what it is; my impression is it is something like about thirty millions a day, as a maximum, but I will not be sure about it.

Q. What is the storage capacity for oil at your plants and at these companies' plants?

A. I think approximately the following:

6076 14th Street	Nothing	
42nd Street	180,000	gallons
21st Street, about	440,000	"
44th Street	306,000	"
99th Street	226,000	"

That, I think, is figured on everything chock-a-block.

Q. That is 1,146,000 gallons, is it?

A. Yes. At 21st Street we are just finishing constructing a half million gallons tank which is not ready for use.

Q. An additional storage tank for half a million gallons?

A. Yes. But I do not think that is in service yet.

Q. That would be 1,146,000 gallons storage capacity?

A. I did not add it up. I will, if you want me to.

Q. Well, you can see if it is correct. I understood you to say that some little while ago you had run out of oil almost entirely?

A. At 21st Street.

Q. At 21st Street?

A. Yes.

Q. In case of shortage at one station do you get oil from another station?

A. No, sir.

Q. Why not?

A. Well, it would be hardly possible to discharge our tanks into a barge, and bring the barge around and discharge it back.

Q. That is the only method by which you could do it?

A. That is the only way I could think of.

Q. And some few weeks ago when the defendants sought a sample of 28 Beaume, I understood you were all out of 28 Beaume oil?

A. It was during the winter and we are using 34 degrees. If you would come in the summer we would give you 28 degree.

Q. You did not have enough even to fill a bottle?

A. I so understood, yes, sir.

6077 Q. Now, on page 5940 you gave a resume of the amount of oil required by the various companies, showing, or attempting to show by comparison what a small lot it was compared with the amount that you required, and how long the oil that you needed or used in eleven days would last the various companies?

A. The oil we received in eleven days would last these companies.

Q. Received?

A. Yes.

Q. Now, if these companies were all joined together and sought to obtain the aggregate amount they needed, is it your opinion that they would meet with the same difficulties that you have met with in securing your supply for the Consolidated Gas Company?

Mr. Mathewson: I object to that as wholly hypothetical. These companies scattered around in one place and another, of course they could not be joined and could not exist under these conditions.

Mr. Burr: Well, he has indulged in a great deal of speculation.

The **Master**: It is a little remote, but I will let him answer it if you think it is of value.

A. Well, I do not care to answer that question, Mr. Burr. The stations are very widely scattered, some are in the oil regions, very far away, and some near the oil regions, and I don't know what effect it would have.

Q. Have you any knowledge or information of the supply required by the U. G. I. for their various stations and subsidiary companies?

A. No.

Q. Do you agree with the statement of Mr. Mathewson that "if we got all the oil in the country outside of the Standard Oil Company it would not be enough"?

6078 Mr. **Mathewson**: That was his statement, I did not say anything about it.

Mr. **Burr**: On page 5941: "Mr. Mathewson, we will meet that a little later in this testimony. If we got all the oil in the country outside the Standard Oil Company it would not be enough."

Mr. **Mathewson**: Well, he so testified, and I was simply echoing him.

The **Witness**: Do I agree with that statement?

Q. Yes.

A. I think I very clearly stated what I did state, that is that some sixty odd thousand gallons of 34 gravity oil would seem to be available if the yield of that grade was the same throughout all the United States and handled by all the outside refineries, which was less than would be required by this company. But as far as 44 gravity Able is concerned I stated that there was slightly more of that, and if yield averaged the amount assured them from the crude used, there would be slightly more than that amount made in the United States, and it would just be sufficient in round numbers for our probable need if we could obtain it all. I think that was my statement, Mr. Burr. But the crude oil itself, so far as the crude is concerned, is very much in excess, it is some—from my memory, over 300,000,000 gallons, when you take the whole volume of the crude, I mean.

Q. So that unless you would adopt some such means of creating competition as asking for bids for the supply of each station and each subsidiary company, you would continue to be absolutely at the mercy of the Standard Oil Company to pay whatever price they exacted from you?

A. Mr. Burr, under the condition as I see now in the case, we could not buy oil cheaper from anybody in the United States 6079 than we are buying now, on the evidence which has been put in here by these gentlemen from the west.

Q. I have no objection to your making that statement, but I will ask you to answer the question if you will, please?

A. Well, I did not intend it should not be answered. Will you repeat the question, please?

Q. So that unless you would adopt some such means of creating competition as asking for bids for the supply of each station and each subsidiary company, you would continue to be absolutely at the mercy of the Standard Oil Company to pay whatever price they exacted from you?

A. I will say this, in answer to that question, that we must depend, it would seem to me, upon the Standard Oil Company in any case for a portion of the product, and unless we could purchase from the Standard Oil Company that which we require over and above what we could purchase and store from any outside companies, we would be in the same position, it seems to me, as we are now.

Q. I will not argue the question with you. That is the best answer you make to the question, is it?

A. If you will read the question I will try again, if it is not satisfactory.

Question repeated as follows:

"Q. So that unless you would adopt some such means of creating competition as asking for bids for the supply of each station and each subsidiary company, you would continue to be absolutely at the mercy of the Standard Oil Company to pay whatever they exacted from you"?

The Master: It seems to me that is responsive, Mr. Burr.

Q. Well, I am asking if that is the best answer you can 6080 make?

A. Mr. Burr, the other companies are very large companies. The other companies may require more oil, they themselves, without the Consolidated Gas Company. They themselves may require more oil than they could buy from the independents, so called. You see, if I can make it plain, suppose you had one very small company, you might buy all the oil possible from that one company but——

Q. The point I was going to make——

A. I do not like the expression "at the mercy of" because I do not think that is exactly the situation.

Q. Unless you can devise some way of opening up competition in the way I have suggested, or some other way, you will be, as a matter of fact, obliged to deal as you are dealing, with the Standard Oil Company and in the manner which you have done?

A. Yes, I think we will have to deal with the Standard Oil Company, if that answers your question, unless some other method can be devised.

Q. You say the average cost of the oil which you now use is 4.524?

A. That is the average on the proportions you know the contract covers, 40 per cent. of 34 degree and 60 per cent. of 28 degree. If we should use a few gallons more of 34 degree or a few gallons less of 28 degree it would change that, but not materially.

Q. And the stipulation which appears in the contract, requiring you to purchase all your supplies of the Standard Oil Company, that is forced into the contract by the company, if I understand you right?

A. I do not recall ever seeing a contract, Mr. Burr, that that clause was not in, either here or elsewhere.

Q. Well, you say that that is a stipulation which they insisted upon in making the price, that is true, there is no question about it?

A. Oh, they do, they require that that is part of the con-
6081 tract and that is one part, an integral part, of the contract, if
I may use that term.

Q. Now, you referred to the statement of Dr. Marks as to the companies which he found in Brown's Directory, whose average was 3.65 cents per gallon. They were fourteen in number, were they not, or do you recall? If he said they were fourteen have you any reason to doubt that, or do you know?

A. I think I added twelve and made the total twenty-six, so I think it would be fourteen. I think I can check that.

Mr. MATHEWSON: He named them.

The WITNESS: I named mine, but I do not think I named Mr. Marks. I think his were fifteen in number, were they not?

Q. Does it not appear reasonable to you, Mr. Addicks, that if the fourteen or fifteen companies in the State of New York should get their oil in small quantities for 3.65 that a company buying vastly more in quantity should get it for at least less than 4?

A. I think, Mr. Burr, it depends upon the location as well as quantity. There are no other companies that I have seen that are getting their oil under the conditions which New York is getting it; in other words, having a water transportation in addition to the railway transportation. That water transportation must of necessity be an absolute addition to the cost of oil at the seaboard, and all these, of course, would be within the limits of the seaboard. In addition to that I call attention to the storage which all gas companies as a rule have for themselves. I had in Boston a very large storage, but even then
I was backed up when I had a contract with the Standard Oil
6082 Company, I was backed up with the storage supply of the
Standard Oil Company.

Q. Now, you have referred to four companies within the limits of the Greater City of New York, the Brooklyn Borough, Kings County, New York and Richmond, and Queens Borough Gas and Electric Company, and you have made some statements based on information you received from some of the gentlemen engaged in the operation of these companies, have you not?

A. Yes, I have.

Q. Are you the engineer or have you any connection with the New York and Richmond Company?

A. I have not.

Q. You are the engineer or connected with the Richmond Electric Light and Railroad Company, are you not?

A. I am not.

Q. Well, you are familiar with conditions as they exist in the Borough of Richmond, are you not?

A. I do not think I have ever been in the Borough of Richmond but once in my life. I am familiar enough by reading in the papers about it, but that is all.

Q. Am I misinformed when I say that you are engaged in making plans for the construction of a large electric light plant in the Borough of Richmond?

A. Absolutely; if you are speaking to me individually.

Q. Yes.

A. I am not, nor do I know who is.

Q. Now, in the operation of these companies you have referred to the dropping of the oil, etc. In the operation of these companies and in the operation of every gas works, is it not a fact, Mr. Addicks, in your vast experience that you have had here and in Boston and elsewhere, that the human element enters very largely into the successful operation of a gas works; that one man may spend where another may save?

A. I think that is true within certain limits.

6083 Q. So, given the same conditions, the same oil and the same coal, one man may arrive at a better result than another?

A. That is possible.

Q. So that would have to be taken into consideration in arriving at a definite understanding of each case.

A. I shall have to add number 15 to my list on oil and candle power.

Q. So that unless we knew the capacity and character and ability of the various gentlemen who have informed you as to the results in their companies, we would be only guessing at the situation?

A. I think that would be an element which would have an influence upon me. I must know their professional reputation, but in one particular case I know he is a very careful man, and the others I do not know so well.

Mr. Burr: I want to call the Master's attention to page 5958. Strange, uncouth and ungrammatical language has been placed in my mouth during the progress of this case, due to the rapadity with which this record is being made and printed every day, and to which I have not taken exception, but I do object to having placed in my mouth such a word as "consmuption." I ask leave to have that changed to assumption or presumption, which is probably what I did mean.

The Master: We will expurgate that.

Mr. Mathewson: It is a matter of personal privilege, I suppose.

Q. You have referred to the matter of wages, Mr. Addicks, stating that your company has raised the wages of certain classes of employés 10 per cent. in the face of a round robin. Is that correct?

A. Well, I said that another company—that in the shop of one of these other companies they presented a round robin to their 6084 superintendent, and in another station their men had had meetings with a view to making a demand.

Q. Is it not a matter of fact that the Board of Directors of the Consolidated Gas Company voluntarily raised the wages of these employees?

A. It is not.

Q. Are you not aware that within the past three months, while we have been sitting here, that great corporations throughout the United

States have raised voluntarily the wages of their employees 10 per cent., such as the Standard Oil Company, the Pennsylvania Railroad and other large companies and railroads?

A. Yes.

Q. And is it not a fact that this raise in the wages of the employees of the Consolidated Gas Company was due more to public sentiment than the round robin?

A. Well, I think it was a combination of the two, Mr. Burr. When I say it was not done voluntarily, in the whole situation it was not done voluntarily, but we could not resist a demand under the conditions which existed. I do not think it would have been right to have resisted.

Q. Referring to the statement made on page 5978 that the Astoria plant came into active operation on the 3rd of December, will you tell me the details of that a little more. How did the company come into active operation? Are you buying your gas from that company?

A. We have not yet had the account of the cost of that gas made up so far as I know. We will undoubtedly——

Q. Well, it has been supplied to you since the 3rd of December, you are receiving it to-day, are you not?

A. Yes.

Q. To what extent daily?

A. Commencing with about 200,000 feet on the 3rd of December and increasing gradually to about 500,000 I should say, or possibly
800,000, and then the second house was started, as I remem-
6085 ber it, and that was allowed to come up gradually to possibly
a corresponding amount.

Q. By the second house you mean part of the first unit?

A. Yes, the second house of the first unit, and then they were both gradually increased, so that now they are making over 4,000,000 feet a day, the two of them.

Q. You have been receiving that gas since the 3rd of December without any agreement as to what is to be paid for it, is that true?

A. None whatever.

Q. No agreement whatever has been made?

A. No agreement whatever. The amount in December was something like between 40 and 50 million feet for the whole month, so that the average, you see, was a little over a million feet.

Q. The Astoria Light, Heat & Power Company has no right or franchise to operate in the City of New York, as I understand it?

A. No, sir, I do not so understand it.

Q. They operate to-day in the manner Mr. Simpson described through Ravenswood, and the tunnel and mains, it is delivering its gas to your company at the station at 70th Street or 72d Street?

A. At various points. It is going through the transit mains to such points as it would be most convenient to use that gas.

Q. So that sooner or later you will have to agree upon a price for that gas?

A. Sooner or later we will have to arrange for the payment of the expenditure to make the gas.

Q. Well, if that is the price, you will sooner or later have to arrange it?

A. Yes, they cannot run on forever without getting something for their product.

Q. But there is nothing to show that that will be the sole price, the cost to manufacture that gas, or has there been any agreement to that effect?

A. No, but we own all the securities——

6086 Q. I understand, I will never forget it.

A. Well, I do not want you to forget it.

Q. You gave the weights of pipe in Boston. Where did you get those figures, Mr. Addicks?

A. I got them from a blue print, Mr. Burr. If you would like to see it I will produce it.

(Witness produces paper.)

Q. Well, you know that those figures given by you are correct?

A. Oh, absolutely, no question about it.

Q. And do you still think that a single main system on every street in New York would be a perfect absurdity?

A. I never made the statement.

Q. Then we are losing our minds. I see on page 5981, the question was asked:

"Q. What would be your view as to the wisdom of a single main system in New York City? A. Well, applied specifically to the single main system on every street in New York it would be a perfect absurdity."

A. Yes, excuse me, I did say that. I thought you said on the narrow streets.

Mr. Mathewson: The question was if you still thought so.

The Witness: I still think so, yes.

Q. I notice by the public prints, Mr. Addicks, that within the past few days you made the annual report to the Board of Directors of the Consolidated Gas Company and you are quoted as saying that the plants of the gas and electric light companies are physically in the best condition? Is that true?

A. That is my opinion of it, Mr. Burr.

Q. In that report you did not make any report as to the 6087 earnings of the Consolidated Gas Company for the past year?

A. I made nothing further than I think has been stated in the papers.

Q. Do you know what candle power the Philadelphia Gas Works uses, the U. G. I.?

A. Well, I think I have heard, and my impression is it was about 22. That is my impression from what I have heard.

Mr. Mathewson: Do you mean works or city tests?

The Witness: I don't know which it is, Mr. Mathewson, that is my impression.

Q. Do you know that that company receives 28 degree Beaume gas oil at 2½ and 3 cents per gallon in ships alongside the wharf in Philadelphia from the Guffey Company in Texas?

A. I do not.

Q. Is it not a fact that the legally required candle powers of gas in 1905 was an average of 21 candle power, that is, 20 candle power the first six months and 22 candle power the second six months?

A. That is true.

Q. Was not the average candle power furnished according to Dr. Love's test 23.1 candles, that is, the first six months 22 candles, and the second six months, 24.19 candles, according to City's Exhibit 47, page 1198?

A. Of course I do not remember those figures, this is 1905?

Mr. MATHEWSON: If it was, and if it so appears in the exhibit, what is to be gained by asking the witness?

Mr. BURR: Because I am going to ask another question and I want to call his attention to it.

The WITNESS: Do you refer to the Consolidated Gas Company in your question?

Q. Yes?

6088 A. It seems to be the average. I have only checked one single candle power, but it seems to represent the candle power of the stations of the Consolidated Gas Company on different days.

By Mr. MATHEWSON:

Q. Does 24.19 represent the average at the bottom or the average of the whole number taken and divided by the whole number?

A. I would say it was the average of the averages. I have not added it up to check it, though.

Q. If that is so, it would not represent the true average?

A. No, because there would be a greater amount of gas made in the winter than in the summer, it would not be the true average.

By Mr. BURR:

Q. Was not the average candle power of gas tested at the works 25.35 candle power during 1905, see City's Exhibit 62, page 1404L.

Mr. MATHEWSON: Do you know whether that is an average of averages or whether it is made up by taking the total number of tests and averaging them?

Mr. BURR: It is the average of the averages.

A. There is a statement here, average candle-power, coal and water gas stations, 25.35, but I have not checked that.

Mr. MATHEWSON: It appears so in the exhibit is all you can say?

The WITNESS: Yes.

Q. That purports to be a statement of the monthly record of manufacturing averages and results taken from your books?

A. I don't know what the source is.

6089 Mr. MATHEWSON: Whatever the testimony shows.

Q. If that is true and if the average I have previously called your attention to was true, would not those together make altogether a drop in candle-power of 2.25, assuming the purchased gas not to affect the candle-power?

A. That would represent a drop of the averages, it would seem to me, to be put in correctly.

Q. Of 2.25?

A. Well, I didn't add that in my mind.

Mr. MATHEWSON: I understand in getting the lower figure you took Exhibit 47, and took 22 candle as the average stated for the first six months, and 24.19 as stated for the second six months, and got the average of those two sums, which is 23.1 candle?

Mr. BURR: Yes.

Mr. MATHEWSON: And the difference between that and 25.35 would be 2.25 candle.

The WITNESS: Of those figures, that would be as what is represented, yes, sir.

By Mr. BURR:

Q. You spoke of a single system of mains as an absurdity. As a matter of fact, Mr. Addicks have you not used it in 56 per cent. of the blocks of the City of New York, as appears by City's Exhibit No. 102, page 1653 see pp 6103?

A. Now, Mr. Burr, I do not want to quibble about that. But I do not think it is fair for me to assume that. I do not know exactly how to make that answer, but it is simply this, I have assumed in my reply that a single system of mains in every street in a city—that is all I said on that subject.

6090 Q. You would not be understood then as saying that a single main system is not in use in 56 per cent. of the streets of New York?

A. I do not know what the percentage is, but it is in a very large number of the streets. I expressly said that in the case where there was a- large as an eight-inch main on a street in one block, that it was an open question in my mind if it would be better to have a six-inch main on each side. That does not apply where a six-inch main is large enough to supply the block. It is more economical to have a single six-inch main.

Q. You would not say that in the city there are many streets in the remaining forty-four per cent. which could not be perfectly served by a single main system?

A. Of course, I do not doubt that is true, but, of course, there are many streets where there are several companies and a great many mains.

Q. And there is no doubt, as appears by Exhibit 102, that there are many blocks occupied by three, four, five and six mains of the Consolidated Gas Company?

A. I cannot carry that in mind.

Mr. MATHEWSON: Mr. Marks has put in an exhibit here, at great length, which shows exactly what proportion of the streets have two, three and four mains. The witness cannot tell off-hand.

Mr. BURR: I am only cross-examining on the statement he made, that it was an absurdity.

Mr. Mathewson: Putting a single main system throughout the City of New York is an absurdity, and he has expressly said that in many streets single mains can be used to advantage.

Q. Notwithstanding the condition I have pointed out to you with regard to the mains, you still say that the proposition to install a single main system in every street of the City of New York is still an absurdity in your mind? 6091

A. Now, Mr. Burr, I am a little doubtful in my mind what you mean by single main system and what I mean.

Q. What do you mean by a single main system?

A. One main in a street.

Q. That is what I mean.

A. I thought perhaps you considered a single company.

Q. A single main in the street?

A. Yes, I think it is absurd to attempt to pipe New York City in its entirety with one gas main in the street. I did not mean the expression offensively.

Q. I meant to ask you when I was talking about the oil, you spoke of the situation having presented itself here quite recently where you were all out of oil and were saved solely through the weather opening and oil that was not intended for you being appropriated and delivered to you at the station where the need was felt?

A. That is right.

Q. Is that good business management in your opinion?

A. Well, it is a situation of storage oil in the City of New York, and in that station we are erecting a half million gallon tank to endeavor to avoid that situation in the future.

Q. And the occurrence happened in the previous year?

A. True. It is with the greatest hesitancy, as far as I am concerned, that we have the additional supply there. I prefer to have the oil off the island as far as possible.

Q. I will ask you to look at Exhibits 47 and 62 again, Mr. Addicks, and see if these figures that I will now state are correct. You give the candle power drop (p. 5934) as follows:

December, 1905, 3.12 candles——

Mr. Mathewson: No, he did not give it; that is the exhibit you put in, is it not?

6092 The Witness: It is the exhibit Mr. Page put in there through Mr. Edgerton. No, December, 1905, we put in——

Mr. Mathewson: I thought you were referring to the Exhibit you have before you.

The Witness: No.

Q. You give candle power drop as follows:
February 1905, 3.75?

A. In February, 1905?

Q. Yes.

A. That is the exhibit Mr. Edgerton put in.

Q. Now, it appears from these Exhibits 47 and 62, that in December, 1905, the candle power was as follows at the various stations:

25.17	14th Street
26.51	21st Street
24.45	42nd Street
24.21	44th Street
24.42	99th Street

A. Yes.

Q. Then the total average at stations is 24.92?

A. Well, I have not calculated that. No, sir, I do not make it that. Substantially 24.95.

Mr. MATHEWSON: That would be the arithmetical average of those four averages.

The WITNESS: Of the five averages.

Q. You find the city's test to be 24.06 for December?

A. Where is that?

Q. That must be on Exhibit 62.

A. Yes, 24.06 is there. (Exhibit No. 47.)

Q. That makes the drop in candles .86 instead of your 3.12 candles for that month, would it not?

6093 Mr. MATHEWSON: But his was only 21st Street. Mr. Edgerton dealt only with the 21st Street station and not with all the stations.

The WITNESS: That is correct, so far as I can see.

Q. That is right, is it not?

A. So far as I can see.

By Mr. MATHEWSON:

Q. Is it not true that your higher figure of 3.12 came from the records of the 21st Street station only?

A. Yes, sir; 21st Street station only and the others were lower, Mr. Edgerton's figures were lower, if you will remember, in 99th and 44th Streets there was practically none.

By Mr. BURR:

Q. Taking 21st Street station, 26.51 candle power, the city test is 24.06, that would make the drop in candles 2.45 instead of your 3.12?

A. Yes. This is still 1905?

Q. 1905, yes.

A. Taking the 21st Street station?

Q. Yes; 21st Street station is 26.51 and the city test is 24.06, leaving the drop in candles 2.45 instead of your 3.12 for that month.

Mr. MATHEWSON: Not his, that is Mr. Edgerton's figure, you understand, and those are Mr. Edgerton's exhibits.

Mr. BURR: No, this is the map that you introduced yourself, December, 1905.

Mr. MATHEWSON: Very good, then it is ours.

The WITNESS: Where do you find the city tests for 21st Street.

Q. In Exhibit 62; is it not?

A. I do not find it. I did not see it for 21st Street. That is the combined companies, that 24.06, that is not for 21st Street. 21st Street works, this is 26.51 and the city test is 23.39, not the amount which you are giving, which is the average of all the stations. The figure on Exhibit 47 is the combination of all the stations.

6094 Q. And the purchased gas, is it not?

A. If any purchased gas is tested at that station; but those are tested separately. If there is any purchased gas in it, yes, but the figures I have given are correct for the station, and the city test as reported for that station. That 23.39 is correct for 21st Street, city test.

Q. You say the city test is 23.39?

A. 23.39 is correct for the city test at 21st Street.

Q. And the candle power is correct, 26.51?

A. 26.51 is the candle power for the station. I gave that to the stenographer, so I have not that copy here. It is copied.

Mr. MATHEWSON: Well, it appears in the testimony.

The WITNESS: According to Exhibit 62, 26.51 is station test for December from 21st Street, which agrees with what appears for 21st Street as December, 1905, on page 5934.

Q. I understood you to say that the drop in candle power requires an increased amount of oil, is that right?

A. I should say that if there is a drop in candle-power it requires an increased candle-power to overcome that drop, which would naturally require an increased amount of oil.

Q. Now, referring a moment again to your oil contract, are you aware that in Philadelphia the company there divides its oil contract into three companies, the Gulf and Sun, of Texas, and the Standard Oil Company?

A. No, I am not.

Q. Or divides it between two companies, the Gulf and Sun, of Texas?

A. I don't know what the situation is.

Q. Do you know the amount of gas which is manufactured by the U. G. I. in Philadelphia, water gas?

A. No, I do not.

6095 Q. Have you never acquainted yourself with the production of that company?

A. I think Mr Marks gave certain figures, but I don't recall what they are. I have known it years ago.

Q. Well, I am informed that over seven billion feet of gas—including over five billion feet of water gas, is made by that company. Have you any reason to doubt that information or the correctness of that information?

A. I could neither confirm it or doubt it.

Q. Do you know anything as to the conditions prevailing in Philadelphia as to testing candle power? I understood you to say you believed they had the same candle-power as we have here, 22 candle-power?

A. My impression is 22 candle-power. I don't know whether that is correct or not, but I understand there are testing stations.

Q. Don't you know, as a matter of fact, that the companies in

Baltimore, Jersey City, Newark and New Haven buy most of their oil from independent companies?

A. No.

Q. You don't know that?

A. No.

Q. Do you know that these various companies just named make as much or more water-gas than the Consolidated?

A. No, I do not.

Q. I mean all combined?

A. No, I did not.

Q. Have you familiarized yourself with the sources of oil, the great body of it, where it comes from?

A. I don't know how much or how little I know about it. I think I know a good deal about it.

Q. Have you taken pains at all to familiarize yourself with the existing conditions in that regard?

A. I know more or less about it. I don't know how much I know or how little I know. It depends on how much somebody else knows as to how much I know about it. My principal source of information has been from census reports.

6096 Q. Do you know these companies I have called your attention to, Baltimore, Jersey City, Newark, New Haven and Philadelphia use Texas oil.

A. I do not know whether they do or not, but they wont be using it very long I think.

Q. Why?

A. From the evidence in this case Texas oil is about run out.

Q. Do you know what company furnished the oil to Boston in 1906?

A. During the current year?

Q. Yes.

A. I understand it to be the Standard Oil Company.

Q. Are you aware that during the year ending June 30, 1906, the Boston Gas Company used 3,971 gallons of naphtha at 5.52 cents and 6,213,964 gallons of other oils at 4.01, making a total of 6,216,935 gallons?

A. I know Mr. Bemis' quotations and reports to that effect.

Q. And made 1,421,194,000 feet of water gas of about 22.9 candle power with that?

A. That would be the works candle power in that case, I presume. I don't know exactly how much they have made themselves. My memorandum don't go into the question of how much water gas they made.

Q. In confirmation of which I will refer you to pages 22 and 17 of the report of the Massachusetts Board of Gas and Electric Commissioners, and also to the letter of President Richards to whom you referred, of the Boston Consolidated Gas Company.

A. These figures do not quite check with the totals I have but I presume they are right. I see here the candle power 23.13 at the station and 22.7. The candle power given in the gas commission report is 19.37.

Q. The candle power given in the report is what?

A. 19.37.

Q. At what point?

A. Well, it says, the State Inspector.

Q. That is on the street, the mixed gas?

A. That is the testing station, wherever the testing station is.

6097 & 6098 Q. And what is referred to in the letter of October, 1906, from President Richards is the water gas to which we have made reference, is it not?

A. No, I don't think it is all water gas. I think it is water and coal gas mixed in one case. Pardon me. This letter says that it is water gas at the Calf Casture Station, and it says further, "And at out Commercial Point Station for the same period 22.7," but it does not say water gas.

Q. Assuming these figures to be correct, does not that mean and show a make of 4.37 gallons of oil per thousand feet of water gas?

A. I have not got the other figures. Do you want me to make a computation here from these reports?

Q. Yes, to verify that, if you will?

A. What was the total gallons of oil?

Q. 6,216,935.

A. Will you ask Mr. Bemis to add that up again and see what that is. I make it 6,217,935.

Q. That is right.

A. Did Mr. Bemis give the amount of carburetted water gas made?

At 5:05 P. M. adjourned to Thursday, January 24, 1907, at 11:30 A. M.

Last Exhibits:

Complainant's, 335.
State's, OOO.
City's, 236.

6099 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity and the CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January* 24, 1907.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr.

6100 WALTER R. ADDICKS resumes.

By Mr. BURR:

Q. When we left off last night we were engaged in doing some figuring, and you undertook to complete your figuring this morning.

A. I have forgotten the exact question that was asked me last night.

Q. What I asked you was, assuming those figures to be correct, does not that mean and show a make of 4.37 gallons of oil per thousand feet of water gas, and you undertook to verify the figures I had previously given you.

A. Now, may I have the number of gallons of oil that Mr. Bemis thought the amount was, so as to check it?

Q. It was 6,217,935.

A. I have it 6,218,096. You will note that there was some naphtha used and marked as used, and also the naphtha unaccounted for was 161, which should be included in the amount used, so there will be two items to be added.

Q. We will accept your figures.

A. The whole amount of naptha, amounting to about four thousand gallons, I make it. By the way, how much is the gas made?

Q. 1,421,194,000 feet.

A. I have taken that same figure 1,421,194,000 and the result is about 4.38 gallons of oil.

Q. So that instead of the 4.37 that I asked you regarding, you make it 4.38?

A. Well, it is 4.375, which I would take as 4.38, it being slightly over .5.

Q. Calling your attention to your testimony regarding Lowell, will you look at the report to the Massachusetts Gas Commission, pages, 22, 19 and 17, and state whether from that report it does not appear that Lowell used 836,032 gallons of oil costing 3.13 cents per gallon to make 189,118,000 feet of water gas, and from such report it appears that the candle power was 18 after this gas was mixed with 338,544,000 feet of coal gas.

6101 Mr. MATHEWSON: Don't think that I have laid stress on Lowell. I have not. You will remember it was brought out by Mr. Bemis and I merely asked Mr. Addicks in rebuttal about one or two statements. I did not introduce Lowell and have not claimed that Lowell is representative.

Mr. BURR: I am now endeavoring to show that the statements he made in his rebuttal were incorrect.

Mr. MATHEWSON: No, you cannot show that, because he did not make any.

Mr. BURR: I call your attention to his testimony at page 5965, in which he says: "The information is that the candle power is about 4½ candles to the gallon of oil in Lowell." So I want to show the contrary, if I can.

Mr. MATHEWSON: All right, I have no objection.

The WITNESS: Now, you gave me a lot of figures that were in various parts of this report, and it requires just as much work as it did in the other case. I ought to familiarize myself with the whole report, instead of taking out such figures as I am asked for in the question.

Q. Change that figure to 893,032 gallons of oil.

A. In other words you are including 60,000 gallons of naphtha this time, are you?

Q. Yes.

A. That is at 5.3 cents a gallon.

Mr. MATHEWSON: Of course, now, Mr. Burr, the figures you are asking the witness to make are from statements of the officers of this company made to the Massachusetts Gas Commission, and any other statements made by officers of the company I shall expect to present on the same theory, they are equally competent.

6102 Mr. BURR: You have. He has stated that the information he gets is so and so, and comparing the information contained in the official report to the gas commission——

Mr. MATHEWSON: If you want that, all right, only I want it to appear.

The WITNESS: Mr. Burr, in order to make this computation I have to take the amount on hand, the amount received and the amount used and see if the amount agrees before I can check up these figures, as I did in the case of the Bay State. In the first place, I find that considering the amount of oil on hand as of January 30, 1905, adding to that the amount received and subtracting what is said to be used, does not bring out the amount on hand at the end of the year, unless I have made a mistake in my calculation, so that is error No. 1.

Mr. MATHEWSON: That is in that report?

The WITNESS: That is the amount of fuel and other oil in the report.

Q. Does that appear by the report?

A. Yes. Now, if Mr. Bemis will kindly check these figures I will go on a little further.

Mr. MATHEWSON: Can we not finish this up here? I do not think we should chop up this particular company, I do not think we should take a little here and a little elsewhere about this company.

Mr. BURR: No, I want to finish it up myself.

Q. Well, I will not press that matter further, we will not take any time about it.

A. Mr. Burr, may I tell you something about this last question in regard to the amount of oil used in the Boston companies?

Q. Yes.

6103 A. I would like to state that I do not think that report is for a year, although it appears to be on the face of it, the annual report for that year. I think it includes a part of the previous June, a portion of June, 1905, as well as from July 1, 1905, to June 30, 1906. I have here the sworn statement of the accountants which agrees substantially with the Gas Commissioner's report and shows it is for more than a year.

Q. Now, take Fall River. Fall River you have——

Mr. MATHEWSON: I did not ask him a word about Fall River. I did not mention Fall River. It was Lowell and Boston and Lynn.

Mr. BURR: And you referred to other Massachusetts companies.

Mr. MATHEWSON: And he said he made no comparison with Lynn because part of that was electricity.

Mr. BURR: I will leave that out, then. By the way, I want to call attention to a correction that ought to be made at once, on page 6095. It reads, "Well, I am informed that over seven billion feet of gas—over five million feet of gas is made by that company." It should read "Over seven billion feet of gas including over five million feet of water gas."

Mr. MATHEWSON: At page 6089, while you have it right before you, you referred to City's Exhibit 102 as page 1563. It should be page 1653, and the exhibit referred to, of course, was the exhibit made up by Mr. Marks from his measurement of the maps.

Mr. BURR: Showing a duplication, that is all.

Mr. MATHEWSON: I understood it, yes, but even the percentage of duplication, of course, would be affected by the errors.

6104 Q. Now, calling your attention to Lynn, do you find from the same report to which I have called your attention, pages 22, 19 and 17, that Lynn used 1,007,166 gallons of oil, costing three cents a gallon, to make 206,197,000 feet of water gas, or 4.88 gallons per thousand feet, and that this water gas, when mixed with 230,842,000 feet of coal gas, yielded 18.2 candle-power, according to the State tests?

A. I also find an error in this report.

Q. Are you speaking of the report of the Gas Commission?

A. Of the Lynn report to the Gas Commission as copied here. I found that they use 20,913 tons of coals, which I assume to be gas coals, they say carbonized, which would make a make of about

10,000 feet to the ton or 209,000,000. This states that the coal gas made is 23,084,200.

Q. That has nothing to do with the water gas, has it?

A. Well, it has—yes, in this sense, that you have the total make which is composed of coal gas and water gas, and if the coal gas is only 23,000,000 we would have to subtract 23,000,000 from the total make which would make a very much larger amount for water gas. If the cypher is left off, I would like to know it.

Mr. MATHEWSON: I do not think we ought to be called upon to testify upon a report which is apparently incorrect and which counsel for the defendant or his witness thinks probably would be corrected by doing something else. It seems to me——

The MASTER: It seems to me that the value of this kind of evidence is not commensurate with the time it is taking, in view of our limited time.

Mr. BURR: Well, that is all I will ask on that point.

6105 Q. I will ask you, how do you reach your figures of candles per gallon for your company and for Lowell?

A. I had the figures from Lowell from a letter from Mr. Pease, who was the superintendent. So far as our company is concerned, from our own records.

Q. Do you know where the 28 degree oil used by your company comes from?

A. From the Standard Oil Company, that is as particular as I can give you.

Q. Does it not come from Texas?

A. 28 degree?

Q. Yes.

A. I did not know it did.

Q. Have you not used a good many millions of gallons of Texas oil in New York during the past three years?

A. Not in the Consolidated Gas Company, so far as I know of.

Mr. MATHEWSON: It comes from the Standard Oil Company, he says. Mr. Emery, after his test, said part was Pennsylvania oil and he thought that part was not, but that was as definite as he could be.

Q. Are you aware that most of the five million gallons of storage capacity which you stated was possessed by the Gulf Refining Company in New York harbor could be used for storing gas oil?

A. Well, any tank that is suitable to store any degree of oil can be used for any other degree of oil, I should think.

Q. Are you aware that that company now ships oil by barge in this harbor to some of the four companies in this city that you have testified about?

A. Yes, it is my general information that they do send by water; to what extent I do not know.

Q. To which company?

A. Well, my impression is that they do both to the Kings County

and the Rockaway Company, Far Rockaway—the Queens
6106 Borough Gas & Electric Company, I think, is the correct name for it.

Q. You refer to the difficulty of drawing deductions from Lynn, because it is a combined electric and gas plant. Did you observe that the profit from the gas alone at the price of 90 cents amounted to $160,414.42 during 1905-6 before the reduction to 85 cents on October 1st, 1906?

A. I would have no opportunity to observe that, Mr. Burr. The returns are not published, Mr. Burr. Mr. Bemis is the only one who has the advantage of having that information.

Q. Now, you stated in regard to Boston that the Boston Gas Company secures about $30,718 profit from the gas it sells to other companies and $130,000 from the electric business, or a total of $160,718, or about 4.6 cents per thousand feet of gas sold, and that without this profit it could not have reduced the price voluntarily from 90 cents to 85 cents from July 1st, 1906.

A. I do not remember making that statement in that form, Mr. Burr. My statement was that without that they could not make the profit they did in that year without an additional price of gas, equal to 4.6 cents. I do not think I referred to the question of their reducing it.

Q. As a matter of fact, did not the company last year, selling gas at 90 cents, pay 8 per cent. dividend on its stock of $15,124,600?

A. They paid about 8 per cent. dividends. I would say also in regard to electric light, from glancing over this report last night it would seem to indicate that they made a little more on their electric light than the figure I gave here, but I was not able to check it. If you will pardon me, I will check that here with this other report. From the statement I gave yesterday from the president I had $130,000 for the electric business. According to the computation I
6107 have just made from the report of the audit by Harvey Chase & Company, if I have made no mistakes in the computations——

Q. Where does that audit appear?

A. In the publication according to law in the Boston papers. Mr. Bemis, I think, has a copy of it also. I find that the expenses for electricity were $87,405.20 and the receipts for electricity $225,135, and the difference between those two sums to be $137,729.80. I used $130,000.

Q. Then every 1 per cent. dividend means $151,246, does it not?

A. It varies from time to time, Mr. Burr. That may be true, but their notes payable increased over seven hundred thousand dollars for that year, which would affect it as far as the earnings are concerned. I merely call attention to that, and the capital is slightly changed for this year over last year.

Mr. Mathewson: You mean capital stock?

The Witness: I will not be sure about that. No, the capital stock is the same.

Q. Well, therefore a reduction of $160,000 in the profits would mean a reduction in the dividend of 1.6, or a reduction to 6.94 per cent.?

A. Pardon me, I have not answered your other question yet. May I answer that before I take up the other one?

Q. Yes.

(Question repeated as follows:)

Then every 1 per cent. dividend means $151,246, does it not?

A. That is correct.

Q. Therefore a reduction of $160,000 in profits would mean a reduction of the dividends of only 1.06 per cent., or to 6.94 per cent., would it not? It would mean a reduction of 1.06 per cent., or from the 8 per cent. to 6.94 per cent.

6108 Mr. MATHEWSON: But it is not shown, Mr. Burr, that the 8 per cent. was when the company had a large surplus from which it may have taken, and undoubtedly did take, I think, a portion of that, as will be made apparent.

Mr. BURR: We have only asked the question.

Mr. MATHEWSON: Now, you ask if the earnings be reduced 1 per cent. They have no relation to each other. One is earnings and the other is dividends paid.

A. Without working it out carefully, 1 per cent. being 151 and for 9,000 more would be less than one-tenth. I imagine the figures are correct, so far as a reduction in the amount applicable to the dividends of that amount would produce a reduction in the probable dividend in the amount stated.

Q. But if the company did not have an electric light business, on that sale of gas to the other companies it would need less capital, would it not?

A. Well, Mr. Burr, you will see from the balance sheet of the company or from any statement of the company that the property of the company is very much in excess of the capital, and whether it had the electric light plant or not it would have at least as much capital as it has now, still a large surplus.

Q. Well, the capital is based on both plants, gas and electric light, isn't it?

A. Undoubtedly. It is based on the sum of its assets unquestionably.

Q. Well, assuming it needed less capital because of the absence of electric light business or the sale to other companies, the gas produced would not average anything like 1 per cent. on the gas capital, would it?

A. Well, that is a question of what the percentage return, $130,000 or $137,000, whichever may be correct——

6109 Q. I mean assuming there were no profits from the electric light or gas?

A. Well, there would still be a less cost. It would depend upon the profit made from the electric light end of the business, and according to my rough computations here that has very much larger return than on the gas. I think that affects the situation.

Q. Well, you took all the profit from the gas, didn't you, in the reduction that you made?

A. Yes, but I am assuming now you are going to take all the profit off, the return of the capital invested in the electric light business, suppose it is $700,000, and $70,000 would be 10 per cent. a year for profit but this is $130,000, showing there is 15 per cent. or more profit on the electrical end of it, capital invested. Of course, that would leave out the capital invested in the gas business.

Q. The point is that if you are going to take off from the dividends you must assume there is less capital upon which dividends are to be paid?

A. If the capital were exactly the same as the assets that is undoubtedly true, but that is not the case here?

Q. Now, before the Massachusetts Gas Commission, in the hearing two years ago about the consolidation and about the prices of gas of the Boston companies, you presented a table, did you not, showing that the depreciation on the electric plant was 3 per cent. on the then electric assets of over $800,000, or $24,000 odd and should be included in the cost of electric light, is that so?

A. I don't recall that. I may or may not.

Q. Assuming that it be so, that would make an allowance of 6 per cent. on these assets and would amount to $49,000, would it not?

A. I don't think it is necessarily a parallel case, because that Brookline Electric Company at that time, which was with the gas, was fully capitalized to its full value; that is to say, the assets 6110 of the company were not exceeding the capital stock or certificates of indebtedness, so that while that might be done at that time it might not necessarily be done at this time. If you will let me refresh my memory by referring to the record I might be able to answer.

(The witness is handed a book.)

Q. Well, Mr. Addicks, we won't stop now——

A. I want to see if this is my testimony. If you will show me that it is first. I don't say I did not present the table. I don't recall presenting the table and this seems to be the testimony of Robert Grant and not my own at all.

Q. Who was Robert Grant?

A. I think he was auditor of the company at that time, and he states that his 3 per cent. is taken from Mr. Bemis' figures; 3 for electricity and 5 for gas.

By Mr. MATHEWSON:

Q. Making a total based on Mr. Bemis' assumption?

A. Pardon me. Five cents for gas and 3 per cent. for electricity.

Q. Do you mean five cents Professor Bemis allowed for depreciation per thousand feet of gas?

A. Yes, sir; that is as I understand what is stated there.

By Mr. BURR:

Q. You stated, and I believe it is generally conceded, that the maximum price of 90 cents has been voluntarily reduced by the Boston Gas Company to 85 cents in July, 1906?

A. I understand that has been done.

Q. And it continues to sell at that price although, as you say, it has a right to restore the price to 90 at any time?

A. It has not made any change so far as I know up to the present time.

6111 Q. Did you not testify in Boston on the investigation before the State Gas Commission, January 30, 1905, that after making proper allowance for depreciation $1.10 would have to be charged to yield 8 per cent. dividend?

A. I would like to have my testimony pointed out to me so that I can refresh my mind. It is three years ago.

(A book is handed to witness.)

The WITNESS: This table looks familiar. If you refer to page 694 of printed testimony, hearing before the Board of Gas and Electric Light Commissioners in relation to production and price of gas in Boston, and published November, 1905, by the City of New York library——

Q. That is the book I refer to. Now, calling your attention to that, is it not true that less than two years ago you testified that after making proper allowance for depreciation $1.10 per thousand cubic feet of gas would have to be charged to yield 8 per cent. dividend?

A. My statement in this table as shown me is as follows: It is assuming a combination of then independent works in the city of Boston under the then existing conditions of expense as existed, 1903-04, I say that allowing for the cost of labor and material and allowing ten cents for contingency that the difference between one dollar and that amount, considering the fixed charges, would only yield 24.74 cents per thousand cubic feet; that the amount required to pay the interest and dividends as then existing amounted to 41.56 cents, leaving a deficit of 16.82 cents per thousand.

By Mr. MATHEWSON:

Q. Including dividends, of what per cent., 10?

A. Including dividends of 10 per cent. and interest on such outstanding obligations as then existed.

6112 By Mr. BURR:

Q. Then I fairly stated what you contended at that time, that it would take, as you say, under the conditions as they so existed—that it would require the company charging $1.10 a thousand cubic feet of gas in order to pay 8 per cent. dividend?

A. Well, it does not show that specifically on that table; it shows simply deficit in earnings of 16.83, which would make it 1.1683 and not 1.10.

Q. We won't be technical about it. Didn't you testify before the Gas Commission, as I have stated?

A. Not on the table shown me by Mr. Bemis. Now, there is another table on page 693, which shows that the price of gas, 1903-04, cost, plus 10.5 cents and 8 per cent. dividends, 1.1066.

Q. 1.1066 would be necessary to be charged by the company per thousand feet of gas?

A. Under the then existing condition of things in Boston.

Q. Now, as a matter of fact, hasn't that company paid 8 per cent. dividends for the year June 30, 1905, with a price of only 90 cents?

A. That company did not exist at that time. That was a suppositious company.

Q. I mean to say the consolidation of these companies?

A. The consolidation of those companies did take place, and they have paid 8 per cent. dividends last year on $15,124,600, and I might add that the president has stated——

Q. No, just answer the question. And the price was 90 cents?

A. Without any allowance at all for depreciation of plant.

Q. Did you not also state at the same investigation, at page 686, 694, that at $1.00 per thousand cubic feet the dividends could only be 4.54 per cent.?

A. That is covered by my answer before in regard to the deficit of 16.82.

6113 Q. And the fact still remains that at 90 cents it paid 8 per cent.?

A. These companies did not exist.

Q. The fact still remains that these consolidated companies the next year paid 8 per cent. dividend, the price being 90 cents?

A. The Consolidated for last year, in 1905-6, my figure is for 1903-4. This is about the 1st of January, 1904, and the year ending June 30, 1906, they paid 8 per cent. dividends without depreciation.

Mr. Mathewson: I think you are confusing earnings and dividends, Mr. Burr, which have no necessary relation, certainly not so close as that.

Q. Is it not true in warm weather gas may have a candle power at the burner equal to that at the works, whether due to the picking up of enriching material in the holders and mains and services, or from whatever the cause may be?

A. I think that the station candle power in the summer is apt to run more closely in the burner—consumer's burner—than it is in winter; the same observer taking a candle power in each case.

Q. In the Boston gas case before this Commission, at this investigation to which I am still referring, you added one-half cent for bad debts and ten cents per thousand feet for depreciation and contingencies, did you not?

A. Yes, sir.

Q. As actual operating expenses you added those two items to carry operating expenses?

A. As the amount to be allowed on the cost of gas for a given year, as representing what the cost of gas would be on that period.

Q. On page 778 of the record of that investigation you were asked:

> "So far as you know this is the only time that ten and a half cents has been added on the cost of manufacturing and the cost of distribution by your company?" 6114

And did you not reply:

"No. I cannot answer that question; I cannot say yes or no. Q. Why not? A. Because I cannot remember; that is the reason. Q. You don't know of any other company that does it? A. No."

You so testified did you not?

A. That sounds very much like it, only I thought I added that Mr. Bemis did.

Q. Do you know now of any such companies?

A. Oh, there are a great many of them, yes, sir.

Q. Well, the Boston Company, for one, does not do it, does it?

A. The Boston Company now?

Q. Yes.

A. Well, the Boston Company made a statement before the Gas Commission within three weeks that at least five cents should be allowed for depreciation.

By Mr. Mathewson:

Q. Through Mr. Richards?

A. Through Mr. Richards.

By Mr. Burr:

Q. But they have reduced the price and they are not doing it?

A. Well, they have a very large reserve fund between capital and value of the plant. They can throw away a very large portion of their plant without involving their capital at all. The amount of ten cents a thousand for forty odd years at the present output. And besides, they make these returns on the electric light and the gas amounting to $170,000, which you have neglected entirely in asking me these questions about earnings in Boston. 6115

Q. You were asked still further by the Commission with regard to this proposition presented by you—asked on page 777: "Q. Do you know of any company in the United States, possibly excluding your own, which takes the price of gas and the cost of distribution and adds ten and one-half cents to cover these things? A. I don't know."

A. I think that is right.

Q. Then you were asked: "Q. Then this is an original idea on your part, that that is a fair leeway?" and you replied, "That is my judgment." Is that right?

A. I think so.

Q. You were asked, "Q. Do you know of any other companies that have adopted this same basis for arriving at the price to be charged to the gas?" and your answer was, "I don't remember."

A. Yes, sir. I won't say definitely whether that was the way I replied to it, but it sounds familiar.

Q. Well, you have the record before you?

A. Well, I know, but it is a printed record from the original record. This is a reprint in New York from the evidence in Boston.

Q. What was the date of your testimony in Boston?

A. I think January, 1905.

Q. Well, now, you testify you think, judging from the record there and your own recollection, that you did not remember of any other company that made such a charge?

A. At this late day——

Q. Do you remember any company that existed at the time you gave your testimony that made that charge?

A. You mean at that time?

Q. At that time.

A. The only thing I know is Mr. Bemis' statement that Mr. Vanderpool said five cents should be allowed for water gas and ten cents for coal gas, whether they made that charge on the books I don't know personally.

6116 By Mr. MATHEWSON:

Q. And you know, Mr. Bemis testified in Philadelphia that ten cents ought to be allowed?

A. He testified in Philadelphia that ten cents should be allowed on the coal gas. He testified in this case.

By Mr. BURR:

Q. That was ten years ago.

A. In Philadelphia, yes. But the testimony in regard to Mr. Vanderpool was only 1905.

Q. Mr. Bemis has explained that as a quotation from somebody else's statement already and given a full explanation in regard to it. But I want to press the question, do you know of any other company besides the Consolidated Gas Company charging this ten cents as against the cost of manufacture and distribution of gas?

A. Yes, I do know of other companies. I cannot enumerate them.

Q. You don't remember their names now?

A. I know a man who has charge of a large number of gas companies and he tells me he is doing the same thing. Mr. Cowdry testifies to ten in Chicago; whether he is doing it in St. Louis or not I don't know.

Q. You don't know whether they are doing it or not at Chicago or St. Louis?

A. I don't know whether they are doing it at St. Louis. This gentleman showed me his accounts—a list of his accounts in which ten cents appeared, so I know from his statement that he is doing it. A man does not usually have access to the books of other companies or information of other companies.

Mr. BURR: I have found that to be the case.

Mr. MATHEWSON: But you were not in the gas business, Mr. Burr.

6117 Q. Do you know what the companies in Buffalo that Dr. Humphreys is connected with have reported as to the cost of oil?

A. No, sir; I do not.

Q. Or at Syracuse?

A. Unless Syracuse is one of those eight companies, but I don't recall it now. I did see the Syracuse testimony, but I don't recall what the price of oil was. I have that testimony, but I don't recall the amount.

Q. You said something, I think, about you would have to know the penalties which were inflicted upon companies for transgressing the law regarding candle-power, as one of the elements of the thirteen elements or factors that you referred to in making up your mind as to what the conditions actually were regarding candle-power and oil in that direction.

A. In this way, if you want the explanation. If the penalty of a company was around one dollar for violating the law they might carry one candle-power. When the penalty is one thousand dollars for violating the law they could not afford to risk the one thousand dollars on the material or the closeness with which they tried to adjust themselves to the law, and if there was no penalty whatever and no inspection they might use a jet photometer in the works, and so the candle-power might or might not be different or might vary three or four candles.

Q. I merely wanted to call your attention to penalties that are imposed under the English law, and ask you if you are familiar with them. I have special reference to the book entitled *Reeson's Complete Gas and Water Acts,* 1817-1902, with full index, by which it appears, on page 338, regarding the candle-power penalties for failure to keep up the candle-power:

"If on any day the gas supplied by the company at any testing place is of any less illuminating power than it ought to be
6118 under the special act, the company would be liable to the following forfeitures:

"For the first half of a candle of defective power forty shillings and for the next and every subsequent candle of defective power a sum not less than twenty-five pounds, and not exceeding 100 pounds, having regard to the relative quantities of gas manufactured by the respective companies."

Are you familiar with that?

Mr. MATHEWSON: You haven't the whole thing there by any means. You have not read the whole act. There is a qualifying or saving clause there which you have not read.

Mr. BURR: Very well, I will read the remainder of it.

"Provided always, that the controlling authority of any testing place having recovered one forfeiture in respect of defective illuminating power in the gas supplied by the company at one testing place on any day, shall not be entitled to any further forfeiture in respect of illuminating power by the gas supplied by the company at any other testing place, of such controlling authority on the same day."

Mr. MATHEWSON: We have five testing places to the Consolidated.

Q. Don't you know there are four testing places in London for this same company, for the South Metropolitan?

A. No, I don't know how many testing places they have. I am more or less familiar with that act. I have read it before, but what answer do you want me to make as a basis of that?

Q. Well, I ask particularly whether in making the answers which you did with regard to oil and the candle-power, you had in
6119 mind this provision regarding the infliction of a penalty under the English law, the assumption having been all

through this case by the Consolidated and by counsel, it seems to me that the penalty imposed here was greatly in excess of any other penalty that was imposed in any other case.

Mr. Mathewson: Grossly so.

A. I had in mind when I made that answer any penalty established by any statute at any place, and I said that the amount of the penalty would have a marked influence on the quality of material that you would use in your manufacture and the closeness with which you would run to the legal requirements. On the basis of what you read the New York penalty is very much heavier, as I read it. It is claimed that we can be fined for every violation, and there is a test made now for every station. I think there are five in number, so that would make five thousand dollars on any one day, but unless I am in error, the law does not say that it should only be once a day, either, but I think as often as the inspector may see fit, and they may increase the number of testing stations, and I don't know where it will end, and there is no leeway whatever, and besides that the burner is not specified. In Massachusetts it says it must be the best burner applicable to the gas, and the consequence is they use a table top tip. If you give one-half or three-quarters of a candle power higher than other burners. It makes a great difference how the law is drawn and its application. I think your first fine here of 25 shillings is about $10.

Q. Did I understand you yesterday to say that as a result of the Astoria plant that the amount of oil that you will need will be decreased or diminished?

A. I said if we could make coal gas under the present law, 6120 we are restricted in the amount of coal gas we can make, because the candle power is in excess of what you can commercially supply coal gas—in other words, it is not commercially possible to supply coal gas exceeding a candle power of 19 candles.

Q. You have undoubtedly studied this question of candle power very extensively. Are you familiar with the fact as stated by the Brooklyn Union Gas Company that for several years of the past five years they have been distributing gas at 25 candles?

A. They are not making a foot of coal gas, as I understand it; not a foot. I don't question it in water gas. It is coal gas I am talking about. Now, will you give me that other question again, I don't think I answered it.

The Stenographer (reading): Did I understand you to say yesterday that as a result of the Astoria plant that the amount of oil that you will need will be decreased or diminished?

A. For every thousand feet of coal gas we use at legal candle power we would probably use two or more gallons of oil under the present laws.

Q. In the future?

A. No, now. We do that now, according to the testimony. That if they made a thousand feet of water gas it would be something over four gallons, so that as coal gas displaces the water gas we use that much less oil per thousand feet, but if we had eighteen candle power it would be very much better because it takes a very large quantity of oil to get this 22 candle power which cannot be operated outside of carburetted water gas, and therefore we must make the water gas in certain proportions.

Q. But you won't need to make so much water gas with coal gas in Astoria?

6121 A. Yes, sir, because we have to enrich our coal gas with water gas to get 22 candles. We cannot sell 22 candle coal gas unmixed with water gas. It will smoke every ceiling so we cannot sell the gas.

Q. Do I understand you to mean that no-withstanding the operation of this coal gas plant which started up December 3d, your supply of oil will not diminish but rather increase?

A. That depends entirely on the relative amount of coal gas and water gas. That might diminish to some extent—how many thousand gallons I would not like to say.

Q. Referring for a moment to the drop candles to which your attention was called yesterday, you have given the apparent drop of the 21st Street station as 3.12 candles between that station and the city test office for December, 1905. You figured the average drop between all the stations as against the city authority as .86 candles. Does not this show a very great difference between the candles total average of oil gas and the drop 3.12 candles you have given for 21st Street? In other words, as a commercial proposition, is not the actual and plain average loss of .86 candles for December, 1905, on all the gas of the Consolidated Gas Company very much less than might be deduced from the stated loss of 3.12 candles at the 21st Street station?

A. That is a very involved question. I don't know whether I followed it all. In the average candle power involved appears the average of the coal gas as well as all the water gas. I don't know how that phase of it would affect the entire averages, but your general average is lower than 21st Street, but please do not forget that 44th Street and 99th Street do not show the same drop as 21st Street in December; materially less.

Q. One question with regard to the mains——

6122 A. May I put in one thing apropos? I was asked yesterday about where our candle powers are taken. Those are taken at the outlet of the holder, not at the inlet, and invariably it is a candle power of the gas made at the station, with the exception of 14th Street, where it is a mixture of other gases to raise the candle power of 14th Street gas.

Q. Your understanding is, and your information is, that at one time here there were various gas companies competing together for business in the same territory?

A. I so understand it.

Q. There was a gas war here?

A. Yes, sir.

Q. And so in that territory there are the mains and piping of the various competing companies?

A. I understand that to be true.

Q. And those mains and pipes still remain in those territories?

A. They are supplying gas from them to other companies as they exist to-day. The company has its own mains and is supplying gas from its own mains.

By Mr. MATHEWSON:

Q. To its own consumers?
A. To its own consumers.

At 1 P. M. a recess was declared till 2:30 P. M.

6123 After Recess.

Mr. Kirby also was present.

WALTER R. ADDICKS resumed.

By Mr. BURR:

Q. There is just one question I want to ask you with regard to the uncorrected gas and corrected gas. You say in 1905 the Consolidated Gas Company obtained candle power per gallon of oil as follows: Uncorrected gas, 5.73 candle power to 5.98 candle power?
A. Yes, water gas works.
Q. Corrected gas 5.42 to 5.74 candle power?
A. That is right.
Q. Refer to City's Exhibit 62, page 1404-L, and explain this. Do you not find in 44th Street 5.13 and in 99th Street 6.88 candle power per gallon?
A. I do not.
Q. There it is; is not that 44th Street 5.13 and 99th Street 6.88?
A. My statement is for the entire year, Mr. Burr. Your statement is for one particular month. Mine is the average for the entire year.
Q. You do find it there for the twelve months?
A. Yes, but my figure is 5.42 and this figure is 5.42.
Q. Then you wish to be understood that the statement you made is for the entire year?
A. The average for the entire year of twelve months.

Mr. BURR: I am not going to ask Mr. Addicks to do any computation, but I want to read on the record certain statements from the report of the Massachusetts Gas Commission with respect to Lynn and Lowell.
Mr. MATHEWSON: I think I shall object to that; I do not see why you should read from it. If you have a question to ask the witness, that is another proposition.
6124 Mr. BURR: I will hand you the report and ask you to verify it.
Mr. MATHEWSON: I thought you withdrew that, that the figures were not correct and were not checked. Is it worth while to put some figures on this record which may be incorrect?
Mr. BURR: These figures are correct, and it is important, because it is a comparison between the value, so far as the result is con-

cerned of the cheaper oil in Boston and the oil used by the Consolidated Gas Company.

Q. With respect to Lynn, Mr. Addicks, do you find on page 22 of the return as it appears in the report of the Massachusetts Gas Commission for 1905, that the company had on hand at the beginning of the year 59,200 gallons, during the year 1,013,966 gallons, carbonized 1,007,166 gallons and had on hand at the end of the year 66,000 gallons?

A. That appears there, yes.

Mr. MATHEWSON: It appears in what? Is that the original report?

The WITNESS: In this copy.

Mr. MATHEWSON: In what copy?

The WITNESS: A copy of the report?

Mr. BURR: To which reference has been made all through this hearing.

Mr. MATHEWSON: But they were found to be incorrect.

Q. Do you find the average candle power determined by the State inspector on page 19 with the mixed coal and water gas at the State testing stations to be 18.2 candle power?

A. It so appears on this page.

6125 The MASTER: Is that copy of the report now shown the witness one that has been used heretofore in this proceeding?

Mr. BURR: Yes.

The MASTER: And marked in evidence or for identification?

Mr. BURR: No, but it was the report referred to by Professor Bemis in giving his testimony.

The MASTER: What is there to authenticate it? Is it a sworn copy? What proof is there as to the correctness of those manuscript entries?

Mr. BURR: Professor Bemis swore as to the manner in which that copy was made in the office of the Commissioners of Gas in Boston at the time he was examined.

The MASTER: Is it certified to be a correct copy by the clerk?

Mr. BURR: And he testified as he went there and verified the figures on water gas, oil and candle power.

Mr. MATHEWSON: I do not remember whether he did or not. The oil figures for one of the companies that Professor Bemis has produced this morning were confessedly incorrect, so the paper was withdrawn by counsel.

Q. Referring to the printed report of the State Gas Commission in Massachusetts relative to Lynn on page 82 of the Appendix do you not find that the total assets both gas and electricity were $1,792,602.11 and the gas profits $136,344.26, that is for 1904-5?

A. This report that I have here in manuscript is for the year ending June 30, 1906.

Q. Yes.

A. Whereas the report you have just handed me is for the year ending 1905, the year before.

6126 Q. That is right.

A. They are not the same reports at all, they are a year apart.

Q. That is right.

A. You want to know whether on page 82 of the Appendix the total assets on the books of the company are $1,792,602.11?

Q. Yes.

A. That is correct.

Q. And the gas profits $136,344.26?

A. The gas profits as reported, $136,344.26.

Q. As a matter of fact, you see that the gas and electric assets are separately given there on that page, and on the page preceding?

A. They are given—they are not separately given in two totals, but they are comprised in the $1,792,602.11, and can be separated to a great extent.

Q. You observe that among the electric assets on pages 81 and 82, real estate, $118,719.63?

A. That is the electric real estate.

Q. Steam plant, $131,928.88?

A. Yes.

Q. Electric plant, $127,855.48?

A. Yes.

Q. Electric lines, $159,676.80?

A. That is correct.

Q. Transformers, $12,570?

A. Correct.

Q. Meters, electric, $19,623.39?

A. Yes.

Q. Arc lamps, $5,500?

A. Correct.

Q. Due for electric light and power, $29,904.80?

A. Correct.

Q. And there are other items also there, are there not?

A. Correct. Fuel on hand, electric, $2,186. Carbons on hand, $1,774. Incandescent lamps on hand, $1,337. Globes on hand, $318. Electrical fixtures on hand, $242.78. I left out the cents in those other cases. The horses and wagons are not divided. Sundry accounts due the company, I do not see that that is divided, nor do I see the materials on hand for electric, other than those I have mentioned, if there are any.

6127 Q. Calling your attention to page 17 of the report for the year 1905-06, of the Massachusetts Gas Commission with regard to Lynn, if we assume the correctness of those figures we had under dispute this morning and that the amount of water gas is correctly given there at 206,197,000 feet, on page 17 of the return, could you not readily find the gallons of oil used per thousand feet by dividing the oil by the water gas made?

A. Yes.

Q. On page 22 of the Lowell return will you simply read the figures on naphtha and other oils on the two marked lines which are handed you?

Mr. **Mathewson**: That is Professor Bemis' copy of gas for the year ending June 30, 1906.

Mr. **Burr**: Yes.

A. Mr. Burr, are you going to ignore the unaccounted-for oil?

Q. Will you just kindly read those two lines?

A. You want that which is under the third column from the left-hand side headed——

Q. Under each column?

A. Then I did not understand the question.

Q. On page 22 of the Lowell return will you simply read the figures on naphtha and other oils on the two marked lines which I handed you and the headings above each column in which they appear.

A. Naphtha on hand, June 30, 1905, 44,930 gallons; received during the year, 20,034 gallons—I cannot read the figures—it appears to be 20,034 gallons; carbonized during the year 60,009 gallons; unaccounted-for, blank; on hand, June 30, 1906, 4,955 gallons; average cost per gallon of each kind used at the works, 0.053; other oils on hand, June 30, 1905, 98,492 gallons; received during the year, 1,114,027 gallons; carbonized during the year, 833,033 gallons; unaccounted-for, blank; on hand, June 30, 1906, 373,622 gallons; average cost per gallon of each kind used at the work, .0313.

6128 Q. I have just one other question to ask you. You observed on page 17 of the return for 1905-6 that they made 338,544,000 feet of coal gas and 189,118,000 feet of water gas, and on page 19 you will observe that the average candle-power of the mixed gas at the State testing station, away from the works, was 18, and you observed also that Mr. Pease, the Superintendent, from whom you have quoted, wrote that the candle-power of the water gas before mixing with the coal gas was 21.8

A. The statement here is, as you have stated, that the candle-power of the water gas and so forth, average of candle-power before mixing with coal gas for year ending June 30, 1905, was 21.08.

Mr. **Mathewson**: That is at Lowell.

The **Witness**: Yes, Lowell is what I have been reading from.

Mr. **Burr**: That is all.

Redirect examination by Mr. **Mathewson**:

Q. The mains of the Consolidated Gas Company which were in the streets were here first before the competing companies, were they not, unless some Mutual mains in the streets of New York City?

A. Yes, sir. The Standard and the New Amsterdam were after the Consolidated, but I don't know about the Mutual. I don't know whether that was before or after. The Mutual was before.

Q. Referring to Lowell, did your statement that at Lowell they could average only about 4½ candle power per gallon, rest on your own recollection, or have you a letter from Mr. Pease on that subject stating that in explicit terms?

A. I have a letter from Mr. Pease expressing it and stating it in explicit terms?

6129 Mr. Burr: I have no objection to that letter being introduced in evidence, providing this letter is also introduced.

Mr. Mathewson: You put it in substantially in your question.

Q. On December 13, 1906, Mr. Pease wrote, did he not: "I am trying it under various heats and conditions, and can average only about 4½ candle power per gallon"?

A. He does.

Q. Now, what does the Consolidated Gas Company get in candle power per gallon from their oil?

A. With uncorrected gas from 5.73 to 5.98, depending upon the station.

Mr. Burr: That you have already testified to.

The Witness: It is simply a duplication.

Q. Take the subject of Lynn, assuming the statement to be correct as it has been quoted to you from this report by Professor Bemis or called to your attention, how many candles per gallon does the Lynn oil produce?

A. The figure I have here is 4.88 gallons and candle power of 25.87. Is that the correct candle power in gallons that we have in the testimony?

Q. No, I think not. 18.2 was the official test, was it not?

A. Mr. Burr, have you given us the candle power of the Lynn gas?

Mr. Burr: No.

The Witness: It has not been given. It has only been given for the total gas, that would be mixed gas, and we have not the water gas, and it would be very much lower.

6130 Q. It would be very much lower, yes.

A. Yes.

Q. It is possible without having a record of the unaccounted for oil to make exact determinations of figures that are worth anything?

A. No, sir.

Q. In reference to Lynn, the profits as you have been made to read them are merely a statement purporting to be presented by the company to the State Board of Gas Commissioners of Massachusetts?

A. I so understand those reports.

Q. You do not understand how the expenses were divided as between the electric plant and gas plant in figuring the profits of either one, do you?

A. No.

Q. Would not that have a very material effect upon the cost of gas or electricity as either one or the other might be favored in charging expenses or salaries?

A. It would.

Q. Is it possible without that to make any comparison of value in your judgment?

A. No.

Q. As to the value of the property in Lynn have you any information as to whether the assets have been charged down by depreciation or otherwise?

A. I have not, no.

Q. That would be a material element, too, would it not?

A. It would.

Q. You were asked in reference to the employment of coke of the New England Coal & Coke Company in Boston for various purposes and you stated that large amounts were sold to locomotives, about 50 per cent., I think, and considerable other amounts for industrial enterprises, factories, &c. Let me ask you whether the coke that is produced by the New England Coal & Coke Company is of the same character as that produced in New York or whether it is denser?

A. It is not the same, and it is denser.

Q. More like anthracite in that regard, is it not, and of better use for those purposes?

6131 A. More like anthracite, so far as its fuel use is concerned, that is to say it can be used in place of anthracite and also in place of what is known as Connellsville coke, it is of the same character as Connellsville coke.

Q. Which would not be true to the same extent, would it, for the coke produced in New York?

A. It would not.

Q. You said coke was used in the suburban service in Boston. As a matter of fact there is a very large suburban service running from the various stations, is there not, in the immediate vicinity of Boston?

A. There is.

Q. Is it not so to a much greater extent than in New York?

A. In Manhattan proper, yes sir, I think so.

Q. You were asked as to Mr. Edgerton's system, and whether you could not get more gas under a high pressure through a small main. Assuming that to be the case, would that be any argument, in your opinion, in favor of taking up and throwing away or disusing your large mains which at present exist?

A. No.

Q. It would not be economical to put in small mains to meet that situation, would it?

A. No, sir.

Q. How about the expense and cost of a high pressure main of any size?

A. Size for size a high pressure main is more expensive than the present main.

Q. Would you not have to use wrought iron mains?

A. Mr. Edgerton, I think, assumed wrought iron mains in his proposition, but if he did not we would have to use wrought iron mains, and I am assuming we would use them.

Q. When you said that the gas mains would be as safe under the pressure as water mains, to what did you refer?

A. Merely the factor of safety on a given type, for a given pressure would be the same whether it was water or air or gas.

6132 Q. Do you mean to say that in case of a break that there would be no more danger in one than in the other?

A. Not for one moment.

Q. You were asked in reference to generators and whether you would not mark off something for depreciation if you knew that they would depreciate and require the replacement of parts. That situation exists the moment you start a new generator, does it not?

A. Yes, sir. As a matter of fact——

Q. And where parts are replaced from time to time with new, or as good as new parts, the generator is as good as ever?

A. Yes, it maintains at least 100 per cent. in value; in my judgment, a generator which has been actually in use is better than one that is starting up in use. As a matter of fact the $2,100 could not have referred properly to a generator. It probably referred to retorts, and, as a matter of fact, retorts are not repaired all at once every three years, but year in and year out, some one year and some the next, so it leaves an even distribution, as a rule of expenses of that nature.

Q. And if there is any depreciation or any requirement for replacement this is not met, I understand it to be your view, from your previous testimony, that a fund should be set aside to meet that.

A. For current renewals and replacements.

Q. And final renewals?

A. Yes, pardon me—for extraordinary renewals and final renewals and replacements, not for current renewals.

Q. You were asked whether or not you would reinstall the 14th Street benches at Astoria and you stated you would not?

A. I did.

Q. Let me turn the question around and let me ask you if you would install the Astoria benches at 14th Street as the situation is now?

A. I would not.

Q. Do you consider it an economical thing to do?

A. We have the 14th Street already in use, and I do not believe in installing the Astoria benches alongside the 14th Street works would reduce the cost of gas, considering the capital in use there and the additional capital required to make the change. 6133

Q. Reference was made to the carry-ng of crude oil in the pipe line. Your understanding is, is it not, that it is refined when it gets to Bayonne, so far as the Standard Oil is concerned?

A. Yes, and those that have pipe lines east, and I understand that crude oil is transferred to the refineries and refined there.

Q. You were asked regarding Williamsport and you added the freight from Williamsport to New York City in order to find what oil would cost here. As a matter of fact Williamsport is about the edge of what is known as the independent field there, is it not, the oil field?

A. I so took it to be.

Q. And if we obtain oil from independents, do you know of any way we could get it without paying in addition to their charge there the freight from Williamsport to New York?

A. I so assumed it, I assume that that was a competitive point and a competitive price.

Q. You found in Garfield's report that the oil fields were competitive points, didn't you?

A. Yes, sir, in general.

Q. So, too, if we were receiving oil from the far West by rail, we would have at least to pay the freight from here to Williamsport?

A. Yes, sir, it would be so much in excess of that from Ohio.

Q. Mr. Chamberlain was brought on to testify as to the cost of oil in Findlay, and you have given that cost plus the freight to Jersey City?

A. Yes, sir.

Q. Do you find in Mr. Garfield's report that Findlay is a competitive point also?

A. I do.

Q. Especially so mentioned, is it not?

A. Yes, sir.

Q. Now, Pennsylvania oil was stated by one of the withnesses to cover Pennsylvania, some part of New York, a few counties
6134 in southeastern Ohio, and some in West Virginia. Is Findlay in the Pennsylvania oil region or in a different region?

A. No, sir, Findlay is in the northern part of Ohio, west of the central line of Ohio, quite well up towards the State line.

Q. That is known as Lima oil?

A. I so understand it. I was there a number of years ago.

Q. You remember that Mr. Carter testified in reference to coal that the coal companies insisted upon presenting their bids and that they would have broken the door down if we tried to keep them out. Has anything come to your knowledge from any source which would lead you to suppose you could get oil from any source in the quantity and at the time you required, and of the same character, at less than you are now paying?

A. No, sir.

Mr. Burr: He may not have all the knowledge upon the subject.

Q. Do you know of any independent refineries this side of Pennsylvania that refine any oil that amounts to anything in quantity?

A. I understand from Mr. Garfield's report there are two very small refineries in the vicinity of New York.

Q. But so far as your information goes, their product does not amount to enough to be of much value to the Consolidated Gas Company, does it?

A. No, sir, the exact amount was not stated, but the way it is spoken of, it is insignificant.

Q. When you spoke of the candle-power tests, you were asked whether those tests were corrected for temperature as you gave them at the works and for the city test; were they?

A. Yes, sir, I investigated that carefully and I find they had been corrected for temperature and pressure and that they were taken from the outlet of the holder from the make of the works
6135 unmixed with other gas, except at 14th Street, where gas of other works is used to enrich the coal gas. May I interpolate a statement right here?

Q. Yes.

A. About that same time Mr. Kirby asked me in regard to whether I was sure that certain figures were corrected gas or whether they were the oil gas. I would like to spread on the record the actual figures for Mr. Kirby's information.

Mr. KIRBY: I would like to have them.

The WITNESS: February, 1905, gas registered, 393,518,000; corrected, 384,604,000; oil gas, 15,400,000. Total, 400,004,000. You will see that Mr. Edgerton used the 400,004,000, which is the total gas, including oil gas, and the figure I gave was corrected by gas. The correction was actually 11,000,000, whereas the oil gas was 15,000,000.

Q. Now, reference was made to Pintsch gas under heavy pressure as being used under conditions of cold with the suggestion that that did not lose candle power. Is that comparable with ordinary gas produced and delivered under ordinary pressures?

A. Not in my judgment.

Q. As a matter of fact, it is subjected to a pressure of 150 or 200 pounds, is it not?

A. Yes, sir.

Q. And what effect has that?

A. A large quantity of the hydrocarbons is deposited on account of the compression of the gas, which of course affects the conditions of the gas. If that gas then were subjected to a change of temperature I think it would be very materially different from the conditions which exist in ordinary illuminating gas.

Q. You stated that in some instances gasolene was added, or naphtha to a low gravity oil to bring it up. In what cases would that be profitably or naturally done?

A. Mr. Mathewson, I do not think I stated that I knew it
6136 was done. I said it might possibly be done that way, but
Mr. Kirby suggested that the high cost of gasolene might make it unprofitable. It might possibly be used for lower gravities, at least it would materially affect the question upon what gravity they were endeavoring to make as to the cost of doing it, and whether it was profitable to do it.

Q. And would you consider an oil of very heavy gravity, say, 25, raised to a certain point by the addition of naphtha of a very high gravity, as producing a desirable oil from your standpoint?

A. I should prefer not to have it raised from any gravity in that way. I should prefer to have one which is more even.

Q. That would be what you would call unhomogeneous if you were to use that expression contrasted to homogeneous oil?

A. That was the way we used it.

Q. There is always some tar in manufacturing water gas, is there not?

A. Yes, sir, always tar produced.

Q. Did you figure how much territory you would desire for your storage tanks in New Jersey if you established a storage capacity for ninety days there, if you cut loose from the Standard Oil contract?

A. We would require in excess of thirty acres, I should say.

Q. In reference to the price of residuals in London, so far as coal tar is concerned, do you know what the price is? You were asked about it and how it compared with New York.

A. I do not recollect the figures that were given there. I think it was rather lower than our price when divided by the number of gallons.

Q. But, as a matter of fact, the coal which is used in London, for instance, is of a very different quality, so far as your informa-
6137 tion goes, from that used in New York, is it not?

A. I am informed so, but I do not know of my own personal knowledge.

Q. And without further information you would not yourself be able to make any comparison, would you, that would be of value?

A. Not in comparing the yield of residuals on the given coal and return.

Q. Now, Mr. Addicks, you took various exhibits, including State's Exhibit HHH and MMM and NNN and OOO, which were prepared by Mr. Edgerton, and made certain deductions from those exhibits, stating what they showed as analyzed and you prepared one for December, 1905, of the 21st Street plant, made up on the same basis. Was your purpose in that connection anything more than to show what the results were from Mr. Edgerton's own method of tabulation himself?

A. That was my purpose, sir.

Q. As a matter of fact would it not be your judgment that a much more intelligible result as to candle power and drops between works and tests could be obtained by taking all the gas of the company for all stations for the year combined and averaging them with the city's tests for the year?

A. Any suggestion of the City Inspector not getting the exact gas that was made at that station—it would eliminate that, if you took the average as Mr. Marks did yesterday.

Q. Precisely.

A. I want to say, however, that the number of tests in each case has a little bearing. That is to say that the tests at the station are in some cases made every hour for the whole twenty-four hours candle power, whereas the city tests are only—I don't remember how many a day, perhaps ten a day.

Q. But your point is that even then it would not be an exact comparison but you would get a general average that would be more nearly the fact than by taking the entire year for all stations and all tests.

6138 A. It seems to me if there is any mixing of the gas that should be done.

Q. Now, for instance the 42nd Street works take the test of their gas as it leaves the station, that is to say works test?

A. Yes.

Q. Now, before that gas reaches the city test station it is sent to another point, is it not, and mixed with other gas in a holder?

A. I don't remember the testimony about that, Mr. Mathewson; I don't recall exactly how it is. If there was, that would have to be considered.

Q. These testing stations, as you understand it, were picked when the companies were separate companies, were they not, representing the mains?

A. I so understand it, one uptown and one downtown, and the two stations are supposed to cover every company in the city, but as to what date they were fixed, I could not state.

Q. In answer to Mr. Burr you referred to the fact that you negotiated the oil contract. Did you ultimately get a lower figure, that is to say, does the contract comprise a lower figure than at first demanded by the Standard Oil Company?

A. I have so testified to it, one-quarter of a cent a gallon.

Q. You stated you tried once buying oil on the outside, in answer to Mr. Burr's question as to whether that was so. Was your experience a pleasant one, and what was the experience?

A. It was not a pleasant one. In Boston we hired a man as an oil buyer, with the understanding that he was to supply us with our necessary oil for our stations, which at that time was naphtha, but after we had burned our bridges we found we could not buy enough naphtha to reach our gas works at any reasonable price, and as a result we had to build new works to handle the heavier grade oil which we had not anticipated using when we started in on the proposition.

6139 Q. In other words, he could not deliver the goods and it was an expensive experiment, was it not?

A. That was the experience that we had at that time.

Q. You were asked whether if fourteen or fifteen companies got oil at 3.65 a gallon, as cited by Mr. Marks, you did not think you ought to get it for less than the present price, and you cited certain circumstances that would govern, but you said nothing about quality. Would not the question of the quality of the oil be a very important circumstance?

A. Yes.

Q. I think you referred to the personal equation, or Mr. Burr referred to the personal equation in reference, if I understood him, to information that you obtained from these other companies. As a matter of fact, the information you obtained was figures, practically all, was it not?

A. Yes, I did not understand Mr. Burr to mean the personal equation in getting the figures, but merely in the management of the work.

The Master: The economical administration of the work.

Mr. Burr: Yes.

Mr. Mathewson: I have nothing more to say on that, then. I misunderstoood him.

Q. You also said in certain streets of the city you thought one line of mains would do. Do I understand that if two lines of mains, say six-inch mains, did exist in the street, it is considered at all economical to discard them and to put down one line of main, even in such streets?

A. No, sir.

Q. I want to refer to the city of Boston for a moment. If the figures which have been shown you are correct, the candle-power for water gas in Boston is stated to be 22.9. As a matter of fact,
6140 no gas of that candle-power is sent out to consumers, is it?
A. No, not in the city proper.

Q. That is mixed with low candle power coal gas to produce an average of 19 candles, as I understand it, or 19.3.

A. So far as I can read that gas commissioner's report, that water gas that is shown is made in three stations, and in one of the three stations coal gas is made and mixed with it, and in another one of the three stations coke oven gas is mixed with it and the testing station is in the center of the city, possibly five miles from each of the three stations, four or five miles. In addition to that coal gas is brought in through a fourth station about a mile and a quarter or a mile and a half from this testing station.

Q. Now, so far as the candle power at the works is concerned for the coal gas and water gas, is not the coal gas tested by an Argand burner, or was it not your experience?

A. Any coal gas enriched with oil or unenriched would be tested by an Argand burner.

Q. What would be the effect of that, to show a higher candle-power or lower candle-power than if tested by the Bray burner, such as is used in New York City?

A. To show a higher candle-power.

Q. So, too, as to water gas, which is stated to be 22.9 candles. With that sort of a burner is that test made, so far as your experience goes?

A. That test is made, as I stated to-day to Mr. Burr, I think, with a Sugg-table top burner which is a burner which has around the lower part of it, just below the slit, a platform which prevents the air coming in quickly to the flame.

Q. And what is the effect of that, to show a higher candle-power or lower candle-power than the Bray burner which is used here?

A. It tends to increase the candle-power.

Q. By how much?

6141 A. By some authorities it is as high as 8 per cent. I can say from my personal knowledge somewhere not less than between half and one candle; 8 per cent. would be 1.6 candles, so it would be somewhere in the limits of probably three-quarters and 1.6 candles.

Q. So on that basis you would suppose that water gas when tested by the New York standard would show substantially lower than 22.9, would it not?

A. That particular gas?

Q. Yes.

A. Yes, but in addition to that the water gas mixed with the coal gas must be the candle-power of the mixed gas as made before it goes into the holder. At the Bay State it would be uncertain as to whether it was as it left the holder or went into the holder.

Q. Now, the Boston result of 4.38 candles per gallon, if those be the correct figures, are also very much below the New York results, are they not?

A. Yes, sir, it is considerably.

Q. Now, regarding your testimony in Boston at the investigation there, regarding which Mr. Burr has questioned you, is it not a fact that you appeared and assumed certain figures of cost which were given you and thereupon made your estimate and tabulations of result, if a dividend of 10 per cent. were allowed and also if a dividend of 8 per cent. were allowed and if 10.5 cents were allowed for a depreciation fund?

A. Yes.

Q. And were not the figures which you gave at that time the exact result of such a computation?

A. They were. I also eliminated certain charges.

Q. Very good, will you state a little more at length, taking the $1.10 which would be the result with 8 per cent., if these other additions which you think proper were made, and see how it figures out at present?

A. I eliminated all returns from electricity and eliminated all the profits on the sales of gas to outside auxiliary companies.

6142 Q. That was the basis upon which the testimony was given, was it not?

A. I gave testimony of that. I had the figures and stated what they were.

Q. It was fully explained in detail so it was perfectly understood what you were testifying at the time?

A. Perfectly.

Q. Now, if you deduct the 10½ cents from $1.10 it would leave 99½ cents, would it not?

A. Yes, sir.

Q. And you did not include, you say, the profit on gas sold to other companies, or the profit on the electric business, which would amount to how many cents per thousand on an output of that time?

A. On the output of that time, based upon what I have already stated, about $170,000, I think it was, and the sales at that time were about three thousand millions, I have not the report before me, which makes nearly 5.7 cents per thousand feet on the sales at that time.

Q. And if you take 5.7 from 99 cents it would leave about 94 cents?

A. It would leave 93.8 cents, and according to my figure here the average price of gas paid by private consumers in the year referred to, ending June 30, 1906, was 92.15 cents. There is a difference of 1.65 cents in the two computations.

Q. Which might have been made up, assuming the figures were to exactly balance, by a difference in operating expense or something of that sort?

A. As the effect of consolidation and as modified by increase of sales to private consumers.

Q. As a matter of fact, was 8 per cent. paid or has it been paid on an 85 cent basis, or even on a 90 cent basis of sales?

A. It has not.

Q. What was the average?

A. The sales to private consumers—when I say paid, I mean to private consumers, the average price of gas paid by private consumers—the memorandum I have here, obtained from Mr. Richards, was 92.15 cents per thousand.

6143 Q. In this 92.15 per thousand you testified that the Boston Company did not include the depreciation allowance of 10½ cents?

A. No, sir, they did not.

Q. Nor the profits from the electric business nor gas sold to other companies?

A. You mean in my computations?

Q. Yes.

A. No, sir.

Q. Now, even at the price at which they did sell, from the accountant's report as published in the press and to which reference has been made, they did not earn even the 8 per cent. dividend, did they, if you deduct a profit on the sales of gas to other companies and the electric, and if you deduct depreciation at the rate of 5 cents a thousand, which Mr. Richards testified should be done?

A. They did not earn it if you deduct either of those, and certainly not if both be deducted.

Q. And if you deducted them both there would be a substantial shortage?

A. Yes, sir.

Mr. Burr: Are the amounts stated in that newspaper clipping?

Mr. Mathewson: Yes, they are. It is not a newspaper clipping except that it is a publication required by the statute of Massachusetts.

Q. The assets of the Boston Company, according to the report to which your attention has been called, amount to something like $24,000,000, do they not?

A. Yes, sir.

Q. As against a capital stock of a little over $15,000,000 and some notes outstanding of not a large amount in addition, is that right?

A. Yes.

Q. There are several million dollars surplus, at any rate, over capital and capital obligations in assets?

A. Yes.

6144 Q. So the entire investment in electric business could be treated as surplus beyond all the capital outstanding of the company, in whatever form?

A. If they so desired to figure it.

Q. Now, in view of the fact that Mr. Burr has gone into this subject at such a length and spoken of the earnings and dividends——

Mr. Burr: Of what company?

Mr. Mathewson: Of the Boston Company.

Q. (Continuing:) I will ask you what your information is as to the earnings on the reduction to 85 cents per thousand?

Mr. **Burr**: I object to that. We were simply meeting the statements he had made.

Mr. **Mathewson**: No, you were not. You went into it head over heels this morning.

Mr. **Burr**: And which you brought out through his examination in rebuttal.

Mr. **Mathewson**: I think you have opened it so that I at least can ask this question.

The **Master**: I will allow it, Mr. Burr.

Mr. **Burr**: Exception.

A. Mr. Richards' statement to the Tax Commissioners in Boston was that the net earnings since reduction in price was last made indicates that the company for the year ending June 30th will not be able to pay over 6 per cent., if it does that, for the fiscal year ending June 30, 1907.

Q. And if you eliminate the earnings from electrical business, assuming that they are 4.6 cents per thousand, the earnings would not be over five per cent., would they?

A. You would have to reduce that by the 1.1.

Q. That would be less than five per cent.?

A. I think the calculation this morning would be 4.9, and under it. Mr. Mathewson, you understand that is the entire amount

6145 of the sales to other companies, as well as the electricity?

Q. Yes; in other words, the entire profits of the company from whatever source, so far as you know?

A. Well, I eliminate the sales to other companies and the electricity—in that $170,000 which you mentioned.

Q. Yes, I understand——

A. In other words, based right on the gas business in Boston and not on some outside business.

Q. Now, Mr. Burr asked if gas in summer would not pick up enrichment, or might not puick up enrichment as it went along through the mains. If it could do that, wouldn't it necessarily follow that the enrichment must have been dropped in the winter or some other time in order that it might be picked up later?

A. Yes, sir.

Q. One is a corollary of the other?

A. If one could be done——if it was to be picked up.

Q. As a matter of fact the ten and one-half cents which you deducted in Boston was for depreciation and reserve fund, final renewals, pure and simple, without including any renewals there had been, wasn't it?

A. That was in addition to the expenditures for repairs during the current year, yes, sir.

Q. You were asked whether if when we had the Astoria plant running we would require more oil, and I did not understand your reply to be exactly definite. If we use Astoria to produce the three billion feet which we are now procuring from other companies and continue to run our own manufactories on Manhattan Island, it would certainly mean more oil required.

A. For the Consolida-ed Gas Company, yes, sir.

Q. Your answer I assume referred to the proposition of our completing a second unit which would be substituted for something on Manhattan Island later?

A. I was assuming that the whole situation was the whole
6146 hundred million gallons, all the companies, when I answered
that question, and if some coal gas would be made instead of
some water gas.

Q. As far as the Consolidated is concerned, you cannot see any reason, can you, for supposing we would require less oil in the near future?

A. Not so long as the candle power exists as now.

Q. Now, as a matter of fact, isn't the English law which Mr. Burr has presented and which shows no penalty for half a candle power and some penalty for twenty-five pounds to one hundred pounds, or a later drop, a law that has been superseded by a subsequent act?

A. I am so informed.

Q. And the London Gas Act of 1905, which I show you, provides, does it not, that the penalty shall attach only in case there is deficiency in candle power existing of one candle instead of half a candle?

A. (No answer.)

Q. And that then the average of all testings——

Mr. Burr: He has not answered that question. I would like to know about it.

Mr. Mathewson: You shall know. Here is the act. Paragraph 3 on page A2, I think it is, states:

"If on any one day the gas supplied by the company at any testing place is of less illuminating power to an extent not exceeding one candle than it ought to be the average of all the testings made at such testing place on that day and on the preceding day and on the following day shall be deemed to represent the illuminating power of the gas on such one day at such testing place."

Q. Yes, that was all. Then they take the average of all the test-
ings of that day combined and the average of all the testings
6147 for the day before and the day after to arrive at the candle
power in determining the question of the imposition of the
penalty; that is it in substance?

A. That seems to be the force of it. And it also I see here states that:

"The gas supplied by the South Metropolitan Gas Company and the Commercial Gas Company shall be 14 sperm candles of six to the pound."

My opinion is that a difference of one candle in a 14 candle power gas is a very different proposition from the difference of one candle in a 22 candle power gas.

Q. And you find also that the company has a right of appeal, don't you, by that act, in case they do not think that the imposition of the penalty is proper?

The Master: They had that under the old act, didn't they, to the chief inspector?

Mr. **Burr**: Yes.

Mr. **Mathewson**: The rights of appeal are very much broader in this act, Mr. Master.

The **Witness** (reading): "If the company think themselves aggrieved by any prescription or certificate of the gas referees they may, in the case of an appeal, in respect of a burner or a chimney prescribed by the gas referees under the provisions of this act, within three months, or in any other case, within one month from the making of such prescription or certificate, appeal against such prescription or certificate to the chief gas examiner."

In our law there is no provision even that the best burner should be used.

Mr. **Mathewson**: This act, I will say, is known as the
6148 London Gas Act, 1905 (5 Edw. VII., Chapter 155).

Recross-examination by Mr. **Burr**:

Q. With regard to the figures that were supplied to you at the Boston examination, were these the same figures that are contained in this clipping from the *Boston Globe* of September 28, 1906, to which reference has been made?

A. No, sir, but the figures supplied to me were very similar; I have checked them.

Q. This purports to be the audit covering the company's books, June 15, 1905, to the close of the fiscal year, June 30, 1906?

A. Yes, I told you it was more than one year.

Q. You stated that the figures for the Boston company, by Mr. Chase, as auditor, did not agree with those in the State return. You are now aware, are you not, that Mr. Chase's audit was from June 15, 1905, the date of consolidation, to June 30, 1906, while the State return was for the year commencing twelve months from June 30, 1905?

A. Did I state they were not alike?

Q. I think so.

A. Didn't I state they were alike? My impression is I have checked some of these figures and they are undoubtedly the gas commission's report. There are some figures that are identical, therefore, I assume the gas commission must have covered more than one year.

Q. Referring to the statement you just made, with regard to the possible increase or non-increase of oil supply, by reason of the Astoria works, if the make of the Astoria works in coal gas for 1907 and 1908 is 15,000,000,000 cubic feet and each cubic foot of gas required two gallons of oil to enrich to 25 candles at the works, will
not the total of your requirement for oil be 30,000,000 in-
6149 stead of 107,000,000 gallons of oil?

A. Astoria to make 15,000,000,000 feet.

Mr. **Mathewson**: The total capacity of the first unit is only 4,000,000,000.

Mr. **Burr**: We are speaking now of the future.

Mr. **Mathewson**: You say this year?

Mr. **Burr**: I say 1907 and 1908.

The WITNESS: That is nearly four times the capacity of the first unit.

Q. Well, that will be true when you get a capacity of 15,000,000,000 cubic feet, which is the capacity which you calculate to finally arrive at?

A. Why, I have not made any statement of that kind, except in so far that the first unit will be four thousand millions and each unit that we had would be that much, if the ultimate capacity of the Astoria plant in coal gas is 120,000,000 a day, and if we had four units, I might have said it was sixteen thousand millions with four units, but I don't see any connection with 1907.

Mr. MATHEWSON: The testimony expressly was that it was not determined whether the subsequent units would be water gas or coal gas. We couldn't tell that.

Q. Assuming the make of the Astoria works of coal gas will finally arrive at fifteen billion feet, then you will not need 107,000,000 gallons, but only 30,000,000, assuming two gallons per thousand cubic feet of gas enriched to the 25 candle-power point?

A. Multiplying the fifteen billion feet by two gallons is thirty million gallons of oil, but that has no reference to our requirements.

Q. The figures upon which you based your statement in the Boston gas investigation were supplied to you by the company, were they not?

A. Yes, sir.

6150 Recross-examination by Mr. KIRBY:

Q. It does not require as much oil to enrich coal gas to 22 candlepower as it does to enrich carburreted water gas, does it?

A. No, sir.

Q. As a matter of fact if you add a gallon of gas oil to a thousand cubic feet of carburetted water gas there is no enrichment, is there?

A. I can't answer that question. I should think there would be some but I don't recall doing that.

Q. If you added two gallons would there be any appreciable result in candle power?

A. I don't recall the figures given by others, and I do not remember myself having added either as low as one or two gallons to water gas to determine the candle power.

Q. Now, if you add a gallon after two have already been added, you will have the candle power raised more than the gallon—more than that occasioned by adding the second gallon, will you not?

A. I think very probably as you state it for that number of gallons, yes.

Q. That would be true up to how many gallons per thousand cubic feet of carburetted water gas?

A. I think with the present oil you would get the higher candle power up to between twenty and twenty-five. I think it will probably proceed in the opposite direction and require more proportionately for the net result in higher candle powers.

Q. And that would commence before you reached twenty-five candles?

A. I think it would come more in the vicinity of twenty-two to twenty-five probably, but I wouldn't want to be specifically tied down to that as a specific statement of facts.

Q. You are not sure of that point where the maximum result from one gallon of oil to a thousand cubic feet of gas is thirty-five candles, and not twenty-five?

A. You mean with the present oil?

Q. Yes, such oil as the Consolidated is now using?

6151 A. My judgment and experience would be to say it was below twenty-five rather than anywhere near thirty-five, with our present oil.

Q. Would a lower gravity oil make the point nearer 35?

A. I think it would be more difficult with gravity oil to make the higher candle out of it than if you had the higher. You are speaking now of 30 and 35? I mean netting that.

Q. Are we to infer by that that the maximum of a low gravity oil would be at a higher candle power than the maximum from a high gravity oil?

A. No, I think the reverse of that. That is how I am trying to place it.

Q. Well, that is what I thought. Do you know whether the coke furnished by the New England Coal & Coke Company has any higher percentage of carbon than that furnished by the Consolidated Gas Company works on the Island of Manhattan?

A. Pound for pound?

Q. Pound for pound?

A. I would not like to say whether it had or not.

Q. Do you know whether it differs at all in ash, pound for pound?

A. I would not commit myself on that either.

Q. Do you mean to say that if there were no works upon the 14th Street real estate of the Consolidated Gas Company and you were called upon to place a coal gas plant upon that you would place there the kind and size of benches or retorts that are now there rather than those which have been placed at Astoria?

A. I do not.

Q. Your information in reference to the oil used at the gas works at Williamsport was that such oil was purchased from the Standard Oil Company, was it not?

A. That was in the evidence originally.

Q. And such information as you received did nothing to contradict that, did it?

A. No, sir, it did not.

6152 Q. Do you know what candle power the Pintsch gas which you referred to has?

A. Before or after using?

Q. As it is used in the cars?

A. No, sir. I meant to say before or after compression.

Q. I mean after the compression, ready for use?

A. No, sir. I don't know definitely.

Q. Do you know what candle power it has before compression?

A. Well, from general knowledge of what oil gas is usually.

Q. What would that be?

A. It depends somewhat on how many feet of gas you make with the oil. If you make more feet of gas you are apt to have a low candle power when made in the retort process. If you make less gas you would have a higher candle power.

Q. Do you know how much candle-power is lost by compression?

A. No, Mr. Kirby, I won't say I have never known; I probably have known in reading, but I haven't it in mind and could not testify and give you the information about it.

Q. You have spoken about the coal gas being tested by the Argand burner. When is it tested by an Argand burner, do you know?

A. Well, the supply of air to the gas produces the highest incandescence in the hydro-carbons in that particular kind of gas, in that particular shaped burner, with a particular number of holes.

Q. So there would be more candle-power shown by a test with this burner than if tested with a Bray burner?

A. With the ordinary flat frame burner, or even the Bray burner, yes, sir, in my judgment.

Q. Is that also true of the Sugg table top burner that you have made reference to?

A. Yes, sir. I think the Argand burner gives a better result than the Sugg table top for the lower candle-power coal gases.

Q. Would the Sugg table top show more candles than the Bray burner on gas below 16 candle-power?

6153 A. I don't recall that, but I should think it would; but I don't think in the same proportion, if at all.

Q. Would it show it on gases below 20 candle-power?

A. Yes, I think it would be apt to.

Q. Would it on gases below 22 candle-power?

A. I think on the higher candle powers it would show probably the results that I have set up. As you go down to lower ones I don't think the results would be in the same proportions.

Q. Do I understand you, then, that the Sugg table top burner would give a higher candle-power than the Bray burner, such as is used in the city's tests here in New York, on the same gas, such gas being 22 candle-power or above?

A. That is my opinion, yes.

Q. The Sugg table top burner is in use in the city tests, isn't it?

A. I don't know of it being used, no, sir. It is used in Boston, I stated. It was used by me at the Boston works.

Q. Is the Sugg table top burner the burner used by the Consolidated Gas Company?

A. No, sir. We use the same burner as the city, which, as I recall it, is the Bray No. 7, I think I stated the day before yesterday it was Bray No. 6. I would like to correct that now. I think it is No. 7.

Q. There is no requirement you know of in the statute applying the test of candle-power which specifies that the Sugg table top burner should not be used, is there?

A. I won't be sure about the present law, but the former law said tests should be, as I recall by a burner that was in general use, from my memory of the wording of it. As a Sugg table top I do not think is in use in New York, it would be excluded, I should think.

Q. Have you ever made any tests on the Sugg table top as compared with the Bray burner?

A. Yes, I did; a great many years ago.

6154 Q. On what candle-power gas?

A. 25 candle-power.

Q. Do you remember the results of your tests?

A. No, except it was adopted in preference to that burner as giving the better results. Under the Massachusetts law it was that the burner should be used that gave the best results; it was used for that reason.

Q. Was that enriched coal gas or enriched carburetted water gas?

A. That was carburetted water gas.

Q. Are you not aware that the Sugg table top burner was made for the purpose of testing the low candle-power gas used in the City of London?

A. I didn't know that it was intended for that purpose. I only know its result as used on high candle-power in Boston.

Redirect examination by Mr. Mathewson:

Q. Dense coke is not so bulky as porous coke, I suppose?

A. It is not, sir, ton for ton.

Q. Therefore, where you have restricted room, for instance, as in the tender of a locomotive, the dense coke is better adapted for use there?

A. It is; and, in general, it will stand the blast of the locomotive and would stay in the fire where the draught through the tubes of the locomotive might draw the lighter coke up through the tubes and make more of the cinders in the front end which you are familiar with.

Q. Referring to other Massachusetts companies outside of Boston, it would make a distinct difference whether in that test they used table top burners or Argand burners in making their tests as reported, would it not?

A. It would depend upon the gas they made; yes, sir.

6155 Alfred E. Forstall, a witness called on behalf of complainant, in rebuttal, being first duly sworn, testifies as follows:

Direct examination by Mr. Mathewson:

Q. Where do you reside?

A. Montclair, New Jersey. My business office is in New York City.

Q. What is your business?

A. Consulting gas engineer.

Q. How long have you been such?

A. Since 1899.

Q. Have you had any practical experience in the gas business?

A. Quite a good deal. Shall I give you an account of it?

Q. Yes.

A. After graduating with a degree of Mechanical Engineer from Lehigh University, Class of 1883, and taking a post graduate course of a year in chemistry, I went to work with the Chicago Gas Light and Coke Company, which was one of the companies now merged into the People's Gas Light and Coke Company of Chicago, as superintendent of construction. I was then made assistant manager of the North station works of that company, in charge of the operation of the water gas plant. Upon the death of the manager I was made manager of the station for a year. Later, upon the death of the engineer, I was made assistant engineer in charge of both stations. I left that company in 1890, came to Newark, where I was general superintendent of the Newark Gas Light Company until 1897, when I went to Montclair and was general manager of the Montclair Gas and Water Company, which made no gas but bought it and distributed it, for two years, and then I became a consulting engineer.

Q. Have you had experience and practice in photometry and investigations of candle power and pressure?

6156 A. I have made a very thorough study of photometry as part of my work as manager of a gas works.

Q. Did you take State's Exhibits X, Y, Z and AA, being four burners, which were presented here by Professor Hallock, and make tests of the rate of consumption, candle power of flame and efficiency under the pressures as to each which Professor Hallock employed?

A. I did.

Q. And do these sheets which I present show the results of your tests as to those four burners respectively?

A. They do.

Q. And in the final column and under "Remarks" I find such entries as "Flame of good shape and stiffness" or "Horns at base of flame almost horizontal." Those remarks indicate the character of the flame, I assume?

A. Based upon my observation at the time of making the tests, yes, sir.

Q. Do these sheets contain tests at any pressure in any case other than those employed by Professor Hallock?

A. They do in the case of the last sheet.

Q. That is referring to State's Exhibit AA?

A. Yes; but not otherwise.

Mr. Mathewson: I will offer these in evidence. They are in the same form as Professor Hallock's, and made so for the purpose of comparison.

Received in evidence, and marked Complainant's Exhibits 336, 337, 338 and 339.

Q. As a rule, Mr. Forstall, these tests as to rate of consumption, candle-power, and efficiency candle-power per foot, agree very closely with Professor Hallock's, do they not?

A. In general they do. There is a little difference in connection with State's Exhibit X and State's Exhibit Z, in that my tests do not show the efficiency to fall off as fast, in the case of State's
6157 Exhibit X, with the change in pressure from .4 to .6 of an inch, as Professor Hallock's did, and State's Exhibit Z from

.14 to .21 of an inch, my efficiency does not fall off as fast as the efficiency determined by Professor Hallock did.

Q. Professor Hallock stated in the case of the Welsbach that the efficiency dropped off when the pressure fell below 1½ inch, and you made no tests in that regard?

A. No, sir.

Q. State's Exhibit AA is the same as State's Exhibit Z, except that the former is checked?

A. Exhibit AA is checked.

Q. And did you make tests with a high pressure Bray Slit Union No. 6 burner, which was similar to State's Exhibit X, except that the high pressure Bray was checked?

A. I did.

Q. So, too, did you make experiments with a high pressure Bray Slit Union No. 4, which was similar to State's Exhibit Y, except that this high pressure Bray also was checked?

A. I did.

Q. And the results of those tests, as compared with State's Exhibit Z and State's Exhibit AA and State's Exhibit X are shown in tabulated form on this sheet?

A. They are.

Mr. Mathewson: I offer this sheet in evidence.

Received in evidence and marked Compainant's Exhibit 340.

Q. Referring to these five sheets, Complainant's Exhibits 336 to 340, both inclusive, I wish to call your attention to some other features. Is it not the fact that when the efficiency begins to drop there is a noticeable difference in the appearance of the flame which calls the attention of the consumer to the necessity of adjustment?

A. It is.

Q. And how is that change evidenced?

A. If you will look in the "Remarks" on Complainant's Exhibit 336, the first page——

6158 Q. That is the commercial 6-foot bat-wing lava tip burner?

A. Yes, you will see opposite the data for .6 pressure the statement that the flame shows horns at base of flame and streaks in the blue portion, and is just on the point of becoming serrated on the upper edge. When you come to the .7 pressure you find horns becoming quite prominent, blue portions streaked and the upper edge serrated. It is just at that point that the efficiency drops, when those horns appear it shows the efficiency is beginning to drop.

Q. A very slight drop then in efficiency beyond the point where the flame is of good shape and stiffness is at once shown in the character of the flame.

A. The shape of the flame and its character.

Q. I call your attention to Professor Hallock's action in removing the checks from the burner in order to obtain more light, even though it involved loss of efficiency according to his tables, and ask you whether that is wise or necessary in the use of gas according to your tests and experience?

A. Very unwise and entirely unnecessary. If he wanted more light he could have obtained it with the same efficiency by getting a larger sized check burner which would have given him the same efficiency, and he could have gotten a size to suit any amount of light he wanted.

Q. Take Complainant's Exhibit 340, the fifth sheet of these, where we have a comparison of the checked and unchecked burners. I observe that State's Exhibit Z, the unchecked burner, with a pressure of .14 inches—which is its highest efficiency, is it not?

A. According to Professor Hallock, and which agrees approximately with my test, yes.

Q. (Continuing.) Gives an efficiency candle power per foot of 4.43 candles; is that right?

A. Yes, sir.

Q. That same burner, except that it is checked, to wit, State's Exhibit AA, with a pressure of one inch, gives an efficiency of
6159 how much?

A. 4.46 candle per foot.

Q. So that the high pressure of gas instead of being uneconomical would seem to be economical in that case, wouldn't it?

A. If the burner was properly designed to it, yes.

Q. So too, take State's Exhibit X, under the pressure of .4 of an inch, it gives an efficiency of 4.14, and what does it give if checked under a pressure of 1.29 inches?

A. 4.52 candles.

Q. There is another substantial advance in efficiency?

A. Yes.

Q. So, too, State's Exhibit Y, unchecked, under pressure of .4 inch assumed by Mr. Hallock, gives an efficiency of 4.17 candles, and if checked it gives what efficiency at a pressure of 1.33 inches?

A. The checked burner similar to it gave an efficiency of 4.28 candle.

Q. So that these high-pressure burners, or the checked burners you employed, gave them, with a pressure as high as 1.3 inches, or even higher, a greater efficiency than can be obtained by the low pressure burners even under the most economical pressure for the low-pressure burner?

A. They may be employed at considerably higher pressures than that. I stopped there because the particular photometer I was workign on would not give me any more pressure—the governor on the photometer would not give me any more pressure than that—but I could have run either of those two burners up to two inches without showing any drop in efficiency.

Q. That is your general experience from other tests and observation?

A. From other tests, yes, sir.

Q. If one desires to use a low pressure burner and one less
6160 efficient, therefore, than the checked burner, he may regulate the amount of gas and the character of his flame by turning down his burner when he sees it flare?

A. He certainly can do just what I do every night in my hall. I have a burner there which I have not changed, because I adjust the flame by the stop cock.

Q. If he does not care to do that he can have the higher pressure burners?

A. Yes, sir.

Q. Have you any photographs here which you want to show me?

A. Yes, sir. I have photographs of the flames given by these burners, illustrating some of the points which I testified to.

Q. Now, as to State's Exhibit X, is this a photograph taken with the flame at a pressure of .8 inch?

A. It is. The pressure is shown on the gauge at the side, a low-pressure burner, unchecked.

Q. Does that mean to show by the character of the flame that it should be turned lower?

A. Yes. The horns are very decided and the upper edges becoming rough and the flame is beginning to have sharp angles instead of a curve.

Mr. MATHEWSON: I offer this photograph in evidence.

Received in evidence and marked Complainant's Exhibit 341.

The WITNESS: That pressure is the point at which the efficiency showed a decided drop.

Q. Now, State's Exhibit Z is shown in the photograph I now hand you at its highest point of efficiency, as per Professor Hallock, at .14 of an inch, isn't it?

A. Yes, sir.

Q. And the character of that flame simply shows it is being burned at an economical rate, doesn't it?

A. Yes, sir. This photograph also shows that that flame
6161 is entirely too small to be of much service to anybody and
that it is very flabby; the edges are curved back so the flame
is like that instead of being flat (illustrating).

Q. And do you find that some of these results of Professor Hallock were obtained with a flame so flabby that while it might do in the laboratory it would be out of question for commercial use?

A. Yes, sir. I think you will find that noted in the remark on these.

Mr. MATHEWSON: I offer this photograph in evidence.

Received in evidence and marked Complainant's Exhibit 342.

Q. I also show you another photograph. This represents State's Exhibit Z, a low pressure burner, a pressure of .2 inch, does it not?

A. It does.

Q. And what does it show as to the size of the flame and the character of it?

A. By comparing it with the other parts in the photograph it can be seen that that flame is very small and also seen it is curled over on the edge and flabby and not such as would be commercially used.

Mr. MATHEWSON: I offer that photograph in evidence.

Received in evidence and marked Complainant's Exhibit 343.

Q. I show you a photograph showing upon the same paper two exhibits, one State's Exhibit AA?

A. Yes.

Q. A checked burner, is it not?

A. Yes, sir.

Q. And the other State's Exhibit Z, which is an unchecked burner; is that right?

A. Yes, sir.

Q. This is under pressure of 1.35 inches, is it not?

A. Yes, sir.

6162 Q. What comments have you to make as to the character of those flames and what they indicate?

A. The checked burner is giving a good flame; the unchecked burner, you can almost tell from the picture, is making a noise, and giving a flame that gives very little light. The flame is pointed and you can see the streaks in it, showing the blue streaks running all through the flame. It was making so much noise that nobody would use it in the room.

Mr. Mathewson: I offer that photograph in evidence.

Received in evidence and marked Complainant's Exhibit No. 344.

Q. The unchecked burner, State's Exhibit Z, is "blowing," isn't it, as it is called?

A. Making a noise, roaring; yes, sir. I will state that I took no candle power test of State's Exhibit Z when it was in that condition, because it was simply useless. You find on Complainant's Exhibit 338 that I took no candle power tests at pressures of .62 and .97 of an inch, although Professor Hallock had taken tests at those pressures. As soon as I saw the flame I made up my mind there was no use taking any candle power of that gas, because it was not a flame that would be used.

Q. Professor Hallock in speaking about the use of gas for fuel did not say that the practical efficiency of gas was the same, no matter at what pressure the gas was supplied to the burner; his statement being in this regard at page 3868, merely that he had made tests showing that the actual calorific value of the gas was the same at different pressures?

A. That is as I read the testimony and as I understand it.

Q. In his cross-examination, page 3890, he said the tests were made with the Junker Calorimeter. Does that show efficiency or merely the total calorific value?

A. Merely shows the total calorific value.

6163 Q. Then the general proposition, as I understand it, without going into details, which you consider to be established by these details, is that the higher efficiency and the greater economy to the consumer can be obtained by burning the gas under pressure of more than an inch, even in the ordinary burner, if it is checked?

A. I wouldn't say greater, but as great. If the ordinary burner is properly checked the efficiency will be about the same.

Q. And those checked burners are burners, are they not, which are in common use and can be obtained at any time in the city from the company and which it distributes, as you know?

A. The burners are on hand at the company's office, as I understand it; or, if the consumer does not care to go to the company they can be very easily obtained at several places in the city.

Q. For a small sum?

A. About 5 to 10 cents. I never bought them at retail. At wholesale I can get them considerably cheaper than 5 cents.

Q. On page 3093 of the testimony Professor Bemis made the statement that "If then the Consolidated Gas Company can stand a reduction to 85 cents on the basis of last year's business it could stand a reduction to 75 cents on the basis of the business that would surely come to it in the next two years after the reduction." And again, on pages 3408 and 3409, he gave an explanation of this statement, using concrete figures. Will you review that theory with your figures and state your conclusions as to the soundness of his deductions?

A. In order to test that I proceeded to check, by a method which I use continually when I am estimating the amount of gas that would be sold in a town, on the gas company of which I am reporting the reasonableness of sales, of the amount of gas that would be required to make these statements accurate, and in order to determine
6164 the amount of gas that would have to be sold at 80 cents,
taking the second statement first, to produce under these assumptions a profit of $3,288,000, which is the profit assumed by Professor Bemis, I first divided that amount of money by the sales of gas in 1905, and determined that the profit per thousand cubic feet necessary under those conditions was 24.75 cents. Assuming the same cost of gas the profit at 80 cents would be only 14.75 cents per thousand cubic feet, or to have a total profit of $3,288,000 it would be necessary to sell 22,291,525 thousands of cubic feet.

Q. That would be 22 billion- and over?

A. Yes. Sales of that amount would mean an increase between 1905 and 1908, 1908 being the second year after the reduction, if it were made immediately, of 67.5 per cent. Now the per cent. increase of sales is very misleading sometimes, that is, when you attempt to go from the past to the future. Simply on a percentage basis you are very apt to get into trouble, so using the method that I employ to see what that would mean in this way, I took a consumption per active meter December 31st 1904, as taken from Complainant's Exhibit No. 86, which was 35,227 cubic feet and divided it into 22,291,525,000 cubic feet and so found that to sell that amount of gas the company would have to have, December 31st, 1908, 632,796 active meters, which would be an increase over the number in use or the number of active meters December 31st, 1905, of 242,466 meters. This number of 632,796 active meters would mean one meter for the Consolidated Company for every 3.59 inhabitants in Manhattan in the year 1908. Assuming that the other companies on the island——

By the **Master**:

Q. Your population being estimated on what?

6165 A. I estimated the population by taking the difference
between the population as shown by the State Census of 1905 and the population as shown by the United States Census of 1900, and assumed that the increase for the years between 1905 and 1908 would be at the same absolute number per year as in that five years

between 1900 and 1905, and that brought out a population for 1908 of 2,270,257. Assuming that the other companies operating in Manhattan in 1908 had 200,000 active meters the total number of active meters in Manhattan would be 832,796, which would give one meter per 2.72 inhabitants. To see what this meant in regard to the number of families in the Island of Manhattan at that time, or rather to see how the increase in the meters compared with the increase in number of families, I divided the increase in population, which was roughly 156,000, three times 52,000 and some odd hundreds, by 4.72, which is the number of persons per family given for the Island of Manhattan in the United States Census of 1900, and found that there would be an increase of practically 33,400 families in the three years, or only 1-7 the increase in Consolidated meters that would be required to meet the increase of sales.

By Mr. Mathewson:

Q. So there would be an increase of meters of 289,955, against an increase in families of 33,400?

A. 242,466 was the increase in meters as against 33,400 in families, yes, sir.

Q. Now taking the other comparison?

A. I had no cost of gas given and so for the sake of getting something that had authority behind it outside of the company's statement, I took the cost of gas given by the Gas Commission, which is
62.56 cents per thousand cubic feet. With this cost the
6166 profit at a price of 85 cents would be 22.44 cents per thousand cubic feet, which on sales of 13,283,000,000 cubic feet,
leaving out the odd thousands from the sales of 1905, would be $2,980,705. Making this total profit at a price of 75 cents or with a profit of 12.44 cents per thousand feet it would be necessary to sell 23,946,000,000 cubic feet in 1908. On the same basis of sales per active meter this would call for 679,672 meters to be set December 31st, 1908, which would give the Consolidated Company one active meter for each 3.34 inhabitants in Manhattan at that time, and making the same assumption as to the 200,000 active meters for the other companies the combined companies would show one meter for each 2.58 inhabitants, or nearly two for each family.

Q. In the whole Island of Manhattan, two meters for each family in the whole Island?

A. In the whole Island, yes, sir. And these figures would call for an increase of 289,955 meters as against an increase in families as previously noted of 33,400.

Q. Now, based on your experience and knowledge of the gas companies is such a thing humanly possible, in your judgment?

A. I think it is entirely impossible.

Q. You never heard of any such proportion anywhere did you?

A. Well, in something like fifty companies I have examined in the last few years I don't know of any case where there has been as much as one to six inhabitants.

Q. And New York City has already passed that and got under that lowest minimum, hasn't it?

A. Yes, sir.

Mr. Kirby: If that is testimony rather than a brief I should certainly like a little opportunity to endeavor to digest it before I should attempt to cross-examine him.

6167 Mr. Mathewson: You can take the sheet; it is right before you, and it is not very difficult to understand it.

Q. How did you get the number of meters for the other companies, on what basis did you assume that?

A. I could not find any definite information which was already on file. It was not in evidence in the case, and not having access to the records of the other companies, I went at it in this way. On page 2283 of the testimony Mr. Marks gives the sales of the Consolidated Gas Company for the year 1905 as being 68 per cent. of the total sales in Manhattan. Assuming that the other companies had the same sales per meter as the Consolidated, which, if anything, is a little low; that is, the other companies would probably have a little higher sales per meter, then, dividing 390,330, which is the number of Consolidated active meters, by .68 would give a total of 574,014 active meters for all companies, or 183,684 for the other companies apart from the Consolidated. To correct for any over estimate there I took 10 per cent. off or 18,000 meters, making the total active meters for 1905 for the other companies of 165,000. Then if there was to be any such increase for the Consolidated meters as would be required by the conditions assumed by Professor Bemis, there would certainly be an increase of 35,000 in the meters of the other companies, so I considered 200,000 was, if anything, too low an estimate for what they would have under those conditions in 1908.

Q. These deductions are based entirely on the figures that have been presented you, as you have stated your computations from them?

A. Exactly. All the figures I have taken are taken entirely from the figures in the testimony. The deduction is, as I say, following out a line of checking that I always use in making up my own reports, as to possible increase in consumption.

6168 Cross-examination by Mr. Kirby:

Q. In this statement which you have made I presume you assumed that the meters registered the same number of cubic feet of gas for the year 1908 as they would for the year 1905?

A. All the figures in this case are for 1905, as I understand it, and I estimated the meters would register whatever gas passed through them, but I have estimated that the sales per meter would be exactly the same in 1908 that they were in 1904.

Q. So that if, as a matter of fact, the sales per meter were larger the number of meters as calculated by you would be much more smaller?

A. Certainly.

Q. And smaller in exact ratio to the increase of sales per meter?

A. Yes, sir.

Q. So again your deductions as to the number of thousands of cubic feet of gas which would have to be sold to bring the profit which you have assumed, depends entirely upon what the cost of making and distributing that gas would be?

A. Certainly.

Q. If the cost of making and distributing that gas would be 80 cents, why couldn't you sell enough gas to make that profit?

A. There wouldn't be any profit at all, no, sir.

Q. Why, you could very well show by a curve or a scale of some kind how the scales would have to increase, as the cost of making and distributing would vary from 80 to 70 to 60 to 50 to 40 or whatever it might be?

A. Certainly.

Q. Now, turning to these tests which you have made on various burners, I take it that in your exhibits 336, 337, 338, 339 and 340, where you state at the top thereof, "State's Exhibit X," you refer to the exhibit which was the actual metal burner with the lava tip or whatever kind of tip might happen to be inserted therein?

A. I do.

6169 Q. And the words, "Commercial six-foot bat-wing lava tip burner," are those corresponding with State's Exhibit CC?

A. Yes, sir.

Q. And that you have assumed from the testimony for instance in Exhibit 336, that State's Exhibit X was in fact the commercial six-foot bat-wing lava-tipped burner with which Professor Hallock made his tests?

A. No, the tag with which the burner was marked, the tags on the exhibits (I haven't in the photograph of State's Exhibit X, but the tags are all the same. Excuse me, here is one with X.) You will see that the tags give both the exhibit number and the type of the burner; that is what I went by.

Q. Do you know how many check burners are in use in the Borough of Manhattan to-day, or the City of New York?

A. No, sir.

Q. Do you know how many unchecked burners are in use?

A. No, sir.

Q. Do you know what percentage of unchecked burners there are, compared to all the burners in use?

A. No, sir.

Q. Do you know what percentage the checked burners bear to all the burners in use?

A. No, sir.

Q. Do you know how one compares with the other so far as the number in use is concerned?

A. I do not.

Q. You have spoken of this burner which you have in your hall, and which you turn down because it is too much trouble to go out and get another one. Don't you think that a man with a check burner that gets clogged up would be put to some trouble to go out and get another one to replace his burner?

A. I never knew a check burner to get blocked up any more readily than an ordinary burner.

Q. Don't they all get clogged up?

A. That depends on the gas a good deal.

Q. In New York City?

A. I don't know.

6170 Q. Do they get clogged up in part? Do they need cleaning or taking care of?

A. Any burner needs taking care of, yes.

Q. How do you take care of them?

A. I usually carry a burner cleaner around with me, but I haven't one now.

Q. You think the ordinary householder carries a burner cleaner around with him?

A. No, but the gas companies distribute burner cleaners very frequently.

Q. Do you know of anybody who can produce one on demand?

Mr. Mathewson: How does that affect a checked rather than an unchecked burner? It seems to me that is rather immaterial.

Mr. Kirby: I don't think so.

Q. Do you?

A. No. But you will remember that I stated that the checked burners did not stop up any more than the unchecked.

Q. They are apt to stop up, aren't they?

A. Most burners have a tendency to stop up.

Q. And when they stop up they are not as efficient as when they are not stopped up?

A. No.

Q. And they flare and do all sorts of things?

A. They are apt to. A checked burner won't flare; an unchecked burner will.

Q. A checked burner when it flares will very often do some of the very things shown in Complainant's Exhibit 341, won't it?

A. I never saw one do that.

Q. It will go off on one side and flare up in the middle and not be regular in form?

A. I never saw a checked burner act that way.

Q. Did you ever see an unchecked burner act that way?

A. I have.

Q. What does a checked burner do when it gets stopped up?

A. Why, it flares to a certain extent, but not as much as 6171 the unchecked burners, because the check in the burner prevents the pressure of gas under the tip from being as high as it is in the unchecked burner.

Q. Have you made your tests as shown on these Exhibits 336 to 339 inclusive in the same manner and with the same kind of apparatus as that used by Professor Hallock?

A. As nearly as I could understand his description, yes, sir; I tried to use the same apparatus that he did, or rather similar apparatus.

Q. I mean similar design and in the same manner?

A. Yes, sir.

Q. Now, I show you a picture here (handing paper) the lower part of which is supposed to represent a gas jet and the upper part thereof the flame. Written in the bottom thereof are the words "Non-Luminous." Is that the way the great majority of flames from gas burners in this city appear to you?

A. Well, I do not claim to have any acquaintance with the appearance of gas burners in this city. I do not live here and spend comparatively no time at all here, and the time I do spend is on streets that have electric light and not gas.

Q. Now, you have said that you consider the check burner is as efficient over one inch as at those points below one inch indicated by Professor Hallock?

A. I beg pardon?

Q. That the check burner is as efficient with pressures of over one inch as at any pressure below one inch?

A. No, I did not say that.

Q. Then what did you say?

A. I think what you refer to is that I said that the check burner was as efficient above one inch as the unchecked burners were at the lower pressure used by Professor Hallock in his test.

Q. State's Exhibit Y was a commercial four foot bat-wing lava-tipped burner, is that a burner in general use, or don't you know?

6172 A. It is a burner that is used quite frequently, yes, sir.

Q. State's Exhibit X was a commercial six-foot bat-wing lava-tipped gas burner, is that a burner generally in use?

A. I think it is used a good deal.

Q. By your statement that a check burner under pressures of more than one inch is as efficient as the unchecked burners used by Professor Hallock in his experiments at pressures under one inch, did you have any limit above one inch pressure?

A. Yes, I would not like to use that particular burner that I used in making these tests above three inches.

Q. You have no tests here, have you, of how that burner would behave at such a pressure?

A. No, sir. The governor on the photometer that I was using refused to give me more than 1.33 inches pressure.

Q. You could have gone to higher pressures with your experiment by removing that governor, could you not?

A. And having another one put on. I could have gone a little higher, but in that particular locality I was working from street mains in which it is very difficult to get over two inches pressure at any time without a governor at all.

Q. Where were these tests made?

A. No. 4 Irving Place.

Q. In the office of the Consolidated Gas Company?

A. Yes, sir.

Q. And you took your gas right from the main?

A. Right from the main.

Q. What sort of a governor did you use?

A. It was a wet balance governor.

Q. You did not draw your gas off into a tank and take your gas at that point?

A. No.

Q. Did you test the gas from time to time as you made your experiments to ascertain the composition thereof?

A. Not to ascertain the composition, no.

6173 Q. It might have been a different mixture at one period of your experiments than at another, might it not?

A. Well, as my experiments only ran over—yes, it might have been.

Q. What standard did you use to test the gas?

A. Candles.

Q. Did you check these candles against any other standard?

A. No, sir.

Q. Where did you obtain them?

A. They were candles furnished by the Consolidated Gas Company or bought by the Consolidated Gas Company for use in making their tests.

Q. And they were turned over to them by you?

A. I got them out of the boxes in which they were bought.

Q. Did you make corrections for temperature?

A. You will see it stated that the candle power was not corrected for temperature and pressure; Professor Hallock did not correct it and so I did not.

Mr. Kirby: That is all.

The Master: Mr. Burr?

Mr. Burr: It is five o'clock.

Mr. Mathewson: Mr. Forstall has an engagement in Philadelphia to-morrow, and I should like to finish with him.

Mr. Burr: I could not, I have had no opportunity to confer with Dr. Marks or Professor Bemis.

Mr. Mathewson: We are not responsible for their not being here, and I object to stopping at this point.

Mr. Burr: I could not finish with him to-night anyway. I do not think it is fair to crowd the mourners anyway. It is five minutes after five, and he has made a very extended review of all these figures and suddenly projected them into this case, and we ought to 6174 have at least a moment's breathing time to look them over. We ordinarily adjourn at five o'clock and it is now five minutes after five.

The Master: All of that is true, but at the same time I made Mr. Mathewson go on with your witnesses when there were reams of tabulations and so forth put in. Of course, you are not entitled to any time for conference with your experts, but the question of its being after five o'clock cannot be denied. What time do you have to be in Philadelphia?

The Witness: I want to be there at ten o'clock.

The Master: Well, you will have to stay here.

Mr. Burr: He can come the next day for cross-examination.

Mr. Mathewson: No, I think it is better to have it consecutive.

The Master: I want to go on at half past 10 to-morrow, gentlemen, as there is a possibility, in fact, there is a very strong probability, that I will have to be in the Appellate Division. I do not know when my case will be on, but if I have to be there at the opening of court I want to leave here before 1 o'clock, so we will go on at 10:30.

At 5:05 P. M. adjourned to Friday, January 25th, 1907, at 10:30 A. M.

Last Exhibits:

Complainant's Exhibit, 344.
State's Exhibit, 000.
City's Exhibit, 236.

6175 United States of America,
Southern District of New York, ss:

I, John A Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 8) pages, numbered from 5409 to 6174 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office. (Vol. 8.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— vs. —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

6175½ Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 25, 1907.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

U. S. Circuit Court, Southern District N. Y. Filed Jun- 24, 1907. John A. Shields, Clerk.

6176 Alfred E. Forstall, resumed.

By Mr. Burr:

Q. You do not contend for a moment, do you, that this calamity of two meters to a small family will happen if the price is reduced to the C' y of New York to 75 cents?
A. I have not the slightest idea it will happen under any conditions.
Q. In other words, your calculation regarding the number of meters necessary would not apply to the city as the sole consumer entitled to the reduction to 75 cents.
A. The calculation, as I understand it, does not affect the reduction to 75 cents at all; it is merely a calculation as to the reasonableness of a certain statement given in the evidence.
Mr. Mathewson: By Professor Bemis.
Q. That is an assumption on the part of Professor Bemis. You set up his hypothesis to knock it down.
A. He set it up and I tried to knock it down.
Q. But you have not confined yourself to what the accountants Marwick, Mitchell & Co. found from the books of the company to be the cost of the manufacture and distribution of gas?
A. No.
Q. And you have made no calculation on that basis?
A. No.
Q. Now, for 1905 you claim a profit on one dollar gas of 24¾ cents per thousand, don't you?
A. No, I said on the figures introduced by Professor Bemis, that he assumed there was a profit of that amount.

Q. That is the assumption that you have adopted for the purpose of your reasoning, for the purpose of your calculation?

A. That is the assumption that I found there and on which I proceeded to work.

Q. It would make the cost of gas about 77¼ cents, assuming that the testimony is correct here, that in 1905 the Consolidated Gas Company received $1.02 per thousand cubic feet? 6177

A. Yes.

Q. Now, Marwick, Mitchell & Co., in Exhibit 87, figured the cost of gas from the books of the company at 52½ cents per thousand. Do you recall that?

Mr. **Mathewson**: No, they did not. That 52½ cents is not on anything, sales, make or anything else; it is a mongrel figure and is not computed on sales. It does not purport to be.

Mr. **Burr**: That is your characterization of the figure, but that is what they claim they find to be the actual cost of the manufacture and distribution of a thousand feet of gas.

Mr. **Mathewson**: Per what, per thousand made or per thousand sold?

Mr. **Burr**: The report shows what they state.

Mr. **Mathewson**: There is absolutely no quantity dividing or divided to produce that amount, but go ahead.

The **Master**: Well, ask your question on the basis of an assumption that it does so appear from their report.

Q. Assuming that the price, 52½ cents, found by Messrs. Marwick, Mitchell & Co. in their report as the cost of manufacture and distribution of a thousand cubic feet of gas is correct, would not the gross gas manufacturing profits for 1905 amount to $6,575,085?

A. I would have to—what return for gas are you assuming there, Mr. Burr?

Q. 52½ cents.

A. That is the cost, but the return to the company for the gas sold, the price of gas? The price of gas is really one dollar.

Mr. **Mathewson**: Mr. Bemis' assumption, on which the witness is testifying, was the sale at 85 cents.

6178 Mr. **Burr**: I am still sticking to the $1.02.

Mr. **Mathewson**: That has nothing to do with the testimony this witness has given. He has taken Professor Bemis' figures and figured out what the result would be.

Mr. **Burr**: I am asking about some other figures now.

Mr. **Mathewson**: I do not think it is proper to take up that figure which has no relation to what the witness testified to.

Mr. **Burr**: You want to figure and stick to those figures and I want to do a little more figuring.

Mr. **Mathewson**: No, of course, if you have thirteen billion feet of gas and assume it cost 52½ cents and you sell it for $1.02 it is simply two times two equals four to assume what the profits will be, but it has nothing to do with his testimony. He has assumed a selling price of 85 cents, which Professor Bemis did, and showed that Professor Bemis's statements were ridiculous on that assumption.

Mr. Burr: I object to all this criticism of the testimony.

The Master: Let us go ahead. If the question is objected to I will pass upon it.

Q. (Repeated as follows:) Assuming that the price 52½ cents found by Messrs. Marwick, Mitchell & Company in their report as to cost of manufacture and distribution of a thousand feet of gas is correct, would not the gross gas manufacturing profits for 1905 amount to $6,575,085? Is not that so, Mr. Forstall?

Mr. Mathewson: I object to that as not cross-examination, and
furthermore as the counsel himself will recall, if he will think
6179 a moment, in getting the 52½ cents Messrs. Marwick, Mitchell & Company deducted the miscellaneous income which made the difference between that and $1.02.

Mr. Burr: I call your attention to the report of Marwick, Mitchell & Company as it appears at page 1431, final conclusion:

"First, we find that the total cost of manufacturing and distributing the gas sold to private consumers in the City of New York by the Consolidated Gas Company during the year 1905 was 52.04 cents per thousand cubic feet. This cost includes a charge for depreciation of 1.71 per thousand cubic feet, the same as made by the company in its accounts."

And I am addressing myself to that situation and asking him to do some figuring on what was actually found and not based on any assumption or hypothesis of Professor Bemis. It is very easy——

Mr. Mathewson: But the 52.50 was obtained by deducting from the 1.02 the miscellaneous income which went to make that up, and now you are asking us to take an amount which has that miscellaneous income and deduct it from an amount from which it is deducted——

The Master: He may answer it if he can. The objection goes not so much to the form of the question, but as to the merits of the case.

The Witness: If I can make the computation——

Q. That is what you did yesterday.

A. I do not get exactly those figures——

Mr. Mathewson: Just a minute, has the Master ruled on my objection as to the propriety of such a question as that?

The Master: Yes, I allowed the question.

Mr. Mathewson: Exception.

6180 Q. What did you make it?

A. I used the multiplier 13,283,164 and get the result 6,575,166.

Q. Now, you do not assume to say what the cost of gas is or was?

A. I have not investigated that question at all.

Q. So that you do not assert that the cost of gas was or is 77¼ cents per thousand?

A. No, sir.

Q. Well, that would be the result, Mr. Forstall, if you subtracted the 24¾ cents from the $1.02, would it not?

Mr. Mathewson: Just a moment. What is the use of asking that kind of a question when Mr. Forstall's entire testimony was directed to Professor Bemis' proposition, if you sold the gas at 85 cents you would get a certain price? Now, he says if you get $1.02 would you not get a certain other. Of course you would. It is wasting time.

The Master: I do not know what counsel has in mind, but I will let him ask a question or two on this line. I do not myself see the pertinence of it. It seems to me it is a matter of argument on brief.

Mr. Burr: That is what we claimed yesterday as to the whole of Mr. Forstall's testimony, that it was a matter of brief. And Mr. Kirby objected to it very properly at the time.

Q. Now, the profit, Mr. Forstall, of $4,588,000 appearing on Exhibit 96, page 382, net earnings as it is called there, net profits, is nothing but what the Consolidated Gas Company calls its net profits, and not its manufacturing profit on gas as figured from the examination of Marwick, Mitchell & Company.

Mr. Mathewson: What that is is shown by the exhibit.

6181 The Witness: I do not know what it is. I have never seen that exhibit. I would have to examine it and see before I could say, and I might not be able to say then.

Q. It is so stated——

The Master: Then, if it is so stated, that ends it. There is no use of asking this witness about it.

Q. Then the difference between the $6,575,085 and $4,588,000 is $1,987,000, profits on gas manufactured and elsewhere expended.

Mr. Mathewson: I don't know about elsewhere expended.

A. It gives a difference of that amount. I don't know what the difference represents further than it is the difference between those two sets of figures.

Q. If we add this $1,987,000 to the reduced net profits, $3,288,000, granted by Professor Bemis, we have a total gross profit of $5,275,000, have we not?

A. We have a total of $5,275,000, yes, sir.

Q. If the price of gas is reduced to 80 cents per thousand and the cost is allowed to remain as high as 52½ cents, will not the profit per thousand be 27½ cents?

Mr. Mathewson: Well, your witnesses went over that and over that and said yes, it would be.

A. If the cost is reduced——

Mr. Mathewson: If the cost of gas should be 52½ cents——

6182 Q. I will repeat my own question. If the price of gas is reduced to 80 cents per thousand and the cost is allowed to remain as high as 52½ cents, will not the profit be 27½ cents?

A. The difference between 80 cents and 52½ cents is 27½ cents.

Q. If we divide the gross manufacturing profit of $5,275,000, as deduced in those figures I have given you, the sum of $1,987,000 and the reduced net profits, $3,288,000, I say if we divide the gross manufacturing profit of $5,275,000 by 27½ cents, does it not give a total sale of 19,182,000,000 cubic feet to about 68 per cent of your population for 1908, or 2,270,257 for Manhattan?

Mr. MATHEWSON: Now, if the Master please, this so-called manufacturing profit of $5,275,000 is obtained by taking the one dollar rate and computing what the profits are for the past year. Now, the witness is asked to take that amount and assume a situation at which 80 cents would be charged, which, of course, would not give the same profit, and deduce Heaven knows what; I cannot follow it.

The MASTER: Well, let him answer it, and we will see where it will land him.

A. What was the question again?

Q. (Repeated.)

Mr. MATHEWSON: 68 per cent. of the population?

Mr. BURR: He gave the population of the Borough of Manhattan as 2,270,257.

The MASTER: I thought the Consolidated sales were 68 per cent. of the entire sales in Manhattan?

Mr. BURR: Yes; and 68 per cent. of the population is 1,543,775.

Mr. MATHEWSON: I don't know how you can divide it in that way.

6183 The WITNESS: Dividing of 5,275,000 by .275 the quotient is 19,182,000,000—it is 19,182,800,000, which is practically the same.

Q. You gave the population of Manhattan in 1908 as 2,270,257, didn't you?

A. That was the estimate, yes, sir.

Q. And 68 per cent. of that would be 1,543,775, would it not?

Mr. MATHEWSON: If it would, what would that show? We never claimed that we were serving 68 per cent. of the population of New York, and it is not our testimony anyway, even as to any 68 per cent.

The MASTER: Well, Mr. Mathewson, I will allow the question., I want to let Mr. Burr go on a reasonable length of time and see if I can get at what he is trying to reach in regard to the testimony of the witness yesterday, as to this question of meters, and I cannot tell until he gets further along whether he does or does not arrive at any result.

The WITNESS: 68 per cent. of 2,270,257 is 1,543,775.

Q. Now, if you divide that figure of 1,543,775 into 19,182,000,000 cubic feet you obtain 12,425 cubic feet per capita, don't you?

The MASTER: Let me ask you, Mr. Burr, is the result of the examination of this witness going to be to impeach the correctness of the calculation the witness gave yesterday in any respect?

Mr. BURR: Yes, I think so.

The MASTER: In what respect? Because I cannot see now what it is leading to on the question of attacking his direct examination.

6184 Mr. BURR: I have but three or four questions more. They are all part and parcel of each other, but I will read you all the questions I have here, if you wish.

The **Master**: In other words, what do you show to be wrong in regard to this calculation of the number of meters on the basis he took here?

Mr. **Burr**: We claim that he errs in the percentage of the increase of the number of meters that will be used..

The **Master**: I understand, but he figured on a certain assumed price of gas and on a certain assumed cost of gas, and as I understand your question, you are putting to him an entirely different price of gas and an entirely different cost of gas. You are figuring on one dollar gas and 52½ cents cost, and he was figuring on 52.50 cost and on 85-cent gas. I do not see if you continue this indefinitely that you will get at anything which impeaches the correctness of his calculation, and that is the only province of cross-examination.

Mr. **Burr**: As we said yesterday, it was a mere calculation, but you allowed him to make a calculation and it leads to an apparent absurdity.

The **Master**: He was allowed to make it because he claimed to show his calculation an error in Professor Bemis' calculation. Now, I will allow you to show the same thing on cross-examination as to what he has done, but what I do not perceive now is where you are going to arrive, if you proceed along the lines you are now pursuing.

Mr. **Burr**: Can I get the answer to the question?

The **Master**: Have you got the calculation?

6185 The **Witness**: I do not remember the figure that was given, and before I check over my figures I want to see whether it agrees or not.

Q. (Repeated as follows:) Now, if you divide that figure of 1,543,775 into 19,182,000,000 cubic feet you obtain 12,425 cubic feet per capita, do you not?

A. That is the result of the division.

Q. From your experience, Mr. Forstall, as you have stated it yesterday, in the gas business, is it not true that the construction of apartment houses in New York will be likely to force a greatly increased use of gas for cooking and heating?

A. No, as far as the increase is concerned——

Q. You do not know, or no?

A. I say no. I would like to explain that if I can.

Q. Yes, please.

A. I think that the construction of apartment houses has already brought about a very large sale of gas in New York City, and that the increase that will come from the construction of apartment houses in the future, the increase in the sales of gas that will come from the construction of apartment houses in future, will be merely in proportion to the number of apartment houses built, which would be approximately in proportion to the population.

Q. Then you do not believe, as a gas engineer, that the use of gas as fuel is on the increase?

A. As a general proposition, yes, it is on the increase. As a special proposition for New York City, I think it has about reached its limit per capita of population.

Q. As a matter of fact, would you not say that the use of gas for fuel and power is on the increase?

A. I do not think there is much increase in the use of gas for power. That is, the percentage increase of the gas used for power may be pretty large, but the increase in proportion to the total amount of gas sold is very small.

6186 Q. But you know the testimony in this case of Messrs. Addicks and Humphreys is that the per capita consumption of gas is about 9,200 feet in New York?

A. Yes, sir, I have heard that testimony.

Q. That was with gas at one dollar?

A. Yes, sir.

Mr. Burr: Well, I will not press this further in view of the Master's attitude. I thought that I might ask him to make a calculation based upon other evidence in this case.

The Master: I think the brief is the place for that.

Mr. Burr: I think so, too, and I think his whole statement as given yesterday should be incorporated in the form of a brief.

Mr. Mathewson: Professor Bemis had nothing but the figures presented and did not pretend to know anything about the gas business, and he spent days going over those figures and making deductions. What is the use——

The Master: Go on with the rest. What else do you wish to ask him?

Mr. Burr: That is all.

Mr. Kirby: I would like to ask the witness a few more questions. I was rather limited yesterday.

By Mr. Kirby:

Q. Complainant's Exhibit 339, showing photometric tests with the commercial fishtail burner No. 5, checked; is it not a fact that such burner shows a greater efficiency with one inch pressure than with 1.18 pressure?

A. Yes.

Q. You stated yesterday that you took your pressure readings at what point of the burner?

A. For all burners the pressure was taken directly at the base of the burner itself, and for unchecked burners that necessarily

6187 gave the pressure at the tip; for checked burners it gave the pressure on the inlet side of the check.

Q. Were any pressures taken by you between the check and the tip?

A. No, sir.

Q. You also stated that you used a governor to regulate the pressure as given to the burner. Do you consider that the pressure and consumption was in any way restricted by the use of that governor?

A. No. The pressure was cut down a little by the friction of the gas passing through the governor. What was the other part of the question?

Q. The consumption.

A. The consumption was not cut down, because I set the governor to give the pressure that I wanted to use.

Q. Does the governor itself in its measurements regulate for the friction of gas passing through it?

A. The governor is provided for the purpose of maintaining an even pressure from its outlet, from which the gas is supplied to the burner, so that the amount of gas consumed will not be constantly varying from second to second, making your flame give different amounts of light from second to second or minute to minute, that is the only effect that it has.

Q. What kind of a burner did you use in ascertaining the candle power of the gas as set down in the bottom of each exhibit?

A. I used a burner that Dr. Love, the City Gas Examiner, has very often told me that he used, a No. 7 low pressure Bray slit union; and another reason for using that was that Professor Hallock said that he used it.

Q. And did you measure the candle power of each gas with this burner before performing your experiments?

A. For each series of tests, if they extended over any great length of time, that is over, say, three hours, I took the candle power of the gas that I was using at the beginning of the series, and as the very last thing at the end of a series.

6188 Q. And what pressure did you use in the test for the candle power of the gas?

A. Why, I did not make a note of that, Mr. Kirby, but my recollection is it was somewhere between .55 and .6 of an inch.

Q. And where did you take that pressure?

A. That was behind the check in the burner. In making the test I adjusted the governor to burn at the rate of 5 cubic feet per hour in that burner, or practically at that rate. In some tests I may have got .02 of a foot above or below. In making the tests I followed the practice of Dr. Love with which I am familiar, and also which I understood to be Professor Hallock's practice, based upon Dr. Love's.

Mr. Mathewson: What burner was that you just referred to?

The Witness: It does not show in this exhibit. It is a burner I took the candle power with, the figures for candle power being given in these exhibits.

Q. Now, if your pressure had been taken between the check and the tip it would have indicated a different pressure than that taken by you, would it not?

A. It would, yes.

Q. And would that pressure have been higher or lower?

A. I would naturally expect it to be lower.

Q. And that is because the check cuts down the pressure?

A. Yes.

Q. Now, do you consider that with a pressure at the street main of say three inches, or, better, say at the point where the gas enters the house meter, a pressure at that point of three inches, that the pressure at the point of ignition in a check burner might rise as high as 6.2 inches?

A. That would be a matter of speculation. I would not have any idea as to how high it would rise.

Q. Do you consider that the reduction of the cost of electric currents to 10 cents per kilowatt hour has sent many customers who formerly used gas to the use of electricity? 6189

Mr. Mathewson: Is that a proper question?

Mr. Kirby: I should think it was very proper, inasmuch as he has been making certain deductions as to what would happen in the future based upon his experience and knowledge of the gas business.

Mr. Mathewson: He rather testified as to what could not possibly happen, which was Professor Bemis' result, rather than what could happen in electricity or anything else. I shall not object if you wish to push the question.

A. I should expect a reduction in price in any rival illuminant to take away from the gas company a certain number of consumers. The exact number or percentage it is very hard to say.

Q. And would you not think that the converse of that proposition would be true?

A. That if the price of electricity was increased it would add consumers to the gas company?

Q. Yes.

A. If the price of any competing illuminant is increased it makes it easier for the gas company to substitute gas for that illuminant.

Q. Then does it follow from that that if the price of gas be reduced to 80 cents that the customers in whole or in part who have turned over to electric current at 10 cents per kilowatt hour would come back to the use of gas at 80 cents?

A. Why, they might in part, yes; possibly.

Q. You nor no one else is prepared to state as to how many?

A. No. I am prepared to say, though, that even at $1.00 the cost of gas properly used is pretty well below the cost of electricity, and the part of the population who consider economy and the price of gas would keep gas at $1.00, and, therefore, would not come to it at 80 cents; they would be there at $1.00. 6190

Q. And if, by reason of persuasive powers of the electric light company, they turned to the use of electricity they would be much more apt to come back to the use of gas at 80 cents than they would at $1.00?

A. They would not be as apt to come back as they would be apt not to have listened to the offers of the solicitors. After they have changed over they are not as apt to come back.

Q. In reference to meters, many families have two, three or even four meters to the family, have they not? One for the residence, one for the store, another for the factory, and some have them for the lighting of their residences and another meter for the heating?

A. I should not think that would—the use of a meter for the lighting and the use of another for heating would not obtain in New York City. Of course, there are cases where a man has a meter in his residence and a meter in his store, and possibly—well, he might have, possibly, a further meter in his factory, but that would be very, very rare.

Q. It would be all the same family?

A. Yes.

Q. Is it not a fact that in many apartment houses in the city the rent of the apartment includes the lighting of it, but not gas for cooking?

A. I don't know, Mr. Kirby.

Q. If that were so it would necessitate two meters, would it not?

A. If the apartment were lighted with gas, it would.

Q. We are assuming that. Are you not aware that in Glasgow, Scotland, there are nearly two meters to the family at a price of gas not much less than in New York?

A. I was not aware of it, but they do some queer things in municipal plants.

6191 Mr. Kirby: That is all, I think.

Mr. Burr: Just one question.

By Mr. Burr:

Q. You have assumed in your calculation, have you not, that a meter will not register any more gas in 1908 than it did in 1905?

A. Yes; as I answered that question yesterday I said that I had assumed that the sales of gas per meter would not be any larger in 1908 than they were in 1905.

Q. But you do not mean to say that those meters now in existence would not, in the event of a reduction in price, be able to consume and register more gas?

Mr. Mathewson: What do you mean? Do you mean to say that the meters could be so constructed that for 1,000 feet of gas they would register 1,500 feet?

Mr. Burr: No.

Mr. Mathewson: What is the use of the question?

Mr. Burr: He says on the basis of the consumption per year of 35,227 feet per active meter——

Q. You do not mean to be understood as saying that a meter cannot register more than that?

A. Allow me to correct that. I think you said that was the consumption in 1905. My impression is that the sales per meter in 1905 were not that amount, but that was the sale per meter in 1904.

Q. So that you have used in your calculation the number of feet registered by your meter in 1904?

A. I think it is 1904; that Exhibit 86 would show.

Q. You refer to the exhibit I see, Exhibit 86?

A. I can tell in a minute; I have it right here in my notebook. Yes, that was for the year 1904.

6192 Q. Do you know what the Consolidated Gas Company's gas meters registered in 1888?

A. No.

Q. Have you got Exhibit 86 here?

A. No, I have just some few figures I had copied.

Q. I call your attention to Exhibit 86, and ask you if it does not appear from that complainant's Exhibit 86 that in 1888 the average sales per meter of the active meters of the Consolidated Gas Company were 39,731 feet?

A. It does.

Q. During the gas war, 1898 to 1900, did not the meters increase to 58,344?

A. I would like to see the exhibit.

Q. Or 29,172 feet per year, with gas at 82.85 cents average?

Mr. Mathewson: 29,000 feet a year? No such thing.

Q. In 1898, from this complainant's Exhibit 86, it appears that the active meters on district in 1898 was 253,816, and in 1899, 289,357?

A. Yes.

Q. And in 1900, 311,960?

A. Yes, sir.

Q. That was the period during which the so-called gas war continued?

A. I have it so marked in my notebook.

Q. From 1900 to 1905 have not your meters increased 78,370, or only 15,674 per year, with gas at a dollar, referring to the same exhibit?

A. Yes.

Q. Or only 15,674 per year with gas at one dollar?

A. Yes.

Q. Since 1898 to 1905, has not the registry of meters increased from 29,000 to 34,000 cubic feet?

A. I think in 1898 the figures were 28,800 and some odd feet, I have not the exact figures; and in 1905 they were 34,000 and some odd feet.

Q. You heard Mr. Addicks testify that there will be an increase of 10 per cent.?

A. No, I did not hear Mr. Addicks' testimony except a few fragments of it, five minutes at a time.

6193 Q. Now, Mr. Addicks has allowed for an increase in oil of 10 per cent. in the amount of oil required; that would mean more than an allowance of 10 per cent. increased water gas, would it not?

Mr. Mathewson: I shall have to object to this. It seems to me that we are going entirely outside of anything that was suggested, even by name, with this witness.

Mr. Burr: We are still harping on the meters. We have this important fact that he has been assuming in 1908 that the consumption of gas stood still and that the registry of gas has stood still since 1904, and upon that he is basing his calculations as to the number of meters which will be required in 1908.

Mr. Mathewson: The witness has not made any such assumption as you suggest, and if he had, the matter of oil would not affect the question.

Mr. Burr: He has said, that being so, there would be a certain number of meters needed at that time. I am going to ask if he will figure on Mr. Addicks' increase of 10 per cent., without taking anything else into consideration, would not this reduce the number of meters required by 209,568, leaving only 34,998 new meters to be added in three years, or 11,666 per year, which figure is not excessive.

Mr. Mathewson: Mr. Addicks has not testified to any such thing. He testified that he gave 10 per cent. in order to get a large figure which would surely cover it; that he thought it would more than cover it when he ordered them.

Mr. Burr: I say, assuming his 10 per cent., does it not follow as I have stated this question that I have asked Mr. Forstall?

6194 Mr. Mathewson: It has no relation to it.

The Master: I do not see what the oil has to do with it.

Mr. Burr: Assuming a 10 per cent. in the increase of oil, it increases the gas.

The Master: The supply of oil increases 10 per cent. each year over the preceding year?

Mr. Burr: There is an increase in the supply of oil of 10 per cent. which must necessarily mean an increase in the production of gas of 10 per cent.

Mr. Mathewson: It does not, anything of the sort, because here we have coal gas and we might increase coal gas and make less water gas, and use less oil, as Mr. Addicks testified. The question virtually is this, if the increase of gas would be 10 per cent., what about the number of meters you would require, that is the question, if anything.

Mr. Burr: If you object to the statement that it was Mr. Addick's testimony, I will say, assuming it is stated.

Q. Assuming the increase of 10 per cent. in the consumption of gas, would not this reduce the number of extra meters by 209,468, leaving only 34,998 new meters to be added in three years?

Mr. Mathewson: You mean 10 per cent. a year in the output of gas, or 10 per cent. all told for the three years?

Mr. Burr: Just let the witness answer, if he understands the question.

Mr. Mathewson: No, but I would like to understand the question, and I think I am entitled to.

Mr. Burr: What do you want to know?

6195 Mr. Mathewson: Whether the ten per cent. is the increase you assumed to cover the three years or per annum?

Mr. Burr: Ten per cent. per annum.

The Master: That is what I wanted to know, whether you mean the consumption of oil was assumed to be ten per cent. more in any one year than in the preceding year; in other words, whether in the period of three years the total consumption of oil would have increased thirty odd per cent.

Mr. Burr: Yes. As I understood Mr. Addicks he said that for 1908 it will have increased ten per cent.

Mr. Mathewson: No, he did not testify to that at all.

Q. Well, leaving Mr. Addicks out of the case altogether, if we can, and assuming an increase in the consumption of gas of ten per cent.

in 1908, would that reduce the number of extra meters required by 209,468?

A. I thought I understood the question at first, but you have mixed me up. You mean that the sales of gas in 1908 would be ten per cent. greater that the sales in 1905?

Q. Yes, that they have increased ten per cent. a year since 1905.

A. That is they would be thirty per cent. greater in 1908 than in 1905?

A. Yes.

A. My answer is no.

Q. How do you know you could have obtained the same efficiency with gas having a two-inch pressure, as with gas having less than one inch if your photometer could not register a test above 1.33, by reason of the governor?

A. Because my experience with those burners has taught me for pressures up to 2½ inches at the base of the burner they are all right, their efficiency changes very little.

6196 Q. How can you assume efficiency at pressures which cannot be registered on a photometer?

A. I was not estimating efficiencies as a result of that test, but as the result of my previous experience.

By Mr. **Mathewson**:

Q. With photometers that would register higher pressure?

A. Yes.

Mr. **Burr**: That is all.

Redirect examination by Mr. **Mathewson**:

Q. Referring to Exhibit 86, as a matter of fact it appears, does it not, taking the whole period altogether, that in 1885, 1886, 1887, 1888, etc., the company sold from thirty-six to thirty-eight or thirty-nine thousand feet per active meter and that that has fallen in the year 1905 to thirty-four thousand and thirty-one feet per meter?

A. That is so.

Q. In other words, the consumption per meter has fallen?

A. Yes.

Mr. **Burr**: Do you know the cause?

Mr. **Mathewson**: Yes.

The **Witness**: It has not only fallen from in the 80's to 1905, but it has fallen considerably from 1904 to 1905.

Q. And is it not your experience that with the increase of consumption and the getting in of the small consumers that the decrease per meter does naturally follow?

A. Yes, the increase in sales after a certain point is reached is bound to come from getting in of small consumers.

Q. And, therefore, more expensive per consumer to the company.

Mr. **Burr**: I would rather you would ask the witness to give his own facts upon it. You have been continually putting words in the mouth of this witness and in the mouths of every other witness. 6197

The **Witness**: Certain expenses depend entirely upon the consumer and upon the amount of gas that he burns, and a small consumer is necessarily more expensive in proportion to the company than a large one.

Q. Where you have two kinds of gas, both fuel at one price and one quality, and illuminating gas of another price and another quality, there might be two meters in a house for that purpose, might there not?

A. Yes, there are.

Q. But you are speaking of New York conditions?

A. I am speaking of New York conditions.

Q. And is not the same kind of gas delivered in New York, so far as you know?

A. The same gas and at the same price.

Q. You do not know whether they furnish different qualities of gas in Glasgow for illuminating and fuel, do you?

A. I don't know anything about the Glasgow conditions.

Q. You were asked with reference to the effect of electric light on the sales of gas. What would be the effect if the electric light appliances were to be improved so as to make three times the efficiency at the same cost?

A. It would necessarily reduce the cost of electric light to one-third of its present cost and by so doing make it a very much more effective competitor of gas than it is at present.

Q. Do you know whether there are such appliances now in use?

Mr. Kirby: I object.

Mr. Burr: I understand Mr. Forstall did not claim to be an electric light expert?

Mr. Mathewson: No, he does not, that I know of.

6198 Q. If you say you don't know I suppose there is no objection to that?

Mr. Kirby: He can go on, if he does not know, but if he does know I would——

Mr. Mathewson: You don't want him to go on if he does know?

Mr. Kirby: I would rather state it myself.

Q. I will take your answer over the objection.

A. I think it is a matter of common knowledge among lighting or illuminating engineers that there are several lamps on the market which cut down the current per candle power to something like one-half of the requirements of the ordinary carbon filament lamp. The General Electric Company are putting out what they call the tantalum lamp, for instance.

Mr. Kirby: I understand this goes in over my objection.

The Master: I did not understand the ground of the objection.

Mr. Kirby: On the ground it is not proper rebuttal, mainly.

The Master: It is proper redirect on the cross-examination, surely.

Mr. Kirby: I do not know that anything has been brought out on the cross-examination in reference to the appliances for the use of electric current and the efficiency thereof and the problematical question of what the future is going to bring forth, whether they burn with more efficiency or whether they do not; it opens up a large sphere of speculation?

Mr. MATHEWSON: That is the only question I have on that subject, but it is directly related to the questions of counsel for the defendants.

The MASTER: I will allow it.

6199 Mr. KIRBY: Exception.

Mr. MATHEWSON: And it has been answered.

Q. As to your pressure taken behind the check, that would show, would it not, substantially, the pressure in the main with what small falling there might be between the main and the foot of the burner?

A. It would show the pressure of the main less whatever loss of pressure there might be between the main and the foot of the burner.

Q. In other words, it has some practical relation to the pressure law?

A. Yes.

Q. Now, taking this checked burner, what is the effect on the flame at the outlet where ignition takes place?

A. The check is so designed that its area, the area of the orifice in it is smaller than the area of the orifice or the orifices through the tip and the relation between them is chosen so that at the pressures for which the checked burners are designed to be used the pressure under the tip will be the proper pressure for the most efficient consumption of gas.

Q. It delivers it with less swirl to the burner?

A. As the burner is designed a piece of wire gauze is inserted between the check and the tip, which steadies the flow of gas and delivers the gas to all parts of the orifice in the tip at the same rate and same pressure and by doing that makes the flame uniform over its whole surface.

Q. In some of the photographs two flames appear from burners on the same pipe. Was that pipe large enough so as to deliver substantially the full pressure to each burner?

A. It was.

Q. Now, as to the Bray high pressure burners, the question was asked of you yesterday as to burners in general use. Is the Bray high pressure burner, which you have shown as giving you 6200 results of high pressure, in general use?

A. Yes, it is.

Q. In the City of New York, so far as your observation goes?

A. Yes.

Q. My question, in other words, is whether it is an unusal burner or one not commonly in use?

A. It is a very common burner.

Q. As to table top burners, such as described by Mr. Addicks, have you ever made tests as to the candle power given by the table top burners as compared with the ordinary Bray burner, say No. 6?

A. I have.

Q. And what is the percentage of efficiency or candle power of one over the others, pressure and other conditions being the same?

A. Eight per cent. in favor of the table top.

Q. I will ask you a final question. As to comparison of efficiency of gas or cost per candle of gas as reported by different companies, is it possible to make a comparison which will be reliable or valuable without knowing the apparatus with which the tests are made, the experience and capacity of the tester and all other conditions surrounding such tests?

A. The figures as to efficiency, of course, depend entirely upon the accuracy of the photometric readings upon which those efficiencies are based, and my experience with the photometrical arrangements at a number of gas works, and the manner in which the photometer tests are taken, has put me into a state of mind in which I will not accept anybody's photometer results as being right until I have examined the photometer, the room and the method in which the tests are made. No comparison can be made between two tests unless you know that both tests are accurately made, and I think that the presumption is in favor of their not being accurately made until you know the conditions.

6201 Q. You mean to say that that is the result of your experience from tests and revision of tests?

A. Yes, sir, that is from my experience as to the way in which tests are made in quite a number of gas works.

Recross-examination by Mr. Kirby:

Q. When did you make your comparative tests between table top burners and Bray check burners?

A. I think it was September, 1892; I am sure of the 1892, and I think it was September.

Q. Where did you make them?

A. In the photometer room at the Market Street gasworks in Newark, New Jersey.

Q. What kind of gas was used?

A. A mixture of 47 per cent. of coal gas and 53 per cent. of carburetted water gas.

Q. What was the resulting candle power?

A. By the works test something over 22, I don't remember exactly. I did not put it down in my book——

Q. By your test?

A. That was my test, the works test. And by the City Examiner 21.87. I put that down.

Q. Do you know whether or not this table top burner was designed for testing candle power of low candle power gas?

A. Why, I don't know. I have an impression that it was designed for use in England. I know it was designed for use in England, where, as a rule, candle powers are low.

Q. You say Bray burners are in general use in the City of New York. What do you mean by general use?

A. That it is not an unusual thing to see them and find them.

Q. You cannot give a better definition than that?

A. As I said yesterday, my knowledge of the conditions in the City of New York is not detailed, and it is pretty hard to say. In walking along last night, having had my attention called to
6202 the fact, recalled to it by your cross-examination, I noticed the burners along Washington Street, well, from Vesey, I think, is where I began to get into the region where they were burning gas, up to Warren Street, where I turned off to go to the ferry, and I should say that of the burners that I looked at, about 30 to 40 per cent. were Bray checked burners.

Q. You looked in the store windows?

A. I looked in the store windows.

Q. Did not walk through the buildings?

A. No, I had not time.

Q. But your experience here in the city on such matters is not very great, is it?

A. No, but reasoning from analogy I know that the Bray burner is very common in Newark and Jersey City and around there, so I should imagine it was in New York.

Q. But New York is peculiar, you know?

A. The conditions in New York are similar to those of Jersey City and Newark, in that the companies in all those cities give away Bray burners.

Q. Mr. Forstall, what do you consider would be the effect if the appl-ances for the use of gas were so improved as to increase the efficiency of the use of such gas?

A. Well, I know what the effect of one increase in efficiency has been, and that is the adoption of the Welsbach burner, which has been to prevent the gas companies from having as great an increase in sales as they had before.

Q. Don't you think that would also apply to your answer in reference to increased efficiency of electric light?

A. I think very possibly it would cut down the increase in the sales of electricity by the electric light company; it would not cut down the increase in the number of people who used electric light in preference to gas.

Q. The question, I suppose, that concerns the gas and electric light companies is not how many persons are using the light, but
6203 how much current or gas is sold?

A. The gas companies—I cannot answer for the electric light companies—but the gas companies desire to sell as much gas as possible, but they also desire to have as satisfied a consumer as possible, so they will not have to look after him all the time to keep him from going somewhere else; therefore, the gas companies will welcome any more efficient appliances for the use of gas than have been brought out.

Q. As a matter of fact, is not the mantle burner to-day so improved over the original Welsbach burner that the efficiency of the present mantle burner is some four times that of the original Welsbach?

A. Which do you mean by the original Welsbach?

Q. I mean the Welsbach mantle which came into use——

A. Of what year?

Q. Some fifteen years ago, say.

A. Well, I tested some Welsbach mantles in 1886 or 1887, and I think that is the first time they were introduced into this country; in fact, the patent was granted in 1885 or 1886 to Welsbach; and I should say, as I remember those tests, that the present burners are 2½ to 3 times as efficient as the burners I tested at that time.

By Mr. Mathewson:

Q. You were secretary of the American Gas Light Association for some years, were you not?

A. I was secretary for eight years.

Q. And an officer otherwise?

A. After resigning from the office of secretary I was made third vice-president and promoted to be the first vice-president, at the time of the dissolution of the association and its entering the American Gas Institute.

6204 Q. Are you a member of the American Society of Mechanical Engineers?

A. Yes, a member of the Society of Mechanical Engineers, and the Societé Technique de l'Industrie du Gaz en France.

Q. That is the French company, I suppose?

A. Yes, that is the French association.

Oscar H. Fogg, recalled for further examination, testified as follows:

Direct-examination by Mr. Mathewson:

Q. Mr. Fogg, was your attention drawn to Mr. Edgerton's testimony in reference to pr-ssures that he took at certain points, and his argument that the pressure within the districts or any particular district would be found within the boundary of 1.5 inches or might be?

A. Yes, it was.

Q. Have you taken pressures upon various points in various districts and presented the result of such pressures for the different hours of the day selected upon a chart so as to show the difference in pressure at different points, the same initial pressure remaining at the station?

A. I have had profiles made up from charts that were taken, yes.

Q. These profiles to which you refer were made up, were they not, from recording of actual Bristol gauges put at different points with which you are familiar?

A. Yes.

Q. Were they checked and revised by you?

A. The gauges on the districts are always checked by the man removing the chart. I make it a point to frequently inspect gauges on the district myself. These charts that are presented have not been taken off by me directly. I have examined every chart taken from the gauges every day as they are brought in.

6205 Q. By your men?

A. Yes.

Q. And you have the original gauges for each district, have you?

A. Yes, sir.

Q. And you have the men here who took them off the points which are indicated on each particular gauge for examination, if desired?

A. Yes, sir.

Q. Now, will you take the first chart which you have?

A. Is there any particular district which you want to start with?

Q. No, in any order that you please, Mr. Fogg.

(Witness produces chart.)

Q. Now, this chart that you show represents the territory supplied by the 99th, 111th and 132d Street stations, does it not?

A. Yes, sir.

Q. And are the places where the gauges whose results are charted, located, indicated on the map at the right of the main chart?

A. They are.

Q. And the reading of each station is indicated by a line here corresponding to the color which is placed opposite that station, in the schedule at the right, is that correct?

A. It is.

Q. So that by noting the color of the line you can in each case ascertain the station at which the reading was taken?

A. That is correct.

Q. Now, what date does this chart represent?

A. That chart represents the pressure for twenty-four hours, ending at 7 o'clock, January 17th—7 A. M.

Q. And at the top of this chart we have the various hours, have we not?

A. The various hours of the day.

Q. And that applies to each horizontal or ragged line, is that right?

A. Each vertical line here, the hour and the point at which the ragged line or pressure line intersects it, the pressure at that time.

6206 Q. And pressures are at the right and left in duplicate of the chart?

A. Yes.

Q. I call your attention to this reading about a quarter before 7 P. M., what is the highest reading, the broken line in orange?

A. That is the pressure at the 132nd Street station, the works pressure.

Q. Now, take these gauges; except so far as the station pressure is concerned, they represent places where there are actual services?

A. They are on actual services in every case, those referred to as district gauges.

Q. And do these charts and the profiles of the others you will present this morning represent the actual normal working conditions of the company?

A. Yes.

Q. No change of pressure or anything else to meet any special requirements?

A. None whatever.

Q. Now, I observe on this chart at one point at one station the pressure was as low as .7 of an inch, and that at another point in the same district the pressure was as high as what, according to the recording gauges?

A. At the same time, at another point in the district, we had a pressure of 28½ tenths.

Q. That was about 6 P. M., that is more than that?

A. From 6:15 to 6:30.

Q. That is 29 tenths there, while it is 27 tenths here?

A. Yes. I read it here, it is a difference of half a tenth.

Q. That would be a difference of 22 tenths?

A. That is right.

Q. The broken lines here represent the pressures, do they not, at the various holder stations?

A. They represent the pressures at the various stations which supply the district.

Q. And it is so indicated in the schedule at the right?

A. It is.

6207 Q. Now, at 6 o'clock P. M. and thereabouts in the evening, is it not true that this chart shows that the company was outside the requirements of the law at both ends, or at some points in the district it was below one inch and at some other points it was above two and one-half inches?

A. Yes.

Mr. Mathewson: I offer that in evidence.

Chart received in evidence and marked Complainant's Exhibit 345.

Q. Now, will you produce the next one?

(Witness produces chart.)

Q. This profile which I show you is made up in the same manner which you have described for the previous one?

A. It is.

Q. And it shows the district supplied by the 44th Street station?

A. It does.

Q. That is service No. 6 (indicating)?

A. Yes, that is at a point in the district.

Q. I observe at 5 P. M. the pressure appears to be 43 tenths inches at one point and at the same time at another point it appears to be about 18½ tenths, does it not?

A. A trifle over 18, yes.

Q. Is there an even greater difference in that at 6 o'clock?

A. Yes.

Q. Where you have 44.1 tenths in one place and at another point it is only 14 tenths?

A. 14½ tenths.

Mr. Mathewson: I offer that in evidence.

Chart received in evidence and marked Complainant's Exhibit 346.

Q. Is this profile which you now produce for the territory supplied by the 42nd, 63rd and 65th Street stations?

A. Yes, sir, it is.

6208 Q. I observe here at a few minutes to 7 o'clock a pressure of 4.65 inches is reached?

A. That is correct.

Q. And at the same time there appears to be a pressure at another point as low as 1.4 inches?

A. Yes.

Q. So that in many cases on this chart there appears to be a much greater difference than 1.5 inches between different points at the same hour, does there not?

A. A very much greater difference. There is a difference of 3.2 inches in that one case that you referred to.

Mr. Mathewson: I offer that in evidence.

Chart received in evidence and marked Complainant's Exhibit 347.

Q. Now, this chart which you have now produced shows the territory supplied by the 14th Street station, does it not?

A. It does.

Q. And one service shows at a little after 5 o'clock, about twenty minutes after 5 o'clock, 4.7 inches pressure?

A. That is right.

Q. And at the same time another point in the system shows a pressure of 1.5 inches, does it not?

A. 1.6 inches at the same time; that 1.5 inches is a little bit later.

Q. But here also, is it not a fact, that for considerable periods there is a difference much greater than 1.5 inches?

A. There is a difference of over three inches in the case you cite.

Mr. Mathewson: I offer that chart in evidence.

Chart received in evidence and marked Complainant's Exhibit 348.

Q. Mr. Edgerton testified in substance that every time 6209 there was a fall observed outside the testing point the pressure might be increased at the works or if a high pressure was observed it might be reduced at the works and thereby meet the requirements. Have you made profiles showing the rising or falling pressure at the same time?

A. I have made profiles showing the rising and falling pressures of the district gauges, without direct reference to the pressure maintained at the works.

Q. Will you produce those?

A. Yes.

(Witness produces charts.)

Q. They are made from the readings of the same kind of gauges, are they?

A. Yes, sir.

Q. Now, this which I show is headed, "District supplied by East

63rd Street station; pressure from 3 P. M. to 9 P. M., January 16, 1907"?

A. That is right.

Q. What is this left-hand point marked three hundred?

A. That is the hour that is 3:00.

Q. And the readings at the left represent pressures, do they?

A. Yes.

Q. Now, the pressure, according to this chart, does not rise evenly in all parts of the district at the same hour, does it?

A. It does not.

Q. In other words, the gauge at one point indicated by the green line of 311 East 72d Street appears to run substantially uniform?

A. With very slight variations.

Q. At the same time the pressure shown by the black line which is 408 East 63d Street, only nine blocks away, rises very rapidly?

A. It does.

Q. What is the pressure at seven o'clock, at the last point mentioned as indicated by the black line?

A. 5.9 inches.

Q. And what was the pressure at the same hour at 311 East 72d Street, only nine blocks away? 6210

A. 2.2 inches.

Q. And there you have more than the difference allowed by law of 1.5 inches pressure, have you not?

A. Very much.

Mr. Mathewson: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 349.

Mr. Page: Did you explain what the green line was?

Mr. Mathewson: That is the pressure at 311 East 72d Street as shown on the explanatory table at the upper left hand corner.

Q. Have you another one taken from another district?

A. Yes. (Producing chart).

Q. You now produce a chart headed districts supplied by 44th Street station showing certain pressure gauges?

A. I do.

Q. And the lines of those gauges at different hours from 3 to 9 P. M. are represented by the different colors, are they not, as indicated on the side?

A. They are.

Q. Well, in this case it appears, does it not, that say between 4:30 at 5 o'clock all the pressure at one of the points is rising rapidly, and it is falling at every other point of the four points?

A. That is correct, yes, sir.

Q. And does it not appear repeatedly that where it is rising at one point it is falling at another within this radius?

A. It does.

Q. And here, too, the range is considerable more than 1.5 at the same hour, is it not, in various instances?

A. It is over 2½ in one case and considerably over 1½ in every case with the exception of the lower three lines.

Mr. Mathewson: I offer that in evidence.

6211 Received in evidence and marked Complainant's Exhibit 350.

Q. The profile which you now show me is headed districts supplied from Inwood station and is made up on the same basis, is it not, as the previous two charts?

A. It is.

Q. And does this also show pressure rising at one point and falling at another on the same occasion?

A. Yes, it does.

Mr. Mathewson: I offer it in evidence.

Chart received in evidence and marked Complainant's Exhibit 351.

Q. Does it show a difference at the same hour of more than 1½ inches?

A. Yes, it does.

Q. Now, I will ask you, generally, whether it would be possible, therefore, to regulate the pressure at the station by the reading of pressure at any one point, so as to regulate the entire district?

Mr. Kirby: I object to that. You have not shown the witness is qualified to answer.

Mr. Mathewson: He testified he has charge of the pressure under Mr. Simpson.

Mr. Kirby: What does that mean? He is not an engineer.

Mr. Mathewson: I will ask a few questions on that.

Q. You have observed pressures, have you not, Mr. Fogg, for some years?

A. I have.

Q. Have you had charge of the pressure charts in these various districts, and have they been brought to you for checking?

A. They have.

Q. And have you been generally familiar with pressure at stations and pressures at various points in the district, as shown by the charts?

6212 A. I am familiar with the pressures at the stations, as shown by the charts, from having observed the charts and knowing that they are correct, knowing that they have been tested with the gauges, the water gauges.

Q. Then from your experience and observations, as plotted on these charts and otherwise, I will ask you whether, in your opinion, it is possible to regulate the pressure at the station as you find pressure at one point or another in your district going up or down, so as to affect the regulation for the entire district, within any special limits?

Mr. Page: Objected to on the ground that it is incompetent, immaterial and irrelevant. The witness's observation of charts does not make him an engineer.

Mr. Burr: I join in the objection. He does not appear to have knowledge about them.

The Master: You may cross-examine, gentlemen.

By Mr. KIRBY:

Q. Are you a graduate of any technical or scientific school?

A. I am not.

Q. Have you ever operated a gas works anywhere?

A. I have.

Q. Where?

A. Flushing, Long Island, Ocean City New Jersey, Yonkers, New York.

Q. What were your duties at such plants?

A. Superintendent at Flushing, engineer of works at Yonkers, and construction engineer at Ocean City, and later, when the plant was operated, its superintendent.

Q. When did you enter the employ of the Consolidated Gas Company?

A. In the early part of 1904.

Q. What were your duties at that time?

A. In 1904?

Q. Yes.

6213 A. At the beginning of my employment with the Consolidated Gas Company, I took charge of the construction of the 36-inch main between East 111th Street and West 136th Street, about which I have testified.

Q. Since then have you been engaged upon similar work for the company, laying of mains and such?

A. Not the construction of any mains since that time.

Q. Have you had any direct work in the operation of any plant?

A. By plant, do you refer to their manufacturing stations?

Q. Yes.

A. None.

Q. Have you ever had any direct work in relation to the regulation of pressure of the gas sent out either from their holder stations or manufacturing stations?

A. I have.

Q. What have you done?

A. I have had supervision of the pressure gauges maintained on the districts throughout the city and the men employed in caring for those gauges. I have, from time to time, as the pressure conditions varied, kept the chief engineer indirectly or through the general superintendent of mains informed as to any variations, so that the proper regulation at the works might be effected.

Q. Have you ever given any orders for the regulation of pressure at the works?

A. None whatever.

Q. Have you ever, in any way, had the pressure at the works changed?

A. None, except in the manner I have just testified. No one changes the orders as regards the pressure at the works except the chief engineer of the company.

Q. Then, I take it, that your work with the Consolidated Gas Company as having to do with pressures has simply been the readings of the pressures and in the endeavor to see that they were taken in the proper way and with proper apparatus?

A. No, it has more to do with it than that. I have, from time to time, as the need became apparent, had additional gauges 6214 set out in the district, made as I saw——

Q. Then we will add to those duties the installation of gauges.

A. And their maintenance, yes, sir.

Mr. Kirby: That is all. I contend, Mr. Master, that this witness has done nothing more than to check off readings and install pressure gauges and never changed or varied the pressure in any way at the various stations, and measured the results thereof, and the regulation has been in charge of another.

The Master: I will allow the question.

Mr. Kirby: Exception.

Mr. Burr: Same objection and exception.

By Mr. Mathewson:

Q. You may answer the question now. (Question repeated as follows): Then from your experience and observation as plotted on these charts and otherwise, I will ask you whether in your opinion it is possible to regulate the pressure at the station as you find pressure at one point or another in your district going up or down so as to effect the regulation for the entire district within any special limit?

A. I do not consider it to be possible.

Mr. Mathewson: That is all at present.

Mr. Kirby: What do you mean by at present?

Mr. Mathewson: I mean I may possibly recall any witness on another point, but I am through with this.

Cross-examination by Mr. Kirby:

Q. Referring to Complainant's Exhibit 325, I notice in the upper right hand corner thereof a plotting of a section of the city. 6215 From what source did you obtain the map I have just referred to?

A. The skeleton outline?

Q. Yes?

A. That is a reduction of any one of the standard maps we have in our office; I don't know which one. It is not to scale and no effort has been made to put it to scale.

Q. Was it taken from any exhibit in this case?

A. The outline of the map? No, not that I can recall.

Mr. Mathewson: It is merely to locate the place where these gauges are located by general description so he can identify them.

The Witness: Referring to the outline, but not to the figures appearing on it.

Mr. Mathewson: Yes.

Q. I notice set down in the spaces indicating streets certain lines having colors of orange, yellow, purple and green, and by reference to a key, that these represent different sizes of main. From what source did you get the information that mains of these sizes were upon these various streets and laid in the manner here set down?

A. From our own street mains record.

Q. From any exhibit in this case?

A. No.

Q. I notice the statement upon this exhibit as follows: "Territory supplied by 99th Street, 111th Street and 132d Street stations." From what source did you get that information?

A. From my own knowledge of the condition of the street mains in that section of the city.

Q. Are you prepared to state that this territory and none other is supplied by these stations?

A. There may be one or two connections at the lower end of the district which dovetail into another section.

6216 Q. Are you prepared to state whether or not any other stations supply any other part of this territory?

A. No other stations supply any part of that territory, except the statement that I just made, at the lower end of the district where several mains may overlap into this district. That would apply only to the lower part of the dis-rict.

Q. What do you mean by supplying territory from a certain station?

A. Are you speaking in the case of the three stations there, or any one of them?

Q. I speak with special reference to the chart, Complainant's Exhibit 345.

A. That would involve taking into consideration all the stations. We cannot draw the line between the territory supplied by any one of them in any case, because the main system is tied together all through.

Q. Which station supplies the more northerly section of this territory?

A. Above what streets?

Q. Above 170th Street.

A. The territory is supplied by 132d Street. The regulation of pressure is effected from the Inwood station, however, from the governor located at that point.

Q. How is that done?

A. The gas is sent to the Inwood governor by means of a transfer main and enters the governor at that point at Inwood, and goes out onto the district after being regulated by the Inwood governor.

Q. Does any other gas pass through that governor *at* except that which comes from the 99th Street station?

A. No gas directly from the 99th Street station goes through that governor.

Q. I mean the 132d Street station, the station to which you just made reference as having a main running to the Inwood governor, and the gas passing through that governor and supplying the more northerly section of this territory?

A. No.

6217 Q. Quite sure of that?

A. Reasonably so, from my knowledge of the main system and the records.

Q. What territory is supplied from the Inwood station?

A. None from the Inwood station itself; the territory that we are just speaking of, the pressure regulation is effected at the Inwood station. It is not a manufacturing station, it is merely a holder point.

Q. There is a holder at Inwood, is there not?

A. I have seen an old holder frame there; I don't know whether the holder is in the tank or not. I have not had occasion to be in the station.

Q. You are familiar with all this territory, you have stated, and with the distribution of gas therein?

A. As regards the street mains, yes, sir.

Q. But you don't know anything about where the gas comes from which goes through those mains?

A. From the 132d Street station, and I have so testified.

Q. But you are not prepared to state whether there is any gas going into any territory from the holder at Inwood?

A. I don't know what may have been done with the holder at Inwood, I don't know that any gas is in it, or has gone through it.

Q. I refer you to Complainant's Exhibit 351, which has printed thereon "districts supplied from Inwood station," what does that mean?

A. That refers to the district supplied from Inwood station, not by it.

Q. Well, what does it mean?

A. It means that the pressure regulation on the points shown in the profile lines there is effected by the governor at Inwood station.

Q. Do you know where that gas comes from?

A. From the 132nd Street station.

Q. None from Inwood at all?

A. None that I know of from Inwood.

6218 Mr. Burr: I note on this map at the bottom it says red figures in district sk[illegible] show elevation above mean high water. Where are the red fi[illegible]es?

Mr. Mathewson: That is in the sketch on the map above, in the upper right hand corner.

The Witness: It is possible that they have been omitted. They have been in this case, they are on the originals.

Mr. Mathewson: We will supply them. They would not show on the blue print, but we will put them in for you.

Q. Now, referring for a moment to Complainant's Exhibit 347, which has printed thereon, "territory supplied by the 42nd, 63rd and 65th Street stations," I ask if that street given as 79th Street is between the same avenues as 79th Street set down upon Complainant's Exhibit 345?

A. 79th Street, as shown there on Exhibit 347, is between 5th Avenue and the East River.

Q. While 79th Street, as shown on Exhibit 345, is between the same boundaries?

A. The same boundaries.

Q. Now, being familiar with the mains as they are laid, I ask if you will tell us what happens to the mains from either 42nd, 63rd or 65th Street stations when they get to 79th Street between 5th Avenue and the river? Do they stop?

A. No, they do not stop.

Q. Do they go on?

A. Yes, as mains. As conductors, I doubt if they do.

Q. As mains do they go on?

A. As a metallic structure, they do.

Q. Is there any dividing territory between that and the territory supplied by the 99th, 111th and 132nd Street stations, as set
6219 down on Complainant's Exhibit 345?

A. The boundary is shown, which is 79th Street, on that side, the dividing line.

Q. The mains go on? What do you mean by the dividing line?

A. A valve in the main itself.

Q. Is there a valve there which shuts off the gas of one territory from the gas in another?

A. I don't know in what condition those valves are. There are valves there.

Q. Are they closed?

A. I don't know in what condition the valves are.

Q. Well, you are familiar with all of this territory and with all these mains and with all the pressure gauges distributed throughout the territory. Did you ever look as to whether those valves are open or shut?

A. Only when I have had occasion to do so for some particular reason.

Q. Have you had occasion to do so while you were making up these charts or taking these readings to make them up from?

A. No.

Q. Do I understand you to state that on each main as it runs from one of these territories indicated on any one of these exhibits into another territory indicated on another exhibit that there is a valve to close off the gas in that main from the adjoining territory?

A. I would not attempt to say that there was a valve on every main anywhere. It is quite impossible for me to even assume that there was. I know the general division of that side of the city is effected at 79th Street.

Q. Or at any other street? Did you lay any of these mains yourself?

A. None.

Q. Have you made excavations for the purpose of repairing or renewing?

A. I have at times inspected mains in excavations made for that purpose, yes.

Q. Have you ever put any valves down or in?

A. Personally, no.

6220 Q. Under your supervision have any been installed?

A. Not under my supervision.

Q. Now, again referring to Complainant's Exhibit 345, and looking at these designations of various sized mains, which you have laid down upon the map in this territory, are you prepared to state that these are the only mains in this territory?

A. I am prepared to state that they are not the only mains in the territory. We made no attempt to put all the mains on those maps and the only object of putting the mains on the map is to give a general idea from what station the territory is supplied, and the larger or trunk mains leading into the districts; the mains are not complete and were not intended to be so.

Q. Upon Complainant's Exhibit 345 I note a small oblong hatching marked 1, and by reference to the index I see that is set down as 111th Street station; am I right in stating that on the date of January 16th, 1907, you took certain readings at that station?

A. No, I did not take any readings myself at that station; readings are taken every day at that station.

Q. By whom are they taken?

A. By the works' employés.

Q. Do you know who they were taken by on this day?

A. They are taken under the direction of a Mr. Barlow.

Mr. Mathewson: They are taken on the regular recording automatic gauges.

The Witness: And removed every day.

Mr. Mathewson: And as I said a few minutes ago, I have the men here and the original charts here if you wish to assure yourself on this point. I did not put them on because Mr. Fogg had general knowledge of it, but I will put them on if you wish.

6221 & 6222

Q. Have you any personal knowledge as to whether or not that gauge was registering properly on that day?

A. I have no personal knowledge, except that I have been told that it was.

Q. Do you know whether it has been checked by anybody?

A. I do know that it has been, yes.

Q. By whom?

A. The man removing the chart.

Q. How did he check it?

A. Comparing it with the water gauge, siphon gauge.

Q. How many times a day did he check it?

A. He checked it once a day.

Q. What kind of a pressure gauge is this that was used to take these readings?

A. A Bristol recording pressure gauge.

Q. And will you describe to us what the general character of such apparatus is?

The Master: Gentlemen, you will have to excuse me, we will have to suspend here now.

At 1 P. M. adjourned to Saturday, January 26th, 1907, at 11 A. M.

Last Exhibits:

Last Complainant's Exhibit, 351.
Last State's Exhibit, OOO.
Last City's Exhibit, 236.

6223 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 26, 1907—11 A. M.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

6224 Oscar H. Fogg resumes the stand and further testifies:

Cross-examination by Mr. Kirby (resumed):

Q. I call your attention to Complainant's Exhibit 345, the chart which we were looking at yesterday afternoon when we adjourned. The line upon this chart showing the maximum reading of pressure is taken at the Inwood station, according to the reference table. Will you inform me just where at the Inwood station that pressure is taken?

A. You say the maximum line on the chart is taken at Inwood?

Q. Yes.

A. I do not think that is the case, Mr. Kirby.

Mr. Mathewson: That is 132d Street.

The Witness: The Inwood station is down here (indicating).

Q. Very good. Now, we will take the line——

A. These colors on the prints are rather misleading.

Q. You see on the chart here the line instead of being broken with a long and then a short line is chopped up so that it is almost impossible to ascertain what it is?

A. On account of the short turns.

Q. Very good. We have this line. The line which on the lefthand side of the chart starts at the reading, 2.2 inches?

A. Yes, sir.

Q. And continues across the chart, ending on the righthand side of 2.25 inches, is that correct?

A. That is correct.

Q. That is the line indicating the pressure reading at the Inwood station?

A. Yes, sir.

Q. Will you inform me where at the Inwood station that reading was taken?

6225 A. The reading was taken at the outlet of the governor, at the point where the gas passes into the main system of that district.

Q. And you stated yesterday that the gas was brought to Inwood from where?

A. 132d Street station.

Q. How was it taken to Inwood?

A. By means of a twenty inch transfer line.

Q. That is, a main running from 132d Street to Inwood, twenty inches in size. Now, from this twenty inch main are there any transverse mains or services taken; is any gas taken from that main before it reaches the Inwood station?

A. None whatever, that I know of. That main is known as a transfer main for the sole purpose of carrying gas from the 132d Street station to Inwood.

Q. Is there any line upon this chart indicating the pressure in that main?

A. No, sir; no line on the chart showing that pressure at all.

Q. The pressure indicated at the 132d Street station is different from that in this main running to Inwood?

A. The pressure indicated at the 132d Street station in which main?

Q. In any main laid down upon this chart?

A. Oh, yes, yes.

Q. Now, do you know the pressure in that main?

A. I know it is about seven or eight inches.

By Mr. Mathewson:

Q. That is in the main from 132d Street to Inwood?

A. The transfer main to the Inwood station.

By Mr. Kirby:

Q. That is not on this chart?

A. No pressure of transfer mains shown on the chart at all, no.

6226 Q. When that gas reaches Inwood, it there passes through a governor, its pressure is reduced, and the line which we have spoken of on this chart shows the readings of pressure on the side of the governor from which the gas leaves it to go to the territory supplied from Inwood?

A. That is right, yes, sir.

Q. Let us look at point 5, being 175th Street and Boulevard Lafayette, indicated upon the diagram by a green line. Is point 5 supplied from the governor at Inwood?

A. No, not entirely.

Q. What is it supplied from?

A. As I have before testified, it is impossible to say in that district the pressure entirely supplied by any one particular station, inasmuch as there are three stations, and one governor station, which play into the combined main system of that district.

Q. Now, you have just testified that the main running from 132d Street to Inwood has no gas taken therefrom until it reaches Inwood. What other main is there that would run to point 5?

A. None that would run direct to point 5. There is, however, a main leaving the 132d Street station known as a district feeder, a main thirty inches in diameter, which connects into the general distribution system at 129th Street and Amsterdam Avenue. From this point of connection there is a main north in Amsterdam Avenue tying into the various distribution mains at various points north and south, which would in a measure affect the pressure at 175th Street and Boulevard Lafayette; to just what extent that particular main would affect that pressure I am not prepared to say.

Q. Are there any points where pressures were taken and laid down upon this chart which might draw their gas from this main to which you have just made reference, from points other than point 5?

A. No, not directly. That main affects the entire distribution system in that district.

6227 Q. Would it affect point 11, being 185th Street and Port Washington Avenue?

A. That I do not believe anybody knows definitely. It would be quite impossible to state.

Q. Now, if we should raise the pressure at Inwood station at its maximum point, which is now, as set down upon this diagram, 3.2 inches, to 4½ inches, or between 4½ inches and 5 inches, what effect would it have upon the pressure at the same moment at points 5 and 11?

Mr. Mathewson: Are you referring to the green line?

Mr. Kirby: Yes.

Mr. Mathewson: That is 3.4 inches, not 3.2.

Mr. Kirby: I am referring to Inwood.

A. You asked me what the effect would be upon the pressure at this point, 176th Street and Boulevard Lafayette? It is my judgment that the pressure at that point would be increased to some extent.

By Mr. Mathewson:

Q. If what?

A. If the line indicated by Mr. Kirby representing the Inwood pressure, at the outlet of the governor were increased to a point between 4½ and 5 inches.

By Mr. Kirby:

Q. And it would be possible to increase the pressure at the Inwood station so as to bring that down higher than 1 inch and not to permit it to go higher than 2½ inches, would it not?

A. It might have that effect, not considering the effect that it would have upon the other pressures in that district. There undoubtedly would be a relative increase in all the other pressures, some of which are already up to 2½ inches and some over.

6228 Q. Point out to me one that is above 2½.

A. Right there (indicating on chart).

Q. Which line did you indicate?

A. I indicated the red line which indicates the pressure on Bolton Road.

Q. At point 6?

A. Point 6.

Q. Where does point 6 get its supply from?

A. Point 6 is north of the Inwood governor station, and I think it is perfectly safe to assume that the pressure regulation at that point is effected by the Inwood governor station.

Q. Does it obtain its supply from any other point than the Inwood station?

A. That again would be impossible to answer. Its supply, as I have already said, comes from the station at 132d Street. Its pressure regulation, I believe, would be entirely effected by the regulation at the Inwood station.

Q. So that if the main running to point 6, being Bolton Road, had a governor thereon which would not prevent the pressure rising above 2½ inches, at no time could the pressure at point 6 be above 2½ inches, could it?

A. If there were a governor upon that main, and that main was supplying only the one point or the one immediate section referred to by you, the governor could be so set that the pressure would not go beyond any given point.

Q. And you have testified that you had information and knowledge that this main does only supply that section, and does only come from the Inwood station, so that you could govern that section in that way, could you not?

A. I am referring now to the one main supply up there, No. 6, particularly.

Q. So am I. Now, will you tell me where the pressure reading was taken at this point 6; was it directly upon the main?

6229 A. No, it was not on the main. The gauge in that case is attached to the head of the service, or at a point before the gas reaches the consumer's meter inside the house.

Q. What was the size of the main at this point?

A. That I could not tell definitely without referring to the record.

Q. What size would you think?

A. I would not be able from the conditions—I should imagine it might be a six inch main or an eight inch, but that is something at which I could not more than guess.

Q. Was it the main from which the service pipes in that district were drawn?

A. It was.

Q. And to which the service pipes were attached?

A. Yes, sir.

Q. The reading at 111th Street, being point 1, was taken where?

A. That gauge is attached to the outlet main from the station at the point where it connects into the distribution system.

Q. Any services attached to that main?

A. To the main at the point where this reading is shown?

Q. Yes.

A. Oh, no, that is the works' pressure.

Q. Where was the reading taken at 99th Street?

Mr. **Mathewson**: All those are station pressures.

A. The same point.

Q. Those services attach to the mains at this point?

A. Yes, that is inside the building (indicating the works' pressure line on the chart).

Mr. Mathewson: Those pressures are station pressures without services attached. All the others on the chart are the service pressures.

Q. And that is also true at Inwood, except that these taken at the governor point, such as you have already testified to?

A. Yes, sir.

Q. Where was the reading taken at 132d Street?

A. At the same point inside the building.

6230 Q. Where was the gas coming from which entered this main upon which the pressure was taken?

A. At which point?

Q. 132d Street.

A. That I cannot tell at all. It might have been coming from any one of the stations of the Consolidated Gas Company.

Q. Was it coming from the holders at that station?

A. Oh, yes.

Q. How many holders are there?

A. One holder of the Consolidated Gas Company.

Q. Another holder of the Standard Gas Company?

A. I believe so.

Q. Are you prepared to state that the gas entering this main came alone from the holder of the Consolidated Gas Company?

A. No, I am not.

Q. This is the point where the gas from the Standard Gas Company feeds into the mains of the Consolidated, is it not?

A. Where the gas of the Standard Gas Company feeds into the mains of the Consolidated?

Q. Of the Consolidated?

A. They may.

Q. Don't you know?

A. I do not.

Q. I refer you to the testimony of Simpson, 205, where he states:
"Q. You have been referred to as the authority as to where the gas was delivered, from the various subsidiary companies, into the mains of the Consolidated Gas Company. Can you tell me where those gas connections are between the mains of the Standard and the mains of the Consolidated Gas Company? A. Yes. Q. Where are they? A. The principal connections at 132d Street and Broadway; there the Standard delivers gas into our 30-inch main; also into a 20-inch main going to Inwood, and at 125th Street and Fifth Avenue; and at 125th Street and Eighth Avenue, through
6231 our connections between the New Amsterdam mains and the
Consolidated mains, for the purpose of reinforcing the New Amsterdam pressure."
Does that refresh your recollection in any particular?

Mr. Mathewson: If Mr. Simpson so testified it probably is the case. It probably won't refresh his recollection though.

A. It don't refresh my recollection at all, because I have no knowledge on the subject. If Mr. Simpson has so testified it is undoubtedly correct.

Q. Then, as a matter of fact, you don't know that the gas, the pressures of which you have taken at the various points in this district, is not part of the gas coming from the holder of the Consolidated or the holder of the Standard Gas Company?

A. I would have no reason for knowing that at all.

Q. But you are familiar with how the regulation of pressure is attempted to be effected?

A. I am, yes, sir.

Q. And expressed an opinion as to whether or not it could be so regulated as to keep the pressures within the limits of 1 and 2½ inches?

A. Yes.

Q. Have you ever made any attempts at the 132d Street station to regulate the pressure from the Consolidated Gas Company or the pressure coming from the holder of the Standard Gas Company?

A. I already testified that I have made no attempts to regulate the pressure at any one of the stations; that that is entirely within the jurisdiction of the chief engineer and he alone gives orders for the regulation of the works' pressures.

Mr. Mathewson: Mr. Fogg testified he gave the chief engineer the charts and kept him informed of the pressures generally in the district, for the chief engineer's information. 6232

Mr. Kirby: He was quite willing to express an opinion thereon, as to what could be done.

Mr. Mathewson: Of course, he is.

Mr. Kirby: We are trying to find out how much weight that opinion should have given to it.

Q. Are you familiar with the interior of the 132d Street station so as to know the means used therein to turn the gas from the holder of the Standard Gas Company into the mains of the Consolidated?

A. I am not.

Q. Have they what might be called a switchboard there for that purpose?

A. Not that I know of.

Q. You took readings at point 5 of which we have already spoken. To what was the pressure gauge connected at this point?

A. At that point the pressure gauge is connected to a ¾-inch pipe which is extended from the service at a point before it reaches the consumer's meter.

Q. And do you know the size of the main to which that was connected?

A. 6-inch main.

Q. And were there other services taken off from that main?

A. Yes.

Q. Do you know the consumption of gas in that locality?

A. No.

Q. Do you know the number of cubic feet of gas which passes through a 6-inch main each twenty-four hours?

A. No.

Q. Do you know the carrying capacity of that main?

A. Under what particular conditions?

Q. Under the conditions which are expressed upon that chart?

A. That would have to be determined by the drop in pressure in a given length of pipe.

6233 Q. Could you tell me the carrying capacity of a main of definite size under a definite pressure for a definite distance?

A. I could calculate it, yes.

Q. Being able to calculate that, could you tell me what the carrying capacity would be of a main of twice the diameter under the same conditions?

A. By calculating in the same way.

Q. Does that carrying capacity increase directly as the diameter or the square thereof?

A. It increases as the square of the diameter, 1-5 power of the square of the diameter.

Q. That is a little more than the square?

A. A little bit more. I would like to correct that answer. That is rather confused. It increases as the square root of the 5th power of the diameter. I have not had occasion to refer to the formula. I have calculated tables which we use almost altogether in the place of the formula nowadays.

Q. If a main of larger diameter than that which now supplies point 5 were put down and that main had supplied to it, or could have supplied to it, gas at the same rate per cubic feet of area as the main which now supplies point 5, do you or do you not consider that the pressure at point 5 would be less likely to fluctuations than it is at the present time, as indicated by this chart?

A. No, I do not believe it would be.

Q. In other words, it would make no difference how large a quantity of gas point 5 would have to draw upon, the pressure would fluctuate as you indicated by the diagram?

A. It would depend entirely upon the initial pressures maintained.

Q. We will assume the same initial pressure is maintained and assume it has more than four times the capacity of gas to draw upon.

A. It might reduce the variations at that particular point.

Q. It would, wouldn't it?

A. I think it would, yes. It might.

6234 Q. But wouldn't it?

A. I believe it would. I think it would.

Q. Now, let us take point 7, 533 Lenox Avenue, upon what kind of a pipe were the readings taken at that point?

A. What size?

Q. Size? Was it a service pipe it was taken on?

A. The reading was taken directly from the head of the service before it entered the consumer's meter.

Q. To what size service main was this service attached?

A. I don't know.

Q. What size do you think?
A. I don't know.

Q. Other services were taken from this pipe?
A. Yes, sir.

Q. Do you know the size of the transfer main or supply which supplies that district or trunk main or whatever you call it—I don't know how to designate it—in your company?
A. It would not be a transfer main.

Q. What type of trunk main or a supply main?
A. Yes. And there are several leading into the district from various stations.

Q. And you don't know their sizes?
A. Oh, yes, I know their sizes. The main from the East 111th Street station is a 36-inch; the main from 132d Street, as already testified, is 30-inch, leading to the point where it connects into the distribution system.

Q. Now, do you know how many cubic feet of gas per day are drawn from the service mains supplying this district, compared to the number of cubic feet which are drawn from the service mains supplying point 6?
A. I do not.

Q. Have you ever calculated the volume of gas which is delivered or could be delivered during 24 hours to any one of the points outside of the stations where you have taken readings as set down upon this chart, Complainant's Exhibit 345?
A. I have not.

6235 Q. Have you ever done that for any point or section of the city?
A. No, I have never had occasion to.

Q. Have you ever taken a point where your readings have shown that there has been no variations below the maximum of 2½ inches or below the minimum of one inch, calculated the volume of gas which was delivered to that point during any 24 hours, the diameter or carrying capacity of the mains, including trunk mains, service mains or whatever mains went to that point, and compared the result with the amount of gas and the size of pipe which would be delivered or ran to a point where the variations showed a maximum of over 2½ inch and minimum of less than one inch.
A. I have not.

Q. Now, will you take the chart of which you have the original, which is more easily read than the others, and point out to me the points where the readings were taken, where the pressure during the 24 hours at no time went up to 2½ inches and at no time fell below 1 inch?
A. The point at 38 West 125th Street shown by the yellow line, point No. 10.

Q. Is that the only one?
A. The point at 533 Lenox Avenue, No. 7, that is a brown line.

Q. Any other?
A. No; I don't see any others.

Q. The point 11, being 185th Street and Fort Washington Avenue, I presume obtained its gas from the same source as point 6, being on Bolton Road, did it not?

A. Yes sir,

Q. The point 9, 1911 Amsterdam Avenue, indicated by the blue line, obtained its gas from what source?

A. From the 132d Street station.

Q. Show me the blue line on this, will you? I cannot make out the difference?

A. Here it is (indicating on chart).

Q. And the ranges are of tremendous variation, are the readings at the station, the large line going as high as 6.9 inches, 6236 and the line reading maximum, 4.1 inch and a line reading maximum of 3.4 and the purple line of the Inwood station to which you have already made reference, reading maximum 3.2?

A. Those were the works' pressures, yes, sir.

By Mr. Mathewson:

Q. Those are the pressures, are they not, on the distribution mains from which services are taken off somewhere away from the station?

A. The high pressures.

Q. Station pressures on the transfer mains?

A. Oh, not the transfer mains, no.

Mr. Kirby: Mr. Fogg testified he made no readings of the transfer mains running from 132d Street to Inwood.

Mr. Mathewson: So I understood; or on any of the transfer mains.

Mr. Kirby: Well, I don't know. There is none on this chart.

By Mr. Kirby:

Q. By backing on the service mains you mean that is the initial pressure at which the gas leaves either here from a holder or from the holder station at Inwood?

A. That is the initial pressure at which the gas enters the distribution mains.

Q. Now, take Complainant's Exhibit 346. Looking at the territory plotted out on the upper right hand side of this chart, I notice that the mains from the 44th Street works run over as close to 14th Street and the East River, where the 14th Street station of the Consolidated Gas Company is located, as Third Avenue; do you know whether or not there are any mains which were not closer to that station than the yellow line indicated upon this map?

A. There may possibly be a connection to it at that point. 6237 My impression is that there is no main supplied by 44th Street station east of Second Avenue, so that quite likely there is a connection east of that point you speak of as far as Second Avenue.

Q. Do the mains or any other pipes, whatever you may call them, from the 14th Street station, interlock with those from the 44th Street station?

A. There are connections at points, yes.

Q. Can you indicate those points?

A. No, not definitely on this outline.

Q. On Complainant's Exhibit 348, giving the territory stated to be supplied from the 14th Street station, certain readings were taken at point No. 7, being 609 East 14th Street. On Complainant's Exhibit 346 certain readings were taken as to point designated on such exhibit as point 5, being 4 Irving Place. If point 7 on Exhibit 348 had been supplied from the 44th Street station as point 5 (No. 4 Irving Place) was supplied, is it your opinion that the variations in pressure at point 7 on Exhibit 348 would be any different or materially different from the variations at point 5 on Exhibit 346?

A. Assuming that the main system be extended to the point 609 East 14th Street?

Q. Yes, assuming that.

A. Yes, I think you would naturally assume that the pressure at 609 East 14th Street, then being farther removed from the point of supply or the works will be lower than it is at the present time, where it is directly outside of or within a short distance of the point of supply.

Q. The short distance of the point of supply being the distance from Irving Place to Tenth Avenue and 44th Street?

A. Yes.

Q. Point No. 5 (Irving Place) is supplied from Tenth Avenue and 44th Street, according to your chart, Complainant's Exhibit 346?

A. Yes; that's right.

6238 Q. No. 7 on Complainant's Exhibit 348, being 609 East 14th Street, is supplied, according to Complainant's Exhibit 346, from the 14th Street plant?

A. Yes, sir.

Q. Being 14th Street and the East River?

A. Right next to it, in fact.

Q. Now, I ask if 609 East 14th Street was supplied from the 44th Street works the same as No. 4 Irving Place is, whether or not it is your opinion that the variations in pressure at 609 East 14th Street would not be very close and similar to those now indicated by you at No. 4 Irving Place?

A. And I replied that I would naturally assume that inasmuch as point 609 East 14th Street would, after the main system had been extended, be at a greater distance—the point would be at a greater distance from the source of supply, that the variations might be greater.

Q. The difference in distance of 609 East 14th Street from 44th Street and Tenth Avenue, and No. 4 Irving Place from 44th Street and Tenth Avenue, would be but a very small amount, would it not?

A. 609 East 14th Street, I should assume about ¾—possibly a mile from 4 Irving Place, Second to Third Avenue, First to Second, Third to Irving Place, possibly a mile. I think I might say about ¾ of a mile, in my judgment.

Q. How far is No. 4 Irving Place from the works from which it obtains its gas, the trunk main from which it obtains its gas?

A. Thirty blocks north and south and practically the full width of Manhattan at that point.

Q. Does that trunk main run down Third Avenue?

A. There is a trunk main down Third Avenue, yes.

Q. Is that the trunk main which supplies No. 4 Irving Place?

A. Some connection from that main.

6239 Q. Is there a connection to any other trunk main supplying Irving Place?

A. Not from that system that I know of.

Q. So that the distance from 609 East 14th Street would be from Third Avenue and not from Irving Place?

A. Yes, it would; the connection from the trunk main. You have referred, however, to variations in pressure between Irving Place and the point mentioned.

Q. Quite so, and you have replied by taking the main distance of 609 East 14th Street as compared with No. 4 Irving Place?

A. Yes.

Mr. Mathewson: The distance is not very appreciable.

Q. And No. 4 Irving Place has to go to Third Avenue before it taps a trunk main?

A. A short block, yes.

Q. Your readings at 487 Broadway, being point 2, were taken from a service?

A. They were.

Q. At what point on that service?

A. At the head of the service before it enters the meter. All our gauges are so located.

Q. Do you know the size of the service main to which this service was connected?

A. I do not.

Q. Do you know the size of the trunk main to which the service mains was connected?

A. No, I do not.

Q. Where was the reading, No. 5 Second Avenue, being point 3, taken?

A. The gauge was attached to the head of the service.

Q. I presume that all of these readings then were taken at the head of the service before the gas entered the meter?

A. That is correct.

Q. And were the meters in all instances upon the ground floor or in the basement?

A. They were.

Q. And there was no separate service isolated for the purpose of taking these readings, was there? 6240

A. No service isolated especially for that reason, no.

Q. Now, were these various places houses or stores or what?

A. Both. Some apartments, some stores; the basements of large stores in some cases.

Q. During these readings did you take care to see that no gas was being used by the occupants of those stores or apartments or houses?

A. Oh, no.

Q. So that this indicates the pressure in the gas which was flowing through the meters and not through the house and being burned according as the desires of the occupants of the building demanded?

A. That indicates the pressure at the head of the service before it enters the consumer's meter which I think is a very close indication of the conditions of the service mains.

Q. Did you make any readings at identical times to ascertain what change might be made in the pressure owing to the consumption of gas in the particular apartment or store or house, upon the service of which you had your pressure gauge?

A. Throughout the apartment, throughout the building?

Q. Yes.

A. I have never done so.

Q. Now, point 6 is 317 West 42d Street. That is very close to the gasworks, is it not?

A. It is within a comparatively short distance of the gas-works. It is between Eighth and Ninth Avenues in 42d Street and the gasworks are located at 44th Street and Tenth Avenue.

Q. There are other works at 42d Street, are there not?

A. The 42d Street station.

Q. And gas is delivered from the 42d Street station, is it not?

A. Yes.

Q. Do you know whether or not the gas delivered from the 42d Street station runs through mains which are at given points connected with or interlocked with the mains from the 44th Street station?

6241 A. There are connections undoubtedly very often inserted so that in the event of its becoming desirable at any time the gas of one station could be truned into the mains of another where they are within the same general locality—the same general district.

Q. Do you know whether or not those valves are closed or were closed on the 16th day of January, 1907?

A. I know that their normal condition is closed and I know of no special case or no special reason for them having been opened since that date. They are supposed to be closed. I believe they are.

Q. Have you any record, or are you familiar with any record which would show on which days they were closed or were open?

A. I am.

Q. Can you tell me whether they were open at any time duringq the year 1906?

A. Not without looking it up.

Q. Can you tell me whether they were open on the 17th of January, 1907?

A. I am quite positive that they were not.

Q. Are you positive they were closed on the 16th day of January, 1907?

A. Equally so, I say I know of no special emergency whatever that would require their having been opened.

Q. The pressure from the works at 42d Street is not as great as that from the works at 44th Street, is it?

A. No, it is not.

Q. So that if point 6, 317 West 42d Street, had been supplied from the 42d Street works, the maximum pressure registered at that point would have been less than was as registered upon this chart, Plaintiff's Exhibit 346, would it not?

A. I can't answer that without referring to the other profile.

Mr. **Mathewson**: It would be nearer 42d Street station than to 44th. You would have to account for that proposition.

Mr. **Kirby**: About one block.

Mr. **Mathewson**: Yes.

6242 A. I believe there would be a very slight difference in pressure if that were done.

Q. And a decrease in the maximum?

A. A very slight decrease. A difference of .2 between district pressure and works pressure at that time, five o'clock, the maximum.

Q. Do you know the average size of the service main at which the services going to point 6 of Exhibit 346 was attached?

A. 16-inch main.

Q. And is 16-inches the usual size of your service main?

A. There are a great many mains, service mains, possibly not above 16 inches in diameter, but it is not an unusual condition at all.

Q. How long is that 16-inch main? Starting at the works I presume it runs to what point?

A. My recollection of that 16-inch main is that it starts at the works and runs down to either Tenth or Eleventh Avenues and east on the north side of 42d Street.

Q. And through 42d Street to what point?

A. It continues right east in 42d Street I think to Lexington Avenue or Third Avenue.

Q. And then down Third Avenue?

A. It connects into a main that is running down Third Avenue, possibly. I am not sure that it does continue to Third Avenue. If it does continue it evidently connects into the 16-inch main which runs down Third Avenue.

Q. And there is no smaller main upon 42d Street?

A. Yes.

Q. From which the services were taken?

A. Of that station?

Q. I mean from this station?

A. The point supplied from that station? That I don't know. I am not sure.

Q. In other words, it is your impression that you connect your services all into this 16-inch main which runs across 42d 6243 Street to Third Avenue, and then goes into a main of the same size running down Third Avenue?

A. I know we connect our services into it; the mains generally on the chart are connected into it so it is therefore a service main.

Q. Do you know of any other mains from those works connecting into the 16-inch main on Third Avenue?

A. I believe there is another main going east in 46th Street from the works which connects into the same 16-inch main at Third Avenue.

Q. The size of that main running through 46th Street is what?

A. 30 inches.

Mr. Mathewson: He said he wasn't sure that this did connect with the Third Avenue main.

Q. It appears by Exhibit 346 as 12 inch; which is correct?

A. You have asked me about——

Q. I am not sure about this—I am not trying to mislead you at all. Is that black (indicating); is that 30 inch?

A. That is black.

Q. Is that black?

A. That is black, yes.

Q. Then your impression is that there are two mains running from the 44th Street works across to Third Avenue; a 30-inch main through 46th Street and a 16-inch main through 42d Street?

A. Yes, sir.

Q. And this 16-inch through 42d Street had directly connected to it the services upon which you took the readings of point 6, being 317 West 42d Street?

A. Yes, sir. Regular service main, service connected to it at that point.

Q. Now, will you take the pressure as given at point 5, being 4 Irving Place, and tell me if I am right in stating whether the maximum of that reading is 2.6 inches.

A. You are right, yes.

Q. And that if that maximum point were brought down to 2½ inches the minimum would then be as high as 1.9 inches?

A. It is impossible to state that. The maximum that you
6244 refer to is during the hours of least consumption, it is only
for a momentary peak, and the minimum you refer to is the
lighting hour.

Q. But if there were a general reduction of the pressure taken at this point of .1 of an inch the maximum would be 2½ and the minimum 1.9, would it not?

Mr. Mathewson: If you are assuming the reduction would be uniform all the way through after you reduce the pressure at any single point——

Mr. Kirby: I am.

A. Assuming that, yes.

Q. And we will take point 2, 487 Broadway, indicated by the blue line, I find the maximum for that is 2.2 inches?

A. Yes, sir. No, I guess we were higher than that there.

Q. It is 2.4?

A. Yes.

Q. And the minimum for that is 1.45 inches, so that if you drop the minimum reading at point 2, 487 Broadway, down 1-10th of an inch, that reading would still be as high as 1.35, would it not?

A. If you drop this peak only.

By Mr. **Mathewson**:

Q. What peak?

A. (No answer).

Mr. **Kirby**:

Q. If you drop the peak indicating the minimum reading at Broadway during the 24 hours, at No. 487 Broadway, being point 2 upon Complainant's Exhibit 346?

A. The pressure would then be 1.35 inches.

6245 Q. If we take point 3, being No. 5 Second Avenue, indicated by the green line, we find the highest pressure during the 24 hours is 2.25 inches?

A. That's right; yes, sir.

Q. If in this case we drop the minimum 1-10th of an inch we still have reading of 1.4 inches as the minimum?

A. That is correct.

Q. If we take point 7, being 108 West 34th Street, indicated by the yellow line, we have a maximum of 3.1 inches, have we not?

A. That is right.

Q. And a minimum of 2 inches?

A. That is right.

Q. And if we drop the maximum point to 2½ inches, that is .6 of an inch, our minimum point would be 1.4 inches, would it not?

A. It would be if we were dealing with that pressure alone and could deal with it alone and not consider these other pressures that would be affected at the same time.

Mr. **Mathewson**: What would become of your other pressures, Mr. Kirby?

Mr. **Kirby**: I think I understand, Mr. Mathewson. I think we will make it very clear even to you.

Q. If you take point 8, indicated here by the violet line, we find the maximum to be 3.35?

A. 3.35.

Q. And the minimum of that violet line is 2.1 inches?

A. Correct.

Q. Now, if you drop that maximum down to 2½ inches, which would be 8.15——

A. That is right.

Q. Our minimum would be 1.25, would it not?

Mr. **Mathewson**: That is another matter, Mr. Kirby, entirely.

A. Assuming an entirely impossible condition, it would be, yes. I have to assume that. My own experience teaches me that it cannot be done. Putting it that way, it would.

6246 Q. The points of which I have just made reference, outside of points 6 and 4, point 6 is 317 West 42d Street is close proximity to the works, and of which we have spoken, and point 4 is 879 Eighth Avenue, being at the corner of or close to 55th Street, and took the point 8, at 119 East 47th Street, which is the highest maximum reading, and dropped all of the pressures at these points, with the exception of points 6 and 4, so that the maximum reading at point 8 is 2½ inches, is it not, a fact that the pressures at all of these points are within 1 and 2½ inches?

A. I understand by that that you eliminate these two pressures Nos. 2 and 3.

Q. I do not. I yield 6 and 4.

A. And you ask me if by dropping the pressure indicated by the line No. 8 in violet——

Q. Yes.

A. To a point that would bring it under——

Q. No, to .25.

A. That all the pressures would be within 1 and 2½ inches?

Q. Yes?

A. No.

Q. Now, point 3 would be how much below one inch?

A. Impossible for anybody to say.

Q. Point 4 would be how much below one inch?

A. That is impossible, too.

Q. In other words, you are not prepared to state that if the pressures at the point from which the gas is sent into any district, the pressure at the point from which came the gas sent into any district, were reduced so that the maximum reading in that district were brought down .5 of an inch that the readings at the other points in that district would not be correspondingly decreased?

A. I am not prepared to say that at all. The conditions vary, the conditions of consumption, the points are all scattered throughout the districts, the same conditions cannot possibly apply. A 6247 reduction might be effected of ½ inch at one point and it does not follow it would be so effected at another point in the district.

Q. Then how do you endeavor to regulate pressure to keep within any limits whatever?

A. By endeavoring to maintain a predetermined pressure at some point in the district, keeping the pressure at that point entirely uniform or as near uniform as can be kept, and having that point so located that it will be to a certain extent the indication of the pressures throughout the balance of the district supplied.

Q. Will you point out to me on these exhibits that point?

A. I will.

Q. Take Complainant's Exhibit 346?

A. The pressure maintained on this district by means of an electric indicator is shown by line No. 5.

Q. That is No. 5 Second Avenue?

A. No, it is 4 Irving Place, if I have not misread it.

Q. 4 Irving Place—you are right.

A. The line follows here (indicating).

Q. Now, we will assume that the pressure at 4 Irving Place during this day instead of having a minimum of two inches had not by your electrical indicator shown to you to be as high as that and was brought down so the minimum would be one inch, what effect would it have on the rest of the system?

A. That is only a matter of speculation. I believe that the effect on the rest of the system would be to reduce that comparatively to the same amount as indicated there now, taking that point as the guiding point.

Q. And if that had been done would the readings at No. 4 Irving Place have been 1 inch and 2½ inches?

A. If this peak had been brought down to 1 inch?

Q. Yes?

A. It would.

6248 Q. And would the readings at any of the other points in the district have been brought down?

A. They would.

Q. How would you have reduced the pressure at 4 Irving Place; by reducing the pressure at the 44th Street station?

A. Yes, sir.

Q. Then I was not speculating quite so much after all, was I?

A. You have not considered bringing the pressure of four inch to one inch. You are bringing this down to practically nothing. It is something we cannot determine. Below one inch at any rate. I have said it is impossible to determine just what the fall would be. By taking some other point, I believe we can approximate it by taking the central point on which we are now regulating, but that is not the one you refer to.

Q. The place of reduction of pressure is the point at which the gas goes out and that is what we were having reference to when I asked the question.

A. I did not understand that that was it.

Q. Now, turn to Complainant's Exhibit 347 which states that—that gives the territory supplied by the 42d, 63rd and 65th Street stations. Is there any method by which you can state what section of this territory is supplied by any one of these stations?

A. No, there is not.

Q. Do the pipes *form* any one of these stations interlock the pipes from any other station?

A. From the same general arrangement I have already described, yes.

By Mr. Mathewson:

Q. What do you mean, if you do not mind stating? I am not clear on that?

A. Well, I can probably make it clearer in a general way. The territory supplied by the competing companies, the old constituent companies of the Consolidated Gas Company, were regulated 6249 by certain boundaries in certain parts of the city and since that time an effort has been made to connect the various main systems up so as to reduce the areas supplied by any one station, with the idea of forming as far as possible a more uniform pressure regulation throughout that district.

By Mr. Kirby:

Q. You do not seem to have been very successful at point 4 on this map, being 145 West 69th Street, do you?

A. That is a point near the works where it is necessary to carry a high pressure in order to maintain satisfactory pressure at other points throughout the district.

Q. Do you know the size of mains from which the service at point 4 is taken?

A. I do not.

Q. You do not know whether it would be possible to supply point 4 from 42d Street?

Mr. Mathewson: Run a special main, I suppose.

Mr. Kirby: Yes, you might have to run a special main.

Mr. Mathewson: Yes. That would make a capital expenditure if we proceeded on that basis that would make gas cost five dollars.

Mr. Kirby: Yes, it might cost ten dollars, but it is not likely.

Mr. Mathewson: It would be quite likely.

Mr. Page: Under New York conditions.

Mr. Mathewson: Yes.

A. That point already is in the district which is to a certain extent supplied by the 42d Street station.

Q. But it is close to the 63rd Street station?

A. Oh, yes, just north of 65th Street station.

6250 Q. Yes, 65th Street station; and so, as you have just stated, the main to that immediate district comes from the holder at 65th Street?

A. Yes, that's right.

Q. And point 9, 145 East 65th Street, shown by the orange line, is practically under the same conditions as point 4, is it not?

A. Point 9 is at the corner of 65th Street and Lexington Avenue.

Q. And is there a transverse main or is there a supply main which runs across to 65th Street?

A. There is, yes, sir.

Q. And that main is of the size of 20 inches?

A. It is.

Q. And when it reaches Second Avenue it branches off and runs down that avenue as far as 34th Street?

A. Is it so shown in the map?

Q. Yes.

A. Yes.

Q. Where is the point in this section shown by Complainant's Exhibit 347 where you take the pressure readings to give you an indication as to whether or not the pressure throughout the system is greater or less than it should be?

A. Where is the point?

Q. Yes.

A. Point 10; 565 Park Avenue.

Q. Indicated by the yellow line?

A. Yes, sir.

Q. Now the maximum pressure at point 10 during the 24 hours was 2.6 inches, was it not?

A. It was.

Q. And if that pressure had been uniformly reduced .1 of an inch throughout the entire 24 hours, is it not a fact that the only points which would have been at any time above 2½ inches or at any other time below one inch, point 4 being 145 West 69th Street, to which we have made reference, and point 9, 145 East 65th Street to which you have also made reference?

A. No, sir, there is another point.

Q. Which one is that?

A. This one.

6251 Q. What is that?

A. The pressure at 420, I think the number is—408.

Q. 408 East 63rd Street?

A. That is right.

Q. And 408 East 63rd Street is upon a 36-inch main running from the works——

A. It is attached to this main here, 20-inch.

Q. That is point 9?

A. 408 East 63rd Street is right here (indicating); that is attached to the 20-inch main.

Q. Well, whatever it is. And point 11 is at a service running from the same 20-inch main as that to which the service of point 9 is connected?

A. It is, yes, sir.

Q. Now, I presume that in the pressure readings taken in this section, as in the readings taken in the other sections, you made no general inquiry as to whether any gas was being taken off by consumers on the service to which you had your pressure gauge attached during the time in which the readings were being made?

A. I made no special inquiry for that purpose; the services are all in use to a certain extent.

Q. Now, we come to Complainant's Exhibit 348, stated to indicate the territory supplied by the 14th Street station, that station being at 14th Street?

A. I want to correct that map before it goes any further. They have inadvertently marked "23rd Street," and the proper boundary should be 34th Street.

Q. From the plotting of the territory stated to be supplied by the 14th Street and East River plant I notice that your mains run clear across the city as far west and further west than Tenth Avenue, so that the part of the territory adjacent to Eleventh Avenue and Twelfth Avenue and 14th and 15th Streets, and further north are supplied by these works; is that so?

A. That is so, yes.

6252 Q. Now, I notice that you have put in evidence here no territory such as might be supplied by the holders at 18th Street. Does the gas from the 14th Street station supply the district contiguous to the 18th street holders?

A. Yes, it does. The 18th Street holders at present are merely used to back up the pressure in the mains at certain hours of the day, and are not a very important factor in the pressure regulation.

Q. And then adding this marginal street on the north of 34th Street we find that the section served by these works is in some parts the same as that served by the 44th Street works?

A. In parts, yes.

Q. Upon this exhibit we have readings given at point 7, being 609 East 14th Street, and to which we made reference in examining the chart showing the territory supplied from the 44th Street works. The reading at point 4, being 148 West Houston Street, was taken upon the service attached to what size mains?

A. I don't know.

Q. I note by reference to the key upon this chart that the 18-inch main is indicated by a red line with a green line thereon.

A. That is a broken red.

Q. A green line?

A. Yes, sir.

Q. Is the line which runs along Houston Street and Wooster Street an orange line? Or what size main is it? That is what I am after, and I cannot tell from here?

A. What street?

Q. On Houston and Wooster Street-?

A. I don't find Houston Street is down here.

Q. Hudson Street and Wooster?

A. In Hudson and in Wooster those are both 16-inch mains.

Q. Where is the point in this district where you take those pressure readings by which you judge the pressure to be supplied to the entire district?

A. Those are regulated to a certain extent by an indicator at No. 4 Irving Place also.

Q. Well, by that you mean the readings indicated by the red line on this chart?

A. The red line.

6253 Q. Now, the readings taken at point 3, 420 East 18th Street, are upon a service attached to what size main?

A. That is attached to a 16-inch main.

Q. Which main runs clear across the city to Tenth Avenue, does it not?

A. Yes, not full size—it reduces to 12.

Q. If the pressures at 4 Irving Place indicated by the red line were reduced so that the maximum would be less than that which is here indicated by .35 of an inch, would that not with a corresponding reduction of pressure throughout the system——

A. Do you mean three and one-half tenths?

Q. Yes; bring the readings at one point, point 7, which is 609 East 14th Street, and point 3 which is 420 East 18th Street, so that at no point would you be higher than 2½ inches or lower than 1 inch?

A. Assuming that it could be done, yes.

Q. Now, turning to Complainant's Exhibit 349, I ask if you can tell me the size of the main to which a service was attached supplying point 4, being 408 East 63rd Street?

A. That is the same point that appears on the other chart, 20-inch main.

Q. Coming to Complainant's Exhibit 350, I find that those questions which I would ask you in reference to point 3, 317 West 42d

Street, I have already covered in the examination of the other charts so I won't take up the time of repeating them now. Coming to Complainant's Exhibit 351, showing the districts supplied from the Inwood station, I note some rather interesting elevations stated upon it. For instance, we have here point 1, 185th Street and Fort Washington Avenue, indicated by the brown line, which is the line giving the minimum reading, having an elevation of 270 feet. Let us assume that point was at mean sea level rather than 270 feet.

Mr. **Mathewson**: In other words, bring it down to the Hudson River?

6254 Mr. **Kirby**: Yes, we will take it down to the Hudson River. That is pretty close to sea level at that point, I guess.

Q. And I ask you if you do not consider that the pressures as shown by this chart would have been greatly in excess of those as they are here set down?

A. The question is not entirely clear to me.

Q. Well, we have a pressure here, we will go at it in another way. We will get at it. The minimum pressure shown by the brown line is .7 of an inch?

A. Yes.

Q. Now, an elevation of 270 feet, I take it, would produce a pressure in such illuminating gas as furnished here in the city of about 1.35 inches, would it not?

A. As compared with a main at sea level?

Q. Yes.

A. More than that.

Q. Well, how much would it be?

A. Well, you have to assume specific gravity to calculate properly.

Q. Well, assume specific gravity. You are familiar with the distribution of gas and matters of that kind. Assume we have an elevation of 270 feet and we will assume that you are taking pressure readings at sea level and another one at 270, and there is nothing except elevation to assist in the pressure, and I ask you what it would be at 270, as compared with sea level?

A. About 1.6 inches.

Q. Then if there had been no elevation at this point, and the conditions otherwise had in no way influenced the reading, our reading instead of being .3 of an inch would have been what?

A. .3 of an inch?

Q. That is right, isn't it, .3?

A. .7.

Q. .7 inch?

A. The reading would have been what had that happened?

Q. Yes.

A. As I understand your question you simply eliminate 6255 this pressure chart and place that particular point down at sea level?

A. That is all. And it would reduce it from its present pressure as shown there by 1.6 inches at that point only.

Q. And are these other points indicated by the various elevations—129.70 and 201.67 feet, in the same proportion, that is, the proportion which they bear to 270, 270 having a pressure of 1.3 inches; is that what you gave these?

A. The pressure at the height of 270 feet, is 2.9 inches at the time stated. The loss would be 1.6 inches by reducing the elevation from 270 feet to zero.

Q. And the loss in the other instance would not be as great, but would be in the proportion which the elevation of those other points bears to 270 feet, the elevation of point 1?

A. The loss would be in direct proportion to their elevation above sea level.

At 1 P. M. a recess was declared until 2:15 P. M.

After Recess.

Oscar H. Fogg resumes the stand, and further testifies:

Cross-examination by Mr. Kirby:

Q. I notice that you took pressure readings at the corner of 120th Street and Broadway, being the readings marked in violet on Exhibit 345?

A. Yes, sir.

Q. Do you know the elevation at that point in respect to the elevation at Columbia University?

A. That is at the Columbia University in one part.

Q. That reading was taken upon a service connected to what main?

A. The main on the Broadway side.

6256 Q. Looking again at Exhibit 345, let us suppose that a consumer at point 5, being 176th Street and the Boulevard, desires to cook an evening meal at 4:45; what would have been the operation of a gas stove from that time until quarter of six, the pressure between those times varying from .9 of an inch to .7 of an inch?

Mr. Mathewson: Isn't that rather an extraordinary question? This man is not qualified as an expert on gas stoves and how long it would take him to cook a steak, I suppose, with the pressure varying like that. Is not that question outside of anything this witness has testified respecting? I think so. I think I shall have to object to it as speculative and not proper cross-examination.

Mr. Kirby: If he does not know he can say so. If he does know I would like to hear.

Mr. Mathewson: I do not think it is cross-examination if he did know.

The Master: He may answer it if he knows.

Q. Do you know?

A. No, I do not.

Q. You have stated you are acquainted with the subject of gas distribution in Yonkers and other different localities. Have you noticed such extreme variations in pressure exhibited upon the charts which have been put in evidence here; have you noticed in these localities such extreme variations in pressure?

A. Yes, I have.

Q. And has there been any effort on your part or on the part of those connected with the companies that you were then associated with to correct such variations?

Objected to as immaterial and irrelevant.

Question allowed. Exception.

6257 A. As a matter of pressure variation, an effort has always been made to reduce the variation in pressure as far as it was possible to do so.

Q. From such experience and such reading as you may have done upon the subject, do you gather that it is advocated; that any such extreme pressure on the mains as shown in these charts, do you gather that it is advocated?

Mr. Mathewson: By whom?

Q. By those in charge of the companies with which you were connected or by the authors of such text books as you may have read upon the subject?

A. No. Pressures appear on our charts which are necessarily in excess of what would be considered an efficient and satisfactory pressure. Because of the proximity of the points to the works, the conditions of elevation, their regularities of consumption, those higher pressures occur.

Q. Have you, or has the Consolidated Gas Company to your knowledge, ever made any use of district governors for the purpose of regulating pressure?

A. They have not, to my knowledge.

Q. I believe you were present when Mr. Forstall testified, were you not?

A. I was, yes.

Q. You heard the testimony of the effect of pressure upon the efficiency of the use of gas, did you not?

A. I did not follow it very carefully. I have heard his testimony in a general way. I don't know that I recall that.

Q. Is it your opinion that any of his suggestions about check burners, by turning down burners, would effectually protect the consumer against waste of gas at such high pressures as shown in your charts?

6258 Mr. Mathewson: That is objected to as altogether too general. If you desire to call the witness' attention to any particular statement of Mr. Forstall's and ask him if he agrees or disagrees with this one proposition, do so, but to deduce what the conclusions were and ask whether he agrees with general conclusions that you state, I do not think it is proper or fair.

The Master: I think that is a fair suggestion, Mr. Kirby, so long as the record is printed.

Mr. Kirby: It won't take long to get at it.

Q. I call your attention to Complainant's Exhibit 348, and especially to point 7 thereon, being 609 East 14th Street; there the variations in pressure are shown by the violet line, and where between the hours of 4:30 o'clock in the afternoon the pressure rapidly decreases to 3.35 inches, and then as rapidly within the next half hour increases to 4.7 inches?

A. The next hour.

Q. 33.5; then within the next half hour increases to 3.5 inches, then in the next half hour rapidly rises to 4.7 inches, then within the next fifteen minutes drops to 4½ inches, then remains constant for half an hour, then within the next three-quarters of an hour rises to 4.65 inches, from 7:30 to 9:30 remains practically constant at 4.7, then within the next half hour rapidly drops so that at ten o'clock it is at 4.35 inches, then in the next half hour to 10:30 drops to 3.55 inches, the next half hour again rapidly drops to 2.8 inches.

Q. Now, I ask you, assuming that the consumer had his burner properly adjusted by turning the stop cock, so that it was giving efficient light at half past four, what sort of a light would he have during the hours from half past four to half past ten if he did not make any adjustment to his stop cock.

Mr. Mathewson: If he did not exercise intelligent, common sense, in other words.

6259 Mr. Kirby: We will assume that that is what it is, if you desire to.

Mr. Page: That is, that he should exhibit the common sense which the gas company fails to exhibit.

Mr. Mathewson: And which the gas company cannot possibly exhibit.

A. I can't tell you what sort of a light he would have. His gas pressure at that point is necessarily subjected to the extreme variation, because of the extreme variations that occur in that district, because of its proximity to the works.

Q. Now, do you not consider that that variation would be less if the service were attached to other than the large-size main to which you have testified it is attached?

A. If there is another main there which carries a less pressure.

Q. Do you know whether or not there is another main there which carries a less pressure?

A. I don't think there is another main there—another district main there supplied by that station.

Q. You are not prepared to state that there is no other main there supplied from some other station, say the 44th Street station?

A. I have already stated that I do not believe the mains of the 44th Street station on that street go to Second Avenue.

Q. Might there be mains there from some other station than either 14th or 44th?

Mr. Mathewson: He says he does not know that there are.

Mr. Kirby: I have not asked him that question yet. If he does not know he can say so.

A. I don't know that there are.

Q. Now, we will assume that the consumer at this point is
6260 displaying this great degree of intelligence which has been
called upon——

Mr. Mathewson: Very slight degree.

Q. (Continuing.) Which is the standard set by Mr. Mathewson, which we will assume—he has fixed his meter at half-past four so that it is giving the proper illuminating efficiency, and will you tell me how many times he would have to adjust his cock on his burner so that it would continue at that efficiency until the hour of eleven o'clock, when we will assume he goes to bed?

A. No, I can't tell you that.

Q. Well, wouldn't it be at least thirteen times?

A. I should not consider it so. If you are prescribing for the highest efficiency and a very careful test of gas, where the most minute regulation is desired, he would have to change it as often as the pressure varied. I don't think that condition obtains anywhere in practical use.

Q. Then this point here is a most unusual and extraordinary point of pressure variations?

A. This point here (indicating).

Q. This point 7, 609 East 14th Street?

A. It is the general condition at points in close proximity to the works.

Q. So that if those intelligent consumers within close proximity of the works are to have an efficient illuminating power from their flame they would be jumping up and down thirteen or more times during the evening to adjust their flame.

Mr. Mathewson: You are assuming something that is not shown at all.

A. I don't think they would.

Q. Well, how many times? Here is the chart. You have heard Mr. Forstall tell us about how a man could go up and adjust his cock,
and what the pressure would be, and no matter what it is in
6261 the distributing main he can adjust it by turning down the
cock. Now, I will start at the time he has done that and goes and sits in an armchair and smokes a cigar, and what not, and the pressure goes up over an inch——

Mr. Mathewson: You also heard his testimony that those checked burners would work with pressures from 1 to 3 equally well.

Mr. Kirby: Yes.

The Master: Well, gentlemen, let the witness dispose of it.

Mr. Page: We are talking about adjusting it at the cock now.

A. You asked me a question that it is impossible to answer properly. In the first place, too much has to be assumed. None of us know that the man at this point is consuming gas at the time this variation in pressure takes place.

Q. Well, assume he is.

A. If he is not using gas it does not affect it.

Q. We will assume he is using gas.

A. If he is using gas at the time that the pressure is at its lowest point here I would say that he would get a fairly satisfactory condition if he had lit his gas at that time, and when the extreme hour—

the greatest increase came on, if he adjusted his burner at that point and left it alone——

Q. And left it alone when the decrease came afterwards?

A. Well, the decrease would not have started to come until half-past-nine at night and would not reach the lowest point until between eleven o'clock and midnight—about a quarter of twelve.

By Mr. **Mathewson**:

Q. He might be in bed that time, might he not?

A. I would expect him to be there.

6262 Mr. **Page**: There are some of us who sit up after half-past nine.

By Mr. **Kirby**:

Q. And so you would allow this intelligent man to sit in his chair while his gas increases in pressure from 3.25 inches to 4.7 inches?

A. I would not.

Q. When would he get up? When would he adjust it?

A. He would get up when he noticed——

Q. When would he notice it?

A. When he looked at his light and it was apparent to him.

Q. When would it be apparent to him?

A. At any time the pressure was increasing, probably. We will presume he is an intelligent man.

Q. At what point would it be apparent to him? We have this very large increase of nearly .2 of an inch? At what point along the increase would an intelligent man notice that?

Mr. **Mathewson**: Objected to on the ground that counsel is examining the witness on the subject of candle power, in which subject he has not been qualified and in which subject he has not testified to anything on my examination.

Mr. **Kirby**: I am examining on the point of the intelligent man.

Objection overruled; exception.

A. It might become apparent at any point between its lowest and its highest.

Q. And if it did then he would get up and turn it down?

A. I would expect him to, yes.

Q. If he were extraordinarily intelligent it might go up .2 of an inch and he would notice it?

A. If he were, yes.

Q. And he would get up and turn it down, and having that intelligence on the next increase would he not have another turning down? 6263

A. Providing he was sufficiently intelligent to note .2 of an inch variation, to note it on an ordinary open tip.

Q. So if he turned it down every time it increased .2, instead of being 13 times it would probably be 130?

A. No, I don't think so. There are not 130 variations of .2 during the lighting hours, on the chart.

Q. Well, I count 20 here. Did you make pressure readings on any other days than January 16th and 17th?

A. We take pressures at the points you have seen here, every day.

Q. And are these points well settled ones, where the tests are taken?

A. They represent the average conditions, yes.

Q. Have you any purpose in picking out these points instead of other points in the district?

A. None whatever.

Q. Do you endeavor to pick out points where the best or the worst conditions are shown?

A. No; merely to show the general conditions applying to the district.

Q. I presume that you endeavor to regulate other points?

A. Yes.

Q. And that being so it would be an effort to ascertain how great a maximum or how great a minimum there might be in the entire district?

A. Yes. We try to keep fully informed of pressure conditions throughout the district.

Q. So you would naturally seek to find a point where it would give you the greatest pressure in a district and also the point which would give you the least pressure in the district, would you not?

A. It would be far more important, and we do make a greater effort to keep in touch with the lowest points on the district than we do the higher.

Q. You also endeavor to keep in touch with the highest?

6264 A. We endeavor to keep in touch with all of them.

Q. When you say that these charts here probably show where the points were, you mean the lowest and the highest points where you would have the highest pressure in the inspection districts?

A. I think they would, in a general way, yes. There may be points where the pressure- are lower and there are undoubtedly points where the pressures are higher than shown on these charts. It does not amount to much I believe in either case what little variation or what difference between the points that we give would be.

Q. Have you the charts, Mr. Fogg, by which you plotted the curves on these exhibits?

A. I have.

Q. Will you let me see one of them, please?

A. Which one?

Q. The one we have before us is Complainant's Exhibit 348. Suppose we take the "intelligent-man" point, 609 East 14th Street, Point 7.

(Witness hands counsel a chart).

Q. The witness hands me a disc chart, which is from Bristol's recording pressure gauge?

A. That is right.

Q. And the red line upon which indicates the pressure reading at

Point 7 of Complainant's Exhibit 348, being 609 East 14th Street; that is correct, is it not?

A. That is correct, yes, sir.

Q. I notice upon this chart certain other minute variations. Have those minute variations been plotted upon this Complainant's Exhibit 348?

A. They have not.

Q. What have you done where——

A. We have plotted the mean or average pressure line, also disregarding the very rapid fluctuations of .3 to .4.

Q. Now, I notice here between the hours of five P. M. and
6265 six P. M. at least seven variations of over one-half of a tenth
of an inch, do I not?

A. Half of a tenth?

Q. I read the scale wrong. About .7 of an inch, do I not?

A. Yes.

Q. Are they indicated upon Complainant's Exhibit 348?

A. The chart exhibit 348 shows the pressures at the quarter-hourly points throughout the entire twenty-four hours—such variations as may occur between the fifteen minute points are not plotted or are not recorded at all. It would complicate I think the profile to such an extent as to make it useless to show what we have endeavored to show.

By Mr. Mathewson:

Q. You just treat your lines between the quarter hour points?

A. Simply taken those throughout the day.

By Mr. Kirby:

Q. So the variations during a period of fifteen minutes would not be shown, as set down upon the Complainant's Exhibit?

A. Any variation that might have occurred would not have been set down.

Q. And, as we have just found by referring to the chart from Bristol's record pressure gauge, such variations did occur in those instances?

A. If they occurred between the quarter-hourly points.

Q. They do, don't they?

A. These variations here, you mean?

Q. Yes.

A. You mean this uniform line of variation?

Q. Yes.

A. Oh, yes. Of course, that is constantly occurring.

Q. Do you know what occasions that constant variation?

A. No, I don't know definitely that in that case.

6266 Q. Do you know where this point is situated?

A. Yes, it is right close to the works.

Q. And you noticed between the hours of eleven thirty at night and five thirty in the morning there is practically no such jiggling or minute variation?

A. I do notice that, yes.

Q. Does that give you any clue as to what those minute variations might be due to?

A. I would say, from my observation of the charts entirely and without knowing the conditions within the works, that I believe it to be the variation produced by the unusually heavy draft upon the outlet of the governor or regulating valve at that time.

Q. How much larger is the scale upon the exhibits than that upon the chart from the recording gauge?

A. You cannot make any comparison of the scale between the two. You can take them separately. The chart on the gauge, the pressure scale, increases from zero to its full capacity. The chart as plotted in the profile is at a uniform rate of increase both as to the time and as to the pressures.

Q. Well, we have the time here, for instance; it is indicated along that curved line?

A. Yes, sir.

Q. And presumably the distance between each of the circular lines representing the pressure is the same, is it not?

A. I think you will find that on the first 15/10ths or 18/10ths the scale is just a trifle finer, a little more so than could be measured with a rule on the chart which you hold there. I had in mind a 20/31 chart. We have two types. The charts you have there is uniform all the way around as to the pressure divisions.

Q. In this uniform chart, which is the one to which we have been making reference, you have increased the scale upon the exhibit about how many times?

A. My whole chart has been increased in proportion a number of times.

Q. Twice, three, four, nine times?

6267 A. It is hard to say. I have not made any effort to increase it with any direct reference to this at all.

Q. In taking it off you must have known the number of times of increase so as to know——

A. We read here on the chart; we have made it a uniform rectangular scale here (indicating).

Q. And simply drawn straight lines between the points you plotted?

A. The points plotted have been connected for the sake of reference by a straight line, a point as mentioned here and at the half-hour the same; they are simply connected by a straight line to show the general tend of pressure at that time. Otherwise the points would merely appear as dots, and be hard to read—could not be read.

Q. Mr. Mathewson asked you yesterday (p. 6204): "Q. Mr. Fogg, was your attention drawn to Mr. Edgerton's testimony in reference to pressures that he took at certain points, and his argument that the pressure within the district or any particular district would be found within the boundary of 1.5 inches, or might be? A. Yes, it was." I call your attention to Mr. Edgerton's testimony, which you have stated that you read, and ask you if you can point out therein any results of the pressure taken by him which differ in any material way from those taken by you—you have read the testimony, and I take it you are familiar with what he testified to?

A. Yes, I think I read the greater part of it, of these dates. I have not seen any further testimony since. You ask me if from what I know of his testimony, the method of pressure taken——

Q. No, whether you, from his testimony and the pressure readings which he has placed in evidence, found any material difference from the pressure readings taken by you?

Mr. **Mathewson**: He only put in one or two points, or such a
matter, and he showed the pressure he got at those points.
6268 This witness has not testified that those pressures as he took
them were not correct. We can keep our pressure at one
point undoubtedly.

Mr. **Kirby**: I think the witness understands the question, and I think you do, too, Mr. Mathewson.

Mr. **Mathewson**: It seems to me quite obvious.

A. You mean the pressures we have taken at the same points that Mr. Edgerton has taken.

Mr. **Kirby**: Will you read the question, Mr. Stenographer?

The **Stenographer** (Reading): Whether you, from his testimony and the pressure readings which he has placed in evidence, found any material difference from the pressure readings taken by you.

A. Why, I don't see how any comparison can be made between them at all. Mr. Edgerton has taken pressures at five or six or possibly seven points, I think only five upon the Consolidated. If you want me to compare the conditions right at those particular points I can probably do that, or try to.

Q. Have you done so?

A. Yes, in some cases.

Q. And what do you find?

A. At those particular points I find the pressures are about as he has indicated them.

Cross-examination by Mr. **Burr**:

Q. Does the black line on Exhibit 349, showing the pressure at 408 East 63d Street, represent a main used for services?

A. It does.

Q. Now, you have shown on the mains to which services are
directly attached wide variations in pressure readings from
6269 .22 to .59 of an inch from 3 P. M. to 7 P. M. at 408 East 63d
Street?

A. Throughout the district? Yes, sir.

Q. Isn't that an exceedingly poor regulation?

A. I shouldn't consider it so.

Q. Are not these wide variations of pressure able to be corrected by using mains adequate to the demands upon them; that is, large enough to care for the draught at all points, without a variation greater than 1½ inches?

A. I believe if it were possible in any place to instal a main system that is theoretically perfect, the variations could be materially reduced.

Q. If I understand correctly, it is the variation in the pressure which makes the trouble for the intelligent consumer that we have been referring to, is it not?

A. Yes; if he considers it trouble.

Q. And can these variations of pressure in your opinion be obviated?

A. They cannot.

Q. You referred to the conditions of elevation, and I notice on these exhibits a note at the foot of each one reading: "Red figures at stations as shown on disc scale; usual elevations above mean high water." What did that mean?

A. That means that most of our *guages* are located at the street level or very close to it. That means that we have gotten from city records—the Highway Department—elevations throughout the city above mean high water and that we have plotted them as a convenience for reference on the map in red figures.

Q. Has it been your custom to plot these pressures taking into account the elevation at various points?

A. Correcting for the elevation and reducing the pressure?

Q. Yes.

A. No, sir.

Q. Referring to Exhibit 346, can you state how far it is from the 44th Street station to point 2 at 487 Broadway as shown on that map?

A. I cannot state definitely how far it is, no.

6270 Q. Well, approximately?

A. Oh, I would only have to guess for that. I would say two and one-half miles, maybe three.

Q. How long would it take a point as far away from the distributing station as No. 2 on that map to be influenced by a change in pressure at the distributing station?

A. It would respond almost immediately to any change.

Q. You stated in your direct examination yesterday that the pressure at some points decreased while at other points it increased,, did you not?

A. Points in one district, yes, I did.

Q. To what extent did any difference depend on the distance of the testing station from the distributing station?

A. Oh, I don't know that it depends upon the distance at all. I think it depends more on the consumption.

Q. Comparing the points 7 at 108 West 44th Street and 8 at 119 East 47th Street, how far is each of these points from the distributing station at 44th Street and the North River, approximately?

A. I should say that point 8 at 119 East 47th Street is probably a mile from the station. It is the difference between Tenth Avenue and Lexington.

Q. Are not these distances nearly the same?

A. Yes, I think they are, within a comparatively short distance.

Q. Now, by referring to this Exhibit 346, you will notice for the entire twenty-four hours on January 16, 1907, the pressures at these points were almost identical, were they not?

A. There is not very much difference between them—a matter of .2 in the lighting hour.

Q. Comparing the pressures at these two points with the pressure at the distributing station, did you not find that the pressure at these two points varies directly with the pressure of the distributing

6271 station, excepting that the pressure is relatively less at these far-off points and that the change of pressure takes place a little later due to the distance from the distributing station?

A. Referring to these two points we have been talking about?

Q. Yes.

A. Yes, I think they do.

Q. Comparing station point 2 at 487 Broadway, and point No. 3 at 5 Second Avenue, how far is it from the 44th Street station, approximately?

A. 487 Broadway I have already guessed at. That is only a guess.

Q. By comparison with the other station?

A. I think if anything 487 Broadway is a trifle further from the works than 5 Second Avenue.

Q. Do you not find that the point 2, which is a little further from the distributing station than point 3 has at its minimum point a lower pressure than point 3?

A. About half a tenth, yes.

Q. Do you not find from the chart that your pressures at point 2 and point 3 were less than the pressures at points 5 and 7 at 4 Irving Place and 108 West 34th Street respectively, which points are nearer the distributing station than points 2 and 3?

A. No, sir.

Q. What were the pressures there?

A. At what particular hour?

Q. Say at five o'clock?

A. At five o'clock I find point 2 is very much lower than point 7.

Q. Make it seven o'clock?

A. Still lower than point 7.

Q. Comparing the size of the mains at points 7 and 8, point 7 at 108 West 34th Street has according to the chart a 12-inch main and point 8 has a 16-inch main, has it not?

A. There is no size of main indicated on 34th Street.

Q. What is your knowledge or intimation on the subject?

A. About the main in 34th Street?

6272 Q. Yes.

A. I don't know just what size it is.

Q. The boundaries down in this district extend from 79th Street to Grand Street and from the North River to the East River?

A. Yes, sir, they do.

Q. And this exhibit shows the pressure varies there considerably, does it not, dependent on the distance of each testing station from the distributing station?

A. In this particular case it is a fact that the lowest pressures, No. 2 and No. 3, are at the greatest distance from the works.

Q. Now, assuming that there were more distributing stations in the territory served from the 44th Street station and that the distances showed much less differences from the distributing station than at present, would not the pressures at these points show much less differences from each other than at present?

A. I don't think I can answer that question.

Q. You mean it is not clear enough or not definite enough?

A. No, not in its present form; and as I understand it I do not believe I can answer it at all. I will try to.

Q. Yes, what is the best answer you can make to that?

A. Possibly you can put it to me in a little different shape. I would not try to answer it at all as it is.

Q. Assuming there were no more distributing stations and less distance to cover, need there be less difference in pressure?

A. Would there be less difference in pressure?

Q. Yes.

A. Yes, I think there would.

Q. Now, I understood you to say a moment ago in response to Mr. Kirby that you had no experience with regulating devices. Am I correct in that?

A. In regard to the Consolidated Company's mains, you mean?

Q. Yes.

6273 A. As I remember it, Mr. Kirby asked about an automatic district governor.

Mr. Mathewson: He asked whether the company here used that, and Mr. Fogg said no.

Q. Have you had any experience at all with pressure regulation, with regulating devices of any kind?

A. District devices?

Q. Yes; automatic governors?

A. As set in some parts of the street main system away from the works?

Q. Yes.

A. No.

Q. Then you cannot say whether it is possible to reguiate the pressure of gas without impeding its flow by means of diaphragm pressure regulators?

A. I know that diaphragm pressure regulators are employed for the regulation of gas pressures.

Redirect-examination by Mr. Mathewson:

Q. You were cross-examined respecting qualifications, and I will ask you whether you were in the employ originally of the United Gas Improvement Company of Philadelphia?

A. I was.

Q. And as Constructing Engineer had you any charge of the designing or the contsruction of the distributio- system at Ocean City?

A. I designed the works and the distributing system at Ocean City, had charge of their construction, put the plant into operation there upon its completion, and was superintendent for a time after the plant was in operation.

Q. Were you in charge of street main construction for the Mt. Vernon Company?

A. Of a section of the large contract work that was done up there before their merging with the Westchester Lighting Company; yes.

6274 Q. In 1904 you were employed by the Consolidated Gas Company as engineer to supervise the construction of the 36-inch main regarding which you have testified?

A. I was; yes, sir.

Q. Between the 111th and 132nd Street Stations?

A. Yes.

Q. What have been your general duties for the company since that?

A. Since that time I have had charge of the draughtsmen and the record clerks of the department of mains and services. In addition to that I have had the gen-ral inspection of all subway and tunnel work in New York City, in particular in relation to the protecting of this company's mains. I have also had charge, as I testified, of the gauge pressure stations, of which there are seventy-four maintained throughout the city, and from time to time I have been detailed to the supervision of special work, with regard to street mains.

Q. Are you a member of the American Gas Institute?

A. I am; yes, sir.

Q. And of any engineering society?

A. I am a member of the Illuminating Engineering Society, yes.

Q. Have you ever tested these recording gauges which are used by the Consolidated, as to their accuracy?

A. Before we adopted these gauges for general use throughout the city I made a very extensive series of tests with the device that we now use to determine within what ranges of pressure they are entirely accurate, and I found that they we*er* thoroughly reliable and correct.

Q. You found that they responded instantly to variations in pressure?

A. I did.

Q. Now, as to these different divisions of the city, I understand that the divisions are separated from each other by valves or something of that sort, in normal condition, is that correct?

A. That is correct; yes, sir.

6275 Q. And is that for the purpose of equalizing the pressure or establishing districts in which you can get as uniform a pressure as possible?

A. Its purpose is to reduce the district supplied by each station in order to effect the most uniform pressure regulation possible.

Q. Have you ever claimed if you select any one particular point that you could not keep the pressure at that one particular point between 1 inch and 2½ inches range?

A. No, sir, I have not.

Q. Mr. Edgerton testified that he observed the pressures at those points that he thought likely to give the greatest difference of pressure, the highest point and the lowest, and those most remote as well as a few nearer the works; did you find that in fact he did select such points for his experiments?

A. I did not.

Q. Did you find in actual experience as shown by these charts, that the ranges of pressure were actually very much greater than he showed for those particular points which he took?

A. I did, yes, sir.

Q. And as a matter of fact the highest elevation which Mr. Edgerton took was about 136½ feet, wasn't it?

A. The elevation where Mr. Edgerton took this pressure was at Columbia University, in room 206, Fairweather Hall—that is right opposite 118th Street on the Amsterdam Avenue side. The elevation of the intersection of 118th Street and Amsterdam Avenue is 126½ feet. Mr. Edgerton stated in his testimony that the point he took was about ten feet above the street level. That would make it about 136½ feet; that is the maximum.

Q. As a matter of fact, the mains of the company supply a point of elevation of over 200 feet?

A. They do.

Q. Do you know what the elevation of 186th Street and Fort Washington Avenue is?

A. At 185th Street and Fort Washington Avenue there is an elevation of 270 feet.

6276 By Mr. **Kirby**:

Q. All set down in the charts?

A. Not all of them.

By Mr. **Mathewson**:

Q. Is there not a difference of elevation of 237 feet at points supplied by our mains within a distance of less than half a mile?

A. There is.

Q. A question was asked as to what relation a number of feet drawn from service mains supplying one point had to a number of feet drawn from the service mains supplying another point. Is it possible to introduce any such comparison or make any relation between the two?

A. I do not consider it is. No, sir.

Q. Your attention has been drawn to certain points where the pressure is quite variable, such as to 609 East 14th Street. I suppose if the company was to disregard the expense and introduce capital enough, and there was in the street room enough so they could run a separate main to each consumer, they could make the pressure uniform, or substantially so within 1½ inches?

A. I believe, if there was no obstacle in the way of a theoretically perfect distribution system, they could do so.

Q. Is that commercially possible in the City of New York?

A. Not in my judgment; no, sir.

Q. These charts which you presented, I understand, represent actual working conditions?

A. They do.

Q. As you meet them day by day?

A. Yes.

Q. Is it true, if you assume a reduction of one inch in pressure at one point in the system, you mean a reduction of one inch in pressure at every other point in the system necessarily?

A. Not at all.

6277 Q. Isn't it true that the pressure at one point of the system may be going down and at another point going up, with the initial pressure at the holder identical?

A. That is the case, yes, sir.

Q. Now, let us test Mr. Edgerton's theory for a moment. Take Complainant's Exhibit 350. Suppose we try to guess the pressure at the holder by having a gauge indicating that the pressure was going up or down at some point. We will take these points at 4:30 P. M. Take point 5 shown on Exhibit 350. Now, from 4:30 on the pressure appears to be dropping at point 4, doesn't it?

A. It is, yes.

Q. And if you were to be governed at your station by the apparent drop then you would raise the pressure?

A. We would.

Q. However, if you look at the point marked green, 317 West 42d Street, and you had an electric connection with that, that at the same moment would show the pressure rising there, wouldn't it?

A. It would.

Q. If you arranged the pressure by a majority and, say, four were going down and one going up, and you would raise your pressure, you would actually raise the pressure in reference to that particular point where the pressure was rising much more rapidly than it was going down at these other four points?

A. Yes.

Q. And that would be unwise to be governed by the majority pressures?

A. I should think so.

Q. Is it possible, from your experience, to take any one station or the indication of any one station as plotted on these charts and proceed to regulate for that station upon the assumption that every other station will fall in pressure or rise in pressure in the same proportion as you had the pressure for that point?

A. No, it is not.

Q. Does your experience show that directly the contrary will be true?

A. It does.

6278 Q. You spoke of the 18th Street holders being now used to back up the pressure at certain hours of the day. Are they not still used as a necessary part of the distributing system?

A. Oh, yes, they are.

Q. And necessarily?

A. Entirely so. I do not remember my exact answer to that question except that I said——

Q. You said it was used to back up pressure at certain parts of the day?

A. That is what it does. The gas is not sent out from there.

Q. You mean that is not a manufacturing station?

A. Yes. It is transferred to those points from 14th Street, and the pressure regulation for that part of the city effected from that station.

Q. If there is pressure enough for a consumer to use for his different appliances he can regulate it. If there is not pressure enough is there any way by which he can secure the gas?

A. No.

Q. Assuming he has two apparatuses, a stove requiring two or two and one-half inch pressure, and the flat-flame low pressure burner which shows the greatest efficiency at one-half inch pressure, do you know of any way in which he can use both of those without regulating one or the other and exhibiting this common sense to which we have referred?

A. No possible way to do it that I can see without regulating. It is a natural thing to do.

Q. Do you know of any method by which a consumer can get an absolutely uniform pressure upon a single apparatus throughout the twenty-four hours of the day?

A. No, I do not.

Q. Isn't it true that if you take one of these points in Exhibit 345 or the succeeding exhibits, which shows a range between one inch and two and one-half inches, in such cases there are constant drops or rises of half a tenth or half an inch, so he would have to 6279 continue to make changes twelve or thirteen times even in this case if he wanted to keep a supply at his burner of exactly the same amount at all times?

A. If he wanted to maintain the pressure absolutely uniform.

Q. It is not confined to the stations and cases where you have the highest variations, is it?

A. No.

Q. In reference to regulating devices, the form, as valves and valve houses, aren't they, for the purposes of regulation so far as that can be done effectively?

A. Of the pressure of the gas leaving the station, yes, of course.

Q. And I will ask you whether in your judgment and upon your experience it is possible in New York City by any system of valve or by any automatic regulators in the streets to render the pressure at all points and at every time in the City of New York between 1 and 2½ inches and at the same time distribute gas efficiently to each consumer?

A. I consider it utterly impossible.

Q. Do you know of any system where the consumer if he does not exercise some reasonable supervision over his apparatus can get efficient service at his different burners?

A. No.

Q. Or obtain a uniform pressure at the different burners?

A. Not without exercising some judgment as to the manner of using them; certainly not.

Recross-examination by Mr. **Kirby**:

Q. Does Complainant's Exhibit 350, one of those profiles which you produced here, show the rising and falling pressures of the district gauges without direct reference to the pressure maintained at the works?

A. Yes, without showing the works pressure maintain-d at that time, on the profile.

Q. The Consolidated Gas Company has certain holder stations—63rd Street, 65th Street and others?

A. Yes.

Q. And these have been considered by you in making up your charts which have been placed in evidence? 6280

A. Yes.

Q. Was 18th Street considered by you the same as 63rd Street, 65th Street, and the other holder stations?

A. 18th Street was considered by me with regard to the district supplied by the 14th Street station, and the works pressure for 18th Street should have been shown on the profile for the 14th Street district.

Q. In the 18th Street station supplying gas in the district shown by you for the 14th Street station the same as 63rd Street, 65th Street and other holder districts do for districts indicated by them?

A. Yes. This is a holder station and takes gas from the manufacturing station and distributes it after regulating the pressure there on that section of the district.

Q. Then your charts are deficient in that they do not show the station pressure at 18th Street?

A. The one chart on the 14th Street district is lacking the works pressure line for that station, yes.

Q. That works pressure would have an influence over the pressures throughout that district, would it not?

A. Particularly on that side of the district, yes.

Q. Would it have an influence on any other district than the one shown in the 14th Street chart?

A. No.

Q. What position did you occupy with the U. G. I. of Philadelphia?

A. I was employed by the U. G. I. Co. in 1895, in a clerical position, in the purchasing and later in the engineering department.

Recross-examination by Mr. **Burr**:

Q. Pressure falling at one point while it was rising at another point would indicate, would it not, that the mains at the point at which the pressure fell were not large enough to take care of the demand on it by the consumer? 6281

A. No, not necessarily.

Q. Why not?

A. I think that as a matter of fact a somewhat special condition of consumption, some excessive distance from the works or some particularly low el-vation, would have bearing on that.

Q. In addition to the size of the main?
A. Yes.

Redirect-examination by Mr. MATHEWSON:

Q. You have been asked in reference to using a larger main and decreasing the pressure. If a six or eight-inch main was sufficient to supply all the demands of the street or vicinity would you consider it as wise or as expedient to put in a thirty-inch main merely because there would be less pressure in a big main, with the same amount of gas?
A. No, certainly not.

OSCAR H. FOGG resumes the stand and further testifies in rebuttal:

Direct-examination by Mr. MATHEWSON:

Q. Have you prepared, Mr. Fogg, for the year 1905, which we have been considering principally in this connection, a chart showing the variable demand on the street system?
A. I have, yes, sir.
Q. And what does this chart which you now produce indicate?
A. That chart indicates the hourly output or the variable demand on the street main system at two days in the year 1905; the heaviest day of the year in the heaviest part of the year and the heaviest day in the lightest part of the year.
Q. That is the heaviest day in the winter and the heaviest day in the summer?
A. Exactly.
6282 Q. So that the chart that you have now shows the maximum of the summer months and the maximum of the winter months?
A. It does.
Q. And the difference in consumption and direct connection with the maintenance of pressure and the difficulty of maintaining pressure?
A. It is.

The chart is offered in evidence.
Received in evidence and marked Complainants' Exhibit 352.

Q. What does this second chart I now show you indicate?
A. The second chart shows the same maximum day as plotted on the first chart, and the minimum day of the year 1905.
Q. In other words, the extreme difference between the maximum day and the minimum day of the entire year?
A. The extreme condition for the whole year; yes.
Q. In each one of these charts the figures at the left represent thousands of feet, do they?
A. They do.
A. And the figures at the top represent the hours of the day?
A. They do.
Q. And the figures under the date in each case represent the output?
A. They do, yes, sir.

The chart is offered in evidence.
Received in evidence and marked Complainant's Exhibit 353.

By the **Master**:

Q. These high figures are the same in both charts?
A. They are, yes.

By Mr. **Mathewson**:

Q. This is the minimum summer day against the maximum day?
A. Yes.

Q. There have been spread upon the record two letters of 6283 C. F. Lacombe, Chief Engineer of Light and power, complaining that the pressure at the pumping station, 179th Street and Amsterdam Avenue, was poor; the second letter repeating the complaint and saying that the inspection made by the city on December 5th found that the trouble had not been remedied. Now, the pressure of the gas at that particular point is regulated, is it not, by the station at 132nd Street mainly?

A. I believe it is. It is affected to some slight degree possibly also by the pressure backed up from Inwood.

Q. Precisely, by those two?

A. Those two.

Q. Have you the Bristol recording chart which was taken pursuant to your directions, the regular chart of the company, on December 5th, at the 132nd Street station, showing what pressure was there when the city was unable to get sufficient pressure at the pumping station?

A. I have.

Q. Is that it?

A. That is the chart.

Q. Have you also the chart for the Inwood station for the same period?

A. I have.

Q. Is that it?

A. It is.

Mr. **Mathewson**: I offer the chart for the 132nd Street station and for the Inwood station in evidence.

Received in evidence and marked respectively, Complainant's Exhibits 354 and 355.

Q. The pressure appears, does it not, to have been about 6½ inches at 132nd Street when the gas was sent into the distributing mains?

A. It ranges from a pressure of 1.9 inches at the minimum to 6.3 inches.

Q. And does Exhibit 355 show that at Inwood the pressure was from 1.8 to about 3 inches for the same day?

A. Yes, sir.

Q. When Mr. Simpson was on the stand he was asked in reference to a test which was made after the receipt of Mr. Lacombe's 6284 letter of December 12th to see what the pressure in the vicinity of the pumping station was, and he produced a chart.

Was this pressure taken by your direction upon the chart I show you for the purpose of determining what the pressure was at the pumping station? That is taken on the lamp post, isn't it, near it?

A. It is taken at the base of the lamp post. I had it taken at Mr. Simpson's direction.

Q. That shows a minimum pressure at that point of 1.3 inches, such minimum pressure being at 6 o'clock P. M., doesn't it?

A. It does, yes, sir.

The chart is offered in evidence.

Received in evidence and marked Complainant's Exhibit 356.

Q. This test was made on what date; that gauge was taken on what date?

A. That chart was removed actually at 2 o'clock in the afternoon of December 15th. The clock movement was a little bit late on that and the time shows 1.45; the man removing the chart, however, has marked that "15 minutes slow;" he has noted that difference and marked it 15 minutes slow.

Q. The pressure at this particular point was supplied, was it not, by the 132nd Street station, backed up, as you have said, by the Inwood pressure?

A. It was, yes, sir.

Q. Now, will you look at these two charts which I hand you and say whether they are the records of the 132nd Street pressure at that time and covering the same period as Complainant's Exhibit 356, showing the pressure at the lamp post close to the city pumping station?

A. They are; yes.

Q. Now, at the time when the pressure at this lamp post close to the city pumping station was 1.3 inches, that is its minimum, what was the pressure at the 132nd Street station as the gas went into the mains?

6285

A. At 6 P. M. the pressure at the 132nd Street station was just rising from 6.2 inches to 6.35 inches, rising right on the hour line.

Mr. Mathewson: I offer those two charts in evidence relating to 132nd Street.

Received in evidence and marked Complainant's Exhibits 357 and 358.

Q. And do these two Bristol recording charts which I now show you represent the pressure at the Inwood station covering the period of Complainant's Exhibit 356, being the pressure chart at the lamp post near the pumping station?

A. They do.

Q. And what appears to have been the pressure at the Inwood station at 6 P. M., when the pressure at the lamp near the pumping station was 1.3 inches?

A. 3.1.

The charts are offered in evidence.

Received in evidence and marked Complainant's Exhibits 359 and 360.

Q. Now, at the time that the test was made on the lamp outside of the pumping station at the lamp post, and covering the same period as Complainant's Exhibit 356, was a record taken inside the pumping station so as to show the exact record there?

A. There was.

Q. Is that it?

A. Yes.

Q. And this shows, does it not, that at 6 P. M., the time to which we have been referring, the pressure inside the pumping station was .9 of an inch, or substantially that?

A. 8½.

The chart is offered in evidence.

Received in evidence and marked Complainant's Exhibit 361.

6286 Cross-examination by Mr. **Kirby**:

Q. Do I understand that Complainant's Exhibit 352 shows the sales of gas by the Consolidated Gas Company?

Mr. Mathewson: No; sent out.

Q. What does it show?

A. It shows the variable demand on the street mains in the City of New York.

Q. What do you mean by the variable demand on the street main system?

A. I mean the maximum and the minimum day consumption on the mains in New York City.

Q. How is that consumption measured; that is what I am getting at?

A. It is the output, the maximum day divided into hourly points.

Q. You mean the total number of feet of gas sent into the mains from all the stations?

A. No. We mean it is the total number of cubic feet of gas sent out by all the stations into the street mains.

Q. Which would be represented by the sales during that day, less the loss?

A. Yes, exactly.

Q. The last is also true of Complainant's Exhibit 353?

A. That is correct.

Q. Now, as far as the appearance of this curve is concerned, in Exhibits 352 and 353 or these other curves, it would make no difference whether the output was shown by thousands of cubic feet or one cubic foot or any number—the feet would be indicated in the same way and the general character of the curve would be the same, would it not?

A. You mean the shape of the curve would be the same?

Q. Yes.

A. If the consumption were reduced in any given proportion both days?

Q. Yes.

A. Yes, provided the hourly scale were reduced in the same proportion.

Q. And if instead of thousands you had one cubic foot or
6287 5,000 cubic feet it would make no difference what the unit of measurement was, the character of the curve would be just the same?

A. Provided the reduction in the profile were made correspondingly both as to the time and the spacing.

Q. Now, you know that a great amount of electric current is furnished in the Borough of Manhattan, do you not?

A. There must be. I should say yes.

Q. You are also familiar with the fact that that consumption is not uniform throughout the twenty-four hours, are you not?

A. The consumption of gas?

Q. Of electric current?

A. No, I don't suppose it is.

Q. And they have a very heavy load at certain periods of the day compared with other periods, have they not?

A. I should think so, at the lighting hours.

Q. What is known as a very high peak?

A. Yes, I should think so.

Q. Which would correspond to the high peak indicated in Exhibit 352?

A. I don't know whether it would correspond at all. I am not prepared to say that. They must undoubtedly have a heavy peak in lighting hours. That is as far as I am prepared to say anything about it.

Q. And are you not also familiar with the fact that they maintain practically a constant voltage or pressure notwithstanding that peak?

Mr. **Mathewson**: I object. I do not think you can very well compare electricity and gas in that regard.

Question allowed; exception.

A. I am unable to answer the question.

Q. I call your attention to Complainant's Exhibit 354. I do not quite understand where that reading was taken. Will you
6288 inform me again, please?

A. That is the initial pressure of the gas entering the distributing mains from the 132d Street station.

Q. Will you kindly give me the chart which shows the pressure readings outside of the pumping station?

A. Here it is (Complainant's Exhibit 356).

Q. Where was that reading taken?

A. At the base of the street lamp—directly outside the pumping station on Amsterdam Avenue.

Q. What size main is the lamp connected with?

A. I don't know.

Q. What was the consumption of gas from that main?

A. I don't know.

Q. How far was that point from the 132d Street station?

A. Why, I would guess it at probably 2¼ miles.

Q. What was the difference in elevation?

A. Between what, that point and the station?

Q. Yes.

A. I could tell you by referring to some of the profiles here and to the elevation marked on the back of the chart and I will give you the elevation of the 132d Street station: the elevation of the 132d Street station is 35 feet.

Q. And while you are referring to that exhibit giving the elevations, what was the elevation of the Inwood station?

A. The elevation of the Inwood station was 40 feet.

Q. I call your attention to Complainant's Exhibit 361. Am I right in stating that that pressure reading was taken inside of the city pumping station?

A. It was.

By Mr. **Mathewson**:

Q. That was taken on the service inside and the other was virtually on the main outside?

A. Yes, sir.

6289 By Mr. **Kirby**:

Q. Comparing Exhibit 356 with Exhibit 361, I ask you if you can find any points on Exhibit 361 which indicate as high a pressure as any corresponding point of Exhibit 356?

A. The pressures are practically un-form, except in the lighting hours; that is, there is not much difference between them.

Q. They are lower within the station than they are outside?

A. They are naturally lower inside the station; the station is a lower elevation than the street.

Q. How much?

A. I think the charts state.

Q. I fail to see where they so state, unless it be this note on the back of Exhibit 361, approximate elevation of gauge 40 feet below street surface; is that what you refer to?

A. Yes; the pumping station is in a hollow there; it is below the street's surface.

Q. And the elevation of the station is, as set down in Exhibit 356, 157.49 feet above mean sea level?

A. That is the elevation of the street outside the station.

Q. That is the point where this reading was taken?

A. Yes, the street reading, that is right.

Q. How much difference do you calculate this 40-feet would make in pressure?

A. A trifle over .2 on a gas of 600 specific gravity.

Q. So that if we take, say, 9 P. M., when the reading inside the station is 1.5 inches, the reading outside the station would be approximately 2 inches?

Mr. **Mathewson**: You have omitted the loss in going through the service. Even if on the same level, it is about half an inch.

Q. Well, look at the charts and the two exhibits, and tell me what the loss is and to what cause you attribute it?

6290 A. Loss between street pressure and the pressure at the head of the service inside of the pumping station is 4½/10ths. I think that is accounted for both by the drop in the pipe consumption——

Q. How much by the drop in the pipe?

A. And the drop due to elevation. The drop due to elevation I have given at a trifle over .2—say .2. It would leave the difference in the drop to the consumption; friction passing through the pipe.

Q. And which, of course, would indicate that gas was being used in the station?

A Yes, sir.

Q. And if such gas was not being used. the two charts would be identical except for the loss due to elevation, which you have stated to be approximately .2 of an inch?

A. If there was no consumption loss that would be the case. If there was no consumption the question of pressure regulation would not bother us either.

Q. I assume that is quite true. I assume you obtained the total here by adding up the readings at the various meters from the manufacturing stations or the holder stations?

A. No; I merely took the hourly test as kept in the records of the engineering department.

Q. That is the way they are kept, is it not?

A. Yes, I have taken it from their records.

Q. Did you allow for the gas which came from the Standard and New Amsterdam or other companies?

A. That is the total sent out by both companies.

Q. That is the total sent out?

A. I have not stated so here as clearly as it might have been stated. That is the street main system of New York.

Mr. Mathewson: That is merely to illustrate the difference in consumption.

Mr. Kirby: That is what I intended to get at in the beginning.

6291 Q. What do you mean by street main system—New York, Manhattan and The Bronx?

A. On Manhattan Island.

Q. From any and every source whatever?

A. Yes, from there.

Cross-examination by Mr. Burr:

Q. What did you say Exhibit 356 shows, Mr. Fogg?

A. Exhibit 356 shows record of the pressure on the street lamps located outside of the pumping station at 179th Street and Amsterdam Avenue.

Q. And shows it to be what? 1.3 inches?

A. That is the lowest point; yes, sir.

Q. When was that?

A. 6 P. M.

Q. That is the minimum?

A. Correct.

Q. What was the size of the main leading into the city's pumping station at that point?

A. The service?

Q. Yes.

A. That I don't know.

Q. What was the size of the main from which you got the pressure—you don't know, you say?

A. No. This pressure?

Q. Yes.

A. The service you mean leading into the building?

Q. The service?

A. No, I don't know that.

Q. Do you know the size of the main in the street?

A. No. I have already stated that.

Q. Now, Exhibit 353, does that exhibit cover gas purchased by the Consolidated as well as gas made by the Consolidated?

A. That includes all gas sent out by the Consolidated, therefore I assume it must.

Q. It includes purchased gas?

A. It includes all gas sent out. It must include the purchased gas.

Q. Have you carefully kept these records of the demand on the mains of the Consolidated Gas Company?

A. In that form?

Q. Yes.

A. No. We have never plotted them that way. Yes, I
6292 do remember that. They have been plotted that way several
times.

Q. Don't you keep a record showing the maximum and the minimum?

A. Oh, yes, a book record, a record of the hourly send-out. That is where I have gotten these figures.

Q. And these figures 81,587,000 represent the maximum output on January 4, 1905?

A. For the total 24 hours, yes, sir.

Q. That is the maximum for the whole year?

A. That is the highest part of the year.

Q. Have you a record showing the maximum output in the highest record for the year 1906?

A. There is such a record, yes; there must be.

Q. And for 1904?

A. Yes. I suppose so. There is a book of "Send-Out" records. Those ones I have here are the only ones I have had occasion to refer to.

Q. Do you keep those?

A. No.

Q. Who keeps them?

A. Those are kept by the engineering department—the Chief Engineer's clerical force.

At 4:25 P. M., adjourned to Monday, January 28, 1907, at 11 o'clock.

Last Exhibits:

Complainant's, 361.
State's, 000.
City's, 236.

6293 NEW YORK, *January 28th*, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Page.

MR. MATHEWSON: Mr. Master, consecutive with Mr. Fogg's testimony I would like to have a few of these charts from which the profile was made up marked so that they may be compared if desired. The first one is the reading at 4 Irving Place; the chart for two days is presented so as to cover the period shown in the profile.

Chart received in evidence and marked Complainant's Exhibits 363*a* and 363*b*.

MR. MATHEWSON: Also the pressure gauge for 609 East 14th Street, showing the extreme variation of that district..

Chart received in evidence and marked Complainant's Exhibit 364.

MR. MATHEWSON: Also the gauge at 317 West 42nd Street covering the period plotted on the chart; this gauge covers two days.

Chart received in evidence and marked Complainant's Exhibits 365*a* and 365*b*.

MR. MATHEWSON: Likewise for 145 West 69th Street, covering two days, in order to cover the period profiled on the chart.

Chart received in evidence and marked Complainant's Exhibits 366*a* and 366*b*.

6294 MR. MATHEWSON: Mr. Burr telephoned that he cannot be here for half an hour, and suggests that we proceed, and if it is agreeable I will do so.

ROBERT A. CARTER recalled as a witness in behalf of the complainant, in rebuttal, testified as follows:

Direct examination by MR. MATHEWSON:

Q. Mr. Carter, in view of remarks in the testimony of Mr. Marks I wish to ask you just a moment in respect of his examination of the plant and books. You were informed at the outset, were you not, that Mr. Marks would be in charge of the examination of the books of the company and not of the examination of the plant?

A. Yes, sir, I was so informed.

Q. And in the course of this examination of the books, how many men were employed in your office for several weeks?

A. From 25 to 35 men; as high as 35 men at a time.

Q. With Mr. Hall also?

A. Yes, sir.

Q. And was any information denied them in respect to the period which they were to examine?

A. None whatever.

Q. After a considerable time were you asked by Mr. Marks whether he might examine the plants, and did he say why?

A. He asked to be permitted to examine the plants in connection with certain vouchers which the Board of Advisory Engineers wished some further information regarding.

Q. And what did you tell him?

A. I told him that if he would indicate the specific vouchers that were questioned we would be glad to comply with that request.

Q. And as soon as those vouchers were indicated, several 6295 weeks later, did you then permit him to go into the plant and examine?

A. Yes, sir.

Q. And that is the whole story, is it not, in brief?

A. All there is to it.

Q. Now, Mr. Marks introduces a certain theory as to the increase in the output of gas on Manhattan Island. What have you to say on that subject?

A. My opinion is that when Mr. Marks gets away from Manhattan Island in showing increase in gas consumption, whether due to reduction in price or any other reason, he deals with situations in no respect comparable as to territory. The Consolidated Gas Company having its natural and permanent limitations, it has no suburbs through the development of which additional business is likely to be had. Such growth in the gas business in Greater New York will benefit such companies as Brooklyn, Bronx, Long Island and Jersey City companies, and not the companies supplying the Island of Manhattan. In Mr. Bemis' testimony he stated in respect to the increase in London, that the increase on output was in the suburbs of London and not in the city proper. Respecting the alleged probabilities of increase on the volume of gas sold in the Borough of Manhattan, the reduction in the price of electric current is resulting in its introduction into almost every new apartment house which is erected.

New devices for the use of electric current for domestic as well as commercial purposes are constantly appearing on the market, including cooking and heating apparatus, the development of which cannot fail to cut into the business of the gas companies.

In addition to the reduction of the price of electric current, 6296 the introduction of incandescent lamps which give a greatly increased illumination in proportion to the amount of current used, also operates to cheapen this service and encourage its more general use in place of gas.

Mr. Marks made some calculations showing increase of gas sales in the future due to reduction in the price of gas and increase in population. In my judgment the rate war in 1899 and 1900 and the coal strike in 1902 and 1903, both operated to establish an average consumption per capita, which will probably never be exceeded in New York City. It is greater in New York than elsewhere as shown by the testimony. In the former case the sixty-five cent rate led to a more liberal use of gas than ever before, and this has survived the restoration of the price to a paying basis. The coal strike led to a more general use of gas for domestic purposes, cooking, heating, etc., which had its permanent effect. In my opinion a reduction in the price of gas at this time to sixty-five cents and another coal strike could not possibly lead to a repetition of those results. In other words, any advantage resulting from a substantial decrease in price of gas, we already have to the fullest extent, and any increase we might realize in population is likely to be entirely, if not more than absorbed by the development of the electric business.

There is another feature of the question dealing with the substitution of electric current for gas that is very important to the gas companies, and that is the fact that it is in the larger installations that gas is supplanted with electricity. Though the meter may not be taken out, the consumption of gas drops to practically nothing, and they keep the gas meter there as a kind of a stand-by 6297 service in the event of the electric current giving out; and the result is that while the company has all the expense of attending to that installation, indexing and billing and collecting, and all the other distributing expenses that it had when a large volume of gas was consumed, there are small sales over which to spread such expense. In other words, the company is losing large units of business, and taking on a number of small units of business, which cannot fail to increase the cost per thousand of distribution as well as decrease the average sales per meter in use.

Q. Now, Mr. Marks makes a certain estimate of operating cost and in that connection a certain estimate of depreciation.

A. The weakness in Mr. Marks' estimated cost of operating is that it contradicts his value of the plant and property, or his stat-ment of the value of the plant and property contradicts his estimated cost. The two by no means can be reconciled. The average cost of repairs and renewals since 1884 has been shown to be 10.89 cents per thousand cubic feet sold. According to Mr. Marks' valuation of the plant this has not been sufficient to take care of repairs, wear and tear, supersession, obsolescence, inadequacy and antiquation. He finds that notwithstanding the amounts expended on the upkeep of the property it has nevertheless depreciated in value some $6,738,736.72, shown by comparison between the amount invested in manufacturing plant October 31, 1905, as shown by the company's books, $16,087,428.72, and the actual present value of operating buildings and gas apparatus, shown in Marks' table, page 5108 of this testimony, $9,348,692. The depreciation therefore claimed by Marks over and above that which has been taken care of by expendi- 6298 tures for repairs and renewals is $6,738,736.72, which distributed over the sales since 1884, 164,076,199,000 cubic feet, amounts to 4.11 cents per thousand cubic feet sold. In his estimate of the proper allowance for operating expenses, he employed the actual expenditures of the company for repairs for the calendar year 1905, and the cost of renewals for the nominal year ending October 31, 1905, which happened to be lower than for the calendar year, and reached a total of 53.51 cents per thousand cubic feet sold, and said in his judgment that was an adequate allowance. While it is inadequate from any standpoint it is particularly and strikingly so from the standpoint of his valuation of the plant. If he asks that that be accepted he must augment his cost to operate as follows:

Average expenditures for repairs and renewals from 1884 to 1905	10.89c.
Additional loss in value, according to Mr. Marks' estimate.	4.11c.
Making a total of	15.00c.
He allowed for repairs and renewals	7.03c.
Leaving a balance of	7.97c.
To be added to his estimated cost of	53.51c.
Making a total of	61.48c.

But to this amount should be added certain amounts which Mr. Marks rejected and which obviously enter into the complainant's cost of manufacturing and distributing gas.

	Tax on dividend on capital invested in gas business	.47
	Interest on deferred taxes	.71
6299	Interest on consumers' deposits	.39
	Making a total of	1.57

There should also be added the items which he deducted from the expenses but which are also included in the income.

Income from stove rent		.92
Real estate rent		.28
A total of		1.20
Also an item of street lamp expenditures for maintenance which he excluded	2.18	4.95
Making a total to be added to his		61.48
Of		4.95
Making a total of		66.43

This amount includes no allowance for reserve or contingent fund, or for additional enrichment for a full 22 candle power year, the year in question having co[illegible]ined but six months of 22 candle power term, and said six months not including the cold winter months, when the highest enrichment is required.

Q. Now, as a matter of fact, Mr. Carter, the expenses are expenses, are they not, whether they are subsequently met in part by receipts or not; in other words this is an operating expense account you are dealing with?

A. Yes.

Q. The fact that the company has stove rents does not decrease at the time its expenditures for stove repairs, does it?

A. Not in any sense, no sir.

Q. And when you come to deduct receipts in reaching an expense account you are not confusing the two accounts?

A. You are getting something that is not expenses at all.
6300 You are getting another figure entirely. It does not represent expenses. There is one other consideration in that con-

nection which Mr. Marks finds this depreciation to have occurred in the value of the company's property of some $6,738,000. The amount which the company has expended since 1884 in repairs and renewals of its plant over the amount which he allows in the expense would amount to between six and seven million dollars. In other words, if he is right in his estimate of costs, then that amount which the company has expended must be considered as addition to the plant to arrive at the amount which he depreciates the plant in his estimate of its present value.

Q. Mr. Marks made an estimate and computation and gave testimony as to the cost of land and plants of the company. Do you find that to be accurate or inaccurate?

A. Quite inaccurate, and he refers to it in his later table by which he reaches the value of the plant and property by an entirely different process, referring to it evidently as confirming his present valuation.

Q. Now will you recall the figures which he used as a basis and proceed to point out the errors he made?

A. On page 2366 of the testimony, he gives the "increase in the real estate, plant, property and construction since 1884," (referring to Exhibit 89, page 371) as $9,693,565.90. The increase shown here in one item is given in detail in Exhibit 79, page 347a. From the total increase he deducts what he states to be the increase in the value of real estate—$597,918.28 and gets a balance of $9,095,647.62. The increase in real estate which he deducts is the increase between November 11, 1884, and December 31, 1905, instead of October 31st, 1905. The difference $128.71, is negligible, however.

6301 From the above balance he deducts the increase in the value of mains, services, meters, etc., as follows:

Value of mains, services, meters, etc., October 31st, 1905	$12,866,766.62
Appraised value, June, 1884	7,487,000 00
Less office furniture which he omits	70,000
The balance being an amount which deducted from the value Oct. 31, 1905	7,417,000.00

It shows an increase in this property to have been $5,449,766.62. Deducting this from the increase shown above, $9,095,647.62, he arrived at his increase in plants as $3,645,881. The actual increase in plants from November 11, 1884, to October 31, 1905, (exhibit 79), $3,904,937.31. The excess actual increase in plants over his figures being $259,056.31, made up as follows:

Value of this property November 11, 1884	$5,449,766.62	
Appraised in June, 1904 at	5,190,839.02	
Additions, June to November, 1904	258,927.60	
Marks' error in real estate increase	128.71	
		$259,056.31

which is the excess of the actual increase in plant over the figures which Marks showed.

Q. In other words he excludes the increase from June to November, 1904, in real estate?

A. That is the case, yes, sir.

On page 2365 he makes a statement purporting to give the value of plant as shown by Yalden's summaries from the books of the old companies. To the total value which he thus finds, $10,737,418.70 he adds an increase in plant as above, $3,645,881, getting a total of $14,385,299.70 (note that it should be $14,383,299.70).

6302 From this total deducts Mayer's estimate of the value of plant at 18th street taken by the city, $1,508,035; and the value of the entire 111th street plant as shown by the books of the Harlem Gas Light Company, alleging that it has been abandoned, $569,495.57. The total of these two items is $2,077,530.57, he deducts, leaving a remainder of $12,307,769.13, which he announces to be the "value of the actually operating and going manufacturing plants and holders of the Consolidated Gas Company."

Referring to the foregoing deductions, it is interesting to note with reference to the 18th street plant, that this plant is included in his summary of value in 1884 at $1,281,694.84 (See Yalden's summary, Senate document 47, page 674).

Q. And he deducts a value of $1,508,035 or more than the entire plant appears in the total from which he made the deduction, doesn't he?

A. Precisely, yes, sir. On page 84 of the printed testimony, Chief Bradley testified that there had been expended at this station for construction $424,173.09. The total valuation of Eighteenth Street plant in Marks' total of $14,385,299.70 is therefore $1,705,867.93. From this he deducts Mayer's estimate of the value of plant taken by the City, $1,508,035, leaving a balance of $197,832.93 as the value of the present plant at 18th Street included in his final amount of $12,307,769.13. Mayer values the present plant at $588,873 or three times the value arrived at by this process.

Q. In other words, he takes Mr. Mayer's value for the part excluded but wholly ignores Mr. Mayer's value as to the part that remains?

A. Yes, sir. Mr. Marks includes the 111th Street plant in his 1884 valuation at $569,495.57. The additions since 1884

6303 (to which Chief Bradley apparently did not testify) amount to $236,399.72, making the total amount at which this plant is included in Marks' total ($14,385,299.70) $805,895.29, from this he deducts as the value of plant abandoned, $569,495.57, leaving only the cost of the additions, $236,399.72, as the value of the present plant. Mayer values it at $1,039,910.

Q. Generally speaking, is it true that taking the original value of 1884 as to land and plant Mr. Marks deducts present valuation of land and plant and not the valuations at which those items entered into his 1884 total?

A. That was his method of computation.

Q. Very good. Proceed. Now, as to this 111th Street plant which he deducts on the theory that it has been abandoned, has it in fact been abandoned?

A. No, it has never been abandoned. Besides being operated as a distributing station it is held in a reserve capacity, the manufacturing apparatus being in excellent condition, some of it never having been used. The City acquired the plant on but one block out of four, paying for it and for damages to the rest of the plant by reason of its removal the sum of $246,100, all of which was credited to plant account and operated to reduce the book value of additions to other parts of the plant to the net amount stated above, $236,399.72, which forms a part of the total net increase of $3,904,937.31, shown in Exhibit 79. It is obvious therefore, that as he adds only the net increase in plant to his 1884 valuation, the entire amount deducted by Marks, $569,495.57 must be added to his net value of existing plant in order to arrive at its present value even by his process.

The price allowed by the City for the plant condemned was not less than the value at which it was taken over at consolidation or acquired subsequently to consolidation. 6304

Marks on page 2365 gives a summary of the value of real estate in 1884 as he finds it in the Yalden's summaries of the accounts of the old companies, the total being $5,054,014.88.

Although he accepts the increase in the value since 1884 of plant, mains, services, meters, etc., as shown by complainant's exhibits, he entirely disregards the increase in the value of real estate, $597,918.28 to December 31, 1905, and deducts it (Page 2366) from the total increase shown in Exhibit 89, before proceeding with his calculations.

From his Yalden valuation he proceeds to deduct certain items aggregating $1,985,874.37, leaving as the present value of real estate $3,068,140.51. The items deducted are as follows:

Little Italy Park, 111th street and 112th street, Harlem. $365,000.00

But his total of $5,054,014.88 includes the entire real estate of the Harlem Company (Page 2365), of which that taken by the city forms only a small part at $158,899.

Q. That is less than half the amount he deducts?

A. Leaving $206,100.19 less than nothing at all as the value of the balance of the Harlem real estate valued by Mr. Wheelock at $1,227,500.

This deduction is made notwithstanding the fact that Marks had access to all the data necessary to completely inform himself on the subject. He must have procured from the city records the amount $365,000 awarded to the company for the real estate and plant condemned by the city. He could easily have ascertained that the award was divided between real estate, $118,900; plant, $246,100; total, $365,000.

6305 He could, without any trouble, have identified the plot in question in the real estate schedule of the Harlem Company (Page 909) Senate Document 47, and ascertained that the land sold to the city for $118,900 was appraised in 1884 at $86,000.

By taking Yalden's value of the Harlem real estate, $158,899.81, and the appraised value in 1884, $754,000, he would have found that Yalden's value amounted to but 21% of the appraised value. Applying this factor to the appraised value, $86,000, of the land taken by the city, he would have found that the value at which this land was included in his total value of real estate was but $18,060, and he must have known that to deduct $365,000 for a parcel of real estate from a total in which that parcel was included at not more than $18,060 was sophistication of the rankest kind.

Mr. Kirby: Oh, Mr. Master——

Mr. Mathewson: Sophistication is a word we did not coin. That is a word that came from Mr. Marks. He testified he got this figure from the City Record itself.

Mr. Kirby: I must object.

Mr. Mathewson: Mr. Marks used this very term, and now the shoe pinches.

Mr. Page: It is aggravating to have a witness go ahead and draw deductions as to what another man should have done and might have done, and have him characterize what he has done as sophistication. The testimony of the witness does not pinch very much, I will say for Mr. Mathewson's benefit.

The Master: Well, gentlemen, as I have had occasion to say before, I do not like this idea of stump speeches made by witnesses. I had occasion to criticise it several times on the part of the 6306 witnesses called by the defense, and it does not any more commend itself to me now, but some of these other experts managed to get a pretty free view on the record and I do not know exactly how or where I can stop Mr. Carter. If it is possible, Mr. Mathewson, to divide—if you have a manifold of that, and if you can bring out the facts by question and answer, and eliminate this summing up of features of it I think it would be very much better.

Mr. Mathewson: It will lose some force if I were to ask the questions; but as a matter of fact, the Senate document of 1884, Document No. 47, which Mr. Marks was using and which he had before him, and from which he made deductions as this witness shows, showed certain other things which Mr. Marks absolutely ignored.

The Master: You can show the fact.

Mr. Mathewson: And the witness has now consecutively shown that Mr. Marks made certain deductions from the real estate values. He is now proceeding to show that those deductions were utterly uncalled for, and the reason they were uncalled for——

The Master: That is all right, you are entitled to show that.

Mr. Mathewson: Yes; it is not argument, but entirely facts.

Mr. Page: You are entitled to show the facts, no question about that; but that Mr. Marks must have been wrong and that this is a sophistication pure and simple——

Mr. Mathewson: Was not that word used and the word "tricky" used by this same witness who is now being criticised? And 6307 if there is anything that is sophistication that is worse and ranker than this I would like to know where it is.

Mr. Page: Of course, if such was done, putting another witness on the stand to fall into the same error does not cure the original evil.

The Witness: Shall I proceed with respect to the next deduction?

Q. Let us take the next deduction, the parcel of land sold to the New Amsterdam Company.

A. His next deduction is for a parcel of land sold to the New Amsterdam Gas Company for $180,000 which was appraised in 1884 at $130,000. Here again we have the disparity between Yalden's figures and the appraised value of land. The valuation of 14th Street real estate included in the total of $5,054,014.88 amounts to $367,495 (see table Senate Document, 47 page 674, from which Marks got his total). It was appraised at $1,952,500. Yalden's value was about 19 per cent. of the appraised value. It is fair to assume, therefore, that Yalden's value and the value at which it is carried in Marks' statement, of the plot sold to the New Amsterdam Gas Company was not more than $24,700.

Q. That is the same proportion of the total, $180,000, is it?

A. Yes. I think it is obviously carried in Mr. Marks' total at $24,700, the amount of $180,000 is deducted for this plot.

Q. Take the next deduction for bulkheads at 21st Street.

A. The amount deducted was the amount awarded for the bulkheads condemned by the City, $247,858, and is approximately the amount at which all the bulkheads and the water rights at the station were carried in the books.

6308 Q. The next deductions were for bulkheads taken at the 18th Street station?

A. He values them partly by authority of a city expert at $1,193,016.37. This he deducts from a total in which the entire value of the land and bulkheads at the 18th Street station is included at only $473,173.51 (see table Senate Document 47, page 675, from which he obtains his total value of Manhattan companies real estate).

Q. In other words, he deducts there something like $1,200,000 from a total in which the same property was carried at $473,173.51, which would give a minus quantity of how much in that case?

A. Exactly $719,842.86, which of course operated to reduce the already low value of the other property in his statement.

Q. Now, he refers to the sale to the Standard Gas Light Company, without giving the amount. What is the fact as to that?

A. This was a sale in September, 1905, of a parcel of land between 62d and 63d Streets west of Avenue A, which was appraised in 1884 at $118,600, and for which we received $178,078.

Q. That was credited to the real estate account, wasn't it?

A. The entire amount being credited to the real estate account. According to his valuation of the real estate there is a variation there of $2,583,792.65, being the difference between the total value in 1884 of $5,054,014.88, which he himself finds and adding the increase to which he always refers, $597,918.28, making a total value according to his theory of $5,651,933.16, or an excess of the value he arrived at, $3,068,140.15, of $2,583,792.65.

Mr. Kirby: It is quite impossible to take up the cross-examination on a matter of this kind until we have had an opportunity to read the record.

6309 Mr. Mathewson: If it is too fast say so and we will have the witness give the amount slowly.

The Master: Read it slowly.

The Witness: This entire testimony runs consecutively from the page to which is first referred (page 2366 of the printed testimony in this case).

Mr. Marks added his valuation as follows:

Land	$3,068,140.51
Manufacturing Plants and Holders	12,866,766.62
Mains	7,700,151.03
Services	1,212,071.09
Metres, etc., Less Scows and Gas Stoves	3,495,108.58
Total	$28,342,237.83

There should be added for the items which he deducted which are obviously required in the business:

Scows	$19,816.15	
Gas Stoves	287,619.77	
		$307,435.92
There should be added for real estate as previously noted		2,583,792.65
And on the Harlem plant should be added, as established		569,495.57
And for errors in his increase in plant account		259,056.31
Making a Total of		$32,062,018.28

Roughly estimated, about 45% of total plant at 18th street was taken by the city, and that percentage of the amount at which this plant is included in Mr. Marks' total, $473,173.51 or $212,928.07, would have to be deducted, leaving the present value of the 6310 plant and property excluding cash accounts receivable and material and supplies, according to Mr. Marks' theory, $31,849,090.21.

Q. And would this include any working capital or any part of the Astoria investment?

A. No, sir.

Q. Or any franchises or anything of that sort?

A. No, sir.

Q. And it is made up, correcting these errors, upon his theory with the exception of the errors which you have noted?

A. Precisely.

Q. In Mr. Yalden's table he finds value of real estate at 14th street, or rather he puts down figures at which the 14th street real estate is carried and the 21st street real estate. What is the amount at which the 14th street real estate is carried?

A. Fourteenth street, $367,495, consisting of 228 lots, the average value per lot $1,622.34 per lot.

Q. Taking the 21st street station which is on the same side of the city, and his valuation is what?

A. $1,857,000 for 225 lots, a value of $8,253.33 per lot; about five times as great as the 14th street valuation per lot.

Q. Now the 14th and 18th street plants were both plants of the Manhattan Company and both coal gas plants, were they not?

A. Yes, sir.

Q. Does there appear to be any contrast between the Yalden valuation of buildings in the two plants?

A. That is indicated by the table from which the value as given in Mr. Marks' table is obtained, Senate document 47, page 674, the buildings at 14th street are included at $75,197.54 and at 18th street, $372,621.46.

Q. And were the plants of the same capacity?

A. Identical at that time, yes, sir; three and one half millions.

6311 Q. And so far as your observation goes would they require substantially the same equipment and buildings?

A. No appreciable difference, Mr. Mathewson, according to my information.

Q. Is there any way in which you can reconcile the $75,000 for one plant and the $372,000 for the other except the way in which they were arbitrarily carried on the books of the company.

A. They apparently were carried at that value on the books of the company, but the inference is that in writing down the cost of their property the Manhattan Company did not attempt to maintain any parity between the values of these properties.

Mr. Page: Has the witness any knowledge of the facts from which he is drawing inferences?

Mr. Mathewson: He has examined Senate document 47, very carefully, which your witness used, and from which they pointed out their conclusions.

Mr. Page: He is giving what the companies must have done on their books.

The Master: He was asked if there was any way in which he could account for it and I suppose in the absence of any facts, he being an officer of the company, we might take his inference for what it is worth.

Mr. Page: These inferences are of some company he was not an officer of, and where he had no charge of the books.

Q. Mr. Marks referred to the buildings of the various plants of the Consolidated Gas Company as appraised in 1884, and compared
them with Mr. Mayer's appraisal of buildings in 1906, and
6312 showed the difference between the two. Didn't Mr. Rowland
in 1884, so far as the record shows, include the foundations
of apparatus in his estimate of buildings?

A. No, he did not. It was not his rule to do so. In some small buildings apparently he did, but in the large buildings where the apparatus was important, as generators and purifiers, and apparatus of that character, the foundations were included in the apparatus.

Q. They are appraised, are they not, separately, here in the schedule?

A. Yes, sir.

Q. Take the 21st street building for an example which is compared by Mr. Marks in which Mr. Marks compared Mr. Mayer's appraisal to the appraisal of Mr. Rowland; is that building today the same as it was in 1884?

A. No, sir, in no respect. Are you referring to some of the buildings, or the buildings generally at the station?

Q. Well, the buildings generally at that station, the large buildings.

Mr. PAGE: Which is it, the large buildings or the buildings generally?

A. I thought perhaps you were referring to one building given here on 21st street and 1st avenue, which Mr. Rowland valued at $5,000, stating that the building was out of use and the only value he indicated was the value of the foundation. That building is still in use, used as a store for stoves and meters and a portion of the meter repair plant is in it, and it is a perfectly sound substantial building, has had a great deal of money spent upon it, and was unquestionably worth a great deal more in 1884 than Rowland valued it at, unquestionably worth a great deal more than the $5,000 he valued it at that time.

6313 Q. Take the generator building at 21st street, hasn't an additional story been added to that or the roof been raised?

A. The building had to be altered with respect to the roof and elevation to accommodate the new generating apparatus that was installed there in 1891; a new roof was put on the building, and the walls were renewed and raised.

Q. Now, quite aside from the question as to the inclusion of the foundation of apparatus in this building by Mr. Mayer, and the fact Mr. Rowland has done so, is it possible to compare the two buildings today on the assumption that they are the same buildings?

A. In no respect.

Q. As to the other buildings of the company at its various plants, without going into detail, are those buildings now exactly as they were in 1884, or have expenditures been made on them in general?

A. Very large expenditures either in the shape of repair or the shape of renewal and replacements that have resulted in the buildings probably being in better condition now, a great deal, than they were in 1884.

Q. And the amount which has been expended according to exhibit 79 upon the buildings and their contents appears under the heading of plants, doesn't it?

A. Yes, sir.

Q. And shows for the repairs alone something like six million dollars?

A. Yes, sir, over six million dollars.

Q. And expenditures for construction of nearly four million?

A. Yes, sir.

Q. In addition to expenditures for renewals and replacement?

A. That is the case.

Q. Mr. Marks referred to the works from 1894 to 1899 as "tottering to their final collapse," to use his expression. You were

6314 thoroughly familiar with the works during that period?

A. Yes, sir.

Q. Were the works producing gas during that period in increasing quantities?

A. The 14th street plant produced in 1884 three and one-half million; in 1905 it sent out very close to five million; so that the capacity has not only been maintained but it has been substantially increased.

Q. It is true that from 1900 on a certain type of Lowe apparatus was substituted with another type, isn't it?

A. Not at 14th street.

Q. No, but at the water gas stations?

A. Yes, sir, at the water gas stations for other types the Lowe type of apparatus has been substituted.

Q. Is it true during that period the plants or any of them were tottering toward their final or any other collapse.

A. Not true with respect to the plants or any portion of the plants.

Q. Mr. Marks also referred to the great field that the company had in supplying gas in Queens and Brooklyn. Do you know of any franchise that the Consolidated Gas Company has to supply gas in the Borough of Brooklyn?

A. They have none that I ever heard of, no, sir.

Q. Or any in the Borough of Queens?

A. No, sir.

Q. In reference to Prof. Bemis' testimony, he made a comparison between the 14th street station and the coal gas at the Central Union station. Have you read that comparison?

A. Yes, sir.

Q. And have you made up a table showing the errors into which he fell?

A. I have done so, but I would like to explain in reference to the table I have made up that the difference shown by comparing the total cost of coal gas at these two stations is made up of variations in the cost of the items entering into the total which are no indication of efficiency but are due to differences in the conditions be-

6315 yond the control of either company.

In the matter of coke, for example, it has been shown that the conditions under which the Central Union Company deals with this commodity are so favorable as to create a variation of nearly ten cents per thousand cubic feet of gas made.

The fact that the Central Union Company is not obliged for the purpose of equalizing pressure to maintain distributing stations, affects their cost favorably as compared with the situation in New York, the 14th street station having to bear its share of the cost of the maintenance of the various distributing stations of the Consolidated Company.

The fact that the coke delivered from the 14th street station to the Water Gas Stations for use in the generators has to be carted some distance at the 14th street station operates to increase the cost at the 14th street station as compared with the Central Union station, where the Water Gas Plant is adjacent to the Coal Gas Plant.

The fact that in the case of the 14th street station the works have been cut off from the water front by the marginal street, operates to considerably increase the cost of the labor and cartage of coal and coke.

The fact that the Central Union Coal Gas Station is equipped with inclined retorts and recuperative coal gas branches and the latest labor-saving types of coal and coke handling apparatus, operates to reduce the cost to the Central Union Company,—though such advantage, while appearing very favorable in a comparison of cost figures, is offset to a very considerable degree by the additional investment and the consequent increase in the Fixed Charges which does not appear in any statement of cost.

6316 A fair comparison between the cost of manufacturing gas at the 14th street station and at the Central Union's Station, therefore, could only be made by first eliminating from the cost at both stations certain items which are in no respect comparable.

For reasons stated above, the proceeds of the sale of coke should be eliminated, as well as the cost of labor and cartage of both coal and coke.

The item of distribution should be eliminated from the cost at both stations, for the reasons given.

As the 14th street cost includes the oil gas made for the 14th street station at the 21st street station, this should be eliminated before comparing the cost of the coal gas of the Central Union station.

During the year 1905, a small quantity of gas oil was used experimentally in the Central Union Coal Gas Plant, and appears as an item of cost in the statement of the Central Union Company. This should be eliminated to place both stations upon an equal footing.

As the quantity of gas manufactured with the small quantity of oil used in the Coal Gas plant of the Central Union Company is not shown in any of their statements—and as a matter of fact is unknown—it has been estimated upon the basis of the oil gas made pr. gallon of oil used at 21st street for 14th street, about 50 cubic feet per gallon. The cost of labor and repairs in connection with the oil gas made in the Coal Gas Plant of the Central Union Company is not known, and has, therefore, been estimated—with respect to the labor, upon the basis of the cost of labor per thousand cubic feet of oil gas made at 21st street for 14th street; with respect to the repairs, 6317 the cost of repairs has been estimated upon the basis of the cost per thousand of all the repairs to coal gas plant at the Central Union Station.

The table is as follows:

14TH STREET STATION.

Statement showing cost of Coal Gas after eliminating the residual coke, cost of Cartage and Labor handling—cost of Station distribution, and Oil Gas, nominal year ending October 31st, 1905:

	See printed testimony G. C.	Cubic feet.	Amount.	Per M C. F. made.
Total Cost.	2117 / 2120	1,528,773,000	$576,429.56	37.70
Add Coke........	2118	....	178,527.11	......
			$754,956.67	
Deduct:				
Cartage and Handling.................	(p. 2117, $32,688.05) (p. 2118, 34,821.03)		$67,509.08	
Distribution.........(p. 2120).....		....	20,387.71	
			$87,896.79	
			$667,059.88	
Deduct Oil Gas: (p. 2145).......		168,489,000		
G. C. Page 2117—Coal...........		....	$48.25	
2119—Coke..........		....	7.90	
2119—Gas Oil.......		....	137,602.63	
2119—Labor		....	9,603.51	
			$147,262.29	
		1,360,284,000	$519,797.59	38.21

6318

CENTRAL UNION GAS COMPANY.

Statement showing cost of Coal Gas after eliminating the residual coke, cost of Cartage and Labor Handling, cost of Station distribution, and Oil Gas, nominal year ending October 31st, 1905:

	See printed Testimony G. C.	Cubic feet.	Amount.	Per M C. F. made.
Total Cost...............	p. 132	670,518,000	$131,249.46	19.58
Add Coke........... ..	212–14–15	....	154,817.63	23.09
			$286,067.09	42.67
Deduct:				
Cartage and Handling..................	132	....	$23,345.12	03.48
Distribution...........	132	....	1,869.70	00.28
			$25,214.82	03.76
			$260,852.27	38.91
(*a*) Deduct Gas Oil...........		10,515,437		
Oil Used......	p. 132.........	....	$8,501.58	
(*b*) Oil Gas, Labor..................		....	5,331.32	
(*c*) Oil Gas, Repairs.........		....	5,131.53	
			$18,964.43	
Total..........................		660,002,563	$241,887.84	36.65

Excess—14th Street cost over Central Union cost=.0156. c. for M.c.f made.

(*a*) The quantity of Oil Gas made is estimated on the basis of the make per gallon at 21st Street for 14th Street, the process being identical. 21st Street make (p. 2145) 168,489,000 c.f. Gallons oil used (p. 2119) 3,371,782 gals. Gas made per gallon 49.97 c.f.

Gas oil used at Central Union (p. 132) 210,435 gallons x 6319 49.97 c.f. per gallon = 10,515,437 c.f.

(*b*) The labor on Oil Gas is calculated on the basis of the cost of Oil Gas labor at 21st Street. 21st Street labor (p. 2119) $9,603.51, makes 168,489,000 c.f. Cost per M. 5.07c. Oil Gas make at Central Union 10,515,437 c.f. @ 5.07c. = $5,331.32.

(*c*) Oil Gas repairs are calculated on the cost of repairs on all gas made at Central Union, 4.88c. (p. 132) 10,515,437 x 4.88c. = $5,131.53.

Less item of gas purchased $460.50 @ 00.06c. per M.

Q. The table that you have prepared and which you now show me shows the cost of the coal gas at the 14th street station, as compared with the cost at the Central Union station, eliminating the items of distribution, oil gas and labor, handling and coke which you have stated were not comparable?

A. That was the case, yes, sir; and I get a total cost at 14th street of 38.21 per thousand cubic feet of coal gas made and at the Central Union a cost of 36.65 cents per thousand cubic feet of coal gas made, a difference of 1.56 cents per thousand cubic feet made.

Q. Now as to that, it was stated that the Central Union installation was more expensive and there would be a larger amount required for the return on investment?

A. That is the case. It was a question whether the additional fixed charges in use at the Central Union for such apparatus as in use at 14th street station would not amount to considerable more than the difference above referred to of 1.56 per thousand cubic feet of coal gas made.

Q. Has the Central Union plant any marginal street between it and the water?

A. No, sir.

6320 Q. So that supplies were delivered directly into its plant?

A. Everything directly into its plant.

Q. And having but a single station there is no station expense, is there?

A. No distributing station distribution to be added to their cost, therefore the item of distribution has been eliminated from both.

Q. The special item in manufacture referred to known as distributing expense between distributing stations before the gas is sent out, in other words, not a distribution expense at all which comes under the general heading of distribution expense?

A. The 14th street distributing expense includes the cost of the distributing station expense, therefore to put both stations on an equal footing the distribution expense has been eliminated from both costs.

Q. Have you prepared another tabulation showing the comparison between the Central Union cost and the Consolidated Gas Company cost, taking the entire output?

A. Yes, sir, I made a comparison for the nominal year ending October 31st, 1905, both statements being in the exhibit and adjusting the Central Union cost to a candle power corresponding to that candle power produced by the Consolidated Company, I get a cost to Consolidated Company of 32.17 cents per thousand and the Central Union 31.34 cents per thousand, a difference of only .83 of a cent per thousand between the cost of the two companies, the Consolidated Company and the Central Union Company. The table is as follows:

6321 COMPARISON BETWEEN THE COST OF MANUFACTURE, CONSOLIDATED COMPANY, AS SHOWN BY EXHIBIT 93 OF PRESENT CASE, AND CENTRAL UNION GAS COMPANY, AS SHOWN BY EXHIBIT 20 OF PRESENT CASE, FOR THE NOMINAL YEAR ENDING OCTOBER 31st, 1905.

Consolidated Gas Company:

Total Station Cost—Exhibit 93		32.68c.
Deduct for Purposes of Comparison:		
Experiments	.03c.	
Depreciation	.48c.	.51c.
Bal. (25.07c.p.@1.28 per candle)		32.17c.

Central Union Gas Company:

Total Station Cost—Exhibit 20 C. U. G. C.		26.57c.
Add for purposes of comparison:		
Expense	.59c.	
Distribution	.42c.	
	1.01c.	
Less gas bought	.06c.	.95c.
Total (22.08 c. p.@1.25c. per candle)		27.52c.

Consolidated Co's Cost:

(c. p. gas, 25.07) as above .... 32.17c.

Central Union Co.'s Cost:

Adjusted to 25.07 c.p.@1.25 .... 31.34c.

Excess:

Consolidated over Central Union Cost .... 0.83c.

6322 Q. Now it appears in evidence that up to the 1st day of July, 1905, that is during the eight months of the year for which you have made the comparison between the Central Union and the Consolidated, there was no inspection for candle power in the Borough of the Bronx where the Central Union operated?

A. That was the case.

Q. Did you make investigation and examination in order to determine how much their candle power fell below that maintained by the Consolidated?

Mr. Burr: Objected to as incompetent, immaterial and irrelevant; we are not investigating the candle power of the Central Union.

Question allowed. Exception.

A. We have a statement of their candle power every month, their station candle power in connection with the statements to us of gas made for us under the agency agreement, and by that means we know that prior to July 1st, 1905, with the average station candle power shown it would be impossible for them to deliver on the district anything like 20 candles.

Q. And as a matter of fact their station candle power showed considerably less than the Consolidated station candle power?

A. Very much less, yes, sir.

Q. When you make this comparison, say a difference of only .83 of one cent to the cost of gas for the nominal year ending October 31st, 1905, did you make an adjustment of candle power for the difference which you found to exist?

A. I did, which the record showed to exist.

6323 Q. And do you not recall that while prior to July 1st, 1905, the gas which was delivered to you by the Central Union Gas Company under agency agreement appeared at a very much less cost than that which you received from the Standard or the New Amsterdam or the Mutual, but after July 1st, 1905, when the new candle power went into effect their gas rose to substantially the other companies?

A. Yes, sir.

Q. Taking therefore the figures of the Central Union and of the Consolidated as you have presented them and eliminating the items in which it is impossible to make comparison, is there any substantial difference in cost?

A. There is none; no, sir.

Q. Quite aside from the question as to the greater return required by the Central Union on its investment?

A. Aside from that.

Q. Now you heard Professor Bemis's testimony, did you not, in which he found a difference of only .98 of a cent in coke as between the receipts of the 14th and the Central Union plant?

A. .98 of a cent, yes, sir. I have looked over that testimony very carefully.

Q. Did he fall into any errors in making that computation and is that conclusion of his correct?

A. There were many errors and the conclusions were incorrect.

Q. Now, will you state as briefly as you can what the errors were?

A. The last calculation Mr. Bemis made in arriving at this result was to divide what he computed to be the variation in dollars between the value of the coke at 14th Street and 42d Street station, and at the Central Union station, $27,464.48, into the total make of the 14th Street and 42d Street station, including the oil gas made at 21st Street for 14th Street, which had nothing whatever to do 6324 with it, 2,809,586,000 cubic feet and getting the result of 1.01 cents per thousand cubic feet of gas made. In this calculation he erred, either by reversing his factors in dividing, or by dividing by the gas sold instead of made. He should, of course, have divided his $27,464.48 by the quantity made which would have given him .98 of a cent per thousand cubic feet, instead of 1.01 cents per thousand cubic feet made. The whole method, however, was erroneous from any standpoint. Mr. Bemis took the coke used in the water gas plant of the Central Union Company, 23,155,050 pounds, or about 15 per cent. of the entire output of coke, and reducing it to short tons, got 11,577.5 tons. This he did without ascertaining whether the price per ton at which the coke was used at the Consolidated water gas stations was based on long tons or on short tons. By using short tons in the Central Union calculation, the result would be a larger number of tons, and a smaller average price per ton than if long tons were used, and thereby the gap between the price per ton at the Central Union and the Consolidated stations would be reduced, no matter how the Consolidated may be calculated. He gets an average price of $3.23 per short ton. After noting, according to his own statement, that the rate per ton of coke used at the Consolidated water gas station, was as follows:

At 21st Street	$3.24
At 44th Street	3.35
At 99th Street	1.45

When the average price received at 14th Street for all the coke produced was $3.08 and at 42d Street $2.90 a long ton, there was no evidence on which he could assume that the price at which
6325 he figured the 15 per cent. of the Central Union coke used in
their water gas plant was identical with the price which they received on the other 85 per cent. of their coke. Nevertheless, this was assumed and the following results obtained. The average price per ton at 14th Street being $3.08 against $3.23 at the Central Union the excess of the Central Union over 14th Street was 15 cents per ton. The price at 42d Street being $2.90 compared with $3.23 at the Central Union gave a variation of 33 cents a ton. Mr. Bemis proceeds to multiply the difference between 14th Street and Central Union, 15 cents, by all the coke produced at 14th Street, and to multiply the difference between the Central Union and the 42d Street station, 33 cents, by all the coke produced at 42d Street, which gives him the figures shown at page 2896 of his testimony. Thus,

14th Street	$8,676.61
42d Street	18,787.87
A total of	$27,464.48

Notwithstanding the fact that the make accounted for at both stations, 14th Street and 42d Street, includes at 14th Street a great deal of oil gas made at 21st Street, and at 42d Street a great deal of oil gas produced at that station, which puts them absolutely out of comparison with the Central Union station, he adds them together and gets 2,809,586,000 cubic feet. And after having his attention drawn to his errors, divides the amount by the quantity and gets .98 of a cent per thousand cubic feet. This is referred to repeatedly as "a difference of a cent in the coke item," of the cost at the three stations, page 2987. Again: "There is no certainty that there is any difference at all," and again "the coke item does not take up
6326 more than one cent of that eleven cents," page 2988, referring
to the difference between the 14th and 42d Street stations and

the Central Union. Later, in reply to an interrogation by Mr. Mathewson, at page 2989, "does that take out the one cent difference for coke?" He answered, "No, because it was not clear that it should be taken out." Later, according to Mr. Bemis' testimony he undertook to establish his fairness by showing that the price at which coke was used in the Central Union water gas manufacture was practically the same as the price received for coke sold, less cartage. But it was apparent that there was no cartage on coke used in water gas manufactured at the Central Union plant, and it was apparent that there was cartage on coke used in water gas manufactured at the Consolidated station which was paid by the coal gas stations. This should have been deducted before making any comparison.

Q. In other words, one represented coke in which there was cartage, and the other represented coke in which there was no cartage?

A. Exactly. In the Central Union case they were supplying coke to a water gas plant which was next door to their coal gas plant, and in the case of the Consolidated they were delivering their coke to water gas stations more or less remote from the coal gas plant. It gave an entirely misleading result, after getting a difference between the coke receipts, in dollars and cents, to divide it by the sum of oil gas made at 21st Street for 14th Street and the oil gas made at 42d Street, and the coal gas made at both stations, when it appeared that there was relatively little oil gas made at the Central Union plant.

Q. In other words, the oil gas was included all the way around, was it?

6327 A. The oil gas was included all the way around, yes, sir. And the result was used to produce the difference in the item of coke receipts.

Q. Instead of being one cent difference, what is the difference, and how is it obtained in the price of coke?

A. Well, on cross-examination Mr. Bemis made a calculation which showed that the difference in the coke item was 9.97 cents per thousand cubic feet of coal gas made.

Q. That was on cross-examination when I called his attention to certain figures, was it?

A. Yes, sir, and then Mr. Bemis injected the element of cartage and labor into the proposition, and I have made a table which indicates that after deducting the cartage and labor the difference is still 8.69 cents per thousand cubic feet of coal gas made between the Consolidated coal gas plant and the Central Union coal gas plant.

Q. Did you find that Mr. Bemis took into consideration the screenings in his computation, or the fact that there were screenings?

A. No. There were some figures made tending to show that there was little difference between the price at which the Consolidated Company's coke was used in the water gas manufacture and the average price of all coke produced, and again between the water gas figures and the selling price, as shown in Exhibit J-414-A, and here he disregards the screenings and deals with coke only, comparing $2.25 per load for water gas stations with $2.25 average selling price, disregarding the fact that out of 29,160.04 loads used at the water gas plants, but five per cent. were screenings, while of the loads sold

21 per cent. were screenings, which sold for 96 cents per load, and the comparison, instead of being between $2.25 and $2.25 as he states, is between $2.19 and $.96.

6328 Q. Have you your computation showing the actual difference, even deducting labor and cartage of 8.69 as between the Central Union and the 14th Street plant?

A. Yes. The computation showing the variation after deducting cartage and labor of 8.69 cents per thousand cubic feet is as follows:

COKE OPERATIONS, YEAR ENDING OCTOBER 31, 1905.

Central Union Gas Co.

	Mr. Bemis.	Central Union Statement.	
Sales	$114,663.76	$114,810.02	(p. 215)
W. G.	37,281.56	34,177.41	(p. 212)
District Boilers		3,204.15	(p. 212)
Coal Gas		2,626.05	(p. 214)
Total	$151,945.32	$154,817.63	(p. 214)
States it to be	$152,045.32		

(Note that to this point not one of Mr. Bemis's figures is correct.)

Labor and cartage	20,935.91	20,935.91
	$131,109.41	$133,881.72
Per M. cu. ft. made		20.29c.

CONSOLIDATED GAS COMPANY, AFTER DEDUCTING LABOR AND CARTAGE.

14th Street	$143,706.08	
42nd Street	150,765.49	$294,471.57
Per M. cu. ft. made		11.60c.

Excess Central Union over Consolidated, 8.69c. per M. cu. ft. made.

6329 Q. And without deducting cartage and labor it would be 9.97 cents per thousand, would it not?

A. Yes.

Q. Now, Professor Bemis stated that it makes a difference of only 3 cents, or actually 3.75 cents per hundred pounds, and that it is not unreasonable in view of the fact that the coke had to be carted from the coal gas to the water gas stations. The difference does not look as much on one hundred pounds, but what does it amount to when applied to the 250—what is the amount?

A. 257,000,000 pounds, which the Consolidated Company sold, the difference between the value of the coke at the 14th Street station, of 3.75 cents per hundred pounds amounts to over $95,000, or about three and three-quarters cents per thousand cubic feet of coal gas made by the Consolidated Gas Company.

Q. Now, the entire cost of cartage from the coal gas to the water gas stations aggregated how much?

A. The entire cost of cartage aggregated but $12,360.66.

Q. But the variation in that regard is one of principle rather than of great amount?

A. Yes, sir, it was purely one of principle, I think.

Q. Now, Professor Bemis in his testimony draws an analogy between deducting the residuals such as receipts from coke, ammonia and tar, and the deduction of miscellaneous income. Is there such an analogy in your judgment?

A. None such as Mr. Bemis claims. The net cost of gas manufacture logically takes out the proceeds of the sales of residuals. But neither from an operating nor from a commercial standpoint can the expenses of distribution which are actual and permanent entities in the business, be reduced by deducting from them the income 6330 from the rental of stoves which may be sold outright at any time, and which every customer has the option of buying at a nominal price, the policy of this company being ultimately to have consumers own their own stoves, or the income from the rental of such real estate as at the moment the company may chance to own and have on rental, as for example, real estate which has been purchased for extension of plant, but temporarily rented; or acquired to avoid damage suits, as the 21st street explosion case, and rented pending the company's finding a market for it. In manufacturing gas we have residuals and they are part of the process.

Q. In other words so far as your residuals of coke, tar and ammonia are concerned, are they not a necessary part of the manufacture of gas, you are bound to get them if you manufacture gas?

A. You are bound to get residuals if you manufacture gas, in some form or another.

Q. They are part of the process?

A. Yes, sir.

Q. Does the same thing apply to the receipts from gas stove rentals or other rentals of that kind?

A. A great many companies have nothing of the sort, neither stove rent nor real estate rent is an item; it is simply incidental to the conditions at the time, and therefore, in my judgment such deductions instead of being "much simpler," as suggested on page 3006, would give misleading results. They would not change the facts and the distributing expenses would go on right after the income of the stoves and real estate had passed into history. There would appear to be an increase in distributing expenses which would not exist at all in fact.

Q. Professor Bemis at page 3063 to 3072 of his testimony referred to the item of 10.89 for repairs and renewals for the twenty 6331 years, and gives a reason for his exclusion of three cents per thousand feet for contingent expense reserve fund, which he allowed before the Gas Commission and he bases this change on the assumption that the company's plant has appreciated, as he puts it, about $13,000,000. Now, that appreciation to which he refers relates or is due to what, practically?

A. The appreciation that he finds is not the result of expenditures for repairs and renewals, but to the increase in the value of the land, the increase in the value of the materials of which our property is constructed, the increase in the cost of labor that would be employed in their reproduction, and reconstruction, and the greatly increased cost of laying mains and services due to high grade and expensive pavements.

Q. It is due practically, if not almost wholly to the increase in the value of land and the increase in the value of mains and services due to change of pavement?

A. That enters very largely into the result.

Q. And have any receipts from consumers gone in to produce that increase at all?

A. None, no sir.

Q. In other words, the plant has not been built up out of the returns from the consumers of gas?

A. No, sir. In connection with that conclusion of Mr. Bemis the table made upon pages 3063 and 3064 and 3065 of his testimony, indicates an error there, of a million dollars, and another error in the computation of the rate per thousand cubic feet of gas sold since 1884.

Q. In other words, he makes a certain computation of the number of cents per thousand it would make if we divided the appreciation of the value of our land, mains and services by the output of gas, does he not?

A. Well, he uses the output of gas for twenty years as a
6332 factor, but the balance which he reaches, $4,676,497.58,
which should be $3,676,497.58, is the difference between the increase which he finds in the value of the property as appraised in 1905 over the plant in 1884, he finds an increase of $23,409,000, in round figures, and deducting from that the additions shown on Exhibit 79, $9,693,565, he gets a balance of $13,716,000, and deducting that——

Q. That $13,716,000 is what he calls the appreciation of property which is due substantially to the increase in the value of real estate and the increase in value of mains and services?

A. Over and above the expenditures of the company.

Q. And he deducts that from the total expenditures for renewals and repairs?

A. For renewals and repairs $17,392,000 and gets according to this testimony $4,676,000, actually $3,676,000.

Q. In other words his subtraction results in an error of about a million dollars, exactly a million dollars?

A. Yes, sir, and a rate per thousand of 3.46 cents, which I am unable to obtain by using any figures of sales——

Q. In other words, taking either the remainder which he actually got, or the remainder which he should have got, which differed a million dollars from that, and dividing by any amount of gas, is it possible to get the 3.46 cents which he assumed?

A. No, it is not.

Q. Furthermore in making that assumption and in arriving at that result even on Mr. Bemis' theory, is it not necessary for him to get his depreciation, to accept the valuations of property and plant which the company has put on them?

A. Absolutely.

Q And he does so in making the computation, does he not?

A. Yes, sir.

6333 Q. You cannot on any theory get any such result without assuming those valuations, can you?

A. No, the theory on which Mr. Bemis excludes any of the 10.89 cents involves the acceptance of the appraisals of the company's property by its own experts.

Mr. Page: I merely wish to suggest that the relative duties of counsel and witness seem to have been changed; the counsel is testifying and the witness is summing up the case.

Mr. Burr: That has been continuous for months, Senator.

Q. Now, as a matter of fact, Mr. Carter, is there anything in the situation that you know of or anything in the facts which appear by the testimony which would make an inclusion of three cents for a contingent fund proper at the time of the testimony before the Gas Commission and exclude the three cents at this time?

A. Nothing whatever.

Q. No change in circumstances whatever at all?

A. No, sir.

Q. Now, Mr. Bemis also testified as to land values without going into details. How did you find his method compared with the method of Mr. Marks, which you have already pointed out to be erroneous?

A. On page 3046 Mr. Bemis starts with Yalden's valuation of land and deducts, as Mr. Marks did, the alleged valuation of certain land sold or taken by the city aggregating $1,585,874.37. Whatever the company received for land which it sold was credited to its plant and property account, and operated to reduce the net increase from
1884 to October 31st, 1905, $9,693,565.90, which Mr. Bemis
6334 adds to Yalden's valuation in 1884, and such deduction hav-
ing already been made, Mr. Bemis' deduction operates to take
out this value twice over.

Q. It had already been deducted, and Mr. Bemis deducted it again, did he?

A. Such is the case, yes, sir. Furthermore——

Q. And was Professor Bemis's deduction of real estate at 18th Street, for instance, from the total deduction at the value at which that real estate was carried in the total or the value at the present time, which was several times the original value?

A. The value at the present time, several times the value at which it is included in his total.

Q. Did you find any inaccuracy of Professor Bemis in his assumption of the proportions of oil used?

A. Why there was, Professor Bemis made a misstatement with respect to the proportions of low grade and high grade oil used by the Consolidated Gas Company in the calendar year 1905, stating that it was——

Q. He stated what proportion of the high grade oil was used?

A. 16% of the high grade oil.

Q. As a matter of fact what proportion actually was used?

A. 25%, slightly over.

Q. And he made his computations and assumptions on the theory of the 16%, did he?

A. That is the case, yes, sir.

Q. Now he also refers to the fact that the services are less in number than in 1885. What is the explanation of that? There seems to be a small decrease in the number of services?

A. The change in the character of the structures or buildings which the company supplies; not infrequently a large structure takes the place of several small ones, resulting in the abandonment of several small services and substituting of one large one.

6335 Q. Does the substitution of large buildings covering many lots for smaller buildings affect the number of services?

A. Yes, sir, it decidedly does.

Q. It reduces them?

A. Yes, sir.

Q. How about the size of the services?

A. The size of course would increase very considerably.

Q. So that in spite of the reduction in the number, the increase in the size has resulted, has it not, in the increase of about $177,000 in the capital account for services since 1884?

A. That is the case, yes, sir.

Q. Now, Professor Bemis also, in dealing with working capital which the company would require, allowed one million dollars, and stated that about two million dollars more, which would make up a total of three million dollars, might be computed by assuming that the two million dollars, or that some two million dollars due from consumers of gas, was in the nature of a surplus. Is that two million dollars in the nature of a surplus in anyway?

A. In no way in the nature of a surplus, no, sir. It represents absolutely an appropriation of capital in some form or other.

Q. So that assuming a three million dollar working capital, as I understood Professor Bemis to do, no part of it could be made up of those accounts, could it, two million dollars of accounts receivable?

A. No.

Q. Is it treated as a surplus?

A. No, I don't know just exactly how he uses the term, or how he is able to construe that asset as representing a surplus.

Q. The question is whether you are able to?

A. I am not able to in any manner or shape.

At 1:05 P. M. adjourned to 2:15 P. M.

6336 After Recess.

Robert A. Carter resumed.

By Mr. Mathewson:

Q. Mr. Carter, have you read Mr. Hall's testimony?

A. Yes, sir.

Q. And the long paper, City's Exhibit 87, which is in evidence?

A. I have, yes, sir.

Q. Now, the table in this exhibit or report which I will refer to as Marwick & Mitchell's report, perhaps, on page 1433 of the exhibits in this case, states a certain amount in the gas holders of the company, which Mr. Hall takes as his starting point in the computation of gas consumption and gas on hand. Is the amount which he states on hand in the holders, January 1st, 1905, 26,552,000 cubic feet correct?

A. No, sir, it is not correct?

Q. What does he omit?

A. He omits the gas on hand at the 18th Street station.

Q. What items in that exhibit as appearing on page 1433 are therefore incorrect?

A. The statement of the gas in the holder on January 1st, 1905, the total gas to be accounted for, the total gas accounted for and the gas unaccounted for are all incorrect.

Q. And does that error at the outset affect his computations and figures all the way through as to gas on hand and items of consumption?

A. Yes, sir, the tables throughout, to the extent of the error arising from the omission of the quantity on hand at the 18th Street station.

Q. Now, on page 4478, Mr. Hall states that the table in Marwick & Mitchell's report, page 1490 of the exhibit, purporting to show gas on hand manufactured, purchased, sold to consumers and
6337 balance on hand, indicated that during the five months
ending October 31, 1905, that the company sold 421,000,000 feet in excess of the quantity made by the company and made for the company under the agency agreements during that period. Did the company in fact sell that quantity of feet in excess of the quantity manufactured and received?

A. No.

Q. Did they sell any amount in excess of the amount manufactured and received?

A. They did not, no, sir.

Q. What percentage did they make and receive under the agency agreements for those five months more than they sold?

A. The gas made by the company and for the company under the agency agreements, taking into account the variation in the quantity actually on hand, June 1st, and October 31st, exceeded the sales for the five months in question to the extent of 86,521,346 feet, or 1.82 per cent.

Q. Were these facts shown in the books to which Mr. Hall had access?

A. The facts were shown in the books to which Mr. Hall had access.

Q. Now, Mr. Hall added that this assumed excess of sales over make of 421,000,000 feet which you say was incorrect was over half the total sales of either July and August, and that he was unable to obtain any explanation for it. Did he ask you for any explanation for his apparent figures?

A. No, sir, none whatever.

Q. Would it have been easy to have made it if he had asked you?

A. Very easily pointed out, that he had made an error of over 500,000,000 cubic feet of gas in his statement.

Q. Now, as a matter of fact, instead of the sales attributed to any one month exceeding the gas made and the gas received by
6338 the Consolidated Gas Company for four successive months, such apparent excess occurred in how many months?

A. But two.

Q. And those months were?

A. The months of June and July.

Q. Now, will you state whether that excess was large or small and how it could be accounted for?

A. I have a table, Mr. Mathewson, that it might be well to put in evidence.

Q. Very good. Now, did you make copies of them?

A. Yes, there are a couple of extra copies.

Q. The table which you produce shows an excess of sales attributed to the months of June and July over the gas actually made and received for those months of 141,000,000 feet in one case and 80,000,000 feet in another. That in relation to the total gas made is a small percentage, is it not?

A. Quite small.

Mr. Mathewson: I offer that table in evidence.

Table received in evidence and marked Complainant's Exhibit 367.

Q. Now, as to the make in any one month and the gas received under the agency agreements, that is an absolute and known quantity, is it not?

A. The make is an absolutely known quantity; the quantity received is a calculated quantity based upon the sales of the other companies and their make for the calendar month.

Q. But that is definitely figured out?

A. That is definitely figured out, yes, sir.

Q. How is it to the sales which are attributed for June and July, are they the actual sales, are those two calendar months
6339 figured on the exact days of those months?

A. They are not. In both cases the sales cover a nominal month and are not necessarily comparable to the calendar month. The June sales for example would run probably from the middle of May to the middle of June, and accordingly as the temperature, weather conditions and other conditions might vary in the calendar month as compared with the nominal month, it would be reflected in the ratio of sales to the quantity of gas to be accounted for.

Q. In other words, the sales attributed to the month of June are not actually the sales in the month of June?

A. They are not, no, sir.

Q. It is an average covering a part of another month, is it not?

A. Exactly.

Q. Taking the month of July, for instance, that includes so far as gas made is concerned the period of the year when a great many people are out-of-town, does it not, say from the first of July, the vacation period?

A. Yes, sir.

Q. It includes in gas sales, however, about half the month of June, does it not?

A. It does.

Q. When the exodus has not begun or extended to the same point?

A. Exactly.

Q. So far as your experience goes, does any company undertake to reconcile its sales attributable to any particular month with the actual gas made in that month?

A. It is impossible and no one undertakes to do it.

Q. If you were to do so would it not be necessary to read every meter on the same day and such meters to be read on the 30th of June and the 31st of July, for example, to cover the month of July?

A. That would be the case, yes, sir, and it would only be sales covering that calendar period which would be comparable to the calendar month's make.

6340 Q. Is that practically possible?

A. It is practically impossible.

Q. And for the five months you have said, instead of having an excess of sales over make of 421,000,000 feet there is actually an excess of make over sales even on this theory of 86,000,000 feet and more?

A. Yes, sir.

Q. What have you to say as to the accuracy of Mr. Hall's statement on page 4477, that the company had 109,983,736 cubic feet of gas on hand, November 1st?

A. The gas company actually had on hand at that date 27,854,000 cubic feet.

Q. Did that also appear from the books of the company?

A. It also appeared from the books of the company.

Q. Now, the testimony in this case shows that the total of holder capacity of the Consolidated Gas Company was in the neighborhood of 50,000,000 cubic feet, so that Mr. Hall's statement of gas on hand would be something more than double at that period the entire holder capacity of the company, would it not?

A. Yes, sir, in that period, and on December 1st when it is made to appear that there are 196,000,000 cubic feet on hand, it is nearly four times the entire holder capacity of the company.

Q. Now Mr. Hall in his testimony refers I think to one item of the company's expenses as being excessive, that is to say meter repairs or expenditures at the repair shop. What is the fact as to that?

A. In making such comparison, Messrs. Marwick & Mitchell in-

clude as a part of the cost of repairing meters the item of meter shop expense, and they get a total which divided by the average number of meters in use during the year 1905 gives 58.56 cents as the cost per meter in use, for repairs. That they compare with
6341 the alleged cost shown in the Massachusetts Report of 49
cents and invite attention to the higher figure in the Consolidated Company. As a matter of fact, the meter shop expense has nothing whatever to do with the cost of repairing meters. The expense of the meter shop, fitting shop, deals with the care of customer's complaints and the locking and unlocking of meters, the clearing services and attending to work of that nature, and work of a jobbing character, and has nothing to do with the repairs to meters. The item in Exhibit 94, repairs to meters, costing $172,925.52 and figuring out 45.25 per average number of meters in use during the year 1905, is the actual cost of repairs to meters and is lower than the figure which they quote as appearing in the report of the Massachusetts Gas and Electric Commission.

Q. In other words, comparing it with the same item which is referred to in the Massachusetts Commissioners' report, is the Consolidated cost higher or lower than in Massachusetts?

A. It is lower. I might add in that connection that the Consolidated Company repairs its own meters as a measure of economy, and that during the year 1905 saved by this scheme $52,717.57 as compared with what the company would have had to pay to outside companies to make similar repairs at the scheduled rates which they charge.

Q. Now, in the summary of accounts excluded by Marwick, Mitchell & Co., at page 1432 of the exhibits there appears an item, "Legislative and franchise litigation," stated to be .61 cents, and on page 1462 is a table showing the advertising and legal expenses in one column, and amounts rejected in another, and the amounts approved in a third. In the column headed "amounts rejected" ap-
6342 pears a total of $63,401.65. Do you discover any error in
computing this .61 cents?

A. I do, yes, sir. On this page 1462 and the succeeding page the amounts which Marwick, Mitchell & Company reject are given in some detail. Five items aggregating $63,401.65, one of which is called actual payments excluded, amounting to $15,528.57. Dividing the amount $63,401.65 by their sales factor of 13,012,384,000 cubic feet, gives a rate per thousand of .49 of a cent. Adding for a second time the item of rejection of actual payments, $15,528.57, gives a total of $78,930.22, which being divided by the factor of sales gives a rate of .61 cents.

Q. Which is the cost per thousand which they state?

A. Which is the cost per thousand which they state, and it is obvious that the item of $15,528.57 was included twice in their statement of the amounts excluded.

Q. And if it had not been included twice, the amounts that they excluded for this particular item would be correspondingly reduced?

A. It would, yes, sir.

Q. Now, respecting this factor of sales by which they divide, what did it appear to be?

A. It is the balance of sales left after deducting from the sales reported in Exhibit 94, 13,283,163,000 cubic feet less the lamp sales reported to have been as estimated on the basis of 3 cubic feet per lamp per annum, 270,779,000 cubic feet, the balance, 13,012,384 cubic feet, they used as a volume of sales in arriving at their cost per thousand.

Q. You have already testified that the lamps burn more than three cubic feet per annum, therefore, the item of 270,779,000 cubic feet for public lamps is too small. But waiving that point, is it
possible to reach any intelligent results by dividing the
6343 operating expenses as shown in Exhibit 4 by the amount of
gas sold, less the amount sold in the city?

A. There is no theory, as I understand it, upon which the lamp sales could be deducted. The expenses shown in Exhibit 94 include the cost of gas delivered to the city, and the income statement of the city shown in Exhibit 96 includes the revenue from those lamps. Even after deducting the amount of maintenance of those lamps, shown in Exhibit 94, there is still left the revenue the company receives from the city for gas supplied to public lamps. Therefore, both in the expense and revenue there still remains the cost of and the revenue from sales of gas to the public lamps, and therefore, to divide the expenses and divide the revenue by such a factor would give results which would be purely erroneous and misleading.

Q. Is that the course which was pursued in this report?

A. That was the course which was pursued in this report.

Q. Now, Messrs. Marwick, Mitchell & Company report in this exhibit a cost which they say is 52.5 cents per thousand cubic feet after making these various deductions which are questioned. What is that 52.50 per thousand cubic feet, per thousand cubic feet of make, sales, or what is it?

A. The amount of 52.50 per thousand cubic feet which they say is the cost per thousand of $6,922,738.34 on page 1438 of their report, is not an amount that would be obtained by dividing that amount by any factor of sales by them or by the company.

Q. Neither by gas made or sold?

A. Nor anything else.

Q. To get one part of that they divide, do they not, certain ex-
penses of manufacture to the station by what they call the
6344 gas made after deducting some leakage, or how is that ob-
tained?

A. Well, I would be loath to undertake to describe how they got that 52.50 because it would be too complicated for anyone to understand it, and it would not be a factor that any practical gas company would use in their own practice, because it would be utterly misleading, being based upon no factors that the company uses in its sales.

Q. At any rate, it is safe to say that it is not 52.50 cents per thousand of feet sold, even on their own theory?

A. It is not, no, sir.

Q. Now, in reference to the legal expenses which they exclude, as attributable to franchise tax litigation or the expenses connected with the legislative investigation, are such charges as those unusual charges in your experience with gas companies?

A. No, sir, they are not.

Q. Those expenses are said to be in connection with the legislative investigation of 1905. How about the hearing before the Gas Commission of 1905-6. That would appear in the expenses of 1906?

A. Yes, sir.

Q. And the expenses of the present suit would appear perhaps in 1907?

A. Quite likely.

Q. And your franchise litigations have been proceeding since about 1899 or 1900, have they not?

A. Yes, sir, they have.

Q. And if such expenses of litigation as advised by counsel are not borne and charged as part of operating expense, do you know of any account in which they could be charged?

A. No, sir, I do not.

Q. What is your judgment as to the propriety of excluding those charges in operating expense?

A. There is no theory that I know of, Mr. Mathewson, in which they could be excluded or on which any company excludes them.

6345 Q. Do you know of any case in your knowledge where they have been excluded as operating expense?

A. No, sir, I do not.

Q. Or similar charges, I mean?

A. Or similar charges.

Q. Now, another point to which I call your attention, Marwick, Mitchell & Company in this exhibit include in their items rejected the sum of $1,850.31, being, as they state, the cost of certain expenses and increases to services in the year 1905, alleging that they should have been charged to construction account. That amount if I recall is so small that it is said it could not be expressed in cents per thousand and was not expressed by them.

A. It was not expressed by them.

Q. But there is a principle there involved and I would like to have you explain as to that item, and your view as to the propriety of excluding it.

A. The only theory upon which they could be excluded from the operating expenses would be that it was a replacement of an old service with a new one, in which case the value of the old service or the value at which it was carried in our books would have to be charged to depreciation account as an offset to the charge of construction of the new service. As a matter of fact, most of the extensions are made in the course of overhauling in advance of new pavements, and are made from the main to the curb line, a portion of the service only, and we estimate that the expense attending the change in the size of the service would just about offset the amount which we would charge to depreciation if we charged that to construction, therefore we make a short cut and charge it to expenses.

6346 Q. Is there any material difference in the result to be obtained.

A. None whatever.

Q. Now, as a layman, let me see if I understand. These services include the cost of laying them under the old pavement and they stand on your books?

A. That is the case, yes, sir.

Q. And if an entire service is abandoned, it is charged out entire at the cost at which it appears on your books, is it not?

A. That is the case, yes, sir.

Q. But you say that in cases where it is proposed to repave a street and where the city I assume has removed the pavement, you then put in an extra joint, say, from the pipe to the sidewalk, and that is charged to repairs?

A. That is charged to repairs.

Q. And you do not have the expense of putting pavement in in that case and repaving?

A. No, sir.

Q. If it were to be charged in another method, we will assume that the cost of the pipe laid would be $4 and that the cost of the pavement originally $1, that would be $5 and it would appear on your books at that figure. If you were charging it to replacement, how would you charge it? You would charge $5 to depreciation, would you not?

A. Representing the value of the service that was in the ground before.

Q. And you would then charge $4 to replacement?

A. Then charge $4 to construction in that case.

Q. And that would amount to a replacement less $1, and reduce your capital account $1?

A. That would be the case.

Q. Instead of that you simply charged——

A. The $4 to the repair account, instead of $5.

Q. And if your pipe, being a larger pipe as you say it is,
6347 in place of the old pipe, cost $5 instead of $4 without any
pavement, then if you went through the form of replacement, you would carry $5 to depreciation and $5 to construction, meaning the new and larger pipe without pavement?

A. Exactly.

Q. And it would leave your capital account exactly where you started, would it not?

A. It would exactly.

Q. And when you charge it to repairs you charge the $4 likewise to repairs and have your capital account left intact as it was originally, is that it?

A. Precisely, that is the case exactly.

Q. Is it therefore merely a mat-er of bookkeeping as to which way you treat it in a case of this kind?

A. Purely a matter of bookkeeping.

Q. Have you on your books as a matter of fact just exactly what that particular one joint cost, although you have the cost of the entire service in your books?

A. We have not.

Q. So you could not charge a replacement unless you made a particular estimate for that charge?

A. A particular estimate which would be an arbitrary one.

Q. Now, the amount which Messrs. Marwick, Mitchell & Company have stated is, as you say, negligible as applied to cents per thousand. Would the effect upon capital account in any conceivable circumstances be substantial?

A. No, it would not.

Q. As a matter of fact has not the accountant in this report included operating expense charges of substantially similar import?

A. Exactly the same kind of charges where the company has made a small extension from the service to the house risers to enable them to connect the meter, and supply a customer,
6348 charges of that nature have been accepted by the accountants,
and they are included in the cost of jobbing, shown in Exhibit No. 94.

Q. It is in evidence that the assessed value of the land of the company in the Borough of Manhattan is $9,753,000, isn't it?

A. Yes, sir.

Q. And what do Marwick, Mitchell & Company take as the valuation of that real estate in their computations?

A. They find the value as shown by the books of the old company $3,377,971.10, and the additions to December 31, 1905, $740,296.28; a total of $4,118,267.38.

Q. Marwick, Mitchell & Company included in their rejections amounts aggregating $2,222.48, which is equivalent to about .02 of one cent per thousand feet sold by the Consolidated Company, stating that it was, price of repairs to apparatus, $2,133.98, and repairs to buildings $88.50. What are the facts regarding those items?

A. Well, I have examined all the vouchers submitted to me by Marwick, Mitchell & Company referring to the first item of $2,133.98, and I find that in every case the vouchers attached—the station vouchers attached to the bills, indicate that the material charged for was intended for use in repairing apparatus, and I have no reason to doubt those statements were correctly made.

Q. So far as your investigation shows there is nothing to indicate that the items represent anything else than the books state?

A. Nothing whatever; no, sir.

Q. Now as to the small repair on buildings, $88.50, while the amount is negligible as a matter of fact, is not that the cost of repairing buildings against which you have a certain receipt for rent?

A. Yes, sir, shown in our statement of miscellaneous income, Exhibit 96 in this case.

6349 Q. And all the witnesses, even for the defendant, take the receipts from building rents and deduct them, do they not, from the operating cost of gas?

A. Yes, sir; they do.

Q. Do you know of any other theory in which in that case you can exclude the repair of buildings from operating expenses?

A. Under no theory that I can think of.

Q. On page 4472 and 4473 Mr. Hall testified over objection of complainant's counsel that he was not an expert, that in his opinion the amount expended for renewals in 1905 was sufficient to keep the plant in thorough state of efficiency and replace all waste which may have taken place during the year, and that the depreciation was provided for in the amount written off during the year 1905?

A. We expended for renewals to plant $3,424 in 1905.

Q. And what in 1904?

A. $259,244.32.

Q. What have you to say as to the opinion or statement of Mr. Hall that this expenditure for renewals of plant was sufficient as an average amount to keep the plant in repair?

A. Absurd on the face of it.

Q. Mr. Hall also commented on a charge of 10% on certain work done for consumers, referring particularly to bills rendered by Schmitt Bros. for conducting Manhattan heaters, stating that that was a profit and should not therefore have been charged into expenses. What is the fact as to that?

A. The fact is that Mr. Hall handled a great many of Schmitt's bills and must have observed that an additional charge of ten per cent. was only made in a few instances, not over half a dozen, and the facts with respect to those additions are that in all those 6350 cases the company was put to some expense in connection with the installation of appliances by Schmitt Bros. The expense the company was being put to was for preliminary survey, planning, drawing plans, supervising the work, and expenses of that character which were not more than covered by the amount added to Schmitt's bills.

Q. Therefore was that ten per cent. profit, or did it represent actual expenses?

A. It represented actual expenses; not a penny of profit in it.

Q. Now in the case where there was no such expense incurred was any addition made to Schmitt's bills?

A. None whatever.

Q. Was that also apparent from an examination of the vouchers which Mr. Hall had before him?

A. It was apparent, yes, sir.

Q. Mr. Hall also excludes interest on consumer's deposits, $51,392.50. What is your view as to the propriety of that exclusion?

A. I do not recall that Mr. Hall assigned any particular reason for excluding it. We are of the opinion that we save a great deal of money by charging consumers deposits and that the item of interest is properly an item of expense as it operates to reduce the loss from bad debts which would be very considerably higher if we were not protected by deposits, as well as reducing in our opinion the cost of collecting to some extent. I have made an estimate based upon our operations during 1905 in connection with the deposits and I calculate that we saved during the year 1905 by charging deposits, something like $191,000 of bad debts.

Q. Is it possible or practicable in the gas business to have a deposit charged against the consumer which shall cover any possible charge from that consumer and still conduct your business in
6351 a proper manner?

A. It is impossible from two standpoints: There are a great many consumers of gas from whom it would be absurd for the company to attempt to get a deposit to secure their account. The company has to exercise a great deal of judgment and a great deal of care in that particular branch of the business, and in using its best judgment there are consumers of supposed perfect responsibility who are allowed to consume gas without a deposit who fail to pay their final bills. In the matter of the amount of the deposit charged we have to be careful in that respect also, and of course in estimating the amount that a consumer will burn there may be an under-estimate, and sometimes is, of his consumption, and he is able to perhaps get ahead of the company to the extent of a month's bill.

Q. What is the character of the population of New York with which you deal which makes this situation difficult, as to transients?

A. I don't suppose there is another city in the country that compares with New York in respect to the number of transient residents, made up largely of foreigners or people who spend a short time in New York and leave again, or remaining in New York are shifting constantly from one place of residence to another.

Q. From your information and experience what would you say as to the loss from bad debts in percentage for the Consolidated as compared with other enterprises?

A. I think it is remarkably small.

Q. Even so, isn't it a fact that bills were introduced in the Legislature to compel us to return our deposits?

A. There have been such bills introduced and I noticed in the New York *Times* of January 21, 1907, there is reported a bill
6352 introduced by Assemblyman Eagleton reducing the amount of deposits a company can charge to the amount of one month.

Mr. Burr: This is entirely improper. I think it has no bearing on the present situation.

Mr. Mathewson: It simply shows you have to conduct the gas business, as every other business, with some reason, some intelligence and with some regard for your consumers, and you cannot run it on theoretical lines.

Mr. Burr: That is exactly what we have been insisting upon throughout this whole case.

Mr. Mathewson: Then we are entirely in accord.

The Master: Proceed, gentlemen.

Q. Messrs. Marwick, Mitchell & Company in computing the cost of the gas sold by the Consolidated Gas Company deduct from the charges made by the companies operating under agency agreements the 10 per cent. above cost of labor and material, and also certain interest paid to the New Amsterdam Company on the new construction at Ravenswood. As a matter of fact was not that Ravenswood construction made for the express purpose of helping the Consolidated out in its requirements?

A. Yes, sir, it was.

Q. Now, the Consolidated Company within the last few years has suffered curtailment of its productive capacity, hasn't it, through action of the city?

A. It has, conspicuously at 18th Street.

Q. Wasn't part of the 111th Street plant taken?

A. It was; taken by the city some years ago.

6353 Mr. Burr: That has all been gone over in the former examination of witnesses for the complainant.

Q. Assuming that this 10 per cent. over cost of material and labor paid to the other companies under the agency agreements, and said interest to the New Amsterdam Company, were deducted, would there not be certain distributing expenses which the Consolidated Company would have to meet before the gas goes into their mains?

A. There would be, as shown by Exhibit 94.

Q. Amounting to how much per thousand feet?

A. I should have to consult that exhibit. I have made a calculation showing that if from the 10 per cent. over cost of material and labor paid the other companies and the interest paid to the New Amsterdam Company, if from that sum there be deducted the station and distributing expenses at the rate per thousand shown in Exhibit 94 for these items for the Consolidated Company, calculated on the amount of gas manufactured under the agency agreements, the balance if it were assumed that it all represented earnings on capital were to be excluded from the cost of the gas made for the Consolidated Company, it would amount to .78 of one cent per thousand cubic feet of gas sold by the Consolidated during the year 1905.

Q. It is also suggested in Marwick, Mitchell & Company's report and in Mr. Hall's testimony and Mr. Mark's testimony that the charge for depreciation or renewals, whatever you please to call it, as shown on the company's books for 1905, amounting to $282,000 was 2.12 cents per thousand feet, or was an amount arbitrarily fixed by the Board of Trustees. Is that the fact?

A. It is not the fact. The authorization did not operate
6354 to create any charge to the depreciation account at all. It simply authorized the transfer of the balance in the depreciation account as of December 31, 1905, to the renewal and contingency account.

Q. Was not the entire $282,000 already charged in the company's books before the Board of Trustees took any action at all on the subject?

A. It was all charged during every month of the year 1905 and the detail of the charges are shown in Schedule 1, Exhibit C, of Marwick, Mitchell & Company's report, covering six type written pages, giving in detail the entries made in the depreciation account, aggregating for the year the amount referred to, $282,000.

Q. Did the resolution of the Board operate to any greater extent than merely to have that $280,000 already on the books charged into a particular account.

A. It had no other effect whatever, nor was it designed to have.

Q. Has the Board of Trustees of the Consolidated Gas Company at any time fixed any arbitrary amount or any cents per thousand which should be charged for renewals and contingent except the ten cents per thousand to which reference has heretofore been made?

A. They have never made any other provision than that.

Q. And have they ever taken any action or has the Executive Committee taken any action establishing 2.12 as the proper amount to be expended for renewals or charged to depreciation in any year?

A. No such action has ever been taken.

Q. Marwick, Mitchell & Company, in this report reject for the year 1905 the sum of $59,836.85 out of the total of $282,000 leaving a remainder of about $222,000 or 1.71 cents, which they allow for depreciation in that year. What does this $59,836.85
6355 represent?

A. It represents the value of certain mains which were abandoned in December, 1905, but which as they were disused in 1903 and 1904, Messrs Marwick, Mitchell & Company excluded from the total depreciation for the year 1905.

Q. Now, as a matter of fact when a main is abandoned and when the company gives up its use, it is marked off the books, isn't it?

A. That is the case, yes, sir.

Q. Were these mains so abandoned until 1905?

A. They were not.

Q. If you cut a main out temporarily on account of the building of salt water mains or for some other purpose it is merely marked "disused" isn't it?

A. That is the case.

Q. And is it still a part of the assets of the company, ready to be used at any time?

A. It is, yes, sir.

Q. Were these mains in that condition in 1903 and 1904?

A. And up to December, 1905, yes, sir.

Q. If, however, they were to be charged back into 1903 or 1904 that would not affect, would it, the average expenditures for renewals and repairs for the twenty years?

A. No, sir, it would not.

Q. It would merely mean that the difference in 1905 between the reduced amount and 10.89 which was the average for twenty years would still be added——

A. It would; the difference would be so much greater than if they left it in.

Q. It would not affect the computation in the slightest, would it?

A. Not in the slightest, no, sir.

Q. Mr. Hall has also commented and possibly one of these other witnesses in reference to the handling of new materials and supplies account and suggested that you might be more certain of
6356 their use if they were treated in some other way in the accounts. What have you to say to that suggestion?

A. There seems to have been a misunderstanding on Mr. Hall's part as to the company's method of dealing with material and supplies. My statement to Mr. Hall was that when materials were purchased for a specific purpose they were so charged on the books of the company instead of being charged first into a stock account and then charged out again as they were used. I also stated to Mr. Hall that if material purchased for a specific purpose were used for any other purpose than that for which it was purchased a report was made to the general office and proper entries made in the books to have the materials finally charged to the account where it was finally employed.

Q. Does that operate to make your accounts any less certain, or your information any less exact as to the using of the material?

A. Not at all, because no additional protection would be afforded by dealing with the material in any other way. Entries on the general books are no protection against misappropriation of property. If the superintendent should mislead us to the extent of sending in a requisition for material that he did not require he would be quite capable of following that up with the report that the material had been employed, so that as far as the books were concerned they would record everything very properly from the accounting standpoint, though the material may never have been used for the purpose for which it was supposed to have been used.

Q. Do your reports show what material is used for repairs and what for construction?

6357 A. The requisitions and the report of the receipt of the material indicate that the material is to be used either for construction or repairs and in every case states specifically what employment is to be made of it.

Q. Is the method you employ peculiar to the Consolidated Gas Company or is it employed by other corporations of standing?

A. It is very generally employed. As a matter of fact we take perhaps more care of some materials than is general in very large concerns handling a great deal of material for manufacturing purposes.

Q. Do you happen to know whether such a company as the General Electric Company abandoned recently this theory which is advocated by Mr. Hall?

A. I had occasion to visit——

Mr. Burr: I object to that.

The Master: That is objectionable, Mr. Mathewson.

Mr. Mathewson: Very good.

Mr. Burr: I have not objected to all the leading questions that have been asked because I thought it would consume too much time, but all this line of examination is leading.

The Witness: I might say in that connection that Mr. Lacombe and Mr. Hall visited the shops and departments and reported that they found that the records of the use of material were very carefully and correctly kept.

Q. Mr. Hall states at page 4418, regarding the cost sheets of other companies that furnish gas to you under the agency agreements that you simply held it up before him and would not let him take a copy. Is Mr. Hall accurate in that statement?

A. Quite inaccurate.

6358 Q. Did he ever ask you for a copy?

A. Personally, never, except by mail. He wrote me a letter asking to be shown those reports.

Q. Did a representative of his appear and ask you for them and did you show them to him?

A. Mr. McMurtry, representing Mr. Hall, called and asked to be shown them and they were shown to him and he had them in his hands in my office for something like twenty minutes.

Q. Did he make any demand on you, or request, for copies or for the privilege of copying?

A. No demand or request for copies or for the privilege of copying was made.

Q. Now in regard to the keeping of your accounts as to renewals and replacements and depreciation, Mr. Marks has testified that the depreciation, referring particularly to 1905, does not represent actual expenditure. As a matter of fact does the depreciation account ever represent an actual expenditure in itself?

A. A depreciation account never does record actual expenditure; it represents the writing down of depreciated property.

Q. Which is abandoned or lost or something else?

A. Yes, or superseded or obsolescent or antiquated or many other things.

Q. As a matter of fact where do the expenditures appear which offset that depreciation?

A. The expenditures which offset the depreciation appear in the construction account.

Q. Now I showed you Complainant's Exhibit 79 in this connection. Taking the item of plant, I find the third column "depreciation (renewals) since consolidation $1,227,683.10," does that represent the charge for depreciation on account of abandonment, of loss of property of one kind or another, under heading of plant.

A. Yes, sir, it does.

6359 Q. On the other hand how much was expended to replace in that property account that amount of plant?

A. $1,227,683.10.

Q. Precisely the same figure?

A. Precisely the same figure.

Q. And therefore you have put "renewals" in parentheses as the heading?

A. Yes, sir.

Q. And the balance of construction $3,904,937.21 goes to what account?

A. Goes to construction account.

Q. Now if you look down there, is it not a fact that in every instance and as to every class of property, depreciation has been charged down and expenditure made for an equal amount to renewal in your property account for the amount of property so lost, with a single exception of possibly "furniture and fixtures?"

A. That is the case with every item appearing in Exhibit 79.

By Mr. BURR:

Q. You do not mean to say you include in every item franchises and rights?

Mr. MATHEWSON: That is down at the bottom here. There are no columns of the character to which I have been referring relating to the franchises and rights.

The WITNESS: No depreciation shown for that item.

Mr. MATHEWSON: The State Board of Tax Commissioners don't seem to think there has been any.

By Mr. MATHEWSON:

Q. So taking each one of these items, plants, mains, services, meters, etc., which appear on exhibit 79, is it true that the column headed "Depreciation (renewals)," does not in that way represent actual expenditures? 6360

A. It represents actual expenditures in every case except the items stated were the expenditures for new property have not equalled the amount by which the property has been depreciated, in the matter of office furniture and fixtures.

Q. If a main is abandoned on one side of Wall Street and a larger main is put down on the other side of Wall Street, is it in your judgment any less a replacement of mains because this is not put in the exact spot?

A. Decidedly not; no, sir.

Q. As a matter of fact may not replacement sometimes precede the abandonment of the main where you lay one large main before you abandon a small main which was formerly used?

A. It may, and not infrequently does.

Q. Does that affect the validity of the bookkeeping or the propriety of it in any way?

A. No, sir, not a particle.

Q. Have you any modifications to make of your previous testimony that these columns of "Depreciation (renewals)," and of "Amount Expended in Repairs," as shown in complainant's exhibit 79 are absolutely accurate and show absolute money spent.

A. I have no modification to make.

Q. I observe that in Marwick, Mitchell's report, gas on hand is dealt with at various times. What is the practice of the company as to keeping exact statements of that character?

A. While we know at seven o'clock every day in the year what quantity of gas there is on hand we do not treat with it in our accounts or in our statistics, and it would only be useful to such a company as you described a little while ago, one that could index all its meters on the last day of the month and know exactly the sales as compared with the output, would find the record of gas on hand, especially if they had a large holder capacity, of some use to them. 6361

Q. Now as a matter of fact, in the case of the Consolidated Company, can the difference between the quantity on hand at the beginning and at the end of the year be of any subtantial importance when taken in connection with the total output?

A. The difference in the year 1905 between the quantity on hand at the beginning and end of the year amounted to about 2/1000 of one per cent.

Mr. Hall in his testimony and also in Marwick, Mitchell's report to which I have referred, figures up certain property amounting to $20,942,000 and also furnishes a statement of certain land which appeared on the books of the constituent company, showing the present value on the books of the company as compared with the value on the books of the six constituent companies. As a matter of fact, does not the land which appears on the books of the company at present include some parcels that have not appeared in Marwick, Mitchell & Company's statement of the land of the six constituent companies?

A. Yes, sir.

Q. Which?

A. The land which belonged to the Knickerbocker Gas Light Company and which was transferred to the Consolidated Company in 1884, as shown by the schedules in Marwick & Mitchell's report, was not included in the accounts of any of the companies which either Yalden in 1884 or Marwick & Mitchell in 1905 had access to. In other words, they were not shown on the books of the Municipal Gas Light Company.

6362 Q. In other words, the real estate, that is the land plus any office buildings on part of the manufacturing or distributing plant of the Knickerbocker did not appear at all, did it, on the Municipal Company's books?

A. Not all, no, sir.

Q. Now Marwick, Mitchell & Company in their report show all the land including that, do they not, as at present valued on the books of the company?

A. Well, I am not aware that anywhere in their report they show the actual value of the company's real estate except as they have copied and embodied in their report the schedules of the real estate which was transferred to the Consolidated in 1884.

Q. But in their computations showing the real estate of the six constituent companies and comparing it with the company's real estate now they do not in the first instance, do they, include this Knickerbocker real estate at all?

A. They do not include the Knickerbocker real estate at all, no, sir.

Q. And that makes any difference between the present values and the values of 1884 inaccurate, doesn't it?

A. The amount at which the real estate of the Knickerbocker Company was appraised in 1884, which was $595,000.

Q. Do the records which they have show that real estate was not included in the records of the books of the five constituent companies that they examined?

A. The records plainly indicated that the real estate of the Knickerbocker Company was not included in the real estate of the Municipal Gas Light Company. In other words, all the real estate they found of record and on the books of the Municipal Gas Light Company was the real estate described as being located at the North River, between 44th and 46th streets, and the real estate transferred 6363 to the Consolidated Company included real estate of the Knickerbocker Company described as bounded by East 98th and 99th Streets and Second Avenue and the Harlem River and appraised at $595,000. No such property was shown on the books of the Municipal Gas Light Company.

Q. Now, as a matter of fact, the Consolidated Gas Company has not the books of the Knickerbocker Company, have they?

A. No, sir, never had them.

Q. Does it not appear by the Senate Document 47 of 1884 that Mr. Yalden did not have those books?

A. It does so appear.

Q. Did you furnish Mr. Hall all the books that the company actually has or owns or has control of?

A. Yes, sir.

Q. Relating to the six constituent companies?

A. Yes, sir.

Q. Referring to the figures shown in Marwick, Mitchell & Company's report, pages 1503 to 1511 of that report, how do you find the manufacturing averages are made up?

A. They are made up throughout by adding the monthly averages and dividing by twelve instead of using the totals of the two factors that enter into the average in arriving at the average for the year.

Q. Does that represent a true or correct average?

A. No, it does not.

Q. They refer to 14th street labor as 51,765 days. What are the actual number of days?

A. 54,583 days.

Q. That is, the statement is less than the fact by how many?

A. 2,818 days' labor.

Q. Do you find that they have included or omitted the purifier labor there?

A. They have excluded the purfier labor, but have ac- 6364 cepted the gas made per day's labor notwithstanding such exclusion. Of course their figures then would not work out.

Q. It would not give any proper result?

A. No, sir, it would not.

Q. Now as to the 42nd street station theirreport shows 17,508,000 cubic feet of oil gas received from the 14th street station. Does that represent the fact?

A. It is not a fact. No oil gas was delivered there by the 14th street station. They received ordinary gas from the 14th street station.

Q. Oil gas is merely that made at 21st Street and sent down to 14th Street to enrich the coal gas, isn't it?

A. That is the case, yes, sir.

Q. How about 42nd Street labor; do youfind they have included their purification labor in that?

A. In that case also the purification labor seems to have been omitted.

Q. At 21st Street they say 9,570,300 cubic feet under the heading of "candle power." That is, of course, a clerical error, but what should it read?

A. It should read "Croton Water."

Q. Referring to the 21st street station, April, 1905, do you find that they have included all the gas making oil in making up their figures?

A. Their statement of operations at 21st Street excludes 5,587 gallons of naphtha employed in gas making at that station in April, 1905.

Q. They show the oil used per thousand feet in two columns. What errors do you discover there as between April and September?

A. In April there is an error in the gallons of oil used per thousand arising from their omission of the naphtha that was used in that month, already referred to. They get an incorrect average for the year from any standpoint. We were unable to check their figure 4.65 gallons per thousand cubic feet. It don't check in any
6365 way. The next table showing the gallons per thousand, showing the total of 4.61, is correct, except of course as to April again they make a mistake by excluding the naphtha as already referred to.

Q. Now, at the 21st Street station, in delivering your production, do you find that they include in their computations the tar burned under the boilers during January, 1905?

A. No. Their report shows no weight of tar in January, 1905, although directly under the column where it should appear there is a quantity expressed in gallons of 320,020 gallons of oil used during that month, therefore that January omission is incorrect and that total for the year is incorrect.

Q. Now, at 44th Street is there any omission in their report of oil tar used during February?

A. An omission of 8,608 gallons of oil tar used during February, 1905. The figure shows 198,018 as being correct. The correct quantity is 206,626 gallons.

Q. How about the 44th Street plant, in their report do they show the entire labor there employed.

A. Their statement of labor is incorrect. The number of days would be 12,555, instead of 7,713. As they are shown in their statement the cost of a per day's labor while correct in other respects is incorrectly averaged.

Q. Now, before leaving a review of Mr. Hall's testimony in this report, I call your attention to the testimony of the witnesses for the defendant that it was a proper method of bookkeeping, to charge off to depreciation any property lost, abandoned, or taken out of the property accounts of the company; is that the method used by the Consolidated Company?

A. Yes, sir.

6366 Q. And they also agreed that it was proper to charge into property account any expenditures for construction; is that the course which the Consolidated pursues?

A. Precisely.

Q. And so far as those expenditures offset or equal the amount of property charged off to depreciation they appear in effect in your accounts and in fact as renewals of property lost, do they not, or replacements of property lost?

A. That is the case, yes, sir.

Q. Has there been in fact, as suggested might have been the case by one or two of the witnesses for the defendant, any increase or augmentation of the property or capital account of the company except as it may result from the method of bookkeeping which I have just called your attention to; that is, construction more than offsets the depreciation already charged off?

A. Nothing of that kind.

Q. In other words, has there been any increase out of earnings?

A. None whatever.

Q. Mr. Hall refers to certain adjustments (p. 1432) .16 of a cent, and he introduces that as a factor in the cost of gas. Are you able to ascertain just what that represents?

A. It was impossible to do so, but I presume it is intended to cover the omission of several items which appear in the statement, page 1437 of exhibits aggregating .31 of a cent, which are not included in the statement on page 1432 although as items rejected are obviously intended to be excluded in that statement, it is not an amount which is divisible into any component part nor the cost per thousand on any volume of sales used by Marwick, Mitchell, or the Consolidated Gas Company in any of its computations.

6367 Q. Referring now to Mr. Edgerton's testimony, he makes a comparison of the oil tar used by the New Amsterdam Company and the oil tar produced by the Consolidated Company, apparently showing the amount produced by the New Amsterdam is about one-half as much as that produced by the water gas plants of the Consolidated; is that right?

A. That is the case, and it occurs on page 4874 of the printed testimony.

Q. Is that correct?

A. It is not correct. The quantity of oil tar shown in State's Exhibit III, is the amount of oil tar sold by the New Amsterdam Company during the nominal year ending October 31, and is not the quantity produced during that period, and one-half of the tar produced by the New Amsterdam Company was used as fuel.

Q. Comparing the total amount produced by the New Amsterdam Company to the total amount produced by the Consolidated Company there is not any substantial difference, is there?

A. No substantial difference whatever between the two.

Q. Mr. Edgerton is made in the testimony to refer to the 42d Street oil tar, that it is representing 33 per cent. of the oil used?

A. He stated that the oil tar used by the Consolidated Gas Company by the bench process was 33 per cent. of the gas used. As a matter of fact, there is no oil tar produced by the bench process. There is a drip oil produced used for fuel under the retorts of which no record is made and none kept, and therefore, no figures available to which Mr. Edgerton could have access, and from which he could not have drawn any such conclusion.

Q. Are you able to point out to him where he did draw such conclusions from?

A. Yes, sir, at 42d Street there was recorded in the manufacturing records to which Mr. Edgerton had access, during the last six months of 1905 the coal tar that was produced at that station, and the
6368 coal tar produced during that period amounted to 652,171
gallons, representing 33 per cent. of the gas oil that was used at that station in enriching the coal gas made there. The two, however, had no relation whatever to each other. The coal tar produced has nothing to do with the gas oil used for enriching coal gas, but we are of the opinion, however, that these figures must have been used by Mr. Edgerton as there were no other figures in any of our records that would show any such 33 per cent. from any computation whatever.

Q. Well, that 33 per cent. would not mean anything, would it?

A. It would not mean anything, no, sir.

Q. Mr. Edgerton stated that so far as he knew there had been no particular change in the cost of materials for seven years. Do you know whether there has been or not?

Mr. Kirby: What reference was that?

Mr. Mathewson: I haven't the page.

A. He did make that statement and I took the trouble to look up the prices at that page for anthracite and bituminous coal in 1899, and found that it was for anthracite coal, \$3.35 a ton against \$4.36 a ton, paid in 1905, an increase of \$1.01 per ton, or about 33⅓ per cent. In the case of bituminous coal in 1899 the price was \$2.38 against \$3.18 in 1905, an increase of 80 cents per ton, or about 33 per cent.

Q. Mr. Edgerton also made at page 4873 some comparison between the cost of manufacture at the Consolidated water gas plant and the cost of manufacture at the New Amsterdam plant, stating
the Consolidated to be 31.05 and the New Amsterdam 29.01
6369 cents per M. of make. Did he compare the same periods in
those cases?

A. I am not able to establish the fact that he did. The average cost which he states for the Consolidated water gas stations, 31.05 per M., is incorrect. The cost for the nominal year ending October 31, 1905, which is the same period as covered by the New Amsterdam statement, is as follows:

	Gas Made.—cu. ft.	Cost.
21st Street Station	4,185,341,000	\$1,341,188.50
44th Street Station	2,263,444,000	695,539.20
99th Street Station	1,401,538,000	420,938.42
	7,850,323,000	\$2,457,666.12

Equal to 31.50 cents per thousand cubic feet made. To make a comparison with the New Amsterdam Company it would be necessary to deduct from this total the items of experiments and depreciation, there being no corresponding items of expense in the New Amsterdam; they amount to $53,599.03, equal to 68 cents per thousand cubic feet made, leaving a balance of $2,404,666.19 or 30.62.

Q. To compare with the New Amsterdam cost of 29.01?

A. A difference of 1.61 cents.

Q. As to this item of depreciation you heard or read the testimony of Mr. Doane of the New Amsterdam Company in reference to their practice when property was lost, did you not?

A. Yes, sir. I know that Mr. Doane testified it was the practice of the New Amsterdam Company to charge all the renewals and replacements to construction account and not to charge anything off for depreciation. It is generally understood that the line between repairs and renewals may be drawn very fine, so it is even possible that repairs may get into construction account.

6370 Mr. MATHEWSON: I am referring to his testimony in the New Amsterdam case where he said they charge everything to construction and did not charge anything to renewals, for he said they could not afford it and within two or three years they were losing money and not paying their operating expenses.

Mr. BURR: Mr. Doane was here. You did not examine him with regard to that. You are reciting now the substance of what you claim was his testimony. You should produce the testimony here and call Mr. Carter's attention to it. I do not know what testimony you refer to. I was not a party to that case. I object to it further as not being proper rebuttal.

Mr. MATHEWSON: It is page 370 and following of the printed New Amsterdam case.

Q. Now, considering this difference of 1.61 between the New Amsterdam cost and the Consolidated cost, would that be a difference which in your judgment might not occur in the operation of the plants in the same town if there was nothing special to explain the difference?

A. Why, yes, sir, I think it would be difficult for two plants working entirely independently to get much closer together than that.

Q. As a matter of fact, however, did the New Amsterdam Company have the same candle power at its station that the Consolidated did during this period?

A. No, sir, there was a difference between the candle power of the two stations .41 of a candle which I estimate to amount to *t*about .57 of a cent included in that difference of 1.61 cents.

Q. What is the condition of the two companies as to the element of cartage at their manufacturing stations?

6371 A. The New Amsterdam Company are very fortunately situated in that respect. We have to cart refuse away at some expense. People who are filling in land in the vicinity of the New Amsterdam plant are very glad to come and cart theirs away and at the present time they not only have the carting done but receive something for the ashes.

Q. A great deal of filling in in that section is going on, isn't there?

A. Yes, sir.

Q. Now, as a matter of fact the difference in the cartage items of the two companies which would be thus explained is how much?

A. .20 of a cent.

Q. Now, about the item of distribution which goes into the gas at the holder——

A. The very large territory which the Consolidated Company supplies necessitates the employment of distributing stations, the cost of which is *pro rated* between the manufacturing stations.

Q. While the New Amsterdam have but a single manufacturing station?

A. The New Amsterdam have only a single manufacturing station.

Q. What do you find to be the difference in the item of distribution as between the two companies?

A. .26 of one cent.

Q. What about the item of station expense as between the two companies?

A. Well, I am of the opinion that the fact that the station expense at Ravenswood is shared by the distributing department; the distributing department being located at the station results in a division of expense there which would be rather favorable to the cost of that item to the New Amsterdam Company.

Q. It appears that the Consolidated "Station Expense" involved in this amounts to how much more than the New Amsterdam?

A. .32 of one cent per thousand cubic feet made.

6372 Q. Now, if we take into account this difference in candle power which the Consolidated maintains above the New Amsterdam, and the difference in the cartage due to the New Amsterdam station, and the difference in the item of distribution due to the fact that the Consolidated has many stations and the New Amsterdam but one, and this difference in station expense, and aggregate them, they amount to 1.35 cents, do they not?

A. They do.

Q. And if deducted from the previous difference between Consolidated water gas stations and the New Amsterdam station, to wit, 1.61 cents, what would the balance unaccounted for be?

A. .26 of a cent.

Q. Do these figures in your judgment show any want of efficiency in Consolidated water gas management or apparatus as compared with the New Amsterdam?

A. None whatever.

Q. And how about the station cost of the Mutual and Standard which operate in New York City and have their plants here as compared with the station cost to the Consolidated at its water gas stations?

A. The Mutual is higher.

Mr. Kirby: Does the Master consider all this testimony proper rebuttal? It seems to me we are going to length here without limit, taking up all these matters that Mr. Carter has no knowledge of whatever, acting upon sources which are not in evidence.

Mr. Mathewson: You put in evidence the cost between the Consolidated and New Amsterdam and drew the inference that the Consolidated ought to do better. We now put in from exactly reliable sources—you went to the report—we have them—showing the 6373 cost to the Standard and the Mutual operating on Manhattan Island to be the same practically or greater at the holder than the Consolidated. Isn't that proper to meet your bringing in the New Amsterdam?

Mr. KIRBY: In the first place I cannot say it is. In the next place that which we spoke of, we put in evidence, the table is in evidence.

Mr. MATHEWSON: I can have it written out as a table if it makes it better evidence.

Mr. KIRBY: Mr. Carter says he got some information and he draws a deduction from it. Now he is going to the Mutual and now to some other company.

Mr. MATHEWSON: Your Mr. Bemis and Mr. Edgerton and Mr. Marks read reams of deductions from these figures before the Gas Commission in the case of other companies.

Mr. KIRBY: Mr. Edgerton's reams I think consist of one page.

Mr. MATHEWSON: Well, that is a good precedent. I cannot be excluded from the same sources. I am merely asking——

The MASTER: I think if you opened the door for that kind of testimony there seems to be some force in Mr. Mathewson's suggestion. We have all been relying on here, and using, a great deal, these records of other investigations.

Mr. BURR: I concede that we had a great deal of comparative data, but where that data has been extracted from the history of any one company, the circumstances attending anything were fully brought out either on direct examination or cross examination. Now if we have to go into the situation that these two companies were 6374 placed in which would justify the figures that Mr. Mathewson quotes regarding these matters, that is another matter that opens the door to a further examination of these companies.

The MASTER: I am not disposed to exclude it unless carried to what seems to be an unreasonable length.

Mr. MATHEWSON: It is brief. I merely asked what the station cost was of those two companies, the Standard and Mutual, according to the records which he has.

A. The station cost of the Standard for the nominal year ending October 31st, 1905, was 30 cents or .62 of a cent lower than the Consolidated cost.

Q. And it had a single station as against many for the Consolidated?

A. Yes, sir. The Mutual cost was 34.34 of a cent for the same period.

Q. Mr. Edgerton refers to certain foundations at 21st street which he said were not in use and that he did not value, were there any such foundations?

Mr. KIRBY: That they were not there.

A. There are no foundations at 21st street that the company has any knowledge of that are not in use, occupied by apparatus.

Q. And he also took occasion to suggest that he doubted whether the foundations of the apparatus when the new Lowe apparatus was put in were charged off, and that quite likely they still appeared as part of the capital and property account. What is the fact as to that?

A. The fact is that any apparatus that has ever been dismantled in the history of the company to make room for new apparatus has been charged to depreciation account and been taken out of the property account. 6375

Q. And was that true as to anything that was abandoned at 21st street at the time to which Mr. Edgerton had reference?

A. It was absolutely true at that time, as I have established by looking up the entries in the books which were made at that time, and I find that the apparatus that was replaced or superseded at that time was taken out of the plant and property account and charged to depreciation account.

Q. Now, Mr. Edgerton also in explaining why he allowed three per cent. for engineering and general expenses in addition to the amount paid contractors in his estimate of cost of plant stated or explained that he found three per cent. the amount charged for the Astoria plant construction, similar items. Did he not?

Mr. Kirby: No such thing.

A. He so stated specifically in his testimony on page 5387.

Q. Yes, and he said he was surprised to find it so small, I think.

A. Yes, sir.

Q. As a matter of fact, does three per cent. represent the engineering expense at the Astoria plant?

A. It does not. And furthermore, Mr. Edgerton did not have access to any books of account that would have shown to him what the cost of engineering expenses incidental to the construction of the Astoria plant happened to be.

Q. Now, as a matter of fact engineering expenses of that kind are made or passed through the books of the Consolidated?

A. They do, and Mr. Edgerton may have observed some entries in the Consolidated Company's books representing expenditures possibly for salaries or wages which were charged to the Astoria Company, and of course any such item would form but a small part of the expense of that kind of the Astoria Company. 6376

Q. The bulk of such expense would appear in the Astoria books, would it not?

A. Yes, sir, it would.

Q. Let me ask you whether when an expense is made of that character and passes through the Consolidated books that appears as part of the operating cost of the Consolidated Company, or whether it is excluded in your computation?

A. It is excluded, of course.

Q. It does not enter into the cost of Consolidated expenses or property, or account.

—. ——.

Q. As a matter of fact at Astoria has the ten per cent. estimate proven to be not excessive, so far as experience goes?

A. So far as experience goes, the expenditures of that nature at Astoria in connection with the construction of the plant at the present time amount to 11.62 per cent. of the amount expended.

Q. Mr. Edgerton also referred to the natural gas in Chicago, and said that about 168,000,000 feet of natural gas was pumped in daily.

A. 168,000,000 repeated twice on page 4845 of Mr. Edgerton's testimony. The fact is that according to Mr. Bemis' testimony the output in Chicago is about 11,000,000,000 cubic feet per annum, which would, reduced to a maximum day's output, amount to about 55,000,000 feet for a maximum day against the 168,000,000 of natural gas which Mr. Edgerton testified was pumped into Chicago at high pressure.

6377 Q. Did it not appear from Mr. Bemis' testimony that a greater part of that was manufactured in Chicago?

A. Of the 11,000,000,000 feet the greater part of it was manufactured gas.

Q. But if you assumed a maximum day's output and assumed that it was all natural gas, it would not equal the amount which Mr. Edgerton assumed was pumped in daily in the shape of natural gas?

A. It would not amount to one-third of it.

Q. Mr. Edgerton also referred to the correction for temperature, which testimony is on page 4851.

A. He testified that he thought prior to July 1st, 1905, the city inspector corrected for temperature. As a matter of fact, we know that the city inspector did not correct for either temperature or pressure prior to July 1st, 1905.

Q. What have you to say to Mr. Edgerton's statement that the 14th street plant is a dilapidated old plant?

The MASTER: Did you not cover that this morning?

Mr. MATHEWSON: I don't think I did fully.

A. Well, there has been nearly a million dollars expended on keeping that plant in repair since 1884, and as I testified this morning, the plant has been greatly increased and the cost of manufacturing gas there has been greatly reduced, so in every respect the standard of efficiency has been maintained at the plant and the capacity considerably augmented.

Q. Would you agree therefore, with Mr. Marks' statement on page
4587 that the works themselves appear to have been amply repaired
and the operating portion used for the manufacture and
6378 generating of gas rather than with Mr. Edgerton's statement that is was dilapidated?

A. Yes, sir, I should have to agree with Mr. Marks' testimony with respect to that.

Q. Did you read Mr. Edgerton's hypothetical cost of mixed coal and oil gas, in the City of New York?

A. Yes.

Q. And have you prepared a table reviewing that?

A. I have prepared a table wherein I substitute for his figures the actual results obtained in New York City.

Q. What of his figures or methods do you employ in making up the table to which you refer?

A. I have accepted his coal figures as to the production of gas per ton of coal and the cost per ton, and one or two other items. I have also accepted his cost of purifying gas, because he alleges with respect to that item that he gets better results, two candles better.

Q. And so far as the other items are concerned, you have inserted in this table actual facts instead of Mr. Edgerton's fancy?

A. Yes, instead of Mr. Edgerton's hypothetical conditions, yes, sir. That is the table (handing paper).

Q. And this table shows that employing such actual facts in the cases where you have stated, you have done so, the cost per thousand feet of his mixed coal and oil gas in New York City to be how much?

A. 36.22 per thousand feet of mixed oil and coal gas. The table is as follows:

6379 MIXED COAL AND OIL GAS.

MR. EDGERTON'S HYPOTHETICAL COST ADAPTED TO NEW YORK CONDITIONS—ASSUMING COST OF OIL GAS TO BE AS COMPUTED BY MR. EDGERTON.

Cost of coal—10,640 c. f. @ $3.20	30.08	30.08
Cost of discharging—labor and cartage 25.66c. per ton	2.41	1.053
Labor—gas making and purifying 78.95c. per ton	7.42	4.91
Supervision	.50	.50
Repairs	4.26	3.50
Purifying material—Lime	.75	.75
Purifying Material—Oxide	.25	.25
Oil waste and sundries	.37	.37
Water	.17	.17
Expense	.77	.50
Distribution	.88	
Distribution station expense	.55	
	48.41	42.083

Less Residuals:

Coke, 66%	1,478 lbs.	1,478 lbs.		
Less use in retorts, 32%	473 lbs.	295.6		
Coke for sale	1,005 lbs.	1,182.4		
Value at 2.75 pr. short ton	$1.381875—	12.98	22.22	
Tar 13 gals. per ton @ 2.24c	.29.12c.—	2.73	7.049	
Am. 21.22 lbs. sulphate per ton @ 1.36c	28.85c.—	2.71	5.263	34.532
		18.42		

Less cartage and labor handling coke at 53.69c. per ton coke...........................	2.69	15.73	
		32.68	7.551

775 c. f. @ 32.68—25.32
225 c. f. @ 48.45—10.90

1000 c. f. —36.22 Cost per M. c. f. of Mixed Gas.

NOTE.—Mr. Edgerton's figures underlined.

6380 Q. Now, Mr. Carter, as to the receipts from residuals, Mr. Doane has testified in reference to the sale of coke, and also Mr. Addicks. Have you conferred with Mr. Doane or the other officers in respect to the market for coke from time to time?

A. It is frequently a subject of conversation.

Q. And is that subject of the sale of coke pushed by the Consolidated Gas Company as well as the National Coal & Coke Company?

A. Decide-ly in every way, by advertising and by the exhibiting of signs and announcement to consumers through such facilities as we have, everything that we can do to encourage the use of coke as fuel is done.

Q. Now, in reference to your ammoniacal liquors and your coal tar respecting which you are dealing with the Barrett Manufacturing Company. It has been suggested that the company might itself deal with those products. Has that subject ever received consideration from you or the Consolidated Company?

A. Yes, sir, I have given personally some consideration to the subject of the conversion of coal tar into pitch and dead oil and the marketing of those products, and considering the amount necessary to be invested in a plant for performance of that work, the expense of doing it, the expense of marketing the commodity, the possibility of competition, I have not seen my way clear to recommend that the company take up the handling of that product itself.

Q. Was this investigation and this thought to which you have referred given to the subject in order to determine whether it was possible or prudent for the company to undertake this work and establish a plant for the purpose?

A. It was for that purpose.

Q. Was it during the pendency of this hearing or before it?

A. Oh, before this hearing.

6381 Q. Now, as a matter of fact Field's analysis from which Mr. Kirby quoted at pages 6049 and 6050 of this record, shows, does it not, 1.37 pence equal to about 2.74 cents per gallon for coal tar received by the three London companies?

A. Yes, sir.

Q. Now, this being per Imperial gallon, which is 20 per cent. larger than the American gallon, what price would that mean if reduced to terms of the American gallon?

A. 2.19 cents per American gallon.

Q. And what did the Consolidated Company receive in 1905 for its coal tar?

A. 2.24 cents per gallon.

Q. Now, Mr. Kirby, also at page 6049 of the testimony, referred to a report in Field's Analysis that the three London companies received for their ammoniacal liquor and sulphate of ammonia 48 cents per ton of coal carbonized. Do you understand that this was 48 cents per ton of coal carbonized net to those companies?

A. No, sir, I do not. I understand it was gross, and that there could be no comparison made between those receipts and the receipts of the Consolidated Company for its ammoniacal liquor.

Q. In other words, out of that 48 cents if these companies treat it themselves, would have to be deducted the expense of treating it, and the return on the plant invested in treating it, would it not?

A. The largest company of the three and the one that does a larger business than the other two combined, sold no ammoniacal liquor, but only sulphate of ammonia during the year 1905.

Q. What do you find was given as the market price for sulphate of ammonia?

A. I found in the same London Gas Lighting journal in which
I got the report of the Gas Light and Coke Company of
6382 London a statement of the market price per ton of sulphate
of ammonia, which reduced down to pounds, figured about
2.73 cents per pound of sulphate. The price which the Consolidated Company received for its ammoniacal liquor is based upon an average market price here of 2.75 cents per pound of sulphate of ammonia.

Q. Slightly more than the London Company?

A. Slightly more than the average price prevailing at that time in London.

Q. Practically the same?

A. Practically the same.

Q. You have read the testimony here on the subject, have you not, of the ammonia and coal tar?

A. Yes, sir.

Q. And with that in view and as the result of your examination, do you think it would be wise or profitable for the Consolidated Gas Company to enter into the treatment of those two products and establish a plant for that purpose?

A. I don't think it would be wise, no, sir.

Q. And in your judgment would the net results be any better to the company than they are getting now, so far as those products are concerned?

A. It is because I think it would be no better that I think it would not be wise, Mr. Mathewson.

Q. Referring to the tabulation of Mr. Edgerton in his hypothetical cost of mixing coal and oil gas in New York City, what do you find as to the value of his residuals in relation to the cost of his coal according to the estimate which he prepared?

A. Well, I find that while it is not apparent on the face of it, the value of his residuals exceeds the cost of his coal.

Q. By how much, do you remember?

A. Well, six or seven cents, I think, as near as I can remember.

6383 Q. And in making up this schedule, you assume for the purposes of this computation, do you not, his coal figures as to the cost of production and the cost of two or three other items including his purification figures?

A. Yes.

Q. On page 5362 Mr. Edgerton states that he saw a lot of foundations at 21st Street station on which there was no apparatus. Are there any such foundations there that you know anything about?

A. There are no such foundations in existence.

Q. Now, Mr. Carter, leaving Mr. Edgerton's testimony and taking up a few other points, have you read the analysis of Marwick, Mitchell & Company relating to the cost of the property of constituent companies as carried on their books prior to consolidation, and the testimony of Professor Bemis and others to the same point, they starting with the statement that the cost to the six constituent companies of the property taken over by the Consolidated Gas Company in 1884, appeared in the books of the six companies at only $20,942,000?

A. Yes, sir, that sum has been referred to repeatedly.

Q. Is it a fact that all the property of the Consolidated Gas Company which it took over, and which was included in the $29,994,000 appraisal of Rowland and so forth in 1884, did appear on the books of the company as only $20,942,000?

A. No, sir, it did not so appear.

Q. Now, as a matter of fact at page 776 of Senate Document 47 of 1886, Mr. Yalden has a column headed "Costs of property," and in the exhibit that has been presented here from Mr. Hall in the Marwick, Mitchell & Company report, he also uses the term "Cost;" is there any such heading in the books of the constituent
6384 companies as cost?

A. None in any of them, no, sir.

Q. Is there any account in the constituent companies that states that figures, $20,942,000 as the cost of the properties?

A. Not a line.

Q. As a matter of fact, those figures $20,942,000 relate to the books of how many of the six companies?

A. They relate to the books of five of the six companies.

Q. And the Knickerbocker books were not before the Committee of 1886, were they?

A. They were not, no, sir.

Q. Does the $20,942,000 represent anything less than the figure at which certain property of the five companies who were present was carried on their books at that time?

A. That is all it represents.

Q. After charging down depreciation and other accounts?

A. After charging down depreciation in very large sums.

Q. I would like to have you say whether you have examined as Professor Bemis said he had examined the report, Senate Document 47 of 1886, and whether you will show from that that the $20,942,-

000 was not the cost of the property which the Consolidated Gas Company took over at $29,994,000 in 1884? In the first place the $20,942,000 did not include any property of the Knickerbocker Company, did it, except $810,000 expended by the Municipal Company on the plant of the Knickerbocker Company after the Municipal Company leased the Knickerbocker Company properties?

A. That is the case.

Q. And does Mr. Yalden so state in his testimony before the Committee of 1886?

A. He plainly states that, repeatedly states it.

Q. Will you make your statements and deductions referring to such points as you think advisable? 6385

A. The statement is intended to show the amount by which the value of the books of the old companies of the plants transferred to the Consolidated Gas Company exceeded the value at which it was appraised in 1884. In the first place, I would have to establish the value of the plant of the Knickerbocker Gas Light Company. The testimony before the Senate Investigating Committee of 1886 in Senate Document 47 was to the effect that there had been expended on the property of the Union Gas Light Company prior to the time of its going into the hands of a receiver and being acquired by the Knickerbocker Company, $1,200,000. That this company was acquired by the——

Q. That is by the testimony of whom?

A. This appears by the testimony of John Sickles who testified on page 284 of Senate Document 47. The Knickerbocker Gaslight Company invested after acquiring its property some $1,200,000 on it.

By Mr. Burr:

Q. Are you testifying of your own knowledge?

A. I am testifying as to the results of the testimony given before the Senate Committee in 1886.

Q. That is true with regard to all the statements you are making about the company?

A. Yes, sir.

The Master: I so understand.

The Witness: It was testified that cash was raised, dollar for dollar, for $750,000 of Knickerbocker bonds, and $450,000 of Knickerbocker notes on page 279 of the testimony. And a detail was given there of the expenditure of $1,100,000 out of the $1,200,000.

6386 By Mr. Mathewson:

Q. Represented by those bonds and notes?

A. Yes, sir, or the cash realized from them. This appears on page 283 of Senate Document 47. It appears furthermore that $810,000 was expended by the Municipal Company for the benefit of the Municipal Company, such expenditure being shown on the books of the Knickerbocker Company, and included by Yalden in his total valuation of $20,942,000. The property was appraised in 1884——

Q. Had you not better give the summary?

A. The summary with respect to the Knickerbocker Company in brief is this, that there was invested by the Union Gas Light Company prior to the receivership $1,200,000. There was invested by the Knickerbocker Gas Light Company prior to the acquiring of that company by the Municipal Company $1,200,000, and there was expended by the Municipal Gas Light Company $910,000, a total expenditure of $3,210,000, and this by the way does not include any expenditures of surplus, which the books indicate that the Knickerbocker Gas Light Company had accumulated up to 1884. The statement of Yalden indicates that they had $416,000 of surplus earnings undistributed, and of course the inference is that that was invested in plant and property, but I have only taken into account in this table the expenditures by the Union Gas Light Company by the Knickerbocker Company and the Municipal Company aggregating $3,210,000.

Q. And were all these sworn to by uncontradicted evidence before the Committee of 1886?

A. The testimony of witnesses in that respect was not contradicted in any respect whatever.

6387 By Mr. **Burr**:

Q. What other witnesses do you refer to beside Sickels?

A. A number of witnesses testified to that effect.

Mr. **Mathewson**: Yalden testified to the $810,000 expended by the Municipal Company.

Mr. **Burr**: Have you given all the pages where this appears, pages 279, 284 and 283?

Mr. **Mathewson**: And page 278 and 282.

By Mr. **Mathewson**:

Q. This property was appraised at what figure in 1884 at the time the Consolidated took it over?

A. At the time the property was transferred to the Consolidated Company in 1884 it was appraised at $2,472,000. In other words, the undisputed testimony with respect to the cost indicates that the property cost $738,000 more than it was appraised at in 1884.

Q. Now, of this $3,210,000 or the appraised value of $2,472,000, how much appeared in the $20,942,000?

A. Only $810,000, the amount which the Municipal Company had expended on the property.

Q. Have you prepared a table showing——

A. I think I can state what it is. Showing that the appraised value of the plant transferred to the Consolidated Gas Company was $204,134.05 less than the book value.

Q. Do you mean by that the cost of the plant, according to the books?

A. No, the cost of the plant is another proposition entirely. I am showing now the difference between the appraised value and book value of the plant, showing that so far as the plants
6388 were concerned that they were appraised at less than the book value, less than the value at which they were carried on the books of the old companies.

Q. Regardless of the fact that they were carried on the books of the old companies at very much less than their cost?

A. Yes. I have prepared a table showing that, and submit it herewith.

Appraised value of plant and property in 1884, (excluding franchises and rights $7,781,000)..				$29,994,000
Value as shown by books of Constituent Companies—(Yalden's summary p. 1398 Exhibit in this case)..................				20,942,632.85
Excess appraised value over book value				$9,051,367.15
The Real Estate of the old companies, including that of the Knickerbocker Co., was taken over by Con. Co. (see Ex. 79: p. 347 A Exhibit) at...........			$10,332,000	
Messrs. Marwick and Mitchell (p. 1562 Exhibit) reported that the real estate was carried on the books of the old companies (excluding Knickerbocker)			3,377,971.10	
Difference (which includes Knickerbocker Real Estate appraised @ $595,000 M. & M. p. 1570 Exhibits)			$6,954,028.90	
6389 On page 875 of Exhibits in present case appears a statement in Comp. Ex. 227 which shows the excess of appraised value of mains, meters and services in 1884 over value shown on books of old companies to have been................			$1,979,315.00	
The plant and property of the Knickerbocker Company was appraised in 1884 (p. 652, Senate Document 47).		$2,472,000		
Including mains, meters and servies	$894,000			
Real Estate	595,000	1,489,000		
Balance representing Plant		$983,000		

Investmt. by Mun. Co. in plant for Knickerbocker Co. included in the $20,942,632.85 (S. D. 47, page 948). $660,842.70		
Bal. being appraised value Knick. plant over amount invested by Munic. Co. for a/c Knickerbocker Company............	322,157.30	$9,255,501.20
Difference—being the amount by which the value on the books of the old companies of the plant transferred to Con. Co. exceeded the value at which it was appraised in 1884		$204,134.05

6390 Q. Well, this statement which you have just submitted states in brief that deducting from the appraised property in 1884, $29,994,000 the book value of assets as shown on the books of the five companies outside of the Knickerbocker, $20,942,632.85 you have $9,051,367.15, appraised value over that particular property?

A. Yes, sir.

Q. But the appraised value covers property, does it not, which is not in the $20,942,632.85 at all?

A. That is the case.

Q. What are these items the sum of which you compare with the difference of $9,051,367.15?

A. The first item is the excess of the appraised value of the real estate in 1884 that was transferred to the Consolidated Company over the value at which Messrs. Marwick and Mitchell report that it was carried on the books of the old companies, excluding the books of the Knickerbocker Company. In other words from the appraised value of $10,332,000 I deduct Marwick, Mitchell & Company's value as shown by the books of the old companies of $3,377,971.10 and I get a difference which includes the Knickerbocker real estate appraised at $595,000 of $6,954,028.90. On page 875 of exhibits in the present case appears a statement in Complainant's Exhibit 227 which shows the excess of appraised value of mains, meters and services, in 1884 over value shown on books of old companies to have been $1,979,315. These are two items of appreciation which have nothing to do with the plant, appreciation in real estate and appreciation in mains. There is one other item of $322,157.30 which is the plant of the Knickerbocker Company over and above what was shown on the books of the Municipal Company as having been expended, and which are therefore included in the appreciation shown
6391 by comparing the $29,994,000 and the $20,942,000. These three items being, first, the appreciation in the real estate;

second, the appreciation in the mains, and, third, an item excluded because it was not shown at all upon the books of the old company, that is a certain portion of the plant of the Knickerbocker Company, amounting in the aggregate to $9,255,501.20. Deducting from this the amount ppreviously given, $9,051,657.15, leaves a balance of $204,134.05 which is the amount by which the value of the books of the old companies of the plant transferred to the Consolidated Gas Company exceeded the value at which it was appraised in 1884.

Q. I think I understand you, Mr. Carter, but put from a layman's standpoint it amounts to this, does it not, that deducting the appreciation of real estate, deducting also the amount carried in mains, services, etc., that you have left an amount for value applied which exceeded the appraised value of plant in 1884?

A. That is the case.

Q. So that without regard to the proposition that the plants were not carried at their actual cost on the books of the constituent companies, the figures at which they were carried exceeded the amount of the appraised value?

A. That is the case, yes, sir.

Q. Now you have referred to the fact that the Knickerbocker Company did not appear at all in this $20,942,000, except $810,000 which was spent on the Knickerbocker plant by the Municipal Company, and that, therefore, the difference between the $810,000 and the $3,210,000 that was spent on the Knickerbocker plant or $2,400,000 of cost in relation to the Knickerbocker Company alone did not appear in the $20,942,000, is that right?

A. That is absolutely the case, yes, sir.

6392 Q. Now, will you point out some other items which did not appear in the $20,942,000, but which represented actual cost of property to the constituent companies at that time?

A. Yalden indicated by his reports and in his testimony that the practice of the old companies was to conceal earnings by writing down the book value of their properties, employing their surplus earnings for that purpose, and in the case of the New York, and Manhattan and Municipal Companies he indicated so plainly sums which had been written off the book value of their property, that it is only reasonable that in endeavoring to arrive at the cost of those properties, that the amount thus written off should be added to what was shown to have been the cost at that time.

Q. Do you refer to amounts which were arbitrarily written off and did not represent actual expenditures for repairs and renewals?

A. I referred to amounts arbitrarily written off over and above anything expended for repairs and renewals.

Q. What figure did he find the companies had written off, say the Manhattan or New York Company?

A. In the case of the New York company on page—I do not happen to have the page at the moment——

Mr. Burr: Yalden's report you are referring to?

The Witness: Yalden's testimony in Senate Document 47, he indicated that $2,929,357.97 of surplus appearing in the accounts of the New York Gas Light Company represented profits which had

been written off their property account and which in writing back again, or writing the amounts back again, only restored the
6393 property to its original cost. He distinctly testified to that effect.

At page 434 Mr. Yalden testified respecting the amount which the New York Company had written off. He says finally this was written back by appreciation to the Consolidated Company and the balance shown on the profit and loss resumé on page 707, amounting to $3,646,258.19 is in fact surplus profit of the company beyond the stock capital account. That is Yalden's statement, and of that $3,646,258.19, the account I have already named, $2,929,357.97, was added to the book value of their property at that time, therefore an amount properly to be added to their book value as shown by Yalden, which did not include this amount written back at consolidation, but which excluded it, this amount I say should be added to the $20,942,000 to get even approximately the cost of the property together with others which I will name.

Q. That amount is how much in the case of the New York Gas Light Company?

A. $2,929,357.97.

Q. Which should be written back?

A. Which should be written back.

Q. That is a portion of the amount which should be written back that was arbitrarily written off?

A. Yes, sir.

Q. In the case of the Manhattan Company?

A. Mr. Yalden testified that $2,030,000 had been written off during the period of ten years ending in 1884. That was on page 329.

Q. $2,030,000 had been written off in ten years against a plant costing on the books, how much?

A. $2,400,000.

Q. Pretty nearly the whole value of the plant?

A. Pretty nearly the whole value of the plant, and he also
6394 established the fact that it was the practice not only to write off these amounts, but to maintain the property by charging the cost of such maintenance and wear and tear to the repair account.

Q. Did he testify that as much as eight or ten per cent. annually of the value of the property had been so arbitrarily charged up?

A. He undertook to establish that 12½% was the amount charged off, and the proper amount, confirming his statement by referring to this particular transaction of the Manhattan Company.

Q. Do you recall Professor Bemis' testimony that even if as much as 2 per cent. or anything beyond 2 per cent. was charged up to depreciation per annum it would indicate that the company was adding lavishly to its construction account without having it appear in the construction account?

A. Professor Bemis testified substantially to that effect, as did also Professor Marks.

Q. Does this appear to be a case of that kind?

A. I should say it was decidedly a case of that kind.

Q. The Manhattan Company real estate at the time of consolidation was carried on its books at actually less than the cost, according to its own record, was it not?

A. Yes, to the amount of $21,706.

Q. Although that real estate had been acquired as early as the 50's, had it not?

A. As early as the 30's.

Q. Part in the 30's and part in the 50's?

A. Yes.

Q. What about the writing off for the mains, meters and services for the ten years from 1871 to 1881 on the part of the Manhattan Company?

A. Their accounts as brought down in his tables by Yalden, indicate that $768,000 was written off from the mains, meters and services alone during the ten years from 1871 to 1881. 6395

Q. Well, now, in order to see if this was justified or not, does not Mr. Yalden testify that these plants of the Manhattan Company off which over $2,000,000 was charged in ten years, and against the original cost of $2,400,000, were at the time of consolidation practically as good as new?

A. He testified specifically to that fact, that they were as good as new, and there were other witnesses who testified to the same effect at the same hearing.

Q. And at the time of consolidation is it not a fact that amounts which had been arbitrarily charged off in this manner were charged back on the books of the company, the Consolidated Company, in some instances?

A. Yes.

Q. So as to restore construction account to the proper figure?

A. Yes.

Q. Take the Harlem Company, what do you find as to the filling in of the water front property of that company, was that charged to construction account, as it should have been?

A. Mr. Moss, the vice-president of that company, testified that the filling in of the water front property and the filling of bulkheads and expenditures for mains and construction of other kinds were paid out of earnings.

Q. And that they were not charged to construction or added to property account at all?

A. That is the case.

Mr. Burr: What is the page?

The Witness: 234, 325, 335 and 331. On page 331 he testified that the capacity of the plants had been brought from one million to two million feet, the greater part being charged expense account. 6396

Q. In other words, the capacity of the Harlem plant was doubled with practically no charge whatever to property account, or addition to property on that account?

A. That is the case according to the testimony, yes, sir.

Q. Now, does any of this additional plant or property that resulted from the use of the New York Gas Light Company surplus, or from the addition to property or writing down of property by the Manhattan Company to which you have testified, or the additional property which accrued to the Harlem Company and was charged to expense account, when they doubled the capacity of their plant, appear at all in the $20,942,000?

A. Not a dollar of it.

Q. Now, have you prepared a table here showing the appraised value of the plant and property transferred to the Consolidated Gas Company in 1884, $29,994,000, and deducted from that the appreciation in the value of land only, from the figures as they appear on the books of the constituent companies, as compared with the figures at which the land was appraised in 1884?

A. Yes.

Q. And that shows a balance of $23,039,971.10 after deducting the appreciation in the value of land only?

A. Yes, sir.

Q. So that the property of the Consolidated Company appraised at $29,994,000 in 1884, if you deduct the appreciation of land over cost, leaves a balance of only $23,039,971.10 as against the figures carried on the books of five of the companies at $20,942,632.85?

A. That is the case.

Q. Now, to this $20,942,632.85 in this table have you added the additional expenditures and costs for the properties of the Knickerbocker Company, the New York Gas Light Company, the 6397 Manhattan Gaslight Company and the Municipal Company which you have been able to identify as you have stated?

A. I have added those amounts, yes, sir, reaching a total of $29,106,098.56 and to that total, of course, would have to be added, if we knew the amount, whatever was expended by the Harlem Company for doubling the capacity of their plant, which they charged to expense account, and in filling in their water front and constructing bulkheads and charged to expense account, and other similar expenditures not shown in their construction account, and construction by all of the other companies that may have been charged to their repair accounts, and therefore, not included in Yalden's statement, if known would have to be added to this total.

Q. This total, taking the figures of the books of the original five companies, $20,942,682.85 and adding these various items which you have amounts altogether to $29,106,098.56, and that includes no appreciation of real estate, does it?

A. Not a dollar.

Q. And it does not include the cost of doubling the capacity of the Harlem plant without any cost to property?

A. No.

Q. And pretty nearly reaches the $29,944,000 at which all the property was appraised in 1884, does it not?

A. It does.

Q. From your investigations are you prepared to say that the $29,994,000 including the appreciation of real estate represents more than the actual cost to the companies originally of their plant, property and real estate?

Mr. Burr: Objected to as incompetent and immaterial.

6398 The Master: Well, I suppose it is a matter of argument.

Mr. Mathewson: The witness has made a very careful examination of the record, as you can see, and other witnesses have drawn their conclusions, and I think he should be allowed to state it.

The Master: He may state it.

Mr. Burr: Exception.

A. The result of my examination of the testimony taken before the Senate Committee in 1886, is that the $29,994,000 is considerably less than the cost of the property of the old companies.

Q. Now, Mr. Carter in testing the valuations of the appraisals of $29,994,000 in 1884, did you examine the figures of the Equitable and Mutual companies which appeared in Senate Document 47 of 1886, and which were not questioned by Mr. Yalden?

A. I did and made some calculations to determine the amount of the investment of those companies per million feet of capacity as testified to by them, and compared the result with the valuation per million of capacity placed upon the property of the Consolidated Company.

Q. Is this table which you now produce such a compromise?

A. Well, the table that you have deals with the Mutual Company only and shows in substance that dealing only with such assets of that company as correspond with the property included in the $29,994,000 of Consolidated Company valuation, the actual investment would amount to $6,056,432.17, which would be $1,514,100 per million cubic feet capacity, at which rate the 28,000,000 feet of capacity of the Consolidated Company would have amounted to $42,394,800 instead of the $29,994,000. In the accounts of the
6399 Equitable Company the figures differed somewhat, although
the total value of the Equitable Gas Light Company property per million feet of capacity was $1,148,900 against $1,067,900 per million feet of capacity of the Consolidated plant and property.

Q. And that also exceeded the value per million of capacity, didn't it?

A. Yes, sir, and of course in making that comparison it would be unfavorable to the Consolidated Company for the reason that the Consolidated had of its entire plant fifty per cent. coal gas plant, whereas both the Equitable and Mutual Companies had water gas plants, which are admittedly less expensive to construct than a coal gas plant.

Q. And did you find that Mr. Yalden criticized the value of the property of the Equitable and Mutual companies unfavorably?

A. Not a word of criticism unfavorable to either of the companies. And because the Equitable Company had been operating but a short time, and their property had been purchased, both land, plant, mains and services within a comparatively short time of the date of this investigation, therefore, their values would probably more closely reflect conditions at that time and costs at that time, than any other companies.

Q. Now, you find that the mains of the Consolidated Company were appraised in 1884 at a cost of pipe of somewhat in the neighborhood of thirty dollars per ton, was it?

A. Yes, sir.

Q. Did you find that in that appraisal of 1884 account was taken of the fact that pipe during the time that a large amount of the mains of the constituent companies were laid, was costing as high as fifty dollars, sixty dollars, seventy dollars, or even eighty dollars a ton, as defendant's witnesses have admitted?

6400 A. No evidence of that sort whatever. On the other hand, I did make a comparison with the cost of mains of the Equitable Company, which demonstrated that the appraised value of the mains of the Consolidated Company in 1884 agreed almost exactly with the cost values of the Equitable Company mains laid at about that time, within two or three years of the investigation of 1886.

Q. As to the appraisal at that time, do you find anything, any testimony, as to whether the appraisal covers the operating plants, or as to whether useless things were appraised?

A. The testimony was very distinct that no useless or abandoned property or plant was valued in the appraised.

Q. Now the defendant's witnesses testified as to certain observations of Mr. Kennedy, who was president of the Mutual Company, which did not go into this consolidation and still exists. What do you find that Mr. Kennedy states at page 413, as to the value of the Manhattan plants as they appear in the appraisal of $29,994,000?

A. Mr. Kennedy testified on page 412 of Senate Document 47 that nothing useless was appraised; and on page 413 that the schedule of the Manhattan plant be considered a very fair appraisal of the value of the plant; and again on page 414, he stated that in his opinion the appraisement of the property of the constituent companies was a fair one. On page—it is not given here, but I can find it—he testified that the plants of the Manhattan Company that comprised the 14th and 18th streets plants were as fine as any of the kind in existence.

Q. This was the same Mr. Kennedy whose testimony was quoted by the defendants, was it not, who testified that these appraisements in 1884 were fair ones of the plants of the constituent companies?

A. Yes, sir.

6401 Q. Do you remember what General Roome, the chief engineer of the Consolidated Gas Company, testified would be required to convert the capacity of the Consolidated Gas Company into thirty-two million or thirty-three million feet per day?

A. He testified that having all the land and buildings and most of the apparatus necessary for increasing the capacity of the plant that he could add five million feet capacity at an outlay of about a million dollars at that time, raising it from 28,000,000 to 33,000,000 feet per day.

Mr. Burr: What is the page?

The Witness: Page 522.

Q. Now, referring back for a moment to the Manhattan Gas Light Company, Mr. Yalden's summary at pages 683-684, in which he testified that there was written off for meters and services the sum of $768,517.96, within ten years, how much do you find during that period there was added to the account for mains?

A. In certain years nothing whatever.

Q. Yes, but for other periods?

A. No figures appearing. The addition during that period amounted to but $147,630.70.

Q. So that in spite of the growth of the Manhattan Gas Light Company, and it being a prosperous company at that period, the mains' account, book value of the property, was diminished by over six hundred thousand dollars, was it not, during that period?

A. It was, yes, sir.

Q. Instead of being added to and showing a larger property account than at the beginning?

A. As it logically would have done if the books had shown the actual value of their property.

6402 At 5:20 P. M. adjourned to Tuesday, January 29, 1907, at 11:00 A. M.

Last Exhibits:

Complainant's, 367.
State's, OOO.
City's, 236.

6403 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January 29th*, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby.

6404 MR. MATHEWSON: The statement or schedule prepared by Mr. Carter and which he produced at page 6396 of the minutes was omitted in some manner in the minutes, and I would like to have it spread in now. It is as follows:

Appraised value of plant and property transferred to Consolidated Company in 1884		$29,994,000.00
Less appreciation in value of land—appraised value in 1884 over book value		6,954,028.90
Balance		23,039,971.10
Figures at which certain plant and property transferred to Consolidated Company in 1884 was carried on the books of the constituent companies (excluding those of the Knickerbocker Company) as per Yalden		20,942,632.85
Knickerbocker Co., cost	$3,210,000.00	
On books Municipal Co	810,000.00	2,400,000.00
N. Y. Gas Light Co., amount property was written down below cost and written back at time of consolidation, as per Yalden's statement		2,929,357.97
Manhattan Gas Light Co., amount written off although plant was as good as new at consolidation, as Yalden states		2,030,000.00
Municipal Company, amount written off but written back at consolidation		804,107.74
Total		$29,106,098.56

6405 To which should be added most of the cost of doubling the capacity of Harlem Plant which was charged to Expense Account; also cost of filling in waterfront and constructing bulkheads, etc., charged to Expense Account; and other similar expenditure not shown in the Construction Account of that Company, amount unknown.

Such construction by all the above companies as was charged to repairs and therefore was not indicated in Yalden's summaries—if known—would have to be added to the above total.

Robert A. Carter resumed.

By Mr. Mathewson:

Q. Mr. Carter, on the subject of arbitrary charging down of the property of various constituent companies so as to produce the sum of $20,942,000, excluding the Knickerbocker, will you quote Mr. Yalden's testimony at page 438 of Senate Document 47?

A. Mr. Yalden said at that point:

"The methods they used in keeping their accounts previously by writing to the debit of profit and loss to the credit of appreciation account, and so lessening the actual cost of their property amounting to such a sum that enabled them to write it back again and reinstate the property at something like what it cost."

Q. The writing back again to which Mr. Yalden refers was the raising of the value of the property above the $20,942,000 at the time of consolidation, was it not?

A. It was to that he had reference.

Q. Now, what does Mr. Yalden say at page 440?

A. Mr. Yalden says: "Furthermore this depreciation account, although it was called such was really an account for no other purpose practically than to hide away some of the profits until the opportunity came for them to increase the capital stock from it, there was a great deal more put into it than was necessary." 6406

Q. And what is the language of Mr. Yalden on page 434 of the Report of 1886?

A. "The company——"

Q. Which company was he referring to?

A. The New York Gas Light Company. "The Company was, many years ago (similarly to the Manhattan Co.) in the habit of transferring from their profit and loss account sundry items to provide for depreciation and wear and tear of property, which in the aggregate amounted to a very considerable sum.

Finally this was written back by appreciation to the Consolidated Company and the balance shown on the profit and loss resume on page 707 amounting to $3,646,258.19 is in fact the surplus profit of the company beyond the stock capital account.

Q. And at page 361 what does Mr. Yalden testify respecting the Manhattan Company?

A. As follows: "In the early part of 1857, and continuing until October, 1863, the company was in the habit of transferring, at certain periods, an amount from profit and loss to the credit of depreciation account, creating a reserve fund to meet the wear and tear of the various properties and works, and during these years the amounts so charged to profit and loss amounted to nearly $1,000,000.

It seems, however, that the company having also provided for alterations and imprpovements by charging such expenses to the profit and loss account, subsequently by resolution of the board of directors in November, 1863, they transferred $756,288.51 to the profit and loss account." 6407

Q. Would, then, Mr. Marks' statement that when companies are prosperous they are likely to charge down lavishly appear to have been followed in this case?

A. It would appear to have been followed.

Q. Now, were these companies prosperous during that period?

Mr. **Burr**: Objected to.

Q. I do not mean to have you go into details, but merely to state generally, as evidenced by the earnings and disbursements according to reports, in the nature of dividends.

Mr. **Kirby**: I also object to this. Prosperous is a wide term.

Mr. **Burr**: I would like to have you define what you mean by prosperous.

Mr. **Mathewson**: I know when I am prosperous, when I have money in the bank.

Mr. **Burr**: We claim that the Consolidated Gas Company is extremely prosperous to-day, and you claim that——

Mr. **Mathewson**: I will accept the witness' construction of what Mr. Marks may have meant in his statement that companies charge down lavishly when prosperous. I will take the answer, anyway.

A. The statement of the company as shown in Yalden's report indicates that they were extremely prosperous.

Q. And paying large dividends?

A. Paying very large dividends indeed; as high as fifty, 6408 and sixty, and seventy per cent. per annum, and higher even.

Q. And gas from 1825 to 1880 ran from ten dollars a thousand to three dollars, something like that?

A. Yes, sir.

Q. Can you state Mr. Rowland's qualifications as given by him in this testimony of 1886?

A. Yes, sir.

Mr. **Burr**: I object to that as being incompetent, irrelevant and immaterial, the witness not being shown to be qualified to testify to Mr. Rowland's qualifications.

Mr. **Mathewson**: He is simply quoting from the same report which you have quoted from.

Mr. **Burr**: You are asking him to read what Mr. Yalden said with regard to Mr. Rowland?

Mr. **Mathewson**: No, I am asking him to read a statement from that very book as to Rowland's qualifications, that is all, which you have quoted from through your own witnesses.

Mr. **Burr**: From which part of the book, from the report of the Committee?

Mr. **Mathewson**: No, you did not confine yourselves to the report of the Committee.

Mr. **Burr**: We certainly will not after this, I can assure you, but I would like to know what particular part of the book you are referring to, and whose testimony it is.

Q. Just answer the question.

A. Mr. Rowland stated with respect to his qualifications:

"I built the Municipal Gas Light Company's works at the 6409 foot of 44th street and also the Knickerbocker works at 99th street and Second avenue; I rebuilt the New York Gas Works almost entirely; I built the Nassau Company's works of Brooklyn, Long Island; I built a large gas works for the Boston Gas Light Company; I have built a number of small gas works at different parts of the State; I can hardly enumerate them, I don't remember them."

Mr. **Burr**: That is Mr. Rowland's own testimony as to his qualifications, and it appears in Senate Document 47.

Mr. **Mathewson**: Yes, and that is all

Q. Now, you referred yesterday to the fact that the buildings as appraised by Mr. Mayer included foundations of apparatus in every case, and as appraised by Mr. Rowland in 1884, a great part of them did not include apparatus, and that therefore there could be no comparison. Is it not a fact that the capacity of the Consolidated Gas Company has substantially doubled since 1884 so far as output is concerned?

A. Yes, sir, it has.

Q. And is it not the fact therefore that there are great amounts of foundations for apparatus in existence now which were not in existence in 1884?

A. That is unquestionably the case, yes, sir.

Q. And do you understand that those were included by Mr. Mayer in his value of buildings also?

A. They are.

Q. From your knowledge of the buildings and the changes of the apparatus and the changes in foundations of apparatus as between 1884 and date, is it possible, in your judgment, to make an intelligent comparison by taking Mr. Rowland's valuation 6410 of buildings and comparing it with Mr. Mayer's valuation of buildings and apparatus as they now exist?

A. No such comparison is possible.

Q. Now Professor Bemis has endeavored to account for something by suggesting that the plants of the Consolidated or some of them have been changed from coal gas to water gas plants since 1884. Is that so?

A. No, sir.

Q. Your attention has been called by the defendants in various exhibits to the fact that in tax reports or petitions for revision of franchise assessments, the value of the property covered by such franchise assessments was stated to be something like $4,200,000 or in that neighborhood, repeatedly. What is the explanation of that, Mr. Carter?

Mr. **Kirby**: Objected to as not proper rebuttal.

The **Master**: My recollection was that you went into that on the direct-examination of Mr. Carter before, very fully.

Mr. **Mathewson**: No, these tax reports or petitions for revision were put in evidence by the defendants in their own case and they called attention to the fact that in those there appeared statements that the value of the franchises and so on should not be assessed at more than about $4,200,000, and they also referred to evidence of Mr. H. E. Gawtrey in that regard. Now I am merely asking this witness what the explanation of that figure is.

Mr. **Burr**: You asked him at the time very fully.

Mr. **Mathewson**: No, they were not in at that time and I could not have asked him. They were put in as part of your case.

6411 Mr. **Burr**: When I called Mr. Carter as a witness for the defense, I asked him as to some papers I showed him, and you then asked him very fully as to how he made the figures, and he said he consulted with counsel and named the counsel, and I asked him to produce the data and memoranda on which he made up the figures, but I have not seen them.

Mr. **Mathewson**: Well, I only have about five minutes on this line, but I think I am entitled in my case to rebut those inferences which you sought to draw from the testimony you introduced.

The **Master**: Well, in view of counsel's statement that it is very short, it will be quicker to take it than to look it up, to see whether or not it is strictly rebuttal, although I am inclined to think you are right about it.

Mr. Burr: Exception.

A. The amount stated in the special franchise report to the State Board of Tax Commissioners to have been the value for purposes of taxation for tangible property in the street was originally furnished to me by Mr. Simpson and——

Q. Well, the figures are the ones which were furnished by Mr. Simpson on his basis of material and labor in soft earth?

A. That is the case.

Q. And simply the tangible property, is not that right?

A. That is absolutely the case.

Mr. Burr: I object to these questions as being leading.

Mr. Mathewson: I think they are leading, but I am getting at it a little more briefly than perhaps the witness was going to. He understands the situation even better than I do. 6412

Q. And why was not the value of the intangible right included in your valuation for purposes of taxation?

A. Because the allegation in our applications for *certiorari* and for a reduction of the assessments stated that the law under which the right to use the street was taxed was unconstitutional, and that therefore there could be no taxable value of such rights, however valuable they might be as an asset of an operating company, being in the same class of intangible assets as goodwill, which the courts held not to be taxable, although very valuable in itself.

Mr. Burr: Are you reading from a brief or what?

The Witness: Nothing but from a memorandum of my own making, Mr. Burr.

Q. And does that apply to every case in which these figures, or substantially these figures, appear in your petitions for revisions of assessments, or in your tax reports?

A. That was the case, yes, sir.

Q. Some testimony was given in reference to the Milwaukee, Grand Rapids and Detroit companies, showing candle power and price. Have you made any computation as to the cost of illuminating unit, even under these conditions, and of the gas furnished in New York at our candle power?

A. I have, yes, sir, taking Mr. McMillan's testimony. I find that the average price obtained by the Milwaukee, Detroit and Grand Rapids companies to have been 84.95 cents per thousand cubic feet; that the average candle power was 17.8 candles; that the sales per consumer averaged 32,500 cubic feet; 6413 the Consolidated Company's sales for 1905, amounting to 34,031 cubic feet; the average candle power of the gas of the Consolidated Company, as shown by the city tests from July 1st to December 31st, 1905, was 24.18 candles; allowing in the case of the McMillan companies a loss of one candle between the station and the district would make their district candle power 16.8 candles, or about 69 per cent. of the candle power of the gas distributed in New York. Using those factors, it would appear that the customers of the Mc-

Millan companies pay $1.23 per thousand for the same illumination furnished by the Consolidated Company.

Mr. KIRBY: I suppose that we will be permitted to put on experts to review this calculation?

Mr. MATHEWSON: It is a matter of calculation, dispute it if you do not like it. You have to prove even the computation of interest in a law suit.

Mr. KIRBY: Yes, anybody can compute interest, but it takes an expert to compute this.

Mr. MATHEWSON: It is figured on the Edgerton basis of proportion of illuminating service to cost.

Mr. KIRBY: Then it should be in the brief.

The WITNESS: The testimony further showed that notwithstanding the low average price of 84.95 cents per thousand, the McMillan customers consumed but 32,500 cubic feet per annum. This, however, is of 16.8 candle power gas.

6414 Q. Well, does it make the illuminating cost per unit greater or less in those cities than in New York, assuming those figures which were put on the record by Mr. McMillan to be correct?

A. Assuming that the consumer is buying illumination, it is costing them more for illumination there than it is costing the consumers in New York City.

Q. Per candle?

A. Per candle. And furthermore, notwithstanding the low price, the consumption per consumer is smaller than it is in New York.

Q. Now, the question was raised as to the change in the oil contract on November 1st, 1905, and as to the effect of the cost, provided the year 1905 had continued at the prices existing in previous contracts. Have you made a computation so you can show how much difference in cost per thousand it would have made if the prices for November and December, 1905, had continued under the old contract, and how much is it, if you can produce it?

A. The difference expressed in cents per thousand is .13 of one cent.

Q. As a matter of fact, Mr. Carter, and bearing on the use of low gravity oil, the Mutual Gas Company which operates in New York City had no part in this contract of November 1st, 1905, had they?

A. No, sir.

Q. And they continued the use of lower grade oil, did they not, in December, 1905?

A. They did, yes, sir.

Q. And the Consolidated at the same time was using practically all of the 34 degree oil, were they not?

A. That is the case, yes, sir.

Q. What was the actual result in that month as to the cost per candle?

6415 A. The actual result of cost of candle power delivered on the district as shown by the City tests was that the cost was greater to the Mutual Company than to the Consolidated Company.

Q. Yes, the Mutual Company's oil averaged them how much in December?

A. 4.04 cents per gallon.

Q. How much did the Consolidated Company's cost?

A. 4.84 cents per gallon.

Q. Reference has been made to H. E. Gawtrey's statement. Referring to the value of property as of $27,400,000 taken over in 1884 instead of $29,994,000, what is the figure which Mr. Gawtrey gives?

A. The figure given by Mr. Gawtrey, $27,649,060 (page 4862) was the value of the tangible property, $29,994,000, less an amount reserved to retire the outstanding obligations of the old companies, $2,329,000, and sundry adjustments amounting to $15,940.

Q. That has no relation then really to the value of the property, $29,994,000?

A. None whatever. It simply is a statement of stock that was issued for each company assuming however the obligations of the outstanding bonds of the old companies and paying for it in that way.

Q. That is accounted for, is it not, in the same way as the difference between the $37,775,000 of capital authorized and the actual amount of $35,000,000 and something of capital actually issued?

A. That is the case.

Q. In other words, certain capital was reserved to retire the debts of the contingent companies which were assumed?

A. That is the case, yes, sir.

Q. Have you read Mr. Lacombe's testimony?

A. Yes, sir.

Q. As to the account with the city?

A. I have, sir.

6416 Q. Do you find that Mr. Lacombe assumes that the company actually delivered to the city three feet per hour?

A. Mr. Lacombe's calculations are most of them based upon an assumption of 3.77 cubic feet per hour for Welsbach lamps and four and one-half cubic feet per hour for open flame lamp. Mr. Lacombe's conclusions are somewhat in error in that he undertakes to demonstrate that deducting from the amount of the company's bill the amount applicable to the payment for gas that the balance is the cost of maintenance, whereas as a matter of fact the balance is the amount available for maintenance or which the company would receive in payment for maintenance.

Q. In other words, the amount of maintenance is assumed to be the difference between that assumed amount of gas delivered and the amount received?

A. And the total amount of the bill.

Q. You previously testified, or Mr. Addicks did, I think, that the amount of gas delivered was not the exact amount which the bill showed?

A. That is the case, yes sir.

Q. In other words, your bills were made out according to your contract, weren't they?

A. Precisely so, according to Mr. Lacombe's Schedule 6, assuming the consumption of 3.77 cubic feet in the Welsbach lamps and 4½ cubic feet per hour in the open flat-flame lamp the apparent loss to the company for maintenance of the lamp would be $32,072.49.

Q. Correcting the figures to the actual figures which have previously been testified to, do you find that Mr. Lacombe's results differ substantially from the company's?

A. No, in no respect; no, sir.

6417 Q. Prof. Bemis referred to your statement in an affidavit in this case that the services since 1894 have been largely renewed or replaced, with no additional charge to capital except $177,000, and suggested that that meant that you from earnings had increased the construction or property account without showing it, is that the fact?

A. Not at all, sir.

Q. Now, in relation to services, did you pursue any different course than what you described yesterday, merely charging off when you lost or abandoned a service that service at the figure which it was carried on your books, and when you put in a new service, new or to replace an old one, charging that into your property account at the actual cost?

A. That is the method we have always pursued.

Q. But if you removed a long, expensive service and put in a new service, or put in a service when iron is cheaper than when the old service was put it, it might mean a new service at an actual reduction in your property account, might it not?

A. Exactly so.

Q. In other words, the services charged off would exceed in cost the new service put in?

A. In many cases, yes, sir.

Q. Mr. Doane referred to the sales of coke as $3.35 a chaldron, or $4.71 per net ton of 2,000 pounds. Do you know whether that was the ordinary run of coke or whether that was screened coke?

A. That was screened coke.

Q. It did not take into account screenings and the cheaper grades of coke?

A. It did not, no, sir; of which there would be from 15 to 20 per cent.

Q. The defendants brought out the point that the mains on December 31st showed a smaller mileage account than on Oc-
6418 tober 31st, 1901, which is the date at which we have been considering the capital of the company. If you take the mains as of October 31st, 1905, we must take the rest of the properties as of that date, and what would the total result be, greater or less in property account on December 31st or on October 31st?

A. It would be greater on December 31st, taking the total property into account.

Q. And the same would be true at any subsequent date?

A. At any subsequent date, yes, sir.

Q. As a matter of fact, Mr. Doane's figures, to which I call your attention, include, do they not, cost of handling and delivery of the coke?

A. Yes, sir, all the expenses incidental to it.

Q. The defendants have laid stress on the fact that 27.81 miles of the company's mains out of a total of 822 miles were marked "disused." You stated yesterday that where such mains were temporarily disused that you considered them part of the assets of the company, didn't you?

A. Yes, sir.

Q. And that when they are really abandoned they are marked off as abandoned and taken out of the property account?

A. Yes.

Q. What is the total value on the books of this 27.81 miles of disused mains as compared with the total value of $7,852,000, on October 31st, 1905?

A. The total value would be $103,207.01.

Q. Of that $103,000 and over, how much would represent mains under six inches which counsel suggested might not be useful for all the future?

A. The value of the mains under six inches disused is $55,869.11.

Q. Have you the average candle power of the company for 1905 according to the works' tests and the city's tests?

A. Yes, sir.

6419 Mr. Burr: Isn't that already shown from their book exhibited in evidence here?

Mr. Mathewson: No; no such schedule is in yet.

Mr. Kirby: If you keep on long enough we will have it up to the moment of stopping, I suppose.

Mr. Mathewson: I am not surprised that counsel is worried by this testimony.

Mr. Kirby: I am not worried at all by the testimony. I am a little concerned about the possibility for cross-examination.

A. I have such a statement.

Q. Is this it?

A. Yes, sir.

Q. This shows the monthly averages for 1905 as attributed to each one of the works of the company and also the city tests attributed to those works, and the average tests, does it not?

A. It shows those figures, yes, sir.

The paper is offered in evidence.

Received in evidence and marked Complainant's Exhibit 368.

Q. Is it possible by having a single station or a single month to get any relative comparison between city's tests and works' tests, or between the general candle power maintained at the works and the candle power delivered to consumers?

A. I should think not, no, sir.

Q. As a matter of fact, these different stations, so-called, 14th street, 21st street, 42nd street, 44th street and 49th street, related to the constituent companies or five of them before the consolidation, didn't they?

A. Yes, sir.

Q. And the city for the purpose of its testing has still 6420 maintained the same names as to the stations and referred to them as 14th street and 21st street, hasn't it?

A. My impression is they refer to them as New York, Manhattan, Harlem, Knickerbocker, I think they still use the name from the old company.

Q. Still using the old name?

A. Yes, sir.

Q. Isn't it a fact that the mains of the company interlock, and the gas runs around so it is impossible to say for a certainty that the gas which reaches the testing station of the city on the old 14th street mains does not contain gas from some other station?

A. It would be impossible to say that it does not, and I am absolutely certain that it does.

Q. For instance, you take the 42nd street station, isn't it a fact that the gas of the 42nd street station before it gets to the city testing station is mixed with other gas at one of the uptown stations?

A. Yes, sir, either 63rd street or 65th street, or both of them.

Q. Now taking the entire year, what is the average at the works, all stations?

A. 25.34 candles.

Q. What is the average at the city testing station?

A. 22.99 candles.

Q. That shows a drop between the works and the testing stations of how much?

A. 2.35 candles.

Q. Referring to the Standard Company, the Mutual, the New Amsterdam, is it not the fact that they serve a comparatively limited territory in the city, that is that they do not go into every street as the Consolidated does?

A. Oh, no, sir, they have restricted territories. Not restricted in the sense of any restrictions being placed upon them, but they are confined within a limited area.

6421 Q. While the Consolidated has to maintain its candle power even to the remote districts?

A. The most remote districts of the city.

Q. Do you understand there is anything in the law which prevents the city from testing your gas at any point it pleases, at any time?

A. On the contrary, my interpretation of the law is it has such a right to test at any remote point in the district supplied by the Consolidated.

Q. Is it your view that the company must maintain a candle power which will show 22 candles at any point?

A. We would not think of doing anything else than that, Mr. Mathewson.

Q. Mr. Burr, for the defendants, offered in evidence the minority report made by Senator Gilbert of the Committee of 1886. Mr. Gilbert in that report refers to the capital of the Mutual Gas Light Company as $4,100,000, and says that it appears that for that they could produce 4,000,000 cubic feet per day. Is that in fact the capital of the Mutual Company as it appears in that report?

A. It is not, no, sir.

Q. What is it?

A. The actual investment of the Mutual Company as shown by their statement referred to by Yalden was $8,284,515, and eliminating from that anything that possibly could be eliminated on the score of it not being an investment in the gas business, as for examppl, United States bonds and some of their own stock and that sort of thing, would leave at the lowest possible estimate a possible $6,275,904.96 as the investment of the Mutual Company in the gas business, with a capacity of 4,000,000 cubic feet per day.

Q. Do you find that he also assumed an ideal company, costing $15,000,000, and bases that on the names of two witnesses that he mentions?

6422 Mr. **Burr**: Isn't this all matter of argument and for brief rather than to have it brought out in this way at this time? The report is in evidence and whatever deduction may be drawn, it seems to me, is properly a matter of argument.

The **Master**: It seems to me, Mr. Burr, excepting in so far as there is anything in the report which might involve the calculation of an expert on constructions or the effect to be given to any figure therein appearing. That is the idea on which I consider some of the testimony might be rebuttal, but as to that last question I think your objection is entirely good.

Mr. **Mathewson**: If the Master pleases, the report of the minority was offered in evidence by my friend Mr. Burr, but the evidence was not offered in evidence upon which Senator Gilbert purported to make his report, and the evidence directly contradicts the terms of his report. You could not argue it from the evidence because the evidence is not before this Master until I put it here by questioning this witness. That is the point. I shall not pursue this for more than a moment, but I think I am entitled, am I not, under those circumstances, to ask the question?

The **Master**: I did not understand that the matter about which you were questioning was not in evidence here.

Mr. **Mathewson**: No, it is not.

The **Master**: All right.

A. There was no such testimony given by either of the witnesses quoted by Senator Gilbert.

6423 Mr. **Burr**: What quotation have you in mind and where does it appear?

Mr. **Mathewson**: Page 47, "upon this testimony a capital of $15,000,000," and so on, "more than suffices to produce a certain number of cubic feet of gas," assuming I suppose the building of an ideal company instead of the six existing companies.

Q. Now he refers to two witnesses and both of those witnesses testify that a million dollars or more per million feet of capacity would be required, don't they?

A. Yes. The two witnesses were Mr. Graham, the President of the Equitable Gas Light Company, and Mr. Kennedy, the President of the Mutual Company.

Q. Did they testify to any such thing as that?

A. They did not testify to anything of that kind.

Q. You have read all the testimony, haven't you, Mr. Carter?

A. Yes, sir.

Q. Without going into details did you find anything in that testimony to sustain the statements of the minority report as against the findings of the majority?

Mr. **Burr**: I object to that as incompetent. We must have the evidence here upon which he bases his statement.

The **Master**: That is going pretty far.

Mr. **Mathewson**: Well, all right. In order not to take time and in order that the argument may be produced if desired, I will offer in evidence the balance of the volume, report of the committee of 1886, Senate documents 47 of 1886, including the testimony and other things which have not already been offered.

Mr. **Burr**: Do you mean to say you offer all the evidence?

6424 Mr. **Mathewson**: Yes, I offer the whole thing that has not already been offered. I think if it meets with the views of counsel that a stipulation on the record that we may refer to it probably would meet the case—you have copies of it—without printing the whole book.

The **Master**: Yes, why not make such stipulation as that—the record may be deemed in evidence for the purpose of reference thereto by either party without the necessity of reprinting it.

Mr. **Mathewson**: The tabulations and reports are printed and contain the figures, and it seems to me that the stipulation suggested meets all requirements.

Mr. **Burr**: I don't know as to that. You offer it for the purpose of sustaining certain opinions which you have asked Mr. Carter to express with regard to the point, of what was proven before this committee?

Mr. **Mathewson**: No, no. I offer it to show the utter ridiculousness of the proposition advanced by Senator Gilbert in his minority report, and to show the soundness of the conclusions of the majority report which we offered in evidence.

Mr. **Burr**: Well, I think that ought all be before the court.

Mr. **Mathewson**: Yes. The Court won't read it through except as you may refer to it.

The **Master**: As long as part of it is in the rest of it might as well go in.

Mr. **Burr**: Yes, let us make a complete report.

Received in evidence as Complainant's Exhibit 369.

6425 Mr. **Mathewson**: That is all I have.

Cross-examination by Mr. **Kirby**:

Q. Mr. Carter, I refer you to the resolution of the—I think it is of your Board of Directors, or your Executive Committee, I am not sure which, which you referred to yesterday, as the same appears on page 1466 of the exhibits, being part of City's Exhibit 87. Did I understand that this was the first resolution of the kind that your company has passed?

A. Yes, sir.

Q. But prior to this time there had been a similar application of funds for such purposes or similar purposes to those set down in this resolution, had there not?

A. There had been.

Q. Was -here any resolution of authorization for the same?

A. There was not. There is no resolution for the authorization of these expenditures, Mr. Kirby.

Q. This resolution then was for what purpose?

A. The closing of one account into another account.

Q. Had you ever had any previous resolution for that purpose?

A. We have not had previously any such account to close it into.

Q. Which is the new account that you had not prior to this time?

A. Renewal and contingency account.

Q. When did that account commence?

A. Commenced in May, 1905.

Q. And what is that account for?

A. It is an account that is credited monthly with the contingent expenses, calculating at 10 cents per thousand cubic feet sold and charged monthly into the operating expense account.

6426 Q. You might designate that as a depreciation account?

A. What its name indicates—a renewal and contingency account.

Q. Is it ever designated, in other companies, as depreciation account or depreciation fund account?

A. I cannot tell you how it is designated in other companies.

Q. What is its purpose?

A. To accumulate a fund which will be used for——

Q. Renewals?

A. To accumulate a fund which will be employed for renewals and contingencies.

Q. That is, for other purposes than new construction?

A. Always other purposes than new construction.

Q. This account was never carried on the books of your company prior to this time under another name?

A. To which account are you referring?

Q. The renewal and contingency account?

A. No, sir.

Q. The amount set down in this resolution was $282,219.67. Was that money actually spent?

A. As I have already testified we do not attempt to show in that account expenditures.

Q. No, I did not ask you what you attempt to show there, I asked if your money was actually spent?

A. I should testify yes, that it was all spent.

Q. Now, can you tell me for what it was spent?

A. To replace the property that was written off during the year of which that formed a summary at the end of the year, that entry.

Q. Can you tell me for what specific apparatus or parts of plant or mains or any part of your producing or distributing system it was spent?

A. It was expended on the plant corresponding to the items enumerated in that entry.

6427 Q. By that you mean that the sum of $3,424 was spent for renewals of plants, that the sum of $90,561.54 was spent for the renewals of mains, that the sum of $37,401 was spent for the renewal of services and so on as set forth in that resolution?

A. I might qualify that to this extent by saying that if it was not expended during that identical calendar period it certainly has been by this time.

Q. So that the resolution and the amount set down therein took not only of that which had been done but that which was intended to be done?

A. In a measure. We might abandon a main in December, 1905, and not relay that main until January, 1906, in which case the expenditure for the replacement of that main would not appear in the disbursements of 1905.

Q. Then the amount which under this resolution you charged off from your renewal and contingency account and which is there set down as $282,219.67, and which is set down in State's Exhibit L under the heading "renewals, 1905," as $282,219.67, being the same, may or may not indicate moneys actually expended?

A. It is bound to do so ultimately if not within as I say identically that period.

Q. Assume that after the passing of this resolution for some cause unforeseen at that time the work which was then contemplated was not either started or completed, in that instance you would have no expenditure, would you?

A. Well, that was hardly a conceivable condition to my mind, Mr. Kirby.

Q. Now, what you are endeavoring to show I think is that these renewals may lap over into the next year?

A. Or may have been carried over from the preceding year.

6428 Q. Well, if carried over from the preceding year they would have been charged up to the renewal item of the preceding year?

A. Exactly.

Q. But if they lapped over as in this instance—by this instance I mean the resolution we have been referring to—you will not charge them in the renewal account for the year 1906?

A. No.

Q. Having been cared for by that resolution?

A. That would be the case.

Q. And if something set down therein was not carried into effect you would make an adjustment, I take it, in the next year's account?

A. If anything came specifically to our attention of that character that would be done.

Q. So taking this renewal item over the entire period from the year 1884, if there had been any errors of that kind the chances are that an adjustment would have been made and the total would stand as correct?

A. Yes, sir.

Q. Now prior to this year, or rather, 1905, the time when this resolution was passed, having no renewal and contingency account I take it that you designated as your renewals account the moneys which you actually expended for that which your company considered renewals?

A. There was no change in 1905, Mr. Kirby with respect to our method of charging up our depreciation as it accrued. The only charge that occurred in 1905 was in the creation of the renewal and contingency account against which these items were charged at the end of the year instead of being charged to profit and loss account.

Q. So that in 1905 you took it out of this fund which you had created by your 10 cents per thousand cubic feet?

A. Yes.

6429 Q. And theretofore at the end of the year you charged it in your profit and loss account?

A. That is the case, yes, sir.

Q. But the renewal account stands today as it stood since 1884?

A. Yes, sir.

Q. And indicates the actual amount which has been spent each year on renewals of your property, renewals in the sense which you consider renewals?

A. Yes, sir, that is the case.

Q. Now then that does not indicate—that is that amount as set down in your property may or may not have been, does it?

A. Covering the period of twenty years?

Q. Yes.

A. It indicates such depreciation as became evident during that period in any manner or shape.

Q. It indicates as far as your books are concerned, and looking only to the books, taking into account at this time no knowledge which you may have of the plant by inspection thereof that the property may or may have depreciated more than the amount spent for renewals and repairs, may it not?

Mr. Mathewson:

Q. Would the book account itself show anything on that subject?

A. The book account would indicate nothing whatever; inspection of the plant might.

By Mr. Kirby:

Q. We are confining ourselves to the book account?

A. The book account would not indicate that, no.

Q. In other words the plant may have, for all the books would show, have been "tottering to its final collapse?"

A. Except as the amount, Mr. Kirby, expended would appear to have been adequate to maintain it at a high standard of efficiency and in good repair.

6430 Q. Now, you are using the mind of an engineer, and I am trying to keep ourselves to that of an accountant.

Mr. Mathewson: Even an accountant may know something.
Mr. Burr: But he never built a gas works.

Q. That is true, is it not?

A. That is quite true. Of course, you will agree that in the course of twenty years, starting with a plant or with several plants all of which had been in operation for a great many years that a great many things would transpire during the twenty odd years, during the history of the Consolidated Company, that would not transpire in the history of a company that started *de novo* twenty years ago.

Q. Quite so. Now you, with that knowledge which has come to you as one familiar with figures, as also one who has been closely associated with engineers and familiar with gas works on your own account and the company's experts have also testified that the plants are in first-class condition, I presume that taking this in consideration you considered that the amount spent in repairs and renewals has been sufficient to offset all depreciation?

A. Well, I would not like to say that, Mr. Kirby, because men more experienced than myself tell me that it has not and that there is still a condition that we should provide against.

Q. So you may still have them "tottering," for all that you know?

A. Not in any respect apparent in the plant as it exists to-day; the plant as it exists to-day giving no indication of it whatever, but nevertheless long experience leads them to believe that conditions are liable to arise in the future that the company should provide 6431 for by a suitable reserve which I consider no reflection whatever upon the condition of our plants as they stand to-day.

Q. They seem all right, but they may be all wrong?

A. They seem and are all right, but for reasons which we are unable to foresee now we may have to replace them with other kinds or other types of gas-making apparatus at some time that we know not of to-day and that we should be prepared to do that and that the business has got to provide for that.

Q. I call your attention to Complainant's Exhibit 79, to which you made reference yesterday, being page 347-A of exhibits, and ask you if you will look with me at the second column thereof, headed "Construction since Consolidation." Now, excluding the item of real estate with which we are not concerned at this time, I take it that all the totals set down in that column indicate the actual expenditure has been made, whether it be for new construction or whether it be for renewal?

A. That is the case; yes, sir.

Q. Now, am I not also right in assuming that the total for those expenditures, excluding as we may in the expenditure, the expenditure for real estate, comes from two sources, from capital and from earnings?

A. That is the case, yes, sir.

Q. Now, coming to the third column, headed "Depreciation (renewals) since Consolidation" I take it that all of the items set down therein indicate the amount expended for other new construction?

A. That is the case, yes, sir.

Q. Now, will you state to me from what source the expenditures in that column came from, from capital or from earnings?

A. From earnings, Mr. Kirby.

6432 Q. And the amount spent for new construction and spent out of capital is set down under the heading "Net increase," being the fourth column of this table?

A. That is correct, yes, sir.

Q. The sixth column, headed "Expenditures and Repairs since Consolidation, to October 31st, 1905," represents that which was not spent either for new construction or for renewals and which amount was spent out of earnings?

A. Yes, sir.

Q. So that the total of amount spent for new construction, being the total set down in the column under the heading "Net increase," the amount spent for renewals, being the total set down under the third column, and the amount spent for repairs, being the total set down under the sixth column, would represent the total amount spent by your company out of capital and earnings since 1884 for other than labor and expenses, and in the actual manufacture of your product?

A. And other expenses of manufacture and distribution than these.

Mr. Mathewson: These items here of property, Mr. Kirby, you ought to know, represent not all our items of property; that is the expenditure on those particular items; because we have material and supplies, working capital and other things which are not in here at all.

Mr. Kirby: Very good, we will exclude them, and such items as are not in here are those which I think Mr. Carter had reference to.

The Witness: Yes, anything, of course, not covered in this table.

6433 Q. Now, taking up the amounts spent for new construction, I ask you if you can indicate to me just what you mean by new construction. To aid us, I might sug-est an example to you. If you put up an entirely new building I presume that would be new construction, would it not?

A. Yes, sir.

Q. If you installed an entirely new apparatus I take it that would be new construction?

A. Not replacing apparatus already in use?

Q. No.

A. That would be new construction, yes.

Q. And a new additional piece of apparatus?

A. Yes, sir; that would be new construction.

Q. If you put in a new additional main, I take it that would be new construction?

A. Yes, sir.

Q. And all those expenditures would be out of capital and not out of earnings?

A. That is the case.

Q. Let us assume that we have a certain number of benches at a station, and we add to that number, the addition would be new construction, would it not?

A. Yes, sir.

Q. Or if we add additional water gas apparatus, that would be new construction?

A. Yes.

Q. Now suppose that instead of adding to the old apparatus you tear the old out and put up apparatus with greater capacity, but no greater efficiency, would that be new construction?

A. The cost of the new apparatus and of its installation would be charged to construction account, and the value at which the apparatus dismantled was carried in our construction account would be deducted from it.

Q. So that the total of the new apparatus would not be charged to new construction?

A. Not as an addition to new construction, assuming that the new apparatus cost the same amount at which the old apparatus was carried on the books, the result of the entries would leave the total value of the plant account identically the same as it was before. 6434

Q. Quite so. Now would that new apparatus be paid for out of capital or out of earnings?

A. In that event the new apparatus would be paid for out of earnings.

Q. And that would be the case irrespective of the cause which necessitated the change?

A. Yes, it would be irrespective of the cause which necessitated the change. Assuming always that it is a piece of apparatus replacing or superseding a piece of apparatus already in use and of a corresponding value, my answer is that there would be no change in the status of the capital account and that the cost of the new apparatus would be taken out of the earnings of the company.

Q. If, let us say, a community ten years ago was taking a certain number of cubic feet of gas and demanded no more, and that community so grew that it would need to-day two, three, four or five times the number of cubic feet of gas which it did at that time, and your apparatus while efficient was not large enough to produce the number of cubic feet of gas necessary to supply that community, and your real estate holdings were such that you could not extend your plant and build additional units, and that it, therefore became necessary for you to tear down your present apparatus, which was in first-class condition and as efficient as the present apparatus which you would have to instal, and you did tear down that old apparatus so as to serve the community; would the entire cost of that larger apparatus be charged to new construction or would it be charged to renewals?

6435 A. The cost of the new apparatus to the extent of the value of the old apparatus would be charged to renewals.

Q. And what value would you give to the old apparatus?

A. The value at which it stood upon the books—its cost value.

Q. And only to that extent would you pay for the new apparatus out of earnings?

A. Only to that extent, to the extent of the value of the old apparatus.

Q. So you would make no distinction between the supersession of apparatus or buildings or what was not, due to increased demand of the community, or due to unfitness of the apparatus for causes of inefficiency or non-workability, or things of that sort?

A. No discrimination, no, sir.

Q. Now, you carry that theory also into the replacement of your mains, I take it.

A. Yes, sir.

Q. Assume a case there; you run a six-inch main into a small community; it is sufficient for the demands of consumers at the time it is put down; that demand grows; you need twice the capacity which you formerly did; you put down an additional six-inch main; what is that charged to?

A. An additional six-inch main?

Q. Yes.

A. Capitalized.

Q. Paid for out of capital?

A. Yes.

Q. And new construction, and credited to plant?

A. No, charged to plant.

Q. Yes, charged to plant.

A. Yes.

Q. Assume that instead of putting down a new six-inch main you had replaced the original six-inch main by one which would carry twice the quantity of gas, what would you do in that instance?

A. And take out the old main?

Q. Yes.

A. It would be depreciated to that amount.

6436 Q. And in that instance the cost of the new main would be charged entirely to new construction, but——

A. It would be charged entirely to new construction, but the construction account as a result of the transaction would be reduced by charging off the value of the old main.

Q. And paid for not entirely out of capital, but only the difference of the book value of the six-inch main, and the book value of the twelve-inch main would be paid for out of capital?

A. That is the case.

Q. In other words, you put upon the consumers such cost and expense which might not have been placed thereon if the company had had foresight enough to have installed a large main in the first instance.

A. You must bear in mind that if that foresight saw so far ahead that the ultimate installation of the large main was anticipated, that the customers would have to bear the burden of that main for a great many years before it was required.

Q. That might be true, but if that twelve-inch main or nine-inch main, whatever it might be—I have not figured what the capacity of twice six would be—had been installed in the first instance, the entire cost of installation would have been out of capital, would it not?

A. Yes, sir.

Q. I neglected to ask you, although I think there is no doubt whatever in our minds, but the total of this third column, depreciation and renewals since consolidation, represents moneys actually expended?

A. Yes, sir.

Q. With the small qualifications which you referred to?

A. Yes.

Mr. Mathewson: There are no qualifications to that, Mr. Kirby.

6437 Mr. Kirby: Yes, that includes, I take it, 1905, and 1905 includes the amount set down in Exhibit L, which is the identical amount set down in the resolution, and which amount as set down in the resolution has certain small items going to make it up, and all of the amounts of the smaller items may not as yet have been expended, as Mr. Carter has testified. I do not think we misunderstood each other.

The Witness: It would be a negligible and small amount, possibly spent in January, 1906.

Mr. Kirby: And which Mr. Carter has said spread over that entire period might be entirely wiped out.

The Witness: Yes.

Q. Now, I have endeavored to draw a line between renewals and new construction. Let us see if it is possible to understand each other on the line between renewals and repairs; so we may have a concrete example before us, I will ask if you will take up the alterations of the 21st street plant, which you spoke about yesterday. You have stated you were quite familiar with what these alterations were. I ask if you will tell us when they were made and what they were, and such part of them as was charged to new construction and such part as was charged to renewal, and such as was charged to repairs?

A. The facts, as nearly as I recall them, briefly, are that certain oil gas benches at the 21st street station were dismantled and generating apparatus of the Lowe type installed in their place. To enable this to be done, the walls of the building had to be raised and a new roof put upon the building.

6438 Q. So that I may not lose the trend of this, if you have not stated it all, we will take up just as far as you have gone. You say the walls were raised. Do you know which walls were raised?

A. The walls of what was known as the generator house on the block bounded by Avenue A, East River, 21st and 22nd streets.

Q. And were all four walls of that building raised?

A. I am under the impression that they were; I am not quite positive on that point.

Q. Is it not a fact that the new roof of which you speak is supported by Phœnix columns?

A. Yes.

Q. And if that is so, are you still of the opinion that all four walls were raised?

A. I have not expressed the opinion that they were; I don't know whether they were or not. My impression is that they were, all four, but I am not sure of it.

Q. Don't you think that would produce a rather unusual arrangement of the buildings or rooms under one large roof, which is supported by Phœnix columns, and which, therefore, needs no support from the old walls of the houses which are now underneath?

A. The building on that block is rather a combination of buildings formerly separated, and it is because I feel a little doubtful about that, and am not perfectly familiar with all the changes, not having particularly noted them at the time——

Q. I took it up because you referred to it yesterday.

A. I referred to the records in the books of what was done at that time at that station.

Q. Well, now, what do your records tell you?

A. The records tell me that the walls of the building were raised, that a new roof was placed upon it, and certain apparatus was dismantled, and certain new apparatus was installed.

6439 Q. But you cannot tell us in detail which walls were raised.

A. Whatever walls had to be raised to accommodate the new apparatus that was installed there, were the walls that were raised.

Q. Yes, but you do not know which walls had to be raised to take care of the new apparatus?

A. No.

Mr. **Mathewson**: My question was merely directed to the point that this building has substantially changed since Mr. Rowland had made his valuation.

Mr. **Kirby**: It was directed toward certain other points and Mr. Carter under your kindly questioning seemed to be entirely familiar with the construction of the building and apparatus and what was there and what was not there.

Mr. **Mathewson**: No, you come to another question when you reach the apparatus.

Mr. **Kirby**: We will reach that in good time.

Q. Do you know what happened to the roofs of these buildings when this new and larger roof was thrown over all the buildings?

A. What happened to the roofs? *A*. Yes. Do you mean what disposition was made of the old roofs?

Q. Yes. Are they still there?

A. Why, no, the old roofs were removed.

Q. Now, let us take the method of charging up the different expenses to which the company was put in making this alteration. Here are large columns erected, a new roof thrown over them. Is that new construction?

A. Part of it was new construction and part of it was in the nature of repairs.

Q. Now, how did you draw the line, and where did you draw the line?

6440 A. It was drawn at the time by people who were very familiar with the work and what was done.

Q. But you yourself are not competent to draw that line?

A. At this time? From book records of a transaction fifteen years old?

Q. You cannot tell us to-day where the line was drawn?

A. Only as indicated in the book entries, and I presume it was made in accordance with the facts, which were matters of the knowledge to the people who made those entries at that time.

Q. We will assume it was made in accordance with the facts within the knowledge of the persons familiar with it at that time.

A. I believe it was.

Q. You are familiar with the books?

A. Yes.

Q. I ask you if you can tell us, and if you cannot, you can say so, to what account the cost of putting on this new roof was charged?

A. A part of it was charged to repair account and a part of it to construction account; it was a better roof than was on the building before, and justified the division of the cost of it between those two accounts.

Q. And you would consider the putting on of a new roof, encompassing, if you might say, all these buildings, a repair?

A. I have described what it was. It was not all repair, nor was it all new construction, but the entries in the books recognized the fact or reflected the fact that a better roof had been put upon the building than was there before, which justified a charge of a portion of the cost of that roof to construction account, and such a charge was made.

Q. As a matter of fact, this roof was practically a roof and the walls therefore, and the new columns—it was practically a new building within the limits of which was contained these old buildings?

A. Well, that is your designation of it.

6441 Q. Well, is it not yours?

A. I think that the building was very greatly improved, and its capacity very considerably increased.

Q. Well, we won't differ on that.

A. And that the method by which the accounts recorded what was done was perfectly in harmony with the facts.

Q. Oh, yes, I take it it was in harmony with the facts as those who performed the work and those who had charge of distributing the account thought was proper and right?

A. Yes.

Q. And while I am not trying in any way to state whether or not they were correct I am endeavoring to get those facts.

A. I am endeavoring to give them to you, Mr. Kirby.

Q. But you can simply give them to me in a general way of this kind, and cannot give me any——

A. I can give you the book entries and the figures in detail, if you wish them.

Q. I think it would be most interesting to have them.

Mr. Mathewson: That is not the point. Do you want them? A good many things would be interesting.

Mr. Kirby: Yes, I want them. Mr. Carter seems to have stated his familiarity with the work, and I think inasmuch as he came to a conclusion, we are entitled to the data on which he based his conclusion, and I would like to see the distribution of charges at the time of the alteration of the 21st Street works, to which he made reference yesterday, and which I would not have thought of going into if he had not mentioned it.

Mr. Mathewson: And which we would not have thought of going into if Mr. Edgerton had not volunteered the suggestion that
6442 he suspected things were still carried to construction although they had been done away with at 21st Street, that is the reason we went into it.

Mr. Kirby: I am very glad to know the reason, I did not know it before.

The Master: This is very interesting but counsel had better understand that this cross-examination cannot proceed on the theory that I am going to sit an indefinite time.

Mr. Kirby: I aim to make the cross-examination as brief as possible, notwithstanding the fact that the direct testimony took a day and a half, and Mr. Carter answered at railroad speed, and the record came to us half an hour before the hearing this morning.

Mr. Mathewson: We took less than an hour this morning, Mr. Kirby.

Mr. Kirby: I do not want to pursue this course of questioning if it is not going to be fruitful of any results, Mr. Master, but I think that in the light of yesterday's testimony in reference to the 21st street plant, and Mr. Carter's assumed familiarity with it, that we are entitled to know just what was expended, and when it was expended, and if he doesn't know that he can bring a statement showing it.

The Master: I only wish to warn you that the cross-examination of Mr. Carter now cannot proceed on the lines it did before, of calling for various elaborate statements and things from the books, and go on assuming we are going to occupy some days in this examination, because we have not time, and Mr. Mathewson has stated he has several other witnesses to call.

6443 Mr. Kirby: This is an offer on Mr. Carter's part. Now, if he does not know, and states that his familiarity with the plant is not such that he can tell, I am quite willing that the answer should stand that way. But if he does know, and it is by reason of his knowing that he answered yesterday, then I take it we are entitled to pursue it to its logical conclusion.

The Witness: I might explain in a moment how much information I would be able to give you on that subject. The entries by which the dismantled apparatus were taken out of plant account and charged to depreciation account. I have with me now as a memorandum, and would be glad to show them to you or read them into the testimony. With respect to the repairs to the building, which account bore a part of the expense of raising the walls and substituting a new roof for the old one, it would be difficult to identify in the cost of repairing buildings in that year, the identical amount that was expended in repairing the generator house. The method, however, by which certain expenses in that connection were distributed is indicated by the entries in the books; and my recollection is that the cost of raising the walls was distributed between the construction and repairs to buildings account on the basis of two-thirds to construction and one-third to repairs to buildings, and that the cost of substituting a new roof for the old one was divided between construction account and repairs to building account on the basis of one-third to construction account and two-thirds to repairs to buildings account. With respect to the dismantling of the 6444 oil gas benches, the amount at which the benches and foundations were carried on the books of the company, was charged off. The benches were carried, to the best of my recollection at $108,000, and that amount was written to depreciation account. The foundations were used as foundations for the new apparatus in whole or in part, and such parts as were not so used was charged off at the value at which that property was carried in the books.

Q. You have those items in regard to dismantling of benches?

A. Yes.

Q. I think it would be relevant and proper to state what those amounts were and how they were charged.

A. In 1901 an entry was made charging off $108,000, "that being the amount"——

Q. Charging off from what?

A. The construction account "that being the amount of the scheduled valuation of sixty benches of six retorts each, to be taken down from block bounded by Avenue A, East River, 21st and 22nd streets, to make room for a new generator plant: each of said benches were inventoried at $1,800, and the valuation of November 11, 1884, inclusive of the foundations. The foundations are not to be removed, but will be utilized as the foundation for the new generator plant."

Mr. Mathewson: That quotation is from your books?

The Witness: Yes.

Q. Does that memorandum that you have make any reference to walls raised, I mean by that increased in height?

A. I was correct in my testimony to the effect that two-thirds of the cost of raising the walls was charged to construction account.

6445 Q. By raising, you do not mean removing them, but increasing them in height?

A. Increasing them in height, and that one-third of the cost of repairing the roof was charged to construction account.

Q. What do you mean by repairing the roof? There was an entirely new roof put over that part of the plant?

A. Well, I have already testified that I do not know that it was entirely changed.

Q. But whatever it was, that was the way it was charged?

A. It was charged to repairs of buildings, two-thirds of it, and one-third charged to construction account. I think it would have been difficult at that time to have divided it up on the basis of construction and depreciation, for I do not think that any records that the company had showed the value of that roof.

Q. If you did in fact put a new roof on any building would that be a repair or a renewal?

A. It would be a repair, if it was simply the replacing of an old worn-out roof with a new roof and nothing else.

Q. If you tore out part of your benchwork by reason of its having been burned out from some cause due to its use, would that be a repair or a renewal?

A. Well, I would like to have you define that a little more exactly, if you will be good enough, Mr. Kirby.

A. Well, we have certain brick used—— Oh, the substituting of new brick for old firebrick in a retort?

Q. Yes.

A. It is repairs.

Q. If you tore down all of the stack of benches and put a new one in its place?

A. Tore down an entire stack of benches and substituted new benches?

Q. Yes.

A. Of the same design and for the same purpose?

6446 Q. Yes.

A. I think it would depend considerably upon whether there was any great difference between the cost of the new benches and the old, whether we treated them as repairs, or whether we treated it as dismantling of the plant, and substituting of new plant; assuming no considerable difference between the cost of the new and old, the probability is that the expense would go right to repair account; as a matter of fact I don't know of anything of that sort ever having been done in our practice.

Q. You do not draw any close line between your repairs and renewals, do you?

A. We do draw a very close line, we think, but we know very well that there is always included in repairs what might technically be termed renewals of small parts, but as repairs; as for example, the replacement of burnt out fire brick with new firebrick, it is to all intents and purposes a renewal, but it is uniformly considered as a repair.

At 1:05 P. M. adjourned to 2:15 P. M.

After Recess.

Robert A. Carter resumes the stand and further testifies.

Cross-examination by Mr. **Kirby** (Continued):

Q. You have spoken of the walls of the 21st street station as having been raised, by which you meant raised up. Do you know whether any of them were razed down, or any of them were removed?

A. I have no knowledge of any, no, sir. I used the term 6447 raised in the sense of being elevated.

Q. So I understood. Yesterday you referred to Mr. Edgerton's testimony where he was considering the value or his appraisal of the 21st street plant, and stated that there were no foundations there upon which apparatus had not been erected and which were not there at the present time. I correctly state your testimony or the sense of it, do I not?

A. Substantially, yes, sir.

Q. Now, I call your attention to the schedule of buildings of 21st street station, to the schedule of buildings as prepared, I believe, by Mr. Mayer, in any event as submitted to counsel for the defendant by Mr. Addicks of the Consolidated Gas Company, of which I have a copy here, my original having been mislaid. The first building is that of the "stove storage and meter proving shop," which is referred to by Mr. Mayer at pages 1370 and 1475 of his testimony, and which has certain description which I will not read on account of its length. After the description comes the words "foundations for machinery." I ask if you will tell me what foundations are in that building and what apparatus stands upon those foundations?

A. My understanding is that the building referred to is on the corner of 22nd street and First avenue, the southeast corner, and my understanding is that there are no foundations nor machinery in that building.

Q. So that when Mr. Edgerton in making his appraisal gave no valuation for foundations in that building, was he correct?

A. Foundations for machinery?

Q. For machinery, I mean; not for the building itself.

A. That is my understanding, yes, sir.

6448 Q. So Mr. Edgerton was not in error in that respect at all events.

A. No error in saying there are foundations there upon which there was no apparatus—that he saw foundations there upon which he saw no apparatus, I think he was in error in that statement.

Q. If you will refer to Mr. Edgerton's testimony you will find that he did not use that language, it was Mr. Mathewson who used the language and asked him the question, and that thereafter Mr. Edgerton in answer to a question of mine stated distinctly that he neither saw the foundations nor any evidence of them. I also call your attention to the description in this same schedule, to the buildings, meter repair shop and office referred to by Mr. Mayer at the same pages which I have already given, and after the description of which there is likewise the statement foundations in that building for machinery, or machinery upon foundations?

A. I presume that that building is on the corner of 21st street and First avenue, being the northeast corner. My understanding is that there are no foundations there for machinery, nor machinery in that building. There may be foundations for work benches, where the men work at the meters, but of that I am not sure. I am inclined to think not. If there are any I am inclined to think that they were not included in any valuation by Mayer or Rowland.

Q. I call your attention to the description, being the station repair shop (pp. 1370 and 1476), where in the schedule after the description appears the same words "foundations for machinery" and ask you if you are aware of any foundations or machinery upon foundations in that shop?

A. I believe that there are foundations in that building for machinery, both foundations and machinery.

6449 Q. Now, will you state what that machinery is?

A. The machinery is such as would be required for repairing the stoves, cleaning them, and the foundations would be such as would be required to support the steam engines and gas engines that are used in that department, in supporting columns upon which there is shafting and belting and machinery and foundations of that character.

Q. Your information accords with that which Mr. Edgerton uses in his calculations. I was misled about "none" there, which is contrary to my notes, which state that the machinery foundations in this building were very small and are included in this figure of the building. I did not intend purposely to mislead you, but coming to the pre-payment meter shop (pp. 1370 and 1476), where in the description are stated the words "foundations for machinery," I ask if there are any foundations in that building or any machinery upon foundations?

A. My understanding is that there is no machinery there nor any foundations for machinery.

Q. Now, these buildings of which we have been speaking are those which are contiguous to each other and to which the repairs or alterations or whatever you do call them, about which we are speaking this morning, were made, were they not?

A. No, these buildings are not on the same block as the building to which reference was made in the testimony this morning.

Q. So that we may understand each other in this, this station shop to which I called your attention first is next, is it not, to the meter repair shop and office?

A. The building to which you drew my attention first was not a stove shop, but it was a store room for stoves and meters, and a meter proving shop.

6450 Q. It was spoken of by Mr. Mayer in that way, and that is the reason that I used the designation but whatever it is, the building to which I called your attention is contiguous to it, is it not?

A. No, it is not. One is on the corner of 22nd street, the first one on the southeast corner of 22nd street and First Avenue, and the second building to which you referred is on the northeast corner of 21st street and First Avenue.

Q. And there is a building in between these two then?

A. There is a building in between, which is the stove repair shop to which you have referred.

Q. So those three buildings take up the entire block and are contiguous to each other?

A. They are; that is a fact, yes, sir.

Q. I call your attention to page 6315 of your testimony of yesterday, where you state as follows:

"The fact that the coke delivered from the 14th street station to the Water Gas Stations for use in the generators has to be carted some distance at the 14th street station operates to increase the cost at the 14th street station as compared with the Central Union station, where the water gas plant is adjacent to the coal gas plant."

And I ask to which station the cost of carting the coke is charged?

A. To the coal gas station.

Q. So that the cost of production of water gas has not charged against it the cost of hauling the coke from the point where it is made to the point where it is consumed?

A. No.

Q. This is not the course you follow when you sell coke to outside consumers, is it?

A. The amount paid for the coke by the water gas stations, as in the case of the amount paid by any other consumer, is supposed to cover the cartage of it.

6451 Q. But the amount charged against the water gas station does not include the cartage?

A. If they do not pay it separately it must be included there.

Q. Well, is it included?

A. In the price that the water gas stations pays for it.

Q. If the water gas station pays——

A. It is an item charged against the coal gas station, the bill for carting that coal is charged against that coal gas station, and they pay for the cartage of it.

Q. If the water gas station paid for that cartage the cost of production of water gas would be greater than it is stated?

A. If they paid the bill directly for the cartage in addition to paying for the coke the cost of the water gas would be augmented to that extent.

Q. And the cost of the production of the coal gas would be lessened by the same amount?

A. Would be diminished to that extent.

Q. When you sell coke to the outside consumers you said this morning that you did include the cost of cartage?

A. Yes.

Mr. Mathewson: At the rate which was specified.

The Witness: Yes.

Mr. Mathewson If it is delivered to the consumer, if he goes to the yard he gets it at a lower price, as appears in the testimony.

Q. And if the water gas station instead of taking the carts from

14th street sent their own carts to get it, the water gas station would have to pay for the cartage, would it not?

6452 A. Yes, and I have no doubt that they would get it at a lower figure.

Q. So that then the amount which the water gas station is charged for coke must be sufficient not only to pay for the coke as such, but for the cartage?

A. Well, I think that would be fair to presume, whatever the price might be. Of course, you will understand that in our cost of operating and manufacturing gas it don't make a penny's difference at what price we debit the water gas branch, or credit the coal gas branch with coke. It would be an arbitrary figure anyway, and the net result would be identically the same, whether we raise or lower that price, or whether we put the cartage against one station or the other.

Q. There is no doubt about that whatever, the result over the whole production would be the same?

A. Yes, sir.

Q. In this same connection I would call your attention to State's Exhibit ZZ, summary of operations for the calendar year ending December 31st, 1905, 44th street station, where I find a credit to the coal by certain residuals, including coal tar, in the amount of 857,616 gallons. That oil tar was obtained from the water gas station, was it not?

A. That is the water gas station that you are referring to now.

Q. From this water gas station?

A. Yes, sir.

Q. And is not credited to the oil used in that station, is it?

A. It is credited against the cost of gas at that station and operates to reduce it as shown there in the statement.

Q. It is, however, credited against the cost of coal, is it not?

A. Well, no, it is simply shown as an item in the sheet, it is not credited against the cost of coal.

6453 Q. I see here: "Coal used in generators, used under boilers, labor employed on coal, cartage employed on coal," making it a certain amount and getting a total of 6.27; then we have residuals, oil tar so much, and reduce the cost per thousand cubic feet made .7 of a cent, which being reduced from 6.27 gives a resultant of 5.57. It looks very much from that as though it were credited against the cost of coal, does it not?

A. It might look that way. If that were the case it would state that the net cost of coal was so much; it would be of course entirely misleading and erroneous; the two have nothing to do with each other.

Mr. Mathewson: I presume that you and your experts understand that you do not get oil tar from anthracite coal?

Mr. Kirby: We presume it, but the account does not indicate it.

Mr. Mathewson: It does not indicate one way or the other, you must know it.

Q. Now, do I understand from what has just been said and your previous testimony in this case that you do not consider that crediting oil tar in this way and charging coke cartage in this manner increases the cost of manufacture of the water gas, and diminishes the cost of manufacture of your coal gas?

A. Why, no, you cannot understand me as testifying to anything of that kind at all.

Q. Well, does it not diminish the cost of manufacture of your water gas to an amount which it would be, other conditions being equal, if these credits were not made to the coal gas part of your plants, or of your company?

A. I don't understand that to be the case. The water gas station would have to have fuel of one kind or another.

6454 Q. And having fuel, would be charged with the amount thereof?

A. And as so charged. The station cost is very properly credited with any residual product resulting from the process of manufacture, so that the cost as shown in our books and exhibits stands net.

Q. But the crediting under the heading of residuals of the oil tar to your coal augments the cost of the oil which is used in the manufacture of your water gas over and above that which it would be if such tar were credited to the oil direct?

A. No, it wouldn't have any effect on it at all. In fact, according to report in the first place, there was no credit to coal. At some point in the statement of operations the residual oil tar has got to be deducted and it is a matter of convenience that was deducted at that point, and has no significance whatever and any one familiar enough with the report to criticize it should know that cost of gas oil used at that station would be the gross amount less the amount of residual oil shown in the report. It is not credited anywhere, it is shown in our books on a separate item by itself, it is just simply a tabulation of items of cost and of credits that appear upon our books. There is no credit to coal account in our books of the residual tar that we obtained in the process of manufacture.

Q. And in preparing the statements you considered this would make a fair and proper statement of the cost of manufacture at your various stations?

A. Perfectly fair and proper, as they are items of expense, and every item of credit appears in that statement.

Q. And the distribution is considered by you to be a proper one?

A. Perfectly proper.

6455 Mr. Mathewson: Field's analysis, which you have quoted and brought in shows it in that very way, unless I am very much mistaken.

Mr. Kirby: Yes, and I think you will find that the coal and the tar in the statements made in Field's analysis proceed from the coal.

Q. Yesterday you had occasion to state that you had made a careful examination of Field's analysis and that the amount obtained for ammoniacal liquor or sulphate of ammonia as set down therein was the gross amount and not the net amount. I ask if you will show me the statement or give me the information which you used in coming to your conclusion?

A. I shall have to correct you in quoting me. I did not say I had made a careful examination of Field's analyis. In reply to a question by counsel I stated as my opinion that the amount reported in Field's analysis as the receipts by the company from the sales of ammonia and of sulphate of ammonia was the gross receipt and not the net receipt after deducting the cost of the conversions of the ammoniacal liquor into sulphate of ammonia.

By Mr. MATHEWSON:

Q. Return on capital invested in the plant?
A. Or return on capital invested in the plant.

By Mr. KIRBY:

Q. Having come to an opinion you must have had some information before you to reason upon. I would like to know what that information was. You did not get it, did you?

A. No, I have had occasion for some years to scrutinize the 6456 reports of the operations of all of the London companies and am more or less familiar with them, and I have never seen anything in any of their reports to indicate that they made a practice of reporting the receipts net.

Q. Well, I notice in regard to the price received for your coke you deduct handling, other labor, cartage, e-c.; that reduces the net receipts for coke, does it not?

A. Our report states all of those things in detail and we do not deal with any net figures in our books, reports or statements in which respect our method would, I think, correspond with that of the London companies, and the expense attending the sale of any residual product or the handling of it would be stated as an item of expense.

Q. And in regard to the tar, is the balance of your tar account the net receipts per ton or the gross receipts?

A. Per ton of what?

Q. Per ton of coal used?

A. It is the gross amount received.

Q. Now, if it be that this amount as set down at so much per ton, that is, the ammoniacal liquor and sulphate of ammonia, is so much per ton of coal or so much per thousand cubic feet sold, giving a gross amount, and it is sulphate instead of ammoniacal liquor, there must naturally be some account to which the cost of the sulphuric acid would be used in producing the sulphate of ammonia would be charged?

A. I have no doubt there is, but the report don't indicate it, nor does it indicate the labor. It is not given in sufficiently elaborate detail to furnish that information.

Q. So that you are not prepared to state where such charges have been made, or where in your opinion such charges would be made?

A. The charges I have no doubt are made in their regular expense accounts.

6457 Q. Can you point out to me in Field's Analysis such account as you consider it would be charged into?

A. I cannot tell what it would be charged into. I can perhaps indicate what it probably is charged into. I should say that the wages paid would be charged under the item of salary and wages. That is the only item.

Q. If so charged then the total of labor set down under this item would not indicate the cost of making gas, would it?

A. Not exclusively, possibly.

Q. Is it your opinion that the tar per gallon as set down here is not the amount which the company receives for each gallon of tar sold?

A. Why, no, I think it is the amount that they receive for each gallon of tar sold.

Q. And do you not think that the amount under "Tar and its products per thousand cubic feet sold" is the amount which the company receives?

A. I have no doubt that it is.

Q. And such is also true of breeze per thousand cubic feet sold, is it not?

A. Well, without checking those figures, Mr. Kirby, I would not like to assume too much about them. They are probably all susceptible to checking as to their accuracy by dealing with the various factors that appear in the statement.

Q. Wouldn't you assume or wouldn't it be reasonable to your mind if it be a fact that the amount received per thousand cubic feet sold as set down in this table for coke breeze, ammoniacal liquor produced, the total receipt for residuals per thousand cubic feet, that the amounts for tar being net there your other amounts would be net?

A. I don't think there is any inference of that sort to draw. The amount for tar is both gross and net. I have no doubt they 6458 endeavor to sell it as it comes from their apparatus by the gallon, as the gross amount they receive for the tar.

Q. You have just stated you considered the amount which it received for that tar was the net amount?

A. Gross.

Q. No, just a few minutes ago, not in your present statement?

A. Well, I have not stated anything to the contrary to what I state now at any time in my testimony.

Q. Then do we understand you to say in reference to the tar and its product as the amount set down here received per gallon and per thousand cubic feet sold is the gross or net?

A. It is the gross.

Q. Wherein would it differ from the net?

A. I don't think in any respect nor I do not believe they make any use of their tar either that to sell it as tar.

Q. And if they sell ammoniacal liquor do they make any use of it other than to sell it as ammoniacal liquor?

A. The company I had opportunity to look over in that respect, so far as their accounts were concerned, did not sell any ammoniacal liquor.

Q. Then where do you get the information upon which you base your opinion that it is a gross amount if the company——

A. But they sell sulphate of ammonia, and I have no reason to think that it is not the gross amount.

Q. Have you any reason to think that it is or is not?

A. Yes, I have a reason for thinking that it is the gross amount.

Q. What is that reason?

A. The reason is that it figures out about the average wholesale price obtained here.

6459 Q. Now, I call your attention to the following items as the same appear in Field's Analysis for the year 1905, and as the same have reference to the sale of residuals by the London companies, taking the average of the Commercial and South Metropolitan companies, coke per thousand cubic feet sold per ton of coal, 4.99 pence; breeze, per thousand cubic feet sold, .32 pence; tar and its products, per thousand feet sold, 1.15; ammoniacal and sulphate of ammonia, per thousand feet sold, 2.09; total residuals, per thousand feet sold, 8.55; and ask you if it is not a fact that the total per thousand cubic feet sold or 8.55, is not the total of the amount which I have given for the four residuals spoken of, coke, breeze, tar and its products, ammoniacal liquor and sulphate of ammonia?

A. I think quite likely. I think that those figures are right, without adding them up.

Q. That being the total of those figures would not in any way change your opinion that the ammoniacal liquor and sulphate of ammonia, as set down for these three companies, the average of which is 2.09, as I have given you, is gross and not net?

A. No, it would not change my opinion any.

Q. And your opinion that it is gross is based upon the price to which you have certain information as to how much is obtained abroad for sulphate of ammonia?

A. Yes.

Q. The sulphuric acid or other material used in manufacture of sulphate of ammonia would be in your opinion therefore charged to certain accounts in Field's Analysis which you cannot identify?

A. Yes.

Q. Are you aware what the duty is upon sulphate of ammonia to this country?

A. I am not, no, sir.

6460 Q. Are you informed as to what the freight charges are from Great Britain to New York City?

A. I am not.

Q. Are you aware that the importation of ammonia sulphate from 1897 to 1904 has increased from 9,905 gross tons to 16,667 gross tons?

A. That is quite possible.

Q. I refer you to the United States tariff for 1897 and ask you if I quote correctly when I state that sulphate of ammonia carries a duty of .3 of a cent per pound.

Mr. MATHEWSON: That is a public statute.

The MASTER: Do not bother to take time on that. Put it in a brief, referring to it as a certain page of a certain statute and I will read it; it is a public act.

Q. You stated in your opinion it would be unwise for the Consolidated Gas Company to market its own ammoniacal liquor or turn it into sulphate of ammonia and market that.

Mr. **Mathewson**: No, he didn't say he thought it was unwise the company should market its own ammoniacal liquor. They do that already.

Mr. **Kirby**: Through a middleman.

Mr. **Mathewson**: They sell to somebody who can use it. It is not used to drink.

Q. And have you ever made an estimate of what the cost of apparatus would be to change your ammoniacal liquor into sulphate of ammonia?

A. No, sir, I have not.

6461 Q. Have you ever compared the cost of manufacture or the estimated cost of manufacture by you with the estimated cost of manufacture by the Barrett Company, to whom you sell your liquor?

A. No, I have made no estimates on the subject whatever.

Q. Have you ever made an estimate of the cost of extracting from your coal tar the percentage of what are commonly known as coal tar products, which are sold for medicinal and other purposes?

A. I have made some estimates of that nature.

Q. And have you ever compared those estimates with the cost of manufacture by the Barrett Company, to whom you sell your coal tar?

A. No, sir.

Q. Now, I refer you to page 6379 of your testimony of yesterday and to Mr. Edgerton's testimony on pages 5024, 5025, 5026, 5027 and 5028. At the bottom of page 6379, you have 775 cubic feet and directly thereunder 225 cubic feet so I take it that the mixture to which you have reference is of those proportions?

A. Yes, sir.

Q. Now, I refer you to Mr. Edgerton's testimony at pages 5024 and 5025 where he gives the cost of a mixture of 775 and 225. You will note at the top of page 5024 that Mr. Edgerton gives the yield per ton of coal of 11,648 cubic feet.

A. Yes, but that is [illegible] the table that I used.

Q. Which table did you use?

A. I used the table wherein it is made to appear that a thousand cubic feet of coal gas of sixteen candle power can be produced for 7.55 cents.

The **Master**: At what page?

The **Witness**: On pages 5026 and 5027.

Q. And such yield was that used by Mr. Edgerton as you will see on page 5028 for a mixture where it was 500 cubic feet of sixteen candle power gas, and 500 cubic feet of 28 candle power gas.

A. Well, I do not see that that makes any difference.

6462 Q. So that in making your comparison you ignored altogether the different yield per ton which Mr. Edgerton used in first using a 14 candle power coal gas and then using a 16 candle power gas?

A. I did not ignore anything that he used. The entire table as it appears on pages 5026 and 5027 is given in my report, in making a combination which I presume I was at liberty to do, I used one of his oil gas results without going into it in detail and got a combined cost. If I had used the other combination it would probably have resulted in a higher combined cost than my comparison shows.

Q. Be that as it may, you did use, in making your calculation, a yield from a ton of coke such as Mr. Edgerton used in getting his 16 candle power coal gas, did you not?

A. Yes. It happens that he claims to get a 16 candle power coal gas out of it. I don't know whether he does or not. We do not. I used that because that practically conforms to our own results.

Q. You really don't know any more about this than that information which you get from the books of the company, do you?

A. We consider that they give a great deal of information on the subject.

Q. Yes, but you have never manufactured any gas yourself?

A. No.

Q. You are not an engineer and you do not pretend to be?

A. No, and I do not pretend to be.

Q. Don't you think that in making up this comparison it would have been a little more in accord with Mr. Edgerton's figures if when you took the proportion of mixtures you had also taken the yield per ton of coal that he used for that mixture, rather than taking the yield per ton of coal that he used for another mixture?

A. I don't think it would make a particle of difference; it would be negligible.

6463 Mr. Mathewson: Mr. Carter states precisely in his table, 10,640, so there can be nothing misleading about it.

The Witness: I stated it because it was our own experience approximately in coal gas production.

Q. Then in making up this table on page 6379 you have used Mr. Edgerton's figures when they were higher than yours and your figures when they were higher than Mr. Edgerton's, and added the two together, or those figures together, to get your result?

A. No, I have used Mr. Edgerton's figures whether they were lower or higher than our own. They happen to be higher in some cases and he gave a reason for it. I accepted his 16 candles because he stated that he got that result with a certain quantity of lime and oxide. His cost is a little more than ours, and I accepted his figures for that reason.

Q. You certainly did not accept his yield, did you?

A. I have his yield figured out. In quantity I used his figures.

Q. You used his figures for a mixture of 500 and 500, where he used them for a mixture of 225 and 775?

A. I don't think it makes a particle of difference; the difference between the two costs was a fraction of a cent. One of his was 7.55 and the other was 7.12; there was a difference of less than half a cent between the two gases in cost.

Q. But a great difference in the details going to make the same up?

A. Well, I think they were of very little importance.

Q. Well, that is your opinion, certainly. We would not expect you to think otherwise, Mr. Carter. Are you not aware in regard to this yield, that by use of modern benches and reducing the 6464 quality of the coal gas to 14 candles that the yield could be increased as high as 5.2 cubic feet per pound, or to the amount which Mr. Edgerton gives on page 5024, 11,648 cubic feet per ton?

A. No, I don't know anything of the sort; I do not believe it, either. And the statement was made that those figures were obtained in our own practice at 14th Street and I have taken every pains and find out that that was not the case.

Q. But other than the results obtained from your practice as you have read them you are in no position to say whether or not that can be obtained?

A. It has never been obtained in our practice, and our practice was cited as the authority for that production.

Q. Not the only authority, if it were so cited. Now, in this statement on page 6379, you have cost of discharging labor and cartage 25.66 cents per ton. I presume you base that on the experience of the Consolidated, don't you?

A. Yes, sir.

Q. And that is based on the cost at the 14th street works where your coal has to be frequently handled, sometimes three times before it reaches the retorts, and at the 42nd street works, where your coal is hoisted and dumped into small carts and pushed by hand labor to your coal storage and again reloaded by hand labor and carted to the retorts where it is again handled into the retorts?

A. The fact is we have to deal with conditions and not theories.

Q. Do you propose to handle your coal in this way at Astoria?

A. I don't understand that Astoria enters into the proposition.

Q. It may or may not. I ask you, do you propose to handle your coal in this way at Astoria?

A. No, we do not.

6465 Mr. Mathewson: And the investment at Astoria is correspondingly greater.

Q. In regard to this yield, I call your attention to a statement in the Progressive Age for August 1, 1906, where it states that the working results now obtained by Dessau & Mariandorf justifying us in fixing the make of gas from standard gas coal with a vertical retort of our system at not less than 12,560 cubic feet per ton.

Mr. Mathewson: Well, really, this has got to be funny, Mr. Master. Here is a German concern with German coal, and a so-called vertical retort, and our process is not mentioned in the advertisements; it is perfectly ridiculous.

Mr. Kirby: It is very funny when Mr. Carter holds himself up to criticize our figures.

Mr. Mathewson: These men are advertisers and produce an advertisement of that character from Germany. It is ridiculous. Vertical retorts were an experiment and are not accepted yet.

The MASTER: Gentlemen, if you will, forbear this discussion and continue with this cross-examination.

Q. In the item of gasmaking, labor and purifying 79.95 cents per ton, which you give as 7.42 cents per thousand cubic feet, I ask you if you are not informed that this service is now being done with modern apparatus and appliances at as low a cost as three cents per thousand?

A. I am not aware of it being done at as low a figure as that, and if it is done at any lower figure, I am not aware to what extent that apparent economy is offset by greater cost of repairs and of fixed charges on the more expensive apparatus. 6466

Q. Now coming to repairs, I asked if even Mr. Edgerton's figure, 3.50 cents, is not lower than that which you charge yourself?

A. It certainly is, yes, sir, and it is lower than we are ever likely to realize with very modern up to date apparatus.

Q. Now is this item of repairs which you have set down at 4.20 and which Mr. Edgerton sets down as 3.50 the same item as set down in repairs in State's Exhibit ZZ, summary of operation for the calendar year ending December 31st, 1905, 14th street, repairs, including labor and material, cost per thousand cubic feet made, 3.85, cost per thousand cubic feet sold 3.95, and in the corresponding items for 42nd street, cost per thousand cubic feet made, 2.53; cost per thousand cubic feet sold, 2.59?

A. No, I do not think the period is the same.

Q. But it is for the same labor and materials?

A. Not for the same labor and materials; it is for the same items of expense, yes.

Q. In your labor of gas making and purifying did you use such salaries as were formerly paid or those which are now paid under the increase, about which Mr. Addicks has testified?

A. Those in actual practice during the period that we are covering by our statistics, Mr. Kirby, in 1905.

Q. Well, some of your statistics such as Complainant's Exhibit 368 run up to January 1st, 1907?

A. Do they? Does that?

Mr. MATHEWSON: No.

The WITNESS: I am not aware of it. It is a misprint if it does. No evidence of it there. The calendar year 1905.

6467 Q. I read that as 1906. I beg your pardon.

Mr. MATHEWSON: You will observe that the first six months as compared with the last six months show the difference.

Q. Can you tell me what the labor items were which went into that calculation of 7.42?

A. What they were in various items of retort house labor.

Q. Yes, gas making and purifying?

A. Yes, sir, I think I can give you that in some detail. Retort house labor 6.61; boiler house .45 cents; purifying house .32 cents.

There is a difference of .04 of a cent which probably arises in the decimal in converting this into tons and back again into cents per thousand.

Q. Do you base your estimate upon any rate of wage?

A. Upon the actual wages paid at that station, Mr. Kirby.

Q. And can you tell me what they are? What labor goes into this gas making?

A. The rate of wages paid at 14th street station is in the testimony somewhere, now I feel very sure. They were brought out before the Gas Commission.

Q. Well, the testimony of the Gas Commission is not altogether before this tribunal?

A. I have not the rates altogether in mind at the moment.

Q. Did you make this estimate up from the rate of wage?

A. No, from the actual expenditures.

Q. You simply took the expenditures for a certain number of cubic feet of gas and divided it by the number of feet made?

A. That is the case.

Q. So that you are not prepared to state to us just what labor was used and how much that labor was paid?

A. I can very easily get you the rate of wages paid at that station during that period.

Q. But you have not the information at hand?

A. No, I have not.

6468 Q. But if that is stated in the testimony before the Gas Commission there has been no change in your calculations?

A. None whatever.

Mr. Mathewson: You mean that you used the rate of wages which prevailed at the time of the testimony taken before the Gas Commission, or don't you remember?

A. No, that prevailed in 1905.

Q. Now, we have here in this statement at page 6379 three items of expense, expense, distribution, distributing expense, amounting in your total to 2.2 cents or over $200,000 per annum, based upon Mr. Edgerton's estimate of over three-quarters coal gas. Is it not true that these three charges are devoted almost exclusively to distributing the gas from one station to another; in other words, for labor and in what you call your exhauster house, or such other labor as may be expended in distributing your gas as you do?

A. Well, part of it, one item of it covers the expense of distributing the gas about the plant and through the holders and through the mains, and the other has to do with the cost of storing that gas at distributing stations and such apparatus as is necessary to be used for that purpose at those points.

Q. And this comprehends the expense of sending or carrying the gas to these points?

A. Yes, sir, that is the case.

Q. And the amount of coke which you use under your retorts in the statement is 32 per cent. of the total coke made. Is not this estimate nearly double that which is used in good practice and about 33 per cent. more than your company uses at its 42nd street works?

A. It may be more than is used at 42nd street, which 6469 would not be significant at all, because at the 42nd street works they have certain drip oil available there as the result of manufacturing oil gas by the retort process, which they are able to use as fuel under their retorts in lieu of coke, so that their apparent yield per ton may be better than at 14th street, where they make no oil gas and have no such residual drip oil to use as fuel.

Q. Is it not a fact that at 42nd street the drip oil is used under the oil gas retorts?

A. Under both.

Q. And you are not prepared to state whether or not, exclusive of the oil used, the coke at 42nd street would be less than 32 per cent. of the total yield?

A. I do not believe that it would, eliminating the drip oil fuel which they have at that station and are able to use under their retorts.

Q. You have never made any computations as to that?

A. No, I have not.

Q. You get a final cost here of 36.22 cents computed upon your figures; is it not a fact that this is about 8 cents greater than the cost to the Central Union?

Mr. Mathewson: The Central Union does not produce any such gas as that.

Q. For the 22 candle power gas that the Central Union produces?

A. Pardon me, I did not catch that question. I was looking for the 36 cents.

Q. My question is whether or not this 36.22 cents, which you set down here as the cost per thousand cubic feet of the mixed gas, which gas we assume, or you assume and which we state, has a candle power of 22 or over, I think it is 23 and something—is not about 8 cents higher than the gas produced at the Central Union works?

6470 A. No, it is not half that much higher. I don't think that under the new candle power law that the Central Union Company is doing such a great deal better than we, perhaps three or four cents better on their mixed gas.

Q. Have you examined the amount of oil per thousand cubic feet which the Central Union uses, have you examined reports giving the amount of oil per thousand cubic feet of gas made?

A. Oh, yes, I have had occasion to do so.

Q. And compared with the results from the works of the Consolidated Company, don't you think that the amount of oil which they used per thousand cubic feet of gas made should be sufficient to give them a candle power equal to that produced at the works of the Consolidated Company?

A. Well, of course the quantity of oil they use in their mixed gas, Mr. Kirby, we cannot very well make any other comparison of any other kind, than between their mixed gas and our combined coal gas, and of course the quantity of oil used per thousand cubic feet of combined gas would vary so much accordingly as the percentage of water gas and the percentage of coal gas is varied, that a comparison would not be very illuminating.

Q. And you have never made any such comparison?

A. I have.

Q. And how much illumination did it give you?

A. Not much.

Q. So that you are not prepared to state one way or the other on that proposition?

A. I made a table and put it in evidence yesterday which I think is quite illuminating. We took the cost of manufacturing gas for the year ending October 31, 1905, and of the gas at the Central Union station and compared it with the combined cost of coal
6471 and water gas made by the Consolidated, and eliminating the
variation due to candle power, found a difference in the two costs of less than one cent.

Q. In that comparison did you take into consideration the relative efficiency of apparatus at the Central Union and at, say, your 21st street works?

A. No, we did not take into account either the advantage they have over—that is, the advantage in cost, as shown in a cost sheet over our coal gas stations, and the fact of their being equipped with more modern regenerative recuperative benches, and with more modern and up to date apparatus for handling coal and handling coke. We did not even take that into account, and even with that advantage there was, as I say, a difference of less than one cent between their cost and ours.

Q. But in making these comparisons you sought in all instances to ascertain such advantages as you thought the Central Union or the Standard, or the New Amsterdam, or the Mutual might have over the Consolidated?

A. When it comes to making an analytical comparison between the costs between two stations, naturally we have got to take into account local conditions. Any comparison other than that would be valueless.

Q. The influences which might make a showing by them more advantageous than a showing by the Consolidated Gas Company were studied by you in the comparisons stated yesterday in the comparisons between the Consolidated Gas Company's cost and the New Amsterdam, and the Mutual and Standard and Central Union?

A. Well, I don't know exactly what you are referring to in my testimony yesterday. I made a comparison between the 14th street coal gas and the Central Union coal gas and made another
6472 comparison between the combined coal and water gas of the
Central Union Company and of the Consolidated Company, and then in reply to some inquiries from Mr. Mathewson I did state what the cost was of the Standard and Mutual companies, in connection with the comparison made by Mr. Edgerton between the Consolidated and the New Amsterdam companies.

Q. And in all of that you naturally sought to ascertain if there were not influences which to your mind might make the cost of production at these stations less than at the Consolidated stations?

A. In referring to the Standard cost I made no analysis of it whatever, or the Mutual. In comparing with the Central Union I did take into account the variations in the conditions at the two stations, 14th street and the Central Union, and in the comparison of the New Amsterdam gas I did take into account, and make note of, certain variations between the conditions there and at ou*t* water gas plants that seemed to me to have a bearing on the subject.

Q. You also stated in your testimony of yesterday that Mr. Edgerton had made an error in his estimate of your losses due to making gas from gas oil in retorts as practiced at 14th Street and 21st Street stations. Is it not a fact that your yield of gas per gallon of oil averages but 50 feet?

A. The yield per gallon of oil used at 21st *for* 14th Street station in 1905 by the Bench process was, as I stated, about 50 cubic feet per gallon.

Q. Is it not a fact that under this condition of yield that 36 per cent. would more nearly represent the loss of drip oil and carbon in the retorts than 33 per cent.?

A. I have no knowledge on the subject and I simply know
6473 the facts to which I testified, that there were no figures that
Mr. Edgerton had opportunity of consulting or which the company has any record of confirming his statement of a production of 33 per cent. of oil tar by the Bench process of making oil gas.

Q. Are you aware what *pre*centage of oil turned into gas 50 feet to the gallon would represent?

A. No, I am not. It would depend a good deal, I presume, upon the grade of gas, whatever that 50 feet might contain in the way of illuminants.

Q. And you are not prepared to state?

A. No, I am not prepared to go into that technically.

Q. In reference to this use of drip oil, is it not a fact that your accounts show particularly at the 21st Street station the use of nearly six times as many pounds of drip oil for heating the retorts to make a thousand feet of oil gas as in use of coke for making a thousand feet of coal gas at the 42d Street works?

A. I should have to confirm that statement before I could testify on it, Mr. Kirby.

Q. You are not prepared to state one way or the other?

A. No, I am not prepared to state at the moment.

Q. It is not a fact that at your 42d Street works you use the coke for firing the retorts but little over eighteen pounds per thousand cubic feet of gas made from coal?

A. I would not like to testify to that from memory.

Q. Yesterday you made a calculation in regard to the New Amsterdam Company whereby you augmented the cost of its gas *pro rata* to the deficiency in candle power compared with the Consolidated Company. Will you state how you made that calculation?

A. It was just simply shown by the comparison of the cost of oil at that time to the two companies, which would figure out, I think, about .57 of a cent for .40 of a candle power.

6474 Q. And what price of oil did you use in your calculation?

A. The price at which oil was used in enriching during that year.

Q. And what was that price?

A. The cost of the New Amsterdam oil was 4 cents, the average cost per gallon and at the Consolidated station 4.08 cents per gallon.

Q. And how much oil did you calculate as necessary to represent the difference in candle power?

A. The amount was not calculated at all. The average cost of the oil per thousand cubic feet used by the Consolidated Gas Company was 18.75 cents and the average cost to the New Amsterdam was 18.18, the difference being .57 of a cent as the cost of oil used, which in round figures would about explain or cover the difference in the candle power between 25.41 candles in the case of the Consolidated and 25 candles in the case of the New Amsterdam Company.

Q. Yes, but this does not take into consideration the difference in the cost of the oil?

A. Of .08 of a cent?

Q. Yes.

A. I think it would.

Q. Did you neglect that altogether?

A. Oh, no. As I have explained, the calculation was not made at all, it was assumed, and I will make a calculation now if you would like to have me.

Q. I don't care what you make now unless it is——

A. I am stating——

Q. I am getting at what you did make.

A. I am stating that the calculation was the average cost per thousand cubic feet of the gas oil used at both points and difference of .57 cents stated as the difference in the value of the candle power produced.

Q. Was this candle power for the water gas alone?

A. Yes.

6475 Q. This would indicate, of course, that the higher the candle power the higher the cost?

A. Yes, I think it would, using the same grade of oil and the same price of oil.

Q. Now, in reference to these candle powers and to the gas war, about which gas war you made reference yesterday, I ask you if it is not a fact that the average quality of the East River gas in 1900 was 28.03 candles, the Consolidated branch one, 24.97 candles; branch two, 23.47 candles; branch three, 26.08 candles; branch four, 24.68 candles; branch six, 24.18 candles; the Mutual, 22.15 candles; the Equitable, 27.83 candles; the Standard, 23.63 candles; the average to the Consolidated being 24.67; and I refer to the report of the Department of Public Lighting and Building for December, 1900, where a table appears on pages 76 and 77, from which I read the figures I just give to you.

Mr. Mathewson: Mr. Carter did not make reference to the candle power yesterday.

Mr. Kirby: But he made reference to the gas war.

The **Witness**: I made no reference to any candle power yesterday. I find those figures reported there in that report.

Q. And it is your information, is it not, that these figures are uncorrected for temperature?

A. That is my information, yes, sir.

Q. Do you know anything about it except you see it in that book?

A. Nothing whatever about it, except what is recorded there.

By Mr. **Kirby**:

Q. Now, you referred yesterday to the condition of
6476 these various plants. Have you visited the 14th street plant
recently?

A. What reference did I make? I would like to know just what you are referring to.

Q. I can find it in the testimony if I search long enough, but it was in regard to their being in good condition, I think in regard to the 111th street plant you stated it was in excellent condition. I have not as a matter of fact gone through this testimony but I have my notes, which I think are fairly accurate in that regard.

Mr. **Mathewson**: He stated that the 111th street plant was in operation and that it was not all taken by the city.

Mr. **Kirby**: Yes, and he said more than that, too.

Mr. **Mathewson**: Quite likely. At page 6303 he refers to the 111th street plant:

"No, it has never been abandoned. Besides being operated as a distributing station it is held in a reserve capacity, the manufacturing apparatus being in excellent condition, some of it never having been used."

That, I suppose, is what you refer to.

Mr. **Kirby**: Yes, and I think he will find in another part of the testimony he made reference to the plant. If you will refer to page 6377 you will note in reference to the 14th street plant:

"Q. What have you to say to Mr. Edgerton's statement that the 14th street plant is a dilapidated old plant. A. Well, there has been nearly a million dollars expended on keeping that plant in repairs since 1884, and as I testified this morning, the capacity of the plant has been greatly increased, and the cost of manufacturing gas
there has been greatly reduced, so in every respect the stand-
6477 ard of efficiency is maintained at the plant and the capacity
considerably augmented."

Q. Now, I ask you when you visited the 14th street plant last?

A. I have visited it on and off a number of times in the last twenty years. I suppose*d* it may be a year since I was at the plant.

Q. Did you take any special notice of the retort house walls?

A. Not specially, having no occasion to do so at the time. I think if they had been in a very dilapidated condition I should have taken notice of them.

Q. Did you notice whether the buildings were in a complete state of repair?

A. To all appearances they were.

Q. Did you notice whether the walls were in alignment or not?

Mr. MATHEWSON: The walls of the building or around the property?

Mr. KIRBY: Well, we will take them both.

A. I did not notice that they were not.

Q. Did you notice whether they were or not, did you pay any particular attention to it, did you look to see?

A. Only in the most casual way.

Q. You have also been to the 42nd street works I assume?

A. Yes, sir.

Q. Did you notice the state of the timber trestle work there?

A. The timber trestle work there is something valued at a very low figure, I think, by Mr. Mayer, and it is answering its purpose at the present time, and I do not think that that work is ever very attractive looking.

Q. Well, was it in good condition?

A. I believe it to be.

6478 Q. In a thorough state of preservation and repair?

A. It certainly is kept up and repaired; otherwise it could not be operated.

Q. At the 42nd street station did you notice the state of the coal shed which is valued at $59,000?

A. I noticed the condition of the coal shed.

Q. Well, what condition was it in?

A. Nothing about it that attracted my attention.

Q. Nothing in respect to any of these buildings that attracted your particular attention, was there?

A. Not at all, of a character which would answer the description given by some of the witnesses for the defendants.

Q. Well, that depends on what you call dilapidated, does it not?

A. Well, I presume that might be a flexible term.

Q. Taking 111th street station which you state has apparatus which is in excellent condition, what apparatus is there?

A. Benches, retorts—I am not particularly familiar with with the apparatus; I have not qualified, nor have I attempted to qualify as an engineer, but I am informed by the engineering department that the apparatus is in the condition I have described it.

Q. But you do not know of your own knowledge?

A. So far as the technical status of the apparatus is concerned I should have to depend upon the engineering department for information regarding it.

Q. Have you been at the station recently?

A. Within a year.

Q. Did you notice the condition of the retort house roof?

A. I had no particular occasion to do so, and saw nothing particularly the matter with it.

Q. Do you know whether that roof is such as would keep out the weather?

6479 A. I have every reason to believe that it would. I have no information to the contrary.

Q. Is there any roof there?

A. On the retort house at 111th street?

Q. Yes.

A. There was the last time I was there.

Q. Was the entire roof there?

A. It was, the last time I had occasion to visit the plant, all there.

Q. A year ago?

A. Yes, sir.

Q. And you don't know what condition it may be in to-day or a month ago?

A. It might have been struck by lightning or demolished or taken down since them for aught I know to the contrary.

Q. Then as a matter of fact you know very little about the condition of the 111th street plant of your own knowledge?

A. Well, I have every reason to believe it is in good condition.

Q. And you so believe because somebody told you so?

A. Because it is our practice to keep our plants in that condition.

Mr. MATHEWSON: And because the last time he saw it it seemed to be.

Mr. KIRBY: But he has not seen it except over a year ago.

The WITNESS: I have no reason to believe that it has undergone any radical change in its conditions since I was last there and I do not believe it has.

Q. What kind of apparatus is at 111th street station?

A. Well, I am trusting to memory and speaking from the standpoint of a layman entirely; it is a coal gas apparatus.

Q. Is there any purifying apparatus there?

A. My impression is that there is. I would not be sure of it.

6480 Q. And if that plant were started up to-day, do you consider that it could produce purifying gas and get it into such condition that it could be sent out from that plant to the consumer?

A. I have no idea that the plant could be started up to-day, nor any plant that has been out of commission for some time, started up within twenty-four hours.

Q. What should have to be done to that plant before it could be started up?

A. Whatever is lacking in the way of apparatus would have to be provided.

Q. So that it is not a complete manufacturing plant as it stands to-day?

A. I understand not complete.

Q. I suppose in reference to coke that you have no further information than that that has been given by Mr. Addicks and Mr. Doane, have you?

A. I do not believe that I have, except that I do not believe that we will be able to increase the production of it 200 per cent. and at the same time double the selling price of it. I don't know that either of them may have expressed that opinion, but it is mine.

By Mr. Mathewson:

Q. Is that the result of Mr. Edgerton's assumption?
A. As suggested by Mr. Edgerton in his hypothetical cost.

By Mr. Kirby:

Q. We quite understand that you do not agree with Mr. Edgerton's conclusions. I do not think we need emphasize that in any way. I presume that this comparison that you have made with the New Amsterdam and Mutual, Standard and Central Union
6481 was upon information furnished to you by others, was it not?
A. The question is based upon facts as set forth in their statement of operations to which I have access.

By Mr. Mathewson:

Q. And the same reports to the Gas Commission which Mr. Edgerton used?
A. The same reports.

By Mr. Kirby:

Q. And all your information has been taken from testimony which appeared before the Gas Commission?
A. Well, I think it has, I think all of it is in evidence.
Q. No information other than that which appears in the testimony before the Gas Commission has been used by you in making the comparison spoken of put in yesterday?
A. I would not say, I might have used some calendar year figures, I am not sure about it. In which case I do not think any calendar year figures were submitted to the Gas Commission.
Q. And if so, you got your information from these companies or officers thereof?
A. Yes.

By Mr. Mathewson:

Q. If you used calendar year or nominal year you stated it in each case?
A. Yes, it is always plainly stated.

By Mr. Kirby:

Q. You have stated that Rowland in his inventory of 1884 did not include the foundations, that it was not his rule to do so.
6482 That in some buildings he might have. Now, I ask you how you have come to that conclusion, what knowledge have you of what Mr. Rowland's custom was?

Mr. Mathewson: Will you repeat that question?
(Question repeated.)
Mr. Mathewson: Foundations of apparatus in every case.
Mr. Kirby: Foundations of apparatus I have reference to.
Mr. Mathewson: I meant in the cost of buildings, that was my question.

A. Answering your question as amended by Mr. Mathewson, I will say, that what information I have on the subject is gathered from looking over his appraisals.

Q. The appraisals which are in evidence in this case?

A. Yes, sir.

Q. You have made some reference to screenings from coke, in which you said that 21 per cent. of the screenings were sold and five per cent. of the screenings were used. I would like to know where you got that information?

A. I stated that of the coke used at the water gas stations five per cent. was screenings, and of the coke sold, accepting your figures, 21 per cent. was screenings.

Q. Now, I ask where that information came from?

A. The information appears in Exhibit J, I think, State's Exhibit J in this case.

Mr. Mathewson: Are you sure about the number?

6483 The Witness: Yes, it is State's Exhibit J, page 414-A of the exhibits in this case.

Q. Do you know the method of charging your water gas apparatus with coke when such is used and how screenings are used when such is done?

A. Do I know the method of charging the apparatus?

Q. Yes.

A. Do you mean the physical charging of the apparatus?

Q. Yes.

A. No, I don't know much about that.

Q. Do you know whether or not it is customary to place screenings on the outside edges of the coke between the main body of the coke and the apparatus?

A. Oh, I think not. I think that nothing of that sort is done. In fact, I think there is scarcely any screenings used at all in the generators in the water gas plant.

Q. On page 6334 of your testimony of yesterday there was a certain criticism of Professor Bemis' statement and Mr. Mathewson questioned you, and he stated:

"What percentage of the high-grade oil was used? 16 per cent. of the high-grade oil. As a matter of fact, what proportion of oil was used? A. 25 per cent., slightly over."

I ask where you get your information that twenty-five per cent. was used and not sixteen?

A. From our books.

Q. And where does that appear, in any exhibit in evidence here?

A. I don't think that it would be shown by the evidence.

Q. I refer you to the matter of Schmitt Bros.' bill, of which you spoke yesterday, to the amount of the actual cost of which you added ten per cent. If I remember correctly you stated that was to cover certain other work which you had to do in addition to the
6484 actual putting in of the apparatus. Will you kindly tell me just what you did do there, and for what that ten per cent. charge was?

A. The time employed in going to the customers' premises and finding out what was required, making a drawing of it, taking the matter up with Schmitt, arranging to have the work done, and the price to be paid for it, and inspecting the work when completed; those would be the main things.

Q. What was the work?

A. What was the character of the work they did?

Q. Yes.

A. I think in every instance the installation of Manhattan heaters or some gas heating appliances.

Q. A gas stove?

A. It is not a gas stove exactly, it is a heater that sets into the fireplace and requires some special piping and masonry work and that sort of thing.

Q. And did you do the piping and masonry work?

A. No, we did not do any of it.

Q. And what work did you actually do?

A. I have described it; we put the time in going to the customers' premises, probably explaining to him the work that it would be necessary to do in making such an installation and making a diagram of it for Schmitt's use, indicating how the work should be done and taking it up with Schmitt and arranging with him for the cost of it, and inspecting the completed work.

Q. And it is the custom of your company to charge its customers for such services as you have just made reference to?

A. In the case of this particular kind it is the custom.

Q. Wherein did this differ from others? You have done work for Schmitt before?

A. No, this work was not done for Schmitt, but Schmitt has done a good deal of work of that character where no addition was
6485 made to his bill whatever, where it was not necessary for us to do any specific work.

Q. Had you ever installed any apparatus, gas ranges, or heaters or what not in the place where this heater was put in before?

A. I don't know whether we had or not.

Q. This is what you consider an unusual case?

A. They were quite unusual. I do not think there were six cases that occurred in 1905.

Q. And the amount received appears to a credit to what account?

A. To the account to which the expense of whatever nature the company was put to, would be charged the distribution account.

Q. And what is the name of that account as it appears in Exhibit 94?

A. Distribution account. It would appear under the subdivision of distribution material, the credit.

Q. Yesterday you made some reference to Mr. Edgerton's testimony, giving the cubic feet of gas delivered in Chicago. Are you familiar with the amount of gas turned into Chicago prior to the years 1904 and 1905?

A. No, sir.

Q. Are you acquainted with the operation of sending gas into Chicago from the Indian natural gas fields? Do you know the maximum amount which has ever been sent in?

A. No, nothing in the testimony about it; the only thing in the testimony in regard to the Chicago output of gas is that it is about fifty-five million feet per day on the average, or the maximum is that which I could scarcely reconcile with the statement that 168,000,000 feet of natural gas were pumped daily into Chicago.

Q. The number of cubic feet which Mr. Edgerton intended to state, and I believe did state, was not 168,000,000 but 68,000,000, and I so have it in my notes. 6486

A. It appears twice in the answer. That is the reason propably why it seemed to me not to be a typographical error.

Mr. **Mathewson**: Even that would be sufficiently improbable, for our purposes.

The **Witness**: Quite. It would seem to me they were not making any gas there at all and were wasting 13,000,000 a day.

Q. And you have taken the output for a certain year, whereas Mr. Edgerton had reference to an entirely different period. This morning you spoke in reference to candle power of the gas furnished in Milwaukee, Grand Rapids and Detroit, and made a certain deduction of cost therefrom. Did you know or do you know the price of oil as used in Milwaukee, Grand Rapids, and Detroit?

A. No, sir.

Q. Did you base your reckoning upon the price of oil as used for the Consolidated Company?

A. No, sir.

Q. What did you base your calculations upon?

A. I based my calculation upon the assumption that the consumer is buying illumination. It is called gas and measured as such, but the consumer is buying illumination expressed in candle power, and if he pays 84 and a fraction cents for candle power of only 69% of the value of the candle power in New York he is paying at the rate of $1.23 for a corresponding candle power to that which is furnished in New York.

Q. How did you arrive at the conclusion that the relative value was 69%

A. By taking the average candle power delivered in New York as shown by city tests and taking the candle power furnished by Mr. McMillan, or at least as produced in the three cities where his companies operate, and allowing a drop of one candle between his stations at his district. 6487

Q. Yes, and then what?

A. Applying the two factors of the candle power delivered at the district in New York and delivered at the district in Detroit, Milwaukee and Grand Rapids I got 69%.

Q. I still do not understand. You assume that the candle power as given by Mr. McMillan was a certain definite amount.

Mr. **Mathewson**: He stated it.

The **Witness**: 17.8, and reducing it one candle power, 16.8.

Q. Very good. We will say 16.8; and what price per thousand did you put on that gas?

A. 84 cents and a fraction. I can give it to you exactly.

Q. Averaging it for the three cities?

A. Averaging it for the three cities.

Q. Now we increased that candle power to how much?

A. 24 and a fraction, the candle power delivered in New York.

Q. That is the candle power delivered to the consumer?

A. Delivered to the consumer.

Q. And that gives you a difference of how much candle power?

A. The difference between 69% and 100%, figuring it in percentage.

Q. And did you figure that increased cost per candle at the same rate as the cost per candle for 17.8 candle?

A. The calculation was based upon the variation in the candle power and the actual price paid by the consumers of the McMillan Company for the gas which they received of 16.8 candles.

6488 Q. They paid 84.95 cents per thousand cubic feet of 16.8 candles?

A. That is the case.

Q. Assumed by you?

A. Exactly.

Q. Now, will you take a piece of paper and show me the figures that would produce the cost that you have stated?

A. You want to know the arithmetical proposition?

Q. I want to see just how you figure it out, step by step, figure by figure?

A. It is a very simple proposition indeed; 84.95 cents represents the price paid by the consumers of the McMillan Company for the gas furnished them. The value of the gas as an illuminant represents 69 per cent. of the value of the gas supplied to the consumers in the City of New York.

Q. That is the percentage 17.8 upon 24?

A. 16.8 upon 24; that is the case And by dividing 84.95 cents by .69 you get the equivalent cost of gas of the candle power delivered in New York.

Q. Of course you have no knowledge as to what kind of gas this is which Mr. McMillan's companies are selling?

A. No, other than the information conveyed in his testimony, Mr. Kirby.

Q. In reference to Mr. Doane's price of coke, what you really mean is that the purchaser does not pay the cost of deliverey of the coke?

A. It is included in the amount that he pays, Mr. Kirby, for coke.

Q. He does not pay it in addition to the price per ton or unit which he buys?

A. No, sir.

Q. I refer you to Complainant's Exhibit 368, candle power, the calendar year 1905, monthly averages, and ask where you obtained that information?

A. That information is obtained from two sources: Our own station record and the record of the tests made by the city which

6489 are kept in the Department of Water Supply, Gas and Electricity.

Q. Do you know whether or not these candle power tests were corrected for temperatures and pressures?

A. Prior to July, 1905, they were corrected for candle weight and consumption only; subsequently to July 1, 1905, they were corrected for candle weight consumption for temperatures and for pressure.

Q. What was the candle power standard at this time?

A. Are you asking——

Q. The candle power standard, the requirements of the statute?

A. What were the legal requirements?

Q. Yes.

A. My understanding is that prior to July 1st the requirements were 20 candles delivered on the district and subsequently to July 1st, 22 candles delivered on the district.

Q. And the average you gave in answer to Mr. Mathewson's question was for the entire twelve months including that period covered by the 20 candle power regulation?

A. That was the case.

Q. Yesterday you spoke of the competition of the electric current, of the lack of suburbs within which the Consolidated Company might operate and of other causes which you had in mind which tended to refute Mr. Marks' prediction as to the increasing sale of gas; you also spoke of the transient and shifting residents of the city and their effect upon payment of their gas bills and consequent loss to the company; also referred to an article in the New York *Times* of January 1st, 1907. Now I refer you to an article in the New York *Times* of January 28th, 1907, and will read it and ask if you can inform me whether or not the statements therein are true as they apply to the Consolidated Gas Company.

6490 Mr. MATHEWSON: Let us see what it is before you read it.

Mr. KIRBY: I think you have probably seen it (handing a newspaper clipping to Mr. Mathewson).

Mr. MATHEWSON: I do not think I have, if it is the New York *Times*. I think I shall object to the reading of that statement, Mr. Master. It seems to me it is utterly impertinent in any respect, a newspaper assumption, reports and conclusions, unfounded largely, I know.

Mr. KIRBY: Even so the witness can state it, as he has taken occasion to refer to newspaper clippings. He has taken occasion to state that the sales are not increasing.

The MASTER: What is the page where he spoke of newspaper clippings?

Mr. MATHEWSON: It depends somewhat on the purpose and point upon which it is offered. The question which the witness was dealing with was brought up by the defendant's assertion as to our bad debts and deposits, and he simply stated that there was great pressure to bear even to make us return part of our deposits that we had, and that a bill had been introduced in the Legislature for that purpose. That is entirely pertinent, but this newspaper article that you have here——

The MASTER: Unless it is directly applicable to something brought out yesterday I will exclude it. You may equally read in everything that has appeared in the newspa-*res* for six months about gas companies and ask him what his opinion is about all that.

Mr **Kirby**: On page 6351 you will find a qu-stion by Mr.
6491 Mathewson:

"Q. Even so, isn't it a fact that bills were introduced in the Legislature to compel us to return our deposit? A. There have been such bills introduced and I notice in The New York *Times* of January 21, 1907, there is reported a bill introduced by Assemblyman Eagleton reducing the amount of deposit the company can charge to the amount of one month.

Mr. **Burr**: That is entirely improper."

The **Master**: Possibly it was. It was not objected to when the question was asked. This question is. I will exclude it.

Mr. **Kirby**: Exception.

Q. Mr. Carter, is it or is it not a fact that your sales for the year ending December 31, 1905, have increased to fifteen billion feet of gas?

A. Our sales for the year 1995 are in evidence, Mr. Kirby.

Q. 1906, I beg your pardon.

Mr. **Mathewson**: Mr. Master, the testimony which it is now sought to introduce of subsequent periods of course would be met, if it were pertinent at this stage of the case, by evidence as to the increase in our plant for the same period and other things, and open up an entirely new field of additional capital and other points which you can see would be entirely pertinent in that connection. This is not cross-examination and it is certainly not pertinent at this stage of the case. I object to it on all those grounds.

Mr. **Kirby**: Mr. Carter has stated that the sales of the Consolidated Gas Company were not increased in the way Mr. Marks' pointed out, and I should think it were certainly pertinent to show by
6492 what amount they had increased.

Mr. **Burr**: May I say here, as it appears on page 6296 of the record, Mr. Carter sets himself up as an expert to contradict and criticize the theory upon which Professor Marks arrived at the conclusion that as the gas is reduced in price it increases in consumption. Now, whether as a matter of fact in his own company there has been an increase in the sales of gas, in the consumption of gas, for the past year, is quite a pertinent question, it seems to me.

Mr. **Mathewson**: Well, if you want to ask him whether that is so, and the Master——

Mr. **Burr**: Mr. Carter says——

The **Master**: I have it before me, but I do not see how this question has anything to do with cross-examination as to that. I should doubt very much if it was legitimate cross-examination even if it appeared here that there had been any such decrease in the price of gas during the last year to a fixed amount as there was during this period as to which Mr. Carter was testifying, but certainly the conditions existing during the last year when some people were paying one dollar and some people paying 80 cents would not afford any criterion to go by. I do not think that is proper cross-examination.

Mr. **Burr**: I think to disprove his own assertion we are entitled to show just what happened in his own company.

The **Master**: I do not see that it tends to disprove it. And even if it does I do not know that it is a proper time in the case to bring it in. It is not cross-examination, in my view, and that is
6493 what we are here for now.

Mr. **Mathewson**: I am merely seeking to curtail this within some limits.

Mr. **Kirby**: Do I understand that the Master will not take judicial notice of the amount on deposit in the Federal court, representing the twenty cent deposit from the dollar collected by the Consolidated Gas Company?

The **Master**: You want to know if I know what it is? I will tell you, yes.

Mr. **Kirby**: I ask if the Master will take judicial notice of such?

The **Master**: No, I could not take judicial notice of it, Mr. Kirby.

Mr. **Kirby**: Then I ask——

The **Master**: But the Court will, undoubtedly. It may change between now and the time when this case comes before the Court. It will if you don't hurry up and proceed with your cross-examination.

Mr. **Kirby**: I ask the witness if as a matter of fact there has not been deposited in the Federal Court since May 1st last, to January 1st, 1907, the sum of $1,904,417 representing the difference between one dollar per thousand feet of gas, the price charged by the company, and eighty cents, the price fixed by the law the constitutionality of which is now being tried.

Mr. **Mathewson**: Same objection.

The **Master**: I will exclude it.

Mr. **Kirby**: Exception. I do not want to unnecessarily open up this field, Mr. Master, but I think under the circumstances the witness should be permitted to answer.

6494 The **Master**: Well, he may answer it. It has been ruled on. You can take his answer under the rule, if he knows.

The **Witness**: I presume you are asking if that is the amount deposited by the Consolidated Gas Company?

Q. Yes?

A. It is not.

Q. Can you state the amount which has been deposited by the Consolidated Gas Company.

Same objection, same ruling; exception.

A. I cannot state from memory the amount. It is very much less than that.

Q. It is less by the difference between the total amount deposited and the amounts deposited by companies other than the Consolidated Gas Company?

Same objection, same ruling; exception.

A. That is the case.

Q. Can you state the number of cubic feet sold by the Consolidated Gas Company during the year 1906?

Same objection, same ruling; exception.

A. I cannot.

Mr. **Kirby**: That is all I have, Mr. Master.
The **Master**: All right, proceed, Mr. Burr.

Cross-examination by Mr. **Burr**:

6495 Q. Well, of course, you have made some inquiries t ..ent
certain what the result has been, whether there has be now-
reduction in the price of gas, before you ventured to offer an Had
ion as you expressed it here on page 6296? have

A. Whether there has been a reduction in the price of gas where, when and to whom?

Q. You say on page 6296:

"In other words, any advantage resulting from a substantial decrease in price of gas, we already have to the fullest extent, and any increase we might realize in population is likely to be entirely, if not more than, absorbed by the development of the electric business."

A. That is my opinion, yes, sir.

Q. I say, you have made some investigations to support that opinion?

A. Why, yes, sir. It is supported by the testimony I have just given with respect to the McMillan's companies where gas is selling at eighty-four cents and they do not begin to burn as much as they do in New York City.

Q. Are you acquainted with the fact that the People's Gas Company in Chicago reduced its rate here some little while ago?

Mr. **Mathewson**: That was gone into long ago.

Mr. **Burr**: Yes. Well, it is not denied that it reduced its rate, I want to ask him if he recalls or if he knows that that company has increased its dividends since that time?

A. No, I am not aware that it has. I believe it has restored them to the former figure, with respect to one dividend. I don't know that that means they are going to continue paying at the rate they formerly paid.

6496 By Mr. **Mathewson**:

Q. One quarterly dividend?
A. One quarterly dividend.

By Mr. **Burr**:

Q. I find in the New York *Times* of January 26th, this year, a statement that "The directors of the Peoples Gas Company declared yesterday a quarterly dividend of one and one-half per cent., increasing the annual rate from five to six per cent. This restores the company's dividends to the figures at which they stood for nine years prior to February last year, when the rate was reduced one per cent. to five per cent. for the reason, as was explained at the time of the reduction, that the directors felt that prudence required this step in view of the reduction in the price of gas. It is reported in Wall Street"——

Mr. **Mathewson**: It seems to me enough of that newspaper article has been rea[illegible] hen we get to what is reported in Wall Street we ought to stop.

The MASTER: I think so, Mr. Burr.

Q. Have you any information on that subject?

A. None. I should not assume from that article that the rate of annual dividend has been restored at all. I should expect that they might possibly not pay the same dividend the next quarter.

Q. But you have no information which would lead you to disbelieve this statement as it appears here in the public press?

6497 A. I believe that they paid at the rate of six per cent. for this quarterly dividend, yes. That I can believe from that article.

Q. Now, you are not a gas engineer, I think you stated?

A. Oh, I have said that several times, I think.

Q. You never built a gas works?

A. No, sir.

Q. You never operated a gas works?

A. No, sir.

Q. You have no idea of assuming to pose here as an expert upon any branch of the gas business outside of the financial department?

A. That is the case.

Q. Now, you have criticised the report of Messrs. Marwick & Mitchell, Mr. Carter, in some respects. You said that according to their report the amount of gas on hand January 1, 1905, is incorrect.

A. Yes, sir.

Q. You were asked by Mr. Mathewson (page 6336), referring to Mr. Hall and his report, "Is the amount which he states on hand in the holders January 1, 1905, 26,552,000 cubic feet correct? A. No, sir, it is not correct." Is there any such figure as that in Mr. Hall's report or Marwick, Mitchell & Company's report?

A. Yes, sir. On page 1433 of the record of exhibits appears the statement that the gas in the holder on January 1, 1905, amounted to 26,552,000. The record on page 6336 of the testimony has three ciphers too many. It is a stenographic error. The figures are Mr. Hall's, and they are incorrect, and they are your figures so far as the testimony is concerned, Mr. Mathewson.

Mr. MATHEWSON: I repudiate the last three ciphers on page 6336. They are not mine, but the stenographer's.

6498 Q. The figures should be 26,552,000?

A. Yes, sir.

Q. That is the way it appears in the accountant's report?

A. Yes, and I understood Mr. Mathewson, and I think Mr. Mathewson said 26,552,000, and I said "No, sir it is not correct." And I reiterate that 26,552,000 is not correct.

Q. That is what I want to get at? What is the correct figure?

A. The correct figure? The correct amount was 27,880,000 cubic feet of gas in the holders January 1, 1905.

Q. You say you had certain gas on hand at the 18th street station. Now, why didn't you inform Mr. Hall as to that?

Mr. MATHEWSON: We didn't know what he was getting up; he didn't ask for any figures at the 18th street station. He could have had the books.

A. I didn't know Mr. Hall was using gas on hand at all. I understood he was checking up Exhibit 94. There was no statement appearing in Exhibit 94 of gas on hand and I had no means of knowing what he was doing independently of checking Exhibit 94. Had he asked for a statement of the gas on hand I should certainly have seen he got every figure we had on the subject.

Q. Didn't Mr. Hall ask you for the station records?

A. He asked for the manufacturing records so as to check Exhibit 94, and he had and was enabled to check the exhibit in its entirety.

Q. Didn't you give him the station record for 14th street, 21st street, 44th street, 99th street?

A. I did. They are all manufacturing stations and were used by him in confirming our statements in Exhibit 94 of the employment of material entering into the manufacture of gas. 6499

Q. You didn't give him 18th street?

A. 18th street is not a manufacturing station and we did not give it to him because there were no manufacturing figures contained in it.

Q. Assuming you are correct in stating that the quantity on hand on January 1, 1905, would be more than that shown by the accountants, it would have had the effect of increasing the amount of leakage, would it not?

A. No, it would not, assuming that a corresponding quantity was on hand at the end of the year of which Mr. Hall did not take cognizance.

Q. With a greater output of gas there is a greater percentage of leakage, is there not?

A. We are not dealing with output in your question. We are dealing with quantity on hand, which has no effect on the output unless diminished as a result of a month's or a year's transactions.

—. Well, this error would not in any way affect the computation of gas per thousand feet, would it?

A. Assuming he used the sales as recorded in your statements where he used the sales less the lamp sales reaching an arbitrary factor, I don't know that it would have affected; where he made any addition to his cost on account of unaccounted-for leakage therein he would be in error.

Q. The extra gas on hand January 1, 1905, added to the leakage at the close of the year would not increase it to any great extent, would it?

A. No, it would not result in any material change in his figures, Mr. Burr.

Q. Assuming that your 18th Street station holders on January 1, 1905, were full and their capacity was I believe not more at any time than 5,500,000 cubic feet, what difference in cents per thousand cubic feet according to Mr. Hall's method of computation would it make? 6500

A. I don't know. In the first place the assumption that the holders were full would scarcely go because these records are taken at 7 A. M., after most of the gas in the holders has been taken out, I think, so it would not be the maximum capacity of the holder that would be recorded as on hand at that time.

Q. Assuming it be just as I said, it would be .01 cents per thousand, would it not?

A. Well, I am willing to assume that, Mr. Burr.

Q. Now, as a matter of fact you had only about one million cubic feet on hand at 18th Street, had you not?

A. Exactly 1,328,000 on hand at 18th Street on the first of January, 1905.

Q. On that basis the error in computation could be neglected and not affect the ultimate result?

A. I presume any one could neglect it who chose to do so.

Q. I mean to say it would not affect the ultimate result?

A. Not substantially.

Q. You said yesterday you had approximately the same stock on hand at 18th Street at the close of 1905 as you had at the beginning of the year——

A. I don't remember saying so. I would like to have it pointed out.

Mr. Mathewson: I asked you no such question.

The Witness: I made no such statement.

Q. All right, I will refer you to the page later. You said in reference to Mr. Hall's evidence as recorded on page 4477—you referred to that testimony and quoted his as stating that your sales for five months, June to October, exceeded your manufacture and purchases by 421,516,256 cubic feet; do you recall that?

A. Yes, sir.

6501 Q. It did not occur to you when checking Mr. Hall's figures that he simply made an error in recording his figures shown in Exhibit B?

A. I knew he had made an error. I so stated that he had made an error.

Q. Didn't you find that that error was in the question proposed to him by Mr. Mathewson?

A. No, sir. It was not proposed to him by Mr. Mathewson. It was proposed to him by you.

Q. Was it?

A. Yes, sir.

Mr. Burr: That accounts for it.

Q. Well, it was quite apparent that the slip had been made by the witness or by counsel.

A. Why, very apparent, I think.

Q. Again referring to Exhibit B, is it not true that the only actual stocks entered were those of January 1, 1905, and December 31, 1905, the other stocks or those entered as such being only balancing figures.

A. They are certainly not quantities on hand, and I so testified.

Q. So that it would appear, would it not, July 31, 1905, you had over-delivered gas beyond your make, amounting to 197,808,540 cubic feet, plus the unmetered gas at the same date and what was metered in gas?

A. I don't know. I would not like to testify to anything from those figures. They are not the kind of figures that are ever made up in any gas statement and I prefer not to draw any conclusions from them at all.

Q. You stated yesterday in regard to advertising expenses, it was obvious to you that Marwick, Mitchell & Company had treated $15,528.57 as a deduction twice?

A. Yes, sir.

Q. Were you able to trace the individual items making up 6502 the several deductions made by the accountants?

A. Only with respect to that item. With respect to that item I did, and read it into the testimony.

Q. Have you got the figures there?

The Master: Referring now to page 6342?

Mr. Burr: Yes, sir.

A. The individual items are given on pages 1462 and 1463 of the exhibit book.

Q. I will ask this question, the item on page 1432, "Legislative and Franchise Litigation" and so forth, .61 of a cent per thousand cubic feet is made up as follows, is it not:

Expense, general office	.19
Advertising——	

A. Where is .19 of a cent?

Q. Expenses, general office, .19.

A. Where is it to be found?

—. Page 1437 of exhibits.

A. There is such an item as .19 on the page.

Q. Advertising and legal, .48 of a cent; total, .67. You have in the divisor accounts .06, as per page 1432, total .61.

A. Well, I could not possibly confirm that statement. There were a number of items appearing on page 1437 as being rejected and not shown in the table on page 1432, of which amount I understand was this .19 of a cent.

Q. Now that I have called it to your attention does that explain what you consider an error on the part of the accountant?

A. No, it does not.

Q. Are you satisfied they were correct in the deductions made?

A. No, I am not.

Q. Well, can you state the account which you considered to be duplicated?

A. Yes, sir.

6503 Q. Please do so.

A. On pages 1462, 1463, appear in detail the items rejected by Marwick & Mitchell as follows:

Amount of ordinary legal expenses charged up exceeding amount of actual payments	$7,705.38
Actual payments excluded	15,528.57
Legal expense on account of legislative investigation	28,876.60
Franchise litigation	5,270.76
Advertising	6,020.34
Total	$63,401.65
If you add to that	15,528.57
A second time, being the second item,	
you get a total of	$78,930.22

And if you divide that amount by 13,012,384,000 cubic feet, the factor which they use in arriving at their rate per thousand, you get the cost per thousand of .61 which they used, and stated to be the amount which they rejected.

Q. What particular item was duplicated?

A. The item of $15,528.57.

Q. How do you know that?

A. Because the calculation demonstrates it very quickly to my way of thinking.

Q. Does not the calculation to which I have just called your attention explain it?

A. It does not explain anything. There is a large element in there that is not any rate per thousand of any kind. I am asked to take 19 cents, deduct 6 from it and add that to something else and reach the .61 of a cent, but I would not be satisfied to accept that as an explanation of that amount. I might indeed say that is not the only item on page 1437 that is not accounted for in this table 6504 on page 1432, but there are several other items which are also omitted from that page.

Q. Well, dropping that for the moment. In dealing with the street lamp expenses, the accountants eliminated both the sales and the amount of the expense, did they not?

A. They eliminated not the sales, because they had nothing to do with the sales, they eliminated the item of maintenance, but they did not eliminate the cost of the gas which was supplied to the lamps from the operating expenses, and therefore they could not properly eliminate the quantity of gas that was supplied to public lamps from their computations.

Q. What do you consider is the right method of treating that question?

A. As we treat it.

Q. That is by eliminating nothing?

A. Showing it as an expense as it is an expense, and showing in the income the total amount received from the city as long as the amount that we receive from the city is not divided by the contract between gas and maintenance.

Q. I understand that you testified heretofore that it was merely a matter of bookkeeping. You charge up against the cost of gas and say that it is merely a bookkeeping regulation. Isn't that the explanation you have of it?

A. No, it seems to me an original method of dealing with it. I will explain that in all our computations of cost, of profit and so forth, we show that item on both sides, so that the net result is identically the same as though it were deducted from the expense and the expenses shown as something that they are not.

Q. To ascertain the cost to the private consumer that item should be eliminated from both sides, should it not?

A. Our business deals with private and public consumers
6505 and all kinds of consumers and it is a business that has to do with consumers as a unit and we cannot split it up into different kinds of business; it is all the gas business.

Q. Have you reduced the number of transients to whom you made reference, to a given percentage in the City of New York?

A. No, sir.

Q. Did you ever make an examination of a going concern on behalf of a buyer, Mr. Carter?

A. Well, what do you mean by that question, please?

Q. Well, one might take a different view of the valuation under those conditions, and I ask you whether you had any experience in placing a valuation upon a going concern for a person who was a proposed purchaser of that going concern?

A. Why, do you mean as a purchase of property, in the purchase of a plant?

Q. Yes, a going manufacturing plant?

A. No, I don't think I ever have. I don't recall an instance just now of just that character.

Q. If you were called upon so to do would you consider expenses similar to legislative expenses that have been referred to here, expenses in the ordinary course of a company's business?

A. I should expect if I were figuring on what profit I could make out of an enterprise that I contemplated investing in I should certainly consider those expenses as something I should have to reckon with in the future.

Q. Would you not treat them as expenses of an extraordinary nature and more properly chargeable to surplus account?

A. No, nothing is chargeable to surplus account, except through the operating expense account.

Q. Isn't that the recognized method of treating such expenditures?

A. It is absolutely not the recognized method.

6506 Q. And you base that statement upon what experience outside of the Consolidated Gas Company?

A. My observation of systems of accounting generally.

Q. Your attention has been drawn to companies having such items of expenses, legislative expense?

A. Yes, sir.

Q. Are those electric companies?

A. Such as electric light companies and gas companies, here and abroad.

Q. In reference to the reduction on account of services extended or increased, did you identify the items eliminated with the job tickets, or did you identify the eliminated items with the job tickets?

A. What do you mean by identify?

Q. Compare them?

A. Do you mean, did I take all the items comprised in Marwick, Mitchell's statement, and compare them with the job tickets?

Q. Yes.

A. No, I did not. I compared enough of them, and had them compared by others sufficiently to establish in my mind what they were.

Q. I have special reference, Mr. Carter, to your statement as it appears upon page 6345 where the question was asked:

"Q. Now, another point to which I call your attention, Marwick, Mitchell & Company in this exhibit included in their items rejected the sum of $1,850.31, being, as they state, the cost of certain expenses and increases to services in the year 1905, alleging that they should have been charged to construction account. That amount, if I recall, is so small that it is said it could not be expressed in cents per thousand and was not expressed by them. A. It was not expressed by them. Q. But there is a principle there involved," etc.,

6507 And you went on to give an expression of your views upon that subject.

A. Yes, sir.

Q. Now, assuming your explanation to be the correct one, that when the city has removed the pavement you put in an extra joint, say from the pipe to the sidewalk, it is, you say, a charge to repairs.

A. Yes, sir.

Q. Then is not this an addition or new work?

A. No, it takes the place of an old joint or service. That is already an item in our capital account and we consider that to depreciate the old and capitalize the new would reach the same result as to charge the work of increasing the size and the material to repair account.

Q. No, but as a matter of fact you take nothing away, you simply add to or improve a service and call it repairs, is not that so?

A. No, it is not an addition, it is a substitution of perhaps a 1¼ inch for a ¾ inch pipe from the main to the curb line.

Mr. MATHEWSON: You displace small pipes plus pavement, and replace large pipes, which equals the two?

The WITNESS: That is the theory upon which we charge it to repairs.

Q. You charge it to expenses?

A. Expenses as a repair item.

Q. That is what you designate as a short cut?

A. It is a short cut, labor saving and brain saving, and leads to the same result in our judgment.

Q. Don't you find it leads to confusion?

A. Not at all, sir.

Q. Now, when you increased the various services mentioned by you, you did not add anything to your construction account, did you?

6508 A. No, nor did we take anything from the construction account representing the old services.

Q. Well, should you not add the difference, between the service valued at five dollars and one at four dollars, that is a dollar, to construction account?

A. We do not think there is that difference. As has already been testified to, the service is laid in advance of new pavement at comparatively little expense. The probability is that the cost of laying the larger service under those conditions would amount to no more than the value at which the other service is carried on the books, plus the pavement.

Q. You admitted in your evidence yesterday that your books did not record what any particular joint cost, and that you could not charge a replacement unless a particular estimate was made for that charge, and that any such estimate would be an arbitrary one, didn't you?

A. I stated so, and it is a fact.

Q. It might be then, that your present method of treating these charges would lead you to charge operating expenses with what should really be construction?

A. I cannot concede that it leads to that result. I cannot believe that it does.

Q. Is it not the case, as a matter of fact, that the accountants were obliged to admit a large number of charges for small extensions of the service to the house, as your books and records were not kept in such a manner that they could be separated?

A. I am not aware of it.

Q. Your books as a matter of fact, are not kept for the purpose of supplying information easily and without considerable digging, are they?

A. (No answer.)

Q. Yes or no.

A. We think we can get a great deal of information from them without much trouble, Mr. Burr.

6509 Q. You are the only people who can. I think you have stated, Mr. Carter, that in your opinion the repairs and renewals and depreciation on your plant during the year 1905 were ample.

A. No, sir, I have not stated so; I have not made any statement of that kind.

Mr. Burr: I will withdraw that question.

Mr. Mathewson: Well, he has answered it.

Mr. Burr: Then let it stand.

Q. From the vouchers of Schmitt Bros, could you say definitely that no profit was included in the ten per cent. added when they were billed to consumers?

A. I can say specifically that there was no profit included in it.

Q. Was this not an arbitrary figure, its exact composition being unknown?

A. It was extremely conservative and probably did not cover all the expense that we were put to. It is not our policy to charge anything in the shape of a profit on transactions of that kind, and most of Schmitt's bills, as Mr. Hall had occasion to observe, bore no addition of that kind, and we would not have been living up to our policy if we had charged anything in that ten per cent. over and above the expense we were put to.

Q. Can you make up what expenses were embraced in that ten per cent.?

A. Itemize them?

Q. Yes.

A. I have not done so. I think it might be done.

Q. Well, you can have it in the morning, can you?

A. Yes, I think so. I should not say in the morning because there will not be anybody in the office to-night, and it will depend upon what time we will meet in the morning. I can make an effort to do so.

6510 Q. If the Consolidated Gas Company invested the money received on consumers' deposits, would it not practically reimburse itself for the interest paid?

A. Well, that would depend a good deal upon what sort of an investment was made; it might reimburse itself for some of it.

Q. Do you not consider it reasonable to take into consideration the fact that you have the use of this money as working capital?

A. Well, I presume those matters are all subjects of argument and will be taken up in their turn, Mr. Burr. I would rather not anticipate the argument of counsel in a matter of that particular kind.

Q. Well, you have presented a magnificent brief here, you were making an argument all day yesterday. Of course, it has been testified many times here that the Consolidated has a controlling interest in these subsidiary companies with which it has these agreements for the manufacture of gas; that is a fact, is it not?

A. Yes, sir.

Q. Now, holding this controlling interest, or in fact any interest at all, do you not receive in dividends, which you treat as miscellaneous income, a proportion at least of the ten per cent. which you charge your company with?

A. Well, that would be a return on any investment we made in those companies.

Mr. Mathewson: The question is whether that is treated as miscellaneous income?

The Witness: Yes, it is so treated.

Q. In other words you pay them ten per cent. over and above the cost of the labor and material employed in the manufacture of the product?

A. Assuming that it was a profit to them, or a return to 6511 them upon their capital invested in the business, and did not simply reimburse them for some other expenses, such as Marwick, Mitchell & Company suggested it might, insurance, depreciation and charges of that character——

Q. However that might be, they receive this ten per cent. and afterwards return a portion of it to you in dividends?

A. I cannot tell you whether they do.

Q. You have no knowledge on that subject?

Mr. MATHEWSON: Certainly the New Amsterdam does not.

A. Some of them I am sure do not.

Q. I think you have touched upon almost every subject that has been broached in this inquiry, and I am surprised that you are not familiar with the situation in that regard.

A. To trace that ten per cent. which we pay them to a dividend, and to say in case that——

Q. From those companies.

A. I think it would be a very difficult matter; I should scarce want to undertake to establish it.

Q. Well, assuming that to be the case, that would have the effect of really reducing the matter to being a charge against the operating expense and a credit to income on those investments.

A. That would be the case.

Q. You testified that certain mains were useless in 1903 and 1904.

Mr. MATHEWSON: No, temporarily disused and disconnected. They were not useless or they would have been marked abandoned at that time.

6512 Q. Well, when you made use of the expression disused did you mean abandoned?

A. No, I did not. By disused I meant disused.

Q. They were in a condition to be used at some future time?

A. That was the case, yes, sir.

Q. When you purchase material you charge it direct to the account to which you intend it to be used, don't you?

A. That depends upon the character of the material, Mr. Burr. We buy a great deal of material that is charged to stock account. All of our manufacturing material is carried in stock accounts and a great deal of our material for extending our distributing system and repairing it is carried in our stock account.

Q. Well, if subsequently you decide to use it for some other purpose, you make a cross entry in your books, don't you?

A. Where the material as purchased has been charged to some specific account, operating account and is used for some other purpose there is a cross entry made.

Q. That is the method with which you treat these things on your books, I am speaking of the books of the Consolidated Gas Company?

A. Yes.

Q. Do you not lay yourselves open to error in handling material in this manner?

A. No, I think we do not.

At 5:55 P. M. adjourned to Wednesday, January 30th, 1907, at 11:00 A. M.

Last Exhibits:

Complainant's, 369.
State's, OOO.
City's, 236.

6513 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *January* 30, 1907—11 a. m.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

6514 Robert A. Carter resumes the stand and further testifies.

Cross-examination by Mr. Burr (continued):

Q. From the rents you receive from gas stoves you are expected to keep them in repair, are you not?

A. Why, yes, we do keep them in repair.

Q. Well, this being so, does the credit of stove rentals not appear to you to be reasonable as made by the accountants?

A. Why, I don't think any alteration of our statements as made reasonable.

Q. On the contrary you believe them all to be unreasonable?

A. I believe them all to be rather fruitless of results since we show both the expenses and the revenue in all our calculations.

Q. As a matter of fact the company does repairs and other work for consumers and other companies, does it not, and credits the operating expense with the same?

A. Consumers and other companies? I don't quite understand.

Q. Well, for consumers?

A. Why, we do a great deal for consumers, yes, sir.

Q. And other companies?

A. Oh, you are referring to work done in the street, probably?

Q. Yes, whatever work you do for consumers, or whatever work you do for other companies you credit to operating expenses, credit your operating expenses with the same?

A. Yes, sir.

Q. Why did you do so in one case and not in another?

A. Well, in one case the charge that we make is specifically for work that is done and the charge comprises the labor and the material employed and very properly as the cost of the labor and the material appears in our expenses, the charge made to individuals or

companies should appear directly in the expenses as an offset
6515 to it. It is in no sense revenue and in no sense income, the
amount we receive from customers or companies for whom
we do work.

Q. Will you refer to page 1437 of Exhibit 87 and tell me what deductions made on account of advertising and legal expenses—does it not appear to be there $63,401.65?

Mr. Mathewson: I do not think your question reads quite clearly. You mean what the reduction is on that account?

Mr. Burr: Yes.

A. I don't notice any deduction made there. I notice a column headed "amount" and under it an item of $63,401.65 or .48 of a cent per thousand cubic feet, which of course is not .48 of a cent per cubic foot on any volume of sales employed by either Marwick, Mitchell & Company or the Consolidated in any statements that they have ever made.

Q. There are two columns, one headed "increase" and the other is headed "decrease." This item of $63,401.65 appears under the column headed "increase"—I mean to say there is a column there headed "increase or decrease," this item of $63,401.65 appears under that column?

A. It appears under that column of increase or decrease.

The Master: I do not know about that. The increase or decrease covers two columns, does it not?

The Witness: Yes, sir, it does.

Q. Well, it gives the amount and then gives the cents per thousand cubic feet?

A. Yes, sir.

Q. Now, will you refer to pages 1461 and 1462, and I will ask you
if you do not find the items of that amount to be as follows:
6516 Advertising, $6,020.34; Legislative Investigation expenses,
$28,876.60——

A. Where are you reading?

Q. Pages 1461 and 1462.

A. What page? You are not reading both pages, I presume.

Q. I haven't the exhibit here; I will give it to you. On page 1462 of exhibits, under the column headed "rejected," you find advertising $6,020.24?

A. Yes, sir.

Q. On page 1463, at the top of the page, you find "Legislative Investigation Expenses," $28,876.60?

A. Yes, sir.

Q. On the same page you find "amount insufficiently provided for prior to January 1, 1905," $7,705.38, and you find on the same page, do you not, "amounts not properly applicable to cost of gas for 1905, as detailed" $15,528.57?

A. Yes, sir.

Q. Then you find on page 1462 in the column headed "Rejected amounts," franchise litigation, $5,270.76?

A. I have enumerated all those items yesterday.

Q. Making a total of $63,401.65?

A. Yes, sir.

Q Now, you see in these figures the sum of $15,528.57 but once, isn't that so?

A. Entered but once, but the total contained in the .61 cents per thousand that appears on page 1432——

Q. We will come to that. The item of $15,528.57 appears but once there?

A. It appears but once on pages 1462 and 1463, but twice in the calculation, by which the rate per thousand was arrived at.

Q. It appears but once in the sum total of $63,401.65; is that right?

A. That's right, yes, sir.

6517 Q. Now, look at the bottom of page 1437, and do you not find that the decrease from the cost per thousand feet as shown by the accountant's statement as compared with your own statement is 22.31 cents?

A. I find a rate there of 22.31, which corresponds with other rates to which I have had occasion to refer as not being the rate per thousand on any volume of sales.

Q. Well, never mind. You find it there?

A. I find that figure there, yes, sir.

Q. Now, will you refer back to page 1432?

A. Yes, sir.

Q. And at the top there you will see a statement in these words: "The following is a summary of the amount excluded by us." And do you not find that the result of such summary is given in detail, and amounts to 22.31 cents?

A. I do not find it is given in detail. I find several items shown on page 1437 to which you have referred as being items excluded, including repairs to services, repairs to buildings, expense general office, adjustments and repairs to general apparatus aggregating .31 of a cent per thousand cubic feet, not shown at all in this statement on page 1432.

Q. Well, it appears there as 22.31 cents, does it not?

A. It does appear there as 22.31 cents.

Q. Well, that total of 22.31 agrees with the total deductions per thousand cubic feet as shown on page 1437, does it not?

A. It does.

Q. How is it possible? Can you understand how it would be possible that an amount should be deducted twice in the one statement and not in the other?

A. In this way: The amount is deducted twice in the item of legislative and franchise litigation .61 of a cent, and then the fact that such an error has been made disappears in the sundry adjustments which arbitrarily take care of all differences between the aggregate of the items enumerated, and the total of 22.31.

6518 Q. Does it so appear in dollars and cents there? If so, please point it out?

A. Does what appear in dollars and cents?

Q. The error that you spoke of that has been entered twice?

A. No; it is impossible to point out the error, because I say the error is taken care of in that item called "Sundry adjustments" in red ink in the total, and indicates a credit and takes care of any mistakes or omissions that may have occurred in making up that table.

Q. Can you point the error in dollars and cents so far as this item of $15,528.57 is concerned?

A. I did very clearly in my testimony yesterday point it out.

Mr. MATHEWSON: He showed that you have to include it twice to get your .61 of a cent.

The WITNESS: Yes, sir, it had to be included twice to get that rate per thousand, using their own factor of sales.

By Mr. MATHEWSON:

Q. If you did not include it twice it would not have given .61 of a cent, would it?

A. It would not, no, sir; nor would any other amount included give .61 of a cent.

By Mr. BURR:

Q. You see on page 1432 the last item in that column headed "amount per one thousand cubic feet" is an item entitled "sundry adjustments"?

A. Yes, sir; a credit item in the table.

Q. Do you know how that is arrived at?

A. No, sir, I do not, but I have indicated how a part of it is arrived at. It takes care of an error of .12 of a cent in the legislative and franchise litigation, among other things.

6519 Q. You say I understand that the accountants have pursued a different method of calculation from the method pursued by you in arriving at their cost per thousand cubic feet?

A. Yes, sir; in eliminating the lamp sales they pursued a different method than that pursued by us.

Q. It is not apparent from an examination of the figures to which I have called your attention on page 1432 that they are the same figures as shown on page 1437, grouped in a different manner and making allowance at the same time for the different methods of calculation?

A. I find 22.31 cents in both statements, which does not change the fact that there is an error in one if the items in statement on page 1432 which is adjusted into the item which handles apparently many things that I would not undertake to enumerate and I doubt very much if they could be intelligently enumerated.

Q. But you cannot point out the item $15,328.57 twice?

A. I have indicated that it was included twice in arriving at .61 of a cent per thousand.

Q. But you cannot point it out in so many dollars and cents?

A. Yes. You have read the amount a moment ago, you read it, what it amounts to, but it evidently has been included twice in making up his table.

The MASTER: Gentlemen, you seem to be wholly at variance on this point, do you think it is worth while to spend any more time on it?

Mr. Burr: I won't spend any more time on it just at present.

Q. You stated yesterday that the accountants had deducted between $78,000 and $79,000 on account of legal expenses.
6520 Do you find those figures anywhere in the account of Messrs. Marwick & Mitchell?

A. On what page?

Q. Page 6503?

A. I indicated on that page how an error had been made by which it was made to appear that .61 of a cent per thousand cubic feet was the amount rejected by the accountants in their table on page 1432 of the exhibits.

Q. As a matter of fact you get that amount of $78,930.22 by adding to the amount to which I have previously made reference ($63,401.65), this item of $15,528.57 do you not?

A. Yes, sir, I do, making that addition for the purpose of demonstrating that it was included twice in the amount which represented the .61 of a cent per thousand cubic feet of gas sold, using their factor of sales.

Q. Now, you have not had any experience in keeping the accounts of any gas company outside of the city of New York, have you, Mr. Carter?

A. Oh, I have had occasion to see the accounts of a great many gas companies.

Q. But the method by which you seek to determine the cost per thousand cubic feet of gas is the same with regard to all the companies, the constituent companies of the Consolidated—the Consolidated Gas Company and its constituent companies, is it not?

A. Yes, sir.

Q. You have no more information on the subject of the original companies than Yalden had, have you, nor do you pretend to have any more information than he had?

A. With respect to what?

Q. With respect to anything and everything appertaining to those constituent companies?

A. Well, the testimony itself furnishes evidence that apparently Mr. Yalden did not have.

Q. In other words all that you desire to appear as saying
6521 here is taking the evidence that was produced in 1886 before that commission and arriving at a different conclusion from even the minority or majority of the Committee?

A. I have tried to arrive at a correct conclusion without considering whether it conflicted with the conclusion of the majority or minority committee or not.

Q. I want to call your attention to this one thing, you have arrived at a different conclusion from even the majority of the committee, as I understand you find that because there were certain things left out of their consideration the amount of capitalization should be even larger than it was at that time.

Mr. MATHEWSON: No. In the first place whether his conclusions disagree with the majority opinion or not appears from his conclusions and the majority opinion which is in evidence. As a matter of fact his conclusions do not agree with the majority opinion at all.

Mr. BURR: My understanding of his testimony was that he said that there had been left out of the consideration of Yalden and therefore the consideration of the committee large items of real estate, for instance from the Knickerbocker.

Mr. MATHEWSON: If you read the report of the majority you will find the majority say in substantial words that it is not necessary to go into the original cost, because the Act of 1884 authorizes the consolidation of the companies upon the then value of their properties and that that is the value with which they have dealt.

6522 By Mr. BURR:

Q. Don't you find from a careful reading of that report as you have given it that Mr. Yalden included real estate of the Knickerbocker in the assets of the Municipal Company?

A. I am very sure that he did not, absolutely certain about it; there is no question about it, he so testified himself.

Q. Do you find that he intended from any statement that he made, that he intended to embrace it in the assets of the Municipal?

A. He distinctly stated that he did not intend to do it and had not done so.

Q. Did he state any reason why he left it out?

A. He did.

Q. What was the reason?

A. Because the books of the company were not in evidence and he was unable to get a book value, and therefore could not include the value of the property.

By Mr. MATHEWSON:

Q. You mean the books of the Knickerbocker?

A. I mean the books of the Knickerbocker.

By Mr. BURR:

Q. Where did you find they took their values from?

A. They testified from their knowledge, presumably from the books of the company as they had access to them and had seen them.

Q. The books of the company were not in evidence—you have never seen them from that day to this, have you?

A. No, sir.

Q. And the witnesses were not testifying from the books of the company because the books of the company were not produced according to Yalden and therefore Yalden could not arrive at the figures of that real estate?

6523 A. A. He did not arrive at it. He knew there was real estate and knew it was transferred to the Consolidated Company, but in his summary of the value of property, as shown by the books of the old company, he did not include any real estate of the Knickerbocker Company.

Q. You have no personal knowledge on the subject at all, have you, other than that derived from whatever knowledge you may have or information obtained from the perusal of this testimony in this exhibit, which was offered in evidence yesterday?

A. From the perusal of Yalden's testimony and of his own exhibit.

Q. Now, are not stock records usually kept in works, storerooms? Are they not more a protection against misappropriation of property than the system you have adopted and which the accountants have criticized in their report?

A. Stock records kept in works storerooms?

Q. Yes.

A. There are such records kept. The Board of Advisory Engineers, represented by Mr. Lacombe and Mr. Marks, reported on that, and in very complimentary terms.

Q. Do you mean to say there is a stock ledger kept?

A. No, not a stock ledger.

Q. You made a mistake I think the other day when you unintentionally said that Mr. Hall had visited your shops?

A. Mr. Hall did not visit our shops, no. If I said so I was mistaken. It was Mr. Lacombe and Mr. Marks.

Q. As I understand your testimony you claim that renewal and depreciation are practically the same thing, one and the same thing; isn't that your claim?

A. No.

Q. Wherein does the difference exist, according to your view?

A. I think that in the long run the probability is that all depreciation would ultimately materialize in the shape of renewals.

6524 Q. Now, say for example you bought a table for your office and at the close of the year it has depreciated by 20 per cent.; the next year you buy a desk. Are these not two separate and distinctive transactions, one a charge for depreciation on old furniture and one an investment of capital for new furniture?

A. That is the case. Ultimately we will buy a new table and our capital account will not bear the burden of two tables.

Q. Before you can say that your depreciation was expended in renewals it would be correct and proper to identify the depreciation with the items renewed, would it not?

A. Not necessarily.

Q. I understood you to say that Marwick, Mitchell & Company referred in their report to certain real estate amounting to $20,942,000?

A. No, sir.

Q. That was a mistake?

A. Will you kindly give me the page so I can see what was said in that connection.

Q. It was the day before yesterday. As a matter of fact it does not appear in their report.

Mr. **Mathewson**: What the $20,942,000 represents we all perfectly understand, and if any such expression was used it must have been a slip of the tongue. That is the amount at which the property was carried on the books of five of the six original constituent companies—all the property.

Q. And it is quite clear to you from the report of Marwick, Mitchell & Company that the reason why the Knickerbocker real estate was not included was for the same reason as found by Mr. Yalden, that they did not have the books?

A. Not exactly. They did not have the books of the Metropolitan Company and still they included that real estate in their statement.

6525 Q. Where did they get the Metropolitan real estate from?

A. They allege in their report to have taken it from Mr. Yalden's figures in document 47.

Q. The Knickerbocker real estate did not appear in Yalden's report, did it?

A. No, sir.

Q. So, therefore, they could not find that either in Yalden's report or on the books of the company, which were missing?

A. No, sir.

Q. Did Mr. Hall during the progress of his examination of your books call your attention to the manner in which your books are kept, so far as omitted footing and calculation not extended, and so forth, were concerned?

A. No, sir.

Q. In the manufacturing records?

A. No, sir.

Q. Have you any doubt that there were a great many calculations to be made and footings to be made, and calculations extended by the accountant?

A. Oh, yes, very grave doubts about it.

Mr. Burr: There is a good deal of Mr. Carter's testimony that I do not regard as worth while to cross-examine with regard to, I regard it simply as more of an argument than the presentation of facts, and I will reserve my presentation of counter-propositions upon the same facts for a brief, rather than to consume the time of the court in conducting a lengthy cross-examination, which may just as well be presented in the form of a brief.

Q. You have testified regarding the candle power which you found in the various companies. Can you state the candle power of the gas at the water gas stations of the Consolidated Company, 21st Street, 44th Street, 99th Street, exceeded the candle power at the New Amsterdam Company station during the year ending 6526 October 31st by .41 of a candle power, in view of the fact that the exhibits put in by the city giving the tests of Dr. Love at the City Testing Station show a higher candle power at those stations of the New Amsterdam than the Consolidated, and we would ask what was the candle power that you found at the New Amsterdam during the year in question?

A. I don't think I have the candle power of the New Amsterdam for that year. I think the figures were not for the nominal year ending October 31st, 1905, and the candle power was the station candle power and not the district candle power.

Q. Have you that data from which you compiled your conclusions, or made up your conclusions?

A. Not in detail, I have it by months if you desire.

Q. Have you got it?

A. No, I haven't got it. You would like the candle power of the New Amsterdam Company each month?

Q. Yes, the station candle power for each month.

Mr. Mathewson: From which you get your average?

The Witness: Yes, it is a very simple matter. I will produce that, with pleasure.

Q. Now, when the term long ton is used in reference to coke made at the Central Union how many pounds are to be understood?

A. The term long ton means 2,240 pounds.

Q. When the term ton is used with reference to coke made at the Central Union how many pounds are to be understood?

Mr. Mathewson: Do you mean when this witness uses it?

Mr. Burr: Yes.

6527 A. I don't think that I have had occasion to use it except in connection with Mr. Bemis' testimony, when I just simply used his statements without any reference to the number of pounds.

Q. What do you understand the ton referred to by Mr. Bemis to mean, so far as the number of pounds; how many pounds Mr. Bemis uses to his ton?

A. Yes. I understood him to testify he used 2,240 pounds.

Q. Do you understand that to be the same amount as used in the returns of the Central Union?

A. I understood you were asking about the Central Union.

Q. Yes.

A. In the returns of the Central Union?

Q. Yes.

A. Yes, I believe they use long tons, 2,240 pounds.

Q. And their returns to the Gas Commission?

A. Oh, to the Gas Commission? I don't know.

Q. How is it as to tons of coke sold?

A. My understanding is they are long tons of coke.

Mr. Mathewson: Are you referring to the returns to the Gas Commission or what? because we know nothing about their returns to the Gas Commission. They have not been presented by anybody that I know of. You are talking of a document we know nothing about and have no knowledge of as to the theory on which it is made up.

Mr. Burr: When I say return I mean, Mr. Mathewson, the evidence which you yourself referred to and brought into this case on behalf of the Central Union before the Gas Commission.

Mr. Mathewson: You mean the tesimony before the Gas Commission?

Mr. Burr: Yes.

6528 Q. Now, with that explanation can you state how many pounds are to be understood in the tons of coke?

A. I can only give my impression as gathered from Mr. Bemis' testimony that it was 2,240 pounds. I have not had an occasion in any calculation I have made or any testimony I have given to use the pounds or tons in any way, have not dealt wtih them at all, and consequently I have not had occasion to know what factor the Central Union Company uses.

Q. How many pounds per ton are to be understood in the Consolidated plant in the case of coke made?

A. 2,240.

Q. And that is true also in the case of coke sold by the Consolidated?

A. We do not sell any coke by the pound or any coke by the ton.

Q. It must be measured in some way?

A. It is measured in loads. We sell it by the load, an average of 1,500 pounds to the load and 2,000 pounds to the load of screenings, and we have no—we don't keep our records in pounds or tons, but in loads.

Q. You have stated Mr. Bemis should have given $3,676,000 instead of $4,676,000 when he was making comparisons between 1884 and 1895. That was a clerical error in favor of the company, was it not?

A. Quite likely it might have been in favor of the company, Mr. Burr. I would call attention to it nevertheless.

Q. You have stated Mr. Bemis deducted twice over from the assets of the company $1,985,874.37 received for land. Does this criticism apply to certain bulkheads condemned and not paid for, which he gave as $317,000 on page 364 of the testimony?

A. If they were included in the nineteen million dollars and have
not yet been deducted from our book value of our property,
6529 why, of course, to that extent there would have been no
duplication, but with respect to all the rest of the property
which has been dealt with in our accounts and the credit shown in our accounts, and the net increase in the value of our property thereby diminished to that extent Mr. Bemis' calculation operated to deduct that twice over.

Q. Does that apply to the $875,916.37 of the land that was condemned but not yet paid for by the city?

A. Not to any land that has not been paid for, but to such land, or such property, as the property as sold or the proceeds of that have been credited to the company's property accounts.

Q. They have not been paid for, have they?

A. Which?

Q. The bulkheads?

A. The 18th Street property has not been paid for.

Q. Can you state how much was due from consumers November 11, 1884, as compared with the amount due from consumers October 31, or December 31, 1905?

A. I cannot, Mr. Burr, at the moment.

Q. You can get that for me very easily?

Mr. MATHEWSON: He can if it is material. I do not think it is.

Q. Mr. Addicks has testified as to increase in wages lately. Will you tell us what are the wages per day of stokers and common workers of the most numerous class of workers in your coal and water gas stations, and will you state what rate and hours per day you use of wages for the three or four most numerous classes of labor in coal and water gas manufacture, and please state whether these are the wages since the recent increase?

6530 Mr. MATHEWSON: I suggest this is not cross-examination of this witness; and, secondly, in checking up the exhibits in evidence the accountants went over or had full opportunity to go over the wage payments and all that.

Mr. BURR: He has arrived, as I understood him yesterday or the day before, at certain costs of labor, and instead of asking that long question, probably I might have obviated the matter by asking him to please give the details by which he arrived at the price of labor.

Mr. MATHEWSON: You referred a moment ago to Mr. Addick's testimony.

Mr. BURR: Mr. Addicks testified to the increase in wages, but Mr. Carter has, I understood, testified to a certain labor cost.

The MASTER: You may cross-examine him now as to what he did say about labor cost.

Mr. KIRBY: It is set down in comparison with Mr. Edgerton's figures, giving the amount of labor in that manufacture, of the cost as a total, and I think Mr. Burr is inquiring as to the details.

Mr. BURR: I would like to know the details.

Q. On page 6379, Mr. Carter, you gave labor cost, making and purifying 78.95 cents per ton, making 7.42 as against one thousand cubic feet of gas. What was the basis of that figure?

A. The actual cost of labor during the nominal year ending October 31, 1905, is shown by all our exhibits in the testimony.

Q. Did that take into consideration the increase in wages?

A. No, sir, it was the wages as they were paid during the nominal year ending October 31, 1905.

6531 By Mr. MATHEWSON:

Q. Nominal or calendar year 1905?

A. That was the nominal year.

By Mr. BURR:

Q. Can you give me the items of that labor, what rate?

A. No, sir, I cannot.

Q. Well, you must have had some paper from which you made up this conclusion or deduction regarding that item?

A. The statement is in the testimony wherein these items of labor are enumerated and have been checked by the accountants and found correct.

Q. I am calling special attention to this item of labor, as appears on page 6379, and which you have summarized as representing a cost of 78.95 cents per ton, making the cost against a thousand cubic feet of gas of 7.42. I ask you if you would be good enough to let me have the details of that calculation?

A. The details of the calculation are the cost per thousand, as shown there, converted into a cost per ton by using the factor of the cubic feet of gas produced per ton of coal. That is all the calculation there is to it. It is our own actual cost of labor in coal gas manufactured reduced to a cost per ton which we have never showed in practice, as it is of no use to us, but shown there for the purpose of making a statement conforming to Mr. Edgerton's.

By the MASTER:

Q. Taken from Exhibit 94?

A. No, sir, because that is all our labor, and I am dealing with comparisons with 14th Street only. The 14th Street cost is shown in two exhibits for the calendar year—in Exhibit ZZ and for the nominal year. In that case I do not know whether it is in
6532 this testimony or not.

Mr. MATHEWSON: I think so.

Q. In arriving at that cost, what I want to get at is, what rate of wages and hours per day were used by you?

A. No rate of wages, no hours per day, but the actual cost per thousand cubic feet of labor at the 14th Street station, and of course, the rate or whatever was paid at that station during that time.

Q. That was the sole information you had in making up your conclusion as to cost per ton?

A. Exactly.

Q. On page 6374 you state that the cost of the Standard was 30 cents, or .62 lower than the Consolidated. This means that the cost of the Consolidated was 30.62 cents, does it not?

A. The Consolidated was 30.62, yes, sir.

Q. Will you point out any testimony or give now the data on which you base 30.62 cents for the Consolidated water gas, and 30 cents for the Standard?

A. The Consolidated I gave in great detail in my testimony, giving each station; the quantity produced and the cost in dollars, and the total, and the rate per thousand and showed what items had to be deducted in arriving at a figure comparable with the New Amsterdam Company, the figure deducted being a certain item of depreciation, and an item of experiments, neither of which items of expense appeared in the cost of the New Amsterdam Company. The result was 30.62 and it is all plainly spread out in my testimony.

Q. You observe, do you not, at page 26 of the Mutual exhibit that you have offered here that oil costs the Mutual 4.495
6533 cents per gallon, or 21.26 cents per thousand feet——

Mr. MATHEWSON: I don't know what you are referring to as having been offered in evidence.

Mr. BURR: Didn't you refer to the return of the Mutual? You have referred to the return of the Mutual in comparison with the Consolidated, have you not?

Mr. **Mathewson**: That is the cost at the station for the Mutual as compared with the cost at the station of the Consolidated.

Q. Now, I call Mr. Carter's attention to the testimony in that case, Exhibit 31, in the case of the Mutual, before the Gas Commission, and ask—you observe, do you not, on page 26 of the Mutual exhibit that oil costs the Mutual 4.495 cents per gallon, or 21.26 per thousand feet, while the cost for October 31, 1905, at 21st Street was 4.08 cents per gallon, or 18.84 cents per thousand at 44th Street, or 19.18 per thousand, and at 99th Street was 4.05 per gallon or 17.80 per thousand; in other words, the difference in the cost of oil extends over two cents per thousand feet of the excess cost of the Mutual.

Mr. **Mathewson**: If you want the witness to answer these questions, make those comparisons, I must ask that the record be produced so that he can make them. I cannot allow him to rely on his memory unless he is perfectly sure as to all these decimals.

Mr. **Kirby**: He had a very good memory on his direct examination.

Mr. **Mathewson**: Oh, no, he had the data. He may have the data here by which he can make the comparison. If so I have no objection.

6534 A. It still leaves the Mutual gas costing more than the Consolidated gas even taking into account a variation of the cost of oil.

By Mr. **Mathewson**:

Q. Even assuming the variation is as counsel just stated?

A. Yes, it still leaves the Mutual cost higher than the Consolidated cost.

Q. Are you able to say from memory whether the assumed percentage is correct or not?

A. In this particular case?

Q. Yes.

A. No, sir, I am not.

By Mr. **Burr**:

Q. Well, you have got the exhibit before you, haven't you?

Mr. **Mathewson**: It is not the printed Mutual record that is before the witness, and he has not the other papers before him in any shape.

Q. As I understand, there was an exhibit offered before the Gas Commission, No. 144, giving the amount of gas manufactured by the Consolidated during the month, beginning the 1st of November, 1904, and ending the 31st of October, 1905. Do you recall such an exhibit? It has also been introduced in evidence in this case.

A. I think there possibly may have been such an exhibit. I would like to see it before testifying about it.

Mr. **Burr**: I have just sent for it. We do not appear to have it here.

Mr. **Mathewson**: Well, where is it in this case as an exhibit? I don't know anything about it because I did not even represent the Mutual before the Gas Commission.

6535 Mr. Burr: I have no reference to the Mutual. I am speaking of the exhibit introduced by the Consolidated before the Gas Commission, which record has also been introduced in evidence in this case here.

Mr. Mathewson: Oh, that is another proposition.

Q. I show you a copy of it, Mr. Carter, and ask you to say whether that to the best of your knowledge, information and belief correctly shows the gas sales for those months that I had referred to between the 1st of November, 1904, and the 31st of October, 1905?

A. The gas sales by the Consolidated Company during the nominal year ending October 31st, 1905, are given in Exhibit 93 in this case, and I think as that has all been checked and confirmed in every way perhaps it would be better detail to introduce now, or for me to testify from than anything else.

Q. The amount as given on this exhibit, a total of 13,308,363,773?

A. Those figures sound very familiar to me. I should say they were the sales for the nominal year ending October 31st, 1905.

Q. You referred to Mr. Marks' statement as you claim as having been made by him that the Consolidated was going to operate in Queens County or in Kings County. Don't you find in that connection that he referred to the operation of the Astoria plant in Queens County or in Brooklyn, the undisputed testimony being that the Consolidated Company owns all the stock of the Astoria?

A. I don't recall Mr. Marks' testimony very well. If he made any reference, however, to any output of gas in Queens Borough or Kings County he was far away from the fact, Mr. Burr. If you are simply referring to the production of gas in the Borough
6536 of Queens for distribution in New York, why I do not think there is any criticism to be made of his testimony.

Q. But, Mr. Carter, you do not wish me to understand you as claiming that the Astoria Company cannot operate in Queens County and sell gas in Queens County?

Mr. Mathewson: Have you introduced any franchise or anything else here, Mr. Burr, showing that the Astoria Company has franchises to operate in the Borough of Brooklyn and Queens? If so, they have escaped my notice. The Astoria is a manufacturing company, not a distributing company.

Mr. Burr: You are furnishing gas to the New Amsterdam and East River companies.

Mr. Mathewson: They are manufacturing gas and not furnishing it to consumers. They are not furnishing it to the New Amsterdam either. They are sending it to the Consolidated in New York through the tunnel, so far as they have begun to manufacture, as stated.

Mr. Burr: I do not think it is claimed seriously that the Astoria Light, Heat & Power Company cannot make and distribute gas in Queens County.

Mr. Mathewson: It is seriously contended, if you want the statement, that so far as I know I don't know that they have any franchise to distribute gas in the Boroughs of Queens or Brooklyn.

The MASTER: Do not argue it further. The witness has answered it responsively, as far as I understood his answer.

6537 Q. The Astoria is delivering gas to the company, the Astoria Company, is it not?

A. Yes, sir.

Q. Mr. Addicks testified the other day you had not at the time he was testifying agreed upon the price which you were to pay to the Astoria Company for the gas being so delivered. Have you yet agreed upon the price?

A. No, sir.

Q. You criticised the amount of the land and structural cost obtained by Mr. Marks in his statement of valuation which he derived early in this inquiry from your incomplete data, amounting to $3,068,140.51. Will you be good enough to refer to Exhibit 87, page 1562, and do you not find the original cost of land to the six constituent companies or the consolidated companies to be $3,377,971.10 up to 1884?

A. No, sir, I don't find anything of the kind. I find a statement of the value at which a portion of the real estate, a large portion of the real estate was transferred to the company in 1884, and was carried on the books of the constituent companies, excepting the books of the Knickerbocker Company.

Q. Of course you know nothing of your own knowledge with respect to mains, Mr. Carter, and what information you have on that score I understand you take from Mr. Simpson, or from the men who have practical knowledge with regard to mains, whether they are diseased with pits, or whether they are disused, or whether they are abandoned?

A. Nothing of that character. The practical character, Mr. Burr, would come from Mr. Simpson to a very large degree, but with respect to the cost of labor and material employed in extending I should have probably more information than the department itself would have.

6538 Q. Well, Marwick, Mitchell & Company give the number of miles of mains according to the books of the company to be something like 804,594 on December 31, 1905; is that correct, according to your books?

A. That is correct, yes, sir. You are comparing, I presume, the other figures given as of October 31, 1905?

Q. Does that include everything but abandoned mains?

A. That includes everything but abandoned mains, yes, sir.

Mr. BURR: That is all I want to ask, Mr. Carter.

Mr. KIRBY: I have a few questions which I intended to ask yesterday, which I omitted yesterday by turning over two of my pages of notes instead of one. The first is on page 6375 and 6376 where Mr. Carter states in answer to a question:

"A. So far as experience goes, the calculations of that nature at Astoria in connection with the construction of the plant at the present time amount to 11.662 per cent. of the amount expended," referring to engineering charges.

The WITNESS: It should not be "calculations," it should be expenditures, on page 6376.

Q. Will you kindly tell me what those expenditures were? And when made?

A. They are in the nature of salaries of engineers, draughtsmen, inspectors and engineering department generally, the cost of borings and soundings, the cost of temporary structures, the taxes and insurance, the cost of repairing temporary structures, and expense of that nature.

6539 Q. When you say engineers, to whom do you refer—engineers directly employed by the company?

A. Engineers directly or indirectly employed by the company.

Q. Do those engineers include any of the employees of the company who have or are providing other services than those having to do with Astoria?

Mr. MATHEWSON: Which company?

Mr. KIRBY: The Consolidated Company.

A. Well, if there are any individuals, any engineers whose services are divided between both companies, their time or their salaries are divided and so much of it as applies to the Astoria construction operation is charged to the Astoria Company and appears as one of the items of the expense of this character.

Q. Will you tell me when these expenditures commence?

A. I should say they commence as far back as 1900, Mr. Kirby.

Q. And your plans have now all been made and specifications drawn up, and all that remains to be seen in regard to Astoria is the completion of the units as laid out?

A. That is my understanding at the present time.

Q. So this 11.62 per cent. which has been paid out in the manner you have indicated would probably care for all such charges as might be attributable to Astoria, unless there should be some change of plan.

A. I would not like to commit myself to that proposition because the expenses of that character are still going on in connection with the completion of the plant there, and would be probably taken into account when the plant is finally completed as to the first unit.

6540 Q. In other words, there will be inspection of buildings and things of that kind?

A. Yes, sir. I don't think it will be very considerable in addition to this amount, I would not like to say how much or how little.

Q. Did the Consolidated Gas Company lay down the plans for the Astoria Company itself, or the Astoria company?

A. The Astoria Company.

Q. So when we speak of this amount as a charge for engineering I presume it is immaterial whether charged up against Astoria, or the Consolidated?

A. No, this is all charged up against the Astoria Company, although if the disbursements may have possibly been made by the

Consolidated Company it would be charged against the Astoria Company, but would not appear in any permanent record and expenses in the Consolidated station.

Q. That is the way I understood it, and the reason for my question. Now, the entire expenditure at Astoria is contemplated to be something about thirteen million dollars, is it not?

A. Yes, sir. I think when the first unit is completed it will approximate that sum, that is my recollection of the testimony as given by Mr. Bradley.

Q. So that this percentage would amount to over one and one-half million dollars, would it not, as applied to the estimated cost of the plant?

A. Not necessarily, because the entire cost of the plant would include the cost of the land, and the grading of it, which is not taken into account here.

By Mr. MATHEWSON:

Q. The tunnel?

A. The tunnel.

6541 By Mr. KIRBY:

Q. Between the grading of the land and the tunnel, have you not employed engineering skill and advice?

A. The tunnel remains to be constructed.

Q. You have made borings?

A. And that is included in that percentage figure which you have given?

A. Yes, although as an item of expense in the tunnel it is probable, so far as that preliminary work is concerned, completed; I presume so.

Q. So with your gradings and matters of that kind, while it has to do with the land as land nevertheless it is part of the system of the installation of the plant, and any engineering cost in plans, in draughting, which had to be done, I presume is included in this percentage?

A. No, this is the cost of engineering in the course of construction of the plant.

Q. And has nothing to do with the grading or the laying out?

A. No, sir, we do not consider that the labor of filling in real estate requires a great deal of engineering or any engineering expenses.

Q. Don't you make plans to get your grades and place the buildings properly?

A. Yes, I daresay there are several items of expense of that kind.

Q. And those would be included?

A. Yes.

Q. Now, I refer you to page 6411 in the next day's testimony, where you said in answer to a question by Mr. Mathewson, the answer being:

"A. The amount stated in the special franchise report to the State Board of Tax Commissioners to have been the value for purposes of taxation for tangible property in the street was originally furnished to me by Mr. Simpson——

6542 Q. Well, the figures are the ones which were furnished by Mr. Simpson on his basis of material and labor in soft earth? A. That is the case."

I presume you have no more information on this point than Mr. Simpson, have you?

A. Oh, no, sir. Mr. Simpson has testified at considerable length in that connection, and I could not add anything to the testimony that he has given.

Q. Now, look at page 6495, where you speak of Mr. McMillan's companies, where you answered in regard to a question by some one—I don't know whom—

"Q. I say, you have made some investigations to support that opinion? A. Why, yes, sir. It is supported by the testimony I have just given with respect to the McMillan companies where gas is selling at eighty-four cents and they do not begin to burn as much as they do in New York City."

I ask if you know how much gas was burned by the consumers of the McMillan companies before and after the reduction in price made by those companies?

A. No, I only know what it was after it was made.

Q. I refer you to page 6421, with reference to the Mutual Company, where you state: "The actual investment of the Mutual Company, as shown by their statement, referred to by Yalden, was $8,284,515," and so on, and I ask if you know the amount of share stock issued by the Mutual Company at the time of consolidation of the companies now forming the Consolidated?

Mr. Mathewson: Objected to as immaterial and having nothing to do with the proposition.

6543 Mr. Kirby: It has to do with the statement referred to by Yalden set down in the report.

Mr. Mathewson: No.

Mr. Kirby: I do not want to go all through Mr. Yalden's testimony and show this thing in that way. If it is objected to and it is ruled out I will put it in and we can let it go that way, because it is point.

Objection sustained; exception.

A. The share capital outstanding at that time was three and one-half million dollars.

Q. By that you mean the par value of the stock?

A. Yes, sir.

Q. Do you know how much was paid in on that stock?

A. In arriving at my figure I deducted $1,000,000 representing the discount at which it was alleged that some of that stock was issued. I assume that half of the par value of $5,000,000 of the stock was realized.

Q. Had been paid in in cash?

A. Had been paid in in cash; and my calculation or my result of $6,275,904.96, eliminates $1,000,000 from their then share capital.

Mr. Kirby: I ask now that that question be allowed to stand. I think the answer of the witness has shown very clearly the materiality of it.

The Master: I can easily reverse myself, Mr. Kirby, either now or at any time before I dispose of the case, and I shall not hesitate to do so if it seems to me to be necessary.

Q. Now, I refer you to page 6368, commencing at the bottom of 6367 and carrying over to page 6368, where you make a certain assumption as to Mr. Edgerton's figures, that 33% of gas oil that was used at the 42nd Street station in enriching the coal gas made there? 6544

A. Yes, sir.

Q. Is there any reference in any place as to the coal tar produced at 42nd Street upon which Mr. Edgerton, as you claim, based a loss of 33% from the gas oil used?

A. The testimony was to the effect that the Consolidated Company by its oil bench process was producing 33% of oil tar, and my testimony was to the effect that there was no foundation whatever for that statement.

Q. Then your statement here on page 6338 is based upon your assumption that he uses the coal tar produced as a basis of his calculation?

A. I assumed that because it was the only statement, the only records we have where 33% could be obtained by using any factors whatever in evidence in the report.

Q. You made a calculation coming to practically the same figures that he used, you assumed that was what he used?

A. Yes, sir; precisely so.

By Mr. Burr:

Q. Do you not understand that the stated object of the consolidation of the constituent companies into the Consolidated Gas Company in 1884 was to reduce the price of gas to the consumer by curtailment of expenses, centralization of their works and manufacturing at a minimum of expense.

Mr. Mathewson: I don't know as it makes much difference. I shall not object if counsel thinks it is important.

Mr. Burr: I would like to have Mr. Carpenter's views on that subject.

6545 The Master: What his understanding is as to some statements made some twenty odd years ago I do not believe to be material.

Q. Wasn't that the object of the consolidation? You were there at the time?

The Master: Stated object?

Q. Was it not, Mr. Carter?

A. I believe it was stated to be the object by some of the witnesses before the Senate Committee, Mr. Burr, and the fact that the price of gas was reduced at that time from $2.25 to $1.75 a thousand would rather tend to support that statement.

Q. In other words——

Mr. KIRBY: The Legislature had nothing to do with that, I suppose.

The WITNESS: No, sir, it was a voluntary action on the part of the Consolidated Company.

Q. In other words you do not understand for a moment that the object of consolidation was to increase the price of gas to the consumer? It was to reduce it, was it not?

Objected to.

The MASTER: I do not see the materiality of that, Mr. Burr.

Question withdrawn.

Redirect-examination by Mr. MATHEWSON:

Q. This reduction from $2.25 to $1.75 in the price of gas was practically the first act of the Consolidated Company after it came into existence, was it not?

A. That was the case, yes, sir.

Q. Referring to this 33⅓%—should it not be, instead of cents, at page 3368?

A. Yes, it should be 33⅓%.

6546 Q. No matter what figures were used was any such result obtained at 42nd Street as Mr. Edgerton testified?

A. No, nor anywhere else.

Q. In reference to Mr. Edgerton's testimony regrading 21st Street, I read as follows from page 5361 of his testimony:

"I say in those places where there was nothing on the foundation or requiring a foundation I did not calculate it, and there was no definite description by Mr. Mayer. It just said foundations for machinery."

At page 5362 (Mr. Edgerton's testimony) "There were quite a good many in 21st Street, right straight through each range of buildings, foundation for machinery and no machinery on the foundation."

Now I certainly have quoted this accurately, and I ask you whether as matter of fact there were foundations for machinery there and no machinery on the foundations?

A. Not one.

Q. You have been questioned in respect to the depreciation charges of the company, and as to whether amounts were spent or not. Now where an item appears as a repair, is that a charge to operating expense?

A. Yes, sir.

Q. Where a piece of main or other apparatus is abandoned and taken out of your property account, does that item whether marked depreciation or otherwise also become a charge against operating expenses?

A. It does, yes, sir.

Q. Is there the slightest difference as to the result whether called a repair or depreciation or renewal?

A. No difference whatever.

Q. As a matter of fact, according to the English practice, repairs and renewals of that character or depreciation which needs renewal are simply charged to a general account called wear and tear, aren't they?

A. That is the case, yes, sir.

6547 Q. Now you were asked what would be the result if the proposed renewal were not made. Assume that a main was abandoned today, that would be charged against operating expense as a depreciation, would it?

A. Yes, sir.

Q. Would it make any difference as to its being charged against operating expense as depreciation, whether the plants stopped tomorrow or continued for a dozen years?

A. Not a particle.

Q. In other words the depreciation charge would be simply the ordinary charge which a company has to put into its operating expense to keep its plant up to par and unimpaired?

A. That is the case, yes, sir.

Mr. Burr: I do not like to make objections, but I think it is only fair to say that Mr. Mathewson should let the witness testify and not put all these things in his mouth.

The Master: Mr. Mathewson, I think that is a fair criticism. If you had an unintelligent witness you might perhaps be permitted to lead him to a certain extent.

Q. On page 1466 of the exhibits, the amount of depreciation charged by reason of loss in property account for the calendar year 1905 appears in total to be $282,219.67, if I read correctly, is that right?

A. That is the amount, yes, sir.

Q. Now, during that year while plant was charged down only $3,424 by reason of abandoned or lost apparatus, was a greater or less sum than that spent in additional plant which made up that amount of depreciation?

A. Why, the amount was expended during that period very largely in excess of that.

6548 Q. And if you take the entire plant account for the year 1905 by reason of the charging out of these items of depreciation representing property lost or abandoned, how much would the plant account be reduced in total if there had been no new construction?

A. If there had been no new construction whatever the property account would have been diminished by the total amount of depreciation $282,219.67.

Q. Now, as a matter of fact did the total plant account of the company during that period show such a loss?

A. It showed an increase, Mr. Mathewson, during that period.

Q. Would that indicate or would it not indicate that the plant account had been replaced, taken in the whole by more than the amount of depreciation charged off?

A. It would so indicate, yes, sir.

Q. If you came to any particular item such as plant or mains or services or meters or meter cocks, for instance, is it possible by a single year to get an average of expenditures of depreciation and replacement?

A. No, not necessarily.

Q. You spoke of something being renewals. If a piece of apparatus is charged off or lost that appears in what account primarily?

A. Depreciation account, the piece charged off.

Q. We will assume that it is main worth $1,000. New main is laid in that year or during the period which you assumed, the amount we will assume being $3,000. Is that charged simply to construction?

A. The new main?

Q. Yes, sir.

A. As construction, yes.

Q. As a matter of fact, how much of that $3,000 expenditure is required to offset the main lost and abandoned, the original main lost and abandoned having been stated to be $1,000.

A. $2,000.

6549 Q. No, you do not understand.

A. The entire $3,000 has got to be expended unquestionably, if I understand your question.

Q. To replace that main I assume to be worth $1,000?

A. Yes; $1,000 is required to offset the loss in the main that was abandoned.

Q. And how would your capital account then stand at the end of the period as compared with the beginning?

A. Augmented $2,000.

Q. So as a matter of fact what you call renewal, is it anything else than the amount required to pay for depreciation in the particular line?

A. Nothing else.

Q. When you said that 10.89 had been spent on the average during the 20-year period from 1884 or 1885 in repairs and renewals, did that take into account any reserve or contingent or other fund which might be required on account of removal to Astoria or anything else than merely to keep the plant in fine physical condition?

A. The expenditures were simply for the purpose of keeping the plant in good condition and repair, Mr. Mathewson, and included nothing in the shape of reserve for any future contingencies.

Q. Have you Exhibit 79 there?

A. No, sir.

Q. You stated to Mr. Kirby that the amount of $14,464,548.62 came out of earnings, did you?

A. No, sir.

Q. How much of it does come out of earnings?

A. $4,770,982.72 comes out of earnings.

Mr. Kirby: He never stated to me that the fourteen million came out of earnings.

Mr. Mathewson: I understood him to do so.

Q. Then the amount of that which comes out of earnings is simply the amount which equals the depreciation which has been
6550 charged off by lost apparatus?

A. That is the case, yes, sir.

Q. As to these repairs $12,331,666.68, from what source do they come?

A. Out of earnings.

Q. And you claim that the net increase represents, does it not, the amount of construction in these various classes of apparatus, less the amount of that construction which offsets depreciation by loss of apparatus and plant?

A. That is the case, yes, sir, and represents an investment of capital.

Q. Mr. Kirby referred to the replacement of a six-inch main by a nine-inch main and said that if the nine-inch main had been laid originally it would have been charged to capital. Isn't it charged to capital anyhow?

A. It is.

Q. If you replace a six-inch main by a nine-inch main what becomes of the value of the six-inch main?

A. Charged off to depreciation and comes out of the capital account and the nine-inch main is capitalized at its cost.

Q. And if you had a new given apparatus and you required more capacity, to use an expression of Mr. Kirby's, which would you do, throw that apparatus away or get additional apparatus?

A. We would get additional apparatus.

Q. There would be no replacement then?

A. There would be none.

Q. What would be the effect on the consumer of gas had this company proceeded in 1823 on the theory that they must put in mains enough and mains large enough in the streets to furnish the requirements in 1923.

The Master: Isn't that a matter of argument?

Mr. Mathewson: Well, almost. It is rather provoked by
6551 the suggestion that we ought to have built our plant originally on that theory, or had such foresight.

Q. As to the putting on of a new roof, does it make any difference as to its being charged into operating expense? Would you call it a repair or a renewal?

A. It would make no difference in either case. The earnings would have to bear the expense of replacing the old roof with a new one.

Q. Mr. Kirby referred to the time when a main would be inadequate. We will assume a six-inch main on one side of the street and we will assume that it would be renewed by an eight-inch main; in such case would that be the ordinary course or would you lay another six-inch main?

A. The practice would be, I think, to lay another six-inch main on the other side of the street and so divide the supply in that street between two mains and be more conveniently situated as to the curb line, etc.

Q. How as to services?

A. And as to the length of services and the convenience in reaching them.

Q. Would you think it would be wise policy to abandon a six-inch main that was doing good service under those circumstances?

A. Not good policy, Mr. Mathewson.

—. Mr. Kirby referred to the coke sold or transferred by coal gas plants to water gas plants. Now, if the coal gas plant stands the expense of transferring the coke, is that cost of cartage taken into account in the figure at which it is transferred?

A. Yes, sir.

Q. If on the other hand the water gas station sends for it would that mean a lower price at the yard of the coal gas station?

A. It would.

6552 Q. Would it make the slightest difference to either station as to which course was pursued either in expense or final result?

A. No difference in the final result.

Q. You observed Mr. Kirby called attention to *Field's Analysis,* where he spoke of the sale by the London companies of ammoniacal liquor and sulphate. Now sulphate is not produced, is it, by the gas companies without any process of manufacture?

A. No, it is not. It is a product of the ammoniacal liquor.

Q. What would that indicate?

A. That would indicate an investment by the company in a suitable working plant and such working force as would be necessary to operate the plant, handle the production, and to sell it, market it.

Q. Did you find anything in *Field's Analysis* that indicated to you that the return on the capital invested in the plant to produce that sulphate had been deducted in getting the forty-eight cents to which Mr. Kirby referred?

A. No, sir, no evidence of that kind.

Q. That would not then represent a net figure, would it, if that were the case?

A. No, not even under those conditions, assuming it was net with respect to the cost of converting it into sulphate.

Q. You stated yesterday that you did not remember the cost to the Consolidated Company of treatment of coal tar and producing the pitch and dead oil as compared with what it might cost the Barrett Company to do that work. Did you in your considerations to which you referred, make estimates at the time as to what it would cost the Consolidated Company itself and how the company would come out in net results?

A. Yes, sir.

Q. As compared with selling it to the Barrett Company?

A. Yes, sir. I did make such calculations and estimate.

6553 Q. What was your conclusion in that regard?

A. My conclusion was if the Barrett Company would be satisfied to retire from the field and leave us the market we might do very well, but with the prospect of competition with them, I did not see my way clear to recommend the necessary investment for taking up the development of that product.

Q. Now, reference was made yesterday to the use of eighteen pounds of coke, per thousand of gas made at the 42nd Street station. Is there any such result as that reached at the 42nd Street station?

A. No, sir. The station records indicate that something like, well between 19 and 20 pounds of coke were used under the retorts at that station per thousand cubic feet of gas made, but as the gas made includes all the oil gas that was made at that station, and as the manufacture of the oil gas produced a great deal of drip oil, which was used under the coal gas benches, the number of pounds of coke used under coal gas retorts at that station calculated in that way per thousand cubic feet of gas made is of no value for any purpose of comparison.

Q. You were also asked in reference to the 111th Street station and said that certain apparatus would have to be added in order to operate the station. Is that the station of which the city took a part?

A. Yes, sir, they condemned it. They took a part of it under condemnation proceedings.

Q. And the apparatus which you state was good—the company's capital is invested in it, is it?

A. Yes, sir.

Mr. Burr: Hasn't that already been gone over, the 18th Street station?

6554 Mr. Mathewson: No, not that particular point. This is 111th Street.

Mr. Burr: Well, 111th Street also.

Q. Is there any reason that you know why that plant has not been completed in full except the action of the city in condemning and taking a portion of the property?

A. I know of no other reason.

Q. You stated yesterday you had a knowledge of the financial department of the company. What did you intend to include in that?

A. Well, I said that yesterday in answer to Mr. Burr's question whether I was not more particularly identified with that department of the business. Perhaps in doing so I may have conveyed the impression that I was not very particularly concerned in the entire proposition of the distribution of gas. Such is the case, however.

Mr. Burr: I think his testimony shows that, Mr. Master. It speaks for itself. I don't think we need to pursue that line of inquiry further.

Mr. Mathewson: I am quite able to determine how far I will pursue the line of inquiry, but I did not intend to pursue it any further.

Q. You were asked whether the renewals and repairs in 1905 as expended were ample. What do I understand you to say on that subject?

A. The expenditures took care of such renewals and depreciation as developed during the year or became apparent, but the charge had nothing to do with the possibilities of future requirements of that particular character or in the nature of contingents or unforeseen expenses.

6555 Q. Do they represent what you consider an average, a fair average, amount?

A. On the contrary, the amount expended for renewals of plant in the year 1905——

Q. I am speaking in total?

A. Oh, no; they do not represent an average by any means, and it could not in our judgment be used in connection with any estimate in connection with the cost of gas for that reason.

Q. Do you concur with the statement of witnesses for the defendants, Mr. Marks and Mr. Hall, that an average period must be taken?

A. That is our contention.

Q. You stated yesterday, referring to the dividends from other expenses, if I understand you, that they were included in miscellaneous income?

A. If I so testified I was in error. They are not included in miscellaneous income, but are included in a statement of income from securities owned, not the statement of miscellaneous income.

Q. And the amount of the miscellaneous income it has been testified to in this case, as I understand, was reduced to cents per thousand.

A. Yes, sir.

Q. And offset ultimately as a receipt against the operating cost of gas, by different witnesses?

A. That was the case, yes, sir.

Q. That includes all the miscellaneous income, doesn't it?

A. Yes, sir.

Q. Where work is done by the Consolidated Company for another company under an arrangement, like laying of mains, for instance, does that go into the operating expenses of the Consolidated Gas Company at all?

A. No, sir. All of the expense incurred in that sort of work is charged, of course, to the other company.

6556 Q. And as to gas apparatus, gas burners or gas stoves, does the gas company in the interest of its business repair that apparatus where it is necessary for the consumer in order to add to the consumption of gas regardless of whether the company sold the apparatus or not?

A. Why, yes, decidedly, as a matter of policy.

Q. Suppose your gas stove business was entirely eliminated from the company's business, would that have any effect on the repairs to gas stoves as an operating expense?

A. It never could be eliminated. We may not rent stoves, or the consumers may elect to purchase stoves instead of renting them, but in either event we would consider it good policy to look after the stoves and keep them in repair as being one of the most important factors in the development of the gas business in the future.

Q. Now, at page 1463 of the exhibits I find that the item of legal expenses paid in 1905 for some services rendered in 1904 was excluded by the accountant. These bills for legal expenses did not appear until 1905, did they?

A. No, they did not.

Q. Is there any possible way in which you could have charged them into the statement for 1904?

A. No, no possible way, nor is there any possible way in which we might in 1906 have charged similar disbursements applying to 1905 into the year 1905.

Q. Now, in reference to the year 1905, if you excluded these on the theory of the accountants, would it not be necessary to include the amount of legal services rendered in 1905 for which no disbursements were made?

A. I should say most decidedly.

Q. Did you pay your legal bills incident to the gas investigation which took place in 1905 during the year 1905?

A. No, sir.

6557 Q. Is it possible in the conduct of your business to render your operating expense statement in any other way than it is?

A. No, impossible to do it by any other process.

Q. As a matter of fact have you any reason to suppose that legal expenses rendered in the year 1905, not charged until 1906, would be any less in amount than those rendered in 1904 which were charged in 1905.

Objected to as incompetent, immaterial and irrelevant.
Objection sustained.

Q. You were asked as to your knowledge in reference to the accounts of the original companies and the cost of the property of the original companies coming solely from your examination of the testimony before the committee of 1886. You knew something about the Knickerbocker plant yourself, didn't you, after 1884?

A. Yes, sir.

Q. Is it or is it not a fact that the Knickerbocker plant was so large, so extensive after 1884 that the Harlem plant was shut down and the entire upper part of the city furnished from the Knickerbocker plant for some time?

A. That was the case.

Q. And that your Knickerbocker plant appeared in the $20,942,000 to the extent of only $810,000?

A. That is all.

Q. Largely franchises?

A. The testimony showed it cost over $3,200,000.

By Mr. Burr:

Q. Have you learned that since 1884 or did you know that in 1884?

6558 Mr. Mathewson: He knew that immediately following 1884, that that course was pursued.

Q. You were not called as a witness before the investigating committee of 1886, were you?

A. No, sir.

Q. You had that knowledge at that time?

A. Yes, sir.

By Mr. **Mathewson**:

Q. Referring to the comparison between real estate to which counsel has called your attention, and made by Marwick, Mitchell & Co., the estimated value of the real estate in 1884 as they gave it was something over $10,000,000, wasn't it?

A. $10,322,000.

Q. But that was the real estate which was appraised at that time and was the real estate of all those companies, was it not?

A. That is the case, yes, sir.

Q. Whereas the real estate which they put on the other side of the account showing original cost covered the real estate of only five companies, did it not?

A. That is the case.

Q. The Knickerbocker real estate was not in there at all?

A. Was not in there at all.

Mr. **Burr**: Haven't we gone over that on direct examination?

Mr. **Mathewson**: No, we did not.

Q. So that did the difference between $10,322,000, the valuation of 1884 as stated by Marwick, Mitchell & Company, and the figure you gave as the cost of the real estate, actually show the depreciation of the real estate whose cost they showed?

A. No, it did not show it.

6559 Q. It did purport to do so?

A. It purported to do so, yes, sir.

Q. You were asked as to whether or not an arrangement had been made as to the price to be paid to the Astoria Company for gas. Do you know what method of bookkeeping has been determined upon yet in treating that case?

A. No, there has been no method yet determined. It is merely a matter of bookkeeping.

Q. Is it anything else?

A. Nothing else.

Q. Do you know whether it has been determined merely to charge the gas on the Astoria books at the bare cost and have the amount added by the Consolidated to represent the return on the investment at Astoria, or whether it is intended to charge to the cost of gas there the amount to make a return on that investment before the Consolidated receives the gas?

A. Those matters have not been determined yet. They are merely matters of bookkeeping, but they have not been decided.

Q. You were asked in reference to the Mutual stock, the Mutual Gas Light Company in 1884. When you testified yesterday as to the Mutual property were you referring to the par value of the stock outstanding or to the assets as found by the 1884 commission?

A. The actual assets of the company. No reference whatever to the share capital.

Recross-examination by Mr. **Kirby**:

Q. Where did you get your values for the Knickerbocker plant such as you have just given?

A. From the testimony as found in Senate Document 47.

Q. And from no other source?

A. No other source than from that testimony.

6560 Q. Mr. Mathewson has taken occasion to refer to *Field's Analysis* again. I ask you if it is not customary when figures are compared to compare net figures with net figures and gross figures with gross figures?

Mr. **Mathewson**: How does he know except you point out a case.

Mr. **Kirby**: He is an accountant and is skilled in all matters of this kind.

A. I know this, that that is not a very flexible proposition, that *Field's Analysis*. It furnishes year after year facts under forms that were used years ago and have not varied since, and they have to take a company's statement and adopt it in a measure to their form, and how they do it I don't know.

Q. If your company was getting out figures showing costs of various substances, comparing one works with another, would you compare figures at one works on net basis, and figures at one works on gross basis?

A. No, we would compare both the net and gross and the expenses that entered in between the two.

Q. But it is your endeavor to bring that down to a basis which is possible of comparison?

A. Decidedly.

Q. And such basis would be net to net or gross to gross?

A. It would be.

Q. I call your attention to the columns in *Field's Analysis* that we were looking at yesterday, ammoniacal liquor and sulphate of ammonia. The Gas Light Company in London per thousand cubic feet of gas gives a statement of 2; the Commercial of 1.75; the South Metropolitan 2.31; the average 2.09. Is there anything in your method which would show you any of these companies were
6561 selling ammoniacal liquor or sulphate of ammonia?

A. Why, no, because those companies did not make exclusively coal gas, all of them; some of them made oil gas, and you get a factor when you have oil gas in the proposition that creates variations that do not mean anything.

Q. It might be one and might be the other?

A. It might be one and it might be the other.

Q. And it might be both?

A. And it might be both, Mr. Kirby.

Q. You have spoken of the depreciation account. I think in answer to my question of yesterday you said there was no account under the name of depreciation.

A. No, I didn't say so.

Q. Have you what is known as a depreciation account?

A. That is the account in which we carry the items shown in this exhibit of Marwick & Mitchell during the year, which is closed at the end of the year into the renewal and contingency account.

Q. What is the name of that account?

A. The name of that account is depreciation account.

Q. And such depreciation account has been carried as such since 1884?

A. As such since 1884.

Q. And it is under that heading of depreciation account that renewals are charged?

A. That is the case; and only renewals.

Mr. Kirby: Mr. Carter has taken occasion to refer to the Mutual Company, the cost there, and to make a comparison between Mr. Edgerton's figures and the Mutual Company saying that he got his information from the testimony before the State of New York Commission of Gas and Electricity, and I think it was only proper under
the circumstances that Exhibit 31 before that commission,
6562 being statement furnished to the State Commissioners of Gas
and Electricity by the New York Mutual Gas Light Company, cost of gas for the nominal year ending October 31, 1905, be placed in evidence.

Mr. Mathewson: I shall not offer it. Mr. Kirby is entirely wrong in his statement. No such evidence offered.

Mr. Kirby: No such evidence offered. That is quite true.

Mr. Mathewson: He did not compare Mr. Edgerton's result with the Mutual Companies. He merely took December, 1905, and compared the Mutual cost with the Consolidated cost.

Mr. Kirby: Very good. Then can I have Mr. Carter's figures for December, 1905, which you have just stated he didn't compare.

Mr. Mathewson: He has already testified.

Mr. Kirby: He has testified to the result but not to the items going to make up the result, and I was trying to make those short-cuts of which Mr. Carter spoke.

The Master: I have no doubt if he has them in his memorandum he can send them down and put them on the record as part of his testimony.

Mr. Kirby: If he has not let him so state.

Mr. Mathewson: What figures do you mean?

Mr. Kirby: I will call attention to it after recess.

Mr. Mathewson: No, let us have it now.

The Master: If it is anything to be done as part of Mr. Carter's testimony let us have it now.

6563 Mr. Kirby: If you will look at page 6372 of the printed testimony, you will find this question:

"Q. And how about the station cost of the Mutual and Standard which operate in New York City and have their plants here as compared with the station cost of the Consolidated at its water gas stations? A. The Mutual is higher."

Then a lot of objections follow.

Mr. **Mathewson**: That is another thing, station cost for the year.

Mr. **Kirby**: Then on page 6374: "A. The station cost of the Standard for the nominal year ending October 31st, 1905, was 30 cents or .62 of a cent lower than the Consolidated cost. Q. And it had a single station as against many for the Consolidated? A. Yes, sir. The Mutual cost was 34.34 of a cent for the same period."

That is for the nominal year, as you will see by referring——

Mr. **Mathewson**: Of course, there is no question about it. The comparison of oil was for December, 1905, as to the two companies.

The **Master**: You want to know how he got at his 34.34?

Mr. **Kirby**: Yes, and put in his statement for the nominal year as placed before the Gas Commission and to which he referred.

The **Master**: Well, you are certainly entitled to cross-examine him about that 34.34. I do not say that you are entitled to put in evidence.

Mr. **Kirby**: I will ask him the details of that then.

6564 Mr. **Mathewson**: You cannot ask him from that. You will have to get your Mutual *printed* exhibit, I think.

The **Master**: I do not think it is of enough importance to waste any great amount of time on.

By Mr. **Kirby**:

Q. Referring you to page 6374, I ask you if you will give the totals which went to make up the figure of 34.34 given as the Mutual cost, and ask you if you obtained those figures from the statement before the State Board of Gas Commissioners?

A. The figures were prepared from the statement that was prepared for the State Board of Gas Commissioners. I don't know whether that is a copy or a correct copy of it.

Q. Have you such copy as you need?

A. Yes, sir, I have.

Q. Can you produce that?

A. I can.

Q. Will you produce it? Just take and read off the items, then we will have it?

A. The details of the calculation are as follows:

(Take in Exhibits.)

At 1.40 P. M. a recess was declared till 3 P. M.

After Recess.

January 30, 1907—3:00 p. m.

Frederick J. **Mayer** recalled by complainants in rebuttal.

Direct-examination by Mr. **Mathewson**:

Q. Mr. Mayer, you have read the testimony of Messrs. Edgerton and Marks respecting their valuation of plants, apparatus, general connections and holders?

A. I have.

6564a NEW YORK MUTUAL GAS LT. CO.

COST OF GAS FOR THE NOMINAL YEAR ENDING OCT. 31, 1905.

		Cost per M. made
Coal Used in Generators, 31,812.75 Tons, at $4.40	$139,976.08	06.17
Coal Used Under Boilers, 13,220.18 Tons, at $2.3588	31,183.57	01.38
Coal Handling	1,684.48	00.07
Oil Handling (Drip)	5,181.95	00.23
Gas Oil, 10,725,228 Gals., at $ .04495	482,120.96	21.26
Oxide, 33,006 Bus., at $ .1814	5,986.19	00.26
Water, 6,135,350 cu. ft., at $1.00 per M.	6,135.35	00.27
Sundries, Wood, Waste, etc	791.50	00.03
Purifier Labor	5,056.84	00.22
Other Labor	51,843.79	02.29
Repairs	31,478.77	01.39
Expense at Works	10,595.75	00.46
Distribution at Works	7,241.90	00.32
Total	$779,277.13	34.35
Less Wharfage	323.29	00.01
(Gas Made, 2,268,275,000 c. f.)	$778,953.84	34.34

6565 Q. And have you, so far as you are able, in the time at your disposal gone over the schedules that they have filed?

A. I have.

Q. You have observed the estimates that they have made on your valuations, and the figures that they have given?

A. Yes, sir.

Q. Now, taking first Mr. Marks' values, do you find that Mr. Marks has omitted any apparatus which you valued?

A. Yes, sir.

Q. Have you prepared a schedule stating in some detail what he did omit which you have discovered?

A. Yes, I have.

Mr. **Burr**: Do I understand this is different from the original valuation of the apparatus omitted from the schedule as presented by Mr. Mayer?

Mr. **Mathewson**: Yes, Mr. Mayer. That Mr. Marks has omitted the apparatus which Mr Mayer valued.

Mr. **Kirby**: Which valuation is in the testimony.

Mr. **Mathewson**: Yes. Certainly. I am referring now to Mr. Mayer's——

Mr. **Burr**: Previous testimony.

Mr. **Mathewson**: Certainly.

Q. Does this schedule which I show you contain a statement of the omitted items so far as you have discovered?

A. Yes, sir.

Q. I see it consists of several columns, one of which is headed Mayer's Cubic Contents. Under that column appears the cubic contents as you estimated them and your cents per cubic foot under that estimate, does it not?

A. Yes, in some instances.

Q. And the second column is: "Mr. Marks' Cubic Contents"?

A. Yes.

6566 Q. And the contents per foot which he estimated?

A. Yes, sir.

Q. The next column is his valuation, and the last column is your valuation?

A. Just the reverse, the third column is mine and the fourth column is Mr. Marks'.

Q. And in the last column the difference appears both in statement and cubic feet, and in the cost does it not?

A. Yes.

Q. But where you have a minus sign in the last column before any amount, what does that indicate?

A. It means that it is less than my valuation. Where there is a plus sign it means it is more.

Q. And where items are entitled entirely they are marked "omitted" if I understand this correctly, and the valuation which is inserted in that then is your valuation of that particular item?

A. That is right.

Mr. Mathewson: I offer this schedule in evidence as Complainant's Exhibit 370.

Mr. Burr: I object to this Mr. Master, because apparently what it contains is already in the evidence. This does not purpose to give anything more, for instance, than the differences between Marks' cubic contents and Mayer's cubic contents. That has already appeared in the record. Mayer's valuation appears on the record, and Marks' valuation appears on the record. So far as matters have been omitted by Mr. Marks, I have no objection to that being called to the attention of the Master, but this spreading of a lot of comparative figures on the record I object to.

6567 The Master: If that tends, as I think it does, to save the time of the witness in pointing out what he claims to be the errors in computation of other witnesses, I will let it in.

Mr. Mathewson: But more than that, Mr. Master, this contains the omitted items and the cubic contents Mr. Marks employed, which were mostly included in a general schedule, not put in evidence, but which as I recollect he called attention to and submitted to us for our examination and criticism.

The Master: I will admit it.

Received in evidence and marked Complainant's Exhibit 370, January 30, 1907.

Mr. Burr: I except.

Q. Now, have you also made up a schedule, Mr. Mayer, for convenience in giving your testimony for counsel, showing the valuations as given by Mr. Marks originally, and adding back the items of depreciation which he deducted, so as to get the original cost without depreciation, as per his figuring?

A. I have.

Q. And also adding in the omissions in the cost of each plant, where you have noted omission of apparatuses?

A. I have.

Q. And then for purposes of comparison with your own testimony have you upon that basis of original cost computed the ten per cent. engineering charge, which you consider to be proper, and five per cent. interest?

A. Yes, I have added that to it.

Q. And is this schedule which I now present separated as to stations, the result of adding these omissions and making the other corrections to which I have just called your attention?

A. Yes, sir.

6568 Q. Now, then the original cost taking all the plants together with the ten per cent. for engineering charge and five per cent. interest charge added to Mr. Marks' valuation, together with the omitted items, amounts to how much?

A. The total of plants and holders and stations $14,345,635.00.

Q. As against your total without depreciation of how much?

A. $16,137,477.00.

Q. Or about $1,800,000 less?

A. Yes.

Q. And you have not in this $14,345,635.00 included the cost of installing apparatus, setting it up, while Mr. Marks may have given the cost of apparatus merely delivered at the station?

A. No, I have given his cost as given in the testimony.

Q. You have read his testimony where he stated that he considered your value of apparatus substantially correct.

A. Yes.

Q. And did your valuations for the individual items of apparatus to which he was testifying include any ten per cent. and five per cent. as they have appeared on your schedule of individual items, or do you add that ten per cent. and five per cent. at the end?

A. At the end, each station.

Q. So that the individual valuations of the different pieces of apparatus in your case do not include the ten per cent. and the five per cent.?

A. They do not.

Mr. Mathewson: I offer this paper in evidence.

Received in evidence and marked Complainant's Exhibit 371, January 30, 1907.

Q. Referring now to Mr. Edgerton's estimate of value of plant less depreciation, $9,367,344.25, do you find that he com-
6569 puted his three per cent. for engineering and superintendence on the original cost of the plant new or on the value of the plant after you have taken out depreciation?

A. After depreciation was taken out.

Q. Is that in your judgment a proper way to compute the engineering expenses?

A. It is not.

Q. Why not?

A. Because no depreciation exists when you make your estimate originally. You estimate on a new plant, to which ten per cent. for general engineering is to be charged.

Q. Well, what have you to say as to the sufficiency of three per cent., according to your experience and knowledge, to cover the general expenses for engineering and superintendence and the other items which are not included in the amount paid to the contractor?

A. The actual expense is nearer fifteen per cent. than ten per cent.; in some instances the grading consists of the removal of twenty to twenty-five feet of earth on top of the original ground, before you get the surface for the foundation.

Q. Now, Mr. Edgerton has also employed four per cent. as the amount allowable for interest. Do you find that he has also computed the four per cent. on the depreciated value of the plant instead of on the original value?

A. Yes, sir.

Q. Is that a correct method of procedure?

A. It is not for the same reason that the engineering charges are not chargeable on that basis.

Q. Mr. Edgerton stated he allowed four per cent. because he thought that a somewhat shorter period than two years might be required to construct these plants, if they were to be constructed. What is your judgment as to the period required being less than two years?

A. I know it cannot be done in less than two years.

6570 Q. You observe that Mr. Edgerton in comparing his values of depreciated plants placed only value on apparatus after depreciation was taken, or value on depreciated apparatus in many instances, did you not?

A. Yes, in many instances.

Q. But coming to the valuation of the plant, now upon Mr. Edgerton's basis, have you made a computation adding in the original cost of apparatus as given by him, or the valuation of these items new, where he has accepted your valuation?

A. I have.

Q. And will you state what that would make his valuation upon his own basis.

A. The second column there I think, that is excluding the omission——

Q. Excluding the omission——

A. $10,266.704.

Q. And do you find that he has omitted various items of apparatus?

A. I do.

Q. What do those which you have observed that he has omitted, amount to in the total?

A. $124,544.

Q. And $124,544 is your valuation of the omitted items, is it?

A. Yes.

Q. That would make a total original cost new, including these omitted items, of how much?

A. $10,388,248.

Q. And if you include his engineering charge at three per cent. and interest at four per cent., what would the total be?

A. $11,115,425.36.

Q. Now, if you were to add the engineering charge of ten per cent., which you say is the minimum figure, and the interest charge of five per cent. on the basis of two years' period required, what would the total cost be, new?

A. $11,998,425.

Q. Now, the sheet which you have here shows the detail by stations on such testimony, does it?

A. It does.

6571 Mr. Mathewson: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 372, January 30, 1907.

Q. Now, in reference to your method of computing the valuation of buildings in the time at your disposal, Dr. Marks claimed at the outset in his testimony that such a basis of valuation would not give correct results. What is the fact in reference to that?

A. Well, I know from my own practical experience that the method which I pursued in establishing the cost of the buildings, basing the same upon a certain amount per cubic foot is absolutely correct, particularly when a number of buildings such as form a gas plant are to be considered. It is possible that in one or the other of the buildings a slight difference may occur in the unit of value, but in the total aggregate for all buildings, I am absolutely sure that the valuation is correct.

Q. Have you made comparisons between such estimates and the actual cost of buildings in order to determine whether it does figure up substantially correctly?

A. I have. I have made an estimate of the 132nd Street governor and boiler house. In fact, that estimate was made last summer and the unit of valuation per cubic feet was based upon such detailed estimates. I have made estimates of the sheds 1 to 6 at the 21st Street station. I have made estimates of the foundations of the old and new generator house at the 21st Street station. I also obtained the actual cost of the various buildings, retort houses, that have just been completed under my own supervision and in accordance with my designs, and the actual cost of such buildings also indicates that my applied units of valuation are absolutely correct.

6572 Q. Well, if there is any difference, do you find that your unit of valuations, the unit of value used by you, are greater or less than the unit of value and actual cost of these buildings?

A. If anything they are a little less than those of the actual cost of buildings I just referred to, and some of these buildings, one at least, was not constructed in New York at all. They were constructed under conditions which are not applicable to New York cost.

Q. Less expensive or more expensive?

A. Less expensive, that is, less for labor in particular, and still the unit cost per cubic foot shows almost as high as the one I have applied.

Q. Now, in estimating the 132nd Street governor and boiler house for the purpose of testing your unit figure, was that estimating from drawings and detailed specifications?

A. That was from drawings, specifications, and also from the building itself.

Q. And have you such drawings and specifications here?

A. I haven't the drawings and specifications, but I have the detail estimates.

Q. Now, Dr. Marks subsequently used your cubic contents of value in computing his valuation of buildings?

A. Yes, sir.

Q. And he stated he took as the unit of the governor and boiler house at 132nd Street, 14-4/10 cents per cubic foot, as against the 13-2/10 which was your value?

A. Yes, sir.

Q. Did you use that unit of value or did you use the cubic foot value which you employed at 132nd Street in the same method in reference to all the other buildings, making allowances for changes as due to the character of buildings?

A. Well, yes, each house the value is proportioned to the character and detail in design of that particular building, adapted to such conditions.

6573 Q. And as Dr. Marks took a higher figure for the 132nd Street, which he adopted as a unit, if he had followed the same value throughout, wouldn't his valuation of buildings have exceeded yours instead of being less?

A. It would undoubtedly.

Q. Now, he proceeds taking the 132nd Street building to apply this as the unit of the other buildings, and he referred particularly to the 112th Street building, where he allowed fifteen cents per foot as against 14-4/10 for the 132nd Street building with practically the same unit——

A. Yes.

Q. Is the same unit applicable to these two buildings?

A. It is not.

Q. Why not?

A. Well, the superstructure apparently while of identical construction or similar in construction, the foundations vary entirely.

Q. Which was the more expensive construction?

A. The 111th Street building, for various reasons. First, because it contains a very much larger amount of machinery, and then the foundations were carried down to a depth of about sixteen feet, which was necessary on account of the two large holders which were constructed in the immediate neighborhood, demanding excavation there for the reason that all the earth on the original site of this building had to be removed.

Q. Now, Dr. Marks referred to the finish of the 132nd Street buildings as finished substantially more expensively than the 111th street?

A. There is very little difference in the finish of any of these buildings; the finish forms but a very small portion of the total cost; although in these two instances they have some enameled brick finish in the interior of the rooms.

6574 Q. In examining the unit figure Mr. Marks employs in reference to the other buildings as compared with the 132nd Street, are you able to find any consistent relation in the character of buildings and the unit figure used?

A. I am not.

Q. Do you find anything in his figures which changes your own estimate as originally made, as to the value of buildings?

A. I do not.

Q. I think Dr. Marks gave no details for the different buildings.

A. No.

Q. Except as to the cubic feet?

A. No.

Q. Now, taking Mr. Edgerton's detailed prices he computes the 132nd Street building at $21,160, but his schedule it appears would call for a value of $30,000.

A. It does.

Q. Now, have you a detailed estimate of the 132nd Street building comparing your values with Mr. Edgerton's, pointing out wherein he has omitted items or is in error?

A. I have.

Q. Is this it (handing witness paper)?

A. Yes, sir.

Q. And does the comparison of the figures or the items as given under the head "Mayer's Valuation" as compared with the column "Edgerton's Valuation" indicate the extent of the figure in which you think he is in error in each case?

A. It does.

Mr. Mathewson: I offer this paper in evidence.

Received in evidence and marked Complainant's Exhibit 373, January 30, 1907.

Q. Now, you have prepared a detailed estimate, have you not, to check your figures on the No. 2 shed at 21st Street?

A. Yes, sir.

Q. And that would give a total of the detailed estimate of how much for the shed?

A. $67,846.

6575 Q. Well, that is the amount of your original schedule, is it?

A. That is the amount for the original shed, the total estimate, first value, $65,888.13——

Q. That is a trifle less than your original estimate?

A. Yes.

Q. But did this average that you employed of 16 cents per cubic foot, for the sheds at 21st Street, would that apply also to the shed No. 6, as well as the purifier house and condenser there?

A. It applies to all sheds from 1 to 6, and some of them are at present used as purifiers and condenser houses.

Q. How do the purifier house and condenser house, as well as shed No. 6, compare in expense of construction with shed No. 2?

A. Well, the average for all of them is 16 cents a cubic foot, for the reason that the purifier house and condenser house have double floors and more foundations with apparatus which is omitted in the case of the shed.

Q. So that the average of 16 cents you would consider fair?

A. It is fair for all of them.

Q. Now, in figuring out the valuation of the coal shed at this station by a detailed estimate according to your figures you find results how?

A. I find a value of $69,830.

Q. And what have you got there in your schedule, as the value, according to cubic contents?

A. $63,168.

Q. And to what is the increase in value by the detailed estimate due in general?

A. At the time the original valuation was made the inclined bottom supported upon timbers for the carrying of coal was not calculated in detail. Such has been done now and that increases the original value given.

6576 Q. Now, you have testified as to the foundations which you have employed in your apparatus and buildings. How do you find what character of foundation was used, or determine what character of foundation to figure upon in these estimates?

A. Wherever the character of the ground appeared doubtful or the character of the foundation, in each instance, I referred to drawings where I could find such, and where I could not find drawings I got the information from the people who had been at the works for a long time.

Q. And isn't it a fact that some of these buildings are on soil that is way below the depth of the street, that is on low ground?

A. All of the buildings are on such soil.

Q. Now, from your experience in addition to the information that you got from books and other sources what would you say as to the character of the foundations which must be required under buildings on such soil?

A. They could not be constructed without pile foundations.

Q. Now, do you find on Mr. Edgerton's valuations for these buildings to which I have called your attention, that he has made any allowance for pile foundation or any foundation except the ordinary foundations that could be used in the hard soil?

A. He had not, and in some instances he did not allow enough for ordinary foundations.

Q. Now, Mr. Edgerton suggested that there were no foundations under the water gas apparatus which he was able to ascertain, have you a sketch here showing the foundations under these apparatus as they really exist?

A. I have, and this sketch was prepared from drawings which I saw at the works, which I was told were used for the construction of these foundations.

Q. Did those drawings appear to be correct so far as you
6577 could check them by your own observation?

A. They did.

Q. And how did you find this foundation was constructed, of what material was this foundation in the old generator house?

A. In some of the drawings I saw at the works show a depth of foundation of from 8 to 10 feet below the surface line, supported on piles and stone flagging.

Q. What did you find that the foundation under the water gas apparatus consisted of?

A. The foundation under the water gas apparatus consisted of solid concrete five feet in depth, under the superheater and carburetter and 5 feet 6 inches of depth under the generator.

Q. Did you find that Mr. Edgerton in his estimate made any allowance for these expensive foundations?

A. No, sir.

Q. What did you find the detail estimates for the foundation under the buildings as well as the apparatus give combined with the old and new generator houses?

A. The total of all foundations for buildings and apparatuses is $88,595.

Q. Now, at what figure did you carry these foundations in the new and old generator houses in the schedule of valuations which you presented, and which are critisized by defendant's witnesses?

A. The valuations of the foundations for the two buildings amounted to $32,197 in the instance of the new generator and $31,065 in the instance of the old generator house.

Q. Making a total valuation of for the two houses?

A. Of $63,262.

Q. Well, now, it appears that the difference between that and the detailed estimate you have specified is $25,333. How is that difference taken care of?

A. In the application of the unit values per cubic foot of
6578 building done. I have allowed for ordinary foundations constructed in soil that requires no re-enforcement. In other words, in all my unit valuations on buildings, by the cubic foot foundation, of about four feet depth in ordinary soil below the surface line are included. Therefore, this only represents the difference——

Q. Now, have you endeavored to establish the value of foundations given by Mr. Edgerton from his testimony in relation to these buildings?

A. I tried to, but it was impossible as the foundations were not given in detail separately from the rest of the building.

Q. Have you examined the values which he gave for the excavation of these buildings?

A. The excavation of these buildings? A. The excavation is chargeable to the foundations only. I have examined such items in Mr. Edgerton's testimony.

Q. What do you find in that regard?

A. In the instance of the old and new generator house I find that he has a total item for excavation amounting to 629 cubic yards.

Q. Figured at how much per yard?

A. At a dollar per yard, a total value of $621.00.

Q. Now, what is the cost of excavation, I mean the depth of excavation of the character required for such foundations in the City of New York, including the carting and dumping?

A. The actual amount of excavation in the two above referred to buildings, is 6,740 cubic yards, or over ten times as much as that allowed by Mr. Edgerton in his testimony.

Q. And at what price do you figure deep excavation including carting and dumping in the City of New York?

A. Excavation in ground of this character, where there is a large quantity of water to be encountered, is exceedingly slow, and is worth two dollars a cubic yard.

6579 Q. Therefore, the total cost of excavation for these two buildings, would equal how much as compared with Mr. Edgerton's estimate of $621?

A. $13,480.

Q. In that estimate has any allowance been made for sheet piling and pumping?

A. None whatever, but it should have been made, such item is absolutely indispensable in excavating in ground of that character.

Q. Is sheet piling and pumping included in that amount of $13,480?

A. No, sir, that is an extra item. That $13,480 is for the excavation alone.

Q. Now, what would be the total value of the sheet piling and pumping in addition to the $13,480?

A. The sheet piling for these two buildings cost $3,360, whereas the item of pumping cost $5,750. That last item of course includes boiler, fuel, the water, the salaries of the engineers and coal, etc.

Q. Well, then, the expenditure, if I aggregate these correctly for these foundations should be $22,620 as against Mr. Edgerton's allowance of $620?

A. Yes.

Q. So there is a difference of $22,000 about?

A. Yes.

Q. Now, have any allowances been made by Mr. Edgerton for the solid concrete and brick foundations which are under the water gas apparatus as shown in the sketch of the foundations which you have prepared?

A. There has not been.

Q. From what were these sketches drawn; what kind of drawings are these sketches which you have prepared?

A. From the drawings in existence at the works, which I understand were used in building these foundations; that is the old generator house showed piles and solid brick foundations, which 6580 formed the foundation of the original benches, the retort benches. The concrete foundation I think under the water gas apparatus was not piled.

Q. Now, generally speaking, without going into great detail, have you compared Mr. Edgerton's estimates upon various factors of cost with the actual cost of construction as known to you in New York for these particular factors?

Mr. Burr: I think that was all gone into.

Mr. Mathewson: It is simply a general question which is introductory to something else. It could not have been gone into, any comparison, because he has not been on the stand since Mr. Edgerton was on the stand.

Mr. Burr: He gave his general reasons.

Mr. Mathewson: This is something different.

The Witness: I have.

Q. Now, suppose you take one building and make some comparisons, what building would you select?

A. For instance, the building which we have only completed a short while ago at the new plant of the Astoria works, the inclined retort house.

Q. How did you find that the unit of cost which you have employed in computing the value of buildings compares with the actual unit of cost of that building?

A. The cost of that building?

Q. Is your unit of cost more or less than the actual unit of cost in that case?

A. It requires a little explanation.

Q. Well.

A. In this instance the building is higher, and therefore the relative cost of the foundation floor area as well as the roof construction would be the same, also the volume is increased on ac- 6581 count of greater heights, therefore the unit of value of such building should be considerably less.

Q. On your schedule?

A. Yes, the unit of value computed as it is is very little less.

Q. Now, take the 111th street exhauster house to which he referred, Mr. Edgerton, in his estimate has put brick at $14 per thousand laid What is the actual cost?

A. $25 a thousand.

Q. He has stated stone footings, estimated at 90 cents per cubic foot. What is the actual cost per cubic foot?

A. The actual cost is $1.40 per cubic foot.

Q. He has estimated flooring at $40 per thousand feet board measure. What have you to say as to that?

A. The cost of the material alone is $42 without any labor attached.

Q. And what would be the total cost per thousand feet including labor?

A. If it was double flooring the cost would be $82 per thousand feet laid.

Q. What is the cost of labor per thousand feet for single flooring and double flooring?

A. About $20 per thousand feet board measure.

Q. Single or double?

A. Single.

Q. And $40 for double?

A. Yes.

Q. He has estimated yellow pine girders at $40 per thousand feet board measure. What do you say as to that?

A. The actual cost of the material would hardly be covered by that estimate without any labor. I have quotations for the same kind of lumber at present at $45 per thousand feet.

Q. Now, he has inserted steel checkered floor plates at 5 cents a pound, does that cover the cost of such floor plates?

A. The material cost alone at present is 3½ cents per pound, and the cost of labor to lay the plates including the fitting and cutting is 1¾ cents per pound, making a total actual cost without
6582 any profit to the contractor of 5¼ cents per pound.

Q. That includes all waste that may arise in cutting?

A. Any waste in fitting and cutting.

Q. Did you find that Mr. Edgerton has allowed anything for excavation for this building?

A. No, I believe that Mr. Edgerton omitted the entire item of excavation for this building.

By Mr. KIRBY:

Q. What building are you now referring to?

Mr. MATHEWSON: This same building, 111th Street.

By Mr. MATHEWSON:

Q. Now in the same estimates Mr. Edgerton has allowed cost of 50 cents per cubic yard in the instance of the 132nd Street governor and boiler house and in another instance he has applied the figure of $1.00 per cubic yard. What is the average cost for deep excavation of this character, as required in such buildings?

A. Not less than $1.25 including the cost of disposing of the earth, the dumping privileges, etc.

Q. Do you find in any of Mr. Edgerton's estimates that he has made an allowance for the contractor's expenses, for his office force, draftsmen, scaffolding, shop, wear and tear on tools and appliances, etc.?

A. He has not.

Q. What percentage of the value of the cost of work of this kind in your experience in this character of building should be allowed for these items?

A. It would not come less than 10% on the actual cost of the work.

Q. Now, Dr. Marks in substantially all cases has assumed your

cost of apparatuses and holders to be correct, but in some few
6583 instances he differs with you, and with Mr. Edgerton he
differs in many instances. Now, taking up Mr. Edgerton's statement as to holders, do you find that he has submitted any detailed estimates as to the cost of holders including guide frames?

A. He has not.

Q. At page 5347 he states that one-third of the cost of the holder is an ample allowance for the cost of the guide frame. What have you to say as to that proposition, Mr. Mayer?

A. I can only say that such estimate is absolutely erroneous. Some 25 to 30 years ago it was the intention to have the various gas holders uniform in their construction, and at that time they endeavored to use a column in the guide frame for every ten feet in diameter of the holder, but such were only endeavors and could never be carried out with any kind of certainty. For instance a holder 60 feet in diameter would have 6 columns, one 70 feet would have 7 columns, one 80 feet 8 columns, etc. Now there were no holders built at that time with an uneven number of columns in the guide frame. Why that was so I cannot explain, but nevertheless it was the fact, and in the very instance of the Consolidated works a glaring example of this kind exists which will prove positively that Mr. Edgerton's assumption that the guide frame of the holder amounts to one-third the cost of the holder is impossible. For instance, the four holders at the 21st Street station of 400,000 feet capacity are constructed in three lifts with an outer section of 88 feet in diameter. These holders have 16 cast iron columns in the guide frame. At the same station there are six holders each of
345,500 cubic feet capacity constructed in two lifts, the outer
6584 section of these holders is 95 feet in diameter. These holders
have guide frames consisting of only eight cast iron columns.

Q. The diameter is greater, but the number of columns is only half as many?

A. The diameter is greater, but the number of columns is only half as many. The two holders of 250,000 cubic feet capacity at the same station are constructed in two lifts with 84 feet in diameter, and the guide frame only contains six columns, so that it will be seen that the maximum variation in the diameters of the different holders as between 84 and 95 is only 11 feet, whereas the variation in the number of columns amounts to over 100 per cent., and such difference excludes all possibility of applying a general rule which assumes that the cost of the guide frame to the holder is one-third of the cost of the holder itself.

Q. Now, if the valuation of the various holders (including guide frames) by Mr. Edgerton is based on the assumption of such proportionate values between the guide frames and the holders, would that be sufficient to account for the entire difference between Mr. Edgerton's and your own valuation as to the value of the holders?

A. No, I think it would account for a great deal more than that.

Q. And is the same true of the other cases in which differences of values exist where such a general rule has been applied by Mr. Edgerton?

A. It is so.

Q. Now, what were your values on holders and apparatuses, with which Mr. Edgerton disagrees, based on?

A. My valuations for holders and apparatuses are all based on actual detailed estimates. Of course it was impossible for me to make any such detailed estimates in the time at my disposal, 6585 during my examination of the plants, but as I had access to all the detailed estimates of the firm of Bartlett, Hayward & Co., with which I was formerly connected, and which estimates are an accumulation of over 25 years, made partly by myself or under my personal direction, I was thoroughly familiar with applying them to the apparatuses in question at the works of the Consolidated Gas Company.

Q. Now, in giving your estimates of the value of holders, for instance, did you ever make or did you have before you detailed estimates in each case showing the actual cost of such holders or of holders of the same character which you could change as might be required for existing conditions of material or labor?

A. Yes, I had the actual detailed estimates of weight, to which I applied the prices under New York conditions as they existed last summer.

Q. Now, do you mean merely estimated weights or actual shipping weights?

A. I had both.

Q. W-ere Bartlett, Hayward Co., for instance, installed any part of the holders or installed a holder of the same kind, did they keep a record of the actual weight of the holder?

A. Absolutely a record of the actual cost.

Q. Were holders ever erected by you or under your personal supervision?

A. They were all constructed under my personal supervision.

Q. And did you have access to all this in making up your estimates?

A. I did.

Mr. Kirby: I submit, Mr. Master, this is not proper rebuttal. I object to this line of questioning to these details upon which Mr. Mayer based his conclusion as set down in his direct testimony 6586 unless an opportunity be given to Mr. Edgerton to go upon the stand and show his details.

Mr. Mathewson: I don't propose to put in evidence these details as to each holder and piece of apparatus; I am merely now calling the attention of the court to the method by which this witness reached his estimate to rebut the defendant's assumption that his estimates are incorrect.

Mr. Kirby: If it were to be brought out in this case it should have been brought out on his direct-examination, it seems to me.

Mr. Burr: It seems to me that it is quite apparent that this testimony should have been given in the direct testimony and if it is intended as a statement now it seems there was no information as to the sizes, the actual weights or the cost of holders, it was not furnished to me, and it should have been, in justice to us, we should have had the foundation, and the basis of his figures and in the valuation of these buildings, then we would have had a proper opportunity to have criticized or gone in detail into the merits of these figures.

The MASTER: Why wasn't it done. Why didn't you bring that out on cross-examination? It might be a serious question as to whether if Mr. Mathewson had chosen to bring out these facts on the direct-examination of his witness, his own expert whether you might not have objected to it on the ground that the reasons for his opinion as an expert are not properly brought out as a part of his direct-examination. Now, if Mr. Mathewson didn't bring that out on direct and you didn't bring that out on your cross, and it 6587 comes up that the witness' method of valuation is not attacked by your witnesses why can't he show generally the care which he took, or the methods he followed in arriving at his results. I quite agree with you that it is not at all proper to put in evidence any of these materials that he used, these detail drawings, etc., these specifications, etc., I don't understand that Mr. Mathewson is offering them.

Mr. BURR: I understand the only object in referring to them is to confirm the correctness of the valuations he gave before, since his last appearance here. He has testified as to the values he has given, that he made detailed estimates, consulted drawings which were made at the time in some cases, all of which seems to me is not proper rebuttal, unless we have the opportunity to go into it very fully.

Mr. KIRBY: His method has not been attacked, his conclusions have not been attacked.

The MASTER: I will allow this line of testimony in so far as it is broad and general, but not in detail. I think you are right about that. It is a very close question anyway as to what is proper.

Mr. KIRBY: I except.

Mr. BURR: I except.

Q. What proportion of the detailed apparatus would you say Mr. Mayer, in your valuation consists of apparatus upon which you computed the weights, and respecting which you had exact weights or procured exact weights one way or another as distinguished 6588 from the stock items like boilers and things of that sort which are built by special builders and not particularly by Bartlett, Hayward & Company?

A. Well, all apparatus at the plant as compared with the other items for which I was compelled to obtain prices from the manufacturer which manufactured such articles, would cover probably not less than 96 to 97 per cent. of the cost of the apparatus or plant.

Q. And where Mr. Edgerton differs from your weights are your weights of apparatus estimated or asumed, or are they the actual result of your knowledge and your experience?

A. The actual result of knowledge based upon my own experience.

Q. As to the three or four per cent. consisting of boilers, etc., have you bought and installed boilers from time to time?

A. Many of them.

Q. In your estimates which have been attacked by Mr. Edgerton, in regard to these items, did you in addition to your own knowledge make any inquiry at the time of the manufacturers as to the prices at which the boilers could be installed?

A. I so stated that in my testimony.

Q. As an illustration, Mr. Mayer, have you here a sheet showing the detail in which it is necessary to go, and into which Mr. Edgerton did not go, to make an exact estimate of the cost of a gas holder?

A. I have.

Q. This estimate is a hypothetical holder of the type of the 132nd Street holder, five million cubic feet——

A. It is of the same dimensions, but slightly less in pressure I think.

Q. Now, does this detail which I hold in my hand show the detail into which it is necessary to go to give an exact estimate of the holder?

A. Yes.

6589 Q. In making an estimate of the value of these different apparatuses how do you proceed as compared to the way in which you would proceed to make a bid for furnishing such apparatuses?

A. Identically in the same manner.

Mr. Mathewson: I offer this paper in evidence as an illustration of the detail into which the witness says it is necessary to go to get the actual value of a holder. This is not an estimate of the 132nd Street holder, but illustrative of what it is necessary to do to get the exact value of the holder, but Mr. Edgerton stated on the stand that he did not do that.

Mr. Kirby: What Mr. Edgerton stated on the stand is in the testimony.

Mr. Burr: Isn't this merely a bill of material?

Mr. Mathewson: This is an estimate in detail of the weights to which in figures the price for material and cost of labor have to be applied to suit conditions at the time each piece of work is installed, the actual price.

Mr. Burr: This simply shows the material used in the holder?

A. Yes. Shows the weights of material and each class of material.

By the Master:

Q. Is there anything in this paper which differentiates the cost of the guide frame from the cost of the holder?

A. Yes.

Q. Can you pick it out?

A. Yes, sir (witness exhibits same to Master).

6590 By Mr. Mathewson:

Q. I ask you at this point whether it is possible to make an exact estimate of the cost of a holder or other piece of apparatus constituting these other 96% to which you have referred without going into a detailed estimate of the same general character as you have presented here and which you have shown to the Master

A. I consider it absolutely impossible. All the factors have to be based on the weight, and such factors cannot be determined unless the weight is known.

By Mr. Burr:

Q. Where did you get the weights which appear in this hypothetical holder?

A. From the former estimates for a holder of those exact dimensions.

Q. That was not open to Mr. Edgerton for his inspection, was it?

A. Oh, no.

Mr. Mathewson: It would have been if you had cross-examined him on the subject and brought it out.

Q. Have you that estimate now?

A. Here it is.

Mr. Burr: If you remember, Mr. Master, you will recall that we called on the other side for the particulars of the construction of these holders and never could get them. Now, it is not fair that at this last moment that they should present here an estimate of the cost of the construction of these holders without giving us a chance to go into the whole subject.

Mr. Mathewson: You mistake, Mr. Burr, I am not offering any such thing. Unless I am mistaken your witness testified that
6591 he didn't make such detailed estimate of such apparatus. Mr.
Mayer testified it is not possible except from such detailed estimate to make an estimate of the values. Then he says what sort of an estimate it is necessary to make. It is perfectly obvious. Your witnesses never could go into the details in the time at their disposal. Even if they attempted to they could not. I am not not going to put in the estimates of these various holders.

Mr. Kirby: Such details as our witnesses went into have not been spread upon the record. They should be spread upon the record, as I stated before. There are reams of it.

The Master: Don't discuss it. If you object I will rule upon it.

Mr. Burr: I object to that as incompetent and immaterial and not proper rebuttal.

The Master: I don't see that it is proper rebuttal, except in so far that Mr. Edgerton may have given general testimony about the methods to be followed in getting at the cost of holders; and I don't see any such general testimony here except in that single case of the cost of the guide frames, and that, I understand, you have already covered. This table which you have here covers a great deal more than that guide frame question. Mr. Edgerton did say here that one-third of the cost of the sheel was considered an ample allowance for the guide frame. That of course is the sort of thing you are entitled to meet on rebuttal; but I think most of this goes further than that. It simply goes to show that the methods adopted by your witnesses was better and more accurate than the method 6592 adopted by the other witnesses.

Mr. MATHEWSON: Where our method is criticised am I not entitled to meet such criticism?

The MASTER: I don't find that he specifically attacked Mr. Mayer's method.

By Mr. MATHEWSON:

Q. Have you examined Mr. Mayer's testimony as to the manner in which he found the valuation?

A. Yes.

Mr. MATHEWSON: Then may I have this marked in for identification, and then tomorrow morning I will renew the offer. I think I can show the Master then the testimony which rendered it admissible.

The MASTER: I think so much of that as goes into this question of allowance for guide frame is proper, but there is so much else in it, I have very serious doubt about it.

Marked for identification, "Complainant's Exhibit 374, January 30, 1907, E. C. Jr., steno."

Mr. BURR: I say in reference to the testimony of Dr. Marks in connection with holders he has practically accepted the figures of Mr. Mayer as being correct, he differs with him, however, in the depreciation principal.

Mr. MATHEWSON: In reference to the detailed estimate of a holder of the character of the 132nd Street holder, such detail figuring would consume a good many pages according to the exhibit "For Identification 374." I will withdraw that last question, on which the main question is based. It may be rendered unnecessary.

6593 Q. My question, Mr. Mayer is, whether in reference to other items of apparatus, excluding the stock items like boilers, etc., you consider it necessary to get an exact estimate, to go into a like detailed computation?

A. It is even more so with the other apparatus than in the instance of holders.

Q. Mr. Edgerton spoke of double-riveted covers for purifiers as something unique or different. What is the fact?

A. Well, all large purifier covers must necessarily be double-riveted on account of the interior strain.

Q. How about the New Astoria?

A. Are all double-riveted, and could not be otherwise.

Q. In the case of smaller holders do you consider it better or poorer construction?

A. It is better, but not necessary.

Q. Mr. Edgerton spoke of the 14th Street as a dilapidated old plant. You examined the plant, did you not?

A. I did.

Q. What have you to say as to that suggestion of Mr. Edgerton's?

A. I find that the plant has been operated and is being operated to the full capacity and at economical rates, therefore it could not be dilapidated.

Q. Now, Mr. Logan in his testimony stated that in many cases his values were higher than yours, and in other cases substantially the same, and in some cases it was below your valuation, do you find his difference was due to the difference in the weights which were assumed for the apparatuses or due to other reasons?

A. That is the only reason I can assume, that his weights differ from mine.

Q. Well, you observed in his testimony that he was assuming the weights which he employed in such cases?

A. Yes, I remember that.

6594 Q. And assuming the weights that you actually found, and his unit figures, how would his values then compare with yours?

A. Would be the same about, excepting——

Q. Now, without going into details as to each structure do you find that Mr. Edgerton in his estimates generally as to the value of similar factors of cost to those to which I have called your attention, I mean by similar factors the cost of board, the cost of excavation, the cost of brick laying, etc.—in other words has he made the same errors and omissions generally throughout, or are those individual instances?

A. No, the same errors and omissions are made throughout, but they vary in some instances. They are not always the same in each estimate.

Q. Do you consider these errors fundamental, or are they merely of slight account?

A. No, they are errors which would absolutely give a wrong impression concerning the value of such buildings and construction.

Q. What then do you say general-y concerning his estimates of value of buildings, and apparatuses wherever they fall below your figures?

A. I can only say that these estimates have not been made upon any knowledge of expenses and conditions as they exist in New York, and therefore I cannot accept them as being fair valuations.

Q. As to pipe connections Mr. Edgerton suggested that a new plant could be constructed with fewer pipe connections than those called for in your valuations. Even if you constructed a plant with the connection which Mr. Edgerton suggested, could in your judgment, the connections for such plants as the Consolidated possesses be constructed on his theories on the figures he gives?

A. No, sir, or nothing like it.

Q. Is it a fact that modern plants as they are constructed contain single pipe system connections?

6595 A. All modern plants contain at least a double system, and in some instances like in the New Astoria we have four lines of pipes from the retort house to the condenser house to act as condensing mains to assist atmospheric condensation.

Q. Between the retort house and the condenser house?

A. Yes.

Q. Now, if old mains had been maintained in the plants of the Consolidated Gas Company, as the connections had additional lines laid, would that indicate any antiquated or out-of-date or improper construction?

A. I doubt that additions to existing plants could be made when the plant is to be kept in operation without simply adding to the existing mains and making the existing mains a part of the reconstructed plant.

Q. Now, so far as you have observed, what about the connections, were they in use or not?

A. As far as I was able to ascertain and as far as I was able to see they were all in use.

Q. Where you have several lines of connections would it in your judgment be wise or economical to throw out these smaller connections in order to put in new and larger ones?

Mr. Burr: I object to that. I think it is opening the door——

Mr. Mathewson: Mr. Edgerton criticized the connections and cut them from 21,000 down to 12,000 each.

The Master: Objection overruled.

Mr. Burr: I except.

Mr. Kirby: I except.

The Witness: No, it would not be wise for the reason that you would be compelled to shut down the plant.

6596 Q. What would you do, add additional connections, and keep what you had?

A. There is no other way of adding to a plant that has to be kept in operation, as I have said.

Q. In reference to these items of holders, etc., which you have valued how many of them did you see personally?

A. I saw them all.

Q. Now, as to your estimate of the cost of labor in the city of New York did you act on hearsay, or from actual experience and knowledge.

Mr. Burr: One moment. I think this is direct-examination. You have examined him and re-examined him as to the basis on which he fixed the cost of labor.

Mr. Mathewson: Mr. Edgerton has testified he got information from these sources and other sources and asked Tom, Dick and Harry, and I ask this witness whether his conclusion is based on estimate and hearsay or else on experience and knowledge.

The Master: I don't think it is rebuttal.

Q. In addition to your examination of the plant of the Consolidated at this time for the purpose of an appraisal, have you had any knowledge of the facts?

Mr. Burr: I object to that as already testified to.

The Master: Objection sustained.

Mr. Mathewson: I except.

Q. Do you find that even as it was and at the time then at your disposal you included all the buildings and apparatus of the company——

6597 Mr. KIRBY: I object to that.

Q. ——in your estimate of valuation.

Mr. BURR: Same objection.
Objection overruled. Exception.
The WITNESS: I did, with the exception of two buildings, one was the so-called Avenue A shop at the 21st Street works, and the other one was the 66th Street shop.
Mr. MATHEWSON: I am not going to ask this witness these valuations, but to indicate the fact merely that in the estimate he did not include them.

Q. Now, Mr. Mayer, the witnesses for the defence in some instances referred to various pieces of apparatus, as for instance scrubbers, as scrubbers are used, ordinarily used, is it a fact that all scrubbers are made by the same concern or in the same way when they deal with the same capacity?
A. No, not at all, it depends entirely upon the different construction of the various firms.
Q. Is it possible taking any piece of apparatus of that character to compute its value without knowing the exact weight or measuring the exact weight?
A. No, as I stated before, you cannot.
—. Now, you have given a certain valuation of the plant new as something over sixteen million dollars, and you have given the valuation of a plant taking out your depreciation *in toto* at something over $15,500,000, as I recollect——
A. It is something like that.
Q. Upon what theory did you compute the depreciation?

Mr. BURR: He has already testified as to that.
6598 Mr. MATHEWSON: Wait a minute, let us see whether he has or not.
Mr. KIRBY: If he has not, he cannot do so now.
Mr. BURR: Point out just exactly where he did testify to that.
Mr. MATHEWSON: Have you any objection to it?
Mr. KIRBY: I have.
Mr. BURR: I object to it on the ground that it has already been testified to, the method of arriving at his depreciation, and the method by which he arrived at the cost of engineering.

Q. Referring to the depreciation computations of Dr. Marks and Mr. Edgerton and your knowledge of the plant, I will ask you whether or not in your judgment for the difference between your valuations given to-day, to which I have referred, and the valuations as depreciated, to which I have referred, the plants could be put in condition as good as new?
A. In my valuation, you mean?
Q. Yes.
A. Yes, they can.

Q. In your experience is it easy to judge the depreciation of a building from appearances, simply outside appearances?

A. Unless such judgment of depreciation is performed by a man experienced in the detail of the estimated cost of repairs I should say that he would be unable to judge depreciation by appearances.

Q. Isn't it a fact that frequently a very small expenditure for pointing up and other items relating to outside appearance makes a building as good as new?

A. It is very often the fact.

Q. Have you ever estimated for repairs and alterations in bringing apparatus up to efficient working order?

6599 Mr. **Burr**: I make the same objection. It is incompetent, immaterial and not rebuttal.

The **Master**: That is good, Mr. Mathewson.

Mr **Mathewson**: It seems to me that is proper. He said that the difference between his view and depreciated value would make the plant as good as new.

The **Master**: The question is objected to and I think here it is clearly objectionable. I will allow you to ask him merely as to Dr. Marks and Mr. Edgerton's method of arriving at values, and let him point out their defects.

Q. How long have you been estimating for repairs and alterations in gas apparatuses?

Mr. **Kirby**: I object to that.

Mr. **Mathewson**: Why?

Mr. **Kirby**: If it was not brought out before, it should not be brought out now.

The **Master**: Objection sustained.

Mr. **Mathewson**: I ask for the answer.

A. Over 25 years.

Q. Now, did you observe that Mr. Edgerton's depreciation for both the old and new U. G. I. stations, which had been many years in operation as 10%?

A. I did.

Q. What do you observe for his depreciation at 132nd Street as compared with other holders?

A. Where the holder is entirely new, as I remember it the depreciation is marked at 5%. Then there was a holder at I think 63rd Street which I constructed in 1889 or 1888, I have forgotten which, at any rate it is seventeen or eighteen years old, and the depreciation is the same 5%. 6600

Q. Now, did you hear the testimony of Mr. Edgerton and Mr. Marks, or have you read it as to the time which was devoted by them to the examination of these plants?

A. I have.

Q. I will ask you whether in your judgment it is possible in an examination of that length to go into the details of construction or make such an examination as to give even an approximately exact cost of such a plant?

A. I know that I should not be able myself within that time to give even a rough guess, it would be absolutely impossible.

Q. Have you made a computation as to the number of hours that you and your assistants put in in examining these plants for the purpose of your testimony and estimate originally?

Mr. Burr: I object to that as already in the testimony.

A. I have.

Q. How many?

A. My own time and that which my assistants actually spent at the various works was 3780 hours.

Q. And were your assistants men familiar or unfamiliar with gas apparatuses?

A. They were all draughtsmen and engineers, picked for that particular purpose, they had been working with me for years and they were familiar with all the details of construction. Without such men I could not have accomplished it even in that time.

Q. Could you have accomplished in that time with these men that result, if you had not had the benefit of the estimates and drawings which had been placed at your disposal?

6601 A. It would have been impossible even in that time It could not have been done within 12 months with more men if I had not had these estimates and drawings at my disposal.

Q. Did you compute from the testimony the number of hours occupied by Mr. Edgerton and Dr. Marks?

A. I have.

Q. Well, how many hours, about?

A. Dr. Marks has been 84 hours at the works and Mr. Edgerton 50 hours.

Mr. Mathewson: That is all except that I will call the Master's attention to-morrow to this Exhibit 374 for identification. I reserve that right.

Cross-examination by Mr. Kirby:

Q. What did you take into account, Mr. Mayer, when you computed the numbers of hours that Mr. Edgerton put in in making his appraisal of these plants?

A. His testimony as he gave it when I was sitting over there.

Q. The times spent at the plant?

A. Yes.

Q. Anything else?

A. No. You could not examine apparatus any other place except at the plant.

Q. Did you consider the time of any one who was assisting him?

A. Only his own time.

Q. In your total of 3,780 hours do you include anybody's time but your own?

A. That of my assistants.

Q. You do not include Mr. Edgerton's assistants?

A. I don't know that he had any.

Q. Or of Dr. Marks' assistants?

A. I didn't know that he had any.

6602 Q. I presume in figuring depreciation the conditions as well as the age of the apparatuses has much to do with the factor employed, does it not?

A. The condition has, the age has not——

Q. Well, it might well be a new U. G. I. apparatus of 1906 and an old one of 1884 would have the same depreciation factor, would it not?

A. No, it would not.

Q. If age has nothing to do with the appearance, or rather conditions as observed, how do you come to the conclusion that there might not be the same depreciation?

A. Because in every instance the apparatuses are kept up to their full working and operating condition.

Q. Then you assume that——

A. I know it, because if it was not the case it could not be operated.

Q. You assume it from your knowledge of these apparatuses?

A. Yes, I know from my observations of these apparatuses.

Q. All these U. G. I. apparatuses are in use from day to day?

A. Yes, sir.

Q. And in use the fire brick and such portions as are subject to heat are depreciated, are they not?

A. Yes.

Q. And being new lined to-day they would be more valuable than a week from to-day, would they not?

A. Well, there would probably be a slight deterioration, yes, which would be wiped out the next time they were repaired.

Q. But needing repair at any time before those repairs are made they have less values than at a period immediately after the repairs have been made, have they not?

A. At that immediate moment, yes.

Q. Such is also true of holders, is it not? Do holders ever need repairs?

6603 A. Very seldom, only such holders as are defective in construction. I don't know that we ever repaired a holder we constructed ourselves.

Q. Do they last forever?

A. I don't know how long they last.

Q. Isn't it a fact that sometimes the tops rust out or become so defective that new plates have to be put in, or repairs made in some way?

A. Not if the gas is properly purified or the painting on the outside properly taken care of.

Q. Are all holders properly painted, and is all gas properly purified so that it will not in any way affect the material of which the holder is made?

A. It is for the Consolidated Gas Company in New York.

Q Have you examined the holders at 65th Street?

A. Yes, sir.

Q. Are you not aware that on the side of these holders paint for a space of yards or more at various places has come off?

A. Not at the time I examined it, no.

Q. Paint does peel off from holders from time to time, does it not?

A. When there is bad paint used or bad water in the tank, yes, sir.

Q. Did you consider that the holders at 14th Street at the time you examined them were properly painted?

A. They were.

Q. Needed no painting of any kind?

A. No.

Q. Where did you get your information from in reference to Mr. Edgerton assuming that the cost of the frame was one-third that of the holder?

A. From his testimony.

Q. Did you notice how many holders out of all these he proceeded to use such an estimate for?

A. How many what?

Q. How many holders out of all these did he proceed to use such an estimate for?

6604 A. He didn't give any detailed estimate of the holders, therefore I assume he assumed the same estimate for all of them.

Q. Now, I refer you to Mr. Edgerton's testimony at pages 5346 and 5347, to the question at the top of page 5347: "Q. Did you measure those guide frames and compute their value? A. I did. Q. And computed their weight? A. Yes, sir. Q. Now let us have the details of that computation? A. Haven't anything more here than 164,700 at four cents, cast iron girders 16,150 pounds and guide rails 960 pounds."

Q. Did you read that part of Mr. Edgerton's testimony?

A. I did.

Q. And did you consider that in estimating the value of the guide frame, did you consider that one-third?

A. No, I considered nothing except that he did not give enough information——

Q. I understand you to say that Mr. Edgerton in all expenses going to his cost as to all guide frames of holders estimated that the guide frame was a third of the holders.

A. I assume he did, because he did not——

Q. That was because of the fact that on examination he did not go into the details used in giving the valuation that you assumed he took one-third of the cost of the holders as the cost of the guide frames?

A. No, because he could not have measured his guide frame any other way.

Q. Do you know how many times Mr. Edgerton went to these different stations and examined these guide frames?

A. It would take him not less than three days with one man to measure each guide frame in one holder.

Q. Would Mr. Edgerton have to measure each member of that guide frame?

A. He would.

6605 Q. He could not take one section, measure the members of that section and assume the rest were the same?

A. Yes, if he went on that section of the holder from the top to the bottom, but they vary.

Q. But if he measured the sizes from top to bottom wouldn't it be possible for him to come to a conclusion as to the value of such guide frames?

A. It would not have been possible for him to have measured them in the time at his disposal.

Q. Then your answers depend upon what you consider impossible for Mr. Edgerton to have done in the time at his disposal, in the way of making measurements which would have enabled him to make an appraisal?

A. No assumption about it. I know from my own experience he couldn't have done it.

Q. Assume that Mr. Edgerton measured the lowest of the three members of this guide frame, for the sake of getting the weight of frame, and gave them the benefit of the doubt and used that weight to the top, would he be giving a value that would be too great or too small, or a weight which would be too great or too small?

A. Well, if he assumed the bottom member of the guide frame to constitute the entire guide frame and provided his calculations were correct and he would not increase the error 12 or 24 or 16 times or as many panels as there are in the guide frame, but if he should make an error in that instance he would simply have that error 24 times, if there were 24 panels.

Q. Now, the error would be in the direction of making the guide frame too heavy?

A. Not at all, it might be just in the other direction.

Q. Aren't they heavier as you come near the ground?

A. If his estimate is correct——

Q. Then your whole testimony here is that Mr. Edgerton in the time at his disposal could not make an examination of the plant and make measurements, but if he did make measurements they were not correct measurements?

A. I know they were not correct as far as he did give them.

6606 Q. From such weights as you have been able to get from the testimony?

A. Yes, they are not correct.

Q. Have you looked at his weight of the guide frame for the 65th Street——

A. I don't recall it just now. I was attempting to give the testimony——

Q. Having done so at that time did you not come to the conclusion that the weight which he gave there was enough higher than that which the guide frame actually is——

A. I cannot recall that until I go over the testimony.

Q. Now, in your measurement of the dimensions of the members of this guide frame did you, as Mr. Edgerton did, take callipers and rules and micrometers and use such precautions to see that you got the right and proper dimensions of the guide frame?

A. If I had done that I would have made the same errors that Mr. Edgerton made. I have built most of these and know——

Q. Then it is impossible to go to a guide frame and make measurements and find out the size of the material that enters therein?

A. No, it is not impossible to do it, but you have to climb up in the air about 250 feet to do it, and it takes considerable time to do it.

Q. Have you consulted the employees of the Consolidated Gas Company to find out whether Mr. Edgerton did not climb up some 250 feet in the air to make these measurements?

A. It was not necessary to do so. I know he did not.

Q. Do you know whether he did or not?

A. No.

Q. Do you know how many times it is necessary to climb up 250 feet to make these measurements?

A. No. But no man can do it in fifty hours.

Adjourned at 5.45 P. M., to Thursday, January 31st at 11 A. M.

Last Exhibits:

Complainant's, 374.
Other exhibits same as last hearing.

6607 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *January* 31, 1907—11.00 a. m.

Met pursuant to adjournment.
Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

6608 Mr. BURR: I think I might occupy some time in straightening out the matter of the real estate, which has got to be done before we close this case or else I will withdraw the stipulation which I entered into with you.

Mr. MATHEWSON: What do you mean? I don't know what you are talking about.

Mr. BURR: I will tell you. That is the reason I will avail myself of this lull to tell you.

Mr. MATHEWSON: I don't know of any stipulation that I have violated, or that I am prepared to cancel.

Mr. BURR: Our time is becoming very limited and I cannot afford to lose a moment. You remember some time ago, Mr. Master, I called your attention to the stipulation which Mr. Mathewson evidently intended to enter into that was made waiving the technical objection to the grants and the maps, but it appears in the record it simply refers to the grants. When we afterwards sought to have that corrected by including the stipulation as to maps, certain conditions were exacted from us with which we cannot comply. Now, I will call your attention to exactly what happened in that regard. On page 4277 of the record, on the introduction of City's Exhibit 76, Mr. Mathewson used the following language: "I object to it as not proven." This objection was overruled and exceptions taken (p. 4278). Similar objections were made to Exhibits 77, 78, 79 and 80. On page 4282, Mr. Master, on this subject the following discussion took place:

"Mr. MATHEWSON: There is no question but what these water rights were substantially vested in the Consolidated Gas Company."

6609 Mr. MATHEWSON: That word "substantially" should be subsequently.

Mr. BURR: Yes, subsequently. I won't read all. That is on page 4284, but it is manifest that the intention was to have this stipulation cover objections made to the maps as well as to the grants. It seems to me we are entitled to this correction and in the event of its refusal we desire to withdraw our stipulation and require the gas company to prove the *mean* conveyances.

Mr. MATHEWSON: What are you referring to?

Mr. BURR· Simply that without the word "maps" here we would have to prove all these maps. We made a concession with regard to them and in consideration of that you consented we should not be put to the trouble of proving the maps and the grants, but the word "maps" was left out.

Mr. MATHEWSON: I remember generally that records were presented and that there was objection to them as not proven, as to execution or something of that sort, and that we withdrew the objection.

Mr. BURR: We entered into a stipulation with you.

Mr. MATHEWSON: Well, whatever it was it appears on the record.

Mr. BURR: It was an inadvertence that the word "maps" was left out of our stipulation.

The MASTER: Well, the maps were admitted, Mr. Burr.

Mr. MATHEWSON: Of course, any concession we made and any concession you made in that regard was for the purpose of this suit only.

Mr. BURR: If I recall, some days ago it was said "if you submit a stipulation it will be all right," and I submitted one but there seems to be come hitch. I wish you would take it up yourself.

6610 The MASTER: The maps were admitted and it appears that the man was here ready to prove them and I admitted them understanding that he was the proper custodian of the maps and the man would be called later, so as not to interrupt the witness on the stand at that time. Mr. Mathewson apparently having insisted on having him called, but he was not called, and I should think your rights are protected.

Mr. **Burr**: I do no- say Mr. Mathewson is changing any stipulation that he meant to enter into at the time, but in the office of the attorneys for the complainant they evidently do not understand it as well as Mr. Mathewson does.

Mr. **Mathewson**: I assume some stipulation as to inserting the word "maps" between Mr. Burr's office and the office of Sherman & Sterling has been taken up, with which I am not familiar.

The **Master**: You will find that the record shows that Mr. Hatton was going away. Mr. Hatton, who was the man who brought the maps, was going to prove the custody of them and the office they came from and he was relieved from attendance. That apparently is a waiver of any objection.

Mr. **Burr**: Well, I didn't know. Because of the attitude of Sherman & Sterling I assumed that there was some legal objection.

I think it is proper to note that we have not as yet received the transcript of the testimony taken yesterday, and it is by a great effort that we are able to proceed at all to cross-examination upon the great mass of rebuttal testimony which has been put in so quickly.

6611 Mr. **Kirby**: Not only that, but yesterday's exhibits, numbers 370, 371, 372 and 373 have not as yet been received although they were promised.

Mr. **Mathewson**: The delay is not attributable to us. I gave them to Mr. Carroll last night and he was to deliver them by half past nine this morning.

Mr. **Kirby**: We are not blaming anybody; but simply stating the fact.

Frederick Mayer resumes the stand and further testifies:

Cross-examination continued by Mr. **Kirby**:

Q. I understood you to say yesterday that you figured on the cost of labor and material for over 95% of the apparatus you appraised in arriving at its value?

A. I did.

Q. How did you arrive at your values for the water gas apparatus?

A. I obtained those from the proposals from the United Gas & Improvement Company.

Q. I other words you obtained bids from them?

A. Yes.

Q. So that that apparatus at least was not included in your 95%?

A. Not in the instance of the water gas plant but it was in the coal gas plant.

Q. In the coal gas plant you figured upon the material and labor for the construction of it?

A. Yes.

Q. I believe you also said you had access to the figures of Bartlett, Hayward & Company, of holders constructed in New York for the Consolidated Gas Company?

A. I did.

Q. So that you took advantage in making your appraisal of bids from the U. G. I. of Philadelphia and Bartlett, Hayward & Company of New York on such apparatus as these concerns installed for gas companies? 6612

A. Well, those of Bartlett, Hayward & Company were the actual estimates either by myself personally or under my direction.

Q. But no matter how they were made I understand it that they were not yours at the time of making this appraisal?

A. They were mine in a sense of the word, yes, because they were prepared by myself or under my direction.

Q. But were in the possession of Bartlett, Hayward & Company with which you were no longer associated?

A. That is right.

Q. Now I state to you that Mr. Edgerton's figures on holders were checked before their insertion in his proposal by the sales agent for three of the largest holder builders in this country. Assuming this was so would this in any way change your opinion as to the accuracy of Mr. Edgerton's values?

Mr. Mathewson: I have no objection to Mr. Kirby's putting an assumption to the witness, but to say I now "state to you," which is testimony by counsel, I do not think it is quite proper.

Q. Then I will change the question and assuming say, that Mr. Edgerton before inserting the values obtained by him in his appraisal of holders submitted his figures to the sales agent of three of the largest holder builders in this country, and that these agents agreed with his values, would this in any way change your opinion as to the accuracy of Mr. Edgerton's figures?

A. No, it would confirm my opinion regarding the cost prices submitted by him for the reason that no matter who he referred to they were not familiar with New York conditions 6613 as nobody built holders in New York for the last eight years except Bartlett, Hayward & Company, therefore they could not be familiar with New York conditions, and this would strengthen my valuation.

Q. Now will you also assume that Mr. Edgerton had access to and examined the cost of material and labor and total cost erected of the original four small holders of the Mutual Gas Light Company of this city, has had access to the cost of the holder for the Standard Gas Light Company of this city, and had access to the cost of the 2,600,000 cubic feet holders of the Central Union Gas Works of this city, would this in any way change your opinion as to the accuracy of his figures?

A. Not at all, because my estimate was based upon the conditions as they existed last summer. If he had access to such figures they were built under different conditions.

Q. Were all of Bartlett Hayward's figures for holders built last summer?

A. No, they were for holders built within the last twenty-five years, only the prices were applied to conditions as existed last summer.

Q. I notice in a great many of your foundation estimates, in fact in the majority of them, that you have estimated for piling under buildings of but twenty-eight feet in height. Is it usual to put any more than ample footings for such foundations? 6614

A. It is. I have never built a building of that height for gas house purposes in ground that was bad and required reinforcement without any piling because I knew it would not stand.

Q. How did you arrive at your knowledge that there had been piling used in these cases?

A. I stated yesterday partly from drawings and partly from information that I could collect at the works. Where there had been any drawings in existence for the buildings under consideration I ascertained -he necessity of piling from drawings or other buildings in the immediate neighborhood.

Q. In your inspection of various buildings around the neighborhood did you notice the condition of the three-story building opposite the retort house on 14th Street and endeavor to ascertain whether piling was used in each of the walls of that building.

Mr. MATHEWSON: What kind of a building is that?

Mr. KIRBY: Three-story brick building opposite the gas house in 14th Street.

Mr. MATHEWSON: Was it a tenement house or a part of a gas plant?

Mr. KIRBY: Not part of a gas plant.

A. I did not.

Q. Would it surprise you to know that this three-story brick building has no pile foundation thereunder?

A. Not in the least. I have heard of tenement houses falling down for want of proper construction and proper foundation, and such construction certainly would not be done by the Consolidated Gas Compnay.

Q. Will you give me the buildings you did look at to ascertain if they had piling foundation thereunder, contiguous to the 14th Street works?

6615 A. I do not recall the drawings which were in existence for particular buildings. What I have in mind now is 21st Street. I don't know whether there were any bad conditions at the 14th Street station. It is too long ago to remember.

Q. I call your attention to the description of a one-story building, as set down in the schedule of appraisal, 14th Street station shed, one-story building, galvanized iron siding, 38 ft. 3 by 31 ft. by 11 ft. 6, at underside of roof trusses, foundations 6 ft. 6 below grade, consisting of brick walls and 12 by 12 inch coping, constructed of piles, space, 30-inch centres, in double rows; do you consider that a building of that size and weight demands a pile foundation?

A. I don't know what the original intention was as far as the purpose of that building is concerned.

Q. I ask you do you consider that a building of that size, dimensions and weight demands a pile foundation?

A. Yes, I consider that no building could be built in that ground without pile foundation, no matter how small it is.

Q. A shed or anything of that kind?

A. Yes, sir.

Q. Have you ever made any estimate of the weight which soil of this character would hold up without pile foundation?

A. I have made many tests of ground of similar character, yes.

Q. And what weight do you think it would hold per square foot of area?

A. Well, I should not for a building or foundations of machinery place any weight upon it, because it may be hard in one spot and may be soft in another right alongside of it.

Q. Is there any apparatus in this one-story building, with galvanized iron sides, to which I have just called your attention?

A. No; I believe not. But I do not recall it.

6616 Q. It has no basement?

A. No.

Q. Now, we can eliminate foundations for machinery and simply take the building by itself?

A. Yes.

Mr. Mathewson: What building is that? Will you give me just the description of it, what it is known as?

Mr. Kirby: I have given you the description. It is known as a shed of the 14th Street station. The description I have given. I will repeat it if you would like to have it again.

Mr. Mathewson: No.

Mr. Kirby: The roof is galvanized iron or wood. Mr. Mayer has stated he is familiar with the character of the ground at 14th Street. I would like to know how much weight this ground would carry per square foot.

A. Why, I did not make any tests of the carrying capacity of the ground at that particular location, but from the description you read and from the character of the ground I know that no weight should be placed upon it at all.

Q. No weight at all?

A. No weight of a building or anything like a building.

Q. Not even a shed?

A. Not even a shed, because that shed may be used for supporting a great deal of weight inside for storage purposes.

Q. You know the use to which this shed was put, don't you?

A. I don't recall it now; it is too long ago.

Q. Let us assume that that was a shed which was not to be put to such use as holding great weights for storage purposes?

A. I would still claim the necessity of piling the walls.

6617 Q. So that every building whether it was one-story *of* half a story or five stories, whether it was what is commonly known as a shed, or no matter what its weight was, according to you would have to be piled?

A. It has to be piled.

Q. Notwithstanding the fact that across the street you have a three-story brick building which has no piling under its foundations?

A. It would not affect my judgment at all.

Mr. Mathewson: No evidence in the case that there is such a building.

Q. Would it influence you in any way if this three-story building across the way to which you have made reference was a factory in which there was machinery?

A. Not at all.

Q. Do I take it that you assume that Mr. Edgerton in making his appraisal of these buildings did not compute on any piling for the foundations?

A. To the best of my recollection he stated he did not consider piling necessary and did not include it. Now, whether that was just in 14th Street or some other place, I don't recollect exactly, but it was in either one of the places.

Q. That is the only ground which you took for coming to your conclusion. Now if it be a fact that Mr. Edgerton merely stated that he did not consider a piling foundation necessary that would not indicate to you, would it, that he had not estimated on piling in getting at his appraisal valuation, would it?

A. Not only that fact alone, but his detailed estimate did not show it, that he included any piling except in a few instances. In a general way, if I remember correctly, he said he made an estimate for piling so many thousand dollars. Where that thousand dollars comes from or how he arrived at it I don't know.

6618 Q. But the mere fact that he stated piling, so many thousands, would indicate he had estimated on piling?

A. No, it would not indicate he had estimated at all, but that he made a wild guess.

Q. Well, call it whatever you may, but he included piling?

A. Only in a few instances as I remember his detailed estimate now.

Q. Point to the testimony and show me where you consider he has not included piling where you set it forth, as being under the buildings for foundations?

A. I referred to the detailed figures which he submitted and which I had to look over.

Q. Nothing in the testimony?

A. Yes, it was so stated in the testimony. I cannot refer to the pages. In many instances he said there was no piling there and why there shouldn't be any there.

Q. That is quite true but that is not testimony to the effect that he did not estimate on the cost of the piling?

A. If he was familiar with the structures and surrounding buildings and the consequent action on pipes in certain cases he would not consider that piling was unnecessary.

Q. I do not presume that there would have been for a gas works peculiar conditions existing so that they would require pilings, whilst a factory building to sustain a greater weight might not need piling?

A. A big difference between the two. The effect produced by settlements might put the whole station——

Q. That would apply to your one-story shed?

A. It would.

Q. In which there would be no pipes of any kind?

A. There might be. There might be some in the immediate neighborhood in the ground that would be affected by the settlement of the buildings.

6619 Q. And presume there were no pipe contiguous, would that change your opinion?

A. Not at all. It would have to be piled if it is a building for a gas works.

Q. Did you notice that the brick wall around the holder yard at 14th Street and Avenue C leaned badly over towards the street so it had to be secured to the holder columns and anchored inside the yards to keep it from falling in the street?

A. I did.

Q. Did you notice in the 14th Street retort house that truss girders of considerable depth were stretched across the retort house at a number of places and apparently introduced since the building of the house to keep the building from falling apart?

A. I did.

Q. Do you consider the roof of the purifier house at 42nd Street to be in good repair while at a number of points a good view of the sky can be had through the roof?

A. What is that, 42nd Street?

Q. Yes.

A. I don't recall that.

Q. Did you take particular notice of the woodwork of the trestles in the 42nd Street yard?

A. Yes.

Q. Isn't that woodwork, all of it, as a matter of fact, in such a dilapidated condition, as well as the flooring above, as would call for a general condemnation of the whole of it?

A. No.

Q. What condition is the woodwork in?

A. I cannot recall exactly, but it is in condition as far as depreciation is concerned, according to the value of depreciation that I put it down at that time. It is impossible to remember all of those details now when the investigation was made several months ago.

6620 Mr. Mathewson: I think that was the vast sum of $1,000 that was attributed to the trestle, or something like that.

Mr. Burr: You wasted a good deal of time upon $50 in this rebuttal, so that by comparison that sum is vast.

Mr. Mathewson: Perhaps I saved it. You won't save the thousand.

Q. Mr. Edgerton has estimated the cost of frame Phenix column holders at 63d Street and 65th Street, at a value of $48,000 each, due to the extraordinary amount of iron introduced into that frame, thus making the cost of the frame nearly one-half the cost of the iron work of the holder. Do you consider the introduction of this amount of iron into the frame excessive?

A. Well, if you will refer to my valuation you will find that if there is a difference that this difference is due to either lack of weight in Mr. Edgerton's estimate or else by applying wrong prices. The values I have given are absolutely correct. I built both of those holders, too, I believe.

Q. What proportion do you consider the weight of the frame to be to the holder?

A. There is no fixed proportion.

Q. Of these holders I am talking about, these two specific holders at 63rd Street and 65th Street.

A. I could not make a guess at that.

Q. But you built them?

A. I know, but that does not naturally enable me to make a guess as to what that weight was eight or ten years ago in proportion to the weight of the holder.

Q. You did not estimate that?

A. Of course, and that would vary with every style and detail of holder. There is no fixed proportion, therefore I cannot remember.

6621 Q. In making your appraisal didn't you figure on these weights?

A. I did. I took it right from the original cost.

Q. But you cannot remember now what the proportion was?

A. Certainly not, because there are thousands and thousands of figures that I had to make.

Q. And you have not the information at hand?

A. Except in my valuation.

Q. Except as there, you haven't it?

A. No.

Mr. Mathewson: If you want the information as to what the weight of the frame was and the weight of the holder——

The Witness: It is all in the testimony.

Mr. Mathewson: The witness can give it to you, if you want him to refer to his notes, can you, Mr. Mayer?

The Witness: Yes, it is in the testimony now, I think.

Mr. Kirby: No, it is not.

Q. What did you estimate as the weight of these holders, exclusive of their framings.

Mr. Mathewson: He said he did not estimate, but took the exact weight and knows what it is.

Mr. Kirby: Some of us call that an estimate.

Mr. Mathewson: It is not wise to do so.

The Witness: That is the three million-foot holder?

Q. Yes.

A. The weight of the holder is 1,204,610 pounds; the
6622 weight of the guide frame is 924,285; the weight of the pipe
connections is 75,400. The total weight of the entire construction is 2,258,795 pounds.

Q. What did you figure the value of the holders to be exclusive of the guide frame?

A. I figured them altogether .

Q. So that in coming to your valuations for holders you took all the weights and multiplied it by a certain factor?

A. I did, and that certain factor is based on the actual facts existing last Summer.

Q. About that you have already testified?

A. I have testified, and I believe given the details how those factors were made up; the total was 7.1 cents per pound.

Q. So that the method of your appraising these holders was as set down in your testimony and as just stated, obtaining the weights of the different parts and adding them together and multiplying by a certain factor?

A. Yes.

Q. Coming for a moment to the tanks which contain the holders. I ask you if it is not considered from an engineering point of view that it is considerably cheaper to construct a brick tank in rock excavation than in any other kind of material?

A. No, it is very much more expensive. That is very plain on the face of it. When you have to excavate a whole mass of rock instead of earth it costs very much more. I don't see how it could cheapen the tank any. You have to do the same excavation as in ordinary earth and then build the holder the same as in ordinary earth.

Q. Do you estimate the entire amount of rock?

A. No, neither do you in earth where the earth is good.

Q. Do you excavate more rock than earth?

A. No more than you would in the instance of earth.

6623 Q. As much?

A. As much.

Q. Would you excavate as much rock as you would earth?

A. As much as you would good earth, yes. There may be a slight difference in the cone remaining in the centre of the tank, but the blasting would remove a great portion of the rock unintentionally which probably could remain there if it was not——

Q. But there is no drilling or blasting done for the purpose of removing the rock in the central part where the cone would be and where in an excavation in dirt the earth would have to be removed?

A. No, that is not so. The rock would not have to be removed. The earth would remain in the same spot where the earth remains in the other instances.

Q. But the earth, not standing up as rock does, is it not a fact that more of it would have to be removed than rock?

A. I have already stated just now very slightly more because you cannot confine your explosions in blasting to a certain contour.

Q. But you endeavor to do so?

A. But you cannot; it is practically impossible. You always remove more than you intend and therefore the excavation is nearly like with good ground.

Q. Have you ever calculated the difference in the cubical contents which are removed from an excavation for a tank built in rock and one built in sand?

A. I have, in this very instance. The removal of the rock is based upon a drawing which is prepared for the special purpose of building the tank. Now blasting has got to be executed to the lines called for by that drawing and that gives the maximum amount of excavation of rock required.

Q. Yes, but in preparing the drawing for excavation in rock and also sand are the same distances and height of cone reached.

6624 Mr. MATHEWSON: He said ordinary ground and not sand.

A. In the instance of sand you would have to excavate to the natural angle of repose of that particular material.

Q. And that is so in all soil?

A. It is so in rock, especially where you have rotten rock.

Q. But the angle in rock is much more vertical than it is in soil?

A. Yes, but I have already stated that you can not carry out a vertical excavation and it is never done in gas holder tanks, this is due to the fact that the tank when completed must be absolutely tight. In order to make it tight you have got to cover the interior excavation and make the same tight with the covering of concrete or cement. Now you cannot put concrete or cement into a vertically blasted rock wall, and in order to permit of applying the concrete you have to blast on an incline the same as you would in the cone in the instance of good ground. The tank that leaks through the crevices in the excavated rock not properly protected by the concrete, in other words, would be of no value.

Q. So that you require a certain angle to be set down for an excavation in rock?

A. We do.

Q. And a certain other angle to be set down for an excavation in sand?

A. Yes, sir, and another angle for another kind of dirt.

Q. But coming to steel tanks of modern construction, I ask you if these could not be built for less than half the cost, including pile foundation, in place of the brick tanks now used for the small holders which you have appraised at 14th Street, 42d Street, 44th Street and 21st Street plants?

A. I am not prepared to say unless I investigate that question in detail and ascertain the details.

6625 Q. What is your opinion about it?

A. As an engineer I have no opinion in matters of that kind. I deal with positive facts only and by reference to my paper.

Q. Would you be prepared to state whether or not such steel tanks would cost as much as the brick tanks to which I have referred?

A. No, I think they would cost less than the four combined holders, including the brick tanks and in fact I know that is a fact because we have removed four holders and substituted them by a holder with steel tank on the same area.

Q. So you have at least some little opinion upon the subject?

A. Well, a weak opinion which is of no value so far as comparison of values is concerned.

Mr. Mathewson: They might cost twice as much.

Q. Where do you think you could obtain a duplication of any one of these holders together with steel tanks for one-half the sum that you have estimated to replace these holders?

A. I could not say that at all. It takes a good many references to figures to answer that.

Q. Speaking for a moment upon your 10 per cent. engineering factors as opposed to Mr. Edgerton's 3 per cent, I presume that in undertaking an enterprise such as the replacing of the works of the Consolidated Gas Company, you would start out by employing engineers and draughtsmen and such as that to lay down the plant, would you not?

A. You mean from the standpoint of the contractor or the standpoint of the gas company?

Q. From the standpoint of the man who gets your 10 per cent.

6626 Mr. Mathewson: If you were building the works. You mean the company, don't you, Mr. Kirby? That is, for a plant constructed for it?

Mr. Kirby: I don't care whether it is a company, individual or what. Take the man who is getting this amount of 10 per cent.

A. There is more than one who gets 10 per cent. There is one 10 per cent. for the company and another 10 per cent. for the contractor.

Q. Yes, your final 10 per cent. you have spoken of and compared with Mr. Edgerton's 3 per cent.

A. The final 10 per cent. is expense incurred by the gas company. The gas company employs continuously a force of engineers and draughtsmen numbering from 50 to 75. That is about as big a force as I had under my direction as the chief engineer of the firm of Bartlett, Hayward & Company. It is this force of fifty to seventy-five engineers and draught-men and men that make up a very large portion, besides all the other items which I have enumerated in my testimony, of the 10 per cent.

Q. Now, we will assume that you have got a contract at the figures set down in your appraisal for replacing the buildings and apparatus of the Consolidated Gas Company. Would you employ engineers to lay out the work and draughtsmen to put the same into proper working drawings and prepare specifications and such?

A. That work will all be done by the gas company, that is, with the force of engineers and draughtsmen that I have just referred to. They would ask for proposals on specific parts of the contemplated improvements, such as apparatus or alterations to certain fixed buildings.

6627 Q. Now, in asking for these bids I presume that the details, say for gas holders and holder tanks, would be furnished by the firm giving the bid?

A. They might in some instances if they are approved of by the gas company. When they have an idea of their own that the details of the manufacturers do not suit them, they would change them to suit their ideas, and get bids upon such altered conditions.

Q. In these bids submitted by Bartlet Hayward, which you are familiar, were the plans and specifications for those holders and tanks drawn up by Bartlett, Hayward & Co., or the Consolidated Gas Co?

A. In the instance of the tanks of Bartlett, Hayward & Co., they are solely and alone my own construction and details. In instances of other apparatus, very often the gas company requires specific details to be incorporated in the construction upon which bids have to be made.

Q. I presume the U. G. I., from whom you obtained your bids for the Lowe water gas apparatus, also have their own plans and specifications, have they not?

A. Absolutely the same as in my instance with the gas holders.

Q. Now, your plans and specifications are prepared for say one stack of benches of a certain size. I presume those plans and specifications can be used for another stack of the same kind of benches, can they not?

A. They can under like conditions, but where conditions differ, or the details of construction have to be changed to suit that particular condition——

Q. That is, different foundation plans might have to be used or something of that kind, dependent——

A. In the instance of benches they would have to be adapted to the building unless it is contemplated to make such repairs 6328 in the buildings to permit of building benches of modern construction.

Q. This contract which you have, being for a great number of buildings and benches, I presume you would endeavor to so make the size of your buildings and benches that the plans for one would be fitted for use elsewhere, would you not?

A. Not at all. Every plan that I design is designed upon different lines to suit the local requirements and conditions as they exist. One cannot be applied to another.

Q. You never make your plans and specifications for say one holder in figuring upon the cost of another?

A. Oh, yes, I said before that we apply it to the requirements of the individual conditions.

Q. That is also true of your benches, is it not?

A. Also true of the benches and other apparatus.

Q. Of every apparatus?

A. Yes, the gas company watches the results obtained with the apparatus very carefully, and where they see the necessity of introducing improvements in the next apparatus for the same purpose, they request the manufacturer to incorporate that in his design.

Q. You have assumed a two years' building, what do you mean by that, that the operations from the time you obtained the contract to the completion of the work is two years?

A. I mean that it is two years from the time that the gas company places the first contract for grading and excavation to the time that they are able to make gas in that plant.

Q. And that includes such plans and specifications and work of that kind as would be necessary for the work?

A. It does.

6629 Q. Did I understand you to state in your testimony of yesterday in reference to foundations of the 21st Street plant that the concrete foundations for the new Lowe machines were not piled?

A. I did say that, and the reason I presume for not piling this particular foundation was due to the fact that the ground was found to be sufficiently compressed from the piling of the building, and the adjacent foundation of the old benches which had been piled. There is very often a great difference in the character of ground within a very short space. I find for instance in two purifier houses at the Astoria plant, that within two hundred feet, the same kind of building, that in one instance the excavation alone of one building amounted to over $40,000, whereas in the instance of the other building, an exact duplicate, it was $27,000, and the buildings were only 200 feet apart.

Q. This last is an unusual condition?

A. Not at all; it is met very often.

Q. And in your assumption of the necessity of piling under such buildings as you have included in your appraisal, it was based upon information given to you by the employees of the Consolidated Gas Company or from such old contract that came into your hand?

A. Well, they were only sufficient to indicate that the buildings had been piled, and then the value of the piling was based upon my own detailed estimate of what those pilings would be if I had to construct them.

Q. I mean whether or not it was necessary for these buildings to be placed on piles, not the cost of them?

A. No, it was not any question of finding out whether it was necessary, but whether it was piled, and I found out they were.

Q. That is all you looked into?

A. That is all I looked into.

6630 Q. You stated yesterday there was no visible dilapidation of the 14th Street plant and that it can be operated to the full capacity?

A. I did.

Q. In his connection did you notice that one entire stack of benches was let down, and kept down by reason of wear and tear on the retorts?

A. Where is that, 14th Street?

Q. Yes.

A. I don't think that was the fact at the time of my investigation and my examination of the plant.

Q. Did you notice Mr. Edgerton's testimony in reference to that?

A. Yes, I believe I recall that.

Q. Did you notice that six or eight benches or another stack were exhausted?

A. Not at the time of my examination.

Q. Did you notice that the stack of sixes accompanying the ½ depth furnaces, although nearly filled with retorts, was out of action?

A. I did not notice it.

Q. I ask did you notice it at the time?

A. No.

Q. Were all of these benches in action at the time of your examination?

A. As far as I can recall now they were, although I won't be sure of that fact because it was some time and it is possible that large number of benches were down, and I believe they were, for repairs; that is usual in the summer time, to shut down part of the plant to repair it.

Q. The condition would be different in December or January when Mr. Edgerton visited the plant, would it not?

A. It would as far as the repairs were concerned, but if they had other sources of production to supply the demand, they could afford to shut down a section of the plant.

Q. You stated yesterday that the pipe connections cannot be cut off in an old apparatus in order to connect on new apparatus. Must not, therefore, the new piping be a duplication of the old
6631 and on a larger scale, and when the old apparatus is removed what use can these old connections be?

A. I didn't refer to pipe connections for apparatus; I referred to pipe connections for the entire plant.

Q. Let us refer to pipe connections for apparatus.

Mr. **Mathewson**: I do not think Mr. Mayer so testified. I asked in regard to yard connections and nothing about——

Q. Let us take it, say to a puprifier box. Now, you have stated that such could not be shut down because the operation of the works must go on, and we will assume putting in a new purifier box and say you carried to that purifier box a new connection.

A. I didn't state that at all. I stated that the connections could not be taken out and replaced by others because it would stop the operation of the plant.

Q. Well, I think I stated the same thing in a little different way.

A. No, you referred to a single apparatus of the plant.

Q. Let us assume the single apparatus of the plant.

A. That is a different question from what I answered yesterday.

Q. May be it is; let us assume that it is. Will you answer the one I am asking now?

A. The question you ask now does refer to a single apparatus. If you mean to refer say temporarily to a single apparatus, to reconstruct the same, that of course can be done without shutting down the plant, because there are always valves between the gas mains and apparatus permitting a shutting down of such individual apparatus, but that is an entirely different question from what I answered yesterday.

6632 Q. So in the instance I have mentioned it would be possible to remove the yard connections and replace it by another?

A. No, it would not, I have not referred to general connections. I have referred to an apparatus, the elimination of this particular apparatus and not to any particular pipe connections except so far as they belong to that particular apparatus.

Q. Well, that is what I have reference to.

A. That is not yard connections.

Q. Well, take the yard connection running to that individual apparatus?

A. Well, you cannot take out the yard connections without stopping the operation of the plant.

Q. If, Mr. Mayer, you had been unable to obtain figures from the U. G. I. as to the cost of their water gas apparatus, how would you figure the value of such apparatus?

A. I should have had to figure them in detail, both for the fire brick linings as well as for the shells and mechanism to operate the plant, but as I have built many shells and a great many operating mechanisms for various kinds of water gas apparatus, including those of Mr. Edgerton's, I am familiar with the cost of that class of works from my own experience.

Q. I presume that the forms of these water gas apparatus, in fact of all apparatus in gas works, have been changed several times during your experience as an engineer?

A. Oh, yes, I have stated that just a few minutes ago, that the details have been changed.

Q. I presume also in estimating your value of guide framing, or rather the weight thereof, that the size and weight of a holder has much to do therewith?

A. No, none whatever. The size and weight of holder has nothing whatever to do with the guide frame.

6633 Q. So that a holder of small cross section would require as heavy a guide framing as one of large cross section?

A. That depends upon the result of statistical calculation, based upon the assumption of twenty-six pounds of pressure to the square foot of curved surface exposed to the direction of the wind.

Q. So that then a large holder which has relatively a large cross section would need a stiffer and heavier frame than a small one, would it not?

A. Oh, yes; that is natural.

Q. And a three or five——

A. Excuse me. What I meant by that, is not stiffer applied in the proper term of the word. It has to be just as stiff for a small as a big holder, but it would require more material in one than the other. The stiffness would have to be the same in both to resist the same wind pressure.

Q. And to get that stiffness in that large holder you would have to have more weight than in a small holder?

A. Yes, more material.

Q. Well, more material means more weight?

A. Yes.

Q. That is also true for a five lift holder as with a one lift holder?

A. Oh, yes. Possibly I misunderstood your question before regarding the size and weight of a holder in comparison to the guide frame. I referred to the same individual holder, meaning the size and weight of a particular holder had no fixed relationship to the weight of its own guide frame.

Q. That comes down to that with which we all agree, that cubical contents has little influence upon the weight of the guide frame; it depends upon the diameter of the holder?

A. That's right.

6634 Q. You spoke yesterday of your detailed estimate of cost of the governor and boiler house at 132nd Street?

A. Yes, sir.

Q. And you gave a cost of that per cubic foot, did you not?

A. I believe I did.

Q. Do you remember what that was?

A. I think it was fifteen cents, wasn't it? I don't remember.

Mr. Mathewson: 13.2 I think.

The Witness: I think it was fifteen cents, that is my recollection. That was 132d Street, wasn't it?

Mr. Mathewson: Yes.

The Witness: Fifteen cents.

Q. Is that the building which you compared with Mr. Edgerton's cost?

A. I did.

Q. That being the only exhibit which I had I will take that up. I refer you to Complainant's Exhibit 373, which purports to be a comparison between your valuation of that plant and Mr. Edgerton's, and I ask first of all where do you get the value of $30,000 as Mr. Edgerton's valuation, cost given in schedule, because by referring to the testimony I see that the value set down is $21,000.

Mr. Mathewson: Mr. Edgerton computed that at $21,160, and I am not sure but that may have been one of the clerical errors in the schedule that Mr. Edgerton presented, which was subsequently corrected on your list here—$30,000, I mean.

Mr. Kirby: In my copy of the schedule, I have not the original, and in the printed schedule which was taken from the original, the value is set down not at $30,000, but as over $21,000, or $21,160.

6635 Mr. Mathewson: $21,000 it was put down as—was that the depreciated value or original value, Mr. Kirby?

Mr. Kirby: I don't know.

Mr. Mathewson: There are $30,000 and whether that was an error and subsequently changed before printing—or maybe it was the cost without depreciation, I don't remember.

The Witness: I think it was Dr. Marks' testimony instead of Mr. Edgerton's.

Q. Then it is an error, instead of having $30,000 it ought to be as is in the testimony, $21,000?

A. It appears here $21,000. It may be I just changed the two schedules, Dr. Marks' and Mr. Edgerton's.

Q. Well, that is the case; you have just referred to the schedule where you got your information from?

A. Yes.

Q. And it is set down there as $21,000?

A. Yes; it should be Dr. Marks' valuation instead of Mr. Edgerton's.

Mr. Mathewson: In reference to that 132d Stre-t building, the 13.2 cents is the amount at which Mr. Marks figured Mr. Mayer's cost upon Mr. Marks' cubic contents, 13.2.

Mr. Kirby: What I was after was Mr. Mayer's, and that is fifteen cents.

The Witness: Fifteen cents.

Mr. Mathewson: Mr. Mayer, on his own cubical contents computation gave fifteen cents.

Q. So that the figures which we have to compare are Mr. Edgerton's of $21,000, and——

A. $21,160, as given in his detailed schedule.

Q. And your figure which is——

A. $26,763.

6636 Q. What is this figure which I see here, $20,071? The figure in Complainant's Exhibit 373?

The Master: It says here total contents of building 133,800 cubic feet.

Mr. Kirby: I just wanted to see what the value is and I think I know, but I want him to state.

A. It may be an error of the typewriter in inserting those two values. I do not recall for what reason they put that down. I don't know whether it had any relation to the 15 cents at all. The total contents of the building was 133,800 cubic feet.

Q. Well, 133,800 cubic feet at 15 cents per cubic foot would be what?

A. I presume $26,736.

Mr. Mathewson: You had better not presume. Just figure it out and see. That may give you some light. You had better look at your own record and find what the cubical feet are and not depend upon memory.

A. Well, I have it down here, 133,800.

Mr. Mathewson: Yes, but the question is raised about it. That is the building at the top of the page, isn't it?

A. Will you let me see my original schedule, please, of 132d Street.

Mr. Mathewson: You have it here.

By Mr. Kirby:

Q. It is a fact that the number of cubic feet which you have set down on this exhibit as the cubical contents of that building, figured at 15 cents per cubic foot, amounts to $20,071, is it not?

A. $20,071, yes.

6637 Mr. Mathewson: Look at your cubical feet. Look at your memorandum and see if that is right.

A. That $20,071 refers to the building alone. And then there is an item for the foundations, $6,665, making a total of $26,736.

Q. Then, that is the cost you have given in your schedule, but you have figured this out now at 15 cents per cubic foot and you have given the cubical contents of the building?

A. Yes, I have already stated in my testimony that my additional values per cubic foot are based upon a foundation of about four feet depth below the surface of the ground; it includes though in that instance in good character of ground, which at 15 cents for the building make $20,071, and then there is an item for foundations, extra cost $6,665, making a total of $26,736.

By Mr. **Mathewson**:

Q. That is what appears in your original schedule?

A. That is on account of the original increased depth for foundations beyond that of normal condition.

By Mr. **Kirby**:

Q. So you have tried to carry through the estimate of all your buildings a method which will make them capable of comparison, you have taken a certain unit assuming a certain depth of foundation and where that foundation has been carried deeper you have added to that and where it has been shallow you have deducted?

A. That's right.

Q. Now, then we are to compare Mr. Edgerton's valuation of $21,160 with your valuation of $26,736, is that correct?

A. That is right, sir.

6638 Q. And is this figure of $19,310 which you have put under Mr. Edgerton's column that of his building exclusive of foundations so as to compare it with your figure of $20,071 exclusive of foundation?

A. Exclusive of the foundation as it exists here but including foundation of the depth of four feet as would be in normal condition, so that the two valuations are upon the same basis.

Q. So that there is practically but little difference between the two?

A. As far as the substructure is concerned, but he made a big blunder in his foundations.

Q. Endeavoring to trace this blunder, as you call it, you have taken certain values and put them under the column headed "Edgerton's values;" where did you get those values from?

A. From his total estimate.

Q. Did they come from his testimony?

A. No, from his detailed estimate which he submitted here in large yellow paper envelopes.

Q. Now, I notice that on page 3 of this exhibit, under miscellaneous items, you have fireproof concrete arches. Now, you included that in your cost of concrete?

A. Yes.

Q. And so in your tile coping, you included the cost of enameled brick and so on?

A. Yes.

Q. So that it has been impossible for you to make separate comparison between the values which you put upon certain parts of the work and values which you, looking at these sheets to which you have made reference, assumed Mr. Edgerton had put upon the same parts of the work, is that not a fact?

A. No. In most instances direct comparison was possible; and only in these few instances, such as fireproof, concrete arches, tile coping, fireproof doors, flashing and gutters and machinery foundations, amounting in total to $3,450, no comparison was possible.

6639 Q. Did you go through these sketches which Mr. Edgerton submitted here?

A. Oh, no, that was impossible.

Q. Do you understand those that you went through?

A. Do I understand them?

Q. Yes?

A. Well, I did as far as I could tell what figures meant when I saw them on a piece of paper added together. That is all it amounted to.

Q. What were these schedules, were they detailed statements of cost?

A. Well, they were intended to be, and with the exception of the omissions why they were detailed statements. There were a whole lot of omissions.

Q. You haven't any knowledge, have you, as to whether or not certain amounts as set down for a certain material or job say painting and glass, Edgerton's valuation $325 as against yours, being $150, you did not include hardware which you have set down as a separate item of $200?

A. If he includes painting and glass under hardware it would be a blunder right off. I don't see any connection between the two.

Q. It might be a blunder in the statement but it would give the same thing in dollars and cents, would it not?

A. I am not prepared to say.

Q. Neither are you prepared to say that the amount which he sets down as $520 for his granolithic cement floor which you give as $432 does not include other things beside the floor in itself?

A. I cannot tell, no, sir.

Mr. Mathewson: Might that include hardware, too?

Mr. Kirby: It might very well include it.

6640 Q. In figuring out the costs of buildings and things of this kind, do two men work in the same way? Is it not a fact that one man will oftentimes include under a certain head what another man will include under another certain heading?

A. No; that couldn't happen very easily. He might apply different valuations but so far as the application of values to a certain class of material *of* workmanship is concerned he could not change those. He could not make carpenter's work like hardware or hardware like painting and glass or anything of that kind. He can apply different values but cannot change the character of the work to which it is applied.

Q. Now in going through these schedules you found a certain statement with the letters "etc." after them. Did you know what those letters "etc." referred to?

A. What are those letters?

Q. Well, it means and so forth, does it not?

A. I presume so.

Q. Do you know what and so forth means?

Mr. Mathewson: Let us see what it is that you are referring to.

Mr. Kirby: My question is perfectly clear.

A. No, I don't know what and so forth means in putting a valuation on the cost of a building. I couldn't attach any value to it.

Q. So wherever in this schedule which you have just made reference to I show you "etc.," do you know what the "etc." means?

A. I don't know. It is of no value.

Q. And probably the only man who would know what "etc." meant would be the man who put it there?

A. That may be so but when you total up his summary and you find that a whole lot is missing there then that "etc." explains that that "etc." was not taken care of. It was lost in some way or another.

6641 Q. As a matter of fact that "etc." might very well be those things which have not been taken care of?

A. Well, that may be, but when they are not there, of course his price is too low.

Q. And in such cases where his prices are smaller or higher than yours I suppose "etc." included certain things there which he had not taken care of?

A. Possibly.

Q. So in no instance, high or low, or the same, could he be right?

A. No the total is considerably lower. If the total was the same as mine it would be all right, but it is not.

Q. So the way you come to your conclusion is to take Mr. Edgerton's total and compare it with yours and because he is different he is wrong, is that it?

A. I know he is wrong because he has not allowed sufficient for sub-construction or foundation. It is self-evident by his detailed estimates that he has not included it.

By Mr. Mathewson:

Q. You would not include $6,000 of extra foundations under "etc.," would you?

A. I think not, unless figured *it* in detail.

By Mr. Kirby:

Q. This question of foundations having been such an interesting one—I cannot find it here, but if I remember rightly you made reference to Mr. Edgerton's lack of including foundations in his appraisal of the 21st Street station. Did you make such a reference?

A. That may have been possible, I don't recall it exactly, but I believe it is quite likely.

Q. Now, do you find on Mr. Edgerton's valuation for these buildings to which I have called your attention that he has made 6642 any allowance for both foundations or any foundation except the foundation which could be used in the hard soil?

A. He did not. In some instances he did not allow enough for ordinary foundations.

Mr. Mathewson: That was the old and new generator house at 21st Street, was it?

Mr. Kirby: I think that referred to the whole of 21st Street.

Mr. Mathewson: No, I don't think so, for I didn't ask him as to any buildings at 21st Street except the old and new generator plant, as far as I recall.

Mr. Kirby: He went into a whole lot of talk about purifier houses and sheds.

Mr. Mathewson: The question asked was whether these buildings, with reference to these buildings, that is to say the two buildings respecting which I had been questioning the witness, and he said he found he had allowed only 621 cubic yards of excavation. There should have been over ten times as much or 6,740.

Mr. Burr: I find referring to certain buildings that Mr. Edgerton has made no allowance for pile foundations.

Mr. Mathewson: Yes, that is quite right.

Mr. Burr: Under the water gas apparatus and under the buildings.

Mr. Mathewson: That may be, yes.

Mr. Burr: And the witness stated he had drawings on such foundations and from such drawings and the information which was given him he built what would represent the existing foundations.

Mr. Mathewson: Yes. That is all true. Confining this 6643 to apparatus and foundations and buildings to which the witness was testifying. It may be Mr. Edgerton did not allow anything for pile foundations on any building at 21st Street, and this witness might so testify if it were true, but my point is, so far as I recollect, he has not covered it so broadly as that.

Mr. Kirby: The contrary not only may be true, but is true.

Mr. Mathewson: Even if so it must appear in the statement.

By Mr. Kirby:

Q. Well, so that we may get at the foundation of this whole foundation question, let us take up the 21st Street station and buildings. Let us take the first building set down in that schedule, stove storage and meter-proving shop. I ask you if you know——

Mr. Mathewson: Refer to your schedule in reference to the 21st Street plant, so you can know what you are after.

Q. (Continuing:) — how much Mr. Edgerton allowed for the excavation and foundation upon that building?

A. No, I do not.

Q. Now, I ask if you will tell me how much you allowed for excavation and foundation in that building?

A. $12,400.

Q. And did that include foundation for machinery?

A. There is not any machinery in that building.

Q. So that a statement in that schedule "foundation for machinery" is an incorrect one?

Mr. Mathewson: No, it is not.

6644 A. I have it here as merely a memorandum, instructions given to my men at the time of examining the plant to look out for foundations of machinery, and they had a memorandum by which they had to report to me. Where there isn't any machinery, there wasn't any included.

Mr. Mathewson: This was Mr. Mayer's private memorandum made out for his purpose, and to assist you I had copies made as speedily as possible and sent to you. There were in various cases expressions, "Foundations for Machinery," under different headings which were merely put there by Mr. Mayer's instructions to call the attention of himself and subordinates to look for foundations and include them if there were any, and it does not mean that any foundations were included in the total estimate. Is that so, Mr. Mayer?

The Witness: That is so; it was simply copied in making the copies of the schedule.

Q. Taking the meter repair shop and office, do you know how much Mr. Edgerton included for foundations in that building?

A. I don't recall it now. I looked hurriedly over his detailed estimate, but I cannot carry it all in my head.

Q. Nor for the stove repair shop?

A. Same thing.

Q. Or the——

A. There is no foundation for machinery in any of those buildings.

Q. And none included in your estimates of their value, is there?

A. None whatever.

Q. Do you know how much Mr. Edgerton allowed for his foundation for machinery over the entire plant?

A. No, he did not figure the foundation separate from his substructures and therefore you cannot tell.

6645 Q. In other words you could not from the sheets which you had before you separate the figures so you would be able to come to a conclusion thereon?

A. There were some instances where I think there was a figure at the end for these foundations estimated in round figure; in a great many instances there was no such figure.

Q. In those instances you were not able to make your separation?

A. No, because he did not figure it in detail.

Q. Do you deny that these sheets were the only figures that Mr. Edgerton had in making his appraisal?

A. That is the only one submitted to me.

Q. Well, I didn't ask you that.

A. Well, those are the only papers I can base my judgment upon, I haven't seen any others.

Q. In making your estimate did you have about three sheets or a sheet and a half for each building?

A. Wherever I made a detailed estimate it was made on the same basis that you have an example of before you. Foundations I kept separate from the buildings in order to establish a value of foundations.

Q. And the figures and calculations that you made to come to these conclusions I presume would cover a great many more pages than even here, would it?

A. No, it was not necessary for me because I employed a unit figure for the buildings which included a certain amount of foundation. All I had to estimate was the variations from normal conditions of the constructions under consideration and so I got basis for comparison.

Q. So that that would be a very simple operation?

A. It would be, yes.

Q. Quite a different operation, however, where you are working on the cost of buildings by detailed estimate of materials entering into the construction thereof?

6346

A. No, it would not be very different for the reason as shown in my yesterday values in which the detailed estimates or rather the prices of the detailed estimate were included.

Q. In your unit values you had to go through quite a long process to come to a conclusion, did you not?

A. No, I had those.

Q. But at the time you originally made that you had to, didn't you?

A. Yes, indeed.

Q. You didn't do it on one sheet of paper either?

A. No. It took more than three or four weeks to do it, too.

Q. Now, if I remember your testimony yesterday you stated that Mr. Edgerton figured his brick at $14 per thousand laid?

A. I believe that was the case in that instance, that particular building. I have forgotten which one it was. I think it was at 132nd Street, the governor house——

Mr. Mathewson: No, exhauster house at 111th Street. They may have miscopied it 111th Street, but my notes make it so.

Q. I think you also stated that Mr. Edgerton's price for flooring was $40 a thousand, board measure.

A. Yes.

Q. Now, I call your attention to page 5393 and 5394 of the testimony, and ask you if it is not stated there that Mr. Edgerton in making his estimates considered the cost of material erected "brick work, ordinary brick, $14 to $20 per thousand; pressed brick $20 to $40 per thousand; lumber $35 to $60 per thousand feet B. M."?

A. Yes, but I am referring to the detailed prices applied to his estimate in yesterday's testimony—applying his prices given in his testimony in the detailed estimate, but much lower ones.

6647 Q. Will you tell me in how many instances he used brick at $14 per thousand laid?

A. No, I can't tell you that because I could not examine all the estimates within the time.

Q. Can you tell me in how many instances he used flooring at $40 per thousand feet, board measure?

A. No.

Q. And you assumed because he used it in one instance that he used it in all instances, is that right?

A. Well, I had a good reason for that assumption. I don't see why he should change the value in one building from that in another building for the same class of materials unless there is an error.

Q. And the cost of brick laid never varies, in your mind?

A. Oh, yes. I stated that repeatedly. It varies very much.

Q. You gave a value yesterday, I think, of $25 per thousand, did you?

A. And I gave in detail how that was made up in my testimony.

Q. When did you give that?

A. In my original testimony.

Q. I would like to have you give it to me now?

A. These prices are based upon conditions that existed at the time of my examination last Summer. The average price of the brick was $10, the minimum price at that time was $8, and the maximum price was $12. The labor of laying that brick for bricklayers was $7, the labor of the helpers was $4, the Portland cement was $2.25; sand and water, 80 cents; proportion of time for foreman, 50 cents; proportion of time for timekeeper, 20 cents; hod hoisting, 50 cents; scaffolding, 16 cents; total, $25.41, for which I applied a figure of $25.

At 1.10 P. M. a recess was declared until 2.30 P. M.

6648

Afternoon Session.

2:30 O'CLOCK.

Frederick J. Mayer, being further examined, testified as follows:

Cross-examination by Mr. Kirby (continued):

Q. Just before recess you gave us figures going to make up the cost of brick, which you stated you have used, as $25 per thousand laid, and you gave brick at from $8 to $10?

A. $8 to $12.

Q. Using an average figure of $10 per thousand?

A. That is right.

Q. Was that the price of brick in December of last year?

A. Thas was the price of brick in July of last year, at the time I made my examination.

Q. Is it not a fact that the price of brick in December last year and to-day is no higher than $7.50 per thousand, for ordinary brick, used in ordinary building purposes?

A. That is always the case in the winter time, when they cannot get up the river in winter, and they cannot make any deliveries.

Q. I suppose that it is the effort of every builder to purchase his brick at as low a figure as possible?

A. Yes, but he has got to buy them when he can get them.

Q. You stated that a bricklayer received $7.00 per thousand? Upon what day's wage did you base that?

A. $5.60 per day of eight hours.

Q. That would be the same as the wages used by Mr. Edgerton; that is, 70 cents per hour, would it not?

A. Seventy cents per hour.

Q. How many brick do you calculate he would lay in a day?

A. 800 brick in walls of this kind.

Q. Is it not a fact that bricklayers laying brick on straight work of this kind will lay a thousand a day, and oftentimes more?

6649 A. Not when the work is executed under the direction and supervision of the Consolidated Gas Company.

Q. In ordinary contract work such as is going on in this city, is it not a fact that men will lay a thousand and more bricks a day?

A. It depends on the character of the wall.

Q. I mean in this character of wall?

A. No, it is not. A wall that contains pilasters and curbing cannot have much over 800 brick laid in a day, when you lay it in cement mortar, in a full bed of mortar.

Q. Are all the brick of the Consolidated Gas Company laid in cement?

A. Almost all, there are very few exceptions.

Q. Is there no lime used?

A. Occasionally, but not often.

Q. Is that the way the brick is laid in most work in this city?

A. In most gas works.

Mr. Mathewson: Are we dealing with the Consolidated Gas Company's plant? It seems to me we are, and not with some other plant.

Mr. Kirby: They may have laid the brick in cement when there was no necessity for it. There was a great deal of extravagant work done here.

Mr. Mathewson: This is testimony by Mr. Kirby.

Q. Is it not a fact that brick laid in buildings of this character in this city are laid with lime cement, instead of cement mortar?

A. No, it is a fact that they are almost exclusively laid in cement mortar, and not lime mortar.

Q. And you consider that the walls of the building of the Consolidated Gas Company are laid in cement mortar?

A. I do.

6650 Q. Is that true of the buildings at 21st Street?

A. I do not recall exactly whether this is true in any particular instance, but if these buildings were to be built today, they would be built in cement mortar.

Q. I see you put down here the price of a helper at $4.00 a thousand. What wage does he receive per day?

A. $3.00.

Q. For an eight hour day?

A. An eight hour day, yes.

Q. Is it not a fact that where hod hoisting machinery is used, the helper is able to serve more bricklayers, than where hod hoisting machinery is not used?

A. In buildings of this kind, where the heights are not very great, the hod hoisting does not cut a very great figure.

Q. Fifty cents on a thousand brick?

A. I mean the application of machinery would not, because the buildings are comparatively low.

Q. Do you use hod hoisting machinery as a matter of fact?

A. To a very small extent in buildings of this kind.

Q. I notice you have a foreman down here at 50 cents?

A. Yes.

Q. What do you figure his wage to be?

A. $7.00 per day.

Q. How many workmen do you expect that foreman will be able to take supervision of?

A. Any foreman is required to supervise from twelve to sixteen masons. That was taken from direct observation last summer during the construction of buildings at the Astoria plant, from where I collected all this data. I also ascertained that they could only lay 800 bricks a day.

Q. You do not consider that the bricklayers at Astoria are laying more than 800 bricks a day, in work of this kind?

A. They were not, at the time of my examination.

6651 Q. Is it your understanding that the sub-contractors that are laying brick at Astoria are receiving as much as $25.00 a thousand for brick laying?

A. If they do not they lose money.

Q. Then if it came to your attention that the builders that are erecting the Blair Building, which is at the corner of Broad Street and Exchange Place, and the builders that are putting up the North American Trust Company Building and the builders that erected the Title Guarantee & Trust Company Building or Broadway, each of *of* which is by a different concern, are to-day using in their estimates and prices for brick laying $15 to $20 a thousand, they would be losing money?

A. I know nothing about that class of buildings. I am talking about buildings that I have erected in my own experience, and as to which I have absolute facts.

Mr. Mathewson: Gas house buildings?

The Witness: Gas house buildings.

Q. Have you ever built gas houses in the City of New York?

A. I said in my testimony that my valuation was based upon the buildings of the completed plant of the Kings County Gas Light Company in Brooklyn.

Q. Are you prepared to state that the buildings of the kind that I have spoken of are more complicated in their character or that the laying of brick thereat would be more expensive than at a gas house building of the same kind and character as the Consolidated Gas Company?

A. I would not be able to make any comparisons at all; they are so different in detail of construction that they cannot be compared.

Q. When was the Kings County Gas Company building put up?

A. I have testified to that.

6652 Mr. MATHEWSON: He went all over that in his original examination fully.

The WITNESS: 1897.

Q. You have also taken occasion to state your figures in reference to the price of lumber; are you aware that you can purchase to-day lumber of as good quality as that which is used in the majority of the floorings of the buildings of the Consolidated Gas Company for a price not higher than $30 per thousand board feet?

A. No, the price that I have obtained within the last few days was $45, and the price that I applied last summer I think was $42.

Q. Did you make application to the Southern Yellow Pine Company?

A. No, I did not.

Q. Did you make application to the Collins-Lavery Company?

A. No, I did not.

Q. I understood you to say that you did not make a careful examination of all these sheets, which are placed in the possession of counsel for complainant?

A. No, it was impossible in the time.

Q. I call your attention to Sheet for the 65th Street station, where there appear under the heading "Brick Work" certain dimensions, and I ask you if it is set down thereon at what price this brick work was figured?

A. That might be $17 or $18.

Q. If you multiply that by $18 you will get $3,600, will you not, and if you multiply by $17, you will get some other figure?

A. I presume so.

Mr. MATHEWSON: That would be a little less wrong than $14?

Mr. KIRBY: As you look at it.

6653 Q. Here is one of the buildings of the 21st Street plant, brick work, giving certain dimensions, $17?

A. Yes.

Q. That is correct, is it not?

A. Yes; that is, the application of the figure 17 is correct on that sheet. I do not know whether the calculation is correct.

Mr. MATHEWSON: Are the sheets the same as those which were in the envelopes when we had them.

Mr. KIRBY: They are the same sheets.

Q. In such of these sheets as you did examine, did you notice that in some instances the value of the building as given in Mr. Edgerton's schedule differed from that set down upon the sheet?

A. I cannot recall that now.

Q. Did you notice that in some instance the total of the amount set down as the cost of the various elements of the buildings is not the same as the cost of the entire building as set down on the sheet?

A. That is about the same question; I cannot recall that in detail. There was too much stuff to examine in the time that I had.

Q. Did you notice that in some instances the walls were figured solid? That is, without any allowance for the windows equal to the cost of the brick work which is replaced.

Q. But in figuring the cost of the wall as such, did you notice that in some instances the wall was figured solid, without any brick being taken therefrom such as would be measured by the area of the window spaces?

A. No, when I examined the detail of the brick work, I believe I saw there was an allowance for the cost of the windows equal to the displacement of the brick.

Q. If the walls had been figured solid in the manner which I indicated, would not this increase the cost per thousand of 6654 brick which would have to be actually laid for that wall with the window spaces taken out?

A. No, because they are figured at the same cost. The windows are figured at the same cost as the brick work; consequently there is no difference.

Q. You misunderstand me. We will take a wall for instance in which——

Mr. Mathewson: If you exclude windows and put in brick, or if you exclude the brick and put in windows, the witness says that they offset each other.

The Witness: According to your own detail.

Q. Let us assume that we have a wall indicated on this blotting paper, and in it, there are say a dozen windows or doors or what not; now, let us say that we are figuring only on the cost of that wall, and we take its area solid without any allowance for any windows or doors or anything?

A. Without any allowance for pilasters, or anything of that kind?

Q. We will make an allowance for everything that is there, with the exception of windows and doors; if we take and multiply the number of brick as calculated in that way by, say, 16, we will come to a certain figure which would be the cost of that solid?

A. On that basis of applying a price.

Q. Applying a price, yes. Now, if instead of doing it that way we deduct from the number of brick the number which would be indicated by the area of our windows and doors, we would for the same value have to use a higher amount per thousand, would we not?

A. If $17 was the figure and what you took out for the windows is replaced by brickwork I do not see why we should; it will be one and the same thing for the cost of the wall; therefore the total 6655 cost of the wall remains the same.

Q. The total cost of the wall remains the same, but the total cost of the brick per thousand is different, is it not?

A. The total number of brick would be different.

Q. Yes, and if you figured your brick at the larger number than were actually there and come to a figure which we will say would be $1,000, and you used that $1,000 as the value of your wall, and then divide that by the number of brick actually in that wall, you would get a cost per thousand which would be greater than that which you use, would you not.

A. Than that which I use?

Q. Than that which would be used (under such conditions) in your calculation?

A. Than that which I use, yes.

Q. You stated in your testimony yesterday that you made a detailed estimate of one of the sheds at the 21st Street plant?

A. Foundations, I think I said.

Q. Page 6574, the things of which you have prepared a detailed estimate; there you check your figures as to Shed No. 2, 21st Street.

"Q. And that would give a total of detailed estimate of how much for the shed? A. $67,846."

A. I think that detailed estimate referred to the foundation.

Q. Have you prepared a detailed estimate of any building at the 21st Street station?

A. For the foundations.

Q. Not for any buildings?

A. Except Avenue A shop, I think it is, 21st Street, which was omitted from my original testimony.

Q. Then you figured all of these sheds at so much per cubic
6656 foot; is that right?

A. For the superstructure, yes.

Q. And that was 16 cents a cubic foot, was it not?

A. That included the purifier houses, and houses with double floors, yes.

Q. Did those double floors extend all over the floor?

A. They did in the instance of the revivifying room, but not in the instance of the purifier houses.

Q. How high are those buildings?

Mr. Mathewson: Which one are you referring to now?

Mr. Kirby: I am referring to the one in the testimony at page 6,574, No. 2 Shed at 21st Street, the one of which he said he prepared a detailed estimate, and which he now says only referred to foundations.

Mr. Mathewson: That was the total detailed estimate.

Mr. Kirby: $67,846.

A. The average height was 28 feet 6 inches; some of those were higher than others, but that was the average height for all six.

Q. And you used the 16 cents per cubic foot factor for each shed?

A. I did.

Q. How many of them were there?

A. 5 sheds, two purifier houses and 1 condenser house; all of the same dimensions.

Q. Were they separate buildings?

A. They were all in connection with each other, all adjoining each other.

Q. They had party walls, hadn't they?

A. Yes, with buttresses on both sides.

Q. Didn't you figure them as separate buildings?

A. No, my valuation of 16 cents per cubic foot, that took care of all that.

6657 Q. In other words it would be more if each building had its own wall?

A. If it had been one separate building, yes.

Q. How much would it have been in that instance?

A. I could not say that offhand; it requires that I should give it some little consideration, to establish a unit value of the building, because you have to do it in comparison with the other buildings.

Q. Would it have been a cent more?

A. I could not tell that offhand; I would have to make a detailed comparison.

Q. What is the construction of those buildings?

A. They are heavy walls, buttressed on both sides, with foundation walls 24 inches thick, and some of them have very expensive peaked roofs, and some of them have flat roofs.

Q. What do you mean by very expensive roofs?

A. For that size building, the peaked roof as compared with a flat roof; the flat roof is very much cheaper than a peaked roof.

Q. Are there any stories in them, floors?

A. I have already stated, in the oxide shed and the purifier house.

Q. But they do not cover the entire area?

A. No, but they all refer to the same valuation of 16 cents per cubic foot; 16 cents remains the unit for all of those buildings.

Q. Will you take those buildings and compare them with the building at the 132nd Street station, of which you have given a cubical contents factor of 15 cents, and tell me what in those sheds makes them more expensive than at the 132nd Street building.

A. The 132nd Street is figured at 15 cents for the building, and these buildings were figured at 16 cents.

Q. It would have been more but for the party walls?

6658 A. It would have been more but for the party walls, on account of the buttresses and heavy walls and the stone work and the foundations.

Q. How deep are those foundations at the 21st Street station?

A. They are 8 feet 6 inches to the top of the timber capping on top of the piles.

Q. In your 16 cent estimate did you include the piling in the foundations?

A. No, I included a foundation to the ordinary depth of 4 feet below the ground.

Q. So that as far as the foundation is concerned, you compared it with the 132nd Street building, did you not, where you add $6,665 for additional foundation?

A. Yes, that was for the extra depth below the ordinary.

Q. And you have done the same thing with the 21st Street Station?

A. Much more, because they are piled; considerably more.

Q. So that we can disregard that extra foundation. Now, disregarding that, tell me what in the building itself at 21st Street is such as to make your unit of value higher than it is at the 132nd Street building?

A. The brickwork itself, with the curbing, and the heavy offsets, the buttresses and the stone work on the buttresses.

Q. How many more brick are there in the walls of the 21st Street building, considering the wall as a party wall, than there are in the 132nd Street building?

A. You cannot make any comparison on that basis between the two buildings, at all; I could not answer that question, because my valuation was based upon so much per unit of cubical contents.

Q. But that unit varies, and varies according to the kind of buildings; you have stated that the reason is on account of the extra thickness in the wall. Now, I ask you if you can give me the difference in the number of brick? 6659

A. Not in the number of brick, I cannot, only in that unit of value.

Q. As a matter of fact does not the 132nd Street building have more brick than the 21st Street building, considering the wall as a party wall?

A. I could not tell you, because I have not made that detailed calculation on that basis. It is on the basis of cubical contents.

Q. In the 132nd Street building you included a steel floor at a value of $2,104.99. Was there any steel floor in this building at 21st Street?

A. No, there is not.

Q. You also included some monitor sash, $630, was there any monitor sash in this building?

A. No, there is not.

Q. You also included some terra cotta roof covering, $1,170? Is there any terra cotta roof covering at 21st Street?

A. No, there is stone covering, though.

Q. You also add as high as a value for slating and flashing as $2,250. Would there have been such an amount as this spent for similar materials at 21st Street?

A. Yes, the flashing would cost more; because it is a much larger roof?

Q. How about slating?

A. No slating, because these are different kinds of roofs.

Q. You also have fire-proof concrete arches at the 132nd Street building; are there any fire-proofed concrete arches at 21st Street?

A. No; it is substituted by brick instead of concrete.

Q. What are the arches for at 21st Street?

A. I was just going to say—some of these buildings contain foundations for apparatus, especially for purifiers.

Q. But that foundation you considered in the shed for purifier house, didn't you? 6660

A. Yes, but it has for a total valuation, a 16 cent unit for all of it.

Q. Is that quite a large item?

A. Yes, quite an item.

Q. How much?

A. On the total cost of the foundation you mean?

Q. Yes.

A. I cannot separate the number of feet of concrete in each one of them now.

Q. It is not very large, is it?

A. It is quite an item, yes, sir.

Q. How much do those purifiers weigh? What do the foundations have to carry per square foot?

Mr. MATHEWSON: You have the weight of the purifiers, haven't you?

The WITNESS: Ordinarily about three and a half tons.

Q. Per square foot?

A. Per square foot; that includes the spent oxide in the boxes.

Q. What sized purifier would that be for?

A. The weight per unit of surface would vary of course with the depth of the box. The spent oxide alone weighs 75 pounds per cubic foot, to which would have to be added the concentrated load of the carriages, and the covers suspended from the carriages, and under those conditions the load on the foundations increases very materially more than if the covers are not suspended; therefore, when the traveling load is added, it comes to about 3½ tons per square foot.

Q. Do I understand that over the entire area covered by these purifier boxes there is a weight of three tons or more per square foot?

A. No, upon the foundation.

Q. Upon each foot of foundation there is a load of between three and four tons?

A. Yes, the foundations for the purifiers, that is the foundation for the columns.

6661 Q. That would mean the total weight of the purifier boxes would be how much?

A. This includes the weight of the oxide, and it includes the rolling weight of the covers when suspended from the carriages.

Q. In other words, you are putting down a foundation to suspend a moving load?

A. Yes, a maximum load; that is, normal load plus the moving load when the covers are suspended.

Q. In doing that of course you calculate the area foundation which is not directly under the load which is moved to that place, don't you?

A. I do not understand that question.

Q. Let us take two tons per square foot of area, what height of solid iron would that represent placed over that area?

A. These are all concentrated loads; the purifiers are supported on columns, and upon those columns loads are concentrated. It depends on the number of columns, how much the concentrated load will be. The less columns you have, the more load, and the more columns you have, the less load. I know from my own practical experience, and I have calculated many foundations for purifiers, and I know that they average from two to three tons on those foundations.

Q. Exclusive of the oxide?

A. Including the oxide it would be about 3½ tons per square foot.

Q. Then instead of having a large area to sustain your purifier you have columns upon which the weight becomes concentrated?

A. Yes.

Q. That being so, the columns must necessarily be similar in area, would they not?

A. It depends upon the load upon them.

Q. You have assumed a load and stated one?

A. I have stated that the load depends on the number of columns under the purifiers.

6662 Q. Do you know the number of columns under the purifiers here?

A. No; you asked me a general question how much the load under the purifiers was, the load upon their foundation.

Q. I asked you a general question and endeavored to aid you to come to a conclusion so as to tell me what the cost of those foundations was?

A. I have the cost here, but I cannot tell you exclusively of the cost of purifiers; I can tell you in detail.

Q. I don't want it in detail.

A. Then I cannot give it to you.

Q. You cannot tell me what percentage of the total that would be?

A. Not off hand.

Q. In your 132d Street detailed estimate, you gave an estimate of platform and stairs, $740.04. Was there any such item in your 21st Street building?

A. There was in the instance of the purifier houses and the revivifying sheds, yes. No, they were not iron; they were wooden stairs. Besides, in those buildings there are elevators for the handling of the oxide.

Q. You have given the value of these elevators in the schedule of your apparatus, have you not?

A. I do not recall whether I did in this instance or not; I think it is likely they are included in the cost of the buildings.

Q. The schedule will show. My impression is that they are in the schedule of apparatus. Those sheds were coal sheds, were they not originally?

A. I presume they were originally built for coal sheds, and for general store sheds.

Q. You have included in your estimate of their value an overhead runway to carry coal, have you not?

A. Yes, that is also included in that valuation of 16 cents per cubic foot, and the very fact that they were constructed for coal sheds made the walls exceptionally heavy and made the valuation a little more on that account. 6663

Q. Are they old sheds?

A. They are old sheds, but they are almost as good as new.

Q. They were built in 1884 and prior to that, were they not?

A. Yes, about that time.

Q. Have there been any changes in them since that time, that you know of, besides putting in purifiers and revivifying rooms?

A. No, I do not know of any.

Q. Now, I call your attention to Complainant's Exhibit 372, in which you make certain comparisons in the second column thereof, where you say: "Edgerton's value new." What do you mean by Edgerton's values new?

A. Undepreciated.

Q. As a matter of fact those values in many instances included your own values, did they not?

Mr. MATHEWSON: That has all been explained. Mr. Edgerton in his statement accepted Mr. Mayer's figures in many cases and put down the depreciated value in the last column.

Mr. KIRBY: I am quite familiar with Mr. Edgerton's schedule and if you will look at it you will see that while Mr. Edgerton did that he did it in cases where he agreed with Mr. Mayer's valuation, or because he did not have time to make appraisal on his own account.

Mr. MATHEWSON: All right; he assumed them, and we are proceeding on that same assumption in our computation.

Mr. KIRBY: That is what I want Mr. Mayer to state, and not have it as it appears on that exhibit.

Mr. MATHEWSON: He did say so yesterday, if you will look at the testimony.

6664 The MASTER: Gentlemen, the more time you waste in repartee and argument, the less you will have for the examination of witnesses.

Q. I ask you whether the column "Edgerton's values" did not in fact include value which you yourself have put on part of the apparatus? I ask as to the second column. Are those all values which were given by Mr. Edgerton, or did they include value which you gave to the apparatus, and which were taken by Mr. Edgerton, for the reason, as stated by him in his testimony, that he had neither the time nor the opportunity to appraise them himself?

Mr. MATHEWSON: We do not know why he took them.

A. These were taken from Mr. Edgerton's details; that is all I know about it. I did not compare it with his testimony.

Q. Did you read his testimony?

A. I read his testimony, but I did not compare this with his testimony. I had the figures right before me, and there was no necessity for referring to any testimony.

Q. You do not understand that Mr. Edgerton agrees with you in all of your values, do you?

Mr. MATHEWSON: Is this important? I object to this. Mr. Edgerton stated his own conclusions.

The MASTER: It is proper cross-examination, if Mr. Kirby thinks it worth while to pursue it.

Mr. KIRBY: It simply carries a wrong inference, and I do not think the exhibit should stand in that way without explanation.

6665 Q. I refer you to the third column of this exhibit where it says: "Omissions"; have you a detailed statement showing what those omissions were?

A. They all appear in my testimony. They were omissions taken from my own schedules.

Q. Do you mean to say that your testimony of yesterday gives the apparatus the values of which when totaled up will equal the value set down in that third column marked "Omissions"?

A. My previous testimony does not, the testimony of yesterday.

Q. Then these are values which you yourself have given to apparatus of parts of the plant which you did not appraise at the time you gave your prior testimony?

A. Oh, yes, I did; these are values taken from my testimony and from my schedule, which I did not find in Mr. Edgerton's valuations.

Q. Will you tell what they are?

A. Yes, I can tell you that; it took a long time to find that out.

Q. You have not prepared a statement of that?

A. Here is Mr. Edgerton's statement; I have got it right here.

Q. You have not prepared a detail of this third column?

A. No, I had not the time, but I can give it to you all from here, item for item. In the instance of the 132nd Street station——

Mr. MATHEWSON: There is nothing in there from the 136th Street station, Mr. Mayer.

Q. Take the largest, the 99th Street plant. There is $50,000 or more; that is the only item that amounts to anything, $50,000 and more; take that and tell me what it is. The other amounts are so small that I cannot waste much time on it?

A. The total amount was $50,493. Can I see the original sheet?

6666 By Mr. MATHEWSON:

Q. Yes, you may have taken that out of the wrong station; it doesn't seem to run parallel exactly (hands witness original sheet). May it have been in connectings?

The WITNESS: I am trying to find out, I cannot tell without reference to my detailed notes. There is one item 11 through benches of sixes, back to back, $48,620. There is no valuation in Mr. Edgerton's schedule for it.

By Mr. KIRBY:

Q. Are you not aware that Mr. Edgerton did value those eleven through benches, giving the cost new $39,000 with depreciation of 6½ per cent., giving it a value of $33,307, and so stated in his testimony?

A. It don't appear in this schedule.

Q. That is in your typewritten copy of the schedule?

A. That is the schedule which was furnished me.

Mr. Mathewson: Furnished by you to me, Mr. Kirby, and the one that this witness had to examine.

Q. Did you compare that with the exhibit in this case?

Mr. Mathewson: Why should he? It was a carbon copy that you delivered to me for our purposes, and if you made a change in the exhibit afterwards, and did not notify us, we are not to be held responsible.

Mr. Kirby: I have made no change in the exhibit whatever, but if Mr. Mayer had read Mr. Edgerton's testimony he would have found a reference to these very benches, and the value given.

6667 Mr. Mathewson: There is your cover and the whole thing as it was delivered to us. Do you mean to say that there has been an addition of that to the exhibit?

The Witness: I do not know whether it is in the exhibit, or whether it is not; I only know it is in the testimony.

Mr. Matthewson: There is the carbon copy which was delivered to us.

The Witness: The item is there but there is no value given.

Mr. Mathewson: And that was filed and printed as an exhibit in this case.

Q. Let us take the one for the 14th Street plant, $13,279——

A. Here is another item; I find it now, $1,650 for two Mackenzie exhausters, page 5.

Q. Don't you find a value in the very schedule that you have before you of $3,726 for those two Mackenzie exhausters?

A. The connections for the exhausters have been omitted. I think it is connections; I will refer to my detailed schedule. What station is this?

Q. Just what do you mean has been omitted, if anything?

Mr. Mathewson: I will say in regard to this typewritten exhibit that a copy was given to us long before the other was printed, and was given to the witness long before it was printed.

Mr. Kirby: You will remember that at the time Mr. Edgerton was testifying he called attention to some errors, not only of omissions, but of adding in value twice.

Mr. Mathewson: I called his attention to those on cross-examination, and my own recollection is that this was one of them, 6668 now, you mention it, but of course, I did not go over those schedules.

Mr. Kirby: I am trying to get nothing more than the fact.

Mr. Mathewson: I understand that. The amount of the omissions is not very much. It is only for accuracy that the witness has stated what they appear to be in Mr. Edgerton's schedule. It is fair to say that our question is not so much with the omissions, which are not large in amount, but the basis of valuations which Mr. Edgerton assumes in the property which he did include and value. I think that is clear.

The Witness: I have got it now.

Mr. Mathewson: What is the item?

The Witness: My price of $1,650 for the two Mackenzie exhausters—Mr. Edgerton has got a price below it of $3,726, which refers to the Greenfield vertical engines, the next item which was also taken from my schedule at the same price, but these figures are badly mixed in Mr. Edgerton's schedule; they were not copied right from my valuation.

Q. The Greenfield vertical engine has been appraised by Mr. Edgerton, has it not?

A. He has given a price for Greenfield vertical engines of $3,720, and in my valuation they are under the head of Mackenzie exhausters.

Q. The "valve as per Meyer" refers to the Mackenzie exhausters?

A. No, he has given a wrong price; that refers to the Greenfield engines.

Q. Be that as it may; what value do you give to the Mackenzie exhausters?

A. $1,650.

Q. Then Mr. Edgerton has given you the benefit of the difference between $3,726 and $1,650, and instead of being an error in 6669 the manner you have stated it is an error in the other direction, because he has valued, as you will notice on the schedule, the Greenfield engine himself and given the cost as $2,000, factory price, and with depreciation value of 15%, $1,700?

A. He applies the price which I gave him in my schedule for Greenfield engines, for Mackenzie exhausters, and did not put down the Mackenzie exhausters, which would be probably the difference between the two.

Q. And it would be a debit instead of a credit, and it is really not worth while taking up this time about it; and the fourth column of this Exhibit No. 372 is simply additions as you made them from the values you have set down there?

A. Which I set down as being omitted:

Cross-examination by Mr. Burr:

Q. Have you been in Astoria lately?

A. Yes.

Q. When?

A. Last Sunday.

Q. How many times have you been there this month?

A. Three times.

Q. Have you examined the plant over there?

A. I have.

Q. Within the past month?

A. Yes.

Q. And since Dr. Marks and Mr. Edgerton gave their testimony have you examined the plants of all the companies?

A. No, I have not.

Q. I mean, for the purpose of comparison?

A. No, it was impossible; I did not have time to do that.

Q. You did, as far as you were able, with the idea of correcting any errors in your previous valuations?

A. Yes.

Q. Did you find any errors in your previous valuations or your inventory?

A. No, sir.

Q. You have described some errors here to-day, have you not, in your inventory?

A. Do you mean these errors referred to just now?

6670 Q. Yes, and before this morning?

A. That is to say, in Mr. Edgerton's valuation that I referred to just now; it was not in my own.

Q. In making your examination of these plants and of the apparatus, if I understand you correctly, Mr. Mayer, you had the advantage of the aid and assistance of the officers and employees of the Consolidated Gas Company; you were enabled to inspect and examine and measure and weigh to your heart's content, were you not?

A. Yes.

Q. And you had all the information which was at the disposal of the officers of the company?

A. Yes, of those that I found at the gas works.

Q. You spent, you say, 3,780 hours in making an examination which has enabled you to appear here and testify so positively with regard to the correctness of your inventory and your valuation; is that correct?

A. Well, with regard to the 3,780 hours, that referred to the actual time spent in examination of the plant, not in the preparation of the schedules or the detailed valuation of the plants, only in the examination of the plant itself.

Q. That is what I thought, how many hours did you spend in the preparation of the schedule?

A. As compared with that——

Q. I am not asking you to be so particular as to designate the number of hours. Can you give me the number of days or weeks?

A. Probably at least the same number of hours, if not more.

Q. Now, allowing eight hours a day that would be 473 days or 15.7 months, would it not, for the 3,780 hours?

A. Yes, if your calculation is correct. I say yes, but I have not figured it over.

Q. And allowing twelve hours a day, it would mean 315 days or 10.5 months, assuming that my calculation is correct?

A. I presume it would.

6671 Q. You saw and consulted, undoubtedly, the inventory and calculations presented here by Dr. Marks and Mr. Edgerton, as you say, and they show at least great industry on the part of those gentlemen?

A. Yes, I don't doubt that.

Q. If I understand you correctly it is absolutely impossible for any man without the knowledge and information which Bartlett Hayward & Company possesses as to the cost of construction of gas plants, under New York conditions, to make a fair and reliable estimate as to the cost or value of these plants in the City of New York to-day?

A. Generally speaking, yes, but I would like to modify that to this extent; that is absolutely correct in the instance of holders, and most of the apparatus.

Q. And how as to the buildings?

A. Not to the buildings, because we do not construct buildings ourselves.

Q. I will ask you, after the length of time that you have spent in the actual examination of plants and holders, are you prepared to swear now here that there are no foundations in any of the plants of the Consolidated Gas Company which are unused?

A. I do not know anything about unused foundations; my valuations only included those that are used.

Q. I am asking you, will you swear that there are no foundations in the plants which are not in use? Can you swear under oath that there are no foundations in the plants of the Consolidated Gas Company which are not in use?

A. I haven't paid any attention to that; I have only valued the foundations which are in use.

Q. In other words, there may be some foundations in the plants of the Consolidated Gas Company which are not in use, and those you have paid no attention to? 6672

A. I don't know anything about those.

Q. And in ascertaining the depths and kinds of foundations which you have testified regarding, if I understand you correctly you were helped and aided by the original drawings used at the time of the construction of those foundations and which the employees or officers of the company were using at the time of the construction of these foundations?

A. That is so, the ones which I found at the works of the various stations.

Q. So that as regards those particular structures, you took the dimensions and you took the character of them as they appeared in those drawings?

A. To a large extent.

Q. Are you familiar with the exhibit introduced in evidence here known as Rowland's inventory?

A. I have never seen it and never heard of it until I came here to testify; I never heard of its existence.

Q. Then that accounts probably for what I am going to call your attention to; you have not accepted, therefore, the valuation placed by Mr. Rowland upon the various buildings itemized in his inventory, have you?

A. I have never seen it, Mr. Burr.

Q. You are quite sure you have made no mistakes of any moment in your calculations or in your inventory, and as I understand you you would desire to be understood as saying that if these other experts had all the information that you had they would have arrived at the same conclusions that you have?

A. No, I don't mean to say that. As far as I know there is no

error in any of my valuations, because they have been checked time and again. I do — mean to say that I have checked them
6673 all myself, because that would have been impossible, but I do not believe there are errors, and there are none according to my knowledge. As far as the other gentlemen reaching the same conclusion as I have is concerned, I am willing to state that under no circumstances would they reach the same conclusions, because they have not the practical experience in valuing these buildings that I have, and they could not reach the same conclusions even if they had had the same length of time at their disposal to reach those conclusions.

Mr. Burr: The conclusion is obvious.

Q. You say that Mr. Edgerton and Dr. Marks depreciated the U. G. I. water gas apparatus 20 per cent. Is it not a fact that Mr. Marks did not depreciate the U. G. I. water gas apparatus at 21st and 42nd Street stations at all?

A. I don't recall that at all; did I say that he depreciated it twenty per cent.?

Mr. Mathewson: I do not think he said that generally.

Mr. Burr: I have here this question in the typewritten record: "Now, did you observe that Mr. Edgerton's and Dr. Marks' depreciation for both the old and new U. G. I. stations, which had been for many years in operation, was twenty per cent.? A. I did."

Q. Aren't you mistaken in that? Is it not a fact that Dr. Marks did not depreciate U. G. I. apparatus in the 21st and 44th Street stations at all?

A. I cannot state that from memory. I would have to refer to the testimony and my notes and everything else.

Q. Are you not aware from the exhibit that you introduced
6674 yesterday that Dr. Marks did not depreciate the 132nd Street station at all?

A. Which exhibit is that?

Mr. Burr: I will give it to you in a second.

—— tention to the fact that there is an error there. What I said was, I think, that Mr. Edgerton *marks* the old U. G. I. sets as depreciated.

(Here Mr. Mathewson refers to the printed record at page 6599.)

My question in substance was whether Mr. Edgerton marks the old and new U. G. I. sets as having depreciated ten per cent., but not twenty per cent.; nor did the first part of the question read as the stenographer has it. I know there was nothing about twenty per cent., for I asked no such question.

Mr. Burr: And as far as Mr. Marks was concerned?

Mr. Kirby: Nor so far as Mr. Edgerton was concerned?

Mr. Mathewson: No, nor as far as Mr. Edgarton was concerned.

Q. The depreciation which you have allowed was only the depreciation for visible decay, and allowed nothing for inadequacy and increasing demands and obsolescence due to the progress of the art of gas making?

A. The depreciation which I allowed in my opinion based upon practice for the last twenty-five years of making estimates for repairs, and I considered that the actual depreciation is represented by the cost of repairs required to put the apparatus in condition as good as new, and to serve its purpose intended. As to obsolescence and inadequacy I can only state what I have stated before, that in my opinion there is no obsolescence or inadequacy from the
6675 sources which you mention, because every year each of the plants receives additions or alterations or substitutions of apparatus. Old apparatus are substituted by new ones; and in fact all of the plants are kept up to the best possible condition, and are supplied constantly with modern apparatus in order to produce the best and most economical results; therefore, I cannot conceive that obsolescence or inadequacy, is in existence.

Mr. Mathewson: The question as it should be, on page 6599 is: "Now, did you observe that Mr. Edgerton marks depreciation for both old and new U. G. I. stations which have been for many years in operation as ten per cent."? instead of twenty per cent. The answer remains as before: "I did."

Q. That depreciation which you allowed for three renewals and extensions which you have referred to as due to the causes I have named, as inadequacy, etc.?

A. No, it is due to wear and tear principally, and in this instance of course the time was too short to make a detailed estimate of the cost of repairs, to establish a positive factor of depreciation, because such depreciation, based upon the actual cost of repairs, would require more time than the valuation of the new apparatus and take them apart to a certain extent to find out what repairs would be needed. It is my opinion based upon my practice and general knowledge, based upon the approximate cost of repairs for such apparatus.

Q. These gentlemen who undertook to follow you on behalf of the defendants, making inventory and giving valuation of these various plants and apparatus, they had the benefit of your
6676 knowledge as given here where you assumed to give the age of the different plants, the dimensions, size, weight, etc., and have used those to a very large extent, have they not?

A. I think they have.

Q. Referring to Exhibit 371, 14th Street station, you stated that there was an omission of eight holders?

A. Yes.

Q. Your valuation of them being $507,398?

A. Yes.

Q. Will you look at Complainant's Exhibit 70 in this case, page 193. I will call your attention particularly to the item there marked No. 19, gas holder tanks. Six tanks, Nos. 1, 2, 3, 4, 5 and 6, including guide plates and inlets, $198,000.

A. Yes, sir.

Q. Item No. 21, gas holders—six gas holders and frames, $198,000.

A. Yes, sir.

Q. Now, referring to block number 7, page 197 of the same exhibit, item number 41, gas holders—two gas holders and frames, $52,000; number 40, gas holder tanks—two tanks, including guide plates and well, $60,000?

A. Yes.

Q. Total for eight holders, Rowland's valuation in 1884, $508,800?

A. I don't see that last.

Q. The exhibit to which I am calling your attention is Rowland's inventory, so I ask you if you do not see there the total valuation as given by him, amounting to $508,800?

A. $116,364.

Q. The $198,000 that I first called your attention to, and the other $198,000, the $52,000 and $60,000 amount to $508,800?

A. In connection with the former, that may be, but I have not been able to figure it up in my head as you call off the figures.

Q. Refer to page 198 of the same exhibit and take the recapitulation as given there?

A. Total value of machinery, buildings and holders?

6677 Q. Yes, $1,706,294?

A. Yes.

Q. Don't you observe that the $508,800 valuation, assuming my calculation to be correct, the valuation of the eight holders, is included in this $1,706,294?

A. I presume it is; I haven't seen this before, I am not sure, but I presume it. It appears to be.

Q. Will you refer to Dr. Marks' testimony, page 5063, recapitulating the inventory, 14th Street; don't you find that this total of Mr. Rowland's of $1,706,294 is the first figure in the recapitulation?

Mr. Mathewson: Show him the testimony.

Q. (Handing testimony to witness.) Don't you find that to be the first item in the inventory of the 14th Street station, Consolidated Gas Company, 1906, as given by Dr. Marks as it appears on that page, 5063?

A. It is the same as it appears on this page, 198.

Q. As appears in Mr. Rowland's inventory?

A. I don't know how it appears in Mr. Rowland's inventory. This is the first time I have seen Mr. Rowland's inventory.

Mr. Burr: It will be conceded that this is Rowland's inventory, an exhibit in this case?

Mr. Mathewson: That is what it is stated to be "total actual first cost of buildings and structures 1884, $1,706,294." If the holders were included in that I suppose the witness assumed, as I think I would have assumed, that the buildings and structures did not include holders and apparatus. I did not know about that of course; I haven't checked them up.

6678 Q. If this total, given there by him, $1,706,294, includes the $508,800 which you say was omitted for those eight holders, then you are mistaken as to that?

A. I cannot give my *po*inion as to that; I have not added up this valuation and I don't know what it is.

Q. You can see; there is the exhibit before you.

A. I see some figures here, but I cannot give an opinion on them unless I read the whole testimony.

Q. You find figures on the pages mentioned, do you not?

A. I find the figures printed in this book.

Q. Your own valuation of those eight holders in 1905 is $507,398, is it not?

A. Yes, that includes the tanks.

Q. Mr. Rowland included the tanks, as I have shown you?

A. I can form no opinion about what Mr. Rowland included; I have not read it and I do not know.

Q. I referred you to it where it appears at page 197, Block 7, Items No. 40 and No. 41.

Mr. Mathewson: If it relates to that I suppose it can be pointed out?

A. Under that item it refers to two tanks, gas holder tanks—two tanks, including guide plates and well.

Q. $60,800?

A. Yes, referring to two tanks.

Q. And Item No. 41 is two gas holders and frames, $52,000?

A. It does not include any tanks.

Mr. Mathewson: That is page 197 you are referring to, of the exhibits or the testimony?

Mr. Burr: Of the exhibit; Mr. Rowland's inventory.

The Witness: There are no tanks given in that last item. In Item No. 41 it says gas holders and in Item No. 40 it says two tanks, including guide plates and well.

6679 Q. The difference between those two valuations is $1,402, which is all the depreciation you have allowed after twenty-two or twenty-three years of service?

A. I cannot follow you in my mind. You can read it from that paper, but I have not made any comparisons between my values and Mr. Rowland's values.

Q. I am trying to follow you.

A. I have based my depreciation on my opinion irrespective of Mr. Rowland's, and therefore, I am unable to make any comparisons as to my valuations or depreciations with Mr. Rowland's.

Q. Let us assume that this valuation of Mr. Rowland's valuation is as I have stated, and the difference is as I have stated, $1,402. Is not that 27/100 of one per cent. depreciation, and is it not a fact that it is about 1/100 of one per cent. depreciation annually which you have allowed on those holders.

Mr. Mathewson: I object to this; here is Mr. Rowland's valuation, he gives certain figures and he says Mr. Mayer's is a certain other figure, and he says that the difference is Mr. Mayer's depreciation, which is ridiculous, of course.

Mr. **Burr**: That is what you had Mr. Carter for two days doing, making calculations of this kind.

The **Master**: In view of what he says about his non-use of Mr. Rowland's valuation, I do not see what use it is on cross-examination, even if it is correct. I do not see why it is not a matter for your brief.

Mr. **Burr**: This exhibit is an exhibit of the complainants'; they put it in to bind us by Mr. Rowland's valuations at that time.

6680 The **Master**: It does not appear that it affects this witness' testimony.

Mr. **Burr**: I am simply calling his attention to Mr. Rowland's valuation in 1884.

The **Master**: He says that he does not know anything about Mr. Rowland's valuation in 1884, and you cannot attack his appraisal by any question in regard to Mr. Rowland's valuation if he did not see it.

Mr. **Burr**: Except as regards the item of depreciation, showing that a certain valuation was placed upon these holders and tanks in 1884, and that there was a certain other valuation placed upon them after the lapse of twenty-three years, in 1906.

Mr. **Mathewson**: But not by this witness.

The **Master**: It seems to me very remote, but if you gentlemen want to spend your time on that instead of saving it for Dr. Humphreys or whoever else will be here tomorrow, you may do it. I do not want to cut you off in cross-examination, but it seems to me a little out of proportion to the importance of what else there is in the case.

Q. When you say that Dr. Marks agrees with your figures in regard to any of these matters, you do not mean that he follows you in allowing ten per cent. for engineering and five per cent. for interest, do you?

A. No, I am speaking of the total figures.

Q. If you add your ten per cent. for general engineering to your valuation for these holders, $507,398 it gives you a total of $558,137 for the eight holders, and if you add five per cent. to this for interest charges, does it not give $586,044, or $77,200 odd higher valuation on these eight holders than Mr. Rowland himself put upon them in 1884? 6681

A. I do not know anything about Mr. Rowland; I cannot base any opinion on it, as I do not know Mr. Rowland's figures and do not know anything about them. This is the first time I have ever seen them.

Q. But that would be the fact, assuming these figures to be correct?

Mr. **Mathewson**: I suppose your computation is correct, but the witness would have to go through it to establish its correctness.

Q. Is that correct?

A. I presume so.

Q. Will you refer to Complainant's Exhibit No. 70, page 214, of this same book?

A. Yes, sir.

Q. I call your attention to the item house No. 10, brick building on concrete foundation, composite roof, lime room and foundation for iron work, purifier house 66 x 184 feet?

A. I do not see that.

Mr. MATHEWSON: That is Mr. Rowland's valuation again?

Mr. BURR: Yes, $33,265.

The WITNESS: Yes, I see it.

Q. Page 215, house No. 9, 66 by 184 feet, $18,313?

A. Yes.

Q. House No. 8, condenser and scrubber house, 66 by 184, $43,517?

A. Yes, sir.

Q. House No. 7, storage warehouse, 66 by 184, $24,435?

A. Yes.

Q. Page 216, house No. 6, storage warehouse, 66 by 184, $27,335?

A. Yes.

Q. House No. 5, storage warehouse, 66 by 184, $23,135?

A. Yes.

Q. House No. 4, storage warehouse, 66 by 184, $26,135?

A. Yes.

Q. Page 217, house No. 3, 66 by 184, $24,771?

A. Yes.

6682 Q. House No. 2, storage warehouse, 66 by 184, $25,443?

A. Yes.

Q. Is not the total of these valuations given by Mr. Rowland in 1884, as appears by that exhibit, $246,349?

A. The total was $463,131. You did not read all the figures on those pages?

Q. I am referring you to those particular houses?

A. I cannot follow you as quick as you can read and figure up these figures to see if they are right.

Q. We have had to do considerable figuring.

A. Well, I cannot do it.

Q. If you take a piece of paper and a pencil, you can follow me?

A. Then you must not read so quick; you must give me time to put it down.

Q. If you put down the figures, and Mr. Mathewson will follow the exhibit, we will get along.

Mr. MATHEWSON: I think I ought to say here for the record that this is merely taking certain buildings described in the exhibit which Mr. Rowland appraised at a figure in 1884, and taking certain other buildings described in the exhibit; and, assuming that they compact, although Mr. Mayer includes foundations for apparatus and Mr. Rowland perhaps does not, there is no evidence as to how the building is changed, and he is asked what the difference is between two amounts. If this line is to be pursued, it seems to me it is wholly useless as a basis of comparison, and I do not want my time in putting in my direct testimony from my chief remaining witness cut down, if this consumes a great deal of time. I do not see that it is important.

6683 Mr. **Burr**: It is very brief; we have got it in concise form and it is merely to call the attention of the court to the value of depreciation as allowed by Mr. Mayer.

The **Master**: You will have to have the time to finish up your case, and it will come out of the other side, Mr. Mathewson. They can cut short their examination of some other witness. I do not think it is of any material importance myself.

A. $246,349.

Q. Are not these the buildings on the block partially bounded partially by Avenue A and other property on Avenue A, 20th Street, East River and 21st Street, with the exception of the meter house which is not taken into consideration?

A. I am not familiar with those.

Mr. **Mathewson**: That is true. Take it out and look it over.

Mr. **Burr**: Yes, he has apparently never looked at Mr. Rowland's valuation.

The **Witness**: I do not see here a description of the block that you refer to.

Q. Is not that so?

A. With the exception of the meter house—I have to find that out; which meter house is it?

Mr. **Burr**: The meter house, 21st Street and Avenue A.

Mr. **Mathewson**: Now, are there any other buildings in that schedule, which is called Rowland's appraisal, which were not included in the figures given you and which you have just added up?

—. There may be buildings specified in some other place in the exhibit; I confes I do not know.

6684 Mr. **Burr**: Mr. Mayer is familiar with them. He has valued them.

Mr. **Mathewson**: Not in regard to that exhibit; he knows nothing about it.

The **Master**: What I do not understand is this; unless there is some evidence in the case from some of these witnesses, I do not understand how the valuation made by Mr. Rowland in 1884 can be of any value as compared with the valuation made by this witness in 1906. *Non constat,* but the property may have changed in a dozen different particulars between those two dates. Suppose the wall has fallen down; suppose one story has been added to it, or something of that kind. How any comparison based on those two valuations can be of materiality here, I do not see.

Mr. **Burr**: The testimony is—Dr. Marks says that he adopted Mr. Rowland's valuation and he inspected the buildings and he gave his testimony as to the character and appearance of the buildings.

The **Master**: But this witness says that he does not know anything about Mr. Rowland's valuations and did not take them into account.

Mr. **Burr**: That is what he should have done in making his depreciation, we contend.

The **Master**: That is a matter of argument. You cannot gain anything by putting him through these valuations here, except to waste time.

Mr. Burr: I made the same objection to Mr. Carter's valuations, when he was allowed to go on with carefully prepared papers on every conceivable subject.

6685 The Master: I am not going to cut you off, only I am giving you fair warning that you may need this time for something else that you may consider more important.

The Witness: Yes, apparently they are all the buildings contained in this paper, or the value of such buildings as taken from this exhibit, with the exception of the meter house, pages 213 to 218.

Q. Referring to your testimony on page 1478, shed No. 1, as given by you, south side of 21st Street, corresponds to Shed No. 2 on Mr. Rowland's inventory, does it not? Are not those the numbers made by Mr. Rowland on the doors of those sheds?

A. What shed is that?

Q. Your testimony, page 1478?

A. What page is it here in the exhibit?

Q. I am calling your attention to your testimony at page 1478. Look at that page of the record; you gave certain valuations as they appear on that page, of the sheds numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, didn't you?

A. I only find up to 5. Sheds Nos. 1, 2, 3, 4, and 5. Are they marked as Shed 8, 9 and 10, purifier house and condenser house?

Q. You gave certain valuations there for those sheds, including a shaving and scrubber house, purifier house, condenser and scrubber house, and shed No. 10 purifier house. The total of your valuations of those sheds appears to be $677,183, does it not?

By Mr. Mathewson:

Q. Are they valued as sheds in your testimony?

A. Only from 1 to 5.

Q. What are the rest?

A. Purifier house and condenser house, and another purifier house.

Mr. Mathewson: Then those were the sheds, when you valued them?

The Witness: No, a purifier house and condenser house.

6686 By Mr. Burr:

Q. And you call them sheds, don't you?

A. No, I do not. You call them sheds. You call them sheds 8, 9, and 10, but I call them purifier house and condenser house.

Q. I will read it correctly: Shed No. 1, Shed No. 2, Shed No. 3, Shed No. 4, Shed No. 5 and Shed No. 6?

A. There is no Shed No. 6 here.

Q. Shed No. 7, shaving and scrubber house?

A. No shed No. 7 here.

Q. Well, we will call it shaving and scrubber house. You valued that at $64,037, didn't you?

A. The shed, $67,846; purifier house, $7,626.

By Mr. MATHEWSON:

Q. Is that one shed or all the sheds, at $67,846?
A. Each. That is No. 1 shed.

By Mr. BURR:

Q. And the condenser and scrubber house, you place a valuation on that also?
A. Yes, $97,626.
Q. The purifier house, you give a valuation to that of $94,697?
A. $94,697.
Q. Is not the total of your valuation of those houses and sheds that I have called your attention to $677,183?
A. I will have to figure that up first. You include the two purifier houses and the condenser house, do you?
Q. Yes.
A. I make it $629,179.
Q. Will you add 15 per cent. and see what that makes?

Mr. MATHEWSON: Why? How do you know, even on your theory, that 15 per cent. was not included by Mr. Rowland in his appraisals, assuming that the buildings are the same.
Mr. BURR: I am giving you the benefit of adding his 15 per cent., or 10 per cent. and 5 per cent.

6687 A. Do you want 10 per cent. and 5 per cent., or 15 per cent.? It makes quite a difference.
Q. 10 and 5?
A. $725,652.
Q. Will you deduct Mr. Rowland's valuation of $246,349 from that?
A. $479,303.
Q. You do not claim that that difference is due to foundations, do you?
A. Why, Mr. Burr, I have already stated before that I do not know anything at all in comparison with Mr. Rowland's valuation; I cannot tell anything about it, as I know nothing about Mr. Rowland's valuation. I do not know how he did value the buildings, so that I am unable to make any comparison, and I cannot tell you.
Q. You refer on page 1556 to some brick and brown stone building used as an enclosure for holders?
A. That was at 18th Street, wasn't it?
Mr. MATHEWSON: Yes.
Q. Are not the brownstone trimmings on that building disintegrated and in very bad condition?
A. Yes, to some extent they were disintegrated, but just how much I do not recall at the present time.
Q. Don't you give a valuation there of $155,784, I think it is, is it not (shows to witness)?
A. I gave my valuation $169,328.
Q. What is the depreciated value?
A. $155,785.
Q. If you add to that depreciated value your ten per cent. and

five per cent, what do you make it? Or adding in round figures fifteen per cent., which amounts to $23,368, if my computation is correct, does not that amount to $179,151?

A. If your computation is correct it would amount to about that, yes.

Q. Will you refer to page 184 of Exhibit No. 70, Block No. 2, West 18th Street?

A. Yes.

6688 Q. Above 10th Avenue, two enclosed gas holders; also well, gas holder building, 188x92, brick with heavy stone trimmings, extra heavy roof, and internal framing, $45,250. That is the same property which you valued with fifteen per cent., at $179,151?

A. The location here would indicate that, yes, sir.

Q. Subtracting the valuation placed by Mr. Rowland, $45,250, from that, leaves a difference of $133,901 excess placed by you upon this building twenty-two years after Mr. Rowland valued it, is that the fact?

A. I only valued a building in the same location; whether or not it was the same building I could not tell, and therefore I cannot make any comparison with any of Mr. Rowland's statements; it is absolutely impossible for me to do so.

Q. There is only one building there, which occupies the whole block?

A. I do not know whether that building was in the same condition at the time of my examination as it was at the time Mr. Rowland examined it; besides which the cost of materials and labor at the present time is entirely different from what it was at that time.

Q. In your testimony regarding the 18th Street station you mention as an omission five sheds amounting to $145 in a total of $224,000. Have you seen those sheds?

A. Where was that, at 18th Street?

Q. Yes.

A. Yes, I have; last summer I have.

Q. As a matter —, would you say that they were worth five dollars collectively?

A. They are worth just what they are valued in my schedule; at that time I valued them carefully and I looked at them and examined them carefully.

Q. Are they fit for anything more than kindling wood?

A. Yes, they served the purpose for which they were intended at the time of my examination.

6689 Q. Don't you know that Mr. Marks stated in his testimony that he purposely left them out of his valuation, and that it was not an omission in the sense in which you use it?

A. It was an omission that appeared on the schedule.

Q. Are you not aware that the $11,800 of which you spoke, for foundations, at the 21st Street station was purposely omitted, according to the testimony of Dr. Marks, so far as the figures being included in the cost of the buildings was concerned.

A. What foundations do you refer to?

Q. 21st Street.

A. Which ones, there are lots of foundations at 21st Street.

Q. Referring to your omissions, $11,800, old retort house; you gave a valuation of that as $71,117, and you referred to an omission by Dr. Marks.

A. What was the amount?

Q. $11,800.

A. Yes, item No. 22, foundation for benches, omitted from his schedule.

Q. Don't you know that that item was included in the cost of the buildings, from his testimony?

A. No, I do not; I do not see why it should be.

Q. You have that here; and the other item $1,650 for furniture, marble fireplaces and so forth, was not that according to Dr. Marks' testimony purposely omitted, as a lot of antiquated relics?

A. I cannot recall his testimony at the present time. I know it is not in this total valuation. It is in use and is worth something; it was in use when I examined the plant.

Q. How about the other condenser; item No. 100, marked ten per cent. completed, $30,700. Do you recall that?

A. That item was omitted entirely.

Q. Don't you recall testifying yourself that there was 90 per cent. of that yet to come?

A. No, 90 per cent. of it was completed at the time; ten per
6690 cent. was to come, if I remember correctly. That condenser
was partly erected, as I remember it; and most of the material
was lying on the ground.

Q. On the contrary, was it not marked ten per cent. completed?

A. I will not be sure about that, but the material was there. I cannot tell how much of it was erected.

Q. Item No. 115, three filter presses, John Johnson & Company, $2,550.

A. It was omitted entirely from this schedule, Dr. Marks' schedule.

Q. Those filter presses were abandoned, were they not?

A. Not when I examined the plant; they were in good condition and could be used at any time.

Q. I call your attention to this other item, 16-inch Wiley Proportional meter, $1,600, Item No. 165. Was not that deemed unnecessary, and was it not merely experimental?

Mr. Mathewson: Deemed by whom unnecessary?

A. It was in position and ready for use; I presume it was in use at the time, and it was, for all I know.

Q. Dr. Marks testified that it did not appear to be in use; have you read his testimony?

A. I cannot recall.

Q. Item No. 28, $12,700, foundations for benches?

A. It is omitted from this schedule.

Q. Dr. Marks testified, didn't he, that that was valued with the building?

A. I do not recall that.

Q. Item No. 177, steel tank, $655. Did you find that yourself, Mr. Mayer?

A. Yes.

Q. Are you quite positive that that steel tank is in existence?

A. I do not know whether it is now, it was at the time I made my examination.

6691 Q. Do you recall the day when you saw that particular steel tank?

A. The day?

Q. Yes.

A. No.

Q. About how many months ago was it?

A. About seven.

Q. Dr. Marks testified that it could not be found by himself or the guide?

A. I cannot help that; that is not my fault.

Q. Referring to the 42nd Street station, you called attention to certain omissions of Dr. Marks, omissions which you say amount to $6,077, item No. 21, specifically, of that statement?

A. $156, is it not?

Q. Didn't Mr. Marks include that in his estimate for No. 2 coal shed?

A. It is marked here carpenter shop, but how he makes a connection between carpenter shop and No. 2 coal shed, I do not know.

Q. Dr. Marks testified that he did not include it in his estimate for No. 2 coal shed?

A. I did not know that. The item is here but no valuation. That is the reason I marked it as an omission.

Q. The point I want to make is this. If you read Dr. Marks' testimony he mentions these various things, and they were not negligently omitted. He did not value them because he did not consider they had any value. For instance, take item number 50, cast iron box?

A. I say I cannot recall all the testimony.

Q. In regard to that he said that the attendant knew nothing of its use, and it was apparently out of use. You say it is an omission of $636?

A. Yes.

Q. Item number 32, cribbing and earth work filling for eight oil tanks, $2,438?

A. It is omitted here.

Q. Mr. Marks allotted that to the general expense of construction, didn't he, in his testimony?

6692 A. I cannot recall it, but if he did it did not belong there; it belongs here where the item is.

Q. I call your attention to Exhibit No. 70, of page 242. Don't you find that Mr. Rowland gives four gas holders at $120,000 and four telescopic gas holders at $90,000, being a total of $210,000.

Mr. Mathewson: At what works?

The Witness: Eleventh Avenue on the Hudson River, 41st and 42nd Streets. It is marked here.

Q. Will you refer to items 94 and 95 of the inventory?

A. Of my inventory?

Mr. Mathewson: You will have to look at your inventory.

The Witness: Mine is not numbered.

Mr. Mathewson: I know it, but I guess you can find it.

The Witness: What station is it?

Mr. Mathewson: 42nd Street station apparently.

Q. Referring to your inventory, see if you did not give us a total depreciated value of those same holders in 1905 or 1906, $223,590, the value given by you, $245,209, adding to the depreciated value of those same holders in 1905 or 1906, $223,590, the value given by you, $245,209, adding to the depreciated value 10 per cent. What do you find the value given by you for those four holders in that inventory?

A. These are the four holders, 250,000 feet capacity?

Mr. Mathewson: Just look and see on the schedule.

The Witness: I am looking to see if I can compare them; I do not see how I can.

Q. What value did you give for those four gas holder tanks and four telescopic gas holders?

6693 A. For the tanks I gave $120,384, for the holders I gave $112,180.

Q. That is $232,564?

A. Yes.

Q. Now, you add 10 per cent. to that and then 5 per cent.; what do you make it?

Mr. Mathewson: Did he add 10 per cent. on holder stations?

The Witness: This is not a holder station; this is a plant.

A. To the whole plant I add that, but not to that particular item.

Q. If you add it to those two items, of which you have given the value as $120,384, and $112,180, what do you find it to be?

Mr. Mathewson: He did not add it, but if you want him to I suppose he can do it.

Mr. Burr: Yes, I would like to have him act as my computer temporarily.

A. $253,110.

Q. Now, add the five per cent.?

A. $268,610.

Q. That is a difference of $58,210 from the valuation placed by Mr. Rowland on those same holder tanks, is it not?

Mr. Mathewson: I do not know whether they are the same ones or not.

A. There is a difference between the figures given in this book and the figures given by my valuation, yes.

Q. I will not bother you to go over the omissions to which you have referred regarding the 44th Street station, save to say that they were omitted according to Dr. Marks for the same reasons, either because he did not deem them of value, or because he could not find them in his investigation.

6694 Mr. MATHEWSON: Is that your testimony or his?

Mr. BURR: I am asking him in regard to it. He is criticizing Dr. Marks' statements.

Mr. MATHEWSON: I am asking whether it is your testimony or his.

Mr. BURR: It is my statement based on Dr. Marks' evidence, and that applies to all the other stations.

Q. Now, if you refer to your Exhibit No. 373, introduced by you yesterday, you gave the exact cost per cubic foot of contents, not inc-uding foundations at fifteen cents; is that so?

A. No, that includes a certain part of the foundations; it included foundations of ordinary depth, four feet.

Q. Then, you mean by that that a cubic foot of contents is not computed to include the foundation, but that the cost of the foundations is included in the fifteen cents?

A. Ordinary depths of foundation; to a depth of four feet.

Q. Didn't you observe that Dr. Marks fixes fifteen cents per cubic foot as the true first cost of this building?

A. I believe that his figure was identical with mine in that instance.

Q. And that in his computation he says as to all these buildings he has included not only the contents of the superstructure, but also to give full measure, the contents of the cellar or basement. Do you notice that?

A. Well, the cellar or basement would form a part of that building, because my computation was based upon from the first floor line as far as the contents of the buildings are concerned, up to the edge of the roof. Now, if there was a basement under these buildings that would be included. Whether he did it on the same basis I am unable to tell. 6695

Q. In regard to this particular 132nd Street station, as appears on Exhibit No. 373, don't you also note that the result of that computation from Dr. Mark's value is $569,604 as against $540,702 obtained by yourself with the assistance of plans and the figures and facts of the entire Consolidated Gas Company at your service, as you have stated, and do you not deem this a proof that Dr. Marks' valuations are liberal and more than fair to the gas company?

A. I do not know what you are talking about. I do not see any figure here of $569,604 for this building. The biggest figure is only $26,000.

Q. While Dr. Marks is looking for that I will call your attention to another matter. I call your attention to the recapitaulation on the opposite page of Complainant's Exhibit 371. Have you got that there?

A. No, I don't know what it is.

Q. It is the exhibit offered by you yesterday?

A. Yes, I have it here.

Q. Now, I will call your attention to that exhibit, Mr. Mayer, Exhibit 371, and to your recapitulation. Do you not find on page 5108 of the testimony that Mr. Marks gives his actual present valuation at $9,348,692 for the property of the Consolidated Gas Company's plants?

A. I will have to see that testimony.

Q. Do you not find those figures given there, $9,348,692?

A. Yes, under the heading of estimated cost per annual thousand cubic feet of sales, 1905, the structural cost of buildings, apparatus and holders is given as $9,348,692.

Q. Now, referring you to the following pages, 5064, 5063, do you not find the depreciation given on the 14th Street station as $725,175, $13,200 and $6,472?

A. On page 5063?

6696 Q. Yes.

A. Yes.

Q. And on page 5064 do you not find depreciation for 42nd Street given as $472,182?

A. Yes.

Q. On page 5069 do you not find the depreciation for the 44th Street station given as $132,808?

A. Yes.

Q. And I will read the rest of page 5076, and see if they are correct: 21st Street station, $612,304.

A. Yes.

Q. Page 5084?

A. I find these figures and I will try to follow as quick as I can, just hunting up the figures.

Q. Page 5094, 99th Street station, $129,974?

A. Yes.

Q. Page 5089, 18th Street station, $165,290.

A. Yes.

Q. Page 5093, 63rd Street Station, $43,644?

A. Yes.

Q. Page 5095, 65th Street station, $81,499?

A. Yes.

Q. Page 5098, 111th Street station $96,780?

A. Yes.

Q. And on page 5101 and on page 5103, no depreciation is charged against the 132nd Street station or against the Inwood station?

A. Yes.

Q. Making a total of $2,479,323, if you want to verify that?

A. That is right.

Q. And that makes the actual present structural value given by him as a grand total, $11,828,020, does it not?

A. Yes.

By Mr. MATHEWSON:

Q. That excludes the omitted items however and of course the 10 per cent. and 5 per cent.?

A. As the figures appear I think it would.

By Mr. BURR:

Q. If you read the testimony as to the inventoried actual structu-

6697 rail cost of the buildings, manufacturing apparatus and holders of the Consolidated Gas Company, which was given by Dr. Marks with the statement that it is not customary in inventories where all the various subjects are in position to add either 10 per cent. or 5 per cent. to the cost as was necessarily done in the case of preliminary estimate of proposed works made by engineers; from your inspection of the inventory prepared by Rowland did you not observe that this was not done by Mr. Rowland in the inventory prepared by him in 1884, Complainant's Exhibit 700?

A. I did not inspect Mr. Rowland's valuation, therefore I cannot tell.

Q. Your total is $16,137,477, is it not?

A. I believe that is the figure.

Q. And that is $4,309,457 more than Mr. Marks' total of $11,828,020?

A. That was without allowing anything for the general engineering expenses and for interest charges.

By Mr. **Mathewson**:

Q. We will say that those items are items not valued, not omitted; or items whose value was included in the valuation of other buildings. Now, the original structural cost as given by Mr. Marks as you have stated appears to be $11,828,020, and this subjected to a depreciation of $2,479,328, which would be, would it not, about 21 per cent. on an average and yields an actual present value of $9,348,692. Now, have you noticed in the case of the 14th Street station——

Mr. **Mathewson**: Is that a question?

Mr. **Burr**: I am now drawing his attention to the depreciation as made up by Rowland in the case of the 14th Street——

The **Master**: He said within five minutes, and three other times, that he didn't know anything about Rowland's appraisal at all, never inspected it. 6698

Mr. **Mathewson**: I don't believe he knows whether Rowland computes depreciation or not.

The **Witness**: I know nothing about Rowland's valuation.

Mr. **Burr**: Well, of course, I do not want to unduly protract the examination as a good deal of this is more argument than testimony, but I simply desire to call the Master's attention to the great differences which exist between the figures as found by Mr. Mayer and the figures as found by Mr. Rowland for the same property in 1884.

The **Master**: I see, but it — a matter of argument rather than a question to this witness, who does not seem disposed to change his valuations at all in consequence of anything you bring out. He says he does not know anything about Rowland's figures.

Q. Will you look at Exhibit 370, 99th Street station, Item No. 2, generator house?

A. Is that the same as this (indicating a paper)?

Q. The generator house, Item No. 2, are not your cubical contents incorrect there? This is the East 99th Street station; or if your cubical contents are not wrong your multiplication of the 105,056 cubic feet at 13½ cents is incorrect, is it not?

Mr. Mathewson: Multiplication on those two would not necessarily bring Mr. Mayer's valuation, because that is only a unit figure, the result of which he adds for foundations of apparatus, etc., beyond a depth of about four feet.

6699 Mr. Burr: We will let Mr. Mayer answer it.

Mr. Mathewson: That was shown this morning in another instance exactly how he reached his total.

A. Yes, there is apparently a small difference.

Q. What is the difference?

A. I make it $133,840, as against $105,056.

Q. Now, will you multiply the cubic feet by the 13½ cents which you have adopted and see what it amounts to, or I mean multiply the number of cubic feet that you have found to be correct by 13½ cents?

A. It will make the price $15,368.

Q. Instead of $29,807, as given by you?

A. Oh, no, that only refers to the superstructure and not to the foundation. There is another item for foundation and buildings and foundations for water gas apparatus amounting to $30,732, in addition to that.

Q. That is not in Exhibit 370, is it, the generator house in East 39th Street?

Mr. Mathewson: The witness has testified that is——

The Witness: No, that is not here. It is just superstructure.

Q. Now, you see I am referring to Exhibit 370 and calling your particular attention to item 2, generator house, 69 feet x 67 feet x 24 feet, six inches high, and where you give a cubical contents of 105,056 cubic feet at 13½ cents, and your total upon that calculation at $29,807, and I ask you is not that incorrect? You have, as I understand, found that your cubical feet are incorrect, and I am now asking whether your general results, the amount, is not incorrect?

A. No, the $29,807 includes the foundations that I referred to just now.

6700 Q. Well, that don't appear in that exhibit.

A. They do not appear in that exhibit.

Mr. Burr: That is all.

Mr. Kirby: I will just state to Mr. Mathewson that I have been reading over this testimony, and in reference to the detailed estimate of that holder at 132nd Street I believe, as far as I am concerned, if Mr. Mathewson desires to put it in, I have no objection.

Mr. Mathewson: 132nd Street?

Mr. Kirby: The one you offered yesterday.

The Master: The hypothetical or typical estimate.

Mr. Mathewson: Yes, very good. I do.

Mr. Burr: I object to it as not being proper and as incompetent.

The Master: You were to call my attention to some thing, Mr. Mathewson.

Mr. Mathewson: Yes, I will, but I think I would rather examine the witness on redirect first, if it does not make any difference to the Master.

The MASTER: No difference.

Mr. KIRBY: It is quite immaterial to me one way or the other.

Redirect examination by Mr. MATHEWSON:

Q. Referring to this generator house at 99th street which you value at $29,807 you have testified, as I understand it, that your valuation of that building includes both the building and the apparatus—the foundations of apparatus?

A. That is so in all instances. In all my valuations wherever there is an apparatus in a building the foundation is included.

6701 Q. And that is true even though you do not specify it when you give the name of the house?

A. In every instance.

Q. So taking the cubical contents and multiplying by the cents per foot which represents the building with a normal foundation of only four feet the product would not give your total valuation, would it, in many cases?

A. No.

Q. And to that would have to be added the excess for the unusual foundations to get your total valuation?

A. That is right.

Q. And that is the explanation of any situation that may appear in these exhibits?

A. That is the case all through my entire valuation.

Q. Reference has been made to the supposed fact that some paint appeared to be off the holder at 63rd Street or 65th Street. Would that indicate any physical deterioration in the holder if it were painted at reasonable intervals?

A. Not at all.

Q. Mr. Edgerton testifies on page 5324 of the record that on a visit to 23rd Street he had two gentlemen with him; he also says at another place that he was accompanied by a Mr. Woodward, and he subsequently states at page 5401 that he had two assistants to go over portions of the plant, but does not state what portions they were. Assuming that Mr. Edgerton had two assistants at all times who assisted him continuously or even four assistants, would he and they have been able, in your judgment, within the time at their disposal, to make an accurate estimate of the cost of the plant to the Consolidated Gas Company which they have appraised?

Mr. BURR: Objected to. I think that whole thing was traversed before. No use of bringing up this subject again. This is
6702 not redirect-examination.

The MASTER: It is redirect-examination, but it seems to me it is a question gone over so often it is not worth while spending any more time on it. Both sides have brought that question to my mind several times; that question of insufficient time in which to make the inspection.

Mr. Mathewson: That is the only question I have on that point, unless the Master thinks it is improper.

The Master: I do not think it is improper. I think it is all right for redirect-examination, but I think it is a little cumulative, that is all.

A. I am absolutely sure that the valuation within that time with any three or three dozen assistants could not have been accomplished.

Q. You were asked why you thought that Mr. Edgerton had not measured all these apparatuses and computed, and you stated for one reason that there was no time. Did the weights which Mr. Edgerton state for apparatus so far as he did state them indicate that he had examined them accurately and carefully?

A. Not at all.

Q. Now, Mr. Edgerton at page 4688 gave the weight of a iron tank on the roof of the boiler room at 14th Street at 72,348 pounds. What was the weight of that tank?

Mr. Burr: This is not anything brought out by cross-examination, Mr. Master. This all should have been gone into on direct-examination of Mr. Mayer. It is opening up new sources for cross-examination, I submit. I think counsel should have exhausted himself on his direct-examination and his rebuttal.

6703 Mr. Mathewson: He was directly asked why he thought Mr. Edgerton had not made measurements of the apparatus. Now, he says one reason was the weights that he gave where he specified apparatus, and I am asking in reference to these particular things.

Mr. Kirby: But he should have testified to them on his direct-examination.

Question allowed; exception.

A. 90,000 pounds.

Q. On page 5336 he mentions eight purifiers at 42d Street and gave the weight as 443,544 pounds for the eight. What was the weight?

A. 675,720 pounds.

Q. At page 5342 he refers to the four holders, 250,000 pounds each at 42d Street. He said the weight was 1,120,000 pounds. What was the weight?

A. 1,580,000 pounds.

Q. At page 5432 he gave the weight of four holders at the 44th Street station as 203,300 pounds. He gave the weight of the holders with their frames and connections in items totaling 1,373,200 pounds. What was the weight of all those?

A. 1,751,880 pounds.

Q. At page 5355 he gave the weight of two holders at 65th Street as totaling 2,124,000 pounds each. What was the weight of the two holders?

A. For the two together, 805,600 pounds.

Q. I don't think you have got the right place?

A. 65th Street?

Q. Yes, there is the figure you made for your examination?

A. What size holders were those? Oh, those were the million foot holders?

Q. Yes, 2,124,000 each or 4,248,000 for the two?

A. The weight of one was 2,774,800 pounds and the other was 2,869,920 pounds.

6704 Q. Including shell, guide frame and connections in each?

A. Yes, sir; a total for the two of 5,614,720.

Q. Did you observe any case where Mr. Edgerton gave the weights, where he gave the actual weights as you recall it, of apparatus or the holders?

A. No.

Q. Now, I will ask you one general question in reference to Mr. Logan's testimony. Counsel for the complainant——

Mr. Kirby: This is certainly not redirect-examination.

Mr. Mathewson: I know it is not and I will recall the witness, if you put it that way, for a single question. I know this is not.

Q. Counsel for the complainant gave Mr. Logan certain weights and asked him if he assumed those weights whether the valuation would be equal to your valuation, Mr. Mayer, or asked those questions in substance. Were the weights which were given to Mr. Logan in those questions the actual weights that you had found?

A. That was right.

Mr. Mathewson: I can go over them all. I have them here, but I think it is easier in that way.

Q. In each case?

A. In each case.

Q. Now, you were asked where you got the figures from which you made comparison with Mr. Edgerton's unit values of different material. Were they not the figures giving or purporting to give the details of valuation of the different buildings which were handed by defendant's counsel to me and delivered by me to you?

A. Yes.

6705 Q. Did you use any other figures from any source but this in making the comparison?

A. I did not.

Q. In reference to piling; supposing you could get no information and had no drawings, but knew that the character of the soil was wet or swampy below a depth of three or four feet. Would it not be known to you as an engineer that you would have to put in pile foundations or other expensive foundations from that fact alone?

A. Absolutely, and I should certainly put in sufficient in a gas works because I know the danger arising from an insufficient amount of piling.

Q. In case a building is erected on an insufficient foundation in such soil it is not possible to put additional weight in the building, is it, without putting in a foundation which would mean the destruction of the building after the building is once built.

Objected to as calling for a conclusion, as the previous question did and as all those questions do which commence "Is it not an impossibility," which Mr. Mathewson has so frequently used; and as incompetent, immaterial and irrelevant.

The **Master**: The question is undoubtedly objectionable as to form, Mr. Mathewson.

Q. If you desire to use a building to sustain a heavy weight in a gas plant located on such soil as is without pile foundations, would it be an expensive thing to reconstruct and put different foundations under the building after it is constructed?

Objected to as calling for a conclusion.

Question allowed. Exception.

A. No. It would be entirely too expensive to do it afterwards.

6706 Q. Did you take into account the fact that a wall was leading at one of the stations and that there were truss girders in buildings to which attention was called in making your estimate of value?

A. I believe that was in 14th Street, either 14th or 21st Street, I am not quite sure about that. The walls were bulged very much and leaning, and that to my mind was an indication of an instance where an insufficient amount of piling had been used or else the piles were cut down at a point above the water line and had rotted.

Q. Did you find the wall had been buttressed or otherwise supported?

A. The insufficiency of the piling had been taken care of by buttressing and the trusses you referred to.

Q. Did the wall appear to be firm at the time you examined it?

A. Absolutely, with those additions.

Q. Your attention has been called to the fact that contractors sometimes submit estimates in reference to apparatus where it is desired. Did you take that into consideration in computing your ten per cent. engineering cost to the company?

A. Well that is not to be taken into consideration directly in the ten per cent. charged for general engineering cost, which the contractor submits in the way of a general proposal and has not the slightest bearing on the work that is to be performed by the gas company in designing and arranging a gas plant.

Q. Is it general engineering and drawing of plans, grading, curbing, the storage and drain pipes and temporary fences and other things of that sort which go into the ten per cent. which the company has to expend?

6707 A. It is. I want to say right here that in some instances the grading amounts sometimes to digging away earth and often rock extending from fifteen to twenty feet above the surface before it is graded, and that sometimes goes over the entire surface of the building lot occupied by the gas works. A very large amount of earth under this condition was removed in the case of the new works at Astoria.

Q. Mr. Marks has testified as defendant's counsel has called your attention, that it is not customary for engineers in inventoring an existing plant to make an estimate of its value, to include ten per cent. for engineering expenses; or five per cent., is that the fact?

A. I have to differ with Dr. Marks for the simple reason that it is an expense which the gas company has got to go to in designing the plant.

Q. Your attention was called to the fact that bricks are a little lower at this time of the year than they are in the summer. How does the price of other building material compare now with what it did last summer?

A. In a great many instances the cost of material is higher, particularly in the instance of lumber and also of steel. Steel plate alone went up in price since about the first of January, $8 a ton. Even with the bricks lower at this time of the year the cost of laying them would be considerably more than the difference in cost of the material or the total cost of $25, for the reason that the inclemency of the weather would not permit of laying brick at the same rate as in summer.

Q. What rate of wages did you assume in your estimate of cost in New York City, I mean Union rates or other rates?

6708 A. Only Union rates, for the reason that the work could not be executed and finished within the time required by the gas company to permit them of using the plant when they need it without Union labor.

Q. Referring to the table of this 132d Street building, respecting which counsel has examined you, I observe that it figures up $21,160, and there appeared to be masonry $1,370, concrete $480, and the various other items mentioned for that total amount, and the item after which the "etc." occurs is as follows: "$150, painting, etc., isn't it?

A. Yes.

Q. Would you as an engineer suppose that any great amount was included in this $150 for painting?

Mr. Burr: Objected to.

The Master: It is hardly a question calling for expert opinion.

Mr. Mathewson: I thought not originally. I could not exactly understand the purpose of the examination.

I offer these sheets in evidence.

Mr. Burr: I object to the introduction of these because it is quite evident they are mainly pencil marks and incomplete data upon which some conclusion was reached by the witness Edgerton.

Mr. Mathewson: It shows the $21,000 at which he valued the plant very clearly.

Objection overruled; exception.

The Master: It being understood they are allowed simply for the purpose of meeting so much of the cross-examination as related to the question of what was included under the item "etc.," and such length on the subject of this memorandum and I assume you offer it to meet them?

Mr. Mathewson: I do.

6709 Mr. Burr: Then there is no objection to that item "etc." being marked in evidence, but here is a whole lot there that I don't know anything about.

The **Master**: It has no probative force except for the purpose for which it is admitted.

Mr. **Mathewson**: He testified respecting them before and I would be quite entitled to call for them and introduce them independently of any examination of this witness.

Mr. **Burr**: At this hour and at this time I think it is wholly improper, and I object to it as incompetent, irrelevant and not proper rebuttal.

Objection overruled; exception.

Mr. **Burr**: Exception.

Mr. **Kirby**: Exception.

Received in evidence and marked Complainant's Exhibit 375.

Q. You were asked in respect to the shop item No. 2, 21st Street, as compared with the 132nd Street—governor house, wasn't it?

A. Yes.

Q. And whether certain items in 132nd Street did not appear in the construction of the shop. On the other hand, is it a fact that certain features in the construction of a shop did not appear in the construction of the 132nd Street house?

A. It is impossible to make a comparison between the two buildings. They are so different in character and nature that no comparison is possible.

Q. When asked in reference to foundations you said that foundations must carry about three and one-half to four tons per foot. In addition to the weight of the purifier boxes and covers and the carriages generally the foundations have to carry the weight of the water in the seal and floors of the building.

A. Yes.

6710 Q. And the weight of the columns themselves, of course?

A. Yes.

Mr. **Burr**: I object to that as being improper, "of course" and assuming and telling the witness what they must do and what they must carry. This witness is entirely competent to tell what is the situation under the circumstances.

The **Master**: Do not lead him, Mr. Mathewson.

Mr. **Mathewson**: I will try not to. Where he is asked if certain things are not carried, it seems to me that I am entitled to draw his attention to some things and ask if they are carried. It would seem to me so, at any rate.

Q. Now, you were also questioned as to certain buildings in 1884 which were appraised by Mr. Rowland and then as to your appraisal at present. Do you know what changes of construction or otherwise have been made in any building appraised by Mr. Rowland in 1884 within the last twenty-two years.

A. I know that a great many changes have been made in all the buildings, but just what they consist of since Rowland's valuation of course I do not know.

Q. You know how many of them have had buttresses added, do you?

Mr. **Burr**: He has stated he does not know.

Mr. **Mathewson**: Yes, I know he has.

Q. Well, we will take eight sheds and which appear to have been valued by Rowland and now there appear to be five sheds and three purifier houses. Do purifier houses require any foundations 6711 and apparatus or otherwise or other things that you do not ordinarily find in sheds?

A. A great many.

Q. How about condenser house?

A. The same there.

Q. Do you know how the condition of any of the apparatus in 1884 compares with the condition at present?

A. I do not.

Q. Do you know how much has been spent on any item in replacements or repairs or renewals?

A. No, I cannot tell you that.

Q. Is it possible for you to make any comparison without knowing all the details as to conditions then and exactly what the buildings contain and what their construction was as compared to the present?

Objected to as calling for a conclusion of the witness.

Question allowed; exception.

A. It would be absolutely impossible for me to make a comparison unless I knew what was included in Mr. Rowland's valuation.

Q. Do you know in what buildings of Mr. Rowland he included any foundations of apparatus, if he included such foundations in any building?

A. I can tell you nothing at all about it.

Mr. **Mathewson**: Now, Mr. Master, I wish to renew this offer in evidence of Complainant's Exhibit 374 for identification. The testimony as I find it of Mr. Edgerton on page 5118 that there are many small and some large items that he was unable to calculate out on account of the number. He stated at page 5333 he had not 6712 figured the weight of six holders at 14th Street at all and based his estimate entirely upon their capacity. He stated at page 5336 that two other holders at 14th Street were figured on capacity and that he did not estimate separately for the guide frames. He stated that two holders at 65th Street were calculated on their cubic contents and he stated (p. 5373) he did not compute the weight of apparatus, and from that its value in every case; he stated (p. 5403) he took guide frames at 42nd Street at one-third the weight of the holder, and so on.

The **Master**: Now, as I understand it this exhibit that you offer amounts to this, that the witness says that no proper estimate can be made by the method that Mr. Edgerton has shown, that he used, and that the only proper sort of estimate is one going into details such as that typical exhibit that you offer.

Mr. **Mathewson**: Yes, and he also says in addition that it is impossible within the time which was at Mr. Edgerton's disposal to make such detailed estimates, all of which should be corroborated by an exhibition of the details required for even a single holder which this witness says does not require so much figuring as a good many other kinds of apparatus.

Mr. **Burr**: I do not quite understand this, not having had an opportunity to look over the numerous pages of which this document is composed—some thirty-six uages.

The **Master**: As I understand it, he says that is the way you ought to figure on the cost of a holder.

By Mr. **Burr**:

6713 Q. Are these the various costs given here on this paper?

A. Only the weight. The costs are given in my testimony as to the cents per pound of its value in detail.

Q. This merely is a bill of material, is it not?

A. No, that is an estimate of the weight and of the various parts entering into the construction of the holder.

Mr. **Mathewson**: You will see at the end of the statement of the number of feet total.

Mr. **Burr**: I notice here at the end, and that is why I base my objection against its introduction, that 5,180,980 multiplied by .67 cents per pound gives $347,125.66.

Q. For what particular plant or piece of machinery does that have reference?

A. To the 132nd Street holder. I stated yesterday those were the hypothetical dimensions of the 132nd Street holder.

Q. Then this is an estimate on the 132nd Street holder?

A. Of a holder of the same size. In this instance a little bit lighter.

Q. Does that purport to give the amounts paid for the various materials used in that holder?

A. Not at all. It is a detailed estimate upon which is based the final price at so many cents per pound, to which I have testified in my testimony, and I will give you the figures in detail how the price of a pound was made up, and I can do it again now, if you want it.

Mr. **Burr**: I object to it as incompetent, immaterial and irrelevant.

The **Master**: Mr. Kirby's objection is withdrawn, do I understand?

Mr. **Kirby**: Yes, I do not care one way or the other whether it is in or not.

6714 The **Master**: I will allow it.

Mr. **Burr**: Exception.

Received in evidence and marked Complainant's Exhibit 376.

Recross-examination by Mr. **Kirby**:

Q. You spoke with reference to the weight of a tank at one of the stations to which you gave a weight of 90,000 pounds. How did you get that weight?

A. I had taken the measurement of the tank and estimated the weight in detail from those dimensions.

Q. Did you make those measurements?

A. They were made under my direction.

Q. And if Mr. Edgerton made his measurements I assume that you would consider that the difference lay in the accuracy of one man's measurements over the other, would you not?

A. They are in the accuracy of the measurements or the thickness of the metal or the calculations themselves; there are three chances of making error.

Q. I assume measurements made not only of dimensions but of thickness of metal?

A. Everything included.

Q. Have you the measurements of that tank?

A. No, not here. I had them all at the time I gave my testimony.

Q. Take the purifiers of the 42d Street works to which you give a weight of 675,720 pounds. How would you get the weights of those purifiers?

A. Those purifiers were measured and then an estimate taken from those that I referred to as having been made during the last twenty-five years of the same size purifiers corresponding to the measurements of the boxes in this instance.

6715 Q. So that if Mr. Edgerton had measured the size of the purifier, the thickness of the material would enter therein, and would have made his measurements and multiplications correctly; would he not have been apt to have come to a more correct result than this which you obtained by comparison.

A. No, quite to the contrary. I am quite satisfied any results would have been incorrect. He is not familiar with the detail of construction and I am quite satisfied that he would probably leave out of the detailed estimate at least 25 per cent. of material that should be in it.

Q. How do you know that Mr. Edgerton is not familiar with the detailed construction of a purifier?

A. Because he has not constructed any to any large extent.

Q. Well, if he has constructed one, doesn't he know?

A. No, that is only a trial but not an experience upon which you can base the valuation of an apparatus.

Q. I am not talking about valuation, sir. I am talking of size and how they are made?

A. Well?

Q. And if a man builds one doesn't he know as well as if he built a dozen?

A. No.

Q. Though they are all the same, as you state?

A. No, he doesn't know. He does not. Every time he builds one it is quite a problem to figure the statical calculation and the sizes therefrom and ascertain the proper thickness of the plates.

Q. And how do you estimate it, by comparison?

A. I have taken the same size of purifier, the same hypothetical dimension of a purifier, and I know that is absolutely right and fits the occasion.

Q. That is quite true——

A. There is no comparison about it. It is an absolute detailed estimate for that situation; no comparison.

Q. Now, therefore, if Mr. Edgerton measures the size and dimensions of the material going to make up those purifier boxes has he not the data upon which he can base his estimate? 6716

A. I venture to say that if Mr. Edgerton would do so it would take him not less than a week to make an estimate of one set of purifiers, and then I do not believe he would have everything in there that belongs in it.

Q. Let us take your holder at 42nd Street. How did you get the weight of that holder?

The Master: If you are going on in this way we will adjourn now till 9:30 o'clock tomorrow morning.

Mr. Kirby: I do not desire to go into this. I would not have gone into it.

The Master: I am not complaining of you. You have a right to recross-examine, but are apparently starting out now on a line of examination that will consume quite some time.

Mr. Kirby: It will, of necessity, not because I want to.

At 6.10 P. M. adjourned to February 1st, 1907, at 9.30 A. M.

Last Exhibits:

Complainant's, 376.
State's, OO.
City's, 236.

6717 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Arthur H. Masten, Special Master.

NEW YORK, *February* 1, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Kirby, Mr. Burr.

6718 FREDERICK J. MAYER resumed the stand and further testified:

Cross-examination by Mr. KIRBY (continued):

Q. Last evening you were speaking of the purifier boxes at 42nd Street, of which you gave the weight, as estimated by you, 675,720 pounds. I have before me the description of the apparatus for the 42nd Street station, furnished in the manner noted by Mr. Mathewson yesterday, and I ask you if the boxes, the description of which I now read, are those of which you gave the weights just mentioned?

Mr. Mathewson: Take your own memorandum and see if it is accurate, Mr. Mayer.

The Witness: Is that 42nd Street?

Mr. Kirby: Yes, the ones of which you gave the weight yesterday.

Q. I read from the description:

"Eight purifier boxes, 20 feet by 3 feet deep by 22 feet, 24 inch by 4 inch cups;

Two layers of trays, connections and supports;

Eight W. I. covers, 20 feet by 22 feet by 3 feet 6 inch boxes."

Is that the description which you used in making your calculation of weight?

A. That is right.

Q. Now, have you the details giving the size of the iron work going to make up those boxes?

A. No, I have not those details now; I did have them last summer at the time I made my valuation. This is 42nd Street. If I remember correctly, I built those boxes myself. I think in this instance they are likely to be the actual shipping weight. That was formerly the Metropolitan Company, and I believe I built those boxes myself.

6719 Q. Are you prepared to state whether or not you took the sizes of the various materials going to make up these boxes from actual measurement of the same as the box appears, or from drawings or specifications which you may have had in your possession, or obtained from some one?

A. The actual measurements were taken first by a man competent and familiar with the details of such boxes, under my direct supervision. Those measurements were then used in selecting the detailed estimate amongst thousands of estimates that fit these particular boxes, or boxes of the same dimensions. From those detailed estimates, which were made by myself or under my direct supervision within the last twenty-five years, the detailed weights were arrived at. All those details I had here last summer at the time I made my valuation.

Q. So that it was possible for your assistants to measure the dimensions as set down here, and not only to measure their dimensions, but to measure the thickness of the material used in the construction of those boxes?

A. Yes, it was.

Q. Do I understand you to say that it would have been impossible for Mr. Edgerton to have also made those measurements of thickness?

A. I say it would have been impossible for him to do that in every instance, in the fifty hours that he spent at the works.

Q. I didn't ask you that. I asked you if as to those particular boxes, of which you have given the weights and to which you have made reference, it would have been impossible for Mr. Edgerton to have measured the thickness of the material?

A. No, not if he did not spend any time anywhere else except on those boxes; he might have measured that particular set of boxes, but not the other apparatus which he claims he did.

6720 Q. You measured each purifier box in every plant?

A. Each and every one purifier box, and every other apparatus in each and every plant.

Q. And the thickness of the material going to make up each purifier box in each and every plant?

A. Where an apparatus was not enclosed it was measured; and where it was enclosed entirely you cannot measure it.

Q. You did not take, say, a purifier box of the same dimensions which might be at some other plant, and having applied a weight and value to the first purifier box which you measured, and, taking the thickness of the material, apply the same weight and measurements to the other one which was of the same size?

A. Not at all, Mr. Kirby. I just told you that these weights were selected from thousands of estimates prepared within the last twenty-five years either by myself or under my supervision.

Q. Did it happen in any instance that this estimate that you selected was for more than one purifier box?

A. Yes, of course, if a purifier box is of the same dimensions it is applicable under the same conditions, and these estimates are correct in detail, for the simple reason that a cubic foot or a cubic inch of iron twenty-five years ago did not weigh any more than it does weigh to-day?

Q. But twenty-five years ago it might have been that they used more material in purifier boxes than they do to-day, might it not?

A. And that is taken care of by the detailed estimates which have been *been* made, as I said before, by me or under my direction for the last twentyfive years, as compared with estimates made at a more recent date. I told you that it was selected from thousands of estimates.

Q. Quite so; a purifier box erected to-day might have an 6721 entirely different weight, though, from one that was erected twenty-five years ago?

A. It is possible, of course, depending upon the size and detail of construction, upon which I dwelt so forcibly last night before we left.

Q. Do I understand you to say that it is your opinion that with all the dimensions of a purifier box, together with the thickness of both the wrought and the cast iron, the width and depth of the cups, the width and the thickness of the flanges, the length and sizes of the T-iron supporting the covers, and the length, number and sizes of the T-iron supporting the trays, that it would have been impossible for Mr. Edgerton with his experience in the gas business, as it has been set down in this record, both in designing, constructing and operating works, to correctly calculate the weight of this purifier box?

A. If this purifier box was in use he had no chance to go inside of it and measure anything pertaining to the inside of it.

Mr. MATHEWSON: Supposing he had all those dimensions?

A. (Continuing:) If he had all the dimensions and had not omitted any, he probably could make a correct estimate of the weight.

Q. How would he get the inside dimensions?

A. By going inside the box.

Q. Suppose the covers had been lifted?

A. Then he had access to the interior of the box.

Q. Don't you know that the covers were lifted for him?

A. I do not, but I know from his estimate that he did not include the value of any trays or any supports for the trays.

Q. How do you know that?

A. Because it don't appear in his estimate.

6722 Q. Have you seen the details of his estimate?

A. No, he has not shown it.

Q. Then how do you know?

A. Because he has not mentioned it. He has used so many cents per pound, and he cannot do that unless he has got sufficient practical knowledge to apply it.

Q. Don't you consider that a man of his experience has practical enough knowledge to measure the dimensions of a purifier box?

A. I know he has not sufficient practical experience to include the cost of the trays and supports for the trays on a per pound price. It is only a practical man who has been long years in the business who has sufficient knowledge to know how such factors can be applied.

Q. And you do not consider that his experience in the business is sufficient for him to measure up the exterior and interior of a purifier box?

Mr. Mathewson: He did not say so.

A. That is not the question; that is not what I said. I said his practical experience is such, what is not based upon any assumption, but upon my actual knowledge for a great many years, and I know he has not sufficient familiarity with the details of construction as would enable him to incorporate the values of trays and tray supports on a per pound price. He does not know how to apply it.

Q. Not if he had made a detailed examination of the interior?

A. No, it is a question of practical experience to apply such factors.

Q. Do you consider that a purifying box is a very complicated piece of apparatus?

A. Not to a constructing engineer. It might be to a man who occupies the standpoint of a buyer, for instance, but not to a constructing engineer. As a buyer he might buy the cheapest, 6723 but it would prove the most expensive in the end, because there would be so many omisions that would have to be furnished afterwards that the total cost would be the same as if he had accepted the highest price submitted.

Q. But when you buy a purifying box you buy it complete, don't you?

A. That depends on the specifications accompanying the bid. If you buy from irresponsible people you will have to buy a lot of things afterwards.

Q. I call your attention to some diagrams set down upon pages 143, 144, 145 of "Newbigging's Handbook for Practical Engineers," and I ask you if you will point out to me the complicated parts of a purifier box.

A. I have not stated that the construction of a purifier was complicated. I will say that it might be complicated to an inexperienced man such as a buyer, but it is not complicated to a constructing engineer. And right here in this instance I want to say that there are no tray supports and no trays shown; as I said before, Mr. Edgerton omitted them in his estimate.

Q. Look at page 141, and I think you will see a section which shows the trays.

A. That is a different section from what you showed me. In this one it is included and in the other one it was omitted.

Q. I mentioned three pages and you failed to take notice of any but the first page.

A. As I said before, Mr. Kirby, to the eye of a constructing engineer familiar with the details of construction of course it is apparent at once, but to the eye of an inexperienced man, such as a buyer, it is not.

Q. On page 141 is a section through a purifier box, is it not?

A. Yes.

Q. The horizontal lines there indicate trays, do they not?

A. Yes.

Q. Is there anything very complicated in that?

A. There is nothing complicated to me, anywhere, in any of those places.

6724 Q. Page 144 I show you another section which is the box with the tray left out, and the carrying carriage and the hoist by which the box is lifted. I asked you if there is anything very complicated in that.

A. Now, as to that, when you get right down to the point of detail of construction there is more complication in this little picture than it appears to possess, to the eye of a man that don't know.

Q. I can believe that.

A. I venture to say right now that Mr. Edgerton does not know how large to make the bottom plate, just one bottom plate of a purifier, so as to take care of the cooling strains that exist in the process of cooling in the mould, which enter into consideration as a factor to resist pressure. That is a complication that he does not know.

Q. Don't the pattern makers have a scale which allows for contraction and expansion?

A. You do not understand my remarks. I am talking about shrinkage strains which occur in the casting, during the process of cooling in the mould.

Mr. Mathewson: Not the reduction of the size?

A. (Continuing:) The pattern maker does not know that; he has nothing to do with that. It is a question for the constructing engineer to decide that.

Q. Then there is no method of measuring the thickness of that bottom plate?

A. A method of measuring it? Certainly you can measure anything that is accessible. In connection with my remarks I want to add that the cooling strains have to be taken care of, in the dimensioning and sizing of the plate, and the ribbing and the thickness of the plates, to prevent its cracking when in operation. It is
6725 a well-known fact that bottom plates in purifiers have cracked from apparently unaccountable causes. If you take our purifier bottoms you will find that there are no cracks. This is attributable to these details which appear to you as being not in existence.

Q. No; this being what you designate now as your purifier box, I presume it would have all those strengthening materials that you mentioned.

A. Yes it would.

Q. And one who had an opportunity to examine should observe that in his examination, should he not?

A. If they were there, yes, he should find them.

Q. And if they were not there they ought not naturally to be included in the estimate of the value of the box?

A. Certainly not.

Q. I ask if you consider that these figures with the dimensions are such as will set down upon the box?

Mr. Mathewson: The dimensions of the covers?

Mr. Kirby: 8 wrought iron covers, 20 x 22, with 24 inch x 4 inch cups, etc.

A. There is always an allowance for a variation of the cups around the boxes, and in designating the size of the cover, you always refer to the size of the box. It is common with all constructing engineers.

Q. If Mr. Edgerton in making measurements ascertains that the covers were of greater dimensions than set down here, and so calculated them he would not be in error, would he?

A. That is not in error in either direction. The covers for 4 inch cups are always 5 inches larger in each direction than the
6726 box, and the size of the covers always refers to the size of the box.

Q. So that the dimensions given here for covers are not in fact the true dimensions?

A. Yes, they are, because the constructing engineer always adds half the size of the cup for the cover.

Q. But the weight of material in these covers, you would have to use larger dimensious than are set down in this schedule, would you not?

A. No, for the constructing engineer handling it, knows just exactly how to apply that difference, which I do in every instance. Besides I think you will find the covers for boxes. I think you will find it reads. It does not say eight covers so and so big.

Q. And such covers would be larger in size than the boxes?

A. Yes, by five inches—half the width of the cup.

Q. So that taking their dimensions you do not think it would be correct rather than taking the dimensions as set down?

A. I did not set down the dimensions of the cover. I said the covers for such size boxes.

Q. If you will listen until I have finished my question you will not be led into error?

A. You asked about the size of the cover given there. I did not give the size of the cover. I gave the size of cover for such size boxes.

Mr. MATHEWSON: This inventory was made by you for your own purposes, was it not?

The WITNESS: Certainly.

Mr. MATHEWSON: Not to be delivered to anybody else?

The WITNESS: Certainly not, every constructing engineer of gas works knows how to apply such dimensions.

6727 Q. Have you the details of the foundations under those purifier boxes?

A. No, I haven't got them now, I had them all last summer.

Q. The foundation as indicated in Newbigging's—can you give a general idea?

A. Not at all; foundations in every instance would differ from those under other conditions.

Q. I am asking you how this condition at 42nd Street compares with that down here?

A. Not at all; that is merely an assumption. That is based upon nothing; it is a sketch.

Q. I want you to tell me, inasmuch as you have not your details here, how the foundations are situated at 42nd Street?

A. They are piled.

Q. The foundations are piled, and the supports for the purifying boxes?

A. They are piled.

Q. Piled below the foundations?

A. Below the column foundations.

Q. They come up to the columns?

A. Yes.

Q. Are the columns in any way similar to this sketch?

A. Well, a column is a column, and there is not a great deal of variance in the appearance of a cast iron column; they look pretty near all alike.

Q. And the columns as placed under the purifying boxes, disregarding the question of piling, are similarly placed in this sketch to what they are in 42nd Street?

A. Not at all; it has got no bearing upon that at all, on 42nd Street, and it does not admit of any comparison.

Q. Are there more columns?

A. Mr. Kirby, it is impossible to say that off-hand, by comparing it with a sketch and a book which does not refer to any particular job at all.

Q. I am very anxious to get at the truth, and you have not your details here?

6728 A. If I had my details here I would not be able to tell you that. I would have to have the plan of the building to find that out.

Q. You haven't that plan, have you?

A. Not now. I have not. It is a well-known fact that in modern construction the number of columns is reduced to a minimum, and in fact I have executed a great many constructions without any columns. Instead of using them, I have put the weight in the supporting girders, which extend from side wall to side wall of the building.

Q. You do not remember how many columns there are under these purifying boxes, if any, do you?

A. No, I couldn't tell you that now.

Q. Now, you spoke of the bulging of the walls of the building at 14th Street. Does this bulging show a settlement of the walls?

A. It absolutely indicates it.

Q. Now, if those walls settled, why is it that the piping running from that building or into it was not broken?

A. I did not say it was not broken; it might have been broken and repaired.

Q. If a wall settles in that way does it break the pipes entering or leaving the building?

A. It undoubtedly would if there was sufficient settlement. I have known that to occur in many instances.

Q. Would a most minute settlement, say 1-16 of an inch?

A. It depends on the limit of elasticity of the pipe connections as to how long it would be before the fracture would occur.

Q. Are pipes running in and out of buildings in gasworks so placed that they will be able to compensate for a slight settling?

A. They are.

Q. And in running through walls, is it not the custom to leave a small space around so that a settlement or variance in the relative position of the wall, if small, will not disturb the pipe?

A. That is true.

6729 Q. You have placed in evidence Complainant's Exhibit 376, detailed estimated weights of 5,000,000 cubic feet holder, and stated that the details set down in this exhibit are necessary to be obtained in calculating the weight, and from the weight the value of a gas holder. Is that correct?

A. That is right.

Q. Now, does this detail include not only the tanks proper and the framing, but also any internal framing which may be in the holder?

A. Everything and anything belonging to that holder from beginning to end and from start to finish.

Q. Am I right in assuming that some of these articles set down under the heading "Flange Steel" are for the interior framing of the holder, or if not, will you point out to me such material?

A. Yes, in this instance it is. It belongs to the vertical stiffeners of the second section.

Q. And there is distributed throughout the schedule all the material which there is in any one of the holders?

A. Yes, the entire material is set down from beginning to end of construction.

Q. Will you tell me which holders of the Consolidated Gas Company you have the same details for as are set down in this Exhibit No. 377?

A. I cannot tell you from memory, but a large majority; within the last six or eight years nobody but Bartlett, Hayward & Company has built any holders in New York or Brooklyn.

Q. Outside of the holders erected within the last six or eight years?

A. A great many estimates of the other holders, yes, just how many I cannot tell you.

Q. Let us take up the holders of the various stations? Have you the details of construction of the holder at 132d Street.

A. That is the one (indicating) or one of the same size.

6730 Q. By that you mean the estimate set down in Complainant's Exhibit No. 379?

A. Yes, sir.

Q. And the holders at 65th Street?

Mr. Mathewson: You mean has he identified the 65th Street?

Mr. Kirby: Yes.

A. Yes, I believe I built the 65th Street holders.

Q. In coming to your appraisal of that holder, you prepared a schedule such as this?

A. I took my weights from such a detailed estimate such as that.

Q. And did you do the same thing with the holders at 65th Street?

A. Yes, I did, I built those.

Q. Did you take the weights in the same way of the holders at 44th Street?

A. In every instance.

Q. And at 42d Street?

A. In every instance. I built the four holders at 42d Street.

Q. And 18th Street?

A. There are only two holders. Yes, they were taken from detailed estimates.

Q. When were those 18th Street holders erected?

A. I do not remember, but it was a good many years ago.

Q. And from what source did you get the detailed estimate?

A. The same source as I got that.

Q. From the builders?

A. From my own estimates made within the last twenty-five or thirty years, of the same size holders.

Q. Then, it was not for the identical holder there to-day?

A. If the dimensions agreed with those, or my detailed estimate, it is the identical holder. As I said before, it did not make any difference whether it was made twenty-five years ago or made to-day.

Q. Is it not a fact that you can take an estimate for holders 6731 of exactly the same size and same capacity, and that then when erected one will weigh more or less than the other?

A. Slightly, due to the difference between the weight of the purchase weight of the material and the actual shipping weight after the material has been manufactured. That difference varies from—well, it amounts to about 3½ per cent.

Q. So that the holders which you did not have the actual details of, and of which you took the details by comparison, might differ by that percentage?

A. No, that percentage is a difference which exists in all holders. Where I did not have the details in my estimate I made new details for such conditions.

Q. How could you make new details if you did not know the construction of the holders?

A. I could see the construction of the holder. I took the pressure of the holder, for the weight of the holder, and then measured the details for the guide frame.

Q. Did that carry out the statement which you have made in connection with the details of construction of the holder? When you took the pressure of it did that give you the internal framing?

A. No, sir.

Q. You did not know the details then?

A. In this instance, no; the weight of the holder was estimated by pressure, but I say in most instances I had detailed estimates and did not have to take the pressure.

Q. How is that about 18th Street, do you remember?

A. No, I cannot recall that.

Q. How is it in regard to 14th Street?

A. In 14th Sreet I believe I took the pressure, but I would not be sure about that, there are so many estimates; it is impossible for me to remember that, when I made that about seven months ago, in all this multitude of figures.

6732 Q. How about 23rd Street?

A. What I said about one applies to all. Wherever I had a detailed estimate of the exact holder, which was the case in a great many instances, I took that detailed estimate. Where that was not the case I did make estimates from such weights and measurements as I was able to obtain.

Q. And what weights and measurements were you able to obtain, and in what way did you obtain them?

A. By sending my man there and going there myself, and by directing them how to take the measurements and telling them what measurements I wanted. When they reported to me I telephoned to Baltimore to find whether they had an estimate to cover that situation.

Q. Did you measure the height of the guide frame and the thickness of the material entering into it?

A. Everything.

Q. Did you take the pressure on the holder?

A. Everything.

Q. And from those dimensions and from that pressure you calculated the weight of that holder and your guide frame?

A. And compared it for verification with the estimate in existence at Bartlett, Hayward & Company's office, which estimates were made under my direction for the last twenty-five years, in order to be sure that my calculations were correct.

Q. And to that weight you applied a unit figure which you had previously determined upon and which you have spoken of in your direct testimony?

A. Yes.

Q. Yesterday you mentioned certain sheets, some of which you had examined and some of which you had not examined, which sheets are those furnished by me to counsel for complainant?

6733 Mr. Mathewson: I did not ask him on redirect about any of them, nothing at all.

Mr. Kirby: It was on redirect that you offered one.

Mr. Mathewson: No, I merely asked for 132d Street, which had already been testified to. I asked for it at the end of the case and I offered it, but it had no relation to his examination, and I shall object to going into this question, as I think it is a consumption of time.

Mr. Kirby: The consumption of time will consist in offering all those sheets in evidence. I simply want to identify them.

Mr. Mathewson: I don't know how you can offer them in evidence, your case being closed. I think you should have offered them before, and I shall not consent to that. That may mean days of further examination by me of witnesses, and going over them.

Mr. Kirby: I will make the offer and then make my argument.

Q. I show you a statement headed 14th Street station, a lot of yellow sheets upon which there are certain writings, figures and dimensions and what not. I show you the same thing in an envelope headed 42d Street plant, 44th Street plant, 18th Street plant, 21st Street station, 163d Street station, 199th Street station and 111th Street station; also Inwood station. I ask you if these are not the envelopes and the contents thereof which you make reference in your testimony as having been looked over in part by you, and from which envelope headed 132d Street station the entries have not been taken out, but were yesterday placed in evidence in this case by Mr. Mathewson?

A. I am absolutely unable to tell. I had such envelopes
6734 but I cannot tell whether they are in the same condition as when I had them, because my reference yesterday to omissions and errors may have been corrected since that for all I know. I cannot tell whether they are the same papers or not.

Mr. Mathewson: You did not examine them anyway, did you?

The Witness: No, the space of time was entirely too short; I could not do that and I could not tell whether they are the same papers or not.

Q. You made such a close examination of them that you are not able to tell whether they are?

A. I said yesterday that the time was too short, but in that time those that I did examine I found that they were so full of errors and omissions that I took it for granted that they were all on the same basis and were of no value.

Mr. Kirby: By reason of the statement of the witness, and more particularly by reason of the fact that yesterday Mr. Mathewson placed in evidence over our objection these sheets for the 132d Street station, I here offer, so that instead of having a part of what is a complete statement, which may be worth much or little, we may have it complete, the sheets for the other stations. I call attention to the fact that on page 5385 of the testimony, being the testimony for January 9th, a statement was made by me in reference to these sheets, as follows:

(Here Mr. Kirby quotes from the record at the page mentioned, which was ordered not to be spread upon the record.)

Mr. **Kirby**: I was prepared to offer all of these statements at that time, and acting upon the suggestion of the Master I had 6735 them marked for identification. Now, I contend it is improper to place in evidence here as an exihbit any one of these exhibits without placing them all in. As I stated at that time, and as I inferred yesterday, they are nothing but memoranda subject to the explanation of the man who made them, and without such explanation, as I then stated, can have but very little value. Having been taken advantage of in any one instance by the complainant I certainly consider that the others should go in and that that should be stricken out as an exhibit; either that, or else they should all go in together.

Mr. **Mathewson**: Mr. Kirby entirely misconceives the situation. The only papers which I offered were the details in reference to the 132nd Street station and no other station. Now, if Mr. Kirby will refer to the record he will see that I took these very sheets when Mr. Edgarton was on the stand, and asked Mr. Edgarton as to every one of the details making up the $21,160, and I asked him whether he had included profit in the first item, the cost of brick, or whatever it was. No, he had not. I asked him whether he had included profit in the cost of carriage, and he said he had or had not. I said "Take up the cement floors $520." He answered, "I can shorten that by saying that the contractor's profit, so far as my information goes, will be included only in the brickwork and he will save that concrete work."

Now, I have simply offered these sheets in order that being printed, it may be intelligible to the Court that the figures with which I was dealing, and the sheets upon which I was examining the wit- 6736 ness, were in reference to that particular station; nothing more and nothing less.

Of course, if any paper were produced by the defendant which would tend to rebut the accuracy of the defendant's testimony, as that paper would, showing that he had not included any profit in the purchase of his brick or other material, it would be quite pertinent for me, he having presented it, to offer it as the very last thing in my case, with no witness on the stand at all. It is marked for identification, and if these papers were desired to be offered as to the other stations by the counsel for defendants at that time, and they had been admitted, my witness would then have examined those particular papers as to those other stations and would have been prepared to testify to their correctness or incorrectness, no matter what time it might take; but to put them in now after their case is closed, merely because I offered papers which have been referred to in the examination of the witness and gone over in detail as to the 132nd Street station, would simply put me back where I would have to take up these papers and spend days on them in examination to perhaps rebut them. It seems to me perfectly clear that it is most competent for me to offer that paper and incompentent for defendant's counsel at this stage to offer these other papers respecting which I have said nothing. I will say this, that if the counsel have any question about it, this can be marked for identification and printed. I would be just as willing to have it marked for identification as anything else.

6737 The **Master**: Where is the place this was offered in evidence?

Mr. **Burr**: It is in yesterday's proceedings which have not been printed yet.

The **Master**: I remember pretty well what took place.

Mr. **Kirby**: The whole testimony carries an entirely wrong inference.

The **Master**: I will exclude these and give you an exception.

Mr. **Kirby**: Then I here move to strike out the exhibit which was admitted yesterday, on the ground that it is improperly admitted unless all are placed in evidence.

Mr. **Mathewson**: I am perfectly willing to have this printed so it can be referred to as a part of this record, as an exhibit for identification for that purpose, if you wish.

The **Master**: That probably answers the purpose.

Mr. **Kirby**: No, I want to have them all to have the same strength in the case. I do not want in the case an exhibit which has no right there unless it is connected with all the other sheets for the other stations.

The **Master**: Do you imagine the Appellate Court is going to spend any time looking over these details?

Mr. **Kirby**: They will on an exhibit in the case.

Mr. **Mathewson**: If you will give me time to rebut these papers and go over them and give testimony in regard to them, I would have no objection to their going in.

6738 The **Master**: I have disposed of the matter. I think the suggestion made by Mr. Mathewson, that they should be printed, the expense of that coming out of his client, in part, covers the whole thing. If there is any error in excluding them you will get the benefit of that.

Mr. **Kirby**: They are marked for identification. I do not care whether they are printed or not. They are always subject to our use, marked for identification.

The **Master**: But the Supreme Court will not pay any attention to them unless they are in the record.

Mr. **Mathewson**: I am perfectly willing to have the paper I offered yesterday printed as an exhibit for identification for reference, to make this intelligible in the testimony, instead of being offered as an evidence as proof of anything.

The **Master**: That answers your question, Mr. Kirby.

Mr. **Mathewson**: But I cannot consent to printing all of these other papers.

The **Master**: Very well, we are all in harmony.

Mr. **Kirby**: So that there may be no controversy about tampering, such as Mr. Mayer suggested, in regard to these schedules, I would like to have them marked in some way.

The **Master**: They have already been marked.

Redirect examination by Mr. **Mathewson**:

Q. Did you have all the d-tails of computation at hand when you were called to testify last summer, when you were examined here?

A. I had, and I was continuously telephoning to Baltimore, and even taking trips to Baltimore twice a week, sometimes taking the night train and coming back the next night.

6739 Q. Bartlett, Hayward & Company are the custodians of these, are they?

A. Yes.

Q. And they are in Baltimore?

A. Yes.

Q. And since last summer you have moved your office and cleaned up generally?

A. Both my Baltimore and New York offices were moved since then.

Q. Do I understand, in reference to a holder which you did not build, that after taking measurements of the holder, for instance, or other apparatus, you then went to Bartlett, Hayward & Company's estimates to see if they had built a holder or other apparatus of these dimensions?

A. Yes.

Q. And if you found that, you took that weight?

A. I did.

Q. And if you did not?

A. Where they differed from the dimensions taken actually in buildings, then the weights were estimated in detail.

By Mr. **Burr**:

Q. Where is your office now?

A. My New York office, in Park Row Building. My Baltimore office is in the Keyser Building.

Alexander C. Humphreys, recalled in rebuttal, testified as follows:

By Mr. **Mathewson**:

Q. At what period were you connected with the U. G. I. Company of Philadelphia?

A. From the first of 1885, January 2nd, to the latter part of 1894, almost exactly ten years.

Q. What was your position there?

A. First, superintendent of construction; almost immedi-
6740 ately general superintendent; finally, in charge of all the en-
gineering details, of operating details, and finally all commercial details and sales of all plant.

Q. Mr. Edgarton in his testimony at page 3945 says that he was engineer and chemist from 1882 to 1891; and at page 3990 he says that he thinks he was as active as anybody connected with the U. G. I. Company. That covers the first six years of your administration there?

A. Yes.

Q. What is the fact as to that?

A. The facts are that practically Mr. Edgarton had nothing whatever to do with the engineering connected with the works of the U. G. I. Company, or with the operation, purchase, accounting, or any of the features that came under my direction, the only exception being one works or plant in which his process had been installed, namely, Pensacola. I will follow that up and try to get rid of an unpleasant subject at once. When I took charge of the U. G. I. Co. I was engaged as superintendent of construction with the understanding that I should be given general charge, after a short test. When I took charge the whole technical force that was given to me to do my work with was one draughtsman who had never been inside of a gas works before, so far as I could learn, and one constructor who had never erected anything but an oil gas bench. Within a month I was required to take charge of the operating works, North and South, and then, within a few months I was, on top of all my other duties, required to instruct a lawyer who had charge of one of our important patent suits, our other lawyer having died. It seemed to me that that duty would not have been put upon me if the company had been depending upon anybody else, except in an honorary way. Mr. Ed-
gerton's title as engineer and chemist, as declared by the offi-
6741 cers of the company, was an honorary one, in connection with
the fact that they have taken up some of his patents.

Q. Do you know, in fact, whether it was an honorary one during the six years since 1885 to 1891, while he was connected with the company?

A. If you could use that term to indicate a position where no specific duties were performed and where the holder of the position was not in regular attendance, but was frequently absent for months at a time.

Mr. **Burr**: I move to strike out "as declared by the officers of the company."

Mr. **Mathewson**: He was one of the officers.

The **Master**: Strike it out, in so far as it relates to that. This is a matter of personal knowledge.

Q. Was Mr. Edgerton consulted by you or did he confer with you from 1885 down to the time he left in 1891?

A. He did not.

Q. In reference to matters of policy or otherwise?

A. Not at all.

Q. He says that he left the U. G. I. Co. because he differed as to the policy of making a poisonous gas. What was the reason that he left, if you know?

A. Expiration of his contract.

Q. And at whose suggestion was that not renewed?

A. I do not know who originally suggested it.

Q. I will ask generally whether Mr. Edgerton was active in any practical way so far as the U. G. I. was concerned after you joined it in 1885?

Mr. Burr: I object to that as calling for a conclusion. He may state what he did.

Mr. Mathewson: In a practical way. I suppose that is a meaning that is intelligible to any one.

6742 Mr. Burr: I suppose it is, but he is entitled to give the details. It is merely a conclusion.

The Master: Let him state what he did as far as the witness knows.

A. Do you want to ask what he did?

Q. State what he did, so far as you have not already stated; if you have covered it, all right.

A. It would be difficult to state exactly what Mr. Edgerton did, as he, so far as I know, was not considered in the practical operation of the work of the company. He was consulted, no doubt, by some of the officers as to experimental work and the like, in which he was expert, but in practical matters was not.

Q. Had he anything to do with the purchase of pipe and material while he was there with the U. G. I. Company and he had his title?

A. Not at all; that purchasing agent was one of my assistants, and all large purchases passed through my hands for final decision.

Q. He also testified that he made a study of accounts, and took charge of accounts. Did Mr. Edgerton have anything to do with the accounts of the U. G. I. Company after you were there?

A. This is the very first intimation I have had of anything of the kind. When I took charge of the U. G. I. Company, if my recollection serves me, the only thing that could be considered as a return or form, or anything of that kind to be used in connection with the operation of the works, was a weekly report. Possibly Mr. Edgerton may have had something to do with getting that up, but I could not say; but the whole thing was a great surprise to me; this statement.

Mr. Burr: I move to strike that out.

The Master: Strike it out.

6743 Q. Were you in such a position that you would have known if he had had anything to do with keeping accounts or the method of the accounts?

A. During my administration?

Q. Yes.

A. Certainly, I directed it.

Q. Have you yourself ever had experience in accounting, or have you made a study of the subject?

A. I have. I entered the gas business through a secretarial position.

Q. Mr. Edgerton at page 3990 of the testimony states in substance that he made possible the use of heavy oil, such as intermediate. Do you understand that to be the fact, is that your information or knowledge?

A. No, it was quite contrary to my knowledge and belief. Undoubtedly Mr. Edgerton has done a large amount of experimenting in that direction, but as far as the U. G. I. was concerned, and so far as the general work which I know of in the gas business is concerned, I think it can be claimed that the development of plants for the use of heavy oils was done in the United Gas Improvement under my immediate direction, and resulted in the development of the so-called double superheated plant, the object being to develop a plant which would use an oil which was at that time almost a drug upon the market; and at the same time to develop a plant which would be elastic enough to use practically any kind of oil which could be bought the cheapest at the moment, with the additional feature that it was desirous of especially developing a heavy oil, as the heavy oils as a rule were at high flash points and therefore safer.

Q. I have asked you in reference to Mr. Edgerton's connection with the U. G. I. Company only because he himself stated it as part of his qualifications before proceeding with his testimony; he 6744 also additionally stated that he was connected with the Pensacola Company, and you have so stated. Was that a company which at that time was employing his so-called process of oil gas?

A. It was.

Q. Did you take charge of the Pensacola plant when he left it?

A. It came under my direction with the other works as soon as I assumed charge.

Q. When was that?

A. In 1885, my general charge; but being loaded down with work I endeavored as far as possible to place the work for that particular plant upon Mr. Edgerton, it being his process.

Q. The process was introduced at Pensacola about 1884, wasn't it?

A. Yes, about that.

Q. And when was it abandoned?

A. In 1896.

Q. Why was it abandoned?

A. Because it was wasteful, and also it was badly constructed in some directions.

Q. Mr. Edgerton has stated in some substance that this process has been displaced at plants where it has been in use in the United States, except at Danbury, on account of persuasions of promoters—that word being his. What is the fact, as you know, and as far as your knowledge goes?

A. I have already stated the facts in regard to Pensacola. It was abandoned because it was uneconomical as compared with the other plants being operated by United Gas Improvement Company; and as each plant, as far as possible, was made to stand upon its own legs, we endeavored to make that plant in every way a success, and we got better results out of it in the years immediately succeeding the time that Mr. Edgerton had not been supposed to be looking out for it closely himself. The result was that it was somewhat improved, but by comparison it was still very poor, especially on oil.

6745 Q. What condition did you find the Pensacola works in when they were turned over?

A. When I commenced to go to Pensacola to look out for things I found they were in great trouble about contamination of the wells from leakage of the holder tank, and also from the tar being allowed to run out on the adjacent country, which was sand. I also found that there was no purification provided for, although the plant was there, but had not been started up. After that was started up we still had considerable trouble with the purification, and when I came to investigate it I found that my orders that were attached to the test slips for sulphureted hydrogen to the effect that a jet of gas passing five feet should be allowed to impinge upon a slip of paper saturated with acetate of lead. Mr. Edgerton had countermanded to the effect that the stream should be reduced to two feet an hour, because this was, so to speak, a two-foot process, and I had to show the superintendent that our problem had nothing to do with the size of the stream, that we were trying to find out whether there was any possibility of sulphuretted hydrogen developing, and not to take those instructions from Mr. Edgerton.

Q. As to the results of heavy oil, of which Mr. Edgerton states was just as good as high-grade oil, was what was disclosed at Pensacola incorporated in his process?

A. The general results showed them to be using about 140 pounds of fuel to the thousand, about ten gallons of naphtha per thousand, 35 candle power gas with a very very wide variation, som-times running as wide a variation as from 20 to 40 candle power, and showing about 3.5 candles to the gallon. In 1892 and 1893, the year succeeding Mr. Edgerton's departure from the company, although he had not much to do with Pensacola before that, showed 9.32
6746 gallons and 9.23, and they happened to average out exactly the same, 3.85 candles to the gallon. The repair item for works is interesting, showing for one year 12.36 cents and the next 14.14.

Q. What was the cost in the holder at Pensacola, if you have a note of it?

A. My recollection is considerably over a dollar. In 1892, $1.37.

Q. Were these results with 140 pounds of fuel and ten gallons of naphtha to the thousand and 3.5 candles to the gallon, good or bad results as compared with modern methods?

A. Very poor.

Q. Mr. Edgerton also referred to the New Orleans gas company as in the hands of a receiver, as having failed. Has the company that owns and operates the New Orleans works been in the hands of a receiver so far as your information goes?

A. Not the immediate company; some holding company with which it was indirectly connected had some financial trouble; the gas company had always gone along and paid dividends.

Q. Mr. Edgerton testified at page 4017 that he invented the tower scrubber, which was taken to England and brought back here, and again claimed that he originated the tower scrubber and erected one at New Orleans in 1873, from plans made in 1871 or 1872. Is Mr. Edgerton correct in that?

A. No.

Q. What are the facts?

A. The great Beckton works in London commenced work in 1868, and they were gas making in 1870, including these scrubbers, but these were erected in Belfast as far back as 1860, and in Preston in 1867, and many of them were in use in the 60's.

Q. Mr. Edgerton testified at page 4849 that he introduced a system of compressed gas on railway cars first as early as 1871, and that this led finally to the use of the compression system as a 6747 means of distribution. Was 1871 the first use of compressed gas of the character which he described?

A. No.

Q. What is the fact in reference to that?

A. The Pintsch people in Germany were using it successfully back in 1877, and they had been experimenting in Germany on compressed gas for car illumination as far back as 1837.

Q. Now, Mr. Edgerton refers at various points to the laying of mains, and advocates laying them near the surface. Do you know any place in this country and in this latitude in which mains are laid as near the surface as possible instead of at a depth of several feet?

A. Not unless it is unavoidable on account of some obstruction or the like in this latitude.

Q. Have you any information which corroborates Mr. Edgerton, that they are laid at Faribault near the surface?

A. They are not.

Q. He referred to Baltimore and exposed pipes there, at page 4035 of the testimony. Now, you are a director of the Baltimore Company, are you not?

A I am, and largely interested.

Q. What is the fact as to that so-called exposed pipe?

A. That exposed pipe was exposed because we could not get it down under the surface; it went across the marsh, and was laid across the marsh and covered up as far as possible. It happens that the engineer of the Baltimore Company is a very warm advocate of putting his pipes under the ground, and he never would have put that pipe above he ground if he could have helped it. That was discussed, and I entered into this discussion as to how this pipe should be laid and the difficulties to be overcome.

Q. So the facts as to the way it was laid and the reasons for its laying are within your knowledge, are they?

A. They are.

6748 Q. Now, Mr. Edgerton expressed at page 4835 to 4837 that heavy oil is better than light oil, has more carbon and greater enriching power, and just as good a carrying capacity for the illuminants in suspension. What is your view on that subject?

A. It is an extremely broad statement to make, that an oil is a better illuminator because it has more carbon; it seems to me if we followed that out to its logical conclusion, we could say that powdered anthracite would be still better.

Q. It is pure carbon practically, is it not?

A. Yes, sir, or that a bituminous coal would be a better illuminator than cannel coal, having a larger amount of carbon than the cannel coal. Of course, the fact is that the carbon has to be kept in solution in the hydrogen, in the form of hydro-carbons, and the oils that are now supplied to the gas company, the heavy oils, do not carry their illuminating power to the burner as well as the oil we used to use. And that is unquestionably a fact that has been demonstrated by practice in later years. In other words, there are more of the condensable vapors in the gas made from these heavy oils than there used to be in the past.

Q. What is your knowledge, derived in the business, as to the efficiency of heavy oils as compared with light oils in carrying illuminants to the consumer?

A. You could not put that into percentages, because it would vary with the oils, and even from the same crude oil, an oil of the same specific gravity as another oil from that same crude oil might vary in that regard, depending upon the way in which the oil has been produced in the oil stills; and we made a series of very extensive tests in England not a great while ago, two or three years ago, on heavy oils, and they have not been giving such satisfac-
6749 tion to our clients as the oil previously purchased, and we found that those oils gave an efficiency of about 85 per cent. of the oil that had been used before that.

Q. Mr. Edgerton suggests that in cold weather with the heavy oils no more will be required, the heavy oils will do just as well, and he refers in his testimony to certain papers accompanied by letters from him which had been sent to Chief Engineer Bradley of the Consolidated Gas Company. Have you those letters with the papers attached?

A. I have.

Q. Does Mr. Edgerton in any of those papers say whether more oil is required in cold weather or not?

A. He does.

Q. Just quote what he does say on that subject.

A. I quote from the 7th page of the general statement, on the Danbury gas process, which accompanied the letters referred to, to Chief Engineer Bradley, something over a year ago, "were the above method carefully carried out it would give a very fair result; as carried out there was some times intervals of ten days between tests at Danbury on many occasions, thus giving an opportunity for the gas to sag in candle power, or rise above the mean in the spring season. Not only is more oil required in cold weather, but even with the increased quantities shown in the record the gas would sag below standards, and this is particularly noticeable since the use of gas oil.

Q. Now, Mr. Edgerton also refers to the cost of gas——

A. If I might continue, please?

Q. Yes, very good.

A. "In order to weather the minimum standard points in bad weather, close haul and close to, the plant put in New Orleans and very closely watched for fouls from the poop deck of the City 6750 Hall during several months, the enclosed log or record is offered." It would seem to point to the fact that more watchfulness is required in bad weather.

Mr. Kirby: That is an inference. I move to strike it out. Let the statement stand as it is.

The Master: Let it stand as it is.

Q. Now, is that all of that subject?

A. Yes.

Q. Now, Mr. Edgerton at page 4678 stated that the cost of gas as he was informed by the New Bedford people was something like twenty-four cents, that that was the information that he gained. Is that correct?

A. No, sir.

Q. Now, what is the fact as to the cost at New Bedford?

A. He has stated it was 38.65. It was reported, I think, 24 cents in a report made by the sliding scale commission, but through some mistake of the printer, probably, the distribution amount was put in the manufacturing column, and the manufacturing account was put in the distribution column, so that it does appear in that column that the gas was made for 25.4 per cent. An examination of the returns of the company show that that is not the fact.

Q. Well, Mr. Edgerton may have been misled by seeing that report?

A. I imagine that was the truth.

Q. Now, in order to confirm the reports of the company did you make any inquiries of the president of the company?

A. Yes, I had quite an extensive correspondence with the president.

Q. Did you find that your conclusion that you have now stated was correct or otherwise?

A. I found that conclusion was correct according to the president's statements. In fact, it was the president who pointed out to 6751 me how the error probably had occurred.

Q. Now, at page 4679, Mr. Edgerton refers to a mixed coal and water gas of 18 or 19 candle power, and this is a gas, is it not, which costs 38 cents?

A. It is.

Q. And it might be gathered from Mr. Edgerton's testimony that New Bedford made an unenriched coal gas from 18 to 19 candle power. Do you know whether that is the fact or not?

A. I know that is not the fact, that it is so made, and I gathered from the testimony that is what Mr. Edgerton meant. I don't know whether he did mean it or not.

Q. However it is construed, the fact is as you have stated it?

A. Yes.

Q. At page 4754, Mr. Edgerton has stated that a depreciation is not a charge against the cost of gas, but a charge direct to profit and loss. In the papers which he sent the Chief Engineer, Bradley, and which you have here, how does he include depreciation, as a charge against the cost of gas or otherwise?

A. Included right in the cost of gas.

Q. What does he state is required for depreciation and repairs which the defendants criticize at even 10.89 in the case of the Consolidated Gas Company?

A. The statement that I have before me is not the unadjusted statement of cost, it is the statement on the basis of 17.6 candle power reduced.

Q. What do you mean by reduced?

A. On the Edgerton theory that one candle is as good as another, he takes the actual cost of the gas as made of a certain candle power and then says the cost is so much less according to the candle power to which he wishes to reduce it, and in this particular statement he reduces his gas to a candle power of 17.6 and then makes his cost conform to that. I have merely restored the original figures and 6752 on that basis—this 32.95, I think, candle power gas—the repairs and depreciation together foot up $14.96 *cents* a thousand.

Mr. **Kirby**: Mr. Master, I object to this line of testimony and object to quotations from Mr. Edgerton's letters to Mr. Bradley, unless it be that all of the letters and the accompanying schedules be either read in evidence as to the contents of the letters received by Mr. Bradley or else placed in evidence as an exhibit. I don't think it is proper upon the record in this way part of a communication.

Mr. **Mathewson**: There is a good deal of it that does not relate to the points about which there is any controversy.

The **Master**: If you use this letter for the purpose of impeaching the witness, it ought to be produced.

Mr. **Mathewson**: Certainly, it is produced, it is right here, and the witness has it in his hand.

The **Master**: If there are enclosures and tables in it that it is not material to have spread upon the record, you can mark it for identification, but anything that is of sufficient importance to be put on record should be produced.

Q. (Handing papers.) Are these the letters to which you refer, the first being dated Danbury, November 22d, 1905, and second dated Danbury, November 30, 1905, with the papers attached, excluding, of course, any pencil memorandums you have put on them?

A. Yes, sir.

Mr. **Mathewson**: I ask that they be marked for identification. 6753

Bundle of papers marked Complainant's Exhibit 377 for identification.

Q. Now, Mr. Edgerton, in these papers which have been marked Complainant's Exhibit 377 for identification, sets forth, does he not, various estimates in reference to the cost of making the oil gas according to his process, using one item or another?

A. These papers?

Q. Yes.

A. These papers show Mr. Edgerton's statement of the actual cost at Danbury in the year 1902-3. It is a selected statement, although the statement was dated and sent to Mr. Bradley March, 1905, apparently, or the statement was made then, it was sent to Mr. Bradley later, but it is for the year 1902-3, and purports to be an actual statement of the cost as it occurred. There are many results given for many other years, but that is the only one that covers actual cost.

Q. He gives certain results as to coal, oil, candle power and candle power per gallon from the year 1891 to 1905, does he not?

A. Yes, sir.

Q. Take the entire number of years, how many candles per gallon are produced, or how high is the candle power per gallon according to his own statement?

A. His statement shows the candle power from 1890 to 1904, and it seems to be an arithmetical average for those years of 34.89 candles.

Q. How many gallons per thousand?

A. 9.64. It figures out candles per gallon of 3.62.

Q. Now, during the entire period from 1891 to 1905, do you find that his candles per gallon rise above four?

Mr. Burr: I object to this. I do not think this is pertinent. I scarcely think we want to go into an inquiry at this late hour 6754 as to the methods adopted by Mr. Edgerton or by anybody connected with that company at that time.

Mr. Mathewson: I did not go into it. Mr. Edgerton was brought in and alleged that we ought to have a coal and oil gas process, and introduced figures reducing cost to something like 16 cents on his process, by assumptions of one kind and another, and I am going to show by his own statements that the candles of gas are much less than the Consolidated Company, and the next question will be whether a table has been made comparing the table which he here presented with the result, but inserting the actual results which he obtained in Danbury and showing the situation.

Mr. Burr: But that necessitates us to go into the circumstance which brought that about and therefore we would have to know all the circumstances.

Mr. Kirby: This matter was before Mr. Mathewson at the time, and he referred to it in his examination of Mr. Edgerton, and if desired could have gone into it at length. It is not proper and I object to it on that ground, and I object to it on the further ground that you cannot take a letter which is not in evidence in the case and make comparisons from part of it and deductions by a witness, even assuming that he was the one to whom it was addressed.

The Master: I don't know that it is not Mr. Mathewson's intention to eventually offer it in evidence, or part of it, but on the question of rebuttal, do you claim that it is not proper for Mr.

Mathewson to show that one of your witnesses has made on some other occasion statements which are inconsistent with the
6755 statements which he made on your direct examination?

Mr. **Kirby**: I certainly do not, but I do not see, Mr. Master, how by taking a statement as to which Mr. Edgerton has had no opportunity to say whether the conditions there vary, or whether they are the same as he assumed in making his computation——

The **Master**: That may all be. If he has given testimony along a certain line on his direct, and Mr. Mathewson claims he has writings emanating from Mr. Edgerton, which when examined will bring results entirely different from Mr. Edgerton's testimony, it would certainly be proper rebuttal. I cannot interrupt at this time until Mr. Mathewson has developed the lines to show how far it is material, or valuable, but that to my mind is what he is trying to get at, and unless you show me some stronger reason to the contrary I am inclined to let him proceed.

Mr. **Burr**: I submit the proper procedure was at the time, in order to enable this to be brought into rebuttal, to call Mr. Edgerton's attention to the letters and statements made, and ask him if he did not make the statements and give him an opportunity at that time to explain what gave rise to those letters and statements therein contained.

Mr. **Mathewson**: I did not know at that time that there were any such letters written. I only knew it when Mr. Edgerton, when I asked him if he did not send some letters to Maryland, volunteered the statement that he sent some to Chief Bradley, and I did not have the papers at that time.

6756 The **Master**: I will allow it.

Mr. **Burr**: Exception.

Mr. **Kirby**: Exception.

Q. I asked whether during the entire period from 1891 to 1905, the results as he submitted them to Chief Bradley of his oil gas process as operated at Danbury exceeded four candles per gallon?

A. There is only one case where it would work out, and that is the year 1902, when he got 4.01.

Q. Well, the Consolidated, according to the testimony is how high per gallon?

A. For the moment I do not recall; I think it was between 5 and 5.60.

Q. Well, between 5 and 6?

A. Yes.

Q. Have you examined the table which Mr. Edgerton submitted here showing an estimate of the cost of oil gas mixed with a certain proportion of coal gas, according to the process that he advocates giving unit figures which he uses as cost of coal, etc.?

A. Yes.

Q. Have you taken that table and prepared a table in rebuttal, inserting instead of the figures which he used the actual figures which resulted according to his statement to Chief Bradley in the papers which are marked for identification?

A. Let me understand that question. You are now asking me to show what would be the cost of candle power as in New York on the basis of Mr. Edgerton's Danbury statement?

Q. Yes.

A. Or to criticise Mr. Edgerton's statement as to the should-be cost in New York?

Q. Well, I want you to do both, but I will let you take the order.

A. I take Mr. Edgerton's statement of the cost of the Danbury gas of 32.95 candle power, and from that I prepare a statement according to the one-candle-power-being-as-good-as-another 6757 theory, of what it would cost for 24 candle power gas. I wish to have it distinctly understood, however, that I do not agree with the theory as applied to cost. It has some relation as to value to consumers. The cost of the 24 candle power gas prepared on this assumption by proportion would be $1.0254 or 102.54 cents. Now, in the same way I prepare a comparison with the New York—I should have stated, by the way, that that $1.02 is of course for everything, including management and everything, at the burner. This statement that I am now going to refer to I am just going to compare with manufacture as being more in line with Mr. Edgerton's statement for New York, and a better comparison.

Q. In other words, to compare the statement as to the cost of coal and oil gas, 28 candle power and 50 candle power.

—. ——.

Q. And the table which he presented, I think was at page 4683 of the testimony. Have you the page where he states that?

A. Page 5024-6. These statements prepared by Mr. Edgerton were on 14 candle power and 50 candle power. So as to arrive from that at a cost of the mixture, I have made up this statement to show what would be the cost of a 28 candle power made direct from gas on this Edgerton theory, which would be 65 cents, and 50 candle power would be $1.16, whereas, comparing Mr. Edgerton's statement for New York, instead of the 28 candle power being 65 cents it is estimated by him at 34.64 and the 50 candle power instead of being $1.16 is estimated at 48 cents.

Q. In reaching these highest figures, you took Mr. Edgerton's method of computation and tables, did you?

A. Yes, sir.

6758 Q. And inserted the cost of the items as stated by him to Chief Bradley, in 1905, as actually obtained at Danbury?

A. Yes. I have these tables, if you wish them.

Q. How would that affect the cost of his mixed coal and water gas?

A. Now, I have not made an estimate in every particular to correspond to Mr. Edgerton's statements, just referred to, of 14 candle power gas and 50. I have satisfied myself with simply criticising certain features of Mr. Edgerton's statement. I should want to take more time and considerably more study before putting myself on the record as to exactly what it would cost in detail to produce a mixed gas as covered by Mr. Edgerton's statement.

Q. Well, then proceed and point out such features as you desire in reference to his estimate?

A. First of all I wish to call attention to the fact that if we make

Mr. Edgerton's statement up in a little different shape for 14 candle power gas and add together the cost of coal and unloading, we have a cost per thousand of 28.431 cents. Now if we go down below and take up our residuals, we find the statement credit for residuals 31.83. These two totals, however, are not brought together for comparison in this statement.

Q. As the statement works out he would get for residuals——

A. A credit or minus quantity of 3.40 per thousand.

Q. That is he gets more for his residuals than the cost of the coal?

A. Yes, he would commence with no cost for his coal, which is something that is practically unheard of on the Atlantic coast. There have been a few isolated cases under exceptional conditions and in the west there have been other cases, especially in Cincinnati and Cleveland. I cannot say positively, but I do not think it 6759 is so even in those cities to-day where the conditions are very different. On the Atlantic seaboard it is almost unknown if not entirely so. It used to be found frequently to be the case in England, but is very infrequently so now. In the last year's report that came out there were only two cases reported in England, and those were Sheffield and Widnes.

Q. In the lake region of the west such as Cleveland in the making of coal gas, is not coal a good deal cheaper than it is in New York?

A. As a rule it runs cheaper.

Q. How about the price of the residuals?

A. As a rule the residuals run higher. There is a general tendency that way for the bituminous coal, the coal for coal gas making running lower and the net returns on residuals higher.

Q. From your knowledge of the gas business and as a gas operator familiar with eastern conditions, is it in your judgment possible to obtain from residuals in New York City three cents more than the coal originally cost?

A. A physical impossibility, or a finincial, whatever you like to call it. It is an impossibility at present.

Q. Is there anything further?

A. Mr. Edgerton takes as a yield for this particular gas 11,648 feet to the long ton. You can squeeze out of the coal that much gas; it is doubtful if that yield would run as high as 14 candle power in the average; within certain limits it does not make much difference, whether you take a little more or little less gas out of the coal, you pay for it one way or another. If you strip the gas down closer, you get the lower candle power. For a 14 candle power gas I should be unwilling to estimate on more than 11,000 feet to the long ton, although you could obtain more. For instance, New Bedford 6760 was quoted as showing almost exceptional conditions as to efficiency, and they produce only 10,640 feet with the modern benches. Another criticism I would have as to repairs, where Mr. Edgerton only allows 3½ cents per thousand in spite of the fact that the labor is down to a low point, indicating the use, as of course you would use, of a large amount of labor saving machinery. One of the debits against the saving on labor in that case is the extra repairs to the machinery. My judgment is that in modern coal gas works with labor saving devices. carried to the maximum, 5 cents per thousand for repairs would be rather under than over.

Q. That is exclusive of renewals and depreciations ?

A. Well, I was just going to add that I do not find anything in that for depreciation beyond this insufficient amount for repairs.

Q. And you find that in Mr. Edgerton's statement to Chief Bradley he did include depreciation?

A. Yes, in the Danbury one referred to, as I say, they both together amounted up to 14 cents and more, but of course, a very different plant. But, let me correct that a little, the 14.5 you know is in the total cost.

Q. The 14.96 you mean, don't you?

A. That takes in all repairs and depreciation in the cost of the gas.

Q. You mean 14.96 instead of 14.15?

A. Yes, I should say 14.96. That is not simply works repairs by any means. Mr. Edgerton did not mean that. I should correct some of the items, with the distinct understanding that I am not endeavoring to make a final statement of cost, but simply to correct the more glaring errors, as I take them to be, in Mr. Edgerton's statement. By allowing 11,000 cubic feet as all things being considered, as an economic result, $3.20 per ton would be 29.09
6761 cents. For unloading, I have accepted Mr. Edgerton's figures. I have tried to differ in as few places as possible without endorsing any of those which I include, but simply, as I say, picking up the ones which I think are glaringly out of the way. That brings unloading 1.02, making coal gross 30.11. On coke I allowed Mr. Edgerton's figure of 1182 pounds, but I took the average price of $3 per ton as I preferred to take the evidence of facts accomplished in New York rather than to take any estimate. We make from the coke 16.12 cents. Tar I take also on the same basis of what can be here recovered, 29.1 cents a ton, or 2.64 cents; ammonia happens to be practically the same. I also allowed a small amount for carbon that might be recovered .39, making 21.79 credit for residuals, and leaving net for coal, instead of a credit of 3.41, a charge of 8.32 per thousand. This makes a difference between us of 11.72 cents at once. I put in repairs and depreciation at 9.5 against Mr. Edgerton's 3.5, or a difference of 6 cents, bringing the difference up to 17.72 cents, which is to be added to Mr. Edgerton's cost of 7.12, bringing it up to 24.84.

6762 Q. For what candle power gas?

A. 14. Now, I have not attempted to deal with Mr. Edgerton's water gas cost for 50 candle power, but even accepting that——

Q. Oil gas was it not? Oil and water gas?

A. Water gas, it is the same thing, it is a water gas with really very little water gas in it. I presume that is what Mr. Edgerton meant, rich water gas. It is an enriched water gas, or a diluted oil gas, either way you want to put it. Now to make the mixture of 24 candle power we need 280 feet of the 50 candle power and 720 of the 14 candle power. Taking the 50 candle, 48.45 cents, Mr. Edgerton's price, the cost would make 13.566 the 720 feet of the 14 candle power gas at 24.84 would make 17.885, which would show even with these corrections a cost of 24 candle power mixture at Astoria of 31.45.

Q. That would be assuming his cost of oil gas as estimated in his table?

A. Yes, sir, for the purposes of that calculation I accepted it.

Q. If you have the cost of oil gas as computed according to his actual results at Danbury as stated in his letter to Chief Engineer Bradley, and combine it with your coal gas as you have computed it, according to Mr. Edgerton's errors as you think they are, what would — give as the cost of the mixture?

A. If instead of accepting Mr. Edgerton's cost for 50 candle power gas as 48.45, we should take the cost as developed by the Edgerton theory from Danbury cost sheets, which brings a 50 candle power gas up to $1.16, we should have the 280 feet if my figures are
6763 correct, that are required in the mixture, costing alone 32.48 cents, and we should have a total cost of 50.37 cents in the holder.

Q. Some evidence was introduced as to the costs at Milwaukee, Detroit and Grand Rapids, or, rather, selling prices of gas there, and Mr. Carter made an estimate that on the same basis per candle power, that New York gas at the present candle power would cost something over $1.20, but I wish to ask you from your familiarity with conditions and operations of plants in various parts of the country, whether you would consider it possible to achieve the same results in New York City as to cost of gas as can be achieved in the Lake region to which I have reference and in which those cities are located?

A. As a general proposition, no.

Q. I will ask you whether you think it possible to make any comparison or to draw any deductions as to the price in New York, or the prices charged in those cities, without a complete analysis of accounts and costs of other items?

A. It would have to be made with an expert analysis, and when I say expert I mean expert both from the operating standpoint and the accountant's standpoint; an analysis other than that would not be of any special value. We would have to know as to the exact classification of all the items.

Q. Have you read Mr. Edgerton's testimony or have you heard it in reference to his suggested high pressure system for New York?

A. I have.

Q. What have you to say as to his statement that he has specified, that the pressures could not only be controlled within a variation of an inch and a half but possibly one-fifth of that which, would be .3 of an inch?

A. I think it is about as far from being correct as it could be.

6764 Q. Have you ever been able to realize, or even known any case where such result has been experienced?

A. Not operating to any extent at all. Where you have any such variation you would have to have the consumption cut down practically to nothing.

Q. Do you know of any city in which gas is carried through the congested portions of the city and delivered to the distributing mains in the city under a pressure of 20 or 30 pounds?

A. I know of only one case that could be brought in under that description, and there you would have to study conditions pretty carefully. That is New Orleans. They do run a high pressure, but I think it runs at thirty pounds. It was not, however, put in to equalize pressures as far as the city was concerned, but was put in to carry gas to districts which were troubled by low pressure rather than by variation of pressure, and the effort has been made to carry that pipe through districts not as thickly settled. I know of no other case where the high pressure pipes for illuminating gas are being carried through the city.

Q. Was it your information that in New Orleans the pipes are used as general supply pipes running back and forth through the congested parts of the city for the pur*opse* of supplying those congested sections?

Mr. Burr: I must again object to Mr. Mathewson leading the witness. Dr. Humphreys can clearly state what he finds to be the condition or what his information is, but Mr. Mathewson says "don't you find" and "isn't it your information" that such and such conditions exist? If it is continued by Mr. Mathewson I must object to it.

6765 Q. I will simply ask you this question further, whether you would consider it wise or safe to install a system operating mains up and down each side of the City of New York, as indicated by Mr. Edgerton, under a pressure of from twenty to thirty pounds, through the congested parts they would traverse?

Mr. Burr: Objected to as calling for a conclusion.
Question allowed. Exception.

A. I should consider it most hazardous and unsafe; I would not for a moment take the responsibility of recommending such a course; and on top of that I should consider it unnecessary.

Q. Mr. Edgerton states that automatic governors could be inserted so as to shut off the supply in case of any break. What have you to say on that subject?

A. Automatic cut-off valves that would, upon the amount of gas passing out through the governor in excess of the maximum, trip and shut down the valve, that is what I presume Mr. Edgerton has referred to; and there are such valves, more or less efficient; but granted the valves were put in, no question as to their efficiency, guaranteed to act on every occasion, it would not afford any safety as far as regulators are concerned in between the high pressure lines and the low pressure lines; would afford no extra safety with regard to high pressure lines; and it is the high pressure lines we are considering with the introduction of high pressure lines into a city where now we have only low pressure lines. These valve- are so designed and constructed that if through a break or any other cause the amount of gas being passed exceeds a certain amount, as I have stated, a trip

occurs and the valve falls and is held. That would shut off
6766 the gas through a particular governor from the low pressure mains, but we are not talking of low pressure mains; we are talking about a break in the high pressure mains, and if a break occurred in the high pressure mains, even if the valve did shut down it would have no effect upon it; the valve, in other words, is beyond the break. You could take another step towards safety by the introduction of such a valve at the pumping station. In other words, pumping all your gas up to such a pressure above 20 pounds as would be necessary to make this main automatic governor operate, that governor would pass the gas on about 20 pounds pressure to the high pressure line and then the gas would finally be governed by the individual governors. Now if a break occurs in the high pressure line and provided the gas passes in such possible quantities as to exceed the maximum for which that governor was set, plus the margin allowed, then it would shut, but to do that you would have to leak so much gas into the streets that you would not have secured safety. And, furthermore, the introduction of a valve or a regulator at that point, namely, after the compressor, would introduce another distinct danger. If for any other reason the pump ceased to act and the pressure fell on that account at the inlet the governor then would fall and you would not have gas on your mains and if the stoppage lasted long enough you would cease to satisfy your consumers, although that is a somewhat remote contingency; but the point is even if you introduce this additional valve, which I don't think any engineer with experience would stand for, the safety obtained from it would be practically nothing.

6767 Mr. BURR: I move to strike out "which I don't think any engineer with experience would stand for."

The MASTER: Let it remain. It is a question of expert opinion and there has been a lot of it given on both sides.

Exception.

The WITNESS: I can supply a little rough sketch. I didn't have time to make a proper one. If there is any doubt as to what I mean it can be shown by this.

Mr. MATHEWSON: I understand.

Q. In reference to a high pressure system of this kind, Mr. Simpson testified that it would require an expenditure of over four million dollars for additional mains, and Mr. Addicks also said it would require a large additional expenditure for pumping station and apparatus. Does that or not accord with your view?

A. It does. I have not been over the figures very closely, but I have done considerable figuring on it.

Q. And can you, as an engineer, as a gas man, see any reason why with a system of mains already in operation in the city of New York they should be either abandoned or supplemented by additional expensive mains or compressing stations such as have been indicated?

A. No, not such as has been indicated. I would be in favor as necessity developed, and as the company has done in the past of introducing pumping mains running at lower pressures, though they are really high pressures for gas, and using pipes of a larger size for that reason and I think some misapprehension comes into the consideration of this matter perhaps by Mr. Edgerton and others in thinking that there is this very great difference in the size. There is large difference but there is no such difference as I think 6768 is generally supposed. For instance if I wanted to raise my flow from—double my flow—no, if I had a certain flow and wanted to increase the flow by say going up from 30 inches which we might take as a low pressure pumping scheme up to 20 pounds I could get the same effect by doubling the size of my pipe, doubling its diameter; that would be the difference in size.

Q. Referring to weights of pipes, Newbigging was quoted by Mr. Edgerton as to weights. Are you familiar with our friend Newbigging's work?

A. I have it in my office and have had it for many years and get all the editions. I am not very familiar with it.

Q. How do the Newbigging weights given for gas pipe compare with those Mr. Simpson states the Consolidated Gas Company is using and always has used?

A. My recollection is that in every side except two Newbigging is heavier than Simpson.

Q. And those are four inch and six inch pipes, are they not?

A. Four inch and six inch.

Q. And as to the frost conditions in England, relating to the depth of pipe, how do they compare with this country and how would that affect the laying of pipe?

A. The frost conditions in England are of course much less severe than here.

Q. Have you any knowledge as to the depth at which pipes are laid in London under the congested traffic of that city?

A. I have not any very definite knowledge—I have had it but I cannot recollect it.

Q. Mr. Edgerton at page 3979 refers to the best pressure, which he stated he thought in the Consolidated Gas Company would at present be about .6 of an inch, which would be all around the 6769 most satisfactory pressure; what is your view on that subject, briefly?

A. I entirely disagree with him.

Q. Is that based on theory or experience?

A. Based on experience, based on the complaints made by consumers.

Q. Do you think a higher or lower pressure would be good?

A. Considerably higher and I should want to point out here also that we are considering the pressure as I understand it in the ordinary distributing mains, and when we talk about a pressure required at the stove we have got to think of the pressure required in the distributing mains, to get the pressure at the stove.

Q. And would there be more or less of pressure between the mains and the stove?

A. There would be less pressure at the stoves than in the mains.

Q. How much perhaps on an average, for an average length of service or house pipe?

A. It is almost impossible to state, because the buildings and all run so differently—the piping is run so differently, but a loss of an inch would not be at all infrequent.

Q. What would you consider to be a minimum working pressure to meet the requirements with the various kinds of apparatus that are now in use, tested at the main?

A. In my opinion we have to have two and one-half inches at the head of all the services to get the best results. We could get along with less, but unquestionably an inch and a half to two inches at the heads of the service would create very great dissatisfaction, with modern appliances.

Q. Referring now to Professor Bemis' testimony at pages 3024 and 3025, he justifies his estimate of the value of a plant of twenty times net earning by quoting your testimony in Holyoke, Massachusetts, where he says that you pursued a similar cost or
6770 adopted some similar theory. Was that the case——

Mr. Burr: Ask him, what that case was.

Mr. Mathewson: Very good.

Q. What was that case?

A. A case where the investigation, appraisals, etc., were being made in connection with the determination of the city to take over the gas plant and electric plant.

Q. I was going to ask you if that was the case. And what was 5% in that case, or in what relation did you use it?

A. I used it in valuing the plant and business and used it in connections with the earnings which I had determined; the earnings of the gas plant separately, and I valued the plant on a basis of $672,654.

Q. Did that include the plant and tangible property alone or the plant and any rights and franchises and good will, etc.?

A. Of course there was a large question as to what the rights might be on account of the way it was being taken over, but that was my valuation of the plant, as I expressed it in the testimony, as a going concern.

Q. A tangible and intangible concern?

A. Yes, sir; everything for business.

Q. As a matter of fact, what were the tangible assets, the structural value of the tangible assets, estimated at that time and in that proceeding?

A. For the gas plant only $340,227.52.

Q. And the profits?

A. $33,632.70.

Q. And that would be a profit of how much on the structural value?

A. 9.88 per cent.

Q. Or practically ten per cent.?

A. Yes, sir.

Q. That is the same figure you gave in your original testimony here as a fair return of the bare structural value?

A. Yes, sir.

6771 Q. Now, at page 3021, Professor Bemis suggests that six per cent. is a sufficient return on your investment, and he quotes certain Massachusetts companies to show the net issues are on a five per cent. basis; that is, for an established, successful business. Have you examined that testimony and the returns of those companies?

A. I have.

Q. As they appear in the reports to the Massachusetts Gas Commission, to which Professor Bemis referred?

A. I have.

Q. What are the names of the——

A. Lynn, Cambridge, Clinton, Brockton, Newburyport, Fitchburg, Natick, and Malden and Melrose as one.

By Mr. **Burr**:

Q. Worcester, also, wasn't it?

Mr. **Mathewson**: That comes in later.

Q. My recollection is that that came in in a different connection.

By Mr. **Mathewson**:

Q. Have you made up a table showing from the reports to the Gas Commission exactly what the profits of the companies were which he referred to as on a five per cent. basis?

A. I have taken the profits as they appeared from the manufacturing account without any adjustment and the assets as they appeared in the individual reports, and found them to total as follows:

Assets	$5,895,499.60
Profits	595,968.12

or an average return upon the investment of 10.1 per cent.

6772 Q. In other words, their earnings were 10 per cent., although the dividends may have been some other figure; is that right?

A. Yes, sir.

Q. Did you prepare a table showing that?

A. Yes, sir.

Q. Have you it here?

A. Yes, sir; that is the table. It is as follows:

Average Return

Upon Investment of All Massachusetts Companies cited by Bemis on pp. 3021-3023 of Testimony in this case, as Shown by Gross Profits—"Manufacturing Account"—from Mass. Commission's Reports, return of June 30, 1905:

Company.	Assets.	Profits.
Lynn Gas & Elec. Co. (including Elec.)	$1,792,602.11	$259,159.28
Cambridge Gas Light Company	1,742,581.88	159,011.02
Clinton Gas Light Co. (including Elec.)	247,508.95	13,418.07
Brockton Gas Light Co.	616,279.40	42,773.62
Newburyport Gas & Elec. Co. (including Elec.)	294,365.88	14,482.88
Fitchburg Gas & Electric Co.	421,243.00	54,266.54
Natick Gas Light Co.	63,667.30	1,480.36
Malden & Melrose Gas Light Co.	717,251.08	51,376.35
Total	$5,895,499.60	$595,968.12

59,596,812 ÷ 5,895,499.60 = 10.1% Average return upon investment for all of the above companies.

6773 NOTE—In comparing above data with that contained in A. C. H. Table No. 1, note that, in latter, all the Mass. Gas Companies engaged only in the gas business are included, and that the profits as determined from the so-called Manufacturing Account are reduced by figures obtained from analysis of P. & L. Accounts. The above profits are the balances of Manufacturing Account without modification. The total reduction so made (in case of Natick and Malden) only amounts to $4,099.71 and leaves the average return for eight companies above still in excess of 10 per cent.

Q. Have you other copies of those?

A. I think I have; two more.

Q. Prof. Bemis also quotes the seven companies to which you have referred, Cambridge, Fall River, Worcester, Lowell, Springfield, Lawrence and Lynn, in another con-ection, at page 3055, with comments on their returns of capital?

A. Yes, sir.

Q. Have you from the same source, that is the reports to the Massachusetts Gas Commission, prepared a table showing their sales, capital, including funds and notes, per thousand, profits, and other items of income, so as to bring out a statement of the rate per cent. on the total capital paid by these companies and the cents per thousand of profit?

A. I have.

Q. Will you produce it?

A. Here it is. I will say that this is prepared, that there may not be any doubt about it, it is prepared from the actual returns made by the companies themselves and not from the printed returns. It would be difficult for anybody to get all this information out of the printed returns. We have had to make application to the returns as furnished by the company such as were used by Mr. Bemis.

6774 The MASTER: This refers, as I understand it, to the corresponding material to that shown in table 18 on the other side of the page, 3055.

Mr. MATHEWSON: Yes, sir.

Mr. BURR: Except he says it is based upon the actual returns and not the official returns as appears in the report of the Massachusetts Gas Commission.

Mr. MATHEWSON: They are not printed yet. We got copies, as Mr. Bemis examined the originals or took copies.

The WITNESS: The printed records were not available for either of us, you see.

Mr. BURR: I see.

Q. And the results are as follows, are they not, as to the rate of return on capital,

Cambridge	11.55%
Fall River	16.38%
Lowell	16.09%
Springfield	9.6 %
Worcester	15.88%

or an average of how much?

A. 13.88%.

Q. What is the average profit or earnings, net earnings, allowed in the case of the five companies to which you have referred?

A. Net earnings allowed?

Q. Yes, cents per thousand?

A. 31.03.

Q. I see that on rates of total capital you specify nothing for the other two companies, Lawrence and Lynn. Is that because they are electric as well as gas companies, and their capital is not separated.

A. Yes, sir; I endeavored to separate but learned from the Commission that it will be impossible to do it reliably.

Q. But the cents per thousand sold can be stated and averages 35.16 cents for the two companies, does it not?

6775 A. That's right.

Q. Or an average for the seven of how much?

A. 32.06.

Mr. BURR: Are you going to put in the summary of results?

Mr. MATHEWSON: I offer this table, with the summary of results, in evidence.

Received in evidence and marked "Complainant's Exhibit 378.

Mr. MATHEWSON: This exhibit is marked at the top "A. C. H.; Table No. 4, rebuttal."

Dr. Humphreys made up several tables of one kind or another which may or may not be used tentatively, and that is a good way to refer to it.

The WITNESS: I would like to say, Mr. Mathewson, that I don't want to load you up with a lot of stuff, because everything is on here, I believe to make these details completely self-explanatory. I have endeavored to do so, and still they do need the explanation——

Q. *Q*. I was just going to ask you to make it?

A. Well, I have made up this table by taking each case and analyzing as far as I could with the returns of each company before me. Where I found certain other items charged to profit and loss, I considered them and analyzed them and introduced them except so far as they might be met by other items of income. If I found other items of income I didn't take credit for them but simply let them stand by themselves and took the profits from the gas business.

Q. If you had taken those items of income, that would have increased the rate of income and increased the profit in cents per thousand?

A. Yes, but I was endeavoring to confine myself strictly to
6776 the gas business as far as I could see it from these reports.
Where I found by analysis that the renewals and repairs did not amount to 14.15 cents I added.

Q. Wherever you found that the repairs, renewals and depreciation already equaled or exceeded 1.415 cents you left it at that point, did you?

A. I left it at that point, did not make any reductions on that account.

Q. And in every case where it was below you added to bring it up to 14.15, which was the figure you used in your estimate of the amount of depreciation, repairs and renewals?

A. That is correct, sir.

Q. That would compare with actual expenditures of the Consolidated Gas Company for repairs and renewals for the past twenty-one years I think you said, of 10.6?

A. Yes, that is my figure.

Q. Or nearly four cents more than the Consolidated?

A. Yes, sir.

Q. If these companies were to be cut down in this table to 10.60 cents which the Consolidated has actually expended per annum that also would show a substantial increase, the rate or return on capital, and in number of cents per thousand of profits, wouldn't it?

A. Yes, sir. I assume in that adjustment I did not take my amount, as I figured it up at 10.60, but took 10.89 as the amount that was probably more nearly in the minds of counsel on both sides.

Q. That was for the twenty years?

A. That was for the twenty years, but it has been so often referred to I took that instead of the amount brought up to date of 10.6.

Q. That is to say, following this table you made a comparison
with the Consolidated Gas Company's situation, and have a
6777 table to that effect, have you not?

A. Yes, sir.

Q. Now, will you simply read that into the record? It is very brief.

Table No. 4 shows Gross Profits adjusted to bring Repairs and Renewals up to at least 14.15 c. per M in cases of all seven companies considered, but where Repairs and Renewals as charged were found to exceed 14.15c. no adjustment was made.

If now instead of making the above adjustment we adjust Repairs and Renewals to 10.89c. per M in all cases we find a considerable increase in Gross Profits as follows:

Gross Profit (5 Co.'s — 1 to 5) 15.78% of Capital as compared with 13.88% on Table No. 4 Col. No. 14.

Gross Profit (5 Co.'s — 1 to 5) 35.27c, per M as compared with 31.03c. on Table No. 4 Col. No. 15.

Gross Profit (2 Co.'s — 6 and 7) 39.38c. per M as compared with 35.16c. on Table No. 4, Col. No. 15.

Gross Profit (7 Co.'s) 36.29c. per M as compared with 32.06c. on Table No. 4 Col. No. 15.

Hence, assuming 8% interest we have 36.29 ÷ 8 = $4.536 as Capital per M *exclusive* of Franchises, Good Will and other intangible assets for the 7 Massachusetts Companies.

Sales of N. Y. Consolidated were 13,283,163 M ft. for Year 1905. Hence 13,283,163 x $4,536 = $60,252,427 as capital for N. Y. Consolidated exclusive of Franchises, Good Will, and other intangible assets on the basis of 7 Massachusetts Companies quoted by defendant's experts.

6778 Q. Now, Doctor, these special items, the profit and loss, debtors to profit and loss, column 7, represent charges other than those carried into the previous charges for cost of gas; that is, it might be called lump charging off?

A. Yes, sir.

Q. And you have taken enough of those to bring up to 14.15 cents where the amount of repairs and renewals and depreciation was less than that at the outset?

A. Oh, yes.

Q. Now, as a matter of fact, while that rate of repairs, renewals and depreciation is very much greater than charged by the Consolidated Gas Company, supposing you included not what you considered a fair adjustment and to which you have testified in these tables, but the entire amount of these special and arbitrary charges to the profit and loss account as part of the operating cost of gas, showing a gross profit for the five companies which you show in Complainant's Exhibit 378 of how many cents per thousand?

A. The five companies would still show 29.05 cents per thousand.

Q. And profits under capital of what per cent.?

A. Thirteen per cent., as compared with 13.88 on the table.

Q. But of course, if you add those enormous amounts to the depreciation, renewal and repair account they would become charges as against the operating cost of gas, would they not?

A. Yes, sir.

Q. What would they add to the operating cost of gas per thousand feet in that connection?

A. 4.47 cents.

Q. And that would have to be reckoned with, would it not, if you assume any such depreciation item as that?

A. Certainly.

6779 Q. Have you prepared two supplementary tables to Complainant's Exhibit 378, showing how the different items in Exhibit 378 were figured out as to the amount added in each case where it was added to bring the total renewals, repairs and depreciation up to 14.15 cents?

A. Yes, sir. This shows details so that it can be followed—the development of that other table can be followed; that is all it is for.

Q. One or two?

A. Two additional tables.

Q. Have you copies of those tables?

A. I have, sir.

Mr. MATHEWSON: I will ask you to give the copies to the other counsel and I will offer these in evidence.

Received in evidence and marked respectively Complainant's Exhibits 379 and 380.

Q. Have you gone to the Massachusetts reports, the last printed volume from the Commissioners of Gas and Electricity, in the State of Massachusetts, and taken all the companies in Massachusetts, as shown in the work from which Prof. Bemis has quoted, showing in similar manner to Exhibit 378 the returns as profit on capital, and profit in cents per thousand sold as to all of the companies in Massachusetts engaged exclusively in the gas business, so that they can be analyzed?

A. I have. I have prepared that table and also two supplements, Nos. 2 and 3, to show how I developed the details.

Q. In the same way that the last two exhibits showed the development of Exhibit 378?

A. Yes, sir, with a careful note in each column so as to lead anybody examining it to see exactly what I mean.

6780 Q. And in this case where the expenditures in the manufacture of gas did not equal 14.15 cents for renewals, depreciation and repairs, did you add a sufficient amount to make that sum up where there was any special fund charged off to which it could be applied, or from which it could be obtained?

A. Yes, sir, I added enough to bring up to 14.15, but did not deduct anything if I found more.

Q. And if it had been reduced to 14.15 by deduction where companies had charged off more than that it would have increased the rate of return on capital and increased the cents per thousand of cents of profit shown in this table?

A. Yes, where there were such cases.

Q. Will you state whether this table does not in whole show that the average profits per thousand sold for these companies were 32.21 cents per thousand?

A. Yes, sir.

Q. And the average return on capital 11.17 per cent?

A. Yes. I want to make an additional explanation, it appears here, and I had better draw special attention to it, that these adjustments were made only in the case where there seemed to be necessity for it by the introduction into the individual profit and loss account of special items such as depreciation or reserve.

Q. If you had a credit that also would have increased the rate of return?

A. Yes, except so far as I stated where they might be considered as standing against other items of extra expenditure. Now, the returns as printed did not give me the full opportunity for closely analyzing those charges to profit and loss or again we have had reference to the detailed reports of the Commission, and we made those adjustments by the reports made by the companies themselves, the detailed reports in the same way, and employing that as Mr.
6781 Bemis had employed some in the case of 1906, though we went back to 1905, because the details were not even in the printed record.

Q. Now, I see in this paper which you have in your hand, one or two, perhaps two, companies you have marked "ignored"; what is the reason for that?

A. Well, in one case it is plainly shown there, No. 2 where there was a loss. There was no good considering such a case as that, in considering profits. It shows an abnormal condition, I hope.

Q. Reference has been made to Haverhill?

A. Yes, sir.

Q. Now, if you look at this table a moment, referring to the low capital at Haverhill, meaning stock, bonds and notes, it appears to be how much?

A. 63 cents per thousand feet.

Q. To you as a gas engineer familiar with conditions, what would that indicate as to assets?

A. Indicate the assets had been very largely written down in some way or another.

Q. How much does Haverhill earn on a capitalization in percentage on capital?

A. 44.56 per cent. on that basis.

Q. And looking down the table it seems to be generally true, does it not, that these companies with very low capitalization are permitted to earn a very high return on it?

A. Yes, take the very [illegible]t one on the list, Worcester, shows 2.18; earns 14.20 per cent.

Q. And when you speak of capital in this table which you have before you and also in Complainant's Exhibit 378, it refers, does it not, merely to the paper capital, that is, to stock, bonds, notes payable and not to the value of assets or value of property? Not at all to the value of assets or value of property?

A. Not at all to the value of assets, and the notes payable
6782 are the notes payable which are considered as part of the fixed capital by the commissioners and so show in their returns.

Q. The same ones to which I called Dr. Marks' attention when he was on the stand?

A. Yes, the same thing.

Mr. **Mathewson**: I will offer this in evidence, with the summary, showing the detail by which this table was developed, for the convenience of counsel.

Received in evidence and marked Complainant's Exhibit 381 382 and 383.

Q. Assuming that all these special lumped charges included in the column of this large sheet, Complainant's Exhibit 381 under column 7 (Special debits to profit and loss) were included not only to sufficient extent to bring those individual companies up to 14.15 cents for repairs, renewals and depreciation, but that such items had been included *in toto*, making a very much greater charge. What charges would the gross profits for the thirty-two companies still appear to be per thousand feet?

A. 27.61 cents, as compared with the figures shown on the detail, 32.21 cents.

Q. Or a return on capital of what?

A. 9.57% *per cent.* as compared with 11.17.

Q. But in case you had this additional charge to depreciation, renewal and repair account it of course would go into the operating cost of gas as a charge against operation, would it not?

A. Certainly, amounting to 5.75 cents per thousand feet.

Q. So in reckoning the cost of gas if you were to include those immense depreciation charges you would have to add 5.75 cents to the cost, would you not?

A. Yes, that is right.

6783 Q. In other words, is it possible to consider a large depreciation charge without at the same time considering an addition to the cost of gas to take care of it?

A. No, sir.

At 1.00 P. M. a recess was declared until 2.15 P. M.

After Recess.

Alexander C. Humphreys, resumed.

By Mr. **Mathewson**:

Q. Referring to your statement that the inclusion of all the special items of debit arbitrarily charged off in the cost of gas, following the introduction of Complainant's Exhibit 378 would add to the cost of gas 4.47 cents, just exactly what do you mean by that? I think I did not ask you definitely enough, so that it is clear. That is, how is the 4.47 cents computed and what does it represent?

A. The 4.47 cents covers all the special charges carried into profit and loss, reduced to the cents per thousand basis; the difference in cost, as found on Exhibit 378, namely, 31.03 and 29.05, the difference in cost would be only 1.98 of course, and that 29.05 is found by including such additional amounts as are found on the profit and loss statements outside of the adjustments I made, already explained.

Q. In this connection you omitted Lawrence and Lynn, for the reason that their business is involved with electricity?

A. Yes, sir. Perhaps you want an explanation on the other table, if you did not understand me.

6784 Q. Very good. What does the 5.75 cents mean which you said would be added to cost if everything was included, all the special items on Complainant's Exhibit 380?

A. That 5.75 is on a par with the 4.47, referring to the other table, whereas the net difference in cost would be only 4.60, namely the difference between 27.61 and 32.21, as it appears on Exhibit 380.

Q. Now, by reference to Complainant's Exhibit 382, if you are to include all the special debit charges to which you have referred, it would show a charge to repairs, depreciation and renewals on the part of Cambridge, of how much per thousand feet?

A. 22.679, with this little explanation: Gas stove repairs and renewals are omitted in that total, because I found upon close investigation that that account was in Massachusetts practice used somewhat as a dumping ground for other charges, and while unquestionably the repairs and renewal charges are in there which should be included, I was not able to eliminate the charges which were not stove repairs and renewals, and therefore did not include it at all. In other words, these amounts would all be somewhat increased if we had all the repairs and renewals included.

Q. But on the general proposition of return upon capital and the cents per thousand included, there would be substantially no change?

A. No, there would be no change, because it simply means that a certain item which is not in repairs appears as repairs in the total, it would be in.

Q. In East Boston the total return is 16.996, including repairs and depreciation, if the special debit item be included?

A. Yes, sir.

Q. And Northampton?

A. 31.577. Pittsfield, 57.003; Plymouth, 66.466; Springfield, 26.107; Taunton, 22.037; Worcester, 21.199.

6785 Q. Cents per thousand feet in each case?

A. Yes.

Q. You observe that Mr. Marks and Mr. Bemis assumed certain capital and assets in Massachusetts, as though they represented actual assets and capital of the company. As an engineer familiar with the gas business, what would it indicate to you where charges are made at that rate for depreciation, repairs and renewals?

A. The charges in some of those cases undoubtedly indicate that there has been a writing down of assets by charging too much; more than was required to account for depreciation and repairs.

Q. Now, referring to the companies that were selected by Mr. Marks as to four out of the five, and as to Mr. Bemis, all five, Cambridge, Fall River, Worcester, Springfield and Lowell, as typical companies, have you made an analysis of the reports for the year ending June 30, 1906, with a view to showing the actual book value, and structural value per thousand feet in the case of those companies?

A. I have.

Q. Now, is the table you have in your hand the result of your knowledge and computation and does it state your conclusions therefrom?

A. It does, in connection with certain other tables.

Q. Have you a copy of this table for the other counsel?

A. Yes.

Mr. MATHEWSON: I offer that in evidence.

Paper received in evidence and marked Complainant's Exhibit 384.

Q. This table, Complainant's Exhibit 384, shows adjusted book assets for the Cambridge Company of 4.38; Fall River, 3.80; Springfield, 4.62; Worcester, 4.38 and Lowell 3.40. Lowell seems to have no figure carried opposite the adjusted book assets, and I find 6786 in relation to street mains and meters the statement that Lowell in its assets and liability statement does not separate the mains and meters from the real estate, machinery and manufacturing appliances and that therefore no adjustment could be made in the case of this company. That is the explanation, is it?

A. That is true.

Q. Now as explanatory of this table 384 have you prepared certain supplementary tables?

A. I have, to establish the adjustments.

Q. The first table, being table number 8 to which I call your attention, indicates, does it not, how the item working net assets found in Compalinant's Exhibit 384 is obtained?

A. That is true, yes, sir. It is for that purpose so as to give details of the amount appearing in the main sheet.

Q. Complainant's Exhibit 384 and with the necessary notes and explanations of the method I follow.

Q. You deduct from the quick assets the floating debt?

A. That is right.

Q. Now Mr. Marks testified, you may recall, that he found the working capital of the four companies which he dealt with as 47.8 cents per thousand feet of sales after including the notes payable, in accordance with the custom of the Massachusetts Commission. What do you find here as to working capital per thousand feet sold? Mr. Marks' figure of 13 cents was his first estimate when he excluded notes payable and some other items from working capital, but his final figure was 47.8 cents including those items, when he found that the Mass. Commission included them. What do you find for these five companies as to working capital?

6787 A. The figure that rested in my mind was the 13 cents, that being Mr. Marks' figure as really deduced by him. My recollection is also that Mr. Marks took for the year of June 30, 1905, and for that year on the same basis on which this paper was prepared the true working capital would be 43.75 cents per thousand, and this table for the year June 30, 1906, shows the working capital to average 38.5 cents per thousand, instead of 13 cents.

Mr. MATHEWSON: I offer that table in evidence.

Paper received in evidence and marked Complainant's Exhibit 385.

Q. Now, have you also a table marked "A. C. H., Table No. 9," indicating how the excess value as to street mains and meters over book value is obtained?

A. I have. It is a comparison between the book value of certain of the assets and an estimated value prepared in the case of such assets and details are to be found in the reports. For instance, street mains, and meters, are scheduled in the reports, and therefore, we have an opportunity to compare with these two particular items the book values with the real values. I have been careful in making my estimates for comparison to take conservative values. For instance, in my estimate on meters, I took the present cash price and did not even add for cartage. All the discounts are taken off. The street mains, instead of taking any value of mine, this refers to Mr. Marks' work, I have satisfied myself for this particular purpose by accepting Mr. Marks' estimate of cost for cheap laying, namely under uniform conditions of macadam. On that basis I have prepared this explanatory table so as to arrive at the values appearing in table No. 6788 7 by which we built up the assets. It is to be noted that I have no means of adjusting for works nor for services.

Q. But taking street mains and meters only, and those you say are the only ones you can compare, does it not appear that in every instance, that the actual value as estimated exceeds the book value with the sole exception of meters in Springfield, where the book value seems to exceed the actual value by $1,693.

A. That is true.

Mr. Mathewson: I offer this table in evidence.

Table received in evidence and marked Complainant's Exhibit 386.

Q. Now, you have produced another table known as "A. C. H. Table No. 10," showing your details of the estimated values of the meters as shown by you on the last previous paper, Complainant's Exhibit 386, based on the conservative basis of figuring to which you have testified?

A. I have.

Q. And this paper merely shows the detail of such computation, does it not?

A. That is all. It is just to show the facts as I understand them.

Mr. Mathewson: I offer that in evidence.

Received in evidence and marked Complainant's Exhibit 387.

Q. Have you also prepared a further supplementary table known as "A. C. H. Table No. 7," being a summary comparing the estimated increases in the value of street mains from June 30, 1905, to June 30, 1906, with the increases of value of such mains and services for the same period, and showing the apparent writing down of this account for the four companies at Cambridge, Fall River, Springfield and Worcester?

A. I have.

6789 Q. Take Cambridge and the increase between June 30, 1905, and June 30, 1906, in mains upon Dr. Marks' estimate of value would be $15,524, would it not?

A. Yes, sir.

Q. How much does the increase appear on the books?

A. $6,010, making a difference of $9,514.

Q. From your knowledge of the value of mains would you be able to say that the $6,010 does not represent an adequate value of the increased main mileage?

A. It does not represent the value on the books, no.

Q. In every case there would seem to be a writing into the books of less than the full increase, except in the case of Worcester, as to street mains and services?

A. That is right.

Q. And the details at the foot of this sheet show how the totals above are arrived at in detail, do they not, or at least the amounts which are found at the foot of the column?

A. That is right, it shows the details. It is a listing of the amounts.

Q. Dr. Marks produced statistics as to the Worcester Company and was questioned as to their treatment of assets in their books, and as to the fact that the assets account did not keep pace with the increase in property. Have you prepared as illustrating this from the Massachusetts' reports to which his attention was drawn, a statement of the increase in mileage for mains for the Worcester Company between June 30, 1901, and June 30, 1906, a period of five years as indicating that policy?

A. I have.

Q. And is the table, "A. C. H. Table 11-A," a table setting forth the results?

A. It is.

Q. Now, taking this table, it appears that on June 30th, 1901, that the Worcester Company had 523,128 feet of mains to which you attribute a value of $430,000, omitting some few mains of 1, 1¼ and 1½ inches and the 30 and 36-inch mains which do not seem to appear?

6790 A. Well, I omit the 1, 1¼ and 1½ inches, which are on the list simply because they are small, and Mr. Marks' table did not cover them. I wanted to confine myself to that.

Q. That is, he gave no values for them?

A. Yes, sir. The 30 and 36-inch mains do not appear in the schedule.

Q. And the same is true where dashes appear elsewhere in this account?

A. That is right.

Q. According to Mr. Marks' unit values this 523,128 feet should be worth on June 30, 1901, how much?

A. $430,270.

Q. What were they actually carried at on the books of the Worcester Company on that date?

A. $123,215.

Q. Which would be less than one-third of the value as computed by Dr. Marks, would it not?

A. Yes, sir.

Q. In the year ending June 30, 1906, we find that the mains of the Worcester Company have increased from 523,128 to how many feet?

A. 707,885 feet, which I valued at $558,137.

Q. On Dr. Marks' unit values?

A. Yes, sir, simply by way of comparison as will develop later.

Q. Instead of appearing on the books of the company at a value of $558,137 on June 30, 1906, at what value are they carried?

A. $112,328.39.

Q. That is to say in spite of an increase from 523,128 feet to 707,885 feet in the five years the company has reduced the book value of its mains by how much?

A. $10,977.47; in other words, there is an increase in calculated value which is an increase on new pipe, because the increase is in new pipe of $127,867, and if we add to that the actual decrease in the book value of $10,977.47 we have a difference of $138,844 in this period alone. That is the increase of calculation values of mains alone.

6791 Mr. MATHEWSON: I offer that in evidence.

Paper received in evidence and marked Complainant's Exhibit 389.

Q. You said that the only items which you were able to compare, as appearing in the report, were the mains and services and meters. Have you any reason to suppose that the treatment of manufacturing plant as to writing down, and other assets, was any different on the part of the Massachusetts companies than their treatment of mains and meters?

A. Mains and meters?

Q. Yes.

A. Services I did not compare. No, I have no reason to suppose they followed any different plan.

Q. Do you know what the structural value per thousand feet average throughout the United States has been of gas plants according to the last census?

A. Yes. I have a memorandum here.

Mr. BURR: Sales or capacity?

Mr. MATHEWSON: Was it sales or capacity?

The WITNESS: Per thousand feet of sales.

Q. And the average capital per thousand feet of sales, taken into account all the gas undertakings throughout the country according to the census was how much?

A. The United States structural value per thousand was $7.23 and capitalization $8.47, as compiled by Mr. Grosser, the statistician, in Chicago. I took it from a statement appearing in the Chicago pamphlet, as it has been called here.

Q. His tabulation purports to come from the United States census, does it not?

A. Yes, sir.

Mr. MATHEWSON: That is the pamphlet we had from them with several statements quoted therefrom.

6792 Q. Mr. Bemis says at page 3092 as a well known fact in the gas business that an increased consumption following a reduction of price does not involve a proportionate increase in capital. Have you taken the companies to which he referred in his table—was it at page 3092?

A. He refers to those companies at page 3021 or 3055.

The Master: 3055 is the Massachusetts companies.

Q. Have you taken the large companies, Lynn, Worcester, Springfield, Lowell, Lawrence, Charlestown and Cambridge, to see whether his statement that there is no proportionate increase required in capital is susceptible of proof?

A. I have.

Q. Have you prepared a table showing the increase in percentage of assets and profits?

A. I have.

Q. And do you remember his statement that the profits would largely increase with very little increase in assets in case of an increased output in gas?

A. Yes, sir. "It is a well-known fact in the gas business that an increase of consumption following a reduction in price does not involve a proportionate increase of capital?"

Q. In taking these companies have you taken the increase in price for periods which Mr. Bemis used in his table, in showing the increase in sales or profits of the companies?

A. Yes, sir.

Q. For instance, Lynn?

A. I think you will find that page to be 3090.

Q. For instance, in the case of Lynn, Professor Bemis took two periods, 1894-5 and 1903-4, did he not?

A. Yes.

Q. And in Worcester, two periods, 1894-5 and 1900-1?

A. Yes.

6793 Q. And so on for the other companies which I have named?

A. Yes.

Q. Now, taking those two periods for the Lynn Company, for example, 1894-5 and 1903 and 1904, the gas profits show an increase of profits of how much money?

A. Over the first period they show an increase—well, the profits were $46,212 in the first case and $114,200 in the second, and the ratio is 2.47.

Q. Did you find that the gas assets had to increase or did increase any less rapidly than the profits?

A. I found the gas assets to be $351,405, and $879,421, a ratio of 2.5.

Q. In other words, the assets increased more rapidly than the profits, did they not?

A. A little in that case.

Q. How about Worcester?

A. Let me add to that, please, I think I left it off the table, that the total reduction in that case was from 1.22 to 90 cents.

Q. In the case of Worcester the reduction was from $1.29 to one dollar, was it not?

A. Yes, sir.

Q. And the profits increased?

A. The ratio was 1.22.

Q. And gas assets?

A. 1.23.

Q. In the case of Springfield with a reduction from 1.37 to 1.01 there was an increase of profit by a ratio of what?

A. The profits increased 1.67 and the gas assets 1.22. There is an explanation on the table showing that the conditions were somewhat different, change of management, etc.

Q. In Lawrence what was the result of a reduction from $1.28 to one dollar?

A. The increase in profits was a ratio of .83 and the increase of assets was 1.45.

Q. And in the case of Lowell with a reduction from $1 to 91 cents?

A. The ratio of profits was 1.30 and the ratio of gas assets 1.40.

6794 Q. Of course all of these gas outputs are under the legal rate of 16 candle power?

A. They are under that rate. I have not put in the actual candle powers delivered.

Q. Cambridge shows an increase of .96 ratio and profits and 1.11 ratio in assets, does it not?

A. That is right.

Q. Charlestown on the other hand seems to show an increase of 1.48 ratio in profits and 1.18 in assets?

A. That is true.

Q. What is the explanation there?

A. They were buying gas from the Union Gas & Coke Co., and since then they had been building a plant for themselves. In other words, they did not need the increase in plant because they purchased the gas already manufactured in their immediate neighborhood.

Mr. Mathewson: I offer that paper in evidence.

Received in evidence and marked Complainant's Exhibit 390.

Q. Prof. Bemis at page 3533 said that in some cases a reduction had been made in Massachusetts when dividends were below 6%?

A. Yes, sir, he made that statement at page 3533.

Q. Have you a statement of the companies to which that statement of his would apply?

A. I have prepared a statement which I think is complete.

Q. He named the companies, I think, and you have taken the same companies, have you not?

A. Yes, sir, I think I have taken the exact companies.

Q. Does it appear in the case of those companies that that was the general rule, or did the Commission make some explanation 6795 in each case of why the reduction was made?

A. I will say that there is a special explanation in each showing that there were conditions which the Commission seemed to think warranted them in making this reduction.

Q. Did they make a special explanation in each case?

A. Yes.

Q. Have you prepared a memorandum for convenience setting forth in as concise terms as possible the statements of the Commissioner in that regard, setting forth the reason?

A. I have. It is as follows:

1A—EXHIBIT

MEMORANDUM

In Regard to the Reductions in Price of Gas Made by the Massachusetts Gas & Electric Light Commission When Dividends Were Only 6%, As Claimed by Profesor Bemis in His Testimony (See page 3533).

Springfield—Reduction took effect November 1, 1900:

In its decision upon this petition the Board said (see page 19 of Report Issued January, 1901) that as far as the dividends were concerned it was doubtful whether it would be justified in reducing them, but that the earnings for the fiscal year ending June 30, 1900, were the largest in the company's history, and that even allowing for the reduction in those earnings that would be produced by increases in the prices of materials there would still remain "after providing for dividends and the other charges necessary for the maintenance of a proper public service a substantial sum, which may be applied to a reduction in the price."

6796 The profit from the gas business for the fiscal year ending June 30, 1900, was $86,543.83, or at the rate of 11.99% upon the gas assets of $684,940.02, which equalled $4.50 per 1,000 cu. ft. of sales for the year (see pages cxx and 124, Report issued January, 1901). If the average price received during this fiscal year had been lower by the amount of the reduction of 20c. per 1,000 cu. ft., ordered by the Commission, the profit from gas for the year would have been $56,163.85, or at the rate of 8.2% upon the gas assets.

East Boston—Reduction took effect March 1, 1901:

In its decision upon this petition the Board, in reviewing the history and financial policy of the company, said: "For many years no charges whatever were made for depreciation; these have never exceeded one per cent. in any year, and have usually been not more than three-quarters of one per cent. At the same time, although the annual charges for repairs have been uneven in amount, and, when computed upon the cost per thousand, have sometimes seemed to be too high, no considerable sum seems ever to have been charged in this way which should have been charged to construction accounts. The tendency, on the whole, has seemed to be liberal towards construction rather than operating accounts * * * The natural result of the policy thus outlined has been that the company has to-day a plant whose structural value is probably less than its capital stock, and is confronted with a demand for a liberal expenditure for extraordinary repairs, needed in the interest of the consumers and the shareholders as well," and concluded, "As the conditions exist, however, it is difficult to see how the expenditures now needed can be met without either a higher price or a lower dividend rate 6797 than might otherwise be fair and reasonable. The responsibility for this condition seems to be so clearly upon the management that it does not seem to be the duty of the Board to provide for these expenditures out of the price of gas, or to require consumers to again contribute, through the maintenance of the present price, what they have already once contributed for such a purpose. The conditions seem to entitle consumers to a reduction in price, and to imperatively demand, for the proper conserving of the interests of the shareholders, a reduction of dividends until such expenditures have been made upon the plant as will equip the company to supply gas at a reasonably low price with a fair profit."

The profit for the fiscal year ending June 30, 1900, was $24,856.22, or 8.1% upon the assets of $306,933.47, which equalled $6.05 per 1,000 cu. ft. of sales for the year, while 10% dividends were paid upon the capital stock of $220,000, which equalled $4.34 per 1,000 cu. ft. of sales (see pages xli and 123 of the Report issued January, 1901). If the price during the fiscal year had been lower than the average price actually received by the amount, 15c., of the reduction ordered by the Commission the profit would have been $17,337.17, or 5.6% upon the assets.

Waltham—Reduction took effect June 1, 1901:

This was a combined gas and electric plant and the Board found that in addition to selling gas to two large consumers at a loss, the company was making the gas department pay part of the cost of the electric department (see pages 15, 16 and 17 of the Report issued January, 1902). Even under these conditions the profits from gas for the fiscal year ending June 30, 1901, was $15,600.03, 6798 or 9.83% upon the gas assets of $158,647.58, which equalled $4.60 per 1,000 cu. ft. of sales during the year (see pages cxxxi and 135 of the Report issued January, 1902). If the price received during the fiscal year had been the average price, $1.30, per 1,000 cu. ft. received during the first fiscal year during the whole of which the reduction ordered by the Commission was in effect, instead of being $1.41 as it actually was, the gas profits would have been $11,871.83, or 7.5% upon the gas assets.

Newton and Watertown—Reduction took effect July 1st, 1901:

In this case the Board found that notwithstanding a decrease in the price of gas in "the last fiscal year" and an increase in cost of materials combined with a decrease in value of residuals "a somewhat lower rate than that charged would probably permit the maintenance of the usual dividend, and amply provide for depreciation or contingencies, along with the maintenance of the best service to the public. To such a reduction the consumers are justly entitled." In the fiscal year ending June 30, 1901, the profit from gas was $42,386.82, or 11.6% upon the gas assets of $366,341.85, which equalled $3.33 per 1,000 cu. ft. of the sales for the year (see pages xcviii and 135 of the Report issued in January, 1902). If the price received during the fiscal year had been the average price, $1.17, per 1,000 cu. ft. received during the fiscal year during the whole of which the reduction ordered by the Commission was in effect, instead of

$1.30 as it actually was, the gas profits would have been $28,223.08, or 7.7% upon the gas assets.

6799 CHICOPEE—Reduction took effect January 1, 1903:

In this case the Board found that 24% of the total output of the company was sold to two large consumers at a price that did not include a fair share of the fixed charges, and that in addition the expense of management was very high. They summed up the case as follows: "The proposition that a company is entitled to a fair profit involves a further proposition that its affairs are economically and judiciously managed. The management may, if it desires, choose between profits and a high operating account, but it cannot rightly choose to impose both upon the consumer. Some of the prices now charged are unusually low, too low, it may be, for the interest of the corporation; but the highest price charged is unusually high, and the economies demanded of the Company may properly be applied to a reduction in this price." The reduction in price from $1.75 to $1.50 per 1,000 cubic feet, which was ordered by the Board, only affected about 24% of the sales, and only made a reduction of 4c. in the average price received per 1,000 cu. ft. in the fiscal year in which it was made, and of 9c. per 1,000 cu. ft. in the first complete year in which it was in effect.

For the fiscal year ending June 30, 1902, the profit from gas was $6,423.84, or 3% on the gas assets of $193,252.91, which equalled $10.24 per 1,000 cu. ft. of sales (see pages xxxv and 146 of the Report issued in January, 1903). If the price received had been the average price, $1.31, per 1,000 cu. ft. received during the first fiscal year during the whole of which the reduction ordered by the Commission was in effect instead of being $1.40 as it actually was, the profit would have been $4,736.41, or 2.4% upon the assets.

6800 CHELSEA—Reduction took effect November 1, 1904:

The Board in this case stated that the ability of the company to make any reduction that might be practical was due entirely to the contract in force for the purchase of gas from the Massachusetts Pipe Line Company, the benefits of which should be shared between the stockholders and the consumers (see page 20 of the Report issued in January, 1905).

The gas profits for the fiscal year ending June 30, 1904, were $24,754.76, or 7.5% upon the gas assets of $329,630.85, which equalled $6.63 per 1,000 cu. ft. of sales for the year (see ppages xxx and 125 of the Report issued in January, 1905. If the price received for gas during the fiscal year had been less than the amount, $1.25, per 1,000 cu. ft. actually received by the reduction of 15c., ordered by the Commission, the gas profits would have been $17,105.27, or 5.2% upon the gas assets.

EAST BOSTON—Reduction took effect November 1, 1904:

In this case the Board gives the reason for ordering the reduction as follows: "The acquisition of this company in the interest of the owners of the other Boston companies was effected but little more than a year ago. The advantage of this alliance, bringing to the company a highly skilled management and increased facilities in the purchase of supplies, has apparently improved the company's ability to serve its customers. As this common control makes special economies available, the company may well afford to share their benefits with its consumers. Utilizing these advantages, and considering the expenditures needed to improve the services and maintain it at a proper standard, the Board make their recommendation."

6801 In the fiscal year ending June 30, 1904, the profit was $30,489.89, or 8.4% of the assets of $362,587.84. Owing to the fact that one-quarter of the gas sold was sold in bulk to another gas company and therefore did not call for any distributing system, the assets per 1,000 cu. ft. of sales have not been figured. (See pages xliii and 124 of the Report issued January, 1905.) Taking the average price received for the gas sold to ordinary consumers as being less than the average price, $1.26, per 1,000 cu. ft. actually received for gas sold to such consumers by the amount, 5c., of the reduction ordered by the Commission and the price of gas sold to the other gas company as being that stated by the Commission in their decision the profit for the year would figure out $27,493.96, or 7.6% upon the assets.

NEWBURYPORT—Reduction took effect December 1, 1904:

The reasons for ordering this reduction are stated by the Board as follows "About two years ago the control of the corporation passed to the present owners, who have greatly improved and extended the plant and the cost of this work has so increased the company's indebtedness that at the date of the decision it was more than $110,000.

"The statement of the company's operations for the last fiscal year shows a surplus, after payment of interest and dividends, altogether too small either for a reduction in price or even for the regular and safe conduct of the company's affairs. A careful scrutiny, however, of the operating accounts disclosed the fact that they contained numerous items incidental to the plant improvements already referred to; and, while these may have been properly
6802 and necessarily included, they are not likely to be repeated,
and their absence from future statements will make a substantial increase in the company's apparent profits. On the other hand, this increase will be in some measure offset by an increase in the interest charges, due to the growth of the floating debt.

"Giving due weight to all these facts, the conditions which surrounded the company at the time of the decision seemed to permit only the reduction in price which was named by the Board."

In the fiscal year ending June 30, 1904, the profit from gas was $6,630.60, or 5.6% on the gas assets of $128,962.82, which equalled $5.36 per 1,000 cu. ft. of sales for the year (see pages xcvii and 125 of the Report issued in January, 1905). If the price received during the year had been only $1.40 per 1,000 cu. ft., this being that to which it was reduced by order of the Board, the gas profits would have been $4,111.41, or 3.2% upon the gas assets.

CHARLESTON—Reduction took effect January 1, 1906:

In the fiscal year ending June 30, 1905, the profit from gas was $68,778.41, or 10.5% upon the gas assets of $654,049.75, which equalled $3.58 per 1,000 cu. ft. of sales for the year (see pages cx and 116 of the Report issued in January, 1906).

If the average price received during this fiscal year had been 91c. per 1,000 cu. ft. instead of $1.01, as it actually was, the gas profit would have been $50,507.81, or equal to 7.7% upon the gas assets.

Mr. BURR: I cannot help but remark that this is called a memorandum instead of a long speech or oration, as the statements 6803 of Professor Bemis and Dr. Marks were characterized.

Mr. MATHEWSON: They should have headed their memorandum in that way. This was taken from the same sources which they kindly introduced to our notice.

Q. Are you able to find any general pronouncement of the Gas Commissioners in Massachusetts that a six per cent. rate is sufficient under normal circumstances?

A. No, sir.

Q. At page 3093 Professor Bemis says that he draws a conclusion from his study of the Massachusetts companies that if the companies can stand a reduction of any given amount they can stand a reduction of at least eight or ten cents more by reason of the large increase in business sure to follow without any proportionate increase in expenses, always providing that the reduction does not go down to operating cost. The exhibits we have put in have shown an increase in assets proportionate to profit and more, but independent from that, what would be your view as to the soundness of the proposition which he advances?

A. My view is it is very unsound. For instance, if the statement is literally interpreted, I can hardly believe Mr. Bemis wished it to be so understood, in other words, if there is a reduction of eight or ten cents, there is no reason that there should not be another reduction of eight or ten cents, the only limit is, provided it does not go down to operating cost. Suppose it went down within one or two cents of operating cost, the amount of sales would have to be very, very large.

By Mr. BURR:

Q. Then we would have confiscation, would we not, Doctor?

A. We would.

6804 By Mr. MATHEWSON:

Q. He also refers to the proposition which he advanced that with a reduction of price there would be or will be such a great increase of consumption that the sales will increase very rapidly, and in this connection some one referred to the London companies. What is the experience there according to your investigation?

A. Taking the years 1900 and 1904, taking the three London companies and averaging them, the reduction in price between those years was 10.56 per cent., whereas the sales only increased on an average of one per cent. per year. My recollection is that one per cent. per year figured up 4.23.

Q. Is not the consumption in London so far as you know the largest per capita of any city in the world outside of New York?

A. I believe it to be.

Q. Would the fact that the saturation point per capita has been so nearly reached have any effect on the increase in consumption in your judgment?

A. In my opinion it has a very great influence.

Q. And what would you say as to Professor Bemis' statement at page 3218 that his experience throughout this country and Europe tends to show that the large company has lower costs of distribution, as to its being a general proposition which may be accepted?

A. As affected by the increase in sales, the larger the sales, presumably, the larger the company, in that sense.

Q. That is what I referred to.

A. The average for the three Metropolitan companies between the years 1901 and 1905 shows an increase in the items which are called distribution and management of 18.8 per cent., whereas the sales show an increase of 3.79 per cent., so that the expenses increase even faster than the sales.

6805 Q. Referring to the Laclede Gas Company, which was introduced at page 3018 as part of a table, it was stated that 5 per cent. was paid on stock and bonds, but upon what capitalization was the 5 per cent. paid, if you have computed it?

A. First mortgage bonds, $10,000,000, five per cent.; five per cent. extending refunding bonds of $7,000,000, making $17,000,000; preferred stock of $2,500,000 and common stock $8,500,000, making $28,000,000.

Q. That would be an equivalent to $8.43 per thousand sold, the sales being 3,221,671 thousands, thousands being the unit.

Q. That would be an equivalent to 8.43 per cent. on a capitalization of $5 per thousand cubic feet of sales?

A. Yes.

Q. Or of 10½ per cent. on $4 of sales?

A. That is right.

Q. At page 3577 and 3578, where Professor Bemis was asked as to its being easier to maintain a candle power of only 14 with coal gas than it would be to maintain a candle power of 22 by means of oil enrichment to a large degree, he said it was easier probably to maintain 14 than 22 candles, and yet that he knew in Philadelphia the candle power does not vary a mile from the works, and at the home of Mr. Walton Clark, who lives seven or eight miles away. Does your knowledge of the situation at Philadelphia enable you to say whether that is so, or could be so?

A. No, sir, it is not so, and could not be so.

Q. Professor Bemis stated as his authority something that Mr. Walton Clark said to him, have you gone to the same source of information to find whether Professor Bemis properly understood the matter?

A. I have, and have his absolute denial that he ever made any such statement.

6806 Q. In writing?

A. In writing, yes, sir.

Q. Now as a matter of fact in considering candle power and the maintaining of a margin, is it not true that it is easier to maintain a narrow margin above 14 or 16 candle power, where you are making coal gas, than it is to maintain a narrow margin above the 22 standard for water gas, with the assurance that you will not fall below the standard fixed at any time?

A. It is easier to maintain the standard on the lower candle power, especially as compared with water gas made today, from the oils which we have to employ; especially so in that regard.

Q. And assuming that the Consolidated Gas Company was maintaining a certain candle power at its works, and that that candle power averaged on the whole considerably above the 22 rate, but that repeatedly the candle power was found falling at one or more points to between 22 and 22½ candle power, would it in your judgment be prudent or wise to reduce the candle power at the works?

A. It would not, in my opinion.

Q. Do you or do you not think it necessary to take into consideration the possible fall in candle power beyond the testing station before it reaches consumers, at distant points?

A. I certainly do, although as I understand the New York Law, they can test where they please, and therefore can go beyond the present testing station and so find a farther fall than is shown by the city's test at present.

Q. Questions have been asked in reference to the provisions of the English statute, in reference to candle power penalties. Is it possible with fair prudence and safety to maintain a narrow margin between the standard of average candle power where the penalty is
6807 slight, than where the penalty is heavy?

A. As a commercial proposition of course you can run more risk in that connection, because the fines are smaller.

Q. What is the English statute? What, in brief, does it provide?

A. The London standard?

Q. The London standard, yes.

A. To understand the London standard and the London penalties you have to take the Law of 1880, which as I think has been referred to two or three times in this case, and read that, and read with it the modifications brought in to the amendment of 1905, London Gas Act.

The MASTER: Did not some of the provisions of that 1905 Act get in on the record before?

Mr. MATHEWSON: Yes, they did, but that is not the Act that provides the penalties. It relates back to a previous Act.

Q. Is not that so?

A. Yes. The 1905 Act simply refers back to the old Act and simply shows these amendments. The facts are at present, taking into consideration both these laws, there is no penalty for sulphur or ammonia; sulphuretted hydrogen remains as an impurity, with 50 pounds the maximum fine for each occasion; but if found at one testing station they are not entitled, the examining officers, to a further forfeiture for tests at other stations. Further, the average at such one testing station for that day and on the preceeding day and on the following day shall represent the quality of the gas said to be deficient; in other words, having found the deficiency they must then proceed and average them, the averages of that day, the preceding day, and then the next day, and take that average, the final average to show the deficiency if there is one.

6808 On pressure there is simply a requirement as to a minimum, but nothing as to a maximum, as has been repeatedly brought out, and that must not go less than 6 between what you might call the daylight points, from midnight until sunset, I think it is, and from sunset to midnight, not less than one inch. The maximum penalty in that case is 10 pounds, and they are only permitted to assess one penalty in the 24 hours.

In regard to candle power, of course it varies with the companies. Two of the companies are 14, and one is 16. The large Gas Light and Coke Company is 16, the small Commercial Company and the other companies, such as the South Metropolitan, are 14. For the first half candle power deficiency there is only a 40 shilling fine or penalty, but even for the first candle and for every subseqeunt candle the fine shall not be less than 25 pounds and not more than 100 pounds, with only one forfeiture a day. But, if the deficiency is found not to exceed one candle, then the same rule applies as I have previously described with regard to impurity. They are to take the average of the day at that place, average that with the average of the preceding day, and with the average of the next following day, and that is to be taken as the candle power for comparison with the standard. Then it goes on to say that no forfeiture shall be incurred in any case with respect to which it is certified by the Chief Examiner that the defect of the illuminating power, excess of impurity or insufficiency of pressure, was occasioned by unavoidable cause or accident.

Furthermore this clause was modified in the latter Act in regard to appeals, and the fact is, by lists obtained by me from the
6809 companies, that most of the cases reported against them are finally remitted.

Mr. Burr: Have you got the references there to the statute which you have quoted?

The Witness: Yes.

Mr. Burr: Will you be kind enough to give them?

The Witness: I cannot give you a reference, Mr. Burr, for 1905. I do not know where it is published. I can let you have my copy. It is an official copy.

Mr. Burr: Is that the copy you had the other day?

The Witness: Yes, it is an official copy; and I can refer to the other one, the original Act.

Mr. Kirby: Is it not in the Supplement?

The Witness: No, it is too late. It is only out in 1905. I do not think there is any publication as late as that. For 1880, you will find that in Michaels and Wills, 5th Edition, pages 180 and 181. I think you have got that. If not, I will let you have my copy. The 1905 Act is 5, Edward VII, Chap. 155, and that I can let you have if you like afterwards. It is all marked up, but you can read it.

Q. Do you find that even with this mild penalty and with the low candle power coal gas, the Metropolitan and Suburban Companies of London maintain an average of only one-half candle above the standard of candle power?

A. In the year 1904 the Gas Light & Coke Company averaged 16.52 for a requirement of 16. The Commercial averaged 6810 14.9 for a requirement of 14. The South Metropolitan maintained an average of 14.7 for a requirement of 14. The average delivery was 15.78, but I have not averaged out what the average requirement would be. You would have to take and multiply the amount sold by each one, which I had to in the other case.

Q. You have not the suburban companies there, have you. May I take the sheet?

A. You cannot get any average from that. They run from 14.50 up to 16.50, the suburban companies, with all sorts of different requirements. You would have to take each one individually in order to work that out. You would have to take Fields for that.

Q. Have you Fields here?

A. Yes, I have it here. It is in the second main column with the two sub columns "Required or Delivered," I think it is. That is 1905.

Q. I have the figures here, if you do not mind my leading the witness to that extent?

A. That is 1905, and I think I just gave the other.

Q. Don't it appear in Fields' Analysis that Brentford maintains 15.60 as against required 14?

A. Yes.

And Bromley maintains 15.55 as against the requirement of 14?

A. Yes.

Q. And Croydon 15.25 as against 14?

A. Yes.

Q. And Hornsey 15.90 as against 15?

A. Yes.

Q. And Richmond 15.70 as against 15?

Q. And Wandsworth 15.51 as against 14, amongst others?

A. Yes, that is right.

Q. Professeor Bemis refers to the oil contracts of the Consolidated Gas Company with disapproval and says that the different stations could divide the contract as Philadelphia did; have one station supplied by one oil company, and one by another oil company. Is the case in New York parallel to Philadelphia?

6811 A. No, I think not. New York has a very much larger quantity of oil to use, and it is a much more serious problem to cover such a large field and be sure of having a supply. For instance, Mr. Bemis mentions Philadelphia. The amount of oil used by the Consolidated Gas Company and other gas companies coming in under the contract in 1905, was 32 per cent. more than Philadelphia, Newark, Jersey City, New Haven and Baltimore added together was, and that was for 1906, which are the figures I have obtained. We will presume that showed a little increase over 1905.

Q. Did you hear Mr. Addicks's testimony, that in case they abandoned the Standard Oil Company contract it would be necessary and prudent to have a large storage capacity of three months. In view of the fact that there was no other great storage capacity than the Standard Oils in this vicinity?

A. I did.

Q. Do you approve or disapprove of that?

Mr. **Burr**: I object to that.

Q. Well, what would be your view on the subject? I will put it that way?

A. I will put it in this way, that I should not want to advise or undertake the responsibility in such a case, unless I know there was a very large storage supply available and at my disposal.

Q. Mr. Bemis, at page 3252, being asked how they did in Massachusetts in connection with the Municipal Act, to which his attention was called, and as to whether there was any provision whatsoever for a Sinking Fund in that Act, replied that he understood there was. Is there any provision in that Act for Sinking Fund that you can ascertain?

A. No, there is not.

Q. What is it?

6812 A. It is a requirement for the taking of three per cent. on the investment, less land and appurtenant water rights, charging that up to the cost of gas each year, and that amount is to be expended from year to year for renewals and extensions so far as that amount is large enough to pay for the extensions or renewals. In other words, the amount is at once re-invested in the business, as required, as an offset against depreciation. It is true that that three per cent., as named in the Act, can be modified by the Commission. They have the right to do so, but they have not done so; and in the case where they were asked to modify for Holyoke at five per cent. they refused to do so, before the new law went into effect changing it from five to three.

Q. Did you, as Mr. Bemis had, have any conference or communication with any member of the Commission?

A. Wishing to be very sure of my reading of the Act I communicated with the chairman, Mr. Barker, and found that my reading of the Act was entirely correct.

Q. Have you his letter, if counsel desire it in that connection?

A. Yes.

Q. Mr. Bemis said in reference to the hazard of explosion, which perils among others would be covered by the reserve fund, that he had heard of no other explosion as costly to the company as in Boston, and that its occurrence anywhere else seemed improbable. Is it the fact that explosions of that character, and disastrous ones, are unusual in your experience and knowledge?

A. It depends upon the meaning of the word unusual. They occur, and we have to look out for them. We had a very bad one in Philadelphia, at Market and 6th Streets, last year, the money cost of which has not yet been determined on account of suits pending and all. There was a very bad explosion in London, in 6813
Southampton Row, Holborn, I think it was. I found that

the Gas Light & Coke Company was permitted to write up a portion of the cost of that explosion, to the extent of eight thousand pounds, to its insurance fund during the last half of the year 1904.

There was another bad explosion occurred a good many years ago in Liverpool. That led to the loss of a very large sum. My recollection is—the whole thing was described to me in detail by the Chief Engineer, who was a personal friend—that it resulted in the burning down of docks and so forth, and they had actually to pay out of their treasury 450,000 pounds, or $450,000—we will assume it was $450,000—and of course we know such explosions are occurring continually in a small way. I should expect such a hazard to be very largely increased with a high pressure system.

Q. Mr. Bemis, at page 3519, says of the cost of the repairs of the Consolidated Gas Company, 7.16 cents, that this seems to be high and no doubt repairs and depreciations will be within the 10.89 to which reference has been made, and he refers to your testimony in Holyoke and to Mr. Cowdrey's testimony in Chicago. What was the testimony on those occasions, as it relates to this point of Mr. Bemis?

A. My testimony in Holyoke was guarded all the way through with a statement that I was referring to Holyoke and that I had been repeatedly asked to give general statements, and that I had refused to do so; that it was not my practice to do so; each cost must be considered by itself, taking into account construction and everything else. There I mentioned repairs and renewals and depreciation, 11.27—small works in a cheap town. I do not read Mr. Cowdrey's evidence quite as Mr. Bemis seemed to. Mr. Cowdrey put from 8 to 9 cents in for repairs and renewals for water gas plant 6814 alone, or for coal gas plants 10 to 12 cents, and then allowed 10 cents to take care of future depreciation and emergencies. Then he recapitulates by taking 20 cents for repairs, renewals, depreciation and contingencies.

Q. That 20 cents covering the same items would be such as you allow, practically the same or more than you allow in your estimate for the New York situation?

A. Yes, that is more than I allowed for the same thing.

Q. Referring to Mr. Marks' testimony he stated at page 2383 that you neglected to place any limit as to the length of time within which your 5 cents per thousand extra for reserve fund would be collected from consumers, and at page 2390 he corrects that by saying that, on thinking the matter over, he recalls that you lately had agreed that the reserve fund should be terminated when 10 per cent. of the capital or investment was reached?

A. Yes.

Q. Now, as a matter of fact, the first time you appeared on the subject was before the Commission of Gas and Electricity of the State of New York, was it not?

A. It was.

Q. What did you say on that occasion?

A. Page 1700 of the report of the case before the New York Gas and Electricity Commission, printed "I add for that, I just explained, for reserve contingencies and hazards 5 per cent., making 21.77. Now, I would like to supplement, of course, that five cents by saying that I would like it distinctly understood that that in my opinion is a reserve and should not be called an actual expense in the business, but should be treated as a reserve, and having grown to certain dimensions should be there stopped and not allowed to increase again until drawn upon, following the English practice.

6815 Q. But in this case your testimony appears at page 1497, where you stated that the reserve should accumulate until it reached one-tenth of the investment, did you not?

A. I did.

Q. Mr. Marks at page 2372 advocates a single system of mains for the City of New York. What would this involve, and what would you say as to the wisdom of such a substitution?

A. Well, first it would involve a fairly complete abandonment of all that they have got in the streets now, but I will go further than that and say that a single pipe system in many of the streets of New York, especially the important streets, would not be in my opinion a practicable method of distributing gas in New York City.

Q. Mr. Marks testifies at page 2385 that the price received for gas in Philadelphia was 78.1, is that the fact, Doctor?

A. No, sir.

Q. Is there any gas sold in Philadelphia at that price?

A. I think not.

Q. As a matter of fact, to reach that 78.1, does not Dr. Marks include all the gas sold to private consumers, and also all the gas which is delivered to the city, as part consideration for the rental, in the price received from private consumers only?

A. He does.

Q. If he divided the price received from private consumers by the gas sold to private consumers, he would get, would he not, a dollar, or practically that, as the cost of gas sold?

A. Yes; I can show it perhaps by a statement rather clearly. If you take the gas sold to citizens at a dollar—I am taking the figures from Dr. Marks, and using his figures, but simply readjusting them—40,243,341 M feet, we have $40,243,341. If you take the city's gas consumption, at a dollar, we have 4,639,900 M feet, or $4,639,900. This would make the total receipts $44,883,241.

6816 Against that we would have rental-royalty I think Dr. Marks calls it—Column 4 of his table $3,758,477, gas equivalent at $1 as above. That is gas that is given free, now, put down in dollars and cents $4,639,900; then we would have as the total rental paid to the city for the use of its plant $8,398,377, which would amount to 18.71 as the rental paid. Now, the cost of lighting, meter inspectors and so forth, given by Mr. Marks, Column 7 of his table, excluded from the price $1,113,528; this would make the total rental and cost of lighting and repair and meter inspectors $9,511,905, that last item of lighting and repair being 2.48 cents per thousand. Then there remains to the U. G. I. to cover the cost of gas and return on the U. G. I.'s investment, and only on their investment,

$35,371,336 and that amounts to 78.81, and that is where the 78.81 comes from. You take all those amounts together and foot them up, the average selling price would then be $1. You can turn around and say you sell it to the city at a different price, and get a different result. For instance, I have got another statement made up on the same lines, only in this case I assume that the gas is sold to the city at 90 cents. In that case the average selling price comes out at 98.96, and still the U. G. I. has remaining to cover the cost of gas and return on the U. G. I.'s investment just the same sum of 78.81 cents.

Q. As to the U. G. I. Company, if I understand you correctly, and I wish you would correct me if I do not—I am simply trying to get at the facts—they have to earn no return on the investment in the city's plant which they operate nor do they have to pay any taxes on that plant?

A Not at all.

6817 Q. And all they do pay is paid to rental in the shape of gas to the city and ten cents per thousand on the gas they sell to private consumers; is that correct?

A. That is included in the 21.19 cents of my first statement, which added to the 78.81 makes up a dollar. That has to include the return on the city's investment in plant. The U. G. I. Company has, according to Mr. Marks' own statement—I have not checked that up—an investment of $2.15 a thousand in its part of the plant, and it does have $2.15, according to that, which they have to earn on it. There are other reasons of course that you could bring into this, as appear from a summary of the lease. For instance, fourth in the lease—the U. G. I. is protected from competition and has exclusive rights——

Mr. Burr: I object to that unless the lease is offered in evidence.

Mr. Mathewson: It was commented on here by your own witness, and is put in Dr. Marks' affidavit, to which we have had access.

The Master: Is that the same thing which was called the contract dated November 12th, 1897?

Mr. Mathewson: Yes.

The Master: Your witness has testified about that.

(The paper to which Dr. Humphreys refers is marked for Identification Complainant's Exhibit No. 391).

The Witness: Now, you wish me to comment on that ordinance?

Q. Which is the ordinance to which you now refer?

A. It is entitled an ordinance of the City of Philadelphia, 6818 approved November 12th, 1897, authorizing lease of the Philadelphia Gas Works to the U. G. I. Company.

Q. Yes, briefly, if you will?

A. Page 4. It protects the company from competition by giving the company exclusive rights; page 4, also, the company can do its own paving; page 5, can occupy any subway that should be built by the city without rental; page 8, can terminate in ten years, January 1908, upon notice; the city must then reimburse for all extensions and so forth and improvements with interest at 6%, simple interest. That is pages 9 and 10. Page 11, if the lease runs to December 31st, 1927, the City gets works and improvement without payment to the company. Page 12, the company to expend 5 millions of dollars in three years and at least 15 millions in thirty years; page 13, need not extend pipes, unless one consumer for each hundred feet guaranteed; page 14, 22 candle power is the standard daily average unless prevented by accident beyond the company's control; penalty $500, not for each violation, but for each day; fine to be returned if the company shall show fault beyond its control; page 15, free street lamps to the number in use at the first of the lease, but not to exceed 300 additional each year thereafter; pages 15 and 16, price to be $1.00 unless changed by ordinance; then limited as follows: December 31, 1907, 90 cents to be net to the company, 90 cents; December 31, 1912, to be net to the company 85 cents; 1917, net to the company 80 cents; 1927, net to the company 75 cents. The U. G. I. in addition is to pay $10,000 per year to the city for inspection and some other little items. Page 18, the company only pays to the city money as received. I read this to mean that they do not have to pay on bad debts. Page 16, the company can 6819 collect penalties from consumers if bills are not paid in 5 days, according to the old rule. In other words, instead of giving discount to consumers for prompt payment they can penalize them if they are not paid in 5 days. I do not imagine that they follow out such a rule, but they are permitted to do so.

Q. I do not want to spend any time on the question I am now going to ask you, but Mr. Marks was asked in reference to a proposition involving the extension of the lease for 30 years, was it, from 1905, or 75 years?

A. 75 years.

Q. 75 years, for which he said the company offered 25 million dollars, (that is page 3760) to the City of Philadelphia?

A. Yes, sir.

Q. To be paid in the future, and this was cited by Marks as showing how valuable the situation was?

A. Yes.

Q. What is the fact in reference to that, and how onerous would such a contract be covering that long period?

A. Well, to provide for the capital invested at the end of 30 years, it would have been necessary to put by if I recall, 1.78 per cent in a 4 per cent. sinking fund; and here is an eminently appropriate place to show what a sinking fund is really intended for. They would not want to invest that in the plant; having already invested it, they want to find some means of paying it back, because the assets would not be there at the end of 30 years; they would have to deliver them up without extra payment. I have not attempted to spread out on the thousands of feet by endeavoring to estimate what the sales would be, but I have simply taken the sales at the average of what they were in 1904, the actual sales to the consumers on which they got their money taking 1.78 upon the 16 millions, which was the amount named by Mr. Marks as having been already spent, and the amount brought into his statement.

6820 Q. Spent by the U. G. I. for plant?

A. For improvements and repairs and all the rest of it, which they would have to sacrifice. I find it would take $284,800 a year, or, 4.18 cents per thousand. Now, so far so good, up to the time 1905. In 1905 when this change of lease was contemplated there would have been accumulated by this process $2,624,147. Now, if that was allowed to accumulate without any additions whatever, so as to relieve the company entirely of any further additions, and take care of the money we have to sacrifice, and we take the 16 million dollars and add to it the 25 millions which they would pay, making 41 million dollars in all, I find that the accumulation at 4% compound interest would at the end of the lease amount to $49,714,465, so that they would have left about 8 million dollars to cover any further extensions and additions to plant that they might find it necessary to make.

Q. In other words, if they had provided or reserved up to that time when they retire their investment the mere accumulation at compound interest of that in future would take care of the entire 25 million dollars that they would have to pay, the entire 16 million dollars in the plant already spent, and 8 million dollars more?

A. That is right, sir.

Q. I will ask you one question as to maps of mains. For what purposes are maps of mains kept by gas companies ordinarily?

A. They are ordinarily kept for ready reference to see what mains they have in the street and what streets are occupied with mains and the size of the mains.

6821 Mr. BURR: I object to that. The question is what the maps in the office of the Consolidated Gas Company — kept for?

The MASTER: I do not see that it is important. You covered that fully.

Mr. MATHEWSON: I think so; *de mortuis nil nisi bonum.*

Q. We will refer to Mr. Hall's testimony for a moment. Has you firm of Humphreys & Glasgow acted and are they acting as accountants for gas companies, or accounting engineers to any extent?

A. Yes, you might call it that, but I would rather like to explain it, than give it a title. We have a very large number of plants for whom we put in apparatus all over the world, and we endeavor to keep that plant up to the mark by periodical inspection.

Mr. BURR: I think this was all gone into when Dr. Humphreys was qualified as an expert.

Mr. MATHEWSON: Not on this point.

Mr. BURR: I do not think it is pertinent to this inquiry at this stage, where we are rapidly drawing to a close, to go into a dissertation on the care and intense purpose with which they construct.

Mr. MATHEWSON: Not at all; give him a minute and he will be all through.

The MASTER: I presume he wants to show that he has some knowledge of accounts, to meet some points in Mr. Hall's testimony. You may go on for a moment or two, and if it does not appear we will rule it out.

Mr. MATHEWSON: That is the whole purpose.

6822 The WITNESS: It may be your purpose; it is not mine, because I think that I have qualified.

The MASTER: Shorten it as much as you can.

A. We have this intimate knowledge of the way the English accounts are kept, to enable us to make comparisons from year to year, we go through the accounts of these clients of ours, a certain number of them, now amounting to about fifty, and others that we have erected plants for are coming in all the time and adding themselves to this list. We send out each year to these people confidential comparative statements as to the cost of gas, and then suggestions as to how to improve results. This brings us into intimate contact with the English accounts.

Q. I want to ask first as to what your view is of the propriety of the exclusion of interest on taxes which are being tested under the advice of counsel. Is that a proper operating expense or not?

A. In my opinion it is.

Q. Mr. Hall at page 3366 said that he eliminated repairs to gas stoves. As to the English practice, he was doubtful. What is the English practice to the inclusion of repairs to gas stoves in operating expenses?

A. They include it.

Q. When asked as to the Parliamentary investigation expenses he said they would not be allowed by any competent accountant. What is the rule as to Parliamentary investigations, where the company is attacked or being legislated against?

Mr. BURR: I object to that because it does not appear that in the sense that Mr. Hall used the expression Mr. Humphreys is a competent accountant. He does not assume to be an expert accountant. 6823

Mr. MATHEWSON: He will refer you to his authority; give him a chance.

The MASTER: I will allow it.

Exception taken by Mr. Burr.

A. I will say first that I do assume to be an expert accountant, and know a great deal more about accounts in connection with gas companies than any of the accountants who pose as expert accountants. What particular item do you refer to? I was embarrassed at the attack upon my ability.

Q. Parliamentary investigation. I refer now to the item of legal charges and expenses in connection with the investigation of 1905, which Mr. Hall has excluded as not a proper charge in the operating expense of the company.

A. The returns all show that provision is made for such charges in the regular way to operating expenses; but there is one exception, where the company has involved itself in such Parliamentary proceedings; and there it is left to the Board of Trade sometimes, or the auditor of the Board of Trade, to decide whether it shall go against income or whether it shall be charged against the profits, so to speak; in other words, a direct charge to profit and loss, but there is no exception as far as I know in the ordinary Parliamentary proceedings, where the company is attacked, or on the defensive or in any other legal charges.

Q. That is to say, where the company is investigated or where they are opposing an act of Parliament, do the usual forms of account expressly provide that they are legal expenses and shall be a charge against operating account?

A. They do

6824 Q. Now, as to the section of public lamps charges, Parliamentary and law charges, in the nature of the expenses to which I have just referred, bad debts, stove repairs, and so forth, what authorities have you, if any, for objecting to the conclusion of Mr. Hall, Mr. Marks and others to exclude them or any of them?

Mr. Burr: He has not stated that he does object yet.

Mr. Mathewson: If he does not, I suppose he will say so.

A. I do object to the exclusion of those items, and the one chiefly referred to, public lamps, lighting and repairing—an item for them appears in the British Government returns and also appears as a special item in the printed report of the Gas Light and Coke Company. It also is to be found at page 88 of Michael & Wills, previously referred to. American Gas Light Association, uniform system, shows the item. Page 68 of the classification sheet of Blank 20, I think they call income and expense, whatever the title is; Massachusetts form for returns of companies, item 13, on income and expenses says, "For public lamps lighting and repairing (gas lamps only), then, ditto, other lamps," which I presume is a blank left for oil lamps, naphtha lamps, etc. In New York, the form of the return by the New York Commission shows under operating expense an item: "Operating and repairing street lamps."

Q. Mr. Bemis stated that he withdrew his three per cent. allowance for reserve fund which he made in favor of the company before the Gas Commission, because he ascertained here that 6825 the land of the company had appreciated in value since it was acquired by themselves, or the predecessor companies, and that the mains and services appeared to be worth more on account of the new and expensive pavement. I want to ask you whether that situation, in your opinion, would justify the exclusion of a reserve fund?

A. It would not.

Q. State briefly why?

A. Increase and appreciation in value of real estate would not pay for anything until that real estate was sold, and the real estate could not be sold until the property was vacated. It would add to the value of the assets of the company, but would not add to its earning capacity as long as it was occupied by a manufacturing plant. Therefore, there would be nothing to pay this charge from.

Q. What about the expenses of operation and renewals, so far as the more expensive pavement is concerned; what effect would that have on the situation?

A. The additional values that the assets might have by reason of the pavement being above the pipe would add to the burdens of the company from an operating standpoint, because not only would the pipes to be laid in future have to be laid at a greater cost, but the operating expenses would be increased because the work of keeping the pipes repaired and renewed would have to be done at an added cost, due to the fact that the pavements would have to be renewed; so that if that were taken as compensating for depreciation, we have to compensate by the increased cost of our operating charges, which does not seem to me to be logical.

Q. If the increase in the value of land was due to moneys received from consumers of gas and put into new lands beyond a fair dividend, or if the increase in the value of mains was due to a like action, the situation might be different, might it not? 6826

A. Certainly.

Mr. Burr: I object to that as calling for a conclusion as to what might be the result.

The Master: It is answered already.

Mr. Burr: Then I move to strike it out.

Motion denied. Exception by Mr. Burr:

Q. As to the cost of gas, attention has been called to the fact that for one reason or another there is a difference of a cent or two between the cost of the Consolidated water gas stations and the New Amsterdam, and perhaps the Standard and the Mutual. I want to ask you as a practical gas man whether it is possible to get the identical cost of gas as between two companies operating even in the same city?

A. I do not know whether it is possible or not. I should consider that if I made an examination of two such companies and found such to be the case, it would be a most extraordinary case.

Q. Would you consider that a difference of a cent is extraordinary at all?

A. No, I should not.

Q. If you made a schedule of the cost of gas in London, to which Mr. Marks has referred and shown what it would cost in New York—Mr. Edgerton's theory (page 4742)—what does he call that?

A. Well, he described it in two or three ways. I have quoted it generally on the "one candle is good as another" theory, which I think is explicit.

Q. That is, it has to be reduced to the power of New York gas at an average of 24.18 at the test. Reduced to this basis the Gas Light and Coke Company would charge for candle power gas 24.18, 101.19 cents, would it not? 6827

A. Yes, raising it from 16.48, which they actually delivered to 24.18, which was the actual delivery for the last half of the year 1905, in New York by the Consolidated Gas Company after the standard was raised.

Q. And the Commercial?

A. 99.28.

Q. And the South Metropolitan?

A. 84.04.

Q. What is the average of the three?
A. 95.59.

Mr. Mathewson: I ask that this statement be spread upon the record in connection with Dr. Humphrey's testimony.
(The statement referred to is as follows.)

PRICES OF GAS. PRIVATE CONSUMERS.

New York and London.

Compared on basis Edgerton's theory "One candle as good as another" (p. 4742), on basis of candle power delivered 1905. N. Y. average latter half of year.

	Average candle power delivered.		London prices to private consumers, including meter rents, which, in N. Y., are included in price.	London prices adjusted on basis of candle powers according to Edgerton theory.	
	London.	New York.		Ratio.	Adjusted price.
			c.		c.
Gas Light & Coke Co.....	16.48	24.18	68.98	1.467	101.19
Commercial..............	14.9	24.18	61.17	1.623	99.28
South Metropolitan........	14.6	24.18	50.75	1.656	84.04
Average of Three Cos.....	15.72	24.18	62.15	1.538	95.59

6828 Q. Now, as a matter of fact can gas be manufactured, all other things being equal, as cheaply here as in London?

A. It cannot.

Q. Why not?

A. Labor is lower there and materials are as a rule lower in price.

Q. Generally speaking, how would you say the price of labor varied in per cent. from the cost of labor here, as far as your observation goes?

A. I have not made an estimate in the form I would like to do it, by taking the number of men of each kind and averaging it up in the true way, but I should think it would run about 40 per cent., from the figures that I have been able to compare along certain lines. For instance, comparing the Gas Light and Coke Company of London with the Consolidated Company returns received from both companies within a month or so; the foremen are about 24½ per cent. more in New York than in London. I am now comparing prices in New York before they raised. Assistant foreman in the works, about 45 per cent., nearly 46 per cent. higher here. The coal handling men about 29 per cent. more. Carbonizing men, 43 per cent. more. Coke handling men, 45 per cent. more. Mechanics—well, that is rather an indefinite term, and we would have to match it up the best we could there. We have taken mechanics as they are described and put them against mechanics here. Of course that will vary, but there is about 35 per cent., in the figures here, against New York. Mechanics' laborers or helpers, about 17 per cent.; gas fitters, 53 per cent. and over; gas fitters' assistants or helpers, 54 per cent. General laborers, 39 per cent.

Q. As to the cost of plant, to which some witnesses have referred, in Great Britain, is plant as expensive of construction there as here?

A. In general, no.

6829 Q. Is that due to the lower price of labor and material taken as a whole?

A. Of course, certainly.

Q. So that the production of gas would be less costly, and the amount of plant per thousand upon which returns would be paid, would also be less?

A. Yes.

Q. And is it possible, without taking into consideration all these features, to compare the cost of gas in Great Britain, or the cost of plant in Great Britain, or capitalization per thousand in Great Britain, with similar items in the United States, without careful an-lysis?

A. It is not.

Q. I think that is all, except that you referred this morning to computations respecting the results of Mr. Edgerton, or results which you obtained by taking Mr. Edgerton's figures, and you stated your total. Have you for the conve-ience of counsel detailed statements showing how the results are reached?

A. I have.

Q. Will you hand one to each of counsel? This first sheet is a computation taken from the papers sent to Mr. Bradley by Mr. Edgerton on 32.95 candle power oil gas, is it not?

A. That is right, and that cost is not shown in Mr. Edgerton's statements of cost because he shows the amount expended for each item, but before putting down the cost per thousand he reduces it to the basis of 17.6. I took and divided it up, each item for itself, just as it appears; namely, got it down to a basis of 32.95, which is what it purports to be, and so arrive at the cost of manufacturing the 32.95 candle power gas at Danbury, for manufacturing and leakage, as 90.5 cents per thousand, as shown by the actual figures given by Mr. Edgerton in his statement: Distribution, 9.07; Manufacture, 21.09; Bad debts, etc., bringing it up to 140.78 cents.

6830 Q. The figures that you use are his exhibit after the division?

A. That is all, in other words, I divided by the actual gas made.

Q. What does the second sheet show?

A. The second sheet shows on the theory of Mr. Edgerton what it costs to make 28 candle power gas, the 28 being one of the candle powers that he has taken for his New York ideal assumption, but I have also 50 candle power gas, both being enrichers, and I show in column 2 what would be the result of the Danbury basis, namely, cost of manufacturing 65 cents, against the cost that he took in his estimate for New York, at 34, and the Danbury gas cost on the basis of 50 candle power, 1.16 against his estimate*d* of 48 cents.

Q. What is the third sheet?

A. The third sheet is the statement of certain averages as obtained from the Danbury record. For instance, gallons of oil, average gallons used, average candle power, average candle power per gallon, and the coal per thousand, mixed gas.

Mr. MATHEWSON: I offer these sheets in evidence.

Received in evidence and marked Complainant's Exhibits, respectively, Nos. 392, 393, and 394.

Mr. KIRBY: I move to strike out all the testimony of Mr. Humphreys having to do with the letter purported to have been sent to Mr. Edgerton and received by Mr. Bradley, unless it be that with the letter accompanying statistics be placed in evidence.

The MASTER: I did not find this morning the page where it was referred to on the examination of Mr. Edgerton.

6831 Mr. MATHEWSON: Is that motion made on the theory that the letters are not proven? If so, I will ask Dr. Humphreys some questions, as he is perfectly familiar with Mr. Edgerton's handwriting, and has the original letters.

Mr. KIRBY: No, I am not taking any such captious ground as that. I am quite willing to admit on the record, after inspection, that the letters were written by Mr. Edgerton, and were sent to Mr. Bradley, but the letter is really a statement upon a certain theory in regard to making gas, and represents the results shown at Danbury, and results, I believe, shown at New Orleans.

The WITNESS: And some reference to them.

Mr. KIRBY: And Wallington, and it carries figures and statistics of all those places, and the references and statements are so interwoven that one taken without the other is certainly unfair and improper.

Mr. MATHEWSON: You can cross-examine the witness on it. The papers are here at your disposal.

Mr. KIRBY: I have no objection whatever to it all going in evidence, but I do contend that it is improper to place that letter, or part of the letter, in evidence in the way that has been done this morning, unless it is all placed in evidence, and the letter is not complete unless the data which accompanied it is considered as part of it.

Mr. MATHEWSON: It is marked for identification, and I am willing that it should be printed so that you can refer to it; but here is your witness who produces Danbury as the pet place where 6832 this process is going on, which he says he has consulted in reference to everything and he sent the statements for 1905 to our chief engineer, saying that the results at Danbury are thus and so. He then makes a statement of the cost of gas in New York, and puts it at about half of what the cost was in Danbury. Is not that pertinent? As to the method of introducing it, if you want me to support that, all the papers in connection with those letters may be marked for identification, or they may be marked for identification and printed. I have no objection. But I did not offer all that stuff here because I have not made any reference to it. It is simply the Danbury statement.

Mr. KIRBY: I stand on my objection. The witness made no mention of Danbury. It was brought out on cross-examination, and reference to the letter was brought out on cross-examination, and now an effort is made to place in evidence a part of the document.

The **Master**: I cannot tell anything about this until I see it. I want to see a reference to the page where the matter first came up, and I would like to look at the document if it is important, and pass on it now. I should think it would answer your purposes to have it marked for identification and printed, because then, if your motion to strike out the testimony is wrongfully denied, you have got the matter before a court which can remedy it. That is the object of having these excluded questions taken, under our Federal practice. Now, if you get all this printed, as Mr. Mathewson suggests, you have got everything you can get out of it.

Mr. Mathewson: I do not want to offer it as evidence, 6833 because it does not seem to be evidence to me.

The **Master**: To save time I will deny the motion to strike out upon the stipulation made by Mr. Mathewson, here, that he does not object to having the papers printed, and having them marked for identification.

Mr. Kirby: I will take an exception.

Q. I will ask just one more question of Dr. Humphreys which occurs to me. Do you know why the oil gas process of Mr. Edgerton was superseded at New Orleans. Was that through the pleas of promoters, or for any purpose connected with promoters, so far as you know?

A. No, it was to secure greater economy.

Q. When was the oil gas plant of New Orleans superseded by the water gas plant?

A. The oil gas plant in New Orleans was in part superseded; that is, the Edgerton process was in part superseded before 1890. They introduced about 1890 the double superheater water gas plant, in either 1890 or 1891; I was down there myself, and they took me out and showed me what they said was the only part of the Edgerton process remaining—two oil tanks.

Cross-examination by **Mr. Kirby**:

Q. Speaking of New Orleans, what do you mean by the supersession of the Edgerton plant or the Edgerton system there?

A. Abandonment of its use.

Q. Did I understand you to say that was in 1890?

A. I said it was in part superseded at that time by what was known as the Meeze process.

Q. Are you familiar with the earnings of the company prior to 1890?

A. I don't carry them in mind. I know they paid dividends right along.

6834 Q. Do you know what dividends they paid at the time the Edgerton process was in operation?

A. I think I have it, from 1885 to 1900.

Q. What does that state?

A. Eight per cent., six per cent., five and one-half, five per cent., five per cent., five per cent., five per cent., five per cent., five per cent., five and one-half per cent., six per cent., seven and one-half per cent., eight per cent., seven and one-half per cent., five per cent., five per cent., five per cent.

By Mr. **Mathewson**:

Q. Respectively?
A. Yes; that last would be 1900.

By Mr. **Kirby**:

Q. Was there any redemption of bonds during that period?
A. That I do not recollect.

Q. Have you any knowledge or information which would lead you to deny that $500,000 worth of bonds were redeemed during the years 1885, 1886, 1887, 1888, and 1889?

A. No, nor have I any means of knowing how much surplus they had without referring to table.

Q. Have you any knowledge or information as to the surplus after the year 1890?

A. No, not at present.

Q. Or as to whether or not there were bonds redeemed during that period?

A. No, sir; I am basing my calculations on what I saw at the works, statements and all that sort of thing.

Q. Do you know what the candle power of the gas was prior to 1890?

A. On this statement of Mr. Edgerton's referring to New Orleans and accompanying the Bradley letters appears the statement that in July 24, 1885, the candle power ran 32.10, the next day 33.33,
33.20, 33.60, 32.70, 31.80; July 27th, 34. The next one
6835 named is July 28th, 34 and then 33.33, 33.15. I imagine
in each case those are the different tests the same day. It is not very plain. August 4th, 33.15. I remember being puzzled at this, before this August 4th, then in the margin appears "July 28, 29, 30," etc. Taking the last named dates, July 28, 33.15, the next day 32.66, 33, 32.70, 33.20, 33.51; August 3d, 33.51; next day, 32.30, 32.80, 32, 33, 32.80; they seem to run about 32, sometimes to 34, sometimes 33. The last one I have here runs on to November 24th.

Q. And after the change from the Edgerton system have you any knowledge as to what the candle power was that was furnished?

A. No, I presume I have had information, but I haven't got any now.

Q. So it is your impression that it was about 20 candles or below that?

A. My recollection is that the whole system of charging was changed and instead of charging on a candle power basis they came back to charge by volume. When they changed the process I am not sure, but before that I know the charging by the meters was unsatisfactory, and there was considerable question as to whether the meters gave an accurate result, even on the changed candle power.

Q. And you have no knowledge of any increased capitalization?

A. Not accurate knowledge, no. There were great changes in regard to the holding company, recapitalized in a sense. It took on different forms through different holding companies.

Q. Now, in this assumption which you made of costs, or comparison rather, which you made of labor costs in England and labor costs here you simply made a comparison of the wages, did you not?

A. I made a comparison of the wages per hour, yes.

6836 Q. And to apply that to conditions in New York, or in this country, or to any other place than England you would have to assume that labor does the same amount of work, and that the same amount of wages is required to produce the same result, would you not?

A. Yes.

Q. You have spoken of the "one candle as good as another" theory?

A. Yes.

Q. Do you subscribe to that theory?

A. No.

Q. What is your contention in that regard?

A. My contention is that with a flat flame burner and considering the illumination of the flat burner alone, as far as the consumer is concerned he is getting his value, when he considers it by candles, but it does not hold true except in modified degree with regard to stoves and Welsbach burners.

Q. Speaking of the conditions of the U. G. I. lease in Philadelphia, for a moment, what do you understand that the company leases from the city?

—. It leases the works, mains, plant in general; leases the business.

Q. Everything which the company uses in the manufacture and distribution of gas?

A. It leases what Philadelphia turned over to them, with certain exceptions as to property they had to give up. My recollection is they had to abandon part of the plant at Market Street and Schuylkill River, some exceptions of that kind, but it was a lease of the plant and a turning over to the company of its business—the city's business.

Q. And the company pays as a return for this lease or rental or whatever you might call it by furnishing gas to the city free of charge and paying at the present time ten cents on each thousand of cubic feet sold to other consumers?

A. Yes.

Q. You have stated that you consider the conditions at
6837 Holyoke are those well qualified to have low figures of repairs,
renewals and depreciation, that it is a "small and cheap
town." What do you mean by "small and cheap town."

—. Well, it is not very well expressed. It is a small town and the living is cheap there and the prices that prevail are cheaper, you can get construction done cheaper, make repairs to your mains cheaper on account of no expensive pavement, and many other conditions which I may have forgotten at present.

Q. Have you made any comparison of the wages paid at Holyoke with those paid in New York and elsewhere?

A. Not of all, but I made my very close examination at Holyoke at the time I testified as I did in regard to Holyoke, and I made my testimony applicable to Holyoke and Holyoke alone after having made an exhaustive examination of six weeks.

Q. Did you consider that in a small plant the repairs and depreciation and renewals were proportionately less than they are in a large plant?

A. Certainly not.

Q. You have spoken of the explosion in Philadelphia at Market and Sixth Street. When was that explosion?

A. I don't recollect the date. My impression is it was last summer.

Q. Was it not due to blasting in excavation going down in Market Street?

A. My recollection is it was something of that kind.

Q. You have spoken of and made a comparison of the oil contract in New York with the Consolidated and the U. G. I. in Philadelphia, and made a computation of the amount of oil used by Philadelphia, Jersey City, Baltimore and other companies. Will you let me have the details of that calculation, please?

6838 A. How is that, Mr. Mathewson? Having given the testimony as a whole, must I give it as to the detail?

Mr. Mathewson: Yes. I think if you have the details it is proper that you give them, making up the totals. In other words, you stated that certain cities did not use as much as the Consolidated. I suppose he wants the amount for each city, as you have it?

Mr. Kirby: I do.

A. It is in round numbers:

Jersey City	8,800,000
Newark	10,000,000
Philadelphia	33,000,000
New Haven	2,000,000
Baltimore	7,700,000
Total gallons	61,500,000

Q. And the sources of your information were what?

A. Direct from the companies in each case.

Q. By inquiry on your own account?

A. Yes.

Q. From the superintendent or those in charge?

A. In every case higher than the superintendent, a good deal.

Q. Did you ascertain the gravity of these oils?

A. No. I was not concerned with that. I was simply dealing with quantities. I think they are all so called heavy oils, some around 28, that is my impression.

Q. You in your first testimony this afternoon gave some statistics from the calculations of a Mr. Grosser of Chicago?

A. Yes, Mr. Grosser, I think it is.

6839 Q. In which he stated the average structural value per thousand cubic feet of sales was $7.23 and the average capital $8.47. Does this include both producing and distributing system?

A. I think it does. I certainly read it so. Now, that you raise the point——

Mr. MATHEWSON: Yes, it does.

Mr. KIRBY: I assumed that was so but the testimony was not specific.

The WITNESS: You go ahead, Mr. Kirby, and I will look it up and see. Yes, that seems to cover land, buildings, machinery, meters, etc., that was my impression.

Q. When you went to the U. G. I. in 1885, did they have any works in the city of Philadelphia?

A. No.

Q. Where did they have works?

A. They controlled works at Waterbury, Paterson, Jersey City, Pensacola, Yonkers, Savannah, Omaha, Kansas City, I think; Harrisburg and St. Louis; one works in St. Louis.

Q. Is it not a fact that during the period that both you and Mr. Edgerton were with the U. G. I. that Mr. Edgerton was going from one of these works to another making such examinations there as were thought by his company to be necessary and giving such advice to those in charge as he might be called upon to give.

A. Going to the works of the U. G. I. as named and giving orders at those works, you mean instructions for men to follow?

Q. Giving such advice on matters having to do with the running of the works, or so far as they might have arisen, or things which they desire to be advised upon.

A. If so, this is the first I have heard of it, unless it was something that was especially deputed to him at the time. I permitted nobody to give any orders at those works. Even the president of the company would not have been permitted to do it.

6840 Q. As a matter of fact was that one of Mr. Edgerton's most important duties to keep in touch with all of these works, so that any trouble which might arise in the operation of the same might be brought to his attention, and he could advise those managing them on it?

A. Certainly not.

Q. If he did go from one of these works to the other, and spent his time there, you of course would have knowledge of it?

A. Not necessarily, no, not unless I found my orders interfered with, then I would have knowledge of it.

Q. Did Mr. Edgerton take orders from you?

A. No, he was not in the operating department.

Q. Do you know what Mr. Edgerton's salary was from the U. G. I. at the time you went into the employ of the company?

A. My recollection is it was a salary of $5,000 a year.

Q. Would you not feel inclined to believe that it was $9,000 a year?

A. No, I should not be inclined to think so. If so the matter was incorrectly stated to me by other officers of the company.

Q. Have you any reason to doubt that Mr. Edgerton received during these years which you have mentioned, $9,000 a year salary, with enough to make up at least $25,000 a year in royalties on account of his patents which the U. G. I. at that time controlled and used?

A. I know that Mr. Edgerton had a contract with the U. G. I. on a salary basis of some kind and also on a royalty basis, I imagine. And I know also that the U. G. I Company after 1885 when I went in built none of the Edgerton process. Just where the royalties would come from I don't know. I don't know that I ever read the contract with Mr. Edgerton. I don't recollect it. I am not very positive as to what Mr. Edgerton did in connection with the operating department of the U. G. I.

6841 Q. Is it not a fact that during this period Mr. Edgerton was largely employed and spent much time on behalf of the company in experimenting with the Wel*l*sbach lamp for the use of gas oil and introducing gas oil into commercial use and upon high pressure system of gas for use in railroad and trains for the other purposes and did you not often consult with him in reference to these things?

A. I did not. I have no recollection of it. Might have talked matters over, naturally would, if we met, just as I would with an outsider.

Q. Did you not often communicate with him in reference to these various things?

A. I have no recollection of doing so. I might have communicated with him, but I want it distinctly understood that I did not consult with Mr. Edgerton nor was he concerned in the operation of those works which were under my direct charge. If I got any good suggestions from Mr. Edgerton, and he was capable of making them especially in laboratory work, I should undoubtedly have accepted them. I have no recollection, however, of anything of the kind.

Q. Was it not a fact that the U. G. I. at the time you came to it had merely its head office at Philadelphia, that when draughtsmen or a clerical force was necessary, they were used at the works at the various places you have mentioned or at the office of the contractors who had contracts for making or altering these works?

A. Of course, there was the necessary force at each works to conduct the business at those localities. The direction, however, was from the Philadelphia office and from the first my effort was so to concentrate the direction of that office so that they acted under the orders from the Philadelphia office, if it was more convenient to do draughting or anything of that kind at those 6842 places, and if -hey had a man there that could do it, I presume it would give the orders to that effect. The fact was, however, that there was very little talent of that kind in the company at the time I took charge.

Q. Do you know who the president of the company was at that time?

A. At the time I took charge?

Q. Yes.

A. My recollection is that Mr. William G. Warden was at that time. I am not sure whether Mr. Stewart was not, or whether he went out just before that. My information is that it was Mr. Warden. *A*. I think it was.

Q. Is it not a fact that Mr. Warden was regularly in consultation with Mr. Edgerton in reference to the affairs of the company?

A. Not that I know of.

Q. Are you not aware that Mr. Edgerton purchased all the material for New Orleans, Wallingford, Pensacola, and Paterson Works of the U. G. I.?

A. I could not say about that. That was before my time. I testified as to the time after I took charge.

Q. Are you not aware that Mr. Edgerton before the expiration of his contract made application to the president and again to the directors of the company to be relieved from the contract so that he could take up work elsewhere?

A. That does not agree with my information, no.

Q. Is it not a fact that you first met Mr. Edgerton in New Orleans in 1886 while he was engaged in showing the New Orleans works to the trustees of the Philadelphia Gas Works?

A. If so, it has entirely passed from my memory.

Q. Do you remember meeting him at that time?

A. I do not.

6843 Q. Are you not aware that the city authorities of Philadelphia passed an unanimous approval of the methods shown at New Orleans and recommended their adoption at Philadelphia?

A. No, I don't recollect it. I don't deny it at all. I have no recollection one way or the other.

Mr. Mathewson: You mean the City Council of Philadelphia or New Orleans?

Mr. Kirby: The City Council of Philadelphia, which went to New Orleans, passed an unanimous approval of the methods shown at New Orleans and recommended their adoption in Philadelphia.

The Witness: That does bring something back to my mind, now I think that Mr. Edgerton was engaged part of the time in endeavoring to get the Edgerton process introduced in Philadelphia and devoted a good deal of time to it as sort of an advance agent.

Q. And Edgerton's process at that time was under the control of the U. G. I.?

A. Oh, yes. I would like to supplement that by saying that particular point would not be so much impressed upon my mind as it was not until some years later that I was given charge of the contract department, as I originally stated in my testimony.

Q. I presume you are acquaintel with Mr. Edgerton's researches in preparing petroleum products for gas making as anticipating the present practice and as shown in Mr. Edgerton's United States patents?

A. I know he has taken out some patents but I never had any reason to think they were particularly valuable. It is judged by results in these matters rather than patents.

Q. Are you familiar with Mr. Edgerton's patents having to do with the fractionation of oil so as to obtain an oil for gas making purposes with as few fractionations as possible?

6844 A. I have read the patents. I have not looked at it in some time.

Q. With reference to the payment of money and the care of accounts, I ask if you were not aware that it was on Mr. Edgerton's report that the first money was paid out to Dr. Auer's representative, Mr. Montgomery, for the Welsbach burner patents?

A. When was that?

Q. In May, 1886.

A. That the first money was paid to Mr. Montgomery on the Auer patents?

Q. On the recommendation of Mr. Edgerton and on the order of Mr. Edgerton?

A. Unquestionably not on Mr. Edgerton's order. I have no recollection that Mr. Edgerton had anything to do with it. The subject was assigned to me when I had to get time from my other work to take it up, and I went over to Jersey City and set up apparatus there especially for the purpose and assigned to the work, if I recollect, my present partner A. G. Glasgow, F. N. Morton and one other man, I think J. M. Rusby, all graduates of Stevens Institute; and experiments were conducted for six weeks at the Jersey City works on the Auer burner, so-called Welsbach burner. I was repeatedly asked to make a report and repeateedly declined to make a report in recommendation, because my experiments were not completed. Dr. Henry Morton, my predecessor at Stevens, was also in consultation in regard to rare earth's minerals, and I consulted with him at great length. The final decision was made to make an advance payment, because as explained to me by Mr. Gibbs afterwards, the option or something or other was expiring and they could not wait for my final report and they would have to act more or less on a "flier" on my partial report of progress made. It may be

6845 I may have known in the past that Mr. Edgerton had some connection with it, but it comes to me now as a perfect surprise. I worked on that and went back and forth between Philadelphia and Jersey City for six weeks and set up special apparatus for the purpose, and I distinctly remember Mr. Montgomery coming in, almost forcing his way into the laboratory, at that time, and urging me to finish my report.

Q. Did not Mr. C. R. Collins have much to do in the making of those tests?

A. My recollection is that Mr. C. R. Collins did not come into it until later. When I was made general manager of the Welsbach Company in connection with my duties in the U. G. I., when I was general manager of the Welsbach for about six months, as they wished somebody close to the U. G. I., to be in control, I made Mr. Collins, then one of the assistants in the U. G. I., chief engineer of the Welsbach Company, and as such laid out a very large amount of work to do in connection with the Welsbach. That was all after the work that I referred to. My present impression is that Mr. C. R. Collins was not in those original experiments.

Q. Do you know who ordered this first payment to Mr. Montgomery?

A. Who ordered it?

Q. Yes.

A. I guess it was ordered by Mr. W. W. Gibbs, and if you mean to imply it was ordered by Mr. Edgerton it certainly was not; he had nothing to do with the business of the company. The man whose hands it would finally have to go through, and certainly no payment would ever be made without him, is S. T. Bodine.

Q. Is it not a fact that the engineer for the Pintsch Company of Berlin came to this country in 1875, went to Reading, Pennsylvania, and there studied Mr. Edgerton's system of high pressure power lighting, Mr. Edgerton there using gas under a pressure up 6846 to 300 pounds, which was higher than any that had been used by the Pintsch Company at that time?

A. It is quite possible. There is nothing extraordinary in the fact that they should come to this country and try to learn whatever there was to be learned in addition to what they knew. The Pintsch Company did not run at 300 pounds and were absolutely opposed to it, and at the time I was chief engineer of the Pintsch I was in favor of raising the pressure of gas made from American oil, as it would stand compression a little better. They opposed the raising of it. They had the fixed idea of keeping to 150 pounds. The apparatus, however, I have myself used up to 300 pounds, showing it was merely a matter of opinion and judgment on their part as to the lower pressures.

Q. You had reference to the use of Tower scrubbers as early as the 60's?

A. Yes.

Q. Was there anything in the literature of gas making in this country or in England prior to the use of these Tower scrubbers in 1873 by Mr. Edgerton in New Orleans?

A. I am sure I don't know. I imagine if I would look through the English Journal I would find something. I am simply basing my statement as to the erection of these scrubbers by the statements from the people in control.

Q. Referring to Faribault for a moment, do you mean to say that the mains which Mr. Edgerton laid himself, or others which were laid under his direction were not laid in the manner which he has testified to in this hearing?

A. I don't know anything about what mains Mr. Edgerton laid in Faribault. I don't know that he ever laid any there. I don't know that he ever gave any directions. My recollection is he 6847 quoted Faribault as an instance where they followed this practice of shallow mains.

Q. Didn't you read his testimony to the effect that he had laid mains there and that mains had been laid there under his direction and as to how he put them down?

A. I don't recollect just what he said. The general impression he stated about Faribault—there was a certain practice followed, and as to their practice I say it is not their practice. Certain pipes may have been laid there, I think that is probably so, and they found the practice wasn't a good one and abandoned it.

Q. When do you consider that such practice was abandoned?

A. That I don't know. I have got the statement that that is not their practice.

Q. Is that from knowledge you have yourself?

A. I have the information from the secretary of the company, Mr. Cowperthwait, dated November 24, 1906.

Q. And that is the letter which I think Mr. Mathewson had and referred to in his cross-examination of Mr. Edgerton?

Mr. Mathewson: I think so.

A. I don't recollect about the cross-examination.

Mr. Mathewson: I think so, Mr. Kirby.

The Witness: It is the one that states that the main feeders are down 5 to 7 feet.

Mr. Kirby: There is no need of pursuing that further because I think Mr. Edgerton was examined on that himself.

Q. You have spoken of light oil and heavy oil, stating that in your opinion the lighter oils were better than the heavier oils. Is it not a fact that a heavy homogenous oil is better than a
6848 lighter non-homogenous oil?

A. I didn't make any such general statement, Mr. Kirby.

Q. Then I ask you the latter question: Is it not a fact that heavy homogenous oil is better for gas making than a lighter non-homogenous oil?

A. I wouldn't want to say yes or no to that, Mr. Kirby. I am perfectly willing to talk on it. I should not like to use a lighter oil with a wide range of gravity so that I would have to carry varying heats, but I don't want either a very heavy oil such as 28 degree oil that at present is coming into the market to such an extent.

Q. The matter of "Homogenousy," if you may use that term, of the oil, plays a very important part with its proper use for gas making purposes, does it not?

A. I prefer very much to have an oil within a short cut of temperature.

Q. Having read Mr. Edgerton's patent on the subject of oils and the fraction thereof, for gas making apparatus, isn't this the chief claim of that patent?

A. I do not recollect the patent. It did not make much impression on me.

Q. I ask if you will show me anything in Mr. Edgerton's testimony which states that he does not consider it necessary to use more oil in winter than in summer to obtain the same candle power?

A. I don't know as I can at the moment. I think I could do so by looking through. He plainly intimated that it was not necessary to run more oil in winter than summer.

Q. I think you have taken an entirely wrong inference from his testimony?

A. The evidence will show that of course. If I have, I apologize.

Q. Referring to Danbury, I ask if you do not know that the depreciation at Danbury is chagred to profit and loss after operating expenses have been accounted for and that the inclusion of 6849 the depreciation item in the letter to Mr. Bradley was simply for information to give the amount of that item to Mr. Bradley?

A. I simply know what appears in that sheet. I don't know anything about the Danbury books outside that and there it appears as a separate item in that statement, showing what the gas costs. How they cover it in their books I don't know and I don't think it makes any difference whether you write to one account or another, it would have to be paid for by the gas receipts.

Q. That of course is a matter of argument?

A. No, I don't think it admits of any argument whatever.

Q. Two men might differ?

A. They might, of course. You can find them.

Q. Referring to Danbury again do you not understand that the candle power test at Danbury, the results of such tests being included in that letter to which you have made reference as made with a one-foot burner consumed two feet of gas per hour?

A. I don't know whether it is a one foot burner, or what it is. I did understand it was a two-foot pressure burner.

Q. If it were made with a one-foot burner consuming two feet of gas per hour, and if in place of such a burner one were used giving a flame of 25 candles as against 14 candles given by the one foot burner, burning the 2 feet of gas per hour, would not the candle power be raised to 44 candles?

A. I don't know what it would be raised to. I think probably you would get somewhat better result.

Q. A better result than 44?

A. No, a better result than the result obtained with the two foot burner; the two foot consumption

Q. Do you know how much better?

6850 A. No, that would depend upon the gas and its constituents.

Q. On the same gas taken?

A. I say it would depend on that gas as to how much difference there would be as to your method of testing and no man living could tell you that without making an experiment; there is no rule that would apply.

Q. Have you made experiments upon various gas with different burners?

A. I have done a great deal of such work.

Q. Let us assume the gas of candle power manufactured in the way in which Mr. Edgerton has set down in that letter as being used at Danbury, can you tell within say 3 candles?

A. No, not without knowing the gas.

Q. Your experience would not give you sufficient information to draw a conclusion?

A. Certainly not.

Q. Referring to Complainant's Exhibit 392, cost of Danbury gas of 32.95 candle power and pro rata of 24 candle power New York gas based upon the equivalent light theory of H. H. Edgerton are you familiar with the method used at Danbury in ascertaining their candle power?

A. I am familiar with the methods used in these calculations because Mr. Edgerton shows them in his papers and they check out. It is simply a proportion of candle power.

Q. We have here a 32.95 candle power at Danbury?

A. Yes, sir.

Q. I have just asked you in reference to the kind of burned used there and the number of cubic feet of gas burned and the candle power of the flame?

A. Yes.

Q. And as I understand it you are not familiar with the method of taking their candle power, other than that you understood they used a one-foot burner and they used a two-foot flame. That 6851 I understood; as to whether or not it was one foot, I did not know or I have forgotten if I ever knew. I understood that they themselves state the candle power—Mr. Edgerton states it as 32.95, and my impression is that although they state it as 32.95 they charge the people on the basis of its being 44 candle power.

Q. And if it be that they charge the people on the basis of 35, but if it be tested on the same basis as it is tested in New York it gives a candle power of 44, your comparison as set down in that exhibit would not be an accurate one, would it?

A. No, I should advise them to change their method of testing and have their tests conform to what they claim to be the fact in that case.

Q. I presume that in all works the methods of testing are oftentimes th- survival of old and different operations?

A. I think there is a good deal of the survival of the non-fittest. I have had to eliminate a great deal of poor methods in that direction.

Q. You have spoken of the loss in service pipes of about an inch pressure. Is it not stated in the proceedings of the Gas Association that house piping should be such as to confine such loss to within .3 to .4 inches?

A. The rule is a loss of 1 inch for each 50 feet of piping, but of course we have to contend with many houses that are not piped according to the rules. If the rules were always comp*il*ed with the gas man's life would be a much happier one.

Q. And such rules, if applied would bring an average drop of the amount that I have stated?

A. That would be the house alone. You still have the meter to contend with and the service. The meter alone may absorb .5, if there is a large amount of gas passing through it.

6852 Q. A meter properly proportioned for the passage of gas should not absorb so much as that, should it?

A. There is a great difference about that. Some authorities fix it as .5, and hardly any man fixes it below .3 for an average consumption. My recollection is that .2 is accepted as the minimum.

Q. And is it not a fact that Mr. Addicks has stated in the New England proceedings of the Society for Gas Engineers, that the drop in the house pipes, that is from the meter through the services should not exceed .3 of an inch?

A. I dare say. I should be very glad to state the same thing, and say it ought not to, but it will just the same in the houses we have to take under our wing.

Q. The gas companies have ruled, and endeavor to establish rules of piping, so as to keep the drop within these limits, don't they?

A. They do, and have no authority to enforce them, as a general practice. I have given a great deal of personal attention to that matter in a great many companies.

Q. And gas companies would be much happier if they were enforced, would they not?

A. They certainly would. The complaint desk would not be so busy.

Mr. Kirby: I am through.

The Master: Mr. Burr, I want to consult your convenience. Mr. Mathewson says that he is finished with the exception of some odds and ends and will not take more than fifteen minutes, and will not involve any long cross-examination. I will give you such time to-morrow as you want. What time to-morrow would you like to begin?

6853 & 6854 Mr. Burr: Say ten o'clock.

The Master: You are entitled to first consideration.

Mr. Burr: I want to say in view of the number of schedules and tabulations which Dr. Humphreys has put in evidence, I think that a study of them overnight will shorten the examinations, and more than that, I now ask if you would be good enough to produce those records for 1906 from which you made your deductions, so that Dr. Marks may have an opportunity to examine them over night.

The Witness: There is no objection to that I imagine.

Mr. Mathewson: No.

The Master: Then, we will adjourn until 10 o'clock tomorrow morning.

At 5.40 P. M. adjourned to Saturday, February 2nd, 1907, at 10.00 A. M.

Last Exhibits:

Last Compalinant's Exhibit, 394.
Last State's Exhibit, 000.
Last City's Exhibit, 236.

6855 Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York; William Travers Jerome, as District Attorney of New York County; Frederick E. Gunnison, John C. Davies, and Lucian L. Shedden, Constituting the New York State Commission of Gas and Electricity, and The City of New York, Defendants.

Before Arthur H. Masten, Special Master.

New York, *February 2d*, 1907.

Met pursuant to adjournment.

Present: The Master, Mr. Mathewson, Mr. Burr, Mr. Kirby, Mr. Page.

6856 Alexander C. Humphreys resumes.

The Witness: Before you proceed, I would like to draw attention to an omission on my part in those tables. Mr. Burr probably discovered that I referred to a certain letter from Chairman Barker, in connection with Arlington and Brockton, and as it is directly referred to for confirmation, I suppose the letter ought to be put in as part of the tables. The point is this, that in the case of Arlington and Brockton, the capitalization per thousand did not seem to check between the column covering that item, and the individual accounts of the company, so I wrote to the Chairman of the Board saying that I thought his figure was wrong in his deduced column, and this is his explanation of why he made exceptions, in Arlington and Brockton, but otherwise my process was correct. Of course, I had no means of knowing that there was a variation in those figures and only discovered it by finding that my figures as calculated did not agree with the Massachusetts Commission. The letter is as follows:

Commonwealth of Massachusetts:

Board of Gas and Electric Light Commissioners,
Room 145, State House.

Boston, *Nov. 14th*, 1906.

(Answered Nov. 15, 1906, by A. C. H.)

Mr. A. C. Humphreys, New York City.

Dear Sir: We have yours of the 13th inst. giving result of your scrutiny of certain data in the last annual report of the Board and referring particularly to the Arlington and Brockton gas companies.

6857 In general, I may say that in computing "the capital per thousand sold including bonds," we have dealt somewhat differently with the liabilities outside of capital and bonds from our treatment of those two items. That is to say, we have not intended to include notes and accounts payable except so far as, from the facts in our possession, they seem to be to a degree permanent in their character or clearly representing investment in plant.

In the Arlington case you will note toward the top of page 10 of appendix, the item "amounts due from the company not included above $12,457.70." Included in this is the item of $6,924 which for special reasons at the date of the company's return was in the form of an open account but represented the cost of plant additions and under the policy of the company would later be represented either by new capital or some permanent form of debt. We therefore included it in the computation and if you shall also do the same, you will, I think, make the figure of $8.45, as given on page 116.

In the case of the Brockton Company some exception has been apparently made to the usual practice. A large percentage of the floating debt, amounting to $112,235, represents, as we have reason to believe, a liability which accumulated under very peculiar circumstances in the company's history and which does not and never did represent plant investment or perhaps anything other than a loss growing out of speculation in the company's franchise. Being of this character and constituting a debt as to which we understand it is the company's policy to discharge as rapidly as it can, having no purpose to retain it as a permanent debt, we have 6858 not included it in our computation. It is true, of course, that it bears interest which constitutes a part of the burden upon the company and may on the whole be as clearly entitled to be counted a part of the capital as some percentage of the actual capital stock in many companies.

I think these statements will quite fully account for the difficulties revealed by your study of the figures.

Very truly yours,

(Signed) F. E. BARKER, *Chairman.*

Cross-examination by Mr. BURR:

Q. How many gas concerns are you connected with, Doctor?

A. At present?

Q. Yes.

A. I am connected with the Consolidated Gas Company of Baltimore, and am president of the Buffalo Gas Company of Buffalo, and our firm manages the Gas Company of Lawrence; and then in the way I have described as advising companies, we are connected with something over fifty in foreign parts.

Q. And I understood you to say yesterday that *that* you were heavily interested in the Baltimore Company?

A. Yes, sir.

Q. Were you a witness in the investigation or suit in Baltimore regarding those companies here recently?

A. No.

Q. You know there was some investigation as to their capitalization and operation, a few months ago?

A. Yes.

Q. You have been in daily attendance here, Doctor, for most of the testimony that has been given in this inquiury?

6859 A. I have heard a great deal of it. I was not here in the early part, in the summer; I think I commenced about the first of September, somewhere around there.

Q. And you, as I understand, claim to have experience in the construction, installation and operation of gas works and gas plants?

A. Yes, sir.

Q. Both in this country and in Europe?

A. Yes, sir.

Q. And you regard yourself as having some peculiarly personal knowledge with regard to the keeping of accounts of gas companies?

A. Well, I feel that I am quite competent in that line. I have had a great deal to do with it, getting up accounts and as chairman of the committee that developed the uniform system of accounts for the American Gas Association, and I developed the system for the United Gas Improvement Company, and have given a great deal of attention to it.

Q. You are also familiar with the purchase of supplies for gas companies?

A. Yes. I do not give any special attention to it at present.

Q. You are the president of the Stevens Institute?

A. I am.

Q. And that is a college or school of technology?

A. It is.

Q. How often have you testified as an expert in these gas hearing- or where gas business is the subject of scrutiny.

A. My present recollection is that I testified for the Consolidated Company before the New York Gas Commission; in this case also; in two patent suits on gas and once or twice before parliamentary committees in connection with water gas introduction into Great Britain; that is my recollection. I have not done much of it.

6860 Q. Did you not testify in Chicago?

A. Oh, yes.

Q. Did you testify in Syracuse?

A. Yes, I did, but not as an expert; I was subpœnaed to testify as to facts.

Q. Regarding the gas business?

A. Well, regarding some papers. It was to identify a paper I went to Syracuse for, a paper I signed some years before when I was president of the gas company there.

Q. You testified in Holyoke?

A. Yes.

Q. Are there any others that you can recollect?

A. Yes, I testified very briefly in Norwich.

Q. And if I remember aright, you were president of the American Gas Light Association of America?

A. I was for one year. Presidents of late years are always elected for a single year.

Q. And you are connected with many allied societies?

A. Yes.

Q. And in your capacity, and acting as member or officer of these various societies you have from time to time delivered addresses upon the subject of gas operation and management of gas works and gas plants, etc.?

A. I do not remember delivering many addresses on the subject. I think I delivered one as president. I have written papers on the subject.

Q. Well, you have written papers and you have delivered an address that you recall, while you were president of The American Gas Light Association?

A. Yes.

Q. In that address did you not allude to the subject of depreciation, if you recall?

A. I think I did.

Q. How long have you been acting as consulting engineer to the Consolidated Gas Company?

A. I am not consulting engineer to them now.

6861 Q. Well——

A. That is, if you mean that I hold a definite position as consulting engineer.

Q. You are simply consulting engineer for the purposes of this case?

A. I am consulted with regard to this case and with regard to any subject which may come up in connection with it.

Q. Are you interested financially in the Consolidated Gas Company?

A. No.

Q. Have you ever been?

A. I don't think so. My firm I think has had stock in the company, but not personally.

Q. Does it still hold that stock?

A. I am not sure if it does or not; I dare say it does.

Q. In the address to which I have referred did you not state as follows: "To provide a definite scheme to cover deprpeciation, we must, as accurately as possible, decide upon the average life of the plant in question." And further: "Having decided in the case of each division what can be safely assumed as the life of this portion of the plant, we can refer to our annuity tables to determine what percentage of the original cost of plant annually set aside at compound interest will at the end of the period assumed provide a fund equal to the original cost. Having done this in the case of each item on our list, we can find the total amount to be set aside each year, and then find what percentage this represents the total original cost of plant, and this is the amount to be, after some manner, reinvested from the annual profits."

Do you recall using that language?

A. That sounds correct.

Q. And did you not further say *that* in that address:

> "An important point is to determine at what rate we can invest the payments to our sinking fund. In these days of low
> 6862 interest bearing securities, five per cent. seems hardly attainable with safety. But if our business is a growing one, as it

must be if we are to continue in it long enough to make the question of sinking fund important, there will be the opportunity to invest this fund in legitimate extensions of plant required by increased demand for gas. There should not be the slightest difficulty in thus earning five per cent. on this special extension and sinking fund; and, bearing in mind that this new capital has the way prepared for it by the old, the chances are that the new portion of our capital will earn a considerably higher rate. We may then assume five per cent. as a safe figure. You so stated, did you not.

A. That sounds correct.

Q. I have read this from the address given by you as it is printed in the Progressive Age, page 484, November 1st, 1899.

A. Yes.

Q. And I hand it to you to see if I quoted correctly.

A. I do not think it is necessary, it sounds quite natural.

Q. Referring to your testimony in the Holyoke gas case, April 17, 1899, I call your attention to Vol. 2 of the printed record in that case, and especially to pages 242 and 243, and especially calling attention to the statements you made on page 242, that the Holyoke gas works had repair of works and current renewals in the year 1898, of 6.11 cents per thousand feet of gas made, you stated, did you not?

"Now, four cents would be enough for that by the ordinary practice. In the same way, coming to distribution, the repairs of
6863 meters, services and mains, and current renewals of those, come in at 5.166 cents. Now, 2½ cents I think will generally be considered as a fair and perhaps full amount for repairs in that department. In other words, there seems to be an excess of 5.77 cents per thousand, which would amount to $3,030. That is, 2.11 cents on 68,000,000 cubic feet made, and 2.5 cents on 60,000,000 feet sold, and I consider these ample to cover depreciation and final renewals. Q. That is for every thousand feet according to your allotment there is an expenditure apparently for repairs and renewals of something like five cents in excess of what should be so spent. A. Of what is ample to take care of a plant, yes. Q. And you say that that excess amply cares for the question? A. I do."

Q. That is correct, is it not?

A. Yes, sir.

Q. I have correctly quoted you in your testimony?

A. Yes, sir.

Q. Now, as a matter of fact, at Holyoke at that time, was not over three quarters of the gas made Coal gas?

A. About two thirds and one third, I think; that is my recollection.

Q. Your company in Buffalo of which you are president as I understand——

A. Yes.

Q. Has just recently made a return to the Gas Commission as required by law, has it not?

A. Yes.

Q. I call your attention to Question 14——

Mr. Mathewson: Now, if the Master please, he will recall that when Mr. Hazard, the secretary of the Commission was on the stand, that it was expressly said that we should have an opportunity to examine the reports of other companies in addition to the few 6864 selected which were here presented, and counsel for the defendants, the members of the Commission, stated that opportunity should be given us. Immediately in December we wrote asking for information. The Secretary did not give us information, he said the matter would be submitted to the Board. We have had correspondence back and forth and to this day we have not had an opportunity to examine those reports. We have been utterly unable to see them. I have the correspondence here, if it is desired to be shown, but it will not be disputed, I think. And we are in this position, we have been unable to see those, while apparently, counsel for the other side or the witnesses seem to have no difficulty whatsoever in getting access to the reports, and I want to say right here so far as the attorneys before the Master for the members of the Commission are concerned, I know they have acted in perfect good faith in reference to the matter, and have advised the commission that we should be permitted to see those papers, but we have not been permitted to do so, and of course now we shall lose any opportunity to examine them; but in view of this present suggestion, it ought to be stated now so the Master may understand it.

The Witness: May I state something?

Mr. Mathewson: Yes.

Mr. Burr: One moment. I will not delay my examination of this witness to answer the criticism of counsel because that relates to an entirely different matter to the question I have asked this gentleman, and pertinent to the statements made by him on his 6865 direct. Suffice it to say, the book from which I read was not obtained from the Gas Commission but from the city counsel of the City of Buffalo.

The Witness: I will let you know that those answers were answers prepared for the city counsel of Buffalo under the direction of the Commission and in accordance with their orders and given to Mr. Bemis as their expert, and he is using them in this case.

Q. I call your attention to question fourteen which was asked you yesterday and which you answered. The question calls for the following information, does it not: "A separate statement of operating "expenses for each year from June 30, 1901, up to June 30, 1906, "prepared in tabulated form and in accordance with the classifica- "tion of accounts used by the company," and I next call your attention to the answer you made to this question, and referring to the year ending September 30, 1906, will ask you after giving a total cost of distribution as 11.7 you did not deduct the income from the street lamp department, the gas stove department and the gas arc lamp department, 2.55 cents, and if you did not in the line below write the net cost of distribution 8.52 per cent.?

A. I do not recall the figures at all. I don't know that I ever saw that answer. No answers were submitted to me except where there was a question as to the figures and whether that was the form prescribed, or whether it was the form we used at the moment, I am unable to say. The Buffalo Gas Company, I will say, does not use in all respects the uniform system of accounts, because——

6866 Q. One moment. This is on cross-examination. Mr. Mathewson will bring out anything you desire on the redirect, but I am in a hurry to finish my cross-examination. Will you kindly look at the document I show you and see whether that question and answer appears there (handing book).

Mr. **Mathewson**: If the witness is not responsible for it, suppose it does? You are cross-examining an individual and not the Buffalo Gas Company.

A. Where do you find this, in tabulated form? That is the way it appears here.

Q. As a matter of fact——

Mr. **Mathewson**: I objected to the question. Did I get a ruling on that?

The **Master**: What is this, is it a return made by his company over his signature?

Mr. **Burr**: Yes.

The **Witness**: I do not think it is over any signature.

Q. Do you deny that that is made by the Buffalo Gas Company of which you are the president?

A. No.

Q. Are the accounts of that company kept in accordance with your instructions as president?

A. They are kept in accordance with my permission.

Q. How long have you been president of the Buffalo Gas Company?

A. Six or seven years.

Q. Have you ever had occasion to look at the accounts?

A. Every little while.

Q. Are they properly kept?

A. Properly kept for the purpose, yes, to show the facts.

Q. Now, then, I ask you to look at that report and refresh your recollection and say whether what I have read as purporting to be contained in that report is correct?

6867 Mr. **Mathewson**: I object.

The **Master**: Is there any ground for your objection?

Mr. **Mathewson**: I do not think it is competent.

The **Master**: Why is it not competent, if Mr. Burr intends to show that in this report there are some methods of bookkeeping, or some statements which are inconsistent with the theories which Dr. Humphreys has announced on his direct examination.

Mr. **Burr**: That is all the purpose.

Mr. **Mathewson**: I cannot see that it rebuts or it disproves anything, if it be so.

The **Master**: I will allow it and give you an exception.

Mr. **Burr**: It directly controverts the statement made by Dr.

Humphreys yesterday, with regard to the statement of keeping accounts of public lamps and stoves.

Mr. Mathewson: Exception.

(Question not answered.)

Q. Now, Doctor, did you not make similar reports for the past four years showing that as you kept your accounts in Buffalo you deduct income from street lamps and stoves from your operating expenses before reaching the net cost of distribution?

A. No.

Q. Won't you look at page 70 of the record and see if a similar entry showing that you kept your account in this same way the year before does not appear here?

A. No, this would not prove it was kept that way; it shows that form in that way.

Q. Do you desire to be understood as saying that you did not keep your accounts for the past four years in the Buffalo Gas Company in such a manner that you deduct income from street 6868 lamps and stoves from your operating expenses before reaching your net cost of distribution?

A. I am almost positive that we have not.

Q. I call your attention to page 4 of this report which may refresh your recollection in that regard. Question 14 calls for a separate statement of operating expenses for each year, from June 30, 1901, to June 30, 1906, prepared in tabulated form and in accordance with the classification of accounts used by your company, setting opposite each general heading and sub-heading the total cost.

A. Yes.

Q. Is not the statement appearing on page 70 the answer to that question, and the following pages?

A. I presume it is.

Q. And does it not appear by that answer that for the years from 1901 to 1906 you used the same method of accounting?

A. Not at all necessarily, no; not at all.

Q. I call your attention to the statement for the year 1904 and to the item of total cost of distribution and then underneath, less income lamp department, $11,431.75, less income stove department, $1,067.19?

A. Yes.

Q. The total cost of distribution, $87,945.92, and these two items being deducted leave net cost of distribution $77,581.36?

A. I will call attention to one fact right away. I have never seen that statement before, but I see that less income lamp department is given as $11,431.75, then it says less income stove department $1,067.19, and the total deduction is $10,346.56.

Q. I noticed that error in subtraction——

A. I do not believe it is an error.

Q. But the items are there and the statement is there deducting street lamps and stoves from those gross expenses.

6869 Mr. Mathewson: No, it would look as if you had taken street lamps and stoves, and that before you deducted them you deducted one from the other.

The WITNESS: That is the way it strikes me. They have taken the eleven thousand dollars and deducted the one thousand from it, and made a net of ten thousand dollars to deduct.

By Mr. MATHEWSON:

Q. Then they did not deduct stoves?

A. No, it does not appear that they did in that case. It may be different in other cases.

By Mr. BURR:

Q. Look at page 59, Doctor, purporting to give operating statistics in response to Question 14, operating expenses for the year ending September 30, 1905, and do you not find on page 70 the total cost of distribution is given there at $62,161.61 or .1119, and underneath appears the statement, income street lamp department $10,941.16, income gas stove department, $1,888.19; income gas lamps department, $1,737.92, total income $14,567.27, net cost of distribution $47,594.34.

A. That is right. In this case those items all seem to be added in for the deduction. Yes, in that case they are all added together before the deduction is made. I would say that .1119 or something probably means fraction of a dollar and not of a cent.

Q. Does not that same thing occur in the statement in regard to the operating expenses for the year ending September 30, 1906? Does it not appear on page 72 as follows:

Total cost of distribution	$61,351.78
Income street lamp department	10,138.28
Income gas stove department	1,720.69
Income gas arc lamp department	2,306.81
Total income	14,165.78
Net cost of distribution	47,186.00

6870 Does it not so appear there?

A. That is right.

Q. You testified yesterday that you could not argue from the cost of gas in the Lake cities as to the cost of gas in New York, because there were such differences in the cost of manufacture, did you not?

A. Yes, that is right.

Q. Are you aware that in the recent Chicago gas hearings the People's Gas Light and Coke Company reported that its cost for manufacture was 31.8193 and that it supplies 22 candle power gas at the testing stations?

A. That sounds familiar.

Q. Are you not familiar that by law this company must supply 22 candle power gas at testing stations at a distance from the works?

A. That is the requirement, I believe.

Q. And that is the company that reduced its rate to 85 cents, is it not?

A. Yes.

Q. You have referred to the profits of the seven largest Massachusetts companies outside of Boston, Cambridge, Fall River, Lynn, Lowell, Springfield, and Worcester. I call your attention to pages 103 and 104 of the Massachusetts Gas Commission report for the year ending June 30, 1905, which is the last report in print, and ask you whether it does not appear that the dividends in Cambridge were 19.3 cents, in Fall River 19.77——

A. Yes, those are dividends, amounts paid per thousand for dividends.

Q. Lowell, 19.70 cents per thousand feet?

A. Right.

Q. And Springfield 21.18 per thousand?

A. 21.18, yes.

Q. And in Worcester——

Mr. MATHEWSON: Just a moment, Mr. Master, Professor Bemis, when he was on the stand, or Dr. Marks, put in all this evi- 6871 dence as to the amount paid in dividends in these various cities. We in our rebuttal testimony have shown from the same reference that if they paid that amount in dividends they were allowed to earn such an amount upon their capital and that their dividends did not represent all that they were permitted to earn over the operating cost of gas. They may have carried it to surplus or used it in extensions; it does not seem to me it is very valuable to go back again and ask if they did not pay so much dividends, which is not what we are rebutting here.

Mr. BURR: I am leading up to a statement which he made yesterday and calling his attention preliminary to it, by asking the question I am.

Q. I want to call your attention to Worcester, 20.21 cents.

A. That is right.

Q. The only one omitted is Lynn, is it not, of the seven companies.

A. What are the seven?

Q. Cambridge, Fall River, Lowell, Lynn, Springfield and Worcester.

A. I think you have omitted another one. Is not Lawrence in that bunch?

Q. Well, assume Lawrence to be in it, I think it is, according to my recollection. Lawrence and Lynn are left out, because they are both combined electric light and gas plants, are they not?

A. They sell both gas and electricity, yes.

Q. Now, if you will turn to the appendix of this same report in order to determine how much should be added to these companies on account of interest payments do you not find that the sum of interest in Cambridge as given on page 27 of the appendix is $9,413.31?

A. That is right.

6872 Q. While the sales, as given on page 116 of the main report were 439,162,251 feet?

A. That is right.

Q. I will now call your attention to the Fall River Company, page 52 of the appendix. You observe, do you not, that the interest stated there is $3,521.17?

A. Yes, sir.

Q. And you will observe in the main report that the sales for Fall River were 321,119,341?

A. Yes.

Q. Now, referring to Lowell, page 81 of the appendix, don't you find the interest as stated there $734.45?

A. Yes, sir.

Q. And on page 116 of the main report are not the sales given at 482,088,600 feet?

A. Yes, sir.

Q. Referring to Springfield, page 128 of the appendix, don't you find that the interest payment was $391.22?

A. Yes.

Q. While on page 117 of the main report the sales are 311,678,930?

A. Yes.

Q. And on page 152 of the appendix in the case of Worcester, the interest was $1,828.72, was it not?

A. Yes.

Q. While on page 117 you find the sales to be 410,641,700?

A. Yes.

Q. Now, with respect to the Boston company, which was the largest company before the consolidation, you find, do you not, on page 21 of the appendix that the interest payments were $50.53.

A. I find an item of $50.53 as against interest paid. It has no meaning for me in that particular case.

Q. While the dividends per thousand feet of gas sold as given on page 103, was 18.9 cents.

A. Yes.

6873 Q. With respect to the profits, the Massachusetts gas companies are allowed to make and could put into their plant aside from what they pay out in dividends and interest, you are aware, are you not, that it has for many years been the position taken by the Massachusetts Gas Commission, that if profits are put into extensions, the time will ultimately come when the plant being thus paid for, the price of gas will be so reduced as to include only a return on such capital as has been actually put in by the stockholders?

A. No, I don't know anything of the kind. I think they have left their capital away down below the amount paid in by their stockholders.

Q. Are you not aware that in the Haverhill gas case that was the position taken by the Commission as embodying their policy?

A. They made a decision there which has never been sustained and is still in the courts. I don't recollect what the difference was. Haverhill shows at present 63 cents capitalization per thousand.

Mr. MATHEWSON: They are returning about 44 per cent on that.

The WITNESS: Yes.

Mr. BURR: I object to that statement.

Mr. MATHEWSON: It appears in the tables.

Mr. Burr: Then do not interrupt me in the course of my cross-examination, if it appears in the tables.

Q. I call your attention to the 16th annual report of the Board of Gas and Electric Light Commissioners of the Commonwealth of Massachusetts, from the year ending December 31, 1900, including tables from the annual returns for the year ending June 30, 1900. On page 9 of that document don't you find that the Board of Gas and Electric Light Commissioners states as follows:

6874 "The Haverhill Gas Light Company was organized under a special charter in February, 1853, and later, in that year began the supply of gas in Haverhill. Its capital stock was originally $45,000, which was increased in 1871 to $75,000 its present amount.

It has enjoyed the exclusive privilege of supplying gas to the city and people of Haverhill, and with the exception of a period in its earliest history, has been uniformly prosperous. Its management appears to have been exceptionally careful and conservative, so that, in addition to the payment of an average dividend of about 8 per cent., it has accumulated a surplus invested in its plant estimated to represent from $275,000 to $300,000. * * * Accumulated, as it has been, out of profits in the performance of a public service, its existence affords exceptional facilities and imposes peculiar duties upon the corporation in its relation to the public.

As the company has applied this surplus to the cost of improving and enlarging its plant as has been needed to satisfy the public demand, the property in which it has been invested must otherwise have been represented by new capital contributed by the shareholders. Such use of surplus may properly be made of substantial benefit to the consumers and shareholders alike; to the former, by relieving them of some portion of the burden which the investment of fresh capital necessarily imposes, by affording the most ready facility for minor extensions of the company's lines, for superior excellence in its product and by aiding to the most satis-
6875 factory performance of its varied duties toward the public; to the latter, by strengthening the corporation in enhancing the security of the original investments of the shareholders, and in bringing to them a return somewhat higher than that to which they might otherwise be entitled. Such a surplus is by every principle of law the property of the corporation. It has an undoubted legal pro rata to its shareholders in case of liquidation; but, notwithstanding this, the circumstances attending its accumulation impose upon the company, so long as it continues to exercise the functions of a public monopoly, the duty to employ it for the joint advantage of the consumers and the corporation. It need not be dealt with as the exclusive property of either.

Fortunately, in the majority of companies of this class in this State, the recognition of this duty by the directors has been a part of the policy of their management; until recently this has been true also of the company in Haverhill. Now, however, its policy appears to have undergone a very decided change."

Is that correct?

A. I don't doubt it is correct.

Q. Is it not a fact that the Massachusetts Gas Commission has no authority to reduce the price except upon petition of the Mayor or a certain number of consumers?

A. I believe that is true.

Q. Don't you find from your examination of the record of that Commission that where such cases have been brought before them the Commission has reduced the price of gas even though the dividends were not over six per cent.?

A. They have done in some cases as explained by me yesterday.

6876 Q. It is not true also that in the case of new capital the Commission so fixed the price or the premium that not more than five or six per cent. could be realized by the investor?

A. Sometimes.

Q. Now, in the tabulations presented yesterday, you brought out the fact that certain Massachusetts companies quoted by you had a total capitalization both in stocks, bonds and notes of only $2.24 per thousand feet of annual sales. Now, on the basis of the sales of the Consolidated Gas Company last year of about thirteen billion cubic feet, this would amount to a capital of less than thirty million dollars, would it not?

A. I would be glad to compute it for you, acting as your computer, as Mr. Marks says.

Q. And making only a rude calculation, as he also stated?

A. No, I will make a very exact one. What was the figure?

Q. 2.24.

A. You have got a lower one. $2.18.

Mr. Mathewson: And the Haverhill, .63 cents.

The Witness: Yes, but I will take the 2.24 which Mr. Burr asks about. What was the amount, thirteen billion?

Q. I gave you the rough figures on the basis of the sale of thirteen billion.

A. It is thirteen billion, two hundred and eighty-three million and something.

Q. Well, if you want it exactly, yes.

A. I make it $29,753,920. I think probably they took the figures from Exhibit 378, the average for Cambridge, Fall River, Lowell and Worcester, given as $2.24.

Q. In most of those cities you referred to, you recognize, do you not, that they make all their own gas instead of buying part of it, as in the case of the Consolidated?

A. Most of them do, yes, sir.

6877 Q. And that the larger per cent. of that gas is coal gas?

A. I should not want to say without making a careful examination. There is a great deal of water gas made in Massachusetts.

Q. Assuming it to be coal gas, it would mean a more expensive plant, would it not?

A. Yes, sir.

Q. Don't you find the miles of mains are much greater per thousand feet of sales than in the case of the Consolidated Company?

A. I have not looked it up lately.

Q. And is it not your understanding and information that the Massachusetts gas companies you referred to are not working to the limit of the manufacturing capacity, to say nothing of exceeding it, as in the case of the Consolidated?

A. They no doubt have a margin to work on. It would not be safe otherwise.

Q. You referred to the figures you got from the statement of Mr. Grosser of Chicago?

A. Yes.

Q. Do you claim that those figures which you took from that statement present actual structural values?

A. No, I do not know what it represents. I just quoted it as a statement from the census, for what value it might have.

Q. Is it not likely to be more than the structural value?

A. On the average I am not sure; it probably is somewhat more.

Q. You quoted or referred to the statement of Mr. Bemis, as it appears upon page 3093 of the record. Did he not state there "If the companies can stand a reduction of any given amount," etc.? Does not that mean and did you not understand it to mean that if an agreed and reasonable profit on the basis of present sales can be secured by certain reductions in price, then the company can stand a further reduction?

A. I understood it to mean that if the company could stand
6878 any kind of a reduction it could stand additional reduction
down to the actual cost of the gas.

Q. That was your understanding of this statement?

A. Yes.

Q. And upon that understanding you based your statement?

A. Yes.

Q. Now, is it not a fact that although the increase of sales with reduction in price has not been large in London since 1901, you do not deny that reductions in price have led increase in consumption in most large cities, is that true?

A. There is a tendency, of course, in that direction. There is another question which goes there——

Q. With respect to a sinking fund in some Massachusetts municipal plants, you do not dispute the accuracy of Dr. Bemis' statement on the subject as he states, on page 3253, where he stands: The law states as among the expenses of operating a municipal plant this: "The requirements of the sinking fund or debt incurred for the plant." I interpret that to mean that in borrowing for the plant the town or city very likely has to agree to a sinking fund provision, or there may be a State law as to all municipal bonds. You do not dispute that, do you?

A. May I have the question to which that is an answer.

Q. (Handing book) You can read it.

A. Now, what is the question?

Q. I say you do not dispute the accuracy of his statement in regard to the subject of a sinking fund in some Massachusetts municipal plants as it appears at top of page 3253?

A. What you read me was on page 3252; I think Mr. Bemis was not entirely correct there. The provisions for a sinking fund are entirely separate from the point I understand was being referred to there, namely, the three per cent. for depreciation. That had 6879 nothing to do with depreciation, and I should say from the answer that Mr. Bemis was confusing those two points. Of course, there is no doubt in some of these cases there is a provision for a sinking fund in addition to depreciation. That is simply to get rid of the original investment after a stated number of years.

Q. Well, you say that the Consolidated Company should accumulate a reserve fund up to one-tenth of its assets?

A. Yes.

Q. Has it ever done so prior to this year?

A. No, no necessity for it. They have not had to meet a price reduction, a heavy reduction.

Q. Do you mean to say they never had to meet a price reduction before this one?

A. Any such reduction as this cutting down to eighty cents.

Q. So that the necessity you say did not exist before for the reserve fund?

A. No more than has been met by their methods of carrying on the business.

Q. Does that apply to a final renewal fund, also?

A. How do you mean, how does what apply?

Q. When you say that the necessity did not exist for the reserve fund prior to this reduction to 80 cents, I say does that apply also to the final renewal fund you spoke of yesterday?

A. They would not establish a final renewal fund, that would be unusual, they would put into plants amounts to cover renewals.

Q. And have they done that?

A. They have done it to a certain extent. In my opinion it might have been a little heavier.

Q. To what extent have they done it?

A. They have the difference between the amount charged to repairs and the amount charged to total repairs and renewals.

6880 Q. Do you recall what amount that was, or where it appears?

A. About four cents, I should think, that is the amount included in the 10.89.

Mr. Mathewson: It already appears in the exhibits.

Q. You compared the wages in London with wages in New York?

A. Yes.

Q. Upon what basis did you assume the wages in New York to be, what hours per day, and what wages did you use? If you have a tabulation of that, which I presume you have, I will take it and hand it to the stenographer. I would like to get the benefit of that.

A. Do you wish this, Mr. Mathewson?

Mr. Mathewson: If counsel wishes it, I have no objection to his putting it in.

Q. Where did you get your information as to the wages paid in England?

A. The one quoted, Gas Light and Coke Company?

Q. Yes.

A. From the company.

Q. And does that apply to any of the other companies?

A. Do you mean the Edinburgh works, the Granton?

Q. Yes.

A. That was not quoted yesterday, I made no reference to it in my direct-examination. That was obtained from data taken—I forget where it is now.

Q. Are you familiar with the method of operating gas plants in Glasgow and Dundee?

A. Not Dundee. I have been fairly familiar with Glasgow, I put up a plant for them some ten years ago.

Q. Do they pursue the same methods as adopted here by the Consolidated Gas Company of keeping their accounts.

A. I don't just know how they keep their accounts. They are not on our lists. 6881

Mr. Mathewson: That is a municipal plant?

The Witness: That is a municipal plant, yes.

By Mr. Burr:

Q. You haven't got that on your list?

A. No.

Q. They are not one of the fifty clients to whom you send that confidential communication?

A. No. We have a number of municipal plants on our list.

Q. I refer you to the report of the Massachusetts Gas Commission for 1899-1900 and ask you if the following figures are correct for Haverhill before the Commission ordered the reduction from one dollar to eighty cents: Sales, page 123, 115,022,200 feet; profit——

A. You asked me the year before. I will have to trace this back to find out what—on page 123 the Haverhill sales are given as 115,022,200 feet.

Q. On page 72 of the appendix does not the profit appear as $23,060.60?

A. I don't find anything on the page you speak of as referring to Haverhill. I have got it on page 61, there is a reference to Haverhill, but that is not the correct amount.

Q. On page 62 it should be, instead of page 72; excuse me. Referring to page 62 of the appendix, do you not find the profit to be there stated as $23,060.60?

A. Yes. That is on the manufacturing account.

Q. On the same page do you not find the capital stock to be stated as $75,000?

A. $75,000.

Q. Bonds and notes, nothing?

A. Well, there is no notice of it.

6882 Q. Not given?

A. Unpaid bills——

Q. Bonds and notes, no figure opposite?

A. No, I don't find any.

Q. Dividends, $22,500?

A. Now you are referring to the profit and loss statement, $22,500. Yes, the debits to that account.

Q. In your exhibit 390, do you not observe from that exhibit that in the seven cities there referred to that the profits, even omitting Charlestown, increase nearly as fast as the assets, so that the earnings were nearly as large a percentage of the assets after the reduction as before?

A. Well, I should have to calculate that out. It is not shown in the figures on the exhibit. I have figured Lynn and that stands about the same. The rate of profits on the assets remains about the same.

Q. You observe also this was in face of a reduction in price of 9 cents in one company and from 28 to 36 cents in the other companies, omitting Charlesto-n for the reasons you gave for so omitting?

A. Yes. Well, the reductions are shown right on that sheet. I added them afterwards to the amount. I think I added them afterwards to the amount. In Lynn it was $1.22 to .90; in Worcester, $1.09 to $1; in Springfield, $1.37 to $1.01 and etc.

Q. As a matter of fact does not your exhibit 390 show, omitting Charlestown, that with an average of over twenty cents in price the sales in fact increased from 988,739,000 feet at the first date given by you for each company to 1,785,603,000 feet at the last date given by you, an increase of 80 per cent.?

A. I have not shown that here at all. I should have to make up a total to see whether that was so.

Q. I won't ask you to stop to compute it now. It is a matter of computation.

—. ——.

6883 Q. Does not exhibit 390 show that the assets only increase 37.7%, or from $4,312,786.11 to $5,937,706.69, in order to take care of this 80% that I understand you would have to compute?

A. Certainly.

Q. But assuming those statements to be correct that would confirm Professor Bemis' claim that an increase of consumption following the reduction in price does not involve a proportionate increase of capital?

A. I think the facts are shown right in my table. There is given the increase of profit and there the increase of assets, and there are the ratios given.

Q. But if that exhibit shows what I have asked you in the two preceding cases then that would bear out Professor Bemis, would it not?

A. I should have to study his whole deduction very carefully. You mean those two answers?

Q. You cannot say?

A. No, I cannot say without computing. It seems to me that the whole case is covered in my table there, boiled right down.

Q. Now in any given city does doubling of the amount of gas passing through a street main increase its depreciation or need of repairs?

A. The actual passing of the gas through does not injure the pipe at all, but if you have more gas passing through you probably have more consumers and you probably have more services to take care of and the like. It adds to some of the charges in that way.

Q. Does it add to the charges on mains?

A. Yes, it would add to the charges on mains somewhat because the more you dug down to connect services and the like the more you would have to look out for your main. It would not be important in that direction.

6884 Q. The cost of repairs and depreciation does not increase proportionately to the increase in volume of gas passing through the main, does it?

A. Not necessarily, no.

Q. Does it usually?

A. The cost of repair as a whole?

Q. In any way that you want to assume, on mains?

A. I mean on mains. As a whole?

Q. Yes.

A. No, it would not be in proportion. As I stated there would be an increase with the extension of business; some increase.

Q. Compare two mains, one capable of carrying ten times the amount of gas of another. Will the large main require ten times the repair of the smaller?

A. Certainly not.

Q. I call your attention to volume 2, page 211, of the Holyoke Gas Investigation, and ask you does it not appear there that the gas sold June 1st, 1897-98 was 59,875,900 feet?

A. Yes.

Q. And the unaccounted for gas 12.2%?

A. Yes.

Q. On page 15 do you notice that the number of meters in use was 2,457?

A. It does not seem to be very clearly stated as to whether in this one case the meters on hand are shown below.

Q. Will you give the two items that appear with regard to meters?

A. Unless there is some general total that shows it. I don't know. It shows meters, 2,457 meters. It then gives some meters down below as on hand; 110 of them.

Q. On page 16 the mains are given, are they not, Doctor?

A. Yes.

Q. Assuming that the mains there as given show 168,687 feet or 31.93 miles—or may be you can find by a short computation that there is correct?

A. That adds up correctly; 168,587.

6885 Q. Well, we won't bother with it any more. That would be 31.93 miles, would it not?

A. Yes; about that, I should think.

Q. You spoke of the oil used in Philadelphia and elsewhere as mostly 28 degree gravity oil. Is it not mostly Texas oil?

A. I don't think I said I was quite as definite as that. I said I imagined it was. I have no very exact information as to the exact gravity of the oil. As to its being Texas, I have no doubt some of it is Texas oil. As to the proportions, I don't know.

Q. I understood you to say yesterday that by this proposed lease or ordinance to which reference was made, that the proposition of the company in Philadelphia contemplated a reduction for a number of years. I did not quite understand whether you referred to 75 years or 30 years yesterday. What was the correct number of years you had in mind at that time?

A. The year 1927 was the last. After that my recollection is that the proposition contemplated the price staying there.

Q. They were to make the price of gas on December 31, 1907, 90 cents; 1912, 85 cents; 1917, 80 cents; 1927, 75 cents?

A. That was the net to the company, yes. They could juggle it around as they pleased with regard to the city and the consumers.

Q. And this I understand from you was an offer which they made to the Councils in Philadelphia, agreeing to pay $25,000,000 for that, having a capitalization of sixteen millions themselves, and which you figured out would bring them at the end of that period an income over and above about $8,000,000, is that right?

Mr. Mathewson: A sinking fund?
Mr. Burr: A sinking fund.

6886 A. These prices I named to you were the prices of the ordinance, not in connection whatever with regard to the amount of capitalization. I was simply taking Mr. Marks' statement as to that and simply rebutting his statement that it must be a very profitable contract if they were able to pay off any such vast sum of money. I didn't say it would be the actual expenditure, although I did mention if there were such extra expenditures the sinking fund arrangement that I developed on Mr. Marks' statement would leave a margin of some seven million or eight million after paying off those forty-one millions.

Q. As I understood, an offer was made by the U. G. I. to the Council in Philadelphia whereby they offered to enter into a lease with the city authorities and pay $25,000,000 for that lease; is not that true?

A. Oh, it is approximately correct.

Q. And that lease or contract or agreement contemplated the reduction which you have stated?

A. No. You are confounding the two propositions. The ordinance which is now controlling the situation covers these reductions, and the revised proposition, as I recollect, was to commence future payments by the payment of $25,000,000.

Q. They wanted an extension of the present arrangement by which they were willing to pay $25,000,000?

A. Yes, in lieu of the other payments they would have to make otherwise, and commute it; pay it in advance.

Q. That was rejected?

A. Yes.

Q. And caused a great public upheaval, to your knowledge, in the City of Philadelphia?

A. Made quite a fuss.

Q. Do you know where the oil comes from that is used in Philadelphia?

A. No, I do not.

Q. Nor do you know where the oil comes from that is supplied to the Consolidated?

A. No.

6887 Q. Can you state what gas companies in the forty odd cities of the United States of over 100,000 population set aside a reserve or contingent fund such as the Consolidated has introduced into its books since the Boston gas hearing two years ago?

A. Can I tell you how many do it?

Q. Yes.

A. No, I don't think that many of them do it in that form. They cover it by construction.

Q. Do you know any five cities that do it?

A. No.

Q. Do you know any two that do it?

A. I might amend that answer. I don't know of any companies that do it just in this way, but quite a large number of companies are covered by a very definite system providing for depreciation, by the United Gas Improvement Company, they cover it in their general account, not for each individual company.

Q. How many cities over 100,000?

A. In that group?

Q. Yes.

A. Well, let us see. There is Philadelphia; Jersey City, I suppose it well up above 100,000; Kansas City, Omaha. I don't recollect. I cannot for the moment just recollect the number of instances and I would have to take out Jersey City because that is not now under the direct control of the U. G. I., and I don't know what the direct methods would be; simply interested in it through the public service corporation.

Q. Outside of the three controlled by the U. G. I., do you know of any other company?

A. I don't think of any at the moment.

Q. In Exhibit 380 you gave sales, Fall River, for year ending June 30, 1906, as 371,796,000 feet, did you not?

A. No.

Q. It is probably Exhibit 390 then, Doctor.

Mr. Mathewson: 321,119,000.

6888 Q. On page 17 of your copy of the return of that company, the water gas made is stated as 396,903,400, is it not, as the same appears upon page 17 of the return?

Mr. Mathewson: For what year?

Mr. Burr: I will ask that.

A. Yes.

Q. What is the year for which that return is made?

A. That was for the year ending June 30, 1906.

Q. Is the candle power given on page 119 as 20.8?

A. Yes, determined by the State inspector.

Q. Now in your copy of the report for Lowell, page 22, for 1905-6, is not the unaccounted-for oil there stated to be 29,613.88 gallons?

Mr. Mathewson: I do not know how this is cross-examination of anything that this witness testified to.

Mr. Burr: So that there may be no mistake as to the figures, while the witness is on the stand.

The Witness: I have not used any of these figures except sales, and these are makes. I have not used any of these figures.

Mr. Burr: All these matters are matters of computation and correlation of figures and different facts, and I want to call the witness' especial attention to these figures for the purpose of deductions we propose to make if we can.

Mr. Mathewson: I know, but there is nothing in these tables relating to that.

The Master: That is hardly the function of this cross-examination, is it, Mr. Burr?

6889 A. I am not conscious I touched on this, nor am I conscious I ever looked a- these figures before, and I would have to look at them, especially because of all this ringing which was done by the commissioners, and we simply copied it and I shall have to study it out and see just what is meant.

Mr. Mathewson: What does that rebut, Mr. Burr, that we put in yesterday.

Mr. Burr: I will leave that to the brief.

Mr. Mathewson: I am afraid you will have to. That is a prudent answer.

(The witness now proceeds to figure).

Mr. Mathewson: I think it is only fair, in view of the fact that the witness has not examined these figures, to call his attention——

Mr. Burr: If the Doctor finds any difficulty about that I will withdraw the question.

The Witness: I will have it in a minute. There are evidently a lot of adjustments that have been made here.

Mr. Mathewson: Naphtha as well as gas oil was used.

Mr. Burr: The witness is quite competent to understand the question.

Mr. Mathewson: Yes, he understands the question all right, no doubt.

The Witness: Now, what is the question.

The Stenographer (reading): Now in your copy of the report for Lowell, page 22, for 1905-6, is not the unaccounted-for oil there stated to be 29,613.88 gallons?

A. On the line "other oils" I have calculated that out and cannot make it agree with the report at all, and this is all ringed in with certain marks that I don't believe refers to any unaccounted-for oil;

it does not check at all with the figures. I do not believe
6890 that it is, from my investigation.

Q. On page 17 of the Lynn return for 1905-6, the water gas made is given as 206,197,000 feet and the coal gas 230,842,400 feet, is it not?

A. It is given with some marks crossing it out, and I don't recollect just what those marks indicated, whether it was a readjustment by the commissioners or not.

Q. And the coal gas?

A. The coal gas is shown at 230,842,400 feet and the water gas at 206,197,000, and then both have lines crossing them out.

Q. What is the total?

A. 437,039,400.

Q. You referred yesterday to Professor Bemis' statement with regard to the testimony given by Mr. Cowdry in Chicago, and you thought that he had misquoted Mr. Cowdry. I want to refer you to the testimony taken at that investigation; it may refresh your recollection?

A. My impression is that my testimony was more to the fact that he had partially quoted them.

Q. Do you not find on page 41 of the record entitled "Transcript of Proceedings at the Meeting of the Committee on Gas, Oil, Electric Light of the City Council of the City of Chicago held on December 28, 1905; Present; Aldermen Young, chairman; Marks, Smith, Potter, Ryansburg, O'Connell, Sitz, Monohan, Badnock, Raemer," that Mr. Cowdery states on that page (41) referring to repairs of manufacturing plant that the "ordinary repairs in a water gas works would be about two and one-half cents, on an average, whereas coal gas works would be nearer five cents."

A. Page 41?

Q. Yes.

A. I quoted from this little book. I read that in this paper which purports to be a transcript of the proceedings.

6891 Q. Now, refer to page 64 and do you not find he there stated "the repairs to mains and services will take in the average company, an average large company, any way about three cents a thousand."

A. I read from this document handed me, what Mr. Cowdery said: "I don't know that I care to and I don't believe I am called upon particularly to go into all these details, but I have no hesitation in answering that the repairs of mains and services will take in the average company—average large company, about three cents a thousand."

Q. Referring to the pamphlet which you just a moment ago had in your hand, which is the pamphlet that has been referred to many times during the progress of this trial, do you not find on pages 45, 46, 47, 48 and 49 of that pamphlet a letter from you to the Chairman of the Gas Committee of the City Counsel of Chicago, dated January 12, 1906, in which on page 47 you reached by various methods of computation 94.98 cents as a fair basis in Chicago on the manufacture and distribution per thousand cubic feet of gas, and in closing you state, do you not, "finally from the facts given to me in the hearing and now briefly recapitulated I do not hesitate to say that the offer of the Chicago Gas Company to sell gas at a value of 90 cents per thousand is a fair one and should be accepted by the City."

A. Quite correct.

Q. Isn't it a matter to your knowledge within a few days afterward that that company voluntarily reduced its price to 85 cents?

A. Sometime after. I don't recollect how long. I should imagine it was a month or two; not a few days after. It doesn't change my opinion though.

6892 Q. Are you aware that the company has just raised their quarterly dividend to 1½%, to the usual dividend when the price was one dollar?

A. No, I am not aware of that. I have seen in the papers they paid one dividend of that amount. I have no means of knowing that that is to be their rate.

Q. Now, referring to the testimony of Dr. Marks, you have used the chart prepared by him regarding mains and the cost of laying, which is City's Exhibit 50, in making computations of amounts for Cambridge, Fall River, Springfield, Worcester and Lowell, have you not?

A. Yes.

Q. This chart purports to give the cost per ton of 2,000 pounds in New York, does it not?

A. Yes.

Q. And did you observe this at the foot of it, reading "figures include 10% undistributed expense and 15% contractors' profits"?

A. It is some time since I made this table.

Mr. Mathewson: The rates are printed in the record in the form of a table and you may have that instead of the chart?

The Witness: I think I had the record and for a moment I cannot recollect whether that was supposed to include those items or not, but I think it was. I am not sure of that. I should expect to include some such items. Certainly the ten per cent.

Q. Well, you know that this chart was prepared, do you not, to show the prices of laying mains under the peculiar situations that exist in the streets of the City of New York?

A. No, I did not understand it was prepared with the idea of covering various conditions.

Q. Even the "cheap" cities you referred to yesterday.

A. As far as the pavement is concerned, yes.

6893 Q. Doesn't it equally appear "cost per ton of 2,000 pounds in New York"?

A. It is.

Q. You accepted this of course as a basis for the computation of the laying of mains in these other cities?

A. I accepted Mr. Marks in this computation as I accepted his figures in other cases, in rebutting his own testimony.

Q. In your figures you include the 15% though for contractor's profits in your prices?

A. I think I did, yes. I should have to look that up again with my original figures. I think that was prepared some months ago.

Q. Have you noticed the "cost for excavating and filling, city proper, $2.50 per cubic yard," on the excavating line of the diagram, and the $5 per cubic yard for rock excavation?

A. No, I have not particularly noticed. As I say, I think I took my figures from the schedule which stated as to simply laying under the uniform macadam conditions.

Q. This chart was prepared for the purpose of attracting the eye to the similar schedule that was prepared, so that you might readily understand what you mean to show. That is the object of the chart, you understood that, didn't you?

A. It might be the object, I don't see much readily by the chart.

Q. Have you not as a matter of fact allowed a New York contractor's profit of $2.50 per cubic yard for excavations for these Massachusetts towns with which you have instituted comparison?

A. I took Mr. Marks' figures and stated so distinctly. The simple conditions that he stated, and took one of Mr. Marks' low costs.

Q. Then you did not understand that a user of this chart is expected, except for the City of New York, to make proper modifications of different places and that on the chart will be found
6894 every means for so doing?

A. No, I did not understand that.

Q. Is it not a fact that Metropolitan conditions of pipe laying do not obtain in the Massachusetts towns of 100,000 inhabitants, or are the conditions the same as they are in New York?

A. Certainly not.

Q. The conditions of laying mains and the cost of laying mains is the same in these small towns as they are in New York?

A. Certainly not; they are not the same.

Q. So therefore if you base the cost, if he has given here in this chart and in his schedule the cost which according to him would be necessary to be paid for laying mains in the streets of the City of New York and you have used the same figures for the laying of mains in these cities the deduction would be erroneous—there would be some error in it?

A. Yes.

Q. And therefore it would follow that your cost of mains is extravagant—there would be some error in it?

A. Yes.

Q. And therefore it would follow that your cost of mains is extravagant according to Exhibits 384 to 389, since you have not rightly used the data on City's Exhibit 50?

A. I have not acknowledged I have not rightly used it, until I look it up again, and I object to "extravagant." I don't say it would make an extravagant difference on the particular figures I took from Mr. Marks. My recollection is I studied them out at the time and made up my mind that they excluded most of the special conditions.

Q. Have you knowledge of the method by which the Massachusetts companies charge off capital expenditures?

A. The method?

6895 Q. Yes.

A. You mean by that, they have some uniform method and do I know it?

Q. Or do you know the method or methods adopted by them?

A. There is no special method adopted by them so far as I know of. They have their own ways of doing it and there is nothing specified as far as I know by the Commission. They charge up several amounts to depreciation in cases of amounts that already appear in the so-called gas manufacturing account and make special charges of that kind which tend to increase the usual accounts.

Q. Are you willing to swear that the actual cost of main increases has not been entered upon the books of all these companies and depreciation for obsolescence and inadequacy written off?

A. I am inclined to think the charges are all made against the proper account. I cannot imagine they are doing otherwise, and that they have been reduced by credit against those accounts. That would be the conclusion from the study of the figures.

Q. You understand that Dr. Marks divided his working capital roughly into raised capital, stockholders, 13 cents per thousand, borrowed capital on notes 35, total 48 cents per thousand?

Mr. Mathewson: You mean for the seven or four Massachusetts companies?

Mr. Burr: For the Massachusetts companies.

A. I know he makes a distinction between the amounts that he says are borrowed from the stockholders and the amount raised by notes. Of course, the distinction is not a correct one.

Q. Are not notes payable regarded generally and everywhere in the United States as floating debts?

A. There is a very great deal of very loose nomenclature
6896 used in America in regard to such matters. In the Massachusetts gas companies it does not mean anything of the kind, and the Gas Commissioners themselves regard that title as fixed capital temporarily as a rule in the form of notes payable, afterwards to be taken up by the substitutions therefore and stock sold to stockholders or other forms of securities.

Q. You would not say that the mere fact that the Massachusetts Commission treats notes payable as bonds makes them bonds or fixed capital, would you?

A. The mere fact that the Massachusetts Commission considered it fixed capital is sufficient for me for my purposes. I do not care whether you call it notes payable, accounts payable, or anything you please, the fact is it is money borrowed and invested in the plant, and so considered and considered by those who have charge of the accounts, and those who control the gas companies, the Commissioners, and they treated it so, and I have a statement to that effect from the chairman of the Commission, if you wish it. In fact it appears in that letter handed in this morning that that is the way of treating the subject.

Q. Do you know as a matter of fact, Dr. Humphreys, the cash cost of gas in Philadelphia?

A. No.

Q. Referring to that exhibit 384, you gave the company's assets, structural assets of works, as follows: From report June 30th, 1906, to the Massachusetts Commissioners; Cambridge, 1,698,040, is that correct?

A. Yes.

Q. Fall River, 1,038,162?

A. Yes.

Q. Lowell, 1,554,464?

A. Yes.

Q. Worcester, 1,338,305?

A. Yes.

Q. Total, 5,628,971?

A. I don't know about totaling it. It was not totaled by me.

6897 Q. Kindly total it and see what the total is?

A. You selected for comparison Fall River, Worcester and Lowell, was it?

Q. Yes.

A. 5,628,971.

Q. Now, from the reports you have produced here will you check their daily capacity for me?

A. Daily capacity?

Q. Yes, Cambridge, or whatever it is—the first one you have there.

Mr. Mathewson: The daily capacities were all gone over previously, and it appears in the record for daily capacity; at least what was stated in the report of daily capacities by Professor Bemis, or Dr. Marks. I do not see the necessity of doing it again.

Mr. Burr: This is 1906 that Dr. Humphreys has brought in.

Q. From their reports will you check their daily capacity? Cambridge 4,000,000 capacity, is it not?

A. I do not know, sir, I will have to look it up.

Q. Look at page 17.

A. Cambridge is stated on page 17 to be 4,000,000—1,000,000 coal gas and 3,000,000 water gas.

Q. Fall River 2,500,000, same page?

A. Fall River is stated to be 2,500,000.

Q. Look at page 17, Lowell report, and see if you do not find the daily capacity stated there, 4,400,000?

A. 4,400,000.

Q. Look on the same page 17, at the report on Worcester, and see if you do not find the daily capacity stated there to be 4,200,000?

A. 4,200,000; would you like to have it added?

Q. Yes, kindly do so and see if the total is not 15,100,000.

A. It is 15,100,000, as near as I can make it.

Q. The annual 200 times daily capacity is 3,020,000,000.

6898 A. Multiplying 15,100,000 by 200, as your computer, I find it to be 3,020,000,000.

Q. On the basis of those reports made will not this give $1.86

per annual thousand capacity, provided that those works are operated as is the Consolidated Gas Company with a capacity factor of 200 to 204?

Mr. MATHEWSON: Is not that what Dr. Marks testified, that those figures brought out 1.86? It is the same thing and that is what we are rebutting, among other things. It does not prove anything to go back and say that the original figures were different, on a different basis, representing a different thing.

A. That calculation gives it as you say, $1.86.

Q. Of course, "adjusted book assets," in that item you exclude notes payable from your floating debt?

A. Certainly.

Q. And therefore on that item you and he do not agree? I understand that to be the situation.

A. He does not agree with me in that, and he does not agree with the commissioners in that.

Q. Assuming that to be so, does not this result which you find of $1.86 agree within reasonable practical limits with the $1.78 per annual thousand of capacity, deduced by Dr. Marks, for those four same companies for the fiscal year of 1905, as he has testified?

A. I should be as willing to take one figure as another in my calculations that I had to make.

Q. Is not the capacity factor at which the works of the Consolidated Gas Company were operated in 1905, about 204, or a little greater than the 200 which Mr. Marks has assumed?

A. I do not recall exactly, it is about that.

6899 Q. I will ask you this; don't you consider the New York field here in this metropolis of much denser and vastly larger capacity in its demands for gas, than these Massachusetts towns?

A. Yes.

Q. You said that where under the British Law gas companies invited parliamentary investigation, in that event it would be a question for the Board of Trade to say whether that charge should be made against consumers of gas, or fixed in some other manner.

A. I did not say anything of the sort.

Q. Will you kindly tell me what you did say?

A. In that case there is a question, although it is usually charged in the same way as the rest, and certain questions are carried to the Board of Trade in that regard, and they generally follow the advice of their chief auditor or something of that kind.

Q. The language you have used is this:

"Where a company has involved itself in parliamentary investigation, then it is left to the Board of Trade."

Is that true?

A. That may be the way I stated it, but I stated it more correctly now, and fuller than I did then. It is not absolutely referred to the Board of Trade, unless the question comes up. It comes up, as I recall, through the auditor, the Board of Trade's auditor—having an opportunity to go through the account and object to such items, and in such case, as I recall it, it has to be considered by the Board of Trade if the amount is rejected.

Q. Therefore, I understand that under the British procedure, if a company fought against the law fixing the regulations and prices for it, the question would have to be solved by the Board of Trade.

A. No, sir; not at all. You entirely misunderstood me.

6900 In all such cases as that—the ones I referred to, are where they are attacked; in the cases where they have to defend themselves, that is not the question at all; it goes right into the operating expenses, the same as coal itself.

Q. You have stated a number of companies that you act for in an advisory capacity, and you have particular connection with a certain number of companies that you have stated this morning. In addition to that you issue to those fifty clients that you have a confidential communication, so to speak.

A. That is right, sir.

Q. In which you advise them as to the cost of gas as to how to produce the best results; is that right?

A. Yes.

Q. That is, you advise the gas companies how to get the most money out of their working plants?

A. No, only in regard to water gas works, as I stated. I think we advise them as to the plants that we have put in for them and in that connection are given an opportunity to analyze their accounts and make adjustments between coal gas and water gas companies and ourselves, properly, so as to get the cost of the water gas on a comparable basis for the several companies. That is a confidential communication. There is a copy of it, I think that is the last issue. That is sent to every one of these companies or corporations, and I think that number is about fifty.

Q. Your business is, as I understand it, in issuing that confidential communication to advise them how to put money in their pockets?

A. Certainly.

Q. And to produce the best results?

A. Certainly.

6901 Mr. Mathewson: You would not have much sale for one advising them how to lose money, would you?

Mr. Burr: The Greek chorus will please subside while I am cross-examining.

A. I would like to add to that, if you would like to have me do it——

Q. (Interrupting.) No. You testified as to your connection with the U. G. I. Company and you have testified relative to Mr. Bemis' testimony on the differences in candle power between Mr. Walton Clark's home, and the Philadelphia Gas Works, which you said Mr. Clark absolutely denied?

A. Absolutely, in the most positive terms.

Q. Many more miles away. Do you know, or have you read of the paper before the American Gas Institute, October 19, 1906, by W. H. Gartley, engineer of works of the Philadelphia Gas Works?

A. In a general way.

Q. It is printed in the "Progressive Age," for December, 1906, on page 755, giving the experience of that company, he shows at the bottom of the page in a curve the loss of candle power between the works and the City testing stations, does he not?

A. My recollection is that he did do something of that kind.

Q. Do you find there at the bottom of page 755 those curves of loss in candle power by reduction in temperature, and if so, will you look especially at curve C, Philadelphia holder, and distributing mains, at testing stations.

A. Yes.

Q. Now, this curve shows, does it not, that starting with 70 degrees temperature at the works or holder, a drop to 60 degrees reduces the candle power to about 2½ per cent.

6902 A. Give me a little time to look at the paper. It is a very complicated one and very hard to understand. I do not think it is per cents.

Q. Look at the bottom of that diagram and see if you do not find the words "per cent. of candle power loss"?

A. Yes, that is right. This table shows the curve C, a loss of about 15 per cent. at 35 degrees.

Q. A drop to 60 degrees reduces the candle power about 2½ per cent., does it not?

A. Yes.

Q. And a drop to 50 degrees reduces it about 5½ per cent.?

A. About 5 per cent, I think.

Q. A drop to 45 degrees reduces it about 8 per cent.?

A. 8 per cent. is right.

Q. A drop of 40 degrees reduces it about 8 per cent.?

A. 8 per cent. is right.

Q. A drop to 35 degrees reduces it about 15 per cent.?

A. Yes.

Q. All those droppings, so to speak, of percentages, are shown in the tables I have referred to?

A. Yes, shown in the curve.

Q. I call your attention to Mr. Gartley's further statement, which appears on page 746, as follows:

"We are required to maintain 22 candle power at the testing station. Allowing ½ to ¾ candle power extra for any further reduction in dew-point between the testing station and the consumer, we are convinced by hydrometer and photometer observations in other parts of the city, that we have delivered 22 candle power to the remotest points. With this method in use we find that no importance need be attached to the loss of candle power from friction in the mains and other vague causes.

A. Yes.

6903 Q. Do you agree with that statement, or have you any reason to disbelieve it?

A. No, I do not agree with Mr. Gartley as to the effect of friction in mains.

Q. You have no reason to disbelieve it as to the effect in candle power?

A. No, I imagine he is correct; no doubt he thought he was correct when he wrote that.

Q. I will also call your attention to his statement appearing at page 757:

"I have intended in this paper to lay down the general principles of a method for securing not only uniform candle power to the same consumer from hour to hour, but a method that will give gas varying only slightly in candle power over the entire distribution system. In order to show the uniform candle power delivered to the consumer by the application of this method in Philadelphia, I give the average daily candle power during a period of low dew-points, that is from March 16 to April 1. Each day shows the average of the twenty-four hourly observations by the candle power readers at the testing stations. The candle power desired to be carried was 22.75."

Then follows the candle power in three columns, showing the candle power on the days stated in the column, under columns headed A and under the one headed B. Is not that true?

A. Yes.

Mr. **Burr**: I ask to have these columns read as if they were put to the witness and answered.

6904 The columns referred to are as follows:

March 16	22.69	22.96
“ 17	22.52	22.63
“ 18	22.44	22.56
“ 19	22.54	22.83
“ 20	22.90	22.86
“ 21	22.67	22.73
“ 22	22.74	22.71
“ 23	22.60	22.43
“ 24	22.78	22.49
“ 25	23.04	22.79
“ 26	22.75	22.76
“ 27	22.82	22.63
“ 28	22.52	22.35
“ 29	22.88	22.35
“ 30	22.92	22.48
“ 31	22.66	22.44

The **Witness**: Yes.

Q. On page 755 you find a statement made at the head of the chart A, B, and C, from mixed gas, six parts water gas, Texas oil distillate, to one part coal gas; is that so?

A. This is from a mixture of six parts water gas, and one part coal gas?

Q. Yes.

A. Yes, I find that there.

Q. Do you agree with those views expressed by Mr. Gartley?

Mr. **Mathewson**: We do not know what they are.

Q. Have you any doubt as to the accuracy of his statements as he has given them here?

A. I would not express any opinion on that paper without very careful study. I endeavored to give it that study, and did not find time. It is a new proposition which Mr. Gartley has brought forth, and which I presume many engineers would disagree with him about. Still, I have the highest respect for Mr. Gartley, and
6905 I would hesitate a long time before I doubted anything that he stated. Undoubtedly he believes every word he has stated.

Mr. **Burr**: I want to admit that Mr. Bemis was mistaken, when he used the difference in candle power referred to in works; he referred to the testing stations.

The **Master**: It was on that point that this cross-examination has been going on.

Mr. **Burr**: That is all I have to ask.

The **Witness**: Of course, I could not say as to that, I did not ask the question that way.

Cross-examination by Mr. Kirby (Continued):

Q. Of course, when you were at the U. G. I., you were familiar with the letter head of that company?

A. Yes.

Q. I show you a letter addressed to H. H. Edgerton, dated Philadelphia, February 16, 1888, and I ask you if that is upon the letter head of the U. G. I. Company?

A. That is right; I remember it very well.

Q. Do I read this letter head correctly:

United Gas Improvement Company,
Office 333 Walnut Street,
Philadelphia.

George Filler, President.
W. W. Gibbs, Vice-President.
A. O. Granger, General Manager.
H. H. Edgerton, Chemist and Engineer.
Samuel T. Bodine, Secretary and Treasurer.
Edward C. Lee, Asst. Secretary and Treasurer.
Alex. C. Humphreys, General Superintendent.
6906 Joseph H. Collins, Jr., Asst. General Superintendent."

That is correct, isn't it?

A. Yes, that is correct; that was the form for quite a time.

Mr. **Mathewson**: This appears to be a letter addressed by Joseph Collins, Jr., Assistant General Superintendent, to Mr. Edgerton, does it not?

Mr. **Kirby**: It does.

Mr. **Mathewson**: Of course we can introduce things from the officers.

Mr. **Kirby**: I am not introducing the letter. I do not consider that I have any right so to do, or I certainly would have offered it. My inquiry is directed as to the officers of the company which we were speaking of yesterday.

Q. Referring you not to Complainant's Exhibit for identification

No. 377, and especially in reference to the method of testing candle power in use at Danbury, I call your attention to a clause at the bottom of the page headed: "Results from the use of Danbury process of upright retorts," and I ask you if I read the same correctly.

"The candle power is determined by the use of a burner giving a fourteen candle flame; standardized by a burner giving a 22 to 25 candle flame, the rating of the gas would be raised to about 44 candles; or 8.8 candles per cubic foot instead of 7.5 candles?"

A. Yes, that seems to be read correctly.

Q. Now, I read to you a statement which happens to appear in a book entitled: "Gas works, their construction and arrangement, &c., by Samuel Hughes, C. E.," on page 341 thereof:

6907 "Argands are generally made to consume five feet of gas per hour, and they only give the full amount of light the gas is capable of evolving, when burning the maximum quantity for which each burner is made. Moreover the light diminishes materially in proportion as the quantity of gas is reduced; as shown in the following table of the light evolved from an argand under different consumption of gas."

Then follows the table referred to, and it goes on:

"It follows, therefore, that in order to obtain the maximum amount of light from argand burners, the full quantity for which they are made should be consumed by them; and whenever it may be desirable to introduce economy, it is better to have a limited number of burners of the larger dimensions, some of which may be extinguished when desired, rather than have a number which are checked to only a portion of their full consumption."

I read that correctly, do I not?

A. Yes.

I read further:

"The light from a given quantity of gas when consumed in the batwing or fishtail does not vary in the same degree when the flame is reduced, as the argand. Thus, if we suppose either of these burners to yield the light of ten candles when consuming five feet per hour, on reducing -he supply of gas to 2½ feet the light of 2.5 candles will be evolved."

I read that correctly, do I not?

A. Yes.

Q. Do you agree with that proposition as laid down there?

A. The whole thing?

6908 Q. The latter part which I read?

A. Oh, no, not as a general proposition, at all; there are a very great many loose statements made in these text books, as if there were some general law that applied to all qualities of gas, which is not so at all. If you are going to establish a law of that kind you will have to establish it for each particular quality of gas, to commence with.

Q. As a general proposition, taking the same gas, we will assume that we are using a batwing or fishtail, as called for in the last paragraph of the statement:

"Thus, if we suppose either of these burners to yield the light of ten candles when consuming five feet per hour, on reducing the supply of gas to 2½ feet the light of 2.5 candles will be evolved.

That is correct, is it not, that while it may not be a reduction of as much as 2.5 candles, or may be more, it does not follow in a batwing or fishtail burner in the same proportion as it does in an argand?

A. Probably not, but as I say, these cases have to be considered in connection wi-h the gas you are manipulating and burning and testing. You cannot set down any law as to what the increase of light will be due to change of burners.

Q. Therefore one would have to be familiar with any particular gas to know how the candle power would be affected by using different size burners?

A. Certainly; you would have to experiment with the gas. There is no general law.

Q. And that, of course, would be true of Danbury gas the same as any other gas?

A. Of course.

Q. I call your attention further to a part of complainant's 6909 exhibit 377 for identification, being the part of the statement headed "The Danbury process of gas making" and under the subheadings "Photometric Methods used at Danbury."

"Photometric Methods used at Danbury, in reporting candle power. This is an important point, because it is a well known fact that poor gases can be rated a- higher and rich gases at a lower value, than is practically obtained by the consumer, even with the best and most suitable burners in each case. The whole matter rests on the fact that the same gas can obtain different ratings per five cubic feet, according to the greater or less candle power of the flame used to obtain the rating; for instance, if a three-foot rate of consumption is obtained and tested with a suitable flat-flame, and a five-foot rating of the gas given thereby, it will give a decidedly inferior rating to the gas than if burned in a suitable burner at the rate of five-feet. For the above reasons it was determined to standardize the Danbury gas by a standard candle power flame, and the power of the flame was put at fourteen candles, because at that time, 1879, it was the actual five-foot rating of the gas in use (coal cas). The Danbury gas can be actually burned, and is so used by many customers, in flames of thirty to thirty-three candles. There was no obligation to standardize by so small a flame as fourteen candles, save the facility it gave for comparison with the former gas, coal gas. Standardized with a twenty to twenty-five candle flame the pro rata candle power of Danbury gas is raised from fourteen candles for two c. f. rate to 17.6 candles for a two 6910 c. f. rate; and this is the actual comparative value of the gas and——"

And here follows a line which has been chopped off and we have only the top of some of the letters. But I think that reads:

"When compared with"—then we cannot read that—"ordinary methods."

A. Yes, I got that much, but I could not get anything out of the centre of it.

Q. That is a correct quotation from this exhibit, is it not?

A. Yes, sir, I think it is.

Q. Now, referring to the same exhibit for identification, and with especial reference to the oil proposition in that, the first page, I read:

"DANBURY, CONN.
November 22nd, 1905.

W. H. Bradley, Esqr., Chief Eng'r Consolidated Gas Co.
MY DEAR SIR:

The apparently simple questions left for me to answer by Mr. Wood——"

Q. Mr. Wood being in this instance, I take it, one of the engineers of the Consolidated Gas Company and should have been Woods, I think?

A. Yes, I think so.

Q. I will continue:

"relative to the results of making oil gas in vertical retorts according to my plans, has led me into a perfect wilderness of figures and retorts, extending over a period of fifteen years. If Mr. Wood had struck in here about a week after starting; that is to say, about the middle of April, 1890, I could have told him all about it right away without any ifs, ands or buts; *but* when it comes to running 6911 one machine for fifteen years, there's lots of things turn up. There's shortage of naphtha and oil to account for; there's cutting up of gas meters, big ones and little ones; there's leakage of gas to charge up against the machine; the ups and downs of the thermometer, the hoppings of the barometer, the height above the sea——"

The MASTER: Mr. Kirby, this exhibit for identification is all going to be printed, it does not seem necessary to me to spread it on the record again.

Mr. KIRBY: Dr. Humphreys stated yesterday that I asked him in regard to candle power and he did not remember the method used at Danbury, and I want to call his attention to a particular point. I am coming to it right here,

"and the depths of human cussedness and neglect; now as the only way out of the maze, I shall, as you will see, charge them all up against the machines. There seems to be no other way out. I, therefore, send you a table of performances since the beginning. The last six years running has been on gas oil, with an occasional tank of Texas oil; the first nine years on naphtha. A salient feature is, that the machine is carbonizing more oil per hour under fire, and making more gas per hour than it did in the start, also that it has performed a little better on gas oil than on naphtha, but that is possibly due to improved handling. Under the head of naphtha gas made is included the gas made in purging out and the beginning and end of runs, the analysis will show more correctly the proportion of oil and water gas."

6912 Is that correct?

A. Yes, sir, that is correct?

Q. That appears in the exhibit?

A. Yes.

Mr. MATHEWSON: All that appears, and is going to be printed.

Q. I ask if under the heading of "The Danbury process of gas-making," the following appears:

"In fact the operation as a process was being continually made over, to suit the different oils, and as shown by the results, that a fifteen-year-old machine is doing superior work with an inferior and cheaper quality of oil than at the outset. For instance, the first year's running on naphtha took a gallon of material for 95.69 cubic feet of average, 34.38 candle gas; while the year ending May 31, 1905, required a gallon of gas oil (gone from stack) for 106.86 cubic feet of average 34.8 gas. It may as well be stated at this point how the photometry of this gas has been determined and entered in the account."

Thereafter follows the quotation in regard to photometry that I read.

A. Quite correct, sir.

Q. You also made certain comparisons with New York and Danbury, and I call your attention to that part of the communication headed: "Results from the use of the Danbury process" from the setting of nine upright retorts, being schedule of such results for various years. I take it that the total number of hours in a year is 8,760, is it not?

A. I think so.

Q. I have here the year 1890, under "Hours Run," total 2,969.7 hours.

A. That seems to be the statement, yes.

Q. 1891, 2,352.

A. Yes, those were complete years, two half years in each case; that is right.

6913 Q. 1892, 2,962.8?

A. Right.

Q. 1893-4.

A. It is 1893-4; it is for the two years in each case.

Q. But for twelve months?

A. 2,301.2.

Q. 1894-5?

A. 2,824.6.

Q. 1895-6?

A. 2,909.7.

Q. 1896-7?

A. 2,533.9.

Q. 1897-8?

A. 2,426.6.

Q. 1898-9?

A. 2,279.7.
Q. 1889-90?
A. 2,581.1.
Q. 1900-1?
A. 2,635.4.
Q. 1901-2?
A. 2,961.5.
Q. 1902-3?
A. 3,098.7.
Q. 1903-4?
A. 3,351.8.
Q. 1904-5, ending June 1?
A. 3,501; those are right.

Mr. MATHEWSON: Mr. Master, it will take just a moment, but you will recollect that during that summer, during the hot weather, quite a number of papers were put in signed by Oakey Hall, Sweeney and others, and the question was raised as to whether the signatures had been identified; they were considered sufficiently so for admission. Mr. Clark Bell, who drew many of the papers, was then out of town and be could not get him. Now, counsel for the other side have consented that I call Mr. Bell for a moment and have him testify as to the signatures.

Mr. BURR: I have consented to allow Mr. Bell to be called now, because he is an old gentleman and I am informed that Mr. Mathewson will only take a little time with the redirect-examination of Dr. Humphreys.

6914 (In order not to break the sequence of Dr. Humphreys' examination, the testimony of Mr. Bell, although taken at this point, is printed at another part of the record, after the close of the examination of Dr. Humphreys).

(After Mr. Bell's testimony a recess was taken to 2.30 o'clock P. M.)

After Recess.

Redirect-examination by Mr. MATHEWSON:

Q. You say that you became connected with the U. G. I. Company of Philadelphia in 1885, Doctor?
A. Yes.
Q. How long had Mr. Edgerton then been connected with the company?
A. About three years, I think.
Q. And what were you employed to do?
A. I was employed specifically to organize the engineering and operating departments.
Q. Did Mr. Edgerton have anything to do with those after you came there?
A. Not that I know of, except in the case of Pensacola, where we endeavored to use his services in a definite direction.
Q. It has been suggested that he was paid a royalty during the

time, until his contract expired, that is until 1891, and some salary. Is it your information that he did receive some compensation?

A. Yes. He no doubt received some compensation for the trial of his apparatus.

Q. While the U. G. I. Company were experimenting to see if the process proved good?

A. They had a number of different processes at that time, including the Lowe, the Edgerton, the Hamlin-Johnson, and I think the Pierson, and the question when I went into the employ of the company was what process would be finally adopted, and that was one of the problems put up to me to report upon, which I did report upon.

6915 Q. Were any of the Edgerton processes introduced or constructed or established by the U. G. I. Company after the results of the Pensacola experiments in relation to that process were known?

A. They were not. There never were any of the Edgerton processes put into use by the U. G. I. Company in their plants after the results at Pensacola were known.

Q. You said yesterday that if Mr. Edgerton had made suggestions as to laboratory work, you would have been inclined to accept them. Did you intend to make a distinction there?

A. I did. I consider Mr. Edgerton a very skillful man in the laboratory, but do not consider that he is a practical man.

Q. You were asked yesterday if you did not know that payment for the Welsbach process was made on Mr. Edgerton's order, or upon his recommendation. What is the fact in that regard?

A. The fact is, as I stated yesterday, I have always supposed it was made upon a very exhaustive investigation that was made under my direction, and that while my report was not finished it was upon such information as I was able to give them from my investigation that they decided to enter into this proposition, and that understanding I have confirmed by a communication with Mr. Bodine, who is the man who made the payment.

Q. The main offices of -he U. G. I. have always been in Philadelphia, have they not, since you became connected with the company?

A. They have.

Q. Reference was made yesterday to a resolution or assumed resolution of the Philadelphia Council approving the Edgerton process and recommending it for Philadelphia. Did you ever hear of any such resolution before?

A. No, I have not.

6916 Q. Did the Council of Philadelphia have anything to do with the management of the Philadelphia Gas Works?

A. I cannot see what they had to do with the gas works. The gas works at that time were in the hands of the notorious gas trust, and they had charge of the works as trustees for the city.

Q. You refer to the Philadelphia gas trust?

A. The Philadelphia gas trust. It was a political municipal body.

Q. It was asked yesterday whether you could not get more candle power from a five-foot burner than from a two-foot burner, in testing the candle power of this oil, all in connection with the candle power of 32.95 as shown in Mr. Edgerton's letter to Mr. Bradley. What is the fact in that regard, or have you anything you wish to say on the subject?

A. The facts are that as to the highest candle power to be developed from any gas by the selection of a burner depends upon the richness of that gas; if the gas is very, very rich, running up to 50 or 60 candle power, or even 40, you can get higher candle power by using a burner of less than five feet consumption per hour.

Q. What was the character or condition of the photometers that you found in use at the U. G. I. Company's office when you came in, in 1885, do you remember?

A. Very distinctly. Not at the office, but at the several works. I remember that in a number of cases the photometers were in such condition that no reliable result could be obtained from them, especially I remember that the Goodwin candle balances—I remember using the expression in describing them as I went back to the office that they would not weigh sugar correctly, the discs were generally dirty, and frequently the apparatus was out of alignment.

6917 Q. Have your views been modified in any way as to the impracticability of keeping the pressure between one inch and 2½ inches at one time at all points in New York City by any evidence that has been presented?

A. Not at all.

Q. You have been asked whether you had testified heretofore in various places. At whose request or invitation did you testify in Chicago?

A. The invitation of the city, as represented by the chairman of the committee on gas or oil or whatever it was—you have the title in the little blue book. The chairman of that committee, Mr. Young, I think it was, communicated with me. Gas, Oil and Electric Light is the name of the committee.

Q. At whose invitation did you testify before the Parliamentary Committee? At that of the gas companies or others?

A. No, at the invitation of the chairman of the committee.

Q. Who is that, do you remember?

A. I think his name was Lord Belfort, or Belport; I was also invited by a gentleman who is now known as Lord William Ramsey and also by Mr. Haldane, a brother of the present Minister of War.

Q. Referring to your Holyoke testimony, did you give any testimony there that was opposed to your present recommendation of the allowance to the consolidated gas company of an expenditure of 10.89 cents?

A. Not at all, in my opinion.

Q. Plus reserve fund and final renewal fund?

A. No.

Q. You were asked some questions in reference to the Buffalo reports. Will you state the situation at Buffalo, and something further in reference to why that report is in that particular form?

6918 A. When I took charge in Buffalo, the report form being used was in the form stated in the evidence this morning, and it has been simply allowed to go along in that way without change, in spite of the fact that I do not consider it the best form. We have introduced just as little change in Buffalo as possible, even in the matter of printing blanks, as we are on the edge of default on our bonds all the time, due to the tremendous competition with 30 cent natural gas; in fact that is what I was employed by the owners of the company for; to save them from default. It does not alter the facts at all as to the ultimate knowledge and sense.

Q. Nor as to your opinion regarding the proper form to be used?

A. Not the slightest.

Q. Of course, the figures you gave are distribution figures, exclusive of taxes and general management and others?

A. Yes.

Q. In the Buffalo returns there are certain things included for distribution and certain things included for, I think the term is collection, then there is general and executive; more generally in the returns of companies all three of these are included under one heading of distribution, but at Buffalo they distinguish them.

Q. As to dividends on the Massachusetts companies respecting which you were asked, of course, the dividends apply as you understand them, only to the stock issued, the term dividends?

A. That is my recollection.

Mr. Burr: I suggest that Mr. Mathewson ask the direct question and let the witness answer.

Mr. Mathewson: I will, but it will take a little more time. I supposed there was no particular object in doing so.

6919 Q. Does the statement of dividends paid or stock issued and interest paid on notes or bonds issued in any way conflict with the tables which you have put in here showing earnings upon actual assets?

A. Not at all.

Mr. Burr: That is a conclusion which the Master will arrive at, may be, and may be not.

Q. Referring to Complainant's Exhibit 380, are you able to state what the profit per cent. on the paper capital employed would be, and what the profit per thousand of sales would be, provided none of the special amounts, debits to profit and loss, had been included in the cost of gas, but only the ordinary inclusions?

A. I will figure it for you.

Q. No matter, I thought you had it figured.

A. Well, I have it here as 11.78 per cent. 34 cents per thousand. I was going to go over it, but it was just figured by me in pencil, it was not part of the original table.

Q. Your attention was called this morning to Haverhill, which has a paper capital of 63 cents per thousand feet, and your attention was called to the fact that the Commission endeavored in order to reduce the price of gas to 80 cents on the theory that a part of the plant had been built up from contribution by consumers of gas beyond the dividends paid. Is it your information that 80 cents prevails at Haverhill, or ever has prevailed?

A. No.

Q. What is the situation?

A. My recollection is they are charging $1.10 with ten cents discount.

Q. What is your information as to the proceedings there?

A. The matter as I say was carried into Court. I don't know definitely how it stands at present, but the impression in my 6920 mind is that the matter has not been pressed for a number of years by the commission.

Q. Do you remember when this came up first?

A. A great many years ago.

Q. And there has been no decision so far as you know?

A. There has been no decision so far as I know, and the matter is in abeyance entirely.

Q. Will you look at the 21st annual report of the Board of Gas and Electric Light Commissioners and see whether in that volume to which your attention has been called to other matters, Haverhill does not appear to be charging $1.10 now.

A. Yes, it is stated on page 106 that the price is $1.10, discount ten cents per thousand feet if paid on or before the 10th; average price $1.01, and the average price the year before, $1.01.

Mr. Burr: Well, he has stated that matter is in the court.

Mr. Mathewson: I would like to know how long ago the order or decision was made, if you have the report to which you referred.

Mr. Burr: I gave it to the stenographer.

Mr. Mathewson: I suppose it will be conceded that the order to which you refer in Haverhill appears in the report of the Massachusetts Gas Commissioners for the year ending Junue 30, 1900?

Mr. Burr: Yes.

Q. As to the cases in which a rate was fixed where the dividend was six per cent. or less, are these the cases, Dr. Humphreys, to which you referred yesterday and in which you said the Gas Commission of Massachusetts made a special statement in each case as to the reason why?

A. That is right.

6921 Q. And those all appear then in the record, do they not?

A. Yes.

Q. You were asked this morning as to some result taking $2.24 as the capital of the five companies specified in Complainant's Exhibit 378?

A. Yes.

Q. Was that capital paper capital or actual assets?

A. Paper capital.

Q. How do the assets compare with the paper capital, more or less?

A. More.

Q. Now, the Boston Consolidated Company was organized within the last year or so, and do you remember what their capitalization per thousand is, according to the statute, as allowed by the statute?

A. About five dollars, I think.

Q. Do you know the percentage of coal and water gas manufactured in Massachusetts?

A. I know it in certain cases, I do not know it in detail in every case.

Q. You were asked regarding the amount charged for renewals by the Consolidated Gas Company, and you stated it was the difference between the 10.89c. and the repairs. Did you wish to be understood as questioning the propriety of that charge for renewals, or anything of that sort?

A. Certainly not.

Q. And did I understand you in that connection to withdraw your opinion that reserve fund and final renewal should be allowed beyond?

A. Certainly not.

Q. Now, referring to Exhibit 390, showing the increase in profits and increase of assets in the various Massachusetts companies therein specified does it not appear that the increases cover a considerable period of years in many cases?

A. Yes.

Q. And do you find anything in that as to sales? I under-
6922 stood Mr. Burr to refer to the amount of sales?

A. No, there was not anything on the table as to sales.

Q. You were asked as to how many companies you know carrying a reserve fund in the same form in which the Consolidated is now carrying its, that is, as part of a ten cents per thousand charge, and you named only two or three. Do you understand that the carrying of a reserve fund in some form is uncommon by industrial companies?

A. By no means; it is the general practice of nearly all manufacturing concerns.

Q. In reference to the computation for mains in Massachusetts, you assumed Mr. Marks' table for mains laid under macadam, you said in computing for these large but outside cities. Some tears seem to have been shed over that. What is the explanation?

A. The explanation is that I endeavored to find a figure that could not be found fault with, on the other side, at least, so I took the cost that is shown by the curve that runs up to No. 18 at the top.

Q. And what is the endorsement on that curve?

A. Cost per foot for streets with macadam tops outside the city proper, laid and surface restored.

Q. So the curve you took does not appear to be the prices by Mr. Marks for laying mains inside the city proper, does it?

A. I did not understand it so, and the prices developed from it would not indicate it.

Q. You are referring now to what exhibit?

A. City's Exhibit No. 50. It says, page 1404-N, on top of it.

Q. You were asked this morning to make some computations of the same character that Dr. Marks had originally made for a previous year showing assets per thousand of capacity, assuming
6923 the capacity to be as it appears in the Massachusetts Report to the Gas Commissioners.

A. Yes, sir.

Q. And for example, Worcester was stated at a total of 4,200,000 cubic feet, is that correct?

A. That is right, yes, sir.

Q. Has Worcester the capacity to put out 4,200,000 cubic feet?

A. It has not.

Q. What is their capacity to-day?

A. Their balance capacity is three million. This simply refers to generating capacity, distinguishing between coal gas and water gas. It is not the capacity of the works as a whole, no matter what the returns may say.

Q. And from your knowledge as a gas engineer, of the way such reports are made, would you consider it safe to take a statement of that kind as the balance capacity of work in making any computation on which you are to depend?

A. Not unless it was stated specifically. These returns are interpreted in different ways by different men, and I have no doubt that some of those returns appear as the Worcester report appears, and others will appear as the balance capacity, but generally I think you will find the companies put in their generating capacity, especially if there is water gas and coal gas.

Q. And not their capacity in reference to other apparatus necessarily?

A. No, sir.

Q. Now, as a matter of fact, is it not necessary to have a reserve capacity as a rule beyond the real capacity of a plant, so that you cannot count on an output up to the full capacity as a working entity?

A. Certainly, you must have a reserve to take care of sudden fluctuations and accidents; where the capacity is reduced, retorts thrown out of order, a generator has to be repaired, purifier lid has to be fixed, or what not.

6924 Q. Would you think therefore that in such computation as Dr. Marks has made, taking the capacity as found stated in the report referred to would be a safe one?

A. I should say it would be valueless.

Recross-examination by Mr. **Burr**:

Q. What do you mean by the "city proper" in reference to the mains and the figures appearing on the map or chart by Dr. Marks?

A. It was not I that meant it. It was Dr. Marks, but I suppose what he meant was when you get beyond the city conditions and get out into the suburbs of a town. I thought he was taking a general condition.

Q. The city proper as a matter of fact in the City of New York would mean below 59th Street, wouldn't it?

A. I shouldn't think so any more there than anywhere else.

Q. So far as the laying of mains is concerned I mean?

A. No, sir. It is just the same above as below.

Q. I said so far as the laying of mains was concerned?

A. So far as the laying of mains is concerned it is the same. That is a crowded district up there and it is very difficult to lay mains in that district.

Q. You don't mean to say that the officers of your company have grown careless in making up their report because of this competition which you say exists in Buffalo?

A. Oh, no, not at all. We are very careful. We have got all the facts up there to a very fine point.

Q. By reason of the use of these blanks you refer to?

A. Yes, and the use of many other things. We watch those things carefully.

Q. I say they have not grown careless because of using those blanks?

A. No.

6925 Q. Now, as to what you mean by heavy and light oil; what do you understand is the difference?

A. That is rather a loose way of expressing myself. I was referring to say a 28 degree or even lower oil as compared with a 38 degree up to 40, somewhere around there.

Q. Any refined oil consists of hydrogen and carbon in combination, does it not?

A. Yes; somewhat.

Q. Is not all the carbon in a heavy gas oil in combination with hydrogen to form hydro-carbons?

A. We presume it is, although they speak of free carbon. The fact is though that in the heavy oils when you come to distill them you get compounds which are very prompt to let go their carbon and as you distill you get finally free carbon in the form of coke.

Q. A heavy gas oil has been distilled before you get it, hasn't it?

A. Yes.

Q. Isn't a heavy gas oil in which there is more carbon in combination with hydrogen than in a light oil?

A. More carbon?

Q. The carbon and hydrogen being found in any refined oil your per cent. between cannel coal and a-thracite coal, both of which contain a large percentage of uncombined carbon, has no connection with an oil in which oil the carbon has combined; that is, comparing two unlike materials?

A. It is not a good illustration. I simply used it because I wanted to meet the very inaccurate statement made by Mr. Edgerton that an oil was necessarily better for gas making because it had more carbon in it, which is not true.

Recross-examination by Mr. Kirby:

6926 Q. Don't you remember then when you were in New Orleans in 1885 and 1886 that a committee of not only the gas trustees of this Philadelphia company, of which you have spoken, but also of the Council of the City of Philadelphia, including the Mayor of the city, visited New Orleans for the purpose of examining the gas companies there and did make such examination?

A. I have no recollection. I didn't even remember I was in New Orleans in 1885. Evidently you have something which makes you think I was, otherwise I should say I was not. I might have been there.

Q. Weren't you there with a Mr. Adams?

A. I was in New Orleans with a Mr. Adams, yes, and it might have been 1885.

Q. Don't you remember at that time this joint committee from the Gas Trustees and from the Council, which included the Mayor of Philadelphia, visiting New Orleans and examining the works?

A. I have absolutely no recollection of it.

Q. You, of course, would not deny that such a committee did make such a visit for that purpose?

A. Certainly not.

Q. Are you prepared to state that over and above the amount which Mr. Edgerton obtained for royalties while he was in the employ of the U. G. I. that he did not receive a salary as chemist and engineer of that company, which at no time was less than $9,000 a year?

A. I am not prepared to state that it is not true, but I do not believe it, and I have very good reasons for thinking it was very considerably less than that. I know the arrangements made with Mr. Edgerton as I have stated were with regard to his patent and that they wanted to keep the patents under their control until they should determine what was the best patent to develop, and that determination rested upon my report.

6927 Q. Speaking of Mr. Edgerton's patents and processes, I call your attention to an illustration set down in the book issued by the United Gas Improvement Company, appearing on page 35, the year of which does not seem to be given, but on page 35 thereof, and I ask you if you will tell me what that picture illustrates—a man leaning over an apparatus with something in his hand?

A. That looks to me like a man making an ordinary test for sulphuretted hydrogen in a purifier box.

Q. Is that not a man making a test of the mixture in the water gas apparatus to ascertain whether or not there is an excess of carbon or of tar, proportioning the amount of oil?

A. Absolutely no, and I can prove it. There is a purifier house, with a recessed window to get light through without having any flame in the room, and there is the clamp coming down to clamp in underneath the water seal, and there is the edge of the water seal and there is the purifying box coming down with a square into the water seal, and you never saw one of those plants made in that form, the water gas plant. It is unquestionably the purifier box.

Q. Be that as it may, and failing to find herein an illustration which will show that which I now ask you of, is it not a fact that the method of ascertaining the proper proportion of oil in the water gas apparatus proper is not one which was devised by Mr. Edgerton and one which is in use today.

A. I am not sure whether it was devised by Mr. Edgerton, or not. I dare say it was. Mr. Edgerton is an extremely ingenious man about such things. It was used for many years in New York, and I have seen it employed there, and the method of allowing the gas to impinge upon a polished piece of steel like a trowel. 6928 Whether Mr. Edgerton was the inventor or suggestor of that scheme I don't know. As to its reliability I have very great question. It is just a good rough test by the color.

Q. And it is used today by the Consolidated Company, is it not?

A. I am not sure. I should not think so, but it might be.

I would like to put one thing on the record, if I may, Mr. Mathewson, and if I have the Master's permission. I have testified with regard to Mr. Edgerton in this matter, and myself, with very great reluctance. I have never done anything of the kind before, and it was only that I felt necessary on account of the claims he made that I so testified, and I am very sorry I had to do it.

The testimony of Clark Bell is inserted in the record at this point as per previous note .

CLARK BELL, being called as a witness on behalf of the complainant, being duly sworn, testified as follows:

Direct examination by Mr. MATHEWSON:

Q. Are you an attorney and counsellor-at-law?

A. Yes.

Q. Of the City of New York?

A. I am.

Q. How long have you been such?

A. I came here in 1864, since which I have resided here.

Q. And were you attorney for the Anthracite Gas Lighting & Heating Company?

A. Yes.

Q. And subsequently the Union Gas Light Company?

A. Yes.

Q. Have you examined certain original exhibits in this case?

A. They have been presented to me by Mr. Benedict this morning.

Mr. MATHEWSON: I have here a statement which has been 6929 prepared in order to shorten the testimony of Mr. Bell, and by consent I will read it and hand it in to be printed in the record.

(The statement alluded to by Mr. Mathewson is as follows):

The WITNESS: In summary I will say that I have examined the exhibits hereinafter mentioned, and make the following statement in reference thereto:

120. The affidavit of publication is in my handwriting. I know after refreshing my recollection from this paper, that the notice—a copy of which is contained in the exhibit—was published.

201. The signatures of Doolittle, Redfield and Osborn are genuine signatures. This paper was executed in my presence.

103. I recognize this paper. I examined it as counsel about the year 1871 as one of the warrants of title.

109. This instrument is in my handwriting. It was signed by William H. Appleton and by S. D. Law in my presence. The witnesses, George S. Appleton, and John Sickels, signed their names

in my presence. I know that at that time William H. Appleton was President of the Anthracite Gas Lighting & Heating Company of New York, and I know that S. D. Law was secretary of the Company and that the instrument was executed in pursuance of a Resolution of the Board of Directors of the said Company.

179. (Also being No. 180.) I recognize the signatures of Genet, Connolly, Fields, Tweed, Wilbour, Peter B. Sweeney, Hall and Hilton. This paper passed through my hands over thirty years ago. I also recognize the signature of James M. Sweeney.

195. This paper passed through my hands more than
6930 thirty years ago. It was prepared in my office, part of the
body of it is in the handwriting of my then law partner, Judge Edward I. Bartlett. It was executed about the time of its date.

200. I recognize the signatures of Redfield, Doolittle, Graham, Osborn and Porter. The signatures are genuine. The paper was executed in my presence and in part prepared by me. M. A. Potter, the Notary, was Managing Clerk in my office at the date of this instrument.

215. I recognize the signatures of W. Bayard Cutting, M. Bayard Brown, R. Fulton Cutting, William W. Moir, Oliver P. C. Billings, John Sickels and George Howes.

115. This instrument was delivered to me by Charles Edgar Appleby, as Receiver, more than thirty years ago.

145. I know that John J. Bradley customarily acted as attorney in fact for James M. Sweeney. I dealt with him as attorney in fact for Sweeney.

156. Parts of this instrument are in my handwriting. It passed through my hands over thirty years ago.

151. Parts of this instrument are in my handwriting. It passed through my hands over thirty years ago.

188. I know that at the date of this instrument Robert M. C. Graham was President of the Union Gas Light Company and John Sickels was Secretary of the same Company. I was attorney for that Company. I know that the grantors—Foster, Townsend, Turney, Bacon, Appleby, Porter and Young—constituted and acted as an Executive Committee under Chapter 944 of the Laws of 1871. I superintended the execution of this instrument and recognize the
signatures of Appleby and Porter. I saw President Graham
6931 and the Secretary Sickels sign the instrument. That was
over thirty years ago.

196. Parts of this instrument are in the handwriting of Judge Bartlett, who was my law partner at that time. I saw this instrument over thirty years ago.

161. I recognize the signature of A. Oakey Hall. It is his signature.

142. The alteration striking out the word "William" and in writing the word "Henry" was made by me before execution of this instrument.

144. The words "Hugh Smith" were struck out by me in three

places and the words "James M. Sweeney" were written in their places by me before execution and with the authority of the grantor.

165. The William Johnston who signed this instrument was reputed by his associates to be the same person mentioned in Chapter 944 of the Laws of 1871, as William Johnson. The alterations in the fifth and fifteenth line of that instrument in purple ink, were made before execution.

Cross-examination by Mr. **Burr**:

Q. It was prepared by Mr. Benedict?

A. It was prepared by Mr. Benedict and submitted to me, and I corrected some parts of it.

Q. Mr. Benedict of Sherman & Sterling?

A. Yes, it was stated to me that it would be shortened in that way. I have examined the exhibits.

Q. In here you purport, according to this statement, to recognize the signatures of various parties whose signatures are attached or said to be attached to the papers offered in evidence here?

A. Yes.

Q. The papers are not here?

A. Yes, I think the papers are here.

6932 Q. When did you see Bill Tweed last?

A. Along in those days.

Q. When was that?

A. About 1872.

Q. Do you mean to say now that you could recognize the handwriting of William M. Tweed?

A. Why, certainly.

Q. Did you see him write often?

A. I think so, a good many times. He was a well-known character in those days.

Q. Did you have business with him?

A. Certainly.

Q. Were you at that time the President of the Society of Medical Jurisprudence?

A. I think I was elected in 1871.

Q. It was not on that business that you saw Mr. Tweed, was it?

A. No.

Q. Your office was then at 47 Broadway?

A. My recollection is that it was about 20 Nassau Street, but I would not be sure. I think it was 20 Nassau Street.

Q. Don't you recall being on Broadway below the National Express office?

A. You are referring to 1872?

Q. I think so.

A. I think I was at 120 Broadway; first I was at 20 Nassau Street and then I went to 120 Broadway. That is my general recollection; you may correct *wrong* if I am wrong. It is a good many years ago.

Q. Did you have anything to do with the transfer of these various franchises outside of the deed which you and your wife executed?

A. I was the counsel for the company.

Q. For what company?

A. The Anthracite Gas Light and Heating Company. I conducted the negotiations and had the papers executed, transferring to the Union—I think—yes, the Union, subsequeently to the 6933 Knickerbocker; and I was counsel for all of those companies until the final sale. The papers passed through my hands as counsel. My wife had nothing to do with it.

Q. Do you mean to say that you had charge of the transfer of the franchise rights from Peter B. Sweeny and Tweed and all those other men as assignees?

A. Yes, my clients.

Q. To your clients?

A. Yes, sir.

Q. So that you saw them sign the papers yourself?

A. Many of them I did, but every one of them had to pass me as counsel before I would accept them.

Q. You have read this statement correctly, have you?

A. I did not prepare that. First I examined the papers and then I modified his statement. It is not drawn exactly as I would have drawn it, and it was done to shorten it, as I understand. If you will refer to any one you will see.

Q. Do you recognize the signature of William H. Appleton?

A. Yes.

Q. Who was he?

A. He was the president of one of the companies.

Q. And S. D. Law?

A. S. D. Law was the secretary.

Q. Did you know Connolly, the treasurer?

A. Certainly.

Q. You say that as if you were an intimate friend?

A. Well, I was before his misfortune came upon him. Dick Connolly was as good a man as there ever was in this town, and a very good fellow, by the way, and from an elegant family.

Q. Now, you have made a statement here with regard to the affidavit of service. What calls that to your recollection?

A. If you will show me the exhibit; it is numbered there, isn't it?

Q. You also recognize the signature of A. Oakey Hall?

A. Yes.

6934 Q. Still another particular friend?

A. He was, indeed; I was very intimate with him years ago. He was Mayor of this city, if you remember; a prominent man here.

Q. Who was your law partner at that time?

A. Edward T. Bartlett, now of the Court of Appeals.

Q. Was he also the attorney?

A. I seee his handwriting in some of these papers, where I had him to assist me in the work.

Q. I notice in this Complainant's Exhibit 20, marked in the corner is 89½ B. & C. Does that refer to you, that B?

A. I do not know, I recognize this paper. It is a general release. The signature is that of my managing clerk.

Q. Mr. Potter?

A. M. A. Potter was my managing clerk. The body of that is in his handwriting, and the signatures are those of men that I know, Osborne, Doolittle, and Redfield. I recognize the handwriting and they signed that in my presence.

Q. I will call your attention to the affidavit of publication, Complainant's Exhibit 120, purporting to be proofs of publication in compliance with the State grant. Do you recognize that paper?

A. Yes, I do.

Q. And in whose handwriting is that?

A. I do not know. The first page I do not recognize. The affidavit is in my handwriting; William Foster, Jr's. signature.

Q. Do you know that he swore to it?

A. He signed it in my presence.

Q. Is this his signature?

A. Yes, and he swore to it. I will not say I was present when he swore to it, but I have no doubt I was. That is his handwriting and mine.

6935 Q. Do you know the notary, James Klein, notary public, King's County? Do you recognize his signature?

A. I cannot swear to that. I do not remember that I know him. This transaction was a great many years ago. I do not know that I knew Mr. Klein at that time. What is the date?

Q. May 20, 1878.

A. I do not recognize it now, and I do not remember James Klein; very likely I knew him, but I do not remember now.

Q. You do not know when William Foster swore to this affidavit?

A. Oh, yes, I do.

Q. You say you were not present?

A. I did not say I was not. I say I probably was. There is no doubt it was sworn to about the date that it bears date.

Q. And that is his signature?

A. Yes.

Mr. MATHEWSON: Mr. Forstall, will you take the stand.

Mr. BURR: I notice Mr. Mathewson has called Mr. Forstall although he finished with him on his rebuttal and gave all the testimony that was necessary. It is rather a surprise to call Mr. Forstall at this hour for something else, and I object to it. Our time has been limited; we have been held down to a very narrow and limited margin of time, and to call Mr. Forstal again——

The MASTER: I cannot pass on the objection until I see what he is going to ask him. Mr. Mathewson stated last night he would have fifteen minutes of odds and ends today. This may be an odd or an end.

Mr. MATHEWSON: My examination won't exceed five minutes with this witness, and all the rest I have won't take more than five minutes. This rose from something that came up this morning. Fortunately, I was able to answer it.

6936 Mr. BURR: Then this was not one of the odds and ends you referred to yesterday?

Mr. MATHEWSON: No, but I think we can include it in the same time.

Alfred E. Forstall recalled on behalf of complainant in rebuttal.

Direct-examination by Mr. **Mathewson**:

Q. You heard the testimony this morning and the suggestion of counsel in regard to the Danbury tests, that while the test was 32.95 or such a matter with a two-foot burner, yet if a test of such gas as that were made with a large burner it might or would show 44 candle power. As a matter of fact, have you recently made a test in Danbury with a larger burner, say a No. 6 Bray?

A. I have.

Mr. **Page**: This is objected to. I don't know really what relevancy and materiality it has in the case. The statement he is called upon to testify regarding is certainly something brought out by their own witnesses. If they are going to rebut their own testimony we will keep on for some time yet.

Mr. **Mathewson**: It was a statement in Mr. Edgerton's letters to Mr. Bradley upon which an interpretation had been placed by you.

Mr. **Page**: And it was brought out originally by your own cross-examination. I think you asked the question.

The **Master**: Has anbody found yet the page at which this Danbury testimony first came into the case? Nobody had a memorandum of it yesterday, and I was not able to find it.

6937 Mr. **Mathewson**: You will remember that after examining Dr. Humphreys, Mr. Kirby threw down the paper as of no value because the tests there, he said, were made with a two-foot burner or something like that, and the suggestion if a larger one had been used 44 candles would have been found.

The **Master**: It is not a question of what the point is. It is a question whether this is proper rebuttal or not. I want to see this matter in which this Danbury correspondence first came up.

Mr. **Mathewson**: I don't think there is any dispute, Mr. Master, about that.

The **Master**: There wasn't any dispute about it yesterday, and I acted accordingly, but I would like, for my own satisfaction, to see it.

Mr. **Mathewson**: If you have a copy of the cross-examination of Mr. Edgerton I think I can find it here in short order.

Mr. **Page**: Mr. Mathewson, as I remember, asked him if he had not written some letter.

Mr. **Mathewson**: To somebody in Maryland, and he said, no, he had not, but he had sent certain papers to Mr. Bradley, who was then ill. It was a voluntary statement. I did not ask him about it at all, and even though I did, I think it would be competent to use papers that he was the author of to rebutt his theories.

The **Master**: Well, I seem to be unable to find it here, now, so I will overrule the objection. I don't know whether it is proper or not, and I cannot find the reference. An exception may be noted. That will serve the interests of both sides.

6938 Mr. **Mathewson**: Very good. I will take it in that way.

Q. What burners did you use in those tests at Danbury, and have you a statement showing the results of the tests?

A. I used the number 6 low pressure Bray Union jet burner to obtain the candle power, with a consumption at the rate of five cubic feet per hour. Then for comparison I used three burners that were obtained from the office of the gas company in Danbury, such as they give out, and all being those that they give out to their customers. One of these was a lava tip batwing burner, unchecked, without any name or mark on it; another was a Stewart Special Union jet, marked H, which was checked; the third was a No. 3 Bray Regulator Union jet, which had no check, but with wire gauze in the base and muslin just below the tip, and I have a table showing the results of those tests.

Q. Is this it?

A. It is. The results are as follows:

TESTS OF CANDLE POWER OF DANBURY GAS.

Made Jan. 11th, 1907.

No. 6 Low Pressure Bray Union Jet Burner, with a consumption at the rate of 5 cu. ft. per hour. The flame was just on the point of smoking and did smoke with the slightest draft. While the flame in this condition gave the greatest efficiency, it was not a flame that could be used commercially.

1st test	3:25 P. M.	36.6 candles.
2nd test	5:45 P. M.	34.5 candles.

Several other tests were made with the same burner, but were not considered because the candles did not burn 40 grains within the proper time limits.

6939 TESTS OF BURNERS OBTAINED FROM THE OFFICE OF THE GAS CO.

Name of burner.	Rate of consumption cu. ft. per hour.	Candle power of flame.	Candle power for —	
			1 ft.	5 ft.
Lava Tip Batswing Burner Unchecked. No name nor mark	1.96	12.48	6.37	31.85
	2.21	14.52	6.57	32.85
Steward Special Union Jet H. Checked	2.6	16.69	6.42	32.10
No. 3 Bray Regulator Union Jet. No check, but with wire gauze in the base and muslin just below the tip.	3.95	28.07	7.11	35.55

These results are all uncorrected for temperature and pressure. The temperature was from 68 degrees to 70 degrees, and the barometer 29.5 inches.

Cross-examination by Mr. **Kirby**:

Q. You have made no test with Danbury gas which, with the first burner set down in this schedule, lava tip batwing burner, unchecked, would have produced a candle power or flame of 14, have you?

A. No, sir. I came pretty close to it. On the second test, as put down in that table.

Q. But in that you showed 2.21 feet of gas, as against 1.96?

A. Yes.

Q. Are you aware that at Danbury during the time of this test a new apparatus had just been installed and had not as yet got down to what you would call proper working order?

6940 A. I had no knowledge—I have no knowledge of conditions at the Danbury works.

Q. Have you ever made any tests with your third kind of burner, No. 3 Bray Regulator Union jet, which, with the number of cubic feet burned, would give a candle power of 33?

A. No.

Q. Are you prepared to state what the candle power for five feet would be if using your third burner and burning 3¼ feet you got a candle power of 33?

A. I am not prepared to state exactly, but I tried to get that burner burning the quantity of gas at which it seemed to me to give the best flame, and then took the test at that and I think that if I ran it up to 33 candles it would have shown lower than it did under this test with that gas.

Q. Are you not aware that the gas as tested by you at this time was below the standard required at Danbury?

A. I am not. I have information that it was a little higher than it had been before.

Q. What do you mean by before?

A. Well, a week before.

Q. All companies, I presume, fall below standard at times, do they not?

A. No, I won't say that.

Q. I call your attention for instance to Fall River, where it says candle power, number of inspections made, 52; candle power averaged 20.09, highest 24.01; lowest, 18.9. That shows a fluctuation of 5.3 candle power? Does it not?

A. It shows a fluctuation, but doesn't show they fall below the standard.

Walter R. Addicks, recalled in rebuttal, testified as follows:

By Mr. **Mathewson**:

Q. Testimony has been inserted by the defendant in reference to charge for gas at Syracuse, seventy-five cents, and various 6941 other cities in New England. Have you prepared a schedule showing the price charged in each city of this State?

Mr. **Burr**: I object to this, I do not think that is proper at this time. To recall Mr. Addicks and present a lot of charts and figures on them that we know nothing about.

Mr. **Mathewson**: It is not a lot of charts.

Mr. **Burr**: Or give a lot of testimony at this time when our understanding was that he had finished with them in rebuttal the other day, and we have all acted upon that assumption.

The **Master**: I will allow it.

Mr. **Burr**: I except.

Q. Is that it?

A. Yes, sir.

Q. Does this show, in accordance with the lines at the top 50 cents, one dollar, $1.50, $2.00, and $2.50?

A. It does.

Q. The unbroken lines represent the cost per thousand feet, up to $2.50?

A. Yes.

Mr. **Page**: Was this not produced at the hearing before the Com*imss*ion?

The **Witness**: This is not the same.

Mr. **Page**: I think it is the same thing.

Q. What do the broken lines indicate?

A. They indicate the price of gas for fuel.

Mr. **Page**: What is this supposed to rebut?

Mr. **Mathewson**: Testimony that was put in affecting prices at Lynn, Boston, Syracuse, and one thing and another.

Mr. **Burr**: I object to it on that statement.

6942 Mr. **Mathewson**: Also from Brown's directory, various information.

Mr. **Burr**: One moment until I get a ruling on my objection. This purports to be a statement regarding cities in the state of New York?

Mr. **Mathewson**: Yes, that is to say, outside of Greater New York, and outside of the Westchester Lighting Company, of which the Consolida-ed Gas Company owns the stock.

Mr. **Burr**: That is for the year 1906, and have no relation to conditions existing in Massachusetts that have been referred to.

Mr. **Mathewson**: Haven't you quoted the -ports for the year 1906—a dozen of them?

The **Master**: It would not be proper rebuttal of the testimony given in regard to these Massachusetts cities.

The **Witness**: You will see that that 1906 refers to Brown's Directory of 1906.

The **Master**: Are these alike, these two?

The **Witness**: Exactly.

Mr. **Burr**: This is a long chart containing a mass of figures, and we are to end this hearing within a couple of hours. I submit that it is unfair and improper, and I object to it.

The **Master**: The question is whether it is proper rebuttal or not; the other questions have no bearing at this time.

Mr. **Mathewson**: They introduced testimony showing that the price at some cities is so and so, and we introduce a chart of the

State of New York showing charges of other cities in the State of New York.

The **Master**: That is all right. I recall that Mr. Bemis 6943 or somebody else did bring in something about Syracuse and some other towns mentioned here. Of course, that evidence was received and allowed to go in, although it was very doubtful materially anyway; but we had that all out early in the case, about different conditions in different cities, and we concluded that we would let it in, and a lot of it went in, but evidently this table is not rebuttal in any sense, except as it refers to something referred to in the defense; and in reference to something shown here about the price of gas in Syracuse, you cannot come in here and rebut with the price of gas in Geneseo.

Mr. **Mathewson**: Let me ask this question, not necessarily to be answered. If upon their case they bring in the price of gas charged in certain cities as an argument against our charging a certain price here, and if they bring in Brown's Directory and statistics of Dr. Marks and others, must we be excluded unless we go to those same cities, or unless we bring in figures showing how in other cities near home the price is fixed according to authority?

The **Master**: I will hold that it is not rebuttal of anything put in on the defense.

Q. I will ask one or two more questions. These lines represent the gross charges, do they not, and there are in some instances deductions for prompt payment?

Mr. **Burr**: I object to that as incompetent, irrelevant and immaterial.

Mr. **Page**: This is being received under the ruling.

6944 A. There are some in which only the net charges are shown.

Q. And Syracuse appears at 95 cents, which Professor Bemis testified was the price fixed by the Commission. Was the candle power fixed in the same order of the Commission?

A. Not less than 18 candles.

Mr. **Mathewson**: I will ask to have this marked for identification, if the Master excludes it.

The **Master**: I exclude except as stated.

The chart referred to is marked for identification, Complainant's Exhibit 395.

Mr. **Mathewson**: I called attention this morning to the fact that in spite of the directions of their own counsel, as I understand it, we have been unable to get access to reports of the New York State Gas Commission, by which we might present evidence if we saw fit touching some points upon which certain reports were here produced by the Secretary of the Commission; and I do not know as it is essential to put in the correspondence to prove that fact. Perhaps counsel on the other side know it sufficiently, so that it is not necessary.

Mr. **Burr**: I have not the slightest idea myself to what you are alluding.

The **Master**: I recall it.

Mr. **Burr**: I mean as to the correspondence.

Mr. **Mathewson**: Correspondence between Dr. Humphreys representing the complainant and the Gas Commission by its secretary, in reference to examining the reports of various companies filed with the Commission regarding the charges for oil and one or two points respecting which Mr. Hazard testified, and produced here reports of some few companies.

6945 Mr. **Burr**: Do you claim that in any way changes the testimony of Mr. Hazard?

Mr. **Mathewson**: No, but we have had no opportunity to see these very reports in order to present anything that came from them.

(Here Mr. Mathewson refers to page 5017 of the record and quotes therefrom).

We have been trying to see them, but have not been able to, and of course now we cannot see them, and I merely make this *settlement* in order to explain why they have not received attention.

Mr. **Burr**: You remember the testimony of Dr. Humphreys with regard to certain information which he got from the companies; he had no difficulty in getting all the information which he wanted, not only from superintendents but men higher up than superintendents.

Mr. **Mathewson**: We are talking about the Gas Co*mi*m*ss*ion.

Mr. **Burr**: I say, outside of the records of the Gas Commission the complainant could readily find the information which they *so-rt*.

Mr. **Page**: The attitude, as I found it, seems to be that Mr. Hazard having allowed me to look at this as a matter that was brought up before the commission, they have taken the ground, which I think is entirely un*ad*justifiable and told them so, that they were confidential communications from the gas company to them, and not public records.

I told them distinctly just what I had said here and I forced them to give me the copies of the papers, and I had quite a time over that.

6946 Mr. **Burr**: And those copies I understand are given to Mr. Mathewson?

Mr. **Mathewson**: That is all right. That is not what we are talking about. There are others in which Mr. Hazard admitted that four cents or more was paid for oil without specifying, of course, the quality of oil. I will simply say this: If they were confidential documents and their representatives appeared for them here, they being defendants in this case and represented by counsel here, it does seem to us a remarkable proposition that they should exclude us from an examination of the papers; but more than that, if they were confidential, why was this report from Buffalo, upon which Dr. Humphreys has been examined, delivered over to the experts for the other side?

Mr. **Burr**: That did not occur, and that is not the fact. We got that report from the city attorney of Buffalo.

The **Master**: Gentlemen, you have said enough on the record to make your point and I cannot do anything about it.

Mr. MATHEWSON: No, I do not think it is necessary to offer the letters. Mr. Page's statement is very fair about it, and he has acted in the utmost good faith about it, as I would know he would. Now, we have to do the best we can at this time. The question is raised as to the candle power up the State and as to the character of oil that was used, and I now read upon the record in this connection a quotation from the report of the Commission of Gas and Electricity which I have from Mr. Hazard secretary of the Commission as follows:

6947 Mr. BURR: What is this?

Mr. MATHEWSON: It is the current report, it is marked at the top: "To be released for Tuesday Morning Newspapers, January 29, 1907," and sent to us from the commission.

Mr. BURR: I object to it as incompetent, irrelevant and immaterial.

The MASTER: I do not think that is important, I do not think it is material, and I do not think it is competent. I suppose the report will come out in the fullness of time and you can cite from it on your brief as a public document.

Mr. MATHEWSON: Perhaps so, but I think if the Master thinks I am mistaken I shall take the chance and put it in.

The MASTER: All right, I think you are mistaken.

Mr. MATHEWSON: There is no doubt that that is a copy of the report? You do not question that?

Mr. BURR: I dont' know anything at all about it.

Mr. MATHEWSON: I will ask Mr. Addicks, then, I can prove it.

The MASTER: It comes on the paper of the company signed by the secretary, but, if that was to be released some days ago, why has it not appeared in the newspapers?

Mr. MATHEWSON: It has appeared, some days ago. You do not question that this is a copy of the report?

Mr. BURR: I do not doubt that that was written by Mr. Hazard, and that that paper purports to be the report of the Gas Commission about to be published, or is published.

Mr. MATHEWSON: It has been published.

6948 Q. Mr. Addicks, you are still on the stand; is this a copy of the report which was sent to you by the secretary of the Commission?

A. Yes, I sent and got such report with such memorandum on it. I had one of the others.

Q. And this is what you received from the secretary of the Commission?

A. I received that, yes.

Q. With this letter on the paper of the Commission?

A. With that attached to it, yes, sir.

Mr. MATHEWSON: I will now read into the evidence this extract.

Mr. BURR: One moment; that has been excluded.

Mr. PAGE: Yes, but taken under the ruling.

Mr. MATHEWSON: It has been excluded and it is being taken under the ruling. A great many things have been excluded, Mr. Burr, that you have put in.

"The report further shows that although gas for illuminating purposes has been supplied in this State since 1823, no regular or systematic inspection or examination has been made of the purity and illuminating value of the product supplied, except in the City of New York, until during the past year, when the Commission established a department for such purpose. Tests have already been made by order of the Commission in practically every section of the State. The result of these inspections showed that the candle power of the gas furnished was very low, and an order has been issued by the Commission, compelling all companies furnishing
15,000,000 or more cubic feet of gas annually to install an
6949 improved photometer for use in making frequent tests for
candle power. The Commission has also adopted a rule to
report results of tests to the companies in question, and to order improvements where deficiencies are discovered."

Mr. **Mathewson**: Now, I think I have only one thing more. Mr. Burr, at pages 3042 and 3044 of the testimony on behalf of the defendant, read certain extracts from the report of the committee of 1885, against my protest, as appears on the record.

Mr. **Burr**: This is the committee of which Mr. Thomas was chairman?

Mr. **Mathewson**: I think so. I merely, to conclude my case, and in order not to seem discourteous to Mr. Burr, read in evidence the following extract from the same report.

Mr. **Burr**: Why didn't you read it before? What does this rebut?

Mr. **Mathewson**: I did not have to before.

Mr. **Burr**: I think so.

Mr. **Mathewson**: Wait until I read it through and see.

Mr. **Burr**: No, it is a part of your main case.

Mr. **Mathewson**: No, you did not introduce the source from which it came. It had not been made competent until you offered the volumes, or part of it. I did not put it in until you had put it in evidence, statements and report of 1886.

Mr. **Burr**: I beg your pardon; you unintentionally misstate the facts. You offered the inventory of Mr. Rowland long before I made the original report.

Mr. **Mathewson**: No, I had the original report of Mr.
6950 Rowland from the records of the Gas Company, and not
from any book, and I merely offered them as a convenience.

Mr. **Burr**: I object to it as incompetent, irrelevant and immaterial.

The **Master**: I will take it.

Mr. **Burr**: I except.

Mr. **Mathewson** (reading): "It is apparent that a pressure necessary to carry gas to consumers at distant parts of the line would be excessive for intermediate points. As a result the gas passes through the burner faster than is desirable for economical consumption, but does not in New York under the pressure used by the company cause the meter to register gas not passing through it. It does not appear that the companies can furnish a remedy for this. It is the duty of the consumer to graduate the flow, either by the use of a governor or some regulation at the burner. Much then depends upon the care of the consumer and his fidelity to his own interests in the use of gas."

Mr. Burr: I object to that and ask to have it stricken out now on the ground that unless it is admitted by the complainants that the conditions as to mains and pressures were the same in 1885 as they were in 1905.

The Master: I will let it stand for what it is worth, and I will allow your extract to stand.

Mr. Mathewson: The complainant rests.

Mr. Burr: I have no questions to ask Mr. Addicks.

The Master: What is the next in order, gentlemen.

Mr. Burr: I desire to call Dr. Marks.

The Master: You mean in reply?

6951 Mr. Burr: Yes.

The Master: Nothing in this rebuttal calls for any reply, in my judgment. I do not think you are entitled to it. I may be wrong, if you can point out some specific matters.

Mr. Burr: For instance, take the testimony of Mr. Simpson with regard to the errors in City's Exhibit 91, I think it is. Did we explain those?

Mr. Mathewson: The schedules of Dr. Marks?

Mr. Burr: May we explain those errors and show how we arrived at the result of the number of miles of mains on the books of the company?

Mr. Mathewson: Did not Mr. Simpson explain that?

Mr. Burr: Can we not show by the production of testimony and exhibits that pipes are affected by water and by earth without any wandering electric currents, in the same manner as they are claimed to have been affected by electric currents?

The Master: No. I do not think there is any use in counsel spending any time, or for me to spend any time, in having any oral argument on any of the features of this case. I think after the draft report is filed probably all counsel will have enough criticism to pass upon it, as to which they would like to be heard, and as to which I would like to hear them, and that will give the best opportunity for oral argument and the most useful, and the argument can then be directed to a specific point.

Mr. Burr: I except to the ruling of the Master in excluding 6952 the introduction of sur-rebuttal testimony on behalf of the defendants.

I now move to dismiss the complaint of the complainant, if that is the situation, and we can offer no further evidence in sur-rebuttal, on the ground that they have failed in proving any confiscation or anything more than, assuming their own figures to be correct, a reduction in the profits which they formerly obtained, under the decision of the United States Court, in which we are. In the case of Covington & Lexington Turnpike Road against Sanford, decided at the October term, 1906, the Court held that:

"We could not say that the act was unconstitutional merely because the company could not earn more than 4 per cent. on its capital stock; it cannot be said that a corporation is entitled as of right, and without reference to the interest of the public, to realize a given per cent. upon its capital stock."

I also move to dismiss upon all the grounds set out at the close of the complainant's case.

Mr. Mathewson: Your case was a case where the capital stock had been largely inflated beyond the assets.

Mr. Burr: I had not finished. Do you rule upon that now, Mr. Master?

The Master: No.

Mr. Burr: I move to strike out again the evidence regarding which motions were made at the close of the complainant's case, and I except to the rejection of the evidence offered by the defendant. I think that that closes our case. We rest.

6953 Now, as to the next thing, the submission of findings of facts and conclusions of law. I do not understand that the practice is that the complainant will submit to you and serve upon us a copy of its proposed findings, and that thereafter we have time in which either to admit their proposed findings——

The Master: No, there is no obligation on anybody to submit any findings at all. It is merely a matter for my convenience, and if submitted there is no obligation on any party to serve on anybody else.

Mr. Burr: Now, as to the submission of briefs. Of course I need not tell you of the vast magnitude of this case and refer you to the voluminous exhibits that have been presented and have grown during the progress of the trial, but we submit that reasonable time should be allowed in which to present those briefs.

The Master: It is unnecessary to point out that I will need the briefs very badly.

Mr. Page: We have not got our record yet.

Mr. Burr: The record, I understand, will not be completed for a week or so, and that must be considered. Furthermore, the record itself has got to be corrected. It is full of inaccuracies regarding all of us, and should be corrected, and as Mr. Mathewson stated, the other day, in which I fully concur, no one can do that properly except the men who have been engaged in the trial of the action. So, in allowing time for the submission of briefs, I hope you will take those matters into consideration.

The Master: What time can counsel agree upon? That is the best way.

Mr. Burr: I would suggest 60 days.

The Master: The case will be decided before that, if I am well.

6954 Mr. Burr: We are all pretty well exhausted, physically.

The Master: I need briefs, of course, and the quicker I have the briefs, the much less labor it will be for me, and there are parts of this work that will be almost impossible for me without the assistance of counsel. I do not want to fix any time for counsel if you can, by any possibility, agree. You will remember that on the question of findings or draft report, or anything of that kind, I asked counsel along in summer to get some of their junior associates at work on them. I understood that you have had two men working on them for months, Mr. Burr.

Mr. **Burr**: But I found it impossible to do so, because it resulted in a very bad result, because this record is changing from day to day, and even to-day the last thing that the complainants did was to offer this beautiful set of charts, which may require some additional investigation on our part.

The **Master**: But they were excluded.

Mr. **Mathewson**: Yes, they were excluded. There is no need for you to bother about them.

The **Master**: What do you think, Mr. Mathewson? You have the affirmative in this case?

Mr. **Mathewson**: I concur in all that Mr. Burr says to some extent, in reference both to the ability to correct the record and the ability to do solid, accurate work through subordinates. The first is utterly impossible, and as to the second, you can get some assistance by telling what you want and having it picked out; but 6955 difficulty is to read over and see what is there, rather than to remember it and tell them to find it. I do not believe that I could put in a complete brief such as I would like to, within any time at the disposal of the Master in the case. Will it meet the Master's view if we get a brief in by March 1st? That would give, say, a month, or do you think we ought to be more expeditious than that?

Mr. **Page**: That only gives us twenty-seven days.

Mr. **Mathewson**: I am not anxious to curtail the period here within which to submit briefs. If we had time enough I should be content to accept a much longer time.

Mr. **Page**: It will take us a week to correct the record, and get it all, will it not?

Mr. **Mathewson**: I am afraid so; it has been impossible to correct it as we have been going on here.

The **Master**: Do you gentlemen intend to print your briefs?

Mr. **Page**: Yes.

Mr. **Mathewson**: Yes, I think so, as a matter of convenience.

Mr. **Page**: Suppose we have forty days; that would give us time to get up our records and briefs, after the whole thing is completed. Will that be acceptable to you?

Mr. **Mathewson**: Yes, forty days will acceptable to me if I can get it. It seems to me the Master must feel, and I suppose the Court will feel, that we are prepared to do it just as rapidly as we can.

The **Master**: I think if you have forty days that ought to be abundant without any extension. That will give you a week to 6956 get the record corrected and about a month to make up your brief and then pretty nearly a week to get it through the press and have it proof-read, if you are going to have it printed. I should be disposed to think that forty days is sufficient, and I am inclined to fix that time with the understanding that I am going to get the brief then, without any delay.

Mr. **Page**: We do not exchange briefs, as I understand it?

The **Master**: No; there is no point in that, because you will have an opportunity to be heard on the draft report, and any questions at issue can be threshed out then. I will fix a date approximately, the 14th of March; that is approximately forty days. Briefs to be submitted March 14th.

Testimony closed.

6957 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Vol. 9) pages, numbered from 6175 to 6956 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office (Vol. 9).

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circut Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

VOL. V.

TRANSCRIPT OF RECORD.

65331

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OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING THE
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YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

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THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

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APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR
THE SOUTHERN DISTRICT OF NEW YORK.

FILED MAY 16, 1908.

(21,176, 21,177, 21,178.)

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53—Description of property............	7104	4906
54—Description of property............	7105	4907
55—Description of property............	7108	4909
56—Description of property............	7109	4909
57—Description of property............	7111	4910
58—Description of property............	7113	4911
59—Description of property............	7116	4913
60—Description of property............	7118	4914
61—Description of property............	7120	4915
62—Description of property conveyed by Frederic N. Gilbert to the Astoria Light, Heat and Power Company, March 24, 1903.................	7122	4917

	Original.	Print.
Complainant's Exhibit 63—Blue print (not set out)	7124	4918
64—Section 889 of the Greater New York charter in regard to assessment of real estate for the purpose of taxation	7125	4918
65—Section 892 of the Greater New York charter in regard to assessment of real estate for the purpose of taxation	7126	4919
66—Lease of bulkheads	7127	4919
67—Lease of pier	7128	4920
68—Permit to occupy bulkhead	7129	4920
69—Permit to occupy bulkhead	7130	4921
State Exhibit A—Assessed values of real estate, 1906	7131	4922
Complainant's Exhibit 70—Schedule of appraisements and valuations of the constituent companies forming the basis of the consolidation	7134	4925
71—Status of real estate, plant, and property of the Consolidated Gas Company of New York	7278	5018
72—Extract from the special meeting of the stockholders of the Consolidated Gas Company of New York, held March 9, 1900	7279	5018
73—Certificate of increase of capital stock of the Consolidated Gas Company of New York	7279	5019
74—Extract from the minutes of a special meeting of the stockholders of the Consolidated Gas Company of New York, held July 16, 1900	7286	5022
75—Certificate of increase of capital stock of the Consolidated Gas Company of New York	7287	5023
76—Extract from the minutes of a special meeting of the stockholders of the Consolidated Gas Company of New York, held June 2, 1904	7293	5026
77—Certificate of increase of capital stock of Consolidated Gas Company of New York	7295	5027
78—Statement showing real estate, plant, property, and construction as shown in the balance sheet at November 11, 1884, and at December 31 of each of the following years	7302	5032
79—Statement showing variation in real estate, plant, property, and construction from date of consolidation, November 11, 1884, to October 31, 1905	7303	5032

		Original.	Print.
Complainant's Exhibit	80—Statement of assets and liabilities, October 31, 1905	7304	5033
	81—Statement of investments in the gas business, October 31, 1905	7306	5034
	82—Market quotations of capital stock	7307	5034
	83—Statement showing rate of dividend paid each year	7308	5035
	84—Dividends calculated at 8 per cent. and excess of 8 per cent. over dividends actually paid, 1885-1906	7309	5036
	85—Sales (by feet) during each year from November 11, 1884, to December 31, 1905	7314	5039
	86—Statement of sales, &c	7315	5040
	87—Certificate of incorporation of the Astoria Light, Heat and Power Co	7317	5042
	88—Certificate of incorporation of the National Coke and Coal Co	7321	5044
	89—Comparative condensed balance sheet	7326	5047
	90—Agency agreement between Consolidated Gas Co. and New York Mutual Gas Light Co., December 31, 1902	7327	5047
	91—Agency agreement between Consolidated Gas Co. and New Amsterdam Gas Co., December 31, 1902	7330	5049
	92—Agency agreement between Consolidated Gas Co. and Standard Gas Light Co., December 31, 1902	7333	5050
	93—Summary of operations for the nominal year ending October 31, 1905	7336	5051
	94—Summary of operations for the calendar year 1905	7337	5051
	95—Statement of income and expenses for the nominal year ending October 31, 1905	7338	5052
	96—Statement of income and expenses for the calendar year 1905	7339	5052
State Exhibit	B—Statement of securities and obligations of other companies acquired, June 30, 1906	7340	5052
	C—Report of the Consolidated Gas Co. of New York to the State Board of Tax Commissioners for year ending June 30, 1905	7341	5053
	D—Report of the Consolidated Gas Co. of New York to the State Board of Tax Commissioners for year ending June 30, 1904	7356	5064
	E—Statement of taxes for year 1905	7371	5075
	F—Statement of bonds	7372	5075
	G—Amount of gas supplied to the city of New York for the year ending December 31, 1905	7373	5076

	Original.	Print.
State Exhibit H—Statement of gas sales, 1905	7373	5076
I—Interest on bonded debt, 1905	7374	5077
J—Analysis of coke account, year 1905	7375	5077
K—Coke and screenings sold during year 1905	7376	5077
L—Repairs and renewals, November 11, 1884, to December 31, 1905	7377	5078
M—Income from securities of other companies during nominal year ending October 31, 1905	7381	5080
Complainant's Exhibit 97—Operating ledger for 1905 (not set out)	7382	5081
98—Journal of operating ledger for 1905 (not set out)	7382	5081
99—Blotter of sundry debtors' ledger (not set out)	7382	5081
100—Sundry debtors' ledger (not set out)	7382	5081
101—Agreement between the mayor, &c., of New York city and the New York Gas Light Company, May 12, 1823	7383	5081
102—Agreement between the mayor, &c., of New York city and the Manhattan Gas Light Co., May 5, 1848	7389	5085
103—Grant from the mayor, &c., of New York city to Manhattan Gas Light Co., May 8, 1833	7396	5089
104—Grant from the mayor, &c., of New York city to the Harlem Gas Light Co., April 25, 1855	7401	5092
105—Franchise of the Metropolitan Gas Light Co. of City of New York	7406	5094
106—Grant from the mayor, &c., of New York city to the Anthracite Gas Lighting and Heating Co., September 17, 1863, amended May 26, 1865	7407	5095
107—Certificate of incorporation of the Anthracite Gas Lighting and Heating Co. of New York	7410	5097
108—Certificate of incorporation of the Citizens' Mutual Gas Co. of New York	7412	5098
109—Deed from the Anthracite Gas Lighting and Heating Co. of New York to the Citizens' Mutual Gas Co. of New York, May 27, 1865	7416	5101
110—Certified copy of certificate of incorporation of Union Gas Light Co., dated October 6, 1871	7418	5102
111—Deed from Citizens' Mutual Gas Light Co. of New York to the Union Gas Light Co. of New York, dated November 22, 1871	7421	5104

	Original.	Print.
Complainant's Exhibit 112—Order in case of the People of New York *vs.* Union Gas Light Co. *et al.*, June 15, 1875	7424	5105
113—Order in case of the People of New York *vs.* Union Gas Light Co. *et al.*, July 24, 1876	7428	5108
114—Order in case of the People of New York *vs.* Union Gas Light Co. *et al.*, March 11, 1879	7432	5110
115—Deed of Charles E. Appleby, receiver of the Union Gas Light Co., to Clark Bell, dated August 10, 1876	7434	5111
116—Deed of Clark Bell to Knickerbocker Gas Light Co., dated August 22, 1876	7438	5113
117—Resolution concerning gas companies adopted by the board of aldermen of the city of New York, approved December 23, 1876	7441	5115
118—Municipal Gas Lighting Company franchise	7442	5116
119—Legislative franchise granted to Isaac P. Martin and others June 12, 1871	7449	5119
120—Proof of publication in compliance with State grant	7450	5121
121—Deed of Wm. R. Dyer to Wm. Cauldwell, dated July 31, 1871	7453	5123
122—Deed of Wm. Cauldwell to C. S. Bushnell *et al.*, dated December 29, 1871	7455	5124
123—Deed of Wm. P. Smith to Isaac P. Martin, dated June 29, 1871	7457	5125
124—Deed of Isaac P. Martin to C. S. Bushnell *et al.*, dated November 27, 1871	7459	5126
125—Deed of Edward Jones to C. S. Bushnell, dated November 25, 1871	7463	5128
126—Deed of Shepherd F. Knapp to C. S. Bushnell *et al.*, dated November 28, 1871	7465	5130
127—Deed of Wm. H. Bloom to Cornelius Corson, dated July 3, 1871	7468	5131
128—Deed of Cornelius Corson to C. S. Bushnell *et al.*, dated November 27, 1871	7470	5132
129—Deed of Joel A. Fithian to Richard B. Connolly, dated July 6, 1871	7472	5134
130—Deed of Richard B. Connolly to C. S. Bushnell *et al.*, dated November 25, 1871	7474	5135

		Original.	Print.
Complainant's Exhibit	131—Deed of Walter Smith to C. S. Bushnell *et al.*, dated Nov. 28, 1871...	7477	5136
	132—Deed of Joseph Murphy to Forbes Holland, dated July 13, 1871....	7479	5138
	133—Deed of Forbes Holland to C. S. Bushnell *et al.*, dated November 25, 1871......................	7481	5139
	134—Deed of Edward Taylor to Wm. M. Tweed, Jr., dated July 3, 1871...	7484	5140
	135—Deed of Wm. M. Tweed, Jr., to C. S. Bushnell *et al.*, dated November 27, 1871......................	7486	5141
	136—Deed of John E. Cronley to Alexander Frear, dated July 18, 1871.	7488	5143
	137—Deed of George H. Wicks to Alexander Frear, dated November 24, 1871.........................	7490	5144
	138—Deed of Alexander Frear to C. S. Bushnell *et al.*, dated November 24, 1871......................	7492	5145
	139—Deed of Joseph G. Jennings to Charles Banks, dated June 28, 1871.........................	7494	5146
	140—Deed of Charles Banks to C. S. Bushnell *et al.*, dated November 25, 1871...	7496	5147
	141—Deed of Henry Johnson to Wm. Hitchman, dated November 24, 1871.........................	7499	5149
	142—Deed of Wm. Hitchman to C. S. Bushnell *et al.*, dated November 25, 1871......................	7501	5150
	143—Deed of Edward J. Shandley to C. S. Bushnell *et al.*, dated November 25, 1871................	7503	5151
	144—Deed of John C. Angell to James M. Sweeney, June 21, 1871......	7506	5153
	145—Deed of James M. Sweeney to C. S. Bushnell *et al.*, dated November —, 1871...................	7507	5154
	146—Deed of Wm. Vail to Thomas C. Fields, dated June 14, 1871......	7512	5156
	147—Deed of Patrick Quinn to Thomas C. Fields, dated June 14, 1871...	7514	5157
	148—Deed of Wm. H. Murphy to Thomas C. Fields, dated June 14, 1871.........................	7516	5159
	149—Deed of Wm. Higgins to Thomas C. Fields, dated June 26, 1871...	7518	5160
	150—Deed of John H. Johnston to Thomas C. Fields, dated June 14, 1871......................	7521	5161

	Original.	Print.
Complainant's Exhibit 151—Deed of George Chivvis to Thomas C. Fields, dated July 6, 1871....	7523	5163
152—Deed of Thomas C. Fields to C. S. Bushnell *et al.*, dated November 25, 1871........................	7525	5164
153—Deed of Richard Vaughan to George L. Loutrel, dated July 3, 1871...........................	7528	5165
154—Deed of George L Loutrel to C. S. Bushnell *et al.*, dated November 25, 1871........................	7529	5166
155—Deed of Andrew J. Smith to C. S. Bushnell *et al.*, dated November 25, 1871........................	7532	5168
156—Deed of Henry A. Smith to C. S. Bushnell *et al.*, dated November 6, 1871........................	7534	5169
157—Deed of Joseph Bell to C. S. Bushnell *et al.*, dated November 25, 1871...........................	7538	5171
158—Deed of John J. Walsh to C. S. Bushnell *et al.*, dated December 30, 1871........................	7540	5173
159—Deed of Delavan Peck to C. S. Bushnell, dated November 27, 1871...........................	7543	5174
160—Deed of Thomas T. Avery to A. Oakey Hall, dated June 29, 1871.	7545	5175
161—Deed of A. Oakey Hall to C. S. Bushnell *et al.*, dated June 29, 1871...........................	7547	5177
162—Deed of John Balmore to C. S. Bushnell *et al.*, dated November 27, 1871........................	7549	5178
163—Deed of James S. Turner to Wm. M. Tweed, dated July 3, 1871...	7551	5179
164—Deed of Wm. M. Tweed to C. S. Bushnell *et al.*, dated July 31, 1871...........................	7553	5180
165—Deed of Wm. Johnston to John Ryan, dated December 16, 1871.	7556	5181
166—Deed of John Ryan to C. S. Bushnell *et al.*, dated December 18, 1871...........................	7559	5183
167—Deed of Henry S. Murray to Peter B. Sweeney, dated July 3, 1871..	7561	5185
168—Deed of Peter B. Sweeney to C. S. Bushnell *et al.*, dated July 3, 1871...........................	7563	5186
169—Deed of Peter H. E. Baxter, Jr., to Henry W. Genet, dated June 16, 1871........................	7566	5187

	Original.	Print.
Complainant's Exhibit 170—Deed of Henry W. Genet to C. S. Bushnell *et al.*, dated November 28, 1871	7567	5188
171—Deed of John Cox to C. S. Bushnell *et al.*, dated November 25, 1871	7570	5189
172—Deed of John J. Turner to Wm. E. King, dated July 3, 1871	7572	5191
173—Deed of Wm. E. King to James F. Pierce, dated June 12, 1871	7574	5192
174—Deed of James F. Pierce to C. S. Bushnell *et al.*, dated November 25, 1871	7576	5193
175—Deed of Edgar Brower to Charles E. Wilbour, dated July 3, 1871	7578	5194
176—Deed of Charles E. Wilbour to C. S. Bushnell *et al.*, dated November 27, 1871	7580	5195
177—Deed of Charles E. Loew to C. S. Bushnell *et al.*, dated November 25, 1871	7583	5197
178—Deed of Mathew T. Brennan to C. S. Bushnell *et al.*, dated November 25, 1871	7585	5198
179—Resignations of executive committee	7587	5199
180—Same as No. 120 (not set out here)	7589	5200
181—Deed of Cornelius S. Bushnell *et al.* to William Foster, Jr., dated February 14, 1874	7589	5201
182—Deed of Cornelius S. Bushnell *et al.* to Eben F. Bacon, dated February 14, 1874	7592	5202
183—Deed of Cornelius S. Bushnell *et al.* to James M. Townsend, dated February 14, 1874	7594	5204
184—Deed of Cornelius S. Bushnell *et al.* to Samuel J. Young, dated February 14, 1874	7597	5205
185—Deed of Cornelius S. Bushnell *et al.* to Charles E. Appleby, dated February 14, 1874	7600	5207
186—Deed of Cornelius S. Bushnell *et al.* to Paschal W. Turney, dated February 14, 1874	7602	5208
187—Deed of Cornelius S. Bushnell *et al.* to Henry H. Porter, dated February 14, 1874	7605	5210
188—Deed of Wm. Foster, Jr., *et al.* to the Union Gas Light Co., dated February 25, 1874	7608	5212
189—Deed of Wm. Foster, Jr., to Robert M. C. Graham, dated December 5, 1876	7614	5215

		Original.	Print.
Complainant's Exhibit	190—Deed of Eben F. Bacon to John Sickels, dated December 5, 1876.	7617	5217
	191—Deed of assignment from James M. Townsend to Jared E. Redfield, dated December 7, 1876........	7619	5218
	192—Deed of Sam'l J. Young to George Howes, dated December 5, 1876.	7622	5220
	193—Deed of Charles E. Appleby to Tilton E. Doolittle, dated December 4, 1876........................	7624	5221
	194—Deed of Wm. Foster, Jr., *et al.* to Walter Osborn, dated December 7, 1876........................	7627	5222
	195—Resignation of the outgoing members of the executive committee holding under laws of New York, dated December 5, 1876.........	7631	5225
	196—Request and consent of the Union Gas Light Company, dated December 11, 1876................	7632	5225
	197—Deed of Charles E. Appleby, receiver, to Clark Bell, dated August 10, 1876..................	7635	5227
	198—Agreement of Robert M. C. Graham *et al.* with the Knickerbocker Gas Light Company, dated December 11, 1876	7638	5229
	199—Consent of the Knickerbocker Gas Light Company, dated May 20, 1878........................	7645	5233
	200—Resignation of the outgoing members of the executive committee, dated May 20, 1878...........	7647	5234
	201—General release from Walter Osborn *et al.* to Knickerbocker Gas Light Company, dated May 20, 1878...	7648	5235
	202—Consent to transfer State grant from Knickerbocker Gas Light Company to Wm. Bayard Cutting *et al.*, dated March 11, 1880.....	7650	5236
	203—Deed of Jared E. Redfield to Wm. W. Moir, dated May 20, 1878...	7653	5238
	204—Deed of Tilton E. Doolittle to Oliver P. C. Billings, dated May 20, 1878........................	7655	5239
	205—Deed of Robert M. C. Graham to M. Bayard Brown, dated May 20, 1878........................	7658	5240
	206—Deed of Henry H. Porter to Robert F. Cutting, dated May 18, 1878..	7660	5242
	207—Deed of Walter Osborn to Wm. Bayard Cutting, dated May 20, 1878.........................	7663	5243

	Original.	Print.
Complainant's Exhibit 208—Deed of Wm. W. Moir to Charles G. Francklyn, dated March 8, 1880	7664	5244
209—Deed of Oliver P. C. Billings to Philip Allen, dated March 8, 1880	7667	5246
210—Deed of M. Bayard Brown to Henry Day, dated March 11, 1880	7669	5247
211—Deed of Robert F. Cutting to H. E. Gawtry, dated March 11, 1880	7671	5248
212—Deed of Wm. Bayard Cutting to O. Ottendorfer, dated March 11, 1880	7674	5250
213—Deed of George Howes to S. C. Thompson, dated March 11, 1880	7676	5251
214—Deed of John Sickels to Peter Gardner, dated March 10, 1880	7678	5252
215—Resignation of executive committee under State grant, dated March 11, 1880	7681	5254
Clerk's certificate to volume 1 of exhibits	7682	5254
State's Exhibit N—(Not set out)	7682*c*	5256
O—National Coke and Coal Co.—Summary of operations, year 1905	7682*c*	5256
P—Statement of coke produced, used in manufacture, and produced for sale, all stations, Consolidated Co., year 1905	7685	5259
Q—Balance sheet, December 31, 1903	7688	5261
R—Balance sheet, December 31, 1904	7689	5261
S—Balance sheet, December 31, 1905	7690	5261
Complainant's Exhibit 216—Chapter 736, An act in relation to the price of illuminating gas furnished or sold to the city of New York and providing a penalty for violation; accepted by the city; became a law June 3, 1905	7691	5262
217—Chapter 125, An act in relation to illuminating gas in the city of New York, and regulating the quality and pressure thereof and the price to consumers other than said city, and providing a penalty for violation; accepted by the city; became a law April 3, 1906	7692	5263
218—Laws of 1897, chapter 385, An act to regulate the price of illuminating gas in cities of fifteen hundred thousand inhabitants; became a law May 7, 1897	7694	5264
219—Notice from the Commission of Gas and Electricity to Consolidated Gas Co. of New York *et al.*, dated November 8, 1905	7696	5265

	Original.	Print.
Complainant's Exhibit 220—Notice from the Commission of Gas and Electricity to Consolidated Gas Co. of New York *et al.*, dated November 8, 1905	7702	5269
221—Order of the Commission of Gas and Electricity in the matter of the complaint of Edward C. Keys *et al.*, dated February 23, 1906	7709	5274
222—Statement of rentals received by Consolidated Gas Co. (not set out here)	7712	5275
223—Statement showing difference between investment, as shown by ledger accounts, and values stated in franchise tax reports, June 30, 1904	7713	5276
State's Exhibit T—Sheets of statements of station expenses by months for 1905 (not set out here)	7714	5277
U—Tax receipts for year 1905	7715	5277
V—Statement of expenditures, &c.	7723	5278
Complainant's Exhibit 224—Statement of miscellaneous income, 1905	7726	5281
225—Extract from affidavit of Robert A. Carter	7726	5281
226—Extract from affidavit of Robert A. Carter	7729	5283
228—Extract from affidavit of Walton Clark	7733	5285
229—Extract from affidavit of Emerson McMillin	7733	5285
229*a*—Statement of sales of gas made at Consolidated and outside companies for the four months ending October 31, 1905	7736	5287
230—Extract from affidavit of Allen B. Forbes	7736	5287
231—Extract from affidavit of Chas. S. Fairchild	7737	5287
232—Extract from affidavit of Frank A. Vanderlip	7737	5288
233—Extract from affidavit of Horace J. Morse	7738	5288
234—Extract from affidavit of N. Wetmore Halsey	7738	5288
235—Summary of Astoria estimates, &c.	7739	5289
236—Certificate of deputy and acting comptroller, July 6, 1904	7742	5291
237—Notice of State Board of Tax Commissioners to the department of taxes and assessments, New York city, March 28, 1906	7742	5291
238—Section 522 of charter of Greater New York (not set out)	7743	5292

	Original.	Print.
Complainant's Exhibit 239—Chapter 651 of Laws of 1866 (not set out)	7743	5292
97—Ledger (not set out)	7743	5292
240—Record of materials used, &c., 1905 (not set out)	7744	5292
241—Record of materials used, &c., 1905 (not set out)	7744	5292
242—Record of materials used, &c., 1905 (not set out)	7744	5292
243—Record of materials used, &c., 1905 (not set out)	7744	5292
244—Record of manufacture of station for 1905 (not set out)	7744	5292
245—Record for 1905 (not set out)	7744	5293
246 and 247—Portions of sundry debtors' blotters (not set out)	7745	5293
100—Portions of sundry debtors' ledger (not set out)	7745	5293
248 and 249—Portions of sundry debtors' blotters (not set out)	7745	5293
250, 251, and 252—Portions of sundry debtors' ledger, &c. (not set out)	7745	5293
253—Trial balance sheet (not set out)	7745	5293
254—Record of gas sales (not set out)	7745	5293
98—Journal, 1905 (not set out)	7745	5293
255—Statement of gas made under agency agreements for November and December, 1905	7746	5293
City's Exhibit 31—Summary of the accounts of the constituent companies of the Consolidated Gas Light Company of New York	7747	5293
32—Correspondence about contract for cast-iron rental ranges	7748	5294
33—Correspondence about contract for gas ranges	7751	5296
34—Book called "Vouchers Audited, Contracts" (not set out)	7753	5297
35—Statement of stations, &c	7754	5298
36—Statement of gas made by other companies for year ending October 31, 1905	7756	5299
37—14th Street Station Works, Labor account	7757	5300
38—42d Street Station Works, Labor account	7758	5301
39—44th Street Station Works, Labor account	7759	5302
40—99th Street Station Works, Labor account	7761	5303
41—14th Street Station, Analysis of increase of cost, &c	7762	5304
42d Street Station, Analysis of increase of cost, &c	7763	5305
21st Street Station, Analysis of increase of cost, &c.	7764	5306
44th Street Station, Analysis of increase of cost, &c	7766	5307
99th Street Station, Analysis of increase of cost, &c	7767	5308

		Original.	Print.
City's Exhibit	42—Prices of meters and discounts allowed	7769	5310
	43—Answers to questions asked before the gas commission on December 11, 1905	7770	5310
	44—Plant and operations for the nominal year ending October 31, 1905	7771	5312
	45—Statement of gas made for Consolidated under agency agreements, net, for months of November and December, 1905 (not set out)	7789	5325
Complainant's Exhibit	227—Report of special committee of the senate to investigate lighting companies, March 1, 1886	7790	5325
City's Exhibit	1—Paper quoted from by witness Colin C. Simpson (not set out)	7890	5389
	2—Bid on estimate of Consolidated Gas Co. for furnishing gas, &c , to city of New York for year ending March 15, 1905	7899	5389
	2*a*—Contract of Consolidated Gas Co. for furnishing gas, &c., to city of New York for year ending March 15, 1905	7911	5396
	4—Bid or estimate of Consolidated Gas Co. for furnishing gas, &c., to city of New York for period ending December 31, 1905	7964	5426
	5—Bid or estimate of Welsbach Street Lighting Co. for furnishing gas, &c., to city of New York for year ending March 15, 1905	7979	5435
	5*a*—Proposals for bids for gas and naphtha lamps, &c., for year ending March 15, 1905, &c	7989	5441
	5*b*—Letter to Commissioner Oakley from Consolidated Gas Co., July 1, 1904, &c	7998	5446
	5*c*—Assent of Commissioner Oakley to assignment of contract, July 1, 1904, &c	8002	5448
	5*d*—Contract of city of New York with Welsbach Street Lighting Co., July 1, 1904	8004	5449
	6—Proposals for bids or estimates for 1906	8049	5474
	Contract of City of New York with Consolidated Gas Co., May 14, 1906	8060	5480
	6*a*—Bid or estimate for furnishing gas, &c., from February 1, 1906, to December 31, 1906	8099	5503
	7—Proposals for bids or estimates for 1906	8109	5508
	Contract of City of New York with Consolidated Gas Co., May 14, 1906	8120	5514
	7*a*—Bid or estimate for term from February 1, 1906, to December 31, 1906	8156	5535
	47—Average candle power of gas delivered by Consolidated Gas Co. in 1905	8167	5540
	51—Recalculation of cost of gas mains of the Consolidated Gas Company, showing cost of one pipe replacing two pipes of same capacity	8168	5540
	54—Report of the bureau of lamps and gas, January 17, 1881	8169	5540

	Original.	Print.
City's Exhibit 49—Pooling agreement and apportionment tables..	8170	5541
53—Reeson's Complete Gas and Water Acts, 1817–1902, page 219, and schedules............	8173	5542
Complainant's Exhibit 48—Consolidated Gas Company maps of real estate, corrected to July, 1906.........................	8181	5551
49—Map of 18th Street station before new water front improvement, September 26, 1903..............	8194	5564
63—Map of Astoria Light, Heat, and Power Co. property............	8195	5565
State's Exhibit W—Diagram..............................	8196	5566
City's Exhibit 56—Summary of operations for the nominal year ending October 31, 1905, all stations.	8197	5567
48—Mr. Yalden's report of accountant's results, December 31, 1885....................	8221	5591
Tables prepared by the expert, showing the various items of the amounts stated in his foregoing report.........	8253	5611
A—Manhattan Gas Light Co..............	8254	5612
B—New York Gas Light Co................	8288	5646
C—Metropolitan Gas Light Co.............	8314	5672
D—Municipal Gas Light Co...............	8332	5690
E—Harlem Gas Light Co..................	8344	5702
F—New York Mutual Gas Light Co........	8360	5718
G—Equitable Gas Light Co...............	8267	5725
H—Summary of constituent companies.....	8368	5726
Appendix E—Summary statement of the capitalization of the Consolidated Company and its constituent companies as taken from their books		
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6957a Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,
vs.
Julius M. Mayer, as Attorney General of the State of New York, *et al.*, Defendants.

Before Arthur H. Masten, Esq., Special Master.

EXHIBITS

Volume I.

U. S. Circuit Court, Southern District N. Y., June 24, 1907. John A. Shields, Clerk.

6957b

EXHIBITS

Volume I.

6957c

COMPLAINANT'S EXHIBIT 1.

CONSOLIDATION AGREEMENT

BETWEEN

VARIOUS COMPANIES

INTO

CONSOLIDATED GAS COMPANY OF NEW YORK,

Dated September 29, 1884.

Filed in office Secretary of State, Nov. 10, 1884.
" " " N. Y. County Clerk, " " "

This agreement, made this twenty-ninth day of September, one thousand eight hundred and eighty-four, between The New York Gas Light Company, The Manhattan Gas Light Company, The Metropolitan Gas Light Company of the City of New York, The New York Mutual Gas Light Company, The Municipal Gas Light Company of New York, The Knickerbocker Gas Light Company and The Harlem Gas Light Company, each of which is a corporation duly organized and now existing under general or special laws of this State for the purpose of carrying on the manufacturing busi-

ness of making and distributing gas, and herein styled the Consoli-
dated Companies, or between two or more of said Companies the
directors or trustees of which shall enter into this agreement and
whose stockholders shall on or before November 10th, 1884,
6958 sanction and approve of this agreement by the votes of two-
thirds of the stockholders present at a meeting to be called
for that purpose, pursuant to the provisions of the Act entitled "An
Act to authorize the consolidation of manufacturing corporations"
passed May 28, 1884, witnesseth:

That said Companies so sanctioning and approving this agreement have agreed and do hereby agree to consolidate into one corporation under and in accordance with said Act of May 28, 1884, and the following are the terms and conditions of such consolidation and the mode of carrying the same into effect.

ARTICLE I. The said new corporation to be formed shall be called the *Consolidated Gas Company of New York.*

ARTICLE II. The number of the *Trustees* thereof shall be *thirteen.*

ARTICLE III. The names of the Trustees who shall manage the concerns of the new Company for the first year, and until others shall be elected in their places, are Charles Roome, Thomas K. Lees, Oscar Zollikoffer, John P. Kennedy, Charles G. Franklyn, Thomas Rutter, Harrison E. Gawtry, Percy R. Pyne, Samuel Sloan, James W. Smith, Henry Day, Arthur Leary and John P. Huggins.

ARTICLE IV. The term of the existence of the said corporation shall be *Fifty years.*

ARTICLE V. The operations of the said corporation shall be carried on in the City, County and State of New York.

ARTICLE VI. The amount of capital of the said new Com-
6959 pany shall be *Forty-five millions of dollars,* which is the fair
aggregate value of the property, franchises and rights of the
several Companies above named, which are more particularly mentioned in Article VII of this agreement, or if either or any of such Corporations shall fail to sanction and approve this agreement, as provided in said Chapter 367 of the Laws of 1884, before November 10, 1884, then the Capital of such new Corporation shall be as much less than forty-five millions as the amount thereof apportioned by Section VIII to either and all of such above named Companies so failing to sanction and approve this agreement. The capital shall be divided into *four hundred and fifty thousand shares of one hundred dollars each,* or if any Company or Companies fail to sanction and approve this agreement as aforesaid, then into as many shares as the reduced amount of capital will make when divided into shares of one hundred dollars each.

ARTICLE VII. Upon the consolidation of such corporations and the organization of the new Company, all and singular the rights, privileges and interests of each of the Companies whose stockhold-

ers shall have sanctioned and approved of this agreement as hereinbefore expressed and as provided in Chapter 367 of the laws of 1884, including all the real estate belonging to such Company situate in the City of New York and elsewhere with all appurtenances belonging thereto, all lands and rights to lands under water, all leasehold property, all mains, service pipes and meters, all patents and licenses or rights to use patents, all machinery, plant, tools, horses, wagons, carts and all other property used by said Companies in the manufacture of gas, all office furniture and stationery, maps, drawings of property and apparatus owned by each of said Companies at
6960 the present time, together with their and each of their corporate rights, franchises, licenses to lay mains and pipes, and privileges of every kind whatever, reserving and excepting from the property of each such corporation only cash on hand, debts due to the Company and coal and other supplies not included in the schedules furnished for previous valuation, shall be vested in and be the property of the new corporation.

ARTICLE VIII. The said Capital of forty-five millions of dollars shall be and is hereby apportioned among the said Consolidating Companies in full consideration of the property, franchises and rights of each of said Companies transferred to and vested in the new corporation by this agreement and described in Article VII thereof, as follows:

The New York Gas Light Company	$7,821,000
The Manhattan Gas Light Company	$12,352,000
The Metropolitan Gas Light Company	$7,422,000
The New York Mutual Gas Light Company	$5,922,000
The Municipal Gas Light Company	$5,276,000
The Knickerbocker Gas Light Company	$3,104,000
The Harlem Gas Light Company	$3,103,000

Of this sum the new corporation shall retain to its own use and dispose of the sum of one million five hundred thousand dollars, to wit, of fifteen thousand shares thereof for the purchase of supplies and as a working capital, in such manner as may be hereinafter provided.

The remainder of the capital of said new Company shall be and is hereby alloted to and shall be distributed among the stockholders of such consolidated corporations as follows, viz.:

6961 To the Stockholders of the New York Gas Light Company	75,600 shares
To those of the Manhattan Gas Light Company	119,400 shares
To those of the Metropolitan Gas Light Company	71,750 shares
To those of the Mutual Gas Light Company	57,250 shares
To those of the Municipal Gas Light Company	51,000 shares
To those of the Knickerbocker Gas Light Company	30,000 shares
To those of the Harlem Gas Light Company	30,000 shares

If there shall be any outstanding lien or incumbrance by way of mortgages, or otherwise, upon any of the lands of either of said consolidating companies or any outstanding certificates of credit or other indebtedness or obligation of either corporation at the time of the consolidation, as herein provided, then the said new corporation shall assume the payment of such liens, bonds or indebtedness. Such Consolidating Company may at the time consolidation takes effect, pay to the said new Company the amount of such liens, bonds, obligations or indebtedness in cash, and in default of so doing said new Company shall retain in liew of and as a satisfaction of said liens and indebtedness from the capital stock allotted to stockholders of such Company by Article VIII an amount of stock equal to the amount due on such liens and indebtedness for principal and interest to date of consolidation, and the sum to be distributed to stockholders shall be reduced accordingly. Such stock so retained may be sold by the new corporation to provide means to pay such indebtedness.

6962 The said amount of capital stock of the new Company to be received by the stockholders of each of the said Consolidating Companies according to the provision of this Article shall be divided among the said stockholders *pro rata* in proportion to the holdings of each stockholder in the stock of said Company at the time of the closing of the books of such Company previous to consolidation, and such division and distribution shall be made by the new corporation immediately after consolidation is perfected; provided that each stockholder upon and before receiving his or her proportion of stock aforesaid shall assign and deliver to said new corporation, to be cancelled, his or her certificate or certificates of stock in said Company so consolidated; it being understood that the delivery of such certificate and cancelling of same shall not be construed as preventing the consolidating companies or either of them from closing up its affairs and distributing its assets not assigned to said new corporation under any of the provisions of this agreement.

Should any such stockholders on such division of stock be entitled to a fraction of a share, a certificate of the ownership of such fractional share shall be issued to him. Said certificate shall provide that when certificates of fractional shares equal to one or more shares shall be presented to said new corporation a full share or shares of stock equal in amount to such fractional shares shall be issued in place thereof, but such fractional shares shall not be entitled to any dividend until they are exchanged for full shares as aforesaid.

Each consolidating company shall at the time consolidation takes effect, furnish the new corporation with a list of its shareholders and the number of shares of stock of its company to which each is entitled.

6963 ARTICLE IX. Each consolidating Company sanctioning this agreement shall as soon as this agreement has been sanctioned and approved by two or more companies convey to said new corporation, by deed duly executed and acknowledged so as to entitle the same to be recorded, all its property enumerated and described in Article Seven of this agreement and shall furnish a map or maps with a description of all real estate and a particular schedule of all the other property and rights of property described in Article VII.

ARTICLE X. Each consolidating company shall furnish to the new corporation, attested by the signatures of the President of such Company, a full and complete statement of all liens or incumbrances upon the real estate of said Company and a particular list of all outstanding indebtedness and obligations of said Company, with a statement of any unsettled claims or pending law suits against the company.

ARTICLE XI. Should the Board of Directors or Trustees of either of said Companies named as parties to this agreement not enter into the same, or should two-thirds in amount of the stockholders of either of said Companies at a meeting thereof to be called as provided in Chapter 367 of the Laws of 1884, fail before November 10, 1884, to sanction and approve of this agreement, and should the Board of Directors of two or more of such Companies enter into this agreement under their respective corporate seals, and should two-thirds in amount of the stockholders of two or more such companies before November 10, 1884, sanction and approve of this agreement, then the said last named companies whose Directors have entered into this agreement and whose stockholders
6964 have so sanctioned and approved the same, shall and do
agree to consolidate on the terms and in the manner in every respect as hereinbefore mentioned, except that the capital stock of said corporation shall be the aggregate amount of stock apportioned by Article VIII of this agreement to the Companies whose stockholders shall have sanctioned and approved this agreement as above stated, and such non-assenting company or companies shall not be a party or parties to this agreement, but this agreement as thus made shall be valid and binding upon such companies as shall by their Directors or Trustees and stockholders legally assent to the same.

ARTICLE XII. The Trustees of the new corporation shall meet at No. 4 Irving Place, on the 10th of November, 1884, at one o'clock P. M. of that day, for the purpose of choosing officers of said new corporation and organizing the business of the same.

A majority of said Trustees shall constitute a quorum for the transaction of business. In case of failure of the Trustees to meet on the said 10th day of November, a meeting of the same may be called by any three of said Trustees at the same place by a notice in writing addressed to each of said Trustees and left at his usual place of business or given to him personally.

Said Board of Trustees shall adopt by-laws which shall be in accordance with the laws of this State for the government of the business and affairs of said corporation and of the Board of Trustees, and such by-laws shall, among other things, fix the time for the annual meeting of the stockholders for election of Trustees and the number and duties of the officers of the corporation and the method of changing or adding to said by-laws.

6965 ARTICLE XIII. All obligations and contracts of each of the Consolidating Companies shall be assumed by the new corporation.

ARTICLE XIV. Each of said Consolidating Companies shall appoint one of their Directors, Trustees or officers as a member of a committee to be called the Adjusting Committee. This Committee shall choose a Chairman and Secretary, and shall have power to adjust and settle all questions of difference between all or any parties, and any disputes or claims which may arise out of or in perfecting said consolidation and which are not specifically provided for in this agreement. Should any of said Companies herein named fail before November 10, 1884, to sanction and approve this agreement, as provided in said Act, the person designated by such Company as a member of the Adjusting Committee shall cease to be a member of such Committee.

The decision of a majority of such Committee shall be binding on all the Consolidating Companies and all stockholders therein, as well as upon the new Corporation.

ARTICLE XV. Either Consolidating Company may transfer to the new corporation its money on hand, debts due to it, coal and other supplies and material on hand at time of consolidation and not included in the Schedules furnished for previous valuations, or any portion of the same, and the same shall be paid for in stock, or partly in stock and partly in cash, as may be desired by such Company. *Provided, however,* that no stock shall be issued for such payment beyond the million and a half of capital reserved and mentioned in Article IX of this agreement. Notice of the desire to make such transfer shall be given to the Chairman of the Adjusting Committee before November 10, 1884.

6966 The value of the property so transferred shall be determined by the Adjusting Committee. The money to be paid and the stock to be issued in payment therefor shall be distributed proportionately to the stockholders of such Consolidating Company at the same time and in the same proportion as such stockholders shall receive stock named in Article VIII of this Agreement. If any shares of stock remain after paying for such transferred property, they may be disposed of by the new corporation for the purposes aforesaid.

This agre-ment will be executed in different copies each of which shall be considered an original, the execution of one copy by one of the said Companies shall be considered a due execution of the same, although the execution by other companies shall be on another copy.

In testimony whereof, each of the said parties hereto have caused these presents to be signed by their respective Presidents or Vice

Presidents and Secretaries and the seal of their respective corporations to be hereunto affixed.

THE NEW YORK GAS LIGHT COMPANY,
[L. S.] By THOMAS K. LEES, *President.*

Attest:
WM. J. CLARK, *Secretary.*

THE MANHATTAN GAS LIGHT COMPANY,
[L. S.] By CHARLES ROOME, *President.*

Attest:
JAS. W. SMITH, *Secretary.*

6967 THE METROPOLITAN GAS LIGHT COMPANY OF THE CITY OF NEW YORK,
[L. S.] By O. ZOLLIKOFFER, *President.*

Attest:
O. F. ZOLLIKOFFER, *Secretary.*

MUNICIPAL GAS LIGHT COMPANY OF NEW YORK,
[L. S.] By CHARLES G. FRANKLYN, *President.*

Attest:
PHILIP ALLEN, *Secretary.*

THE KNICKERBOCKER GAS LIGHT COMPANY,
[L. S.] By HARRISON E. GAWTRY, *President.*

Attest:
SAM'L J. YOUNG, *Secretary.*

THE HARLEM GAS LIGHT COMPANY,
[L. S.] By THOMAS RUTTER, *President.*

Attest:
WM. H. OSBORN, *Secretary.*

STATE OF NEW YORK, *Office of the Secretary of State, ss:*

I have compared the preceding with the original Consolidation Agreement forming the Consolidated Gas Company of New 6968 York, filed and recorded in this office on the tenth day of November, 1884, and do hereby certify the same to be a correct transcript therefrom and of the whole thereof.

Witness my hand and seal of office of the Secretary of State, at the City of Albany, this thirty-first day of October, one thousand nine hundred and one.

[SEAL.]

J. A. M. MONGIN,
Deputy Secretary of State.

No. 315.

State of New York, *County of New York, ss:*

I, William Sohmer, Clerk of the said County and Clerk of the Supreme Court of said State for said County, do certify, that I have compared the preceding with the original certificate of Consolidated Gas Company of New York, on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

Indorsed and filed and recorded November 10th, 1884, 12h. 30m.

In witness whereof, I have hereunto subscribed my name and affixed my official seal, this 30th day of October, 1901.

[SEAL.] WM. SOHMER, *Clerk.*

6969 COMPLAINANT'S EXHIBIT 2.

CHAP. LXXXV.

AN ACT *to incorporate the Gas Light Company of the City of New York.*

Passed March 26, 1823.

WHEREAS Samuel Leggett, Moses Cunningham, George Youle, Thomas Morris, and William S. Coe, and others, associated to form a Gas Light establishment in the City of New York, for the purpose of better lighting the said city, and the buildings, manufactories, and houses therein, have prayed to be incorporated, the better to enable them to carry on the business of their association: Therefore,

I. *BE it enacted by the People of the State of New York, represented in Senate and Assembly,* That the said Samuel Leggett, George Youle, and Moses Cunningham, and their present and future associates, shall be, and hereby are created, constituted, and declared to be a body politic and corporate in fact, by the name of "The New York Gas Light Company"; and by that name they and their successors may have perpetual succession, and shall, in law, be capable of suing and being sued in all courts and places whatsoever; and may have a common seal, with power to alter the same; and by the name and style aforesaid, the said corporation shall have full power and authority to manufacture, make, and sell gas, to be made of coal, oil, tar, peat, pitch or turpentine, or other materials; and to be used for the purpose of lighting the said city, or the streets thereof, and any buildings, manufactories, or houses therein contained and situate; and to enter into, make and execute any 6970 contracts, agreements or covenants, in relation to the objects of this incorporation, and of enforcing the same, and be capable of purchasing, taking and holding any estate or property, real or personal, as shall be necessary to give effect to the purposes of this incorporation, or for the accommodation of their business and concerns: *Provided,* the value of such real estate shall not exceed one hundred thousand dollars: *And provided also,* That no public street, lane, or highway in the city of New York, shall be dug into, or in any wise injured or defaced without the permission of the corporation of the said city first had and obtained.

II. *And be it further enacted,* That the capital stock of the said corporation, shall not exceed one million of dollars, and that a share in the same shall be fifty dollars, and the subscriptions to the same, or to such part thereof, as from time to time may, by the directors for the time being, be deemed proper and necessary, be opened by the appointment, or under the direction of the directors hereinafter named, or a majority of them, subject to such rules, limitations and conditions, as by them shall be prescribed.

III. *And be it further enacted,* That the stock, property, and affairs and concerns of the said corporation, shall be ordered, managed, and conducted, under the direction of thirteen directors, being stockholders and citizens of this state; that the said directors shall hold their offices from the third Monday of January, inclusive, in every year, for one year, and shall be elected on the second Monday of January in each year, at such time and place within the City of New York, as a majority of the directors for the time being shall appoint; and that notice of the time and place of holding such election, shall be published in at least two of the public news-
6971 papers printed in the city of New York, at least fourteen days previous to the time of holding the said election; and that all election for directors shall be by ballot, and made by such of the stockholders as shall attend for that purpose, either in person or by proxy; and that each stockholder shall be entitled to one vote, for each share which he, she, or they, shall have held in his, her, or their own name or names, at least fourteen days before the time for voting, and that the persons having the greatest number of votes shall be directors; and if it shall happen, that two or more persons have an equal number of votes, the directors in office, at the time of such election, shall, by a plurality of votes given by ballot, determine which of the persons so having an equal number of votes, shall be director or directors, so as to complete the whole number; and the directors so chosen shall, as soon as may be thereafter, proceed in like manner to elect one of their number by ballot, for their president; and if any director shall remove out of this state, or cease to be a stockholder, or shall resign, his office shall be vacant; and whenever any vacancy shall in any manner happen, the same shall be filled by the remaining directors, by plurality of votes, until the next annual election; and that Samuel Leggett, Moses Cunningham, Josiah Ogden Hoffman, George Youle, Richard S. Williams, William Seaman, Thomas Morris, Henry Eckford, Robert Bogardus, George Buckmaster, William S. Coe, Samuel Ackerly, and Thomas H. Smith, shall be the present directors, and shall hold their offices respectively, until the third Monday of January inclusive, which will be in the year of our Lord, one thousand eight hundred and twenty-five, and until others are chosen in their place, and proceed to choose their president at such time and place, as they, or a majority of them shall determine.

6972 IV. *And be it further enacted,* That in case it shall at any time happen, that an election of directors shall not be made on the day appointed by this act for that purpose, the said corporation shall not for that cause, or for any non-user, be deemed to be dissolved, but it shall and may be lawful to hold any election for directors, on any other day, in such manner as shall be provided for by the by-laws and ordinances of the said corporation.

V. *And be it further enacted,* That the directors for the time being shall form a board; and they, or a majority of them, shall be a quorum for transacting the business of the said corporation, and shall have power to make such by-laws, rules and regulations, not repugnant to the constitution or laws of the United States, or of this State, as to them shall seem needful and proper, touching the government of the said corporation, the management and disposition of the stock, property, estate and effects thereof; the duties of the officers, clerks, and servants employed therein; the election of directors, and all such other matters as may appertain to the concerns of the said corporation; and shall also have power to appoint so many officers, clerks, and servants, for carrying on the business thereof, with such salaries and allowances as to them shall seem meet.

VI. *And be it further enacted,* That the stock of the said corporation shall be assignable and transferable, according to such rules and subject to such regulations, as the board of directors shall from time to time make and establish, and shall be considered personal property.

VII. *And be it further enacted,* That it shall and may be lawful for the directors, or a majority of them, to require payment
6973 of the sums to be subscribed, at such time and in such proportions, as they, or a majority of them, shall deem fit, under the penalty of the forfeitures of all previous payments thereon; and that previous notice of the instalments required, after the first, and of the time when the same are to be paid, shall be published at least fourteen days, in two of the public newspapers printed in the city of New York.

VIII. *And be it further enacted,* That if any person or persons shall wilfully do, or cause to be done, any act or acts whatever, whereby the works of the said corporation or any pipe, conduit, plug, cock, reservoir, or any engine, machine or structure, or any matter or thing appertaining to the same, shall be stopped, obstructed, impaired, weakened, injured or destroyed, the person or persons so offending, shall forfeit and pay to the said corporation double the amount of the damages sustained by means of such offence or injury, to be recovered in the name of said corporation, with cost of suit, by action of debt, to be brought in any court of record in this state.

IX. *And be it further enacted,* That nothing in this act contained, shall be construed to authorize any banking or insurance privileges, or the issuing of any notes, bills, or other negotiable paper, all of which are hereby prohibited to the said corporation.

X. *And be it further enacted,* That this act shall be deemed a public act, and shall be benignly and favorably construed, for the purposes therein expressed and declared, in all courts and places whatsoever.

XI. *And be it further enacted,* That the legislature may, at any future time or times hereafter, alter, modify or repeal this act.

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COMPLAINANT'S EXHIBIT 3.

CHAP. 313.

AN ACT *to amend an act entitled "An act to incorporate the Gas Light Company of the City of New York," passed* March 26th, 1823.

Passed May 2, 1837.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. It shall be lawful for the New York Gas Light Company of the city of New York, to purchase, take and hold any estate or property, real or personal, as shall be necessary to give effect to the purposes contemplated by the said act of incorporation, or for the accommodation of their business and concerns, provided, the value of such real estate shall not exceed two hundred and fifty thousand dollars.

§ 2. So much of section first of the act hereby amended as is inconsistent with this act, is hereby repealed.

COMPLAINANT'S EXHIBIT 4.

CHAP 424.

AN ACT *to amend an act entitled "An act to incorporate the Gas Light Company of the city of New York," passed March twenty-six, eighteen hundred and twenty-three.*

Passed April 13, 1855.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. It shall be lawful for the New York Gas Light Company of the city of New York, to purchase, to take and hold such and so much real estate or property as shall be necessary for their manufacturing and business purposes, and no more, provided the value of such real estate or property shall not exceed the sum of five hundred thousand dollars. 6975

§ 2. So much of the first section of the act hereby amended and of the act amending the same passed May second, eighteen hundred and thirty-seven, as is inconsistent with this act is hereby repealed.

§ 3. This act shall take effect immediately.

COMPLAINANT'S EXHIBIT 5.

CHAPTER 59.

AN ACT *to Incorporate the Manhattan Gas Light Company.*

Passed February 26, 1830.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. That Robert McDermut, Mordecai Myers, Moses Judah, and their present and future associates, shall be and are hereby created, constituted, and declared, to be a body politic and corporate, by the name of "The Manhattan Gas Light Company," with full power and authority to manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch, and turpentine, or other materials, and to be used for the purpose of lighting the city of New York, or the streets thereof, and any buildings, manufactories or houses, therein contained and situate, and to lay pipes for the purposes of conducting the gas in any of the streets or avenues of the said city; *And also,* that the said company will so conduct their manufactory or manufactories of gas, as not to create a nuisance; and that no 6976 public street, lane, or highway, in the city of New York, shall be dug into, or in any way injured or defaced, without the permission of the corporation of said city first had and obtained. But the rights and privileges hereby granted, shall not be construed to impair or affect any exclusive rights or privileges heretofore granted to any incorporated company in said city; and the real estate which this corporation is authorized to hold, shall not exceed in value one hundred thousand dollars.

§ 2. That the capital stock of this corporation shall not exceed five hundred thousand dollars; and that a share in the same shall be fifty dollars; and books of subscriptions to the said capital stock, or to such portion thereof as from time to time may, by the directors for the time being, be deemed proper and necessary, shall be opened by the appointment or under the direction of the directors hereinafter named, subject to such rules, limitations and conditions, as by them shall be prescribed; and the stock of the said corporation shall be deemed and considered personal property.

§ 3. The stock, property and affairs of the said corporation shall be managed and conducted by or under the direction of fifteen directors, being stockholders and citizens of this state; that the said directors shall hold their office for one year from the third Monday of January in each year, and shall be elected on the second Monday of January in each year, at such time and place within the city of New York as a majority of the directors for the time being shall appoint; and that notice of such election shall be published in at least two of the public newspapers printed in the city of New York, at least fourteen days previous to the time of holding such election;

and every such election shall be by ballot, and by such of the
6977 stockholders who shall attend for that purpose, either in person or by proxy; and each stockholder shall be entitled to one vote for each share of the stock which he or she may have held in his or her own name, for at least fourteen days before the time of voting; and the persons having the greatest number of votes shall be the directors; and if it shall happen that two or more persons have an equal number of votes, the directors in office at the time of such election shall, by a plurality of votes given by ballot, determine which of the persons so having an equal number of votes shall be director or directors, so as to complete the whole number to be chosen; and the directors so chosen shall, as soon as may be thereafter, proceed by ballot to elect one of their number for their president; and if any director shall remove out of this state, or cease to be a stockholder, or shall resign, his office shall be vacant; and whenever any vacancy shall happen, the same shall be filled up by the remaining directors, by plurality of votes, until the next annual election.

§ 4. That Robert McDermut, Moses Judah, Noah Jarvis, Thomas Bloodgood, Charles A. Davis, William T. McCoun, Mordecai Myers, William L. Morris, Samuel L. Gouverneur, David C. Colden, Charles Henry Hall, Seth Geer, James Wallace and Charles Graham shall be the first directors of the said company, who shall hold their offices until the third Monday in January in the year one thousand eight hundred and thirty-two, and until others are chosen in their places; and they shall proceed to choose their president at such time and place as they or a majority of them shall determine.

§ 5. In case it shall at any time happen that an election for directors shall not take place on the day appointed by this
6978 act for that purpose, the said corporation shall not, for that cause, or for any non-user, be deemed to be dissolved, but it shall and may be lawful to hold an election for directors on any other day, in such manner as shall be provided for by the by-laws of the said corporation.

§ 6. It shall and may be lawful for the directors, or a majority of them, to require payment of the subscription to the capital stock of the said corporation, at such times and in such proportions as they or a majority of them shall deem fit, under the penalty of forfeiting all previous payment or payments thereon; and that previous notice of the instalments required to be paid, after the first, and of the time when the same are to be paid, shall be published at least fourteen days, in two of the public newspapers printed in the city of New York.

§ 7. If any person or persons shall wilfully do, or cause to be done, any act or acts whatever, whereby the works of the said corporation, or any pipe, conduit, plug, cock, reservoir, or any engine, machine or structure, or any matter or thing appertaining to the same, shall be stopped, obstructed, impaired, weakened, injured or destroyed, the person or persons so offending shall forfeit and pay to the said corporation double the amount of the damage sustained by means of such offense or injury, to be recovered in the name of the said corporation, with costs of suit, in an action of debt, to be brought in any court having cognizance thereof.

§ 8. In addition to the powers herein before enumerated, the corporation hereby created shall have and possess all the powers and privileges, and be subject to all the liabilities, contained in title three of chapter eighteen of the first part of the Revised
6979 Statutes; and all the provisions thereof shall apply to this corporation.

§ 9. This act shall be deemed a public act, and shall be benignly and favorably construed, for the purposes herein expressed and declared, in all courts and places whatsoever.

§ 10. This act shall not take effect unless the American Gas Light Company shall, within sixty days from the passage thereof, surrender all their chartered privileges, under the act entitled, "An act to incorporate the American Gas Light Company," passed March 17, 1827.

COMPLAINANT'S EXHIBIT 6.

CHAP. 163.

AN ACT *to provide for increasing the capital stock of the Manhattan Gas Light Company, of the city of New York.*

Passed April 29, 1847.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. The capital stock of the Manhattan Gas Light Company, of the city of New York, incorporated by an act entitled, "An act to incorporate the Manhattan Gas Light Company," passed February 26, 1830, is hereby increased to one million of dollars, to consist of shares of fifty dollars each; and books shall be opened for subscriptions from time to time, in such manner, and under such rules, limitations and conditions as shall be prescribed by the by-laws of said company.

6980 § 2. Such company shall be authorized to hold such real and personal estate as shall be necessary for their manufacturing and business purposes, and no more.

§ 3. The whole amount of debts and liabilities of such company shall not, at any one time, exceed fifty per cent. of the amount of capital actually paid in, and if such amount shall at any time exceed said fifty per cent., the stockholders of such company, who were such at the time such excess shall be incurred, shall be individually, jointly and severally liable for such excess, and any one or more such stockholders, who may be so liable, may be made parties in the same suit, for the collection thereof; provided, such stockholders shall not be individually liable beyond the amount of said excess.

§ 4. Said company shall, at all times, keep a book at their office or usual place of business, in the city of New York, which shall be open to the free inspection of all persons who may desire to inspect the same, at all usual business hours and days of the city of New York, which shall contain an accurate alphabetical list of all stockholders and amounts of stock respectively held by them and showing the time they became such, the amount of capital actually paid in, and the whole amount of debts and liabilities of the company, and such book shall be presumptive evidence, in all places, of what it purports to contain and set forth, in any suit or proceeding against said company, or the stockholders thereof.

§ 5. This act shall take effect immediately.

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COMPLAINANT'S EXHIBIT 7.

CHAP. 89.

AN ACT *to increase the Capital Stock of the "Manhattan Gas Light Company" of the city of New York.*

Passed March 25, 1852.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. The capital stock of the Manhattan Gas Light Company, of the city of New York, incorporated by an act entitled, "An act to incorporate the Manhattan Gas Light Company," passed February 26, 1830, may be increased one million dollars at such time as the board of directors may prescribe.

§ 2. This act shall take effect immediately.

COMPLAINANT'S EXHIBIT 8.

CHAP. 543.

AN ACT *to increase the capital stock of the Manhattan Gas Light Company of [illegible] city of New York.*

Passed April 17, 1855.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. The capital stock of the Manhattan Gas Light Company, of the city of New York, incorporated by an act entitled, "An act to incorporate the Manhattan Gas Light Company," passed February 26, 1830, may be increased two million dollars at such times 6982 and in such manner as the board of directors may prescribe, by resolution of such board. In case such board shall not adopt such resolution within six months from the passage of this act, the said capital stock shall not be so increased.

§ 2. Said company shall supply to every inhabitant of the said city of New York who shall request it, and who shall pay for the same, such inflammable gas made by them as he or she may require, provided said gas is required where the mains or pipes of said company are now or may be hereafter laid, at a price not exceeding three dollars per thousand cubic feet, for the period of one year after the adoption of the resolution named in the foregoing section, and after the expiration of that period, at a price not exceeding two dollars and fifty cents per thousand cubic feet.

§ 3. This act shall take effect immediately.

COMPLAINANT'S EXHIBIT 9.

Pursuant to the provisions of an Act, entitled, "An Act to amend Chapter 37 of the Laws of 1848, entitled 'an act to authorize the formation of Gas Light Companies'" passed April 20, 1867. We, the undersigned, holders of two thirds of the Capital Stock of The Manhattan Gas Light Company, a Gas Company incorporated by Special Act for the purpose of Manufacturing and supplying Gas in the City of New York, do hereby certify

That we desire to form a Company for the purpose of manufacturing and supplying Gas for lighting the streets and public and private buildings of the City of New York.

6983 That the Corporate name of the said Company is The Manhattan Gas Light Company.

That the objects for which the Company is formed are the manufacturing, making and selling gas to be used for the purpose of lighting the City of New York, the streets thereof and any buildings, manufactories, or houses therein contained and situate, and to lay pipes for the purpose of conducting the gas in the streets and avenues of said City.

That the amount of the Capital Stock of the said Company is Four Millions of Dollars

That the term of its existence is fifty years

That the number of shares of which said stock is to consist is eighty thousand

That the number of Directors is nine

That the names of the Directors who shall manage the concerns of the Company for the first year are Henry Young, Moses Taylor, John Alstyne, William H. Smith, John R. Ludlow, John I. Cisco, Benjamin W. Bonney, Samuel Sloan, Charles Roome, and that the operations of the Company are to be carried on in the City and County of New York

In witness whereof we have signed these presents, in duplicate, this sixth day of September one thousand eight hundred and sixty-seven.

	Names.	No. of shares.	
	Henry Young	Twenty four hundred	2400
	Moses Taylor	Thirty seven hundred forty six	3746
	Thos. C. Chardavoyne	Three hundred fifty	350
	P. H. Holt	Two hundred	200
	P. H. Holt, Trustee	Twenty	20
	John Alstyne	Eighteen hundred	1800
	Floyd Smith	Sixteen	16
	Fred E. Gibert	Four Hundred	400
	B. W. Bonney	Four hundred	400
6984	J. H. James	Twenty shares	20
	C. F. Dambmann & Co.	Eleven hundred	1100
	George W. Welsh	Fifty shares	50
	H. C. D Rham	Five hundred shares	500
	De Rham & Co	Three hundred shares	300
	John A. Robinson	Thirteen hundred fifty shares	1350
	Wm. C. Schermerhorn	Three hundred fifty shares	350
	Samuel Hart Sen	Twenty four	24
	E. Caylus De Ruyter & Co.	Fifty shares	50
	J. N. Phelps	Fourteen hundred shares	1400
	Thos. G. Hodgkins	Four hundred	400
	Jno. R. Ludlow	Eight hundred	800
	Robert Jaffray	Thirty	30
	Isaac T. Ludlam	Twenty	20
	Geo. Hall	Two hundred	200
	Henry H. Mosher	One hundred ninety	190
	Adeline L. Hitchcock	One hundred	100
	John Allen	Two hundred	200
	Charles Roome	Eighty	80
	W. R. Clarkson	Twenty	20
	Christr. Townsend	Four hundred	400
	Sarah M. Hitchcock	One hundred	100
	D. Thompson	Five hundred sixty eight	568
	John I. Cisco	Three hundred eighteen	318
	John I. Cisco & Son	One hundred fifteen	115
	Percy R. Pyne	Two hundred fifty	250
	Sam Sloan	Two hundred shares	200
	H. Lawrence	Five hundred twenty eight	528
	Caroline E. Hart	Twenty four	24
	F. Alexandre	Two hundred	200
	C. J. Sprague	One hundred	100
	David Rodh	One hundred twenty	120
	S. Mendelson	Twenty	20
	Uriah J. Smith	Six hundred Eighty five	685
	Robert Dinwiddie	Forty	40
	Corn. Bogert	Three hundred	300
	Geo. W. Welsh	Fifty	50
	Chas. C. Carpender	One hundred sixty five	165
6985	J. & J. Hilyard	One hundred shares	100
	E. T. Pell	Four hundred fifty one	451
	Fred'k Mead	One hundred shares	100

Names.	No. of shares.	
Geo. Wilson	One hundred sixty shares	160
Henry Salisbury	One hundred thirty five	135
John Halstead	One hundred twenty shares	120
Chas. E. Bulkley	One hundred thirty five	135
Reuben Parsons	Two hundred shares	200
Peter H. Morss Guad	Three hundred thirty five	335
Alex. Johnston	Forty	40
Mrs. M. R. Knowlton	Ten	10
Samuel Willets	One thousand	1000
John Reuter	Twenty	20
Carsten H. Hincken	Twenty	20
Albertina S. Pyne	Five hundred shares	500
Ezra P. Davis	Thirty five	35
Mason Young	Two hundred shares	200
Moses H. Swift	Forty	40
Joseph Howland	Two hundred	200
Chas. Kneeland, Ex'r	Four hundred eighty	480
Chas. Kneeland, Trustee	One hundred ninety five	195
Chas. Kneeland	One hundred ninety five	195
J. B. Brice	Two hundred	200
James L. Ogden	Twenty	20
Henry H. Ward in Trust	Four hundred	400
Ward & Co. in trust for L. W. Terry	Two hundred seventy two	272
Grace Burritt	One hundred forty one	141
Augusta B. Storer	One hundred thirty two	132
Mary Bulkley	One hundred thirty five	135
O. Bronson	One hundred	100
Geo. W. Endicott	Twenty	20
Abel Robert	Twenty	20
J. B. Brice	One hundred	100
Edw. Blackburn & Co. in trust	One hundred ninety	190
I. N. McCall	Twenty five	25
Chas. F. Osborn	One hundred fifty four	154
Geo. Merritt	Four hundred fourteen	414
Thos. Morrell	Seventy	70
6986 John W. Culver	Sixty	60
G. C. Woodhull	One hundred twenty six	126
G. C. Woodhull, Executor of Est. of E. S. Woodhull	Forty eight	48
Ellen P. Andrew	Ten	10
D. C. Hays	Twenty	20
Chas. P. Leverich	Seventy five	75
Eugene S. Ballni	One hundred five	105
Baltzer & Taaks	One hundred	100
Danl. C. Kingsland	Two hundred	200
James H. Banker	Seventy five	75
H. K. Bogert	Ten	10
Walter Edwards	Sixty four	64
Edward Scheitlin	One hundred	100

Names.	No. of shares.	
Edward Scheitlin & Co., in trust	One hundred	100
Escler & Co., in trust	Eighty shares	80
Christ. Jay & Co., in trust	Twenty five shares	25
J. D. Dupuy	One hundred shares	100
Fredk. S. Salisbury	One hundred thirty five shs.	135
Fredk. S. Salisbury, admi. of Estate of George E. Salisbury decd.	One hundred thirty five shs.	135
William A. Woodhull	Seventy shares	70
S. C. Dortic	One hundred shares	100
John I. Dortic	Fifty shares	50
Geo. T. Trimble	Three hundred	300
Benj. B. Sherman	Seventy two shares	72
E. Pouvert	One hundred sixty shares	160
Pouvert & Co.	Four hundred shares	400
A. C. Kingsland	Two hundred shares	200
T. E. Smith	Ten shares	10
Thomas B. Rich	Three hundred	300
Daniel Parish	Three hundred twelve	312
Josiah Jex	Five hundred	500
Annie S. Ireland, Executrix	Two hundred shares	200
Kutter Lukemeyer & Co., in trust	Twenty shares	20
Robert L. Stuart	Two hundred fifty shs.	250
Alexander Stuart	Two hundred fifty shares	250
John H. Welsh	Twenty	20
6987 N. L. McCready	Twenty shares	20
Charles Banks, Att'y	Two hundred seventy	270
Francis Tomes by Benj. Tomes Att'y	Four hundred shares	400
Robert Tomes	Three shares	3
George W. Elder	One hundred shares	100
P. R. Warner	One hundred shares	100
Jos. Rifflard, Jules L. Rifflard	Fifty shares	50
Jos. Rifflard & Sons	One hundred twenty	120
Kepler & Co. in trust	Nine hundred forty five shares	945
Wm. H. Terry Exr of Joseph H. Terry	Five hundred sixty four shares	564
Henry L. Young by Henry Young, Att'y	One hundred shares	100
John Osborn	Twenty shares	20
Catharine L. Schmelzel	One hundred and ten	110
E. Judson Hawley, Actg. Exe. for Estate Irad Hawley	Three hundred shares	300
Jas. S. Palmer	Seventy six	76
Marcus P. Woodruff	Four hundred fifty five	455
J. A. Bennett	Seven	7
James De Peyster	One hundred ten	110
Anna C. Roome	One hundred	100
Joseph Sampson	Five hundred	500
H. H. Casey in trust	Fifty	50
Wm. H. Albeo	Eighty	80
Edward J. Roberts	Ninety nine	99

Names.	No. of shares.	
Mary W. Barre	One hundred seven	107
Benjamin H. Lillie, Guardian per James W. Barre	One hundred seven	107
John H. Sprague	One hundred shares	100
Mary D. Hodges	Eighty eight	88
Est. of John Skillman by A. G. Waterbury Exe	Ninety seven	97
Ch. A. Peabody	Two hundred	200
H. Erskine Smith	Forty eight	48
L. Bayard Smith	Forty eight	48
D. Thompson	Four hundred thirty two	432
John Jones Schermerhorn by D. Thompson Prest. Att'y	Four hundred eight	408
6988 L. Bouquet by S. R. Reynal & Sons, Att'y	One hundred fifty four	154
E. Caylus De Ruyter & Co	One hundred	100
Ann Craig by W. P. Powers, Att'y	One hundred twenty	120
Wm. H. Tillinghast	Twenty	20
Adrian H. Muller	Twenty five	25
John & Edwd. Ferguson, Trustees	Two hundred shares	200
C. H. Russell	Five hundred twenty shares	520
Walter M. Smith	Fifteen shares	15
J. E. Woodhull	One hundred twenty six	126
C. P. Woodhull	One hundred eight	108
Mrs. M. R. Miller by N. W. H. Judson, Att'y	Two hundred	200
J. M. Smith	Forty eight	48
E. M. Smith	Forty eight	48
Jno. De Ruyter	Fifty	50
Wm. V. Brady	Four hundred	400
Isaac Phillips	Forty	40
P. Harmony's Nephews & Co	One hundred fifteen	115
L. S. Suarez by P. Harmony Nephews & Co., Att'ys	Three hundred five	305
Lorenza Carrio De Francia by P. Harmony's Nephews & Co., Att'ys	One hundred seventy	170
Maltby G. Lane in trust	Twelve	12
Elias Brevoort by Maltby G. Lane, Att'y	Thirty	30
Mrs. Kate Winthrop by Moses Taylor	Two hundred forty nine	249
Antonio F. Bramasio by Moses Taylor	Four hundred fifty seven	457
Mrs. Mary Lewis by Moses Taylor	One hundred fifty five	155
Antonio F. Bramasio by Moses Taylor	Four hundred	400
Henry Heyward	Two hundred shares	200
Isaac Buchanan	Forty shares	40
E. A. Blake	Ten hundred fifty	1050
Sylvester Brush Exr. of Jacob Abrahams	Eighty shares	80
Egerton L. Winthrop, Trustee	Twenty seven shares	27
Daniel Stinson	Twenty shares	20
John J. Phelps	Fourteen hundred fifty shares	1450

	Names.	No. of shares.	
	A. E. Schermerhorn	One thousand	1000
6989	Daniel B. Fearing	Eight hundred thirty two shares	832
	Isaac O. Woodruff by M. P. W. Atty.	Two hundred twenty shares	220
	Arethusa H. Woodruff by M. P. W. Att'y.	Ninety eight shares	98
	John H. Gourlie	Seventy four	74
	Saml. T. Ferguson	One hundred	100
	Jos. B. Townsend Adm. etc. of George Platt decd	Six hundred	600
	Augustus Whiting	Three hundred shares	300
	Emily M. F. Braene	Fifty shares	50
	Augusta E. Breese	Seventy five shares	75
	Wm. B. Bibbins	Twenty shares	20
	Geo. N. Miller	Four hundred shares	400
	Geo. N. Miller, Exr. of the Estate of Horatio Miller	Two hundred do	200
	John H. Adam	Fifty shares	50
	Anna M. Bulkley by Jeremiah Wilbur, Att'y	Sixty shares	60
	Mary H. Bradford by Jeremiah Wilbur, Att'y	Seventy two shares	72
	Harriet J. Rogers by Jeremiah Wilbur, Att'y	Sixty shares	60
	Peter Goelet	Four hundred fifty	450
	Robert Goelet	Three hundred	300
	Elie Charlier	Twenty four	24
	John A. McGaw	One hundred ninety nine	199
	Eliza Hearsey	Two hundred	200
	A. P. Merrill, Jr.	Forty five	45
	Chas. A. Townsend	One hundred thirty	130
	Henry Chauncey, by Fredk. Chauncey, Att'y	Fifty	50
	Wm. J. Schenck	Two hundred	200
	The Roosevelt Hospital, by Geo. Trimble, Treas.	Two hundred	200
	Julia D. K. Davis	Twenty	20
	Julia A. Gentil	Twenty	20
	Frances M. Parkin	Twenty nine	29
	Leonard H. Morrison	Fifty	50
	F. Augustus Schermerhorn	One hundred sixteen	116
	Geo. W. Thompson	Four hundred thirty	430
	Laura H. Curtis	Fifteen	15
6990	Gouverneur M. Smith	Forty eight	48
	Georgiana G. Trim	Twenty	20
	A. Pfender	Fifty	50
	E. H. Schermerhorn	Three hundred fifty	350
	Henry Bodmer, by J. Q. Jones, Att'y	Two hundred	200
	James R. Taylor, by F. D. Taylor, Att'y	Fifty shares	50
	Saml. Loed	Six hundred	600
	W. H. Smith, per. Moses Taylor	Two thousand twenty	2020
	John D. Wolfe, per Moses Taylor	Four hundred eighty one	481
	H. A. Hurlbut, per Moses Taylor	Two hundred twenty one	221

Names.	No. of shares.	
David W. Bishop, per Moses Taylor	Forty shares	40
David W. Bishop, Exe. Japhet Bishop, per Moses Taylor	One thousand shares	1000
A. Iselin & Co.	Ten shares	10
John B. Storm, Adm. J. A. Storm Deused	Two hundred forty shs.	240
D. Varet	Twenty five shares	25
Louisa Varet, per O. Varet, Att'y	Twenty five shares	25
Elvina Varet, per O. Varet, Att'y	Seventy five shares	75
Virginia C. Varet, per O. Varet, Att'y	Twenty five shares	25
F. Th. Achman & Co., in trust	Fifty shares	50
Jas. P. Kernochan, Ezra P. Davis, Executors of Peter Lorillard	Twelve hundred shares	1200
Albert Smith	One hundred sixty	160
Robert Bent	Thirty six shares	36
Henry Salisbury	Twenty seven shares	27
Frederick S. Salisbury	Twenty seven shs.	27
Bradish Johnson	One hundred fifty	150
Louisa A. Johnson	One hundred fifty	150
Edwd. N. Tailer	Eighty	80
Mary L. Redmond	One hundred thirty six	136
Effin. H. Nichols, Executor of S. Tredwell, decd.	One hundred twenty	120
Edward Barton, by Brown Brothers & Co., Att'ys	One hundred forty	140
Edwd. Ludlam	Sixty three	63
John J. Dortic, in trust for F. Lacapere	Fifty shares	50
B. H. Hutton	Two	2
Walter W. Price	One hundred	100
Susan L. Smith	Forty two	42
6991 Ellen S. Auchmuty	117 shares	117
M. Monlum	Fifty shares	50
John Nielson, Trustee	One hundred twenty	120
Amos Clark	Forty five shares	45
Elizabeth M. Hudson	One hundred sixty one	161
John H. Watkinson, per S. H. Howard, Att'y	One hundred sixty shares	160
A. J. Leavenworth, per S. H. Howard, Att'y	One hundred shares	100
Geo. Brinley, trustee, per S. H. Howard, Att'y	Two hundred eighty eight shs.	288
E. G. Ellingwood, Ex., per S. H. Howard, Att'y	Two hundred five shares	205
Robt. Donaldson, per S. H. Howard, Att'y	Two hundred ten shares	210
Saml. B. Gardiner, per S. H. Howard, Att'y	Two hundred fifty shares	250
Geo. H. Normaio, per S. H. Howard, Att'y	One hundred fifty shares	150
Charles H. Minot, per S. H. Howard, Att'y	Three hundred fifty shares	350

Names.	No. of shares.	
Edward N. Kent, per S. H. Howard, Att'y	Fifty shares	50
J. S. Carpender, per S. H. Howard, Att'y	One hundred shs.	100
Mrs. D. H. McAlpin	Twenty shares	20
Almira Smith	Five hundred sixty five	565
Edward Leavitt	Eight hundred shares	800
Cynthia A. Allen	Twenty one	21
Edward N. Kent	Fifty shares	50
John C. Parsons	Seventy shares	70
John C. Parsons, Trustee	One hundred & thirty	130
Francis Tomes, Jr.	Fifty shares	50
William R. Talbot	Two hundred	200
Elijah C. Pell	Eighty three	83
John I. Studwell	Two hundred shares	200
R. Sprague, by C. J. Sprague, Exr. subject to the consent of his Co. Executor J. H. Sprague	One thousand	1000
Anna B. Holmes	Fifty shares	50
Catharine C. Spencer	Twenty shares	20
Mary Spencer	Twenty shares	20
6992 Caroline H. Polhemus	Two hundred thirty two	232
Wm. H. Herriman, per A. J. Beekman, Att'y	Two hundred thirty three	233
Charles G. Taylor	Two hundred twenty five	225
Emily G. Ellingwood, Exe.	Two hundred five	205
Emily G. Ellingwood	Fourteen	14
Mary G. Chittenden	Four hundred eighty eight	488
Eden Allen	Thirty nine	39
Geo. Brinley, Trustee	Two hundred eighty eight	288
John B. Storm	Eighty shares	80
Josiah Moorhead, Administrator	Sixty shares	60
Elizabeth Grafton	Twenty shares	20
Julia R. Hunting	Forty shares	40
Jane H. Taylor	Forty shares	40
Anna C. Burdsall	Twenty shares	20
Charles G. Goodhue	Twenty eight shares	28
Sara E. S. Appleby	Eighty shares	80
Mary B. S. Doetic	Eighty shares	80
Hannah G. Gerry	One hundred shares	100
Jean B. Golet	One hundred shares	100
Louise Varet	Twenty five	25
Elvina Varet	Seventy five	75
Kate W. Winthrop	Two hundred forty nine	249
Geo. J. Schmelzel	One hundred twenty	120
Thomas Lewis	Eighty three	83
John M. Burke	Four hundred	400
Gustav H. Kipel	Nine hundred forty five	945
Edward Ferguson, Trustee	Two hundred shares	200
Sylvester Brush	Fifty shares	50
W. C. Pickersgill	Five hundred five	505
H. A. Schermerhorn	One hundred thirty seven	137
George Rudd	Seventy shares	70

Names.	No. of shares.	
Calvin Stevens	Thirty shares	30
C. F. Dambmann	Eleven hundred	1100
Isabelle Varet Weed	Twenty five	25
John R. Brodhead	One hundred shares	100
James Low	Fifty shares	50
Eliza P. Toole, per S. H. Howard, Att'y	Forty shares	40
Smith Woodhull, per S. H. Howard, Att'y	Two hundred	200
6993 Edward M. Osborn, per S. Howard, Att'y	Forty shares	40
Edward M. Osborn, per S. H. Howard, Att'y	Forty shares	40
Diedrich Knubel, per S. H. Howard, Att'y	Forty shares	40
S. H. Howard, in trust	Nineteen shares	19
Frederic Bronson	Two hundred shares	200
Frederic Bronson, Exe.	One hundred shares	100
Frederic Bronson, Att'y	Fifty three shares	53
Mary E. Sayers	Twenty two shares	22
Edward Crary	Forty	40
George W. Taylor, Executor of James S. Taylor by John T. Lord, Att'y	Two hundred seventy shs.	270
John T. Lord	Five hundred shares	500
William Barton, per S. H. Howard, Att'y	Four hundred shs.	400
Henry H. Ward	Two hundred seventy two	272
H. R. Baltzer & W. G. Taaks in firm Baltzer & Taaks	One hundred	100
John J. Cisco and John A. Cisco forming the firm of John I. Cisco & Son	One hundred fifteen	115
Ezra P. Davis	Four hundred shares	400
Julia Battersby	Forty	40
Charlotte Brinckerhoff	Two hundred	200
Louisa Troup	Two hundred	200
Lucretia Salisbury	One hundred sixty two	162
Alex. Van Rensselaer	One hundred	100
A. Major	Three hundred	300
J. H. McKim	One hundred	100

STATE OF NEW YORK,
City and County of New York, ss:

Before me, Thomas Stephenson, a notary public duly commissioned and sworn, dwelling in the city and county of New York, at the times hereinafter set forth personally came the following named persons, viz.: On the twenty-fourth day of September, in the year one thousand eight hundred and sixty-seven, John A. Robinson;
on the twenty-seventh day of September, in the year aforesaid,
6994 Joseph Howland; on the twenty-second day of October, in the
year aforesaid, Adeline E. Schermerhorn; on the twenty-sixth
day of October, in the year aforesaid, John Alstyne, Ambrose C.

Kingsland, Daniel C. Kingsland and George Merritt; on the twenty-eighth day of October, in the year aforesaid, William A. Woodhull, Augustus Whiting and James A. Bennett; on the twenty-ninth day of October, in the year aforesaid, Daniel Parish, Daniel B. Fearing, Cornelius Bogert, Augusta E. Breese, Emily M. F. Braem, Charles Roome, Benjamin W. Bonney, Isaac Buchanan, John R. Ludlow, William B. Bibbins, Catharine L. Schmelzel and Mary D. Hodges; on the thirtieth day of October, in the year aforesaid, Geo. N. Miller, Geo. N. Miller, Executor of the estate of Horatio Miller, John H. Adam, Wm. H. Albro, Mary W. Barre, Eugene S. Ballin, Marcus P. Woodruff, Samuel T. Ferguson, D. C. Hays, John Halstead; and Maltby G. Lane, Trustee for Richard H. Lane and for Malvina A. Lane; on the thirty-first day of October, in the year aforesaid, John H. Gourlie, Henry C. De Rham, Charles P. Leverich, Isaac N. Phelps, John J. Phelps, Percy R. Pyne, Charles H. Russell, Joseph Sampson, Robert L. Stuart, Alexander Stuart, William C. Schermerhorn, Daniel Stinson, Edward Scheitlin, John H. Sprague, C. J. Sprague, Floyd Smith, George T. Trimble, David Thompson, Henry Young and Francis Alexandre; on the first day of November, in the year aforesaid, Peter Goelet, Robert Goelet, Elie Charlier, Isaac Phillips, Henry Heyward, James L. Ogden, Edward J. Roberts and A. G. Waterbury, Executor of the estate of John Skillman; on the second day of November, in the year aforesaid, John A. McGaw, Moses Taylor, Peter R. Warner, Mary Bulkley, George W. Endicott, Eliza Hearsey and Charles F. Osborn; on the fourth day of November, in the year afore-
6995 said, A. P. Merrill, junior, Charles A. Townsend, William J. Schenck, Henry K. Bogert, Charles E. Bulkley, Charles Banks, Attorney, Mason Young, John J. Cisco, Walter M. Smith, William R. Clarkson, Eliza A. Blake, John H. Welsh, Theodore E. Smith, Elias Ponvert, Adrian H. Muller, N. L. McCready, Charles Kneeland, Charles Kneeland, Executor of the estate of George Kneeland, and Charles Kneeland, Trustee for George Kneeland and for Anna Kneeland, S. C. Dortic and John J. Dortic; on the sixth day of November, in the year aforesaid, Julia D. K. Davis, Julia A. Gentil, Francis M. Parkin and Leonard H. Morrison; on the seventh day of November, in the year aforesaid, F. Augustus Schermerhorn, George W. Thompson, William H. Tillinghast, H. Erskine Smith, L. Bayard Smith, Josephine M. Smith, Emily M. Smith, Thomas B. Rich, H. H. Casey, Trustee, John De Ruyter, James De Peyster, John D. Dupuy, Carsten H. Hincken, Laura H. Curtis and Thomas C. Chardavoyne; on the eighth day of November, in the year aforesaid, Gouverneur M. Smith, Georgiana J. Trim and A. Pfender; on the ninth day of November, in the year aforesaid, E. H. Schermerhorn, George Wilson, Robert Dinwiddie, George W. Elder and George Hall; on the eleventh day of November, in the year aferosaid, Charles C. Carpender, Uriah J. Smith, Israel B. Brice, Gilbert C. Woodhull, Gilbert C. Woodhull, Executor of the estate of Edmond S. Woodhull, Samuel Willets, Charles A. Peabody and Samuel Lord; on the twelfth day of November, in the year aforesaid, Samuel Sloan, Henry H. Ward, Trustee, and Robert Jaffray;

on the thirteenth day of November, in the year aforesaid, D. Varet,
Albert Smith, John W. Culver, Thomas Morrell, Robert
6996 Tomes and Edgerton L. Winthrop, Trustee; on the fourteenth
day of November, in the year aforesaid, Walter Edwards and
Henry H. Mosher; on the fifteenth day of November, in the year
aforesaid, Robert Bent, Henry Salisbury and Frederick S. Salisbury;
on the sixteenth day of November, in the year aforesaid, Bradish
Johnson, Louisa A. Johnson and E. N. Tailer; on the eighteenth day
of November, in the year aforesaid, Mary L. Redmond and Effingham
H. Nichols, Executor of the estate of S. Tredwell; on the nineteenth
day of November, in the year aforesaid, Edward Ludlam; on
the twentieth day of November, in the year aforesaid, John J. Dortic,
Trustee for F. Lacapere; on the twenty-first day of November,
in the year aforesaid, Charles C. Carpender, Uria J. Smith, Israel
Philetus H. Holt on the twenty-second day of November, in
the year aforesaid, Susan L. Smith, Walter W. Price, Ellen
S. Auchmuty, Henry Monlun, David Rodh, and John Neilson,
Trustee for Margaret A. Neilson; on the twenty-third day of
November, in the year aforesaid, Elizabeth M. Hudson; on the
twenty-fifth day of November, in the year aforesaid, Oliver Bronson;
on the twenty-sixth day of November, in the year aforesaid, Reuben
Parsons; on the thirtieth day of November, in the year aforesaid,
Anna C. Roome; on the second day of December, in the year aforesaid,
Ellen P. Andrew, Frederick E. Gilbert, Almira Smith, Thomas
G. Hodgkins, Anne S. Ireland, Executrix of the estate of Wm. B.
Ireland, Miranda R. Knowlton, Edward Leavitt, Mrs. D. H. McAlpin,
and Moses H. Swift; on the fourth day of December, in the
year aforesaid, Anna B. Holmes, Caroline H. Polhemus, Elijah C.
Pell, Mary Spencer, Catharine C. Spencer, John J. Studwell, Charles
G. Taylor, Emily G. Ellingwood, Executrix, Augusta B. Storer, and
Grace Burritt; on the fifth day of December, in the year aforesaid,
Mary G. Chittenden, Eden Allen, and George Brinley,
6997 Trustee; on the sixth day of December, in the year aforesaid,
John B. Storm, William V. Brady, Elizabeth Grafton, Julia
R. Hunting, Jane H. Taylor, Anna C. Burdsall, Frederick Mead,
James N. McCall, Isaac T. Ludlam, Alexander Johnston, Sarah M.
Hitchcock, Adeline L. Hitchcock, John Allen, George J. Schmelzel,
and James H. Banker; on the seventh day of December, in the year
aforesaid, Charles C. Goodhue, Sara E. S. Appleby, Mary B. S. Dortic,
Hannah G. Gerry, Jean G. Goelet, Louisa Varet, Elvina Varet,
Kate W. Winthrop, Julia E. Woodhull, Caroline P. Woodhull,
Henry Lawrence, Edward N. Kent, Benjamin B. Sherman, John
Reuter, E. T. Pell, S. Mendelson, John Osborn, Francis Tomes, Jr.,
Samuel Hart, Senior; on the twentieth day of December in the year
aforesaid, Albertina S. Pyne; on the twenty-third day of December,
in the year aforesaid, John W. Burke and Gustav H. Kissel; on the
twenty-fourth day of December, in the year aforesaid, Christopher
Townsend; on the twenty-sixth day of December, in the year aforesaid,
Sylvester Brush, William C. Pickersgill, Henry A. Schermerhorn,
Calvin Stevens, C. F. Dambmann, Isabella Varet Weed, John
R. Brodhead, and James Low; on the twenty-seventh day of Decem-

ber in the year aforesaid, Frederick Bronson, Frederick Bronson, Executor, Frederick Bronson, Attorney, Mary E. Sayres, Edward Crary, Samuel H. Howard, Trustee, Henry H. Ward, all of whom the said persons above named I then knew, and now know, to be stockholders in The Manhattan Gas Light Company, and to be individuals who signed and executed the foregoing certificate; and the said persons then, in my presence, severally signed the said certificate, and acknowledged that they executed the same; and on the thirtieth day of October, in the said year one thousand eight 6998 hundred and sixty-seven, personally came before me Marcus P. Woodruff, whom I know to be the individual, who, as the attorney of Isaac O. Woodruff, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose, duly constituted by the said Isaac O. Woodruff, and the said Marcus P. Woodruff, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Isaac O. Woodruff; and on the said thirtieth day of October, Personally came before me Marcus P. Woodruff, whom I know to be the individual who, as the attorney of Arethusa H. Woodruff, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose, duly constituted by the — Arethusa H. Woodruff, and the said Marcus P. Woodruff, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Arethusa H. Woodruff; and on the thirty-first day of October, in the year aforesaid, before me personally came Henry Young, whom I know to be the individual, who, as the attorney of Henry L. Young, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said Henry L. Young, and the said Henry Young, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Henry L. Young; and on the said thirty-first day of October, in the year aforesaid, before me personally came William P. 6999 Powers, whom I know to be the individual, who as the attorney of Ann Craig, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said Ann Craig, and the said William P. Powers, as such attorney, then, in my presence, signed said certificate and acknowledged that he executed the same as the act and deed of the said Ann Craig; and on the said thirty-first day of October, in the year aforesaid, personally came before me Jeremiah Wilbur, whom I know to be the individual, who, as the attorney of Anna M. Bulkley, a stockholder in the Manhattan Gas-Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted by the said Anna M. Bulkley, and the said Jeremiah Wilbur,

then, as such attorney, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Anna M. Bulkley, and on the said thirty-first day of October, in the year aforesaid before me personally came Jeremiah Wilbur, whom I know to be the individual who as the attorney of Harriet J. Rogers, a stockholder in the Manhattan Gas-Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said Harriet J. Rogers, and the said Jeremiah Wilbur, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Harriet J. Rogers; and on the twelfth day of November, in the year aforesaid, before me personally came Moses Taylor, whom I know to be the individual who as the attorney of Mary Lewis, a stockholder in The Manhattan Gas-Light Company, signed and
7000 executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said Mary Lewis, and the said Moses Taylor, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same, as the act and deed of the said Mary Lewis.

And on the said twelfth day of November, before me personally came Moses Taylor, whom I know to be the individual who as the attorney of John D. Wolfe, a stockholder, in The Manhattan Gas-Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said John D. Wolfe, and the said Moses Taylor, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said John D. Wolfe; and on the said twelfth day of November, before me personally came Moses Taylor, whom I know to be the individual who as the attorney of William H. Smith, a stockholder in The Manhattan Gas-Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said William H. Smith, and the said Moses Taylor, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said William H. Smith; and on the said twelfth day of November, before me, personally came Moses Taylor, whom I know to be the individual who as the attorney of David W. Bishop, a stockholder in The Manhattan Gas-Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said David W. Bishop, and the
7001 said Moses Taylor as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said David W. Bishop; and on the said twelfth day of November, before me personally came Moses Taylor, whom I know to be the individual who signed and executed the foregoing certificate as the attorney of David W. Bishop, Executor of the last will and testament of Japhet Bishop,

deceased, the said David W. Bishop, Executor as aforesaid, being a stockholder in the Manhattan Gas Light Company, and whom I also know to be the attorney for that purpose duly constituted by the said David W. Bishop, Executor as aforesaid, and the said Moses Taylor, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said David W. Bishop, Executor as aforesaid; and on the said twelfth day of November, before me personally came Moses Taylor, whom I know to be the individual who, as the attorney of Henry A. Hurlbut, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know, to be the attorney for that purpose, duly constituted by the said Henry A. Hurlbut, and the said Moses Taylor, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Henry A. Hurlbut; and on the twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of John H. Watkinson, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said John W. Watkinson; and the said Samuel H. Howard, as such attorney, 7002
then in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said John H. Watkinson; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Abner J. Leavenworth, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted by the said Abner J. Leavenworth, and the said Samuel H. Howard, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Abner J. Leavenworth; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Robert Donaldson, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said Robert Donaldson, and the said Samuel H. Howard as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Robert Donaldson; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Samuel B. Gardiner, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said Samuel B. Gardiner;

and the said Samuel H. Howard, as such attorney, then in
7003 my presence signed the said certificate, and acknowledged
that he executed the same as the act and deed of the said Samuel B. Gardiner; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Charles H. Minot, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said Charles Minot, and the said Samuel H. Howard, as such attorney, then in my presence signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Charles H. Minot; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of George H. Norman, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose, duly constituted by the said George H. Norman, and the said Samuel H. Howard, as such attorney, then in my presence signed the said certificate, and acknowledged that he executed the same as the act and deed of the said George H. Norman; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Edward M. Osborn, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted, by the said Edward M. Osborn, and the said Samuel H. Howard, as such attorney, then in my
presence signed the said certificate and acknowledged that he
7004 executed the same as the act and deed of the said Edward
M. Osborn; and on the said twenty-fifth day of November, in the year aforesaid, before me personally came N. W. H. Judson, whom I know to be the individual who, as the attorney of Mary R. Miller, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney for that purpose duly constituted, of the said Mary R. Miller, and the said N. W. H. Judson, as such attorney, then in my presence signed the said certificate and acknowledged that he executed the same as the act and deed of the said Mary R. Miller; and on the twenty-seventh day of December, in the year aforesaid, before me personally came John T. Lord, whom I know to be the individual who, as the attorney of George W. Taylor, sole surviving executor of James S. Taylor, deceased, and a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted by the said George W. Taylor, sole surviving executor as aforesaid, and the said John T. Lord, as such attorney, then in my presence signed the said certificate and acknowledged that he executed the same as the act and deed of the said George W. Taylor, sole surviving executor as afore-

said; and on the said twenty-seventh day of December, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who as the attorney of Eliza P. Toole, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted by the said Eliza P. Toole, and the said Samuel H. Howard, as such attorney, then in my presence signed the said certificate and 7005 acknowledged that he executed the same as the act and deed of the said Eliza P. Toole; and on the said twenty-seventh day of December, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Smith Woodhull, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said Smith Woodhull, and the said Samuel H. Howard, as such attorney, then in my presence signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Smith Woodhull; and on the said twenty-seventh day of December, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Delia Perry, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted by the said Delia Perry, and the said Samuel H. Howard, as such attorney, then in my presence signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Delia Perry; and on the said twenty-seventh day of December, in the year aforesaid, before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of Diedrich Knubel, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew, and now know to be the attorney for that purpose duly constituted by the said Diedrich Knubel, and the said Samuel H. Howard, as such attorney, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of the said Died- 7006 rich Knubel; and on the said twenty-seventh day of December before me personally came Samuel H. Howard, whom I know to be the individual who, as the attorney of William Barton, a stockholder in The Manhattan Gas Light Company, signed and executed the foregoing certificate, and whom I then knew and now know to be the attorney, for that purpose duly constituted by the said William Barton, and the said Samuel H. Howard, as such attorney, then, in my presence signed the said certificate and acknowledged that he executed the same as the act and deed of the said William Barton; and before me personally came on the said twenty-seventh day of December, H. R. Baltzer and William G. Taaks, composing the firm of Baltzer & Taaks, John J. Cisco and John A. Cisco, composing the firm of John J. Cisco & Son, Henry H. Ward, Ezra P. Davis, Julia Battersby, Charlotte Brinkerhoff, Louisa Troup and Lucretia Salisbury, and on the twenty-eighth day of December, in the year aforesaid, Alexander Van Rennselear, all of whom I then knew and now know to be stockholders in The Manhattan Gas Light Company, and to be individuals who signed and executed the foregoing certificate, and the said persons, then, in my presence severally signed the said certificate and acknowledged that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my notarial Seal at the city of New York, this thirtieth day of December, in the year one thousand eight hundred and sixty-seven.

[L. S.] THOS. STEVENSON,
Notary Public.

7007 STATE OF NEW YORK, *City and County of New York, ss:*

I, William C. Conner, Clerk of the City and County of New York, and also Clerk of the Supreme Court for the said City and County, the same being a Court of Record, do hereby certify that Thomas Stevenson, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument and thereon written, was at the time of taking such proof or acknowledgment a Notary Public in and for the City and County of New York, dwelling in the said city, commissioned and sworn and duly authorized to take the same. And further that I am well acquainted with the handwriting of such notary and verily believe that the signature to the said certificate of proof or acknowledgment is genuine. I further certify that said instrument is executed and acknowledged according to the law of the State of New York.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County the 30th day of December, 1867.

[5 ct. stamp]

WM. C. CONNER, *Clerk.*

7008 STATE OF NEW YORK, *City and County of New York, ss:*

Before me, Richard C. Greene, a Commissioner of Deeds, duly commissioned and sworn, dwelling in the city and county of New York at the times hereinafter set forth personally came the following named persons, viz.: On the second day of December, in the year one thousand eight hundred and sixty-seven, Francis Tomes, Jr., and John C. Parsons; on the third day of December, in the year one thousand eight hundred and sixty-seven, George W. Welsh, William R. Talbot and Cynthia A. Allen, and on the twenty-sixth day of December, in the year aforesaid, George Rudd, all of whom the said persons above named I then knew and now know to be stockholders in The Manhattan Gas Light Company, and to be individuals who signed and executed the foregoing certificate of organization, and the said persons then, in my presence, severally signed the said certificate and acknowledged that they executed the same.

And on the second day of December, in the year aforesaid, before me also personally came John C. Parsons, trustee of Mary H. Webb and of Mrs. E. S. Newton, and whom I then knew and now know to be a stockholder in The Manhattan Gas Light Company, and to be one of the individuals who signed the foregoing certificate, and the said John C. Parsons, trustee as aforesaid, then in my presence, signed the said certificate and acknowledged that he executed the same.

And on the twenty-sixth day of December, in the year aforesaid, before me personally came George T. Trimble, whom I know to be the Treasurer of The Roosevelt Hospital, a corporation in the city of New York, and which said Hospital is a stockholder in The
7009 Manhattan Gas Light Company, and to be one of the individuals who signed the foregoing certificate; and the said George T. Trimble, Treasurer as aforesaid, then, in my presence, signed the said certificate, and acknowledged that he executed the same as the act and deed of The Roosevelt Hospital aforesaid, and being by me duly affirmed, did say that he resided in the city of New York, that he was Treasurer of said The Roosevelt Hospital, and that he so signed and acknowledged the execution of said certificate by authority of said corporation.

And on the twenty-eighth day of December, in the year aforesaid, before me personally came A. Major and J. H. McKim, whom I then knew and now know to be stockholders in The Manhattan Gas Light Company, and to be individuals who signed and executed the foregoing certificate, and the said persons then, in my presence, severally signed the said certificate, and acknowledged that they executed the same.

In witness whereof, I have hereunto set my hand at the City of New York, this thirtieth day of December, in the year one thousand eight hundred and sixty-seven.

RICHD. C. GREENE,
Commissioner of Deeds.

STATE OF NEW YORK, *City and County of New York, ss:*

I, William C. Connor, Clerk of the City and County of New York, and also Clerk of the Supreme Court for the said City and County, the same being a Court of Record, do hereby certify that Richard C. Green, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument and thereon
7010 written, was at the time of taking such proof or acknowledgment a Commissioner of Deeds in and for the City and County of New York, dwelling in the said city, commissioned and sworn and duly authorized to take the same. And further that I am well acquainted with the handwriting of such commissioner and verily believe that the signature to the said certificate of proof or acknowledgment is genuine. I further certify that said instrument is executed and acknowledged according to the law of the State of New York.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 30th day of December, 1867.

[5c. stamp]

WM. C. CONNER,
Chief Clerk.

STATE OF NEW YORK, *Office of the Secretary of State:*

I have compared the preceding with the original certificate of organization of The Manhattan Gas Light Company, with acknowledgment thereto annexed, filed in this office on the thirty-first day of December, 1867, and hereby certify the same to be a correct transcript therefrom and of the whole of said original.

Witness my hand and seal of office of the Secretary of State at the city of Albany, this thirty-first day of December, one thousand eight hundred and sixty-seven.

[L. S.] ERASTUS CLARKE,
Deputy Secretary of State.

7011 STATE OF NEW YORK, *City and County of New York, ss:*

I, William C. Conner, Clerk of the said city and county, and Clerk of the Supreme Court of said state for said county, do certify that I have compared the preceding with the original certificate of organization of the "Manhattan Gas Light Company," on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

In witness whereof I have hereunto subscribed my name and affixed my official seal, this thirtieth day of December, 1867.

[L. S.] W. C. CONNER, *Clerk.*

COMPLAINANT'S EXHIBIT 10.

CHAP. 545.

AN ACT *to incorporate the Metropolitan Gas Light Company of the city of New York.*

Passed April 17, 1855.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. That James Bowen, James Freeborn, William H. Edwards, Rufus F. Andrews, John Callaghan, Charles Spear, Isaac M. Marsh, John H. Platt, Charles W. Baker, Hugh Smith, William McDermott and Isaac H. Cady, and their present and future associates, shall be and are hereby created, constituted and declared to be a body politic and corporate by the name of "The Metropolitan Gas Light Company of the City of New York," with full power and authority at any time hereafter to manufacture, make and sell gas, to be 7012 made of coal, oil, tar, peat, pitch and turpentine or other materials, and to be used for the purpose of lighting the city of New York, and the streets, avenues, lanes, alleys and squares thereof, and any building, manufactories or houses therein contained and situate, and to lay pipes for the purpose of conducting the gas in any of the streets, avenues, lanes, alleys and squares of the said city, and to adopt any other necessary means to furnish gas to any inhabitant of said city, and also that the said company will so conduct their manufactory or manufactories of gas as not to create a nuisance, and that no public street, avenue, lane, alley, square or highway in the said city shall be dug into or defaced or other means adopted in regard thereto for the purpose aforesaid, without the permission of the two boards of the Common Council of said city first had and obtained, and the said boards are hereby authorized to grant and vest exclusive permission and authority to and in said company for said purposes to such extent and under such regulations as to them shall seem expedient, and such permission and authority shall be conclusive and shall continue as thus fixed during the period designated by said boards at the time of granting the same. But the rights and privileges hereby granted shall not be construed to affect or impair any exclusive rights or privileges vested in any incorporated company in said city.

§ 2. That the capital stock of this corporation shall not exceed two million, five hundred thousand dollars. And that a share in the same shall be one hundred dollars; and books of subscription to the said capital stock or to such portion thereof as from time to time may, by the directors, for the time being, be deemed proper and necessary shall be opened by the appointment or under the direction
of the directors hereinafter named subject to such rules lim-
7013 itations and conditions as by them shall be prescribed; and
the stock of the said corporation shall be deemed and considered personal property.

§ 3. The stock, property and affairs of the said corporation shall be managed and conducted by or under the direction of twelve directors, being stockholders and citizens of this state; that the said directors shall hold their offices for one year, except as provided in Section 4 of this act, and shall be elected at such time and place within the city of New York as a majority of the directors for the time being shall appoint, and that notice of such election shall be given in at least two of the public newspapers printed in the city of New York, at least fourteen days previous to the time of holding such election, and every such election shall be by ballot and by such of the stockholders who shall attend for that purpose, either in person or by proxy, and each stockholder shall be entitled to one vote for each share of the stock which he or she may have held in his or her own name for at least fourteen days before the time of voting, and the persons having the greatest number of votes shall be the directors, and if it shall happen that two or more persons shall have an equal number of votes the directors in office at the time of election shall, by a plurality of votes given by ballot, determine which of the persons so having an equal number of votes shall be director or directors, so as to complete the whole number to be chosen; and the directors so chosen shall, as soon as may be thereafter, proceed by ballot to elect one of their number president, and if any director shall remove out of this state, or cease to be a stockholder, or shall resign, his office shall be vacant, and whenever any vacancy shall
happen the same shall be filled up by the remaining directors
7014 by a plurality for the unexpired term, except as provided in
Section 4 of this act.

§ 4. That James Bowen, Isaac H. Cady, Rufus F. Andrews, Charles W. Baker, James F. Freeborn, John Callaghan, Isaac M. Marsh, Hugh Smith, William McDermott, William H. Edwards, John H. Platt and Charles Spear shall be the first directors of the said company, who shall hold their offices until one year after the said company shall be organized and in practical operation, and until others are chosen in their places, and they shall proceed to choose their president at such time and place as they or a majority of them shall determine. Any of the above named directors on resigning may designate the person or persons to fill the vacancy, provided that the person or persons so designated are stockholders of said company, for the unexpired term. Vacancies by death shall be filled by the remaining directors by a plurality, for the unexpired term.

§ 5. Each stockholder of any company formed under this act shall be individually liable to the creditors of such company, to an amount equal to the amount of the stock held by him, for all the debts and liabilities of such company, until the whole amount of the capital stock so held by him shall have been paid into the company, and all the stockholders of any such company shall be jointly and severally liable for all the debts due or owing to any of its laborers and servants for services performed for said corporation, but shall not be liable for an action therefor before an execution shall be returned unsatisfied in whole or in part against the corporation, and then the amount due on such execution shall be the amount recoverable with costs against such stockholders.

7015 § 6. Every corporation formed under this act shall, in addition to the powers hereinbefore conferred, and the powers conferred on corporations in the third title of the eighteenth chapter of the first part of the Revised Statutes, have power:

1. To purchase and hold real estate.
2. To erect and maintain all necessary and convenient buildings, fixtures and machinery, for the aforesaid purposes, or incident or necessary thereto.
3. From time to time to borrow such sums of money as may be necessary for the aforesaid objects, and to issue and dispose of their bonds for any amount so borrowed, and to mortgage their corporate property and franchises to secure the payment of any debt contracted by the company for the purposes aforesaid; and the directors of the company may confer on any holder of any bond issued for money borrowed as aforesaid, the right to convert the principal due or owing thereon into stock of said company, at any time not exceeding ten years from the date of the bond, under such regulations as the directors may see fit to adopt.

§ 7. It shall and may be lawful for the directors or a majority of them to require payment of the subscription to the capital stock of the said corporation, at such times and in such proportions as they or a majority of them shall deem fit, under the penalty of forfeiting any previous payment or payments thereon; and that previous notice of the instalments required to be paid, after the first, and of the time when the same are to be paid, shall be published at least fourteen days in two of the public newspapers printed in the 7016 city of New York; provided that no such forfeiture shall be made until the company shall be organized and in practical operation.

§ 8. If any person or persons wilfully do or cause to be done any act or acts whatever, whereby the works of the said corporation, or any pipe, conduit, plug, cock, reservoir, or any engine, machine or structure, or any matter or thing appertaining to the same, shall be stopped, obstructed, or impaired, weakened, injured or destroyed, the person or persons so offending shall forfeit and pay to the said corporation treble the amount of the damage sustained by means of such offence or injury, to be recovered in the name of the said corporation, with costs of suit, in any court having cognizance thereof.

§ 9. The said company shall be deemed to be organized when the president shall be elected, and shall be deemed to be in practical operation from the time the permission and authority provided for in the first section is obtained.

§ 10. The said company may receive, in lieu of cash subscriptions, property suitable to be used for its purposes, at a valuation to be agreed upon.

§ 11. This act shall be deemed a public act, and shall be favorably construed for the purposes herein expressed, and declared in all courts and places whatsoever.

7017 COMPLAINANT'S EXHIBIT 11.

CHAP. 476.

AN ACT *to provide for the payment of certain certificates of indebtedness of the Metropolitan Gas Light Company of the city of New York.*

Passed June 8, 1881; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

§ 1. The Metropolitan Gas Light Company of the city of New York, in order to provide for the payment of the outstanding scrip certificates of the company, issued March 24 and November 30, 1870, may, by resolution of the board of directors of the company, issue its bonds to an amount not exceeding the sum of nine hundred thousand dollars, payable within twenty years, the money so provided by the issue of the bonds of the company, as herein provided, to be applied to the payment of the said certificates outstanding, and to no other purpose whatever.

§ 2. This act shall take effect immediately.

COMPLAINANT'S EXHIBIT 12.

CERTIFICATE OF REORGANIZATION UNDER GENERAL LAWS OF 1848 OF THE NEW YORK GAS LIGHT COMPANY.

READ ON BEHALF OF COMPLAINANTS.

(Filed in office of N. Y. County Clerk June 1, 1871.)

(Filed in office of Secretary of State June 1, 1871.)

7018 Pursuant to the provisions of an Act entitled "An Act to amend Chapter 37 of the Laws of 1848, entitled An Act to authorize the formation of Gas Light Companies," passed April 20, 1867, we, the undersigned, owners of two-thirds of the Capital Stock of the New York Gas Light Company, a Gas Company incorporated by special Act for the purpose of manufacturing and supplying gas in the City of New York, do hereby certify:

That we desire to form a Company for the purpose of manufacturing and supplying gas for lighting the streets and public and private buildings of the City of New York;

That the corporate name of the said Company is the New York Gas Light Company;

That the objects for which the Company is formed are the manufacturing, making and selling gas to be used for the purpose of lighting the City of New York, the streets thereof, and any buildings, manufactories or houses therein contained and situate, and to lay pipes for the purpose of conducting gas in the streets and avenues of said City.

That the amount of the Capital Stock of the said Company is four millions of dollars.

That the term of its existence is fifty years.

That the number of shares of which said Stock is to consist is forty thousand.

That the number of Directors is nine.

That the names of the Directors who shall manage the concerns of the Company for the first year are Joseph Sampson, William A. Hadden, James R. Taylor, Cornelius L. Everitt, Henry R. Remsen, Moses Taylor, John J. Astor, Frederick W. Stevens and Thomas K. Lee, and that the operations of the Company are to be carried on in the City and County of New York.

In Witness Whereof, we have signed these presents in duplicate this first day of May, one thousand eight hundred and seventy-one.

(U. S. int. rev. 5c. stamp, cancelled.)

(Here follow signatures and acknowledgments.)

7019 COMPLAINANT'S EXHIBIT 13.

CERTIFICATE OF INCORPORATION OF THE HARLEM GAS LIGHT COMPANY.

READ ON BEHALF OF COMPLAINANTS.

We, Burr Wakeman, Henry P. McGown, Walter Brady, Lemuel Arnold and John M. Reed, all of the City and County of New York, whose names are hereunto subscribed, being desirous to form a Company for the purpose of manufacturing and supplying gas for lighting the streets and public and private buildings, and for other purposes, situated and being in all that part of the City and County of New York lying north of the center line of Seventy-ninth Street in said City,

Do for that purpose make and sign and acknowledge, this certificate by which we certify that the corporate name of said Company shall be and is "The Harlem Gas Light Company" and

That the objects for which said Company is intended to be formed are the manufacturing and supplying gas for lighting the streets and the public and private buildings and for other purposes, situated and being in all that part of the City and County of New York lying north of the center line of Seventy-ninth Street in said City.

That the amount of the Capital Stock of said Company shall be and is one hundred and twenty thousand dollars to be divided into two thousand four hundred shares of fifty dollars each.

That the term of existence of said corporation shall be fifty years.

That the number of the Directors of said Company shall be five, and that Burr Wakeman, Henry P. McGown, Walter Brady, Lemuel Arnold and John M. Reed, hereinbefore named, shall be Directors of said corporation for the first year, and that the operations 7020 of said Company are intended to be and shall be carried on in the City and County of New York.

This certificate is made, signed and acknowledged in said City and County of New York before Joseph O. Brown, a Commissioner of Deeds in and for the City and County of New York, an officer competent to take the acknowledgment of deeds, to the intent that he shall duly certify to such making, signing and acknowledgment and with intent that the same shall be filed in the office of the Clerk of said City and County, and a duplicate thereof in the office of the Secretary of State, the whole to be done with intent thereby to form a corporation under and pursuant to the provisions of the Act entitled "An Act to authorize the formation of Gas Light Companies," passed February 16, 1848, and any amendment thereof.

Made, signed and acknowledged in duplicate in the City and County of New York this first day of February in the year of one thousand eight hundred and fifty-five.

In the presence of
JOS. O. BROWN.

BURR WAKEMAN. [SEAL.]
HENRY P. McGOWN. [SEAL.]
WALTER BRADY. [SEAL.]
LEMUEL ARNOLD [SEAL.]
JOHN M. REED. [SEAL.]

STATE OF NEW YORK, *City and County of New York, ss:*

On the first day of February, A. D. eighteen fifty-five, before me came Burr Wakeman, Henry P. McGown, Walter Brady, Lemuel Arnold, John M. Reed, all known to me to be the individuals described in and who executed the foregoing certificate and acknowledged to me that they executed the same.

JOSEPH O. BROWN,
Commissioner of Deeds.

7021 STATE OF NEW YORK, *City and County of New York, ss:*

I, Richard B. Connelly, Clerk of the City and County of New York, do certify hereby, that Joseph O. Brown, whose name is subscribed to the certificate of proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Commissioner of Deeds for said City and County, dwelling in the said City, commissioned, and sworn, and duly authorized to take the same, and further, that I am well acquainted with the handwriting of such Commissioner, and verily believe the said signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the County, the second day of February, eighteen fifty-five.

[SEAL.] RICH. B. CONNELLY, *Clerk.*

COMPLAINANT'S EXHIBIT 14.

CERTIFICATE OF INCREASE OF CAPITAL STOCK OF THE HARLEM GAS LIGHT COMPANY.

READ ON BEHALF OF COMPLAINANT'S.

We, Burr Wakeman, Chairman, and Henry P. McGown, Secretary, do hereby certify that a meeting of the Stockholders of "The Harlem Gas Light Company" was held at the office of the Company, corner First Avenue and One Hundred and Eleventh Street, in the City of New York, on the twenty-first day of June, A. D. One thousand eight hundred and sixty-nine, at ten (10) o'clock a. m. 7022 of that day, at which meeting seventeen thousand three hundred and seventeen (17,317) shares of the Capital Stock of said Company was represented, being more than two-thirds of all the shares of Stock of said Company.

That such meeting was held for the purpose of voting for or against increasing the Capital Stock of said Company the sum of ($1,000,000) one million dollars, the Capital Stock of said Company being previous to said meeting the sum of ($1,000,000) one million dollars, the proposed increase being one million dollars ($1,000,000), making the Capital Stock the sum of ($2,000,000) two million dollars, said meeting being held under, by virtue of, and in pursuance of the requirements of sections (20) twenty and (21) twenty-one of an Act entitled "An Act to authorize the formation of Gas Light Companies," passed February sixteenth, eighteen hundred and forty-eight, and Acts amendatory thereof.

That at such meeting Burr Wakeman, one of the Directors of said Company, was chosen Chairman of the meeting, and Henry P. McGown was chosen Secretary.

The said stockholders thereupon proceeded to vote for such proposed increase; that the polls were kept open until eleven o'clock a. m. of that day; that upon canvassing the votes cast it appeared that seventeen thousand three hundred and seventeen (17,317) shares of the Capital Stock of said Company had been voted upon, and that all of said votes cast were in favor of such proposed increase.

And we further certify, that a notice of such proposed increase, signed by all of the Directors of said Company, has been regularly published in the *Express*, a daily newspaper printed and published in the City and County of New York, for at least three successive weeks previous to the twenty-first day of June, one thousand eight hundred and sixty-nine, the time of holding such meeting as 7023 aforesaid, as appears by an affidavit of such publication hereto annexed, and also that a printed copy of such notice was deposited in the New York Post Office, addressed to each and every one of the stockholders of said Company, at his usual place of residence, at least three weeks previous to the day fixed upon for holding such meeting, as appears by the affidavit of N. Gano Dunn, annexed.

That (20,000) twenty thousand shares, being the whole of the Capital Stock of said Company, amounting to the sum of ($1,000,000)one million dollars, has actually been paid in. That the whole amount of the debts and liabilities of said Company does not exceed the sum of ($103,000) one hundred and three thousand dollars, and that the amount to which the Capital Stock is increased is the sum of ($2,000,000) two million dollars.

That this certificate is made, signed and acknowledged in said City and County of New York before N. Gano Dunn, a Notary Public in and for the City and County of New York, an officer competent and authorized to take the acknowledgment of deeds, to the intent that he shall duly certify to such signing and acknowledgment, and to the intent that the same shall be filed in the office of the Clerk of the City and County of New York, that being the County in which the business of said Company is carried on, and a duplicate thereof in the office of the Secretary of State, the whole to be done with the intent thereby to increase the Capital Stock of said Company the sum of ($1,000,000) one million dollars in pursuance of section twenty-two of act hereinbefore referred to, and any amendment thereof.

Made, signed and acknowledged in duplicate in the City and County of New York this twenty-first day of July, in the year One thousand eight hundred and sixty-nine.

BURR WAKEMAN.

In the presence of
N. GANO DUNN.
Attest:
HENRY P. McGOWN, *Secr'y.*

7024 STATE OF NEW YORK, *City and County of New York, ss:*

Burr Wakeman, of said City, being duly sworn, doth depose and say that the foregoing certificate, signed by him, is true to the best of his knowledge, information or belief, and further deponent saith not.

BURR WAKEMAN.

Sworn to before me this 21st day of July, 1869.

N. GANO DUNN,
Notary Public, City and Co. of New York.

STATE OF NEW YORK, *City and County of New York, ss:*

On this 21st day of July, one thousand eight hundred and sixty-nine, before me personally came Burr Wakeman, to me known to be the same person described in and who executed the foregoing certificate, and he acknowledged to me that he executed the same.

N. GANO DUNN,
Notary Public, City and Co. of New York.

OFFICE OF THE HARLEM GAS LIGHT CO.,
NO. 76 NASSAU STREET, CITY OF NEW YORK, *May* 27, 1869.

Notice is hereby given that a meeting of the stockholders of the Harlem Gas Light Company will be held on the 21st day of June, next, A. D. eighteen sixty-nine, at the office of the Company, corner of First Avenue and One Hundred and Eleventh Street, in the City of New York, at ten o'clock a. m. of that day, for the purpose of increasing the amount of the Capital Stock of said Company—said capital now being one million ($1,000,000) dollars—the proposed increase being one million ($1,000,000) dollars—making the whole Capital Stock of said Company the sum of two million ($2,000,000) dollars. Such increase being intended for the purpose of extending the business of the Company, the laying of and extension of mains for conducting gas, and of extending the works of the Company. This notice being given in pursuance of sections twenty and twenty-one of an act entitled "An Act to authorize the formation of Gas Light Companies," passed February 16th, 1848. 7025

BURR WAKEMAN,
HENRY P. McGOWN,
C. ZABRISKIE, JR.,
J. M. HALSTEAD,
ROB. W. RODMAN,
ABM. R. VAN NEST,
THOMAS RUTTER,
Directors.

CITY AND COUNTY OF NEW YORK, *ss:*

C. T. Potter, of the City of New York, being duly sworn, says that he is Principal Clerk in the office of the *Express,* a daily paper printed and published in the City of New York; and that the notice, of which the annexed is a printed copy, has been regularly published in the said *Express* once in each week for four weeks successively, commencing on the 27th day of May, 1869.

C. T. POTTER.

Sworn to before me this 23d day of June, 1869.

THOS B. KINGSLAND,
Notary Public, C. & C. N. Y.

7026 OFFICE OF THE HARLEM GAS LIGHT COMPANY,
NO. 76 NASSAU STREET, CITY OF NEW YORK,
MAY 27*th*, 1869.

"Notice is hereby given that a meeting of the stockholders of the Harlem Gas Light Company will be held on the 21st day of June next, A. D. 1869, at the office of the company, corner of First Avenue and 111th Street, in the City of New York, at ten o'clock a. m. of that day, for the purpose of increasing the amount of Capital Stock of said Company—said capital now being one million ($1,000,000) dollars—the proposed increase being one million ($1,000,000) dollars—making the whole Capital Stock of said Company the sum of two million ($2,000,000) dollars. Such increase being intended for the purpose of extending the business of the Company, the laying of and extension of mains for conducting gas, and of extending the works of the Company."

This notice being given in pursuance of Sections 20 and 21 of an act entitled "An Act to authorize the formation of Gas Light Companies, passed February 16, 1848.

BURR WAKEMAN.
HENRY P. McGOWN.
C. ZABRISKIE, JR.
J. M. HALSTEAD.
ROB. W. RODMAN.
ABM. R. VAN NESS.
THOS. RUTTER.

CITY, COUNTY, AND STATE OF NEW YORK, *ss:*

N. Gano Dunn, of said City, being duly sworn, doth depose and say that he is a clerk in the office of the Harlem Gas Light Company; that he deposited in the general post office in the City of New York on the 27th day of May, A. D. 1869, between the hours of three and four o'clock p. m. of that day, a true copy of the above
7027 annexed printed notice, addressed to each and every person named and mentioned on the books of the said Company, as a stockholder of said Company on said last-named day, and that the said notices, so deposited as aforesaid, were addressed to said persons, at their last-known place of residence, and the postage paid thereon by deponent, and further deponent saith not.

N. GANO DUNN.

Sworn to before me this 27th day of May, 1869.

ERASMUS F. BROWN,
Notary Public, N. Y. City & Co.

COMPLAINANT'S EXHIBIT 15.

CERTIFICATE OF INCORPORATION OF THE MUNICIPAL OXYGEN GAS COMPANY OF THE CITY OF NEW YORK.

READ ON BEHALF OF COMPLAINANTS.

We, George Shea, Sydney Howard Gay, Robert M. C. Graham, Henry J. Robinson, Richard M. Harison, James M. Varnum and Henry H. Porter do hereby certify that we have formed a company under the provisions of the Act entitled, "An Act to authorize the formation of Gas Light Companies" passed February 16th, 1848, and the several Acts amendatory thereof, and

First. The corporate name of the said Company is The Municipal Oxygen Gas Company, of the City of New York.

Second. The objects for which the company is formed are
7028 the manufacturing and supplying gas for lighting the streets
and public and private buildings in the City of New York.

Third. The amount of the Capital Stock of the said Company is five hundred thousand dollars.

Fourth. The term of the existence of the Company is to be fifty years.

Fifth. The said capital is divided into five thousand shares of one hundred dollars each.

Sixth. The number of Directors who will manage the concerns of said Company for the first year is seven and their names are George Shea, Robert M. C. Graham, Sydney H. Gay, Henry J. Robinson, James M. Varnum, Richard M. Harison and Henry H. Porter.

Seventh. The operations of the said Company are to be carried on in the City and County of New York.

New York, May 29, 1874.

GEO. SHEA.
SYDNEY HOWARD GAY.
R. M. GRAHAM.
HENRY J. ROBINSON.
R. M. HARISON.
JAMES M. VARNUM.
H. H. PORTER.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On this twenty-ninth day of May, one thousand eight hundred and seventy-four, before me personally appeared George Shea, Robert M. C. Graham, Sydney Howard Gay, Henry J. Robinson, Richard M. Harison, James M. Varnum and Henry H. Porter, to me known to
be the individuals described in and who executed the fore-
7029 going certificate, and acknowledged that they executed the
same.

ROBERT OWEN,
Notary Public, New York.

COMPLAINANT'S EXHIBIT 16.

ORDER CHANGING NAME OF MUNICIPAL OXYGEN GAS COMPANY TO MUNICIPAL GAS LIGHT COMPANY.

READ ON BEHALF OF COMPLAINANTS.

At a Special Term of the Supreme Court of the State of New York, in and for the County of New York, held at the Court House in the City of New York, on the fifth day of June, 1876.

Present: Hon. Charles Donohue, Justice.

In the Matter of the Application of THE MUNICIPAL OXYGEN GAS COMPANY OF THE CITY OF NEW YORK, for Leave to Change its Corporate Name and Assume the Name and Title of the Municipal Gas Light Company of New York.

7030 The Municipal Oxygen Gas Company of the City of New York, having applied by petition to this Court for leave to change its corporate name and to assume the name and title of the Municipal Gas Light Company of New York, in accordance with the provisions of the Statutes in such case made and provided;

And it appearing by said petition that notice of application for such change of name has been published for six weeks in the State paper, and in two newspapers in the City and County of New York, where the only business office and principal corporate property of said Corporation are situate, one of the said newspapers being one of those designated to publish the Session Laws in and for said County; and also that such application was made in pursuance of a resolution of the Board of Directors of said Corporation; and it appearing to the satisfaction of this Court that there is no reasonable objection to granting such petition, and allowing said corporation to change its name and assume the name and title mentioned in said petition.

Now, on reading and filing said petition, and on motion of Varnum and Harison, of counsel for the petitioners, it is ordered that the prayer of said petition be and the same hereby is granted, and that the said Municipal Oxygen Gas Company of the City of New York be and they are hereby authorized, from and after the seventh day of July, 1876, to change their name and assume, be known by and use the name and title of the "Municipal Gas Light Company of New York," upon complying with the provisions and requirements of the Statutes in such case made and provided.

And it is further ordered that a copy of this order be filed in the office of the Secretary of State and with the Clerk of the City and County of New York, and be published once in each week for four weeks successively in the *Daily Register*, a newspaper published in the City and County of New York.

CHARLES DONOHUE, *J. S. C.*

7031 STATE OF NEW YORK, *City and County of New York, ss:*

I, William Walsh, Clerk of the City and County, and Clerk of the Supreme Court of said State for said County, do certify, that I have compared the preceding with the original order for change of name on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

Endorsed, filed and recorded 7 June, 1876, 11 h. 40 m.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 7th day of June, 1876.

[SEAL.] WM. WALSH, *Clerk.*

COMPLAINANT'S EXHIBIT 17.

CERTIFICATE OF INCREASE OF STOCK OF THE MUNICIPAL GAS LIGHT COMPANY OF NEW YORK.

READ ON BEHALF OF COMPLAINANTS.

STATE OF NEW YORK, *City and County of New York, ss:*

This is to certify that a meeting of the stockholders of the Municipal Gas Light Company of New York was held at the office of the company, No. 360 Fourth Avenue, New York City, on the 26th day of February, 1880, pursuant to a notice signed by C. G. Francklyn, Peter Gardner, George W. King, Oswald O. Hendorfer, E. Stern, William Schwartzwaelder, L. Delmonico, S. Hawk and Samuel C. Thompson, stating that a meeting of the stockholders of said 7032 company would be held at the office of the said Company, No. 360 Fourth Avenut, New York City, on Thursday, the 26th day of February, one thousand eight hundred and eighty, between the hours of noon and one o'clock p. m., and that the object of such meeting was to increase the Capital Stock of the Company pursuant to law from two millions of dollars to three millions of dollars.

That said notice was duly published in the *Evening Post,* a newspaper published in the County of New York, in which the business of the Company is carried on, for three successive weeks, and that a printed copy of such notice addressed to each stockholder of said Company was deposited in the post office in the City of New York at least three weeks previous to the date fixed upon for holding such meeting (a copy of said notice with due proof of the publication thereof and of the deposit of copies thereof in the post office addressed as above stated is hereto annexed).

That at the time and place specified in said notice stockholders appeared in person or by proxy in numbers representing more than two-thirds of all the shares of the Capital Stock of said Company and organized by choosing Mr. William Schwartzwaelder, one of the Directors of said Company, Chairman of the meeting, and Mr. Philip Allen, a suitable person, Secretary, and the meeting thereupon proceeded to a vote of those present in person and by proxy on the question of increasing the Capital Stock of said Company from two millions of dollars to three millions of dollars as specified in the notice of meeting, and on canvassing, it appeared that votes representing seventeen thousand and fourteen (17,014) shares, being more than two-thirds of all the shares of Stock of said Company, were cast and given in favor of increasing the Capital Stock of said Company from two millions of dollars to three millions of dollars and none against such increase.

7033 And it is further certified that the amount of the Capital Stock of the Company actually paid in and the whole amount of its debts and liabilities are as follows:

Seven thousand shares of said Stock (of the par value of seven hundred thousand dollars) have been issued in payment for patents, rights, lands, buildings, mains, and machinery transferred to the Company at fair valuations and valued at $700,000. Thirteen thousand shares of said stock of the par value of $1,300,000 have been subscribed for and their par value actually paid in in cash. The whole amount of the debts and liabilities of the Company is about and does not exceed $773,235.76, of which sum $765,597.13 is owing for principal and accrued interest upon Bonds issued or the payment of which has been assumed by said Company and which are secured by Mortgage on real estate owned by it.

And it is further certified that the Capital Stock of the Company has heretofore been two millions of dollars, divided into twenty thousand shares of one hundred dollars each, and that the amount to which it is to be increased is three millions of dollars, in thirty thousand shares of one hundred dollars each.

In Witness Whereof the said William Schwartzwaelder, the Chairman of said meeting, and the said Philip Allen, the Secretary thereof, have hereunto set their hands, this third day of March, One thousand eight hundred and eighty.

WM. SCHWARTZWAELDER.

Countersigned by:
PHILIP ALLEN.

7034 STATE OF NEW YORK, *City and County of New York, ss:*

William Schwartzwaelder, being duly sworn, said that he was the Chairman of the meeting of stockholders of the Municipal Gas Light Company of New York referred to in the above certificate, and that the matters in said certificate set forth are true to the best of his knowledge, information and belief.

WM. SCHWARTZWAELDER.

Sworn to before me this 3d day of March, 1880.

SAMUEL J. YOUNG,
Notary Public, Kings County.

Certificate filed (956).

CITY AND COUNTY OF NEW YORK, *ss:*

On the third day of March, in the year one thousand eight hundred and eighty, before me personally appeared William Schwartzwaelder, to me personally known and known to me to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

SAMUEL J. YOUNG,
Notary Public, Kings County.

Certificate filed (956).

STATE OF NEW YORK, *City and County of New York, ss:*

Philip Allen, being duly sworn, saith that he is the Secretary of the Municipal Gas Light Company of New York, that the schedule hereto annexed marked "A" contains a true and correct list of the stockholders of said Company, on the fourth day of February,
7035 1880, and of their respective residences as they appeared on the books of said Company on that day, and that said list is in all respects correct to the best of deponent's knowledge and belief.

PHILIP ALLEN.

Sworn to before me this 3d day of March, 1880.

SAMUEL J. YOUNG,
Notary Public, Kings County.

Certificate filed (956).

STATE OF NEW YORK, *City and County of New York, ss:*

George W. Beckwith, being duly sworn, saith that on the fourth day of February, 1880, he deposited in the post office at No. 401 Third Avenue, near 29th Street, in the City of New York, a printed copy of the notice hereto annexed marked "B," contained in a securely closed postpaid wrapper addressed to each of the persons mentioned in the schedule hereto annexed marked "A," at their respective residences as therein specified.

GEORGE W. BECKWITH.

Sworn to before me this 3d day of March, 1880.

SAMUEL J. YOUNG,
Notary Public, Kings County.

Certificate filed (956).

STATE OF NEW YORK, *City and County of New York, ss:*

I, William A. Butler, Clerk of the City and County of New York, and also Clerk of the Supreme Court for the said City and
7036 County, being a Court of Record, do hereby certify that Samuel J. Young has filed in the Clerk's office of the County of New York a certified copy of his appointment as Notary Public for the County of Kings with his autograph signature, and was at the time of taking the annexed deposition duly authorized to take the same, and that I am well acquainted with the handwriting of said Notary Public, and verily believe that the signature to the annexed certificate to be genuine.

In Testimony whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 6th day of March, 1880.

[SEAL.] WM. A. BUTLER, *Clerk.*

COMPLAINANT'S EXHIBIT 18.

CERTIFICATE OF INCORPORATION OF KNICKERBOCKER GAS LIGHT COMPANY.

READ ON BEHALF OF COMPLAINANTS.

We, the undersigned, being desirous to form a Company under and by virtue of the Act of the Legislature of the State of New York, passed February 16th, 1848, entitled "An Act to authorize the formation of Gas Light Companies," and the various Acts amendatory and supplementary thereof, for the purpose of manufacturing and supplying gas for lighting the streets and public and private buildings of the City and County of New York, State of New York, do hereby certify, that the corporate name of said Company shall be the Knickerbocker Gas Light Company.

7037 That the object for which the Company is formed is the manufacturing, supplying, vending and conducting of gas and doing all necessary things for the purpose of manufacturing and vending gas and lighting public and private buildings, streets, avenues and parks in the City of New York with the same.

That the amount of the Capital Stock is one million five hundred thousand dollars.

That the term of existence of the Company shall be fifty years.

That the Capital Stock shall consist of Fifteen thousand shares of the par value of one hundred dollars each.

That the number of Directors who shall manage the concerns of the Company for the first year shall be five and their names are:

Robert M. C. Graham, of New York City.
Jared E. Redfield, of Essex, Connecticut.
Tilbon E. Doolittle, of New Haven, Conn.
John Sickles, of New York City.
George Howes, of New York City.

The operations of said Company are to be carried on in the City and County and State of New York.

In Witness Whereof, we have hereunto set our hands and seals this twenty-fourth day of June, in the year one thousand eight hundred and seventy-six.

ROBERT M. C. GRAHAM. [SEAL.]
TILBON E. DOOLITTLE. [SEAL.]
JARED E. REDFIELD. [SEAL.]
JOHN SICKLES. [SEAL.]
GEORGE HOWES. [SEAL.]

STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-fourth day of June, in the year of our Lord one thousand eight hundred and seventy-six, before me personally appeared Robert M. C. Graham, Tilbon E. Doolittle, Jared E. Redfield, John Sickles and George Howes, to me known to be the 7038 individuals described in and who executed the foregoing certificate, and they severally before me signed the said certificate and acknowledged that they signed the same for the purposes therein mentioned.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *City and County of New York, ss:*

I, William Walsh, Clerk of the City and County of New York, and also Clerk of the Supreme Court for the said City and County, the same being a Court of Record, do hereby certify, that M. A. Potter, whose name is subscribed to the certificate of proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the City and County of New York, dwelling in the said City, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine. I further certify that said instrument is executed and acknowledged according to the law of the State of New York.

In Testimony Whereof, I have hereunto set my hand and affixed the Seal of the said Court and County, the 10th day of July, 1876.

WILLIAM WALSH, *Clerk.*

7039 By consent, simply the description of the lands conveyed by the deeds offered and received in evidence as Complainant's Exhibits 19 to 47, both inclusive, are incorporated in the printed book of exhibits in the case, as follows:

COMPLAINANT'S EXHIBIT 19.

DESCRIPTION OF PROPERTY CONVEYED BY

THE NEW YORK GAS LIGHT COMPANY

TO THE

CONSOLIDATED GAS COMPANY OF NEW YORK.

Dated November 10, 1884.

Conveying the following property:

ALL THOSE certain lots, pieces or parcels of land situate, lying and being in the City of New York, with the buildings thereon, which are severally bounded and described as follows, viz.:

FIRST. Beginning at a point in the southerly line of Twentieth Street distant westerly ninety-three feet ten and one-half inches from the corner formed by the intersection of the westerly line of

Avenue A with the southerly line of Twentieth Street, running thence southwardly parallel with the westerly line of Avenue A, ninety-two feet to the centre line of the block; thence westwardly along said centre line, parallel with the southerly line of Twentieth Street, one hundred and seventy-six feet; thence northwardly again parallel with the westerly line of Avenue A ninety-two feet to the southerly line of Twentieth Street; thence eastwardly along the southerly line of Twentieth Street one hundred and seventy-six feet to the point of beginning.

7040 SECOND. ALL that certain parcel of land bounded as follows: Beginning at a point in the northerly line of Twentieth Street, distant eastwardly ninety-six feet from the corner formed by the intersection of the easterly line of First Avenue with the northerly line of Twentieth Street; and running thence northwardly parallel with the easterly line of the First Avenue to the southerly line of Twenty-first Street, thence eastwardly along said southerly line of Twenty-first Street to the corner formed by the intersection of the said southerly line of Twenty-first Street with the Westerly line of Avenue A, thence southwardly along said westerly line of Avenue A one hundred and four feet; thence westwardly parallel with the southerly line of Twenty-first Street seventy feet; thence again southwardly parallel with the westerly line of Avenue A eighty feet to the northerly line of Twentieth Street; and thence again westwardly along said northerly line of Twentieth Street to the point of beginning.

THIRD. ALL that certain lot of land bounded as follows: Beginning at the corner formed by the intersection of the northerly line of Twentieth Street with the westerly line of Avenue A and running thence northwardly along said westerly line of Avenue A twenty feet; thence westwardly, parallel with the northerly line of Twentieth Street, seventy feet; thence southwardly parallel with the westerly line of Avenue A twenty feet to the northerly line of Twentieth Street, and thence eastwardly along the northerly line of Twentieth Street seventy feet to the point of beginning. Together with the right to use as a party wall the southerly wall of the building standing on the premises adjoining on the north the last-described lot of land.

7041 FOURTH. ALL the block bounded northwardly by Twenty-second Street, southwardly by Twenty-first Street, eastwardly by Avenue A and westwardly by the First Avenue.

FIFTH. ALL that certain parcel of land bounded as follows: Beginning at the intersection of the southerly line of Twenty-first Street with the easterly line of Avenue A and running thence eastwardly along said southerly line of Twenty-first Street and the same line continued into the East River to the easterly boundary of the lands and lands under water which were granted by the Mayor, Aldermen Commonalty of the City of New York to Edward Roberts and Joseph A. Benjamin by a certain grant bearing date the twenty-third day of February, one thousand eight hundred and fifty-two, and recorded in the Comptroller's Office of the City of New York in

Book I of City Grants, page 79; thence southwardly along said easterly boundary until said boundary meets an extension of the northerly line of Twentieth Street; thence westwardly along such extension of the northerly line of Twentieth Street and the northerly line of Twentieth Street to a point on said northerly line distant eastwardly seventy feet from the corner formed by the intersection of said southerly line of Twentieth Street with the easterly line of Avenue A; thence northwardly parallel with the easterly line of Avenue A to the centre line of the block; thence again westwardly along said centre line and parallel with the northerly line of Twentieth Street, seventy feet to the easterly line of Avenue A; thence northwardly along said easterly line of Avenue A twenty-three feet; thence easterly parallel with the northerly line of Twentieth Street seventy feet; thence northwardly parallel with the easterly line of Avenue A twenty-three feet; thence westwardly parallel with the northerly line of Twentieth Street to the easterly line of Avenue A; and thence northwardly along said easterly line of Avenue A forty-six feet to the corner, the point of beginning. TOGETHER with the 7042 northerly half of Twentieth Street and the southerly half of Twenty-first Street lying in front of said premises or included in the said grant to Edward Roberts and Joseph A. Benjamin, and ALSO, all water rights, water privileges, wharfage, cranage, rights of wharfage and cranage, lands covered with water and pre-emptive or other rights to land to be gained out of the East River appurtenant to the said premises or to which the party of the first part is or may be or become entitled by reason of the ownership of the said premises or of any part thereof.

SIXTH. ALL that certain parcel of land bounded as follows: Beginning at the southeasterly corner of Twenty-second Street and Avenue A, running thence eastwardly along the southerly line of Twenty-second Street, and an extension of said line into the East River to the easterly boundary of the land and land under water which were granted to the party of the first part by the Mayor, Aldermen and Commonalty of the City of New York, by a certain Indenture bearing date the twenty-third day of February, one thousand eight hundred and fifty-two, and recorded in the office of the Register of the City and County of New York on the eighth day of January, one thousand eight hundred and fifty-three, in Liber 625 of Conveyances, page 91; thence southwardly along said easterly boundary to an extension of the northerly line of Twenty-first Street; thence westwardly along such extended line of Twenty-first Street and said northerly line of Twenty-first Street to Avenue A; thence northwardly along Avenue A to the corner the point of beginning. TOGETHER with the northerly half of Twenty-first Street and the southerly half of Twenty-second Street lying in front of said premises, or included in the said grant to the party of the first part. ALSO, ALL water rights, water privileges, wharfage, cranage, rights of wharfage and cranage, lands covered with water and pre-7043 emptive or other rights to land to be gained out of the East River, appurtenant to the said premises or to which the party of the first part is or may be or become entitled by reason of the ownership of the said premises or of any part thereof. ALSO, the pier or wharf extending into the East River built partly on the said premises and partly upon the premises in this indenture fifthly described.

SEVENTH. ALL that parcel of land bounded as follows: Beginning at the corner formed by the intersection of the northerly side of Hester Street with the easterly side of Elizabeth Street, and running thence northwardly along Elizabeth Street one hundred and fifty feet to land now or late of Jacob Hanly; thence eastwardly parallel with Hester Street and along said last-mentioned land one hundred feet to land now or late of Norman Cook; thence southwardly along said land and along lands now or late of Isaac Underhill and others, and parallel with Elizabeth Street one hundred and fifty feet to Hester Street; and thence westwardly along Hester Street, one hundred feet to the said corner the point or place of beginning.

ALSO, all other real estate belonging to the party of the first part, situate in the City of New York and elsewhere, with all appurtenances belonging thereto, all lands and rights to lands under water, all leasehold property, all mains, service pipes and meters, all patents and licenses or rights to use patents, all machinery, plant, tools, horses, wagons, carts and all other property used by said party of the first part in the manufacture of gas; all office furniture and stationery, maps, drawings of property and apparatus owned by the said party of the first part, and all licenses to lay mains and pipes.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof. AND ALSO, all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in and to the above-described premises and every part and parcel thereof with the appurtenances. 7044

COMPLAINANT'S EXHIBIT 20.

ALL THOSE certain lots, pieces or parcels of land situate, lying and being in the City of New York, which are severally bounded and described as follows, viz:

FIRST. ALL that certain parcel of land bounded northerly by the centre line of Fifteenth Street; southerly by the centre line of Fourteenth Street; westerly by the centre line of Avenue D, and easterly by the East River. AND ALSO ALL the bulkhead along said East River between the centre line of Fourteenth Street and the centre line of Fifteenth Street; and also all the water front, water rights, water privileges, wharfage and cranage, rights of wharfage and cranage, lands covered with water and pre-emptive or other rights to land which may hereafter be gained out of the East River by reason of any grant or extension of the exterior line of the City of New York into the East River, or otherwise, between said centre lines of Fourteenth and Fifteenth Streets as continued into the East River in front of or adjoining said bulkhead and premises.

SECOND. ALL that certain parcel of land bounded northerly by the centre line of Sixteenth Street; southerly by the centre line of Fifteenth Street; westerly by the centre line of Avenue D, 7045 and easterly by the East River, together with the bulkhead built along said East River from the centre line of Fifteenth Street to the centre line of Sixteenth Street; and also all the right, title, interest, property and claims of the said party of the first part in and to the water rights, water property, water privileges, wharfage, cranage, rights of wharfage and cranage, land covered with water and pre-emptive or other rights to land which may hereafter be gained out of the East River by reason of any grant or extension of the exterior line of the City of New York or otherwise between the centre line of said Fifteenth Street and the centre line of said Sixteenth Street as continued into the said East River in front of the said premises.

THIRD. ALL the block bounded southerly by Fourteenth Street, northerly by Fifteenth Street, easterly by Avenue D, and westerly by Avenue C.

FOURTH. ALL the block bounded southerly by Fifteenth Street, northerly by Sixteenth Street, easterly by Avenue D, and westerly by Avenue C.

FIFTH. ALL those certain lots of land bounded as follows: Beginning at the corner formed by the intersection of the westerly line of Avenue C with the northerly line of Fourteenth Street, and running thence northerly along the westerly line of Avenue C to the southerly line of Fifteenth Street two hundred and six feet and six inches: thence westwardly along said southerly line of Fifteenth Street four hundred and thirty-four feet, thence southwardly parallel with the westerly line of Avenue C one hundred and three feet three inches to the centre line of the block; thence westwardly, along said centre line ten and one-half inches, thence again southwardly and parallel with the westerly line of Avenue C one hundred and three feet three inches to the northerly line of Fourteenth Street, and thence eastwardly along said northerly line of Fourteenth 7046 Street four hundred and thirty-four feet ten and one-half inches to the corner the place of beginning.

SIXTH. ALL those certain lots of land bounded as follows: Beginning at a point on the northerly line of Seventeenth Street distant one hundred and eighty-eight feet, westerly, from the northwesterly corner of said Seventeenth Street and Avenue C; thence running northwardly parallel with the westerly line of Avenue C, one hundred and eighty-four feet to the southerly line of Eighteenth Street; thence westwardly along said southerly line of Eighteenth Street, three hundred and fifty feet; thence southwardly and parallel with the westerly line of Avenue C, one hundred and eighty-four feet to the northerly line of Seventeenth Street, and thence eastwardly along said northerly line of Seventeenth Street, three hundred and fifty feet to the point the place of beginning.

SEVENTH. ALL that certain piece or parcel of land bounded as follows: Beginning at a point on the southerly line of Fifteenth Street, distant westerly three hundred feet from the southwesterly corner of said Fifteenth Street and Avenue B, running thence southwardly parallel with the westerly line of Avenue B, one hundred and three feet and three inches; thence northwestwardly and parallel with the said southerly line of Fifteenth Street, one hundred and fifty feet; thence northeastwardly and parallel with the westerly line of Avenue B, ten feet and six inches, or thereabouts, to a line drawn east and west through the centre of a piece of ground heretofore called Stuyvesant Street; thence, eastwardly, along said last-mentioned line one hundred and sixty-five feet and four inches, or thereabouts, to a point in the said southerly line of Fifteenth Street distant three hundred and fifty-two feet and nine inches easterly from the southeasterly corner of said Fifteenth Street and Avenue A, 7047 and thence southeastwardly along said southerly line of Fifteenth Street, thirteen feet three inches to the point or place of beginning.

EIGHTH. ALL that certain parcel of land bounded as follows: Beginning at the point formed by the intersection of the easterly line of Irving Place with the southerly line of Fifteenth Street, and running thence southwardly along said easterly line of Irving Place, fifty-nine feet; thence eastwardly, and parallel with the southerly line of Fifteenth Street, ninety-two feet; thence again southwardly, parallel with the Easterly line of Irving Place, twenty-five feet; thence again eastwardly, parallel with the southerly line of Fifteenth Street; fifty feet; thence northwardly, again parallel with the easterly line of Irving Place, eighty-four feet, to the southerly line of Fifteenth Street, and thence westwardly along said southerly line of Fifteenth Street, one hundred and forty-two feet to the point the place of beginning.

NINTH. ALL the block bounded southerly by Sixteenth Street, northerly by Seventeenth Street, easterly by Tenth Avenue, and westerly by the Eleventh Avenue.

TENTH. ALL the block bounded southerly by Seventeenth Street, northerly by Eighteenth Street, easterly by the Tenth Avenue, and westerly by the Eleventh Avenue.

ELEVENTH. ALL that certain parcel of land bounded as follows: Beginning at the point formed by the intersection of the westerly line of the Tenth Avenue with the southerly line of Nineteenth Street, and running thence westwardly along said southerly line of Nineteenth Street, one hundred and twenty-five feet; thence southwardly, parallel with the westerly line of the Tenth Avenue, ninety-two feet to the centre line of the block between Eighteenth 7048 and Nineteenth Streets; thence westwardly along said centre line and parallel with the southerly line of Nineteenth Street, two hundred and fifty feet; thence northwardly parallel with the westerly line of the Tenth Avenue, ninety-two feet, to the southerly line of Nineteenth Street; thence westwardly, along said southerly line of Nineteenth Street, one hundred and fifty feet; thence southwardly, parallel with the westerly line of the Tenth Avenue, one hundred and eighty-four feet, to the northerly line of Eighteenth Street, thence eastwardly, along said northerly line of Eighteenth Street, five hundred and twenty-five feet to the westerly line of the Tenth Avenue, and thence northwardly along said westerly line of Tenth Avenue, one hundred and eighty-four feet, to the point the place of beginning.

TWELFTH. ALL that certain parcel of land bounded as follows: Beginning at a point on the southerly line of Nineteenth Street, distant, westerly, one hundred and seventy-five feet from the corner formed by the intersection of said southerly line of Nineteenth Street with the westerly line of the Tenth Avenue, and running thence southwardly and parallel with the westerly line of the Tenth Avenue, ninety-two feet, to the centre line of the block; thence westwardly, along said centre line, and parallel with the southerly line of Nineteenth Street, twenty-five feet; thence northwardly, and again parallel with the westerly line of the Tenth Avenue, nine--two feet to the southerly line of Nineteenth Street, and thence eastwardly along said southerly line of Nineteenth Street, twenty-five feet to the point the place of beginning.

THIRTEENTH. ALL that certain parcel of land bounded as follows: Beginning at a point on the southerly line of Nineteenth Street, distant westerly two hundred and twenty-five feet from the corner formed by the intersection of the westerly line of the
7049 Tenth Avenue with the southerly line of Nineteenth Street,
and running southwardly parallel with the westerly line of the Tenth Avenue, ninety-two feet to the centre of the block; thence westwardly along said centre line and parallel with the southerly line of Nineteenth Street, one hundred feet; thence northwardly, again parallel with the westerly line of the Tenth Avenue, ninety-two feet to the southerly line of Nineteenth Street, and thence eastwardly along said southerly line, one hundred feet to the point the place of beginning.

FOURTEENTH. ALL that certain parcel of land bounded as follows: Beginning at the corner formed by the intersection of the easterly line of the Eleventh Avenue with the northerly line of Nineteenth Street, and running thence eastwardly along the said northerly line of Nineteenth Street, three hundred and fifty feet; thence northwardly, parallel with the westerly line of the Eleventh Avenue, one hundred and eighty-four feet to the southerly line of Twentieth Street; thence westwardly along said southerly line of Twentieth Street, three hundred and fifty feet to the easterly line of the Eleventh Avenue, and thence southwardly along said easterly line one hundred and eighty-four feet to the corner the place of beginning.

FIFTEENTH. ALL the block bounded easterly by the Eleventh Avenue, northerly by Seventeenth Street, southerly by Sixteenth Street, and westerly by the Thirteenth Avenue, and also all the bulkhead on the Hudson River in front of the said premises, together with all water front, water rights, water privileges, wharfage, cranage, and rights of wharfage and cranage and the pre-emptive or other rights of the party of the first part to land which may hereafter be gained out of the Hudson River in front of or adjoining said premises or bulkhead.

7050 SIXTEENTH. ALL the block bounded northerly by Eighteenth Street, southerly by Seventeenth Street, easterly by the Eleventh Avenue, and westerly by the Thirteenth Avenue; and also all the bulkhead on the Hudson River in front of the said premises, together with all the water front, water rights, water privileges, wharfage, cranage, and rights of wharfage and cranage and the pre-emptive or other rights of the party of the first part to land which may hereafter be gained out of the Hudson River, in front of or adjoining said premises or bulkhead.

AND ALL other real estate belonging to the party of the first part, situate in the City of New York and elsewhere, with all appurtenances belonging thereto, all lands and rights to lands under water, all leasehold property, all mains, service pipes and meters, all patents and licenses or rights to use patents, all machinery, plant, tools, horses, wagons, carts and all other property used by said party of the first part in the manufacture of gas, all office furniture and stationery, maps, drawings of property and apparatus owned by the said party of the first part, and all licenses to lay mains and pipes.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

And also all the estate, right, title, interest, property, possession, claim and demand whatsoever as well in law as in equity, of the said party of the first part, of, in and to the above-described premises, and every part and parcel with the appurtenances.

7051 COMPLAINANT'S EXHIBIT 21.

ALL those certain lots, pieces or parcels of land with the buildings thereon erected situate, lying and being in the Twenty-second Ward of the City of New York and bounded and described as follows, viz.:

Beginning at a point on the northerly side of Forty-fourth Street, distant one hundred feet easterly from the westerly line of Eleventh Avenue and running thence westerly along the said northerly side of Forty-fourth Street to the exterior line of the City of New York; thence northerly along said exterior line to the southerly line of Forty-sixth Street; thence easterly along said southerly line of Forty-sixth Street to a point distant three hundred feet westerly from the westerly line of Eleventh Avenue; thence southerly and parallel with Eleventh Avenue to the southerly line of Forty-fifth Street, thence easterly along said southerly line of Forty-fifth Street, one hundred feet to a point distant two hundred feet westerly from the westerly line of Eleventh Avenue; thence southerly and parallel with Eleventh Avenue, one hundred feet five inches to the centre line of the block between Forty-fourth and Forty-fifth Streets; thence easterly along said centre line one hundred feet; thence southerly and parallel with Eleventh Avenue, one hundred feet five inches to the point or place of beginning; and also all the right, title and interest of the party of the first part of, in and to said Forty-fourth. Forty-fifth and Forty-sixth Streets, and of and to the land lying in the Hudson River in front of said premises.

AND also that certain other lot of land bounded and described as follows: Beginning at a point on the southerly side of Forty-fifth Street, distant one hundred and fifty-eight feet four inches westerly from Eleventh Avenue and running thence westerly along 7052 the southerly side of Forty-fifth Street, sixteen feet eight inches; thence southerly and parallel with Eleventh Avenue, one hundred feet five inches, to the middle line of the block; thence easterly along said middle line sixteen feet eight inches; thence northerly and parallel with Eleventh Avenue, one hundred feet five inches to the southerly side of Forty-fifth Street to the point or place of beginning.

And also all other real estate belonging to the said party of the first part in the City of New York and elsewhere and all the appurtenances and all lands and rights to lands under water, all leasehold property, all mains, services, pipes and meters, all patents and licenses or rights to use patents, all machinery, plant, tools horses wagons carts, and all other property used by said company in the manufacture of gas all office furniture and stationery, maps, drawings of property and apparatus owned by said company at the present time, together with its corporate rights, franchises, licenses to lay mains and pipes and privileges of every kind whatsoever.

COMPLAINANT'S EXHIBIT 22.

ALL those certain lots, pieces or parcels of land with the buildings thereon erected situate, lying and being in the Twelfth Ward of the City of New York and bounded and described as follows:

Beginning at the point formed by the intersection of the centre line of Ninety-eighth Street with the centre line of Second Avenue and running thence easterly along the centre line of Ninety-eighth Street to the Harlem River; thence in a northerly direction along the said Harlem River to the centre line of Ninety-ninth Street; thence westerly along said centre line of Ninety-ninth Street to the centre line of Second Avenue; thence southerly along the centre line of Second Avenue to the point or place of beginning.

7053 AND also all other real estate belonging to the said party of the first part in the City of New York and elsewhere, and all the appurtenances and all lands and rights to lands under water, all leasehold property, all mains, services, pipes and meters, all patents and licenses or rights to use patents, all machinery, plant, tools, horses, wagons, carts, and all office furniture and stationery, maps, drawings of property and apparatus owned by said company at the present time, together with its corporate rights, franchises, licenses to lay mains and pipes and privileges of every kind whatsoever.

COMPLAINANT'S EXHIBIT 23.

ALL those certain lots, pieces or parcels of land situate, lying and being in the City of New York which are severally bounded and described as follows, viz:

FIRST. ALL that certain tract, piece or parcel of land situate, lying and being in the Twelfth Ward of the City of New York, which is more particularly bounded and described as follows, to wit: Beginning at the corner formed by the intersection of the southerly line of One Hundred and Eleventh Street with the westerly line of First Avenue, and thence westerly along said southerly line of One Hundred and Eleventh Street, four hundred and seventy-five feet; thence southerly and parallel with First Avenue, one hundred and twenty feet eleven and three-quarter inches to the southwesterly boundary line of property formerly belonging to the Estate of George Bradish, deceased; thence southeasterly along said southwesterly boundary line of said Bradish Estate, one hundred and twenty-five feet to the point where said southwesterly boundary line of the Bradish Estate intersects the northerly line of One Hundred 7054 and Tenth Street, and thence easterly along the said northerly line of One Hundred and Tenth Street, four hundred and one feet and seven inches, to the corner formed by the intersection of the said northerly line of One Hundred and Tenth Street with the said westerly line of First Avenue, and thence northerly along said westerly line of First Avenue two hundred and one feet and ten inches to the point or place of beginning.

SECOND. All that certain lot, piece or parcel of land, situate, lying and being in the Twelfth Ward of the City of New York which is more particularly bounded and described as follows to wit: Beginning at the corner formed by the intersection of the northerly line of One Hundred and Eleventh Street with the westerly line of First Avenue, and running thence northerly along said westerly line of the First Avenue seventy-five feet ten and three-quarter inches; thence westerly and parallel with One Hundred and Eleventh Street, one hundred feet; thence northwesterly along the easterly boundary line of lands formerly belonging to the Estate of George Bradish, deceased, to a point in the southerly line of One Hundred and Twelfth Street; where the said easterly boundary line of the said Bradish Estate intersects the said southerly line of One Hundred and Twelfth Street, and thence westerly along the said southerly line of One Hundred and Twelfth Street seventeen feet and two inches; thence southerly and parallel with the First Avenue two hundred and one feet and ten inches to the northerly line of One Hundred and Eleventh Street, and thence easterly along the said northerly line of One Hundred and Eleventh Street, two hundred and twenty-five feet to the point or place of beginning.

THIRD. All that certain tract, piece or parcel of land bounded northerly by the centre line of One Hundred and Eleventh 7055 Street; southerly by the centre line of One Hundred and Tenth Street; westerly by the centre line of the First Avenue, and easterly by the original high-water line of the Harlem River, as the same winds and turns.

FOURTH. ALL that certain tract, piece or parcel of land situate, lying and being in the Twelfth Ward of the City of New York which is more particularly bounded and described as follows, to wit: Beginning at the corner formed by the intersection of the northerly line of One Hundred and Eleventh Street with the easterly line of the First Avenue, running thence easterly along said northerly line of One Hundred and Eleventh Street, two hundred and ninety-five feet; thence northerly and parallel with First Avenue, one hundred feet and eleven inches to the centre line of the block between One Hundred and Eleventh and One Hundred and Twelfth Streets; thence westerly along said centre line one hundred and fifty feet; thence northerly again parallel with the First Avenue, one hundred feet and eleven inches to the southerly line of One Hundred and Twelfth Street; thence westerly along said southerly line of One Hundred and Twelfth Street, fifty feet; thence southerly parallel with the First Avenue, fifty-one feet; thence westerly and parallel with One Hundred and Twelfth Street, ninety-five feet to the easterly line of the First Avenue; thence southerly along said easterly line of the First Avenue, one hundred and fifty feet eleven inches to the point or place of beginning.

FIFTH. ALL that certain piece or parcel of land under water in the Harlem River, situate, lying and being in the City of New York adjoining and in front of uplands owned by the said party of the first part and bounded and described as follows, to wit: Beginning at the point where the original high-water line of the said river intersects the continuation of the centre line of One Hundred and Tenth Street; running thence easterly along the 7056 continuation of the said centre line one hundred and twenty feet to the exterior or bulkhead line of the said City of New York; thence in a northerly direction along said exterior or bulkhead line two hundred and sixty-five feet and six inches to the intersection of said exterior or bulkhead line with the continuation of the centre line of One Hundred and Eleventh Street; thence along the continuation of the centre line of One Hundred and Eleventh Street in a westerly direction, one hundred and thirty-two feet to the intersection thereof with the original high-water line of said river; thence along said orginal high-water line in a southerly direction as the same winds and turns along the land belonging to the said party of the first part to the intersection thereof with the said centre line of One Hundred and Tenth Street at the point of place of beginning; being the premises which are delineated and colored pink upon a map or diagram annexed to a certain conveyance bearing date the 20th day of May, one thousand eight hundred and seventy, made by the Mayor, Aldermen and Commonalty of the City of New York to the said party of the first part, and recorded in the office of the Register of the City and County of New York in liber 1113 of Conveyances, page 626, on the 7th day of September, 1870, saving and reserving out of the last-mentioned premises so much thereof as may form part of any street or streets, avenues or avenue that may now or hereafter be assigned, designated or laid out through said premises according to law for the uses and purposes of public streets, avenues and highways.

And also all the bulkhead along the said Harlem River between the centre line of One Hundred and Tenth Street and the centre line of One Hundred and Eleventh Street; and also all the water front, water rights, water privileges, wharfage and cranage, rights of wharfage and cranage, lands covered with water and pre-
7057 emption or other rights to land which may hereafter be
gained out of the Harlem River by reason of any grant or extension of the exterior line of the City of New York into the Harlem River between the said centre lines of One Hundred and Tenth and One Hundred and Eleventh Streets as continued into the Harlem River in front of or adjoining said bulkhead and premises.

SIXTH. ALL those certain pieces or parcels of land, situate, lying and being in the Twelfth Ward of the City of New York which are more particularly bounded and described as follows, to wit: Beginning at a point in the easterly line of Broadway or Kingsbridge Road as widened at the southwesterly side of plot number 44 on a certain map entitled "Map of one hundred and twenty-eight acres of land situate in the Twelfth Ward of the City of New York, part of the Estate of Isaac Dykman, deceased, known as Fort George Property," dated September 15th, one thousand eight hundred and sixty-eight, R. Rosa, Surveyor, and filed in the office of the Register of the City and County of New York, November 7th, one thousand eight hundred and sixty-eight, as Map No. 697, running thence southeasterly along the southwesterly side of said plot No. 44, and parallel with the new street laid out by the Commissioners of Central Park, and designated upon said map as Boulevard, or Dykman Street, one hundred and eighty-eight feet and ten inches; thence running southwesterly and at right angles with said Dykman Street, fifty feet; thence running southeasterly and parallel with said Boulevard, four hundred and twenty-six feet, to the centre line of a new street or avenue laid out by the Commissioners of Central Park and designated upon said map as Sherman Avenue; thence running southwesterly along said centre line of Sherman Avenue ninety-three feet and eight inches; thence running northwesterly and parallel with said Boulevard or Dykman Street and along the rear of plots Nos. fifty-two, fifty-one, fifty, forty-nine, forty-eight and
7058 forty-seven, three hundred and fifty-four feet and five inches;
thence running northwesterly along plot No. forty-seven on said map one hundred and thirty-one feet and nine inches to the easterly line of Broadway or Kingsbridge Road, and thence running northeasterly along said easterly line of Broadway or Kingsbridge Road three hundred and two feet and seven inches to the point or place of beginning; together with all the right, title and interest of the party of the first part to the one-half part of Broadway or Kingsbridge Road in front of or adjacent to said premises.

SEVENTH. ALL that lot of land situate at Harlem in the City of New York and bounded and described as follows: Beginning at the corner formed by the intersection of the westerly line of the Third Avenue with the northerly line of One Hundred and Fourteenth Street, and thence running westerly along the northerly line of One Hundred and Fourteenth Street one hundred and eight feet and three inches; thence northerly and parallel with the Third Avenue, one hundred feet and eleven inches to the centre line of the block between One Hundred and Fourteenth and One Hundred and Fifteenth Streets; thence easterly along said centre line eight feet and three inches; thence southerly and parallel with the Third Avenue, seventy-five feet eight and one-quarter inches; thence easterly and parallel with One Hundred and Fourteenth Street, one hundred feet to the Third Avenue, and thence southerly along the westerly side of the Third Avenue, twenty-five feet two and three-quarter inches to the place of beginning, and all other real estate belonging to the party of the first part situate in the City of New York and elsewhere with all the appurtenances belonging thereto, all lands and rights to land under water, all leasehold property, all mains, service pipes and meters, all patents or licenses, etc.

7059 COMPLAINANT'S EXHIBIT 24.

FIRSTLY. All that certain block, piece or parcel of land situated, lying and being in the Twenty-second Ward of the City of New York, bounded and described as follows, viz: Beginning at the southwesterly corner of Eleventh Avenue and Forty-second Street; running thence westerly along the southerly side of Forty-second Street, eight hundred feet, to Twelfth Avenue; thence southerly along the easterly side of Twelfth Avenue, one hundred and ninety-seven feet six inches, to Forty-first Street; thence easterly, along the northerly side of Forty-first Street, eight hundred feet, to Eleventh Avenue, and thence northerly, along the westerly side of Eleventh Avenue, one hundred and ninety-seven feet six inches, to the place of beginning. Together with the right and title of the parties of the first part hereto, of, in and to the said streets and avenues adjoining the said premises to the centres thereof respectively.

AND ALSO, all the estate, right, title and interest of the parties of the first part, of, in and to the land and soil under water, to be made land and gained out of the Hudson or North River, lying in front of the premises hereinabove described, bounded and described as follows, viz: Northerly by the middle of Forty-second Street; easterly by the middle of Twelfth Avenue and the premises hereinabove described; southerly by the middle of Forty-first Street, and westerly by the westerly side of Thirteenth Avenue. And all wharfage, cranage, advantages, emoluments and rights of every name and nature appertaining to the premises hereby conveyed; as the same were granted to Charles Edgar Appleby by the Mayor, Aldermen and Commonalty of the City of New York by Grant or Deed bearing date the twenty-seventh day of August, 1853. Recorded in the office of the Register of the City and County of New York, 7060 in Liber 660 of Conveyances, page 309, March 25, 1854, subject nevertheless to the covenants, restrictions, reservations and conditions in the said Grant or Deed contained, which covenants and conditions the parties hereto of the second part assume and agree to perform. And being the same premises conveyed to the parties of the first part by the said Charles Edgar Appleby and Sarah E., his wife, by deed dated February 1, 1860, and recorded in the office of the Register of the City and County of New York on the 20th day of July, 1860, in Liber 815 of Conveyances, at page 410.

SECONDLY. ALL those eight certain lots, pieces or parcels of land and premises, situate, lying and being in the Twenty-second Ward of the City of New York in the County and State of New York, which together are bounded and described as follows: Commencing at a point on the northerly side of Forty-first Street, distant one hundred feet easterly from the easterly side of Eleventh Avenue; thence running northerly and parallel with Eleventh Avenue, ninety-eight feet and nine inches to the middle line of the block between Forty-first and Forty-second Streets; thence easterly along said middle line, two hundred feet; thence, southerly, parallel with Eleventh Avenue, ninety-eight feet and nine inches, to the line of Forty-first Street; thence westerly along Forty-first Street two hundred feet to the point or place of beginning. Each of said lots being twenty-five feet front and rear by ninety-eight feet and nine inches in depth. And being the same premises conveyed to the party of the first party by deed dated October 20, 1883, and recorded in Liber 1755 of Conveyances, page 263, on the 20th day of October, A. D. 1883.

THIRDLY. ALL those five certain lots, pieces or parcels of land, situate, lying and being in the Twenty-second Ward of the City of New York, on the northerly side of Forty-second Street, between
7061 the Eleventh and Twelfth Avenues, and designated by the numbers 87, 88, 89, 90 and 91, on a certain map entitled "Map of 245 lots of ground situate in the Twelfth Ward of the City of New York, belonging to the estate of James Clinton Norton, deceased," surveyed May, 1847, by Daniel Ewen, City Surveyor—and which said map was filed in the office of the Register of the City and County of New York, on the — day of July, 1847—which said lots, taken together, are bounded and described as follows to wit: Commencing at a point in the northerly line of Forty-second Street, distant one hundred feet westerly from the northwesterly corner of the Eleventh Avenue and said Forty-second Street, and running thence westerly along the northerly side of Forty-second Street, one hundred and twenty-five feet to lot No. 92; thence northerly, along the easterly side of lot 92, one hundred feet five inches to lot No. 74; thence easterly, along lots Nos. 74, 75, 76, 77 and 78, one hundred and twenty-five feet to lot No. 83; thence southerly, along lots Nos. 83, 84, 85 and 86, one hundred feet five inches to the northerly side of Forty-second Street, the point or place of beginning. Each lot being twenty-five feet in width in front and rear and one hundred feet five inches in depth on each side, and being the same premises conveyed to the party of the first part, by deed dated the 23d day of April, 1868, and recorded in the office of the Register of the City and County of New York, on the 14th day of May, 1868, in Liber 1047 of Conveyances, page 381.

FOURTHLY. ALL that certain lot, piece or parcel of land, situate, lying and being in the City of New York, and bounded and described as follows: Beginning at a point on the northerly side of Forty-second (42d) Street, distant two hundred and twenty-five (225) feet westerly from the intersection of the westerly side of the Eleventh (11th) Avenue with the northerly side of 7062 Forty-second Street; running thence northerly and parallel to the Eleventh Avenue, one hundred (100) feet and five (5) inches to the center line of the block; thence westerly, along such centre line, and parallel to Forty-second Street, twenty-five (25) feet; thence southerly and parallel to the Eleventh Avenue, one hundred (100) feet and five (5) inches, to the northerly side of Forty-second Street; thence easterly, along the northerly side of Forty-second Street, twenty-five (25) feet to the point or place of beginning. And being the same premises conveyed to the party of the first part, by deed dated twelfth day of June, 1868, and recorded in the office of the Register of the City and County of New York, the 27th day of July, 1868, in Liber 1064 of Conveyances, page 508.

FIFTHLY. All those two certain pieces and parcels of land, situate in the Twenty-second (formerly Ninth and Twelfth) Ward of the City of New York, being part of the Estate of John Somarindyck, late of said city, deceased, and designated and described on a certain map of the said estate, made by William Bridges, sworn surveyor, in November, 1808, and the Deed from the other heirs of the said John Somarindyck, by Lots No. 8 and Letter "H"; bounded westerly in front by Hudson River; northern by lots designated on said map by letter "I" and No. 9; easterly by the Tenth Avenue, and southerly by lots designated on said map by No. 7 and letter "G"—the said premises hereby conveyed or intended so to be, lying between the Tenth Avenue on the east, the Hudson River on the west, Sixty-fifth Street on the south, and Sixty-sixth Street on the north. Together with the rights and interest of the parties of the first part in and to the said streets and avenues to the centre thereof respectively—excepting and reserving all the right, title and interest of the Hudson River Railroad Company in and to that portion of the said premises heretofore conveyed to them by 7063 certain indentures. And being a portion of the same premises conveyed to the party of the first part, by deed dated the 24th day of June, 1863, and recorded in the office of the Register of the City and County of New York, in Liber 882 of Conveyances at page 259, July 1, 1863.

SIXTHLY. All that certain lot, piece or parcel of land, situate, lying and being in the Nineteenth Ward of the City of New York, bounded and described as follows, to wit: Beginning at a point on the southerly side of Sixty-third Street, distant two hundred and eighty-one feet and five inches westerly from the southwesterly corner of Sixty-third Street and Avenue A; thence running southerly and parallel with Avenue A, one hundred feet and five inches to the centre line of the block between Sixty-third and Sixty-second Streets; thence westerly, along said centre line of the block and parallel with Sixty-third Street, twenty-five feet; thence northerly and parallel with Avenue A, one hundred feet and five inches to the southerly side of Sixty-third Street, and thence easterly, along the easterly side of Sixty-third Street, twenty-five feet, to the point or place of beginning. Together with all the right, title and interest of the parties of the first part and to the one-half in width of that portion of Sixty-third Street lying in front of said premises, being the same premises which were conveyed to Benjamin W. Hicks by Samuel Borrowe and wife, by deed bearing date the fifteenth day of December, 1865, and recorded in the Register's office of the City and County of New York, in Liber 945 of Conveyances, page 481, on the twenty-second day of December, 1865. And being the same premises conveyed to the party of the first part, by deed dated the 21st day of April, 1884, and recorded in the office of the Register of the City and County of New York, in Liber 1803 of Conveyances, page 66, on the 23d day of April, A. D. 1884.

7064 SEVENTHLY. ALL that certain piece of land, situate in the City of New York, and bounded and containing as follows: Beginning at a point on the northerly side of Sixty-second Street, distant two hundred and twenty-five feet westerly from the westerly side of Avenue A; running thence westerly, along Sixty-second Street, eighty-six feet five inches; thence northerly and parallel with Avenue A, one hundred feet five inches to the centre line of the block; thence easterly along said centre line twenty-five feet; thence northerly and parallel with Avenue A, one hundred feet five inches to the southerly side of Sixty-third Street; thence easterly, along Sixty-third Street, sixty-one feet five inches; and thence southerly and parallel with Avenue A, two hundred feet ten inches to the place of beginning. And being the same premises conveyed to the party of the first part, by deed dated the 17th day of April, 1882, and recorded in the office of the Register of the City and County of New York, in Liber 1658 of Conveyances, page 234, on the 8th day of June, A. D. 1882.

EIGHTHLY. ALL those twelve certain lots of land, situated in the City of New York and taken together bounded and containing as follows, to wit: Beginning at a point on the northerly side of Sixty-second Street, distant one hundred and thirty-one feet five inches; easterly from the easterly side of First Avenue; running thence northerly and parallel with First Avenue, one hundred feet five inches to the centre line of the block; thence easterly, and parallel with Sixty-second Street, fifty feet; thence northerly, and parallel with First Avenue, one hundred feet five inches to the southerly side of Sixty-third Street; thence easterly, along Sixty-third Street, one hundred and twenty-five feet; thence southerly and parallel with First Avenue, two hundred feet ten inches to the northerly side of Sixty-second Street; and thence westerly along Sixty-second Street, one hundred and seventy-five feet to the
7065 place of beginning. Being lots known on a map of property belonging to the heirs of Abraham K. Beekman and William Beekman, made by Samuel S. Doughty, City Surveyor, dated July 21, 1837, as Lots Nos. five hundred and fifty to five hundred and fifty-six (550 to 556), both inclusive and five hundred and sixty-nine to five hundred and seventy-three (559 to 573), both inclusive. And being the same premises conveyed to the party of the first part, by deed dated the 28th day of October, 1882, and re-

corded in the office of the Register of the City and County of New York, in Liber 1721 of Conveyances, page 195, on the 18th day of April, A. D. 1883.

NINTHLY. ALL those certain lots, pieces or parcels of land, situate, lying and being in the Nineteenth Ward of the City of New York, and which taken together are bounded as follows, to wit: Easterly by the westerly line of Avenue A, extending from Sixty-second Street to Sixty-third Street; westerly by a line running parallel with the said westerly line of Avenue A, and distant two hundred and twenty feet westerly therefrom, and extending from Sixty-second Street to Sixty-third Street, aforesaid; northerly by the southerly line of Sixty-third Street, and southerly by the northerly line of Sixty-second Street. And also, all the right, title and interest of the said party of the first part, of, in and to the said streets and avenue respectively, in front of and adjoining the above described premises, to the centres of said streets and avenue respectively. And being the same premises conveyed to the party of the first part by deed dated the 1st day of May, 1872, and recorded in the office of the Register of the City and County of New York, in Liber 1212 of Conveyances, page 281, on the 20th day of May, A. D. 1872.

7066 TENTHLY. All that certain piece or parcel of land, with the buildings thereon, situated in the City of New York, and bounded and containing as follows, to wit: Beginning at the northwesterly corner of the Eastern Boulevard, lately called Avenue A, and Sixtieth Street; running thence northerly along the westerly side of said Boulevard two hundred feet ten inches to the southerly side of Sixty-first Street; thence westerly along the southerly side of Sixty-first Street, three hundred and thirteen feet; thence southerly, and parallel with said Boulevard, two hundred feet ten inches, to the northerly side of Sixtieth Street; and thence easterly, along the northerly side of Sixtieth Street, three hundred and thirteen feet to the place of beginning.

And also, all that certain piece or parcel of land, situate in the said City of New York, bounded southerly by Sixtieth Street, westerly by the easterly side of said Boulevard and northeasterly by the original high-water line of the East River.

And also, all the right, title and interest of the said parties of the first part, in and to the land now or formerly under the waters of the East River between Sixtieth and Sixty-first Streets in front of the premises above conveyed.

It being the intention of the party of the first part by this deed, to convey unto the party of the second part, all the lands, water rights and property of every description which were conveyed to the said party of the first part by Thomas Rutter and Georgianna R., his wife, by deed bearing date the 1st day of June, one thousand eight hundred and eighty-one, and recorded in the office of the Register of the City and County of New York, in Liber 1611 of Conveyances, page 67, excepting so much thereof as has been taken for said Eastern Boulevard or Avenue A.

ELEVENTHLY. ALL that certain piece or parcel of land, situate, lying and being on the west bank of the Hudson River in

the township of Ridgefield, County of Bergen and State of
7067 New Jersey, bounded and described as follows: Beginning at
the northwest corner of a parcel of land now or lately occupied by William Hennen, being the southwest corner of that certain parcel of land marked No. 6 on a certain map of the Estate of Samuel Ellis, deceased, on file in the office of the Surrogate of Bergen County and running thence along the division fence between said land of William Hennen and said parcel No. 6, and through the centre line of the ditch in a continuation of said partition fence and along the dividing line between the premises hereby conveyed or intended so to be and the lot marked No. 5 on said map, in a southeasterly direction, thirteen chains more or less to the Hudson River; thence northerly along said river four hundred and ninety-five feet, more or less, to the centre line of another ditch dividing the parcel of land hereby conveyed from the parcel of land now occupied by the heirs of Hannah Ellis Miller—being parcel No. 4 on said map; thence through the centre of said ditch and along the dividing line between the premises hereby conveyed or intended so to be, and the lot marked No. 4 on said map, and in a northwesterly direction ten chains and fifty links, more or less, to the road leading from Bull's Ferry to Fort Lee; thence along said road in a southwesterly direction, eight chains and sixty links, more or less, to the point or place of beginning. And being the same premises conveyed to the party of the first part by deed dated the 18th day of November, 1882, and recorded in the office of the Clerk of the County of Bergen on the 29th day of November, A. D. 1882, in Liber H-11 of Deeds, on pages 44, etc.

TWELFTHLY. ALL that parcel of land, flowed by tide water, lying at Shady Side in the County of Bergen and State of New Jersey, described as follows: Beginning at a point in the high-water
mark of the westerly shore of the Hudson River where the
7068 same is intersected by the division line between lands of Ezra
Miller and lands of the said The Metropolitan Gas Light Company of the City of New York, and from thence running south fifty-four degrees and thirty minutes, east six hundred and sixty-nine and four-tenths feet to the new exterior line for solid filling, established December 11th, 1875, by the Commissioners appointed under the authority of the Act entitled "An Act to ascertain the rights of the State and of riparian owners in the lands lying under the water of the Bay of New York and elsewhere in this State." Approved April 11th, A. D. 1864, and the supplements thereto; thence along said new exterior line for solid filling, south thirty-five degrees and thirty minutes west, four hundred and eighty-six and nine one-hundredths feet; thence north, fifty-four degrees and thirty minutes, west, six hundred and seventy and sixty-seven one-hundredths feet to high-water mark of the westerly shore of the Hudson River, where the same is intersected by the division land of Isaac P. Martin, formerly Melville, and lands of the said Metropolitan Gas Light Company of the City of New York; thence northeasterly along said high-water mark to the place of beginning. With the right, liberty, privilege and franchise to exclude the tide water from so much of the lands

above described as lie under tide water by filling in, or otherwise including the same, and to appropriate the lands above described to its exclusive private uses.

And also, all and singular the lands under water lying between the exterior line for solid filling and the exterior line for piers, as fixed by the Commissioners appointed under the authority of the Act aforesaid and the supplements thereto; and bounded by the northerly and southerly lines of the above described tract extended easterly to said pier line. With the right, liberty, privilege and franchise of building piers alone upon the lands last above conveyed, that is to say, that which lies between the exterior lines already fixed and above mentioned.

And if and when said exterior line shall be fixed at any
7069 other points or places further out into said river.

Also any and all lands under water, lying between the present exterior lines above described and the new exterior line or lines that may be hereafter fixed, the same to be used for solid filling and for piers respectively, agreeably to the terms of such extension. And being the same premises conveyed to the party of the first part, by a grant from the State of New Jersey, dated the 6th day of January, 1883, and recorded in the Bergen County Clerk's Office on the 17th day of January, A. D. 1883, in Liber G-11 of Deeds, pages 668, etc.

COMPLAINANT'S EXHIBIT 25.

ALL those certain lots, pieces or parcels of land, situate, lying and being in the Twelfth Ward of the City of New York, being in Block No. sixteen hundred and forty-three (1643) in Section No. six (6), as shown on the Land Map of the City of New York and which taken together are bounded and described as follows: Beginning at the southwesterly corner of Lexington Avenue and East One Hundred and Sixteenth Street; thence running westwardly, but along the southerly line of East One Hundred and Sixteenth Street, eighty (80) feet; thence running southwardly, but parallel with Lexington Avenue, one hundred feet (100) and eleven (11) inches; thence running eastwardly, but parallel with East One Hundred and Sixteenth Street, eighty (80) feet to the westerly line of Lexington Avenue; and thence running northwardly but along said westerly line of Lexington Avenue, one hundred (100) feet and eleven (11) inches to the southwesterly corner of Lexington Avenue and East One Hundred and Sixteenth Street, the point or place of beginning.
7070 A portion of the premises above described being conveyed by the parties of the first part to the party of the second part by deed bearing even date herewith and containing the usual covenants.

COMPLAINANT'S EXHIBIT 26.

ALL those certain lots, pieces or parcels of land, situate, lying and being in the Twelfth Ward of the City of New York, being in Block No. sixteen hundred and forty-three (1643) in Section No. six (6), as shown on the Land Map of the City of New York, and which taken together are bounded and described as follows: Beginning at the southwesterly corner of Lexington Avenue and East One Hundred and Sixteenth Street; thence running westwardly, but along the southerly line of East One Hundred and Sixteenth Street; eighty (80) feet, more or less, to the easterly line of the wall of the building adjoining on the west the premises hereby conveyed; thence running southwardly by a line parallel with Lexington Avenue and eighty (80) feet westwardly therefrom, but along the easterly line of said wall so far as the same extends one hundred (100) feet and ten (10) inches; thence running eastwardly, and parallel with East One Hundred and Sixteenth Street, but part of the distance along the northerly line of the wall of the building adjoining on the south the premises hereby conveyed, eighty (80) feet to the westerly line of Lexington Avenue, and thence running northwardly, but along said westerly line of Lexington Avenue, one hundred (100) feet and ten (10) inches, more or less, to the southwesterly corner of Lexington Avenue and East One Hundred and Sixteenth Street, the point or place of beginning.

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COMPLAINANT'S EXHIBIT 27.

ALL those two certain lots, pieces or parcels of land with the buildings thereon erected, situate, lying and being in the Twelfth Ward of the City of New York, and which taken together are bounded and described as follows: Beginning at a point on the northerly side of One Hundred and Fourteenth Street, distant one hundred and eight (108) feet and three (3) inches westerly from the northwesterly corner of One Hundred and Fourteenth Street and Third Avenue; thence running westerly along the northerly side of One Hundred and Fourteenth Street, forty-two (42) feet and two (2) inches; thence northerly parallel with Third Avenue and distant one hundred and fifty (150) feet and five (5) inches westerly therefrom, one hundred (100) feet and eleven (11) inches to the centre line of the block between One Hundred and Fourteenth and One Hundred and Fifteenth Streets; thence running easterly along said centre line forty-two (42) feet and two (2) inches; thence running southerly on a line parallel to Third Avenue, one hundred (100) feet and eleven (11) inches to the northerly side of One Hundred and Fourteenth Street at the point or place of beginning be said distance and dimensions more or less.

COMPLAINANT'S EXHIBIT 28.

ALL that certain dwelling house and lot, piece or parcel of land, situate, lying and being in the Eighteenth Ward of the City of New York on the southeasterly side of Irving Place, between Fourteenth and Fifteenth Streets and bounded northwesterly in front by Irving Place, southeasterly in the rear by a line drawn parallel to Irving Place on the southeasterly side thereof, and distant therefrom

7072 ninety-two feet, northeasterly by a line drawn parallel to Fifteenth Street on the southwesterly side thereof and distant therefrom fifty-nine feet, southwesterly by a line drawn parallel to the said Fifteenth Street on the southwesterly side thereof and distant therefrom eighty-four feet and being twenty-five feet in width and ninety-two feet in depth.

COMPLAINANT'S EXHIBIT 29.

ALL that certain lot, piece or parcel of land situate, lying and being in the Eighteenth, late Sixteenth, Ward of the City of New York, bounded and described as follows, viz: Beginning at a point on the southerly side of Fifteenth Street, distant one hundred and forty-two (142) feet easterly from the southeasterly corner of Irving Place and Fifteenth Street, running thence easterly along the said southerly side of Fifteenth Street, thirteen feet and six inches (13 feet 6 inches) to the centre of a party wall which forms the westerly wall of the building now erected on the premises that adjoins on the east the premises hereby conveyed, running thence southerly and parallel with Irving Place through and along the centre of the said party wall, eighty-four (84) feet; thence westerly parallel with Fifteenth Street, thirteen feet and six inches (13 feet and 6 inches); thence northerly and parallel with Irving Place, eighty-four (84) feet to the point or place of beginning.

COMPLAINANT'S EXHIBIT 30.

ALL those three certain lots, pieces or parcels of land with the buildings thereon erected, situate, lying and being in the Eighteenth Ward of the Borough of Manhattan in the City of New York, and taken together are bounded and described as follows, viz: Beginning at a point on the westerly side of Avenue A, distant twenty feet northerly from the corner formed by the intersection of the westerly line of said Avenue A and the northerly line of Twentieth Street and running thence northerly along the westerly line of said Avenue A, sixty feet; thence westerly at right angles with the said Avenue, seventy feet; thence southerly on a line parallel with the said Avenue A, sixty feet, and thence easterly parallel with Twentieth Street, seventy feet to the westerly line of said Avenue at the point of beginning. 7073

BEING the same premises conveyed to Benjamin Weed, party of the first part hereto, by Antoinette Kellogg, by deed dated 28th February, 1899, and recorded in the office of the Register of the City and County of New York on the 14th March, 1899, in Liber of Section 3, Block Series of Conveyances, page ——.

COMPLAINANT'S EXHIBIT 31.

ALL that certain lot, piece or parcel of land, with the buildings thereon erected, situate in the Eighteenth Ward of the City of New York, bounded and described as follows: That is to say, BEGINNING on the easterly side of Avenue A at a point distant twenty-

three feet and one inch and one-half inch or thereabouts northwardly from the corner formed by the intersection of the easterly line of Avenue A by the northerly line of Twentieth Street, such point of beginning being immediately adjoining the northerly side wall of the house erected on the lot situate on the northeasterly corner of Avenue A and Twentieth Street and running thence northwardly along the easterly line of Avenue A twenty-three feet and three-quarters of an inch or thereabouts, to the centre line of the party wall between the house erected on the premises hereby
7074 conveyed and the house adjoining the same on the northerly
side thereof; thence eastwardly through the centre line of such party wall and along a line in continuation of such centre line parallel with Twentieth Street, seventy feet; thence southwardly parallel with Avenue A, twenty-three feet and three-quarters of an inch, and thence westwardly parallel with Twentieth Street and along the northerly side of the wall of the said house erected on the lot situate on the northeasterly corner of Avenue A and Twentieth Street, seventy feet to the point or place of beginning. Being the same premises conveyed to the said Henry Fuldner by Simon P. Flannery, by deed dated the first day of March, 1890, and recorded in the office of the Register of the County of New York on the same date in Liber 2296 of Conveyances, page 231; subject, however, to a mortgage for eight thousand dollars ($8,000), the payment of which is hereby assumed by the said party of the second part. And likewise ALL that certain lot, piece or parcel of land situate in the Eighteenth Ward of the City of New York and bounded and described as follows: That is to say, BEGINNING on the easterly side of Avenue A at a point distant forty-six and one-half inches or thereabouts northwardly from the corner formed by the intersection of the easterly line of Avenue A by the northerly line of Twentieth Street, and running thence northwardly along the easterly line of Avenue A, twenty-three (23) feet and one and one-half inches or thereabouts to the centre line of the party wall between the premises hereby conveyed and the lot adjoining the same on the northerly side thereof; thence eastwardly through the centre line of such party wall and along a line in continuation of such centre line parallel with Twentieth Street, seventy feet; thence southwardly parallel with Avenue A, twenty-three feet and one-half inches; and thence westwardly parallel with Twentieth Street and a part of the way through the centre of a party wall seventy feet to the place or
7075 point of beginning; subject, however, to a mortgage for eight
thousand dollars ($8,000), the payment of which is hereby assumed by the party of the second part, being the same premises conveyed to the said Henry Fulner by Virginia Quinn by deed dated the first day of March, 1890, and recorded in the office of the Register of the County of New York in Liber 2306 of Conveyances, page 92.

TOGETHER with the appurtenances and all the estate and rights of the parties of the first part in and to said premises.

COMPLAINANT'S EXHIBIT 32.

ALL that certain lot, piece or parcel of land, with the building thereon erected, situate, lying and being in the Borough of Manhattan of the City of New York, and bounded and described as follows:

Beginning at the corner formed by the intersection of the easterly side of Avenue A with the northerly side of Twentieth Street, and running thence northerly along the easterly side of Avenue A, twenty-three (23) feet; thence eastwardly parallel with Twentieth Street seventy (70) feet; thence southwardly parallel with Avenue A, twenty-three (23) feet to the northerly side of Twentieth Street; and thence westwardly along said northerly side of Twentieth Street, seventy (70) feet to the place of beginning. Being part of the lot known on a map of lands belonging to the estate of Thomas H. Smith on file in the office of the Register of New York County as lot No. one hundred and ninety-three (193), and being the same premises which were conveyed to the said Michael John Farrell by James T. O'Hara, Joseph F. O'Hara and John P. O'Hara, by deed dated the first day of September, 1884, and recorded on the same day in said Register's office in Liber 1831 of Conveyances, page 235.

7076

COMPLAINANT'S EXHIBIT 33.

ALL that certain lot of land together with the buildings thereon erected, situate, lying and being in the City, County and State of New York and bounded and described as follows:

Beginning at a point on the easterly side of Avenue A, distant forty-six feet southerly from the corner formed by the intersection of the said easterly side of Avenue A and the southerly side of Twenty-first Street; thence running easterly and parallel with said street seventy feet; thence southerly and parallel with the said avenue twenty-three feet; thence westerly again parallel with said street seventy feet to the easterly side of the said avenue; and thence northerly along said avenue twenty-three feet to the point or place of beginning.

COMPLAINANT'S EXHIBIT 34.

ALL that certain triangular plot or parcel of land and premises hereinafter particularly described, situate, lying and being in the Township of Ridgefield, County of Bergen and State of New Jersey, and being more fully described as follows: Said land beginning at a point in the centre of the old River Road, the same being the easterly corner of the land hereby intended to be conveyed as shown on map hereto attached; and from thence running (1) north forty-one degrees and twenty-one minutes west (N.41° 21′ W.), ninety (90) feet to the centre of the new highway; thence (2) southwesterly along the centre of the new highway a distance of two hundred and thirty-two (232) feet to the centre of the Old River

Road to a point distant two hundred and thirty (230) feet westerly from the point of beginning; thence (3) easterly along the centre of the Old River Road a distance of two hundred and thirty 7077 (230) feet to the point or place of beginning; containing two hundred and twenty-nine one thousandths (0.229) of an acre, be the same more or less, but all measurements to be subordinate to this, namely, that the property hereby conveyed goes to and along the centre of the new road.

COMPLAINANT'S EXHIBIT 35.

ALL that certain lot, piece or parcel of land situate lying and being in the Twenty-second Ward of the City of New York, bounded and described as follows: BEGINNING at a point formed by the intersection of the northerly line of Forty-first Street with the easterly line of the Eleventh Avenue and running thence northerly along the said easterly line of Eleventh Avenue, twenty feet; thence easterly parallel with Forty-first Street, sixty-two feet through the centre of a party wall; thence southerly and parallel with Eleventh Avenue, twenty feet to the northerly line of Forty-first Street, and thence westerly along the said northerly line of Forty-first Street, sixty-two feet to the point or place of beginning, together with the buildings thereon erected and the right to the party wall on the northerly side of said lot hereby conveyed as the buildings on the said lot and the adjoining lot now stand. Being a portion of the premises conveyed by the parties of the first part hereto to Harrison E. Gawtry by deed dated the 23d day of January, 1896, and recorded in the office of the Register of the City and County of New York, in Liber 45 of Section 4, Block Series of Conveyances, page 370, and by said Harrison E. Gawtry and wife conveyed to the party of the second part hereto by deed dated the 5th day of February, 1898, and to be recorded in said Register's office.

ALSO all those four certain lots of land, situate, lying and 7078 being on the northerly side of Forty-second street in the City, County and State of New York, which taken together are bounded and described as follows: Beginning at a point on the said northerly side of Forty-second Street distant two hundred and twenty-five feet easterly from the easterly side of Eleventh Avenue, running thence northerly parallel with Eleventh Avenue, one hundred feet five inches to the centre line of the block between Forty-second and Forty-third Streets; thence easterly parallel with Forty-second Street one hundred feet; thence southerly parallel with Eleventh Avenue, one hundred feet five inches to the northerly side of Forty-second Street, and thence westerly along said northerly side of Forty-second Street, one hundred feet to the point or place of beginning. BEING the same premises conveyed by the parties of the first part hereto to the party of the second part by deed dated the 7th day of October, 1896, and recorded in said Register's office, in Liber 51 of Section 4, Block Series of Conveyances at page 411. This conveyance being given to perfect and confirm the title of the party of the second part hereto in and to said premises.

COMPLAINANT'S EXHIBIT 36.

ALL that piece or parcel of land with the buildings thereon erected, situate, lying and being in the Twenty-second Ward of the City of New York, being in Section No. four (4) in Block No. one thousand and ninety-three (1093), as shown on the Land Map of the City of New York, and being bounded and described as follows: Beginning at a point on the northerly line of West Forty-fifth Street, distant two hundred and twenty-five (225) feet westwardly from the northwesterly corner of West Forty-fifth Street and Eleventh Avenue; thence running northwardly, but parallel, with said 7079 Eleventh Avenue, one hundred (100) feet five (5) inches to the middle line of the block; thence running westwardly, but along said middle line of the block fifty-six (56) feet three (3) inches; thence running southwardly, but again parallel, with said Eleventh Avenue, and to and through a party wall so far as the same extends, one hundred (100) feet five (5) inches to the northerly line of said Forty-fifth Street, and thence eastwardly, but along said northerly line of Forty-fifth Street, fifty-six (56) feet three (3) inches to the point or place of beginning.

COMPLAINANT'S EXHIBIT 37.

ALL that certain piece or parcel of land with the building thereon erected, situate, lying and being in the City of New York, on the northerly side of Forty-fifth Street, and bounded and described as follows: Commencing at a point on the said northerly side of Forty-fifth Street, distant westerly two hundred and eighty-one feet and three inches from the northwesterly corner of Forty-fifth Street and Eleventh Avenue; thence running northerly but parallel with Eleventh Avenue and partly through the middle of a certain party wall, one hundred feet and five inches; thence westerly, but parallel, with Forty-fifth Street, eighteen feet and nine inches; thence southerly, but again parallel, with Eleventh Avenue, one hundred feet and five inches to the northerly side of Forty-fifth Street, and thence easterly along the northerly side of Forty-fifth Street, eighteen feet and nine inches, to the place of beginning, be the said dimensions more or less.

COMPLAINANT'S EXHIBIT 38.

7080 ALL that certain lot, piece or parcel of land, with the buildings thereon erected, situate, lying and being in the Twenty-second Ward of the City of New York, being in block number ten hundred and ninety-two, in section number four, as shown on the land map of the City of New York, and being bounded and described as follows:

Beginning at a point in the southerly line of West Forty-fifth Street, distant one hundred and twenty-five feet, more or less, westwardly from the southwesterly corner of Eleventh Avenue and West

Forty-fifth Street, but opposite to the easterly line of an independent wall, being the easterly wall of the building on the premises hereby conveyed; thence running southwardly, but parallel with Eleventh Avenue, and along the easterly line of said independent wall, so far as the same extends, one hundred feet and five inches to the middle line of the block; thence running westwardly, but along said middle line of the block sixteen feet eight inches; thence running northwardly and again parallel with Eleventh Avenue, and to and through a party wall, so far as the same extends, one hundred feet and five inches to said southerly line of West Forty-fifth Street, and thence running eastwerdly, but along said southerly line of West Forty-fifth Street, sixteen feet eight inches, more or less, to the point or place of beginning, said premises being known by the street number 606 West Forty-fifth Street.

COMPLAINANT'S EXHIBIT 39.

ALL that certain lot, piece or parcel of land, with the buildings thereon erected, situate, lying and being in the Twenty-second Ward of the City of New York, and being in block one thousand and ninety-two (1092) in section four (4) as shown on the land map of the City of New York, and being bounded and described as follows:

Beginning at a point on the southerly line of West Forty-
7081 fifth Street, distant one hundred and forty-one feet (141)
eight (8) inches, more or less, westwardly from the southwesterly corner of Eleventh Avenue and West Forty-fifth Street, but at or opposite to the middle of a party wall; thence running southwardly and parallel with Eleventh Avenue and to and through the middle line of said party wall so far as the same extends, one hundred (100) feet five (5) inches to the middle line of the block; thence running westwardly but along said middle line of the block sixteen (16) feet eight (8) inches; thence running northwardly but again parallel with Eleventh Avenue, and to and through the middle line of another party wall so far as the same extends, one hundred (100) feet five (5) inches to said southerly line of West Forty-fifth Street, and thence running eastwardly but along said southerly line of West Forty-fifth Street, sixteen (16) feet eight (8) inches to the point or place of beginning.

Being the same property conveyed to me by deed recorded in the office of the Registrar of the City and County of New York, in Liber 948 of Conveyances, at page 158.

COMPLAINANT'S EXHIBIT 40.

ALL that certain lot, piece or parcel of land with the buildings and erections thereon, situated, lying and being in the Twenty-second Ward of the City of New York, known as number 612 West Forty-Fifth Street, and bounded and described as follows, to wit: Beginning at a point on the southerly line of West Forty-fifth Street, distant one hundred and seventy-five (175) feet westwardly from the southwesterly corner of said West Forty-fifth Street and Eleventh

Avenue, and thence running southwardly but parallel with said Eleventh Avenue, one hundred (100) feet five (5) inches to
7082 the middle line of the block; thence westwardly, but along the said middle line of the block, twenty-five (25) feet; thence northwardly, but again parallel with said Eleventh Avenue, one hundred (100) feet and five (5) inches to the said southerly line of West Forty-fifth Street, and thence eastwardly, but along the said southerly line of West Forty-fifth Street twenty-five (25) feet to the point or place of beginning; the said premises being the premises designated as Lot No. 79 on a map made by Thomas R. Ludlam, City Surveyor, and filed in the office of the Registrar of the City and County of New York as map No. 137, in a tin case, and being also the same premises which were conveyed to the said Robert Auld by Matthew Allen and Agnes, his wife, by deed dated February 1st, 1860, and recorded in the office of the Registrar of the City and County of New York, in Liber 797, Conveyances, page 660, March 22d, 1860.

COMPLAINANT'S EXHIBIT 41.

ALL those seven lots of land, situate in the Twenty-second Ward of the City of New York, which, taken together, are bounded and described as follows:

Beginning on the southerly side of Forty-sixth Street, distant three hundred and twenty-five feet westerly of the southwest corner of said Forty-sixth Street and Eleventh Avenue, and running thence westerly along the southerly side of West Forty-sixth Street, one hundred and seventy-five feet; thence southerly, parallel with said Eleventh Avenue, one hundred feet five inches to the middle line of the block between Forty-fifth and Forty-sixth Streets; thence easterly along said middle line one hundred and seventy-five feet; thence northerly and parallel with said Eleventh Avenue, one hundred feet five inches to the point or place of beginning.

7083 COMPLAINANT'S EXHIBIT 42.

BEGINNING at a point in the southerly side of Sixty-fifth Street, four hundred (400) feet east of West End Avenue; running thence southerly parallel with West End Avenue, one hundred (100) feet five (5) inches; thence easterly parallel with Sixty-fifth Street, one hundred (100) feet; thence northerly parallel with West End Avenue, one hundred (100) feet five (5) inches to the southerly side of Sixty-fifth Street, and thence westerly along the same one hundred (100) feet to the point or place of beginning. Said premises being known by the street numbers 222, 224, 226 and 228 West Sixty-fifth Street.

COMPLAINANT'S EXHIBIT 43.

ALL that triangular piece of land in the Twelfth Ward of the City of New York bounded and described as follows: Beginning at a point on the northerly side of One Hundred and Tenth Street, distant one hundred and seventy-five (175) feet, easterly from the point formed by the intersection of the northerly side of One Hundred and Tenth Street with the easterly side of Second Avenue; thence running northerly in a line parallel with the easterly side of Second Avenue, eighty (80) feet ten (10) inches, to the westerly side of an old lane formerly called Roosevelt's Lane; thence southerly along the westerly line of said Lane, one hundred and nine (109) feet, two and one-quarter (2¼) inches to the northerly side of One Hundred and Tenth Street, at a point thereon distant easterly from the northeasterly corner of said Street and Second Avenue, two hundred and forty-eight (248) feet five (5) inches; thence westerly along said northerly side of One Hundred and Tenth Street, seventy-three (73) feet five (5) inches to the point or place of beginning, be the said several dimensions more or less.

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COMPLAINANT'S EXHIBIT 44.

ALL that certain triangular piece or parcel of land, situate, lying and being in the Twelfth Ward of the City of New York, and bounded and described as follows: Beginning at a point on the southerly line of East One Hundred and Twelfth Street, distant one hundred and seventy-five feet westwardly from the southwesterly corner of First Avenue and East one Hundred and Twelfth Street; thence running southwardly but parallel with said First Avenue, thirty-six feet and three-quarters of an inch, more or less, to the easterly line of lands of the said Consolidated Gas Company; thence running northwardly but along said easterly line of lands of said Gas Company to the southerly line of One Hundred and Twelfth Street, at a point distant two hundred and seven feet and ten inches westwardly from the southwesterly corner of One Hundred and Twelfth Street and First Avenue, and running thence eastwardly but along said southerly line of East One Hundred and Twelfth Street, thirty-two feet ten inches, more or less, to the point or place of beginning—the said premises being situated in block 1683 on the land map made pursuant to Chapter 349, Laws of 1889, and the amendments thereto.

COMPLAINANT'S EXHIBIT 45.

BEGINNING at a point in the centre line of the block between One Hundred and Twelfth and One Hundred and Eleventh Streets, distant one hundred feet westerly from the westerly side of First Avenue, and running thence southerly, parallel with the westerly side of First Avenue and along the land now or formerly of Peter

Marine, seventeen feet and two inches, to land formerly belonging to the Estate of George Bradish, deceased, but now owned by The Consolidated Gas Company, the party of the second part; thence northwesterly, along said land, twenty-three feet and twenty-six one-hundredths of a foot to the centre line of the block; thence easterly along said centre line and along land owned by the party of the first part, fifteen feet eight inches and forty-one one-hundredths of an inch to the point of beginning, be said several distances and dimensions more or less. 7085

BEING A PART OF THE PREMISES conveyed to the party of the first part by Maria Cipollaro and Erico Cipollaro, her husband, by deed dated June 27th, 1905, and recorded June 28th, 1905, in the office of the Registrar of the County of New York, in Liber 102, Section 6 of Conveyances, at page 463.

COMPLAINANT'S EXHIBIT 46.

DESCRIPTION OF PROPERTY CONVEYED BY

JOHN D. CRIMMINS

TO

CONSOLIDATED GAS COMPANY OF NEW YORK.

Dated December 24, 1892.

ALL that certain plot, piece or parcel of land, situate, lying and being in the Twelfth Ward of the City of New York, being in block number nineteen hundred and ninety-nine (1999) in Section Number Seven (7) as shown on the Land Map of the City of New York, and bounded and described as follows: Beginning at the northeasterly corner of West One Hundred and Thirty-second Street and Twelfth Avenue, and thence running eastwardly, but along the northerly line of West One Hundred and Thirty-second Street, six hundred and seventy-five (675) feet; thence northwardly, but parallel with said Twelfth Avenue, ninety-nine (99) feet eleven (11) inches, to the middle line of the block; thence running westwardly, but along said middle line of the block, twenty-five (25) feet; thence running northwardly, but again parallel with said Twelfth Avenue, ninety-nine (99) feet eleven (11) inches to the southerly line of West One Hundred and Thirty-third Street; thence running westwardly, but along the said southerly line of West One Hundred and Thirty-third Street, six hundred and fifty (650) feet to the southeasterly corner of said West One Hundred and Thirty-third Street, and said Twelfth Avenue; thence running southwardly, but along the easterly line of said Twelfth Avenue, one hundred and ninety-nine (199) feet ten (10) inches to the said northeasterly corner of West One Hundred and Thirty-second Street and Twelfth Avenue, the point or place of beginning. 7086

TOGETHER with the appurtenances, and all the estate and rights of the said party of the first part, in and to said premises.

COMPLAINANT'S EXHIBIT 47.

ALL that certain plot, piece of parcel of land, formerly land under water and now filled in on the Harlem River, bounded and described as follows, to wit:

ALL those certain lots, pieces and parcels of land, formerly under water, situate, lying and being in the Twelfth Ward of the City of New York, bounded on the north by the southerly line of the Ninety-ninth Street, and on the south by the northerly line of Ninety-7087 eighth Street, and on the east by the westerly line of the Exterior Street as now established by law, and on the west by the original line of high water from its intersection with the southerly line of Ninety-ninth street as it winds and turns to its intersection with the easterly line of First Avenue; thence southerly to the point of intersection of the easterly line of First Avenue with the northerly line of Ninety-eighth Street; being the said premises shown upon the map hereto annexed and made part hereof, colored yellow, together with all and singular the tenements, hereditaments, and appurtenances thereunto belonging or in anywise appertaining and reversion and reversions, remainder and remainders, rents, issues, and profits thereof. ALSO ALL the estate, right, title, interests, property, possession, claim and demand whatsoever as well in law as in equity of the said party of the first part of, in and to the above described premises and every part thereof with the appurtenances.

Said deed contains the following:

And the said party of the second part, for itself, its successors and assigns, does hereby covenant and agree to and with the said party of the first part, its successors and assigns, that if the said party of the second part, its successors and assigns, shall and will within three months next after they shall be thereunto required, by the said party of the first part, or the Common Council of the City of New York or its successors or the Board of Commissioners of the Department of Docks of said City, at its own proper costs and charges build, erect, make and finish, or cause to be built, erected, made and finished according to any resolution or ordinance of the said party of the first part, the said Common Council or its successors, or the Board of Department of Docks, already passed or adopted, or that may hereafter be passed or adopted, a good and sufficient street which shall 7088 form the northerly one-half part of Ninety-eighth Street, and another good and sufficient street which shall form the southerly one-half part of Ninety-ninth Street, said streets lying contiguous to the premises hereinbefore described and extending from the original line of high water mark to the westerly side of the exterior street, wharf or place determined upon by the Department of Docks; and will fill in the same with good and sufficient earth and regulate and pave the same and lay the sidewalks thereof.

And also that the said party of the second part, its successors and assigns, shall and will from time to time, and at all times forever hereafter at its own proper costs and charges, and expenses, uphold and keep in good order and repair all of said parts of such streets and sidewalks which the said party of the second part has covenanted and agreed to make, erect and build as aforesaid, and will at all times hereafter obey, fulfill and observe such ordinances, resolutions, orders and directions as the said party of the first part or the said Common Council and its successors, or the said Board of the Department of Docks shall from time to time pass or make relative thereto.

And also that the said streets shall forever thereafter continue to be and remain public streets and highways for the free and common use of the inhabitants of the City of New York and all others to pass and re-pass by, through and along the same in like manner as the other public streets and avenues of said city now are or lawfully ought to be.

And in case default shall be made by the said party of the second part, its successors or assigns, in building, erecting, making and finishing the said streets, by them covenanted herein to be built, erected, made and finished, and in filling in the same or any part thereof, or in complying with any ordinance, resolution or order of the
7089 said party of the first part, the said Common Council or its successors, or said Board of the Department of Docks when required, then and in that case it shall and may be lawful for the said party of the first part or its successors to build, erect, make and finish, or cause to be built, erected, made and finished, the streets aforesaid, and to fill in the same and to regulate and pave the same and to lay the sidewalks for and on account of, and at the proper costs and charges of the said party of the second part, its successors and assigns, and to charge to and recover in an action at law from the said party of the second part, its successors and assigns the amount thereof, together with the interest thereon and all the costs, and charges of the proceedings relative to the same or to sell and dispose of the whole of the said hereby granted premises or any part thereof at public auction for the most that can be obtained for the same, and in case of any deficiency to charge with and recover from the said party of the second part, its successors and assigns, the amount of such deficiency, or to adopt and pursue any legal right or remedy that the said party of the first part now possesses or enjoys under and by virtue of any act of the Legislature of the State of New York, or that may hereafter be granted unto the said party of the first part, or its successors by the Legislature of the State of New York, or to enter into or upon the whole or any part of the hereby granted premises and to grant the same to any person or persons, their heirs or assigns forever.

* * * * * * *

And it is further mutually agreed by and between the parties to these presents that the estate hereby granted is upon this express condition, that if at any time hereafter it shall appear that the said party of the second part was not at the time of the date of
7090 these presents seized of a good, sure, absolute and indefeasible estate of inheritance in fee simple of, in and to the land and premises on the westerly side of and adjacent to the premises hereby conveyed or so intended to be conveyed, that then and in every such case these presents and every article, clause and thing herein con-

tained shall be absolutely null and void, and the said party of the first part, and its successors and assigns, shall and may forthwith thereupon enter into the said premises hereby granted and shall be thereafter seized of the said premises with the appurtenances, free, clear and discharged of and from any claim, right or pretence of claim or right of the said party of the second part, its successors and assigns, anything herein contained to the contrary notwithstanding.

And it is hereby further mutually agreed and understood that if the said party of the second part, its successors and assigns, shall make default in the performance of any or either of the covenants herein contained on their part and behalf to be observed, performed, fulfilled and kept, then and in every such case these presents and every article, clause or thing herein contained shall be and become absolutely null and void, and the said party of the first part, its successors and assigns shall and may forthwith thereupon enter into and upon the said premises hereby granted and shall thereafter be seized of the same with the appurtenances free, clear and discharged of and from all claim or right or pretence of claim or right of the said party of the second part, its successors and assigns, anything herein contained to the contrary notwithstanding.

7091

COMPLAINANT'S EXHIBIT 48.

(Blue Print.)

COMPLAINANT'S EXHIBIT 49.

(Blue Print.)

COMPLAINANT'S EXHIBIT 50.

"All those several certain lots, pieces or parcels of land, situate lying and being in the Borough of Queens, City of New York, and State of New York, and which taken separately, are bounded and described as follows:

First Parcel. All that certain tract of land and meadow, with the improvements thereon, situate, lying and being at Hell Gate Neck, in Newtown, Long Island, formerly known as Willoughby's Point, but now commonly called Casina, containing by estimation ninety acres of land, more or less, and bounded northwesterly and northeasterly by the Sound and Bay; southeasterly by a creek and ditch that divide it from the meadow now or late of Elbert Luyster, and by the land now or late of Cornelius Berrian; southerly by land now or late of Jacob Rapalje, Jr., and southwesterly by land now or late of Abraham Polhemus, Jr., and Samuel Lawrence, running down to the Sound aforesaid, being part of the premises conveyed to George M. Woolsey by Samuel A. Willoughby and Margaretta, his wife, by deed dated the twelfth day of July, 1841, and recorded in the office of the Clerk of the County of Queens in Liber 55 of Deeds, at page 242.

7092 Second Parcel. All that certain piece of land situate in Newtown aforesaid, and known on a map entitled "Map of property belonging to the Estate of Abraham Polhemus, deceased, in the Town of Newtown, Queens County" etc., surveyed by Gardner A. Sage, City Surveyor, December 3d, 1844, and filed in the Clerk's office of Queens County as lot number seven (7) bounded southwesterly by a road in common running through the said farm five hundred and eighteen feet; northwesterly by the rears of lots number four (4), five (5) and six (6) on said map, six hundred and eighty-six feet six inches; northeasterly by land late of George M. Woolsey, five hundred and twenty-five feet, and southeasterly by lot number twelve (12) on said map belonging to Harriet S. Robertson, six hundred and twenty-four feet, according to said map, containing seven and seventy-nine one-hundredths (7 79/100) acres. Also, all the right, title and interest of the said party of the first part, if any, of, in and to the road in front of said premises laid down on said map; being the same premises described in a deed from Abraham Polhemus and Eliza B., his wife, to the said George M. Woolsey, dated the thirteenth day of January, 1847, and recorded in the office of the Clerk of said County in Liber 70 of Deeds, at page 306.

Third Parcel. All that certain piece of land, situate in Newtown aforesaid, known on said map entitled "Map of property belonging to Estate of Abraham Polhemus, deceased," as lot number six (6), bounded northwesterly in front by the East River; northeasterly by land late of George M. Woolsey; southeasterly in the rear by lot number seven (7) on said map, and southwesterly by lot number five (5) on said map, belonging to Harriet S. Robertson, containing eight and thirty-three one-hundredths (8 33/100) 7093 acres according to said map; being the same premises described in a certain deed from James S. Polhemus and Anne E., his wife, to said George M. Woolsey, bearing date the 13th day of January, 1847, and recorded in the office of the Clerk of said County of Queens in Liber 70 of Deeds, at page 288.

Fourth Parcel. All that certain farm of lands, situate in Newtown aforesaid bounded and described as follows:

Beginning at dock and thence running south eleven degrees west six chains; thence south nineteen degrees west two chains seventy-six links; thence south forty-two degrees west one chain, eighty-five links; thence due west four chains sixty-seven links; thence south fifty-seven degrees west four chains sixty links; thence south fifteen degrees west eight chains; thence due west six chains four links; which courses are along the River and Creek; thence north twenty-eight degrees west four chains eighty-five links along Peter Rapalje's land, thence north sixty degrees west two chains sixty links; thence north seventy degrees west four chains, which two last courses are along land conveyed by Dows Ditmars and wife to Ezra N. Berrian, hereinafter described; thence north sixteen degrees thirty minutes west four chains forty links along land late of Edward J. Woolsey; thence north forty-five degrees east five chains eight links along said Woolsey's land; thence north twenty-four degrees west sixty links; thence north seventy degrees east fourteen chains along the land of

George Kouwenhoven; thence north sixteen degrees east eleven chains seventy-five links, and thence south forty degrees east fourteen chains eighty links, to the place of beginning; containing
7094 forty-three acres, fifteen perches of land, more or less, being the same premises described in a certain deed made by John M. McDonald, Master in Chancery, to Ezra M. Berrian, dated the 1st day of August, 1829, and recorded in the office of the Clerk of the County of Queens, in Liber MM of Conveyances, at page 169.

Fifth Parcel. All that certain tract, piece or parcel of land and meadow, situate, lying and being as follows: Bounded on the northwest and northeast by land and meadow late of Ezra M. Berrian, and formerly belonging to Samuel Berrian, deceased; on the southeast and southwest by land and meadow lately belonging to the Estate of Jacob Rapalje, deceased; containing two acres, more or less, being the same premises described in a certain deed to said Ezra M. Berrian by Dowd Ditmars and wife, dated the 24th day of April, 1848, and recorded in the Clerk's office of said County of Queens in Liber 80 of Deeds, at page 455.

Sixth Parcel. All the right, title and interest of said party of the first part of, in and to all that certain piece of land with the improvements thereon, situate in Newtown aforesaid, bounded as follows: Northerly by the highway leading from Hell Gate and Astoria along the River from the Bowery and Newtown; easterly by land of the Estate of Jacob Rapalje, and southerly and westerly by land late of George M. Woolsey; containing along the highway seventy-one feet, on the easterly side one hundred and twenty-three feet; on the southerly side seventy-two feet, and on the westerly side one hundred and twenty-seven feet, as the said premises are now enclosed.

Seventh Parcel. All that certain piece or parcel of land
7095 under the waters of the East River in front of the adjoining upland, now or late belonging to Edward J. Woolsey, situate in Long Island City, bounded and described as follows: Beginning at a point on the southerly shore of the East River at common high water mark and the boundary line dividing the lands of R. A. Robertson from the said lands now or late of Edward J. Woolsey, and running thence along said high water mark the following courses and distances, viz.: North forty-three and one-quarter degrees, east three hundred and ten and five-tenths (310.5) feet; north fifty-five degrees, sixteen minutes, east four hundred and ninety-two (492) feet; north forty-five degrees, thirty-nine minutes east one hundred and forty-eight (148) feet; north thirty-six degrees, fourteen minutes east three hundred and eighty (380) feet; north sixty-one degrees five minutes east three hundred and sixteen and seven-tenths (316.7) feet; north sixty-seven degrees twenty-three minutes east two hundred and ninety-eight and seven-tenths (298.7) feet; north fifty-five degrees twenty minutes east five hundred and seventy-three and seven-tenths (573.7) feet; south fifty-four degrees, twenty-three minutes east two hundred and ninety-five and five-tenths (295.5) feet; south thirteen degrees thirty minutes west one hundred and twenty-two and seven-tenths (122.7) feet; south thirty-seven degrees forty-seven minutes east one hundred and forty-five and three-tenths

(145.3) feet; south thirty-seven degrees, fifty-one minutes west one hundred and sixty-three and three-tenths (163.3) feet; south twenty-one degrees twelve minutes east six hundred and fifty-five and nine-tenths (655.9) feet; south twenty-seven degrees, forty minutes east four hundred and forty-two and three-tenths (442.3) feet; south six degrees west three hundred and sixteen (316) feet; south sixty-nine degrees east seventy (70) feet; to the middle of a creek 7096 dividing said lands now or late of Edward J. Woolsey from those of George Kouwenhoven; thence and along the centre line of said creek north twenty-six degrees thirty minutes east four hundred and ninety (490) feet; thence north twenty degrees east twelve hundred and eighty (1280) feet; to the permanent bulkhead and pier line; thence along said bulkhead and pier line the following courses and distances: North seventy degrees, forty-five minutes west thirteen hundred and eighty (1380) feet; south fifty-nine degrees west fourteen hundred and fifty (1450) feet; south forty-five degrees fifteen minutes west twelve hundred and twenty-five (1225) feet; thence south thirty-four degrees, forty-five minutes east one hundred and fifty (150) feet; to the place or point of beginning.

Eighth Parcel. All the right, title and interest of said party of the first part of, in and to all that certain tract, piece or parcel of land and land under water, situate in Long Island City aforesaid, being all the land lying between the easterly line of the above described premises and the centre of the creek which separates the said land from the land of Steinway.

Ninth Parcel. All the right, title and interest of said party of the first part of, in and to the other land under water, adjoining the premises hereby conveyed, and the wharfage and cranage therein, and also in and to the lanes, roads and avenues running through or immediately adjoining said premises, excepting, however, from the premises designated above as the third and seventh parcels all that certain tract, piece or parcel of land bounded and described as follows: Beginning at a point on the southerly side of the Shore Road, at the division line between the hereby granted premises and 7097 land of R. A. Robertson, and running thence along said land and premises of R. A. Robertson, south thirty-five degrees thirty-six minutes east two hundred and two feet, seven and three eighths inches; thence south thirty-four degrees, forty-five minutes east eight hundred and seven feet three and five-eighths inches to the centre line of a strip of land laid down on a map or survey of Long Island City, filed in the office of the Secretary of State, made by the Commissioners of Streets, Roads, Avenues and Parks in said City, and designated as Van Alst Avenue; thence along the center line of said strip so described, north forty-nine degrees thirty-nine minutes east six hundred and twelve feet two and three-eighths inches to the Old Bowery Bay Road; thence northwesterly along the Bowery Bay Road as it turns to its intersection with the Shore Road aforesaid; thence southerly along the Shore Road to the point of beginning, containing nine acres and nine hundred and seventy one-thousandths (970/1000) of an acre, and also excepting all land under water in front of said premises so excepted, and in front of lot number twenty (20) and twenty-five (25) included in block 184 hereinafter mentioned.

Excepting also from above granted premises, a certain tract of land which on a "Map of property of the Casina Land Company, dated Long Island City, December 4th, 1897, and made by Leonard C. L. Smith, City Surveyor, is designated as lots 1-6 and 15-20, both inclusive, in block 167B; lots 20-25, both inclusive, in block 184; lots 13 and 14 in block 168B, and lots 32-41, both inclusive, in block 100.

Excepting also so much of the streets and avenues adjoining and in front of the last excepted premises, excepting also from the above granted premises, a portion thereof conveyed by Edward J. Woolsey
and wife to Patrick Ward, by deed dated the 25th day of
7098 April, 1894, and recorded on the 8th day of January, 1895,
in the office of the Clerk of said County of Queens in Liber
1052 of Conveyances, at page 67, and a certain other deed between the same parties, dated the 5th day of January, 1895, and recorded in the office of the Clerk of said County of Queens on the 7th day of January, 1895, in Liber 1051, of Conveyances, at page 458.

For a more particular description of the above granted premises other than the land under water, reference is hereby made to a certain map entitled "Map of the property of the Casina Land Company, made by Stevenson Towle, City Surveyor, dated November 30th, 1898, and filed or intended to be filed in the office of the Clerk of said County of Queens, upon which map such portion of the above granted premises is distinguished by the color blue.

And also all that certain piece or parcel of salt meadow, upland and marsh situated at Hell Gate Neck, in Long Island City, in the Borough of Queens, in the City of New York and in the County of Queens in the State of New York, and bounded as follows, to wit: Beginning at a point on the road or lane leading from the public highway to Berrian's Point, at the southeasterly corner of premises devised to Luke Kouwenhoven by George Kouwenhoven in and by his Will, which point is distant five hundred and eight feet easterly from a ditch separating the said premises so devised to said Luke Kouwenhoven from land formerly of the late Edward J. Woolsey, and running thence north nine degrees and forty minutes west, along said premises so devised to said Luke Kouwenhoven, to the center of a creek separating the premises hereby granted from marsh formerly of the said Edward J. Woolsey; thence northerly and westerly along the center of said creek as it winds and turns to the East River;
thence southeasterly along the East River as it winds and
7099 turns to the center of another creek separating the premises
hereby granted from meadow and marsh formerly of Eliza
N. Berrian and afterwards of the said Edward J. Woolsey; thence southerly along the center of said creek as it winds and turns and said meadow and marsh formerly of Ezra N. Berrian and afterwards of said Edward J. Woolsey to said road or land leading to Berrian's Point, and thence westerly along said road or lane to the place of beginning. Also any right of way of the said party of the first part from the said premises to the public highway; also all the right, title

and interest of the said party of the first part to the lands under the waters of the East River and Berrian's Creek in front of the said piece or parcel of salt meadow, upland and marsh above described, and also the right, title and interest of the said party of the first part in the land constituting the said road or lane in front of and adjoining the premises hereinabove granted.

And also all that certain piece or parcel of meadow and upland situated at Hell Gate Neck in Long Island City, in the Borough of Queens of the City of New York, and in the County of Queens in the State of New York, and bounded as follows, to wit: Beginning at a point on the northerly side of the road or lane leading from the public highway to Berrian's Point, where the same is intersected by a ditch separating the premises hereby granted from the land of the late Edward J. Woolsey, and running thence easterly along the said road or lane leading to Berrian's Point, five hundred and eighty feet to premises devised to Francis D. Kouwenhoven by George Kouwenhoven in and by his Will; thence north nine degrees and forty minutes west along the said premises so devised to the said Francis D. Kouwenhoven, to the center of a creek separating
7100 the premises hereby granted from meadow and marsh of the said Edward J. Woolsey, and then along the center of said creek and said ditch, as the same winds and turns to the place of beginning. Also any right of way of the said party of the first part from the said premises to the public highway. Also the right, title and interest of the said party of the first part in the land constituting the said road or lane in front of and adjoining the said premises herein above granted.

And also all that certain Island situated in the East River in the County of Queens and State of New York, commonly called Berrian's Island, which Island contains about forty-five acres of land and lies opposite to a farm formerly owned by Edward J. Woolsey, and being separated therefrom by a creek called Berrian's Creek, being the same premises conveyed to Edward J. Woolsey, the elder by two deeds, one executed by Moses Longstreet and wife and Samuel Berrian to Edward J. Woolsey, dated the 17th day of August, 1849, recorded on the 18th day of August, 1849, in the office of the Clerk of the County of Queens in Liber 80 of Deeds, at page 268, and one executed by Ezra N. Berrian and wife to Edward J. Woolsey, dated the 18th day of February, 1853, and recorded on the 3d day of March, 1853, in said Clerk's office in Liber 104 of Deeds, at page 141.

Also all that parcel of land under water adjoining said Island between high and low water mark described as follows: Beginning at a stake at common high water mark at the southeasterly corner of the said Berrian's Island; running thence along said high water mark north forty-six degrees, thirty minutes east six hundred feet; thence south ten degrees, thirty-eight minutes east, one hundred and thirty-eight feet; thence south twenty-seven degrees, ten
7101 minutes east, three hundred and thirty-two feet; thence south fifty degrees, forty-two minutes east two hundred and ninety-four feet; thence south eight *eight* degrees, eighteen minutes east

one hundred and eighty-four feet; thence south twelve degrees, thirty-nine minutes east, seven hundred and fifty-three feet; thence south twelve degrees, forty minutes west, five hundred and sixty feet; thence south forty-nine degrees thirty-five minutes west, five hundred and fifty-six feet; thence south eighty-two degrees, forty-five minutes west, one hundred and thirty-one feet; thence south nine degrees thirty minutes west, one hundred and forty-five feet to the center line of a creek between said Island and lands now or late of George Kouwenhoven; thence through the center of said creek south seventy-one degrees, thirty minutes east, one hundred and fifty feet; thence north fifty-three degrees east, 1455 feet to permanent bulkhead and pier line; thence along said bulkhead and pier line, north thirty degrees thirty minutes west twelve hundred and fifty feet; thence north forty-four degrees thirty minutes west nine hundred and sixty-five feet; thence north seventy degrees, forty-five minutes west, three hundred and twenty feet; thence south twenty-one degrees, thirty minutes west, nine hundred and sixty feet to the center line of said creek; thence along the center line of said creek; south thirty-eight degrees, thirty minutes east, two hundred and fifteen feet; thence north forty-five degrees east two hundred and twenty-five feet to common high water mark on Berrian's Island; and thence along said high water mark on Berrian's Island north thirty-nine degrees, thirty minutes west two hundred and twenty-six feet to the point or place of beginning, containing twenty-seven and seven-tenths (27 7/10) acres, being the same premises which were granted by the People of the State of New York to Edward J. Woolsey, 7102 by Letters Patent, dated October 6th, 1873, and recorded December 18th, 1873, in the office of the Clerk of the County of Queens in Liber 427 of Deeds, at page 93.

All the premises above described being all the land and land under water conveyed to the party of the first part by the Casina Land Company and Kate T. Woolsey by Deed bearing date the 14th day of December, 1898, by Joseph Pasovsky and Josephine Pasovsky, his wife, by Deed bearing date the 15th day of December, 1898, by the Berrian's Island Company, by Deed bearing date the 3d day of December, 1898, by Frank S. Martyny and Mary Martyny, his wife, by Deed bearing date the 14th day of December, 1898; by Francis D. Kouwenhoven and Harriet, his wife, by Deed bearing date the 8th day of December, 1898, and by Luke Kouwenhoven, by Deed bearing date the 8th day of December, 1898."

COMPLAINANT'S EXHIBIT 51.

"All that certain tract of land, comprising certain lots which, on a certain map entitled 'Map of property belonging to Kate T. Woolsey,' being part of property known as "Casina Farm" in the Fifth Ward of Long Island City, Queens county, N. Y., Long Island City, August 16, 1895, Julius von Hunerbein, City Surveyor," and filed in the office of the Clerk of Queens county September 17, 1895, by the map No. 221, are designated as lots 1 to 6 inclusive and 15 to 20 inclusive, on Block 167B, together with a portion of Block 184 on

said map, lying to the westerly of said lots, and which tract of land hereby intended to be conveyed is more particularly described as follows: Beginning at the point formed by the intersection
7103 of the northerly side of Trimble place with the westerly side of Casina avenue, and running thence northerly along said westerly side of Casina avenue, 150 feet; thence westerly, parallel with Trimble place, to high water mark on the East River; thence southerly along high water mark of the East River, to a point where the westerly extension of said northerly side of Trimble place would intersect the same, and thence easterly in the line of such extension, and along said northerly side of Trimble place, to the point or place of beginning; together with all the right, title and interest of the parties of the first part of, in and to the lands below high water mark and lands under water in the East River in front of and adjacent to said premises, so far as the same may extend; also all the right, title and interest of the parties of the first part of, in and to the land lying in Trimble place and Casina avenue and in front of and adjacent to said premises, to the middle of said Trimble place and Casina avenue, respectively; also all the right, title and interest that the parties of the first part may have in any other lands or lands under water, shown on said map; being the same premises conveyed to the parties of the first part by the Casina Land Company, by deed bearing date the 25th day of November, 1895, and recorded in the office of the Clerk of Queens County on the 2d day of December, 1895, in Liber 1091 of Conveyances, at page 354.

COMPLAINANT'S EXHIBIT 52.

"All his right, title and interest to all real property owned by him in Long Island City, forming part of what was formerly known as Woolsey Manor, or Casina Farm, together with all his right, title and interest in a certain lease made by the Casina
7104 Beach Land Company, body corporate, to him, and bearing date the 6th day of October, 1898; and the party of the first part does hereby sell, transfer and assign unto the said party of the second part all buildings owned by him in said Long Island City which are at present upon the property heretofore owned by the Casina Land Company and by Kate T. Woolsey."

COMPLAINANT'S EXHIBIT 53.

"All those certain lots, pieces or parcels of land and premises and land under water, situated, lying and being in the Borough of Queens, in the County of Queens, in the City and State of New York, and bounded and described as follows: Beginning at a point in the centre line of Riker avenue equi-distant from the centre lines of Lawrence street and De Bevoise avenue as the same are laid down on the map and filed by the commissioners for laying out streets, avenues, roads and parks in Long Island City, and running thence northerly and along the land of the said party of the second part hereto, to a point where the centre line of the block between De

Bevoise and Lawrence streets, if extended northerly, would intersect the centre line of Berrian Creek and thence running easterly, southeasterly and southerly along the said centre line of said Berrian Creek and the proposed canal, as the same winds and turns to a point where the centre line of said Riker avenue if extended easterly would intersect said centre line of said creek and canal, and from the last named point of intersection running westerly and along the land of the said party of the second part hereto to the point or place of beginning; it being intended hereby to convey to the
7105 said party of the second part all those premises bounded on the south and west by the land of the party of the second part hereto, and on the northeast, east and sontheast by the centre line of Berrian Creek and the proposed canal together with all the right, title and interest of the said parties of the first part in and to the land under water adjoining the same, or appurtenant thereto under said Berrian Creek or said canal."

COMPLAINANT'S EXHIBIT 54.

All those five certain pieces or parcels of land under waters of the East River or Berrian Creek in front of and adjacent to uplands owned by the grantee herein in Lond Island City, Borough of Queens, County of Queens, City and State of New York, bounded and described as follows:

Parcel Number One. Beginning at a point on the south shore of Berrian Creek at the centre line of the creek separating the lands formerly owned by Francis D. Kouwenhoven and the land formerly owned by Edward J. Woolsey at common high-water line and running north 45° east one hundred and eighty feet to the Bulkhead and Pier line of 1890, thence along said line the following courses and distances, south 35° 30′ east five hundred twenty foot, and south 34° 30′ east two hundred one feet, thence south 51° 30′ west thirty-nine feet to common high-water and to a point on the line dividing the land formerly of Patrick Ward and the lands of the grantee herein; thence along high-water line north 35° 30′ west three hundred one feet; thence north 50° 30′ west four hundred nineteen feet to the place of beginning, containing one and eighty-three one-hundre-ths acres.

7106 Parcel Number Two. Beginning at high-water line of Berrian Creek at the line dividing the lands of the Astoria Light Heat and Power Company formerly owned by Edward J. Woolsey and the land formerly owned by Patrick Ward, thence running north 51° 30′ east thirty-nine feet to the Bulkhead and Pier line established 1890, thence along said Bulkhead and Pier line the following courses and distances: South 5° east two-hundred thirty-seven feet, south 13° 47′ west five hundred fifty-two feet, south 35° 30′ west two hundred feet, to a creek known as Luyster Creek, separating the land of the grantee herein from the lands formerly of William, Theodore and Albert Steinway; thence to and along common high-water line of Berrian Creek and the upland of the grantee herein the following courses and distances: north 17° 30′ east three hundred ninety feet, north 13° 47′ east four hundred sixty-three feet, north

2° 30′ west two hundred twelve feet to the place of beginning, containing seventy-six one-hundredths of an acre.

Parcel Number Three. Beginning at common high-water at the south-east corner of Berrian Island at lands granted by the State of New York, October 6th, 1873, to Edward J. Woolsey; thence along said high-water line the following courses and distances: North 9° 30′ east seven hundred eight feet, north 17° 30′ west six hundred feet, north 37° 30′ west five hundred feet, to the lands granted by the State of New York to Edward J. Woolsey, October 6th, 1873; thence along the said lands so granted South 45° west ninety-four feet, to the Bulkhead and Pier line; thence along the said Bulkhead and Pier line south 35° 30′ east five hundred forty-four feet, south 34° 30′ east two hundred one feet, south 5° 30′ east three hundred sixty-four feet, south 13° 47′ west four hundred forty-six feet,
7107 south 21° 15′, east two hundred thirty-five feet to the above-
mentioned granted lands; thence along said granted lands north 9° 30′ east fifty-six feet to the place of beginning, containing four and sixty-nine one-hundre-ths acres.

Parcel Number Four. Beginning at common high-water line of the East River, at the center of the creek dividing the lands formerly owned by Edward J. Woolsey and the lands adjacent to the lands herein granted, and running thence north 20° east seven hundred ten feet, to the established Bulkhead and Pier line of 1890; thence along said Bulkhead and Pier line south 35° 30′ east nine hundred eighty-two feet, to a point opposite the center of another creek dividing the lands of the grantee herein adjacent to the lands herein granted and the lands of the grantee herein formerly owned by Edward J. Woolsey; thence south 45° west one hundred eighty feet to common high-water line and the uplands of the grantee herein; thence along said high-water line north 69° 10′ west seven hundred thirty-three feet to the place of beginning, containing eight and one-tenth acres.

Parcel Number Five. Also all those certain lands under water at the westerly end of Berrian Island bounded on the east by the lands granted to Edward J. Woolsey, October 6th, 1873, by the State of New York, and on the west by the Bulkhead and Pier line established of 1890, containing ninety-three and one-hundredths of an acre.

These letters-patent are issued pursuant to a resolution of the Commissioners of the Land Office adopted December 7, 1899, and are subject to the following exception and reservation:

Excepting and reserving to all and every the said People,
7108 the full and free right, liberty and privilege of entering upon
and using all and every party of the above-described premises, in as ample a manner as they might have done had this power and authority not been given, until the same shall have been actually appropriated and applied to the purposes of Commerce, by erecting a Dock or Docks or other improvements of a substantial character thereon, or for the beneficial enjoyment of the same by the adjacent owner; provided that unless the fulfillment of the purposes set forth in the application and the grant be entered upon in good faith within five years, this grant be null and void.

COMPLAINANT'S EXHIBIT 55.

ALL those two certain lots, pieces or parcels of land situate, lying and being in the First Ward of the Borough of Queens (late Fifth Ward of Long Island City), Queens County and State of New York, and known and distinguished upon a certain map entitled "Map of property belonging to Kate T. Woolsey, being part of property known as 'Casina Farm' in the Fifth Ward of Long Island City, Queens County, N. Y., made by Julius von Hunerbein, City Surveyor, dated Long Island City, August 16, 1895," and filed in the office of the Clerk of the County of Queens as Lots Nos. 13 (thirteen), 14 (fourteen), in Block No. one hundred and sixty-eight B (168 B), and which said two lots are more particularly bounded and described with reference to said map as follows, viz.: Beginning at a point on the southeasterly side of Boulevard as laid down on said map, distant fifty (50) feet, one and one-quarter (1¼) inches southwesterly from the corner formed by the intersection of the southeasterly side of Boulevard with the southwesterly side of Riker 7109 avenue as laid down on said map; running thence southeasterly and parallel with Riker avenue, one hundred and twenty-two (122) feet, six (6) inches; thence northeasterly and at right angles to Riker avenue, fifty (50) feet to the said southwesterly side of Riker avenue; thence northwesterly along the southwesterly side of Riker avenue, one hundred and nineteen (119) feet, three and one-eighth (3⅛) inches to the southeasterly side of the Boulevard; thence southwesterly along the southeasterly side of the Boulevard, fifty (50) feet, one and one-quarter (1¼) inches to the point or place of beginning TOGETHER with all the right, title and interest of the parties of the first part hereto, of, in and to those portions of Boulevard and Riker avenue, lying in front of and adjacent to said property to the centre lines of said Boulevard and Riker avenue, except for the public use.

COMPLAINANT'S EXHIBIT 56.

ALL those certain lots, pieces or parcels of land, situate, lying and being in the Borough of Queens, City and State of New York, and known as and by lot numbers 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280 and 281 on a certain map entitled "Map of 281 lots of ground situate in the Fifth Ward of Long Island City, Queens County, New York, belonging to the estate of Peter Rapelje, Dec'd surveyed April, 1874, by P. G. Van Alst, City Surveyor," and filed in the office of the Clerk of the County of Queens, July 24th, 1874, and which said lots 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280 and 281, according to said map, are bounded as follows: BEGINNING at a point in the northeasterly side of Winthrop Avenue distant 78 feet and 11⅝ inches southeasterly from the south- 7110 easterly intersection of De Bevoise and Winthrop Avenues, and running thence northeast and along the lands now or formerly owned by Sarah De Bevoise 407 feet 4½ inches more or less to a point on the southeasterly side of the Witch or Small Creek, and running thence with and along said Witch or Small Creek and adjacent to the Meadow Land now or formerly owned by E. J. Woolsey in a general west and northwesterly direction to the southeasterly side of De Bevoise Avenue, and thence southwest along the said southeasterly side of De Bevoise Avenue 300 feet more or less, to the northeasterly intersection of De Bevoise and Winthrop Avenues, and thence southeasterly 78 feet 11⅝ inches to the point or place of beginning. TOGETHER also with all that lot, piece or parcel of land situate, and being in the said Borough of Queens, City and State of New York and known as Lot No. 269 on aforementioned map and described as follows: BEGINNING at a point in the southeasterly intersection of De Bevoise and Winthrop Avenues, and running thence southwest and along southeast side of De Bevoise Avenue 145 feet 11⅜ inches, and thence northeast from De Bevoise Avenue 154 feet 7¼ inches, to a point in the southwest side of Winthrop Avenue and thence northwest and along Winthrop Avenue 51 feet ⅛ inches to lot, point or place of beginning. Together with all the right, title and interest of the party of the first part in and to the streets in front of and adjoining said lots 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280 and 281.

Being the same premises conveyed to the party of the first part by William M. D. de Peyster, by a deed dated September 26, 1901, and recorded in the office of the Register of the County of Queens in Liber 1264 of Conveyances, page 64, on October 3, 1901.

7111 COMPLAINANT'S EXHIBIT 57.

ALL those fifteen lots, pieces or parcels of land situate, lying and being in Long Island City, County of Queens and State of New York known and distinguished on a certain map filed in the office of the Clerk of the County of Queens, entitled "Map of two hundred eighty-one lots of ground situate in the Fifth Ward of Long Island City, Queens County, New York, belonging to the estate of Peter Rapelje, dec.," surveyed April, 1874, by P. G. Van Alst, City Surveyor, as lots numbered from (30) thirty to (44) forty-four, both inclusive, and with reference to the streets and avenues, as established by the commissioners of streets under "An act to provide for the laying out of streets, avenues, roads and parks in Long Island City, passed April 26th, 1871, and the acts amendatory thereof, and laid down on the map aforesaid, which said lots numbered (30) thirty to (44) forty-four, both inclusive, taken together, are bounded and described as follows:

BEGINNING at the northerly corner of De Bevoise and Winthrop Avenues, running thence northwesterly along Winthrop Avenue, one hundred and ninety-seven feet eleven inches and five-eighths of an inch to land of E. J. Woolsey; thence easterly along land of said Woolsey three hundred and sixty-six feet one inch and five-eighths of an inch to a corner, thence southerly along land of said Woolsey, fifty-two feet nine inches and one-eighth of an inch to De Bevoise Avenue, and thence southwesterly along De Bevoise Avenue, three hundred and twenty-one feet one inch and three-eighths of an inch to the point or place of beginning. With one-half of the streets and avenues belonging to said estate of Peter Rapelje, deceased, in front of and adjoining said premises to the centre line of said 7112 streets and avenues, subject to the right of way over such part of said street and avenues in favor of the owners of any part of the lots laid down on said map.

These premises are conveyed without any right of way over or dedication of that part of De Bevoise Avenue which lies within Wolcott Avenue and the Old Bowery Bay Road.

This property being a part of the property conveyed to Edwin Bellman by Francis D. Kouwenhoven and Luke Kouwenhoven, sole acting Executors of the Last Will and Testament of Peter Rapelje late of Long Island City, Queens County, New York, by deed dated July 21st, 1874, and recorded in Queens County Clerk's office in Liber 442 of Deeds, page 354, on July 9, 1874.

Being the same premises described in a certain deed of conveyance to William V. Clark, one of the parties of the first part hereto by Marion M. Bellman, widow of Edwin Bellman, and John J. Bellman and others, children and devisees under the Last Will and Testament of Edwin Bellman, deceased, dated November 18, 1901.

It being intended by this instrument to convey unto the said party of the second part, its successors and assigns, all the right, title and interest of, in and to the said premises that was, or has been, conveyed to the said William V. Clark by such deed or Marion M. Bellman, the widow, and John J. Bellman and others, children and devisees under the Last Will and Testament of Edwin Bellman, deceased, and in and by a certain deed of conveyance made and executed to the said William V. Clark by Jean R. Phillips and others, children of the children of said Edwin Bellman, deceased, dated November 18, 1901.

7113 COMPLAINANT'S EXHIBIT 58.

"All those seventeen lots, pieces or parcels of land, situate, lying and being in the First Ward of the Borough of Queens, City of New York, formerly known as Long Island City, County of Queens and State of New York, and known and distinguished on a certain map entitled "Map of 190 lots of ground, situate in the Fifth Ward of Long Island City, Queens County, New York, belonging to Sarah J. De Bevoise" surveyed April 1874 by P. G. Van Alst, surveyor, filed in the Queens County Clerk's office May 17, 1893, as lot- numbers one to seventeen inclusive (1 to 17), said lots being all of the lots on said map lying Northeast of Winthrop Avenue as there laid down.

AND ALSO all that certain other piece or parcel of land situate, lying and being in the First Ward of the Borough of Queens, City of New York, formerly known as Long Island City, County of Queens and State of New York, and bounded and containing as follows, to wit:

BEGINNING at the corner formed by the intersection of the Northeasterly side of Winthrop Avenue as laid down on the map made and filed by the Commissioners for laying out streets, avenues, roads and parks in Long Island City, and the Northwesterly side of Rapelje Avenue as laid down on said map, and running thence Northwesterly along said Winthrop Avenue twenty-seven feet and eight inches more or less to land formerly belonging to Jacob Rapelje and subsequently to Peter Rapelje, and conveyed or intended to be conveyed by Sarah Jane De Bevoise to Henry W. Biffar and Ada E. Biffar, his wife, and Melchior P. Biffar by deed, bearing date the twenty-second day of May, 1893, thence Northwesterly along 7114 said last mentioned land and nearly parallel with Rapelje Avenue one hundred feet more or less to a ditch or creek separating the said last mentioned land from the said piece or parcel of land hereby described and herein granted and conveyed; thence still Northeasterly along the centre line of the said ditch or creek to the intersection of the same by a ditch or creek separating the said land formerly belonging to Jacob Rapelje and now of the said Henry W. Biffar, Ada E. Biffar, his wife, and Melchior P. Biffar, from land formerly of Samuel Berrian and recently of Edward J. Woolsey, deceased; thence Easterly along the centre line of the main ditch or creek separating the said last mentioned land from the piece or parcel of land hereby described and herein granted and conveyed, to a point on the Northwesterly side of Rapelje Avenue, distant three hundred and fifteen feet more or less Northeasterly from the said place of beginning, and thence Southwesterly along said Rapelje Avenue three hundred and fifteen feet, more or less to the point and place of beginning.

AND ALSO all that other piece or parcel of land situate, lying and being in the First Ward of the Borough of Queens, City of New York, formerly known as Long Island City, County of Queens and State of New York, and bounded and containing as follows, to wit:

BEGINNING at a point on the southeasterly side of Rapelje Avenue as laid down on the map made and filed by the Commissioners for laying out streets, avenues, roads and parks in Long Island City, distant one hundred and thirty-seven feet and six inches Northeasterly from the corner formed by the intersection of the Southeasterly side of Rapelje Avenue and the Northeasterly side of Winthrop Avenue, as laid down on said map, and running thence North- 7115 easterly along said Rapelje Avenue one hundred and sixty-seven feet and six inches, more or less, to the centre line of the main ditch or creek separating the piece or parcel of land hereby described and herein granted and conveyed from land formerly of Samuel Berrian, and recently of Edward J. Woolsey, deceased; thence southerly along the centre line of the said main ditch or creek to a line drawn parallel with and distant one hundred and seventy feet Southeasterly from the Southeasterly side of Rapelje Avenue; thence Southwesterly and parallel with said Rapelje Avenue about seventy-five feet to a line drawn parallel with and distant one hundred and thirty-seven feet and six inches Northeasterly from the Northeasterly side of said Winthrop Avenue, and thence Northwesterly and parallel with said Winthrop Avenue one hundred and seventy feet to the place of beginning.

ALSO the estate and interest of the said party of the first part in and to the land included within the limits of said Rapelje Avenue and said Winthrop Avenue in front of and adjoining the said pieces or parcels of land above described and hereby conveyed to the centre lines of said avenues respectively.

ANY reference hereinabove contained to Rapelje Avenue and Winthrop Avenue as the same are laid down on the map made and filed by the Commissioners for laying out streets, avenues, roads and parks in Long Island City, for the convenience of description only, and it is not intended thereby to dedicate to the use of the public an*d* land included in said Rapelje Avenue, nor any land included in said Winthrop Avenue.

BEING the same premises conveyed to the party of the first part by Frederic N. Gilbert, by a deed, dated April twenty-four, 1902, and recorded in the office of the Clerk of Queens County in Book 1278 of Conveyances, page 427."

7116

COMPLAINANT'S EXHIBIT 59.

"ALL those four certain plots, pieces or parcels of land, situate, lying and being in the County of Queens, City and State of New York, known and designated on a certain map entitled 'Map of property belonging to the Estate of Abraham Polhemus, deceased, in the Town of Newtown, Queens County, State of New York, December 3rd, 1844, surveyed by Gardiner A. Sage, City Surveyor,' and filed in the office of the Clerk of the County of Queens on the 29th day of April, 1845, as and by plots Nos. Five (5), Twelve (12) and Eleven (11) and more particularly described as follows (excepting only the grave yard situate in plot No. Five (5) as reserved in original Deed of 1781).

Plot No. 5: Beginning at a point on the southeasterly side of the Shore Road as laid down on said map adjoining the northeasterly side of Plot No. 4, as shown on said Map; running thence southeasterly along the northeasterly side of Lot No. 4, Eleven hundred and forty (1140) feet to Lot No. 7, as shown on said Map, property of the Astoria Light, Heat and Power Company; thence northeasterly along said Lot No. 7, Two hundred and eighty-seven (287) feet to Lot No. 6 on said Map, property of the Astoria Light, Heat and Power Company, thence northwesterly along said Lot No. 6, Twelve hundred and thirty-three (1233) feet to the southeasterly side of the Shore Road; and thence southwesterly along the said southeasterly side of said Shore Road as the same winds and turns to the point or place of beginning, containing Eight and thirty-three one hundredths (8.33) acres, be the said dimensions and acreage more or less.

Plot Nos. 12 and 11. Beginning at a point on the northeasterly side of a certain road laid down on the aforesaid Map and 7117 designated as "Road in Common, fifty (50) feet wide," distant Sixteen hundred and thirty-eight (1638) feet southeasterly from the corner formed by the intersection of the southeasterly side of said Shore Road and Plot No. 4, as laid down on said

Map; running thence northeasterly along Plot No. 7, property of the Astoria Light, Heat and Power Company, Six hundred and twenty-four (624) feet to other lands of the Astoria Light, Heat and Power Company; thence southeasterly along the said last mentioned land, Twelve hundred and twelve (1212) feet to lands belonging to Jacob Rapelje, as shown on said Map; thence southwesterly along said last mentioned land, Four hundred and seventy-nine (479) feet to the northeasterly side of said road designated as "Road in Common," as aforesaid, and thence northwesterly along the northeasterly side of said road. Twelve hundred and fifty-one (1251) feet to the point or place of beginning, containing Fifteen and fifty-seven one hundredths (15.57) acres, be the said dimensions and acreage more or less.

Also all that land and lands under water beginning at the westerly corner of Lot No. 5, and running northeasterly along the said Shore Road to the northerly corner of said Lot No. 5, running thence northwesterly along the northeasterly line of said Lot No. 5 extended, to the bulkhead and pier head line, thence southwesterly along the said bulkhead and pier line about Three hundred and fifteen (315) feet to a point in the East River where the said bulkhead and pier line is intersected by the southwesterly line of said Lot No. 5 extended, thence southeasterly along the said southwesterly line of said Lot No. 5 extended to the point or place of beginning, containing about Forty-eight thousand, five hundred and thirteen (48,513) square feet.

7118 Also all the right, title and interest of the party of the first part of, in and to the said Shore Road, and said "Road in Common," as laid down on said Map and also all right, title and interest of the party of the first part of, in and to the lands under water in front of and adjoining said Plot No. 5, so far as the rights of the party of the first part extend.

And also all the right, title and interest of the party of the first part of, in and to any and all Awards made for the opening of Walcott Avenue."

COMPLAINANT'S EXHIBIT 60.

ALL that certain piece or parcel of land under waters of the East River or Luyster Creek, in front of and adjacent to upland of the grantee herein, in the Borough of Queens, in the County of Queens, in The City of New York and State of New York, described as follows:

BEGINNING at a point in the Pier and Bulkhead Line established by the War Department, 1891, on the Westerly side of Luyster Creek, and in the easterly line of lands under water granted to The Astoria Light, Heat and Power Company, December 12th, 1899, which point is distant seven hundred and eighty feet northerly from the northerly line of Riker Avenue produced, measured on a line at right angles thereto, and distant six hundred feet westerly from the westerly line of Blackwell Street, measured on a line at right angles thereto; thence northerly and westerly along said Pier and Bulkhead Line as the same bends, and along the said granted lands two thousand five hundred and fifty feet to the lands under water adjacent to Lawrence Point granted to Edward J. Woolsey, October 6th, 1873, and now owned by the grantee herein; thence north twenty degrees east and along said granted lands six 7119 hundred and ten feet to the Pier and Bulkhead Line, established by the War Department in 1903, for the easterly shore of the East River at Lawrence Point; thence along said line of 1903, south sixty-seven degrees fifty-nine minutes east seven hundred and forty feet to its point of intersection with the lands under water adjacent to Berrian Island granted to Edward J. Woolsey, October 6th, 1873, now owned by the grantee herein; thence south twenty-one degrees thirty minutes west and along said granted lands three hundred and ten feet to the Pier and Bulkhead line of Berrian Island established 1891, which line is also the westerly boundary line of lands under water adjacent to Berrian Island granted to The Astoria Light, Heat and Power Company, December 12th, 1899; thence in a southerly direction and along said Pier and Bulkhead line of 1891, as the same bends and along said granted lands five hundred and ten feet to the lands under water granted to Edward J. Woolsey, aforesaid, now owned by the grantee herein; thence along the said granted lands the following course and distances; south twenty-one degrees thirty minutes west one hundred and sixty feet; south thirty-eight degrees thirty minutes east two hundred and fifteen feet; north forty-five degrees east one hundred and twenty-nine feet to the Pier and Bulkhead Line established by the War Department, 1891, for the northeasterly side of Berrian Creek, which line is also the southerly and westerly boundary of the lands under water adjacent to Berrian Island granted to The Astoria Light, Heat and Power Company, December 12th, 1899; thence southerly and easterly along said Pier and Bulkhead Line of 1891, as the same bends, and along said granted lands one thousand eight hundred feet to lands under water granted to Edward J. 7120 Woolsey, aforesaid, and now owned by the grantee herein; thence south nine degrees thirty minutes west and along said granted lands fifteen feet to the Pier and Bulkhead Line established 1903, thence north seventy-six degrees eleven minutes west and along said Pier and Bulkhead line of 1903, three hundred and fifty feet to the point or place of beginning, containing twenty-one acres and fifty-two hundredths of an acre. The bearings are magnetic.

COMPLAINANT'S EXHIBIT 61.

"All that certain tract, piece or parcel of land situate in the First Ward of the Borough of Queens of the City of New York, in the County of Queens and State of New York (formerly in the Fifth Ward of Long Island City, in the said County and State), and more particularly bounded and described as follows:

BEGINNING at the corner formed by the intersection of the northerly side of Wolcott Lane with the easterly side of the Shore

Road, as the said lane and road existed immediately previous to the making and filing of the map made and filed by the commissioners for laying out streets, avenues, roads and parks in Long Island City; running thence easterly along the said northerly side of Wolcott Lane one thousand and thirty-six (1,036) feet and nine and one-half (9½) inches; thence northerly and at an angle of ninety-one (91) degrees, twenty-seven (27) minutes and forty (40) seconds with the last course one hundred and twenty-seven (127) feet one and one-half (1½) inches to land formerly of Cornelia P. Trowbridge; thence northwesterly and along said land formerly of Cornelia P. Trowbridge; one thousand and forty-one (1,041) 7121 feet, four and one-half (4½) inches, more or less, to the said Easterly side of the Shore Road; and thence Southerly along the said Easterly side of the Shore Road Two hundred and three (203) feet and three (3) inches, more or less, to the point or place of beginning.

Excepting, however, from the premises above described so much thereof as has heretofore been acquired by The City of New York for the opening or widening of Wolcott Avenue.

Together with all the right, title and interest of the party of the first part of, in and to the land lying in said Wolcott Lane and the Shore Road in front of and adjacent to, said premises.

Also all the right, title and interest of the party of the first part, of, in and to the land under the waters of the East River in front of, and adjacent to said premises, granted by The People of the State of New York to Eliza B. Polhemus by Letters Patent bearing date July 22nd, 1873, and recorded in the office of the Clerk of the County of Queens on the 5th day of September, 1873, in Liber 419 of Conveyances, Page 288, and described in said Letters Patent as follows: the land under water and between high and low water mark, described as follows, to wit:

All that certain piece or parcel of land under the waters of the East River in front of and adjacent to the uplands belonging to said Eliza B. Polhemus, situate in Long Island City, County of Queens and which is bounded and described as follows, to wit:

BEGINNING at a point in the Southerly shore of the East River at common high water mark and in the boundary line dividing the lands owned by Cornelia P. Trowbridge from the lands of the said Eliza P. Polhemus, and running thence North thirty-four 7122 (34) degrees and forty-five (45) minutes West One hundred and ninety-four (194) feet to the permanent Bulkhead and Pier Line; thence along the said permanent Bulkhead and Pier Line South Seventy-nine (79) degrees and forty-five minutes West Two hundred and eighteen (218) feet, thence South thirty-nine (39) degrees and thirty (30) minutes East Two hundred and twenty-five (225) feet to common high water mark; thence along the said common high water mark North forty-nine (49) degrees and thirty (30) minutes East Two hundred (200) feet to the point or place of beginning. CONTAINING an area of Forty-three thousand nine hundred and ninety-five (43,995) square feet of land, being the same premises conveyed to the party of the first part by Gustave Goetze and others by Deed dated December 21st, 1904."

COMPLAINANT'S EXHIBIT 62.

Description of Property Conveyed by

FREDERIC N. GILBERT

TO

THE ASTORIA LIGHT, HEAT AND POWER COMPANY.

Dated March 24, 1903.

ALL that certain tract or parcel of land with the buildings thereon erected, situate, lying and being in Long Island City (formerly Newtown, and now Borough of Queens), in the County of Queens and State of New York, and bounded and containing as follows, viz.:

7123 BEGINNING at a point on the southerly side of the Shore Road at the division line between the hereby granted premises and the land of R. A. Robertson, and running thence along the land and premises of said R. A. Robertson, south thirty-five degrees, thirty-six minutes, east two hundred and two feet, seven and three-eighths inches; thence south thirty-four degrees, forty-five minutes, East eight hundred and seven feet three and five-eighths inches to the center line of the strip of land down on the map or survey of Long Island City, filed in the office of the Clerk of said County of Queens and in the office of the Secretary of State, made by the Commissioners of streets, wards, avenues and parks in said City, and thereon designated as Van Alst Avenue; thence along the center line of said strip so designated as Van Alst Avenue north forty-nine degrees, thirty-nine minutes, East six hundred and twelve feet two and three-eighths inches to the Old Bowery Bay Road; thence northwestwardly along the Bowery Bay Road as it winds and turns to its intersection with the Shore Road aforesaid; and thence southerly along the Shore Road to the place of beginning; containing nine acres and nine hundred and seventy-one thousandths acres, more or less.

Also all that certain other tract or parcel of land and land under water situate in the City aforesaid and opposite to the parcel of land herein firstly described:

BEGINNING at a point on the northerly side of the said Shore Road at the boundary line of the lands of R. A. Robertson and the land and premises hereby intended to be conveyed, and running thence along the Shore Road north forty-five degrees fifty-six minutes, east ninety-two feet one and three-quarter inches; thence north forty-two degrees and thirty-two minutes and thirteen seconds east two hundred and one feet four inches; and thence still along

7124 said Shore Road north fifty-four degrees fifty minutes, east one hundred and thirty-eight feet ten inches; thence running on a line at right angles to the Shore Road, or nearly so, north thirty-five degrees forty-five minutes and ten seconds, west to the permanent bulkhead and pier line as established by law; thence southerly along the said permanent bulkhead and pier line to a point opposite to the place of beginning; and thence south thirty-four degrees forty-five minutes, east to the point or place of beginning; and also the right, title and interest of the party of the first part in and to the Old Bowery Bay Road and the Old Shore Road lying in front of and adjoining the premises first herein described.

Being the same premises conveyed to the party of the first part, by William E. Strong and wife by a deed dated February 24, 1903, and recorded in the office of the Clerk of Queens County.

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

COMPLAINANT'S EXHIBIT 63.

(Blue Print.)

7125

COMPLAINANT'S EXHIBIT 64.

SECTION 889 OF THE GREATER NEW YORK CHARTER, IN REGARD TO ASSESSMENT OF REAL ESTATE FOR THE PURPOSE OF TAXATION.

DEPUTY TAX COMMISSIONERS; DUTIES OF IN ASSESSING TAXABLE PROPERTY.

SEC. 889. It shall be the duty of the deputy tax commissioners, under the direction of the board of taxes and assessments, to assess all the taxable property in the several districts that may be assigned to them for that purpose by said board, and they shall furnish to the said board, under oath, a detailed statement of all such property, showing that said deputies have personally examined each and every house, building lot, pier or other assessable property, giving the street, lot, ward, town and map number of such real estate embraced within said districts, together with the name of the owner or occupant, if known; also the sum for which, in their judgment, each separately assessed parcel of real estate under ordinary circumstances would sell if it were wholly unimproved; and separately stated, the sum for which, under ordinary circumstances, the same parcel of real estate would sell with the improvements, if any, thereon; with such other information in detail relative to personal property or otherwise, as the said board may, from time to time require. Such deputies shall commence to assess real and personal estate on the first Tuesday in September in each and every year.

(As amended by L. 1903, ch. 454.)

7126

COMPLAINANT'S EXHIBIT 65.

SECTION 892 OF THE GREATER NEW YORK CHARTER IN REGARD TO ASSESSMENT OF REAL ESTATE FOR THE PURPOSE OF TAXATION.

ANNUAL RECORD OF ASSESSED VALUATION; WHAT THEY CONTAIN AND WHEN TO BE OPEN FOR EXAMINATION AND CORRECTION.

SEC. 892. There shall be kept in the several offices established by the department of taxes and assessments books to be called "the annual record of the assessed valuation of real and personal estate of the borough of ——," in which shall be entered in detail the assessed valuation of such property within the limits of the several boroughs of the city of New York as established by this act. In such books the assessed value of real estate shall be set down in two columns; in the first column shall be given, opposite each separately assessed parcel of real estate, the sum for which such parcel under ordinary circumstances would sell if wholly unimproved; and in the second column shall be set down the sum for which the said parcel under ordinary circumstances would sell, with the improvements, if any, thereon. The said books shall be open for public inspection, examination and correction from the second Monday in January until the first day of April in each year; but on the said last mentioned day the same shall be closed to enable the board of taxes and assessments to prepare assessment rolls of the several boroughs for delivery to the board of aldermen. The said board previous to and during the time the said books are open as aforesaid for inspection shall adver- 7127 tise the fact in the City Record and in such other newspaper or newspapers published in the several boroughs created by this act as may be authorized by the board of city record.

(As amended by L. 1903, ch. 454.)

COMPLAINANT'S EXHIBIT 66.

July 17th, 1906.

Lease of Bulkheads between 20th and 21st and 21st and 22d Streets, East River, Borough of Manhattan: Dated July 19, 1901.

All that certain wharf property situated on the East River in the Borough of Manhattan, City of New York, known and described as follows:

"Bulkhead on the East River between the northerly side of East 20th Street and the southerly side of East 21st Street, and between the northerly side of East 21st Street and the southerly side of East 22d Street, together with the right to enter upon the said wharf property for the purposes of this lease and to collect the said wharfage."

Term of the lease is for ten years with privilege of two renewals of ten years each.

Lease to begin at time of completion by the City of the said bulkheads.

Occupancy was given to the Gas Company of the bulkhead between 20th and 21st Streets on October 1st, 1902:

Of the bulkhead between 21st and 22d Streets, December 1st, 1901.

Rental is 5 per cent. of the cost to the City of New York of the improvements at the said water front.

Amount of rental is $17,806 per annum, as per letter from Dock Department, April 16th, 1904, filed with lease.

7128 An increased rental of 5 per cent. is to be paid from the beginning of each renewal term.

The Gas Company is to keep in good repair at its own cost all of said bulkheads.

COMPLAINANT'S EXHIBIT 67.

July 17th, 1906.

Lease of northerly half of pier foot of East 21st Street, Borough of Manhattan:

Description of property: "All and singular the wharfage which may arise, accrue or become due for the use and occupation in the manner and at the rates prescribed by law of all that certain public wharf property, situated at the East River, in the Borough of Manhattan, City and County of New York, and known and described as follows, to wit:

"Northerly half of the pier foot of East 21st Street, together with the right to enter upon said wharf property for the purposes of this lease and to collect said wharfage."

Annual rental, $3,000.

Gas Company also agrees to maintain the pier in good repair and condition and do all necessary dredging.

Date of lease, November 1st, 1902.

Term: Five years.

7129 COMPLAINANT'S EXHIBIT 68.

DEPARTMENT OF DOCKS AND FERRIES

OF THE CITY OF NEW YORK,

PIER A, NORTH RIVER, NEW YORK

J. A. BENSEL, Commissioner.

B

Consolidated Gas Company, 4 Irving Place, Manhattan, Foot of East 15th Street, East River.

Privilege is hereby granted to use and occupy the bulkhead at the above location. Rent to be paid at the rate of $400 per annum, payable quarterly in advance to the Cashier of this Department. This renewal permit begins May 1st, 1906, will continue during the pleasure of the Commissioner, and will terminate by limitation of time on April 30, 1907.

J. A. BENSEL,
Commissioner.

Dated April 26, 1906.

Per J. W. SAVAGE, *Secretary.*

ATTENTION.

This notice must be kept on the premises described above for the inspection of the Dock Master.

7130 COMPLAINANT'S EXHIBIT 69.

DEPARTMENT OF DOCKS AND FERRIES

OF THE CITY OF NEW YORK,

PIER A, NORTH RIVER, NEW YORK

J. A. BENSEL, Commissioner.

B

Consolidated Gas Company, 4 Irving Place, Manhattan, Between 98th and 99th Streets, East River.

Privilege is hereby granted to use and occupy the bulkhead at the above location. Rent to be paid at rate of $900 per annum, payable quarterly in advance to the Cashier of this Department. This renewal permit begins May 1st, 1906, will continue during the pleasure of the Commissioner, and will terminate by limitation of time on April 30, 1907.

J. A. BENSEL,
Commissioner.

Dated April 26, 1906.

Per J. W. SAVAGE, *Secretary.*

ATTENTION.

This notice must be kept on the premises described above for the inspection of the Dock Master.

7131

STATE EXHIBIT A.

ASSESSED VALUES OF REAL ESTATE—1906.

Block.	Lot.	Land alone.	Land with improvements.
239	1	79,100	90,000
	5	28,000	38,000
688	21	225,000	225,000
689	17	285,000	335,000
690	12	250,000	320,000
	40	7,500	7,500
	62	7,500	7,500
	43	7,500	7,500
	44	7,500	7,500
	45	7,500	7,500
	48	7,500	8,000
	49	7,500	7,500
	50	7,500	7,500
	51	7,500	7,500
	52	7,500	7,500
	53	7,000	7,000
691	11	95,000	185,000
715	51	10,000	10,000
	59	80,000	100,000
716	14	32,000	36,000
870	54	9,500	12,000
	56	39,000	44,000
	59	95,000	135,000
	60	31,500	40,000
951	35	50,000	60,000
952	7	275,000	335,000
	29	10,000	10,000
	30	17,000	27,000
	33	6,500	8,000
	34	7,000	8,000
	35	25,000	45,000
953	1	500,000	785,000
972	45	20,000	21,000
978	1	9,000	15,000
	2	6,000	12,000
		2,266,600	2,978,500

STATE EXHIBIT A—Continued.

7132

Block.	Lot.	Land alone.	Land with improvements.
		2,266,600	2,978,500
978	3	6,000	12,000
	5	13,000	20,000
	6	335,000	500,000
979	1	351,500	542,000
982	13	275,000	475,000
985	7	155,000	200,000
	19	6,000	6,000
	20	6,000	6,000
	39	6,000	6,000
	40	6,000	6,000
987	37	55,000	55,000
	41	6,000	6,000
	42	6,000	6,000
	43	12,000	12,000
	51	7,000	7,000
988	1	350,000	550,000
989	1	155,000	275,000
	26	90,000	95,000
991	1	180,000	180,000
	26	115,000	115,000
	47	35,000	35,000
	50	35,000	35,000
1070	5	58,000	70,000
1071	10	9,500	9,500
	11	9,500	9,500
	12	9,500	9,500
	13	9,500	9,500
1089	1	525,000	800,000
1090	23	50,000	53,000
1092	1	300,000	550,000
	28	5,000	5,500
	38	3,500	5,000
	38½	3,500	5,000
	39	3,500	5,000
1093	1	250,000	425,000
1107	7	75,000	85,000
		5,783,600	8,164,000

STATE EXHIBIT A—Continued.

	Block.	Lot.	Land alone.	Land with improvements.
7133			5,783,600	8,164,000
	1107	23	75,000	75,000
		28	75,000	75,000
	1156	45	5,000	9,500
		46	16,000	18,000
	1157	1	500,000	1,000,000
	1177	21	140,000	150,000
	1455	13	156,000	156,000
	1457	6	125,000	225,000
	1474	24	15,000	15,000
	1642	32	16,000	43,000
		33	33,000	52,000
	1643	56	27,000	27,000
		57	13,500	13,500
		58	13,000	13,000
	1670	1	365,000	525,000
	1682	8	7,000	7,000
		11	275,000	500,000
	1683	18	55,000	55,000
		34	6,000	6,000
		35	6,000	6,000
	1692	1	130,000	135,000
	1704	1	285,000	330,000
	1712	2	30,000	35,000
	1999	1	265,000	350,000
	2175	15	14,000	14,000
		18	24,000	36,000
		22	25,000	25,000
		100	28,000	28,000
			8,508,100	12,088,000

7134

COMPLAINANT'S EXHIBIT 70.

SCHEDULES OF APPRAISEMENTS AND VALUATIONS OF THE CONSTITUENT COMPANIES FORMING THE BASIS OF THE CONSOLIDATION.

Manhattan	A.
New York	B.
Metropolitan	C.
Municipal and Knickerbocker	D.
Harlem	E.

A.

VALUATION OF THE WEST EIGHTEENTH STREET STATION OF THE MANHATTAN GAS-LIGHT COMPANY.

NEW YORK, *August* 25, 1884.

BLOCK NO. 1.

On Tenth and Eleventh Avenues, between W. 17th and W. 18th Streets contains: Coal Houses, Retort Houses, Condensing and Purifier Houses, Meter House, Shops, etc. detailed as follows:

1. Office and laboratory, 90 feet by 34 feet, two stories: Brick building with timber roof slated	$22,000	
Office and drawing-room furniture, upstairs	2,000	
Office and drawing-room furniture, downstairs	3,500	
Photometer room, laboratory apparatus, etc.	4,200	
Experimental gas-works apparatus	4,000	
		$35,700
Carried Forward		$35,700

7135

Brought Forward	$35,700
2. Coal houses, 146 feet x 184 feet 10 in., in four sections, brick buildings on pile and concrete foundations, heavy timbered roof, with series of cast-iron supporting columns, and covered with slate	74,896
3. Gangway shed, brick building, on piles, arched sides, iron columns, wooden roof, slated gutters, etc.	9,223
4. Tar well, four tar wells	4,222
5 and 6. Boiler house and chimney 45	

	feet by 15 feet. Brick building, wooden roof tinned, including chimney, forty feet high	$2,314	
	Including boiler and engine etc.	4,000	
	Including coal apparatus	4,326	
			10,640
7.	Retort house, 402 feet x 115½ feet in two sections, brick building on piles, iron roof in two spans, supported in center on one row of columns—girders, etc., Louvre blinds, gutters, etc., of iron		159,936
8.	Coal bunkers and railings, elevated coal bunkers, both inside and outside, including rails and cars	$52,295	
	Carried Forward		$294,617
7136			
	Brought Forward		$294,617
	Stoker railway, transferable and turntable	3,441	
			55,736
9.	Four hydraulic elevators with pumping apparatus, pipes, valves, foundations, etc.		15,500
10.	Benches, foundations for 200 benches	$41,252	
	Bench masonry and iron work for ninety-eight benches of sixes, at $1,850	181,300	
	Bench masonry and iron work for thirty-six benches of fives, at $1,700.	61,200	
			283,752
11.	Stoking apparatus, five charging machines at $6,000	$30,000	
	Five raking machines at $7,000	35,000	
			65,000
12.	Retort house connections, take-off valves and tar connections with gas mains, supports, etc.		8,070
13.	Retort house tools, tools for benches		6,000
14.	Condenser House, 43 feet 10 inches x 59 feet 9 inches, brick building, iron roof, slated		11,132
15.	Condensers, two multitubular condensers each containing 480 four-inch tubes		30,000
16.	Zig zag scrubber, including trays, etc.		7,640
	Carried Forward		$777,447

7137	*Brought Forward*	$777,447
17.	Connections in condenser house, twenty-four-inch valves, thirty-inch valves, pipes for gas, tar and water	6,645
18.	Foundations for two condensers and one scrubber of brick with stone trimming	2,370
19.	Tower scrubbers, complete with trays, stair tower, water and steam connections	37,840
20.	Foundations on piles with brick and granite finish	7,239
21.	Tower scrubber connections, gas connections, valves, etc.	1,418
22.	This item included in detail No. 5.	
23.	Purifier and meter house, 184 x 88, two wings, extensions for lime and meters, iron roof slated	59,589
24.	Purifying apparatus, twelve purifiers complete with trays, three center seals and connections; elevated railway, and galleries with two carriages and rails	67,592
25.	Included in detail No. 24.	
26.	Deodorizing apparatus, consisting of washer, steam jet, etc., apparatus underground iron and cement pipe, three culverts, etc., lime barrows	14,098
27.	Two station meters, wih connections, valves and all complete without foundations, which latter are included in the estimate of building	22,706
	Carried Forward	$996,944
7138	*Brought Forward*	$996,944
28.	Tin shop, tools, stock and fixtures	950
29.	Store-room and rigging loft, tools, stock and fixtures	7,500
29*a*.	Hose carriage room, tools, stock and fixtures	2,700
30.	Boiler and engine-house, 47 feet 6 x 47 feet 6, of brick, with roof consisting of cast iron water tank for roof and chimney stairs	18,330
31.	Contents of boiler and engine-house, one boiler set in brick work, one horizontal engine, two feed pumps and fittings, one Worthen pump, one compensator, two rotary exhausters, recording and pressure gauges, and all mains, small pipes, etc.	10,630
32.	Machine shop over engine room, all machine tools, shafting, pulleys and belts, small tools, work benches, etc.	3,045
33.	Work-shop buildings, all mason and carpenter work complete, wooden roof covered with slate	13,659
34.	Machine shop contents in work-shop building, tools, stock and fixtures	4,990
35.	Carpenter shop contents, tools, stock and fixtures	3,995
36.	Blacksmith shop contents, tools, stock and fixtures	1,080
37.	Pipe shop contents, tools, stock and fixtures	4,915
	Carried Forward	**$1,068,738**

7139	*Brought Forward*	$1,068,738
38.	Fitting shop contents, tools, stock and fixtures	2,150
39.	Tool House contents, bars, shovels, etc.	500
40.	Street Department material, tools, stock and fixtures	1,600
41.	Office store room contents, tools, stock and fixtures.	600
42.	Paint shop contents, tools, stock and fixtures	975
43.	Tile house contents, tools, stock and fixtures	150
44.	Coke yard wall of brick	3,431
		$1,078,144

BLOCK NO. 2.

West 18th Street, above 10th Avenue, two inclosed gas holders, also well.

1.	Gas holder building, 188 x 92, brick, with heavy stone trimmings, extra heavy roof and internal posts, framing, etc.	$45,251
2.	Two gas holders, Nos. 1 and 2, guide rails on the frame, counter weights, etc.	34,186
3.	Two tanks, with inlet pipe, guide plates, well and cover	41,800
4.	This item is included in detail 3.	
5.	Street department shed, brick building and frame addition	1,900
6.	Well	15,000
		$138,137

7140

BLOCK NO. 3.

On 10th and 11th Avenues, between West 16th and West 17th Streets, contains four gas holders and two coal storage yards, etc.

1.	Four gas holders, Nos. 5, 6, 7, 8	$100,000
2.	Four tanks for above holders, including inlet pipe and well	120,800
3.	Valve house, brick, with connections	2,200
4.	Tank yard, wall brick, with gates, etc	10,950
5.	Coal yard No. 1, with brick engine and boiler house, and coal distributing machinery	32,032
6.	Coal yard No. 2, with brick engine and boiler-house and coal-distributing machinery	36,782
7.	Pump-shed and contents, building of wood, including two pumps, etc	1,500
		$304,264

BLOCK NO. 4.

On 10th and 11th Avenues, between West 18th and West 19th Streets; contains two gas-holders, coal yards, etc.

1.	Two gas-holders, Nos. 3 and 4	$52,000
2.	Two tanks, for above holders, including inlet-pipe and well	60,800
3.	Valve-house, of brick with connections	1,800
3*a*.	Fence around pipe-yard, wooden fence	230
4.	Boiler-house, of brick, with chimney, including machinery	3,930
	Carried Forward	$118,760

7141

	Brought Forward	$118,760
5.	Tank-yard wall, of brick, with retaining-wall, grading, etc.	6,300
6.	Coal yard No. 4, timber fence, etc., and flooring	7,855
		$132,915

BLOCK NO. 5.

On 11th Avenue, between West 19th and 20th Streets; contains two gas-holders and storage yard.

1.	Two gas-holders, Nos. 9 and 10	$52,000
2.	Two tanks, for above holders, including inlet pipe and well	60,800
3.	Boiler-house and yard sheds, buildings of wood, including boiler and fixtures	1,184
4.	Coal yard No. 5, on 11th Avenue, fence and floor	5,539
5.	Tank-yard fence, of wood, ten feet high	411
		$119,934

BLOCK NO. 6.

Corner 11th Avenue and West 18th Street.

1.	Coal yard No. 3, with boiler-house of brick	$2,060

BLOCK NO. 7.

1.	Weigh-office, 14 feet by 30 feet, of brick, with scales	$2,000
2.	Deodorizing block, 11th Avenue, brick and wood buildings with apparatus	6,226
		$8,226

7142 BLOCK NO. 8.

1.	Stable 22 feet by 72 feet, brick buildings, with stalls, etc.	$4,100
2.	Wagon-house, 20 feet by 22 feet, brick building	1,250
3.	Wagon-house 27 x 28, brick building—two stories	3,500
4.	Truck shed, frame building	360
5.	Horses and carts	8,814
6.	Stable yard, wall of brick, 8 and 10 feet high	1,342
		$19,366

MISCELLANEOUS.

1.	Mains about works, includes water-meters, fire hydrants, valves, culverts, cement sewer-pipe, etc.	$53,475
2.	Pipe in yard, forty-two tons, pipe on hand	1,680
3.	Specials, seventy-five tons on hand	4,500
4.	Paving materials, Belgian block on hand	800
5.	Yard pavement, flagging in rear of office, Belgian pavement and grading about works	11,441
6.	Ladders	500
7.	Tin cans	50
8.	Gauges of various kinds on hand	650
9.	This item included in detail No. 1, block No. 1.	
10.	Meters about the works	320
11.	Sundry instruments, surveying instruments, etc.	500
12.	Sewers, grading, etc., including sundry small piping and valves	10,000
13.	Street paving, consisting of sidewalks, curbs, gutters, bridge stones and iron cover plates	21,818
14.	Iron fencing on property line	7,575
		$113,309

7143 RECAPITULATION.

Block No. 1	$1,078,144
Block No. 2	138,137
Block No. 3	304,264
Block No. 4	132,915
Block No. 5	119,934
Block No. 6	2,060
Block No. 7	8,226
Block No. 8	19,366
Miscellaneous	113,309
	$1,916,355

The foregoing appraisal, that is to say, one million, nine hundred and sixteen thousand, three hundred and fifty-five dollars ($1,916,355), setting forth the present value of the buildings, gas producing and gas storage plant, coal storage, fixtures, tools, implements and betterments of every description (excepting the river bulkhead), comprising the property of the "Manhattan Gas-Light Company," known as the 18th Street Station, has been carefully revised and corrected by me, and I believe the said sum to be the just and true *present value* thereof.

(Signed) THOMAS F. ROWLAND.

August 25, 1884.
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7144 VALUATION OF THE EAST FOURTEENTH STREET STATION OF THE MANHATTAN GAS-LIGHT COMPANY.

NEW YORK, *August* 26, 1884.

BLOCK No. 1.

Bounded by E. 14th and 15th Streets and Avenues C and D, contains: Coal-houses, retort-house, workshops, condenser-house, scrubbers and office, etc.

1.	Office, 22 feet by 31 feet, two stories:		
	Brick building on piles, with wood roof covered with tin	$7,500	
	Furniture	1,400	
	Photometer apparatus	1,000	
			$9,900
2.	Pay and store building, 26 feet by 46 feet, two stories:		
	Brick building on piles, with wood roof covered with slate, including all flagging, paving and flooring	$5,740	
	Paint shop, tools, etc., including water meter	758	
	Tin shops, tools, etc	367	
			$6,865
3.	Coal-houses, 186 feet by 206 feet, in five sections, brick building on piles, heavy wood roof covered with slate and supported on columns, with distributing and weighing apparatus		96,520
	Carried Forward		$113,285

7145	*Brought Forward*			$113,285
4.	Gangway shed, 63½ feet by 132 feet, brick building on piles, arched walls, iron columns, wood roof slated			11,498
5.	Coal shed, boiler-house, 13 feet by 42 feet:			
	Brick building on piles, with chimney, wood roof covered with tin		$2,200	
	Boiler, engine, pump and fixtures		3,900	
				$6,100
6.	Retort-house, main building, 186 feet by 245-½ feet, with wings, 7-½ and 13-½ by 245-½, Brick Building on piles with iron roof in three spans, slated and supported on columns and girders, Louvre blinds, etc., including flagging and paving		$136,418	
	Foundations for 180 benches		37,081	
	Bench masonry and iron work for 120 benches, $1,850		222,000	
	Tools for benches		6,124	
	All gas-mains, valves, tar and water connections		13,800	
	Brick, wood and corrugated iron building, including all turn-tables and tracks		9,256	
	Carried Forward		$424,679	$130,883
7146				
	Brought Forward		$424,679	$130,883
	Condenser proper	$20,700		
	Foundation	2,120		
			22,820	
	Five Ross raking machines		35,000	
				$482,499
7.	This item included in Detail No. 6.			
8.	Condenser-house, 36 feet by 55 feet, two stories and cellar, brick building on piles, with machinery, foundations, galleries, flagging and iron roof covered with slate			11,228
9.	Two multitubular condensers:			
	648 tubes, 4 inches diameter		$21,000	
	Valves and connections		3,356	
				$24,356
10.	Tower, scrubbers:			
	Complete with trays, stair tower, water and steam connections		$37,840	
	Foundation, with brick and granite finish on piles		7,239	
	Gas connections, valves, etc		1,418	
				$46,497

11.	Belgian pavement and flagging:		
	Pavement	$5,897	
	Flagging	1,149	$7,046
12.	Engine and boiler-house, 32 by 43 feet:		
	Brick building, two stories high, with cellar, cast-iron water tank for roof, with chimney, stairs, flagging, etc.	$14,425	
	Carried Forward	$14,425	$702,509
7147			
	Brought Forward	$14,425	$702,509
	Boiler and setting, engine and foundations, two pumps and fixtures, two exhausters, shafting and pulleys, coal bunkers, gauges and small fixtures	9,7775	$24,200
13.	Avenue "C," workshops, 26 by 60, two stories, cellar, machine shop, pipe shop, wagon shop, grinding-room, blower-room, wing:		
	Brick building on piles, wood roof covered with slate, with wings	$7,787	
	Tools, stock and fixtures	3,645	
	Tools, stock and fixtures	1,004	
	Tools, stock and fixtures	2,155	
	Tools, stock and fixtures	1,050	
	Tools, stock and fixtures	2,570	
	Compensator	850	
	New exhauster and engine complete, with valves, set up in working order	4,350	
	Line shaft	550	$23,961
14.	Carpenter and blacksmith shop, 36 feet by 51 feet, two stories, carpenter and smith shops:		
	Brick buildings with wood roof covered with slate	$5,000	
	Tools, stock and fixtures	1,055	
	Tools, stock and fixtures	1,785	$7,840
15.	Fences, brick and iron fences on this block		6,371
			$764,881

7148

BLOCK NO. 2.

Bounded by East 14th and 15th Streets and Avenues B and C, contain-: Purifier, Meter and Lime House and six Gas Holders with Valve and Boiler Houses.

16.	Purifying house 62 x 120 feet, with two wings, 42 and one-fourth by 62 feet, and one wing, 36 by 41 feet, brick building on piles, iron roof covered with slate		$60,501
17.	Purifying apparatus:		
	Eight purifiers complete with trays supported on iron beams and columns, five center seals and connections, iron floor, elevated track, galleries and carriages	$56,734	
	One elevator, eight lime barrows and elevated tracks, in foul lime house	2,350	
			$59,084
18.	Meters, two meters, valves and connections without foundations, which latter are included in the building		$22,706
19.	Gas holder tanks, six tanks, Nos. 1, 2, 3, 4, 5 and 6, including guide-plates and inlets		198,000
20.	Walls, grading, etc., tank yard walls, retaining walls, grading, paving, steps, etc		19,034
21.	Gas holders, six gas holders and frames		198,000
	Carried Forward		$557,325

7149

	Brought Forward		557,325
22.	Valve house, 12 x 20 feet, house and contents		2,200
23.	Fencing, this item included in detail No. 20.		
24.	Boiler house:		
	Brick building with chimney on piles, wood roof covered with tin	$2,500	
	Boiler and fixtures	2,000	
			$4,500
			$564,025

BLOCK NO. 3.

Bounded by East 14th and 15th Streets and Avenue D and Tompkins Street, contains Coal Yard No. 1.

25.	Engine and boiler house, 11 feet x 25 feet, brick building on piles, wood roof covered with tin, including boiler, engine and fixtures............	$3,875
26.	Coal Yard No. 1, yard inclosed and coal distributing machinery	27,532
	Total	$31,407

BLOCK NO. 4.

Bounded by East 15th and 16th Streets, and Avenues C and D, contains, Coal Yard No. 2, stable, tar and ammonia wells, rigging, loft, kiln and storage yard.

27.	Engine and boiler house 16-½ feet x 19 feet, brick building on piles, wood roof covered with tin, including boiler, engine and fixtures............	$4,075
	Carried Forward.........................	$4,075

7150

	Brought Forward.........................	$4,075
28.	Coal yard No. 2, yard inclosure and coal distributing machinery	28,444
29.	Tar and ammonia wells, all wells for tar and ammonia on this block.......................	7,100
30.	Stables, two stories, 19 feet x 85-¼ feet, brick building on piles, wood roof covered with tin, including board fence.........................	6,413
31.	Stable contents, horses, trucks, carts, harness, hay, tools, etc................................	3,760
32.	Kiln, shed and storage shed, 40 feet x 150 feet, wooden building with gravel roof including kiln and tools, paving, etc......................	3,552
33.	Rigging loft, tools, stock and fixtures............	7,070
		$60,414

BLOCK NO. 5.

Bounded by East 15th and 16th Streets, and Avenue D and Tompkins Street, contains, Engine and Boiler House, Coal Yard No. 3, Weigh Office and Deodorizing Apparatus.

34.	Engine and boiler house, 18-1/3 feet, x 20 feet, brick building on piles, wood roof covered with tin, including boiler, engine and fixtures	$3,575
35.	Coal Yard No. 3, yard inclosure, including coal distributing machinery	20,952
	Carried Forward	$24,527

7151

	Brought Forward	$24,527
36.	Weigh office, 16½ feet x 26½ feet, brick building on piles, wood roof covered with gravel, including chimney	2,000
37.	Deodorizing houses, one—20 feet 8 inches by 46 feet 7 inches, one—20 feet 8 inches by 36 feet 7 inches, with chimney between, brick buildings on piles, wood roof covered with gravel, including chimney	5,837
38.	Deodorizing apparatus, cement pipe (steam jet, pipe and valves in purifying house cellar), boxes, trays, etc	14,714
		$47,078

BLOCK NO. 6.

Bounded by East 14th and 15th Streets and Avenues A and B; contains Boiler-house and well.

39.	Well, well complete		$15,000
	Boiler-house, 13 feet, 9 inches by 28 feet, brick building, wood roof, including chimney, gangway	1,800	
	Shed and well-house	1,000	
	Boiler and fixtures and two Worthington pumps, tools, etc	2,030	
			$4,830
			$19,830

7152

BLOCK NO. 7.

Bounded by East 17th and 18th Streets and Avenues B and C, contains gas-holder tanks, gas-holders and boiler-house.

40.	Gas-holder tanks, two tanks, including guide-plates and well	$60,800
41.	Gas-holders, two gas-holders and frames	52,000
42.	Boiler house, wooden building with upright boiler, pump and fixtures, valve pits, valves, sundry valves, and fence	3,564
		$116,364

MISCELLANEOUS.

43.	Mains about works, including 20-inch main to holders, Nos. 7 and 8, and all valves outside the buildings	$42,213
44.	Hydrants, sewers and culverts	16,165
45.	Small steam, water and gas-pipes, valves, etc., about the works	10,000
46.	Fifty tons of pipe	2,000
	Fifty tons of specials	3,000
47.	Twenty-two patent iron coal tubs	800
48.	Nine hundred malleable retort mouth-lids	2,700
49.	Small gas-meters about works	175
50.	Spare purifier trays (new stock)	3,000
51.	Street flagging, consisting of sidewalks, curbs, gutters, bridge stones and iron cover plates	22,242
		$102,295

7153

RECAPITULATION.

Block No. 1.	$764,881
Block No. 2.	564,025
Block No. 3.	31,407
Block No. 4.	60,414
Block No. 5.	47,078
Block No. 6.	19,830
Block No. 7.	116,364
Miscellaneous	102,295
	$1,706,294

The foregoing appraisal, amounting to the total sum of one million seven hundred and six thousand two hundred and ninety-four dollars ($1,706,294), setting forth the present value of the buildings, gas-producing and gas storage plant, coal storage, tools, fixtures, implements and betterments of every description (excepting the river bulkhead, which is not included in this estimate), comprising the property of the Manhattan Gas-Light Company, known as the Fourteenth Street Station, has been carefully revised and corrected by me, and I hereby certify the said sum to be the just and true present value thereof to the best of my knowledge and belief.

(Signed) THOMAS F. ROWLAND.

August 26, 1884.

VALUATION OF MAINS, METERS, SERVICES AND REAL ESTATE.

MAINS.

16,063 feet, 2 inch, at 55 cts	$8,834.65
416,972 feet, 3 inch, at 70 cts	291,880.40
170,831 feet, 4 inch, at 80 cts	136,664.80
201,664 feet, 6 inch, at $1.20	241,996.80
8,649 feet, 8 inch, at 1.75	15,135.75
16,050 feet, 10 inch, at 2.00	32,100.00
34,221 feet, 12 inch, at 2.50	85,552.50
Carried Forward	$812,164.90
7154 *Brought Forward*	$812,164.90
21,586 feet, 16 inch, at 3.75	80,947.50
18,171 feet, 18 inch, at 4.50	81,769.50
21,644 feet, 20 inch, at 5.00	108,220.00
925,851	$1,083,101.90

METERS.

21,360, 3 light, at $6.50	$138,840.00
6,516, 5 light, at 8.25	53,757.00
4,192, 10 light, at 10.50	44,016.00
1,306, 20 light, at 14.50	18,937.00
396, 30 light, at 19.50	7,722.00
269, 45 light, at 29.00	7,801.00
192, 60 light, at 39.50	7,584.00
168, 100 light, at 65.00	10,920.00
46, 150 light, at 100.00	4,600.00
26, 200 light, at 140.00	3,640.00
12, 250 light, at 200.00	2,400.00
18, 300 light, at 250.00	4,500.00
1, 500 light	450.00
1 station	750.00
	$305,917.00
Total of meters 34,503.	
Add 20 per cent. for connecting etc.	61,183.00
	$367,100.00

Services.

369,	½ inch, at	$10	$3,690.00
1,692,	¾ inch, at	10	16,920.00
27,169,	1 inch, at	10	271,690.00
2,276,	1 ¼ inch, at	11	25,036.00
819,	1 ½ inch, at	15	12,285.00
529,	2 inch, at	20	10,580.00
85,	2 ½ inch, at	32	2,720.00
150,	3 inch, at	42	6,300.00
9,	4 inch, at	62	558.00
			$349,779.00

Total of services, 33,098.

7155

Real Estate (14th St. E. R.)

1835-8, 4 lots, Tompkins St., 26 x 109.11 ½ at $8,000	$32,000	
1831-4, 4 lots, 26 x 118.8 ½ $8,000	32,000	
2 Corners, $2,000	4,000	
		$68,000
1806-14, 9 lots, Avenue D, E. S., 22.11-4/ x 88, at $8,000	$72,000	
2 corners, at $2,000	4,000	
		76,000
1797-1805, 9 lots, Avenue D, 22.11-4/9 x 88, at $7,000	$63,000	
2 corners, at $2,000	4,000	
		67,000
1839-44, 6 lots, 14th St., N. S., 25 x 103, at $10,000		60,000
3102-5, 4 lots, 15th St., S. S., 25 x 103 at $7,000		28,000
1779-96, 18 lots, Avenue D, W. S., 22.11 x 88, at $7,500	$135,000	
4 corners, at $2,000	8,000	
		143,000
1845-64, 20 lots 14th St., N. S., 25 x 103, $10,000		200,000
3082-3101, 20 lots, 15th St., S. S., 25 x 103, at $7,000		140,000
3108-3127, 20 lots, 15th St., N. S., 25 x 103, at $7,000		140,000
Carried Forward		$990,000

7156

Brought Forward		$990,000
3408-27, 20 lots, 16th St., S. S., 25x103, at $6,000		$120,000
1681-98, 18 lots, Avenue C, E. S., 22.11-4/9x 88, at $7,500	$135,000	
4 corners, at $2,000	8,000	
		143,000

1672-80, 9 lots, Avenue C, W. S., 22.11-4/9x 88, at $7,500	$67,500	
2 corners, at $2,000	4,000	
		71,500
1865-77, 13 lots, 14th St., N. S., 25x103, $10,000		130,000
1878, 1 lot, 14th St., N. S., 21.10x103		9,000
3068, 1 lot, 15th St., S. S., 21x103		6,000
3069-81, 13 lots, 15th St., S. S., 25x103, $7,000		91,000
3048½-3053, lots, 15th St., S. S., average 25x103 at $5,000 well property, small fronts		12,000
3074-87, 14 lots, 17th St., N. S., well property, small front 25x92 at $6,000		84,000
4079-92, 14 lots, 18th S. S., 25x92 at $6,000		84,000
228 City lots.		
Total value station, 14th Street, East river		$1,740,500

REAL ESTATE, 18TH STREET, N. R.

2058-66, 9 lots, S. S., 18th St., 25x92, at $7,500		$67,500
2262-64, 3 lots N. S., 18th St., 25x92, at $7,500		22,500
Carried Forward		$90,000

7157

Brought Forward		$90,000
1769-46, 24 lots, N. S., 16th St., 25x92, at $7,500		180,000
1770-93, 24 lots, S. S. 17th St., 25x92, at $7,500		180,000
2007-30, 24 lots, N. S. 17th St., 25x92, at $7,500		180,000
2031-54, 24 lots, S. S., 18th St., 25x92, at $7,500		180,000
2274-90, 17 lots, N. S., 18th St., 25x92, at $7,500		127,500
2305-10, 2313-16, 2318, 2321, 12 lots, S. S., 19th St., 25x92, at $7,500		90,000
2577-87, 11 lots, N. S., 19th St., 25x93, at $7,500		82,500
2593-2603, 11 lots, S. S., 20th St., 25x92, at $7,500		82,500
313-20, 8 lots, W. S., 10th Ave., 23x100, at $9,500	$76,000	
2 corners, at $2,000	4,000	
		80,000
304-12, 9 lots W. S., 10th Ave., 20, 5-1/3x100, at $8,500	$76,500	
2 corners, at $2,000	4,000	
		80,500
296-303, 8 lots, W. S., 10th Ave., 23x100, at $9,500	$76,000	
2 corners, at $2,000	4,000	
		80,000
161-168, 8 lots, E. S., 11th Ave., 23x100, at $9,500	$76,000	
2 corners, at $2,000	4,000	
		80,000
Carried Forward		$1,513,000

7158 *Brought Forward*		$1,513,000
169-176, 8 lots, E. S., 11th Ave., 23x100, at $9,500	$76,000	
2 corners, at $2,000	4,000	80,000
185-192, 8 lots, E. S., 11th Ave., 23x100, at $9,500	$76,000	
2 corners, at $2,000	4,000	80,000
1, 8 lots, W. S., 11th Ave., E. S., 13th Ave. (Block) 16th and 17th Sts	$50,000	
9, 8 lots W. S., 11th Ave., E. S. 13th Ave. (Block) 17th and 18th Sts	100,000	$150,000
224 City lots		1,823,000
Office and dwelling, Irving Place and 15th St., lots 59x92, 50x84		175,000

SUMMARY MANHATTAN GAS-LIGHT COMPANY.

RECAPITULATION OF VALUES.

SEPT. 5, 1884.

Mains		$1,083,000
Meters		367,000
Services		350,000

BUILDING AND APPARATUS "PLANT" T. F. ROWLAND'S VALUATION.

14th St. Station, East River	$1,706,294	
18th St. Station, North river	1,916,355	3,623,000
Carried Forward		$5,423,000
7159 *Brought Forward*		$5,423,000

REAL ESTATE.

14th St. Station, East river	1,740,500	
18th St. Station, North river	1,823,000	3,563,000
Office buildings, including dwelling and lot		175,000
Laboratory		5,000
Bulkheads and water rights		425,000
Office furniture and fixtures		20,000
Franchises		2,329,000
		$11,940,000

B.

VALUATION OF THE BUILDINGS, GAS PRODUCING, GAS STORAGE, COAL STORAGE, OIL STORAGE, TOOLS, FIXTURES, IMPLEMENTS AND BETTERMENTS OF EVERY DESCRIPTION, CONSTITUTING THE PLANT OF THE NEW YORK GAS-LIGHT COMPANY, LOCATED BETWEEN FIRST AVENUE, 20TH STREET, EAST RIVER, AND 22D STREET.

By Thos. F. Rowland, Continental Works, Brooklyn, September 1, 1884.

Block No. 1.

Bounded by avenue A, 21st street, East river, and 22d street.

1. 7160	Office building, 46 feet 2x29 feet 8, three stories, brick building, Philadelphia, fronts, and finish, blue stone trim, containing quarters for engineer, assistant paymaster, etc., drafting room, stationary closets, laboratory, gas testing room, photometer room, etc., all newly fitted in the best manner	$25,000	
	Fittings and furniture of office laboratory, library, photometer rooms, etc.	4,500	
			$29,500
2.	Engineer's store room, 26 feet 6x52 feet, two story, contents of engineers' store room (Brick room adjoining office), one spare horizontal engine complete, 5x12, two Copeland and Bacon hoisting engines, 8x8, one Root rotary hoisting engine, eight 3-inch shaft hangers, spare shafting and pulleys for small blower, eight Cameron pumps, 3 No. 2, 1 No. 3, 1 No. 4, 1 No. 9, 2 No. 8, one Worthington steam pump, 7x10, one Woods' pipe cutter, 30-inch, 1 Woods' pipe cutter, 20-inch, two gas governor tanks and float-1, 12-inch; 1, 16-inch, two spare Westinghouse engine fly-wheels, 34-inch, one pair extra sheaves for same, three governor rods, weights and		
	Carried Forward........................		$29,500

7161	*Brought Forward*...........................		$29,500
	safety valves, oil cabinet, tanks, cans, measures, waste bin, closets, work bench risers, tools, etc........	5,725	
	Second story of engineer's room, contents, boiler tube brushes, steam and vacuum gauges, governor valves, oil cans, gauge glasses, inspirator gauge cock, engine brasses, pyrometer, Babbit metal pump piston, oil cups, boiler water column and steam gauge, whistle, lamp wick, antifriction metal, Judson engine governor hemp, rubber and packing, etc., foreman's room, desk, bookcases, closets, etc................	1,000	
			$6,725
3.	Main building, 198 feet x 513 feet, with stone front on avenue A, and brick walls on 21st and 22d streets, also iron lattice work, and brick filling at rear, covered with wrought-iron framed roof, slated, supported on wrought-iron columns and girders, size 198 feet x 513 feet, less parallelogram at south-west corner, 29 feet 8 x 46 feet 2, occupied by office building; contained within said building are engineer's store-room, engine, blower and exhauster rooms, blacksmith shop,		
	Carried Forward...........................		$36,225
7162	*Brought Forward*...........................		$36,225
	pipe and carpenter shops, carburetter room, coal-gas benches, water-gas benches, gasogenes, boilers, etc..................................		257,801
4.	Machinery departments, 50 feet x 160 feet, two stories, of brick with gravel roof, consisting of rooms for stores, machinery and work-shops, including foundations for machinery...........		$24,774
5.	Carburetter room, 33 feet x 36 feet, composed of brick walls, doors, carburetter, foundations and slatted floor		3,789
6.	Coal-gas plant: Consisting of 100 benches in all their detail, each bench 7 feet 6 inches wide, containing six retorts per bench. The value of these benches, if in working order, would be twenty-two hundred and fifty dollars each ($2,250), but the retorts are useless while the ovens are in good working condition, therefore the sum		

	of four hundred and fifty dollars ($450) per bench must be deducted from the above price for said renewal, then 100 benches at $2,250 less $450 each, $1,800 each........	$180,000	
	Carried Forward...............	$180,000	$322,589
7163			
	Brought Forward..............	$180,000	$322,589
	Foundations for the above benches....	25,000	
	Twenty take-offs 24 inches in diameter with valves (four to each stack), also 24 inch and 30 inch delivery pipe leading the length of and across the retort house to the exhauster room, together with the tar drains to tar wells	27,895	
	Tools for working partially worn out..	2,500	
			$235,395
	Capacity of this plant 3,000,000 per day.		
7.	Water-gas plant, consisting of fourteen gasogenes with galleries upon which are situated seven water boxes (one box common to each pair gasogenes), lifting cranes, take-off pipes, purge valves, chimney hoods, etc., fitted complete.....		84,000
8.	Gasogene foundations, sixteen gasogene foundations		3,792
9.	Blower fixtures, blast pipes, relief valves and fixtures, commencing at the blowers and terminating at gasogenes and boilers...............		4,442
9*a*.	Hydrogen connections, consisting of 30-inch wrought and cast iron pipes, specials, valves, drips, etc., commencing at the hydrogen holder and terminating (after passing hydraulic main) at 21st street wall of building................		26,000
	Carried Forward........................		$676,218
7164			
	Brought Forward		$676,218
10.	Boilers, eight horizontal tubular boilers set in two batteries, each boiler independent of others, having its own smoke stack, feeding and delivery appliances, including an underground brick water tank located between the batteries........		24,700
11.	Engines, blowers, etc., two Continental works beam engine 15 x 24 with steam connections, two blowers with blast domes and valves to main blast pipe, shaftings, hangers, pulleys, belts, gallery ladders, tools, self-oiler and sundry fixtures.....		15,818

12.	Exhausting apparatus, three Westinghouse engines, 8 x 8, with steam piping, valves, 3 Huntoon governors and fixtures complete, two Smith & Sayre rotary exhausters with compensators, 24-inch valves and connections to main, counter-shafting, friction pulleys, with gallery and stairs for same, also belts, tools, gauges, etc		16,416
13.	Elevated railroad about the gasogenes with surface turntables, tracks, etc., to coal house and boiler, switch and scale and pumps, etc.		22,930
14.	Carburetters, four carburetters with valves, connections, etc., complete		18,450
	Carried Forward		$774,532
7165			
	Brought Forward		$774,532
15.	Naphtha benches:		
	Sixteen through benches complete, containing 6 retorts, each equivalent to 32 ordinary coal benches with the attachments of valves, etc., for controlling the naptha additional thereto, at $2,000 per bench	$64,000	
	Foundations for the above benches	6,400	
			$70,400
16.	Naphtha storage:		
	Twelve wrought iron storage naphtha tanks, 40 feet long, 8 feet in diameter, 15,000 gallons' capacity each, and two distributing naphtha tanks with the necessary pipes for distribution	$32,008	
	Pump house, two-story brick building with slate roof, 19 feet x 23 feet	1,769	
	Two large Cameron steam pumps for naphtha, one small Cameron steam pump for well-water, two small Worthington pumps for naphtha, tools, etc., with large pipes and valves, etc., to docks and tanks	6,100	
			$39,877
	Carried Forward		$884,809
7166			
	Brought Forward		$884,809
17.	Water tower, tank, etc.:		
	Circular brick building, 20 feet diameter, 25 feet high, with water closets and connections	$2,640	
	One wrought iron tank on building 20 feet high for well water with float and gauge and necessary piping	3,300	
			$5,940

18.	Tar wells, six circular brick tanks, underground, roofed and paved over with the necessary pipes and connections, etc., for collecting tar and other residuals		$10,789
19.	Coal house No. 1, 69 feet x 153 feet:		
	Brick building with pile and concrete foundations, slate roof, capacity 5,000 tons of coal	$27,253	
	Two Hunt's automatic railroads with two Copeland & Bacon's engines, boiler, coal tubs, cars, two Fairbanks scales	7,477	
			$34,730
20.	Blacksmith shop, 18 feet x 49 feet, one story, contains one No. 3 shears, one double forge, one steamgrindstone, one steam hammer, one steam drill press, one screw cutting machine, lathe, anvils, tools, etc., etc.		$1,825
	Carried Forward		$938,093
7167			
	Brought Forward		$938,093
21.	Pipe shop, 26 feet x 49 feet, contains shop tools consisting of one Copeland and Bacon engine 8 x 8, one 2-inch Chase pipe cutter, one Cameron steam pump for pumping drips, one 6-inch Sandercon's pipe cutter, one iron sink, shafting, hangers, pulleys, etc., 14 spare hand drip pumps, desks, closets, ladders, hand trucks, work benches, tools, stock, etc.		4,300
	The cost of special pumping machinery for the elevators is included in the railroad system.		
22.	Carpenter shops on second floor, contents, one large and one small saw table, complete, and boring machine, one sticking machine, complete, one mortising machine, complete, three work benches, tools, etc., countershafting pulleys, hangers, belting, iron sink, desk, clothes closets, steam heater, stove and stock		1,060
23.	Small piping, steam, water and gas lighting of various sizes from 3-8 to 6 inches		11,143
24.	Sundry fittings, furniture, etc., two closets, two pipe cutters 12-in. and 16-in., two 4-inch water meters, gas fixtures, water closets, one 8-inch valve, one cart and horse, wood partition in retort house, two ladders, two lamp posts, seven		
	Carried Forward		$954,596

7168	*Brought Forward*	$954,596
	water troughs (cast iron) and fixtures, three iron stairways, bench tools, tools for ice boxes, scales	3,820
25.	Gasogene tools, tools for gasogenes and twelve coal cars	3,600
26.	Fuel main, fuel main at water benches	1,504
27.	Fences, brick fence at rear of block and wood fence around tar and naphtha tank	4,050
28.	Sewers, main sewers on block No. 1	4,694
29.	Paving, paving in rear of retort house	2,440
	Total, block No. 1	$974,704

BLOCK No. 2.

Bounded partially by Avenue A and other property on Avenue A, 20th Street, East River and 21st Street.

1.	Meter-house, 45 feet, 6 inches x 71 feet, 5 inches:		
	Brick building, with composite roof and wood floors, also meter foundations		$10,950
	One station meter with wrought-iron case and cast-iron pedestals, with gauges, index, etc., complete capacity, 4,000,000 per day		18,250
	Carried Forward		$29,200
7169			
	Brought Forward		$29,200
1*a*.	Appliances for measuring the gas, etc.:		
	Two station meters, with cast-iron cases and pedestals, with gauges, indices, etc., individual capacity, 1,500,000 per day		12,282
	Wrought and cast-iron pipes, specials, valves and connections, contained within meter-house	$5,217	
	One large Bray burner, with ornamental lantern erected complete	350	
			5,567
			$47,049
2.	Purifying-house, 66 feet x 184 feet:		
	(House No. 10), brick building on concrete foundations, composite roof, lime room, and foundations for iron work	$33,265	

2*a*. Purifying appliances:		
Eight purifiers, with covers, tray bars and trays, two carriages and rails, two dry center-seal valves with pipes, beams and columns for boxes and all connections, valves and tar pipe....	63,314	
Three lime wagons, fifty lime boxes, four foul lime barrows, gauges and tools for handling lime............	767	97,346
Carried Forward		$144,395
7170		
Brought Forward.........................		$144,395
3. (House No. 9), 66 feet x 184 feet for lime (both fresh and foul): Brick walls on 20th and 21st streets, with wood roof, supported on walls of purifier and condenser-house, a runway for lime with gallery and tar well		18,313
4. Condenser and scrubber-house, 66 feet x 184 feet:		
(House No. 8), brick structure, covered with slated composite roof, the portion containing scrubbers being raised above the main building, the transverse wall thereof being supported on wrought-iron girders and columns; also including the brick foundations for the apparatus and the galleries surrounding it........	$43,517	
Four condensers	43,500	
Two edge condensers...............	6,000	
Two scrubbers with stairs...........	21,250	
Valves, pipes, drips, over-flows, gauges, thermometers, etc................	16,050	130,317
5. Storage warehouse, 66 feet x 184 feet: (House No. 7), brick building, with gravel roof, tracks and turn-tables for handling coal, also plank floor with storage bulkhead.............		24,435
Carried Forward.........................		$317,460
7171		
Brought Forward.......................		$317,460
6. Storage warehouse, 66 feet x 184 feet:		
(House No. 6), same as No. 7, *i. e.* (with gravel roof, tracks and turn-tables for handling coal), elevator tower, boiler and pump room, also plank floor	27,335	

	One pipe truck, one hoisting winch, one circular saw table, one platform scale, forty test weights, one hydraulic jack, screw jacks, three derricks, and tools for masons and riggers	4,700	
6*a*.	Hydraulic machinery: One upright boiler, one hydraulic pumping engine, one accumulator, one iron water tank with piping, valves, etc., complete	7,450	
			39,485
7.	Storage warehouse, 66 feet x 184 feet: (House No. 5), generally like No. 7..	$23,135	
	Six buggy wagons for gas coal, one experimental carburetter, iron railing coping, manhole covers, doors, sashes, etc.	1,625	
			24,760
8.	Storage warehouse, 66 feet x 184 feet: (House No. 4), generally, like No. 7, with the addition of an elevator tower	$26,135	
	Carried Forward	$26,135	$381,705
7172	*Brought Forward*	$26,135	$381,705
	Contents: One experimental scrubber, one experimental condenser, four experimental purifiers with covers, three iron steam expansion joint boxes	750	
			26,885
9.	Storage warehouse, 66 feet x 184 feet: (House No. 3), generally, same as No. 7, excepting floor, which is asphalt paved	$24,771	
	Contents: Three iron buggy wagons, twelve roof coal cars, four coal tubs	2,375	
			27,146
10.	Storage warehouse, 66 feet x 184 feet: (House No. 2), generally, same as No. 7, excepting floor, which is asphalt paved and has three lines of car tracks thereon		25,443
11.	Inclosure east of storage warehouses, wooden fences inclosing the property east of storage warehouses, bounded by 20th street, East river, and 21st street, also two dumps, two small brick buildings and one wooden stable		1,934
	Carried Forward		$463,113

7173	*Brought Forward*	$463,113
12.	Water, steam and gas lighting pipes, fixtures, etc., about the building, water-pipes, running from hydraulic towers all along the storage buildings, also steam and gas lighting pipes	1,850
	Total block No. 2	$464,963

BLOCK No. 3.

Bounded by First avenue, Twenty-first street, Avenue A and Twenty-second street.

1.	Purifying-house, 50 feet 6 x 211 feet 6, one-story brick building with iron and slate roof, S. E. corner of Twenty-second street and First avenue, has been used for a purifying-house, now vacant, building considered of no value, only value is in foundation and excavation		$5,000
2.	Condenser-house, 50 feet x 66 feet, one story brick building with iron and slate roof, on First avenue, south of above purifying-house, has been used for condensers and washers, not now in use. Scrubber-house, 50 feet 8 x 21 feet, tall brick building with mansard roof (slate and gravel), on First avenue south of condenser, has been used for scrubbers, not now in use		12,825
3.	Purifying-house, 49 feet x 100 feet and drying-house, 49 feet 110 feet 6: One-story brick building with gravel roof, corner Twenty-first street and First avenue	$17,200	
	Carried Forward	$17,200	$17,825
7174	*Brought Forward*	$17,200	$17,825
	Drying-room, a continuation of the purifying house	12,900	
	Set of old purifiers, beams, columns, etc.	4,500	
			34,600
4.	Boiler-house, 40 feet x 58 feet: One-story brick building with slate roof, 178 feet east of First avenue	$6,000	
	Contains (2) two locomotive boilers (80 H. P. each) set in brick work and fitted with feeding and delivery appliances complete	9,000	
			15,000

5.	Holders, Nos. 3, 4, 5 and 6:		
	Four triple sectional telescopic gas holders, arranged to work separately or together, capacity of each holder 400,000 cubic feet	$220,000	
	Four tanks for above holders 90 feet 8 diameter arranged with 24-inch inlet and 24-inch outlet pipes going into the 30-inch to governor house, tanks reinforced with iron bands	140,000	
			360,000
6.	Valve-house, 24 feet x 24 feet:		
	Brick building with slate roof	$2,000	
	Contains (4) four inlet and (4) outlet valves for holders	3,500	
			5,500
	Carried Forward		$432,925

7175

	Brought Forward		$432,925
7.	Governor-house, 26 feet x 23 feet 6:		
	One-story brick building with slate roof	$4,000	
	Contains inlet and outlet valves, wall holders, valves to street mains, etc., with the necessary gauges, pressure registers, etc., holders 3 and 6 can be worked as one holder from this house	8,000	
			12,000
8.	Street main valve-house, 10 feet x 15 feet 6:		
	Low brick building with tin roof	$400	
	Contains the four transit main valves, and is the point from which the street mains commence	1,800	
			2,200
9.	Drafting and experimental house, 17 x 28 feet:		
	Two-story brick building with gravel roof, used for experimental purposes	$3,500	
	Contains experimental bench, condenser, scrubber, purifiers, meter, etc.	2,800	
	At the rear of the building is an experimental gas holder 1,500 cubic feet capacity and iron tank both inclosed in galvanized iron building	4,500	
			10,800
	Carried Forward		$457,925

7176	*Brought Forward*		$457,925
10.	Holder No. 1, single lift hydrogen holder, capacity 80,000 cubic feet, acts as governor for carburetters and benches of water gas plant	$15,000	
	Tank for same fitted with 24-inch inlet and outlet pipes	30,000	
			45,000
11.	Holder No. 2, double-sectioned telescopic gas-holder 190,000 cubic feet capacity	$25,000	
	Tank for same with 24-inch inlet and outlet fixtures so arranged that the gas-holder may be used for either hydrogen or illuminating gas	30,500	
			55,500
12.	Cast and wrought-iron gas mains: Cast and wrought-iron gas mains, crosses, tees, specials and general connections (within this block) between holder to valve house and to street mains		21,625
13.	Governor: Holder, governor and fixtures		1,000
14.	Ammonia wells, etc., Ammonia wells, sewers, manholes, etc.		3,275
15.	Walls: Brick walls surrounding this block with gates, etc.	$21,845	
	Carried Forward	$21,845	$584,325
7177			
	Brought Forward	$21,845	$584,325
	Walls, storerooms, etc., walls in the north-east and south-east corners of the block; adjoining the walls are store-houses, one in each corner used for paint shop, storage, etc.	1,300	
			23,145
16.	Steam piping, etc.: Steam pipes, cocks, valves, small water pipes, water meter, etc.		2,650
17.	Fixtures for lighting: Small gas pipes, fittings, lighting fixtures, Siemen's burner on top of governor-house, gas meter for above		1,000
18.	Grading and paving:		
	Grading around the tanks	$5,000	
	Inside paving and flagging	4,176	
			9,176
	Total, Block No. 3		$620,296

BLOCK NO. 4.

Bounded by 20th street, lots on 1st avenue, 21st street, lots on Avenue A.

1. Holder No. 7:		
Two-lift telescopic holder, 18-inch cup and 6-inch dams, capacity 1,500,000	$140,000	
Tank with valve house and well......	196,500	
		$336,500
Carried Forward.........................		$336,500

7178

Brought Forward.........................		$336,500
2. Holder No. 8:		
Two-lift telescopic holder, 18-inch cup and 6-inch dams, capacity 1,500,000	$140,000	
Tank with valve house and well......	196,500	
		336,500
3. Boiler-house, 27 feet x 40 feet:		
Contains one locomotive boiler (25 horse-power) complete, with extra length of smokestack.............	$1,050	
Boiler	950	
		2,000
4. Hose for holders, tools, etc...........		1,180
5. Stables:		
Across the eastern end of the plot of ground extending from 20th to 21st streets are the stables, wagon house, etc.	$6,030	
Contents, 13 horses, 1 coupe rockaway, 2 top wagons, 1 box wagon, 1 4-wheel truck, 1 lumber wagon, 1 sprinkling cart, 1 spring cart, 2 drip carts, 2 Concord wagons (express), 6 coal carts (no springs), 1 coal cart (springs), 3 coke carts (springs), 6 brick carts, harness, blankets, sheets, etc., tools, carts, etc., used by street department	8,550	
		14,580
Carried Forward.......................		$690,760

7179	*Brought Forward*	$690,760
6.	Walls, brick walls on 20th and 21st streets, inclosing the holders, Nos. 7 and 8, including gates and retaining walls, concrete paving, etc.	16,930
7.	Cesspools, etc., cesspools, sewers, water piping and steam piping and under-ground work	1,969
8.	Mains, valves, specials, etc., constituting the conveying pipes for connecting the various portions of the works, service pipes underground leading from gas holders to street and in First avenue, 21st street to valve house, located on south side of block No. 3, also in 22d street and Avenue A, including all the main gas pipes of all sizes located outside of the works proper	60,783
	Total block No. 4	$770,442

MISCELLANEOUS.

1.	Pipe in yard, sixty tons pipe on hand	$2,400
2.	Specials, sixty-five tons on hand	3,900
3.	Wells, eight Andrews driven wells with pump and piping to water tower	3,600
4.	Sidewalks, etc., sidewalks, curbing, gutter, iron bridges, etc., for all the blocks	27,219
5.	Sewers, sewer in 21st street built and owned by the Company	5,800
	Carried Forward	$42,919
7180	*Brought Forward*	$42,919
6.	Water and gas services, small water-service pipe, connections, etc., also test gas pipe leading from fixing lights at benches to the station meters all located in 21st street	1,600
	Total Miscellaneous	$44,519

RECAPITULATION.

Block No. 1	$974,702
Block No. 2	464,963
Block No. 3	620,296
Block No. 4	770,442
Miscellaneous	44,519
	$2,874,922

The foregoing estimate of values, the original of which was produced by my assistants during my absence from the country, has been carefully revised and corrected by me, I having personally examined the details thereof and eliminated therefrom all errors which I have discovered therein. I therefore hereby declare that the sum of two million eight hundred and seventy-four thousand nine hundred and twenty-two dollars ($2,874,922), being the sum of the revised appraisal, is the just and true *present value* thereof to the best of my knowledge and belief.

(Signed) THOMAS F. ROWLAND.

September 1, 1884.

7181 SUMMARY NEW YORK GAS-LIGHT COMPANY, NEW YORK.

SEPTEMBER 10, 1884.

(A.)	Real estate	$1,607,000	
	Bulk-head pier and water rights	250,000	
	Office building	100,000	
	Office furniture	15,000	
	Laboratory, etc.	5,000	
			$1,977,000
(B.)	Plant		2,874,000
(C.)	Street mains and valves	$950,000	
	Meters	215,000	
	Services	127,000	
			1,292,000
	Total valuation		$6,143,000

(Signed) NEW YORK GAS LIGHT COMPANY,
THOS. K. LEES, *President.*

A.

REAL ESTATE INVENTORY OF THE NEW YORK GAS-LIGHT COMPANY.

BLOCK NO. 1.

Avenue A and E. R., 21st and 22d streets.

Ave. A, 1462 and 1469, 2 corners, at $10,000 each	$20,000	
1463-1468, 6 lots at $8,000 each	48,000	
22d St., 5565-5583, 19 lots at $7,000 each	133,000	
Carried Forward	$201,000	

7182

Brought Forward	$201,000	
21st St., 5282-5300, 19 lots at $7,000 each	133,000	
Ave. B, 1493, 1 corner at $10,000	10,000	
Ave. B, 1492-1486, 7 lots, at $8,000	56,000	
		$400,000

BLOCK NO. 2.

Ave. A and Ave. B, 20th and 21st streets, also Ave. B. to E. R.

Ave. A, 1461 1 corner	$10,000	
Ave. A, 1460 and 1458, 2 lots at $7,000 each	14,000	
Ave. B, 1494 and 1501, 2 corners, at $10,000 each	20,000	
Ave. B, 1495-1500, 6 lots, at $8,000 each	48,000	
21st St., B and 5202-5221, 21 lots at $6,000 each	126,000	
20th St., 4938-4957½, 21 lots, at $6,000 each	126,000	
Ave. B, 1599-1606, 2 corners, at $9,000 each	18,000	
1600-1605, 6 lots, at $7,000 each	42,000	
3935-3937, 3 lots, at $6,500 each	19,500	
4932-4934, 5222-5224, 6 gores and 2 full lots, at $6,500 each	13,000	
		$436,500
Carried Forward		$836,500

7183

BLOCK NO. 3.

Brought Forward	$836,500

1st Ave. and Ave. A, 21st and 22d streets.

1st Ave., 1272 and 1265, 2 corners, at $10,000 each	$20,000	
1266-1271, 6 lots, at $8,000 each	48,000	
Ave. A, 1338 and 1345, 2 corners, at $10,000 each	20,000	
1339-1344, 6 lots, at $8,000 each	48,000	
21st St., 5301-5317, 17 lots, at $7,000 each	119,000	
22d St., 5548-5564, 17 lots, at $7,000 each	119,000	
		$374,000

BLOCK NO. 4.

1st Ave. and Ave. A, 20th and 21st streets.

Ave. A, 1346 and 1354, two corners, at $9,000 each	$18,000	
1347-1350, four lots at $8,000 each	32,000	
21st St., 5183-5201, and A, 19 lots, at $7,000 each	133,000	
20th St., 4458-4479, 22 lots at $6,000 each	132,000	
		$315,000
Carried Forward		$1,525,500

7184

BLOCK NO. 5.

Brought Forward		$1,525,500

South side of 20th street, between 1st Ave. and Ave. A.

20th St., 4829-4836, 8 lots, at $6,000 each		$48,000

ADD FOR OMISSIONS.

The stable building and improvements on south side of 20th St., Block 5	$15,000	
Five dwelling houses on Ave. A, west side, 20th and 21st sts., at $3,500 each, Block 4	17,500	
And improvements, i. e., new party wall, corner 20th St., and Ave. A, on lot 1354	1,000	
		$33,500
Bulkhead, pier and water rights		$250,000

Hester Street and Elizabeth Street.

Six lots, 100x150 feet, with office building and workshops, etc.	$100,000	
Office furniture and fixtures, safes, tools in workshop in basement, etc.	15,000	
Laboratory, etc.	5,000	
		$120,000
		$1,977,000

7185

NEW YORK GAS LIGHT COMPANY.

Inventory of Street Mains and Valves.

19,290 feet, 24 inch, at $6.50	$125,385.00	
28,472 feet, 20 inch, at $5.00	142,360.00	
9,429 feet, 18 inch, at $4.50	42,430.50	
10,758 feet, 16 inch, at $3.75	40,342.50	
45,903 feet, 12 inch, at $2.50	114,757.50	
5,234 feet, 10 inch, at $2.00	10,468.00	
55,172 feet, 8 inch, at $1.75	96,551.00	
157,817 feet, 6 inch, at $1.20	189,380.40	
7,719 feet, 5 inch, at $1.00	7,719.00	
105,147 feet, 4 inch, at .80	84,117.60	
126,555 feet, 3 inch, at .70	88,588.50	
6,779 feet, 2 inch, at .55	3,728.45	
308 feet, 1½ inch, at .50	154.00	
Total value of street mains		$945,982.45

Valves on Transit Mains.

Two, 8 inch, at $125	$250.00	
Two, 16 inch, at $251	502.00	
Two, 18 inch, at $288	576.00	
Six, 20 inch, at $308	1,848.00	
Two, 24 inch, at $399	798.00	
Total value valves		$3,974.00
Total valuation of street mains and valves		$949,956.45

7186

Inventory of Meters.

9,645,	3 light meters, at $7.80	$75,231.00
5,810,	5 light meters, at $9.90	57,519.00
2,115,	10 light meters, at $12.60	26,649.00
969,	20 light meters, at $17.40	16,860.60
300,	30 light meters, at $23.40	7,020.00
222,	45 light meters, at $34.80	7,725.60
6,	50 light meters, at 47.40	284.40
107,	60 light meters, at $47.40	5,071.80
16,	80 light meters, at $64.80	1,036.80
83,	100 light meters, at $78.00	6,474.00
20,	150 light meters, at $120.00	2,400.00
27,	200 light meters, at $168.00	4,536.00
13,	300 light meters, at $300.00	3,900.00
19,333		
	Total value meter	$214,708.20

Inventory of Services.

116,	½,	at $10	$1,160
1,708,	¾,	at 10	17,080
5,921,	1,	at 10	59,210
1,571,	1-¼,	at 11	17,281
1,057,	1-½,	at 15	15,855
570,	2,	at 20	11,400
127,	3,	at 42	5,334
4,	4,	at 62	248
11,074			$127,568

7187

C.

VALUATION OF THE METROPOLITAN GAS-LIGHT COMPANY, AUGUST 5, 1884.

The diagram or plan of the lots designated in this Schedule is appended to the original, of which this is a copy.

5 lots situated at the northeast corner of Avenue "A" and 60th Street, partly under water	$22,000	
8 lots fronting Avenue "A," on the west side, between E. 60th and 61st streets, at $7,000	56,000	
Add for corners	4,000	
8½ lots fronting on the north side of 60th street, between 1st Avenue and Avenue "A," commencing 100 feet west of Avenue "A," at $4,500	38,250	
8½ lots fronting on the south side of 61st street, between 1st Avenue and Avenue "A" commencing 100 feet west of Avenue "A," at $4,500	38,250	$158,500
8 lots fronting Avenue "A" on the west side, between East 62d and 63d streets, at 8,000	64,000	
Add for corners	4,000	
Carried Forward	$68,000	$158,500

7188

Brought Forward	$68,000	$158,500
13¼ lots fronting on the south side of 63d street and commencing 100 feet west of Avenue "A" at $6,000	79,500	
15¼ lots fronting on the north side of 62d street and commencing 100 feet west of Avenue "A" at $5,000	76,250	223,750
8 lots fronting 41st street on the north side, between 10th and 11th avenues, commencing 100 feet east of 11th avenue, at $6,000	48,000	
8 lots fronting 10th avenue on the west side from northwest corner of 65th street to southwest corner of 66th street at $7,000	56,000	
Add for corner lots	4,000	
8 lots fronting 11th avenue on the east side, commencing at the northeast corner of 65th street and extending to the southeast corner of 66th street, at $5,000	40,000	
Add for corner lots	4,000	

24 lots fronting north side of 65th street, commencing 100 feet west of 10th avenue, at $4,500	108,000	
24 lots fronting south side of 66th street, commencing 100 feet west of 10th avenue, at $4,500	108,000	368,000
Carried Forward		$750,250
7189 *Brought Forward*		$750,250
6 inside lots fronting west side of 11th avenue, between 41st and 42nd streets	$54,000	
1 lot northwest corner of 11th avenue and 41st street	10,000	
1 lot southwest corner of 11th avenue and 42d street	15,000	
28 lots fronting north side of 41st street, between 11th and 12th avenues, commencing about 100 feet west of 11th avenue, at $6,000	168,000	
28 lots fronting south side of 42d street, between 11th and 12th avenues, commencing about 100 feet west of 11th avenue, at $9,000	252,000	499,000
6 lots fronting on the north side of 42nd street, between 11th and 12th avenues, commencing 100 feet west of 42d street, at $10,000		60,000
8 lots fronting on the west side of 11th avenue, between 65th and 66th streets, at $5,000	40,000	
Add for corners	4,000	
17-75/100 lots, having a frontage of 199 feet 9 inches on the north side of 65th street, and 234 feet 9 inches on the south side of 66th street, between 11th avenue and the H. R. R. R. cut, commencing 100 feet west of 11th ave., at $4,000	71,000	115,000
Carried Forward		$1,424,250
7190 *Brought Forward*		$1,424,250
57 lots, bounded by the west side of 12th avenue, the center line of 41st street, the west side of the former 13th avenue and the center line of 42d street, with water rights and grants as to wharfage, cranage, etc.		300,000
16-76/100 acres of land (7-48/100 acres under water) situated on the west shore of the Hudson river at Shady Side, Bergen county, N. J.		50,000
		$1,774,250

Meters.

17,594,	3 lights, at	$6.50 plus 20 per cent.,	7.80	$137,233.20
5,136,	5 lights, at	8.25 plus 20 per cent.,	9.90	50,846.40
3,158,	10 lights, at	10.50 plus 20 per cent.,	12.60	39,790.80
838,	20 lights, at	14.50 plus 20 per cent.,	17.40	14,581.20
215,	30 lights, at	19.50 plus 20 per cent.,	23.40	5,031.00
127,	45 lights, at	29.00 plus 20 per cent.,	34.80	4,419.60
105,	60 lights, at	39.50 plus 20 per cent.,	47.40	4,977.00
17,	80 lights, at	54.00 plus 20 per cent.,	64.80	1,101.60
89,	100 lights, at	65.00 plus 20 per cent.,	78.00	6,942.00
16,	150 lights, at	100.00 plus 20 per cent.,	120.00	1,920.00
21,	200 lights, at	140.00 plus 20 per cent.,	168.00	3,528.00
	Carried Forward...........................			$270,370.80

7191

27,316	*Brought Forward*........................			$270,370.80
2,	250 lights, at	200.00 plus 20 per cent.,	240.00	480.00
8,	300 lights, at	250.00 plus 20 per cent.,	300.00	2,400.00
27,326				$273,250.80

Services.

1,	½ inch, at	$10........................	$10
268,	¾ inch, at	10........................	2,680
14,950,	1 inch, at	10........................	149,500
4,355,	1¼ inch, at	11........................	47,905
866,	1½ inch, at	15........................	12,990
469,	2 inch, at	20........................	9,380
20,	2½ inch, at	32........................	640
169,	3 inch, at	42........................	7,098
19,	4 inch, at	62........................	1,178
10,	6 inch, at	140........................	1,400
21,127			$232,781

Street Mains.

8,590,	2 inch, at	$0.55........................	$4,724.50
135,659,	3 inch, at	0.70........................	94,961.30
245,915,	4 inch, at	0.80........................	196,732.00
186,564,	6 inch, at	1.20........................	223,876.80
81,356,	8 inch, at	1.75........................	142,373.00
25,162,	10 inch, at	2.00........................	50,324.00
21,022,	12 inch, at	2.50........................	52,555.00
2,093,	18 inch, at	4.50........................	9,418.50
37,510,	20 inch, at	5.00........................	187,550.00
1,170,	24 inch, at	6.50........................	7,605.00
50,	30 inch, at	10.25........................	512.50
745,091			$970,632.60

7192 *Avenue A and 1st Avenue, 60th and 61st Streets.*

Frame dwelling house, situate standing detached about 30 feet south side of 61st street, commencing about 100 feet west of Avenue A	$5,000	
Frame dwelling-house, situate standing detached about 35 feet on the north side of 60th street, commencing about 100 feet west of Avenue A....................	6,000	
Stable building, two-story frame filled with brick, shingle roof, situate on 60th and 61st streets, about 290 feet west of Avenue A............................	1,500	
		$12,500

Avenue A and 1st Avenue, 62d and 63d Streets.

Two gas-holder tanks of 94 feet diameter and 26 feet net depth, built of brick with concrete bottoms, at $40,000............	$80,000	
Two telescopic gas-holders, 92 feet 6 inches diameter of outer section, 91 feet diameter of inner section, 26 feet height of each lift. Holders have cast iron columns, 24-inch inlet and 20 inch outlet pipe, capacity each 325,000 feet....................	56,000	
Valve house built between the two holders, brick cellar, frame upper part, slate roof, house is octagon, 17 feet long, 15 feet wide	2,000	
Carried Forward............................		$138,000

7193

Brought Forward............................		$138,000
It contains three 30-inch branches, two 30-inch valves, with hand wheels, two 24-inch valves, two 20-inch valves..............	$1,500	
It contains further on furniture, 1 desk, chairs, clock, steam heater, gas fixtures...	150	
Engine room building on 63d street, 32 feet x 56 feet, frame with basement 10 feet high, built of masonry, slate roof.......	6,000	
Basement contains workshop with pipe and parallel vise, stock and dies, pipe tongs, hammer, chisels, drip-pump, 6 snow shovels, saw and ladder..................	100	
Under engine room, foundation for steam engine and exhauster included in cost of building six 24-inch tees, four 24-inch bends, five 24-inch valves, one 24-inch self-acting valve, 48 feet of 24-inch heavy flange pipe	3,000	

In boiler room, one cylindrical tubular boiler 4 feet in diameter and twelve feet in length, with thirty-three 3-inch tubes; boiler is built into brick work with cast iron front, including gauges and valves..	2,000	
One No. 3 Woodward pump for feeding boiler, including connections...........	250	
One reel with 100 feet of ¾-inch hydrant hose any clay-pipe....................	25	
		13,025
Carried Forward............................		$151,025

7194

Brought Forward............................		$151,025
Iron stairway and platform leading to engine room on main floor of building, engine room containing one twenty-horse power horizontal steam engine, cylinder 10 inches diameter by 18 inches stroke......	$1,400	
One Mackenzie's patent exhauster of 150,000 feet per hour capacity for 24-inch connections	5,000	
One Mercury compensator for same........	600	
Fifteen feet of 3-inch counter-shaft with two pulleys	200	
One friction pulley, 62 feet of 10-inch belting	275	
One each of King's pressure and vacuum gauges and connections...............	125	
One arch pressure gauge................	25	
One valve stand with hand wheel.........	60	
Two steam heaters, gas fixtures, chairs.....	100	
Office in front part containing 1 desk, 1 washstand, chairs, bench, steam heater...	125	
One set photometer.....................	115	
One self-registering pressure gauge........	175	
In and under yard, 146 feet of 20-inch pipe, 24 feet of 24-inch pipe, two 20-inch branches, two 24-inch x 20-inch reducers, two 20-inch bends....................	1,500	
Vault for water meter and water meter...	175	
		9,875
Carried Forward............................		$160,900

7195

Brought Forward............................		$160,900
Twenty-five feet of 4-inch water pipe......	$25	
One hundred and fifty feet of 2-inch water pipe	50	
One hundred and twenty feet of 1½-inch steam pipe	50	

Forty feet of 1-inch steam hose	10	
Eighty feet of 4-inch cast iron sewer pipe	125	
One lantern at gate on 63d street	15	
Frame blacksmith shop for street department	75	
Frame carpenter shop for street department	50	
Frame shed used by street department	50	
One blacksmith hearth, bellows, anvil and set of tools in blacksmith shop	150	
Work-bench in carpenter shop	25	
Two hundred feet ten inches of brick wall 16-inch, with 20-inch panels (on Avenue "A")	2,000	
Nine hundred and fifty feet of wooden fence on 62d and 63d streets	1,000	
		3,625
		$164,525

10th and 11th Aves., 41st and 42d Sts.

Retort house, one story, brick, walls 16 inches thick, iron roof frame, covered with corrugated iron, building is 17 feet high inside measurement, floor paved with brick		$1,500
Carried Forward		$1,500

7196

Brought Forward		$1,500
Boiler room, one story, brick, 30 feet x 30 feet 10 inches, iron roof, 17 feet high, floor paved with brick, 12-inch walls	750	
Lime room, 1 story, brick, 12 inch walls, wooden roof, floor paved with brick, 13 feet high, building 25 feet 5 inches x 31 feet 2½ inches	600	
Purifier house, basement, one story, 16-inch brick walls with 12-inch panels, wooden roof slated, wooden floor in main story	1,500	
Gas holder tank, 49 feet 6 inches diameter, 15 feet deep, dismantled	1,750	
Brick chimney next retort-house, 9 feet square at base and about 60 feet high	850	
Small brick building, 16 feet 4 inches square, 12-inch walls, wooden roof	500	
Wooden shed, 14x16 feet, adjoining the above, frame shed in front of boiler-room	100	
One hundred and nine feet of brick fence wall without coping; one wooden gate	350	
One hundred and nine feet of parapet or retaining wall at N. E. corner of property	350	
		$8,250

7197 *11th avenue and Hudson River, 41st and 42d streets.*
Holder yard:

Four gas holder tanks, 96½ feet diameter, 21 feet 6 inches depth, built of brick and cement with concrete bottoms...........	$120,000	
Four telescopic gas holders, 95 feet diameter of lower lift, 93 feet 6 inches diameter of upper lift; each lift 20 feet deep, cast iron columns with lattice girders, 16-inch inlet and outlet pipes, each holder having a capacity of 250,000 feet.................	90,000	
Brick governor and valve house, one story high with cellar and vault..............	3,500	
Containing:		
Governor	3,100	
Valves: One 30-inch $210, one 24-inch $168, five 16-inch $560............	938	
Carpet, desk and chairs, gas fixtures and steam heater	200	
Three arch pressure gauges..........	75	
One drip pump....................	8	
One drip barrel on wheels............	15	
One-story brick meter-house, 12-inch walls, slate roof, no cellar containing..........	1,200	
Station meter No. 4, of a capacity of 500,000 feet per 24 hours, with 10-inch rotary bypass valve, overflow, clock and pressure gauges complete	1,800	
Carried Forward..............................		$220,836

7198

Brought Forward..............................		$220,836
Two hundred and sixty-seven feet of brick wall, 12-inch with 16-inch piers on 42nd street side of holder yard, $20 per foot...	$5,340	
Four hundred and forty feet of wooden fence inclosing holder yard on 41st street and 11th avenue sides, $1.50 per foot........	660	
Cast iron pipes in holder yard and connections to works, 204 feet of 30-inch pipe from works to governor-house, 3 30-inch bends and 90 feet of 24-inch pipe from governor-house to city, 1 24-inch bend...	3,000	
Two hundred and seventy-five feet of 20-inch pipe for two outlets to city, 3 20-inch bends, 2 20-inch branches, 1 20-inch valve 2 20 x 16-inch reducers...........	2,000	

Three hundred and ten feet of 16-inch pipe, 1 16-inch valve, 4 branches, 4 drips, 220 feet of 10-inch pipe, 2 10-inch valves, 12 bends, 100 feet of 8-inch pipe, 3 8-inch valves, 4 8-inch bends and 6 16-inch bends	3,150	
Office building, 57 feet 4 inch- x 29 feet inside measurement of brick, cellar, two stories and garret, slate roof with cupola or dome, walls 12-inch with 16-inch piers, vault under sidewalk on 42nd street, 36 feet x 18 feet x 8 feet high covered with		
Carried Forward............................		$234,986

7199

Brought Forward............................		$234,986
brick arches on iron beams, area 5 feet wide on 42nd street inclosed by iron railing with skylights for vault below, area 5 feet wide 10 feet deep along office building on holder yard side with iron steps leading down and covered with iron grating, contains water closet and urinal.....	$22,500	
Cellar is concreted and contains 106 feet 30-inch heavy flange pipe (for meter and two holders)	1,500	
Two 30-inch branches, 1 bend, 2 valves (for meter and two holders)................	620	
Forty-five feet of 24-inch pipe (heavy) to exhauster No. 3......................	500	
Five 24-inch valves, 5 branches, 9 bends...	1,450	
One hundred and five feet of 16-inch pipe for meter connections, 6 valves and 9 bends	1,420	
One 24-inch self-acting by-pass...........	310	
Foundation for 3-station meters...........	1,500	
Foundation for steam engine and pillow block	550	
Foundation for exhauster................	450	
One water meter.......................	150	
First floor contains—office with office furniture and fixtures....................	500	
One iron safe.........................	150	
Two self-registering pressure and vacuum gauges	400	
Nine syphon pressure gauges with connections from cellar....................	225	
Carried Forward..................	$32,225	$234,986

7200 *Brought Forward*	$32,225	$234,986
Four arch pressure gauges with connections	100	
One station meter (No. 1), 14 x 14 feet of 2,000,000 feet capacity	6,000	
One station meter (No. 2), 12 x 12 feet of 1,450,000 feet capacity	5,000	
One station meter (No. 3), 10 feet six inches x 10 feet nine inches of 1,150,000 feet capacity	4,000	
All with the proper gauges, overflows, etc.		
Density test, timers, naphtha and ammoniacal liquor test	100	
Movable platform scales	125	
Four ornamental valve stands	300	
Engine room No. 11 contains: one 25 horse power steam engine, horizontal, cylinder 12 x 24 inches	1,500	
One gas governor with throttle valve for this engine complete	250	
One Mackenzie part rotary exhauster (No. 3), 3,600,000 feet per 24 hours capacity	5,000	
with one compensator	600	
One friction pulley	85	
One King's pressure gauge, $50; one King's Vacuum gauge, $50	100	
One set photometer	115	
Closet for tools	25	
Carried Forward	$55,525	$234,986
7201 *Brought Forward*	$55,525	$234,986
One mercury steam gauge and connections	100	
Forty-five feet of 10-inch triple belt	110	
Four valve stands with wheels for four 24-inch valves, two valve stands with arrows for self-acting by-pass and key for valve of independent by-pass	350	
Second floor contains: Engineer's private office, containing 1 desk, 1 table, chairs, closet with shelves, and washstand; closet for writing materials, black walnut book case with books and periodicals on Gas Engineering	400	
Sulphur and ammonia testing apparatus	25	
Draughtsman's room contains: 1 desk, 1 glass book-case, 1 large book-case with drawers, full set of drawing boards, mathematical instruments, 1 theodolite, closet for drawing paper, steam heater and gas fixtures	600	

Drawings of works and apparatus—President's room contains desk, table, chairs, steam heater and gas fixtures...........	120	
Porter's room contains, closet, table, chairs, gas-stove, etc.........................	50	
Photometer room contains, a complete set Bunsen Letheby Bar Photometer with		
Carried Forward.................	$57,280	$234,986

7202

Brought Forward.................	$57,280	$234,986
cubic foot gas test, gas holder and connections to various points of works.........	2,000	
(Garret used for storage of various materials.)		
		59,280
Purifying house, frame, 70 x 160 feet with brick extension on 41st street 38 x 21 feet, one story high with wooden, felt and tan covered roof, cellar underneath the whole building with brick walls 16 inches thick, area along holder yard (walls 2 feet thick), cellar concreted and sewered throughout	30,000	
Cellar containing brick and iron foundations for 16 boxes of purifiers, centre valve 16-inch dry for purifier set 1, with tar tank below	1,200	
Centre valve 16-inch dry for purifier set 2, with tar tank below..................	1,200	
Centre valve 20-inch dry purifier for set 3, with tar tank below..................	1,500	
One hundred and sixty-eight feet of heavy 24-inch flange pipe (for inlet and by-pass to purifiers) with piers................	1,680	
Three 24-inch branches, 4 bends, 2 valves..	650	
Four hundred and seven feet of twenty-inch flange pipe (inlet and outlet to set No. 3, and connections for same..............	2,450	
Nine 20-inch bends, 1 branch, 3 valves.....	675	
Carried Forward................	$39,355	$294,266

7203

Brought Forward................	$39,355	$294,266
One 20-inch special casting for outlet......	125	
Inlet and outlet connections between boxes of sets No-. 1 and 2:		
482 feet of 16-inch socket pipe............	2,175	
Eight 16-inch branches, 9 bends, 4 valves..	800	
One 16-inch double bend, 1-16-inch cross...	90	

Connections for deodorizing apparatus:

113 feet of 20-inch socket pipe	700	
129 feet of 16-inch socket pipe	600	
One 20-inch cross, 1 20-inch x 16-inch reducer	65	
One 16-inch cross, 3 16-inch branches, 2 16-inch sleeves	105	
Twelve 16-inch bends, 12 16-inch valves	1,580	

Connections for set No. 4:

395 feet of 10-inch pipe	1,000	
Three 10-inch branches, 17 10-inch bends, 3 sleeves	220	
One 10-inch valve	70	
One hundred and ten feet of 6-inch pipe socket	175	
One 6-inch bend	5	
Seven drip pots with overflows	70	
Foundations for 12 boxes of purifiers, brick and iron, at $1,100	13,200	
Carried Forward	$60,335	$294,266

7204

Brought Forward	$60,335	$294,266
Main floor—purifier set 1: 4 boxes, 20 feet x 20 feet x 3 feet 6 inches deep, with wrought iron covers, cups 20 inches deep and hoisting carriage running on track on floor; 7 rows of sieves	11,500	
Purifier set 2, same as 1	11,500	
Purifier set 3, 4 boxes, 27 feet, 5¾ inches x 15 feet, 11 inches x 3 feet 6 inches deep, wrought iron covers, 20 inches depth of cups in hoisting carriage moving on track on main floor	12,500	
Lime sheds, partly on 41st St., sidewalk, frame, 1 story	600	
Tools as shovels, brooms, etc., for 12 men, 12 wooden wheelbarrows, 24 bushels-baskets, 6 wooden and 6 iron pails	200	
Purifier set 4, 7 feet 8 inches x 11 feet 8 inches x 3 feet 3 inches deep, 6 rows of sieves, carriage, dry centre valve for 10 connections	3,000	
		99,635
Vault under sidewalk on 41st street, 100 feet long, 13 feet wide, 8 feet 6 inches high, covered with brick arches resting on iron beams	$5,000	

Contains 44 feet of 20-inch socket pipe, 1 20-inch branch, direct connections between purifiers and holders..................	300	
Twelve feet of 10-inch pipe, 1 10-inch bend, connection between purifier set 4 and meter 4	50	
		5,350
Carried Forward...........................		$399,251
7205		
Brought Forward...........................		$399,251
Entrance to works from 42nd street:		
900 square yards of flags.................	$300	
Two gates	100	
Below flags, 37 feet of 24-inch cast iron flange pipe, for inlet to exhauster No. 3..	500	
Eighteen feet of 10-inch socket pipe, and 1 10-inch bend, inlet to purifier set 4.......	85	
		985
Entrance to works from 41st street, iron gate..........		311
Flagged yard with vaulted basement below. Flagged yard 300 feet x 38 feet between purifying engine and retort houses with basement underneath, flags resting on brick arches turned between iron beams. Building (including 4 chimneys).......	$26,000	
Fourteen skylights of glass and iron for lighting basement	3,000	
Two straight and 2 circular iron stairways leading to basement..................	1,000	
		30,000
Old engine room. Situated in basement of flagged yard, 22 x 38 feet concrete floor; used at present as store room for cast iron materials, as bends, branches, valves, part of machinery. It contains further, a brick cistern, 5 feet x 5 feet x 5 feet deep for accumulation of tar from low lying drips..	$500	
Carried Forward................	$500	$430,547
7206		
Brought Forward................	$500	$430,547
A No. 0 Woodward pump for removing tar.	125	
In connection with this cistern there are extending through cellars, under purifying and condenser houses, 445 feet of 6-inch cast iron pipes (sockets)..............	750	
Seventeen cast iron cesspools with covers, and 3 cast iron bends..................	550	
Eighty feet 1½-inch wrought-iron discharge pipe	15	
		1,940

Further, inlet to exhauster No. 111; 35 feet 24-inch heavy flange pipe	$400	
One 24-inch branch	35	
Outlet from exhauster No. 111; 24 feet of 24-inch flange pipe	275	
One 24-inch bend	30	
Twenty feet of 20-inch cast-iron socket pipe (belonging to deodorizer)	175	
Fourteen feet of 16-inch flange pipe	75	
Two 16-inch bends, 1 24-inch x 16-inch reducer, outlet from condenser 1	75	
		1,065
In passage between purifier house and condenser house No. 11. Cellars. Inlet to exhauster No. 111, 44 feet of 24-inch flange pipe	459	
One 24-inch bend, $35; 1 branch, $40; 1 valve, $170	245	
Carried Forward	$704	$430,547
7207 *Brought Forward*	$704	$430,547
Inlet to washer-scrubber, 5 feet of 24-inch flange pipe	533	
One 24-inch bend, 1 cross, 1 branch, 1 double bend and two valves	590	
Inlet to purifier set No. 11 from water-gas bench 44 feet of 6-inch pipe	65	
Outlet from oil exhauster	75	
Eleven feet of 12-inch elbows, 3 drip pots	25	
		1,992
Boiler-room, 18 feet x 53 feet 6, contains 1 locomotive boiler of 70 H. P., built in 1881, fire-box 5 feet square inside, 6 feet outside, 86 3-inch tubes, 12 feet long	$3,000	
Fitted with draught regulator	50	
Two locomotive boilers of 45 H. P. each, built in 1871; fire-boxes inside 4 feet square, outside 5 feet square; each boiler contains 54 3-inch tubes 8 feet long	4,500	
There is one wrought-iron smoke stack 24-inch diameter 65 feet high (above flags in yard) for large boiler, and one 24-inch diameter 50 feet high for 2 smaller ones		
Two Blake's No. 3 boiler-feed pumps	450	
One Niagara No. 5 pump (formerly used for pumping ammonia liquor)	600	
Carried Forward	$8,600	$435,544

7208 *Brought Forward*	$8,600	$435,544
One complete set of stoking tools, 2 coke boxes, 6 wooden wheel-barrows	200	
		8,800
Vault between old engine-room and boiler-room, 10 feet x 18 feet, contains one condenser for steam, 4 feet diameter and 6 feet high, and one No. 11 feed-water heater with brass coil, connection between condensers I and II, 42 feet of heavy cast iron 20-inch pipe		800
Store-room, 18 x 22 feet, used for storage of waste, shovels, pig lead, white lead, fittings, etc., one No. 9 Blake's pump for pumping out tanks with 60 feet 3-inch and 30 feet 6-inch suction pipe	$800	
One old steam engine of 15 H. P. 8-inch cylinder, 20-inch stroke, with fly-wheel, 2 pulleys	350	
One gas governor	100	
One 6-inch jet exhauster with by-pass valves, etc., complete	500	
		1,750
Pipe and fitting shop, 18 feet wide, 36 feet 6 inches long, containing 2 work benches with 4 parallel vises, 1 pipe vise, 1 pipe vise on iron stand, 2 closets, 1 oscillating steam engine of 5 H. P., 1 horizontal drilling machine with full set of twist drills from half inch to 1½ inch.,		
Carried Forward		$446,894
7209		
Brought Forward		$446,894
1 line of shafting with 5 pull*ies*, 1 pipe cutting and threading machine (cuts up to 4½ inch), 1 grindstone and full set of tools for 6 pipe fitters, steam heater, 1 punching press, 1 shearing machine, 1 punch for use on holders, 4 screw jacks, 1 hydraulic jack, 1 derrick for hoisting pipes, etc., with blocks and fall, and 1 drip pump, 1 pump for cleaning pipes, 2 chain blocks and 1 small truck for hauling pipe		3,000
Blacksmith shop, 18 feet x 53 feet, contains 2 blacksmith's hearths and bellows, 2 anvils, 1 work bench, with parallel vise and full set of tools for 2 blacksmiths and helpers		1,000
Paint shop, 18 feet x 14 feet 6 inches, containing work bench, closets, steam heater and full set of tools for painter and helpers, machine for grinding paint, and tar boiling over		200

Stable, 18 feet x 37 feet 6 inches, contains stalls for 3 horses, blankets, etc., feed box, steam heater, 1 brown horse, 1 roan horse, 1 brown mare, 3 light wagons, and 1 drip wagon		2,000
Condenser house No. 1, two stories and basement (upper story, including air condenser now being erected), brick walls 16		
Carried Forward		$453,094

7210

Brought Forward		$453,094
inches thick, 20 piers, iron roof covered with slates, with iron floors, iron dooors and windows	$16,000	
Basement contains one cast-iron washer for deodorizing foul gas from purifiers, 3 feet x 7 feet 6 inches x 9 feet high (inside measurements), divided into 4 compartments, filled with wooden trays, and provided with jets of water. Washer has drip pot attached to it	1,800	
One 20-inch steam jet exhauster for deodorizing apparatus	350	
Connections to deodorizing apparatus, 50 feet of 20-inch socket pipe, 7 20-inch elbows	500	
Connections to condenser No. 2, 1 16-inch x 16-inch tee, 1 16-inch elbow, 10 feet of 16-inch pipe, 2 16-inch valves, 1 16-inch x 20-inch reducer	400	
Tar connections, 43 feet of 8-inch cast-iron tar pipe, 50 feet of 6-inch cast-iron tar pipe, 30 feet of 6-inch cast-iron tar pipe, 2 tar pots, 3 8-inch valves, 3 8-inch tees, and 3 8-inch elbows	500	
First floor, two round cast-iron dry scrubbers, 8 feet diameter, 18 feet high, fitted with wooden trays, provided with necessary manholes and drip connections	3,500	
Foundation for same	800	
Carried Forward	$23,850	$453,094

7211

Brought Forward	$23,850	$453,094
One multitubular condenser, 42 feet long, 4 feet 6 inches wide, and 14 feet high, 12 compartments, with 48 4-inch cast-iron tubes each being 11 feet long	9,000	
Foundation for same	1,500	

Connections as follows, 50 feet of 16-inch cast-iron socket pipe, 4 16-inch elbows, 2 16-inch valves, 1 10-inch saddle-piece, 3 elbows, 1 valve, 1 24-inch elbow, 1 24-inch x 20-inch reducer, 1 24-inch valve, 5 feet of 24-inch pipe........................	1,050	
Second floor, one air condenser, composed of two sets of 4 each cast-iron seal mains, 24 inches x 26 inches inside, x 14 feet 8 inches long, and 32 wrought iron, 16-inch tubes, 45 feet 10 inches long each, whole apparatus resting on wrought iron girders	11,000	
Connections as follows, 48 feet of 24-inch wrought-iron pipe, 17 feet 24-inch cast-iron pipe, 6 24-inch elbows, 4 tees and 6 valves	2,000	
		48,400
Condenser house No. 2: One story brick building, 28 feet x 57 feet, with cellar, iron roof covered with slates, walls 16 inches thick, with 20-inch piers, area on 41st street covered with iron grating.........	13,000	
Carried Forward..........................		$501,494
7212 *Brought Forward*.................	$13,000	$501,494
Cellar and main floor contain: One multitubular condenser of the same size and description as the one in condenser house No. 1	12,000	
Brick foundation for same................	1,500	
Two cast-iron scrubbers, 9 feet square, 18 feet high, filled with wooden trays and fitted with water sprinkling apparatus, used as dry scrubbers at present...............	6,000	
Brick foundation for scrubbers...........	1,000	
One Kirkham-Hulett washer scrubber of two millions per diem capacity, 8 feet dtr., 16 feet 4-½ inch long, outside measurement with 13 compartments, gearing, counter shaft, 3 pulleys and belting......	15,000	
Small water supply tank with self-regulating ball cock, washer....................	50	
Resting on iron frame-work and columns..	500	
One cast-iron dry scrubber for naphtha gas, 6 feet 10 inches long, 4 feet 10 inches wide, 14 feet high, divided into four compartments, fitted with wooden slats.......	1,800	
Two round, wrought-iron multitubular condensers used for naphtha gas; diameter of each shell 5 feet; total height 22 feet 11 inches; 127 3-inch galvanized tubes, 19		
Carried Forward.................	$50,850	$501,494

7213 *Brought Forward*..................	$50,850	$501,494
feet 10 inches long in each condenser. They are provided with self-acting water supply apparatus, and also with quick opening valves for inlet, worked with rods and levers from main floor..............	8,000	
One condenser composed of two lengths of 24-inch pipe, forming a water tank with about 40 feet of 6-inch condensing pipe inside of it; not in use at present........	275	
Connections to large condenser, scrubbers and washer; 140 feet of cast-iron 24-inch flange pipe, 12 24-inch bends, 9 branches, 11 valves and 9 ornamental valve stands.	6,000	
Inlets from retort house No. 2; 36 feet of 20-inch flange pipe, 2 20-inch bends and 2 valves	650	
Connections for naphtha gas apparatus, 100 feet of 12-inch socket and flange pipe, 9 12-inch bends, 11 branches, 6 valves.....	450	
Tar connections to large condenser and scrubbers, 40 feet of 8-inch pipe, 6 8-inch branches, 6 valves; 16 feet of 4-inch pipe, 6 4-inch bends...................	550	
One large and 3 small tar pots............	50	
Tar connections to naphtha gas apparatus, 40 feet of 3-inch wrought-iron pipe, 20		
Carried Forward.................	$66,825	$501,424
7214		
Brought Forward.................	$66,825	$501,424
feet of 2-inch wrought-iron pipe, 95 feet of 1½-inch wrought-iron pipe..........	75	
		66,900
Vault in 41st street in front of condenser house No. 2, under sidewalk, 30 feet 6 inches long and 8 feet wide, covered with brick arches between iron beams........	$2,000	
Contains one wrought iron tank 10 feet x 6 feet 9 inches x 3 feet 3 inches, used for storage of naphtha tar.................	150	
One No. O Blake's pump for pumping this tar	100	
Eighteen feet of 4-inch cast-iron pipe, leading to water meter, 1 4-inch valve.......	46	
One meter for Croton water..............	150	
		2,446

Engine room No. 1, adjoining condenser room No. 2: One story and basement brick building 28 feet x 37 feet, with iron and slate roof. Basement concreted and sewered, main floor has double floor, upper one of hard wood, wooden ceiling with octagonal dome, 8 ft. across extending 8 feet above peak of roof................	12,000	
Contains in cellar and main floor: One 65 horse-power steam engine, cylinder 16		
Carried Forward.................	$12,000	$570,840

7215

Brought Forward.................	$12,000	$570,840
inches in diameter by 30-inch stroke, variable cut-off, fly-wheel, driving pulley 57 inches in diameter....................	3,000	
Engine resting on brick pier and iron beams as foundation	650	
Speed of engine regulated by one gas governor acting upon throttle valve of engine	400	
One large Smith & Sayre exhauster No. 1, of 5,760,000 feet capacity for 24 hours for 24-inch connections with driving pulley, 54 inches diameter................	6,000	
One Smith & Sayre exhauster No. 2, of 3,600,000 feet capacity for 24 hours for 24-inch connections with driving pulley, 48 inches diameter..................	5,000	
Exhauster is fitted with compensator......	600	
Bed-plates of both exhausters resting on brick arches, turned between iron beams supported by cast-iron columns.........	500	
One Smith & Sayre exhauster of 864,000 feet capacity per 24 hours and 12-inch connections (used for naphtha gas), steam engine of 7 horse power, with cylinder 6 inches in diameter 6 inches stroke on same and bedplate with exhauster and gas governor	2,500	
Bed-plate resting on brick pier...........	425	
A platform 28 feet 7 inches of cast-iron plates running across engine room 16 feet		
Carried Forward................	$31,075	$570,840

7216 *Brought Forward*	$31,075	$570,840
above main floor and supported by wrought-iron girders and cast-iron ornamental columns	1,500	
Platform support 3-1/2 inches, counter-shaft 17 feet long, counter-shaft provided with 3 pulleys 42 inches in diameter in connection with engine and exhausters 1 and 2, pulleys for exhausters provided with friction-clutches and belt tighteners worked from main floor	700	
Forty-three feet of 15-inch double belt and 82 feet of 10-1/2-inch double belt	700	
Iron stairway leading from main floor to platform	350	
One 12 horse power Greenfield upright engine, cylinder 8 inches in diameter x 8 inches stroke (driving Kirkham-Hulett washer scrubber included in valuation of scrubber		
One set photometer with governor for testing finished gas	115	
One set photometer for testing coal gas by itself	80	
Two of King's pressure gauges	100	
Two of King's vacuum gauges	100	
One set of tools for use of engine driver, set of oil cans and closets	125	
Six ornamental valve stands	350	
One reflector gas fixture and 2 ornamental side brackets	60	
Carried Forward	$35,255	$570,840
7217		
Brought Forward	$35,255	$570,840
One mercury column steam gauge	100	
One steam heater	25	
Connections to exhausters 1 and 2: Ninety-five feet of cast-iron 24-inch flange pipe, eleven 24-inch bends, 7 branches, 6 valves, 1 self-acting by-pass valve. Connections from condensers Nos. 1 and 2. Forty-eight feet of 20-inch flange pipe, one 20-inch bend, 1 branch, 1 24 x 20-inch reducer. Connections to naphtha gas exhauster: Fourteen feet of 12-inch socket pipe, five 12-inch elbows, 2 tees, 3 valves, 14 cast-iron columns for support of pipes, three drip pots	5,000	
		40,380

Storage house: Elevated between purifier and condenser house No. 2, iron frame covered with corrugated iron resting on iron columns and girders; it is used for the storage of naphtha and contains one tubular tank 4 feet 6 inches x 25 feet long, covered with felt and has a capacity of 3,000 gallons		2,000
Retort house No. 1: Two hundred and sixty feet long, 56 feet wide, 22 feet from main floor, to square of building with a paved cellar 11 feet deep, walls above main floor		
Carried Forward		$613,220

7218

Brought Forward		$613,220
16 inches wide with 20-inch piers, main floor composed of castiron beams and floor plates. Wrought-iron trussed roof covered with slates	$75,000	
Contains three sections of benches: East section, 20 benches of 6 retorts each, built back to back, 10 in a row; skeletons 6 feet 4 inches wide; retorts 14 inches x 24 inches by 9 feet 4 inches long; each bench fitted with a generator, which is fitted from main floor and slag drawn off in cellar; mouth-pieces fitted with self-sealing retort lids, stand bridge and dip pipes 6 inches diameter, of cast-iron; 1 hydraulic main for each side, made of 3/8-inch boiler iron, 24 inches wide x 30 inches deep	50,000	
Middle section, 20 benches of 6 retorts each built back to back, of same construction as east section	50,000	
West section: 20 benches of 6 retorts each built back to back same as East section, retorts are 14 inches x 24 inches by 10 feet 2 inches long	50,000	
Twenty-inch take-off main on south and east walls 28 feet of 20-inch wrought-iron pipe; 180 feet of cast-iron socket pipe; 4		
Carried Forward	$225,000	$613,220

7219 *Brought Forward*.................	$225,000	$613,220
20-inch branches, 1 bend, 1 valve; 2 24-inch branches; 1 24-inch bend; 16-inch take-off main on top of benches; 222 feet of 16-inch flange pipe; 120 inches x 16 inches reducer; 3 branches, 4 bends, 3 valves. Connections between hydraulic and take-off main; 92 feet of 12-inch socket pipe, 3 12-inch branches, 1 bend, 2 12 inches x 10 inches reducers, and 2 12-inch valves. Connections from retort house No. 4 to scrubber 1: 95 feet of 10-inch socket pipe, 2 10-inch branches, 3 10-inch bends. Take-off mains, 160 feet of 10-inch pipe, 8 branches, 8 bends, 8 valves, 50 feet of 6-inch pipe, 6 branches, 4 bends, 4 valves. Tar connections to hydraulic main; 157 feet of 4-inch socket pipe, 2 4-inch branches, 8 4-inch bends, 6 4-inch tar gates, and 6 4-inch seal pots.........	8,000	
		233,000
Scale-house, between retort-house 1 and coal sheds 1 and 2 frame 3 feet x 14 feet, with one Riehle's platform scale, 1 weigher's desk, chair, closet, gas fixtures and steam heater, 1 movable frame scale house 6 x 8 feet..		900
Retort house No. 2, 95 feet long x 56 feet wide, 22 feet 6 inches high from main		
Carried Forward...........................		$847,120
7220		
Brought Forward...........................		$847,120
floor to square of building; north and south walls 16 inches thick with 20-inch piers; east wall 16 inches thick, west end is formed by 9 piers 2 feet thick with roof frame of wrought iron, covered with connecting arches for support of roof; slates, main floor composed of cast-iron beams and plates; cellar is 11 feet deep and is paved; area on 41st street 4 feet wide covered with iron grating; vault under 41st street walk; full width of retort house, iron doors and windows......	$28,000	
Retort-house contains: One stack of 20 benches of 7 retorts each, built back to back, width of skeletons 7 feet 2 inches, size of retorts, 14 inches x 23 inches x 10 feet 3½ inches long; each bench provided with a generator furnace; the 12 northerly benches are used for coal gas		

purposes, and the 8 southerly ones for naphtha gas have through retorts; wrought-iron hydraulic mains 24 inches x 30 inches, 86 feet long each; stand, bridge and dip pipes 6 inches diameter, with 3-inch by-passes to seal; mouthpieces 13 inches by 21 inches, with self-sealing lids	54,000	
Carried Forward................	$82,000	$847,120

7221

Brought Forward................	$82,000	$847,120
Two movable platforms running on tracks for charging top retorts of coal gas benches	600	
One iron tar tank, on gable wall, half round, holding 200 gallons..................	100	
One iron naphtha tank, holding 945 gallons	350	
Two iron naphtha tanks, holding 452 gallons	450	
Two naphtha meters in retorthouse........	75	
Two sets of apparatus for distributing naphtha to retorts, complete............	950	
One naphtha still 3 feet diameter, 4 feet high with steam coil of ¾-inch pipe.....	100	
		84,625
Retort-house, No. 3, of same size and construction as retort-house No. 2, including vault on 41st street...................	$29,000	
Contains: one stack of 20 benches of 6 retorts each, built back to back; 6 benches have generators, 14 old-fashioned furnaces; width of skeletons, 7 feet 2 inches; size of retorts 13 inches x 24 inches x 9 feet 5 inches long; mouth pieces, 12 inches x 20 inches, fitted with self-sealing lids; bridge, stand and dip-pipes 7 inches diameter, cast-iron hydraulic; mains 20 inches wide, 24 inches deep, and 86 feet long each............	36,000	
Carried Forward................	$65,000	$931,745

7222

Brought Forward................	$65,000	$931,745
Take-off mains on walls in retort-houses No. 2 and 3 inclusive; connection to retort house No. 1, across yard; 228 feet of 20-inch flange and socket-pipe; 7 20-inch tees, 1 bend, 2 valves, 2 reducers, 20 inches x 16 inches; 132 feet of 16-inch socket-pipe, 7 16-inch branches, 1 bend, 1 valve; take-off main for naphtha gas, 68 feet of 12-inch socket-pipe, 7 12-inch		

branches, 4 bends, 4 valves. Connection from retort-house 4 to scrubber 1; 158 feet of 10-inch pipe (socket), 1 10-inch branch, 3 bends; connection between hydraulic and take-off main, 12 feet of 10-inch pipe, 4 10-inch bends and 6 10-inch valves. Connection to experimental bench in retort-house No. 4; 243 feet of 6-inch socket-pipe, 4 branches, 7 bends, 4 valves. Tar connection to tar main in 41st street; 375 feet of 6-inch socket-pipe, 4 6-inch branches, 9 6-inch bends, 144 feet of 4-inch socket-pipe, 4 4-inch bends, 8 tar-gates, 5 seal pots....................	8,000	
		$73,000
Retort-house No. 4 fronting on 41st street and adjoining retort-house 3 to the west; 33 feet wide, 34 feet long, 22 feet 6		
Carried Forward...........................		$1,004,745
7223		
Brought Forward...........................		$1,004,745
inches high with cellar 11 feet deep; walls 16 inches with 20-inch piers, iron roof covered with slate, iron main floor, cellar paved with brick....................	$8,000	
Containing 3 benches for experimental purposes, 2 with six and one with 7 retorts; retort 12 inches x 20 inches x 12 feet long, open on both ends, with mouth-pieces and self-sealing lids; one bench fitted with generator, the other with ordinary furnaces, naphtha distributing apparatus; 6-inch stand, bridge and dip-pipes; one bench with fanners, the other two with ordinary 3-inch by-pass valves; wrought-iron hydraulic main 2 feet square, 25 feet 7 inches long, made of 7/16-inch boiler iron	6,500	
One water gas bench with 12 upright retorts 22½ inches x 6 inches x 8 feet long, and one retort 16 inches x 10 inches x 8 feet long, clay super-heaters, 3-inch take-off pipes for every retort; steam pipes, complete with all valves; 6-inch pipes leading to a small cast-iron hydraulic main, 36 inches x 20 inches x 23 inches; ordinary furnace in cellar, two 10-inch jet exhausters, four 10-inch bends, 3 branches, 2 valves; one 8-inch valve, 1 10-inch x		
Carried Forward.................	$14,500	$1,004,745

7224	*Brought Forward*	$14,500	$1,004,745
	8-inch reducer, 154 feet of 6-inch cast-iron pipe, 18 6-inch bends, 12 6-inch branches 11 6-inch valves, 85 feet of 4-inch cast-iron pipes, 4 4-inch bends, 2 2-inch branches, 1 drip-pot, 2 4-inch tar valves	4,000	
			$18,500
	Retort-house tools: Full set of retort-house tools for working all the benches in retort-houses 1, 2, 3, 4, as shovels, rakes, scoops, lid-openers, augers, 18 iron wheel-barrows, coal wheelers' shovels and 24 tin lanterns		2,500
	Coal yard: west of retort-houses 3 and 4 with 300 feet of elevated track for dumping coal	1,500	
	One hundred and ten feet of run for wheeling coke from cellar	300	
	And 80 feet of run for wheeling coal from coal-shed 3	150	
	Scale-house in coal yard, frame, 1 story, 16 feet x 16 feet, with platform scale; size of platform, 8 x 16	1,000	
	One hundred and two feet of fence wall along 41st street, wall 24 inches thick, with 20-inch panels above water table, wooden lining	3,500	
	Inside of wall to keep weight of coal from wall	250	
	Carried Forward	$6,700	$1,025,745
7225	*Brought Forward*	$6,700	$1,025,745
	Vault under 41st street, sidewalk, 27 feet long x 13 feet wide, 8 feet high, with walls 2 feet thick, covered with brick arches resting on iron beams	1,500	
	Containing 3 boiler iron tanks of together 8445 gallons capacity (formerly used for storage of naphtha), with connections and valves complete, also one boiler iron tank, with drip-pan resting on top of fence wall of 1620 gallons capacity	1,200	
	Frame house, one story, 14 feet x 28 feet, on level of flags in yard, with lockers for retort-house firemen and closets for tools	1,000	
	One boiler iron tank, round 4 feet 6 inches diameter, and 25 feet long, 3,000 gallons capacity (lying in 41st street, and not in use)	500	
			$10,900

Coal sheds Nos. 1 and 2, on 42nd street, each 168 feet long, and 42 feet wide, one story high, each holding 3,000 tons of coal when trimmed, brick gables and side walls, 24 inches, two division walls, 16 inches thick, west gable of framing, wooden retaining walls inside of brick ones, wooden roof over each shed covered with tar felt and pebbles, single track railroad running over peak of each roof........................	30,000
Carried Forward........................	$1,066,645

7226

Brought Forward........................	$1,066,645
Coal shed No. 3, on 41st street, 168 feet long, 86 feet wide, divided by 1 2-foot brick wall (in center), and by wooden partitions into 6 bins; each bin holding about 1,000 tons of coal when trimmed; second story is traversed by railroad tracks, provided with the necessary switches and turning tables for distribution of coal into bins	40,000
Carpenter shop, 15 feet x 75 feet on easterly end of second story of coal shed 3, containing work benches for 3 carpenters, grindstone, drilling machine, with full set of augers, 1 3-inch auger, 1 cross-cut saw, gas fixtures, 1 hand cart, 1 car to run on tracks for moving lumber	800
Store room, 20 feet x 75 feet on west end of second story of coal shed 3, used for storage of lumber, scaffolding, wheel-barrows, ladders, one coke wagon............	500
Dock, trestle work extending from west of coal sheds to head of pier, with 3 floors.......................	
First floor for wheeling and carting on level of cellars of works (about 4 feet above high-tide)..............	
Second floor, with 3 railroad tracks, for conveying coal	
Carried Forward........................	$1,107,945

7227

Carried Forward........................	$1,107,945
from pier head to bins in coal shed 3, and to coal yard west of retort-house- 3 and 4......................	
Third floor, with two tracks for bringing coal into sheds 1 and 2, and into lots west of coal sheds, trestle work is composed of 41 trestles, built of 10-inch x 10-inch timber as uprights, with the necessary cross braces and ties, each trestle resting on cap timbers laid on top of a row of piles................................	
Length of trestle work from coal shed to platform at pier head 417 feet................................	
Width of trestle work on first floor, 28 feet 6 inches, width of trestle work on second floor, 26 feet 4 inches, width of trestle work on third floor, 12 feet 10 inches.	

From main trestle work there are branching off, 4 side trestles, each 90 feet long, with single track in connection with tracks on third floor of main trestle.......

These trestles are for the purpose of dumping coal in lots between main trestle and 42nd street...........

Two side trestles, each 78 feet long, with cross-trestle 75 feet long, same as above, for dumping coal into lots between main trestle and 41st street................

Carried Forward......................... $1,107,945

7228

Brought Forward......................... $1,107,945

On main floor of main trestle there is a frame scale house, 13 feet x 11 feet, with two Fairbanks track scales, one on upper and one on lower track; scale house further contains 1 desk, 2 chairs, 1 washstand, gas fixtures and steam heater.....................

Frame hoisting platform, 85 feet x 85 feet, at end of pier, built of 10-inch x 8-inch uprights, strongly braced piling, crib work and filling, with two floors above ground floor, corresponding with upper and lower runs of trestle work; platform provided with 6 wooden derricks, complete with blocks, falls, brake lines, guy ropes and iron stays, 5 booths or stands for brakemen, turntable, track, switches for shifting coal cars when being loaded.........................

Frame engine-house, 37 feet x 60 feet, built under platform; has two floors and wooden roof covered with tar paper; contains, on first floor: Engine room, 37 feet x 48 feet, containing one 60 horse power locomotive boiler, fire box 60 inches x 60 inches, 84 tubes 3-inch diameter, 10 feet long, with sheet iron smoke stack, 24-

Carried Forward......................... $1,107,945

7229

Brought Forward......................... $1,107,945

inch diameter extending 24 feet above top of platform, 3-inch exhaust steam pipe rising to same height, boiler fitted with draught regulator.....................

One 50 horse power hoisting steam engine, 14 inches diameter of cylinder by 24-inch stroke, with plain side valve, governor, pulley 60 inches in diameter, and flywheel resting on timber foundation, 87 feet of 3-inch shafting resting on 15 pillow blocks along 3 sides of room with gearing acting upon 8 hoisting drums, drums are fitted with friction clutches and brakes and connected one to each of the derricks, with 2 to spare, one 36-inch pulley on shafting, 45 feet of 10-inch double belt.................................

One salt water pump, Guilds and Garrison, steam cylinder 10-inch diameter, water cylinder 6-inch diameter, length of stroke 6 inches, one No. 2 "Niagara" boiler feed pump, steam heater, gas fixtures, one bench with parallel vise, set of tools and oil cans for use of engine driver, 1 bench with 6 oaken water pails for fire purposes, vestibules in front of engine room contain stairway to upper story, closet for tools................

Carried Forward........................... $1,107,945

7230

Brought Forward........................... $1,107,945

One movable hoisting engine of 8 horse power, with boiler on iron movable platform..................

Second story comprises rigging loft with rigging tools and supplies as follows: Holder, hoisting rigging, 8 15-inch blocks, 3 sheaves; 8 15-inch blocks, 2 sheaves; 8 15-inch blocks, 1 sheave, 8 falls of 3¾-inch manilla rope, 279 feet long each, 8 shackles, 8 cup hooks.....

Coal hoisting rigging: 4 12-inch tackle blocks with 3 sheaves, 2 10-inch tackle blocks with 3 sheaves, patent, 2 10-inch tackle blocks with 2 sheaves, 1 10-inch tackle block with 3 sheaves, 3 14-inch blocks with 1 sheave, 1 8-inch block with 1 sheave, 1 14-inch snatch block, 2 10-inch snatch blocks, 24 patent sheaves 11-inch diameter by 2-inch face, 13 patent sheaves 10-inch diameter by 2-inch face, 4 patent sheaves, 4-inch diameter x 1-inch face, 4 sheaves, 3½ x ⅞ inches face, 5 sheaves, 7½ x 1½ inches face, 1 tackle, 30 feet hoist with 7-inch blocks, rope 2½ inches, 2 tackles, 40 feet hoist with 7-inch patent blocks, rope 2½ inches, 5

Carried Forward........................... $1,107,945

7231

Brought Forward........................... $1,107,945

tackles, 30 feet hoist with 6-inch blocks, rope 2 inches, 1 4-inch sheave, 12-inch rope, strap tackle, 84 feet hoist 3-inch rope, 2 tackle falls, 3½ inches, 3-strand rope, 420 feet long each, 2 tackle falls, 3¾ inches, 3-strand rope, 250 feet long each, 1 tackle fall, 3¾ inches, 3-strand rope, 420 feet long, 1 tackle fall, 3 inch, 3-strand rope, 200 feet long.......................

Rigger tools, as sailor's needles, palms, marlin spikes, one winch or windlass, one bench with 6 oaken water pails for fire purposes, 18 coal cars, iron throughout, weighing about 1,100 pounds each, and holding 2,400 pounds coal each, 1 side dumping car, 12 tubs for hoisting coal, holding from 400 to 600 pounds of coal, 35 shovels, 12 kerosene lamps, 1 kerosene can, 6 water pails, 1 flat-bottomed boat with blocks and falls for lowering, 1 large float and 1 small float.......... 100,000

Tar dock, south of main pier, 82 feet long and 36 feet wide	$2,500	
Tar tank set on piles underneath tar dock, constructed of 3-inch planks and lined with sheet lead 24 x 20 feet x 8 feet deep.	2,800	
Carried Forward	$5,300	$1,207,945
7232 *Brought Forward*	$5,300	$1,207,945
Separator 4 inches x 4 feet 6 inches x 8 feet deep constructed also of 3-inch planks and lead lined	150	
Small frame house 6 x 7 feet	150	
Containing one "Niagara" steam pump No. 2½, used for pumping tar and ammoniacal liquor, with all connections and valves	300	
Ammonia tank alongside of tar dock, built on piles in river and constructed of 3-inch planks with wooden roof, size of tank 16 feet 6 inches x 19 feet 6 inches x 8 feet deep	1,050	
		$6,950
Tank yard, 80 x 38 feet along bulkhead north of main pier, enclosed by iron fence on river side and brick wall and iron fence on land side, with two gates	1,150	
Containing one iron round tank for ammoniacal liquor 30 feet diameter and 15 feet high, contents 79,200 gallons	1,600	
One iron round tank for naphtha 30 feet diameter and 21 feet high, contents 12,000 gallons	3,000	
Six tubular iron tanks for naphtha, 4 feet 6 inches diameter 25 feet long, contents, 3,000 gallons each, arranged in pairs on top of each other with connections to large round tank	3,600	
Carried Forward	$9,350	$1,214,895
7233 *Brought Forward*	$9,350	$1,214,895
One frame pump-house, 9 x 10 feet, irregular, one story, gravel roof, containing	400	
Containing one large Woodward special duplex, double-acting steam pump, with 6-inch connections, capacity 20,000 to 25,000 gallons per hour, used for pumping naphtha from boat into tank	1,000	
One No. 3 Woodward steam pump, for pumping naphtha from tanks on dock to tanks at works	275	
		11,025

Bulkhead, 275 feet of bulkhead along river front	$4,200	
Four hundred and sixty feet of fencing made of 2-inch planks, strongly braced, inclosing coal yards west of coal sheds along 42d and 41st streets	1,150	
		5,350
Sewers, 1,400 feet of sewers built of brick and cement from 8 to 24 inches wide extending through cellars, 340 feet of box sewer under gangway between coal sheds and under pier, 225 feet of 6-inch pipe sewer between governor-house and purifier-house cellars, 40 feet of 8-inch overflow pipe from gas-holder tanks 184 feet of box sewer in coal shed No. 1, 80 feet of 6-inch pipe sewer in retort-house No. 1		9,100
Carried Forward		$1,240,370

7234

Brought Forward		$1,240,370
Water gas, steam pipes, etc.: Eighteen feet of 4-inch castiron, 1,375 feet of 3-inch water pipe, wrought and cast-iron, 276 feet of 3-inch water pipe, overflows of condensers, 1,160 feet of 3-inch water pipe, wrought iron for salt water supply, 1,260 feet of 2-inch water pipe, 740 feet of 1½-inch water pipe, 510 feet of 1¼-inch water pipe, 2,000 feet of 1-inch and ¾-inch water pipe	5,000	
Six hundred and thirty feet of 2-inch gas pipe, 1,115 feet of 1½-inch gas pipe, 1,240 feet of 1¼-inch gas pipe, 2,100 feet of 1-inch gas pipe, 3,000 feet of ¾-inch gas pipe, 47 gas lanterns in yards on dock, 222 outlets for burners with stop-cocks	3,000	
Eighteen feet of 6-inch steam pipe, 69 feet of 3½-inch steam pipe, 51 feet of 3-inch steam pipe, 153 feet of 2½-inch steam pipe, 1,639 feet of 2-inch steam pipe, 1,460 feet of 1-inch and ¼-inch steam pipe, 2,000 feet of 1-inch and ¾-inch steam pipe	2,000	
Five hundred feet of 2-inch pressure pipe for gas governors, 450 feet of 1¼-inch pressure pipe for gauges, 2,500 feet of ¾-inch pressure pipe for gauges	1,000	
Carried Forward	$11,000	$1,240,370

7235 *Brought Forward*	$11,000	$1,240,370
Nine hundred and eighty feet of 3-inch cast-iron ammoniacal liquor pipe, 250 feet of 2-inch wrought-iron ammoniacal liquor pipe, 350 feet of 1½-inch wrought-iron ammoniacal liquor pipe	1,500	
T*ow* hundred and ninety-two feet of 8-inch earthen ware tar pipes, 1,292 feet of 8-inch cast-iron tar pipes, 12 8-inch branches, 6 bends, 1 valve, 480 feet of 3-inch cast-iron tar pipes for oil tar, 250 feet of 1¼-inch wrought-iron tar pipe for oil tar, 150 feet of 1-inch wrought-iron tar pipes for oil tar	6,000	
Seven hundred and forty-five feet of 20-inch cast-iron deodorizing pipe, 6 cast-iron elbows, 1 wrought-iron chimney on dock, 50 feet high, 20 inches in diameter	7,125	
Fifty feet of fire hydrant hose with play-pipe and coupling, 600 feet of ¾-inch hydrant hose	125	
Eighty feet of 6-inch wrought and cast-iron naphtha pipe, 1,900 feet of 3-inch wrought-iron naphtha pipe, 550 feet of 2-inch wrought-iron naphtha pipe, 350 feet of 1½ wrought-iron naphtha pipe, 50 feet		
Carried Forward	$25,750	$1,240,370

7236

Brought Forward	$25,750	$1,240,370
of 6-inch and 4-inch suction hose for naphtha pump, with 5 6-inch, one sheave blocks and tackle for raising and lowering	2,500	
		28,250
Mason tools: One tool box, containing 6 shovels, 6 picks, 6 steel drills, 2 striking hammers, 2 sledges, 1 derrick for setting retorts, 1 truck for hauling retorts		200
Driveway, leading from 41st street to 42ld street between coal sheds and between coal shed 1, and retort house with wooden gates at each street; 390 square yards pavement, 170 feet of wooden and iron run, 2 wooden gates		1,100
		$1,269,920

10th and 11th Avenues, 65th and 66th Streets.

Six gas-holder tanks, each 94 feet diameter and 26 feet depth, to footing of stones, built of brick with concrete bottoms.....	228,000	
Four telescopic gas-holders, 92 feet and 6 inches diameter of lower lift, 91 feet diameter of upper lift, 26 feet height of each lift, two holders with cast-iron, and two with wrought-iron columns, all with 20-inch inlet pipe, each holder having a capacity of 325,000 feet, at $26,000.........	104,000	
Carried Forward		$332,000

7237

Brought Forward		$332,000
Engine house, west to 10th avenue, 37 x 18 feet of frame, brick basement with concrete floor, slate roof	2,800	
Boiler vault under 10th avenue sidewalk 46 feet long and 18 feet wide by 11 feet high, roofed with brick arches turned between iron beams, arches are covered with concrete, tar paper and heavy flags. Railing on 10th avenue, enclosing area with vault lights and drop doors. Area on inner side of fence wall with iron steps leading from holder yard into vault.................	4,500	
Sewer connection from vault to 10th avenue sewer, 6-inch pipe....................	150	
Chimney wrought iron for boilers 2 feet diameter, 50 feet high, with base plate and stays	350	
Water meter and connections.............	140	
Boilers in vault, two cylindrical tubular boilers, each boiler has 4-feet diameter x 10 feet length and 50 3-inch tubes, boilers are built in brick work with cast-iron ornamental fronts	3,500	
One inspirator for feeding boilers with 1½-inch connections	75	
In engine room, one 12 horse power vertical beam engine, cylinder 6½-inch diameter x 18-inch stroke with flywheel and pulley.	900	
Carried Forward		$344,415

7238 *Brought Forward*		$344,415
On a foundation built of stone............	200	
One Mackenzie patent exhauster of 100,000 feet capacity per hour for 16-inch connections	2,000	
On a foundation of masonry............	175	
Forty feet of 10-inch belting and 1 friction pulley	200	
One 16-inch compensator................	600	
One 16-inch self acting bypass valve.......	250	
Connections to exhauster, 34 feet of 16-inch pipe, 4 16-inch bends, 2 branches, 4 valves	750	
Connections to pumping main, 48 feet of 20-inch pipe, 2 20-inch branches, 1 20-inch valve	500	
Connections to holders, 2 30-inch bends, 3 benches, 2 valves, 312 feet of 30-inch pipe, 36 feet of 20-inch pipe and 6 20-inch valves	6,000	
One iron circular stair leading from engine room to boiler room..................	150	
Furniture of engine room, as desk, table, chairs, closet, etc., steam heater, gas fixtures and connections................	125	
Tools, as hammer, chisels, caulking tools, set of pipe tongs, vise, stock and dies, stoking tools, iron and wooden shovels, ladders, wheel-barrow, chain block, ash tub, saws, block and fall, drip pump and set of oil cans	125	
Carried Forward		$355,490
7239		
Brought Forward		$355,490
One King's pressure gauge and 1 King's vacuum gauge and connections for both..	125	
1 arch pressure gauge and connections.....	25	
One self-registering gauge and connections..	200	
Three hundred and fifty feet of 2-inch water pipe, 100 feet ¾-inch hydrant hose......	150	
Two hundred and fifty-eight feet of 1½-inch steam pipe, and 80 feet of ¾-inch steam hose	100	
Three lamp posts and lanterns in yard with connections	150	
Seven wooden huts or boxes over valves in yard	50	
Eight hundred and twenty-four feet of brick fence wall; base 20 inches, upper part 16 inches with 12-inch panels and blue stone water table and coping................	12,000	

Two hundred feet of brick parapet wall at westerly end of tanks	1,200	
One thousand one hundred and seventy-six feet of wooden fence around westerly part of block	1,800	
Wooden bridge between westerly tanks	150	
Frame building in yard, 50 feet x 25 feet, with wooden roof	1,800	
Carried Forward		$373,240

7240

Brought Forward		$373,240
Containing parts of apparatus used for testing Gale & Rand's process for making naphtha gas	1,500	
Frame photometer room, 12 x 25, one story, wooden roof, on 66th street	300	
Office building, frame, one story, 12 x 25 feet	100	
Containing furniture as desk, chairs, stove, gas fixtures and piping	50	
Brick foundations of purifying house (up to level of main floor); size of building 200 x 68 feet, with foundation for 8 purifiers 27 feet x 25 feet	12,000	
Scales (14,000 pounds)	133	
Railroad car for hauling pipe	125	
		$387,448
Office proper: Lease to May 1, 1901, at 4,000 per annum, 6 1/3 years	25,333	
Two seaman's lanterns and burners	500	
Stock of glasses for same	45	
Desks for 19 men	950	
Two seaman's chandeliers	210	
Gas stoves	500	
One pressure register	175	
Four officers' desks	300	
Book-case and contents	300	
One book safe	400	
One burglar-proof safe	750	
One cashier's safe	250	
Carried Forward		$29,713

7241

Brought Forward	$29,713
Wardrobe	100
Stationary closet	100
Furniture and fixtures, etc	5,000
Furniture in collector's room	250
Heating furnaces, pipes, etc	300
Furniture in Street Department room	400

One safe in Street Department room	40	
One lamp-post ($283) and lantern ($200) in front of office	483	
Stationery	1,000	
Books of account	10,000	
		$47,386
Lamp repair room: 1 2-foot pressure holder	50	
One burner meter	25	
Lamp, stop-cock and stems	150	
One vise	16	
		241
Meter repair shop: 1 5-foot testing holder	125	
One 10-foot testing holder	175	
Ten gas furnaces at $4.90	49	
Diaphragms	400	
Block tin	50	
One rolling machine	40	
One folding machine	20	
One grind stone	10	
One smelting furnace	15	
Complete meter repairing tools for eleven men	500	
		1,384
Carried Forward		$49,011

7242

Brought Forward		$49,011.00
Meter connections room, lead pipe, lead connections made up, 2 gas furnaces, at $4.90	$9.80	
Wrought-iron pipe and fittings, union meter cocks half inch to 2 inch, wrought and malleable fittings, 1 Ford and Curtis cutting and threading machine	82.00	
Complete meter connection tools for 2 men	100.00	
		191.80
Laboratory, 2 pressure registers at $175	350.00	
One Troemner balance	150.00	
Complete chemist's outfit in chemicals, glasses, instruments, etc	500.00	
		1,000.00
Photometer room, 1 bar photometer	$250.00	
One pressure holder	50.00	
One dry meter	25.00	
One specific gr. tester	22.50	
		347.50
Street department: on hand in office, wrought and malleable fittings on hand, shovel, stocks and dies, lanterns, yarn, 1 steam-boiler for freeing service of ice, lamp glass	$64.00	
		64.0

Meter department, 12 service cleans at $25.	$300.00	
One 5-foot testing holder..................	125.00	
One Fairbanks scales....................	19.00	
Complete tools for 23 gas-fitters and indexers	500.00	
		944.00
		$51,558.30

7243 RECAPITULATION.

Meters	$273,250.80
Services	232,781.00
Mains	970,632.60
Avenue A and 1st Avenue, 60 and 61.............	12,500.00
Avenue A and 1st Avenue, 62 and 63.............	164,525.00
Tenth and 11th avenues, 41 and 42...............	8,250.00
Eleventh Avenue and Hudson, 41 and 42..........	1,269,920.00
Tenth and 11th Avenue-, 65 and 66...............	387,448.00
Office	51,558.30
	$3,370,865.70
And under contract, about.......................	150,000.00
Contract 42nd Street, East 63rd Street..............	28,000.00
	$3,548,865.70
R. E.	1,774,250.00
	$5,323,115.70

August 5, 1884.

Submitted by

METROPOLITAN GAS-LIGHT COMPANY.

7244 *D.*

VALUATION OF THE KNICKERBOCKER GAS-LIGHT COMPANY, 1884.

The diagram or plan of the Lots designated in the Schedule is appended to the original, of which this is a copy:

Real estate, located in the 12th Ward, New York City, on Blocks Nos. 214 and 125, as follows, viz.: Bounded by East 98th street, East 99th street, Second avenue and Harlem river, with bulkhead extending the entire front.....................	$550,000	
Brick dwelling house, 20 feet x 30 feet, 2 stories and cellar.....................	2,500	
Bulkhead	30,000	
		$582,500

Walls: the property is partially enclosed by 864 feet 3 inches of 12-inch brick wall, 10 feet high panelled with 4-inch pilasters coped with 3-inch bluestone, 14 inches wide, 2½-inch bluestone water table, 2 gates 10 feet wide, 1 gate 8 feet 2 inches wide, 1 gate 3 feet 10 inches wide, 1 gate 3 feet wide, 8 gate piers 32 inches x 34 inches and 12 feet high in addition to wall thickness	$11,810
One thousand two hundred and sixty-seven feet of board fence, 4 double gates and 2 single gates	2,534

The plant on the property consists of the following described buildings and their contents, to wit:

Gasogene house, brick building 70 feet 4 inches by 64 feet 8 inches, 1 story, iron roof, slated, height 25 feet	
Carried Forward	$14,344

7245

Brought Forward	$14,344
feet 8 inches to plate, 36 feet to peak, 16-inch walls, 4-iron pilasters	20,500
Foundations for	5,000
Six Gasogenes with air, steam and gas pipes complete, seal boxes, valves and take-off pipes, capacity, 3,000,000 cubic feet, 6 coal buckets for hoisting coal, 4 iron swinging cranes with windlass and chain for hoisting coal for gasogenes	41,525
Two iron coal wagons	300
One iron farmer's dumping barrow	125
Seven spare iron wagon wheels	50
Two Mackenzie's steam jet exhausters	100
Tools and implements	250
Retort house, brick building, 210 feet by 60 feet 8 inches, 1 story, iron roof slated, 23 feet to plate, 41 feet to peak in height, 16-inch walls, 4-inch pilasters	51,000
Containing foundations for plant	14,650
Eleven double benches of sixes, 12 inches x 20 inches x 18 feet fitted with mouth pieces, stand bridge and dip pipes, hydraulic main (wrought-iron) inlet main and inlet pipes with all valves and connections, complete, capacity 3,000,000 cubic feet	44,000
Naphtha main and connections	6,400
Five horizontal tubular boilers, set in brick work, 65-inch diameter, 16 feet long, 43 tubes 4-inch diameter, about 300 horse power	19,100
Five Hancock inspirators	350
One Guild & Harrison, No. 4 steam pump	375
Five steam gauges	175
Two coke wagons	450
Carried Forward	$218,694

7246 *Brought Forward*	$218,694
One platform scale (dock scales)	150
Tools and implements	250
Purifying-house, brick building 124 feet x 60 feet, 1 story and cellar, iron roof, slated, 22 feet 5 inches high to plate, 39 feet to peak, 16-inch walls, 4-inch pilasters.	28,600
Containing 8 purifiers, 20 feet x 21 feet x 3 feet (with foundations), arranged for 6 layers of lime in 2 sets of 4 each, inlet, and outlet connections 16 inches, boxes supported on masonry piers and arches, capacity 3,000,000 cubic feet 2 traveling carriages (iron) running on floor tracks, for lifting and transporting covers, 2 dry center seals, 16 inches	47,800
Two by-pass valves 16 inches, revolving top	2,000
Four farmer's iron dumping barrows	500
One turn-table for lime truck	100
Tools and implements	200
Lime-house adjoining purifying-house is 16 feet 8 inches x 74 feet 10 inches, 3 sides brick, 1 story, wooden roof, covered with slate, with cellar	5,300
Condenser and scrubber-house adjoining purifying-house, brick building 52 feet x 39 feet, 1 story, iron roof, slated, 20 feet high to plate, 32 feet 6 inches to peak, 16 inch wall, pilasters 4 inches	8,000
Containing 2 multitubular condensers 23 feet long, 4 feet wide, 15 feet high, each containing 250 tubes (with foundations), capacity 3,000,000 cubic feet...	20,800
Two wrought iron cylindrical scrubbers and foundations to same, 10 feet diameter, 24 feet high, capacity 3,000,000 cubic feet	9,800
Carried Forward	$342,194
7247 *Brought Forward*	$342,194
Connections to scrubbers, and condensers' inlet and outlet 16 inches, mains 24 inches, all valves and connections with drips complete	5,300
Engine house (adjoining retort house).	
Brick building, 4.4 feet 8 inches x 60 feet 8 inches, 23 feet high to plate, 41 feet to peak, 1 story and cellar, yellow pine ceiling and wainscot, iron roof, slated, 16-inch walls, 4 inch pilasters	14,600
Containing foundations for machinery	2,000
Four beam engines 12 inches x 20 inches	10,000
Four Mackenzie pressure blowers 4 x 4	3,200
Two Mackenzie gas exhausters with compensators, engine governors complete, capacity 3,000,000 cubic feet	7,600
Connections to engines, exhausters and blowers	5,000
Four lines counter-shafts and pulleys	3,250
Tow King vacuum and pressure gauges	150

Four glass syphon gauges 8 inches	50
One steam gauge	50
Tools and implements, cups, etc.	500
Meter-house adjoining purifying-house, building 52 feet x 39 feet, 3 sides brick, 20 feet high to plate, 32 feet 6 inches to peak, 1 story and cellar, iron roof, slated, 16-inch walls, 4-inch pilasters	9,200
Containing 1 station meter and foundation therefor (American Meter Co.) in wro't iron case 13 feet x 13 feet, 24-inch connections and valves, 1 station meter and foundation therefor (American Meter Co.), in cast-iron cases 10 feet x 10 feet, 16-inch connections and valves, capacity of meters 3,000,000 cubic feet	16,200
Carried Forward	$419,294

7248

Brought Forward	$419,294
One Isbell's patent street main governor, 30 inches, with by-pass and valves complete with foundation	2,500
Two arch pressure gauges, 6 inches	50
One Mackenzie rotary gas exhauster, 12 inches with compensator and engine governor and foundation therefor, capacity 1,000,000 cubic feet	1,800
One Copeland and Bacon trunk engine, 6 inches x 8 inches complete, and foundation for same	550
One line countershaft hangers, pulleys and belting complete	200
Two Jet photometers (Goodwin's)	200
Two Babcock fire extinguishers	75
Tank, 1 wrought iron over-flow tank, 8 feet diameter 24 feet long, capacity 9,000 gallons	1,200
Naphtha storage tanks, 7 tanks wrought iron, 8 feet diameter 30 feet long, 2 tanks wrought iron 8 feet diameter, 60 feet long, including valves and connections to naphtha pumps, capacity 30,000 gallons	27,600
Naphtha pump and tank house adjoining retort house, building 18 feet 4 inches x 15 feet 8 inches, three sides brick, two stories 22 feet 8 inches high, 12-inches walls, 4-inch pilasters, roof wood covered with slate, ($2,000) containing 1 Worthington duplex steam pump, 10 inches x 10 inches, with foundation thereunder, ($1,150)—$3,150. Two Guild and Garrison steam pumps No. 1½, and foundations therefor, one naphtha supply tank, 10 feet diameter, 7 feet high with floats, valves, pipes and measuring scale, capacity 4,000 gallons	3,150
Carried Forward	$459,769

7249 *Brought Forward*	$459,769
Seven hundred and fifty feet wrought iron, suction pipe, 10 inches with valves and specials	4,000
Twenty feet rubber suction hose, 10-inch	325
Twenty feet rubber suction hose, 6-inch	120
Thirty-four feet rubber suction hose, 4-inch	153
Hydraulic accumulator house water tank, adjoining retort house, building 18 feet 4 inches x 15 feet 8 inches, 3 sides brick, three stories, 35 feet 5 inches high, 16-inch walls, 4-inch pilasters, wooden roof covered with slate	3,000
One Davidson steam pump for accumulator No. 8, 1 accumulator, 1 water tank 5 feet long, 4 feet 2 inches wide, 3 feet deep—450 gallons, 1 water tank for works supply, 9 feet 8 inches diameter, 10 feet deep, capacity, 5,400 gallons	4,300
Office and meter shop, building 30 feet x 42 feet, 2 stories and cellar, brick wooden truss roof hip covered with tin, 30 feet high two plate, 16-inch walls, 4-inch pilasters	11,000
One Bunsen photometer (Am. Meter Co.), 100 in bar	1,000
One electric watch clock with battery, 6 watchman's station boxes and connecting wires to all parts of works	500
Office furniture, consisting of desks and table in engineer's office, desks, letter-press, chairs, floor coverings, maps and drawings, etc.	1,700
Tools, implements, machines, machinery, forges, etc., etc. (Complete outfit), for meter, proving and repairing and jobbing shop	3,500
Carried Forward	$489,367
7250 *Brought Forward*	$489,367
Carburetter house inside of retort house, brick 29 feet 8 inches x 38 feet, 3 sides, average height of walls 30 feet, 16-inch walls, 4-inch pilasters	5,700
Three carburetters and foundations to same, cast-iron trays, wrought iron jacket, 16-inch inlet and outlet pipes and valves, inlet and outlet steam, water and naphtha pipes and valves, capacity 3,000,000 cubic feet	13,500
Coal shed, brick, 124 feet x 44 feet, wooden roof, tinned, 17 feet high complete, 20-inch walls, 18-inch piers, capacity 1,500 tons	18,500
One hydraulic lift in process of completion	4,500
One Richle Bros. platform scales, cart scales	250
One platform scales, 600 pounds	75
Dwelling house, brick building, 20 feet x 30 feet 2 stories and cellar walls 22 feet 6 inches high, wooden roof, flat, covered with gravel, walls 12 inches thick, included in real estate valuation	

Stable, frame building, peak roof, shingle, 40 feet x 20 feet, containing 4 stalls	1,000
Three horses, 2 buggies, 1 wagon, 1 cart, harness and stable furniture and equipments	2,075
Gas holders, 1 water gas holder, 67 feet in diameter, 29 feet 3 inches deep, 6 wrought iron columns and girders, 20-inch inlet and outlet pipes, valves, drips, etc., capacity 108,000 cubic feet	51,500
One telescopic gas holder, 88 feet, 86 feet 6 inches in diameter, 23 feet deep, 8 wrought iron columns and	
Carried Forward	$586,467

7251

Brought Forward	$586,467
girders, 20-inch inlet and outlet pipes, valves and drips, capacity 300,000 cubic feet	70,000
Two "three lift" telescopic gas holders, in process of completion, 100 feet, 98 feet 6 inches, 97 feet in diameter, 28 feet deep; 16 wrought-iron columns and girders, 20-inch inlet and outlet pipes, valves, drips, etc., capacity 1,200,000 cubic feet	232,000
Total holder capacity 1,625,000 cubic feet, steam water and gas pipes, valves and connections throughout plant	9,000
Main connections about works	28,000
Water meters, 24-inch	800
Upright tubular boiler, 4 feet in diameter, 9 feet high, 121 tubes, 1¾-inch in diameter, cast iron base and ash-pit, 3 gauge cocks, 1 water gauge, 1 steam gauge and all steam and water valves complete, 4 Douglas pumps, No. 1, 8 Douglas pumps No. 2, 1 Douglas pump, No. 6, 1 brass pump, ¾-inch, Seneca Falls, grading and filling	2,662
When I contracted to build the two tanks and holders for the Union Gas-Light Company, the tide ebbed and flowed on the ground now occupied by them. All the property now known as the Knickerbocker Gas Works has been subsequently graded from about one foot below high-water mark to about five feet above, the cost thereof being, say $30,000	30,000

THOS. F. ROWLAND.

Carried Forward	$958,929

7252

Brought Forward	$958,929
Driven well system, pump valves and connections	3,500
Sewers throughout entire plant	5,760
Flagging inside of works (included in valuation of buildings)	
Telephone lines, hose jumper, with 500 feet fire hose	500
Pipe in yard 60 tons on hand (for use in works)	2,400

Specials in yard, 65 tons on hand (for use in works)....	3,900
Sidewalks, curbing, iron gutter bridges, outside of works on all blocks..................................	3,119
	$978,108

I hereby certify that I constructed the establishment formerly known as the "Union Gas Works," located at 98th and 99th streets, and the East River, which was subsequently purchased, and is now known as the Knickerbocker Gas Works. I also designed and constructed the improvements and betterments necessary to transform it from a "coal" to a water gas process. I am thoroughly acquainted with all the details in connection therewith; and have this day carefully revised and corrected the foregoing estimate of its value, deducting the value of bulkhead, a certain dwelling house and pavement erroneously inserted, and adding the value of the grading and such items as properly belong therein. I therefore hereby declare that the total sum of nine hundred and seventy-eight thousand one hundred and eight dollars ($978,108) is the just and true present value thereof to the best of my knowledge and belief.

THOS. F. ROWLAND.

September 8, 1884.

7253 *Street Department.*

Cars fitted with tools and implements complete, including rubber bags..........................	$2,000.00

Street Mains.

Size 30, 14,572 feet 10 inches, 2,760 miles agreed value per foot $10.25...	$149,371.55	
Size 24, 3,474 feet 3 inches, 658 miles, agreed value per foot $6.50..........	22,582.62	
Size 20, 3,352 feet 10 inches, .635 miles agreed value per foot $5...........	16,764.17	
Size 16, 23,527 feet 8 inches, 4.456 miles, agreed value per foot $3.75...	88,228.75	
Size 12, 40,988 feet 8 inches, 7.763 miles, agreed value per foot $2.50...	102,471.66	
Size 10, 2,808 feet 11 inches, .532 miles agreed value per foot $2.00.........	5,617.83	
Size 8, 50,666 feet 10 inches, 9.596 miles, agreed value per foot $1.75...	88,666.96	
Size 6, 221,232 feet 41.900 miles, agreed value per foot $1.20.........	265,478.40	
Size 4, 432 feet 11 inches, .082 miles, agreed value per foot 80 cents.......	346.33	
		$739,528.27
Carried Forward........................		$741,528.27

Total quantity in feet and inches 361,056.11.
Total quantity in miles 68.382.

7254 *Brought Forward*.......................... $741,528.27

Gate Valves on Line of Mains.

Two 30-inch flanged valves with main holes, at $478.50....................	$957.00	
One 24-inch flanged valve with main holes, at $399.......................	399.00	
One 20-inch flanged valve with main holes, at $308.......................	308.00	
One 20-inch hub valve, at $231..........	231.00	
One 16-inch hub valve, at $150..........	150.00	
Two 8-inch hub valves, at $50...........	100.00	
Two 6-inch hub valves, at $39...........	78.00	
		$2,223.00
		$743,751.27

Service Pipes.

Size.	Number of each size.	Agreed price each.		
4	4	$62.00	$248.00	
3	27	42.00	1,134.00	
2½	14	32.00	448.00	
2	314	20.00	6,280.00	
1½	1,185	15.00	17,775.00	
1¼	4,347	11.00	47,817.00	
1	738	10.00	7,380.00	
Total No. of	6,629			$81,082.00

Carried Forward.......................... $824,833.27

7255

Brought Forward.......................... $824,833.27

Meters.

Size Lights.	Number of each size.	Agreed price paid.		
250	1	$240.00	$240.00	
200	1	168.00	168.00	
150	1	120.00	120.00	
100	13	78.00	1,014.00	
60	3	47.40	142.20	
30	17	23.40	397.80	
45	17	34.80	591.60	
20	100	17.40	1,740.00	
10	465	12.60	5,859.00	
5	1,441	9.90	14,265.90	
3	5,813	7.80	45,341.00	
				$69,879.90

Office furniture and fixtures at 2008 Third Avenue, desks, safe, railings, pressure gauge, clock, storm door, awnings, etc., etc.	800.00
Telephone line	650.00
Meters, Services, Mains, etc.	$896,163.17
Plant	978,108.00
Real Estate	582,500.00
Total	$2,456,771.17

MUNICIPAL GAS LIGHT COMPANY.

VALUATION.

The diagram or plan of the Lots designated in this Schedule is appended to the original of which this is a copy.

September 8, 1884.

Real Estate. The following described property, located in the 22d Ward, on blocks bounded by West 44th and West 46th Streets, Eleventh Avenue and Hudson River, New York City, as follows, viz:

7256

On block 225 Nos. 1 to 28 inclusive, 39 and 41 to 64 inclusive, 52 lots each 25 feet by 100 feet 5 inches, 1 lot 16 feet 8 inches by 100 feet 5 inches		
On block 225*a,* 54¾ lots each 25 feet by 100 feet (8 lots above water, 32 lots under water, together with bulkhead water rights and full water grant to exterior city line.		
On block 226, Nos. 1 to 20 inclusive, and 45 to 64 inclusive, 54¾ lots each 25 by 100 feet		
On block 226*a,* 40 lots each 25 feet by 100 feet, 8 lots above water, 32 lots under water, together with bulkhead, water rights and full water grant to exterior city line.	$1,083,000	
Bulkhead, 517 feet long with two returns, dumping board, including rock filling...	52,500	
On lot No. 29, block 225, there is a two story and basement frame dwelling house (on rear of the lot)	2,500	
On lot 39, Block 225, there is a three story brick dwelling-house (situate on the front of the lot.)	3,500	
		$1,141,500

7257

On block 22[illegible]: The 44th and 45th streets property is surrounded in part by 861½ feet of 8-inch brick wall 8 feet high, 2 inches blue stone coping 12 inches wide 4-inch outside pilasters on 818 feet of rough-faced jointed stone wall 4 feet high, 3 feet 8 inches thick, coped with blue stone 2½ inches by 2 feet 4 inches wide; 7 double gates each 12 feet wide; 1 single gate, 2½ feet wide; 16 gate piers, brick, 20 inches x 28 inches in addition to 8-inch wall; 12 inside piers, brick, 8 inches x 16 inches in addition to 8-inch wall....	$10,075	
Five hundred and twenty-six feet of board fence and 2 double gates..............	1,052	
On block 226: The 45th and 46th streets property is partly enclosed by 603½ feet of 8-inch brick wall 10 feet high, 2-inch blue stone coping 12 inches wide; foundation of a portion of said wall is 245 feet of rough-faced jointed stone wall 5 feet high, 2 feet thick; 2 double gates, each 12 feet wide; 1 single gate 2½ feet wide; 6 gate piers 20 inches x 28 inches in addition to 8-inch wall; 4 inside piers 8 inches x 16 inches in addition to 8 inch wall	6,530	
Six hundred and forty-five feet of board fence and 2 double gates..............	1,290	
Dry stone retaining wall and filling around tanks	3,159	
Bulkhead: 517 feet long with two returns, dumping board; earth and rock filling. (Included in real estate valuation.).....		
Belgian pavement in yard...............	6,650	
Plant on Blocks 225 and 225*a*, as follows, viz:		
Gasogene house, brick building, 140 feet x 66 feet, one story, 49½ feet high with iron roof slated.....................	38,451	
Containing 12 gasogenes with air, steam and gas pipes, superheaters, seal boxes, "take-off" valves, pipes and mains, complete, in working order, capacity 6,500,000 cubic feet	78,973	
Carried Forward............................		$146,180

7258 *Brought Forward*		$146,180
Twelve iron railroad cars for carrying coal to gasogenes, carrying capacity 2,000 pounds each	2,400	
Twelve iron buckets for hoisting coal for gasogenes	240	
Two Guild & Garrison's No. 4 steam pumps.	750	
Six iron cranes, with windlass and chains for hoisting coal for gasogenes, 6 horizontal tubular boilers, 68 inches in diameter, 16 feet long, 63 tubes, 4 inches set in brick work, about 360 horse power, all steam and water pipes and valves complete	22,300	
Six steam gauges	195	
Six Hancock inspirators	420	
Two Guild & Garrison's No. 4 steam pumps.	750	
Two hydraulic lifts for elevating coal to gasogenes, pipes and working valves and connections complete, elevated railroad surrounding gasogenes, with two turntables, track 2 inches x 1 inch, weight 20 27-100 pounds per yard, all supported by 10½-inch I beams, 16 cast-iron columns and 4 wrought iron columns	18,400	
Two farmers dumping barrows for ashes	250	
Two coal wagons (iron) for conveying boiler fuel	300	
Two coke wagons (iron) for conveying boiler fuel	250	
Twelve glass syphon gauges, 30-inch	255	
One iron wheelbarrow	25	
One platform cart scales	450	
Complete outfit of tools and implements	500	
Carried Forward		$192,915
7259		
Brought Forward		$192,915
Retort house, brick building 207 feet x 66 feet one story 49 2-12 feet high, with iron roof slated	52,221	
Containing eighteen double benches of 6's (36 furnaces) "through retorts" 12 x 20 x 18 inches, all complete in working order, with mouth-pieces, stand, bridge and dip pipes, 6-inch hydraulic and inlet main, with main and retort valves, capacity 5,000,000 cubic feet	79,200	
Connections, valves and fittings, etc	7,600	

Four carburetters (foundations included) and connections, inlet and outlet main, valves, steam and naphtha pipes, and valves and water jacket, complete, capacity 5,000,000 cubic feet	17,855	
Two glass syphon gauges, 10 inch	10	
Four glass syphon gauges, 8-inch	18	
Two upright tubular boilers, 6 feet in diameter, 12 feet high, 195 tubes, 2 inches, about 40 horse power	3,500	
Two Hancock inspirators	125	
One Worthington duplex feed pump 4 inches x 4 inches	150	
Three iron wheelbarrows	75	
Two farmer's dumping barrows	250	
One jet photometer (Goodwin's)	100	
One water meter, 4-inch	400	
Four hose reels and rubber hose	110	
Necessary tools and implements	500	
Carried Forward		$355,029

7260

Brought Forward		$355,029
Purifying house, brick building 156 x 66 feet, one story (12-6/12 feet high), with lime room and cellar, roof wooden framing and iron truss slated, containing	33,400	
Eight purifiers, 24 x 24 feet x 3 feet, in two sets arranged for six layers of lime; supported by 8-inch wrought iron I beams and 96 cast iron columns inlet and outlet connections to boxes 20 inches, capacity 4,500,000 cubic feet; 2 iron carriages running on floor track for lifting and transporting covers; one complete set "church screens" for four boxes; One complete set Haverhill and Duffy screens for four boxes	54.571	
Two dry center seals 20-inch main inlet and outlet connections 24-inch	5,026	
Two farmers' iron dumping barrows	250	
Tools and implements necessary	300	
Office and meter-house, brick building 44 feet, 10-inch x 44 feet, two stories and cellar (48-6/12 feet high) wooden roof slated, containing	15,262	
Two station meters (with foundations thereunder) in wrought iron cases, 13 feet diameter, 13 feet high, 24-inch inlet and outlet pipes, valves and by-pass complete, capacity 4,000,000 cubic feet	16,038	

One Smith & Sayre steam jet exhauster 24-inch for water gas with governor complete, capacity 3,500,000 cubic feet	1,000	
One arch gauge 6-inch	20	
One pressure register for street mains	175	
Carried Forward		$481,071

7261

Brought Forward		$481,071
One pressure and vacuum register for exhausters	210	
One Bunsen Letheby improved photometer, 100-inch bar	1,300	
One electric watch-clock with 12 station boxes, and connecting and ground wires to all parts of the works	650	
Office furniture and fixtures, consisting of safe, 6 desks, 3 tables, map closets, letter press, lounge, chairs, illuminating power meter, window shades, maps, drawings, plans, linoleum, matting, etc., same being contained in the offices of the engineer and assistant-engineer and general office	2,650	
Spare machinery, tools and implements, etc., 1 horizontal engine 6 x 12 inches; 8 gate valves, weighmaster's scales, shovels, etc.	2,108	
Engine and condenser house, brick building, 90 feet by 50 feet, by 50 feet high, the engine-house two stories and cellar, wooden roof, the condenser house one story and cellar, wooden roof frame, iron truss, both roofs covered with slate	19,593	
The engine-house, containing 4 beam engines 12 x 18 inches, with foundations for same, about 80 horse power	9,000	
Four lines countershaft and pulleys	4,000	
Two MacKenzie exhausters with foundations, with engine governors and compensators, complete, capacity 8,000,000 cubic feet	9,394	
Carried Forward		$529,976

7262

Brought Forward		$529,976
Two steam jet exhausters (Smith & Sayre) 12 inches, complete with governors, capacity 3,000,000 cubic feet	2,000	
Two MacKenzie pressure blowers with foundations, capacity 12,500 cubic feet of air per minute with 100 revolutions, 5,500,000 gas capacity	5,298	

One Cameron steam pump No. 10, for working hydraulic coal elevator and water tank for same (Valued in railway for gasogenes.)		
Three King Vacuum and pressure gauges..	150	
One steam gauge..........................	35	
One pressure gauge for hydraulic accumulator	35	
One Siemens burner and lantern..........	275	
One water meter 4-inch..................	400	
Tar pipes in entire building..............	734	
Shafting and belting, governors and connections	9,510	
Tools and implements necessary to equip engine room fully....................	450	
The condenser-house, containing 2 wrought iron multitubular condensers (and foundations thereto) 30 feet long, 7 feet wide, 16½ feet high, 636 tubes, 4-inch, 13 feet long, 24-inch valves and connections, capacity 5,000,000 cubic feet.		
Condensers $26,600, valves and connections $4,606	31,206	
Two wrought iron cylindrical scrubbers, 10 feet diameter 21 feet high (with foundations thereunder), 24-inch valves and connections, capacity 5,000,000 cubic feet	10,000	
Carried Forward...........................		$590,069

7263

Brought Forward...........................		$590,069
One Pelouze and Audouin condenser, capacity 4,000,000 cubic feet.............	6,700	
One accumulator for hydraulic coal elevator, included in value of El. R. R., in gasogene house		
One glass syphon gauge, 18 inches........	9	
One glass syphon gauge, 24 inches........	18	
One differential gauge, 12 inches..........	18	
Eleven glass syphon gauges, 8 inches each..	40	
One glass syphon gauge, 6 inches.........	4	
One glass syphon gauge, 12 inches, and all necessary tools and implements.........	6	
In loft over engine-house, sundry valves, pulleys, electrical apparatus, etc., etc....	8,617	
Naphtha tank and pump house, brick building, 18 feet x 18 feet, 2 stories, 27 feet high, wooden roof, slated.............	2,000	
Containing 1 naphtha supply tank, 12 feet diameter, 7 feet deep, with floats, pulleys and scales, capacity 6,000 gallons.......	1,000	

Two Worthington duplex steam pumps (with foundation for same), 10 inches x 10¼ inches, capacity	2,000	
Two hundred and fifteen feet 10 inch wrought-iron suction pipe with gates	1,850	
Twenty feet 10-inch rubber suction hose with couplings	325	
Twenty feet 6-inch rubber suction hose with couplings	120	
Twenty feet 4-inch rubber suction hose with couplings	103	
Carried Forward		$612,879

7264

Brought Forward		$612,879
Two Cameron steam pumps, No. 8, for filling supply tank	925	
Naphtha storage tanks and vault surrounding same underground, brick wall 12 inches thick, 86 feet x 10 feet 6 inches x 7 feet high, with wooden roof	1,500	
Eighteen wrought-iron tanks, 8 feet diameter, 30 feet long each, with dome capacity 210,000 gallons, 6-inch discharge pipe, 18 6-inch Ludlow valves	42,209	
Three hundred and eighty-three feet picket fence	575	
One wrought iron tank underground	2,950	
Water tower, brick building, 20 feet diameter, 35 feet high, two stories	2,950	
Containing wrought-iron water tank, 20 feet diameter, 20 feet high, capacity 50,000 gallons	3,900	
Two Worthington duplex steam pumps, 7 inches x 10 inches (with the foundations thereto) fitted with valves and connections for supplying tank or for use as fire pumps	1,400	
One mercury syphon gauge, 20 inches (manometer), connected to tank	25	
Two jumpers, with hose reels and 1,000 feet fire hose	1,000	
Chemist's laboratory fully equipped, density apparatus, test and analytical apparatus, tubes, chemical apparatus, etc., etc	850	
Furniture in chemist's laboratory, drawers, closets, shelves, tables, etc., etc	750	
Boiler house in tank yard, brick building, 19 feet high, wooden roof slated	880	
Carried Forward		$672,793

7265 *Brought Forward*............................		$672,793
Containing 1 upright tubular boiler (with foundation) 4 feet 8 inches in diameter, 12 feet high, 157 tubes, 2-inch complete with all connections..................	1,550	
One Worthington duplex steam feed pump, 4 inches x 4 inches, with foundations for same................................	150	
Governor house in tank yard, brick building, 27 feet in diameter, octagon shape, 16½ feet high, lathed and plastered, wooden roof slated	2,900	
Containing 1 Isbell's patent street main governor (with foundation thereunder) with inlet and outlet valves, by-passes, and complete connection to all holders.......	20,750	
One arch gauge, 9-inch..................	28	
Two arch gauges, 6-inch..................	45	
One Worthington steam pump 4 inches x 4 inches	150	
Coal shed and elevator, coal shed, wooden building 120 feet x 80 feet high, with elevated tracks, capacity 4,000 tons, iron turntable and four-floor tracks through shed, 1 Riehle Bros. platform scales for weighing coal, 1 Hunt's patent elevator for discharging coal from boats with two elevated tracks into shed, Riehle Bros. platform scale on elevator, with railway rails, switches, etc., etc., 1 Copeland & Bacon double cylinder hoisting engine, complete, 2 iron coal tubs, 1 ton each, 2 iron coal tubs, ½ ton each, 2 Hunt's patent coal cars, water gas and steam pipes.....	14,500	
Carried Forward............................		$712,866
7266		
Brought Forward............................		$712,866
Gas holders, 1 holder for water gas, single lift, 72 feet 6 inches in diameter, 30 feet high, 8 wrought iron columns and girders, with tank, inlet and outlet pipes and valves, etc., capacity 125,000 cubic feet..	61,000	
Four gas holders, telescopic, each 90 feet 6 inches in diameter, 60 feet high, 8 wrought-iron columns and girders, with tanks, inlet and outlet pip-s and valves, etc., capacity 375,000 cubic feet each.....	320,000	

(Inlet and outlet pipes, valves, drips, and connections to those four holders are valued in the valuation of governor house.)

Plants on Blocks 226 and 226*a* as follows, viz:

Gas Holders, 1 holder for water gas, single lift, 72 feet 6 inches diameter, 30 feet high, 8 wrought-iron columns and girders, inlet and outlet pipes, valves, tank, etc., etc., capacity 125,000 cubic feet.........	61,000	
One gas holder telescopic, 180 feet diameter, 80 feet high, 18 wrought-iron columns and girders, tank, inlet and outlet pipes, valves, etc., etc., capacity 2,000,000 cubic feet	435,500	
One experimental gas holder, single lift in wrought-iron tank, 20 feet diameter, 10 feet high, cast-iron columns and wrought-iron girders, capacity 300,000 cubic feet..	3,000	
Gasogene and retort house, brick building, 105 feet by 65 feet, one story 41 1/3 feet high, iron roof slated, containing 2 gaso-		
Carried Forward..........................		$1,593,366

Brought Forward..........................		$1,593,366
genes with foundations complete, capacity 1,000,000 cubic feet.............	11,300	
Four double benches of four's retorts 12 inches x 20 inches x 18 inches with foundations, stand bridge and dip pipes, 6-inch hydraulic main, inlet main, retort connections, etc., capacity 500,000 cubic feet, 1 upright tubular boiler and foundation, boiler 6 feet diameter, 12 feet high, 195 tubes, 2-inch diameter, 1 Worthington duplex steam pump 4 inches x 4 inches experimental apparatus carburetter furnaces upright pipe-condenser, 20-inch engine exhauster governor, 4 purifiers 5 feet x 5 feet x 3 feet with dry centre seal station, meter 48 inches and rootblower..............	41,450	
Carbu-tting house, brick building, 26 feet by 26 feet, 1 story, 16¼ feet high, wooden roof, slated	3,000	
One carburetter and foundation, carburetter with wrought iron jacket, 8-inch inlet and outlet valves and connection, capacity 400,000 cubic feet....................	1,000	
Naphtha tank and pump house, brick building 10 feet by 10 feet, two stories, 24 feet high, wooden roof, slated..............	750	

One naphtha supply tank with scales, floats, etc., complete, 5 feet diameter, 8 feet high, capacity 1,200 gallons	800	
One naphtha tank, 18 inches diameter, 6 feet deep, capacity 80 gallons		
Carried Forward		$1,651,666
7268		
Brought Forward		$1,651,666
One Worthington duplex steam pump, 4 inches x 1 inch and foundation		
Pipe shop and meter repair shop, brick building, 38 feet by 28 feet, 1 story, 23 feet high, wooden roof, slated	4,000	
One meter prover, 20 feet	375	
One meter prover, 10 feet	150	
One small holder for gas	50	
One pressure gauge, 9 inches		
Tools and implements, spare machinery stocks and fixtures	5,723	
Two Copeland & Bacon engines, 8 inches x 8 inches, double cylinder, 2 lines counter shaft, pulleys, 1 Knowles pump pulleys, etc., etc.	3,925	
Valve and boiler house: Brick building 30 feet 8 inches by 24 feet 8 inches, two stories, 31 7/12 feet high, with cellar, wooden roof gravelled; boiler house 16 feet x 16 feet, brick building, one story, — feet high, wooden roof gravelled	5,000	
One MacKenzie exhauster (and foundation therefor), 12-inch connections, valves and by-pass, engine, governor and compensator	1,800	
One Copeland and Bacon single engine, 8 inches x 12 inches, with foundation therefor	550	
Two upright tubular boilers (and foundations for same), 3 feet diameter, 9 feet high, 45 tubes 1¾ inch diameter	1,750	
One Worthington duplex steam pump, 4 inches x 4 inches	150	
Two Hancock inspirators	110	
One water meter	65	
Carried Forward		$1,675,314
7269		
Brought Forward		$1,675,314
Valves and connections between holders	3,650	
Stable: Brick building, 62 feet x 47 feet, one story 35 feet high, wooden roof, slated, concrete floor, 13 stalls	9,500	

Eight horses, 4 wagons, 1 spring truck, 2 carriages, 3 carts, 1 drip cart and cask, harness, blankets and stable utensils and equipments complete	5,530	
Blacksmith's and carpenter's shops, carriage house and store rooms: One story, 12 feet high, frame, part shingle and part gravel roof, building 121 feet 6 inches x 18 feet, containing all necessary blacksmith's and carpenter's tools, stock, etc	3,500	
Naphtha storage tanks, underground: Two wrought iron tanks each 8 feet in diameter, 30 feet long with domes; one wrought iron tank, 7 feet 6 inches wide, 30 feet long, 7 feet deep, with discharge pipes, etc., etc., capacity 30,000 gallons	6,900	
Total holder capacity of entire plant, 3,753,000 cubic feet		
Total capacity of naphtha storage tanks, 240,000 gallons		
Steam, water and gas pipes, valves, cocks and connections throughout the entire plant	15,000	
Main connections about works, outside of buildings and tanks	45,000	
Sewers, throughout entire plant	5,000	
Flagging, inside of buildings. (This item is included in value of buildings.)		
Cisterns	250	
Carried Forward		$1,769,644

7270

Brought Forward		$1,769,644
Scows, one scow for transporting ashes and foul lime, No. 1, 80 feet long, 26 feet wide, 7 feet 7 inches deep, with windlass, derrick, ropes and fittings; one scow, No. 2, 71 feet long, 25 feet wide, 7 feet deep	5,800	
Sidewalks, flagging, curbing, bridging, gutter iron, etc., outside of works, in all blocks	4,358	
Pipe in yard, 60 tons of pipe on hand	2,400	
Specials, 65 tons of specials on hand	3,900	
Grading, when this property was used for "saw mill" purposes and at the time it was taken for its present use, the tide ebbed and flowed up to a point now occupied by the eastern wall of the gasogene house. The excavation from the tanks, etc., served in a measure to fill up to the present western line of the property but not entirely so, for a large sum has been expended upon the property to bring it to its		

present condition so far as relates to grade, and a proper amount to represent the material and labor will be, say............	10,000	
Miscellaneous surveyer's instruments, lamps and lanterns in yard, tiles, fire brick, gasogenes blocks	1,425	
		$1,797,527.00

This is to certify that I designed and constructed the buildings, plant, etc., known as the Municipal Gas Works. I am very familiar with every portion of the said establishment and know the cost of its production.

7271 I have this day carefully revised and corrected the foregoing estimate of its value, deducting therefrom the value set opposite the "Bulkhead" and adding the value of some items which I know to obtain, but which have been omitted. I therefore declare that the gross sum of one million seven hundred and ninety-seven thousand five hundred and twenty-seven dollars ($1,797,527) is the just and true value thereof at the present time, to the best of my knowledge and belief.

(Signed) THOMAS F. ROWLAND.

Sept. 8th, 1884.

Street department, carts fitted with tools and implements complete	$3,003.00

Street Mains.

Size of main, inches.	Quantity in miles.	Quantity, feet.	Inch.	Agreed value per foot.		
30	1.527	8,062	.7	$10.25	$82,641.48	
16	4.651	24,557	.3	3.75	92,089.68	
12	8.807	46,500	.11	2.50	116,252.29	
10	2.125	11,272	.10	2.00	22,545.66	
8	19,774	104,405	.5	1.75	182,709.48	
6	35.916	189,634	.8	1.20	227,561.60	
4	3.647	19,259		.80	15,407.20	
3	.388	2,051		.70	1,435.70	
2	.537	2,844		.55	1,564.20	
1½	.241	1,275		.50	637.50	
Total.	77.622	409,862	8			742,844.79

Valves on line of Mains.

Four 16-inch valves at $150 each.........	$600.00	
Ten 12-inch valves at $119 each.........	1,190.00	
Three 10-inch valves at $92 each.........	276.00	
Eleven 8-inch valves at $50 each.........	550.00	
Seven 6-inch valves at $39 each..........	273.00	
		2,889.00

Carried forward........................... $748,736.79

7272

Brought forward........................ $748,736.79

Service Pipes.

Size.	No. of each size.		Agreed price, each.		
6	4	at	$140........	$560	
4	36	at	62........	2,232	
3	256	at	42........	10,756	
2½	80	at	32........	2,560	
2	596	at	20........	11,920	
1½	846	at	15........	12,690	
1¼	5,569	at	11........	61,259	
1	49	at	10........	490	
¾	34	at	10........	340	
Total.	7,470				102,803.00

Meters.

Size.	No. of each size.		Agreed price, each.		
500 light,	2	at	$540.00	$1,080.00	
300 light,	36	at	300.00	10,800.00	
250 light,	12	at	240.00	2,880.00	
200 light,	54	at	168.00	9,072.00	
150 light,	53	at	120.00	6,360.00	
100 light,	135	at	78.00	10,530.00	
60 light,	117	at	47.40	5,545.80	
45 light,	129	at	34.80	4,489.20	
30 light,	211	at	23.40	4,937.40	
20 light,	748	at	17.40	13,015.20	
10 light,	1,771	at	12.60	22,314.60	
5 light,	3,415	at	9.90	33,808.50	
3 light,	4,227	at	7.80	32,970.60	
	10,910				157,803.30

Office furniture and fixtures, 360 Fourth Avenue: Consisting of partitions, closets, racks, safes, desks, chairs, counters, maps, tables, lounge, clocks, carpet and mats, pressure gauges, gas fixtures, shades, awnings, storm doors, etc., etc.................. 17,780.00

Carried Forward......................... $1,027,123.09

7273 *Brought Forward*	$1,027,123.09
Telephone lines .6	650.00
Burner department: Partitions, desks, benches, lathes, tools and implements	1,780.00
Service department and fitting shop: Carts completely equipped with tools and implements for service work and tools, implements and fixtures of jobbing and meter setting shop	1,600.00
Pipe and fittings on hand at fitting shop	3,500.00
Mains, services, meters, etc	1,034,653.09
Plant	1,797,527.00
Real Estate	1,141,500.00
	$3,973,680.09
Add for street main pipe and specials in yard, say	13,970.00
	$3,987,650.09

HARLEM GAS-LIGHT COMPANY.

Real Estate.

Block 140, 8 lots, Avenue A	$36,000		
Eight lots, First Avenue	48,000		
Seventeen lots, 110 Street	68,000		
Seventeen lots, 111th Street	85,000		
		$237,000	
Block 141, 6 lots, First Ave	$36,000		
Eight lots, 111th Street	40,000		
Two lots, 112 Street	10,000		
		86,000	
Block 226, 8 lots, 1st Ave	$48,000		
Twelve lots, 110 Street	66,000		
Lots, gore	3,500		
Fifteen lots,111th Street	82,500		
		$200,000	
Block 227, 3 lots, First Ave	$18,000		
Five lots, 111th Street	27,500		
Gore, 112th Street	7,500		
		$53,000	
Block 68, 1 plot on Kingsbridge road, near Inwood		28,000	
			604,000.00
Carried Forward			$604,000

7274 *Brought Forward*	$604,000
Bulkhead, avenue A and East River	100,000
Office building and lot on Third avenue and 114th Street	50,000
Office furniture	5,000
Laboratory	2,000

Retort house, with all necessary gas mains, valves, tar pipes, etc	$65,000	
Retort house, addition	8,600	
Thirty-two benches of 6s, $2,350	75,200	
Ten benches of 5s, $2,000	20,000	
Two benches of 6s, $2,600	5,200	
Twelve coke buggies, $85	1,020	
Eight hub coke chargers, $35	280	
One Fairbank scale	150	
One weighing house	100	
Tools	950	
One tar well, 750 barrels	500	
		177,000
Purifying house	$44,000	
Four purifying boxes	20,000	
Two centre seals	1,000	
Two scrubbers	10,000	
One condenser	6,000	
One condenser	8,500	
One ammonia well	500	
One Cameron pump	250	
		90,250
Engine and boiler house	$6,000	
Two engines	1,200	
Two exhausters	3,600	
Three boilers	3,500	
		14,300
Two oil stills	$1,300	
One Cameron pump	500	
One well	50	
		1,850
Carried Forward		$1,044,400

7275

Brought Forward		$1,044,400
Five coal sheds		5,000
One gasolene tank		12,000
One ammonia tank		500
Elevated railway	10,000	
One Fairbanks scale	250	
Two hoisting engines	1,200	
Six cars	1,200	
Six tubs	400	
		13,050
Carpenter shop	$500	
Shed	1,000	
		1,500
Machine shop	$8,500	
Four forges	500	

One Engine	600	
One lathe, 1 drilling machine, 1 pipe cutting machine, etc.	3,000	12,600
One air pump	$600	
Three rotary pumps	1,800	2,400
Office and furniture	$8,500	
Two photometers	1,200	9,700
New engine boiler, exhauster and condenser house with all apparatus, new purifying house and boxes, seats and connections, new lime house, new gas holder		220,000
Three gas holders		180,000
Meter house	$7,000	
One station meter	6,500	
One station meter	3,500	17,000
Carried Forward		$1,518,150

7276

Brought Forward		$1,518,150
Two Governor houses		15,000
One boiler house	$1,500	
One boiler	1,500	3,000
Dwelling		3,000
Stable and sheds	$12,000	
Thirteen horses	2,600	
Six coke carts	600	
Three meter wagons	375	
Two service wagons	300	
One pipe truck	100	
Four carriages	700	
One four-wheel tool cart	100	
Five sets cart harness	250	
Five sets wagon harness	250	
Five sets buggy harness	250	17,525
Three water meters		400
One gas holder		20,000
Four hundred and fifty feet brick wall		4,500
Two thousand six hundred feet of fence		2,600
Seven hundred feet of sewer		2,500
One platform scale		500
8,232 feet 2-inch street main at $.53	$4,362.96	
104,426 feet 3-inch street main at .70	115,098.20	
345,173 feet 4-inch street main at .80	276,138.40	
160,568 feet 6-inch street main at 1.20	192,681.60	

8,360 feet 10-inch street main at 2.00..	16,720.00	
32,509 feet 12-inch street main at 2.50..	81,272.50	
1,824 feet 16-inch street main at 3.75..	6,840.00	
5,380 feet 20-inch street main at 5.00..	26,900.00	
726,472		720,013.66
Carried Forward..........................		$2,307,188.66

7277

Brought Forward..........................				$2,307,188.66
10,890	3-light meters at	$7.80......	$84,942.00	
1,970	5-light meters at	9.90......	19,503.00	
250	10-light meters at	12.60......	3,150.00	
68	20-light meters at	17.40......	1,183.20	
19	30-light meters at	23.40......	444.60	
20	45-light meters at	30.58......	611.60	
10	60-light meters at	47.40......	474.00	
3	80-light meters at	64.80......	194.40	
11	100-light meters at	78.00......	858.00	
1	150-light meters at	120.00......	120.00	
2	200-light meters at	168.00......	336.00	
1	250-light meters at	240.00......	240.00	
2	300-light meters at	300.00......	600.00	112,656.80
9,570	1-inch services at $10.00........		$95,700	
1,228	1¼-inch services at $11.00......		13,508	
621	1½-inch services at $15.00......		930	
34	2-inch services at $20.00........		680	
4	2½-inch services at $32.00......		128	
3	3-inch services at $42.00........		126	111,072.00
				$2,530,917.46

RECAPITULATION.

Mains and valves..................	$720,013.66	
Meters	112,656.80	
Services	111,072.00	
Works	826,175.00	1,769,917.46
Real estate	$604,000.00	
Bulkhead	100,000.00	
Office building	50,000.00	
Office furniture	5,000.00	
Laboratory, etc..................	2,000.00	761,000.00
		$2,530,917.46

7278 COMPLAINANT'S EXHIBIT 71.

CONSOLIDATED GAS CO. OF N. Y. STATUS OF REAL ESTATE, PLANT, AND PROPERTY, AS SHOWN UNDER THE FOLLOWING HEADINGS ON THE BOOKS OF THE COMPANY.

	As per schedule. June —, 1884.	Additions to Nov. 11, 1884.	Total. Nov. 11, 1884.
Real Estate	$10,332,000.00	....	$10,332,000.00
Plant	12,175,000.00	7,491.41	12,182,491.41
Mains	5,217,000.00	16,962.10	5,233,962.10
Services	1,005,000.00	29,241.41	1,034,241.41
Meters	1,195,000.00	36,753.98	1,231,753.98
Meter Cocks and Connections	....	11,926.53	11,926.53
Pipe and Specials	....	88,398.43	88,398.43
Office Furniture and Fixtures	70,000.00	....	70,000.00
Horses, Wagons, and Harness	....	1,115.00	1,115.00
Tools and Implements	....	3,273.70	3,273.70
Gas Stoves	....	1,256.45	1,256.45
Scows			
	$29,994,000.00	$196,419.01	$30,190,419.01
Franchises and Rights	7,781,000.00	....	7,781,000.00
	$37,775,000.00	$196,419.01	$37,971,419.01

7279 COMPLAINANT'S EXHIBIT 72.

Extract from the Special Meeting of the Stockholders of the Consolidated Gas Company, of New York, held March 9, 1900.

"Resolved, That the Capital Stock of the Consolidated Gas Company of New York, be increased from the present amount thereof, to wit, Thirty-nine million and seventy-eight thousand ($39,078,000) dollars, consisting of three hundred and ninety thousand seven hundred and eighty (390,780) shares of the par value of One hundred ($100) dollars each, to Fifty-four million five hundred and ninety-five thousand two hundred ($54,595,200) dollars, to consist of five hundred and forty-five thousand nine hundred and fifty-two (545,952) shares of the par value of One hundred ($100) dollars each, and that the trustees of this company be and they hereby are requested to issue such increase of capital stock, namely, one hundred and fifty-five thousand one hundred and seventy-two (155,172) shares, and use the same to redeem, in accordance with the terms thereof, the outstanding 4 per cent. debentures of this company issued for the stock of the New York Gas and Electric Light, Heat and Power Company, and aggregating Thirty-six million ($36,000,000) dollars.

COMPLAINANT'S EXHIBIT 73.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Certificate of Increase of Capital Stock.

We, the undersigned, William Nelson Cromwell, Chairman, and O. F. Zollikoffer, Secretary, respectively, of a special meeting 7280 of the stockholders of the Consolidated Gas Company of New York, a domestic stock corporation, held for the purpose of increasing its capital stock, do hereby certify:

I. That prior to such meeting, a notice, stating the time, place and object thereof, and the amount of the increase proposed signed by a majority of the directors, was published once a week for at least three successive weeks in the New York *Sun* and the New York *Evening Post*, two newspapers in the County of New York, where the principal business office of such corporation is located.

II. That the following is a true copy of such notice:

CONSOLIDATED GAS COMPANY OF NEW YORK,

No. 4 Irving Place.

Notice to Stockholders.

New York, *June* 21, 1900.

Notice is hereby given that a Special Meeting of the Stockholders of the Consolidated Gas Company of New York will be held on the sixteenth day of July, 1900, at eleven o'clock in the forenoon, at the office of said company, No. 4 Irving Place, in the City of New York, for the purpose of voting upon a proposition to increase its capital stock from the present thereof, to wit: Fifty-four million five hundred and ninety-five thousand two hundred dollars, consisting of five hundred and forty-five thousand nine hundred and fifty-two shares of the par value of One hundred dollars each, to an amount not exceeding Eighty million dollars, or eight hundred thousand 7281 shares of the said par value; such increase of the proceeds thereof, to be used for any of the following purposes, to wit: acquiring the stocks, bonds or other obligations of other Gas or Electric Light Companies, providing for the redemption or payment of the company's debentures, debenture scrip or other indebtedness, or for additional improvements, or for such other purposes as the stockholders may determine to be expedient; and also for the purpose of transacting such other business as may come before the meeting.

JOHN P. HUGGINS,
ANTHONY N. BRADY,
S. S. PALMER,
THOMAS F. RYAN,
H. E. GAWTRY,
SAMUEL SLOAN,
JAMES STILLMAN,
GEO. F. BAKER,
WILLIAM ROCKEFELLER,
M. TAYLOR PYNE,
W. C. WHITNEY,
Majority of the Board of Trustees.

The transfer books of the Consolidated Gas Company of New York will be closed on July third, 190 , at three P. M., and reopened July seventeenth, at ten A. M.

By order of the Board.

O. F. ZOLLIKOFFER, *Secretary.*

III. That a copy of such notice was also duly mailed, postage prepaid, to each Stockholder of such Corporation, at his last known post-office address, at least three weeks before the meeting.

IV. That, at the time and place specified in such notice, Stockholders appeared in person or by proxy, representing 442,092 shares of the Capital Stock of the said Corporation, being more than three-fourths of the total Capital Stock outstanding, and organized 7282 said Meeting by choosing from their number the undersigned, William Nelson Cromwell, as Chairman, and O. F. Zollikoffer, as Secretary thereof.

V. That the notice of the Meeting and proof of the proper publishing and mailing thereof were presented and directed to be spread upon the minutes.

VI. That upon motion, a vote was then taken of those present in person or by proxy, upon the following Resolution:

"Resolved, That the Capital Stock of the Consolidated Gas Company of New York be increased from the present amount thereof, to wit, $54,595,200, consisting of Five hundred and forty-five thousand nine hundred and fifty-two (545,952) shares of the par value of One hundred ($100) dollars each, to Eighty hundred thousand (8,000,000) to consist of Eight hundred thousand (800,000) shares, of the par value of One hundred ($100) dollars each."

VII. That Stockholders owning 442,092 shares of Stock, being more than three-fourths of all of the Stock of the Corporation, voted in favor of such Resolution; and no Stockholders voted against its adoption.

VIII. That a sufficient number of votes having been cast in favor of such increase, such Resolution was thereupon declared duly adopted.

IX. That the amount of Capital of said Corporation actually paid in, is Fifty-four million five hundred and fifty-one thousand nine hundred ($54,551,900) dollars, and that the additional amount previously authorized is Forty-three thousand three hundred 7283 ($43,300) dollars, making the total amount actually paid in and authorized, Fifty-four million five hundred and ninety-five thousand two hundred ($54,595,200) dollars; that the whole amount of the debts and liabilities of such Corporation is $10,584,914 73-100; and that the amount to which the Capital Stock of such Corporation is increased is Eighty million ($80,000,000) dollars.

In Witness Whereof, We have made, signed, verified and acknowledged this Certificate in duplicate, this 16th day of July, 1900.

WM. NELSON CROMWELL, *Chairman.*
O. F. ZOLLIKOFFER, *Secretary.*

TATE OF NEW YORK, *County of New York:*

William Nelson Cromwell, Chairman, and O. F. Zollikoffer, Sec-
tary, respectively, of the Meeting mentioned in the foregoing Cer-
ficate, being severally duly sworn do depose and say, each for him-
lf, that he has read the foregoing Certificate subscribed by him and
nows its contents, and that the same is true.

WM. NELSON CROMWELL.
O. F. ZOLLIKOFFER.

Sworn to before me, July 16, 19900.

WALLACE YOUNG,
Notary Public No. 3.

Certificate filed in N. Y. Co. Kings Co.

284 STATE OF NEW YORK, *County of New York:*

On the 16th day of July, 1900, before me personally came William Nelson Cromwell and O. F. Zollikoffer, to me personally known
o be the persons described in and who made, signed and verified the
foregoing Certificate, and severally duly acknowledged to me that
they made, signed and verified the same for the uses and purposes
therein set forth.

WALLACE YOUNG,
Notary Public No. 3.

[SEAL.]

Certificate filed in N. Y. Co. Kings Co.

No. 206.

STATE OF NEW YORK, *County of New York:*

I, William Sohmer, Clerk of the said County and Clerk of the Supreme Court of said State for said County, do certify, that I have compared the preceeding with the original Certificate of Increase of Capital Stock on file in my office and that the same is a correct transcript therefrom and of the whole of such original.

Endorsed: Filed and recorded July 19th, 1900, 10 h. 55 M.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal, this 19th day of ——, 1900.

WM. SOHMER.

7285 STATE OF NEW YORK, *Office of the Secretary of State:*

I have compared the preceding with the original Certificate to increase the Capital Stock of the Consolidated Gas Company of New York, filed and recorded in this office on the 18th day of July, 1900, and I do hereby certify the same to be a correct transcript therefrom and of the whole thereof.

Witness my hand and the seal of office of the Secretary of State, at the City of Albany, this eighteenth day of July, nineteen hundred.

JOHN T. McDONOUGH,
Secretary of State.

(Endorsement on Exhibit 73.)

CONSOLIDATED GAS COMPANY OF NEW YORK.

Certificate of increase of Capital
Stock.

"Tax for privilege of increase of
Capital of this Corporation,

$19,396.50

Under Chapter 908, Laws of 1896,

Paid to

State Treasurer before filing.

State of New York,
Office of Secretary of State,

Filed and Recorded Mar. 12, 1900.

J. B. H. Mongin,
Deputy Secretary of State."

7286

COMPLAINANT'S EXHIBIT 74.

EXTRACT FROM THE MINUTES OF A SPECIAL MEETING OF THE STOCKHOLDERS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK, HELD JULY 16, 1900.

"Resolved, That the capital stock of the Consolidated Gas Company of New York be increased from the present authorized amount thereof, to wit, fifty-four million five hundred and ninety-five thousand two hundred dollars ($54,595,200), consisting of five hundred and forty-five thousand nine hundred and fifty-two (545,952) shares, of the par value of one hundred dollars ($100) each, to eighty million dollars ($80,000,000), to consist of eight hundred thousand (800,000) shares of the par value of one hundred dollars ($100) each.

Resolved, That the Board of Trustees may issue and sell or otherwise dispose of such increase of the Company's stock, at such times, in such amounts, for such consideration and upon such terms as shall to them seem advisable; and may use such increase and the proceeds of any sale or other disposition thereof, as and when they see fit for acquiring the stocks, bonds or other obligations, properties or franchises of other gas or electric light companies, or for providing for the redemption or payment of the debentures, debenture scrip or other indebtedness of this company, or for making improvements upon the property of this Company, or for acquiring other property, or for any other purpose which the said board may approve or authorize.

7287 It is hereby recommended, that, whenever in the opinion of the board of trustees, the proceeds of such additional capital stock shall be required, the board offer to the stockholders of this company the privilege of subscribing in proportion to their respective holdings of stock at the time specified in the said offer, to such amount of the said additional capital stock, and at such price per share, not less than par, as the board may then deem expedient, and all of such stock so offered but not subscribed for may be disposed of by the board upon the same terms.

COMPLAINANT'S EXHIBIT 75.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Certificate of Increase of Capital Stock.

We, the undersigned, William Nelson Cromwell, Chairman, and Robert A. Carter, Secretary, respectively, of a Special Meeting of the Stockholders of the Consolidated Gas Company of New York, a domestic Stock Corporation, held for the purpose of increasing its Capital Stock, DO HEREBY CERTIFY:

I. That prior to such meeting, a notice, stating the time, place and object thereof, and the amount of the increase proposed, signed by the President and the Secretary, was published once a week, for at least two successive weeks, in the New York *Sun* and the New York *Times*, two newspapers, in the County of New York, where the principal business office of such Corporation is located.

II. That the following is a true copy of such notice:

7288 CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 4 Irving Place.

Notice to Stockholders.

New York, *May* 18, 1904.

Notice is hereby given that a Special Meeting of the Stockholders of the Consolidated Gas Company of New York will be held on the 2d day of June, 1904, at 12 o'clock noon, at the office of the said Company, No. 4 Irving place, in the City of New York, for the purpose of voting upon a proposition to increase its capital stock from the present amount thereof, to wit: Eighty million dollars ($80,000,000), consisting of eight hundred thousand (800,000) shares of the par value of $100 each, to one hundred million dollars ($100,000,000) or one million (1,000,000) shares of the said par value; such increase or the proceeds thereof to be used for providing additional improvements and betterments, the acquisition of additional property, the payment of any indebtedness of the Company, whether now existing or hereafter contracted, and for such other purposes as the stockholders at such meeting may determine to be expedient, and also for the purpose of transacting such other business as may come before the Meeting.

The transfer books of the Company will be closed on May 26, 1904, at 3 P. M., and reopened on June 3, 1904, at 10 A. M.

By order of the board.

H. E. GAWTRY, *President.*

R. E. CARTER, *Secretary.*

7289 III. That a copy of such notice was also duly mailed, postage prepaid, to each Stockholder of such Corporation, at his last known post-office address, at least two weeks before the Meeting.

IV. That, at the time and place specified in such notice, Stockholders appeared in person or by proxy, representing 555,479 shares of the Cap*ti*al Stock of the said Corporation, being more than two-thirds of the total Capital Stock outstanding, and organized said Meeting by choosing from their number the undersigned, William Nelson Cromwell, as Chairman, and Robert A. Carter as Secretary thereof.

V. That the notice of the meeting and proof of the proper publishing and mailing thereof were presented and directed to be spread upon the Minutes.

VI. That, upon motion, a vote was then taken of those present in person or by proxy, upon the following Resolution:

"RESOLVED, That the capital stock of the Consolidated Gas Company, of New York, be increased from Eighty million dollars ($80,000,000) consisting of Eight hundred thousand (800,000) shares of the par value of One hundred dollars ($100) each, to One hundred million dollars ($100,000,000) to consist of One million (1,000,000) shares, of the par value of One hundred dollars ($100) each."

VII. That Stockholders owning 555,479 shares of Stock, being more than two-thirds of all the Stock of the Corporation, voted in favor of such Resolution, and none voted against its adoption.

VIII. That a sufficient number of votes having been cast in favor of such increase, such Resolution was thereupon declared duly adopted.

7290 IX. That the amount of Capital of said Corporation heretofore authorized, is Eighty million dollars ($80,000,000); that the amount thereof actually issued is Eighty million Dollars ($80,000,000) and that the amount to which the Capital Stock of such Corporation is increased is One hundred million Dollars ($100,000,000).

IN WITNESS WHEREOF, we have made, signed, verified and acknowledged this Certificate in duplicate, this 2nd day of June, 1904.

WM. NELSON CROMWELL,
Chairman of said Meeting.
R. A. CARTER,
Secretary of said Meeting.

STATE OF NEW YORK, *County of New York:*

William Nelson Cromwell, Chairman, and Robert A. Carter, Secretary of the Meeting mentioned in the foregoing Certificate, being severally duly sworn, do depose and say, each for himself, that he has read the foregoing Certificate subscribed by him, and knows its contents, and that the same is true.

WM. NELSON CROMWELL,
R. A. CARTER.

Sworn to before me, June 2d, 1904.
[SEAL.]

WALLACE YOUNG,
Notary Public, 5, Kings County.

Certificate filed in N. Y. County.

7291 STATE OF NEW YORK, *County of New York:*

On this second day of June, 1904, before me personally came William Nelson Cromwell and Robert A. Carter, to me personally known to be the persons described in and who made, signed and verified the foregoing certificate, and severally duly acknowledged to me that they made, signed and verified the same for the uses and purposes therein set forth.

[SEAL.]

WALLACE YOUNG,
Notary Public, 5, Kings County.

Certificate filed in N. Y. County.

No. 564.

STATE OF NEW YORK, *County of New York, ss:*

I, Thomas L. Hamilton, Clerk of the said County and Clerk of the Supreme Court of said State for said County, do certify that I have compared the preceding with the original Certificate of Increase of Capital Stock on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

Indorsed, filed and recorded June 7, 1904, 3 h. 15 m.

In Witness Whereof, I h[illegible] hereunto subscribed my name and affixed my official seal, this 7[illegible]ay of June, 1904.

THOMAS L. HAMILTON, *Clerk.*

7292 STATE OF NEW YORK, *Office of the Secretary of State, ss:*

I have compared the preceding with the original Certificate to Increase the Capital Stock of Consolidated Gas Company of New York, filed and recorded in this office on the 6th day of June, 1904, and I do hereby certify the same to be a correct transcript therefrom and of the whole thereof.

Witness my hand and the seal of office of the Secretary of State, at the City of Albany, this sixth day of June, one thousand nine hundred and four.

[SEAL.]

HORACE G. TENNANT,
Second Deputy Secretary of State.

(Endorsement on Exhibit 75:)

CONSOLIDATED GAS COMPANY OF NEW YORK.

Certificate of Increase of
Capital Stock.

Dated July 16, 1900.

Tax for privilege of increase of
capital of this corporation,

$31,756.00,

Under Chapter 908, Laws of 1896,

Paid to
State Treasurer before Filing.

State of New York,
Office of SECRETARY OF STATE,

Filed and Recorded July 18, 1900.

J. B. H. MONGIN,
Deputy Secretary of State.

7293

COMPLAINANT'S EXHIBIT 76.

EXTRACT FROM THE MINUTES OF A SPECIAL MEETING OF THE STOCKHOLDERS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK, HELD JUNE 2, 1904.

"Resolved, That the capital stock of the Consolidated Gas Company of New York be increased from Eighty million ($80,000,000) dollars, consisting of eight hundred thousand (800,000) shares, of the par value of One hundred ($100) dollars each, to One hundred million ($100,000,000) dollars, to consist of one million (1,000,000) shares, of the par value of One hundred ($100) dollars each.

Resolved, That the Board of Directors of the Company be and they are hereby authorized to issue forthwith the coupon debentures of the company, at par in denominations of $500, and such multiples thereof as the board may deem expedient, to the extent of $20,000,000 par value, dated July 1, 1904, and payable in cash July 1, 1909 (unless sooner converted into the stock of the company, as hereinafter provided), with interest at the rate of six per cent. 6% per annum, represented by coupons, payable semi-annually on the first days of January and July in each year; such debentures to contain a provision giving the holder thereof the privilege, upon the expiration of three years, namely, on July 1, 1907, and on any subsequent interest date prior to July 1, 1909, to convert the said debentures into the capital stock of the company, at its par value; and that the increased capital stock, about provided for, be reserved for the purpose of such conversion.

Resolved, That the stockholders of record on June 8, 1904, at 3

P. M., shall have the right to subscribe, at par, for the said debentures, to the extent of twenty-five per cent. (25%) of their holdings of the stock of the company, as shown at the closing of the transfer books on June 8, 1904, at 3 P. M., provided they shall exercise such right on or before June 25, 1904, at 3 P. M., and that for the purpose of ascertaining the names of stockholders, who may be entitled to subscribe for such debentures, the transfer books of the company be closed from 3 P. M. on June 8, 1904, until 10 A. M. on June 16, 1904. 7294

Resolved, That all debentures not subscribed and paid for by the stockholders, in the manner hereinafter provided shall be disposed of to such persons and in such manner as may be determined by the trustees, but at not less than par.

Resolved, That so much of the said increased stock as may not be required for purposes of conversion, as aforesaid, be sold and disposed of by the Board of Trustees, at such times, to such persons, in such amounts, for such consideration, at not less than par, and upon such terms as shall seem to them advisable.

Resolved, That the proceeds of the said debentures and of so much of the said increased stock as may not be required for the purpose of conversion be used for providing additional improvements and betterments, the acquisition of additional property, the payment of any indebtedness of the company, whether now existing or hereafter contracted, and for such purposes as the Board of Trustees may approve or authorize.

7295

COMPLAINANT'S EXHIBIT 77.

Canceled Revenue Stamp—10 cents.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Certificate of Increase of Capital Stock.

We, the undersigned, H. E. Gawtry, Chairman, and O. F. Zollikoffer, Secretary, respectively, of a special meeting of the stockholders of the Consolidated Gas Company of New York, a domestic stock corporation, held at the office of said company, No. 4 Irving Place, in the City of New York, on the ninth day of March, A. D., 1900, at twelve o'clock noon, for the purpose of voting upon a proposition to increase its capital stock, do hereby certify:

That prior to such meeting, a notice, stating the time, place and object thereof, and the amount of the increase proposed, signed by a majority of the Trustees, was published once a week, for at least three successive weeks, in the "Sun" and the "Evening Post," newspapers in the County of New York, where the principal business office of such corporation is located.

That the following is a true copy of such notice:

"CONSOLIDATED GAS COMPANY OF NEW YORK,

No. 4 Irving Place.

NOTICE TO STOCKHOLDERS.

NEW YORK, *February 8th*, 1900.

7296 Notice is hereby given that a Special Meeting of the Stockholders of the Consolidated Gas Company of New York will be held on the 9th day of March, 1900, at 12 o'clock noon, at the office of said Company, No. 4 Irving Place, in the City of New York, for the purpose of voting upon a proposition to increase its capital stock from thirty-nine million and seventy-eight thousand dollars ($39,078,000), consisting of three hundred and ninety thousand seven hundred and eighty shares of the par value of one hundred dollars ($100) each, to fifty-four million five hundred and ninety-five thousand two hundred dollars ($54,595,200) to consist of five hundred and forty-five thousand nine hundred and fifty-two shares of the par value of one hundred dollars ($100) each, and to take such other action as may be appropriate and lawful for such meeting, in respect to the issue and disposition of the increase of such Capital Stock, if the same shall be authorized.

SAMUEL SLOAN,
JAMES STILLMAN,
GEO. F. BAKER,
WM. ROCKEFELLER,
M. TAYLOR PYNE,
JOHN P. HUGGINS,
F. AUG. SCHERMERHORN,
H. E. GAWTRY,
A Majority of the Trustees.

The transfer books of the Consolidated Gas Company of New York will be closed on February 27th, at 3 P. M. and reopened March 10th, at 10 A. M.

By order of the Board.

O. F. ZOLLIKOFFER, *Secretary.*"

7297 That a copy of said notice was also personally served upon or duly mailed, postage prepaid, to each stockholder of said corporation, at his last-known post-office address, at least three weeks before the meeting.

That at the time and place specified in said notice, stockholders appeared in person or by proxy, in numbers representing at least a majority of all the shares of stock of said corporation and organized said meeting by choosing from their number the undersigned, H. E. Gawtry as chairman, and the undersigned, O. F. Zollikoffer as Secretary thereof.

That the notice of the meeting and proof of the proper publishing and mailing thereof were presented, and ordered on file.

That, upon motion, a vote was then taken of those present in person or by proxy upon the following resolution:

RESOLVED, that the capital stock of the Consolidated Gas Company of New York be increased from the present amount thereof, to wit, thirty-nine million and seventy-eight thousand dollars ($39,078,000), consisting of three hundred and ninety thousand seven hundred and eighty (390,780) shares of the par value of one hundred dollars each, to fifty-four million five hundred and ninety-five thousand, two hundred dollars ($54,595,200) to consist of five hundred and forty-five thousand, nine hundred and fifty-two (545,952) shares, of the par value of one hundred dollars ($100) each; and that the Trustees of this Company be, and they hereby are, requested to issue such increase of capital stock, namely, one hundred and fifty-five thousand one hundred and seventy-two (155,172) shares and use the same to redeem, in accordance with the terms thereof, the outstanding four per cent, debentures of this Company, issued for stock of the New York Gas and Electric Light, Heat and
7298 Power Company, and aggregating thirty-six million dollars ($36,000,000).

That stockholders owning Three hundred and eight thousand eight hundred and forty-one (308,841) shares of stock, being more than two-thirds of all the stock of the corporation, voted in favor of said resolution; and stockholders owning no shares of stock voted against said resolution.

That a sufficient number of votes having been cast in favor thereof, said resolution was declared duly adopted.

That the amount of capital of said corporation actually paid in is thirty-nine million and seventy-eight thousand dollars ($39,078,000) and the whole amount of the debts and liabilities of said corporation is thirty-nine million, nine hundred and twenty-nine thousand three hundred and thirty-six and 53/100 dollars ($39,929,336.53) thirty-six million dollars ($36,000,000) thereof consisting of the debentures of the Company, issued in January, 1900, mentioned in the foregoing resolution, to be redeemed according to their terms, by the issue of the increase of stock thereby created, and that the amount to which the capital stock of said corporation is increased is fifty-four million five hundred and ninety-five thousand two hundred dollars ($54,595,200).

IN WITNESS WHEREOF, we have made, signed, verified and acknowledged this certificate in duplicate.

Dated, this 9th day of March, 1900.

H. E. GAWTRY, *Chairman.*
O. F. ZOLLIKOFFER, *Secretary.*

7299 STATE OF NEW YORK, *County of New York, ss:*

H. E. Gawtry, Chairman, and O. F. Zollikoffer, Secretary, respectively, of the aforesaid meeting, being severally duly sworn, do depose and say, and each for himself deposes and says, that he has read the foregoing certificate subscribed by him, and knows its contents, and that the same is true.

H. E. GAWTRY, *Chairman.*
O. F. ZOLLIKOFFER, *Secretary.*

Sworn to before me this 9th day of March, 1900.

[SEAL.] FRANK M. CLARK,
Notary Public, Westchester County.

Certificate filed in New York.

STATE OF NEW YORK, *County of New York, ss:*

On this 9th day of March, 1900, before me personally came H. E. Gawtry, and O. F. Zollikoffer, to me personally known to be the persons described in and who made, signed and verified the foregoing certificate, and severally duly acknowledged to me that they made, signed and verified the same.

[SEAL.] EMANUEL PERLS,
Notary Public, N. Y. Co.

7300 No. 226.

STATE OF NEW YORK, *County of New York, ss:*

I, William Sohmer, Clerk of the said County, and Clerk of the Supreme Court of said State for said County, DO CERTIFY, That I have compared the preceding with the original Certificate of Increase of Capital Stock on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original. Endorsed, filed and recorded March 13th, 1900, at 9h. and 10m.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 30th day of July, 1900.

WM. SOHMER, *Clerk.*

STATE OF NEW YORK, *Office of the Secretary of State, ss:*

I have compared the preceding with the original Certificate to Increase the Capital stock of Consolidated Gas Company of New York, filed and recorded in this office on the 12th day of March, 1900, and I do hereby certify the same to be a correct transcript therefrom and of the whole thereafter.

Witness my hand, and the seal of office of the Secretary of State, at the City of Albany, this 22nd day of March, nineteen hundred.

[SEAL.] JOHN T. McDONOUGH,
Secretary of State.

7301 (Endorsement on Exhibit 77:)

CONSOLIDATED GAS COMPANY OF NEW YORK

CERTIFICATE OF INCREASE
of
Capital Stock,

Dated June 2, 1904.

Tax for privilege of increase of
capital of this Corporation.

$10,000.

Under Chapter 448, Laws of 1901.

Paid to

State Treasurer before Filing.

State of New York,
Office of SECRETARY OF STATE,
Filed and Recorded June 6, 1904.
J. B. H. MONGIN,
Deputy Secretary of State.

7302

COMPLAINANT'S EXHIBIT 78.

CONSOLIDATED GAS COMPANY OF NEW YORK.

REAL ESTATE, PLANT, PROPERTY AND CONSTRUCTION AS SHOWN IN THE BALANCE SHEET AT NOVEMBER 11, IN THE YEAR 1884, AND AT DECEMBER 31, OF EACH OF THE FOLLOWING YEARS.

Year.	Amount.
1884	$37,971,419.01
1885	38,175,046.46
1886	38,390,143.62
1887	39,030,732.96
1888	39,967,996.26
1889	40,654,884.76
1890	41,059,706.64
1891	41,699,890.26
1892	42,450,786.35
1893	43,416,396.63
1894	43,930,828.02
1895	44,188,883.65
1896	44,366,979.93
1897	44,576,521.05
1898	45,033,781.60
1899	45,688,221.40
1900	45,862,406.41
1901	46,438,975.90
1902	46,672,936.12
1903	46,789,121.38
1904	47,402,617.53
1905, Oct. 31	47,664,984.91

(Here follows Complainant's Exhibit 79, marked p. 7303.)

COMPLAINANT'S EXHIBIT 79.

CONSOLIDATED GAS COMPANY OF NEW YORK
VARIATION IN REAL ESTATE, PLANT, PROPERTY AND CONSTRUCTION FROM DATE OF CONSOLIDATION
NOVEMBER 11th, 1884 to OCTOBER 31, 1905.

	Valuation at Consolidation Nov. 11th, 1884.	Construction Since Consolidation	Depreciation (Renewals) Since Consolidation	Net Increase	Valuation October 31, 1905.	Expended in Repairs Since Consolidation to October 31st, 1905.	
Real Estate	$10,332,000.00	$597,789.57	..	$597,789.57	$10,929,789.57		
Buildings, Machinery, Holders, Plant	12,182,491.41	5,132,620.41	$1,227,683.10	3,904,937.31	16,087,428.72	$1,275,749.03 4,865,362.51	Repairs to Buildings. " " Apparatus.
Mains	5,233,962.10	3,459,249.15	841,060.22	2,618,188.93	7,852,151.03	2,131,176.37	
Services	1,034,241.41	711,502.55	533,672.87	177,829.68	1,212,071.09	1,297,653.12	
Meters	1,231,753.98	2,460,066.34	750,783.25	1,709,283.09	2,941,037.07	1,864,717.53	
Meter Cocks and Connections	11,926.53	622,347.60	320,559.66	301,787.94	313,714.47	..	
Pipe and Specials	88,398.43	105,667.28	80,806.07	24,861.21	113,259.64	..	
Office Furniture and Fixtures	70,000.00	64,503.02	94,794.29	**30,291.27*	39,708.73	..	
Horses, Wagons and Harness	1,115.00	105,535.34	82,521.99	23,013.35	24,128.35	..	
Automobiles and Accessories	..	6,915.15	..	6,915.15	6,915.15	..	
Tools and Implements	3,273.70	394,875.02	341,803.55	53,071.47	56,345.17	558,214.89	
Gas Stoves	1,256.45	783,661.04	497,297.72	286,363.32	287,619.77	338,793.23	
Scows	..	19,816.15	..	19,816.15	19,816.15	..	
	$30,190,419.01	$14,464,548.62	$4,770,982.72	$9,693,565.90	$39,883,984.91	$12,331,666.68	
Franchises and Rights	7,781,000.00				7,781,000.00		
	$37,971,419.01				$47,664,984.91		

*Figures in *italics* in red ink in original.

7304 COMPLAINANT'S EXHIBIT 80.

CONSOLIDATED GAS COMPANY OF NEW YORK.

STATEMENT OF ASSETS AND LIABILITIES, OCTOBER 31st, 1905.

Investments in the Gas Business:		*Assets.*	*Liabilities.*
Plant and Property—Manhattan...	$47,664,984.91		
" " " —Astoria......	5,560,000.00		
		$53,224,984.91	
Material and Supplies...........................		616,470.08	
National Coke and Coal Co.......................		50,000.00	
Due from Consumers and Others, and Temporary Investments and Loans..........................	8,517,071.00		
Excluding (*a*)........	6,517,071.00		
		2,000,000.00	
Cash............................	7,200,423.64		
Excluding (*a*)....................	6,200,423.64		
		1,000,000.00	
		$56,891,454.99	
Derived from—			
Capital Stock (part)...............			$41,356,409.86
Convertible Debentures issued 1904.	19,857,600.00		
Excluding (*a*)....................	12,717,494.64		
		....	7,140,105.36
Debenture Bonds issued 1888....................		....	1,387,000.00
Insurance Fund and Bond Premium..............		....	303,908.93
Renewals and Contingencies Fund...............		....	971,101.87
Consumers' Deposits...........................		....	904,520.07
Accounts payable and Accrued Charges (part)....		....	3,281,711.52
Surplus...		....	1,546,697.38
			$56,891,454.99

7305 *Investments in the Gas Business Excluded Above:*

	Assets.	Liabilities.
Due from Consumers and Others, and from Temporary Investments and Loans.................	$6,517,071.00	
Cash..	6,200,423.64	
	$12,717,494.64	
Derived from—		
Convertible Debentures issued 1904, Excluded Above..	....	$12,717,494.64
Total in Gas Business......................	$69,608,949.63	$69,608,949.63
Investments in Securities of Other Companies:		
Total Amount..................................	$53,041,134.52	
Derived from—		
Capital Stock (balance)...........	....	38,643,590.14
* Premium on Capital Stock	....	14,322,217.95
Accounts payable and Accrued Charges (balance).	....	75,326.43
Total Book Values.........................	$122,650,084.15	$122,650,084.15

7306

COMPLAINANT'S EXHIBIT 81.

CONSOLIDATED GAS COMPANY OF NEW YORK.

INVESTMENTS IN THE GAS BUSINESS, OCTOBER 31, 1905.

Real Estate (Land and Office Buildings)	$10,929,789.57
Plant (Manufacturing and Holders)	16,087,428.72
Mains	7,852,151.03
Services	1,212,071.09
Meters, Meter Cocks and Connections, and miscellaneous Personal Property	3,802,544.50
	39,883,984.91
Material and Supplies	616,470.08
Cash Working Capital	1,000,000.00
Accounts Receivable	2,000,000.00
Invested in Gas Manufacturing Plant at Astoria (through ownership of all outstanding stock and securities of The Astoria Light, Heat and Power Company)	5,560,000.00
Invested in Cartage Plant (through ownership of entire stock of National Coke and Coal Company)	50,000.00
Total	49,110,454.99
In addition to the foregoing, the Consolidated Gas Company then had in hand, from proceeds of its Debentures of July 1st, 1904, $6,200,423.64 in cash and $6,517,071.00 in temporary investments, pending investment thereof in further construction then in progress, as will hereinafter appear	12,717,494.64
making a total investment of tangible assets in the said gas business of	$61,827,949.63

7307

COMPLAINANT'S EXHIBIT 82.

CONSOLIDATED GAS.

MARKET QUOTATIONS ON CAPITAL STOCK.

	Lowest.	Highest.
1885	80	104½
1886	133	168
1887	136½	241½
1888	164	205½
1889	163	223¼
1890	164	201
1891	92½	104¾
1892	102	128
1893	108	144
1894	111	140
1895	126	161½
1896	133	168
1897	136½	241½
1898	167	205
1899	163	223¼
1900	164	201
1901	187	238
1902	205	230¾
1903	164	222
1904	185	220
1905	184½	214

7308

COMPLAINANT'S EXHIBIT 83.

CONSOLIDATED GAS COMPANY OF NEW YORK.

STATEMENT SHOWING RATE OF DIVIDEND PAID EACH YEAR.

Year.	Rate.
1885	7%
1886	3%
1887	4%
1888	4%
1889	5%
1890	5%
1891	5%
1892	6%
1893	7½%
1894	8%
1895	8%
1896	8%
1897	8%
1898	8%
1899	5½%
1900	6%
1901	8%
1902	8%
1903	8%
1904	8½%
1905	8½%
1906—Six months to June 30	3%

7309

COMPLAINANT'S EXHIBIT 84.

CONSOLIDATED GAS CO. OF N. Y.

DIVIDENDS CALCULATED AT EIGHT PER CENT. AND EXCESS OF EIGHT PER CENT. OVER DIVIDENDS ACTUALLY PAID, 1885–1906.

Dividend dates.	Div. No.	Capital stock.	Rate.	Dividends paid.	Calculated at 8 per cent.	Excess at 8 per cent. over dividends actually paid.
June 15, 1885	1	$35,414,700.00	3½ %	$1,239,514.50	$1,416,588.00	$177,073.50
Dec. 15, 1885	2	35,422,500.00	3½ %	1,239,787.50	1,416,900.00	177,112.50
June 15, 1886	3	35,424,600.00	1½ %	531,369.00	1,416,984.00	885,615.00
Dec. 15, 1886	4	35,425,300.00	1½ %	531,379.50	1,417,012.00	885,632.50
June 15, 1887	5	35,426,200.00	2 %	708,524.00	1,417,048.00	708,524.00
Dec. 15, 1887	6	35,426,600.00	2 %	708,532.00	1,417,064.00	708,532.00
June 15, 1888	7	35,427,400.00	2 %	708,548.00	1,417,096.00	708,548.00
Dec. 15, 1888	8	35,427,700.00	2 %	708,554.00	1,417,108.00	708,554.00
June 15, 1889	9	35,428,200.00	2½ %	885,705.00	1,417,128.00	531,423.00
7310 Dec. 15, 1889	10	35,428,300.00	2½ %	885,707.50	1,417,132.00	531,424.50
June 15, 1890	11	35,428,900.00	2½ %	885,722.50	1,417,156.00	531,433.50
Dec. 15, 1890	12	35,429,300.00	2½ %	885,732.50	1,417,172.00	531,439.50
June 15, 1891	13	35,429,600.00	2½ %	885,740.00	1,417,184.00	531,444.00
Dec. 15, 1891	14	35,429,700.00	2½ %	885,742.50	1,417,188.00	531,445.50
Mar. 15, 1892	15	35,429,700.00	1½ %	531,445.50	708,594.00	177,148.50
June 15, 1892	16	35,429,700.00	1½ %	531,445.50	708,594.00	177,148.50
Sept. 15, 1892	17	35,429,700.00	1½ %	531,445.50	708,594.00	177,148.50
Dec. 15, 1892	18	35,429,800.00	1½ %	531,447.00	708,596.00	177,149.00
Mar. 15, 1893	19	35,429,800.00	1½ %	531,447.00	708,596.00	177,149.00
June 15, 1893	20	35,429,800.00	2 %	708,596.00	708,596.00	
Sept. 15, 1893	21	35,429,800.00	2 %	708,596.00	708,596.00	

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Dec. 15, 1893	22	35,429,800.00	2 %	708,596.00	708,596.00	
Mar. 15, 1894	23	35,429,800.00	2 %	708,596.00	708,596.00	
June 15, 1894	24	35,429,900.00	2 %	708,598.00	708,598.00	
Sept. 15, 1894	25	35,429,000.00	2 %	708,598.00	708,598.00	
Dec. 15, 1894	26	35,429,900.00	2 %	708,598.00	708,598.00	
Mar. 15, 1895	27	35,429,900.00	2 %	708,598.00	708,598.00	
7311 June 15, 1895	28	35,429,900.00	2 %	708,598.00	708,598.00	
Sept. 15, 1895	29	35,429,900.00	2 %	708,598.00	708,598.00	
Dec. 15, 1895	30	35,429,900.00	2 %	708,598.00	708,598.00	
Mar. 15, 1896	31	35,429,900.00	2 %	708,598.00	708,598.00	
June 15, 1896	32	35,429,900.00	2 %	708,598.00	708,598.00	
Sept. 15, 1896	33	35,429,900.00	2 %	708,598.00	708,598.00	
Dec. 15, 1896	34	35,429,900.00	2 %	708,598.00	708,598.00	
Mar. 15, 1897	35	35,429,900.00	2 %	708,598.00	708,598.00	
June 15, 1897	36	35,429,900.00	2 %	708,598.00	708,598.00	
Sept. 15, 1897	37	35,429,900.00	2 %	708,598.00	708,598.00	
Dec. 15, 1897	38	36,229,900.00	2 %	724,598.00	724,598.00	
Mar. 15, 1898	39	36,729,900.00	2 %	734,598.00	734,598.00	
June 15, 1898	40	36,729,900.00	2 %	734,598.00	734,598.00	
Sept. 15, 1898	41	37,729,900.00	2 %	754,598.00	754,598.00	
Dec. 15, 1898	42	37,729,900.00	2 %	754,598.00	754,598.00	
Mar. 15, 1899	43	39,077,900.00	2 %	781,558.00	781,558.00	
June 15, 1899	44	39,077,900.00	1½ %	586,168.50	781,558.00	195,389.50
Sept. 15, 1899	45	39,077,900.00	1 %	390,779.00	781,558.00	390,779.00
Dec. 15, 1899	46	39,077,900.00	1 %	390,779.00	781,558.00	390,779.00
7312 Mar. 15, 1900	47	39,077,900.00	1 %	390,779.00	781,558.00	390,779.00
June 15, 1900	48	54,551,900.00	1 %	545,519.00	1,091,038.00	545,519.00
Sept. 15, 1900	49	54,551,900.00	2 %	1,091,038.00	1,091,038.00	
Dec. 15, 1900	50	71,593,700.00	2 %	1,431,874.00	1,431,874.00	
Mar. 15, 1901	51	72,533,900.00	2 %	1,450,678.00	1,450,678.00	

Complainant's Exhibit 84—*Continued.*

Dividend dates.	Div. No.	Capital stock.	Rate.	Dividends paid.	Calculated at 8 per cent.	Excess at 8 per cent. over dividends actually paid.
June 15, 1901	52	72,830,200.00	2 %	1,456,604.00	1,456,604.00	
Sept. 15, 1901	53	72,831,100.00	2 %	1,456,622.00	1,456,622.00	
Dec. 15, 1901	54	72,886,400.00	2 %	1,457,728.00	1,457,728.00	
Mar. 15, 1902	55	72,891,100.00	2 %	1,457,822.00	1,457,822.00	
June 15, 1902	56	72,891,800.00	2 %	1,457,836.00	1,457,836.00	
Sept. 15, 1902	57	72,916,400.00	2 %	1,458,328.00	1,458,328.00	
Dec. 15, 1902	58	72,917,100.00	2 %	1,458,342.00	1,458,342.00	
Mar. 15, 1903	59	72,917,200.00	2 %	1,458,344.00	1,458,344.00	
June 15, 1903	60	72,917,200.00	2 %	1,458,344.00	1,458,344.00	
Sept. 15, 1903	61	72,917,600.00	2 %	1,458,352.00	1,458,352.00	
Dec. 15, 1903	62	79,986,300.00	2 %	1,599,726.00	1,599,726.00	
Mar. 15, 1904	63	79,998,900.00	2 %	1,599,978.00	1,599,978.00	
June 15, 1904	64	79,999,600.00	2 %	1,599,992.00	1,599,992.00	
7313 Sept. 15, 1904	65	80,000,000.00	2 %	1,600,000.00	1,600,000.00	
Dec. 15, 1904	66	80,000,000.00	2½ %	2,000,000.00	1,600,000.00	*400,000.00*
Mar. 15, 1905	67	80,000,000.00	2½ %	2,000,000.00	1,600,000.00	*400,000.00*
June 15, 1905	68	80,000,000.00	2 %	1,600,000.00	1,600,000.00	
Sept. 15, 1905	69	80,000,000.00	2 %	1,600,000.00	1,600,000.00	
Dec. 15, 1905	70	80,000,000.00	2 %	1,600,000.00	1,600,000.00	
Mar. 15, 1906	71	80,000,000.00	2 %	1,600,000.00	1,600,000.00	
June 15, 1906	72	80,000,000.00	1 %	800,000.00	1,600,000.00	800,000.00
As at June 30th, 1906	...	....	......	$70,042,725.50	$80,989,916.00	$10,947,190.50

Note.—Figures in *italics* in red ink in original.

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COMPLAINANT'S EXHIBIT 85.

CONSOLIDATED GAS COMPANY OF NEW YORK.

SALES (BY FEET) DURING EACH YEAR FROM NOVEMBER 11th, 1884, to DECEMBER 31st, 1905.

Year	*Cubic Feet*
1884—November 11 to December 31	559,957,000
1885	3,942,433,000
1886	4,192,689,000
1887	4,844,514,000
1888	5,382,147,000
1889	5,615,509,000
1890	5,904,343,000
1891	6,269,804,000
1892	6,581,954,000
1893	6,854,014,000
1894	6,731,325,000
1895	6,736,461,000
1896	6,837,571,000
1897	6,790,864,000
1898	7,306,829,000
1899	8,615,523,000
1900	9,898,001,000
1901	10,296,955,000
1902	11,494,838,000
1903	12,766,545,000
1904	13,170,760,000
1905	13,283,164,000

ERTICAL IN BOOK

7315

COMPLAINANT'S EXHIBIT 86.

CONSOLIDATED GAS CO. OF N. Y.

Year.	Active meters on district.	Sales cubic feet.	Average sales per mile of mains.	Average sales per active meters.	Unaccounted for c. f.	Pr. Ct.
1885	109,397	3,942,433,000	5,507,807	36,038	746,421,513	15.92
1886	114,032	4,192,689,000	5,815,990	36,768	782,131,452	15.72
1887	126,100	4,844,514,000	6,607,537	38,418	859,645,059	15.07
1888	135,465	5,382,147,000	7,202,702	39,731	974,842,620	15.33
1889	144,789	5,615,509,000	7,389,508	38,784	856,577,821	13.15
1890	155,153	5,904,343,000	7,728,804	38,055	854,239,106	12.55
1891	163,588	6,269,804,000	8,172,000	38,327	859,353,483	11.97
1892	171,920	6,581,954,000	8,469,457	38,285	871,325,096	11.61
1893	181,023	6,854,014,000	8,812,618	37,863	890,109,835	11.40
1894	182,480	6,731,325,000	8,572,643	36,888	871,514,324	11.37
1895	199,149	6,736,461,000	8,539,705	33,826	717,999,157	9.56

Complainant's Exhibit 86.—*Continued.*

1896	213,199	6,837,571,000	8,645,741	32,071	661,583,572	8.76
1897	223,437	6,790,864,000	8,567,732	30,393	598,633,711	8.04
1898	253,616	7,306,829,000	9,102,928	28,811	574,998,297	7.24
1899	289,367	8,615,523,000	10,729,971	29,774	761,360,963	8.05
1900	311,960	9,898,001.000	12,279,027	31,728	930,609,136	8.53
1901	334,620	10,296,955,000	12,694,267	30,772	471,265,186	4.35
1902	354,016	11,494,838,000	14,340,225	32,470	689,187,592	5.63
1903	365,641	12,766,545,000	16,112,865	34,915	649,689,853	5.15
1904	373,886	13,170,760,000	16,606,461	35,227	678,900,832	4.88
Nominal Year to Oct. 31, 1905	383,240	13,308,364,000	16,740,080	34,726	321,327,300	3.02
Calendar Year 1905	390,330	13,283,163,767	16,698,510	34,031	318,243,115	2.34

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COMPLAINANT'S EXHIBIT No. 87.

CERTIFICATE OF INCORPORATION

OF

THE ASTORIA LIGHT, HEAT AND POWER COMPANY.

We, the undersigned, all being persons of full age, at least two-thirds being citizens of the United States and one of us a resident of the State of New York, desiring to form a corporation for the purpose of supplying gas for light and of using electricity for light, heat and power, pursuant to the provisions of the Transportation Corporations Law, Article 6, do hereby make, sign, acknowledge and file this certificate for that purpose, as follows:

First. The name of the proposed corporation is

THE ASTORIA LIGHT, HEAT AND POWER COMPANY.

Second. The objects of the said corporation are to manufacture and supply gas for lighting the streets and public and private buildings of the City of New York; and to manufacture and use electricity for producing light, heat and power, and in lighting streets, avenues, public parks and places and public and private buildings of said City; and to exercise the powers conferred by law upon corporations formed for the purposes and objects aforesaid.

Third. The amount of its capital stock is to be Five Hundred Thousand Dollars ($500,000).

7318 Fourth. The term of its existence is to be fifty years.

Fifth. The number of shares of which the stock shall consist is to be five thousand.

Sixth. The number of directors is to be five.

Seventh. The names and places of residence of the directors who are to serve for the first year are as follows:

Name.	Places of residence.
Horace W. Fuller	No. 59 West 65th St., New York.
T. Wilbur Spear	No. 449 Gates Ave., Brooklyn, N. Y.
Augustus R. Moen	No. 308 W. 77th St., New York.
Arthur C. Hume	No. 28 East 28th St., New York.
Francis R. Foraker	No. 122 W. 94th St., New York.

Eighth. The operations of the corporations are to be carried on in The City of New York, and in the several counties of New York, Kings, Queens and Richmond, lying within the said The City of New York; and the office of the Corporation is to be located in the County of Queens.

In Witness Whereof, we have made, signed, sealed and acknowledged this certificate in duplicate this nineteenth day of January, one thousand eight hundred and ninety-nine.

HORACE W. FULLER.
T. WILBUR SPEAR.
A. RENE MOEN.
ARTHUR C. HUME.
FRANCIS R. FORAKER.

7319 State of New York, *County of New York, ss:*

On this nineteenth day of January, 1899, before me personally came Horace W. Fuller, T. Wilbur Spear, Augustus R. Moen, Arthur C. Hume and Francis R. Foraker, to me severally known to be the persons described in and who made and signed the foregoing certificate, and severally duly acknowledged to me that they each made, signed and executed the same for the uses and purposes therein set forth.

[SEAL.] ADOLPH C. WAPPLER,
Notary Public, New York County.

(Cancelled Revenue Stamp 10 Cents.)

State of New York, *County of New York, ss:*

I, William Sohmer, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Adolph C. Wappler, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And, further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

7320 In Testimony Whereof, I have hereunto set my hand and affixed the seal of said Court and County, the 19th day of January, 1899.

[SEAL.] WM. SOHMER, *Clerk.*

(Cancelled Revenue Stamp 10 Cents.)

State of New York, *County of Queens, ss:*

I, James Ingram, Clerk of the County of Queens, and of the Courts of Record for said County, do certify, that I have compared the preceding with the original Certificate of Incorporations The Astoria Light, Heat and Power Company as the same is recorded in Liber No. 5 of Certificate of Incorporations on page 89, on January 20th, 1899, in the Clerk's Office of said County, and that the same is a true and correct copy thereof, and the whole of such original.

In Witness Whereof, I have hereunto subscribed my hand and affixed the Seal of said Court and County, the 11th day of May, 1905.

[SEAL.] D. L. VAN NOSTRAND, *Clerk.*

STATE OF NEW YORK, *Office of the Secretary of State, ss:*

I have compared the preceding with the original Certificate of Incorporation of The Astoria Light, Heat and Power Company, filed and recorded in this office on the 20th day of January, 1899, and do hereby certify the same to be a correct transcript therefrom and the whole of said original.

7321 Witness my hand and seal of office of the Secretary of State, at the City of Albany, this 20th day of Ja-uary, one thousand eight hundred and ninety-nine.

J. N. H. MONGIN,
Deputy Secretary of State.

COMPLAINANT'S EXHIBIT 88.

CERTIFICATE OF INCORPORATION

OF THE

NATIONAL COKE AND COAL COMPANY.

We, the undersigned, desiring to form a corporation pursuant to the provisions of the Business Corporations Law, all being of full age and citizens of the United States and at least one of us being a resident of the State of New York, do hereby certify:

1. That the name of the proposed corporation is the National Coke and Coal Company.

II. That the purposes for which it is to be formed are:

1. To manufacture, purchase, use and sell, throughout the United States and elsewhere, coke and coal and all products composed in whole or in part of coke and coal in combination with other substances, and all machinery, apparatus and fixtures for any purposes relating in any manner to the production and use of coke and coal, or either of them, and their products, as aforesaid.

2. To carry on the trade or business of miners, engineers, colliery proprietors and coke manufacturers, and for those purposes to search for, get and make merchantable, and to sell and dispose of coal and other minerals and substances, and all products composed in whole or in part of coke or coal in combination with other substances, and to manufacture and sell coal, coke, fuel and other products, as aforesaid. 7322

3. To acquire by purchase, lease and otherwise, and to hold, use, manage, operate, lease and dispose of lands, mineral deposits and mineral rights, water powers and water rights, quarries, coal properties and collieries, together with the veins or seams of coal and other minerals, situate therein, and all wharves, railways, fixed and

movable plant, machinery and other property and effects appertaining or belonging thereto, and all patent rights, inventions, franchises, grants, licenses, easements, concessions and other interests therein; to utilize and employ all forms of motive power and means of transportation which may be desirable or convenient in connection with the foregoing objects of any of them. It shall also have power to own the stocks and bonds issued by other corporations; and generally to conduct any business and enter into any contracts which may be permitted by the laws of the State of New York, or of the place where such business is transacted and contracts made.

III. That the amount of the capital stock is Fifty thousand dollars ($50,000).

IV. That the number of shares of which the capital stock shall consist is Five hundred and the amount of capital with which said corporation will begin business is Fifty thousand dollars ($50,000).

7323 V. That the location of its principal business office is to be in the Village of Mount Kisco, Westchester County, New York.

VI. That its duration is to be perpetual.

VII. That the number of its directors is to be five.

VIII. That the names and post-office addresses of the directors for the first year are as follows:

Names.	Post office addresses.
J. Edmund Wood	118 Clymer St., Brooklyn, N. Y.
Edwin North	109 West 82d St., N. Y. City.
James E. Keeler,	47 South Elliott Place, Brooklyn, N. Y
Charles F. Halstead	166 Schermerhorn St., Brooklyn, N. Y.
Cornelius A. Loughlin	224 East 19th St., N. Y. City.

IX. That the names and post office addresses of the subscribers and the number of shares of stock which each agrees to take in the corporation are as follows:

Names and post office addresses.	Number of shares subscribed.
J. Edmund Wood, 118 Clymer St., Brooklyn, N. Y	1
Edwin North, 109 West 82d St., N. Y. City	496
James E. Keeler, 47 South Elliott Place, Brooklyn, N. Y	1
Charles F. Halsted, 166 Schermerhorn St., Brooklyn, N. Y	1
Cornelius A. Loughlin, 224 East 19th St., N. Y. City	1

7324 In Witness Whereof, we have made, signed and acknowledged this certificate this eleventh day of November, 1901.

CORNELIUS A. LOUGHLIN. CHARLES F. HALSTED.
J. EDMUND WOOD. JAMES E. KEELER.
EDWIN NORTH.

State of New York, *County of New York, ss:*

On this eleventh day of November, 1901, before me personally came Cornelius A. Loughlin, J. Edmund Wood, Edwin North, Charles F. Halsted and James E. Keeler, to me known and known to me to be the individuals described in, and who executed the foregoing certificate and severally acknowledged to me that they executed the same.

[seal.] FREDERIC N. GILBERT,
Notary Public, Kings County.

Certificate filed in New York County.

State of New York, *County of New York, ss:*

I, William Sohmer, Clerk of the County of New York, and also Clerk of the Supreme Court for the said county, the same being a Court of Record, do hereby certify that Frederic N. Gilbert has filed in the Clerk's Office of the County of New York a certified copy of his appointment and qualifications as Notary Public for the County of Kings with his autograph signature, and was at the time of taking the proof or acknowledgment of the annexed instrument duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and believe the signature to the said certificate of proof or acknowledgment to be genuine.

[seal.]

7325 In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 11th day of November, 1901.

WM. SOHMER, *Clerk.*

State of New York, *Office of the Secretary of State:*

I have compared the preceding with the original Certificate of Incorporation of National Coke and Coal Company, filed and recorded in this office on the 21st day of November, 1901, and do hereby certify the same to be a correct transcript therefrom and of the whole said original.

Witness my hand and seal of office of the Secretary of State, at the City of Albany, this 21st day of November, one thousand nine hundred and one.

[seal.] JOHN T. McDONOUGH,
Secretary of State.

State of New York,
Office of the County Clerk of Westchester County, ss:

I have compared the preceding with the original Certificate of Incorporation filed and recorded in this office on the 23rd day of November, 1901, and do hereby certify the same to be a correct transcript therefrom and of the whole of such original.

In Testimony Whereof, I have hereunto subscribed my name and affixed my official seal this 23rd day of November, 1901.

[seal.] LEVRETT F. CRUMB,
County Clerk of Westchester County.

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COMPLAINANT'S EXHIBIT 89.

CONSOLIDATED GAS COMPANY OF N. Y.

COMPARATIVE CONDENSED BALANCE SHEET.

ASSETS.

	October 31, 1905.	November 11, 1884.	Variation.
Real Estate, Plant, Property & Construction	$47,664,984.91	$37,971,419.01	$9,693,565.90
Cash—in banks and on hand	7,200,423.64	....	7,200,423.64
Accounts and bills receivable	8,517,071.00	824,865.86	7,692,205.14
Material and Supplies	616,470.08	436,506.96	179,963.12
Securities—National Coke & Coal Co	50,000.00	....	50,000.00
Securities—Astorial Light, Heat & Power Co	5,560,000.00	....	5,560,000.00
Securities—Other	53,041,134.52	....	53,041,134.52
Profit and Loss	....	62,441.36	*62,441.36
	$122,650,084.15	$39,295,233.19	$83,354,850.96

LIABILITIES.

	October 31, 1905.	November 11, 1884.	Variation.
Capital Stock	$80,000,000.00	$35,430,060.00	$44,569,940.00
Capital Stock, Scrip	....	920.00	920.00
Bonded Debt	1,387,000.00	1,836,507.53	*449,507.53
Convertible Debentures	19,857,600.00	....	19,857,600.00
Bonds & Mortgages	....	38,676.67	*38,676.67
Carried Forward	$101,244,600.00	$37,306,164.20	$63,938,435.80
7327 *Brought Forward*	$101,244,600.00	$37,306,164.20	$63,938,435.80
Accounts and Bills payable	3,357,037.95	1,687,906.97	1,669,130.98
Consumers' Deposits	904,520.07	301,162.02	603,358.05
Insurance Funds, etc.	303,908.93	....	303,908.93
Capital Stock Premiums	14,322,217.95	....	14,322,217.95
Renewal & Contingency	971,101.87	....	971,101.87
Profit & Loss	1,546,697.38	....	1,546,697.38
	$122,650,084.15	$39,295,233.19	$83,354,850.96

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* In red ink.

COMPLAINANT'S EXHIBIT 90.

AGENCY AGREEMENT.

Agreement, made the 31st day of December, 1902, between the Consolidated Gas Company of New York and the New York Mutual Gas Light Company, corporation duly organized and existing under the laws of the State of New York.

I. The Consolidated Gas Company of New York hereby employs the New York Mutual Gas Light Company, as its agent and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it for the term of five (5) years, such illuminating gas of the illuminating power required by the laws of the State of New York as it may require, during each year, for the said term of five (5) years, estimated to be equal to at least one hundred million

(100,000,000) cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of 7328 New York, in such quantities and at such times as may be reasonably required by it.

The New York Mutual Gas Light Company agrees to manufacture, produce and deliver such gas, as aforesaid, as the agent of the Consolidated Gas Company of New York.

II. The New York Mutual Gas Light Company shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery, and employ in such manufacture, production and delivery its own plant and appliances.

III. At the expiration of each month, the New York Mutual Gas Light Company shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent materials and labor made by it, as aforesaid, during such month, and the Consolidated Gas Company of New York agrees to pay to the New York Mutual Gas Light Company, within ten (10) days thereafter, the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof, which shall be in full for its services and the use of its plant and appliances during the said month.

IV. The Consolidated Gas Company of New York shall have a right to examine, at any reasonable time during business hours, the manufacturing records, books and bills of cost of the said constituent materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

7329 V. This contract may be terminated at any time, after July 1, 1904, at the option of either party hereto, by its giving notice of its election so to do one year in advance of the date of such termination.

VI. If no notice of termination shall have been given, under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of five (5) years, provided the said Company notifies the New York Mutual Gas Light Company, in writing, during the last six months of the present term, of its election so to do.

In Witness Whereof, the Company have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries, the day and year first above written.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] By H. E. GAWTRY, President.
Attest:
R. A. CARTER, *Secretary.*

NEW YORK MUTUAL GAS LIGHT COMPANY,
[SEAL.] By R. M. GALLAWAY, *President.*
Attest:
W. C. BESSON, *Secretary.*

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COMPLAINANT'S EXHIBIT 91.

AGENCY AGREEMENT.

Agreement, made the 31st day of December, 1902, between the Consolidated Gas Company of New York and the New Amsterdam Gas Company, corporation duly organized and existing under the laws of the State of New York.

1. The Consolidated Gas Company of New York hereby employs the New Amsterdam Gas Company as its agent, and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it, for the term of five years, such illuminating gas of the illuminating power required by the laws of the State of New York, as it may require during each year for said term of five years—estimated to be equal to at least 500,000,000 cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York in such quantities and at such times as may be reasonably required by it.

The New Amsterdam Gas Company agrees to manufacture, produce and deliver such gas aforesaid as the agent of the Consolidated Gas Company of New York.

2. The New Amsterdam Gas Company shall as agent for the Consolidated Gas Company of New York purchase all the constituent materials and furnish labor necessary for such manufacture, production and delivery and employ in such manufacture, production and delivery, its own plant and appliances.

3. At the expiration of each month the New Amsterdam Gas Company shall render to the Consolidated Gas Company of New
7331 York an account of the cost of gas materials used and the gas
labor furnished in manufacturing said gas together with the so-called station repairs during said month, and the Consolidated Gas Company of New York agrees to pay to the New Amsterdam Gas Company within ten days thereafter the amount due according to the said account, together with an additional ten per cent. thereof, which shall be in full for the services of the latter Company, and for the use of its plant and appliances during said month, and in full also for all claims for taxes on said plant and for insurance thereon and for all administrative and general expenses and of all other claims whatsoever, except as hereinafter mentioned.

4. The Consolidated Gas Company of New York shall have the right to examine at any reasonable time during business hours the manufacturing records, books and bills of the cost of the materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

5. The Consolidated Gas Company of New York further agrees that it will at the end of every period of six months during the term of this agreement pay to the New Amsterdam Gas Company interest at the rate of five (5) per cent. per annum for the previous six months upon the amounts expended by the New Amsterdam Gas

Company in making additions to its Ravenswood Works since March 1, 1901, for the purpose of increasing or facilitating the manufacture of gas.

6. This agreement may be terminated at any time after July 1, 1904, at the option of either party hereto, by its giving notice 7332 of its election so as to do one year in advance of the date of such termination.

7. If no notice of termination shall have been given under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of five (5) years, providing the said Company notifies the New Amsterdam Gas Company in writing during the last six months of the present term of its election so to do.

In Witness Whereof, the Companies have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries the day and year first above written.

CONSOLIDATED GAS COMPANY OF NEW YORK,
[SEAL.] By W. R. ADDICKS, *Vice-President.*
Attest:
R. A. CARTER, *Secretary.*

NEW AMSTERDAM GAS COMPANY,
[SEAL.] By G. W. DOANE, *Vice-President.*
Attest:
M. M. GRAHAM, *Secretary.*

7333 COMPLAINANT'S EXHIBIT 92.

AGENCY AGREEMENT.

Agreement, made the 31st day of December, 1902, between the Consolidated Gas Company of New York and the Standard Gas Light Company of the City of New York, corporations duly organized and existing under the laws of the State of New York.

I. The Consolidated Gas Company of New York hereby employs the Standard Gas Light Company of the City of New York, as its agent and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it for the term of five (5) years, such illuminating gas of the illuminating power required by the laws of the State of New York as it may require, during each year, for the said term of five (5) years, estimated to be equal to at least five hundred million (500,000,000) cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York, in such quantities and at such times as may be reasonably required by it.

The Standard Gas Light Company of the City of New York agrees to manufacture, produce and deliver such gas, as aforesaid, as the agent of the Consolidated Gas Company of New York.

II. The Standard Gas Light Company of the City of New York

COMPLAINANT'S EXHIBIT 93.

CONSOLIDATED GAS COMPANY OF N. Y.

SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCT. 31st, 1905.

	Quantity.	Price per unit	Amount.	Quantity per M. c. f. made	Cost per M. c. f. made	Cost per M. c. f. sold
Coal: Bituminous—Tons	235,586.75	$3.21	$758,068.60	49.50	7.11	7.33
Anthracite— "	105,661.87	4.37	461,820.64	22.20	4.33	4.47
Boiler — "	9,159.00	3.94	36,075.16	1.92	0.34	0.35
Cartage — "	..	..	18,250.48	..	0.17	0.18
Labor handling	..	..	50,506.25	..	0.48	0.49
Total			$1,324,721.13	..	12.43	12.82
Residuals:						
Coke—Loads	171,400.32	2.00	$343,526.94	..	3.22	3.32
Less—Labor handling	..	..	36,694.71	..	0.34	0.35
Cartage			12,360.66	..	0.12	0.12
Net			$294,471.57	..	2.76	2.85
Tar (Coal) Tons Carbonized	235,586.73	29.09	68,527.08	..	0.64	0.66
Ammoniacal Liquor (Lbs.)	4,983,751	01.36	67,807.44	.46	0.64	0.66
Carbon	549,590	01.00	5,495.90	.05	0.05	0.05
Spent Oxide	4,391,524	00.11	4,769.38	..	0.05	0.05
Oil Tar—Gallons	2,823,384	01.90	53,637.10	.27	0.50	0.52

Carbon	549,590	01.00	5,495.90	.05	0.05	0.05
Spent Oxide	4,391,524	00.11	4,769.38	..	0.05	0.05
Oil Tar—Gallons	2,823,384	01.90	53,637.10	.27	0.50	0.52
Total Residuals	..		494,708.47	..	4.64	4.79
Net Total	..		830.012.66	..	7.79	8.03
Coke used—Tons	22,738.25	3.23	73,346.02	4.21	0.69	0.71
Labor			1,473.08	..	0.01	0.01
Cartage			43.87	..	..	..
Total			74,862.97	..	0.70	0.72
Naphtha—Gallons	5,587	04.37	244.43	..	..	..
Gas Oil— "	41,504,907	04.08	1,693,646.16	3.89	15.89	16.39
Lime—Bushels	59,400	04.98	2,957.93	..	0.03	0.03
Oxide— "	119,310	15.82	18,878.43	..	0.18	0.18
Water—Cubic Feet	23,609,400	$1.00 M.	23,609.40	..	0.22	0.23
Fuel Oil Labor (including Drip Oil Labor used in mfg.)	..	..	4,434.13	..	0.04	0.04
Oil, Waste and Sundries	..	..	5,279.95	..	0.05	0.05
Cartage	..	..	17,830.15	..	0.17	0.17
Labor	..	..	389,322.92	..	3.65	3.77
Net amount of Material and Labor	..	..	3,061,079.13	..	28.72	29.61
Repairs (at Stations)	..	..	211,095.54	..	1.98	2.05
Expense	..	..	62,441.83	..	0.58	0.60
Distribution	..	..	90,399.52	..	0.85	0.87
Profit and Loss Adjustment	..	..	4,101.12	..	0.04	0.04
Experiments	..	..	2,912.70	..	0.03	0.03
Depreciation	..	..	51,532.36	..	0.48	0.50
Station Cost	..	..	3,483,562.20	..	32.68	33.70
Cost of Gas Mfg. under Agency Agreement	..	..	1,022,236.28	..	33.38	34.42
Total	.	..	4,505,798.48	..	32.84	33.85
Expense	..	..	583,278.52	..	..	4.38
Distribution	..	..	285,273.04	..	..	2.15
Repairs to Gas Stoves	..	..	52,063.05	..	..	0.39
do Mains	..	..	131,550.93	..	..	0.99
do Services	..	..	86,048.81	..	..	0.64
do Meters	..	..	172,280.18	..	..	1.30
do Buildings	..	..	16,868.97	..	..	0.13
do Tools	.	..	15,160.59	..	..	0.11
Street Lamps	..	..	285,701.13	..	..	2.15
Interest on Consumers' Deposits	..	..	52,315.73	..	..	0.40
Bad and Doubtful Debts	..	..	85,757.15	..	..	0.63
Profit and Loss Adjustment	..	..	*8,260.96*	..	..	*0.06*
Contingent Expense and Depreciation	..	..	1,114,236.38	..	..	8.37
Total Distribution	..	..	2,872,273.52	..	..	21.58
Expense—General Office	..	..	276.823.22	..	..	2.09
Vacations and Sickness	..	..	7,995.41	..	..	0.06
Automobiles	..	..	4,354.26	..	..	0.03
Advertising and Legal	..	.	62,861.02	..	..	0.47
Real Estate Rents	..	..	51,558.12	..	..	0.39
Contributions to Employees' Aid Society	..	..	6,392.21	..	..	0.05
Superannuation	..	..	14,803.57	..	..	0.11
Insurance	..	..	55,525.90	..	..	0.42
Taxes	..	..	803,127.46	..	..	6.03
Total General Expenses	..	..	1,283,441.17	..	..	9.65

Water—Cubic Feet	28,600,400	$1.00 M.	28,600.40	..	0.22	0.23
Fuel Oil Labor (including Drip Oil Labor used in mfg.)	..	..	4,434.13	..	0.04	0.04
Oil, Waste and Sundries	..	..	5,279.95	..	0.05	0.05
Cartage	..	..	17,830.15	..	0.17	0.17
Labor	..	..	389,322.92	..	3.65	3.77
Net amount of Material and Labor	..	..	3,061,079.13	..	28.72	29.61
Repairs (at Stations)	..	..	211,095.54	..	1.98	2.05
Expense	..	..	62,441.83	..	0.58	0.60
Distribution	..	..	90,399.52	..	0.85	0.87
Profit and Loss Adjustment	..	..	4,101.12	..	0.04	0.04
Experiments	..	..	2,912.70	..	0.03	0.03
Depreciation	..	..	51,532.36	..	0.48	0.50
Station Cost	..	..	3,483,562.20	..	32.68	33.70
Cost of Gas Mfg. under Agency Agreement	..	..	1,022,236.28	..	33.38	34.42
Total	.	..	4,505,798.48	..	32.84	33.85
Expense	..	..	583,278.52	..	..	4.38
Distribution	..	..	285,273.04	..	..	2.15
Repairs to Gas Stoves	..	..	52,063.05	..	..	0.39
do Mains	..	..	131,550.93	..	..	0.99
do Services	..	..	86,048.81	..	..	0.64
do Meters	..	..	172,280.18	..	..	1.30
do Buildings	..	..	16,868.97	..	..	0.13
do Tools	..	..	15,160.59	..	..	0.11
Street Lamps	.	..	285,701.13	..	..	2.15
Interest on Consumers' Deposits	..	..	52,315.73	..	..	0.40
Bad and Doubtful Debts	..	..	85,757.15	..	..	0.63
Profit and Loss Adjustment	..	..	*8,260.96*	..	..	*0.06*
Contingent Expense and Depreciation	..	..	1,114,236.38	..	..	8.37
Total Distribution	..	..	2,872,273.52	..	..	21.58
Expense—General Office	..	..	276,823.22	..	..	2.09
Vacations and Sickness	..	..	7,995.41	..	..	0.06
Automobiles	..	..	4,354.26	..	..	0.03
Advertising and Legal	..	.	62,861.02	..	..	0.47
Real Estate Rents	..	..	51,558.12	..	..	0.39
Contributions to Employees' Aid Society	..	..	6,392.21	..	..	0.05
Superannuation	..	..	14,803.57	..	..	0.11
Insurance	..	..	55,525.90	..	..	0.42
Taxes	..	..	803,127.46	..	..	6.03
Total General Expenses	..	..	1,283,441.17	..	..	9.65
Fixed Charges	..	..	936,883.24	..	..	7.04
Total Operating	..	..	$9,598,396.41	..	..	72.12

Gas Made—Consolidated Stations	10,659,909,000	
Stations of other Co's—under Agcy. agree't	3,062,354,768	13,722,263,768 Cu. Ft.
Gas Sold—Made at Consolidated Stations	10,337,979,747	
" " other Co's. " " " "	2,970,384,026	13,308,363,773 " "
Excess make over Sales (3.02¢)		413,899,995 " "
Gas Sales, cubic feet	13,308,363,773	

NOTE—Figures in *italics* in red ink in original.

COMPLAINANT'S EXHIBIT 94.

CONSOLIDATED GAS COMPANY OF NEW YORK.

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR 1905.

	Quantity.	Price per unit	Amount.	Quantity per M. c. f. made	Cost per M. c. f. made	Cost per M. c. f. sold
Coal: Bituminous—Tons	229,282.81	$3.18	$729,606.21	48.19	6.84	7.00
Anthracite — "	106,024.68	4.36	462,680.25	22.82	4.34	4.44
Boiler — "	10.399.67	3.67	38,156.43	2.19	0.36	0.37
Cartage — "	..	..	18,222.89	..	0.17	0.18
Labor handling	..	..	49,150.07	..	0.46	0.47
Total	..	..	1,297,815.85	..	12.17	12.46
Residuals:						
Coke—Loads	167,071.70	2.02	338,300.91	..	3.17	3.25
Less—Labor handling	..	..	35,678.39	..	0.34	0.34
Cartage	..	..	11,164.97	..	0.10	0.11
Net	..	..	291,457.55	..	2.73	2.80
Tar (Coal) Tons Carbonized	229,282.81	28.59	65.546.70	..	0.62	0.63
Ammoniacal Liquor (Lbs.)	4,896.886	01.34	65,849.65	..	0.62	0.63
Carbon	485,720	01.00	4,857.20	..	0.04	0.05
Spent Oxide	5,577.034	00.11	6,196.47	..	0.06	0.06
Oil Tar—Gallons	2,710,826	01.93	52,207.26	..	0.49	0.50
Total Residuals	..	..	486,114.83	..	4.56	4.67
Net Total	..	..	811,701.02	..	7.61	7.79
Coke used—Tons	19,892.54	$3.22	63,972.09	..	0.60	0.61
Labor	.	..	1,293.31	..	0.01	0.01
Cartage	..	..	43.87	..	..	..
Total	..	..	65,309.27	..	0.61	0.62
Naphtha—Gallons	5,587	04.38	244.43	..	..	..
Gas Oil— "	41,876,670	04.23	1,769,968.42	3.93	16.61	16.99
Fuel Oil— "	2,502	02.00	50.04	..	..	..
Lime—Bushels	62,374	04.99	3,114.02	..	0.03	0.03
Oxide— "	121,485	15.78	19,173.35	..	0.18	0.18
Water—Cubic Feet	22,684,200	$1.00 M.	22,684.20	..	0.22	0.22
Fuel Oil (including Drip Oil Labor, if used in mfg.)	..	..	4,424.70	..	0.04	0.04
Oil, Waste and Sundries	..	..	5,407.15	..	0.05	0.06
Cartage	..	..	17,123.60	..	0.16	0.17
Labor	..	..	382,632.04	..	3.59	3.67
Net amount of Material & Labor	..	..	3,101,832.24	..	29.10	29.77
Repairs to Apparatus	..	..	169,197.39	..	1.59	1.62
do Buildings	..	..	24,900.69	..	0.23	0.24
do Tools and Implements	..	..	16,228.48	..	0.16	0.16
Expense	.	..	59,016.97	..	0.55	0.57
Distribution	.	..	31,855.34	..	0.30	0.31
Experiments	..	..	3,030.08	..	0.03	0.03
Profit and Loss Adjustment	..	..	7,508.39	..	0.07	0.07
Distributing Station Expenses	..	..	56,538.57	..	0.53	0.54

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PAGE BOUND VERTICAL IN BOOK

mfg.)	..	..	4,424.70	..	0.04	0.04
Oil, Waste and Sundries	..	..	5,407.15	..	0.05	0.06
Cartage	..	..	17,123.60	..	0.16	0.17
Labor	..	..	382,632.04	..	3.59	3.67
Net amount of Material & Labor	..	..	3,101,832.24	..	29.10	29.77
Repairs to Apparatus	..	..	169,197.39	..	1.59	1.62
do Buildings	..	..	24,900.69	..	0.23	0.24
do Tools and Implements	.	..	16,228.48	..	0.16	0.16
Expense	.	..	59,016.97	..	0.55	0.57
Distribution	..	..	31,855.34	..	0.30	0.31
Experiments	..	..	3,030.08	..	0.03	0.03
Profit and Loss Adjustment	..	..	*7,508.39*	..	*0.07*	*0.07*
Distributing Station Expenses	..	..	56,538.57	..	0.53	0.54
Station Cost	..	..	3,455,091.37	..	32.42	33.17
Cost of Gas Mfg. under Agency Agreements	..	..	997,039.89	..	34.04	34.82
Total Cost at Holder	..	..	4,452,131.26	.	32.77	33.52
Expense	..	..	490,855.36	..	..	03.69
Distribution	..	..	281,524.12	..	..	02.12
Repairs to Gas Stoves	..	..	55,954.35	..	..	00.42
do Mains	.	..	126,110.31	..	..	00.95
do Services	..	..	89,033.46	..	..	00.67
do Meters	..	..	172,925.52	..	..	01.30
do Buildings	..	..	15,116.68	..	..	00.11
do Tools and Implements	..	..	15,610.59	..	..	00.11
Street Lamps	..	..	289,259.09	..	..	02.18
Interest on Consumers' Deposits	..	..	51,391.52	..	..	00.39
Bad and Doubtful Debts	..	..	82,995.11	..	..	00.63
Profit and Loss Adjustment	..	..	*29,683.92*	..	..	*00.22*
Total Distribution	..	..	1,641,092.19	..	..	12.35
Expense—General Office	..	..	339,999.51	..	..	02.56
Vacations and Sickness	..	..	8,175.20	..	..	00.06
Automobiles	..	..	5,064.16	..	..	00.04
Advertising and Legal	..	..	105,800.02	..	..	00.80
Real Estate Rents	.	..	42,674.71	..	..	00.32
Gas Companies' Mutual Aid Society	..	..	6,413.99	..	..	00.05
Superannuation	.	..	14,943.86	..	..	00.11
Insurance	..	..	54,031.83	..	..	00.41
Taxes	..	..	965,843.88	..	..	07.27
Contingent Expense (includes renewals)	..	..	1,328,316.37	..	..	10.00
Total General Expenses	..	..	2,871,263.53	..	..	21.62
Fixed Charges	..	..	972,423.44	..	..	07.32
Total Operating	..	.	$9,936,910.42	..	..	74.81

Gas made at Consolidated Co.'s Stations	10,657,810,000	
" " " Other Co.'s Stations under Agcy. Agmt	2,929,210,322	13,587,020,322
Gas sold—Made at Consolidated Co.'s Stations	10,419,461,426	
Other Co.'s Stations under Agcy. Agmt	2,863,702,341	13,283,163,767
Excess make over sales (2.24%)		303,856,555
Gas Sales, cubic feet	13,283,163,767	

NOTE.—Figures in *italics* in red ink in original.

shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery and employ in such manufacture, production and delivery its own plant and appliances.

7334 III. At the expiration of each month, The Standard Gas Light Company of the City of New York shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent materials and labor made by it, as aforesaid, during such month, and the Consolidated Gas Light Company of New York agrees to pay to The Standard Gas Light Company of the City of New York, within ten (10) days thereafter, the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof which shall be in full for its services and the use of its plant and appliances during the said month.

IV. The Consolidated Gas Company of New York shall have a right to examine, at any reasonable time during business hours, the manufacturing records, books and bills of cost of the said constituent materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

V. This agreement may be terminated at any time, after July 1, 1904, at the option of either party hereto, by its giving notice of its election so to do one year in advance of the date of such termination.

VI. If no notice of termination shall have been given, under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of five (5) years provided the said Company notifies the Standard Gas Light Company of the City of New York, in writing, during the last six months of the present term of its election so to do.

7335 In Witness Whereof, the Companies have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries, the day and year first above written.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) By H. E. GAWTRY, *President.*
[SEAL.]
Attest:
(Sd.) R. A. CARTER, *Secretary.*

THE STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK,
(Signed) FRANK TILFORD, *President.*
[SEAL.]
Attest:
(Sd.) BENJ. WHITELY, *Treasurer.*"

(Here follow Complainant's Exhibits No. 93 and 94 marked pp. 7336 and 7337.)

7338

COMPLAINANT'S EXHIBIT 95.

CONSOLIDATED GAS CO. OF N. Y.

INCOME AND EXPENSES.

Nominal Year Ending October 31, 1905.

Gas Sales	$13,570,580.77
Operating Expenses, including Taxes	8,661,513.17
Net earnings	4,909,067.60
Fixed Charges	936,883.24
Surplus Earnings from Gas Business	3,972,184.36
Miscellaneous Income	170,766.40
Income from Securities owned	1,051,496.62
	1,222,263.02
Total Income	5,194,447.38
Dividends paid	7,200,000.00
Deficit drawn from Surplus	$2,005,552.62

7339

COMPLAINANT'S EXHIBIT 96.

CONSOLIDATED GAS CO. OF N. Y.

INCOME AND EXPENSES.

Calendar Year 1905.

Gas Sales	$13,552,482.97
Operating Expenses, including Taxes	8,964,486.98
Net Earnings	4,587,995.99
Fixed Charges	972,423.44
Surplus Earnings from Gas Business	3,615,572.55
Miscellaneous Income	172,710.53
Income from Securities owned	1,065,641.74
	1,238,352.27
Total Income	4,853,924.82
Dividends paid	6,800,000.00
Deficit drawn from Surplus	$1,946,075.18

(Here follows State Exhibit B, marked p. 7340.)

STATE EX

CONSOLIDATED GAS CO

STATEMENT OF SECURITIES AND OBLIGATIONS O

June 30

	T
Brush Electric Illuminating Co., 1st Mortgage Bonds......	$2
New Amsterdam Gas Company, Preferred Stock............	8,9
" " " " Common Stock	12,1
" " " " 1st Mortgage Bonds.......	
New York Edison Company, Capital Stock................	45,0
New York Mutual Gas Light Co., Capital Stock............	1,8
Standard Gas Light Company, Preferred Stock............	4,0
" " " " Common Stock	4,7
United Electric Light & Power Co., Preferred Stock.........	1,
" " " " " Common Stock	3,
" " " " " 1st Mortgage Bonds....	4,
" " " " " Notes and Interest.....	
" " " " " Loan	
Westchester Lighting Company, Preferred Stock...........	2,
" " " Common Stock	10,
" " " General Mortgage Bonds..	
Total	$100,
Astoria Light, Heat & Power Co., 1st Mortgage Bonds.......	
" " " " " Capital Stock	
" " " " " Notes	6,
National Coke and Coal Co., Capital Stock...............	
Total	$7,
Total All Companies..........................	$108,

STATE EXHIBIT B.

CONSOLIDATED GAS COMPANY OF NEW YORK.

STATEMENT OF SECURITIES AND OBLIGATIONS OF OTHER COMPANIES ACQUIRED (PAR VALUE).

June 30th, 1906.

	Total	Book Value	Return on Investment
Brush Electric Illuminating Co., 1st Mortgage Bonds......	$275,000.00	$275,000.00	$13,750.00
New Amsterdam Gas Company, Preferred Stock............	8,991,475.00	4,814,608.03	
" " " " Common Stock	12,154,592.50		
" " " " 1st Mortgage Bonds.......	860.00		
New York Edison Company, Capital Stock................	45,041,000.00	18,202,969.63	
New York Mutual Gas Light Co., Capital Stock.............	1,886,200.00	5,703,290.65	169,758.00
Standard Gas Light Company, Preferred Stock............	4,096,100.00	14,587,495.23	533,538.00
" " " " Common Stock	4,796,200.00		
United Electric Light & Power Co., Preferred Stock.........	1,641,888.03	9,452,063.48	301,648.78
" " " " " Common Stock	3,654,145.71		
" " " " " 1st Mortgage Bonds....	4,818,000.00		
" " " " " Notes and Interest.....	963,998.32		
" " " " " Loan	50,000.00		
Westchester Lighting Company, Preferred Stock...........	2,500,000.00		
" " " Common Stock	10,000,000.00		
" " " General Mortgage Bonds..	7,600.00	5,707.50	17.50
Total	$100,877,059.56	$53,041,134.52	$1,018,712.28 = 1.92% on Investment.
Astoria Light, Heat & Power Co., 1st Mortgage Bonds.......	375,000.00	300,000.00	
" " " " " Capital Stock	500,000.00	500,000.00	
" " " " " Notes	6,210,000.00	6,210,000.00	
National Coke and Coal Co., Capital Stock................	50,000.00	50,000.00	5,000.00
Total	$7,135,000.00	$7,060,000.00	$5,000.00
Total All Companies............................	$108,012,059.56	$60,101,134.52	$1,023,712.28

7341
STATE EXHIBIT C.

REPORT

OF THE

CONSOLIDATED GAS CO.

OF

NEW YORK

TO THE

STATE BOARD OF TAX COMMISSIONERS

OF THE

STATE OF NEW YORK

FOR THE

Year Ending June 30, 1905.

Recorded—Received Dec. 4, 1905.—Board of Tax Commissioners, Albany, N. Y.

7342 OFFICE OF THE

STATE BOARD OF TAX COMMISSIONERS,

ALBANY......................

SIR:

The following forms, prepared in conformity with the requirements of law, are forwarded you for use in preparing the Report of your company required by Section 43, Chapter 712, Laws 1899.

☞ It is requested that you complete and forward such report as required by that Act on or before December 1, 1905.

Very respectfully,
STATE BOARD OF TAX COMMISSIONERS.

EXTRACT FROM LAW RELATING TO TAXATION OF SPECIAL FRANCHISES.

SECTION 1. Subdivision three of section two of the tax law is hereby amended to read as follows:

3. The terms "land," "real estate," and "real property," as used in this chapter, include the land itself above and under water, all

buildings and other articles and structures, substructures and superstructures, erected upon, under, or above or affixed to the same; all wharves and piers, including the value of the right to collect wharfage, cranage or dockage thereon; all bridges, all telegraph lines, wires, poles, and appurtenances; all supports and inclosure for electrical conductors and other appurtenances upon, above and under ground, all surface, under ground or elevated railroads, including the value of all franchises, rights or permission to construct, maintain or operate the same in, under, above, on or through streets, highways or public places; all railroad structures, substructures and superstructures; tracks and the iron thereon; branches, switches and 7343 other fixtures permitted or authorized to be made, laid or placed in, upon, above or under any public or private road, street or ground; all mains, pipes and tanks laid or placed in, upon, above or under any public or private street or place for conducting steam, heat, water, oil, electricity or any property, substance or product capable of transportation or conveyance therein or that is protected thereby including the value of all franchises, rights, authority or permission to construct, maintain or operate in, under, above, upon, or through any streets, highways or public places, any mains, pipes, tanks, conduits, or wires, with their appurtenances, for conducting water, steam, heat, light, power, gas, oil, or other substance, or electricity for telegraphic, telephonic or other purposes; all trees and underwood growing upon land, and all mines, minerals, quarries and fossils in and under the same, except mines belonging to the state. A franchise, right, authority or permission specified in this subdivision shall for the purpose of taxation be known as a "special franchise." A special franchise shall be deemed to include the value of the tangible property of a person, copartnership, association or corporation situated in, upon, under or above any street, highway, public place or public waters in connection with the special franchise. The tangible property so included shall be taxed as a part of the special franchise. No property of a municipal corporation shall be subject to a special franchise tax.

7344

SCHEDULE A.

Title of Company, Consolidated Gas Co. of New York.

General Offices at # 4 Irving Place, New York City.

Date at close of Fiscal Year, December 31st.

For information concerning this Report address R. A. Carter, Secretary, # 4 Irving Place, New York.

OFFICERS OF THE COMPANY WITH P. O. ADDRESS:

President	All at # 4 Irving Place, New York.
Vice-President, Samuel Sloan	
Vice-President, Walter R. Addicks	
Vice-President, Lewis B. Gawtry	
Secretary, Robert A. Carter	
Asst. Secretary, Colin C. Simpson	
Treasurer, James A. Bennett	
Asst. Treasurer, Benjamin W. Whiteley	

TRUSTEES OF THE COMPANY:

Name.	P. O. Address.
Harrison E. Gawtry,	# 4 Irving Place, New York City.
Samuel Sloan,	# 26 Exchange Place, New York City.
William Rockefeller,	# 26 Broadway, New York City.
M. Taylor Pyne,	# 52 Wall St., New York City.
George F. Baker,	# 2 Wall St., New York City.
James Stillman,	# 52 Wall St., New York City.
Stephen S. Palmer,	# 52 Wall St., New York City.
F. Augustus Schermerhorn,	# 41 Liberty St., New York City.
Anthony N. Brady,	# 54 Wall St., New York City.
Thomas F. Ryan,	Oak Ridge, Virginia.
Frank Tilford,	# 208 Fifth Ave., New York City.
John W. Sterling,	# 44 Wall St., New York City.

7345 SCHEDULE B.

Description of special franchise, showing streets, highways or public places possessed or rights enjoyed and in what tax district or districts same is located:

Note: If this information was given in former report and map filed, state such fact, giving only additional grants since last report.
The information called for under this schedule was filed with the report for 1899 and reference is made thereto.
A map filed at that time gave all the information that it is possible to give.
This report should be accompanied by maps showing the location and extent of all property subject to taxation as a "Special Franchise."

SCHEDULE C.

Copy of special law, grant, ordinance or contract or reference to general law under which "special franchise is held, possessed or enjoyed and statement of any condition, obligation or burden imposed upon such special franchise, or under which the same is enjoyed:"

Note: If this information was given in former report and copies filed, state such fact, giving only additional rights since last report.
Same remarks as under Schedule "B."
Any matter attached to the report should conform, if possible, to size of this blank.

SCHEDULE D.

Statement of Assets and Liabilities, June 30, 1905.

Assets.	Amount.
Real Estate and Plant	$19,678,612.76
Mains and Services	4,398,160.82
Bonds and Obligations of other Companies	11,243,442.36
Stocks of other Companies	47,588,452.12
Material and Supplies	595,410.39
Accounts and Bills Receivable	4,955,680.69
Cash on hand	8,347,355.62
Unclaimed Dividends	50,812.50
Metropolitan Bond Redemption Fund	500.00
Contracts, Rights, Etc.	7,781,000.00
Meters, Stoves and other Personal Property	2,736,516.94
City of New York Corporate Stock	3,087,500.00
Profit and Loss	
Total	$110,463,444.20

NOTE.—"Cost" in the above statement is not given for the reasons stated in the report for 1899.

Liabilities.	Amount.
Capital Stock	$80,000,000.00
Funded Debt	21,245,100.00
Accounts and Bills Payable	4,540,139.59
Int. on Funded Debt Due & Acc'd	11,558.33
Rentals Due and Accrued	
Dividends unpaid	50,812.50
Miscellaneous	1,024,159.93
Profit and Loss	3,591,673.85
Total	$110,463,444.20

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CAPITAL STOCK. SCHEDULE E.

	No. shares.	Total par value.	Dividends declared during year.		Market value during year.		
			Rate.	When payable.	Highest.	Lowest.	Present.
Dept., '04	800,000	$80,000,000.00	2 %	Sept. 15th	220	186	191 at June 30th.
Dec., '04	"	"	2½	Dec. 15 "	These are prices of small lots of shares as reported to have been sold on the N. Y. Stock Exchange.		
Mar., '05	"	"	2½	Mar. 15 "			
June, '05	"	"	2	June 15 "			
Total							

FUNDED DEBT. SCHEDULE F.

Designation of lien.	Date.	Maturity.	Amount outstanding.	Interest.		Market value during year.		
				Rate.	When payable.	Highest.	Lowest.	Present.
First Mortgage Bonds of the Met'p'n Gas Lt. Co. of N. Y.	Aug. 1st, 1881	July 31st, 1901	$500.00	Not yet presented for Redemption.				
Debenture Bonds of the Consolidated Gas Co.	May 1st, 1888	May 1st, 1908	$1,387,000.00	5 %	May 1st Nov. 1st	No quotations—None offered.		
Convertible Debentures	July 1st, 1904	July 1st, 1909	$19,857,600.00	6 %	Jan. 1st July 1st	192¾	169	176 at June 30
			$21,245,100.00					

7348

SCHEDULE G.

Statement of Receipts and Disbursements for Year Ending June 30, 1905.

Receipts.	Amount.
From Actual Operation	$13,626,085.48
Interest and Dividends	1,045,148.88
Rentals (not including tracks)	
Advertising	
Sales of Stock	
Sales of Bonds	19,857,600.00
Bills payable	
Other Sources	483,080.97
Rents Received for Tracks and Terminals	
Deficit	
Total	$35,011,915.33

7349

SCHEDULE G.

Report below must be MADE IN DETAIL as called for

Disbursements.		Amount.
Salaries of General Officers		$63,041.77
Salaries of Clerks and Office Expenses		700,243.98
Law Expenses		53,592.47
Other Operating Expenses		5,941,170.05
Maintenance	In Streets $449,187.22 Outside Streets $447,179.38	896,366.60
Reconstruction	In Streets $ Outside Streets $	
New Construction (Extension)	In Streets $250,270.84 Outside Streets $521,357.08	771,627.92
Rentals		64,797.51
Interest paid		857,569.87
Stocks and Obligations of other Companies		3,471,115.51
Taxes on Capital Stock and Earnings paid State Comptroller		168,978.20
Taxes paid on Special Franchise	Years 1900 & 1901. $534,276.67 Interest on same 154,640.26	688,916.93
Taxes on Real Estate in this State other than Special Franchise		190,797.71
Taxes on Personal Estate in this State		91,833.06
Taxes on property in other States		875.00
Loans and Advances		1,860,000.00
City of New York Corporate Stock		3,087,500.00
Payments Covered by Sec. 46, Tax Law.	Bills Payable and Loans Cancelled	1,625,000.00
	Debenture Bonds Redeemed—Consolidated Gas Co.	63,000.00
	Bonds and Mortgage Cancelled	15,000.00
	Other items	
Dividends paid......%	Common Stock	7,200,000.00
Dividends paid......%	Preferred Stock	
Amount paid for New Street Paving		
Surplus		7,200,488.75
Total		$35,011,915.33

PAGE BOU

D VERTICAL IN BOOK

Statement of Cost to Reproduce New Property in Streets, Highways, Etc., Value, Less Depreciation and Same Outside, with Assessment in Each Tax District.

Name of each township and city, wherein located, and wards in city where different tax rates prevail.	Present value of property *in streets, highways, and public places* on basis of cost of reproduction (new).	Present value of property *in streets, highways, and public places* (allowing depreciation).	Present value of property *outside* streets, highways, and public places on basis of cost of reproduction (new).	Present value of property *outside* streets, highways, and public places (allowing depreciation).	Assessment of real estate *in* streets, highways, etc., in 1905.	Assessment of real estate *outside* streets, highways, etc., in 1905.	Remarks.
City of New York **Borough** of Manhattan	$5,801,466.10	$4,398,160.82	$106,065,283.38	....	....	$12,062,500.00	
			The details of this item appear in Schedule "D." It includes all property except the property in the streets as stated. It includes the value of the "Intangible Special Franchises" of the Company, there being no method by which the value of the "Special Franchises" can be separated from the Company's other property and Franchises.		The State Board in 1905 assessed the Special Franchise at $27,300,000.00 which includes the Company's Tangible property in the streets.		

7352 SCHEDULE L.

Detailed statement of shares of stock actually owned in other corporations which are taxable on their capital stock and on all other non-taxable securities owned.

Description.			Amount. Par value.
Astoria Light, Heat & Power Co......	5,000	Shares	$500,000.00
National Coke & Coal Co..................	500	"	50,000.00
New Amsterdam Gas Co.—Common..	121,542	"	12,154,200.00
" " " " —Preferred.	89,913	"	8,991,300.00
" " " " —Scrip......	....	"	567.50
New York Edison Co......................	450,410	"	45,041,000.00
New York Mutual Gas Light Co......	18,862	"	1,886,200.00
Standard Gas Light Co.—Common...	47,962	"	4,796,200.00
" " " " —Preferred...	40,961	"	4,096,100.00
United Electric Light & Power Co.:			
Common..	36,540	"	3,654,000.00
" " " Preferred.	16,418	"	1,641,800.00
" " " Scrip......	....	"	233.74
Westchester Lighting Co.—Common..	100,000	"	10,000,000.00
" " " —Preferred.	25,000	"	2,500,000.00
Total..			$95,311,601.24

Value of tangible, personal property, material, supplies, cars, wires, pipes, etc..................................	$3,331,927.33
Total assessment of personal property......................	6,000,000.00
Is there any contest on 1905 personal assessment?....	—No—

(Here follows facsimile marked p. 7353.)

Tax District, Borough of Manhattan County, New York

GAS

Report only on property located in, upon, under or above Streets, Highways (including Crossings over 250 ft.) and Public Places Laid Previous to June 30, 1905.

Diameter of pipe. Inches.	Length in Feet. Cast Iron.	Length in Feet. Steel and Wrought Iron.	Average age years.	Wt. per foot.	Valves and Boxes. Number.	Valves and Boxes. Size in inches.	Valves and Boxes. Age, Years.	Hydrants. Number	Hydrants. Age, Years.	Service Connections. Size and Number.	Service Connections. Length in feet.	Service Connections. Age.	Service Connections. Kind	Kind of Paving.
1½	1,407	—— None ——	Have no means of determining their average age.	We do not know this and our records do not show it.	Impossible to answer.					86,902	— Average 30 feet. —	— From 1 to 30 years. —	— Wrought Iron. —	Belgian Blocks—Asphalt, Granite on Concrete, Etc.
2	22,826													
3	394,336													
4	695,632													
5	5,902													
6	2,113,874													
8	518,653													
10	71,342													
12	319,235													
16	96,315													
18	29,633													
20	178,933													
24	39,623													
30	131,713													
36	22,242													
Total	4,641,666 Feet													

Report only on property located in, upon, under or above Streets, Highways (Including Crossings over 250 ft.) and Public Places Laid Previous to June 30, 1905.

Diameter of pipe. inches.	Length in Feet.		Average age years.	Wt. per foot.	Valves and Boxes.			Hydrants.		Service Connections.				Kind of Paving.
	Cast Iron.	Steel and Wrought Iron.			Number.	Size in inches.	Age, Years.	Number	Age, Years.	Size and Number.	Length in feet.	Age.	Kind	
1½	1,407	None	Have no means of determining their average age.	We do not know this and our records do not show it.	Impossible to answer.					86,902	Average 30 feet.	From 1 to 30 years.	Wrought Iron.	Belgian Blocks—Asphalt, Granite on Concrete, Etc.
2	22,826													
3	394,336													
4	695,632													
5	5,902													
6	2,113,874													
8	518,653													
10	71,342													
12	319,235													
16	96,315													
18	29,633													
20	178,933													
24	39,623													
30	131,713													
36	22,242													
Total	4,641,666 Feet.													

Present value reproduced (new).... $5,801,466.10

Present value allowing depreciation. $4,398,160.82

Rate per 1000 Cu. Ft.	
Lighting,	$1.00
Fuel,	$1.00

Laid from June 30, 1905, to Nov. 1, 1905

3	*899*
4	*7,667*
6	15,214
8	9,387
10	*56*

Decrease

564

12	2,301
16	2,586
20	*·130*
24	5,628
30	*130*
	26,234 Feet.

Value (new), $36,094.93

STATE OF NEW YORK,
County of New York, ss.

R. A. CARTER, Secretary of the Consolidated Gas Co. of New York, being duly sworn, deposes and says that the foregoing statements have been compiled from the books and records of this company and from facts in the possession of its officers and employees, and after careful examination of the same, declares them to be a true, full and correct statement of the property of said company and the value thereof as to all the matters herein set forth, to the best of my knowledge and belief.

Subscribed and sworn to before me this
29th day of Nov., 1905.

R. A. CARTER.

(Seal)

WALLACE YOUNG,
Notary Public,
[SEAL.] King County,

Certificate filed in N. Y. County.

Note.—*Italics* in Red ink in original.

7354 The accompanying blanks are an integral part of this report. A separate blank should be used for *each township, city, and for each ward in a city where the tax rates differ.* Additional blanks will be furnished if a sufficient number does not accompany the report.

They are intended for detailed data showing character of construction. Whenever there are peculiar conditions that tend to cause more rapid depreciation than ordinary, or any special conditions that tend to make the property less valuable, additional data should be furnished.

If any report does not contain the proper blanks for the different fields of construction needed to make a satisfactory report, other blanks will be furnished on request, covering surface street railroads, elevated railroads, surface steam railroads, telegraph, telephone, compressed air, oil, steam heat, electric light and power and subway construction. Other special blanks will be prepared if the nature of any special construction requires them.

The Law requires that every report made under this section shall have annexed thereto the affidavit of the President, Vice-President, Secretary or Treasurer of the association or corporation, or one of the persons or one of the members of the co-partnership making the same.

STATE OF NEW YORK, *County of New York, ss:*

R. A. Carter, Secretary of the Consolidated Gas Co. of N. Y., being duly sworn, deposes and says that the foregoing statements have been compiled from the books and records of this Company, and after careful examination of the same, declares them to be a true, full and correct statement of the property of said Company and the value thereof at the close of the year ending June 30, 1904, as well
7355 as of its financial condition and affairs on the said date, to the best of my knowledge and belief.

R. A. CARTER.

[L. S.]

Subscribed and sworn to before me this 29th day of Nov., 1905.

[SEAL.]

WALLACE YOUNG,
Notary Public 5, Kings County.

Certificate filed in N. Y. County.

7356

STATE EXHIBIT D.

REPORT
OF THE
CONSOLIDATED GAS COMPANY
OF
NEW YORK
TO THE
STATE BOARD OF TAX COMMISSIONERS
OF THE
STATE OF NEW YORK
FOR THE
Year Ending June 30, 1904.

Recorded—Received Dec., 1904, State Board of Tax Commissioners, Albany, N. Y.

7357

OFFICE OF THE
STATE BOARD OF TAX COMMISSIONERS,

ALBANY.......................

SIR:

The following forms, prepared in conformity with the requirements of law, are forwarded you for use in preparing the Report of your company required by Section 43, Chapter 712, Laws 1899

☞It is requested that you complete and forward such report as required by that Act on or before December 1, 1905.

Very respectfully,
STATE BOARD OF TAX COMMISSIONERS.

EXTRACT FROM LAW RELATING TO TAXATION OF SPECIAL FRANCHISES.

SECTION 1. Subdivision three of section two of the tax law is hereby amended to read as follows:

3. The terms "land," "real estate," and "real property," as used in this chapter, include the land itself above and under water, all

buildings and other articles and structures, substructures and superstructures, erected upon, under, or above or affixed to the same; all wharves and piers, including the value of the right to collect wharfage, cranage or dockage thereon; all bridges, all telegraph lines, wires, poles, and appurtenances; all supports and inclosure for electrical conductors and other appurtenances upon, above and under ground, all surface, under ground or elevated railroads, including the value of all franchises, rights or permission to construct, maintain or operate the same in, under, above, on or through streets, highways or public places; all railroad structures, substructures and superstructures; tracks and the iron thereon; branches, switches and other fixtures permitted or authorized to be made, laid or placed in, upon, above or under any public or private road, street or
7358 ground; all mains, pipes and tanks laid or placed in, upon,
above or under any public or private street or place for conducting steam, heat, water, oil, electricity or any property, substance or product capable of transportation or conveyance therein or that is protected thereby including the value of all franchises, rights, authority or permission to construct, maintain or operate in, under, above, upon, or through any streets, highways or public places, any mains, pipes, tanks, conduits, or wires with their appurtenances, for conducting water, steam, heat, light, power, gas, oil, or other substance, or electricity for telegraphic, telephonic or other purposes; all trees and underwood growing upon land, and all mines, minerals, quarries and fossils in and under the same, except mines belonging to the state. A franchise, right, authority or permission specified in this subdivision shall for the purpose of taxation be known as a "special franchise." A special franchise shall be deemed to include the value of the tangible property of a person, copartnership, association or corporation situated in, upon, under or above any street, highway, public place or public waters in connection with the special franchise. The tangible property so included shall be taxed as a part of the special franchise. No property of a municipal corporation shall be subject to a special franchise tax.

7359 SCHEDULE A.

Title of Company, Consolidated Gas Company of New York.
General Offices at #4 Irving Place, New York City.
Date at close of Fiscal Year, December 31st.

For information concerning this Report address Robert A. Carter, Secretary, #4 Irving Place.

OFFICERS OF THE COMPANY WITH P. O. ADDRESS:

President, Harrison E. Gawtry,
Vice-President, Samuel Sloan,
Vice-President, Walter R. Addicks,
Vice-President, Lewis B. Gawtry,
Secretary, Robert A. Carter,
Asst. Secretary, Colin C. Simpson,
Treasurer, James A. Bennett,
Asst. Treasurer, Benjamin Whiteley,

All at No. 4 Irving Place.

TRUSTEES OF THE COMPANY:

Name *P. O. Address:*
Harrison E. Gawtry, #4 Irving Place.
Samuel Sloan, #26 Exchange Place.
William Rockefeller, #26 Broadway.
M. Taylor Pyne, #52 Wall St.
George F. Baker, #2 Wall St.
James Stillman, #52 Wall St.
Stephen S. Palmer, #52 Wall St.
F. Augustus Schemerhorn, #41 Liberty St.
Anthony N. Brady, #54 Wall St.
Thomas F. Ryan, #38 Nassau St.
Frank Tilford, #1412 Broadway.
John W. Sterling, #44 Wall St.

7360

SCHEDULE B.

Description of special franchise, showing streets, highways or public places possessed or rights enjoyed and in what tax district or districts same is located.

Note: If this information was given in former report and map filed, state such fact, giving only additional grants since last report.

The information called for under this schedule was filed with the report for 1899, and reference is made thereto. A map filed at that time gave all the information that it is possible to give.

This report should be accompanied by maps showing the location and extent of all property subject to taxation as a "Special Franchise."

SCHEDULE C.

Copy of special law, grant, ordinance or contract or reference to general law under which "special franchise is held, possessed or enjoyed and statement of any condition, obligation or burden imposed upon such special franchise, or under which the same is enjoyed."

Note: If this information was given in former report and copies filed, state such fact, giving only additional rights since last report.

Statement under schedule "B" covers this question.

Any matter attached to the report should conform, if possible, to size of this blank.

7361

SCHEDULE D.

Statement of Assets and Liabilities, June 30, 1904.

Assets.	Amount.	Liabilities.	Amount.
Real Estate and Plant	$19,673,075.42	Capital Stock	$80,000,000.00
Mains and Service	4,261,156.39	Funded debt	1,465,500.00
		Accounts and Bills Payable	5,740,962.57
Bonds and obligations of other companies.	8,686,744.70	Int. on Funded Debt Due & Acc'd	12,083.33
*Stocks of other Companies	46,674,034.27	Rentals Due and Accrued	
		Dividends unpaid	39,052.50
	55,360,778.97		
Material and Supplies	697,014.92		
Accounts and Bills Receivable	1,944,968.09		
Cash on hand	1,146,866.87		
Unclaimed Dividends	39,052.50		
Metropolitan Fund	500.00		
Contracts, Rights, etc	7,781,000.00		
Meters, Stoves, and other personal property	2,667,329.77		
Note.—"Cost" in the above statement is not given, for the reasons stated in the report for 1899.			
Profit and Loss		Profit and Loss	6,314,144.53
Total	$93,571,742.93	Total	$93,571,742.93

CAPITAL STOCK. SCHEDULE E.

	No. shares.	Total par value.	Dividends declared during year. Rate.	When payable.	Market value during year. Highest.	Lowest.	Present.
Sept., '03	729,176	$72,917,600.00	2%	Sept. 15	209¾	166	193¾ at June 30
Dec., '03	799,863	79,986,300.00	2%	Dec. 15			
Mar., '04	799,989	79,998,900.00	2%	Mar. 15			
June, '04	799,996	79,999,600.00	2%	June 15			
Total							

These are prices of small lots of shares, as reported to have been sold on The N. Y. Stock Exchange.

FUNDED DEBT. SCHEDULE F.

Designation of lien.	Date.	Maturity.	Amount outstanding.	Interest. Rate.	When payable.	Market value during year. Highest.	Lowest.	Present.
First Mortgage Bonds of the Metp'n Gas Lt. Co. of N. Y.	Aug. 1st, 1881	July 31st, 1901	$500.00		May 1st	Not yet presented for redemption—		
Debenture Bonds of Consolidated Gas Co.	May 1st, 1888	May 1st, 1908	$1,450,000.00	5%	Nov. 1st	No quotations—None offered.		
Real Estate Mortgage.	Feb'y 28th, 1899	Mar. 28th, 1905	$15,000.00	4½%				
			$1,465,500.00					

7363

SCHEDULE G.

Statement of Receipts and Disbursements for Year Ending June 30, 1904.

Receipts.		Amount.
From Actual Operation		$13,009,822.71
Interest and Dividends		950,187.28
Rentals (not including tracks)		
Advertising		
Capital Stock Issued	$7,082,400.00	
Premium on same	3,899,931.00	
Sales of Stock		10,982,331.00
Sales of Bonds		
Bills Payable		
Other Sources		102,980.24
Rents Received for Tracks and Terminals		
Deficit		
Total		$25,045,321.23

7364

SCHEDULE G.

Report below must be MADE IN DETAIL as called for.

Disbursements.			Amount.
Salaries of General Officers			$71,583.39
Salaries of Clerks and Office Expenses			790,051.44
Law Expenses			42,000.00
			$903,634.83
Other Operating Expenses			5,874,208.97
Maintenance	In Streets	$209,862.91	640,328.77
	Outside Streets	$430,465.86	
Reconstruction	In Streets	$	
	Outside Streets	$	
New Construction (Extension)	In Streets	$204,962.19	277,287.79
	Outside Streets	$72,325.60	
Rentals			11,190.55
Interest paid			170,252.59
Invested in Stock and Securities of other Co.'s			2,456,199.79
Taxes on Capital Stock and Earnings paid State Comptroller			156,566.30
Taxes paid on Special Franchise			
Taxes on Real Estate in this State other than Special Franchise			194,901.10
Taxes on Personal Estate in this State			
Taxes on Property in other States			657.00
			$195,558.10
Stock Scrip Purchased			322.72
Bills Payable Paid off			7,476,654.86
Advanced on Loans			392,459.27
Other Items, Superannuation, Employees' Aid, etc.			18,413.11
Dividends paid, 8% Common Stock			6,258,048.00
Debenture Bonds Purchased			11,385.00
Amount paid for New Street Paving			
Surplus			202,810.58
			$25,045,321.23

7365 SCHEDULE K. 7366 SCHEDULE K.

Statement of Cost to Reproduce New Property in Streets, Highways, Etc.; Value, Less Depreciation and Same Outside, with Assessment in Each Tax District.

Name of each township and city, wherein located, and wards in city where different tax rates prevail.	Present value of property *in streets, highways, and public places* on basis of cost of reproduction (new).	Present value of property *in streets, highways, and public places* (allowing depreciation).	Present value of property *outside* streets, highways, and public places on basis of cost of reproduction (new).	Present value of property *outside* streets, highways, and public places (allowing depreciation).	Assessment of real estate *in* streets, highways, etc., in 1904.	Assessment of real estate *outside* streets, highways, etc., in 1904.	Remarks.
City of New York **Borough** of Manhattan	$5,613,221.12	$4,261,156.39	$89,310,586.54	....	....	$13,606,000.00	
			The details of this item appear in Schedule "D." It includes all property except the property in streets as stated. It includes the value of the "Intangible Special Franchises" of the Company, there being no method by which the value of the "Special Franchises" can be separated from the Company's other property and Franchises.		The State Board in 1904 assessed the Special Franchise at $21,900,000.00, which includes the Company's Tangible property in the streets.		

Tax District, Borough of Manhattan City of New York

GAS

Laid Previous to June 30, 1904. Report only on property located in, upon, under or above Streets, Highways (including Crossings over 250 ft.) and Public Places

Diameter of pipe. Inches.	Length in Feet. Cast Iron.	Length in Feet. Steel and Wrought Iron.	Average age years.	Wt. per ft.	Valves and Boxes. Number.	Valves and Boxes. Size in inches.	Valves and Boxes. Age. years.	Special Castings. Number of tons.	Special Castings. Age years.	Service Connections. Size and Number.	Service Connections. Length in feet.	Service Connections. Age.	Service Connections. Kind.	Kind of Paving.
1½	1,407	— None —	Have no means of determining their average age.	We do not know this and our records do not show it.	Impossible to answer.					90,184	— Average 30 feet. —	— From 1 to 30 years. —	— Wrought Iron. —	Belgian Blocks—Asphalt, Granite on Concrete, Etc.
2	22,972													
3	394,336													
4	699,003													
5	5,902													
6	2,100,415													
8	513,518													
10	71,342													
12	316,693													
16	96,315													
18	29,633													
20	178,944													
24	39,494													
30	126,504													
36	9,203													
Total.	4,605,681													

Present value reproduced (new)....$5,613,221.12

Present value allowing depreciation... 4,261,156.39

Tax District, Borough of Manhattan City of New York

GAS

Laid Previous to June 30, 1904. Report only on property located in, upon, under or above Streets, Highways (including Crossings over 250 ft.) and Public Places

Diameter of pipe. inches.	Length in Feet. Cast Iron.	Length in Feet. Steel and Wrought iron.	Average age years.	Wt. per ft.	Valves and Boxes. Number.	Valves and Boxes. Size in inches.	Valves and Boxes. Age. years.	Special Castings. Number of tons.	Special Castings. Age years.	Service Connections. Size and Number.	Service Connections. Length in feet.	Service Connections. Age.	Service Connections. Kind.	Kind of Paving.
1½	1,407	— None —	Have no means of determining their average age.	We do not know this and our records do not show it.	Impossible to answer.					90,184	— Average 30 feet. —	— From 1 to 30 years. —	— Wrought Iron. —	Belgian Blocks—Asphalt, Granite on Concrete, Etc.
2	22,972													
3	394,336													
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5	5,902													
6	2,100,415													
8	513,518													
10	71,342													
12	316,693													
16	96,315													
18	29,633													
20	178,944													
24	39,494													
30	126,504													
36	9,203													
Total.	4,605,681													

Present value reproduced (new)....$5,613,221.12
Present value allowing depreciation.. 4,261,156.39
Laid from June 30, 1904, to Nov. 1, 1904.

4	*2,395*	*Decrease*
6	5,764	*969*
8	1,558	
20	*11*	
30	5,134	
36	13,039	
Total..	23,089 Feet.	

Value (new)... $146,533.05

State of New York,}
County of New York,} ss.

R. A. Carter, Secretary of the Consolidated Gas Co. of New York, being duly sworn, deposes and says that the foregoing statements have been compiled from the books and records of this company and from facts in the possession of its officers and employees, and after careful examination of the same, declares them to be a true, full and correct statement of the property of said company and the value thereof as to all the matters herein set forth, to the best of my knowledge and belief.

R. A. CARTER.

Subscribed and sworn to before me}
this 30th day of November, 1904.}

Wallace Young,
Notary Public,
[seal] King County,
Certificate filed in N. Y. County.

Note.—*Italics* in red ink in original.

7367

SCHEDULE L.

Detailed statement of shares of stock actually owned in other corporations which are taxable on their capital stock and all other non-taxable securities owned.

Description.			Amount, par value.
Astoria Light, Heat and Power Co.....	5,000	Shares	$500,000.00
Brush Electric Illuminating Co.........	50	"	5,000.00
National Coke and Coal Co.............	500	"	50,000.00
New Amsterdam Gas Co. (Common)...	121,095	"	12,109,500.00
" " " (Preferred)..	89,763	"	8,976,300.00
" " " Scrip	¾	"	75.00
New York Edison Co......................	450,410	"	45,041,000.00
N. Y. Mutual Gas Light Co..............	17,632	"	1,763.200.00
Standard Gas Light Co. (Common)....	46,309	"	4,630,900.00
" " (Preferred)...	39,344	"	3,934,400.00
United Electric Light and Power Co.. (Common)	36,086	"	3,608,600.00
" " " (Preferred)	16,398	"	1,639,800.00
" " " Scrip.......	......		93.74
Total..			$82,258,868.74

Meters, Stoves, Etc............................	$2,667,329.77	
Material and Supplies......................	697,014.92	
Value of tangible, personal property, material supplies, cars, wires, pipes, etc..................................		3,364,344.69
Total assessment of personal property by Local Commissioner..		6,100,000.00
Is there any contest on 1904 personal assessment?.....		—No—

(Here follows fac-simile marked p. 7368.)

7369 The accompanying blanks are an integral part of this report. A separate blank should be used for *each township, city, and for each ward in a city where the tax rates differ.* Additional blanks will be furnished if a sufficient number does not accompany the report.

They are intended for detailed data showing character of construction. Whenever there are peculiar conditions that tend to cause more rapid depreciation than ordinary, or any special conditions that tend to make the property less valuable, additional data should be furnished.

If any report does not contain the proper blanks for the different fields of construction needed to make a satisfactory report, other blanks will be furnished on request, covering surface street railroads, elevated railroads, surface steam railroads, telegraph, telephone, compressed air, oil, steam heat, electric light and power and subway construction. Other special blanks will be prepared if the nature of any special construction requires them.

The Law requires that every report made under this section shall have annexed thereto the affidavit of the President, Vice-President, Secretary or Treasurer of the association or corporation, or one of the persons or one of the members of the co-partnership making the same.

STATE OF NEW YORK, *County of New York, ss:*

R. A. Carter, Secretary of the Consolidated Gas Co. of N. Y., being duly sworn, deposes and says that the foregoing statements have been compiled from the books and records of this Company, and after careful examination of the same, declares them to be a true, full and correct statement of the property of said Company
7370 and the value thereof at the close of the year ending June 30,
1904, as well as of its financial condition and affairs on the said date, to the best of my knowledge and belief.

[L. S.] R. A. CARTER.

Subscribed and sworn to before me this 30th day of Nov., 1904.

[SEAL.] WALLACE YOUNG,
Notary Public 5, Kings County.

Certificate filed in N. Y. County.

7371

STATE'S EXHIBIT E.

Consolidated Gas Company of New York—Year 1905.

Taxes.

Real Estate	$179,778.95
Personal Property	88,839.00
Special Franchise	406,909.23
Mains, Pipes and Connections on Private Property	14.91
State Tax	195,795.50
	$871,337.59
Interest on accrued taxes	94,506.29
Total	$965,843.88

7372

STATE'S EXHIBIT F.

Consolidated Gas Co. Debenture Bonds.

Authorized May 1st, 1888		$3,000,000.00
Issued May 31st, 1888	$635,000.00 @ 105	
Oct. 31st, "	365,000.00 @ 106	
May 31st, 1889	500,000.00 @ 110–75	1,500,000.00
Retired to October 31st, 1905		113,000.00
Balance outstanding Oct. 31st, 1905		$1,387,000.00
Premium received on Debenture Bonds sold		$107,400.00
Premium paid on Debenture Bonds retired	$6,065.00	
Premium paid on other Bonds retired	18,816.24	
Premium paid credited to Profit & Loss Account	50,000.00	74,881.24
Balance in Bond Premium Account Oct. 31st, 1905		$32,518.76

7373 STATE'S EXHIBIT G.

AMOUNT OF GAS SUPPLIED TO THE CITY OF NEW YORK FOR THE YEAR ENDING DECEMBER 31ST, 1905.

Metered Service	127,712,700 c. f.	@ 90c. M. c. f.	$114,941.43
Arbor Lamps (not metered)	33,600 "	" 90c. "	30.27
	127,746,300 "	" 90c. "	$114,971.70
Public Lamps, including lighting and maintaining (estimated consumption)	270,779,678 "		565,241.39
	398,525,978 "		$680,213.09
Repairing City Lamps			10,986.50
Total			$691,199.59

STATE'S EXHIBIT H.

GAS SALES—1905.

	Cubic feet.	
Sales to Private Consumers	12,884,637,789	$12,873,589.88
Special Deductions		1,320.00
Net		12,872,269.88
Sales to City of New York	398,525,978	680,213.09
Total	13,283,163,767	$13,552,482.97

STATE EXHIBIT J

ANALYSIS OF COKE A/C, YEAR 1905.

Coke used in manufacture at Water Gas Stations, viz.:							
21st-st Station—	Coke............./	19,464.85	Lds.	@	2.25	$43,796.14	
	Screenings ..../	1,101.97	"	"	1.25	1,377.46	$45,173.60
44th-st Station—	Coke..............	8,035.00	"	"	2.25	$18,078.73	
	Screenings	22.	"	"	1.25	27.50	18,106.23
99th-st Station—	Coke..............	22.02	"	"	2.25	$ 49.50	
	Screenings	514.20	"	"	1.25	642.76	602.26
							$63,972.09
Coke used for Distributing Purposes at Stations, Shops, &c.:							
	Coke..............	7,511.	"	"	2.25	$16.902.94	
	Screenings	999.28	"	"	1.25	1,249.10	18,152.04
Loss on Coke Screenings 18-st Station on	....	10,880.5	"	"			3,797.79
Sold to Outside Parties.................	Coke..............	117,940.7	"	"		$260,118.34	
	Screenings	33,155.5	"			30,114.14	290,232.48
Credit 14th-st Coke A/C for Coke Transferred to 21 & 99 Sts.							
	Coke..............	19,828.15	"	@	2.25	$ 44,613.34	
	Screenings	1,506.39	"	"	1.25	1,882.99	
		21,334.54				$ 46,496.33	
For Coke recd. from 14 St.:							
Charged 21st St........................	Coke..............	19,828.15	"	"	2.25	$ 44,613.34	
	Screenings	1,101.97	"	"	1.25	1,377.46	
" 99th St........................	Screenings........	404.42	"	"	1.25	505.53	
		21,334.54				$ 46,496.33	
Credit 42d-st Coke A/C for Coke Transferred, to 44-st Station:							
	Coke..............	7,888.24	"	"	2.25	$ 17,748.52	
	Screenings	17.16	"	"	1.25	21.45	
		7,905.40				$ 17,769.97	
For Coke recd. from 42d St.:							
Charged 44-st Station.................	Coke..............	7,888.24	"	"	2.25	$ 17,748.52	
	Screenings	17.16	"	"	1.25	21.45	
		7,905.40				$ 17,769.97	
							$ 376,154.40
~~Carried Forward~~							~~$376,154.40~~
Less							
Coke A/C Balance—Jan. 1, 1905...............	$47,193.90						
" Dec. 31, 1905...............	9,340.50						
Decrease							37,853.49
Total Coke Produced For Sale..							$338,300.91

STATE EXHIBIT K

CONSOLIDATED GAS COMPANY OF N. Y.

COKE AND SCREENINGS SOLD DURING DURING YEAR 1905

National Coke and Coal Co.	Jan'y 1—Oct. 12, 1905	75,222 Lds.	695 lbs.	Coke @	2.20 per load		$165,489.40
" " " " "	Oct. 13—Dec. 31, "	20,737 "	1,120 "	"	2.45 " "		50,807.49
" " " " "	Jan'y 1—May 31, "	19,015 "	.. "	"	2.075 " "		39,456.15
		115,975 "	315				$255,753.04
National Coke and Coal Co.	Jan'y 1—Dec. 31, 1905	24,084 "	550 "	Screenings @	.95 pr. load		$22,823.07
" " " " "	Sept. 11— " " "	6,127 "	.. "	"	1.05 "		6,433.35
" " " " "	Jan'y 1— " " "	249 "	.. "	"	75 "		186.75
		30,460	550				$29,443.17
	Difference in price	220 Loads		@	1.05	231.00	
	"	220 "			.95	209.00	
	"	220 "			.10	*22.00*	*22.00*
							$ 29,421.17
							$285,174.21
Astoria Light, Heat & Power Co.	Jan'y—Aug. 1905	1,965 loads,	750 lbs.	Coke @	2.20		$4,324.10
" " " " "	Feb'y— " "	729 "	706 "	Screenings @	.95		692.97
		2,694 "	1,456 "				$ 5,017.07
" " " " "	Jan'y, '05, Labor-handling *Coke* sent to Astoria						41.20
							$ 5,058.27
					Total Coke Sales		$290,232.48

COKE	*Loads*	*Amount*	SCREENINGS	*Loads*	*Amount*
National Coke & Coal Co.	115,975.2	$255,753.04	National Coke & Coal Co.	30,460.5	$29,421.17
Astoria Light, Heat & P. Co.	1,965.5	4,365.30	Astoria Light, Heat & P. Co.	2,695	692.97
Total	117,940.7	$260,118.34		33,155.5	$30,114.14

	117,940.7 lds. Coke	$260,118.34
	33,155.5 " Scrn'gs	30,114.14
Total Coke and Screenings	151,096.2	$290,232.48

7374

STATE'S EXHIBIT I.

CONSOLIDATED GAS CO. OF N. Y.

INTEREST ON BONDED DEBT.

Calendar Year—1905.

Debit:		
Interest on Bills Payable	$20,637.50	
do Debenture bonds	69,488.07	
do Convertible Debentures	1,191,527.25	
do Bond and Mortgage	129.54	
		1,281,782.36
Credit:		
Interest on Special Deposits	$93,174.93	
do City of N. Y. Corporate Stock	105,000.00	
do N. Y. Edison Co. Loans	54,316.92	
do Miscellaneous Loans	34,138.81	
do Bank Balances	22,728.26	
		309,358.92
		$972,423.44

(Here follow State Exhibits J and K marked pp. 7375 and 7376.)

7377

STATE EXHIBIT L.

CONSOLIDATED GAS CO. OF N. Y.

REPAIRS AND RENEWALS—NOV. 11, 1884, TO DEC. 31ST, 1905.

		Production.	Distribution.	Total.	Cost per M. sold.
1884.	Repairs	$68,755.61	$13,258.21	$82,013.82	
	Renewals	....	....	....	....
	Total	68,755.61	13,258.21	82,013.82	14.83
1885.	Repairs	184,595.99	124,864.84	309,460.83	....
	Renewals	....	29,049.50	29,049.50	....
	Total	184,595.99	153,914.34	338,510.33	08.59
1886.	Repairs	262,006.65	113,212.06	375,218.71	....
	Renewals	....	31,687.05	31,687.05	....
	Total	262,006.65	144,899.11	406,905.76	09.71
1887.	Repairs	260,899.31	141,540.14	402,439.45	....
	Renewals	86,413.00	66,624.63	153,037.63	....
	Total	347,312.31	208,164.77	555,477.08	11.47
1888.	Repairs	354,301.41	201,858.36	556,159.77	....
	Renewals	875.00	39,069.04	39,944.04	....
	Total	355,176 41	240,927.40	596,103.81	11.07
1889.	Repairs	286,867.30	223,512.46	510,379.7	....
	Renewals	9,681.80	62,924.39	72,606.1	....
	Total	296,549.10	286,436.85	582,985.95	10.38
1890.	Repairs	344,020.81	282,025.88	626,046.69	....
	Renewals	20,321.51	114,522.65	134,844.16	....
	Total	364,342.32	396,548.53	760,890.85	12.88
7378					
1891.	Repairs	366,274.81	310,140.82	676,415.63	....
	Renewals	186,365.42	165,497.55	351,862.97	....
	Total	552,640.23	475,638.37	1,028,278.60	16.40
1892.	Repairs	383,985 36	298,529.10	682,514.46	....
	Renewals	80,097.63	241,114.12	321,211.75	....
	Total	464,082.99	539,643.22	1,003,726.21	15.25
1893.	Repairs	355,424.09	361,355.89	716.779.98	....
	Renewals	36,521.39	150,012.25	186,533.64	....
	Total	391,945.48	511,368.14	903,313.63	13.18

Repairs and Renewals—Continued.

		Production.	Distribution.	Total.	Cost per M. sold.
1894.	Repairs.............	$298,746.59	$285,314.89	$584,061.48	....
	Renewals...........	7,864.89	117,741.99	125,606.88	....
	Total.............	306,611.48	403,056.88	709,668.36	10.54
1895.	Repairs.............	312,865.55	309,201.09	622,066.64	....
	Renewals...........	14,231.49	138,536.90	152,768.39	....
	Total.............	327,097.04	447,737.99	774,835.03	11.50
1896.	Repairs.............	316,594.71	365,419.78	682,014.49	....
	Renewals...........	13,725.17	242,303.92	256,029.09	....
	Total.............	330,319.88	607,723.70	938,043.58	13.71
1897.	Repairs.............	247,138.29	379,413.66	626,551.95	....
	Renewals...........	11,132.16	155,587.57	166,719.73	....
	Total.............	258,270.45	535,001.23	793,271.68	11.67
7379					
1898.	Repairs.............	268,638.74	353,835.89	622,474.63	....
	Renewals...........	214,880.86	239,024.76	453,905.62	....
	Total.............	483,519.60	592,860.65	1,076,380.25	14.73
1899.	Repairs.............	290,344.33	351,236.67	641,581.00	....
	Renewals...........	9,307.84	232,964.57	242,272.41	....
	Total.............	299,652.17	584,201.24	883,853.41	10.26
1900.	Repairs.............	297,234.57	348,627.88	645,862 45	....
	Renewals...........	105,562.15	222,275.75	330,837.90	....
	Total.............	405,796.72	570,903.63	976,700.35	09.87
1901.	Repairs.............	186,441.74	332,521.22	518,962.96	....
	Renewals...........	275,114.94	187,412.88	462,527.82	....
	Total.............	461,556.68	519,934.10	981,490 78	09.53
1902.	Repairs.............	178,163,51	344,828.23	522,991.74	....
	Renewals...........	7,331.71	451,149.09	458,480.80	....
	Total.............	185,495.22	795,977.32	981,472.54	08.54
1903.	Repairs.............	280,300.45	446,481.87	726,782.32	....
	Renewals...........	16,859.18	220,717.78	237,576.96	....
	Total.............	297,159.63	667,199.65	964,359.28	07.55
1904.	Repairs.............	213,403.51	410,202.44	623,605.95	....
	Renewals...........	268,686.22	187,649.57	456,335.79	....
	Total.............	482,089.73	597,852.01	1,079,941.74	08.19
Total for the period:					
	Repairs.............	5,757,003.33	5,997,381.38	11,754,384.71	....
	Renewals...........	1,367,972 36	3,295,865.96	4,663,838.32	....
	Total.............	7,124,975.69	9,293,247.34	16,418,223.03	10.89

Repairs and Renewals—Continued.

7380

		Production.	Distribution.	Total.	Cost per M. sold.
Nominal year ending October 31st, 1905.					
	Repairs	$211,095.54	$473,972.53	$685,068.07	....
	Renewals	57,147.71	137,519.16	194,666.87	....
	Total	268,243.25	611,491.69	879,734.94	06.61
1905.	Repairs	217,319.07	474,750.91	692,069.98	....
	Renewals	12,098.01	270,121.66	282,219.67	....
	Total	$229,417.08	$744,872.57	$974,289.65	07.34

7381

STATE'S EXHIBIT M.

NOMINAL YEAR ENDING OCTOBER 31, 1905.

Income From Securities of Other Companies During Nominal Year Ending October 31st, 1905.

Dividends:

Standard Company	$523,728.00	
Mutual "	164,838.00	
Coke "	7,500.00	
	696,066.00	

Interest:

United Company	341,663.12	
Brush Company	13,750.00	
Westchester Company	17.50	
	355,430.62	
Tax Rate of .005 on	$1,051,496.62 =	$5,257.48

Investments in the Securities of other Companies being $38,643,590.14. Tax at rate 3 % on Dividends paid in Excess of 4 % on $38,643,590.14 as follows:—

Nominal Year Dividend:

December 15—1904—2½ %
March 15—1905—2½ %
June 15—1905—2 %
Sept. 15—1905—2 %

9 % Excess over 4 %—5 %
5 % of $38,643,590.14—$1,932,179.51

Tax Rate of 3 % on $1,932,179.51	57,965.39	
Tax on Income from Securities of Other Co.'s	$5,257.48	
" " " " Gas Business	70,538.02	
		$75,795.50
Tax on Excess Dividends on amount invested in Securities of other Companies, $38,643,590.14	57,965.39	
Tax on Excess Dividend on Capital Stock actually employed in Gas Business, $41,356,409.86	62,034.61	
		120,000.00
		$195,795.50

7382 COMPLAINANT'S EXHIBIT 97, for Identification.

[Operating Ledger for 1905.]

COMPLAINANT'S EXHIBIT 98, for Identification.

[Journal of Operating Ledger for 1905.]

COMPLAINANT'S EXHIBIT 99, for Identification.

[Blotter of Sundry Debtors' Ledger.]

COMPLAINANT'S EXHIBIT 100, for Identification.

[Sundry Debtors' Ledger.]

7383 COMPLAINANT'S EXHIBIT 101.

THE MAYOR, ALDERMEN & COMMONALTY OF THE CITY OF NEW YORK

TO

THE NEW YORK GAS LIGHT COMPANY.

Dated May 12th, 1823.

Articles of agreement indented, made and concluded this twelfth day of May, in the year of our Lord one thousand eight hundred and twenty-three, between the Mayor, Aldermen and Commonalty of the City of New York of the first part, and The New York Gas Light Company of the second part.

Witnesseth, that the said parties of the first part, for and in consideration of the covenants, articles and agreements hereinafter mentioned, on the part of the said parties of the second part, and their successors, to be observed, performed and kept, DO hereby grant, demise and to farm let, to the said parties of the second part, and their successors, All and singular the sole and exclusive privilege and right of laying or placing under ground pipes in all and every of the public streets and parts of streets of the City of New York, lying and being south of a line commencing at the East River at the foot of Grand Street, and running through Grand Street to Sullivan Street, and through Sullivan Street to Canal Street, and through Canal Street to the North or Hudson River, for conducting Gas, for lighting the public lamps in the streets and parts of streets south of said line, and the houses and buildings fronting, or to front on, or bounded by, or adjacent to the Streets or parts of Streets south of said line.

7384 To have and to hold and to enjoy the same unto the said parties of the second part and their successors from the day of the date of these presents, for and during and until the twelfth day of May, which will be in the year of our Lord one thousand eight hundred and fifty-three.

Provided, nevertheless, and this grant is upon this express condition, that the said parties of the second part, and their successors, shall and do in all things well and sufficiently keep, perform and observe, all and singular the covenants, articles, agreements and stipulations, on their part to be kept, performed and observed as hereinafter is set forth and agreed. And the said parties of the second part, in consideration of the premises, do, for themselves and their successors, covenant and agree, to and with the said parties of the first part, and their successors, as follows, that is to say, that they the said parties of the second part, shall and will before the twelfth day of May in the year of our Lord one thousand eight hundred and twenty-five, erect, establish and complete in the said City of New York, good and sufficient buildings, works and apparatus for the preparing and manufacture of gas, and that they will also cause the pipes for conducting the same, and of sufficient capacity, to be laid, and will also manufacture or cause to be manufactured and supplied, in the most approved manner, sufficient quantities of the best quality gas, commonly called inflammable gas, for lighting the houses and public lamps in the street called Broadway in the said city from the Battery to Grand Street, in the manner hereinafter mentioned. And also, moreover, that they the said parties of the second part, shall and will at all times from and after the twelfth day of May in the year of our Lord one thousand eight hundred and twenty-eight, and during the residue of the term of this 7385 grant, in like manner, cause the pipes, of sufficient capacity, for conducting the said gas to be laid, and will also manufacture or cause to be manufactured and supplied in the most approved manner, sufficient quantities of the said gas of the best quality for well and sufficiently lighting the streets, parts of streets and public places, and the public lamps and houses adjoining or to adjoin all and singular the streets and parts of streets lying in the said city, south of the aforesaid line, at such periods as the said parties of the first part shall from time to time, after the said twelfth day of May in the year of our Lord one thousand eight hundred and twenty-eight, by resolution or by-law reasonably require of the said parties of the second part. And that all such pipes to be furnished by the said parties of the second part, and placed underground, for the purpose of conducting the said gas, in all or either of the said streets or parts of streets shall be made and constructed in the most approved manner of cast iron, and of the best materials. And also that the said parties of the second part shall and will light such and so many of the public lamps, with the best quality of gas, as are in the streets or parts of streets of the said city, south of the aforesaid line whenever they may be required to light the same, or any number of the same, by the said parties of the first part, or their successors; the said lamps to be lighted during such times as the public lamps are now required to be lighted and in the streets or parts of streets in which the pipes for conducting gas shall be laid according to these presents, at a yearly expense to the said parties of the first

part not exceeding what would be the expense of lighting and supplying an equal number of the said lamps with oil of the quality generally used for that purpose, estimating the price of
7386 oil at the average price of the same in the city of New York during the preceding year. And further that the said parties of the second part shall likewise furnish at their own expense, the necessary conductors of metal of sufficient capacity to the lamp posts; that the lights of the said lamps shall be of a quality, brilliancy or intensity equal to the gas in use for the public lamps in the city of London; the said parties of the first part, however, to be at the expense of lamps, lamp irons, lamp posts and fittings up, and at no other expense for fixtures, conductors, repairs, or on any other account whatsoever. And also that the said parties of the second part shall and will, at all times, give forty-eight hours' notice to the said parties of the first part, or to their street commissioner of their intention to break up or open any street, or part of a street, for the purpose of laying or repairing the pipes to conduct the gas, and that they will replace the earth which they may remove in so doing, before sunset of the day on which any such opening shall be made. And that they will replace the pavements and repave and repair the same in such reasonable time and manner as the said parties of the first part, or their street commissioner may direct, and in as good and firm a manner as the streets were in before being broken up for the aforesaid purposes. And further that all such repairs as shall at any time become necessary by reason of the said pipes or conductors shall always be made and done by the said parties of the second part at their own cost and expense. And also that the said parties of the second part will so conduct their manufactory or manufactories of gas as not to create a nuisance and that they will in all things be governed by such reasonable and necessary rules and regulations as the said parties of the first part or their successors may from time to time pass, ordain and establish
7387 relative to the opening of streets and laying down the pipes and conductors aforesaid.

Provided always, that nothing in this grant contained shall be construed to prevent any person or persons residing on, adjacent or near to any of the said streets or parts of streets in said city south of the aforesaid line, from erecting in or on his or their own premises, any building or apparatus to light with gas his or their own house or manufactory.

And provided further, and the premises hereby granted, are also upon this express condition, anything herein contained to the contrary notwithstanding, that if the said parties of the second part, or their successors, shall not well and faithfully observe, perform, fulfil and keep, all and singular the covenants and conditions above contained, on their part and behalf to be observed, performed, fulfilled and kept, according to the true intent and meaning of these presents, then and in that case it shall and may be lawful for the said parties of the first part, in Common Council convened, by a resolution or order to annul and vacate this grant, and thereupon the premises hereby demised shall be revested in the said parties of the first part, or their successors, as fully and completely as if this Indenture had never been executed.

In witness whereof, to one part of this Indenture, remaining with the said parties of the first part, the said parties of the second part have caused the Common Seal of the said The New York Gas Light Company to be affixed; and to the other part thereof remaining with the said parties of the second part, the said parties of the first part have caused the Common Seal of the City of New York to be affixed, the day and year above written.

7388 NOTE: The words "and in the streets or parts of streets in which the pipes for conducting gas shall be laid according to these presents," interlined before execution.

STEPHEN ALLEN.

By the Common Council,

[L. S.] J. MORTON, *Clerk.*

CITY AND COUNTY OF NEW YORK, *ss:*

On the twenty-second day of May, in the year of our Lord one thousand eight hundred and twenty-three, before me personally, came Jacob Morton, who is known to me, and being by me duly sworn, did depose and say that he is the Clerk of the Common Council of the City of New York, and has the custody of the Seal of the Mayor, Aldermen and Commonalty of the City of New York, the parties of the first part described in and who have executed the preceding deed; that the seal thereto affixed is the Common Seal of the said The Mayor, Aldermen and Commonalty of the City of New York and was so affixed by him, the deponent, pursuant to an order by them made; that the signature "Stephen Allen," thereto subscribed, is the proper handwriting of Stephen Allen, the Mayor of the said city, and that the signature "J. Morton, Clerk," also thereto subscribed, is the proper handwriting of the said deponent.

JOHN W. MULLIGAN,
Commissioner under Act of 24th March, 1818.

Recorded (this Instrument) in the office of Register in and for the City and County of New York in Lib. 169 of Conveyances, Page 178, on the 15th day of August, 1823, at 54 min. past 2 o'clock P. M.
Examd. by

JAS. W. SENT, *Register.*

7389

COMPLAINANT'S EXHIBIT 102.

GRANT TO THE MANHATTAN GAS LIGHT COMPANY.

Dated May 5, 1848.

This indenture made the fifth day of May in the year of our Lord, one thousand eight hundred and forty-eight.

Between the Mayor, Aldermen and Commonalty of the City of New York, of the first part, and the Manhattan Gas Light Company of the second part.

Witnesseth, that the said parties of the first part for and in consideration of the covenants, articles and agreements hereinafter mentioned on the part of the said parties of the second part and their successors, to be observed, performed and kept, do hereby grant and demise to the said parties of the second part and their successors, the privilege and right to lay or place underground pipes in any and all of the streets, avenues and public places of the city of New York, comprised between a line commencing at the East River at the foot of Grand Street and running through the middle of Grand Street to Sullivan Street and through the middle of Sullivan Street from Grand Street to Canal Street, and through the middle of Canal Street from Sullivan Street to the North or Hudson's River and a line commencing at the East River at the foot of Forty-second Street, on the north side thereof and running parallel with said street to the North or Hudson's River and embracing both sides of said street, and in any or every part of any such street, avenue or public place for the purpose of conducting gas, commonly called inflammable gas, for lighting the public lamps in the said streets, avenues and public places and parts thereof as hereinafter mentioned and for lighting the houses and buildings fronting or to front on or bounded by or adjacent to the said streets, avenues and public places or parts thereof. To have, hold, use and enjoy the said right and privilege unto the said parties of the second part and their successors from the day of the date of these presents until the fifth day of May which will be in the year one thousand eight hundred and sixty-eight. Provided always, and these presents are upon this express condition, that they the said parties of the second part and their successors, shall and do in all things well and sufficiently keep, perform and observe all and singular the covenants, articles, agreements, provisions and stipulations on their part to be kept, performed and observed as hereinafter specified. 7390

And the said parties of the second part in consideration of the premises do for themselves and their successors covenant and agree to and with the said parties of the first part and their successors as follows: that is to say, that any gas house or work for the manufactory of such gas which the said parties of the second part hereafter may use or erect and establish in the city of New York, shall be located, erected and established on the margin of either the Hudson or the East River and not south of Fourteenth Street in the said city, and that all pipes for conducting the gas which the said parties of the second part may cause to be laid, shall be of sufficient capacity and made and constructed of the best materials of cast iron and in the most approved manner. That the said parties of the first part shall have the right to order the pipes called the mains of the company, to be extended in and along all the streets, avenues and public places in the said city within the limits aforesaid, commencing at Grand and Canal Streets and continuing through each street 7391 in regular succession. Provided, however, that the said parties of the second part shall not be compelled to expend in the laying of said mains as last aforesaid during the continuance of this contract, a yearly sum to exceed six thousand dollars. Also that the said parties of the second part shall fit up and light all the public lamps required by the corporation wherever the pipes of the Company are or shall be laid within the district aforesaid, and that the said lamps shall be so lighted during such times as the public lamps throughout the city of New York are required to be lighted by the regulations of the said parties of the first part, and that all such public lamps situated within the district aforesaid which shall be required by the corporation as aforesaid, shall be so supplied and lighted by the said parties of the second part at the yearly rate of fifteen dollars for each lamp, for the light and for lighting and extinguishing the same. Also that the said parties of the first part may direct and require by notice to that effect, that all or any portion of said public lamps shall be lighted and kept burning at any other time or times during the continuance of this contract, and the said parties of the second part shall light the same and continue them burning in accordance with any and every direction of the said parties of the first part, or their proper agent or agents to that effect. Provided that if in compliance with the direction of the said parties of the first part, the whole number of hours during which the said lamps or portion of them are kept burning in any year shall exceed the average number of hours during which the public lamps in the city of New York have been kept burning during the last five years prior to the date of this contract (which the parties hereto estimate to be 7392 and fix at Two thousand three hundred hours), then and in that case the said parties of the second part shall be entitled to claim and receive for such additional number of hours, during which the public lamps or a portion of them in the district aforesaid are kept burning, in accordance with such direction of the said parties of the first part, an additional compensation, equivalent to a pro-rata increase of the compensation hereinbefore allowed, proportioned to the increased number of hours beyond the said average number.

The burners in the public lamps shall be equal to those heretofore used in the City of New York, equal to an average consumption of three cubic feet per hour.

And it is further agreed that the said parties of the second part shall furnish at their own expense, the necessary conductors of metal of sufficient capacity to the lamp posts of such public lamps as they may be required to supply with gas and light as aforesaid. The parties of the second part shall also fit up the said public lamps and shall receive as compensation therefor the sum of Five dollars for each lamp so fitted up. It is agreed, however, that the cost of the posts, lanterns and repairs shall be at the expense of the said parties of the first part.

And it is further agreed that the said parties of the second part shall have the right to lay pipes at any time within the said district upon giving forty-eight hours notice to the said parties of the first part, or to the Street Commissioner, of their intention to break up or open any street, avenue or public place or part thereof, or to remove any part of the pavement thereof for the purpose of laying or repairing the pipes to conduct the said gas and that they will replace the earth which they may remove in so doing before sunset of the
7393 day on which such opening shall be made, and that they will replace the pavement and repave and repair the same in such reasonable time and manner as the said parties of the first part or their Street Commissioner may direct, and in as good and firm a manner as such streets, avenues or public places or parts thereof were in before being broken up for the purpose aforesaid. Also that all such repairs as shall at any time become necessary by reason of laying the said pipes or conductors shall be made and done by the said parties of the second part at their own cost and expense. Also that no such street, avenue or public place or part thereof removed, or shall be so broken up or opened, or the pavement thereof removed, or shall be again filled up or repaired except under the direction and supervision of a competent person to be appointed by the said Street Commissioner, but the said parties of the second part shall not be called upon to pay any sum to any party or parties for the inspection of any pavement which they may have occasion to replace.

And it is further agreed that the said parties of the second part shall and will so conduct the manufactory or manufactories of gas as not to create a nuisance and that they will in all things be governed by such reasonable and necessary rules and regulations as the said parties of the first part or their successors may from time to time pass, ordain and establish relative to the opening of such streets, avenues or public places or parts thereof and laying down the pipes and conductors aforesaid.

And it is hereby expressly provided that nothing herein contained shall be construed or deemed as granting to the said parties of the second part any sole or exclusive right or privilege, or as preventing the said parties of the first part for granting the like privileges
7594 as are hereby given, to the said parties of the second part to any other company, persons or parties whatsoever, or as preventing any person or persons residing on or adjacent or near to any of the said streets, avenues or public places or parts thereof lying north of the line hereinbefore first mentioned from erecting in or upon his or their own premises any building or apparatus to light with gas, his or their own house, store, manufactory or premises.

And it is further covenanted and agreed by and on the part of the said parties of the first part, that the said parties of the first part and their successors shall and will pass all needful ordinances which shall be necessary to protect the interests of the said parties of the second part and which of right ought to be passed for that purpose.

And it is further provided that these presents are upon the express condition that if the said parties of the second part, or their successors, shall not well and truly observe, perform and fulfill and keep all and singular the covenants and conditions hereinbefore contained on their part and behalf to be observed, performed, fulfilled and kept, according to the true intent and meaning of these presents, then and in that case, it shall and may be lawful for the said parties of the first part by a resolution or order to be passed in Common Council, to annul and vacate this grant and thereupon the premises hereby demised shall be revested in the said parties of the first part or their successors as fully and completely as if this indenture had never been executed.

In witness whereof, to one part of this indenture remaining with the said parties of the first part, the said parties of the second part have caused the common seal of the said the Manhattan Gas Light Company to be affixed, and to the other part thereof remaining with the said parties of the second part, the said parties of the first part have caused the common seal of the City of New York to be affixed the day and year above written. 7395

[SEAL.] WM. V. BRADY, *Mayor.*

By the Common Council,
D. T. VALENTINE,
Clerk, C. C.

STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-fourth day of May, A. D., one thousand eight hundred and forty-eight, before me personally appeared David T. Valentine, with whom I am personally acquainted and known to me to be the Clerk of the Common Council of the City of New York, who, being by me duly sworn, did depose and say that he resides in the City of New York, that the seal affixed to the foregoing instrument is the common seal of the corporation of the City of New York, that the same was affixed to said instrument by their authority, and that he subscribed his name thereto by like authority.

CHAS. D. JUDAH,
Comm'r of Deeds.

Recorded in the office of Register of the City and County of New York in Liber 507 of Conveyances, page 124, May 24th, 1848, at 30 minutes past 3 o'clock P. M.

Examined, SAMUEL OSGOOD, *Rg. C.*

Endorsed: The Mayor, Aldermen and Commonalty of the City of New York to the Manhattan Gas Light Company.

Approved,
WILLIS HALL.

7396 COMPLAINANT'S EXHIBIT 103.

GRANT TO THE MANHATTAN GAS LIGHT COMPANY.

Dated May 8, 1833.

This Indenture, made this eighth day of May in the year of our Lord one thousand eight hundred and thirty-three between the Mayor, Aldermen and Commonalty of the City of New York, of the first part, and the Manhattan Gas Light Company of the second part, Witnesseth, that the said parties of the first part, for and in consideration of the covenants, articles and agreements hereinafter mentioned, on the part of the said parties of the second part and their successors, to be observed, performed and kept, do hereby grant and demise to the said parties of the second part and their successors, the privilege and right to lay or place underground, pipes in any and all of the streets, avenues and public places of the City of New York, lying and being north of a line commencing at the East River, at the foot of Grand Street, and running through Grand Street to Sullivan Street, and through Sullivan Street to Canal Street, and through Canal Street to the North or Hudson River, and in any or every part of any such street, avenue or public place for the purpose of conducting gas, commonly called inflammable gas, for lighting the public lamps in the said streets, avenues and public places, and parts thereof, as hereinafter mentioned, and for lighting the houses or buildings fronting or to front on or bounded by or adjacent to the said streets, avenues and public places or parts thereof. To have, hold, use and enjoy the said right and privilege unto the said parties of the second part, and their successors, from the day of the date of these presents,
until the twelfth day of May, which will be in the year of our
7397 Lord one thousand eight hundred and fifty-three; provided
always, and these presents are upon this express condition, that they, the said parties of the second, and their successors, shall and do, in all things well and sufficiently keep, perform and observe, all and singular, the covenants, articles, provisions, agreements and stipulations on their part to be kept, performed and observed, as hereinafter specified.

And the said parties of the second part, in consideration of the premises, do for themselves, and their successors, covenant and agree to and with the said parties of the first part, and their successors, as follows, that is to say, that any gas house or works, for the manufactory of such gas, to be erected or established by the said parties of the second part, in the City of New York, shall be so erected and established on the margin either of the Hudson or of the East River, not south of Fourteenth Street in the said city; and that all pipes for conducting the same which the said parties of the second part may cause to be laid, shall be of sufficient capacity, and made and constructed of the best materials of cast iron, and in the most approved manner; also, that from all such main pipes, as they may lay or cause to be laid by virtue of the right and privilege hereby granted, they will supply with gas, and cause to be lighted such and so many of the public lamps opposite or adjacent to such main pipes as they may from time to time be required to do by the said parties of the first part, and that the said lamps shall be so lighted during such times as the public lamps throughout the City of New York are required to be lighted, by the regulation of the said party of the first part, and that all such public lamps situated north of the line aforesaid, and south of the line of Sixth Street, which the said parties of the first part may require to be so supplied with gas, and 7398 lighted as aforesaid, shall be so supplied and lighted by the said parties of the second part, at a yearly expense to the said parties of the first part, not exceeding fifteen dollars for supplying each of such lamps with gas, and lighting the same. And it is further agreed that the said parties of the second part shall furnish at their own expense, the necessary conductors of metal of sufficient capacity to the lamp posts of such public lamps as they may be required to supply with gas and light as aforesaid; and that the light of the said lamps shall be of a quality, brilliancy or intensity equal to the gas in use for the public lamps in the City of London. It is understood, however, that the parties of the first part are to be at the expense of such lamps, with their lamp irons, lamp posts and fittings up, but at no other expense for fixtures, conductors, repairs, or on any other account whatsoever for the same. And it is further agreed that the said parties of the second part shall at all times give forty-eight hours' notice to the said parties of the first part, or their Street Commissioner, of their intention to break up or open any street, avenue or public place or part thereof, or to remove any part of the pavement therefrom, for the purpose of laying or repairing the pipes to conduct the said gas, and that they will replace the earth which they may remove in so doing, before sunset of the day on which such opening shall be made, and that they will replace the pavement and repave and repair the same in such reasonable time and manner as the said parties of the first part, or their Street Commissioner may direct, and in as good and firm a manner as such streets, avenues and public places or parts thereof were in before being broke up for the purpose aforesaid. Also, that all such repairs as shall at any time become necessary by reason of laying the said pipes or conductors, shall be made and done by the said parties of the second part, at their own cost and expense. Also that no such street, avenue or 7399 public place or part thereof shall be so broken up or opened or the pavement thereof removed, or shall be again filled up or repaired or such pavement replaced, except under the direction and supervision of a competent person to be appointed by the said Street Commissioner, and who shall be considered as in the employ of the said parties of the first part, but who shall be paid for his services by the said parties of the second part, such sum as the said Street Commissioner may direct, not exceeding one dollar and fifty cents per diem for each day that he may be so employed. Also, that no such street, avenue or public place, or part thereof shall be so broken up or opened, or the pavement thereof removed at any time between the first of December and the first of March during the continuance of the term mentioned in these presents, without the consent of the said Street Commissioner being first obtained for that purpose.

And it is further agreed that the said parties of the second part shall and will so conduct their manufactory or manufactories of gas, as not to create a nuisance, and that they will in all things be governed by such reasonable and necessary rules and regulations as the said parties of the first part, or their successors may, from time to time, pass, ordain and establish, relative to the opening of such streets, avenues or public places, or parts thereof, and laying down the pipes and conductors aforesaid.

And it is hereby expressly provided, that nothing here in contained shall be construed or deemed as granting to the said parties of the second part, any sole or exclusive right or privilege, or as preventing the said parties of the first part from granting the like privileges as are hereby given to the said parties of the second part, to any other company, persons or parties whatsoever, or as preventing any person or persons residing on or adjacent or near to any of the said streets, avenues or public places, or parts 7400 thereof, lying north of the line hereinbefore first mentioned, from erecting in or upon his or their own premises, any building or apparatus, to light with gas, his or their own house, store, manufactory or premises. And it is further provided, and these presents are upon the express condition, that if the said parties of the second part, or their successors, shall not well and truly observe, perform, fulfill and keep all and singular, the covenants and conditions hereinbefore contained, on their part and behalf to be observed, performed, fulfilled and kept, according to the true intent and meaning of these presents, then and in that case, it shall and may be lawful for the said parties of the first part, by a resolution or order to be passed in Common Council, to annul and vacate this grant, and thereupon, the premises hereby demised shall be revested in the said parties of the first part, or their successors, as fully and completely as if this indenture had never been executed.

In witness whereof, to one part of this indenture remaining with the said parties of the first part, the said parties of the second part, have caused the common seal of the said The Manhattan Gas Light Company to be affixed and to the other part thereof remaining with the said parties of the second part, the said parties of the first part have caused the common seal of the City of New York to be affixed, the day and year, above written.

By the Common Council,

[SEAL.] GIDEON LEE, *Mayor.*

J. MORTON, *Clerk.*

Endorsed: Agreement between the Mayor, Aldermen and Commonalty of the City of New York and The Manhattan Gas Light Company.

Approved:
R. EMMET.
321—396

7401 COMPLAINANT'S EXHIBIT 104.

GRANT TO THE HARLEM GAS-LIGHT COMPANY.

Resolved, That the consent of the Mayor, Aldermen and Commonalty of the City of New York is hereby given to "The Harlem Gas-Light Company," to lay conductors for conducting gas through the streets, avenues, lanes, alleys, and squares, in all that portion of the city lying north of the center line of Seventy-ninth Street, for the purpose of supplying gas to public and private buildings, in consideration of the following articles being faithfully complied with.

First. The said company shall not impede or interrupt public travel in the laying of such mains more than cannot possibly be avoided; and shall, after opening any street, lane, alley, or square, depositing their mains, restore the same to as good condition as the same was before such opening, and be at all times subject to such restrictions, ordinances, and resolutions as the Common Council of said City may, from time to time, adopt, and under the control of the Street Department of said city.

Second. They shall furnish a supply of gas to all persons who may desire the same, and shall deprive no consumer of gas upon their refusal to pay, or for a dispute of the bill rendered, until they have served such disputant with the affidavit of their inspector as to the correctness of the register of their meter, and that all the gas for which said disputants are charged has actually passed through said meter.

Third. The Mayor, Aldermen, and Commonalty of said city hereby reserve the right to purchase, at any time, from the 7402 said company, all the materials, pipes, fixtures, buildings, and all and singular all the personal and real property owned by said company, by paying to the said company the cost of the same, and ten per cent. over and above the said cost.

Fourth. The permission herein granted, is upon the express condition that said company shall proceed immediately, or within one year from the approval by the Mayor, of the resolution, to lay their mains in the district as embraced in this grant, and supply, at least within two years from its passage, gas to be used by the corporate authorities or private consumers.

Fifth. The said company shall be exempt from taxation on their personal property for the period of three years from the organization of said corporation, pursuant to the power granted for this purpose by the eighteenth section of "An Act to authorize the formation of gas-light companies," passed by the Legislature of the State of New York, February 16, 1848.

Sixth. The Mayor, Aldermen, and Commonalty also retain the right to revoke any and all permission, which may be herein granted, upon satisfactory proof being afforded of a failure of the said "Harlem Gas Light Company" to comply with these conditions as herein expressed, or of any neglect to comply with any resolution or ordinance, which may be hereafter adopted, and nothing herein contained shall be construed as giving any exclusive permission whatever to the said Harlem Gas Light Company.

Adopted by the Board of Aldermen, March 26th, 1855.

7403 THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of the said City, do certify, that I have compared the preceding with the original resolution granting permission to the "Harlem Gas Light Company" to lay conductors through the streets, etc., of the City of New York, north of Seventy-ninth Street.

Adopted by the Board of Aldermen, March 26th, 1855, — on file in my office, and that the same is a correct transcript therefrom and the whole of such original.

It witness whereof, I have hereunto subscribe- my name and affixed my official seal this 31st day of July, 1906.

P. J. SCULLY, *Clerk.*

GRANT TO THE HARLEM GAS-LIGHT COMPANY.

Resolved, That the consent of the Mayor, Aldermen, and Commonalty of the City of New York is hereby given to "The Harlem Gas-Light Company," to lay conductors for conducting gas through the streets, avenues, lanes, alleys, and squares, in all that portion of the city lying north of the centre line of Seventy-ninth Street, for the purpose of supplying gas to public and private buildings, in consideration of the following articles being faithfully complied with:

First. The said company shall not impede or interrupt public travel in the laying of such mains more than cannot possibly be avoided; and shall, after depositing their mains, restore the same to as good condition as the same was before such opening, and 7404 be at all times subject to such restrictions, ordinances, and resolutions as the Common Council of said city may, from time to time, adopt, and under the control of the street department of said city.

Second. They shall furnish a supply of gas to all persons who may desire the same, and shall deprive no consumer of gas upon their refusal to pay, or for a dispute of the bill rendered, until they have served such disputant with the affidavit of their inspector as to the correctness of the register of their meter, and that all the gas for which said disputants are charged has actually passed through said meter.

Third. The Mayor, Aldermen, and Commonalty of said city hereby reserve the right to purchase, at any time, from the said company, all the materials, pipes, fixtures, buildings, and all and singular all the personal and real property owned by said company, by paying to the said company the cost of the same, and ten per cent. over and above said cost.

Fourth. The permission herein granted, is upon the express condition that said company shall proceed immediately, or within one year from the approval by the Mayor, of this resolution, to lay their mains in the district as embraced in this grant, and supply, at least within three years from its passage, gas to be used by the corporate authorities or private consumers.

Fifth. The said company shall be exempt from taxation on their personal property for the period of three years from the organization of said corporation, pursuant to the power granted for this purpose by the eighteenth section of "An act to authorize 7405 the formation of gas-light companies," passed by the Legislature of the State of New York, February 16, 1848.

Sixth. The Mayor, Aldermen, and Commonalty also retain the right to revoke any and all permission, which may be herein granted, upon satisfactory proof being afforded of a failure of the said "Harlem Gas-Light Company" to comply with these conditions as herein expressed, or of any neglect to comply with any resolution or ordinance, which may be hereafter adopted, and nothing herein contained shall be construed as giving any exclusive permission whatever to the said Harlem Gas-Light Company.

Adopted by the Board of Councilmen, April 23d, 1855.

(Signed) D. T. VALENTINE,
Clerk of Common Council,
By JOHN H. CHAMBERS, *Deputy.*

THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of said City, do certify, that I have compared the preceding with the original resolution granting permission to the "Harlem Gas Light Company" to lay conductors through the streets, etc., of the City of New York, north of Seventy-ninth Street. Adopted by the Board of Councilmen, April 23, 1855. Approved by the Mayor, April 25, 1855. —— on file in my office, and that the same is a correct transcript therefrom, and the whole of such original.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 31st day of July, 1906.

P. J. SCULLY, *Clerk.*

7406 COMPLAINANT'S EXHIBIT 105.

FRANCHISE

OF THE

METROPOLITAN GAS LIGHT COMPANY OF THE CITY OF NEW YORK.

Resolved, That permission be and the same is hereby given to the Metropolitan Gas Light Company of the City of New York, to lay pipes for conducting gas through the streets, avenues, lanes, alleys and squares in said city, for the period of thirty years, to be subject to the same restrictions as to the mode of laying down said conductors as apply to and govern the New York and Manhattan Gas Light Companies in that respect.

Adopted by the Board of Councilmen, June 9, 1858.

Adopted by the Board of Aldermen, June 10, 1858.

A message from his Honor, the Mayor, vetoing the same was received by the Board of Councilmen, June 21, 1858.

By Board of Councilmen, December 20, 1858, taken from the Table, considered and adopted, notwithstanding the objections of the Mayor, two-thirds of all the members elected to said Board voting therefor.

By Board of Aldermen, December 21, 1858, laid on the table.

By Board of Aldermen, December 22, 1858, taken from table and adopted on ayes and noes notwithstanding the objections of his Honor, the Mayor, two-thirds of all the members elected to said Board voting in favor thereof.

D. T. VALENTINE,
Clerk of Common Council.

7407 THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of said City, do certify, that I have compared the preceding with the original resolution granting franchises to Metropolitan Gas Light Company to lay gas pipes in the streets of the City of New York. —— on file in my office, and that the same is a correct transcript therefrom, and the whole of such original.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 2d day of July, 1906.

P. J. SCULLY, *Clerk.*

COMPLAINANT'S EXHIBIT 106.

GRANT

from

The Mayor, Aldermen, etc. of the City of New York,

to

The Anthracite Gas Lighting and Heating Company

September 17th, 1863.

Amended May 26th, 1865.

Resolved, that there be, and hereby is granted to "The Anthracite Gas Lighting and Heating Company of New York," to right to lay pipes and mains for conducting gas for illuminating and heating, and other purposes, through the streets, avenues, lanes, alleys, squares and other public places in the City of New York for a period of fifty years as provided by the General Manufacturing Laws of the State of New York, the said conductors to be laid under the supervision of the Street Commissioner, the said Company being required to restore the streets, opened by them for laying such 7408 pipes to the same condition as before the said pipes and mains were laid.

Adopted by the Board of Councilmen, June 18, 1863.
Adopted by the Board of Aldermen, June 22nd, 1863.

By Board of Councilmen, July 6th 1863, received from his Honor the Mayor, with his objections thereto.

By Board of Councilmen, August 3, 1863, taken up and adopted, notwithstanding the objections of his Honor the Mayor two thirds of all the members elected having voted in favor thereof.

By Board of Aldermen, September 17th, 1863, taken up, and adopted notwithstanding the objection of his Honor the Mayor, two-thirds of all the members elected having voted in favor therefor; therefore, under the provisions of the Amended Charter, the same became adopted.

D. T. VALENTINE,
Clerk of Common Council.

THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of the said City, Do certify, that I have compared the preceding with the original resolution granting to "The Anthracite Gas Lighting and Heating Co. of New York" the right to lay pipes and mains for conducting gas, etc. through the streets, avenues, etc., of the City of New York, on file in my office and that the same is a correct transcript therefrom and the whole of such original.

In witness whereof I have hereunto subscribed my name and affixed my official seal this 20th day of July 1906.

P. J. SCULLY, *Clerk.*

7409 Resolved, that the resolution granting permission to the "Anthracite Gas Lighting and Heating Company of New York," the right to lay pipes and mains for conducting gas, which became adopted, September 17th, 1863, be, and hereby is amended by adding after the words "New York" in the second line of said resolution, the words "and their assigns."

Adopted by the Board of Councilmen, May 18th, 1865.
Adopted by the Board of Aldermen, May 24th, 1865.
Approved by the Mayor, May 26th, 1865.

THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of the said City, do certify, that I have compared the preceding with the original resolution amending the resolution granting permission to the "Anthracite Gas Lighting and Heating Company of New York," the right to lay pipes and mains for conducting gas, etc., on file in my office, and that the same is a correct transcript therefrom, and the whole of such original.

In witness whereof, I have hereunto subscribed my name and affixed my official seal this 20th day of July, 1906.

P. J. SCULLY, *Clerk.*

7410 COMPLAINANT'S EXHIBIT 107.

CERTIFICATE OF INCORPORATION. THE ANTHRACIT-GAS LIGHTING AND HEATING COMPANY OF NEW YORK.

State of New York,
City and County of New York, ss:

We, the undersigned Citizens of the State of New York, do hereby certify that we have associated together as a Manufacturing Corporation under and by virtue of an Act of the Legislature of the State of New York entitled an Act to authorize the formation of Corporations for Manufacturing mining and mechanical or Chemical purposes, passed February 17, 1848, and the Acts additonal to and amendatory of the same for the purposes of carrying on and conducting the business of making or manufacturing and supplying Gas for Illuminating and Heating purposes, that the name of the said corporation is "The Anthracite Gas Lighting and Heating Company of New York," and that such corporation is to continue in existence for the period of Fifty Years; that the amount of the Capital Stock thereof is Three Million Dollars ($3,000,000), and is divided into Thirty Thousand Shares of One hundred dollars each; that the number of the Trustees of said corporation who shall manage the concerns for the first year, are three whose names are as follows: William H. Gwynne, Henry Holdrige and Stephen D. Law.

And we do further certify, that the Manufacturing operations of the said Corporations will be carried on in the City and County and State of New York.

Dated this 27th day of May, 1863.

W. H. GWYNNE. [L. S.]
H. HOLDRIGE. [L. S.]
S. D. LAW. [L. S.]

7411 City and County of New York, *ss:*

On this 27th day of May, 1863, before me came the above named William H. Gwynne, Henry Holdrige and Stephen D. Law, to me known to be the persons described in and who executed the foregoing instrument and severally acknowledged the execution thereof.

J. H. WASHBURN,
Notary Public, City & Co. of N. Y.

Filed, May 28th, 1863.

No. 843.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the said County and Clerk of the Supreme Court of said State for said County, do certify that I have compared the preceding with the original Certificate of Incorporation of The Anthracite Gas Lighting and Heating Company of New York, on file in my office, and that the same is correct transcript therefrom, and of the whole of such original.

In witness whereof, I have hereunto subscribed my name and affixed my official seal, this 17th day of July, 1906.

(Signed) PETER J. DOOLING, *Clerk.*

Indorsed: Filed May 28th, 1863.

7412

COMPLAINANT'S EXHIBIT 108.

CERTIFICATE OF INCORPORATION

CITIZENS MUTUAL GAS CO. OF N. Y.

May 26, 1863.

5 cent U. S. In. Rev. Stamp Cancelled.

STATE OF NEW YORK,
City and County of New York, ss:

We, William D. Appleton, C. De Forest Grant, Abraham M. Coggins, Elesha Riggs, Moses H. Grinnell, Henry Holdridge, and Stephen D. Law, do hereby certify:

That we desire to form a company pursuant to the provisions of an Act of the Legislature of the State of New York, entitled "An Act to authorize the formation of corporations for manufacturing, mining, mechanical or chemical purposes," passed February 17th, 1848, and of the several acts amending and extending the same, and we hereby associate ourselves as a body corporate under the following

ARTICLES OF ASSOCIATIONS

Act 1. The corporate name of this Company is to be "The Citizens Mutual Gas Company of New York."

Act 2. The objects for which this company is to be formed are the manufacture and production of Gas for illuminating and other purposes and the supplying the same for lighting, heating and other uses and the purchase and sale of inventions, patents and materials applicable therefor.

7413 Act 3. The term of the existence of this company is to be fifty years.

Act 4. The capital stock of said company is to be Five millions of dollars and the number of shares of which the said stock is to consist is fifty thousand.

Act 5. The name of the City and County in which the operation of the said company are to be carried on are the City and County of New York.

Act 6. The number of trustees who shall manage the concerns of said company for the first year is seven and their names and residences are as follows:

William H. Appleton, New York City,
O. De Forest Grant, New York City,
Abraham M. Coggens, New York City,
Eleshia Riggs, New York City,
Moses H. Grinnell, New York City,
Henry Holdrege, Irvington, N. Y.
Stephen D. Law, Brooklyn, N. Y.

In Witness Whereof, We have hereunto set our hands and seals this 26th day of May, one thousand eight hundred and seventy-five.

WM. H. APPLETON.	[L. S.]
O. D. F. GRANT.	[L. S.]
ABRAHAM M. COGGINS.	[L. S.]
G. RIGGS.	[L. S.]
H. HOLDREGE.	[L. S.]
M. H. GRINNEL.	[L. S.]
S. D. LAW.	[L. S.]

In presence of
JOHN R. STONE.

STATE OF NEW YORK,
City and County of New York, ss:

On this 26th day of May, 1865, before me personally ap-
7414 peared William H. Appleton, O. De Forest Grant, Abraham M. Coggens, Elisha Riggs, Moses H. Grinnell, Henry Holdrege and Stephen D. Law, to me known to be the persons described in the foregoing certificate, and they severally before me signed the said certificate and acknowledged that they signed the same for the purposes therein mentioned.

JOHN R. STONE,
Notary Public in and for the said
County of New York.

5 cent U. S. In. Rev. Stamp Cancelled

STATE OF NEW YORK,
City and County of New York, ss:

I, William C. Conner, Clerk of the City and County of New York, and also Clerk of the Supreme Court for the said City and County, the same being a court of Record, do hereby certify that John R. Stone, whose name is inscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written was at the time of taking such proof or acknowledgment a Notary Public in and for the city and county of New York, dwelling in the said city commissioned and sworn and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary and verily believe that the signature to the said certificate of proof or acknowledgment is genuine. I further certify that said instrument is executed and acknowledged according to the laws of the State of New York.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said court and county the 26th day of May, 1865.

[L. S.] WM. C. CONNER, *Clerk.*

7415 STATE OF NEW YORK,
Office of the Secretary of State, ss:

I have compared the preceding with the original Certificate of Incorporation of "The Citizens' Mutual Gas Company of New York" with acknowledgment thereto annexed, filed in this office on the twenty-seventh day of May, 1865, and hereby certify the same to be a correct transcript therefrom and of the whole of said original.

Witness my hand and the seal of office of the Secretary of State at the city of Albany the twenty-sixth day of June, one thousand eight hundred and seventy-one.

[L. S.] DIEDRICH WILLERS, JR.,
Dep. Secretary of State.

No. 399.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of said county and clerk of the Supreme Court of said State for said county, do certify that I have compared the preceding with the original Certificate of Incorporation of The Citizens' Mutual Gas Company of New York on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

Indorsed: Filed May 26th, 1865.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 25th day of July, 1906.

PETER J. DOOLING, *Clerk.*

7416 COMPLAINANT'S EXHIBIT 109.

THE ANTHRACITE GAS LIGHTING AND HEATING COMPANY OF NEW YORK.

to

THE CITIZENS MUTUAL GAS COMPANY OF NEW YORK.

Dated, May 27, 1865.

This indenture made this twenty-seventh day of May in the year Eighteen hundred and sixty-five:

Between

The Anthracite Gas Lighting and Heating Company of New York, party of the first part, and The Citizens' Mutual Gas Company of New York, party of the second part. Witnesseth:

Whereas, the party of the first part has duly sold unto the party of the second part all its rights and interests in the several inventions and patents and the franchises held by the said party of the first part in relation to laying pipes and mains for conducting gas for illuminating and heating purposes and acquired from the city of New York on the 17th day of September, 1863.

And whereas the party of the first part by a resolution, this day passed, of its board of directors, authorized its President to make and execute all necessary conveyances and transfers, to transfer and vest said inventions and patents and franchises in the said Citizens Mutual Gas Company.

Now therefore in consideration of the premises and other valuable considerations and of one dollar in hand paid, the receipt whereof is hereby acknowledged, the said party of the first part, The Anthracite Gas Lighting and Heating Company of New 7417 York, doth hereby sell, transfer, assign and set over unto The Citizens' Mutual Gas Company of New York, the party of the second part: All and singular, all its right, title, interest and possession of, in and to the several inventions and patents of every name, character and description by it owned or in any way acquired or in which it has any right, privilege or interest; together with all its right, franchise and privilege and permission to lay pipes and mains for conducting gas for illuminating and heating and other purposes through the streets, avenues and lanes and other public places in the city of New York for the period of fifty years, together with all the privileges incident and appurtenant, thereto, acquired by the said party of the first part from the city of New York by the action of the Board of Councilmen, June 18, 1863; of the Board of Aldermen, June 22nd, 1863; of the Board of Councilmen, August 3d, 1863; of the Board of Aldermen, September 17th, 1863; and also by the subsequent action of the Board of Councilmen, May 18, 1865; the Board of Aldermen, May 24th, 1865, and approved by the Mayor, May 26th, 1865, for the said party of the second part to have and to hold the same to and for itself and its assigns forever.

And the said party of the second part doth hereby further covenant to execute any other or further instrument, assignment or transfer, that counsel learned in the law, may advise, when demanded by the party of the second part, to more effectually vest the title of the whole or any part of the inventions, patents or franchises herein and hereby conveyed and to make it or its assigns the full and perfect owner thereof.

7418 In witness whereof, the said The Anthracite Gas Lighting and Heating Company of New York has caused these presents to be duly signed by its president and secretary, the day and year above written, the said Company having no seal.

For the Anthracite Gas Lighting and Heating Company of New York,

By WM. H. APPLETON, *President.*
S. D. LAW, *Secretary.*

Two 5c. U. S. Internal Revenue Stamps.

Witness:
GEO. S. APPLETON.
A. T. GURLITZ.
JOHN SICKELS.

COMPLAINANT'S EXHIBIT 110.

CERTIFIED COPY OF CERTIFICATE OF INCORPORATION

of

UNION GAS LIGHT CO.

Dated October 6, 1871.

STATE OF NEW YORK, *City and County of New York, ss:*

7419 We, the undersigned, do hereby certify that we have associated together as a corporation under and by virtue of an Act of the Legislature of the State of New York, entitled "An Act to authorize the formation of gas light companies," passed February sixteenth, in the year eighteen hundred and forty-eight, and of the several acts amendatory and additional thereto for the purpose and object of manufacturing, vending and supplying gas for lighting the streets, and public and private buildings in and of the City of New York and for heating and other mechanical uses and objects, and also for the purpose of buying, taking, employing and adopting all things necessary and convenient to and in the manufacturing of such gas.

That the company shall continue and exist for the term of fifty years from this the date of its formation.

That the corporate name is "The Union Gas Light Company of the City of New York."

That the amount of the capital stock of the company is Five millions of dollars and said capital stock is divided into fifty thousand shares of One hundred dollars each.

That the number of directors is seven, and their names are James M. Ryder, Henry M. Benedict, Frank F. Jones, Edwin R. Bennet, Gordon H. Waddell, John Sickels and Francis C. White, all of the City of New York who will and shall manage the concerns of said company for the first year of its existence.

That the City and County of New York in the State of New York is the place in which the operations of the company are to be carried on.

In certification of which we hereunto subscribe our names this the 26th day of October, in the year of our Lord one thousand eight hundred and seventy-one.

J. M. RYDER. [L. S.]
FRANK F. JONES. [L. S.]
H. M. BENEDICT. [L. S.]
EDWIN R. BENNET. [L. S.]
GORDON H. WADDELL. [L. S.]
JOHN SICKELS. [L. S.]
FRANK C. WHITE. [L. S.]

7420 STATE OF NEW YORK, *City and County of New York, ss:*

On this the twenty-sixth day of October, 1871, before me came the above-named subscribers, James M. Ryder, Henry M. Benedict, Frank F. Jones, Edwin R. Bennett, Gordon H. Waddell, John Sickels and Francis C. White, to me known to be the persons described in and who executed the within and foregoing instrument, and certificate of incorporation and they severally acknowledged the execution thereof.

[SEAL.]

E. JACKSON,
Notary Public, N. Y. Co.

I hereby approve of the foregoing certificate of incorporation and do consent that the same be filed in the office of the Secretary of State of the State of New York and in duplicate in the office of the Clerk of the City and County of New York.

Dated, New York, November 3rd, 1871.

ALBERT CARDOZA,
Justice N. Y. Supreme Ct.

Endorsed: Filed Nov. 4th, 1871.

STATE OF NEW YORK, *City and County of New York, ss:*

I, William Walsh, Clerk of the said City and County and Clerk of the Supreme Court of said State for said County, do certify that I have compared the preceding with the original Certificate of Incorporation of the Union Gas Light Co. of the City of New York on file in my office, and that the same is a correct transcript therefrom, and of the whole of such original.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this seventeenth day of April, 1874.

[SEAL.] WM. WALSH, *Clerk.*

7421 COMPLAINANT'S EXHIBIT 111.

THE CITIZENS' MUTUAL GAS COMPANY OF THE CITY OF NEW YORK

to

THE UNION GAS LIGHT COMPANY OF THE CITY OF NEW YORK.

Dated November 22d, 1871.

This indenture made this twenty-second day of November, 1871, made between The Citizens' Mutual Gas Company of the City of New York, party of the first part, and the Union Gas Light Company of the City of New York of the second part,

Witnesseth:

Whereas the party of the first part is the owner of certain rights and privileges in regard to laying pipes and mains for conducting gas in and through the streets, avenues, lanes and public places of the City of New York acquired by purchase from the Anthracite Gas Lighting and Heating Company of New York.

And Whereas, the Union Gas Light Company of New York did on the 18th day of November propose to purchase the same of the party of the second part, according to the terms of a written proposition bearing that date,

And Whereas, the Board of Directors of the said Citizens' Mutual Gas Company of New York did on the said 18th November, 1871, duly accept the said proposition of the party of the second part and did sell and authorize the sale of the rights and privileges aforesaid to the party of the second part upon the terms therein specified and did authorize, empower and direct the officers of said company to make and execute the necessary and proper transfer of the same,

7422 Now, Therefore, under and pursuant to the terms and provisions of the said Resolution of the Board of Directors of the said party of the first part and by the authority therein and thereby granted, the Citizens' Mutual Gas Company of New York, the said party of the first part, does hereby for and in consideration of the sum of six thousand five hundred dollars in cash and two hundred and thirty-seven thousand dollars in the full paid shares of the Capital Stock of the said Union Gas Light Company, according to the terms and privilege as elected and accepted by the party of the first part, sell, transfer and assign unto the Union Gas Light Company of the City of New York, the party of the second part, the right, privilege and permission to lay pipe and mains for conducting gas for illuminating and heating and other purposes through the streets, avenues and lanes and other public places in the City of New York for the period of fifty years, together with all the privileges incident and appurtenant thereto.

In Witness Whereof, the said Citizens' Mutual Gas Company of New York, the party of the first part, has caused these presents to be signed by its President and Secretary and attested by its corporate seal, this twenty-second day of November, 1871, at the City of New York.

JOHN WHITE, *President.*
[SEAL.] JOHN SICKELS, *Secretary.*

Two U. S. Internal Revenue Stamps 5c. Each.

STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-second day of November in the year 1871 before me personally came John White, the President of the Citizens' 7423 Mutual Gas Company of New York and John Sickels, the Secretary of said Company, with each of whom I am personally acquainted and who being by me severally duly sworn said, the said John White that he was the President of the Citizens' Mutual Gas Company of New York, and the said John Sickels that he was the Secretary of the said Company, that they each resided in the City of New York, that they knew the corporate seal of said Company, that the seal affixed to the above instrument was such corporate seal, that it was affixed by order of the Board of Directors of said Company and that they signed their names thereto by the like order as President and Secretary respectively of the said Company.

[SEAL.] M. A. POTTER,
Notary Public, N. Y. C.

7424 COMPLAINANT'S EXHIBIT 112.

At a Special Term of the Supreme Court, held at the Court House in the City of New York on the fifteenth day of June, 1875.

Present: Hon. JOHN R. BRADY, Justice.

THE PEOPLE OF THE STATE OF NEW YORK
against
THE UNION GAS LIGHT COMPANY OF THE CITY OF NEW YORK, and
JAMES BOORMAN JOHNSON, Trustee, etc.

A motion having been made herein on behalf of the plaintiff for the appointment of a Receiver of the property and franchises of the Union Gas Light Company in accordance with the Statue in such case made and provided, and also for an injunction against the defendant Johnson as by reference to the motion papers herein will more fully and clearly appear.

And the said motion now coming on to be heard, and Freeman J.

Freeman, Esq., as Counsel for the People, duly delegated and authorized by the Attorney General, having appeared in support of the said motion, and the Union Gas Light Company and James B. Johnson the defendants having appeared in this action by Richard M. Harison, their attorney, and having by their said attorney expressly waived any and all objections for want of notice, and admitted due and legal service of the motion papers herein, now 7425 therefore, on the Complaint herein and the affidavit of F. J. Fithian and on motion of Mr. Fithian of Counsel for the plaintiff after hearing Mr. Harison of Counsel of the Union Gas Light Company and James Boorman Johnson, Trustee, &c.

It is ordered that Charles Edgar Appleby, of Glen Cove, Long Island, be and he is hereby appointed Receiver of all and singular the property, franchises and effects of every description of the said Union Gas Light Company of the City of New York with all *the* singular *and* appurtenances in anywise thereto appertaining, and of all records books, papers and accounts of said Company in anyway relating to the business thereof and necessary to enable him properly and efficiently to discharge the duties imposed upon him by this order; and the said Receiver is hereby vested with all such other and general powers as it is usual, and in accordance with the rules and practice of this court to confer upon Receivers in like cases.

And it is ordered that he give a bond for the faithful performance of his duties as such Receiver in the sum of Five thousand dollars with sureties to be approved as to form and sufficiency by one of the Justices of this Court, and that on the filing of such Bond he enter forthwith upon the performance of his duties as such Receiver.

AND IT IS FURTHER ORDERED,

1st. That as soon as may be after entering upon his office the said Receiver make and file with the clerk of this Court a true, full and complete Inventory of all and singular the property of the said corporation, seal, personal and mixed, and also a like statement of the debts and liabilities of the said Company.

2nd. That he have power to prosecute and defend with- 7426 out the further order of this Court, all existing actions by or against the said Company, and to commence and prosecute any actions, which in the usual course of business he may deem necessary and proper to commence hereafter, either in the name of the said Company, or in his own name as such Receiver, and to defend any and all suits which may hereafter be brought against the said Company, or himself, as such Receiver, and in respect to all of the aforesaid actions to pay and defray the usual and ordinary expenses incident thereto.

That he do all that may be needful to maintain and preserve the corporate organization and franchises of said corporation until final judgment herein and that he defray the proper and necessary expenses incident thereto.

3d. That the said Receiver have full power to compromise and settle any and all judgments or claims against the said corporation or its property, or in favor of the said corporation as against other parties and also to sell and dispose of any or all of the property and franchises of said Company whenever and upon such terms as he shall deem anvantageous to the interests of the creditors of the said corporation, provided, however, that no such compromise, settlement or sale shall be fully and completely consummated and carried out and the Receiver relieved from personal liability and responsibility on account thereof until the consent of confirmation of this Court shall have been first had and obtained to such compromise, settlement or sale.

4th. All moneys coming into the lands of the said Receiver from and such compromise and settlement or sale are to be held by him subject to the further order and direction of this Court and in all and singular the premises he shall be subject to such orders and 7427 directions as this Court may from time to time make and he is authorized to apply from time to time for such orders and directions as he may be advised.

5th. He shall keep a true, full and particular account of all his acts and doings as to such property and of all his payments and disbursements in the performance of the duties imposed upon him hereby, and he shall once in every three months, and oftener if required, render to this Court and file with the Clerk thereof a true, full and faithful account of all his said receipts and disbursements in the premises.

And the said Union Gas Light Company, its officers and agents are commanded and enjoined to deliver up to the said Receiver when he shall have qualified, all and singular of the property whereof he is hereby appointed Receiver.

Enter,

J. R. B.

No. 971.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the said County and Clerk of the Supreme Court of said State for said County, do certify that I have compared the preceding with the original order on file in my office and that the same is a correct transcript therefrom, and of the whole of such original.

Indorsed: Filed. June 15, 1875.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal this 27th day of July, 1906.

[L. S.] (Signed) PETER J. DOOLING, *Clerk.*

7428 COMPLAINANT'S EXHIBIT 113.

At a Special Term of the Supreme Court, held at the Court House in the City of New York, on the 24th day of July, 1876.

Present: Hon. T. R. WESTBROOK, *Justice.*

THE PEOPLE OF THE STATE OF NEW YORK
against
THE UNION GAS LIGHT COMPANY OF THE CITY OF NEW YORK and Others.

On reading and filing the petition of Charles Edgar Appleby, Receiver of the Union Gas Light Company of the City of New York, duly appointed by the Court, bearing date July 19, 1876, whereby it among other things appears that the said Receiver now holds in his hands, as assets of the said Union Gas Light Company certain franchises and rights to lay mains; an interest in a certain contract made by the Union Gas Light Company with William Foster, Junior, and certain others, grantees, of a grant from the City of New York, known as and described in Chapter 944 of the Laws of this State, passed June 12, 1871, which contract bears date the 25th of February, 1874, and any interest which the said Union Gas Light Company may have in and to the said State grant; and also certain checks of Cornelius S. Bushnell, amounting in the aggregate to the sum of $17,611.81; certain office furniture and fixtures of the value of about $250, 7429 and a claim against Cornelius S. Bushnell under the warranty clause in his deed of conveyance to the Union Gas Light Company of the real estate formerly owned by him, and that this constitutes all the property and rights which belong to said Company and which are now in the hands of the petitioner as such Receiver.

And it also appearing that there are now judgments and claims against the said Union Gas Light Company amounting in the aggregate to upwards of $300,000, and that it is desirable and proper, and for the best interests of all parties concerned, that all of the said property, rights, franchises and contracts should be sold forthwith at public auction, in order to close up and settle the affairs of the said Company.

Now on motion of James M. Varnum of Counsel for said Receiver and no one appearing in opposition, and upon filing proof of due service of the notice of motion.

It is Ordered that Charles Edgar Appleby, Receiver of the Union Gas Light Company of the City of New York, be and he is hereby authorized and directed to sell forthwith at public auction in the City of New York, all the right, title and interest of any Kind and nature whatsoever which the said Union Gas Light Company, or its Receiver, may have in or to certain franchises, or rights to lay mains in streets, avenues, &c., in the City of New York, acquired by the Union Gas Light Company by intermediate assignments from the Anthracite Gas Lighting and Heating Company, to which last named Company and its assigns, the said franchises and rights were granted by the Municipal authorities of the City of New York by an ordinance passed by the Common Council, September 17th, 1863, and amended subsequently by the said Common Council, and approved by the Mayor of the City of New York on or about the 26th day of May, 1865, which said franchises and rights were assigned 7430 to the Union Gas Light Company by assignment bearing date the twenty-second day of November, 1871; (and also all the interest of the said Union Gas Light Company or its Receiver in and to a certain contract made by the Union Gas Light Company with William Foster, Junior, and certain other grantees, of a grant from the State of New York, Known as and described in Chapter 944 of the Laws of this State, passed June 12th, 1871, which contract bears date the twenty-fifth day of February, 1874, and all the right, title and interest of the said Company, or its Receiver, in and to the State grant above referred to,) and also certain checks of Cornelius S. Bushnell, on the Continental National Bank of the City of New York, amounting in the aggregate to the sum of $17,611.81; and also certain office furniture and fixtures of the Union Gas Light Company of the value of about $250, viz:

and also any claim which the said Union Gas Light Company, or its Receiver, may have against the said Cornelius S. Bushnell, under the warranty clause in his deed of conveyance to the said Union Gas Light Company, of the real estate above mentioned, by reason of certain mortgage and judgment liens, which were incumbrances upon the said property at the time of its conveyance.

And it is further Ordered that said Receiver give fourteen days public notice of such sale by publication in the *Daily Register* and in the *New York Evening Post,* two newspapers published in the City of New York, once in each week for two weeks, and by mailing a copy of such notice to all the creditors and stockholders of record of said Company, addressed to their last Known address; 7431 and that said property be sold at such time to the highest bidder, and that said Receiver make and file in the office of the Clerk of this Court, a full report and account of such Sale.

And it is further Ordered that said Receiver be and he is hereby authorized and empowered to sell the said assets, either separately or as a whole, as he may in his judgment deem best and advisable, and upon the sale of the same to make, execute and deliver to the purchaser or purchasers or his or their assigns all necessary and proper deeds or other instruments conveying and transferring the same.

And it is further Ordered that the proceeds of said Sale be applied by said Receiver towards paying the claims of all the creditors of said Company, whose claims have been proved and allowed by the Receiver, and in case they shall be insufficient to discharge the same in full then that such proceeds be divided by him *pro rata* among the said creditors, in accordance with the Statutes in such case made and provided.

(Filed, July 24, 1876.)
Enter.

T. R. WESTBROOK, *J. S. C.*

A Copy:
PETER J. DOOLING, *Clerk.*

7432 COMPLAINANT'S EXHIBIT 114.

At a Special Term of the Supreme Court, held at the Court House in the City of New York, on the 11th day of March, 1879.
Present: Hon. A. R. Lawrence, Justice.

THE PEOPLE OF THE STATE OF NEW YORK
against
THE UNION GAS LIGHT COMPANY OF THE CITY OF NEW YORK.

Upon reading and filing the report of Charles E. Appleby, Receiver of the Union Gas Light Company, whereby it amongst other things appears that in pursuance of an order of this Court made on the 24th day of July, 1876, the said Charles E. Appleby, as Receiver as aforesaid, duly sold at public auction, at the Exchange Salesrooms, No. 111 Broadway and partly at 1½ Pine Street, in the City of New York, on the tenth day of August, 1876, by E. H. Ludlow & Co., auctioneers, all the property, assets and effects, franchises and rights of every description belonging to the Union Gas Light Company, specifically described in the order aforesaid, for the aggregate sum of Seventy-six thousand four hundred dollars to Walter Osborne, Tilton E. Doolittle and Jared E. Redfield, Receivers of the Townsend Savings Bank of New Haven, Connecticut, they being the highest bidders therefor.

And it further appearing by the vouchers and papers annexed to said report:

7433 1st. That said Receiver gave due notice of such sale for the time and in the manner described by said order of July 24th, 1876, and in all other respects has fully complied with the provisions of said order.

2d. That the purchasers at such sale duly assigned their purchase and bid to Clark Bell, and that the Receiver has duly executed transfers and conveyances of said property and assets to said Clark Bell.

3rd. That the said Receiver has distributed the proceeds of such sale among the creditors of said Union Gas Light Company *pro rata* in accordance with the provisions of said order.

Now, upon motion of James M. Varnum, Esq., of counsel for said Receiver, it is ordered, that the said Report be and the same is hereby in all respects ratified and confirmed, and the sales so made by said Receiver and the conveyances and transfers executed by him to complete the same be and the same are hereby duly ratified and confirmed by this Court.

Enter,

A. R. L., *J. S. C.*

A copy.
PETER J. DOOLING, *Clerk.*

7434 COMPLAINANT'S EXHIBIT 115.

CHARLES E. APPLEBY, RECEIVER OF THE UNION GAS LIGHT COMPANY,

TO

CLARK BELL.

Dated August 10, 1876.

This Indenture, made the tenth day of August, one thousand eight hundred and seventy-six, between Charles Edgar Appleby, Receiver of the Union Gas Light Company of the City of New York of the first part, and Clark Bell, of the City and County of New York of the second part.

Whereas, the party of the first part was duly appointed the Receiver of the property, Estate and effects of the Union Gas Light Company of the City of New York by an order of the Supreme Court of the State of New York, made on the fifteenth day of June, 1875, in an action pending in said Court in the City and County of New York, wherein the People of the State of New York are plaintiffs and the said The Union Gas Light Company and another are defendants.

And whereas, by an order of the said Supreme Court made in the said action at Special Term on the twenty-fourth day of July, 1876, it was among other things ordered that the party hereto of the first part as such Receiver, be and he was thereby authorized and directed to sell at public auction in the City of New York, to the highest bidder, all the right, title and interest of every kind and nature, whatsoever, which the said Union Gas Light Company, or its Receiver might have in and to certain franchises, rights, grants, contracts and property in such order mentioned, of which the rights and franchises hereinafter mentioned and conveyed are part;
7435 and that the said party of the first part as such Receiver, give public notice of such sale in the mode in such order mentioned, and upon the sale of the same to make, execute and deliver to the purchaser or purchasers, or his or their assigns, all necessary and proper deeds or other instruments conveying and transferring the same.

And whereas, the said party of the first part as such Receiver, pursuant to such order duly advertised to be sold at the Exchange Sales Room number 111 Broadway, in the City of New York, on the tenth day of August, 1876, at 12 o'clock noon of that day, by E. H. Ludlow & Co., Auctioneers, all and singular the franchises, rights, grants, contracts and property in such order mentioned, due notice of such sale having been given as directed in and by said order.

And whereas, at the time and place mentioned in such advertisement of sale, the party of the first part as such Receiver, duly attended and sold at public auction, the rights and franchises hereinafter mentioned, to Walter Osborn, Tilton E. Doolittle and Jared E. Redfield, Receivers of the Townsend Savings Bank of New Haven, Connecticut, for the sum of One thousand dollars, that being the highest sum bidden therefor.

And whereas, the said purchasers have since such sale, by an instrument in writing duly assigned and transferred unto the party hereto of the second part, all their rights, title and interest in and to the said property and franchises and their interest in the said bid.

Now this Indenture witnesseth, that the party hereto of the first part, in consideration of the premises and of the said sum of One thousand dollars to him, paid by the party hereto of the second part, the receipt of which is hereby acknowledged, hath bargained, sold, assigned and set over, and he hereby bargains, sells, assigns 7436 and sets over to the said party of the second part, his executors, administrators and assigns: "All the right, title and interest of any kind and nature whatsoever, which the said Union Gas Light Company, or its Receiver, may have in or to certain franchises or rights to lay mains in the streets, avenues, &c., in the City of New York, acquired by the Union Gas Light Company by intermediate assignments from the Anthracite Gas Lighting and Heating Company, to which last named company, and its assigns, the said franchises and rights were granted by the municipal authorities of the City of New York, by an ordinance passed by the Common Council, September 17th, 1863, and amended subsequently by said Common Council, and approved by the Mayor of the City of New York, on or about the 26th day of May, 1865, which said franchises and rights were assigned to the Union Gas Light Company by assignment bearing date the 22d day of November, 1871, and all the right, title and interest of the said company, or the said party of the first part as its Receiver, in and to the rights and franchises above referred to.

To have and to hold the same to the party of the second part, his executors, administrators and assigns to their own use forever.

In witness whereof, the party of the first part has hereunto set his hand and seal the day and year first above written.

CHARLES ED. APPLEBY, *Receiver.* [SEAL.]

Sealed & delivered in the presence of
M. A. POTTER.

7437 STATE, CITY, AND COUNTY OF NEW YORK, *ss:*

On this twenty-first day of August, 1876, before me personally came Charles Edgar Appleby, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a

Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[SEAL.] PETER J. DOOLING, *Clerk.*

Endorsed: Charles E. Appleby, receiver of The Union Gas Light Co. to Clark Bell.

Deed, dated August 10th, 1876. Anthracite Grant.

7438 COMPLAINANT'S EXHIBIT 116.

CLARK BELL
TO
KNICKERBOCKER GAS LIGHT COMPANY.

Deed

Dated August 22, 1876.

This indenture made this 22nd day of August in the year one thousand eight hundred and seventy-six

Between Clark Bell of the City and County, and State of New York, of the first part and Knickerbocker Gas Light Company of the same place, of the second part.

Witnesseth:—That the said party of the first part for and in consideration of the sum of One dollar to him in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, and of other valuable considerations, unto him moving, and in pursuance and fulfilment on his part of a certain agreement heretofore made between the said party of the first part and the said party of the second part, dated August 10th, 1876, hath bargained, sold, assigned, conveyed and set over and by these presents does bargain, sell, assign, convey and set over to the said party of the second part, its successor and assigns, all the right, title and interest of any kind and nature whatsoever, which the Union Gas Light Company or its Receiver had or which the said party of the first part has in or to certain franchises or rights to lay mains in streets, avenues, etc., in the City of New York, acquired by the Union Gas Light Company by intermediate assignments, from the Anthracite Gas Lighting and Heating Company to which last named Company and its
7439 assigns the said franchises and rights were granted by the municipal authorities of the City of New York by an ordinance passed by the Common Council September 17th, 1863, and

amended subsequently by said Common Council and approved by the Mayor of the City of New York on or about the 26th day of May 1865, which said franchises and rights were assigned to the said the Union Gas Light Company by assignment bearing date the 22nd day of November 1871, and all the right, title and interest which the said the Union Gas Light Company or its Receiver had or which the said party of the first part has in and to the rights and franchises above referred to.

Being the same rights, franchises and property heretofore conveyed to the said party of the first part by Charles E. Appleby Receiver of The Union Gas Light Company by conveyance bearing date August 10th, 1876, to the which conveyance is hereby made for a more particular description.

Also all the interest which the said The Union Gas Light Company, or its Receiver, had or which the said party of the first part has in and to a certain contract made by the said The Union Gas Light Company with William Foster, Junior, and certain other grantees of a grant from the State of New York, known as and described in Chapter 944 of the Laws of this State, passed Jan. 12, 1871, which contract bears date the twenty-fifth day of February, 1874, and all the right, title and interest which the said The Union Gas Light Company, or its Receiver, had or which the said party of the first part has in and to the State grant above referred to.

Being the same property heretofore conveyed to the said party of the first part by Charles E. Appleby, Receiver of the Union Gas Light Company by conveyance bearing date August 10th, 1876, to the which conveyance reference is hereby made for a more particular description.

7440 To have and to hold the same to the party of the second part, its successors and assigns, to their own use forever.

In Witness Whereof, The party of the first part has hereunto set his hand and seal the day and year first above written.

CLARK BELL. [L. S.]

Sealed & Delivered in presence of
M. A. POTTER.

City and County of New York, *ss:*

On this twenty-second day of August, in the year 1876, before me personally came Clark Bell, to me known to be the individual described in and who executed the within instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written was, at the time of taking

such proof or acknowledgment a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn and duly authorized to take the same, and further
7441 that I am well acquainted with the handwriting of such Notary, and verily believe the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal in the said Court and County, the 31st day of July, 1906.

PETER J. DOOLING, *Clerk*.

[L. S.]

COMPLAINANT'S EXHIBIT 117.

RESOLUTION CONCERNING GAS COMPANIES.

Resolved: That permission be and is hereby given to all incorporated Gas Light Companies to lay gas mains and pipes in the streets, avenues and public places in this City for the purpose of supplying gas to this City and its inhabitants, upon such conditions as may be prescribed and approved by his Honor the Mayor, the Comptroller and the Commissioner of Public Works who are now by law authorized to make provisions for lighting the streets of this City.

Adopted by the Board of Aldermen, December 21, 1876.
Approved by the Mayor, December 23rd, 1876.

THE CITY OF NEW YORK.

I, P. J. Scully, Clerk of the said City, Do Certify, that I have compared the preceding with the original Resolution giving permission to Gas Light Companies to lay gas mains in the City of New York.
Adopted by Board of Aldermen Dec. 21st, 1876, approved
7442 by the Mayor, Dec. 23, 1876, on file in my office, and that the same is a correct transcript therefrom, and the whole of such original.

In witness whereof, I have hereunto subscribed my name and affixed my official seal this 21st day of August, 1906.

(Signed) P. J. SCULLY, *Clerk*.

COMPLAINANT'S EXHIBIT 118.

MUNICIPAL COMPANY FRANCHISE. MAYOR, COMPTROLLER AND COMMISSIONER OF PUBLIC WORKS OF THE CITY OF NEW YORK

TO

THE MUNICIPAL GAS LIGHTING COMPANY OF NEW YORK.

Whereas, The following Resolution has been adopted by the Common Council and approved by his Honor the Mayor, to wit:

Resolved: That permission be and is hereby given to all incorporated Gas Light Companies to lay gas mains and pipes in the streets, avenues and public places in this City for the purpose of supplying gas to this City and its inhabitants, upon such conditions as may be prescribed and approved by his Honor the Mayor, the Comptroller and the Commissioner of Public Works who are now by law authorized to make provision for lighting the streets of this City.

7443 Adopted by the Board of Aldermen, December 21, 1876.
Approved by the Mayor, December 23, 1876.

(Signed) F. J. TWOMEY,
Clerk of the Common Council.

And Whereas, the "Municipal Gas Light Company," a Gas Light Company duly incorporated, desires to avail itself of such permission upon conditions to be prescribed and approved, as in said resolution provided; now,

We, the Mayor, Comptroller, and Commissioner of Public Works of the City of New York, in pursuance of the foregoing resolution, do hereby prescribe and approve the following, as the conditions upon which the said Municipal Gas Light Company may lay its gas mains and pipes in the streets, avenues and public places in the City of New York, for the purpose of supplying gas to this City and its inhabitants, namely:

1st. The Manufactory or Works necessary for the purpose of producing and furnishing gas, shall be so conducted as not to be in any way detrimental to the public health, nor otherwise create a nuisance.

2nd. The gas furnished shall be of the best quality of illuminating gas of an illuminating power of not less than 16 candles when tested at a distance of not less than one mile from the place of manufacture.

3rd. Gas shall be supplied to the public lamps situated on the line or lines of the mains of said Company, and said lamps shall be lighted, when required by the City, at a rate not to exceed the maximum of Twenty Dollars per annum for each lamp, burning 7444 Thirty-eight hundred and thirty-three and one-third hours and consuming gas through a burner consuming three feet of gas per hour under a pressure of one inch; the said rate to include the gas, lighting, extinguishing, cleaning, repairing, reglazing and painting the lamp-posts and lanters, replacing the cocks, tubes, burners, cross-heads, lamp irons and lanterns.

Also the prices for fitting and repairing lamp-posts, which may at any time be required, shall not exceed the following rates, to-wit:

For fitting up each lamp-post Ten Dollars.

For straightening each lamp-post, One Dollar and Fifty Cents.

For releading each column, One Dollar and Fifty Cents.

For refitting each column, Three Dollars and Fifty Cents.

For moving each lamp-post, Three dollars and fifty cents.

For resetting each lamp-post, Ten Dollars.

Fourth. If at any time during the continuance of the permission given by said Resolution of the Common Council it shall be considered by the Commissioner of Public Works that the cost of production or manufacture of gas shall be reduced to an extent to admit of the lighting of the public lamps at a rate less than twenty dollars per annum, then in that case, arbiters shall be appointed, one by the parties of the first part, one by the parties of the second part, and the two so appointed to designate a third, which three shall determine upon a fair and equitable rate below the said twenty dollars.

Fifth. Gas shall be supplied to the public buildings or offices of
the Corporation, situated on the line or lines of the mains of
7445 said parties of the second part whenever the said Company
may be required so to do by the proper officers of the City,
at a rate not to exceed two dollars per one thousand cubic feet.

Sixth. From and after the first day of January, 1878, gas shall be supplied to all persons residing or doing business on the line or lines of the mains of the parties of the second part who may desire the same, at a rate not to exceed two dollars and forty cents per one thousand cubic feet; and no consumer shall be deprived of gas upon refusal to pay or in consequence or on account of a dispute as to the bill rendered, until such consumer shall have been served with an affidavit of the Inspector of the said Company as to the correctness of the register of the meter through which such gas has been passed: Provided that leaving such affidavit on the premises where gas has been furnished, with some person of suitable age and discretion, shall be a sufficient service thereof on such consumer.

Seventh. The Common Council of the City of New York shall have the right to order the mains or pipes of said Company to be extended in or along any of the streets, avenues, or public places of the City: Provided that said parties of the second part shall not be compelled to expend in the laying of mains a yearly sum exceeding ten thousand dollars.

Eighth. All trenches or excavations shall be filled immediately after the mains or pipes shall be laid, the earth to be thoroughly rammed as the same is thrown into the trench or excavation, and the pavement to be replaced in a good and workmanlike manner and
to the entire satisfaction of the Commissioner of Public
7446 Works; and in case the said Company, or its successors, shall
fail, or neglect to replace the pavement or pavements to the
satisfaction of the Commissioner of Public Works, then the Commissioner of Public Works shall have the right to cause such pave-

ment to be taken up and replaced in a good and workmanlike manner by a person or persons to be appointed by the said Commissioner for that purpose; and the expense of such repaving shall be paid by the said parties of the second part to the Commissioner of Public Works.

Said Company shall also be governed by the laws and ordinances of the Common Council of the City of New York, and by such rules and regulations as the Commissioner of Public Works, his successor or successors in office, may prescribe for the laying of mains and the proper protection and filling of the trenches or excavations, for the taking up, replacing and repaving of the pavements, and the lighting, care and maintenance of the public lamps.

Ninth. The permission given by said resolution of the Common Council, unless sooner revoked, as hereinafter provided, shall continue for the period of thirty years from the date of signing of these conditions by the Mayor, Comptroller, and Commissioner of Public Works: Provided all the conditions herein prescribed shall be fully performed by the said Company. Neither said permission or any right conferred on said Company by said resolution shall be assigned nor transferred without the previous consent of the Common Council.

Tenth. The Common Council may repeal, annul and revoke the said resolution and the permission thereby given upon the failure of the said Company to perform any of the conditions herein 7447 contained, and thereupon all right of said Company under said resolution and these conditions shall cease, and said Company shall thereupon remove all its pipes and mains from the streets, avenues and public places.

Eleventh. It is expressly provided that nothing herein nor in said resolution contained, shall be construed as granting to the said parties of the second part, any sole or exclusive right or privilege, or as preventing the granting privileges similar to those hereby and by said resolution given to any other company, persons or parties whatsoever, or as preventing any person or persons from erecting in or upon his or their own premises any building or apparatus to light with gas his or their own house, store, manufactory or premises.

Twelfth. The permission given in said resolution shall not become operative or take effect until the said Municipal Gas Light Company shall have signified its assent to these conditions, and its acceptance of the permission given in said resolution, upon these conditions.

Dated, New York, March 22d, 1877.

SMITH ELY, Jr., *Mayor.*
JOHN KELLY, *Comptroller,*
ALLAN CAMPBELL,
Commissioner of Public Works.

The Municipal Gas Light Company hereby assents to all the above conditions and accepts the permission given by the above 7448 resolution of the Common Council of the City of New York, upon such conditions.

Dated, New York, March 22d, 1877.

THE MUNICIPAL GAS LIGHT COMPANY,
By CHARLES G. FRANCKLYN, *President.*
[SEAL.] PHILIP ALLEN, *Secretary.*

Resolved, That this Company assent to the conditions imposed by the Mayor, Comptroller and Commissioner of Public Works, as set forth in foregoing paper this day signed by them, and accept the permission given by the resolution of the Common Council of the City of New York therein referred to. That the President be and hereby is directed to execute the same in triplicate, and affix the seal of the Company thereto.

I hereby certify that the above is a true copy of a resolution passed by the Board of Directors of the Municipal Gas Light Company, March 22d, 1877.

[L. S.]

PHILIP ALLEN, *Secretary.*

Endorsed: Approved as to form, Wm. C. Whitney, Counsel to the Corporation.

The above is a correct copy of foregoing agreement on file in the Department of Finance.

N. TAYLOR PHILLIPS,
Deputy Comptroller.

J. A. McC.
New York, Aug. 21/06.
Ex. & O. K.
H. J. S.

7449

COMPLAINANT'S EXHIBIT 119.

STATE GRANT.

LEGISLATIVE FRANCHISE GRANTED TO ISAAC P. MARTIN AND OTHERS.

CHAP. 944, LAWS OF 1871.

AN ACT to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose.

Passed June 12, 1871; three-fifths being present.

The People of the State of New York, represented in State and Assembly, do enact as follows:

SECTION 1. Isaac P. Martin, William Foster, Junior, Edward Jones, George H. Wicks, Shepherd F. Knapp, William R. Dyer, John E. Cronly, John C. Angell, Edward J. Shandly, Joseph G. Jennings, William Vail, Henry Johnson, William Johnson, William H. Murphy, James S. Turner, Thomas Y. Avery, John Balmore, Henry S. Murray, Peter H. E. Baxter, Junior, Edward Taylor, Joseph Murphy, Walter Smith, Joel A. Fithian, William H. Bloom, Andrew J.

Smith, Henry A. Smith, Patrick Quinn, Richard H. Vaughn, William P. Smith, Joseph Bell, Delavan Peck, John J. Walsh, Matthew T. Brennan, Charles E. Loew, George Chivis, Edgar Brown, John J. Turner, John H. Johnston John Cox, William Higgins, and their assigns are hereby authorized and empowered, at any time hereafter, to manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch, turpentine, or other materials, to be used for the purpose of lighting all that portion of the city of New York 7449a lying north of the center line of Seventy-ninth street, including all of the Central Park, in its entire width and length, and all streets, avenues, lanes, alleys, squares and parks, within the limits aforesaid, and any buildings, manufactories or houses contained and situate within the said limits, and to lay pipes for the purpose of conducting the gas in any streets, avenues, lanes, alleys, squares and parks of said portion of said city, and in the said Central Park, and to adopt any other necessary means to furnish gas to any inhabitants in said portion of said city, and to the said Central Park; and also the said persons and their assigns shall so conduct their manufacture or manufactures of gas as not to create a nuisance, and that in digging and laying pipes in any public street, avenue, lane, alley, square, park or highway the same shall be done in a proper and workmanlike manner, with as little delay and inconvenience to the public travel as practicable, and without injury to the Croton pipes; and the surface of such street, avenue, lane, alley, square or park shall thereupon, be immediately restored and repaired by said persons, or their assigns, to the condition in which it was immediately before the laying of such pipes. But nothing herein contained shall be taken or construed so as to authorize the laying of any gas pipes, or other conduit for the transmission of gas, or the construction of any works, buildings or erections, or the lighting of any road, street, lane or path within the Central Park, or within or upon any of the parks, public places, boulevards, streets or avenues which are under the control of the Department of Public Parks of the City of New York, without the consent of the said Department of Public Parks first had and obtained. The rights and privileges hereby granted are exclusive; but shall not be construed to affect or 7449b impair any exclusive rights or privileges, if any, vested in any incorporated company in said City.

§ 2. The said persons and their assigns shall have power to purchase and hold real estate necessary and convenient for the purposes aforesaid, and to erect and maintain all necessary and convenient buildings, fixtures and machinery for the purposes aforesaid, and incident or necessary thereto.

§ 3. If any person or persons willfully do or cause to be done any act or acts whatever, whereby the works of said persons, or of their assigns, or any pipe, conduit, plug, cock, reservoir, or any engine, machine or structure, or other thing appertaining to the same, shall be stopped, obstructed or impaired, weakened, injured or destroyed, the person or persons so offending shall forfeit and pay to the said persons, or their assigns, treble the amount of the damage sustained by means of such offense or injury, to be recovered by said persons or their assigns, with costs of suit, in any court having cognizance thereof. The persons named in the first section of this act or their assigns, shall, within ninety days after the passage of this act, select, by the ballots of a majority thereof, not less than seven, nor more than thirteen of their number, as an executive committee, who shall have the control and management of the business authorized to be done and carried on by the provisions of this act. The first five persons named in said section shall give at least five days' notice, in two daily newspapers published in the city of New York, of the time and place at which such executive committee shall be elected.

7450 § 4. This act shall be deemed a public act, and shall be favorably construed for the purposes herein expressed and declared, in all courts and places whatsoever.

§ 5. This act shall take effect immediately.

COMPLAINANT'S EXHIBIT 120.

PROOF OF PUBLICATION, IN COMPLIANCE WITH STATE GRANT.

State of New York, *City and County of New York, ss:*

Edwin J. Carver, being duly sworn, saith that he is the Principal Clerk in the office of the New York Daily Transcript, a newspaper printed in the City of New York, that the advertisement hereto annexed was published in the said New York Daily Transcript in its issues dated July 8th, 10th, 11th, 12th, and 13th, 1871.

EDWIN J. CARVER.

Sworn to before me this 13th day of July, 1871.

P. McMULLEN,
Com. of Deeds.

OFFICE NEW YORK NEWS.

State of New York, *City of New York, ss:*

Henry E. Lynch, of the City of New York, being duly sworn, says that he is Principal Clerk employed in the office of the New York News, a newspaper published in the said City of New York, and that the Notice, of which the annexed is a copy, has been regularly published in the said New York News six times successively commencing on the seventh day of July, 1871. 7451

HENRY E. LYNCH.

Sworn to before me this 13th day of July, 1871.

JOHN CALLAHAN,
Com. of Deeds, City and County of New York.

COPY OF PUBLISHED NOTICE.

To All Whom it may Concern:

In pursuance of the provisions of an act of the Legislature of the State of New York, passed May 12th, 1871, being Chapter 944 of the Laws of 1871, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein and to lay the pipes for that purpose."

The undersigned, the first five persons named in said Act, hereby give notice in pursuance of the provisions thereof that a meeting of the persons named in the first Section of said Act, or their assigns, will be held on Thursday, thirteenth day of July, A. D. 1871, at the hour of one o'clock in the afternoon, at the office of Andrew J. Smith, No. 132 Nassau Street, in the City of New York, for the purpose of selecting an Executive Committee, to control and manage the business authorized to be done and carried on by the provisions of said Act.

Dated New York, July 6, 1871.

EDW. JONES.
ISAAC P. MARTIN.
WM. FOSTER, Jr.
S. F. KNAPP.
GEORGE H. HICKS.

7452 City and County of New York, *ss:*

William Foster, Jr., being duly sworn, says: That he was a member of the Executive Committee of the so-called City Gas Legal Co., organized under an Act of the Legislature of the State of New York, passed May 12, 1871, entitled "An Act to authorize the Construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein and to lay pipe for that purpose."

That for a long time he was Chairman of said Executive Committee and was familiar with its business and operations.

That the annexed copy of a notice was within the personal knowledge of this deponent published in the New York Daily Transcript, for six successive days succeeding the 7th day of July, 1871, and in the New York Daily News for six successive days succeeding the 7 days of July, 1871.

That the annexed copy affidavits of Edwin J. Carver, and Henry E. Lynch are true copies of the original affidavits of publication made by them respectively, of such notice, furnished by them to the said Executive Committee, which were for some time in deponent's possession, but are not now and are mislaid.

Deponent further says: That Henry Hilton and Hugh Smith were at one time elected members of the said Executive Committee, under the supposition that they were incorporators named in the Act, which was a misrepresentation in fact—that they were not corporators, and never were eligible to act as members of the Executive Committee, and so far as this deponent has any knowledge, never took by purchase or assignment the interest of any incorporator and 7453 were never by reason of their said not being eligible, entitled to act as members of said Executive Committee.

WM. FOSTER, Jr.

Subscribed and sworn to before me this 20th day of May, 1878.

JAMES CLYNE,
Notary Public, Kings County.

COMPLAINANT'S EXHIBIT 121.

WILLIAM R. DYER TO WILLIAM CAULDWELL.

Dated July 31, 1871.

Know All Men by These Presents

That I, William R. Dyer, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for, and in consideration of the sum of *one dollar* to me in hand paid by Wm. Cauldwell of the State of New York, the receipt whereof is hereby acknowledged and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said William Cauldwell all my right, title, interest, franchise, property, and estate individually, or as incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled on Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the Streets, avenues, squares and buildings therein, and to lay pipes for that purpose." Passed June 12, 1871.

7454 And I do hereby constitute and declare that the said William Cauldwell is the *Assignee* of all my rights, privileges, property and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act;—the intention of this instrument being to confer upon and vest in the said William Cauldwell all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he the said William Cauldwell had been named and mentioned in the first section of said above mentioned Act as Incorporator or Grantee therein in my place and stead.

In witness whereof I have hereunto set my hand and seal this thirty-first day of July one thousand eight hundred and seventy-one.

WILLIAM R. DYER. [L. S.]

In presence of
JAMES H. MARSH.

STATE OF NEW YORK, *City and County of New York, ss:*

On this 31st day of July, 1871, before me came William R. Dyer, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

WM. HASTINGS,
Notary Public, N. Y. County.

7455 COMPLAINANT'S EXHIBIT 122.

WILLIAM CAULDWELL TO C. S. BUSHNELL & OTHERS.

Dated December 29, 1871.

For a good, full and valuable consideration, to me, William Cauldwell, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davidson and Gordon H. Waddell, all and every my right, title and interest as Assignee of William R. Dyer, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7456 To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In witness whereof, I have hereunto set my hand and seal this twenty-ninth day of December, one thousand eight hundred and seventy-one.

WM. CAULDWELL. [L. S.]

In presence of

HENRY PARSONS.

City and County of New York, *ss:*

On this 29th day of December, 1871, before me came William Cauldwell, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. 7457 And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 123.

WILLIAM P. SMITH TO ISAAC P. MARTIN.

Dated June 29, 1871.

Know All Men by These Presents: That I, William P. Smith, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by Isaac P. Martin, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said Isaac P. Martin all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the laws of 1871, entitled an Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

7458 And I do hereby constitute and declare that the said Isaac P. Martin is the Assignee of all my rights, privileges, property, franchises and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act, the intention of this instrument being to confer upon and rest in the said Isaac P. Martin all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said Isaac P. Martin, had been named and mentioned in the first section of said above mentioned Act as an incorporator or grantee therein in my place and stead.

In Witness Whereof, I have hereunto set my hand and seal, this twenty-ninth day of June, one thousand eight hundred and seventy-one.

WILLIAM P. SMITH. [L. S.]

In presence of
THOS. C. FIELDS.

STATE OF NEW YORK, *City and County of New York:*

On this twenty-first day of October, 1871, before me came Thomas C. Fields, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same, the subscribing witness within named who being by me sworn did depose and say that he resides in the City of New York, that he knows William P. Smith, the grantor within named, knows him to be the grantor who is described in and who executed the within instrument in writing that he was present
7459 and saw the said William P. Smith execute the same and that he thereupon subscribed his name as a witness thereto.

HENRY PARSONS,
Notary Public for New York City and County.

COMPLAINANT'S EXHIBIT 124.

ISAAC P. MARTIN TO C. S. BUSHNELL AND OTHERS.

CONTRACT OF SALE.

Dated November 27, 1871.

For a good, full and valuable consideration, to me, Isaac P. Martin, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as one of the grantees, or persons named in the first section of the Act hereinafter mentioned, and as Assignee of William P. Smith, also one of the grantees, or persons named in said first section, by assignment dated 29th June, 1871, of which a copy is hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the said Act of the Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June

12th, 1871, whereby the said grantees named in said section, 7460 and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry, J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of such grantees or persons in said first section.

In witness whereof, I have hereunto set my hand and seal this twenty-seventh day of November, one thousand eight hundred and seventy-one.

ISAAC P. MARTIN. [L. S.]

U. S. Internal Revenue Stamp, 5c.

TRANSFER.

Know all men by these presents that I, William P. Smith, being one of the persons mentioned in the first section of the Act hereinafter described, as Grantee or Incorporator therein, for and in consideration of the sum of one dollar to me in hand paid by Isaac P. Martin, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, 7461 do hereby sell, assign, transfer and convey to the said Isaac P. Martin all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an Act "to authorize the construction of Gas Works for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Isaac P. Martin is the assignee of all my rights, privileges, property, franchises and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act, the intention of this instrument being to confer upon and vest in the said Isaac P. Martin all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said Isaac P. Martin, had been named and mentioned in the first section of said above mentioned act as an Incorporator or Grantee therein, in my place and stead.

In witness whereof, I have hereunto set my hand and seal this twenty-ninth day of June, one thousand eight hundred and seventy-one.

WILLIAM P. SMITH. [L. S.]

In presence of
THOS. C. FIELDS.

7462 STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-first day of October, 1871, before me came Thomas C. Fields, to me known the subscribing witness within named, who, being by me sworn, did depose and say that he resides in the City of New York, that he knows William P. Smith, the grantor within named, knows him to be the grantor who is described in and who executed the within instrument in writing, that he was present and saw the said William P. Smith execute the same, and that he thereupon subscribed his name as a witness thereto.

[L. S.] HENRY PARSONS,
Notary Public, for New York City and County.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And, further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In testimony whereof I have hereunto set my hand and
7463 affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 125.

EDWARD JONES TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Edward Jones, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and to hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes, for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, 7464 and subject to, certain other conditions, rights privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect, as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

EDWARD JONES. [L. S.]

In presence of

—— ——

CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November, 1871, before me came Edward Jones, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Records, do hereby Certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowl- 7465 edgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 126.

SHEPHERD F. KNAPP TO C. S. BUSHNELL AND OTHERS.

Dated November 28, 1871.

For a good, full and valuable consideration, to me, Shepherd F. Knapp, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. T. Bushnell, Henry I. Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of 7466 lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lap pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. T. Bushnell, Henry I. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-eighth day of November, one thousand eight hundred and seventy-one.

S. F. KNAPP. [L. S.]

In the presence of
J. SMITH.

Inter. Rev. 5c Stamp Cancelled.

7467 STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-eighth day of November, in the year one thousand eight hundred and seventy-one, personally came before me John Smith, subscribing witness to the foregoing instrument, with whom I am personally acquainted, who being by me duly sworn, did depose and say that he resides in the City of Brooklyn, Kings County, New York, that he is acquainted with Shepherd F. Knapp, and knows him to be the individual described in and who executed the foregoing instrument, that he saw him sign the same, that he acknowledged in his presence that he executed the same, and that he thereupon subscribed his name as a witness thereto.

RICHARD STACKPOOLE,
Notary Public.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Richard Stackpoole, whose name is subscribed to the certificate of the proof of acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the county of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and 7468 affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] **PETER J. DOOLING,** *Clerk.*

COMPLAINANT'S EXHIBIT 127.

WILLIAM H. BLOOM TO CORNELIUS CORSON.

Dated July 3, 1871.

Know All Men by These Presents: That I, William H. Bloom, for the sum of one dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto Cornelius Corson and his legal representatives, all the right, title, and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, Chapter 944, passed June 12th, 1871, entitled "An act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose, and do hereby constitute and appoint said —— —— my Attorney and Agent, for me and in my name, place and stead, to do all matters and things which under the provisions of said Act I would be authorized to do.

In witness whereof, I have hereunto set my hand and seal this third day of July, one thousand eight hundred and seventy-one.

WM. H. BLOOM. [L. S.]

Sealed and delivered in presence of
JAMES S. TURNER.

7469 CITY AND COUNTY OF NEW YORK, *ss:*

On this 27th day of November, 1871, before me came William H. Bloom, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily beli-ve that the signature to the said certificate of proof or acknowledgment is genuine.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7470 COMPLAINANT'S EXHIBIT 128.

CORNELIUS CORSON TO C. S. BUSHNELL AND OTHERS.

Dated November 27, 1871.

For a good, full and valuable consideration, to me, Cornelius Corson, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of William H. Bloom, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by assignment dated July third, 1871, hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7471 To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In witness whereof, I have hereunto set my hand and seal this twenty-seventh day of November, one thousand eight hundred and seventy-one.

CORNELIUS CORSON. [L. S.]

In presence of
JAS. S. TURNER.

[L. S.]

CITY AND COUNTY OF NEW YORK, *ss:*

On this 27th day of November, 1871, before me came Cornelius Corson, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

PAT'K McMULLEN,
Notary Public, County of New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Patrick McMullen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same.

7472 And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 129.

JOEL A. FITHIAN TO RICHARD B. CONNOLLY.

Dated July 6, 1871.

Know all Men by These Presents: That I, Joel A. Fithian, being one of the persons mentioned in the first Section of the Act hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by Richard B. Connolly, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said Richard B. Connolly all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the laws of 1871, entitled an Act "to authorize the construction of Gas Works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Richard B. Connolly is the Assignee of all my rights, privileges, property, franchises and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act.—the intention of this instrument being to confer upon and vest in the said Richard B. Connolly all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said Richard B. Connolly, had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead. 7473

In Witness Whereof, I have hereunto set my hand and seal, this sixth day of July, one thousand eight hundred and seventy-one.

JOEL A. FITHIAN.

In the presence of
A. S. CADY.

State of New York:

On this sixth day of July, 1871, before me came Joel A. Fithian, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

A. S. CADY,
Notary Public for County of N. Y.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same 7474 being a Court of Record, do hereby certify that A. S. Cady, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 130.

RICHARD B. CONNOLLY TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Richard B. Connolly, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of Josel A. Fithian, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment dated July sixth, 1871, hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize 7475 the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand, eight hundred and seventy-one.

RICHARD B. CONNOLLY. [L. S.]

In presence of
HENRY PARSONS.

CITY AND COUNTY OF NEW YORK, *ss:*

7476 On this 25th day November, 1871, before me came Richard B. Connolly, to me known to be the individual described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7477 COMPLAINANT'S EXHIBIT 131.

WALTER SMITH TO C. S. BUSHNELL AND OTHERS.

Dated November 28, 1871.

For a good, full and valuable consideration, to me, Walter Smith, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign, and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act. 7478

In Witness Whereof, I have hereunto set my hand and seal this twenty-eighth day of November, one thousand eight hundred and seventy-one.

WALTER SMITH. [L. S.]

In presence of:

—— ——.

Three 5 cent U. S. Internal Revenue stamps.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 28th day of November, 1871, before me came Walter Smith, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

JAS. J. TRAYNOR,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Jas. J. Traynor, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine. 7479

In Witness Whereof, I have hereunto set my hand *hand* and affixed the seal of the said court and County, the 31st day of July, 1906.

[L. S.]

PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 132.

JOSEPH MURPHY TO FORBES HOLLAND.

Dated July 13, 1871.

Know All Men by These Presents that I, Joseph Murphy, of the City of New York, being one of the persons mentioned in the First Section of the Act hereinafter described as grantee or incorporator therein, for and in consideration of the sum of one dollar and for other good and valuable considerations to me in hand paid by Forbes Holland, the receipt whereof is hereby acknowledged, have bargained, sold and assigned, and by these presents do hereby sell, assign, transfer, grant, set over and convey unto the said Forbes Holland, his executors, administrators, and assigns, all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in a certain act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled "An Act to authorize the construction of Gas Works for the purpose of lighting a portion of the City of New York and the Streets, Avenues, Squares, and Buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

7480 And I do hereby constitute and declare that the said Forbes Holland is the assignee of all my rights, privileges, property, franchises and estate contained or coming through or by reason of the above mentioned and described act—the intention of this instrument being to confer upon and vest in the said Forbes Holland all the rights, privileges, franchises and estate which the provisions of the said act conferred upon or vested in me individually or as an incorporator or grantee to the same extent and with like effect as if the said Forbes Holland had been named and mentioned in the first section of the said above mentioned Act, as an incorporator or grantee therein in my place and stead.

In Witness Whereof, I have hereunto set my hand and seal the thirteenth day of July, one thousand eight hundred and seventy-one (1871).

JOS. MURPHY. [L. S.]

Sealed and delivered in the presence of
DANIEL WHALEN.

U. S. Internal Revenue Stamp 5 cents.

City and County of New York, *ss:*

On this 13th day of July, 1871, before me personally came Joseph Murphy, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

DANIEL WHALEN,
Com. of Deeds.

7481 State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Daniel Whalen, whose name is subscribed to the Certificate of Proof or Acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Commissioner of Deeds in and for the City of New York, dwelling in the said City, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Commissioner, and verily believe that the signature to the said Certificate of Proof or Acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand, and affixed the Seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 133.

FORBES HOLLAND TO C. S. BUSHNELL AND OTHERS.

Dated, November 25th, 1871.

For a good, full and valuable consideration to me, Forbes Holland, the subscriber paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell and assign and transfer and do hereby relinquish, sell and assign and transfer unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all my right, title and interest as assignee of Joseph Murphy, one of 7482 the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment, dated July 13th, 1871, hereto annexed, in and to the charter, grant, franchise and authority granted by the State of New York by the Act of its Legislature entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues and squares and buildings therein and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof with the appurtenances unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

FORBES HOLLAND. [L. S.]

Sealed and delivered in presence of
HENRY PARSONS.

7483 CITY AND COUNTY OF NEW YORK, *ss:*

On this twenty-fifth day of November, 1871, before me came Forbes Holland, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City & County.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7484 COMPLAINANT'S EXHIBIT 134.

EDWARD TAYLOR TO WILLIAM M. TWEED, JR.

Dated July 3, 1871.

Know All Men by These Presents that I, Edward Taylor, for the sum of one dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto William M. Tweed, Jr., and his legal representatives, all the right, title, and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, chapter 944, passed June 12th, 1871, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," and do hereby constitute and appoint said —— —— my attorney and agent, for me and in my name, place and stead, to do all matters and things which under the provisions of said Act I would be authorized to do.

In Witness Whereof, I have hereunto set my hand and seal this third day of July, one thousand eight hundred and seventy-one.

EDWARD TAYLOR. [L. S.]

U. S. Internal Revenue Stamp, 5 cents.

Signed and delivered in presence of
WM. H. BLOOM.

7485 CITY AND COUNTY OF NEW YORK, *ss:*

William H. Bloom, being duly sworn, says that he resides at No. 53 Beech Street, N. Y. City, and knows Edward Taylor, the person described in and who executed the within instrument in writing, that he saw him sign the same, and that the said Taylor duly acknowledged that he executed the same, and that thereupon this deponent subscribed the same as witness thereto.

WM. H. BLOOM.

Sworn to before me this 27th day of November, 1871.

HENRY PARSONS,
Notary Public.

STATE OF NEW YORK, *County of New York:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily beli-ve that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Where[illegible] I have hereunto set my hand and affixed the seal of the said Court [illegible]nd County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7486 COMPLAINANT'S EXHIBIT 135.

WILLIAM M. TWEED, JR. TO C. S. BUSHNELL AND OTHERS.

Dated, November 27th, 1871.

For a good, full and valuable consideration, to me, William M. Tweed, Jr., the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby sell, assign and transfer unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as assignee of Edward Taylor, one of the grantees or persons named in the first section of the act hereinafter mentioned by assignment dated July third, 1871 hereto annexed in and to the charter, franchise and authority, granted by the State of New York, by the Act of its Legislature, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th 1871 whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7487 To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-seventh day of November one thousand eight hundred and seventy one.

WM. M. TWEED, Jr. [L. S.]

In presence of
CORNELIUS CORSON.

Three 5 cent U. S. Internal Revenue Stamps.

City & County of New York, *ss:*

On this 27th day of November 1871 before me came Wil-iam M. Tweed Jr. to me known to be the person described in and who executed the foregoing instrument in writing & acknowledged that he executed the same.

CORNELIUS CORSON,
Notary Public, N. Y. Co.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Cornelius Corson whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the 7488 same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk*.

COMPLAINANT'S EXHIBIT 136.

JOHN E. CRONLEY TO ALEXANDER FREAR.

Dated July 18, 1871.

Know All Men by These Presents, That I, John E. Cronly, being one of the persons mentioned in the first section of the Act hereinafter described, as grantee or incorporator therein, for and in consideration of the sum of One dollar to me in hand paid by Alexander Frear, of the State of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations do hereby sell, assign, transfer and convey to the said Alexander Frear, all my right, title, interest, franchise, property and estate individually or as incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an Act to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipe for that purpose" passed June 12th, 1871. 7489

And I do hereby constitute and declare that the said Alexander Frear is the assignee of all my rights, privileges, property, franchises and estate, contained in coming through, or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said Alexander Frear all the rights, privileges, franchises, and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he the said Alexander Frear had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead.

In Witness Whereof I have hereunto set my hand and seal, this eighteenth day of July, 1871, one thousand eight hundred and seventy-one.

J. E. CRONLY. [L. S.]

In presence of
GEORGE B. RAYMOND.

STATE OF NEW YORK, *City and County of New York, ss:*

On this eighteenth day of July, 1871, before me came John E. Cronly, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

[L. S.] A. W. OLIVER,
Notary Public, N. Y. C.

7490

COMPLAINANT'S EXHIBIT 137.

GEORGE H. WICKS TO ALEXANDER FREAR.

Dated November 24, 1871.

Know All Men by These Presents, That I, George H. Wicks, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by Alexander Frear, of the State of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said Alexander Frear all my right, title, interest, franchise, property and estate individually or as Incorporator or Grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Alexander Frear is the Assignee of all my rights, privileges, property, franchises and estate contained in coming through or by reason of the provisions of the above mentioned and described Act:—the intention of this instrument being to confer upon and vest in the said Alexander Frear all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as Incorporator or Grantee to the same extent and with like effect as if he the said —— —— had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead. 7491

In Witness Whereof I have hereunto set my hand and seal this twenty-fourth day of November, 1871, one thousand eight hundred and seventy-one.

GEORGE H. WICKS. [L. S.]

In presence of:
J. E. CRONLY.

STATE OF NEW YORK, *City and County of New York, ss:*

On this twenty-fourth day of November, 1871, before me came George H. Wicks to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

J. E. CRONLY,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That J. E. Cronly whose name is subscribed to the Certificate of the proof or acknowledgment, of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such 7492 Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

PETER J. DOOLING, *Clerk*.

[L. S.]

COMPLAINANT'S EXHIBIT 138.

ALEXANDER FREAR TO C. S. BUSHNELL AND OTHERS.

Dated November 24, 1871.

For a good, full and valuable consideration, to me, Alexander Frear, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, sign, and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of George H. Wicks, and John E. Cronly, certain of the Grantees or persons named in the first section of the Act, hereinafter mentioned by Assignments dated respectively the 24th day of November, 1871, and the 18th day of July 1871 hereto annexed in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Aevnues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, 7493 whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants with the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this 24th day of November one thousand eight hundred and seventy one.

ALEX FREAR.

[L. S.]

In the presence of:
HENRY PARSONS.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 24th day of November 1871, before me came Alexander Frear to me known to be the person described in and who executed the foregoing instrument in writing & acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City & Co.

7494 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Henry Parsons whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 139.

JOSEPH G. JENNINGS TO CHARLES BANKS.

Dated June 28, 1871.

Know All Men by These Presents, That I, Joseph G. Jennings, named in a certain Act passed by the Legislature of the State of New York, June 12th, 1871, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the street-, avenues, squares and buildings therein, and to lay pipes for that purposes"—to which Act reference is hereby made—in considera- 7495 tion of the sum of One Dollar, to me in hand paid by Charles Banks, of the City of New York, have sold, assigned, transferred and set over, and do hereby sell, assign, transfer and set over to him, said Charles Banks, all my rights, title, interests, benefits, advantages, franchises, property, and emoluments of what nature soever under or conferred by, the said Act, and all my right, title and interest in and to all franchises, rights, privileges or advantages created or bestowed in or by the said Act, to have and to hold to him, the said Charles Banks, his executors, administrators, or assigns forever.

In Witness Whereof, I have hereto set my hand and seal this twenty-ninth day of June, in the year one thousand eight hundred and seventy-one.

JOS. G. JENNINGS. [L. S]

Sealed and delivered in the presence of
DAVID BANKS, JR.

City and County of New York, *ss:*

David Banks, Jr., being duly sworn, says: That he resides at No. 10 West 40th Street, New York City, and is the subscribing witness to the foregoing instrument in writing; that he knows Joseph G. Jennings the person described in and who executed the foregoing instrument in writing, and who acknowledged before this deponent that he executed the same and thereupon this deponent subscribed the same as witness.

DAVID BANKS, Jr.

Sworn to before me this 25th day of November, 1871.

HENRY PARSONS,
Notary Public, N. Y. City.

7496 State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

PETER J. DOOLING, *Clerk.*

[L. S.]

COMPLAINANT'S EXHIBIT 140.

CHARLES BANKS TO C. S. BUSHNELL AND OTHERS.

Transfer.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Charles Banks, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, 7497 title and interest, as Assignee of Joseph G. Jennings one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment dated June 29th, 1871, hereunto annexed in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the

City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davidson and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty fifth day of November one thousand eight hundred and seventy one.

CHARLES BANKS. [L. S.]

In presence of:
HENRY PARSONS.

7498 CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November 1871 before me came Charles Banks, to me known to be the person described in and who executed the foregoing instrument in writing & acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Henry Parsons whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7499

COMPLAINANT'S EXHIBIT 141.

HENRY JOHNSON TO WILLIAM HITCHMAN.

Dated November 24, 1871.

Know All Men by These Presents, That I, Henry Johnson, being one of the persons mentioned in the first section of the Act hereinafter described, as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by William Hitchman, of the State of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations do hereby sell, assign, transfer and convey to the said William Hitchman, all my right, title, interest, franchise, property and estate individually or as incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th 1871.

And I do hereby constitute and declare that the said William Hitchman is the Assignee of all my rights, privileges, property, franchises, and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said William Hitchman all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said William Hitchman, had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead. 7500

In Witness Whereof, I have hereunto set my hand and seal, this twenty-fourth day of November, one thousand eight hundred and seventy-one.

HENRY JOHNSON. [L. S.]

In presence of
WM. P. ALLEN.

Inter. Rev. 5c. stamp.

State of New York,
City and County of New York, ss:

On this 24th day of Nov. 1871, before me came Henry Johnson, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

WM. P. ALLEN,
Notary Public, N. Y. C.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, Do Hereby Certify, That Wm. P. Allen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such 7501 Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 142.

WILLIAM HITCHMAN TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, William Hitchman, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of Henry Johnson one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment dated the 24th day of November 1871, hereto annexed in and to the charter, franchises and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and em- 7502 powered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty fifth day of November one thousand eight hundred and seventy one.

W. HITCHMAN.

[L. S.]

In presence of
HENRY PARSONS.

U. S. Inter. Rev. 5c. Stamp.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November 1871 before me came William Hitchman, to me known to be the person described in and who executed the foregoing instrument in writing & acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City & Co.

7503 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify That Henry Parsons whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

PETER J. DOOLING, *Clerk.*

[L. S.]

COMPLAINANT'S EXHIBIT 143.

EDWARD J. SHANDLEY TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Edward J. Shandley, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinguish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every 7504 my right, title and interest, as one of the Grantees or persons named in the first section of the Act hereinafter mentioned in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this fourth day of December, one thousand eight hundred and seventy-one.

E. J. SHANDLEY. [L. S.]

In presence of
HENRY PARSONS.

Three U. S. Inter. Rev. Stamps, 5c. each.

7505 CITY AND COUNTY OF NEW YORK, *ss:*

On this 4th day of December, 1871, before me came Edward J. Shandley, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City and County.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7506

COMPLAINANT'S EXHIBIT 144.

JOHN C. ANGELL TO JAMES M. SWEENEY.

Know All Men By These Presents: That I John Angell being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein for and in consideration of the sum of One dollar to me in hand paid by James M. Sweeney, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations do hereby sell, assign, transfer and convey to the said James M. Sweeney all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the laws of 1871, entitled an Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said James M. Sweeney is the Assignee of all my rights, privileges, property, franchises and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said James M. Sweeney all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he the said James M. Sweeney had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead.

7507 In Witness Whereof, I have hereunto set my hand and seal, this Twenty-first day of June, One thousand eight hundred and seventy-one.

JOHN C. ANGELL. [L. S.]

In presence of

—— ——.

State of New York:

On this twenty-first day of June, 1871, before me came John C. Angell to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY SNYDER,
Com. of Deeds, City & County N. Y.

COMPLAINANT'S EXHIBIT 145.

JAMES M. SWEENY TO C. S. BUSHNELL AND OTHERS.

Power of Attorney.

Dated November, 1871.

Know All Men By These Presents, That I, James M. Sweeny of the City, County and State of New York, Counselor at law, have made, constituted and appointed and by these presents *to* make, constitute and appoint John J. Bradley of the said city, my true and lawful Attorney for me, and in my name place and stead.

To pledge or hypothecate or to assign, sell and transfer any and all stock or stocks and all public fund or securities of every kind now owned or which may be hereafter owned by me and 7508 which now stand or may hereafter stand in my name and for such purpose to make, sign, seal and deliver, acknowledge for me and in my name good proper and sufficient instruments in writing.

And generally to manage and conduct all my business and affairs the same as I could do if personally present.

In Witness Whereof, I have hereunto set my hand and seal this — day of November 1871.

JAMES M. SWEENY. [L. S.]

Sealed and delivered in presence of
ANDREW J. SMITH.

City and County of New York, *ss:*

I, Henry Parsons, a Notary Public for the City of New York, do hereby certify that a certain power of Attorney of which the foregoing are true and correct extracts was duly exhibited to and examined by me this 29th day of December, 1871. The said power of Attorney was duly and properly executed and a certificate of the acknowledgment of such execution before Andrew J. Smith, a Notary Public, was thereto attached.

[L. S.] HENRY PARSONS,
Notary Public for N. Y. City and County.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court of the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose 7509 name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same.

And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate or proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

ASSIGNMENT.

Dated December 6, 1871.

For a good, full and valuable consideration, to me, James M. Sweeny, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby sell, assign and transfer unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignees of John C. Angell, one of the Grantees or persons named in the first section of an Act hereinafter mentioned by Assignment dated June 21st, 1871, hereunto annexed.

in and to the charter, franchise and authority, granted by the State of New York, by the Act of its Legislature, entitled "An Act
7510 to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-sixth day of December, one thousand eight hundred and seventy-one.

JAMES M. SWEENY, [L. S.]
For JOHN J. BRADLEY, *Atty.*

In the presence of:
JAMES M. SWEENY.

Three 5c. U. S. Internal Revenue Stamps.

325—396

7511 CITY AND COUNTY OF NEW YORK, *ss:*

On this 26th day of December, 1871, before me came James M. Sweeny, by Wm. M. Bradley, his attorney, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

DANIEL WHALEN,
Notary Public, City and County of New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Daniel Whalen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7512

COMPLAINANT'S EXHIBIT 146.

WILLIAM VAIL TO THOMAS C. FIELDS.

Dated June 14, 1871.

Know All Men by These Presents, That I, William Vail, of the City of New York, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for, and in consideration of the sum of One Dollar to me in hand paid by Thomas C. Fields of said City of New York, the receipt whereof is hereby acknowledged and for other good and valuable considerations, do hereby sell, assign, transfer, set over and convey to the said Thomas C. Fields all my right, title, interest, franchise, property and estate Individually or as an Incorporator or Grantee named and mentioned in an act of the Legislature of the State of New York, known as chapter 944 of the laws of 1871, entitled an Act "to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Thomas C. Fields is the assignee of all my rights, privileges, property, franchises and estate contained in coming through or by reason of the pro-

visions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said Thomas C. Fields all the rights, privileges, franchises and estate which the provisions of the said act conferred upon or vested in me individually or as an Incorporator or Grantee to the same extent, and with like effect as if he, the said Thomas C. Fields, had been named and mentioned in the first section of said above mentioned
7513 act as in Incorporator or Grantee therein in my place.

In Witness Whereof, I have hereunto set my hand and seal this 14th day of June, A. D. 1871.

WILLIAM VAIL. [L. S.]

In the presence of
HENRY PARSONS.

City and County of New York, *ss:*

On this 14th day of June, 1871, before me came William Vail, to me known, and known to me to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment, of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

7514 In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 147.

PATRICK QUINN TO THOMAS C. FIELDS.

Know All Men by These Presents, That I, Patrick Quinn, of the City of New York, being one of the persons mentioned in the first section of the Act, hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of one dollar to me in hand paid by Thomas C. Fields, of said City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer, set over and convey to the said Thomas C. Fields all my right, title, interest, franchise, property and estate individually or as an incorporator or Grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an act "to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares, and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Thomas C. Fields is the Assignee of all my rights, privileges, property, franchise and estate contained in, coming through, or by reason of the provisions of the above mentioned and described act—the intention of this instrument being to confer upon and vest in the said Thomas C. Fields all the rights, privileges, franchises and estate which the provisions of the said act conferred upon or vested in me individually or as Incorporator or Grantee to the same extent and with like effect as if he, the said Thomas C. Fields, had been named and mentioned in the first section of said above mentioned act as an Incorporator or Grantee therein in my place. 7515

In Witness Whereof, I have hereunto set my hand and seal this 14th day of June, A. D. 1871.

PATRICK QUINN. [L. S.]

In the presence of
HENRY PARSONS.

U. S. Internal Revenue Stamp 5 cents.

City and County of New York, *ss:*

On this 14th day of June, 1871, before me came Patrick Quinn, to me known, and known to me to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

State of New York, *City and County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the hand- 7516 writing of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 148.

WILLIAM H. MURPHY TO THOMAS C. FIELDS.

Dated June 14, 1871.

Know All Men by These Presents, That I, William H. Murphy, of the City of New York, being one of the persons mentioned in the first Section of the Act hereinafter described, as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by Thomas C. Fields of said City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer, set over and convey to the said Thomas C. Fields all my right, title, interest, franchise, property and estate, Individually or as an Incorporator or Grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944, of the Laws of 1871, entitled an Act "to authorize the construction of gas works 7517 and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Thomas C. Fields is the assignee of all my rights, privileges, property, franchises and estate contained in coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said Thomas C. Fields all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me Individually or as Incorporator or Grantee, to the same extent and with like effect, as if he, the said Thomas C. Fields, had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place.

In Witness Whereof, I have hereunto set my hand and seal this 14th day of June, A. D. 1871.

W. H. MURPHY. [L. S.]

In presence of
HENRY PARSONS.

U. S. Internal Revenue Stamp, 5 Cents.

City and County of New York, *ss:*

On this 14th day of June, 1871, before me came William H. Murphy, to me known and known to me to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

7518 STATE OF NEW YORK, *County of New York, ss:*

I. Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 149.

WILLIAM HIGGINS TO THOMAS C. FIELDS.

Dated June 26, 1871.

Know All Men By These Presents: That I, William Higgins, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of One Dollar to me in hand paid by Thomas C. Fields, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said Thomas C. Fields, all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the laws of 1871, entitled an Act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and Buildings therein, and to lay pipes for that purpose," passed June 12th, 1871. 7519

And I do hereby constitute and declare that the said Thomas C. Fields is the Assignee of all my rights, privileges, property, franchises and estate contained in, coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said Thomas C. Fields—all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said Thomas C. Fields, had been named and mentioned in the first section of said above mentioned Act as an incorporator or grantee therein in my place and stead.

In Witness Whereof, I have hereunto set my hand and seal, this twenty-sixth day of June, one thousand eight hundred and seventy-one.

WILLIAM HIGGINS. [L. S.]

In the presence of
HENRY PARSONS.

U. S. Internal Revenue Stamp, 5 Cents.

7520 STATE OF NEW YORK:

On this 26th day of June, 1871, before me came William Higgins, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same.

[L. S.] HENRY PARSONS,
Notary Public for New York City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7521 COMPLAINANT'S EXHIBIT 150.

JOHN H. JOHNSTON TO WILLIAM C. FIELDS.

Dated June 14, 1871.

Know All Men by These Presents that I, John H. Johnston, of the City of New York, being one of the persons mentioned in the first section of the Act hereinafter described as Grantor or Incorporator therein, for and in consideration of the sum of one dollar to me in hand paid by Thomas C. Fields, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby assign, transfer, set over and convey to the said Thomas C. Fields all my right, title, interest, frauchise, property and estate, Individually or as incorporator or Grantee, named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944, of the Laws of 1871, entitled an act "to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Thomas C. Fields is the Assignee of all my rights, privileges, property, franchises and estate contained in, coming through, or by reason of the provisions of the above mentioned and described act. The intention of this instrument being to confer upon and vest in the said Thomas C. Fields all the rights, privileges, franchises and estate which the provisions of the said act conferred upon or vested in me Individually or as Incorporator or grantee to the same extent and with like effect as if he, the said Thomas C. Fields, had been named and
mentioned in the first section of said above mentioned act as
7522 an Incorporator or Grantor therein in my place.

In Witness Whereof, I have hereunto set my hand and seal this 14th day of June, A. D. 1871.

JOHN H. JOHNSTON. [L. S.]

In the presence of

HENRY PARSONS.

U. S. Internal Revenue Stamp 5 Cents.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 14th day of June, 1871, before me came John H. Johnston, to me known to be the persons described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

[L. S.]

HENRY PARSONS,
Notary Public New York City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I
am well acquainted with the handwriting of such Notary, and
7523 verily believe that the signature to the said certificate of
proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.]

PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 151.

GEORGE CHIVVIS TO THOMAS C. FIELDS.

Dated July 6, 1871.

Know All Men by These Presents, that I, George Chivvis, being one of the persons mentioned in the first section of the Act hereinafter described as Grantee or Incorporator therein, for and in consideration of the sum of one dollar to me in hand paid by Thomas C. Fields, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said Thomas C. Fields, all my right, title, interest, franchise, property and estate individually or as an incorporator or grantee named and mentioned in an Act of the Legislature of the State of New York, known as Chapter 944 of the Laws of 1871, entitled an Act "to authorize the construction of Gas Works for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said Thomas C. Fields is the Assignee of all my rights, privileges, property, 7524 franchises and estates contained in, coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said Thomas C. Fields all the rights, privileges, franchises and estate which the provisions of the said Act conferred upon or vested in me individually or as incorporator or grantee to the same extent and with like effect as if he, the said Thomas C. Fields, had been named and mentioned in the first section of said above mentioned Act as an Incorporator or Grantee therein in my place and stead.

In Witness Whereof, I have hereunto set my hand and seal this sixth day of July, one thousand eight hundred and seventy-one.

GEORGE CHIVVIS. [L. S.]

In presence of
JOHN HAYES.

U. S. Internal Revenue Stamps, 5 cents.

STATE OF NEW YORK:

On this sixth day of July, 1871, before me came George Chivvis, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

SMITH E. LANE,
Notary Public.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same 7525 being a Court of Record, do hereby certify that Smith E. Lane, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature of the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 152.

THOMAS C. FIELDS TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Thomas C. Fields, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of John Johnston, Patrick Quinn, George Chives, William Higgins, William H. Murphy and William Vail, certain of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignments hereto annexed in and to the charter, franchise and authority granted by the State of New 7526 York, by the Act of its Legislature, entitled: "An Act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

THOS. C. FIELDS. [L. S.]

In presence of
HENRY PARSONS.

Three U. S. Internal Revenue Stamps, 5 Cents Each.

7527 CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November, 1871, before me, came Thos. C. Fields, to me known to be the individual described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City and Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify that Henry C. Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7528 COMPLAINANT'S EXHIBIT 153.

RICHARD H. VAUGHAN TO GEORGE L. LOUTREL.

Dated July 3, 1871.

For and in consideration of the sum of One Dollar to me in hand paid, the receipt whereof is hereby acknowledged, I do hereby assign, transfer and set over unto George L. Loutrel, all my right, title and interest as one of the incorporators, in an Act entitled an Act "to authorize the construction of gas works in the City of New York, passed by the Legislature of session of the year 1871," and authorize him to act in my stead as such incorporator, hereby transferring to him all my right therein.

RICHARD H. VAUGHAN.
New York, July 3, 1871. [L. S].

In presence of
M. BREWSTER.

CITY AND COUNTY OF NEW YORK:

On this 25th day of November, 1871, before me, came Richard H. Vaughan, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify, that Henry Parsons, whose name is subscribed to the certificate of the proof or acknowledgment 7529 of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 154.

GEORGE L. LOUTRELL TO C. S. BUSHNEL AND OTHERS.

Dated November 25, 1906.

For a good, full and valuable consideration, to me, George L. Loutrell, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of Richard H. Vaughan, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment dated July 3rd, 1871, hereto annexed in and to the charter, franchise, and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas 7530 for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares, and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect, as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

GEORGE L. LOUTRELL. [L. S.]

In presence of

HENRY PARSONS.

U. S. Internal Revenue Stamp, 5 Cents.

7531 CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November, 1871, before me came Geo. L. Loutrel, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7532

COMPLAINANT'S EXHIBIT 155.

ANDREW J. SMITH TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Andrew J. Smith, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as one of the Grantees or persons named in the first section of the Act hereinafter mentioned in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7533 To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

AND. J. SMITH. [L. S.]

In presence of
HENRY PARSONS.

Two U. S. Internal Revenue Stamps, 5 cents each.

City and County of New York, *ss:*

On this 25th day of November, 1871, before me came Andrew J. Smith, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. 7534

And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 156.

HENRY A. SMITH TO C. J. BUSHNELL AND OTHERS.

Power of Attorney.

Dated November 6, 1871.

Know All Men By These Presents: That I, Henry A. Smith, of the City and County of New York, have made, constituted and appointed and by these presents do make, constitute and appoint Bernard Smythe of said City, my true and lawful attorney for me and in my name, place and stead.

To pledge or hypothecate, or to sell, assign and transfer any and all stocks, or stock, and all public funds or securities, of every kind, now owned or which may be hereafter owned by me and which now stands or may hereafter stand in my name and for such purpose to make, sign, seal and deliver and acknowledge for and in my name proper and sufficient instruments in writing.

And generally to manage and conduct all my business affairs the same as I could do if I personally present, giving and granting to my said attorney full power and authority to do and perform all and every act and thing whatever requisite and necessary to be done in and about the premises as fully to all intents and purposes as I might or could do if personally present in the full power of substitution and vocation hereby ratifying and confirming all that my said attorney or his substitute shall lawfully do or cause to be done by virtue thereof. 7535

In Witness Whereof I have hereunto set my hand and seal the sixth day of November, one thousand eight hundred and seventy-one.

(Signed) HENRY A. SMITH. [L. S.]

Sealed and Delivered in the Presence of
ANDREW J. SMITH.

City and County of New York:

On the sixth day of November, 1871, before me personally came Henry A. Smith, known to me to be the individual described in and who executed the foregoing power of attorney and acknowledged to me that he executed the same.

ANDREW J. SMITH,
Notary Public.

I certify that the foregoing is a true and correct extract from the original power of attorney in my possession.

ANDREW J. SMITH,
Notary Public, N. Y. C.

ASSIGNMENT.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Henry A. Smith, the subscriber, paid, the receipt of which is hereby 7536 confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of the Act thereinafter mentioned, in and to the charter, franchise and authority, granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as the grantees or persons in the said first section of said Act.

7537 In Witness Whereof, I have hereunto set my hand and seal this fifth day of December, one thousand eight hundred and seventy-one.

HENRY S. SMITH, [L. S.]
By BERNARD S. SMYTHE, *Att'y.*

In presence of
AND. J. SMITH.

Three U. S. Internal Revenue Stamps, 5 cents each.

CITY AND COUNTY OF NEW YORK, *ss:*

On this fifth day of December, before me personally came Bernard Smyth, Attorney in fact of Henry A. Smith, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same as the act and deed of the said Henry A. Smith by virtue of letters of attorney bearing date the sixth day of November, 1871.

ANDREW J. SMITH,
Notary Public, N. Y. C.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Andrew J. Smith, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. 7538

And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 157.

JOSEPH BELL TO C. S. BUSHNELL AND OTHERS.

Dated November 25th, 1871.

For a good, full and valuable consideration, to me, Joseph Bell, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign, and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell all and every my right, title and interest, as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, and present owner thereof, in and to the charter, franchise, and authority granted by the State of New York, by the Act of its Legislature, entitled, "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and Buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting 7539 the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

JOSEPH BELL. [L. S.]

In presence of
HENRY PARSONS.

Three U. S. Internal Revenue Stamps, 5 Cents Each.

City and County of New York, *ss:*

On this 25th day of November, 1871, before me, came Joseph Bell, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

7540 State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 158.

JOHN J. WALSH TO C. S. BUSHNELL AND OTHERS.

Dated 30th December, 1871.

For a good, full and valuable consideration, to me, John J. Walsh, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison, and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of the 7541 Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this thirtieth day of December, one thousand eight hundred and seventy-one.

JOHN J. WALSH. [L. S.]

In presence of
J. S. KELLY.

7542 City and County of New York, *ss:*

On this 30th day of December, 1871, before me came John J. Walsh, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

DAVID D. TERRY,
Notary Public, N. Y. City and Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that David D. Terry, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7543

COMPLAINANT'S EXHIBIT 159.

DELAVAN PECK TO C. S. BUSHNELL AND OTHERS.

Dated November 27, 1871.

For a good, full and valuable consideration, to me, Delavan Peck, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of the Act hereinafter mentioned in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and Buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the
appurtenances, unto the said C. S. Bushnell, Henry J. Davison
7544 and Gordon H. Waddell, and their assigns, with like force
and effect as if they had been named as a part of the grantees
or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this —— day of November, one thousand eight hundred and seventy-one.

DELAVAN PECK. [L. S.]

Subscribed and sworn to before me, this 27th day of November, 1871.

E. M. PARKER,
Com'r of Deeds.

STATE OF NEW YORK, *County of Albany:*

On this 27th day of November, 1871, before me, came Delavan Peck, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

E. M. PARKER,
Com'r of Deeds.

STATE OF NEW YORK, *County of Albany, Clerk's Office, ss:*

I, John Franey, Clerk of the said County, and also Clerk of the Supreme and County Courts, being Courts of Record held therein, do Certify, that E. M. Parker, whose name is subscribed to the Certificate of proof or acknowledgment of the annexed instrument in writing, and endorsed thereon, was at the time of taking such proof or acknowledgment, a Commissioner of Deeds, in and for the County aforesaid, dwelling in said County, and duly authorized to take the same; and that I am well acquainted with the handwriting of the said Commissioner, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine; and that the said instrument is executed and acknowledged according to the Laws of the State of New York. 7545

In Testimony Whereof, I have hereunto set my hand and affixed my official seal as County Clerk and Clerk of said Courts, this 4th day of August, 1906.

[L. S.] JOHN FRANEY, *Clerk.*

COMPLAINANT'S EXHIBIT 160.

THOMAS Y. AVERY TO A. OAKEY HALL.

Dated June 29, 1871.

Know All Men by These Presents that I, Thomas Y. Avery, of ——, being one of the persons mentioned in the first section of the act hereinafter described, as Grantee or Incorporator therein, for and in consideration of the sum of one dollar to me in hand paid by A. Oakey Hall, of the City of New York, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, do hereby sell, assign, transfer and convey to the said A. Oakey Hall all my right, title, interest, franchise, property and estate, individually or as an Incorporator or Grantee named or mentioned in an act of the Legislature of the State of New York, known as Chapter 944, of the Laws of 1871, entitled an act "to authorize the construction of gas works for the purpose of lighting a portion of the City of New York and the Streets, Avenues, Squares 7546 and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871.

And I do hereby constitute and declare that the said A. Oakey Hall is the Assignee of all my rights, privileges, property, franchises and estate, contained in, coming through or by reason of the provisions of the above mentioned and described Act—the intention of this instrument being to confer upon and vest in the said A. Oakey Hall all the rights, privileges, franchises and estate which the provisions of the said act conferred upon or vested in me Individually or as an Incorporator or Grantee to the same extent and with like effect as if he, the said A. Oakey Hall, had been named and mentioned in the first section of said above mentioned act as an Incorporator or Grantee therein in my place and stead.

In Witness Whereof, I have hereunto set my hand and seal this 29th day of June, 1871.

THOMAS Y. AVERY. [L. S.]

In presence of
DANIEL SEYMOUR.

U. S. Internal Revenue Stamp 5 Cents.

STATE OF NEW YORK, *County of New York, ss:*

On the 29th day of ——, 1871, before me came Thomas Y. Avery, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

DANIEL SEYMOUR,
Notary Public, N. Y. C.

7547 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Daniel Seymour, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 161.

A. OAKEY HALL TO C. S. BUSHNELL AND OTHERS.

Dated June 29, 1871.

For a good, full and valuable consideration, to me, A. Oakey Hall, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of Thomas Y. Avery, one of the Grantees 7548 or persons named in the first section of the Act hereinafter mentioned by assignment dated June 29th, 1871, which is hereto annexed in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and Buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits; together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-seventh day of November, one thousand eight hundred and seventy-one.

A. OAKEY HALL. [L. S.]

Three U. S. Internal Revenue Stamps, 5 Cents Each.

7549 City and County of New York, *ss:*

On the twenty-eighth day of November, in the year one thousand eight hundred and seventy-one, before me personally appeared A. Oakey Hall, known to me to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

G. D. CARDIZO,
Com'r of Deeds.

COMPLAINANT'S EXHIBIT 162.

JOHN BALMORE TO C. S. BUSHNELL AND OTHERS.

Dated November 27, 1871.

For a good, full and valuable consideration, to me, John Belmore, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain 7550 streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-seventh day of November, one thousand eight hundred and seventy-one.

JOHN BALMORE. [L. S.]

In presence of
HENRY PARSONS.

Three U. S. Internal Revenue Stamps 5c each.

City and County of New York, *ss:*

On this 27th day of November, 1871, before me came John Balmore, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY PARSONS.
Notary Public for N. Y. City.

7551 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 163.

JAMES S. TURNER TO WILLIAM M. TWEED.

Dated July 3, 1871.

Know All Men by These Presents, That I, James S. Turner, for the sum of One Dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto William M. Tweed, and his legal representatives, all the right, title, and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, Chapter 944, 7552 passed June 12th, 1871, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting the City of New York, and the streets, avenues, squares, and buildings therein, and to lay pipes for that purpose, and do hereby constitute and appoint said —— my Attorney and Agent, for me and in my name, place and stead, to do all matters and things which under the provisions of said Act I would be authorized to do.

In Witness Whereof, I have hereunto set my hand and seal this third day of July, one thousand eight hundred and seventy-one.

JAMES S. TURNER. [L. S.]

Sealed and delivered in presence of
EDGAR BROWN.

Internal Revenue 5c Stamp.

CITY AND COUNTY OF NEW YORK, *ss:*

On th-s 27th day of November, 1871, before me came James S. Turner, to me known to be the person described in and who executed the foregoing instrument in writing, and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Henry Parsons
7553 whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that, I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 164.

WILLIAM M. TWEED TO C. S. BUSHNELL AND OTHERS.

Dated July 31, 1871.

For a good, full and valuable consideration to me, William M. Tweed, the subscriber, paid the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of James S. Turner, one of the Grantees or persons mentioned in the first section of the Act hereinafter mentioned by Assignment, dated July third, 1871, hereto annexed in and to the charter, franchise and authority granted by the State of
7554 New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is par-

ticularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-seventh day of November one thousand eight hundred and seventy one.

WILLIAM M. TWEED. [L. S]

In presence of
CORNELIUS CORSON.

Three U. S. Internal Revenue Stamps, 5 cents each.

7555 City and County of New York, *ss:*

On this 27th day of November 1871 before me came William M. Tweed to me known to be the person described in and who executed the foregoing instrument in writing & acknowledged that he executed the same.

CORNELIUS CORSON,
Notary Public, N. Y. Co.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Cornelius Corson whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signa-ure to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7556 COMPLAINANT'S EXHIBIT 165.

WILLIAM JOHNSTON TO JOHN RYAN.

Dated December 16, 1871.

For and in consideration of the sum of one dollar, to me in hand paid by John Ryan, the receipt whereof is hereby acknowledged, and for other good and valuable considerations, I, William Johnston, one of the Grantees named in the first section of a certain act of the Legislature of the State of New York, entitled, "An Act to authorize the construction of Gas works and the manufacture and sale of Gas for the purpose of lighting a portion of the City of New York and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose" passed June 12th, 1871, and named in said Act as William Johnson, do hereby sell, assign, transfer and set over unto the said John Ryan all my right, title, interest, property or possession in and to the Charter, Grant, Franchise and authority therein and thereby granted to me, to have and to hold the same and every part thereof with the appurtenances unto the said John Ryan, with the like force and effect as if he the said had been named as one of the Grantees in the said first section of said Act.

In Witness Whereof I have hereunto set my hand and seal this 16th day of December one thousand eight hundred and seventy one.

WM. JOHNSTON. [L. S.]

In presence of
JOHN CALLAHAN.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 16th day of December 1871, before me came William Johnson, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same. 7557

JOHN CALLAHAN,
Commissioner of Deeds.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 23d day of December 1871 before me came William Johnston to me known to be the person described in and who executed the foregoing instrument in writing and reacknowledged that he executed the same, after the change made in fifth line of first page from Johnson to Johnston, and after the interlineation between the 14th and 15th lines on first page.

JOHN CALLAHAN,
Commissioner of Deeds.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that John Callahan whose name is subscribed to the Certificate of Proof or Acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment a Commissioner of Deeds in and for the City of New York, dwelling in the said City, commissioned and sworn and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Commissioner, and verily believe that the signature to the said Certificate of Proof or Acknowl-dgment is genuine.

7558 In Testimony Whereof I have hereunto set my hand, and affixed the Seal of the said Court and County, the 31 day of July 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

City and County of New York, *ss:*

On this 23rd day of December 1871 before me came William Johnston to me known to be the person described in and who executed the foregoing instrument in writing and reacknowledged that he executed the same, after the change made in fifth line of the first page from Johnson to Johnston, and after the interlineation between the 14th and 15th lines on first page.

JOHN CALLAHAN,
Commissioner of Deeds.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that John Callahan, whose name is subscribed to the Certificate of Proof or acknowledgment of the annexed instrument, and thereon written was, at the time of taking such proof or acknowledgment a Commissioner of Deeds in and for the County of New York, dwelling in the said County, commissioned and sworn and duly authorized to take the same, and further that I am well acquainted with the handwriting of such Commissioner, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

7559 In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 166.

JOHN RYAN TO C. S. BUSHNELL AND OTHERS.

Dated December 18th, 1871.

For a good, full and valuable consideration, to me, John Ryan, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of William Johnston, one of the Grantees named in the first section of the Act hereinafter mentioned by Assignment dated December 16th, 1871, hereto annexed (named in said section as William Johnson, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes, for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of 7560 the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect, as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this eighteenth day of December, one thousand eight hundred and seventy-one.

JOHN RYAN. [L. S.]

In presence of
HENRY PARSONS.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 18th day of December, 1871, before me came John Ryan, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for New York City and County.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same 7561 being a Court of Record, do hereby Certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 167.

HENRY S. MURRAY TO PETER B. SWEENEY.

Dated July 3, 1871.

Know All Men by These Presents, That I, Henry S. Murray, for the sum of One Dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto Peter B. Sweeney and his legal representatives, all the right, title and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, Chapter 944, passed June 12th, 1871, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of Gas for the
purpose of lighting the City of New York, and the streets, ave-
7562 nues, squares and buildings therein, and to lay pipes for that
purpose, and also do constitute and appoint said —— ——, my Attorney and Agent, for me and in my name, place and stead, to do all matters and things which under the provisions of said Act I would be authorized to do.

In Witness Whereof, I have hereunto set my hand and seal this 3rd day of July, one thousand eight hundred and seventy-one.

H. S. MURRAY. [L. S.]

Sealed and delivered in presence of
W. E. ZISSELL.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 2nd day of December, 1871, personally appeared before me, Henry S. Murray, known to me to be the person described in the within instrument, who acknowledged that he executed the same.

CORNELIUS CORSON,
Notary Public, County of New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Cornelius Corson, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of
taking such proof or acknowledgment, a Notary Public in
7563 and for the County of New York, dwelling in the said County,
commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 168.

PETER B. SWEENY TO C. S. BUSHNELL AND OTHERS.

Dated July 3, 1871.

For a good, full and valuable consideration, to me, Peter B. Sweeny, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of Henry S. Murray, one of the Grantees or persons named in the first section of the Act herein mentioned by assignment dated July third, 1871, hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said 7564 grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this fourth day of December, one thousand eight hundred and seventy-one.

PETER B. SWEENY. [L. S.]

In presence of:
THOMAS C. FIELDS.

Three U. S. Internal Revenue Stamps, 5 cents each.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 4th day of December, 1871, before me came Thomas C. Fields, to me known — the subscribing witness within named, who being by me sworn, did depose and say that he resides at 140th Street and 12th Avenue, New York City, that he knows Peter B. 7565 Sweeny, the grantee above named, knows him to be the person described in and who executed the within instrument in writing, that he was present and saw the said Peter B. Sweeny execute the same and that — thereupon subscribed his name as a witness thereto.

THOS. C. FIELDS.

Sworn to before me this 4th day of December, 1871.

HENRY PARSONS,
Notary Public, N. Y. C.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7566

COMPLAINANT'S EXHIBIT 169.

PETER H. E. BAXTER, JR., TO HENRY W. GENET.

Dated June 16, 1871.

In consideration of the sum of one dollar to me in hand paid by Henry W. Genet of the City of New York, I do hereby assign, transfer and set over unto the said Henry W. Genet, all my right, title and interest as an incorporator in and to a certain act of incorporation, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of Gas for the purpose of lighting a portion of the City of New York, and the Streets and Avenues, Squares and buildings therein and to lay pipes for that purpose," passed June 12th, 1871, to have and to hold such interest to himself, his heirs and assigns forever.

Signed this 16th day of June, 1871.

PETER H. E. BAXTER.

In presence of
GEO. H. E. LYNCH.

Int. Rev. 5c. Stamp.

STATE OF NEW YORK AND COUNTY OF NEW YORK, *ss:*

On this 2d day of December, 1871, personally appeared before me Peter H. E. Baxter, to me known and known to me to be the person signing the foregoing assignment, and he acknowledged to me that he signed the same for the uses and purposes therein mentioned.

THOS. F. GILROY,
Notary Public, City and County of N. Y.

7567 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Thos. F. Gilroy, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 170.

HENRY W. GENET TO C. S. BUSHNELL AND OTHERS.

Dated November 28, 1871.

For a good, full and valuable consideration, to me, Henry W. Genet, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as Assignee of Peter H. E. Baxter, one of the Grantees 7568 or persons named in the first section of the Act hereinafter mentioned by Assignment dated June 16th, 1871, hereto annexed, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-eighth day of November, one thousand eight hundred and seventy-one.

H. W. GENET. [L. S.]

Three Internal Revenue Stamps, 5 cents each.

7569 CITY AND COUNTY OF NEW YORK, *ss:*

On this 28th day of November, 1871, before me came Henry W. Genet, the person named in the foregoing instrument of Assignment and subscribed the same in my presence and I acknowledged the same to be his signature thereto.

JOHN SCOTT,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That John Scott, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7570 COMPLAINANT'S EXHIBIT 171.

JOHN COX TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, John Cox, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7571 To have and to hold the same and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

JOHN COX. [L. S.]

In presence of:
HENRY PARSON-.

Three U. S. Internal Revenue Stamps, 5 cents each.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November 1871 before me came John Cox to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public for N. Y. City.

STATE OF NEW YORK,
County of New York, ss:

7572 I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Henry Parsons whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 172.

JOHN J. TURNER TO WILLIAM E. KING.

Dated, July 3, 1871.

Know All Men By These Presents: That I, John J. Turner, for the sum of One Dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto William E. King and his legal representatives, all the right, title, and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, chapter 944, passed June 12th, 1871, entitled "An act to authorize the construction of Gas Works, and the manufacture and sale of Gas for the purpose of lighting the City of New York, and the streets, avenues, squares, and buildings therein, and to lay pipes for that purpose, and do hereby constitute and appoint said my Attorney and Agent, for me and in my name, place, and stead, to do all matters and things which under the provisions of said Act I would be authorized to do.

In Witness Whereof, I have hereunto set my hand and seal this 3rd day of July one thousand eight hundred and seventy one. 7573

JOHN J. TURNER, [L. S.]

Sealed and delivered in presence of
CORNELIUS CORSON.

U. S. Internal Revenue Stamp 5 cents.

STATE OF NEW YORK,
City and County of New York, ss:

On the 3rd day of July, 1871, before me personally came John J. Turner to me known to be the same person mentioned in, and who executed the foregoing assignment and acknowledged that he executed the same.

R. H. CLIFFORD,
Notary Public, N. Y. City.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, that R. H. Clifford, whose name is subscribed to the Certificate of Proof or Acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary and verily believe that the signature to the said Certificate of Proof or Acknowledgment is genuine.

7574 In Testimony Whereof, I have hereunto set my hand, and affixed the Seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 173.

WILLIAM E. KING TO JAMES F. PIERCE.

Dated June 12, 1871.

For and in consideration of the sum of One Dollar to me in hand paid, the receipt whereof is hereby acknowledged, I do hereby transfer, assign, and set over to James F. Pierce or his assigns, all the right, title, and interest I now have, or may hereafter acquire by the provisions of a certain act entitled, An Act to Authorize the construction of Gas Works, and the manufacture and sale of Gas for the purpose of lighting a portion of the City of New York and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose, passed June 12, 1871, and do hereby fully authorize said Pierce to do and perform all things I may be authorized to do by said act.

(Signed) WM. E. KING.

July 18, 1871.

In presence of
E. BOTTGER.

U. S. Internal Revenue Stamp 5 cents.

STATE OF NEW YORK,
City and County of New York, ss:

On this 18th day of July 1871, before me personally appeared William E. King, to me known to be the same person 7575 mentioned in and who executed the foregoing assignment, and acknowledged that he executed the same.

R. H. CLIFFORD,
Notary Public, N. Y. City.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a

Court of Record, do Hereby certify, that R. H. Clifford, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7576 COMPLAINANT'S EXHIBIT 174.

JAMES F. PIERCE TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, James F. Pierce, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby sell, assign and transfer unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of John J. Turner, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by Assignment first from said Turner to one William E. King, dated July 3d, 1871, and from said King to me, dated July 18th, 1871, hereto annexed, in and to the charter, franchise and authority, granted by the State of New York by the Act of its Legislature entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues and squares and buildings therein and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument. 7577

To have and to hold the same and every part thereof with the appurtenances unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

JAMES F. PIERCE. [L. S.]

In presence of

HENRY PARSONS.

Three U. S. Internal Revenue Stamps, 5 cents each.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of November, 1871, before me personally came James F. Pierce, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSONS,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Henry Parsons, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, 7578 at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 175.

EDGAR BROWER TO CHAS. E. WILBOUR.

Know All Men by These Presents, That I, Edgar Brower, for the sum of One Dollar to me in hand paid, the receipt of which is hereby acknowledged, and for other valuable considerations, do hereby grant and assign and convey unto Charles E. Wilbour and his legal representatives, all the right, title and interest which may have accrued, or may hereafter accrue, to me, under and by virtue of the provisions of the Act of the Legislature, Chapter 944, passed June 12th, 1871, entitled "An Act to authorize the construction of Gas Works, and the manufacture and sale of Gas for the purpose of lighting the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose, and do hereby constitute and appoint said —— my Attorney and 7579 Agent for me and in my name, place and stead, to do all the matters and things which under the provisions of said Act I would be authorized to do.

In Witness Whereof, I have hereunto set my hand and seal this third day of July, one thousand eight hundred and seventy-one.

EDGAR BROWER. [L. S.]

Sealed and delivered in the presence of
JAMES S. TURNER.

U. S. Internal Revenue Stamp, 5 cents.

City and County of New York, *ss:*

On this 27th day of November, 1871, before me came Edgar Brower, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged he executed the same.

CORNELIUS CORSON,
Notary Public for N. Y. Co.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Cornelius Corson, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in 7580 and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 176.

CHARLES E. WILBOUR TO C. S. BUSHNELL AND OTHERS.

Dated November 27, 1871.

For a good, full and valuable consideration, to me, Charles E. Wilbour, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby sell, assign and transfer unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as Assignee of Edgar Brower, one of the Grantees or persons named in the first section of the Act hereinafter mentioned by assignment dated — hereto annexed, in and to the charter, franchise and authority, granted by the State of New York, by the Act of its Legislature, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the 7581 Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as the grantees or persons in the said first section of said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-seventh day of November one thousand eight hundred and seventy one.

CHARLES E. WILBOUR. [L. S.]

In presence of

CORNELIUS CORSON.

Three 5 cent U. S. Internal Revenue Stamps.

CITY & COUNTY OF NEW YORK, *ss:*

On this 27th day of November 1871 before me personally came Charles E. Wilbour, to me known to be the person described 7582 in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

CORNELIUS CORSON,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Cornelius Corson whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7583 COMPLAINANT'S EXHIBIT 177.

CHARLES E. LOEW TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Charles E. Loew, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby sell, assign and transfer unto C. S. Bushnell, Henry Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of the Act hereinafter mentioned, in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entiled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

7584 To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty-fifth day of November, one thousand eight hundred and seventy-one.

CHARLES E. LOEW. [L. S.]

In presence of

HENRY PARSONS.

Three U. S. Internal Revenue Stamps, 5 cents each.

City and County of New York, *ss:*

On this 25th day of November, 1871, before me personally came Chas. E. Loew, to me known to be the person described in and who executed the foregoing instrument in writing and acknowledged that he executed the same.

HENRY PARSON,
Notary Public for N. Y. City and Co.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, That Henry Parsons whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for 7585 the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 178.

MATHEW T. BRENNAN TO C. S. BUSHNELL AND OTHERS.

Dated November 25, 1871.

For a good, full and valuable consideration, to me, Mathew T. Brennan, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby sell, assign and transfer, unto C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, all and every my right, title and interest, as one of the Grantees or persons named in the first section of an Act hereinafter mentioned in and to the charter, franchise and authority granted by the State of New York, by the Act of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are author- 7586 ized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same, and every part thereof, with the appurtenances, unto the said C. S. Bushnell, Henry J. Davison and Gordon H. Waddell, and their assigns, with like force and effect as if they had been named as a part of the grantees or persons in the said first section of the said Act.

In Witness Whereof, I have hereunto set my hand and seal this twenty fifth day of November one thousand eight hundred and seventy one.

M. T. BRENNAN. [L. S.]

In presence of:
JOHN KERR.

Three U. S. Internal Revenue Stamps, 5 cents each.

City and County of New York, *ss:*

On this 25th day of November, 1871, before me came Mathew T. Brennan, to me known to be the person described in and who executed the within instrument in writing & acknowledged that he executed the same.

JOHN KERR,
Com. of Deeds.

7587 State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That John Kerr, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 179.

RESIGNATIONS OF EXECUTIVE COMMITTEE.

We, the subscribers, who were, within ninety days after the passage of the Act of June 12, 1871, Chapter 944, of the Laws of the State of New York, of 1871, page 2,168, duly selected, pursuant to the third section of the said Act, as an Executive Committee, as therein provided for, in consideration that the persons named in the

first section of the said Act, or their assigns, or nearly all of them, have duly assigned to C. T. Bushnell, Henry I. Davison and Gordon
H. Waddell, all and every their right, title and interest, as
7588 grantees, or assignees, in and to the charter franchise and
authority granted by the said Act, do hereby release, relinquish, assign and set over to the said Bushnell, Davison and Waddell, and their assigns, all the rights, power and control which we have acquired, or can in any way exercise, or have, as such Executive Committee.

In Witness Whereof, we have hereunto set our hands and seals this twenty seventh day of November, 1871.

H. W. GENET. [L. S.]
RICHARD B. CONNOLLY. [L. S.]
THOS. C. FIELDS. [L. S.]
W. M. TURNER. [L. S.]
CORNELIUS CORSON. [L. S.]
JAS. E. WILBUR. [L. S.]
PETER B. SWEENY. [L. S.]
A. OAKEY HALL. [L. S.]
HENRY HILTON. [L. S.]

Cancelled Inter. Rev. 5c. Stamp.

We, the Subscribers, who were, within ninety days after the passage of the Act of June 12, 1871, Chapter 944, of the Laws of the State of New York, of 1871, page 2,168, duly selected, pursuant to the third section of the said Act, as an Executive Committee, as therein provided for, in consideration that the persons named in the first section of the said Act, or their assigns, or nearly all of them, have duly assigned to C. T. Bushnell, Henry I. Davison and Gordon H. Waddell, all and every their right, title and interest as grantees, or assignees, in and to the charter, franchise and authority granted by the said Act, do hereby release, relinquish, assign and set over to the
said Bushnell, Davison and Waddell, and their assigns, all
7589 the rights, power and control which we have acquired, or can
in any way exercise, or have, as such Executive Committee.

In Witness Whereof, we have hereunto set our hands and seals this twenty-seventh day of November, 1871.

HUGH SMITH. [L. S.]
—— ——. [L. S.]
JAMES M. SWEENEY. [L. S.]

Inter. Rev. 5c. Stamp.

COMPLAINANT'S EXHIBIT 180.

Complainant's Exhibit 180 is the same as Complainant's Exhibit 120.

COMPLAINANT'S EXHIBIT 181.

CORNELIUS S. BUSHNELL AND OTHERS TO WILLIAM FOSTER, JR.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto William Foster, Junior, of the City of New York, all and every our joint and several rights, title and interest as owners by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp and William R. Dyer (or their assigns) the original grantees, in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract 7590 of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances unto the said William Foster, Junior, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness Whereof, we have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

7591 STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared Cornelius S. Bushnell, and on the twenty-first day of February, 1874, before me personally appeared Henry J. Davison, and on the twentieth day of February, 1874, before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7592 COMPLAINANT'S EXHIBIT 182.

CORNELIUS S. BUSHNELL AND OTHERS TO EBEN F. BACON.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Eben F. Bacon, all and every our joint and several rights, title and interest as owners by intermediate assignments from Edward Taylor, Joseph Murphy, Walter Smith, Joel S. Fithian and William H. Bloom (or their assigns) the original grantees, in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, 7593 and its terms considered as part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances unto the said Eben F. Bacon, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness Whereof, we have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared Cornelius S. Bushnell, and on the twentieth day of February, 1874, before me personally appeared Gordon H. Waddell, and on the twenty-first day of February, 1874, before me personally appeared Henry I. Parson, to me known to be the individuals described in and who executed the foregoing instrument and acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

7594 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such

Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 183.

CORNELIUS S. BUSHNELL AND OTHERS TO JAMES M. TOWNSEND.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison, and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer 7595 unto James M. Townsend all and every our joint and several rights, title and interest as owners by intermediate assignments from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings, Henry Johnson (or their assigns) the original grantees, in and to the charter, grant, franchise and authority, granted by the State of New York, by the Act and contract of its Legislature, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances unto said James M. Townsend as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness Whereof, We have hereunto severally set our 7596 hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared, Cornelius S. Bushnell, and on the twenty-first day of February, 1874, before me personally appeared Henry J. Davison, and on the twentieth day of February, 1874, before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, Do Hereby Certify, That Robert Owen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such 7597 Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 184.

CORNELIUS S. BUSHNELL AND OTHERS TO SAMUEL J. YOUNG.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison, and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Samuel J. Young, all and every our joint and several rights, title and interest as owners by intermediate assignments from William Vail, William H. Murphy, Patrick Quinn, George Chivvis, John H. Johnston & William Higgins (or their assigns) the original grantees, in and to the charter, grant franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled: "An Act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of

New York, and the Streets, Avenues, Squares and buildings 7598 therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances unto the said Samuel J. Young, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness Whereof, we have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

7599 STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared, Cornelius S. Bushnell and on the twenty-first day of February 1874 before me personally appeared Henry J. Davison, and on the twentieth day of February 1874 before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT T. OWEN,
Notary Public, New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that

I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7600

COMPLAINANT'S EXHIBIT 185.

CORNELIUS S. BUSHNELL AND OTHERS TO CHARLES E. APPLEBY.

Dated February 14, 1874.

For good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison, and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Charles E. Appleby all and every our joint and several rights, title and interest as owners by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughan, Joseph Bell, Delevan Peck, and John J. Walsh (or their assigns) the original grantees, in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares, and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument. 7601

To Have and To Hold the same and every part thereof, with the appurtenances unto the said Charles E. Appleby as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness Whereof, We have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the 21st day of February, one thousand eight hundred and seventy-four, before me personally appeared Cornelius S. Bushnell and Henry J. Davison, and on the twentieth day of February, 1874, before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

7602 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 186.

CORNELIUS S. BUSHNELL AND OTHERS TO PASCHAL W. TURNEY.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison, and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Paschal W. Turney all and every our joint and several rights, title and interest as owners by intermediate assign- 7603 ments from William Johnston (otherwise called William Johnson), James S. Turner, Thomas Y. Avery, John Balmore, Henry S. Murray and Peter H. E. Baxter, Junior (or their assigns) the original grantees, in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled: "An Act to authorize the construction of Gas Works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with, and subject to, certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances unto the said Paschal W. Turney, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

7604 In Witness Whereof, we have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared, Cornelius S. Bushnell and on the twenty-first day of February 1874 before me personally appeared Henry J. Davison, and on the twentieth day of February 1874 before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in 7605 and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 187.

CORNELIUS S. BUSHNELL AND OTHERS TO HENRY H. PORTER.

Dated February 14, 1874.

For a good, full and valuable consideration to us, Cornelius S. Bushnell, Henry J. Davison and Gordon H. Waddell, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Henry H. Porter, all and every our joint and several rights, title and interest as owners by intermediate assignments from Matthew T. Brennan, Charles E. Loew, Edgar Brower, John L. Turner and John Cox (or their assigns) the original grantees, in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled: "An Act to authorize the construction of Gas Works and the manufacture and sale of gas for the purpose of lighting a portion of the 7606 City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York, therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances unto the said Henry H. Porter, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned, were derived as aforesaid.

In Witness whereof, we have hereunto severally set our hands and seals this fourteenth day of February, one thousand eight hundred and seventy-four.

CORNELIUS S. BUSHNELL. [L. S.]
HENRY J. DAVISON. [L. S.]
G. H. WADDELL. [L. S.]

Sealed and delivered in the presence of
ROBERT OWEN.

State, City and County of New York, *ss:*

7607 On the nineteenth day of February, one thousand eight hundred and seventy-four, before me personally appeared Cornelius S. Bushnell, and on the twenty-first day of February, 1874, before me personally appeared Henry J. Davison, and on the twentieth day of February, 1874, before me personally appeared Gordon H. Waddell, to me known to be the individuals described in and who executed the foregoing instrument, and respectively acknowledged that they executed the same.

ROBERT OWEN,
Notary Public, New York.

State of New York,
City and County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature of the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7608 COMPLAINANT'S EXHIBIT 188.

WILLIAM FOSTER, JR., AND OTHERS AND THE UNION GAS LIGHT COMPANY.

AGREEMENT.

Dated February 25, 1874.

This Indenture made the twenty-fifth day of February, one thousand eight hundred and seventy-four, between William Foster, Junior, James M. Townsend, Paschal W. Turney, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young of the first part and The Union Gas Light Company of the City of New York of the second part:

Whereas by an Act of the Legislature of the State of New York, passed June 12, 1871, entitled "An Act authorizing the construction of gas works and the manufacture and sale of gas for the purposes of lighting a portion of the City of New York, and the Streets, Avenues, Squares and buildings therein, and to lay pipes for that purpose," Isaac P. Martin, William Foster, Junior, and others therein named and their assigns were authorized and empowered at any time thereafter to manufacture, make and sell gas to be made of coal, oil, tar, peat, pitch, turpentine or other materials to be used for the purpose of lighting all that portion of the City of New York, lying North of the centre line of Seventy-ninth Street, including all the Central Park in its entire width and length, and all Streets, Avenues, Lanes, Alleys, Squares and parks within the limits aforesaid, and any buildings, manufactories or houses contained and situate within the said limits, and to lay pipes for the purpose of conducting the gas in any Streets, Avenues, Lanes, Alleys, Squares and parks of said City and in the said Central Park and to 7609 adopt any other necessary means to furnish gas to any inhabitant in said portion of said City, and to the said Central Park together with and subject to certain other conditions, rights, privileges and immunities as by the said act will upon reference appear and the terms of which act are to be taken and considered as part of this instrument.

And Whereas, the parties of the first part by virtue of assignments from all the original grantees named in the said Act of the Legislature, or their assigns, are the owners as joint tenants of all and singular the franchises, rights, powers, immunities and authorities granted by the said Act of the Legislature.

And Whereas, the parties of the first part now constitute the Executive Committee for the control and management of the business authorized to be done and carried on by the provisions of said act.

Now This Indenture Witnesseth, that the parties hereto of the first part in consideration of the sum of One Dollar to them respectively paid, the receipt of which is acknowledged and of other good and valuable considerations, do grant and assign unto the parties of the second part for and during the whole term of the corporate existence

of the parties of the second part whether original or renewed or extended and for the whole term of the existence of any other corporation or association into which the parties of the second part may at any time become merged, the right to do, exercise and perform as the Agents and Attorneys of the parties of the first part and their successors, hereby irrevocably constituted all and every the rights, privileges, franchises and immunities given and granted or created by the said Act of the Legislature or which may be given, granted or by any Act amendatory or in addition to the said recited act
7610 fully and effectually and in as large and ample a manner as the parties of the first part as the assignees and holders of all the rights, franchises, privileges and immunities can or may exercise, use and enjoy the same. And the parties of the first part, for themselves and their successors, covenant with the parties of the second part and their successors and assigns that they hold and will continue, jointly and not severally, to hold the rights, privileges, franchises and immunities granted by the said Act of the Legislature, or which may be granted by any other amendatory or additional act and that upon the death, or upon the resignation of either of the parties of the first part as a member of the Executive Committee provided for in the said act, or of any of their successors in said Committee, the surviving members of the Executive Committee for the time being will upon the request of the parties of the second part and their successors, elect a new member of the Executive Committee in the place and stead of the member of such Committee so dying or resigning, and such new member shall be vested with the rights and be subject to the duties and obligations of the member in whose place he shall be so elected and this Instrument shall operate as a transfer and assignment of all the rights and interests of the person so dying or resigning to the person who may be appointed in his place as aforesaid, and further that they, the parties of the first part, and their successors will not, except upon the written consent of the parties of the second part, their successors or assigns, transfer, part with or encumber any of the rights, franchises, privileges or immunities vested in them by the said Act of the Legislature as the assignees of the grantees therein named or otherwise or which may become vested in them by any amendatory or additional Act. And, the
7611 parties of the first part for themselves and their successors further covenant with the parties of the second part, their successors and assigns, that they will at any time upon request of the parties of the second part and their successors, grant and delegate to any other corporation or association the right as the Agents and Attorneys of such Executive Committee to manufacture, make and sell gas to be used for the purpose of lighting any portion of the City of New York within the territorial limits expressly described in the said recited Act of the Legislature, including Central Park, and to adopt any other necessary measures to furnish gas to any other inhabitant in any other portion of said City, subject to the limitations, restrictions and conditions and with the benefit of the rights and privileges thereby granted.

And the parties of the first part for themselves and their successors further covenant to and with the parties of the second part, their successors and assigns, that they will at any time hereafter upon the request of the parties of the second part, their successors and assigns, make, do and execute all such further and other deeds and assurances which may be necessary or which may be required for the more effectually carrying out and executing of the grant, agreement and covenants on their parts herein contained.

This Indenture Further Witnesseth that the parties of the second part in consideration of the premises and of the sum of One dollar to them in hand paid, covenant with the parties of the first part and their successors, that they will at their own cost, charge and expense as the agents and attorneys of the parties of the first part and their successors do execute and perform all and every the work, labor and services contemplated in and by the said recited Act for the 7612 beneficial exercise of the rights and privileges thereby granted as fully as if they had been named the grantees in said act and that they will protect and save harmless the parties of the first part and their successors from any and every liability, damage or injury in the premises. But it is expressly understood that nothing herein contained shall be construed as an obligation to pay to the parties of the first part or their successors any sum of money whatever by way of compensation for their services in the exercise of their function as an Executive Committee as aforesaid, or any sum of money whatever other than any damages which they may sustain by reason of the failure of the parties of the second part to protect and save them harmless in the premises.

In Witness Whereof the said parties of the first part have hereunto set their hands and seals and the parties of the second part have hereunto caused their Common Seal to be affixed the day and year first above written.

WM. FOSTER, JR. [SEAL.]
JAS. M. TOWNSEND. [SEAL.]
P. W. TURNEY. [SEAL.]
EBEN F. BACON. [SEAL.]
CHARLES ED. APPLEBY. [SEAL.]
H. H. PORTER. [SEAL.]
SAML. J. YOUNG. [SEAL.]

Sealed and delivered in the presence of

[SEAL.]

UNION GAS LIGHT CO.,
R. M. C. GRAHAM, *Prest.*

Attest:
JOHN SICKELS, *Sec'y.*

7613 CITY AND COUNTY OF NEW YORK, *ss:*

On the twenty-fifth day of February, one thousand eight hundred and seventy-four, before me personally appeared Eben F. Bacon, Charles Edgar Appleby, Henry H. Porter and Samuel J. Young, and on the twenty-sixth day of February one thousand eight hundred and seventy-four before me personally appeared James M. Townsend, and on the twenty-seventh day of February one thousand eight hundred and seventy-four before me personally appeared William Foster, Junior and Paschal W. Turney to me known to be the individuals described in and who executed the foregoing instrument and acknowledged that they executed the same and on the said twenty-seventh day of February one thousand eight hundred and seventy-four before me personally appeared Robert M. C. Graham, with whom I am personally acquainted and known to me to be the President of the Union Gas Light Company the Corporation described in and who executed the foregoing instrument, who being by me duly sworn, deposed and said that he resides at Astoria in the County of Queens; that the seal annexed to the foregoing instrument is the common Seal of said corporation and was affixed thereto by their authority.

ROBERT OWEN,
Notary Public, New York.

State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That Robert Owen, 7614 whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 189.

WILLIAM FOSTER, JR., TO ROBERT M. C. GRAHAM.

Dated December 5, 1876.

For a good, full and valuable consideration, to me, William Foster, Jr., the subscriber, paid, the receipt of which is hereby confessed and acknowledged I agree to relinquish, sell, assign and transfer and do hereby relinquish, sell, assign and transfer unto Robert M. C. Graham of the City of New York all my joint and several rights title and interest as owners by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp and William R. Dyer being certain of the original grantees, together with all my right as one of the original grantees in and to the Charter grant, franchise and authority granted by the State 7615 of New York by the Act and contract of its Legislature, entitled an Act to authorize the construction of gas works and the manufacture of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein and to lay pipes for that purpose, passed June 12th, 1871, whereby the said grantees named in first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To Have and To Hold the same and every part thereof with the appurtenances unto the said Robert M. C. Graham as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interest hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this fifth day of December, A. D. 1876.

WM. FOSTER, JR. [L. S.]

In presence of words "and do hereby relinquish, sell, assign and transfer and set over" interlined on first page before execution.

M. A. POTTER.

7616 CITY & COUNTY OF NEW YORK, *ss:*

On this fifth day of December, A. D. 1876, before me personally came William Foster, Jr., to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do Hereby Certify, That M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 3d day of August, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7617

COMPLAINANT'S EXHIBIT 190.

EBEN F. BACON TO JOHN SICKELS.

Dated December 5, 1876.

For a good, full and valuable consideration to me, Eben F. Bacon, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby relinquish, sell, assign, and transfer unto John Sickels, of the City of New York, all my joint and several rights, title and interest as owner by intermediate assignments from Edward Taylor, Joseph Murphy, Walter Smith, Joel A. Fithian and William H. Bloom, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature entitled An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose, passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred and its terms considered as a part of this instrument.

7618 To Have and To Hold the same and every part thereof, with the appurtenances unto the said John Sickels as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interest hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal the fifth day of December, 1876.

EBEN F. BACON. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

STATE OF NEW YORK,
City and County of New York, ss:

On this fifth day of December, A. D. 1876, before me personally came Eben F. Bacon, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the
7619 County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 191.

JAMES M. TOWNSEND TO JARED E. REDFIELD.

Assignment.

Dated December 7, 1876.

For a good, full and valuable consideration to me James M. Townsend the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign, and transfer and do hereby relinquish, sell, assign, and transfer unto Jared E. Redfield of Essex, Connecticut, all my joint and several rights, titles and interests as owners by intermediate assignments from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings & Henry Johnson being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of
7620 the City of New York and the Streets and avenues, squares and buildings therein and to lay pipes for that purpose" passed June 12th, 1871, whereby the said grantees named in first section of the said act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits together with, and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To Have and To Hold the same and every part thereof with the appurtenances unto the said Jared E. Redfield as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this fifth day of December 1876.

JAS. M. TOWNSEND. [L. S.]

Sealed and delivered in the presence of
FREDK. W. BABCOCK.

FREDERICK W. BABCOCK,
A Commissioner for the State of New York.

7621 STATE OF CONNECTICUT, *County of New Haven, ss:*

NEW HAVEN, *Dec. 7th,* 1876.

On this seventh day of December, A. D. 1876, before me personally came James M. Townsend, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

In Witness Whereof I have hereunto set my hand and official seal at New Haven in the County and State aforesaid this seventh day of December, A. D. 1876.

[SEAL.] FREDERICK W. BABCOCK,
A Commissioner for State of New York.

STATE OF NEW YORK,
Office of the Secretary of State, ss:

I Hereby Certify, that Frederick W. Babcock, of City and County of New Haven and State of Connecticut, was, at the time of taking the proof and acknowledgment mentioned in his annexed certificate, a Commissioner for the State of New York, to take the proof and acknowledgment of deeds and *State,* and to administer oaths and affirmations; and that such Commissioner was at the time aforesaid duly authorized to take the same; and that I have compared the signature of the said Commissioner to the certificate subjoined to the annexed instrument with the signature of such Commissioner deposited in this office, and have also compared the impression of the seal affixed to such certificate with the impression of the seal of such Commissioner, deposited in this office, and I verily
7622 believe the signature and impression of the seal to the said certificate to be genuine.

Witness my hand and the seal of office of the Secretary of State, at the City of Albany, this fourth day of August, in the year one thousand nine hundred and six.

FRANK D. COLE,
Deputy Secretary of State.

COMPLAINANT'S EXHIBIT 192.

SAMUEL J. YOUNG TO GEORGE HOWES.

Dated December 5, 1876.

For a good, full and valuable consideration to me, Samuel J. Young, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell and assign and transfer and do hereby relinquish, sell and assign and transfer unto George Howes, of New York City, all my joint and several rights, title and interest as owner by intermediate assignments from William Vail, William H. Murphy, Patrick Quinn, George Chives, John H. Johnston and William Higgins, the original grantees in and to the charter, grant, franchise and authority granted by the State of New York, by the act and contract of its Legislature entitled an act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues and squares therein, and to lay pipes for that purpose, passed June 12th, 1871, whereby the said grantees named in the first section of the said act, and their assigns are authorized and empowered to manufacture, make and sell gas, within certain 7623 limits of the City of New York therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which, the said act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To Have and To Hold the same and every part thereof, with the appurtenances, unto the said George Howes, as aforesaid, with like force and effect, as if he had been named as the grantee in the said first section of said act, in the place and stead of the said original grantees, from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this fifth day of December, 1876.

SAML. J. YOUNG. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

STATE OF NEW YORK,
City and County of New York, ss:

On this fifth day of December, A. D. 1876, before me personally came Samuel J. Young, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

7624 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, Commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 193.

CHARLES E. APPLEBY TO TILTON E. DOOLITTLE.

Dated December 4, 1876.

For a good, full and valuable consideration to me, Charles E. Appleby, the subscriber, paid, the receipt of which is hereby confessed and acknowledged. I agree to relinquish, sell and assign and transfer and do hereby relinquish, sell, assign and transfer unto Tilton E. Doolitt-e of New Haven, Connecticut, all my joint and several rights, title and interest as owner by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughan, Joseph Bell, Delavan Peck and John J. Walsh, being certain of the original grantees in and to the Charter grant, franchise and authority granted by the State of New York by the act and contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues and squares therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument. 7625

To Have and To Hold the same and every part thereof with the appurtenances, unto the said Tilton E. Doolittle as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this 4th day of December, 1876.

CHARLES E. APPLEBY. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

7626 STATE OF NEW YORK,
City and County of New York, ss:

On this fourth day of December, A. D. 1876, before me personally came Charles E. Appleby to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, Commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7627 COMPLAINANT'S EXHIBIT 194.

WILLIAM FOSTER, JR., ET AL., TO WALTER OSBORN.

Dated December 7, 1876.

For a good, full and valuable consideration to us, William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the subscribers, paid, the receipt of which is hereby confessed and acknowledged, we jointly and severally agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Walter Osborn, of New Haven, Connecticut, all and every our joint and several rights, title and interest as survivors of Paschal W. Turney, deceased, under the provisions of an agreement dated the 25th day of February, 1874, between the subscribers and said Paschal W. Turney of the first part and "The Union Gas Light Company" of the City of New York of the second part.

It being the intention of this assignment to vest in said Walter Osborn only the rights, title and interest of said Paschal W. Turney as owner by intermediate assignment of certain grants and franchises from certain of the original grantees named in Chapter 944 of the Laws of New York of 1871, and vested in the subscribers as survivors of said Turney under said agreement of February 25th, 1874.

And the subscribers by virtue of the provisions of said agreement last named, and on the written request of "The Union Gas Light Company" of the City of New York do hereby elect and appoint said Walter Osborn, a member of the Executive Committee existing under section three of Chapter 944 of the Laws of New York for 1871, to fill the vacancy caused by the death of said Paschal
7628 W. Turney.

In Witness Whereof, we have hereunto severally set our hands and seals the fifth day of December, one thousand eight hundred and seventy-six.

JAS. M. TOWNSEND. [L. S.]
EBEN F. BACON. [L. S.]
CHARLES E. APPLEBY. [L. S.]
WM. FOSTER, JR. [L. S.]
H. H. PORTER. [L. S.]
SAM'L YOUNG. [L. S.]

In the presence of
M. A. POTTER, [L. S.]
As to Bacon, Appleby, Foster, Porter & Young.

FRED'K W. BABCOCK, [L. S.]
As to Jas. M. Townsend.

STATE OF NEW YORK, *City and County of New York, ss:*

On this fifth day of December in the year eighteen hundred and seventy-six, before me personally came Eben F. Bacon, Charles E. Appleby, William Foster, Jr., Henry H. Porter and Samuel J. Young, to me known to be the individuals described in and who executed the foregoing instrument and severally acknowledged that they executed the same.

M. A. POTTER, [L. S.]
Notary Public, N. Y. Co.

STATE OF CONNECTICUT, *County of New Haven, ss:*

NEW HAVEN, *December 7th,* 1876.

On this seventh day of December, A. D. 1876, before me personally came James M. Townsend, to me known to be the individual described in and who executed the foregoing instru-
7629 ment and acknowledged that he executed the same.

In Witness Whereof, I have hereunto set my hand and official seal at New Haven, in the County and State aforesaid, this seventh day of December, A. D. 1876.

[L. S.] FREDERICK W. BABCOCK,
A Commissioner for State of New York.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7630 STATE OF NEW YORK,
Office of the Secretary of State, ss:

I hereby certify that Frederick W. Babcock, of City and County of New Haven, and State of Connecticut, was, at the time of taking the proof and acknowledgment mentioned in his annexed certificate, a Commissioner for the State of New York, to take proof and acknowledgment of deeds and other instruments to be used or recorded in this State, and to administer oaths and affirmations; and such Commissioner was at the time aforesaid, duly authorized to take the same; and that I have compared the signature of the said Commissioner to the certificate, subjoined to the annexed instrument with the signature of such Commissioner deposited in this office, and have also compared the impression of the seal affixed to such certificate with the impression of the seal of such Commissioner, deposited in this office, and I verily believe the signature and impression of the seal to the said certificate to be genuine.

Witness my hand and the seal of office of the Secretary of State, at the City of Albany, this fourth day of August, in the year one thousand nine hundred and six.

FRANK D. COLE, [L. S.]
Deputy Secretary of State.

7631

COMPLAINANT'S EXHIBIT 195.

RESIGNATION OF THE OUTGOING MEMBERS OF EXECUTIVE COMMITTEE HOLDING UNDER LAWS NEW YORK.

For 1871, Ch. 944, S. 3.

Dated December 5th, 1876.

We, the subscribers, the surviving members of the Executive Committee duly holding office under Section Three of Chapter 944 of the Laws of 1871, do hereby release, relinquish, assign and set over to Robert M. C. Graham of New York City, Tilton E. Doolittle of New Haven, Connecticut, Jared E. Redfield of Essex, Connecticut, John Sickels of New York City, George Howes of New York City, Walter Osborn of New Haven, Connecticut, and Henry H. Porter of New York City and their assigns all the rights, powers and control which we have acquired or can in any way exercise or have as such Executive Committee.

In Witness Whereof we have hereunto set our hands and seals this fifth day of December, 1876.

CHARLES E. APPLEBY. [L. S.]
WM. FOSTER, JR. [L. S.]
JAS. M. TOWNSEND. [L. S.]
EBEN F. BACON. [L. S.]
SAML. J. YOUNG. [L. S.]

7632

COMPLAINANT'S EXHIBIT 196.

REQUEST AND CONSENT OF "THE UNION GAS LIGHT COMPANY."

Dated December 11, 1876.

The undersigned "The Union Gas Light Company of the City of New York" hereby consents that William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the assignees and owners by intermediate assignments from the original grantees of the charter, grant, franchise, and authority granted by the State of New York by the Act of its Legislature entitled "An Act to authorize the construction of Gas Works and the manufacture and sale of Gas for the purpose of lighting a portion of the City of New York and the Streets, avenues, and squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, and owners by right of survivorship of the right, title and interest of Paschal W. Turney, deceased, may sell, assign, transfer and set over to Robert M. C. Graham of New York City, Tilton E. Doolittle of New Haven, Connecticut, Jared E. Redfield of Essex, Connecticut, John Sickels of New York City, George Howes of New York City, Walter Osborn of New Haven, Connecticut, and Henry H. Porter of New York City all of said interests. This consent is given under the provisions of a certain agreement dated the 25th day of February, 1874, between William Foster, Jr., et al., and the said "The Union Gas Light Company" of the City of New York, whereby said Company is created the agent and attorney of the parties of the first part in said agreement named.

7633 And we request said Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter and whoever may be associated with them to grant and delegate to the "Knickerbocker Gas Light Company" of the City of New York all the rights and privileges as agents and attorneys heretofore granted and delegated to "The Union Gas Light Company" by the parties of the first part in said agreement of February 25th, 1874.

And the said "The Union Gas Light Company" hereby requests said William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, surviving members of the Executive Committee under section three of Chapter 944 of the Laws of 1871, to elect Walter Osborn of New Haven, Connecticut, a member of said Executive Committee to fill the vacancy caused by the death of Paschal W. Turney, a member of said Committee at the time of his death.

Also to assign to said Osborn all the rights, title and interest of said Turney as assignee by intermediate assignments of certain grantees named in said Chapter 944 of the Laws of 1871, and vested in them as the survivors of said Turney.

In Witness Whereof the said "The Union Gas Light Company" has hereunto set its hand and caused its common seal to be affixed this eleventh day of December one thousand eight hundred and seventy-six.

UNION GAS LIGHT CO.,
[SEAL.] By R. M. C. GRAHAM, *Pres.*

Attest:
JOHN SICKELS, *Sec'y.*

7634 CITY AND COUNTY OF NEW YORK, *ss:*

On this eleventh day of December, 1876, before me personally appeared Robert M. C. Graham with whom I am personally acquainted and known to me to be the President of "The Union Gas Light Company, the corporation in and who executed the foregoing instrument, who being duly sworn deposed and said that he resides at the City of New York, County and State of New York aforesaid and that the seal annexed to the foregoing instrument is the common seal of said Corporation and was affixed thereto by their authority.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby Certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said Certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7635

COMPLAINANT'S EXHIBIT 197.

CHARLES E. APPLEBY, RECEIVER, TO CLARK BELL.

Deed.

Dated August 10, 1876.

This Indenture, made the tenth day of August, 1876, between Charles Edgar Appleby, Receiver of the Union Gas Light Company of the City of New York, of the first part, and Clark Bell, of the City and County of New York, of the second part.

Whereas the party of the first part was duly appointed the Receiver of the property, Estate and effects of The Union Gas Light Company of the City of New York, by an order of the Supreme Court of the State of New York, made on the fifteenth day of June, 1875, in an action pending in said Court, in the City and County of New York, wherein the People of the State of New York are plaintiffs and the said The Union Gas Light Company and another are defendants.

And Whereas by an order of the said Supreme Court made in the said action, at Special Term, on the twenty-fourth day of July, 1876, it was among other things ordered that the party hereto of the first part as such Receiver, be and he was hereby authorized and directed to sell at public auction in the City of New York, to the highest bidder, all the right, title and interest of every kind and nature whatsoever, which the said Union Gas Light Company or its Receiver might have in and to certain franchises, rights, grants, contracts and property in such order mentioned, of which the contract rights and franchises and hereinafter mentioned, and conveyed, are part; And that the said party of the first part as such Receiver give public notice of such sale in the mode in such order mentioned, and upon the sale of the same to make, execute 7636 and deliver to the purchaser or purchasers, or his or their assigns, all necessary and proper deeds or other instruments, conveying and transferring the same.

And Whereas the said party of the first part as such Receiver, pursuant to such order duly advertised to be sold at the exchange Sales Room, Number 111 Broadway, in the City of New York, on the tenth day of August, 1876, at 12 o'clock noon of that day, by E. H. Ludlow & Co., Auctioneers, all and singular the franchises, rights, grants, contracts, and property in such order mentioned, due notice of such sale having been given as directed in and by said order.

And Whereas at the time and place mentioned in such advertisement of sale, the party of the first part as such Receiver duly attended, and sold at public auction, the contract and rights and grants, franchises hereinafter mentioned to Walter Osborne, Tilton E. Doolittle and Jared E. Redfield, Receivers of the Townsend Savings Bank of New Haven, Connecticut, for the sum of Seventy-five thousand dollars, that being the highest sum bidden therefor.

And Whereas the said purchasers have since such sale, by an instrument in writing duly assigned and transferred unto the party hereto of the second part all their right, title and interest in and to the said property and franchises and their interest in the said bid.

Now This Indenture, Witnesseth, That the party hereto of the first part in consideration of the premises and of the said sum of Seventy-five thousand dollars to him paid by the party hereto of the second part, the receipt of which is hereby acknowledged, hath bargained, sold, assigned and set over, and he hereby bargains, sells, assigns, and sets over to the said party of the second part, his executors, administrators and assigns all the interest of the said 7637 Union Gas Light Company, or the party of the first part, as its receiver, in and to a certain contract made by the said Union Gas Light Company with William Foster, Junior, and certain other grantees of a grant from the State of New York, known as and described in Chapter 944 of the Laws of this State, passed Jan. 12, 1871, which contract bears date the twenty-fifth day of February, 1874; and all the right, title and interest of the said Company or of the said party of the first part as its Receiver, in and to the State grant above referred to.

To Have and To Hold the same to the party of the second part, his executors, administrators and assigns to their own use forever.

In Witness Whereof the party of the first part has hereunto set his hand and seal the day and year first above written.

CHARLES E. W. APPLEBY, *Receiver*. [L. S.]

Sealed and delivered in presence of
M. A. POTTER. [L. S.]

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On this twenty-first day of August, 1876, before me personally appeared Charles Edgar Appleby to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same.

M. A. POTTER, [L. S.]
Notary Public, N. Y. Co.

7638 State of New York, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 198.

ROBERT M. C. GRAHAM, TILTON E. DOOLITTLE AND OTHERS.

with

KNICKERBOCKER GAS LIGHT COMPANY.

AGREEMENT.

Dated December 11, 1876.

This Indenture, made this eleventh day of December, in the year one thousand eight hundred and seventy-six, between Robert
7639 M. C. Graham, of the City, County and State of New York, Tilton E. Doolittle, of New Haven, Connecticut, Jared E. Redfield, of Essex, Connecticut, John Sickels, of said City of New York, George Howes, of said City of New York, Walter Osborn, of New Haven, Connecticut and Henry H. Porter, of said City of New York of the first part, and the Knickerbocker Gas Light Company of the City of New York of the second part.

Whereas, by an Act of the Legislature of the State of New York, passed June 12, 1871, entitled "An Act authorizing the construction " of gas works and the manufacture and sale of gas for the purposes " of lighting a portion of the City of New York, and the streets, ave- " nues, squares and buildings therein, and to lay pipes for that pur- " pose," Isaac P. Martin, William Foster, Junior, and others therein named and their assigns were authorized and empowered at any time thereafter to manufacture, make and sell gas to be made of coal, oil, tar, peat, pitch, turpentine or other materials, to be used for the purpose of lighting all that portion of the City of New York lying north of the center line of Seventy-ninth Street, including all the Central Park in its entire width and length, and all streets, avenues, lanes, alleys, squares and parks within the limits aforesaid and any buildings, manufactories or houses contained and situate within the said limits, and to lay pipes for the purpose of conducting the gas in any streets, avenues, lanes, alleys, squares and parks of said City and in the said Central Park and to adopt any other necessary means to furnish gas to any inhabitant in said portion of said City and to the said Central Park, together with and subject to certain other conditions, rights, privileges and immunities as by the said act will upon reference appear and the terms of which act are to be taken 7640 and considered as part of this instrument.

And Whereas, the parties of the first part by virtue of assignments from all the original grantees named in the said act of the Legislature or their assigns, are the owners as joint tenants of all and singular the franchises, rights, powers, immunities and authorities granted by the said Act of the Legislature.

And Whereas, the parties of the first part now, constitute the Executive Committee for the control and management of the business authorized to be done and carried on by the provisions of said act.

Now This Indenture Witnesseth, that the parties hereto of the first part in consideration of the sum of one dollar to them respectively paid, the receipt of which is hereby acknowledged, and of other good and valuable considerations do grant and assign unto the parties of the second part for and during the whole term of the corporate existence of the parties of the second part whether original or renewed or extended and for the whole term of the existence of any other corporation or association into which the parties of the second part may at any time become merged the right to do, exercise and perform as the agents and attorneys of the parties of the first part and their successors hereby irrevocably constituted all and every the rights, privileges, franchises and immunities given and granted or created by the said act of the Legislature or which may be given, granted or created by any Act amendatory or in addition to the said recited Act as fully and effectually and in as large and ample a manner as the parties of the first part as the assignees and holders of all the rights, franchises, privileges and immunities can or may exercise, use and enjoy the same.

And the parties of the first part for themselves and their 7641 successors covenant with the parties of the second part and their successors and assigns that they hold and will continue jointly and not severally to hold the rights, privileges, franchises and immunities granted by the said act of the Legislature or which may be granted by any other amendatory or additional act and that upon the death, or upon the resignation of either of the parties of the first part as a member of the Executive Committee provided for in the said act, or of any of their successors in said Committee, the surviving members of the Executive Committee for the time being will upon the request of the parties of the second part and their successors elect a new member of the Executive Committee in the place and stead of the member of such Committee so dying or resigning and such new member shall be vested with the rights and be subject to the duties and obligations of the member in whose place he shall be so elected, and this instrument shall operate as a transfer and assignment of

all the rights and interests of the person so dying or resigning to the person who may be appointed in his place as aforesaid, and further that they, the parties of the first part and their successors will not, except upon the written consent of the parties of the second part, their successors or assigns, transfer, part with or encumber any of the rights, franchises, privileges or immunities vested in them by the said act of the Legislature as the assignees of the grantees therein named or otherwise, or which may become vested in them by any amendatory or additional Act. And the parties of the first part for themselves and their successors further covenant with the parties of the second part, their successors and assigns, that they will at any time upon request of the parties of the second part and their successors grant and delegate to any other corporation or association the
7642 right as the agents and attorneys of such Executive Committee to manufacture, make and sell gas to be used for the purpose of lighting any portion of the City of New York within the territorial limits expressly described in the said recited Act of the Legislature, including Central Park, and to adopt any other necessary measures to furnish gas to any other inhabitant in any other portion of said City, subject to the limitations, restrictions and conditions, and with the benefit of the rights and privileges thereby granted.

And the parties of the first part for themselves and their successors further covenant to and with the parties of the second part, their successors and assigns that they will at any time hereafter upon the request of the parties of the second part their successors and assigns, make, do and execute all such further and other deeds and assurances which may be necessary or which may be required for the more effectually carrying out and executing of the grant, agreement and covenants on their parts herein contained.

This Indenture further witnesseth that the parties of the second part in consideration of the premises and of the sum of one dollar to them in hand paid, covenant with the parties of the first part and their successors, that they will at their own cost, charge and expense as the agents and attorneys of the parties of the first part and their successors, do, execute and perform all and every the work, labor and services contemplated in and by the said recited Act for the beneficial exercise of the rights and privileges thereby granted as fully as if they had been named the grantees in said Act and that they will protect and save harmless the parties of the first part and their successors from any and every liability, damages or injury in the premises.

But it is expressly understood that nothing herein con-
7643 tained shall be construed as an obligation to pay to the parties of the first part or their successors any sum of money whatever by way of compensation for their services in the exercise of their function as an Executive Committee as aforesaid or any sum of money whatever other than any damage which they may sustain by reason of the failure of the parties of the second part to protect and save them harmless in the premises.

In Witness Whereof the said parties of the first part have hereunto set their hands and seals and the parties of the second part have hereunto caused their Common Seal to be affixed the day and year first above written.

R. M. C. GRAHAM. [L. S.]
TILTON E. DOOLITTLE. [L. S.]
JARED E. REDFIELD. [L. S.]
JOHN SICKLES. [L. S.]
WALTER OSBORN. [L. S.]
H. H. PORTER. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

[L. S.] KNICKERBOCKER GAS LIGHT CO.,
By R. M. GRAHAM, *Prest.*

Attest:
JOHN SICKLES, *Sec'y.*

STATE OF NEW YORK, *City and County of New York, ss:*

On this eleventh day of December, in the year one thousand eight hundred and seventy-six, before me personally came Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickles, 7644 George Howes, Walter Osborn and Henry H. Porter, to me known to be the individuals described in and who executed the within instrument and severally acknowledged that they executed the same and on the twentieth day of December, in the year 1876, before me personally came Robert M. C. Graham, the President of the Knickerbocker Gas Light Company, with whom I am personally acquainted, who being by me duly sworn said that he resided in the City of New York; that he was the President of the Knickerbocker Gas Light Company, that he knew the corporate seal of said Company, that the seal affixed to the within instrument was such corporate seal; that it was affixed by order of the Board of Directors of said Company, and that he signed his name thereto by the like order as President of the said Company.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or 7645 acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] **PETER J. DOOLING, *Clerk.***

COMPLAINANT'S EXHIBIT 199.

CONSENT OF KNICKERBOCKER GAS LIGHT COMPANY.

Dated May 20, 1878.

The undersigned "Knickerbocker Gas Light Company" hereby consents that Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, Walter Osborn and Henry H. Porter, five of the assignees and owners by intermediate assignments from the original grantees of the charter, grant, franchise and authority granted by the State of New York by the Act of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, and squares and buildings therein and to lay pipes for that purpose," passed June 12, 1871, may sell, assign, transfer, and set over to William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O.P.C. Billings and William W. Moir, all of their said interests. This consent is given under the provisions of a certain agreement dated the eleventh day of December, 1876, between Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter of the 7646 first part and the Knickerbocker Gas Light Company of the second part whereby said Company is created the agent and attorney of the said parties of the first part in said agreement named.

In Witness Whereof the said Knickerbocker Gas Light Company has caused its corporate seal to be hereunto affixed and these presents to be signed by its President and Secretary this 20th day of May, A. D. 1878.

KNICKERBOCKER GAS LIGHT CO.,
[L. S.] By J. E. REDFIELD, *President.*

Attest:
JOHN SICKELS, *Sec'y.*

STATE OF NEW YORK,
City and County of New York, ss:

On this twentieth day of May in the year 1878, before me personally came Jared E. Redfield, the President of Knickerbocker Gas Light Company with whom I am personally acquainted, who being by me duly sworn said that he resided in Essex, Connecticut; that he knew the corporate seal of said Company; that the seal affixed to the above instrument was such corporate seal; that it was affixed by order of the Board of Directors of said Company, and that he signed his name thereto by the like order as President of said Company.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK,
County of New York, ss:

7647 I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 200.

RESIGNATION OF THE OUTGOING MEMBERS OF THE EXECUTIVE COMMITTEE.

Dated May 20th, 1878.

We, the subscribers, five of the members of the Executive Committee duly holding office under Section three of Chapter 944 of the Laws of 1871, do hereby release, relinquish, assign and set over to William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings and William W. Moir and their assigns all the rights, powers and control which we have acquired or can in any way exercise or have as such Executive Committee.

7648 In Witness Whereof we have hereunto set our hands and seals this twentieth day of May, 1878.

JARED E. REDFIELD. [L. S.]
TILTON E. DOOLITTLE. [L. S.]
R. M. C. GRAHAM. [L. S.]
WALTER OSBORN. [L. S.]
H. H. PORTER. [L. S.]

Signed, sealed and delivered in presence of
M. A. POTTER,
As to Redfield, Doolittle.
GRAHAM & OSBORN,
SAMUEL JOHNSON,
To H. H. P.

COMPLAINANT'S EXHIBIT 201.

WALTER OSBORN, TILTON E. DOOLITTLE, JARED REDFIELD
TO
KNICKERBOCKER GAS LIGHT COMPANY.

Dated May 20, 1878.

General Release.

To All to Whom These Presents Shall Come Or May Concern, Greeting:

Know ye, That we, Walter Osborn, Tilton E. Doolittle, and Jared E. Redfield, individually and as Receivers of the Townsend Savings Bank of New Haven, Connecticut, for and in consideration of the sum of One Dollar lawful money of the United States of America, to each of us in hand paid by Knickerbocker Gas Light Company the receipt of which is hereby acknowledged, have remised, re-
7649 leased, and forever discharged and by these presents do for ourselves, our heirs, executors, and administrators and our successor or successors, remise, release and forever discharge the said Knickerbocker Gas Light Company, its successor or successors, of and from all, and all manner of action and actions, cause and causes of actions, suits, debts, dues, sums of money, accounts, reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances, trespasses, damages, judgments, extents, executions, claims and demands whatever in law or in equity, which against said Knickerbocker Gas Light Company we ever had, now have or which our heirs, executors, or administrators, successor or successors, hereafter can, shall or may have for, upon, or by reason of any matter, cause or thing whatsoever from the beginning of the world to the day of the date of these presents, jointly and severally.

In Witness Whereof, we have hereunto set our hands and seals, the 20th day of May, in the year of our Lord one thousand eight hundred and seventy-eight.

WALTER OSBORN. [L. S.]
TILTON E. DOOLITTLE. [L. S.]
JARED E. REDFIELD. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

7650 COMPLAINANT'S EXHIBIT 202.

KNICKERBOCKER GAS LIGHT COMPANY TO WILLIAM BAYARD CUTTING AND OTHERS.

Consent to Transfer State Grant.

The undersigned "Knickerbocker Gas Light Company" hereby consents that William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings, William W. Moir, John Sickels and George Howes, the assignees and owners by intermediate assignments from the original grantees of the charter, grant, franchise and authority granted by the State of New York by the Act of its Legislature entitled:

"An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of enlighting a portion of the City of New York and the streets, avenues and squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, may sell, assign and transfer and set over to O. Ortendorfer, H. E. Gawtry, Henry Day, Phillip Allen, Charles G. Francklyn, Peter Gardner, L. C. Thompson, all of their said interests.

This consent is given under the provisions of a certain agreement, dated the eleventh day of December, 1876, between Robert M. C. Graham, Tilton E. Doolittle, Jared E. Redfield, John Sickels, George Howes, Walter Osborn and Henry H. Porter, of the first part, and the Knickerbocker Gas Light Company, of the second part, whereby said company is created the agent and attorney of the said party of the first part in said agreement named.

In Witness Whereof, the said Knickerbocker Gas Light Company has caused its corporate seal to be hereunto affixed and these
7651 presents to be signed by its President and Secretary this 11th day of March, one thousand eight hundred and eighty.

KNICKERBOCKER GAS LIGHT COMPANY,
By WM. A. STEPHENS, *President.*
JOHN SICKELS, *Secretary.*

In the presence of
DANIEL P. MAHONY.
[L. S.]

Attest:
JOHN SICKELS, *Sec'y.*

STATE OF NEW YORK, *City and County of New York, ss:*

On this eleventh day of March, one thousand eight hundred and eighty, before me personally came William A. Stephens and John Sickels, respectively the President and Secretary of the Knickerbocker Gas Light Company, with whom I am personally acquainted, who, being by me severally duly sworn, each for himself, said, that he resided in the City of New York; that he, William A. Stephens, was the President, and he, John Sickels, was the Secretary of the Knickerbocker Gas Light Company; that he knew the corporate seal of said company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the board of directors of the said company, and that he, William A. Stephens, signed his name thereto as President of said company, and he, John Sickels, signed his name thereto as Secretary by like order.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

7652 The foregoing agreement is subsequent and subject to two certain Indentures of Mortgages made by said Knickerbocker Gas Light Company, one dated July 16th, 1878, to secure the payment of the sum of $750,000, and the other dated March 11th, 1880, to secure the payment of the sum of $450,000.

Dated New York, March 11th, 1880.

KNICKERBOCKER GAS LIGHT COMPANY,
WM. A. STEPHENS, *President.*
JOHN SICKELS, *Secretary.*

In the presence of
DANIEL P. MAHONY.
[L. S.]

Attest:
JOHN SICKELS, *Sec'y.*

CITY AND COUNTY OF NEW YORK, *ss:*

On this 11th day of March, A. D. 1880, before me personally came William A. Stephens and John Sickels, respectively the President and Secretary of the Knickerbocker Gas Light Company, with whom I am personally acquainted, who, being by me severally duly sworn, each for himself, said that he resided in the City of New York, that he, William A. Stephens, was the President, and he, John Sickels, was the Secretary of the Knickerbocker Gas Light Company; that he [illegible]w the corporate seal of said company, that the seal affixed to the foregoing condition was such corporate seal, and that it was so affixed by order of the Board of Directors of the said
company, and that he, William A. Stephens, signed the
7653 name of said corporation thereto, and his own name as
President thereof, and he, John Sickels, signed his name
thereto as Secretary by like order.

[L. S.]

DANIEL MAHONY,
Notary Public, N. Y. Co.

COMPLAINANT'S EXHIBIT 203.

JARED E. REDFIELD TO WILLIAM W. MOIR.

Dated May 20, 1878.

For a good, full and valuable consideration to me, Jared E. Redfield, the subscriber, paid, the receipt of which is hereby confessed and acknoweldged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto William W. Moir, of New York City, all my joint and several rights, titles and interests as owner by intermediate assignments from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings and Henry Johnson, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled "An Act to authorize the construction of gas works and for the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets and avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting 7654 the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said William W. Moir, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 20th day of May, 1878.

JARED E. REDFIELD. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

STATE OF NEW YORK, *City and County of New York, ss:*

On this twentieth day of May, A. D. 1878, before me personally came Jared E. Redfield, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

7655 STATE OF NEW YORK,
City and County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that M. A. Potter, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And, further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In testimony whereof I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 204.

TILTON E. DOOLITTLE TO OLIVER P. C. BILLINGS.

Dated May 20, 1878.

For a good, full and valuable consideration to me, Tilton E. Doolittle, the subscriber, paid, the receipt of which is hereby confessed and acknowledged. I agree to relinquish, sell and assign and transfer and do hereby relinquish, sell and assign and transfer unto Oliver P. C. Billings of New York all my joint and several rights, title and interest as owner by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughn, Joseph Bell, Delavan Peck and John J. Walsh, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues and squares therein and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument. 7656

To have and to hold the same and every part thereof with the appurtenances unto the said Oliver P. C. Billings as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this 20th day of May, A. D. 1878.

TILTON E. DOOLITTLE. [L. S.]

Sealed and delivered in the presence of
M. A. POTTER.

7657 State of New York,
City and County of New York, ss:

On this twentieth day of May, A. D. 1878, before me personally came Tilton E. Doolittle, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

State of New York,
City and County of New York, ss:

I, Peter J. Dooling, the Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7658 COMPLAINANT'S EXHIBIT 205.

ROBERT M. C. GRAHAM TO M. BAYARD BROWN.

Dated May 20, 1878.

For a good, full and valuable consideration to me, Robert M. C. Graham, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer unto M. Bayard Brown, of Bergen County, New Jersey, all my joint and several rights, title and interest as owner by assignment from William Foster, Jr., and by intermediate assignments from Isaac P.

Martin, William P. Smith, Edward Jones, Shepherd Knapp and William R. Dyer, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and contract of its Legislature entitled "An Act to authorize the construction of gas works and the manufacture of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain prescribed limits of the City of New York, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the said City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with 7659 the appurtenances, unto the said M. Bayard Brown as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this twentieth day of May, A. D. 1878.

R. M. C. GRAHAM. [L. S.]

Sealed and Delivered in the presence of
M. A. POTTER.

STATE OF NEW YORK,
City and County of New York, ss:

On this twentieth day of May, A. D. 1878, before me personally came Robert M. C. Graham, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

M. A. POTTER,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that M. A. Potter, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of 7660 taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that, I am well acquainted with the handwriting of such

Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31 day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 206.

HENRY H. PORTER TO ROBERT F. CUTTING.

Dated May, 1878.

For a good, full and valuable consideration to me, Henry H. Porter, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby relinquish, sell, assign and transfer unto Robert F. Cutting, of Bergen, N. J., all my joint and several rights, title and interest as owner by intermediate assignments from John Cox, John J. Turner, Edgar Brower, Charles E. Loew and Mathew T. Brenan, being certain of the original grantees in and to the charter grant franchise and authority granted by the State of New York by the Act and contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees 7661 named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make, and sell gas within certain limits of the City of New York therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the said City and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof with the appurtenances unto the said Robert F. Cutting as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interest hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this eighteenth day of May, A. D. 1878..

H. H. PORTER. [L. S.]

Sealed and delivered in the presence of

SAMUEL JENNISON.

COMMONWEALTH OF MASSACHUSETTS,
County of Suffolk, City of Boston:

I, Samuel Jennison, a Commissioner for the State of New York, residing in Boston, in the County of Suffolk, and Commonwealth of Massachusetts, do certify that on this eighteenth day of May, A. D. 1878, in said Boston, personally appeared before me Henry 7662 H. Porter, personally known to me to be the individual described in and who has executed the foregoing instrument and acknowledged that he executed the same.

In Witness Whereof, I have hereunto set my hand and official seal at Boston this 18th day of May, A. D. 1878.

[L. S.] SAMUEL JENNISON,
A Commissioner for the State of New York.

STATE OF NEW YORK, *Office of the Secretary of State:*

I hereby certify that Samuel Jennison of Boston, County of Suffolk, and State of Massachusetts, was at the time of taking the proof and acknowledgment mentioned in his annexed certificate, a Commissioner for the State of New York, to take the proof and acknowledgment of deeds and other instruments to be used or recorded in this State, and to administer oaths and affirmations; and that such Commissioner was at the time aforesaid, duly authorized to take the same; and that I have compared the signature of the said Commissioner to the certificate subjoined to the annexed instrument with the signature of such Commissioner deposited in this office, and have also compared the impression of the seal affixed to such certificate with the impression of the seal of such Commissioner, deposited in this office, and I verily believe the signature and impression of the seal to the said certificate to be genuine.

Witness my hand and the seal of office of the Secretary of State, at the City of Albany, this fourth day of August in the year the one thousand nine hundred and six.

[L. S.] FRANK D. COLE,
Deputy Secretary of State.

7663 COMPLAINANT'S EXHIBIT 207.

WALTER OSBORN TO WM. BAYARD CUTTING.

Dated May 20, 1878.

For a good, full and valuable consideration to me, Walter Osborn, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer unto Wm. Bayard Cutting, of Bergen County, State of New Jersey, all my joint and several rights, title and interest as assignee of William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the survivors of Paschal W. Turney, deceased, and of which said Paschal W. Turney was owner by intermediate assignments from Thomas Y. Avery, John Balmore, James S. Turner, William Johnston, Henry S. Murray and Peter H. E. Baxter, Jr., being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the act and contract of its Legislature, entitled "An Act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12th, 1871, whereby the said grantees named in the first section of the said act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits of the City of New York therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the said City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and im- 7664 munities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said Wm. Bayard Cutting as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this twentieth day of May, A. D. 1878.

WALTER OSBORN. [L. S.]

Sealed and Delivered in the presence of
M. A. POTTER.

COMPLAINANT'S EXHIBIT 208.

WILLIAM W. MOIR TO CHARLES G. FRANCKLYN.

Dated March 8, 1880.

For a good, full and valuable consideration to me, William W. Moir, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer unto Charles G. Francklyn, all my joint and several rights, titles and interest as owner by intermediate assignments from George H. Wicks, John E. Cronly, John C. Angell, Edward J. Shandley, Joseph G. Jennings and Henry Johnson, being certain of the original grantees in and to the charter, grant, franchise and authority granted 7665 by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the Streets and Avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said Charles G. Francklyn, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 8th day of March, 1880.

WILLIAM W. MOIR. [L. S.]

Sealed and Delivered in presence of
DANIEL P. MAHONY.

7666 STATE OF NEW YORK,
City and County of New York, ss:

On this 8th day of March, A. D. 1880, before me personally came William W. Moir, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Daniel P. Mahony, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7667

COMPLAINANT'S EXHIBIT 209.

OLIVER P. C. BILLINGS TO PHILIP ALLEN.

Dated March 8, 1880.

For a good full and valuable consideration to me, Oliver P. C. Billings, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby relinquish, sell, assign and transfer unto Philip Allen, all my joint and several rights, titles and interest as owner by intermediate assignments from Andrew J. Smith, Henry A. Smith, Richard H. Vaughn, Joseph Bell, Delavan Peck and John J. Walsh, being certain of the original grantees in and to the charter grant franchise and authority granted by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the Streets and Avenues, Squares and Buildings therein and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed and to lay pipes for the purpose of conducting the gas in certain Streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof with the appurtenances unto the said Philip Allen as aforesaid with like force and effect as if he had been named as the grantee 7668 in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 9th day of March, 1880.

OLIVER P. C. BILLINGS. [L. S.]

Sealed and delivered in presence of
DANIEL P. MAHONY.

STATE OF NEW YORK, *City and County of New York, ss:*

On this 9th day of March, A. D. 1880, before me personally came Oliver P. C. Billings, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify that Daniel P. Mahony, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same.

7669 And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 210.

M. BAYARD BROWN TO HENRY DAY.

Dated March 11, 1880.

For a good, full and valuable consideration to me, M. Bayard Brown, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer, unto Henry Day all my joint and several rights, titles and interests as owner by assignment from William Foster, Jr., and by intermediate assignments from Isaac P. Martin, William P. Smith, Edward Jones, Shepherd F. Knapp and William R. Dyer, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the act and contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets and avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufac-

7670 ture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said Henry Day, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 11th day of March, 1880.

M. BAYARD BROWN. [L. S.]

Sealed and Delivered in presence of
DANIEL P. MAHONY.

STATE OF NEW YORK, *City and County of New York, ss:*

On this 11th day of March, A. D. 1880, before me personally came M. Bayard Brown, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

7671 STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Daniel P. Mahony, whose name is subscribed to the Certificate of Proof or Acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Commissioner, and verily believe that the signature to the said Certificate of Proof or Acknowledgment is genuine.

In Testimony Whereof I have hereunto set my hand, and affixed the Seal of the said Court and County, the 31 day of July 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 211.

ROBERT F. CUTTING TO H. E. GAWTRY.

Dated March 11, 1880.

For a good, full and valuable consideration to me, Robert F. Cutting, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer, unto H. E. Gawtry all my joint and several rights, titles and interest as 7672 owner by intermediate assignments from John Cox, John J. Turner, Edgar Brower, Charles E. Loew and Mathew T. Brennan, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets and avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other means necessary to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said H. E. Gawtry, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 11th day of March, 1880.

R. FULTON CUTTING. [L. S.]

Sealed and Delivered in presence of

DANIEL P. MAHONY.

7673 STATE OF NEW YORK, *City and County of New York, ss:*

On this 11th day of March, A. D. 1880, before me personally came Robert F. Cutting, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK, *County of New York, ss:*

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for said County, the same being a Court of Record, do hereby certify that Daniel P. Mahony, whose name is subscribed to the Certificate of Proof or Acknowledgment of the annexed instrument, and thereon written was, at the time of taking such proof or acknowledgment a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn and duly authorized to take the same, and further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature of the said certificate of proof and acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

7674 COMPLAINANT'S EXHIBIT 212.

WILLIAM BAYARD CUTTING TO O. OTTENDORFER.

Dated March 11, 1880.

For a good, full and valuable consideration to me, William Bayard Cutting, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer and do hereby relinquish, sell, assign and transfer unto O. Ottendorfer all my joint and several rights, titles and interest as assignee of William Foster, Jr., James M. Townsend, Eben F. Bacon, Charles E. Appleby, Henry H. Porter and Samuel J. Young, the survivors of Paschal W. Turney, deceased, and of which said Paschal W. Turney was owner by intermediate assignments from Thomas Y. Avery, John Balmore, James S. Turner, William Johnson, and Peter H. E. Baxter, Jr., being certain of the original grantees in and to the charter grant franchise and authority granted by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the Streets and Avenues, Squares and Buildings therein and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act and their assigns are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the city, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits together with and subject to certain other conditions, rights, privileges and immunities for the full and particular certification of which the said Act
7675 of the Legislature is particularly referred to and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof with the appurtenances unto the said O. Ottendorfer, as aforesaid with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof I have hereunto set my hand and seal this 11th day of March, 1880.

W. BAYARD CUTTING. [L. S.]

Sealed and delivered in presence of
DANIEL P. MAHONY.

STATE OF NEW YORK,
City and County of New York, ss:

On this 11th day of March, A. D. 1880, before me personally came William Bayard Cutting, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Daniel P. Mahony, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, 7676 at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 213.

GEORGE HOWES TO S. C. THOMPSON.

Dated March 11, 1880.

For a good, full and valuable consideration to me, George Howes, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer, unto S. C. Thompson all my joint and several rights, titles and interest as owner by intermediate assignments from William Vail, William H. Murphy, Patrick Quinn, George Chivis, John H. Johnston and William Higgins, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets and avenues, squares and buildings therein, and to 7677 lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said S. C. Thompson, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

In Witness Whereof, I have hereunto set my hand and seal this 11th day of March, 1880.

GEO. HOWES. [L. S.]

Sealed and Delivered in presence of
DANIEL P. MAHONY.

STATE OF NEW YORK,
City and County of New York, ss:

On this 11th day of March, A. D. 1880, before me personally came George Howes, to me known to be the individual described in 7678 and who executed the foregoing instrument, and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Daniel P. Mahony, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further, that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] PETER J. DOOLING, *Clerk.*

COMPLAINANT'S EXHIBIT 214.

JOHN SICKELS TO PETER GARDNER.

Dated March 10, 1880.

For a good, full and valuable consideration to me, John 7679 Sickels, the subscriber, paid, the receipt of which is hereby confessed and acknowledged, I agree to relinquish, sell, assign and transfer, and do hereby relinquish, sell, assign and transfer, unto Peter Gardner all my joint and several rights, titles and interest as owner by intermediate assignments from Edward Taylor, Joseph Murphy, Walter Smith, Joel A. Fithian and William H. Bloom, being certain of the original grantees in and to the charter, grant, franchise and authority granted by the State of New York by the Act and Contract of its Legislature, entitled "An Act to authorize the construction of gas works and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York and the streets and avenues, squares and buildings therein, and to lay pipes for that purpose," passed June 12, 1871, whereby the said grantees named in the first section of the said Act, and their assigns, are authorized and empowered to manufacture, make and sell gas within certain limits therein prescribed, and to lay pipes for the purpose of conducting the gas in certain streets and other portions of the City, and to adopt any other necessary means to furnish gas to inhabitants within the said prescribed limits, together with and subject to certain other conditions, rights, privileges and immunities, for the full and particular certification of which the said Act of the Legislature is particularly referred to, and its terms considered as a part of this instrument.

To have and to hold the same and every part thereof, with the appurtenances, unto the said Peter Gardner, as aforesaid, with like force and effect as if he had been named as the grantee in the said first section of said Act, in the place and stead of the said original grantees from whom the rights, titles and interests hereby granted and assigned were derived as aforesaid.

7680 In Witness Whereof, I have hereunto set my hand and seal this 10th day of March, 1880.

JOHN SICKELS. [L. S.]

Sealed and Delivered in presence of
DANIEL P. MAHONY.

STATE OF NEW YORK,
City and County of New York, ss:

On this 10th day of March, A. D. 1880, before me personally came John Sickels, to me known to be the individual described in and who executed the foregoing instrument and acknowledged that he executed the same.

DANIEL P. MAHONY,
Notary Public, N. Y. Co.

STATE OF NEW YORK,
County of New York, ss:

I, Peter J. Dooling, Clerk of the County of New York, and also Clerk of the Supreme Court for the said County, the same being a Court of Record, do hereby certify, that Daniel P. Mahony, whose name is subscribed to the Certificate of the proof or acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a Notary Public in and for the County of New York, dwelling in the said County, commissioned and sworn, and duly authorized to take the same. And further that I am well acquainted with the handwriting of such Notary, and verily believe that the signature to the said certificate of proof or acknowledgment is genuine.

7681 In Testimony Whereof, I have hereunto set my hand and affixed the seal of the said Court and County, the 31st day of July, 1906.

[L. S.] **PETER J. DOOLING,** ***Clerk.***

COMPLAINANT'S EXHIBIT 215.

RESIGNATION OF EXECUTIVE COMMITTEE UNDER STATE GRANT.

Dated March 11, 1880.

We, the subscribers, the members of the Executive Committee, duly holding office under Section three of Chapter 944 of the Laws of 1871, do hereby release, relinquish, assign and set over to O. Ottendorfer, H. E. Gawtry, Henry Day, Philip Allen, Charles G. Francklyn, Peter Gardner, S. C. Thompson and their assigns, all the rights, powers and control which we have acquired or can in any way exercise, or have as such Executive Committee.

In Witness Whereof we have hereunto set our hands and seals this 11th day of March, 1880.

W. BAYARD CUTTING. [L. S.]
M. BAYARD BROWN. [L. S.]
R. F. CUTTING. [L. S.]
WILLIAM W. MOIR. [L. S.]
OLIVER P. C. BILLINGS. [L. S.]
JOHN SICKELS. [L. S.]
GEO. HOWES. [L. S.]

Signed, sealed and delivered in the presence of
DANIEL P. MAHONY,

As to Wm. W. Moir, Oliver P. C. Billings, John Sickels, W. Bayard Cutting, M. Bayard Brown, R. Fulton Cutting and Geo. Howes.

7682 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages, Volume I, Exhibits numbered from 6957 to 7681 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant-Appellee, against Julius M. Mayer, as Attorney General, *et al.,* Defendants-Appellants, as the same remain of record and on file in my office. (Vol. I, Exhibits.)

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second:

[Seal of U. S. Circuit Court, South. Dist. New York.]

JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

7682*a* Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, *Complainant,*

vs.

Julius M. Mayer, as Attorney General of the State of New York, *et al., Defendants.*

Before Arthur H. Masten, Esq., Special Master.

EXHIBITS.

Volume II.

7682*b*

EXHIBITS.

Volume II.

STATE'S EXHIBIT N.

(Marked for Identification.)

STATE'S EXHIBIT O.

Sept. 4, 1906.

NATIONAL COKE AND COAL COMPANY.

SUMMARY OF OPERATIONS YEAR 1905.

COKE:			
69,645.71	Loads @	$3.08.642	$214,956.11
11,338.50	"	3.00	34,015.50
16,203	"	2.75	44,558.25
2,883	"	2.65	7,639.95
100	"	2.55	255.00
3,927	"	2.50	9,817.50
7,970	"	2.40	19,128.00
2,908	"	2.25	6,543.00
114,975.21	"		$336,913.31
SCREENINGS:			
22,536.77	Loads @	$1.75.011	$39,441.82
4,276	"	1.60	6,841.60
249	"	.75	186.75
2,801.50	"	1.40	3,922.10
510	"	1.45	739.50
163	"	1.70	277.10
30,536.27	"		$51,408.87

7683 Total Coke and Screenings:

145,511.48 Loads—(as above)	$388,322.18 —					$388.322.18
Coke Purchased:		Loads.	Lbs.			
Consolidated Gas Co.	Jan. 1 to Oct. 12 1905 =	75,222	695	@ 2.20 =	$165,489.40	
"	Oct. 13 " Dec. 31 "	20,737	1120	2.45	50,807.49	
"	Jan. 1 " May 31 "	19,015	—	2.075	39,456.15	
		114,975	315		$255,753.04	
Screenings Purchased:						
Consolidated Gas Co.	Jan. 1 to Dec. 31 1905 =	24,084	550	@ .95 =	$22,823.07	
"	Sep. 11 " " "	6,127	—	1.05	6,433.35	
"	Jan. 1 " " "	249	—	.75	186.75	
		30,460	550		$29,443.17	
Difference in price	220 Loads	@ 1.05 —	231.00			
"	220 "	.95 —	209.00			
	220 "	.10 —	*22.00*		*22.00*	
		Loads.	Lbs.		$29,421.17	
		145,435	865 —		$285,174.21	
Repurchased from New Amsterdam Co.		136			217.60	
						285,391.81
Gross Earnings						102,930.37

7684 OPERATING EXPENSES:

Expense	$13,830.10
Advertising	111.25
Stablemen	5,333.72
Drivers	50,345.28
Horses Hired	1,815.75
Feed &c. used	13,870.61
Cartage	*13,234.42*
Repairs to Wagons & Harness	5,770.22
do Tools and Implements	93.46
do Buildings	359.41
Shoes, } Stable Sundries	2,124.80
Medicines, } Stable Sundries	272.74
Incidentals, } Stable Sundries	845.26
Rent	1,800.00
Taxes	187.50
Legal Expenses	17.95
Interest	*17.48*
Insurance	2,035.63
Bad & Doubtful Debts	668.05
Commissions	806.31
Claims for Damages	269.05
Depreciation	5,028.85
	92,334.04
Net Earnings	10,596.33
Dividend Paid	5,000.00
Surplus	$5,596.33

NOTE.—Figures in *Italics* in red ink in original.

STATE'S EXHIBIT P.

Sept. 4, 1906.

COKE PRODUCED, USED IN MANUFACTURE AND PRODUCED FOR SALE.

All Stations—Consolidated Co.—Year 1905.

1905.	Produced.	Used retorts.	Used boilers.	Total used.	Produced for sale.
January	24,929	6,058	1,321	7,379	17,550
February	22,406	5,922	1,140	7,062	15,344
March	23,048	5,609	1,141	6,750	16,298
April	20,319	3,782	1,075	4,857	15,462
May	18,322	3,825	867	4,692	13,630
June	17,266	3,162	949	4,111	13,155
July	16,201	3,147	942	4,089	12,112
August	16,411	3,084	954	4,038	12,373
September	16,408	2,802	934	3,736	12,672
October	17,721	3,330	964	4,294	13,427
November	17,918	4,310	1,077	5,387	12,531
December	18,333	4,799	1,016	5,815	12,518
	229,282	49,830	12,380	62,210	167,072

7686 COKE PRODUCED, USED IN MANUFACTURE AND PRODUCED FOR SALE.

14th Street Station—Year 1905.

1905.	Produced.	Used retorts.	Used boilers.	Total used.	Produced for sale.
January	13,571	3,865	612	4,477	9,094
February	12,156	3,532	543	4,075	8,081
March	11,893	3,302	572	3,874	8,019
April	10,931	2,242	561	2,803	8,128
May	10,083	2,566	461	3,027	7,056
June	9,478	2,203	563	2,766	6,712
July	8,523	2,005	561	2,566	5,957
August	8,648	2,341	579	2,920	5,728
September	8,927	2,561	557	3,118	5,809
October	9,781	2,825	584	3,409	6,372
November	9,825	3,088	602	3,690	6,135
December	9,957	3,112	501	3,613	6,344
	123,773	33,642	6,696	40,338	83,435

STATE'S EXHIBIT Q.

September 4, 1906.

BALANCE SHEET—DECEMBER 31st, 1903.

Folio.	DEBITS: ACCOUNTS.			Totals.
	PLANT, PROPERTY AND CONSTRUCTION:			
1	Real Estate	11,162,712.51		
3	" M	50,588.65	11,213.301.16	
	Plant	15,318,197.68		
30	Tanks & Holders, 21 & Ave. A	127,957.96		
31	Foundations, "	44,858.53		
32	Damages, "	36,535.01	15,527,549.18	
70	Street Mains—Manhattan	7,440,094.05		
75	" Bronx	47,450.37	7,487,544.42	
77	Scows	22,017.95		
81	Pipe and Specials	95,155.00		
89	Meters	2,755,410.07		
93	Meter Cocks and Connect'ns	310,734.26		
98	Services	1,236,544.76		
107	Office Furniture and Fixtures	25,359.91		
108	Franchises and Rights	7,781,000.00		
110	Horses, Wagons & Harness	22,557.13		
114	Tools & Implements	48,975.25		
120	Gas Stoves on hand	35,747.89		
125	Gas Stoves Rented	224,380.99		
129	Gas Stoves Loaned	2,843.41	12.560,726.62	46,789.121.38

11,213,301.16

	Plant	15,318,197.68		
30	Tanks & Holders, 21 & Ave. A	127,957.96		
31	Foundations, "	44,858.53		
32	Damages, "	36,535.01	15,527,549.18	
70	Street Mains—Manhattan	7,440,094.05		
75	" Bronx	47,450.37	7,487,544.42	
77	Scows	22,017.95		
81	Pipe and Specials	95,155.00		
89	Meters	2,755,410.07		
93	Meter Cocks and Connect'ns	310,734.26		
98	Services	1,236,544.76		
107	Office Furniture and Fixtures	25,359.91		
108	Franchises and Rights	7,781,000.00		
110	Horses, Wagons & Harness	22,557.13		
114	Tools & Implements	48,975.25		
120	Gas Stoves on hand	35,747.89		
125	Gas Stoves Rented	224,380.99		
129	Gas Stoves Loaned	2,843.41	12.560,726.62	46,789,121.38
	ACCOUNTS RECEIVABLE:			
141	Sundry Consumers		982,488.94	
147	Sundry Debtors		459,653.47	
149	Installment Stove Sales		3,464.00	
151	Accounts Receivable—Branches		12,788.35	
152	East River Gas Co.		55,278.60	
153	New York Edison Co.		100,000.00	1,613,673.36
	CASH AND SECURITIES:			
158	Cash—in banks and on hand		2,271,616.50	
159	" in offices and stations		19,150.00	
161	Securities, Stocks and Bonds		52,703,814.47	
163	National City Bank		41,282.50	
165	Employees Fund Investment		19,619.58	55,055,483.05
	MISCELLANEOUS ACCOUNTS:			
166	Metropolitan Fund		500.00	
168	Brush Co.—Accrued Interest		13,750.00	
170	United Co. " "		731,470.84	
186	Material and Supplies		126,123.36	
191	Insurance Fund		48,828.61	
469	General Suspense		54,136.52	
513	Scowing		2,151.06	976,960 39
	GAS MAKING MATERIAL:			
194	Coal		490,321.52	
202	Coke		51,050.07	
208	Fuel Oil		743.74	
211	Naphtha		244.43	
213	Gas Oil		35,535.36	
215	Lime		813.95	
217	Iron Mass		551.09	
222	Sundry Supplies		928.79	580,188.95
	GENERAL ACCOUNTS:			
410	Special Interest Account		355,681.12	
414	Fire in Office Building		6,466.28	362.147.46
				$105,377,574.53

CREDITS:

Stock and Bonds:

PAGE BOUND VERTICAL IN BOOK

161	Securities, Stocks and Bonds	52,703,814.47	
163	National City Bank	41,282.50	
165	Employees Fund Investment	19,619.58	
			55,055,483.05
	MISCELLANEOUS ACCOUNTS:		
166	Metropolitan Fund	500.00	
168	Brush Co.—Accrued Interest	13,750.00	
170	United Co. " "	731,470.84	
186	Material and Supplies	126,123.36	
191	Insurance Fund	48,828.61	
469	General Suspense	54,136.52	
513	Scowing	2,151.06	
			976,960 39
	GAS MAKING MATERIAL:		
194	Coal	490,321.52	
202	Coke	51,050.07	
208	Fuel Oil	743.74	
211	Naphtha	244.43	
213	Gas Oil	35,535.36	
215	Lime	813.95	
217	Iron Mass	551.09	
222	Sundry Supplies	928.79	
			580,188.95
	GENERAL ACCOUNTS:		
410	Special Interest Account	355,681.12	
414	Fire in Office Building	6,466.28	
			362.147.46
			$105,377,574.53
	CREDITS:		
	STOCK AND BONDS:		
426	Capital Stock	80,000,000.00	
428	Metropolitan Bonds	500.00	
432	Debenture Bonds	1,450,000.00	
437	Bonds and Mortgages	15,000.00	
			81,465,500.00
	ACCOUNTS AND BILLS PAYABLE:		
441	Bond Interest Accrued	12,083.33	
451	Dividends not called for	41,282.50	
453	Consumers Deposits	721,270.46	
459	Sundry Creditors	1,023,343.60	
465	Employees' Aid Society	19,619.58	
469	General Suspense	......	
472	Accrued Taxes	1,615,109.87	
476	Bills Payable	900,000.00	
479	Bills Payable, Interest Accrued	2,719.38	
480	National City Bank Loan	275,000.00	
			4,610,428.72
	MISCELLANEOUS ACCOUNTS:		
485	Insurance Fund	286,809.84	
489	Gas Stove Rent Suspense	11,782.49	
490	Bond Premium	34,793.76	
491	Capital Stock Premiums	14,322,217.95	
492	Special Suspense	5,000.00	
495	N. Y. Gas & E. L. H. & P. Co.	350,000.00	
190	Rapid Transit Tunnel	890.52	
			15,011,494.56
	GENERAL ACCOUNTS:		
532	General Profit and Lass	4,290,151.25	
			4,290,151.25
			$105,377,574.53

STATE'S EXHIBIT B.
September 4, 1906.

BALANCE SHEETS—DECEMBER 31st, 1904.

DEBITS:

ACCOUNTS.

Folio				Totals
	PLANT, PROPERTY AND CONSTRUCTION:			
1	Real Estate	11,232,407.17		
3	" M.	50,588.65	7 11,282,9~~6~~5.82 ^	
24	Plant	15,565,699.64		
30	Tank & Holder—Ave A & 21 St.	127,957.96		
31	Foundations	44,858.53		
32	Damages	36,535.01		
33	Damages etc.—44 Street	1,378.87	15,776,430.01	
70	Street Mains—Manhattan	7,692,317.81		
75	" Bronx	47,450.37		
77	Scows	19,816.15		
81	Pipe and Specials	104,642.26		
89	Meters	2,831,674.54		
94	Meter Cocks and Connections	295,492.54		
98	Services	1,221,831.83		
107	Office Furniture & Fixtures	33,473.92		
108	Franchises and Rights	7,781,000.00		
110	Horses, Wagons and Harness	23,632.03		
114	Tools and Implements	49,622.84		
120	Gas Stoves on hand	26,240.69		
125	Gas Stoves Rented	212,729.36		
129	Gas Stoves Loaned	3,267.36	20,343,19	
				47,402,617.33
	ACCOUNTS RECEIVABLE:			
141	Sundry Consumers	1,301,481.45		
147	Sundry Debtors	594 603.30		
149	Installment Stove Sales	2,129,00		
151	Accounts Receivable—Branches	7,299.48		
152	East River Gas Co.	496,511,11		
153	N. Y. Edison Co.	3,000,000.00		
154	Interest Accrued City of N. Y.	17,500.00		
155	" " N. Y. Edison Co.	41,124.99		
156	" " Special 2	62,599.44		5,523,248.77
	CASH AND SECURITIES:			
158	Cash—in banks and on hand		1,301,889.22	
159	" —in offices and stations		20,800.00	
161	Securities, Stocks and Bonds		55,938,648.17	
163	National City Bank		54,384.00	
165	Employees Fund Investment		19,619.58	
166	Metropolitan Bonds		500.00	
167	U. S. Government 2%		8,008,000.00	
167	City of N. Y. Stock		3,087,500.00	68,431,340.97
	MISCELLANEOUS ACCOUNTS:			
168	Brush Co.—Accrued Interest		27,500.00	
171	United Co.— " "		842,166.68	
186	Material and Supplies		117,201.66	
188	Insurance Trustees		36,408.15	
191	Insurance Fund		48,828.61	
469	General Suspense		[illegible]	

163	National City Bank	55,938,648.17	
165	Employees Fund Investment	54,384.00	
166	Metropolitan Bonds	19,619.58	
167	U. S. Government 2%	500.00	
167	City of N. Y. Stock	8,008,000.00	
		3,087,500.00	
			68,431,340.97
	MISCELLANEOUS ACCOUNTS:		
168	Brush Co.—Accrued Interest	27,500.00	
171	United Co.— " "	842,166.68	
186	Material and Supplies	117,201.66	
188	Insurance Trustees	36,408.15	
191	Insurance Fund	48,828.61	
469	General Suspense	735,579.81	
			1,807,684.91
	GAS MAKING MATERIAL:		
195	Coal	458,186.77	
202	Coke	47,193.99	
208	Fuel Oil	198.04	
211	Naptha	244.43	
213	Gas Oil	28,208.42	
215	Lime	919.9	
217	Iron Mass	812.38	
222	Sundry Supplies	739.57	
			536,503.53
	GENERAL ACCOUNTS:		
513	Scowing	778.35	
			778.35
			$123,702,174.06
	CREDITS:		
	STOCK AND BONDS.		
426	Capital Stock	80,000,000.00	
428	Metropolitan Bonds	500.00	
432	Debenture Bonds	1,394,000.00	
437	Bonds and Mortgages	15,000.00	
438	Convertible Debentures	19,857,600.00	
			101.267,100.00
	ACCOUNTS AND BILLS PAYABLE:		
441	Bond Interest Accrued	11,616.66	
451	Dividends not called for	54,384.0	
453	Consumers Deposits	835,482.8	
460	Sundry Creditors	943,494.70	
465	Employees' Aid Society	19,619.58	
472	Accrued Taxes	2,117,873.85	
473	Accrued Water Rates	2,636.20	
476	Bills Payable	900,000.00	
479	Bills Payable, Interest Accrued	2,756.71	
			4,887,864.56
	MISCELLANEOUS ACCOUNTS:		
485	Insurance Fund	271,390.17	
489	Gas Stove Rent Suspense	6,437,00	
490	Bond Premiums	32.763.76	
491	Capital Stock Premiums	14,322,217.95	
492	Special Suspense	5,000.00	
190	Rapid Transit Tunnel	1,092.14	
			14,638,901,02
	GENERAL ACCOUNTS:		
516	Insurance Fund 1902 Agmt	36,408.15	
532	General Profit and Loss	2,871,900.33	
			2,908,308.48
			$123,702,174.06

7689

STATE'S EXHIBIT 8.

September 4, 1906.

BALANCE SHEET—DECEMBER 31ST, 1905.

DEBITS:

Folio	ACCOUNTS.			Totals.
	PLANT, PROPERTY AND CONSTRUCTION:			
2	Real Estate	10,879,329.63		
3	" M	50,588.65		
			10,929,918.28	
25	Plant	15,965,531.17		
30	Tank & Holder—Ave. A & 21 St	127,957.96		
31	Foundations— "	44,858.53		
32	Damages — "	37,035.01		
			16,175,382.67	
70	Streets Mains—Manhattan	7,451,075.78		
75	" " —Bronx	47,450.37		
			7,498,526.15	
77	Scows	18,825,34		
81	Pipe and Specials	107,056.19		
89	Meters	2,977,549.38		
94	Meter Cocks and Connections	284,138.04		
99	Services	1,222,228.37		
102	Automobiles & Accessories	6,281.23		
107	Office Furniture & Fixtures	32.598.29		
108	Franchises and Rights	7,781.000.00		
110	Horses, Wagons & Harness	21,354.48		
114	Tools and Implements	48,331.48		
120	Gas Stoves on hand	25,380.24		
126	Gas Stoves Rented	256,846.85		
129	Gas Stoves Loaned	3.167.69		
			12,784,757.58	
	ACCOUNTS RECEIVABLE:			47,388,584.68
142	Sundry Consumers		1,857,826.51	
148	Sundry Debtors		1,139,849.17	
150	Installment Stove Sales		1,725.75	
151	Accounts Receivable—Branches		7,931.78	
152	East River-Gas Co. of L. I. City		536,780.60	
153	New York Edison Co.		1,250,000.00	
153	Central Union Gas Co.		50.000.00	
154	Interest Accrued N. Y. City Stock		17,500.00	
155	" " " Edison Co.		7,967.15	
155	" " Central Union Gas Co.		20.83	
156	" " National City Bank		33,542.62	
	CASH AND SECURITIES:			4,923.144.41
158	Cash—in banks and on hand		4,933,862.12	
159	" in offices and stations		20 360.00	
162	Securities, Stocks and Bonds		59,001,134.52	
163	National City Bank		46,804.00	
164	Interest Accrued Westchester Lighting Co.		22,281.27	
165	Employees Fund Investment		23,454.58	
166	Metropolitan Redemption Fund		500.00	
167	City of New York, Corporate Stock		3,087,500.00	
	MISCELLANEOUS ACCOUNTS:			67,135,896.49
169	Brush Co.—Accrued Interest		34,375.00	
171	United Co.— " "		1,075,049.08	
172	Westchester Lighting Co.		930,000.00	
186	Material and Supplies			

	[illegible]	20,360.00	
162	Securities, Stocks and Bonds	59,001,134.52	
163	National City Bank	46,804.00	
164	Interest Accrued Westchester Lighting Co.	22,281.27	
165	Employees Fund Investment	23,454.58	
166	Metropolitan Redemption Fund	500.00	
167	City of New York, Corporate Stock	3,087,500.00	
	Miscellaneous Accounts:		67,135,896.49
169	Brush Co.—Accrued Interest	34,375.00	
171	United Co.— " "	1,075,049.08	
172	Westchester Lighting Co.	930,000.00	
186	Material and Supplies	134,993.85	
188	Insurance Fund Trustees	73,918.68	
189	Rapid Transit Tunnel	1,881.24	
191	Insurance Fund	48,828.61	
409	General Suspense	59,326.85	
	Gas Making Material:		2,358,373.31
195	Coal	442,297.92	
203	Coke	9,340.50	
209	Fuel Oil	148.00	
219	Gas Oil	40,465.23	
215	Lime	833.41	
218	Iron Mass	1,097.14	
222	Sundry Supplies	692.71	
			494,874.91
			$122,300,873.80
	Credits:		
	Stock and Bonds:		
426	Capital Stock	80,000,000.00	
428	Metropolitan Bond	500.00	
432	Debenture Bonds	1,387,000.00	
438	Convertible Debentures	19,857,600.00	
	Accounts and Bills Payable:		101,245,100.00
441	Bond Interest Accrued	11,558.34	
451	Dividends not called for	46,804.00	
454	Consumers Deposits	920,695.80	
460	Sundry Creditors	1,433,702.77	
465	Employees' Aid Society	23,454.58	
472	Accrued Taxes	1,937,625.97	
473	Accrued Water Rates	2,145.09	
	Miscellaneous Accounts:		4,375,986.55
485	Insurance Fund	271,390.17	
489	Gas Stove Rent Suspense	7,241.50	
490	Bond Premiums	32,518.76	
491	Capital Stock Premiums	14,322,217.95	
492	Special Suspense	5,000.00	
	General Accounts:		14,638,368.38
514	Scowing	926.85	
516	Insurance Fund under 1902 Agreement	73,918.68	
517	Renewal & Contingency	1,046,096.70	
532	General Profit and Loss	920,476.64	
			2,041,418.87
			$122,300,873.80

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COKE PRODUCED, USED IN MANUFACTURE AND PRODUCED FOR SALE.

42nd Street Station—Year 1905.

1905	Produced.	Used retorts.	Used boilers.	Total used.	Produced for sale.
January	11,358	2,193	709	2,902	8,456
February	10,250	2,390	597	2,987	7,263
March	11,155	2,307	569	2,876	8,279
April	9,388	1,540	514	2,054	7,334
May	8,239	1,259	406	1,665	6,574
June	7,788	959	386	1,345	6,443
July	7,678	1,142	381	1,523	6,155
August	7,763	743	375	1,118	6,645
September	7,481	241	377	618	6,863
October	7,940	505	380	885	7,055
November	8,093	1,222	475	1,697	6,396
December	8,376	1,687	515	2,202	6,174
	105,509	16,188	5,684	21,872	83,637

(Here follow State's Exhibits Q, R, and S, marked pp. 7688, 7689, and 7690.)

7691

COMPLAINANT'S EXHIBIT 216.

CHAP. 736.

An Act in relation to the price of illuminating gas furnished or sold to the City of New York and providing a penalty for violation.

Accepted by the city.

Became a law, June 3, 1905, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. A corporation, association, copartnership or person engaged in the business of furnishing or selling illuminating gas in the city of New York, shall not charge said city or receive therefrom for such gas, a sum in excess of seventy-five cents per one thousand cubic feet.

Sec. 2. The illuminating gas furnished or sold by any such corporation, association, copartnership or person to said city shall have an illuminating power of not less than twenty-two sperm candles of six to a pound burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. The pressure of said illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches.

7692 Sec. 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars for each offense to be sued for and recovered in the name of and by the city of New York for its benefit.

Sec. 4. All acts or parts of acts inconsistent herewith are hereby repealed.

Sec. 5. This act shall take effect on the first day of July, nineteen hundred and five.

COMPLAINANT'S EXHIBIT 217.

CHAPTER 125.

An Act in relation to illuminating gas in the City of New York and regulating the quality and pressure thereof and the price to consumers other than said city and providing a penalty for violation.

Accepted by the City.

Became a Law April 3, 1906, with the approval of the Governor. Passed, a majority being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. A corporation, association, copartnership or person engaged in the business of manufacturing, furnishing or selling illuminating gas in the city of New York, except in the fifth ward of the Borough of Queens and in that portion of the Borough of the Bronx formerly contained in the towns of Eastchester and Pelham, shall not charge or receive for gas manufactured, furnished or sold in said city a sum per one thousand cubic feet in excess of the following rates:

7693 1. In the Borough of Manhattan, in the first ward of the Borough of Queens, in the Borough of Brooklyn except the thirtieth and thirty-first wards thereof, and in the Borough of the Bronx, except that portion of it formerly contained in the town of Westchester outside of the villages of Wakefield and Williamsbridge, eighty cents.

2. In the second and fourth wards of the Borough of Queens, and in the thirtieth ward of the Borough of Brooklyn, one dollar.

3. In the third ward of the Borough of Queens, in the thirty-first ward of the Borough of Brooklyn, and in the Borough of Richmond, one dollar and twenty-five cents for the remainder of the year nineteen hundred and six; one dollar and twenty cents during the year nineteen hundred and seven; one dollar and fifteen cents during the year nineteen hundred and eight; one dollar and ten cents during the year nineteen hundred and nine; one dollar and five cents during the year nineteen hundred and ten; and one dollar thereafter.

4. In that portion of the Borough of the Bronx formerly contained in the town of Westchester, outside of the villages of Wakefield and Williamsbridge, one dollar and fifteen cents during the years nineteen hundred and six, nineteen hundred and seven and nineteen hundred and eight; one dollar and ten cents during the year nineteen hundred and nine; one dollar and five cents during the year nineteen hundred and ten; and one dollar thereafter.

Sec. 2. The illuminating gas furnished by any such corporation, association, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from 7694 the distributing holder by a burner consuming five cubic feet of gas per hour and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. The pressure of illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch, nor more than two and one-half inches.

SEC. 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars for each offense to the people of the state.

SEC. 4. This act shall not apply to gas furnished or sold to the city of New York.

SEC. 5. Chapter three hundred and eighty-five of the laws of eighteen hundred and ninety-seven, entitled "An act to regulate the price of illuminating gas in cities of fifteen hundred thousand inhabitants," and all other acts or parts of acts inconsistent herewith are hereby repealed.

SEC. 6. This act shall take effect on the first day of May, nineteen hundred and six.

COMPLAINANT'S EXHIBIT 218.

LAWS OF 1897.

CHAPTER 385.

AN ACT to regulate the price of illuminating gas in cities of fifteen hundred thousand inhabitants.

Became a law May 7, 1897, with the approval of the Governor. Passed, a majority being present.

7695 *The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

SECTION 1. A corporation, association, company, copartnership or person shall not charge or receive for illuminating gas in a city, as now constituted, which has a population of fifteen hundred thousand, sums to exceed, per thousand cubic foot, during the remainder of the year eighteen hundred and ninety-seven, one dollar and twenty cents; during the year eighteen hundred and ninety-eight, one dollar and fifteen cents; during the year eighteen hundred and ninety-nine, one dollar and ten cents; during the year nineteen hundred, one dollar and five cents; and during each year thereafter, one dollar.

SEC. 2. Such a corporation, association, company, copartnership or person shall not charge for illuminating gas for the use of any such city, sums to exceed, per thousand cubic feet, during the re-

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mainder of the year eighteen hundred and ninety-seven, one dollar; during the year eighteen hundred and ninety-eight, ninety-seven and a half cents; during the year eighteen hundred and ninety-nine, ninety-five cents; during the year nineteen hundred, ninety-two and a half cents, and during each year thereafter, ninety cents, but this act shall not apply to that portion of the city of New York which formerly constituted the town of Kingsbridge, or that portion of said city which was annexed thereto by chapter nine hundred and thirty-four of the laws of eighteen hundred and ninety-five, entitled "An act to annex to the city and county of New York, territory lying within the incorporated villages of Wakefield, Eastchester and Williamsbridge, the town of Westchester, and portions of the towns of Eastchester and Pelham."

SEC. 3. A change hereafter affected in the territory boundaries of
such a city, either by annexation, consolidation or otherwise,
7696 shall not be deemed to enlarge or change the territory within
which the price of gas is regulated as herein provided, but
this act shall continue in force for the purpose of regulating the price of gas in such city, as now constituted, notwithstanding any subsequent change of territory, but shall not apply in or to territory not now in such city.

SEC. 4. The illuminating gas furnished by any such corporation, association, company, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to the pound, burning at the rate of one hundred and twenty grains of spermaceti per hour tested, at a distance of not less than one mile from the place of manufacture, by a burner consuming five cubic feet of gas per hour, and shall, as regards purity, comply with the standard now or hereafter established by law.

SEC. 5. All acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 6. This act shall take effect on the first day of May, eighteen hundred and ninety-seven.

COMPLAINANT'S EXHIBIT 219

Aug. 24, 1906.

Please take notice that the Commission of Gas and Electricity of the State of New York have received in writing a complaint against your company, signed by one hundred or more customers and purchasers of gas sold and delivered by you in the City of New York.
A copy of said complaint is hereto annexed and herewith
7697 served upon you. That the purpose of said complaint is to
cause this commission to fix the maximum price of gas furnished by your company to its customers in the City of New York at seventy-five cents per thousand cubic feet; and

You will further take notice that a public hearing upon said complaint will be held in the Council Chamber, City Hall, Borough of Manhattan, City of New York, at 10.30 o'clock A. M.. on the 20th

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day of November, 1905, at which you will have the opportunity to be heard.

Dated New York City, this 8th day of November, 1905.

COMMISSION OF GAS & ELECTRICITY,
By FREDERICK E. GUNNISON, *Chairman.*

To Consolidated Gas Company, of New York,
The New York Mutual Gas Light Company,
The Standard Gas Light Company.
New Amsterdam Gas Company,
Central Union Gas Company,
Northern Union Gas Company,
Brooklyn Union Gas Company.

To the Honorable the Commission of Gas and Electricity of the State of New York:

The undersigned, complaining of the Consolidated Gas Company of New York, respectfully show:

I. That the Consolidated Gas Company of New York, is a domestic corporation duly incorporated under the Laws of The State of New York, and engaged in furnishing illuminating gas to the residents of the Borough of Manhattan, City of New York. 7698

II. That each of the undersigned is a customer or purchaser of illuminating gas from the said Company.

III. That the price charged for illuminating gas by said Company is one dollar per thousand cubic feet, and that said price is excessive and unreasonable. That a joint Committee of the Senate and Assembly of the State of New York, pursuant to a concurrent resolution adopted March 16th, 1905, did among other things, investigate the reasonableness of the charges maintained by the gas companies operating in the City of New York. That the said Committee held hearings in the City of New York, and the said company appeared before said Committee by Counsel and produced witnesses and documentary evidence in its behalf, and the said Committee did, on the 1st day of May, 1905, report to the Legislature.

"That the price of gas sold in the Boroughs of Manhattan and Brooklyn, and in that part of the Borough of The Bronx, west of the Bronx River, should be fixed at a maximum of seventy-five cents per thousand cubic feet." That a bill was introduced by said Committee into the Legislature in accordance with their recommendation, and the same was passed by the Assembly and failed of passage in the Senate by one vote, receiving twenty-five votes in favor, and twenty-three against. To the original records and testimony before said Committee, these complainants crave leave to refer in support of this complaint.

Wherefore your complainants pray that the maximum price at which the said company may charge for gas furnished to its

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7699 customers in the City of New York be fixed at seventy-five cents per thousand cubic feet.

Dated, New York, August —, 1905.

Names.	Residences.
Edward C. Keys	210 West 1229th Street
Frank W. Bartley	2158 7th Avenue
Katie Duffy	118 E. 127th Street
E. Seligman	2162 7th Avenue
John Alpy	2160 7th Avenue
M. H. Jacoby	2207 7th Avenue
F. A. Schwarz	2156 7th Avenue
F. A. Schwarz	2540 8th Avenue
Frank McCabe	44 E. 129th Street
W. Hutzler	205 W. 125th Street
Joseph Liebman	201 W. 1225th Steet
John D. Walton	1739 Madison Avenue
Godyear I. R. C. & Mfg. Works	105 W. 125th Street
Samuel C. Watts	449 W. 123rd Street
W. S. Andrews	103 W. 125th Street
Victor Lawrensie Candy Store	N. W. Cor. 119th St. & Madison Ave.
Wolls & Gunther	308 Lenox Avenue
John J. Stein	323 Lenox Avenue
John J. Weber	335 Lenox Avenue
Hugo Schmelz	339 Lenox Ave., and 2 E. 128th Street
Thomas P. Thornton	360 W. 127th Street
Thomas P. Thornton	2365 8th Avenue
Richard Cunck	228 W. 128th Street
Richard Runney	406 St. Nicholas Avenue
A. G. Buckmaster	458 W. 151st Street
Kleine Buckmaster	307 E. 48th Street
William L. Mein	238 W. 126th Street
H. A. Mulvey	308 W. 126th Street
J. Wheatley	438 W. 163d Street
G. A. Wanamaker, Jr.	40 W. 1331st Street
7700 C. G. Reton	279 W. 127th Street
D. Brown	279 W. 127th Street
Mrs. E. Gessler	277 W. 127th Street
Mrs. J. Scofield	277 W. 127th Street
Miss M. Roche	277 W. 127th Street
S. Wennick	2356 8th Avenue
John F. Shaughnessy	549 W. 125th Street
John F. Shaughnessy	651 W. 131st Street
Thomas McCurker	2354 8th Avenue
James Quinn	2360 8th Avenue
Wm. Gartelmann	2364 8th Avenue
P. H. Ashton	280 St. Nicholas Avenue
Gustav Bornheim	280 Lenox Ave. cor. 124th Street
Gustav Bornheim	49 W. 125th Street
Lester E. Smith	166 W. 128th Street

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J. W. Hart	162 E. 113th Street
David A. Sweezy	1500 5th Avenue
David A. Sweezy	2 W. 120th Street
L. Rosenthal	12½ W. 118th Street
Geo. Weber	2 W. 120th Street
C. Absolon	1466 5th Avenue
A. Roshok	1492 5th Avenue
H. E. Marks	1464 5th Avenue
Jacob Ledner	1365 5th Avenue
Otto Gross	1494 5th Avenue
F. Cohen	1486 5th Avenue
F. Vanderlehr	2 W. 116th Street
P. M. Sampson	35 W. 119th Street
Louis Gibbs	1468 5th Avenue
John Leykens	1750 Park Avenue
H. Daubert	1480 5th Avenue
B. Kohosoff	1474 5th Avenue
M. Kohosoff	274 W. 135th Street
A. Mentz	1474 5th Avenue
A. Harris	36 W. 116th Street
J. Fisher	1470 5th Avenue
Michele Berstelli	1468 5th Avenue
Benno L. Salzman	26 W. 118th Street
7701 Machele La Fonio	335 E. 114th Street
Morris Wiener	1468 5th Avenue
M. H. Nathan	1464 5th Avenue
David E. Cohen	48 W. 116th Street
Rudolph Jacobs	15 W. 118th Street
Arkin Bros. & Co.	396-398 Canal Street
Jacob Oberlander	2187 2nd Avenue
G. Auslander	4 E. 118th Street
A. Fromenson	1444 Fifth Avenue
Jacob M. Horn	12 W. 117th Street
Samuel Newmark	48 W. 119th Street
Louis Kohn	2 W. 117th Street
S. Hoffman	100 W. 115th Street
W. B. Phillips	13 E. 117th Street
William J. Juper	77 E. 118th Street
Harry H. Vadlmer	172 E. 117th Street
Jacob Goldberg	1704 Park Avenue
Richard Block	1439 Fifth Avenue
Dr. B. Mindling	2 E. 117th Street
S. J. Raphaelson, M. D.	2 E. 118th Street
Frances R. Greenwald	1426 Fifth Avenue
Jacob E. Frien	1420 Fifth Avenue
H. Geisenheim	1422 Fifth Avenue
H. Siegel	247 E. 77th Street
A. Muchlenthal	1420 Fifth Avenue
J. Axel	1420 Fifth Avenue
Emil Agalston	15 W. 116th Street
S. Glatner	1716 Fifth Avenue

Charlie Lomonti..........1411 Fifth Avenue
J. H. Payne..........8 E. 116th Street
Peter McGinn..........2 E. 116th Street
Philip Michael..........68 E. 116th Street
S. B. Mathes..........1768 Madison Avenue
James J. Fox..........55 E. 115th Street
H. J. Hiseradt..........1760 Madison Avenue
Edgar J. Barker..........12 W. 118th Street
J. Magubie..........1429 Fifth Avenue
J. J. Windish..........153 E. 106th Street
7702 D. M. Levenish..........26 W. 114th Street
Susan Watts..........449 W. 123rd Street
H. Rentano..........2206 7th Avenue
A. Weinstock..........2204 7th Avenue
T. Doutford..........2200 7th Avenue
M. Kafte..........165 W. 133rd Street
Geo. Masterson..........208 7th Avenue
Jos. T. Simons..........77 W. 134th Street
Mrs. L. Doscher..........2202 7th Avenue
Jas. Masterson..........2202 7th Avenue
Joseph F. Corrigan..........2196 7th Avenue
Robert Doblin..........2198 7th Avenue
J. G. McKinley..........104 Bradhurst Avenue
E. Le Piemme..........2173 7th Avenue
P. J. Welsh..........2157 5th Avenue
Jno. P. Daly, Jr..........230 Bradhurst Avenue
Jas. Williams, Jr..........11 Manhattan Street
H. V. Ohlers..........261 W. 114th Street
M. M. Braun..........1728 Madison Avenue

COMPLAINANT'S EXHIBIT 220.

August 24, 1906.

Please take notice that the Commission of Gas and Electricity of the State of New York have received in writing a complaint against your company, signed by one hundred or more customers and purchasers of gas sold and delivered by you in the city of New York. A copy of said complaint is hereto annexed and herewith served upon you. That the purpose of said complaint is to have this Commission investigate as to the cause for such complaint, in the manner provided by law, and that a public hearing be had thereon, and the evidence which petitioners offer then and there be duly consid-
7703 ered by this Commission, to the end that orders may me made reducing the price charged by your company for gas, to the extent warranted by the evidence; and

You will further take notice that a public hearing upon said complaint will be held in the Council Chamber, City Hall, Borough of Manhattan, City of New York, at 10.30 o'clock in the morning, on the 20th day of November, 1905, at which you will have the opportunity to be heard.

Dated New York City, this 8th day of November, 1905.

COMMISSION OF GAS & ELECTRICITY,
By FREDERIC E. GUNNISON, *Chairman.*

To Consolidated Gas Company of New York,
The New York Mutual Gas Light Company,
The Standard Gas Light Company,
New Amsterdam Gas Company,
Central Union Gas Company,
Northern Union Gas Company,
Brooklyn Union Gas Company.

Hon. Frederick E. Gunnison, John C. Davies, Lucien L. Shedden, composing the New York State Commission of Gas and Electricity:

The undersigned, purchasers of gas from the Consolidated Gas Coompany of New York, respectfully present to you their complaint as follows:

That the Consolidated Gas Company of New York is a domestic corporation authorized to manufacture, sell and supply gas for heat and light in the City of New York, and is now and for several years last past has been manufacturing, selling and supplying gas for heat and light to the undersigned and other persons residing in the City of New York.

7704 That said Consolidated Gas Company of New York is now and for several years past has been charging and receiving from the undersigned and from other persons in the City of New York, the sum of One ($1.00) dollar per thousand cubic feet for gas supplied by it to the undersigned and to such other persons in the City of New York.

That early in the year 1905, the Legislature of the State of New York, duly appointed a committee to investigate, among other things, the price for gas charged by various companies, manufacturing, selling and supplying gas in the City of New York. That said committee thereupon proceeded with said investigation and thereafter and in or about the month of April, 1905, reported to the New York State Legislature that the price charged by such companies operating in the City of New York were unreasonably high, and that the price charged by companies operating in the Borough of Manhattan, New York City, should be reduced to Seventy-five (75) cents, and that the specific recommendation of said committee appearing in said report is as follows:

"From the evidence which has been presented we are satisfied that a price of seventy-five cents per thousand cubic feet will be fair to the consumer and will afford to the companies, after allowing the proper costs for manufacture and distribution, taking into consideration all the elements of such cost, a reasonable return upon their capital investment in their gas making business. This applies to the Borough of Manhattan, the Borough of Brooklyn, and a large part of the Borough of the Bronx.

We therefore recommend that the price of gas sold in the Boroughs of Manhattan and Brooklyn and in that part of the 7705 Borough of the Bronx west of the Bronx River should be fixed at a maximum of seventy-five cents per thousand cubic feet."

That said report was made after a careful and thorough investigation by said committee of all of the facts relating to the capitalization, assets and indebtedness of each of the gas companies operating in the City of New York, and of the cost of manufacturing and supplying the gas manufactured and supplied by each of the said companies, including the Consolidated Gas Company of New York.

That the price charged for gas by the Consolidated Gas Company of New York is in fact unreasonably high and should be reduced at least to the figure recommended by said Legislative Committee.

That each of the undersigned is at present and has been for some time past a purchaser and consumer of gas manufactured, supplied and sold to him by the said Consolidated Gas Company of New York.

Wherefore, your petitioners file this complaint and pray that your Commission forthwith investigate as to cause for such complaint in the manner provided by law and that your Commission cause notice of this complaint and the purpose thereof to be served upon said Consolidated Gas Comapny of New York, and that a public hearing be had thereon, and the evidence which petitioners offer then and there be duly considered by your honorable body, to the end that orders may be made reducing the price charged by said Consolidated Gas Company of New York for gas, to the extent warranted by the evidence.

Dated, New York City, August 17, 1905.

R. H. & M. McGurrin	214 Bowery
Bauer & Doctor	247 Bowery
Goodwin & Pearlman	52½ Bowery
7706 Maurice Gelula	18 Bowery
Uhrmacher & Schechter	16 Bowery
H. Forman	16 Bowery
N. Hebald	166 Bowery
Sandler & Scherman	166 Bowery
Morris Fisher	182 Broadway
L. Jaretsky	218 Broadway
S. Segall	160 Broadway
G. A. Ruppy	326 Broadway
Jappen Bros	95 3rd Avenue
B. May	143 3rd Avenue
M. E. Swart	347 3rd Avenue
L. Druiken	410 3rd Avenue
W. Melloner	724 3rd Avenue
N. Sarewitz	274 Mattensen
Philip Karalmsky	28 East Broadway
Philip Lipsky	173 Cherry Street
J. Ginsberg	87 Mocotison Street
Waxmun & Metze	153 East Broadway
W. Rubenstein	147 East Broadway
Samuel Schwartz	159 East Broadway
	167 East Broadway

Adolph Stutzkin	265 Broadway
M. Myers	265 East Broadway
Abe Refkin	265 East Broadway
Chrein & Harris	153 East 103rd Street
L.	456 Grand Street
L. Golding	450 Grand Street
J. Hilmer	416-18 Grand Street
Lassman & Paley	419 Grand Street
Chertobb & Ruderman	417 Grand Street
Gabriel Brousteen	375 & 379 Grand Street
Wilhelm Soll	366 Grand Street
A. Wieserbo & H. Greengold	311 Grand Street
Louis Rosenberg	298 Grand Street
Nathan Herman	294½ Grand Street
Simon Cohen	292 Grand Street
Jacob Froelich	271 Grand Street
7707 M. P. Rosenberg	103 Division Street
J. Sparber	272 Grand Street
A. Rosenstraus	260 Grand Street
Sam Scheer	50 Second Avenue
Sigmund Freedman	124 Second Avenue
Patrick Farrelly	422 Second Avenue
Beney Siskind	430 Second Avenue
Solomon Glickman	444 Second Avenue
Joseph Gitsky	163 East 75th Street
Barnet Dwork	552 Second Avenue
Anellis Topoozion	554 Second Avenue
Sam Mencher	300 First Avenue
C. Edelstein	568 Second Avenue
A. Peekelig	614 Second Avenue
James Crombie	427 E. 79th Street
Josepf Grossmer	647 Second Avenue
A. Loewenstein & Co	688 Second Avenue
Louis Zelvin	694 Second Avenue
Peter Wm. Norberg	713 Second Avenue
Abraham Aronowitz	717 Second Avenue
Louis S. Jacobovitz	716 Second Avenue
C. Y. Riker	155 Sixth Avenue
Aug. Welm	259 W. 18th Street
M. Sudry	168 8th Avenue
Samuel Rosenberg	179 8th Avenue
H. Hamilton	335 W. 19th Street
C. Becker	182 8th Avenue
Falk & Dannenbury	205 8th Avenue
A. Jacobson	233 8th Avenue
Max Goldwater	311 8th Avenue
Jacob W. Stern	355 8th Avenue
J. Moore	351 8th Avenue
M. Numan	349 8th Avenue
E. Friedlich	357 8th Avenue
J. C. Kinsie	361 8th Avenue

Louis Kaufman..........................368 8th Avenue
A. Lustberg..........................379 8th Avenue
7708 S. Stein..........................383 8th Avenue
Gardner & Gatty..........................411 8th Avenue
Wm. Liberman..........................521 8th Avenue
S. Blumenthal & Co..........................531 8th Avenue
Frosel Bros..........................524 8th Avenue
C. Langschmidt..........................552 8th Avenue
John Branlega..........................564 8th Avenue
M. L. Wetstein..........................557 8th Avenue
Abraham Berman..........................559 8th Avenue
H. M. Greenberg..........................589 8th Avenue
M. Schaem..........................591 8th Avenue
W. S. Rusk..........................604 8th Avenue
H. Lohmann..........................633 8th Avenue
W. B. Lunn..........................685 8th Avenue
J. Schattman..........................108 W. 113th Street
A. Zucker..........................687 8th Avenue
H. S. Burger..........................689 8th Avenue
Henry Robohen..........................691 8th Avenue
H. Schuette..........................709 8th Avenue
Nathan Voosa..........................756 8th Avenue
M. L. Sheehan..........................785 8th Avenue
M. B. Stanton..........................439 W. 47th Street
H. A. Gliesman..........................782 8th Avenue
John H. Werner..........................783 8th Avenue
J. J. Drake..........................857 8th Avenue
G. F. Sterchi..........................884 8th Avenue
M. Nacht..........................879 8th Avenue
Bernard Dinnar..........................885 8th Avenue
S. Heinrich..........................895 8th Avenue
M. Levitz..........................904 8th Avenue
C. H. Hettling..........................908 8th Avenue
Henry Imburg..........................918 8th Avenue
Samuel Simmons..........................925 8th Avenue
Joseph Rager..........................942 8th Avenue

7709 COMPLAINANT'S EXHIBIT 221.

At a meeting of the Commission of Gas and Electricity of the State of New York, held at the Capitol in the City of Albany, N. Y., on the 23rd day of February, 1906.

Present: Frederic E. Gunnison, John C. Davies, Lucien L. Shedden, Commissioners.

In the Matter of The Complaint of Edward C. Keys and Others, Being Upwards of One Hundred Customers of the Consolidated Gas Company of New York, and the Complaint of R. H. & M. McGurrin and Others, also Being Upwards of One Hundred Customers of said Company.

Complaint in writing having been made and signed by Edward C. Keys and others, being upwards of one hundred customers and purchasers of gas sold and delivered by the Consolidated Gas Company of New York in the Borough of Manhattan, City and State of New York, as to the price of such gas so sold and delivered in said city, wherein the complainants pray that the maximum price
7710 which the said Company may charge for gas be fixed at
seventy-five cents per thousand cubic feet; and the further complaint in writing made and signed by R. H. & M. McGurrin and others, being upwards of one hundred customers and purchasers of gas sold and delivered in said Borough of Manhattan, City of New York, by the said Consolidated Gas Company of New York as to the price of such gas so sold and delivered, wherein the complainants pray that an order may be made reducing the price charged for such gas to the extent warranted by the evidence; and public hearings having been had upon such complaints in the said city of New York pursuant to a notice of said complaints and the purposes thereof, which notice was duly served on said Consolidated Gas Company;

Page, Grant & Booth, by Alfred R. Page, Esq., appearing for the complainant first above mentioned;

Clarence J. Shearn, Esq., by William A. De Ford, Esq., appearing for the complainants last above mentioned;

Charles F. Mathewson, Esq., appearing in behalf of said Consolidated Gas Company;

And the said proceedings having been consolidated at said hearing by order of said Commission, and the said Commission having investigated as to the cause for such complaints and inspected the works, system, plants and methods used by said Consolidated Gas Company in manufacturing and distributing such gas, and having examined the books and papers of said Company pertaining thereto; and, pursuant to a further notice, duly served upon the said Consolidated Gas Company of New York, the Commission at said hearing having inquired into, examined and investigated the illuminating power, purity and pressure of gas supplied by said Company, and

having examined the methods employed by it in the transac-
7711 tion of its business and inquired into the methods and means employed in manufacturing, distributing and supplying gas for light, heat and power; Now, after such hearings and upon such investigations and upon the evidence and argument of counsel, and due deliberation having been had, it is

Ordered, that on and after the first day of May, 1906, the maximum price for gas which shall be charged by the Consolidated Gas Company of New York, in the Borough of Manhattan, City of New York, State of New York, be and is hereby fixed at eighty cents per thousand cubic feet; and, it is further

Ordered, that the gas furnished, sold and delivered by the Consolidated Gas Company of New York shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour, tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour, as is now provided by law; and, it is further

Ordered, that the gas furnished, sold and delivered by the Consolidated Gas Company of New York shall not contain in each one hundred cubic feet of such gas more than five grains of ammonia, nor more than twenty grains of sulphur, nor more than a trace of sulphurated hydrogen.

As the gas supplied to all customers of the Consolidated Gas Company is delivered through the same service mains as gas supplied to the City of New York, and as the pressure of gas so supplied is fixed by law at not less than one inch nor more than two and one-half inches in any service mains in said city, at any distance from the place of manufacture, said law fixes the pressure of gas
7712 at which all customers and consumers of the Company must be furnished in said city.

FREDERIC E. GUNNISON,
JOHN C. DAVIES,
LUCIAN L. SHEDDEN,
Commission of Gas and Electricity of the State of New York.

COMPLAINANT'S EXHIBIT 222.

(For Identification.)

Being statement of rentals received by Consolidated Gas Company. (Page 1221 of record.)

7713

COMPLAINANT'S EXHIBIT 223.

CONSOLIDATED GAS CO. OF N. Y.

June 30th, 1904.

	Investment as shown by ledger accounts.	Values stated in franchise tax reports.	Difference.
Real estate	$11,216,479.71	[a]$11,216,479.71	
Plant	15,755,462.88	[a] 8,456,595.71	7,298,867.17
Mains	7,571,808.83	* 3,666,531.38	3,905,277.45
Services	1,227,931.86	* 594,625.01	633,306.85
Franchise and rights	7,781,000.00	7,781,000.00	
Stocks of other companies	46,674,034.27	46,674,034.27	
Bonds and obligations of other companies	8,686,744.70	8,686,744.70	
Material and supplies	697,014.92	697,014.92	
Accounts and bills receivable	1,944,968.09	1,944,968.09	
Cash on hand	1,146,866.87	1,146,866.87	
Unclaimed dividends	39,052.50	39,052.50	
Metropolitan redemption fund	500.00	500.00	
Meters, stoves and other personal property	3,630,772.12	2,667,329.77	963,442.35
Totals	$106,372,636.75	$93,571,742.93	$12,800,893.82

* Stated in the Tax Report under the heading "Present value allowing for depreciation." "Reproduction" value stated as $5,613,221.12 for Mains and Services.

Detail not asked for and not given in Tax Report to State Board:

For Mains	$4,829,925.82
For Services	783,295.30
Total	$5,613,221.12

[a] Stated as a single item at $19,673,075.42 in Schedule D.

STATE'S EXHIBIT U.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904 Dols.	Cts.	Meter Setting Dols.	Cts.	Arrears
6	1	5,440	1,642	32	175/177	E. 114	40,000	596.20	—	—	—	—	—
—	—	9	—	33	2084	Ave. 3	50,000	745.25	—	—	—	—	—
—	—	5,589	1,643	56	P. 3	115-116	27,000	402.43	—	—	—	—	—
—	—	90	—	57	—	—	13,500	201.21	—	—	—	—	—
—	—	91	—	58	—	—	13,000	193.76	—	—	—	—	—
—	2	9,412	1,670	1	2. 1	89-99	450,000	6,707.29	—	—	—	—	—
—	—	10,746	1,682	8	—	110-111	6,000	89.43	—	—	—	—	—
—	—	10,785	—	11	—	—	455,000	6,781.81	—	—	—	—	—
—	—	10,894	1,683	18	—	111-112	50,000	745.25	—	—	—	—	—
—	—	10,910	—	34	—	—	5,000	74.52	—	—	—	—	—
—	—	1	—	35	—	—	5,000	74.52	—	—	—	—	—
—	—	13,152	1,704	1	P. 1	110-111	330,000	4,918.68	—	—	—	—	—
—	—	11,829	1,692	1	L. E.R.	98-99	135,000	2,012.18	—	—	—	—	—
—	—	14,031	1,712	2	P. H.R.	110-113	25,000	372.62	—	—	—	—	—
								$23,915.15	—	—	—	—	—
								235.22	—	—	—	—	—
					Oct. 2, 1905.			*$23,679.93*	—	—	—	—	—

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier).

Received Payment,
1905.

WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904		Meter Setting		Arrears
									Dols	Cts.	Dols.	Cts.	
4	2	8,986	1,070	5	539—551	W.—41	70,000	1,043.35	—	—	—	—	—
—	—	9,099	1,071	10	—	—	9,500	141.59	—	—	—	—	—
—	—	9,100	—	11	—	—	9,500	141.59	—	—	—	—	—
—	—	9,101	—	12	—	—	9,500	141.59	—	—	—	—	—
—	—	9,102	—	13	—	—	9,500	141.59	—	—	—	—	—
—	—	11,063	1,089	1	11—12	41—42	800,000	11,924.08	—	—	—	—	—
—	—	11,196	1,090	23	—	42—43	53,000	789.97	—	—	—	—	—
—	—	11,391	1,092	1	—	44—45	550,000	8,197.80	—	—	—	—	—
—	—	11,400	—	28	—	—	5,500	81.97	—	—	—	—	—
—	—	11,461	—	38	—	—	5,000	74.52	—	—	—	—	—
—	—	11,462	—	38½	—	—	5,000	74.52	—	—	—	—	—
—	—	11,463	—	39	—	—	5,000	74.52	—	—	—	—	—
—	—	11,501	1,093	1	—	45—46	425,000	6,334.66	—	—	—	—	—
—	—	13,060	1,107	7	12 H R	40—46	85,000	1,266.93	—	—	—	—	—
—	—	13,114	—	23	—	—	75,000	1,117.88	—	—	—	—	—
—	—	13,125	—	28	—	—	75,000	1,117.88	—	—	—	—	—
4	3	19,002	1,156	45	222	W.—65	9,500	141.59	—	—	—	—	—
—	—	19,003	—	46	224—228	—	18,000	268.29	—	—	—	—	—
—	—	19,036	1,157	1	W. E. Am.	65—66	1,000,000	14,905.10	—	—	—	—	—
—	—	21,291	1,177	21	12 W. E.	65—66	140,000	2,086.71	—	—	—	—	—
								50,066.13					
								492.42					
								49,573.71					

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier).

Received Payment,
1905.

WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(COPY)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES.
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904 Dols.	Water Arrears 1904 Cts.	Meter Setting Dols.	Meter Setting Cts.	Arrears
3	4	36,799	979	1	A E. R.	21—22	542,000	$8,078.56	—	—	—	—	—
—	—	37,156	982	13	B C	14—15	475,000	7,079.92	—	—	—	—	Arrs.
—	—	37,465	985	7	—	17—18	200,000	2,981.02	—	—	—	—	—
—	—	8	—	19	—	—	5,500	81.97	—	—	—	—	—
—	—	9	—	20	—	—	5,500	81.97	—	—	—	—	—
—	—	37,532	—	39	—	—	5,500	81.97	—	—	—	—	—
—	—	3	—	40	—	—	5,500	81.97	—	—	—	—	—
—	—	37,734	987	37	B E. R.	19—21	55,000	819.78	—	—	—	—	—
—	—	9	—	41	—	—	5,500	81.97	—	—	—	—	—
—	—	40	—	42	—	—	5,500	81.97	—	—	—	—	—
—	—	41	—	43	—	—	12,000	178.86	—	—	—	—	—
—	—	37,759	—	51	—	—	7,000	104.33	—	—	—	—	—
—	—	37,790	988	1	C D	14—15	550,000	8,197.80	—	—	—	—	—
—	—	37,899	989	1	—	15—16	450,000	6,707.29	—	—	—	—	—
—	—	38,119	991	1	D E.R.	14—16	180,000	2,682.91	—	—	—	—	—
—	—	38,132	—	26	—	—	115,000	1,714.08	—	—	—	—	—
—	—	38,125	—	47	—	—	35,000	521.67	—	—	—	—	—
—	—	38,141	—	50	—	—	35,000	521.67	—	—	—	—	—
								40,079.71					
								394.20					
								39,685.51					

Registered
Oct. 2, 1905.
Book 13.
Folio 13.

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier)

Received Payment,
1905.
WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904		Meter Setting		Arrears
									Dols.	Cts.	Dols.	Cts.	
1	4	26,679	239	1	70	Elizabeth	90,000	1,341.45	—	—	—	—	—
—	—	26,681	—	5	78—80	—	38,000	566.39	—	—	—	—	—
3	1	2,979	688	21	Exter'r"10	16—17	250,000	3,726.27	—	—	—	—	—
—	—	3,090	689	17	—	17—18	380,000	5,663.93	—	—	—	—	—
—	—	3,199	690	12	—	18—19	345,000	5,142.25	—	—	—	—	—
—	—	3,255	—	40	—	—	7,500	111.78	—	—	—	—	—
—	—	7	—	42	—	—	7,500	111.78	—	—	—	—	—
—	—	8	—	43	—	—	7,500	111.78	—	—	—	—	—
—	—	9	—	44	—	—	7,500	111.78	—	—	—	—	—
—	—	3,260	—	45	—	—	7,500	111.78	—	—	—	—	—
—	—	3	—	48	—	—	8,000	119.24	—	—	—	—	—
—	—	4	—	49	—	—	7,500	111.78	—	—	—	—	—
—	—	5	—	50	—	—	7,500	111.78	—	—	—	—	—
—	—	6	—	51	—	—	7,500	111.78	—	—	—	—	—
—	—	7	—	52	—	—	7,500	111.78	—	—	—	—	—
—	—	8	—	53	—	—	7,000	104.33	—	—	—	—	—
—	—	3,308	691	11	—	19—20	185,000	2,757.44	—	—	—	—	—
								20,427.32					
								200.91					
								20,226.41					

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier).

Received Payment,
1905.
WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(COPY)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK. TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904 Dols.	Water Arrears 1904 Cts.	Meter Setting Dols.	Meter Setting Cts.	Arrears
7	21	21,178	1,999	1	B. 12	132—133	$6,500.	96.88	—	—	—	—	—
—	—	21,179/81	—	2/4	—	—	13,500.	201.21	—	—	—	—	—
—	—	21,194/214	—	5/27	—	—	80,500.	1,199.85	—	—	—	—	—
—	—	21,248/70	—	39/60	—	—	88,000.	1,311.64	—	—	—	—	—
—	—	21,185	—	61	—	—	6,500.	96.88	—	—	—	—	—
—	—	4	—	62	—	—	4,500.	67.07	—	—	—	—	—
—	—	3	—	63	—	—	4,500.	67.07	—	—	—	—	—
—	—	2	—	64	—	—	4,500.	67.07	—	—	—	—	—
8	1	9,635	2,175	15	B. S.	B. D.	8,000.	119.24	—	—	—	—	—
—	—	9,636	—	18	—	—	24,000.	357.72	—	—	—	—	—
—	—	7	—	22	—	—	15,000.	223.57	—	—	—	—	—
—	—	9,706	—	100	B. S.	B. D.	14,000.	208.67	—	—	—	—	—
								4,016.87					
								39.51					
								$3,977.36					

Registered
Oct. 2, 1905.
Book 13.
Folio 13.

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier).

Received Payment,
1905.
WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904 Dols.	Water Arrears 1904 Cts.	Meter Setting Dols.	Meter Setting Cts.	Arrears
3	4	36,704	978	6	B. A.	20. 21.	Balance	6,707.30	—	—	—	—	—

(Paid by Check
Nov. 22, 1905.
I. B. B., Cashier)

Received Payment,
1905.
WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

STATE'S EXHIBIT U, Continued.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES,
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904 Dols.	Cts.	Meter Setting Dols.	Cts.	Arrears
3	1	6,030	715	51	438	W.—18	10,000	149.05	—	—	—	—	—
—	—	6,031	—	59	440—454	W.—18	125,000	1,863.13	—	—	—	—	—
—	—	6,078	716	14	435—441	“	36,000	536.58	—	—	—	—	—
—	3	24,387	870	54	130	E.—15	12,000	178.86	—	—	—	—	—
—	—	9	—	56	124	—	44,000	655.82	—	—	—	—	—
—	—	24,348	—	59	4—6	Irving Pl.	135,000	2,012.18	—	—	—	—	—
—	—	9	—	60	2	“ “	40,000	596.20	—	—	—	—	—
—	4	33,787	951	35	428—442	E.—20	60,000	894.30	—	—	—	—	—
—	—	33,842	952	7	1. A	20	335,000	4,993.20	—	—	—	—	—
—	—	33,883	—	29	—	—	10,000	149.05	—	—	—	—	—
—	—	4	—	30	—	—	27,000	402.43	—	—	—	—	—
—	—	6	—	33	—	—	8,000	119.24	—	—	—	—	—
—	—	7	—	34	—	—	8,000	119.24	—	—	—	—	—
—	—	33,888	—	35	—	—	45,000	670.72	—	—	—	—	—
—	—	33,938	953	1	1. A	21—22	785,000	11,700.50	—	—	—	—	—
—	—	36,101	972	45	526—538	E.—15	21,000	313.00	—	—	—	—	Arrs.
—	—	36,689	978	1	A. B	20—21	15,000	223.57	—	—	—	—	—
—	—	90	—	2	—	—	12,000	178.86	—	—	—	—	—
—	—	91	—	3	—	—	12,000	178.86	—	—	—	—	—
—	—	93	—	5	—	—	20,000	298.10	—	—	—	—	—
—	—	36,704	—	6	—	—	50,000	745.25	—	—	—	—	—
								26,978,14					
								265.34					
								26,712.80					

(Paid by Check
Oct. 2. 1905.
E. G. S., Cashier)

Received Payment,
1905.
WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

STATE'S EXHIBIT U, Continued.

(Copy)

DEPARTMENT OF FINANCE, CITY OF NEW YORK.
BOROUGH OF MANHATTAN.
BUREAU FOR THE COLLECTION OF TAXES.
Nos. 57 and 59 Chambers Street.

CONSOLIDATED GAS CO. OF NEW YORK.

TO THE CITY OF NEW YORK,
FOR TAXES, 1905.

Section	Vol.	Line No. Changes each Year	Block No. Permanent	Lot No. Permanent	Between What Avenues	Between What Streets	Valuation Dols.	Tax Dols. Cts.	Water Arrears 1904		Meter Setting		Arrears
									Dols.	Cts.	Dols.	Cts.	
5	4	22846/51	1455	13—18	1. "A"	60—61	30,000	447.15	—	—	—	—	—
—	—	22852	—	— 19	—	—	6,000	89.43	—	—	—	—	—
—	—	22853	—	— 20	—	—	5,000	74.52	—	—	—	—	—
—	—	22883	—	— 21	—	—	3,000	44.71	—	—	—	—	—
—	—	4	—	— 22	—	—	8,000	119.24	—	—	—	—	—
—	—	22885/90	—	23—28	—	—	42,000	626.01	—	—	—	—	—
—	—	22891	—	— 29	—	—	11,000	163.95	—	—	—	—	—
—	—	22896	—	— 30	—	—	4,500	67.07	—	—	—	—	—
—	—	22897	—	— 32	—	—	12,000	178.86	—	—	—	—	—
—	—	22898/902	—	33—37	—	—	22,500	335.36	—	—	—	—	—
—	—	23061	1457	— 6	—	—	350,000	5,216.78	—	—	—	—	—
—	—	24973	1474	— 24	—	—	15,000	223.57	—	—	—	—	—
								$7,586.65					
								74.62					
								$7,512.03					

Oct. 2, 1905.

(Paid by Check
Oct. 2, 1905.
E. G. S. Cashier.)

Received Payment,
1905.

WM. H. LOUGHRAN,
Deputy Receiver of Taxes.

Note.—Figures in *Italics* in red figure.

7714

STATE'S EXHIBIT T.

For identification being 83 sheets of statements of station expenses by months for 1905. (Page 1712 of Record.)

(Here follows State's Exhibit U marked pp. 7715-7722.)

7723

STATE'S EXHIBIT V.

Sept. 11, 1906.

Items.	Expenditures to 5/31/06.	Estimated to complete.	Totals.
Real Estate	$1,132,558.28	$2,678.35	$1,135,236.63
Improvements on Real Estate:			
Grading and Filling	447,833.72	83,938.17	531,771.89
Piers and Bulkheads	171,929.79	79,682.25	251,612.04
Inclined Retort House:			
Size, 125′ 7″ x 542′ 4″ x 43′ 7″	378,272.16	46,406.94	424,679.10
Contains: 64 Benches each of 9 Retorts 20′ long. Retorts 22½″ x 15¾″ at upper end by 25″ x 15¾″ at lower end. House rated at 10,000,000 cu. ft. per 24 hours.			
Coal and Coke Handling Machinery, Storage Bins, etc.			
Cost of Contents	977,164.53	94,627.41	1,071,791.94
East Purifier House:			
Size, 102′ 0″ x 300′ 0″ x 30′ 4″	152,390.39	7,040.09	159,430.48
Contents: Purifying Apparatus complete, Piping, etc.	189,998.15	10,144.65	200,142.80
East Condenser House:			
Size, 76′ 0″ x 86′ 5″ x 38′ 8″	23,458.48	2,501.55	25,960.03
Contents: Condensers, Rotary Scrubbers, Piping, etc.	74,372.54	9,033.18	83,405.72
East Tar Extractor & Washer House:			
Size, 74′ 8″ x 132′ 0″ x 39′ 1″	26,608.78	15,356.46	41,965.24
Contents: Tar Extractors, Napthaline & Cyanogen Washers, with Piping, etc.	58,426.10	66,191.69	124,617.79
Exhauster House:			
Size, 57′ 0″ x 104′ 0″ x 27′ 8″	23,772.41	2,008.07	25,780.48
Contents: Engines, Exhausters, Compressors, Piping, etc.	29,822.47	10,606.50	40,428.97
Forward	$3,686,607.80	$430,215.31	$4,116,823.11

7724 *Forward*	$3,686,607.80	$430,215.31	$4,116,825.11
Meter House:			
Size, 53′ 10″ x 73′ 4″ x 34′ 3″	19,388.78	4,335.31	23,723.99
Contents: Meters, Piping, etc.	6,229.07	34,405.55	40,634.62
Tar Tanks (underground):			
First—85′ 0″ x 21′ 6″ x 14′ 8″ Second 30′ 0″ x 80′ 9″ x 11′ 8″	8,745.73	1,500.00	10,245.73
Ammonia Tanks (underground):			
First—85′ 0″ x 156′ 6″ x 14′ 8″ Second 30′ 0″ x 38′ 3″ x 11′ 8″	30,938.98	5,000.00	35,938.98
East Holder:			
Tank 300′ 0″ diam. x 48′ 3″ deep. Capacity of holder 15,000,000 cu ft., steel work of holder not included.	117,396.19	186,500.00	303,896.19
Horizontal Retort House:			
Size, 141′ 7″ x 489′ 3½″ x 42′ 0″	259,816.03	42,488.00	302,304.03
Contains 60 benches of 8 retorts each. Retorts 16″ x 26″ x 21′ 9″. House rated at 10,000,000 cu. ft. per 24 hours.			
Coal and Coke Handling Apparatus, charging and discharging machinery, storage bins, etc. Cost of contents	679,691.74	253,599.35	933,291.09
West Purifier House:			
Size, 102′ 0″ x 300′ 0″ x 38′ 4″	117,487.58	7,065.70	124,553.28
Contents—Purifying Apparatus complete with piping, etc.	190,673.34	10,304.41	200,977.75
West Tar Extractor & Washer House:			
Size, 74′ 8″ x 132′ 0″ x 39′ 1″	26,640.57	15,534.94	42,175.51
Contents—Tar Extractors, Naphthaline and Cyanogen Washers, Piping, etc.	59,432.57	67,280.44	126,713.01
Forward	$5,203,048.38	$1,058,228.91	$6,261,277.29

Items.	Expenditures to 5/31/06.	Estimated to complete.	Totals.
7725 *Forward*	$5,203,048.38	$1,058,228.91	$6,261,277.29
West Holder:			
Tank 300′ 0″ dia. x 48′ 3″ deep. Capacity of Holder, 15,000,000 cu. ft.	590,336.24	329,463.76	919,800.00
Boiler House:			
Size, 54′ 0″ x 94′ 0″ x 30′ 0″	20,899.94	1,048.06	21,948.00
Contents:			
Boilers, Feed Water Heaters, Pumps, Breeching, Piping, etc.	28,177.41	9,763.56	37,940.97
Chimney, complete	4,921.53	....	4,921.53
General Connections:			
30″, 36″ and 48″ Gas Piping, Salt Water, Sewer, Tar, Ammonia Piping, etc.	43,966.51	43,248.39	87,214.90
Electric Power House:			
Size, 106′ 8″ x 194′ 1″ x 35′ 6″	26,033.24	127,966.76	154,000.00
Tools and Implements	24,735.34	15,000.00	39,735.34
Office Furniture and Fixtures	2,322.84	8,000.00	10,322.84
Boats and Scows	2,075.87	5,000.00	7,075.87
Horses, Wagons & Harness:			
Permanent use	2,853.03	10,000.00	12,853.03
Permanent Fresh Water System:			
Wells, Pumps, Tower, etc	16,231.84	44,487.32	60,719.16
Totals	$5,965,602.17	$1,652,206.76	$7,617,808.93

7726

COMPLAINANT'S EXHIBIT 224.

CONSOLIDATED GAS CO. OF N. Y.

Miscellaneous Income.

Calendar Year 1905.

Gas stove rents	$122,322.60	
Discounts	9,497.57	
Real estate rents	37,408.88	
Sundry items	3,481.48	
		$172,710.53

Nominal Year ending Oct. 31st, 1905.

Gas stove rents	$120,768.66	
Discounts	9,103.21	
Real estate rents	37,338.36	
Sundry items	3,556.23	
		$170,766.40

[Complainant's Exhibits 225 and 226 and 228 to 234, inclusive, extracts from affidavits. See testimony of Robert A. Carter, pages 1897 to 1926 of testimony.]

COMPLAINANT'S EXHIBIT 225.

[Extract from affidavit of Robert A. Carter.]

The Senate Committee of 1886, Senate Document 47 of that year, completely sustained the valuation of the company's assets at the time of consolidation, as above appears. They had before them on their investigation, lasting nearly a year, substantially every person connected with the consolidation and were able to learn at first hand and on the spot all the facts in regard to amount and character of property and its value. The same data is not accessible to-day with the same fullness.

7727 As to the legislative committee of 1905 (known as the Stevens Committee) the resolution appointing it contained no provision authorizing the companies interested to be heard or to produce evidence or examine witnesses or participate in any way. Said Committee did not recognize at any stage the right of the Companies to participate by counsel, this company's participation being confined to such brief additional questioning or data as the courtesy of the Committee permitted. The investigation covered such a vast field and was conducted with such haste, limited in taking its testimony to less than three weeks altogether, that the elements entering into the question could be neither fully presented nor deliberately considered by said Committee, several members of which were absent from illness or other cause during a great part of the Committee's sittings. This company was not permitted to address the Committee at the conclusion of the investigation, nor did the Committee have time or opportunity to consider written memoranda submitted, prior to preparation of its report to the Legislature.

We hazard nothing in saying that the members of the Committee themselves will concede the insufficiency of the time at their disposal thoroughly and in detail to investigate, weigh and determine such important matters. The result was that, upon some most material points, no evidence at all was before the Committee; upon other points evidence was in such incomplete shape that the situation was gravely misapprehended or misconstrued by the Committee. Said Committee fell into the error of taking the figures of the tax report of the company as representing the actual value of the company's assets as a going concern or as the company's invest-7728 ment therein; and furthermore, said tax report as summarized by said committee included none of the cash working capital of the company, none of the accounts receivable which formed part of its capital, no part of Astoria investment, and took no note of other assets of great value.

The Gas Commission of the State of Massachusetts consumed more than a year in 1904-5 in consideration of the capitalization and cost of making gas as to the Boston companies alone.

As to the action and report of the Gas Commission filed February 23rd, last, in favor of 80 cent gas, it will be observed that said Commission in their estimate of the value of the company's property wholly excluded its working capital of $1,000,000 and its accounts receivable of $2,000,000, to say nothing of its investment at Astoria then amounting to nearly $6,000,000, its franchises capitalized under express authority of the Act of 1884 and other items of great value.

No sooner had said Commission begun its investigation than certain journals of the City of New York declared and reiterated in caustic terms that said Commission had no other duty to perform than to report in favor of "80 cent gas" as recommended by the Stevens Committee, and criticised said Commission in unmeasured terms for not at once so reporting. Before the petitioners in favor of the reduction of the charge for gas had completed their case, and before this complainant in defense had had an opportunity to present a word of evidence, the Governor of the State of New York (whose appointees the members of said Commission are) recommended in his message the passage of an act reducing the price of gas to eighty cents; promptly thereafter the Senator from New York who was then chief counsel for said petitioners before said Commis-7729 sion, introduced a bill to reduce said rate to eighty cents, being substantially the bill which finally passed. And finally, when it was rumored that the Commission did not see its way clear to reduce the rate to eighty cents, a bill was introduced in the Legislature by Senator Stevens, Chairman of the Legislative Committee of 1905, to abolish the Commission.

Thus the minds of the Commission from the very outset, instead of being left free to flow to a natural and unbiased conclusion upon the evidence, were at every step and by every influence pressed toward a finding which would justify the report of the Stevens Committee; and thus the complainant instead of receiving that fair and unprejudiced hearing to which it was entitled, suffered grave prejudice and has never received that judicial consideration of its property rights in behalf of which it has sought the interposition of this honorable Court.

COMPLAINANT'S EXHIBIT 226.

[Extract from affidavit of Robert A. Carter.]

2. In 1885 the Senate of the State of New York appointed a Committee of three to investigate the "consolidation and capitalization" of the six Companies so uniting, with direction to report to the next session of the Legislature whether the provisions of Chapter 367 of the Laws of 1884 had been "evaded, disregarded or in any manner violated and whether the said consolidation has been capitalized on the said basis of 'the fair aggregate value of the property, franchises and rights' of its constituent Companies or otherwise."

7730 This Committee made a most exhaustive examination of the subject referred to them; they employed an expert accountant; they had, by subpœna, Mr. Rowland and substantially every one else connected with the constituent Companies or the Consolidated Company before them upon the subject of valuations and method of consolidation, and after consuming an entire year they reported to the Legislature of 1886.

After a review of the situation, the majority report proceeds as follows:

"Under the law of 1884 the capital stock may be $39,000,000 (provided the fair aggregate value of their property, franchises and rights are equal to that amount) and could not be any more than that, had the aggregate amount of their capital stock been $50,000,000. Nor under this law does it make any difference what the property, franchises and rights may have cost the constituent Companies, whether one, five, fifteen or fifty millions. The capital stock of the new Company may still equal but must not exceed the fair aggregate value of the property, franchises and rights of these Companies at the time of the consolidation. To ascertain this value * * * your Committee with the aid of an expert made a thorough examination of the books of the constituent Companies from the time of their formation and examined many witnesses as to the value of the property and basis of consolidation."

After referring to the appraisal of the tangible property of the constituent Companies at $29,994,000 and the valuation of the franchises at $7,781,000, making, with $1,303,000 for working capital, a total of $39,078,000, the Committee proceeds:

"The question for your Committee to examine was, was this capitalization thus obtained more than the fair aggregate value of the

property, franchises and rights of the constituent Compa-
7731 nies at the time of the consolidation? The street mains,
valves, meters, services, plant, office building, office furniture, laboratories appear to have been appraised at the value of what it would cost to reproduce them at the time of the consolidation; and there is no evidence that any of these items were appraised too high, except the evidence of the expert, Mr. Yaldon, who finds that they were valued higher than they appear to have been charged as costing in the Companies' books."

The Committee then refers to the valuation of the real estate, bulkheads, piers and water rights, with opinions of real estate dealers, and thereupon continues.

"If the above basis is a correct one, then the aggregate value of the real estate and plants of the several Companies, given at $29,994,000, is not too high. Indeed, the objections to the capitalization do not appear to be so much to the valuation of the gas plant, mains, real estate, etc., as it does to their having capitalized nearly eight millions of dollars as the value of their franchises. * * * But it is a fact that the law of 1884, under which these Companies consolidated, expressly authorized this to be done, so that the only question left to your Committee to examine and report was:

1. Did these Companies have franchises?

2. If they had, were they capitalized at their fair aggregate value?"

After referring to the character of the franchises "including the privilege of laying their mains in the king's highway," and their recognition by the courts as property, the Committee goes on:

"Thus the question for your Committee to decide was this: Was the $7,781,000 more than the fair aggregate value of the franchises and rights of these six Companies? We are forced to the
7732 conclusion that it was not; that the franchises of the New
York, Manhattan, Metropolitan and Municipal were worth much more than that sum, and if these companies saw fit to give a part value of their franchises to the stockholders of the Harlem and Knickerbocker, it was a matter that interested only the stockholders of these Companies.

Your Committee therefore is compelled to report that they have found nothing in the organization which is contrary to the law under which it was effected, unless there should have been an overvaluation of property, and as to that the difficulties attending the determination of such a question are so great that your Committee believe that any attempt to upset such valuation would be futile.

The stock has been issued and circulated and by virtue of law; about one-sixth of it is held by innocent holders, and nothing but the clearest proof of fraud and violation of the law by virtue of which it was issued, would justify any attempt to render such stock worthless. We are compelled to say that we have not been able to find such proof. If injustice has been done to the gas consumers of New York City, it was done by the Legislature in passing a law allowing the consolidation to be effected in this manner. These companies did simply what the law expressly said they might do."

The conclusions of this Senate Committee, submitted to the Legislature in 1886, were accepted as closing the case. They were acquiesced in without question for twenty years, and the stock of the company has been passing from hand to hand in reliance upon the provisions of the Act of 1884 which authorized the capitalization of the complainant company at the *then value* of its property and franchises, and upon the finding of said Committee that such provisions had not been violated.

7733 COMPLAINANT'S EXHIBIT 228.

[Extract from Affidavit of Walton Clark.]

6. As a result of my experience, it is my opinion that a rate should not be fixed which will necessitate a lower return than ten per cent. upon the investment in new gas works in New York City.

COMPLAINANT'S EXHIBIT 229.

[Extract from Affidavit of Emerson McMillin.]

5. I am fairly familiar with the market values of the stocks and bonds of gas companies engaged in business in the City of New York, and of other cities in this and other states. Many of these securities here and elsewhere have, in the past, sold above par, and have paid a low rate on the investment. But in such cases, the prices have been based on the assumption of perpetual franchises, or of such consideration by public authorities, as to warrant the belief that the property will continue to be treated with the same consideration and right and protection as is accorded to other classes of investments. Where these conditions do not apply, investors will not be satisfied with less than a ten per cent. basis of earnings, even though a much lower rate of dividend may be paid. Even before the recent disturbances relating to public utility corporation securities, but few gas or electric company securities would sell at par when the net earnings were less than ten per cent. on the investment. Of some ten or more companies purchased, through my direction, since the year 1900, none were purchased on less than a nine per cent. basis of net earnings, and the average cost of all these companies was above a ten per cent. basis on net earnings. In several instances, the Companies had per-
7734 petual franchises, and in two instances, perpetual and exclusive franchises. The stock of the largest company with which I am connected (capital paid up more than $20,000,000), sells on a basis of about par for ten per cent. net earnings.

6. The popularity of public utility corporations has, in a large measure, been due to the prospective rapid growth in urban population, and the fact that such growth made it possible for these companies to rapidly reduce prices of the salable product and at the same time increase, in a marked degree, the earnings on the investment. In England, this feature has been encouraged by the Government,

through permitting gas companies not only to earn ten per cent., but to pay ten per cent. dividends, and to increase the dividends above ten per cent., provided the companies gave to their patrons, in the way of reduction in price, a designated proportion (I do not recall the figures) of the earnings above ten per cent. In addition to the encouragement named above, the Government discourages opposition companies. This discouragement amounts, practically, to exclusion.

6. The risks and hazards connected with the business of manufacturing and supplying illuminating gas in the City of New York are constantly increasing, owing to a variety of causes. The construction of subways, for instance, is likely to continue for many years, and as I am informed and believe, the City intends, shortly, to commence the laying of new and larger water mains. Work of this character not only increases the danger from explosions, due to the necessary interference with the gas mains, causing the escape of gas, but it adds materially to the cost of operation due to loss of gas through broken pipes and to the expense of using and repairing mains. The extension in the use of electricity for light and
7735 power and traction purposes also involves an increase in the risk from explosion, not only owing to the greater possibility of igniting any escaping gas, but also to the physical injury caused to the gas mains from electrolytic action, causing the disintegration of the iron of which the mains are made. The electric companies also enter into direct competition with the gas companies in the lighting business. The substitution to an increasing extent of asphalt for stone paving also adds to the cost of laying, removing and repairing the pipes of gas companies in the streets, and to the cost of finding and repairing leaky pipes; while the recent special taxation of the franchises adds a new and very heavy burden of expense to gas corporations engaged in business in the City of New York.

7. I have been a resident of New York for about fifteen years and have a general knowledge of the Consolidatd Gas Company and its relation to the consumers in the City of New York. Having due regard to the risks and hazards hereinbefore referred to in Paragraph 6, I am of the opinion that a reasonable price to be charged for its product would be such as would ensure net earnings of at least ten per cent. per annum on the investment. Underlying securities can be maintained at about par, when drawing a low rate of interest, only through the expenditure of a portion of net earnings in extensions, additions and improvements. To fix prices that would not permit such earnings to be made would be *pro tanto* a deprivation of its rights to earn upon its property and franchises fair and reasonable compensation in proportion to the special hazards hereinbefore referred to.

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COMPLAINANT'S EXHIBIT 229*a*.

CONSOLIDATED GAS CO. OF N. Y.

SALES OF GAS MADE AT CONSOLIDATED AND OUTSIDE COMPANIES FOR THE FOUR MONTHS ENDING OCTOBER 31, 1905.

		Sales.	Amount.	Cost Per M.
Consolidated	Make....	2,749,661,355	$978,823.65	35.60
New Amsterdam	"	696,408,934	244,165.71	35.06
Standard Co.	"	112,885,410	38,780.17	34.35
Mutual Co.	"	45,944,347	17,015.28	37.03
Central Union	"	25,052,665	8,606.73	34.35
Total		3,629,952,711	$1,287,391.54	35.47

COMPLAINANT'S EXHIBIT 230.

[Extract from Affidavit of Allan B. Forbes.]

6. In the case of gas and electric companies and other public utility corporations, of which class of securities I have a wide knowledge, one of the first considerations to an investor is the duration and security of the franchises and the probability of being able to utilize for an extended period whatever natural facilities there may be for expansion and improvement without undue interference or harassing competition. It is only where these questions can be satisfactorily answered that a public utility corporation will be favorably regarded as an investment, even if its present rate of earnings is fully equal to 10 per cent. net upon the reasonable value of its property over and above all interest, taxes and other fixed charges.

7737

COMPLAINANT'S EXHIBIT 231.

[Extract from Affidavit of Charles S. Fairchild.]

2. I have read the affidavit of Allen B. Forbes herein, verified on May 4, 1906. The statements therein contained with reference to the returns obtainable from investments of various kinds are true and conservative, according to my own experience. The business of manufacturing and supplying illuminating gas in the City of New York is subject to such wide fluctuations and involves such special risks and hazards, that, in my judgment, capital could not be secured for establishing a business of that kind, in the city of New York, which did not yield a return of about 10 per cent. per annum upon the fair value of the property of the company engaged in the business.

COMPLAINANT'S EXHIBIT 232.

[Extract from Affidavit of Frank A. Vanderlip.]

2. I have read the affidavits of Emerson McMillin and Allen B. Forbes herein, verified on April 30, 1906, and May 4, 1906, respectively. The statements therein contained with reference to the returns obtainable from investments of various kinds are true and conservative, according to my own experience. The business of manufacturing and supplying illuminating gas in the City of New York is subject to such wide fluctuations and involves such special risks and hazards, that, in my judgment, capital could not be secured for establishing a business of that kind, in the City of New York, which did not yield a return of about 10 per cent. per annum upon the fair value of the property of the company engaged in the business.

7738 COMPLAINANT'S EXHIBIT 233.

[Extract from Affidavit of Horace J. Morse.]

2. I have read the affidavit of Allen B. Forbes, herein, verified on May 4, 1906. The statements therein contained with reference to the returns obtainable from investments of various kinds are true and conservative, according to my own experience. The business of manufacturing and supplying illuminating gas in the City of New York is subject to such wide fluctuations and involves such special risks and hazards, that, in my judgment, capital could not be secured for establishing a business of that kind, in the City of New York, which did not yield a return of at least 10 per cent. per annum upon the fair value of the property of the company engaged in the business.

COMPLAINANT'S EXHIBIT 234.

[Extract from Affidavit of N. Wetmore Halsey.]

3. I have read the affidavit of Allen B. Forbes herein, verified on May 4, 1906. The statements therein contained with reference to the returns obtainable from investments of various kinds are true and conservative, according to my own experience. The business of manufacturing and supplying illuminating gas in the City of New York is subject to such wide fluctuations and involves such special risks and hazards, that, in my judgment, capital could not be secured for establishing a business of that kind, in the City of New York, which did not yield a return of at least 10 per cent. per annum upon the fair value of the property of the company engaged in the business.

E BOUND VERTICAL IN BOOK

7739

COMPLAINANT'S EXHIBIT 235.

SUMMARY OF ASTORIA ESTIMATES, 9/11/06.

Items.	Expenditures to 5/30/06.	Estimated to complete.	Totals.
Items requested by Mr. Page	5,965,602.17	1,652,206.76	7,617,808.93
" not requested by Mr. Page	767,177.08	3,634,308.92	4,327,930.67
	6,732,779.25	5,286,515.68	11,945,739.60
Items not included in above, but required for complete plant:			
Cover for Coal Storage		400,000.00	400,000.00
60″ Main and Ravenswood Pumping Station		620,000.00	620,000.00
Gas Pumping Station at Astoria		90,000.00	90,000.00
48″ Piping		40,000.00	40,000.00
Paving		25,000.00	25,000.00
Office		50,000.00	50,000.00
Shops		40,000.00	40,000.00
Storage for Tar, Ammonia, etc.		40,000.00	40,000.00
	6,732,779.25	6,591,515.68	13,250,739.60
Original Estimate			13,134,519.65
			116,219.95

NOTE:—The sum of columns Nos. 1 and 2, differ from the total as given in column 3 by $73,555.33, made up as follows:

Material and Supplies	$48,555.33
Advanced on account of Contracts	25,000.00

both of which are "Suspense Accounts" which will finally be closed out.

7740 ITEMS NOT COVERED BY MR: PAGE'S INQUIRY.

Items.	Expenditures to 5/31/06.	Estimated to complete.	Totals.
New Fences	7,521.05	4,500.00	12,021.05
Land Drainage System	22,611.74	14,717.12	37,328.86
Hoisting Apparatus	7,753.51	1,000.00	8,753.51
Engineering Department	131,909.91	50,009.07	181,918.98
Railroad	18,920.10	4,613.09	23,533.19
Railroad Equipment	13,035.54	2,045.34	15,080.88
Astoria Tunnel	13,102.57	2,636,897.43	2,650,000.00
Coal Handling Machinery, (Unloading Towers)	3,942.54	228,563.68	232,506.22
Railway System, Coal (Standard Gauge).	1,405.10	83,769.00	85,174 10
Coal Handling Machinery:			
Adjacent to Inclined Retort House	31,209.96	51,609.13	82,819.09
Adjacent to Horizontal Retort House	31,914.31	55,611.99	87,526.30
Tar Tanks Underground:			
Pump House Building	2,381.41	3,132.34	5,513.75
Ammonia Tanks Underground:			
Pump House Building	2,489.92	3,659.15	6,149.07
Coke Handling Apparatus:			
Adjacent to Inclined Retort House	2,073.27	72,429.47	74,502.74
Adjacent to Horizontal Retort House	1,229.85	70,030.87	71,260.72
*Materials and Supplies	48,555.33		
Temporary Structures	24,015.88	1,000.00	25,015.88
Repairs to Hoisting Apparatus	2,091.23	1,083.65	3,174.88
Repairs to Water Plant and Mains	3,345.61	300.00	3,645.61
Repairs to Docks and Sea Walls	246.53	....	246.53
Repairs to Tools and Implements	6,405.61	3,416.21	9,821.82
Repairs to Railroad & Equipment	12,342.29	5,858.70	18,200.99
Repairs to Boats	52.12	124.91	177.03
Repairs to Temporary Structures	1,908.08	637.38	2,545.46
Repairs to Buildings	5,122.59	7,000.00	12,122.59
	$395,586.05	$3,302,008.53	$3,649,039.25

*Item of "Materials and Supplies" will be finally wiped out.

7741 *Forward*	$395,586.05	$3,302,008.53	$3,649,039.25
Repairs to Permanent Fresh Water System	58.88	563.66	622.54
General Expense	30,133.96	6,964.99	37,098.95
West Condenser House	24,155.92	2,345.92	26,501.84
West Condenser House Contents	75,409.89	8,061.55	83,471.44
Office Expenses	19,429.83	7,217.11	26,646.94
Stable Expenses	6,409.06	1,414.68	7,823.74
Handling Cement	7,259.70	4,000.00	11,259.70
Storeroom Expense	3,449.28	1,500.00	4,949.28
Sundry Expense at Astoria	74,489.16	17,167.10	91,656.26
Insurance	15,969.70	5,000.00	20,969.70
Legal Expense	26,946.75	5,000.00	31,946.75
Taxes	57,878.90	9,000.00	66,878.90
Securities, Stocks and Bonds of other Companies	5,000.00		5,000.00
*Advanced on account of Contracts	25,000.00		
General Electric Distribution		40,013.63	40,013.63
Electric Power Station Contents		149,818.75	149,818.75
Coke Handling, Railway System		74,233.00	74,233.00
Totals	$767,177.08	$3,634,308.92	$4,327,930.67

*Item of $25,000.00 "Advanced on account of Contracts" is included in columns Two and Three in other forms.

7742
COMPLAINANT'S EXHIBIT 236.

COMPTROLLER'S CERTIFICATE.

THE CITY OF NEW YORK, *July* 6, 1904.

In pursuance of the provisions of Section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation Department of Water Supply, Gas and Electricity, Boroughs of Manhattan and The Bronx, lamps and lighting for 1904 applicable to this contract, sufficient to pay the estimated expense of executing the same, viz.: $500,000.00.

J. W. STEVENSON,
Deputy and Acting Comptroller.

O. K.
A. BEEKMAN.

COMPLAINANT'S EXHIBIT 237.

Series 1906.

No. 142.

[Certificate B.—Notice to Clerk of City or Town of Statement of Valuation of Special Franchise.]

OFFICE OF STATE BOARD OF TAX COMMISSIONERS.

ALBANY, N. Y., *March* 28, 1906.

To the Dept. of Taxes & Assessments, N. Y. City:

The State Board of Tax Commissioners has fixed and determined the valuation of the special franchise of the Consolidated Gas Company of New York, 4 Irving Place, New York City, for the 7743 year 1906, in and for the City of New York, Borough of Manhattan, in the County of ——, at the sum of $31,900,000, which valuation is fixed and determined as the assessed valuation of such special franchise in such tax district for purposes of taxation, as provided by Section 42 of the Tax Law, during the next ensuing year, which sum is to be entered by the assessors in the proper column in the tax roll *and you are required by the same section to deliver a certified copy of this statement to the assessors of your tax district within five days after receipt of this notice.*

Yours very truly,
STATE BOARD OF COMMISSIONERS,
By PETER DEYO, *Secretary.*

Lot 12.

COMPLAINANT'S EXHIBIT 238.

Section 522 of the Charter of the Greater New York, Laws of 1901, providing a penalty for failing to maintain a candle-power of twenty candles.

COMPLAINANT'S EXHIBIT 239.

Chapter 651 of the Laws of 1866, being an act to incorporate the New York City Mutual Gas Light Company.

COMPLAINANT'S EXHIBIT 97.

Original Operating Ledger from which compilations of results in 1905 were presented in Exhibit 94. Formerly marked Complainant's Exhibit 97 for Identification.

7744

COMPLAINANT'S EXHIBIT 240.

FOURTEENTH STREET STATION.

Record of Consolidated Gas Company for 1905 of the material used, etc.

COMPLAINANT'S EXHIBIT 241.

FORTY-SECOND STREET STATION.

Record of Consolidated Gas Company for 1905 of the material used, etc.

COMPLAINANT'S EXHIBIT 242.

FORTY-SECOND STREET STATION.

Record of Consolidated Gas Company for 1905 of the material used, etc.

COMPLAINANT'S EXHIBIT 243.

TWENTY-FIRST STREET STATION.

Record of Consolidated Gas Company for 1905 of the material used, etc.

COMPLAINANT'S EXHIBIT 244.

FORTY-FOURTH STREET STATION.

Record of manufacture of station for 1905.

GAS MADE FOR CONSOLIDATED

	New Amsterdam Gas Company.			Standard Gas	
	Cubic Feet.	Per M.	Amount.	Cubic Feet.	P
Nov	210,249,100	37.73	$79,317.15	27,151,600	3
Dec	239,374,400	39.74	95,121.47	29,077,400	4
Total	449,623,500	38.80	$174,438.62	56,229,000	3

The net quantity of gas made for Consolidated Gas Co. under Agency Agr
net quantity for each month is calculated on the average ratio of sales to make for

COMPLAINANT'S EXHIBIT 255.

DE FOR CONSOLIDATED GAS CO. UNDER AGENCY AGREEMENTS (NET) FOR THE MONTHS OF NOVEMBER AND DECEMBER, 1905.

	Standard Gas Light Company.			Mutual Gas Light Company.			Central Union Gas Company			Total.		
t.	Cubic Feet.	Per M	Amount.	Cubic Feet.	Per M.	Amount.	Cubic Feet.	Per M.	Amount.	Cubic Feet.	Per M	Amount.
5	27,151,600	36.50	$9,910.78	15,238,900	37.02	$5,637.90	8,352,800	40.09	$3,348.68	260,992,400	37.63	$98,214.51
7	29,077,400	40.01	11,635.04	17,052,000	37.94	6,469.79	8,892,000	38.94	3,462.29	294,395,800	39.64	116,688.59
2	56,229,000	38.32	$21,545.83	32,290,900	37.49	$12,107.69	17,244,800	39.50	$6,810.97	555,388,200	38.69	$214,903.10

d Gas Co. under Agency Agreements in the months of November and December, 1905, is calculated on the ratio of sales to make for the given months. In Exhibit 105 (Gas Commission hearing) the
ge ratio of sales to make for the nominal year ending October 31st, 1905.

CITY'S EXHIBIT 31.

SUMMARY OF THE ACCOUNTS OF THE CONSTITUENT COMPANIES OF THE CONSOLIDATED GAS LIGHT COMPA

Name of Company.	Amount paid by Consolidated Company for property.	Cost of property.	Appreciation of profit.	Stock issued by Consolidated Co. in payment of property.	Liabilities assumed by Consolidated Co., bonds, interest, taxes, dividends, etc.	Cash paid by Consolidated Company.	Balance due by Consolidated Company unsettled.
Manhattan	$11,966,461.60	$4,872,999.49	$7,093,462.11	$11,940,000	$590,724.08	$30,016.70	
New York	7,560,000.00	4,630,642.03	2,929,357.97	7,600,000	131,741.76	108,694.51	$1,000
Metropolitan	7,175,000.00	5,292,175.35	1,882,824.65	6,500,000	825,763.46	23,753.46	
Municipal	5,100,000.00	4,092,347.86	1,007,652.14		402,410.33		30,000
Knickerbocker	3,000,000.00	810,481.15	2,189,518.85	6,600,000	1,175,271.48	236,565.72	
Harlem	3,025,803.49	1,243,986.97	1,781,816.52	2,840,000	289,239.65	49,466.28	
	$37,827,265.09	$20,942,632.85	$16,884,632.24	$35,480,000	$3,415,150.76	$448,496.67	$31,000

Manhattan—The Consolidated Company assumed liabilities of the Manhattan Company to the amount of $620,740.78 (including cash paid by it) and received assets amounting to only $594,279.18, leaving a difference in favor of the Manhattan Company of $26,461.60, which is entered as an additional profit on the transfer of property, etc., over the appraised value of $11,940,000.

Harlem—The Consolidated Company assumed liabilities of the Harlem Company to the amount of $338,705.93 (including $170,000 bonds and $49,466.28 cash paid by it) and received assets amounting to $312,902.44, only including $170,000 consolidated stock withheld, leaving a difference of $25,803.49 in favor of the Harlem Company, which is entered as an additional profit on the transfer of the property over the appraised value of $3,000,000.

Harlem—The amount of stock actually issued by the Consolidated Company was $2,840,000—$10,000 more than the original allotment, for which difference the Consolidated Company received 140 shares of the Harlem Gas Light Company stock.

CITY'S EXHIBIT 31.

CCOUNTS OF THE CONSTITUENT COMPANIES OF THE CONSOLIDATED GAS LIGHT COMPANY OF NEW YORK—(Continued).

Cost of property.	Appreciation of profit.	Stock issued by Consolidated Co. in payment of property.	Liabilities assumed by Consolidated Co., bonds, interest, taxes, dividends, etc.	Cash paid by Consolidated Company.	Balance due by Consolidated Company unsettled.	Total.	Less assets taken over.	Balance, being amount of purchase money.
$4,872,999.49	$7,093,462.11	$11,940,000	$590,724.08	$30,016.70		$12,560,740.78	$549,279.18	$11,966,461.60
4,630,642.03	2,929,357.97	7,600,000	131,741.76	108,694.51	$1,000	7,841,436.27	281,436.27	7,560,000.00
5,292,175.35	1,882,824.65	6,500,000	825,763.46	23,753.46		7,349,516.92	174,516.92	7,175,000.00
4,092,347.86	1,007,652.14		402,410.33		30,000	8,444,247.53	344,247.53	8,100,000.00
810,481.15	2,189,518.85	6,600,000	1,175,271.48	236,565.72		3,178,705.93	142,902.44	3,025,803.49
1,243,986.97	1,781,816.52	2,840,000	289,239.65	49,466.28			10,000.00	
$20,942,632.85	$16,884,632.24	$35,480,000	$3,415,150.76	$448,496.67	$31,000	$39,374,647.43	$1,547,382.34	$37,827,265.09

any assumed liabilities of the
20,740.78 (including cash paid
ly $594,279.18, leaving a differ-
of $26,461.60, which is entered
roperty, etc., over the appraised

y assumed liabilities of the
5.93 (including $170,000 bonds
received assets amounting to
lidated stock withheld, leaving
Harlem Company, which is en-
nsfer of the property over the

lly issued by the Consolidated
than the original allotment, for
any received 140 shares of the

COMPLAINANT'S EXHIBIT 245.

NINETY-NINTH STREET STATION.

Record for 1905.

7745 COMPLAINANT'S EXHIBITS 246 AND 247.

Portions of Sundry Debtor's Blotters Nos. 13 and 14 relating to the City's account and the sale of residuals, scrap and other material relating to the production of gas for year 1905.

COMPLAINANT'S EXHIBIT 100.

Portion of Sundry Debtor's Ledger No. 3, relating to the accounts of the City of New York on the sale of residuals, scrap and other items relating to the production of gas for the year 1905. (Formerly marked Exhibit 100 for Identification.)

COMPLAINANT'S EXHIBITS 248 AND 249.

Portions of Sundry Debtor's Blotters Nos. 11 and 12, relating to same matters, for same period, as above.

COMPLAINANT'S EXHIBITS 250, 251, 252.

Portions of Sundry Debtor's Ledger No. 2 and Sundry Debtor's Blotters Nos. 15 and 16, relating to the same accounts for the year 1905, as above.

COMPLAINANT'S EXHIBIT 253.

Trial Balance Sheet from Original Balance Book No. 5, for October 1, 1905, being on pages 92, 93 and 94.

COMPLAINANT'S EXHIBIT 254.

Record of Gas Sales No. 5, as covering sales for calendar year 1905.

COMPLAINANT'S EXHIBIT 98.

Operating Journal for year 1905. Formerly marked Complainant's Exhibit 98 for Identification.

(Here follows Complainant's Exhibit 255, marked p. 7746, and City's Exhibit 31, marked p. 7747.)

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CITY'S EXHIBIT 32.

CONTRACT FOR CAST-IRON RENTAL RANGES.

October 18, 1905.

PROPOSAL.

Chairman of the Executive Committee, Consolidated Gas Co. of New York, New York, N. Y.

Dear Sir:

In response to your kind invitation to bid on your cast-iron ranges, we beg to submit the following special prices:

On approximately 2,000, 16-inch oven, and 500, 18-inch oven cast-iron ranges we bid as follows:

F. O. B. Cars, Baltimore, Not Crated.		
16″ Oven, 4 Burner, C. I. Gas Ranges...........	$11.25	each net
18″ " " " " " "	13.25	" "
F. O. B. Cars in New York, in Car Lots, Not Crated.		
16″ Oven, 4 Burner, C. I. Gas Ranges...........	$11.75	" "
18″ " " " " " "	13.75	" "
F. O. B. Cars, Baltimore, Crated.		
16″ Oven, 4 Burner, C. I. Gas Ranges...........	$11.75	" "
18″ " " " " " "	13.75	" "
F. O. B. Cars, New York, in Car Lots, Crated.		
16″ Oven, 4 Burner, C. I. Gas Ranges...........	$12.20	" "
18″ " " " " " "	14.25	" "

It is understood you are to furnish us with a set of working patterns and follow-boards. Delivery of the above to be made during the year 1903 as you may hereafter instruct, and you to have the option of doubling the above quantity, if desired, within the year 1906, upon ninety days' notice. The above quotation is contingent upon accidents and strikes in our works and other occurrences beyond our control. If favored with your order, we feel that

7749 deliveries can be made as required, and we hope that our quotations will be sufficiently low to interest you.

Yours very truly,

—— ——.

Nov. 3, 1905.

Consolidated Gas Company of N. Y., New York.

Gentlemen:

Replying to your valued favor of the 2nd, concerning our quotation of October 18th on cast iron Gas Ranges. Our prices are really figured out on a 30 days' net cash basis. However, we will allow you 1% for cash within 10 days from date of invoices, and hope the special prices we are quoting will secure us your order. Awaiting your commands, we are

Yours truly,

—— ——.

CONSOLIDATED GAS COMPANY OF NEW YORK,

128 EAST 15TH ST., *Nov. 14th*, 1905.

GENTLEMEN:

In connection with your bid for supply of ranges, you say that you require "a set of working patterns." Kindly let us know at once what you consider constitutes a *SET* of working patterns. We have in our possession ONE SET of sixteen-inch patterns (fallow-boarded) which, as I understand it, is a foundry capacity for about fifteen ranges per day. In case our requirements are for sixty to seventy-five a day, what arrangements would you make about the extra patterns on the "slow running Parts." At Albany we
7750 have what we term a set of MASTER PATTERNS, *which*
are in wood. In running off working patterns from these they have been built up to the eighteen inch size, and as our requirements demanded, have been cut down to the sixteen inch size again. WE HAVE NO MASTER PATTERNS IN METAL. Kindly send your answer back by return of mail, and oblige,

Yours very truly,
—— ——, *Supt.*

Nov. 15, 1905.

SUBJECT: PATTERNS FOR RANGES.

Consolidated Gas Co. of New York, Mr. William J. Clark, Supt.

DEAR SIR:

Replying to your favor of the 14th instant concerning working patterns for Ranges, *one complete set of iron patterns*, fallow-boarded, would enable us to produce approximately 15 complete ranges per day; if a greater number is required it would be necessary to have additional patterns and fallow-boards, which we could produce ourselves if you would ship us the wood master patterns, charging you with the actual cost of casting, finishing and fallow-boarding duplicate iron patterns, or you could have these duplicate iron patterns produced elsewhere, and forwarded to us as you prefer.

You have not as yet definitely advised us as to whether we have been awarded the order for ranges, but we have inferred from the recent correspondence that our estimate has been accepted, and we trust in the event of your placing the order with us you will give us all the time possible to get out the goods and furnish us with sufficient patterns so as to make them to good advantage. Awaiting your further orders regarding above, we are

—— ——.

7751

CITY'S EXHIBIT 33.

CONTRACT FOR GAS RANGES.

Nov. 23rd, 1905.

Mr. W. R. Addicks, Vice-President, Consolidated Gas Co. of New York, No. 4 Irving Place, New York.

Dear Sir:

Referring to my quotation of yesterday, the 22nd inst., would request that you change the price named to read $11.63, or in other words, we now beg to quote you a net cash price of $11.63, ten days, F. O. B. New York on Ranges No. 16 on an order for four thousand (4000) ranges with an option to you of taking an additional four thousand (4000) during the year 1906.

Yours very truly,

—— ——.

CONTRACT FOR GAS RANGES.

Nov. 22nd, 1905.

Mr. W. R. Addicks, Vice-President, Consolidated Gas Co. of New York, No. 4 Irving Place, New York.

Dear Sir:

Referring to our conversation of the 21st, I herewith hand you a net cash price of $11.87, ten days, F. O. B. New York, on Ranges No. 16; this being my understanding of a 3 per cent. discount upon the price quoted you of $12.24 on an order for four thousand (4000) ranges, with an option to you of taking an additional four thousand (4,000) during the year 1906.

Yours very truly,

—— ——.

7752

CONTRACT FOR GAS RANGES.

Oct. 30th, 1905.

Chairman Executive Committee, Consolidated Gas Co. of New York, New York, N. Y.

Dear Sir:

In accordance with request of your Purchasing Agent, Mr. North, we quote you as follows on furnishing to your Company,

2,000 No. 16 Gas Ranges.
500 No. 18 " "

for 1906 delivery to be made in a first-class manner, same as heretofore furnished you. All ranges to be tested before leaving our Works to a pressure of nine (9) pounds to insure against imperfect pipe and couplings and the whole to be made in a first-class workmanlike manner.

Prices F. O. B. New York via Boat or Rail.	
No. 16 cast iron Gas Range	$12.24
No. 18 " " " "	$13.49
Prices F. O. B., crated.	
No. 16 cast iron Gas Range	$12.35
No. 18 " " " "	$13.60
Prices F. O. B., uncrated.	
No. 16 cast iron Gas Range	$12.00
No. 18 " " " "	$13.25

Terms: 60 days, with 2 per cent. off 10 days.

We also agree to furnish you in addition, on ninety days' notice, during the year 1906, at the same prices and terms,

2,000 No. 16 cast iron Gas Ranges.
500 No. 18 " " " "

or any part of that number you may elect.

In presenting our proposal we wish to call your attention to the fact that we have been manufacturing your ranges for the past three years and have become thoroughly familiar with all your
7753 requirements; furthermore, we have gone to the expense of making the necessary patterns and flasks to fill a rush order for you at the rate of one hundred (100) ranges per day.

We are perfecting new dies and stamps for the range, so that we will be able to advance the standard of quality, be that possible.

Trusting that we may be favored with your valued contract and assuring you of our best attention, we are,

Yours respectfully,
—— ——.

CONTRACT FOR GAS RANGES.

Nov. 3rd, 1905.

Mr. Edwin North, Pur. Agt., Consolidated Gas Go., No. 4 Irving Place, New York.

Dear Sir:

Replying to your esteemed favor of the 2nd, we are compelled to advise that it would be impossible for us to allow you a greater cash discount than that named in our quotation of the 30th ultimo. In naming you price on your Cast Iron Ranges we, of course, figured as low as is consistent with the turning out of a first-class article, and at that time took into consideration the cash discount on a 2 per cent. basis. Under these existing conditions we are, therefore, in justice to ourselves, unable to allow you greater cash discount than that already quoted.

Awaiting your further valued favors, we are,

Yours very truly,
—— ——.

CITY'S EXHIBIT, 34.

(For Identification.)

Being book called "Vouchers audited, Contracts." (Record, page 1,014.)

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CITY'S EXHIBIT 35.

October:	1904.	1903.	
14th St. Station..................	31.48	34.73	3.25
42nd St. “	36.24	40.54	4.30
21st St. “	30.88	36.12	5.24
44th St. “	29.27	34.58	5.31
99th St. “	28.59	35.94	7.35
November:			
14th St. Station..................	31.60	32.32	.72
42nd St. “	34.02	36.99	2.97
21st St. “	30.36	35.16	4.80
44th St. “	29.97	33.81	3.84
99th St. “	27.50	34.46	6.96
December:			
14th St. Station..................	30.26	32.29	2.03
42nd St. “	33.18	37.44	4.26
21st St. “	32.44	38.22	5.78
44th St. “	30.40	35.72	5.32
99th St. “	29.71	34.46	4.75
January:	1905.	1904.	
14th St. Station..................	30.36	34.72	4.36
42nd St. “	31.99	38.56	6.57
21st St. “	31.09	39.46	8.37
44th St. “	29.34	38.37	9.03
99th St. “	30.03	36.21	6.18
February:			
14th St. Station..................	29.68	36.12	6.44
21st St. “	30.58	38.03	7.45
42nd St. “	33.45	38.32	4.87
44th St. “	29.45	37.93	8.48
99th St. “	29.63	30.06	.43
March:			
14th St. Station..................	33.57	36.59	3.02
42nd St. “	35.18	41.02	5.84
21st St. “	29.91	41.96	12.05
44th St. “	28.27	38.38	10.21
99th St. “	29.73	32.91	3.18

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April:			
14th St. Station..................	27.17	33.08	5.91
21st St. “	32.73	39.38	6.65
42nd St. “	36.18	38.12	1.94
44th St. “	29.90	37.26	7.36
99th St. “	(not operating in April.)		

GAS MADE FOR CONSOLIDATED GAS

	New Amsterdam Gas Company.			Stand
	Cubic Feet.	Per M.	Amouut.	Chbic F
November, 1904............	224,434,800	33.51	$75,271.23	58,686,
December, 1904............	254,929,200	31.85	81,218.40	57,278,
January, 1905............	212,472,100	35.91	76,302.71	38,264,
February, "	156,638,200	36.37	56,968.83	23,379,
March, "	185,910,000	32.48	60,381.45	39,869
April, "	123,277,200	34.78	42,874.20	21,427
May, "	133,976,800	36.76	49,253.66	50,842
June, "	102,894,300	39.11	40,240.30	41,671
July, "	90,421,300	39.66	35,862.47	16,5
August, "	171,222,700	33.73	57,748.43	24,790
September, "	213,695,300	33.11	70,762.52	22,350
October, "	242,355,400	32.92	79,792.29	52,688
Total (Nominal Year)....	2,112,227,300	34.40	$726,676.49	447,75

CITY'S EXHIBIT 36.

FOR CONSOLIDATED GAS CO. BY OTHER COMPANIES—NET—FOR THE NOMINAL YEAR ENDING OCT. 31ST, 1905.

dam Gas Company.		Standard Gas Light Company.			Mutual Gas Light Comyany.			Central Union Gas Company.			Total.		
Per M.	Amouut.	Chbic Feet.	Per M.	Amount.	Cubic Feet.	Per M.	Amount.	Cubic Feet.	Per M	Amountl	Cubic Feet.	Per M.	Amount.
33.51	$75,271.23	58,686,500	31.78	$18,651.63	39,350,600	41.60	$16,371.61	....	....	....	322,471,900	34.20	$110,294.47
31.85	81,218.40	57,278,900	32.08	18,373.20	54,334,800	41.51	22,556.39	26,435,100	28.96	7,657.03	392,978,000	33.03	129,805.02
35.91	76,302.71	38,264,400	33.07	12,655.90	50,924,200	38.64	19,679.18	9,185,800	28.10	2,580.78	310,846,500	35.78	111,218.57
36.37	56,968.83	23,379,800	32.70	7,645.32	23,692,800	38.90	9,228.42	7,665,000	30.17	2,312.62	211,375,800	36.03	76,155.19
32.48	60,381.45	39,869,600	32.58	12,987.82	47,792,900	36.10	17,254.83	7,593,200	31.06	2,358.15	281,165,700	33.07	92,982.25
34.78	42,874.20	21,427,400	34.46	7,383.59	30,566,400	36.35	11,111.78	6,301,000	27.72	1,746.71	181,572,000	34.76	63,116.28
36.76	49,253.66	50,842,600	31.65	16,089.50	19,618,700	36.35	7,131.95	5,578,300	26.00	1,450.19	210,016,400	35.20	73,925.30
39.11	40,240.30	41,671,300	32.55	13,565.33	5,581,000	37.51	2,093.42	4,978,600	25.85	1,286.94	155,125,200	36.86	57,185.99
39.66	35,862.47	16,5[illegible],100	35.31	5,828.21	201,700	41.01	82.43	5,220,300	32.91	1,717.72	112,349,400	38.71	43,490.83
33.73	57,748.43	24,790,900	34.29	8,500.42	16,641,900	37.18	6,187.59	5,934,000	34.11	2,024.01	218,589,500	34.06	74,460.45
33.11	70,762.52	22,350,000	32.47	7,257.88	13,120,300	35.64	4,675.81	6,688,100	31.68	2,118.78	255,853,700	33.15	84,814.99
32.92	79,792.29	52,688,800	32.63	17,193.66	17,384,800	34.91	6,069.45	7,976,000	34.43	2,746.22	320,405,000	33.02	105,801.62
34.40	$726,676.49	447,756,300	32.64	$146,132.46	319,210,100	38.36	$122,442.86	93,555,400	29.93	$27,999.15	2,972,749,100	34.42	$1,023,250.96
					Less sold to Central Union Gas Company (February, 1905)..						2,967,000	34.20	1,014.68
					Net						2,969,782,100	34.42	$1,022,236.28

TORN PAGE

May:			
14th St. Station	32.26	36.02	3.76
21st St. “	30.17	35.44	5.27
42nd St. “	36.18	39.45	3.27
44th St. “	28.99	35.93	6.94
99th St. “	(Not operating.)		
June:			
14th St. Station	32.23	36.26	4.03
21st St. “	30.09	31.61	1.52
42nd St. “	36.75	39.95	3.20
44th St. “	30.42	38.31	7.89
99th St. “	(Not operating.)		
July:			
14th St. Station	34.19	38.59	4.40
42nd St. “	39.51	39.90	.39
21st St. “	33.35	32.49	.86
44th St. “	31.72	38.58	6.86
99th St. “	(Not operating.)		
August:			
14th St. Station	35.35	36.78	1.43
42nd St. “	36.39	34.51	1.88
21st St. “	33.85	32.73	1.12
44th St. “	30.74	36.09	5.35
99th St. “	29.97	39.87	9.90
September:			
14th St. Station	34.56	34.88	.32
42nd St. “	34.74	38.94	4.20
21st St. “	33.66	32.64	1.02
44th St. “	30.91	34.16	3.25
99th St. “	30.14	30.49	.35

(Here follows City's Exhibit 36, marked p. 7756.)

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CITY'S EXHIBIT 37.

14TH ST. STATION WORKS. LABOR ACCOUNT. FROM NOVEMBER 1ST, '04, TO OCTOBER 21, '05.

	Account.	Amount.	Per M.
Gas Production:	Retort House	89,961.95	.0661
	Boiler "	6,101.29	.0045
	Purifier "	4,353.58	.0032
	Superintendence	1,733.75	.0013
	Total Gas Making	102,150.57	.0751
Handling Material:	Coal Labor	3,721.03	.0027
	Coke "	27,052.85	.0199
	Enriching Mat'l Labor		
	Purifying " "	156.47	.0001
	Total Handling Mat'l.	30,930.35	.0227
Total Gas Production		133,080.92	.0978
Expense		6,047.93	.0045
Distribution		7,375.25	.0054
Repairs:	Buildings	3,358.47	.0025
	Apparatus	29,304.97	.0215
	Tools and Implements	4,445.31	.0033
	Total Repairs	37,108.75	.0273
Total Cost Account Labor		183,612.85	.1350
Cartage		4,449.54	.0033
Other Accounts (not included above)		4,919.65	.0036
Total Pay Roll		$192,982.04	.1419

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CITY'S EXHIBIT 38.

42ND STREET WORKS, LABOR ACCOUNT, FOR 12 MONTHS ENDING OCTOBER 31, 1905.

	Account.	Amount.	Per M.
Gas Production:	Retort House	$133,052.47	.1039
	Boiler "	4,795.99	.0038
	Purifier "	4,788.46	.0037
	Superintendence	1,277.50	.0010
	Total Gas Making	$143,914.42	.1124
Handling Material:	Coal Labor	$18,897.87	.0149
	Coke "	$9,623.66	.0075
	Enriching Mat'l Labor.		
	Purifying Mat'l Labor.	98.14	.000
	Carbon Labor	43.20	.000
	Total Handling Mat'l.	$28,662.87	.0224
Total Gas Production		$172,577.29	.1348
Expense		7,210.61	.0056
Distribution		$1,916.51	.0015
Repairs:	Buildings	$3,303.08	.0026
	Apparatus	13,118.95	.0102
	Tools and Implements	3,689.78	.0029
	Total Repairs	$20,111.71	.0157
Total Cost Account Labor		$201,816.12	.1576
Cartage		851.10	.0007
Other Accounts—(Not included above)			
	63rd Street Station	5,971.29	.0046
	65th " "	6,167.11	.0048
	Other Accounts	3,094.92	.0024
Total Pay Roll		$217,900.54	.1701

7759

CITY'S EXHIBIT 39.

44TH STREET STATION, LABOR ACCOUNT, NOVEMBER 1, 1904, TO OCTOBER 31, 1905.

Account.	Amount.	Per M.
Handling Material:		
Coal Labor	$3,850.94	.0017
Cartage	1,007.06	.0004
Coke Labor	49.03	....
Cartage	192.74	.0001
Total	$5,099.77	.0022
Generator House:		
Gas Makers		
Firemen and Helpers	$18,647.95	.0082
Handling refuse, including Tar, etc.	1,165.06	.0005
Total G. H. Labor	$19,813.01	.0087
Boiler House:		
Engineers and oilers		
Firemen and helpers	$8,585.64	.0038
Dripmen		
Handling refuse		
Total B. H. Labor		
Purifying House	$1,222.37	.0006
Incidentals		
Superintendence	$2,920.00	.0013
Total Gas Production Labor	$37,640.79	.0166
Carried Forward	$37,640.79	.0166

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Account.	Amount.	Per M.
Brought Forward	$37,640.79	.0166
Repairs: Buildings	$3,006.60	.0013
Apparatus	10,754.83	.0049
Tools and Implements	1,415.13	.0006
Total Repairs	$15,176.56	.0068
Expense Account	$4,545.95	.0020
Distribution Account	$1,881.50	.0008
Total cost account labor	$59,244.80	.0262

Account.	Amount.	Per M.
Other Accounts (not included above)		
Scows	646.47	.0003
Dripmen	967.35	.0004
Cartage	2,711.04	.0013
Construction	797.88	.0003
Damage on account of Explosion	752.89	.0003
Removing Snow	318.16	.0001
Storing Coal	169.45	.0001
Empl. Coal, Bldgs, G. C., 14th St. Coke	71.65	....
Total	$65,679.68	.0290

7761

CITY'S EXHIBIT 40.

99TH STREET STATION, LABOR ACCOUNT, FROM NOVEMBER 1, 1904, TO OCTOBER 31, 1905.

Account.	Amount.	Per M.
Handling Material:		
Coal Labor	$4,157.43	.0030
Cartage	1,867.52	.0013
Coke Labor	125.39	.0001
Cartage	183.62	.0001
Total	$6,333.96	.0045
Generator House:		
Gas Makers	$5,148.66	.0037
Firemen and Helpers	5,849.82	.0042
Handling Refuse, including Tar, etc	3,354.35	.0024
Total G. H. Labor	$14,352.83	.0103
Boiler House:		
Engineers and Oilers	$3,596.83	.0025
Firemen and Helpers	1,825	.0013
Dripmen		
Handling Refuse	213.16	.0002
Total B. H. Labor	$5,634.99	.0040
Purifying House	$1,704.29	.0012
Incidentals		
Superintendence	2,555.00	.0018
Total Gas Production Labor	$30,581.07	.0218

Account.	Amount	Per. M.
Repairs: Building	$1,476.21	.0011
Apparatus	6,598.69	.0047
Tools and Implements	776	.0005
Total Repairs	$8,850.90	.0063
Expense Account	$4,705.04	.0033
Distribution Account	1,845.13	.0013
Total Cost Account Labor	$45,982.14	.0327
Other Accounts (not included above)	818.34	.006
Total Pay Roll	$46,800.48	.0333

7762 CITY'S EXHIBIT 41.

14TH STREET STATION. (COAL GAS.) ANALYSIS OF INCREASE IN COST TO MANUFACTURE—SEPTEMBER, 1905, COMPARED WITH SEPTEMBER, 1904.

Decrease of 19.80c per Ton on 8,926.63 Tons of Caking Coal used	*$1,767.47
Increase of 8.51 lbs. of Caking Coal used per M. 804,748.15 lbs. at 14.79c per cwt	1,190.22
Increase in labor Caking coal at .51c per M	482.28
Decrease in Caking Coal	*94.97
Increase in Residuals of .31c per M	*293.15
Total Decrease in Caking Coal	*388.12
Decrease of .326c per bu. on 1900 bus. of Oxide used	*6.19
Decrease of .18 c. f. of Water used per M. 17,022 c. f. at $1.00 per M. c. f	*17.02
Increase in Oil, Waste, etc., of .05c per M	47.28
Decrease in Material	*364.05
Increase on Gas making labor of .29 per M	274.24
Decrease in Material and Labor	*89.81
Increase in gas making labor of .15c per M	141.85
Decrease in Expense, Distribution, etc., of .35c per M	*330.98
	*278.94
Decrease in quantity of gas made	*1,614.04
Decrease in Cost at Station	*$1,892.98

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*In red ink.

	Gas Made.		Per M.	Amount.
Sept. 1905	94,565,000	at	34.56c =	$32,680.22
" 1904	99,194,000	at	34.88c =	34,598.31
Variation	*4,629,000		*.32	$1,918.09

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*Credit item.

7763 42D STREET STATION.

Analysis of Increase in Cost to Manufacture—September, 1905, Compared with September, 1904.

Decrease of 20.11c per Ton on 7,480.93 Tons of Caking Coal used	*$1,504.41
Increase of 4.84 lbs. of Caking Coal used per M. 415,968.96 lbs. at 14.66c per cwt................	609.81
Decrease in Labor Caking Coal of .85c per M..........	*730.52
Decrease in Caking Coal................	*$1,625.12
Increase in Residuals of 1.42c per M................	*1,220.40
Total Decrease in Caking Coal................	*$2,845.52
Decrease of .134c per Gal. on 153,089 Gals. of Gas Oil used	*205.14
Increase of .29 Gals. of Gas Oil used per M. 24,923.76 Gals. at 4.174c per Gal................	1,040.32
Decrease of .10c per bu. on 5,100 bus. of Lime used.....	*5.10
Increase of .02 bus. of Lime used per M. 1,718.88 bus. at 4.90c per bu................	84.23
Increase in Oxide (none used 1904)................	798.44
Increase of .30 c. f. of Water used per M. 25,783 c. f. at $1.00 per M................	25.78
Increase in Oil, Waste, etc., of .03c per M............	25.78
Decrease in Material	*$1,081.21
Increase in Gas Making Labor of .22c per M..........	189.08
Decrease in Material and Labor................	*$892.13
Decrease in Repairs of 3.04c per M................	*2,612.70
Decrease in Expense, Distribution, etc., of .16c per M....	*137.51
	*$3,642.34
Increase in quantity of Gas made................	2,610.00
Decrease in Cost at Station................	*$1,032.34

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* Credit item.

7764

	Gas Made.		Per M.		Amount.
September, 1905	85,944,000	at	34.74c	=	$29,858.75
" 1904	79,240,000	at	38.94c	=	30,858.59
Variation	6,704,000		*4.20c		*$999.84

21ST STREET STATION.

ANALYSIS OF INCREASE IN COST TO MANUFACTURE, SEPTEMBER, 1905, COMPARED WITH SEPTEMBER, 1904.

Decrease of .35c per Ton on 3,711.87 Tons of Generator Coal used	*$12.99
Decrease of 2.07 lbs. of Generator Coal used per M, 600,459.39 lbs. at 19.46c per cwt.	*1,168.49
Decrease of .76 lbs. of Generator Coke used per M, 220,458.52 lbs. at 15.00c per cwt.	*330.69
Decrease in Generator Fuel	*$1,512.17
Decrease of 13.30c per Ton on 972.70 Tons of Boiler Coal used	*$129.30
Increase of 3.17 lbs. of Boiler Coal used per M, 919,544.09 lbs. at 18.56c per cwt.	1,706.67
Decrease of 4.69 lbs. of Boiler Coal used per M, 1,360,461.13 lbs. at 15.00c per cwt.	*2,040.69
Decrease in Boiler Fuel	*$463.32
Decrease in Generator and Boiler Fuel	*$1,975.49
Increase in Labor handling material of .12c per M.	348.09
Decrease in Fuel	$1,627.40
Decrease of .143c per Gal. on 1,354,593 Gals. of Gas Oil used	*1,937.11
Carried Forward	*$3,564.51

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* Credit item.

7765

Brought Forward	*$3,564.51
Increase of .10 Gals. of Gas Oil used per M, 2,900.77 Gals. at 4.183c. per Gal.	1,123.39
Increase of 1.528c. per bu. on 18,348 bus. of Oxide used.	280.36
Increase of .061 bu. of Oxide used per M., 17,694.70 bu. at 13.774c. per bu.	2,437.28
Decrease of .08 c. f. of Water used per M., 23,206 c. f. at $1.00 per M. c. f.	*23.21
Decrease in Oil, Waste, etc., of .02c. per M.	*58.02

Decrease in Material	$195.29
Increase in Residuals, of .86c. per M	*2,494.66
Total Decrease in Material	*$2,299.37
Decrease in Gas making labor of .32c. per M	*928.25
Decrease in Material and Labor	*$3,227.62
Increase in Repairs of 1.98c. per M	5,743.52
Increase in Expense, Distribution, etc., of 12c. per M	348.09
	$2,863.99
Increase in quantity of Gas made	6,123.65
Increase in Cost at Station	$8,987.64

	Gas Made.		Per M.	Amount.
Sept. 1905	290,077,000	at	33.66c. =	$97,630.53
" 1904	271,309,000	at	32.64c. =	88,557.48
Variation	18,768,000		1.02c.	$9,073.05

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* Credit Item.

7766 44TH STREET STATION.

Analysis of Increase in Cost to Manufacture—September, 1905, Compared with September, 1904.

Decrease of 6.70c. per Ton on 2,167.73 Tons of Generator Coal used	*$145.24
Decrease of 3.01 lbs. of Generator Coal used per M, 485,242.10 lbs. at 19.66c. per cwt	*953.99
Increase of 1.25 lbs. of Generator Coke used per M, 201,512.50 lbs. at 15.00c. per cwt	302.27
Decrease in Generator Fuel	*$796.96
Increase of 56.56c. per Ton on 93.81 Tons of Boiler Coal used	$53.06
Decrease of 1.74 lbs. of Boiler Coal used per M, 280,505.40 lbs. at 16.85c. per cwt	*472.65
Decrease of 1.67 lbs. of Boiler Coke used per M, 269,220.70 lbs. at 15.00c. per cwt	*403.83
Decrease in Boiler Fuel	*$823.42
Decrease in Generator and Boiler Fuel	*$1,620.38
Increase in Labor handling material of .16c. per M	257.94
Decrease in Fuel	*$1,362.44
Decrease of .1747c. per Gal. on 763,833 Gals. of Gas Oil used	*1,334.42

Increase of .25 Gals. of Gas Oil used per M, 40,302.50 Gals. at 4.2148 per Gal.	1,698.67
Increase in Oxide (None used 1904)	1,069.81
Decrease of .87 c. f. of Water used per M, 140,252.70 c. f. at $1.00 per M, c. f.	*140.25
Increase in Oil, Waste, etc., at .01c. per M	16.12
Carried Forward	52.51

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* Red Ink Item.

7767 Increase in Material (Bro't Forward)	$52.51
Increase in Residuals (No Residuals 1904)	1,052.00
Decrease in Material	*$999.49
Decrease in Gas Making Labor of .35c. per M	*564.24
Decrease in Material and Labor	*$1,563.73
Decrease in Repairs of 1.94c. per M	*3,127.47
Decrease in Expense, Distribution, etc., of .28c. per M.	*451.39
	*$5,142.59
Increase in quantity of gas made	18,989.78
Increase in Cost at Station	$13,847.19

	Gas Made		Per M.	Amount.
Sept. 1905	161,210,000	at	30.91c.=	$49,823.71
" 1904	105,611,000	at	34.16c.=	36,079.56
Variation	55,599,000		*3.25c.	$13,744.15

99TH STREET STATION.

ANALYSIS OF DECREASE IN COST TO MANUFACTURE—SEPTEMBER 1905, COMPARED WITH SEPTEMBER, 1904.

Decrease of 11.25c. per Ton on 1,312 Tons of Generator Coal used	$147.60
Increase of .26 lbs. of Generator Coal used per M., 23,708.88 lbs. at 20.03c. per M	*47.49
Decrease in Generator Coke of .06c. per M. (none used 1905)	54.71
Decrease in Generator Fuel	$154.82
Increase of 12.00c. per Ton on 81 Tons of Boiler Coal Used	*$9.72
Carried Forward	*$9.72

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*Red Ink Item.

7768 *Brought Forward*	$9.72
Increase of 1.62 lbs. of Boiler Coal used per M., 147,724.56 lbs. at 16.43c. per cwt.	242.71
Increase in Boiler Coke (none used 1904)	69.42
Increase in Boiler Fuel	$321.85
Increase in Generator and Boiler Fuel	$167.03
Increase in Labor handling material	346.51
Increase in Fuel	$513.54
Decrease of .1808c. per Gal. on 391,722 Gals, of Gas Oil used	$708.23
Increase of .03 Gals. of Gas Oil used per M., 2,735.64 Gals. at 4.2208c. per Gal	115.47
Increase in Oxide (none used 1904)	364.00
Decrease of .28 c. f. of Water used per M., 25,532 c. f. at $1.00 per M. c. f.	25.53
Decrease in Oil, Waste, etc., of .11c. per M	100.31
Increase in Material	$158.94
Increase in Residuals (no Residuals 1904)	594.75
Net Decrease in Material	$435.81
Increase in Gas making labor of .01c. per M	9.12
Decrease in Material and Labor	$426.69
Increase in Repairs of .13c. per M	118.54
Increase in Expense, Distribution, etc. of .02c. per M	18.22
	$289.93
Decrease in quantity of Gas made	139.93
Decrease in Cost at Station	$429.86

	Gas Made.		Per M.		Amount.
Sept. 1905	91,188,000	at	30.14c.	=	$27,487.97
" 1904	91,636,000	at	30.49c.	=	27,946.15
Variation	448,000		.35c.		$458.18

7769

CITY'S EXHIBIT 42.

PRICES OF METERS AND DISCOUNTS ALLOWED.

5. (Q) Schedule of prices for meters supplied by the American Meter Company, showing prices charged and discounts allowed by that Company.

(A)

Size.		List.	Price.	Discount.
3	Light	$4.72	$4.50	5%
5	"	5.98	5.50	"
10	"	7.50	7.00	"
20	"	10.40	9.50	"
30	"	14.15	13.50	"
45	"	20.80	19.80	"
60	"	28.35	27.00	"
80	"	39.00	37.20	"
100	"	47.25	45.00	"
150	"	72.50	68.50	"
200	"	100.00	95.00	"
250	"	142.00	135.00	"
300	"	173.00	170.00	"

6. (Q) Statement showing the quantity of several grades or items that enter into the item of iron mass purchased during the year ending October 31, 1905, with a statement of prices paid for same, and the names of the Companies from whom purchased.

(A)

Connolly Iron Sponge Co....	22,500	Bushels	@ 15c.	= $3,406.25
Bouker Chemical Company	13,750	"	@ 12½c.	= 1,735.00
Greenpoint Chemical Co..	52,500	"	@ 14½c.	= 7,612.50
Total....	88,750	"	@ 14⅓c.	=$12,753.75

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CITY'S EXHIBIT 43.

CONSOLIDATED GAS COMPANY OF NEW YORK. ANSWERS TO QUESTIONS ASKED FOR BEFORE THE GAS COMMISSION ON DECEMBER 11, 1905.

1. (Q) Map of the Company's property (Borough of Manhattan) on the City lot plan, with Tax numbers at the bottom of the lots.

(A) Map is in process of preparation.

2. (Q) The usual cash discount on coal bills under coal contract "Q" (Exhibit 118H), and a statement showing the discount allowed on all purchases of coal under said contract since its inception.

(A) There is no cash discount on coal bills under contract "Q" as noted. The only cash discount that the Company obtains on its purchases of coal is from Coxe Bros. & Co., who allow us a deduction of 6% per annum from the date of payment to the due date, 30 days from the date of the bill.

3. (Q) Transcript of the ledger account showing number of meters of each size purchased, and price paid for same during the twelve months ending October 31, 1905; also statement of discounts or rebates received on purchases of meters.

ORDINARY METERS.

Size.	Purchased. Number.	Invoice. Total.	Delivered. Parts net.	Invoice. Net.	Discount.	Cost. Net.
3	500	$2,250.00	$60.00	$2,190.00	$109.50	$2,080.50
5	11,700	64,350.00	1,638.00	62,712.00	3,135.60	59,576.40
10	1,000	7,000.00	245.00	6,755.00	337.75	6,417.25
20	450	4,275.00	166.50	4,108.50	205.42	3,903.08
30	62	837.00	31.00	806.00	40.30	765.70
45	37	732.60	25.90	706.70	35.33	671.37
60	25	675.00	21.50	653.50	32.67	620.83
100	12	540.00	19.44	520.56	26.02	494.54
150	5	342.50	12.50	330.00	16.50	313.50
200	2	190.00	5.00	185.00	9.25	175.75
		$81,192.10	$2,224.84	$78,967.26	$3,948.34	$75,018.92

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PREPAYMENT METERS.

Size.	Purchased. Number.	Invoice. Total.	Delivered. Parts net.	Invoice. Net.	Discount.	Cost. Net.
3	8,000	$62,200.01	$960.00	$61,240.01	....	$61,240.01
5	1,700	14,832.51	238.00	14,594.51	....	14,594.51
		$77,032.52	$1,198.00	$75,834.52	....	$75,834.52

4. (Q) Statement of quantities of pipe we have bought for use either as mains or services, for twelve months ending October 31, 1905, and the price paid for them, with the names of the Companies from whom purchased on a separate sheet.

(A) We have bought during this nominal year for use on mains as follows:

2,474 Net Tons 1204 lbs. @ $24.43 per Net Ton..... } $60,455.20
2,209 Gr. " 1044 " @ $27.36 " Gr. " ..... }

To determine how much pipe we have bought for services would be a tremendous clerical proposition, as it would involve the examination and analysis of about 500 different bills. Would not an estimate from the Street department serve the purpose of the Committee?

CITY'S EXHIBIT 44.

PLANT AND OPERATIONS FOR THE NOMINAL YEAR ENDING OCTOBER 31, 1905.

1. (Q) Number of miles of each size of Street Mains in use owned by the Consolidated Gas Co.

Answer to Question No. 1.

	1½″	.266	Miles
	2″	.804	"
	3″	31.985	"
	4″	96.097	"
	5″	.340	"
	6″	396.010	"
7772	8″	98.066	Miles
	10″	13.361	"
	12″	60.844	"
	16″	18.631	"
	18″	5.610	"
	20″	33.520	"
	24″	8.697	"
	30″	24.886	"
	36″	4.212	"

2. (Q) Number of miles of mains of each size laid before 1860.
(A) Cannot answer.

3. (Q) The same information for all mains laid before 1880, including those laid before 1860.
(A) Cannot answer.

4. (Q) Number of services in use owned by the Company.
(A) Number of services in use as at October 31, 1905, was 86,338.

5. (Q) Number of meters of each size owned by the Company.
(A) Number of meters owned as at October 31, 1905, was as follows:

Size.	Number owned.
3 Lt.	207,499
5 "	86,924
10 "	31,285
20 "	9,984
30 "	3,036
45 "	2,082
60 "	1,024
100 "	1,018
150 "	235
200 "	224
250 "	34

300 "	152	
600 "	1	
800 "	1	343,499
3 Lt. Prepayment	93,462	
5 " "	4,260	
20 " "	2	97,724
Total		441,223

7773 6. (Q) Number of meters of each size bought before 1880.

(A) Cannot answer.

7. (Q) Price paid per ton for cast iron water pipe delivered alongside of the trench each year since 1900.

(A) We have no positive data as to the cost of this pipe delivered alongside of trench since 1900, but cost of pipe delivered on the dock was as follows:

	Gross ton.	Net ton.
1900	$22.35	$19.95
1901	22.25	19.95
1902	26.35	23.52
1903	29.70	26.52
1904	23.20	20.71
1905	25.17	22.47

8. (Q) Number of miles of each size of mains laid from January 1, 1901, to December 1, 1905, with the approximate cost of same per foot.

(A) This question necessitates a vast amount of clerical labor. The work is now under way in the Street Department, and will probably be ready shortly.

9. (Q) What would be the cost of same per foot (a) for materials (b) for all other expenses, such as laying, etc., if the prices of 1905 for labor and material had prevailed during the previous three years?

(A) The prices of both labor and material have not changed materially during the last three years; at least not enough to affect the cost of main per foot. Price of labor has increased 15% over 1901.

10. (Q) Does the Company own and lay at its own expense the services (a) from the curb to the lot line (b) from the lot line to the building?

(A) The Company owns and lays at its own expense the services from curb to lot line and from lot line to the building, and inside the building wall an average distance of 3 feet.

11. (Q) If not, what are the facts in the case?

(A) Covered by answer to Question No. 10.

1. (Q) Income from operations.

1. (Q) Feet of gas sold by meter to consumers.

7774 2. (Q) Receipts for the same.

3. (Q) Number of street lamps and receipts for gas used by them.

4. (Q) Receipts for care of lamps and other expenses connected with the street lamps.

Answers to Questions 1, 2, 3 and 4.

	Cubic feet.		Amount.
Sales to Private Consumers	12,906,438,650	C. F. @ 99.91	$12,894,552.64
" " N. Y. City Public Buildings	130,725,900	" @ 90.00	117,653.45
" " N. Y. City Street Lamps	271,199,223	" *	559,823.11
	13,308,363,773		$13,572,029.20

*Open Flame Lamps.... $17.25 per lamp per Year } including
Welsbach Lamps....... 24.75 " " " " } Maintenance.

Lamps outstanding as at Oct. 31, 1905, Open Flame 216,

Single Wels	22,755	
Double "	4	
Special Deductions		1,448.43
Net Sales		$13,570,580.77

MEMORANDUM.

Meters are purchased by us from the American Meter Company and from D. McDonald and Company.

Pipe has been bought during the nominal year by us from the United States Cast Iron Pipe and Foundry Company.

5. (Q) Gas sold to other companies and receipts for the same.

(A) No gas sold to other Companies.

6. (Q) Amount of coke sold and receipts thereof.

(A) Coke produced for sale:

14th St. Station.			
86,380.47 Loads @ $2.07 57,844.06 Tons @ $3.08	$178,527.11		
Less Cost to handle:			
Labor and Cartage	34,821.03		
		$143,706.08	
Carried forward		$143,706.08	$13,570,580.77

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Brought forward		$143,706.08	$13,570,580.77
42nd St. Station.			
85,024.00 Loads @ $1.94 56,932.93 Tons @ $2.90	$164,999.83		
Less Cost to handle:			
Labor and Cartage	14,234.34		
		$150,765.49	
			$294,471.57

7. (Q) Amount of tar sold and receipts therefor.
(A) Coal Tar.

14th St. Station. 127,195.16 Tons Carbonized @ 29.10c.	$37,014.90		
42nd St. Station. 108,391.57 Tons Carbonized @ 29.07c.	31,512.18		
		$68,527.08	
Oil Tar.			
21st St. Station. 1,393,351 Gallons @ 01.97c.	$27,490.15		
44th St. Station. 907,572 Gallons @ 01.78c.	16,149.78		
99th St. Station. 522,461 Gallons @ 01.91c.	9,997.17		
		$53,637.10	
			122,164.18

8. (Q) Amount of ammoniacal liquor and receipts therefor.
(A) 14th St. Station.

2,699,080 lbs. @ 01.36c.	$36,668.15	
42nd St. Station. 2,284,671 lbs. @ 01.36c.	31,139.29	
		67,807.44

9. (Q) Amount of other residual products and receipts therefor.

Carried Forward $14,055,023.96

7776

Brought Forward $14,055,023.96

(A) Carbon:

14th St. Station. 218,955 lbs. @ 01.00c.	$2,189.55	
42nd St. Station. 330,635 lbs. @ 01.00c.	3,306.35	
		5,495.90
Spent Oxide:		
14th St. Station. 3,022,870 lbs. @ 00.11c.	$3,400.73	
42nd St. Station. 1,368,654 lbs. @ 00.10c.	1,368.65	
		4,769.38

10. (Q) Rent of Meters.
(A) Company does not rent meters.
11. (Q) Rent of gas stoves and engines.
(A) Company does not rent Engines.
Gas Stoves rents for the period were... 120,768.60
12. (Q) Miscellaneous income from operations.
(A) Miscellaneous income 49,997.80
13. (Q) Total income.
(A) Total Income $14,236,055.64

11. Expense of Manufacture:

Note: Give answers to all the following questions on cost of manufacture for each station, and afterwards for all stations in the aggregate.

(A) Note: Figures given below are in the aggregate for all stations. The same information for each separate station is now being compiled.

1. (Q) Maximum daily capacity of each station in (*a*) coal gas and (*b*) water gas and (*c*) oil gas, for mixture with the coal gas.

2. (Q) Maximum daily output during the twelve months, of each station in (*a*) coal gas, (*b*) water gas, and (*c*) oil gas.

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3. (Q) During what days, if any, since January 1st, 1904, was no gas whatever made at one or more of the stations.

Answer to Questions 1, 2 and 3. The Engineering Department will furnish this information.

4. (Q) Total amount of gas made at each station during the year of (*a*) coal gas, (*b*) water gas, (*c*) oil gas.

(A) Total Gas made:

14th St. Station....	1,528,773,000	C. F.*	Coal & Oil Gas
42nd St. Station....	1,280,813,000	"	" " " "
21st St. Station....	4,185,341,000	"	Water Gas.
44th St. Station....	2,263,444,000	"	
99th St. Station....	1,401,538,000	"	
	10,659,909,000	"	

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*Coal Gas made at 14th St.......... 1,360,284,000 C. F.
Oil Gas made at 21st St. for 14th Street ....
o Cannot separate................ 168,489,000 "

5. (Q) Where was the oil gas made at each station used.

(A) Oil Gas made at 21st Street is used at 14th Street station. Oil Gas used at 42nd Street is used at that point.

6. (Q) Cost of purifying (*a*) material, (*b*) labor.

(A) Cost of purifying—Coal Gas Plants:

Lime	$2,957.93		
Oxide	6,609.80		
		9,567.73	
Labor		9,198.74	
			$18,766.47

7. (Q) Amount and cost of water.

(A) Water — at Coal Gas Plants — 6,984,000 Cu. Ft. 6,984.00

8. (Q) Maintenance and Renewal of works, including renewal of retorts.

Carried Forward $25,750.47

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Brought Forward..................... $25,750.47

9. (Q) Tools and Implements.

Answers to Questions 8 & 9:

Repairs to Apparatus at Coal Gas Plants....	$71,866.41
Repairs to Buildings at Coal Gas Plants....	9,396.00
Tools	10,417.69

91,680.10

10. (Q) Cost of cartage of coal.

(A) Coal Cartage—Coal Gas Plants...... 15,312.96

11. (Q) Cost of labor at works, including superintendent, but exclusive of cartage, repairs and purifying.

(A) General Labor at Works—Coal Gas Plants 302,190.19

12. (Q) Amount and cost of gas received at each station from any other station.

(A) The only gas transferred between stations of which any financial record is kept is the Oil Gas made at 21st St. for account of 14th St., the cost of which is charged against 14th St. Operations, as follows:

Coal	$48.25
Oil	137,602.63
Coke	7.90
Sundry Supplies......	118.47
Labor	**9,603.51**

147,380.76

13. (Q) Amount and cost of coal used in water gas generators.

(A) Coal used in water gas generators, 105,650.80 Tons...................... 461,772.39

Note.—In this, and the following items, unless otherwise specified, exclude the cost of cartage and other items above called for.

Carried Forward...................... $1,044,086.87

7779

Brought Forward...................... $1,044,086.87

Answer to Note.—Cartage in the following items has been eliminated.

14. (Q) Amount and value of coke used in water gas generators.

(A) Coke used in Water Gas Generators:

33,952.28 Loads, 22,735.90 Tons } 74,855.07

15.	(Q)	Amount and value of coal used under the boilers for making water gas.		
	(A)	Coal used under Boilers—Water Gas Stations—9,159 Tons		36,075.16
16.	(Q)	Amount and cost of oil used for making water gas.		
	(A)	Oil used in making Water Gas: 36,061,742 Gallons		1,472,302.60
				$2,627,319.70
17.	(Q)	Amount and value of coal tar used in making water gas.		
	(A)	The Company's product of Coal Tar is disposed of under contract.		
18.	(Q)	Amount and value of water gas used in making water gas.		
	(A)	The Company keeps no financial record showing the use of this fuel, as all material used in Generators is charged to "Gas Production" when used—the only credit to "Gas Production" covering this residual being for such oil tar as is sold.		
19.	(Q)	Purifying material and labor for water gas, separate from other forms of gas made.		
	(A)	Purifying Material & Labor—Water Gas Plants:		
		Oxide	$12,268.63	
		Shavings	189.49	
				12,458.12
7780				
		Labor		5,304.98
20.	(Q)	The same for water.		
	(A)	Water Gas Stations		16,625.40
21.	(Q)	Same of wages at works.		
	(A)	General Labor—Water Gas Stations		167,980.06
		Less—Purifying Labor, shown above		5,304.98
				$162,675.08
22.	(Q)	The same of repairs at works.		
	(A)	Repairs—Water Gas Plants:		
		Repairs to Apparatus	$97,247.48	
		do Buildings	16,098.10	
		do Tools	6,069.86	
				$119,415.44

23. (Q) The same of gas supplies.

(A) Sundry Supplies—Water Gas Plants.. 2,021.12

24. (Q) The same of miscellaneous expenses,

(A) Miscellaneous Expenses—Water Gas Plants:

Cartage on Coal......	$2,972.52	
Naphtha	244.43	
General Cartage......	14,797.13	
Sundries, Incidentals, etc.	15,054.77	33,068.85

25. (Q) Total expenses for water gas.

(A) Total Cost of Water Gas............. 2,396,574.21

" " " " " (including Distribution) 2,457,604.54

26. (Q) Total expenses per thousand feet of Water Gas made.

(A) Cost per M. made—Water Gas—30.53c

" " " " " " 31.29c including Distribution.

27. (Q) Amount and value of receipts from water gas tar produced.

(A) Water Gas Residuals—2,823,384 Gallons 53,637.10

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28. (Q) The net cost per thousand feet of water gas in the holder.

(A) Net Cost per M. Water Gas 29.83c.

" " " " " " 30.60c. including Distribution.

29. (Q) The above items of cost to manufacture for oil gas as far as they will apply.

(A) Answer to Question No. 12 covers this Question.

30. (Q) Coal used in retorts for making coal gas, amount and cost apart from cartage.

(A) Coal—Coal Gas Plants—235,586.73 Tons 758,068.60

NOTE.—The following items, unless otherwise designated, relate to coal gas.

31. (Q) Amount and value of coal used under boilers.

32. (Q) Amount and value of coke and other material used under boilers.

Answers to Questions 31 and 32.

Our records do not show this as a separate item.

33. (Q) Amount of oil used separately not included in the above schedules relative to water gas and oil gas.

(A) Gas Oil used at 42nd Street Station for making Oil Gas:

2,071,383 Gallons.............. 83,740.93

34. (Q) Amount and value of tar used.

(A) The Company's product of Coal Tar is disposed of under contract.

35. (Q) Cost of purifying materials and labor for coal gas.

(A) Answer to Question No. 6 covers this Question.

36. (Q) The same of water used.

(A) Answer to Question 7 covers this question.

37. (Q) The same of labor and materials for repairs.

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(A) Answer to Questions 8 & 9 cover this question.

38. (Q) The same for wages at works.

(A) Answer to Question No. 11 covers this question.

39. (Q) The same for gas supplies.

(A) Sundry Supplies, Coal Gas Plants.... 2,950.87

40. (Q) The same for other expenses of manufacture.

(A) Other Expenses of Manufacture—Coal Gas Plants:

Cartage	$3,033.02	
Sundries, Incidentals, etc.	7,488.02	
		10,521.04

41. (Q) Total expenses, same for gas bought.

(A) Total Expenses—Coal Gas Stations, including Oil Gas made at 21st St. Station.. 1,432,750.76

Total Expenses—Coal Gas Stations, including Distribution.................. 1,462,119.95

42. (Q) Amount and value of coke produced, whether used or sold.

(A) Our only records are so kept as to show "Coke Produced for sale only."

43. (Q) Amount and value of coke sold or available for sale out of the year's product.

(A) The amount so produced for the Nominal Year is shown in detail on Page No. 5, Question No. 6.

44. (Q) Amount and value of coal gas tar made.
(A) Our arrangement for the disposal of the Coal Gas Tar is based on the "Number of tons of coal carbonized."

45. (Q) Amount and value of coal gas tar sold or available for sale out of the year's product.
(A) Full details showing the credit to "Gas Production" for the Nominal Year is shown on Page No. 5, Question No. 7.

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46. (Q) Amount and value of ammoniacal liquor sold or available for sale out of the year's product.
(A) Answer to Question No. 8 on Page No. 5 covers this question.
(Q) Cost of distribution and other expenses not included in the above named Costs of production.
(A)

Total Expenses for Water Gas	$2,342,937.11	
Total Expenses for Coal Gas	991,679.39	
		3,334,616.50
Distribution at Station	$31,557.73	
Distribution Station Expense	58,841.79	
		90,399.52
Profit and Loss Adjustment—Miscellaneous Items		4,101.12
Depreciation—actual Depreciation for November and December, 1904, applicable to the Plant; the amount being apportioned on the basis that the sales for these two months bears to the total sales		51,532.36
Experiments—Chemical Laboratory at 21st Street Station		2,912.70
Total Station Expenses aside from Gas bought		$3,483,562.20

7784 NOTE.—This is for the Consolidated Gas Co. as a whole for the twelve months ending October 31st, 1905.

1.	(Q)	Wages of meter-takers and salary or commission of collectors and wages of clerical labor.	
	(A)	Wages of Meter-takers, salaries, etc.	$543,898.54
2.	(Q)	Repairs, renewals and maintenance of mains and service pipes, tools and appliances.	
	(A)	Repairs, Renewals, Maintenance, etc.	249,629.30
3.	(Q)	The same of meters.	
	(A)	Repairs to Meters.	172,280.18
4.	(Q)	The same of Gas Stoves.	
	(A)	Repairs to Gas Stoves	52,063.05
5.	(Q)	Lighting, repairing and other care of public lamps.	
	(A)	Lighting, Repairing Lamps, etc.	285,701.13
6.	(Q)	Directors' Allowances.	
	(A)	Directors' Allowances	11,040.00
6½.	(Q)	Salaries of General Officers.	
	(A)	Salaries of General Officers	64,000.00
		Carried Forward	$1,378,612.20
7785		*Brought Forward*	$1,378,612.20
7.	(Q)	Salaries and all expenses for labor not included elsewhere in Distribution.	
	(A)	Salaries and all expenses for labor not included elsewhere in Distribution	196,725.73
8.	(Q)	Rent of offices not owned by the Company.	
	(A)	Rent of offices and other property	51,558.12
9.	(Q)	Advertising, canvassing and soliciting.	
	(A)	Advertising, canvassing and soliciting	76,119.90
10.	(Q)	General Office expenses.	
	(A)	General Office expenses	85,297.38
11.	(Q)	Law Expense.	
	(A)	Law Expense	53,270.76

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12.	(Q)	Claims, accidents and damages.	
	(A)	Damages, etc.	20,601.61
13.	(Q)	Bad Debts.	
	(A)	Bad Debts	85,757.15
14.	(Q)	Royalties and Licenses.	
	(A)	Royalties and Licenses—None paid.	
15.	(Q)	Incidental Expenses.	
	(A)	Incidental Expenses	76,729.98
			$2,024,672.83
		Carried Forward	$2,024,672.83
7786		*Brought Forward*	
15*a*.	(A)	Other items not shown above:	
		Distribution—Material	92,901.57
		Interest	52,315.73
		Insurance	55,525.90
		Superannuation	14,803.57
		Contributions to Employes' Aid Society	6,392.21
		Profit and Loss Adjustment	*8,260.96
		Taxes	803,127.46
		Contingent Expense and Depreciation	1,114,236.38
16.	(Q)	Total Expenses of Distribution.	
	(A)	Total Expenses of Distribution	$4,155,714.69

17. (Q) Amount of gas bought from each outside Company, and price paid for same.

(A) Gas made for our account as follows (excluding leakage).

New Amsterdam Gas Co.	2,112,227,300 C.F.	@ 34.40c.	$726,676.49	
Standard Gas Lt. Co.	447,756,300 "	" 32.64c.	146,132.46	
Mutual Gas Light Co.	319,210,100 "	" 38.36c.	122,442.86	
Central Union Gas Co.	90,588,400 "	" 29.93c.	26,984.47	
	2,969,782,100 "	" 34.42c		$1,022,236.28

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* In Red Ink.

7787 18. (Q) Total amount of gas made and bought.
(A) Gas made (our stations).......... 10,659,909,000 C. F.
" " outside stations (including leakage).......... 3,062,354,768 "

Total amount of Gas made and bought.......... 13,722,263,768 "

19. (Q) Total amount of gas sold.
(A) Gas sold .... 13,308,363,773 C. F.
20. (Q) Total expense operation, whether in manufacture or distribution or gas bought.
(A) Operating Expenses:
Gas production $3,483,562.20
Gas made for our account.......... 1,022,236.28
Distributing Expenses.......... 4,155,714.69 8,661,513.17

7788 21. (Q) Total income from operations.
(A) Income from operation.......... 13,570,580.77
22. (Q) Earnings from operation.
(A) Earnings from operation.......... $4,909,067.60
22*a*. (A) Fixed Charges.......... 936,883.24

22*b*. (A) Net Earnings from Operations.......... $3,972,184.36
22*c*. (A) Miscellaneous Income.......... 170,766.40
Divisible Surplus.......... $4,142,950.76

1. (Q) Additions to the Consolidated plant by items with the cost of each from June 30, 1904, to December 1st, 1905.
2. (Q) Map showing the location of all of the gas works and the holders and the mains larger than 12 inches.
3. (Q) Locate and give capacity of each gas holder, with its age and estimated value and character of construction.

NOTE.—The answers to these three questions necessitate a little more time to get out satisfactorily.

7789

CITY'S EXHIBIT 45.

(For Identification.)

(Being statement of gas made for Consolidated under agency agreements, net, for months of November and December, 1905.)

7790

COMPLAINANT'S EXHIBIT 227.

STATE OF NEW YORK.

No. 47.

IN SENATE.

MARCH 1, 1886.

REPORT

Of Special Committee of Senate to Investigate Lighting Companies.

To the Senate:

The following is a resolution of the Senate, under which this committee was appointed:

"WHEREAS, It appears by the records of the Secretary of State, that the New York, Manhattan, Metropolitan, Municipal, Knickerbocker and Harlem Gas Companies are the only corporations that have consolidated, pursuant to the provisions of chapter 367 of the Laws 1884; and

"WHEREAS, The total share capital of said companies prior to said consolidation was represented by the par value of seventeen millions of dollars; and

"WHEREAS, It appears in evidence, before a special committee of the Senate, that the said par value is represented in the said consolidation by a nominal share capital of $35,440,000, par value, which, it has been alleged, is beyond the fair aggregate value of the property, franchises and rights, of the said constituent companies as required by said act; therefore,

7791 "RESOLVED, That a special committee of three senators be appointed by the President of the Senate and directed to investigate the said consolidation and capitalization, and to report at the next session of the Legislature whether in fact said statute has been evaded, disregarded or in any manner violated, and whether the said consolidation has been capitalized on the said basis of 'the fair aggregate value of the property, franchises and rights' of its constituent companies, or otherwise; and what legislation, if any, in respect to lighting companies, is required by the public interests; and that such committee have power to send for persons and papers and to employ a stenographer, counsel and experts for the purpose of aiding in such investigation."

The nominal capital of the Consolidated Gas Company of New York on the 11th day of November, 1884, was $39,078,000.

ND VERTICAL IN BOOK

The aggregate nominal capital of all the companies which entered into the consolidation was, on the same day, $17,000,000.

No capital of any kind was contributed to the Consolidated Company except that which was transferred to it by the several constituent companies. Of the property so transferred, the sum of $2,139,089 was returned to the shareholders of these several companies.

These facts having been ascertained, the question seemed to be this, namely: How is it that upwards of $2,000,000 taken from $17,000,000 leaves a little more than $39,000,000? The difficulty of finding a satisfactory answer was increased, if possible, when it was found that this nominal capital of $17,000,000 represented an actual capital of only $15,500,000.

At this point in the investigation the question seemed to resolve itself into this, viz: How has a capital of $15,500,000 become a nominal capital of $39,078,000 by a simple change of form, without any addition to the capital, but accompanied, on the contrary, by the withdrawal of $2,139,089?

7792 The committee was not disposed to assume hastily that this was a mere device designed to put the new company in a more secure and favorable position than that occupied by the old for exacting undue profits by over-taxing the consumers of gas.

Expert accountants were employed to examine the books of the companies named in the foregoing resolution. In order to reach well assured conclusions, and do justice to all concerned, it was necessary to cause an examination to be made of the entire financial history of each of the gas companies which entered into the scheme of consolidation. This inquiry covered a period of about sixty-two years, beginning with the organization of the New York Gas-light Company in 1823. Without that investigation it would be impossible to ascertain the actual capital of each of the companies as distinguished from that which does not represent any money or other property contributed by their shareholders.

The want of exact and sufficient information accounts for a large part of the ineffective and unstable legislation with which our statute books are encumbered.

The committee believed that in obtaining such information in regard to the gas companies in question, the legislature would not only be better able to act intelligently concerning them, but would also find valuable suggestion upon the general subject of corporate capitalization, and its effect upon the prices which the public are required to pay for whatever is furnished by incorporated companies.

Fiat Capital.

The issuing of watered stock is an adulteration of capital—an increase in volume without a corresponding increase in intrinsic value. Such stock does not represent actual capital paid in or invested. It becomes an instrument whereby additional burdens may be
7793 imposed upon the people. It furnishes a pretext for adding to the cost of commodities furnished and services rendered It creates conditions favorable to frauds and corruptions. It en-

ables the few to become immensely rich at the expense of the many. It is the root of a tree which exhausts the soil and exhales poison. It is an increasingly prevalent evil. Fiat money has been discarded. It remains to be seen whether or not there is intelligence and virtue enough to discard *fiat capital* also, and effectually prohibit it as an element in business. Both are alike in violation of first principles, and therefore inevitably mischievous in result. Until fictitious capitalization shall cease, business cannot rest upon a stable basis, nor be conducted in a normal and healthy manner. Hence, it is greatly important that the origin, methods and results of such capitalization should be accurately understood; and the sooner this is done the better for all concerned.

Until this unnatural and disturbing element is removed, the people will look in vain for relief from the unjust and therefore oppressive exactions in the form of overcharges for the common necessities of life.

Corporate capital must be purified. It must *be* what it *seems* to be. The capital of a concern must represent what has been actually put into it. The public served by them should pay such prices as will enable stockholders to receive a reasonable per cent. of profit upon the actual capital investment in the business and represented by its share capital. The reasonableness of profits depends on the risks involved when the capital was invested, on the returns which the capital has already received, and on the present and prospective security of the enterprise. 7794

CORPORATIONS NOT ANTAGONIZED.

Nothing in this report is intended to antagonize corporations as such, but only to expose and help to eradicate that which is itself in necessary opposition to all legitimate interests affected by them.

The rights of corporations are as real as those of individuals. In fact they are but an organic aggregation of individual rights. Such associations of capital are demanded by the enterprises and civilization which they advance. The real interests and rights of corporations are to be guarded as carefully as those of individuals. When all those rights and interests are ascertained and freed from intruding abuses they will be found to be in harmony. The proper conservation of corporate rights requires that they be dissociated from corporate abuses. And it is according to the nature of things that the sooner abuses are extirpated the better for all legitimate interests. They are essentially destructive.

EXACT INFORMATION ESSENTIAL.

In order to proceed intelligently and wisely in the treatment of the associated capital under investigation and the public interests concerned in its use, there must be something more than general impressions. There must be thorough inquiry into the exact facts of the case. Such inquiry has been made in relation to the gas companies which consolidated or attempted to consolidate on the 11th day of November, 1884.

The examination into the books of the constituent companies (except those of the Knickerbocker, showing the original capitalization, which books were missing), has fully disclosed their financial history.

That examination shows exactly *what capital has been put into the several companies, what profits have been taken out by the shareholders, and what they claim to have left in their own hands.* 7795

All the profits that have been distributed to the shareholders, and all that remains in their hands over and above what they have actually invested can come from only two sources. First and chiefly from the consumers, and secondly from the natural rise in the value of property.

SOME EFFECTS OF STOCK-WATERING UPON CONSUMERS.

The capital of a company may be regarded as the basis on which the per cent. of profits or dividends is computed. These dividends constitute an important element in the price of gas to the consumers. The amount of this element of cost is determined by two factors, viz.: The amount of capital on which the dividend is to be distributed, and the rate by which it is to be computed. The increase of either will ultimately involve an increase of cost to the public, or obstruct the operation of other causes tending to its reduction.

It is a matter of indifference, so far as the *immediate* result to the consumer is concerned, whether the nominal capital be doubled without increasing the actual capital, or the rate per cent. of the dividend be doubled. For example, twenty-one per cent. upon an actual capital of $1,000,000 is the same as seven per cent. upon a watered or fictitious capital of $3,000,000.

We say the *immediate* result is the same. The effect, however, in the long run, is very different. Under a scheme of misrepresentation of capital, unreasonable charges are comparatively easy, because they are made under a disguise which gives them the appearance of respectability. A price to the consumer, which involves a profit of seven per cent., seems reasonable and therefore tolerable, while a price involving a profit of twenty-one per cent. might 7796 seem unreasonable and intolerable. FICTITIOUS CAPITALIZATION, *therefore, becomes* A COVER FOR UNJUST AND OPPRESSIVE EXACTIONS.

CORPORATIONS BOUND TO FURNISH NECESSITIES AT REASONABLE PRICES.

Corporations deriving their existence and power from the public for the purpose of providing the common necessities of life, such as light, water and transportation, ought to furnish those necessities at reasonable prices. Not to do this is to turn against the people a power derived from themselves.

If a company were disposed to disregard the rights of the public in this respect, it would, nevertheless, be entirely willing that the law should fix the maximum rate of profits to the shareholders, provided the company is allowed to fix the amount of nominal capital. If, for example, a company having an actual capital of $1,000,000 were determined to derive an annual net income for distribution among its stockholders, to the amount of $350,000, the company would be quite willing that the maximum rate of dividend should be fixed by law at seven per cent., provided the company is left at liberty to adulterate, to fictitiously increase, to water its stock by making its nominal capital $5,000,000; in other words, by adding to its actual capital $4,000,000 of FIAT STOCK. In the one case the transaction shows *upon its face* that exorbitant charges have been made, while in the other the profits *seem* reasonable, but *are in fact* equally excessive and unreasonable. It is obvious that limiting the rate of dividends affords the public no protection against exorbitant charges, unless at the same time the nominal capital is made to agree with the actual.

These statements illustrate some of the injurious effects upon the consumer resulting from the watering of stock.

7797 STOCKHOLDERS LIABLE TO SUFFER FROM FALSE CAPITALIZATION.

But the evil is by no means confined to the consumers. *The stockholders themselves, or some of them, are liable to suffer still more from false capitalization.*

Those who issue this fiat stock, which represents no increase of actual capital, may, and in many cases doubtless do, make themselves rich. Immense fortunes have been made in that way. But their accumulated wealth must come out of somebody else. If a gas company, for example, it must come out of the pockets of the consumers or out of the new stockholders, or both. If the stock thus watered maintains itself in a good dividend-paying condition the loss falls upon the consumers, who pay the prices necessary to accomplish that result. Otherwise the stock itself falls in value, and its holders suffer the loss. In that case the market value of the stock may for a time be kept up by artificial means—such as manipulating stocks and borrowing money with which to pay unearned dividends—until those who profited by the fictitious issue have quietly retired from the concern, leaving the other shareholders to bear the loss.

In addition to those losses should be noticed the injurious effects of the speculative spirit and deceptive methods developed and fostered in the community by practices such as those above mentioned.

ILLUSTRATION OF STOCK WATERING.

A careful examination of the evidence accompanying the report furnishes ample illustration of the evils above suggested.

For the sake of a more clear and authoritative statement of the false methods against which the public should guard itself, 7798 let us take the case of one of the companies which combined with others to constitute the Consolidated Gas Company of New York. We present some of the salient facts in the history of the New York Gas-light Company as the same are established by the evidence given before the Committee.

This company was organized with a proposed capital of $1,000,000. Of this amount, $750,000 was paid in during the period from 1823 to 1838, inclusive. No further capital was ever paid in. But in 1861 the nominal capital was increased by $250,000, making the total nominal capital $1,000,000. It is to be observed that when this addition was made no new capital was created. The company simply said, let there be more capital, and there was more capital, by transferring from the surplus profits to the credit of stock account. This was a mere matter of bookkeeping. During the next nine years the nominal capital remained $1,000,000. In 1871 the company reorganized under a new name, and again increased their capital stock in a similar manner to the extent of $3,000,000, making the total nominal capital $4,000,000. At this time, as before, no new contribution was made to the treasury of the company. The transaction was, in effect, simply a matter of corporate decree and bookkeeping. This amount of capital continued unchanged until November 11, 1884, when the consolidation took effect. At this time the transaction, so far as capitalization is concerned, was similar to the one last mentioned, although effected under different forms of law.

In the transition from the old corporate existence to the new, no addition was made to the actual capital of the New York Company, and yet its stockholders received back from the Consolidated Company an amount of stock not only equal to that which the company had before, but the additional amount of $3,600,000, making
7799 in all $7,600,000. This was done under an agreement in pursuance of which the consolidation was effected, and by which the other constituent companies received similar additions to the amount of stock issued to their respective shareholders, without any new contribution to the actual capital employed, to say nothing of the amount actually withdrawn as before stated, and distributed among the shareholders.

It appears, therefore, that of this $7,600,000, being the par value of the consolidated stock issued to the stockholders of the New York Company, only $750,000 was ever actually paid in by its shareholders. That is to say, only ten per cent. of that part of the Consolidated stock, which was assigned to the New York Company was actually paid in by its stockholders. The remaining ninety per cent. was added by simple vote of the company, the last increase being consented to by the other constituent companies in consideration of similar additions to each of them respectively. This addition of ninety per cent., therefore, either represented no intrinsic value, or only such as arose from the natural increase, if any, of some of its properties, and from the charges exacted from the consumers over and above the enormous profits that had already been distributed among the stockholders from year to year. How small this natural increase has been will hereafter appear. What these profits were will also fully appear from the annexed report of Mr. Yalden, the expert accountant (see appendix D, at page 635, particularly at page 775), which gives the benefits derived by the stockholders of this and the other constituent companies. Mr. Yalden's thorough investigations have drawn from the records of a vast number of transactions the facts upon which in large measure the conclusions arrived at by the committee have been based.

7800 What is true of the New York Gas-light Company is substantially true of the other companies, the difference being only in degree.

HOW THE ACTUAL CAPITAL OF THE CONSTITUENT COMPANIES WAS CONTRIBUTED.

It also appeared by the evidence that the stockholders of the several companies had contributed in the aggregate only $8,727,050 in cash; and that $2,488,250 par value of stock had been issued in payment for patents and other properties; and that $4,284,170 had been transferred from surplus profits to the capital account.

This sum of $4,284,170, was in effect contributed by the gas consumers. It was derived from revenues obtained wholly from them, not in lieu of a dividend so derived, but in addition to dividends enormously large, as will hereafter appear. If, therefore, the aggregate capital stock of the constituent companies had been $15,500,000, the amount of the three items given above, and if such price had been charged for gas as would enable the companies to distribute among its shareholders in the form of dividends what should be regarded as a fair rate per cent. of profit, it would even then have been true that the consumers themselves had contributed more than a quarter of the basis on which such dividends would be predicated. But the evidence shows that the nominal capital of the constituent companies immediately before and at the time of the consolidation was $17,000,000; and that in pursuance of an agreement between those companies, all their working capital, amounting to $2,139,089, was returned to their stockholders, thereby reducing the aggregate amount of capital by so much.

7801 EFFECT OF FICTITIOUS CAPITALIZATION UPON GAS CONSUMERS OF NEW YORK CITY.

It remains to apply some of the foregoing suggestions to the particular case in mind, and to consider *how this fictitious capitalization affects the gas consumers of New York City; and how it is liable to affect the holders of the watered stock.*

As has been stated, the amount of dividends paid to stockholders is an important element in the price of gas.

If the aggregate amount of the dividends is more than a fair per cent. of profit upon the capital invested, all of that excess must come out of the pockets of the consumers and is to that extent an unjust and oppressive burden upon them; and it makes no immediate difference to them whether this aggregate amount of dividend is derived from an exorbitant rate of profit upon the real capital, or from a lower rate upon a watered capital. It is a matter of simple arithmetical computation to show that seven per cent. upon $39,078,000—the amount of capital stock issued by the Consolidated Company is about the same as sixteen and nine one-hundredths per cent. upon $17,000,000—the nominal capital just prior to consolidation and about the same as twenty-four and twenty-eight one-hundredths per cent. upon $11,215,300, the actual share capital representing shares issued for money and property of the constituent companies.

It is plain that the present cost to the consumers is the same whether they pay such a price for gas as shall yield a dividend of 24.28 per cent. on the amount of actual capital; or 16.09 per cent. upon the capital just prior to consolidation, or seven per cent. upon the stock of the consolidated company in its present greatly watered state.

7802 So much for the *present* effect upon the consumers. As to the future effect it is obvious that it would be easier to increase a nominal 7 per cent. dividend than it would be to raise one of 16 or 24 per cent. The people might submit to the former because its real character is obscured by the fictitious capitalization on which it is paid; while the same public would not tolerate the larger per cent. appearing as it really is without any artificial disguise.

If the gas consumers had known that the stockholders of the New York Company had put into the concern only $750,000; that they had taken out of it in the form of dividends $15,274,078; or $9,814,225 in excess of ten per cent. upon the nominal capital, and that when the consolidation arrangement was entered into they claimed to have left in their hands $7,600,000, that being the par value of the consolidated stock issued to the shareholders of the New York Company; if all these things had been known as they occurred, it cannot be supposed that the company could have charged a price large enough to enable them to attain such results. Knowledge of the facts would have created such a demand for reduction in the price of gas that the company could not have withstood it.

So under the present consolidation, if the public can be made to believe that they are being charged such a price for gas as enables the new company to realize only seven per cent. of profit upon the capital invested, no one will complain. They might even be allowed to increase somewhat their rate of profit. But if the people understand that the nominal capital is greatly watered—that seven per cent. on the nominal capital means more than twice seven per cent. on the actual capital, that it means three times more than seven per cent. on the amount actually invested by the stockholders, apart from that which was derived from the consumers, then it may well
7803 be doubted whether the people will long consent to the payment of a tax upon a necessity which yields to the company such unreasonable profits. Hence it is greatly important that the people should know the true state of the case. What is reasonable the people in general are willing to have done, but an unreasonable and exorbitant charge they ought not to submit to.

UNIFORMITY OF PRICE OF GAS THROUGHOUT THE STATE IMPOSSIBLE.

There cannot be a uniform price of gas throughout the State. The price must vary in different places according to the cost of labor and material used and the amount of gas consumed. A price that would yield a net profit of 100 per cent. in the city of New York might yield no profit at all in a village or small city. In London it can be made cheaper than in New York. But there is one condition of universal application. *Fictitious capitalization tends to increase the price everywhere.*

HONEST CAPITALIZATION ESSENTIAL TO FAIR PRICE OF GAS..

If, therefore, the price of gas is to be reduced to a fair and reasonable amount, it becomes a matter of obvious and prime necessity that the public, from which all chartered rights and franchises proceed, should see to it that illegitimate stocks shall not impose upon them illegitimate burdens; that corporate "rights" shall not be perverted into instruments of public wrongs. That this has been done by the gas companies of the city of New York, which your committee was directed to investigate, has been demonstrated by ample and incontrovertible evidence. We are not criticising men or motives.
That is not within our province. We are exposing methods
7804 and their results. In doing this we indicate the objective
points that must be aimed at in any attempt to provide an effective remedy. *Stock watering must be prohibited.* It must be looked upon as an instrument of extortion. It must be frowned upon as a species of dishonesty. If it has not hitherto been regarded as such, and, if good men have engaged in it, the popular conscience cannot too soon be quickened or the popular judgment too soon rectified. If this species of unjust gains is now under the protection of law, that protection cannot be withdrawn too soon. The shield of law should become a sword.

CORPORATIONS MUST ACCOUNT TO THE PUBLIC.

Prompt and entire accountability to the public should be made the law of all corporate dealings with the people. Complete reports of such dealings should be made at regular and frequent intervals, such, for example, as are required in Great Britain. These reports should be put within easy reach of the people. Legitimate capital with fair, frank dealing and a consequent mutual good understanding will result in reasonable prices to the consumer and reasonable profits to the companies.

OTHER LEGISLATIVE REMEDIES are necessary in order to supplement those above suggested. The legislature should provide for testing, by public authority, the purity of gas, its illuminating power and its measurement. These are matters which cannot safely be left to individuals. They lack the means of doing it. This falls within the range of purposes for which organized society exists.

The evidence at pages 548 and 549 shows that by altering the radius, which forms a part of the meter, the gas passing through it
may be made to register too little or too much, according as
7805 it is made longer or shorter; as a clock may be made to go too
fast or too slow by shortening or lengthening the pendulum.
We do not say that frauds have been committed by this means, but

we do say that frauds might easily be perpetrated, and that legal safeguards should be provided against such liability.

WASTE OF GAS AND INJURY TO HEALTH.

In this connection it may be useful to call attention to a very important matter which appears in the evidence on pages 552, 553 and 554. It is there stated that only about one-half of the gas that passes through the burner is consumed, and thereby converted into light. If this evidence, which is confirmed by other testimony, be correct, it must follow that about one-half of the gas which the consumer pays for is wasted, and, what is of still more serious consequence, the portion of gas which is unconsumed passes into the air and poisons it. In this way the health of the people is being steadily and stealthily injured. Thus, the consumer not only pays for that which lights his dwelling, but also for that which impairs vigor and causes disease and death. The evidence shows that when the pressure at the burner is too great the gas escapes so rapidly that imperfect combustion takes place, causing the waste and injury above mentioned. It further appears that the companies can increase this pressure, thereby increasing both gas-bills and doctor's bills. Provision should be made by law for ascertaining whether or not that power is exercised. It is due to the companies to say that they should be held responsible for this waste and injury to health only so far as it may be produced by a pressure applied by them in excess of what is necessary in order to distribute the gas to all parts of the territory covered by their operations.

7806 THE GAS PROBLEM.

It is obvious that the gas problem involves much more than the price per thousand cubic feet, as shown by the gas bill. It involves at least these four questions:

1. How to get the best attainable gas.
2. How to get it at a far price.
3. How to permit no more to escape than can be consumed and converted into light; and
4. How to secure an accurate measurement of the gas so used.

The special attention of your committee was directed to the second of the above questions, and to that as affected by the alleged false capitalization. Hence the other matters, while not wholly overlooked, have received less consideration than their importance deserves, for the reason that the committee could better serve the public by making an extensive examination into the matter specifically set forth in the resolution, than by a more equal distribution of its labors among a variety of subjects which, if time permitted, might come within the scope of its duties.

EXCESSIVE ACTUAL CAPITAL INCREASES PRICE.

In connection with the subject of fictitious capitalization it is worthy of observation also that *there should not be an unnecessarily*

large amount of actual capital employed. This would seem to be so obvious as to forbid mention were it not for the fact that its neglect has done much harm. It is often necessary to revive neglected truism, and the greatest difficulty is often experienced in setting them in their proper working relations. The evidence before your Committee has shown that the Consolidated Companies have more capital than is actually employed, or than is necessary for the
7807 results which are being accomplished. That is to say, the nominal capital is not only greatly in excess of the real capital, but the latter is in excess of what is needed for making and distributing the amount of gas furnished. The result, so far as the consumers are concerned, therefore, is that they are paying a price for gas which enables the companies to distribute a dividend not only upon watered, fictitious stock, but also, though *in a far less degree,* upon necessary capital.

A regulated monopoly, such as that wheh exists in London, by which watered stock is excluded, and which affords the best conditions for adjusting the amount of actual capital employed to actual requirements is the most economical system that has been devised. The word "monopoly" may tend to deter from its adoption. An unregulated monopoly such as prevails now to very great extent in New York city is perhaps about as bad as could be devised.

The New York city plan of UNREGULATED MONOPOLY ought to be abandoned at once. If the London plan of strictly limited and regulated monopoly does not meet with favor then there should be provided a system of regulated competition. Not unlimited competition, but one that shall be subject to such strict and well-defined regulations as economy and mutually fair dealings between the companies and the public may require.

STOCK-WATERING TO BE EXCLUDED AS A DISGUISED MEANS OF IMPOSING UNJUST AND, THEREFORE, OPPRESSIVE BURDENS UPON THE PEOPLE.

The full development of the true system will of course require time and much patient attention to details. But your committee desire to make as emphatic as possible, the inevitable injustice and bur-
7808 dens that result from a false or watered capitalization. Its utter exclusion is the beginning of success in attempting to get gas at a fair price. What is true in this respect of gas companies in New York city, is true of gas companies everywhere, and what is true of gas companies is equally true of other corporations. Watered stock in any of them is an instrument for exacting unjust gains at the public expense, and should be excluded from them all.

The committee has indulged the hope that in attempting to disclose the injustice and evils resulting from fiat gas stock, the attention of the public may be so drawn to the general subject of fictitious capitalization and the public burdens thereby imposed, as shall lead to the correction of similar abuses in other corporations. The people have very little conception of how much they are paying yearly in the form of increased prices for many of necessities of life. It must be understood that corporate franchises are granted by the public for the public good, and not to promote private speculation.

FALSE CAPITALIZATION PROMOTES OFFICIAL CORRUPTION.

The difficulty in dealing with the subject of fictitious capitalization, and the evils resulting from it, increases as corporations multiply and grow strong under the inadequate provisions of existing law Hence, there should be prompt and radical remedial legislation. The axe must be laid at the root of the abuses.

The evil furnishes the means for its own perpetuation—a false capitalization naturally tends to other forms of dishonesty.

7809 It creates inducements to corruption and provides the means of effecting it. If, for example, a company requiring only half a million of actual capital for carrying on a given enterprise issues in addition an unnecessary and fictitious stock of two millions, it is easy to see that a possible corruption fund is at hand with at least the temptation to use it both to cover up what has been done and to secure a continuance of the same. It cannot be doubted that much of the alleged bribery that has scandalized legislation and political conduct and debauched the moral sense of the people is due to the evil to which we refer. The rights of the public are believed to be bartered away by money obtained from the people themselves, who pay the over charges made necessary by the over capitalization and by whatever is corruptly expended to promote or defeat legislation. The Consolidated Gas Company of the City of New York is an example in point. By means of its fictitious capitalization its managers has the *power* to provide the funds necessary for buying the votes of legislators for the purpose of thwarting the efforts of the people to obtain relief from unjust burdens, provided enough legislators were purchasable; in which case the company *could* say to the people with an air of confidence, "What are you going to do about it?"

INDIFFERENCE TO BRIBERY—ITS DANGER.

Whether or not the alarming scandals so notoriously common both before and after the close of the last session, as to the *use* of that power were true is a matter in which the deepest interest ought to be felt. *General indifference to bribery is more alarming than the act itself.* The supremacy of the popular will cannot long survive the debasement of the popular conscience. When men come to speak

7810 lightly of giving and taking bribes; when this comes to be looked upon as "practical" business or politics; when corporations deriving their powers and their profits from the people use both to corrupt their representatives; when these things are tolerated, there is the most imperative need of reformation before the evil becomes so great as to invite revolution.

No legitimate effort should be spared to ascertain the truth or falsity of the allegations of corruption in connection with the defeat of the proposed gas legislation in 1885. If the offenses were not committed, it is injurious to the public to permit itself to become familiar with charges of corruption. The familiarity itself tends to dull the moral perceptions and sear the public conscience.

Bribery tends to defeat the popular will. It is an attack upon popular government. It is treason against popular sovereignty, and should be treated as such. Any thing short of that is danger at a vital point.

The Fair Aggregate Value of the Property, Rights, and Franchises of the Constituent Companies.

The Consolidated Gas Company assumed to organize under chapter 367 of the Laws of 1884. The promoters of that scheme had procured, in the manner hereinafter referred to, the passage of that act for the purpose of this consolidation. It was a general law for this special purpose. It provided that the several companies proposing to combine and reorganize might do so with a capital determined upon a basis of "the fair aggregate value of the property, franchises and rights" of its constituent companies. Was that done? Was $39,078,000 such value?

The words property, franchises and rights of the companies 7811 included everything which they owned or could rightfully claim to own. They owned certain lots of land with buildings and plant upon them, together with whatever might be employed by them in the manufacture and distribution of gas. To these they had an absolute right except so far as that right might be affected by liens upon them. They also had a conditional and revokable right to use that property for that purpose. This was all they had or could rightfully claim to have.

The cost of property affords some aid in ascertaining its value, especially when purchased in the ordinary course of mercantile transactions. In some cases that value may subsequently be increased. In others it may be diminished. The land, considered simply as vacant lots belonging to the companies, was worth more at the time of consolidation than when it was purchased. While on the other hand the structures upon them and the mains, services, meters, etc., were subject to deterioration. Their value is still further reduced below cost by the displacement of some of the properties made necessary by the introduction of improved methods, the property being thereby rendered comparatively valueless.

The books of the companies show that the entire cost of the property, including patent rights, was between twenty and twenty-one million dollars, for which the companies were still owing upwards of $2,000,000.

By applying the cost test, without claiming for it anything more than a means of approximation to the value, we find, after making due allowance for both appreciation and depreciation, that the value of all their properties is about equal to the aggregate share capital of the companies prior to consolidation.

Another mode of arriving at the fair value is by ascertain-
7812 ing what it would cost at the time of consolidation to dupli-
cate the property. It may safely be inferred from all the evidence that about $15,000,000 would be ample for that purpose; that an actual cash capital of that sum would purchase everything necessary for the manufacture and distribution of gas of the best quality and equal in amount to the total quantity of gas furnished by all the constituent companies prior to consolidation, or by the consolidated company since that time. See evidence, pages 397, 494, and elsewhere, as to amount of capital required. In a comparatively small business a capital of one million of dollars may be required for the daily production of one million cubic feet of gas; but as the business increases the ratio of capital to producing capacity diminishes. So that, while four million of dollars may be required for a producing capacity of four millions of cubic feet per day, a capital of $20,000,000 is adequate to a producing capacity greatly in excess of 20,000,000 cubic feet per day, and upwards of 30,000,000 cubic feet per day.

Hence one million dollars of capital for one million of cubic feet of out-put is not a proper measure of requisite capital as applied to the consolidation.

In addition to the properties above referred to there is nothing left as a basis of valuation except such right as the companies might have in respect to the use of those properties, for the purposes specified, and in the manner in which they were used, including the right to lay mains in the streets, etc.

So far as the committee are aware none of these rights were granted for a specified time, except the contracts with the city which are made from year to year. But it was doubtless expected that their privileges would be enjoyed continuously, *provided*, and this is a vital point in the case, provided the privilege so to do is not forfeited
by its abuse. This privilege, this so-called franchise or right
7813 is a public license to do a given thing during good behavior
or for a given period, as the case may be. The State has reserved to itself in express terms the right to annul the charters of corporations. This carries with it the power to revoke all franchises contained in them.

The State has reserved to itself the right to say when the privileges which it has granted have been abused; and *the* when the public good requires the annulment of such privileges, due regard being had to the rights of all in respect of the property belonging to the corporation. It ought, therefore, to follow that the more those corporate rights and franchises are abused, the more precarious should be the tenure by which they are held, and consequently the less valuable they become. It ought not to be true that the more the corporate privilege is abused and the more flagrantly the rights of the public are violated, the more valuable the franchise becomes; and the more effectively it may continue to be used as an instrument for future exactions.

The "fair" value of corporate property ought not to be increased by the fact that the corporation has made excessive charges at the expense of the public.

It cannot accord with sound public policy that an abused franchise is rendered more valuable by the abuse. It cannot be that the State will put a premium upon exorbitant charges. A forfeited privilege cannot have much "fair value" in the hands of any body.

So far as we are aware no one claims that the "fair aggregate value of the property, franchises and rights" of the constituent companies could by any method of valuation amount to the sum of $39,078,000 except upon the theory that such value is derived from the large amount of profits that had been realized by the companies. But it should be borne in mind that those enormous profits were ob-
7814 tained by the unreasonable and excessive price charged for gas. Their magnitude was proof of the wrong done to the public.

The profits which have already been distributed among the stockholders of the various companies cannot be restored to those from whom they were obtained; but is it not equally obvious that such charges, so far as they are excessive, cannot be a fair basis for increased charges in the future?

The LEGISLATURE ought not to predicate value upon a public wrong.

The quoted prices of the shares of a company are not a proper measure of the "fair value of the property, franchises and rights" of the company in question. The fluctuation in those prices cannot indicate corresponding changes in intrinsic value. According to that standard the consolidated values have varied more than $4,000,000 within less than four months. And about $8,000,000 in a year. According to the same standard, the values of all that belonged to the constituent companies rose from less than $14,000,000 in 1880, when the pooling arrangemen- took effect, to upwards of $30,000,000, in 1884, when that pooling arrangement developed, as was intended, into the consolidation. The simple truth of the matter is that during that time the passage of an act, known as the two-thirds act, hereinafter referred to, prevented competition, so far as possible, by companies outside of the pool, while the effect of the pool itself was to prevent competition among themselves. By these means the companies were enabled securely to exact from the consumers those charges for gas, which resulted in the profits elsewhere stated. We have said that the cost of an article is some indication of its value. This arises from the fact that in most cases the subject of the
7815 sale, as a whole, is known to the parties. If a farm, for example, its boundaries, location and the quality of its soil are noted. The whole subject is before the contracting parties.

If, *under such circumstances,* the minds of the buyer and of the seller, with their opposing interests, meet upon a given price, there arises a fair presumption that the price agreed upon will not widely vary from the true value.

But in the case of gas shares a comparatively small part only of the whole property and franchises were before the purchaser. In most cases it is probable that he has but a meager and superficial knowledge of the concern as a whole. He takes it with a degree of artificial and fictitious value, impressed upon it by conditions having no proper effect upon the fair value. The transaction is largely a matter of speculation.

We may safely conclude that the fair value of the property, franchises and rights of a company cannot be measured by the fluctuating and more or less speculative prices obtained for a small fraction of the company's stock.

The sum of $45,000,000 seems to have been arbitrarily taken, not, however, without some objection against its excessive character, as the capital of the new company to be formed by the consolidation of all the pooling companies.

The Mutual finding itself prohibited under penalty from consolidating with the other gas companies, did not enter the consolidation. Hence, the capital was reduced by the amount which had been assigned to the Mutual, leaving the share capital of the consolidation as already stated. So that that sum equally with the $45,000,000 was arbitrarily fixed.

7816 Having determined upon the aggregate amount of share capital, the next and most difficult matter was to distribute it. The contention was as to how each constituent company could get the largest possible fractional part for its shareholders.

Some of the properties were appraised, and the schedules were produced before the committee. In that valuation two things were noticeable:

1. Little or no allowance was made for superseded, impaired or abandoned works or apparatus, and
2. The valuation included all the rights and franchises which the company had in respect to the use and enjoyment of the properties for distributing as well as for manufacturing gas. Hence it would seem to follow that the valuation so made should be reduced as above suggested.

But instead of this an addition was made. Finding that the predetermined amount of share capital could not be reached by a liberal appraisal of some of the properties, and by nothing deserving the name of appraisal, as to other properties, the further sum of $7,781,000 was added for franchises, that being the difference between the proposed sum and that which had been reached without it. The valuation of the items constituting the proposed aggregate seems also to have been made in an arbitrary manner. The value assigned to the lots exclusive of the structures upon them, was, according to the testimony of the expert appraiser, appointed by the committee, about twenty-five per cent. in excess of their proper value, making an over valuation as to this item alone for more than $2,000,000. The evidence shows that there was not such an appraisal of anything as would have been made as between purchaser and seller. There were no purchasers in that transaction; all concerned acted as if 7817 vendors, having a common interest in making the total price as large as possible. The Consolidated Company did not capitalize upon the basis of "the fair aggregate value of the property, franchises and rights" of the constituent companies. The law referred to in the resolution has been violated, regard being had to the thing done rather than to the manner of doing it. The substance of the law, as well as the rights of the public, have been disregarded. It is no answer to say that the people have assented to it. The separate individuals composing the public do not meet these corporations upon terms of equality. The consumer is compelled to yield to superior force. It is important to observe also that the companies have hitherto kept their dealings from the knowledge of the public. Prior to this investigation it was not generally known that the entire sum ever contributed in cash by all the constituent companies was only $8,727,000, and in properties the further sum of $2,488,250, and that from this investment they have received upwards of 700 per cent. of benefits, all of which were derived from the people in the form of exorbitant gas bills.

When nominal capital represents only cash or its equivalent; when dividends upon it shall be limited to a reasonable rate; when full publicity shall be given to corporate dealings, and when all this shall be secured by governmental supervision, then may the public expect to obtain pure gas fairly measured and at a reasonable price.

For the purpose of effectuating those results, the committee make the recommendations wihch may be found at the end of the following summary of the evidence.

7818

SUMMARY

OF THE

EVIDENCE TAKEN BEFORE THE COMMITTEE AND CONCLUSIONS.

No Concurrence between the Actual and Nominal Capital of the Gas Companies.

It is established by the evidence, beyond contravention, that the nominal or share capital of the constituent companies affords no accurate information touching their actual capital. Historically considered, their is no period of time during the life of any of these companies when the nominal or share capital exclusively represented either money or property contributed as money, and so constituting a common fund, aggregating a total share capital whereof each stockholder or contributor held certificates for his proportion thereof. On the contrary, contributions of money from subscribers or of shareholders were of rare occurrence; and, compared with the total share capital, of relatively small amounts. In the few instances where the issue of stock appears to have been based on actual property, the true value of the latter never equaled the par value of such an issue.

The nominal share capital appears to have been in each and every instance an arbitrary or fixed aggregate upon which an issue of stock should be founded, and earnings distributed. This is not a theoretical inference, but an incontrovertible statement of fact.

Hence, the nominal or share capital of any or of all of these organizations is useful as a guide only in stating the denominator of fractions representing the respective interests or aliquot portions of the actual aggregate capital owned by the several stockholders. 7819

Again, a large amount of this nominal or share capital represents undistributed earnings. In so far as such earnings have been in fact devoted to the legitimate purposes of permanent capital employed in the business, apart from the usual and current expenses of business and wear and tear of its fairly capitalized properties, there is no sound objection to an actual capitalization of such earnings, so far as the necessities of the business reasonably may require such an increase of actual capital. In those cases the withholding of such surplus earnings from distribution, and their investment in actual property required by the enlargement of the business—not in replacing exhausted properties already capitalized—may fairly be treated as equivalent to cash contributions from those who would otherwise have received such earnings in distribution. Where this has fairly and legitimately been done, so as to result in an increase of actual capital in the true and correct use of that term, no criticism can reasonably be made.

Where, however, this apparent procedure is made the occasion (as it has been in some instances) for an issue of stock without any concurrent increase of actual property or producing capacity, or where the surplus earnings have been devoted to substituting new or improved processes for worn out, obsolete or unsatisfactory machinery or plant, then such an issue is calculated to deceive both shareholders* and the public; and shortly necessitates higher prices to consumers in order to cover the anticipated dividends upon the extra issue.

7820 In other instances an actual increase of capital has occurred exclusively at the expense of consumers, for the benefit of stockholders, and for the time quite regardless of the nominal or share capital. Thus, loans were made, or bonds issued, for enlargement of works or purchase of real estate, and subsequently paid off from surplus earnings realized from excessive prices of gas—prices fixed with a view to the discharge of such loans. The shareholders thereby realized large accessions to their property without contributing a dollar. Subsequently, under the plea of an increase of values, the nominal share capital would be enlarged and distributed as a scrip dividend; or, it may be, offered to stockholders for subscription and the subscriptions discharged by extra dividends; and upon this new issue of stock, as upon the old, dividends would be paid and the consumers forced to contribute for them in high prices for gas.

Hence, when the *actual* capital was enlarged, the consumers and *not* the shareholders (with some rare exceptions elsewhere herein mentioned) contributed to that increase of capital, furnishing in such instances no equities for future dividends or high prices. When the actual capital was on the other hand, in fact, diminished (as by abandonment of material or plant, losses, or extraordinary wear and tear), instead of being replenished by a new issue of shares for which shareholders contributed cash, the consumers also contributed the earnings from which the diminished capital was re-established, affording therefore, in such instances also no equities for future dividends on the lost capital or high prices to insure them.

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*Shareholders then presume the management has in fact increased the capital, whereas it has only schemed to replace some exhausted capital.

It is in this connection noteworthy that in the entire history of the New York companies there is no instance where the nominal or share capital was in fact diminished, although it has some-
7821 times occurred that the property thereby represented was, in fact, diminished, and in one case quite destroyed.

It must therefore be conceded that if there be any limitation of dividends, there must primarily be fixed the basis upon which dividends shall be estimated and distributed, and that such basis bears no just or uniform relation to the nominal or share capital of the companies entering into this consolidation.

Dividends Should be Limited to Honest Capital.

It is difficult to state any fair reason why the dividends should be estimated upon any sum as large as the aggregate share capital of the constituent companies. But it must be conceded as beyond question that on no established principle of industrial finance should dividends be paid on a *nominal* capital of twice that amount.

If the nominal or share capital of the constituent companies before consolidation, in fact represented the *actual* capital contributed or employed in the business, then it was fraud on the public to double it and to invite investment in the swollen shares.

That the actual capital was in fact much less than the aggregate represented by the nominal or share capital is a fact fully proven.

If the properties or accretions were of *greater* value than such an aggregate, then this excess is either profits or actual increase of capital in use.

If profits, it should be distributed. If consisting of enlargements of properties necessary to the conduct of the business, then under proper circumstances and restrictions there would be no sound reason for objecting to a fairly proportionate increase of capital.

The relation sustained by the actual capital used and employed in the business immediately prior (September, 1884), to the
7822 consolidation, and in fact used and employed during the year ensuing, having in view at both periods the future necessities of the business, has been made a special topic of inquiry by the committee.

It is proven that the total capital actually in the business and capable of being ascertained, stated and defined, was greater immediately prior to than it was immediately after the consolidation. Since then it has not been increase-, but probably has been diminished by dividends. It is also proven that more capital was in actual use by the constituent companies immediately before consolidation than has been in use or is required for the business of the so-called Consolidated Company.

Thus the total capital actually in use in the business of the constituent companies—if represented by their aggregate nominal or share capital—was $17,000,000. The owners of these shares, however, in attaining their consolidation, withdrew from their common funds, under various pretexts, sums aggregating $2,139,089 (see testimony page 460). In fact these constituent companies turned over to the new consolidated concern only their plant, properties, services and mains, and no working capital. What had been their then working capital, such as supplies, customers' balances, cash, etc., amounting to $2,139,089, was retained for and distributed among themselves under the guise of extra dividends and otherwise. By this method not only were the total assets diminished, but the actual capital of the consolidated concern was impaired by at least $2,139,089 less than the aggregated capital of its uniting constituences.

The working capital of the new concern must therefore be created out of earnings, or else by the sale of new stock; and no new stock, the officers testified had been sold.

7823 In fact there is nothing to prevent this additional stock, or any other stock that may be issued to replace convertible bonds purposely made, being distributed as a bonus.

Why under these cir-*mu*stances the nominal or share capital of the new concern should exceed the figures which its owners had selected to represent the total nominal or share capital of the constituent companies, is a question that must be explained upon the principle that the nominal or share capital bears no just relation to the actual capital of the companies.

This, in fact, is further demonstrated by the entire history and management of all the companies, and must be assigned also as the theory on which all their business has hitherto been conducted.

In all discussions, therefore, whether in aid of legislation or to fix a fair price for gas, or to arrive at a proper dividends, or for any other purpose—except to write a figurative or market value for stock—it should be assumed that actual capital is in the case before us an absolutely distinct and different thing from share capital, which is nominal capital.

WHAT IS THE ACTUAL CAPITAL OF THE CONSOLIDATION.

The whole is not greater than the sum of all its parts. No legislation, financial jugglery, or gas economies can disturb this proposition. Besides, as we have seen, the combined capital in this case is actually less than the sum total of what had been enjoyed by the constituent companies.

It should also further, in this connection, be considered, whether or no all the property represented by the capital of the constituent companies, and owned and transferred by them, is property or capital necessary, or in reasonable time likely to become necessary for

the conduct of the business. If not, then there is no justice
7824 or propriety in charging such prices for gas as may be
necessary to include dividends upon an excessive and unproductive capital.

It is in proof that more property is owned by the combined companies than is useful for the manufacture and sale of gas; and also that the producing capacity of the works now in use can be largely increased if not doubled and trebled wit-out using works which are now closed, and in which capital of some of the constituent companies was invested.

Should not such properties be disposed of and the investment they represent be withdrawn from the expectation of dividend and from forming a consequent element in the cost or price of gas? Questions of this character are of wider scope than the self interest of stockholders, or managers, exclusively in their interest, and demand for their solution some intervention in behalf of the public. *In the absence of adequate statutory provisions some public authority should exist to regulate, within reasonable limits, the properties or permanent investments on which dividends are to be rated, and charges made against the public.*

That there is some property or investment of a permanent character which is not in use, or required for production, and which is not fairly requisite in any aspect for the conduct of the business is, upon the evidence, one of the inevitable conclusions of fact. The precise dimensions of this burden, or extent in figures of this extra investment, may fairly be inferred from the testimony submitted; but the committee withhold any opinion on that subject as not essential to their present conclusions. Such an opinion, however, should form an element in ascertaining or establishing a maximum price for gas, and a maximum dividend for gas stock. Notwithstanding extra or unnecessary investments all such items are included
within the totals mentioned by your committee in consider-
7825 ing the actual and real, as distinguished from the constructive
or nominal share capital of the consolidation.

How to Ascertain the Actual Capital.

In ascertaining the cash capital of the consolidation values should, in the first instance, be disregarded, and the united capital of the constituencies stated. Whether the law does or does not favor excessive capitalization by making the same distinction between a *lawful* capital and an *actual* capital, is a question that is herein elsewhere considered.

The actual capital attributed by stockholders (at the times and in the manner particularized in the expert tables, pp. 661-777), of the several constituent companies was as follows:

Manhattan	$3,280,000
New York	750,000
Metropolitan	2,500,000
Municipal Knickerbocker	2,512,300
Harlem	1,569,050
Total stockholders' contributions	$8,727,050

This sum ($8,727,050) represents the actual capital of all the constituent companies. Nor is it the initial capital of these companies.

For instance: The New York Company, with an authorized capital in 1823 of $1,000,000, commenced business with $200,000 paid in, which was increased from time to time until in 1838 the entire amount of $750,000 had been contributed. Since that time nothing has been contributed by its stockholders, unless undistributed earnings, not received as dividends but left in the business, be regarded as such contributions. These amounts are mentioned hereafter.

7826 The Manhattan Company with an authorized capital in 1830 of $500,000, commenced business with $500,000 paid in. This was from time to time increased until by 1856 $1,200,000 had been contributed; and by 1866 the entire sum of $3,280,000 had been contributed in cash by stockholders. These being the two oldest companies, further history of stockholders' contributions need not be recapitulated. The items will be found in the evidence. (See pp. 661, 662, 695, 775).

It having been suggested that earnings withdrawn from distribution and permanently invested in enlargement of works or property required by the current or probable and reasonable demands of the business, should be regarded as capital, the amounts of surplus profits carried by the companies to what they have treated as capital account, are stated respectively as follows:

Manhattan	$720,000
New York	3,250,000
Municipal Knickerbocker	34,700
Harlem	280,000
Paid to capital from surplus profits	$4,284,700

In addition to this sum large amounts of surplus profits have been expended for apparatus, construction of bulkheads, buildings, plant and various purposes of a permanent, as distinguished from a current nature, and in that respect have become capitalized as moneys employed in the business. These amounts in some instances are charged directly to expense or repair accounts, and in other instances are so intermingled in various accounts as to render it difficult to state them, except as they are in bulk extracted from all of the accounts and grouped under a title of *total cost of property.*

7827 Even then such totals in the accounts of some of the companies necessarily include stock at its par value issued directly or indirectly for property. For convenience, therefore, such issues should first be stated.

There was issued for property, at various times, shares representing at the par value:

Stock of Metropolitan	$1,887,300
Stock of Municipal	450,000
Stock of Harlem	150,950
In all of par value of	$2,488,250

These three sums, aggregating $15,500,000, *comprehend the actual capital of all the constituent companies* at the time of the consolidation, the Knickerbocker capital being included in the Municipal capital for the reasons hereafter stated.

THE COST OF INVESTMENTS.

Of the constituent companies, including worn out apparatus or mains, or other impaired property of all kinds, has been ascertained as the same *appear on the books* of the several companies.

The total cost from all sources of property paid for by stockholders' original contributions, by surplus earnings, by stock treated as money, and from the proceeds of bonds and other loans, was as follows:

Company.	Total cost of properties.
Manhattan	$4,872,999.49
New York	4,630,642.03
Metropolitan	5,292,175.35
Municipal	4,092,347.86
Knickerbocker	810,481.15
Harlem	1,243,986.97
Total cost	$20,942,632.85

7828 It was found that the total outstanding indebtedness of the same companies was then $2,329,000. The sum, therefore, should be deducted from $20,942,632 as the properties nominally costing the last named sum were subject to those debts.

The conclusion therefore follows that from the books of the constituent companies their actual investment was not greater than $18,613,632.

This sum should be further diminished by the proper amount to represent actual loss of mains, apparatus, wear and tear, and destroyed or impaired property.

A COMPARISON.

Was there any justifiable ground for representing the capital of the new combination to be greater than the combined capital of its constituencies? *There was no increase of plant, of real estate, of works, or of money; and there was a diminution of materials and of moneys and cash assets. Why then should there be an enlargement of nominal or of share capital?*

Unless the law of 1884 (chap. 367) provided such authority (and the contrary will be shown) there existed no law by which the existing nominal or share capital of the constituent companies could have been enlarged without some concurrent increase of money or of property to represent capital. *It requires some authority of law not cited to satisfy the committee that a corporation may, without consideration, voluntarily issue an unlimited amount of stock as representing its capital;* and then by a process of distribution among shareholders without benefit to the common treasury permit
7829 the shareholders to sell it at their own price, and for their
own exclusive benefit. An ignorant and innocent public, who may be induced to invest in such shares are also imposed upon; they suppose themselves to be investing in capital, whereas they are only contributing profits to the old shareholders.

Neither the policy nor the statutes of this State have ever contemplated allowing any class of corporations to magnify their nominal capital beyond the representation of an actual value therewith required. Certain corporations desiring to increase their nominal or share capital may do so under established regulations, and then dispose of the new shares as original shares for adequate value.

SHARES DO NOT CREATE VALUES.

It will not be pretended that either of the constituent companies might have enlarged their nominal capital without acquiring new values, and solely because, in the opinion of the stockholders, their property had appreciated in value beyond the par value of their shares. This may furnish a ground for advancing the market price of shares to a premium; but the wildest financier has not hitherto succeeded in adding capital to his business, by formulating the owner's opinions of values.

Pronunciamentos do not create capital stock; certificates do not create values.

If the capital of a bank be $100,000, and be wholly invested at par in United States bonds, and those bonds have subsequently been quoted in the market at ten per cent. premium, it does not follow that the *capital* of the bank has thereby become enlarged to $110,000; or, if the bonds depreciated ten points, that the capital was changed to $90,000. If this were so there would be no fixity or security in capitalized shares. No school of economists has
7830 justified such a dogma, although it is sometimes attempted
as a part of some concurrent fraud.

So, by way of illustration, when the nominal or share capital of the Manhattan Gas-Light Company was $4,000,000 ($3,280,000 of which was capital contributed, and $720,000 capitalized earnings), there was no fair basis according to which the total cost of its properties as owned by it in 1884, viz.: $4,872,999.49, should become the exact figure and the measure of its new nominal capital and further issues of shares made accordingly. The true state of fact was that there was a surplus of $872,999.49 over and above the share capital, which surplus was invested in property.

In point of fact a sum much larger than this amount was distributed in dividends by the Manhattan Company for that year (1884). Yet in the fact of these facts the *Manhattan* was assumed to be *recapitalized,* through some process, *at* $11,940,000, *which amount the committee find is not in any fair and meritorious sense the actual capital of that constituent company.*

So also by way of further illustration when the nominal or share capital of the *New York Gas-Light Company* was $4,000,000, there was no fair basis according to which even the total cost of its properties as owned by it in 1884, should become the exact figure and measure of its new nominal capital, and further issues of shares made accordingly. The true state of fact was that there was a bookkeeping surplus of $630,642.03 over and above the share capital. In point of fact in this instance also a larger sum than this was by this company distributed in dividends in its last year.

In spite of these facts also the *New York Company* was assumed to be *recapitalized* through some process or fiction of law at $7,560,-
000; *which amount the committee find is not in any fair and*
7831 *meritorious sense the actual capital of that constituent company.*

By taking the figures furnished in the evidence, other similar illustrations will present themselves; and the proposition clearly demonstrated that *neither constituent company could without equivalent in any fair and meritorious sense justifiably enlarge its issue of shares to the figures assigned to it in the Consolidation.*

If it could not justifiably issue further shares by remaining out of the consolidation how could its share capital be enlarged by the alleged merger? Yet the nominal or share capital of the constituent companies has been enlarged in the following proportions:

Name of company.	Old share capital.	New share capital.
New York	$4,000,000	$7,560,000
Manhattan	4,000,000	11,940,000
Metropolitan	2,500,000	7,175,000
Municipal	3,000,000	5,100,000
Knickerbocker	1,500,000	3,000,000
Harlem	2,000,000	3,000,000
	$17,000,000	$37,775,000
An additional amount reserved to sell, called working capital, but possibly to donate, to distribute or otherwise to dispose of is yet held by treasury		1,303,000
Combined stated nominal or share capital		$39,078,000

From this it is assumed that all debts and obligations will be paid.

The debts are, therefore, first deducted from this appointed share capital, and the net amount in shares, thus ascertained for 7832 each respective company, was apportioned to its shareholders.

The debts of the several companies, as thus deducted, and the net amounts and proportions distributed to shareholders are stated in Appendix D, at pp. 779-780.

The total debts, as already noted, are $2,329,000; more than half of it being Knickerbocker and Municipal debts. How and to whom the stock reserved to pay his debt was sold the committee could not, within their allotted time, definitely ascertain. The accounts show the shares were issued. Their precise disposition, however, is not essential to any of the conclusions at which, upon the evidence, the committee has arrived.

THE RE-CAPITALIZATION WAS NOT A PURCHASE OF PROPERTY FOR STOCK.

The theory upon which this increase of nominal or share capital without any corresponding increase, but in spite of a diminution of actual capital, is attempted to be sustained is that of a purchase and sale. It is assumed that a new corporation is created, and issues its shares for property at fair values, that the property of the old companies is purchased and transferred, and that the new issue of shares being based thereon and agreed to is not subject to further inquiry.

A purchase and sale presumes a bargain between two minds or parties. It presumes the existence of a legal entity capable of contracting. But there existed no new corporation competent to enter upon such a transaction having capacity to issue stock and to contract with each constituent company touching the values of its properties.

Assuming, however, for the sake of argument, that the 7833 properties were each and all fairly valued for the purposes of the alleged consideration and transfer, the committee have carefully inquired how far any agreement as to values and the capitalization of the combination is a matter of public importance; and without hesitation agree that an excessive recapitalization based on a revaluation of properties in a transaction of this public importance, is of that vital character that requires the interposition of public authority.

LEGISLATIVE INTERVENTION EXPEDIENT.

There is no adequate remedy for the public from whom extortionate charges for gas may be exacted in order to pay dividends on fictitious or excessive capital, except by the interposition and public authority. Whether any other authority than the legislature may or may not exist, the power of the legislature to intervene is supreme and incontestible, and the occasion for its exercise is at hand.

If through the unexpected result of some legislative enactment, the power exists whereby the gas consuming public of New York shall be made to pay in charges for gas sums sufficient to yield profits on an apparent investment of $39,078,000, when in fact the actual investment is not one-half that amount, then not only should that power be withdrawn, but all transactions in the exercise of it should be absolutely abrogated so far as may be consistent with the protection to which property rights and vested interests are justly entitled. This protection may safely be left to the courts, as is provided for in the proposed laws accompanying this report.

Is the Consolidated Gas Company an Incorporation?

If the six named constitutent gas companies of New York
7834 have in fact recapitalized themselves or revalued themselves
at the fair aggregate value of their property rights and franchises (and the committee show elsewhere that the new assumed values are not fair), then, it may be argued, that they have not become a new and valid corporation, because:

1. Chapter 367, Laws of 1884, does not by strict construction apply to the corporations assuming to consolidate; and
2. Chapter 367, Laws of 1884, is unconstitutional in one of its essential features, and therefore wholly inoperative and void.

1. Some of the reasons in support of the proposition that chapter 367 of the Laws of 1884 does not apply to the gas companies who have united in executing the consolidation agreement readily suggest themselves by a comparison of this statute with previous legislation. In this connection a comparison by sections of chapter 960 of the Laws of 1867, and chapter 367 of the Laws of 1884 becomes especially significant. This comparison is deemed by the committee of such probable service in framing future legislation that a digest of the two statutes has been prepared, showing the sections in parallel columns, and will be found as Appendix K, at the foot of this report.

It will be observed that the only substantial difference between these two enactments is in respect to the total capital of the combination or consolidation which each of the statutes assumed to authorize.

In the act of 1867 that total capital is limited in terms to the total share capital of the constituent companies; while in the act of 1884 the total capital is not thus limited in terms, but is assumed to be allowed according to "the fair aggregate value of the property, franchises and rights." Neither of these acts purport to relate to
7835 corporations of a different character than those embraced
within the other act. Both assume to apply to corporations doing business under the general manufacturing, mechanical and mining laws. If any corporations may have been organized under special statutes granted prior to 1848 for the purposes of carrying on any business authorized by the general manufacturing laws, such corporations might reasonably be deemed to be embraced within the provision of chapter 367 of the Laws of 1884. But it requires the application of very liberal rules of interpretation, which have little, if any, place in this connection, to enlarge the class of corporations

embraced within the act of 1884 beyond the corporations which, since 1848, were organized, or which may hereafter be organized under the Laws of 1848, entitled "An act to authorize the formation of corporations for manufacturing, mining, mechanical or chemical purposes," passed February 17, 1848, and the numerous acts amendatory thereof and supplementary thereto.

The uniform legislative habit of alluding to manufacturing corporations as corporations organized under general manufacturing laws and laws supplementary thereto, is not likely to be disregarded in arriving at legislative intendment. In statutes imposing taxes, where various classes of corporations are referred to in a general way for the purposes of including all the corporations of a certain class as the subject of taxation, it would not be unreasonable to assume that the legislature intended to describe, and did describe, within the terms it used, all corporations reasonably included within the ordinary use of such terms. Indeed laws for the purposes of raising revenue are by principle and authority to be construed liberally, and for the purpose of furnishing a revenue designed by the statute. Hence, it has been held that chapter 542 of the Laws of 7836 1880, imposing a special State tax to be paid to the comptroller upon the dividends of all * * * "manufacturing" * * * corporations must for the purposes of carrying out the provisions of that act be deemed to apply to the companies engaged in manufacturing and supplying illuminating gas. (*Nassau Gas-Light Company v. Tax Commissioners, etc.*, 89 N. Y. 410). This decision, however, does not hold or imply that corporations organized under one set of general laws are to be made applicable to another set of general laws authorizing and providing for a different class of corporations.

In 1848 there was passed (chap. 37) a general law, still in force, entitled "An act to authorize the formation of Gas-light Companies." A separate set of statutory provisions was made applicable to the formation and conduct of all such companies. That statute has from time to time been amended or supplemented by legislative enactments. The class of corporations thus provided for, therefore, remain for the usual purposes of State action GAS-LIGHT companies. This class of corporations is subject to the provisions and limitations of the general act in relation to *gas-light* companies as distinguished from corporations known as *manufacturing* corporations organized under the general act of 1848, relating to the formation and conduct of corporations for "manufacturing, mining, mechanical or chemical purposes."

The character of the corporations for the usual purposes of State action is derived from the law under which they have their being. At least two classes of creation are covered by these two sets of statutes, viz.: *gas-light* companies under one enactment, and companies for *manufacturing,* mining mechanical or chemical purposes under the other enactment. So far as their practical operations are concerned, the company organized under the manufacturing 7837 laws might manufacture gas, and a company organized under the gas-light laws may and necessarily must engage in manufacturing. Yet for purposes of ordinary dealings, according to the law of their origin and the character of their being, the manufacturing corporation cannot necessarily or properly be said to be a *gas-light* company, and thus subject to the gas-light laws only. Nor can the gas-light company in law properly be designated the *manufacturing* company mentioned in this statute, and subjected, therefore, only to the manufacturing laws. Hence, we observe, in most of the special laws chartering gas-light companies, or promoting their incorporation, provisions subjecting the new creation of certain general laws of the State applicable to corporations in general. Precisely such provisions are found in the two consolidation statutes of 1867 and 1884 now under consideration. Section 4 of both laws subject the new corporation to be created under such statute to all the provisions enacted under "An act to authorize the formation of corporations for manufacturing, mining, mechanical or chemical purposes."

For these and other reasons, it may fairly be held that chapter 367 of the Laws of 1884, neither by its terms nor upon sound principles of interpretation, should be treated as applying to gas-light companies, but should be limited to the class of corporations which have assumed to have become organized under and by virtue of the act entitled, "An act to authorize the formation of corporations for manufacturing, mining, mechanical and chemical purposes," passed February 17, 1848, and the acts amendatory thereof and supplementary thereto, and should not embrace any other corporations.

2. Some of the reasons in support of the proposition that chapter
367 of the laws of 1884 is unconstitutional in one of its essential
features, and therefore wholly inoperative and void, and af-
7838 fords no basis of incorporation or implied grant of franchise
from the State to any organization purporting to have been
created by virtue thereof, are as follows:

Section two of the act provides for the taking of private property by private persons and for private uses involuntarily and by compulsory process. While private property may constitutionally be taken for public use, it cannot constitutionally be taken for a use not a public use. Should the legislature assume to authorize the taking of property otherwise than for a public use, the courts would interfere.

Nor can the legislature take away the judicial authority to determine what is, or what is not, a public use. Numerous cases have arisen in this State where the courts have passed upon the question as to whether particular purposes specified in various statutes were public uses. Laws have frequently been declared unconstitutional by the courts when they have assumed to permit private property to be taken for a use not a public one. Thus the taking of land for railroad purposes in the exercise of the right of eminent domain is justified because the use is a public one. So it has been held in relation to highways, parks and other public uses.

If the right of eminent domain, or the right to take private property for the purpose of laying pipe lines, or mains to lay gas upon, should be authorized by the legislature, it would then become the province of the courts to say whether or not such use in either instance was a public use, and if it were not the act would be void.

The legislature, however, has not assumed to give to the New York gas companies any authority to take private property for public use. There is no statute that points to any right, privilege or franchise by which any New York gas company, through the courts or
7839 otherwise, may acquire by compulsion private property for the
purposes of carrying on their business. It will be time enough to inquire whether such legislation can be upheld when it shall be attempted. At present there is no such statute. The only grounds, therefore, upon which the private property of gas shareholders can be wrested from them is, for a use recognized to be a public use. No such ground exists, or is declared or implied in the statute of 1884. Nevertheless, by its provisions persons owning fractional parts of the property of the constituent companies are, if the provisions of chap. 367 of the laws of 1884 are sound, compelled to part with their interests at the instigation of other stockholders, if it may be outside parties, and for benefits exclusively of a private nature expected by such investigating party. Under such compulsion the stockholder must either part with his rights and interest, on the best terms he can make, or take such value for it as may be awarded him in adverse proceedings.

Now, the State has no power to deprive the stockholder of property represented by his stock in any of the constituent companies or the benefit of his co-shareholders and shareholders of other constituent companies. This not being the taking of private property for a public use, is an intrusion upon private rights not justified upon principle or upon authority.

The effect of a statute assuming to do this, is to force property from a minority shareholder for the private benefit of other persons, and not exclusively for a public use.

It may very well be doubted whether for the simple purpose of reorganizing an industrial corporation (although engaged in subserving by its business some public advantage), the State may exert its power of seizure upon private property; or by placing on its
7840 statute books a menace, may compel an unoffending owner to
part with his property for private purposes to strangers. Yet, by this statute the shareholder must yield up his property at a market price controlled by those engaged in wresting it from him, or engage with associates from other corporations in their ventures in conducting various businesses other than the one to which his corporate property is already devoted. He shall surrender his rights and interests, or enter upon new enterprises beyond the original promise of his association, and which, he may believe, will destroy all original values or purposes. It may very well be suggested that the execution of such a menace is an intrusion on contract rights of association, purpose, property, devotion and business risk, such as are necessarily attendant upon every incorporated association of shareholders, and hence, no violation of the constitutional prohibition against impairing contract obligations.

There is no similarity between the exertion of the powers assumed to be created, or necessarily implied by this statute, and the sovereign right of eminent domain. The taking of shareholders' stock for the purpose of being pooled and re-distributed with divers other stock to various persons, not being in any fair sense of the term a public use, cannot form a constitutional basis for sound legislation. Hence a statute fundamentally dependent for its operations on such a feature, and incapable on its face of becoming operative with that provision omitted, might be said to be unconstitutional and void.

It is submitted that the Legislature, in a clear case of a recent unconstitutional enactment of this nature, when public reasons exist therefor, should not delay for some judicial intervention, but should apply at once remedial legislation; and that the public grounds for immediate action by the Legislature are apparent in this instance.

7841 It is ascertained from the Secretary of State's office that no attempt has been made to utilize this statute, chapter 367, Laws of 1884, except by the New York gas companies to form their consolidation.

THE CONSOLIDATION SHOULD BE ANNULLED BECAUSE UNFAIRLY CAPITALIZED.

But, assuming the statute of 1884 to have the full force and validity its advocates and promoters contend for, the combination known as the Consolidated Gas Company of New York has not resulted from a compliance with its provisions. On the contrary having violated them in essential particulars, and having assumed to capitalize in excess of the true value of its acquired properties, its assumed incorporation should in the interest of the public be annulled by the Legislature and its properties and assets marshalled and distributed under the direction of the courts to those in law and equity entitled thereto. Moreover, such proceedings would doubtless swiftly result in a reorganization and a recapitalization on a fair basis.

VALUES.

Upon the question of the fair aggregate value of the properties, rights and franchises of the constituent companies the committee have made extended investigation.

In addition to the considerations hereinabove suggested touching actual values the various estimates and methods of estimation pursued in arriving at the combination in question have been spread in evidence.

From this it has resulted that in the opinion of the committee *by no fair and meritorious valuation can the property rights and franchises of the constituent companies be valued at* $39,078,000.

7842 This conclusion is sustained by any fair method of valuation that may be proposed. None has been suggested by testimony or argument that supports this figure.

The aggregate valuation is neither estimated according to actual cost; nor the fair earning capacity of the properties in the ordinary course of trade; nor the fair cost to duplicate an equivalent producing capacity; nor the salable or market value of the properties; nor the true and actual value with a fair relation to the normal condition of similar commercial enterprises as they have been current; nor according to any ascertainable principle of fair appraisement.

It is not pretended that the valuation is according to the actual cost of the properties. But it was vaguely suggested by some of the officers that the appointed values represented a fair appreciation over cost. This topic, therefore, was made the subject of extended testimony, by which it has been clearly established that *with the exception of the lots of land originally acquired for the various works there was no investment in gas properties that had perceptibly appreciated in value beyond its first cost.* On the contrary such investments, unless annually replenished by fresh expenditures of from twelve to fifteen per cent., depreciate when in use; and when not in use or properly cared for are likely in a short time to become altogether valueless. Moreover improvements in the processes and methods of manufacture depreciate some values and necessitate expenditures for maintaining with economy a stated producing capacity.

Opinions as to gas plants proper may vary, and the values thereof may be more or less dependent on location, kind of gas to be made, competition in supplying, distribution facilities and other circumstances; but as a matter of evidence before this committee, *no*
7843 *witness has ventured the opinion that a gas plant is worth more than it cost to produce it.*

THE CONSOLIDATION SCHEDULES.

By directing the evidence toward the items stated in the schedules of appraisements upon which the business on consolidation was finally negotiated, and the books of the new concern opened, the committee readily ascertained upon what items opinions, even of experts, were likely to differ, and how far such opinions were a matter of any practical or legal importance.

These schedules, showing as they do the entire scheme of capitalization as outlined by the parties effecting it, have been deemed of sufficient importance to be printed herewith in full (excepting the real estate maps), reference being had thereto, it is only necessary in this connection to note that by these schedules the total aggregate values of the properties is assumed to be $29,994,000, and no more.

Now this amount is made up by assigning to each company specific values for the following items:

1 Street mains, valves, etc.	$5,217,000
2. Meters	1,195,000
3. Services (the service pipes from mains to meters, etc)	1,005,000
4. Plant	12,151,000
5. Real estate (being lots only, exclusive of buildings)	8,617,000
6. Bulkhead piers and water rights	1,300,000
7. Office buildings	325,000
8. Office furniture	70,000
9. Laboratories, photometer-rooms, etc	24,000
Total	$29,994,000

7844 As to items 1, 2 and 3: Grouping these items ($7,417,000) for conveniences, and comparing the values assigned to them in the appraisement schedule with the books, the following appears as the cost of mains, meters, and services:

Company.	Cost.	Page of testimony.	Schedule.	Increase.
Manhattan	$1,457,021	671	$1,800,000	$342,970
New York	Unknown.	708	1,292,000	....
Metropolitan	8,357,129	727	1,477,000	239,870
Municipal Knickerbocker	923,865	747	1,904,000	980,135
Harlem	527,669	758	944,000	416,331
Total	....	.....	....	$1,979,315

Thus the values for consolidation were assumed to be at least $1,979,315 in excess of the actual cost. Is it possible that the mains, valves, meters, and services had become enhanced in value notwithstanding their use and subjection to ordinary wear and tear for from five to forty years? It is common sense that neither mains, meters, nor services increased in value with time. The privilege of using them to furnish gas, is their chief, if not their only value. Do not these figures include all such privileges? If not, then these values are excessive. If they do the item elsewhere for franchise is so far improper.

Respecting the first three items, it may be observed that the values are stated at full cost, and upon the assumption that the quantities appearing upon the books of the respective companies to have been paid for, did actually exist in a condition equivalent to that at first cost. If this proves anything, it is that cost is not an unfair element in fixing values for some gas property.

The sixth item is in fact included in the cost of the fifth item, except as filling in of water fronts and construction of piers was
7845 paid for out of current expenses for labor and materials. The two items should be considered together as $9,917,000. That the value of the lots is in some respects inordinately excessive is fully proven; so excessive, indeed in some instances, as to be treated as fraudulent.

The committee has caused every specified piece of real estate to be appraised by a disinterested witness qualified by an experience of eighteen years as an assistant appraiser of city real estate in the New York tax office; and have subjected his results to reasonable tests from other witnesses of large familiarity with such values. No certified appraisement of the values of these lots was offered by the companies.

It is a moderate statement warranted by the testimony as well as from the general sources of information accessible to the public, to conclude that *the appointed or scheduled values for the lots* (not the real estate property so-called because the buildings and fixtures are accounted for in the "plant") *designated in the schedules as "real* *estate," is about twenty-five per cent. in excess of what was their fair value in September,* 1884, *when the agreement was signed.*

This conclusion of fact, considered as it must be in connection with the obvious motives and public consequences of the whole transaction, is itself sufficient to justify the abrogation of the consolidation and capitalization assumed to have been perfected in this way.

A difference of even $2,500,000 of improper capital to which the public is practically bound to contribute, is of sufficient consequence to warrant the intervention of adequate public authority to extinguish it.

This, however, is only *one* item. What shall be done when the excess is nearer $20,000,000 than $2,000,000?

7846 Item four, "plant $12,151,000," appeared to have been arrived at as the result of a general agreement between the representatives of the constituent companies, and after much consideration.

It is not below the actual cost of the property it assumes to represent, and in some instances exceeds such cost.

Each company appraised its own plant, and submitted its figures to its associates. What is here designated as the plant comprises the retorts, benches, gas holders, tanks, engines, machinery, buildings, storehouses, yards, tools, fixtures and general apparatus for carrying on the manufacture. Fairly considered, the "plant" of a gas company is the manufactory complete for sending out a given quantity of gas. Considered with relation to capital, it is generally conceded that there is some recognized or approximate proportion between the capacity to produce a given quantity of gas, and the total capital necessary for that purpose. This will be again alluded to. The companies' valuations of plant, however, as appointed to this item, have no such significance.

The engineer who constructed a large portion of it, and who appraised the plant of the New York and Metropolitan Companies, testified that he made his valuation or appraisement (testimony, page 38) based on what the plant is worth "for the production of gas in the manner in which it was used at the time;" and that it would be of no use except in connection with the right to open streets; and that he could not conceive that it was of any value except for old material, unless under this condition, or made applicable for the purpose for which it was built. Upon that basis the witness thought it was fairly worth the money it would cost to produce it now, and he affixed his valuations accordingly.

7847 When it is observed as the testimony shows, that a large part of the plant of the old companies was produced many years ago, and used for the manufacture of a gas of a low candle-power, which did not successfully compete, in subsequent years with the gas of a higher candle-power manufactured by different method and introduced by competing companies, it is not difficult to understand why in recent years and until such competition was satisfactorily composed, the old companies were obliged to expend large sums on the plant.

Thus the New York Company during the last five years of its business substantially reconstructed a large part of its plant. Substantial additions were also made to the Manhattan plant. The officials of these companies stoutly denied that any of their plant had been rendered worthless or unserviceable. The fact, however, appeared that at the works of the companies, there was very considerable plant that was not in actual use.

There is good reason to believe, from the testimony, that in view of the competition and methods of the later companies, and the menace thereby occasioned to the excessive profits to which the stockholders of the New York and Manhattan Companies had long been accustomed, that the managers of these old companies appreciated the necessity of improving their methods and uniting their fortunes with the new comers, or of appeasing their rivalry in some substantial way. Both courses seem to have been successfully followed. Valuable concessions of money (the New York Company paid to the Municipal $300,000 for patent rights), or of business were agreed upon; then freedom from competition and finally combination or consolidation was arranged, without which a large part of the business of the old companies might have fallen into new hands.

7848 Under these circumstances it was of slight consequences to any one constituent, and of still smaller consequence to any individual stockholder, at what figure the plant, or any other scheduled item, should be appraised, or valued in the consolidation. It was only important that the minds of all the representatives of the constituent companies should meet at some figure. Each company, therefore, that was urgent for consolidation tried to make its own figures as high as possible; and there was no interest to interfere with any excessive valuation.

Upon the testimony it requires some exercise of the imagination to conclude that the fair salable value of the retorts, benches, holders, tanks, engines, machinery, buildings, fixtures and the various apparatus comprising the "plant" of the constituent companies, exclusive of any other element of value reached the schedule figure of $12,151,000.

In the view taken by the committee respecting the total capitalization, it is not necessary to express any opinion as to what was in truth the fair value to be assigned to this particular item of $12,151,000 because the value of a gas apparatus is elsewhere considered and is not fairly to be separated from the value of a gas plant in its entirety. If the various factory items be detached from each other and valued separately, and not for the purpose of being used in the manufacture of gas, then, as the witnesses agree, their separate values would be much less than cost. In that event they should not have been scheduled on the basis of estimated cost; or as pretended according to what it would cost to reproduce the apparatus. Much of the material was necessarily obsolete, laid aside, or incapable of detached estimation without regard of the general relation of all parts of the plant to each other and to the business in which it is used.

7849 It is clear that all parties treated the value to be assigned or scheduled to this item (as indeed they treated all the other items) as dependent on the condition of its continuing use at the same place for making and supplying gas. The valuations were for property of a "going concern;" else, as one of the builders and appraisers testified, the plant had little value except as old material.

Of course, therefore, the value of the "going concern" depended on the right of the concern to keep going; and this necessarily included the right or franchise so to do if any existed.

The entire properties when valued or pretended to be valued in this way are scheduled by the managers at $29,994,000.

This scheduled estimation of $29,994,000, therefore, necessarily comprehended an over-valuation of all there was or could have been of properties, franchises and rights belonging to all the constituent companies.

The arbitrary addition, therefore, to this sum of more than twenty-five per cent. of this excessive valuation not only savors of fraud to some innocent stockholders who approved it but amounted to a public wrong.

Instead of $29,944,000 the consolidation capital appears scheduled at $39,078,000. This result is attained not only by excessive estimations according to the scheduled items, but by their actual duplication; here is

ONE FICTITIOUS ITEM OF $7,781,000.

With no limitation by law on the price of gas, or regulation as to its quality or measurement, the effect of adding arbitrarily $7,781,000, the last scheduled item, to the capitalization of six companies already capitalized excessively for the business they were conducting, is to tax gas consumers for an unrestricted profit on an apparent investment of $7,781,000, when in honest truth that $7,781,000 does not represent one dollar.

7850 Seven per cent. on this sum is over half a million dollars per annum. More than four times that amount has already been distributed as dividends and collected by the consolidation from the gas paying public of New York.

This item alone of $7,781,000, is a significant badge. The public wrongs its approval would perpetuate justifies the Legislature in disintegrating the transaction of which it is an essential element.

THE TRUE VALUE OF GAS PROPERTIES.

But the true value of a complete plant, capable of producing a stated quantity of gas and adequate to the varying demands of the seasons, and of reasonable expansion for the future, including real estate, apparatus and all the necessary equipment for business, has been conceded by all the witnesses testifying upon the subject to be measured by its fair cost. All the evidence concurs in the statement that the capital fairly requisite to produce a given quantity of gas is readily ascertainable within approximate limits. The experience of witnesses who have organized companies, constructed and located gas works, inaugurated and conducted gas business generally, coincides within reasonable limits. Indeed so uniform was the testimony—extracted from unwilling witnesses and not without difficulty—that the committee have no hesitation in stating it to be a fact that for a producing capacity for furnishing, say five million cubic feet of gas per day a maximum capital of five millions of dollars is abundantly adequate including preparation for extensions and enlargements of the business.

To double this capacity would not require double the capital. On the contrary in dealing with such large capacities, the proportion of additional capital required to increase the manufacture diminishes as the capacity increases.

7851 By way of illustration, the constructor and manager of the works and business of the Mutual Gas-light Company testified to having attained a capacity of 4,000,000 cubic feet per day, with a representative capital of $4,100,000; in which sum is included $600,000 spent in experiments, enlargement, and alterations of works and street mains, and other miscellaneous items belonging to a proper construction account. The construction here alluded to was also made soon after the war when prices for labor and materials were higher than at present. The same thing could be done now, the witness thought, for twenty per cent. less. The producing capacity thus established, having been conducted with regard to the future demands of the business, is capable of being doubled by the further expenditure of about $1,500,000.

Here is testimony from experience that a total capital of less than $6,000,000 is practically adequate to the necessities of a gas business capable of furnishing for New York 10,000,000 cubic feet of gas per day.

The present consolidation is now producing about 22,000,000 cubic feet of gas per day, and in the opinion of some witnesses is capable of producing 28,000,000. It claims to own land enough to erect works to double its present production.

If this be true such land should either be utilized or disposed of, to prevent the public from being charged dividends for its use as capital.

Upon this testimony a capital of $15,000,000 would more than suffice for a business capable of furnishing 25,000,000 cubic feet of gas per day.

Indeed, as an appraiser of gas property this expert stated that as a practical man, to arrive at the fair actual value of gas works, he would not apply any other basis or principle of valuation than what it would cost to produce a given quantity of gas per day.

7852 He also stated that he and others interested in the consolidation negotiations thought its capital too large.

Another expert who was engaged in constructing the Manhattan works, and was for many years the chief manager of that company, testified that with the expenditure of $1,000,000 an additional producing capacity of five million cubic feet of gas per day could be constructed by the consolidation.

The president of the Equitable Gas Light Company, who also organized the Municipal company, testified that with a capital of $20,000,000, he would hopefully undertake to furnish the whole city of New York with more gas than they required and also make considerable allowance for future growth; and further, that within the past few years his company had attained a capacity to produce 2,500,000 cubic feet of gas per day, at a total expenditure (including $500,000 of stock issued for patents) of about $2,850,000.

Enlarging the capacity above five million cubic feet per day requires much less capital in proportion to further capacity than the original capital required for the initial capacity. Especially is this true when the original construction is planned with due regard to future growth, and all gas works are usually so devised.

Thus, it is indisputable that *upon the evidence the fair capital of the combined constituent companies, having regard to their actual and prospective capacities, and present out-put of gas should stand at less than twenty millions of dollars. Under no circumstances should it be permitted to remain for any public purpose whatever* at $39,078,000.

If in any possible view of the situation the combined properties be deemed to be of any such value a large portion of the property should be sold and a recapitalization established upon a basis
7853 that shall be fair to the public and just to all parties in interest.

According to the experienced testified to by the president of the Mutual Company, a capital of $18,000,000 would be more than adequate for a producing capacity of 30,000,000 cubic feet per day; a larger output than the consolidation has yet attained.

To express it *within wide and liberal limits* on the whole evidence, regardless of cash actually contributed by stockholders—if such important elements are in any aspect of the case proper to be disregarded—*a fair and meritorious capitalization of the constituent companies consolidating would have been at some figure between* $15,000,000 *and* $20,000,000.

MARKET VALUES OF STOCK UNDER NORMAL CONDITIONS NOT ABOVE THESE FIGURES.

The conclusions above expressed are further supported by comparing the market values of the shares of the constituent companies with the large capitalization which their managers had themselves established.

In 1879, under normal conditions, when there was competition and the ordinary demands of commerce and of capital, operated without artificial restraint in the public enterprises of supplying gas, the total market value of all the shares of capital stock of the six constituent companies was, according to the quotation then current, about $13,933,000.

Gas was then furnished as low as one dollar per thousand cubic feet; new capital was seeking to supply it, and the old companies sought to defeat the endeavor by destroying the new companies and by impairing the confidence of capitalists in them. But the
7854 expensive methods of the old companies and low candle power of the gas produced by them, threatened their business and profits in competition with the new rivals. So a truce was agreed upon.

It is incredible that without any substantial contribution of money or of property or any new privileges, that which six years ago was valued in the market at $13,933,000 should now have attained an actual aggregate value of $39,078,000. Yet if the consolidation is an honest one such should be the fact. This however, as we have seen is not the fact; many of the old stockholders of the new concern seem to be of the same opinion lest when the public become more fully informed on the subject they may not heartily invest in the shares at par. Since the consolidation the old shareholders have disposed of about one-seventh of their holdings to the general public who have purchased (as it appears by the books) since the Senate ordered its investigations.

THE GAS POOL AN UNLAWFUL COMBINATION AND NO TRUE ELEMENT OF VALUE.

The truce agreed upon when the price of gas was restored and the gas pool established was the organization of consolidation.

An agreement was made April 5, 1880, between all the companies at that time supplying gas in New York city, fixing the price of gas at $2.25 per thousand cubic feet, providing that there should be "no canvassing or soliciting of customers," that no new mains should be laid in streets where mains were already laid "it being the intention that no competing mains be laid," that all sales should be pooled and the proceeds distributed in established proportions, and that the agreement should continue for five years "unless sooner terminated by consolidation."

7855 It is noteworthy that this agreement followed the absorption by the Municipal Company of the Knickerbocker Company (the details of which transaction are elsewhere alluded to) and that the parties profiting by this transaction were active managers in promoting the consolidation that was in terms contemplated by the pooling agreement.

The agreement also provided for a committee of one member from each company to conduct the business under it. Thus the Municipal Company, which owned all the stock of the Knickerbocker acquired two votes in the combination. Some of the largest stockholders of the Manhattan and New York Companies had also become interested in the Municipal Company, and naturally assisted in promoting the consolidation.

Four votes, representing these four companies, determined values, stock distributions and reservations, total share capital, together with the general course of action of the committee, and finally brought about the consolidation.

Moreover the immense profits immediately enjoyed by the combination, and the fact, that within less than six months from its perfection the quoted value of the shares of the companies participating had more than doubled, intensified the possibilities of the future.

The New York Company spent several hundred thousand dollars in adapting its coal gas apparatus so as to manufacture water gas; and improved or generally reconstructed a large part of its works.

The accounts show over $800,000 expenditures of this kind from earnings realized after the pool was made, and that the immense profits succeeding the pooling agreement are due to the excessive charges for gas fixed by the pool and maintained by it.

7856 This price was obviously so fixed as to pay the dividends mutually agreeable to the managers, and without any consideration of what was a reasonable price for the public to pay.

This pooling agreement of April 5, 1880, was undoubtedly illegal and void as against public policy, and in restraint of trade. Its existence was concealed from the public. Its terms come within the well-defined class of judicial authority on that subject. If any method existed by which this agreement could be subjected to judicial scrutiny it would doubtless be declared to be illegal. Its public effect having been to extort from the consumers in charges for gas supplied, large sums of money in excess of a fair and reasonable charge, does not add anything to its integrity, but on the contrary, affords additional reason why the results attributable to such an impolitic contract should not, if unjust, receive legislative sanction.

If it be true that by reason of this agreement and its operation the price or market value of the capital stock and properties of the constituent companies greatly appreciated, and if in consequence of the extortion thereby practiced, and profits thereby realized, the aggregate values of the properties of the constituent companies became in the opinion of their own managers largely enhanced, then these considerations should be disregarded in arriving at what, under normal conditions, and according to the unrestrained influence of the laws of commerce and the requirements of capital, was the true value of the aggregate properties of the constituent companies.

It is submitted that the legislature has no moral right to entertain fictitious or illegal standards of values as the basis for legislative action, and that in consequence all estimates founded upon wrong should be absolutely disregarded. The values of the prop-
7857 erties of the constituent companies should be ascertained independently of this agreement, or of any operations under or in pursuance of it.

The profits during the four years following this pooling agreement are aptly illustrated by the fact that the Manhattan Company, in that short period, paid in dividends to its stockholders an amount exceeding its entire capital. The Municipal Company likewise returned to its stockholders more than its actual capital, and the Metropolitan Company divided also as its profits sums equal to about four-fifths of its actual capital. The actual receipts and expenditures of the constituent companies during this time, as shown by their books exhibited their excessive profits to have arisen exclusively from the charges for gas. *These charges for gas, being excessive and unreasonable,* formed no proper element in valuing the respective properties of the constituent companies.

Much difficulty was experienced by the committee in ascertaining from the witnesses who were individually concerned in the endeavor, and who were members of the pooling committee having consolidation in contemplation, as to the time when the details for consolidation and capitalization were first definitely arrived at. There was a curious coincidence of failure of memory in this respect. The records exhibited that as early as the fall of 1883 plans of consolidation were under consideration, and in December, 1883, a plan was so far adopted as to be referred to a sub-committee "with power to call in legal counsel," with a view to carry it *in* into operation.

At this point it became desirable to ascertain whether any legislation had been proposed in aid of the contemplated consolidation; but in this respect the efforts of the committee were unex-
7858 pectedly—and either by design or accident—thwarted. It
did appear by the testimony of one of the directors of the Municipal and Knickerbocker Companies, and one of the members of the pooling committee and an active promoter of the consolidation and one of its present advisers and directors, that in 1883 an act was drafted in aid of the consolidation scheme. This proposed act the witness (Henry Day) testified was handed by him to one of the State senators and subsequently became a law, known as chapter 567 of the Laws of 1884 (see testimony, pages 206-215). The witness said he asked the senator to take the bill and to push it along as fast as he could and that the senator introduced the bill (ib. 214) At the next session of the committee the senator named appeared and requesting to testify stated, that while he was handed the bill and requested to introduce it, yet he did not do so but returned it to the witness with his reasons. He did not know or hear while he was in the Senate of the passage in 1884, or the presentation of any bill relating to the consolidation of gas companies in the city of New York; and that it was a matter of surprise to him when he learned that a bill had been claimed to have been passed looking toward such consolidation. He also stated that the bill which he had returned to the witness was an act authorizing the consolidation of manufacturing corporations, and that it was returned to the witness within two months from the beginning of the session of 1884.

The examination of the witness Day had, meanwhile, been suspended, with the understanding that he should attend again upon the committee when notified, and produce also certain papers called for. The witness was then notified to attend and to produce, in addition to the papers called for, the draft of the proposed act
7859 which the senator had returned to him. This, however, he
neglected to do, sending the committee a letter that he would be out of town on the appointed day. Mr. Day successfully evaded, or avoided the efforts of the sergeant-at-arms to serve him with a further subpœna. (See proceedings, page 587.) The committee allude to this incident as affording a partial and suggestive explanation of the sources of some of the legislation which the promoters of the consolidation scheme have claimed to take advantage of, and to throw light on the question whether such legislation should be repealed, or should remain on the statute book.

In this connection there are two amendments (chap. 276, Laws of 1883, and chap. 287 of the Laws of 1884) to the New York city consolidation act or charter of 1882, which could not have had their origin elsewhere than with the promoters of the consolidation scheme.

The present effect of these amendments is to prohibit the laying of any gas mains in the streets or avenues of New York city, except after two-thirds of the owners of the property fronting on the streets and avenues where mains are to be laid, shall have united in petitioning the city authorities for that purpose. This legislation was without precedent respecting gas companies in the city of New York, and practically prohibits forever any competition with existing companies.

It is the occupants of stores or dwellings, rather than the real estate owners, who are directly interested in the laying of one or more mains in front of their premises. It is the numerous small consumers who are unable to protect themselves against extortionate charges for gas, or to induce competition at their premises, or whose trade is affected who are immediately interested. Moreover capital would not be successfully invited to invest in the laying of
7860 mains in one block or street, unless there was a reasonable opportunity to perfect some profitable system of arterial distribution for the gas it proposes to manufacture. Any devised system of distribution might be destroyed by the failure of one block of real estate owners to consent to the laying of mains, while on that same block no one of such owners might reside or carry on business, or be interested to the extent of one dollar in the laying of such mains.

This prohibitory legislation was undoubtedly designed to cut off competition, and to promote and to perfect the scheme of fraud and of extortion which has culminated in the consolidation.

It is noteworthy that this practical prohibition against competition, was made a law shortly after the Equitable Gas Company by its contract with the city had acquired for itself the right to lay mains, and had guaranteed the maximum price. It proposed to furnish gas at $1.75 per thousand cubic feet, instead of at the price of $2.25 per thousand cubic feet, which was then charged by all the companies. It is also in this connection noteworthy that when the Equitable Gas-light Company had constructed works, laid mains, and had begun to furnish gas in appreciable quantities, viz.: in November, 1884, there was a coincident reduction or apparent reduction by the consolidation from the price of $2.25 to $1.75 per thousand feet.

Concealed as this prohibitory legislation was in the amendment to a section relating to steam pipes, it is not strange that its practical operation did not suggest itself to the Legislature which enacted it. In the light of its effect and its expediency the committee recommend its abrogation. To effect this, requiring as it will a further amendment to the New York City Consolidation Act, or
7861 a separate or local act, the committee have prepared an act which is herewith proposed.

As long as the policy of the State appears on its statute books as it does since the passage of chapter 37 of the Laws of 1848, to authorize the formation of gas-light companies under the general laws and without special authority from the Legislature, there is no good reason in the opinion of the committee why under reasonable and proper regulations capital should not be invited to interest itself in serving the public on fair terms, without favor or partiality to any particular company or monopoly that may have improperly fortified itself against further enterprise and reasonable competition. It is obvious, however, that it was the purpose of the promoters of consolidation to exclude further enterprise and further capital, and to insure at the same time a remunerative return upon a nominal and fictitious capitalization which might attract innocent investors. It was undoubtedly with this view that the combined capital of the constituent companies was fixed arbitrarily by the parties to the agreement at $45,000,000.

That is was not from the first intended by any of the promoters of consolidation to unite upon the total combined, actual or nominal capital of the constituent companies, is clear when it is observed that there already existed a law authorizing manufacturing corporations to consolidate upon a combined capital which should not exceed the aggregate capital of the uniting companies. Such a law was passed in 1867. Its terms did not apply to gas companies; its re-enactment in 1884 did not then in terms apply to gas companies: but the law of 1884 assumed to permit consolidation upon a capital equivalent to the fair aggregate value of the property, franchises and rights of the uniting companies. While it may be 7862 true that neither of these statutes apply to the New York Gas Companies, it is clear that the first one, limiting as it did the new capital to the total capital of the constituent companies, did not answer the purposes of the consolidation promoters.

The testimony shows that the figures, $45,000,000, as the capital of the new concern, was proposed early in the summer of 1884. About the same time schedules of the real estate of the constituent companies were directed to be prepared. Schedules of the other property, plant, mains, etc., in more or less perfect form had already been considered by the members of the pooling committee, but nothing definite in respect to values had been determined. Careful questioning of every member of that committee who was called as a witness, and of all the officers of the constituent companies, has failed to disclose any paper containing in whole, or in part, any schedules whatever of any of the properties of any of the constituent companies, or any of the plans for consolidation that were before the pooling committee. Nothing in this respect has been found except the formal inventories or schedules exhibiting the properties of the various constituent companies, as they were finally accepted and agreed upon at the time the consolidation agreement, dated September 29, 1884, was executed. The committee is unable to explain the singularly coincident absence of data by which these various schedules must have been prepared; and cannot account for the absence of memory of all the witnesses who assumed to agree upon the details of values therein set forth.

The failure of the Mutual Gas-light Company to become one of the constituent companies in the consolidation, as designed, by the terms of the consolidation agreement is explained by the provisions of its charter (chapter 651 of the Laws of 1866, sec. 6), that renders its directors voting for consolidation, or for transferring its franchise to any other gas company, liable to punishment as for a misdemeanor. It is doubtless for this reason that the Mutual Company did not unite in the agreement in which it is recited as a party. The capital, therefore, of $45,000,000 for the consolidation was in fact reduced by the amount which by that agreement had been assigned to the Mutual, viz.: $5,922,000; leaving the existing nominal capital of the combination to stand at $39,078,000. 7863

Whether the execution of the pooling agreement, dated April 5, 1880, by the Mutual Company and signed by its president was an offense under the section quoted, or such a violation of law as impairs the charter of that company, are questions which may properly be left with the judiciary.

THE FAILURE OF THE MUTUAL COMPANY TO COMPLY WITH ITS CHARTER.

There is, however, one provision (Sec. 4, chap. 651 of the Laws of 1866) in the charter of the Mutual Gas-light Company which, according to the evidence and accountant's tables prepared from that company's books and accompanying this report, requires special attention with relation to that company. Its charter requires that whenever the profits of this company shall in any one year exceed ten per cent. on its capital stock, then the excess shall be divided "between the consumers of gas furnished by said company, *pro rata* according to the amount consumed by them respectively, and the other half shall be paid as a dividend to such owners and holders of the stock of said company as may be consumers," provided that no individual stockholder shall be paid such dividends upon more than fifty shares.

7864 It appears that during the last few years the profits exceeded in each year ten per cent. of the whole capital stock of the company, and that (testimony, page 405) a large fund (exceeding $800,000) has accumulated, and that large accumulations are now being made after providing for an annual profit equivalent to ten per cent. upon the whole capital stock. No measures appear to have been taken to distribute this profit in accordance with the above quoted provision of the charter of the company; nor has it been used to reduce the price of its gas furnished. The net earnings or profits of this company were for many years largely in excess of $500,000 per year, or ten per cent. upon its nominal capital stock. A scheme was resorted to of issuing $1,500,000 of bonds to stockholders for an equivalent amount of stock concurrently surrendered. This operation is treated by the company as a reduction of capital; and it is now proposed to pay those bonds out of the accumulated earnings. Some have already been paid. Dividends also were paid upon $3,500,000 in 1883 and 1884. There are now among the assets of that company representing earnings after paying dividends, $3,130,000, $830,000 of which is invested in United States bonds.

This attempted evasion of the section above quoted is a violation of law, that in the opinion of the committee requires the intervention of public authority. It would seem to warrant the abrogation of its charter.

Under the circumstances, and in the absence of an opportunity for further investigation into the matter, and in the absence of any justification offered by the company when called to its attention, the committee recommends that the Attorney-General of the State be instructed to institute such proceedings as the facts may warrant.

A bill for this purpose is herewith submitted.

7865 THE POOLING AGREEMENT WAS EXTINGUISHED BY THE FINAL AGREEMENT OF CONSOLIDATION.

Four years and a half of successful operations under the pooling agreement, assisted by friendly legislation, culminated in the consolidation of November 1885, formally announced to the public with a reduction in the nominal price of gas per thousand cubic feet.

The agreement of consolidation, by its article VIII, assigned to the various companies the amount of the capitalization (testimony p. 787) respectively apportioned to each company, and also a number of shares of the par value of $100 each that should be allotted to the stockholders of the constituent companies out of the total number of shares, thus: (See page 787.)

Name of company.	Par value of shares.	No. of shares allotted.
New York Gas light Company	$7,821,000	75,600
Manhattan Gas light Company	12,352,000	119,400
Metropolitan Gas light Company	7,422,000	71,500
New York Mutual Gas-light Company	5,922,000	57,250
Municipal Gas-light Company	5,276,000	51,000
Knickerbocker Gas-light Company	3,104,000	30,000
Harlem Gas-light Company	3,103,050	30,000
Total	$45,000,050	434,750

It was also provided that outstanding obligations or debts of either of the constituent companies might be assumed or paid by the consolidation, and a proportionate amount of stock be reserved from this distribution to stockholders in order to provide means to pay such indebtedness.

It was also provided that supplies and material on hand by the constituent companies might be sold or transferred to the consolidated company for cash or stock; and that schedules of property, debts and shareholders should be furnished by the constituent 7866 companies. And also that if any company should not sanction the agreement, the consolidation should be binding upon those who did sanction it.

The Municipal and Knickerbocker Profits in Consolidation.

In this scheme of capitalization it will be observed that $8,380,000 of the total nominal capital and 81,000 shares of its stock was assigned to the Municipal and Knickerbocker companies. Here is an item that concerns one-fifth of the total recapitalization, and affords another illustration in support of the conclusions expressed in this report.

The nominal or *share capital of the Municipal* company was $3,000,000, and of the Knickerbocker company $1,500,000. Upon what reasonable ground could $8,380,000 be *apportioned* to the owners of $4,500,000?

It has been suggested that there were debts of these two companies amounting to $1,465,000 (Municipal $328,000, Knickerbocker $1,137,000). That, however, is no explanation, as the property represented by the old stock was subject of course to debts, and issuing new stock for old did not change the situation in that respect. The transaction still retained its character of the substitution of 81,000 shares of new for what was called 45,000 shares of old stock, without the contribution of an additional dollar of actual capital.

In fact, however, there was not in any true and proper sense of the term a capital of $4,500,000, which 45,000 shares of old stock could fairly be said to represent in these two companies. All the stock (15,000 shares, representing the par value of $1,500,000) of the Knickerbocker Company was in fact purchased by the Municipal Company, and held in trust for its benefit by a transaction concluded
in March, 1880, just before the gas pool was made. These
7867 15,000 shares being in fact paid for by the issue of 3,500
shares (representing $350,000 par value) of the capital stock of the Municipal Company, were thenceforward represented by this Municipal issue. It was, therefore, no less a fraud on the public than it was a fraud on stockholders of other constituent companies to include the same capital twice in the consolidation, as it was in fact included. Thus, new stock of the consolidation was issued both for those 3,500 shares of the Municipal Company at the rate of 158½ new stock for 100 of old, and new stock was also issued for those 15,000 shares of Knickerbocker stock at the rate of 123½ of new for 100 of old. Nor is it any answer to this unwarrantable multiplication of shares, and imposition on the public and on investors, that it was a profitable transaction to the holders of shares in the Municipal Company. When a fraud is attempted and successfully perpetrated, profit is generally contemplated and realized. It undoubtedly was profitable in this instance to those who managed the business. The knowledge of structural weakness in this method of capitalization is doubtless the explanation of what the share lists show to be the fact, viz.: That among the old shareholders of the constituent companies who since the consolidation have parted with their stock, more than half are Municipal shareholders.

THE KNICKERBOCKER TRANSFER.

As further illustrating the initial wrong or fraud in this same element of capitalization, the method pursued by the officers of the Municipal Company in issuing the block of its 3,500 shares last mentioned is noteworthy. This transaction in brief was as follows: The stock of the Knickerbocker Company was of no value. Its 7868 officers had so sworn for successive years before the tax authorities in New York city. The property of the company was incumbered with debts for construction, etc., to the extent of about $1,150,000, and no immediate prospect of relief was at hand. The nominal or share capital of the Municipal Company was at that time $2,000,000. This was voted to be increased to $3,000,000. The Municipal Company drew its checks for $350,000, and paid it to R. F. Cutting, who, in common with his associates, owned a large part of the debt against the Knickerbocker Company. Cutting, without relinquishing any of the debt, drew his check in return for $350,000 and paid it back to the Municipal. The latter company thereupon under the pretense of having received $350,000 of money in payment for subscription to its increased stock, issued these 3,500 shares, which were distributed by Cutting or his associates at their own pleasure, in acquiring the total 15,000 shares of Knickerbocker Company's stock. The discontinuance of a pending law suit, to which the paper showed a complete defense (see Appendix I), further assisted to conceal the actual transaction. These 15,000 shares were then placed in the hands of Messrs. Francklyn, Ottendorfer, Gawtry, Allen and Day, as five trustees to hold for the benefit of the Municipal Company.

These five trustees, holding each one share separately in his own name to qualify as a director, assumed to constitute themselves a directory for the Knickerbocker Company. Some of them were already trustees or directors of the Municipal Company, and all of them were, of course, interested in that company. Thereafter the Knickerbocker Company became owned and managed by the Municipal Company. It was, of course, the interest of the last-named company to discharge the Knickerbocker indebtedness. It has, in fact, succeeded in having that indebtedness substantially dis- 7869 charged by the consolidation, and has received from the consolidation, the profit of about $5,380,000 in its shares for the privilege.

It is true that after the acquisition of the Knickerbocker shares in March, 1880, the Municipal company did expend upon the works of the Knickerbocker in improving them several hundred thousand dollars. This expenditure is represented by an equivalent increase in the capital stock of the Municipal company. The testimony particularizing the transactions last above mentioned as far as the committee have been able to extract them (and it is a notable coincidence that one of the persons concerned and largely interested in the transaction represented by the exchange of checks for $350,000, sailed for Europe while the testimony on that subject was being taken; and that another party in interest, and one of the trustees, a director, manager, and professional advisor in the affair, could not be found at his house, or at his office during the last three weeks of the life of the committee) will be found at pages 215 to 288 of the proceedings.

As further illustrating the motive in preserving the semblance of two separate and independent organizations, when in fact there was only one, and of preserving the power of *two* corporations in the combination, when in fact it was but *one* party, and of the probable design towards the ultimate profitable result attained through consolidation, the form was observed of executing an apparent lease whereby the Knickerbocker Company purported to lease its works and properties to the Municipal company for an annual rent of $75,000 for five years from November, 1880. This lease, together with the trust agreement above mentioned, will be found printed in
full in the appendix to the report of the prior senate com-
7870 mittee, whose conclusions at page 9 in reporting that the pay-
ments under that alleged lease could only have been matters of form this committee on further investigation ratifies and confirms, and in view of the fact developed further finds to have been parts of a scheme to defraud.

The conclusion arrived at upon this branch of the investigation of the consolidation and capitalization is that the nominal or share capital of the so-called constituent companies was in part fictitious; that the new issue was also in part fictitious; and that the consolidation in these respects was not according to the fair aggregate value of the property, franchises and rights of the united companies.

Other illustrations than those above detailed of fiction or of water in the stock of the consolidation need not be further particularized.

INTERESTS MAINTAINING CONSOLIDATION AND PRICES.

It is not strange that a capitalization constructed on such a basis should be jealous of the power to regulate its own revenues by fixing its own price of gas. This power it now exercises without restriction. Nor is there at present any competition, except that which, within a limited territory, is afforded by the gas furnished by the Equitable Gas-light Company.

The Mutual Company's operations supply a territory with which the consolidation does not interfere, and for practical purposes may be deemed to be covered by the combination so far as price is affected. The interest of this company, as well as of the Equitable Company is, and at the present outlook must continue to be, to maintain the present price for gas.

The officers of the Equitable Company while opposing official restriction of price of gas, claim to furnish a better quality of gas than
has ever been delivered in New York; and seem content to
7871 compete with their gas at any price charged by the consolida-
tion. Hence, the continuance of the high prices fixed by the consolidation operates advantageously for all the companies under the present condition. Without, therefore, a limitation of capital and dividends as an element of price, or an absolute price to be fixed

by law (which might if not sufficiently elastic to respond to the exigencies of commerce prove in some year to be inequitable), there is no prospect of gas being furnished any cheaper by existing companies.

If new companies, with responsible parties, will enter upon the task and supply capital under reasonable restrictions as to dividends, price, and proper official regulation, the committee recommend that the proper authority be given them by law for that purpose.

But the time that would be required for new enterprises to perfect their sources of supply and means of distribution would not afford any immediate relief against the present overcharges.

LIMITATIONS FAIR TO SHAREHOLDERS.

In legislation to limit the price of gas, or the dividends of the present companies, there is no inequity to the shareholders. The excessive profits shown to have been derived by the shareholders in the consolidation removes this consideration from serious attention.

The few recent investors or speculators who have been induced to deal in consolidation shares took their own risks as to what the paper was worth, and as to what might be the results of the investigations undertaken on the part of the State prior to their transactions.

The excessive profits just mentioned as realized by the shareholders
of some of the constituent companies, six-sevenths of whom
7872 still retain their holdings, are illustrated by the following
facts:

The New York Company's shareholders have received from the earnings of that company $18,484,078.50 in dividends and $87,258.19 of assets distributed at the time of consolidation. The same shareholders have also been allotted $3,600,000 (par value) in shares of the consolidation over and above the $4,000,000 (par value) of their old shares, which latter represented an actual investment of $750,000. The total benefits to New York shareholders above investment are $22,171,336.69.

The Manhattan shareholders have received from the earnings of that company $26,347,675.66 in dividends and division of assets, together with $7,940,000 (par value) in shares of the consolidation over and above the $4,000,000 (par value) of their old shares—the latter representing an actual investment of $3,280,000. The total benefits to Manhattan shareholders above investment are $34,287,675.66.

The Metropolitan Company's shareholders have received from the earnings of that company, $7,573,749.36 in dividends, and will receive $686,988.17 additional distribution of assets upon consolidation. The same shareholders have also been allotted $4,000,000 (par value) in shares of the consolidation over and above the $2,500,000 (par value) of their old shares, which latter represented $612,700 paid in money, and $1,887,300 (par value) of shares issued for property. The total benefits to Metropolitan shareholders above actual capital are $12,260,737.53.

The Municipal and Knickerbocker shareholders have received within nine years from the joint earnings of these corporations, $2,-

806,192.50 in dividends, and $932,843.63, proceeds of assets distributed at time of consolidation. The same shareholders have also been allotted $3,600,000 (par value) in shares of the consolida-
7873 tion, over and above the $3,000,000 (par value) of the total Municipal stock, which latter represented all the shares and capital of the Knickerbocker, or $2,515,300 of shares paid for in money, and $450,000 (par value) of shares issued for property. The total benefits to Municipal and Knickerbocker shareholders are $7,339,036.13.

The Harlem shareholders have received from the earnings of that company, $2,529,917.25 in dividends, and $830,000 (par value) in shares of the consolidation over and above the $2,000,000 (par value) of their old shares, which latter represented $1,569,050 of cash, and $150,950 (par value) of shares issued for property. The total benefits to Harlem shareholders are $3,359,917.25.

Altogether the shareholders of the constituent companies (see pages 775 and 776) have received from earnings in cash dividends $57,741,613.27, and proceeds of assets distributed at time of consolidation, $1,707,089.99. The same shareholders have also been allotted $19,970,000 (par value) in shares of the consolidation over and above the $15,500,000 (par value) of their old shares. The latter represented only $8,727,050 of cash actually invested by shareholders, and $2,488,250 (par value) of shares issued for property, the balance ($4,284,700) of the old nominal or share capital representing accumulated earnings. The total benefits to shareholders of all the constituent companies as the result of consolidation are $79,418,703.26.

Reports and Publicity of Accounts.

The fact that these extensive accumulations and inordinate profits have been attained by extortionate charges upon gas consumers, and without any public information or means of information as to the necessity or fairness of the charges exacted or authority to measure them, demonstrates in the opinion of the committee the ex-
7874 pediency and usefulness of full and complete publicity of gas companies' finances.

While the gas companies do not enjoy any special power or authority over private property (*e. g.,* they may not exercise the power of eminent domain), they are nevertheless in their very nature more or less of a monopoly, and as such have devoted their capital or property toward a business in which the public have an interest.

Upon that ground, as well as upon other grounds, they are subject to public regulation. The primary regulation should be to enforce fair and honest reports of their transactions.

Stated accounts and reports are necessary in any well conducted business; and have proved efficacious in many respects when enforced upon corporations engaged in a business of a public nature. The gas companies of London, and of many of the great cities of the world, are subject to some such supervision. The stated reports are of large practical service to consumers and investors.

The detailed statement of capital, property, investments, earnings, expenses, repairs, loss, profits, receipts, purchases of material and sales of gas, residuals and other products, amount and value of productions have been enforced in many places with excellent results both to the shareholders, managers and consumers.

The forms in which such reports are now required to be particularized, as well as the information furnished by a large business of that character during the first half of the year 1885, are deemed of sufficient general public interest to be appended (appendix L) to this report. Besides its value as a form this publication of the Gas-light and Coke Company of London exhibits operations involving a capital of about $54,000,000, an out-put of gas of 8,479,915,000 in 7875 six months, a maximum price to the consumer of seventy-two cents per thousand (and for much of the gas a less price, different kinds of gas being made), and a profit on various issues of its shares ranging from five to ten per cent. on the investment.

For purposes of useful comparison, however, the operations of the three companies furnishing gas in the city of London during the entire year of 1884 are more valuable. This information is detailed in reports resulting from investigations of Parliament, printed by order of the House of Commons in March and July, 1885.*

This report shows that the Gas-light and Coke Company in the year 1884 sold 15,251,603,000 cubic feet of gas—about four times the out-put of the New York Consolidation for the year ending November, 1885—and at a price to consumers ranging from sixty-four to seventy-two cents per thousand; that the operations of the company involved a capital of $53,665,000, represented by various grades of shares, on which dividends were paid ranging from five to twelve per cent. per annum.

The Commercial Gas Company of London in the year 1884 sold 1,633,122,000 cubic feet of gas at a maximum price to consumers of sixty-four cents per thousand. Its capital was $3,729,000, represented by different grades of shares, on which dividends were paid ranging from ten and one-quarter to thirteen and one-quarter per cent. per annum.

The South Metropolitan Company in the year 1884 sold 4,234,164,000 cubic feet of gas at a maximum price per 1,000 feet of sixty-eight cents (less five per cent. to public bodies and railways). 7876 Its capital was $11,401,800, represented by different grades of shares, on which dividends were paid ranging from eleven and three-quarters to fourteen and one-half per cent. per annum.

Hence the total out-put of gas during the year 1884 sold in the city of London was 21,118,889,000. Its production occupied capital represented by various grades of shares in round figures of $68,795,800, on which liberal dividends have been earned, while consumers have not paid beyond a maximum price of seventy-two cents per thousand. This rate does not refer to cannel gas, which affords no useful comparison.

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* These reports are made in great detail for all the gas undertakings in the United Kingdom, exhibiting the various authorities under which they act, and their capital, profits, and all their operations. The reports may be had of the London book-sellers.

It assists the comparison to observe that in 1884 the price of residuals was so reduced in London as to assimilate themselves to the corresponding values of residuals in New York.

By this it would seem that a capital of $17,000,000 was amply adequate to produce 5,000,000,000 cubic feet per annum, or an out-put exceeding the year's out-put of the Consolidation.

It cannot be true that in the face of these facts $39,078,000 is a true capital or the fair aggregate value of properties, franchises and rights employed as capital in the business of selling to consumers in the city of New York, an out-put of 3,820,000,000 cubic feet of gas—which was the out-put during the first year of the operations of the Consolidation. Nor can it be true that there is any necessity or equity in extorting a price of $1.75 per thousand.

Operations of the Consolidation.

In the investigation of the transactions of the Consolidation, since the new organization, it appeared that about the time the stock at the request of the managers was listed at the New York Stock Exchange, and became a matter of daily quotation in the stock lists,
loans were authorized and subsequently made, and from time
7877 to time renewed. From the spring of 1885 until the close of
the sessions of this committee there appeared to be only a
short period when the Consolidation was not borrowing money. In June, 1885, a semi-annual dividend of three and one-half per cent. was declared. A loan was then outstanding. A similar dividend for the next six months was declared *in* November 25, payable December 15, 1885. On the day this last dividend was payable (December 15) $600,000 was borrowed from the city bank, and as collateral for this loan all the revenues of the company were pledged.

The principal officer of the National City Bank and others of his business associates were largely interested as shareholders in the constituent companies. In addition to the loan above mentioned there was a loan by the National City Bank on demand notes without security of $300,000 which had been made October 2, 1885. This loan was outstanding when the cashier of that bank was on December 18 subpœnaed to testify. Immediately after the subpœna was served, and by his direction this loan was charged up against the account of the Consolidated Company, which until that charge was made had owed $900,000 borrowed.

The payment of each of these dividends required in round figures $1,100,000. There is upon all the testimony abundant fortification of the statement of the expert in his report on this subject (see testimony, pages 653-655), that the payment of the last dividend is not fairly warranted by the earnings.

While the balance sheets of the books of the Consolidation may show apparent footings of adequate profit, yet if a proper amount were allowed for expense, that is to say, if the accounts were made up upon a true basis of reserving a proper amount for depreciation

and wear and tear, the dividend was not earned; nor could it
7878 in fact have been paid except by anticipating the receipts and
borrowing money.

Twelve and a half per cent. per annum is, according to the testimony, a fair minimum amount to be allowed for depreciation or repairs, or wear and tear of a gas plant; and such an amount according to the accounts has not been expended or provided for even if the plant and works had been taken at actual cost, much less if taken at their present scheduled value (see testimony, pages 338, 347, 654).

Large expenditures also were in fact charged to plant, works, etc., thereby considerably increasing the apparent outlay for plant, and increasing the depreciation in future years. The profits of the company were exhausted in the payment of the dividends.

The company has no working capital, except as it may sell stock, on which also dividends must then be paid. "There being no working capital to provide for the cash assets except the credit obtained for supplies, the company must of necessity be a borrower;" and to provide means to carry on the business must continue to borrow, "unless more capital stock is subscribed, or a surplus fund created out of profits." The pretended object of consolidation, being to reduce the price of gas, is not likely therefore to be immediately accomplished.

Moreover, the cost of executive management is large, amounting to $75,000 per annum. Contracts awarding $10,000 a year for ten years were made with officers of some of the constituent companies on consummating the consolidation. In many other instances other expenses remain the same.

What has apparently been gained by the consumers in the
7879 nominal reduction in the price of gas from $2.25 to $1.75,
is largely accounted for by the decrease in leakage from the
closing of the mains formerly in use.

The Harlem Company's works also have been closed, and the large amount of capital thereby represented, rendered idle and unprofitable. It is not required in the business, in the opinion of the managers; but it remains a charge upon the consumers.

The dividends, it will be seen, are being paid to substantially the same shareholders, who were shareholders in the old companies, and these dividends approximate in amount the dividends received by them on their corresponding holdings in the constituent companies. There is no concession made by the shareholders; on the contrary the prospect exhibited by the present situation indicates the necessity from their point of view of increasing the charge to consumers.

New investors in Consolidation shares, on the assumption that the dividends will be regular, should have advised themselves of the fact that such dividends are proposed on the capital artificially created at their expense for the benefit of the original holders, and through increased valuations and charges upon consumers in former years and excessive prices for gas.

The fact of the nominal capital of $17,000,000, or more properly $15,500,000, being enlarged by about $4,284,700 of accumulated earnings at the consumers' expense, long prior to consolidation, and then further increased on consolidation to $39,078,000 by the creation of fiat stock demonstrates the benefits to the old shareholders, to the detriment of the new shareholders and to the consumers. Thus injustice is worked to the consumers and a wrong perpetrated by shareholders upon the persons to whom they sell their stock.

7880 The workings of the consolidation demonstrate that no relief can be afforded or is in prospect through its operations.

EXTRA SHARES OR BONDS SHOULD REPRESENT ACTUAL INVESTMENTS.

The shares of stock, also "$1,303,000" reserved in the scheme of organization for so called *"working capital"* of the Consolidation, according to the testimony, have in fact been issued in trust to an officer of the Consolidation. There is no law prohibiting the distribution of this stock, or its proceeds, among all of the shareholders either as dividends, or as a gratuity, or for any other purpose. Nor is there any adequate law to prevent the Consolidation from borrowing money, secured by a mortgage on its property or otherwise, issuing its bonds at pleasure, and distributing the proceeds of such loans, or even the bonds themselves, among the shareholders. There is at present no law to enforce the appropriation of further capital that may be acquired in this way toward permanent improvements or to any other legitimate purpose. Indeed at the volition of the parties, bonds themselves might be issued and distributed to shareholders, and consumers charged a sufficient price to take up the bonds out of earnings.

The financial history narrated in this report, and the evidence accompanying it, exhibit transactions which correspond to such possibilities.

Remedial legislation adequate to prevent the recurrence of such circumstances in the future, and to rectify the transactions of the consolidation, including its capitalization, is urgently requisite.

7881 NO OBJECTION TO OFFICIAL SUPERVISION.

The advantageous results attained elsewhere, as well in respect to profits and stability of investment as in the charges to gas consumers, fortify from experience the correct principle of reasonable regulation of gas companies, including restrictions as to dividends, capitalizations, accumulation of earnings and charges to consumers. It is not difficult, therefore, to apprehend why the committee has failed to elicit from any of the officers of the New York companies any assignable reason adverse to such official supervision.

No witness interested in the gas business has tendered any sound reason against remedial legislation.

A bill is, therefore, proposed and herewith submitted, drafted in accordance with the views and conclusions herein expressed. This bill provides limitations of dividend paying capital, of profits and of charges to consumers, together with proper regulation as to measurement, quality of gas, and publicity of accounts. This is to be accomplished through the supervision of a commission charged with enforcing the laws in these respects.

The total annual expense attending such a commission, if for New York city, would be much less than one cent for every thousand cubic feet of gas furnished in the city of New York; a sum too inconsiderable, even if paid by the consumers, to be of any importance in weighing the public interests to be thereby promoted.

This commission at least for the first term of its existence, and in view of its great judicial duties, should comprise three members.

THE COMMITTEE REFER TO NEW YORK CITY ONLY.

7882 The investigation being in terms directed to the Consolidation and New York city has not extended to other cities in the State. It was deemed better to treat one subject thoroughly and at one time, than to make partial inquiries in many quarters, and do possible injustice to all. Time did not permit further inquiry; although the committee were informed that excessive capitalization and its consequent evils were more or less dominant in other places. Further inquiry in other cities will subserve the public interest.

Enough has been shown, however, to demonstrate that some of the legislation expedient for New York city must be especially adapted to that metropolis. The situation is not such as to admit of uniform treatment throughout the State in all respects. Local and special acts exclusively adapted to the exigencies of the city of New York are essential. Such enactments are recommended for that purpose, and are herewith submitted.

INCIDENTAL OBSERVATIONS.

As an incident in the course of this investigation there was developed a notable coincidence of expression of press opinions in respect to proposed gas legislation. A journalist attached to a New York evening newspaper (*"Mail and Express"*) testified to having written at the instance of an officer of the Consolidation, an article urging republican assemblymen not to vote for the gas companies bill, as it would give patronage to a democratic mayor; and another article suggesting that democrats in the Legislature should not vote for it on some party ground.

The articles were intended for insertion as editorial or reading matter in republican and democratic journals respectively. He was paid for the articles; and through an adverstising agency
7883 they were inserted in thirty-seven prominent newspapers, in as many different places in this State.

The names of these newspapers and the amounts which they were paid appear at page 512 of the testimony. These articles did not appear as advertisements, but as editorial or reading matter, apparently the expressions of the home editors; and the bill was rendered to and paid by the "Consolidated Gas-light Company." The lawyer's opinion purporting to have been rendered to a stockholder and by him contributed to a New York daily newspaper, and on which these thirty-seven articles were founded, was also paid for from the same treasury (and his voucher produced before the committee), together with an apparently voluntary contribution published as a communication in another New York daily.

Had the committee felt charged with the duty or indeed authorized to continue an inquiry into the methods adopted to influence public opinion, and, consequently, legislation in respect to gas companies, enough appeared to indicate that these were probably not the only instances where the profits from furnishing gas were applied in such directions. Indeed, the numerous and distinct allegations of improper influences of this character spread in the columns of many newspapers shortly after the adjournment of the last Legislature, would justify the most searching inquiry of this character. Whether or no, therefore, if it be true, as editorially alleged, that legislative action was "scandalous" and "made it still more clear, that members were sold to the gas monopoly," is a charge that must be left to such consideration and action as may be determined by the Senate. No duty on that subject was specially indicated by the resolution under which this committee was appointed; but 7884 one of the gas company trustees volunteered testimony that brought the topic to the special consideration of the committee, too late in its sessions, however, to be adequately pursued, even had the committee deemed itself authorized to do so.

LEGISLATIVE CORRUPTION.

The public importance of this particular subject, however, renders it proper in this connection to be noted that there was evidence before the committee showing that some of the earnings of the gas companies had been used in buying what untruly appeared to the reader as disinterested editorial opinion, and that the intent was to prevent legislation designed to protect the public against what were deemed extortions on the part of the gas companies. Charges were notoriously made in the public press that the gas companies had defeated the contemplated legislation by the corrupt use of money; that the votes of members of assembly were procured thereby, and that the profits derived from consumers were used to defeat legislation proposed for the protection of consumers.

These allegations were so generally made since the adjournment of the Legislature of 1885, and were accompanied by circumstances so suspicious, and charges of legislative corruption are of such vital importance to the State, that they demand at the hands of some adequate authority a thorough investigation.

If crimes of the sort alleged have been committed, the offenders should be brought to swift and condign punishment, and should not be allowed to use their corrupt gains to deceive the public, or thus to fortify their own continuance in power, and secure new opportunities for corrupting and being corrupted.

7885 Such scandals should not go uninvestigated. If true, they strike at the foundations of popular government. If untrue, both the gas managers and accused legislators have been most outrageously wronged. In that case both the wronged managers and legislators should themselves demand an investigation.

It is, therefore, respectfully recommended that by a joint committee of Senate and Assembly, or other adequate authority, the fullest investigation be directed with a view to determine upon the necessity or expediency of further laws or constitutional amendments toward preventing the use of corrupt means to promote or to defeat legislative action.

The moneyed interests at stake in legislation, together with the vigilance and dexterity of the managers of large enterprises, which are more or less dependent on public authority for their creation and revenues, secure advocates or apologists where the body of the people are sometimes not heard. It is better that there should be too many than too few such inquiries.

RECOMMENDATIONS.

1. That chapter 367 of the Laws of 1884 be repealed; or so amended as to prohibit the capitalization of franchises, and in terms exclude gas companies from its operation.

2. That the price of gas be regulated by limiting the dividends to a fixed rate per cent. of the actual capital invested.

3. That dividends shall not exceed ten per cent. of the actual capital invested.

7886 4. That for the purpose of covering losses, gas companies be allowed to accumulate a reserve fund not to exceed ten per cent. in the aggregate of the actual capital invested. And whenever such reserve fund shall reach said amount, that then the surplus, if any shall be applied for the benefit of the gas consumers, in such manner as the gas commission may direct.

5. That a gas commission be appointed for the State of New York consisting of three persons, to be appointed by the Governor, by and with the advice and consent of the Senate, one of whom shall be chosen from that political party which cast the next greatest number of votes for governor at the last gubernatorial election after that by which the governor was elected. And that whenever a vacancy shall occur in such commission it shall be so filled that each of the two largest political parties shall always have at least one member of the commission. That such commission shall have power and it shall be its duty to provide, among other things, for testing the quality of gas; for regulating the pressure applied in its distribution; for measuring the gas used; for fixing the price of gas in accordance with the foregoing recommendations; for procuring stated and other reports to the commission in substantial accordance with reports contained in appendix "L" attached to the evidence in this matter, with such other items as the commission may deem useful, and for giving publicity to such reports, and that the

commission be invested with such other powers as may be appropriate in order to protect and promote the rights of gas consumers, at the same time doing justice to the companies.

6. That the statute requiring the consent of two-thirds of the owners of property fronting on the streets, avenues and public places in the city of New York be repealed; and that the gas commission
7887 be invested with power to determine whether or not the
streets, avenues and public places in any city of the State, having a population of 100,000 or upwards, shall be used for the purpose of laying gas mains and services; that any parties feeling themselves aggrieved by any decision of the commission in respect to such use of streets, avenues or public places, may appeal to the general term of the Supreme Court in the judicial department in which the question arose, and their decision shall be final.

The oral testimony and proceedings of the committee and such of the numerous documents that were before the committee as it was deemed expedient to append thereto are herewith submitted.

Dated Albany, *February* 26, 1886.

Respectfully, JOHN I. GILBERT.

To the above recommendations your committee are unanimous and to *many* of the conclusions in the report reached, but to that part of the report which finds that the Consolidated Gas Company violated any of the provisions of chapter 367 of the Laws of 1884, and to all conclusions which follow from such finding, the majority of your committee dissent, and submit the following as their report on that question:

To the Senate of the State of New York:

The committee appointed by resolution of the Senate, dated May 15, 1885, to inquire and report at the next session of the Legislature:

1. Whether or not the Consolidated Gas Company of New York has evaded, disregarded or in any manner violated the provisions of chapter 367 of the Lawe of 1884.

2. And whether the said consolidation has been capitalized
7888 on the basis of "the fair, aggregate value of the property, fran-
chises and rights of its constituent companies," or otherwise.

3. And what legislation, if any, in respect to lighting companies is required by the public interests.

If there be any question as to whether or not the law of 1884 is applicable to gas companies, your committee decline to discuss it, for the reason that neither their opinion nor that of the Legislature would be of any practical worth. Our courts must settle that. *If there be* any question as to the constitutionality of the law, for the same reason your committee decline to discuss it, and for the further reason that the Legislature having enacted a law are estopped from questioning the legality of acts performed in strict obedience to its provisions. They may, as in this case, inquire whether or not any of its provisions have been violated or in any manner evaded. Beyond this your committee have no power to go.

There was no claim made to your committee that the law of 1884

had been violated, evaded or disregarded by the consolidation of the several gas companies, *except* that the capital stock of the new company represented *more* than the fair aggregate value of the property, franchises and rights of the several constituent companies. To properly understand the real issue involved in this allegation it may be well to state the changes which chapter 367 of Laws of 1884 made in the then existing law in reference to manufacturing companies consolidating. Previous to the passage of this act and by the Law of 1867, companies could consolidate, but the capital stock of the new company could not be larger in amount than the aggregate amount of capital of the consolidating companies. While under the
law of 1884 the capital stock of the new company *shall not be*
7889 *larger in amount* than the fair aggregate value of the prop-
erty, franchises and rights of the consolidating companies.
Thus it will be seen at a glance that under the Law of 1884, the capital stock of the consolidating companies has nothing whatever to do with the amount of the capital stock of the *new* company. Thus with the case in controversy. These six companies could have consolidated under the Law of 1867 (if that law applies to gas companies), but in that case the capital stock of the new company could not have exceeded seventeen millions, though the value of their property might have been fifty millions. But under the law of 1884 the capital stock may be thirty-nine millions (provided the fair aggregate value of their property, franchises and rights are equal to that amount), and could not be any more than that, had the aggregate amount of their capital stock been *fifty* millions. Nor under this law does it make any difference what the property, franchises and rights may have cost the constituent companies, whether it be five, fifteen or fifty millions. The capital stock of the new company may still equal but *must not exceed* the fair aggregate value of the property, franchises and rights of these constituent companies at the time of the consolidation. To ascertain this value and the truth of these allegations so charged, your committee, with the aid of an expert, made a thorough examination of the books of the constituent companies from the time of their formation, and examined many witnesses as to the value of the property and basis of consolidation. From such examinations your committee have arrived at the following conclusions of fact:

1. It was the intention of these companies to have formed a consolidation of all the gas companies then existing in the city of New York, being seven (7) in number, viz., the New York, the Man-
hattan, the Metropolitan, the Mutual, the Municipal, the
7890 Knickerbocker and the Harlem. Six of these seven com-
panies voted to become parties to the consolidation, the Mutual
being prevented by a clause in its charter which made it a misdemeanor for any director voting to consolidate with any gas company in the city of New York. Of the companies so consolidated the New York Gas-light Company was organized in 1823, and at the time of the consolidation it had a capital of $4,000,000. The Manhattan Gas Company was organized in 1830, at the time of the consolidation having also a capital of $4,000,000. The Harlem Gas-light Company was organized in 1855, having a capital at the time of

the consolidation of $2,000,000. The Metropolitan Gas Company was organized in 1858, having at the time of consolidation a capital of $2,500,000. The Municipal Gas Company was organized in 1876, having a capital at the time of the consolidation of $3,000,000. The Knickerbocker Gas Company was organized in 1876, having at the time of the consolidation a nominal capital of $1,500,000. Several of these younger companies had also outstanding obligations in bonds to a very considerable amount.

The amount of capital for the new consolidated company appears to have been a subject of long and much discussion among the directors of the several constituent companies. It was finally fixed upon this basis: taking the number of shares of stock of each constituent company, they multiplied it by the price for which such shares were then selling in the market, and the total of the amounts thus obtained was agreed to be the capital of the new company and that such total amount so obtained should be divided among the original companies upon the same basis as nearly as could be.

The next step was to appraise the property of the constituent companies, consisting of street mains, valves, etc., meters, services,
7891 plant real estate, bulkhead, piers and water right, office buildings, office furniture, laboratories, photometer rooms, etc. The value of this property finally agreed upon by the six constituent companies comprising the consolidation was $29,994,000, but as the value of the stock of the same six companies had been agreed to be $39,078,000, after setting apart $1,303,000 for working capital it left $7,781,000 which they called the value of the franchises and rights of the several constituent companies, and was divided between them in proportion to their individual sales of gas, to the gross amount of sales by all the companies from October 14, 1882 to October 14, 1883, and the sum thus divided was added to the schedule value of each of the existing companies.

The question for your committee to examine was *was* this capitalization thus obtained more than the fair aggregate value of the property, franchises and rights of the constituent companies at the time of the consolidation. The street mains, valves, meters, services, plant, office building, office furniture, laboratories appear to have been appraised at the value of what it would cost to repdoduce them at the time of the consolidation, and there is no evidence that any of these items were appraised too high, except the evidence of the expert, Mr. Yalden, who finds that they were valued higher than they appear to have been charged as costing in the company's books. As to the value of the real estate, bulkheads, piers, water rights, there is a conflict of testimony. It is a difficult question to determine owing to the varying opinions of real estate dealers. It appears from the evidence given by the three presidents of the Equitable, Consolidated and Mutual Companies that it costs for real estate and everythink necessary for a capacity to produce and deliver gas in the city of New York about one million dollars for every million of feet produced and distributed daily. See pages of testimony 415,
7892 484, 485, 494, 495, 523 and 528.

The Consolidated Gas Company can now produce and deliver 28,000,000 cubic feet daily, and having a large amount of plant not now in use by the additional expense of $1,000,000, it can produce and deliver thirty-three million feet per day. If the above basis is a correct one then the aggregate value of the real estate and plants of the several companies given at $29,994,000 is not too high. Indeed, the objections to the capitalization do not appear to be so much to the valuation of the gas plant, mains, real estate, etc., as it does to their having capitalized nearly eight millions of dollars as the values of their franchises. There certainly seems to be *a great injustice* to the people in permitting the value of the franchises conferred by the State to form a basis of capitalization for the purpose of organization as a corporation, and that the consumers of gas should be required to pay such a price for it as would pay a dividend upon the value of these franchises which are a *gift* of the *people*. But it it as fact that the law of 1884, under which these companies consolidated, expressly authorized this to be done. So that the only question left to your committee to examine and report was:

1. Did these companies have franchises?

2. If they had, were they capitalized at their fair aggregate value? To the first question there can be but one answer: "A franchise is a royal privilege or branch of the King's prerogative subsisting in the hands of a subject. If there are certain immunities and privileges which cannot be exercised without authority derived from the sovereign power, it would seem that such immunities and privileges must be franchises." 15 Johnson's Reports, page 386.

7893 These gas companies had the privilege of laying their mains in the King's highway. They enjoyed the immunities of being free from indictment as common nuisances, which had they been private works, they would have been subject to. 6 Lans. Reports, page 467.

Our courts have virtually decided that they hold such franchises. 5 Hun, page 206.

The second question as to the value of these franchises. We know of but one rule to determine the value of a franchise, viz.: the return which it makes upon the capital necessarily invested for its proper enjoyment. To ascertain this, your committee, with the aid of an expert accountant, went through the books of all the constituent companies from their first organization to the time of the consolidation, and thus learned the amounts of money actually paid in for each; the amount of money earne[illegible]y each; the amount of money paid for permanent improvements and to increase the capital stock; the amount paid for dividends in each year; the amount of stock assigned to each in the Consolidated Company. From this examination it appears that four of the six companies consolidated have from their organization earned large dividends—in many instances *enormous*. Thus the Manhattan, after paying good large dividends yearly and keeping their property up in as good condition as new, had surplus earnings still on hand, so that in 1885 they divided to each of the 40,000 shareholders of $50 of its stock, $18 towards paying for a new issue of stock of $2,000,000. After paying large dividends on the capital thus increased, the same company, in 1863, again divided a surplus among the stockholders equal to 98 per cent of their original investment. See testimony, page 365.

The New York Company had invested in 1838 $750,000,
7894 after paying large dividends on this, yet out of the surplus
earnings over and above all dividends, could, in 1862, make a dividend in fact equal to 133⅓ per cent.; and in 1863, 26 66-100 per cent.; in 1864, 40 per cent.; in 1865, 66⅔ per cent.; in 1866, 120 per cent.; in 1868 and 1869, 66 per cent., and in 1871, by valuing their property at what it was then worth, the increase of value from the time of the purchase, in 1836, with the surplus earnings enabled them to increase their stock $3,000,000 without paying in any money. See testimony, pages 436, 437. The Metropolitan has averaged over 16 per cent. dividends from the time it commenced business. The Municipal has paid from its earnings 16⅔ per cent. dividends on its actual capital every year since it commenced doing business. The Harlem has never paid large dividends, and the Knickerbocker, as a separate organization, has never paid any, but since its lease to the Municipal, in 1880, its dividends appear to consist in the payment of interests on her bonds. These six companies, in the year 1884, paid a dividend upon capital which had been increased by earnings, as in the case of the Manhattan and New York, of 18 per cent. Had it been upon the money actually paid in it would have been nearly 25 per cent. These franchises were in force on the 10th day of November, 1884, the time of the consolidation, and the money invested in them was earning the same enormous dividends. So far as the evidence shows there was nothing in the condition of affairs on the 10th of November to indicate that these franchises would not be as valuable for the next twenty years as they have been in the past. There were gas companies enough in the city with a capacity capable of supplying the demands for the next twenty years. A law was on our statute books that virtually prohibited the laying of any
more gas pipes in her streets. The gas companies had an
7895 agreement among themselves fixing the price of gas at a figure
that paid these dividends. The people were paying this price, as they had in the past, without objection or protest. This price may have been too high, and the dividends *were excessive but they were not illegal,* and the valuation of franchises, computed upon those dividends and that state of facts, cannot be called a violation of a law that expressly authorized it to be done, *unless* such valuation was too high. That the above is a proper method of computing the value of a franchise: see *People v. Albany Insurance Company,* 92 N. Y. Rep., p. 458. The court there holds, in substance, that the value of a franchise depends upon its annual dividends.

Thus the question for your committee to decide was this: Was $7,781,000 more than the fair aggregate value of the franchises and rights of these six companies? We are forced to the conclusion that it was not; that the franchises of the New York, Manhattan, Metropolitan and Municipal were worth *much more* than that sum, and if these companies saw fit to give a part of the value of their franchises to the stockholders of the Harlem and Knickerbocker it was a matter that interested only the stockholders of these companies.

Your committee, therefore, is *compelled* to report that they have found nothing in the organization which is contrary to the law under which it was effected, unless there should have been an over valuation of property, and as to that the difficulties attending the determination of such a fact are so great that your committee believe that any attempt to upset such violation would be futile.

The stock has been issued and circulated and by virtue of law; about one-sixth part of it is held by innocent holders, and 7896 nothing but the clearest proof of fraud and violation of the law, by virtue of which it was issued, would justify any attempt to render such stock worthless. We are compelled to say that we have not been able to find such proof. If injustice has been done to the gas consumers of New York city it was done by the Legislature passing a law allowing consolidations to be effected in this manner. These companies did simply what the law expressly said they might do.

The number of consumers of gas in the city of New York is enormous, and your committee are bound to state that the number of complaints which came to their ears was small as compared with the whole body of consumers; but that there is a mistrust or dissatisfaction extending among a large number of citizens, there can be no doubt.

The only remedy that presents itself to the mind of the committee is such a regulation with reference to the management of the business of these companies, and such oversight on the part of the State authorities as to the manner in which the business is conducted, as to restore confidence to the community.

Your committee are impressed with the idea that legislation upon this subject should be of a general character; that the Legislature should not be *annoyed* from year to year with complaints from separate localities relating to the same subject. The establishment of a supervising power to whom the whole of the subject might be relegated, your committee believes, will afford a substantial remedy for all the evils complained of. They exist not only in the city of New York, but in other cities of the State, and will necessarily arise wherever population increases to such an extent as to make the manufacture of gas profitable.

7897 Your committee have considered the subject with much care. They have noted the operation of the Railroad Commission established within the State a few years ago, exercising supervisory care over the railroad systems prevading the State. They have noticed that the amount of time consumed in the Legislature in the matter of disputes relative to railroads has been very much diminished since the establishment of that commission. They believe that it is in consequence with the spirit of the Constitution of the State, which calls for the enactment of general laws and provides for the remedy of evils and the accomplishment of good by such legislation as will be available to the uses of the citizens of the whole State.

They therefore recommend that a gas commission be established for the State, to consist of three persons, to be appointed by the Governor, with the advice and consent of the Senate, giving them a liberal salary and compelling them to give their whole attention to the duties of the office by requiring that they shall hold no other with power to hear complaints from any part of the State, to make such examination as may be necessary to establish such rules as may be required for the regulation of these companies, and compelling them to supply gas of a proper quality, pressure and purity. They recommend also, after an examination of the English system of laws, the plans that were adopted in Massachusetts, and which have been introduced in other States, that the price of gas be regulated by limitation of the dividends which shall be paid upon the actual capital employed. That there are risks attending the business, and that the possible introduction of electricity or some other illuminating power may suddenly make all gas works unprofitable (propositions which are strongly urged on behalf of the companies), your committee are, of course, ready to admit, for these are facts. 7898

Your committee deems that ten per cent. dividends is enough to satisfy the requirements of any capital that is investigated in the State in such business. Owing the peculiarity of the nature of the business your committee think it would be right to permit the accumulation of a reserve fund to cover losses, say not exceeding ten per cent. of the actual capital stock, and to provide that whenever such a fund has been accumulated and the profits amount to ten per cent., the surplus shall be applied for the benefit of consumers in such manner as the commissioners may determine shall be equitable and just.

In this way the committee believe that a long felt want shall be supplied, that the Legislature will be relieved from all this class of special legislation which is called for by reason of alleged abuses, causing a vast amount of trouble in the investigations to be had by special committees, while with the general commission established in this way all the facts can be accumulated and the Legislature can be informed of what is required by the recommendations which such commission may make of laws enacted to meet any difficulties which shall be apparent to them in the course of their examinations, and which may be carefully considered and well digested by the persons forming the commission, having experience in the matter, before the Legislature is called upon to act upon them.

Dated ALBANY, *February* 26, 1886.

T. ROBINSON,
M. C. MURPHY.

7899

CITY'S EXHIBIT 1.

(For Identification.)

Being paper quoted from by witness Colin C. Simpson during his examination on July 20th. (Pages 373-4 of record.)

CITY'S EXHIBIT 2.

No. 14.

THE CITY OF NEW YORK.

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp Posts, and for furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of Manhattan, in The City of New York, for the term of one year from March 16th, 1904, to March 15, 1905.

Made this 16th day of March, 1904, by Consolidated Gas Co. of New York.

1. I, W. R. Addicks, Vice-President of the Consolidated Gas Company of New York, do declare that the Consolidated Gas Company of New York is (are) the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken. 7900

2. I further declare that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair, and without collusion or fraud.

3. I further declare that no member of the board of aldermen, head of a department, chief of a bureau, deputy thereof or clerk therein, or any other officer of The City of New York, is, shall be or become interested directly or indirectly, as contracting party, partner, stockholder, surety or otherwise, in this bid or estimate, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof.

4. I further declare that the names of the persons affixed to the consent hereto annexed were written by said persons respectively, and

that said persons are householders or freeholders in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. I have examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

7901 I. For furnishing illuminating gas (of not less than 20-candle-power to burners consuming three cubic feet of gas per hour, by photometric test, made at a distance of not less than one mile from the place of manufacture), for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting lamp-posts and lanterns, replacing the cocks, tubes, burners, cross-heads, lamp-posts, lamp-irons and lanterns thereto, for the term of one year in the Borough of Manhattan, including the southerly fixed span and draw span of the Madison Avenue Bridge, the southerly fixed span and draw span of Central Bridge, all of High Bridge and Washington Bridge, to wit: the sum of Seventeen and 25/100 dollars ($17.25) per lamp per year.

II. For furnishing gas to burners consuming four cubic feet of gas per hour, under the same conditions as above, the sum of Twenty-one and 50/100 dollars ($21.50) per lamp per year.

III. For furnishing gas to burners consuming five cubic feet of gas per hour, under the same conditions as above, the sum of Twenty-six and 25/100 dollars ($26.25) per lamp per year.

IV. For furnishing illuminating material other than gas, of kind and grade as stated herewith ...... of ...... for each lamp, at each lamp, for the term of one year, and also operating supplying and maintaining the lamp including the illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns, lamp-posts, and replacing cocks, tubes, burners, tanks, crossheads, lamp-posts, lamp-irons, frames and lanterns when so ordered by the Commissioner.

All the above for the term of one year in the Borough of Manhattan, to wit, the sum of .... dollars ($......) per lamp per year.

7902 V. For furnishing, and connecting ready to use, for each mantle gas and naphtha lamp, improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, and also operating and maintaining it, including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns, lamp-posts and the replacing of cocks, tubes, burners, mantles, chimneys, globes, rods and regulating apparatus as well as lamp-posts, lanterns, cross-heads, lamp-irons and frames, when so ordered by the Commissioner. Lamp-posts for gas lamps, when necessary, will be furnished to the Contractor through this Department by The City.

All the above for the term of one year in the Borough of Manhattan, to wit, the sum of .... dollars ($......) per lamp per year.

VI. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating material, for a period of one year, the sum of .... dollars ($.....).

VII. For repair of lamp-posts and erection of new lamp-posts—

For Single Incandescent Mantle Lamps (Gas).

Twenty-eight and 75/100 dollars ($28.75) per lamp per year for less than 10,000 lamps.

Twenty-seven and 75/100 dollars ($27.75) per lamp per year for over 10,000 lamps and less than 15,000 lamps.

Twenty-six and 75/100 dollars ($26.75) per lamp per year for over 15,000 and less than 20,000 lamps.

7903 Twenty-five and 75/100 dollars ($25.75) per lamp per year for over 20,000 and less than 25,000 lamps.

Twenty-four and 75/100 dollars ($24.75) per lamp per year for 25,000 or more lamps.

Twenty-four and 75/100 dollars ($24.75) per lamp per year for single order now for 22,500 lamps.

For Double Incandescent Mantle Lamps.

Forty-six and 50/100 dollars ($46.50) per lamp per year.

(*a.*) For each lamp-post straightened, the sum of one and 50/100 dollars ($1.50).

(*b.*) For each column releaded, the sum of two and 50/100 dollars ($2.50).

(*c.*) For each column recalked, the sum of one and no/100 dollars ($1.00).

(*d.*) For each column refitted, the sum of three and one-half dollars ($3.50).

(*e.*) For each service pipe refitted the sum of five and 50/100 dollars ($5.50).

(*f.*) For each stand pipe refitted the sum of two and 50/100 dollars ($2.50).

(*g.*) For each lamp-post removed the sum of three and 50/100 dollars ($3.50).

(*h.*) For each lamp-post reset the sum of eight and no/100 dollars ($8.00).

(*i.*) For each new lamp-post used for gas lamps fitted up complete and erected with service and stand-pipe and lantern, the sum of—Fitting up new lamp, 8 and no 100 dollars ($8.00); Boulevard lantern additional, six dollars ($6.00)—($14.00).

VIII. For furnishing illuminating gas of not less than 20 candle power, when tested, as provided for gas to street lamps, in-
7904 cluding the service pipes from the gas mains to the building,
and a proper meter for registering the gas, for the term of one year for each of the public buildings and offices in the Borough of Manhattan, the lighting of which is now, or hereafter may be, under

the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic feet at a pressure of not less than 1½ inches, in the sum of ninety cents ($0.90).

IX. For furnishing, connecting and maintaining a pressure regulator, at the option of the Commissioner, controlling supply of gas from each meter which registers the total consumption of gas in any building under the jurisdiction and control of the Department. This gas pressure regulator shall maintain an even pressure of 1½ inches throughout the building as closely as can be obtained. The Contractor shall inspect and regulate same at least once a month, and shall perform all necessary acts in order to maintain same in such a condition that it shall efficiently regulate the supply of gas in the building. The regulator shall be inspected and tested, when required by the Commissioner, by the Engineer, and if found defective, shall be replaced, without further expense to the City, whenever such replacement is ordered by the Engineer.

Estimates may be given separately on the price for use of regulator for one year, and on the maintenance, as specified.

For furnishing and connecting regulators of an average capacity of about one and one-quarter inches, for the period of one year, in the Borough of Manhattan the sum of .... dollars ($......).

For maintaining the above regulators for the period of one year, in the Borough of .... as specified, the sum of .... dollars ($......).

7905 Subject to the general conditions of this contract bids on Section IX may be made independently of the other services and supplies called for. Bids may also be made on the entire contract excluding Section IX.

CONSOLIDATED GAS CO. OF NEW YORK,
By W. R. ADDICKS, *Vice-President.* [L. S.]

[L. S.]

Attest:
R. A. CARTER, *Sec'y.*

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

W. R. Addicks, being duly sworn, says, for himself, that the several matters stated in the above estimate are in all respects true.

W. R. ADDICKS,
Vice-President.

Subscribed and sworn to before me, this 16th day of March, A. D. 1904.

[SEAL.]

WALLACE YOUNG,
Notary Public, Nassau County.

Certificate filed in New York County.

SURETIES' AGREEMENT.

In consideration of the premises, and of one dollar to us and each of us in hand paid by the City of New York, the receipt whereof is hereby acknowledged—

We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, persons or corporation making the same, we will upon its being so awarded, become bound as his, their or its sureties for its 7906 faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the same is ready for execution, we will pay, without proof of notice or demand, to the said the City of New York, or its successors, any difference between the sum to which such person, persons or corporation would be entitled upon the completion of such contract, and the sum which the City of New York may be obliged to pay to the person, persons or corporation to whom the contract shall be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

In Witness Whereof, we have hereunto set our hands, this 15th day of March, one thousand nine hundred and four.

THE UNITED STATES FIDELITY & GUARANTY COMPANY,
By CHAS. W. YOUNG, *Attorney-in-Fact.*

Attest:
GEORGE E. HAYES,
Attorney-in-Fact.

The adequacy and sufficiency of the above-named sureties approved.

Dated this 1st day of July, 1904.

J. W. STEVENSON,
Deputy Acting Comptroller.

THE CITY AND STATE OF NEW YORK, *County of ——, ss:*

The above-named ...., being duly sworn, says that he is a householder, or freeholder in the City of New York, 7907 and is worth the sum of .... dollars ($......), being the amount of security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this .. day of ...., 1904.

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of ——, ss:*

The above-named ...., being duly sworn, says that he is a householder or freeholder in the City of New York, and is worth the sum of .... dollars ($......), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this .. day of ...., 1904.

—— ——,
Notary Public or Commissioner of Deeds.

7908 STATE OF NEW YORK, *County of New York, ss:*

On the 15 day of March, in the year 1904, before me personally came Chas. W. Young, to me known, who being by me duly sworn, did depose and say that he resided in the City of New York; that he was Attorney-in-Fact of the United States Fidelity and Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order. And the said Chas. W. Young further said that he was acquainted with George E. Hayes and knew him to be the Attorney-in-Fact of said company; that the signature of the said George E. Hayes subscribed to the foregoing instrument was the genuine handwriting of George E. Hayes and was subscribed thereto by like order of said Board of Directors and in the presence of him, the said Chas. W. Young.

(Signed) ALONZO G. OAKLEY,
Commissioner of Deeds, New York City.

STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

Home Office:

Corner Calvert and German Streets, Baltimore, Md.

At the Close of Business, December 31st, 1903.

Commenced Business August 1st, 1896.

7909 ASSETS.

Cash on hand and in banks	$257,183.43	
Investments, stocks and bonds (market value)	1,890,523.80	
Real Estate	445,611.92	
Loans on collateral, stocks and bonds	23,535.00	
Loans on mortgage	22,650.00	
Mortgages and other collateral % salvage	4,000.00	
Agents' balance, fidelity and surety, less commissions	257,989.90	
Agents' balances, burglary, less commissions	64,612.48	
Due for subscriptions, department guaranteed attorneys	38,262.50	
Advanced % contracts, secured	155,730.45	
Interest due and accrued	24,719.06	
		$3,184,818.56

LIABILITIES.

Capital stock paid in cash	$1,700,000.00	
Cash collateral deposits	82,902.26	
Surplus and reserve	1,401,916.30	
		$3,184,818.56

STATE OF NEW YORK, *County of New York, ss:*

George E. Hayes, being duly sworn, says: That he is the
7910 Attorney-in-Fact of the United States Fidelity and Guaranty
Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said company, as of December 31, 1903.

(Signed) GEORGE E. HAYES.

Subscribed and sworn to before me, this — day of ——, 1904.

(Signed) ALONZO G. OAKLEY,
Commissioner of Deeds, New York City.

Endorsed: No. .... The City of New York. Department of Water Supply, Gas and Electricity. Bid or Estimate. For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp Posts, and for furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of Manhattan, in The City of New York, for the term of one year from March 16th, 1904, to March 15th, 1905. New York, ..., 1904. ...., Estimator.

7911

CITY'S EXHIBIT 2A.

No. 1.

Name of Bidder, Consolidated Gas Co. of New York.
Address..............................

THE CITY OF NEW YORK.

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BOROUGH OF MANHATTAN.

1904.

PROPOSALS FOR BIDS OR ESTIMATES FOR GAS AND NAPHTHA LAMPS, ETC.

1. Sealed Bids or Estimates will be received at the office of the Department of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, in the City of New York, until 2 o'clock P. M. on Wednesday, March 16th, 1904.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for Making Certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and 7912 Public Places, in the Borough of Manhattan, in The City of New York, for the term of one year from March 16th, 1904, to March 15th, 1905.

2. The amount of security required is TWENTY-FIVE (25) PER CENTUM of the total amount of bid or estimate.

3. In the Borough of Manhattan, the total number of ordinary

gas-lamps now burning is about 13,951; the total number of Welsbach gas-lamps now burning is about 5,078; the total number of Welsbach naphtha lamps now burning is about 754; the total number of ordinary naphtha lamps now burning is about 107; but the Commissioner of Water Supply, Gas and Electricity reserves the right to designate the location and number of the lamps of each kind as to districts, streets, avenues, piers, parks and public places or parts thereof. Bidders must satisfy themselves by a personal examination of the number and kind of lamps required in each Borough, as numbers given above must be taken only as a close approximation of the number of lamps that may be required.

4. The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed with the title given above, of the work for which the estimate is made, with his or their name or names and the date of presentation to the head of the Department, at the said office, on or before the date and hour above named, at which time and place the estimates received will be publicly opened by the head of the Department and read, and the award of the contract made according to law as soon thereafter as practicable.

5. Bidders are required to state in their estimates the districts or several streets, avenues, piers, parks and places, or parts of
7913 streets, avenues, piers, parks and places in which they propose to perform the requirements herein contained, and also the illuminating or candle power of the gas they propose to furnish, when tested at a distance of not less than one mile from the place of manufacture; and bidders proposing to furnish any illuminating material other than illuminating or coal gas, must state distinctly what kind of grade and material they propose to furnish, and the illuminating power of the light they propose to furnish. When the term "illuminating material other than gas" is used in these proposals or the annexed contract and specifications, it shall mean either naphtha or gasolene.

6. Bidders will state in their bids or estimates a price per lamp per year for furnishing gas or illuminating material other than the gas to the public lamps in the Borough of Manhattan, and for other fixtures or appliances or illuminating material for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting lamp-posts and lanterns, and replacing the cocks, tubes, burners, crossheads, lamp-posts, lamp-irons and lanterns thereto, for the term of one year; stating the price, for the above-named term of one year, for each lamp. The burners for open flame or mantle gas lamps will be of such a kind and construction that they will burn three cubic feet of gas per hour under a pressure of not less than 1½ inches. The gas furnished shall have an illuminating power of not less than 20 candles when tested by photometric test at a distance of not less than one mile from the place of manufacture, and bidders will state the price per lamp per year for gas of the illuminating power, and in the quantity and at the pressure specified. Bidders shall also state the cost per year per lamp for
7914 gas supplied to a burner consuming four cubic feet of gas per hour, and the price for a burner consuming five cubic feet of

gas per hour. If open flame and mantle lamps shall use illuminating material other than gas, then the burners to be used for such illuminating material will be of such kind and construction that they will give a light (by photometric test) equal to the light given by the ...... foot open flame or mantle gas-burners of similar type as used in the public lamps in The City of New York, furnished with 20-candle power gas. Bidders are required to state in their estimates the kind, grade and cost of such illuminant furnished in the receptacles for same on the lamps for one year for each lamp at each lamp.

7. A price for furnishing lanterns with improved burner appliances and incandescent mantle for gas or naphtha burners, to produce a light of not less than sixty (60) candle power each, including material for each lamp, maintenance, lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, crossheads, lamp-posts lamp-irons and lanterns thereto, for the afore-mentioned period of one year.

7. (*a*) A price for furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating material, for a period of one year.

7. (*b*) Bidders will state in their bids or estimates a price per thousand cubic feet of gas of not less than 20 candle power for all or any of the public buildings or offices in the Borough of Manhattan, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas
and Electricity. This price will include the service pipes
7915 from the gas mains to the building and a proper meter for
registering the consumption of gas. A bid may also be made on the regulators for governing the supply of gas in buildings in each borough.

8. Bidders will state in their bids a price for the repair of lamp-posts, including straightening and releading, and for each new lamp-post fitted up, as follows:

(*a*) For each lamp-post straightened, stating the price per post.
(*b*) For each column releaded, stating the price per post.
(*c*) For each column recalked, stating the price per post.
(*d*) For each column refitted, stating the price per post.
(*e*) For each service pipe refitted, stating the price per post.
(*f*) For each standpipe refitted, stating the price per post.
(*g*) For each lamp-post removed, stating the price per post.
(*h*) For each lamp-post reset, stating the price per post.
(*i*) For each new lamp-post used for gas-lamps fitted up complete and erected with service and stand-pipe, including lantern, stating the price per post.

9. The right is reserved to the Commissioner to determine and designate in any locality, at any time after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the term of this contract; also upon such determination, to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon; also to decline all estimates for any par-

ticular locality, or all localities if deemed for the best interests of the City.

7916 10. Should any alteration or any attachment be required to any portion of the lamps for which estimates are made in consequence of the use of illuminating material other than gas, then such alteration shall be done and such attachment placed on the posts, without expense to the City.

11. If the estimate of any bidder shall include any lamp-posts with which the pipes or conductors of such bidder are not connected at the time of the making of the bid, and a contract for furnishing the illuminating material for any such lamp-posts shall be awarded to such bidder, in that case, THIRTY DAYS from the date of the execution of such contract, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, shall be allowed to such bidder in which to connect such pipes or conductors with such lamp-posts, and all such connections shall be made by the Contractor without expense to the City.

12. No payment to such bidder, on account of any such lamps, will be made for the time so allowed, nor until the same shall have been connected with the mains or conductors of such bidder, nor except for the time during which all the requirements in this proposal and in the contract, including specifications, which shall be awarded and entered into under this proposal, shall have been fully performed.

13. The number, kind and location of lights to be furnished under the contract to be awarded and entered into under this proposal shall be determined and prescribed by the Commissioner.

14. No bid will be entertained unless the Commissioner shall be satisfied that the party or parties bidding are possessed of sufficient plant to carry out the provisions of the contract.

7917 15. The award of any and all contracts under this proposal, and all contracts entered into in pursuance of said proposal, will be subject and subordinate to the rights of all persons, parties or corporations under contracts or agreements (if there are any such) which are now binding and obligatory upon the City of New York.

16. The number of hours the gas or naphtha lamps are to be kept burning during the contract is 3,925, and in leap year, 11 hours and 55 minutes additional for February 29.

17. Bidders will *write out* the total amount of their estimates in addition to inserting the same *in figures.*

18. The Commissioner reserves the right to reject any or all bids or estimates if the Board of Estimate and Apportionment shall determine it is for the public interest of the City so to do.

19. Each bid or estimate shall contain the same and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair, and without collusion or fraud; and that no member of the board of aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other

officer of the City of New York, is, shall be, or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated
7918 therein are in all respects true; or, if the bidder is a corporation, by the oath, in writing, of an officer of such corporation, with knowledge of the facts and having authority to make such sworn statement.

20. Each bid or estimate shall be accompanied by the consent, in writing, of two householders and freeholders in the City of New York, or of a guaranty or surety company, duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

21. No bid or estimate will be considered unless accompanied by money or a certified check drawn on a National or State bank located in The City of New York, to the order of the Comptroller, to the amount of five per centum of the amount of the bond required, as provided in section 420 of The Greater New York Charter.

22. For particulars as to the repairs or the quantity or quality of the supplies, or the nature and extent of the work, reference must be made to the specifications on file in the Department.

23. Bidders are requested to make their bids or estimates upon the blank form prepared by the Commissioner, a copy of which, with the proper envelope in which to inclose the bid, together with a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefor at the office of the Commissioner of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, The City of New York.

The City of New York, March 3rd, 1904.

JOHN T. OAKLEY,
Commissioner of Water Supply,
Gas and Electricity.

7919

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF MANHATTAN.

CONTRACT AND SPECIFICATIONS

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for furnishing Burners and Appliances of Improved System of Lighting Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of Manhattan in The City of New York, for the term of one year, from March 16th, 1904, to March 15th, 1905, per specifications herein contained or hereto attached.

This agreement, made and entered into this 1st day of July, in the year one thousand nine hundred and four by and between The City of New York, by the Commission of Water Supply, Gas and Electricity, party of the first part, and Consolidated Gas Company of New York, Contractor, party of the second part, pursuant to the provisions of the Greater New York Charter.

Witnesseth, That the parties to these presents, each in consideration of the agreements on the part of the other, herein contained, have mutually agreed, and hereby mutually agree, the party of the first part for itself and its successors, and the party of the second part for itself and its successors, as follows:

7920 (*A*) Wherever in this contract the words "The City," or "The Commissioner," or a pronoun in the place of either of them is used, they shall mean and intend the party of the first part or the Commissioner of Water Supply, Gas and Electricity of The City of New York; wherever the words "Borough President," are used in this contract, they shall mean and intend the President of the Borough above mentioned; wherever in this contract the words "the Department," or a pronoun in place of them is used they shall mean and intend the Department of Water Supply, Gas and Electricity in The City of New York.

(*B*) Wherever in this contract the word "Contractor," or a pronoun in the place of it is used, the same shall mean and intend the party of the second part to this agreement.

(*C*) Wherever the word "Engineer" is used in this contract, it shall mean and be taken to mean and intend the Engineer of the Bureau of Lamps and Gas of the Department, or the Engineer, or other person or official, in charge of the Lighting Bureau in the borough for which this contract is made, acting either directly or through any Assistant or Inspector duly appointed or designated therefor, pursuant to The Greater New York Charter as amended, by the Engineer or either of the Engineers, to inspect, test, examine and accept the supplies of gas or other illuminating material, repairs or supplies, which are the subject of this contract, limited by the particular duties intrusted to him.

(*D*) The Contractor will furnish and deliver to the party of the first part, at the Contractor's own cost and expense, at the times and places and in the manner, and under the conditions herein specified, gas or other illuminating material for, and light, extinguish,
7921 clean, repair and maintain the public lamps (and supply gas, etc., for new lamps when required), and make certain repairs to lamp-posts, and furnish burners and appliances of improved system of lighting on the streets, public buildings, avenues, piers, parks and public places in the Borough of Manhattan, in the City of New York, for the term of one year from March 16th, 1904, to March 15th, 1905, and will accept as full compensation therefor the sum or price hereinafter named, which sums or prices are the amounts at which this contract was awarded to the Contractor at the public letting thereof. The said specifications, the proposal for bids or estimates, the bid or estimate and the bond required are and shall be a part of this contract.

(*E*) The Contractor will not ask, demand, sue for or recover for any supplies delivered, repairs made, illuminating material furnished, or work performed under this contract, any extra compensation beyond the amounts payable for the several classes of work and supplies herein enumerated, which shall be actually supplied at the price therefor, herein agreed upon and fixed.

(*F*) The Engineer shall inspect and test or have tested the gas or other illuminating material, lamps, meters, regulators, repairs and supplies furnished, and see that the same strictly correspond with the specifications hereinafter set forth, and the Engineer is hereby authorized and empowered to reject any of the said gas or other illuminating material, lamp posts, lamps, meters, regulators, repairs and supplies offered under this contract, for the reason that the same do not comply in quality or quantity or pressure, or time or place of maintenance, with the specifications herein contained or hereto annexed.

7922 (*G*) Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such assistant or other person as shall be designated by the Commissioner shall perform all the duties and be vested with all the power herein given to the Engineer.

(*H.*) To prevent all disputes and litigations, the engineer shall, in all cases, determine the amount, quantity and quality of the supplies, illuminating material, and work, which are to be paid for under this contract, and he shall determine all questions in relation to said gas or other illuminating material, repairs and supplies, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of the Contractor, and his estimate and decision shall be final and conclusive.

(*I.*) Any doubt as to the meaning of the contract, including the specifications, or any obscurity as to the wording of them, will be explained by the Engineer, and all directions and explanations required, alluded to, or necessary to complete any of the provisions of these specifications, and give them due effect, will be given by the Engineer.

(*J.*) The Contractor shall commence the delivery of the lamps and other apparatus called for by this contract, and the furnishing of the illuminant required, and the lighting of the lamps, as soon as he shall be ordered so to do by the Commissioner; he will carry on such contract as required from time to time, with such force and in such manner and order, and at such times and seasons, as may be directed by the Commissioner, and that he will fully and entirely perform this contract on his part on or before the fifteenth day of March, 1905.

7923 (*K.*) In case any lamp shall fail to burn continuously throughout each and every night, during the term of this contract, during the hours specified in the time-table hereto annexed, or such hours as the Commissioner may from time to time prescribe, and such failure shall not be due to any act or omission of The City, its officers, agents or employees, the Contractor shall and will pay to The City a sum of money equal to one three hundred and sixty-fifth (1/365) of the contract price of such lamp per annum for each and every night or part thereof that such failure shall continue, which said sum, in view of the difficulty of ascertaining the loss which The City will suffer by reason of such failure, is hereby agreed, fixed and determined by the parties hereto, as the liquidated damages that The City will suffer by reason of such failure, and not as a penalty, and the City shall and may deduct and retain the amount of such liquidated damages out of any moneys which may be due or become due to the Contractor under this agreement.

(*L.*) Neither an extension of time, for any reason, beyond the date fixed for the delivery of supply of gas, or other illuminating material, lamps, repairs and supplies, nor the delivery and acceptance of any said delivery of supply of gas, repairs and supplies, called for by this contract, shall be deemed to be a waiver by the Commissioner of the right to abrogate this contract for abandonment or delay in the manner herein provided.

(*M.*) The Contractor will employ only competent, skillful and faithful men to do the work, and he further agrees that whenever the Commissioner shall inform him in writing that any man engaged in the work is, in his opinion, incompetent or unfaithful, 7924 he will discharge him from the work and will not again employ him upon the work.

(*N.*) The Contractor shall receive the following prices as full compensation for furnishing and maintaining the lights, lamps, apparatus and accessories, and performing the services herein provided to be performed by the Contractor, viz.:

I. For furnishing the aforesaid illuminating material for each lamp, for burners consuming three cubic feet of gas, of 20 candle-power per hour, including the lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, cross-heads, lamp-posts, lamp-irons and lanterns thereto, for the aforementioned period of one year, in the sum of Seventeen and 25/100 dollars ($17.25).

II. and III. For furnishing the aforesaid illuminating gas for each lamp, at each lamp, as directed and specified, for burners consuming 4 or 5 cubic feet as may be selected, for the above-mentioned period of one year, the sum of II., Twenty-one and 50/100 dollars ($21.50); III., Twenty-six and 25/100 dollars ($26.25).

IV. For furnishing illuminating material other than gas for each lamp, at each lamp, and of the kind and grade as stated in the bid, as directed and specified, ... of .... and also operating and maintaining the lamp including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns, lamp-posts, and replacing cocks, tubes, burners, cross-heads, lamp-posts, lamp-irons, frames and lanterns, when so ordered by the Commis-
7925 sioner. All the above for the term of one year, in the Bor-
ough of ...., to wit, the sum of .... dollars ($....), per lamp per year.

V. For furnishing lanterns with improved burner appliances and incandescent mantle for gas or naphtha burners, to produce a light of not less than sixty (60) candle power each, including the illuminating material for each lamp, maintenance, lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners cross-heads, lamp-irons, lamp-posts and lanterns thereto, for the aforementioned period of one year, the sum of.................. dollars ($......).

For Single Incandescent Mantle Lamps (Gas).

Twenty-eight and 75/100 dollars ($28.75) per lamp per year for less than 10,000 lamps.

Twenty-seven and 75/100 dollars ($27.75) per lamp per year for over 10,000 lamps and less than 15,000 lamps.

Twenty-six and 75/100 dollars ($26.75) per lamp per year for over 15,000 and less than 20,000 lamps.

Twenty-five and 75/100 dollars ($25.75) per lamp per year for over 20,000 and less than 25,000 lamps.

Twenty-four and 75/100 dollars ($24.75) per lamp per year for 25,000 or more lamps.

Twenty-four and 75/100 dollars ($24.75) per lamp per year for single order now for 22,500 lamps.

For Double Incandescent Mantle Lamps.

Forty-six and 50/100 dollars ($46.50) per lamp per year.

VI. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating material, for a period of one year, the sum of .... dollars ($....).

VII. For repair of lamp-posts and erection of new lamp-posts:

7926 (*a.*) For each lamp-post straightened, the sum of One and 50/100 ($1.50).

(*b.*) For each column re-leaded, the sum of Two and 50/100 dollars ($2.50).

(*c.*) For each column recalked, the sum of One dollar ($1.00).

(*d.*) For each column refitted, the sum of Three and 50/100 dollars ($3.50).

(*e.*) For each service-pipe refitted, the sum of Five and 50/100 dollars ($5.50).

(*f.*) For each stand-pipe refitted, the sum of Two and 50/100 dollars ($2.50).

(*g.*) For each lamp-post removed, the sum of Three and 50/100 dollars ($3.50).

(*h.*) For each lamp-post re-set, the sum of Eight dollars ($8.00).

(*i.*) For each new lamp-post used for gas lamps fitted up complete and erected with service and stand-pipe and lantern, the sum of....

Fitting up new lamps, Eight dollars..................	($8.00)
Boulevard lantern additional, Six dollars...............	($6.00)
Fourteen dollars	($14.00)

VIII. For furnishing illuminating gas for lighting of not less than 20 candle power, including the service-pipes from the gas-mains to the building, and a proper meter for registering the gas, for the term of one year, for all or any of the public buildings and offices in the Borough of Manhattaan, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic
7927 feet, at a pressure of not less than 1½ inches, in the sum of Ninety cents ($0.90).

IX. For furnishing and maintaining a pressure regulator, at the option of the Commissioner, controlling supply of gas from each meter which registers the total consumption of gas in any building under the jurisdiction and control of the Department. This gas pressure regulator shall maintain an even pressure of 1½ inches throughout the building as closely as can be obtained. The Contractor shall inspect and regulate same at least once a month, and shall perform all necessary acts in order to maintain same in such a condition that it shall efficiently regulate the supply of gas in the building. The regulator shall be inspected and tested when required by the Commissioner, by the Engineer, and if found defective, shall be replaced, without further expense to the City, whenever such replacement is ordered by the Engineer.

Estimates may be given separately on the price for use of regulator for one year and on the maintenance, as specified.

For furnishing .... regulators of an average capacity of about one and one-quarter inches for the period of one year, in the Borough of.......................the sum of .... Dollars ($..........).

For maintaining the above regulators for the period of one year, in the Borough of .... as specified, the sum of .... Dollars ($..........).

(*O.*) No payment will be made or allowed on account of supply of illuminating materials, repairs and supplies to any lamp, except for the time during which all the requirements herein men-
7928 tioned shall have been fully performed in accordance with the specifications.

(*P.*) In case the Contractor shall be unable at any time during the continuance of this contract to supply illuminating material to, or light in any of the lamps specified in this agreement, then the Contractor shall give immediate notice to the Commissioner of his inability to furnish illuminating material to, or to light such lamps, stating the streets in which the supply of illuminating material to the lamps cannot be furnished and the cause thereof. And in case the use of any of the lamps shall be suspended or discontinued, and other lamps shall be used in consequence of such suspension or discontinuance, then the gas or other lamps which may have been suspended, or discontinued, shall not be supplied with illuminating material except pursuant to an order for such supply by the Commissioner.

(*Q.*) The Contractor shall indemnify and save harmless The City, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits based on or arising out of the alleged infringement of any patent or patent right, and against, and from all damages and costs to which they or any of them may be put by reason of any such alleged infringement or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under this contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the Contractor or his agents or servants.
So much of the moneys due to the Contractor under and by
7929 virtue of this agreement, as shall or may be deemed necessary
by the Commissioner, shall or may be retained by The City, until all such suits, actions and claims shall have been settled, and evidence to that effect furnished to the satisfaction of the Commissioner.

(*R.*) In case the Contractor shall fail or neglect to keep the covenants herein contained, or any of them, or neglect to operate, repair, paint, clean or fit up the lamps as before mentioned, or any of them, the Commissioner may and shall have the power to cause such work to be performed by other parties, and to deduct the expense thereof, from any moneys which may be due or may become due to the Contractor, and to hold the Contractor and his sureties liable for the amount thereof, which may be in excess of the prices stipulated in this agreement; and in case such expense is less than the sum which would have been payable under this contract if the same had been completed by the Contractor, he shall forfeit all claim to the difference.

(*S.*) If the Contractor shall not well and truly observe, perform, fulfil and keep all and singular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case the Commissioner may and shall have the power, on the part of the said party of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

(*T.*) On or after the first day of each and every month during the term of this contract, the Contractor shall furnish proof
7930 to the satisfaction of the Commissioner that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid during the preceding month, and particularly that it has furnished the illuminating material of the quality hereinbefore specified, and that all the lanterns have been cleaned three times in each week of said month, and also that the gas burners have consumed three cubic feet of gas each per hour, as required by this contract, during all the time that the lamps were required to be kept lighted, and also proof to the satisfaction of the Commissioner as to all extinguishments of lamps, including the location of each lamp extinguished, the date and length of extinguishment in each case, whereupon the Commissioner shall certify the fact, and in his certificate state the amount to which the Contractor shall be entitled for all the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the Contractor therefor the sum to which he shall be so entitled; and without such certificate and requisition the Contractor shall not be or become entitled to any payment under and in respect to the terms of this contract, or for the light, lamps and accessories or in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of The City, he shall, within thirty days thereafter, pay to the Contractor the amount thereof in lawful money.

(*U.*) The City shall not, nor shall any department or officer thereof be precluded or estopped by any return or certificate made or given by the Commissioner, any Engineer or other officer, agent or appointee of The City under any provision of this agreement from at any time (either before or after the final completion and
7931 acceptance of the work and payment therefor pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this agreement, or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or the work and materials, or any part thereof, do not in fact conform to the specifications; and The City shall not be precluded or estopped, notwithstanding any such return or certificate and payment in accordance therewith, from demanding and recovering from the Con-

tractor such damages as it may sustain by reason of his failure to comply with the specifications.

(*V.*) This contract shall not be binding or of any force unless the Comptroller of The City shall indorse hereon his certificate that there remains unexpended or unapplied, as provided in The Greater New York Charter, a balance of the appropriation or fund applicable thereto sufficient to pay the estimated expense of executing this contract, as certified by the officers making the same.

(*W.*) The residence or place of business given in the bid or estimate upon which this contract is founded, is hereby designated as the place where all notices, letters and other communications shall be served, mailed or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above-named place, or deposited in a post-paid wrapper in any post-office box regularly maintained by the post-office shall be deemed sufficient service thereof upon the Contractor. The place named may be changed at any time by an instrument, in writing, executed and acknowl-
7932 edged by the Contractor and delivered to the Commissioner. Nothing herein contained shall be deemed to preclude or render inoperative service of any notice, letter or other communication upon the Contractor personally.

(*X.*) This contract shall be subject and subordinate to the rights, claims and demands of all persons, parties or corporations under contracts or agreements (if there are any such) which are valid and lawful charges and liabilities against The City of New York, and which the law requires shall be defrayed and answered unto by The City.

(*Y.*) The contractor will give his personal attention constantly to the faithful prosecution of the work; he will not assign, transfer, convey, sub-let or otherwise dispose of this contract, or his right, title or interest in or to the same or any part hereof, without the previous consent in writing of the Commissioner indorsed hereon or hereto attached; and he will not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sub-let or otherwise dispose of this contract, or of his right, title or interest therein, or any of the moneys to become due under this contract, to any other person, company or other corporation, this contract may, at the option of the Commissioner, be revoked and annulled and The City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the Contractor, and to his assignee or transferee; provided that nothing herein contained shall be construed to hinder, prevent or affect an assignment by the Contractor for the ben-
7933 efit of his creditors, made pursuant to the statutes of the State of New York; and no right under this contract, or to any

money to become due hereunder shall be asserted against the City in law or in equity, by reason of any so-called assignment of this contract, or any part thereof, or of any moneys to grow due hereunder, unless authorized as aforesaid by the written consent of the Commissioner.

In Witness Whereof, The Commissioner of Water Supply, Gas and Electricity, has hereunto set his hand and seal on behalf of The City, and the Contractor has caused its corporate seal to be hereunto affixed and its President and Secretary hereto to set their hands, and the parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner, one other to be filed with the Comptroller of The City, and the third to be delivered to the Contractor, the day and date herein first above written.

JNO. T. OAKLEY, [L. S.]
Commissioner of Water Supply,
Gas and Electricity.

CONSOLIDATED GAS CO. OF NEW YORK,
By W. R. ADDICKS,
Vice-President. [SEAL.]
R. A. CARTER,
Secretary.

Attest:
R. A. CARTER,
Secretary.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

On this 1st day of July, 1904, before me personally came John T. Oakley, to me known and known to me to be the Commissioner of Water Supply, Gas and Electricity, the person described and who executed the foregoing instrument, and he acknowledged to
7934 me that he executed the same as such Commissioner for the purposes therein mentioned.

ROBERT J. McKEON,
Commissioner of Deeds, N. Y. City.

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

On this 1st day of July, 1904, before me personally came W. R. Addicks, to me known and known to me to be the Vice-president of the Consolidated Gas Co. of New York, and Robert A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Co. of New York, who, being by me severally duly sworn, did depose and say, each for himself, as follows: The said W. R. Addicks, that he resided in the City of New York, that he is the Vice-President of said Company, and the said Robert A. Carter, that he resided in the City of New York, that he is the Secretary of said Company, the Company described in and who executed the above instrument; that he knew the seal of said Company; that the seal affixed to the said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of ——, ss:*

On this......day of........1904, before me personally came
....
....
....
to me known and known to me to be the person described in 7935 and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

Know All Men by These Present-, That We, Consolidated Gas Co. of New York and The United States Fidelity and Guaranty Company of The City of New York, are held and firmly bound unto The City of New York, in the sum of One hundred and twenty-five thousand dollars, lawful money of the United States of America, to be paid to The City of New York, or to its certain attorneys, successors or assigns, for which payment, well and truly to be made, we bind ourselves, and our several and respective heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

Sealed with our seals. Dated this 1st day of July, one thousand nine hundred and four.

Whereas, The above bounden Consolidated Gas Co. of New York by an instrument in writing, under its corporate seal duly attested, bearing even date with these presents, and one part whereof is hereunto annexed, has contracted with The City of New York to furnish the Illuminating Material, Repairs and Supplies to the Public Lamps of The City of New York, as in said contract will more fully and at large appear:

Now, therefore, the condition of the above obligation is such, that if the said Consolidated Gas Co. of New York, its successors or assigns, shall indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them, or any of them, including suits and actions based on, or arising out 7936 of the alleged infringement of any patent or patent rights, and against and from all damages and costs to which they, or any of them, may be put by reason of any such alleged infringement, or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under said contract, or otherwise, or from any improper or defective material, machinery, implement or appliance uesd in performing the same, or from any act or omission of the said Consolidated Gas Co. of New York, its agents or servants, and if the said Consolidated Gas Co. of New York, or its successors or assigns, shall well and truly, and in a good, sufficient and workmanlike manner, perform, fulfill, observe, and keep the said contract, and each and every of the covenants, provisions, conditions and terms in said contract contained, or to be performed, fulfilled, observed and kept, then this obligation to be void; otherwise to remain in full force and virtue.

CONSOLIDATED GAS CO. OF NEW YORK,
By W. R. ADDICKS, *Vice-President.* [L. S.]
R. A. CARTER, *Secretary.* [L. S.]

[SEAL.]

Attest:
R. A. CARTER, *Sec.*

THE UNITED STATES FIDELITY [L. S.]
AND GUARANTY CO., [L. S.]
By CHAS. W. YOUNG, *Attorney in Fact.*

Attest:
GEORGE E. HAYES, *Attorney in Fact.*

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

On this..day of ....1904, before me personally came .... to me known and known to me to be the persons described in and who executed the foregoing bond and they severally acknowledged to me that they executed the same for the purposes therein mentioned. 7937

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of N. Y., ss:*

On this 1st day of July, 1904, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Company of New York, and Robert A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Company of New York, being by me severally duly sworn, did say, each for himself, as follows: The said W. R. Addicks, that he was Vice-President of said Company, and the said Robert A. Carter, that he was Secretary of said Company; that he knew the corporate seal of said Company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that, by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, The City of New York.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ...of said City, being duly sworn, do depose and say that I am a .... holder in The City of New

York, and reside at Number............................
7938 Borough of............................in said City, and that I am worth the sum of............................
Dollars, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

—— ——.

Subscribed and sworn to before me, this....................day of ...., 1904.

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ...of said City, being duly sworn, do depose and say that I am a .... holder in The City of New York, and reside at Number............................
Borough of ....in said City, and that I am worth the sum of............................
Dollars, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

—— ——.

Subscribed and sworn to before me, this..................day of ...., 1904.

—— ——,
Notary Public or Commissioner of Deeds.

7939 STATE OF NEW YORK, *County of New York, ss:*

On the 15th day of March, in the year 1904, before me personally came Chas. W. Young, to me known, who, being by me duly sworn, did depose and say that he resided in the City of New York; that he was Attorney-in-Fact of the United States Fidelity & Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order. And the said Chas. W. Young further said that he was acquainted with George E. Hayes and knew him to be the Attorney-in Fact of said Company; that the signature of the said George E. Hayes subscribed to the foregoing instrument was the genuine handwriting of George E. Hayes and was subscribed thereto by like order of said Board of Directors and in the presence of him, the said Chas. W. Young.

(Signed) ALONZO G. OAKLEY,
Commissioner of Deeds, New York City.

STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

Home Office:
Corner Calvert and German Streets,
Baltimore, Md.

At the Close of Business, December 31st, 1903.

Commenced Business August 1st, 1896.

7940 *Assets.*

Cash on hand and in banks........	$257,183.43	
Investments, stocks and bonds (market value)	1,890,523.80	
Real estate	445,611.92	
Loans on collateral, stocks and bonds.	23,535.00	
Loans on mortgage...............	22,650.00	
Mortgages and other collateral, ac. salvage	4,000.00	
Agents' balance, fidelity and surety, less commissions	257,989.90	
Agents' balances, burglary, less commissions	64,612.48	
Due for subscriptions, department guaranteed attorneys	38,262.50	
Advanced acct. contracts, secured....	155,730.45	
Interest due and accrued..........	24,719.08	
		$3,184,818.56

Liabilities.

Capital stock paid in cash.........	$1,700,000.00	
Cash collateral deposits	82,902.26	
Surplus and reserve..............	1,401,916.30	
		$3,184,818.56

State of New York, *County of New York, ss:*

George E. Hays, being duly sworn, says: That he is the
7941 Attorney-in-Fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief the foregoing is a true and correct statement of the financial condition of said company, as of December 31, 1903.

(Signed) GEORGE E. HAYES.

Subscribed and sworn to before me this — day of ——, 1904.

(Signed) ALONZO G. OAKLEY,
Commissioner of Deeds, New York City.

APPROPRIATION.

COMMISSIONER'S CERTIFICATE.

In conformity with the provisions of section 149 of The Greater New York Charter, it is hereby certified that the estimated cost of the work, materials and supplies required by the within contract, amounting to Five hundred thousand Dollars ($500,000.00), is chargeable to the appropriation of the Department of Water Supply, Gas and Electricity, for the year 1904, entitled "Lamps and Lighting, Boroughs of Manhattan and Bronx, for 1904."

............................,
Commissioner of Water Supply, Gas and Electricity.

Dated ...., 1904.

COMPTROLLER'S CERTIFICATE.

THE CITY OF NEW YORK, ..., 1904.

7942 In pursuance of the provisions of section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation ....

applicable to this contract, sufficient to pay the estimated expense of executing the same, viz.: $.......

..........................,
Comptroller.

SPECIFICATIONS.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting of Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of Manhattan, in The City of New York, for the Term of One Year, from March 16th, 1904, to March 15th, 1905.

1. The lamps shall be lighted during such times as the public lamps throughout The City of New York may be required to be lighted by the regulations of the said party of the first part, in accordance with a time-table hereto annexed, marked "A," and made a part of these specifications. The Commissioner may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times during the continuance of this contract; and the Contractor

shall and will light the same, and continue them burning, in accordance with any and every direction of the Commissioner
7943 to that effect. Provided, that, in compliance with the direction of the Commissioner, the whole number of hours during which the said lamps, or a portion of them, are kept burning, shall exceed the number of hours specified in the said time-table, which time-table shall aggregate a total of 3925 hours for the term, then, in that case, the Contractor shall be entitled to claim and receive, for such additional number of hours during which the lamps, or such portion of them, in the district aforesaid, are kept burning in accordance with such direction of the Commissioner, an additional compensation, equivalent to a *pro rata* increase of the compensation allowed by the foregoing contract and proportioned to the increased number of hours beyond the said number, and the number of lamps so kept burning. And also, provided that if, in compliance with the direction of the Commissioner, the number of hours during which the said lamps, or any portion of them, are kept burning, shall be less than the aforesaid number of 3925 hours per term, then, in that case there shall be deducted an amount equivalent to a *pro rata* decrease of the compensation allowed by the foregoing contract and proportioned to the decrease of the number of hours below the said number, and to the decrease of the number of lamps so kept burning. If the lamps are to be lighted by means of gas or naphtha, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; also that they shall be lighted either by the means of a torch, or the use of a ladder, and that the lamplighters will not be permitted to climb the lamp posts for such purpose. The Contractor shall keep the service pipes and stand pipes of said lamps cleared of all obstructions, at its own cost and expense.

7944 2. The Commissioner shall have the right at any time to increase or diminish the number of lamps required to be lighted by the Contractor under this contract, and the right is reserved by the Commissioner, at any time during the continuance of this contract, to increase or diminish the number of hours during which the said lamps or any portion of them are to be kept burning, and to change said time-table in any particular, and to determine and from time to time to change the said number and location of the lights in any public building or office, and the amount and kind of illuminating material used and to be used therein, and the public buildings and offices and parts thereof lighted and to be lighted under the foregoing contract.

3. If the material to be furnished under this agreement shall be illuminating gas, then such gas shall have an illuminating power of not less than twenty candles, when tested at a distance of not less than one mile from the place of manufacture, on the improved form of the Bunsen Photometer, by means of a Bray slit, Union No. 7, burner consuming five cubic feet of gas per hour. The testing candle shall be of sperm, of six to the pound, and consuming as near as possible, one hundred and twenty grains of spermaceti per

hour; and no test shall be recorded in which the candle consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And as regards purity, gas shall be clean and of such quality that it will not deteriorate the mantles in the mantle lamps using same so as to shorten their length of life under similar conditions. The gas shall be entirely free, within limits not injurious to the public health, from ammonia, sulphureted hydrogen and other sulphur or noxious compounds. In case the illuminating material shall be illuminating
7945 material other than gas, then the quantity of light
produced by the burner used for such material shall be equal to the quantity (by photometric test) produced by the twenty candle-power coal gas, above described, consumed by the foot gas burners called for in this agreement.

4. The City shall have the right at any time to test the quality and illuminating power of the lamps and light as furnished on the street, and for that purpose at least twenty-five (25) lamps may be selected from those in actual use, by the Engineer, in each and every calendar month, and their illuminating power shall be determined photometrically by the City Gas Inspector or the Engineer at The City's Laboratory, or elsewhere at the discretion of the Engineer. The average candle-power of the lamp so tested shall constitute the basis for calculating the light furnished by the lamps burning during the month and for which the charge is made. The term "Lamp" herein means the burner complete with mantle and chimney, if any, as found set up for use in any of the streets or public places, and the test herein referred to shall be made through uncolored clear glass of the same character as encloses the lamp on the street, and under the same conditions of supply of gas; the object of the test being to determine that the actual illuminating power, as contracted for, is given on the street, and to determine that each burner is consuming at least the required three (3) cubic feet of gas per hour. Each lamp shall be tested with the gas furnished by the company furnishing gas to said lamp when in actual service on the street, the gas being first tested for candle-power. 20-candle power gas is herewith defined as gas which, when tested, at a distance of not less than one mile from the place of manufacture, on the improved form of Bunsen Photometer, by means of a Bray slit, Union No. 7,
7946 burner, consuming 5 cubic feet of gas per hour, shall give
20-candle power; the testing candle shall be of sperm of six to the pound, and consuming, as near as possible, 120 grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than 114 or more than 126 grains of spermaceti per hour.

When desired by the Commissioner, these tests will be applied to each of the different classes of lamps, viz.:

Open flame gas.
Mantle gas.
Open flame naphtha.
Mantle naphtha.

The Contractor operating and maintaining the lamps tested shall replace said lamps whenever they are taken down for test, free of cost to The City, and shall always keep in stock ready for operation, at least 25 lamps of each class.

Lamps using other illuminant than gas will also be tested photometrically as to actual street illuminating power with the illuminating material they may contain when taken down, and they shall furnish the same illuminating power as a lamp of similar type using gas of 20-candle power supplied at the rate of .... cubic feet per hour.

The minimum candle power required of each type of lamp consuming not more than 3 cubic feet per hour per lamp, under the conditions herein specified, will be as follows:

Open flame gas..................	12 candle power.
Mantle gas	60 candle power.
Open flame naphtha............	12 candle power.
Mantle naphtha	60 candle power.

7947 The open flame lamps to be supplied with 20-candle power gas at the rate of not less than three (3) cubic feet per hour. The mantle gas lamps to be supplied with from 2½ to 3 cubic feet of gas per hour, at 1½ inches pressure as may be required. The naphtha lamps, both open and mantle, shall be supplied with sufficient naphtha to equal the candle power of the similar type of gas lamp mentioned above.

5. All the burners used for the illuminating material, commonly called illuminating gas, shall be of a capacity to burn 3, 4 or 5 cubic feet of gas per hour, as may be selected, and each of said burners *shall* burn 3, 4 or 5 cubic feet of gas per hour, as selected, during all the time the lamps are required to be kept lighted. Should the illuminating material be naphtha, then the burners to be used for such illuminating material shall give a light (by photometric test) equal to the light given by the gas-burners in use in the public lamps of similar type in The City of New York. The burners are to be kept clear at all times, so as to allow a free and unobstructed flow of illuminating material, and to permit a full and normal flame. All checks or automatic regulators shall be of a type approved by the Engineer, and shall be cleaned at least once in each year, or oftener if ordered by the Engineer.

6. Incandescent mantles for either gas or naphtha lamps when supplied for the lamps now using same, or for lamps which may be hereafter specified by the Commissioner, shall be of the very best quality, capable of producing and maintaining under the conditions of this contract not less than 60 candle-power. Whenever the mantles become smoked or deteriorated to such an extent that at least 60 candle-power is not obtained, they must be replaced by new

7948 mantles by the Contractor. The Commissioner reserves the right to have the lamps and the character of mantles furnished, tested, basing test on the same conditions as those under which they are required to burn on the streets, and to reject any lamps and mantles furnished that do not comply with the above requirements as to candle-power. Anti-vibrators for lamps, using incandescent mantles, should be furnished with each lamp, and samples of same should be submitted to the Engineer for approval with the sample of lamp furnished him as mentioned elsewhere.

7. The Commissioner or the Borough President shall have the right at any time to place signs, designating the names of streets, on any lamp-post situated on the street corners of any street to be lighted under this contract, without further expense to The City, whether the lamp-posts shall belong to The City or not, and all the lamps and street signs are to be kept in such a cleanly condition that not more than 10 per cent. of the light of the lamps shall be absorbed or obstructed by the uncolored glass. They shall be cleaned at least three times in each week, and oftener, if the Commissioner shall direct or require the same, and at each of these cleanings all the sides, top and bottom glass of the lantern, as well as the glass of the street sign, shall be thoroughly cleaned, both on the inside and the outside, and all dust and dirt shall be brushed from the frames.

8. The lamps, including the bottoms, are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the Contractor, without cost to The City.

7949 Stained glass of a ruby color, of such tint as shall be approved by the Commissioner, shall be placed in the Fire Alarm Signal lamps and in the tops of the gas lanterns nearest to the several Fire Alarm Signal boxes, and in the tops of the gas lanterns on the street corner nearest said boxes. And in case any of such stained glass should be broken, after being placed in the lamps, then the Contractor shall procure glass of the same color, and place and keep the same in the lamps without cost to The City.

9. The party of the first part shall have the right to require that burners of a greater consuming capacity than three cubic feet of gas per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of one year, provided that the party of the first part will pay to the Contractor, for the lamps so furnished, an additional compensation, equivalent to the increase of the compensation allowed by the foregoing contract and proportioned only to the increased amount of gas consumed by each burner over and above three cubic feet per hour.

10. Sample lamps, showing all burning appliances and connections for each type of mantle or other lamp to be furnished, shall be submitted when called for by the Commissioner to the Engineer for the purposes of comparison and test. Such sample lamps shall be complete in every respect, and shall accurately represent the burner which the Contractor uses on each type of lamp under this contract, and the sample lamp, like lamps in service, shall be so combined and adjusted as to secure, under all ordinary variations of pressure, an intensity of candle power of not less than 60 in the case of
7950 mantle lamps and . . . . in the case of open flame lamps. The
tips for open flame gas burners shall be designed to consume 3, 4 or 5 cubic feet of gas as required, per hour. These tips shall be approved by the Engineer before being placed on the burners. They shall be kept in good order and repair, and renewed

whenever required by the Engineer, and he shall also have same tested for consumption of gas when it is deemed necessary.

11. Whenever the Commissioner shall require that any lamp-post or posts shall be reset or straightened, or that any column or columns be releaded or recalked, or that any lamp-post or posts be repaired in any other manner, in this contract specified, the same shall be done within twenty-four hours after the Department shall notify the Contractor of such requirement.

12. The lamp-posts, lamp irons, brackets and lanterns, used for gas or naphtha, are to have one heavy coat of best paint, ground in oil, as follows: The lamp-posts, crossheads and stand pipes of bracket lamps to have one coat of dark-green paint, blue shade. The square lamp irons, brackets, and outside of lanterns to have one coat of green paint, pea-green shade; the design being to make a strong contrast between lamp-posts and lanterns. The tin work on inside of lanterns to be painted in all their parts with one heavy coat of best white-lead paint; the round lamp irons and under side of the reflectors of the globe lamps to be painted with one coat of the best white-lead paint, and so much of the stand pipes as project above the lamp-posts, to be painted in the same manner as the lamp-posts. All the material shall be of the best quality, and prepared so as to present a gloss finish. While painting the lanterns care must
7951 be taken that the glass shall not be daubed or smeared with
paint. All the painting is to be completed by the first day of *July* next and the Commissioner is to be notified when and where the painting is to be commenced.

13. All lamp-posts shall be taken down which the Commissioner may require to be removed for any purpose.

14. New gas-lamp posts are to be fitted up on any street, avenue, pier, park or public place, wherever the same may be required by the Commissioner. The butts and columns are to be placed in a strictly perpendicular position, the socket of the butt to be calked with yarn gasket and melted lead, the lead to be tamped and then trimmed even with rim of butt. The service-pipe shall be one (1) inch wrought iron pipe, upon which shall be connected by means of a reducer a three-quarter (¾) inch wrought-iron stand-pipe, which shall be galvanized upon its outer surface. Reducer to be connected to outside of both service and stand-pipe. At the lower extremity of the stand-pipe the service-pipe shall make an angle bend of easy curvature, so as to avoid any congestion of any material that may collect within the pipe, and thence have a direct fall to the main. The service-pipe shall receive a heavy coat of asphaltic paint before there is any filling-in around it. The service-pipe and bend on bottom of stand-pipe shall rest on solid earth to prevent the same from settling and forming a trap; the earth is to be thoroughly tamped about the butt as the same is thrown into the excavation. Bracket lamps are to be fitted up in lieu of lamp-posts when required, the brackets and stand-pipes to be fastened to the wall in a firm and secure manner. The service-pipes, stand-pipes and fittings are to be furnished and connected by the Contractor; the lamp-posts
7952 for mantle and open flame gas-lamps, and the lamp-posts,
lamp-irons, cross-heads and brackets for open flame gas-

lamps will be furnished by The City, through the Department, to the Contractor. All new lamp-posts are to be painted immediately after the same shall have been erected.

15. The cocks, tubes, tips, mantles, chimneys, globes, burners and checks which may become worn out or useless, or which, in the opinion of the Commissioner, are worn out or useless, shall be immediately replaced by the Contractor, at its own cost and expense.

16. All lanterns and lamp-posts used for gas, which, in the opinion of the Commissioner, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed and other lanterns and lamp-posts substituted in lieu thereof (and globe lamps substituted for square lamps) by the Contractor without charge to The City, when so ordered by the Commissioner. The lanterns, lamp-posts and globes for that purpose will be furnished by The City in the case of open flame gas lamps. The lamp-posts for mantle gas lamps will also be furnished by The City through the Department to the Contractor, but the Contractor will furnish all the equipment, including posts for the mantle naphtha and open flame naphtha lamps, as well as all the equipment, except the lamp-posts in the case of mantle gas lamps.

17. The crossheads and lamp-irons used for open flame gas-lamps which, in the opinion of the Commissioner, may become broken or out of order, are to be replaced on the posts by the Contractor without charge to The City. The cross-heads and lamp-irons for
7953 that purpose are to be furnished by the party of the first part,
through the Department, to the Contractor.

17. The glass street signs to be placed and retained in their proper places and positions in the gas or naphtha lantern, and are to be kept in a cleanly condition; and globes containing street names are to be placed upon the gas lamp-posts when required by the Department. The globes shall be furnished by the Department to the Contractor, and the signs shall be furnished by the Borough President to the Contractor.

19. All supplies, which, under this agreement, may be required to be furnished by the party of the first part, will be so furnished, but the cartage thereof shall be done by the Contractor.

20. Subject to the provisions of section 469 of the Greater New York Charter, the Contractor will, upon being required to do so by the party of the first part, extend its pipes or conductors, and erect new lamps in and along any or all the streets, avenues and public places within the limits aforesaid or adjacent thereto, and will relight the gas-lamps situated on the line of the mains of the Contractor, which are now suspended or may hereafter be suspended, when ordered so to do by the Commissioner.

21. The Commissioner may determine and designate in any locality, after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the period above mentioned; also upon such determination, to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon.

7954 22. Should any alteration or any attachment be required to any portion of the lamps to be lighted under this agreement, for the purpose of using any other material than illuminating gas, then such alteration will be done and attachment placed and maintained on the lamps by the Contractor hereto at his own cost and expense.

23. In supplying gas for public buildings under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, the Contractor shall supply, put in place, and connect the service-pipe from the gas-mains to the building and install a proper meter for registering the gas consumed. The gas supply shall be of 20-candle power at not less than 1½-inch pressure, the pressure to be regulated by a gas pressure regulator, approved by the Engineer.

All meters registering the total consumption of gas in any building under the jurisdiction and control of the Department to be equipped, when so required by the Commissioner, with a gas pressure regulator to be furnished, erected and maintained by the Contractor awarded same, maintaining an even pressure of 1½ inches throughout the building as closely as can be obtained. This pressure regulator to be supplied, maintained and cleaned by the Contractor without expense to The City, but shall be inspected and tested by the Inspector detailed by the Commissioner or Engineer so to do. The size of the pressure regulator shall conform to the size of the riser-pipe. It shall be attached to the pipes, but not on the gas meter, and the Contractor shall furnish all the necessary fittings to make connections, and do all the work of installing the machines in a first-class manner, including the removal of stoppages in house
7955 pipes where necessary, adjust tips and burners (other than mantle lights) and set the machines in such a manner as to give the best results under existing conditions, as specified, without curtailing light, and if necessary, in the opinion of the Engineer, the Contractor shall furnish the ordinary lava tip burners and checks.

All the work shall be subject to the approval of the Engineer, and the regulators shall be of the type known as Mercury Float Governors of the improved type approved by the Engineer. The Contractor for these regulators shall maintain same for one year; such maintenance shall include inspecting each regulator monthly, reporting to the Engineer each month, readjusting regulator in case of any change, and shall include furnishing such new tips, checks, or burners as may be deemed necessary by the Engineer, and shall also include the pumping out of house pipes when necessary.

24. All gas meters used for supply of gas to public buildings or public places in The City of New York, may be tested by the Engineer whenever the Commissioner may so order, and the Contractor shall replace same during test, if necessary, free of charge. If meter be found defective, same shall also be repaired or replaced by the Contractor without further charge to The City.

Tips for open flame gas burners used in public buildings, and other burning appliances, shall be approved by the Engineer before being installed, and no Contractor shall have the right to furnish such tips or burners to lamps in any public building without first obtaining such approval. The Engineer may test such tips or burning appliances whenever he deems it advisable in order to determine their consumption of illuminant, and in case they shall con- 7956 sume an excessive amount of same, he may order new ones put in their place by the Contractor who furnished them during the term of this contract.

25. In order that bills, when rendered to The City by the Contractor, shall agree so far as it is possible, with the meter readings as obtained by the City Inspectors, it will be required that on proper notification from The City, the Inspectors of the company will read the various meters on the same day as they are read by The City's Inspectors.

No meters shall be installed, changed or replaced in any public building, except in case of emergency, unless due notice shall be given the Bureau of Lamps and Gas twenty-four hours before such new meter is installed or change is made, so that an Inspector from said Bureau can be present and check the readings of the meters.

26. If the requirements of The City, under this contract, includes any lamps with which the pipes or conductors of the Contractor were not connected at the time of the making, such estimate or bid, thirty days from the date of the execution of this agreement, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, will be allowed the Contractor in which to supply and connect service-pipes, bends, reducers, and stand-pipes, as specified above, to such lamps and all such connections, material and labor shall be furnished by the Contractor without other expense to The City; provided that the Contractor has or shall procure a consent, grant or franchise from the proper municipal or other authority, authorizing the laying of gas mains or conductors in the 7957 streets or parts of streets and public places in which the said lamps are located; and that no openings shall be made in the pavements for the purpose of such connections prior to the first day of March, 1904, nor until permits shall have been obtained from the Commissioner, authorizing such openings.

27. No payment on account of any such lamps will be made to the Contractor for the time so allowed, nor until the same shall have been connected with the mains or conductors of the Contractor, nor will payment be made on account of supply of gas or other illuminating material at any lamp except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

28. The Contractor shall indemnify and save The City harmless from any and all claims and suits for damages by reason of any infringement of patent rights in the use under this contract of any illuminating material or any burning appliances connected therewith, or for repairs or supplies to lamps or lamp-posts.

29. The Contractor shall have the right to lay, subject to the provisions of the laws now in force, pipes or conductors at any time between March 1 and December 31 during the term of this contract, upon giving forty-eight hours' written notice to the Department, and subject to the approval of the Commissioner, of its intention to break up or open any street, avenue, or public place, or part

thereof, or to remove any part of the pavement thereof, for
7958 the purpose of laying, subject to the provisions of statute,
or repairing the pipes or conductors, to conduct the said gas or other illuminating material. And the Contractor shall, whenever it shall break up or open any street, avenue, or public place, replace the earth which may be removed in so doing, before sunset of the day on which such opening shall be made (the earth to be thoroughly tamped as the same is thrown into the trench or excavation), and replace the pavement, and repave and repair the same, in such reasonable time and manner as the Borough President may direct, and in as good and firm a manner as such street, avenue, or public place, or part thereof, was in before being broken up for the purpose aforesaid, and shall, from time to time, as required by the Borough President, readjust and fill and finish the same as long as, in the opinion of the Borough President, may be necessary on account of the settling of the earth or pavement caused by the opening. Also, all such repairs as shall at any time become necessary to said pavement by reason of laying the said pipe or conductors shall be made and done by the Contractor, at his own cost and expense. And the Contractor shall furnish to the Commissioner a report weekly, stating therein the location of each and every opening made in the pavements during the preceding week. And no street, avenue, or public place, or part thereof, shall or will be broken up or opened, or the pavement thereof removed, or be again filled up or repaired, except under the direction and supervision of a competent person, to be appointed by the Commissioner; but the party of the first part shall not be called upon to pay any sum, to any party or parties, for the inspection of any pavement which may have been removed and
repaved by the Contractor, but the expense of such inspection
7959 shall be paid by the Contractor when required by the Commissioner.
The Contractor shall and will so conduct the manufacture and manufactories of gas, or stations for other illuminating material, as not to create a nuisance, and it will in all things be governed by such reasonable rules and regulations as the Borough President may from time to time establish or direct, relative to the opening of such streets, avenues, or public places, or parts thereof, and laying down the pipes and conductors, and for lighting, cleaning and protecting the lamps and street signs aforesaid.

30. In order that the Commissioner and his assistants may determine whether the gas-lamps are lighted and extinguished in accordance with the time-table hereinbefore mentioned, the Contractor shall furnish to the Commissioner a map or maps showing the lamps in the district of each lamp-lighter, and designating the particular lamp at which each lighter commences to light, and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamplighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the Contractor shall notify the Commissioner of any change which may be made in the beginning and finishing points on any lamp district during the term of this contract. The Contractor shall furnish to the Commissioner a report weekly, stating therein the number and

location of all new lamps fitted up and lighted, of lamp-posts removed and reset, and of lamps discontinued during the preceding week. Nothing herein contained shall be construed or deemed as
granting to the Contractor any sole or exclusive right or privi-
7960 lege, or as preventing the party of the first part from granting
the like privileges as are hereby given to the Contractor to any other company, persons or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas his or their own house, store, manufactory or premises.

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TIME TABLE

For Lighting and Extinguishing the Public Gas Lamps for the Year 1904.

BEGINS TO LIGHT AT		BEGINS TO EXTINGUISH AT		
Jan. 15....	4.45 P. M.	Jan. 16....	6.30 A. M.	
" 22....	4.55 "	" 23....	6.20 "	
Feb. 5....	5.05 "	Feb. 6....	6.05 "	
" 12....	5.15 "	" 13....	5.55 "	
				31 nights, 413 hours and 5 minutes.
Feb. 15....	5.20 P. M.	Feb. 16....	5.55 A. M.	
" 26....	5.35 "	" 27....	5.30 "	
Mar. 11....	5.50 "	Mar. 12....	5.25 "	
				28 nights, 339 hours and 40 minutes.
Mar. 15....	5.55 P. M.	Mar. 16....	5.10 A. M.	
" 19....	5.55 "	" 20....	5.05 "	
" 23....	6.05 "	" 27....	4.55 "	
Apr. 1....	6.15 "	Apr. 2....	4.40 "	
" 9....	6.25 "	" 10....	4.30 "	
				31 nights, 331 hours.
Apr. 15....	6.35 P. M.	Apr. 16....	4.10 A. M.	
" 24....	6.50 "	" 25....	3.55 "	
May 7....	7.05 "	May 8....	3.40 "	
				30 nights, 273 hours.
May 15....	7.15 P. M.	May 16....	3.30 A. M.	
" 21....	7.20 "	" 22....	3.20 "	
June 4....	7.25 "	June 5....	3.10 "	
				31 nights, 246 hours and 45 minutes.
June 15....	7.30 P. M.	June 16....	3.10 A. M.	
July 14....	7.30 "	July 15....	3.10 "	
				30 nights, 230 hours.
July 15....	7.30 P. M.	July 16....	3.20 A. M.	
" 30....	7.20 "	" 31....	3.35 "	
Aug. 6....	7.15 "	Aug. 7....	3.45 "	
" 13....	7.10 "	" 14....	3.50 "	
				31 nights, 252 hours and 5 minutes.
Aug. 15....	7.05 P. M.	Aug. 16....	4.00 A. M.	
" 27....	6.50 "	" 28....	4.10 "	
Sept. 3....	6.35 "	Sept. 4....	4.15 "	
" 10....	6.20 "	" 11....	4.15 "	
				31 nights, 289 hours and 35 minutes.

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Sept. 15....	6.15 P. M.	Sept. 16 ...	4.30 A. M.	
" 17....	6.10 "	" 18....	4.30 "	
" 24....	5.55 "	" 25....	4.40 "	
Oct. 1....	5.35 "	Oct. 2....	4.50 "	
" 8....	5.35 "	" 9....	4.55 "	30 nights, 326 hours and 10 minutes.
Oct. 15....	5.20 P. M.	Oct. 16....	5.05 A. M.	
" 22....	5.05 "	" 23....	5.15 "	
" 29....	4.55 "	" 30....	5.20 "	
Nov. 5....	4.40 "	Nov. 6....	5.30 "	
" 12....	4.30 "	" 13....	5.40 "	31 nights, 383 hours and 40 minutes.
Nov. 15....	4.30 P. M.	Nov. 16....	5.50 A. M.	
" 25....	4.15 "	" 26....	5.55 "	
Dec. 14....	4.15 "	Dec. 15....	6.15 "	30 nights, 407 hours.
Dec. 15....	4.10 P. M.	Dec. 16....	6.15 A. M.	
" 24....	4.20 "	" 25....	6.15 "	
Jan. 14....	4.30 "	Jan. 15....	6.30 "	31 nights, 433 hours.

Total, 365 nights, or 3,925 hours.

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY,

New York................1904.

The above table will show the time for lighting and extinguishing the public lamps during the year 1904. See specifications, paragraph 1

JOHN T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

NOTE—For 1904, a leap year, add 11 hours and 55 minutes to total for February 29.

Endorsed: The City of New York, Department of Water Supply, Gas and Electricity—Contract for Furnishing Gas and other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying
7963 Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of Manhattan, in the City of New York for the term of One Year, from ...., 1904, to ...., 190 —Consolidated Gas Co. of New York, Contractor—Dated July 1st, 1904—Assigned to ....—Approved as to form, John L. O'Brien, Acting Corporation Counsel—Dated.........................

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CITY'S EXHIBIT 4.

No. 4.

THE CITY OF NEW YORK.

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved Systems of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of Manhattan, in The City of New York, for the term of nine months and sixteen days, from March 16, 1905, to December 31, 1905, both inclusive.

Made this fourteenth day of March, 1905, by Consolidated Gas Co. of New York.

1. Consolidated Gas Co. of New York do declare that we (are) the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken.

2. We further declare that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair, and without collusion or fraud.

7965 3. We further declare that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer of The City of New York, is, shall be or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise, in this bid or estimate, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof.

4. We further declare that the names of the persons affixed to the consent hereto annexed were written by said persons respectively, and that said persons are householders or freeholders in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. We have examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and we will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

OPEN FLAME GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

I. For furnishing illuminating gas (of not less than 20 candlepower to burners consuming 3 cubic feet of gas per hour, by photometric test, made at a distance of not less than one mile from the place of manufacture) for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and crossheads, the furnishing, repairing and replacing of cocks, tubes
7966 burners, the replacing of cross-heads, lamp-irons and lanterns, and the replacing and repairing of lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of Manhattan, to wit:

" For furnishing all the above for each lamp, at each lamp, for 993 in number of same, the sum of Thirteen 7527/10000 dollars ($13 7527/10000) per lamp, or at the rate of Seventeen 25/100 ($17.25) per lamp, per annum, burning 3,925 hours.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

OPEN FRAME NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

II. For furnishing illuminating material other than gas for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of Manhattan, to wit:

7967 For furnishing all the above for each lamp, at each lamp, for............in number of same, the sum of.......... Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for

............in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

OPEN FLAME NAPHTHA LAMPS—LAMP-POSTS FURNISHED BY CONTRACTOR.

III. For furnishing illuminating material other than gas for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lamp-posts, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7*a* and 9, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............
7968 Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for............in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

MANTLE GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

IV. For furnishing and connecting, ready for use, each mantle gas lamp, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it, including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, and repairing and replacing of lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 8 and 9, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for 16,244 in number of same, the sum of Twenty-one 3267/10000 dollars ($\$21^{3267}$) per lamp, or at the rate of Twenty-six 75/100 (\$26.75) per lamp, per annum, burning 3,925 hours.

For furnishing all the above for each lamp, at each lamp, for
22,500 or more in number of same, in either the Boroughs of Manhattan or the Bronx, or both, the sum of Nineteen 7322/
7969 10000 dollars ($\$19.73^{22}$) per lamp, or at the rate of Twenty-four 75/100 (\$24.75) per lamp, per annum, burning 3,925
hours.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

MANTLE NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

V. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 8 and 9, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

7970 For furnishing all the above for each lamp, at each lamp, for...........in number of same, the sum of........... Dollars (\$......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars (\$......) per lamp.

MANTLE NAPHTHA LAMPS—LAMP-POSTS FURNISHED BY CONTRACTOR.

VI. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lamp-posts, lanterns, lamp-irons, frames and cross-heads thereto, as specified and as noted in proposals, clauses No. *8a* and 9, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of............Dollars ($......) per lamp.

7971 For furnishing all the above for each lamp, at each lamp, for...........in number of same, the sum of........... Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of................Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for ....in number of same, the sum of................Dollars ($......) per lamp.

VII. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating gas only, as specified and as noted in clauses No. 7, No. 8 and No. 9 of the proposals, for the period of this contract, the sum of.............. ....Dollars ($........).

VIII. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating gas only, as specified and as noted in clauses No. *7a*, No. *8a*, No. *8b* and No. 9 of the proposals, for the period of this contract, the sum of......... ....Dollars ($........).

IX. For repair of lamp-posts and erection of new lamp-posts, for the term of this contract, in the Borough of Manhattan, when owned, furnished or hereafter acquired by The City:

(*a*) For each lamp-post straightened, the sum of One 50/100 dollars ($1.50).

(*b*) For each column releaded, the sum of Two 50/100 dollars ($2.50).

(*c*) For each column recalked, the sum of One 00/100 dollars ($1.00).

(*d*) For each column refitted, the sum of Three 50/100 dollars ($3.50).

(*e*) For each service pipe refitted, the sum of Five 50/100 dollars ($5.50).

7972 (*f*) For each stand pipe refitted, the sum of Two 50/100 ($2.50).

(*g*) For each lamp-post removed, the sum of Three 50/100 dollars ($3.50).

(*h*) For each lamp-post reset, the sum of Eight dollars ($8.00).

(*i*) For the erection of each new lamp-post, complete (with service and stand pipes when for gas) and with cross-heads, lamp-irons and lanterns in place, stating the price per post, the sum of Eight 00/100 dollars ($8.00).

X. For furnishing illuminating gas of not less than 20 candle-power, when tested, as provided for gas to street lamps, including the service pipes from the gas-mains to the building and a proper meter for registering the gas, for the term of this contract, for each of the public buildings and offices in the Borough of Manhattan, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic feet, at a pressure of not less than one and one-half (1½) inches at the meter end of the house service pipe, in the sum of Ninety cents ($0.90).

CONSOLIDATED GAS CO. OF N. Y. [L. S.]
By W. R. ADDICKS, *Vice-President.* [L. S.]

COLIN C. SIMPSON,
Asst. Secretary.

7973 THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

WALTER R. ADDICKS, being severally duly sworn, say each for himself, that the several matters stated in the above estimate are in all respects true.

W. R. ADDICKS.

Subscribed and sworn to before me, this 15th day of March, A. D. 1905,

CORNELIUS A. LOUGHLIN,
Notary Public, New York County.

(Blanks for consent of Sureties and Affidavits on next leaf.)

SURETIES' AGREEMENT.

In Consideration of the premises, and of One Dollar to us and each of us in hand paid by The City of New York, the receipt whereof is hereby acknowledged—

We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, per-

sons or corporation making the same, we will, upon its being so awarded, become bound as his, their or its sureties for its faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the same is ready for execution, we will pay, without proof of notice or demand, to the said The City of New York, or its successors, any difference between the sum to which such person, persons or corporation would be entitled upon the completion of such contract and
7974 the sum which The City of New York may be obliged to pay to the person, persons or corporation to whom the contract shall be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

In Witness Whereof, we have hereunto set our hands, this 15th day of March, one thousand nine hundred and five.

Name of first surety,

THE UNITED STATES FIDELITY &
GUARANTY CO.,
By SYLVESTER J. O'SULLIVAN, *Manager.*

Name of second surety,

Attest:
GEORGE E. HAYES,
Attorney in Fact.

The adequacy and sufficiency of the above-named sureties approved.

Dated this........day of............, 1905.

—— ——,
Comptroller.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

The above-named.............................being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of............Dollars ($......), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and*
7975 *otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this...............day of ....A. D. 1905,

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

The above-named.............................being duly sworn, says that he is a householder or freeholder in The City of New

York, and is worth the sum of................Dollars ($......), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with the intention to execute the bond required by law.

Subscribed and sworn to before me, this...............day of ....A. D. 1905,

—— ——,

Notary Public or Commissioner of Deeds.

STATE OF NEW YORK, *County of New York, ss:*

On the 15th day of March, in the year 1905, before me personally came Sylvester J. O'Sullivan, to me known, who, being by me duly sworn, did depose and say that he resided in the City of New York; that he was Manager of the United States Fidelity and Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; 7976 that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the board of Directors of said corporation, and that he signed his name thereto by like order. And the said Sylvester J. O'Sullivan, further said that he was acquainted with George E. Hayes, and knew him to be the Attorney-in-Fact of said Company; that the signature of the said George E. Hayes, subscribed to the foregoing instrument, was in the genuine handwriting of said George E. Hayes, and was subscribed thereto by like order of said Board of Directors, and in presence of him, the said Sylvester J. O'Sullivan.

(Signed) GEO. TRACY SWEENEY,
Commissioner of Deeds, New York City.

7977

STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY,

Home Office:

BALIMORE, MD.

At the close of Business, September 30, 1904.

Commenced Business August 1st, 1896.

Assets.

Real estate	$422,302.27
United States Bonds..........................	84,050.00
Baltimore City, State and Municipal Bonds.......	1,579,528.92
Railroad Bonds	2,215.00
Bank Stocks	18,310.00

Railroad Stocks	41,800.00
Other Stocks	182,500.00
Cash in Banks and Home Office	440,981.43
Premiums due from Agents, Less Commission	322,027.42
Loans on Mortgages	19,050.00
Loans on Collateral	55,103.78
Ground Rents	1,000.00
Due for Subscriptions Dept. Guaranteed Att'ys	36,807.00
Advanced a/c. Contracts Secured	162,447.83
Interest Due and Accrued	21,177.34
	$3,389,300.99

7978 *Liabilities.*

Capital Stock Paid in Cash	$1,700,000.00
Re-Insurance Reserve	1,053,623.48
Reserve for Unadjusted and Resisted Claims	213,843.58
Collateral Deposits	111,981.64
Surplus and Undivided Profits	309,852.29
	$3,389,300.99

State of New York, *County of New York, ss:*

George E. Hayes, being duly sworn, says, that he is the Attorney-in-fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said Company, as of September 30, 1904.

(Signed) GEORGE E. HAYES.

Subscribed and sworn to before me, this 15th day of March, 1905.

(Signed) GEO. TRACY SWEENEY,
Commissioner of Deeds, New York City.

Endorsed: The City of New York—Department of Water Supply, Gas and Electricity.—Bid or Estimate.—For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp Posts, and for furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of Manhattan, in The City of New York for the term of nine months and sixteen days, from March 16, 1905, to December 31, 1905.

7979

CITY'S EXHIBIT 5.

No. —.

THE CITY OF NEW YORK.

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp Posts, and for furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of The Bronx, in The City of New York, for the term of one year from March 15th, 1904, to March 15th, 1905.

Made this 15th day of March, 1904, by Welsbach Street Lighting Company of America, 33 Nassau Street, New York.

1. Welsbach Street Lighting Company of America does declare that Welsbach Street Lighting Company of America is (are) the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken.

2. We further declare that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair, and without collusion or fraud.

7980 3. We further declare that no member of the board of aldermen, head of a department, chief of a bureau, deputy thereof or clerk therein, or any other officer of The City of New York, is, shall be or become interested directly or indirectly, as contracting party, partner, stockholder, surety or otherwise, in this bid or estimate, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof.

4. We further declare that the names of the persons affixed to the consent hereto annexed were written by said persons respectively, and that said persons are householders or freeholders in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. We have examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and we will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

I. For furnishing illuminating gas (of not less than 20-candle power to burners consuming three cubic feet of gas per hour, by photometric test, made at a distance of not less than one mile from the place of manufacture), for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting lamp-posts and lanterns, replacing the cocks, tubes, burners, cross heads, lamp-posts, lamp-irons and lanterns thereto, for the term of one year in the Borough of .... to wit: the sum of .... Dollars ($..........) per lamp per year.

7981 II. For furnishing gas to burners consuming four cubic feet of gas per hour, under the same conditions as above, the sum of .... Dollars ($..........) per lamp per year.

III. For furnishing gas to burners consuming five cubic feet of gas per hour, under the same conditions as above, the sum of .... Dollars ($..........) per lamp per year.

IV. For furnishing illuminating material other than gas, of kind and grade as stated herewith .. of .. for each lamp, at each lamp, for the term of one year, and also operating and maintaining the lamp including the illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns, lamp-posts, and replacing cocks, tubes, burners, tanks, crossheads, lamp-posts, lamp-irons, frames and lanterns when so ordered by the Commissioner.

All the above for the term of one year in the Borough of The Bronx, to wit, the sum of .... Dollars ($..........) per lamp per year.

V. For furnishing, and connecting ready for use, for each mantle gas and naphtha lamp, improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, and also operating and maintaining it, including illuminant. The operation and maintenance to include the lighting, extinguishing cleaning, reglazing, repairing and painting of lanterns, lamp-posts and the replacing of cocks, tubes, burners, mantles, chimneys, globes, rods and regulating apparatus as well as lamp-posts, lanterns, crossheads, lamp-irons and frames, when so ordered by the Com-
7982 missioner. Lamp-posts for gas lamps, when necessary, will be furnished to the Contractor through this Department by The City.

All the above for the term of one year in the Borough of The Bronx, to wit, the sum of Twenty-nine and 70/100 Dollars ($29.70/100) per lamp per year.

VI. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating material, for a period of one year, the sum of .... Dollars ($..........).

VII. For repair of lamp-posts and erection of new lamp-posts—

(*a*) For each lamp-post straightened, the sum of .... Dollars ($..........).

(*b*) For each column releaded, the sum of .... Dollars ($..........).

(*c*) For each column recalked, the sum of .... Dollars ($..........).

(*d*) For each column refitted, the sum of .... Dollars ($..........).

(*e*) For each service pipe refitted the sum of .... Dollars ($..........).

(*f*) For each stand pipe refitted the sum of .... Dollars ($..........).

(*g*) For each lamp-post removed the sum of .... Dollars ($..........).

(*h*) For each lamp-post reset the sum of .... Dollars ($..........).

(*i*) For each new lamp-post used for gas lamps fitted up complete and erected with service and stand pipe and lantern, the sum of .... Dollars ($..........).

VIII. For furnishing illuminating gas of not less than 20 candle power, when tested, as provided for gas to street lamps, including the service pipes from the gas mains to the building, and a 7983 proper meter for registering the gas, for the term of one year for each of the public buildings and offices in the Borough of Manhattan, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic feet at a pressure of not less than 1½ inches, in the sum of .... Dollars ($..........).

IX. For furnishing, connecting and maintaining a pressure regulator, at the option of the Commissioner, controlling supply of gas from each meter which registers the total consumption of gas in any building under the jurisdiction and control of the Department. This gas pressure regulator shall maintain an even pressure of 1½ inches throughout the building as closely as can be obtained. The Contractor shall inspect and regulate same at least once a month, and shall perform all necessary acts in order to maintain same in such a condition that it shall efficiently regulate the supply of gas in the building. The regulator shall be inspected and tested, when required by the Commissioner, by the Engineer, and if found defective, shall be replaced, without further expense to The City, whenever such replacement is ordered by the Engineer.

Estimates may be given separately on the price for use of regulator for one year, and on the maintenance, as specified.

For furnishing and connecting regulators of an average capacity of about one and one-quarter inches, for the period of one year, in the Borough of................the sum of............Dollars ($........).

For maintaining the above regulators for the period of one year, in the Borough of......................as specified, the sum of ....Dollars ($........).

7984 Subject to the general conditions of this contract bids on Section IX may be made independently of the other services and supplies called for. Bids may also be made on the entire contract excluding Section IX.

WELSBACH STREET LIGHTING COMPANY OF AMERICA, [SEAL.]
(Signed) By ARTHUR E. SHAW, [SEAL.]
President.

THE CITY AND STATE OF NEW YORK,
County of New York, ss:

Arthur E. Shaw, President, being duly sworn, says, that the several matters stated in the above estimate are in all respects true.

(Signed) ARTHUR E. SHAW. [SEAL.]

Subscribed and sworn to before me, this 15th day of March, A. D. 1904.

(Signed) THOS. G. JONES,
[SEAL.] *Notary Public, New York County.*

(Blanks for consent of Sureties and affidavits on next leaf.)

SURETIES' AGREEMENT.

In consideration of the premises, and of One Dollar to us and each of us in hand paid by The City of New York, the receipt whereof is hereby acknowledged—

We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, persons or corporation making the same, we will, upon its being so awarded, become bound as his, their or its sureties for its faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the
7985 same is ready for execution, we will pay, without proof of notice or demand, to the said The City of New York, or its successors, any difference between the sum to which such persons or corporation would be entitled upon the completion of such contract, and the sum which The City of New York may be obliged to pay to the person, persons or corporation to whom the contract shall be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

In Witness Whereof, we have hereunto set our hands, this 15th day of March, one thousand nine hundred and four.

THE CITY, TRUST, SAFE DEPOSIT AND SURETY COMPANY OF PHILADELPHIA,
160 *Broadway, N. Y.*
A. P. KIERNAN, *Vice-President.*
P. H. MOONEY, *Ass't Secretary.*

The adequacy and sufficiency of the above-named sureties approved.

Dated this............day of July 1st, 1904.

J. W. STEVENSON,
Deputy and Acting Comptroller.

41936.40 J. W. S.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

The above-named.........................being duly sworn, says, that he is a householder or freeholder in The City of New York, and is worth the sum of.................Dollars ($..........) being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and* 7986 *otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this......day of..........., 1904.

—— ——,

Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

The above-named.........................being duly sworn, says, that he is a householder or freeholder in The City of New York, and is worth the sum of..................Dollars ($........) being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this.........day of......., 1904.

—— ——,

Notary Public or Commissioner of Deeds.

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On this 15th day of March, A. D. 1904, before me personally appeared Adrian T. Kiernan, to me known, who, being by me duly sworn, did depose and say: That he resided in the City of New York; that he is Vice-President of The City Trust, Safe Deposit and Surety Company of Philadelphia, the corporation described in and which executed the above instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such cor- 7987 porate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order; and that the liabilities of said corporation do not exceed its assets as ascertained in the manner provided by Section 3, Chapter 720, of the New York Session Laws of 1893.

And the said Adrian T. Kiernan further said, that he was acquainted with Patrick H. Mooney, and knew him to be the Assistant Secretary of said corporation; that the signature of said Patrick H. Mooney subscribed to the said instrument is in the genuine handwriting of said Patrick H. Mooney and was therefore subscribed by like order of said Board of Directors in and in the presence of him, the said Adrian T. Kiernan, Vice-President.

MAY L. O'REILLY,
Commissioner of Deeds, New York City.

STATEMENT OF

THE CITY TRUST, SAFE DEPOSIT AND SURETY COMPANY OF PHILADELPHIA.

Incorporated 1886.

On the Thirty-first Day of December, 1903.

Assets.

Cash on Hand	$83,724.36	
Cash in Banks	213,938.39	
Call Loans upon Collaterals	1,324,916.56	
Time Loans upon Collaterals	37,050.00	
Loans upon Bonds and Mortgages	33,000.00	
Investment Securities Owned, Stocks, Bonds, etc.	353,170.50	
Real Estate, Furniture and Fixtures	521,185.08	
Miscellaneous Assets	481,522.46	
Total		$3,048,507.35

7988 *Liabilities.*

Capital Stock (Fully Paid)	$500,000.00	
Surplus Fund	150,000.00	
Re-Insurance Reserve	113,306.00	
Undivided Profits	53,219.59	
		$816,525.59
Deposits		2,215,087.76
Miscellaneous Liabilities		16,894.00
Total		$3,048,507.35

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

Patrick H. Mooney, being duly sworn, says that he is Assistant Secretary of The City Trust, Safe Deposit and Surety Company of Philadelphia, and that the above is a correct statement of the financial condition of the Company, on December 31, 1903.

(Signed) P. H. MOONEY.

Sworn to and subscribed before me, this 15th day of May, A. D. 1904.

(Signed) MAY L. O'REILLY,
Commissioner of Deeds, New York City.

Endorsed: The City of New York—Department of Water Supply, Gas and Electricity.—Bid or Estimate.—For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp Posts, and for furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of The Bronx, in The City of New York for the term of one year from March 16th, 1904, to March 15th, 1905. New York, 3/15, 1904. Welsbach Street Lighting Company of America, Estimator.

7989 CITY'S EXHIBIT 5*a*.

Name of Bidder—Welsbach Street Lighting Co. of America.
Address—33 Nassau Street.

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF THE BRONX.

1904.

PROPOSALS FOR BIDS OR ESTIMATES FOR GAS AND NAPHTHA LAMPS, ETC.

1. Sealed Bids on Estimates will be received at the office of the Department of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, in the City of New York, until 2 o'clock P. M. on Wednesday, March 16th, 1904.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for Making Certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of The Bronx, in The City of New York, for the term of one year from March 16, 1904, to March 15, 1905.

7990 2. The amount of security required is TWENTY-FIVE (25) PER CENTUM of the total amount of bid or estimate.

3. In the Borough of The Bronx, the total number of ordinary gas-lamps now burning is about 5,648; the total number of Welsbach gas-lamps now burning is about......; the total number of Welsbach naphtha lamps is about 100; the total number of ordinary

naphtha lamps now burning is about 1,332; but the Commissioner of Water Supply, Gas and Electricity reserves the right to designate the location and number of the lamps of each kind as to districts, streets, avenues, piers, parks and public places or parts thereof. Bidders must satisfy themselves by a personal examination of the number and kind of lamps required in each Borough, as numbers given above must be taken only as a close approximation of the number of lamps that may be required.

4. The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed with the title given above, of the work for which the estimate is made, with his or their name or names and the date of presentation to the head of the Department, at the said office, on or before the date and hour above named, at which time and place the estimates received will be publicly opened by the head of the Department and read, and the award of the contract made according to law as soon thereafter as practicable.

5. Bidders are required to state in their estimates the districts or several streets, avenues, piers, parks and places, or parts of streets, avenues, piers, parks and places in which they propose to perform the requirements herein contained, and also the illuminating or
candle power of the gas they propose to furnish, when tested
7991 at a distance of not less than one mile from the place of
manufacture; and bidders proposing to furnish any illuminating material other than illuminating or coal gas, must state distinctly what kind of grade and material they propose to furnish, and the illuminating power of the light they propose to furnish. When the term "illuminating material other than gas" is used in these proposals or the annexed contract and specifications, it shall mean either naphtha or gasolene.

6. Bidders will state in their bids or estimates a price per lamp per year for furnishing gas or illuminating material other than gas to the public lamps in the Borough of The Bronx, and for other fixtures or appliances or illuminating material for each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting lamp-posts and lanterns, and replacing the cocks, tubes, burners, crossheads, lamp-posts, lamp-irons and lanterns thereto, for the term of one year; stating the price, for the above-named term of one year, for each lamp. The burners for open flame or mantle gas lamps will be of such a kind and construction that they will burn three cubic feet of gas per hour under a pressure of not less than 1½ inches. The gas furnished shall have an illuminating power of not less than 20 candles when tested by photometric test at a distance of not less than one mile from the place of manufacture, and bidders will state the price per lamp per year for gas of the illuminating power, and in the quantity and at the pressure specified. Bidders shall also state the cost per year per lamp for gas supplied to a burner consuming four cubic feet of gas per hour, and the price for a burner consuming five cubic feet of gas per hour. If open flame and mantle lamps shall use illuminating material other than gas, then the burners to be used for such illuminating material

will be of such kind and construction that they will give a
7992 light (by photometric test) equal to the light given by the
three foot open flame or mantle gas-burners of similar type as used in the public lamps in The City of New York, furnished with 20-candle power gas. Bidders are required to state in their estimates the kind, grade and cost of such illuminant furnished in the receptacles for same on the lamps for one year for each lamp at each lamp.

7. A price for furnishing lanterns with improved burner appliances and incandescent mantle for gas or naphtha burners, to produce a light of not less than sixty (60) candle power each, including the illuminating material for each lamp, maintenance, lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, crossheads, lamp-posts, lamp-irons and lanterns thereto, for the afore-mentioned period of one year.

7. (*a*) A price for furnishing, maintaining and putting in place all the above-mentioned items, except the cost of illuminating material, for a period of one year.

7. (*b*) Bidders will state in their bids or estimates a price per thousand cubic feet of gas of not less than 20 candle power for all or any of the public buildings or offices in the Borough of The Bronx, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity. This price will include the service pipes from the gas mains to the building and a proper meter for registering the consumption of gas. A bid may also be made on the regulators for governing the supply of gas in buildings in each borough.

8. Bidders will state in their bids a price for the repair of lamp-
posts, including straightening and releading, and for each
7993 new lamp-posts fitted up, as follows:

(*a*) For each lamp-post straightened, stating the price per post.

(*b*) For each column releaded, stating the price per post.

(*c*) For each column recalked, stating the price per post.

(*d*) For each column refitted, stating the price per post.

(*e*) For each service pipe refitted, stating the price per post.

(*f*) For each stand pipe refitted, stating the price per post.

(*g*) For each lamp-post removed, stating the price per post.

(*h*) For each lamp-post reset, stating the price per post.

(*i*) For each new lamp-post used for gas-lamps fitted up complete and erected with service and stand-pipe, including lanterns stating the price per post.

9. The right is reserved to the Commissioner to determine and designate in any locality, at any time after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the term of this contract; also, upon such determination, to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon; also to decline all estimates for any particular locality, or all localities if deemed for the best interests of The City.

10. Should any alteration or any attachment be required to any

portion of the lamps for which estimates are made in consequence of the use of illuminating material other than gas, then such alteration shall be done and such attachment placed on the posts, without expense to The City. 7994

11. If the estimate of any bidder shall include any lamp-posts with which the pipes or conductors of such bidder are not connected at the time of the making of the bid, and a contract for furnishing the illuminating material for any such lamp-posts shall be awarded to such bidder, in that case, THIRTY DAYS from the date of the execution of such contract, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, shall be allowed to such bidder in which to connect such pipes or conductors with such lamp-posts, and all such connections shall be made by the Contractor without expense to The City.

12. No payment to such bidder, on account of any such lamps, will be made for the time so allowed, nor until the same shall have been connected with the mains or conductors of such bidder, nor except for the time during which all the requirements in this proposal and in the contract, including specifications, which shall be awarded and entered into under this proposal, shall have been fully performed.

13. The number, kind and location of lights to be furnished under the contract to be awarded and entered into under this proposal shall be determined and prescribed by the Commissioner.

14. No bid will be entertained unless the Commissioner shall be satisfied that the party or parties bidding are possessed of sufficient plant to carry out the provisions of the contract.

15. The award of any and all contracts under this proposal and all contracts entered into in pursuance of said proposal will be subject and subordinate to the rights of all persons, parties or corporations under contracts or agreements (if there are any such) which are now binding and obligatory upon the City of New York. 7995

16. The number of hours the gas or naphtha lamps are to be kept burning during the contract is 3,925, and in leap year, 11 hours and 55 minutes additional for February 29.

17. Bidders will *write out* the total amount of their estimates in addition to inserting the same *in figures*.

18. The Commissioner reserves the right to reject any or all bids or estimates if the Board of Estimate and Apportionment shall determine it is for the public interest of The City so to do.

19. Each bid or estimate shall contain the name and place of residence of the person making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair, and without collusion or fraud; and that no member of the board of aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of The City of New York, is, shall be, or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in, or in the performance of the contract, work

or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated therein are in all respects true; or, if the bidder is a corporation, by the oath, in writing, of an officer of such corporation, with knowledge 7996 of the facts and having authority to make such sworn statement.

20. Each bid or estimate shall be accompanied by the consent, in writing, of two householders and freeholders in The City of New York, or of a guaranty or surety company, duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

21. No bid or estimate will be considered unless accompanied by money or a certified check draw- on a National or State bank located in The City of New York to the order of the Comptroller, to the amount of five per centum of the amount of the bond required, as provided in section 420 of The Greater New York Charter.

22. For particulars as to the repairs or the quantity or quality of the supplies, or the nature and extent of the work, reference must be made to the specifications on file in the Department.

23. Bidders are requested to make their bids or estimates upon the blank form prepared by the Commissioner, a copy of which, with the proper envelope in which to enclose the bid, together with a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefor at the office of the Commissioner of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, The City of New York.

The City of New York, March 3rd, 1904.

JOHN T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

7997 Whereas, a contract was executed July 1st, 1904, between the Welsbach Street Lighting Company of America and John T. Oakley, as Commissioner of Water Supply, Gas and Electricity of the City of New York, for lighting streets, avenues, piers, parks and public places in the Borough of The Bronx, in the City of New York, for a term of one year, from March 16, 1904, to March 15, 1905, upon which The City Trust, Safe Deposit and Surety Company of Philadelphia is surety, and

Whereas, the assent of the said Surety Company is desired to the assignment of the said contract to the Consolidated Gas Company of New York;

Now Therefore, the said The City Trust, Safe Deposit and Surety Company of Philadelphia does hereby assent to the said Assignment, and agree that its liability on the said contract for whatever may be done thereunder shall in no way be affected by the said assignment.

City of New York, July 1, 1904.

(Signed) THE CITY TRUST, SAFE DEPOSIT AND SURETY COMPANY OF PHILADELPHIA, 160 *Broadway, N. Y.*
(Signed) STEPHEN FARRELLY, *Vice-President.*
R. M. STONE, *Asst. Secretary.*

STATE OF NEW YORK, *County of New York, ss:*

On this first day of July, 1904, before me personally appeared Stephen Farrelly, to me known, who, being by me duly sworn, did depose and say that he resided in the City of New York, that he is a Vice-president of the City Trust, Safe Deposit and Surety 7998 Company of Philadelphia, the corporation described in and which executed the above instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order; and the said Stephen Farrelly further sayeth that he was acquainted with said Ross M. Stone and knew him to be the Asst. Secretary of said corporation; that the signature of said Ross M. Stone subscribed to the said instrument is in the genuine handwriting of said Ross M. Stone and was thereto subscribed by like order of said Board of Directors and in the presence of him, the said Stephen Farrelly, Vice-President.

(Signed) WM. JARDINI,
Notary Public, No. 16, Kings County.

Certificate filed in New York County.

CITY'S EXHIBIT 5*b*.

NEW YORK, *July 1st,* 1904.

Mr. John T. Oakley, Commissioner W. S., G. & Electricity, City of New York.

DEAR SIR:

In consideration of your giving consent to the transfer of the contract of the Welsbach Street Lighting Company of America for the lighting of the Bronx with incandescent gas mantle lamps under bids asked for by you for the year 1904-5, we agree to carry 7999 out the said contract as required by the specification, and further that the price for said lamps shall not be charged for at the rate of $29.70 named by the said Welsbach Street Lighting Company, but at the rate as specified in our bid for similar lights in Manhattan. The number of lamps to be arrived at by combining all such lamps in Manhattan and the Bronx on the following schedule, to wit:

	If less than	10,000,	$28.75	each	lamp.
If over 10,000	" "	15,000,	27.75	"	"
" " 15,000	" "	20,000,	26.75	"	"
" " 20,000	" "	25,000,	25.75	"	"
" " 25,000			24.75	"	"

But if a single order is given for 22,500 lamps, $24.75 for each lamp. This price is what it was intended the City was to have had when bid was originally made by this Company, and the number and price in our bid was intended to have covered both the Boroughs of Manhattan and Bronx, as you were then informed.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) By W. R. ADDICKS, *Vice-President.*
(Signed) R. A. CARTER, *Sec.*

[SEAL.]

Attest:
R. A. CARTER, *Sec.*

STATE OF NEW YORK, *County of New York, ss:*

8000 On this 1st day of July, 1904, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Company of New York, and Robert A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Company of New York, who, being by me severally duly sworn, did depose and say, each for himself, as follows: The said W. R. Addicks, that he resides in the City of New York, that he is the Vice-President of the said Company; and said Robert A. Carter, that he resides in the City of New York, and that he is the Secretary of said Company, the Company described in and which executed the above instrument; that he knows the seal of said Company, and that the seal affixed to the said instrument is such corporate seal, and that it was so affixed by authority of the Board of Directors of said Company, and by like authority he so signed his name and official designation.

(Signed) ROBERT J. McKEON,
Commissioner of Deeds, New York City.

For and in consideration of the sum of one dollar and other consideration, the receipt of which we acknowledge, we hereby assign, transfer and set over, unto the Consolidated Gas Company of New York, all our right, title and interest in and to a certain contract awarded to us this day for furnishing incandescent mantle gas lamps complete with illuminant, in the Borough of the Bronx, City of New York, under and in accordance with our bid for said incandescent mantle gas lamps, submitted to the commissioner on March 16, 1904; and we hereby further authorize and empower the said Consolidated Gas Company of New York, to perform any and all acts necessary to carry out the terms of said contract. And we do hereby further agree to execute any other papers necessary to give this assignment full force and effect.

8001 IN WITNESS WHEREOF, the Welsbach Street Lighting

Company of America has executed this assignment this first day of July, A. D. nineteen hundred and four (1904).

WELSBACH STREET LIGHTING
COMPANY OF AMERICA,
(Signed) By SAMUEL H. HOEY, *Ass't Secretary.*

[SEAL.]

Attest:

SAMUEL H. HOEY,
Ass't Secretary,
By ARTHUR E. SHAW, *President.*

Approved as to form.

G. L. STERLING,
Acting Corporation Counsel.

STATE OF NEW YORK, *County of New York, ss:*

On this 1st day of July, 1904, before me personally came Arthur E. Shaw, to me known and known to me to be the President of the Welsbach Street Lighting Company of America, and Samuel H. Hoey, to me known and known to me to be the Assistant Secretary of the Welsbach Street Lighting Company of America, who, being by me severally duly sworn, did depose and say, each for himself, as follows: The said Arthur E. Shaw, that he resides in Philadelphia, in the State of Pennsylvania; that he is the President of the said Company; and said Samuel H. Hoey, that he resides in the City of New York and he is the Assistant Secretary of the said Company, the Company described in, and who executed the above instrument; that he knew the seal of the said company; and that the seal 8002 affixed to the said instrument was such corporate seal, and that it was so affixed by authority of the Board of Directors of said Company, and by like authority he so signed his name and official designation.

(Signed) ROBERT J. McKEON,
Commissioner of Deeds, New York.

CITY'S EXHIBIT 5c.

A contract having been entered into this day between the Welsbach Street Lighting Company of America and myself, as Commissioner of Water Supply, Gas and Electricity of the City of New York, for lighting streets, avenues, piers, parks and public places in the Borough of The Bronx, City of New York, for a term of one year, from March 16, 1904, to March 15, 1905, and the said Company being willing to assign and having assigned the said contract to the Consolidated Gas Company of New York, in accordance with certain papers and correspondence executed this day, I, John T. Oakley, Commissioner of Water Supply, Gas and Electricity of the

City of New York, pursuant to the statutes in such cases made and provided, do hereby assent to the assignment aforesaid.

(Signed) JNO. T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

City of New York, July 1, 1904.

8003 CITY OF NEW YORK,

DEPARTMENT OF FINANCE.

COMPTROLLER'S OFFICE.

Edward M. Grout, Comptroller.

JULY 6, 1904.

Hon. John T. Oakley, Commissioner of Water, Gas and Electricity.

SIR:

Please note that the Comptroller's certificate has been endorsed upon July 1, 1904, contract of Welsbach Street L. Co. of America for lighting Bronx, this date, and it is now a valid contract.

By order of the Comptroller.

(Signed) J. W. STEVENSON,
Deputy Comptroller.

In replying Refer to Contracts.

8004

CITY'S EXHIBIT 5D.

THE CITY OF NEW YORK,

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF THE BRONX.

CONTRACT AND SPECIFICATIONS.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for furnishing Burners and Appliances of Improved System of Lighting Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of The Bronx, in The City of New York, for the term of one year, from March 16th, 1904, to March 15th, 1905, per specifications herein contained or hereto attached.

THIS AGREEMENT, made and entered into this 1st day of July, in the year one thousand nine hundred and four by and between The City of New York, by the Commissioner of Water Supply, Gas and Electricity, party of the first part, and the Welsbach Street Lighting Co. of America, No. 33 Nassau Street, New York, Contractor, party of the second part, pursuant to the provisions of the Greater New York Charter.

WITNESSETH, That the parties to these presents, each in consideration of the agreements on the part of the other, herein contained, have mutually agreed, and hereby mutually agree, 8005 the party of the first part for itself and its successors, and the party of the second part for itself and its successors, as follows:

(*A*) Wherever in this contract the words "The City," or "The Commissioner," or a pronoun in the place of either of them is used, they shall mean and intend the party of the first part or the Commissioner of Water Supply, Gas and Electricity of The City of New York; wherever the words "Borough President" are used in this contract, they shall mean and intend the President of the Borough above mentioned; wherever in this contract the words "the Department," or a pronoun in the place of them is used they shall mean and intend the Department of Water Supply, Gas and Electricity in The City of New York.

(*B*) Wherever in this contract the word "Contractor," or a pronoun in the place of it is used, the same shall mean and intend the party of the second part to this agreement.

(*C*) Wherever the word "Engineer" is used in this contract, it shall mean and be taken to mean and intend the Engineer of the Bureau of Lamps and Gas of the Department, or the Engineer, or other person or official, in charge of the Lighting Bureau in the borough for which this contract is made, acting either directly or through any Assistant or Inspector duly appointed or designated therefor, pursuant to The Greater New York Charter as amended, by the Engineer or either of the Engineers, to inspect, test, examine and accept the supplies of gas or other illuminating material, repairs or supplies, which are the subject of this contract, limited by the particular duties intrusted to him.

(*D*) The Contractor will furnish and deliver to the party 8006 of the first part, at the Contractor's own cost and expense, at the times and places and in the manner, and under the conditions herein specified, gas or other illuminating material for, and light, extinguish, clean, repair and maintain the public lamps (and supply gas, etc., for new lamps when required), and make certain repairs to lamp-posts, and furnish burners and appliances of improved system of lighting on the streets, public buildings, avenues, piers, parks and public places in the Borough of The Bronx, in The City of New York, for the term of one year from March 16th, 1904, to March 15th, 1905, and will accept as full compensation therefor the sum or price hereinafter named, which sums or prices are the amounts at which this contract was awarded to the Contractor at the public letting thereof. The said specifications, the proposal for bids or estimates, the bid or estimate and the bond required are and shall be a part of this contract.

(*E*) The Contractor will not ask, demand, sue for or recover for any supplies delivered, repairs made, illuminating material furnished, or work performed under this contract, any extra compensation beyond the amounts payable for the several classes of work and supplies herein enumerated, which shall be actually supplied at the price therefor, herein agreed upon and fixed.

(*F*) The Engineer shall inspect and test or have tested the gas or other illuminating material, lamps, meters, regulators, repairs and supplies furnished, and see that the same strictly correspond with the specifications hereinafter set forth, and the Engineer is hereby authorized and empowered to reject any of the said gas or other illuminating material, lamp posts, lamps, meters, regulators, repairs and supplies offered under this contract, for the rea-
8007 son that the same do not comply in quality or quantity or pressure, or time or place of maintenance, with the specifications herein contained or hereto annexed.

(*G*) Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such assistant or other person as shall be designated by the Commissioner shall perform all the duties and be vested with all the power herein given to the Engineer.

(*H*) To prevent all disputes and litigations, the Engineer shall, in all cases, determine the amount, quantity and quality of the supplies, illuminating material, and work, which are to be paid for under this contract, and he shall determine all questions in relation to said gas or other illuminating material, repairs and supplies, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of the Contractor, and his estimate and decision shall be final and conclusive.

(*I*) Any doubt as to the meaning of the contract, including the specifications, or any obscurity as to the wording of them, will be explained by the Engineer, and all directions and explanations required, alluded to, or necessary to complete any of the provisions of these specifications, and give them due effect, will be given by the Engineer.

(*J*) The Contractor shall commence the delivery of the lamps and other apparatus called for by this contract, and the furnishing of the illuminant required, and the lighting of the lamps, as soon as he shall be ordered so to do by the Commissioner; he will carry on such contract as required from time to time, with such force and in such manner and order, and at such times and seasons, as may
8008 be directed by the Commissioner, and that he will fully and entirely perform this contract on his part on or before the thirt .... day of............190....

(*K*) In case any lamp shall fail to burn continuously throughout each and every night, during the term of this contract, during the hours specified in the time-table hereto annexed, or such hours as the Commissioner may from time to time prescribe, and such failure shall not be due to any act or omission of The City, its officers, agents or employees, the Contractor shall and will pay to The City a sum of money equal to one three hundred and sixty-fifth (1/365) of the contract price of such lamp per annum for each and every night or part thereof that such failure shall continue, which said sum, in view of the difficulty of ascertaining the loss which The City will suffer by reason of such failure, is hereby agreed, fixed and determined by the parties hereto, as the liquidated damages that The City will suffer by reason of such failure, and not as a penalty, and the City shall and may deduct and retain the amount of such liquidated damages out of any moneys which may be due or become due to the Contractor under this agreement.

(*L*) Neither an extension of time, for any reason, beyond the date fixed for the delivery of supply of gas, or other illuminating material, lamps, repairs and supplies, nor the delivery and acceptance of any said delivery of supply of gas, repairs and supplies, called for by this contract, shall be deemed to be a waiver by the Commissioner of the right to abrogate this contract for abandonment or delay in the manner herein provided.

(*M*) The Contractor will employ only competent, skilful and faithful men to do the work, and he further agrees that 8009 whenever the Commissioner shall inform him in writing that any man engaged in the work is, in his opinion, incompetent or unfaithful, he will discharge him from the work and will not again employ him upon the work.

(*N*) The Contractor shall receive the following prices as full compensation for furnishing and maintaining the lights, lamps, apparatus and accessories, and performing the services herein provided to be performed by the Contractor, viz.:

I. For furnishing the aforesaid illuminating material for each lamp, for burners consuming three cubic feet of gas, of 20 candle-power per hour, including the lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, cross-heads, lamp-posts, lamp-irons and lanterns thereto, for the aforementioned period of one year, in the sum of .... Dollars ($..........).

II. and III. For furnishing the aforesaid illuminating gas for each lamp, at each lamp, as directed and specified, for burners consuming 4 or 5 cubic feet, as may be selected, for the above-mentioned period of one year, the sum of .... Dollars ($..........).

IV. For furnishing illuminating material other than gas for each lamp at each lamp, and of the kind and grade as stated in the bid, as directed and specified, ... of .... and also operating and maintaining the lamp, including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns, lamp posts, and replacing cocks, tubes, burners, cross-heads, lamp-posts, lamp-irons, frames and lanterns, when so ordered by the Commissioner. 8010 All the above for the term of one year, in the Borough of The Bronx, to wit, the sum of .... Dollars ($..........), per lamp per year.

V. For furnishing lanterns with improved burner appliances and incandescent mantle for gas or naphtha burners, to produce a light of not less than sixty (60) candle power each, including the illuminating material for each lamp, maintenance, lighting, extinguishing, cleaning, repairing, reglazing, painting, replacing cocks, tubes, burners, cross-heads, lamp-irons, lamp-posts and lanterns thereto, for the afore-mentioned period of one year, the sum of Twenty-nine and 70/100 Dollars ($29 70/100).

VI. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating material, for a period of one year, the sum of .... Dollars ($..........).

VII. For repair of lamp-posts and erection of new lamp-posts:

(*a*) For each lamp-post straightened, the sum of .... Dollars ($..........).

(*b*) For each column releaded, the sum of .... Dollars ($..........).

(*c*) For each column recalked, the sum of .... Dollars ($..........).

(*d*) For each column refitted, the sum of.............. Dollars ($..........).

(*e*) For each service-pipe refitted, the sum of .... Dollars ($..........).

8011 (*f*) For each stand-pipe refitted, the sum of .... Dollars ($..........).

(*g*) For each lamp-post removed, the sum of .... Dollars ($..........).

(*h*) For each lamp-post reset, the sum of .... Dollars ($..........).

(*i*) For each new lamp-post used for gas lamps fitted up complete and erected with service and stand-pipe and lantern, the sum of .... ($..........).

VIII. For furnishing illuminating gas for lighting of not less than 20 candle power, including the service-pipes from the gas-mains to the building, and a proper meter for registering the gas, for the term of one year, for all or any of the public buildings and offices in the Borough of ...., the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic feet, at a pressure of not less than 1½ inches, in the sum of .... Dollars ($..........).

IX. For furnishing and maintaining a pressure regulator, at the option of the Commissioner, controlling supply of gas from each meter which registers the total consumption of gas in any building under the jurisdicton and control of the Department. This gas pressure regulator shall maintain an even pressure of 1½ inches throughout the building as closely as can be obtained. The Contractor shall inspect and regulate same at least once a month, and shall perform all necessary acts in order to maintain same in
8012 such a condition that it shall efficiently regulate the supply of gas in the building. The regulator shall be inspected and tested when required by the Commissioner, by the Engineer, and if found defective, shall be replaced, without further expense to the City, whenever such replacement is ordered by the Engineer.

Estimates may be given separately on the price for use of regulator for one year and on the maintenance, as specified.

For furnishing .... regulators of an average capacity of about one and one-quarter inches for the period of one year, in the Borough of .... the sum of .... Dollars ($..........).

For maintaining the above regulators for the period of one year, in the Borough of .... as specified, the sum of .... Dollars ($..........).

(*O*) No payment will be made or allowed on account of supply of illuminating materials, repairs and supplies to any lamp, except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

(*P*) In case the Contractor shall be unable at any time during the continuance of this contract to supply illuminating material to, or light any of the lamps specified in this agreement, then the Contractor shall give immediate notice to the Commissioner of his inability to furnish illuminating material to, or to light such lamps, stating the streets in which the supply of illuminating material to the lamps cannot be furnished and the cause thereof. And in case the use of any of the lamps shall be suspended or discontinued, and other lamps shall be used in consequence of such suspension
8013 or discontinuance, then the gas or other lamps which may have been suspended, or discontinued, shall not be supplied with illuminating material except pursuant to an order for such supply by the Commissioner.

(*Q*) The Contractor shall indemnify and save harmless The City, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits based on or arising out of the alleged infringement of any patent or patent right, and against, and from all damages and costs to which they or any of them may be put by reason of any such alleged infringement or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under this contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the Contractor or his agents or servants. So much of the moneys due to the Contractor under and by virtue of this agreement, as shall or may be deemed necessary by the Commissioner, shall or may be retained by The City, until all such suits, actions and claims shall have been settled, and evidence to that effect furnished to the satisfaction of the Commissioner.

(*R*) In case the Contractor shall fail or neglect to keep the covenants herein contained, or any of them, or neglect to operate, repair, paint, clean or fit up the lamps as before mentioned, or any of them, the Commissioner may and shall have the power to cause such

work to be performed by other parties, and to deduct the expense thereof, from any moneys which may be due or may become due to the Contractor, and to hold the Contractor and his sureties,
8014 liable for the amount thereof, which may be in excess of the
prices stipulated in this agreement; and in case such expense is less than the sum which would have been payable under this contract if the same had been completed by the Contractor, he shall forfeit all claim to the difference.

(*S*) If the Contractor shall not well and truly observe, perform, fulfill and keep all and singular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case the Commissioner may and shall have the power, on the part of the said party of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

(*T*) On or after the first day of each and every month during the term of this contract, the Contractor shall furnish proof to the satisfaction of the Commissioner that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid during the preceding month, and particularly that it has furnished the illuminating material of the quality hereinbefore specified, and that all the lanterns have been cleaned three times in each week of said month, and also that the gas burners have consumed.............. cubic feet of gas each per hour, as required by this contract, during all the time that the lamps were required to be kept lighted, and also proof to the satisfaction of the Commissioner as to all extinguishments of lamps, including the location of each lamp extinguished, the date and length of extinguishment in each case, whereupon the Commissioner shall certify the fact, and in his certificate state
8015 the amount to which the Contractor shall be entitled for all
the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the Contractor therefor the sum to which he shall be so entitled; and without such certificate and requisition the Contractor shall not be or become entitled to any payment under and in respect to the terms of this contract, or for the light, lamps and accessories or in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of The City, he shall, within thirty days thereafter, pay to the Contractor the amount thereof in lawful money.

(*U*) The City shall not, nor shall any department or officer thereof be precluded or estopped by any return or certificate made or given by the Commissioner, any Engineer or other officer, agent or appointee of The City under any provision of this agreement from at any time (either before or after the final completion and acceptance of the work and payment therefor pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this agreement, or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the specifications; and The City shall not be precluded or estopped, notwithstanding any such return or certificate and payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the specifications.

8016 (*V*) This contract shall not be binding or of any force unless the Comptroller of The City shall indorse hereon his certificate that there remains unexpended or unapplied, as provided in The Greater New York Charter, a balance of the appropriation or fund applicable thereto sufficient to pay the estimated expense of executing this contract, as certified by the officers making the same.

(*W*) The residence or place of business given in the bid or estimate upon which this contract is founded, is hereby designated as the place where all notices, letters and other communications shall be served, mailed or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above-named place, or deposited in a post-paid wrapper in any post-office box regularly maintained by the post-office shall be deemed sufficient service thereof upon the Contractor. The place named may be changed at any time by an instrument, in writing, executed and acknowledged by the Contractor and delivered to the Commissioner. Nothing herein contained shall be deemed to preclude or render inoperative service of any notice, letter or other communication upon the Contractor personally.

(*X*) This contract shall be subject and subordinate to the rights, claims and demands of all persons, parties or corporations under contracts or agreements (if there are any such) which are valid and lawful charges and liabilities against The City of New York, and which the law requires shall be defrayed and answered unto by The City.

(*Y*) The Contractor will give his personal attention constantly to the faithful prosecution of the work; he will not assign, transfer, convey, sublet or otherwise dispose of this contract, or his
8017 right, title or interest in or to the same or any part hereof,
without the previous consent in writing of the Commissioner indorsed hereon or hereto attached; and he will not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sublet or otherwise dispose of this contract, or of his right, title or interest therein, or any of the moneys to become due under this contract, to any other person, company or other corporation, this contract may, at the option of the

Commissioner, be revoked and annulled and The City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the Contractor, and to his assignee or transferee; provided that nothing herein contained shall be construed to hinder, prevent or affect an assignment by the Contractor for the benefit of his creditors, made pursuant to the statutes of the State of New York; and no right under this contract, or to any money to become due hereunder shall be asserted against The City in law or in equity, by reason of any so-called assignment of this contract, or any part thereof, or of any moneys to grow due hereunder, unless authorized as aforesaid by the written consent of the Commissioner.

IN WITNESS WHEREOF, The Commissioner of Water Supply, Gas and Electricity, has hereunto set his hand and seal on behalf of The City, and the Contractor has caused its corporate seal to be hereunto affixed and its President and Secretary hereto to set their hands, and the parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner, one other to be filed with the Comptroller of The City, and the third to be delivered to
8018 the Contractor, the day and date herein first above written.

JNO. T. OAKLEY, [L. S.]
Commissioner of Water Supply, Gas and Electricity.

WELSBACH STREET LIGHTING CO.
OF AMERICA,
By ARTHUR E. SHAW, *President.* [SEAL.]
SAMUEL H. HOEY,
Ass't Secretary.

Attest:
SAMUEL H. HOEY,
Ass't Secretary.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

On this 1st day of July, 1904, before me personally came John T. Oakley, to me known and known to me to be the Commissioner of Water Supply, Gas and Electricity, the person described herein and who executed the foregoing instrument, and he acknowledged to me that he executed the same as such Commissioner for the purposes therein mentioned.

ROBERT J. McKEON,
Commissioner of Deeds, City of New York.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

On this 1st day of July, 1904, before me personally came Arthur E. Shaw, to me known and known to me to be the President of the Welbach Street Lighting Co. of America, and Samuel H. Hoey, to me known and known to me to be the Assistant Secretary of the Welsbach Street Lighting Co. of America, who, being by me
8019 severally duly sworn, did depose and say, each for himself, as follows: The said Arthur E. Shaw, that he resided in Phila-

delphia, Pa.; that he is the President of said Company; and the said Samuel H. Hoey, that he resided in the City of New York; that he is the Assistant Secretary of said Company, the Company described in and who executed the above instrument; that he knew the seal of said Company; that the seal affixed to the said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, the City of New York.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

On this ....day of ....1904, before me personally came ....
....
to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

KNOW ALL MEN BY THESE PRESENTS, That We, the City Trust, Safe Deposit and Surety Co. of Philadelphia, and the Welsbach Street Lighting Co. of America of the City of New York, are held and firmly bound unto The City of New York, in the sum
of $41,936 40/100 Dollars, lawful money of the United States
8020 of America, to be paid to The City of New York, or to its certain attorneys, successors or assigns, for which payment, well and truly to be made, we bind ourselves, and our several and respective heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

Sealed with our seals. Dated this 1st day of July, one thousand nine hundred and four.

WHEREAS, The above bounden Welsbach Street Lighting Co. of America, by an instrument in writing, under its corporate seal duly attested, bearing even date with these presents, and one part whereof is hereunto annexed, has contracted with The City of New York to furnish the Illuminating Material, Repairs and Supplies to the Public Lamps of The City of New York, as in said contract will more fully and at large appear:

NOW, THEREFORE, The condition of the above obligation is such, that if the said Welsbach Street Lighting Co. of America, its successors or assigns, shall indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them, or any of them, including suits and actions based on, or arising out of the alleged infringement of any patent or patent rights, and against and from all damages and costs to which they, or any of them, may be put by reason of any such alleged infringement, or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under said contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the said 8021 Welsbach Street Lighting Co. of America, its agents or servants, and if the said Welsbach Street Lighting Co. of America, or its successors or assigns, shall well and truly, and in a good, sufficient and workmanlike manner, perform, fulfill, observe, and keep the said contract, and each and every of the covenants, provisions, conditions and terms in said contract contained, or to be performed, fulfilled, observed and kept, then this obligation to be void; otherwise to remain in full force and virtue.

WELSBACH STREET LIGHTING CO. OF AMERICA,
By ARTHUR E. SHAW, *President.* [L. S.]
SAMUEL H. HOEY, *Asst. Sec'y.* [L. S.]
THE CITY TRUST, SAFE DEPOSIT AND SURETY CO. OF PHILADELPHIA, 160 *Broadway, N. Y.*
STEPHEN FARRELLY, *Vice-President.*
R. M. STONE, *Asst. Secretary.* [SEAL.]

Attest:

SAMUEL H. HOEY, *Ass't Sec'y.*
[SEAL.]

STATE, CITY AND COUNTY OF NEW YORK, *ss:*

On this 1st day of July, A. D. 1904, before me personally appeared, Stephen Farrelly, to me known, who, being by me duly sworn, did depose and say: That he resided in the City of New York; that he is the Vice-President of the City Trust, Safe Deposit and Surety Company of Philadelphia, the corporation described in and which executed the above instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such 8022 corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order; and that the liabilities of said corporation do not exceed its assets, as ascertained in the manner provided by Section 3, Chapter 720, of the New York Session Laws of 1893.

And the said Stephen Farrelly further said, That he was acquainted with Ross M. Stone, and knew him to be the Assistant Secretary of said corporation; that the signature of said Ross M. Stone, subscribed to the said instrument, is in the genuine handwriting of said Ross M. Stone, and was thereto subscribed by like order of said Board of Directors and in the presence of him, the said Stephen Farrelly, Vice-President.

(Signed.) WM. JARDONI,
Notary Public Kings County, No. 16.

Certificate filed in New York County.
344—396

8023 STATEMENT OF

THE CITY TRUST, SAFE DEPOSIT AND SURETY COMPANY OF PHILADELPHIA.

Incorporated 1886.

On the Thirty-first Day of December, 1903.

Assets.

Cash on Hand	$83,724.36	
Cash in Banks	213,938.39	
Call Loans upon Collaterals	1,324,916.56	
Time Loans upon Collaterals	37,050.00	
Loans upon Bonds and Mortgages	33,000.00	
Investment Securities Owned, Stocks, Bonds, etc.	353,170.50	
Real Estate, Furniture and Fixtures	521,185.08	
Miscellaneous Assets	481,522.46	
Total		$3,048,507.35

Liabilities.

Capital Stock (fully paid)	$500,000.00	
Surplus Fund	150,000.00	
Re-Insurance Reserve	113,306.00	
Undivided Profits	53,219.59	
		$816,525.59
Deposits		$2,215,087.76
Miscellaneous Liabilities		16,894.00
Total		$3,048,507.35

8024 State, City and County of New York, *ss:*

............, being duly sworn, says that he is Assistant Secretary of The City Trust, Safe Deposit and Surety Company of Philadelphia, and that the above is a correct statement of the financial condition of the Company, on December 31, 1903.

(Signed) W. M. STONE.

Sworn to and subscribed before me, this 1st day of July, A. D. 1904.

WM. JARDONI,
Notary Public No. 16.

Certificate filed in New York County.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

On this..............day of................, 1904, before me personally came ....
....
....
to me known and known to me to be the persons described in and who executed the foregoing bond and they severally acknowledged to me that they executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

On this 1st day of July, 1904, before me personally came Arthur E. Shaw, to me known and known to me to be the President
8025 of the Welsbach St. Lighting Co. of America, and Samuel H. Hoey, to me known and known to me to be the Assistant Secretary of the Welsbach St. Lighting Co. of America, being by me severally duly sworn, did say, each for himself, as follows: The said Arthur E. Shaw, that he was President of said Company, and the said Samuel H. Hoey, that he was Assistant Secretary of said Company; that he knew the corporate seal of said Company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that, by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, The City of New York.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ... of said City, being duly sworn, do depose and say that I am a .... holder in The City of New York, and reside at Number.....................
Borough of .... in said City, and that I am worth the sum of..............................
Dollars, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

Subscribed and sworn to before me, this ...... day of........, 1904.

—— ——,
Notary Public or Commissioner of Deeds.

8026 THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ... of said City, being duly sworn, do depose and say that I am a...................... holder in The City of New York, and reside at Number....................
Borough of .... in said City,

and that I am worth the sum of..............................
Dollars, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

Subscribed and sworn to before me, this .... day of ...., 1904.

—— ——,
Notary Public or Commissioner of Deeds.

APPROPRIATION.

COMMISSIONER'S CERTIFICATE.

In conformity with the provisions of section 149 of The Greater New York Charter, it is hereby certified that the estimated cost of the work, materials and supplies required by the within contract, amounting to One Million one hundred and sixty-seven thousand seven hundred and forty-five and sixty one hundredth dollars ($1,167,745.60), is chargeable to the appropriation of the Department of Water Supply, Gas and Electricity, for the year 1904, entitled "Lamps and Lighting, Boroughs of Manhattan and The Bronx, for 1904."

..............................,
Commissioner of Water Supply, Gas and Electricity.

Dated ...., 1904.

8027 COMPTROLLER'S CERTIFICATE.

The City of New York, ..., 1904.

In pursuance of the provisions of section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation.................
....,
....
applicable to this contract, sufficient to pay the estimated expense of executing the same, viz.: $..........

..........................,
Comptroller.

SPECIFICATIONS.

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting of Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of The Bronx, in The City of New York, for the Term of One Year, from March 16th, 1904, to March 15th, 1905.

1. The lamps shall be lighted during such times as the public lamps throughout The City of New York may be required to be lighted by the regulations of the said party of the first part, in accordance with a time-table hereto annexed, marked "A," and made a part of these specifications. The Commissioner may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times during the continuance of this contract; and the Contractor
8028 shall and will light the same, and continue them burning,
in accordance with any and every direction of the Commissioner to that effect. Provided, that, in compliance with the direction of the Commissioner, the whole number of hours during which the said lamps, or a portion of them, are kept burning, shall exceed the number of hours specified in the said time-table, which time-table shall aggregate a total of 3925 hours for the term, then, in that case, the Contractor shall be entitled to claim and receive, for such additional number of hours during which the lamps, or such portion of them, in the district aforesaid, are kept burning in accordance with such direction of the Commissioner, an additional compensation, equivalent to a *pro rata* increase of the compensation allowed by the foregoing contract and proportioned to the increased number of hours beyond the said number, and the number of lamps so kept burning. And also, provided that if, in compliance with the direction of the Commissioner, the number of hours during which the said lamps, or any portion of them, are kept burning, shall be less than the aforesaid number of 3925 hours per term, then, in that case there shall be deducted an amount equivalent to a *pro rata* decrease of the compensation allowed by the foregoing contract and proportioned to the decrease of the number of hours below the said number, and to the decrease of the number of lamps so kept burning. If the lamps are to be lighted by means of gas or naphtha, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; also that they shall be lighted either by the means of a torch, or the use of a ladder, and that the lamplighters will not be permitted to climb the lamp posts for such purpose. The Contractor shall keep the service pipes and stand pipes of said lamps cleared of all obstructions, at its own cost and expense.

8029 2. The Commissioner shall have the right at any time to increase or diminish the number of lamps required to be lighted by the Contractor under this contract, and the right is reserved by the Commissioner, at any time during the continuance of this contract, to increase or diminish the number of hours during which the said lamps or any portion of them are to be kept burning, and to change said time-table in any particular, and to determine and from time to time to change the said number and location of the lights in any public building or office, and the amount and kind of illuminating material used and to be used therein, and the public buildings and offices and parts thereof lighted and to be lighted under the foregoing contract.

3. If the material to be furnished under this agreement shall be illuminating gas, then such gas shall have an illuminating power of not less than twenty candles, when tested at a distance of not less than one mile from the place of manufacture, on the improved form of the Bunsen Photometer, by means of a Bray slit, Union No. 7 burner consuming five cubic feet of gas per hour. The testing candle shall be of sperm, of six to the pound, and consuming as near as possible, one hundred and twenty grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And as regards purity, gas shall be clean and of such quality that it will not deteriorate the mantles in the mantle lamps using same so as to shorten their length of life under similar conditions. The gas shall be entirely free, within limits not injurious to the public health, from ammonia, sulphureted hydrogen and other sulphur or noxious compounds. In case the illuminating material shall be illumi-
8030 nating material other than gas, then the quantity of light produced by the burner used for such material shall be equal to the quantity (by photometric test) produced by the twenty candle-power coal gas, above described, consumed by the foot gas burners called for in this agreement.

4. The City shall have the right at any time to test the quality and illuminating power of the lamps and light as furnished on the street, and for that purpose at least twenty-five (25) lamps may be selected from those in actual use, by the Engineer, in each and every calendar month, and their illuminating power shall be determined photometrically by the City Gas Inspector or the Engineer at The City's Laboratory, or elsewhere at the discretion of the Engineer. The average candle-power of the lamp so tested shall constitute the basis for calculating the light furnished by the lamps burning during the month and for which the charge is made. The term "Lamp" herein means the burner complete with mantle and chimney, if any, as found set up for use in any of the streets or public places, and the test herein referred to shall be made through uncolored clear glass of the same character as encloses the lamp on the street, and under the same conditions of supply of gas; the object of the test being to determine that the actual illuminating power, as contracted for, is given on the street, and to determine that each burner is consuming at least the required three (3) cubic feet

of gas per hour. Each lamp shall be tested with the gas furnished by the company furnishing gas to said lamp when in actual service on the street, the gas being first tested for candle-power. 20-candle power gas is herewith defined as gas which, when tested, at a distance of not less than one mile from the place of manufacture, on the improved form of Bunsen Photometer, by means of a
8031 Bray slit, Union No. 7, burner, consuming 5 cubic feet of
gas per hour, shall give 20-candle power; the testing candle shall be of sperm of six to the pound, and consuming, as near as possible, 120 grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than 114 or more than 126 grains of spermaceti per hour.

When desired by the Commissioner, these tests will be applied to each of the different classes of lamps, viz.:

Open flame gas.
Mantle gas.
Open flame naphtha.
Mantle naphtha.

The Contractor operating and maintaining the lamps tested shall replace said lamps whenever they are taken down for test, free of cost to The City, and shall always keep in stock ready for operation, at least 25 lamps of each class.

Lamps using other illuminant than gas will also be tested photometrically as to actual street illuminating power with the illuminating material they may contain when taken down, and they shall furnish the same illuminating power as a lamp of similar type using gas of 20-candle power supplied at the rate of .... cubic feet per hour.

The minimum candle power required of each type of lamp consuming not more than 3 cubic feet per hour per lamp, under the conditions herein specified, will be as follows:

Open flame gas..................	12 candle power.
Mantle gas	60 candle power.
Open flame naphtha.............	12 candle power.
Mantle naphtha	60 candle power.

The open flame lamps to be supplied with 20-candle power
8032 gas at the rate of not less than three (3) cubic feet per hour.
The mantle gas lamps to be supplied with from 2½ to 3 cubic feet of gas per hour, at 1½ inches pressure as may be required. The naphtha lamps, both open and mantle, shall be supplied with sufficient naphtha to equal the candle power of the similar type of gas lamp mentioned above.

5. All the burners used for the illuminating material, commonly called illuminating gas, shall be of a capacity to burn 3, 4 or 5 cubic feet of gas per hour, as may be selected, and each of said burners *shall* burn 3, 4 or 5 cubic feet of gas per hour, as selected, during all the time the lamps are required to be kept lighted. Should the illuminating material be naphtha, then the burners to be used for such illuminating material shall give a light (by photometric test) equal to the light given by the gas-burners in use in the public lamps of similar type in The City of New York. The burners are

to be kept clear at all times, so as to allow a free and unobstructed flow of illuminating material, and to permit a full and normal flame. All checks or automatic regulators shall be of a type approved by the Engineer, and shall be cleaned at least once in each year, or oftener if ordered by the Engineer.

6. Incandescent mantles for either gas or naphtha lamps when supplied for the lamps now using same, or for lamps which may be hereafter specified by the Commissioner, shall be of the very best quality, capable of producing and maintaining under the conditions of this contract not less than 60 candle-power. Whenever the mantles become smoked or deteriorated to such an extent that at least 60 candle-power is not obtained, they must be replaced by new 8033 mantles by the Contractor. The Commissioner reserves the right to have the lamps and the character of mantles furnished, tested, basing test on the same conditions as those under which they are required to burn on the streets, and to reject any lamps and mantles furnished that do not comply with the above requirements as to candle-power. Anti-vibrators for lamps, using incandescent mantles, should be furnished with each lamp, and samples of same should be submitted to the Engineer for approval with the sample of lamp furnished him as mentioned elsewhere.

7. The Commissioner or the Borough President shall have the right at any time to place signs, designating the names of streets, on any lamp-post situated on the street corners of any street to be lighted under this contract, without further expense to The City, whether the lamp-posts shall belong to The City or not, and all the lamps and street signs are to be kept in such a cleanly condition that not more than 10 per cent. of the light of the lamps shall be absorbed or obstructed by the uncolored glass. They shall be cleaned at least three times in each week, and oftener, if the Commissioner shall direct or require the same, and at each of these cleanings all the sides, top and bottom glass of the lantern, as well as the glass of the street sign, shall be thoroughly cleaned, both on the inside and the outside, and all dust and dirt shall be brushed from the frames.

8. The lamps, including the bottoms, are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the Contractor, without cost to The City. 8034 Stained glass of a ruby color, of such tint as shall be approved by the Commissioner, shall be placed in the Fire Alarm Signal lamps and in the tops of the gas lanterns nearest to the several Fire Alarm Signal boxes, and in the tops of the gas lanterns on the street corner nearest said boxes. And in case any of such stained glass should be broken, after being placed in the lamps, then the Contractor shall procure glass of the same color, and place and keep the same in the lamps without cost to the city.

9. The party of the first part shall have the right to require that burners of a greater consuming capacity than three cubic feet of gas per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of one year, provided that the party of the first part will pay to the Contractor, for the lamps so furnished, an additional compensation, equivalent to the

increase of the compensation allowed by the foregoing contract and proportioned only to the increased amount of gas consumed by each burner over and above three cubic feet per hour.

10. Sample lamps, showing all burning appliances and connections for each type of mantle or other lamp to be furnished, shall be submitted when called for by the Commissioner to the Engineer for the purposes of comparison and test. Such sample lamps shall be complete in every respect, and shall accurately represent the burner which the Contractor uses on each type of lamp under this contract, and the sample lamp, like lamps in service, shall be so combined and adjusted as to secure, under all ordinary variations of pressure, an intensity of candle power of not less than 60 in the case of
8035 mantle lamps and twelve in the case of open flame lamps.
The tips for open flame gas burners shall be designed to consume 3, 4 or 5 cubic feet of gas as required, per hour. These tips shall be approved by the Engineer before being placed on the burners. They shall be kept in good order and repair, and renewed whenever required by the Engineer, and he shall also have same tested for consumption of gas when it is deemed necessary.

11. Whenever the Commissioner shall require that any lamp-post or posts shall be reset or straightened, or that any column or columns be releaded or recalked, or that any lamp-post or posts be repaired in any other manner, in this contract specified, the same shall be done within twenty-four hours after the Department shall notify the Contractor of such requirement.

12. The lamp-posts, lamp irons, brackets and lanterns, used for gas or naphtha, are to have one heavy coat of best paint, ground in oil, as follows: The lamp-posts, crossheads and stand pipes of bracket lamps to have one coat of dark-green paint, blue shade. The square lamp irons, brackets, and outside of lanterns to have one coat of green paint, pea-green shade; the design being to make a strong contrast between lamp-posts and lanterns. The tin work on inside of lanterns to be painted in all their parts with one heavy coat of best white-lead paint; the round lamp irons and under side of the reflectors of the globe lamps to be painted with one coat of the best white-lead paint, and so much of the stand pipes as project above the lamp-posts, to be painted in the same manner as the lamp-posts. All the material shall be of the best quality, and prepared so as to present a gloss finish. While painting the lanterns care must be taken
8036 that the glass shall not be daubed or smeared with paint. All
the painting is to be completed by the first day of *July* next and the Commissioner is to be notified when and where the painting is to be commenced.

13. All lamp-posts shall be taken down which the Commissioner may require to be removed for any purpose.

14. New gas-lamp posts are to be fitted up on any street, avenue, pier, park or public place, wherever the same may be required by the Commissioner. The butts and columns are to be placed in a strictly perpendicular position, the socket of the butt to be calked with yarn gasket and melted lead, the lead to be tamped and then trimmed even with rim of butt. The service-pipe shall be one (1) inch wrought iron pipe, upon which shall be connected by means of

a reducer a three-quarter (¾) inch wrought-iron stand-pipe, which shall be galvanized upon its outer surface. Reducer to be connected to outside of both service and stand-pipe. At the lower extremity of the stand-pipe the service-pipe shall make an angle bend of easy curvature, so as to avoid any congestion of any material that may collect within the pipe, and thence have a direct fall to the main. The service-pipe shall receive a heavy coat of asphaltic paint before there is any filling-in around it. The service-pipe and bend on bottom of stand-pipe shall rest on solid earth to prevent the same from settling and forming a trap; the earth is to be thoroughly tamped about the butt as the same is thrown into the excavation. Bracket lamps are to be fitted up in lieu of lamp-posts when required, the brackets and stand-pipes to be fastened to the wall in a firm and secure manner. The service-pipes, stand-pipes and fittings are to be furnished and connected by the Contractor; the lamp-posts for mantle and 8037 open flame gas-lamps, and the lamp-posts, lamp-irons, cross-heads and brackets for open flame gas-lamps will be furnished by The City, through the Department, to the Contractor. All new lamp-posts are to be painted immediately after the same shall have been erected.

15. The cocks, tubes, tips, mantles, chimneys, globes, burners and checks which may become worn out or useless, or which, in the opinion of the Commissioner, are worn out or useless, shall be immediately replaced by the Contractor, at its own cost and expense.

16. All lanterns and lamp-posts used for gas, which, in the opinion of the Commissioner, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed and other lanterns and lamp-posts substituted in lieu thereof (and globe lamps substituted for square lamps) by the Contractor without charge to The City, when so ordered by the Commissioner. The lanterns, lamp-posts and globes for that purpose will be furnished by The City in the case of open flame gas lamps. The lamp-posts for mantle gas lamps will also be furnished by The City through the Department to the Contractor, but the Contractor will furnish all the equipment, including posts for the mantle naphtha and open flame naphtha lamps, as well as all the equipment, except the lamp-posts in the case of mantle gas lamps.

17. The crossheads and lamp-irons used for open flame gas-lamps which, in the opinion of the Commissioner, may become broken or out of order, are to be replaced on the posts by the Contractor without charge to The City. The cross-heads and 8038 lamp-irons for that purpose are to be furnished by the party of the first part, through the Department, to the Contractor.

18. The glass street signs to be placed and retained in their proper places and positions in the gas or naphtha lantern, and are to be kept in a cleanly condition; and globes containing street names are to be placed upon the gas lamp-posts when required by the Department. The globes shall be furnished by the Department to the Contractor, and the signs shall be furnished by the Borough President to the Contractor.

19. All supplies, which, under this agreement, may be required

to be furnished by the party of the first part, will be so furnished, but the cartage thereof shall be done by the Contractor.

20. Subject to the provisions of section 469 of the Greater New York Charter, the Contractor will, upon being required so to do by the party of the first part, extend its pipes or conductors, and erect new lamps in and along any or all the streets, avenues and public places within the limits aforesaid or adjacent thereto, and will relight the gas-lamps situated on the lines of the mains of the Contractor, which are now suspended or may hereafter be suspended, when ordered so to do by the Commissioner.

21. The Commissioner may determine and designate in any locality, after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the period above mentioned; also upon such determination, to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon.

8039 22. Should any alteration or any attachment be required to any portion of the lamps to be lighted under this agreement, for the purpose of using any other material than illuminating gas, then such alteration will be done and attachment placed and maintained on the lamps by the Contractor hereto at his own cost and expense.

23. In supplying gas for public buildings under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, the Contractor shall supply, put in place, and connect the service-pipe from the gas-mains to the building and install a proper meter for registering the gas consumed. The gas supply shall be of 20-candle power at not less than 1½-inch pressure, the pressure to be regulated by a gas pressure regulator, approved by the Engineer.

All meters registering the total consumption of gas in any building under the jurisdiction and control of the Department to be equipped, when so required by the Commissioner, with a gas pressure regulator to be furnished, erected and maintained by the Contractor awarded same, maintaining an even pressure of 1½ inches throughout the building as closely as can be obtained. This pressure regulator to be supplied, maintained and cleaned by the Contractor without expense to The City, but shall be inspected and tested by the Inspector detailed by the Commissioner or Engineer so to do. The size of the pressure regulator shall conform to the size of the riser-pipe. It shall be attached to the pipes, but not on the gas meter, and the Contractor shall furnish all the necessary fittings to make connections, and do all the work of installing the machines in a first-class manner, including the removal of stoppages in house pipes where necessary, adjust tips and burners
8040 (other than mantle lights) and set the machines in such a
manner as to give the best results under existing conditions, as specified, without curtailing light, and if necessary, in the opinion of the Engineer, the Contractor shall furnish the ordinary lava tip burners and checks.

All the work shall be subject to the approval of the Engineer, and the regulators shall be of the type known as Mercury Float Governors of the improved type approved by the Engineer. The Contractor for these regulators shall maintain same for one year; such maintenance shall include inspecting each regulator monthly, reporting to the Engineer each month, readjusting regulator in case of any change, and shall include furnishing such new tips, checks, or burners as may be deemed necessary by the Engineer, and shall also include the pumping out of house pipes when necessary.

24. All gas meters used for supply of gas to public buildings or public places in The City of New York, may be tested by the Engineer whenever the Commissioner may so order, and the Contractor shall replace same during test, if necessary, free of charge. If meter be found defective, same shall also be repaired or replaced by the Contractor without further charge to The City.

Tips for open flame gas burners used in public buildings, and other burning appliances, shall be approved by the Engineer before being installed, and no Contractor shall have the right to furnish such tips or burners to lamps in any public building without first obtaining such approval. The Engineer may test such tips or burning appliances whenever he deems it advisable in order to determine their consumption of illuminant, and in case they shall con-
8041 sume an excessive amount of same, he may order new ones put in their place by the Contractor who furnished them during the term of this contract.

25. In order that bills, when rendered to The City by the Contractor, shall agree so far as it is possible, with the meter readings as obtained by the City Inspectors, it will be required that on proper notification from The City, the Inspectors of the company will read the various meters on the same day as they are read by The City's Inspectors.

No meters shall be installed, changed or replaced in any public building, except in case of emergency, unless due notice shall be given the Bureau of Lamps and Gas twenty-four hours before such new meter is installed or change is made, so that an Inspector from said Bureau can be present and check the readings of the meters.

26. If the requirements of The City, under this contract, includes any lamps with which the pipes or conductors of the Contractor were not connected at the time of the making, such estimate or bid, thirty days from the date of the execution of this agreement, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, will be allowed the Contractor in which to supply and connect service-pipes, bends, reducers, and stand-pipes, as specified above, to such lamps and all such connections, material and labor shall be furnished by the Contractor without other expense to The City; provided that the Contractor has or shall procure a consent, grant or franchise from the proper municipal or other authority, authorizing the laying of gas mains or conductors
8042 in the streets or parts of streets and public places in which the said lamps are located; and that no openings shall be made in the pavements for the purpose of such connections prior to the first day of March, 1904, nor until permits shall have been obtained from the Commissioner, authorizing such openings.

27. No payment on account of any such lamps will be made to

the Contractor for the time so allowed, nor until the same shall have been connected with the mains or conductors of the Contractor, nor will payment be made on account of supply of gas or other illuminating material at any lamp except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

28. The Contractor shall indemnify and save The City harmless from any and all claims and suits for damages by reason of any infringement of patent rights in the use under this contract of any illuminating material or any burning appliances connected therewith, or for repairs or supplies to lamps or lamp-posts.

29. The Contractor shall have the right to lay, subject to the provisions of the laws now in force, pipes or conductors at any time between March 1 and December 31 during the term of this contract, upon giving forty-eight hours' written notice to the Department, and subject to the approval of the Commissioner, of its intention to break up or open any street, avenue, or public place, or part thereof, or to remove any part of the pavement thereof, for the purpose of 8043 laying, subject to the provisions of statute, or repairing the pipes or conductors, to conduct the said gas or other illuminating material. And the Contractor shall, whenever it shall break up or open any street, avenue, or public place, replace the earth which may be removed in so doing, before sunset of the day on which such opening shall be made (the earth to be thoroughly tamped as the same is thrown into the trench or excavation), and replace the pavement, and repave and repair the same, in such reasonable time and manner as the Borough President may direct, and in as good and firm a manner as such street, avenue, or public place, or part thereof, was in before being broken up for the purpose aforesaid, and shall, from time to time, as required by the Borough President, readjust and fill and finish the same as long as, in the opinion of the Borough President, may be necessary on account of the settling of the earth or pavement caused by the opening. Also, all such repairs as shall at any time become necessary to said pavement by reason of laying the said pipe or conductors, shall be made and done by the Contractor, at his own cost and expense. And the Contractor shall furnish to the Commissioner a report weekly, stating therein the location of each and every opening made in the pavements during the preceding week. And no street, avenue, or public place, or part thereof, shall or will be broken up or opened, or the pavement thereof removed, or be again filled up or repaired, except under the direction and supervision of a competent person to be appointed by the Commissioner; but the party of the first part shall not be called upon to pay any sum, to any party or parties, for the inspection of any pavement which may have been removed and repaved by the 8044 Contractor, but the expense of such inspection shall be paid by the Contractor when required by the Commissioner. The Contractor shall and will so conduct the manufacture and manufactories of gas, or station for other illuminating material, as not to create a nuisance, and it will in all things be governed by such reasonable rules and regulations as the Borough President may from time to time establish or direct, relative to the opening of such streets,

avenues, or public places, or parts thereof, and laying down the pipes and conductors, and for lighting, cleaning and protecting the lamps and street signs aforesaid.

30. In order that the Commissioner and his assistants may determine whether the gas-lamps are lighted and extinguished in accordance with the time-table hereinbefore mentioned, the Contractor shall furnish to the Commissioner a map or maps showing the lamps in the district of each lamplighter, and designating the particular lamp at which each lighter commences to light, and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamplighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the Contractor shall notify the Commissioner of any change which may be made in the beginning and finishing points on any lamp district during the term of this contract. The Contractor shall furnish to the Commissioner a report weekly, stating therein the number and location of all new lamps fitted up and lighted, of lamp-posts removed and reset, and of lamps discontinued during the preceding week. Nothing herein contained shall be construed or deemed as granting to the Contractor any sole or exclusive right or privilege, or
8045 as preventing the party of the first part from granting the like
privileges as are hereby given to the Contractor to any other company, persons or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas his or their own house, store, manufactory or premises.

8046

TIME TABLE

For Lighting and Extinguishing the Public Gas Lamps for the Year 1904.

BEGIN TO LIGHT AT		BEGIN TO EXTINGUISH AT		
Jan. 15....	4.45 P. M.	Jan. 16....	6.30 A. M.	
" 22....	4.55 "	" 22....	6.20 "	
Feb. 5....	5.05 "	Feb. 6....	6.05 "	
" 12....	5.15 "	" 13....	5.55 "	
				31 nights, 413 hours and 5 minutes.
Feb. 15....	5.20 P. M.	Feb. 16....	5.55 A. M.	
" 26....	5.35 "	" 27....	5.30 "	
Mar. 11....	5.50 "	Mar. 12....	5.25 "	
				28 nights, 339 hours and 40 minutes.
Mar. 15....	5.55 P. M.	Mar. 16....	5.10 A. M.	
" 19....	5.55 "	" 20....	5.05 "	
" 23....	6.05 "	" 27....	4.55 "	
Apr. 1....	6.15 "	Apr. 2....	4.40 "	
" 9....	6.25 "	" 10....	4.30 "	
				31 nights, 331 hours.
Apr. 15....	6.35 P. M.	Apr. 16....	4.10 A. M.	
" 24....	6.50 "	" 25....	3.55 "	
May 7....	7.05 "	May 8....	3.40 "	
				30 nights, 273 hours.
May 15....	7.15 P. M.	May 16....	3.30 A. M.	
" 21....	7.20 "	" 22....	3.20 "	
June 4....	7.25 "	June 5....	3.10 "	
				31 nights, 246 hours and 45 minutes.

June 15....	7.30 P. M.	June 16....	3.10 A. M.	
July 14....	7.30 "	July 15....	3.10 "	
				30 nights, 230 hours.
July 15....	7.30 P. M.	July 16....	3.20 A. M.	
" 30....	7.20 "	" 31....	3.35 "	
Aug. 6....	7.15 "	Aug. 7....	3.45 "	
" 13....	7.10 "	" 14....	3.50 "	
				31 nights, 252 hours and 5 minutes.
Aug. 15....	7.05 P. M.	Aug. 16....	4.00 A. M.	
" 27....	6.50 "	" 28....	4.10 "	
Sept. 3....	6.35 "	Sept. 4....	4.15 "	
" 10....	6.20 "	" 11....	4.15 "	
8047				31 nights, 289 hours and 35 minutes.
Sept. 15....	6.15 P. M.	Sept. 16....	4.30 A. M.	
" 17....	6.10 "	" 18....	4.30 "	
" 24....	5.55 "	" 25....	4.40 "	
Oct. 1....	5.35 "	Oct. 2....	4.50 "	
" 8....	5.35 "	" 9....	4 55 "	
				30 nights, 326 hours and 10 minutes.
Oct. 15....	5.20 "	Oct. 16....	5.05 A. M.	
" 22....	5.05 "	" 23....	5.15 "	
" 29....	4.55 "	" 30....	5.20 "	
Nov. 5....	4.40 "	Nov. 6....	5.30 "	
" 12....	4.30 "	" 13....	5.40 "	
				31 nights, 383 hours and 40 minutes.
Nov. 15....	4.30 P. M.	Nov. 16....	5.50 A. M.	
" 25...	4.15 "	" 26....	5.55 "	
Dec. 14....	4.15 "	Dec. 15....	6.15 "	
				30 nights, 407 hours.
Dec. 15....	4.10 P. M.	Dec. 16....	6.15 A. M.	
" 24....	4.20 "	" 25....	6.15 "	
Jan. 14....	4.30 "	Jan. 15....	6.30 "	
				31 nights, 433 hours.

Total, 365 nights, or 3,925 hours.

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY,

NEW YORK................1904.

The above table will show the time for lighting and extinguishing the public lamps during the year 1904. See specifications, paragraph 1.

JOHN T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

NOTE—For 1904, a leap year, add 11 hours and 55 minutes to total for February 29.

8048 Endorsed: The City of New York, Department of Water Supply, Gas and Electricity—Contract for Furnishing Gas and other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of The Bronx, in The City of New York for the term of One Year, from March 16, 1904, to March 15, 1905—Welsbach Street Lighting Co. of America, Contractor—Dated July 1st, 1904—Assigned to ....—Approved as to form, John L. O'Brien, Acting Corporation Counsel—Dated ....

8049 CITY'S EXHIBIT 6.

No. ....

Name of Bidder—Consolidated Gas Co. of New York.
Address—No. 4 Irving Place, N. Y. City.

THE CITY OF NEW YORK.

Department of

WATER SUPPLY, GAS AND ELECTRICITY.

Borough of Manhattan.

1906.

PROPOSALS FOR BIDS OR ESTIMATES.

For the Furnishing, Maintaining and Repairing of Gas Lamps, Etc.

1. Sealed Bids or Estimates will be received at the office of the Department of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, in the City of New York, until 2 o'clock P. M., on Thursday, February 1st, 1906.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the same, and also Lamps Belonging to the City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks, and Public Places, in the Borough of Manhattan, in The City of New York, for the Term of this Contract, from Feb. 1st, 1906, to December 31, 1906, both inclusive.

8050 2. The amount of security required is FIFTY (50) PER CENTUM of the total amount of bid or estimate.

3. The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed with the title given above, of the work for which the estimate is made, with his or their name or names and the date of presentation to the head of the Department, at the said office, on or before the date and hour above named, at which time and place the estimates received will be publicly opened by the head of the Department and read, and the award of the contract made according to law as soon thereafter as practicable.

4. In the whole Borough of Manhattan the total number of ordi-

nary gas lamps now burning is about ....; the total number of Welsbach gas lamps now burning is about ....; but the Commissioner of Water Supply, Gas and Electricity reserves the right to designate the location and number of the lamps of each kind as to districts, streets, avenues, parks and public places or parts thereof. Bidders must satisfy themselves by a personal examination of the number and kind of lamps required in each Borough, as numbers given above must be taken only as a close approximation of the number of lamps that may be required.

5. Bidders are required to state in their estimates the districts or several streets, avenues, parks and places, or parts of streets, avenues, parks and places in which they propose to perform the requirements herein contained, giving also the number of lamps they propose to supply.

8051 5*a*. The number, kind and location of lamps to be furnished under the contract to be awarded and entered into under this proposal shall be determined and prescribed by the Commissioner.

6. The burners for open flame gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three (3) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches. The burners for mantle gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three and one-half (3½) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches.

7. For the information of the bidder, it is stated that the gas furnished will have an illuminating power of not less than twenty-two candle power when tested bv photometric test, at the Photometric Stations now established or to be established in the City. The lamps and burners will be of such a kind and construction that when tested, under, the same conditions as exist in service on the street, by photometric test on horizontal measurement, they shall give, the glass globe esclosing same having been removed, at least twelve (12) candle power in case of open flame lamps, and at least sixty (60) candle power in the case of mantle lamps.

8. Governors will be required to be furnished by the Contractor for the furnishing, maintaining and repairing of mantle gas lamps. Such governors will be placed on each lamp as will govern the maximum consumption of the lamp, so that it shall not consume more than three and one-half (3½) cubic feet of gas per hour, unless otherwise ordered by the Commissioner. These governors and the gas burners shall be of such kind and selected in such a manner as is set forth in the specifications. Checks or regulators 8052 shall be placed upon the open flame lamps by the Contractor furnishing the lanterns, cocks, tubes, burners and so on, and they shall be of such a kind as to govern the maximum consumption of these lamps so that they will not consume more than three (3) cubic feet of gas per hour at one and a half (1½) inches pressure.

9. For the information of the bidders on this contract, it is stated that as soon as possible the Department will meter a certain number

of the public gas lamps within the districts of each of the Contractors furnishing gas, in order to establish the actual consumption of the gas lamps of the different types as mentioned. This will be done approximately by attaching a standard meter to about one in ten of the lamp-posts for a sufficient number of hours or nights to establish the average consumption of the lamps, and the quantity so obtained will be the consumption of gas upon which the City will pay. The pressure will also be taken, if necessary, at a point as closely as possible to the metered lamp, in order to confirm this consumption. Ample facilities and notice will be given the Contractors so they can confirm and check these tests, in order to arrive at as fair a conclusion as is possible under the circumstances, and the test will be amplified, if necessary, until results are obtained which, in the opinion of the Engineer, are fair and reasonable to all concerned.

10. In case there are two Contractors—one for the supply of gas and one for the supply of lamp, the maintenance, repair, lighting, cleaning and extinguishing of same—and dispute shall arise which will involve the illuminating power of gas, or lamp or the quantity, quality or pressure of gas supplied by the Contractor for the
8053 supply of gas, appeal must at once be made to the Engineer,
who, with the Chief Gas Inspector of The City, will, by photometric test, by metering or by registry of pressure, or other tests that may be required, decide on the issue of the dispute, and their decision shall be received by both parties as final. Both Contractors may be represented at any such test and present such statements, if required, as will tend to a settlement of the question in dispute.

11. Bidders will state in their bids or estimates a price per lamp for the term of this contract, for maintaining, repairing and connecting ready for use the public lamps in the Borough of Manhattan, and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lantern and lamp-irons, the painting of cross-heads, the furnishing, replacing and repairing of the cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-iron and lanterns now owned or hereafter acquired by The City of New York, will be furnished to the Contractor by the said City, and put in place by him as required for the amount of the bid.

11*a*. A price for furnishing, maintaining, repairing and connecting ready for use, the public lamps in the Borough of Manhattan, and for other fixtures or appliances for illuminating material for each open flame gas lamp, including lighting, cleaning, extinguishing, reglazing and painting of lanterns, lamp-irons and cross-heads, the furnishing, replacing and repairing of the cocks, tubes, burner appliances, lanterns, lamp-irons and cross-heads, all the above, for each lamp, at each lamp, to be furnished by the Contractor and erected by him as required for the term of this Contract for the amount of the bid.

8054 The attention of bidders is called to the fact only one of the two proposals given in clauses 11 and 11*a* will be accepted.

12. A price for furnishing, maintaining, repairing and connecting ready for use, lanterns complete, including cross-heads, lamp-irons and improved burner appliances and incandescent mantles for gas burners to produce a light of not less than sixty (60) candle power each, at each lamp, in the Borough of Manhattan, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, replacing and repairing of the mantles, cocks and burning appliances, the replacing of cross-heads, lamp-irons and lanterns, all the above for each lamp at each lamp to be furnished by the Contractor and erected by him as required for the term of this contract for the amount of the bid.

12*a*. A price for the erecting of a lamp-post furnished by The City of New York, replacing a lamp-post now owned by other parties.

13. For the information of bidders on this contract, it is stated that all lamp-posts for use with gas lanterns to be erected in new locations will be provided for the term of this contract by The City of New York, and erected and maintained by the Contractor for supply of gas.

13*a*. That in the Boroughs of Manhattan, The Bronx and Brooklyn and part of Queens the lamp-posts for gas lamps are almost entirely owned by The City, and The City will continue to supply same. In these, or other boroughs where any lamp-posts used for gas lighting, either mantle or open flame, may belong to this Con-
tractor or to the Contractor for supply of gas, the right is
8055 reserved to The City of New York to substitute its own lamp-
posts for these if it so desires, to be maintained, by the Con-
tractor for the supply of gas, at The City's expense.

13*b*. That where one contractor shall replace the lamp-posts owned or supplied by another, on account of a change in the contractor from the previous successful bidder to the successful bidder on this contract, then the first erection of lamp-posts by the successful bidder, lamp-post for lamp-post, replacing those that may then exist, shall be made for the price given in the bid for the erection of lamp-post. In this case The City may exercise its right to supply its own lamp-posts, and if so they will be maintained, by the Contractor for the supply of gas, at the expense of The City.

13*c*. That the cross-heads, lamp-irons and lamps used for open flame gas lamps in the Boroughs of Manhattan, The Bronx and Brooklyn are almost entirely owned by The City of New York, and The City will continue to supply same. In these or other boroughs where open flame gas lamps may belong to the Contractor, he shall furnish same, including all repairs and renewals, for the amount of the bid.

13*d*. That in all boroughs, the above conditions and reservations as to the furnishing, repairing, replacing and painting of lamp-posts, cross-heads, lamp-irons and lanterns in the above clauses, No. 11, No. 11*a*, No. 12, No. 13, No. 13*a*, No. 13*b*, and No. 13*c* shall apply as the ownership of said lamp-posts, cross-heads, lamp-irons and lanterns shall appear, but nothing in the above shall be construed that The City of New York obligates itself to supply new lamp-posts in place of those now erected, but not owned by it, unless it so desires, except under clause No. 13 .

8056 14. Bidders who may bid on furnishing gas lamps, etc., on the streets, and for connecting, repairing and maintaining the same, furnishing all the items of supplies and repairs required, which are asked for in these estimates, *may also bid* on any other supplies, repairs, operations and maintenances as needed in the lighting of The City, as asked for by The City in other proposals, and reference is herewith made to the proposals for the supply of gas and to the proposals for furnishing naphtha lamps. Bids, however, must be rendered separately for each item as called for, and for each borough. The Contractor supplying gas must erect all new gas lamp-posts, except as noted in clauses 12*a* and 13*b*, and must reset such gas lamp-posts, when and where necessary, making all connections, and must repair all gas lamp-posts when ordered, particularly so far as such repairs shall relate to service and stand pipes. Contractor supplying lamps must hold The City harmless for any failure on the part of the persons supplying gas to properly supply same.

15. Should any alteration, change, replacement or any attachment be required to the whole or any portion of the lamps, except as mentioned in these proposals and specifications, for which estimates are made, in consequence of the use of improved appliances for the gas lighting under this contract, then such alteration shall be done and such attachment placed on the posts without expense to The City.

16. The right is reserved to the Commissioner to determine and designate in any locality, at any time after the estimates are opened, what illuminating material shall be used in the public lamps, 8057 or any number of them, in such locality, during the term of this contract; also, upon such determination, to decline any estimate, or part thereof, for lighting such locality with illuminating material other than that so determined upon; also to decline all estimates for any particular locality, or all localities, if deemed for the best interests of The City so to do.

17. If the estimate of any bidder shall include any lamps for any lamp-posts with which the pipes or conductors of the Contractor for supply of gas are not connected at the time of the making of the bid, and a contract for furnishing, maintaining and repairing the lamps shall be awarded to such bidder, in that case THIRTY DAYS from the date of the execution of such contract, and such further time as may be deemed reasonable by the Commissioner, shall be allowed to such bidder in which to supply, equip and connect such lamps on and to such lamp-posts, and all such connections shall be made by the Contractor without expense to The City.

18. No payment to such bidder, on account of any such lamps, will be made for the time so allowed, nor until the same shall have been connected with the mains or conductors of the Contractor supplying gas, nor except for the time during which all the requirements in this proposal and in the contract, including specifications, which shall be awarded and entered into under this proposal, shall have been fully performed.

19. No bid will be entertained unless the Commissioner shall be

satisfied that the party or parties bidding are possessed of sufficient plant to carry out the provisions of the contract.

20. The award of any and all contracts under this proposal, 8058 and all contracts entered into in pursuance of said proposal, will be subject and subordinate to the rights of all persons, parties or corporations under contracts or agreements (if there are any such) which are now binding and obligatory upon The City of New York.

21. The number of hours the gas lamps are to be kept burning during the contract is 3950 hours per year as per time-table attached.

22. Bidders will *write out* the total amount of their estimates in addition to inserting the same *in figures.*

23. The Commissioner reserves the right to reject any or all bids or estimates if the Board of Estimate and Apportionment shall determine it is for the public interest of The City so to do.

24. Each bid or estimate shall contain the name and place of residence of the persons making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making a bid or estimate for the same purpose, and is in all respects fair, and without collusion or fraud; and that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of The City of New York, is, shall be, or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated therein are in all respects true; or, if the bidder is a corporation, by the oath, in writing, of an officer of such corporation, with knowledge of the facts and 8059 having authority to make such sworn statement.

25. Each bid or estimate shall be accompanied by the consent, in writing, of two householders and freeholders in The City of New York or of a guaranty or surety company, duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

26. No bid or estimate will be considered unless accompanied by money or a certified check drawn on a National or State Bank located in The City of New York, to the order of the Comptroller, to the amount of five per centum of the amount of the bond required, as provided, in section 420 of The Greater New York Charter.

27. For particulars as to the repairs or the quantity or quality of the supplies, or the nature and extent of the work, reference must be made to the specifications and maps on file in the office of the Chief Engineer of Light and Power Department of Water Supply, Gas and Electricity.

28. Bidders are requested to make their bids or estimates upon the blank form prepared by the Commissioner, a copy of which, with the proper envelope in which to inclose the bid, together with a copy of the contract, including the specifications, in the form approved by

the Corporation Counsel, can be obtained upon application therefore at the office of the Chief Engineer of Light and Power of the Department of Water Supply, Gas and Electricity, Room 1319, No. 21 Park Row, The City of New York.

The City of New York, January 20, 1906.

WM. B. ELLISON,
Commissioner of Water Supply, Gas and Electricity.

8060

CITY OF NEW YORK,

DEPARTMENT OF FINANCE.

COMPTROLLER'S OFFICE.

Herman A. Metz, Comptroller.

14613

JUNE 29, 1906.

Hon. Wm. B. Ellison, Commissioner of Water Supply, Gas & Electricity.

SIR:

Please note that the Comptroller's certificate has been endorsed upon May 14, '06, Contract of Consolidated Gas Co. for Gas Manhattan this date, and it is now a valid contract.

By order of the Comptroller.

N. TAYLOR PHILLIPS,
Deputy Comptroller.

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF MANHATTAN.

CONTRACT AND SPECIFICATIONS.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the same and also Lamps belonging to The City, Supplying New Lamps when required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks and Public Places in the Borough of Manhattan, in The City of New York, for the term of this Contract, from February 1st, 1906, to December 31, 1906, both inclusive, as per Specifications and Proposals herein contained or hereto attached. 8061

This Agreement, made and entered into this 14th day of May, in the year one thousand nine hundred and six, by and between The City of New York, by the Commissioner of Water Supply, Gas and

Electricity, party of the first part and Consolidated Gas Co. of New York, Contractor, party of the second part, pursuant to the provisions of The Greater New York Charter.

WITNESSETH, That the parties to these presents, each in consideration of the agreements on the part of the other, herein contained, have mutually agreed and hereby mutually agree, the party of the first part for itself and its successors, and the party of the second part for itself and its heirs, successors and assigns, as follows:

(*A*) Wherever in this contract the words "The City," or "The Commissioner," or a pronoun in the place of either of them is used, they shall mean and intend the party of the first part or the Commissioner of Water Supply, Gas and Electricity of the City of New York; wherever the words "Borough President" are used in this contract they shall mean and intend the President of the Borough above mentioned; wherever in this contract the words "The Department," or a pronoun in place of them is used, they shall mean and intend the Department of Water Supply, Gas and Electricity in The City of New York.

(*B*) Wherever in this contract the word "Contractor" or pronoun
in the place of it, is used, the same shall mean and intend the
8062 party of the second part to this agreement.

(*C*) Whenever the word "Engineer" is used in this contract, it shall mean and be taken to mean and intend the Chief Engineer of Light and Power of the Department, or the Assistant Engineer, or other person or official, duly appointed or designated therefor, pursuant to The Greater New York Charter, as amended, by the Engineer, to inspect, test, examine and accept the supplies of lanterns, repairs or supplies, which are the subject of this contract, limited by the particular duties intrusted to him.

(*D*) The Contractor will furnish gas lamps and connect in place on the streets, etc., for the party of the first part, at the Contractor's own cost and expense, at the times and places and in the manner and under the conditions herein specified, and light, extinguish, clean, repair and maintain the said lamps and others owned by The City and supply new lamps when required, and furnish burners and appliances for improved system of lighting on the streets, avenues, parks and public places in the Borough of Manhattan in The City of New York, for the term of this contract from Feb. 1st, 1906, to December 31, 1906, both inclusive, and will accept as full compensation therefor the sum or price hereinafter named, which sums or prices are the amounts at which this contract was awarded to the Contractor at the public letting thereof. The said specifications, the proposal for bids or estimates, the bid or estimate and the bond required are and shall be a part of this contract.

(*E*) The Contractor will not ask, demand, sue for or recover
for any lanterns furnished, supplies delivered, repairs made,
8063 or work performed under this contract, any extra compensation beyond the amounts payable for the several classes of work and supplies herein enumerated, which shall be actually supplied at the price therefor, herein agreed upon and fixed.

(*F*) The Engineer shall inspect and test or have tested the lamps, governors, regulators, repairs and supplies furnished, and see that the same strictly correspond with the specifications hereinafter set forth, and the Engineer is hereby authorized and empowered to reject any of the said lamps, governors, regulators, repairs and supplies offered under this contract, for the reason that the same do not comply in quality, or quantity, or time or place of maintenance, with the specifications herein contained or hereto annexed.

(*G*) Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such assistant or other persons as shall be designated by the Commissioner shall perform all the duties and be vested with all the power herein given to the Engineer.

(*H*) To prevent all disputes and litigations, the Engineer shall, in all cases, determine the amount, quantity and quality of the lamps, supplies, repairs, and work, which are to be paid for under this contract, and he shall determine all questions in relation to said lamps, supplies, repairs and work, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of the Contractor, and his estimate and decision shall be final and conclusive.

(*I*) Any doubt as to the meaning of the contract, including the specifications, or any obscurity as to the wording of them, will 8064 be explained by the Engineer, and all directions and explanations required, alluded to, or necessary to complete any of the provisions of these specifications, and give them due effect, will be given by the Engineer.

(*J*) The Contractor shall commence the delivery of the lamps and other apparatus called for by this contract, and the lighting of the lamps and other services, supplies and repairs called for under this contract, as soon as he shall be ordered so to do by the Commissioner; he will carry on such contract as required from time to time, with such force and in such manner and order, and at such times and seasons, as may be directed by the Commisioner, and that he will fully and entirely perform this contract on his part on the 31st day of December, 190 .

(*K*) In case any lamp shall fail to burn continuously and give the candle power required throughout each and every night, during the term of this contract, during the hours specified in the timetable hereto annexed, or such hours as the Commissioner may from time to time prescribe, and such failure shall not be due to any act or omission of The City, its officers, agents of employees, or any act or omission of the person or corporation whose duty it shall be to supply the gas, etc., the Contractor shall and will pay to The City a sum of money equal to the charge to The City for one night's burning, if the lamp fails to burn continuously, and one-half of this amount if the lamp fails to give the candle power required for each and every night or part thereof, that such failure shall continue, which said sum, in view of the difficulty of ascertaining the loss which The City will suffer by reason of such failure, is hereby agreed, fixed and determined by the parties hereto, as the liquidated damages that 8065 The City will suffer by reason of such failure, and not as a penalty, and The City shall and may deduct and retain the amount of such liquidation damages out of any moneys which may be due or become due to the Contractor under this agreement.

(*L*) Neither an extension of time, for any reason, beyond the date fixed for the delivery of the lanterns, repairs and supplies, nor the delivery and acceptance of any such delivery of lanterns, repairs and supplies, called for by this contract, shall be deemed to be a waiver by the Commissioner of the right to abrogate this contract for abandonment or delay in the manner herein provided.

(*M*) The Contractor will employ only competent, skilful and faithful men to do the work, and he further agrees that whenever the Commissioner shall inform him in writing that any man engaged in the work is, in his opinion, incompetent or unfaithful, he will discharge him from the work and will not again employ him upon the work.

(*N*) The Contractor shall receive the following prices as full compensation for furnishing and maintaining the lanterns, apparatus and accessories, and performing the services herein provided to be performed by the Contractor, viz.:

OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CITY.

I. For maintaining, repairing and connecting ready for use the Public Lamps and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City will be furnished to the Contractor and put in place by him for the amount of this bid, for the term of this contract, in the Borough of Manhattan, to wit: 8066

For furnishing all the above for each lamp, at each lamp, for 258 in number of same, the sum of Fifty cents (50c.) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for Lamps in excess in number of same, the sum of Fifty cents (50c.) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for..............in number of same, the sum of.............. Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for..............in number of same, the sum of.............. Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for..............in number of same, the sum of.............. Dollars ($......) per lamp, per month.

OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

II. For furnishing, maintaining, repairing and connecting ready for use the public lamps, and for other fixtures and appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the 8067 furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lanterns, lamp-irons and cross-heads thereto, all the above for each lamp to be furnished by the Contractor and erected by him as required, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

MANTLE GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

III. For furnishing, maintaining, repairing and connecting, ready for use, each mantle gas lamp complete with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods, regulating apparatus, cross-heads and lamp-irons, necessary for each lamp to produce a light of not less than sixty (60) candle power, and also operating it. 8068 The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto. All the above for each lamp to be furnished by the Contractor and erected by him as required for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for all such Lamps in the Borough of Manhattan, stated to be 16,747, in number of same, the sum of One 00/100 dollar ($1.00) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for Lamps in excess, in number of same, the sum of One 00/100 dollar ($1.00) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp, per month.

IV. For the erection of each new lamp-post, according to the specifications, furnished by The City of New York, replacing one not now owned by it, with cross-heads if required, all in place, including painting, the sum of Eight 00/100 Dollars ($8.00).

8069 (*O*) No payment will be made or allowed on account of supply of lanterns, services, repairs or supplies for any lamp, except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

(*P*) In case the Contractor shall be unable at any time during the continuance of this contract to furnish lamps or to light any of the lamps as specified in this agreement, then the Contractor shall give immediate notice to the Commissioner of his inability to furnish said lamps or to light such lamps, stating the streets in which the lamps cannot be furnished or lighted and the cause thereof. And in case the use of any of the lamps shall be suspended or discontinued, and other lamps shall be used in consequence of such suspension or discontinuance, then the gas lamps which may have been suspended, or discontinued, shall not be relighted except pursuant to an order for such lighting by the Commissioner.

(*Q*) The Contractor shall indemnify and save harmless The City, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits based on or arising out of the alleged infringement of any patent or patent right, and against, and from all damages and costs to which they or any of them may be put by reason of any such alleged infringement or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under this contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the Con- 8070 tractor or his agents or servants. So much of the moneys due to the Contractor under and by virtue of this agreement, as shall or may be deemed necessary by the Commissioner, shall or may be retained by The City until all such suits, actions and claims shall have been settled, and evidence to that effect furnished to the satisfaction of the Commissioner.

(*R*) If the work to be done under this contract shall be abandoned by the Contractor, or if this contract shall be assigned, or the

work sublet by him, otherwise than is herein specified, or if at any time the Engineer shall be of the opinion, and shall so certify in writing to the Commissioner that the performance of the contract is unnecessarily or unreasonably delayed, or that the Contractor is wilfully violating any of the conditions or covenants of this contract, or specifications, or is executing the same in bad faith, or not in accordance with the terms thereof, or if the work be not fully completed within the time named in this contract for its completion, the Commissioner shall notify the Contractor to discontinue all work, or any part thereof, under this contract, by a written notice to be served upon the Contractor, either personally or by leaving said notice at his residence, or with his agent in charge of the work, or with any employee found on the work, and thereupon the Contractor shall discontinue the work, or such part thereof, and the Commissioner shall thereupon have the power to contract for the completion of the contract in the manner prescribed by law, or to place such and so many persons as he may deem advisable, by contract or otherwise, to work at and complete the work herein described, or such part thereof, and to use such materials as he may find upon the line of the work, and to procure other material
8071 for the completion of the same, and to charge the expense of said labor and materials to the Contractor; and the expense so charged shall be deducted and paid by The City out of such moneys as may be due or may at any time thereafter grow due to the Contractor under and by virtue of this contract, or any part thereof. And in case such expense shall exceed the amount which would have been payable under the contract if the same had been completed by the Contractor, he shall — the amount of such excess to The City; and when any particular part of the work is being carried on by the Commissioner, by contract or otherwise, under the provisions of this clause of the contract, the Contractor shall continue the remainder of the work in conformity with the terms of this contract, and in such manner as in nowise to hinder or interfere with the persons or workmen employed, as above provided by the Commissioner, by contract or otherwise, to do any part of the work, or to complete the same under the provisions of this article of the contract.

(*S*) If the Contractor shall not well and truly observe, perform, fulfill and keep all and singular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case the Commissioner may and shall have the power, on the part of the said party of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

(*T*) On or after the first day of each and every month during the term of this contract, the Contractor shall furnish proof to the satisfaction of the Commissioner, that he has fully performed and
8072 fulfilled this contract in all particulars and conditions as aforesaid during the preceding month, and particularly that he has furnished the lanterns, supplies and repairs as herein specified,

and that all lanterns have been cleaned each day of said month, and also that the gas burners have been lighted and the lanterns have each given an illuminating power as specified for each type, as required by this contract, during all the time that the lamps were required to be kept lighted, and also proof to the satisfaction of the Commissioner as to all extinguishments of lamps due to non-supply of gas or defective lanterns, including the location of each lamp extinguished, the date and length of extinguishment in each case, whereupon the Commissioner shall certify the fact, and in his certificate state the amount to which the Contractor shall be entitled for all the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the Contractor therefor the sum to which he shall be so entitled; and without such certificate and requisition the Contractor shall not be or become entitled to any payment under and in respect to the terms of this contract, or for the light, lamps and accessories or in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of The City, he shall, within thirty days thereafter, pay to the Contractor the amount thereof in lawful money.

(*U*) The City shall not, nor shall any department or officer thereof be precluded or estopped by any return or certificate made or given by the Commissioner, any Engineer or other officer, agent or appointee of The City under any provision of this agreement from at any time (either before or after the final completion and 8073 acceptance of the work and payment therefor pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this agreement, or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the specifications; and The City shall not be precluded or estopped, notwithstanding an*d* such return or certificate and payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the specifications.

(*V*) This contract shall not be binding or of any force unless the Comptroller of The City shall indorse hereon his certificate that there remains unexpended or unapplied, as provided in The Greater New York Charter, a balance of the appropriation or fund applicable thereto sufficient to pay the estimated expense of executing this contract, as certified by the officers making the same.

(*W*) The residence or place of business given in the bid or estimate upon which this contract is founded, is hereby designated as the place where all notices, letters and other communications shall be served, mailed or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above-named place, or deposited in a post-paid wrapper in any post-office box regularly maintained by the post-office shall be deemed sufficient service thereof upon the Contractor. The place named may be

changed at any time by an instrument, in writing, executed
8074 and acknowledged by the Contractor and delivered to the Commissioner. Nothing herein contained shall be deemed to preclude or render inoperative service of any notice, letter or other communication upon the Contractor personally.

(*X*) This contract shall be subject and subordinate to the rights, claims and demands of all persons, parties or corporations under contracts or agreements (if there are any such) which are valid and lawful charges and liabilities against The City of New York, and which the law requires shall be defrayed and answered unto by The City.

(*Y*) The Contractor will give his personal attention constantly to the faithful prosecution of the work; he will not assign, transfer, convey, sublet or otherwise dispose of this contract, or his right, title or interest in or to the same or any part hereof, without the previous consent in writing of the Commissioner indorsed hereon or hereto attached; and he will not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sublet or otherwise dispose of this contract, or of his right, title or interest therein, or any of the money to become due under this contract, to any other person, company or other corporation, this contract may, at the option of the Commissioner, be revoked and annulled and The City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the Contractor, and to his assignee or transferee; provided that nothing herein contained shall be construed to hinder, prevent or affect an assignment by the Contractor for the benefit of
8075 his creditors, made pursuant to the statutes of the State of New York; and no right under this contract, or to any money to become due hereunder shall be asserted against The City in law or in equity, by reason of any so-called assignment of this contract, or any part thereof, or of any moneys to grow due hereunder, unless authorized as aforesaid by the written consent of the Commissioner.

IN WITNESS WHEREOF, The Commissioner of Water Supply, Gas and Electricity has hereunto set his hand and seal on behalf of The City, and the Contractor has caused its corporate seal to be hereunto affixed and its President and Secretary hereto to set their hands, and the parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner, one other to be filed with the Comptroller of The City, and the third to be delivered to the Contractor, the day and date herein first above written.

WILLIAM B. ELLISON, [L. S.]
Commissioner of Water Supply, Gas and Electricity.

W. R. ADDICK, *President.* [SEAL.]
R. A. CARTER, *Secretary.*

Attest:
R. A. CARTER, *Secretary.*

On page nine line sixteen the date 14th written over the word first stricken out and on line Seventeen the word May written over the word February Stricken out before execution.

R. J. McKEON.

8076 THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

On this 28th day of May, 1906, before me personally came William B. Ellison, to me known and known to me to be the Commissioner of Water Supply, Gas and Electricity, the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same as such Commissioner for the purposes therein mentioned.

ROBERT J. McKEON,
Commissioner of Deeds, N. Y. C.

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

On this 14th day of May, 1906, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Company, and R. A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Company who, being by me severally duly sworn, did depose and say, each for himself, as follows: The said W. R. Addicks, that he is the Vice-President of said Company, and the said R. A. Carter that he is the Secretary of said Company, the Company described in and who executed the above instrument; that he knew the seal of said Company; that the seal affixed to the said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, N. Y. C.

8077 THE CITY AND STATE OF NEW YORK,
County of New York, ss:

On this..........day of..........190 , before me personally came ....
....................to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

Know All Men by These Presents, THAT WE, Consolidated Gas Co. of New York and the United States Fidelity and Guaranty Company of The City of New York are held and firmly bound unto THE CITY OF NEW YORK, in the sum of Forty-seven Thousand DOLLARS, lawful money of the United States of America, to be paid to THE CITY OF NEW YORK, or to its certain attorneys, successors or assigns, for which payment, well and truly to be made, we bind ourselves, and our several and respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals. Dated this 14th day of May, in the year one thousand nine hundred and six.

WHEREAS, The above bounden Consolidated Gas Co. of New York by an instrument in writing, under its corporate seal duly attested, bearing even date with these presents, and one part whereof is hereunto annexed, has contracted with The City of New York to furnish the Lanterns, Maintenance, Operation, Repairs and
8078 Supplies to the Public Lamps of The City of New York, as in said contract will more fully and at large appear:

NOW, THEREFORE, The conditions of the above obligation are such, that if the said Consolidated Gas Co. of New York its successors or assigns, shall indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits and actions based on, or arising out of the alleged infringement of any patent or patent rights, and against and from all damages and costs to which they, or any of them, may be put by reason of any such alleged infringement, or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under said contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the said Consolidated Gas Co. of New York, its agents or servants, and if the said Consolidated Gas Co. of New York or its successors or assigns, shall well and truly, and in a good, sufficient and workmanlike manner, perform, fulfill, observe and keep the said contract, and each and every of the covenants, provisions, conditions and terms in said contract contained, or to be performed, fulfilled, observed and kept, then this obligation to be void; otherwise to remain in full force and virtue.

W. R. ADDICKS. [L. S.]
R. A. CARTER, *Sec.* [L. S.]

Attest:
R. A. CARTER, *Sec.*

UNITED STATES FIDELITY AND GUARANTY COMPANY,
By SYLVESTER J. O'SULLIVAN,
Manager.

Attest:
GEO. E. HAYES,
Attorney in Fact.

8079 STATE OF NEW YORK, *County of New York, ss:*

On this 15th day of May, 1906, before me personally came Sylvester J. O'Sullivan, to me known, who, being by me duly sworn, did depose and say that he resides in the City of New York, that he was Manager of the United States Fidelity and Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order. And the said Sylvester J. O'Sullivan, further said that he was acquainted with George E. Hayes, and knew him to be the Attorney-in-fact of said Company; that the signature of the said George E. Hayes, subscribed to the foregoing instrument, was in the genuine handwriting of said George E. Hayes, and was subscribed thereto by like order of said Board of Directors, and in presence of him the said Sylvester J. O'Sullivan.

LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

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STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

Home Office:

BALTIMORE, MD.

At the close of Business, December 30, 1905.

Commenced Business August 1, 1896.

Assets.

Real Estate, H. O. Property (assessed valuation, $406,450.00)	$387,246.01
Real Estate, Other Properties	141,015.77
Baltimore City, State and Municipal Bonds	1,748,408.81
United States Bonds	103,350.00
Railroad and Other Bonds	77,995.00
Bank Stocks	73,775.00
Railroad Stocks	44,000.00
Cash on Hand and in Banks	446,263.35
Premiums due from Agents, Less Commission	342,807.57
Loans on Collateral	57,292.50
Loan on Mortgages	15,150.00
Advances made on Contracts fully secured	35,910.81
Due for Re-insurance	20,931.63
Due for Subscription Dept. Guaranteed Att'ys	38,030.75
Interest Due and Accrued	28,710.89
	$3,560,888.09

8081 *Liabilities.*

Capital Stock, Paid in Cash	$1,700,000.00
Cash Deposited as Collateral	87,474.15
Due or about to become due to Contractors on acceptance of New Bldg.	45,928.82
Reserve for Outstanding Claims	312,397.86
Legal Premium Reserve	1,153,669.63
Surplus and Undivided Profits	261,417.63
	$3,560,888.09

STATE OF NEW YORK, *County of New York, ss:*

George E. Hayes, being duly sworn, says, that he is Attorney-in-fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said Company, as of December 30, 1905.

(Signed) GEORGE E. HAYES.

Subscribed and sworn to before me, this 15th day of May, 1906.

(Signed) LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

THE CITY AND STATE OF NEW YORK, *County of ——, ss:*

On this .... day of .... 190 , before me personally came ....
....
....
to me known and known to me to be the persons described
8082 in and who executed the foregoing bond, and they severally
acknowledged to me that they executed the same for the purposes therein mentioned.

.......................,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of New York, ss:

On this 14th day of May, 1906, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Co. of New York, and R. A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Co. of New York, who, being by me severally duly sworn, did say, each for himself, as follows: The said W. R. Addicks, that he was Vice-President of said Company, and the said R. A. Carter, that he was Secretary of said Company; that he knew the corporate seal of said Company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that, by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, New York City.

The City, County and State of New York, *ss:*

I, ... of said City, being duly
sworn, do depose and say that I am a........................
holder in The City of New York, and reside at Number...........
Borough of Manhattan, in said City, and that I am worth the sum
of .... DOLLARS,
8083 the amount of security required for the completion of the
above-mentioned contract, over and above all my debts and
liabilities, including my liabilities, as bail, surety and otherwise, and
over and above all my property which is exempt by law from execution.

Subscribed and sworn to before me, this..................day of....................190 .

.....................,
Notary Public or Commissioner of Deeds.

The City, County and State of New York, *ss:*

I,........................of said City, being duly sworn, do depose and say that I am a...............holder in The City of New York, and reside at Number............................ Borough of Manhattan, in said City, and that I am worth the sum of .... DOLLARS, the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

.....................,

Subscribed and sworn to before me, this..................day of....................190 .

....
Notary Public or Commissioner of Deeds.

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APPROPRIATION.

COMMISSIONER'S CERTIFICATE.

In conformity with the provisions of section 149 of The Greater New York Charter, it is hereby certified that the estimated cost of the work, materials and supplies required by the within contract, amounting to One Hundred and Eighty Six Thousand Six Hundred and Twenty-six Dollars ($186,626), is chargeable to the appropriation of the Department of Water Supply, Gas and Electricity, for the year 1906, entitled "Lamps and Lighting, Boroughs Manhattan and the Bronx for 1906."

..........................,
Commissioner of Water Supply, Gas and Electricity.

Dated January 20th, 1906.

Estimated Cost of Contract Made with the
CONSOLIDATED GAS COMPANY
For the Supply and Maintenance of Gas Lamps
in the
BOROUGH OF MANHATTAN.

From February 1, 1906 to December 31, 1906, both inclusive.

Number and kind of lights and price for 11 months.	Estimated amount of contract.	Estimated amount of surety.
218 Open Flame Gas Lamps at $5.50..........	$1,199	
16,732 Mantle Gas Lamps at $11.00...........	184,052	
Estimated Increase		
250 Mantle Gas Lamps at $11.00...........	1,375	
Total	$186,626	$46,650

8085 COMPTROLLER'S CERTIFICATE.

The City of New York,..............190 .

In pursuance of the provisions of section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation......................
....
....
applicable to this contract sufficient to pay the estimated expense of executing the same, viz.: $............

....
Comptroller.

SPECIFICATIONS.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining same, and also Lamps belonging to the City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks, and Public Places, in the Borough of Manhattan, in The City of New York, for the Term of this Contract, from Feb'y 1st, 1906, to December 31, 1906, both inclusive.

1. The lamps shall be lighted during such times as the public lamps throughout The City of New York may be required to be lighted by the regulations of the said party of the first part, in accord-

ance with a time-table hereto annexed, marked "A," and made a part of these specifications. The Commissioner may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times during
the continuance of this contract; and the Contractor shall and
8086 will light the same, and continue them burning, in accord-
ance with any and every direction of the Commissioner to that effect. If the lamps are to be lighted by means of gas, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; and it is also expressly agreed that all the lamps shall be extinguished within fifty (50) minutes from the time fixed in the time-table as the time for the beginning of extinguishing. It is also agreed that they shall be lighted either by means of a torch or the use of a ladder, or by such other method as may be approved by the Engineer, and that the lamplighters will not be permitted to climb the lamp-posts for such a purpose.

2. The Commissioner shall have the right at any time to increase or diminish the number of lamps required to be lighted by the Contractor under this contract, and the right is reserved by the Commissioner, at any time during the continuance of this contract, to increase or diminish the number of hours during which the said lamps or any portion of them are to be kept burning, and to change said time-table in any particular. All lamps ordered discontinued shall be discontinued within forty-eight (48) hours after receipt of notice by Contractor, and no charge for same shall be made after the expiration of said forty-eight (48) hours.

3. For the information of bidders on this contract, it is stated that the illuminant to be furnished to the lanterns will be illuminating gas, such gas will have an illuminating power of not less than twenty-two candles, when tested at a distance of not less than one mile from the place of manufacture, on the improved form of the Bunsen
Photometer, by means of a Bray slit, Union No. 7 burner,
8087 consuming five cubic feet of gas per hour. The testing can-
dle shall be of sperm, of six to the pound, and consuming, as near as possible, one hundred and twenty grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And as regards purity, gas shall be clean and of such quality that it will not deteriorate the mantles in the mantle lamps using same so as to shorten their length of life under similar conditions. Each one hundred (100) cubic feet of gas shall not contain more than five (5) grains of ammonia, nor more than twenty (20) grains of sulphur, nor more than a trace of sulphuretted hydrogen.

4. The City shall have the right at any time to test the quality and illuminating power of the lamps and light as furnished on the street, and for that purpose at least twenty-five (25) lamps may be selected from those in actual use in each district of each Borough, by the Engineer, in each and every calendar month, and their illuminating power shall be determined photometrically by the Chief

Gas Inspector or the Engineer, at The City's Laboratory, or elsewhere, at the discretion of the Engineer. The average candle-power of the lamp so tested shall constitute the basis for calculating the light furnished by the lamps burning during the month and for which the charge is made. The term "Lamp" herein means the burner complete with mantle and chimney, if any, as found set up for use in any of the streets or public places, and the test herein referred to shall be made with the uncolored clear glass globe which incloses the lamp on the street, removed, and under the same conditions of supply of gas as when in use on the street; the object of the test being to determine that the actual illuminating power, 8088 as contracted for, is given on the street by each lamp. Each lamp shall be tested with the gas furnished by the company furnishing gas to said lamp when in actual service on the street, the gas being first tested for candle-power.

The Contractor operating and maintaining the lamps tested shall replace said lamps whenever they are taken down for test, free of cost to The City, and shall always keep in stock ready for operation, at least 25 lamps of each class.

Twenty-two candle-power gas is herewith defined as gas which, when tested, at a distance of not less than one mile from the place of manufacture, on the improved form of Bunsen Photometer, by means of a Bray slit, Union No. 7 burner, consuming 5 cubic feet of gas per hour, shall give 22 candle-power; the testing candle shall be of sperm of six to the pound, and consuming, as near as possible, 120 grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than 114 or more than 126 grains of spermaceti per hour.

5. The burners for open flame gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three (3) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches.

The burners for mantle gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three and one-half (3½) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches.

The lamps and burners will be of such a kind and construction that when tested, under the same conditions as exist in service on the street, by photometric test by horizontal measurement, they shall give, the glass globe enclosing same having been removed, at 8089 least twelve (12) candle power in the case of open flame lamps and at least sixty (60) candle power in the case of mantle lamps.

The gas burners shall be of a capacity to burn at least the gas specified for each type of burners, and they shall be kept in good order and repair, and renewed whenever required by the Engineer. He shall also have same tested for consumption of gas when it is deemed necessary, and any burner not consuming the required amount of gas at the pressure specified shall be removed and replaced by this Contractor.

6. Governors will be furnished by the Contractor for the furnish-

ing, maintaining and repairing of mantle gas lamps. Such governors will be placed on each mantle lamp and will govern the maximum consumption of the lamps so that they will not consume more than three and one-half (3½) cubic feet of gas, within a variation of pressure of five (5) inches.

Checks or regulators shall be placed upon the open flame lamps by the Contractor furnishing the lanterns, cocks, tubes, burners and so on, and they shall be of such a kind as to govern the maximum consumption of these lamps so that they will not consume more than three (3) cubic feet of gas at one and one-half (1½) inches pressure.

The governors, checks or regulators must be of such a kind and construction as shall be satisfactory to the Contractor for the supply of gas, and to the Engineer, and if the two Contractors (the one for the supply of gas, and the one for the supply of lanterns) cannot agree on a governor satisfactory to both parties, the matter shall be submitted to the Chief Engineer of Light and Power, of the Department, for decision, and on his decision the governor selected shall be placed on each of the mantle lamps.

8090 7. As soon as possible the Department will meter a certain number of the Public Gas Lamps within the districts of each of the Contractors furnishing gas, in order to establish the actual consumption of the gas lamps of the different types as mentioned. This will be done approximately by attaching a standard meter to about one in ten of the lamp-posts for a sufficient number of hours or nights to establish the average consumption of the lamps, and the quantity so obtained will be the consumption of gas upon which the City will pay.

The pressure will also be taken, if necessary, at a point as closely as possible to the metered lamp, in order to check this consumption.

Ample facilities and notice will be given the Contractors so they can confirm and check these tests, in order to arrive at as fair a conclusion as is possible under the circumstances, and the test will be amplified, if necessary, until results are obtained which, in the opinion of the Engineer, are fair and reasonable to all concerned.

7*a*. The party of the first part shall have the right to require that burners of a greater consuming capacity than three or three and one-half cubic feet of gas as required per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of this contract.

7*b*. Sample lamps, showing all burning appliances and connections for each type of mantle or other lamp to be furnished, shall be submitted when called for by the Commissioner to the Engineer for the purposes of comparison and test. Such sample lamp shall be complete in every respect, and shall accurately represent the burner which the Contractor uses on each type of lamp under this contract, and the sample lamp, like lamps in service, shall be so combined and adjusted as to secure, under all ordinary variations of pressure, a candle power of not less than sixty in the case of mantle lamps and twelve in the case of open flame lamps, the glass enclosing the lamp being removed during test. 8091

The Commissioner reserves the right to reject any bid should the sample lamp submitted be not well made or should the tests on same not be satisfactory to the Engineer and so certified by him to the Commissioner.

8. Incandescent mantles for either gas or naphtha lamps when supplied for the lamps now using same, or for lamps which may be hereafter specified by the Commissioner, shall be of the very best quality, capable of producing and maintaining under the conditions of this contract not less than 60 candle-power. Whenever the mantles become smoked or deteriorated to such an extent that at least 60 candle power is not obtained, they must be replaced by new mantles by the Contractor. The Commissioner reserves the right to have the lamps and the character of mantles furnished, tested, basing test on the same conditions as those under which they are required to burn on the streets, except that the glass globe enclosing the lamp be removed, and to reject any lamps and mantles furnished that do not comply with the above requirements as to candle power. Anti-vibrators for lamps, using incandescent mantles, should be furnished with each lamp, and samples of same should be submitted to the Engineer for approval with the sample of lamp furnished him as mentioned elsewhere.

9. The Borough President or the Commissioner shall have the right at any time to place signs designating the names of the streets on any lamp or lamp-posts situated on the street corners of any street to be lighted under this contract without further expense to 8092 The City, whether the said lamp or lamp-posts shall belong to The City or not, but such sign shall not be put on in such a way as to interfere with the operation, repair or care of the lamp or lamp-post or to interfere with the light from the lamp.

If necessary, to prevent interference with the lighting, the Engineer may order that certain lamps of the older type of mantle lamps, now existing on certain street corners, shall be changed to a newer type of lamp, in which this interference does not arise.

Such glass or other street signs as are at present properly in place upon the lamps or lamp-posts shall be retained in their proper places and position.

All the glass or the globes of the lamps and street signs are to be of such a kind and kept in such a cleanly condition that not more than ten per cent. (10%) of the light of the lamps shall be absorbed or obstructed by the uncolored glass; and the lamps and street signs shall all be cleaned daily; and in each of these cleanings, all the glass of the lanterns, as well as the glass of the street signs, shall be thoroughly cleaned both on the inside and on the outside, and all dust and dirt shall be brushed from the frames.

10. The lamps are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the Contractor, without cost to The City.

Stained glass of a ruby color of such tint and arranged in a manner approved of by the Commissioner shall be placed on the fire alarm signal lamps, open flame type, and shall also be required

in the tops of the open flame lanterns nearest the several fire
8093 alarm signal boxes and in the tops of the glass lanterns on the
street corner nearest said boxes. And in case any of said stained glass should be broken after being placed in the lamps, then the Contractor shall furnish and replace the same, except in the Boroughs of Manhattan and The Bronx, where mantle lamps are used for fire alarm lanterns, the glass will be provided by The City and put in place by Contractor without further cost to The City.

11. The cocks, tubes, tips, mantles, chimneys, globes, burners and checks which may become worn out or useless, or which, in the opinion of the Engineer are worn out or useless, shall be immediately replaced by the Contractor, at his own cost and expense.

12. The open flame and mantle gas lanterns, lamp-irons and cross-heads shall be painted at least once a year with one heavy coat of best paint, ground in oil in such a manner and of such a color as shall be satisfactory to the Commissioner.

Fire-alarm lanterns shall be painted as specified above. All the material shall be of the best quality, and prepared so as to present a gloss finish. While painting the lanterns care must be taken that the glass shall not be daubed or smeared with paint. All the painting is to be completed by the first day of July next, and the Commissioner is to be notified when and where the painting is to be commenced.

13. New gas lanterns are to be fitted up on lamp-posts on any street, avenue, park or public place, wherever the same may be required by the Commissioner.

New lamp-posts, when properly equipped, erected and connected
for supplying gas by the Contractor for such supply, will be
8094 turned over to the Contractor for the maintenance of burning
appliances and lamps, and the latter shall erect and connect on each new lamp-post immediately such burning appliances and lamps as may be required under this contract.

14. All lanterns, cross-heads and lamp-irons used for gas lamps, which, in the opinion of the Commissioner, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed and other lanterns, cross-heads and lamp-irons, substituted in lieu thereof, and mantle lamps substituted for open flame lamps, if required, by the Contractor as noted in the proposals.

15. All supplies, which under this agreement, may be required to be furnished by the party of the first part, will be so furnished, but the cartage thereof shall be done by the Contractor.

16. Subject to the provisions of section 469 of the Greater New York Charter, the Contractor will, upon being required so to do by the party of the first part, erect new lamps in and along any or all the streets, avenues and public places within the limits aforesaid or adjacent thereto, of the districts for which the bid is made, and will light and connect such gas lamps to the standpipes of the lamp-posts of the City or the Contractor for supply of gas, when ordered so to do by the Commissioner.

17. The Commissioner may determine and designate in any locality, after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such

locality, during the period above-mentioned; also upon such determination to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon.

8095 18. If the requirements of The City, under this contract, includes any lamps not erected and connected at the time of the making such estimate or bid, thirty days from the date of the execution of this agreement, and such further time as may be deemed reasonable by the Commissioner, will be allowed the Contractor in which to supply, erect and connect the lanterns on and to the standpipes of the gas lamp-posts. Such lamps and all such connections, material and labor shall be furnished by the Contractor without other expense to The City, except where such lamps of the open flame type belong to The City of New York, they will be furnished by said City to the Contractor and erected by him.

19. No payment on account of any such lamps will be made to the Contractor for the time so allowed, nor until the same shall have been put in complete service and connected with the mains or conductors of the Contractors for the supply of gas, nor will payment be made on account of supply of any lantern except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

20. The Contractor shall indemnify and save The City harmless from any and all claims and suits for damages by reason of any infringement of patent rights in the use under this contract of any lantern or any burning appliances connected therewith, or for repairs or supplies to such lanterns or burning appliances.

21. In order that the Commissioner and his assistants may determine whether the gas lamps are lighted and extinguished in accordance with the time-table hereinbefore mentioned, the Contractor shall furnish to the Commissioner a map or maps showing the lamps in the district of each lamp-lighter, and designating the particular lamp at which each lighter commences to light, and 8096 also the lamp at which he completes the lighting; and in extinguishing the lamps the lamp-lighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the Contractor shall notify the Commissioner of any change which may be made in the beginning and finishing points on any lamp district during the term of this contract. The Contractor shall furnish to the Commissioner a report daily and also weekly, stating therein the number and location of all new lamps fitted up and lighted, of all lamps relighted, and of lamps discontinued during the preceding day and week. Nothing herein contained shall be construed or deemed as granting to the Contractor any sole or exclusive right or privilege, or as preventing the party of the first part from granting the like privileges as are hereby given to the Contractor, to any other company, persons or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas or other illuminant his or their own house, store, manufactory or premises.

8097

TIME TABLE

FOR LIGHTING AND EXTINGUISHING PUBLIC GAS LAMPS FOR THE YEAR 1906.

Date.		Complete lighting in one hour	Complete extinguishing in 50 minutes	Hours per night.	Hours per week.	Hours per month.
		From time given.				
January	1....	4.12 P. M.	6.27 A. M.	14.15	99.45	
	8....	4.22	6.22	14.00	98.00	
	15....	4.32	6.17	13.45	96.15	
	22....	4.42	6.12	13.30	94.30	
	29....	4.47	6.07	13.20	93.20	
						481.50
February	5....	4.57	6.02	13.05	91.35	
	12....	5 07	5 57	12.50	51.20 (4 days)	
	16....	5.07	5.52	12.45	38.15 (3 ")	
	19....	5.17	5.47	12.30	50.00 (4 days)	
	23....	5.17	5.42	12.25	37.15 (3 ")	
	26....	5.22	5.32	12.10	48.40 (4 days)	
						317.05
March	2....	5.22	5.27	12.05	36.15 (3 days)	
	5....	5.32	5.17	11.45	82.15	
	12....	5.42	5.07	11.25	79.55	
	19....	5.52	4.57	11.05	77.35	
	26....	5.57	4.47	10.50	75.50	
						351.50
April	2....	6.07	4.37	10.30	42 00 (4 days)	
	6....	6.07	4.32	10.25	31.15 (3 ")	
	9....	6.17	4.22	10.05	70.35	
	16....	6.27	4.17	9.50	29.30 (3 days)	
	19....	6.27	4.12	9.45	39.00 (4 ")	
	23....	6.37	4.02	9.25	65.55	
	30....	6.47	3.52	9.05	63.35	
						341.50
May	7....	6.57	3.42	8.45	35.00 (4 days)	
	11....	6.57	3.37	8.40	26.00 (3 ")	
	14....	7.07	3.27	8.20	58.20	
	21....	7.12	3.22	8.10	57.10	
	28....	7.12	3.17	8.05	56.35	
						233.05
June	4....	7.17	3.12	7.55	55.25	
	11....	7.17	3.07	7.50	54.50	
	18....	7.22	3 07	7.45	54.15	
	25....	7.27	3 07	7.40	53.40	
						218.10
July	2....	7.22	3.07	7.45	54.15	
	9....	7.17	3.12	7.55	55.25	
	16....	7.12	3.17	8.05	56.35	
	23....	7.07	3.22	8.15	57.45	
	30....	7.02	3.27	8 25	58.55	
						282.55
August	6....	6.57	3.37	8.40	60.40	
	13....	6.47	3.47	9.00	63.00	
	20....	6.37	3.52	9.15	64.45	
	27....	6.27	3.57	9.30	66.30	
8098						254.55
September	3....	6.17	4.07	9.50	39.20 (4 days)	
	7....	6.12	4 07	9.55	29.45 (3 ")	
	10....	6.02	4.17	10.15	71.45	
	17....	5.52	4 27	10.35	42.20 (4 days)	
	21....	5.47	4.27	10.40	32.00 (3 ")	
	24....	5.37	4.37	11.00	44.00 (4 days)	
	28....	5.32	4.37	11.05	33.15 (3 ")	
						292.25

October	1....	5.22	4.42	11.20	79.20	
	8....	5.12	4.52	11.40	58.20 (5 days)	
	13....	5.07	4 52	11.45	23.30 (2 ")	
	15....	4.57	5.02	12.05	84.35	
	22...	4.47	5.07	12.20	86 20	
	29..	4.37	5.17	12.40	88.40	
						420.45
November	5....	4.27	5.27	13.00	91.00	
	12....	4 17	5.32	13.15	92 45	
	19....	4.12	5.42	13.30	94.30	
	26....	4.07	5 52	13.45	96.15	
						374.30
December	3....	4.02	5.57	13 55	97.25	
	10....	3.57	6.07	14.10	99.10	
	17....	3.57	6.17	14.20	100.20	
	24....	4 02	6.22	14.20	28.40 (2 days)	
	26....	4.07	6 22	14.15	71.15 (5 ")	
	31....	4.12	6.27	14.15	14.15 (1 day)	
						411.05
						3980.25
Deduct, on account of 50 minutes extinguishing time..						30 25
Total number of hours burning						3950

New York, *January 20th,* 1906.

The above time table will show the time for lighting and extinguishing public gas lamps for the year 190 , all lamps to be lighted within one hour from the time of beginning to light, and extinguished within fifty minutes of the time of beginning to extinguish.

WM. B. ELLISON,
Commissioner Dept. of Water
Supply, Gas and Electricity.

C. F. LACOMBE,
Chief Engineer of Light and Power.

Endorsed: The City of New York, Department of Water Supply,
Gas and Electricity. Contract. For Furnishing Gas Lamps, etc., on
the Streets, and for Connecting, Lighting, Extinguishing, Cleaning,
Repairing and Maintaining the same, and also Lamps belonging to
The City, supplying New Lamps when required, and for
8099 furnishing Burners and appliances for Improved System of
Lighting on Streets, Avenues, Parks and Public Places in the
Borough of Manhattan, in The City of New York, for the term of
this Contract, from February 1st 1906, to December 31, 1906, both
inclusive. Consolidated Gas Co. of New York, Contractor. Dated
May 14th, 1906. Assigned to........................Approved
as to form. John L. O'Brien, Asst. Corporation Counsel. Dated
............, 190...

CITY'S EXHIBIT 6A.

No. 25.

THE CITY OF NEW YORK.

DEPARTMENT OF
WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining such Lamps, and also Lamps belonging to The City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved Systems of Lighting on Streets, Avenues, Parks and Public Places in the Borough of Manhattan, in The City of New York, for the Term of this Contract, from February 1st, 1906, to December 31, 1906, both inclusive.

Made this thirty-first day of January, 1906, by Consolidated Gas Co. of New York, No. 4 Irving Place, Borough of Manhattan, New York City.

8100 1. Consolidated Gas Co. of New York does declare that the Consolidated Gas Company of New York is the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken.

2. It further declares that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair and without collusion or fraud.

3. It further declares that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer of The City of New York, is, shall be or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in this bid or estimate, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof.

4. It further declares that the names of the persons affixed to the consent hereto annexed were written by said persons respectively, and that said persons are householders or freeholders in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. It has examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and it will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

8101 OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CITY.

I. For maintaining, repairing and connecting ready for use the Public Lamps and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City will be furnished to the Contractor and put in place by him for the amount of this bid, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for 258 in number of same, the sum of Fifty cents *Dollars* ($00/50) per lamp per month.

For furnishing all the above for each lamp, at each lamp, for lamps in excess in number of same, the sum of Fifty cents *Dollars* ($00/50) per lamp per month.

MANTLE GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

III. For furnishing, maintaining, repairing and connecting, ready for use, each mantle gas lamp complete with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods, regulating apparatus, cross-heads and lamp-irons, necessary for each lamp to produce a light of not less than sixty (60) candle power, and also operating it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of
8102 lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto. All the above for each lamp to be furnished by the Contractor and erected by him as required for the term of this contract in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for all such lamps in the Borough of Manhattan, stated to be 16,747 in number of same, the sum of One 00/100 Dollars ($1.00) per lamp per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($..........) per lamp per month.

IV. For the erection of each new lamp-post, according to the specifications, furnished by The City of New York, replacing one not now owned by it, with cross-heads if required, all in place, including painting, the sum of Eight 00/100 Dollars ($8.00).

CONSOLIDATED GAS CO. OF NEW YORK,
By W. R. ADDICKS, *Vice-President.* [L. S.]

8103 THE CITY AND STATE OF NEW YORK,
County of New York, ss:

W. R. Addicks, being duly sworn, says for himself, that the several matters stated in the above estimate are in all respects true.

W. R. ADDICKS.

Subscribed and sworn to before me this 31st day of January, A. D. 1906.

WALLACE YOUNG,
Notary Public, Kings County,
or Commissioner of Deeds.

Certificate filed in N. Y. County.

SURETIES' AGREEMENT.

In Consideration of the premises, and of One Dollar to us and each of us in hand paid by The City of New York, the receipt whereof is hereby acknowledged—

We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, persons or corporation making the same, we will, upon its being so awarded, become bound as his, their or its sureties for its faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the same is ready for execution, we will pay, without proof of notice or demand, to the said The City of New York, or its successors, any difference between the sum to which such person, persons or corporation would be entitled upon the completion of such contract and the sum which The City of New York may be obliged 8104 to pay to the person, persons or corporation to whom the contract shall be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

In Witness Whereof, we have hereunto set our hands, this 1st day of February, one thousand nine hundred and six.

Name of first surety—
THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

Name of second surety—
By SYLVESTER J. O'SULLIVAN, *Manager.*

Attest:
GEO. E. HAYES,
Attorney in Fact.

The adequacy and sufficiency of the above-named sureties approved.

Dated this 9th day of May, 1906.

N. T. PHILLIPS,
Deputy & Acting Comptroller.

Bond 47,000.

THE CITY AND STATE OF NEW YORK, *County of ——, ss:*

The above-named .... being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of.................. Dollars ($........), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of
8105 every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this ...... day of........, A. D. 190

..........................,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of New York, ss:

The above-named .... being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of ....Dollars ($........), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this ...... day of ...., A. D. 190

..........................,
Notary Public or Commissioner of Deeds.

8106 STATE OF NEW YORK, *County of New York, ss:*

On the 1st day of February, 1906, in the year 1906, before me personally came Sylvester J. O'Sullivan, to me known, who, being by me duly sworn, did depose and say that he resides in the City of New York; that he was manager of the United States Fidelity and Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order. And the said Sylvester J. O'Sullivan further said that he was acquainted with George E. Hayes, and knew him to be the Attorney-in-Fact of said Company; that the signature of the said

George E. Hayes, subscribed to the foregoing instrument, was in the genuine handwriting of said George E. Hayes, and was subscribed thereto by like order of said Board of Directors, and in presence of him, the said Sylvester J. O'Sullivan.

LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

8107 STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

HOME OFFICE: BALTIMORE, MD.

At the Close of Business, June 30, 1905.

Commenced Business August 1, 1896.

ASSETS.

Real Estate	$404,286.56	
Baltimore City, State & Municipal Bonds	1,667,008.81	
United States Bonds	83,200.00	
Railroad and Other Bonds	127,050.00	
Bank Stocks	68,150.00	
Railroad Stocks	43,780.00	
Cash in Banks and Home Office	519,785.88	
Premiums Due from Agents, Less Commissions	358,252.49	
Loan on Mortgages	11,600.00	
Loans on Collateral	38,518.50	
Advances % Contracts Secured	119,046.34	
Interest Due and Accrued	31,595.99	
Due for Subscriptions Dept. Guaranteed Attorneys	29,177.45	
		$3,501,452.02

8108 LIABILITIES.

Capital Stock Paid in Cash	$1,700,000.00	
Premium Reserve	1,122,841.76	
Reserve for Unadjusted and Resisted Claims	251,038.89	
Collateral Deposits	80,053.47	
Surplus and Undivided Profits	347,517.90	
		$3,501,452.02

STATE OF NEW YORK, *County of New York, ss:*

George E. Hayes, being duly sworn, says that he is Attorney-in-Fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said Company, as of June 30, 1905.

GEORGE E. HAYES. (Signed.)

Subscribed and sworn to before me, this 1st day of February, 1906.
(Signed) LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

Indorsed: The City of New York, Department of Water Supply, Gas and Electricity. Bid or Estimate for Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Same and also Lamps belonging to The City, Supplying New Lamps, when required, and for Furnishing Burners and Appliances for Improved Systems of Lighting on Streets, Avenues, Parks and Public Places, in the Borough of Manhattan, in The City of New York, for the term of this Contract, from February 1st, 1906, to December 31, 1906.

8109

CITY'S EXHIBIT 7.

No. ......

Name of Bidder—Consolidated Gas Co. of New York.
Address—No. 4 Irving Place, N. Y. City.

THE CITY OF NEW YORK.

Department of

WATER SUPPLY, GAS AND ELECTRICITY.

Borough of Bronx.

1906.

PROPOSALS FOR BIDS OR ESTIMATES.

For the Furnishing, Maintaining and Repairing of Gas Lamps, Etc.

1. Sealed Bids or Estimates will be received at the office of the Department of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, in the City of New York, until 2 o'clock P. M., on Thursday, February 1st, 1906.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the same, and also Lamps Belonging to the City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks, and Public Places, in the Borough of Bronx, in The City of New York, for the Term of this Contract, from Feb. 1st, 1906, to December 31, 1906, both inclusive.

8110 2. The amount of security required is FIFTY (50) PER CENTUM of the total amount of bid or estimate.

3. The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed with the title given above, of the work for which the estimate is made, with his or their name or names and the date of the presentation to the head of the Department, at the said office, on or before the date and hour above named, at which time and place the estimates received will be publicly opened by the head of the Department and read, and the award of the contract made according to law as soon thereafter as practicable.

4. In the whole Borough of Bronx the total number of ordinary gas lamps now burning is about 95; the total number of Welsbach gas lamps now burning is about 6013; but the Commissioner of Water Supply, Gas and Electricity reserves the right to designate the location and number of the lamps of each kind as to districts, streets, avenues, parks and public places or parts thereof. Bidders must satisfy themselves by a personal examination of the number and kind of lamps required in each Borough, as numbers given above must be taken only as a close approximation of the number of lamps that may be required.

5. Bidders are required to state in their estimates the districts or several streets, avenues, parks and places, or parts of streets, avenues, parks and places in which they propose to perform the requirements herein contained, giving also the number of lamps they propose to supply.

5*a*. The number, kind and location of lamps to be furnished under the contract to be awarded and entered into under this proposal shall be determined and prescribed by the Commissioner. 8111

6. The burners for open flame gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three (3) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches. The burners for mantle gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three and one-half (3½) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches.

7. For the information of the bidder, it is stated that the gas furnished will have an illuminating power of not less than twenty-two candle power when tested by photometric test, at the Photometric Stations now established or to be established in the City. The lamps and burners will be of such a kind and construction that when tested, under the same conditions as exist in service on the street, by photometric test on horizontal measurement, they shall give, the glass globe esclosing same having been removed, at least twelve (12) candle power in case of open flame lamps, and at least sixty (60) candle power in the case of mantle lamps.

8. Governors will be required to be furnished by the Contractor for the furnishing, maintaining and repairing of mantle gas lamps. Such governors will be placed on each lamp as will govern the maximum consumption of the lamp, so that it shall not consume more than three and one-half (3½) cubic feet of gas per hour, unless otherwise ordered by the Commissioner. These governors and the gas burners shall be of such kind and selected in such a manner as

is set forth in the specifications. Checks or regulators shall
8112 be placed upon the open flame lamps by the Contractor furnishing the lanterns, cocks, tubes, burners and so on, and they shall be of such a kind as to govern the maximum consumption of these lamps so that they will not consume more than three (3) cubic feet of gas per hour at one and a half (1½) inches pressure.

9. For the information of the bidders on this contract, it is stated that as soon as possible the Department will meter a certain number of the public gas lamps within the districts of each of the Contractors furnishing gas, in order to establish the actual consumption of the gas lamps of the different types as mentioned. This will be done approximately by attaching a standard meter to about one in ten of the lamp-posts for a sufficient number of hours or nights to establish the average consumption of the lamps, and the quantity so obtained will be the consumption of gas upon which the City will pay. The pressure will also be taken, if necessary, at a point as closely as possible to the metered lamp, in order to confirm this consumption. Ample facilities and notice will be given the Contractors so they can confirm and check these tests, in order to arrive at as fair a conclusion as is possible under the circumstances, and the test will be amplified, if necessary, until results are obtained which, in the opinion of the Engineer, are fair and reasonable to all concerned.

10. In case there are two Contractors—one for the supply of gas and one for the supply of lamp, the maintenance, repair, lighting, cleaning and extinguishing the same—and dispute shall arise which will involve the illuminating power of gas, or lamp or the quantity, quality or pressure of gas supplied by the Contractor for the supply of gas, appeal must at once be made to the Engineer, who,
8113 with the Chief Gas Inspector of The City, will, by photometric test, by metering or by registry of pressure, or other tests that may be required, decide on the issue of the dispute, and their decision shall be received by both parties as final. Both Contractors may be represented at any such test and present such statements, if required, as will tend to a settlement of the question in dispute.

11. Bidders will state in their bids or estimates a price per lamp for the term of this contract, for maintaining, repairing and connecting ready for use the public lamps in the Borough of Bronx, and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, replacing and repairing of the cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City of New York, will be furnished to the Contractor by the said City, and put in place by him as required for the amount of the bid.

11*a*. A price for furnishing, maintaining, repairing and connecting ready for use, the public lamps in the Borough of Bronx, and for other fixtures or appliances for illuminating material for each open flame gas lamp, including lighting, cleaning, extinguishing, reglazing and painting of lanterns, lamp-irons and cross-heads, the furnishing, replacing and repairing of the cocks, tubes, burner appliances, lanterns, lamp-irons and cross-heads, all the above, for each lamp, at each lamp, to be furnished by the Contractor and erected by him as required for the term of this Contract for the amount of the bid.

8114 The attention of bidders is called to the fact only one of the two proposals given in clauses 11 and 11*a* will be accepted.

12. A price for furnishing, maintaining, repairing and connecting ready for use, lanterns complete, including cross-heads, lamp-irons and improved burner appliances and incandescent mantles for gas burners to produce a light of not less than sixty (60) candle power each, at each lamp, in the Borough of Manhattan, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, replacing and repairing of the mantles, cocks and burning appliances, the replacing of cross-heads, lamp-irons and lanterns, all the above for each lamp at each lamp to be furnished by the Contractor and erected by him as required for the term of this contract for the amount of the bid.

12*a*. A price for the erecting of a lamp-post furnished by The City of New York, replacing a lamp-post now owned by other parties.

13. For the information of bidders on this contract, it is stated that all lamp-posts for use with gas lanterns to be erected in new locations will be provided for the term of this contract by The City of New York, and erected and maintained by the Contractor for supply of gas.

13*a*. That in the Boroughs of Manhattan, The Bronx and Brooklyn and part of Queens the lamp-posts for gas lamps are almost entirely owned by The City, and The City will continue to supply same. In these, or other boroughs where any lamp-posts used for gas lighting, either mantle or open flame, may belong to this Contractor or to the Contractor for supply of gas, the right is reserved to The City of New York to substitute its own lamp-posts for
8115 these if it so desires, to be maintained, by the Contractor for the supply of gas, at The City's expense.

13*b*. That where one contractor shall replace the lamp-posts owned or supplied by another, on account of a change in the contractor from the previous successful bidder to the successful bidder on this contract, then the first erection of lamp-posts by the successful bidder, lamp-post for lamp-post, replacing those that may then exist, shall be made for the price given in the bid for the erection of lamp-post. In this case The City may exercise its right to supply its own lamp-posts, and if so they will be maintained, by the Contractor for the supply of gas, at the expense of The City.

13*c*. That the cross-heads, lamp-irons and lamps used for open flame gas lamps in the Boroughs of Manhattan, The Bronx and Brooklyn are almost entirely owned by The City of New York, and The City will continue to supply same. In these or other boroughs where open flame gas lamps may belong to the Contractor, he shall furnish same, including all repairs and renewals, for the amount of the bid.

13*d*. That in all boroughs, the above conditions and reservations as to the furnishing, repairing, replacing and painting of lamp-posts, cross-heads, lamp-irons and lanterns in the above clauses, No. 11, No. 11*a*, No. 12, No. 13, No. 13*a*, No. 13*b*, and No. 13*c* shall apply as the ownership of said lamp-posts, cross-heads, lamp-irons and lanterns shall appear, but nothing in the above shall be construed that The City of New York obligates itself to supply new lamp-posts in place of those now erected, but not owned by it, unless it so desires, except under clause No. 13.

8116 14. Bidders who may bid on furnishing gas lamps, etc., on the streets, and for connecting, repairing and maintaining the same, furnishing all the items of supplies and repairs required, which are asked for in these estimates, *may also bid* on any other supplies, repairs, operations and maintenances as needed in the lighting of The City, as asked for by The City in other proposals, and reference is herewith made to the proposals for the supply of gas and to the proposals for furnishing naphtha lamps. Bids, however, must be rendered separately for each item as called for, and for each borough. The Contractor supplying gas must erect all new gas lamp-posts, except as noted in clauses 12*a* and 13*b*, and must reset such gas lamp-posts, when and where necessary, making all connections, and must repair all gas lamp-posts when ordered, particularly so far as such repairs shall relate to service and stand pipes. Contractor supplying lamps must hold The City harmless for any failure on the part of the persons supplying gas to properly supply same.

15. Should any alteration, change, replacement or any attachment be required to the whole or any portion of the lamps, except as mentioned in these proposals and specifications, for which estimates are made, in consequence of the use of improved appliances for the gas lighting under this contract, then such alteration shall be done and such attachment placed on the posts without expense to The City.

16. The right is reserved to the Commissioner to determine and designate in any locality, at any time after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the term of 8117 this contract; also, upon such determination, to decline any estimate, or part thereof, for lighting such locality with illuminating material other than that so determined upon; also to decline all estimates for any particular locality, or all localities, if deemed for the best interests of The City so to do.

17. If the estimate of any bidder shall include any lamps for any lamp-posts with which the pipes or conductors of the Contractor for supply of gas are not connected at the time of the making of the bid, and a contract for furnishing, maintaining and repairing the lamps shall be awarded to such bidder, in that case THIRTY DAYS from the date of the execution of such contract, and such further time as may be deemed reasonable by the Commissioner, shall be allowed to such bidder in which to supply, equip and connect such

lamps on and to such lamp-posts, and all such connections shall be made by the Contractor without expense to The City.

18. No payment to such bidder, on account of any such lamps, will be made for the time so allowed, nor until the same shall have been connected with the mains or conductors of the Contractor supplying gas, nor except for the time during which all the requirements in this proposal and in the contract, including specifications, which shall be awarded and entered into under this proposal, shall have been fully performed.

19. No bid will be entertained unless the Commissioner shall be satisfied that the party or parties bidding are possessed of sufficient plant to carry out the provisions of the contract.

20. The award of any and all contracts under this proposal, and all contracts entered into in pursuance of said proposal, will
8118 be subject and subordinate to the rights of all persons, parties or corporations under contracts or agreements (if there are any such) which are now binding and obligatory upon The City of New York.

21. The number of hours the gas lamps are to be kept burning during the contract is 3950 hours per year as per time-table attached.

22. Bidders will *write out* the total amount of their estimates in addition to inserting the same *in figures*.

23. The Commissioner reserves the right to reject any or all bids or estimates if the Board of Estimate and Apportionment shall determine it is for the public interest of The City so to do.

24. Each bid or estimate shall contain the name and place of residence of the persons making the same, the names of all persons interested with him therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making a bid or estimate for the same purpose, and is in all respects fair, and without collusion or fraud; and that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of The City of New York, is, shall be, or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party making the estimate that the several matters stated therein are in all respects true; or, if the bidder is a corporation, by the oath, in writing, of an officer of such corporation, with
8119 knowledge of the facts and having authority to make such sworn statement.

25. Each bid or estimate shall be accompanied by the consent, in writing, of two householders and freeholders in The City of New York or of a guaranty or surety company, duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

26. No bid or estimate will be considered unless accompanied by money or a certified check drawn on a National or State Bank located in The City of New York, to the order of the Comptroller, to

the amount of five per centum of the amount of the bond required, as provided, in section 420 of The Greater New York Charter.

27. For particulars as to the repairs or the quantity or quality of the supplies, or the nature and extent of the work, reference must be made to the specifications and maps on file in the office of the Chief Engineer of Light and Power Department of Water Supply, Gas and Electricity.

28. Bidders are requested to make their bids or estimates upon the blank form prepared by the Commissioner, a copy of which, with the proper envelope in which to inclose the bid, together with a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefore at the office of the Chief Engineer of Light and Power of the Department of Water Supply, Gas and Electricity, Room 1319, No. 21 Park Row, The City of New York.

The City of New York, January 20, 1906.

WM. B. ELLISON,
Commissioner of Water Supply, Gas and Electricity.

8120

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF BRONX.

CONTRACT AND SPECIFICATIONS.

For Furnishing Gas Lamps, etc. on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the same and also Lamps belonging to The City, Supplying New Lamps when required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks and Public Places in the Borough of Bronx, in The City of New York, for the term of this Contract, from February 1st, 1906, to December 31, 1906, both inclusive, as per Specifications and Proposals herein contained or hereto attached.

This Agreement, made and entered into this 14th day of May, in the year one thousand nine hundred and six, by and between The City of New York, by the Commissioner of Water Supply, Gas and Electricity, party of the first part and Consolidated Gas Co. of New York, Contractor, party of the second part, pursuant to the provisions of The Greater New York Charter.

WITNESSETH, That the parties to these presents, each in consideration of the agreements on the part of the other, herein contained, have mutually agreed and hereby mutually agree, the party of the first part for itself and its successors, and the party of the second part for itself and its heirs, successors and assigns, as follows:

8121 (*A*) Wherever in this contract the words "The City," or "The Commissioner," or a pronoun in the place of either of them is used, they shall mean and intend the party of the first part or the Commissioner of Water Supply, Gas and Electricity of the City of New York; wherever the words "Borough President" are used in this contract they shall mean and intend the President of the Borough above mentioned; wherever in this contract the words "The Department," or a pronoun in place of them is used, they shall mean and intend the Department of Water Supply, Gas and Electricity in The City of New York.

(*B*) Wherever in this contract the word "Contractor" or pronoun in the place of it, is used, the same shall mean and intend the party of the second part to this agreement.

(*C*) Whenever the word "Engineer" is used in this contract, it shall mean and be taken to mean and intend the Chief Engineer of Light and Power of the Department, or the Assistant Engineer, or other person or official, duly appointed or designated therefor, pursuant to The Greater New York Charter, as amended, by the Engineer, to inspect, test, examine and accept the supplies of lanterns, repairs or supplies, which are the subject of this contract, limited by the particular duties intrusted to him.

(*D*) The Contractor will furnish gas lamps and connect in place on the streets, etc., for the party of the first part, at the Contractor's own cost and expense, at the times and places and in the manner and under the conditions herein specified, and light, extinguish, clean, repair and maintain the said lamps and others owned
8122 by The City and supply new lamps when required, and furnish burners and appliances for improved system of lighting on the streets, avenues, parks and public places in the Borough of Bronx in The City of New York, for the term of this contract from Feb. 1st, 1906, to December 31, 1906, both inclusive, and will accept as full compensation therefor the sum or price hereinafter named, which sums or prices are the amounts at which this contract was awarded to the Contractor at the public letting thereof. The said specifications, the proposal for bids or estimates, the bid or estimate and the bond required are and shall be a part of this contract.

(*E*) The Contractor will not ask, demand, sue for or recover for any lanterns furnished, supplies delivered, repairs made, or work performed under this contract, any extra compensation beyond the amounts payable for the several classes of work and supplies herein enumerated, which shall be actually supplied at the price therefor, herein agreed upon and fixed.

(*F*) The Engineer shall inspect and test or have tested the lamps, governors, regulators, repairs and supplies furnished, and see that the same strictly correspond with the specifications hereinafter set forth, and the Engineer is hereby authorized and empowered to reject any of the said lamps, governors, regulators, repairs and supplies offered under this contract, for the reason that the same do not comply in quality, or quantity, or time or place of maintenance, with the specifications herein contained or hereto annexed.

(*G*) Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such assistant or other 8123 persons as shall be designated by the Commissioner shall perform all the duties and be vested with all the power herein given to the Engineer.

(*H*) To prevent all disputes and litigations, the Engineer shall, in all cases, determine the amount, quantity and quality of the lamps, supplies, repairs, and work, which are to be paid for under this contract, and he shall determine all questions in relation to said lamps, supplies, repairs and work, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of the Contractor, and his estimate and decision shall be final and conclusive.

(*I*) Any doubt as to the meaning of the contract, including the specifications, or any obscurity as to the wording of them, will be explained by the Engineer, and all directions and explanations required, alluded to, or necessary to complete any of the provisions of these specifications, and give them due effect, will be given by the Engineer.

(*J*) The Contractor shall commence the delivery of the lamps and other apparatus called for by this contract, and the lighting of the lamps and other services, supplies and repairs called for under this contract, as soon as he shall be ordered so to do by the Commissioner; he will carry on such contract as required from time to time, with such force and in such manner and order, and at such times and seasons, as may be directed by the Commissioner, and that he will fully and entirely perform this contract on his part on the 31st day of December, 190 .

(*K*) In case any lamp shall fail to burn continuously and give the candle power required throughout each and every night, 8124 during the term of this contract, during the hours specified in the time-table hereto annexed, or such hours as the Commissioner may from time to time prescribe, and such failure shall not be due to any act or omission of The City, its officers, agents or employees, or any act or omission of the person or corporation whose duty it shall be to supply the gas, etc., the Contractor shall and will pay to The City a sum of money equal to the charge to The City for one night's burning, if the lamp fails to burn continuously, and one-half of this amount if the lamp fails to give the candle power required for each and every night or part thereof, that such failure shall continue, which said sum, in view of the difficulty of ascertaining the loss which The City will suffer by reason of such failure, is hereby agreed, fixed and determined by the parties hereto, as the liquidated damages that The City will suffer by reason of such failure, and not as a penalty, and The City shall and may deduct and retain the amount of such liquidated damages out of any moneys which may be due or become due to the Contractor under this agreement.

(*L*) Neither an extension of time, for any reason, beyond the date fixed for the delivery of the lanterns, repairs and supplies, nor the delivery and acceptance of any such delivery of lanterns, repairs and supplies, called for by this contract, shall be deemed to be a waiver by the Commissioner of the right to abrogate this contract for abandonment or delay in the manner herein provided.

(*M*) The Contractor will employ only competent, skilful and faithful men to do the work, and he further agrees that whenever the Commissioner shall inform him in writing that any man engaged in the work is, in his opinion, incompetent or un-
8125 faithful, he will discharge him from the work and will not again employ him upon the work.

(*N*) The Contractor shall receive the following prices as full compensation for furnishing and maintaining the lanterns, apparatus and accessories, and performing the services herein provided to be performed by the Contractor, viz.:

OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CITY.

I. For maintaining, repairing and connecting ready for use the Public Lamps and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City will be furnished to the Contractor and put in place by him for the amount of this bid, for the term of this contract, in the Borough of Bronx, to wit.:

For furnishing all the above for each lamp, at each lamp, for 258 in number of same, the sum of Fifty cents (50c.) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for Lamps in excess in number of same, the sum of Fifty cents (50c.) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

8126 For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($....) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

II. For furnishing, maintaining, repairing and connecting ready for use the public lamps, and for other fixtures and appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lanterns, lamp-irons and cross-heads thereto, all the above for each lamp to be furnished by the Contractor and erected by him as required, for the term of this contract, in the Borough of Manhattan, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

8127 For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

MANTLE GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

III. For furnishing, maintaining, repairing and connecting, ready for use, each mantle gas lamp complete with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods, regulating apparatus, cross-heads and lamp-irons, necessary for each lamp to produce a light of not less than sixty (60) candle power, and also operating it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto. All the above for each lamp to be furnished by the Contractor and erected by him as required for the term of this contract, in the Borough of Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for all such Lamps in the Borough of The Bronx, stated to be 6013 in number of same, the sum of One 00/100 dollar ($1.00) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for Lamps in excess, in number of same, the sum of One 00/100 dollar ($1.00) per lamp, per month. 8128

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of................ Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp, per month.

IV. For the erection of each new lamp-post, according to the specifications, furnished by The City of New York, replacing one not now owned by it, with cross-heads if required, all in place, including painting, the sum of Eight 00/100 dollars ($8.00).

(*O*) No payment will be made or allowed on account of supply of lanterns, services, repairs or supplies for any lamp, except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

(*P*) In case the Contractor shall be unable at any time during the continuance of this contract to furnish lamps or to light any of the lamps as specified in this agreement, then the Contractor shall give immediate notice to the Commissioner of his inability to furnish said lamps or to light such lamps, stating the streets in which the lamps cannot be furnished or lighted and the cause thereof. And in case the use of any of the lamps shall be suspended or discontinued, and other lamps shall be used in consequence of such 8129 suspension or discontinuance, then the gas lamps which may have been suspended, or discontinued, shall not be re-lighted except pursuant to an order for such lighting by the Commissioner.

(*Q*) The Contractor shall indemnify and save harmless The City, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits based on or arising out of the alleged infringement of any patent or patent right, and against, and from all damages and costs to which they or any of them may be put by reason of any such alleged infringement or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under this contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the Contractor or his agents or servants. So much of the moneys due to the Contractor under and by virtue of this agreement, as shall or may be deemed necessary by the Commissioner, shall or may be retained by The City until all such suits, actions and claims shall have been settled, and evidence to that effect furnished to the satisfaction of the Commissioner.

(*R*) If the work to be done under this contract shall be abandoned by the Contractor, or if this contract shall be assigned, or the work sublet by him, otherwise than is herein specified, or if at any time the Engineer shall be of the opinion, and shall so certify in writing to the Commissioner that the performance of the contract is unnecessarily or unreasonably delayed, or that the Contractor 8130 is wilfully violating any of the conditions or covenants of this contract, or specifications, or is executing the same in bad faith, or not in accordance with the terms thereof, or if the work be not fully completed within the time named in this contract for its completion, the Commissioner shall notify the Contractor to

discontinue all work, or any part thereof, under this contract, by a written notice to be served upon the Contractor, either personally or by leaving said notice at his residence, or with his agent in charge of the work, or with any employee found on the work, and thereupon the Contractor shall discontinue the work, or such part thereof, and the Commissioner shall thereupon have the power to contract for the completion of the contract in the manner prescribed by law, or to place such and so many persons as he may deem advisable, by contract or otherwise, to work at and complete the work herein described, or such part thereof, and to use such materials as he may find upon the line of the work, and to procure other material for the completion of the same, and to charge the expense of said labor and materials to the Contractor; and the expense so charged shall be deducted and paid by The City out of such moneys as may be due or may at any time thereafter grow due to the Contractor under and by virtue of this contract, or any part thereof. And in case such expense shall exceed the amount which would have been payable under the contract if the same had been completed by the Contractor, he shall — the amount of such excess to The City; and when any particular part of the work is being carried on by the Commissioner, by contract or otherwise, under the provisions of this clause of the contract, the Contractor shall continue the remainder of the work in conformity with the terms of this contract, and in such manner as in nowise to hinder or interfere with the persons or workmen employed, as above provided by the Commis-
8131 sioner, by contract or otherwise, to do any part of the work, or to complete the same under the provisions of this article of the contract.

(*S*) If the Contractor shall not well and truly observe, perform, fulfill and keep all and si-gular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case the Commissioner may and shall have the power, on the part of the said party of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be henceforth null and void.

(*T*) On or after the first day of each and every month during the term of this contract, the Contractor shall furnish proof to the satisfaction of the Commissioner, that he has fully performed and fulfilled this contract in all particulars and conditions as aforesaid during the preceding month, and particularly that he has furnished the lanterns, supplies and repairs as herein specified, and that all lanterns have been cleaned each day of said month, and also that the gas burners have been lighted and the lanterns have each given an illuminating power as specified for each type, as required by this contract, during all the time that the lamps were required to be kept lighted, and also proof to the satisfaction of the Commissioner as to all extinguishments of lamps due to non-supply of gas or defective lanterns, including the location of each lamp extinguished, the date and length of extinguishment in each case, whereupon the Commissioner shall certify the fact and in his certificate state the amount to which the Contractor shall be entitled for all the 8132 duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the Contractor therefor the sum to which he shall be so entitled; and without such certificate and requisition the Contractor shall not be or become entitled to any payment under and in respect to the terms of this contract, or for the light, lamps and accessories or in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of The City, he shall, within thirty days thereafter, pay to the Contractor the amount thereof in lawful money.

(*U*) The City shall not, nor shall any department or officer thereof be precluded or estopped by any return or certificate made or given by the Commissioner, any Engineer or other officer, agent or appointee of The City under any provision of this agreement from at any time (either before or after the final completion and acceptance of the work and payment therefor pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this agreement, or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the specifications; and The City shall not be precluded or estopped, notwithstanding an*d* such return or certificate and payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the specifications.

8133 (*V*) This contract shall not be binding or of any force unless the Comptroller of The City shall indorse hereon his certificate that there remains unexpended or unapplied, as provided in The Greater New York Charter, a balance of the appropriation or fund applicable thereto sufficient to pay the estimated expense of executing this contract, as certified by the officers making the same.

(*W*) The residence or place of business given in the bid or estimate upon which this contract is founded, is hereby designated as the place where all notices, letters and other communications shall be served, mailed or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above-named place, or deposited in a post-paid wrapper in any post-office box regularly maintained by the post-office shall be deemed sufficient service thereof upon the Contractor. The place named may be changed at any time by an instrument, in writing, executed and acknowledged by the Contractor and delivered to the Commissioner. Nothing herein contained shall be deemed to preclude or render inoperative service of any notice, letter or other communication upon the Contractor personally.

(*X*) This contract shall be subject and subordinate to the rights, claims and demands of all persons, parties or corporations under contracts or agreements (if there are any such) which are valid and lawful charges and liabilities against The City of New York, and which the law requires shall be defrayed and answered unto by The City.

(*Y*) The Contractor will give his personal attention constantly to the faithful prosecution of the work; he will not assign, 8134 transfer, convey, sublet or otherwise dispose of this contract, or his right, title or interest in or to the same or any part hereof, without the previous consent in writing of the Commissioner indorsed hereon or hereto attached; and he will not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sublet or otherwise dispose of this contract, or of his right, title or interest therein, or any of the money to become due under this contract, to any other person, company or other corporation, this contract may, at the option of the Commissioner, be revoked and annulled and The City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the Contractor, and to his assignee or transferee; provided that nothing herein contained shall be construed to hinder, prevent or affect an assignment by the Contractor for the benefit of his creditors, made pursuant to the statutes of the State of New York; and no right under this contract, or to any money to become due hereunder shall be asserted against The City in law or in equity, by reason of any so-called assignment of this contract, or any part thereof, or of any moneys to grow due hereunder, unless authorized as aforesaid by the written consent of the Commissioner.

IN WITNESS WHEREOF, The Commissioner of Water Supply Gas and Electricity has hereunto set his hand and seal on behalf of The City, and the Contractor has caused its corporate seal to be hereunto affixed and its President and Secretary hereto to set their hands, and the parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner, one other to be 8135 filed with the Comptroller of The City, and the third to be delivered to the Contractor, the day and date herein first above written.

WILLIAM B. ELLISON, [L. S.]
Commissioner of Water Supply, Gas and Electricity.

CONSOLIDATED GAS COMPANY OF NEW YORK.
W. R. ADDICK, *President.* [SEAL.]
R. A. CARTER, *Secretary.*

Attest:
R. A. CARTER, *Secretary.*

On page nine line sixteen the date "14th" written over the word "first" stricken out and on line Seventeen the word "May" written over the word "February" stricken out before execution.

R. J. McKEON.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

On this 28th day of May, 1906, before me personally came William B. Ellison, to me known and known to me to be the Commissioner of Water Supply, Gas and Electricity, the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same as such Commissioner for the purposes therein mentioned.

ROBERT J. McKEON,
Commissioner of Deeds, N. Y. C.

8136 THE CITY AND STATE OF NEW YORK,
County of New York, ss:

On this 14th day of May, 1906, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Company of New York, and R. A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Company of New York, who being by me severally duly sworn, did depose and say, each for himself, as follows: The said W. R. Addicks, that he is the Vice-President of said Company, and the said R. A. Carter that he is the Secretary of said Company, the Company described in and who executed the above instrument; that he knew the seal of said Company; that the seal affixed to the said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, N. Y. C.

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

On this..........day of............190 , before me personally came ....
................to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

8137 Know All Men by These Presents, THAT WE, Consolidated Gas Co. of New York and the United States Fidelity and Guaranty Company of The City of New York are held and firmly bound unto THE CITY OF NEW YORK, in the sum of Seventeen Thousand DOLLARS, lawful money of the United States of America, to be paid to THE CITY OF NEW YORK, or to its certain attorneys, successors or assigns, for which payment, well and truly to be made, we bind ourselves, and our several and respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals. Dated this 14th day of May, in the year one thousand nine hundred and six.

WHEREAS, The above bounden Consolidated Gas Co. of New York by an instrument in writing, under its corporate seal duly attested, bearing even date with these presents, and one part whereof is hereunto annexed, has contracted with The City of New York to furnish the Lanterns, Maintenance, Operation, Repairs and Supplies to the Public Lamps of The City of New York, as in said contract will more fully and at large appear:

Now, THEREFORE, The conditions of the above obligation are such, that if the said Consolidated Gas Co. of New York its successors or assigns, shall indemnify and save harmless The City of New York, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits and actions based on, or arising out of the alleged infringement of any patent or patent rights, and against and from all damages and costs to which they, or
8138 any of them, may be put by reason of any such alleged infringement, or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under said contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the said Consolidated Gas Co. of New York, its agents or servants, and if the said Consolidated Gas Co. of New York or its successors or assigns, shall well and truly, and in a good, sufficient and workmanlike manner, perform, fulfill, observe and keep the said contract, and each and every of the covenants, provisions, conditions and terms in said contract contained, or to be performed, fulfilled, observed and kept, then this obligation to be void; otherwise to remain in full force and virtue.

CONSOLIDATED GAS COMPANY
OF NEW YORK.
W. R. ADDICKS. [L. S.]
R. A. CARTER, *Sec.* [L. S.]

Attest:
R. A. CARTER.

UNITED STATES FIDELITY AND
GUARANTY COMPANY,
By SYLVESTER J. O'SULLIVAN,
Manager.

Attest:
GEO. E. HAYES,
Attorney in Fact.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

On this................day of..............190 , before me personally came ....

....

....

to me known and known to me to be the persons described in and who executed the foregoing bond, and they severally acknowl-
8139 edged to me that they executed the same for the purposes therein mentioned.

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of New York, ss:*

On this 14th day of May, 1906, before me personally came W. R. Addicks, to me known and known to me to be the Vice-President of the Consolidated Gas Co. of New York, and R. A. Carter, to me known and known to me to be the Secretary of the Consolidated Gas Co. of New York, who, being by me severally duly sworn, did say, each for himself, as follows: The said W. R. Addicks, that he was Vice-President of said Company, and the said R. A. Carter, that he was Secretary of said Company; that he knew the corporate seal of said Company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that, by like order, he thereto signed his name and official designation.

ROBERT J. McKEON,
Commissioner of Deeds, New York City.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ...of said City, being duly sworn, do depose and say that I am a............holder in The City of New York, and reside at Number...
Borough of Manhattan, in said City, and that I am worth the sum of .... DOLLARS,
$140 the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

—— ——.

Subscribed and sworn to before me, this...................day of ....190 .

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY, COUNTY AND STATE OF NEW YORK, *ss:*

I, ...of said City, being duly sworn, do depose and say that I am a............holder in The City of New York, and reside at Number...
Borough of Manhattan, in said City, and that I am worth the sum of .... DOLLARS, the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

—— ——.

Subscribed and sworn to before me, this..................day of.............190 .

—— ——,
Notary Public or Commissioner of Deeds.

8141 APPROPRIATION.

COMMISSIONER'S CERTIFICATE.

In conformity with the provisions of section 149 of The Greater New York Charter, it is hereby certified that the estimated cost of the work, materials and supplies required by the within contract, amounting to Sixty-eight Thousand, Three Hundred Fifteen and Fifty One Hundredth- Dollars ($68,315.50/100), is chargeable to the appropriation of the Department of Water Supply, Gas and Electricity, for the year 1906, entitled "Lamps and Lighting, Boroughs Manhattan and the Bronx for 1906."

—— ——,
Commissioner of Water Supply,
Gas and Electricity.

Dated January 20th, 1906.

Estimated Cost of Contract Made with the
CONSOLIDATED GAS COMPANY
For the Supply and Maintenance of Gas Lamps in the
BOROUGH OF THE BRONX.

From February 1, 1906, to December 31, 1906, both inclusive.

Number and kind of lights and price for 11 months.	Estimated amount of contract.	Estimated amount of surety.
95 Open Flame Gas Lamps at $5.50........	522.50	
6,013 Mantle Gas Lamps at $11.00.........	66,143.00	
Estimated Increase:		
250 Mantle Gas Lamps at..................		
300 Mantle Gas Lamps at $11.00...........	1,650.00	
Total	$68,315.50	$17,080

8142 COMPTROLLER'S CERTIFICATE.

The City of New York,............190 .

In pursuance of the provisions of section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation.......................
....
....
applicable to this contract sufficient to pay the estimated expense of executing the same, viz.: $........

—— ——,
Comptroller.

SPECIFICATIONS.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining same, and also Lamps belonging to the City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved System of Lighting on Streets, Avenues, Parks, and Public Places, in the Borough of Bronx, *tan,* in The City of New York, for the Term of this Contract, from Feb'y 1st, 1906, to December 31, 1906, both inclusive.

1. The lamps shall be lighted during such times as the public lamps throughout The City of New York may be required to be lighted by the regulations of the said party of the first part, in accordance with a time-table hereto annexed, marked "A," and made a part of these specifications. The Commissioner may direct and require, by notice to that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any other time or times dur-
ing the continuance of this contract; and the Contractor shall
8143 and will light the same, and continue them burning, in ac-
cordance with any and every direction of the Commissioner to that effect. If the lamps are to be lighted by means of gas, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; and it is also expressly agreed that all the lamps shall be extinguished within fifty (50) minutes from the time fixed in the time-table as the time for the beginning of extinguishing. It is also agreed that they shall be lighted either by means of a torch or the use of a ladder, or by such other method as may be approved by the Engineer, and that the lamp-lighters will not be permitted to climb the lamp-posts for such a purpose.

2. The Commissioner shall have the right at any time to increase or diminish the number of lamps required to be lighted by the Contractor under this contract, and the right is reserved by the Commissioner, at any time during the continuance of this contract, to increase or diminish the number of hours during which the said lamps or any portion of them are to be kept burning, and to change said time-table in any particular. All lamps ordered discontinued shall be discontinued within forty-eight (48) hours after receipt of notice by Contractor, and no charge for same shall be made after the expiration of said forty-eight (48) hours.

3. For the information of bidders on this contract, it is stated that the illuminant to be furnished to the lanterns will be illuminating gas, such gas will have an illuminating power of not less than twenty-two candles, when tested at a distance of not less than one mile from the place of manufacture, on the improved form of the
Bunsen Photometer, by means of a Bray slit, Union No. 7
8144 burner, consuming five cubic feet of gas per hour. The test-
ing candle shall be of sperm, of six to the pound, and consuming, as near as possible, one hundred and twenty grains of spermaceti per hour; and no test shall be recorded in which the candle

consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And as regards purity, gas shall be clean and of such quality that it will not deteriorate the mantles in the mantle lamps using same so as to shorten their length of life under similar conditions. Each one hundred (100) cubic feet of gas shall not contain more than five (5) grains of ammonia, nor more than twenty (20) grains of sulphur, nor more than a trace of sulphuretted hydrogen.

4. The City shall have the right at any time to test the quality and illuminating power of the lamps and light as furnished on the street, and for that purpose at least twenty-five (25) lamps may be selected from those in actual use in each district of each Borough, by the Engineer, in each and every calendar month, and their illuminating power shall be determined photometrically by the Chief Gas Inspector or the Engineer, at The City's Laboratory, or elsewhere, at the discretion of the Engineer. The average candle-power of the lamp so tested shall constitute the basis for calculating the light furnished by the lamps burning during the month and for which the charge is made. The term "Lamp" herein means the burner complete with mantle and chimney, if any, as found set up for use in any of the streets or public places, and the test herein referred to shall be made with the uncolored clear glass globe which incloses the lamp on the street, removed, and under the same conditions of supply of gas as when in use on the street; the object of the test being to determine that the actual illuminating power, 8145 as contracted for, is given on the street by each lamp. Each lamp shall be tested with the gas furnished by the company furnishing gas to said lamp when in actual service on the street, the gas being first tested for candle-power.

The Contractor operating and maintaining the lamps tested shall replace said lamps whenever they are taken down for test, free of cost to The City, and shall always keep in stock ready for operation, at least 25 lamps of each class.

Twenty-two candle power gas is herewith defined as gas which, when tested, at a distance of not less than one mile from the place of manufacture, on the improved form of Bunsen Photometer, by means of a Bray slit, Union No. 7 burner, consuming 5 cubic feet of gas per hour, shall give 22 candle-power; the testing candle shall be of sperm of six to the pound, and consuming, as near as possible, 120 grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than 114 or more than 126 grains of spermaceti per hour.

5. The burners for open flame gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three (3) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches. The burners for mantle gas lamps in all boroughs shall be of such a kind and construction that they will burn, as closely as is practicable, three and one-half (3½) cubic feet of gas per hour, under a pressure of not less than one and one-half (1½) inches.

The lamps and burners will be of such a kind and construction that when tested, under the same conditions as exist in service on the

street, by photometric test by horizontal measurement, they shall give, the glass globe enclosing same having been removed, at least twelve (12) candle power in case of open flame lamps, and
8146 at least sixty (60) candle power in the case of mantle lamps.

The gas burners shall be of a capacity to burn at least the gas specified for each type of burners, and they shall be kept in good order and repair, and renewed whenever required by the Engineer. He shall also have same tested for consumption of gas when it is deemed necessary, and any burner not consuming the required amount of gas at the pressure specified shall be removed and replaced by this Contractor.

6. Governors will be furnished by the Contractor for the furnishing, maintaining and repairing of mantle gas lamps. Such governors will be placed on each mantle lamp and will govern the maximum consumption of the lamps so that they will not consume more than three and one-half (3½) cubic feet of gas, within a variation of pressure of five (5) inches.

Checks or regulators shall be placed upon the open flame lamps by the Contractor furnishing the lanterns, cocks, tubes, burners and so on, and they shall be of such a kind as to govern the maximum consumption of these lamps so that they will not consume more than three (3) cubic feet of gas at one and one-half (1½) inches pressure.

The governors, checks or regulators must be of such a kind and construction as shall be satisfactory to the Contractor for the supply of gas, and to the Engineer, and if the two Contractors (the one for the supply of gas, and the one for the supply of lanterns) cannot agree on a governor satisfactory to both parties, the matter shall be submitted to the Chief Engineer of Light and Power, of the Department, for decision, and on his decision the governor selected shall be placed on each of the mantle lamps.

8147 7. As soon as possible the Department will meter a certain number of the Public Gas Lamps within the districts of each of the Contractors furnishing gas, in order to establish the actual consumption of the gas lamps of the different types as mentioned. This will be done approximately by attaching a standard meter to about one in ten of the lamp-posts for a sufficient number of hours or nights to establish the average consumption of the lamps, and the quantity so obtained will be the consumption of gas upon which the City will pay.

The pressure will also be taken, if necessary, at a point as closely as possible to the metered lamp, in order to check this consumption.

Ample facilities and notice will be given the Contractors so they can confirm and check these tests, in order to arrive at as fair a conclusion as is possible under the circumstances, and the test will be amplified, if necessary, until results are obtained which, in the opinion of the Engineer, are fair and reasonable to all concerned.

7a. The party of the first part shall have the right to require that burners of a greater consuming capacity than three or three and one-half cubic feet of gas as required per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of this contract.

7*b*. Sample lamps, showing all burning appliances and connections for each type of mantle or other lamp to be furnished, shall be submitted when called for by the Commissioner to the Engineer for the purposes of comparison and test. Such sample lamp shall be complete in every respect, and shall accurately represent the burner which the Contractor uses on each type of lamp under this contract, and the sample lamp, like lamps in service, shall be so com-
8148 bined and adjusted as to secure, under all ordinary variations of pressure, a candle power of not less than sixty in the case of mantle lamps and twelve in the case of open flame lamps, the glass enclosing the lamp being removed during test.

The Commissioner reserves the right to reject any bid should the sample lamp submitted be not well made or should the tests on same not be satisfactory to the Engineer and so certified by him to the Commissioner.

8. Incandescent mantles for either gas or naphtha lamps when supplied for the lamps now using same, or for lamps which may be hereafter specified by the Commissioner, shall be of the very best quality, capable of producing and maintaining under the conditions of this contract not less than 60 candle-power. Whenever the mantles become smoked or deteriorated to such an extent that at least 60 candle power is not obtained, they must be replaced by new mantles by the Contractor. The Commissioner reserves the right to have the lamps and the character of mantles furnished, tested, basing test on the same conditions as those under which they are required to burn on the streets, except that the glass globe enclosing the lamp be removed, and to reject any lamps and mantles furnished that do not comply with the above requirements as to candle power. Anti-vibrators for lamps, using incandescent mantles, should be furnished with each lamp, and samples of same should be submitted to the Engineer for approval with the sample of lamp furnished him as mentioned elsewhere.

9. The Borough President or the Commissioner shall have the right at any time to place signs designating the names of the streets on any lamp or lamp-posts situated on the street corners of any street to be lighted under this contract without further ex-
8149 pense to The City, whether the said lamp or lamp-posts shall belong to The City or not, but such sign shall not be put on in such a way as to interfere with the operation, repair or care of the lamp or lamp-post or to interfere with the light from the lamp.

If necessary, to prevent interference with the lighting, the Engineer may order that certain lamps of the older type of mantle lamps, now existing on certain street corners, shall be changed to a newer type of lamp, in which this interference does not arise.

Such glass or other street signs as are at present properly in place upon the lamps or lamp-posts shall be retained in their proper places and position.

All the glass or the globes of the lamps and street signs are to be of such a kind and kept in such a cleanly condition that not more than ten per cent. (10%) of the light of the lamps shall be absorbed or obstructed by the uncolored glass; and the lamps and street signs shall all be cleaned daily; and in each of these cleanings, all the glass of the lanterns, as well as the glass of the street signs, shall be thoroughly cleaned both on the inside and on the outside, and all dust and dirt shall be brushed from the frames.

10. The lamps are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the Contractor, without cost to The City.

Stained glass of a ruby color of such tint and arranged in a manner approved of by the Commissioner shall be placed on the fire. alarm signal lamps, open flame type, and shall also be required in
the tops of the open flame lanterns nearest the several fire
8150 alarm signal boxes and in the tops of the glass lanterns on
the street corner nearest said boxes. And in case any of said stained glass should be broken after being placed in the lamps, then the Contractor shall furnish and replace the same, except in the Boroughs of Manhattan and The Bronx, where mantle lamps are used for fire alarm lanterns, the glass will be provided by The City and put in place by Contractor without further cost to The City.

11. The cocks, tubes, tips, mantles, chimneys, globes, burners and checks which may become worn out or useless, or which, in the opinion of the Engineer are worn out or useless, shall be immediately replaced by the Contractor, at his own cost and expense.

12. The open flame and mantle gas lanterns, lamp-irons and cross-heads shall be painted at least once a year with one heavy coat of best paint, ground in oil in such a manner and of such a color as shall be satisfactory to the Commissioner.

Fire-alarm lanterns shall be painted as specified above. All the material shall be of the best quality, and prepared so as to present a gloss finish. While painting the lanterns care must be taken that the glass shall not be daubed or smeared with paint. All the painting is to be completed by the first day of July next, and the Commissioner is to be notified when and where the painting is to be commenced.

13. New gas lanterns are to be fitted up on lamp-posts on any street, avenue, park or public place, wherever the same may be required by the Commissioner.

New lamp-posts, when properly equipped, erected and con-
8151 nected for supplying gas by the Contractor for such supply,
will be turned over to the Contractor for the maintenance of burning appliances and lamps, and the latter shall erect and connect on each new lamp-post immediately such burning appliances and lamps as may be required under this contract.

14. All lanterns, cross-heads and lamp-irons used for gas lamps, which, in the opinion of the Commissioner, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed and other lanterns, cross-heads and lamp-irons, substituted in lieu thereof, and mantle lamps substituted for open flame lamps, if required, by the Contractor as noted in the proposals.

15. All supplies, which under this agreement, may be required

to be furnished by the party of the first part, will be so furnished, but the cartage thereof shall be done by the Contractor.

16. Subject to the provisions of section 469 of the Greater New York Charter, the Contractor will, upon being required so to do by the party of the first part, erect new lamps in and along any or all the streets, avenues and public places within the limits aforesaid or adjacent thereto, of the districts for which the bid is made, and will light and connect such gas lamps to the standpipes of the lamp-posts of the City or the Contractor for supply of gas, when ordered so to do by the Commissioner.

17. The Commissioner may determine and designate in any locality, after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the period above-mentioned; also upon such determination to decline any estimate or part thereof for lighting such locality with illuminating material other than that so determined upon.

8152 18. If the requirements of The City, under this contract, includes any lamps not erected and connected at the time of the making such estimate or bid, thirty days from the date of the execution of this agreement, and such further time as may be deemed reasonable by the Commissioner, will be allowed the Contractor in which to supply, erect and connect the lanterns on and to the standpipes of the gas lamp-posts. Such lamps and all such connections, material and labor shall be furnished by the Contractor without other expense to The City, except where such lamps of the open flame type belong to The City of New York, they will be furnished by said City to the Contractor and erected by him.

19. No payment on account of any such lamps will be made to the Contractor for the time so allowed, nor until the same shall have been put in complete service and connected with the mains or conductors of the Contractors for the supply of gas, nor will payment be made on account of supply of any lantern except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

20. The Contractor shall indemnify and save The City harmless from any and all claims and suits for damages by reason of any infringement of patent rights in the use under this contract of any lantern or any burning appliances connected therewith, or for repairs or supplies to such lanterns or burning appliances.

21. In order that the Commissioner and his assistants may determine whether the gas lamps are lighted and extinguished in accordance with the time-table hereinbefore mentioned, the Contractor shall furnish to the Commissioner a map or maps showing the lamps in the district of each lamp-lighter, and designating
8153 the particular lamp at which each lighter commences to
light, and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamp-lighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the Contractor shall notify the Commissioner of any change which may be made in the beginning and finishing points on any lamp district during the term of this contract. The

Contractor shall furnish to the Commissioner a report daily and also weekly, stating therein the number and location of all new lamps fitted up and lighted, of all lamps relighted, and of lamps discontinued during the preceding day and week. Nothing herein contained shall be construed or deemed as granting to the Contractor any sole or exclusive right or privilege, or as preventing the party of the first part from granting the like privileges as are hereby given to the Contractor, to any other company, persons or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas or other illuminant his or their own house, store, manufactory or premises.

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TIME TABLE

For Lighting and Extinguishing Public Gas Lamps for the Year 1906.

Date.		Complete lighting in one hour.	Complete extinguishing in 50 minutes.	Hours. per night.	Hours per week.	Hours per month.
		From time given.				
January	1....	4.12 P. M.	6.27 A. M.	14.15	99 45	
	8....	4.22	6.22	14.00	98.00	
	15....	4.32	6.17	13.45	96.15	
	22....	4.42	6.12	13.30	94.30	
	29....	4.47	6.07	13.20	93.20	481.50
February	5....	4.57	6.02	13.05	91.35	
	12....	5.07	5.57	12.50	51.20 (4 days)	
	16....	5.07	5.52	12.45	38.15 (3 ")	
	19....	5.17	5.47	12.30	50.00 (4 days)	
	23....	5.17	5.42	12.25	37.15 (3 ")	
	26....	5.22	5.32	12.10	48.40 (4 days)	317.05
March	2....	5.22	5.27	12.05	36.15 (3 days)	
	5....	5.32	5.17	11.45	82.15	
	12....	5.42	5.07	11.25	79.55	
	19....	5 52	4.57	11.05	77.35	
	26....	5.57	4.47	10 50	75.50	351.50
April	2....	6.07	4.37	10.30	42.00 (4 days)	
	6....	6.07	4.32	10.25	31.15 (3 ")	
	9....	6.17	4.22	10.05	70.35	
	16....	6.27	4.17	9.50	29 30 (3 days)	
	19....	6.27	4.12	9.45	39.00 (4 ")	
	23....	6.37	4.02	9 25	65.55	
	30....	6.47	3.52	9.05	63.35	341.50
May	7....	6 57	3.42	8.45	35.00 (4 days)	
	11....	6.57	3.37	8 40	26.00 (3 ")	
	14....	7.07	3.27	8.20	58.20	
	21....	7.12	3.22	8.10	57.10	
	28....	7.12	3.17	8.05	56.35	233.05
June	4....	7.17	3.12	7.55	55.25	
	11.. .	7.17	3.07	7.50	54.50	
	18....	7.22	3.07	7.45	54.15	
	25....	7.27	3.07	7.40	53.40	218.10

July	2....	7.22	3.07	7.45	54.15	
	9....	7.17	3.12	7.55	55.25	
	16....	7.12	3.17	8.05	56.35	
	23....	7.07	3.22	8.15	57.45	
	30....	7.02	3.27	8.25	58.55	
						282.55
August	6....	6.57	3.37	8.40	60.40	
	13....	6.47	3.47	9.00	63.00	
	20....	6.37	3.52	9.15	64.45	
	27....	6.27	3.57	9.30	66.30	
						254.55
8155						
September	3....	6.17	4.07	9.50	39.20 (4 days)	
	7....	6.12	4.07	9.55	29.45 (3 ")	
	10....	6.02	4.17	10.15	71.45	
	17....	5.52	4.27	10.35	42.20 (4 days)	
	21....	5.47	4.27	10.40	32.00 (3 ")	
	24....	5.37	4.37	11.00	44.00 (4 days)	
	28....	5.32	4.37	11.05	33.15 (3 ")	
						292.25
October	1....	5.22	4.42	11.20	79.20	
	8....	5.12	4.52	11.40	58.20 (5 days)	
	13....	5.07	4.52	11.45	23.30 (2 ")	
	15....	4.57	5.02	12.05	84.35	
	22....	4.47	5.07	12.20	86.20	
	29....	4.37	5.17	12.40	88.40	
						420.45
November	5....	4.27	5.27	13.00	91.00	
	12....	4.17	5.32	13.15	92.45	
	19....	4.12	5.42	13.30	94.30	
	26....	4.07	5.52	13.45	96.15	
						374.30
December	3....	4.02	5.57	13.55	97.25	
	10....	3.57	6.07	14.10	99.10	
	17....	3.57	6.17	14.20	100.20	
	24....	4.02	6.22	14.20	28.40 (2 days)	
	26....	4.07	6.22	14.15	71.15 (5 ")	
	31....	4.12	6.27	14.15	14.15 (1 day)	
						411.05
						3980.25
Deduct, on account of 50 minutes extinguishing time....						30.25
Total number of hours burning..................						3950.

New York, *January 20th,* 1906.

The above time table will show the time for lighting and extinguishing public gas lamps for the year 1906, all lamps to be lighted within one hour from the time of beginning to light, and extinguished within fifty minutes of the time of beginning to extinguish.

WM. B. ELLISON,
Commissioner Dept. of Water Supply, Gas and Electricity.

C. F. LACOMBE,
Chief Engineer of Light and Power.

Endorsed: The City of New York, Department of Water Supply, Gas and Electricity. Contract. For Furnishing Gas Lamps, etc., on the Streets, and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining the same, and also Lamps belong-

ing to The City, supplying New Lamps when required, and 8156 for furnishing Burners and appliances for Improved System of Lighting on Streets, Avenues, Parks and Public Places in the Borough of Manhattan, in The City of New York, for the term of this Contract, from February 1st, 1906, to December 31, 1906, both inclusive. Consolidated Gas Co. of New York, Contractor. Dated May 14th, 1906. Assigned to..................
Approved as to form. John L. O'Brien, Ass't Corporation Counsel.
Dated ...., 190..

CITY'S EXHIBIT 7A.

No. 3.

THE CITY OF NEW YORK.

Department of

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE.

For Furnishing Gas Lamps, etc., on the Streets, etc., and for Connecting, Lighting, Extinguishing, Cleaning, Repairing and Maintaining such Lamps, and also Lamps belonging to The City, Supplying New Lamps when Required, and for Furnishing Burners and Appliances for Improved Systems of Lighting on Streets, Avenues, Parks and Public Places in the Borough of Bronx in The City of New York, for the Term of this Contract, from February 1st, 1906, to December 31, 1906, both inclusive.

Made this thirty-first day of January, 1906, by Consolidated Gas Co. of New York, No. 4 Irving Place, Borough of Manhattan, New York City.

8157 1. Consolidated Gas Co. of New York, do declare that the Consolidated Gas Company of New York is the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken.

2. It further declares that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair and without collusion or fraud.

3. It further declares that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer of The City of New York, is, shall be or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in this bid or estimate, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof.

4. It further declares that the names of the persons affixed to the consent hereto annexed were written by said persons respectively,

and that said persons are householders or freeholders in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. It has examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and it will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

8158 OPEN FLAME GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CITY.

I. For maintaining, repairing and connecting ready for use the Public Lamps and for other fixtures or appliances for illuminating material for each open flame gas lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, which cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City will be furnished to the Contractor and put in place by him for the amount of this bid, for the term of this contract, in the Borough of Bronx, to wit.:

For furnishing all the above for each lamp, at each lamp, for 95 in number of same, the sum of Fifty cents Dollars ($00/50) per lamp per month.

For furnishing all the above for each lamp, at each lamp, for lamps in excess in number of same, the sum of Fifty cents Dollars ($00/50) per lamp per month.

MANTLE GAS LAMPS—LANTERNS OWNED OR FURNISHED BY THE CONTRACTOR.

III. For furnishing, maintaining, repairing and connecting, ready for use, each mantle gas lamp complete with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods, regulating apparatus, cross-heads and lamp-irons, necessary for each lamp to produce a light of not less than sixty (60) candle power, and also operating it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of cross-heads, the furnishing, re-
8159 pairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto. All the above for each lamp to be furnished by the Contractor and erected by him as required by the term of this contract in the Borough of Bronx, to wit.:

For furnishing all the above for each lamp, at each lamp, for all such lamps in the Borough of Bronx, stated to be 6,013 in number of same, the sum of One 00/100 Dollars ($1.00) per lamp per month.

For furnishing all the above for each lamp, at each lamp, for lamps in excess in number of same, the sum of One 00/100 Dollars ($1.00) per lamp per month.

IV. For the erection of each new lamp-post, according to the specifications, furnished by The City of New York, replacing one not now owned by it, with cross-heads if required, all in place, including painting, the sum of Eight 00/100 Dollars ($8.00).

CONSOLIDATED GAS CO. OF NEW YORK,
By W. R. ADDICKS, *Vice-President.* [L. S.]

8160 THE CITY AND STATE OF NEW YORK,
County of New York, ss:

W. R. Addicks, being duly sworn, says for himself, that the several matters stated in the above estimate are in all respects true.

W. R. ADDICKS.

Subscribed and sworn to before me this 31st day of January, A. D. 1906.

WALLACE YOUNG,
Notary Public, Kings County,
or Commissioner of Deeds.

Certificate filed in N. Y. County.

SURETIES' AGREEMENT.

In Consideration of the premises, and of One Dollar to us and each of us in hand paid by The City of New York, the receipt whereof is hereby acknowledged—

We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, persons or corporation making the same, we will, upon its being so awarded, become bound as his, their or its sureties for its faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the same is ready for execution, we will pay, without proof of notice or demand, to the said The City of New York, or its successors, any difference between the sum to which such person, persons or corporation would be entitled upon the completion of such contract and the sum which The City of New York may be obliged to pay to the person, persons or corporation to whom the contract shall
8161 be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

In Witness Whereof, we have hereunto set our hands, this 1st day of February, one thousand nine hundred and six.

Name of first surety—

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.
By SYLVESTER J. O'SULLIVAN, *Manager.*

Attest:
GEO. E. HAYES,
Attorney in Fact.

The adequacy and sufficiency of the above-named sureties approved.

Dated this — day of May, 1906.

N. T. PHILLIPS,
Deputy & Acting Comptroller.

THE CITY AND STATE OF NEW YORK, *County of* ——, *ss:*

The above-named —— —— being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of —— Dollars ($—), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law. 8162

Subscribed and sworn to before me, this — day of ——, *A. D.* 190–.

—— ——,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of New York, ss:

The above-named —— —— being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of —— Dollars ($—), being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, *and over and above his liabilities as bail, surety and otherwise;* that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

Subscribed and sworn to before me, this — day of ——, *A. D.* 190–.

—— ——,
Notary Public or Commissioner of Deeds.

8163 STATE OF NEW YORK, *County of New York, ss:*

On the .... day of .... in the year .... before me personally came Sylvester J. O'Sullivan, to me known, who, being by me duly sworn, did depose and say that he resides in the City of New York; that he was manager of the United States Fidelity and Guaranty Company, the corporation described in, and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order. And the said Sylvester J. O'Sullivan further said that he was acquainted with George E. Hayes, and knew him to be the Attorney-in-Fact of said Company; that the signature of the said George E. Hayes, subscribed to the foregoing instrument, was in the genuine handwriting of said

George E. Hayes, and was subscribed thereto by like order of said Board of Directors, and in presence of him, the said Sylvester J. O'Sullivan.

LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

8164

STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

HOME OFFICE. BALTIMORE, MD.

At the Close of Business, June 30, 1905.

Commenced Business August 1, 1896.

ASSETS.

Real Estate	$404,286.56	
Baltimore City, State & Municipal Bonds	1,667,008.81	
United States Bonds	83,200.00	
Railroad and Other Bonds	127,050.00	
Bank Stocks	68,150.00	
Railroad Stocks	43,780.00	
Cash in Banks and Home Office	519,785.88	
Premiums Due from Agents, Less Commissions	358,252.49	
Loans on Mortgages	11,600.00	
Loans on Collateral	38,518.50	
Advances % Contracts Secured	119,046.34	
Interest Due and Accrued	31,595.99	
Due for Subscriptions Dept. Guaranteed Attorneys	29,177.45	
		$3,501,452.02

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LIABILITIES.

Capital Stock Paid in Cash	$1,700,000.00	
Premium Reserve	1,122,841.76	
Reserve for Unadjusted and Resisted Claims	251,038.89	
Collateral Deposits	80,053.47	
Surplus and Undivided Profits	347,517.90	
		$3,501,452.02

State of New York, *County of New York, ss:*

George E. Hayes, being duly sworn, says that he is Attorney-in-Fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said Company, as of June 30, 1905.

GEORGE E. HAYES. (Signed.)

Subscribed and sworn to before me, this 1st day of February, 1906.

(Signed) LOUIS B. CAZIARC,
Commissioner of Deeds, City of New York.

Indorsed: The City of New York, Department of Water Supply,
Gas and Electricity. Bid or Estimate for Furnishing Gas Lamps,
etc., on the Streets, etc., and for Connecting, Lighting, Extinguish-
ing, Cleaning, Repairing and Maintaining the Same and also
8166 Lamps belonging to The City, Supplying New Lamps, when
required, and for Furnishing Burners and Appliances for
Improved Systems of Lighting on Streets, Avenues, Parks and Public
Places, in the Borough of Bronx, in The City of New York, for the
term of this contract, from February 1st, 1906, to December 31,
1906.

(Here follow City's Exhibits 47, 51 and 54, marked pp. 8167, 8168, and 8169.)

AVERAGE CANDLE POW

Days.	Jan.	Feb.	Mar.	Apr.	May
1	..	..	..	..	..
2	..	..	..	..	..
3	..	..	..	..	..
4	..	..	..	..	..
5	..	..	..	..	..
6	20.78	..	..	22.44	20.94
7	22.01	..	..	..	..
8	..	..	..	23.01	..
9	..	..	19.86	..	..
10	..	22.79	22.29	..	..
11	..	20.45	..	..	..
12	21.12	..	..	..	..
13	..	..	..	..	22.13
14	22.14	..	..	20.91	..
15	..	..	..	24.39	..
16	..	22.79	19.50	..	..
17	..	20.48	..	..	..
18	22.19	..	22.39	..	..
19	..	..	..	..	..
20	20.76	..	..	..	21.92
21	..	..	..	..	..
22	..	..	..	21.94	..
23	..	22.60	23.55	..	..
24	..	20.76	21.03	..	..
25	20.68	..	..	..	..
26	..	..	..	..	21.89
27	24.01	21.70	..	..	..
28	..	19.54	..	..	..
29	..	..	..	21.25	..
30	23.40	..	..	..	..
31	20.42	..	21.69	..	21.88
Avg.	21.75	21.39	21.47	22.32	21.75

CITY'S EXHIBIT 47.

AVERAGE CANDLE POWER OF GAS DELIVERED BY CONSOLIDATED GAS CO. IN 1905.

ATTESTED BY CHIEF EXAMINER E. G. LOVE.

Mar.	Apr.	May	June		July	Aug.	Sept.	Oct.	Nov.	Dec.		Days.
..	..	..	..	..	24.86	24.97	24.19	..	23.68	23.78	..	1
..	..	..	..	..	..	25.23	23.60	23.76	23.56	23.82	..	2
..	..	..	..	..	25.32	24.81	..	24.05	24.09	..	..	3
..	..	..	..	..	..	25.56	..	24.46	24.14	22.86	..	4
..	..	..	..	..	24.96	15.21	23.60	24.94	..	22.83	..	5
..	22.44	20.94	..	..	24.53	..	23.62	23.73	23.64	22.45	..	6
..	..	..	21.15	..	24.81	25.66	24.40	23.16	..	23.34	..	7
..	23.01	..	..	For first	25.21	25.36	24.05	..	24.09	23.94	For last	8
19.86	..	..	..	six months	..	24.85	23.74	23.77	23.69	24.21	six months	9
22.29	..	..	..	required	25.35	24.77	..	23.65	23.28	..	required	10
..	..	..	..	by law 20	25.17	24.50	23.74	24.22	23.47	24.36	by law 22	11
..	..	..	..	candles	25.56	24.84	23.90	23.60	..	23.98	candles.	12
..	..	22.13	..	..	25.33	..	23.64	23.77	24.80	25.05	..	13
..	20.91	..	..	..	25.42	23.81	22.77	23.94	23.61	24.95	..	14
..	24.39	..	..	..	25.00	24.24	23.04	..	24.74	23.42	..	15
19.50	..	..	23.76	..	..	23.73	23.74	24.23	25.36	24.16	..	16
..	..	..	23.16	..	25.04	23.83	..	24.14	23.91	..	..	17
22.39	..	..	..	..	25.80	23.90	23.54	24.10	24.51	24.46	..	18
..	..	..	..	..	25.62	23.45	23.83	24.05	..	24.09	..	19
..	..	21.92	24.08	..	24.79	..	23.12	23.70	23.01	24.32	..	20
..	..	..	..	..	24.99	23.83	23.91	22.91	23.66	24.79	..	21
..	21.94	..	..	..	25.11	24.31	24.07	..	23.91	24.62	..	22
23.55	..	..	..	..	..	24.62	23.63	23.74	24.24	24.11	..	23
21.03	..	..	24.24	..	24.61	24.58	..	23.76	24.34	..	..	24
..	..	..	..	..	25.05	24.26	23.13	23.69	25.08	..	..	25
..	..	21.89	..	..	24.96	23.98	23.18	23.71	..	24.35	..	26
..	..	..	..	..	25.13	..	23.36	..	24.45	23.97	..	27
..	..	..	22.66	..	25.43	23.42	24.13	23.48	24.10	24.09	..	28
..	21.25	..	24.13	..	24.98	22.96	23.73	..	24.90	24.88	..	29
..	..	..	..	..	..	24.10	23.94	23.59	..	24.70	..	30
21.69	..	21.88	..	..	24.56	24.24	..	23.24	..	..	—	31
21.47	22.32	21.75	23.31	22.00	25.10	24.41	23.66	23.82	24.09	24.06	24.19	Avg.

CITY'S EXHIBIT 51—OCTOBER 2, 1906.

TESTIMONY, PAGE 40 (QUESTION 65).

RECALCULATION OF COST OF GAS MAINS OF THE CONSOLIDATED GAS COMPANY SHOWING COST OF ONE PIPE REPLACING TWO PIPES OF SAME CAPACITY (SEE CHART).

					Single Pipe Substituted.				
Size in inches.	Number of feet.	Cost per foot cobble pavement.	Total cost.	Total cost minus 15 per cent. contractor's profit.	Size in inches.	Number of feet.	Cost per foot cobble pavement.	Total cost	Total cost minus 15 per cent contractor's profit.
1½in	1,407	No value			1½in	1,407	No value		
2in	No mains	$ .925			3in		$1.07		
3in	84,546	1.07	$90,464.22	$76,894.59	5in	42,273	1.42	$60,027.66	$51,023.51
4in	557,469	1.22	680,112.18	578,095.25	6in	278,734.5	1.625	452,943.56	385,002.03
5in	1,799	1.42	2,554.58	2.171.39	8in	899.5	2.095	1,884.45	1,601.78
6in	2,129,088	1.625	3,459,768.00	2.940.802.80	10in	1,064,544	2.41	2,565,551.04	2,180,718.38
8in	528,040	2.095	1,106,243.80	940,307.23	12in	264,020	2.937	775,426.74	659,112.73
10in	71,286	2.41	171,799.26	146,029.37	16in	35,643	3.78	134,730.54	114,520.96
12in	321,536	2.937	944,351.23	802,698.55	18in	160,768	4.28	688,087.04	584,873.99
16in	98,901	3.78	373,845.78	317,768.91	24in	49,450.5	5.645	279,148.07	237,275.86
18in	29,633	4.28	126,829.24	107,804.85	30in	14,816.5	7.71	114,235.21	97,099.93
20in	178,803	4.757	850,565.87	722,980.99	30in	89,401.5	7.71	689,285.57	585,892.73
24in	45,956	5.645	259,421.62	220,508.38	36in	22,978	9.695	222,771.71	189,355.95
30in	131,583	7.71	1,014,504.93	862,329.19	42in	65,791.5	12.495	822,064.79	698,755.07
36in	22,242	9.695	215,636.19	183,290.76	48in	11,121	15.86	176,379.06	149,922.20
Total	4,202,289		$9,296,096.90	$7,901,682.26	Total	2,101,848		$6,982,535.44	$5,935,155.12

CITY'S EXHIBIT 51—OCTOBER 2, 1906.

TESTIMONY, PAGE 40 (QUESTION 65).

RECALCULATION OF COST OF GAS MAINS OF THE CONSOLIDATED GAS COMPANY SHOWING COST OF ONE PIPE REPLACING TWO PIPES OF SAME CAPACITY (SEE CHART).

					Single Pipe Substituted.				
Size in inches.	Number of feet.	Cost per foot cobble pavement.	Total cost.	Total cost minus 15 per cent. contractor's profit.	Size in inches.	Number of feet.	Cost per foot cobble pavement.	Total cost	Total cost minus 15 per cent contractor's profit.
1½in	1,407	No value			1½in	1,407	No value		
2in	No mains	$ .925			3in		$1.07		
3in	84,546	1.07	$90,464.22	$76,894.59	5in	42,273	1.42	$60,027.66	$51,023.51
4in	557,469	1.22	680,112.18	578,095.25	6in	278,734.5	1.625	452,943.56	385,002.03
5in	1,799	1.42	2,554.58	2.171.39	8in	899.5	2.095	1,884.45	1,601.78
6in	2,129,088	1.625	3,459,768.00	2.940.802.80	10in	1,064,544	2.41	2,565,551.04	2,180,718.38
8in	528,040	2.095	1,106,243.80	940,307.23	12in	264,020	2.937	775,426.74	659,112.73
10in	71,286	2.41	171,799.26	146,029.37	16in	35,643	3.78	134,730.54	114,520.96
12in	321,536	2.937	944,351.23	802,698.55	18in	160,768	4.28	688,087.04	584,873.99
16in	98,901	3.78	373,845.78	317,768.91	24in	49,450.5	5.645	279,148.07	237,275.86
18in	29,633	4.28	126,829.24	107,804.85	30in	14,816.5	7.71	114,235.21	97,099.93
20in	178,803	4.757	850,565.87	722,980.99	30in	89,401.5	7.71	689,285.57	583,892.73
24in	45,956	5.645	259,421.62	220,508.38	36in	22,978	9.695	222,771.71	189,355.95
30in	131,583	7.71	1,014,504.93	862,329.19	42in	65,791.5	12.495	822,064.79	698,755.07
36in	22,242	9.695	215,636.19	183,290.76	48in	11,121	15.86	176,379.06	149,922.20
Total	4,202,289		$9,296,096.90	$7,901,682.26	Total	2,101,848		$6,982,535.44	$5,935,155.12

CITY'S EXHIBIT 54.

"Report of the Bureau of Lamps and Gas, January 17th, 1881."

Exhibit "F."

Pressure on Public Lamps of the Several Gas Companies, as Reported in Tenths of Inches by the Lamp Pressure Registers.

Where taken.	Distance Miles.	Elevation above mean high water. Feet.	Hour. 4 P. M.	5 P. M.	6 P. M.	7 P. M.	8 P. M.	9 P. M.	10 P. M.	11 P. M.	12 P. M.	1 A. M.	2 A. M.	3 A. M.	4 A. M.	5 A. M.	6 A. M.	7 A. M.
New York Gas Company—																		
Corner Grand and Gouverneur Streets....	1.80	34	18	15	18	16	16	16	16	16	16	16	16	15	15	17	17	16
Corner Whitehall and State Streets......	2.86	9	11	8	10	10	10	11	11	11	11	10	11	12	11	12	12	12
Manhattan Gas Company—																		
Corner Irving Place and 15th Street	.75	36.67	15	21	19	20	21	21	19	17	15	15	15	15	16	16	15	15
Corner Grand and Centre Streets.........	1.83	21	12	17	14	16	16	16	16	14	13	13	12	12	12	13	13	13
Metropolitan Gas Company—																		
Corner Eighth Avenue and 35th Street....	.79	31	12	15	15	15	15	15	15	12	10	8	8	8	8	8	9	9
79th Street, between Second and Third Avenues	3.33	50	13	20	19	19	19	17	15	14	12	10	11	11	10	10	9	11
New York Mutual Gas Company—																		
Corner Fourth Avenue and 16th Street...	1.20	38.87	22	25	25	27	24	23	23	23	21	23	21	21	21	22	21	20
Corner Eighth Avenue and 53d Street....	3.63	64	20	20	20	22	20	19	20	20	19	20	18	18	18	18	17	17
Harlem Gas Company—																		
Corner Third Avenue and 114th Street...	.41	18	11	31	28	28	..	..	..	..	14	14	14	14	17	17	17	13
Fort Washington Depot Road...........	4.55	96	40	34	31	26	26	26	26	26	25	25	25	25	25	25	25	26

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CITY'S EXHIBIT 49.

APPENDIX "F."

POOLING AGREEMENT AND APPORTIONMENT TABLES.

Memorandum for Pooling the Business of the Gas-Light Companies of this City, Preliminary to Negotiations for Consolidation.

On all sales by each company, the sum of one dollar and twenty-five cents ($1.25) per thousand cubic feet, to be set apart and form a general pool (to be divided every three (3) months under the direction of a committee to be appointed for that purpose, in the proportion of the actual sales made by each company, during the three (3) months, to wit: December, 1879, January and February, 1880.

The sales by the Knickerbocker Gas-light Company, however, for said three months, to be estimated and taken at the fixed amount of fifty-one millions, seven hundred and twenty-three thousand (51,723,000) cubic feet.

The price of gas to all private consumers to be two dollars and twenty-five cents ($2.25) per thousand cubic feet, except in the case of contracts now existing.

There shall be no canvassing or soliciting of customers.

There shall be no gas given away and no special inducements offered consumers.

A committee, of which one member shall be appointed by each company, shall supervise and decide all matters arising between the companies, in their relations to the pool, and shall superintend the distribution of the moneys pooled among the several companies entitled thereto, and make such regulations as shall be necessary for that purpose.

8171 For two (2) years from this date the Metropolitan Gas-light Company only to lay mains in the district between thirty-fourth (34th) street and Seventy-ninth (79th) street, Hudson and East rivers, but not where mains are already laid. After two (2) years from this date no company is to lay any mains in any street or avenue in which there are mains laid; it being the intention that no competing mains be laid.

The above to be continued for five (5) years, unless sooner terminated by consolidation.

Dated New York, *April* 5, 1880.

MANHATTAN GAS-LIGHT COMPANY,
(Signed) By CHARLES ROOME, *President.*
MUNICIPAL GAS-LIGHT COMPANY,
(Signed) By CHAS. G. FRANCKLYN, *President.*
KNICKERBOCKER GAS-LIGHT COMPANY,
(Signed) By H. E. GAWTRY, *President.*
THE N. Y. MUTUAL GAS-LIGHT COMPANY,
(Signed) By JOHN P. KENNEDY, *President.*
THE MET. GAS-LIGHT CO. OF CITY OF N. Y.,
(Signed) By O. ZOLLIKOFFER, *President.*

N. Y. CITIZENS' GAS-LIGHT COMPANY,
(Signed) By C. K. GARRISON, *President.*
THE NEW YORK GAS-LIGHT COMPANY,
(Signed) By THOMAS K. LEES, *President.*
HARLEM GAS-LIGHT COMPANY,
(Signed) By ROB'T W. RODMAN, *Vice-Prest.*

8172 The distribution of moneys pooled under the foregoing agreement was made from time to time under the directions of the pooling committee according to the following:

TABLE showing the rate of each company's sales to the whole amount sold in the months of December, 1879, *January and February,* 1880.

Company.	Gas Sold.	Ratio per cent.
New York	180,651,877	14.680197
Manhattan	326,901,520	26.564788
Mutual	200,783,281	16.316122
Municipal	201,930,746	16.409368
Metropolitan	207,944,186	16.898034
Harlem	60,647,490	4.928358
Knickerbocker	51,723,000	4.203133
Total	1,230,582,100	100.

8173 CITY'S EXHIBIT 53.

Oct. 3, 1906.

REESON'S COMPLETE GAS & WATER ACTS, 1817-1902 WITH FULL INDEX.

Page 219.

ACCOUNTS.

"35. The Undertakers shall fill up and forward to the local authority of every district within the limits of the special Act, on or before the twenty-fifth day of March in each year, an annual statement of accounts, made up to the thirty-first day of December then next preceding, as near as may be in the form and containing the particulars specified in the Schedule B. to this Act annexed.

The Undertakers shall keep copies of such annual statement at their office, and sell the same to any applicant at a price not exceeding one shilling per each such copy.

The Board of Trade, with the consent of the Undertakers, may alter the said forms for the purpose of adapting them to the circumstances of the undertaking, or of better carrying into effect the objects of this section.

In case the Undertakers make default in complying with the provisions of this section they shall be liable to a penalty not exceeding forty shillings for each day during which such default continues."

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"SCHEDULE B,

FORM OF ANNUAL ACCOUNTS.

THE GAS COMPANY,

Year ended 31st December, 18

A. —STATEMENT OF SHARE CAPITAL.

On the 31st December, 18

1. Description of capital.	2. Maximum dividend authorized.	3. Number of shares issued	4. Nominal amount of share.	5. Called up per share	6 Total paid up.	7. Amount issued but not paid up.	8. Remaining to be issued.	9 Total amounts authorized.

B.—STATEMENT OF LOAN CAPITAL,

On the 31st December, 18

1. Description of loan (mortgage, bond, debenture, stock, &c.)	2. Rate per cent. of interest.	3 Total amounts borrowed at 31st December, 18	4 Remaining to be borrowed.	5. Total amounts authorized

Total share capital paid up (See A)..£

Do loan do borrowed (See B)..£

Total capital received..£

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C.—CAPITAL ACCOUNT,
For the Year Ended 31st December, 18

	Expenditure to 31st December, 18 £. s. d.	Expended this year. £. s. d.	Total to 31st December, 18 £. s. d.		Certified receipts 31st December, 18 £. s. d.	Received during year. £. s. d.	Total receipts to 31st December, 18 £. s. d.
1. To expenditure to 31st December, 18				1. By ordinary shares of £ each			
Since that date.							
2. To lands acquired, including law charges				2. By ditto of £ each			
3. To new buildings, manufacturing plant, machines, storage works, and other structures constructed with manufacture.				3. By preference shares of £ each			
4. To new mains and service pipes (not being in place of old ones), including laying same				4. By debenture stock			
Paving, and other works connected with distribution							
5. To new meters (not in place of old ones), including fixing				5. By mortgages and bonds			
6. To cost of promoting special Act...				6. By amount received in anticipation of calls			
7. To special items (if any)							

Total expenditure .... £

To balance of capital account.. £

Total .... £

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D.—REVENUE ACCOUNT,

For the Year Ended 31st December, 18

	£. s. d.	£. s. d.		£. s. d.	£. s. d.
To Manufacture of Gas:			By Sale of Gas:		
1. Coals, including dues, carriage, unloading, and all expenses of depositing same on works..................			1. Common gas (cubic feet), at per 1,000 cubic feet.........		
2. Purifying materials, oil, water, and sundries at works.			2. Cannel gas (cubic feet), at per 1,000 cubic feet..........		
3. Salaries of engineers, including chief engineer (if any), superintendents, and officers at works............			3. Public lighting and under contracts...............		
4. Wages and gratuities at works			4. Rental of meter.......		
			By Residual Products:		
5. Repairs and maintenance of works and plant (including renewal of retorts), machines, apparatus, tools, material and labor..............£			5. Coke, less labor and cartage		
Less old material sold....£					
To Distribution of Gas:					
6. Salaries of surveyor, chief inspector, inspectors, assistant inspectors, and clerks in light office.........			6. Breeze, less labor and cartage		
7. Repair, maintenance, and renewal of mains, and of service pipes, including materials, laying and paving, and labor.			7. Tar, less labor and cartage		
8. Repairing, renewing, and refixing meters............			8. Ammonical liquor, less labor and cartage...........		
To Public Lamps:					
9. Lighting and repairing..					
To Rents, Rates and Taxes:					
10. Rents					
11. Rates and Taxes......					
To Management:					
12. Directors' allowances..					
13. Salaries of secretary, accountant, and clerks, office keepers, and messengers.....					
14. Collectors' commission or salaries			9. By rents.............		
15. Stationery an printing.			10. By transfer fees.......		
16. General establishment charges and incidentals......			By other items (if any)		
17. Auditor					
To Law and Parliamentary					

PAGE BOUND VERTICAL IN BOOK

water, and sundries at works.		
3. Salaries of engineers, including chief engineer (if any), superintendents, and officers at works............		
4. Wages and gratuities at works		
5. Repairs and maintenance of works and plant (including renewal of retorts), machines, apparatus, tools, material and labor..............£		
Less old material sold....£		
To Distribution of Gas:		
6. Salaries of surveyor, chief inspector, inspectors, assistant inspectors, and clerks in light office.........		
7. Repair, maintenance, and renewal of mains, and of service pipes, including materials, laying and paving, and labor.		
8. Repairing, renewing, and refixing meters.............		
To Public Lamps:		
9. Lighting and repairing..		
To Rents, Rates and Taxes:		
10. Rents		
11. Rates and Taxes......		
To Management:		
12. Directors' allowances..		
13. Salaries of secretary, accountant, and clerks, office keepers, and messengers.....		
14. Collectors' commission or salaries		
15. Stationery an printing.		
16. General establishment charges and incidentals......		
17. Auditor		
To Law and Parliamentary Charges:		
18. Law		
19. Parliamentary (oppositions)		
20. To depreciation fund for works on leasehold lands (if any)..................		
21. To bad debts..........		
To other items (if any)		
Total expenditure...		
Balance carried to Profit and Loss Account, E.......		

cubic feet), at per 1,000 cubic feet..........		
3. Public lighting and under contracts...............		
4. Rental of meter.......		
By Residual Products:		
5. Coke, less labor and cartage		
6. Breeze, less labor and cartage		
7. Tar, less labor and cartage		
8. Ammonical liquor, less labor and cartage...........		
9. By rents.............		
10. By transfer fees.......		
By other items (if any)		
Total receipts.......		

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E.—PROFIT AND LOSS ACCOUNT (NET REVENUE),

For the Year Ended 31st December, 18

Dr.	£. s. d.	Cr.	£. s. d.
1. To amount carried to Reserve Fund Account F (if any), from profits of 18		1. By balance of net profit brought from last account (31st December, 18)	
2. To Interest on temporary loans, and moneys received in anticipation of calls..		2. By amount drawn from reserved fund (if any)........................	
3. To Ditto on mortgages and bonds accrued to 31st December, 18		Less dividend paid for the half year ended 31st December, 18	
4. To Ditto on debenture stock to ditto.		3. Balance brought from Revenue Account D, being profit for year to December, 18	
5. To half year's dividend on 1st preferential to 30th June, 18		4. Interest on moneys deposited......	
6. To Ditto, 2nd preferential to ditto..			
7. To Ditto on ordinary shares at per cent............................			
To Balance of net profit to be carried to next account subject to half year's dividends to 31st December, 18			
£		£	

PAGE BOUND VERTICAL IN BOOK

F.—RESERVED FUND ACCOUNT,

For the Year Ended 31st December, 18

	£. s. d.		£. s. d.
1. Amount (if any) carried to Profit and Loss Account (E) to make up deficiencies of dividends to 31st December, 18		1. By balance brought from last account	
2. Amount paid for extraordinary claim or demand (if any)		2. By balance brought from Profit and Loss Account (E)	
3. Amount of balance to be carried to next account.........................		3. By interest on amount invested....	
£		£	

Like Accounts must be given for depreciation fund for works on leaseholds, if any.

G.—STATEMENT OF COALS,

During the Year Ended 31st December, 18

Description of coal.	In store 31st December, 18	Received during year.	Carbonized or used during year.	In store 31st December, 18
	Tons.	Tons.	Tons.	Tons.
Common				
Cannel				

H.—STATEMENT OF RESIDUAL PRODUCTS,

For the Year Ended 31st December, 18

Description of residual.	In store 31st December, 18 Estimated.	Made during year. Estimated.	Used in manufacture during year. Estimated.	Sold during year.	In store 31st December, 18 Estimated.
Coke—common, chaldrons of 36 bushels cannel					
Breeze					
Tar, gallons.........					
Ammonical liquor, butts of 108 gallons					

PAGE BOUND VERTICAL IN BOOK

I.—GENERAL BALANCE SHEET.

On December 31st, 18

Dr.	£. s. d.	Cr.	£. s. d.
1. To Capital Account—Balance at credit thereof (Account C).............		1. By cash at bankers...............	
2. To Profit and Loss Account—Balance at credit thereof (Account E).....		2. By cash on deposit or at interest..	
3. To Reserved Fund—Balance at credit thereof (Account F)..................		3. By coals for stock on hand, 31st December, 18	
4. Depreciation Fund (for works on leasehold lands)—Balance at credit thereof. (Account)......................		4. By coke and breeze for stock on hand, 31st December, 18	
5. To Unpaid Dividends..............		5. By tar and other products for stock on hand, 31st December, 18	
6. To Interest accrued and unpaid on mortgages, bonds, and debenture stock, and other loans, to 31st December, 18		6. By sundry stores for stock on hand, 31st December, 18	
7. To Sundry tradesmen and others, for amount due for coals, stores, &c., to 31st December, 18		7. By gas and meter rental; balance of this account due to the company on 31st December, 18 , less deposits and prepayments	
8. To Wages and Contingencies—Amount due to 31st December, 18 ..		8. By coke and other residual.........	
		9. By sundry accounts...............	
To Other Items (if any)...........		By Special items (if any), including investements	
£		£	

COMPLAINANTS EXHIBIT 48.

CONSOLIDATED GAS CO

MAPS OF REAL ESTATE

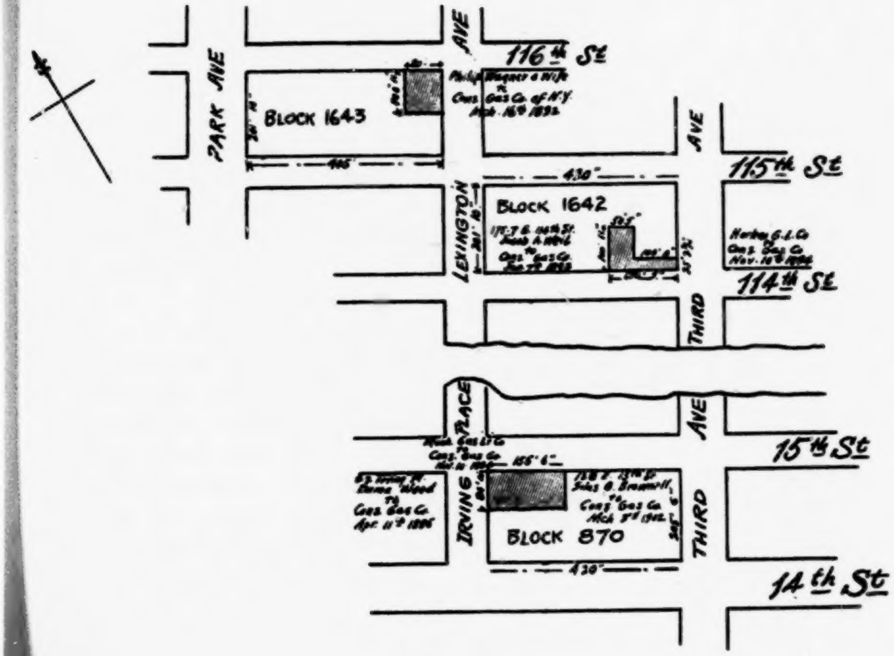
NEW YORK CITY - Corrected to July 1906

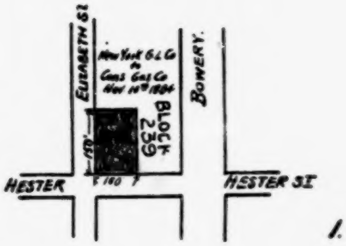
1 Hester St. Office
2 14 St. Station
3 18 St "
4 21 St. "
5 42 St. " & Shady Side
6 44 St "
7 63 St "
8 65 St. "
9 99 St. "
10 111 St. "
11 132 St "
12 Inwood "

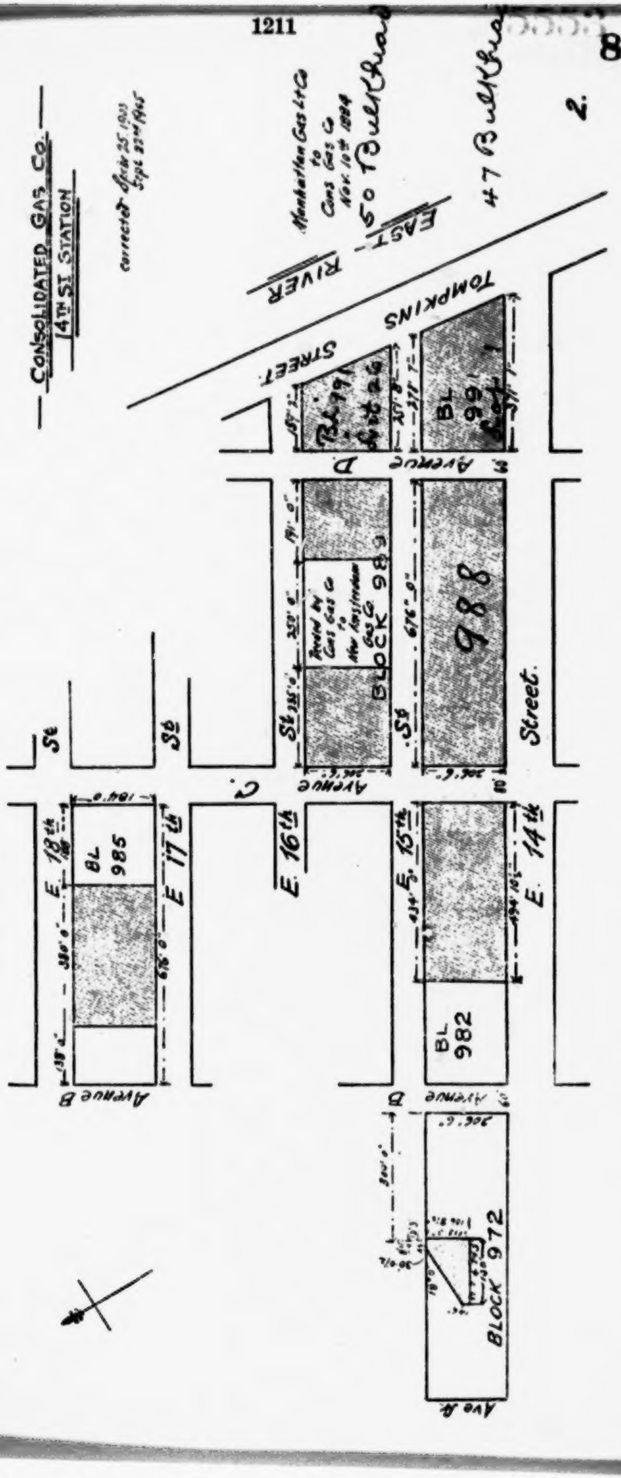
ND VERTICAL IN BOOK

CONSOLIDATED GAS CO

PROPERTY located on IRVING Pl cor 15th St
" HESTER St cor Elizabeth
" 114th St cor THIRD AVE
" 116th St cor LEX. AVE


PARK AVE
BLOCK 1643
AVE
116th St
Philip Wagner & Wife to Cons. Gas Co of N.Y. Mch. 16th 1892
LEXINGTON
AVE
115th St
430"
BLOCK 1642
Cons. Gas Co
Harlem G. L. Co to Cons. Gas Co Nov. 10th 1884
114th St
THIRD
IRVING PLACE
AVE
15th St
155' 6"
Cons. Gas Co
Cons. Gas Co Apr. 11th 1886
Silas O. Brownell to Cons. Gas Co Mch 5th 1902
BLOCK 870
THIRD
430"
14th St


ELIZABETH ST
New York G. L. Co to Cons. Gas Co Nov 10th 1884
BOWERY
BLOCK 239
150'
100
HESTER
HESTER ST
1.


CONSOLIDATED GAS CO.
14TH ST. STATION
corrected Apr 25 1903 Sept 22nd 1905
Manhattan Gas Lt Co to Cons Gas Co Nov. 10th 1884
50 Bulkhead
47 Bulkhead
2.
EAST RIVER
TOMPKINS STREET
Bl 991 Lot 26
BL 991 Lot 1
Avenue D
BLOCK 989
Deeded by Cons Gas Co to New Amsterdam Gas Co
988
Street.
E. 14th St.
E. 15th St.
E. 16th St.
E. 17th St.
E. 18th St.
Avenue C
BL 985
BL 982
Avenue B
BLOCK 972
Ave A
135' 0"
220' 0"
191' 0"
676' 9"
206' 6"
184' 0"
380' 0"
678' 0"
138' 0"
434' 10½"
300' 0"

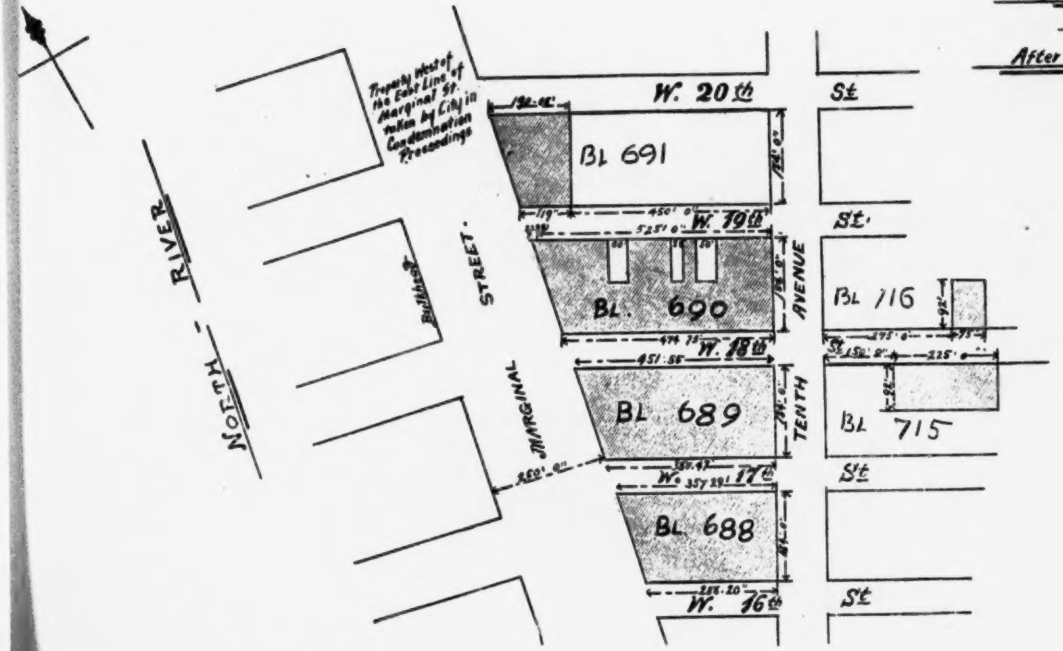
CONSOLIDATED GAS CO

18TH ST STATION

After new Water Front Improvement

Septbr 26. 1903.

corrected May 3/04 A


Property West of the East Line of Marginal St. taken by City in Condemnation Proceedings
NORTH - RIVER
Bulkhead
MARGINAL STREET
W. 20th St
W. 19th St.
W. 18th St
W. 17th St
W. 16th St
TENTH AVENUE
BL 691
BL. 690
BL 689
BL 688
BL 716
BL 715
132.08"
119"
450' 0"
525' 0"
474.75"
451.55
357.41
357.29'
255.20"
250' 0"
184' 0"
275' 0"
75'
150' 0"
225' 0"
92'
92'

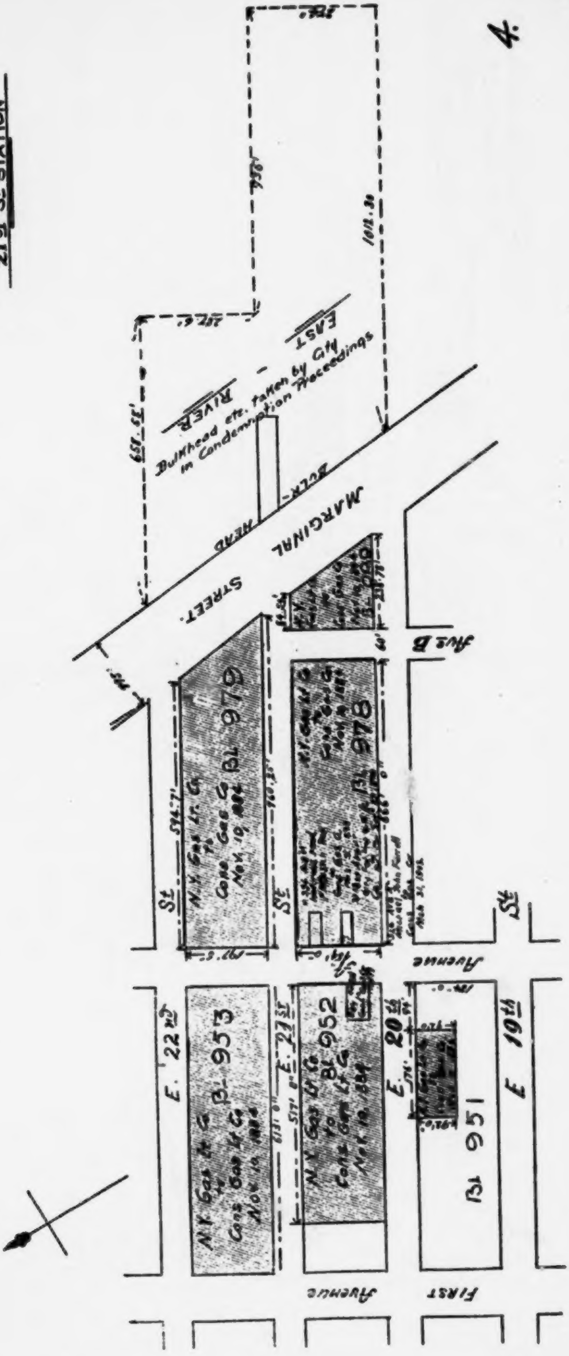
Manhattan Gas Lt Co
to
Cons. Gas Co
Nov. 10th 1884

3.

PAGE BOUND

4.

CONSOLIDATED GAS CO
21ST ST STATION


EAST RIVER
Bulkhead etc. taken by City in Condemnation Proceedings
BULKHEAD
MARGINAL STREET
658.55'
778'
1012.30
257.6'
352'
Ave B
Avenue
FIRST Avenue
E. 22nd St
E 21st St
E 20th St
E 19th St
N.Y. Gas Lt. Co. To Cons. Gas Co. Nov. 19, 1884
Bl 979
Bl 978
Bl 953
Bl 952
Bl 951
596.7'
760.33'
197.6'
N.Y. Gas Lt. Co. To Cons. Gas Lt. Co. Nov. 10, 1884
Bl 980

VERTICAL IN BOOK

8186

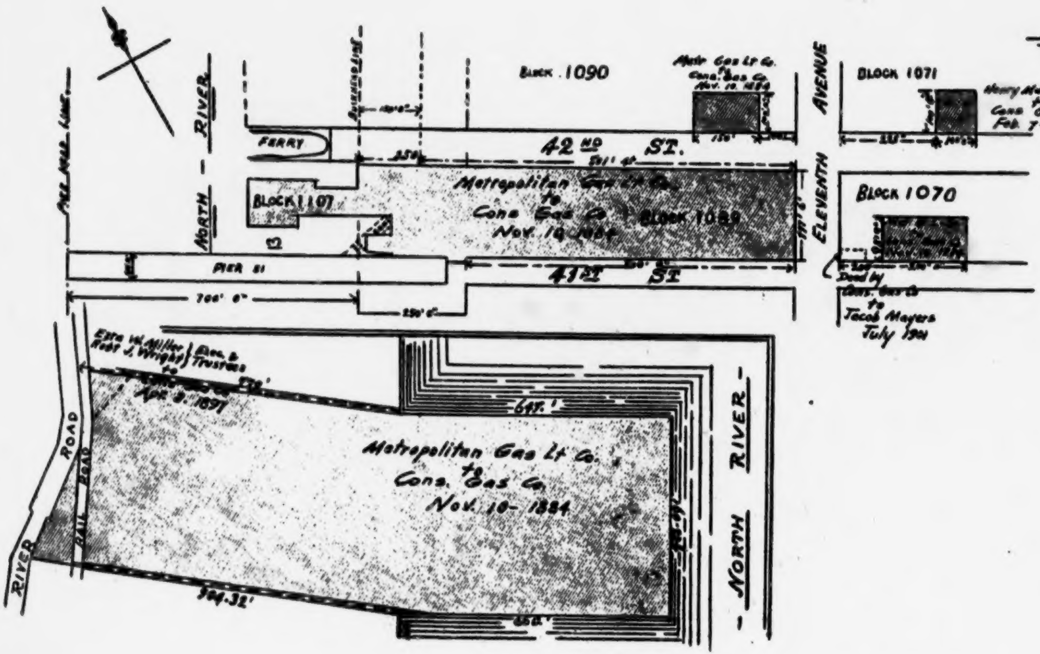
CONSOLIDATED GAS CO

42ND ST STATION

and

SHADY SIDE PROPERTY

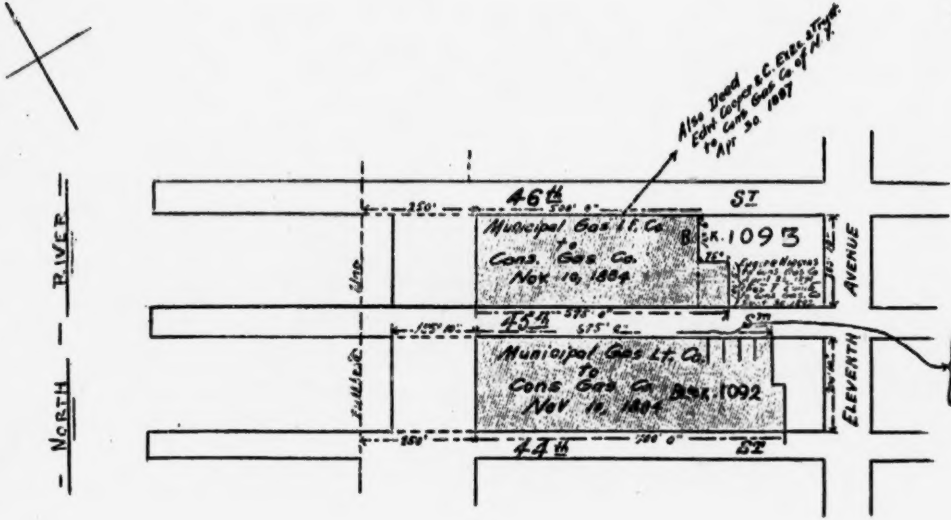
Corrected Sept. 28th 1905.


BLOCK 1090
Metr Gas Lt Co.
to
Cons. Gas Co.
Nov. 10. 1884
150'
AVENUE
ELEVENTH
BLOCK 1071
Henry Murray & Wife
to
Cons Gas Co.
Feb. 7. 1898
BLOCK 1070
Deed by
Cons. Gas Co
to
Jacob Mayers
July 1901
42ND ST.
41ST ST
FERRY
BLOCK 1107
13
Metropolitan Gas Lt Co.
to
Cons Gas Co.
Nov. 10 1884
BLOCK 1089
PIER 81
PIER HEAD LINE
NORTH - RIVER
700' 0"
250' 0"
Ezra W. Miller
Robt J. Wright
Exec. & Trustees
to
Apr. 8. 1897
Metropolitan Gas Lt Co.
to
Cons. Gas Co.
Nov. 10 - 1884
NORTH RIVER
RIVER ROAD
RAIL ROAD
904.32'

5.

CONSOLIDATED GAS CO
44th ST STATION

August 20th 1903.
No. 6

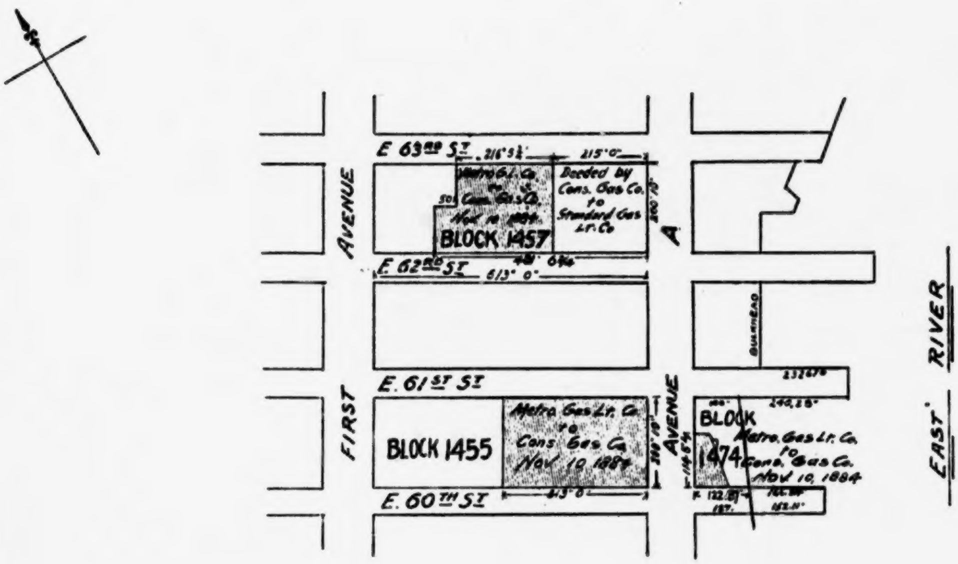

Also Deed
Edw Cooper & C. Ex'rs. & Trust.
to Cons. Gas Co of N. Y.
Apr 30. 1887
46th ST
45th ST
44th ST
AVENUE
ELEVENTH
NORTH
RIVER
BLK. 1093
BLK. 1092
Municipal Gas Lt. Co
to
Cons. Gas Co.
Nov 10, 1884
Municipal Gas Lt. Co.
to
Cons Gas Co
Nov 10, 1884
350'
500' 0"
575' 0"
125' 10"
575' 0"
350'
700' 0"
75'
Line
Bulkhead

606 W 45th Mary Bakes to Cons. Gas Co. Jan. 27.1892
608 " " Catarine Diercks " " " " Dec. 7. 1891
610 " " Municipal Gas Lt. Co " " " " Nov. 10 1884
612 " " Robt. Auld " " " " May 23 1888

6.

CONSOLIDATED GAS CO.
63RD ST STATION.

7.


E 63RD ST
216' 5½"
215' 0"
Metro G. L. Co.
to
Cons. Gas Co.
Nov 10 1884
50
BLOCK 1457
Deeded by
Cons. Gas Co.
to
Standard Gas
Lt. Co
200' 10"
48' 6¾"
E 62ND ST
613' 0"
AVENUE
A
BULKHEAD
232' 6"
E. 61ST ST
FIRST
BLOCK 1455
Metro Gas Lt. Co
to
Cons Gas Co
Nov 10 1884
200' 10"
AVENUE
114' 5¾"
215' 0"
E. 60TH ST
BLOCK
1474
Metro Gas Lt. Co.
to
Cons. Gas Co.
Nov 10, 1884
240' 2½"
122' 8"
137.
162.11"
EAST RIVER

PAGE BOUND V

5559

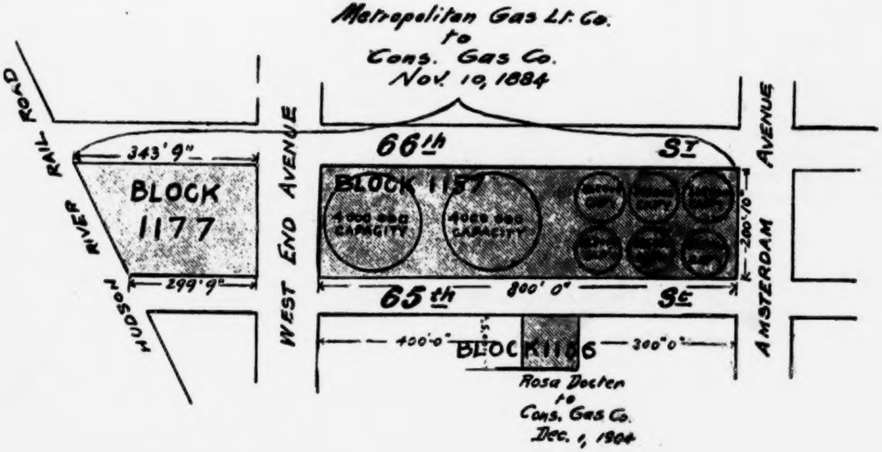
8189

8.

CONSOLIDATED GAS CO.

65th ST STATION

Corrected Sept. 23rd 1915

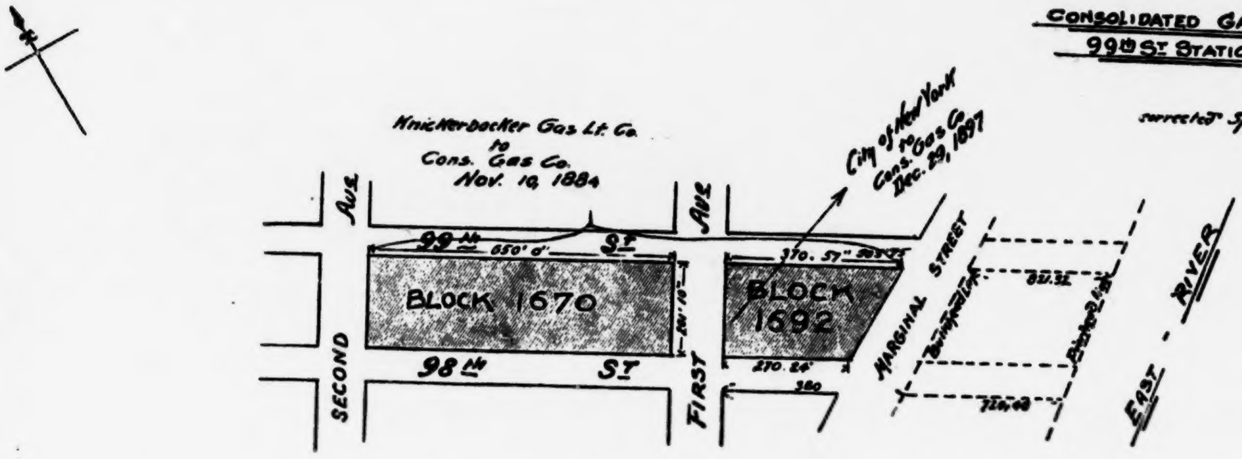

Metropolitan Gas Lt. Co.
to
Cons. Gas Co.
Nov. 10, 1884
66th ST
65th ST
WEST END AVENUE
AMSTERDAM AVENUE
HUDSON RIVER RAIL ROAD
BLOCK 1177
343' 9"
299' 9"
BLOCK 1157
4 000 000 CAPACITY
4 000 000 CAPACITY
800' 0"
200' 10"
BLOCK 1156
400' 0"
300' 0"
Rosa Docter
to
Cons. Gas Co.
Dec. 1, 1904

ERTICAL IN BOOK

CONSOLIDATED GAS CO

99th ST STATION

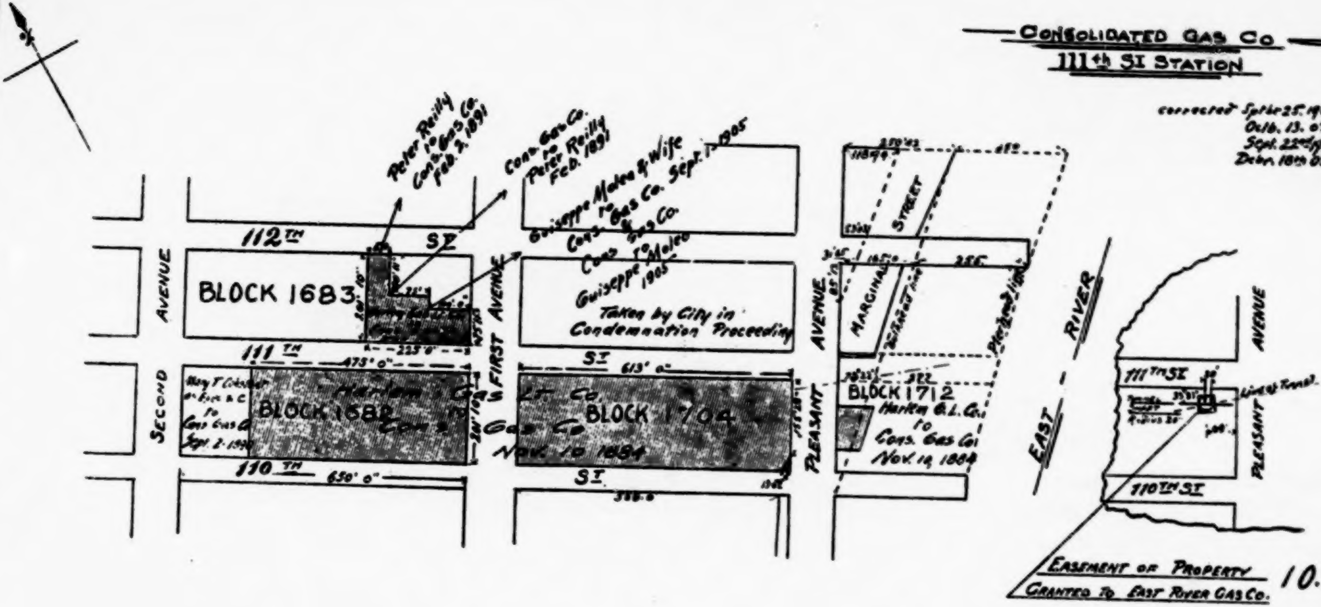
corrected Sptbr. 22/05


Knickerbocker Gas Lt. Co.
to
Cons. Gas Co.
Nov. 10, 1884
City of New York
to Cons. Gas Co
Dec. 29, 1897
AVE
AVE
99th ST
650' 0"
370. 57"
BLOCK 1670
BLOCK 1692
201' 10"
98th ST
270. 24'
380
SECOND
FIRST
MARGINAL STREET
Bulkhead Line
Pierhead Line
827.32
724.03
EAST RIVER

9.

CONSOLIDATED GAS CO
111th ST STATION

corrected Sptbr 25. 1903
Octb. 13. 03
Sept. 25th 1905
Debr. 18th 05


112TH ST
111TH ST
110TH ST
SECOND AVENUE
FIRST AVENUE
PLEASANT AVENUE
MARGINAL STREET
EAST RIVER
BLOCK 1683
BLOCK 1682
BLOCK 1704
BLOCK 1712
Peter Reilly to Cons. Gas Co. Feb. 2. 1891
Cons. Gas Co. to Peter Reilly Feb. 1891
Guiseppe Maleo & Wife to Cons. Gas Co. Sept. 1. 1905
Cons. Gas Co. to Guiseppe Maleo 1905
Taken by City in Condemnation Proceeding
Mary T. Coleman et al. to Cons. Gas Co. Sept. 2. 1890
Harlem Gas Lt. Co. to Cons. Gas Co. Nov. 10 1884
Harlem G. L. Co. to Cons. Gas Co. Nov. 14 1884
Pierhead line
Bulkhead line
225' 0"
475' 0"
613' 0"
650' 0"
255'
322
111TH ST
110TH ST
AVENUE
PLEASANT
Radius 20'
Line of Tunnel

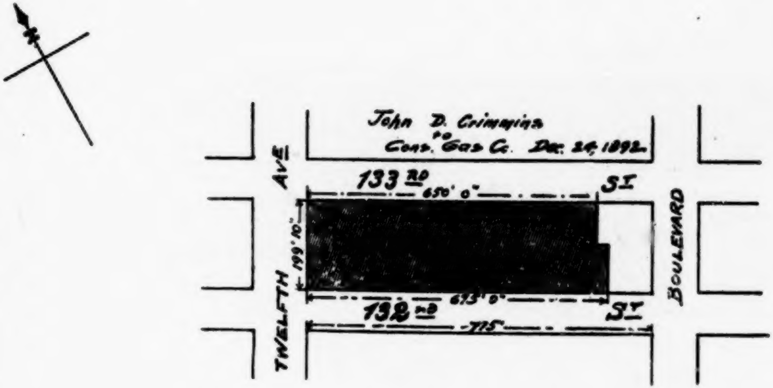
EASEMENT OF PROPERTY
GRANTED TO EAST RIVER GAS CO.

10.

— CONSOLIDATED GAS CO —

PROPERTY on 12th AVE & 132, 133rd St

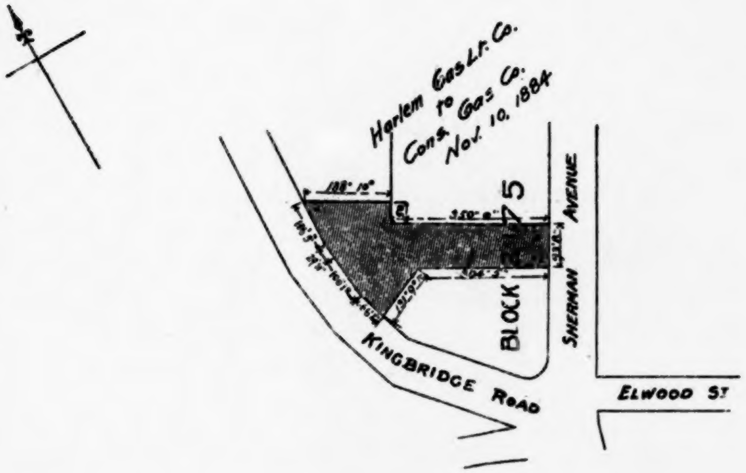
11.


John D. Crimmins
to
Cons. Gas Co. Dec. 24, 1892.
133RD ST
650' 0"
132ND ST
673' 0"
775
199' 10"
TWELFTH AVE
BOULEVARD

12.

CONSOLIDATED GAS CO.

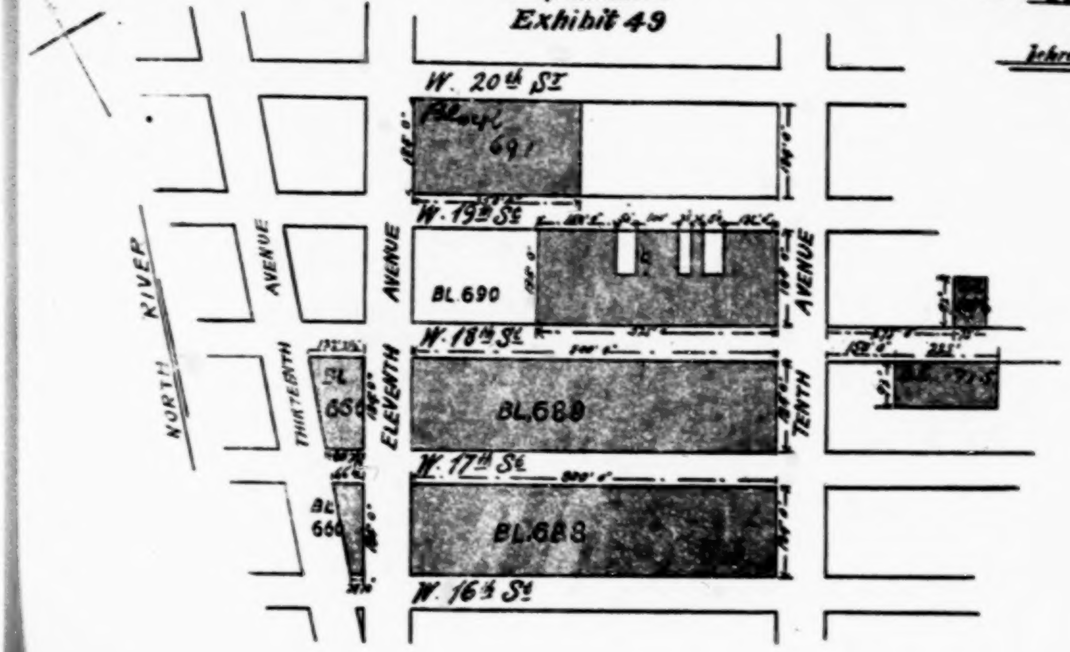
INWOOD STATION


Harlem Gas Lt. Co.
to Gas Co.
Cons. Nov. 10, 1884
188' 10"
350' 8"
304' 3"
2
BLOCK [illegible]75
SHERMAN AVENUE
KINGBRIDGE ROAD
ELWOOD ST

VERTICAL IN BOO

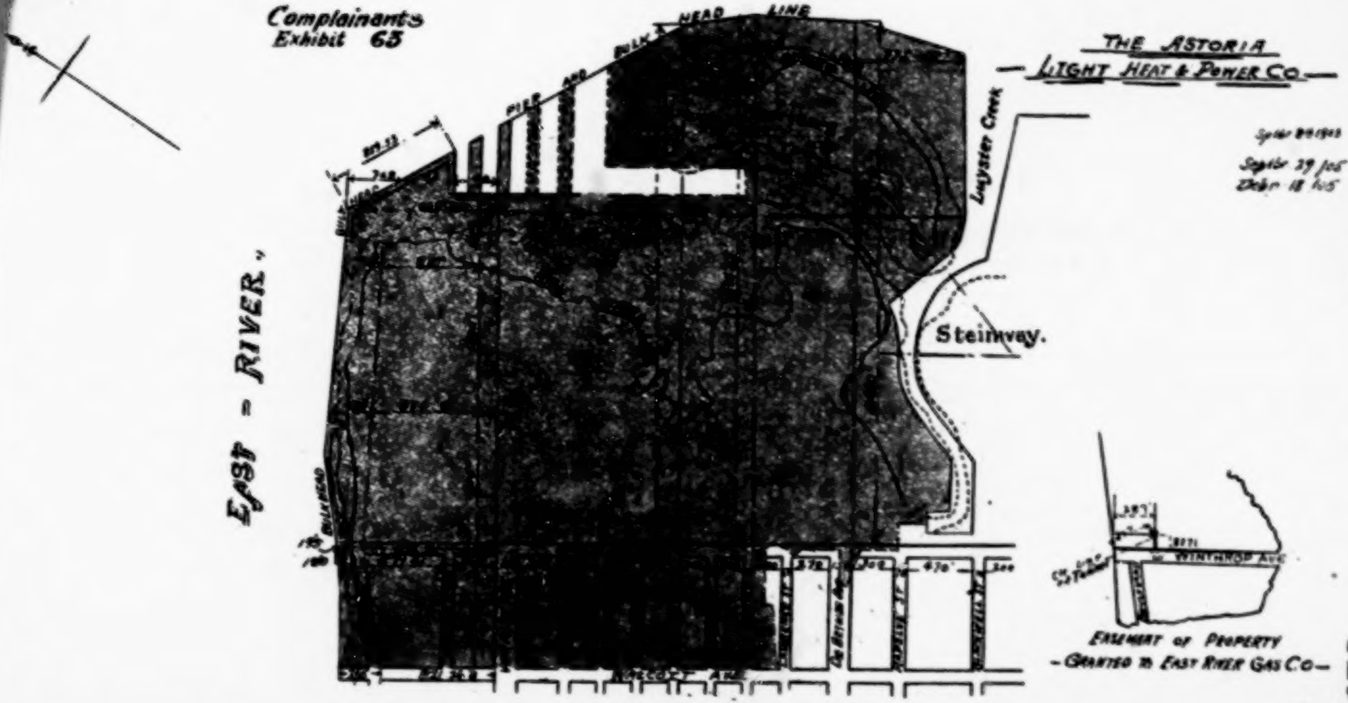
CONSOLIDATED GAS CO.
18TH ST. STATION
before new Water Front Improvement
Sept 26 1910

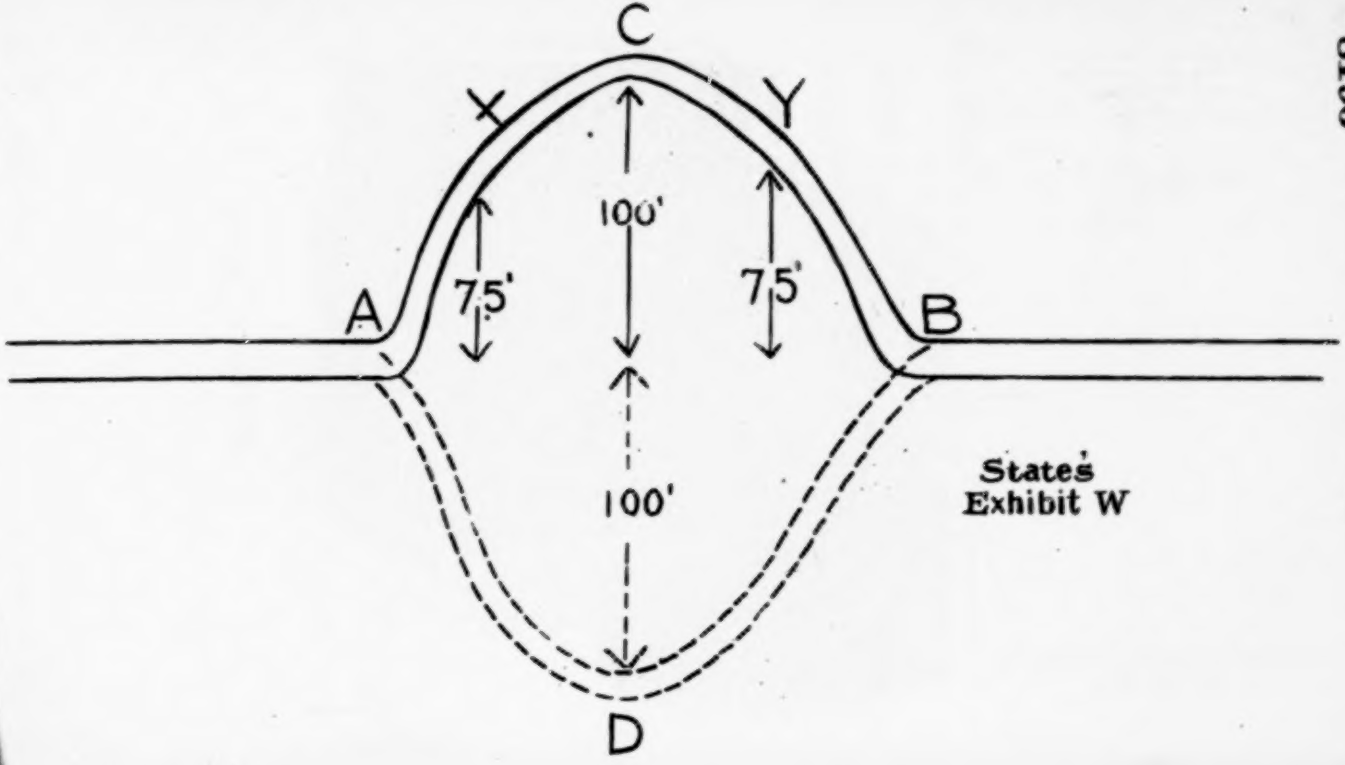
Complainants
Exhibit 49


W. 20th St
BL 691
W. 19th St
BL. 690
W. 18th St
BL. 689
W. 17th St
BL. 688
W. 16th St
BL 656
BL 660
ELEVENTH AVENUE
TENTH AVENUE
THIRTEENTH AVENUE
NORTH RIVER

Complainants
Exhibit 65

THE ASTORIA
— LIGHT HEAT & POWER CO —


[illegible]
Septbr 29/05
Decbr 18 '05
BULK HEAD LINE
PIER AND BULK HEAD LINE
Luyster Creek
Steinway.
EAST - RIVER.
BULKHEAD
WINTHROP AVE
ARSCOTT AVE
EASEMENT OF PROPERTY
- GRANTED TO EAST RIVER GAS CO -
A.


C
X
Y
100'
75'
75'
A
B
100'
D

States
Exhibit W

8197

CITY'S EXHIBIT 56.

CONSOLIDATED GAS CO. OF NEW YORK.

SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCT. 31, 1905.

ALL STATIONS.

Gas made.. 10,659,909,000 Cu. Ft.
Gas sold (based on a leakage of 3.02%).... 10,337,984,748 " " of own make.

		Cost per M made.	Cost per M sold.
Coal used—350,407.60 Tons @ $3.58 per ton	$1,255,964.40	11.78	12.15
Labor handling	50,471.25	00.48	00.49
Cartage "	18,285.48	00.17	00.17
Carried Forward	$1,324,721.13	12.43	12.81

8198

				Cost per M made.	Cost per M sold.
Brought Forward			$1,324,721.13	12.43	12.81
Less Residuals:					
Coke 171,404.47 @ $2.00 114,776.99 @ $2.99		$343,526.94			
Less labor handling	$36,694.71				
Cartage "	12,360.66				
		49,055.37			
			294,471.57	2.76	2.85
Tar, 235,586.73 Tons Carbonized @ 29.08c.			68,527.08	0.64	0.66
Ammoniacal Liquor, 4,983,751 Lbs. @ 01.36c.			67,807.44	0.64	0.66
Carbon, 548,580 " @ 01.00c.			5,495.90	0.05	0.05
Spent Oxide, 4,391,524 " @ 00.11c.			4,769.38	0.04	0.05
Oil Tar, 3,858,808 Gals. 35,424 " not sold owing to excessive amount of water contained. 2,823,384 " @ 01.90c.			53,637.10	0.51	0.52
Total Residuals			$494,708.47	4.64	4.79
Net Total			$830,012.66	7.79	8.03

PAGE BOUND V

TICAL IN BOOK

		Cost per M made.	Cost per M sold.
Brought Forward	$830,012.66	7.79	8.03
Coke—33,955.43 Loads @ $2.1601			
22,738.26 Tons @ $3.3257	73,346.02	0.69	0.71
Labor handling	1,473.08	0.01	0.01
Cartage "	43.87	—	—
	$74,862.97	0.70	0.72
Fuel Oil Labor (incldg. Drip Oil used in Mfg.)	4,434.13	0.04	0.04
Naphtha, 3,587 Gals. @ .04⅜c.	244.43	—	—
Gas Oil, 41,504,907 " @ .04.08c.	1,693,646.16	15.89	16.38
Lime, 59,400 Bu. @ 04.98c.	2,957.93	0.03	0.02
Oxide, 119,310 " @ 15.82c.	18,878.43	0.18	0.18
Water, 23,609,400 Cu. Ft. @ $1.00 per M.	23,609.40	0.22	0.23
Oil, waste and sundries	5,279.95	0.05	0.05
Cartage (Summary of Cartage Operations for the Nominal Year Hereto attached).	17,830.15	0.17	0.17
Carried Forward	$2,671,756.21	25.07	25.82

8200

		Cost per M made.	Cost per M sold.
Brought Forward	$2,671,756.21	25.07	25.82
Gas Making Labor:			
Generator House Labor	67,760.71	0.64	0.66
Retort " "	223,037.81	2.09	2.16
Boiler " "	37,628.49	0.35	0.37
Purifying " "	14,503.72	0.14	0.14
Superintendence	36,788.68	0.34	0.37
At 21st St. on account of 14th St. Oil Gas	9,603.51	0.09	0.09
	$3,061,079.13	28.72	29.61
Repairs (including Labor and Material)	211,095.54	1.98	2.04
Expense, " " " "	62,441.83	0.58	0.60
Distribution " " " "	90,399.52	0.85	0.88
Profit and loss adjustment	4,101.12	0.04	0.04
Experiments	2,912.70	0.03	0.03
Depreciation—November and December, 1904	51,532.36	0.48	0.50
Carried Forward	$3,483,562.20	32.68	33.70

							Cost per M made.	Cost per M sold.
Brought Forward						$3,483,562.20	32.68	33.70
Labor & Material (outside stations) as per detailed statement already presented showing the following result:								
New Amsterdam Gas Co.	2,113,227,300	C. F.	@	34.40c.	$726,676.49			
Standard Gas Lt. Co.	447,756,300	"	"	32.64c.	146,122.46			
Mutual Gas Lt. Co.	318,210,100	"	"	38.36c.	122,442.86			
Central Union Gas Co.	90,588,400	"	"	29.93c.	26,984.67			
	2,968,782,100	"	"	34.42%		1,022,236.28		34.42
*Total Station Cost						$4,505,798.48		33.85
Distributive Expense—including General and Administrative Exp., Meter Setting, Jobbing, etc., Repairs, Street Lamp Maintenance, Insurance, Advertising, Interest, Taxes, Contingent Expense, Depreciation, etc.						4,155,714.69		31.23
Fixed Charges						936,883.24		7.04
Total						$9,598,396.41		72.12

---

*Cost at this point includes the amount paid for gas mf*g*. by other Cos. for the Consolidated Gas Co. The cost per M is, therefore, calculated on the entire volume of gas sales, 13,308,363,773 Cu. Ft.

8202 SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCT. 31, 1905.

14TH ST. STATION.

				Cost per M made.	Cost per M sold.
Gas Made	1,528,773,000 cu. ft.				
Gas Sales (based on a leakage of 3.02%)	1,482,604,055 " "				
Coal—used in Retorts	127,195.16 Tons, $3.22		$410,678.29	26.86	27.70
Used at 21st St. Station for account 14th Street Oil Gas	11.07 " 4.36		48.25	—	—
			$410,726.54	26.86	27.70
Labor handling Coal		$17,944.56			
Cartage " "		14,743.49			
			32,688.05	02.14	02.21
Carried Forward			$443,414.59	29.00	29.91

				Cost per M made.	Cost per M sold.
Brought Forward			$443,414.59	29.00	29.91
Less Residuals:					
Coke—86,380.47 Loads @ $2.07					
57,844.06 Tons @ $3.08		$178,527.11			
Cost to handle: Labor	$27,067.85				
Cartage	7,753.18				
		34,821.03			
			143,706.08	9.40	9.69
Tar—127,195.16 Tons Coal Carbonized @ 29.10c.			37,014.90	2.42	2.50
Ammoniacal Liquor—2,699,080 lbs. @ 01.36c.			36,668.15	2.40	2.47
Carbon, 218,955 " @ 01.00c.			2,189.55	0.14	0.15
Spent Oxide, 3,022,870 " @ 01.10c.			3,400.73	0.22	0.23
			$222,979.41	14.58	15.04
Carried Forward			$220,435.18	14.42	14.87

8204

		Cost per M made.	Cost per M sold.
Brought Forward	$220,435.18	14.42	14.87
Coke—used at 21st St. Station for account 14th St. Oil Gas:			
315 Loads @ $2.5079 2.36 Tons @ 3.3475	7.90	—	—
Gas Oil 3,371,782 Gals. @ 04.08c.	137,602.63	9.00	9.28
Oxide 22,350 Bu. @ 17.13c.	3,827.46	0.25	0.26
Water 3,826,400 cu. ft. @ $1.00 per M.	3,826.40	0.25	0.26
Oil, Waste and Sundries	2,309.34	0.15	0.16
Cartage.	2,651.88	0.17	0.18
Gas Making Labor:			
Retort House Labor	$89,961.95	5.89	6.07
Boiler " "	6,101.29	0.40	0.41
Purifier " "	4,353.58	0.28	0.29
Superintendence	6,860.72	0.45	0.45
At 21st St. for account 14th St. Oil Gas	9,603.51	0.63	0.65
Carried Forward	$487,541.84	31.89	32.88

8205

		Cost per M made.	Cost per M sold.
Brought Forward..	$487,541.84	31.89	32.88
Repairs—including Labor and Material..............................	57,919.71	3.79	3.91
Expense " " "	10,580.30	.69	.71
Distribution " " "	20,387.71	1.33	1.38
	$576,429.56	37.70	38.88
(*a*) Depreciation—November and December, 1904.....................	376.19	.03	.03
	$576,805.75	37.73	38.91

(*a*) Depreciation for Ten Months of 1905 covered by Contingent Expense not shown in above statement.

8206 SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCT. 31, 1905.

21ST ST. STATION.

Gas Made	4,185,341,000 cu. ft.		
Gas Sold (based on a leakage of 3.02%)	4,058,943,701 " "		

Coal—excluding Coal used for 14th St. Station Oil Gas:		Cost per M made.	Cost per M sold.
Used in Generators...... 54,596.39 Tons @ $4.37	$238,337.90	5.69	5.87
" under Boilers...... 6,248.79 " @ 3.96	24,741.56	0.59	0.61
	$263,079.46	6.28	6.48
Labor employed on Coal	5,249.71	0.13	0.13
Cartage " " "	681.46	0.02	0.02
Carried Forward	$269,010.63	6.43	6.63

		Cost per M made.	Cost per M sold.
Brought Forward	$269,010.63	6.43	6.63
Less Residuals:			
Oil Tar......... 1,428,276 Gals.			
34,925 " Not sold owing to the excessive quantity of water contained.			
1,393,351 " @ 01.97c	27,490.15	0.66	0.68
	$241,520.48	5.77	5.95
Coke used......... 24,353.73 Loads @ $2.1708			
16,308.30 Tons @ 3.2418	$52,867.45	1.26	1.30
Labor Employed in handling	1,235.99	0.03	0.03
	$54,103.44	1.29	1.33
Carried Forward	$295,623.92	7.06	7.28

8208

		Cost per M made.	Cost per M sold.
Brought Forward	$295,623.92	7.06	7.28
Fuel Oil Labor	1,610.37	0.04	0.04
Naphtha 5,587 Gals. @ .04⅜c.	244.43	0.01	0.01
Gas Oil (exclude Oil used for 14th St. Oil Gas)— 19,294,592 Gals. @ 04.08c.	788,526.37	18.84	19.43
Oxide 42,700 Bu. @ 15.56c.	6,645.93	0.16	0.16
Water 10,095,900 cu. ft. @ $1.00 per M.	10,095.90	0.24	0.25
Oil, Waste, Sundries, etc.	698.06	0.02	0.02
Cartage	9,848.54	0.23	0.24
Gas Making Labor:			
Generator House	38,103.78	0.91	0.94
Boiler "	12,724.74	0.31	0.31
Purifier "	2,673.82	0.06	0.07
Superintendence	11,180.58	0.27	0.27
Carried Forward.—Net amount of Material and Labor	$1,177,976.44	28.15	29.02

8209

		Cost per M made.	Cost per M sold.
Brought Forward	$1,177,976.44	28.15	29.02
Repairs—including Labor and Material	78,269.09	1.87	1.93
Expense " " "	22,213.82	0.53	0.55
Distribution, " " "	37,081.62	0.88	0.91
Profit and Loss Adjustment	*1.25	—	—
	$1,315,539.72	31.43	32.41
Experiments	2,912.70	0.07	0.07
(*a*) Depreciation November and December, 1904	22,736.08	0.54	0.56
	$1,341,188.50	32.04	33.04

(*a*) Depreciation for Ten Months 1905 covered by Contingent Expense not shown in above statement.
*In Red Ink.

8210 SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCTOBER 31, 1905.

42ND STREET STATION.

			Cost per M made.	Cost per M sold.
Gas Made	1,280,813,000 cu. ft.			
Gas Sold (based on a leakage of 3.02%)	1,242,132,447 " "			
Coal—used in Retorts, 108,391.57 Tons @ $3.20	$347,390.31		27.12	27.97
Labor handling Coal	19,212.87		01.50	01.55
Cartage " "	569.47		00.05	00.04
Carried Forward		$367,172.65	28.67	29.56

							Cost per M made.	Cost per M sold.
Brought Forward						$367,172.55	28.67	29.56
Less Residuals:								
Coke	85,024	Loads	@ $1.94					
	56,932.93	Tons	@ $2.90		$164,999.83			
Less—Cost to handle same:								
Labor				$9,626.86				
Cartage				4,607.48				
					14,234.34			
						150,765.49	11.77	12.14
Tar (Coal)	108,391.57	Tons Carbonized	@ 29.07c.			31,512.18	02.46	02.54
Amm. Liquor	2,284,671	Lbs.	@ 01.36c.			31,139.29	02.43	02.50
Carbon	330,635	"	@ 01.00c.			3,306.35	00.26	00.27
Spent Oxide	1,368,654	"	@ 00.10c.			1,368.65	00.11	00.11
Total Residuals						$218,091.96	17.03	17.56
Net Total						$149,080.69	11.64	12.00
Carried Forward						$149,080.69	11.64	12.00

8212

			Cost per M made.	Cost per M sold.
Brought Forward		$149,080.69	11.64	12.00
Gas Oil	2,071,383 Gals. @ 04.04c.	83,740.93	06.54	06.74
Lime	59,400 Bu. @ 04.98c.	2,957.93	00.23	00.24
Oxide	18,500 " @ 15.04c.	2,782.34	00.22	00.22
Water	3,157,600 cu. ft. @ $1.00 per M	3,157.60	00.24	00.25
Oil, Waste and Sundries		760.00	00.06	00.06
Cartage		381.14	00.03	00.03
Gas Making Labor:				
Retort House Labor		133,075.86	10.39	10.71
Boiler " "		4,795.99	00.37	00.39
Purifier " "		4,845.16	00.38	00.39
Superintendence		4,822.42	00.38	00.39
Carried Forward		$390,400.06	30.48	31.42

8213

		Cost per M made.	Cost per M sold.
Brought Forward	$390,400.06	30.48	31.42
Repairs—including Labor and Material	33,760.39	02.64	02.72
Expense, " " "	11,763.55	00.92	00.95
Distribution, " " "	8,981.48	00.70	00.73
	$444,905.48	34.74	35.82
(*a*) Depreciation November and December, 1904	329.80	00.03	00.03
	$445,235.28	34.77	35.85

(*a*) Depreciation for Ten Months of 1905 covered by Contingent Expense not shown in above statement.

8214 SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCTOBER 31, 19[illegible]

44TH STREET STATION.

Gas Made.. 2,263,444,000 cu. ft.
Gas Sold (based on a leakage of 3.02%).... 2,195,087,991 " "

			Cost per M made.	Cost per M sold.
Coal:				
Used in Generators.........	29,927.41 Tons @ $4.35................................	$130,290.28	5.75	5.93
" under Boilers.........	1,817.11 " @ 3.96................................	7,191.33	0.32	0.33
		$137,481.61	6.07	6.26
Labor employed on Coal................................		3,902.89	0.17	0.18
Cartage " " "		218.40	0.01	0.01
Carried Forward................................		$141,602.90	6.25	6.45

		Cost per M made.	Cost per M sold.
Brought Forward	$141,602.90	6.25	6.45
Less Residuals:			
Oil Tar............907,552 Gals. 20 " small adjustment.			
907,572 " @ 01.79c.	16,149.78	0.71	0.74
	$125,453.12	5.54	5.71
Coke used......... 8,749.22 Loads @ $2.24 5,858.85 Tons @ 3.3531	$19,645.55	0.88	0.90
Labor in handling	61.11	—	—
	$19,706.66	0.88	0.90
	$145,159.78	6.42	6.61
Fuel Oil Labor (including Drip Oil used in Mfg.)	1,165.06	0.05	0.05
Gas Oil........ 10,606,462 Gals. @ 04.09c.	434,033.89	19.18	19.78
Oxide........ 27,260 Bus. @ 15.99c.	4,358.50	0.19	0.20
Water........ 4,591,900 cu. ft. @ $1.00 per M.	4,591.90	0.20	0.21
Oil, Waste, Sundries, etc.	805.22	0.04	0.04
Cartage	2,235.21	0.10	0.10
Carried Forward	$592,349.56	26.18	26.99

8216

		Cost per M made.	Cost per M sold.
Brought Forward	$592,349.56	26.18	26.99
Gas Making Labor:			
Generator House Labor	18,658.45	0.82	0.85
Boiler " "	8,585.64	0.38	0.39
Purifier " "	950.36	0.04	0.04
Superintendence	7,570.00	0.33	0.34
Net amount of labor and material	$628,114.01	27.75	28.61
Repairs, including Labor and Material	25,435.45	1.12	1.16
Expense, " " "	8,899.21	0.39	0.41
Distribution, " " "	14,356.43	0.64	0.66
Profit and Loss Adjustment	100.00	—	—
	$676,905.10	29.90	30.84
(*a*) Depreciation November and December, 1904	18,634.10	0.83	0.85
Total	$695,539.20	30.73	31.69

(*a*) Depreciation for Ten Months 1905 covered by contingent expense not shown in above statement.

8217 SUMMARY OF OPERATIONS FOR THE NOMINAL YEAR ENDING OCTOBER 31, 1905.

99TH STREET STATION.

			Cost per M made.	Cost per M sold.
Gas Made	1,401,538,000 cu. ft.			
Gas Sold (based on a leakage of 3.02%)	1,359,211,552 “ “			
Coal:				
Used in Generators	21,127,000 Tons $4.41	$93,144.21	6.64	6.85
“ under Boilers	1,093.10 “ 3.79	4,142.27	0.30	0.31
		$97,286.48	6.94	7.16
Labor employed on coal		4,161.22	0.30	0.31
Cartage “ “ “		2,072.66	0.15	0.15
Carried Forward		$103,520.36	7.39	7.62

8218

		Cost per M made.	Cost per M sold.
Brought Forward	$103,520.36	7.39	7.62
Less Residuals:			
Oil Tar, 522,980 Gals.			
519 " not sold owing to excessive quantity of water contained.			
522,461 " @ 1.91c.	9,997.17	0.72	0.74
Net Total	$93,523.19	6.67	6.88
Coke, 849.33 Loads @ .9715			
568.75 Tons @ 1.4508	825.12	0.06	0.06
Labor in handling	175.98	0.01	0.01
Cartage "	43.87	0.01	0.01
	$1,044.97	0.08	0.08
Carried Forward	$94,568.16	6.75	6.96

		Cost per M made.	Cost per M sold.
Brought Forward	$94,568.16	6.75	6.96
Fuel Oil Labor (includg. Drip Oil used in Mfg.)	1,658.70	0.12	0.12
Gas Oil, 6,160,688 Gals. @ 04.05c.	249,562.34	17.80	18.36
Oxide 8,500 Bu. @ 14.87c.	1,264.20	0.09	0.09
Water, 1,937,600 Cu. Ft. @ $1.00 per M	1,937.60	0.14	0.14
Oil, Waste and Sundries	707.33	0.05	0.05
Cartage	2,713.38	0.19	0.20
Gas Making Labor:			
Generator House Labor	10,998.48	0.78	0.81
Boiler " "	5,420.83	0.39	0.40
Purifier " "	1,680.80	0.12	0.13
Superintendence	6,534.96	0.47	0.48
Carried Forward—Net amount of labor and material	377,046.78	26.90	27.74

8220

		Cost per M made.	Cost per M sold.
Brought Forward	$377,046.78	26.90	27.74
Repairs (including Labor and Material)	15,710.90	1.12	1.15
Expense " " " "	9,271.41	0.66	0.68
Distribution " " " "	9,592.28	0.69	0.71
	$411,621.37	29.37	30.28
(*a*) Depreciation—November and December, 1904	9,317.05	0.66	0.69
Total	$420,938.42	30.03	30.97

(*a*) Depreciation for Ten Months, 1905, covered by contingent expense not shown in the above statement.

8221 CITY'S EXHIBIT 48.

Appendix "D."

MR. YALDEN'S REPORT.

(Accountant's Results.)

151 Broadway, New York City,
December, 31, 1885.

To Hon. John I. Gilbert, Chairman; Hon. Thomas Robinson, and Hon. Michael C. Murphy, Committee of the Senate, New York:

Gentlemen: In accordance with a resolution, passed by your honorable body, that I should make an investigation of the affairs of the various gas companies of New York, from the time of their organization to the date of the transfer to the Consolidated Gas Company on November 11, 1884, I beg to submit the following as the result of my labors:

The companies so examined—the constituent companies of the present Consolidated Gas Company are:

1. The Manhattan Gas-light Company.
2. The New York Gas-light Company.
3. The Metropolitan Gas-light Company.
4. The Municipal Gas-light Company.
5. The Knickerbocker Gas-light Company, and
6. The Harlem Gas-light Company.

All of which were incorporated on November 11, 1884, under the title of the Consolidated Gas Company, and now carry on business at their respective offices and places—with one or two exceptions—as before the incorporation.

It being the desire (as I understand it) of the committee, and acting upon their instructions, I have ascertained, as nearly as practicable, the constitution of these companies and the manner in which their capital was raised, and what constituted it during their 8222 operations and at the time of the consolidation; likewise the profits and benefits derived by the stockholders of the various companies during their existence, and when they transferred their business.

To show these results I have compiled separate tables for each company, assimilated as near as practicable, giving:

The analysis of the profit and loss accounts.

An account showing the capital used in their business.

The investments on account of real estate, mains, meters, services, etc.

The particulars of sale to the Consolidated Gas Company.

An account showing the dividends paid to the stockholders, and a calculation thereon giving the difference between ten per cent. on the capital stock as paid up and the actual sum divided.

Manhattan Gas-Light Company.

This company was incorporated under the Laws of 1830, chapter 59, passed February 6, 1830, with a capital stock not to exceed $500,000, in $50 shares, and as soon as possible thereafter commenced its business. The first subscription of capital was shortly afterwards paid in. Subsequently, under the Laws of 1847, chapter 163, an act was passed April 29, 1847, providing for the increase of the capital of the Manhattan Gas-Light Co., to $1,000,000 in $50 shares, and up to January 1, 1851, the sum of $850,000 had been paid into the treasury in cash on account of the said stock of $1,000,000, and again under the Laws of 1852, chapter 50, an act was passed March 25, 1852, to increase the capital stock $1,000,000, at such time as the board of directors might prescribe.

8223 By a later act under the Laws of 1855, chapter 543, passed April 17, 1855, power was given to the Manhattan Gas-light Company to increase their capital stock $2,000,000 at such time as the board of directors might prescribe by resolution of said board, with power to adopt such resolution within six months from the passage of the act.

Under a resolution of the board this issue of $2,000,000 worth of stock was credited by a transfer of $18 per share, amounting to $720,000 (40,000 shares at $18 per share), from the surplus profits of the company, and the issue seems to have been made to the shareholders for the equivalent of their present holdings, and the remainder, viz, $32 per share was paid in in cash by the 1st of January, 1866.

To show the particulars of these transactions I have abstracted the details of the capital account on pages 661 to 664. By the books of the company it appears that no business was done by the company until about February 1, 1836, and the details of this for the period to November 11, 1884, I show upon statement, pages 665 to 670, being an abstract of the profit and loss account for the whole period of their doing business. It gives in totals, by yearly and five-yearly periods, the gross income and total cost of gas, and depreciation with dividends paid, and at the foot of such statement the tabulated amounts.

These particulars show that the company, during its business period, divided among its shareholders the sum of $25,847,675.66, which includes $1,500,000 (part of $2,000,000) of certificates, and the interest thereon paid to the shareholders out of the surplus profits, and likewise includes $720,000, before referred to as credited up for capital on account of the last issues of shares. After this the company had a balance to their profit and loss account of $876,134.67, which really represented the surplus capital to provide for
8224 the increased value of the assets, as shown by their books, beyond the amounts which these investments presumably cost.

The properties, etc., of the Manhattan Company were, on November 11, 1884, transferred to the Consolidated Company, at a largely increased value beyond that stated on the books of the former company, and in explanation of this appreciation or increased value of assets, as taken over by the Consolidated Company, the particulars on pages 671-672 will show the state of the accounts upon the books of the Manhattan Company when they were closed on November 11, 1884, and the value of same as taken over by the Consolidated Company.

The balance as shown thereon being $11,940,000, equal to the stock issued by the new company in payment of the properties, franchises, etc., of Manhattan Company.

The column on the debit side of this account, headed "Appreciation written up," and amounting to $7,093,462.11, gives in details the increased value placed upon the various properties and franchises beyond the amount of presumed cost or value stated in the books of Manhattan Company.

Statements are also given upon pages 673 to 683 of the capital investment for real estate, buildings and improvements, services and mains and meters, showing in detail the outlay, year by year, from the inception of the company to November 11, 1884, and giving the methods and forms in which the Manhattan Company treated their investment accounts.

A further statement on pages 684 to 690 is given of the capital stock and surplus profits, according to the books of the company, used in the business, and upon comparison will show that the Manhattan Company was in possession of ample capital, and
8225 sufficient to enable it to accumulate very large profits, and so pay the various dividends.

In July, 1863, this company sold to the Metropolitan Gas-light Company, New York, their real estate and station at Sixty-fifth street, together with the mains, services and meters in use above the center of Thirty-fourth street, for the sum of $685,301.02, and received therefor a mortgage for $161,500 and stock in the said Metropolitan Company 2,356 shares of the par value of $1,178,000.

This stock of the Metropolitan Company appears to have been placed in the hands of Moses Taylor and Henry Young in trust, and by them sold for the benefit of the Manhattan Company; the proceeds of this sale were used to pay the fifty-eighth dividend of the Manhattan Company.

The particulars of this sale, as far as I can ascertain at present, are not fully described in the books, but a complete investigation would no doubt reveal the exact manner in which this transaction was consummated.

In the early part of 1857, and continuing until October, 1863, the company was in the habit of transferring, at certain periods, an amount from profit and loss to the credit of depreciation account, creating a reserve fund to meet the wear and tear of the various properties and works, and during these years the amounts so charged to profit and loss amounted to nearly $1,000,000.

It seems, however, that the company having also provided for alterations and improvements by charging such expenses to the profit and loss account, subsequently by resolution of the board of directors in November, 1863, they re-transferred $756,288.51 to the profit and loss account, and the balance then left, $500,000, was together with

8226 $1,500,000, credited to the registered certificate account under date of June 1, 1867, to meet that amount of certificates before referred to. These registered certificates were paid in cash by the Manhattan Company by redemption and by installment from the period of December, 1871, to October, 1877, with interest at seven per cent. from the date of issue until payment.

I have compiled a statement, fol. 691-694, of the dividends paid by the Manhattan Gas-light Company during the period of its business, showing at stated periods the total capital subscribed in cash, and dividends paid, giving a comparison between a calculation of ten per cent. on the capital paid up and the dividends paid.

The result of this shows that, basing it upon the actual cash capital subscribed, amounting to $3,280,000, there was an excess of dividends paid beyond ten per cent. of $15,509,544.13.

In the year 1856, however, I have included in the dividend $18 per share on 40,000 shares, transferred from surplus profits to the credit of these shares, which, with the $3,280,000 cash subscribed, completes the full capital account of $4,000,000, but as the sum of $720,000 was credited to the capital as before stated, and subsequently treated as capital stock, I have deducted this from the amount of dividends, and reduced the excess of dividends over ten per cent., to $14,789,544.13.

From the foregoing statements the following are the benefits derived by the stockholders of the Manhattan Company from the operations from 1836 to 1884 on the subscribed capital as follows:

Total capital subscribed in cash................	$3,280,000
Transfer from surplus profits as before mentioned, $18 per share on 40,000 shares (last issue).....	720,000
	$4,000,000

8227 Dividends paid to stockholders as per account fol. 691 to 693, inclusive, of $1,500,000, part of the issue of registered certificates and interest at seven per cent, until payment	$25,847,675 66
Balance of depreciation account included in issue of $2,000,000 certificates....................	500,000 00
	$26,347,675 66
Deduct, credited to capital stock on account of last issue of shares (included in amount of dividends)	$720,000 00
Total dividends, certificates and interest thereon paid in cash	$25,627,675 66

Increased valuation beyond stated value of real estate, plant, works, mains, services, etc., in books of Manhattan Company, and the appraisement to the Consolidated Company.

Balances of the separate accounts................		$4,872,999 49
Appreciation	$4,764,462 11	
Franchises	2,329,000 00	
Total appreciation on assets...............		7,093,462 11
		$11,966,461 60
Liabilities of Manhattan Company assumed by Consolidated Company of which $400,000 was dividend	$620,740 78	
Deduct value of coal, lime, gas, consumers' accounts and other assets taken over.............	594,279 18	26,461 60
		$11,940,000 00

8228 For which stock in the Consolidated Company was issued to the stockholders of the Manhattan Company who therefore have received for the original investment of $3,280,000.

Dividends and certificates paid in cash...........		$25,627,675 66
Stock in Consolidated Company..	$11,940,000 00	
Less cash capital subscribed to the Manhattan Company	3,280,000 00	8,660,000 00
Total received beyond the original cash investment................................		$34,287,675 66

The New York Gas-Light Company.

This company is the oldest in New York and its business was continued for about sixty-one years with uninterrupted success and proved to be very profitable.

It was incorporated in the year 1823 with a capital of $1,000,000. Of this sum $200,000 was paid in shortly afterward. In 1824, 1825 and 1826 further sums were paid in, making a total of $495,000, and in the year ending November 1, 1837, the balance of $5,000 was received, making a total of $500,000.

In the following year a further $250,000 was paid, making a total cash capital of $750,000 which was the entire and total amount of cash capital subscribed by the stockholders.

The capital of this company was subsequently increased to $4,000,000 out of the surplus profits of the company, as follows:

8229 There was transferred from the surplus profits to the credit of stock account in the year ending January 31, 1862, $250,000, and in the year ending June 1, 1871, a further sum of $3,000,000 when the company was reincorporated under the general laws of the State.

The account 695-6 will give the particulars of the creation of the capital. The statement on page 697 to 707 gives the profit and loss account of their business for the period of about sixty-one years, the time it was in existence.

The large surplus profits necessary to create this new capital were nominally made up by appreciation of the value of the real estate, plant, etc., but the grounds or basis for so doing do not appear.

The dividends paid by this company, as detailed on pages 717-20 have been continuous from the year 1825 to 1884, and in some years at a very large per cent. per annum.

The total paid in cash to 1871 is	$11,714,078 50
And from 1871 to 1884	3,520,000 00
A further dividend paid by the Consolidated Gas-light Company	40,000 00
Making a total of	$15,274,078 50
Stock dividends or amounts transferred to the credit of capital stock account	3,250,000 00
Making the total profits paid in cash and transferred to the credit of stock account	$18,524,078 50

This company was, many years ago (similarly to the Manhattan Company), in the habit of transferring from their profit and loss account sundry items to provide for depreciation and wear and tear of property which in the aggregate amounted to a very considerable sum.

8230 Finally this was written back by appreciation to the Consolidated Company and the balance shown on the profit and loss resume on page 707 amounting to $3,647,258.19 is in fact the surplus profits of the company beyond the stock capital account.

The following gives the benefits the stockholders derived from the operations of this company:

Net profits, statement No. 1	$4,344,217 78
Net profits, statement No. 2	15,706,437 97
Profits written up direct to depreciation account	66,689 61
Profits on reorganization and consolidation	5,898,302 63
	$26,015,647 99

Paid in dividends exclusive of $40,000 paid by Consolidated Company	$18,484,078 50
Depreciation written off	3,884,311 30
Surplus remaining ($40,000 of this return to stockholders)	3,647,258 19
	$26,015,647 99

Total capital paid in in cash		$750,000 00
Transfer from surplus profits as before mentioned.		3,250,000 00
		$4,000,000 00

Balance of separate account		$4,670,642 03
Appreciations	$1,512,357 97	
Franchise	1,417,000 00	
		2,929,357 97
		$7,600,000 00

8231 For which stock in the Consolidated Gas Company was issued.

The stockholders have therefore received from their original investment of		$750,000 00
Dividends	$15,234,078 50	
Dividend paid by Consolidated Gas Company, January 26, 1885	40,000 00	
Received in shares of Consolidated Gaslight Company	7,600,000 00	
		22,874,078 50

Total return to stockholders above their original cash investment during the years 1823 to 1884 in dividends and stock of the Consolidated Company	$22,124,078 50
And a further estimated surplus yet to be divided of	47,258 19
Total	$22,171,336 69

Metropolitan Gas-Light Company.

This company was organized in 1858, under a special act of the Legislature with a nominal capital of $2,500,000.

Upon reference to the statement page 721, it will be observed that of this capital the sum of $612,700 only was received in cash and the remainder was paid for the charter and construction account.

On this latter account the sum of $1,178,000 was paid to the
8232 Manhattan Company for the purchase of the Sixty-fifth street
property, works, mains, etc. (reference to which is made under heading of that company), and was apparently issued in payment therefor at the rate of about fifty cents on the dollar.

This company commenced business about the year 1862, and was successfully carried on for the next twenty-two years, as will be observed by the profit and loss account on pages 722 to 726, notwithstanding the fact that dividends were paid upon a large amount of capital issued for property and franchises, a great part of which was issued at a large discount.

The dividend account on page 737-738, shows that the company commenced paying dividends in the year 1866, and continued doing so with the exception of the year 1873. The sum paid to stockholders in the aggregate including scrip certificates of $1,000,000 with interest thereon of $761,249.36 is $7,573,749.36, and it will be observed from the statement that this is an excess over ten per cent. upon the whole of the capital, of $1,973,949.36.

Upon reference to the capital investment account of real estate, property, etc., pages 728-724, it will be seen that although some of the property, plant, etc., was paid for by stock issued at a discount, the valuation to the Consolidated Company, including franchises, is largely in excess of the amount so charged as the purchase price of the same, and as detailed upon the account page 927. The cost (including the stock) of the various properties transferred to the Consolidated Company according to the books was $5,292,175.35, giving an appreciation between that and the appraisement to the Consolidated Company ($7,175,000) of $1,882,824.65.

At various times this company issued bonds and mortgages for
considerable sums upon their property, the interest thereon
8233 being charged in the regular way of business to the profit
and loss account before the profits were determined; the
amounts so outstanding and assumed by the Consolidated Company, were, for bonds $658,000 and mortgage $30,000, making $688,000, which was deducted from the appraisement of the property value, and stock of the Consolidated Company was issued for the net amount which, in round figures, was increased to $6,500,000, as hereafter shown.

In addition to this, however, there was a large amount of assets belonging to the company which were not transferred to the Consolidated Company but subsequently realized upon and the proceeds divided among the stockholders to the extent of $525,000, and there now still remains an undivided surplus of about $160,000.

The benefits, therefore, derived by the stockholders were as follows:

Total capital paid in in cash..................	$612,700 00
Total capital for charter......................	144,000 00
Total capital for purchase of Sixty-fifth street property	1,178,000 00
Total capital for construction.................	565,300 00
Making a total of........................	$2,500,000 00

Dividends paid to stockholders in cash..........	$6,500,000 00
Scrip and interest issued in 1870, subsequently paid off by installments	1,073,749 36
Stock in the Consolidated Company............	6,500,000 00
Making a total of........................	$14,073,749 36

8234 Brought forward	$14,073,749 36
To which must be added division of assets since consolidation, paid in cash	525,000 00
Present undivided surplus, say	160,000 00
Making a total of	$14,758,749 36
From which deduct the nominal amount of stock capital	2,500,000 00
Total received beyond original invesment	$12,258,749 36

This company claims to have incurred considerable loss by explosion and fire. By the books, it appears that the loss to the company on this account in 1865, was $108,960.22, $12,000 of which was charged to construction account for new coal sheds, and the balance to profit and loss account, less a small salvage realized upon coal.

In the purchase of the Sixty-fifth street station before referred to, the amount charged to the construction account, as representing the value of the property so taken at cost, and the par value of the stock appears to be the sum of $533,922.62.

MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

The above companies were organized in the year 1876 and subsequently merged and operated under one management up to the time of the consolidation, on November 11, 1884.

The Knickerbocker Company was formerly the Union Gas-light Company which passed into the hands of a receiver. It appears that the works of the Knickerbocker Company were partly built
8235 from funds supplied by the Bayard estate, and the advances
for that purpose amounted to about $1,200,000, which was secured by the lease between the Municipal and Knickerbocker Companies providing for the guarantee of the payment of interest and principal upon the $1,200,000 in bonds. At the same time the Knickerbocker Company stock was purchased by the Municipal for $50,000 in cash, the latter company transferring in trust the whole of its share capital, viz.: 15,000 shares, at $100, each representing $1,500,000 of stock.

The Municipal Company was incorporated July 7, 1876, with a capital of $500,000, and commenced operations by issuing 3,500 shares of stock, at par value of $350,000, to Mr. R. M. C. Graham, in consideration of the purchase of stock in the New York Oxygen Gas Company. Of this $350,000, $250,000 was returned to the treasury of the company, to be sold and used as working capital, leaving the actual cost to the company of the property acquired $100,000. The $250,000 stock was disposed of as follows:

For cash	$215,300
In payment of expenses	8,900
Discount on stock sold below par	25,800
Making a total	$250,000

And $150,000 of stock was issued to Mr. E. Stearns, agent, in purchase of a certain patent-right, known as the Du Moteé patent, and this transaction, with the stock issued to Mr. Graham, completed the entire issue of the original stock of $500,000. In 1877, a further increase of $1,000,000 was made on the capital stock of which $800,000 was paid in cash and $200,000 paid for the purchase of patents; and in 1879 a further issue of $500,000;; and in 1880 a further
8236 issue of $1,000,000, both of which were paid in cash, making the total issue of capital $3,000,000.

The particulars of the capital account are detailed on page 730.

To enable this company to provide additional capital for its plant and works, an issue was made in 1877, of $750,000 in bonds; $390,000 were sold for cash, and the balance, $360,000, was deposited as security for the purchase of real estate and other property, and of these bonds there remained at the time of the transfer to the Consolidated $291,000 the liability of which was assumed by the Consolidated Company.

In the last issue of $1,000,000 of stock, in 1880, there was included a subscription by the Bayard estate of three thousand five hundred shares, amounting to $350,000 a check for which was paid to the Municipal Company on March 16, 1880. The history of this transaction appears to be, that the Knickerbocker Company had instituted a suit against the Municipal Company for damages for the nonfulfillment of a certain contract, which action was settled by payment to the Bayard estate on the 16th March, 1880, of the sum of $300,000 and the $50,000 before referred to for the purchase of the Knickerbocker stock, making a total of $350,000 capital; a check by the Bayard estate for $350,000 was concurrently paid to the company as a subscription for the 3,500 shares so issued. This stock appears by the register of stockholders to have been subsequently transferred in part to the shareholders of the original Knickerbocker stock under arrangement between the parties. The above amount of $300,000 for damages was charged to the profit and loss account, and the $50,000 was charged up as an investment for Knickerbocker stock, so that in reality the company had paid damages and invested
8237 in the Knickerbocker stock at the expense of their capital account, and the transactions being concurrent, the company in reality parted with no money. In 1880, when the Knickerbocker property was acquired by the Municipal as before stated, the two companies were conducted under one management, and a separate set of books was kept showing the production and profits of each company at its respective works, as likewise the amounts paid out for improvements to works and mains, etc., and the cost of each was provided out of the Municipal funds. The separate profits of the two companies are shown in statement pages 740-739 and result in a surplus, during the operations, of $2,493,543.51 after payment of dividends amounting to $2,806,192.50.

The profit and loss account also contains a credit on June 30th, 1879, of $300,000 paid by the New York Gas-light Company for the right to manufacture gas by the process then in use by the Municipal Company.

The purchase of this patent in the first place was charged up to the "purchase of patents account," but the sum received for the right from another company was credited up to "income account." The total outlay by the Municipal Company for real estate, buildings, works, plant, services, mains, meters, etc., was $4,092,347.86, which was appraised to the Consolidated Company at $5,100,000, leaving an appreciation, including the franchise, of $1,007,652.14. The Knickerbocker Company's outlay for improvements, meters, plant, services, etc., provided for by the Municipal amounted to $810,481.15, but the works, the value of which is not brought into the books, were appraised to the Consolidated Company at $3,000,000 leaving an appreciation (subject to mortgage bonds) of $2,189,518.85. The total amount, therefore, of the two properties transferred to the
8238 Consolidated Company was $8,100,000, from which was deducted for liabilities $1,500,000, leaving a net amount of $6,600,000 of stock issued to the stockholders of the Municipal Company in consideration of the two properties, less the incumbrances.

In reference to the dividend account, page 750, it will be seen that the Municipal Gas-light Company commenced paying dividends in 1879 and for the six years ending 1884, paid to its shareholders the sum of $2,806,192.50, by way of dividends, to which must be added the stock of the Consolidated Company amounting to $6,600,000, making a total of $9,406,192.50.

To this, however, must be added division of assets since the consolidation already paid, $795,000, and a further surplus of about $137,000, making a total amount received and to be received by the stockholders of the Municipal Company for the original capital:

Cash dividends and surplus to be divided.........	$3,738,192 50
Add the stock of the Consolidated Company to represent the original investment of $3,000,000......	6,600,000 00
	$10,338,192 50
Deduct amount of stock capital paid in...........	3,000,000 00
Net benefits received in cash and stock beyond the original investment	$7,338,192 50

As before mentioned, the Knickerbocker stock was bought by the Municipal Company for $50,000, which was charged to an ac-
8239 count called "The Knickerbocker stock account." The stock itself, however, was transferred and held in the name of trustees, and arrangements with the old stockholders were apparently made by the subscribers to the Bayard stock of 3,500 shares, a part of the issue of 1880. When the Municipal Company was transferred to the Consolidated Company this stock was divided *pro rata* among the then stockholders of the Municipal Company, and taken at a valuation, to include plant, of $3,000,000, from which was deducted the bonded debt of about $1,137,000. The shareholders of the Municipal, therefore, were benefited in this transaction nearly $1,863,000, and by the profits accumulated from the manufacture, less the outlay upon the works and the cost of the stock, about $860,481.15.

HARLEM GAS-LIGHT COMPANY.

This company was incorporated in 1855 under the act entitled "An act to authorize the formation of gas-light companies," passed February 16, 1848, and during the first year of its existence, issued and received payment for $85,000 of stock. Within the succeeding four years it issued further capital to the amount of $262,900 of which $150,950 was issued in payment for construction and works. By subsequent issues at different periods the total stock capital was brought up to $2,000,000, of which $1,569,050 was paid up in cash, $150,950 was issued as above in payment for construction and works, $200,000 was credited by appreciation by resolution of the board, May 21, 1866, and $80,000 was issued in July, 1864 by way of scrip dividend.

The particulars of the foregoing are shown by the capital account, pages 751-752. In 1875 $150,000 in bonds bearing interest at seven per cent. per annum, payable one-half yearly were issued and 8240 subscribed for, and in 1879 a further $20,000 were taken up, making a total bonded debt of $170,000.

The company did not enter upon active business until the early part of 1857, and the results up to the time of their amalgamation with the Consolidated Gas-light Company are shown in yearly, and five yearly periods by the analysis of the profit and loss account pages 753-757.

An examination of the figures contained in the above-named analysis will show that the company during the twenty-seven years of its active business paid to its stockholders dividends to the amount of $2,329,917.25 (inclusive of the $80,000 scrip), and paid interest regularly on their bonds.

From the statement headed "Current Capital account," pages 761 to 764, it will be noted, that this company, whilst always commanding a steady business had not at all times ample capital at command. This arose to a great extent from a very large portion of the business of the company being the public lighting, which returned but a bare profit, if any, on the cost.

The rate of dividends paid by this company has at no time been excessive, averaging in many years considerably below ten per cent. (See Capital and Dividend Account pages 765-766).

The transfer of this company's property to the Consolidated Gas-light Company was effected at an appreciation of (in round figures) $1,313,000, on the real estate, buildings, retorts, plant, mains and services, and the franchises and rights were charged up at $469,082.54. (For the further full particulars of this, see particulars of sales to Consolidated Gas-light Company, page 758.) The statement shows $3,000,000 Consolidated stock issued, the actual amount of stock received, however, approximated $2,830,000—$170,000 8241 being retained by the Consolidated Gas Company, on account of liability assumed by them of the $170,000 bonds of the Harlem Gas-light Company, which have since been paid off by the Consolidated Company.

From the foregoing, and by reference to the annexed tabulated statements it will be seen that in a condensed form the following figures give particulars of total cash and capital investments and profits derived therefrom by the stockholders of the Harlem Company by way of dividends, and by sale under the consolidated scheme to the Consolidated Gas Company.

Total capital subscribed in cash, and issued for construction (cash)		$1,720,000 00
Issued by appreciation		200,000 00
Issued by scrip dividend		80,000 00
Total		$2,000,000 00
Total dividends paid to stockholders, as per account pages 765-766, exclusive of $80,000 scrip dividend		$2,249,917 25
Increased valuation beyond stated value of real estate, plant, mains, services, etc., in books of Harlem Company, and the appraisement to Consolidated Company:		
Balance of separate accounts		1,243,986 97
Appreciation	$1,312,733 98	
Franchises	469,082 54	
		1,781,816 52
		$3,025,803 49
8242 Brought forward		$3,025,803 49
Liabilities assumed by Consolidated Company:		
Bonded debt	$170,000 00	
Sundry liabilities	168,705 93	
	$338,705 93	
Deduct value of consumers' accounts, coal, tools, stores, materials, coke, cash assets, etc	142,902 44	
		195,803 49
		$2,830,000 00

This being the amount of stock issued by the Consolidated Company to the Harlem Company, viz.: $3,000,000, as shown by statement page 758, less liability of $170,000 assumed by the Consolidated Company on account of the bonded debt of the Harlem Company hereinbefore referred to.

The stockholders of the Harlem Company have therefore received for their original investment of $1,720,000 represented by stock of $2,000,000,

Dividends	$2,249,917 25
Consolidated stock as above	2,830,000 00
	$5,079,917 25
Deduct cash paid for stock	1,720,000 00
Received in cash and stock of Consolidated Company for the original investment	$3,359,917 25

8243 The foregoing gives a succinct history of the constituent companies of the Consolidated Company, and on page 775 give a tabulated statement showing the various capital accounts, the benefits, etc. On reference to this statement it will be seen that the total benefits derived by the stockholders from their investment have been, in cash dividends, surplus assets, and stock in the Consolidated Company $79,418,703.26, and in addition thereto the equivalent of the original stock in the stock of the new company.

On page 776 are shown the assets and liabilities transferred by the constituent companies to the Consolidated Company, but collected on their account, and liquidation of the current liabilities at the time of the transfer.

It therefore shows that the constituent companies really paid back to their stockholders the working capital of their separate concerns, which in the aggregate amounted to (say surplus assets)	$1,707,089 99
Add dividends paid for the Manhattan and New York Companies included under that head	440,000 00
	$2,147,089 89

THE CONSOLIDATED GAS COMPANY.

The various constituent companies were organized into the Consolidated Company at a par value of $39,078,000, which represents, according to the following schedule, the valuation and appraisement of the real estate, mains, services, etc., and other properties and franchises.

8244

	New York.	Manhattan.	Metropolit'n.	Municipal.	Knicker-bocker.	Harlem.	Total.
Street mains, valves, etc.	$950,000	$1,083,000	$971,000	$749,000	$744,000	$720,000	$5,217,000
Meters	215,000	367,000	273,000	158,000	69,000	113,000	1,195,000
Services	127,000	350,000	233,000	103,000	81,000	111,000	1,005,000
Plant	2,874,000	3,623,000	2,044,000	1,804,000	980,000	826,000	12,151,000
Real estate	1,607,000	3,563,000	1,474,000	889,000	480,000	604,000	8,617,000
Bulkheads, piers and water rights	250,000	425,000	300,000	200,000	115,000	100,000	1,390,000
Office buildings	100,000	175,000	....	....	....	50,000	325,000
Office furniture	15,000	20,000	12,000	16,000	2,000	5,000	70,000
Laboratories, photometer rooms, etc.	5,000	5,000	5,000	6,000	1,000	2,000	24,000
	$6,143,000	$9,611,000	$5,312,000	$3,925,000	$2,472,000	$2,531,000	$29,994,000
Rights, franchises etc.	1,417,000	2,329,000	1,863,000	1,175,000	528,000	469,000	7,781,000
Totals	$7,560,000	$11,940,000	$7,175,000	$5,100,000	$3,000,000	$3,000,000	$37,775,000

PAGE BOUND VERTICAL

8245 Furthermore, a certain amount of stock was reserved by the Consolidated Company, amounting to $1,303,000, to be hereafter sold to provide working capital, and a sum of $2,329,000 was also reserved from such valuation of $37,775,000, to be disposed of from time to time in providing for the current obligations and bonds of the various companies.

This stock had not been disposed of at the time your committee commenced its labors, but some of the liabilities had been paid, viz.:

The bonds of the Harlem Company	$170,000 00
Notes of the Knickerbocker Company	450,000 00
Total	$620,000 00

The stock above referred to, and amounting to $3,647,940, was held by the treasurer in trust for the company at the commencement of your committee's sittings.

The time for the Consolidated Company to close its accounts for the first fiscal year is, I am informed, on the 31st of December 1885, therefore, the full result of the year's operations on the method it intends to pursue in closing up its accounts is not apparent. The monthly trial-balance to October 31, 1885, and profit and loss account to June 30, 1885, were, however, produced.

The profit and loss account to 30th June, 1885, showed net profits of $1,832,503.38, and left after payment of the first dividend of three and one-half per cent., $592,988.88 carried forward to a new account. This represents the apparent profits of the company, as made up from November 11, 1884, to June 30, 1885, the best season of the year.

8246 About the 24th of November last, a further dividend of three and one-half per cent. was declared, and made payable on the 15th December, which, at the time of declaration, had not been earned, and it is doubtful if sufficient was to the credit of profit and loss account on the date of payment—15th December.

From an examination of the accounts as submitted to me up to the 31st October, 1885, the seven per cent. dividend was not earned, nor can it be shown, in my opinion, that at the 31st December, 1885, if the accounts are made up upon a true basis of reserving a proper amount of depreciation and wear and tear, that the payment of this dividend is warranted by the earnings.

It having been represented by witnesses during the progress of the committee's labors that the wear and tear of the gas plant is about twelve and one-half per cent. per annum, it can readily be seen that such an amount has not been expended or provided for, even if you take the plant and works at the actual cost, instead of the appraised value.* It is further noticed that large sums have been expended and charged to plant, works, etc., thereby considerably increasing the apparent outlay for plant and increasing the depreciation in future years.

This question of reserving for repairs and depreciations is one that demands careful consideration, and should undoubtedly be a charge to expense account, for a fair proportionate sum yearly, even if the amount so set aside or decided upon, has not been expended.

In all well-conducted manufacturing interests such a course is pursued, to equalize the earnings and avoid an excessive charge in one year as against another, when the expenditure is variable, and chances of accidents occurring, entailing a considerable outlay to replace.

The Treasurer of the company has testified that it was neces-
8247 sary to borrow money to pay the dividend, and to meet that
obligation the company discounted $600,000 worth of notes
with their bankers, pledging their receipts therefor to meet them at
maturity.

From the foregoing it is evident that the profits of the company are exhausted in the payment of the dividend. It must, however, be considered that some of the obligations of the old companies have been paid off, and, there being no working capital to provide for the cash assets, excepting the credit obtained for supplies, the company, of necessity, must be a borrower, and, to provide means to carry on their business, they have contracted loans from February, 1885, which must continue unless more capital stock is subscribed, or a surplus fund created out of profits.

The stated object of consolidation being to reduce the price of gas by curtailment of expenses, centralizing their works, and manufacturing at the minimum of expense, has not, to any extent, been effected. The cost of the executive management is large (amounting to $75,000 per annum), while, in many instances, other expenses remain the same, and what has been gained by the consumers in the nominal reduction of the price of gas from $2.25 to $1.75 per thousand feet is largely accounted for by the decrease in leakage from the closing of mains formerly in use.

The fact still remains, however, that the Consolidated Company is
now paying to its shareholders, who were stockholders in the old
companies, dividends approximating in amount the dividends re-
ceived by them on their corresponding holdings in the constituent
companies; and while the consumers may have benefited by
8248 the cost of gas from reduction of expenses, no concession is
made by the shareholders.

The gas produced and distributed by the company for one year ending November 11, 1885, is estimated at 3,820,000,000 cubic feet, and has produced a profit of about sixty-five cents per thousand feet or thirty-eight and one-quarter per cent. of the average receipts ($1.70 per thousand feet) from consumers as profits.

It appears by the London gas companies' accounts that a larger quantity of gas (4,234,164,000 cubic feet) is produced by the South Metropolitan Gas Company on a capital of $11,401,800 and the price to consumers per thousand cubic feet is sixty-eight cents, while the shareholders receive a dividend of about twelve per cent. for the year 1884. The capital used to produce this quantity is $2.69 per thousand cubic feet, while in the Consolidated Company of New York upon the present capitalization $10.23 is required.

It is quite evident from the workings of this company that little relief can be extended to gas consumers beyond the present price charged, if the stockholders expect a continuous dividend of seven per cent. upon the present capitalization. Some relief might be afforded by consolidating the various works, and so curtail expenses to a minimum, and avoid the use of unnecessary mains to decrease the loss of gas, which, in the year 1883, amounted (including the consumption at works) to fifteen per cent. of the total produced. Should this be adopted, and a fair dividend paid upon the actual capital invested, the cost to consumers will be materially lessened.

The stock of the Consolidated Company is listed on the New York Stock Exchange, and considerable dealings have taken place.

8249 An investigation of the stock accounts show that while a few of the original stockholders have increased their holdings, new holders have acquired 50,662 shares out of a total of 354,300 shares allotted to the stockholders of the constituent companies. With the exception, therefore, of about one-seventh, the shares are now held by the same parties who held them before the consolidation.

NEW YORK MUTUAL GAS-LIGHT COMPANY.

This company was organizd under chapter 651, Laws of 1866.

Its original share capital was $500,000 which in 1870 was increased to $5,000,000.

The books of the company open in November, 1871, with entries tending to show that the whole of the capital of $5,000,000 was allotted as fully paid to the parties contracting to supply the buildings, materials, plant, mains, services, etc., but this seems to have been merely a technical transaction to render the capital legally issued as fully paid.

The contractors appear to have donated the stock to the treasury of the company, and it was then issued to subscribers at fifty cents on the dollar, the whole of the original buildings, materials, plant, mains, services, and real estate being paid for in cash out of the proceeds of such stock sales.

The company commenced active business toward the close of the year 1873, and during the twelve years ending December 31, 1884, after paying dividends to the amount of $3,612,500 accumulated a credit balance to their profit and loss account of $3,129,708.40, a considerable portion of which has been expended in general construction, mains, services, etc.

In 1871 the company made a first issue for cash of $220,000 on account of a total issue of $1,000,000 of first mortgage bonds,

8250 bearing six per cent. interest, redeemable at the option of the company. This issue was continued during 1872, 1873 and 1874, and the last $100,000 issued during 1878. The whole of the loan was redeemed during the four succeeding years.

In 1882 the company made a second issue of $1,500,000 six per cent. mortgage bonds, exchanging these for a like amount of capital stock at par, thereby reducing the stock capital to $3,500,000.

Part of these bonds have since been bought up by the company, so as to leave now on account of unredeemed bonds at the close of 1884, $1,296,000.

Against this, and ostensibly to meet this liability when due, the company has from time to time invested its surplus profits in United States bonds, and now hold $900,000 par value.

The company does not appear to have materially appreciated or depreciated its assets, the cost of repairs and maintenance having been periodically charged against income, thereby effecting, though in a less direct manner, the ends gained by a direct charge to depreciation.

Irrespective of the above, however, the company has, at different periods, written off the sum of $176,500 on account of patents purchased and worked, which have proved of no value.

The analysis of profit and loss accounts, page 768 gives the workings of the company in yearly periods and particulars of the dividends paid, and the subscription and repayment of first and second mortgage bond issues, will be found on page 767.

Page 770 gives particulars of the real estate investments, which will stand at the figures of the original investment, and page 771 gives particulars of the investments other than real estate.

The balance sheet page 767 gives the exact position of the company on December 31, 1884.

8251 The Mutual Company, it was originally intended should join in the consolidation, but for reasons they did not do so. The original capital of the Consolidated Company was fixed at $45,000,000, and the proportion of the Mutual being $5,922,000, the present capital of the Consolidated Company was reduced to that extent.

EQUITABLE GAS-LIGHT COMPANY.

This company was incorporated in 1882 with an authorized capital of $2,000,000, which was subsequently increased to $3,000,000; it commenced business in 1882 by the purchase of the patent rights belonging to Mr. Jermanauski for $1,000,000 in fully paid shares of the capital stock of the company; Mr. Jermanauski then donated $500,000 of this stock to the company for the purpose of providing working capital to build works, etc.

This stock was all sold at par, and paid for in cash.

In addition to the above item $190,000 in shares were issued at par in part payment on contract for the erection of works.

The remainder of the capital, $2,310,000, has all been subscribed for, payable in installments, on account of which $1,742,247.68 has been paid in cash up to November 30, 1885, $432.32 interest allowed on anticipated payments, leaving a balance still to be paid in of $567,320.

The company has issued besides $1,000,000 in coupon bonds, and owes on mortgage on its real estate and works the sum of $400,000, making the total capital upon which it is at present operating $3,832,680. On the first November, 1885, to which time the accounts were taken out, this item stood at $3,737,865.

The investments for works, etc., against this capital including the $500,000 for patents, amount to $3,381,850.10, and the difference is made up of cash in bank, value of materials on hand, and bills against consumers, due and unpaid, amounting to $350,614.90. Of this sum, however, considerable amounts are being expended for real estate (over $500,000) to provide additional works to increase production. 8252

This company did not commence to produce and distribute gas until the month of December, 1884, and has sent out during the eleven months 253,118,800 cubic feet, and is now producing a maximum of about 2,500,000 cubic feet per diem.

The various companies before referred to comprise all the gas companies doing business in New York city, exclusive of those east and north of the Harlem river.

Respectfully submitted,

J. YALDEN,
Public Accountant and Auditor,
151 *Broadway, New York.*

TABLES

(Prepared by the Expert)

SHOWING THE VARIOUS ITEMS OF THE AMOUNTS STATED IN HIS FOREGOING REPORT. ABSTRACTS OF THE CAPITAL ACCOUNTS, THE ACCOUNTS FOR CONSTRUCTION, REPAIRS, PROPERTIES, DEPRECIATION, EXPENSES. PROFITS. DIVIDENDS, EARNINGS AND ALL OTHER IMPORTANT ACCOUNTS ARE IN THESE TABLES STATED SEPARATELY WITH RESPECT TO EACH NEW YORK GAS COMPANY.

A

MANHATTAN GAS LIGHT CO.

Capital Account.

DATE.	Capital created.	Cash.	Dividends declared and paid.	Instalments credited by resolution.
1831				
Feb. 1. 1st issue under original charter. 10,000 shares at $50	$500,000 00			
Feb. 1		$1,625 00		
July 31		825 00		
Aug. 31		5,160 00		
Sept. 30		880 00		
1833				
May 31		2,440 00		
June 30		1,220 00		
July 31		37,830 00		
Aug. 31		20 00		
1834				
July 1		50,000 00		
1835				
Jan. 1		25,000 00		
to 1836				
Jan. 1		75,000 00		
	$500,000 00	$200,000 00		
1836				
Sept. 1		$50,000 00		
1837				
Jan. 1			*24,000 00	
1839				
Mar. 31		20,000 00	27,500 00	
		$70,000 00	$51,500 00	
1841				
July 31		$28,548 00		
1842				
Jan. 1		1,062 00	$17,100 00	
1843				
Jan. 1		30,390 00	18,900 00	
1844				
Jan. 1			19,800 00	
1845				
Jan. 1			19,800 00	
1846				
Jan. 1		37,498 00	21,000 00	
		$97,498 00	$96,600 00	
1847				
Jan. 1		$130,145 00	$24,800 00	
1848				
Jan. 1. 2d issue. 20,000 shares, at $50	$1,000,000 00	103,622 00	77,500 00	
1849				
Jan. 1		122,605 00	53,250 00	
1850				
Jan.		126,067 50	72,875 00	
1851				
Jan. 1		62 50	65,000 00	
	$1,000,000 00	$482,502 00	$312,925 00	

*Feb. 1836, $12,000; Sept. 1836, $12,000.

A — MANHATTAN GAS-LIGHT CO.

Capital Account—(Continued).

YEAR ENDING.	Capital created.	Cash.	Dividends declared and paid.	Instalments credited by resolution.
1852 Jan. 1		$60,550 00	$85,000 00	
1853 Jan. 1		287,372 50	92,625 00	
1854 Jan. 1		301,430 00	120,000 00	
1855 Jan. 1. 3d issue. 10,000 shares at $50	$500,000 00	395,850 00	148,333 33	
1856 Jan. 1. 4th issue. 40,000 shares at $50	2,000,000 00	154,797 50	*905,441 67	
Jan. 1. Credit to stockholders of $18 per share on this issue out of "surplus profits."				$720,000 00
	$2,500,000 00	$1,200,000 00	$1,351,400 00	$720,000 00
1857 Jan. 1			$396,250 00	
1858 Jan. 1			277,000 00	
1859 Jan. 1		$228,045 00	569,333 33	
1860 Jan. 1		497,755 00	600,000 00	
1861 Jan. 1			525,000 00	
		$725,800 00	$2,367,583 33	
1862 Jan. 1		$4,200 00	$525,000 00	
1863 Jan. 1			525,000 00	
1864 Jan. 1		488,587 50	1,337,880 83	
1865 Jan. 1		4,250 00	875,000 00	
1866 Jan. 1		7,162 50	200,000 00	
		$504,200 00	$3,462,880 83	
6 months ending 1866 July 1			$200,000 00	
Year ending 1867 July 1			400,000 00	
6 months ending 1868 Jan. 1			270,000 00	
Year ending 1869 Jan. 1			1,140,000 00	
1870 Jan. 1			940,000 00	
1871 Jan. 1			1,140,000 00	
			$4,090,000 00	

* Inclusive of above, $720,000.

A — MANHATTAN GAS-LIGHT CO,

Capital Account—(Continued).

YEAR ENDING.	Capital created	Cash.	Dividends declared and paid.	Instalments credited by resolution.
1872 Jan. 1	....	....	$1,540,000 00	....
1873 Jan. 1	....	....	1,763,428 90	....
1874 Jan. 1	....	....	411,285 77	....
1875 Jan. 1	....	....	1,600,011 67	....
1876 Jan. 1	....	....	1,400,000 00	....
			$6,714,726 34	....
1877 Jan. 1	....	....	$600,000 00	....
1878 Jan. 1	....	....	800,000 16	....
6 months ending 1878 July 1	....	....	600,000 00	....
Year ending 1879 July 1	....	....	400,000 00	....
1880 July 1	....	....	320,000 00	....
Year ending 1881 Jan 1	....	....	400,000 00	....
			$3,120,060 16	....
1882 Jan. 1	....	....	$880,000 00	....
1883 Jan. 1	....	....	1,000,000 00	....
1884 Jan. 1	....	....	1,000,000 00	....
to Nov. 1	....	....	1,400,000 00	....
			$4,280,000 00	....

A—*Summary.*

FIVE YEARS ENDING.	Capital created.	Cash.	Dividends declared and paid.	Instalments credited by resolution out of profits.
1836 Jan. 1	$500,000 00	$200,000 00		
1841 Jan. 1		70,000 00	$51,500 00	
1846 Jan. 1		97,498 00	96,600 00	
1851 Jan. 1	1,000,000 00	482,502 00	312,925 00	
1856 Jan. 1	2,500,000 00	1,200,000 00	1,351,400 00	$720,000 00
1861 Jan. 1		725,800 00	2,367,583 33	
1866 Jan. 1		504,200 00	3,462,880 83	
1871 Jan. 1			4,090,000 00	
1876 Jan. 1			6,714,726 34	
1881 Jan. 1			3,120.060 16	
to 1884 Nov. 1			4,280,000 00	
		$3,280,000 00		
Instalments credited by resolution out of profits.		720.000 00		
	$4,000,000 00	$4,000,000 00	$25 847,675 66	$720,000 00

A—MANHATTAN GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts from February 1, 1836, to November 11. 1884.* *Cr.*

Year ending	Total cost of gas, bad accounts and sundries.	Depreciation.	Dividends.	Gross income from gas recovered on bad account and sundries.	Appreciation written up.
1834, February 1..	$35,448 48	$1,476 18	$24,000 00	$46,311 79	
1838, February 1..	33,081 94	1,476 18	27,500 00	44,307 58	$13,316 25
1839, February 1..	41,539 88	....	....	50,827 36	
1840, February 1..	33,666. 73	....	....	39,161 03	
1841, February 1..	33,454 04	....	....	49,259 71	
	$177,191 07	$2,952 36	$51,500 00	$229,867 47	$13,316 25
1842, February 1..	$34,716 39	....	$17,100 00	$52,191 75	
1843, February 1..	36,322 04	....	18,900 00	55,723 06	
1844, February 1..	33,849 23	....	19,800 00	57,779 08	
1845, February 1..	40,712 12	....	19,800 00	65,181 30	
1846, February 1..	50.436 51	....	21,000 00	79,550 64	
	$196,036 28	....	$96,600 00	$310,425 83	

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A.—MANHATTAN GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts, etc.*—(Continued). **Cr.**

Year ending	Total cost of gas, bad accounts and sundries.	Depreciation.	Dividends.	Gross income from gas recovered on bad accounts and sundries.	Appreciation written up.
1847, February 1..	$63,282 09	....	$24,300 00	$118,004 89	
1848, Feb. 1 (11 m.)	72,950 46	$9,232 67	77,500 00	134,453 48	
1849, January 1...	81,809 14	5,887 88	53,250 00	163,268 84	
1850, January 1...	132,776 67	1,706 00	72,875 00	248,595 25	
1851, January 1...	162,913 08	4,250 19	85,000 00	313,712 60	
	$513,731 44	$21,076 74	$312,925 00	$978,035 06	
1852, January 1...	$206,275 28	....	$85,000 00	$382,256 28	
1853, January 1...	275,239 99	....	92,625 00	480,917 13	
1854, January 1...	455,108 19	$22,889 15	120,000 00	755,256 02	
1855, January 1...	649,585 99	48,196 66	148,333 33	1,011,728 32	
1856, January 1...	778,550 91	....	905,441 67	1,229,028 93	
	$2,364,760 36	$71,085 81	$1,351,400 00	$3,859,186 68	

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1857, January 1...	$845,892 52	$327,953 84	$396,250 00	$1,388,744 73	
1858, January 1...	991,786 18	50,000 00	277,000 00	1,511,313 16	
1859, January 1...	1,082,300 41	1,168 39	569,333 33	1,631,050 15	
1860, January 1...	1,200,624 99	50,014 50	600,000 00	1,884,500 86	
1861, January 1...	1,282,967 40	150,000 00	525,000 00	2,128,953 61	
	$5,403,571 50	$579,136 73	$2,367,583 33	$8,544,562 51	
1862, January 1...	$1,220,105 61	$227,425 44	$525,000 00	$2,013,623 30	
1863, January 1...	1,186,999 84	450,000 00	525,000 00	2,063,743 77	
1864, January 1...	1,361,835 22	150,000 00	1,337,880 83	2,127,158 04	$903,284 06
1865, January 1...	1,807,845 36	....	875,000 00	2,296,511 23	
1866, January 1...	2,179,542 01	....	200,000 00	2,534,258 34	
	$7,756,328 04	$827,425 44	$3,462,880 83	$11,035,294 68	$903,284 06
1867, January 1...	$2,271,254 04	....	$200,000 00	$2,665,182 51	
1868, January 1...	2,281,431 19	....	670,000 00	3,357,123 87	
1869, January 1...	2,467,006 74	....	1,140,000 00	3,838,615 08	
1870, January 1...	2,730,666 69	....	940,000 00	3,992,864 32	
1871, January 1...	2,684,472 39	....	1,140,000 00	4,016,839 18	
	$12,434,831 05	....	$4,090,000 00	$17,870,624 96	

A—MANHATTAN GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts, etc.*—(Continued). **Cr.**

Year ending.	Total cost of gas, bad accounts and sundries.	Depreciation.	Dividends.	Gross income from gas, recovered on bad accounts and sundries.	Appreciation written up.
1872, January 1...	$2,837,831 76	6,055 50	1,540,000 00	4,355,565 48	
1873, January 1...	2,614,708 54	11,414 00	1,763,428 90	4,159,800 42	
1874, January 1...	2,442,748 88	100,228 03	411,285 77	3,608,518 61	
1875, January 1...	2,326,617 56	2,220 50	1,600,011 67	3,378,317 11	
1876, January 1...	2,133,164 14	166,217 79	1,400,000 00	3,145,317 84	
	$12,355,070 88	$286,135 82	$6,714,726 34	$18,647,519 46	
1877, January 1...	$1,815,787 01	$432,792 66	$600,000 00	$2,553,778 13	
1878, January 1.	1,559,601 63	10,842 36	800,060 16	2,288,273 52	
1879, January 1...	1,457,539 01	11,174 85	600,000 00	2,072,369 21	
1880, January 1...	1,250,982 75	11,023 33	400,000 00	1,624,755 37	
1881, January 1...	1,352,559 42	5,778 86	720,000 00	1,941,271 81	
	$7,436,469 82	$471,612 06	$3,120,060 16	$10,480,448 04	

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1882, January 1...	$1,446,935 98	$5,571 28	$880,000 00	$2,423,660 57	$533.627 12
1883, January 1...	1,517,855 76	4,585 18	1,000,000 00	2,593,792 71	
1884, January 1 to.	1,584,429 91	4,203 80	1,000,000 00	2,758,914 10	
November 11..	1,422,013 62	4,351 31	1,400,000 00	2,428,613 07	
	$5,971,235 27	$18,711 57	$4,280,000 00	$10,204,980 45	$533,627 12

A — *Summary.*

Dr. FIVE YEARS ENDING	Total cost of gas, bad accounts and sundries.	Depreciation.	Dividends.	Totals.	Gross income from gas, recovered on bad accounts and sundries.	Appreciation written up.	Totals. *Cr.*
1841, February 1	$177,191 07	$2,952 36	$51,500 00	$231,643 48	$229,867 47	$13,316 25	$243,183 72
1846, February 1 (4 y'rs 11 m.)	196,036 28	....	96,600 00	292,636 28	310,425 83	....	310,425 83
1851, January 1	513,731 44	21,076 74	312,925 00	847,733 18	978,035 06	....	978,035 06
1856, January 1	2,364,760 36	71,085 81	1,351,400 00	3,737,246 17	3,859,186 68	....	3,859,186 68
1861, January 1	5,403,571 50	579,136 73	2,367,583 33	8,350,291 56	8,544,562 51	....	8,544,562 51
1866, January 1	7,756,328 04	827,425 44	3,462,880 83	12,046,634 31	11,035,294 68	903,284 06	11,938,578 74
1871, January 1	12,434,881 05	....	4,090,000 00	16,524,831 05	17,870,624 96	....	17,870,624 96
1876, January 1	12,355,070 68	286,135 82	6,714,726 34	19,355,933 04	18,647,519 46	....	18,647,519 46
1881, January 1 to	7,436,469 82	471,612 06	3,120,060 16	11,028,142 04	10,480,448 04	....	10,480,448 04
1884, Novem'r 11	5,971,235 27	18,711 57	4,230,000 00	10,269,946 84	10,204,980 45	533,627 12	10,738,607 59
	$54,609,225 71	$2,278,136 53	$25,847,675 66	$82,735,037 90	$82,160,945 14	$1,450,227 43	$83,611,172 57
Balance	....	....	....	876,134 67			
				$83,611,172 57			$83,611,172 57

Resume.

Dr.					*Cr.*
Total cost of gas	$53,541,211 97		Gross income from gas	$81,818,509 44	
Bad accounts	449,616 65		Recovered on bad accounts	85,435 68	
Sundries	618,397 09		Property rents	7,099 50	
		$54,609,225 71	Sundries	249,900 52	
Depreciation	....	2,278,136 53			$82,160,945 14
Dividends	....	25,847,675 66	Appreciation	....	1,450,227 43
Balance being in Consolidated Gas-light Company's stock		876,134 67			
		$83,611,172 57			$83,611,172 57

The operations of this company necessitated an expenditure beyond the capital stock account of the above balance of $876,134.67, and was consequently invested in plant. services, etc., at the time of the transfer to the Consolidated Company.

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A.—MANHATTAN GAS-LIGHT COMPANY.

Dr. *Particulars of sale to the Consolidated Gas-light Company, November 11, 1884.* *Cr.*

Account.	State of account prior to Cr. of appreciation.	Appreciation written up.	Sold for.
To real estate*	$3,351,730 74	$811,269 26	$4,163,000 00
" plant†	64,247 49	3,582,155 73	3,646,403 22
" mains and services	1,212,970 77	223,169 96	1,436,140 73
" meters	244,050 49	127,867 16	371,917 65
" customers	334,500 80	....	334,500 80
" franchises, rights and privileges	....	2,329,000 00	2,329,000 00
" office furniture	....	20,000 00	20,000 00
" coal	240,371 32	....	240,371 32
" lime	576 64	....	576 64
" insurance	78 75	....	78 75
" water rates	393 90	....	393 90
" coke	2,225 00	....	2,225 00
" gas	8,358 80	....	8,358 80
" Arnois Le Cour ammonical liq.	946 12	....	946 12
" N. Y. Coal and Tar Co.	5,484 67	....	5,484 67
" Dept of Public Works	1,343 18	....	1,343 18
	$5,467,278 67	$7,093,462 11	$12,560,740 78

Account.	
By cash	$30,016 70
" interest	8,677 70
" deposits	86,777 00
" dividends	400,000 00
" rents	877 77
" cancelled deposits and interest	2,000 00
By salaries	1,594 44
" mayor, alderman & Co.	50,797 17
By treasurer State of New York	40,000 00
By balance, being stock of Con. Gaslight Co.	11,940,000 00
	$12,560,740 78

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*Real estate:	
Real estate additions and improvements, North river	$1,774,919 38
Real estate additions and improvements, East river	1,486,607 42
Real estate additions and improvements, Irving place	90,203 94
	$3,351,730 74

†Plant:	
Stoking apparatus	$45,844 27
Material at stations	12,870 31
" " Irving place	3,532 91
Library	500 00
Stationery	1,500 00
	$64,247 49

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A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments — Real Estate.

Dr. *Cr.*

North River Property.

DESCRIPTION.	Cost.	Buildings and improvements	Apparatus.	Appreciation written up.	Totals.	Depreciation written off.	Net.
18th street, North river	$22,986 66	$74,738 76	....	....	$97,725 42	....	$97,725 42
18th street (old) between 17th and 18th streets, and 10th avenue and North river....	....	81,951 01	... .	. ...	81,951 01	$21,706 00	60,245 01
18th street (new) between 9th and 10th avenues.....	11,550 00	44,758 21	....	....	56,308 23	....	56,308 23
10th avenue, 18th and 19th streets ..	18,000 00	396 71	....	....	18,396 71	....	18,396 71
North river between 16th and 17th streets	100,000 00	1,999 07	....	....	101,999 07	....	101,999 07
North river, 18th street station	320,636 85	94,009 89	....	....	414,646 74	....	414,646 74
North river..........................	... .	74,767 79	$909,073 38	$41,757 03	1,025,598 20	. ...	1,025,598 20
	$473,173 51	$372,621 46	$909,073 38	$41,757 03	$1,796,625 38	$21,706 00	$1,774,919 38

East River Property.

DESCRIPTION.	Cost.	Buildings and improvements	Apparatus.	Appreciation written up.	Totals.	Depreciation written off.	Net.
Between 15th and 16th streets, Avenue C and East river.............	$125,000 00	$1,234 74	....	....	$126,234 74	....	$126,234 74
14th street station, between Avenue B and East river.................	162,395 00	53,826 88	....	....	216,221 88	....	216,221 88
14th street station..................	80,100 00	5,034 52	....	....	85,134 52	....	85,134 52
East river....	....	15,101 40	$981,737 44	$62,177 44	1,059,016 28	....	1,059,016 28
	$367,495 00	$75,197 54	$981,737 44	$62,177 44	$1,486,607 42	....	$1,486,607 42

A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments— Real Estate — (Continued).

Irving Place Property.

DESCRIPTION.	Cost.	Buildings and improvements	Apparatus.	Appreciation written up.	Total.	Depreciation written off.	Net
Corner Irving place and 15th street..	$25,000 00	$65,203 94	....	.. ..	$90,203 94	....	$90,203 94

Summary.

DESCRIPTION.	Cost.	Buildings and improvements	Apparatus.	Appreciation written up.	Total.	Depreciation written off.	Net
North river property..........	$473,173 51	$372,621 46	$909,073 88	$41,757 03	$1,796,625 38	$21,706 00	$1,774,919 38
East river property	367,495 00	75,197 54	981,737 44	62,177 44	1,486,607 42	....	1,486,607 42
Irving place property...,...........	25,000 00	65,203 94	....	....	90,203 94	....	90,203 94
	$865,668 51	$513,022 94	$1,890,810 82	$103,934 47	$3,373;436 74	$21.706 00	$3,351,730 74

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A — MANHATTAN GAS-LIGHT COMPANY.

Dr. *Real estate investments — five-yearly periods.* *Cr.*

DATE.	Description of property.	Cost.	Buildings and improvements.	Profit on sales.	Totals.	Sales.	Loss on sales.	Depreciation written off.	Balance being net cost of investment.
1832, January 1	Greenwich street	$11,653 05	$74 25	$686 00	$11,727 30	$12,413 30			
1834, January 1	15th street	7,465 03		88 27	7,465 03	7,554 00			
" "	18th street, North river	22,986 66			22,986 66				$22,986 66
" "	Manhattan island	13,606 35	91 19	7,602 46	13,697 54	21,300 00			
1836, January 1	18th street, North river		25,174 16		25,174 16				25,174 16
		$83,724 43	$165 44	$8,377 43	$32,889 87	$41,267 30			
		$22,986 66	$25,174 16		$48,160 82				$48,160 82
1839, January 1	18th street, North river		$2,763 3		$2,763 37				$2,763 37
1840, January 1	Mercer street	$9,083 50	194 78		9,278 28				
1841, January 1	Mercer street		83 18		83 18				
		$9,083 50	$277 96		$9,361 46				
			$2,763 37		$2,763 37				$2,763 37
1842, January 1	19th street, North river		$2,620 08		$2,620 08				$2,620 08
1843, January 1	18th street, North river		5,472 04		5,472 04				5,472 04
1845, January 1	18th street, North river		3,470 70		3,470 70				3,470 70
1846, January 1	18th street, North river		1,486 45		1,486 45				1,486 45
" "	Mercer street					$6,300 00	$3,061 46		9,361 46
" "	18th st. (new) 9th and 10th ave.	$11,550 00	43,294 00		54,844 00				54,844 00
						$6,300 00	$3,061 46		9,361 46
		$11,550 00	$56,343 27		$67,893 27				$67,893 27

A— MANHATTAN GAS-LIGHT COMPANY.

Real estate investments—five-yearly periods.—(Continued).

Dr. | *Cr.*

DATE.	Description of property.	Cost.	Buildings and improvements.	Apparatus.	Totals.	Sales.	Loss on sales.	Depreciation written off.	Balance being net cost of investment.
1847, January 1	18th street, North river	...	$4,370 22	...	$4,370 22	...	...	...	$4,370 23
1848, January 1	Bowery	*$9,500 00*	*15,058 00*	...	*24,558 00*	...	...	...	
" "	18th street, North river	...	15,314 92	...	15,314 92	...	...	...	15,314 92
1849, January 1	18th street, North river	...	14,066 82	...	14,066 82	...	...	...	14,066 82
" "	10th ave., bet. 18th and 19th sts.	18,000 00	...	...	18,000 00	...	...	...	18,000 00
1850, January 1	18th street (new), between 17th and 18th streets	...	23,374 53	...	23,374 53	...	...	$1,706 00	21,668 53
" "	18th st., bet. 9th and 10th aves.	...	419 22	...	419 22	...	...	...	419 22
1851, January 1	18th street (old) between 17th and 18th streets, and 10th avenue and North river	...	3,144 22	...	3,144 22	...	...	...	3,144 22
		$9,500 00	*$15,058 00*	...	*$24,558 00*	...	...	...	...
		$18,000 00	$60,689 93	...	$78,689 93	...	...	$1,706 00	$76,983 93
1852, January 1	18th street (old) between 17th and 18th streets and 10th avenue and North river	...	$26,209 11	...	$26,209 11	...	...	...	$26,209 11
1853, January 1	18th street (old) between 17th and 18th streets and 10th avenue and North river	...	17,006 22	...	17,006 22	...	...	...	17,006 22
" "	Bowery	...	*1,895 84*	...	*1,895 84*	*$24,500 00*	*$1,953 84*	...	*26,453 84*
" "	14th street station, between Avenue B and East river	$162,395 00	53,826 88	...	216,221 88	...	...	...	216,221 88
1854, January 1	18th street (new) between 9th and 10th avenues	...	1,045 01	...	1,045 01	...	...	...	1,045 01
1855, January 1	10th ave., bet. 18th and 19th sts.	...	386 71	...	386 71	...	...	...	386 71
" "	15th street and Irving place	25,000 00	65,303 94	...	90,303 94	...	...	...	90,303 94
" "	18th street (old) between 17th and 18th streets, and 10th avenue and North river	...	12,126 93	...	12,126 93	20,000 00	...	...	$351,172 87 7,873 07
		...	*$1,895 84*	...	*$1,895 84*	*$24,500 00*	*$1,953 84*	...	*$26,453 84*
		$187,395 00	$175,904 80	...	$363,299 80	$20,000 00	...	...	$343,299 80

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1857, January 1	Between 15th and 16th streets, Avenue C and East river	$125,000 00			$125,000 00				$125,000 00
1859, January 1	Between 16th and 17th streets, North river	100,000 00	$1,999 07		101,999 07				101,999 07
1860, January 1	Between 15th and 16th streets, Avenue C and East river		1,234 74		1,234 74				1,234 74
" "	18th street station		48,070 39		48,070 39				48,070 39
" "	65th and 66th streets, 10th avenue and North river	*$105,000 00*			*105,000 00*				
		$105,000 00			*$105,000 00*				
		$225,000 00	$51,304 20		$276,304 20				$276,304 20
1864, January 1	65th and 66th streets, 10th avenue and North river		*$85,082 08*		*$85,082 08*	*$105,000 00*	*$85,082 08*		*$190,082 08*
1867, January 1	18th street station, N. river	$122,900 00	$15,936 63		$138,836 63				$138,836 63
"	14th street station, E. river	60,100 00	5,034 52		65,134 52				65,134 52
1871, January 1	18th street station, N. river	197,736 85	30,002 87		227,739 72				227,739 72
		$380,736 85	$50,974 02		$431,710 87				$431,710 87
1873, January 1	14th street station, E. river	$20,000 00			$20,000 00				$20,000 00
1877, July 1	North river property			$909,073 38	$909,073 38				$909,073 38
"	East river property			981,737 44	981,737 44				981,737 44
				$1,890,810 82	$1,890,810 82				$1,890,810 82
1882, January 1	North river property		$15,321 82	$41,757 03	$57,078 85				$57,078 85
" "	East river property			62,177 44	62,177 44				62,177 44
1883, January 1	North river property		59,445 97		59,445 97				59,445 97
" "	East river property		15,101 40		15,101 40				15,101 40
			$89,869 19	$103,934 47	$193,803 66				$193,803 66

NOTE.—The italic figures represent property purchased and afterward resold. The profit or loss on the transactions having been carried at time of closure to profit and loss account.

A—*Summary.*

Balances, being net cost of investment for—	
Five years ending January 1, 1836	$48,160 82
" " 1841	2,763 37
" " 1846	67,893 27
" " 1851	76,983 93
" " 1856	343,299 80
" " 1861	276,304 20
" " 1866	....
" " 1871	431,710 87
" " 1876	20,000 00
" " 1881	1,890,810 82
Three years, ten and one-third months, to November 11, 1884	193,803 66
	$3,351,730 74
Consisting of—	
North river property	$1,774,919 38
East river property	1,486,607 42
Irving place property	90,203 94
	$3,351,730 74

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A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments other than Real Estate and Plant.

YEAR ENDING.	Apparatus. *Cr.*	Apparatus.	Mains and services. *Cr.*	Mains and services.	Meters. *Cr.*	Meters.	Totals.
1836, February 1	....	$21,980 59	....	$78,693 47	....	$6,534 22	$107,208 28
1837, February 1	....	7,536 96	....	14,162 20	....	1,720 06	23,419 22
1838, February 1	....	11,838 73	....	2,844 82	....	3,672 09	18,355 64
1839, February 1	....	850 59	....	224 93	....	-146 20	1,221 72
1840, February 1	....	1,786 81	....	11,197 34	....	880 44	13,864 59
1841, February 1	....	3,649 96	....	9,273 14	....	333 08	13,256 18
	....	$17,643 64	....	$116,395 90	....	$13,286 09	$177,325 63
1842, February 1	....	* $6,815 81	....	$5,904 75	†$477 29	....	$12,720 56
1843, February 1	....	462 59	....	3,510 33	....	$2,452 11	6,425 03
1844, February 1	....	923 28	....	5,318 51	....	1,818 80	8,060 59
1845, February 1	....	8,264 19	....	8,522 14	....	298 02	17,079 88
1846, February 1	....	3,117 62	....	15,167 79	....	2,266 03	20,651 44
						$6,829 96	$64,837 00
						477 29	477 29
	....	$19,583 49	....	$38,423 55	....	$6,352 67	$64,359 71

* Ledger account shows debits for this period........... $19,007 08
But $12,191.27 was transferred to real estate in 1847 wrongly charged to this account.................................. 12,191 27
$6,815 81

† Rentals exceed outlays during this period.

RTICAL IN BOOK

A—*Summary.*

Balances, being net cost of investment for—	
Five years ending January 1, 1836	$48,160 82
" " 1841	2,763 37
" " 1846	67,893 27
" " 1851	76,983 93
" " 1856	343,299 80
" " 1861	276,304 20
" " 1866	....
" " 1871	431,710 87
" " 1876	20,000 00
" " 1881	1,890,810 82
Three years, ten and one-third months, to November 11, 1884	193,803 66
	$3,351,730 74
Consisting of—	
North river property	$1,774,919 38
East river property	1,486,607 42
Irving place property	90,203 94
	$3,351,730 74

A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments other than Real Estate and Plant.

YEAR ENDING.	Apparatus. *Cr.*	Apparatus.	Mains and services. *Cr.*	Mains and services.	Meters. *Cr.*	Meters.	Totals.
1836, February 1	....	$21,980 59	....	$78,693 47	....	$6,534 22	$107,208 28
1837, February 1	....	7,536 96	....	14,162 20	....	1,720 06	23,419 22
1838, February 1	....	11,838 73	....	2,844 82	....	3,672 09	18,355 64
1839, February 1	....	850 59	....	224 93	....	-146 20	1,221 75
1840, February 1	....	1,786 81	....	11,197 34	....	880 44	13,864 59
1841, February 1	....	3,649 96	....	9,273 14	....	333 08	13,256 18
	....	$47,643 64	....	$116,395 90	....	$13,286 09	$177,325 63
1842, February 1	....	* $6,815 81	....	$5,904 75	†$477 29	....	$12,720 56
1843, February 1	....	462 59	....	3,510 33	....	$2,432 11	6,425 03
1844, February 1	....	923 28	....	5,318 51	....	1,818 80	8,060 59
1845, February 1	....	8,264 19	....	8,522 14	....	293 02	17,079 38
1846, February 1	....	3,117 62	....	15,167 79	....	2,264 03	20,551 44
						$6,829 96	$64,837 00
						477 29	477 29
	....	$19,583 49	....	$38,423 55	....	$6,352 67	$64,359 71

* Ledger account shows debits for this period	$19,007 08
But $12,191.27 was transferred to real estate in 1847 wrongly charged to this account	12,191 27
	$6,815 81

† Rentals exceed outlays during this period.

TICAL IN BOOK

A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments other than Real Estate and Plant — (Continued).

YEAR ENDING.	Apparatus. *Cr.*	Apparatus.	Mains and services. *Cr.*	Mains and services.	Meters. *Cr.*	Meters.	Totals.
1847, February 1	....	*$29,957 08	....	$39,384 16	....	$5,015 06	$74,356 30
1848, February 1, 11 months to	....	515 80	....	39,845 31	....	7,204 39	47,565 50
1849, January 1	....	7,561 44	....	52,571 27	....	6,346 87	66,479 58
1850, January 1	....	29,635 66	....	82,020 71	....	7,826 89	119,483 26
1851, January 1	....	4,323 89	....	14,866 88	....	7,823 50	27,014 27
	....	$71,993 87	....	$228,688 33	....	$38,716 71	$334,898 91
1852, January 1	....	$51,454 96	....	$35,955 50	....	$22,852 60	$142,093 04
1853, January 1	....	63,753 66	....	116,383 57	....	28,757 44	208,924 97
1854, January 1	....	†14,620 78	....	90,776 76	....	41,607 31	147,004 80
1855, January 1	....	5,320 00	....	114,458 96	....	28,111 70	147,665 68
1856, January 1	....	1,843 50	....	32,221 95	....	16,574 95	50,655 40
	....	$166,997 85	....	$392,133 04	....	$134,484 00	$696,343 89
1857, January 1	*$1,338 92*	....	....	$28,356 44	....	$24,999 73	$53,358 17
1858, January 1	....	$1,000 00	....	64,998 62	....	27,428 60	93,427 42
1859, January 1	....	161,787 26	....	29,248 99	....	22,374 23	214,005 48
1860, January 1	....	95,502 41	....	50,199 81	....	27,763 64	178,465 86
1861, January 1	....	131,758 84	....	159,376 25	....	16,928 53	308,060 13
		$390,043 01					$842,317 05
		1,338 92					*1,338 92*
	....	$388,704 09	....	$332,179 11	....	$120,094 93	$840,978 13

1862, January 1	....	$60,816 64	....	$103,802 41	....	¶$764 29	$164,873 54
1863, January 1	....	23,534 68	....	45,161 57	....	4,526 51	73,222 76
1864, January 1	....	24,257 20	....	552 93	....	3,810 74	28,650 92
1866, January 1 (2 years)	....	§§	§$353,839 23	....	....	**2,329 27	2,329 24
							$269,076 29
			149,016 56				149,016 96
	....	$108,608 52	$204,822 27	....	....	$11,420 81	$120,059 33
1867, January 1	....	$95,239 85	....	$80,016 81	....	$25,473 70	$200,730 36
1868, January 1	....	71,209 88	††6,149 75	....	....	25,051 75	96,261 61
1869, January 1	....	§§.	....	55,842 04	....	27,642 13	83,484 17
1870, January 1	....	2,263 26	....	21,750 06	....	29,789 00	53,822 32
1871, January 1	....	26,778 93	....	1,727 49	....	32,588 00	61,094 42
				$159,336 40			$495,393 68
				6,149 75			6,149 75
	....	‡‡$195,511 92	....	$153,186 65	....	$140,544 56	$489,243 13

* Ledger account shows debits for this period.............. $58,712 35

But $23,755.27 is transferred to real estate as wrongly charged to this account 28,755 27

$29,957 08

† Loss by fire credited in this period $22,842.65.

‡ Sale of apparatus at Eighteenth street station credited.

§ Credits during this period include the following, viz.:

Sale of Eighteenth street station to Metropolitan Gas-light Company.............................. $334,755 58

Sale of engine and old material.............................. 7,380 04

Depreciation written off.............................. 16,069 72

$358,205 34

¶ Depreciation credited in this period $3,425 44

** Credits during this period include sale to Metropolitan Gas-light Company.............................. $34,801 02

Depreciation written off.............................. 13,533 73

$48,334 75

†† Credits during this period include sale of service, $6,512.31.

‡‡ Apparatus account ceases January 1, 1871, and is thereafter amalgamated with real estate.

§§ No items in apparatus account during this year.

ERTICAL IN BOOK

A — MANHATTAN GAS-LIGHT COMPANY.

Capital Investments other than Real Estate and Plant — (Continued).

YEAR ENDING.	Apparatus. *Cr.*	Apparatus.	Mains and services. *Cr.*	Mains and services.	Meters. *Cr.*	Meters.	Totals.
1872, January 1				$8,544 70		$30,365 25	$38,909 95
1873, January 1				13,885 46	*†$115,413 87*		13,885 46
1874, January 1				12,587 25		4,466 00	17,053 25
1875, January 1				17,646 22		8,681 05	26,327 27
1876, January 1			**$101,002 55*		*‡$13,136 66*		
			52,663 63		43,512 30		$96,175 93 96,175 93
			$48,338 92		*$115,037 63*		
1877, January 1			*§$257,834 39*			$4,992 90	$4,992 90
1878, January 1						8,900 50	8,900 50
1879, January 1						2,521 00	2,521 00
1880, January 1					*¶$167,478 96*		
1881, January 1				$3,095 42		12,944 95	16,040 37
			3,095 42		29,359 35		$32,454 77 32,454 77
			$254,738 97		*$138,119 61*		
1882, January 1				$437,760 68		$10,227 33	$448,008 01
1883, January 1				7,658 00		10,332 58	17,990 58
1884, January 1				7,896 63		7,685 75	15,582 38
1884 To November 11				229,710 00		133,979 46	368,689 46
				$683,045 31		$162,225 12	$845,270 43

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ERTICAL IN BOOK

Summary.

1841, February 1	....	$47,643 64	....	$116,395 90	....	$13,286 09	$177,325 63
1846, February 1 (5 years)	....	19,583 49	....	88,423 55	*477 29*	6,829 96	64,837 00
1851, January 1 (4 yrs. 11 mo.)	....	71,993 87	....	228,658 33	....	33,716 71	334,898 91
1856, January 1 (5 years)	....	166,997 85	....	392,132 04	....	137,434 00	696,563 89
1861, January 1	*1,338 92*	390,043 01	....	332,179 11	....	120,094 93	841,317 05
1866, January 1	....	108,638 52	*$353,849 23*	149,016 96	....	11,420 61	269,076 29
1871, January 1	....	195,511 92	*6,149 75*	159,336 40	....	140,544 66	495,392 88
1876, January 1	....	....	*101,002 55*	52,663 63	*158,549 93*	43,512 80	96,175 93
1881, January 1, to	....	....	*257,834 39*	3,095 42	*164,478 96*	29,350 85	32,454 77
1884, November 11	....	....	....	683,045 81	....	162,225 12	845,270 43
		$1,000,412 30		$2,154,976 65		$698,423 83	$3,853,812 78
		1,338 92		*718,835 92*		*326,506 18*	*1,046,681 02*
							$2,607,131 76
							**999,073 68
	....	....	....	$1,436,140 73	....	$371,917 65	$1,808,058 38

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* Credits include depreciation, $125,076.81.

† Credits during this period include condemned meters, 1872, $154,573 27.

‡ Credits during this period include condemned meters, 1873, 1874 and 1875, $17,744.37.

§ Credits include depreciation $270,225.89.

‖ The exact amounts of outlay for mains and services were during these periods written off to profit and loss account as depreciation.

¶ Credits include condemned meters, 1876, 1877, 1878 and 1879

1879	$35,354 66
And depreciation	145,629 29
	$180,983 95

** Apparatus account is transferred to real estate after January 1, 1871.

A—MANHATTAN GAS-LIGHT COMPANY.

Current Capital Account and Surplus Profits.

Year ending	Description.	Amount.	Total capital.	Average capital for five years.
1835, February 1....	Capital	$250,000 00		
	Profit and loss debtor balance.	14,612 87		
			$235,387 13	
1838, February 1....	Capital......................	$250,000 00		
	Profit and loss debtor balance.	19,047 16		
			230,952 84	
1839, February 1....	Capital......................	$250,000 00		
	Profit and loss debtor balance.	9,759 68		
			240,240 32	
1840, February 1....	Capital......................	$250,000 00		
	Profit and loss debtor balance.	4,265 38		
			245,734 62	
1841, February 1....	Capital......................	$250,000 00		
	Profit and loss credit balance.	11,540 29		
			261,540 29	
			$1,213,855 20	$242,771 04
1842, February 1....	Capital......................	$299,610 00		
	Profit and loss credit balance.	11,915 66		
			$311,525 66	
1843, February 1....	Capital......................	$330,000 00		
	Profit and loss credit balance.	12,416 68		
			342,416 68	

1844, February 1....	Capital.....................	$330,000 00		
	Profit and loss credit balance.	16,546 53		
			346,546 53	
1845, February 1....	Capital.....................	$330,000 00		
	Profit and loss credit balance.	21,215 71		
			351,215 71	
1846, February 1....	Capital.....................	$367,498 00		
	Profit and loss credit balance.	29,329 84		
			396,827 84	
			$1,748,532 42	$349,706 48
1847, February 1....	Capital.....................	$497,643 00		
	Profit and loss credit balance.	59,752 64		
			$557,395 64	
1848, February 1....	Capital.....................	$601,265 00		
	Profit and loss credit balance.	34,522 99		
			635,787 99	
1849, January 1.....	Capital.....................	$723,870 00		
	Profit and loss credit balance.	56,844 81		
			780,714 81	
1850, January 1.....	Capital.....................	$849,937 50		
	Profit and loss credit balance.	98,082 39		
			948,019 89	
1851, January 1.....	Capital.....................	$850,000 00		
	Profit and loss credit balance.	159,631 72		
			1,009,631 72	
			$3,931,550 05	$786,310 01

RTICAL IN BOOK

A—MANHATTAN GAS-LIGHT COMPANY.

Current Capital Account, etc.—(Continued).

Year ending.	Description.	Amount.	Total capital.	Average capital for five years.
1852, January 1	Capital	$910,550 00		
	Profit and loss credit balance.	250,612 72		
			$1,161,162 72	
1853, January 1	Capital	$1,197,922 50		
	Profit and loss credit balance.	363,664 86		
			1,561,587 36	
1854, January 1	Capital	$1,499,352 50		
	Profit and loss credit balance.	520,923 54		
			2,020,276 04	
1855, January 1	Capital	$1,895,202 50		
	Profit and loss credit balance.	686,535 88		
			2,581,738 38	
1856, January 1	Capital	$2,770,000 00		
	Profit and loss credit balance.	231,572 23		
			3,001,572 23	
			$10,326,336 73	$2,065,267 35
1857, January 1	Capital	$2,770,000 00		
	Profit and loss credit balance.	50,220 60		
			$2,820,220 60	
1858, January 1	Capital	$2,770,000 00		
	Profit and loss credit balance.	242,747 58		
			3,012,747 58	

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1859, January 1.....Capital....................	$2,998,045 00		
Profit and loss credit balance.	220,995 60	3,219,040 60	
1860, January 1.....Capital....................	$3,495,800 00		
Profit and loss credit balance.	254,856 97	3,750,656 97	
1861, January 1.....Capital....................	$3,495,890 00		
Profit and loss credit balance.	425,843 18	3,921,643 18	
		$16,724,308 93	$3,344,861 79
1862, January 1.....Capital....................	$3,500,000 00		
Profit and loss credit balance.	466,935 43	$3,966,935 43	
1863, January 1.....Capital....................	$3,500,000 00		
Profit and loss credit balance.	368,679 36	3,868,679 36	
1864, January 1.....Capital....................	$3,988,587 50		
Profit and loss credit balance.	549,405 41	4,537,992 91	
1865, January 1.....Capital....................	$3,992,837 50		
Profit and loss credit balance.	163,071 28	4,155,908 78	
1866, January 1.....Capital....................	$4,000,000 00		
Profit and loss credit balance.	317,787 61	4,317,787 61	
		$20,847,304 09	$4,169,460 82

RTICAL IN BOOK

A—MANHATTAN GAS-LIGHT COMPANY.

Current Capital Account, etc.—(Continued).

Year ending.	Description.	Amount.	Total capital.	Average capital for five years.
1867, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	517,716 08	$4,517,716 08	
1868, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	917,408 76	4,917,408 76	
1869, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,149,017 10	5,149,017 10	
1870, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,471,214 73	5,471,214 73	
1871, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,663,581 52	5,663,581 52	
			$25,718,938 19	$5,143,787 64
1872, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,635,259 74	$5,635,259 74	
1873, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,405,508 72	5,405,508 72	

1874, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	2,059,764 65		
			$6,059,764 65	
1875, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	1,509,232 03		
			5,509,232 03	
1876, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	995,167 94		
			4,955,167 94	
			$27,564,933 08	$5,512,986 62
1877, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	660,366 40		
			$4,660,366 40	
1878, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	578,135 77		
			4,578,135 77	
1879, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	581,791 12		
			4,581,791 12	
1880, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	544,540 41		
			4,544,540 41	
1881, January 1	Capital	$4,000,000 00		
	Profit and loss credit balance.	407,473 94		
			4,407,473 94	
			$22,772,307 64	$4,554,461 53

A—MANHATTAN GAS-LIGHT COMPANY.

Current Capital Account, etc.—(Continued).

Year ending.	Description.	Amount.	Total capital	Average capital for this period.
1882, January 1.....	Capital......................	$4,000,000 00		
	Profit and loss credit balance.	1,032,254 37	$5,032,254 37	
1883, January 1.....	Capital......................	$4,000,000 00		
	Profit and loss credit balance.	1,103,606 14	5,103,606 14	
1884, January 1 to...	Capital......................	$4,000,000 00		
	Profit and loss credit balance.	1,273,886 53	5,273,886 53	
1884, November 11..	Capital	$4,000.000 00		
	Profit and loss credit balance.	876,134 67	4,876,134 67	
			$20,285,881 71	$5,253,897 42

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A — MANHATTAN GAS-LIGHT COMPANY.

Dividend Account.

DATE.	Increase of capital.	Total capital paid up	Time employed (months).	Dividends paid.	Rate per cent per annum.	Amount at ten per cent per annum on paid-up capital.	Amount in excess of ten per cent.	Deficiency below ten per cent.
1881, February 1	$1,625 00	$1,625 00	....	....	......	$81 25	....	$81 25
1831, July 31	825 00	2,450 00	6	....	......	20 42	....	20 42
1831, August 31	5,160 00	7,610 00	1	....	......	63 42	....	63 42
1831, September 30	880 00	8,490 00	1	....	......	1,415 00	....	1,415 00
1833, May 31	2,440 00	10,930 00	20	....	......	91 08	....	91 08
1833, June 30	1,220 00	12,150 00	1	....	......	101 25	....	101 25
1833, July 31	37,830 00	49,980 00	1	....	......	416 60	....	416 50
1833, August 31	20 00	50,000 00	1	....	......	4,166 66	....	4,166 66
1834, July 1	50,000 00	100,000 00	10	....	......	5,000 00	....	5,000 00
1835, January 1	25,000 00	125,000 00	6	....	......	12,500 00	....	12,500 00
1836, January 1	75,000 00	200,000 00	12	....	......	13,333 83	....	13,338 33
1836, September 1	50,000 00	250,000 00	8	....	......	8,333 33	....	8,333 33
1837, January 1	....	250,000 00	4	$24,000 00	4.27	56,250 00	....	32,250 00
1839, March 31	20,000 00	270,000 00	27	27,500 00	4.37	63,000 00	....	35,500 00
1841, July 31	28,548 00	298,548 00	28	....	......	....	....	
1842, 5 months, ending January 9	1,062 00	299,610 00	....	17,100 00	13.72	12,483 75	4,616 25	
1843, January 1	30,390 00	330,000 00	....	18,900 00	5.73	38,000 00	....	14,100 00
1844, January 1	....	830,000 00	....	19,800 00	6	83,000 00	....	13,200 00
1845, January 1	....	330,000 00	....	19,800 00	6	33,000 00	....	13,200 00
1846, January 1	37,498 00	367,498 00	....	21,000 00	5.71	36,749 80	....	15,749 80
1847, January 1	130,145 00	497,643 00	....	24,300 00	4.88	49,764 30	....	25,464 30
1848, January 1	103,622 00	601,265 00	....	77,500 00	12.89	60,126 50	17,373 50	
1849, January 1	122,605 00	723,870 00	....	53,250 00	7.36	72,387 00	....	19,137 00
1850, January 1	126,067 50	849,937 50	....	72,875 00	8.57	84,993 75	....	12,118 75
1851, January 1	62 50	850,000 00	....	85,000 00	10	85,000 00	....	
1852, January 1	60,550 00	910,530 00	....	85,000 00	9.34	91,055 00	....	6,055 00
1853, January 1	287,372 50	1,197,922 50	....	92,625 00	7.73	119,792 25	....	27,167 25
1854, January 1	301,430 00	1,499,352 50	....	120,000 00	8	149,935 25	....	29,935 25
1855, January 1	395,850 00	1,895,202 50	....	148,333 33	7.88	189,520 25	....	41,186 92

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A — MANHATTAN GAS-LIGHT COMPANY.

Dividend Account.—(Continued).

DATE.	Increase of capital.	Total capital paid up.	Time employed (months).	Dividends paid.	Rate per cent per annum.	Amount at ten per cent per annum on paid-up capital.	Amount in excess of ten per cent.	Deficiency below ten per cent.
1856, January 1	154,797 50	$2,050,000 00	....	*$905,441 67	44.17	$205,000 00	*$700,441 67	
1857, January 1	....	2,050,000 00	....	396,250 00	19.33	205,000 00	191,250 00	
1858, January 1	....	2,050,000 00	....	277,000 00	31.51	205,000 00	72,000 00	
1859, January 1	228,045 00	2,278,045 00	....	569,333 33	24.99	227,804 50	341,528 83	
1860, January 1	497,755 00	2,775,800 00	....	600,000 00	21.62	287,580 00	332,420 00	
1861, January 1	....	2,775,800 00	....	525,000 00	18.91	277,580 00	247,420 00	
1862, January 1	4,200 00	2,780,000 00	....	525,000 00	18.89	278,000 00	247,000 00	
1863, January 1	....	2,780,000 00	....	525,000 00	18.89	278,000 00	247,000 00	
1864, January 1	488,587 50	3,268,587 50	....	1,337,880 83	40.93	326,858 75	1,011,022 08	
1865, January 1	4,250 00	3,272,837 50	....	875,000 00	26.74	327,283 75	547,716 25	
1866, January 1	7,162 50	3,280,000 00	....	200,000 00	6.10	328,000 00	....	$128,000 00
1866, July 1 (6 months)	....	3,280,000 00	....	200,000 00	12.20	164,000 00	36,000 00	
1867, July 1	....	3,280,000 00	....	400,000 00	12.20	328,000 00	72,000 00	
1868, January 1 (6 months)	....	3,280,000 00	....	270,000 00	16.46	164,000 00	106,000 00	
1869, January 1	....	3,280,000 00	....	1,140,000 00	34.76	328,000 00	812,000 00	
1870, January 1	....	3,280,000 00	....	940,000 00	28.66	328,000 00	612,000 00	
1871, January 1	....	3,280,000 00	....	1,140,000 00	34.76	328,000 00	812,000 00	
1872, January 1	....	3,280,000 00	....	1,540,000 00	46.95	328,000 00	1,212,000 00	
1873, January 1	....	3,280,000 00	....	1,763,428 90	53.76	328,000 00	1,435,428 90	
1874, January 1	....	3,280,000 00	....	411,285 77	12.54	328,000 00	83,285 77	
1875, January 1	....	3,280,000 00	....	1,600,011 67	48.78	328,000 00	1,227,011 67	
1876, January 1	....	3,280,000 00	....	1,400,000 00	42.68	328,000 00	1,072,000 00	
1877, January 1	....	3,280,000 00	....	600,000 00	18.29	328,000 00	272,000 00	
1878, January 1	....	3,280,000 00	....	800,060 16	24.39	328,000 00	472,060 16	
1878, July 1 (6 months)	....	3,280,000 00	....	600,000 00	36.59	164,000 00	436,000 00	
1879, July 1	....	3,280,000 00	....	400,000 00	12.20	328,000 00	72,000 00	
1880, July 1	....	3,280,000 00	....	320,000 00	9.76	328,000 00	....	8,000 00

* See note below.

1881, January 1 (6 months)...........	....	3,280,000 00	....	400,000 00	24 39	164,000 00	236,000 00	
1882, January 1	....	3,280,000 00	....	880,000 00	26.83	328,000 00	552,000 00	
1883, January 1	....	3,280,000 00	....	1,000,000 00	30.49	328,000 00	672,000 00	
1884, January 1 to	....	3,280,000 00	....	1,000,000 00	30.49	328,000 00	672,000 00	
November 11	....	3,280,000 00	....	1,400,000 00	42.68	282,444 44	1,117,555 56	
	$3,280,000 00			*$25,847,675 66		$10,338,131 53	*$15,976,180 64	$466,586 51
Less amount at ten per cent per annum on paid-up capital	....	....	......	10,338,181 53				
Less deficiency below ten per cent per annum on paid-up capital......	....	....	......	....	....	....	446,586 51	
Net excess of dividends over ten per cent per annum	....	....	......	*$15,509,544 18			*$15,509,544 18	

NOTE.

Total Dividends paid as above	$25,847,675 66
Deduct—Stock dividend credited to stock account of new issue of shares as per resolution of board passed Oct. 30, 1855.....	720,000 00
	$25,127,675 66

As the above stock dividend is included in the amount of dividends paid during the year ending January 1st, 1856 ($905,441.67), that amount must be decreased to $185,441.67, leaving the calculations for that period as under. viz.:

YEAR ENDING	Capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at 10 per cent per annum on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent
1856 January 1	$2,050,000 00	$185,441 67	9.05	$205,000 00		$19,558 3.
And the total amounts as follows		$25,127,675 66		$10,338,131 53	$15,273,688 97	$486,144 84
Less amount at 10 per cent per annum on paid-up capital		10,338,131 53				
Less deficiency below 10 per cent per annum on paid-up capital					486,144 84	
Net excess of dividends over 10 per cent per annum		$14,789,544 13			$14,789,544 13	

B—NEW YORK GAS-LIGHT COMPANY.

Capital Account.

Date.	Capital created.	How paid in. Cash.	How paid in. Division of surplus profits.	Total to date.
1823, June 2	$1,000,000 00	$200,000 00	....	$200,000 00
1824, Feb. 1	....	5,000 00	....	205,000 00
1825, Feb. 1	....	29,500 00	....	234,500 00
1826, Feb. 1	....	260,500 00	....	495,000 00
Paid-up capital remained at this amount until:				
1837, Feb. 1	....	5,000 00	....	500,000 00
1838, Feb. 1	....	250,000 00	....	750,000 00
Paid-up capital remained at this amount until:				
1862, Feb. 1	....	....	$250,000 00	1,000,000 00
Paid-up capital remained at this amount until:				
1871, Feb. 1	....	....	3,000,000 00	4,000,000 00
		$750,000 00	$3,250,000 00	

Recapitulation.

1884. Nov. 10.	Capital stock paid in in cash	$750,000 00
1884, Nov. 10.	Capital stock paid out of surplus profits	3,250,000 00
1884, Nov. 10.	Total amount of capital stock at this date	$4,000,000 00

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B—NEW YORK GAS-LIGHT COMPANY.

(No. 1.)

Dr. *Analysis of Profit and Loss Accounts from June 2. 1823, to February 1, 1860.* *Cr.*

Period from.	Deterioration written off.	Dividends.	Net profits on gas.	Profits from other sources.	Total profits.
1823, June 2 to					
1829, December 31.....	....	$231,709 50	$152,197 63	$111,394 24	$263,591 87
Year ending.					
1830, December 31.....	....	$52,173 00	$41,948 82	$464 67	$42,413 49
1831, December 31.....	....	47,421 00	44,419 45	848 50	45,267 95
1832, December 31.....	....	47,025 00	47,061 45	617 71	47,679 16
1833, December 31.....	....	49,500 00	51,347 09	686 35	52,033 44
1834, December 31.....	....	49,500 00	71,007 64	1.677 72	72,685 36
	....	$245,619 00	$255,784 45	$4,294 95	$260,079 40
1835, December 31.....	....	$49,500 00	$49,853 01	$735 63	$50,588 64
1836, December 31.....	$18,400 90	49,750 00	42,739 05	2,339 82	45,078 87
1837. December 31.....	2,166 43	62,500 00	34,492 15	1,674 35	36,166 50
1838, December 31.....	2,372 67	75,000 00	62,641 67	2,559 78	65,201 45
1839, December 31.....	2,186 12	67,500 00	60,216 81	2,788 49	63,005 30
	$25,126 12	$304,250 00	$249,942 69	$10,098 07	$260,040 76

B—NEW YORK GAS-LIGHT COMPANY.

(No. 1.)

Dr. *Analysis of Profit and Loss Accounts, etc.*—(Continued). *Cr.*

Year ending	Deterioration written off.	Dividends.	Net profits on gas.	Profits from other sources.	Total profits.
1840, December 31.....	$1,655 41	$67,500 00	$64,851 13	$3,898 08	$68,749 21
1842, February 1......	1,447 82	67,500 00	66,411,73	3,075 44	69,487 17
1843, February 1......	16,330 77	67,500 00	53,124 63	2,692 84	55,817 47
1844, February 1......	1,222 81	67,500 00	69,514 08	2,304 89	71,818 97
1845, February 1......	5,277 31	67,500 00	80,282 18	2,278 63	82,560 81
	$25,934 12	$337,500 00	$334,183 75	$14,249 88	$348,433 63
1846, February 1......	....	$67,500 00	$91,111 82	$3,079 57	$94,191 39
1847, February 1......	....	67,500 00	113,923 40	2,857 74	116,781 14
1848, February 1......	....	67,500 00	132,970 71	2,012 76	134,983 47
1849, February 1......	....	67,500 00	128,322 67	1,236 37	129,559 04
1850, February 1......	$130,574 30	67,500 00	147,539 81	14,177 49	161,717 30
	$130,574 30	$337,500 00	$613,868 41	$23,363 93	$637,232 34

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1851, February 1......	$37,972 54	$75,000 00	$190,844 78	$29,383 04	$220,227 82
1852, February 1......	....	75,000 00	186,814 56	15,868 58	202,683 14
1853, February 1......	64,463 23	75,000 00	202,750 31	19,067 11	221,817 42
1854, February 1......	....	150,000 00	246,839 41	26,473 54	273,312 95
1855, February 1......	41,315 69	75,000 00	220,871 61	37,347 23	258,218 84
	$143,731 46	$450,000 00	$1,048,120 67	$128,139 50	$1,176,260 17
1856, February 1....	....	$75,000 00	$88,840 71	$43,110 32	$131,951 03
1857, February 1......	$27,862 43	75,000 00	220,501 39	35,192 04	255,693 43
1858, February 1......	....	225,000 00	276,259 72	40,602 41	316,862 13
1859, February 1......	53,478 57	112,500 00	303,083 22	9,386 23	312,469 45
1860, February 1......	27,351 34	300,000 00	372,437 32	9,166 25	381,603 57
	$108,592 34	$787,500 00	$1,261,122 36	$137,457 25	$1.398,579 61

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Dr. *Summary.* *Cr.*

PERIOD ENDING.	Deterioration.	Dividends.	Totals.	Net profits on gas.	Profits from other sources.	Total.
1829 December 31..................	....	$231,709 50	$231,709 50	$152,197 63	$111,394 24	$263,591 87
5 years ending 1834 December 31..	....	245,619 00	245,619 00	255,784 45	4,294 95	260,079 40
	$25,126 12	304,250 00	329,376 12	249,942 69	10,098 07	260,040 76
	25,934 12	337,500 00	363,434 12	334,183 75	14,249 88	348,433 63
	130,574 30	337,500 00	468,074 30	613,868 41	23,368 93	637,283 34
	143,751 46	450,000 00	593,751 46	1,048,120 67	128,139 50	1,176,260 17
	108,592 34	787,500 00	896,092 34	1,261,122 36	137,457 25	1,398,579 61
	$433,978 34	$2,694,078 50	$3,128,056 84	$3,915,219 96	$428,997 82	$4,344,217 78
1860 Feb. 1. Balance of undivided profits carried over..	....	....	1,268,896 33	1860 Feb. 1. Transferred from, other accounts............		66,389 61
Feb. 1. Depreciation not written off....	....	....	13,954 22			
			$4,410,907 39			$4,410,907 39

Resume.

To expenses of administration		$467,886 48	By receipts from gas and residuals	$5,013,649 98	
To repairs to apparatus, works &c.		424,850 15	By receipts from interest	198,248 00	
To interest		16,857 22	By receipts from rents	39,068 68	
To advance receipts		17,267 00			
To taxes sundries		369,817 17			$5,250,966 66
To balance being net profit from all sources as above		4,344,217 78	By profits on stock and uncalled for dividends		71,617 66
			By profits on sales of property		25,664 19
			By sundries, principally sales of coke and delivery		292,647 29
		$5,640,895 80			$5,640,895 80
To dividends paid		$2,694,078 50	By balance, net profit		$4,344,217 78
To depreciations written off from profit and loss	$381,242 95		By transfer from other accounts		66,689 61
To depreciations written off from deteriorations	347,735 39				
	$728,978 34				
Less transfer from profit and loss to deterioration	295,000 00				
		433,978 34			
To balance of undivided profits		1,268,896 33			
To depreciation not written off		13,954 22			
		$4,410,907 39			$4,410,907 39

B—NEW YORK GAS-LIGHT COMPANY.

(No. 2.)

Dr. *Analysis of Profit and Loss Accounts from February* 1, 1860, *to November* 10, 1884.

Year ending	Depreciation written off.	Dividends.	Net profit on gas	Profits from other sources.	Total profits	Appreciation written up.
1861, February 1	$53,954 22	$307,500 00	$441,777 02	$10,469 58	$452,246 60	
1862, February 1	63,933 79	337,500 00	343,505 79	11,837 73	355,343 52	
1863, February 1	81,825 10	*1,075,000 00	427,182 26	35,074 50	462,256 76	
1864, February 1	1,600 91	300,000 00	714,712 01	6,165 85	720,877 86	
1865, February 1	88,594 21	200,000 00	402,811 00	3,098 93	405,909 93	
	$289,908 23	$2,220,000 00	$2,329,988 08	$66,646 59	$2,396,634 67	
1866, February 1	$150,209 49	$700,000 00	$730,782 85	$1,640 17	$732,423 02	
1867, February 1	20,989 08	700,000 00	764,196 47	....	764,196 47	
1868, February 1	69,298 16	700,000 00	814,538 05	....	814,538 05	
1869, February 1	409,177 45	500,000 00	856,373 57	58,011 14	914,384 71	
1870, February 1	265,286 84	500,000 00	731,713 92	8,388 47	740,102 39	
	$914,961 02	$3,100,000 00	$3,897,604 86	$68,039 78	$3,965,644 64	

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1871, February 1.......	$300,875 88	$700,000 00	$1,152,808 75	....	$1,152,808 75	
1871, June 1 (4 mos.)..	....	*3,250,000 00	....	....	....	†$2,968,944 66
1872, February 1 (8 m.).	29,460 23	800,000 00	541,498 42	....	541,498 42	
1873, February 1.......	5,063 24	800,000 00	755,923 02	....	755,923 02	
1874, February 1.......	315,256 42	400,000 00	541,948 87	....	541,948 87	
1875, February 1.......	150,700 17	400,000 00	638,536 04	....	638,536 04	
	$801,355 94	$6,350,000 00	$3,630,715 10	....	$3,630,715 10	$2,968,944 66
1876, February 1.......	$11,917 25	$800,000 00	$742,234 16	....	$742,234 16	
1877, February 1.......	19,926 62	400,000 00	463,119 54	....	463,119 54	
1878, February 1.......	255,286 20	400,000 00	476,704 06	$30,000 00	506,704 06	
1879, Dec. 31 (1 y.11m.).	66,606 10	480,000 00	601,708 05	28,034 66	629,742 71	
1880, December 31......	152,471 91	320,000 00	414,006 40	1,104 50	415,110 90	
	$506,208 08	$2,400,000 00	$2,697,772 21	$59,139 16	$2,756,911 37	
1881, December 31......	$38,203 51	$320,000 00	$713,701 05	$15,000 00	$728,701 05	
1882, December 31......	326,080 01	400,000 00	752,319 52	21,500 00	773,819 52	
1883, December 31, to...	205,153 87	400,000 00	786,518 45	....	786,518 45	
1884, November 10.....	368,462 30	600,000 00	643,623 36	23,869 81	667,493 17	$1,512,357 97
						‡1,417,000 00
	$937,899 69	$1,720,000 00	$2,896,162 38	$60,369 81	$2,956,532 19	$1,512,357 97
						1,417,000 00

*Include $250,000.00 and $3,000,000 00, respectively, credited to stock account. † Appreciation of property on reorganization. ‡ Franchise.

B — NEW YORK GAS-LIGHT COMPANY.

(No. 2.)

Analysis of Profit and Loss Accounts from February 1, 1860, to November 10, 1884 — (Continued).

Dr. *Summary.* *Cr.*

FIVE YEARS ENDING.	Depreciation written off.	Dividends.	Total.	Net profits on gas.	Profits from other sources.	Total profits.	Appreciation written up.	Franchise.	Totals.
1865, Feb. 1	$289,908 23	$2,220,000 00	$2,509,908 23	$2,329,988 08	$66,646 59	$2,396,634 67	….. ….	…. ….	$2,396,634 67
1870, Feb. 1	914,961 02	3,100,000 00	4,014,961 02	3,897,604 86	68,039 78	3,965,644 64	…. ….	……….	3,965,644 64
1875, Feb. 1	801,355 94	6,350,000 00	7,151,355 94	3,630,715 10	….. …..	3,630,715 10	$2,968,944 66	……….	6,599,659 76
5 years and 11 months, to 1880, Dec. 31	506,208 08	2,400,000 00	2,906,208 08	2,697,772 21	59,139 16	2,756,911 37	…. ….	……….	2,756,911 37
To 1884, Nov. 10	937,899 69	1,720,000 00	2,657,899 69	2,896,162 38	60,369 81	2,956,532 19	1,512,357 97	$1,417,000 00	5,885,890 16
	$3,450,332 96	$15,790,000 00	$19,240,332 96	$15,452,242 63	$254,195 34	$15,706,437 97	$4,481,302 63	$1,417,000 00	$21,604,760 60
1884, Nov. 10. Balance to credit of surplus capital account			3,647,258 19	Balance of undivided profits Feb. 1, 1860					1,268,896 33
				Depreciation not written off, Feb. 1, 1860					13,954 22
			$22,887,591 15						$22,887,591 15

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Resume.

To expenses of administration....		$2,322,261 19
To repairs to apparatus, works, etc.		2,737,029 62
To taxes		2,545,613 78
To interest		40,420 32
To sundry minor items...........		140,334 41
To balance, being net profit from all sources, as above...........		15,706,437 97
		$23,492,097 29
To dividends paid................		$15,790,000 00
To depreciations written off from profit and loss	$1,995,535 10	
To depreciations written off from deterioration	228,255 08	
To depreciations written off from surplus capital	408,805 16	
To depreciations written off for deterioration and improvements	1,167,737 62	
	$3,710,332 96	
Less transfer for deterioration account.	260,000 00	
		3,450,332 96
To balance to credit of surplus capital account		3,647,258 19
		$22,887,591 15

By receipts from gas.............	$21,170,579 77
By receipts from residuals.......	1,426,186 61
By receipts from interest.........	388,950 30
By receipts from rent............	14,658 00
By profits on stocks and bonds....	75,662 08
By receipts for coke and delivery, etc........................	189,165 98
By receipts for supplies to Consol. Co.........................	56,385 58
By unclaimed deposits...........	68,000 00
By profits on coal................	81,008 97
By depreciation written back.....	21,500 00
	$23,492,097 29
By balance, net profit............	$15,706,437 97
By appreciations written up......	4,481,302 63
By franchise	1,417,000 00
By undivided profits carried over, Feb. 1, 1860..................	1,268,896 33
By amount in deterioration account unappropriated February 1, 1860...................	13,954 22
	$22,887,591 15

B — NEW YORK GAS-LIGHT COMPANY.

Dr. *Profit and Loss Accounts (Nos. 1 and 2) from June 2, 1823 to Nov. 10, 1884.* *Cr.*

PERIOD ENDING.	Depreciation written off.	Dividends.	Totals.	Net profits on gas.	Profits from other sources.	Total profits.	Appreciation written up	Franchise.	Totals.
1829, Dec. 31	....	$231,709 50	$231,709 50	$152,197 63	$113,394 24	$265,591 87	....	....	$265,591 87
5 years ending 1834, Dec. 31	....	245,619 00	245,619 00	255,784 45	4,294 95	260,079 40	....	....	260,079 40
1839, Dec. 31	$25,126 12	304,250 00	329,376 12	249,942 69	10,098 07	260,040 76	....	....	260,040 76
5 years and 1 month to 1845 Feb. 1	25,934 12	337,500 00	363,434 12	334,183 75	14,249 88	348,433 63	....	....	348,433 63
5 years ending 1850, Feb. 1	130,574 30	337,500 00	468,074 30	613,868 41	23,363 93	637,232 34	....	....	637,232 34
1855, Feb. 1	143,751 46	450,000 00	593,751 46	1,048,420 67	128,139 50	1,176,560 17	....	....	1,176,560 17
1860, Feb. 1	108,502 34	787,500 00	896,002 34	1,261,122 36	*137,457 25	1,398,579 61	....	....	1,398,579 61
1865, Feb. 1	299,908 28	2,250,000 00	2,549,908 28	2,320,594 08	66,040 59	2,386,634 67	....	....	2,386,634 67
1870, Feb. 1	914,961 02	3,100,000 00	4,014,961 02	3,897,604 86	68,039 75	3,965,644 61	....	....	3,965,644 61
1875, Feb. 1	801,355 94	6,350,000 00	7,151,355 94	3,650,715 10	....	3,650,715 10	$2,939,944 66	....	6,590,659 76
5 years and 11 mos. 1880, Dec. 31	506,208 08	2,400,000 00	2,906,208 08	2,697,772 21	59,139 16	2,756,911 37	....	....	2,756,911 37
To 1884, Nov. 10	927,800 69	1,730,000 00	2,657,800 69	2,896,162 38	60,369 81	2,956,532 19	1,512,357 97	$1,417,000 00	5,885,890 16
	$3,884,311 30	$18,484,078 50	$22,368,389 80	$19,767,462 50	$283,193 16	$20,050,655 75	$4,481,302 63	$1,417,000 00	$25,948,958 38
1884, Nov. 10, Balance to credit of surplus capital account			3,647,258 19	Transferred from other accounts					66,689 61
			$26,015,647 99						$26,015,647 99

Dr. *Revenue.*

To expenses of administration $2,790,147 67

To repairs to apparatus, works, etc.		3,161,879 77
To taxes and sundries		3,055,765 36
To advance receipts		17,267 00
To interest		57,277 54
Balance, being net profits from all sources from June 2, 1823, to Nov. 10, 1884		20,050,655 75
		$29,132,993 09
To dividends paid		$18,484,078 50
To depreciation written off from profit and loss	$2,286,778 05	
To depreciation written off from deterioration	575,990 47	
To depreciation written off from surplus capital	408,805 16	
To depreciation written off from deterioration and improve-provements	1,167,737 62	
	$4,439,311 30	
Less, transfer from profit and loss to deterioration account	555,000 00	
		3,884,311 30
To balance to credit of surplus capital account		3,647,258 19
		$26,015,647 99

By receipts from interest	587,198 30
By receipts from rents	53,726 68
By profits on stocks and bonds and uncalled for dividends	147,279 74
By profits on sale of property	23,664 19
By supplies to Consolidated Co.	56,385 58
By profits on coal	81,008 97
By receipts for coke and delivery and sundries	481,813 27
By unclaimed deposits	68,000 00
By depreciation written back	21,500 00
	$29,132,993 09
By balance, net profits	$20,050,655 75
By appreciation written up	4,481,302 63
By franchise	1,417,000 00
By transfer from other accounts	66,689 61
	$26,015,647 99

B — NEW YORK GAS-LIGHT COMPANY.

Dr. *Particulars of Sale to the Consolidated Gas-light Company, Nov. 10, 1884.* *Cr.*

Date.	PARTICULARS.	State of account prior to credit of appreciation.	Appreciation written up.	Sold for.	Date.	PARTICULARS.	Amount.
1885. Nov. 10	To gas sold through public lamps, November 1 to 10, inclusive	....	....	$1,376 18	1884. Nov. 10	By cash	$34,070 20
	To work at public lamps, November 1 to 10	....	....	10 00		By accrued interest on bonds and mortgages adjusted to November 10	115 00
	To sundry bills as per day book,	....	....	221 9.		By rent of room at 111 Broad street	6 25
	To sundry bills for gas stoves sold	....	....	126 71		By rent of telephone, one-third month, November 1 to 10	20 50
	To premiums on insurance paid in advance, and adjusted to November 10, 1884	....	....	94 16		By wages of collectors, two-thirds month, November 11 to 30	544 46
	To cost of counter shafting at works, as per inventory	....	....	592 56		By Croton water used to November 10.... $457 50 Less regular Croton rates paid in advance and adjusted to date 309 50	148 00
	To half expenses of painting lamp posts	....	....	339 86		By rents collected in advance and adjusted to date	531 50
	To gas sold through meters to the corporation of the city of New York, from November 1 to 10 (bills not rendered)	....	....	1,302 00		By advance receipts as inventoried	62,899 40
	To amount due from city of New York for gas sold	....	....	10,754 26		By interest on above	6,289 94
	To amount due from sundry customers for gas	....	....	150,699 25		By unclaimed advances	2,439 16
	To anthracite coal as per inventory	....	....	9,440 60		By bond and mortgage on No. 335 Avenue A, due July 18, 1889	6,000 00
	To naphtha	....	....	6,701 72		By local taxes as inventoried (personal tax paid by Consolidated Co.)	38,297 55
	To coke	....	....	8,190 50			
	To 21st street inventory of supplies, less shafting charged above, $592.56	....	....	88,180 97			
	To Hester street inventory of supplies	....	....	22,263 66			

To supplementary schedule (lamp supplies)............	....	....	840 95		By State tax as inventoried tax for 1884 on regular dividends, to be paid by Consolidated Gas-light Co..........	15,000 00
To Hester street property......	$100,000 00	....	.00,000 00			
To real estate at gas works....	1,220,000 00	$637,000 00	1,857,000 00			
To buildings and apparatus....	... .	....	2,894,000 00	1885.		
To street mains	3,310,642 03	875,357 97	1,293,000 00	Jan. 10	By cash......................	32,625 50
To franchise...................	....	1,417,000 00	1,417,000 00	Jan. 31	By cash......................	998 51
To New York Gas-light Company's stock..............	....	....	36,100 00		By final dividend of one per cent, paid January 26, 1885.	40,000 00
To Manhattan Gas-light Company's stock	....	....	3,900 00		By State tax on above dividend, paid by Consolidated Company...................	1,000 00
Above properties to the Consolidated Company, as per agreement (the stock being in lieu of 400 shares of the Consolidated Co.'s stock).					By balance unsettled..........	1,000 00
To cash..........................	....	....	90		By balance, being in stock of Consolidated Gas light Co.	7,600,000 00
	$4,030,642 03	$2,929,357 97	$7,841,436 27			$7,841,436 27

B.—NEW YORK GAS-LIGHT COMPANY.

Capital Investments, Etc.

Year.	Total current capital.	Investments.		Total.
		Real estate.	Works, apparatus, meters, mains, etc.	
1824	$203,581 65	$18,432 06	$3,213 99	$21,646 05
1825	232,581 65	20,210 18	73,828 85	94,039 03
1826	581,893 16	13,842 48	158,802 00	172,644 48
1827	522,470 31	31,663 70	208,878 48	240,542 18
1828	517,677 07	33,011 78	235,760 78	268,772 56
1829.	506,779 73	32,966 35	241,248 22	274,214 57
1830	526,822 37	35,976 11	247,274 56	283,250 67
1831	517,182 86	28,374 39	241,764 80	270,139 19
1832	514,969 81	28,461 89	241,195 81	269,657 70
1833	515,623 97	28,461 89	338,671 32	367,133 21
1834	518,157 41	28,961 89	339,512 13	368,474 02
1835	557,925 57	29,680 55	342,522 24	372,202 79
1836	572,549 12	29,681 06	354,446 36	384,127 42
1837	585,716 10	86,923 45	373,730 44	460,653 89
1838	809,962 89	86,923 45	391,032 53	477,955 98
1839	797,978 22	232,739 80	396,467 04	629,206 84
1840	791,900 93	144,138 85	401,923 72	546,062 57
1841	791,700 32	144,147 85	410,769 69	554,917 54
1842	777,494 90	144,147 85	417,781 92	561,929 77
1843	764,589 56	125,474 96	421,446 06	546,921 02

1844	763,635 72	125,917 61	432,731 78	558,649 39
1845	793,696 53	117,012 56	460,382 90	577,395 46
1846	820,387 92	117,535 96	452,245 00	569,780 96
1847	874,669 06	97,998 28	451,143 04	549,144 32
1848	932,152 53	103,105 99	466,214 59	569,320 58
1849	916,907 68	121,927 53	464,386 72	586,314 25
1850	977,854 57	119,565 49	417,818 82	537,384 31
1851	1,095,109 85	122,179 15	351,528 56	473,707 71
1852	1,138,329 76	129,634 75	341,531 89	472,166 64
1853	1,285,147 18	130,013 72	391,845 45	521,859 17
1854	1,367,144 44	130,130 25	381,072 07	511,202 32
1855	1,540,363 28	183,844 14	411,203 84	596,047 98
1856	1,579,451 88	190,604 72	406,064 83	596,669 55
1857	1,763,145 31	202,114 97	417,484 18	619,599 15
1858	1,798,528 87	202,792 94	399,555 67	602,348 61
1859	1,971,246 98	203,708 04	406,770 06	610,478 10
1860	2,052,850 55	204,310 41	403,213 78	607,524 19
1861	2,170,894 27	254,959 01	407,256 85	662,215 86
1862	2,144,804 00	254,959 01	582,197 51	837,156 52
1863	1,700,235 66	342,459 01	568,788 90	911,247 91
1864	2,092,261 27	342,000 00	556,077 46	898,077 46
1865	2,131,177 90	344,000 00	519,824 26	863,824 26
1866	2,077,489 66	344,000 00	480,518 92	824,518 92
1867	2,114,997 91	344,020 00	460,518 92	804,538 92
1868	2,191,237 80	366,500 00	420,518 92	787,018 92
1869	2,145,445 06	366,500 00	382,250 00	748,750 00
1870	2,120,261 61	366,500 00	382,250 00	748,750 00
1871	1,799,875 47	1,300,000 00	2,700,000 00	4,000,000 00
1872	4,654,036 11	1,300,000 00	2,700,000 00	4,000,000 00

*The company's stock account was increased at this time by appreciating the values of the investments.

B—NEW YORK GAS-LIGHT COMPANY.

Capital Investments, &c.—(Continued).

Year.	Total current capital.	Investments.		Total.
		Real estate.	Works, apparatus, meters, mains, etc.	
1873	$4,480,728 56	$1,300,000 00	$2,700,000 00	$4,000,000 00
1874	4,568,564 43	1,300,000 00	2,700,000 00	4,000,000 00
1875	4,498,881 34	1,300,000 00	2,700,000 00	4,000,000 00
1876	4,542,074 26	1,300,000 00	2,903,067 03	4,203,067 03
1877	4,393,492 22	1,300,000 00	3,047,632 36	4,347,632 36
1878	4,459,563 10	1,300,000 00	2,887,000 00	4,187,000 00
1879	4,350,189 85	1,300,000 00	3,070,000 00	4,370,000 00
1880	4,424,267 72	1,300,000 00	3,364,922 92	4,664,922 92
1881	4,521,118 02	1,300,000 00	3,142,089 42	4,442,089 42
1882	4,669,614 47	1,314,000 00	3,232,706 21	4,546,706 21
1883	4,703,218 65	1,320,000 00	3,277,183 83	4,597,183 83
1884	†7,647,258 19	1,957,000 00	4,186,000 00	6,143,000 00
6 years ending 1829	506,779 73	32,966 35	241,248 22	274,214 57
5 years, ending 1834	518,157 41	28,961 89	339,512 13	368,474 02
" " 1839	797,978 22	232,739 80	396,467 04	629,206 84
" " 1844	763,635 72	125,917 61	432,731 78	558,649 39
" " 1849	916,907 68	121,927 53	464,386 72	586,314 25
" " 1854	1,367,144 44	130,130 25	381,072 07	511,202 32

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" " 1859	1,971,246 98	203,708 04	406,770 06	610,478 10
" " 1864	2,092,261 27	342,000 00	556,077 46	898,077 46
" " 1869	2,145,445 06	366,500 00	382,250 00	748,750 00
" " 1874	4,568,564 43	1,300,000 00	2,700,000 00	4,000,000 00
5 years, 11 mos. to Dec. 31, 1880	4,424,267 72	1,300,000 00	3,364,922 92	4,664,922 92
Nov. 10, 1884	7,647,258 19	1,957,000 00	4,186,000 00	6,143,000 00

†The amount was increased by the valuation, beyond amounts stated in books as transferred to the Consolidated Company.

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B — NEW YORK GAS-LIGHT COMPANY.

Current Capital Account and Surplus.

YEAR	Capital stock.	SURPLUS.					Totals capital and surplus.	Average.
		Profit and loss.	Deterioration.	Surplus capital.	Deterioration and improvements.	Totals.		
1823 (June 2 to December 31)	$200,000 00	*Dr.* $1,418 35	....	....	....	*$1,418 35*	$198,581 65	
1824	205,000 00	*Dr.* 1,418 35	....	....	....	*1,418 35*	203,581 65	
1825	234,000 00	*Dr.* 1,418 35	....	....	....	*1,418 35*	232,581 65	
1826	495,000 00	86,893 16	....	....	....	86,893 16	581,893 16	
1827	495,000 00	27,470 31	....	....	....	27,470 31	522,470 31	
1828	495,000 00	22,677 07	....	....	....	22,677 07	517,677 07	
1829	495,000 00	11,779 73	....	....	....	11,779 73	506,779 73	
							$2,763,565 22	$394,795 03
1830	495,000 00	31,822 37	....	....	....	31,822 37	$526,822 37	
1831	495,000 00	22,182 86	....	....	....	22,182 86	517,182 86	
1832	495,000 00	19,969 81	....	....	....	19,969 81	514,969 81	
1833	495,000 00	20,623 97	....	....	....	20,623 97	515,623 97	
1834	495,000 00	23,157 41	....	....	....	23,157 41	518,157 41	
							$2,592,756 42	$518,551 28
1835	495,000 00	46,342 77	$16,582 80	....	....	62,925 57	$557,925 57	
1836	495,000 00	47,431 41	30,117 71	....	....	77,549 12	572,549 12	
1837	500,000 00	42,750 28	42,965 82	....	....	85,716 10	585,716 10	
1838	750,000 00	16,426 78	43,536 11	....	....	59,962 89	809,962 89	
1839	750,000 00	6,628 23	41,349 99	....	....	47,978 22	797,978 22	
							$3,324,131 90	$664,826 38

1840	750,000 00	11,133 53	30,767 40	...	...	41,900 93	$791,900 93	
1841	750,000 00	3,382 79	38,317 53	...	...	41,700 32	791,700 32	
1842	750,000 00	5,369 91	22,124 99	...	...	27,494 90	777,494 90	
1843	750,000 00	*Dr.* 6,312 62	20,902 18	...	...	14,589 56	764,589 56	
1844	750,000 00	*Dr.* 1,993 62	15,629 34	...	...	13,635 72	763,635 72	
							$3,889,321 43	$777,864 29
1845	750,000 00	13,067 16	30,629 37	...	...	43,696 53	$793,696 53	
1846	750,000 00	24,758 55	45,629 37	...	...	70,387 92	820,387 92	
1847	750,000 00	59,039 69	65,629 37	...	...	124,669 06	874,669 06	
1848	750,000 00	106,523 16	75,629 37	...	...	182,152 53	932,152 53	
1849	750,000 00	158,582 20	8,325 48	...	...	166,907 68	916,907 68	
							$4,337,813 72	$867,562 74
1850	750,000 00	189,529 09	38,325 48	...	...	227,854 57	$977,854 57	
1851	750,000 00	266,784 37	78,325 48	...	...	345,109 85	1,095,109 85	
1852	750,000 00	354,467 51	33,862 25	...	...	388,329 76	1,138,329 76	
1853	750,000 00	481,284 93	53,862 25	...	...	535,147 18	1,285,147 18	
1854	750,000 00	584,597 88	32,546 56	...	...	617,144 44	1,367,144 44	
							$5,863,585 80	$1,172,717 16
1855	750,000 00	747,816 72	42,546 56	...	...	790,363 28	$1,540,363 28	
1856	750,000 00	794,767 75	34,684 13	...	...	829,451 88	1,579,451 88	
1857	750,000 00	955,461 18	57,684 13	...	...	1,013,145 31	1,763,145 31	
1858	750,000 00	1,026,723 31	21,805 56	...	...	1,048,528 87	1,798,528 87	
1859	750,000 00	1,207,292 76	13,954 22	...	...	1,221,246 98	1,971,246 98	
							$8,652,736 32	$1,730,547 26
1860	750,000 00	1,268,896 33	33,954 22	...	...	1,302,850 55	$2,052,850 55	
1861	750,000 00	1,393,642 93	27,251 34	...	...	1,420,894 27	2,170,894 27	
1862	750,000 00	1,367,552 66	27,251 34	...	...	1,394,804 00	2,144,804 00	
1863	1,000,000 00	672,984 32	27,251 34	...	...	700,235 66	1,700,235 66	
1864	1,000,000 00	1,053,862 18	38,399 09	...	...	1,092,261 27	2,092,261 27	
							$10,161,045 75	$2,032,209 15

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B — NEW YORK GAS-LIGHT COMPANY.

Current Capital Account and Surplus — (Continued).

YEAR.	Capital stock	SURPLUS. Profit and loss	SURPLUS. Deterioration	SURPLUS. Surplus capital.	SURPLUS. Deterioration and improvements.	SURPLUS. Totals.	Totals capital and surplus.	Average.
1865	$1,000,000 00	$1,131,177 90				$1,131,177 90	$2,131,177 90	
1866	1,000,000 00	1,051,790 52	$25,699 14			1,077,489 66	2,077,489 66	
1867	1,000,000 00	1,069,298 77	45,699 14			1,114,997 91	2,114,997 91	
1868	1,000,000 00	1,094,538 66	96,699 14			1,191,237 80	2,191,237 80	
1869	1,000,000 00	1,048,745 92	96,699 14			1,145,445 06	2,145,445 06	
							$10,660,348 33	$2,132,069 67
1870	1,000,000 00	1,023,561 47	96,699 14			1,120,260 61	$2,120,260 61	
1871	1,000,000 00		96,699 14	$703,176 33		799,875 47	1,799,875 47	
1872	4,000,000 00			654,036 11		654,036 11	4,654,036 11	
1873	4,000,000 00			480,728 56		480,728 56	4,480,728 56	
1874	4,000,000 00			264,740 48	$304,423 95	568,564 43	4,568,564 43	
							$17,623,465 18	$3,524,693 04
1875	4,000,000 00			194,457 39	304,423 95	498,881 34	$4,498,881 34	
1876	4,000,000 00			237,650 31	304,423 95	542,074 26	4,542,074 26	
1877	4,000,000 00			254,833 33	138,658 89	393,492 22	4,393,492 22	
1878	4,000,000 00			319,946 34	139,616 76	459,563 10	4,459,563 10	
1879	4,000,000 00			337,011 97	13,177 88	350,189 85	4,350,189 85	
							$22,244,200 77	$4,448,840 15
1880	4,000,000 00			321,089 84	103,177 88	424,267 72	$4,424,267 72	
1881	4,000,000 00			351,386 07	169,731 95	521,118 02	4,521,118 02	
1882	4,000,000 00			353,963 77	315,650 70	669,614 47	4,669,614 47	
1883	4,000,000 00			378,218 65	325,000 00	703,218 65	4,703,218 65	
1884 (To November 10)	4,000,000 00			*3,647,258 19		3,647,258 19	7,647,258 19	
							$25,965,477 05	$5,341,460 56

* Includes profit on sale to Consolidated Company.

B — NEW YORK GAS-LIGHT COMPANY.

Dividend Account.

DATE.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at 10 per cent per annum on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent.
1823, June 2	$200,000 00	$200,000 00	....	......	....	....	....
19 months ending 1824, Dec. 31	5,000 00	205,000 00	....	......	$32,458 33	... .	$32,458 33
1825	29,500 00	234,500 00	$14,850 00	6.33	23,450 00	....	8,600 00
1826	260,500 00	495,000 00	57,821 00	11.58	49,500 00	$7,821 00	... .
1827	....	495,000 00	42,718 50	8.63	49,500 00	....	6,781 50
1828	....	495,000 00	57,420 00	11.60	49,500 00	7,920 00	....
1829	....	495,000 00	59,400 00	12.	49,500 00	9,900 00	....
1830	....	495,000 00	52,173 00	10.54	49,500 00	2,673 00	....
1831	....	495,000 00	47,431 00	9.58	49,500 00	....	2,079 00
1832	....	495,000 00	47,425 00	9.56	49,500 00	....	2,475 00
1833	....	495,000 00	49,500 00	10.	49,500 00	....	....
1834	....	495,000 00	49,500 00	10.	49,500 00	....	....
1835	....	495,000 00	49,500 00	10.	49,500 00	....	....
1836	....	495,000 00	49,750 00	10.05	49,500 00	250 00	....
1837	5,000 00	500,000 00	62,500 00	12.50	50,000 00	12,500 00	....
1838	250,000 00	750,000 00	75,000 00	10.	75,000 00	....	....
1839	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1840	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1841	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1842	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1843	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1844	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1845	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1846	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00

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B — NEW YORK GAS-LIGHT COMPANY.

Dividend Account — (Continued).

DATE.	Increase of capital.	Total capital paid up	Dividends paid.	Rate per cent per annum.	Amount at 10 per cent per annum on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent.
1847	....	$750,000 00	$67,500 00	9.	$75,000 00	....	$7,500 00
1848	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1849	....	750,000 00	67,500 00	9.	75,000 00	....	7,500 00
1850	....	750,000 00	75,000 00	10.	75,000 00	....	....
1851	....	750,000 00	75,000 00	10.	75,000 00	....	....
1852	....	750,000 00	75,000 00	10.	75,000 00	....	....
1853	....	750,000 00	150,000 00	20.	75,000 00	$75,000 00	....
1854	....	750,000 00	75,000 00	10.	75,000 00	....	....
1855	....	750,000 00	75,000 00	10.	75,000 00	....	....
1856	....	750,000 00	75,000 00	10.	75,000 00	....	....
1857	....	750,000 00	225,000 00	30.	75,000 00	150,000 00	....
1858	....	750,000 00	112,500 00	15.	75,000 00	37,500 00	....
1859	....	750,000 00	300,000 00	40.	75,000 00	225,000 00	....
1860	....	750,000 00	307,500 00	41.	75,000 00	232,500 00	....
1861	....	750,000 00	337,500 00	45.	75,000 00	262,500 00	....
1862	....	750,000 00	*1,075,000 00	143.33	75,000 00	1,000,000 00	....
1863	$250,000 00	1,000,000 00	200,000 00	20.	100,000 00	100,000 00	....
1864	....	1,000,000 00	300,000 00	30.	100,000 00	200,000 00	....
1865	....	1,000,000 00	500,000 00	50.	100,000 00	400,000 00	....
1866	....	1,000,000 00	900,000 00	90.	100,000 00	800,000 00	....
1867	....	1,000,000 00	700,000 00	70.	100,000 00	600,000 00	....
1868	....	1,000,000 00	500,000 00	50.	100,000 00	400,000 00	....
1869	....	1,000,000 00	500,000 00	50.	100,000 00	400,000 00	....
1870	....	1,000,000 00	500,000 00	50.	100,000 00	400,000 00	....

* $250,000 of the amount was a stock dividend.

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To 1871, May 31	....	1,000,000 00	*3,450,000 00	243.53	141,666 66	3,308,333 34	....
			$11,964,078 50			$8,631,897 34	
Less, amount at 10 per cent per annum on paid-up capital ...	....	....	3,467,074 99	......	....	....	....
Less, deficiency below 10 per cent per annum on paid-up capital...	....	....	....	......	....	134,893 83	....
Net excess of dividend over 10 per cent per annum.	....	....	$8,497,003 51	......	....	$8,497,003 51	....

Reorganization June 1, 1871.

1871, June 1.	....	$1,000,000 00	$600,000 00	102.86	$58,333 33	$541,666 67	....
To 1872, Dec. 31, 7 months........	$3,000,000 00	1,000,000 00	800,000 00	20.	400,000 00	400,000 00	....
1873, 12 months...................	....	4,000,000 00	600,000 00	15.	400,000 00	200,000 00	....
1874..................................	....	4,000,000 00	400,000 00	10.	400,000 00	....	....
1875..................................	....	4,000,000 00	800,000 00	20.	400,000 00	400,000 00	....
1876..................................	....	4,000,000 00	400,000 00	10.	400,000 00	....	....
1877..................................	....	4,000,000 00	400,000 00	10.	400,000 00	....	....
1878..................................	....	4,000,000 00	320,000 00	8.	400,000 00	....	$80,000 00
1879..................................	....	4,000,000 00	160,000 00	4.	400,000 00	....	240,000 00
1880..................................	....	4,000,000 00	320,000 00	8.	400,000 00	....	80,000 00
1881..................................	....	4,000,000 00	320,000 00	8.	400,000 00	....	80,000 00
1882..................................	....	4,000,000 00	400,000 00	10.	400,000 00	....	....
1883..................................	....	4,000,000 00	400,000 00	10.	400,000 00	....	....
To 1884, Nov. 10	....	4,000,000 00	600,000 00	17.42	344,444 44	255,555 56	....
	$4,000,000 00		$6,520,000 00			$11797,222 23	
Less, amount at 10 per cent per annum on paid-up capital.....	....	....	5,202,777 77	......	....	....	....
Less, deficiency below 10 per cent per annum on paid-up capital	....	....	....	......	....	480,000,00	....
Net excess of dividends over 10 per cent per annum.........	....	....	$1,317,222 23	......	....	$1,317,222 23	....

* This amount includes $3,000,000 stock dividend, which amount is credited to capital account, June 1, 1871.

B—NEW YORK GAS-LIGHT COMPANY.

Summary.

PERIOD ENDING	Dividends paid.	Amount at 10 per cent per annum on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent.
1871, May 31	*$11,964,078 50	$3,467,074 99	$8,631,897 34	$134,893 83
1884, Nov. 10	6,520,000 00	5,202,777 77	1,797,222 23	480,000 00
	$18,484,078 50		$10,429,119 57	
Less amount at 10 per cent per annum on paid-up capital	8,669,852 76	....		
Less deficiency below 10 per cent per annum on paid-up capital	....	....	614,893 83	
Total net excess of dividends over 10 per cent per annum	$9,814,225 74		$9,814,225 74	

*This amount includes $3,250,000 stock dividends which amount is credited to capital account.

Particulars of Credit to Surplus Capital Account, June 1st, 1871, as extracted from the books.

Balance of profit and loss account transferred	$925,404 34
Transfer of balance of deterioration account	96,609 14
Transfer of balance of wharfage account	10,342 14
Appreciation on Hester street property	60,000 00
Appreciation on real estate at works	673,500 00
Appreciation on buildings and apparatus, appraised at $1,658,946, — to Dr. of account, $450,000	1,208,946 00
Appreciation on street mains, appraised at $1,000,000,—to Dr. of account, $382,250	617,750 00
Profit on New York Gas-light stock	13,725 00
Profit on U. S. bonds (6 per cent currency)	437 50
Appreciation on stable building	3,291 89
Appreciation on stable equipment, valued at $21,054, charged, $3,915.23	17,138 77

N. Y. Life Ins. & Trust Co.:		
For amount deposited to Cr. J. H. Adams, Pres.	$150,000 00	
For interest on same to June 1st	8,202 03	
For interest on general account	5,611 33	
		$163,813 36
Total		$3,991,138 14
Out of which was paid stock dividend of	$3,000,000 00	
And balance carried to surplus capital	991,138 14	
		$3,991,138 14

C — METROPOLITAN GAS-LIGHT COMPANY.

Capital Account.

DATE.	Capital created.	How paid in.				Total to date.
		Cash.	For charter.	Purchase of property	For construction.	
1860, November 30	$2,500,000 00	$12,150 00	$96,000 00	....	....	$108,150 00
1861, November 30	....	43,190 00	36,000 00	....	$25,600 00	212,940 00
1862, November 30	....	83,870 00	12,000 00	....	368,100 00	676,910 00
1863, November 30	....	473,490 00	....	$1,178,000 00	171,600 00	2,500,000 00
	$2,500,000 00	$612,700 00	$144,000 00	$1,178,000 00	$565,300 00	

Recapitulation.

1863, November 30, Capital paid in in cash	$612,700 00
Capital paid for charter	144,000 00
Capital paid for purchase of property from Manhattan Gas-Light Company	1,178,000 00
Capital paid for street mains and works	265,000 00
Total amount of capital stock at this date	$2,500,000 00

NOTE.—There was no increase of capital from this date, November 30, 1863, to the date of consolidation, November 10, 1884.

C—METROPOLITAN GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts from November* 30, 1862, *to November* 10, 1884. *Cr.*

Year ending	Total cost of gas, bad accounts and sundry expenses.	Depreciation written off.	Dividends.	Gross income from gas, residuals and sundries.	Appreciation written up.
1863, November 30.....	$119,729 18	....	....	$168,892 18	$11,916 66
1864, November 30.....	414,019 97	....	....	487,219 46	
1865, November 30.....	494,293 24	$2,465 91	....	615,099 11	
"	*21,637 06				
1866, November 30.....	521,222 79	....	$200,000 00	794,426 88	
"	*49,818 00				
1867, November 30.....	614,253 20	....	300,000 00	938,736 87	
	$2,234,973 44	$2,465 91	$500,000 00	$3,004,374 50	$11,916 66
1868, November 30.....	$671,964 58	....	$200,000 00	$1,032,965 12	
"	....	....	....	‖18,840 09	
1869, November 30.....	808,469 65	....	400,000 00	1,209,200 61	
"	....	....	....	‖32,337 00	
1870, November 30.....	884,670 08	....	1,300,000 00	1,321,301 21	$739,973 14
"	†144,000 00	....	§25,000 00	‖18,626 92	
1871, November 30.....	900,221 88	....	300,000 00	1,539,479 78	
"	....	....	§62,500 00	‖38,917 36	
1872, November 30.....	1,076,430 10	....	200,000 00	1,521,055 54	
			§50,000 00		
	$4,485,756 29	....	$2,537,500 00	$6,732,723 63	$739,973 14

1873, November 30.....	$1,136,963 82	....	....	$1,495,644 88	
"	‡67,466 17				
1874, November 30.....	1,067,611 53	....	$250,000 00	1,502,132 50	
"	....	....	§70,000 00		
1875, November 30.....	913,254 72	$138 95	250,000 00	1,497,770 70	$39 34
"	....	....	§70,000 00		
1876, November 30.....	814,624 34	....	375,000 00	1,328,669 07	
"	....	....	§105,000 00	‖15,578 86	
1877, November 30.....	735,880 03	....	250,000 00	1,202,140 49	
			§70,000 00	‖16,032 44	
	$4,735,800 61	$138 95	$1,440,000 00	$7,057,968 94	$39 34
1878, November 30.....	$631,404 86	....	$250,000 00	$1,124,255 48	
"	....	....	§70,000 00	°16,670 00	
1879, November 30.....	649,752 22	....	250,000 00	1,032,276 11	
"	....	....	§67,786 60	°14,731 09	
1880, November 30.....	744,451 91	$240 00	375,000 00	1,095,023 71	
"	¶39,198 01	....	§94,479 42	°101,526 08	
1881, November 30.....	813,504 11	4,522 44	337,500 00	1,410,766 75	
"	....	....	§76,483 34	°14,977 92	
1882, November 30.....	862,762 39	....	450,000 00	1,551,586 75	
				°9,056 49	
	$3,741,013 50	$4,762 44	$1,971,249 36	$6,370,870 29	

* Losses by fire. † Charter. ‡ Bad accounts, 1872. § Interest on scrip. ‖ Interest and service. ¶ Loss by city. ° Interest.

C—METROPOLITAN GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts, etc.*—(Continued.) *Cr.*

Year ending	Total cost of gas, bad accounts and sundry expenses.	Depreciation written off.	Dividends.	Gross income from gas, residuals and sundries.	Appreciation written up.
1883, November 30.....	$961,540 95	....	$500,000 00	$1,754,486 58	
"	....	....	....	*12,373 68	
1884, November 10.....	971,539 40	....	625,000 00	1,832,910 52	
				*16,075 68	
				†1,411 58	
				‡675,000 00	
	$1,938,080 35	....	$1,125,000 00	$4,292,258 04	

* Interest. † Wharfage. ‡ Consolidated Gas-Light Company

Dr. C — *Summary.* *Cr.*

FIVE YEARS ENDING	Total cost of gas, bad accounts, sundries.	Depreciations written off.	Dividends.	Totals.	Gross income from gas, residums, sundries.	Appreciation written up.	Totals.
1867 November 30	$2,234,973 44	$2,465 91	$500,000 00	$2,737,439 35	$3,004,374 50	$11,916 66	$3,016,291 16
1872 November 30	4,485,756 29	....	2,537,500 00	7,023,256 29	6,732,723 63	739,923 14	7,472,646 77
1877 November 30	4,735,800 61	138 95	1.440,000 00	6,175,939 56	7,057,968 94	89 34	7,058,058 28
1882 November 30	3,741,013 50	4,762 44	1,971,249 36	5,717,025 30	6,370,870 29	....	6,370,870 29
to 1884 November 10	1,933,080 35	....	1,125,000 00	3,058,080 35	3,617,258 04 *675,000 00	....	3,617,258 04 675,000 00
	$17,130,624 19	$7,367 30	$7,573,749 36	$24,711,740 85	$27,458,195 40	$751,929 14	$28,210,124 54
Balance	....	....	....	3,498,383 69			
				$28,210,124 54			$28,210,124 54

* Consolidated Gas-Light Co.

C — *Resume.*

Dr.

Gas manufacturing	$10,954,710 95		
Reconstruction and repairs	1,380,163 05		
Taxes	1,477,177 17		
Salaries, office expenses, &c	2,037,948 46		
Interest, insurance, &c	700,042 65		
Lamps, services	80,324 59		
Fire losses	71,455 06		
Charter	144,000 00		
Meter and gas stove setting	42,192 27		
Rent and sundries	10,022 08		
		$16,898,036 98	
Loss on bad accounts	$160,029 37		
Loss on meters	72,558 54		
		232,587 91	
			$17,130,624 19
Depreciation			7,367 30
Dividends			7,573,749 36
Balance to credit profit and loss			3,498,383 69
			$28,210,124 54

Cr.

Gross income from gas	$25,413,621 17	
Sale of residuals	991,374 06	
Interest	282,439 39	
Service	39,966 66	
Sundries	55,794 12	
		$26,783,195 40
Appreciation		751,929 14
Consolidated Gas-light Co.		675,000 00
		$28,210,124 54

C — METROPOLITAN GAS-LIGHT COMPANY.

Dr. *Particulars of sale to the Consolidated Gas-Light Company, November 11, 1884.* *Cr.*

Date.	PARTICULARS.	State of acc't prior to Cr. of appreciation.	Appreciation written up.	Sold for.
1884. Nov. 30	To gas, insurance, supplies, materials gas stoves, lamps, stationery, etc., handed over to the Consolidated			
	To street mains laid between Nov. 1 and Nov. 11, 1884			$10,625 67
	To services laid between November 1 and 11			10,738 10
	To real estate			8,749 00
	To construction	$1,411,274 57	$62,725 43	1,474,000 00
	To 65th street station	2,008,195 64 34,505 22	*508,700 86	2,044,000 00
	To mains, meters and services	1,237,129 17	239,870 83	1,477,000 00
	To bulkheads, etc		300,000 00	300,000 00
	To office furniture	1,070 75	10,929 25	12,000 00
	To laboratory		5,000 00	5,000 00
	To franchise		1,863,000 00	1,863,000 00
	To coal, water and supplies at works, as per account of Nov. 11, 1884			92,312 89
	To meters, as per account of Nov. 11, 1884			10,301 41
	To cash paid to collector of street assessments			600 00
	To mains, materials on Dec. 31, 1884, pipes, branches, reducers, bends, retorts, pieces, etc			43,310 23
	Lamp and service materials, coal, repairs, etc			2,840 92
			$2,451,525 51	
	Less depreciation		598,700 86	
		$5,292,175 35	$1,852,824 65	$7,349,516 92

Date.	PARTICULARS.	Amount.
1884. Nov. 30.	By bonds of company outstanding, assumed by Consolidated Gas Light Company	$658,000 00
	By interest accrued on same	11,295 67
	By mortgage on 8 lots in 41st street, 10th and 11th aves	80,000 00
	By interest on same	558 33
	By scrip outstanding	920 00
	By sundry other obligations assumed by the Consolidated Gas-Light Co.	2,126 45
Dec. 31	By proportion of gas collected by Metropolitan Co. belonging to Consolidated Co., from Nov. 11. to 14, 1884	18,084 25
	By money deposited with Metropolitan Co. as security for payment of gas bills assumed by Consolidated Co	95,120 25
	By interest on same at 10 per cent	9,512 02
1885. Feb. 28.	By difference on derricks (belonging to street mains)	136 49
	By cash received from Consolidated Gas Co for balance of accounts, as adjusted by the adjusting committee	23,753 46
	By balance — amount to be distributed to each stockholder of the Metropolitan Gas-Light Co., 2 6-10 shares of Consolidated stock, for the entire capital of $2,500,000	6,500,000 00
		$7,349,516 92

C—METROPOLITAN GAS-LIGHT COMPANY.

Dr. **Capital Investments—Real Estate.** *Cr.*

Sixty-fifth Street Works, N. Y.

Dr.		*Cr.*	
February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$323,000 00	By receipts from sales...........	$225,000 00
street assessments	41,080 31	receipts from rents............	117,373 54
taxes	41,600 07	receipts from wharfage........	422 33
legal expenses, surveying, etc..	3,360 90	sales of old materials..........	2,780 00
appreciation written up.......	526,259 54	balance, being net cost of property as now shown on books..	589,724 95
	$935,300 82		$935,300 82

Sixty-second Street Works, N. Y

Dr.		*Cr.*	
February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$212,993 14	By receipts from rents..........	$3,985 00
taxes and assessments.........	8,884 85	balance, being net cost of property as now shown on books..	238,075 49
legal expenses, surveying, etc..	230 00		
interest paid	19,952 50		
	$242,060 49		$242,060 49

Forty-second Street Works, N. Y.

February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$125,000 00	By balance, being net cost of property as now shown on books....	$390,956 39
improvements (bulkhead)	28,358 22		
street assessments	2,782 89		
taxes	2,715 87		
legal expenses, surveying, etc..	3,516 90		
interest paid	18,473 67		
appreciation written up.......	210,108 84		
	$390,956 39		

Forty-second Street Property, N. Y

February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$19,250 00	By balance, being net cost of property as now shown on books..:.	$26,690 04
street assessments	46 26		
taxes	3,224 02		
legal expenses, surveying, etc..	545 00		
appreciation written up......	3,604 76		
	$26,690 04		

C—METROPOLITAN GAS-LIGHT COMPANY.

Dr. *Capital Investments—Real Estate*—(Continued). *Cr.*

Avenue A, N. Y.

February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$90,000 00	By receipt from rents...........	$2,086 50
taxes and assessment	1,629 05	balance, being net cost of property as now shown on books..	89,948 35
legal expenses, surveying, etc..	405 80		
	$92,034 85		$92,034 85

Tenth and Eleventh Avenues, Nos. 41 *and* 42, *N. Y.*

February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$56,000 00	By balance, being net cost of property as now shown on books....	$50,000 00

Cliff Side, N. J.

February 1, 1860, to November 10, 1884:		February 1, 1860, to November 10, 1884:	
To purchase of property.........	$18,588 00	By balance, being net cost of property as now shown on books....	$25,879 35
water front privileges.........	7,291 35		
	$25,879 35		

Dr.

C — *Summary.*

DESCRIPTION.	Purchase of property.	Street assessments.	Taxes.	Legal expenses, surveying, etc.	Interest paid.	Appreciation written up.	Totals.
Sixty-fifth street works	$328,000 00	$41,080 31	$41,600 07	$3,360 90	....	$526,259 54	$935,300 82
Sixty-second street works ...	212,993 14	....	*8,884 85	230 00	$19,952 50	....	242,060 49
Forty-second street works ...	125,000 00	2,783 89	2,715 87	3,516 90	18,473 67	210,108 84	390,956 89
Improvements (b'lkhead)	28,358 22						
Forty-second street property.	19,250 00	46 26	3,244 02	545 00	... .	3,604 76	26,690 04
Avenue A	90,000 00	... .	*1,629 05	405 80	....	... .	92,034 85
Tenth and Eleventh avenues Nos. 41 and 42...	†50,000 00	... ...	....	....	....	....	50,000 00
Cliff Side, N. J	18,588 00	....	....	....	.. ..	....	25,879 35
Water front privileges..	7,291 35						
	$874,480 71	$43,909 46	$58,073 86	$8,058 60	$38,426 17	$739,978 14	$1,762,921 94

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* Taxes and assessments.

* Twenty thousand dollars paid in cash, mortgage given for $30,000.

C — *Summary* — (Continued). *Cr.*

DESCRIPTION.	Sales.	Rents received.	Wharfage received	Sales of old materials.	Dr. balance, being net amount invested.	Totals.
Sixty-fifth street works	$225,000 00	$117,373 54	$422 33	$2,780 00	$589,724 95	$935,300 82
Sixty-second street works	....	3,985 00	....	....	238,075 49	242,060 49
Forty-second street works	....	....	....	....	390,956 39	390,956 39
Forty-second street property	....	....	....	....	26,690 04	26,690 04
Avenue A	....	2,086 50	....	....	89,948 35	92,034 85
Tenth and Eleventh avenues, Nos. 41 and 42	....	....	....	....	50,000 00	50,000 00
Cliff Side, N. J	....	....	....	....	25,879 35	25,879 35
	$225,000 00	$123,445 04	$422 33	$2,780 00	$1,411,274 57	$1,762,921 94

C—METROPOLITAN GAS-LIGHT COMPANY

Capital Investments.

Year.	Real estate.	Construction.	Mains and Meters.	Furniture, etc.	Totals.
1860	$140,908 72	$4,108 25	....	....	$145,016 97
1861	140,908 72	60,070 61	....	....	200,979 33
1862	165,001 01	562,641 69	....	....	727,642 70
1863	494,325 82	1,607,212 00	$442,064 80	$5,913 63	2,549,516 25
1864	494,944 76	1,671,868 09	425,032 44	5,913 63	2,597,758 92
1865	477,005 23	1,679,069 63	415,948 72	7,059 54	2,579,083 12
1866	478,860 41	1,662,318 37	428,818 66	*42,325 53	2,612,323 27
1867	473,940 73	1,725,040 46	458,059 77	*19,129 60	2,676,170 56
1868	492,685 98	1,789,768 07	544,903 48	*49,506 40	2,876,863 93
1869	501,738 78	1,937,103 63	587,791 14	*35,043 22	3,061,676 77
1870	1,266,240 00	2,013,231 31	634,718 91	7,189 42	3,921,379 64
1871	1,261,548 52	2,094,392 92	731,570 38	7,337 67	4,094,849 49
1872	1,416,014 70	2,361,134 40	840,756 25	7,538 57	4,625,443 92
1873	1,414,946 79	2,503,828 38	873,613 46	4,417 07	4,796,805 70
1874	1,322,144 72	2,512,351 95	899,450 71	5,430 69	4,739,378 07
1875	1,449,741 04	2,483,247 21	940,782 29	5,557 69	4,879,328 23
1876	1,440,870 04	2,494,548 09	971,171 77	5,593 19	4,912,183 09
1877	1,437,352 49	2,499,012 13	1,004,972 33	5,593 19	4,946,930 14

*Includes expenses on bulkheads charged to real estate in November, 1870.

C—METROPOLITAN GAS-LIGHT COMPANY.

Capital Investments—(Continued).

Year.	Real estate.	Construction.	Mains and Meters.	Furniture, etc	Totals.
1878	$1,211,819 47	$2,501,656 98	$1,025,118 84	$5,593 19	$4,744,188 48
1879	1,203,293 67	2,507,502 87	1,072,240 21	5,593 19	4,788,629 94
1880	1,198,781 37	2,515,397 65	1,095,188 25	5,593 19	4,814,960 46
1881	1,290,048 19	2,552,500 29	1,138,210 20	1,070 75	4,981,829 43
1882	1,366.687 19	2,586,315 64	1,199,970 78	1,070 75	5,154,044 36
1883	1,424,487 46	2,598,465 64	1,229,680 73	1,135 75	5,253,769 58
Nov. 10, 1884....	1,445,779 79	2,608,195 64	1,237,129 17	1.372 97	5,292,477 57

C — METROPOLITAN GAS-LIGHT COMPANY.

Current Capital, Account, Surplus, etc.

YEARS.	Capital stock	CURRENT CAPITAL.				Total capital stock and current capital.	Deduct loans receivable.	Net totals.	Average.
		Surplus.	Scrip outstanding.	Bonds, mortgages and loans.	Total.				
1860	$108,190 00	....	....	$122,500 00	$122,500 00	$230,690 00	....	$230,690 00	
1861	212,940 00	....	....	110,000 00	110,000 00	322,940 00	....	322,940 00	
1862	676,910 00	....	....	110,000 00	110,000 00	786,910 00	....	786,910 00	
1863	2,500,000 00	....	....	281,441 71	281,441 71	2,781,441 71	$25,750 00	2,755,691 71	
1864	2,500,000 00	$61,079 66	....	311,744 47	372,824 13	2,872,824 13	4,000 00	2,868,824 13	
1865	2,500,000 00	134,279 15	....	265,930 86	400,210 01	2,900,210 01	....	2,900,210 01	
1866	2,500,000 00	229,862 06	....	314,405 23	544,267 29	3,044,267 29	72,057 75	2,972,209 54	
1867	2,500,000 00	254,368 14	....	313,405 23	567,773 37	3,067,773 37	15,400 00	3,052,373 37	
								$15,889,848 76	$1,986,231 09
1868	2,500,000 00	278,851 81	....	497,405 23	776,257 04	3,276,257 04	168,660 66	$3,107,596 38	
1869	2,500,000 00	458,602 44	....	501,905 23	960,507 67	3,460,507 67	83,480 66	3,377,027 01	
1870	2,500,000 00	491,760 40	$1,000,000 00	500,000 00	1,991,760 40	4,491,760 40	96,000 00	4,395,760 40	
1871	2,500,000 00	217,901 50	1,000,000 00	500,000 00	1,717,901 50	4,217,901 50	232,000 00	3,985,901 50	
1872	2,500,000 00	521,296 96	1,000,000 00	864,700 00	2,385,996 96	4,885,996 96	....	4,885,996 96	
								$19,752,282 25	$3,950,456 45
1873	2,500,000 00	768,292 29	1,000,000 00	704,119 22	2,472,411 51	4,972,411 51	....	$4,972,411 51	
1874	2,500,000 00	1,019,307 18	998,482 20	647,700 00	2,665,489 38	5,165,489 38	....	5,165,489 38	
1875	2,500,000 00	1,114,028 15	990,220 00	436,000 00	2,540,248 15	5,040,248 15	200 00	5,040,048 15	
1876	2,500,000 00	1,386,444 52	996,600 00	442,000 00	2,825,044 52	5,325,044 52	291,900 00	5,033,144 52	
1877	2,500,000 00	1,449,068 11	978,600 00	369,000 00	2,796,668 11	5,296,668 11	272,430 00	5,024,238 11	
								$25,235,331 67	$5,047,066 33

C—METROPOLITAN GAS-LIGHT COMPANY.

Current Capital, Account, Surplus, etc.—(Continued).

YEARS	Capital stock.	CURRENT CAPITAL.				Total capital stock and current capital.	Deduct loans receivable.	Net totals.	Average.
		Surplus.	Scrip outstanding.	Bonds, mortgages and loans.	Total				
1878	$2,500,000 00	$1,610,361 01	$964,800 00	$1,000 00	$2,576,161 01	$5,076,161 01	$228,000 00	$4,848,161 01	
1879	2,500,000 00	1,739,441 63	959,604 00	....	2,699,045 63	5,199,045 63	246,450 00	4,952,595 63	
1880	2,500,000 00	1,879,349 92	896,884 00	....	2,776,233 92	5,276,233 92	245,850 00	5,030,383 92	
1881	2,500,000 00	1,822,730 37	8,642 00	608,000 00	2,439,372 37	4,939,372 37	104,850 00	4,834,522 37	
1882	2,500,000 00	2,016,365 15	2,011 00	658,000 00	2,676,376 15	5,176,376 15	155,300 00	5,021,076 15	
								$24,740,429 08	$4,948,085 82
1883, November 30	2,500,000 00	2,297,878 00	250 00	625,000 00	2,923,128 00	5,423,128 00	280,327 10	$5,142,800 90	
1884, November 10	2,500,000 00	2,587,825 31	....	650,000 00	3,237,825 31	5,737,825 31	322,700 00	5,415,125 31	
								$10,557,926 21	$5,424,390 45

C — METROPOLITAN GAS-LIGHT COMPANY.

Dividend account.

YEAR.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at ten per cent per annum on paid up capital.	Amount in excess of ten per cent.	Amount in deficiency below ten per cent.
1860.	$108,150 00	$108,150 00	....	....	$10,815 00	....	$10,815 00
1861.	104,790 00	212,940 00	....	....	21,294 00	....	21,294 00
1862.	463,970 00	676,910 00	....	....	67,691 00	....	67,691 00
1863.	1,823,090 00	2,500,000 00	....	....	250,000 00	....	250,000 00
1864.	....	2,500,000 00	....	....	250,000 00	....	250,000 00
1865.	....	2,500,000 00	....	....	250,000 00	....	250,000 00
1866.	....	2,500,000 00	$200,000 00	8.00	250,000 00	....	50,000 00
1867.	....	2,500,000 00	300,000 00	12.00	250,000 00	$50,000 00	
1868.	....	2,500,000 00	200,000 00	8.00	250,000 00	....	50,000 00
1869.	....	2,500,000 00	400,000 00	16.00	250,000 00	150,000 00	
1870.	....	2,500,000 00	1,325,000 00	53.00	250,000 00	1,075,000 00	
1871.	....	2,500,000 00	362,500 00	14.50	250,000 00	112,500 00	
1872.	....	2,500,000 00	250,000 00	10.00	250,000 00	....	
1873.	....	2,500,000 00	....	....	250,000 00	....	250,000 00
1874.	....	2,500,000 00	320,000 00	12.80	250,000 00	70,000 00	
1875.	....	2,500,000 00	320,000 00	12.80	250,000 00	70,000 00	
1876.	....	2,500,000 00	480,000 00	19.20	250,000 00	230,000 00	
1877.	....	2,500,000 00	320,000 00	12.80	250,000 00	70,000 00	
1878.	....	2,500,000 00	320,000 00	12.80	250,000 00	70,000 00	
1879.	....	2,500,000 00	317,786 60	12.71	250,000 00	67,786 60	
1880.	....	2,500,000 00	469,479 42	18.78	250,000 00	219,479 42	
1881.	....	2,500,000 00	413,983 34	16.56	250,000 00	163,983 34	
1882.	....	2,500,000 00	450,000 00	18.00	250,000 00	200,000 00	

C — METROPOLITAN GAS-LIGHT COMPANY.

Dividend account. — (Continued).

YEAR.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at ten per cent per annum on paid-up capital.	Amount in excess of ten per cent.	Amount in deficiency below ten per cent.
1883..........	....	$2,500,000 00	$500,000 00	20.00	$250,000 00	$250,000 00	
1884, Nov. 10	....	2,500,000 00	625,000 00	29.08	250,000 00	375,000 00	
	$2,500,000 00		$7,573,749 36			$3,173,749 36	
Less amount at ten per cent per annum on paid-up capital..........................			5,599,800 00	Less deficiency below ten per cent per annum on paid-up capital......................		1,199,800 00	
Net excess of dividends over ten per cent per annum..................................			$1,973,949 36			$1,973,949 36	

D

MUNICIPAL GAS-LIGHT COMPANY.

Capital Account.

YEAR.	Capital created.	HOW PAID IN.					Totals
		Cash.	Purchase of property.	Purchase of patents.	In payment of expenses.	Charged to profit.	
1876..............	$500,000	$212,700	$100,000	$150,000	$5,000	$25,800	$493,500
1877	1,000,000	709,300	....	200,000	3,700	....	1,406,500
1878..............	....	93,300	....	....	200	....	1,500,000
1879..............	500,000	500,000	....	....	....	....	2,000,000
1880..............	1,000,000	*849,800	....	....	....	....	2,849,800
1882..............	....	150,200	....	....	....	....	3,000,000
	$3,000,000	$2,515,300	$100,000	$350,000	$8,900	$25,800	

* Includes $350,000 paid in by the Bayard estate.

VERTICAL IN BOOK

D— MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Dr. *Analysis of Profit and Loss Accounts from January 1, 1876, to November 11, 1884.* Cr.

YEAR.	Total cost of gas, bad accounts and sundries.	Depreciation.	Dividends.	Gross income from gas and sundries.	Appreciation written up.	Depreciation.
1876	$63,530 23	....	....	$200 00		
1877	13,388 54	....	....	492 07	$87,000 00	
1878	215,439 18	....	....	150,439 67		
1879	838,914 26	$42,588 69	$90,000 00	†1,840,778 75		
1880	*1,070,935 99	....	353,742 50	1,472,149 61	... .	$26,941 70
1880	*5,816 92*	....	....	*7,140 14*		
1881	898,035 69	....	712,450 00	1,710,356 12		
1881	*135,174 05*	....	....	*245,963 06*		
1882	742,895 87	....	600,000 00	1,749,574 23		
1882	*238,713 59*	....	....	*355,780 64*		
1883	725,728 87	11,269 50	600,000 00	1,716,952 15	5,000 00	
1883	*252,912 18*	....	....	*373,856 72*		
1884, to Nov. 11	450,562 31	....	450,000 00	1,196,720 67		
1884, to Nov. 11	*219,779 31*	....	....	*286,075 10*		
Municipal	$5,619,430 44	$53,858 19	$2,806 192 50	$9,837,663 33	$92,000 00	$26,941 70
Knickerbocker	*852,396 05*	......	....	*1,268,815 66*		
Municipal & Knickerbocker	$5,871,826 49	$53,858 19	$2,806,192 50	$11,106,478 99	$92,000 00	$26,941 70

* Includes $300,000 compromise of Knickerbocker suit.

† Includes $300,000 paid by N. Y. Gas-Light Co. for patent rights.

Recapitulation.

Municipal.	Total receipts from gas		$9,537,663 33	
	Total appreciation and profits on sales of property		418,941 70	
			$9,956,605 03	
	Total expenses	$4,719,430 44		
	Total depreciations, etc	353,858 19		
	Total dividends paid	2,806,192 50	7,879,481 13	
	Surplus profits			$2,077,123 90
Knickerbocker.	Total receipts		*$1,268,815 66*	
	Total expenses		*852,396 05*	
	Surplus profits			*416,419 61*
	Total surplus			$2,493,543 51
Total depreciations written off from this account				$804,107 74
Appreciations or depreciations written back November 11, 1884				804,107 74

NOTE.—The figures in italics refer to the Knickerbocker Company

VERTICAL IN BOOK

D—MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Dr. *Particulars of Sale to the Consolidated Gas-Light Company, November* 11, 1884.

1884, Nov. 11:		
To sundry consumers account	....	$196,233 24
To gas production:		
coal	$9,418 50	
wood	968 75	
naphtha	3,327 08	
lime	350 46	
oils, waste, etc.	178 95	
gas in holder	2,620 00	
gas not indexed.	7,129 12	
		23,992 86
To pipe and specials acct., materials on hand	....	14,747 11
To gas stove account, stoves on hand	....	217 89
To expense acct., supplies on hand	$1,180 28	
To water rates to May 1, 1885	120 89	
		1,301 17
To repairs to works acct. materials on hand	....	3,50[illegible] 17

1884, Nov. 11:		
By indebtedness, assumed, mortgage bonds outstanding	$291,000 00	
Accrued interest on same	565 83	
		$291,565 83
By Augustus Taber & Wm. T. Waring, trustees, bond and mortgage	$2,000 00	
By accrued interest	3 34	
		2,003 34
By Peter Cooper con.	....	35,000 00
By taxes and assessments, personal	$42,262 02	
on dividends	15,000 00	
		57,262 02
By rent account, rents accrued and rec'vd in advance	....	40 00
By sundry creditors account for accrued rents	....	249 99

To insurance account, unearned premiums on policies in force.		1,574 18
To tools and implements account		62 52
To rents acct., rents paid in advance...		56 67
To gas service acct., services placed after June 30, 1884..	$2,172 00	
To pipe and fittings for services	1,408 05	
Cocks and connections	977 39	
		4,557 44
To Forty-fourth st. construction acct..		5,125 00
To gas meter account, meters set after J'ne 30,'84, and on hand.		5,126 13
To distribution acct., for burners, etc...		344 03
To horses, wagons and harness		740 00
To real estate.......	889,000 00	
To bulkheads, piers and water rights..	200,000 00	
		1,089,000 00
To plant account....	$1,804,000 00	
To laboratory	6,000 00	
		1,810,000 00

By consumers' deposit account for receipts outstanding		14,808 32
By interest account, for accrued interest on deposit, receipts estimated		1,480 83
By cash on account..	$50,000 00	
By cash on account..	130,000 00	
By cash on account..	56,565 72	
		236,565 72
By stock of Consolidated Gas-light Co.		6,600,000 00
By amount of indebtedness assumed, account K. G. L. Co. taxes account, State tax on capital....		*225 00*
By interest account..		*1,395 59*
By consumers' deposits, balance of account		*13,955 89*
Bonds outstanding...	*$687,000 00*	
Unpaid interest on same to Nov. 11...	*18,320 00*	
		705,320 00
Bills payable outstanding	*$450,000 00*	
Unpaid interest on same	*4,375 00*	
		454,375 00

D—MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Dr. Particulars of Sale to the Consolidated Gas-Light Company, November 11, 1884—(Continued). *Cr.*

To mains account....	....	$749,000 00	By balance	$30,000 00
To meters account...	....	158,000 00		
To services account..	....	103,000 00	Total Municipal Co..	$7,268,976 05
To office furniture...	....	16,000 00	Total Knickerb'krCo.	*1,175,271 48*
To patent rights, franchises, etc.........	....	1,175,000 00		$8,444,247 53
To sundry consumers account	....	*40,943 44*		
To gas production:				
coal	*$510 30*			
wood	*543 75*			
naphtha	*4,274 80*			
lime	*700 02*			
bone black	*2,074 98*			
coke	*6 75*			
oils, waste, etc..	*208 72*			
turps	*348 00*			
gas in holders...	*814 00*			
gas not indexed.	*911 72*			
		10,393 04		
To pipe and specials.	....	*20,007 51*		
To gas stove account, stoves on hand..	....	*120 41*		

To expense account:		
supplies on hand.	*$442 99*	
water rates	*85 95*	*528 94*
To repairs to works acct., materials on hand	....	*1,241 53*
To insurance account.	....	*616 59*
To tools and implements not included in plant	....	*1,025 65*
To service acct., services laid since June 30	*$2,765 00*	
To pipe and fittings on hand	*13 12*	
Cocks and connections	*4,220 53*	*6,998 65*
To street mains laid since June 30.....	....	*2,139 10*
To rent account, rents paid in advance...	....	*79 99*
To construction acct., new works account, amount not included in plant....	....	*937 20*

D—MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Dr. Particulars of Sale to the Consolidated Gas-Light Company, November 11, 1884—(Continued). *Cr.*

1884 Nov. 11:		
To real estate.......	*$480,000 00*	
To bulkheads, piers and water rights..	*115,000 00*	
		$595,000 00
To plant account, new works account	*$980,000 00*	
To laboratory	*1,000 00*	
		981,000 00
To mains account...	....	*744,000 00*
To meters account...	....	*69,000 00*
To services account..	....	*81,000 00*
To office furniture...	....	*2,000 00*
To patent rights, franchises, etc........	....	*528,000 00*
Total Municipal Company	....	$5,357,579 41
Total Knickerbocker Co	....	*3,086,668 12*
	....	$8,444,247 53

NOTE.—The figures in italics refer to the Knickerbocker Company.

Summary.

	State of acct. prior to credit of appreciation.	Appreciation written up.	Sold for.
To sundries.......	$344,247 53	....	$344,247 53
To real estate......	561,462 83	$807,537 17	1,369,000 00
To bulkhead, piers and water rights.	....	315,000 00	315,000 00
To plant account, laboratory	1,694,971 48	1,096,028 52	2,791,000 00
To mains acct. meter and services.	923,865 03	980,134 97	1,904,000 00
To office furniture.	7,880 72	10,119 28	18,000 00
To patent right, franchises, etc...	904,197 80	798,802 20	1,703,000 00
	$4,436,625 39	$4,007,622 14	$8,444,247 53

By stock of the Consolidated Gas-light Co....	$6,600,000 00
By liabilities, bonds and accrued interest assumed by the Consolidated Co...	1,488,264 17
By other liabilities assumed by Consolidated Co......	89,417 64
By cash paid.......	236,565 72
By balance remaining unsettled by the Consolidated Gas-light Co.........	30,000 00
	$8,444,247 53

D — MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Capital Investments.

YEAR.	Real estate.	Patent.	Gas works.	Mains, meters, services	Horses, wagons, tools, etc.	Offices.	Totals.
1876	....	$150,000 00	$308,522 18	$90,550 85	....	$211 47	$549,284 50
1877	$489,948 81	850,000 00	793,115 24	470,745 84	$3,293 79	2,211 84	2,109,315 02
1878	498,996 56	350,000 00	1,144,944 34	636,182 05	17,948 68	5,086 11	2,653,157 74
1879	546,412 53	600,900 00	1,140,852 13	800,481 73	9,810 19	3,520 74	3,100,577 32
1880	551,412 53	600,000 00	1,557,165 21	823,752 59	18,663 79	3,987 49	3,554,981 61
1881	553,225 67	480,000 00	*451,021 03*	*59,943 57*	*1,442 55*	*686 81*	*513,093 96*
			1,341,199 07	708,007 17	17,142 69	8,732 83	3,103,307 48
1882	553,557 83	703,429 70	*458,900 95*	*73,555 33*	*2,943 15*	*686 81*	*536,086 24*
			1,406,010 81	635,444 09	14,370 86	3,193 05	3,316,006 43
1883	553,457 83	600,000 00	*460,571 46*	*92,711 76*	*4,099 48*	*818 39*	*558,200 99*
			1,413,252 29	656,678 64	19,489 05	3,293 45	3,246,171 26
1884	561,463 83	904,197 80	*482,445 28*	*122,405 53*	*5,577 52*	*874 62*	*611,302 95*
			1,066,187 62	923,865 03	28,483 86	7,880 72	4,093,377 80
			600,842 70	*143,372 17*	*4,991 12*	*1,275 16*	*810,481 15*

Note.—The figures in italics refer to the Knickerbocker Co.

D — MUNICIPAL AND KNICKERBOCKER GAS-LIGHT COMPANIES.

Current Capital and Surplus.

YEARS.	Capital [illegible]	SURPLUS.				Total capital stock and surplus	Deduct loans receivable.	Net totals.	Average.
		Municipal.	Knicker-bocker.	Bonds and bills payable.	Total.				
1876	$493,500 00	....	....	*$68,508 58	$68,508 58	$562,008 58	....	$562,008 58	
1877	1,406,500 00	....	....	380,650 00 *310,242 20	690,892 20	2,097,392 20	....	2,097,392 20	
1878	1,500,000 00	....	....	649,071 43 *291,655 42	940,726 85	2,440,726 85	......	2,440,726 85	
1879	2,000,000 00	$815,049 59	....	768,843 67	1,583,893 26	3,583,893 26	$50,000 00	3,533,893 26	
1880	2,849,800 00	889,462 41	*$1,323 22*	763,107 53	1,653,893 16	4,503,693 16	102,206 50	4,401,486 66	
1881	2,849,800 00	989,622 84	*112,112 23*	758,258 92	1,859,993 99	4,709,793 99	60,518 34	4,649,275 65	
1882	3,000,000 00	1,396,011 76	*229,178 28*	757,639 45	2,382,830 49	5,382,830 49	123,350 00	5,259,480 49	
1883	3,000,000 00	1,780,965 54	*350,123 82*	789,311 66	2,920,401 02	5,920,401 02	250,906 58	5,669,494 44	
To November 10, 1884	3,000,000 00	2,077,123 90	*416,419 61*	....	2,493,543 51	5,493,543 51	510,806 59	4,982,736 92	
								$33,596,495 05	$3,791,453 90

*These are bills payable.

NOTE — Italic figures are for Knickerbocker Gas-Light Company.

D — MUNICIPAL GAS-LIGHT COMPANY.

Dividend Account.

YEAR.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at ten per cent on paid-up capital.	Amount in excess of ten per cent on paid-up capital.	Deficiency below ten per cent.
1876 (6 months)	$493,500 00	$493,500 00	....	....	$24,675 00	....	$24,675 00
1877..............	913,000 00	1,406,500 00	....	....	140,650 00	.. ..	140,650 00
1878.....	93,500 00	1,500,000 00	....	....	150,000 00	....	150,000 00
1879.......	500,000 00	2,000,000 00	$90,000 00	$450 00	200,000 00	....	110,000 00
1880..............	849,800 00	2,849,800 00	353,742 50	12,413 00	284,980 00	$68,762 50	....
1881..............	... .	2,849,800 00	712,450 00	25 00	284,980 00	427,470 00	....
1882.......	150,200 00	3,000,000 00	600,000 00	20 00	300,000 00	300,000 00	....
1883.......	.. ..	3,000,000 00	600,000 00	20 00	300,000 00	360,000 00	. .. .
1884 (10 months) ...	....	3,000,000 00	450,000 00	18 00	250,000 00	200,000 00	....
	$3,000,000 00		$2,806,192 50	....	... .	$1,296,232 50	....
Less amount at ten per cent per annum on paid-up capital.			1,935,285 00	Less deficiency below ten per cent per annum on paid-up capital..... ...		425,325 00	
Net excess of dividends over ten per cent per annum.			$870,907 50			$870,907 50	

E—HARLEM GAS-LIGHT COMPANY.

Capital account.

Year.	How paid in. Cash.	For construction.	Appreciation on properties and plant.	Scrip dividends.	Total to date.
1856	$85,000 00				$85,000 00
1857	33,725 00	$125,000 00			243,725 00
1858	29,875 00	25,950 00			299,550 00
1859	450 00				300,000 00
1860	47,900 00				347,900 00
1862	50,950 00				398,850 00
1863	1,150 00				400,000 00
1864	120,000 00			$80,000 00	600,000 00
1866	199,750 00		$200,000 00		999,750 00
1867	250 00				1,000,000 00
1869	250,000 00				1,250,000 00
1871	250,000 00				1,500,000 00
1872	299,600 00				1,799,600 00
1873	400 00				1,800,000 00
1884	200,000 00				2,000,000 00
	$1,569,050 00	$150,950 00	$200,000 00	$80,000 00	

E—HARLEM GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Account from July 1st*, 1857, *to Nov. 11th*, 1884—(Continued). *Cr.*

Year.	Total cost of gas. interest and sundries.	Depreciation.	Dividends.	Gross income from gas, interest and sundries.	Appreciation written up
1867	$225,006 85	....	$99,987 50	$349,445 82	....
1868	227,996 87	....	100,000 00	447,745 31	....
1869	265,111 16	....	162,500 00	331,163 79	....
1870	293,712 56	....	125,000 00	333,477 01	....
1871	291,059 59	....	137,500 00	509,859 73	....
	$1,302,887 03	....	$624,987 50	$1,971,691 66	....
1872	$349,493 53	....	$225,000 00	$295,213 12	....
1873	335,447 97	....	144,000 00	750,248 03	....
1874	251,787 52	....	144,000 00	453,766 51	....
1875	302,605 71	....	144,000 00	441,454 23	....
1876	257,334 26	....	144,000 00	408,582 85	....
	$1,496,668 99	....	$801,000 00	$2,349,264 74	....

1877	$223,442 76	....	$135,000 00	$344,858 31	....
1878	262,511 89	....	54,000 00	318,621 49	....
1879	257,122 91	....	....	310,881 98	....
1880	283,524 58	....	....	315,554 38	....
1881	317,140 97	....	....	421,127 52	....
	$1,343,743 11	....	$189,000 00	$1,711,043 68	....
1882	$349,613 46	$175,898 70	$54,000 00	$462,394 92	....
1883	415,401 99	....	108,000 00	538,372 13	....
1884	432,882 53	112,454 89	146,000 00	600,553 24	$1,176 23
	$1,197,897 98	$288,353 59	$308,000 00	$1,601,320 29	$1,176 23

E — HARLEM GAS-LIGHT COMPANY.

Dr. *Summary.* *Cr.*

FIVE YEARS, ENDING DECEMBER 31.	Total cost of gas, interest and sundries.	Depreciation.	Dividends.	Total.	Gross income from gas, interest and sundries.	Appreciation written up.	Totals.
1861	$231,169 06	....	$73,910 75	$305,079 81	$365,226 69	....	$365,226 69
1866	777,385 24	....	333,019 00	1,110,404 24	968,522 46	....	968,522 46
1871	1,302,887 03	....	624,987 50	1,927,874 53	1,971,691 66	....	1,971,691 66
1876	1,496,668 99	....	801,000 00	2,297,668 99	2,349,264 74	....	2,349,264 74
1881	1,343,743 11	....	189,000 00	1,532,743 11	1,711,043 68	....	1,711,048 68
To Nov. 11, 1884	1,197,897 98	$288,353 59	308,000 00	1,794,251 57	1,601,320 29	$1,176 23	1,602,496 52
	$6,349,751 41	$288,353 59	$2,329,917 25	$8,968,022 25	$8,967,069 52	$1,176 28	$8,968,245 75
Balance				223 50			
				$8,968,245 75			$8,968,245 75

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E—HARLEM GAS-LIGHT COMPANY.

Resume.

Dr			*Cr.*		
To total cost of gas	$6,020,134 82		By gross income from		
interest	183,648 73		gas	$8,950,715 22	
sundries	145,967 86		interest	14,710 81	
		$6,349,751 41	sundries	1,643 49	
depreciation		288,353 59			$8,967,069 52
dividends		2,329,917 25	appreciation		1,176 23
balance		223 50			
		$8,968,245 75			$8,968,245 75

E — HARLEM GAS-LIGHT COMPANY.

Dr. *Particulars of sale to Consolidated Gas-Light Company, November 11, 1884.* *Cr.*

PARTICULARS.	State of account prior to Cr. of appreciation.	Amount of appreciation.	Sold for.	PARTICULARS.		Amount.
To real estate..........	$158,899 81	$445,100 10	$604,000 00	By cash of contra, acct. of returns Nov. 11 and 12, and sundry		
To buildings, retorts, bulkhead and plant..	557,418 10	370,917 16	928,335 26			
To mains and services..	403,773 75	442,366 07	846,189 82	pay rolls...........	....	$5,244 41
To meters............	123,895 31	*2,649 44	121,245 87	By interest..........	....	283 79
To customers..........	76,617 91	....	76,617 91	By liabilities assumed:		
To franchise, rights and privileges............	....	469,082 54	469,082 54	interest on bonds...	$326 03	
To office building.....	....	50,000 00	50,000 00	interest on deposits,	2,292 20	
To office furniture....	....	5,000 00	5,000 00	balance of deposits,	22,922 60	
To laboratory..........	....	2,000 00	2,000 00	balance of cancelled deposits.........	740 00	
To coal...............	45,270 84	....	45,270 84	taxes 1884, city....	28,170 63	
To tools..............	1,600 21	....	1,600 21	taxes 1884, State...	2,850 00	
To stationery	500 00	....	500 00	due to T. F. Bowland...........	28,795 00	
To stores and materials,	5,935 42	....	5,935 42			86,095 86
To water rates.........	84 53	....	84 53	By 49th dividend.....	....	32,000 00
To coke...............	1,795 00	....	1,795 00	By State tax on dividend..............	....	800 00
To gas on hand........	787 17	....	787 17	By stock purchase to equalize...........	....	60 00
To lighting and setting lamps, Nov. 1 to 10..	3,731 67	....	3,731 67	By cash:		
To cash:				payment on account	....	44,221 87
advance of contra..	5,244 41	....	5,244 41	Consolidated Gas Co. stock.......	....	3,000,000 00
transf. of cash assets	1,335 28	....	1,335 28			
		$1,784,465 96				
* Less depreciation,	....	2,649 44				
	$1,386,889 41	$1,811,816 52	$3,168,705 93			$3,168,705 93

E—HARLEM GAS-LIGHT COMPANY.

Capital Investments

Year.	Real estate.	Mains and service pipes.	Meters.	Buildings and retorts, general construction new stables.	Totals.
1855	$63,000 00	....	....	....	$63,000 00
1856	....	....	....	$15,637 22	15,637 22
1857	410 00	$9,329 31	$881 21	136,596 20	147,216 72
1858	1,000 00	36,122 70	1,127 25	8,113 42	46,363 37
1859	2,562 50	18,520 58	2,380 16	10,118 72	33,581 96
1860	....	15,904 21	1,585 40	12,284 02	29,773 63
1861	....	8,797 72	4,826 68	57,838 34	71,462 74
1862	....	6,364 93	2,770 66	7,673 34	16,808 93
1863	2,041 25	8,614 61	2,333 17	8,645 73	21,634 76
1864	....	5.233 23	3.226 87	7,239 34	15,699 44
1865	....	8,537 62	3,189 13	8,722 47	20,449 22
1866	4,200 00	24,170 96	3,936 98	3,420 21	35,728 15
1867	3,440 00	19,430 49	5,209 55	17,560 24	45,640 28
1868	23,096 06	23,154 61	3,688 36	17,230 19	67,169 22
1869	5,650 00	13,274 40	4,514 21	18,401 72	41,840 33
1870	7,500 00	18,235 37	4,089 67	39,582 95	69,407 99
1871	27,000 00	24,701 05	4,445 85	91,979 65	148,126 55
1872	....	56,060 63	4,009 04	15,650 64	75,720 31
1873	9,000 00	9,620 14	3,278 03	22,938 72	44,836 89
1874	....	14,823 17	1,869 06	37,715 51	54,407 74

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E—HARLEM GAS-LIGHT COMPANY.

Capital Investments—(Continued).

Year.	Real estate.	Mains and service pipes.	Meters.	Buildings and retorts, general construction new stables.	Totals.
1875	....	$15,832 28	$1,594 15	$190 94	$17,617 37
1876	$7,120 00	4,391 81	1,103 48	5,764 90	18,380 19
1877	2,880 00	2,489 14	603 56	1,580 39	7,553 09
1878	....	3,896 06	1,980 00	22 65	5,898 71
1879	....	3,377 32	6,627 77	56 26	10,061 35
1880	....	10,855 76	6,149 14	1,264 13	18,269 03
1881	....	4,876 91	13,353 37	24 52	18,254 80
1882	....	10,821 32	10,995 02	7,566 80	29,383 14
1883	....	10,902 78	....	27 38	10,930 16
1884, to Nov. 10....	....	15,434 64	24,127 54	15,648 97	55,211 15

Recapitulation.

Year.	Real estate.	Mains and service pipes.	Meters.	Buildings and retorts, general construction new stables.	Totals.
1855	$63,000 00	....	....	....	$63,000 00
1860	3,972 50	$79,876 80	$5,794 02	$182,749 58	272,572 90
1865	2,041 25	37,548 11	16,346 51	90,119 22	146,055 09
1870	43,886 06	98,265 83	21,438 77	96,195 31	259,785 97
1875	36,000 00	121,037 27	15,196 13	168,475 46	340,708 86
1880	10,000 00	25,010 09	16,463 95	8,688 33	60,162 37
1884, to Nov. 10....	....	42,035 65	48,475 93	23,267 07	113,779 25
	$158,899 81	$403,773 75	$123,895 31	$569,495 57	$1,256,064 44

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E—HARLEM GAS-LIGHT COMPANY.

Current Capital Account and Surplus Profits.

Years ending December 31.	Description.	Amount.	Total capital.	Average capital for five years.
1856	Capital	$85,000 00	$85,000 00	
	Profit and loss	....		
1857	Capital	243,725 00	254,081 84	
	Profit and loss	10,356 84		
1858	Capital	299,550 00	315,216 09	
	Profit and loss	15,666 09		
1859	Capital	300,000 00	329,781 78	
	Profit and loss	29,781 78		
1860	Capital	347,900 00	393,164 00	
	Profit and loss	45,264 00		
1861	Capital	347,900 00	408,046 88	
	Profit and loss	60,146 88		
			$1,785,290 59	*$297,548 43

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* Six years.

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E—HARLEM GAS-LIGHT COMPANY.

Current Capital Account and Surplus Profits—(Continued).

Years ending December 31.	Description.	Amount.	Total capital.	Average capital for five years.
1862	Capital	$395,500 00		
	Profit and loss	78,195 40	$473,695 40	
1863	Capital	400,000 00		
	Profit and loss Dr.	5,634 36	394,365 64	
1864	Capital	600,000 00		
	Profit and loss Dr.	1,398 89	598,601 11	
1865	Capital	600,000 00		
	Profit and loss	39,723 31	639,723 31	
1866	Capital	999,750 00		
	Profit and loss Dr.	81,734 90	918,015 10	
			$3,024,400 56	$604,880 11

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1867	Capital		1,000,000 00	$945,426 57	
	Profit and loss	Dr.	54,573 43		
1868	Capital		1,000,000 00	1,062,465 01	
	Profit and loss		62,465 01		
1869	Capital		1,250,000 00	1,216,017 64	
	Profit and loss	Dr.	33,982 36		
1870	Capital		1,250,000 00	1,144,377 93	
	Profit and loss	Dr.	105,622 07		
1871	Capital		1,500,000 00	1,462,082 23	
	Profit and loss	Dr.	37,917 77		
				$5,830,369 38	$1,166,073 87
1872	Capital		1,799,600 00	$1,624,816 73	
	Profit and loss	Dr.	174,783 27		
1873	Capital		1,800,000 00	1,755,650 90	
	Profit and loss	Dr.	44,349 10		
1874	Capital		1,800,000 00	1,811,580 87	
	Profit and loss		11,580 87		
1875	Capital		1,800,000 00	1,806,429 39	
	Profit and loss		6,429 39		
1876	Capital		1,950,000 00	1,963,677 98	
	Profit and loss		13,677 98		
				$8,962,155 87	$1,792,431 17

E—HARLEM GAS-LIGHT COMPANY.

Current Capital Account and Sundry Profits.—(Continued)

Year ending December 31.	Description.	Amount.	Total capital.	Average capital for five years.
1877	Capital	$1,950,000 00	$1,950,093 53	
	Profit and loss	93 53		
1878	Capital	1,950,000 00	1,952,203 13	
	Profit and loss	2,203 13		
1879	Capital	1,970,000 00	2,025,962 20	
	Profit and loss	55,962 20		
1880	Capital	1,970,000 00	2,057,992 00	
	Profit and loss	87,992 00		
1881	Capital	1,970,000 00	2,161,978 55	
	Profit and loss	191,978 55		
			$10,148,229 41	$2,029,645 88
1882	Capital	$1,970,000 00	$2,044,861 31	
	Profit and loss	74,861 31		
1883	Capital	1,970,000 00	2,059,831 45	
	Profit and loss	89,831 45		
To November 10, 1884	Capital	2,170,000 00	2,170,223 50	
	Profit and loss	223 50		
			$6,274,916 26	$2,193,174 62

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E—HARLEM GAS-LIGHT COMPANY.

Dividend Account.

YEAR.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per annum.	Amount at 10 per cent on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent.
1856	$85,000 00	$85,000 00	....	....	$8,500 00	....	$8,500 00
1857	*158,725 00	243,725 00	....	....	24,372 50	....	24,372 50
1858	†55,825 00	299,550 00	$18,057 75	6.08	29,955 00	....	11,897 25
1859	450 00	300,000 00	21,000 00	7	30,000 00	....	9,000 00
1860	47,900 00	347,900 00	22,376 50	6.52	34,790 00	....	12,113 50
1861	....	347,900 00	24,353 00	7	34,790 00	....	10,437 00
1862	47,600 00	395,500 00	27,842 50	7.05	39,885 00	....	12,042 50
1863	4,500 00	400,000 00	28,000 00	7	40,000 00	....	12,000 00
1864	‡200,000 00	600,000 00	‡115,000 00	19.17	60,000 00	$55,000 00	....
1865	....	600,000 00	42,000 00	7	60,000 00	....	18,000 00
1866	§399,750 00	999,750 00	137,987 50	15.80	99,975 00	38,012 50	....
1867	250 00	1,000,000 00	100,000 00	10	100,000 00	....	....
1868	....	1,000,000 00	100,000 00	10	100,000 00	....	....
1869	250,000 00	1,250,000 00	175,000 00	14	125,000 00	50,000 00	....
1870	....	1,250,000 00	125,000 00	10	125,000 00	....	....
1871	250,000 00	1,500,000 00	150,000 00	10	150,000 00	....	....
1872	299,600 00	1,799,600 00	222,000 00	12.33	179,960 00	42,040 00	....
1873	400 00	1,800,000 00	144,000 00	8	180,000 00	....	36,000 00
1874	....	1,800,000 00	144,000 00	8	180,000 00	....	36,000 00
1875	....	1,800,000 00	144,000 00	8	180,000 00	....	36,000 00
1876	....	1,800,000 00	144,000 00	8	180,000 00	....	36,000 00
1877	....	1,800,000 00	117,000 00	6.5	180,000 00	....	63,000 00
1878	....	1,800,000 00	....	....	180,000 00	....	180,000 00
1879	....	1,800,000 00	....	....	180,000 00	....	180,000 00
1880	....	1,800,000 00	....	....	180,000 00	....	180,000 00
1881	....	1,800,000 00	....	....	180,000 00	....	180,000 00

* Includes $125,000 on account of construction.

† Includes $25,950 on account of construction.

‡ $80,000 scrip, fully paid.

§ $200,000 on account of appreciation estimated upon plant and issued as per resolution of board.

E—HARLEM GAS-LIGHT COMPANY.

Dividend Account.—(Continued)

YEAR.	Increase of capital.	Total capital paid up.	Dividends paid.	Rate per cent per unnum.	Amount at 10 per cent on paid-up capital.	Amount in excess of 10 per cent.	Deficiency below 10 per cent.
1882	....	$1,800,000 00	$108,000 00	6	$180,000 00	....	72,000 00
1883	....	1,800,000 00	108,000 00	6	180,000 00	....	72,000 00
1884, Nov. 10	200,000 00	2,000,000 00	92,000 00	3.96	200,000 00	....	108,000 00
	$2,000,000 00				$3,422,227 50		$1,297,362 75
Less dividends paid	....	....	....	....	2,329,917 25	....	....
Less amount in excess of 10 per cent per annum	....	....	....	....	....	....	205,052 50
Net deficiency below 10 per cent per annum on paid-up capital	....	....	....	....	$1,092,310 25	....	$1,092,310 25

F—NEW YORK MUTUAL GAS-LIGHT COMPANY.

Balance Sheet December 31st, 1884.

Dr.

To capital account:		
Capital stock issued		$3,500,000 00
To first mortgage bonds:		
Balance unredeemed		1,296,000 00
To dividends:		
Dividend payable in January 1885		87,500 00
To coupon account:		
Accrued interest		12,960 00
To sundry criditors	$12,540 69	
For deposits	55,225 00	
For taxes	8,750 00	
		76,515 69
To National Park Bank		181,831 46
Surplus.		
To profit and loss account, 1872 to 1883 (both inclusive)	$2,620,033 36	
For the year 1884	509,675 04	
		3,129,708 40
		$8,284,515 55

Cr.

By cash at bank	$26,561 17	
By cash in hand	38 85	
		$26,600 02
By United States bonds	$993,984 17	
By Mutual Gas-light Co.'s stock	14,626 42	
		1,008,610 59
By stock on hand (general)	$2,761 53	
By coal, coke, wood, etc.	8,635 51	
By naphtha	8,741 99	
By commercial gas	1,129 58	
		21,268 61
By consumers' accounts	$143,158 21	
By sundry debtors	15,000 84	
		158,159 05
By real estate		882,550 00
By construction	$4,189,016 66	
By mains and services	1,288,854 00	
By buildings, premises and plant	543,202 83	
By meters	152,808 59	
By wells	704 19	
By tools	12,575 67	
By badges	165 25	
		6,187,327 28
		$8,284,515 55

F — NEW YORK MUTUAL GAS-LIGHT COMPANY.

Dr. *Analysis of Profit and Loss Accounts, from* 1872 *to* 1884, *both inclusive.* **Cr.**

YEAR ENDING.	* General expenses.	Taxes, bad debts, interest and sundries.	Depreciation written off.	Dividends	Totals.	Net income from gas, storage, rent, wharfage and sundries.	Appreciation written up.	Totals.
1874, Jan. 1	$189,404 04	$363,565 30	† $151,500 00	....	$704,469 34	$705,474 64	....	$705,474 64
1875, Jan. 1 ..	3,856 25	168,078 11	6,249 70	$125,000 00	308,184 06	621,310 01	....	621,310 01
1876, Jan. 1 ..	3,509 43	196,990 05	1,148 47	500,000 00	701,647 95	777,026 15	....	777,026 15
1877, Jan. 1 ..	....	‡ 212,405 32	338,735 02	500,000 00	1,051,140 34	776,359 77	$310,061 26	1,085,421 03
1878, Jan. 1 ..	....	188,448 53	16,317 84	500,000 00	705,265 87	753,562 04	....	753,562 04
1879, Jan. 1 ..	....	§ 250,771 84	3,046 38	300,000 00	553,818 22	807,026 24	13,419 89	820,445 63
1880, Jan. 1 ..	....	‖ 190,580 10	....	150,000 00	340,580 10	642,323 94	....	642,323 94
1881, Jan. 1 ..	....	** 180,938 75	7,978 15	225,000 00	413,916 90	679,464 09	....	679,464 09
1882, Jan. 1 ..	....	157,429 40	†† 25,000 00	300,000 00	482,429 40	948,121 62	....	948,121 62
1883, Jan. 1 ..	....	147,273 41	....	312,500 00	459,773 41	915,914 97	....	915,914 97
1884, Jan. 1 ..	....	196,592 62	....	350,000 00	546,592 62	938,787 45	....	938,787 45
1885, Jan. 1 ..	....	206,275 22	....	350,000 00	556,275 22	1,065,950 26	....	1,065,950 26
	$201,769 72	$2,459,348 65	$550,475 06	$3,612,500 00	$6,824,098 43	$9,630,321 18	$323,480 65	$9,953,801 83
Balance......................................					3,129,708 40			
					$9,953,801 83			$9,953,801 83

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* The figures in this column represent items of outlay paid in former years prior to sale of gas, and admit of no further analysis.

† Sundry patents written off.

‡ Includes $2,158 balance of sale of Columbia bonds, and $7,601.69 naphtha leak.

§ Includes $42,553 balance of sale of United States bonds.

‖ Includes $5,492.92 coal.

** Includes $9,506.16 coal.

†† $25,000 Wilkinson's patent written off.

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Resume.

Dr.

General expenses		$201,769 72
Taxes	$683,019 72	
Bad and doubtful debts	111,416 06	
Interest	1,001,622 60	
Company's consumption, allowance, etc.	501,906 71	
Sundries	161,383 56	
		2,459,348 65
Depreciation written off.........		550,475 06
Dividends		3,612,500 00
Balance		3,129,708 40
		$9.953,801 83

Cr.

Net income from gas.	$9,474,713 36	
Storage, wharfage and pier rents	59,882 97	
Sundries	95,724 85	
		$9,630,321 18
Appreciation written up.........		323,480 65
		$9,953,801 83

F—NEW YORK MUTUAL GAS-LIGHT COMPANY.

Real Estate Investments.

Year ending.	Vanderbilt Estate.	Novelty Estate, No. 1.	Novelty Estate, No. 2.	Total.
1871, December 31	$200,000 00	$185,000 00	....	$385,000 00
1872, December 31	100,000 00	....	....	100,000 00
1874, December 31	....	240,000 00	$57,500 00	297,500 00
1876, December 31	....	....	50 00	50 00
1877, December 31	....	....	100,000 00	100,000 00
	$300,000 00	$425,000 00	$157,550 00	$882.550 00

F—NEW YORK MUTUAL GAS-LIGHT COMPANY.

Investments other than Real Estate.

DATE.	General construction.	Buildings, premises and plant.	Mains, services, materials.	Meters.	Wells.	Wages.	Totals.
1872, January 1	$2,590,856 61	$357,257 39	$1,698,670 00				$4,646,784 00
1873, year ending January 1	33,711 62	4,901 19	428,407 31	$41,952 54		$133,535 90	642,508 56
1874, January 1	259,130 21	268,843 45	192,317 12	31,791 22		67,180 09	819,262 09
1875, January 1	15,461 36	3,949 76	15,016 77	16,963 15		26,693 99	78,085 03
1876, January 1	250 29	193 97	42,712 52	24,381 64		47,344 27	114,882 69
	$2,899,410 09	$635,145 76	$2,377,123 72	$115,088 55		$274,754 25	$6,301,522 37
Less cash instalments on stock,							769,830 00
							$5,531,692 37
1877, January 1	$2,173 26	$189,241 63	$27,544 06	$12,154 23		$24,470 48	$255,583 66
1878, January 1	19,153 48	37,817 57	20,341 84	10,202 30		35,470 57	122,985 76
1879, January 1	18,003 83	11,480 10	46,276 95	12,601 84		38,125 06	126,487 78
1880, January 1	3,838 06	5,802 16	12,510 00	653 60		13,609 66	35,913 48
1881, January 1	957 96	18,329 16	569 77		$36 87	8,338 34	28,232 10
	$44,126 59	$262,170 62	$107,242 62	$35,611 97	$36 87	$120,014 11	$569,202 78
1882, January 1	$5,685 85	$5,018 06	$368 78		$176 62	$4,033 61	$15,276 93
1883, January 1	754 18		12,479 79			8,121 96	21,355 93
1884, January 1	19,116 27		487 52	$1,754 07		8,638 12	29,995 98
1885, January 1	6,390 78	5,168 97	968 52	354 00		6,921 03	19,803 30
	$31,947 08	$10,181 03	$14,304 61	$2,108 07	$176 62	$27,714 72	$86,432 13

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F—*Summary.*

PERIOD ENDING	General construction.	Buildings, premises and plant.	Mains, services, materials.	Meters.	Wells.	Wages.	Total.
1876, January 1	$2,899,410 09	$635,145 76	$2,377,123 72	$115,088 55	....	$274,754 25	$6,301,522 37
1881, January 1	44,126 59	262,170 62	107,242 62	35,617 97	$36 87	120,014 11	569,202 78
1885, January 1	31,947 06	10,181 03	14,304 61	2,108 07	176 62	27,714 72	86,432 13
	$2,975,483 76	$907,497 41	$2,498,670 95	$152,808 59	$213 49	$422,483 08	$6,957,157 28
Less cash instalments on stock,	....	....	....	....	....	....	769,830 00
							$6,187,327 28

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F—NEW YORK MUTUAL GAS-LIGHT COMPANY.

Dividend Account.

YEAR ENDING	Capital stock issued.	Actual capital paid up, issued fully paid up at fifty cts. on dol.	Dividends paid.	Rate per cent per annum on capital issued.	*Rate per cent per annum on p'd-up capital.	Amount at ten per cent paid-up capital.	Amount in excess of ten per cent.	Deficiency below ten per cent.
1875, January 1	$5,000,000	$2,500,000	$125,000	2½	5	$250,000	....	$125,000
1876, January 1	5,000,000	2,500,000	500,000	10	20	250,000	$250,000	
1877, January 1	5,000,000	2,500,000	500,000	10	20	250,000	250,000	
1878, January 1	5,000,000	2,500,000	500,000	10	20	250,000	250,000	
1879, January 1	5,000,000	2,500,000	300,000	6	12	250,000	50,000	
1880, January 1	5,000,000	2,500,000	150,000	3	6	250,000	....	100,000
1881, January 1	5,000,000	2,500,000	225,000	4½	9	250,000	....	25,000
1882, January 1	5,000,000	2,500,000	300,000	6	12	250,000	50,000	
1883, January 1	†3,500,000	1,750,000	312,500	‡{ 6 10	12 20	187,500 43,750	81,250	
1884, January 1	3,500,000	1,750,000	350,000	10	20	175,000	175,000	
1885, January 1	3,500,000	1,750,000	350,000	10	20	175,000	175,000	
			$3,612,500				$1,281,250	
Less amount at ten per cent per annum on paid-up capital	....	....	2,581,250					
Less deficiency below ten per cent per annum on paid-up capital	....	....	....	......	.....	....	250,000	
Net excess of dividends over ten per cent	....	....	$1,031,250	......	......	....	$1,031,250	

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* As the capital was all issued and sold at fifty per cent discount, the rate per cent of the dividends paid on actual cash paid up is as per this column. ‡ Nine months on $5,000,000, three months on $3,500,000.

† $1,500,000 of capital was canceled by the issue of 5-20 bonds bearing six per cent interest.

G—EQUITABLE GAS-LIGHT COMPANY.

Accounts from April 26, 1883, to November 1, 1885.

Capital (created)			$3,000,000 00
stock paid in		$2,337,865 00	
bonds and mortgages		1,400,000 00	
			$3,737,865 00
Investments:			
real estate		$1,073,054 06	
gas works		1,116,127 14	
mains, meters and services		683,132 29	
horses, wagons, tools, implements, office furniture, etc		9,536 61	
patent rights		500,000 00	
			$3,381,850 10
Cash on hand and in bank		$137,139 50	
Materials, etc., on hand		143,916 34	
Due from consumers	$75,569 06		
Less deposits	610 00		
		74,959 06	
			356,014 90
			$3,737,865 00

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II — *Summary of the accounts of the constituent companies of the Consolidated Gas-light Company of New York.*

Letters of accounts.	NAME OF COMPANY.	Capital at time of consolidation.	Paid in in cash.	Paid in from surplus profits.	Issued for purchase of property	No. of years in existence.	Dividends paid.	Profit in stock on consolidation, or difference in par value of old and new stock.	Surplus assets.	Total benefits.
A.	Manhattan . .	$4,000,000 00	$3,280,000 00	$720,000 00	.. ..	54	$26,347,675 66	$7,940,000 00	....	$34,287,675 66
B.	New York....	4,000,000 00	750,000 00	3,250,000 00	....	60	18,484,078 50	3,600,000 00	$87,258 19	22,171,336 69
C.	Metropolitan..	2,500,000 00	612,700 00	....	$1,887,300 00	21	7,573,749 36	4,000,000 00	686,988 17	12,260,737 53
D.	Municipal ..... Knickerbocker	3,000,000 00	2,515,300 00	25,800 00 *8,900 00	450,000 00	9	2,806,192 50	3,600,000 00	932,843 63	7,339,036 13
E.	Harlem	2,000,000 00	1,569,050 00	80,000 00 †200,000 00	150,950 00	30	2,529,917 25	830,000 00	....	3,359,917 25
		$15,500,000 00	$8,727,050 00	$4,284,700 00	$2,488,250 00	... ..	$57,741,613 27	$19,970,000 00	$1,707,089 99	$79,418,703 26

Dividends paid in cash..................	$53,491,613 27	
Profits, etc., transferred to capital..	4,250,000 00	$57,741,613 27
Surplus assets divided	... .	1,707,089 99
Stock of Consolidated Company, amount issued to stockholders...........	$35,470,000 00	
Deduct original stock at par....	15,500,000 00	19,970,000 00
Profit on stock...		$79,418,703 26

* Expense account.
† Appreciation or increased valuation of property

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H—*Summary of the accounts of the constituent companies of the Consolidated Gas-light Co. of New York*—(Continued).

Letters of accounts.	NAME OF COMPANY.	Amount paid by Consolidated Company for property.	Cost of property.	Appreciation of profit.	Stock issued by Consolidated Co. in payment of property.	Liabilities assumed by Consolidated Co., bonds, interest, taxes, dividends, &c.	Cash paid by Consolidated Company.	Balance due by Consolidated Company unsettled.	Total.	Less assets taken over.	Balance, being amount of purchase-money
A.	Manhattan ...	$11,966,461 60*	$4,872,999 49	$7,093,462 11	$11,940,000	$590,724 08	$30,016 70	....	$12,560,740 78	$594,279 18	$11,966,461 60
B.	New York. ..	7,560,000 00	4,630,642 03	2,929,357 97	7,000,000	131,741 76	105,094 51	$1,000	7,841,436 27	281,436 27	7,560,000 00
C.	Metropolitan..	7,175,000 00	5,292,175 35	1,882,824 65	6,300,000	825,763 46	23,753 46	....	7,349,536 92	174,536 92	7,175,000 00
D.	Municipal....	5,100,000 00	4,092,347 86	1,007,652 14	6,600,000	402,410 33	238,565 72	30,000	8,444,247 53	344,247 53	8,100,000 00
	Knickerbocker	3,000,000 00	810,481 15	2,189,518 85		1,175,271 48					
E.	Harlem........	†3,025,803 49	1,243,986 97	1,781,816 52	2,840,000	289,259 65	49,406 28	... .	3,178,705 93	142,902 44 ‡10,000 00	3,025,803 49
		$37,827,265 09	$20,942,632 85	$16,884,632 24	$35,480,000	$3,415,150 76	$448,496 67	$31,000	$39,374,647 43	$1,547,382 34	$37,827,265 09

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* Manhattan—The Consolidated Company assumed liabilities of the Manhattan Company to the amount of $620,740.78 (including cash paid by it), and received assets amounting to only $594,279.18, leaving a difference in favor of the Manhattan Company of $26,461.60, which is entered as an additional profit on the transfer of property, &c., over the appraised value of $11,940,000.

† Harlem—The Consolidated Company assumed liabilities of the Harlem Company to the amount of $338,705.93 (including $170,000 bonds and $49,406.28 cash paid by it), and received assets amounting to $312,902.44 only (including $170,000 consolidated stock withheld), leaving a difference of $25,803.49 in favor of the Harlem Company, which is entered as an additional profit on the transfer of the property over the appraised value of $3,000,000.

‡ Harlem—The amount of stock actually issued by the Consolidated Company was $2,840,000—$10,000 more than the original allotment, for which difference the Consolidated Company received 140 shares of the Harlem Gas-light Company stock.

H — *Summary of the mains of the constituent companies of the Consolidated Gas-light Company of New York.*

Letters of accounts.	NAME OF COMPANY.	1¼ inch.	2 inch.	3 inch.	4 inch.	5 inch.	6 inch.	8 inch.	10 inch.	12 inch.	16 inch.	18 inch.	20 inch.	24 inch.	30 inch.	Total number of feet.	Valuation.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	
A.	Manhattan. ..	...	16,063	416,972	170,831	......	201,664	8,649	16,030	34,221	21,586	18,171	21,644	......	... .	925,851	$1,083,101 90
B.	New York......	308	6,779	126,556	105,147	77,119	157,817	55,172	5,234	45,903	10,758	9,429	28,472	19,290	... .	647,983	945,992 45
C.	Metropolitan...	...	8,390	135,650	245,915	......	196,584	81,356	25,162	21,022	......	2,093	37,510	1,170	80	745,191	970,632 60
D.	Municipal......	1,275	2,844	2,051	19,250	......	189,635	104,435	11,273	46,501	24,557	......	... .	......	8,032	409,862	742,944 79
D.	Knickerbocker	. .	......	....	433	......	221,232	50,667	2,809	40,989	23,527	......	3,353	3,474	14,573	361,057	739,828 27
E.	Harlem..	...	8,233	164,426	345,173	......	160,563	......	8,360	32,509	1,824	......	5,380	. ...	. ....	726,472	730,013 68
		1,583	42,308	845,655	886,758	77,119	1,127,490	300,249	68,888	221,145	82,252	29,693	96,359	23,934	22,685	3,816,316	$5,302,103 67

Total feet of mains, 3,816,316=722 miles 4,156 feet, or say 722¾ miles, valued at $5,302,103.67.

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8371 APPENDIX "E."

SUMMARY STATEMENT OF THE CAPITALIZATION OF THE CONSOLIDATED COMPANY AND ITS CONSTITUENT COMPANIES AS TAKEN FROM THEIR BOOKS BY THE EXPERT.

No. 51 BROADWAY, NEW YORK. *March* 13, 1885.

To the Honorable Committee of the Senate, New York:

GENTLEMEN: In accordance with your instructions to investigate the accounts of the several gas companies in New York city, I have the honor to report as follows:

My attention has been particularly directed to the accounts of the following companies: The Manhattan Gaslight Company, the Metropolitan Gaslight Company, the New York Gaslight Company, the Harlem Gaslight Company, the Municipal Gaslight Company, the Knickerbocker Gaslight Company, the New York Mutual Gaslight Company, and as far as practicable, I have extracted therefrom the statistics as to quantities and cost of gas, the expense of distribution, profits, etc., and capital employed; the full particulars of which are fully detailed on the statements herewith (pages).

In many cases it has been possible to gather the information very fully for the period of ten years, from 1875 to 1884 inclusive, but in the cases of the Municipal and Knickerbocker only for the period while the former has been in existence, and in the latter company from the time it became amalgamated with the Municipal, and in these cases, as separate books were kept, they are shown separately.

A summarized statement for the ten years of five of the

8372 companies which have operated, is shown on pages

A summary of the operations of the various companies for the year 1883, is also shown on pages

On the 11th of November, 1884, all the companies before named excepting the New York Mutual Gaslight Company were organized under the name of the Consolidated Gaslight Company, with a capital of	$45,000,000
By reason of the Mutual not joining in the consolidation, the amount was reduced by	5,922,000
Reducing the original amount of stock to	$39,078,000
Of this there was apportioned to the various companies in payment of their plant, works, real estate, franchises, etc.	37,775,000
Reserving for working capital	$1,303,000

The following gives the details of the valuation:

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	New York.	Manhattan.	Metropolitan.	Municipal.	Knickerbocker.	Harlem.	Total.
Street, mains, valves, etc........	$950,000	$1,083,000	$971,000	$749,000	$744,000	$720,000	$5,217,000
Meters................................	215,000	267,000	273,000	158,000	69,000	113,000	1,195,000
Services.	127,000	350,000	233,000	103,000	81,000	111,000	1,005,000
Plant.................................	2,874,000	3,623,000	2,044,000	1,804,000	980,000	826,000	12,151,000
Real estate..........................	1,607,000	3,563,000	1,474,000	889,000	480,000	604,000	8,617,000
Bulkheads, piers and water rights..............................	250,000	425,000	300,000	200,000	115,000	100,000	1,360,000
Office buildings.........	100,000	175,000	....	....	....	50,000	325,000
Office furniture....................	15,000	20,000	12,000	16,000	2,000	5,000	70,000
Laboratories, photometer rooms, etc......................	5,000	5,000	5,000	6,000	1,000	2,000	24,000
	$6,143,000	$9,611,000	$5,312,000	$3,925,000	$2,472,000	$2,531,000	$29,994,000
Rights, franchises, etc............	1,147,000	2,329,000	1,863,000	1,175,000	528,000	469,000	7,781,000
Totals......................	$7,560,000	$11,940,000	$7,175,000	$5,100,000	$3,000,000	$3,000,000	$37,775,000

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8373 The Consolidated company having assumed the liabilities of the several companies, the issue of stock to the various stockholders of the old companies was further reduced by the amount of such debts, and finally adjusted at $35,430,060, as follows:

Companies.	Gross value of property.	Deduction for debts.	Amount of stock to be issued.	Amended amount of stock issued per journal, fol. 21.
New York	$7,560,000	$6,600	$7,554,000	$7,560,000
Manhattan	11,940,000	....	11,940,000	11,940,000
Metropolitan	7,175,000	688,000	6,487,000	6,500,000
Municipal	5,100,000	328,000	4,772,000	6,600,000
Knickerbocker	3,000,000	1,137,000	1,863,000	
Harlem	3,000,000	170,000	2,830,000	2,830,860
Totals	$37,775,000	$2,329,000	$35,446,000	$35,430,060

The following statement will show the capital stock of the old companies, and the value of the stock in the Consolidated company given in exchange therefor:

Companies.	Capital stock.	Capital stock in the consolidated company.	Proportion of new stock to old stock.
New York	$4,000,000	$7,560,000	189
Manhattan	4,000,000	11,940,000	298½
Harlem	2,000,000	2,840,000	*142
Metropolitan	2,500,000	6,500,000	260
Municipal	3,000,000	4,750,000	158⅓
Knickerbocker	1,500,000	1,850,000	123⅓
	$17,000,000	$35,440,000	

The Knickerbocker company was purchased by the Municipal Company in 1880, which assumed its assets and liabilities, and although the works of each appear to have been since carried on separately, and distinct accounts kept, the books of the Consolidated company show an issue of stock of $6,600,000, in satisfaction and presumed payment of the value of the combined properties.

The original stock of the Knickerbocker Company, 15,000 shares ($1,500,000), is held as follows:

8374 By Chas. G. Francklyn, Oswald Ottendorfer, Harrison E. Gawtry, Philip Allen and Henry Day, as trustees	14,995 shares.
And one share in each of the names of the separate trustees	5 shares.
	15,000 shares.

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but there are liabilities of the company on bonds of about $1,150,000.

The books of the Knickerbocker prior to 1880 not being forthcoming, I am unable to state more fully the status of the company.

The results of my examination, given upon the accompanying sheets, pages —, have been extracted from the various companies' books as the accounts are made up, with the intention of showing the cost and expense of distribution of gas, and other matters pertaining to the income and expenses of the several companies, and to conform with the amount of profits made, and either paid as dividends or accumulated to the credit of profit and loss account.

The real estate and other property, works, plant, etc., accounts as standing on the books of the companies have not yet been examined, nor can I yet report in what way or manner the investments were originally paid for. It may be said that in most cases the appraisement for the transfer of the properties to the new company in excess of these figures—independently of the franchises, $7,781,000—and pending further investigation it cannot be reported whether the various accounts have borne their proper depreciations by repairs or reserving a certain sum from revenue yearly.

8375 The working capital employed by the various companies have been taken at the amounts standing on the books as shown on the statements, but while adopting these figures as a basis, some question may arise whether it is not excessive by reason of investments for real estate, etc., not actually required for the purposes or conduct of the business.

Respectfully submitted,

J. YALDEN.

CITY'S EXHIBIT 60.

Schedule 1.

CONSOLIDATED GAS COMPANY.

SUMMARY OF BILLS RENDERED DURING 1905.

	MANHATTAN.						THE BRONX.	
					Open Flame.			
	Single Welsbach.			Miscellaneous		Street Signs.	Single Welsbach.	
19 5	Lighting, etc.	Repairs.	Total.	Lighting, etc.	Lighting, etc.	Lighting, etc.	Lighting, etc.	
January	$33,475.81	$349.50	$33,825.31	$23.83	$1,068.67	$656.22	$11,812.02	
February	33,453.42	240.00	33,693.42	23.83	1,062.02	650.96	11,797.79	
March 15......	16,170.52	371.50	16,542.02	11.53	514.48	314.06	5,724.32	
March 31......	17,266.25	225.00	17,491.25	12.30	549.03	334.09	6,110.75	
April	33,583.17	32.50	33,615.67	23.83	938.61	(Repairs)	11,795.11	
May	34,319.16	1,881.00	36,200.16	23.83	617.24	8.00	11,766.43	
June	34,498.57	1,635.00	36,133.57	23.83	562.43		11,781.09	
July	34,630.43	1,328.50	35,958.93	23.84	531.45		11,869.94	
August	34,709.39	935.00	35,644.39	23.83	487.58		11,970.14	
September	34,722.81	853.50	35,576.31	23.83	447.60		12,096.75	
October	34,673.36	779.50	35,452.86	23.84	339.26		12,262.43	
November	34,600.43	957.00	35,557.43	23.83	310.50		12,348.75	
December	34,557.23	1,390.50	35,947.73	23.84	307.71		12,423.38	
Totals	$410,660.55	$10,978.50	$421,639.05	$285.99	$7,736.58	$1,963.33	$143,758.90	$575,383.85
Total Manhattan..........						$431,624.95		

C. F. LACOMBE,
Chief Engineer of Light and Power.

Schedule I-A.

CONSOLIDATED GAS COMPANY.

Bills Rendered for Erecting New Posts, Repairs, Etc.

Single Welsbach—Manhattan.

1905.	Removing posts.	Resetting posts.	Straightening posts.	Columns refitted.	Columns releaded.	Columns recaulked.	Service pipes refitted.	Stand pipes refitted.	New posts.	Total.
January	$14.00	$96.00	$1.50	$49.00	$30.00	$8.00	$93.50	$57.50	..	$349.50
February	24.50	120.00	..	35.00	17.50	1.00	22.00	20.00	..	240.00
March 15	10.50	168.00	..	35.00	7.50	2.00	82.50	50.00	$16.00	371.50
March 31	17.50	96.00	..	24.50	7.50	2.00	55.00	22.50	..	225.00
April	10.50	8.00	..	3.50	2.50	..	..	..	8.00	32.50
May	112.00	453.00	100.50	66.50	222.50	66.00	434.50	215.00	208.00	1,881.00
June	203.00	256.00	249.00	31.50	222.50	63.00	312.50	157.50	40.00	1,635.00
July	87.50	168.00	168.00	38.50	105.00	71.00	170.50	80.00	440.00	1,328.50
August	168.00	288.00	69.00	24.50	77.50	31.00	154.00	75.00	48.00	935.00
September	140.00	160.00	69.00	31.50	77.50	19.00	132.00	72.50	152.00	853.50
October	108.50	184.00	93.00	28.00	115.00	41.00	55.00	35.00	120.00	779.50
November	112.00	232.00	67.50	31.50	70.00	19.00	203.50	117.50	104.00	957.00
December	731.50	120.00	97.50	45.50	147.50	18.00	110.00	72.50	48.00	1,390.50
Street Signs—Manhattan.										
January	..	..	..	7.00	..	..	..	..	..	7.00
March 15	..	..	..	..	..	1.00	..	..	..	1.00
Totals	$1,739.50	$2,352.00	$915.00	$451.50	$1,102.50	$342.00	$1,925.00	$975.00	$1,184.00	$10,986.50

C. F. LACOMBE,
Chief Engineer of Light and Power.

CONSOLIDATED GAS COMPANY,

Schedule II.

Statement Showing Analysis of Company's Bills as to Number of Lamp Days During 1905 Figured on the Basis of 365 Days to the Year.

1905.	Jan.	Feb.	Mar. 15	Mar. 31	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Manhattan.														
Lamps—Open Flame	Lamps in terms of 1 day.													
" Lit—Full month	23,126	20,804	11,100	11,840	22,230	17,515	12,090	11,811	11,191	9,600	9,300	6,480	6,696	173,783
" " —New lights														
" Relit—During mo. ...	96	40	3	16	171	63	30						14	433
	23,222	20,844	11,103	11,856	22,401	17,578	12.120	11,811	11,191	9,600	9,300	6,480	6,710	174,216
Lamps discontinued	175	166	8	16	2,837	4,202	388	344	664	261	1,947		74	11,082
Equivalent Number days 1 lamp lit	23,047	20,678	11,095	11,840	19,564	13,376	11,732	11,467	10,527	9,339	7,353	6,480	6,636	163,134
Manhattan.														
Single Welsbach.														
Lamps Lit—Full mo........	503,316	454,664	243,165	259,472	486,546	509,764	501,090	519,405	521,575	505,380	522,102	503,550	519,994	6,050,017
" " —New lights					20	541	69	957	93	238	257	176	112	2,463
" Relit—During mo.	1,260	961	360	350	2,995	7,081	1,516	1,060	1,390	1,019	1,342	1,143	1,103	21,580
	504,576	455,625	243,525	259,822	489,555	517,386	502,675	521,422	523,058	506,637	523,701	504,869	521,209	6,074,060
Lamps discontinued	1,424	1,495	477	306	1,039	1,656	868	937	1,369	1,583	2,531	1,587	1,793	17,065
Equivalent Number days 1 lamp lit	503,152	454,130	243,048	259,516	488,516	515,730	501,807	520,485	521,689	505,054	521,170	503,282	519,416	6,056,995
Manhattan.														
Welsbach—Double & Cluster														
Equivalent Number days 1 lamp lit	372	336	180	192	360	372	360	372	372	360	372	360	372	4,380
Manhattan.														
Street signs.														
Lamps Lit—Full mo.......	14,260	12,712	6,780	7,216										40,968
" Relit—During mo. ..		89												46
" Lit—New lights	46			4										93
	14,306	12,801	6.780	7,220										41,107
Lamps discontinued........	154	122	7	15										298
Equivalent Number days 1 lamp lit................	14,152	12,679	6,773	7,205										40,809
The Bronx.														
Single Welsbach.														
Lamps Lit—Full mo.......	177,413	160,776	85,845	92,016	171,840	176,669	171,540	177,289	179.211	174,390	183,210	178,980	186,558	2,115,737
" Lit—New lights	224	30	16		56	307	144	934	1,082	1,526	1,937	684	188	7,148
" Relit—During mo ..	182	814	335	84	219	671	157	473	84	453	97	272	361	4,202
	177,819	161,620	86,196	92,100	172,115	177.617	171,841	178,696	180,377	176.369	185,264	179,936	187,107	2,127,087
Lamps discontinued	309	1,498	162	249	554	799	544	310	477	399	975	309	383	6,968
Equivalent Number days 1 lamp lit	177,510	160,122	86,034	91,851	171,561	176.848	171,297	178.386	179,900	175,970	184.289	179.627	186.724	2.120,119

C. F. LACOMBE,
Chief Engineer of Light and Power.

CONSOLIDATED GAS COMPANY.

Schedule IIIa.

ANALYSIS OF COMPANY'S BILLS RENDERED, SHOWING DIFFERENCE RESULTING FROM COMPUTATION BY COMPANY ON BASIS OF MONTHLY AND DAILY RATES AGAINST DEPARTMENT COMPUTATION ON BASIS OF ACTUAL DAYS AT DAILY RATE.

MANHATTAN—SINGLE WELSBACH.

1906.	Lamp months.		Lit full month.		Lamps.		Part month net lamp days.	Total lamp days.		
			Factor.	Lamp days	Relit.	Extinguished.				
January	16,236	x	31	503,316	1,260	1,424				
February	16,238	x	28	454,664	961	1,495				
March 15	7,844+	x	31	*243,165	360	477				
March 31	8,370+	x	31	†259,472	350	306				
April	16,218	x	30	486,540	3,015	1,039				
May	16,444	x	31	509,764	7,622	1,656				
June	16,703	x	30	501,090	1,585	868				
July	16,755	x	31	519,405	2,017	937				
August	16,825	x	31	521,575	1,483	1,369				
September	16,846	x	30	505,380	1,257	1,583				
October	16,842	x	31	522,102	1,599	2,531				
November	16,785	x	30	503,550	1,319	1,587				
December.	16,774	x	31	519,994	1,215	1,793				
					24,043	17,065				
Department,				6,050,017			6,978	6.056,995	$410,714.04	(Bill on actual day basis.)
Company	198,880	x	$\frac{365}{12}$	6,049,267			6,939	6,056,206	410,660.55	(Bill as rendered)
" Deficit				750			39	789	53.49	Deficit in Co.'s bills.

MEMO—Rates per lamp.	
Per an.	$24.75
Per mo.	2.06
Per diem	.067,808

* Equivalent to 16,211 lamps for 15 days.
† " " 16,217 " " 16 "

C. F. LACOMBE,
Chief Engineer of Light and Power.

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Schedule IIIb.

CONSOLIDATED GAS COMPANY.

Analysis of Company's Bills Rendered, Showing Difference Resulting From Computation by Company on Basis of Monthly and Daily Rates Against Department Computation on Basis of Actual Days at Daily Rate.

MANHATTAN—OPEN FLAME.

1905.	Lamp Months.		Lit full month.		Lamps.		Part Month Net Lamp Days	Total Lamp Days.		
			Factor.	Lamp days.	Relit.	Extinguished.				
January	746	x	31	23,126	96	175				
February	743	x	28	20,804	40	166				
March 15	358.06+	x	31	* 11,100	3	8				
March 31	391.94—	x	31	† 11,840	16	16				
April	741	x	30	22,230	171	2,837				
May	565	x	31	17,515	63	4,202				
June	403	x	30	12,090	30	388				
July	381	x	31	11,811		344				
August	361	x	31	11,191		664				
September	320	x	30	9,600		261				
October	300	x	31	9,300		1,947				
November	216	x	30	6,480						
December	216	x	31	6,696	14	74				
					433	11,082				
Department				173,783			10,649	163,134	$7,709.76	(Bill on actual day basis)
Company	5,732	x	$\frac{365}{12}$	174,348			10,649	163,699	$7,736.50	(Bill as rendered)
“ Excess				565				565	$26.74 Excess in Co.'s bills.	

MEMO: Rates per lamp.

Per an.	$17.25
Per mo.	1.44
Per diem	.04726

* Equivalent to 740 lamps for 15 days.
† “ “ 740 “ “ 16 “

C. F. LACOMBE,
Chief Engineer of Light and Power.

Schedule III C.

CONSOLIDATED GAS COMPANY.

MANHATTAN—STREET SIGNS.

		Lit Full Month.		Lit Part Month.					
1905.	Lamp months.	Factor.	Lamp days.	Relit.	Extinguished.	Net lamp days.	Total. lamp days.		
January	460	x 31	14,260	46	154				
February	454	x 28	12,712	89	122				
March 15........	218.71—	x 31	**6,780		7				
March 31........	232.77+	x 31	§7,216	4	15				
				139	298				
Department			40,968			159	40,809	$1,928.64	(Bill on actual day basis)
Company	1,365.48	x 365	41,533			159	41,374	1,955.33	(Bill as rendered)
		12							
Company Excess.			565				565	$26.69	(Excess in Company's bill)

** Equivalent to 452 lamps for 15 days.
§ Equivalent to 451 lamps for 16 days.

Memo.—Rates per Lamp.	
Per annum	$17.25
" month	1.44
" diem	.04726

C. F. LACOMBE,
Chief Engineer of Light and Power.

Schedule III. D.

CONSOLIDATED GAS COMPANY.

MANHATTAN—WELSBACH—DOUBLE & CLUSTER.

1905						
January						
February						
March 15						
March 31						
April	4 Double=8 x 365	= 2,920 days	@ .0637 per diem		= $186.00	
May	1 Cluster=4 x 365	= 1,460 "	" .0685 " "		= 100.00	
	12 x 365					
June						
July						
August						
September						
October						
November						
December						
		4,380			$286.00	(Bill on actual day basis)
Months 96	x 365/12	@ $46.50 per annum	....	$186.00		
" 48	x 365/12	@ 100.00 " "	....	99.99	285.99	(Bill as rendered by Company)
144	x 365/12= 4,380 days				.01	Deficit in Company's bills.

Memo.—Rates per Lamp.

Double per annum.........	$46.50	for 2 lamps
" " month.........	3.875	" " "
Cluster per annum.........	100.00	for 4 lamps
" " month.........	8.33	" " "

C. F. LACOMBE,
Chief Engineer of Light and Power.

Schedule III-E.

CONSOLIDATED GAS COMPANY.

THE BRONX—SINGLE WELSBACH.

1905	Lamp Months.	Lit Full Month.		Lit Part Month.		Net Lamp Days.	Total Lamp Days.		
		Factor.	Lamp Days.	Relit.	Extinguished.				
January ...	5,723	x31	177,413	406	309				
February ..	5,742	x28	160,776	844	1,498				
March 15 ...	2,769.2	x31	**85,845	351	162				
" 31 ..	2,968.2	x31	§92,016	84	249				
April	5,728	x30	171,840	275	554				
May	5,699	x31	176,669	978	799				
June	5,718	x30	171,540	301	544				
July	5,719	x31	177,289	1,407	310				
August	5;781	x31	179,211	1,166	477				
September .	5,813	x30	174,390	1,979	399				
October	5,910	x31	183,210	2,054	975				
November ..	5,966	x30	178,980	956	309				
December ..	6,018	x31	186,558	549	383				
				11,350	6,968				
Department....................			2,115,737			4,382	2,120,119	$143,761.03	(Bills on actual day basis)
Company......................	69,544.4	x365/12	2,115,613			4,378	2,119,991	143,752.35	(Bills as rendered)
Company Deficit................			*124*			*4*	*128*	*$8.68*	(*Company Deficit*)

** Equivalent to 5,723 lamps for 15 days.
§ " " 5,751 " " 16 "

Memo.—Rates per Lamp.

Per annum	$24.75
" month	2.06
" diem	.067808

Words and figures in *Italic* were red ink in original.

C. F. LACOMBE,
Chief Engineer of Light and Power.

Schedule IV.

CONSOLIDATED GAS COMPANY.

Gas Consumption Analysis.

Statement Showing Consumption of Gas Deduced From Analysis of Bills Rendered.

Description.	Number of Lamp Days	Consumption in Hours	Consumption in Cubic Feet.				
			3 cu. ft. per hour	3½ cu. ft. per hr.	3.77 cu.ft. per hr.	4½ cu. ft. per hr.	*Total*
Manhattan—Single Welsbach	6,056,206	65,124,955	195,374,865	227,937,342	245,521,080		
Open Flame	163,699	1,760,325	5,280,975	6,161,137		7,921,462	
Street Signs	41,374	444,912	1,334,736	1,557,192		2,002,104	
Miscellaneous	4,380	47,100	141,300	164,850	177,567		
					245,698,647	9,923,566	255,622,213
The Bronx—Single Welsbach	2,119,991	22,797,163	68,391,489	79,790,070	85,945,304		8[illegible],945,304
							341,567,517

$$\text{Constant} = \frac{3925}{365} = \text{Consumption in hours for one day as per contract.}$$

C. F. LACOMBE,
Chief Engineer of Light and Power.

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Schedule V.

CONSOLIDATED GAS COMPANY.

GAS COST ANALYSIS.

Statement showing Cost of Gas at 90 Cents per 1,000 Cubic Feet, as per Consumption Analysis.

	3 Cubic feet.		3½ Cubic feet.		3.77 Cubic feet.		4½ Cubic feet.	
	Consumption	Amount	Consumption	Amount	Consumption	Amount	Consumption	Amount
Manhattan—Single Welsbach	195,374,865	$175,837.38	227,937,342	$205,143.61	245,521,080	$220,968.97		
Open Flame ...	5,280,975	4,752.88	6,161,137	5,545.02			7,921,462	$7,129.31
Street Signs ...	1,334,736	1,201.26	1,557,192	1,401.47			2,002,104	1,801.89
Miscellaneous ..	141,300	127.17	164,850	148.37	177,567	159.81		
					245,698,647	$221,128.78	9,923,566	$8,931.20
The Bronx—Single Welsbach	68,391,489	61,550.34	79,790,070	71,811.06	85,945,304	77,350.77		

C. F. LACOMBE,
Chief Engineer of Light and Power.

CONSOLIDATED GAS COMPANY.

Schedule VI.

STATEMENT SHOWING COST OF MAINTENANCE, COMPILED FROM BILLS RENDERED BY COMPANY.

Cost of Maintenance Deduced from Company Bills and Gas Cost Statement.

	Bills Rendered.	Cost of Gas as per Analysis.	Cost of Maintenance.	Cost of Gas as per Analysis.	Cost of Maintenance.		Cost of Gas as per Analysis.	Cost of Maintenance.
		3 cu. ft. per hour.		3½ cu. ft per hour.				
Manhattan—Single Welsbach..	$421,639.05	$175.837.38	$245,801.67	$205,143.61	$216,495.44	(3.77 cu. ft. per hour)	$220,968.97	$200,670.08
Miscellaneous ...	285.99	127.17	158.82	148.37	137.62	(3.77 cu. ft. per hour)	159.81	126.18
Open Flame	7,736.58	4,752.88	2,983.70	5,545.02	2,191.56	(4½ cu. ft. per hour)	7,129.31	607.27
Street Signs	1,963.33	1,201.26	762.07	1,401.47	561.86	(4½ cu. ft. per hour)	1,801.89	161.44
Total, Manhattan.	$431,624.95	$181,918.69	$249,706.26	$212,238.47	$219,386.48		$230,059.98	$201,564.97
The Bronx—Single Welsbach.	143,758.90	61,552.34	82,206.56	71,811.06	71,947.84	(3.77 cu. ft. per hour)	77,350.77	66,408.13
Grand Total	$575,383.85	$243,471.03	$331,912.82	$284,049.53	$291,334.32		$307,410.75	$267,973.10

MEMO.

Manhattan—Single Welsbach ....6,056,206 lamp days = 16,592.34 lamp years = Average number of lamps for 1 year.
Double Welsbach .... 2,920 " " = 4 (double) lamp years = Average number of lamps for 1 year.
Cluster Welsbach .... 1,460 " " = 4 " " = " " " " " " "
Open Flame .... 163,699 " " = 448.4 " " = " " " " " " "
" " Street Signs 41,374 " " = 344.8 " " = " " " " " 3 mos.
The Bronx—Single Welsbach ....2,119,991 " " = 5,808.2 " " = " " " " " 1 year.

N. B.—Street signs lit only during January, February and March.

C. F. LACOMBE,
Chief Engineer of Light and Power.

CITY'S EXHIBIT 62.

CONSOLIDATED GAS COMPANY OF NEW YORK.

MONTHLY RECORD OF MANUFACTURING AVERAGES AND RESULTS.

For Year 1905.

	14th St. Station.		21st St. Station.			42d St. Station.		44th St. Station.			99th St.	
	C. P. Station Test.	Yield in Cu. Ft. per Ton of Coal.	C. P. Station Test.	Gals. Oil per M. Cu. Ft.	Candles per Gal. Oil Used.	C. P. Station Test	Yield in Cu. Ft. per Ton of Coal.	C. P. Station. Test.	Gals. Oil per M. Cu. Ft.	Candles. per Gal. Oil Used.	C. P. City Test.	C. P. Station Test.
January	23.05	10,639	25.14	4.78	5.26	22.81	12,154	24.85	4.81	5.17	..	25.23
February	22.70	10,659	24.95	4.57	5.46	22.90	12,259	24.70	4.58	5.39	..	25.10
March	23.45	10,788	24.84	4.45	5.58	23.30	11,827	25.82	4.62	5.59	..	25.31
April	23.89	10,846	25.07	4.49	5.58	23.57	11,717	23.47	4.38	5.36	..	24.91
May	24.26	10,680	25.50	4.51	5.65	23.50	11,824	24.14	4.40	5.49	23.99	24.76
June	26.01	10,319	26.85	4.45	6.03	23.91	11,357	26.05	4.75	5.48	26.09	26.03
July	30.38	10,265	27.72	4.83	5.74	26.36	10,953	28.06	4.95	5.67	27.19	29.10
August	28.89	10,487	26.50	4.68	5.66	24.84	11,092	26.40	4.60	5.74	25.94	26.44
September	27.25	10,593	26.20	4.67	5.61	25.12	11,488	25.88	4.74	5.46	25.59	25.47
October	26.57	10,852	26.38	4.66	5.66	25.62	12,050	25.77	4.91	5.25	24.73	24.98
November	25.84	10,869	26.69	4.62	5.78	24.60	12,016	24.51	4.78	5.13	23.77	24.46
December	25.17	10,808	26.51	4.60	5.76	24.45	11,777	24.21	4.58	5.29	24.61	24.42
Average per annum	25.62	10,650	26.03	4.61	5.65	24.25	11,710	25.32	4.67	5.42	25.24	25.52

AVERAGE COAL GAS STATIONS.

	C. P. Station Test.	Yield in Cu. Ft. Ton of Coal.
14th St. Station	25.62	10,650
42nd St. Station	24.25	11,710
Average	24.93	11,180

AVERAGE WATER GAS STATIONS.

	C. P. Outside Test.	C. P. Station Test.	Gals. Oil per M Cu. Ft.	Candle per Ga Oil Used
21st St. Station	..	26.03	4.61	5.65
44th St. Station	..	25.32	4.67	5.42
99th St. Station	25.24	25.52	4.46	5.82
Average		25.62	4.56	5.63

Average Candle-Power, Coal and Water Gas Station 25.35

CITY'S EXHIBIT 62.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Monthly Record of Manufacturing Averages and Results.

For Year 1905.

	14th St. Station.		21st St. Station.			42d St. Station.		44th St. Station.				99th St. Station.		
	C. P. Station Test.	Yield in Cu. Ft. per Ton of Coal.	C. P. Station Test.	Gals. Oil per M. Cu. Ft.	Candles per Gal. Oil Used.	C. P. Station Test	Yield in Cu. Ft. per Ton of Coal.	C. P. Station. Test.	Gals. Oil per M. Cu. Ft.	Candles. per Gal. Oil Used.	C. P. City Test.	C. P. Station Test.	Gals. Oil per M. Cu. Ft.	Candles per Gal. Oil Used.
....	23.05	10,639	25.14	4.78	5.26	22.81	12,154	24.85	4.81	5.17	..	25.23	4.76	5.24
....	22.70	10,659	24.95	4.57	5.46	22.90	12,259	24.70	4.58	5.39	..	25.10	4.70	5.34
....	23.45	10,788	24.84	4.45	5.58	23.30	11,827	25.82	4.62	5.59	..	25.31	4.58	5.53
....	23.89	10,846	25.07	4.49	5.58	23.57	11,717	23.47	4.38	5.36	..	24.91	4.38	5.69
....	24.26	10,680	25.50	4.51	5.65	23.50	11,824	24.14	4.40	5.49	23.99	24.76	3.60	6.88
....	26.01	10,319	26.85	4.45	6.03	23.91	11,357	26.05	4.75	5.48	26.09	26.03	3.90	6.67
....	30.38	10,265	27.72	4.83	5.74	26.36	10,953	28.06	4.95	5.67	27.19	29.10	4.51	6.45
....	28.89	10,487	26.50	4.68	5.66	24.84	11,092	26.40	4.60	5.74	25.94	26.44	4.40	6.01
....	27.25	10,593	26.20	4.67	5.61	25.12	11,488	25.88	4.74	5.46	25.59	25.47	4.30	5.76
....	26.57	10,852	26.38	4.66	5.66	25.62	12,050	25.77	4.91	5.25	24.73	24.98	4.52	5.51
....	25.84	10,869	26.69	4.62	5.78	24.60	12,016	24.51	4.78	5.13	23.77	24.46	4.55	5.38
....	25.17	10,808	26.51	4.60	5.76	24.45	11,777	24.21	4.58	5.29	24.61	24.42	4.58	5.33
per annum..	25.62	10,650	26.03	4.61	5.65	24.25	11,710	25.32	4.67	5.42	25.24	25.52	4.40	5.82

Average Coal Gas Stations.

	C. P. Station Test.	Yield in Cu. Ft. Ton of Coal.
th St. Station............	25.62	10,650
nd St. Station.....	24.25	11,710
Average	24.93	11,180

Average Water Gas Stations.

	C. P. Outside Test.	C. P. Station Test.	Gals. Oil per M Cu. Ft.	Candles per Gal. Oil Used.
21st St. Station..........................	..	26.03	4.61	5.65
44th St. Station..........................	..	25.32	4.67	5.42
99th St. Station..........................	25.24	25.52	4.46	5.82
Average...................		25.62	4.56	5.63

Average Candle-Power, Coal and Water Gas Station 25.35

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

8394 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages (Volume 2, Exhibits), numbered from 7682 to 8393 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant-Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office (Volume 2, Exhibits).

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

8394a Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York, *et al.,* Defendants.

Before Arthur H. Masten, Esq., Special Master.

S 9431.

EXHIBITS.

Volume III.

U. S. Circuit Court, Southern District N. Y. Filed June 24, 1907. John A. Shields, Clerk.

8394b

EXHIBITS.

Volume III.

STATE'S EXHIBIT CC.

Commercial 6 ft. bat-wing lava tip Burner.

Series I. 5 Tests. X. 1. 1906.

Pressure at the burner in inches of water.	Rate of burning cubic feet per hour.	Actual power of flame.	Efficiency, candle-power per cubic feet per hour.	Candle-power for 5 cubic feet per hour.	Cost of 900 hours 20 candle light gas 80 cents.	Ditto. Gas $1.00.
0.4	4.7	20.7	4.40	22.	.80	1.00
0.6	6.4	26.6	4.16	20.8	.85	1.06
0.7	7.6	31.3	4.12	20.6	.86	1.07
0.98	9.6	33.4	3.48	17.4	1.01	1.26
1.35	12.0	31.3	2.63	13.2	1.33	1.66

Ditto Series II. 6 Tests. X. 2. 1906.

0.4	4.9	21.6	4.40	22.	.80	1.00
0.6	6.9	27.6	4.00	20.0	.88	1.10
0.8	8.0	31.3	3.92	19.6	.90	1.12
1.0	9.7	33.4	3.44	17.2	1.02	1.28
1.2	10.6	33.4	3.14	15.7	1.12	1.40
1.45	12.0	33.4	2.78	13.9	1.26	1.58

STATE'S EXHIBIT DD.

Against Candles.

Ditto Series III. 4 Tests. X. 4. 1906.

Pressure at burner inches of water.	Rate of burning cubic feet per hour.	Actual power of flame	Efficiency, candle-power per cubic feet per hour.	Candle-power for 5 cubic feet per hour.	Cost of 900 hours 20 candle light gas 80 cents.	Ditto. Gas $1.00.	Flame.
0.3	3.7	14.6	3.95	19.75	.89	1.11	Wavy
0.6	5.75	21.8	3.80	19.00	.93	1.16	Steady
0.91	7.38	25.9	3.52	17.6	1.00	1.25	Flickers
1.07	7.80	25.7	3.30	16.5	1.06	1.32	Blows slightly.

Commercial 4 ft. bat-wing lava tip Burner Against Candles.

Series IV. 4 Tests. X. 10, 1906.

0.2	2.54	8.8	3.46	17.3	1.01	1.27
0.4	4.04	14.35	3.57	17.85	.98	1.23
0.8	7.10	22.40	3.16	15.8	1.11	1.39
1.16	8.58	26.20	3.06	15.3	1.14	1.43

STATE'S EXHIBIT EE.

Welsbach Against Argand.

Regulated for 1".54 pressure.

Series V. 3 Tests. X. 12, 1906.

Pressure at burner in inches of water.	Rate of burning cubic feet per hour.	Actual power of burner.	Efficiency, candle-power per cubic feet per hour.	
1.54	3.6	83.5	23.2	
2.00	4.13	85.2	20.6	
2.35	4.53	83.8	18.5	
Same burner regulated? for 2".35 pressure.				
0.8	2.35	40.0	17.0	Wavy and flickering.
1.0	2.8	63.4	22.6	
1.5	3.33	86.2	25.8	
2.0	4.07	85.4	21.0	
2.35	4.67	88.5	18.9	

Series VI.

STATE'S EXHIBIT FF.

Commercial Fish Tail Burner No. 5. ***Check Removed.***

Series VII. **X. 26. 1906.**

Pressure at burner inches of water.	Rate of burning cubic feet per hour.	Actual power of flame.	Efficiency, candle-power per cubic feet per hour.	Candle-power for 5 cubic feet per hour.	Cost of 200 hours 32 candle light gas at 80 cents.	Ditto. Gas at $1.00.	
.14	3.18	13.6	4.26	21.3	.82	1.03	
.21	3.95	14.8	3.75	18.8	.94	1.17	Blows
.62	8.55	17.3	2.03	10.2	1.73	2.16	do.
.97	9.01	18.7	2.06	10.3	1.71	2.14	do.
1.35	10.7	15.8	1.48	7.4	2.38	2.97	do.

Commercial *Fish Tail* Burner No. 5. ***Checked.***

Series VIII. **X. 26/06.**

0.58	See note below.	3.33	14.28	4.3	21.5	.82	1.02
0.83		4.4	17.16	3.9	19.5	.90	1.13
1.00		4.9	18.9	3.85	19.3	.91	1.14
1.18		5.3	20.2	3.81	19.1	.92	1.15
1.46		6.0	22.7	3.78	18.9	.93	1.16
1.90		6.7	24.1	3.60	18.0	.98	1.22

N. B.—The pressures given in the above table are taken *behind* the check.

STATE'S EXHIBIT GG.

Series IX. **Bray No.7.** **Standard.**

Pressure at the burner; inches of water.	Rate of burning cubic feet per hour.	Actual power of flame.	Efficiency; candle power per cubic feet per hour.	Candle-power for 5 cubic feet per hour.	Cost of 800 hours 20 candle light, gas at 80 cents.	Ditto. Gas at $1.00.	
0.21	5.08	22.3	4.40	22.	.80	1.00	
		Batwing lava tip commercial—4 feet.					
0.5	4.6	18.4	4.00	20.	.88	1.10	
1.52	8.9	30.1	3.38	16.9	1.04	1.30	Not blowing
		Batwing lava tip commercial—6 feet.					
0.50	5.2	21.4	4.11	20.6	.86	1.08	
1.46	9.8	33.1	3.38	16.9	1.04	1.30	Blowing slightly

STATE'S EXHIBIT HH.

Series X.

Commercial 4 ft. batwing burner on compressed gas.

Pressure 3.0 to 3.5 inches water gave no light.

Pressure 7.0 to 10.0 inches water actually blew itself out.

Series XI.

Commercial 6 ft. batwing burner.

Pressure 3.0 to 4.0 inches of water gave no light.

Pressure about 12. inches of water blew itself out.

CITY'S EXHIBIT 61.

New York, February 1st. 1905.

City of New York,

To Consolidated Gas Company of New York, Dr.

licate. General Office: No. 4 Irving Place.

r			Designation.				Amount.	Amount.
			"MANHATTAN."					
			To Supply of Gas Lighting Public Lamps, as per contract as follows:					
Lighting	257	Lamps	South of 23rd St.					
"	129	"	" 79th "					
"	360	"	North of 79th "					
"	746	"	From Jan. 1-31, 1905, 1 mo. @ 17.25 per annum................				1,072 38	
"	3712	S. Wels.	South of 23rd St.					
"	3735	"	" 79th "					
"	8789	"	North of 79th "					
"	16236	"	From Jan. 1-31, 1905, 1 mo. @ 24.75 per annum................				33,486 75	
"	4	D. Wels.	" " 1-31, " 1 " 46.50 "				15 50	
"	4	Cl. S. W.	Refuge Post—Jan. 1-31, 1905—1 mo. @ $100 per annum.........				8 33	
								34,582 96
Relighting	1	S. Wels.	22 St. N. S. 1 E. 11th Avenue...............	Jan.	1-31,	1 mo.	2 06	
"	1	"	3 St. S. S. 1 E. Avenue "B"................	"	1-31,	"	2 06	
"	1	"	10 Ave. W. S. 1 S. of L. W. 12 St............	"	1-31,	"	2 06	
"	1	"	15 St. N. S. 3 E. Avenue "C"...............	"	3-31,	29/365	1 97	
"	1	Ord'y	N. E. C. 11 Ave. & 21st St..................	"	7-31,	25/"	1 18	
"	1	S. Wels.	20th St. S. S. 4 E. 10th Ave................	"	7-31,	25/"	1 70	
"	1	"	Thomas S. S. 1 E. Church St.................	"	10-31,	22/"	1 49	
"	1	"	Carlisle St. S. S. 1 E. West St..............	"	10-31,	22/"	1 49	
"	1	"	Jones St. S. S. 1 E. Bleecker St.............	"	11-31,	21/"	1 42	
"	1	"	South St. N. S. 2 E. Rutger St..............	"	12-31,	20/"	1 36	
"	1	"	23rd St. S. S. 3 E. 8th Ave.................	"	12-31,	20/"	1 36	
"	1	"	Watts St. N. S. 1 E. Hudson St..............	"	12-31,	20/"	1 36	
"	1	"	Marion St. W. S. 1 N. Broome St.............	"	13-31,	19/"	1 29	
"	1	"	9th Ave. W. S. 2 N. 20th St.................	"	13-31,	19/"	1 29	
"	1	"	Washington Sq. S. S. 1 E. Sullivan...........	"	13-31,	19/"	1 29	
"	1	"	Gouveneur Lane, N. S. 1 E. Front............	"	14-31,	18/"	1 22	
"	1	"	" " S. S. 1 "	"	14-31,	18/"	1 22	
"	1	"	7th St. N. S. 1 E. Avenue "D"...............	"	16-31,	16/"	1 08	
"	1	"	Chrystie St. W. S. 1 N. Grand St............	"	16-31,	16/"	1 08	
"	1	"	Cornelia St. S. S. 1 E. Bedford..............	"	18-31,	14/"	95	
"	1	"	" " " " 2 " "	"	18-31,	14/"	95	
"	1	"	Grove St. S. S. .1 E. Bedford................	"	19-31,	13/"	88	
"	1	"	King St. N. S. 1 E. Greenwich...............	"	19-31,	13/"	88	
"	1	"	Manhattan Pl. N. S. 2 W. Elm St.............	"	19-31,	13/"	88	
"	1	"	18th St. S. S. 1 E. Avenue "B"...............	"	19-31,	13/"	88	
"	1	"	John St, S. S. 1 E. Nassau St...............	"	21-31,	11/"	75	
"	1	"	James St. Junction of New Chambers..........	"	24-31,	8/"	54	
"	1	"	Charlton St. N. S. 1 E. Varick St............	"	24-31,	8/"	54	
"	1	"	N. E. Cor. Downing & " "............	"	27-31,	5/"	34	
"	1	"	University Pl. E. S. 1 No. 9.................	"	30-31	2/"	14	
"	1	"	78th. St. S. S. 2 E. Amsterdam..............	"	6-31,	26/"	1 76	
"	1	"	31st. St. S. S. 1 E. 2nd. Avenue.............	"	6-31,	26/"	1 76	
"	1	"	36th. St. N. S. 3 E. 11th. Ave......	"	9-31,	23/"	1 56	
"	1	"	B'way N. W. Cor. 69th. St...................	"	11-31,	21/"	1 42	
"	1	"	" S. W. " 62nd. St....................	"	11-31,	21/"	1 42	
"	1	"	73rd. St. N. S. 1 E. Col. Ave................	"	11-31,	21/"	1 42	
"	1	"	Amsterdam Ave. E. S. 1 N. 68th. St..........	"	11-31,	21/"	1 42	
"	1	"	B'way S. W. Cor. 70th. St...................	"	11-31,	21/"	1 42	
"	1	"	" N. W. " 61st. ".....................	"	11-31,	21/"	1 42	
"	1	"	64th. St. N. S. 1 E. 2nd. Ave................	"	12-31,	20/"	1 36	
"	1	"	72nd. St. S. S. 2 E. Avenue "A"............	"	12-31,	20/"	1 36	
"	1	"	B'way W. S. 3 N. 72nd. Street...............	"	12-31,	20/"	1 36	
	17032		Amount Carried Forward...............				53 39	34,582 96

5758

8399

MANHATTAN.

Order No.			DESIGNATION.				Amount.	Amoun
	17032		Amount Brought Forward..............				53 39	34,582 96
Relighted	1	S. Wels.	38 St. S. S. 2 E. Park Ave........................	Jan.	13-31,	19/365	1 29	
"	1	"	Grand Circle W. S. 3 S. 59 St....................	"	13-31,	19/"	1 29	
"	1	"	" " E. S. 1 N. 59 St....................	"	13-31,	19/"	1 29	
"	1	"	37 St. N. S. 1 E. 11th. Ave....................	"	14-31,	18/"	1 22	
"	1	"	38 St. N. S. 1 E. 10th. "	"	14-31,	18/"	1 22	
"	1	"	53 St. S. S. 3 E. 10th. "	"	14-31,	18/"	1 22	
"	1	Ord'y	B'way N. W. Cor. 34th. St....................	"	14-31,	18/"	85	
"	1	S. Wels.	53 N. S. 2 E. 11th. Avenue....................	"	16-31,	16/"	1 08	
"	1	Ord'y	5th. Ave. N. E. Cor. 63rd. St....................	"	16-31,	16/"	76	
"	1	S. Wels.	41 St. N. S. 3 E. 1st. Ave....................	"	17-31,	15/"	1 02	
"	1	S. Wels.	65 St. S. S. 4 E. 1st. "	"	18-31,	14/"	95	
"	1	"	64 St. N. S. 3 E. 1st. "	"	18-31,	14/"	95	
"	1	"	74 St. S. S. 1 E. Park "	"	18-31,	14/"	95	
"	1	"	10th. Ave. S. W. Cor. 29th. St....................	"	19-31,	13/"	88	
"	1	Ord'y	Madison Ave. N. E. Cor. 72nd. St....................	"	19-31,	13/"	61	
"	1	S. Wels.	24 St. N. S. 7 E. 9th. Ave....................	"	19-31,	13/"	88	
"	1	"	Park Ave. S. E. Cor. 71st. St....................	"	20-31,	12/"	81	
"	1	"	75th. St. N. S. 5 E. 3rd. Ave....................	"	21-31,	11/"	75	
"	1	"	61st. St. N. S. 4 E. " "	"	21-31,	11/"	75	
"	1	"	66th. St. N. S. 3 E. Col. "	"	25-31,	7/"	47	
"	1	Ord'y	W. 35th. St. Dock N. S. 2 W. 12th....................	"	25-31,	7/"	33	
"	1	S. Wels.	30th. St. S. S. 3 E. Madison Ave....................	"	30-31,	2/"	14	
"	1	"	32nd. St. N. S. 1 E. 5th. Ave....................	"	30-31,	2/"	14	
"	1	Ord'y	1st. Ave. N. W. 38th. St....................	"	31-31,	1/"	05	
"	1	S. Wels.	C. P. W., W. S. 1 N. 86th. St....................	"	2-31,	30/"	2 03	
"	1	"	104 St. N. S. 1 E. Madison Ave....................	"	6-31,	26/"	1 76	
"	1	"	116th. St. S. S. 2 E. Pleasant....................	"	6-31,	26/"	1 76	
"	1	"	147th. St. S. S. 1 E. N. River....................	"	6-31,	26/"	1 76	
"	1	"	5th. Ave. S. E. Cor. 117th. St....................	"	9-31,	23/"	1 56	
"	1	"	93rd. St. S. E. Cor. Amsterdam Ave....................	"	13-31,	19/"	1 29	
"	1	"	93rd. St. N. S. 1 E. West End Av....................	"	13-31,	19/"	1 29	
"	1	"	100th. St. N. S. 2 E. Manhattan....................	Jan.	"	" "	1 29	
"	1	Ord'y	Madison Ave. Bridge Opp. W. S. 4 N. 137th. St.,	Jan.	16-31,	16/"	76	
"	1	S. Wels.	86 Trans. Rd. S. S. 17 E. C. P. W. #34..........	"	18-31,	14/"	94	
"	1	"	B'way E. S. 3 N. Academy St....................	"	18-31,	14/"	95	
"	1	"	St. Nicholas Ave. E. S. 6 N. 137 St....................	"	20-31,	12/"	81	
"	1	"	119th. St. N. S. 4 E. 3rd. Ave....................	"	27-31,	5/"	34	89 91
	17069							34,672 8
Discont'd	1	"	W. 4 St. N. S. Opp. Jones St....................	"	1-31,	1 mo.	2 06	
"	1	"	Gouveneur Lane S. S. 1 E. Front....................	"	1-31,	"	2 06	
"	1	"	6th. Ave. W. S. 1 N. Washington Pl....................	"	1-31,	"	2 06	
"	1	"	John St. S. S. 1 E. Nassau St....................	"	1-31,	"	2 06	
"	1	"	South St. N. S. 2 E. Rutger St....................	"	1-31,	"	2 06	
"	1	Ord'y	S. W. Cor. 10th. Ave. & 15th. St....................	"	1-31,	"	1 44	
"	1	S. Wels.	5 St. S. S. 3 E. Avenue "C"....................	"	1-31,	"	2 06	
"	1	"	N. W. Cor. Suffolk & Stanton....................	"	1-31,	"	2 06	
"	1	"	20th. St. S. S. 4 E. 10th. Ave....................	"	2-31,	30/365	2 03	
"	1	"	Wash. Sq. S. S. 1 E. Sullivan....................	"	3-31,	29/"	1 97	
"	1	"	23 St. S. S. 3 E. 8th. Ave....................	"	3-31,	29/"	1 97	
"	1	"	McDougall W. S. 2 N. Houston	"	5-31,	27/"	1 83	
"	1	"	3 St. S. S. 1 E. Avenue "B"....................	"	5-31,	27/"	1 83	
"	1	"	Marion W. S. 1 N. Broome....................	"	6-31,	26/"	1 76	
"	1	"	Manhattan Pl. N. S. 2 W. Elm St....................	"	7-31,	25/"	1 70	
"	1	"	Watts St. N. S. 1 E. Hudson St....................	"	8-31,	24/"	1 63	
"	1	"	18 St. S. S. 1 E. Avenue "B"....................	"	9-31,	23/"	1 56	
"	1	"	15th. St. N. S. 3 E. Ave. "C"....................	"	13-31,	19/"	1 29	
"	1	"	N. E. Cor. Varick & Downing Sts....................	"	16-31,	16/"	1 08	
"	1	"	6 St. N. S. 2 E. Avenue "C"....................	"	22-31,	10/"	68	
"	1	"	64th. St. N. S. 3 E. 1st. Ave....................	"	5-31,	27/"	1 83	
"	1	"	53rd. St. N. S. 2 E. 11th. Avenue....................	"	5-31,	27/"	1 83	
"	1	"	B'way S. W. C. 70th. St....................	"	5-31,	27/"	1 83	
"	1	"	" W. S. 3 N. 72nd. Street....................	"	5-31,	27/"	1 83	
	17045		Amount Carried Forward				42 51	34,675 7

MANHATTAN.

			Designation.				Amount.	Amount.
	17045		Amount Brought Forward				42 51	34,672 80
iscont'd	1	S. Wels.	56 St. N. S. 3 E. 10th. Ave.	Jan.	5-31,	27/365	1 83	
"	1	"	Amsterdam Ave. E. S. 1 N. 68 St.	"	6-31,	26/"	1 76	
"	1	"	S. E. Cor. 71st. St. & Park Ave.	"	6-31,	26/"	1 76	
"	1	"	Grand Circle E. S. 1 N. 59th. St.	"	7-31,	25/"	1 70	
"	1	"	37th. St. N. S. 1 E. 11th. Avenue............	"	7-31,	25/"	1 70	
"	1	"	B'way N. W. Cor. 61st. St.	"	7-31,	25/"	1 70	
"	1	Ord'y	N. E. Cor. 72 St. & Madison.....................	"	7-31,	25/"	1 18	
"	1	S. Wels.	31 St. S. S. 3 E. Madison Ave.	"	9-31,	23/"	1 56	
"	1	"	38 St. N. S. 2 E. 8th. Avenue..................	"	9-31,	23/"	1 56	
"	1	"	29 St. S. W. Cor. 10th "	"	9-31,	23/"	1 56	
"	1	Ord'y	5th. Ave. N. E. Cor. 63rd St.	"	11-31,	21/"	99	
"	1	S. Wels.	49 St. N. S. 1 E. 10th. Ave.	"	11-31,	21/"	1 42	
"	1	"	32 St. N. S. 1 E. 5th. Ave.	"	13-31,	19 "	1 29	
"	1	"	41 St. N. S. 3 E. 1st Ave.	"	14-31,	18/"	1 22	
"	1	"	Lex. Ave. N. E. Cor. 24th St.	"	14-31,	18/"	1 22	
"	1	"	" " W. S. 1 N. " "	"	14-31,	18/"	1 22	
"	1	"	62 St. N. S. 1 E. Madison Ave.	"	14-31,	18/"	1 22	
"	1	"	29 St. N. S. 2 E. Lex. Ave.	"	16-31,	16/"	1 08	
"	1	"	66 St. N. S. 3 E. Col. "	"	17-31,	15/"	1 02	
"	1	"	38 St. N. S. 2 E. 11th. Ave.	"	19-31,	13/"	88	
"	1	Ord'y	Ft. W. 35 St. Dock N. S. 2 W. 12th............	"	19-31,	13/"	61	
"	1	S. Wels.	38 St. N. S. 1 E. 9th. Ave.	"	20-31,	12/"	81	
"	1	"	37 St. S. S. 2 E. 9th. Ave.	"	20-31,	12/"	81	
"	1	"	50 St. S. S. 3 E. 8th. Ave.	"	21-31,	11/"	75	
"	1	"	B'way S. W. Cor. 67 St.	"	21-31,	11/"	75	
"	1	"	61 St. S. S. 2 E. 7th Ave.	"	24-31,	8/"	54	
"	1	"	39 St. S. S. 2 E. 9th Ave.	"	24-31,	8/"	54	
"	1	"	52 St. S. S. 3 E. Park Ave.	"	25-31,	7/"	47	
"	1	"	63rd. St. E. S. 2 E. B'way........................	"	26-31,	6/"	41	
"	1	Ord'y	1st. N. W. Cor. 38th St.	"	27-31,	5/"	41	
"	1	"	47th. St. S. S. 2 E. 8th. Ave.	"	28-31,	4/"	27	
"	1	"	49th. St. S. S. 3 E. 10th. Ave.	"	31-31,	1/"	07	
"	1	"	86th. St. Trans. Rd. S. S. 4 E. 8 Ave.	"	2-31,	30/"	2 03	
"	1	"	100th St. N. S. 2 E. Manhattan..................	"	2-31,	30/"	2 03	
"	1	"	93 St. N. S. 1 E. West End Ave.	"	2-31,	30/"	2 03	
"	1	"	97th. St. Trans. Rd. N. S. 4 E. 8 Ave.	"	2-31,	30/"	2 03	
"	1	"	Amsterdam Ave. S. E. C. 93rd St.	"	5-11,	27/"	1 83	
"	1	"	86 Trans. Rd. S. S. 17 E. C. P. W. #34.	"	7-31,	25/"	1 70	
"	1	"	119 St. S. S. 4 E. 3rd. Ave.	"	9-31,	23/"	1 56	
"	1	"	B'way E. S. 1 N. 180 St.	"	11-31,	21/"	1 42	
"	1	Ord'y	Madison Ave. Bridge opp W. S. 4 N. 137th. St. .	"	12-31,	20/"	95	
"	1	"	2nd. Ave. N. E. Cor 129 St. Bridge Stairs.....	"	14-31,	18/"	85	
"	1	S. Wels.	146 St. S. S. 1 E. North River...................	"	13-31,	19/"	1 29	
"	1	"	136 St. N. S. 4 E. 7th. Avenue..................	"	14-31,	18/"	1 22	
"	1	"	B'way E. S. 1 N. Hawthorne St.	"	16-31,	16/"	1 08	
"	1	"	Lex. Ave. S. E. Cor. 127 St.	"	17-31,	15/"	1 02	
"	1	"	158th. St. S. S. 4 E. B'way.......................	"	17-31,	15/"	1 02	
"	1	Ord'y	Ship Canal Bridge S. App. E. S. 3 N. of B'way	"	18-31,	14/"	66	
"	2	"	" " " N. of So. Approach........	"	18-31,	14/"	1 32	
"	1	S. Wels.	146 St. N. S. 1 E. N. River.......................	"	21-31,	11/"	75	
"	2	"	Madison Ave. E. S. 1 & 2 N. 121 St.	"	22-31,	10/"	1 36	
"	1	"	107 St. N. S. 1 E. Lex. Ave.	"	23-31,	9/"	61	
"	1	"	105 St. S. S. 1 E. " "	"	23-31,	9/"	61	
"	1	"	117 St. N. S. 1 E. " "	"	25-31,	7/"	47	104 49
	16989							34,568 31
			To Repairing as follows:—					
emoved	1	Post	Carlisle St. N. S. 1 E. West St.				3 50	
"	1	"	33 St. S. S. 1 E. 9th. Avenue..................................				3 50	
"	1	"	West End Ave. E. S. 1 N. 68th. Street.......................				3 50	
"	1	"	7th. Ave. E. S. 1 N. 133rd St.				3 50	
Reset	1	"	Carlisle S. S. 1 E. West Street.................................				8 00	
"	1	"	South St. N. S. 2 E. Rutgers St.				8 00	
"	1	"	23rd. St. S. S. 3 E. 8th. A				8 00	
			Amount Carried Forward				38 00	34,568 31

Order No.				Designation.	Amount.	Amount.
				Amount Brought Forward	38 00	34,568 31
9	Reset	1	Post	65 St. S. S. 4 E. of 1st. Avenue	8 00	
9	"	1	"	64 " N. S. 3 " " 1st "	8 00	
20	"	1	"	74 " S. S. 1 " " Park Avenue	8 00	
28	"	1	"	66 " N. S. 3 " " Col. "	8 00	
22	"	1	"	38 " N. S. 2 " " 11th "	8 00	
10	"	.	"	93 " N. S. 1 " " West End Avenue	8 00	
	"	1	"	100 " N. S. 2 " " Manhattan "	8 00	
17	"	1	"	St. Nicholas Ave. E. S. 6 N. 137th. Street	8 00	
23	"	1	"	119th. St. N. S. 4 E. 3rd. Avenue	8 00	
15	Str't'd	1	"	Delancey St. N. S. 1 E. Tompkins Avenue	1 50	
1	Columns Refitted	1	"	Jones St. S. S. 1 E. Bleecker Street	3 50	
11	"	1	"	Marion St. W. S. 1 N. Broome Street	3 50	
1	"	1	"	Gouverneur Lane N. S. 1 E. Front St	3 50	
1	"	1	"	" " S. S. 1 " " "	3 50	
18	"	1	"	18th. St. S. S. 1 E. Avenue "B"	3 50	
16	"	1	"	10th. Ave. S. W. Cor. 29th. Street	3 50	
9	"	1	"	43rd. St. N. S. 1 W. 2nd Avenue	3 50	
19	"	1	"	47th. St. N. S. 1 E. " "	3 50	
22	"	1	"	W. 35th. St. Dock N. S. 3 E. Pier End	3 50	
32	"	1	"	32nd. St. N. S. 1 E. 5th. Avenue	3 50	
6	"	1	"	Amsterdam Ave. S. E. Cor. 93rd. St	3 50	
14	"	1	"	86th. Trans. Rd. S. S. 17 E. of C. P. W. #34	3 50	
28	"	1	"	Lex. Avenue S. E. Cor. 127 Street	3 50	
14	"	1	"	86th. St. Trans. Rd. S. S. 16 E. of C. P. West #32	3 50	
1	Column Releaded	1	"	Barrow St. N. S. 1 E. Bleecker St	2 50	
8	"	1	"	Montgomery St. N. S. 1 E. Front Street	2 50	
8	"	1	"	10th. Ave. W. S. 2 N. 14th. Street	2 50	
11	"	1	"	Leonard St. N. S. 1 E. Centre Street	2 50	
11	"	1	"	Batavia St. N. S. 1 E. New Chambers St	2 50	
11	"	1	"	Forsythe St. N. E. Cor. Bayard St	2 50	
11	"	1	"	Prince St. S. S. 1 E. Sullivan Street	2 50	
11	"	1	"	McDougal E. S. 2 N. Bleecker Street	2 50	
15	"	1	"	13th. St. N. S. 1 E. Washington Street	2 50	
27	"	1	"	Willett E. S. 2 N. Delancey Street	2 50	
24	"	1	"	Henry Street S. S. 1 E. Pike Street	2 50	
24	"	1	"	W. 4th. St. N. S. Opp. Jones Street	2 50	
11	Recaulked	1	"	Roosevelt St. W. S. 2 N. Cherry Street	1 00	
15	"	1	"	Broad St. E. S. 1 N. South Street	1 00	
3	"	1	"	135th. St. S. S. 2 E. 7th. Avenue	1 00	
17	"	1	"	131 St. N. S. 3 E. Lenox Avenue	1 00	
26	"	1	"	126 St. N. S. 5 E. " "	1 00	
26	"	1	"	126 St. N. S. 4 E. " "	1 00	
29	"	1	"	3rd. Avenue S. E. Cor. 93rd. Street	1 00	
38	"	1	"	135th. St. N. S. 2 E. Madison Avenue	1 00	
31	Ser. Pipe Refitted	1	"	Cornelia St. S. S. 1 E. Bedford Street	5 50	
31	"	1	"	" " " " 2 " " "	5 50	
33	"	1	"	Grove St. S. S. 1 E. Bedford Street	5 50	
24	"	1	"	Washington Sq. So. S. S. 1 E. Sullivan St	5 50	
39	"	1	"	James St. Junction New Chambers	5 50	
36	"	1	"	John St. S. S. 1 E. Nassau Street	5 50	
39	"	1	"	Manhattan Alley N. S. 2 W. Elm Street	5 50	
9	"	1	"	3rd. Avenue N. W. Cor. 67th. Street	5 50	
9	"	1	"	31st. S. S. 1 E. 2nd. Avenue	5 50	
12	"	1	"	Madison Avenue N. E. Cor. 72nd. Street	5 50	
25	"	1	"	24th. Street N. S. 7 E. 9th. Avenue	5 50	
12	"	1	"	Park Avenue S. E. Cor. 71st. Street	5 50	
20	"	1	"	75th. Street N. S. 5 E. 3rd. Avenue	5 50	
22	"	1	"	51st. " " " 4 " " "	5 50	
23	"	1	"	53rd " S. S. 3 " 10th "	5 50	
16	"	1	"	Amsterdam Av. E. S. 1 N. 68th. Street	5 50	
20	"	1	"	5th. Ave. N. E. Cor 63rd St	5 50	
				Amount Carried Forward	292 .00	34,568 31

Order No.				Designation.	Amount.	Amount.
				Amount Brought Forward	292 00	34,568 31
1	Stand Pipes Refitted	• 1	"	Jones St. S. S. 1 E. Bleecker St.	2 50	
31	"	1	"	Cornelia St. S. S. 1 E. Bedford	2 50	
31	"	1	"	" " S. S. 2 E. "	2 50	
33	"	1	"	Grove " S. S. 1 E. "	2 50	
18	"	1	"	18th " S. S. 1 E. Ave. B.	2 50	
24	"	1	"	Wash. Sq. So. S. S. 1 E. Sullivan St.	2 50	
39	"	1	"	James St. Junction New Chambers	2 50	
36	"	1	"	John " S. S. 1 E. Nassau St.	2 50	
9	"	1	"	3rd Ave. N. W. Cor. 57th Street	2 50	
9	"	1	"	31st St. S. S. 1 E. 2nd Ave.	2 50	
16	"	1	"	10th Ave. S. W. Cor. 29th St.	2 50	
12	"	1	"	Madison Ave. N. E. Cor. 72d St.	2 50	
25	"	1	"	24th St. N. S. 7 E. 9th Ave.	2 50	
12	"	1	"	Park Ave. S. E. Cor. 71st St.	2 50	
20	"	1	"	75th St. N. S. 5 E. 3rd Ave.	2 50	
22	"	1	"	61st St. N. S. 4 E. 3rd Ave.	2 50	
25	"	1	"	53rd St. S. S. 3 E. 10th Ave.	2 50	
16	"	1	"	Amsterdam Ave. E. S. 1 No. 68th St.	2 50	
20	"	1	"	60th St. N. S. 1 E. Amsterdam Ave.	2 50	
32	"	1	"	W. 35th St. Dock N. S. 3 E. Pier End	2 50	
32	"	1	"	32nd St. N. S. 1 E. 5th Ave.	2 50	
20	"	1	"	5th Ave. N. E. Cor. 63rd St.	2 50	
6	"	1	"	Amsterdam Ave. S. E. Cor. 93rd St.	2 50	
						349 50
						$34,917 81
				Deduct 298 outages @ 17.25 per an.	$14 06	
				" 3534 " @ 24.75 " "	239 60	
						$253 66
						$34,664 15

5762

8403 THE CITY OF NEW YORK,

Secs. 469-530, Chap. 466, Laws of 1901.

To CONSOLIDATED GAS COMPANY, *Dr.*

On ac-ount of appropriation for Lamps and Lighting, Boroughs of Manhattan and The Bronx.

Date, 1905	DESIGNATION.	Amt. Dols.	Amt. Cts.
February 1	To supply of Gas to and Lighting, etc., Public Lamps as per Contract, as follows: Month of January, 1905, as per annexed bill	34,664	15
Total Dollars: Thirty-four thousand six hundred and sixty-four 15/100	....	$34,664	15

THE CITY OF NEW YORK, *ss:*

....

being duly sworn, deposes and says, that the items in the bills specified in the above schedule are correct; that the services specified and articles therein enumerated have in fact been performed and furnished, and by due authority; that the prices charged therein are reasonable and just; that no perquisites, commissions or allowances of any kind, other than as stated in the said account, have been or will be paid, directly or indirectly, in consideration of the procurement of said articles or services; and that the said bills have not been either in whole or any part paid, satisfied or as-igned, and that the full amount is now justly due.

....

Sworn to before me, ...190 .

......................,
Notary Public,

8404 I certify that I have duly examined the above account, and compared the same with the contract, and that the work done is in accordance therewith, and that payment is due thereon, as specified in the above account, as per contract.

C. F. LACOMBE,
Engineer of Surface Construction.

I hereby certify that I have examined the above account and believe it to be correct; that the articles therein specified were necessary and have been received in good condition by this Department, for the use and on account of The City of New York; that the prices charged are just and reasonable, and such services as are therein specified have been properly performed; and that the said articles have been or will be used for and applied to the service and for the purposes of The City of New York, and that the payment of the amount of said account will not exceed the unexpended balance of the sum duly appropriated by law for the purpose thereof.

..........................,
Commissioner of Water Supply, Gas and Electricity.

Received at the office of the Comptroller, in The City of New York, this .... day of .... 190.., from Edward M. Grout, Comptroller, a warrant on the Chamberlain for the sum of ..../100 Dollars, in full payment of the above amount.
$.......... ....

Endorsed: Voucher No...... Requisition No.... Department of Water Supply, Gas and Electricity. Lamps and Gas. Consolidated Gas Company. Lighting Public Lamps. Month of January, 1905. $34,664.15. Appropriation for Lamps and Lighting, Boroughs of Manhattan and The Bronx. Sections 469-530, Chapter 466, Laws of 1901.

8405 CITY OF NEW YORK, *ss:*

Edward J. McKavanagh, M. Gilmore, J. J. Fitzpatrick, W. F. J. Dolan, and J. W. Prenderville, Inspectors of Lamps under the Department of Water Supply, Gas and Electricity, each being duly sworn, doth depose and say that he is assigned to the district lighted by the Consolidated Gas Company, and that he has regularly examined the public lamps in said District, and that the lamps specified on the annexed bill of said Company were regularly lighted and extinguished in accordance with the time table; also that all the work has been performed to the best of deponent's knowledge and belief.

JAMES J. FITZPATRICK.
MICHAEL GILMORE.
WILLIAM F. J. DOLAN.
JOHN W. PRENDERVILLE.
EDWARD J. McKAVANAGH.

Sworn to before me this 17th day of March, 1905.
(Signd.) LOUIS ARNSTEIN,
Commissioner of Deeds.

CITY OF NEW YORK, *ss:*

Louis Arnstein, Inspector of Lamps under the Department of Water Supply, Gas and Electricity, being duly sworn, doth depose and say that he is assigned to the District lighted by the Consolidated Gas Company, and that he has regularly examined the public lamps in said District, and that the lamps specified on the annexed bill of said Company were regularly lighted and extinguished in

8406 accordance with the time table; also that all the work has been performed to the best of deponent's knowledge and belief.

(Signed) LOUIS ARNSTEIN.

Sworn to before me this 15th day of March, 1905.

(Sgnd.) T. McCORMACK,
Commissioner of Deeds.

CITY OF NEW YORK, *ss:*

Edward J. McKavanagh, M. Gilmore, Pierce J. Whalen, N. C. Conlon, Inspectors of Lamps under the Department of Water Supply, Gas and Electricity, each being duly sworn, doth depose and say, that he is assigned to the districts lighted by the Consolidated Gas Company, and that he has regularly examined the public lamps in said district, and that the lamps specified on the annexed bill of said Company were regularly lighted and extinguished in accordance with the time table; also that all the work has been performed to the best of deponent's knowledge and belief.

(Signed) MICHAEL GILMORE.
PIERCE J. WHALEN.
EDWARD J. McKAVANAGH.
N. C. CONLON.

Sworn to before me this 16th day of March, 1905.

(Sgn.) LOUIS ARNSTEIN,
Commissioner of Deeds.

8407 STATE OF NEW YORK,
County of New York, ss:

Colin C. Simpson, being duly sworn, says that he is the General Superintendent of Lamps of the Consolidated Gas Company, being the corporation which, on or about ....entered into an agreement with the City of New York, for the furnishing, operating, and maintaining of gas lamps in, and for lighting the streets, public buildings and parks of the Borough of Manhattan, in said City, for the term of one year from January 1, 190 .

That during the month of January, 1905, the said corporation duly performed and fulfilled the said contract in all the particulars and conditions therein described to be performed and fulfilled upon its part; and particularly that during said month it furnished the illuminating material of the quality in the said contract specified, that all the lanterns specified in the annexed bills, were, during said month cleaned three times in each week of said month; and, also, that the gas burners during said month consumed Three (3) cubic feet of gas each per hour, as required by said agreement, during all the time that the lamps were required to be kept lighted in said month.

That this deponent is able to make the foregoing affidavit for the reason that it is his duty, on behalf of said corporation, to ascertain whether or not it has complied with the particulars and conditions of the said contract; and that he has examined the books and

records of the said corporation and has received reports from its various subordinates charged with such duties, by which
8408 records and reports he is informed that the statements herein made are in each and every respect correct.

(Signed) COLIN C. SIMPSON.

Sworn to before me this 2d day of February, 1905.

(Sgn.) WALLACE YOUNG,
Notary Public, Kings County.

Certificate filed in N. Y. County.

STATE OF NEW YORK, *County of New York, ss:*

Colin C. Simpson, being duly sworn, deposes and says that he is the Gen'l Supt. of Lamps of the Consolidated Gas Company, being the corporation which, on or about .... entered into an agreement with .... for the furnishing, operating, repairing and maintaining of gas lamps in, and for lighting the streets, public buildings and parks of the Borough of Manhattan, in The City of New York, for the term of .... years from ....

That during the month of January, 1905, the said corporation fully performed and fulfilled the said contract in all the particulars and conditions therein described to be performed and fulfilled upon its part; and particularly that during said month the gas lamp-posts, charges for the removal, shifting, changing of location or repairs of which are contained in the annexed bill of the Consolidated Gas Company for said month, were removed, shifted, changed or repaired as in said bill specified; that the work was done by order of the Department of Water Supply, Gas and Electricity, and that the prices charged and the work done are in all respects in accordance with the terms of said contract.

8409 That this deponent is able to make the foregoing affidavit for the reason that it is his duty, on behalf of the said corporation to ascertain whether or not it has complied with the particulars and conditions of the said contract; and that he has examined the books and records of the said corporation and has received reports from its various subordinates charged with such duties, by which records and reports he is informed that the statements herein made are in each and every respect correct.

(Signed) COLIN C. SIMPSON.

Sworn to before me this 2d day of February, 1905.

(Signed) WALLACE YOUNG,
Notary Public, Kings County.

Certificate filed in New York County.

8410

CITY'S EXHIBIT 72.

November 27, 1906.

The People of the State of New York, by the Grace of God, free and independent, to all to whom these presents shall come, Greeting:

Whereas, in the last section of the act entitled "An Act relative to improvements touching the laying out of Streets and roads in the City of New York and for other purposes" passed the third day of April one thousand eight hundred and seven it is recited and enacted in the words following to wit: "*And Whereas* for the purpose of duly regulating and constructing slips and basins and for running out wharves and piers it is essential that the right to the land under water below low water mark should be vested in the corporation of the City of New York Be it therefore further enacted That it shall and may be lawful for the Commissioners of the Land Office and they are hereby directed to issue Letters patent granting to the Mayor, Aldermen and Commonalty of the City of New York and their successors forever all the right and title of the people of this State to the lands covered with water along the easterly shore of the North or Hudson River contiguous to and adjoining the lands of the said Mayor, Aldermen and Commonalty within the said City of New York at and from low water mark and running four hundred feet into the said river from Bestaver's Killetje or river to the distance of four miles to the North along the easterly shore of the said North or Hudson River and also all the land covered with water along the westerly shore of the East River or sound contiguous to and adjoining the lands of said Mayor, Aldermen and Commonalty at and from low water mark and extending four hundred feet into the said river or sound from the North side of Corlaer's Hook at the northerly boundary of the lands covered with 8411 water whereof the said Mayor, Aldermen and Commonalty are now seized to the distance of two miles to the North along the westerly shore of the said East River or sound. Provided always that the proprietor or proprietors of the lands adjacent shall have the pre-emptive right in all grants made by the Corporation of said city of any lands under water granted to the said Corporation by this Act." Now Therefore in order to carry into effect the provisions contained in the said section Know Ye that we have given, granted and confirmed and by these presents do give, grant and confirm unto the Mayor, Aldermen and Commonalty of the City of New York All the aforesaid pieces or parcels or land under water situate in the said City of New York abutted, bounded and described in manner and form as in the said section as above mentioned. Together with all and singular the rights, hereditaments and appurtenances to the same belonging or in any wise appertaining. To Have and to Hold the above described and granted premises unto the said Mayor, Aldermen and Commonalty of the City of New York and their successors as a good and indefeasible estate of inheritance forever.

In Testimony Whereof we have caused these our Letters to be made patent and the Great Seal of our said State to be hereunto affixed.

Witness our trusty and well beloved Daniel D. Tompkins, Esquire, Governor of our said State, General and Commander in chief of all the militia and Admiral of the navy of the same at our *our* City of Albany, the twenty-sixth day of December in the year of our Lord one thousand eight hundred and seven and in the thirty-second year of our Independence.

8412 I have examined the within Letters-patent and do certify that the same are conformable to the order and proceedings of the Commissioners of the Land Office and in due form of law. John Woodworth, Att'y Gen'l. Passed the Secretary's Office the 26th day of December, 1807. Ben. Ford, Dep. Sec'ry.

DANIEL D. TOMPKINS.

Examined and compared with the original by

BEN FORD,
Dep. Sec'ry.

8413 CITY'S EXHIBIT 74.

November 27, 1906.

The People of the State of New York, by the Grace of God, free and independent, to all to whom these presents shall come, Greeting:

Whereas in the first section of the act entitled "An act relative to improvements in the City of New York" passed February 25th 1826 it is enacted as follows to wit: "Be it enacted by the people of the State of New York represented in Senate and Assembly that it shall and may be lawful for the Commissioners of the Land Office and they are hereby directed to issue Letters Patent granting to the Mayor, Aldermen and Commonalty of the City of New York and their successors forever all the right and title of the People of this State to the Lands covered with water along the Easterly shore of the North or Hudson's river contiguous to and adjoining the Lands of the said Mayor, Aldermen and Commonalty within the said City of New York at and from low water mark and running four hundred feet into the said river from a point on the easterly shore of said river four miles north from Bestaver's Killitje and extending therefrom north along the easterly shore of said river to Spuyten Duyvil Creek otherwise called Kingsbridge Creek or Harlem River and also all the land covered with water along the westerly shore of the East River or sound contiguous to and adjoining the lands of the said Mayor, Aldermen and Commonalty at and from low water mark and extending four hundred feet into the said river or sound from a point on the westerly shore of said river or sound two miles north from Corlear's Hook and extending therefrom North along the westerly shore of the said East River or sound to Spuyten Duyvil

Creek otherwise called Harlem River provided always that 8414 the proprietor or proprietors of the lands adjacent shall have the pre-emptive right in all grants made by the Corporation of the said City of any lands under water granted to the said Corporation by this Act." Now therefore in order to carry into effect the provisions contained in the said section Know Ye that We have given, granted and confiermed and by these presents do give, grant and confirm unto the Mayor, Aldermen and Commonalty of the City of New York all the aforesaid pieces or parcels or land under water situate in the said City of New York abutted, bounded and described in manner and form as in the said section is above mentioned Together with all and singular the rights, hereditaments and appurtenances to the same belonging or in any wise appertaining To Have and To Hold the above described and granted premises unto the said Mayor, Aldermen and Commonalty of the City of New York and their successors as a good and indefeasible estate of inheritance forever.

In Testimony Whereof we have caused these our Letters to be made Patent and the Great Seal of our said State to be hereunto affixed. Witness De Witt Clinton, Esquire, Governor of our said State, General and Commander in Chief of all the Militia and Admiral of the Navy of the same at our City of Albany the Twenty-fifth day of March in the Year of our Lord one thousand Eight hundred and twenty-six in the fifteenth year of Independence. Passed the Secretary's Office the 25th day of March, 1826. Archd Campbell Dep. Secretary.

I have examined the preceding Letters patent and do 8415 certify that the same are conformable to the order and proceedings of the Commissioners of the Land Office and in due form of Law. Saml. A. Talcott, Att'y. Gen'l.

DE WITT CLINTON.

Examined and compared with the Original.
ARCHD. CAMPBELL,
Dep. Secretary.

8416 CITY'S EXHIBIT 87.

INDEX TO REPORT ON EXHIBIT NO. 94.

REPORT ON EXHIBIT No. 94, PAGES 1 TO 38.

Exhibit "A," Minutes of Meetings, Numbers 1 to 12, of the Advisory Board of Engineers appointed to advise with the Accountants during the course of their Examination.

Exhibit "B," Statement of Quantities of Gas Manufactured and Purchased under Agency Agreements, together with the Amounts Sold to Consumers and for Public Lighting during Year 1905.

Exhibit "C," Exhibit No. 94, Summary of Operations for Calendar Year 1905, as submitted by the Complainant, the Consolidated Gas Company of New York.

Schedule "1," Depreciation Account, as per Operating Ledger.
Exhibit "D," Exhibit No. 94, Summary of Operations for Year ended December 31, 1905, amplified and adjusted as a result of our Examination.
Schedule "2," Repairs to Apparatus—Operating Charges taken exception to.
Schedule "3," Repairs to Buildings—Operating Charges taken exception to.
Schedule "4," Gas Purchased under Agency Agreements.
Schedule "5," Extensions and increases of ser-
ing the New York State Com-
Schedule "6," Legislative Investigation Expenses, Charged to Expense Account, taken exception to.
8417 Schedule "7," Extraordinary Expenses, charged to General Office Expenses, taken exception to.
Schedule "8," Claims for Damages, charged to Operating Expenses, taken exception to.
Exhibit "E," Monthly Record of Gas Manufactured.
Part "1," 14th Street Station.
Part "2," 42nd Street Station.
Part "3," 21st Street Station.
Part "4," 44th Street Station.
Part "5," 99th Street Station.
Appendix "I," Insurance Carried on Works and Plants.
Appendix "II," Agency Agreements for Purchase of Gas.
Appendix "III," List of Officials and Employees—General Office.

8418 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Hon. Arthur H. Masten, Special Master.

Report of Marwick, Mitchell & Co., Chartered Accountants.

Employed by the City of New York.

NEW YORK, *November* 26, 1906.

To Hon. William B. Ellison, Corporation Counsel, Solicitor for the Defendant, The City of New York, William P. Burr, Esq., of Counsel.

8419 GENTLEMEN:

In accordance with your instructions, we have made an examination of the Operating Accounts of the Consolidated Gas Company of New York to ascertain the cost of gas supplied to private consumers in the City of New York by that Company during the year 1905. In submitting this report, we incorporate in it our criticisms of the Company's Exhibit No. 94, a Summary of Operations for 1905, submitted by the Complainant in the above entitled action. We also submit the Exhibits and Schedules specified in the Index attached hereto.

To co-operate with and advise us on all matters requiring technical engineering knowledge during the course of our examination, a Board of Advisory Engineers was appointed, consisting of Mr. C. V. Lacombe, Chief Engineer of the City of New York, Mr. H. H. Edgerton, Gas Engineer, and Dr. W. D. Marks, Consulting Engineer. At the first meeting of this Board, Mr. Lacombe was elected Chairman. Thereafter meetings were held twice weekly. Minutes of these meetings, twelve in number, were regularly kept to record the decisions of the Board on the various subjects discussed. Copies thereof are submitted in Exhibit "A," as we have occasion, during the course of this report, to refer to them in detail.

We examined all the vouchers and payrolls, approving those which appeared to be proper charges to their respective accounts, and rejecting those which failed to meet our requirements. Those of the latter category were then scheduled and submitted to the Advisory Board of Engineers, who either supported the objections taken by us or admitted the expenditure as reasonable charges to the Manufacture and Distribution of Gas. Upon completion of this examination by the Advisory Board, we scheduled the
8420 rejected vouchers by stations; for example, all charges to 14th Street Station for Repairs to Apparatus, were included in a separate schedule. Thus arranged, these expenditures were again submitted to the Board. Their final disposition of the item is recorded in the Minutes of their meetings.

By working night and day with three shifts of assistants, we checked the postings of the Operating Ledger and satisfied ourselves that all the vouchers pertaining thereto had been produced for our inspection. We also made a thorough examination of the payroll tickets of the workmen.

We verified the output of gas by making a substantial test check of the Consumers' Ledgers in the various offices of the Company.

CONCLUSIONS.

We now submit the general conclusions at which we have arrived.

1. We find that the total cost of manufacturing and distributing the gas sold to private consumers in the City of New York by the Consolidated Gas Company during the year 1905, was 52.50 cents per 1,000 cubic feet. This cost includes a charge for depreciation of 1.71 cents per 1,000 cubic feet, the same as made by the Company in its accounts.

2. We further find that Exhibit No. 94 as submitted by the Consolidated Gas Company in support of their contention that the cost of gas for 1905 was 74.81 cents per 1,000 cubic feet, includes a

8421 number of charges which do not appear to us to be properly applicable to the cost of Manufacturing and Distributing Gas. The following is a summary of the amounts excluded by us:

	Amount per 1,000 cu. ft.	
Cost of Street Lamps	2.18	cents
Interest on Consumers' Deposits	.39	"
Interest on Funded Debt	7.32	"
Tax on Surplus Profits, etc	1.68	"
Legislative and Franchise Litigations, etc	.61	"
Contingencies, less 1.71 cents allowed as Depreciation	8.29	"
Profit added to cost of gas purchased	1.08	"
Adjustment of Gas Stove Accounts	.92	"
Sundry Adjustments	*.16	"
	22.31	cents

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* Red ink in original.

3. The cost of manufacturing, included in the total cost of 52.50 cents per 1,000 cubic feet, amounts to 32.39 cents, contrasted with an average cost of 29.14 cents for the companies supplying gas to the Consolidated Company under agency contracts, as shown by their statements rendered to the latter Company.

DETAILED REPORT.

QUANTITIES OF GAS MANUFACTURED, PURCHASED AND SOLD.—We here submit a summary of the record of Gas Manufactured, Purchased under Agency Agreements, and sold to consumers and to the City for Public Lighting, as more fully detailed in Exhibit "B":

8422

		Cubic feet.
Gas in holder on January 1, 1905.		26,552,000
Manufactured during 1905	10,657,810,000	
Purchased under Agency Agreements	2,932,178,922	
		13,589,988,922
Total gas to be acounted for		13,616,540,922
Consumed during 1905:		
General Consumers	13,012,384,090	
Public Lamps	270,779,677	
Other Companies	2,968,600	
	13,286,132,367	
In holder on December 31, 1905	29,418,000	
Total gas accounted for		13,315,550,367
Leakage (including amount used by Company 64,077,056 cubic feet) 2.215 per cent. of manufacture		300,990,555

As per Consolidated Gas Company				As per Marwick, Mitchell & Co.		*Increase or Decrease	
Account	Cost Per M Cu. Ft.	Amount		Amount	Cost Per M Cu. Ft.	Amount	Per M Cu. Ft.
Divisor 10,419,461 M Cu. Ft.				Divisor 10,657,810 M Cu. Ft.			
Manufacturing			*Coal*				
1	7.00¢	$729,606.21	Bituminous	$729,606.21	6.84¢	—	**.16¢
2	4.44	462,680.25	Anthracite	462,680.25	4.34	—	.10
3	.37	38,156.43	Boiler	38,156.43	.36	—	.01
4	.18	18,222.89	Cartage	18,222.89	.17	—	.01
5	.47	49,150.07	Labor Handling	40,150.07	.46	—	.01
6	12.46	1,297,815.85	Total Coal	$1,297,815.85	12.17		.29
7			*Residuals*				
8	3.25	338,300.91	Coke	338,300.91	3.17	—	.08
9	.34	35,678.39	Less: Labor Handling	35,678.39	.34	—	—
10	.11	11,164.97	Cartage	11,164.97	.10	—	.01
11	2.80	291,457.55	Net Coke	291,457.55	2.73	—	.07
12	.63	65,546.70	Tar Coal	65,546.70	.62	—	.01
13	.63	65,849.65	Ammoniacal Liquor	65,849.65	.62	—	.01
14	.05	4,857.20	Carbon	4,857.20	.04	—	.01
15	.06	6,196.47	Spent Oxide	6,196.47	.06	—	—
16	.50	52,207.26	Oil Tar	52,207.26	.49	—	.01
17	4.67	486,114.83	Total Residuals	486,114.83	4.56	—	.11
18	7.79	811,701.02	Net Cost Less Residuals, forward	$811,701.02	7.61	—	.18

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* Red Ink in Original.

** Note.—This difference per M Cubic Feet is due to the difference in the Divisor, *i.e.*, the amount of Gas manufactured.

	As per Consolidated Gas Company			As per Marwick, Mitchell & Co,		*Increase or Decrease	
Ac-count	Cost Per M Cu. Ft.	Amount		Amount	Cost Per M Cu. Ft.	Amount	Per M. Cu. Ft.
18	7.79¢	$811,701.02	Forward	811,701.02	7.61¢	—	**.18¢
			Coke Used				
19	.61	63,972.09	Coke Used	63,972.09	.60	—	.01
20	.01	1,293.31	Labor	1,293.31	.01	—	—
21	—	43.87	Cartage	43.87	—	—	—
22	.62	65,309.27	Total Coke used	65,309.27	.61	—	.01
			Miscellaneous				
23	—	244.43	Naphtha	244.43	—	—	—
24	16.99	1,769,968.42	Gas Oil	1,769,968.42	16.61	—	.38
25	—	50.04	Fuel Oil	50.04	—	—	—
26	.03	3,114.02	Lime	3,114.02	.03	—	—
27	.18	19,173.35	Oxide	19,173.35	.18	—	—
28	.22	22,684.20	Water	22,684.20	.22	—	—
29	.04	4,424.70	Fuel Oil, Labor	4,424.70	.04	—	—
30	.06	5,407.15	Oil, Waste and Sundries	5,407.15	.05	—	.01
31	.17	17,123.60	Cartage	17,123.60	.16	—	.01
32	3.67	382,632.04	Labor	382,632.04	3.59	—	.08
	21.36	2,224,821.95	Total Miscellaneous	2,224,821.95	20.88	—	.48
33	29.77	3,101,832.24	Total Material and Labor	3,101,832.24	29.10	—	**.67
			Repairs and Expenses				
34	1.62	169,197.39	Repairs to Apparatus	167,063.41	1.57	2,133.98	.05
35	.24	24,900.69	Repairs to Buildings	24,812.19	.23	88.50	.01
36	.16	16,228.48	Repairs to Tools and Implements	16,228.48	.15	—	.01
37	.57	59,016.97	Expenses	59,016.97	.55	—	.02
38	.31	31,855.34	Distribution	31,855.34	.30	—	.01
39	.03	3,030.08	Experiments	3,030.06	.03	—	—
40	*.07	*7,508.39	Profit and Loss Adjustment	*7,508.39	*.07	—	—
41	.54	56,538.57	Distributing Station Expense	56,538.57	.53	—	.01
	3.40	353,259.13	Total Repairs and Expenses	351,036.65	3.29	2,222.48	.11
42	33.17	3,455,091.37	Total Station Cost	3,452,868.89	32.39	2,222.48	.78
(Divisor 2,929,210,322 Cu. Ft.)				(Divisor 2,932,178,922 Cu. Ft.)			
43	34.82	997,039.89	Cost of Manufacturing Gas purchased under Agency Agreements	854,459.57	29.14	142,580.32	5.68

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*Red Ink in Original.

***Note.*—This difference per M Cubic Feet is due to the difference in the Divisor, *i.e.*, the amount of Gas Manufactured.

As per Consolidated Gas Company Account	Cost Per M Cu. Ft.	Amount		As per Marwick, Mitchell & Co. Amount	Cost Per M Cu. Ft.	*Increase or Decrease Amount	Per M. Cu. Ft.
Divisor 13,283,163,767 Cu. Ft.				Divisor 13,589,988,922 Cu. Ft.			
44	33.52¢	4,452,131.26	Total Cost of all Gas at Holder	$4.307,328.46	31.69¢	144,802.80	1.83¢
Distribution							
Divisor 13,283,163,767 Cu. Ft.				Divisor 13,012,384,090 Cu. Ft.			
45	3.69	490,855.36	Expense	490,855.36	3.77	—	*.08
46	2.12	281,524.12	Distributing	281,524.12	2.16	—	*.04
47	.42	55,954.35	Repairs to Gas Stoves	*11,413.27	*.09	67,367.62	.51
48	.95	126,110.31	Repairs to Mains	126,110.31	.97	—	*.02
49	.67	89,033.46	Repairs to Services	87,183.15	.67	1,850.31	—
50	1.30	172,925.52	Repairs to Meters	172,925.52	1.33	—	*.03
51	.11	15,116.68	Repairs to Buildings	12,270.93	.09	2,845.75	.02
52	.11	15,610.59	Repairs to Tools and Implements	15,610.59	.12	—	*.01
53	2.18	289,259.09	Street Lamps	—	—	289,259.09	2.18
54	.39	51,391.52	Interest on Consumers' Deposits	—	—	51,391.52	.39
55	.63	82,995.11	Bad and Doubtful Debts	82,995.11	.64	—	*.01
56	*.22	*29,683.92	Profit and Loss Adjustment	*29,683.92	*.23	—	.01
57	12.35	1,641,092.19	Total Distribution	1,287,377.90	9.43	412,714.29	2.92
	45.87	6,093,223.45	Total Material, Labor & Distribution	5,535,706.36	41.12	557,517.09	4.75
General Expense							
58	2.56	339,999.51	Expense, General Office	308,923.56	2.37	31,075.95	.19
59	.06	8,175.20	Vacations and Sickness	8,175.20	.06	—	—
60	.04	5,064.16	Automobiles	5,064,16	.04	—	—
61	.80	105,800.02	Advertising and Legal	42,398.37	.32	63,401.65	.48
62	.32	42,674.71	Real Estate Rents	42,049.71	.32	625.00	—
63	.05	6,413.99	Gas Co.'s Mutual Aid Society	6,413.99	.05	—	—
64	.11	14,943.86	Superannuation	14,943.86	.12	—	*.01
65	.41	54,031.83	Insurance	53,879.39	.41	152.44	—
66	7.27	965,843.88	Taxes	743,151.26	5.71	222,692.62	1.56
67	10.00	1,328,316.37	Contingent Expenses	167,427.84	1.29	1,160,888.53	8.71
68	21.62	2,871,263.53	Total General Expenses	1,392,427.34	10.69	1,478,836.19	10.93
69	7.32	972,423.44	Fixed Charges	—	—	972,423.44	7.32
70	74.81¢	9,936,910.42	Total Operating	6,928,133.70	51.81	3,008,776.72	23.00
			Add: Adjustment on account of Leakage, 300,990,555 Cu. Ft. at Cost of Manufacture	—	.73	—	*.73
			Discount, etc.	*5,395.36	*.04	5,395.36	.04
				$6,922,738.34	52.50	3,014,172.08	22.31

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*Red Ink in Original.

These figures differ from those submitted by the Consolidated Gas Company inasmuch as they take into account the quantities of gas on hand at the beginning and the end of the period. In arriving at them no account was taken of the unmetered gas. This, however, would not materially change the difference here treated as a leakage.

In order to determine the different costs per 1,000 cubic feet, it is necessary to divide the manufacturing expenses by 10,657,810,000 cubic feet, the quantity manufactured; the expenses of manufactured and purchased gas by 13,589,988,922 cubic feet, and the distribution and general expenses by 13,012,384,090 cubic feet, the quantity sold to General Consumers, excluding Public Lamps and other Companies.

EXHIBIT No. 94, SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR 1905.—As a matter of record, we submit in Exhibit "C" a copy of Exhibit No. 94, Summary of Operations for the Calendar Year 1905, as submitted by the Complainants, the Consolidated Gas Company of New York.

8423 In Exhibit "D" we submit the same statement, prepared by us in greater detail and adjusted in acordance with the facts brought out by our investigation.

The following is an abstract of the two Exhibits "C" and "D":

(Here follow facsimiles marked pp. 8424, 8425, and 8426.)

8427 From the above it will be observed that the Gas Company make their total Operating Cost $9,936,910.42, or 74.81 cents per 1,000 cubic feet. By eliminating certain items which do not properly apply thereto, we make the cost $6,922,738.34, or 52.50 cents per 1,000 cubic feet, a difference of $3,014,172.08 or 22.51 cents per 1,000 cubic feet. Before discussing the various items to which we have taken exception, we would explain that there is a very material difference between the methods to be adopted in determining what charges can properly be made to a Profit and Loss Account and what to a statement of the cost of an article or unit of its manufacture. The Gas Company, in the statement submitted by them, has included all the charges included in their Profit and Loss Account. In our opinion, such a procedure is distinctly wrong for the reasons that we hereafter state in referring to the items.

Accounts 1-33, Net Amount of Material and Labor, $3,101,832.24.—The net amount of Material and Labor represents the aggregate of all items of material and labor less the amounts received for Residuals sold. It is equivalent to 29.10 cents per 1,000 cubic feet of gas manufactured. We examined the items comprising this total and found them correct. In addition, we made an analysis of the Manufacturing Records, which contain in detail the manufacturing averages and results. As these will, in all probability, be of assistance to the engineers in drawing their conclusions, we submit them in Exhibit "E," as follows:

COAL GAS STATIONS.

Part "1"	14th Street Station.
Part "2"	42nd Street Station.

8428

WATER GAS STATIONS.

Part "3"	21st Street Station.
Part "4"	44th Street Station.
Part "5"	99th Street Station.

Account 34, Repairs to Apparatus.—The amount charged under this classification, together with the amounts improperly charged to Operating Expenses, being correctly Construction items, are shown by stations with the relative cost in the following statement:

Station.	Labor.	Material.	Total cost.	Per M cu. ft. mnfd., cents.	Amount rejected.	Amount allowed.
14th Street....	$28,962.02	17,919.15	46,881.17	3.55	112.50	46,768.67
21st Street.....	26,506.22	37,739.83	64,246.05	1.42	1,568.90	62,677.15
42nd Street....	13,278.16	10,306.38	23,584.54	1.90	105.00	23,479.54
44th Street....	10,838.99	11,486.08	22,325.07	.98	144.40	22,180.67
99th Street....	6,988.13	5,172.43	12,160.56	.93	203.18	11,957.38
	$86,573.52	82,623.87	169,197.39	1.59	2,133.98	167,063.41

Authority for these rejections, as detailed in Schedule "2," will be found in Minutes of Meetings dated November 10.

Account 35, Repairs to Buildings.—Under this heading the amount charged along with the amounts improperly charged against Operating Expenses, are shown in the following statement, the details being included in Schedule "3." Authority for these rejections will be found in Minutes of Meetings of the Advisory Board held on November 10.

Station.	Labor.	Material.	Total cost.	Per M cu. ft. mnfd., cents.	Amount rejected.	Amount allowed.
14th Street....	$3,323.74	1,168.47	4,492.21	.34	....	4,492.21
21st Street....	5,049.95	3,854.66	8,904.61	.19	15.00	8,889.61
42nd Street....	3,361.99	1,204.39	4,566.38	.37	48.50	4,517.88
44th Street....	2,887.04	755.01	3,642.05	.16	25.00	3,617.05
99th Street....	1,584.06	1,711.38	3,295.44	.25	....	3,295.44
	$16,206.78	8,693.91	24,900.69	.23	88.50	24,812.19

8429 Account 36, Repairs to Tools and Implements.—This account, together with the cost of manufacture per 1,000 cubic feet manufactured at each station, is as follows:

Station.	Labor.	Material.	Total cost.	Per M cu. ft. Mnfd., cents.
14th Street..........................	$1,425.54	4,427.95	5,853.49	.44
21st Street	1,510.85	1,973.11	3,483.96	.08
42nd Street..........................	3,669.75	907 86	4,577.61	.37
44th Street.	1,274.42	221.42	1,495.84	.07
99th Street..........................	710.25	107.33	817.58	.56
	$8,590.81	7,637.67	16,228.48	.15

The charges are proper ones against the Cost of Manufacturing Gas.

Account 37, Expenses.—This account is classified as follows:

Station.	Labor.	Material or sundries.	Total.	Per M cu. ft. Mnfd., cents.
14th Street..........................	$6,444.83	3,622.91	10,067.74	.76
21st Street	13,998.23	6,735.76	20,733.99	.46
42nd Street..........................	7,188.08	4,124.21	11,312.29	.91
44th Street..........................	4,669.53	3,911.02	8,580.55	.38
99th Street..........................	5,874.69	2,447.71	8,322 40	.64
	$38,175.36	20,841.61	59,016.97	.55

It is composed of proper charges to the cost of Manufacturing Gas.

ACCOUNT 38, DISTRIBUTION.—This account is made up as follows:

Station.	Labor.	Material.	Total.	Mnfd, cents. Per M cu. ft.
14th Street........................	$7,389.15	3,894.04	11,283.19	.86
21st Street	5,425.01	9,498.95	14,923.96	.33
42nd Street........................	1,916.51	....	1,916.51	.15
44th Street........................	1,825.00	....	1,825.00	.08
99th Street........................	1,855.13	51.55	1,906.68	.15
	$18,410.80	13,444.54	31,855.34	.30

8430 The charges included in this Account also appear to be proper charges to the Manufacture of Gas.

ACCOUNT 39, EXPERIMENTS.—An amount of $3,030.08, or .03 cents per 1,000 cubic feet of gas manufactured, has been charged on account of "experiments," to the Cost of Manufacturing Gas. This is, in our opinion, a legitimate charge and we have accordingly allowed it.

ACCOUNT 40, PROFIT AND LOSS ADJUSTMENT.—There is a credit balance of $7,508.39 on this account. It is made up of Sundry credits on account of sales of scrap iron, etc. It represents .07 cents per 1,000 cubic feet of gas manufactured.

ACCOUNT 41, DISTRIBUTING STATION EXPENSES.—This account, amounting to $56,538.57 or .53 cents per 1,000 cubic feet of gas manufactured, is made up as follows, and the charges are, in our opinion, proper:

	Station.					
	18th St.	63rd St.	65th St.	111th St.	Inwood.	Total.
Coal	....	....	....	2,301.03	35.31	2,336.34
Coke................	$1,226.75	1,701.25	3,451.75	3,368.10	......	9,747.85
Water	458.84	961.20	309 40	583.60	4.10	2,317.14
Superintendents.....	2,100.00	....	....	....	......	2,100.00
Boiler and Engine Room Wages......	748.62	3,484.50	3,689.13	4,521.39	.....	12,443.64
Valvemen, Wages....	1,825.25	83.20	....	822.38	730.00	3,460.83
Repairs to Buildings, Labor.............	361.41	21.00	135.59	90.12	......	608.12
Repairs to Buildings, Material	125.66	2.35	7.55	*3.89	13.30	144.97
Repairs to Apparatus, Labor.............	494.77	1,376.84	440.44	1,019.53	30.56	3,362.14
Repairs to Apparatus, Material	*381.77	1,276.62	879.27	1,099.04	3.25	2,876.41
Repairs to Tools and Implements.......	*5.58	1.29	5.16	....	......	.87
Expenses, Labor.....	7,988.21	1,521.01	1,766.24	2,603.08	......	13,878.54
Expenses, Materials and Sundries......	1,326.73	249.35	704.25	898.71	82.68	3,261.72
	$16,268.89	10,678.61	11,388.78	17,303.09	899.20	56,538.57

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* Red ink in original.

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8431 ACCOUNT 42, STATION COST OF GAS.—This account represents the total of the preceding accounts Nos. 1 to 41. The amount in the accounts of the Consolidated Gas Company of New York is $3,455,091.37, or 33.17c. per 1,000 cubic feet of gas manufactured, as compared with $3,452,868.89, or 32.39c. per 1,000 cubic feet, as adjusted by us.

ACCOUNT 43, COST OF MANUFACTURING GAS UNDER AGENCY AGREEMENTS.—The Consolidated Gas Company has entered into contracts with its subsidiary companies, The Standard Gas Light Company of the City of New York, New York Mutual Gas Light Company, the Central Union Gas Light Company of New York, and the New Amsterdam Gas Company, to supply it with whatever gas it requires, a certain minimum, however, to be taken.

We append copies of the agreements—Appendix II. The principal terms of the contract with the Standard Gas Light Company are that each month it shall render to the Consolidated Company an account of its expenditures for materials and labor used in the manufacture of the gas delivered and that the Consolidated Company shall pay to The Standard Company this amount, together with an additional ten (10%) per cent. for its services and the use of its plant and appliances.

The wording of the contract with the New Amsterdam Gas Company is similar to that with the Standard Company, with the exception that it expressly states that the amount of the so-called "station repairs" is to be added to the cost and that this cost, together with the additional ten (10%) per cent. shall be in full for the services of the company, for the use of its plant and appliances, for all claims for taxes and insurance thereon, for all administrative and general expenses and of all claims whatsoever, except that the Consolidated
8432 Company further agrees that it will pay to the New Amsterdam Company interest at the rate of five (5%) per cent. per annum upon the amounts expended by the latter company in making additions to its Ravenswood Works since March 1st, Nineteen Hundred and One, for the purpose of increasing or facilitating the manufacture of gas.

The following is a statement of the quantities of gas purchased from these subsidiary companies, together with the total cost, and the rate per 1,000 cubic feet.

GAS PURCHASE

Manufacturer.	Quantity.	Cost.	Per M cu. ft., cents.	Cost plus 10%	Per M cu. ft., cents.
Standard Gas Light Co....	403,309,322	$118,775.85	29.45	130,653.45	32.39
N. Y. Mutual Gas Light Co....................	267,696,800	86,929.59	32.47	95,622.55	35.72
Central Union Gas Co....	87,976,400	24,684.64	28.06	27,153.09	30.86
New Amsterdam Gas Co..	2,173,196,400	624,069.49	28.72	686,476.44	31.59
Total Gas Purchased.	2,932,178,922	$854,459.57	29.14	939,905.53	32.05

From the above summary, details of which will be found in Schedule "4," it will be observed that in the New Amsterdam Gas Company where, according to the terms of its agreement, the method of computing the manufacturing costs most closely resembles that followed by the Consolidated Company, the cost per 1,000 cubic feet is 28.72 cents, as compared with the 32.39 cents of the Consolidated Company, a difference of 3.67 cents.

The total amount, $997,039.89, entered in Exhibit No. 94, as the cost of manufacturing gas under agency agreement, is made up as follows:

Gas purchased, as above	$939,905.53
Less: Sold to Central Union Gas Co.	1,014.68
	938,890.85
5 per cent. interest on amount expended by New Amsterdam Gas Co. on construction	58,149.04
Total	$997,039.89

8433 From the above amount, however, we have excluded the ten (10%) per cent. added to the costs as well as the five (5%) per cent. on new construction added by the New Amsterdam Company. All the companies in question are controlled by the Consolidated Company. The percentages merely represent an amount which the controlling company has arbitrarily added to the cost of gas supplied by the subsidiary companies in order to provide the proportion, applicable to such supply, of their fixed charges and dividends. They are, therefore, not an addition to the cost of gas as viewed from the standpoint defined to us, viz.: the cost of manufacturing and distributing it to the private consumers of the City of New York. Possibly some allowance for property taxes and depreciation of plant, if not already fully covered in the accounts rendered, might be added to the cost. As, however, we have not had an opportunity of making an examination of the books of the subsidiary companies we are unable to say what amount, if any, should be so added.

Account 44, Total Cost at Holder.—The total cost at holder, being the aggregate of the previous accounts, we make $4,307,328.46, or 31.69 cents per 1,000 cubic feet, as compared with $4,452,131.26, or 33.52 cents per 1,000 cubic feet, the figures arrived at by the Company, a difference of 1.83 cents.

Were the Consolidated Gas Company in a position to manufacture gas at the average manufacturing costs of its subsidiary companies, viz.: 29.14 cents per 1,000 cubic feet, it would have effected a saving of $492,008.86 in 1905.

Account 45, Expense.—This item, $490,855.36, is classified as follows:

8434	Branch Office Expenses	$423,939.22
	Expenses, Meter Shops	51,162.18
	Expenses, Street Department	15,753.96
	Total	$490,855.36

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The subsidiary details of these amounts are as follows:

Offices.

Branch office expense.	Hester St.	Irving Pl.	42nd St.	3rd Ave.	Total.
Wages:					
General	$8,910.79	15,561.58	13,571.41	15,143.49	53,187.27
High Bills	734.05	3,060.32	1,995.92	3,265.93	9,056.22
Applications	5,178.15	7,456.49	6,102.20	8,698.11	27,434.95
Indexing	5,525.88	7,123.68	5,043.29	8,731.34	26,424.19
Regular Bookkeeping	15,235.97	22,780.86	17,724.30	23,605.12	79,346.25
P. P. Bookkeeping	1,898.43	1,768.85	1,455.33	1,892.58	7,015.19
Regular Collecting	19,787.76	27,059.91	18,793.23	29,357.53	94,998.43
P. P. Collecting	5,130.13	4,995.65	3,796.88	5,330.03	19,252.69
Stove Collecting	146.47	223.81	840.60	693.43	1,904.31
Cashier	7,268.60	8,978.83	9,064.34	10,451.71	35,763.48
Stoves	1,042.86	2,514.87	4,156.32	5,610.27	13,324.32
Indexing—Bonus	335.25	466.75	241.25	473.50	1,516.75
Incidentals	7,167.89	13,508.75	14,490.41	19,548.12	54,715.17
	$78,362.23	115,500.35	97,275.48	132,801.16	423,939.22

Shops.

Meter shop expense.	Hester St.	Ave. "A."	66th St.	114th St.	Meter repairs.	Total.
Wages	$8,114.84	7,629.56	7,750.95	9,867.89	565.81	33,929 05
Materials	1,854.16	3,555.35	3,793.91	5,501.92	2,527.79	17,233 13
	$9,969.00	11,184.91	11,544.86	15,369.81	3,093.60	51,162.18

Street Departments.

Street department expense.	Hester St.	66th St.	111th St.	Total.
Wages	$4,177.81	3,698.29	4,312.87	12,188.97
Materials	1,289.36	1,181.12	1,094.51	3,564.99
	$5,467.17	4,879.41	5,407.38	15,753.96

All these charges with the exception of those connected with the Stove Department, to which we refer more fully afterwards, we consider proper charges against the cost of distributing gas.

8435 ACCOUNT 46, DISTRIBUTING.—The amount entered under this heading, $281,524.12, is made up as follows:

A. Distribution	$258,383.65
B. Distribution: General Office Pumping Drips	16,579.27
A. Distribution: General Office Taking Pressure	6,653.98
D. Distribution: General Office	*92.78
	$281,524.12

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* Red ink in original.

The following is an analysis of the account:

	Shops.				
	Hester St.	114th St.	Avenue "A."	66th St.	Total.
Labor:					
Setting Meters..	$5,105.77	9,731.15	4,693.67	3,029.18	22,559.77
Jobbing.	23,782.46	44,577.39	28,520.82	23,503.29	120,383.96
Burner Work...	452.95	2,097.25	1,015.50	1,464.27	5,029.97
Setting Stoves...	1,821.56	10,569.55	3,755.82	9,185.01	25,331.94
Material............	15,323.87	32,654.67	14,834.22	22,265.25	85,078.01
	$46,486.61	99,630.01	52,820.03	59,447.00	258,383.65

The cost of setting meters and stoves might properly be regarded as a construction charge, the piping, etc., installed, being more or less permanent. As, however, on account of the uncertainty of the amount of use to be got out of these installations, the asset is rather a precarious one, we would consider it good business policy to write off each year a liberal allowance for depreciation. Therefore, after consultation with the Advisory Board of Engineers, we decided that it was proper to admit the amount of this account on the
8436 ground that the expenditures of the year would, in all probability, approximate the amount which should be written off as depreciation, had the expenditure of previous years been capitalized.

"B" Distribution, General Office—Pumping Drips. This account, which is a proper charge against the cost of distributing gas, is made up as follows:

Labor:	
Hester Street	$6,228.85
66th Street	4,792.32
111th Street	5,314.60
Opening and Closing Valves...........	243.50
	$16,579.27

"C" Distribution, General Office—Taking Pressure. This account is also a reasonable operating charge and is apportioned as follows:

Labor:	
Hester Street	$1,493.63
66th Street	2,534.26
111th Street	1,387.59
Material	1,238.50
	$6,653.98

"D" Distribution, General Office. There is a small credit of $92.78 on this account. It does not call for special comment.

ACCOUNT 47, REPAIRS TO GAS STOVES.—This account is distributed as follows:

8437	Labor	$30,641.83
	Material	25,312.52
		$55,954.35

From our knowledge of gas companies and their accounts, we understand that it is almost their universal practice to conduct the merchandise or gas stove branch of the business, not so much on account of the profit that may be derived from it, but rather as an auxiliary to the gas business. They look to the profit from the sale of gas to reimburse them for any loss connected with the sale of fuel appliances. While we would prefer, for the purpose of determining the cost of manufacture and distributing gas, to eliminate all such items as the above from the accounts, we find it impossible to do so, as the accounts are so intimately connected with and dependent upon each other. We have, therefore, concluded that the best way to deal with the matter is to deduct from the distributing expenses the amount received on account of the rentals of appliances. Before bringing this credit into account, however, we deduct the amount of depreciation which the company wrote off the stoves during 1905. The amount of the credit is as follows:

Rentals received	$122,322.60
Depreciation written off	54,954.98
Net Credit	$67,367.62

The result is, that instead of a charge to operating of $55,954.35 for Account No. 47, we have a credit of $11,413.27, being the difference between the former sum and the rental less depreciation, viz.:
$67,367.62. This credit is more than offset by the charges
8438 in Account No. 45 for stoves and stove collecting, $13,324.32
and $1,904.31 respectively, in Account No. 46 for stove setting $25,331.94, exclusive of material, in Account No. 58 for general office, new business, $60,575.28, in Account No. 61 for advertising $5,590.22, and by the proportion applicable to the Stove Department of rents, taxes and other general expenses.

Account 48, Repairs to Mains.—The amount expended on this account during the year, $126,110.31, is made up as follows:

	Hester St.	66th St.	111th St.	Total
Labor	$24,995.19	32,689.87	31,202.52	88,887.58
Material	10,942.48	12,615.12	13,665.13	37,222.73
	$35,937.67	45,304.99	44,867.65	126,110.31

The following is a statement of the main mileage:

	Miles.
At December 31, 1904	815.974
Laid during year 1905	11.327
	827.301
Taken up during 1905	2.873
	824.428
Abandoned during 1905	19.834
At December 31, 1905	804.594

This gives an average mileage of 810.284 miles for 1905, maintained at an average cost of $155.63 per mile.

8439 During the course of our examination we found certain charges, in respect of relaying pavements, etc., which appeared to us to be excessive when treated as repairs. We submitted them to the Board of Engineers, and the following is an extract from the minutes of their meeting held on November 10, 1906.

"Resolved, That the attention of the Accountants and Corporation Counsel be drawn to the Repairs to Mains Account for the reason that, from lack of specific information, the Engineers are not able to decide what are Operating Charges. They are, however, of the decided opinion that outside of small repairs involving not more than $100, a considerable proportion should be charged to Construction Account."

The Street Mains Capital Account appears in the books as follows:

At December 31, 1904	$7,433,800.57
Added during year 1905	83,548.08
	7,517,348.65
Depreciation written off	90,561.54
At December 31, 1905	$7,426,787.11

ACCOUNT 49, REPAIRS TO SERVICES.—This account is distributed in the books as follows:

	Hester St.	66th St.	111th St.	Total
Labor	$11,610.68	16,935.49	17,857.20	46,403.37
Material	13,192.78	15,956.28	13,481.03	42,630.09
	$24,803.46	32,891.77	31,338.23	89,033.46

8440 The following is a statement of the number of services:

At December 31, 1904	88,685
Installed during 1905	2,745
	91,430
Cut off during 1905	4,921
At December 31, 1905	86,509

While the Capital invested is:

At December 31, 1904	$1,221,831.83
Added during year	37,797.54
	1,259,629.37
Depreciation during year	37,401.00
At December 31, 1905	$1,222,228.37

or equal to $14.13 per Service.

With a view to satisfying ourselves that the charges to both Operating and Construction were proper, we made a detailed examination of the Pay-Roll Tickets, and found that a considerable number of extensions and increases to services had been charged to operating expense instead of to construction. The labor on this work, detailed in Schedule 5, is as follows:

Branch	
Hester Street	$609.14
66th Street	107.71
111th Street	1,133.46
	$1,850.31

8441 From the fact that the material used is not recorded on these Pay-Roll Tickets, we were unable to determine what additional amount should be added on this account to the above cost of labor.

The operating charge therefore falls to be adjusted as follows:

As per Exhibit No. 94	$89,033.46
Deduct: As above	1,850.31
Charge, as adjusted	$87,183.15

or equal to 99.5¢ per average service in use during the year.

ACCOUNT 50, REPAIRS TO METERS.—The amount charged to this account during the year 1905 was as follows:

Labor	$126,069.90
Material	46,855.62
	$172,925.52

The number of meters in use and on hand during the same period was:

Ordinary meters.	December 31, 1904.	December 31, 1905.
In use	286,566	296,981
Set Locked	27,104	27,746
In Stock	1,968	2,310
At Repair Shop	17,037	19,740
At Factories	99	609
Total	332,774	347,386

8442

Prepayment meters.		
In Use	87,320	93,349
Set Locked	824	2,190
In Stock	469	435
At Repair Shop	1,069	3,825
At Factories	32	45
Total	89,714	99,844
Total Meters Owned	422,488	447,230

represented by a Capital Investment of:

	Meters.	Meter cocks & connections.	Total.
At December 31, 1904	$2,831,674.54	295,492.54	3,127,167.08
Added during 1905	171,521.04	20,216.39	191,737.43
	3,003,195.58	315,708.93	3,318,904.51
Depreciation during 1905	25,646.20	31,570.89	57,217.09
At December 31, 1905	$2,977,549.38	284,138.04	3,261,687.42

or $7.29 per meter owned, irrespective of size.

On the basis of meters in use at the beginning and at the end of the year, we estimate the average number in use to be 382,108, making an average repair cost of 45.25¢ per meter. The number of meters upon which repairs were executed was 100,780, and on this basis the repairs were $1.71 per meter. This cost does not include the up-keep of the meter repair shop and of labor employed on jobbing work. We submitted the whole facts connected with this account to the Advisory Board of Engineers and the following is an extract taken from the minutes of their meeting held on November 14, 1906.

"Resolved, It is found from the report of Messrs. Marwick, Mitchell
& Co. that the average number of meters in use during the
8443 year 1905 was 382,108, that 100,780 meters were repaired
during the year, and that the repairs to meters show three
separate items as follows:

		Average.
1. Meter Shops	$51,162.18	13.31¢
2. Repairs to Meters	172,925.52	45.25¢
3. Labor, Jobbing Work	120,383.96	31.50¢
	$344,471.66	90.06¢

The item, Labor, Jobbing Work, may include jobbing on stoves, but the amount cannot be determined. In addition, the material used on this Jobbing Work has to be added to the above figures.

The cost of Meter Shops must be included in the cost of Repairs to Meters, and would make the average cost of repairing a meter, excluding jobbing, 58.56 cents per meter in use.

We find the average cost of the Repairs to Meters as given by the Massachusetts Gas and Electric Light Commission in the year 1904, 42.5 cents. The same cost for the year 1905 was 49 cents. In the year 1904 the number of meters installed in Massachusetts was 285,765, and in 1905, 304,638. These figures include the expenditures and renewals account of a number of small companies in Massachusetts.

In consequence, on account of the obscurity and lack of definiteness of these accounts, we are compelled to pass them, but would point out the extravagance of the meter repairs of the Consolidated Gas Company of New York."

ACCOUNT 51, REPAIRS TO BUILDINGS.—The Repairs to Buildings,
outside of those connected with the various manufacturing
8444 stations, were as follows:

	Labor.	Material.	Total.
Hester Street Branch.	$28.43	62.16	90.59
Irving Place	47.07	13.90	60.97
42nd Street Branch	3.25	173.95	177.20
3rd Avenue Branch	261,06	301.77	562.83
Hester Street Shop	3.97	81.25	85.22
Avenue "A" Shop	125.20	66.34	191.54
66th Street Shop	193.39	127.42	320.81
114th Street Shop	446.26	308.88	755.14
Meter Repair Shop	1,990.68	2,965.06	4,955.74
Hester St. Street Dept	589.27	652.06	1,241.33
66th Street Street Dept	877.92	380.83	1,258.75
111th Street Street Dept	129.02	62.09	191.11
General Office	1,507.53	3,000.60	4,508.13
Stables	323.98	393.34	717.32
	$6,527.03	8,589.65	15,116.68

In Schedule 3 will be found details of the amounts rejected by us as improper charges to this account. Of these rejections, the amount of $1,618.13 is on account of work done to properties not occupied by the Company and the balance $1,227.62 as being more properly applicable to construction, all conform to minutes of meeting of the Advisory Board of Engineers of November 10, 1906.

ACCOUNT 52, TOOLS AND IMPLEMENTS.—This account, $15,610.59 is made up as follows:

	Labor.	Material.	Total.
Hester Street Shop	**$10.95**	**187.44**	**198.39**
Avenue "A" Shop	**74.54**	**390.68**	**465.22**
66th Street Shop	**123.93**	**1,225.45**	**1,349.38**
114th Street Shop	**189.41**	**387.62**	**577.03**
Meter Repair Shop	**1,090.42**	**1,358.69**	**2,449.11**
Hester Street Street Dept	**1,437.66**	**2,124.55**	**3,562.21**
66th Street Street Dept	**1,856.10**	**1,391.99**	**3,248.09**
111th Street Street Dept	**1,119.45**	**1,134.43**	**2,253.88**
General Office	**1,261.39**	**245.89**	**1,507.28**
	$7,163.85	**8,446.74**	**15,610.59**

These items we consider a proper charge against the cost of distributing gas.

8445 ACCOUNT 53, STREET LAMPS.—The amount appearing as the cost of maintenance of Street Lamps is $289,259.09, and is made up as follows:

	Hester St.	66th St.	111th St.	Total.
Labor, Fitting, Repairing	**$2,130.72**	**4,228.28**	**5,074.79**	**11,433.79**
Labor, Lighting, Extinguishing and Cleaning	**59.33**	**134.58**	**400.50**	**594.41**
Welsbach St. Lighting Co	**56,363.47**	**55,967.73**	**209,073.69**	**321,404.89**
Labor, Inspecting	**912.50**	**754.50**	**2,169.50**	**3,836.50**
Pipe and Fittings	**485.00**	**602.20**	**872.71**	**1,959.91**
Glass	**33.00**	**12.00**	**41.70**	**86.70**
Repairing Material	**1,099.32**	**1,764.08**	**986.25**	**3,849.65**
Sundries	**3,307.01**	**3,786.33**	**22,075.54**	**29,168.88**
Reverse entry for sales reserved for maintenance of City Lamps	**26,214.31**	**25,933.22**	**99,542.88**	**151,690.41**
	$90,604.66	**93,182.92**	**340,237.56**	**524,025.14**
Credits	**42,344.99**	**44,157.89**	**148,263.17**	**234,766.05**
	$48,259.67	**49,025.03**	**191,974.39**	**289,259.09**

The cost of the Maintenance of Street Lamps should not enter into the cost of distributing gas to the private consumers of the city. When considering the cost of gas, it must be clearly kept in view that, under present conditions, there are two contracts, the first with the ordinary consumer for the supply of gas for illuminating and fuel purposes and the second, with the City of New York for the supply of gas for Street Lighting. These contracts differ, inasmuch as the ordinary consumer is charged a rate of $1.00 per 1,000 cubic feet of gas consumed, while the contract with the City provides for lighting at yearly rates per lamp, varying according as the capacity of the burner varies and the reimbursing to the Company of expenditures on account of repair work and also all new work. As we have only to deal with the contract affecting the private consumers, we eliminate from our accounts the amount charged under the above heading. At the same time we also eliminate the amount of gas used in the street lamps, viz.: 270,779,677 cubic feet.

8446 This makes our devisor for arriving at the cost of distributing gas 13,012,384,090 instead of 13,283,163,767 as in Exhibit No. 94.

ACCOUNT 54, INTEREST ON CONSUMERS' DEPOSITS.—The Consolidated Gas Company, as also all other Gaslight Companies doing business in the City of New York, is empowered by law to require a deposit from every consumer in order to protect itself against loss. This deposit may be as high as the estimated consumption of gas for two months. Legal interest must be paid on the deposits and the amounts so paid during the year were as follows:

Hester Street Office	$13,411.91
Irving Place Office	9,801.11
42nd Street Office	7,247.15
3rd Avenue Office	12,258.79
General Office	8,672.56
	$51,391.52

The amount of the deposits at December 31, 1905, was $920,685.80, as compared with $835,482.86 at December 31, 1904.

The amount of this interest, in our opinion, is not a proper charge to the cost of distributing gas. The Company has the use of these deposits as working capital and were it not so would, presumably, have either to borrow a similar amount at or about the same cost or the stockholders would have to provide it.

ACCOUNT 55, BAD AND DOUBTFUL DEBTS.—These for the year 1905 amount to $82,995.11, distributed as follows:

8447	Hester Street Office	$8,982.18
	Irving Place Office	24,832.48
	42nd Street Office	20,970.90
	3rd Avenue Office	28,209.55
		$82,995.11

Bad debts are more properly a charge against "Contingencies" than against the actual cost of distributing gas. Moreover, the Company should not incur such losses, at least to any appreciable amount, in view of the safeguards they have, as referred to under heading Account 54. In order not to complicate matters, however, we admit the amount claimed, as a charge against the operations of 1905.

ACCOUNT 56, PROFIT AND LOSS ADJUSTMENT.—There is a credit balance of $29,683.92 on this account. Of this amount $17,792.19 is on account of the adjustment of inventories of materials on hand

and $5,047.50 for profit on the sale of Fuel Appliances, while the balance is composed of a large number of miscellaneous credits.

ACCOUNT 57, TOTAL DISTRIBUTION.—The total cost of distribution, as stated in Exhibit No. 94, Summary of Operations for 1905, is $1,641,092.19, or 12.35c. per 1,000 cubic feet. This we have reduced to $1,228,377.90, or 9.43c. per 1,000 cubic feet, a difference of $412,714.29, representing 2.92c. per 1,000 cubic feet.

ACCOUNT 58, EXPENSES—GENERAL OFFICE.—The charges classified under this heading are as follows:

8448

Salaries:		
General Expense		$99,807.42
Engineering, Draughtsmen and Clerks		38,211.95
Mains & Service—Superintendents		6,254.59
Bookkeeping Department		19,944.62
Collecting Department		1,400.04
Cashiers' Department		5,199.96
Street Department		1,066.60
Meter Department		9,256.74
Incidentals		67,844.31
		248,986.23
New Business—General Office:		
Fuel Department—Pay Roll	$35,787.77	
Donations of Appliances	268.44	
Pipe for P. P. Meters	3,225.58	
Advertising	3,114.22	
Commissions, Branch Offices	3,481.41	
Rents	1,500.00	
Gas Arc Commissions	9,112.55	
Incidentals	2,214.75	
Monthly Magazine "Gas Logic"	1,870.56	
		60,575.28
Claims for Damages		30,438.00
		$339,999.51

We have carefully examined this account and are of opinion that the following items should not, for the reasons afterward stated, be included in the cost of manufacturing and distributing gas during the year under review:

Legislative Investigation Expenses	$25,671.74
Miscellaneous Extraordinary Expenses	1,604.21
Claims for Damages	3,800.00
	$31,075.95

At the meeting of the Board of Advisory Engineers, held on November 7, 1906, we submitted the list of General Office Officials and Employees as detailed in Appendix III. Consideration was given, more especially to those salaries included under the classification "General Office," and the following Resolution was finally adopted:

8449 "Whereas, The members of the Advisory Board of Engineers are satisfied that a large proportion of the work covered by the General Office salaries, amounting to $99,807.42, has been devoted to Construction, Organization of New Plants, and also to the care of other investments, and

"Whereas, It is impossible from the data furnished to determine this amount accurately, the Board of Advisory Engineers submit for the consideration of Corporation Counsel and the Accountants the following resolution:

"*Resolved,* That we call this matter to the particular attention of Corporation Counsel and the Accountants, with a request that they give it consideration before finally presenting the matter to the Court."

In terms of this minute we carefully considered the question of the apportionment of the General Office Salaries, but, whilst we feel that a proportion of these charges is properly applicable to construction and other interests not connected with the cost of manufacture and distribution of gas, we are unable to state, from the data in our possession, the proper amount which should be so applied.

Included under the classification "Incidentals" are certain items of expenses connected with the present "Legislative Investigation." As this Investigation is principally for the purpose of determining the amount of profit, arising from the sale of gas to New York Consumers, which accrues to the Stockholders of the Consolidated Gas Company, we consider that the expense in connection with it should not be included as part of the cost of gas, but should rather be regarded as a charge against the margin existing between the cost and the price received. The items rejected on this account amount to $25,671.74 and are detailed in Schedule 6.

8450 In addition to the expenditures dealt with in the foregoing, there are a number of charges in respect of miscellaneous expenses of an extraordinary nature. They amount to $1,604.21, as detailed in Schedule 7 and have been rejected by us as not being proper charges to the cost of manufacturing and distributing gas during the year 1905.

We have examined the account "Claims for Damages" and find that it is composed, very largely, of payments in respect of accidents which occurred prior to the year 1905. As, however, the payments on account of the 1905 accidents will be borne by the operations of future years, we allow the charges made against the year as an offset. In Schedule 8 will be found details of several payments made on account of an accident which occurred on December 13, 1898, in connection with the erection of part of the plant. These we have eliminated, as they are not operating, but construction charges.

ACCOUNT 59, VACATIONS AND SICKNESS.—The amount expended on this account during the year 1905 was $8,175.20 and is a reasonable Operating Expense.

ACCOUNT 60, AUTOMOBILES.—The charge on account of automobiles appears to be proper. It is made up as follows:

	Street dep't.	Expense accounts.	General.	Total.
Labor	$415.74	1,344.12	622.00	2,381.86
Material	400.07	1,315.15	967.08	2,682.30
	$815.81	2,659.27	1,589.08	5,064.16

ACCOUNT 61, ADVERTISING AND LEGAL.—The following is a statement of this account as it appears in Exhibit No. 94, together with our adjustments:

8451	Exhibit No. 94.	Amounts Rejected.	Amounts Admitted.
Advertising	$11,888.56	6,020.34	5,868.22
Legal Expenses	77,425.48	52,110.55	25,314.93
Franchise Litigation	5,270.76	5,270.76	—
Legal and Arrears......	11,215.22	—	11,215.22
	$105,800.02	63,401.65	42,398.37

An examination of the Advertising Account reveals the fact that it is composed of the following items:

Henry Romeike, Inc............................	$232.30
Robert B. Livingston............................	5,512.66
F. B. Thurber.................................	3,000.00
Cash Payments	3,143.60
	$11,888.56

Henry Romeike, Inc., supplied newspaper clippings and was succeeded in this business by Robert B. Livingston. Along with his duties of supplying newspaper clippings Mr. Livingston was Editor of the Magazine, "Gas Logic." The expense was partly on account of investigation work and partly on account of general business, including New Business. In our opinion, the best method of arriving at a proper distribution is to apportion the balance equally, after eliminating $295.72 expended for furniture for Mr. Livingston. A sum of $2,724.62 has thus to be admitted as an operating charge and a similar amount rejected. The payments to F. B. Thurber, amounting to $3,000, were, we are informed, more of the nature of a subscription to the Civic Federation, and therefore must be rejected as not bearing on the cost of gas to the consumer. The cash payments of $3,143.60 were for "New Business" and other advertising and are admitted as proper charges:

The Legal Expense Account is composed of the following items:

8452

Monthly estimated charge of $4,000................	$48,000.00
Amount to adjust at close of year...................	548.88
Legislative Investigation Expenses................	28,876.60
	$77,425.48

The amount of $48,548.88, included in the accounts for general and ordinary legal expenses for the year, exceeded the amount of the actual payments by $7,705.38. This sum was insufficiently provided for prior to January 1, 1905, and had consequently to be included in the 1905 accounts. We now exclude it. Of the actual payments, $40,843.50, we also exclude $15,528.57 as not properly applicable to the cost of gas for 1905. The following are the particulars of this amount:

Sherman & Sterling, amount recoverable from Contractors	$664.40
David McClure, 1904 Account	7,850.64
H. D. MacDona, 1904 Account	143.68
H. D. MacDona, Salary as Special Counsel	3,000.00
H. D. MacDona, Investigation Work	1,274.35
Edward Carroll, Services, Gas & Electric Investigation	51.50
John G. Milburn, Counsel for Special Work	750.00
Robert P. Porter, Counsel, Municipal Ownership	1,000.00
R. Fox, Investigation Work	640.00
Fidelity Deposit Co. of Md., Bond suit 1898, Explosion of gas holder	154.00
	$15,528.57

In all we therefore reject $23,233.95 of the amount charged in respect of general and ordinary Legal Expenses. We have also to reject, for the reason already stated under heading Account No. 58, the charges of $28,876.60 in connection with the Legislative Investigation.

The charges in connection with Franchise Litigation are also a charge against the profits of the Stockholders, and therefore not applicable to the cost of gas to the consumer.

8453 The expenses in connection with the legal and arrears department of the business are legitimate expenses, and are consequently allowed.

Account 62, Real Estate Rents.—During the year 1905 the Company paid out on account of rents for Real Estate, Offices, etc., $42,674.71. This expenditure all applied to the year with the exception of a sum of $625.00 for rent of office at 44 Wall Street for the last three months of the year 1904. This amount we have consequently excluded.

Account 63, Gas Companies Mutual Aid Society.—There was paid on this account $6,413.99, and we have allowed the charge as a proper one against the Cost of Manufacturing and Distributing Gas.

Account 64, Superannuation.—During the year the Company paid $14,943.86 on account of superannuation. While, theoretically, this is not a charge against the Cost of Operating, we consider it a wise and prudent expenditure by the Company, and have consequently allowed it. A provision of this nature, in our opinion, tends to improve and maintain good relations between Employer and Employee, and reflects on the quantity and quality of the work done.

Account 65, Insurance.—The only deductions we have made from this account of $54,031.83 is in respect of the proportion of the premium on the Employers' Liability Insurance, viz.: $152.44, applicable to construction work. In Appendix "1" we submit details of the insurance carried for the year 1905. This Appendix is especially interesting in that it shows the valuations placed by the Company on the various parts of its plant for insurance purposes.

8454 ACCOUNT 66, TAXES.—This Account is made up as follows:

Taxes on Real Estate used in the business of the Company		$176,850.10
Taxes on Personal Property		88,839.00
Taxes on Special Franchises		406,909.23
Taxes on Mains, Pipes, etc.		14.91
Taxes on Income from Gas Business		70,538.02
		743,151.26
Taxes on Income from Investments in Other Securities	$5,257.48	
Taxes on Real Estate from which the Company draws Rents	2,928.85	
Taxes on Dividends in excess of 4%	120,000.00	
Interest on Unpaid Taxes	94,506.29	
		222,692.62
		$965,843.88

The first five items, aggregating $743,151.26, are proper charges to the Cost of Manufacturing and Distributing Gas, and have been allowed by us. The remaining ones, aggregating $222,692.62, have been repected for the following reasons: The Taxes on Income from Investments in other Securities, $5,257.48, is a charge against the Revenue received from them. The taxes on Real Estate from which the Company draws rents is a charge against these rents. The Taxes on Dividends paid in excess of four per cent. are not a charge against the Cost of Operations, but against the Surplus Revenue out of which this excess Dividend was paid. The interest on Unpaid Taxes must also be excluded from the cost of Operating the business If the Company chooses to contest any Taxes, the expense of such a contest cannot be levied on the consumers of the years subsequent to that in which the tax was payable.

ACCOUNT 67, CONTINGENT EXPENSE.—The amount entered under this classification is $1,328,316.37, or 10 cents per thousand
8455 feet of gas sold. It is entered in the Gas Company's accounts as a charge to Operating and as a credit to a reserve account called "Renewal and Contingency Account." It is, therefore, purely a bookkeeping entry and not an actual expenditure. At the close of 1905 the amount of $282,219.67 was debited to this reserve account, but again this did not represent any actual expenditure, but was simply a charge to the Renewal and Contingency Account and a credit to various plant accounts for estimated depreciation, as may be seen from the following authorization entered in the Company's books:

POOR CO

"*Resolved,* That the officers of this Company be, and they hereby are, authorized and directed to apply from the amount now at the credit of Renewal and Contingency Account, the sum of $282,219.67 to cover the amount of loss and depreciation in, or cost of replacement of, certain items of this Company's property specified in a memorandum signed by the Secretary of this Company, the same to be entered in detail upon its books."

Plant For the original cost of sundry plant and apparatus dismantled during the year, to make room for new plant and apparatus plus the cost of dismantling, less what was recovered from the sale of old apparatus as scrap or from its use as repair material. Also the book value of plant and apparatus sold, less the amount recovered.	$3,424.00
Mains For the book value of mains abandoned during the year and the book values of mains replaced during the year with mains of larger capacity less the value as stock of the old mains taken up.	90,561.54
Services For the book value of services taken up or cut off and abandoned in the street during the year.	37,401.00
Meters For the book value of meters condemned, lost or destroyed during the year.	25,646.20
Meter Cocks & Connections For the depreciation and replacement during the year, estimated at 10% of the book value.	31,570.89
Horses, Wagons & Harness For the depreciation and replacement during the year, estimated at 20% of the book value.	5,338.62
Office Furniture & Fixtures 8456 For the depreciation and replacement dur- the year, estimated at 20% of the book value.	8,140.87
Tools & Implements For the depreciation and replacement during the year, estimated at 40% of the book value.	24,483.65
Carried Forward	$226,566.77
Brought Forward	$226,566.77
Gas Stoves For depreciation and replacement during the year, estimated at 20% of the book value.	54,954.98
Automobiles For the depreciation and replacement during the year, estimated at 10% of the book value.	697.92
	$282,219.67

(Signed) R. A. C., *Secretary.*

In Schedule "1" we give the full details referred to in the authorization.

It will be observed that the amount entered under the heading "Mains," viz., $90,561.54, includes depreciation for the years 1903 and 1904, as well as that for 1905. The particulars are as follows:

	1903.	1904.	1905.	Total.
2" Mains..	—	68.75	—	68.75
3" " ..	$24,210.80	5,488.70	8,074.50	37,765.00
4" " ..	16,134.40	13,943.20	10,440.80	40,518.40
	$40,336.20	19,500.65	18,515.30	78,352.15

The amount applicable to years prior to 1905 is therefore $59,836.85.

The arbitrary charge of 10 cents per 1,000 feet for contingencies and renewals we have excluded from the accounts as not being a proper charge against the cost of the manufacture and distribution of gas, and in its place have substituted the amount of the actual charges made by the Company during the year for depreciation,
viz., $282,219.67, less $59,836.85 applicable to prior years, or
8457 $222,382.82, equal to 1.71 cents per 1,000 cubic feet dis-
tributed. Of this amount we have included under Account No. 67 the sum of $167,427.84, equal to 1.29 cents per 1.000 feet, and the balance $54,954.98, equal to .42 cents per 1,000 feet, being the depreciation on gas stoves, we have included, as already explained, in Account No. 47.

In regard to the sufficiency of the amount we have included for depreciation, we quote as follows from the minutes of the meeting of the Board of Advisory Engineers, held on November 24:

"*Resolved,* That the Advisory Board of Engineers recommend that the amount of $222,382.82 be accepted as the actual depreciation for the year 1905 and be incorporated in their report, and

Further, that this actual depreciation of 1.71 cents per 1,000 cubic feet of sales, added to the actual repairs made, amounting to 5.61 cents, making a total of $937,534.26, or 7.32 cents per 1,000 cubic feet, is apparently a proper and sufficient amount of depreciation and repairs for modern and large works of the capacity of the Consolidated Gas Company."

ACCOUNT 68, TOTAL GENERAL EXPENSES.—The Total General Expenses in Exhibit "94" amount to $2,871,263.53, equal to 21.62 cents per thousand cubic feet of gas distributed to general consumers. For the reasons explained in the foregoing pages, we have reduced this amount to $1,392,427.34, equal to 10.69 cents per thousand cubic feet of gas distributed, a difference of $1,478,836.19, equal to 10.93 cents per thousand cubic feet.

ACCOUNT 69, FIXED CHARGES.—In Exhibit "94" the Fixed
Charges are stated at $972,423.44, and are on account of in-
8458 terest on Bonded Debt. This charge we have excluded as
not coming within the scope of our inquiry as to the cost of manufacturing and distributing gas.

POOR CO

ACCOUNT 70, TOTAL OPERATING COST.—The total Operating Cost, as shown in Exhibit No. 94, summary of operations for 1905, is $9,936,910.42, equal to 74.81 cents per thousand cubic feet distributed. On the same basis we make the operating cost $6,928,133.70, equal to 51.81 cents per thousand cubic feet, a difference of $3,008,776.72, and 23 cents per thousand cubic feet respectively. In addition to this difference, effect has to be given to the following:

1. Discount. The practice of the Company is to charge all their accounts gross, crediting any cash discount to Discount Account. This discount should come into the credit of the accounts as a deduction from the costs. The amount applicable to operating is.....	$6,006.12
2. Wharfage. Sundry Income is received from shippers for the use of the wharfs. As the cost of running these wharfs is charged to operating, so must all revenue of this nature be credited to it......................	709.24
	6,715.36
3. Deduct. Special Deductions. It is often found necessary to make special deductions to customers, and these are a charge against operations, although not so included by the Company.....................	1,320.00
Total................................	$5,395.36

In arriving at the cost per 1,000 cubic feet of manufacturing and distributing gas, it is necessary also to take into account the amount of the leakage. This, which includes the gas used by the Company, viz., 64,077,056 cubic feet, is 300,990,555 cubic feet, and must be included as a distribution charge at the average cost of manufacture, as our method of entering the leakage differs from that adopted by the Company, inasmuch as they use, as their divisor, 8459 the quantity manufactured, less the above leakage, while we adopt, as ours, the quantity manufactured. This adjustment amounts to .73 cents per thousand cubic feet.

These differences have the effect of bringing the total cost of manufacturing and distributing gas in the City of New York to 52.50 cents per thousand cubic feet.

GENERAL.

In considering our conclusions, it should be kept in mind that in all cases where any doubt existed regarding the correctness of the Company's allocation of its charges and where we could not obtain such definite information as was required to adjust them, we allowed the figures to stand as stated by the Comapny. The following are a few of these doubtful items: No proportion of the General Office

Salaries, $99,807.42, has been charged to Construction Work or to Revenue received from Investments in other securities. Nothing has been charged to the Revenue from Street Lighting Contracts on account of general office expenses, including Distribution. The total of these expenses amount- to approximately $1,375,000. The proportion of gas sold for Street Lighting purposes is about 2% of the total. From the Minutes of the Meetings of the Advisory Board of Engineers it will be observed that a number of doubtful charges to the various repair accounts, including mains, meters and apparatus, have been conceded to the Company. All the expenditures in connection with the Stove Department have been admitted. We have allowed the total amount of the Bad and Doubtful Debts, although strongly of opinion that it is excessive if not actually avoidable. The price of 52.50 cents, as determined by us, must, therefore, be considered a very liberal allowance, one which includes a considerable margin to cover all ordinary contingencies. 8460

Yours, truly,

MARWICK, MITCHELL & CO.

EXHIBIT "A."

MEETING No. 1.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Wednesday, October 17, 1906.

Present:

C. V. Lacombe
H. H. Edgerton
Alfred W. Booraem
Wm. D. Marks
James Marwick
A. Bowman
James Hall

} of Marwick, Mitchell & Co. in Attendance.

The meeting was called to order by Professor Marks, and Mr. Lacombe was elected Chairman.

Mr. Marwick submitted a Memorandum of Vouchers which had been set aside for the consideration of the Board, to be rejected, approved or held subject to further investigation, as they determined.

It was suggested by the Board that the Accountants prepare Schedules of the expenses incurred in reconstructing the plant and equipment at 21st Street and 44th Street Stations. It was understood that such schedules would include only the more important items which would afford a fair idea of the extent of the expenditures for these purposes. It was explained by the Accountants that the preparation of such schedules and memoranda for the consideration of the Board would tend to prolong their investigation, 8461

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but that the advantages resulting therefrom fully justified this course if the Court was likely to concede any extension of time necessary. It was also explained by the Accountants that as all vouchers had to be checked into one Ledger, it was essential to the early conclusion of their work that access be afforded them to the Ledger and Vouchers so that they could work three eight hour shifts of men in checking it. After all the vouchers submitted to them were checked, they would require further time to carefully inspect the Ledger to ascertain whether any vouchers were missing and to investigate such cross entries as might have been made in the Ledger.

After further discussion the meeting, on the motion of Mr. Lacombe, was adjourned until Saturday, October 20, 1906 at three o'clock, afternoon. Mr. Lacombe and Mr. Edgerton retained copies of the Accountants' Schedule of Vouchers, to which exception was taken.

(Signed) C. V. LACOMBE, *Chairman.*

8462

MEETING No. 2.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accountants and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Saturday, October 20, 1906, at three o'clock.

Present:

C. V. Lacombe
Wm. D. Marks
Alfred W. Booraem
James Marwick } of Marwick, Mitchell & Co. in Attendance.
James Hall }

Mr. Lacombe in the Chair:

The Board resumed consideration of the various vouchers which had been set aside by the Accountants. After discussion, they dealt with Vouchers 37 to 98 in the Accountants' Memorandum, rejecting certain and admitting others. At this point it was decided to remit the whole question of these charges to Professor Marks, with power to pass or reject, those being rejected, however, to be submitted to the Board for final disposition.

The Accountants reported that they had prepared Schedules of the chief expenditures included in the repair accounts of the 21st and 44th Street Stations.

The Accountants also reported that they had made a test of the time labor tickets of the Street Department and found that it had been the practice of the Company to charge the extension of services to Repairs and not to Construction. These matters were also referred to Professor Marks.

8463 Mr. Marwick further explained that Mr. Addicks and Mr. Carter had met his request to be allowed to work his Accountants continuously day and night on the Operating Ledger and this work was now progressing favorably.

After a general discussion the meeting, on the motion of Mr. Lacombe, was adjourned until Wednesday, October 24, 1906, at three o'clock, afternoon.

(Signed) C. V. LACOMBE.

MEETING No. 3.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Wednesday, October 24, 1906, at three o'clock.

Present:

C. V. Lacombe
H. H. Edgerton
Wm. D. Marks
Alfred W. Booraem
James Hall of Marwick, Mitchell & Co., in attendance.

Mr. Lacombe in the Chair:

Before the Board resumed consideration of the vouchers, Professor Marks explained that for the past week he had suffered from serious indisposition and regretted he had, consequently, been unable
8464 to take up the reference from the last meeting, regarding the various vouchers which had been set aside by the Accountants. He further explained that he had now almost recovered and would give the matter his immediate attention. The Board then examined Vouchers Nos. 99 to 404. During the course of the discussion, Mr. Lacombe expressed himself strongly that the Board, in its final report, should not deal with the case of isolated vouchers but treat the subject of the classification of the expenditures in its entirety. This view met with the unanimous approval of the members of the Board present. The meeting adjourned until Saturday, October 27, 1906, at three o'clock in the afternoon.

(Signed) C. V. LACOMBE.

MEETING No. 4.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plants of the Consolidated Gas Company of New York, held at the offices of the Company, 124 East Fifteenth Street, New York City, Saturday, October 27, 1906, at three o'clock.

Present:

C. V. Lacombe,
H. H. Edgerton,
Wm. D. Marks,
James Hall, of Marwick, Mitchell & Co. in attendance.

Mr. Lacombe in the Chair:

Professor Marks explained that since the last meeting he 8465 had made a cereful examination of the first 534 Vouchers rejected by the Accountants. He approved of the rejection of some, while he admitted others as reasonable charges against the Company's Operating Expenses. The Board then took up the consideration of Vouchers Nos. 535 to 621.

After a general discussion, it was decided to adjourn the meeting until Wednesday, October 31, 1906, at three o'clock afternoon.

(Signed) C. V. LACOMBE.

MEETING No. 5.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plants of the Consolidated Gas Company of New York, held at the offices of the Company, 124 East Fifteenth Street, New York City, Wednesday, October 31, 1906, at three o'clock.

Present:

Alfred W. Booraem
James Marwick } of Marwick, Mitchell &
James Hall } Co. in attendance.

It was explained that Mr. Lacombe had telephoned stating that, owing to the fact Professor Marks was engaged as a witness, no meeting would be held until Saturday afternoon, at three o'clock. Mr. Marwick submitted copies of letters which were being sent to Mr. Carter in connection with the accounts.

(Signed) C. V. LACOMBE.

8466

MEETING No. 6.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plants of the Consolidated Gas Company of New York, held at the offices of the Company, 124 East Fifteenth Street, New York City, Saturday, November 3, 1906, at three o'clock.

Present:

Wm. D. Marks,
H. H. Edgerton,
James Hall, of Marwick, Mitchell & Co. in attendance.

Mr. Hall explained he had received a telephone message from Mr. Lacombe to the effect that he would be unable, owing to important personal business, to attend the meeting. In his absence, Dr. Marks was called to the Chair and the Board resumed consideration of the vouchers rejected by the Accountants and dealt with Nos. 622 to 734.

Dr. Marks explained that he hoped to complete his examination of the remainder of the rejected vouchers before the next meeting of the Board, and he would then be in a position to discuss more fully the present position of the work.

After a general discussion, the meeting was adjourned to the afternoon of Wednesday, November 7, three o'clock.

(Signed) WM. D. MARKS.

8467

MEETING No. 7.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Wednesday, November 7, 1906, at three o'clock.

Present:

C. V. Lacombe
H. H. Edgerton
Wm. D. Marks
James Hall, of Marwick, Mitchell & Co. in attendance.

Mr. Lacombe in the Chair:

Dr. Marks reported that he had now completed his examination of the vouchers rejected by the Accountants and that these charges were now being scheduled. This work, Mr. Hall stated, would be completed by the date of the next meeting.

Dr. Marks submitted a list of the employees on the General Office payroll and after a general discussion, moved as follows:

Whereas, The members of the Advisory Board of Engineers are satisfied that a large proportion of the work covered by the General Office salaries, amounting to $99,807.42, has been devoted to Construction, Organization of New Plants, and also to the care of other investments, and

Whereas, It is impossible from the data furnished to determine this amount accurately, the Board of Advisory Engineers submit for the consideration of Corporation Counsel and the Accounants, the following resolution: 8468

Resolved, That we call this matter to the particular attention of Corporation Counsel and the Accountants, with a request that they give it consideration before finally presenting the matter to the Court.

This resolution was seconded by Mr. Lacombe and unanimously carried.

The meeting then took up consideration of the charges made in Exhibit 94 on account of repairs to meters, and after a general discussion it was decided to allow the matter to lie on the table.

The meeting was then adjourned until the afternoon of Saturday, November 10, 1906, at 1:30 P. M.

(Signed) C. V. LACOMBE.

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MEETING No. 8.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Saturday, November 10, 1906, at 1:30 P. M.

Present:

C. V. Lacombe
Wm. D. Marks
H. H. Edgerton
Wm. P. Burr, Assistant Corporation Counsel.
S. Roger Mitchell } of Marwick, Mitchell
James Hall } & Co. in attendance.

Mr. Lacombe in the Chair:

8469 The Accountants submitted classified schedules of expenditures which had, in their opinion, been improperly charged to Operating Expenses.

Repairs to Make.—The meeting first took up consideration of this Account and after a general discussion:

Resolved, That the attention of the Accountants and Corporation Counsel be drawn to the Repairs to Mains Account, for the reason that, from lack of specific information, the Engineers are not able to decide what are Operating Charges. They are, however, of the decided opinion that, outside of small repairs involving not more than $100, a considerable proportion should be charged to Construction Account.

The adoption of this resolution was moved by Dr. Marks and unanimously carried.

Repairs to Tools and Implements.

Whereas, In the matter of repairs to Tools and Implements it would appear that telephone sets for 14th Street Station and other small items for 21st Street Station, amounting *in cumulo* to $128.44, are obviously new construction, we would call the attention of Corporation Counsel and the Accountants to these amounts as obviously wrong, while admitting them.

Repairs to Apparatus.

Resolved, On the motion of Dr. Marks, seconded by Mr. Lacombe, that the Advisory Board of Engineers reject charges to this Account, amounting to $2,133.98, as per schedule, submitted by the Accountants, and because of lack of time to make further investigations, the admission of various items, amounting to 8470 $5,463.45. The Board specially desires to call the attention of Corporation Counsel and the Accountants to the doubt regarding the correctness of these charges to Operations.

Repairs to Services.

The charges to this Account were fully considered by the Board and, after explanations by Mr. Lacombe, it was agreed, on the motion of Dr. Marks, seconded by Mr. Edgerton, to admit as Operating Charges all the amounts rejected, aggregating $1,059.29. It was explained by the Accountants that a detailed examination had been made of the pay tickets when it was found that a considerable number of increases of services had been charged to this Account. While they had been able to determine the amount of labor employed on this work, no record could be obtained of the material used. After a general discussion, the matter was remitted to the Accountants.

REPAIRS TO BUILDINGS.

The Accountants submitted schedule of charges, amounting to $2,934.25, which they considered either proper against Construction or against Revenue from Rented Properties. After examination their rejection was duly moved and carried.

REPAIRS TO METERS.

A statement was submitted giving the average number of meters in use during the year 1905, 382,108, and the cost of maintenance, including material used in connection with jobbing labor, $344,471.66, or an average of 90.06 cents per meter. The total investment in meters, meter cocks and connections, etc., was, at December 31, 1905, $3,261,687.42, or an average of $7.20 on the basis
8471 of the number of meters owned, viz.: 447,230. The opinion was generally expressed that both the amount of this investment, and the charge for up-keep, were excessive, and the Accountants explained that it appeared to them, from an examination of the vouchers, that a large proportion of the repairs were on account of reconstruction of meters. It was finally agreed to refer the whole matter to Mr. Edgerton for a report.

DISTRIBUTION ACCOUNT.

It was explained by the Accountants that this Account had been charged with the labor and material necessary to set meters and stoves, and also with work on jobbing and burners. The accounts, however, had not, so far as the Accountants had been able to ascertain by application to the Secretary of the Company, or from personal observation, been so kept that it could be determined how much material applied to each class of work. The account appeared in the books as follows:

Labor Saving Meters	$22,559.77
Labor Setting Stoves	25,331.94
Labor Burner Work	5,029.97
Labor Jobbing	120,383.96
	$173,305.64

The material used in connection with this labor amounted to $85,078.01, and it was necessary to determine how much of it applied to the various classes of work, and it was further necessary for the Board to state whether the charges for Setting Meters and Stoves were, in their opinion, proper charges against the manufacture and distribution of gas, or were Capital Expenditures. At the rerequest of the Chairman the Accountants stated that they considered 8472 that this cost might properly be regarded as a Construction charge, the piping, etc., installed being more or less permanent. As, however, on account of the uncertainty of the amount of use to be got out of these installations, the asset is rather a precarious one, they would consider it good business policy to write off each year a liberal allowance for depreciation. After a general discussion it was resolved to admit the charge as an operating one, on the ground that the expenditures of the year would, in all probability, approximate the amount which should be written off as depreciation had the expenditures of the previous years been capitalized.

At this point it was agreed to adjourn the meeting until Wednesday, November 14, 1906, at two o'clock, afternoon.

(Signed) C. V. LACOMBE.

MEETING No. 9.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Wednesday, November 14, 1906, at two o'clock, afternoon.

Present:

C. V. Lacombe
Wm. D. Marks
H. H. Edgerton
James Hall, of Marwick, Mitchell & Co., in attendance.

Mr. Lacombe in the Chair:

8473 The meeting resumed consideration of the Repairs to Meters Account and after considerable discussion, on the motion of Dr. Marks, seconded by Mr. Edgerton, passed the following resolution:—

Resolved, It is found from the report of Messrs. Marwick, Mitchell & Co. that the average number of meters in use during the year 1905 was 382,108, that 100,780 meters were repaired during the year, and that the repairs to meters show three separate items as follows:—

		Average
1. Meter Shops	$51,162.18	13.31¢
2. Repairs to Meters	172,925.52	45.25¢
3. Labor, Jobbing Work	120,383.96	31.50¢
	$344,471.66	90.06¢

The item, Labor, Jobbing Work, may include jobbing on stoves, but the amount cannot be determined. In addition, the material used on this Jobbing Work has to be added to the above figures.

The cost of Meter Shops must be included in the cost of Repairs to Meters, and would make the average cost of repairing a meter, excluding jobbing, 58.56 cents per meter in use.

We find the average cost of the Repairs to Meters as given by the Massachusetts Gas and Electric Light Commission in the year 1904, 42.5 cents. The same cost for the year 1905 was 49 cents. In the year 1904 the number of meters installed in Massachusetts was 285,765, and in 1905, 304,638. These figures include the expenditures and renewals account of a number of small companies in Massachusetts.

8474 In consequence, on account of the obscurity and lack of definiteness of these accounts, we are compelled to pass them; but would point out the extravagance of the meter repairs of the Consolidated Gas Company of New York.

On a motion of Dr. Marks, the meeting was adjourned until Friday afternoon, November 16, 1906, at 2 o'clock.

(Signed) C. V. LACOMBE.

MEETING No. 10.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plants of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, Friday, November 16, 1906, at two o'clock, afternoon.

Present:

Wm. D. Marks
H. H. Edgerton
James Hall, of Marwick, Mitchell & Co. in attendance.

Dr. Marks explained that Mr. Lacombe had intimated to him that he would be unable to attend the meeting and desired to have it postponed until the afternoon of the following day, November 17, 1906, at two o'clock.

(Signed) WM. D. MARKS.

8475

MEETING No. 11.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plants of the Consolidated Gas Company of New York, held at the Offices of the Company, 124 East Fifteenth Street, New York City, November 17, 1906, at two o'clock, afternoon.

Present:

C. V. Lacombe
H. H. Edgerton
William D. Marks
S. Roger Mitchell } of Marwick, Mitchell
James Hall } & Co. in attendance.

Mr. Lacombe in the Chair.

Dr. Marks reported that he had applied for a permit for himself and Mr. James Hall to visit the various works and stations of the

Consolidated Gas Company of New York, and that such permit had been refused.

Dr. Marks further explained that he was writing to that effect to Assistant Corporation Counsel Burr, and Mr. Lacombe requested that his name be appended to the letter, as it coincided with his views and he considered it highly advisable that this visit be made.

In viewing these accounts and considering certain items shown, the Chairman, in order to get the matter on record wishes to ask the Accountants if he is correct in stating that certain items of material and supplies purchased are shown to go to certain stations of the company, and that, beyond that point, the Accountants cannot trace to what purpose or use they have been put. Further, from the way in which the accounts have been kept, the Accountants 8476 cannot find or obtain the records showing the charging off of these items, so that the engineers cannot check such charging as correct. Further, that the Accountants have advised us that no proper stock accounts are kept in the General Office. In reply the Accountants assured Mr. Lacombe that his understanding was correct.

On the motion of Dr. Marks, the meeting was adjourned to meet any time at the call of the Chair.

(Signed) C. V. LACOMBE.

MEETING No. 12.

Meeting of the Advisory Board of Engineers in Connection with the Examination of the Accounts and Plant of the Consolidated Gas Company of New York, held at the Offices of Messrs. Marwick, Mitchell & Company, 79 Wall Street, New York City, Saturday, November 24, 1906, at two o'clock, afternoon.

Present:

C. V. Lacombe
H. H. Edgerton
Wm. D. Marks
Wm. P. Burr, Ass't Cor. Counsel.
S. Roger Mitchell } Of Marwick, Mitchell &
James Hall } Co. in Attendance.

Mr. Lacombe in the Chair:

Dr. Marks submitted the following report on a visit made to the works and shops by Mr. Lacombe and himself.

"That the accounts of the Meter Shop and Jobbing Shop 8477 could not be obtained; that Dr. Marks and Mr. Lacombe requested permission to go to the Shops, which was granted, and met Mr. Addicks, on November 22nd; that we asked to see his Shops and the Shop Records, and after some discussion he showed us the system of 4 Irving Place. This system shows that supplies for shops were purchased and charged up by 4 Irving Place, according to their characteristics, to Distribution Account or Mains Account, and unless this material, in the reports of the Shop Superintendents, is shown to have gone to some other shops or to some other account, the amount of this bill shows as a charge against this account. In case such items have been sent to other shops or used for other accounts, the item is reported to 4 Irving Place and a general credit made to the accounts above mentioned.

The next afternoon (November 23), with Mr. Addicks we visited the Meter Repair Shop and one of the Jobbing Shops at 66th Street, and found a complete system of accounting for all material and labor used by these Shops. In the Meter Repair Shop this, of course, was nothing but repairs. At the 66th Street Jobbing Shop it was found that in addition to this, they billed consumers for repairs to stoves other than their own, and also bill for special installation of heaters and other comparatively large expenditures for the consumer, which items were credited to Distribution Account.

The criticism that is made on this system of bookkeeping is that there is no way by which any distinction can be made in the items mentioned between Distribution, Operating Expense or Construction Account, so far as we could see this being predetermined by the Main Office and, as a rule, unchanged by the Shop Superintendent. In this Shop no distinction was made in the apportionment 8478 of material to the various accounts of meter seeting, jobbing, burner work, and stove setting, although labor for these accounts is kept separately.

Application was made on or about November 10th to obtain an opportunity to examine the Shops of the Consolidated Gas Company by the representative of the Accountants and of the Advisory Board of Engineers and the delay in granting this very much interfered with and hampered their work."

The question of the Depreciation upon the works and plant was introduced by Mr. Lacombe and after discussion the following motion was submitted by Dr. Marks:

Whereas, a cross-entry on account of depreciation, amounting to $282,219.67, was authorized by the Board of Directors of the Consolidated Gas Company on January 30, 1906, for the year 1905, and

Whereas, upon investigation it proves that part of this depreciation was on account of Mains disused in 1903 and 1904, amounting to $59,836.85.

Resolved, that the Advisory Board of Engineers recommend that the amount of $222,382.82 be accepted as the actual depreciation for the year 1905 and be incorporated in their report, and

Further, that this actual depreciation of 1.71 cents per 1,000 cubic feet of sales, added to the actual repairs made, amounting to 5.61 cents, making a total of $937,534.26 or 7.32 cents per 1,000 cubic feet, is apparently a proper and sufficient amount of depreciation and repairs for modern and large Works of the capacity of the Consolidated Gas Company.

The adoption of this Resolution was seconded by Mr. Edgerton and unanimously agreed to.

(Signed) C. V. LACOMBE.

where

GAS MANUFAC

For the Y

	January	February	March	April	May
On Hand at January 1, 1905	26,552,000	74,090,272	905,250	105,128,436	20.408,
Manufactured:					
14th Street Station	144,380,000	129,583,000	128,302,000	118,567,000	107,890
21st Street Station	457,442,000	400,004,000	410,166,000	349,185,000	338,962
42nd Street Station	138,048,000	125,663,000	131,952,000	109,991,000	97,423
44th Street Station	243,823,000	206,035,000	216,831,000	196,318,000	186,924
99th Street Station	146,894,000	133,124,000	142,919,000	129,867,000	106,28
†Total Manufactured	1,130,593,000	994,400,000	1,030,170,000	903,925,000	837,28
Purchased:					
New Amsterdam Gas Company	219,068,600	161,516,000	191.699,300	127,116,100	138,14
The Standard Gas Light Co.	39,455,984	24,107,855	41,111,103	22,094,640	52,42
N. Y. Mutual Gas Light Co.	52,510,000	24,430,600	49,281,200	31,518,300	20,22
Cent. Union Gas Co. of N. Y.	9,471,800	7,903,700	7,829,700	6,497,200	5,75
†Total Purchased	320,626,384	217,953,155	289,981,303	187,226,240	310,55
Total	1,477,671,384	1,286,457,427	1,320,996,553	1,196,282,676	1,074,2
Sold to Consumers:					
General Office	44,361,500	41,086,100	40,321,800	32,682,900	29,5
Hester Street Office	273,628,900	248,198,900	240,431,100	245,995,900	217,7
Irving Place Office	359,125,200	334,070,00	318,224,900	304,182,300	271,0
42nd Street Office	339,100,800	310,861,200	286,579,600	271,328,800	236,8
114th Street Office	357,800,600	323,595,500	305,816,700	301,691,500	277,1
†Total Sales to Consumers	1,374,017,000	1,237,811,700	1,191,373,000	1,135,383,600	1,032,2
Street Lamps	29,564,112	24,771,877	24,493,117	19,993,045	17,7
Other Companies:					
Cent. Union Gas Co. of N. Y.	......	2,068,000	......	......	
Total Sales	1,403,581,112	1,283,552,177	1,215,868,117	1,173,874,645	1,049,
*Leakage 2.21 per cent.	......	......	......	......	
On Hand at December 31, 1905	74,090,272	905,250	105,128,436	20,406,031	24,
Total	1,477,671,384	1,286,457,427	1,320,996,553	1,196,282,676	1,074,

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*From this should be deducted 64,077,058 cubic feet gas used at offices and stations of company.

† Lines in blue. ‡ Lines in red ink.

EXHIBIT "B."

8479

GAS MANUFACTURED, PURCHASED AND CONSUMED

For the Year Ended December 31, 1905.

	January	February	March	April	May	June	July.	August	September	October	November	December	Total
y 1, 1905	26,552,000	74,090,272	905,250	105,128,436	20,408,031	24,268,390	x117,461,270	x197,808,540	x94,143,629	x36,371,207	109,983,736	196,113,409	26,552,000
tion	144,386,000	129,583,000	128,302,000	118,567,000	107,890,000	97,809,000	87,495,000	90,094,000	94,563,000	106,143,000	106,798,000	107,619,000	1,319,651,000
tion	457,442,000	400,004,000	410,166,000	349,185,000	338,902,000	296,700,000	227,494,000	245,398,000	303,882,000	416,603,000	510,419,000	571,114,000	4,327,378,000
tion	138,048,000	125,663,000	131,952,000	109,991,000	97,423,000	88,450,000	84,036,000	86,103,000	85,944,000	96,686,000	97,241,000	98,648,000	1,233,245,000
tion	243,823,000	206,035,000	216,831,000	196,318,000	186,924,000	153,193,000	123,375,000	142,637,000	161,210,000	194,467,000	210,781,000	229,881,000	2,265,475,000
tion	146,894,000	133,124,000	142,919,000	129,867,000	106,283,000	86,778,000	94,624,000	97,464,000	91,188,000	92,889,000	86,962,000	97,078,000	1,306,061,000
factured	1,130,593,000	994,409,000	1,030,170,000	903,925,000	837,282,000	722,939,000	617,084,000	662,296,000	736,789,000	905,779,000	1,012,201,000	1,104,340,000	10,657,810,000
Gas Company	219,088,000	161,516,000	191,099,300	127,116,100	138,148,900	106,098,400	93,237,000	176,554,700	220,349,900	249,902,500	225,274,900	264,210,100	2,173,196,400
s Light Co.	39,455,984	24,107,855	41,111,103	22,094,640	52,425,871	42,969,060	17,020,140	25,502,850	23,046,000	54,329,327	29,002,025	32,004,207	403,309,322
s Light Co.	52,510,000	24,430,600	49,281,200	31,518,300	20,229,600	5,754,800	208,000	17,160,100	13,528,800	17,926,200	16,328,000	18,621,200	267,696,800
Co. of N. Y.	9,471,800	7,903,700	7,829,700	6,497,200	5,752,000	5,183,600	5,362,900	6,118,800	6,896,400	8,225,900	8,949,800	9,814,000	87,976,400
ased	320,626,384	217,953,155	289,981,303	167,226,240	310,556,372	150,955,360	115,846,040	225,396,450	263,821,100	330,384,127	277,644,725	324,248,107	2,932,178,922
	1,477,671,384	1,286,457,427	1,320,996,553	1,196,282,676	1,074,246,402	907,163,250	615,470,770	689,883,910	906,466,471	1,199,791,920	1,401,829,461	1,625,393,576	13,616,540,922
	44,361,500	41,086,100	40,321,800	32,082,900	29,526,500	25,697,700	20,322,200	21,881,100	23,224,500	29,748,500	33,801,500	38,179,500	380,933,300
Office	273,628,900	248,198,900	240,431,100	245,995,900	217,722,400	218,327,600	130,933,800	182,207,600	210,266,200	237,383,300	248,057,400	256,851,800	2,760,004,900
ice	359,125,200	334,070,000	318,224,900	304,182,500	271,023,800	258,935,900	202,312,200	190,665,700	232,833,800	264,228,300	300,796,200	327,603,000	3,364,012,300
ice	339,100,800	310,861,200	286,579,500	271,328,800	236,851,800	223,963,500	165,316,100	150,807,500	186,062,500	225,843,400	267,832,200	294,864,300	2,959,411,600
ice	357,800,600	323,595,500	305,815,700	301,691,500	277,108,700	281,735,820	227,796,120	219,728,270	269,351,020	307,369,120	328,028,720	347,800,820	3,548,021,490
to Consumers	1,374,017,000	1,237,811,700	1,191,373,000	1,135,383,000	1,032,233,200	1,038,660,520	796,080,420	763,290,170	921,838,020	1,064,772,820	1,178,516,020	1,265,309,020	13,012,384,090
	29,564,112	24,771,877	24,495,117	19,993,045	17,744,812	15,964,000	16,598,890	18,737,360	20,999,058	25,035,364	27,200,032	29,676,001	270,779,677
Co. of N. Y.	......	2,968,600	......	......	......	......	......	......	......	......	......	......	2,968,600
Sales	1,403,581,112	1,285,552,177	1,215,868,117	1,175,874,645	1,049,978,012	1,024,624,520	813,279,310	784,027,530	942,837,078	1,089,808,184	1,205,716,052	1,294,985,021	13,286,132,367
ent.	......	......	......	......	......	......	......	......	......	......	......	300,990,555	300,990,555
r 31, 1905	74,090,272	905,250	105,128,436	20,408,031	24,268,390	x117,461,270	x197,808,540	x94,143,629	x36,371,207	109,983,736	196,113,409	29,418,000	29,418,000
	1,477,671,384	1,286,457,427	1,320,996,553	1,196,282,676	1,074,246,402	907,163,250	615,470,770	689,883,910	906,466,471	1,199,791,920	1,401,829,461	1,625,393,576	13,616,540,922

be deducted [illegible] cubic feet gas used at offices and stations of company.

Lines in red ink.

(Exhibit No. 94.)

Exhibit "C."

CONSOLIDATED GAS COMPANY OF NEW YORK

SUMMARY OF OPERATIONS

For the Calendar Year 1905.

		Quantity	Price per Unit	Amount	Quantity per M c.f. Made	Divisor 10,637,810 Cost per M c.f. Made	Divisor 10,419,461 Cost per M c.f. sold
1.	Coal—Bituminous—Tons	229,282.81	$ 3.18	$ 729,606.21	48.19	6.84	7.00
2.	Anthracite—Tons	106,024.68	4.36	462,680.25	22.82	4.34	4.44
3.	Boiler—Tons	10,399.67	3.67	38,156.43	2.19	0.36	0.37
4.	Cartage—Tons	......	....	18,222.89	....	0.17	0.18
5.	Labor handling	......	....	49,130.07	....	0.46	0.47
6.	Total	......	....	$1,297,815.85	....	12.17	12.46
7.	Residuals:						
8.	Coke—Loads	167,071.70	$ 2.02	$ 338,300.91	....	3.17	3.25
9.	Less—Labor handling	......	....	35,678.39	....	0.34	0.34
10.	Cartage	......	....	11,164.97	....	0.10	0.11
11.	Net	......	....	$ 291,457.55	....	2.73	2.80
12.	Tar (Coal) Tons Carbonized	229,282.81	$28.59	$ 65,346.70	....	0.62	0.63
13.	Ammoniacal Liquor, lbs	4,896,886.	01.34	65,849.65	....	0.62	0.63
14.	Carbon, lbs	485,720.	01.00	4,857.20	....	0.04	0.05
15.	Spent Oxide, lbs	5,577,034.	00.11	6,196.47	....	0.06	0.06
16.	Oil Tar—Gals	2,710,826.	01.93	52,207.26	....	0.49	0.50
17.	Total Residuals	......	....	$ 486,114.83	....	4.56	4.67
18.	Net Total—Lbs	......	....	$ 811,701.02	....	7.61	7.79
19.	Coke Used—Tons	19,892.54	$ 3.22	$ 63,972.09	....	0.60	0.61
20.	Labor	......	....	1,293.31	....	0.01	0.01
21.	Cartage	......	....	43.87	....	...	...
22.	Total	......	....	$ 65,300.27	....	0.61	0.62
23.	Naphtha—Gals.	5,587.	$04.38	$ 244.43	....	...	...
24.	Gas Oil—Gals.	41,876,670.	04.23	1,769,968.42	3.93	16.61	16.99
25.	Fuel Oil—Gals.	2,502.	02.00	50.04	....	...	...
26.	Lime—Bushels	62,374.	04.99	3,114.02	....	0.03	0.03
27.	Oxide—Bushels	121,485.	15.78	19,173.35	....	0.18	0.18
28.	Water—c. f.	22,684,200.	1.00M	22,684.20	....	0.22	0.22
29.	Fuel Oil Labor (Inc. Drip Oil Labor if used in Mfg.)	......	....	4,424.70	....	0.04	0.04
30.	Oil, Waste & Sundries	......	....	5,407.15	....	0.05	0.06
31.	Cartage	......	....	17,123.60	....	0.16	0.17
32.	Labor	......	....	382,632.04	....	3.59	3.67
33.	Net amt. of material & labor, Carried Forward	......	....	3,101,832.24	....	29.10	29.77

(Continued)

Exhibit "C"—*Cont.*

SUMMARY OF OPERATIONS—*Continued.*

		Quantity	Price per Unit	Amount		Quantity per M c.f. Made	Divisor 10,657,810 Cost per M c.f. Made		Divisor 10,419,461 Cost per M c.f. Sold
	Net amount of material & labor, Brought Forward	....	....	$3,101,832.24		....	29.10		29.77
34.	Repairs to Apparatus	....	....	169,197.39		....	1.59		1.62
35.	Repairs to Buildings	....	....	24,900.69		....	0.23		0.24
36.	Repairs to Tools & Implements	....	....	16,228.48		....	0.16		0.16
37.	Expense	....	....	59,016.97		....	0.55		0.57
38.	Distribution	....	....	31,855.34		....	0.30		0.31
39.	Experiments	....	....	3,030.08		....	0.03		0.03
40.	Profit & Loss adjustment	....	....	Credit	7,508.39	....	Credit 0.07		Credit 0.07
41.	Distributing Station Expenses	....	....	56,538.57		....	0.53		0.54
42.	Station Cost	....	....	$3,455,091.37	..	....	32.42	..	33.17
43.	Cost of Gas Mfg. under Agency Agreement			$ 997,039.89	..	....	34.04	..	34.82
44.	Total Cost at Holder	....	....	$4,452,131.26	..	....	32.77	..	33.52
45.	Expense	....	....	490,855.36	..	....	....	..	03.69
46.	Distributing	....	....	281,524.12	..	....	....	..	02.12
47.	Repairs to Gas Stoves	....	....	55,954.35	..	....	....	..	00.42
48.	Repairs to Mains	....	....	126,110.31	..	....	....	..	00.95
49.	Repairs to Services	....	....	89,033.46	..	....	....	..	00.67
50.	Repairs to Meters	....	....	172,925.52	..	....	....	..	01.30
51.	Repairs to Buildings	....	....	15,116.68	..	....	....	..	00.11
52.	Repairs to Tools & Implements	....	....	15,610.59	..	....	....	..	00.11
53.	Street Lamps	....	....	289,259.09	..	....	....	..	02.18
54.	Interest on Consumers' Deposits	....	....	51,391.52	..	....	....	..	00.39
55.	Bad & Doubtful Debts	....	....	82,995.11	..	....	....	..	00.63
56.	Profit & Loss adjustment	....	....	Credit	29,683.92	....	....	..	Credit 00.22
57.	Total Distribution	....	....	$1,641,092.19	..	....	....	..	12.35
58.	Expense—General Office	....	....	$ 339,999.51	..	....	....	..	02.56
59.	Vacations & Sickness	....	....	8,175.20	..	....	....	..	00.06
60.	Automobiles	....	....	5,064.16	..	....	....	..	00.04
61.	Advertising & Legal	....	....	105,800.02	..	....	....	..	00.80
62.	Real Estate Rents	....	....	42,674.71	..	....	....	..	00.32
63.	Gas Co.'s Mutual Aid Soc.	....	....	6,413.99	..	....	....	..	00.05
64.	Superannuation	....	....	14,943.86	..	....	....	..	00.11
65.	Insurance	....	....	54,031.83	..	....	....	..	00.41
66.	Taxes	....	....	965,843.88	..	....	....	..	07.27
67.	Contingent Expenses (includes renewals)	....	....	1,328,316.37	..	....	....	..	10.00
68.	Total General Expenses	....	....	$2,871,263.53	..	....	....	..	21.62
69.	Fixed Charges	....	....	$ 972,423.44	..	....	....	..	07.32
70.	Total Operating	....	....	$9,936,910.42	..	....	....	..	74.81

POOR COPY

EXHIBIT "C," Cont.

SUMMARY OF OPERATIONS,—Continued.

as made at Consolidated Company's Stations	10,657,810,000	
as made at other Company's Stations under Agency Agreements	2.929.210.322	13,587,020,322 c. f.
as Sold, made at Consolidated Company's Stations	10,419,461,426	
as Sold, made at other Company's Stations under Agency Agreement	2,863,702,341	13,283,163,767 c. f.
xcess made over sales—2.24 per cent.		303,856,555 c. f.
as Sales, cubic feet	13,283,163,767	

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POOR COP

SUMMARY OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 1905, AMPLIFIED AND ADJUSTED.

EXHIBIT "D."

As per Consolidated Gas Company			As per Marwick, Mitchell & Co.		*Increase or Decrease	
Cost Per M Cu. Ft. Cents	Amount	*Manufacturing*	Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. Ft. Cents
Divisor 10,419,461 M Cu. Ft.			Divisor 10,657,810 M Cu. Ft.			
7.00	$729,606.21	Coal: Bituminous	$729,606.21	6.84	—	**.16
4.44	462,680.25	Anthracite	462,680.25	4.34	—	.10
.37	38,156.43	Boiler	38,156.43	.36	—	.01
.18	18,222.89	Cartage	18,222.89	.17	—	.01
.47	49,150.07	Labor Handling	49,150.07	.46	—	.01
12.46	$1,297,815.85	Total Coal	$1,297,815.85	12.17	—	.29
		Residuals:				
3.25	$338,300.91	Coke	$338,300.91	3.17	—	.08
.34	35,678.39	Less: Labor Handling	35,678.39	.34	—	—
.11	11,164.97	Cartage	11,164.97	.10	—	.01
2.80	291,457.55	Net Coke	291,457.55	2.73	—	.07
.63	65,546.70	Tar—Coal	65,546.70	.62	—	.01
.63	65,849.65	Ammoniacal Liquor	65,849.65	.62	—	.01
.05	4,857.20	Carbon	4,857.20	.04	—	.01
.06	6,196.47	Spent Oxide	6,196.47	.06	—	—
.50	52,207.26	Oil Tar	52,207.26	.49	—	.01
4.67	$486,114.83	Total Residuals	$486,114.83	4.56	—	.11
7.79	$8[illegible],701.02	Net Coal less Residuals	$811,701.02	7.61	—	.18
		Coke Used:				
.61	63,972.09	Coke Used	63,972.09	.60	—	.01
.01	1,293.31	Labor	1,293.31	.01	—	—
—	43.87	Cartage	43.87	—	—	—
.62	$65,309.27	Total Coke Used	$65,309.27	.61	—	.01
		Miscellaneous:				
—	244.43	Naphtha	244.43	—	—	—
16.99	1,769,968.42	Gas Oil	1,769,968.42	16.61	—	.38
—	50.04	Fuel Oil	50.04	—	—	—
.03	3,114.02	Lime	3,114.02	.03	—	—
.18	19,173.35	Oxide	19,173.35	.18	—	—
.22	22,684.20	Water	22,684.20	.22	—	—
.04	4,424.70	Fuel Oil—Labor	4,424.70	.04	—	—
.06	5,407.15	Oil, Waste and Sundries	5,407.15	.05	—	.01
.17	17,123.60	Cartage	17,123.60	.16	—	.01
3.67	382,632.04	Labor	382,632.04	3.59	—	.08
21.36	$2,224,821.95	Total Miscellaneous	$2,224,821.95	20.88	—	.48
29.77	$3,101,832.24	Total Material and Labor	$3,101,832.24	29.10	—	**.67

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*Red ink in original.

***Note.*—This difference per M Cubic Feet is due to the difference in the Divisor, *i.e.*, the amount of gas manufactured.

POOR COPY

EXHIBIT "D," Cont.

SUMMARY OF OPERATIONS—*Continued.*

As per Consolidated Gas Company		MANUFACTURING—*Continued*						As per Marwick, Mitchell & Co.		**Increase* or Decrease	
Cost Per M Cu. Ft. Cents	Amount		*Labor*	*Material*	*Total*	*Adjust-ments*	*Adjusted Total*	Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. Ft. Cents.
29.77	$3,101,832.24	Total Material and Labor, Brought Forward						$3,101,832.24	29.10	—	.67
		Repairs and Expenses:									
		Repairs to Apparatus:									
		14th Street Station	$28,962.02	17,919.15	46,881.17	112.50	46,768.67				
		21st " "	26,506.22	37,739.83	64,246.05	1,568.90	62,677.15				
		42nd " "	13,278.16	10,306.38	23,584.54	105.00	23,479.54				
		44th " "	10,838.99	11,486.08	22,325.07	144.40	22,180.67				
		99th " "	6,988.13	5,172.43	12,160.56	203.18	11,957.38				
1.62	169,197.39		$86,573.52	82,623.87	169,197.39	2,132.98	167,063.41	167,063.41	1.57	2,133.98	.05
		Repairs to Buildings:									
		14th Street Station	3,323.74	1,168.47	4,492.21	—	4,492.21				
		21st " "	5,049.95	3,854.66	8,904.61	15.00	8,889.61				
		42nd " "	3,361.99	1,204.39	4,566.38	48.50	4,517.88				
		44th " "	2,887.04	755.01	3,642.05	25.00	3,617.05				
		99th " "	1,584.06	1,711.38	3,295.44	—	3,295.44				
.24	24,900.69		$16,206.78	8,693.91	24,900.69	88.50	24,812.19	24,812.19	.23	88.50	.01
		Repairs to Tools and Implements:									
		14th Street Station	1,425.54	4,427.95	5,853.49						
		21st " "	1,510.85	1,973.11	3,483.96						
		42nd " "	3,669.75	907.86	4,577.61						
		44th " "	1,274.42	221.42	1,495.84						
		99th " "	710.25	107.33	817.58						
.16	16,228.48		$8,590.81	7,637.67	16,228.48			16,228.48	.15	—	.01
		Expenses·									
		14th Street Station	6,444.83	3,622.91	10,067.74						
		21st " "	13,998.23	6,735.76	20,733.99						
		42nd " "	7,188.08	4,124.21	11,312.29						
		44th " "	4,669.53	3,911.02	8,580.55						
		99th " "	5,874.69	2,447.71	8,322.40						
.57	59,016.97		$38,175.36	20,841.61	59,016.97			59,016.97	.55	—	.02
		Distribution:									
		14th Street Station	7,389.15	3,894.04	11,283.19						
		21st " "	5,425.01	9,498.95	14,923.96						
		42nd " "	1,916.51	—	1,916.51						
		44th " "	1,825.00	—	1,825.00						
		99th " "	1,855.13	51.55	1,906.68						
.31	31,855.34		18,410.80	13,444.54	31,855.34			31,855.34	.30	—	.01
2.90	301,198.87	Repairs and Expenses, Carried Forward						298,976.39	2.80	2,222.48	.10
29.77	3,101,832.24	Total Materiral and Labor Carried Forward						$3,101,832.24	29.10	—	.67

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*Red ink in original.

EXHIBT "D," Cont.

SUMMARY OF OPERATIONS—*Continued.*

MANUFACTURING—*Continued.*

As per Consolidated Gas Company			As per Marwick, Mitchell & Co.		*Increase or Decrease	
Cost Per M Cu. Ft. Cents	Amount		Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. ft. Cents
29.77	3,101,832.24	Total Material and Labor, Brought Forward	$3,101,832.24	29.10	—	.67
2.90	301,198.87	Repairs and Expenses, Brought Forward	298,976.39	2.80	2,222.48	.10
.03	3,030.08	Experiments	3,030.08	.03	—	—
*.07	*7,508.39	Profit and Loss Adjustment	*7,508.39	*.07	—	—

Distributing Station Expense:	18th St.	63d St.	Station 65th St.	112th St.	Inwood	Total
Coal	$ —	—	—	2,301.03	35.31	2,336.34
Coke	1,226.75	1,701.25	3,451.75	3,368.10	—	9,747.85
Water	458.84	961.20	309.40	583.60	4.10	2,317.14
Superintendents	2,100.00	—	—	—	—	2,100.00
Boiler & Engine Room Wages	748.62	3,484.50	3,689.13	4,521.39	—	12,443.64
Valvemen, Wages	1,825.25	83.20	—	822.38	730.00	3,460.83
Repairs to Buildings, Labor	361.41	21.00	135.59	90.12	—	608.12
Repairs to Buildings, Material	125.66	2.35	7.55	*3.89	13.30	144.97
Repairs to Apparatus, Labor	494.77	1,376.84	440.44	1.019.53	30.56	3,362.14
Repairs to Apparatus, Material	*381.77	1,276.62	879.27	1,099.04	3.25	2,876.41
Repairs to Tools and Implements	*5.58	1.29	5.16	—	—	.87
Expenses, Labor	7,988.21	1,521.01	1,766.24	2,603.08	—	13,878.54
Expenses, Material	1,326.73	249.35	704.25	898.71	82.68	3,261.72
	$16,268.89	10,678.61	11,388.78	17,303.09	899.20	56,538.57

Cost Per M Cu. Ft. Cents	Amount		Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. ft. Cents
.54	56,538.57		56,538.57	.53	—	.01
3.40	353,259.13	Total Repairs and Expenses	351,036.65	3.29	2,222.48	.11
33.17	3,455,091.37	Total Station Cost	3,452,868.89	32.39	2,222.48	.78

Cost of Manufacturing Gas purchased under Agency Agreement:

	Manufacturing Cost	Additional 10 P. C.	Total	Adjustments	Adjusted Total
New Amsterdam Gas Co.	$624,069.49	62,406.95	686,476.44	62,406.95	624,069.49
The Standard Gas Co.	118,775.85	11,877.60	130,653.45	11,877.60	118,775.85
New York Mutual Gas Light Co.	86,929.59	8,692.96	95,622.55	8,692.96	86,929.59
Central Union Gas Co. of N. Y.	24,684.64	2,468.45	27,153.09	2,468.45	24,684.64
	854,459.57	85,445.96	939,905.53		
Sold to Central Union Gas Co.	922.44	92.24	1,014.68	*1,014.68	
	853,537.13	85,353.72	938,890.85		
Add: New Amsterdam Gas Co., 5% of amount expended on Construction			58,149.04	58,149.04	
			997,039.89	142,580.32	854,459.57

Cost Per M Cu. Ft. Cents	Amount		Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. ft. Cents
(Divisor 2,929,210,322 Cu. Ft.)			(Divisor 2,932,179,922 Cu. Ft.)			
34.82	997,039.89		854,459.57	29.14	142,580.32	5.68
33.52	4,452.131.26	Carried Forward	$4,307,328.46	31.69	144,802.80	1.83

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*Red Ink in Original.

EXHIBIT "D." Cont.

SUMMARY OF OPERATIONS—*Continued.*

As per Consolidated Gas Company Cost Per M Cu. Ft. Cents	As per Consolidated Gas Company Amount		As per Marwick, Mitchell & Co. Amount	As per Marwick, Mitchell & Co. Cost Per M Cu. Ft. Cents	*Increase or Decrease Amount	*Increase or Decrease Per M Cu. Ft. Cents
Divisor	13,283,163,767 Cu. Ft.		Divisor 13,589,988,922 Cu. Ft.			
33.52	4,452,131.26	Total Cost of all Gas at Holder, Brought Forward	$4,307,328.46	31.69	144,802.80	1.83

Divisor 13,283,163,767 Cu. Ft. Divisor 13,012,384,090 Cu. Ft

DISTRIBUTION.

Branch Office Expenses:

Wages:	Hester St.	Irving Pl.	Office 42d St.	3rd Avenue	Total
General	$8,910.79	15,561.56	13,571.41	15,143.49	53,187.27
High Bills	734.05	3,060.32	1,995.92	3,265.93	9,056.22
Applications	5,178.15	7,456.49	6,102.20	8,698.11	27,434.95
Indexing	5,525.88	7,123.68	5,043.29	8,731.34	26,424.19
Regular Bookkeeping	15,235.97	22,780.86	17,724.30	23,605.12	79,346.25
P. P. Bookkeeping	1,898.43	1,768.85	1,455.33	1,892.58	7,015.19
Regular Collecting	19,787.76	27,059.91	18,793.23	29,357.53	94,998.43
P. P. Collecting	5,130.13	4,995.65	3,796.88	5,330.03	19,252.69
Stove Collecting	146.47	223.81	840.60	693.43	1,904.31
Cashier	7,268.60	8,978.83	9,064.34	10,451.71	35,763.48
Stoves	1,042.86	2,514.87	4,156.32	5,610.27	13,324.32
Indexing, Bonus	335.25	466.75	241.25	473.50	1,516.75
Incidentals	7,167.89	13,508.75	14,490.41	19,548.12	54,715.17
	$78,362.23	115,500.35	97,275.48	132,801.16	423,939.22

Cost Per M Cu. Ft. Cents	Amount	Amount	Cost Per M Cu. Ft. Cents	*Increase or Decrease Amount	Per M Cu. Ft. Cents
3.19	423,939.22	423,939.22	3.26	—	*.07

Expense, Meter Shops:

	Shop Hester St.	Avenue A	66th St.	114th St.	Meter Repair.	Total
Wages	$8,114.84	7,629.56	7,750.95	9,867.89	565.81	33,929.05
Material	1,854.16	3,555.35	3,793.91	5,501.92	2,527.79	17,233.13
	$9,969.00	11,184.91	11,544.86	15,369.81	3,093.60	51,162.18

Cost Per M Cu. Ft. Cents	Amount	Amount	Cost Per M Cu. Ft. Cents	*Increase or Decrease Amount	Per M Cu. Ft. Cents
.38	51,162.18	51,162.18	.39	—	*.01

Expense, Street Departments:

	Department. Hester St.	66th St.	111th St.	Total.
Wages	$4,177.81	3,698.29	4,312.87	12,188.97
Material	1,289.36	1,181.12	1,094.51	3,564.99
	$5,467.17	4,879.41	5,407.38	15,753.96

Cost Per M Cu. Ft. Cents	Amount		Amount	Cost Per M Cu. Ft. Cents	*Increase or Decrease Amount	Per M Cu. Ft. Cents
.12	15,753.96		15,753.96	.12	—	—
3.69	490,855.36	Carried Forward	$490,855.36	3.77	—	*.08

POOR COPY

EXHIBT "D," Cont.

SUMMARY OF OPERATIONS—*Continued.*

DISTRIBUTION—*Continued.*

As per Consolidated Gas Company Cost Per M Cu. Ft. Cents	 Amount			As per Marwick, Mitchell & Co. Amount	 Cost Per M Cu. Ft. Cents	*Increase or Decrease Amount	 Per M Cu. ft Cents
3.69	490.855.36	Brought Forward		$490,855.36	3.77	—	*.08
		Distribution:					

Labor:	Hester St.	114th St.	Shop Avenue A	66th St.	Total
Setting Meters	$5,105.77	9,731.15	4,693.67	3,029.18	22,559.77
Jobbing	23,782.46	44,577.39	28,520.82	23,503.29	120,383.96
Burner Work	452.95	2,097.25	1,015.50	1,464.27	5,029.97
Setting Stoves	1,821.56	10,569.55	3,755.82	9,185.01	25,331.94
Material	15,323.87	32,654.67	14,834.22	22,265.25	85,078.01
	$46,486.61	99,630.01	52,820.03	59,447.00	258,383.65

Cost	Amount			Amount	Cost	Amount	Cents
1.95	258,383.65		$258,383.65	258,383.65	1.98		*.03
		Distribution, General Office, Pumping Drips:					
		Labor:					
		Hester Street	$6,228.85				
		66th Street	4,792.32				
		111th Street	5,314.60				
		Opening and Closing Valves	243.50				
.12	16,579.27		$16,579.27	16,579.27	.13		*.01
		Distribution, General Office, Pressure:					
		Labor:					
		Hester Street	$1,493.63				
		66th Street	2,534.26				
		111th Street	1,387.59				
		Material	1,238.50				
.05	6,653.98		$6,653.98	6,653.98	.05	—	—
	*92.78	**Distribution, General Office:**		*92.78			
		Repairs to Gas Stoves:					
		Labor	30,641.83				
		Material	25,312.52				
.42	55,954.35		$55,954.35	*11,413.27	*.09	67,367.62	.51
		Repairs to Mains:					

	Hester St.	66th St.	111th St.	Total
Labor	$24,995.19	32,689.87	31,202.52	88,887.58
Material	10,942.48	12,615.12	13,665.13	37,222.73
	$35,937.67	45,304.99	44,867.65	126,110.31

Cost	Amount		Amount	Cost	Amount	Cents
.95	126,110.31		126,110.31	.97	—	*.02
7.18	954,444.14	Carried Forward	$887,076.52	6.81	67,367.62	.37

*Red ink in original.

POOR COPY

SUMMARY OF OPERATIONS—*Continued.*

EXHIBIT "D."

DISTRIBUTION—Continued.

As per Consolidated Gas Company Cost Per M Cu Ft. Cents	As per Consolidated Gas Company Amount								As per Marwick, Mitchell & Co. Amount	As per Marwick, Mitchell & Co. Cost Per M Cu. Ft. Cents	**Increase or Decrease* Amount	**Increase or Decrease* Per M Cu. Ft. Cents
7.18	954,444.14	Brought Forward							$887,076.52	6.81	67,367.62	.37
		Repairs to Services:										
			Hester St	66th St.	111th St.	Total	Adjustments.	Adjusted Total.				
		Labor	$11,610.68	16,935.49	17,857.20	46,403.37	1,850.31	44,553.06				
		Material	13,192.78	15,956.28	13,481.03	42,630.09	—	42,630.09				
.67	89,033.46		$24,803.46	32,891.77	31,338.23	89,033.46	1,850.31	87,183.15	87,183.15	.67	1,850.31	—
		Repairs to Meters:										
		Labor				126,069.90						
		Material				46,855.62						
1.30	172,925.52					172,925.52			172,925.52	1.33		*.03
		Repairs to Buildings:										
			Labor	Material	Total	Adjustments	Adjusted Total					
		Hester Street Branch	$28.43	62.16	90.59	—	90.59					
		Irving Place Branch	47.07	13.90	60.97	8.87	52.10					
		42nd Street Branch	3.25	173.95	177.20	—	177.20					
		3rd Avenue Branch	261.06	301.77	562.83	—	562.83					
		Hester Street Shop	3.97	81.25	85.22	—	85.22					
		Avenue A Shop	125.20	66.34	191.54	—	191.54					
		66th Street Shop	193.39	127.42	320.81	—	320.81					
		114th Street Shop	446.26	308.88	755.14	—	755.14					
		Meter Repair Shop	1,990.68	2,965.06	4,955.74	796.00	4,159.74					
		Hester St. Street Department	589.27	652.06	1,241.33	362.75	878.58					
		66th St. Street Department	877.92	380.83	1,258.75	—	1,258.75					
		111th St. Street Department	129.02	62.09	191.11	—	191.11					
		General Office	1,507.53	3,000.60	4,508.13	1,678.13	2,830.00					
		Stables	323.98	393.34	717.32	—	717.32					
.11	15,116.68		$6,527.03	8,589.65	15,116.68	2,845.75	12,270.93		12,270.93	.09	2,845.75	.02
		Repairs to Tools and Implements:										
			Labor	Material	Total							
		Hester Street Shop	$10.95	187.44	198.39							
		Avenue A Shop	74.54	390.68	465.22							
		66th Street Shop	123.93	1,225.45	1,349.38							
		114th Street Shop	189.41	387.62	577.03							
		Meter Repair Shop	1,090.42	1,358.69	2,449.11							
		Hester St. Street Department	1,437.66	2,124.55	3,562.21							
		66th St. Street Department	1,856.10	1,391.99	3,248.09							
		111th St. Street Department	1,119.45	1,134.43	2,253.88							
		General Office	1,261.39	245.89	1,507.28							
.11	15,610.59		$7,163.85	8,446.74	15,610.59				15,610.59	.12		*.01
9.37	1,247,130.39	Carried Forward							$1,175,066.71	9.02	72,063.68	.35

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*Red Ink in Original.

EXHIBIT "D," Cont.

SUMMARY OF OPERATIONS—*Continued.*

As per Consolidated Gas Company Cost Per M Cu. Ft. Cents	Amount	*Distribution—Continued.*					As per Marwick, Mitchell & Co. Amount	Cost Per M Cu. Ft. Cents	**Increase* or Decrease Amount	Per M Cu. Ft. Cents,
9.37	1,247,130.39	Brought Forward					$1,175,066.71	9.02	72,063.68	.35
		Street Lamps:	Hester St.	66th St.	111th St.	Total				
		Labor, Fitting, Repairing	$2,130.72	4,228.28	5,074.79	11,433.79				
		Labor, Lighting Extinguishing and Cleaning	59.33	134.58	400.50	694.41				
		Welsbach Street Lighting Company	56,363.47	55,967.73	209,073.69	321,404.89				
		Labor, Inspecting	912.50	754.50	2,169.50	3,836.50				
		Pipe and Fittings	485.00	602.20	872.71	1,959.91				
		Glass	33.00	12.00	41.70	86.70				
		Repairing, Material	1,099.32	1,764.08	986.25	3,849.65				
		Sundries	3,307.01	3,786.33	22,075.54	29,168.88				
		Jan. 1 to July 1, 1905, Sales reserved for maintenance	26,214.31	25,933.22	99,542.88	151,690.41				
			90,604.66	93,182.92	340,237.56	524,025.14				
		Credits	42,344.99	44,157.89	148,263.17	234,766.05				
2.18	289,259.09		$48,259.67	49,025.03	191,974.39	289,259.09	—	—	289,259.09	2.18
		Interest on Consumers' Deposits								
		Hester Street	$13,411.91							
		Irving Place	9,801.11							
		42nd Street	7,247.15							
		3rd Avenue	12,258.79							
		General Office	8,672.56							
.39	51,391.52		$51,391.52				—	—	51,391.52	.39
		Bad and Doubtful Debts:								
		Hester Street	8,982.18							
		Irving Place	24,832.48							
		42nd Street	20,970.90							
		3rd Avenue	28,209.55							
.63	82,995.11		$82,995.11				82,995.11	.64	—	*.01
*.22	*29,683.92	Profit and Loss Adjustment					*29,683.92	*.23	—	.01
12.35	1,641,092.19	Total Distribution Expenses					$1,228,377.90	9.43	412,714.29	2.92
45.87	6,093,223.45	Total Material, Labor and Distribution					$5,535,706.36	41.12	557,517.09	4.75

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*Red ink in original

EXHIBIT "D," Cont.

SUMMARY OF OPERATIONS—*Continued.*

GENERAL EXPENSES

As per Consolidated Gas Company								As per Marwick, Mitchell & Co.		*Increase or Decrease	
Cost Per M Cu. Ft. Cents	Amount			Total	Adjustments		Adjusted Total	Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. Ft. Cents.
		Expenses, General Office:									
		General Expense, Salaries		$99,807.42	—		99.807.42				
		Engineering, Draughtsmen, Clerks, Salaries		38,211.95	—		38,211.95				
		Mains and Service, Superintendents Street Department, Salaries		6,254.59	—		6,254.59				
		Bookkeeping Department, Salaries		19,944.62	—		19,944.62				
		Collecting Department, Salaries		1,400.04	—		1,400.04				
		Cashiers' Department, Salaries		5,199.96	—		5,199.96				
		Street Department, Sundries		1,066.60	—		1,066.60				
		Incidentals		67,844.31	27,275.95		40,568.36				
		Meter Department, Salaries		9,256.74	—		9,256.74				
				248,986.23	27,275.95		221,710.28				
		New Business, General Offices:									
		Fuel Department, Pay Roll	$35,787.77								
		Donation of Appliances	268.44								
		Pipe for P. P. Meters	3,225.58								
		Advertising	3,114.22								
		Commissions, Branch Offices	3,481.41								
		Rents	1,500.00								
		Gas Arc Commissions	9,112.55								
		Incidentals	2,214.75								
		Monthly Magazine "Gas Logic"	1,870.56	60,575.28	—		60,575.28				
		Claims for Damages		30,438.00	3,800.00		26,638.00				
2.56	339.999.51			$339,999.51	31,075.95		308,923.56	308,923.56	2.37	31,075.95	.19
.06	8,175.20	Vacations and Sickness						8,175.20	.06	—	—
		Automobiles:		Street Dept.	Expense Autos.	General	Total				
		Labor		$415.74	1,344.12	622.00	2,381.86				
		Material		400.07	1,315.15	967.08	2,682.30				
.04	5,064.16			$815.81	2,659.27	1,589.08	5,064.16	5,064.16	.04	—	—
		Advertising and Legal:			Adjustments		Adjusted Total				
		Advertising		$11,888.56	6,020.34		5,868.22				
		Legal Expense		77,425.48	52,110.55		25,314.93				
		Franchise Tax Litigation		5,270.76	5,270.76		—				
		Legal and Arrears		11,215.22	—		11,215.22				
				$105,800.02	63,401.65		42,398.37				
.80	105,860.02							42,398.37	.32	63,401.65	.48
3.46	459,038.89	Carried Forward						$364,561.29	2.79	94,477.60	.67

POOR COPY

SUMMARY OF OPERATIONS—*Continued.*

General Expenses—Continued.

As per Consolidated Gas Company			As per Marwick, Mitchell & Co.		*Increase or Decrease	
Cost Per M Cu. Ft. Cents	Amount		Amount	Cost Per M Cu. Ft. Cents	Amount	Per M Cu. Ft. Cents.
3.46	459,038.89	Brought Forward	364,561.29	2.79	94,477.60	.67
.32	42,674.71	Real Estate Rents	42,049.71	.32	625.00	—
.05	6,413.99	Gas Company's Mutual Aid Society	6,413.99	.05	—	—
.11	14,943.86	Superannuation	14,943.86	.12	—	*.01
.41	54,031.83	Insurance	53,879.39	.41	152.44	—
7.27	965,843.88	Taxes	743,151.26	5.71	222,692.62	1.56
10.00	1,328,316.37	Contingent Expense	167,427.84	1.29	1,160,888.53	8.71
21.62	2,871,263.53	Total General Expenses	$1,392,427.34	10.69	1,478,836.19	10.93
7.32	972,423.44	Fixed Charges	—	—	972,423.44	7.32
74.81	9,936,910.42	Total Operating	$6,928,133.70	51.81	3,008,776.72	23.00
—	—	Add: Adjustment on Account of Leakage, 300,990,555 Cubic Feet at Cost of Manufacture	—	.73	—	*.73
—	—	Discount, etc.	*5,395.36	*.04	5,395.36	.04
74.81	9,936,910.42		$6,922,738.34	52.50	2,014,172.08	22.31

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*Red ink in original.

Exhibit "E."
Part "1"

14TH STREET STATION

MONTHLY RECORD OF GAS MANUFACTURED DURING YEAR 1905

Date	Gas Made in M Cubic Feet			Received from Stations		Sent To				COAL					Candle Power Station Test		
								Send Out			Used in Caking Coal		Yield in Cubic Feet				
	Registered	Avg. Temp.	Corrected	Oil Gas 2 st St.	Coal Gas 21st St.	Customers	42nd St. Station	Maximum	Minimum	Received (Tons)	Shops (Tons)	Carbonized (Pounds)	Per Pound	Per Ton	Uncorrected	Temp.	Corrected
January	147,458	68	144,386	17,263	90,339	251,516	..	9,206	6,095	9,274.00	6.92	30,398.356	4.74	10,639	22.85	63	23.05
February	131,823	67	129,583	15,400	80,803	226,089	..	8,935	6,368	5,759.50	6.02	27,230,004	4.75	10,659	22.45	64	22.70
March	130,689	67	128,302	13,608	94,565	236,015	..	8,714	5,909	17,067.50	8.24	26,639,411	4.81	10,788	23.12	65	23.45
April	*82,538	68	118,567	11,898	79,586	210,254	..	8,067	5,319	13,369.00	7.38	24,486,986	4.84	10,846	23.45	67	23.89
May	**71,690	76	107,690	11,117	87,027	206,520	..	7,838	4,796	9,718.50	7.29	22,586,323	4.76	10,680	23.62	70	24.26
June	104,370	83	97,809	12,100	72,961	181,109	1,498	7,548	4,009	9,434.00	6.00	21,198,104	4 60	10,319	24.99	74	26.01
July	95,114	89	87,495	14,365	67,463	159,128	10,660	6,136	3,933	8,700.50	7.24	19,091,448	4.58	10,265	28.72	80	30.38
August	97,826	87	90,694	13,629	76,872	177,317	3,500	6,824	4,397	9,774.50	7.23	19,371,408	4.68	10,487	27.56	77	28.89
September	100,786	80	94,565	13,805	91,438	198,476	600	7,521	5,334	10,531.50	9.10	19,995,650	4.72	10,593	26.24	74	27.25
October	110,570	75	106,143	15,401	108,411	228,874	1,250	8,440	5,515	5,933.06	7.18	21,908,879	4.84	10,852	26.05	67	26.57
November	108,627	66	106,798	16,597	123,921	247,835	..	10,040	6,367	6,068.94	19.97	22,009,020	4.85	10,869	25.36	67	25.84
December	108,978	65	107,619	16,075	146,544	269,724	..	10,800	6,882	10,882:50	14.19	22,303,150	4.82	10,808	24.97	63	23.17
	1,290,469	74	1,319,651	171,258	1,119,930	2,592,837	17,508	10,800	3,933	116,513.50	106.76	277,218,730	4.75	10,650	24.95	69	25.62

Date	Iron Mass Bushels Used	Croton Water Cubic Feet Used	COKE												Retorts		
				Boilers					Sent to Stations (in Pounds). No. Loads								
			Produced Loads	Retorts	Exhauster	Distribution	Repairs to Apparatus	Sold Loads	21st St.	21st St. Screenings	111th St.	Astoria	Astoria Screenings	99th St. Screenings	Sundries	Cu. Ft. Made per Retort in Action	Number Days' Labor in Manufacture	Gas Made per Day's Labor Employed
January	4,500	355,800	13,571	3,865	612	414	31	4,791	2,891	....	482	487	...	...	3	5,971	5,499	24,973
February	..	329,900	12,156	3,532	543	357	28	4,626	1,675	99	488	475	178	141	5	5,922	4,969	24,477
March	6,100	317,500	11,893	3,302	572	246	55	6,466	2,901	491	211	269	...	...	19	5,925	4,773	25,137
April	900	315,800	10,931	2,242	561	186	58	4,179	3,928	186	....	....	187	263	8	5,961	4,437	25,503
May	1,000	321,100	10,083	2,566	461	175	75	5,579	1,655	118	....	....	...	...	3	5,740	4,249	24,182
June	1,600	310,700	9,478	2,203	563	15	54	5,229	1,327	108	....	253	...	...	2	5,461	4,072	22,922
July	900	307,800	8,523	2,005	561	24	31	4,601	878	39	....	222	196	...	2	5,290	3,610	21,732
August	900	289,000	8,648	2,341	579	10	44	5,241	1,001	60	....	....	167	...	3	5,468	3,909	22,560
September	1,900	284,900	8,927	2,561	557	2	49	4,703	981	....	....	....	...	...	2	5,646	3,870	23,268
October	2,550	303,400	9,781	2,825	584	..	63	4,473	1,002	....	....	....	...	...	5	5,941	4,143	24,622
November	2,940	278,900	9,825	3,088	602	..	71	4,822	970	....	....	....	...	...	3	6,245	4,050	25,229
December	1,900	272,400	9,957	3,122	501	267	31	5,734	618	....	....	....	...	...	2	6,136	4,184	24,576
	25,190	3,687,200	123,773	33,642	6,696	§1,696	592	60,444	19,827	1,101	1,181	1,706	728	404	57	5,809	‡51,765	24,099

* Gas Made Registered is incomplete, this figure being to April 20.

** Gas Made Registered is incomplete, this figure being to May 12, Meter broken down, Provsion for 4 Meters.

§ This total is made up as follows:

Coal Hoist Boilers	10
Distribution Boilers	1,674
Purification	12
	1,696

‡ This total is made up as follows:

Retort House	36,159
Coal	1,890
Coke	11,321
Incidentals	2,395
	51,765

Exhibit "2"
Part "II"

42ND STREET STATION

MONTHLY RECORD OF GAS MANUFACTURED DURING YEAR 190

Date	Gas Made			Received from Stations			Sent Out to Consumers	Send Out		COAL		Used in Making Coal	Yield in Cubic Feet	
	Registered	Avg. Temp.	Corrected	Oil Gas 14th St.	21st Street	44th Street		Maximum	Minimum	Received (In Tons)	Shops (Tons)	Carbonized (Pounds)	Per Pound	Per Ton
January	140,107	66	138,048	....	128,913	108,250	373,722	13,415	10,864	7,470.5	.52	25,443,060	5.4258	12,154
February	127,641	66	125,663	....	107,581	88,925	322,425	13,106	10,786	8,165.0	3.19	22,960,875	5.4729	12,259
March	136,642	73	131,952	....	91,680	106,490	331,327	12,557	8,733	14,758.5	3.11	24,986,145	5.2810	11,827
April	114,624	75	109,991	....	75,747	105,155	290,063	10,657	8,371	11,285.5	7.60	21,028,520	5.2306	11,717
May	101,877	77	97,423	....	70,325	98,150	266,983	9,744	7,417	8,169.5	2.06	18,456,075	5.2786	11,824
June	92,477	76	88,450	1,498	63,272	81,500	234,635	9,128	5,530	8,888.0	2.00	17,446,215	5.0699	11,357
July	89,084	81	84,096	10,660	24,101	77,000	195,896	7,510	3,942	8,556.5	1.88	17,197,785	4.8899	10,953
August	91,300	81	86,103	3,500	9,455	92,000	190,527	7,247	4,545	7,132.5	2.94	17,388,995	4.9516	11,092
September	89,449	75	85,944	600	29,443	106,500	224,961	9,085	5,200	7,928.0	2.04	16,757,280	5.1288	11,488
October	99,216	74	95,686	1,250	83,233	124,240	304,609	12,137	7,839	5,069.0	4.74	17,786,557	5.3794	12,050
November	99,226	68	97,241	....	141,172	125,020	360,903	15,253	10,407	6,430.5	2.11	18,127,395	5.3643	12,016
December	99,272	62	98,648	....	162,857	137,150	398,945	14,589	11,109	7,714.5	....	18,762,260	5.2578	11,777
	1,280,915	73	1,239,245	17,508	987,779	1,250,380	3,494,987	15,253	3,942	101,568.0	32.19	236,341,162	5.2430	11,710

Date	Candle Power Station Test			Specific Gravity	Lime, bushels		Iron Mass Bushels Received and Used	Croton Water		COKE						Sent to Station (in lbs.) (No. Loads)			
	Uncorrected	Temp.	Corrected		Received	Used		Cubic Feet Used	Cubic Feet Used per M	Produced Loads	Retorts	Boilers Exhauster	Boilers Coal Hoist	% Produced for Fuel	Sold Loads	44th St.	63rd St.	th St.	111th St.
January	22.50	66	22.81	4.87	4,550	7,650	....	326,000	2.36	11,358.50	2,152.00	482	227	25	6,832.33	774	148	270	11
February	22.56	66	22.90	4.85	4,900	8,100	3,000	296,300	2.36	10,250.39	2,349.00	453	142	29	6,008.07	701	108	320	...
March	22.54	72	23.30	4.81	3,700	6,850	....	333,800	2.53	11,154.53	2,281.53	443	126	20	7,016.00	737	140	195	261
April	22.61	75	23.57	4.81	9,500	8,000	....	285,000	2.59	9,387.73	1,495.72	368	146	22	6,169.20	1,477	44	54	1
May	22.52	76	23.50	4.81	8,600	5,600	7,000	248,600	2.55	8,239.32	1,223.35	318	88	21	6,370.97	1,069	16	51	...
June	22.80	77	23.91	4.83	5,350	....	....	234,900	2.66	7,788.49	920.86	287	99	17	5,841.63	896	47	60	...
July	24.69	83	26.36	4.86	950	....	....	255,100	3.03	7,677.58	1,094.11	249	132	17	5,904.97	1,090	39	25	8
August	23.49	80	24.84	4.86	....	....	....	243,800	2.83	7,762.94	689.91	298	77	16	6,071.03	980	...	57	259
September	23.91	78	25.12	4.89	2,550	5,100	5,000	248,200	2.89	7,480.93	216.30	278	99	18	6,373.63	581	31	59	...
October	24.58	75	25.62	4.94	6,050	5,950	....	200,900	2.10	7,940.43	505.20	303	77	22	6,964.23	...	14	72	5
November	23.57	78	24.60	4.97	4,750	7,650	5,000	204,300	2.10	8,092.59	1,222.00	344	131	23	6,294.30	...	24	78	...
December	23.41	76	24.45	...	7,950	7,225	....	242,100	2.45	8,376.01	1,687.01	361	154	26	5,275.00	...	134	302	19
	23.27	75	24.25	4.86	60,850	62,125	20,000	3,119,000	2.52	105,509.44	15,838.99	4,186	1,498	21	76,021.36	8,235	765	1,543	564

EXHIBIT "E"—PART "2," Cont.

42ND STREET STATION—Continued.

Date	Retorts Cubic Ft. Made per Retort in Action	Number Days Labor in Manufacture				Gas Made Per Day's Labor Employed	Gas Oil				Gallons Used per M.
		Retort House	Coal	Coke	Incidentals		Received Gallons	Gallons Corrected	Specific Gravity	Used Gallons	
January	7,834	5,401	740	477	155	19,634	230,002	223,547	32.0	208,576	1.51
February	7,902	4,998	795	425	140	18,904	228,822	221,953	29.7	189,566	1.51
March	7,621	5,223	1,368	504	155	17,535	187,784	183,302	29.5	205,082	1.56
April	7,499	4,465	990	442	150	17,406	189,721	187,307	29.2	187,959	1.71
May	7,535	3,904	804	446	155	17,506	170,281	168,294	29.1	162,241	1.67
June	7,184	3,676	831	432	150	16,880	140,068	137,460	30.5	146,461	1.67
July	6,808	3,430	1,063	452	155	15,879	182,041	176,771	30.5	152,082	1.81
August	6,977	3,368	1,092	465	155	16,323	133,556	133,270	30.5	151,228	1.76
September	7,188	3,098	1,268	463	150	16,439	85,460	86,012	30.0	153,089	1.78
October	7,597	3,138	1,109	477	155	18,700	196,701	190,742	30.1	171,248	1.79
November	7,609	3,216	1,373	468	150	17,802	205,302	200,589	34.0	177,643	1.83
December	7,481	3,309	1,380	483	155	17,852	203,609	198,169	34.4	177,638	1.80
	7,436	47,226	12,815	5,534	1,825	17,584	2,153,347	2,107,416	30.8	2,083,413	1.68

EXHIBIT "E," Part "3"

21ST STREET STATION.

Monthly Record of Gas Manufactured During Year 1905.

	Gas Made						Sent to Stations.				Send Out		Fuel Used per M		
Date	Registered	Ave. Temp.	Corrected	Oil Gas	Total	Sent out to Consumers	Oil Gas 14th St.	14th St.	18th St.	42nd St.	Maximum	Minimum	Gazogenes and Generators	Boilers	Oil Per M Gals.
January	450,100	68	440,179	17,263	457,442	194,587	17,263	90,339	26,685	128,913	8,106	3,141	35.78	3.09	4.78
February	393,518	69	384,604	15,400	400,004	171,585	15,400	80,803	23,939	107,581	7,313	3,140	34.77	3.52	4.57
March	405,505	68	396,558	13,608	410,166	180,094	13,608	94,565	30,637	91,680	7,218	3,535	34.10	6.97	4.45
April	344,721	68	337,287	11,898	349,185	153,512	11,898	79,586	27,960	75,747	6,360	3,141	36.40	4.57	4.49
May	330,254	72	327,845	11,117	338,962	143,407	11,117	87,027	27,578	70,325	5,492	2,745	35.99	5.73	4.51
June	296,949	76	284,609	12,100	296,709	128,518	12,100	72,961	20,095	63,272	5,399	2,187	34.21	7.04	4.45
July	225,051	80	213,129	14,365	227,494	109,293	14,365	67,463	11,868	24,101	4,607	2,119	34.15	5.17	4.83
August	243,232	78	231,769	13,629	245,398	126,730	13,629	76,872	18,357	9,455	6,296	2,668	34.11	9.15	4.68
September	304,031	77	290,077	13,805	303,882	143,014	13,805	91,438	26,589	29,443	6,057	2,857	33.34	7.91	4.67
October	419,902	77	401,202	15,401	416,603	173,846	15,401	108,411	35,640	83,233	7,165	2,869	33.11	6.40	4.66
November	517,373	77	493,822	16,597	510,419	192,645	16,597	123,921	36,221	141,172	7,388	[illegible]	33.89	4.78	4.62
December	582,800	78	555,039	16,075	571,114	209,171	16,075	146,544	36,305	162,857	8,680	3,069	33.43	3.88	4.60
	4,522,496	74	4,356,120	171,258	4,527,378	1,926.402	171,258	1,119,930	321,874	987,779	8,680	2,119	34.44	5.68	4.65

	Candle Power at Station.					Candles per Gallon of Oil Used		Oil Used				Materials Used for Oil Gas					
												Experimental Machine					
Date	Total Cubic Feet	Per M	Without Correction	Temp.	Corrected		Specific Gravity	Gallons Received	Gallons Corrected	Used for Making Gas	Gallons Per M	Coal	Oil	Gas Oil	Drip Oil	Coal	Coke
January	943,700	2.14	23.88	78	25.14	5.26	30.00	2,556,822	2,529,483	2,105,392	4.78	....	...	345,450	115,600	....	....
February	755,300	1.96	23.65	79	24.95	5.46	29.40	2,008,282	1,992,882	1,756,027	4.57	....	...	298,300	105,600	....	....
March	738,300	1.86	23.46	81	24.84	5.58	29.97	2,035,446	2,006,173	1,7[illegible]320	4.43	....	...	268,105	100,000	....	....
April	635,200	1.88	23.82	79	25.07	5.58	33.80	1,852,244	1,837,142	1,509,012	4.47	....	...	231,307	77,750	....	1,925
May	658,400	2.01	24.01	82	25.50	5.65	29.53	1,687,404	1,660,769	1,479,162	4.51	....	...	219,215	79,000	....	....
June	760,200	2.67	25.25	82	26.85	6.03	29.53	1,410,391	1,402,870	1,266,217	4.45	....	...	239,625	73,300	....	....
July	966,200	4.54	25.79	86	27.72	5.74	28.38	1,442,846	1,445,369	1,031,521	4.83	....	...	290,920	88,450	....	....
August	932,000	4.02	24.91	82	26.50	5.66	28.52	1,376,498	1,371,915	1,084,764	4.68	....	...	279,440	93,350	....	....
September	865,700	2.98	24.81	80	26.20	5.61	28.80	1,553,875	1,551,007	1,354,593	4.70	....	...	277,720	94,600	.....	....
October	795,900	1.98	25.13	78	26.38	5.66	29.70	2,200,085	2,187,235	1,869,295	4.66	248*	18*	297,350	108,900	24,800	3,350
November	728,800	1.48	25.52	76	26.69	5.78	33.11	2,547,912	2,538,165	2,282,545	4.62	882*	115*	307,900	114,000	88,230	850
December	790,600	1.42	25.34	76	26.51	5.76	34.49	3,082,979	3,061,795	2,555,358	4.60	259*	36*	309,440	118,700	25,900	3,500
	9,570,300	2.19	24.63	80	26.03	5.65	30.72	23,754,784	23,584,895	20,058,206	4.61	1389*	169*	3,364,772	1,169,250	138,930	9,625

* Note. This represents hundreds.

EXHIBIT "E" Part "3", Cont.

21st STREET STATION, Continued.

	Fuel for Generators			Fuel for Boilers							Total Solid Fuel Used			
Date	Anthracite Coal	Coke	In Action	Anthracite Coal Pea and Dust	Buckwheat Coal	Black Coal	Coke	Coke Breeze	Used Per M	Tar (Pounds)	Coal	Used Per M	Coke and Breeze	Used Per M
January	12,837,955	2,911,108	7	476,110	......	......	885,402	......	3.09	......	13,314,065	30.24	3,796,510	8.62
February	11,698,905	1,674,380	7	311,935	......	31,360	813,540	198,180	3.52	2,708,739	12,042,200	31.31	2,686,100	6.98
March	10,967,430	2,555,790	6	......	......	......	1,780,990	981,600	6.97	2,106,421	10,967,430	27.66	5,318,380	13.41
April	7,625,060	4,656,265	6	......	......	......	1,165,740	373,210	4.57	1,890,100	7,625,060	22.60	6,195,215	18.37
May	9,541,740	2,255,600	6	1,014,570	......	285,210	344,840	235,180	5.73	1,449,785	10,841,520	33.07	2,835,620	8.65
June	7,870,705	1,862,380	4.3	1,273,160	......	386,995	128,410	217,080	7.04	1,298,860	9,530,860	33.49	2,208,070	7.76
July	6,045,200	1,234,530	3.3	730,480	......	215,560	77,220	78,080	5.17	1,746,165	6,991,240	32.80	1,389,830	6.52
August	6,561,280	1,343,970	3.6	1,430,675	......	407,960	162,150	120,620	9.15	1,174,545	8,399,915	36.24	1,626,740	7.02
September	8,314,600	1,355,740	4.7	1,809,920	......	368,920	116,580	......	7.91	1,160,481	10,493,440	36.17	1,472,320	5.28
October	11,923,950	1,360,270	6	1,477,445	672,425	280,760	136,850	......	6.52	2,354,780	14,354,580	35.78	1,497,120	3.73
November	15,390,805	1,342,590	7.18	712,650	1,052,800	492,570	105,750	......	4.83	2,932,335	17,648,825	35.78	1,448,340	2.98
December	17,731,565	823,520	8	666,990	940,800	453,100	93,990	......	3.88	3,196,805	19,792,455	35.66	917,510	1.65
	126,509,195	23,376,343	5.76	9,903,935	2,666,025	2,922,435	5,811,462	2,203,950	[illegible]	22,019,016	142,001,590	32.59	31,391,755	7.21

	Fuel for Tank Yard Boiler		Coal (Tons)		Lime and Iron Mass (Bushels)				Residual Oil or Tar (Gallons)				
Date	Coal (Pounds)	Coke	Received	Sold	Received	Used	Coke Pounds Received	Coke Breeze Pounds Received	Made	Used	Sold	Days' Labor Employed in Manufacture	Gas Made per Day's Labor Employed
January	349,440	532,000	4,789.10	16	5,000	....	4,336,820	......	375,579	320,020	39,674	2,314	190,224
February	689,920	......	4,746.30	5	....	5,000	2,513,420	198,180	312,114	302,500	14,674	1,989½	193,317
March	562,240	......	4,953.35	39	5,000	....	4,351,780	981,600	369,071	233,660	147,568	2,05[illegible]	193,066
April	349,440	......	3,851.35	2	....	....	5,891,430	373,210	248,854	203,870	20,200	2,0[illegible]¾	162,450
May	208,320	......	4,255.30	..	....	....	2,483,190	235,180	312,364	159,852	146,731	1,974	166,081
June	201,600	......	4,470.95	7	1,750	380	1,990,740	217,080	310,312	143,354	177,766	1,426½	199,516
July	208,320	......	3,768.25	1	....	5,454	1,316,750	78,080	272,870	193,731	76,512	1,220½	174,625
August	208,320	......	3,834.05	..	....	168	1,501,620	120,620	235,761	130,645	103,290	1,298	178,559
September	201,600	......	7,861.55	..	27,400	17,348	1,472,320	......	331,824	128,194	190,054	1,630¼	177,934
October	208,320	......	9,899.75	64	....	10,350	1,501,970	......	456,376	263,433	174,779	1,851½	216,690
November	201,600	......	6,560.65	37	3,000	2,110	1,455,190	......	451,379	327,985	136,283	2,022¾	244,134
December	694,400	......	10,258.15	34	....	....	927,010	......	507,387	357,195	175,515	2,161¼	258,814
	4,083,520	532,000	69,248.75	205	42,150	40,810	29,742,240	2,203,950	4,183,891	2,764,489	1,403,046	*22,018½	196,284

* This total is made up as follows:

Purifying House	1,345¼
Generator House	15,648¾
Incidentals	5,024½
	22,018½

Exhibit "E"—Part "4"

44TH STREET STATION

Monthly Record of Gas Manufactured During Year 1905.

	Gas Made			Sent Out				Fuel Used per M		Water		Candle Power		
Date	Registered	Avg. Temp.	Corrected	Consumer	42nd St. Station	Maximum	Minimum	Gazogenes & Generators	Boilers	Total Cubic Feet	Used Per M	Without Correction	Temp.	Corrected
January	252,888	74	243,823	135,627	108,250	5,178	2,775	34.47	2.89	477,900	1.96	23.84	75	24.85
February	211,702	70	206,035	116,269	88,925	4,767	2,943	34.07	1.61	415,800	2.01	23.71	75	24.70
March	224,792	73	216,831	111,131	106,490	4,354	1,937	32.37	1.72	399,200	1.84	24.62	77	25.82
April	205,473	76	196,318	90,358	105,155	3,624	1,845	34.17	3.34	423,100	2.16	22.57	75	23.47
May	200,586	85	186,924	88,764	98,150	3,449	1,743	35.36	4.62	366,500	1.96	22.88	79	24.14
June	167,836	91	153,193	71,709	81,500	3,338	1,410	33.59	4.16	342,900	2.24	24.37	81	26.05
July	133,612	88	123,375	45,993	77,000	1,869	877	33.67	4.65	272,100	2.23	25.98	87	28.06
August	154,717	88	142,637	50,665	92,000	2,442	766	32.94	5.09	347,400	2.44	24.52	86	26.40
September	171,011	81	161,210	55,282	106,500	2,298	1,042	33.86	4.89	304,900	1.89	24.40	81	25.88
October	205,708	80	194,467	70,399	124,240	2,918	964	32.43	3.79	354,900	1.82	24.32	78	25.77
November	219,840	75	210,781	85,016	125,020	3,390	1,442	33.84	3.01	371,600	1.76	23.55	74	24.51
December	241,517	78	229,881	93,071	137,150	3,435	2,194	32.18	3.65	406,500	1.77	23.14	76	24.21
	2,389,702	80	2,265,475	1,014,284	1,250,380	5,178	766	33.58	3.62	4,482,800	2.01	24.01	79	25.32

	Gas Oil				Fuel for Generators							Fuel for Boilers					
Date	Specific Gravity	For Gas Making	Gallons Per M	Sent to 18th St. Station	Anthracite	Anthracite Pea Coal	Coke	Used per M	In Action	Anthracite Pea and Dust	Slack Coal	Coal	Buckwheat	Coke	Coke Breeze	Used Per M	In Action
January	30.40	1,173,507	4.81	...	7,851,889	......	550,775	34.47	4-20/31	227,195	98,078	......	......	337,630	44,010	2.89	5- 9/31
February	29.73	943,595	4.58	...	6,189,780	......	830,367	34.07	3-23/28	91,810	....	......	......	238,930	....	1.61	4-26/28
March	31.58	1,001,604	4.62	...	6,248,670	......	770,290	32.37	3-24/31	153,830	....	......	......	218,910	....	1.91	5
April	34.48	859,721	4.38	...	4,252,580	614,035	1,841,750	34.17	3-26/30	405,010	9,020	......	......	242,365	....	3.34	5
May	30.08	822,382	4.40	...	4,385,330	866,175	1,358,690	35.36	4- 2/31	306,960	95,155	119,385	......	342,050	....	4.62	3
June	29.19	727,077	4.75	...	3,492,480	545,439	1,108,010	33.59	3- 2/30	251,935	63,420	91,970	......	231,745	....	4.16	5
July	29.01	610,603	4.95	50	2,446,940	368,135	1,338,955	33.67	2-17/31	259,585	8,730	90,273	......	215,920	....	4.65	3-11/31
August	29.15	656,493	4.60	50	4,008,285	......	690,230	32.94	2-13/31	247,790	18,040	......	......	459,860	....	5.09	3- 5/31
September	29.49	763,833	4.74	...	4,855,720	......	603,340	33.86	3	210,125	....	......	......	578,615	....	4.89	4
October	29.95	954,397	4.91	...	6,294,070	......	12,440	32.33	3	509,745	35,070	......	111,540	81,914	....	4.73	4- 4/28
November	34.25	1,008,611	4.78	...	7,132,800	......	......	33.86	3-29/30	329,790	83,690	......	221,595	....	....	3.00	5
December	34.75	1,051,934	4.58	...	7,397,715	......	......	32.18	3-26/31	369,750	50,350	......	419,575	....	....	3.65	4-30/31
	31.34	10,573,957	4.68	100	64,556,259	2,393,775	9,104,847	33.57	3-15/30	3,363,525	461,533	301,630	752,710	2,947,639	44,010	3.71	4.57

(Continued)

Exhibit "E"—Part "4"—*Cont.*

44TH STREET STATION—*Continued.*

Date	Total Solid Fuel Used				Coal			Residual Oil or Tar			Day's Labor Generator House	Gas Made per Day's Labor Employed
	Coal	Used per M	Coke and Breeze	Used per M	Total Coal Received	Sold, etc.	Coke Received	Made Gallons	Used Gallons	Sold Gallons		
January	3,650.51	33.54	416.25	3,82	3,270.55	15.00	1,072,346	351,214	199,206	152,134	833.25	191,451
February	2,804.28	30.50	477.36	5.21	2,480.75	16.00	990,670	303,054	198,018	74,486	707.25	183,754
March	2,858.26	29.53	441.61	4.56	3,986.90	13.00	1,068,275	291,318	200,651	128,717	667.60	200,872
April	2,357.43	26.90	930.41	10.61	2,162.25	9.00	2,149,525	178,192	159,901	21,454	616.55	197,991
May	2,577.23	30.88	759.26	9.10	3,550.40	....	1,549,860	203,020	139,820	47,308	698.40	173,850
June	1,984.48	29.01	598.10	8.74	1,610.85	1.00	1,284,960	164,539	121,552	30,173	570.95	157,866
July	1,416.81	25.72	694.01	12,60	2,241.05	....	1,563,355	125,140	91,771	43,889	532.35	133,696
August	1,908.08	29.97	513.43	8.06	1,760.40	....	1,315,870	137,365	91,020	60,936	506.35	163,406
September	2,261.54	31.42	527.66	7.33	3,492.30	....	837,480	174,909	104,258	52,996	539.10	166,824
October	3,102.86	35.76	42.12	5.90	3,174.45	19.75	......	244,329	127,725	108,409	615.80	187,104
November	3,467.80	36.85	......	...	3,311.30	26.00	......	251,582	153,727	113,457	702.05	191,263
December	3,677.41	35.83	......	...	2,305.60	16.00	......	192,771	162,335	16,458	724.00	201,473
	32,066.69	31.33	5,400.21	7.59	33,346.80	115.75	11,832,341	2,617,323	1,749,984	852,417	7,713.65	179,129

(Concluded)

Exhibit "E"—Part "5."

99TH STREET STATION

Monthly Record of Gas Manufactured During Year 1905.

	Gas Made			Sent To		Send Out		Fuel Used per M			Water		Candle Power at Station			
Date	Registered	Avg. Temp.	Corrected	Central Union Station	Customers	Maximum	Minimum	Gazogenes & Generators	Boilers	Oil per M Gallons	Total Cubic Feet	Per M	Without Correction	Temp.	Corrected	Candles per Gallon of Oil Used
January	150,476	69	146,894	....	145,971	5,750	2,556	34.25	3.07	4.76	229,500	1.56	24.71	68	25.23	5.30
February	137,472	72	133,124	2,967	130,371	6,147	3,316	33.82	2.76	4.70	200,100	1.50	24.42	70	25.10	5.34
March	147,831	73	142,919	....	142,133	5,550	2,979	34.19	2.58	4.58	185,800	1.30	24.55	71	25.31	5.53
April	134,393	73	129,867	....	128,783	5,701	2,815	35.79	2.94	4.38	173,200	1.33	24.55	66	24.91	5.69
May	110,498	74	106,283	....	107,997	6,130	128	36.80	2.04	3.60	113,400	1.07	24.07	71	24.76	6.88
June	90,607	76	86,778	....	84,494	5,279	624	33.82	4.17	3.90	169,000	1.95	24.90	76	26.03	6.67
July	100,355	81	94,624	....	95,572	4,627	1,790	32.19	3.11	4.51	199,700	2.11	27.53	80	29.10	6.45
August	102,940	80	97,464	....	100,692	7,201	1,094	32.11	3.24	4.40	209,600	2.15	25.26	76	26.44	6.01
September	95,454	77	91,188	....	87,471	4,022	935	32.23	3.20	4.30	121,100	1.33	24.53	74	25.47	5.92
October	95,107	69	92,880	....	93,864	5,633	350	31.88	1.84	4.53	145,100	1.56	24.35	69	24.98	5.51
November	89,455	71	86,962	....	87,251	4,560	165	32.12	3.61	4.55	163,400	1.88	23.86	69	24.46	5.38
December	99,773	70	97,078	....	96,924	4,799	1,520	32.42	4.27	4.58	152,200	1.57	23.70	71	24.42	5.33
	1,354,355	74	1,306,061	2,967	1,301,573	7,201	128	33.63	3.07	4.43	2,062,100	1.58	24.70	72	25.52	5.78

	Gas Oil					Fuel for Generators				Fuel for Boilers.								
	Gallons									Anthracite								
	Received	Corrected	Specific Gravity	Used	Gallons Per M	Anthracite Coal (Pounds)	Coke (Pounds)	Used Per M	In Action	Coal	Pea and Dust	Buckwheat Coal	Slack Coal	Coke Breeze	Used Per M	Tar (Pounds)	Used Per M	In Action
January	646,229	630,726	30.65	699,179	4.76	5,013,120	18,030	34.25	3.00	73,920	73,920	53,760	53,760	105,953	3.07	1,007,982	6.86	4.00
February	639,684	633,514	30.65	626,008	4.70	4,502,400	.....	33.82	3.00	62,720	53,760	44,800	49,280	157,300	2.76	942,318	7.08	4.89
March	665,338	645,646	31.04	655,171	4.58	4,872,000	15,000	34.19	3.00	145,600	56,000	......	56,000	111,957	2.58	829,393	5.80	3.42
April	553,259	535,717	31.10	568,439	4.38	4,648,000	....	35.79	3.00	138,880	64,960	......	64,960	113,168	2.94	784,774	6.04	3.00
May	454,281	447,329	30.25	383,006	3.60	3,911,040	....	36.80	2.00	78,400	38,080	......	38,080	63,147	2.04	874,842	8.23	2.00
June	330,148	324,240	29.99	338,834	3.90	2,934,400	....	33.82	2.00	127,680	62,720	......	62,720	108,230	4.18	503,517	5.84	2.66
July	432,094	420,598	29.18	426,329	4.51	3,046,400	....	32.19	2.00	118,720	51,520	......	44,800	79,821	3.11	639,648	6.76	3.00
August	429,423	420,267	29.42	429,153	4.40	3,129,280	....	32.11	2.00	136,640	67,200	......	24,640	87,736	3.24	650,390	6.67	3.00
September	455,218	444,484	30.82	391,722	4.30	2,938,880	....	32.23	2.00	44,800	64,960	71,680	......	111,087	3.20	645,978	7.16	3.00
October	420,233	407,331	30.58	421,106	4.33	2,961,280	....	31.88	2.00	......	49,280	96,544	24,640	......	1.84	750,361	8.10	3.00
November	335,132	324,737	33.26	395,621	4.55	2,793,280	....	32.12	2.00	91,840	85,120	103,040	33,600	......	3.61	588,115	6.76	3.00
December	561,734	546,626	33.76	444,859	4.58	3,147,200	....	32.42	2.00	20,160	138,880	208,320	47,040	......	4.27	569,639	5.89	3.00
	5,922,773	5,781,235	30.94	5,770,427	4.43	43,897,280	33,030	33.63	2.33	1,039,360	806,400	578,144	499,520	1,028,399	3.03	8,788,957	6.73	3.16

EXHIBIT "E," Part "5," Cont.

99TH STREET STATION—*Continued.*

	Total Solid Fuel Used				Coal (Tons)		Iron Mass Bushels		Coke Breeze (Pounds)		Residual. Oil or Tar (Gals.)			Days' Labor Employed in Manufacture	Gas Made per Day's Labor Employed
	Coal	Per M	Coke and Breeze	Per M	Received	Sold	Received	Used	Received	Sent	Made	Used	Sold		
January	5,268,480	35.87	213,983	1.45	2,340.30	32.00	....	....	......	......	182,460	111,811	63,106	945	155,443
February	4,712,960	35.40	157,300	1.18	1,624.75	37.85	500	500	282,140	......	166,760	106,028	74,698	874	152,316
March	5,129,600	35.89	126,957	.88	2,201.45	47.43	1,500	1,500	......	31,519	167,112	92,402	66,394	942	151,719
April	4,916,800	37.86	113,168	.87	1,702.85	10.00	....	....	......	4,488	135,900	85,598	44,476	920½	141,083
May	4,065,600	38.25	63,147	.59	2,205.80	37.00	....	....	526,680	32,790	117,740	96,096	26,038	903	117,700
June	3,187,520	33.59	108,230	1.26	1,384.40	44.00	500	500	......	52,480	90,460	55,982	40,082	709½	120,899
July	3,261,440	34.46	79,821	.84	989.55	27.00	2,000	2,000	......	39,514	103,940	70,530	17,682	746	126,842
August	3,357,760	34.45	87,736	.90	1,817.80	32.00	....	....	......	52,567	105,380	71,380	32,592	741½	131,442
September	3,120,320	34.32	111,087	1.44	2,284.90	64.00	2,500	2,500	......	17,191	99,785	71,933	30,068	825	110,531
October	3,131,744	33.74	......	...	2,721.10	110.00	....	....	......	......	105,670	84,565	33,976	872	106,513
November	3,106,880	35.73	......	...	1,750.70	63.00	....	....	......	......	95,600	67,499	29,312	777	111,920
December	3,361,600	36.69	......	...	2,398.75	26.00	2,500	2,300	......	......	93,600	63,882	16,024	849	114,344
	46,820,704	35.85	1,061,429	1.05	23,422.35	530.28	9,500	9,500	808,820	230,549	1,464,407	977,706	474,448	*10,104½	128,396

* This total is made up as follows:

Purifying House	1,020½
Generating House	4,226
Coal	1,937
Incidentals	2,921
	10,104½

Exhibit "C"
Schedule "I"

(Account No. 67)

DEPRECIATION ACCOUNT.

Year ended December 31, 1905.

1905.	Voucher No.			Amount Charged.	Balances.
Jan.	8	Services		$1,109.00	
		Meters		1,810.05	
		Gas Stoves, Meter Repair Shop...		80.07	
					$2,999.12
Feb.	31	Services:			
		111th Street		$ 59.00	
		Hester Street		345.00	
		66th Street		622.00	
				$1,026.00	
		Meters		2,236.90	
		Gas Stoves, Repair Shop........		95.94	
					$6,357.96
Mar.	47	Sundries:			
		Meters		$2,478.15	
		Services		2,859.00	
		General Office	$ 15.31		
		Repair Shop	151.97	167.28	
					$11,862.39
April	..	Depreciation to Plant Account 44th Street		$1,100.00	
		For the difference in the estimated present value and the initial cost of Knowles' 10 x 16 x 12 Air Compressor, transferred to Astoria L. H. & P. Co., April 22, 1905:			
		Original value	$1,550.00		
		Transferred at	450.00		
		Difference	$1,100.00		
		Sundries for amounts written off:			
		Mains:			
		Hester Street	$295.64		
		66th Street	631.02	$926.66	
		Services:			
		Hester Street	$1,579.00		
		66th Street	838.00		
		111th Street	1,296.00		
				$3,713.00	
		Meters		2,489.60	
		Gas Stoves:			
		General Office	$35.20		
		Repair Shop	107.84	143.04	
		Carried Forward			$20,234.69

Exhibit "C"
Schedule "1"—(Continued)

DEPRECIATION ACCOUNT—(Continued).

1905.	Voucher No.			Amount Charged.	Balances.
		Brought Forward			$20,334.69
May	79	Sundries for amounts written off:			
		Mains:			
		Hester Street	$ 4.38		
		111th Street	296.14	$300.52	
		Services:			
		Hester Street	$2,839.00		
		66th Street	2,110.00		
		111th Street	1,990.00	$6,939.00	
		Meters		2,564.55	
		Gas Stoves:			
		Hester Street	$ 6.00		
		Repair Shop	290.23	296.23	
					$30,334.99
June	105	Sundries for amounts written off:			
		Mains:			
		66th Street	$ 454.73		
		111th Street	1,792.80	$2,247.53	
		Services:			
		Hester Street	$1,503.00		
		66th Street	1,428.00		
		111th Street	2,647.00	5,578.00	
		Meters		3,193.65	
		Gas Stoves:			
		Broadway	$1.65		
		General Office	5.94		
		Repair Shop	32.90	40.49	
	107	Sundries:			
		For regular semi-annual depreciation written off:			
		Gas Stove Rental, 10%.....		$25.012.19	
		Tools & Implements, 20%			
		14th Street	$ 872.35		
		18th Street	253.08		
		21st Street	1,390.14		
		42d Street	742.75		
		44th Street	745.58		
		99th Street	511.45		
		Hester Street	396.52		
		Avenue A	498.93		
		66th Street	601.84		
		114th Street	541.42		
		Carried Forward	$6,554.06	$66,406.85	$30,334.99

Exhibit "C"
Schedule "1"—(Continued)

DEPRECIATION ACCOUNT—(Continued).

1905.	Voucher No.			Amount Charged.	Balances.
		Brought Forward		$66,406.85	$30,334.99
		Tools & Implements, 20%:			
		Brought Forward	$6,554.06		
		Repair Shop	1,770.26		
		Hester Street	938.75		
		66th Street	964.79		
		111th Street	1,335.08		
		General Office	837.84	12,400.78	
					$78,807.63
July	117	Sundries for amounts written off:			
		Meters		$1,989.15	
		Services:			
		Hester Street	$1,260.00		
		66th Street	930.00		
		111th Street	1,358.00	3,548.00	
		Mains:			
		Hester Street	$1,845.45		
		66th Street	198.98		
		111th Street	510.94	2,555.37	
		Gas Stoves:			
		Repair Shop	$102.58		
		do do	*2.00		
		For condemned Stove not shown in April Statement, No. 1, Clark Jacob Heater.	*17.80	82.78	
					$86,982.93
Aug.	139	Sundries for amounts written off:			
		Gas Stoves:			
		Repair Shop		$ 89.75	
		Meters		2,350.4	
		Services:			
		Hester Street	$852.00		
		66th Street	654.00		
		111th Street	1,002.00	2,508.00	
		Mains—66th Street		546.76	
					$92,477.89
Sept.	158	Sundries for amounts written off:			
		Mains:			
		Hester Street	$375.69		
		66th Street	958.58		
		111th Street	808.28	$2,142.55	
		Services:			
		Hester Street	$1,405.00		
		66th Street	1,368.00		
		111th Street	630.00	3,403.00	
		Carried Forward		$98,023.44	92,477.89

* Red Ink in Original.

Exhibit "C"
Schedule "1"—(Continued)

DEPRECIATION ACCOUNT—(Continued).

1905.	Voucher No.			Amount Charged.	Balances.
		Brought Forward		$98,023.44	$92,477.39
		Meters		1,666.05	
		Gas Stoves:			
		Repair Shop		64.05	
					$99,753.54
Oct.	181	Sundries for amounts written off:			
		Mains:			
		Hester Street	$ 773.66		
		66th Street	37.10		
		111th Street	1,236.40	2,047.16	
		Services:			
		Hester Street	$1,172.00		
		66th Street	1,275.00		
		111th Street	575.00	$3,022.00	
		Meters:			
		Repair Shop		2,077.10	
		Gas Stoves:			
		Repair Shop		244.60	
					$107,144.40
Nov.	197	Depreciation:			
		Gas Stoves—Repair Shop		$23.85	
	198	Sundries:			
		Mains:			
		Hester Street	$890.85		
		66th Street	438.48		
		111th Street	49.35	1,378.68	
	198	Services:			
		Hester Street	$812.00		
		66th Street	445.00		
		111th Street	535.00	1,792.00	
	198	Meters		867.50	
				532.35	
					$111,738.78
Dec.	215	Depreciation, Street Mains		$78,352.15	
		Number of feet of abandoned 2", 3" and 4" Street Mains from Dec. 31, 1902, to Dec. 31, 1905:			
		2"—125' @ .55........	$ 68.75		
		3"—53,950' @ .70........	37,765.00		
		4"—50,648' @ .80........	40,518.40		
			$78,352.15		
		Sundries for amounts written off:			
	218	Mains—Hester Street		64.16	
		Carried Forward		$190,155.09	$111,738.78

Exhibit "C"
Schedule "1"—(Continued)

DEPRECIATION ACCOUNT—(Continued).

Voucher 1905. No.				Amount Charged.	Balances.
	Brought Forward			$190,155.09	$111,738.78
	Services:				
	Hester Street		$893.00		
	66th Street		634.00		
	111th Street		377.00	1,904.00	
	Meters			1,390.70	
	Gas Stoves:				
	42d Street		36.57		
	General Off. Furn. & App....		11.25		
	Repair Shop		28.35	76.17	
223	Depreciation at Stations:				
	Greenfield Engine transferred from the 21st Station to the Repair Shop:				
	New	$250.00			
	Old	150.00	$100.00		
	American Blower Engine transferred from 21st Station to the Repair Shop:				
	New	$300.00			
	Old	206.00	94.00		
	No. 9 Blake Pump transferred from 42d Street Station to 111th St. Station:				
	New	$260.00			
	Old	130.00	130.00		
	McKenzie Exhauster transferred from 63d Street Station to 42d Street Station:				
	New	$4,000.00			
	Old	2,000.00	2,000.00	$2,324.00	
232	Sundries:				
	Depreciating the following Accounts as at Dec. 31, 1905:				
	Gas Stoves Rented, 10%....			$28,538.54	
	Meter Cocks & Con., 10%...			31,570.89	
	Horses, Wagons & Harness, 20%			5,338.62	
	Carried Forward			$261,298.01	$111,738.78

Exhibit "C"
Schedule "1"—(Continued)

DEPRECIATION ACCOUNT—(Continued).

Voucher 1905. No.				Amount Charged.	Balances.
	Brought Forward.			$261,298.01	$111,738.78
	Office Furniture & Fixtures, 20%:				
	Fitting up Photometer Room:				
	122 Bowery	$ 35.45			
	235 E. 79th Street	51.83			
	General Office	2,212.70	$2,299.98		
	Hester Branch		799.53		
	Irving Branch		1,546.13		
	42d Street		1,623.72		
	3d Avenue		955.11		
	14th Street Station		2.54		
	18th Street Station		7.15		
	21st Street Station		107.90		
	42d Street Station		3.87		
	44th Street Station		33.99		
	99th Street Station		20.69		
	Hester Street Department		66.65		
	66th Street Department		335.75		
	111th Street Department		69.12		
	Meter Repair Shop		268.74		
	Fitting up Show Room, 2 Irving Place		201.16	$8,342.03	
	Tools & Implements, 20%'				
	14th Street Station		$770.42		
	18th Street Station		207.09		
	21st Street Station		1,430.69		
	42d Street Station		590.52		
	44th Street Station		711.02		
	99th Street Station		448.92		
	Hester Street Shop		331.44		
	Avenue A Shop		459.36		
	66th Street Shop		495.11		
	114th Street Shop		342.94		
	Meter Repair Shop		1,954.35		
	Hester Street Department		796.67		
	66th Street Department		891.44		
	111th Street Department		1,231.84		
	General Office		1,421.06	12,082.87	
	Office Furniture:				
	To correct error in Depreciating the Account "Fitting up Show Room, 2 Irving Place" twice			*201.16	
	Automobiles & Accessories, 10% of $6,979.15			697.92	
	Renewal & Contingency Account.			*$282,219.67	

* Red Ink in Original.

REPAIRS TO APPARATUS—OPERATING CHARGES TAKEN EXCEPTION TO.

Year 1905.

No.	Goods Supplied By	Order No.	Items Taken Exception To	Amount Rejected
14th Street Station				
495	The Bristol Company	23,193	Recording Gauges	$75.00
498	The Bristol Company	23,193	Recording Gauges	37.50
	*Total 14th Street Station			*112.50
21st Street Station.				
199	Chapman Valve Mfg. Co.	21,027	List 41, Flgd. Valves	50.03
200	Chapman Valve Mfg. Co.	19,477	List 43, F. E. O. S. Valves	40.39
201	Chapman Valve Mfg. Co.	17,338	Mis. Valves	267.38
527	Manning, Maxwell & Moore	23,306	Cochrane Separator	240.00
572	Chas. A. Schieren & Co.	20,983	Leather Link Belting	181.80
573	Chas. A. Schieren & Co.	19,039	Leather Link Belting	186.00
692	Hohmann & Mauer Mfg. Co.		Thermos., etc.	35.00
739	G. M. Regulator Company	23,822	1 No. 1 Regulator	13.00
769	B. F. Ellis	20,079	Steam Traps, etc.	50.00
770	B. F. Ellis	19,249	Steam Traps, etc.	33.00
801	Chapman Valve Mfg. Co.	25,649	Valves, etc.	24.41
802	Chapman Valve Mfg. Co.	26,764	Valves, etc.	68.62
803	Chapman Valve Mfg. Co.	26,896	Valves, etc.	69.39
804	Chapman Valve Mfg. Co.	27,270	Valves, etc.	13.91
805	Chapman Valve Mfg. Co.	29,014	Valves, etc.	16.61
806	Chapman Valve Mfg. Co.		Valves, etc.	55.63
807	Chapman Valve Mfg. Co.	29,426	Valves, etc.	16.90
810	Consolidated Safety Valve Co.	24,042	Valves, etc.	132.00
844	Chapman Valve Mfg. Co.		Flanged Valves	50.63
	*Total 21st Street Station			1,568.90
42nd Street Station				
59	Christopher Cunningham	17,478	* Smoke Stack, 24 ins. dia. x 52 feet	105.00
	*Total 42nd Street Station			*105.00
44th Street Station				
54	Crosby Steam Gauge & Valve Co.	19,205	2 1¼ ins. Br. Crosby Gl. Valves	32.13
412	National Meter Company	29,677	1 V. D. Empire Oil Meter	59.75
687	Hohman & Mauer Mfg. Co.		Socket Thermos., etc.	52.52
	*Total 44th Street Station			*144.40
99th Street Station				
183	Chapman Valve Mfg. Co.	25,021	1 8 in. List 43¼ F. E. O. S. Valve Drill	56.59
184	Chapman Valve Mfg. Co.	25,021	1 8 in. List 43¼ F. E. O. S. Valve Drill	56.59
497	The Bristol Company	25,207	Recording Gauges	90.00
	*Total 99th Street Station			*203.18
	Total			$2,133.98

* Blue Ink in Original.

(Accounts No. 35 and 51)
(Exhibit "D," Pages 2 and 6)

Exhibit "D"
Schedule "3."

REPAIRS TO BUILDINGS—OPERATING CHARGES TAKEN EXCEPTION TO.

For Year 1905.

No.	*Goods Supplied By*	*Order No.*	*Items Taken Exception To*		*Amount Rejected*
21st Street Station					
406	Equitable Meter Company	29,386	1 3-in. Crawford Regulator, etc.		$15.00
42nd Street Station					
617	Protective Ventilator Co.	21,426	Protective Ventilators, etc.		48.50
44th Street Station					
690	Rheinfrank Wrecking Co.	25,932	Flag Pole		25.00
Hester Street Branch					
413	E. H. Ogden Lumber Co.		Oak Shelving, etc.	$102.00	
415	L. A. Hole	29,219	Putting New Water Closets, etc.	260.75	
					362.75
Irving Place					
663	Johnston Livingston, Jr., & Co.		Installing Lights, etc.		8.87
Meter Repair Shop					
421	Eagle Artificial Stone Co.	23,335	Concrete Floors Laid at E. 21st St.	755.00	
707	Foster Engineering Co.	27,963	Regulators, etc.	41.00	
					796.00
General Office					
941	Henry Diehl	29,486	Inclosing new stairway, House 2 Irving Pl.	60.00	
			Sundry repairs to buildings rented by Co.	1,618.13	
					1,678.13
					$2,934.25

(Account No. 43)
(Exhibit "D," Page 3)

GAS PURCHASED UNDER AGENC

For Year Ended December

NEW AMSTERDAM GAS COMPANY.

	Quantity (Cubic Feet)	Manufacturing Cost	Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
January	219,088,600	$65,047.41	29.64	$71,552.15	32.60
February	161,516,000	47,469.55	29.39	52,216.51	32.32
March	191,699,300	50,570.28	26.38	55,627.31	29.01
April	127,116,100	34,651.85	26.79	38,117.03	29.46
May	138,148,900	40,450.00	29.28	44,495.00	32.20
June	106,098,400	32,137.20	30.29	35,350.92	33.31
July	93,237,000	28,148.25	30.19	30,963.08	33.20
August	176,554,700	48,040.53	27.21	52,844.58	29.93
September	220,349,900	59,869.07	27.17	65,855.98	29.88
October	249,902,500	68,073.44	27.24	74,880.78	29.96
November	225,274,900	67,627.52	30.02	74,390.27	33.02
December	264,210,100	81,984.39	31.03	90,182.83	34.13
	2,173,196,400	$624,069.49	28.72	$686,476.44	31.59
Add: Interest on Construction of New Plant, 5% on amount expended.				58,149.04	2.67
				$744,625.48	34.26

THE STANDARD GAS LIGHT COMPANY.

	Quantity (Cubic Feet)	Manufacturing Cost	Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
January	39,455,984	11,505.36	29.16	$12,655.90	32.07
February	24,107,855	6,950.29	28.82	7,645.32	31.70
March	41,111,103	11,807.11	28.72	12,987.82	31.59
April	22,094,640	6,712.35	30.33	7,383.59	33.36
May	52,425,871	14,626.82	27.90	16,089.50	30.69
June	42,969,060	12,332.12	28.68	13,565.33	31.54
July	17,020,140	5,298.37	31.13	5,828.21	34.24
August	25,562,850	7,727.65	30.23	8,500.42	33.25
September	23,046,000	6,598.07	28.63	7,257.88	31.49
October	54,329,527	15,630.60	28.77	17,193.66	31.64
November	29,092,025	9,003.80	30.97	9,910.78	34.06
December	32,094,267	10,577.31	32.96	11,635.04	36.25
	403,309,322	$118,775.85	29.45	$130,653.45	32.39

January
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April
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July
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January
February
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December

ABSTRACT.

	Quanti (Cubic F
New Amsterdam Gas Company	2,173,196,4
The Standard Gas Light Company	403,309,3
The New York Mutual Gas Light Company	267,696,8
Central Union Gas Company of New York	87,976,4
	2,932,178,9

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Exhibit "D"—Schedule "4."

AS PURCHASED UNDER AGENCY AGREEMENTS

For Year Ended December 31, 1905.

COMPANY.

Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
29.64	$71,552.15	32.60
29.39	52,216.51	32.32
26.38	55,627.31	29.01
26.79	38,117.03	29.46
29.28	44,495.00	32.20
30.29	35,350.92	33.31
30.19	30,963.08	33.20
27.21	52,844.58	29.93
27.17	65,855.98	29.88
27.24	74,880.78	29.96
30.02	74,390.27	33.02
31.03	90,182.83	34.13
28.72	$686,476.44	31.59
	58,149.04	2.67
	$744,625.48	34.26

THE NEW YORK MUTUAL GAS LIGHT COMPANY.

	Quantity (Cubic Feet)	Manufacturing Cost	Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
January	52,510,000	$17,890.16	34.07	$19,679.18	37.47
February	24,430,600	8,389.47	34.34	9,228.42	37.77
March	49,281,200	15,686.21	31.83	17,254.83	35.01
April	31,518,300	10,101.62	32.05	11,111.78	35.25
May	20,229,600	6,483.59	32.05	7,131.95	35.25
June	5,754,800	1,903.11	33.07	2,093.42	36.37
July	208,000	74.94	36.03	82.43	39.63
August	17,160,100	5,625.08	32.78	6,187.59	36.05
September	13,528,800	4,250.74	31.42	4,675.81	34.56
October	17,926,200	5,517.68	30.78	6,069.45	33.[illegible]
November	16,328,000	5,125.36	31.39	5,637.90	34.52
December	18,821,200	5,881.63	31.25	6,469.79	34.37
	267,696,800	$86,929.59	32.47	$95,622.55	35.72

GHT COMPANY.

Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
29.16	$12,655.90	32.07
28.82	7,645.32	31.70
28.72	12,987.82	31.59
30.33	7,383.59	33.36
27.90	16,059.50	30.69
28.68	13,565.33	31.54
31.13	5,828.21	34.24
30.23	8,500.42	33.25
28.63	7,257.88	31.49
28.77	17,193.66	31.64
30.97	9,910.78	34.06
32.96	11,635.04	36.25
29.45	$130,653.45	32.39

CENTRAL UNION GAS COMPANY OF NEW YORK.

	Quantity (Cubic Feet)	Manufacturing Cost	Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
January	9,471,800	$2,346.16	24.77	$2,580.78	27.24
February	7,903,700	2,102.38	26.60	2,312.62	29.26
March	7,829,700	2,143.77	27.38	2,358.15	30.11
April	6,497,200	1,587.92	24.44	1,746.71	26.88
May	5,752,000	1,318.36	22.92	1,450.19	25.21
June	5,133,600	1,169.95	22.79	1,286.94	25.06
July	5,382,900	1,561.57	29.01	1,717.72	31.91
August	6,118,800	1,840.01	30.07	2,024.01	33.07
September	6,896,400	1,926.16	27.93	2,118.78	30.72
October	8,225,900	2,496.56	30.36	2,746.22	33.39
November	8,949,800	3,044.26	34.02	3,348.68	37.42
December	9,814,600	3,147.54	32.07	3,462.29	35.27
	87,976,400	$24,684.64	28.06	$27,153.09	30.86

STRACT.

	Quantity (Cubic Feet)	Manufacturing Cost	Mfg. Cost Per M. Cu. Ft. (Cents)	Manufacturing Cost Plus 10%	Total Cost Per M. Cu. Ft. (Cents)
any	2,173,196,400	$624,069.49	28.72	$744,625.48	34.26
ompany	403,309,322	118,775.85	29.45	130,653.45	32.39
Light Company	267,696,800	86,929.59	32.47	95,622.55	35.72
of New York	87,976,400	24,684.64	28.06	27,153.09	30.86
	2,932,178,922	$854,459.57	29.14	$998,054.57	33.81

POOR COPY

(Account No. 49)
(Exhibit "D," Page 6)

Exhibit "D"
Schedule "5"

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES

During Year 1905.

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*
Hester St. Station				
7,430	2 in.	..	..	$2.75
7,504	2	..	..	2.16
7,503	2	..	..	1.25
7,527	2	..	..	2.83
7,417	1½	..	..	3.20
7,518	..	1 in.	1½ in.	11.45
7,634	..	1¼	1½	9.65
2,457	..	1¼	1½	7.15
2,540	..	1¼	1½	4.50
7,869	..	1¼	1½	8.43
2,594	..	1¼	1½	7.30
7,913	1½	..	..	6.15
7,961	2	..	..	1.25
7,943	..	1¼	1½	9.35
8,501	..	1¼	1½	4.78
7,942	..	1	1½	10.62
8,311	1½	..	..	3.76
8,338	..	1	1½	8.95
8,223	..	1¼	1½	8.18
8,223	..	1	1½	6.20
8,223	..	1¼	1½	4.14
8,223	..	1	1½	7.17
8,223	..	1¼	1½	3.42
8,223	..	1¼	1½	3.80
8,223	..	1¼	1½	5.05
8,223	..	1¼	1½	8.03
8,223	..	1¼	1½	8.51
8,223	..	1¼	1½	6.10
8,223	..	1¼	1½	5.02
8,223	..	1¼	1½	8.60
8,223	..	1¼	1½	5.58
8,223	..	1¼	1½	4.24
8,223	..	1¼	1½	8.95
8,223	..	1¼	1½	4.30
8,223	..	1¼	1½	7.24
8,169	..	1	1½	10.40
8,269	..	1¼	1½	9.86
8,275	..	1¼	2	10.05
7,538	2	..	..	1.79
7,930	..	1	1½	8.49
8,094	..	1	1½	9.23
8,361	..	1¼	1½	5.15
8,384	..	1	1½	6.30
9,136	..	1	1½	5.92

Carried Forward $277.25

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*	
Hester St. Station, Cont.					
		Brought Forward		....	$277.25
8,909	..	1 in.	1½ in.	4.82	
8,942	..	1	1½	5.90	
8,836	..	¾	1½	5.97	
8,848	..	1	1½	9.49	
8,879	..	¾ & 1¼	1½	7.20	
8,880	..	1¼	1½	8.21	
8,886	..	1¼	1½	2.10	
8,886	..	1¼	1½	1.68	
8,857	..	¾	1½	10.30	
8,859	..	¾ & 1¼	1½	8.83	
10,333	..	1	1½	2.00	
10,334	..	1	1½	4.81	
8,820	..	¾ & 1¼	1½	6.79	
9,766	..	1	1½	8.15	
8,965	..	1	1½	7.38	
3,124	..	¾	1½	3.88	
9,112	..	1¼	1½	6.15	
9,121	..	¾ & 1¼	1½	7.36	
9,114	..	1¼	1½	6.32	
9,118	..	1¼	1½	7.50	
9,222	..	2½	3	13.72	
8,213	..	1	1½	6.88	
9,689	..	1½	2	8.01	
9,664	..	1	1½	6.98	
9,666	..	1¼	1½	9.32	
9,643	..	1	1½	6.50	
9,521	..	1¼	1½	7.53	
3,512	..	1	1½	6.13	
10,017	..	1¼	1½	4.88	
9,995	..	1½	2	7.00	
10,146	..	1¼	1½	7.12	
10,139	..	1	1½	3.50	
10,157	..	1¼	1½	8.31	
3,810	..	1	1½	8.31	
10,093	..	1¼	2	12.86	
3,859	..	1¼	1½	6.38	
3,858	..	1¼	1½	5.50	
10,135	..	1	1½	5.62	
10,174	..	1¼	1½	5.94	
10,232	..	1	1½	5.06	
10,137	..	1¼	1½	6.06	
3,433	..	1¼	1½	7.72	
3,434	..	1	1½	7.65	
9,413	..	1	1½	6.19	
		Carried Forward		....	$575.26

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*	
Hester St. Station, Cont.					
	Brought Forward			$575.26	
9,372	..	1	1½	7.13	
9,404	..	1	1½	10.05	
9,521	..	1¼	1½	8.65	
9,508	..	1	1½	8.05	
					$609.14
66th St. Station.					
4,533	..	1	1½	6.15	
4,771	2 in.	..	..	4.25	
4,797	1½	..	..	5.75	
4,921	3	..	..	12.50	
4,948	1½	..	..	17.95	
5,447	..	1¼	2	8.40	
5,740	1¼	..	..	4.50	
6,038	3	..	..	8.05	
....	1½	..	..	5.65	
6,117	3	..	..	12.37	
6,489	1½	..	..	8.02	
7,524	1½	..	.	2.12	
8,490	2	..	..	12.00	
					107.71
111th St. Station.					
2,090	2	..	..	$5.50	
2,087	2	..	..	2.75	
3,543	2	..	..	8.00	
2,525	2	..	..	5.75	
2,151	2	..	..	3.00	
3,711	2	..	..	4.00	
3,712	2	..	..	4.00	
3,729	1½	..	..	2.88	
3,635	2	..	..	4.38	
3,638	2	..	..	4.38	
3,633	2	..	..	4.38	
3,634	2	..	..	4.38	
3,766	2	..	..	4.00	
3,767	2	..	..	4.00	
3,915	2	..	..	4.00	
3,916	2	..	..	4.00	
3,917	2	..	..	4.00	
3,918	2	..	..	4.00	
3,924	1¼	..	..	.88	
2,015	2	..	..	4.38	
2,016	2	..	..	8.75	
3,969	2	..	..	3.00	
3,970	2	..	..	3.00	
3,632	2	..	..	4.38	
3,636	2	..	..	3.75	
3,637	2	..	..	3.75	
3,639	2	..	..	3.00	
2,082	2	..	..	7.38	
	Carried Forward			$119.67	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Service Extended*	*Service Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
		Brought Forward		$119.67	$716.85
3,640	3 in.	..	..	6.25	
3,166	2	..	..	1.50	
3,167	2	..	..	3.13	
3,168	2	..	..	3.13	
2,944	2	..	..	9.25	
2,943	2	..	..	4.25	
2,822	2	..	..	3.88	
2,804	1½	..	..	8.50	
2,817	2	..	..	4.00	
2,814	2	..	..	4.00	
2,867	1½	..	..	11.50	
2,419	2	..	..	4.38	
2,715	2	..	..	3.00	
2,716	2	..	..	1.50	
2,717	2	..	..	1.50	
2,767	2	..	..	3.00	
2,720	2	..	..	4.00	
2,721	2	..	..	4.00	
2,675	2	..	..	2.12	
2,676	2	..	..	2.12	
2,930	2	..	..	4.50	
4,046	2	..	..	3.88	
4,048	2	..	..	3.88	
2,992	..	4-in. Main	6 in.	13.75	
2,668	2	..	..	1.50	
2,669	2	..	..	1.50	
2,670	2	..	..	1.50	
2,671	..	..	..	1.50	
2,718	2	..	..	1.50	
2,719	2	..	..	1.50	
2,813	2	..	..	2.93	
2,815	2	..	..	2.06	
2,816	2	..	..	3.00	
2,867	1½	..	..	5.75	
2,867	1½	..	..	5.75	
4,047	1½	..	..	2.88	
4,563	2	..	..	4.75	
2,701	..	1½ in.	2	7.50	
4,811	..	1½	2	6.50	
4,741	2	..	..	4.00	
4,742	2	..	..	3.18	
4,800	2	..	..	4.75	
		Carried Forward		$292.74	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

	Service				
Pay Ticket No.	*Extended*	*Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
	Brought	Forward	....	$292.74	$716.85
4,254	2 in.	..	..	1.93	
4,256	2	..	..	1.87	
4,257	2	..	..	1.87	
4,258	2	..	..	2.00	
4,263	2	..	..	1.50	
4,264	2	..	..	2.12	
4,261	2	..	..	1.50	
4,262	2	..	..	1.50	
4,255	2	..	..	1.87	
4,259	2	..	..	2.00	
4,260	2	..	..	1.87	
4,507	2	..	..	3.00	
4,535	2	..	..	3.00	
4,634	2	..	..	3.00	
4,799	2	..	..	6.00	
4,736	2	..	..	2.18	
4,737	2	..	..	2.18	
4,738	2	..	..	2.18	
4,739	2	..	..	2.18	
4,840	1½	..	..	2.88	
4,841	2	..	..	2.19	
4,842	2	..	..	3.63	
4,843	2	..	..	2.19	
4,844	2	..	..	3.63	
5,376	2	..	..	2.19	
5,377	2	..	..	2.19	
5,378	2	..	..	4.37	
4,872	2	..	..	1.94	
4,873	2	..	..	3.88	
4,874	2	..	..	1.94	
5,130	2	..	..	3.00	
5,146	2	..	..	3.00	
5,176	2	..	..	3.00	
5,177	2	..	..	2.25	
5,183	2	..	..	4.50	
5,447	3	..	..	1.88	
5,098	2	..	..	2.75	
4,980	1½	..	..	4.75	
4,920	2	..	..	3.25	
5,180	2	..	..	3.00	
5,181	2	..	..	1.50	
5,182	2	..	..	1.50	
5,179	2	..	..	2.25	
	Carried	Forward	....	$404.15	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Service Extended*	*Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
	Brought Forward			$404.15	$716.85
5,184	2 in.	..	..	3.88	
5,375	2	..	..	2.37	
5,379	2	..	..	2.37	
5,489	1½	..	..	4.37	
5,490	1½	..	..	2.19	
5,495	1½	..	..	2.19	
5,540	2	..	..	2.00	
5,659	2	..	..	2.00	
5,658	2	..	..	2.88	
5,660	2	..	..	2.88	
5,690	1½	..	..	4.00	
5,590	2	..	..	2.88	
5,591	2	..	..	2.88	
5,471	3	..	..	3.25	
5,390	2	..	..	2.75	
5,391	2	..	..	2.75	
5,403	2	..	..	2.75	
5,404	2	..	..	2.75	
5,466	3	..	..	3.00	
5,467	3	..	..	1.94	
5,753	2	..	..	6.00	
5,821	2	..	..	4.00	
5,688	2	..	..	8.00	
5,588	2	..	..	2.88	
5,593	2	..	..	2.88	
6,257	3	..	..	3.75	
6,258	3	..	..	4.25	
5,898	3	..	..	3.25	
5,880	1½	..	..	7.50	
5,897	2	..	..	3.63	
6,068	3	..	..	4.19	
6,139	1½	..	..	3.75	
5,934	2	..	..	4.00	
5,706	2	..	..	6.50	
6,259	1½	..	..	4.50	
6,202	2	..	..	2.37	
6,203	2	..	..	2.13	
6,204	2	..	..	1.50	
6,114	2	..	..	3.00	
6,115	2	..	..	3.00	
5,941	2	..	..	4.12	
5,942	2	..	..	4.12	
5,997	3	..	..	6.00	
6,127	2	..	..	3.75	
	Carried Forward			$559.30	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
		Brought Forward............		$559.30	$716.85
6,170	2 in.	..	..	4.50	
6,171	2	..	..	4.25	
6,172	2	..	..	4.75	
6,423	2	..	..	4.00	
6,333	3	..	..	6.00	
6,255	2	..	..	4.00	
6,298	2	..	..	3.00	
6,299	2	..	..	3.00	
6,294	2	..	..	4.00	
6,460	2	..	..	6.25	
6,616	1½	..	..	5.50	
6,503	2	..	..	3.00	
6,505	2	..	..	3.00	
6,506	2	..	..	3.00	
6,547	3	..	..	9.38	
6,501	2	..	..	3.00	
6,507	2	..	..	3.00	
6,201	3	..	..	3.75	
6,546	2	..	..	3.75	
6,542	1½	..	..	4.00	
6,434	2	..	..	2.25	
6,435	2	..	..	2.25	
6,436	2	..	..	2.25	
6,437	2	..	..	2.25	
6,465	2	..	..	3.75	
6,466	2	..	..	4.00	
6,432	2	..	..	2.25	
6,433	2	..	..	2.25	
6,456	2	..	..	2.25	
6,457	2	..	..	2.25	
6,276	1¼	..	..	4.00	
6,173	2	..	..	3.00	
6,347	2	..	..	3.00	
6,975	2	..	..	3.00	
7,003	2	..	..	3.75	
7,004	2	..	..	3.75	
6,891	2	..	..	1.06	
6,892	2	..	..	3.00	
6,893	2	..	..	1.50	
6,739	2	..	..	4.00	
6,740	2	..	..	4.00	
6,758	2	..	..	4.00	
6,760	2	..	..	4.00	
6,942	2	..	..	3.25	
		Carried Forward............		$715.49	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
		Brought Forward	....	$715.49	$716.85
6,946	2 in.	..	..	3.25	
6,826	..	4-in. Main	6 ins.	33.75	
7,517	1½	..	..	6.13	
7,287	1½	..	..	2.88	
7,288	1½	..	..	2.88	
7,280	2	..	..	5.25	
7,456	2	..	..	3.00	
7,457	2	..	..	3.00	
7,086	2	..	..	4.00	
7,087	2	..	..	4.00	
7,154	2	..	..	6.00	
7,155	2	..	..	6.00	
6,943	2	..	..	4.00	
6,944	2	..	..	4.00	
6,947	2	..	..	3.87	
7,625	1½	..	..	4.38	
7,422	2	..	..	3.00	
7,473	2	..	..	3.00	
7,125	2	..	..	3.00	
7,126	2	..	..	3.00	
7,077	2	..	..	4.63	
7,120	2	..	..	3.50	
7,132	2	..	..	3.50	
7,168	2	..	..	3.13	
7,090	2	..	..	4.38	
7,092	2	..	..	2.75	
7,075	2	..	..	3.00	
7,083	2	..	..	4.25	
7,084	2	..	..	4.25	
7,088	2	..	..	4.00	
7,091	2	..	..	4.00	
7,193	2	..	..	2.81	
7,089	2	..	..	4.00	
7,094	2	..	..	4.00	
7,291	2	..	..	14.75	
8,334	1½	..	..	6.00	
7,944	2	..	..	1.06	
7,945	2	..	..	2.50	
7,946	2	..	..	2.63	
7,947	2	..	..	2.50	
7,949	2	..	..	1.56	
7,651	2	..	..	3.68	
7,653	2	..	..	2.25	
		Carried Forward	....	$913.01	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Service Extended*	*Service Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
	Brought Forward............			$913.01	$716.85
7,652	2 in.	..	..	2.68	
7,658	2	..	..	3.24	
8,319	..	..	6-in. Main	5.00	
8,320	..	..	6-in. Main	5.00	
7,863	3	..	..	3.75	
7,864	3	..	..	3.75	
7,900	3	..	..	4.75	
7,901	3	..	..	2.75	
7,860	3	..	..	4.75	
7,862	3	..	..	5.25	
7,588	2	..	..	4.00	
8,168	2	..	..	4.00	
8,379	2	..	..	3.75	
8,380	1½	..	..	5.75	
7,964	3	..	..	3.75	
7,965	3	..	..	5.00	
8,134	2	..	..	5.00	
9,170	2	..	..	4.62	
8,619	2	..	..	3.00	
8,024	3	..	..	4.00	
8,848	2	..	..	1.50	
8,849	2	..	..	3.00	
7,925	2	..	..	3.88	
8,418	2	..	..	2.81	
8,458	2	..	..	2.81	
7,431	2	..	..	2.50	
7,828	2	..	..	2.00	
7,829	2	..	..	2.00	
8,171	2	..	..	2.45	
8,508	2	..	..	2.45	
8,518	2	..	..	2.50	
8,145	2	..	..	3.00	
8,369	1½	..	..	4.06	
8,370	1½	..	..	4.06	
8,277	2	..	..	4.00	
8,278	2	..	..	4.00	
8,461	3	..	..	3.63	
8,462	3	..	..	4.75	
8,463	3	..	..	3.75	
8,456	2	..	..	4.00	
8,457	2	..	..	4.00	
8,539	2	..	..	2.31	
7,985	2	..	..	3.00	
	Carried Forward............			$1,069.26	$716.85

Exhibit "D"
Schedule "5," Cont.

SERVICES EXTENDED AND INCREASED CHARGED TO OPERATING EXPENSES—*Continued.*

Pay Ticket No.	*Extended*	*Service Increased From*	*To*	*Labor*	
111th St. Station, Cont.					
	Brought Forward............			$1,069.26	$716.85
8,904	2 in.	..	..	2.50	
8,905	2	..	..	2.50	
8,906	2	..	..	3.00	
8,467	2	..	..	6.75	
8,955	2	..	..	2.88	
8,956	2	..	..	1.47	
8,957	2	..	..	1.47	
8,618	2	..	..	3.00	
8,976	2	..	..	3.00	
8,610	2	..	..	3.00	
8,617	2	..	..	3.00	
8,978	2	..	..	1.44	
8,979	2	..	..	1.44	
8,980	2	..	..	1.44	
8,981	2	..	..	1.44	
7,578	2	..	..	1.56	
7,579	2	..	..	1.56	
8,144	2	..	..	3.25	
9,052	2	..	..	1.50	
9,075	2	..	..	1.50	
9,076	2	..	..	1.50	
9,077	2	..	..	1.50	
9,098	2	..	..	2.50	
9,099	2	..	..	2.50	
9,195	3	..	..	5.50	
9,156	2	..	..	1.50	
9,157	2	..	..	1.50	1,133.46
					$1,850.31

Exhibit "D"
Schedule "6"

(Account No. 58)
(Exhibit "D," Page 8)

EXPENSES IN CONNECTION WITH LEGISLATIVE INVESTIGATION, CHARGED TO EXPENSE ACCOUNT, TAKEN EXCEPTION TO.

Year ended December 31, 1905.

Date Paid 1905	*Voucher No.*	*Paid to*	*Amount*
Mch. 18	211	G. M. Shotwell	$94.00
Apl. 24	211	C. Burgoyne	1,823.80
Apl. 26	211	Beardsley & Herman	250.00
Apl. 20	211	Cash	51.25
Apl. 27	211	Cash	348.65
Apl. 30	211	Cash	.45
May 1	211	New York Cab Co., Ltd	29.00
May 23	264	H. M. Brandage	250.00
May 23	264	W. R. Addicks	2,500.00
May 23	264	R. A. Carter	2,000.00
May 23	264	Benj. Whiteley	1,500.00
May 23	264	G. H. Church	1,000.00
May 23	264	Harmon & Mathewson	5,000.00
May 4	264	Cash	6.90
May 11	264	Cash	368.18
May 11	264	Louis Sherry	159.64
May 11	292	C. G. Burgoyne	51.70
May 31	294	W. H. H. Hull & Co.	10,593.71
May 12	298	C. G. Burgoyne	542.50
May 12	298	C. G. Burgoyne	68.25
May 13	298	C. G. Burgoyne	381.50
May 31	88	General Suspense	*27,019.63
July 1	357	General Suspense	33,084.96
July 1	388	C. G. Burgoyne	130.27
July 2	388	C. G. Burgoyne	69.43
July 2	388	C. G. Burgoyne	203.87
July 10	399	Clarence Burgoyne	49.82
July 31	419	A. C. Whitz	34.90
		Sundry Debtors	*812.45
Sept. 30	553	C. G. Burgoyne	44.99
Sept. 28	540	Chas. F. Mathewson	873.40
Oct. 31	553	Shearman & Sterling	10,000.00
Oct. 31	167	General Suspense	1,003.20
Oct. 31	167	General Suspense	*2,063.81
Oct. 31	168	General Suspense	51.67
Dec. 29	206	Legal Expense	*23,477.40
Dec. 31	227	Suspense Account	8,912.78
Dec. 31	227	Suspense Account	94.83
Dec. 29	227	Expense Account	*5,399.20
Dec. 31	221	Suspense Account, State Gas Commission	2,870.43
			$25,671.74

*Red Ink in Original.

(Account No. 58)
(Exhibit "D," Page 8)

Exhibit "D"
Schedule "7"

EXTRAORDINARY EXPENSES CHARGED TO GENERAL OFFICE—TAKEN EXCEPTION TO.

For Year 1905.

No.	*Goods Supplied By*	*Order No.*	*Items Taken Exception To*	*Amount Rejected*
330	Bausch & Lamb Optical Co.	22.028	1 No. 6 10 x 12 Zeiss lens	$85.50
768	National Civic Federation	.....	Subscription to National Civic Federation	500.00
836	C. G. Burgoyne	.....	Stenographic work, etc	499.50
842	C. G. Burgoyne	.....	Stenographic work, etc	150.00
1043	A. C. Uhlitz	.....	Cost of fitting up new office, 44 Wall Street	369.21
				$1,604.21

(Account No. 58)
(Exhibit "D," Page 8)

Exhibit "D"
Schedule "8."

CLAIMS FOR DAMAGES PAID CHARGED TO OPERATING—TAKEN EXCEPTION TO.

For Year 1905.

Date Paid 1905	*Claimant*	*Date of Accident*	*Cause of Accident*	*Amount Paid*
June 9	August Hartcom.	Dec. 13, 1898	Explosion at erection of holder at 21st Street..	$720.00
June 9	Max Fischer.....	Dec. 13, 1898	Explosion at erection of holder at 21st Street..	1,080.00
June 21	Michael Duerr...	Dec. 13, 1898	Explosion at erection of holder at 21st Street..	2,000.00
				$3,800.00

APPENDIX "1."

INSURANCE CARRIED FOR YEAR 1905.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
Fourteenth Street Station:						
Building A	Purifiers, Meters, Boilers	$30,000.00	$50,000.00			
B	Valve House	850.00	1,000.00			
C	Office	5,000.00	700.00			
Ca	Tin Shop and Storage	3,000.00	500.00			
D	Engine and Boiler House	3,200.00	8,600.00			
E	Tools	4,000.00	12,000.00			
E1	Exhauster and Engine	700.00	4,000.00			
F	Smith and Carpenter Shop	3,750.00	4,800.00			
F1	Water Condensers	4,250.00	29,000.00			
H	Washer Scrubbers	800.00	6,000.00			
H1	Scrubbers	56,000.00	....			
J	Air Condenser	4,500.00	16,000.00			
K	Retorts	42,900.00	264,000.00			
L	**Coke House	21,500.00	....			
M	Gas Engine House	1,000.00	2,400.00			
N	Boiler House	700.00	500.00			
P	Storage Shed	400.00	1,200.00			
R	Boiler and Exhauster House	6,500.00	10,000.00			
R1	Oil House	100.00	50.00			
T	And Tanks	5,000.00	1,830.00			
T1	Storage Sheds	400.00	3,500.00			
T2	Weigh Office	300.00	200.00			
T	Clay Mill Storage	1,700.00	2,500.00			
U	Stable	3,250.00	3,700.00			
V	Boiler House	700.00	100.00			
V1	Scale House	1,000.00	400.00			
W	Storage Shed	900.00	500.00			
W1	Storage Shed	900.00	1,000.00			
X	Boiler House	200.00	200.00			
Y	Valve House	100.00	250.00			
Z	Boiler House	500.00	1,000.00			
Coal House 1		50,000.00	27,200.00			
Coal Storage A1		3,500.00	78,200.00			
Coal Elevator 1		10,000.00	....			
Coke Storage B1		2,000.00	3,515.00			
Coke Storage C1		2,500.00	13,845.00			
		$272,100.00	$548,690.00	820,790.00	*.75	5,540.34
	Carried forward			$820,790.00		5,540.34

** Includes Coal Hoist and transfer to Coal Pockets.

* Less 10%.

INSURANCE CARRIED FOR YEAR 1905—Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought forward			$820,790.00		5,540.34
Fourteenth Street Station, Continued:						
Holder No. 1		$21,000.00	....			
No. 2		21,000.00	....			
No. 3.		21,000.00	....			
No. 4		21,000.00	....			
No. 5		21,000.00	....			
No. 6		21,000.00	....			
No. 7		195,000.00	....			
No. 8		15,600.00	....			
No. 9		15,600.00	....	352,200.00	*.60	1,901.88
Eighteenth Street Station:						
Building A1	Sheds	300.00	500.00			
B	Exhauster & Valve House	5,000.00	7,000.00			
C	Valve House	800.00	700.00			
D	Boiler House	1,000.00	2,500.00			
F	Stable and Wagons	6,000.00	8,220.00			
G	Wagon Paint Shop and Tools	1,900.00	1,000.00			
G1	Building over Holders Nos. 6 & 7	65,040.00	....			
H	Purifying and Meter House	48,770.00	78,020.00			
I	Office	18,067.00	8,200.00			
J	Shops, Boiler and Engine House	22,659.00	42,630.00			
N	Hoisting Engine House	1,251.00	1,556.00			
V	Condenser House	7,800.00	41,053.00			
V	Air Condenser	14,584.00	....			
V1	Valve House	48.00	250.00			
V2	Valve House	48.00	250.00			
W	Scrubbers	56,000.00	....			
Coal Elevators 3 & 4		6,910.00	....			
Coke Storage N1		....	32,906.00			
		$256.177.00	$224,785.00	480,962.00	*75	3,246.50
Holder No. 2		$15,300.00	....			
No. 3		15,300.00	....			
No. 4		15,600.00	....			
No. 5		15,600.00	....			
No. 6		12,240.00	....			
No. 7		12,240.00	....	86,280.00	*.60	465.91
	Carried forward			$1,740,232.00		11,154.63

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* Less 10%.

INSURANCE FOR YEAR 1905—Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought forward			$1,740,232.00		11,154.63
Twenty-first Street Station:						
Building A	Storage and Stove Repairs	$10,000.00	70,000.00			
Aa	Fitting Shop	20,000.00	5,000.00			
Ab	Dwelling	8,000.00	....			
Ac	Pump House	150.00	500.00			
B	Meter and Stove Repair	20,000.00	39,000.00			
B2	Stove Repair Shop	6,000.00	24,000.00			
C	Boiler House	3,500.00	2,500.00			
D	Valve House	800.00	2,000.00			
E	Valve House	1,500.00	3,500.00			
F	Valve House	500.00	1,000.00			
G	Tinsmith Shop	1,500.00	800.00			
G1	Storage	100.00	300.00			
G2	Paint Shop	100.00	200.00			
H	Retorts	38,000.00	103,960.00			
H	Generators	47,500.00	308,365.00			
H1	Smith Shop	2,740.00	1,000.00			
H2	Machine and Carpenter Shop	2,100.00	6,500.00			
H4	Exhausters	8,120.00	36,150.00			
H5	Pipe and Fittings	2,040.00	6,680.00			
J	Valve House	500.00	750.00			
K	Office	13,150.00	5,000.00			
N	Pump House	1,000.00	3,420.00			
O	Meter House	10,000.00	40,000.00			
P	Dwelling	18,000.00	....			
R	Purifying House No. 1	25,000.00	38,000.00			
S	Pur. Materials & S. Scrubbers	3,000.00	25,000.00			
T	Condensers and Scrubbers	25,000.00	40,000.00			
U	Purifying House No. 2	25,000.00	28,000.00			
V	Storage	20,000.00	3,500.00			
W	Exhauster and Engine House	10,000.00	21,500.00			
X	Dwelling	8,000.00	....			
Y	Dwelling	8,000.00	....			
Z	Stable	15,000.00	20,000.00			
Coal House No. 1		24,000.00	42,190.00			
Coal Shed No. 2		15,000.00	19,700.00			
Coal Shed No. 3		15,000.00	28,250.00			
Coal Shed No. 4		15,000.00	27,615.00			
Coal Shed No. 5		15,000.00	5,000.00			
Coal Storage C1		....	96,033.00			
Coal Storage C2		....	26,650.00			
Tanks Ac	In Building "H"	10,700.00	8,100.00			
Tanks Ad	In Yard	6,000.00	435.00			
Tanks Af	In Yard	3,000.00	2,265.00			
	Carried forward	$458,000.00	1,092,865.00	1,740,232.00		11,154.63

INSURANCE CARRIED FOR 1905, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought forward	$458,000.00	1,092,865.00	1,740,232.00		11,154.63
Twenty-first Street Station, Continued:						
Water Tower No. 1..........	....	2,500.00	....			
Tar Tanks No. 2..............	....	700.00	785.00			
Tar and Water Tanks No. 3....	....	500.00	....			
Tar and Water Tanks No. 4....	....	500.00	....			
		$462,200.00	1,093,650.00	1,555,850.00	*.75	10,502.00
Holder No. 1	....	$24,000.00	....			
No. 2	....	24,000.00	....			
No. 3	....	17,000.00	....			
No. 4	....	24,000.00	....			
No. 5	....	24,000.00	....			
No. 6	....	9,000.00	....			
No. 7	....	90,000.00	....			
				212,000.00	*.60	1,144.80
Forty-second Street Station:						
Building A.....................	Valve House	$1,500.00	2,500.00			
B	Meter House	500.00	2,000.00			
C	Purifying House	4,000.00	31,500.00			
C1	Engine Meter Office	15,000.00	20,000.00			
D	Retort House No. 1............	42,450.00	177,500.00			
E	Retort Houses, Nos. 2, 3 & 4....	31,250.00	88,000.00			
E1	Condensers and Scrubbers	10,500.00	38,600.00			
F1	Stable	6,700.00	1,500.00			
F2	Stable	2,000.00	1,000.00			
F3	Feed House	1,000.00	....			
F4	Harness House	400.00	....			
H	Scale House	300.00	200.00			
L	Boiler and Engine House	2,500.00	9,100.00			
O	Purifier	200.00	2,000.00			
P....................	Pump House	100.00	750.00			
V	Vaults	12,000.00	9,000.00			
Trestle, etc., T..................	On part of Trestle beginning at westerly end at Dock and extending to a point opposite Pump House "P"	5,520.00	....			
T..................	On remainder of Trestle.......	16,480.00	....			
Tank No. 1	....	3,300.00	3,000.00			
No. 2	....	1,470.00	345.00			
No. 3	....	6,000.00	2,265.00			
No. 4	....	1,800.00	330.00			
No. 5	....	350.00	75.00			
	Carried forward	$165,320.00	389,665.00	3,508,082.00		22,801.43

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* Less 10%.

INSURANCE CARRIED FOR 1905, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought Forward	$165,320.00	389,665.00	3,508,082.00		22,801.43
Forty-second Street Station, Continued:						
Tanks G		4,500.00	760.00			
Coal Shed No. 1		20,060.00	15,300.00			
Coal Shed No. 2		30,000.00	14,500.00			
Coal Storage J		....	9,180.00			
Coal Storage K		....	6,800.00			
Coal Storage R		....	7,990.00			
Building R1	Scales and Covering	300.00	....			
D1	Scales and Covering	300.00	....			
Coke Storage N		....	5,275.00			
Coke Storage M		....	1,055.00			
Docks, Cribs, etc., D2		35,920.00	....			
		$256,340.00	450,525.00	706,865.00	*.75	4,771.35
Holder No. 1		15,000.00	....			
No. 2		15,000.00	....			
No. 3		15,000.00	....			
No. 4		$15,000.00	....			
No. 5		1,000.00	....	61,000.00	*.60	329.40
Forty-fourth Street Station:						
Building A	Valve House	$1,000.00	6,000.00			
B	Stoves	500.00	50.00			
C	Carpenter Shop	1,500.00	500.00			
D	Dwelling	1,500.00	....			
E	Dwelling	5,000.00	....			
F	Dwelling	5,000.00	....			
G	Dwelling	5,000.00	....			
H	Lumber Shed	1,000.00	200.00			
I	Purifying House	20,000.00	30,000.00			
I2	Office, Meters	15,000.00	11,000.00			
J	Condensers and Scrubbers	9,000.00	21,500.00			
J1	Engines, Exhausters, Blowers	18,600.00	20,000.00			
J2	Generators	18,000.00	110,000.00			
K	Retorts	21,000.00	37,700.00			
K1	Air Condensers	6,000.00	....			
Coal Hoist L	Including House, Car and Trestle	3,500.00	....			
L2	Scrubbers	4,000.00	....			
N	Pump House	1,400.00	4,295.00			
O	Exhauster and Boiler House	1,500.00	3,400.00			
P	Purifiers, Meter, Storage	16,000.00	15,000.00			
	Carried Forward	$154,500.00	258,645.00	4,275,947.00		27,902.18

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* Less 10%.

INSURANCE CARRIED FOR 1905, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought Forward	$154,500.00	$258,645.00	$4,275,947.00		$27,902.18
Forty-fourth Street Station, Continued:						
Building R	Stable	5,500.00	8,180.00			
S	Tools	1,200.00	2,000.00			
T	Storage	1,400.00	700.00			
V	Smith Shop	300.00	1,000.00			
W	Pump House	150.00	800.00			
Coal Shed No. 1		10,000.00	17,600.00			
Coal Storage X		....	825.00			
Coal Yard No. 2		....	6,600.00			
Coal Yard No. 3		....	5,280.00			
Building O1	Purifying Material	1,800.00	1,800.00			
Water Condenser K2		14,100.00	....			
Building M	Pumps and Tanks	6,500.00	1,085.00			
Tanks M1	Separators	5,500.00	....			
Building U	Tanks and Filter Press	8,900.00	3,525.00			
Water Tower No. 1	Including Tank	3,000.00	2,000.00			
Tank No. 8		4,800.00	4,500.00			
Tank No. 9		4,800.00	4,500.00			
Building L1	Mixer House	100.00	350.00			
Crib, 400 ft. C2		30,000.00	....			
		$252,550.00	319,390.00	571,940.00	*.75	3,860.60
Holder No. 1		$22,500.00	....			
No. 2		22,500.00	....			
No. 3		22,500.00	....			
No. 4		22,500.00	....			
No. 5		120,000.00	....			
No. 6		7,500.00	....			
No. 7		7,500.00	....			
				225,000.00	*.60	1,215.00
Sixty-third Street Station:						
Building A	Office, Engine and Boiler House.	$7,000.00	7,200.00			
B	Valve House	500.00	2,000.00			
C	Storage Sheds	200.00	100.00			
D	School House	4,000.00	....			
E	Dwelling	4,000.00	....			
		$15,700.00	9,300.00	25,000.00	*.75	168.75
Holder No. 1		$19,500.00	....			
No. 2		19,500.00	....			
No. 3		180,000.00	....			
				219,000.00	*.60	1,182.60
	Carried Forward		.....	$5,316,887.00		$34,320.13

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* Less 10%.

INSURANCE CARRIED FOR YEAR 1905, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought Forward			$5,316,887.00		$34,329.13
Sixty-fifth Street Station:						
Building A	Engine and Valve House	$750.00	$4,000.00			
B	Boilers, Engine and Valve House	11,200.00	13,000.00			
C	Storage	150.00	200.00			
D	Watchman's Office	200.00	25.00			
E	Blacksmith Shop	100.00	100.00			
F	Emergency Wagon House and Shed	1,500.00	1,000.00			
G	Oil House	40.00	130.00			
J	Meter and Stove Repair Shop	31,300.00	20,700.00			
		$45,240.00	$39,155.00	84,395.00	*.75	569.67
Holder No. 1		$19,500.00	....			
No. 2		19,500.00	....			
No. 3		19,500.00	....			
No. 4		19,500.00	....			
No. 5		18,000.00	....			
No. 6		18,000.00	....			
No. 7		240,000.00	....			
No. 8		240,000.00	....			
				594,000.00	*.60	3,207.60
Ninety-ninth Street Station:						
Building A	Engine House	$7,500.00	$13,000.00			
A1	Boilers, Retorts, etc.	22,600.00	45,450.00			
A2	Generators	8,800.00	63,000.00			
A3	Air and Water Condenser	11,000.00	....			
A4	Hot Scrubbers	3,000.00	....			
C	Office	7,000.00	2,000.00			
D	Meter House	5,600.00	15,000.00			
E	Purifier and Lime House	17,200.00	18,600.00			
F	Valve House	50.00	500.00			
G	Valve House	50.00	500.00			
H	Valve House	50.00	500.00			
I	Valve House	50.00	500.00			
J	Valve House	50.00	500.00			
K	Condenser and Scrubber House	3,800.00	15,000.00			
L	Exhauster House	3,000.00	4,000.00			
Tank M	Tar Separator	5,000.00	....			
Tank N		15,000.00	6,800.00			
Tank N2		900.00	260.00			
Tank N3		700.00	....			
Building O	Dwelling	3,500.00	....			
P	Scrubber	1,500.00	....			
Tank 2		700.00	750.00			
	Carried Forward	$117,050.00	$186,360.00	$5,995,282.00		$38,106.40

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* Less 10%.

INSURANCE CARRIED FOR YEAR 1905, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought Forward	$117,050.00	$186,360.00	$5,995,282.00		$38,106.40
Ninety-ninth Street Station. Continued:						
Building C1	Scale House	75.00	225.00			
N4	Filter Press Shed	175.00	1,750.00			
Coal Shed No. 1		8,000.00	7,210.00			
Coal Storage R		....	13,200.00			
Coal Storage R1		....	5,610.00			
Coal Storage R2		....	44,000.00			
Coke Storage R3		....	50.00			
Coal Storage R4		....	1,050.00			
Coal Storage R5		....	485.00			
Coke Storage R6		....	50.00			
Bulkhead		6,075.00	....			
		$131,375.00	$259,990.00	391,365.00	*.75	2,641.71
Holder No. 1		$18,000.00	....			
No. 2		36,000.00	....			
No. 3		36,000.00	....			
No. 4		6,000.00	....	96,000.00	*.60	518.40
One Hundred and Eleventh Street Station:						
Building A.	Office	$6,500.00	2,000.00			
Coal Storage A1		....	55.00			
Building B.	Exhauster House	26,000.00	26,500.00			
C	Boiler House	4,000.00	6,000.00			
Coal & Coke Storage C1		....	555.00			
Building D.	Hoisting Engine House	150.00	400.00			
E	Scale House	350.00	200.00			
F	Stable	6,000.00	10,000.00			
L		....	1,000.00			
M		....	1,500.00			
N		....	6,500.00			
Coal Shed		....	1,000.00			
Bulkhead & Platform		14,850.00	....			
		$57,850.00	$55,710.00	113,560.00	*.75	766.53
Holder No. 1		$295,000.00	....			
No. 2		295,000.00	....	590,000.00	*.60	3,186.00
	Carried Forward			$7,186,207.00		$45,219.04

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* Less 10%.

INSURANCE CARRIED FOR YEAR 1906, Continued.

Property	Description	Amount on Buildings	Amount on Contents	Total	Rate	Premium
	Brought Forward			$7,186,207.00		$45,219.04
Inwood Station:						
Building A....................	Engine and Exhauser House.....	$3,000.00	$2,000.00	5,000.00	*.75	33.75
Holder No. 1..................	....	3,600.00	....	3,600.00	*.60	19.44
Third Avenue & 114th Street:						
Building A....................	....	$16,000.00	2,000.00			
B	....	11,500.00	3,000.00			
C	....	3,500.00	5,000.00			
		$31,000.00	$10,000.00	41,000.00	*.75	276.75
Elizabeth and Hester Streets:						
Building A....................	....	$20,000.00	$10,000.00			
		8,000.00	4,000.00			
		$28,000.00	$14,000.00	42,000.00	*.75	283.50
1981 Amsterdam Avenue:	Machinery, Tools, Pipe and Fittings, Furniture and Fixtures..	....	$2,500.00	2,500.00	.55	13.75
107-117 West 41st Street:	....	....	5,000.00	5,000.00	.069	30.45
503 East 114th Street:	Horses, Vehicles, Harness, Stable Equipment, Feed	....	6,190.00	6,190.00	*1.05	58.50
439-41 West 18th Street:	Automobiles	....	1,900.00	1,900.00	1.00	19.00
133-5 Amsterdam Avenue:	Horses, Carriages, etc.	....	625.00	625.00	*1.45	8.16
139 West 125th Street:	....	....	2,500.00	2,500.00	*1.095	24.05
2-4 Irving Place:	Building	75,000.00	....	75,000.00	*1.41	951.75
2-4 Irving Place:	Furniture and Fixtures	....	10,000.00	10,000,00	*1.63	146.70
128 East 15th Street:	Building	3,000.00	....	3,000.00	*1.35	36.45
128 East 15th Street:	Contents............	....	2,000.00	2,000.00	*1.90	34.20
128 East 15th Street:	Automobile	....	2,200.00	2,200,00	*1.90	37.62
Floater.				2,000.00	3%	60.00
				$7,390,722.00		$47,253.71

* Less 10%.

RECAPITULATION OF INSURANCE CARRIED FOR YEAR 1905.

Property	Description	Building and Contents	Holders	Total	Rate	Premium
14th Street Station:		$820,790.00	$352,200.00			
18th Street Station:		480,962.00	86,280.00			
21st Street Station:		1,555,850.00	212,000.00			
42nd Street Station:		706,865.00	61,000.00			
44th Street Station:		571,940.00	225,000.00			
63rd Street Station:		25,000.00	219,000.00			
65th Street Station:		84,395.00	594,000.00			
99th Street Station:		391,365.00	96,000.00			
111th Street Station:		113,560.00	590,000.00			
Inwood Station:		5,000.00	3,600.00			
Third Avenue and 114th Street:		41,000.00	....			
Elizabeth and Hester Streets:		42,000.00	....			
				$4,838,727.00	*.75	$32,661.45
				2,439,080.00	*.60	13,171.03
				7,277,807.00		45,832.48
1911 Amsterdam Avenue:	Machinery, Tools, Pipe & Fittings, Furniture & Fixtures	....	$2,500.00	2,500.00	.55	13.75
107-117 West 41st Street:		....	5,000.00	5,000.00	.609	30.45
503 East 114th Street:	Horses, Vehicles, Harness, Stable Equipment, Feed	....	6,190.00	6,190.00	*1.05	58.50
439-41 W. 18th Street:	Automobiles	....	1,900.00	1,900.00	1.00	19.00
133-5 Amsterdam Avenue:	Horses, Carriages, etc.	....	625.00	625.00	*1.45	8.16
139 West 125th Street:		....	2,500.00	2,500.00	*1.095	24.65
2-4 Irving Place:	Building	75,000.00	....	75,000.00	*1.41	951.75
2-4 Irving Place:	Contents, Furniture & Fixtures	....	10,000.00	10,000.00	*1.63	146.70
128 East 15th Street:	Building	3,000.00	....	3,000.00	*1.35	36.45
128 East 15th Street:	Contents	....	2,000.00	2,000.00	*1.90	34.20
128 East 15th Street:	Automobile	....	2,200.00	2,000.00	*1.90	37.62
Floater.		....	....	2,000.00	3%	60.00
				$7,390,722.00		$47,253.71 ℰ

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* Less 10%.

VOL. VI.

TRANSCRIPT OF RECORD.

65582

SUPREME COURT OF THE UNITED [illegible]

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING
PUBLIC SERVICE COMMISSION OF THE STATE [illegible]
YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW [illegible]

No. 397.

THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW [illegible]

No. 398.

WILLIAM S. JACKSON, AS ATTORNEY GENERAL OF [illegible]
STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED [illegible]
THE SOUTHERN DISTRICT OF NEW YORK.

FILED MAY 14, 1908.

(21,178, 21,177, [illegible])

VOL. VI.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL., CONSTITUTING THE PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK FOR THE FIRST DISTRICT, APPELLANTS,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE CITY OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

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vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

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III—Summary of operations of New Amsterdam Gas Co. for year ending October 31, 1905	8576	5886
City's Exhibit 81—Deed from city of New York to Hezekiah Bradford, June 22, 1848	8578	5887
82—Deed from city of New York to John I. V. Westervelt, May 1, 1850	8588	5892
83—Deed from city of New York to John I. V. Westervelt, May 1, 1850	8595	5896
84—Deed from city of New York to F. B. Cutting and Charles C. King, July 18, 1840	8603	5900
85—Deed from city of New York to Charles E. Appleby, August 27, 1853	8612	5904
86—Deed from city of New York to Harlem Gas Light Co., August 20, 1870	8619	5908
80 A—Approved papers, board of aldermen, volume 27, page 445	8628	5913
122—Grant from State of New Jersey to Metropolitan Gas Light Co., January 6, 1883	8629	5913
121—Deed from Everett P. Wheeler *et al.* to Metropolitan Gas Light Co., November 18, 1882	8634	5916
102—Table showing the sizes of the Consolidated Gas Co.'s mains in the streets of New York city	8641	5919
State's Exhibit AAA—Summary of business of Central Union Gas Co. for year ending October 31, 1905	8642	5920

	Original.	Print.
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MMM—21st Street Station, February, 1902....	8645	5922
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ity's Exhibit 76—Diagram.................................. ..	8648	5925
78—Diagram................................	8649	5926
80—Diagram	8650	5927
81—Diagram..................................	8651	5928
82—Diagram..................................	8652	5929
83—Diagram..................................	8653	5930
84—Diagram..................................	8654	5931
85—Diagram..................................	8655	5932
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88—Diagram..................................	8657	5934
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VV—Picture................................	8660	5937
WW—Picture................................	8661	5938
XX—Picture..........	8662	5939
YY—Picture................................	8663	5940
City's Exhibit 126—Inventories of the buildings and apparatus of the 42d Street gas works of the Consolidated Gas Company of New York City, 1906............................	8664	5941
127—Inventories of the buildings and apparatus of the 99th Street gas works of the Consolidated Gas Company of New York City, 1906	8666	5943
128—Inventories of the buildings and apparatus of the 44th Street station of the Consolidated Gas Company of New York City, 1906	8668	5945
129—Inventory of the buildings and apparatus of the Inwood gas works of the Consolidated Gas Company of New York City, 1906	8671	5948
130—Inventories of the buildings and apparatus of the 111th Street station of the Consolidated Gas Company of New York City, 1906	8672	5949
131—Inventories of the buildings and apparatus of the 132d Street gas works of the Consolidated Gas Company of New York City, 1906	8673	5950
132—Inventories of the buildings and apparatus of the Chelsea or 18th Street gas works of the Consolidated Gas Company of New York City, 1906.......................	8674	5951
133—Inventories of the buildings and apparatus of the 63d Street gas works of the Consolidated Gas Company of New York City, 1906............................	8675	5952

	Original.	Print.
City's Exhibit 134—Inventories of the buildings and apparatus of the 65th Street gas works of the Consolidated Gas Company of New York City, 1906	8676	5953
135—Inventories of the buildings and apparatus of the 14th Street gas works of the Consolidated Gas Company of New York City, 1906	8677	5954
125—Inventories of the buildings and apparatus of the 21st Street gas works of the Consolidated Gas Company of New York City	8679	5956
16*a*—Contract for bituminous coal	8682	5959
34—Book called "Vouchers Audited, Contracts" (not set out)	8683	5960
123—Letter, Bemis to Schaff, November 12, 1906	8684	5960
124—Letter, Porter to Bemis, December 5, 1906	8685	5960
136—An act to amend chapter 338 of the laws of 1892, entitled "An act to authorize the East River Gas Company of Long Island City to supply gas and electricity to the city of New York," so as to authorize the said company to lay and maintain mains and pipes in that portion of the borough of Queens included in the former city of Long Island City	8686	5961
Complainant's Exhibit 335—Contract between Gulf Refining Co. of Port Arthur, Texas, and Queens Borough Gas and Electric Co. of Rockaway Beach, Long Island, December 5, 1904	8687	5961
State's Exhibit ZZ—Summary of operations of the Consolidated Gas Company of New York for the calendar year 1905	8689	5963
Complainant's Exhibit 258—Cost of coal gas, improved works	8707	5981
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272—Picture	8709	5983
273—Picture	8710	5984
274—Picture	8711	5985
275—Picture	8712	5986
276—Picture	8713	5987
277—Picture	8714	5988
278—Picture	8715	5989
279—Picture	8716	5990
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281—Diagram	8718	5992
282—Diagram	8719	5993
283—Diagram	8720	5994
284—Diagram	8721	5995
285—Diagram	8722	5996
286—Diagram	8723	5997
287—Diagram	8724	5998
288—Diagram	8725	5999

	Original.	Print.
Complainant's Exhibit 289—Diagram	8726	6000
290—Diagram	8727	6001
291—Diagram	8728	6002
292—Diagram	8729	6003
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294—Diagram	8731	6005
295—Picture	8732	6006
296—Picture	8733	6007
297—Deed from Robert W. Lowber *et ux.* to the Manhattan Gas Light Company, dated December 26, 1855	8734	6009
298—Deed from Robert W. Lowber *et ux.* to the Manhattan Gas Light Company, dated December 26, 1855	8740	6012
299—Deed from Moses Taylor *et ux.* to the Manhattan Gas Light Company, dated June 15, 1853	8747	6015
300—Deed from Moses Taylor *et ux.* to the Manhattan Gas Light Company, dated February 19, 1852	8752	6017
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305—Diagram	8756	6020
307—Diagram	8757	6021
309—Diagram	8757	6021
311—Diagram	8757	6021
313—Diagram	8757	6021
315—Diagram	8758	6022
318—Diagram	8758	6022
321—Diagram	8758	6022
322—Diagram	8759	6023
325—Diagram	8760	6024
326—Picture	8761	6025
327—Picture	8762	6026
328—Picture	8763	6027
329—Picture	8764	6028
330—Picture	8765	6029
331—Picture	8766	6030
332—Picture	8767	6031
333—Picture	8768	6032
334—Picture	8769	6033
335—Picture	8770	6034
336 (State's Exhibit X)—Photometer tests with burners used by Prof. Hallock	8771	6035
337 (State's Exhibit Y)—Photometer tests with burners used by Prof. Hallock	8772	6036
338 (State's Exhibit Z)—Photometer tests with burners used by Prof. Hallock	8773	6037

	Original.	Print.
Complainant's Exhibit 339 (State's Exhibit AA)—Photometer tests with burners used by Prof. Hallock	8774	6038
340—Photometer tests of burners	8775	6039
342 (State's Exhibit Z)—Picture	8776	6040
343 (State's Exhibit Y)—Picture	8777	6041
344 (State's Exhibit Z & AA)—Picture	8778	6042
345--Diagram	8779	6043
346—Diagram	8780	6044
347—Diagram	8781	6045
348—Diagram	8782	6046
349—Diagram	8783	6047
350—Diagram	8784	6048
351—Diagram	8785	6049
352—Diagram	8786	6050
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354—Diagram	8788	6052
355—Diagram	8789	6053
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359—Diagram	8793	6057
360—Diagram	8794	6058
361—Diagram	8795	6059
363 A—Diagram	8796	6060
363 B—Diagram	8797	6061
364—Diagram	8798	6062
365 A—Diagram	8799	6063
365 B—Diagram	8800	6064
366 A—Diagram	8801	6065
366 B—Diagram	8802	6066
367—Statement of gas make and gas sales from June to October, 1906	8803	6067
368—Candle power, calendar year 1905	8804	6068
Clerk's certificate to volume III of Exhibits	8805	6069
Complainant's Exhibit 369—Proceedings of the Senate committee of 1886, contained in Senate document 47 of 1886, excluding the report of said committee and the report of Mr. Yalden and the schedules of appraisement	8805c	6071
Testimony of James W. Smith	8812	6074
H. E. Gawtry	8860	6107
Thomas F. Rowland	8862	6108
James W. Smith (recalled)	8877	6119
H. E. Gawtry (recalled)	8892	6129
Samuel Sloan	8917	6146
Oscar Zollikoffer	8933	6157
Percy R. Pyne	8953	6170
Henry Day	8976	6185
John H. Sherwood	8993	6196

Complainant's Exhibit 369—Continued.

	Original.	Print.
Testimony of Henry Day (recalled)	8998	6200
R. F. Cutting	9022	6215
John C. Jacobs	9036	6225
Charles G. Francklyn	9041	6228
H. E. Gawtry (recalled)	9062	6244
R. F. Cutting (recalled)	9069	6248
Charles G. Francklyn (recalled)	9077	6254
John Sickels	9092	6264
Wm. A. Stephens	9102	6272
Samuel J. Young	9106	6274
James Yalden	9106	6274
Thomas Rutter	9116	6281
Oscar Zollikoffer	9126	6288
John P. Huggins	9136	6294
John H. Moss	9147	6301
J. Yalden (recalled)	9166	6314
Thomas K. Lees	9178	6322
J. Yalden (recalled)	9191	6330
Thomas K. Lees (recalled)	9213	6344
John P. Kennedy	9234	6358
J. Pierpont Morgan	9272	6383
George W. Doane	9276	6386
David Palmer	9293	6397
James W. Smith (recalled)	9300	6402
J. Yalden (recalled)	9309	6409
James W. Smith (recalled)	9328	6419
David Palmer (recalled)	9328	6420
John W. Smith (recalled)	9332	6423
R. M. C. Graham	9343	6430
J. Yalden (recalled)	9358	6440
W. W. Sharpe	9363	6443
C. H. Botsford	9370	6448
Edward J. MacNiven	9377	6452
Louis M. Bergtheil	9379	6454
Wm. M. Bangs	9382	6456
Charles Roome	9389	6461
Wm. Combe	9404	6471
John H. Sherwood (recalled)	9408	6474
W. W. Sharpe (recalled)	9418	6480
Henry C. Thomas	9419	6481

	Original.	Print.
Complainant's Exhibit 369—Continued.		
Testimony of Dr. W. M. Jackson..	9421	6482
Gustave Kobbe.....	9446	6498
Francis W. Sanborn.	9455	6503
Oscar F. Zollikoffer..	9462	6508
Edward G. Love....	9471	6514
Daniel E. Sickles....	9474	6516
Oscar Zollikoffer (recalled)............	9481	6520
Henry A. Perry.....	9493	6528
Michael Coleman ...	9513	6542
Appendix K—Comparison of laws.	9521	6547
L—Form of report for gas companies in use in London....	9522	6548
Clerk's certificate to volume IV of Exhibits..................	9537	6562
Complainant's Exhibit 370—Differences, errors, and omissions in Marks' testimony.	9537*c*	6563
371—Dr. Marks' valuation of the various plants, including engineering and interest charges, plus omissions from Mayer's schedule..........	9538	6564
372—Edgerton's estimate, &c.	9545	6569
373—Detailed estimate of governor and boiler-house at 132d Street holder plant.........................	9546	6570
375—Photolithographic copy of estimate.	9547	6571
376—Detailed estimated weights of five-lift, 5,000,000 cubic feet gas-holder in steel tank, &c..............	9550	6575
377—Letters of H. H. Edgerton to W. H. Bradley, November 22 and 30, 1905, and enclosure	9576	6595
378—A. C. H. Table No. 4............	9609	6617
379—A. C. H. Table No. 5.............	9610	6618
380—A. C. H. Table No. 6.............	9611	6619
381—A. C. H. Table No. 1.............	9612	6620
382—A. C. H. Table No. 2.............	9613	6621
383—A. C. H. Table No. 3.............	9614	6622
384—A. C. H. Table No. 7.............	9615	6623
385—A. C. H. Table No. 8.............	9616	6624
386—A. C. H. Table No. 9.............	9617	6625
387—A. C. H. Table No. 10...........	9618	6626
388—A. C. H. Table No. 11............	9619	6627
389—A. C. H. Table No. 11*a*...........	9620	6628
390—Reference to increase of investment with increase of sales.....	9621	6629
391—An ordinance of the city of Philadelphia, approved November 12, 1897. authorizing a lease of the Philadelphia gas works to the United Gas Improvement Company.......................	9622	6631

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Complainant's Exhibit 392—Cost of Danbury gas	9650	6645
393—Cost of Danbury gas	9651	6646
394—Cost of Danbury gas	9652	6647
395—Diagram	9653	6648
City's Exhibit 3—Bid or estimate of Consolidated Gas Co. for term of nine months and sixteen days, ending December 3, 1905	9654	6649
3*a*—Proposal for bids or estimates by city of New York for term of nine months and sixteen days, ending December 31, 1905	9670	6659
64—Complaint of Consolidated Gas Company before the State Board of Tax Commissioners as to assessment of 1905	9728	6691
65—Complaint of Consolidated Gas Company before the State Board of Tax Commissioners as to assessment of 1906	9738	6296
66—Petition of the Consolidated Gas Company in the supreme court of the State of New York in the case of The People of the State of New York *ex rel.* Consolidated Gas Company of New York against State Board of Tax Commissioners	9747	6701
Exhibit A—Complaint before the State Board of Tax Commissioners	9759	6707
67—Petition of the Consolidated Gas Company in the supreme court of the State of New York in the case of The People of the State of New York *ex rel.* Consolidated Gas Company of New York against George E. Priest *et al.*, as the State Board of Tax Commissioners of the State of New York	9763	6709
Exhibit A—Complaint before the State Board of Tax Commissioners	9775	6715
Complainant's Exhibit 301—Electrolytic chart	9781	6717
302—Electrolytic chart	9782	6717
Clerk's certificate to appendix to record	10562	6718

8533 AGENCY AGREEMENT.

Agreement made the 31st of December, 1902, between the Consolidated Gas Company of New York and the New Amsterdam Gas Company, corporations duly organized and existing under the laws of the State of New York.

1. The Consolidated Gas Company of New York hereby employs the New Amsterdam Gas Company as its agent, and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it, for the term of five years, such illuminating gas of the illuminating power required by the laws of the State of New York, as it may require during each year for said term of five years—estimated to be equal to at least 500,000,000 cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York in such quantities and at such times as may be reasonably required by it.

The New Amsterdam Gas Company agrees to manufacture, produce and deliver such gas as aforesaid as the agent of the Consolidated Gas Company of New York.

2. The New Amsterdam Gas Company shall as agent for the Consolidated Gas Company of New York, purchase all the constituent materials and furnish labor necessary for such manufacture, production and delivery and employ in such manufacture, production and delivery, its own plant and appliances.

3. At the expiration of each month the New Amsterdam Gas Company shall render to the Consolidated Gas Company of New York an account of the cost of gas materials used and the gas labor 8534 furnished in manufacturing said gas together with the so-called station repairs during said month, and the Consolidated Gas Company of New York agrees to pay to the New Amsterdam Gas Company within ten days thereafter the amount due according to the said account, together with an additional ten per cent. thereof, which shall be in full for the services of the latter company and for the use of its plant and appliances during said month, and in full also for all claims for taxes on said plant and for insurance thereon and for all administrative and general expenses and of all other claims whatsoever, except as hereinafter mentioned.

4. The Consolidated Gas Company of New York shall have the right to examine at any reasonable time during business hours the manufacturing records, books and bills of cost of the materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

5. The Consolidated Gas Company of New York further agrees that it will at the end of every period of six months during the term of this Agreement, pay to the New Amsterdam Gas Company interest at the rate of five (5%) per cent. per annum for the previous six months upon the amounts expended by the New Amsterdam Gas Company in making additions to its Ravenswood Works since March

First, Nineteen hundred and one, for the purpose of increasing or facilitating the manufacture of gas.

6. This Agreement may be terminated at any time after July 1st, Nineteen hundred and four, at the option of either party hereto, by its giving notice of its election so to do one year in advance of the date of such termination.

8535 7. If no notice of termination shall have been given under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of five (5) years, providing the said Company notifies the New Amsterdam Gas Company in writing during the last six months of the present term of its election so to do.

In Witness Whereof, The companies have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries the day and year first above written.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) By W. R. ADDICKS, *Vice-President.*

Attest:
(Signed) R. A. CARTER,
Secretary.

NEW AMSTERDAM GAS COMPANY,
(Signed) By C. W. ACAM, *Vice-President.*

Attest:
(Signed) M. M. GRAHAM,
Secretary.

8536 AGENCY AGREEMENT.

Agreement, made the 31st day of December, 1902, between the Consolidated Gas Company of New York and The Standard Gas Light Company of the City of New York, corporations duly organized and existing under the laws of the State of New York.

1. The Consolidated Gas Company of New York hereby employs The Standard Gas Light Company of the City of New York, as its agent and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it for the term of five (5) years, such illuminating gas of the illuminating power required by the laws of the State of New York as it may require during each year, for the said term of five (5) years, estimated to be equal to at least five hundred million (500,000,000) cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York, in such quantities and at such times as may be reasonably required by it.

The Standard Gas Light Company of the City of New York agrees to manufacture, produce and deliver such gas as aforesaid, as the agent of the Consolidated Gas Company of New York.

II. The Standard Gas Light Company of the City of New York shall, as agent for the Consolidated Gas Company of New York, and at a reasonable rate, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery and employ in such manufacture, production and delivery its own plant and appliances.

8537 III. At the expiration of each month, The Standard Gas Light Company of the City of New York shall render to the Consolidated Gas Company of New York on account of all expenditures for constituent materials and labor made by it, as aforesaid, during each month, and the Consolidated Gas Company of New York agrees to pay to The Standard Gas Light Company of the City of New York, within ten (10) days thereafter, the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof, which shall be in full for its services and the use of its plant and appliances during the said month.

IV. The Consolidated Gas Company of New York shall have a right to examine, at any reasonable time during business hours, the manufacturing records, books and bills of cost of the said constituent materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

V. This agreement may be terminated at any time, after July 1, 1904, at the option of either party hereto, by its giving notice of its election so to do one year in advance of the date of such termination.

VI. If no notice of termination shall have been given, under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of fixe (5) years, provided the said Company notifies The Standard Gas Light Company of the City of New York, in writing, during the
8538 last six months of the present term, of its election so to do.

In Witness Whereof, the Companies have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries, the day and year first above written.

CONSOLIDATED GAS COMPANY OF NEW YORK,
(Signed) By H. E. GAWTRY, *President.*

Attest:
(Signed) R. A. CARTER, *Secretary.*

THE STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK,
(Signed) By —— ——, *President.*

Attest:
(Signed) —— ——, *Treasurer.*

8539 AGENCY AGREEMENT.

Agreement, made the 31st day of December, 1902, between the Consolidated Gas Company of New York and the New York Mutual Gas Light Company, corporations duly organized and existing under the laws of the State of New York.

1. The Consolidated Gas Company of New York hereby employs the New York Mutual Gas Light Company, as its agent and upon the terms hereinafter mentioned, to manufacture, produce and deliver to it for the term of five (5) years, such illuminating gas of the illuminating power required by the laws of the State of New York as it may require, during each year, for the said term of five (5) years, estimated to be equal to at least one hundred million (100,000,000) cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York, in such quantities and at such times as may be reasonably required by it.

The New York Mutual Gas Light Company agrees to manufacture, produce and deliver such gas, as aforesaid, as the agent of the Consolidated Gas Company of New York.

II. The New York Mutual Gas Light Company shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery and employ in such manufacture, production and delivery its own plant and appliances.

III. At the expiration of each month, the New York Mutual Gas Light Company shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent 8540 materials and labor made by it, as aforesaid, during such month, and the Consolidated Gas Company of New York agrees to pay to the New York Mutual Gas Light Company, within ten (10) days thereafter, the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof, which shall be in full for its services and the use of its plant and appliances during the said month.

IV. The Consolidated Gas Company of New York shall have a right to examine, at any reasonable time during business hours, the manufacturing records, books and bills of cost of the said constituent materials and labor, and also any other books, bills and papers containing records of the total cost of the gas manufactured under the terms of this contract.

V. This agreement may be terminated at any time, after July 1, 1904, at the option of either party hereto, by its giving notice of its election so to do one year in advance of the date of such termination.

VI. If no notice of termination shall have been given, under the provisions of the preceding paragraph, the Consolidated Gas Company of New York may renew this agreement upon the same terms and under the same conditions for an additional period of five (5) years, provided the said Company notifies the New York Mutual Gas Light Company, in writing, during the last six months of the present term, of its election so to do.

8541 In Witness Whereof, the Companies have caused this agreement to be executed under their respective corporate seals by their respective Presidents and attested by their respective Secretaries, the day and year first above written.

CONSOLIDATED GAS COMPANY
OF NEW YORK,
(Signed) By H. E. GAWTRY, *President.*

Attes-:
(Signed) R. A. CARTER, *Secretary.*

NEW YORK MUTUAL GAS LIGHT
COMPANY,
(Signed) By R. W. GALLOWAY, *President.*

Attes-:
(Signed) W. A. SASSON, *Secretary.*

8542 OFFICIALS AND EMPLOYEES—GENERAL OFFICE.

Year 1905.

Name.	*Position.*
H. E. Gawtry	Chairman of the Board of Trustees
W. R. Addicks	Vice-President
L. B. Gawtry	Vice-President
J. A. Bennett	Treasurer
B. Whiteley	Assistant Treasurer
R. A. Carter	Secretary
C. C. Simpson	Assistant Secretary
F. Poughkeepsie	Adjuster of Claims
J. B. Gerard	Transfer Clerk, Stock Transfer Department
W. Young	Assistant Transfer Clerk and Filing Clerk
C. M. Carbonell	Assistant to Acting President
W. H. Deeves	Stenographer
C. H. Siebold	Stenographer
H. Franks	Stenographer
H. E. Almberg	Managing Clerk, Claims and Arrears Department
S. B. Ross	Stenographer
Harriet Woods	Stenographer
E. North	Purchasing Agent
L. S. Smith	Clerk, Purchasing Department
T. G. Ascough	Paymaster
L. Durham	Paymaster
A. Phillips	Special Officer, Paymaster Department
G. Franklyn	Manager Real Estate Dep't and Assistant to Engineer of Distribution
B. Lindon	Porter

C. Gardiner	Porter
H. Kelly	Night Watchman
Geo. Powell	Night Watchman
A. B. Silkworth	Superintendent of Buildings
Joseph Cochrane	Carpenter
J. H. Hill	Porter and Messenger
G. W. Hicks	Office Boy
E. Jaynes	Office Boy
W. R. Schoenfisch	Clerk, Purchasing Department
Wm. Rogers	Clerk, Engineering Department
8543 M. Reddington	Office Boy
Miss M. F. Carbonell	Clerk
Miss May F. Dillon	Telephone Operator
F. Ancrum	Elevator Man
W. Wood	Porter
E. R. Jourdan	Assistant General Superintendent of Mains
A. Postley	Assistant General Superintendent of Mains
A. C. Postley	Inspector of Street Openings
J. T. White	Clerk, Street Department
F. L. Lambrecht	Auditor
H. M. Brundage	Chief Accountant
F. R. Barnetz	General Office Assistant
J. B. Duryee	Clerk, Accounting Department
B. G. Furey	Clerk, Accounting Department
W. G. Zepf	Clerk, Accounting Department
J. J. Norton	Clerk, Accounting Department
J. H. Nickerson	Clerk, Accounting Department
W. de Hart	Clerk, Accounting Department
P. L. Freeman	Clerk, Purchasing Department
P. R. Farrell	Clerk, Accounting Department
L. H. Werner	Clerk, Accounting Department
E. C. Sanderson	Clerk, Accounting Department
Frank Bischoff	Clerk, Accounting Department
W. G. Morris	Clerk, Accounting Department
E. Donnelly	Clerk, Accounting Department
G. K. Frazier	Collector
Chas. A. Dayton	Cashier
H. L. McCormick	Clerk, Cashier Department
Josephine T. White	Telephone Operator
E. W. Burdick	Manager Claims and Arrears Department
F. L. Sullivan	Assistant Manager Claims and Arrears Department
J. A. Kenny	Collector, Claims and Arrears Department
H. D. Macdona	Legal Services
J. G. Roberts	Clerk, Claims and Arrears Department
E. Dillon	Clerk, Claims and Arrears Department
W. H. H. Meyers	Collector, Claims and Arrears Department
C. E. Smith	Collector, Claims and Arrears Department
A. Cooper	Inspector, Meter Department
R. C. Poissant	Driver
8544 J. W. Grimmer	Chauffeur
W. McCaffray	Chauffeur
E. O. Coles	Inspector, Street Department

Dr. H. N. Taylor	Doctor, Employees' Friendly Aid Society
J. H. Cummings	Draughtsman, Engineering Department
O. H. Fogg	Street Department Pressure
Wm. H. Bradley	Chief Engineer
Geo. E. Woods	Engineer of Manufacture
A. H. Elliott	Engineer Chemist
A. M. Smith	Engineer of Distribution
Howard Bruce	Engineer of Construction
J. H. Shortt	Draughtsman, Engineering Department
Harold Carpenter	Chief Draughtsman, Engineering Department
T. N. Case	Chief Draughtsman, Engineering Department
M. Shiebler	Assistant Engineer of Construction
W. Strobridge	Draughtsman, Engineering Department
O. Bodelsen	Draughtsman, Engineering Department
C. L. Gosnell	Draughtsman, Engineering Department
A. Nielson	Draughtsman, Engineering Department
W. H. Alrich	Draughtsman, Engineering Department
O. Schroeder	Draughtsman, Engineering Department
M. L. Macintosh	Draughtsman, Engineering Department
H. L. Armstrong	Clerk, Engineering Department
F. Snyder, Jr.	Stenographer, Engineering Department
W. Regan	Assistant in Chemical Laboratory
A. Van de Dreische	Draughtsman
J. H. Ihart	Assistant in Chemical Laboratory
J. McVey	Assistant in Chemical Laboratory
Joshua Snowden	Stenographer, Engineering Department
Anastasia Roche	Stenographer, Engineering Department
G. McCormick	Clerk, Engineering Department
J. Mansfield	Assistant Draughtsman, Street Department
J. W. Price	Telephone Operator
H. Gallagher	Office Boy, Engnieering Department
H. Irwin	Clerk, Engineering Department
E. B. Annett	Draughtsman, Engineering Department
G. C. Shaw	Draughtsman, Engineering Department
C. J. Gefert	Draughtsman, Engineering Department
H. J. Brady	Mailing Clerk, Engineering Department
B. Schoenfeldt	Draughtsman, Engineering Department
8545 J. W. Corbet	Clerk, Engineering Department
N. J. Sperling	Draughtsman, Engineering Department
J. J. Smith	Blueprint Boy, Engineering Department
May Marlow	Stenographer
H. C. Palmer	Draughtsman, Engineering Department
D. Hauser	Elevator Man
J. J. Viebruck	Clerk, Accounting Department
H. S. Leahy	Clerk, Accounting Department
A. G. Buckingham	Inspec-or, Engineering Department
F. Snyder	Chauffeur
C. F. Forsburg	Draughtsman, Engineering Department
W. E. Paulson	Inspector
W. B. Davis	Assistant, Claims and Arrears Department
J. Tolliver	Porter, Laboratory
R. B. Weber	Mailing Clerk, Engineering Department

M. E. Mueller	Draughtsman, Engineering Department
E. Harrington	Stenographer, Engineering Department
Paul Herfort	Draughtsman, Engineering Department
J. G. Weyland	Draughtsman, Engineering Department
Harold Shields	Draughtsman, Engineering Department
O. A. Pope	Draughtsman, Engineering Department
Wm. Heyman	Draughtsman, Engineering Department
J. B. Croker	Draughtsman, Engineering Department
R. G. Lucas	Draughtsman, Engineering Department
Louis Peterson	Stenographer, Engineering Department
R. S. Baldwin	Draughtsman, Engineering Department
Julius E. Reinhardt	Draughtsman, Engineering Department
R. R. Van Sholby	Assistant in Chemical Laboratory
Wm. Bode	Draughtsman, Engineering Department
A. Anderson	Stenographer, Engineering Department
B. Winslow	Inspector of Street Openings
Thos. Byrnes	Office Boy, Engineering Department
B. Coyle	Office Boy
E. J. Bennett	Collector, Claims and Arrears Department
W. C. Morris	Assistant Engineer of Manufacture
O. F. Balston	Inspector, Engineering Department
H. C. Howell	Draughtsman, Engineering Department
W. T. Thecker	Draughtsman, Engineering Department
H. C. Backe	Mailing Clerk, Engineering Department
E. J. Rowe	Collector, Claims and Arrears Department
8546 E. Dillon	
H. C. Picard	(Duplicate)
Frank Monday	Elevator Man
R. D. Rubright	Stenographer and Messenger
Geo. Duke	Clerk, Accounting Department
Wm. Lang	Office Boy
Wm. R. Tyler	Office Boy
Eugene Nelson	Draughtsman, Engineering Department
Wm. Jordan	Pressure Man
Frank Holdenecker	Pressure Man
D. Sullivan	Pressure Man
Alfred Grant	Pressure Man
B. E. Dimes	Pressure Man
Mamie Burns	Stenographer
Jacob Zabo	Typewriter, Engineering Department
John Mulholland	Draughtsman, Engineering Department
	Night Telephone Operator

8547 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIAN L. SHEDDON, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Hon. Arthur H. Masten, Special Master.

Report of Marwick, Mitchell & Co., Chartered Accountants.

Employed by the City of New York.

NEW YORK, *November* 26, 1906.

To Hon. William B. Ellison, Corporation Counsel, Solicitor for the Defendant The City of New York, William P. Burr, Esq., of Counsel.

8548 GENTLEMEN:

In accordance with your instructions, we have examined the item "Sundry Creditors, $3,357,037.95" in Exhibit No. 80, submitted by the Complainant in the above entitled action, and find that it is made up as follows:

Metropolitan Gas Light Company Bond—Balance...	$500.00
Bond Interest Accrued..........................	34,675.00
Dividends not called for.......................	15,604.00
Sundry Creditors	1,208,088.23
Employees Aid Society..........................	23,454.58
Accrued Taxes..................................	1,652,593.74
Accrued Water	8,408.15
Accrued Debenture Interest.....................	397,152.00
Stove Rent Suspense Account....................	11,562.25
Special Suspense	5,000.00
	$3,357,037.95

Should you desire any further information we shall be pleased to obtain it.

Yours truly,

MARWICK, MITCHELL & CO.

8549 Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,
vs.
JULIUS M. MAYER, as Attorney General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; FREDERICK E. GUNNISON, JOHN C. DAVIES, and LUCIEN L. SHEDDEN, Constituting the New York State Commission of Gas and Electricity, and THE CITY OF NEW YORK, Defendants.

Before Hon. Arthur H. Masten, Special Master.

Report of Marwick, Mitchell & Co., Chartered Accountants.

Employed by the City of New York.

NEW YORK, *November* 26, 1906.

To Hon. William B. Ellison, Corporation Counsel, Solicitor for the Defendant The City of New York, William P. Burr, Esq., of Counsel.

8550 GENTLEMEN:

In accordance with your instructions, we have made an examination of the Real Estate Accounts of the Companies merged on November 11, 1884, under the name of the Consolidated Gas Company of New York and of that Company from the date of the merger to December 31, 1905, with a view to ascertaining the actual cost of all Real Estate now owned by it.

Immediately upon receipt of your instructions, we made application to the Consolidated Company for all the books necessary to make this examination, and had those specified in Appendix "I" submitted to us. From this you will observe that none of the books of the Metropolitan and Knickerbocker Gas Light Companies could be found, although a thorough search of all the offices of the Companies was made.

The absence of any books would necessarily limit the scope of our investigation, but in order to make our report complete, we decided to make use of a report, prepared during the year 1885 by Mr. J. Yalden, an Accountant of New York City, and submitted to the Hon. John J. Gilbert, Chairman, Hon. Thomas Robinson and Hon. Michael C. Murphy, Committee of the Senate of the State of New York. The Knickerbocker Gas Light Company was taken over by the Municipal Gas Light Company some time prior to November, 1884, consequently, it is only necessary for us to adopt Mr. Yalden's figures in the case of the Metropolitan Company.

As the result of our examination, we have to submit the following report, together with the Exhibits now enumerated:

Exhibit "A," Real Estate transferred by the Manhattan Gas Light Co., on November 11, 1884.

8551 Exhibit "B," Real Estate transferred by the Municipal and Knickerbocker Gas Light Companies, on November 11, 1884.

Exhibit "C," Real Estate transferred by the Harlem Gas Light Co., on November 11, 1884.
Exhibit "D," Real Estate transferred by The New York Gas Light Co., on November 11, 1884.
Exhibit "E," Real Estate transferred by the Metropolitan Gas Light Co., on November 11, 1884.
Exhibit "F," Real Estate acquired by the Consolidated Gas Co. of New York from November 11, 1884, to December 31, 1905.

ORIGINAL COST OF REAL ESTATE NOW OWNED.—The following statement represents a summary of the Real Estate held by the Companies merged as the Consolidated Gas Company of New York, at November 11, 1884, together with the original cost of the same, appreciation written up in their books and the amount at which it was taken over:

	Original cost buildings and improvements.	Appreciation less depreciation prior to Nov. 11, 1884.	Appreciation on transfer to Consolidated on Nov. 11, 1884.	Taken over at
1. Manhattan Gas Light Co..................	$1,378,691.45	*21,706.00	2,806,014.55	4,163,000.00
2. Municipal Gas Light Co.	561,462.83	....	527,537.17	1,089,000.00
3. Knickerbocker Gas Light Co...........	....	....	595,000.00	595,000.00
4. Harlem Gas Light Co..	313,211.62	....	440,788.38	754,000.00
5. The New York Gas Light Co............	453,303.77	866,696.23	637,000.00	1,957,000.00
6. Metropolitan Gas Light Co................	671,301.43	739,973.14	362,725.43	1,774,000.00
	$3,377,971.10	1,584,963.37	5,369,065.53	10,332,000.00

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* Red ink in original.

From November 11, 1884, to December 31, 1905, the Consolidated Company made certain additions and improvements to Real
8552 Estate, and the following is the present position of the Account:

Taken over at November 11, 1884, as above..................	$10,332,000.00
Additions and Improvements to December 31, 1905, less Cost to Consolidated Company of Properties Sold.................	740,296.28
	11,072,296.28
Less: Profit over Cost to Consolidated Company of Properties sold	142,378.00
Book Value at December 31, 1905	$10,929,918.28

This amount is made up as follows:

Purchase price, including Additions and Improvements to November 11, 1884		$3,377,971.10
Purchase price, including Additions and Improvements from November 11, 1884, to December 31, 1905		740,296.28
		4,118,267.38
Appreciation in Accounts of Merged Companies prior to November 11, 1884	$1,584,963.37	
Appreciation on transfer at November 11, 1884	5,369,065.53	
	6,954,028.90	
Less: Profit on Real Estate sold by Consolidated Company and Credited to Purchase Price	142,378.00	
		6,811,650.90
Book Value at December 31, 1905		$10,929,918.28

1. MANHATTAN GAS LIGHT COMPANY.—This Company transferred at the date of the consolidation real estate, as detailed in Exhibit "A," at an appraised value of $4,163,00. The properties originally cost $1,378,691.45. Prior to the transfer in 1884, they had been depreciated by the amount of $21,706.00. The appreciation added at the date of the transfer was $2,806,014.55.

The Book Value of the properties transferred was $3,351,730.74, that is including $1,994,745.29 on account of apparatus charged during the years 1877 and 1881.

2 AND 3. MUNICIPAL AND KNICKERBOCKER GAS LIGHT COMPANIES.—These Companies were organized in 1876 and operated under one management until taken over by the Consolidated
8553 Company in 1884. The following is a statement of the Account at that date. The details will be found in Exhibit "B":

Acquired from Municipal Gas Light Co.	$1,089,000.00
" " Knickerbocker Gas Light Co.	595,000.00
	1,684,000.00
Original Cost, Including Buildings and Improvements	561,462.83
Appreciation at date of transfer	$1,122,537.17

4. HARLEM GAS LIGHT COMPANY.—The books of this Company have not been kept in such a manner as would enable us to obtain reliable information. The Company was incorporated in 1856. From that date until November 11, 1884, it acquired the real estate specified in Exhibit "C," and transferred at a price of $754,000.00,

including Bulkheads and Office Buildings. We cannot find the cost of the Bulkheads and Office Buildings, but the real estate was purchased, so far as we can determine, at a cost of $163,211.62. The Bulkhead and Office Buildings were transferred at $150,000. We have assumed that they cost the same amount, and have accordingly entered the purchase price of all the properties at $313,211.62. During the year 1875 the Company transferred to the City a certain piece of property at Inwood. We have allowed credit for $23,042.32, the full amount received, as the cost could not be obtained from the books. On May 21, 1866, in accordance with a resolution of the Board of Directors, the Construction Account was charged and the Capital Stock credited with $200,000.00 on account of the increased value of works and plant over the actual cost. A proportion of this
amount would properly apply to Real Estate, but exactly
8554 what proportion we cannot determine. As the purpose of this
examination is to ascertain the actual cost, this point is not
of material importance.

5. The New York Gas Light Company.—This Company, the first to manufacture gas in the City of New York, was formed in 1823 under the title of New York Gas Light Company. In 1871 it was reconstructed under its present name. At that time the real estate was appreciated by $933,500.00, from which has to be deducted depreciation written off in previous years, $66,803.67. Again in 1884 a further appreciation of $637,000.00 was made. As a result, the real estate, as detailed in Schedule "D," which cost $453,303.77, was taken over at $1,957,000.00, an appreciation of $1,503,696.23.

6. Metropolitan Gas Light Company.—The books of this Company could not be found and we have, as previously mentioned, adopted the figures given by Mr. J. Yalden. From his report, we find that the Real Estate handed over to the Consolidated Company and detailed in Schedule "E" was appraised at $1,774,000.00, that is $1,102,698.57 in excess of the book value, which was $671,301.43. Of this appreciation, $739,973.14 was added prior to November 11, 1884, and $362,725.43 at that date.

Consolidated Gas Company of New York.—From November 11, 1884, to December 31, 1905, the Consolidated Gas Company made certain additions to the Account, details of which will be found in Exhibit "F," and they sold the following lots:

	Cost price.	Sold for	Profit.
First Avenue and 111th and 112th Streets.....	$86,000.00	118,900.00	32,900.00
20th and 22nd Streets, East River Water Front.	247,858.00	247,858.00	
15th and 16th Streets...................... ...	130,000.00	180,000.00	50,000 00
Avenue A, 62nd and 63rd Streets............	118,600.00	178,078.00	59,478.00
	$582,458.00	724,836.00	142,378.00

8555 The profit shown above is that made on the price paid by
the Consolidated Company for these properties. What they
originally cost we cannot trace, owing to the lack of definiteness in the books of the merged companies. In the case of the East River Water Front, we find that these bulkheads appeared at a valuation of $250,000. As the Company have retained certain rights and

privileges, their value could not be ascertained. We, therefore, have proceeded on the assumption that the cost price only had been realized.

During the period under review, the Company acquired certain ground at Long Island at a price of $450,000.00, subsequently transferring it to the Astoria Light, Heat and Power Company for $750,000.00, a profit of $300,000.00. This transaction is not included in the figures given by us, as the profit was transferred by the Company to the credit of Profit and Loss Account.

We shall be pleased to furnish any further information you may desire.

Yours truly,

MARWICK, MITCHELL & CO.

8556 EXHIBIT "A.

REAL ESTATE TRANSFERRED BY THE MANHATTAN GAS LIGHT COMPANY.

As at November 11, 1884.

14th Street Station:		
1835-8, 4 lots, Tompkins St., 26 x 109.11½ at $8,000		$32,000.00
1831-4, 4 lots, Tompkins St., 26 x 118.8½ at $8,000		32,000.00
2 Corners at $2,000		4,000.00
		68,000.00
1823-30, 8 lots, Tompkins St., 26 x 117.5 at $8,000	$64,000.00	
2 Corners at $2,000	4,000.00	
		68,000.00
1806-14, 9 lots, Avenue D, E. S. 22.11.4/9 x 88 at $8,000	72,000.00	
2 Corners at $2,000	4,000.00	
		76,000.00
1797-1805, 9 lots Avenue D, 22.11-4/9 x 88 at $7,000	63,000.00	
2 Corners at $2,000	4,000.00	
		67,000.00
1839-44, 6 lots, 14th St. N. S., 25 x 1033 at $10,000		60,000.00
3102-5, 4 lots, 15th St. S. S., 25 x 1033 at $7,000		28,000.00
1779-96, 18 lots, Avenue D, W. S. 22.11-4/9 x 88 at $7,000	135,000.00	
4 Corners at $2,000	8,000.00	
		143,000.00
1845-64, 20 lots, 14th St., N. S. 25 x 1033 at $10,000		200,000.00
3082-3101, 20 lots, 15th St., S. S. 25 x 1033 at 7,000		140,000.00
3108-3127, 20 lots, 15th St., N. S. 25 x 1033 at $7,000		* 140,000.00
3408-27, 20 lots, 16th St., S. S. 25 x 1033 at $6,000		* 120,000.00
1681-98, 18 lots, Avenue C, E. S. 22.11-4/9 x 88 at $7,500	135,000.00	
4 Corners at $2,000	8,000.00	
		143,000.00
1672-80, 9 lots, Avenue C, W. S. 22.11-4/9 x 88 at $7,500	67,000.00	
2 Corners at $2,000	4,000.00	
		71,000.00
1865-77, 13 lots, 14th St. N. S. 25 x 1033, $10,000		130,000.00
1878, 1 lot, 14th St. N. S. 21′ 10½″ x 1033		9,000.00
3068, 1 lot, 15th St. S. S. 21 x 1033		6,000.00
3069-81, 13 lots, 15th St. S. S. 25 x 1033, $7,000		91,000.00
3048½-3053, 3 lots, 15th St. S. S. average 25 x 1033 at $5,000 (well property, small front)		12,000.00

3074-87, 14 lots, 17th St. N. S. 25 x 92 at $6,000		84,000.00
4079-92, 14 lots, 18th St. S. S. 25 x 92 at $6,000		84,000.00
Total 14th Street Station, East River		$1,740,000.00
18th Street Station:		
2058-66, 9 lots, S. S. 18th St. 25 x 92 at $7,500	$67,500.00	
2262-64, 3 lots, N. S. 18th St. 25 x 92 at $7,500	180,000.00	
1769-46, 24 lots, N. S. 16th St. 25 x 92 at $7,500	180,000.00	
1770-93, 24 lots, S. S. 17th St. 25 x 92 at $7,500	180,000.00	
2007-30, 24 lots, N. S. 17th St. 25 x 92 at $7,500	180,000.00	
2031-54, 24 lots, S. S. 18th St. 25 x 92 at $7,500	180,000.00	
2274-90, 17 lots, N. S. 18th St. 25 x 92 at $7,500	127,000.00	
Carried forward	$937,500.00	1,740,000.00

8557 REAL ESTATE TRANSFERRED BY THE MANHATTAN GAS LIGHT COMPANY—*Continued.*

Brought Forward		$937,500.00	1,740,000.00
18th Street Station—*Cont.*			
2305-10, 2313-16, 2318, 2321, 12 lots, 19th St. 25 x 92 at $7,500		90,000.00	
2577-87, 11 lots, N. S. 19th St. 25 x 92 at $7,500		82,500.00	
2593-2603, 11 lots, S. S. 20th St. 25 x 92 at $7,500		82,500.00	
313-20, 8 lots, W. S. 10th Ave. 23 x 100 at $9,500	$76,000.00		
2 Corners at $2,000	4,000.00	80,000.00	
204-12, 9 lots, W. S. 10th Ave. 20.5½ x 100 at $8,500	76,500.00		
2 Corners at $2,000	4,000.00	80,500.00	
296-303, 8 lots, W. S. 10th Ave. 23 x 100 at $9,500	76,000.00		
2 Corners at $2,000	4,000.00	80,000.00	
161-168, 8 lots, E. S. 11th Ave. 23 x 100 at $9,500	76,000.00		
2 Corners at $2,000	4,000.00	80,000.00	
169-176, 8 lots, E. S. 11th Ave. 23 x 100 at $9,500	76,000.00		
2 Corners at $2,000	4,000.00	80,000.00	
185-192, 8 lots, E. S. 11th Ave. 23 x 100 at $9,500	76,000.00		
2 Corners at $2,000	4,000.00	80,000.00	
1, 8 lots, W. S. 11th Ave. E. S. 13th Ave. (Block) 16th & 17th Streets	50,000.00		
9, 8 lots, W. S. 11th Ave. E. S. 13th [illegible]. (Block) 17th & 18th Streets	100,000.00	150,000.00	
Total 18th Street & North River			1,823,000.00
Office and dwelling, Irving Place and 15th St., Lots 59 x 92, 50 x 84			175,000.00
Bulkheads and Water Rights			425,000.00
Total			$4,163,000.00

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* Of this one-half, $130,000.00, sold by Consolidated Gas Company for $180,000.00.

8558

EXHIBIT "B."

REAL ESTATE TRANSFERRED BY MUNICIPAL AND KNICKERBOCKER GAS LIGHT COMPANIES.

As at November 11, 1884.

MUNICIPAL GAS LIGHT COMPANY:

Real Estate:	
The following described property, located in the 22nd Ward, on blocks bounded by West 44th and West 46th Streets, Eleventh Avenue and Hudson River, New York City, as follows:	
On block 225, Nos. 1 to 28 inclusive, 39 and 41 to 64 inclusive, 52 lots each 25 feet by 100 feet 5 inches, 1 lot 16 feet 8 inches by 100 feet 5 inches	
On block 225a, 54½ lots, each 25 feet by 100 feet (8 lots above water, 32 lots under water, together with bulkhead, water rights and full water grant to exterior city line	
On block 226, Nos. 1 to 20 inclusive, and 45 to 64 inclusive, 54½ lots, each 25 feet by 100	
On block 226a, 40 lots, each 25 feet by 100 feet, 8 lots above water, 32 lots under water, together with bulkhead, water rights and full water grant to exterior city line	
Bulkhead, 517 feet long with two returns, dumping board, including rock filling	$1,083,000.00
On lot No. 29, block 225, there is a two-story and basement frame dwelling house (on the rear of the lot)	2,500.00
On lot No. 39, block 225, there is a three-story brick dwelling house (situated on the front of the lot)	3,500.00
Total Municipal Gas Light Company	1,089,000.00

KNICKERBOCKER GAS LIGHT COMPANY:

Real Estate:			
Located in the 12th Ward, New York City, as follows:			
On blocks Nos. 214 and 215, bounded by East 98th Street, East 99th Street, Second Avenue and the Harlem River, with bulkhead extending the entire front		$550,000.00	
Carried Forward		$550,000.00	1,089,000.00

8559 REAL ESTATE TRANSFERRED—*Continued.*

Brought forward			$1,089,000.00

KNICKERBOCKER GAS LIGHT COMPANY—*Continued.*

Brought forward		$550,000.00	
Brick dwelling house, 20 feet by 30 feet, 2 stories and cellar		2,500.00	
Bulkhead		30,000.00	
		582,500.00	
Walls, the property is partially enclosed by 864 feet 3 inches of 12 inch brick wall, 10 feet high panelled with 4 inch pilasters coped with 3 inch blue stone, 14 inches wide, 2½ inch blue stone water table, 2 gates 10 feet wide 1 gate 8 feet 2 inches wide, 1 gate 3 feet 10 inches wide, 1 gate 3 feet wide, 8 gate piers 32 inches by 24 inches and 12 feet high in addition to wall thickness	$11,810.00		
One thousand two hundred and sixty-seven feet of board fence, 4 double gates and 2 single gates	2,534.00		
Say		12,500.00	
Total Knickerbocker Gas Light Company			595,000.00
Total			**$1,684,000.00**

8560

EXHIBIT "C."

REAL ESTATE TRANSFERRED BY HARLEM GAS LIGHT COMPANY.

As at November 11, 1884.

HARLEM GAS LIGHT COMPANY:

Block 140:		
8 lots Avenue "A"		$36,000.00
Eight lots, First Avenue		48,000.00
Seventeen Lots, 110th Street		68,000.00
Seventeen lots, 111th Street		85,000.00
		237,000.00
Block 141:		
Six lots, First Avenue	$36,000.00	
Eight lots, 111th Street	40,000.00	
Two lots, 112th Street	10,000.00	86,000.00 *
Block 226:		
Eight lots, First Avenue	48,000.00	
Twelve lots, 110th Street	66,000.00	
Lots gore	3,500.00	
Fifteen lots, 111th Street	82,500.00	200,000.00
Block 227:		
Three lots, First Avenue	18,000.00	
Five lots, 111th Street	27,500.00	
Gore, 112th Street	7,500.00	53,000.00
Block 68:		
One plot on King's Bridge Road near Inwood		28,000.00
		604,000.00
Bulkhead, Avenue "A" and East River		100,000.00
Office building and lot on Third Avenue and 114th Street		50,000.00
Total		$754,000.00

8561

EXHIBIT "D."

REAL ESTATE TRANSFERRED BY THE NEW YORK GAS LIGHT COMPANY.

As at November 11, 1884.

Block No. 1:		
Avenue "A" and E. R. 21st and 22nd Streets:		
1463-1468, 6 lots at $8,000 each		$48,000.00
Avenue A, 1462 & 1469, 2 Corners at $10,000 ea.		20,000.00
22nd St. 5565-5583, 19 lots at $7,000 each		133,000.00
21st. 5282-5300, 19 lots at $7,000 each		133,000.00
Ave. B 1493, 1 Corner at $10,000		10,000.00
Ave. B 1492-1486, 7 lots at $8,000 each		56,000.00
		400,000.00
Block No. 2:		
Ave. A & Ave. B, 20th and 21st St., also Ave. B to E. R.:		
Avenue A 1461, 1 Corner	$10,000.00	
Ave. A 1460 & 1458, 2 lots at $7,000 each	14,000.00	
Ave. B 1494 & 1501, 2 Corners at $10,000 each.	20,000.00	
Ave. B 1495-1500, 6 lots at $8,000 each	48,000.00	

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* Sold by Consolidated Gas Company for $118,900.00.

21st St. B & 5202-5221, 21 lots at 6,000 each	126,000.00	
20th St. 4938-4957½, 21 lots at $6,000 each	126,000.00	
Ave. B, 1599 & 1606, 2 Corners at $9,000 each	18,000.00	
1600-1605, 6 lots at $7,000 each	42,000.00	
3935-3937, 3 lots at $6,500 each	19,500.00	
4932-4934, 5222-5224. 6 gores and 2 full lots, at $6,500 each	13,000.00	
		436,500.00
Block No. 3:		
1st Ave. & Ave. "A," 21st Street & 22nd Street:		
1st Ave., 1272 & 1265, 2 Corners at $10,000 each	20,000.00	
1266-1271, 6 lots at $8,000 each	48,000.00	
Ave. A, 1338 & 1345, 2 Corners at $10,000 each	20,000.00	
1339-1344, 6 lots at $8,000 each	48,000.00	
21st St. 5301-5317, 17 lots at $7,000 each	119,000.00	
22nd St. 5548-5564, 17 lots at $7,000 each	118,000.00	
		374,000.00
Block No. 4:		
1st Ave. & Ave. "A," 20th St. & 21st Street:		
Ave. A, 1346 & 1354, 2 Corners at $9,000 each	18,000.00	
1347-1350, 4 lots at $8,000 each	32,000.00	
21st St. 5183-5201, & A, 19 lots at $7,000 each	133,000.00	
20th St. 4458-4479, 22 lots at $6,000 each	132,000.00	
		315,000.00
Block No. 5:		
South Side of 20th St. between Ave. "A" & 1st Ave.:		
20th St. 4829-4836, 8 lots at $6,000 each		48,000.00
Carried Forward		$1,573,500.00

8562 REAL ESTATE TRANSFERRED BY THE NEW YORK GAS LIGHT COMPANY—*Continued.*

Brought Forward		$1,573,500.00
Add for Omission:		
The Stable Building and Improvements on South Side of 20th St. Block 5	$15,000.00	
Five Dwelling Houses on Avenue "A." West Side, between 20th and 21st Streets at $3,500 each Block 4	17,500.00	
And Improvements, *i. e.*, new party wall, Corner 20th St. and Avenue "A," on lot 1354	1,000.00	33,500.00
		1,607,000.00
Bulkhead, Pier and Water Rights		*250,000.00
Hester Street and Elizabeth Street, 6 lots, 100 x 150 feet, with Office Building, Work-shops, etc		100,000.00
Total		$1,957,000.00

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* Part of these rights were transferred to the City at a price of $247,858.00.

8563

EXHIBIT "E."

REAL ESTATE TRANSFERRED BY THE METROPOLITAN GAS LIGH COMPANY.

As at November 11, 1884.

5 lots situated at the North East Corner of Avenue A and 60th St, partly under water		$22,000.0
8 lots fronting Avenue A, on the West side, between E. 60th and 61st Streets, at $7,000		56,000.0
Add: For Corners		4,000.0
8½ lots fronting on the North side of 60th Street between 1st Avenue and Ave. A, commencing 100 feet west of Ave. A, at $4,500		38,250.0
8½ lots fronting on the South side of 61st Street, between 1st Avenue and Ave. A, commencing 100 feet West of Ave. A at $4,500		38,250 0
		158,500.0
8 lots fronting Avenue A and the West side between East 62nd and 63rd Sts. at $8,000	$64,000.00	
Add: For corners	4,000.00	
13¼ lots fronting on the South side of 63rd Street and commencing 100 feet West of Avenue A at $6,000	79,500.00	
15¼ lots fronting on the North side of 62nd Street and commencing 100 feet West of Avenue A, at $5,000	76,000.00	
		*223,500.0
8 lots fronting 41st Street on the North side between 10th and 11th Avenues, commencing 100 feet East of 11th Avenue, at $6,000		48,000.0
8 lots fronting 10th Avenue on the West side from North West Corner of 65th St. to South West Corner of 66th Street at $7,000	56,000.00	
Add: For corner lots	4,000.00	
8 lots fronting 11th Avenue on the East side, commencing at the North East Corner of 65th Street and extending to the South East Corner of 66th Street at $5,000	40,000.00	
Add: For Corner lots	4,000.00	
24 lots fronting North side of 65th Street, commencing 100 feet West of 10th Avenue at $4,500	108,000.00	
24 lots fronting South side of 66th Street, commencing 100 feet West of 10th Avenue at $4,500	108,000.00	
		320,000.0
6 Inside lots fronting West side of 11th Avenue between 41st and 42nd Streets	54,000.00	
1 lot North West Corner of 11th Avenue and 41st Street	10,000.00	
1 lot South West Corner of 11th Avenue and 42d Street	15,000.00	
28 lots fronting North side of 41st Street, between 11th and 12th Avenues, commencing about 100 feet West of 11th Ave. at $6,000	168,000.00	
28 lots fronting South side 42nd St. between 11th and 12th Avenues, commencing about 100 feet West of 11th Avenue at $9,000	252,000.00	499,000.0
Carried Forward		$1,249,000.0

8564 REAL ESTATE TRANSFERRED BY THE METROPOLITAN GAS LIGHT COMPANY—*Continued.*

Brought Forward		$1,249,000.00
6 lots fronting on the North side of 42nd Street, between 11th and 12th Avenues, Commencing 100 feet West of 42nd Street at $10,000		60,000.00
8 lots fronting on the West side of 11th Ave. between 65th and 66th Sts. at $5,000	$40,000.00	
Add: For Corners	4,000.00	
17 75/100 lots, having a frontage of 199 feet 9 inches on the North side of 65th Street and 243 feet 9 inches on the South side of 66th Street, between 11th Avenue and the H. R. R. R. cut, Commencing 100 feet West of 11th Avenue at $4,000	71,000.00	
		115,000.00
16 76/100 acres of land (7 48/100 acres under water) situated on the West Shore of the Hudson River at Shady Side, Bergen County, N. J.		50,000.00
		$1,474,000.00
57 lots, bounded by the West side of 12th Avenue, the center line of 41st Street, the West side of the former 13th Avenue and the center line of 42nd Street, with water rights and grants as to wharfage, cranage, etc.		300,000.00
Total		$1,774,000.00

8565 REAL ESTATE ACQUIRED BY THE CONSOLIDATED GAS COMPANY OF NEW YORK.

From November 11, 1884, to December 31, 1905.

Property:		
2 Irving Place		$25,000.00
336 Avenue A and 612 West 45th Street		19,019.80
110th Street and 2nd Avenue		7,000.00
608, 617, 621 West 45th Street		24,875.00
606 West 45th Street, 116th Street and Lexington Avenue, 175-177 East 114th Street, 623 West 45th Street and 132nd Street and 12th Avenue		314,550.00
175 and 177 East 114th Street		24,000.00
¼ Acre of Land, Shadyside, New Jersey		2,500.00
20 68/100 Lots, 98th, 99th Streets and East River		27,500.00
328-330 Avenue A and 405 East 20th Street		71,112.73
405 East 20th Street		24,250.00
222-228 West 65th Street		61,000.00
222-228 West 65th Street and new 41st Street Stable		2,500.00
11th Avenue, assumed in settlement of Debt		50,588.65
Total Property Purchased		$653,896.18
Assessments for Improvements		129,013.89
Bulkheads		384,646.97
Additions to Office Buildings, East 114th Street		62,158.57
New Shop, 66th Street		51,128.87
Sundry Expenditures		44,947.21
		$1,325,791.69
Deduct:		
Cost price of Properties sold	$582,458.00	
Assessments Recovered	3,037.41	
		585,495.41
Total Additions to Real Estate		$740,296.28

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* Of this, $118,000.00 was sold by Consolidated Gas Company for $178,078.00.

8566 LIST OF BOOKS OF ACCOUNTS OF COMPANIES MERGED AS CONSOLIDATED GAS COMPANY OF NEW YORK.

As at November 10, 1884.

Metropolitan Gas Light Company:

*Ledgers.
*Journals.
*Cash Books.

Knickerbocker Gas Light Company:

*Ledgers.
*Journals.
*Cash Books.

Harlem Gas Light Company:

Ledgers:

Aug. 1, 1855—June 30, 1872
July 1, 1872—Feb. 5, 1885

Journals:

July 6, 1855—Dec. 31, 1862
Jan. 1, 1863—Dec. 31, 1869
Jan. 1, 1869—Nov. 13, 1872
Nov. 1, 1872—Sep. 30, 1875
Oct. 1, 1875—Nov. 30, 1878
Dec. 1, 1878—Feb. 28, 1882
Mar. 1, 1882—Apl. 15, 1885

Cash Books:

July 6, 1855—Dec. 31, 1866
Jan. 1, 1867—Sep. 30, 1872
Oct. 1, 1872—May 31, 1877
June 1, 1877—Oct. 31, 1882
Nov. 1, 1882—Mar. 31, 1883
Apl. 1, 1883—June 30, 1884

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* Missing.

8567 *Manhattan Gas Light Company:*

Ledgers:

*Feb. 1, 1835—Dec. 31, 1848
Jan. 1, 1849—June 30, 1856
July 1, 1856—Oct. 31, 1860
Jan. 1, 1861—June 30, 1864
Jan. 1, 1867—Jan. 1, 1873
Jan. 1, 1873—Dec. 31, 1878
Jan. 1, 1879—Nov. 11, 1884

Journals:

xFeb. 1, 1835—Apl. 30, 1848
May 1, 1848—Mar. 10, 1849
*Mar. 10, 1849—Apl. 30, 1852
Mar. 1, 1852—Nov. 30, 1853
Dec. 1, 1853—Apl. 30, 1855
May 1, 1855—Nov. 29, 1856
Dec. 1, 1856—June 30, 1858
June 30, 1858—Feb. 29, 1860
Mar. 1, 1860—June 30, 1861
*July 1, 1861—Nov. 30, 1871
Dec. 1, 1871—Nov. 29, 1873
Dec. 1, 1873—Apl. 30, 1876
May 1, 1876—Aug. 31, 1878
Sep. 2, 1878—Feb. 28, 1881
Mar. 1, 1881—July 31, 1883
Aug. 1, 1883—Nov. 11, 1884

Cash Books:

Municipal Gas Light Company:

Ledgers:

Jan. 1, 1877—Jan. 1, 1880
Jan. 1, 1880—June 30, 1883
July 1, 1883—June 30, 1885

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x Feb. 1, 1835—Consolidation.
* Missing.

8568 **Journals:**

Jan. 1, 1877—Jan. 1, 1880
Jan. 1, 1880—June 30, 1885
July 1, 1883—June.

Cash Books:

*Jan. 1, 1877—Jan. 1884
Jan. 1, 1884—Feb. 1885

New York Gas Light Company:

Ledgers:

June 2, 1823—July 31, 1833
Aug. 1, 1833—Feb. 1, 1845
Feb. 1, 1845—July 31, 1857
Aug. 1, 1857—Jan. 31, 1866
Feb. 1, 1866—May 31, 1871
June 1, 1871—June 30, 1881
July 1, 1881—Jan. 31, 1885

CITY'S EXHIBIT 89.

Comparative Cost of the Consolidated Gas Company's Mains in the Streets of New York City.

		Mr. Simpson's Affidavit Testimony, page 40 (question 65)			Map Measurements			Difference	
Sizes	Cost per Foot for Cobble Pavement	Number of Feet	Total Cost	Total Cost Minus 15 per cent. Contractor's Profit	Number of Feet	Total Cost	Total Cost Minus 15 per cent. Contractor's Profit	Excess of S. Figures	Deficiency of S. Figures
1½"	No value	1,407.00							
2"	$0.925	$4,365.00	$4,037.63	$3,431.98	3,969.60	$3,671.88	$3,121.10	$310.88	—
3"	1.07	222,741.00	238,332.87	202,582.94	138,057.22	147,721.23	125,563.05	77,019.89	—
4"	1.22	557,469.00	680,112.18	578,095.25	477,561.87	582,625.48	495,231.66	82,863.59	—
5"	1.42	1,799.00	2,554.58	2,171.39	430.27	610.98	519.34	1,652.05	—
6"	1.625	2,129,088.00	3,459,768.00	2,940,802.80	1,945,509.85	3,161,453.51	2,687,235.48	253,567.32	—
8"	2.095	528,040.00	1,106,243.80	940,307.23	468,847.20	983,234.88	835,749.65	104,557.58	—
10"	2.41	71,286.00	171,799.26	146,029.37	69,635.34	167,821.17	142,647.99	3,381.38	—
12"	2.937	321,536.00	944,351.23	802,698.55	305,248.17	896,513.88	762,036.79	40,661.76	—
16"	3.78	98,901.00	373,845.78	317,768.91	82,094.15	310,315.89	263,768.50	54,000.41	—
18"	4.28	29,633.00	126,829.24	107,804.85	32,771.97	140,264.03	119,224.43	—	$11,419.58
20"	4.757	178,803.00	850,565.87	722,980.99	143,368.16	682,002.34	579,701.99	143,279.01	—
24"	5.645	45,956.00	259,421.62	220,508.38	35,391.73	58,219.40	49,486.49	171,021.89	—
30"	7.71	131,583.00	1,014,504.93	862,329.19	140,233.42	1,081,199.67	919,019.72	—	56,690.53
36"	9.695	22,242.00	215,636.19	183,290.76	19,163.95	185,794.50	157,925.32	25,365.44	—
		$4,344,849.00	$9,448,003.18	$8,030,802.59	$3,862,282.90	$8,401,448.84	$7,141,231.51	$957,681.20	$68,110.11
	Difference....	$889,571.09							
	" ...	482,566.10 ft. or 91.39 Miles.							

CITY'S EXHIBIT 90.

TABLE SHOWING THE SIZES OF THE CONSOLIDATED GAS COMPANY'S MAINS IN THE STREETS OF NEW YORK CITY.

PAGE "13-A."

Final					Sizes of the Mains Active.							Lengths of Pipe in Feet Given Below.			
Volumes	1½ In.	2 In.	3 In.	4 In.	5 In.	6 In.	8 In.	10 In.	12 In.	16 In.	18 In.	20 In.	24 In.	30 In.	36 In.
1	..	255.95	24,722.57	63,604.11	430.27	302,567.25	105,006.71	688.26	70,641.23	15,610.29	2,953.20	19,901.97	11,950.75	4 353.50	..
2	..	..	17,258.40	44,350.66	..	139,381.35	32,532.11	1,715.39	13,931.21	20,895.89	11,544.20	21,283.35	10,065.59	20,589.54	5,734.26
3	..	..	19,069.47	25,185.98	..	153,392.90	34,440.10	7,465.62	32,149.99	3,687.46	9,218.76	8,581.06	3,868.25	11,005.34	500.00
4	..	..	18,496.78	16,838.06	..	203,150.67	51,424.71	18,216.48	12,233.44	11,124.02	6,459.25	12,922.37	..	9,181.50	...
5	..	..	9,323.40	47,253.47	..	178,752.71	23,126.57	18,157.74	31,194.53	6,701.25	..	16,506.91	1,342.50	14,883.70	..
6	..	..	5,963.16	46,974.93	..	120,069.52	50,171.99	7,697.61	13,383.46	1,863.75	2,596.56	11,759.20	497.66	16,672.23	..
7	..	3,713.65	11,857.61	54,942.03	..	291,835.17	36,380.48	5,975.66	28,266.11	8,210.92	..	18,826.75	..	31,125.46	7,815.14
8	..	..	17,338.59	93,711.33	..	303,445.43	72,131.82	8,927.21	42,391.00	11,164.08	..	11,125.90	5,822.42	26,064.47	4,638.75
11	..	..	6,144.35	46,304.95	..	172,055.52	27,257.57	791.37	39,156.50	2,836.49	..	15,374.98	1,844.56	6,357.68	475.80
12	..	..	7,882.89	8,396.35	..	80,859.33	36,375.14	..	21,700.70	..	..	7,085.67	..	..	..
Manh grand total		3,969.60	138,057.22	477,561.87	430.27	1,945,509.85	468,847.20	69,635.34	305,248.17	82,094.15	32,771.97	143,368.16	35,391.73	140,233.42	19,163.95
Bronx Est.						29,111.									
						1,974,620.85									

Journals:

June 2, 1823—July 19, 1828
July 19, 1828—Sep. 24, 1831
Sep. 26, 1831—July 31, 1835
*Aug. 1, 1835—June 30, 1845
Feb. 1, 1845—Apl. 30, 1852
May 1, 1852—July 31, 1857
Aug. 1, 1857—Jan. 31, 1856
Feb. 1, 1866—June 30, 1871
July 1, 1871—June 30, 1881
July 1, 1881—Jan. 31, 1885

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* Missing.

8569 Cash Books:

*June 2, 1823—Oct. 31, 1835
Nov. 2, 1835—July 31, 1840
Aug. 1, 1840—Nov. 30, 1847
Dec. 1, 1847—Dec. 31, 1853
Jan. 1, 1854—Aug. 31, 1859
Sep. 1, 1859—Jan. 31, 1866
*Feb. 1, 1866—Consolidation.

Daily Cash Book:

Feb. 1, 1845—Aug. 1, 1857
Aug. 1, 1862—Apl. 30, 1875
Nov. 1, 1875—Mar. 31, 1880
May 1, 1865—Sep. 30, 1869
Oct. 1, 1869—May 31, 1871
June 3, 1871—Oct. 30, 1875

Cash Journals:

June 1, 1871—June 30, 1881
July 1, 1881—Mar. 31, 1891

Statements:

Aug. 1, 1827—Aug. 1, 1843
Feb. 1, 1844—Aug. 1, 1860
Feb. 1, 1861—May 31, 1871
June 1, 1871—Jan. 21, 1885

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* Missing.

(Here follow City's Exhibits 89 and 90, marked pp. 8570 and 8571.)

8572 CITY'S EXHIBIT 91.

TABLE SHOWING THE SIZES OF THE CONSOLIDATED GAS COMPANY'S MAINS IN THE STREETS OF NEW YORK.

Page "14-A."

LENGTHS OF PIPE IN FEET GIVEN BELOW.

Sizes.	Active.	Disused.	Abandoned.	Total.
1½".......				
2".........	3,969.60	992.15	—	4,961.75
3".........	138,057.22	127,613.61	—	265,670.83
4".........	477,561.87	81,183.28	238.51	558,983.66
5".........	430.27	2,135.77	—	2,566.04
6".........	1,945,509.85	14,882.17	—	1,960,392.02
8".........	468,847.20	1,213.90	—	470,061.10
10".........	69,635.34	71.70	—	69,707.04
12".........	305,248.17	789.14	—	306,037.31
16".........	82,094.15	—	—	82,094.15
18".........	32,771.97	—	—	32,771.97
20".........	143,368.16	1,728.75	—	145,096.91
24".........	35,391.73	—	—	35,391.73
30".........	140,233.42	21.87	—	140,255.29
36".........	19,163.95	—	—	19,163.95
Total ...	3,862,282.90	230,632.34	238.51	4,093,153.75

NUMBER OF MILES OF MAINS.

Totals, Manh......	731.49 miles	43.68	.05	775.22
Bronx......	5.51			5.51
	737.00			
Simpson's figures	795			
Dif.	58			

8573 CITY'S EXHIBIT 91—*Continued.*

	Miles.
Active Mains, Manhattan and The Bronx..............	737.00
Disused Mains, Manhattan and The Bronx.............	43.68
Abandoned Mains, Manhattan and The Bronx.........	.05
Total, all maps	780.73

Note—Bronx St. Mains Estimate.

Page 1988 Printed Test., Exh. 85, Oct. 31, 1905, before N. Y. State Gas & El. Comm.

Bronx Mains	$47,450.37
Cost 6" main per ft. cobble pav......................	1.63
Est. length 6" main..........................	2,941 ft.
Est. length 6" main............................	5,513 miles

8574

STATE'S EXHIBIT HHH.

Comparison of Candle Power, Yield and Quality of Water Gas.

21st Street Station.

	Average gravity oil.	Gallons per M.	Corrected candle power	City inspector candle power.	Loss.
January	30.0	4.78	25.14	21.24	3.90
February	29.40	4.57	24.95	20.06	4.89
March	29.97	4.45	24.84	19.91	4.93
April	33.80	4.49	25.07	21.69	3.38
May	29.53	4.51	25.50	20.41	5.09
June	29.53	4.45	26.85	23.18	3.67
July	28.38	4.83	27.72	24.61	3.11
August	28.52	4.68	24.91	23.47	1.44
September	28.80	4.70	26.20	23.23	2.97
October	29.70	4.66	26.38	23.39	2.99
November	33.11	4.62	26.69	23.61	3.08
December	34.49	4.60	26.51	23.37	3.14

44th Street Station.

January	30.40	4.81	24.85	20.53	4.35
February	29.73	4.58	24.70	20.37	4.33
March	31.58	4.62	25.82	20.38	5.44
April	34.48	4.38	23.47	21.76	1.71
May	30.08	4.40	24.14	21.58	2.56
June	29.19	4.75	26.05	23.11	2.94
July	29.01	4.95	28.06	25.21	2.85
August	29.15	4.60	26.40	24.17	2.23
September	29.49	4.74	25.88	23.18	2.80
October	29.95	4.91	25.77	23.35	2.42
November	34.25	4.78	24.51	24.29	.22
December	34.75	4.58	24.21	24.26	.05

8575

99th Street Station.

January	30.65	4.76	25.23	22.41	2.82
February	30.65	4.70	25.10	21.43	3.67
March	31.04	4.58	25.31	22.15	3.16
April	31.10	4.38	24.91	23.14	1.77
May	30.25	3.60	24.76	23.48	.68
June	29.99	3.90	26.03	21.62	5.41
July	29.18	4.51	29.10	25.81	3.29
August	29.42	4.40	26.44	25.58	.86
September	30.82	4.30	25.47	24.19	1.28
October	30.58	4.53	24.98	24.30	.68
November	33.26	4.55	24.46	24.58	.12
December	33.76	4.58	24.42	24.51	.09

8576 STATE'S EXHIBIT I. I. I., DEC. 10, 1906.

NEW AMSTERDAM GAS COMPANY—SUMMARY OF THE OPERATIONS FOR THE NOMINAL YEAR ENDING OCTOBER 31, 1905.

	Cu. ft.		
Gas made	5,102,082,000		
Less Gas made for Consolidated Gas Co. under Agency Agreement	2,178,003,000		
	Cu. ft.		
Gas made for N. A. G. Co.	2,924,079,000		
Gas sales—			
Consumers	2,660,652,800	at .9984	$2,656,292.52
Public Buildings	84,913,700	at .90	76,422.33
Blackwell's I'd Lamps	120,000	at 1.00	120.00
Street Lamps, N. Y.	4,725,900	at .7168	3,387.65
	2,750,412,400		$2,736,222.50
Miscellaneous Income			106,903.27
			$2,843,125.77

8577 STATE'S EXHIBIT I. I. I.—*Continued.*

	Quantity.	Price.	Amount.	Cost per M made.	Cost per M sold.
Generator Coal	75,289.18 Tons	$4.266	$333,395.21	.0653	.0676
Operating Expenses:					
Broken	5,075.63 "	4 426			
Boiler coal:					
B'wheat	9,906.12 "	1,873	43,448.50	.0085	.0088
Coke	1,831 "	1.40			
Coal Labor			5,079.84	.0010	.0010
Oils	23,175,882 Gals.	.040023	927,577.18	.1818	.1882
Purifiers:					
Oxide, etc.	5,020 Bus.	.12	6,122.40	.0012	.0013
Water	8,899,776 Cu. ft.	$1. M	8,899.79	.0017	.0018
Supplies (Oil, Waste & Sundries)			2,233.79	.0004	.0005
Cartage			4,376.42	.0009	.0009
Oil Tar Labor			1,142.97	.0002	.0002
Generator House Labor			33,877.09	.0066	.0069
Boiler House Labor			18,669.06	.0037	.0038
Purifier House Labor.			5,585.05	.0011	.0011
Incidental Labor			17,071.78	.0034	.0035
Superintendence			8,333.18	.0016	.0017
Repairs to Buildings			8,684.10	.0017	.0018
Repairs to Apparatus			57,445.89	.0113	.0117
Repairs to Tools & Implements			3,312.02	.0007	.0006
Works Expense			9,624.15	.0019	.0020
West Side Holder			8,474.94	.0017	.0017
East Side Holder			17,860.45	.0035	.0036
Insurance			12,867.00	.0024	.0026
			$1,534,080.81	.3006	.3113
Less Residuals:					
Tar	2,694,287 Gals.	.02	*53,885.74	*.0105	*.0109
			$1,480,195.07	.2901	.3004

8578 CITY'S EXHIBIT 81.

THIS INDENTURE made this twenty-second day of June in the year of our Lord One thousand eight hundred and forty-eight between the Mayor, Aldermen and Commonalty of the City of New York, of the first part and Hezekiah Bradford of said city of New York of the second part.

WITNESSETH that the said party of the first part for and in consideration of the sum of nine thousand dollars lawful money of the United States of America to them in hand paid by the said *parties* of the second part, the receipt whereof is hereby acknowledged have granted, bargained, sold, aliened, released and conveyed, and by these presents do grant, bargain, sell, alien, release and convey unto said party of the second part, and to his heirs and assigns all that certain water lot, vacant ground and soil under water to be made land and gained out of the East River or Harbor of New York, situate, lying and being in the eighteenth Ward of the City of New York, commencing and containing as follows, that is to say BEGINNING at a point on the former high water line where the same is intersected by the line of the centre of fourteenth street, running thence southeasterly along the line of the centre of Fourteenth Street, one thousand nine hundred and fifty-six feet to the easterly side of Tompkins street as established, by law. Thence northerly along the easterly side of Tompkins street one thousand four hundred and sixty-nine feet four inches to the southeasterly corner of land granted by the parties of the first part to John Flack and Nicholas Gouverneur, by deed bearing date the first of August one thousand eight hundred and twenty-five, thence westerly
8579 along the southerly side of said lands made to Flack and Gouverneur, as aforesaid, one thousand three hundred and forty-five feet to the former high water line, thence southerly along the former high water line, thirty-three feet to the northwesterly corner of a certain piece of land granted by the party of the first part to Nicholas W. Stuyvesant, by deed bearing the date of the seventh day of March one thousand eight hundred and ten, now belonging to the party of the second part, thence easterly along the northerly side of land made to Stuyvesant and now belonging to the party of the second part, as aforesaid, five hundred and forty feet, thence southerly along the easterly end of said land made to Stuyvesant and now belonging to the party of the second part, as aforesaid, one hundred and ninety feet, thence westerly along the southerly side of said land made to Stuyvesant and now belonging to the party of the second part, as aforesaid, five hundred and forty feet to the former high water line, thence southerly along the former high water line to the point of Beginning.

Excepting, however so much of the above described premises as is required for the streets hereinafter mentioned to be made by the party of the second part, which said streets by a map or survey made by John I. Serrill, City Surveyor, dated New York May fifteenth, One thousand eight hundred and forty-eight hereunto annexed and which is to be deemed a part of this conveyance will more fully appear.

TOGETHER with all and singular the privileges, advantages, hereditaments and appurtenances to the same belonging or in anywise appertaining, and also all the estate, right, title, interest, property, claim and demand whatsoever of the said parties of the first part of, in and to the said premises and every part and parcel 8580 thereof with the appurtenances.

TO HAVE AND TO HOLD the said premises hereby granted with the appurtenances unto the said party of the second part, his heirs and assigns to his and their own proper use, benefit and behoof forever.

AND the said party of the second part for himself and his heirs and assigns does hereby covenant and agree to and with the said parties of the first part, their successors and assigns, that the said party of the second part his heirs and assigns shall and will within three months next after he or they shall be thereunto required by the said parties of the first part, or their successors, but not until he or them shall be thereunto required, at his or their own proper cost and charges, build, erect, make and finish, or cause to be built, erected, made and finished, according to any resolution or ordinance of said parties of the first part, or their successors, already passed or adopted, or that may be hereafter passed or adopted a good and sufficient firm bulkhead, wharf, avenue or street fifty feet in width along the whole of the southwesterly side of the premises hereby granted and extending to the permanent exterior line of said city being the northeasterly one-half part of Fourteenth street. Also one other good and sufficient firm bulkhead, wharf, avenue or street extending from the southerly side of land granted to Flack and Gouverneur, as aforesaid, to the northerly side of land granted to N. W. Stuyvesant, as aforesaid, and now belonging to the party of the second part, and forming and intending to form a portion of Fifteenth street. Also one other good and sufficient firm bulkhead, wharf, avenue or street, sixty feet in width, extending from 8581 the southerly side of land granted to Stuyvesant, as aforesaid and now belonging to the party of the second part to the permanent exterior line of said city being a portion of the intended new street called Fifteenth street. Also one other good and sufficient firm bulkhead, wharf, avenue or street sixty feet in width extending from the southerly side of land granted to Flack and Gouverneur, as aforesaid, to the permanent exterior line of said city, being a portion of the intended new street called Sixteenth street. Also one other good and sufficient firm bulkhead, wharf, avenue or street sixty feet in width extending from the southerly side of land belonging to Flack and Gouverneur, as aforesaid, to the permanent exterior line of said city, being a portion of the intended new street *and* called Seventeenth street. Also one other good and sufficient firm bulkhead, wharf, avenue or street eighty feet in width extending from the middle line of Fourteenth street to land formerly belonging to Flack and Gouverneur as aforesaid, being a portion of the intended new street, called Avenue C. Also one other good and sufficient firm bulkhead, wharf, avenue or street, sixty feet in width, extending from the northeasterly side of Fourteenth street to land formerly belonging to N. W. Stuyvesant, as aforesaid. Also from the northerly side

of land belonging to N. W. Stuyvesant, as aforesaid, to the southerly side of land granted to Flack and Gouverneur as aforesaid, being portions of the intended new street called Avenue B. Also one other good and sufficient firm bulkhead, wharf, avenue or street seventy feet in width extending from the middle line of Fourteenth street to the southerly side of land formerly belonging to Flack and Gouverneur as aforesaid, being a portion of the intended new street called Tompkins street. Also one other good and sufficient firm bulkhead, wharf, avenue or street bounded northwesterly by
8582 the easterly side of Avenue C, southerly by the northerly side
of Seventeenth street and easterly by the westerly side of Tompkins street. Also one other good and sufficient firm bulkhead wharf avenue or street bounded southwesterly by the northeasterly side of Fourteenth street, westerly by the westerly side of Avenue B and easterly by the westerly side of Tompkins street, which said bulkheads, wharfs, avenues or streets will more fully appear on the map hereunto annexed, and will also fill in the same with good and sufficient earth, and regulate and pave the same and also the sidewalks thereon.

AND also that the said party of the second part his heirs and assigns shall and will, from time to time, and at all times forever hereafter at his or their own proper cost, charge and expense uphold and keep in good order and repair the whole of the above described streets or avenues, which the said party of the second part hath covenanted and agreed to make, erect and build, as aforesaid, and will at all times forever hereafter obey fullfil and observe such ordinances, resolutions, orders and directions as the said parties of the first part, and their successors and assigns shall, from time to time, enact, pass or make relative thereto, and also that the said streets and avenues shall forever thereafter continue to be and remain public streets and avenues and highways for the free and common use and passage of the inhabitants of the said city, and all others passing and repassing by and through and along the same in like manner as the other public streets, avenues, bulkheads and wharfs of the said city now are and of right *out* to be, and in case default shall be made by the said party of the second part, his heirs or assigns in building, erecting, making or finishing the said bulkheads,
8583 wharves, streets and avenues as aforesaid, and fill in the same,
or any part thereof, or complying with any ordinance, resolution or order of the said parties of the first part, or their successors, when they shall be required as above mentioned, then, and in that case, it shall and may be lawful for the said parties of the first part or their successors, to build, erect, make or finish the bulkheads, wharves, streets and avenues, as aforesaid, and fill in the same and regulate and pave the said street and land, and the sidewalks thereof at the proper costs and charges of the said party of the second part, his heirs and assigns and charge to and recover in an action at law from the said party of the second part his heirs or assigns the amount thereof, together with the interest thereon, and all costs and charges of the proceedings relative to the same, or to sell and dispose of the whole of the hereby granted premises, or any part thereof, at public auction for the most that can be had for the same, and in case of any

deficiency to charge with and recover from the said party of the second part his heirs and assigns the amount of such deficiency, or to adopt and pursue any legal right or remedy that the said parties of the first part and their successors now possess or enjoy under and by virtue of any act of the Legislature of the State of New York or that may hereafter be granted to the said parties of the first part and their successors, by the Legislature of the State of New York, or to enter into and upon the whole or any part of the above granted premises, and to grant the above described premises, the right of making the said bulkhead, wharves, streets and avenues, and the right of receiving the wharfage, cranage and profits arising to and from the same in every person or persons, their heirs and assigns forever.

8584 AND also that he, the said party of the second part, shall and will pay all taxes, assessments and impositions, as well ordinary as extraordinary as now are upon or shall or may be imposed or levied upon the hereby granted premises under and by virtue of any act or acts of the Congress of the United States, of the Legislature of the State of New York, or by any act ordinance or resolution of the said parties of the first part, or their successors.

AND It is hereby further covenanted and agreed by and between the parties to these presents, and the intent and meaning hereof is, that the said party of the second part, his heirs and assigns, will not build the wharves and bulkheads, avenues and streets hereinbefore mentioned, or any part thereof, or make the lands in conformity with the covenants hereinafter mentioned until permission for that purpose shall be first had and obtained from the said parties of the first part, their successors or assigns, and will not build or erect, or cause to be built or erected any wharf or pier or other obstructions into the East River in front of Tompkins street, without the permission of the said parties of the first part, their successors or assigns first had for that purpose.

AND the said parties of the first part for themselves and their successors and assigns do covenant and agree to and with the said party of the second part, his heirs and assigns, that he the said party of the second part his heirs and assigns, observing, fulfilling and keeping all and singular the articles, covenants and agreements herein mentioned and contained and on his part to be kept and performed according to the true intent and meaning of these presents, shall and lawfully may from time to time, and at all times hereafter fully have and enjoy, take and receive and hold to his own proper
8585 use all manner of wharfage, cranage, advantages or emoluments growing or accruing by or from that part of the said exterior line of the said city lying on the easterly side of said premises fronting on the East River, EXCEPTING therefrom all such wharfage, cranage, advantages and emoluments to grow or accrue along the easterly end of the bulkhead in front of the northeasterly half of Fourteenth street, also along the easterly end of the bulkhead in front of the entire width of Fifteenth street, also along the easterly end of the bulkhead in front of the entire width of Sixteenth street, also along the easterly end of the bulkhead in front of the entire width of Seventeenth street, which shall be and hereby

are reserved for the said parties of the first part, their successors or assigns, and shall belong unto them and may be received and collected by them for their use and benefit forever.

AND it is hereby further covenanted and agreed by and between the parties to these presents and the true intent and meaning whereof is, that this present grant and every work or thing in the same contained shall not be construed or taken to be a covenant or covenants of the warranty or seizen of the said parties of the first part, or their successors, nor to operate further than to pass the estate, right, title or interest they may have or may lawfully claim by virtue of their several charters and the various acts of the people of the State of New York.

AND it is hereby further mutually understood and agreed that these presents and the estate hereby granted are upon the express condition that if, at any time hereafter, it shall appear that the said party of the second part was not on the day of the date hereof seized of a good, sure, absolute and indefeasible estate of inheritance 8586 in fee simple of and in the lands and premises on the westerly side of the premises hereby granted and adjoining the same, or if the said party of the second part, his heirs and assigns shall make default in the performance of any or either of the covenants above contained on his or their part to be observed, performed, fulfilled and kept, then, and in every such case these presents and every article, clause or thing herein contained shall be and become absolutely null and void and the said parties of the first part and their successors, shall and may forthwith thereupon enter into and upon the said premises hereby granted and shall thereafter be seized of the same with the appurtenances, full, clear and discharged of and from, any claim, right or pretence of claim, or right of the said party of the second part his heirs and assigns anything herein contained to the contrary notwithstanding.

AND the said party of the second part for himself and his heirs and assigns doth hereby covenant promise and agree to and with the said parties of the first part, their successors and assigns, that he, the said party of the second part, his heirs and assigns shall and will in all things well and faithfully comply with fulfil and perform all and every of the covenants, conditions, agreements, understandings and provisions herein contained and on their part to be kept, performed and complied with.

IN WITNESS WHEREOF to one part of these presents remaining with the said parties of the first part, the said party of the second part hath affixed his hand and seal to the other part remaining with the said party of the second part, and the said parties of the first part have caused the common seal of the City of New York 8587 to be affixed the day and year first above written.

HEZEKIAH BRADFORD. [L. S.]

Signed and Sealed and Delivered in Presence of

—— ——.

The word June on the first line of this grant written on an erasure before execution.

AUG. KIMBALL,
Clerk to the Compr.
JOHN I. SERRELL.

8588 CITY'S EXHIBIT 82.

THIS INDENTURE made this first day of May in the year one thousand eight hundred and fifty between The Mayor, Aldermen and Commonalty of the City of New York of the first part and JOHN I. V. WESTERVELT of said city of the second part WITNESSETH that the said parties of the first part for and in consideration of the sum of one thousand eight hundred and fifty dollars and seventy-five cents lawful money of the United States of America to them in hand paid by the said party of the second part the receipt whereof is hereby acknowledged HAVE granted bargained sold aliened released and conveyed and by these presents do grant bargain sell alien release and convey unto the said party of the second part and to his heirs and assigns ALL that certain WATER LOT vacant ground and soil under water to be made land and gained out of Hudson on North River or Harbor of New York situate lying and being in the Nineteenth Ward of the City of New York described and containing as follows that is to say BEGINNING at a point formed by the intersection of a right line drawn lengthwise through the center of Forty-fourth Street with the line of high water mark on the easterly shore of the Hudson River as shown on the map hereto annexed which is to be deemed a part of this conv-yance and running thence westerly along said first mentioned line eight hundred and sixty-six feet four inches to the exterior line of the (13) Thirteenth Avenue which is the permanent exterior line of said city and said river, thence northerly along said last mentioned line two hundred and sixty-one feet eight inches and one-half inch to the centre line of Forty-fifth Street, thence easterly along said centre line last
8589 named and parallel with the line first above mentioned drawn lengthwise as aforesaid through the center of Forty-fourth Street eight hundred and eighty-five feet ten inches till it intersects said line of high water mark and thence southerly along said high water line to the point of beginning as particularly described designated and shown on said map be said distances and dimensions more or less saving and reserving from out of the hereby granted premises so much thereof as forms as per said map annexed parts or portions of Forty-fourth and Forty-fifth Streets and of the Twelfth and Thirteenth Avenues for the uses and purposes of public streets avenues and highways as hereinafter mentioned. TOGETHER with all and singular the privileges advantages hereditaments and appurtenances to the same belonging or in any wise appertaining AND also all the said estate right title interest property claim and demand whatsoever of the said parties of the first part of in and to the said premises and every part and parcel thereof with the appurtenances TO HAVE AND TO HOLD the said hereby granted premises with the ap-

purtenances unto the said party of the second part his heirs and assigns to his only proper use benefit and behoof forever. And the said party of the second part for himself his heirs and assigns doth hereby covenant and agree to and with the said parties of the first part their successors and assigns that the said party of the second party his heirs and assigns shall and will within three months next after he or they shall be thereunto required by the said parties of the first part or their successors at his or their own proper costs and charges build erect make and finish or cause to be built erected made and finished according to any resolution or ordinance of the said parties of the first part or their successors already passed or
8590 adopted or that may hereafter be passed or adopted four good
and sufficient bulkheads wharfs avenues or streets which shall form so much and such parts of Forty-fourth and Forty-fifth Streets and of the Twelfth and Thirteenth Avenues as fall within the limits of the premises above described and are reserved as aforesaid from out thereof for public streets and will fill in the same with good and sufficient earth and regulate and pave the same and lay the sidewalks thereof. And also that the said party of the second part his heirs and assigns shall and will from time to time and at all times forever hereafter at his or their own proper costs charges and expenses uphold and keep in good order and repair the whole of those parts of the said Forty-fourth and Forty-fifth Streets and the Twelfth and Thirteenth Avenues which the said party of the second part has covenanted and agreed to make erect and build as aforesaid and will at all times forever hereafter obey fulfill and observe such ordinances resolutions order and directions as the said parties of the first part and their successors shall from time to time enact and pass or make relative thereto. And also that the said streets and avenues shall forever thereafter continue to be and remain public streets and avenues and highways for the free and common use and passage of the inhabitants of said city and all others passing and repassing by through and along the same in like manner as the other public streets avenues bulkheads and wharfs of the said city now are or lawfully ought to be. And in case default shall be made by said party of the second part his heirs and assigns in building erecting making or finishing the said bulkheads wharves streets and avenues by him or them covenanted herein to be built erected made and finished and in filling the same or any part thereof or in complying with any ordinance resolution or order of the said parties
8591 of the first part or their successors when required then and in
that case it shall and may be lawful for the said parties of the first part or their successors to build erect make or finish the bulkheads wharfs streets and avenues as aforesaid and to fill in the same and to regulate and pave the same and lay the sidewalk thereof at the proper costs and charges of the said party of the second part his heirs and assigns and to charge to and recover in an action at law from the said party of the second part his heirs and assigns the amount thereof together with the interest thereon and all costs and charges, of the proceedings relative to the same or to sell and dispose of the whole of the said hereby granted premises or any part thereof at public auction for the most that can be had for the same and in

case of any deficiency to charge with and recover from the said party of the second part his heirs and assigns the amount of such deficiency or to adopt and pursue any legal right or remedy that the said parties of the first part or their successors now possess and enjoy under and by virtue of any act of the legislature of the State of New York or that may thereafter be granted unto the said parties of the first part or their successors by the legislature of the State of New York or to enter in and upon the whole or any part of the hereby granted premises and to grant the same, the right of making said bulkheads wharfs streets and avenues and the right of receiving the wharfage cranage and profits arising to and from the same to any other person *person* or persons their heirs and assigns forever AND also that the said party of the second part his heirs and assigns shall and will pay and satisfy all taxes assessments and impositions as well ordinary as extraordinary as are now or shall or may hereafter be lawfully imposed or levied upon the hereby granted premises
8592 under and by virtue of any act or acts of the Congress of the United States of America of the Legislature of the State of New York or by any act ordinance or resolution of the said parties of the first part or their successors.

AND IT IS HEREBY further covenanted and agreed by and between the parties to these presents and the true intent and meaning hereof is that the said party of the second part his heirs and assigns will not build the said wharfs bulkheads or avenues and streets hereinbefore mentioned or any part thereof or make the lands in conformity with the covenants hereinafter mentioned until permission for that purpose shall be first had and obtained from the said parties of the first part or their successors and will not build erect or cause to — built or erected any wharf or pier or other obstruction in the Hudson River in front of the Thirteenth Avenue without the permission of the said parties of the first part their successors or assigns first had for that purpose. AND the said party of the first part for themselves their successors and assigns do covenant and agree to and with the said party of the second part his heirs and assigns that he the said party of the second part his heirs and assigns observing, fulfilling and keeping all and singular the articles covenants and agreements herein mentioned and contained on their part to be kept and performed according to the true intent and meaning of these presents shall and lawfully may from time to time and at all times thereafter fully have and enjoy take and receive and hold to his own proper use all manner of wharfage cranages advantages or emoluments growing or accruing by or from that part of the said exterior line of the said city lying on the westerly side of the hereby granted premises fronting on the Hudson River excepting therefrom such wharfage cranage advantages and emoluments to grow or
8593 acc*ure* from the westerly end of the bulkhead in front of the entire width of the southerly half part of Forty-fifth Street and the northerly half part of Forty-fourth Street which shall be and are hereby reserved for the said parties of the first part their successors or assigns with full power to collect and receive the same for their own proper use and benefit forever. AND IT is hereby further

agreed by and between the parties to these presents that the true intent and meaning hereof is that this present grant and every word or thing in the same contained shall not be construed or taken to be a covenant or covenants of warranty or of seizin of said parties of the first part or their successors not to operate further than to pass the estate right title or interest which they may have or may lawfully claim in the premises hereby conveyed by virtue of their several charters and the various acts of the legislature of the People of the State of New York. And it is hereby further mutually understood and agreed and these presents and the estate hereby granted are upon the express condition that if at any time hereafter it shall appear that the said party of the second part was not on the day of the date hereof seized of a good sure absolute indefeasible estate of inheritance in fee simple of in and to the lands and premises on the easterly side of the premises hereby granted and adjoining the same that the said party of the second part his heirs and assigns shall make default in the performance of any or either of the covenants above contained on his part and behalf to be observed performed fulfilled and kept there and in every such case these presents and every article clause or thing herein contained shall be and become absolutely null and void and the said parties of the first part and their successors shall and may forthwith thereupon enter into and upon the said 8594 premises hereby granted and shall thereafter be seized of the same with the appurtenances free clear and discharged of and from any claim right or pretense of claim or right of the said party of the second part his heirs and assigns anything herein contained to the contrary notwithstanding. AND the said party of the second part for himself and his heirs and assigns doth hereby covenant and agree to and with the said parties of the first part their successors and assigns that he the said party of the second part his heirs and assigns shall and will in all things well and faithfully comply with and fulfill and perform all and every of the covenants conditions and agreements undertakings and provisions herein contained and on his part to be kept performed and complied with.

IN WITNESS WHEREOF to one part of these presents remaining with the said parties of the first part the said party of the second part hath affixed his hand and seal and to the other part thereof remaining to the said party of the second part the said parties of the first part have caused the common seal of the City of New York to be affixed the day and year above written.

JOHN I. V. WESTERVELT.

Sealed and delivered in the presence of
CHAS. W. LAWRENCE.

City and County of New York, *ss:*

On this 20th July, 1850, before me came Charles W. Lawrence to me personally known who being duly sworn did depose and 8595 say he resided in the City of New York that he is personally acquainted with John I. V. Westervelt and knows him to be the individual described in and who executed the foregoing indenture; that he became a subscribing witness to the execution of the same and said Westervelt executed the same in his presence and acknowledged to him that he executed the same for the purpose therein mentioned.

JOS. C. PINCKNEY,
Commiss. of Deeds.

CITY'S EXHIBIT 83.

Grant to J. I. V. Westervelt, 45th and 46th Streets, Eleventh and Thirteenth Avenues.

THIS INDENTURE made first day of May in the year one thousand eight hundred and fifty between The Mayor, Aldermen and Commonalty of the City of New York of the first part and John I. V. Westervelt of said City of the second part.

WITNESSETH, that the said parties of the first part for and in consideration of the sum of nine hundred and six dollars and seventy-five cents lawful money of the United States of America to them in hand paid by the said party of the second part the receipt whereof is hereby acknowledged Have granted bargained sold aliened released and conveyed and by these presents Do grant, bargain sell alien release and convey unto the said party of the second part and to his heirs and assigns ALL that certain Water Lot vacant ground and soil under water to be made land and gained out of the 8596 Hudson or North River or Harbor of New York situate lying and being in the Nineteenth Ward of the City aforesaid described and containing as follows that is to say BEGINNING at a point formed by the intersection of a right line drawn lengthwise through the centre of Forty-fifth Street with the line of high water mark on the easterly shore of the Hudson River as shown on the map hereto annexed which is to be deemed a part of this conveyance and running thence westerly along said first mentioned line eight hundred and eighty-one feet eight inches to the exterior line of the (13th) Thirteenth Avenue which is the permanent exterior line of said City in said River thence northerly along said last mentioned line one hundred and thirty feet ten inches and one-fourth of an inch to the centre line of the block bounded by Forty-fifth and Forty-sixth Streets Twelfth and Thirteenth Avenues Thence easterly along said centre line last named and parallel with the line first above mentioned drawn lengthwise as aforesaid through the centre of Forty-fifth Street nine hundred and forty-six feet eleven inches till it intersects said line of high water mark and Thence southerly along said high water line to the point of beginning as particularly described designated and shown on said map be said distances and dimensions more or less Saving and observing from and out of the hereby granted premises so much thereof as forms as per said map annexed parts or portions of Forty-fifth Street and of the Twelfth and Thirteenth Avenues for the uses and purposes of public streets, avenues and highways as hereinafter mentioned TOGETHER with all and singular the privileges advantages hereditaments and appurtenances to the

same belonging or in anywise appertaining and also all the estate right title interest property claim and demand whatsoever of the said parties of the first part of in and to the said premises and
8597 every part and parcel thereof with the appurtenances TO HAVE AND TO HOLD the said hereby granted premises with the appurtenances unto the said party of the second part his heirs and assigns and their only proper use benefit and behoof forever. AND the said party of the second part for himself his heirs and assigns doth covenant and agree to and with the said parties of the first part their successors and assigns that the said party of the second part his heirs and assigns shall and will within three months next after he shall be thereunto required by the said parties of the first part or their successors at his own proper costs and charges build erect make and finish or cause to — built erected made and finished according to any resolution or ordinance of the said parties of the first part or their successors already passed or adopted or that may hereafter be passed or adopted three good and sufficient bulkheads wharves avenues or streets which shall form so much and such parts of Forty-fifth Street and of the Twelfth and Thirteenth Avenues as fall within the limits of the premises first above described and are reserved as aforesaid from out thereof for public streets, and will fill in the same with good and sufficient earth and regulate and pave the same and lay the sidewalks thereof. AND ALSO that the said party of the second part his heirs and assigns shall and will from time to time and at all times forever hereafter at his and their own proper costs charges and expenses uphold and keep in good order and repair the whole of those parts of the said Forty-fifth Street and of the Twelfth and Thirteenth Avenues which the said party of the second part hath covenanted and agreed to make erect and build as aforesaid and will at all times forever hereafter obey fulfill and
8598 observe such ordinances resolutions orders and directions as the said parties of the first part and their successors shall from time to time enact and pass or make relative thereto. AND ALSO that the said streets and avenues shall forever thereafter continue to be and remain public streets and avenues and highways for the free and common use and passage of the inhabitants of said and all others passing and repassing by through and along the same in like manner as the other public streets avenues bulkheads and wharves of the said city now are or lawfully ought to be AND in case default shall be made by said party of the second part his heirs and assigns in building erecting making or finishing the said bulkheads wharves streets and avenues by him covenanted herein to be built erected made and finished and in filling in the same or any part thereof or in complying with any ordinance resolution or order of the said parties of the first part or their successors when required then and in that case it shall any may be lawful for the said parties of the first part or their successors to build erect make or finish the bulkheads wharves streets and avenues as aforesaid and to fill in the same and to regulate and pave the same and lay the sidewalks thereof at the proper costs and charges of the said party of the second part his heirs and assigns and to charge to and recover in an action at law from the said party of

the second part his heirs and assigns the amount thereof together with the interest thereon and all costs and charges of the proceedings relative to the same or to sell and dispose of the whole of the said hereby granted premises or any part thereof at public auction for the most that can be had for the same and in case of any deficiency to charge with and recover from the said party of the second part his heirs and assigns the amount of such deficiency or to adopt 8599 and pursue any legal right or remedy that the said parties of the first part or their successors now possess and enjoy under and by virtue of any act of the legislature of the State of New York or that may hereafter be granted unto the said party of the first part or their successors by the legislature of the State of New York or to enter in and upon the whole or any part of the hereby granted premises and to grant the same the right of making said bulkheads wharves streets and avenues and the right of receiving the wharfage cranage and profits arising to and from the same to any other person or persons their heirs and assigns forever. AND ALSO that the said party of the second part his heirs and assigns shall and will pay and satisfy all taxes assessments and impositions as well ordinary as extraordinary as are now or shall or may hereafter be lawfully imposed or levied upon the hereby granted premises under and by virtue of any act or acts of the Congress of the United States of America of the legislature of the State of New York or by any act ordinance or resolution of the said parties of the first part or their successors. AND IT IS HEREBY FURTHER covenanted and agreed by and between the parties to these presents and the true intent and meaning hereof is that the said parties of the second part his heirs and assigns will not build the said wharves bulkheads and avenues or streets hereinbefore mentioned or any part thereof or make the lands in conformity with the covenants hereinafter mentioned until permission for that purpose shall be first had and obtained from the said parties of the first part or their successors and will not build or erect or cause to be built or erected any wharf or pier or other obstruction into the Hudson River in front of the Thirteenth Avenue without the permission of the said parties of the first part their successors or 8600 assigns first had for that purpose. AND the said parties of the first part for themselves their successors and assigns do covenant and agree to and with the said party of the second part his heirs and assigns that he the said party of the second part his heirs and assigns observing fulfilling and keeping all and singular the articles covenants and agreements herein mentioned and contained on his part to be kept and performed according to the true intent and meaning of these presents shall and lawfully may from time to time and at all times hereafter fully have and enjoy take and receive and hold to his and their own proper use all manner of wharfage cranage advantages or emoluments growing or accruing by or from that part of the said exterior line of the said city lying on the westerly side of the hereby granted premises fronting on the Hudson River excepting therefrom such wharfage cranage advantages and emoluments to grow or accrue from the westerly end of the bulkhead in front of the entire width of the northerly half part of Forty-fifth Street which shall be and are hereby reserved for the said parties of the first part their successors or assigns with full power to collect and receive the same for their own proper use and benefit forever. AND IT IS HEREBY FURTHER AGREED by and between the parties to these presents and the true intend and meaning hereof is that this present grant and every word or thing in the same contained shall not be construed or taken to be a covenant or covenants of warranty or of seizing of said parties of the first part or their successors nor to operate further than to pass the estate right title or interest they may have or may lawfully claim in the premises hereby conveyed by virtue of their several charters and the various acts of the legislature of the People of the State of New York. AND 8601 IT IS HEREBY FURTHER MUTUALLY understood and agreed and these presents and the estate hereby granted are upon the express conditions that if at any time hereafter it shall appear that the said party of the second part was not on the day of the date hereof seized of a good sure absolute and indefeasible estate of inheritance in fee simple of in and to the land and premises on the easterly side of the premises hereby granted and adjoining the same or if the said party of the second part his heirs and assigns shall make default in the performance of any or either of the covenants above contained on his or their part and behalf to be observed performed fulfilled and kept then and in every such case these presents and every article clause or thing herein contained shall be and become absolutely null and void and the said parties of the first part and their successors shall and may forthwith thereupon enter into and upon the said premises hereby granted and shall thereafter be seized of the same with the appurtenances free clear and discharged of and from any claim right or pretense of claim or right of the said party of the second part his heirs and assigns any thing herein contained to the contrary notwithstanding. AND the said party of the second part for himself and his heirs and assigns doth hereby covenant and agree to and with the said parties of the first part their successors and assigns that he the said party of the second part his heirs and assigns shall and will in all things well and faithfully comply with and fulfil and perform all and every of the covenants conditions and agreements undertakings and provisions herein contained on his or their part to be kept performed and complied with.

IN WITNESS WHEREOF to one part of those presents remaining with the said parties of the first part the said party of the 8602 second part hath affixed his hand and seal and the other part thereof remaining with the said party of the second part the said parties of the first part have caused the common seal of the City of New York to be affixed the day and year first above written.

JOHN I. V. WESTERVELT. [SEAL.]

Sealed and delivered in the presence of

CHAS. W. LAWRENCE.

City and County of New York, *ss:*

On the 20th July, 1850 before me came Charles W. Lawrence to me personally known who being duly sworn did depose and say that he resides in the City of New York that he is personally acquainted with John I. V. Westervelt and knows him to be the individual described in and who executed the foregoing indenture that he became a subscribing witness to the execution of the same and said Westervelt executed the same in his presence and acknowledged to him that he executed the same for the purpose therein mentioned.

JOS. C. PINCKNEY,
Commiss. of Deeds.

8603

CITY'S EXHIBIT 84.

Grant to F. B. Cutting and Charles C. King.

THIS INDENTURE made this eighteenth day of July in the year one thousand eight hundred and forty between The Mayor Aldermen and Commonalty of the City of New York of the first part and FRANCIS B. CUTTING and CHARLES C. KING of said City parties of the second part WITNESSETH that the said parties of the first part for and in consideration of the sum of twenty-five hundred and five dollars and seventy-five cents lawful money of the United States of America to them in hand paid by the said parties of the second part the receipt whereof is hereby acknowledged HAVE GRANTED bargained sold aliened released and conveyed and by these presents DO grant bargain sell alien release and convey unto the said parties of the second part and to their heirs and assigns all that certain water lot vacant ground and soil under water to be made land and gained out of the Hudson or North River or Harbor of New York situate lying and being in the Nineteenth Ward of the City of New York bounded described and containing as follows, that is to say: BEGINNING at a point formed by the intersection of the line of high water mark with the line of the centre of the block running lengthwise between Forty-fifth and Forty-sixth Streets and Eleventh and Twelfth Avenues and distant two hundred and forty-five feet easterly from the easterly line or side of Twelfth Avenue and running thence westerly along said centre line two hundred and forty-five foot to the easterly line or side of Twelfth Avenue thence westerly along said line continued in a right line one hundred feet to the westerly line or side of said Twelfth Avenue thence westerly along the line of the centre of the block between said Forty-fifth and Forty-sixth Street and Twelfth and Thirteenth Avenues five hundred and one feet seven inches to the easterly line or side of Thirteenth Avenue thence easterly along said line continued one hundred feet four inches to the exterior line of the Thirteenth Avenue which is the permanent exterior line of the City of New York in said Hudson or North River thence northerly along said exterior line of Thirteenth Avenue three hundred and twenty nine feet seven inches thence easterly along a line till it intersects with the easterly line or side of Thirteenth 8604

Avenue at a point distant thirty-two feet eleven and one half inches southerly from the southerly line or side of Forty-seventh Street one hundred feet four inches thence easterly along a line five hundred and tweny-eight feet six inches till it intersects with the westerly line or side of Twelfth Avenue at a point distant thirty-two feet ten inches southerly from the southerly line or side of Forty-seventh Street thence easterly along a line running parallel with the southerly line or side of Forty-seventh Street two hundred and sixty-nine feet till it intersects with a line of high water mark thence southerly along the line of high water mark as it runs to the point or place of beginning as particularly described designated and shown on a map drawn by John J. Serrell City Surveyor dated New York, June 25th, 1850, and hereto annexed and to which reference may be had said map being considered a part of this conveyance and the premises intended to be conveyed being colored pink on said map. Saving and reserving from and out of the hereby granted premises so much thereof as the said map annexed forms part or portions of Twelfth and Thirteenth Avenues and Forty-sixth Street for the use and purposes of public streets avenues and highways as here-
8605 inafter mentioned TOGETHER with all and singular the privileges advantages hereditaments and appurtenances to the same belonging or in anywise appertaining AND also all the estate right title interest property claim and demand whatsoever of the said parties of the first part of in and to the said premises and every part and parcel thereof, with the appurtenances TO HAVE AND TO HOLD two equal undivided third parts of the said premises hereby granted to the said Francis B. Cutting his heirs and assigns and the other one undivided third part thereof to the said Charles C. King his heirs and assigns to their own proper benefit and behoof forever AND the said parties of the second part for themselves, their heirs and assigns, do hereby covenant and agree to and with the said parties of the first part their successors and assigns that the said parties of the second part their heirs and assigns shall and will within three months next after they shall be thereunto required by the said parties of the first part or their successors at their own proper costs and charges build erect make and finish or cause to be built erected made and finished according to any resolution or ordinance of the said parties of the first part or their successors already passed or adopted or that may hereafter be passed or adopted three good and sufficient bulkheads wharves avenues or streets which shall form so much and such parts of Forty-sixth Street and of the Twelfth and Thirteenth Avenues as fall within the limits of the premises first above described and are reserved as aforesaid from out thereof for public streets and will fill in the same with good and sufficient earth and regulate and pave the same and lay the sidewalks thereof and also that the said parties of the second part their heirs
8606 and assigns shall and will from time to time and at all times forever hereafter at their own proper costs charges and expenses uphold and keep in good order and repair the whole of these parts of the said Forty-sixth Street and of the Twelfth and Thirteenth Avenues which the said parties of the second part have covenanted and agreed to make erect and build as aforesaid and will at

all times forever hereafter obey fulfill and observe such ordinances resolutions orders and directions as the said parties of the first part and their successors shall from time to time enact and pass or make relative thereto. AND also that the said streets and avenues shall forever thereafter continue to be and remain public streets and avenues and highways for the free and common use and passage of the inhabitants of said city and all others passing and repassing by through and along the same in like manner as the other public streets avenues bulkheads and wharves of the said city now are or lawfully ought to be and in case default shall be made by said parties of the second part their heirs and assigns in building erecting making or finishing the said bulkheads wharves streets and avenues by them covenanted herein to be built erected made and finished and in filling the same or any part thereof or in complying with any ordinances resolution or order of the said parties of the first part or their successors when required then and in that case it shall and may be lawful for the said parties of the first part or their successors to build erect make or finish the bulkheads wharves streets and avenues as aforesaid and to fill in the same and to regulate and pave the same and to lay the sidewalks thereof at the proper costs and charges of the said parties of the second part their heirs and assigns and to charge to and recover in an action at law from the said parties of the second part their heirs and assigns the amount
8607 thereof together with the interest thereon and all costs and charges of the proceedings relative to the same or to sell and dispose of the whole of the said hereby granted premises or any part thereof at public auction for the most that can be had for the same, and in case of any deficiency to charge with and recover from the said parties of the second part their heirs and assigns the amount of such deficiency or to adopt and pursue any legal right or remedy that the said parties of the first part or their successors now possess and enjoy under and by virtue of any act of the legislature of the State of New York or that may hereafter be granted unto the said parties of the first part or their successors by the legislature of the State of New York or to enter in and upon the whole or any part of the hereby granted premises and to grant the same the right of making said bulkheads wharves streets and avenues and the right of receiving the wharfage cranage and profits arising to and from the same to any other person or persons their heirs and assigns forever. AND ALSO that the said parties of the second part their heirs and assigns shall and will pay and satisfy all taxes assessments and impositions as well ordinary as extraordinary as now are or shall or may hereafter be lawfully imposed or levied upon the hereby granted premises under and by virtue of any act or acts of the Congress of the United States of America of the legislature of the State of New York or by any act ordinance or resolution of the said parties of the first part or their successors AND IT IS HEREBY further covenanted and agreed by and between the parties to these presents and the true intent and meaning hereof is that the said parties of the second part their heirs and assigns shall not build the said
8608 wharves bulkheads and avenues or streets hereinbefore mentioned or any part thereof or make the lands in conformity

with the covenants hereinafter mentioned until permission for that purpose shall be first had and obtained from the said parties of the first part or their successors and will not build or erect or cause to be built or erected any wharf or pier or other obstruction in the Hudson River in front of the Thirteenth Avenue without the permission of the said parties of the first part their successors or assigns first had for that purpose and the said parties of the first part for themselves their successor and assigns do covenant and agree to and with the said parties of the second part their heirs and assigns that they the said parties of the second part their heirs and assigns observing fulfilling and keeping all and singular the articles covenants and agreements herein mentioned and contained on their part to be kept and performed according to the true intent and meaning of these presents shall and lawfully may from time to time and at all times hereafter fully have and enjoy take and receive and hold to their own proper use all manner of wharfage cranage advantages or emoluments growing or accruing by or from that part of the said exterior line of the said city lying on the westerly side of the hereby granted premises fronting on the Hudson River excepting therefrom such wharfage cranage advantages and emoluments to grow or accrue from the westerly end of the bulkhead in front of the entire width of Forty-sixth Street which shall be and is hereby reserved for the said parties of the first part their successors or assigns with full power to collect and receive the same for their own proper use and benefit forever. AND it is hereby further agreed by and between the parties to these presents and the true intent and meaning hereof is that this present grant and every word or thing
8609 in the same contained shall not be considered or taken to be
a covenant or covenants of warranty or of seizen of said parties of the first part or their successors nor to operate further than to pass the estate right title or interest they may have or may lawfully claim in the premises hereby conveyed by virtue of their several charters and the various acts of the legislature of the People of the State of New York and it is hereby further mutually understood and agreed and these presents and the estate hereby granted are upon the express condition that if at any time hereafter it shall appear that the said parties of the second part were not on the day of the date hereof seized of a good sure absolute and indefeasible estate of inheritance in fee simple of in and to the lands and premises on the easterly side of the premises hereby granted and adjoining the same or if the said parties of the second part their heirs and assigns shall make default in the performance of any or either of the covenants above contained on their part and behalf to be observed performed fulfilled and kept then and in every such case these presents and every article clause or thing herein contained shall be and become absolutely null and void and the said parties of the first part and their successors shall and forthwith thereupon enter into and upon the said premises hereby granted and shall thereafter be seized of the same with the appurtenances free clear and discharged of and from any claim right or pretense of claim or right of the said parties of the second part their heirs and assigns anything herein

contained to the contrary notwithstanding. AND the said parties of the second part for themselves their heirs and assigns do hereby covenant and agree to and with the said parties of the first part their successors and assigns that they th- said parties of the second
8610 part their heirs and assigns shall and will in all things well and faithfully comply with and fulfil and perform all and every of the covenants conditions and agreements undertakings and provisions herein contained and on their part to be kept performed and complied with.

IN WITNESS WHEREOF to one part of these presents remaining with the said parties of the first part, the said parties of the second part have affixed their hands and seals and to the other part thereof remaining with the said parties of the second part the said parties of the first part have caused the common seal of the City of New York to be affixed the day and year first above written.

Sealed and delivered in the presence of

F. B. CUTTING. [SEAL.]
CHARLES C. KING. [SEAL.]

Note the words "or that may hereafter be passed or adopted" on the 37th line page 489 and "not" on page 491 on line 21 interlined previous to execution also word "Hereby" 30th line page 492 interlined previous to execution.

CHAS. W. LAWRENCE.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 9th August 1850 before me came Charles W. Lawrence to me personally known who being duly sworn did depose and say that he resides in the City of New York that he is personally acquainted with Francis B. Cutting and Charles C. King
8611 and knows them to be the individuals described in and who executed the foregoing instrument that he became a subscribing witness thereto and they executed the same in his presence and severally acknowledged to him that they executed the same for the purpose therein mentioned.

JOS. C. PINCKNEY,
Commissioner of Deeds, &c.

8612 CITY'S EXHIBIT 85.

THIS INDENTURE MADE this twenty-seventh day of August One thousand eight hundred and fifty-three between The Mayor Aldermen and Commonalty of the City of New York of the first part and CHARLES E. APPLEBY of the second part. WITNESSETH: That the said parties of the first part for and in consideration of the sum of Four thousand nine hundred and thirty-seven dollars and fifty cents lawful money of the United States of America to them in hand paid by the said party of the second part the receipt whereof is hereby acknowledged HAVE granted, bargained and sold released and conveyed and by these presents Do grant bargain alien release and convey unto the said party of the second part and to his heirs and assigns ALL THAT certain water lot or vacant ground and soil under water to be made land and gained out of the Hudson or North River or Harbor of New York and bounded described and containing as follows that is to say BEGINNING at the point of intersection of the line of original high water mark with the line of the centre of Forty-first Street and running thence westerly along said centre line of said Forty-first Street about one thousand three hundred and thirty-eight feet eleven inches to the westerly line or side of the Thirteenth Avenue said westerly side of the Thirteenth Avenue being the permanent exterior line of said side as established by law, thence northerly along the westerly line or side of the Thirteenth Avenue two hundred and seventy-eight feet five and a quarter inches to a line running through the centre of Forty-second Street, thence easterly along said centre line of Forty-second Street about one thousand three hundred and twenty-five feet seven inches to the line of original high water mark and thence 8613 mainly in a southerly direction along said line of original high water mark as it winds turns and runs to the point or place of beginning particularly described designated and shown on a map hereto annexed dated New York June 1853 made by John I. Serrell City Surveyor and to which reference may be had said map being considered a part of this Indenture the premises conveyed being colored pink on said map be the said dimensions more or less SAVING and reserving from and out of the hereby granted premises so much thereof as by the said map annexed forms parts or portions of the Twelfth or Thirteenth Avenues Forty-first and Forty-second Streets for the uses and purposes of public streets avenues and highways as hereinafter mentioned TOGETHER with all and singular the privileges advantages hereditaments and appurtenances to the same belonging or in anywise appertaining AND ALSO all the estate right title and interest property claim and demand whatsoever of the said parties of the first part of in and to the said premises and every part and parcel thereof with the appurtenance TO HAVE AND TO HOLD the said premises hereby granted to the said Charles E. Appleby his heirs and assigns to his own proper use and benefit and behoof forever AND the said party of the second part for himself his heirs and assigns doth hereby covenant and agree to and with the said parties of the first part their successors and assigns that the said party of the second part his heirs and assigns shall and will within three months next after he or they shall be thereunto required by the said parties of the first part or their successors at his or their own proper costs and charges build erect make and finish or cause to be built erected made and finished according to any resolution or ordinance of the said parties of the first part or their successors already passed or adopted or that may hereafter be passed or 8614 adopted four good and sufficient bulkheads wharfs streets and avenues which shall form so much and such parts of the Twelfth and Thirteenth Avenues Forty-first and Forty-second Streets as fall within the limits of the premises above described and are reserved as aforesaid from out thereof for public street and will fill in the same with good and sufficient earth and regulate and pave the same and lay the sidewalks thereof AND ALSO that the said party

of the second part his heirs and assigns shall and will from time to time and at all times forever hereafter at his own proper costs charges and expenses uphold and keep in good order and repair the whole of these parts of the said Twelfth and Thirteenth Avenues Forty-first and Forty-second Streets which the said party of the second part hath covenanted and agreed to make erect and build as aforesaid and will at all times forever hereafter obey fulfil and observe such ordinance- resolutions orders and directions as the said parties of the first part and their successors shall from time to time enact and pass or make relative thereto AND ALSO that the said streets and avenues shall forever thereafter continue to be and remain public streets and avenues and highways for the free and common use and passage of the inhabitants of said city and all others passing and repassing by through and along the same, in like manner as the other public streets avenues bulkheads and wharfs of the said city now are or lawfully ought to be, and in case default shall be made by said party of the second part his heirs and assigns in building erecting making or finishing the said bulkheads wharfs streets and avenues by him covenanted herein to be built erected made and finished and in filling in the same or any part thereof or in complying with any ordinance resolution or order of the said parties of the first part or their successors when required, then and in that case it shall
8615 and may be lawful for the said parties of the first part or their successors to build erect make or finish the bulkheads wharves streets and avenues as aforesaid and to fill in the same and to regulate and pave the same and to lay the sidewalks thereof at the proper costs and charges of the said party of the second part his heirs and assigns and to charge to and recover in an action at law from the said party of the second part his heirs and assigns the amount thereof together with the interest thereon and all costs and charges of the proceedings relative to the same or to sell and dispose of the whole of the hereby granted premises or any part thereof at public auction for the most that can be had for the same and in case of any deficiency to charge with and recover from said party of the second part his heirs and assigns the amount of such deficiency or to adopt or pursue any legal right or remedy that the said parties of the first part or their successors now possess and enjoy under and by virtue of any act of the legislature of the State of New York or that may hereafter be granted unto the said parties of the first part or their successors by the legislature of the State of New York or to enter into and upon the whole or any part of the hereby granted premises and to grant the same and the right of making said bulkheads wharfs streets or avenues and the right of receiving the wharfage cranage and profits arising to and from the same to any other person or persons their heirs and assigns forever AND ALSO that the said party of the second part his heirs and assigns shall and will pay and satisfy all taxes assessments and impositions as well ordinary as extraordinary as are now or shall or may hereafter be lawfully imposed or levied upon the hereby granted premises under and by virtue of any act or acts of the Congress of the United States
8616 of America or of the Legislature of the State of New York or by any act ordinance or resolution of the said parties of the

first part or their successors AND it is hereby further covenanted and agreed by and between the parties of these presents and the true intent and meaning hereof is that the said party of the second part his heirs and assigns will not build the said wharfs bulkheads avenues or streets hereinbefore mentioned or any part thereof or make the lands in conformity with the covenants hereinafter mentioned until permission for that purpose shall be first had and obtained from the said parties of the first part or their successors and will not build or erect or cause to — built or erected any wharf or pier or obstruction in the Hudson River in front of the hereby granted premises without the permission of the said parties of the first part their successors or assigns first had for that purpose AND the said parties of the first part for themselves their successors and assigns do covenant and agree to and with the said party of the second part his heirs and assigns that he the said party of the second part his heirs and assigns observing fulfilling and keeping all and singular the articles covenants and agreements herein mentioned and contained on his part to be kept and performed according to the true intent and meaning of these presents shall and lawfully may from time to time and at all times hereinafter fully have and enjoy take and receive and hold to his own proper use all manner of wharfage cranage advantage or emoluments growing or accruing by or from that part of the said exterior line of the said city lying on the westerly side of the hereby granted premises fronting on the Hudson River with full power to collect and receive the same for his own proper use and benefit
8617 forever. EXCEPTING therefrom such wharfage cranage advantages and emoluments to grow or accrue from the westerly end of the bulkhead in front of the entire width of the northerly half part of Forty-first Street and the southerly half part*y* of Forty-second Street which shall be and are hereby reserved for the said parties of the first part their successors and assigns with full power to collect and receive the same for their own proper use and benefit forever and IT IS HEREBY further agreed by and between the parties to these presents and the true intent and meaning hereof is that this present grant and every word or thing in the same contained shall not be construed or taken to be a covenant or covenants of warranty or of seizen of said parties of the first part or their successors or to operate further than to pass the estate right title or interest they may have or may lawfully claim in the premises hereby conveyed by virtue of their several charters and the various acts of the legislature of the people of the State of New York AND it is hereby further understood and agreed and these presents and the estate hereby granted are upon the express condition that if at any time hereafter it shall appear that the said party of the second part is not on the day of delivery hereof lawfully entitled to take and receive this grant as the purchaser of the rights hereto from the proprietors of the lands and premises on the easterly side of the premises hereby granted and adjoining the same or if the said party of the second part his heirs and assigns shall make default in the performance of any or either of the covenants above contained on his part and behalf to be observed performed fulfilled and kept then and in every such case these presents and every article clause or thing

herein contained shall be and become absolutely null and void and the said parties of the first part and their successors shall and 8618 may forthwith thereupon enter into and upon the said premises hereby granted and shall thereafter be seized of the same with the appurtenances free clear and discharged of and from any claim right or pretense of claim or right of the said party of the second part his heirs and assigns anything herein contained to the contrary notwithstanding AND the said party of the second part covenants and agrees the assessment and the interest due and to grow due thereon for building the sewer in Forty-second Street assessed upon the premises hereby granted and also to pay all expenses which have been incurred by the said parties of the first part for regulating the streets embraced in this grant between the high water mark and the permanent exterior line of said city AND the said party of the second part for himself his heirs and assigns doth hereby covenant and agree to and with the said parties of the first part their successors and assigns that he the said party of the second part his heirs and assigns shall and will in all things well and faithfully comply with fulfil and perform all and every of the covenants conditions and agreements undertakings and provisions herein contained and on his part to be kept performed and complied with.

IN WITNESS WHEREOF to one part of these presents remaining with the said parties of the first part the said party of the second part hath set his hand and seal and to the other part remaining with the said party of the second part the said parties of the first part have caused the common seal of the City of New York to be affixed the day and year first above written.

CHARLES EDGAR APPLEBY. [SEAL.]

8619 CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of March, 1854, before me came Charles Edgar Appleby to me personally known to be the individual described in and who executed the foregoing indenture and acknowledged that he executed the same for the purpose therein mentioned.

AUG. PURDY,
Commissioner of Deeds.

CITY'S EXHIBIT 86.

THIS INDENTURE made the twentieth day of August one thousand eight hundred and seventy BETWEEN The Mayor, Aldermen, and Commonalty of the City of New York, parties of the first part, and The Harlem Gas Light Company, of the City of New York, parties of the second part, WITNESSETH, that the said parties of the first part, for, and in consideration of the covenants and agreements hereinafter contained, and of the sum of two thousand and eighteen & 33/100 dollars, lawful money of the United States, to them in hand paid, by the said party of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, Have given, granted, bargained, sold, aliened, remised, released, conveyed and confirmed, and by these presents, Do give, grant, bargain, sell, remise, release, convey and confirm, unto the said party of the second part, their successors and assigns forever All that certain piece or parcel of land, and land under water, in the Harlem River, situate lying and being in the City of New York, adjoining and in front of upland owned by said party of the second part, and bounded and described, as follows,

BEGINNING at a point where the original high water line
8620 of said river intersects the continuation of the centre line of One hundred and tenth Street, thence running easterly along the continuation of said centre line, One hundred and twenty (120) feet, to the exterior or Bulkhead line of the said City of New York, thence in a northerly direction along said exterior or bulkhead line, two hundred and sixty-five feet, and six inches (265 ft. & 6 inches) to the intersection of said exterior or bulkhead line with the continuation of the centre line of One hundred and eleventh Street, thence along the continuation of said centre line of One hundred and eleventh Street, in a westerly direction, one hundred and thirty-two (132) feet to the intersection thereof with the original high water line of said river, thence along said original high water line in a southerly direction, as the same winds and turns, and along the upland belonging to said party of the second part, to the intersection thereof with the said centre line of One hundred and tenth Street, at a point or place of beginning, being the premises which are delineated and colored pink upon the map or diagram hereto annexed, dated New York March 25, 1869, made by George William Smith, City Surveyor, which map is to be taken and considered as part of this indenture, SAVING AND RESERVING out of the hereby granted premises so much thereof as may form part of any street or streets, avenue or avenues, that may now or hereafter be signed, designated, or laid out through said premises, according to law, for the uses and purposes of public streets, avenues and highways, as hereinafter mentioned, or which are now in use as such, together with all and singular the tenements, hereditaments and premises thereunto belonging, or in anywise appertaining, and reversion and reversions, remainder and remainders, rents,
8621 issues and profits thereof. AND ALSO, all the estate, right, title, interest, property, possession, claim and demand whatsoever as well in law as in equity of the said parties of the first part of, in, and to the above described premises, and every part thereof, and the appurtenances. TO HAVE AND TO HOLD, all and singular the above mentioned and described premises, with the appurtenances, unto the said party of the second part, their successors and assigns forever. And the said party of the second part for themselves, their successors and assigns do hereby covenant and agree with the said parties of the first part, their successors and assigns, that they the said party of the second part, their successors and assigns, shall and will within three months, next after he or they shall be thereunto required by the said parties of the first part, or the Common Council of the City of New York or their successors, at their own proper costs and charges, build, erect, make and finish.

or cause to be built, erected, made, or finished according to any resolution or ordinance of the said parties of the first part, the said Common Council, or their successors already passed or adopted, or that may hereafter be passed or adopted, good and sufficient bulkheads, wharves, streets or avenues, which shall form so much and such parts of any street or streets, avenue or avenues, that may now or thereafter be designated or laid out through said premises, according to law, as fall within the limits of the premises first above described and are reserved as aforesaid from out therefrom, for public streets, and will fill in the same, with good and sufficient earth, and regulate and pave the same and lay the sidewalks thereof. AND ALSO, that the said parties of the second part, their successors and assigns shall and will, from time to time, and at all 8622 times forever thereafter, at their own proper costs, charges and expenses, uphold and keep in good order and repair all those parts of such streets, avenues and sidewalks as may now or hereafter be designated or laid out through said premises, according to law, which the said parties of the second part, have covenanted and agreed to make, erect, and build as aforesaid, and will at all times hereafter obey, fulfil and observe such ordinances, resolutions, orders and directions, as the said parties of the first part, or the said Common Council and their successors, shall from time to time pass or make relative thereto. AND ALSO, that the said streets or avenues shall forever thereafter continue to be and remain public streets and avenues, and highways for the free and common use and passage of the inhabitants of the said City of New York, and all others passing and repassing by, through and along the same in like manner as the other public streets, avenues, bulkheads and wharves of said city, now are or lawfully ought to be.

And in case default shall be made by the said party of the second part, his heirs or assigns, in building, erecting, making and finishing the said bulkheads, wharves, streets or avenues, by them covenanted herein to be built, erected, made and finished, in filling in the same, or any part thereof, or in complying with any ordinance, resolution, or order of the said parties of the first part, the said Common Council or their successors when required, then and in that case it shall and may be lawful for the said parties of the first part, or their successors, to build, erect, make, and finish, or cause to be built, erected, made and finished, the bulkheads, wharves, streets and avenues aforesaid, and to fill in the same, and to regulate and pave the same, and lay the sidewalks thereof, for and on account of and at the 8623 proper cost and charges of the said party of the second part, their successors and assigns, and to charge to and recover in an action at law, from the said party of the second part, their successors and assigns, the amount thereof together with the interest thereon, and all the costs and charges of the proceedings relative thereto, or to sell and dispose of the whole of the said hereby granted premises, or any part thereof, at public auction, for the most that can be obtained for the same. And in case of any deficiency to charge with and recover from the said party of the second part, their successors and assigns, the amount of such deficiency, or to adopt and pursue any legal right or remedy that the said parties of the first part, or their successors now possess or enjoy under and by virue of any act of the legislature of the State of New York, or that may hereafter be granted unto the said parties of the first part, or their successors by the legislature of the State of New York, or to enter into or upon the whole or any part of the hereby granted premises, and to grant the same and the right of making such bulkheads, wharves, streets and avenues, and the right of receiving the wharfage, cranage, fees and profits arising to and from the same, to any person, or persons, their heirs and assigns forever.

AND ALSO, that the said parties of the second part, their successors and assigns, shall and will pay and satisfy all taxes, assessments and impositions, as well ordinary as extraordinary as are now or shall or may hereafter be lawfully imposed or levied upon the hereby granted premises, under and by virtue of any act or acts of the Congress of the United States of America, or of the Legislature of the State of New York, or by any act, ordinance or resolution of the parties of the first part, the said Common Council and 8624 Board of Supervisors or their successors. AND it is hereby further covenanted and agreed by and between the parties to these presents, and the true intent and meaning of these presents is, that the said party of the second part, their successors and assigns, will not build the said wharves, bulkheads, avenues or streets hereinbefore mentioned or any part thereof or make the land in conformity with the covenants herein mentioned, until permission for that purpose shall be first had and obtained from the said parties of the first part, or their successors, and will not build or erect, or cause to be built, or erected any wharf or pier or any other obstruction in the river, in front of the hereby granted premises, without the permission of the said parties of the first part, their successors or assigns first had for that purpose.

AND the said parties of the first part, for themselves, their successors and assigns, Do covenant and agree to and with the said parties of the second part, their successors and assigns, that they the said parties of the second part, their successors and assigns observing, fulfilling and keeping all and singular the articles, covenants, and agreements herein mentioned on their part, to be kept, and performed, according to the true intent and meaning of these presents, shall and lawfully may from time to time and at all times hereafter, fully have and enjoy, take and receive and hold to their own proper use, all manner of wharfage, cranage, advantages, or emoluments, growing or accruing by or from that part of the bulkhead or pier line of the said city, lying on the easterly side of the hereby granted premises, fronting on the Harlem River, with full power to collect and receive the same, for their own use and benefit forever, EXCEPTING such wharfage, cranage, advantages and emoluments to grow or accrue from the bulkhead at the foot of and in front 8625 of One hundred and tenth, and One hundred and eleventh Streets, which shall be and are hereby reserved for the said parties of the first part, their successors and assigns, with full power to collect and receive the same, for their own proper use and benefit forever.

And it is hereby further agreed by and between the parties to these presents, and the true intent and meaning hereof is, that the present grant, and every word and thing in the same contained, shall not be construed or taken to be covenants of warranty or of seizin, of the said parties of the first part, or their successors, or to operate further than to pass the estate, right, title, or interest, they may have or may lawfully claim in the premises hereby granted and conveyed, by virtue of their several charters, and the various acts of the legislature of the State of New York.

AND it is hereby further mutually agreed and understood that these presents, and the estate hereby granted are upon the express conditions, that if the said parties of the second part are not on the day of the date hereof, seized of a good, sure, absolute and indefeasible estate of inheritance, in fee simple, of, in and to the uplands and premises hereinbefore described as belonging to them and adjoining the premises hereby intended to be conveyed, or if the said parties of the second part, their successors or assigns, shall make default in the performance of any or either of the covenants herein contained on their part and behalf to be observed, performed, fulfilled and kept, then and in such case, these presents and every article, clause or thing herein contained, shall be and become absolutely null and void, and the said parties of the first part, their successors and assigns shall and may forthwith enter into and 8626 upon the said premises hereby granted, shall thereafter be seized of the same with the appurtenances free, clear and discharged of and from all claims or right, or pretense of claim or right of the said parties of the second part, their successors and assigns, anything herein contained to the contrary notwithstanding.

The said parties of the second part, for themselves, their successors and assigns DO hereby covenant and agree to and with the said parties of the first part, their successors and assigns, that they, the said parties of the second part, their successors and assigns, shall and will in all things, well and faithfully comply with, fulfill and perform all and every the covenants, conditions and agreements, undertakings and provisions herein contained, and on their part to be kept, performed, and comp-ied with.

IN WITNESS WHEREBY to one part of these presents, remaining with the said party of the second part, the said parties of the first part, have caused their common seal to be attached, and to the other part thereof, remaining with the said parties of the first part, the said parties of the second part, have affixed their seal, the day and year first above written.

(Stamp)

HENRY P. McGOWN, *President.* [SEAL.]

STATE OF NEW YORK, *City and County of New York, ss:*

On this 20th day of August, 1870, before me came, Henry P. McGown to me personally known who being by me duly sworn did depose and say that he resides in the City and County of New York, that he is the President of The Harlem Gas Light Company, 8627 that the seal affixed to the foregoing instrument is the seal of the Harlem Gas Light Company and was so affixed by authority of a resolution of the Board of Directors of such Company, and that he signed his name thereto by virtue of like authority.

G. W. LAWRENCE,
Notary Public, City and County of New York.

8628

CITY'S EXHIBIT 80A.

Approved papers, Board of Aldermen, Volume 27, Page 445.

RESOLVED that the surveys and maps of the Exterior street along the shore of the Harlem river from Eighty-ninth street to the Hudson river at Spuyten Duyvil Creek, prepared by H. L. Southard, and herewith accompanying be and the same hereby are approved and confirmed, pursuant to the provisions of the Act of the Legislature, entitled

"An Act to establish a permanent exterior street in The City of New York along the shore of the Harlem river from the East river or Sound to the North river, passed April 14, 1852."

Adopted by the Board of Aldermen, September 26, 1859.
Adopted by the Board of Councilmen, October 20, 1859.
Approved by the Mayor, October 29, 1859."

8629

CITY'S EXHIBIT 122.

Grant, Dated January 6, 1883.

THE STATE OF NEW JERSEY
TO
THE METROPOLITAN GAS LIGHT COMPANY OF THE CITY OF NEW YORK.

The State of New Jersey to all to Whom These Presents shall Come or may Concern, Greeting:

Whereas, pursuant to an act of the Legislature of said State, approved March 21st, 1871, entitled "A further supplement to an Act entitled 'An Act to ascertain the rights of the State and of Riparian Owners in the lands lying under the Waters of the Bay of New York and elsewhere in this State,'" approved April eleventh, one thousand eight hundred and sixty-four, The Metropolitan Gas Light Company of the City of New York, a corporation of the State of New York, being the owner of lands fronting on the Hudson River, in the State of New Jersey, where the tide ebbs a[illegible] flows thereon, and so is said riparian owner on tide waters in this [illegible]e, and desirous of obtaining a grant from the said State of the lands under water hereinafter mentioned, which lie in front of *his* said lands, did apply to the Commissioners, to wit: Thomas McKeon, Bennington F. Randolph, Amzi Dodd and Gershom Mott, and to the Governor of said State, for a grant of the lands hereinafter conveyed; And Whereas, the said Commissioners, having due regard to the interests of navigation, have agreed to grant the land hereinafter mentioned and determined that seven thousand two hundred and ninety-one dollars and
8630 thirty-five cents is a proper compensation to be paid to the State for the lands hereinafter conveyed: NOW THERE-

FORE, the said State of New Jersey by Thomas McKeen, Bennington F. Randolph, Amzi Dodd and Gershom Mott, Commissioners aforesaid, the said Governor concurring, in consideration of the premises aforesaid, and of the said sum of seven thousand two hundred and ninety-one dollars and thirty-five cents, duly paid — the said The Metropolitan Gas Light Company of the City of New York, to the said State, the receipt whereof is hereby acknowledged, doth hereby grant, bargain, sell and convey unto the said "The Metropolitan Gas Light Company of the City of New York, and to its successors and assigns forever,

ALL that parcel of land flowed by tide water, lying at Shady Side in the County of Bergen and State of New Jersey, described as follows: Beginning at a point in the high water mark of the westerly shore of the Hudson River, where the same is intersected by the division line between lands of Ezra Miller and lands of the said The Metropolitan Gas Light Company of the City of New York, and from thence running South fifty-four degrees and thirty minutes East six hundred and sixty-nine and four tenths feet to the new exterior line for solid filling established Dec. 11," 1875, by the Commissioners appointed under the authority of the act entitled "An Act to ascertain the rights of the State and of riparian owners in the lands lying under the waters of the Bay of New York and elsewhere in this State," approved April 11, A. D. 1864, and the supplements thereto; thence along said new exterior line for solid filling, South thirty-five degrees and thirty minutes West four hundred and eighty-six and nine one-hundredths feet; thence North fifty-four degrees and thirty minutes West six hundred and seventy and sixty-seven one 8631 hundredths feet to high water mark of the westerly shore of the Hudson River where the same is intersected by the division line between land of Isaac P. Smith, formerly —— Melville, and lands of the said The Metropolitan Gas Light Company of the City of New York; thence Northeasterly, along said high water mark to the place of beginning. With the right, liberty, privilege and franchise to exclude the tide water from so much of the lands above described as lies under tide water, by filling in or otherwise improving the same, and to appropriate the lands above described to its exclusive private uses.

And also, all and singular the lands under water lying between the exterior line for solid filling, and the exterior line for piers, as fixed by the Commissioners appointed under the authority of the act aforesaid and the supplements thereto, and bounded by the northerly and southerly lines of the above described tract extended easterly to said pier line, with the right, liberty, privilege and franchise of building piers alone upon the lands last above conveyed, that is to say that which lies between the exterior lines already fixed and above mentioned. And if and when said exterior lines shall be fixed at any other points or places further out into said River, also any and all lands under water lying between the present exterior lines above described and the new exterior line or lines that may be hereafter fixed, the same to be used for solid filling and for piers respectively, agreeably to the terms of such extension.

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, and all the rights of the State in said

lands. TO HAVE AND TO HOLD all and singular the above granted and described lands covered with water, and prem-
8632 ises, unto the said The Metropolitan Gas Light Company of the City of New York, and to its successors and assigns forever.

IN WITNESS WHEREOF, the said State has caused these presents to be sealed with the Great Seal of the said State and to be subscribed by George C. Ludlow, the Governor of said State, and the said Commissioners and attested by Henry C. Kelsey, the Secretary of State thereof, this sixth day of January in the year one thousand eight hundred and eighty-three.

G. C. LUDLOW, *Gov.*
THOS. McKEEN,
[SEAL.] BENNINGTON F. RANDOLPH.
AMZI DODD.
GERSHOM MOTT.

Attest:
HENRY C. KELSEY,
Secretary of State.

Witness:
R. C. BACOT.

STATE OF NEW JERSEY, *Hudson County, ss:*

Be it remembered, that on this ninth day of January, eighteen hundred and eighty-three, before me, the subscriber, a Commissioner of Deeds for Hudson County, personally appeared Robert C. Bacot, of full age, who being by me duly sworn, on his oath saith that he saw Thomas McKeen, Bennington F. Randolph, Amzi Dodd, and Gersham Mott, the within named Commissioners, sign and deliver the within deed as their voluntary act, and that he, the said
8633 Robert C. Bacot thereupon subscribed his name as an attesting witness thereto.

R. C. BACOT.
SAM'L TAYLOR, *Cl'k.*

Sworn and subscribed before me, at Jersey City, the day and year aforesaid.

JOHN V. BACOT,
Commissioner as Aforesaid.

Received in the Office & Recorded January 17." 1883 @ 3 P. M.

STATE OF NEW JERSEY, *County of Bergen, ss:*

I, JOHN R. RAMSEY, Clerk of the County of Bergen in the State of New Jersey, and also Clerk of the Circuit and Common Pleas Courts, in and for said County (Courts of Record), do hereby certify that I have compared the copy of the record of the Deed hereto annexed, with the original record thereof in Liber G-11 of Deeds at pages 668, &c., in my office at Hackensack in said County, and that the same is a true copy thereof, and of the whole of such original record.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said Courts and County, at Hackensack aforesaid, this fourth day of December, one thousand nine hundred and six.

JOHN R. RAMSEY, *Clerk,*
By W. S. DAUM, O. K.

8634

CITY'S EXHIBIT 121.

Deed, Dated November 18th, 1882.

Everett Peppenell Wheeler and **Lydia L.**, His Wife; **Mary Hannah Smith** and Reverend **Cornulius B. Smith**, Her Husband, and said **Everett Peppenell Wheeler** and **Mary Hannah Smith**, Individually and Heirs at Law of David Everett Wheeler,

TO

The Metropolitan Gas Light Company of the City of New York.

THIS INDENTURE, made the eighteenth day of November, in the year one thousand eight hundred and eighty-two, Between Everett Peppenell Wheeler and Lydia L., his wife, and Mary Hannah Smith and the Reverend Cornelius B. Smith, her husband, (the said Everett Peppenell Wheeler and Mary Hannah Smith as well individually and as children and heirs at law of David Everett Wheeler, late of the City of New York, Counsellor at law, deceased, as devisees under his last Will and Testament) parties of the first part; And The Metropolitan Gas Light Company of the City of New York, party of the second part; WITNESSETH, that the said Everett Peppenell Wheeler, Mary Hannah Smith and Cornelius B. Smith, three of the parties of the first part, by virtue of the power and authority to them given in and by the said last Will and 8635 Testament, and for and in consideration of the sum of eighteen thousand five hundred and sixty dollars, lawful money of the United States of America, to them in hand paid by the said party of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the second part, its successors, heirs, executors and administrators, forever released and discharged from the same by these presents have granted, bargained, sold, aliened, remised, relased, conveyed and confirmed, and by these presents do grant, bargain, sell, alien, remise, release, convey and confirm unto the said party of the second part, and to its successors heirs and assigns forever.

ALL that certain piece or parcel of land situate, lying and being on the west bank of the Hudson River, in the Township of Ridgefield, County of Bergen, and State of New Jersey, bounded and described as follows: Beginning at the northwest corner of a parcel of land now occupied by William Hennen, being the southwest corner of that certain parcel of land marked No. 6, on a certain Map of the Estate of Samuel Ellis, deceased, on file in the Office of the Surrogate of Bergen County, and running thence along the division fence between said land of William Hennen and said parcel No. 6, and through the centre line of the ditch, in a continuation of said partition fence, and along the dividing line between the premises hereby conveyed, or intended so to be, and the lot marked No. 5, on said Map, in a southeasterly direction, 13 chains, more or less, to the Hudson River; thence Northerly, along the said River, 495 feet, more or less, to the centre line of another ditch dividing the parcel of land hereby conveyed from the parcel of land now occu-

pied by the heirs of Hannah Ellis Miller, being Parcel No.
8636 4 on said Map; thence through the centre of said ditch and
along the dividing line between the premises hereby conveyed, or intended so to be, and the lot marked No. 4 on said Map, and in a northwesterly direction, 10 chains and fifty links, more or less, to the road leading from Bull's Ferry to Fort Lee; thence along said road in a Southwesterly direction, 8 chains and 60 links, more or less, to the point or place of beginning.

Being the same premises conveyed to the late David E. Wheeler by two separate deeds of conveyance, one from William Henry Kemp and wife, recorded in the Clerk's Office of the County of Bergen, May 4th, 1858, in Liber F-5 of Deeds, page 270, and the other from Stephen D. Vreeland and wife, dated November 15, 1854, and recorded in said Clerk's Office in Liber U-4 of Deeds, page 500, &c.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof. And also, all the estate, right, title, interest, dower and right of dower, curtesy and right of curtesy, property possession, claim and demand whatsoever, as well in law as in equity, of the said parties of the first part, of, in and to the same, and every part and parcel thereof, with the appurtenances. TO HAVE AND TO HOLD the above granted, bargained and described premises, with the appurtenances, unto the said party of the second part, its successors, heirs and assigns, to its and their own proper use, benefit and behoof forever. And the said Everett Peppenell Wheeler and Mary Hannah Smith, two of the parties of the first part, for themselves, their heirs, executors and administrators, do jointly and
severally covenant, grant and agree to and with the said party
8637 of the second part, its successors, heirs and assigns, that they,
at the time of the sealing and delivery of these presents, have good right, full power and lawful authority to grant, bargain, sell and convey the above granted and described premises with the appurtenances, in manner and form aforesaid, and that the said party of the second part, its successors, heirs and assigns, shall and may at all times hereafter, peaceably and quietly have, hold, use, occupy, possess and enjoy the above granted premises, and every part and parcel thereof, with the appurtenances, without any let, suit, trouble, molestation, eviction or disturbance of the said parties of the first part, their heirs or assigns, or of any other person or persons lawfully claiming or to claim the same. And that the same now are free, clear, discharged and unencumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and encumbrances of what nature and kind soever. And also, that the said parties of the first part and their heirs, and all and every other person or persons whomsoever, lawfully or equitably deriving any estate, right, title or interest of, in or to the hereinbefore granted premises, by, from, under or in trust for them, shall and will at any time or times hereafter, upon the reasonable request, and at the proper costs and charges in the law of the said party of the second part, its successors, heirs and assigns, make, do and execute, or cause or procure to be made, done and executed, all and every such further and other lawful and reasonable acts, conveyances and

assurances in the law for the better and more effectually vesting and confirming the premises hereby intended to be granted in and to the said party of the second part, its successors, heirs and assigns forever, as by the said party of the second part, its successors, heirs or assigns, or its or their counsel learned in the law, shall be 8638 reasonably devised, advised or required. And the said Everett Peppenell Wheeler and Mary Hannah Smith, two of the parties of the first part, for themselves, their heirs, the above described and hereby granted and released premises, and every part and parcel thereof, with the appurtenances, unto the said party of the second part, its successors, heirs and assigns, against the said parties of the first part, their heirs and against all and every person or persons whomsoever, lawfully claiming or to claim the same, shall and will warrant and by those presents forever defend.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Sealed and delivered in the presence of

EVERETT P. WHEELER. [L. S.]
LYDIA L. WHEELER. [L. S.]
MARY H. SMITH. [L. S.]
CORNELIUS B. SMITH. [L. S.]

On the second page the ninth and tenth, fifteenth and sixteenth lines and the words "the said" on the thirteenth line, and the word "lawfully" on the fourteenth line, and part of the seventeenth line, and the word "same" on the eighteenth line, obliterated, and the words "above granted and described premises" with the appurtenances, between the seventeenth and eighteenth lines interlined, all done before execution.

HENRY C. FREEMAN.

8639 STATE OF NEW YORK,
City and County of New York, ss:

Be it remembered, that on this 21st day of November, A. D. one thousand eight hundred and eighty-two, before me, Henry C. Freeman, a Commissioner of Deeds for the State of New Jersey, residing in the City of New York, duly appointed and qualified, personally came Everett Peppenell Wheeler and Lydia L., his wife, Mary Hannah Smith and the Rev. Cornelius B. Smith, her husband, who I am satisfied are the grantors in the within Indenture named, and I having first made known to them the contents thereof, they did severally thereupon acknowledge that they signed, sealed and delivered the same as their, and each of their free and voluntary act and deed, for the uses and purposes therein expressed; and the said Lydia L. Wheeler and Mary Hannah Smith, on a private examination by me made separate and apart from their said husbands, did further severally acknowledge that they signed, sealed and delivered the same as their, and each of their, free and voluntary act and deed, for the uses and purposes therein expressed; and the said Lydia L. Wheeler and Mary Hannah Smith, on a private examination by me made separate and apart from their said husbands, did further severally acknowledge that they signed, sealed and delivered the same as their and each of their voluntary act and deed, freely and without any fear, threats or compulsion of or from their said husbands.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year first above written.

[SEAL.]

HENRY C. FREEMAN,
A Commissioner for the State of New Jersey, Residing in New York City.

8640 Received in the Office and Recorded November 29th, 1882, at 1 P. M.

SAM'L TAYLOR, *Clk.*

STATE OF NEW JERSEY, *County of Bergen, ss:*

I, John R. Ramsey, Clerk of the County of Bergen in the State of New Jersey, and also Clerk of the Circuit and Common Pleas Courts, in and for said County (Courts of Record), do hereby certify that I have compared the copy of the record of the Deed hereto annexed, with the original record thereof in Liber H-11 of Deeds, at pages 44, &c., in my office at Hackensack in said County, and that the same is a true copy thereof, and of the whole of such original record.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said Courts, and County at Hackensack, aforesaid, this fourth day of December, one thousand nine hundred and six.

[SEAL.]

JOHN R. RAMSEY, *C.*
By W. S. DORRIN, *Dp. C.*

8641

CITY'S EXHIBIT 102.

PAGE 1A.

TABLE SHOWING THE SIZES OF THE CONSOLIDATED GAS COMPANY'S MAINS IN THE STREETS OF NEW YORK CITY.

Number of mains to a block.	Number of blocks.	Number of blocks with two or more mains. Per cent.
2	1815	30.2
3	548	9.1
4	235	3.9
5	47	.75
6	2	.0
		43.9

Total number of blocks with two or more Mains..............................	2647	
Total number of blocks with one main.......................................	3353	56.1
Total number of blocks in New York City..............................	6000	100.0

STATE'S EXHIBIT A. A. A.

EXHIBIT 21.

CENTRAL UNION GAS COMPANY.

Summary of Business for Twelve Months Ending October 31, 1905.

READ ON BEHALF OF COMPLAINANTS.

	cu. ft.		
Gas made	1,596,410,000		
Gas Mfg'd under Agency Agreement	508,017,700		
	cu. ft.		
Gas made for Central Union Gas Co.	1,088,392,300		
Sales: Consumers	1,017,454,000	$1,017,453.95	
Lamps	486,300	917.12	
Public Buildings	9,960,800	8,964.72	
	1,027,901,100	$1,027,335.49	
			$1,027,335.79
Income: Miscellaneous			17,092.25
From Investments			38,000.00
			$1,082,428.04

Operating:		Cost per M made.	Cost per M sold.
Caking Coal, 63,599 tons at $3.262	$207,495.08	.1300	.1396
Anth. Coal, 6,217.8 tons at $4,388	27,286.35	.0171	.0184
Cartage and Labor Handling	24,844 84	.0156	.0167
Gas Oil, 4,894,056 gals. at .04042	197,852.09	.1239	.1332
	$457,478.36	.2866	.3079
Less Residuals: Coke, Tar, Sulphate	202,363.98	.1268	.1362
	$255,114.38	.1598	.1717
Coke Used, 11,851 tons at $3,375	40,007.61	.0251	.0269
Oxide.	1,912.85	.0012	.0013
Water, 5,246,870 cu. ft. $1.00	5,246.87	.0033	.0035
Oil, Waste, etc	6,835.74	.0043	.0046
Labor	63,551.03	.0397	.0428
Repairs	50,679.86	.0317	.0341
Gas Bought	1,014.68	.0006	.0007
	$424,343.02	.2657	.2856

(Here follows City's Exhibit 63, marked p. 8643.)

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

8644

STATE'S EXHIBIT JJJ.

Mr. G. E. Cowperthwait, Sec. & Supt., Danbury & Bethel Gas & Elec. Light Co., Danbury, Conn.

DEAR SIR:

Your letter of Aug. 8th to the Williamsport Gas Co., Pa., has been mailed me for reply.

I am very sorry that an error of this kind could occur in my office. There is no explanation as to the difference in the price to be made, other than Danbury, Conn., takes an entirely different rate of freight from Williamsport, Pa. Furthermore, petroleum products are priced against the crude market ruling at the time the prices are made. These prices are always subject to change without notice.

I think if you will inquire into the matter of prices prevailing in your territory, you will find that your company is favorably treated. In fact, Mr. Cowperthwait, I have reason to know you have this information at hand, and that you understand that the price at Danbury is not out of line with the costs of that delivery.

Yours very truly,

C. M. HIGGINS.

8645

STATE'S EXHIBIT MMM.

CONSOLIDATED GAS COMPANY,

21ST STREET STATION, FEBRUARY, 1902.

	Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gal. per M.
1,	16233	25.36	69821		4.45
2,	16649	24.76	81007	30	5.03
3,	16473	25.10	79397	30	5.00
4,	14654	24.85	70793		5.02
5,	11169	25.73	48808	29	4.60
6,	15602	25.14	68741		4.57
7,	16047	24.48	77789		5.02
8,	15730	24.88	67346	29.5	4.44
9,	14917	25.24	69441		4.84
10,	15179	25.33	66092	29	4.52
11,	13785	24.98	59955		4.53
12,	9284	24.52	37717	29.5	4.32
13,	13715	23.84	63055		4.79
14,	16907	25.27	76884		4.70
15,	16001	25.05	71113	29.5	4.60
16,	15247	25.10	71130	29.5	4.84
17,	14578	24.75	62174	29	4.43
18,	12542	24.09	65636		5.45
19,	11055	25.09	48953	29.5	4.65
20,	14282	25.74	65513		4.78
21,	15094	26.16	61113		4.20
22,	12272	25.11	49481	29.5	4.21
23,	15607	24.87	38860		4.39
24,	14552	24.58	61090		4.35
25,	11850	24.41	47528		4.20
26,	10864	24.69	50318	29.5	4.87
27,	14001	24.70	61487		4.57
28,	15715	24.88	64790	29	4.26
	400007	24.95	1756027		4.57

8646 STATE'S EXHIBIT NNN FOR IDENTIFICATION.

CONSOLIDATED GAS COMPANY,

21ST STREET STATION, DECEMBER, 1904.

	Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gal. per M.
1,	17553	24.38	73501	29	4.30
2,	16630	24.91	77263		4.79
3,	14416	24.49	68183		4.89
4,	11945	24.03	56480	29.5	4.95
5,	17154	24.25	75595	29.5	4.55
6,	16060	24.11	74814		4.82
7,	16647	24.37	71014		4.40
8,	16599	23.75	74027		4.60
9,	16650	23.61	78562	29.5	4.87
10,	16032	23.59	78618	29.5	5.07
11,	12537	24.42	59370	32	4.94
12,	16646	25.68	74297	31	4.61
13,	16202	25.09	74034		4.72
14,	15763	25.77	72917	31	4.80
15,	17934	24.63	79533	31	5.59
16,	16643	24.90	77576		4.82
17,	14829	24.31	67860		4.74
18,	11386	24.82	55771	30	5.15
19,	15798	25.48	77200		5.06
20,	16917	25.17	80414		4.92
21,	16806	25.12	79306	30	4.89
22,	17080	24.44	80592		4.88
23,	17413	25.37	78439	30	4.66
24,	15613	24.34	72415		4.79
25,	11528	23.83	53539		4.86
26,	12539	25.48	59617		4.99
27,	17384	25.98	79974	30	4.76
28,	16533	25.99	77193		5.16
29,	17092	25.62	61760		4.87
30,	15644	25.93	77871	29.75	5.16
31,	13989	25.85	64445	30	4.80
	406366	24.83	2232181		4.77

8647 STATE'S EXHIBIT OOO FOR IDENTIFICATION.

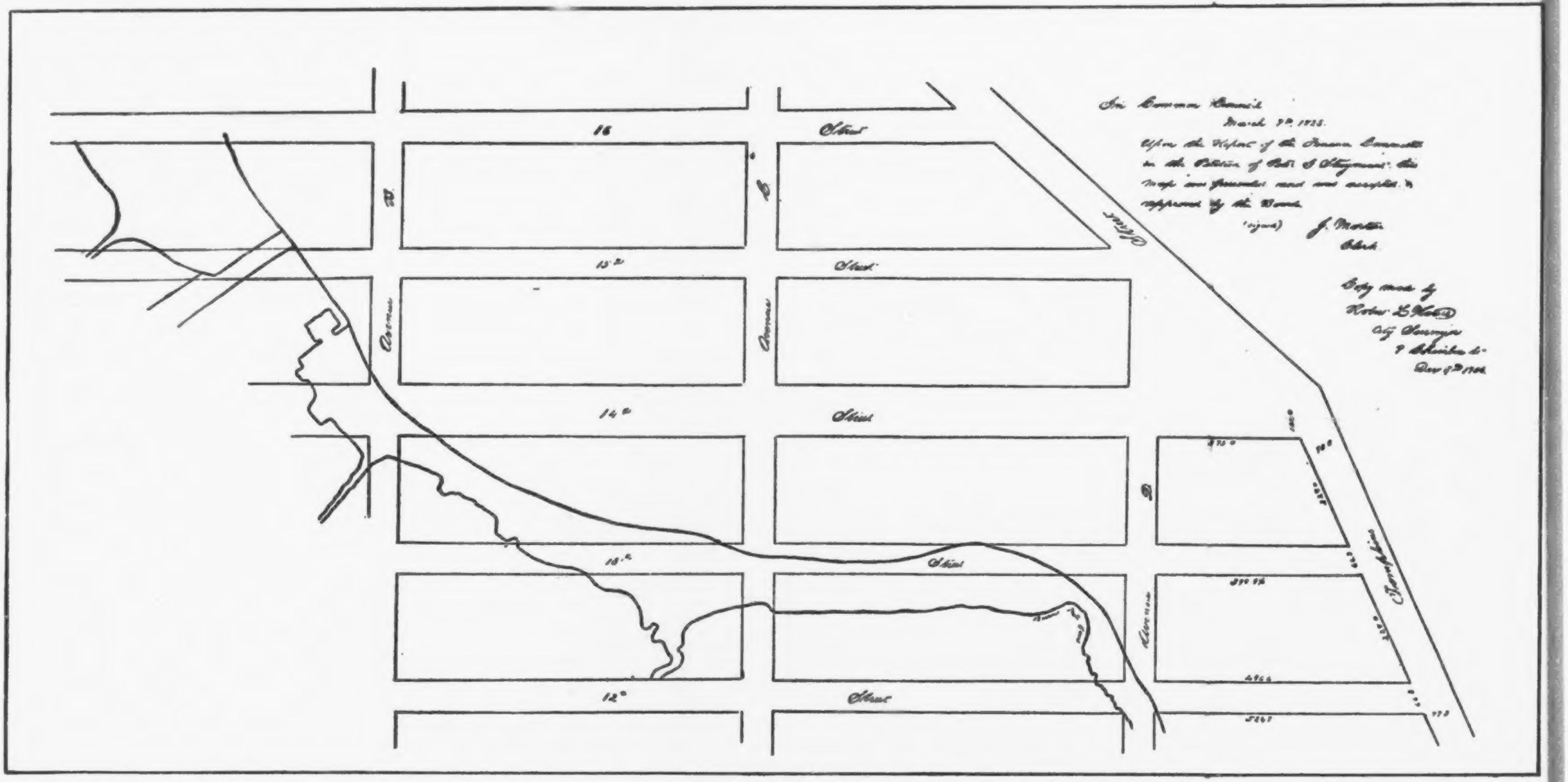
CONSOLIDATED GAS COMPANY,

21ST STREET STATION, DECEMBER, 1902.

	Gas made M.	C. P. at station.	Gas oil used.	Specific gravity.	Gal. per M.
1,	13165	26.45	63418		5.02
2,	13039	26.74	63161		5.04
3,	13057	25.68	65806	38	5.07
4,	14363	23.60	70135		5.07
5,	14324	23.02	71322		5.17
6,	12872	24.44	63011	37	5.10
7,	12578	22.30	60861	37	5.05
8,	14745	20.64	73311		5.15
9,	14615	24.38	71461	37	5.07
10,	14203	27.29	70211	37	5.13
11,	14059	26.04	71811		5.30
12,	12934	25.49	67561	38	5.44
13,	12512	23.75	62461	38	5.21
14,	12700	23.51	60571	38	4.97
15,	13126	23.09	63111		5.00
16,	13655	24.43	61444	37	4.68
17,	13036	26.23	50787	37	4.06
18,	12325	25.87	46302		3.92
19,	12870	24.30	49027	38	3.97
20,	11980	23.48	41094		3.58
21,	11425	23.45	39836		3.64
22,	13914	23.19	50807	37	3.78
23,	14035	25.84	63411		4.68
24,	13780	23.55	63602	38	4.78
25,	12792	22.97	60683	39	4.93
26,	13281	21.96	67215	37	5.25
27,	12011	21.66	59949		5.12
28,	10709	22.09	54465	37	5.32
29,	12031	21.50	59915		5.19
30,	12752	21.44	59529	36	4.85
31,	13027	22.35	65665	37	5.23
	406366	23.89	19535338		5.00

(Here follow diagrams, &c., marked pp. 8648 to 8681.)

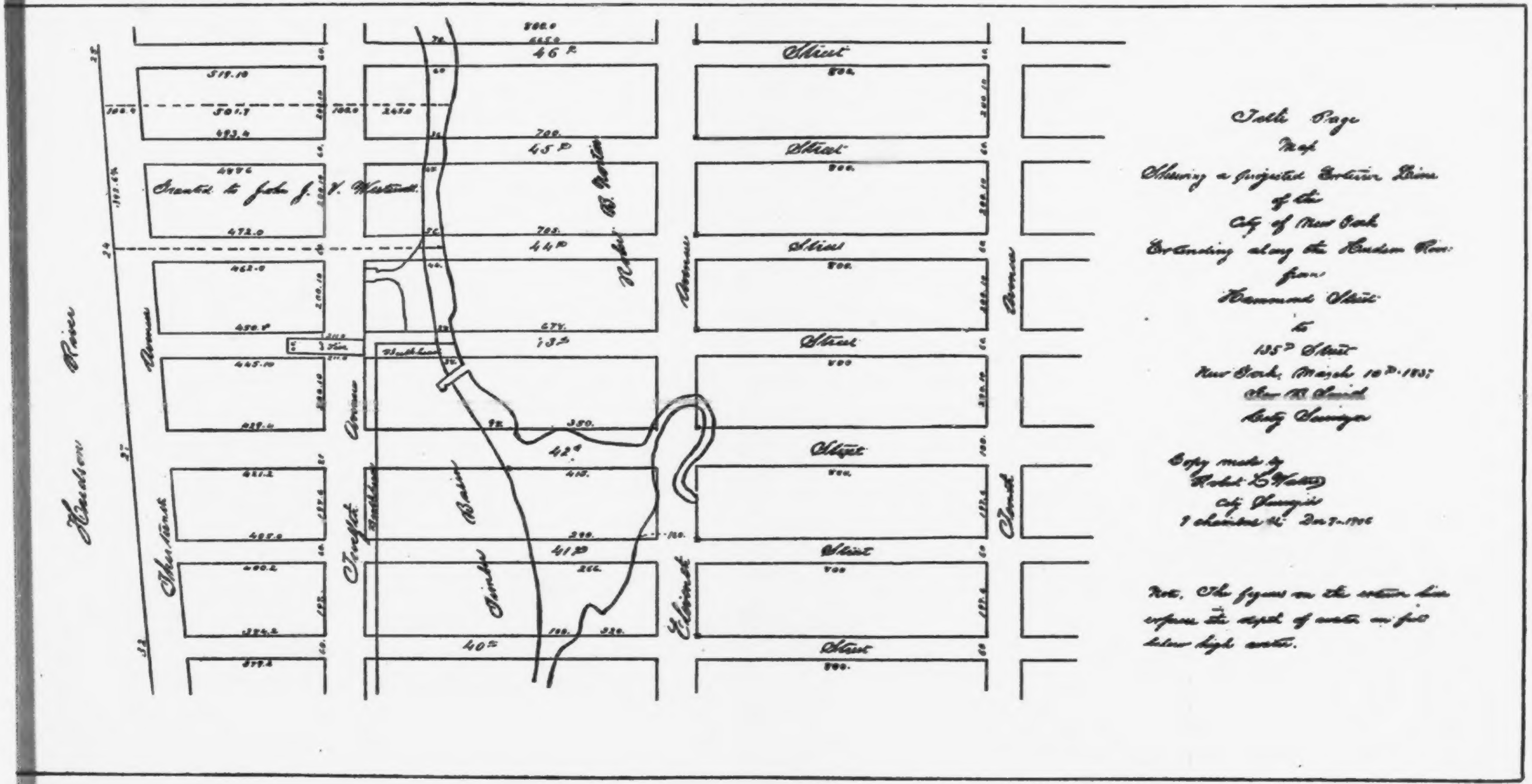
CITY'S EXHIBIT 76.


16 Street
15th Street
14th Street
13th Street
12th Street
Avenue B
Avenue C
Avenue D
Street
Tompkins

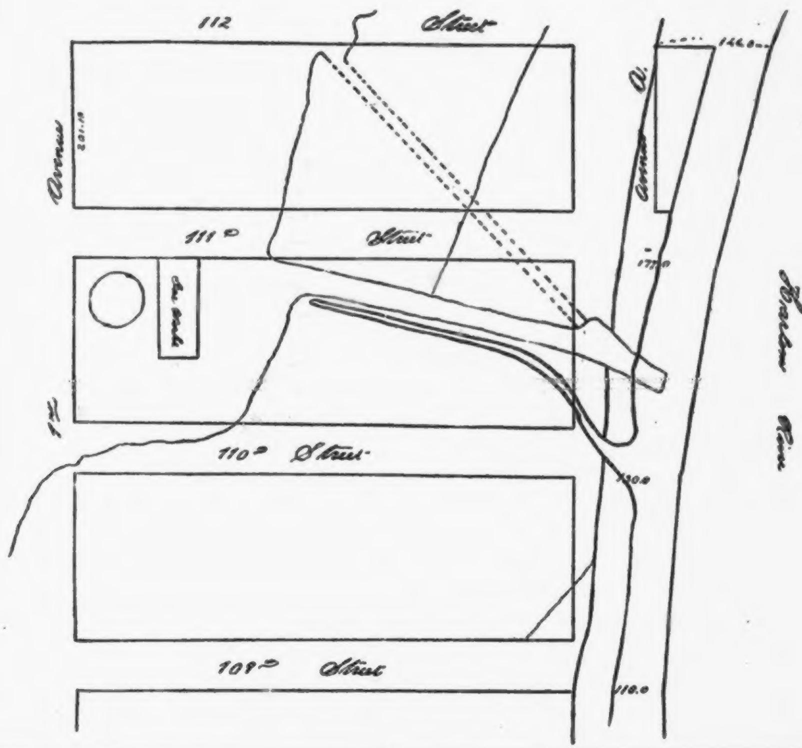
In Common Council
March 3rd 1828.
Upon the Report of the Finance Committee
on the Petition of Petr. G. Stuyvesant: this
Map was presented and was accepted &
approved by the Board.
(signed) J. Morton
Clerk.

Copy made by
Robert L. Hart
City Surveyor
7 Chamber St
Dec 8th 1906

CITY'S EXHIBIT 78.


Title Page
Map
Shewing a projected Exterior Line
of the
City of New York
Extending along the Hudson River
from
Hammond Street
to
135th Street
New York, March 10th 1837
Geo. B. Smith
City Surveyor
Copy made by
Robert L. Watters
City Surveyor
9 Chambers St. Dec 7-1906
Note, The figures on the exterior line express the depth of water in feet below high water.
Hudson River
Thirteenth Avenue
Twelfth Avenue
Eleventh Avenue
Tenth Avenue
Timber Basin
Bulkhead
46th Street
45th Street
44th Street
43rd Street
42d Street
41st Street
40th Street
Granted to John J. V. Westervelt
Robert B. Norton

CITY'S EXHIBIT 80.


112 Street
111th Street
110th Street
109th Street
Avenue
201.0
1st
Avenue
A.
166.0
177.0
180.0
110.0
Harlem River

E. A. T.
Sept 12th 1859
St Comm H.F.K.

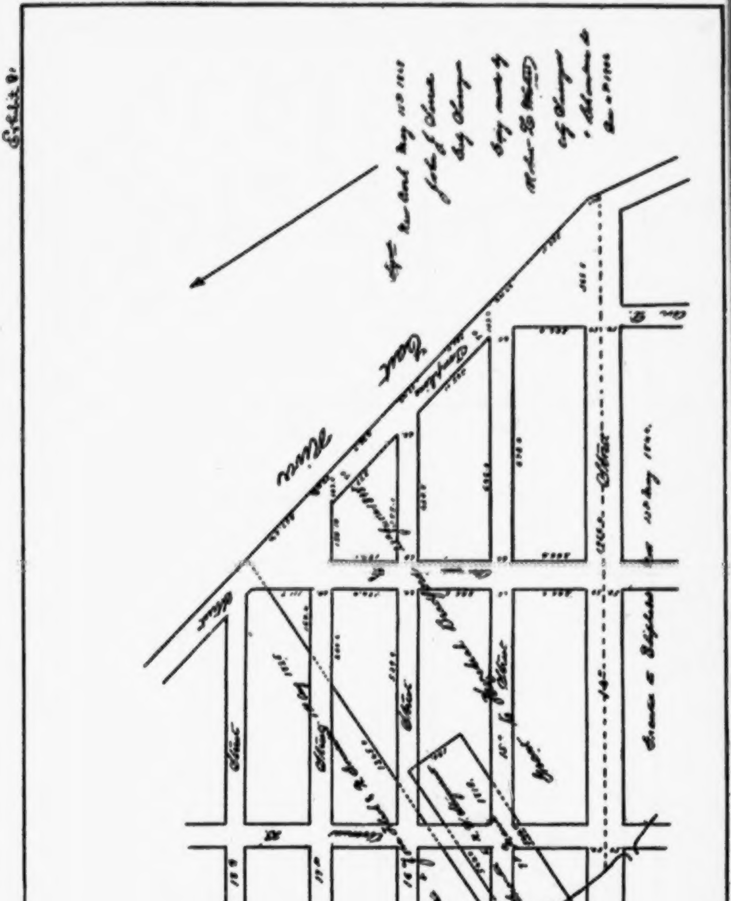
Received Street Commissioners
Office 10th Sept 1859.
M. Lovell
Dep St Comm

Title Page
Map
of the
Exterior Street in the City of New York
along the
Shore of the Harlem River
from 89th Street on the East River to North
or Hudson River
Laid down in conformity with the
Exterior Line as established by the
Harbor Commissioners
By virtue of an Act of the Legislature passed
April 17th 1857
Surveyed in accordance with the resolution
of the Common Council
approved October 26th 1858
By
H L Southard
City Surveyor
1858-9

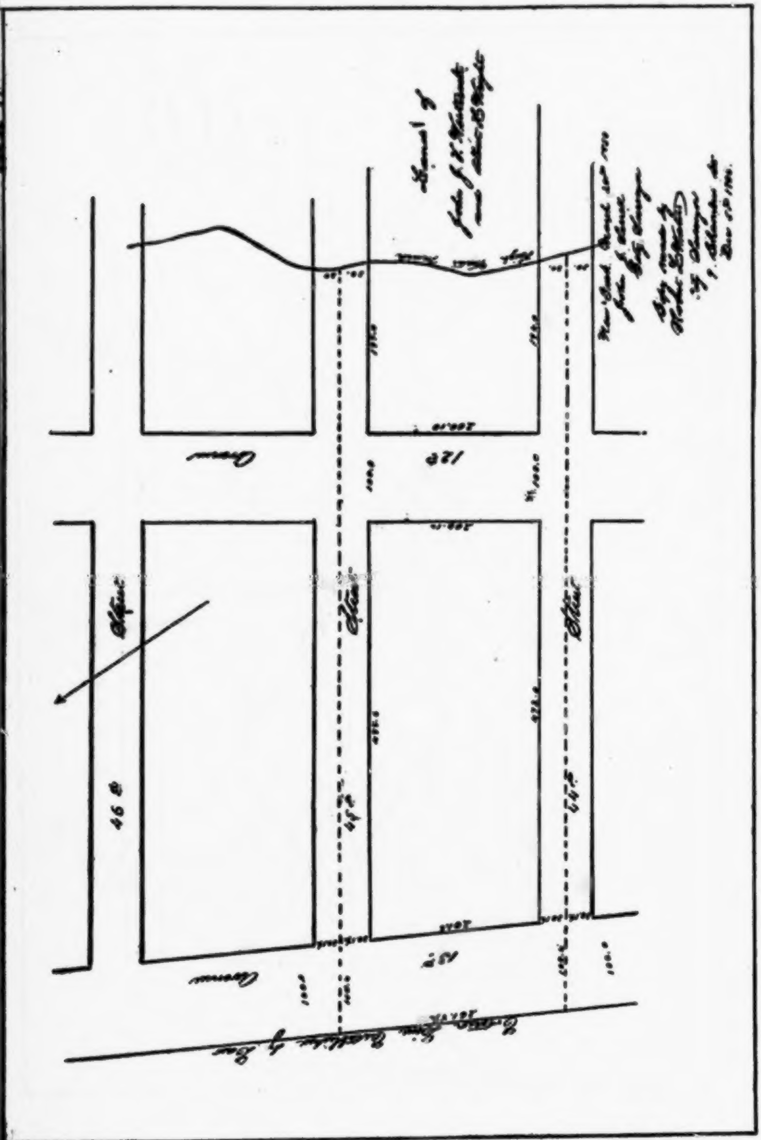
Adopted by the Board of Aldermen
September 26th 1859
Adopted by the Board of Councilmen
October 20th 1859
Approved by the Mayor
October 29th 1859
D. T. Valentine
Clerk of Common Council

Copy made by
Robert L. Waters
City Surveyor
9 Chambers St
Dec 7th 1906

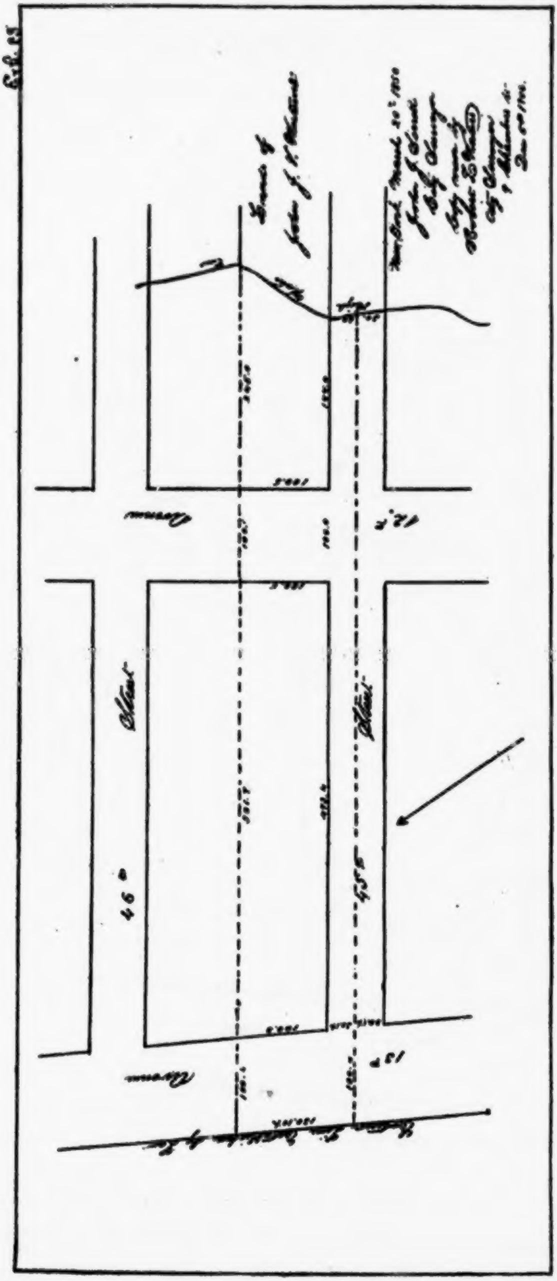
CITY'S EXHIBIT 81.


East River
Street
Street
Street
Avenue
Street

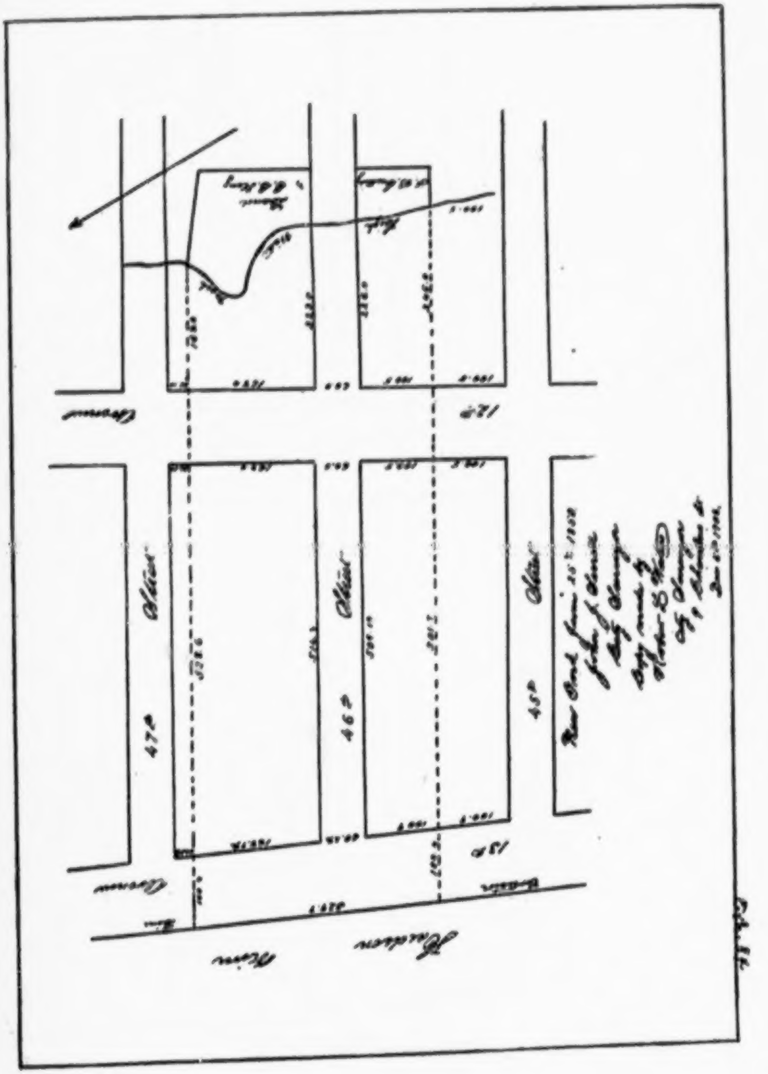
CITY'S EXHIBIT 82.


Survey of
46 th Street
45 th Street
44 th Street
Avenue
12 th
13 th
Avenue
Dec 5th 1906.

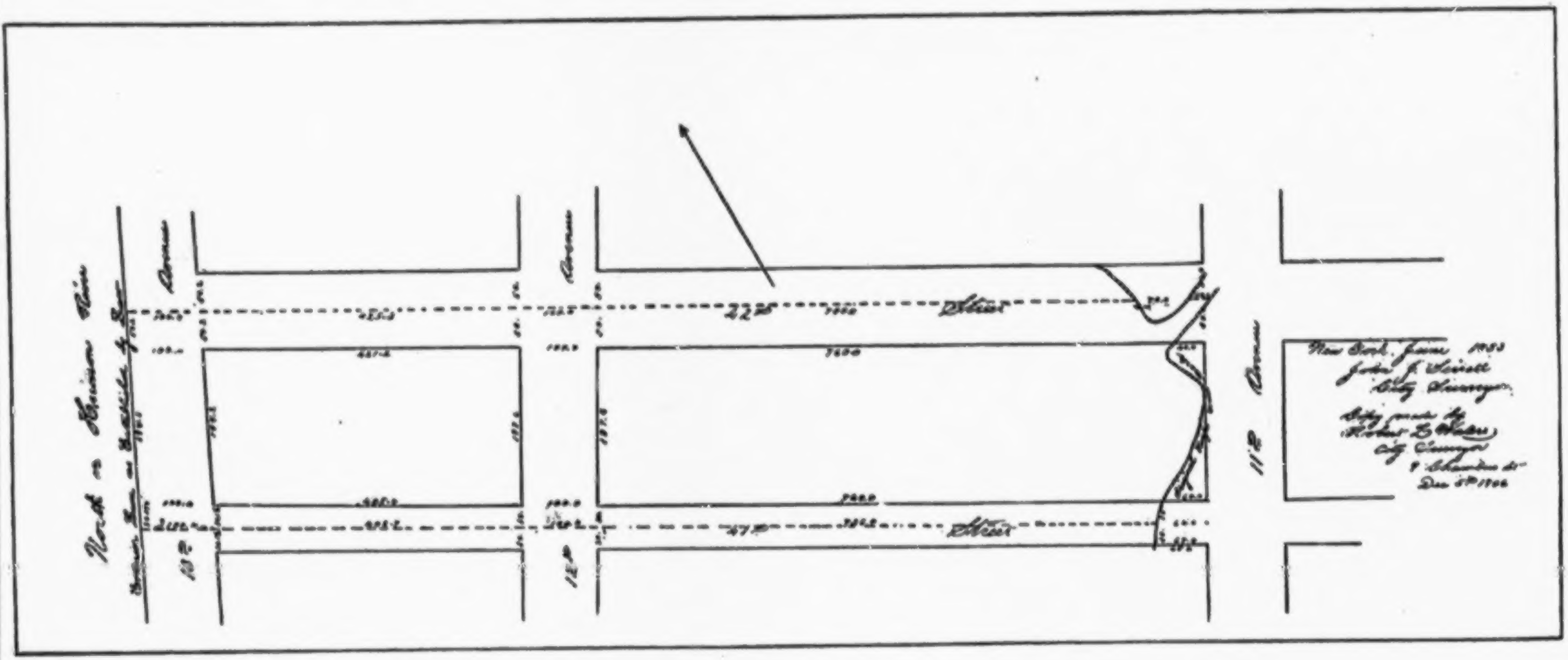
CITY'S EXHIBIT 83.


Exh. 83
Lands of
John J. V. Westervelt
46th Street
Avenue
45th Street
12th
13th
Avenue
New York March 20th 1850
John J. Serrell
City Surveyor
Copy made by
Robert E. Waters
City Surveyor
9 Chambers St.
Dec 6th 1906.

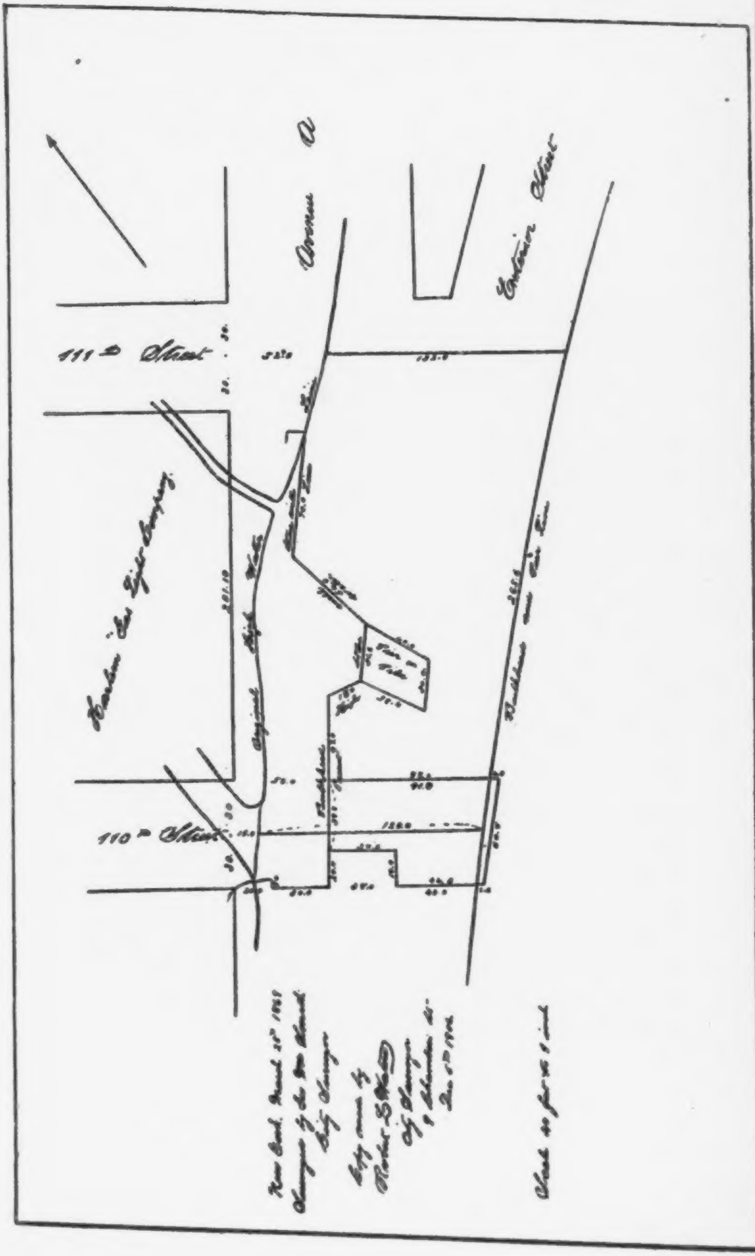
CITY'S EXHIBIT 84.


47th Street
46th Street
45th Street
12th Avenue
13th Avenue
Hudson River

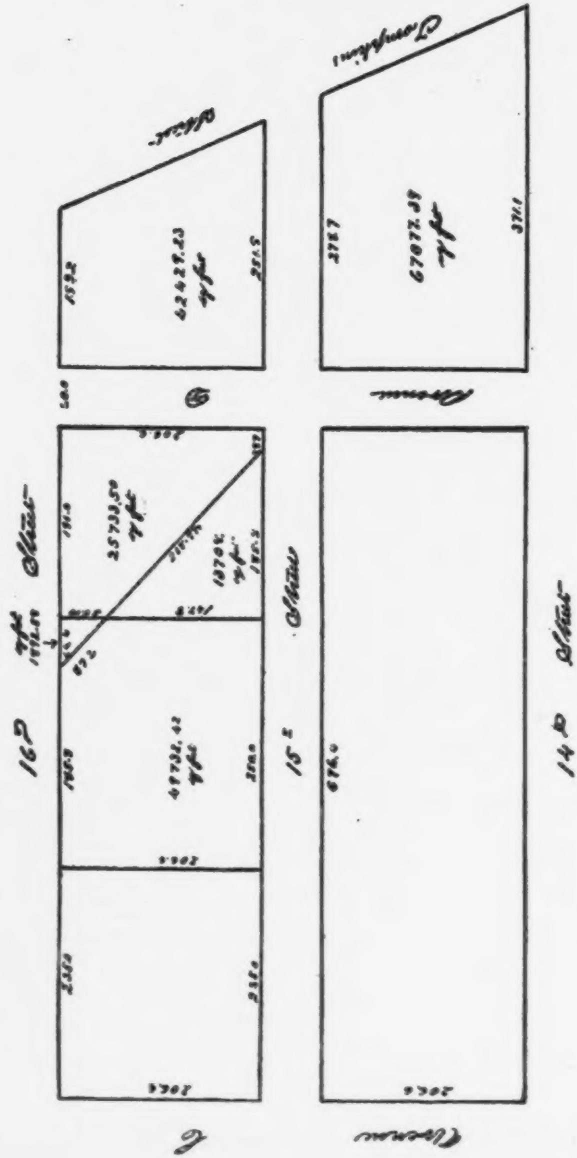
CITY'S EXHIBIT 85.


North River
13th Avenue
12th Avenue
11th Avenue
42nd Street
43rd Street
New York, June 1853
City Surveyor
City Surveyor
Dec 5th 1906

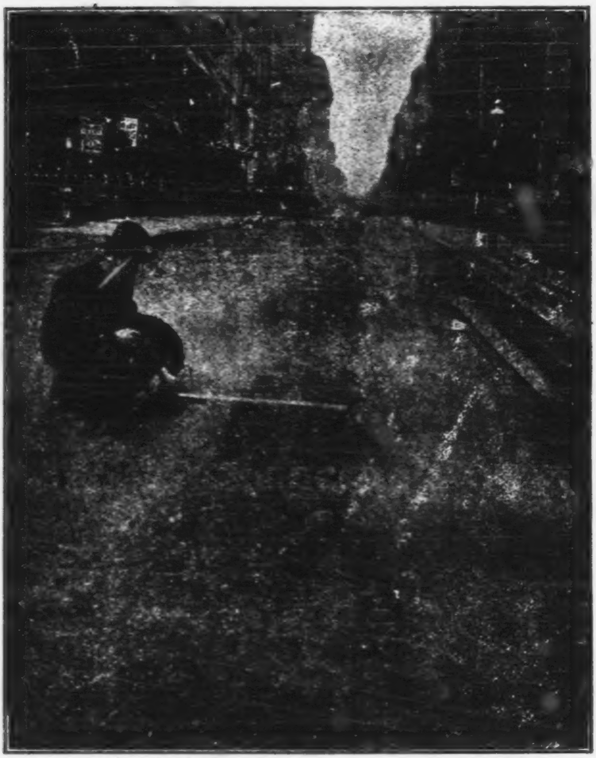
CITY'S EXHIBIT 87.


111th Street
110th Street
Avenue A
Exterior Street
Harlem Gas Light Company
Original High Water
Bulkhead
Scale 40 feet to 1 inch
Dec 1st 1904

CITY'S EXHIBIT 88.


Tompkins
Street
62427.23 sq ft
157.2
251.5
67077.58 sq ft
278.7
371.1
Avenue
B
25733.50 sq ft
18708 sq ft
211.75
49732.42 sq ft
16th Street
15th Street
14th Street
676.0
232.0
206.4
206.6
C
Avenue

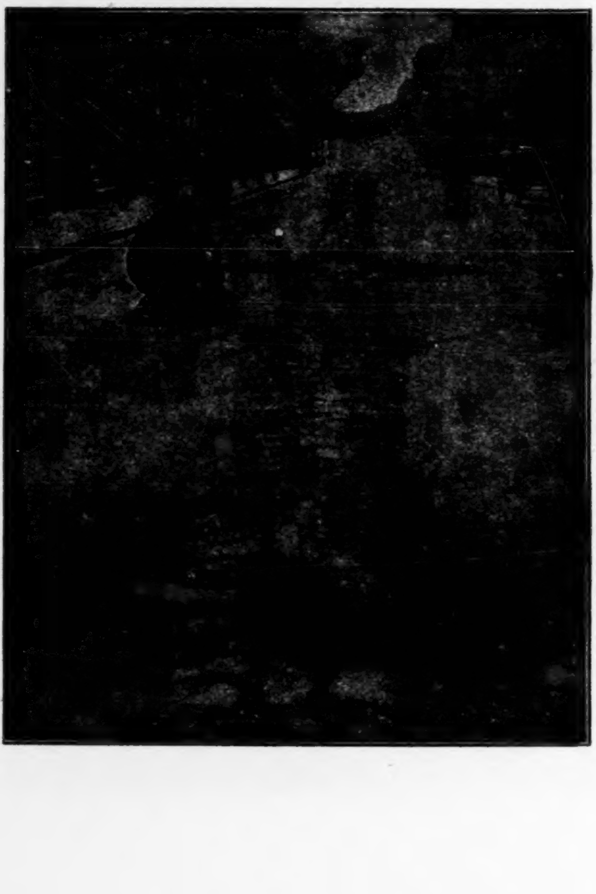
STATE'S EXHIBIT TT.



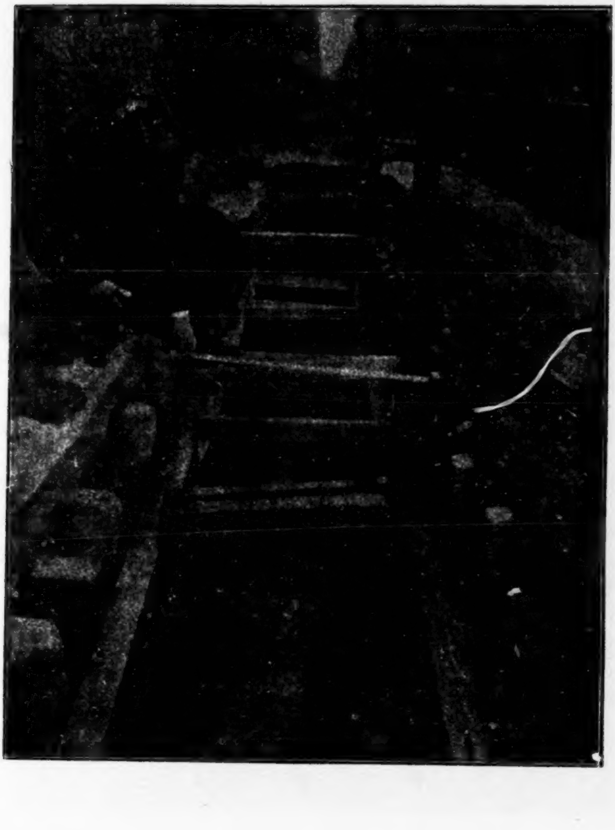
STATE'S EXHIBIT UU.

STATE'S EXHIBIT VV.

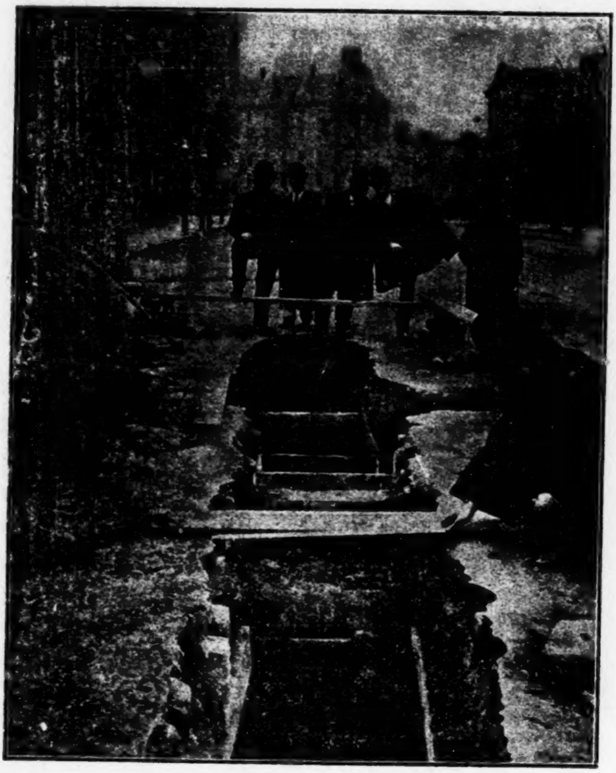
STATE'S EXHIBIT WW.



STATE'S EXHIBIT XX.



STATE'S EXHIBIT YY.



EXHIBITS

NOT

SUITABLE

FOR

MICRO-

FILMING

NINETY-NINTH STREET.

CITY'S EXHIBIT 127.

INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE 99TH STREET GAS WO COMPANY OF NEW YORK CITY, 1906.

Daily Capacity, 5,500,000.

	BUILDINGS & APPARATUS.	Date Inst. or Erect.	Rowland, 1884. Actual Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	Cubic Contents Superstru Only
	BUILDINGS ONLY.						
1.	Engine House, Boiler House, Pump House, Machine Shop, Retort and Accumulator House	1881	$82,250	$96,162	$91,354	15,575.18	436,105
2.	Generator House	1881	25,500	30,732	29,807	4,735.32	116,015
3.	Foundations for Air Condenser	1881	..	900	900	..	..
4.	Foundations for Salt Water Condenser	1881	..	368	368	..	..
5.	Office Building	1881	11,000	8,922	8,922	1,288.14	39,2[illegible]
6.	Meter House	1881	9,200	10,039	10,039	2,028.	54,756
7.	Purifier House	1881	28,600	43,589	41,409	7,626.	228,780
8.	Lime House	1881	5,300	3,787	1,984	1,181.25	21,262
9.	Valve House and Drip Pump House	1881	..	108	108	120.	1,200
10.	Valve House No. 1	1881	..	513	480	53.	424
11.	Valve House No. 2	1881	..	513	480	53.	424
12.	Valve House No. 3	1881	..	513	480	53.	424
13.	Valve House No. 4	1881	..	513	480	53.	424.
14.	Condenser and Scrubber House	1881	8,000	10,185	10,185	2,028.	54,756.
15.	Exhauster House	1881	..	8,400	8,400	1,152.09	28,802.
16.	Tar Separator System 4 ft. deep	1881	..	1,775	1,775	1,044.	4,176.
17.	Pump Pit	1881	..	624	624	314.41	3,144.
18.	Tar Storage Foundation	1881	..	128	128	..	..
19.	Coal Shed	1881	18,500	21,600	19,872	5,863.	103,922.
20.	Filter Press House	1881	..	408	388	260.	1,820.
21.	Walls Around Works, 800 ft.	1895	11,810	15,710	15,710	..	7,293.
22.	Fences, 1,750 ft.	1895	2,534	3,380	3,380	..	..
23.	Cover Over Doors of Oil Tank in Ground, Frame Shed	1895	..	534	534	937.5	5,625.
24.	Foundations Under Hot Scrubbers in Yard						
		1895	..	237,142	247,807	..	1,097,172
		1895	..	15,710 Walls		..	11,469
		1895	..	6,551 Value not computed in cubic ft.		..	1,108,641
				259,403			
99.	Tank House and Contents	1895	7,745				
100.	Hyd. Acc. House	1895	3,000				
102.	Carburetter House and Three Carburetters	1895	19,200				
103.	Stable and Horses	1895	3,075				
			235,714				

CITY'S EXHIBIT 127.

E BUILDINGS AND APPARATUS OF THE 99TH STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

Daily Capacity, 5,500,000.

					MEYER.			MARKS.			
Date Inst. or Erect.	Rowland, 1884. Actual Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	Cubical Contents Superstructure Only.	Cost Per Square Ft.	Cost Per Cubic Ft.	Cubical Contents Including Basement.	Cost Per Cubic Ft.	Total Cost.	Values Not Computed.
chine											
....1881	$82,250	$96,162	$91,354	15,575.18	436,105.04	6.174	.221	436,105.04	.10	$43,610.50	
....1881	25,500	30,732	29,807	4,735.32	116,015.34	6.489	.265	116,015.34	.12	13,921.84	
....1881	..	900	900	..	..	..	..	..	..	..	$1,000
....1881	..	368	368	..	..	..	..	..	..	..	..
....1881	11,000	8,922	8,922	1,288.14	39,288.27	6.926	.227	39,288.27	.15	5,893.24	..
....1881	9,200	10,039	10,039	2,028.	54,756.	4.950	.183	54,756.	.15	8,213.40	..
....1881	28,600	43,589	41,409	7,626.	228,780.	5.716	.191	228,780.	.12	27,453.60	..
....1881	5,300	3,787	1,984	1,181.25	21,262.50	3.206	.178	21,262.50	.12	2,551.50	..
....1881	..	108	108	120.	1,200.	.90	.09	1,200.	.05	60.	..
....1881	..	513	480	53.	424.	9.679	1.210	424.	.05	21.20	..
....1881	..	513	480	53.	424.	9.679	1.210	424.	.05	21.20	..
....1881	..	513	480	53.	424.	9.679	1.210	424.	.05	21.20	..
....1881	..	513	480	53.	424.	9.679	1.210	424.	.05	21.20	..
....1881	8,000	10,185	10,185	2,028.	54,756.	5.022	.186	54,756.	.15	8,213.40	..
....1881	..	8,400	8,400	1,152.09	28,802.25	7.291	.292	28,802.25	.15	4,320.34	..
....1881	..	1,775	1,775	1,044.	4,176.	1.700	1.133	3,706.	..	1,000.	.. $7 per cu. yd.
....1881	..	624	624	314.41	3,144.10	1.985	.198	3,144.10	.03	94.32	..
....1881	..	128	128	..	..	..	..	..	..	..	100
....1881	18,500	21,600	19,872	5,863.	103,922.	3.684	.208	103,922.	.15	15,588.30	..
....1881	..	408	388	260.	1,820.	1.569	.224	1,820.	.05	91.	..
....1895	11,810	15,710	15,710	..	7,293.	..	2.154	20,000.	.40	8,000.	Foundation stone 3 x 5 ft.
....1895	2,534	3,380	3,380	..	..	..	..				
ed..1895	..	534	534	937.5	5,625.	.569	.095	5,625.	.05	281.25	2,500·$1.50 lin. ft.
....											
1895	..	237,142	247,807	..	1,097,172.50	..	Av. .216	1,097,172.30	Av. .119	130,377.49	3,600
1895	..	15,710 Walls		..	11,469.00 Walls			23,706.00 Walls		9,000.00 Walls	
1895	..	6,551 Value not computed in cubic ft.		..	1,108,641.50			1,120,878.50		3.600.00	Value not computated in cu. ft.
		259,403								142,977.49	
....1895	7,745										
....1895	3,000										
....1895	19,200										
....1895	3,075										
	235,714										

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

CITY'S EXHIBIT 128.—(Continued.)

INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE 44TH STREET STATION OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

Daily Capacity, 8,500,000.

	BUILDINGS & APPARATUS.	Date Inst. or Erect.	Rowland, 1884. Actual Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Marks, 1906. Actual Cost.	Marks, 1906. Dept. Cost.
			APPARATUS CONTINUED.				
	Forward	....	$177,046	$419,896	$401,629	$276,200	$132,000
117.	Tar Separator System	....	..	2,250	2,250	2,000	..
118.	Scale House	....	..	300	300	300	..
119.	Forced Draught Fan	....	..	1,000	950	1,000	..
120.	Totals					$279,500	$132,000
121.	4 Holders 375 cu. ft. capacity (125)	....	320,000	111,946	111,946 (See 125)	300,000	279,500
122.	1 " 2,000,000 cu. ft. " (126)	....	435,500	104,982	104,982 (" 126)	225,000	$411,500
123.	1 " 125,000 " " (127)	....	61,000	15,280	15,280	75,000	..
124.	1 " 125,000 " " "	....	61,000	16,690	16,690	..	..
125.	4 Brick Tanks 93 x 32	....	..	214,747	214,747 (121)	..	..
126.	1 Brick Tank 185 ft. 3 in x 41 ft. 5 in	....	..	276,269	276,269 (122)	..	..
127.	2 Brick Tanks 75 x 32	....	..	74,850	74,850 (122)	..	..
128.	Total Value of Buildings (Meyer)				$407,767	$600,000	
129.	Total Value of Apparatus (Meyer)	....	..	..	407,175		
130.	Total Value of Yd. connections (Meyer)	....	..	..	99,910		
131.	Total Value of Holders (Meyer)	....	..	..	814,929		
132.	12 Gasogenes	....	$78,973	..	..		
133.	Gasogene appurtenances	....	46,735	..	..		
134.	18 benches, 36 furn	....	79,200	..	..		
135.	Conn. valves, etc	....	7,600	..	..		
136.	4 Carburetters	....	17,855	..	..		
137.	6 Ganges	....	28	..	..		
138.	2 Upright Boilers & Appurt	....	5,210	..	..		
139.	Beam Eng. & Counter shafting	....	13,000	..	..		
140.	2 Jet Exh. 2 McK. Blowers	....	7,298	..	..		
141.	Engine Room appurt	....	11,189	..	..		
142.	Cond. Room appurt	....	101	..	..		
143.	Stock in Eng. H. loft	....	8,617	..	..		
144.	Pump House pipe, etc	....	2,398	..	..		
145.	Oil tanks	....	43,709	..	..		
147.	Tank underground	....	2,950	..	..		
151.	Exp. gas holder	....	3,000	..	..		
153.	Naphtha tanks & Worth pumps	....	800	..	..		
154.	Meter provers Engs. etc	....	10,223	..	..		
155.	Copeland & Baron Eng	....	550	..	..		
156.	Insp. Meter & Pump	....	325	..	..		
157.	Valve & Holder conn	....	3,650	..	..		
158.	Stable con. horses etc	....	5,530	..	..		
159.	Naphtha tanks	....	6,900	..	..		
160.	Conn. & piping	....	60,000	..	..		
161.	Sewers, cisterns, sidewalk grading	....	19,608	..	..		
162.	Scows	....	5,800	..	..		
163.	Pipe & specials	....	6,300	..	..		
164.	Misc.	....	1,425	..	..		
	Total Rowlands	....	$1,503,520	$423,446	$405,129		

CITY'S EXHIBIT 129.

INWOOD.

INVENTORY OF THE BUILDINGS AND APPARATUS OF THE INWOOD GAS WORKS OF THE CONSOLIDATED

Distributing Station.

	BUILDING & APPARATUS	Date Inst. or Erect.	Rowland, 1884. Act. Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	MEYER.		
							Cubical Contents Superstructure.	Cost Per Square Ft.	Co P Cu
						Buildings Only.			
1.	Exhauster and Valve House	1886		3,330	3,230	572	13,728	$5.822	$
						Apparatus Only.			
							Marks, Actual Cost.		
2.	Exhauster and Eng. and Bldr	1898			1,640				
3.	Connections	1898		650	650		2,000		
4.	80-1 to 12 W. I. connections	1898		18	18				
5.	Valves	1898		255	255		300		
6.	1 Holder 60,000 cu. ft	1889		11,882	11,288		12,000	No value.	
7.	Brick Tank	1889		6,660	6,660		6,000		
8.	Total value of Buildings (Meyer)	1889			3,230				
9.	Total value of Apparatus (Meyer)	1889			1,640				
10.	Total value of Connections (Meyer)	1889			923				
11..	Total value of Holders (Meyer)	1889			17,948				
				19,465	44,252		20,300		

CITY'S EXHIBIT 129.

D APPARATUS OF THE INWOOD GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906.

Distributing Station.

					MEYER.		MARKS.				
Date Inst. or Erect.	Rowland, 1884. Act. Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	Cubical Contents Superstructure.	Cost Per Square Ft.	Cost Per Cubic Ft.	Cubical Contents in Basement	Cost Per Cubic Ft.	Total Cost.	Value Not Computed
				Buildings Only.							
1886		3,330	3,230	572	13,728	$5.822	$ .243	13,728	$ .10	$1,372.80	
				Apparatus Only.							
					Marks, Actual Cost.						
1898			1,640								
1898		650	650		2,000						
1898		18	18								
1898		255	255		300						
1889		11,882	11,288		12,000	No value.					
1889		6,660	6,660		6,000						
1889			3,230								
1889			1,640								
1889			923								
1889			17,948								
		19,465	44,252		20,300						

CITY'S EXHIBIT 131.

INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE 132D STREET GAS WORKS OF THE CONSOL OF NEW YORK CITY, 1906—DISTRIBUTING STATION

	BUILDING & APPARATUS.	Date Inst. or Erect.	Rowland, 1884. Act. Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	Cubical Contents, Superstructure.	MEYER. Cost Per Square Ft.	MEYER. Cost Per Cubic Ft.	Cubi Conte Inclu Basem
						BUILDINGS ONLY.				
1.	Governor and Boiler House......	.	..	$26,736	$26,736	4,900	202,125	$5.456	$ .132	202,1
2.	Boiler Chimney	..	..	3,040	3,040	81.54	3,805		.800	3,8
				$26,736	$29,776		202,125		Av. $ .132	202,1
				3,040	Value not computed cu. ft.		3,805			3,8
				$29,776			205,930			205,9
	APPARATUS ONLY.					Marks, Act. Cost.				
3.	Governor and Boiler House......		..							
	One No. 11 ½ Vert. Exhauster....	..	..	$2,910	$2,910	$3,000				
4.	One 16½x24 Hor. Buckeye Engine.	..	..	3,010	3,010	3,000				
5.	One 24-inch Connelly Gas Gov....	.	..	1,375	1,375	1,200				
6.	Three B. & W. Boilers and 2 Bat...	..	..	8,000	8,000	8,000				
7.	One 6x4 Knowles Dupl. Plunger Pump	..	..	143	143	150				
8.	One No. 6 Cochrane Feed Water Heater	..	..	505	505	500				
9.	One No. 10 Steel Plate Breeching.	..	..	750	750	750				
10.	One 3-inch Crown Water Heater..	..	..	165	165	150				
11.	One No. 12½ Metropolit'n Injector	..	.	78	78	..				
12.	One Blow-Off Tank, 3-inch x 10...	..	..	73	73	100				
13.	One 8-in. Hudson Exhauster Head	..	..	1,885	1,885	1,500				
14.	Toilet, etc....................	..	..	85	85	100				
				$18,979	$18,979					
15.	Connections	..	..	43,291	43,291	$18,450				
16.	Valves	..	..	4,423	4,423					
17.	One Holder, 5,000,000 Capacity...	..	..	346,915	$346,915	347,000				
18.	Foundation for Holder...........	..	..	47,050	47,050	47,000				
19.	Total Value of Buildings.........	..	..		$29,776	$394,000				
20.	Total Value of Apparatus........	..	..		18,979					
21.	Total Value of Connections.......	..	..		47,714	47,714				
22.	Total Value of Holders..........	..	..		393,965					
					$490,534					

CITY'S EXHIBIT 131.

THE BUILDINGS AND APPARATUS OF THE 132D STREET GAS WORKS OF THE CONSOLIDATED GAS COMPANY OF NEW YORK CITY, 1906—DISTRIBUTING STATION

BUILDINGS ONLY.

Rowland, 1884. Act. Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Ground Area.	Cubical Contents, Superstructure.	MEYER. Cost Per Square Ft.	MEYER. Cost Per Cubic Ft.	MARKS. Cubical Contents, Including Basement.	MARKS. Cost Per Square Ft.	MARKS. Total Cost.	MARKS. Value Not Computed.
..	$26,736	$26,736	4,900	202,125	$5.456	$ .132	202,125	$ .148	$30,000	..
..	3,040	3,040	81.54	3,805		.800	3,805		..	$3,000
	$26,736	$29,776		202,125		Av. $ .132	202,125	Av. $ .148	$30,000	$3,000
	3,040	Value not computed cu. ft.		3,805			3,805		3,000	Value not computed cu. ft.
	$29,776			205,930			205,930		$33,000	

ATUS ONLY.

Rowland, 1884. Act. Cost.	Meyer, 1906. Actual Cost.	Meyer, 1906. Dept. Cost.	Marks, Act. Cost.
..			
..	$2,910	$2,910	$3,000
..	3,010	3,010	3,000
..	1,375	1,375	1,200
..	8,000	8,000	8,000
..	143	143	150
..	505	505	500
..	750	750	750
..	165	165	150
.	78	78	..
..	73	73	100
..	1,885	1,885	1,500
..	85	85	100
	$18,979	$18,979	
..	43,291	43,291	$18,450
..	4,423	4,423	
..	346,915	$346,915	347,000
..	47,050	47,050	47,000
..		$29,776	$394,000
..		18,979	
..		47,714	47,714
..		393,965	
		$490,534	

CITY'S EXHIBIT, 133.

INVENTORIES OF THE BUILDINGS AND APPARATUS OF THE 63RD STREET GAS WORKS OF THE CONSOLIDATED

Distributing Station.

						MEYER.				
	BUILDINGS & APPARATUS.	Date Inst. or Erect.	Rowland, 1884. Act. Cost.	Meyer, 1906. Act. Cost.	Meyer, 1936. Dep. Cost.	Ground Area.	Cub. Contents Superstucture Only.	Cost Per Square Ft.	Cost Per Cubic Ft.	Cub. Contents Including Basement.
					BUILDINGS ONLY					
1.	Engine Room	....	..	$1,023	$1,023	672	6,720	$1,522	$.152	6,720
2.	Valve House	....	..	870	870	480	5,040	1,831	.173	5,040
3.	Boiler House	....	..	960	960	510	7,905	1,882	.122	7,905
4.	Brick Walls Around Property	....	..	8,576	8,576	..	8,800	..	.975	8,800
		....	..	$2,853	$11,429	..	19,665	..	Av..$.145	19,665
		....	..	8,576 Walls	..	..	8,800 Walls			8,800
				$11,429			28,465			28,465
	APPARATUS ONLY.									
						Marks, Act. Cost.				
5.	Engine Room One 30 h.p. Morris Engine Rev. 10x8	....	$1,400	$1,430	$1,287	$1,300				
6.	One Sturtevant Exhauster Connections, etc	....	..	750	735	800				
7.	Valve House, One Photometer	....	..	650	650	650				
8.	Boiler House, One 66-in. x 16-in. Cont. Iron Works Boiler	....	..	1,250	1,225	1,200				
9.	One Simplex Blake Pump, 10x6	....	..	360	340	400				
10.	One Metropolitan Injector	....	..	45	45	50				
11.	In the Yard, One Duplex Pump, 12x6	....	..	330	314	300				
12.	One Drip Water Tank	....	..	350	332	350				
		....	1,400	5,165	4,928	5,050				
13.	Pipe and Connections, 225 24-inch to 30-inch	....	..	6,960	6,960	..				
14.	Eighty 1½ and 2	....	..	18	18	..				
15.	Valves	....	..	909	909	7,887				
16.	One No. 3 Holder, 3,000,000 c. f. Capacity	....	..	152,355	152,355	..	152,000			
17.	Retaining Wall (200 ft.)	....	..	11,090	11,090					
18.	Brick Tank	....	..	256,922	256,922	..	267,000			
							419,000			
19.	Total for Buildings (Meyer)	....	..	..	11,429					
20.	Total for Connections (Meyer)	....	..	..	4,828					
21	Total for Connections (Meyer)	....	..	..	7,887					
22.	Total for Holders (Meyer)	....	..	..	420,367					
		....	..	..	444,511					

CITY'S EXHIBIT, 133.

GS AND APPARATUS OF THE 63RD STREET GAS WORKS OF THE CONSOLIDATED GAS CO. OF NEW YORK CITY, 1906.

Distributing Station.

	Date Inst. or Erect.	Rowland, 1884. Act. Cost.	Meyer, 1906. Act. Cost.	Meyer, 1906. Dep. Cost.	Ground Area.	MEYER. Cub. Contents Superstucture Only.	MEYER. Cost Per Square Ft.	MEYER. Cost Per Cubic Ft.	MARKS. Cub. Contents Including Basement.	MARKS. Cost Per Cubic Ft.	Total Cost.	Values Not Computed.	1906. Dept. Cost.
				BUILDINGS ONLY									
....	....	..	$1,023	$1,023	672	6,720	$1,522	$.152	6,720	$ .05	$336		
....	....	..	870	870	480	5,040	1,831	.173	5,040	.05	252		
....	....	..	960	960	510	7,905	1,882	.122	7,905	.05	395.25		
....	....	..	8,576	8,576	..	8,800	..	.975	8,800	.40	3,520		
	....	..	$2,853	$11,429	..	19,665	..	Av..$.145	19,665	Av. $.05	$983.25		
	....	..	8,576 Walls	..	..	8,800 Walls			8,800 Walls		3,520	Walls	
			$11,429			28,465			28,465		$4,503.25		

RATUS ONLY.

					Marks, Act. Cost.	
x8....	....	$1,400	$1,430	$1,287	$1,300	
....	....	..	750	735	800	
....	....	..	650	650	650	
Boiler	....	..	1,250	1,225	1,200	
....	....	..	360	340	400	
....	....	..	45	45	50	
....	....	..	330	314	300	
....	....	..	350	332	350	
	....	1,400	5,165	4,928	5,050	
....	....	..	6,960	6,960	..	
....	....	..	18	18	..	
... ..	....	..	909	909	7,887	
....	....	..	152,355	152,355	..	152,000
....	....	..	11,090	11,090		
....	....	..	256,922	256,922	..	267,000
						419,000
....	....	..	..	11,429		
....	....	..	..	4,828		
....	....	..	..	7,887		
....	....	..	..	420,367		
	....	..	..	444,511		

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

8682

CITY'S EXHIBIT 16A.

CONTRACT FOR BITUMINOUS COAL.

APRIL 29, 1903.

Mr. L. B. Gawtry, Vice-President, Consolidated Gas Company, 4 Irving Place, City.

DEAR SIR:

This will confirm our conversation of this date, whereby the Coal Co. agrees to sell to the Consolidated Gas Company of New York 50,000 tons of 3/4" screened coal, to be shipped between date and April 1st, 1904, subject to strikes, car supply and all other causes beyond our control, and to be delivered to you in boats alongside your docks at your several plants.

The price to be $3.45 per ton of 2240 lbs. alongside your docks.

It is further understood that on this contract we will ship you coal from our and mines, or in the event of our inability to ship coal from these two mines, that we will ship you coal equal thereto, if not better, for gas making purposes.

Please acknowledge receipt of this letter confirming our agreement, and oblige,

Yours very truly,

—— ——.

8683 Copy.

NEW YORK, *May 1st*, 1903.

CONSOLIDATED GAS COMPANY OF NEW YORK.

DEAR SIR:

We beg to acknowledge the receipt of your letter of April 29th, and we hereby agree to purchase from you fifty thousand (50,000) tons of screened coal, to be equal in quality to the coal that we have had from you in the past, and to be delivered alongside of our docks at $3.45 per gross ton. This coal is purchased under the same conditions, *i. e.*, as to weights, etc., as heretofore; and is to be taken from your and mines as far as possible, but in the event of your inability to ship the total quantity from these two mines, the balance to be equal thereto, if not better, for gas-making purposes.

Kindly communicate with Mr. A. M. Smith, at this address, regarding details of shipments, etc.

Yours truly,
(Signed) L. B. G.,
Vice-President.

CITY'S EXHIBIT 34.

(For Identification.)

Being book called "Vouchers Audited, Contracts" (Record, page 1014).

8684

CITY'S EXHIBIT 123.

Directors:
W. J. Springborn.
Harris R. Cooley.
D. E. Leslie.

Telephones:
Bell Main 56
Cuy. Central 1

City of Cleveland,
Department of Public Service,
Division of Water.

Edward W. Bemis, Superintendent of Water Works.

Nov. 12*th*, 1906.

Gen'l Morris R. Schaff, C/o Massachusetts Gas Commission, Boston, Mass.

DEAR GEN'L SCHAFF:

Will you kindly write me on receipt of this whether it was Lynn or Fall River that you said had just reduced the price of gas to 85 cents? Please direct your reply to me at No. 720 Park Row Building, New York City, where I expect to be from Thursday morning until Saturday noon.

Thanking you in advance, I remain,

Very sincerely yours,

EDWARD W. BEMIS,
M. S.

B-H

Lynn, 85 cents from Oct. 1st.
M. S.

8685

CITY'S EXHIBIT 124.

ELY

Office of
The Director
C. S. S.

Department of Commerce and Labor.
Bureau of the Census.
Washington,

DECEMBER 5, 1906.

Mr. Edward W. Bemis, Supt., Water Works, Dept. of Public Service, Cleveland, Ohio.

DEAR SIR:

I have to acknowledge the receipt of your letter of November 30th, which was received in this Office December 4th. In response to your inquiry, I will say that my estimates of the population of the several boroughs of New York city were based upon their increase as shown by the State Census of 1905 over the Federal Census of 1900, assuming that the yearly increase was one-fifth of the quinquennial increase. The assumption that the island of Manhattan is not increasing in population is incorrect, as the State Census of 1905 showed an actual increase in the five years of 252,835.

Very respectfully, M. PORTER,
Acting Director.

8686 CITY'S EXHIBIT 136.

"AN ACT to amend Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-two, entitled 'An Act to authorize the East River Gas Company of Long Island City to supply gas and electricity in the City of New York,' so as to authorize the said company to lay and maintain mains and pipes in that portion of the Borough of Queens included in the former City of Long Island City."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-two, entitled "An Act to authorize the East River Gas Company of Long Island City to supply gas and electricity in the City of New York," is hereby amended by incorporating therein an additional section between sections six and seven, to be known as section six-a and to read as follows:

6*a*. The East River Gas Company of Long Island City, its successors and assigns, shall also have the right to exercise in the portion of the Borough of Queens, included in the former City of Long Island City, as well as in the territory hereinbefore expressly included all the rights, powers and privileges hereinbefore conferred upon the said company, but subject to all payments, obligations, and restrictions hereinbefore imposed, provided, however, that no electrical franchises are by this section conferred upon the said company.

SECTION 2. This act shall take effect immediately.

8687 COMPLAINANT'S EXHIBIT 335.

This contract made and entered into this fifth day of December, 1904, between Gulf Refining Company, of Port Arthur, Texas, first party, and Queens Borough Gas & Electric Co., Rockaway Beach, L. I., second party.

Witnesseth—That first party sells and agrees to deliver to second party, and the second party agrees to purchase and receive from first party.

Article—Solar (Gas) Oil for use in their plant at Rockaway Park, L. I., N. Y.

Quantity—Bbls. Maximum 400,000 gals. Minimum 350,000 gals.

Price—Three and one-quarter cents per gallon. F. O. B. Rockaway Park, L. I.

Delivery—By Barge, at tank located at Rockaway Park, in lots of not less than 60,000 gals, nor more than—bbls., unless otherwise agreed upon.

Time—Between April 1st, 1905, and April 1st, 1906. Five days written notice to be given representative of first party at No. 507 Battery Park Bldg. before each delivery is required.

Payment—Payments shall be made on the 10th day of each month at first party's Pittsburg office for all oil delivered during the preceding month, and in case second party shall fail to pay any draft drawn by first party for bills due, first party may, if so elect, cancel and terminate this contract.

Demurrage—If delivery is by rail, second party agrees to unload cars without delay, and any demurrage accruing to be paid by second party.

Conditions—Delivery under these terms can be enforced only wherein the discharge pipe—if any be required—shall be provided by the second party of a size not less than three inches, if distance
be less than 1000 feet, or four inches if more, but in no case
8688 for more than one mile without special agreement. If by
water, the second party shall place substantial posts for tying barge and arrange suitable piling for properly fending same, with necessary platform for support of discharge pipe, tying up, etc. The first party agrees to pump oil from the tanks or barge to reservoir of the second party. Delivery may be made by rail or water, as first party may elect.

This agreement cannot be used to enforce delivery by water to second party if water at place of delivery be less than eight feet. Liability of first party ceases when shipment is delivered to Railroad Company.

In case of strike, fire, failure of railway or vessel service as public or private carriers, or any unavoidable act of God or providential cause happening to either party to this contract, the suffering party may, at its or their option, suspend terms and conditions of this contract, for a reasonable period, and no liability for damages shall attach against either party on account thereof.

This contract to be signed in duplicate by both parties hereto, and become effective only when approved by General Sales Manager of the first party; and when so approved, duplicate will be forwarded promptly to second party.

Witness the signature of first and second parties this fifth day of December, 1905.

GULF REFINING COMPANY,
Attest: By EDW. A. LYON, *Agent.*

QUEENS BOROUGH GAS & ELECTRIC CO.,
Approved: CARELTON MACY, *President.*

G. R. NUTTY,
General Sales Manager.

STATE'S EXHIBIT ZZ.

CONSOLIDATED GAS COMPANY OF NEW YORK.

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR 1905.

Gas Made—				
14th St. Station	1,490,909,000 c. f.			
42nd St. Station	1,239,245,000 c. f.			
21st St. Station	4,356,120,000 c. f.			
44th St. Station	2,265,475,000 c. f.			
99th St. Station	1,306,061,000 c. f.			
		10,657,810,000 c. f.		
Gas Made by Other Companies—Including Leakage—				
New Amsterdam Gas Co.	2,173,196,400 c. f.			
Standard Gas Light Co.	403,309,322 c. f.			
Mutual Gas Light Co.	267,696,800 c. f.			
Central Union Gas Co.	85,007,800 c. f.	2,929,210,322 c. f.		
		13,587,020,322 c. f.		
Gas Sales—By Branches—				
Branch No. 1	2,760,004,900 c. f.		$2,758,853.62	
Branch No. 2	3,364,012,300 c. f.		3,361,483.87	
Branch No. 4	2,959,411,600 c. f.		2,957,782.23	
Branch No. 6	3,548,021,490 c. f.		3,542,279.46	
G. O.	651,713,477 c. f.		933,403.79	
	13,283,163,767 c. f.		$13,553,802.97	$13,553,802.97
Operating Expenses (Coal)—				
14th St. Station.	Tons.			
Used in Retorts	123,773.37 at $3.19	394,907.04		
Used in Generators (21st)	62.02 at 4.36	270.66		
		395,177.70		
Labor employed on above coal		17,179.74		
Cartage employed on above coal		14,090.84	426,448.28	
42nd St. Station.	Tons.			
Used in Retorts	105,509.44 at $3.17	334,699.17		
Labor employed on coal		18,326.06		
Cartage employed on coal		539.24	353,564.47	
21st St. Station.	Tons.			
Used in Generators	56,477.29 at $4.36	246,502.78		
Used under Boilers	6,916.25 at 3.65	25,254.62		
		271,757.40		
Labor employed on coal		5,544.25		
Cartage employed on coal		861.34	278,162.99	
44th St. Station.	Tons.			
Used in Generators	29,888.37 at $4.34	129,837.90		
Used under Boilers	2,178.32 at 3.72	8,101.45		
		137,939.35		
Labor employed on coal		3,815.19		
Cartage employed on coal		243.59	141,998.13	
99th St. Station.	Tons.			
Used in Generators	19,597.00 at $4.39	86,068.91		
Used under Boilers	1,305.10 at 3.68	4,800.36		
		90,869.27		
Labor employed on coal		4,284.83		
Cartage employed on coal		2,487.88	97,641.98	$1,297,815.85
Forward				$1,297,815.85

8690 5964

Forward............					$1,297,815.85
Less Residuals:					
Coke—					
(a) 14th St. Station...............	83,434.45 Lds. at $2.09		174,219.31		
Less Cost to Handle—					
Labor		25,843.76			
Cartage		6,599.67	32,443.43	141,775.88	
(a) 42nd St. Station...............	83,637.25 Lds. at $1.96		164,081.60		
Less Cost to Handle—					
Labor		9,834.63			
Cartage		4,565.30	14,399.93	149,681.67	291,457.55
Tar (Coal).					
14th St. Station.....	123,773.37 Tons Carbonized at 28.59c			35,392.33	
42nd St. Station....	105,509.44 Tons Carbonized at 28.58c			30,154.37	65,546.70
Ammoniacal Liquor—					
14th St. Station...................	2,623,811 lbs. at 01.34			35,244.20	
42nd St. Station	2,273,075 lbs. at 01.35			30,605.45	65,849.65
Carbon—					
14th St. Station...................	216,955 lbs. at 01.00c			2,169.55	
42nd St. Station.........	268,765 lbs. at 01.00c			2,687.65	4,857.20
Spent Oxide—					
14th St. Station...................	4,208,381 lbs. at 0.12c			4,827.82	
42nd St. Station...................	1,368,654 lbs. at 0.10c			1,368.65	6,196.47
Oil Tar—					
21st St. Station...................	1,384,460 gals. at 1.97c			27,294.43	
44th St. Station...................	852,437 gals. at 1.86c			15,881.95	
99th St. Station...................	475,929 gals. at 1.90c			9,030.88	52,207.26
	Total Residuals......				$486,114.83
					$811,701.02
Coke—					
(b) 21st St. Station............	14,014.18 tons at $3.2223		45,159.20		
Labor in Handling—			1,159.00	46,309.20	
21st St. Station for account of 14th St:					
Oil Gas........................	4.30 tons at $3.2223			14.40	
(h) 44th St. Station............	5,400.22 tons at $3.3528		18,106.23		
Labor in Handling—			50.38	18,156.61	
(h) 99th St. Station............	473.85 tons at $1.4609		692.26		
Labor in Handling—			92.93		
Cartage.			43.87	829.06	65,309.27
Fuel. Oil, Labor (inc. Drip Oil if used in Mfg.):					
21st St. Station..				1,629.19	
44th St. Station..................................				1,153.76	
99th St. Station..................................				1,641.75	4,424.70
	Forward				$881,434.99

(a) For tons and avg price for ton see pp. 13 & 14.
(h) For loads and avg price for loads see pp. 15-16-17.

COPY BOUN

	Forward............				$881,434.99
itha—					
21st St. Station....................	5,587 Gals	at .04-3/8c			244.43
Oil—					
14th St. Station................	3,381,667 Gals.	at .04.22c		$142,629.09	
(a) 21st St. Station............	20,058,206 Gals.	at 04.26c		855,081.15	
42nd St. Station................	2,083,413 Gals.	at 04.16c		86,602.69	
44th St. Station................	10,573,957 Gals.	at 04.23c		446,873.18	
99th St. Station................	5,779,427 Gals.	at 04.13c		238,782.31	
	41,876,670 Gals.	at 04.23c			1,769,968.42
Oil—					
42nd St. Station................	2,502 Gals.	at .02c			50.04
e—					
42nd St. Station................	62,125 Bus.	at 04.99c		3,101.48	
21st St. Station................	249 Bus.	at 05.04c		12.54	3,114.02
de—					
14th St. Station................	25,790 Bus	at 17.42c		4,492.75	
21st St. Station................	41,810 Bus.	at 15.54c		6,497.10	
42nd St. Station................	20,000 Bus.	at 14.63c		2,926.24	
44th St. Station................	24,385 Bus.	at 15.97c		3,893.53	
99th St. Station................	9,500 Bus.	at 14.35c		1,363.73	19,173.35
	121,485 Bus.	at 15.78c			
		Per M. c. f.			
ter—					
14th St. Station................	3,594,000 c. f.	at $1.00		3,594.80	
21st St. Station................	9,230,200 c. f.	at 1.00		9,230.20	
42nd St. Station................	3,059,300 c. f.	at 1.00		3,059.30	
44th St. Station................	4,444,400 c. f.	at 1.00		4,444.40	
99th St. Station................	2,355,500 c. f.	at 1.00		2,355.50	* 22,684.20
	**22,683,400 c. f.	at $1.00			
, Waste and Sundries—					
14th St. Station—					
Colored Waste, 6,440 lbs.......................at		.05c	$322.00		
Loam, 364 loads................................at		1.00	364.00		
Machine Oil................................			......		
Winter Car Oil, 3,405 1/2 gals...............at		.13c	442.67		
Crank Case Oil, 324 1/2 gals..................at		.15c	48.70		
Renoun Oil, 25 1/2 gals.......................at		.19c	4.74		
Amber Cylinder Oil, 265 1/2 gals.............at		.27c	71.71		
Dark Cylinder Oil, 1,987 gals.................at		.25c	496.78		
Cog Grease, 1,437 lbs.........................at		.05c	71.85		
Lubricant, 507 lbs............................at		.05c	25.35		
Asbestos Packing, 25 lbs......................at		.18c	4.60		
Motor Grease, 52 lbs..........................at		.07c	3.56		
Square Flax Packing, 65 3/8 lbs..............at		.24c	15.69		
Rubber Packing, 91 1/2 lbs....................at		.41c	37.25		
Usudurium Packing, 36 lbs.....................at		.64c	22.85		
Rainbow Packing, 70 5/8 lbs...................at		.49c	34.22		
Pure Sheet Packing, 5 1/2 lbs.................at.		.71 1/4c	3.92		
Electric Current			423.48		
Barrels, *148			*144.00		
			2,249.37		
ed at 21st St. for 14 St. Oil Gas—					
White Waste, 71 lbs...........................at		.09c	6.43		
Colored Waste, 534 lbs........................at		.05c	26.70		
Cylinder Oil, 59 gals.........................at		.25c	14.75		
Dynamo Eng. Oil, 200 gals.....................at		.18c	36.00		
Loam, 28 loads................................at		$1.30	36.45		
Winter Car Oil, 3 gals........................at		.13c	.39	2,370.09	
	Forward			2,370.09	$2,696,669.45

**Water used as shown by Engineer's Report is the amount indexed by Station Meter taken by our-lves.

Water used as shown in this statement is the amount as billed by the City and actually paid.

a Excluding gas oil used for 14th St. Station.

* Red ink in original.

TO CLOSE IN CENTER

Brought forward			$2,370.09	$2,696,669.4
42nd St. Station—				
Colored Waste, 1,983 lbs.	at 05.00c	$99.15		
Cylinder Oil, 586 1/2 gals.	at 27.00c	158.36		
Machine Oil, 2,878 1/2 gals.	at 17.70c	511.25		
Winter Car Oil, 412 gals.	at 13.00c	53.57		
Albany Grease, 590 lbs.	at 05.70c	34.26		
Barrels, *67		*63.70	792.89	
21st St. Station—				
White Waste, 777 lbs.	at 09.00c	70.84		
Colored Waste, 1,711 lbs.	at 05.00c	85.55		
Loam, 14 loads	at $1.35	18.90		
Cylinder Oil, 394 gals.	at 25.00c	98.51		
Dynamo Engine Oil, 1,627 gals.	at 18.00c	292.86		
Winter Car Oil, 20 gals.	at 13.00c	2.60		
Candles, 847 packages	at 02.30c	19.53		
Shavings, 838 bales	at 26.80c	224.38		
Prime Lard Oil, 6 lbs.	at 60.00c	3.60		
Texas Cylinder Oil, 18 gals.	at 13.00c	2.34		
Texas Engine Oil, 17 1/2 gals.	at 16.00c	2.80		
Barrels, *75		*73.80	748.11	
44th St. Station—				
Colored Waste, 2,413 lbs.	at 05.00c	120.65		
Cylinder Oil, 360 gals.	at 27.00c	97.23		
Machine Oil, 306 1/2 gals.	at 18.00c	55.17		
Winter Car Oil, 449 1/2 gals.	at 13.00c	58.47		
Shield's Cylinder Compounds, 3,843 gals.	at 07.20c	276.71		
Carbonate Soda, 260 lbs.	at 01.00c	2.60		
Kent's Compound, 242 gals.		28.32		
Heavy Engine Oil, 983 gals.	at 18.00c	176.94		
Shavings, 75 1/2 bales	at 30.10c	22.72		
Tallow, 40 lbs.	at 09.00c	3.60		
Miscellaneous		3.75		
Barrels, *56		*53.45	792.71	
99th St. Station—				
White Waste, 295 lbs.	at 09.10c	26.92		
Colored Waste, 1,570 lbs.	at 05.00c	78.50		
Boiler Liquid, 4,926 gals.	at 07.40c	362.73		
Cylinder Oil, 187 gals.	at 25.00c	46.76		
Heavy Engine Oil, 719 gals.	at 18.00c	129.42		
Glycerine, 250 lbs.	at 17.00c	42.50		
Dry Graphite, 6 lbs.	at 16.00c	.96		
Lub. Candles, 2 packages	at 03.00c	.06		
Shavings, 48 bales	at 30.20c	14.50		
Miscellaneous		3.00		
Barrels, *2		*2.00	703.35	5,40
Cartage				17,12
Forward				$2,719,20

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* Red ink in Original.

PAY-ROLL LABOR FOR THE CALENDAR YEAR 1905—

Brought forward			2,719,200.20
Labor—			
Generator House—			
21st St. Station	38,165.42		
44th St. Station	18,705.17		
99th St. Station	10,388.96	67,259.55	
Retort House—			
14th St. Station	87,754.21		
42nd St. Station	130,420.64	218,174.85	
Boiler House—			
14th St. Station	6,033.72		
42nd St. Station	4,782.90		
21st St. Station	11,837.65		
44th St. Station	8,586.21		
99th St. Station	5,451.91	36,692.39	
Purifying House—			
14th St. Station	4,179.45		
42nd St. Station	4,668.31		
21st St. Station	2,590.07		
44th St. Station	881.41		
99th St. Station	1,640.16	13,959.40	
Superintendence—			
14th St. Station	6,894.06		
42nd St. Station	4,822.42		
21st St. Station	10,443.99		
44th St. Station	7,495.00		
99th St. Station	6,554.96	36,210.43	
Gas Oil—			
14th St. Station	10,335.42	10,335.42	382,632.04
Forward			$3,101,832.24

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NET AMOUNT OF MATERIAL AND LABOR.

Brought forward......			$3,101,832.
Repairs to Buildings—			
14th St. Station—			
Labor	3,323.74		
Material	1,168.47		
42nd St. Station—			
Labor	3,361.99		
Material	1,204.39		
21st St. Station—			
Labor	5,049.95		
Material	3,854.66		
44th St. Station—			
Labor	2,887.04		
Material	755.01		
99th St. Station—			
Labor	1,584.06	16,206.78	
Material	1,711.38	8,693.91	
To Repairs to Apparatus—			
14th St. Station—			
Labor	28,962.02		
Material	17,919.15		
42nd St. Station—			
Labor	13,278.16		
Material	10,306.38		
21st St. Station—			
Labor	26,506.22		
Material	37,739.83		
44th St. Station—			
Labor	10,838.99		
Material	11,486.08		
99th St. Station—			
Labor	6,988.13	86,573.52	
Material	5,172.43	82,623.87	
To Repairs to Tools and Implements—			
14th St. Station—			
Labor	4,423.90		
Material	1,429.59		
42nd St. Station—			
Labor	3,669.75		
Material	907.86		
21st St. Station—			
Labor	1,510.85		
Material	1,973.11		
44th St. Station—			
Labor	1,274.42		
Material	221.42		
99th St. Station—			
Labor	710.25	11,589.17	
Material	107.33	4,639.31	
Total Labor		114,369.47	
Total Material		95,957.09	210,32
Forward			$3,312,15

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Brought forward $3,312,158.8

Expense—			
14th St. Station—			
Labor	6,444.83		
Material	3,622.91	10,067.74	
21st St. Station—			
Labor	13,998.23		
Material	6,735.76	20,733.99	
42nd St. Station—			
Labor	7,188.08		
Material	4,124.21	11,312.29	
44th St. Station—			
Labor	4,669.53		
Material	3,911.02	8,580.55	
99th St. Station—			
Labor	5,856.69		
Material	2,465.71	8,322.40	59,016.9
Distribution—			
14th St. Station—			
Labor	7,389.15		
Material	3,894.04	11,283.19	
21st St. Station—			
Labor	5,425.01		
Material	9,498.95	14,923.96	
42nd St. Station—			
Labor	1,916.51	1,916.51	
Material			
44th St. Station—			
Labor	1,825.00	1,825.00	
Material			
99th St. Station—			
Labor	1,855.13		
Material	51.55	1,906.68	31,855.34
Forward			$3,403,031.1

TO CLOSE IN CENTER

Brought Forward			$3,403,031.1
DISTRIBUTING STATION EXPENSE—			
18th Street Station—			
Coke—Material	1,226.75		
Water—Material	458.84		
Superintendents	2,100.00		
Boiler and Engine Room Labor	748.62		
Valvemen Labor	1,825.25		
Repairs to Buildings—			
Labor	358.13		
Material	128.94		
Repairs to Apparatus—			
Labor	494.77		
Material	*381.77		
Repairs to Tools and Implements—			
Labor			
Material	*5.58		
Expense—			
Labor	7,987.11		
Material	1,327.83	16,268.89	
63rd St. Station—			
Coke—Material	1,701.25		
Water—Material	961.20		
Boiler and Engine Room Labor	3,484.50		
Valvemen Labor	83.20		
Repairs to Buildings—			
Labor	21.00		
Material	2.35		
Repairs to Apparatus—			
Labor	1,411.12		
Material	1,242.34		
Repairs to Tools and Implements—			
Labor			
Material	1.29		
Expense—			
Labor	1,550.61		
Material	219.75	10,678.61	
65th St. Station—			
Coke—Material	3,451.75		
Water—Material	309.40		
Boiler and Engine Room Labor	3,689.13		
Repairs to Buildings—			
Labor	135.59		
Material	7.55		
Repairs to Apparatus—			
Labor	440.44		
Material	879.27		
Repairs to Tools and Implements—			
Labor			
Material	5.16		
Expense—			
Labor	1,765.91		
Material	704.58	11,388.78	
Forward		$38,336.28	$3,403,031.

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*Red ink in Original.

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Brought forward		$38,336.22	$3,403,031.1
111th St. Station—			
Coal—Material	2,301.03		
Coke—Material	3,368.10		
Water—Material	583.60		
Boiler and Engine Room Labor	4,521.39		
Valvemen Labor	822.38		
Repairs to Buildings—			
Labor	86.57		
Material	*.34		
Repairs to Apparatus—			
Labor	1,019.53		
Material	1,099.04		
Repairs to Tools and Implements—			
Labor			
Material			
Expense—			
Labor	2,633.06		
Material	868.73	17,303.09	
Inwood Station—			
Coal—Material	35.31		
Water—Material	4.10		
Valvemen	730.00		
Repairs to Buildings—			
Labor			
Material	13.30		
Repairs to Apparatus—			
Labor	30.56		
Material	3.25		
Repairs to Tools and Implements—			
Labor			
Material	82.68	889.20	**56,538.57
Forward			$3,459,569.68

***Memorandum—*

Figures as given above showing Distribution reflect the accounts as recorded in our books. For the purpose of all our reports, the item of Distributing Stations' Expense $56,538.57 is charged to each Station's Distribution on the ratio that the Station make bears to the total make.

	Distribution.	Distributing Station Expense.	Total Distribution as Reported.
Fourteenth Street Station	11,283.19	7,941.88	19,225.07
Forty-second Street Station	1,916.51	6,604.34	8,520.85
Twenty-first Street Station	14,923.96	23,033.36	37,957.32
Forty-fourth Street Station	1,825.00	12,010.14	13,835.14
Ninety-ninth Street Station	1,906.68	6,948.85	8,855.53
Total	$31,855.34	$56,538.57	$88,393.91

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*Red ink in Original.

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Brought forward			$3,459,569.68
Profit and Loss Adjustment—			
Increase in Material and Supplies at the Stations............		*$11,408.93	
Difference in price between Coke and Screenings.............		3,797.79	
Loss and Petty Cash Fund................................		100.00	
Miscellaneous		2.75	7,508.59
Experiments— This represents the cost to the Company to maintain a Chemical Laboratory at 21st Street Station for the purpose of testing, bettering and improving our product			
Labor and Material (outside Stations)—			3,030.08
As per detailed statement already presented showing the following results:			
New Amsterdam Gas Co.............	2,124,644,788 c. f. at 35.05c	$744,625.48	
Standard Gas Light Co..............	394,298,939 c. f. at 33.14c	130,653.45	
Mutual Gas Light Co................	261,716,265 c. f. at 36.54c	95,622.55	
Central Union Gas Co...............	83,042,349 c. f. at 31.47c	26,138.41	
	2,863,702,341 c. f. at 34.82c	$997,039.89	997,039.89
Total Station Cost..................................			4,452,131.26
Distributing Expense— Including General and Administrative Expense, Meter Setting, Jobbing, Repairs, Street Lamps Maintenance, Insurance, Advertising, Interest, Taxes, Contingent Expense, etc....			4,512,355.72
Fixed Charges—			972,423.44
Total			$9,936,910.42

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ALL STATIONS—SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR 1905.

	Cubic Feet.		Cost per M. Made.	Cost per M. Sold.
Gas Made	10,657,810,000			
Gas Sold (based on a leakage of 2.24 per cent)	10,419,461,426			
Coal Used—345,707.16 tons, at 3.56 per ton		$1,230,442.89	11.54	11.81
Labor Handling		49,150.07	00.46	00.47
Cartage		18, 222.89	00.17	00.18
		$1,297,815.85	12.17	12.46
Less Residuals—				
Coke—				
167,071.70 loads at $2.02 per load 111,878.37 tons at $3.02 per ton	$338,300.91			
Less—				
Labor handling 35,678.39				
Cartage 11,164.97				
	46,843.36	291,457.55	02.73	02.80
Tar, 229,282.81 tons, Carbonized at 28.59c		65,546.70	00.62	00.63
Amm. Liq., 4,896,886 lbs. at 1.34c		65,849.65	00.62	00.63
Carbon, 485,720 lbs. at 1.00c		4,857.20	00.04	00.05
Spent Oxide, 5,577,034 lbs. at 0.11c		6,196.47	00.06	00.06
Oil Tar, 2,710,826 gals. at 1.93c		52,207.26	00.49	00.50
		486,114.83	04.56	04.67
Net Total		$811,701.02	07.61	07.79
Coke—				
29,706.19 loads at $2.1535 19,892.54 tons at 3,2160		63,972.09	00.66	00.61
Labor Handling		1,29331	00.01	00.01
Cartage		43.87	....	....
		65,309.27	00.61	00.62
Fuel Oil Labor (Inc. Drip Oil Used in Mfg.)		4,424.70	00.04	00.04
Naphtha, 5,587 gals. at 04.38c		244.43	....	....
Gas Oil, 41,876,670 gals. at 04.23c		1,769,968.42	16.61	16.99
Fuel Oil, 2,502 gals. at 02.00c		50.04	....	....
Lime, 62,374 bus. at 04.99c		3,114.02	00.03	00.03
Oxide, 121,485 bus. at 15.78c		19,173.35	00.18	00.18
Water, 22,684,200 c. f. at $1.00 per M.		22,684.20	00.22	00.22
Oil, Waste and Sundries		5,407.15	00.05	00.06
Cartage (Summary of Cartage Operations for the Calendar year hereto attached)		17,123.60	00.16	00.17
Gas Making Labor—				
Generator House Labor		67,259.55	00.63	00.65
Retort House Labor		218,174.85	02.05	02.09
Boiler House Labor		36,692.39	00.34	00.35
Purifying House Labor		13,959.40	00.13	00.13
Superintendence		36,210.43	00.34	00.35
At 21st on account of 14th St. Oil Gas		10,335.42	00.10	00.10
		3,101,832.24	29.10	29.77
Repairs (Including Labor and Material)		210,326.56	01.98	02.02
Expense (Including Labor and Material)		59,016.97	00.55	00.57
Distribution (Including Labor and Material)		88,393.91	00.83	00.85
Experiments (Including Labor and Material)		3,030.08	00.03	00.03
P. & L. Adjustment		*7,508.39	00.07	00.07
Forward		$3,455,091.37	32.42	33.16

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*Red ink in Original.

TO CLOSE IN CEN

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	Cubic Feet.			Cost per M. Made.	Cost per M. Sold.
Brought forward			$3,455,091.37		33.17
Labor and Material (Outside Stations) as per detailed statement already presented, showing the following result:					
New Amsterdam Gas Co.	2,124,644,788	at 35.05c	744,625.48		
Standard Gas Light Co.	394,298,939	at 33.14c	130,653.45		
Mutual Gas Light Co.	261,716,265	at 36.54c	95,622.55		
Central Union Gas Co.	83,042,349	at 31.47c	26,138.41		
	2,863,702,341	at 34.82	$997,039.89	997,039.89	34.82
Total Station Cost				4,452,131.26	33.52
Distribution Expense—Including General and Administrative Expense, Meter Setting, Jobbing, etc.; Repairs Street Lamp Maintenance, Insurance, Advertising, Interest, Taxes, Contingent Expense, etc.				4,512,355.72	33.97
Fixed Charges				972,423.44	07.32
				$9,936,910.42	74.81

SUMMARY OF CARTAGE OPERATIONS—CALENDAR YEAR 1905

ur Own Carts.			
6388.394 Days Single Cart	at $3.25	$20,762.28	
28.80 days Double Cart	at 5.50	158.40	20,920.68
ational Coke and Coal Co's. Carts—			
263 loads	at 21.75c	57.20	
211 loads	at 22.70c	47.89	
23,125 loads	at 25.00c	5,781.25	
49 loads	at 85.00c	41.65	
8,255 loads	at 24.00c	1,981.20	
2,309 loads	at 50.00c	1,154.50	
65 loads	at $1.00	65.00	
9,228 1/2 loads	at 20.00c	1,845.70	
531 loads	at 18.00c	95.58	11,069.97
T. Cunningham Co.—			
116,714 tons	at 11.00c	12,838.54	
7,550 1/2 tons	at 16.00c	1,208.08	14,047.62
iscellaneous—			
Being bills from various parties covering the cost of storing carbon, carting spent oxide, carting Oil, Tar, etc.			517.06
			$46,555.33

CARTAGE AS ABOVE, SHOWN AS FOLLOWS—

Coal Cartage	
Coke Cartage	18,222.89
Coke Cartage	11,164.97
General Cartage	43.87
	17,123.60
	$46,555.33

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1905

14TH STREET STATION.

	Cubic Feet.
Gas Made	1,490,909,000
Gas Sold (based on a leakage of 2.24 per cent)	1,457,682,653

			Amount.	Cost per M. c. f. Made.	Cost per M. c. f Sold.
Coal—					
Used in Retorts, 123,773.37 tons at $3.19			$394,907.04	26.48	27.09
Used at 21st St. Station for account of 14th St. Oil Gas, 62.02 Tons at 4.36			270.66	00.02	00.02
Labor handling coal		$17,179.74			
Cartage handling coal		14,090.84	31,270.58	02.10	02.14
			426,448.28	28.60	29.25
Less Residuals–					
Coke——					
83,434.45 Loads at $2.09					
55,871.28 Tons at $3.12		174,219.31			
Cost to handle—					
Labor	$25,843.76				
Cartage	6,599.67	32,443.43			
			141,775.88	09.51	09.73
Tar—12~~3~~2,773.37 Tons of Coal Carbonized at 28.59c			35,392.33	02.37	02.43
Ammoniacal Liquor, 2,623,809 lbs. at 01.34c			35,244.20	02.36	02.41
Carbon, 216,955 lbs. at 01.00c			2,169.55	00.15	00.15
Spent Oxide, 4,208,381 lbs. at 00.11c			4,827.82	00.32	00.33
			219,409.78	14.71	15.05
Net Total			207,038.50	13.89	14.20
Coke used at 21st Street Station for account of 14th Street Oil Gas, 6.42 loads at $2.243 4.30 tons at $3.349			14.40	....	....
Gas Oil, 3,381,667 gals. at 04.22c			142,629.09	09.57	09.78
Oxide, 25,790 bus. at 17.42c			4,492.75	00.30	00.31
Water, 3,594,800 c. f. at $1.00 per M. c. f.			3,594.80	00.24	00.25
Oil, Waste and Sundries			2,370.09	00.16	00.16
Cartage			2,443.71	00.16	00.17
Gas Making Labor—					
Retort House Labor			87,754.21	05.89	06.02
Boiler House Labor			6,033.72	00.41	00.41
Purifying House Labor			4,179.45	00.28	00.29
Superintendence			6,894.06	00.46	00.47
At 21st St. for account of 14th St. Oil Gas			10,335.42	00.69	00.71
			477,780.20	32.05	32.77
Repairs (including Labor and Material)			57,501.65	03.85	03.95
Expense (including Labor and Material)			10,067.74	00.67	00.69
Distribution (including Labor and Material)			19,463.93	01.31	01.34
			$564,813.52	37.88	38.75

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1905.
42D STREET STATION.

	Cubic Feet.
Gas Made	1,239,245,000
Gas Sold (based on a leakage of 2.24 per cent.)	1,211,783,304

			Amount.	Cost per M. c. f. Made.	Cost per M. c. f Sold.
Coal—					
Used in Retorts, 105,509.44 tons ... at $3.17			$334,699.17	27.01	27.62
Labor handling coal			18,326.06	01.48	01.51
Cartage handling coal			539.24	00.04	00.04
			353,564.47	28.53	29.17
ss Residuals—					
Coke—					
83,637.25 loads ... at $1.9618					
56,007.09 tons ... at $2.9296		$164,081.60			
Less—Cost to handle same—					
Labor	$9,834.63				
Cartage	4,565.30	14,399.93	149,681.67	12.08	12.35
Tar (Coal), 105,509.44 tons Carbonized ... at 28.58c			30,154.37	02.43	02.49
Ammoniacal Liquor, 2,273,075 lbs. ... at 01.35c			30,605.45	02.47	02.53
Carbon, 268,765 lbs. ... at 01.00c			2,687.65	00.22	00.22
Spent Oxide, 1,368,654 lbs. ... at 00.10c			1,368.65	00.11	00.11
			214,497.79	17.31	17.70
Net Total			139,066.68	11.22	11.48
Fuel Oil, 2,502 gals. ... at 02.00c			50.04	....	....
Gas Oil, 2,083,413 gals. ... at 04.16c			86,602.69	06.99	07.15
Lime, 62,125 bus. ... at 04.99c			3,101,48	00.25	00.26
Oxide, 20,000 bus. ... at 14.63c			2,926.24	00.24	00.24
Water, 3,059,300 c. f. ... at $1.00 per M.			3,059.30	00.25	00.25
Oil, Waste and Sundries			792.89	00.06	00.07
Cartage			428.44	00.04	00.04
as Making Labor—					
Retort House Labor			130,420.64	10.52	10.76
Boiler House Labor			4,782.90	00.38	00.39
Purifying House Labor			4,668.31	00.38	00.38
Superintendence			4,822.42	00.39	00.40
			380,722.03	30.72	31.42
Repairs (including Labor and Material)			31,335.52	02.53	02.59
Expense (including Labor and Material)			11,312.29	00.91	00.93
Distribution (including Labor and Material)			8,719.40	00.71	00.72
			$432,089.24	34.87	35.66

8704 5978

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1905
21ST STREET STATION.

	Cubic Feet.
Gas Made	4,356,120,000
Gas Sold (based on a leakage of 2.24 per cent.)	4,258,542,912

	Amount.	Cost per M. c. f. Made.	Cost per M. c. f Sold.
Coal—Excluding coal used for 14th St. Station Oil Gas—			
Used in Generators, 56,477.29 tons at $4.36	$246,502.76	05.66	5.79
Used under Boilers, 6,916.25 tons at 3.65	25,254.62	00.58	00.59
	271,757.40	06.24	06.38
Labor employed on Coal	5,544.25	00.13	00.13
Cartage employed on Coal	861.34	00.02	00.02
	278,162.99	06.39	6.53
Less Residuals—			
Oil Tar—1,403,046 gals. 18,586 gals. (not sold owing to excessive quantity of water contained.)			
1,384,460 gals at 1.97c	27,294.43	00.63	00.64
	250,868.56	05.76	5.89
Coke used, 20,927.84 loads at $2.1578			
14,014.18 tons at 3.2224	45,159.20	01.03	1.06
Labor employed in handling	1,150.00	00.03	00.03
	46,309.20	01.06	1.09
Net Total	297,177.76	06.82	6.98
Fuel Oil Labor (including Drip Oil Labor if used in manufacturing)	1,609.19	00.04	00.04
Naphtha, 5,587 gals. at 04 3/8c	244.43	....	00.01
Gas Oil (including Gas Oil used for 14th St. Oil Gas) 20,098,206 gals. at 4.26c	855,081.15	19.63	20.08
Lime, 249 bus. at 05.04c	12.54		....
Oxide, 41,810 bus. at 15.54c	6,497.10	00.15	00.15
Water, 9,230,200 c. f. at $1.00 per M. c. f.	9,230.20	00.21	00.22
Oil, Waste and Sundries	748.11	00.02	00.02
Cartage	9,937.91	00.23	00.23
Gas Making Labor—			
Generator House	38,165.42	00.88	00.90
Boiler House	11,837.65	00.27	00.28
Purifying House	2,590.07	00.06	00.06
Superintendence	10,443.99	00.24	00.24
Net Amount of Material and Labor	1,243,995.52	28.55	29.20
Repairs (including Labor and Material)	67,280.35	01.54	01.58
Expense (including Labor and Material)	20,733.99	00.48	00.49
Distribution (including Labor and Material)	38,655.23	00.89	00.91
Profit and Loss Adjustment	*1.25	....	....
	1,370,263.81	31.46	32.18
Experiments	3,030.08	00.07	00.07
	$1,373,293.92	31.53	32.25

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*Red ink in Original.

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1915
44TH STREET STATION.

	Cubic Feet.
Gas Made	2,265,475,000
Gas Sold (based on a leakage of 2.24 per cent.)	2,215,177,400

	Amount.	Cost per M. c. f. Made.	Cost per M. c. f. Sold.
Coal—			
Used in Generators, 29,888.37 tons at $4.34	$129,837.00	05.73	05.86
Used under Boilers, 2,178.32 tons at $3.72	8,101.45	00.36	00.37
	137,030.35	06.09	06.23
Labor employed on Coal	3,815.19	00.17	00.17
Cartage employed on coal	243.59	00.01	00.01
	141,098.13	06.27	06.41
Residuals—			
Oil Tar, 857,616 gals.			
5,179 gals. (not sold owing to excessive quantity of water contained).			
852,437 gals. at 01.86c	15,881.05	00.70	00.72
	126,116.18	05.57	05.69
Coke Used—			
8,064.33 loads at $2.2452			
5,400.22 tons at $3.3528	18,106.23	00.80	00.82
Labor in handling Coke	50.38	....	....
	18,156.61	00.80	00.82
	144,272.79	06.37	06.51
Fuel Oil Labor (including Drip Oil Labor if used in Mfg.)	1,153.76	00.05	00.05
Gas Oil, 10,573,059 gals. at 04.23c	446,873.18	19.73	20.17
Oxide, 24,385 bus. at 15.97c	3,893.53	00.17	00.18
Water, 4,444,400 c. f. at $1.00 per M.	4,444.40	00.20	00.20
Oil, Waste and Sundries	792.71	00.03	00.04
Cartage	2,095.94	00.09	00.09
Gas Making Labor—			
Generator House Labor	18,705.17	00.82	00.84
Boiler House Labor	8,586.21	00.38	00.39
Purifying House Labor	881.45	00.04	00.04
Superintendence	7,495.00	00.33	00.34
Net amount of Labor and Material	630,194.10	28.21	28.85
Repairs (including Labor and Material)	26,917.14	01.19	01.22
Expense (including Labor and Material)	8,580.55	00.38	00.39
Distribution (including Labor and Material)	14,198.10	00.63	00.64
Profit and Loss, Adjustment	100.00	....	....
	$679,989.89	30.41	31.10

SUMMARY OF OPERATIONS FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1905—90TH STREET STATION.

	Cubic Feet.
Gas Made	1,306,061,000
Gas Sold (based on a leakage of 2.24 per cent.)	1,276,384,025

	Amount.	Cost per M. c. f. Made.	Cost per M. c. f Sold.
Coal—			
Used in Generators, 19,597.00 tons at $4.39	$86,068.91	06.59	06.74
Used under Boilers, 1,305.10 tons at $3.68	4,800.36	00.37	00.38
	90,869.27	06.96	07.12
Labor employed on Coal	4,284.83	00.33	00.33
Cartage employed on Coal	2,487.88	00.19	00.20
	97,641.98	07.48	07.65
Less Residuals—			
Oil Tar—474,448 gals. 519 gals. (not sold owing to the excessive quan- of water contained.) 473,929 gals. at 01.90c	9,030.88	00.69	00.71
	88,611.10	06.79	06.94
Coke—			
707.62 loads at 97.82c			
473.85 tons at $1.46.09	692.26	00.05	00.05
Labor in handling	92.93	00.01	00.01
Cartage in handling	43.87	....	....
	829.06	00.06	00.06
	89,440.16	06.85	07.01
Fuel Oil Labor (including Drip Oil if used in Mfg.)	1,641.75	00.13	00.13
Gas Oil, 5,779,427 gals. at 04.13c	238,782.31	18.28	18.71
Oxide, 9,500 bus. at 14.35c	1,363.73	00.10	00.11
Water, 2,355,500 c. f. at $1.00 per M.	2,355.50	00.18	00.18
Oil Waste and Sundries	703.35	00.05	00.06
Cartage	2,217.60	00.17	00.17
Gas Making Labor—			
Generator House Labor	10,388.96	00.80	00.81
Boiler House Labor	5,451.01	00.42	00.43
Purifying House Labor	1,640.16	00.12	00.13
Superintendence	6,534.96	00.50	00.51
Net Amount of Labor and Material	360,540.39	27.60	28.25
Repairs (including Labor and Material)	14,175.44	01.08	01.11
Expense (including Labor and Material)	8,322.40	00.64	00.65
Distribution (including Labor and Material)	9,064.78	00.70	00.71
	$392,103.01	30.02	30.72

COMPLAINANT'S EXHIBIT 258

Based Upon Enriched Coal Gas, With Only

COST OF COAL GAS—IMPROVED WORKS

	Cost per ton	Yield Gas	Cost per M.	
			¢	
Bituminous Coal	$3.20	10,600 cf	30.2	.....
Cost of unloading	.10	"	1.44	0.940
Cost of charging	.254	"	2.24	.....
Cost of drawing coke				
Cost of drawing, yarding, quenching	.254	"	2.24	.....
Labor, gas making and purifying.			3.00	
			36.12	
Superintendence			.50	
			36.62	
Coke made and breeze 66% = 1320# at $4.00 per ton	$2.64			
Used as fuel 20%	.538			
		¢		
	$2.102	29.80	19.80	.....
Tar 12 gallons at 5c	.600	5.65	.56	43.16
Ammonia liquor	.500	4.71	.47	20.83
		30.16	30.16	22.33
			6.46	

This gas will be of about 14 candle power.

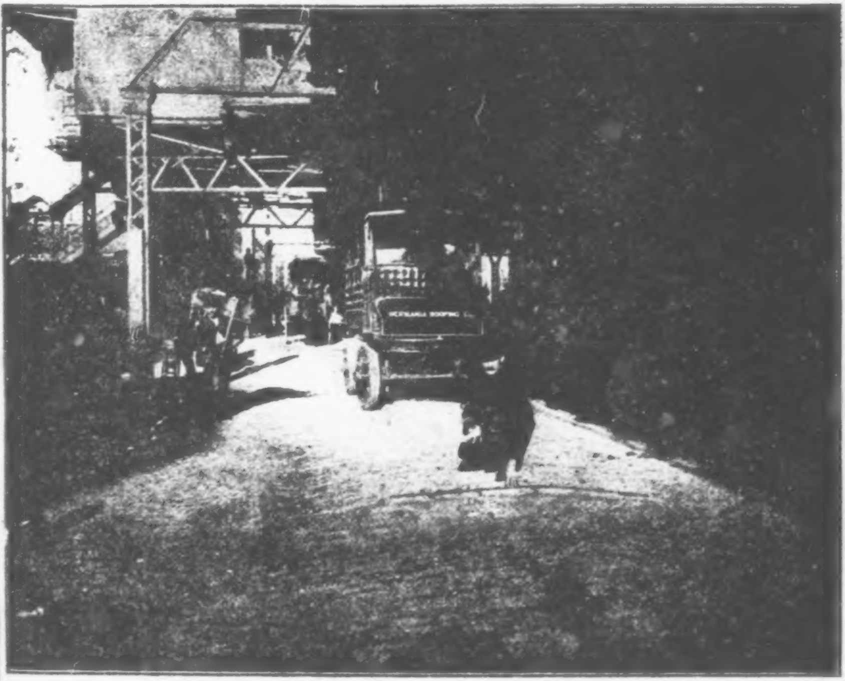
		*36.62
Enriched with oil gas to 22 candles		* 4.50
Would take of oil at 4¢.232 gallons,	8.46	* .75
30 Pr. Ct. water gas with oil gas 225 cf		* .25
Generator coal at 20# per M.	1.00	* .37
Labor making oil and water gas 3¢ per M	.30	* .17
Repairs to apparatus and buildings	4.50	* .50
Purifying material, lime	.75	
Oxide	.25	*43.16
Oil and Waste	.37	*30.16
Water	.17	*13.04
General Expense of work	.50	* 8.46
Repairs to oil gas apparatus at 2¢ per M.	0.50	* 1.
	23.26	* .50
		*23.00

Following lines of Central Union.

22.33 36.62

COMPLAINANT'S EXHIBIT 271.

November 23, 1906.



Third Avenue, W. S.

45 ft. S. S., e. 14th St.; width, 9 ft. 0 in.; 24 in. S. W. Main. Edgerton's trench, width, 3 ft. 0 in.; Consolidated Gas Co., trench, width, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 272.

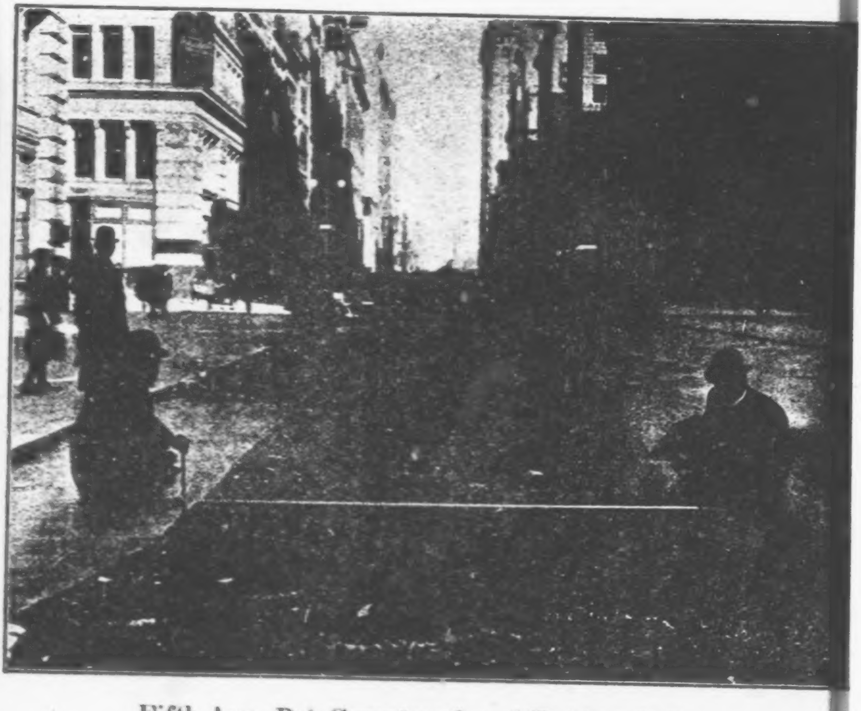
November 24, 1906.

Fifth Ave., S. of Twenty-first St., Looking North.

Tape in front, No. 160; cut shown varies from 7 ft. 4 in. to 8 ft. 1 in.; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Con. Gas. Co., width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 273

November 24, 1896.

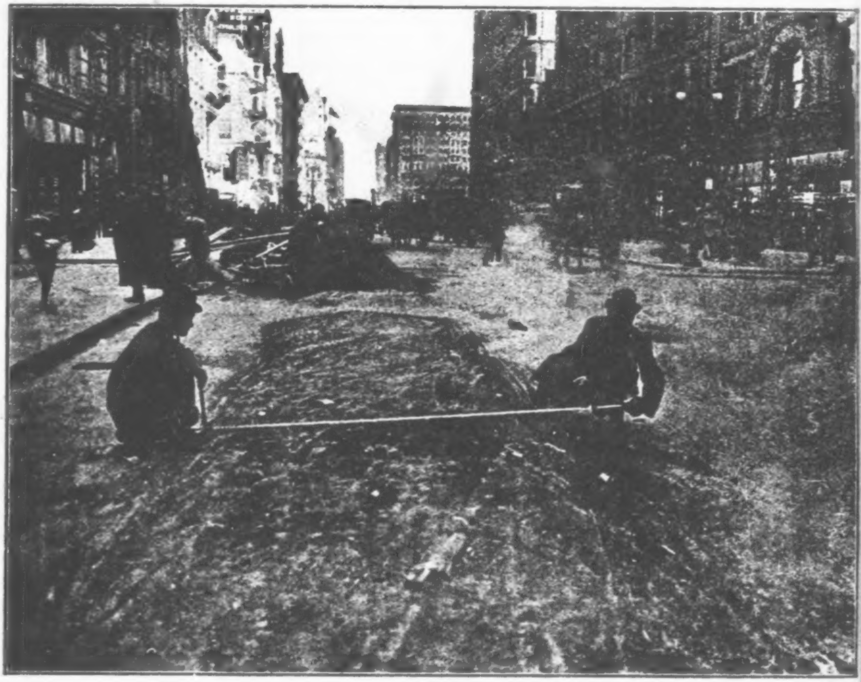


Fifth Ave., Bet. Seventeenth and Eighteenth Sts., Looking North.

Width of cut, 9 ft. 10 in.; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Consolidated Gas Co., width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 274.

November 24, 1906.



Fifth Ave., S. S. c. Twenty-first St., Looking North.

Width, 8 ft. 1 in.; 24 ft. S. W. Main; Edgerton's width trench, 3 in. 0 ft.; Consolidated Gas. Co., width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 275.

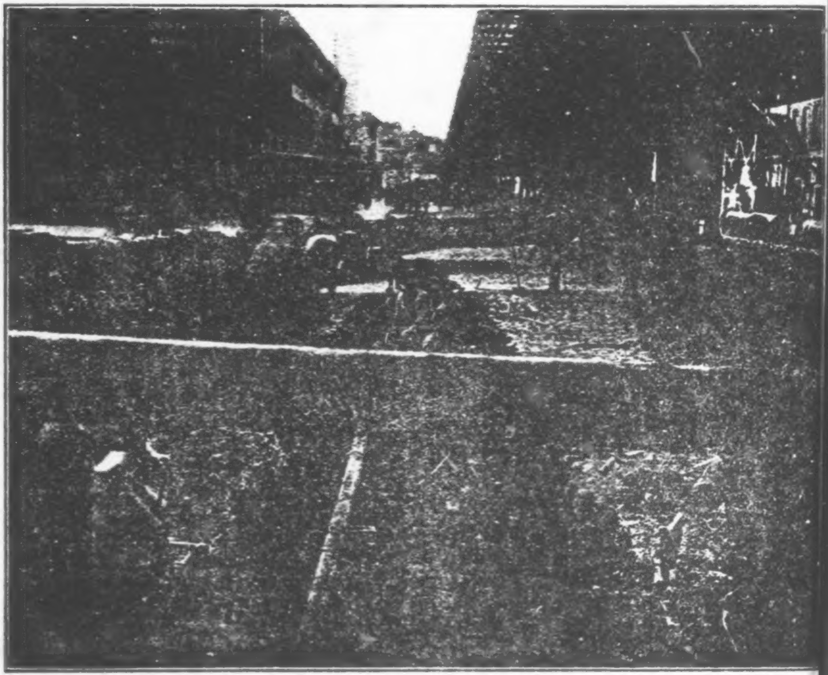
November 24, 1906.

Third Ave., W. S., Looking North.

50 ft. S. S. cor. Fourteenth St.; Width, 9 ft. 0 in.; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Consolidated Gas Co., width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 276

November 24, 1906

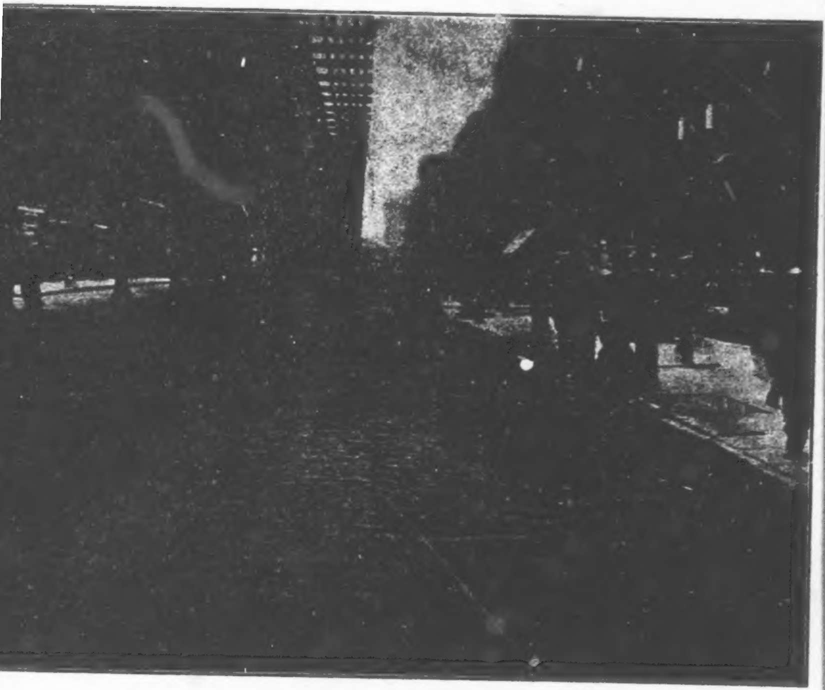


Ninth Ave., E. S., 50 ft. N. N. C. Sixteenth St., Looking South.

Trench for 36 in. Main—Water; width, 7 ft. 3 in.; Edgerton's, width trench, 4 ft. 0 in.; Consolidated Gas Co., width trench, 6 ft. 6 in.

COMPLAINANT'S EXHIBIT 277.

November 24, 1906.

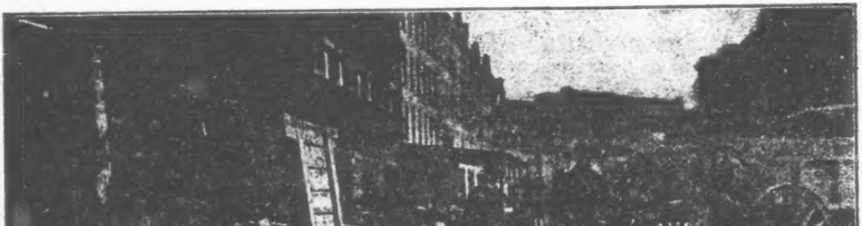


Third Ave., W. S., 90 ft. N. N., C. Thirteenth St., Looking South.

Width, 12 ft. 9 in.; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Consolidated Gas Co.'s, width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 278.

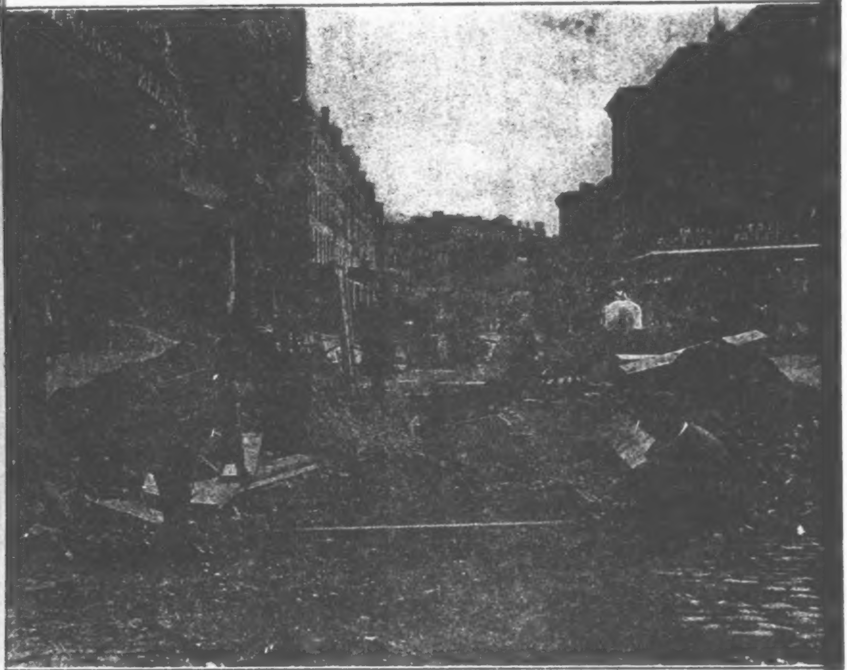
November 24, 1906.



Gansevoort, W. of Hudson (12 ft. W. W. Co.), Looking East.

COMPLAINANT'S EXHIBIT 279.

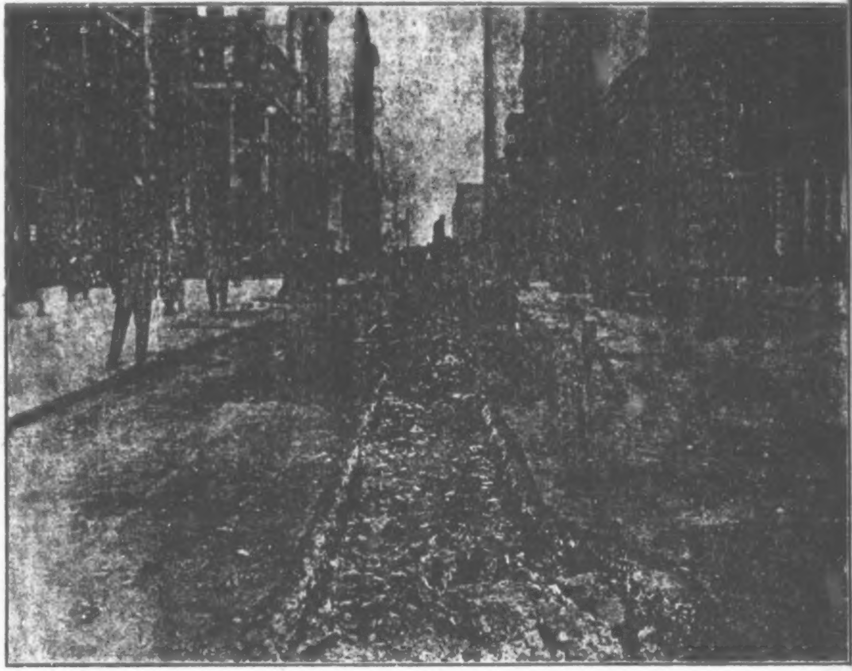
November 24, 1906.



Gansevoort, W. of Hudson (24 ft. W. W. Co.),
Looking East.

COMPLAINANT'S EXHIBIT 280.

November 24, 1906.



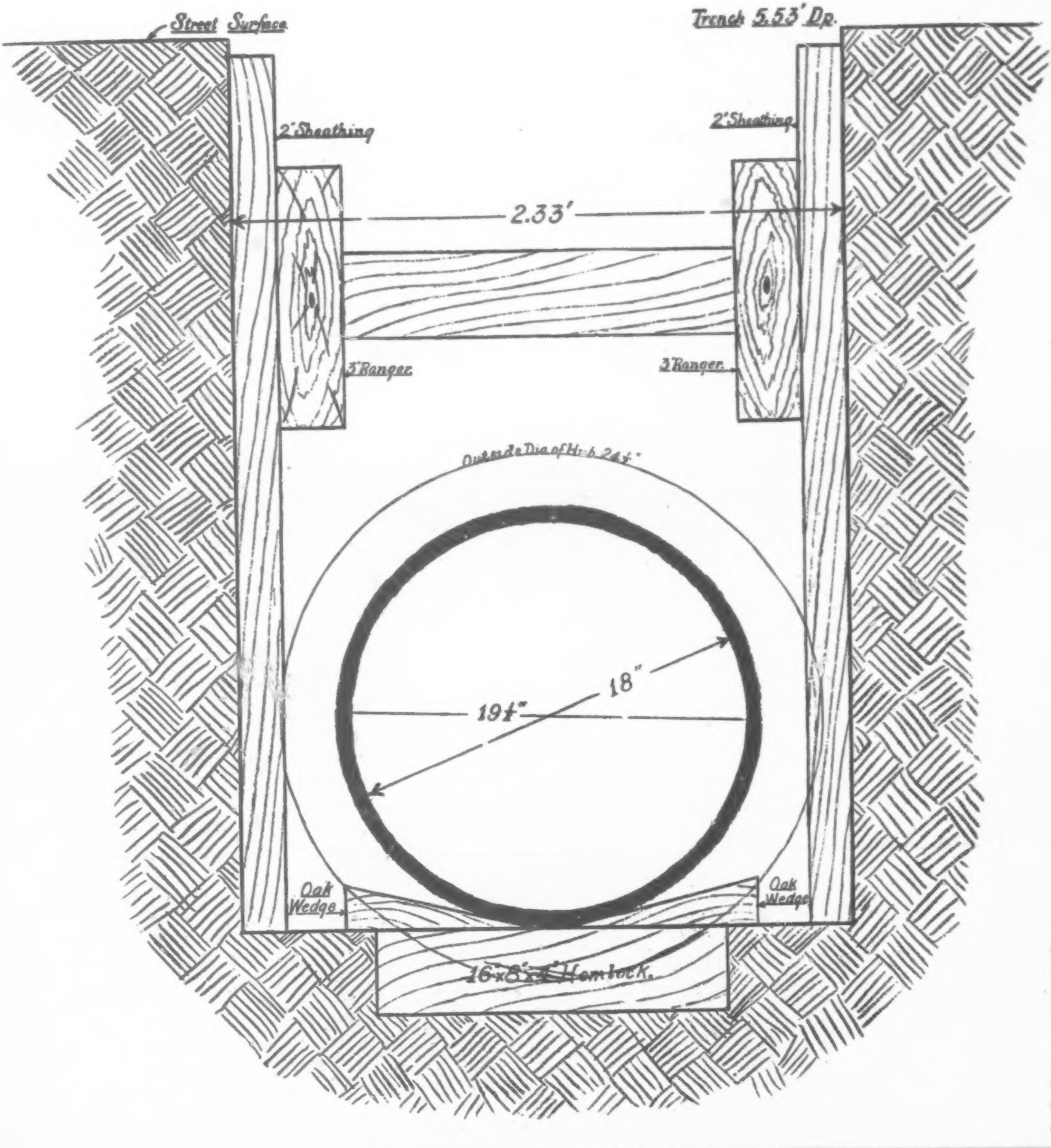
Fifth Ave., 80 ft. S. S., C. Nineteenth St., Looking North.

Width of Asphalt Trim, 6 in. on West Side; 5 in. on East Side; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Consolidated Gas Co., 5 ft. 0 in.

1730 A

COMPLAINANT'S EXHIBIT 281

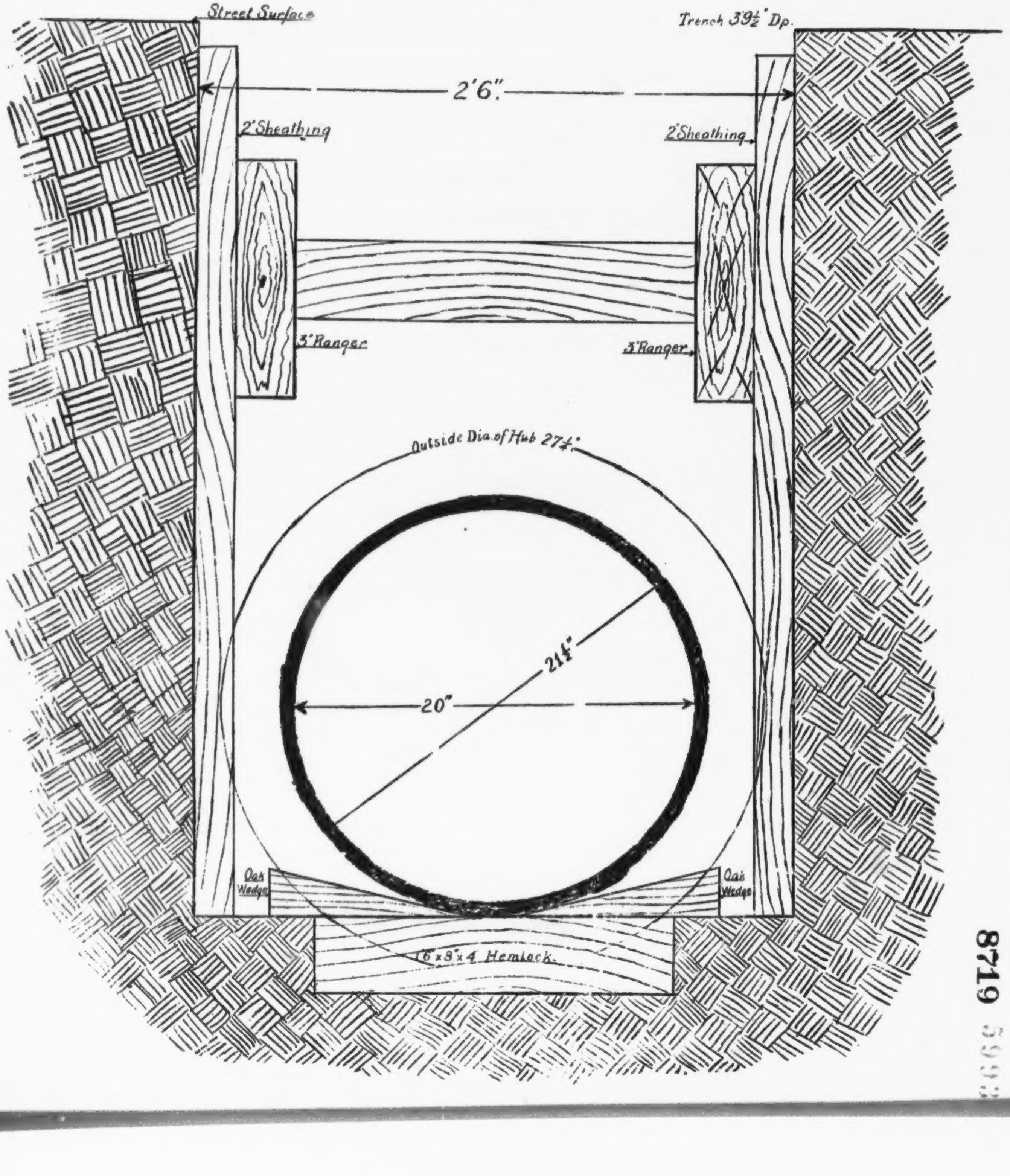
January 14, 1907


Street Surface
Trench 5.53' Dp.
2" Sheathing
2" Sheathing
2.33'
3" Ranger.
3" Ranger.
Outside Dia of Hub 24¼"
19¼"
18"
Oak Wedge
Oak Wedge
16×8"×4' Hemlock.

1730 B

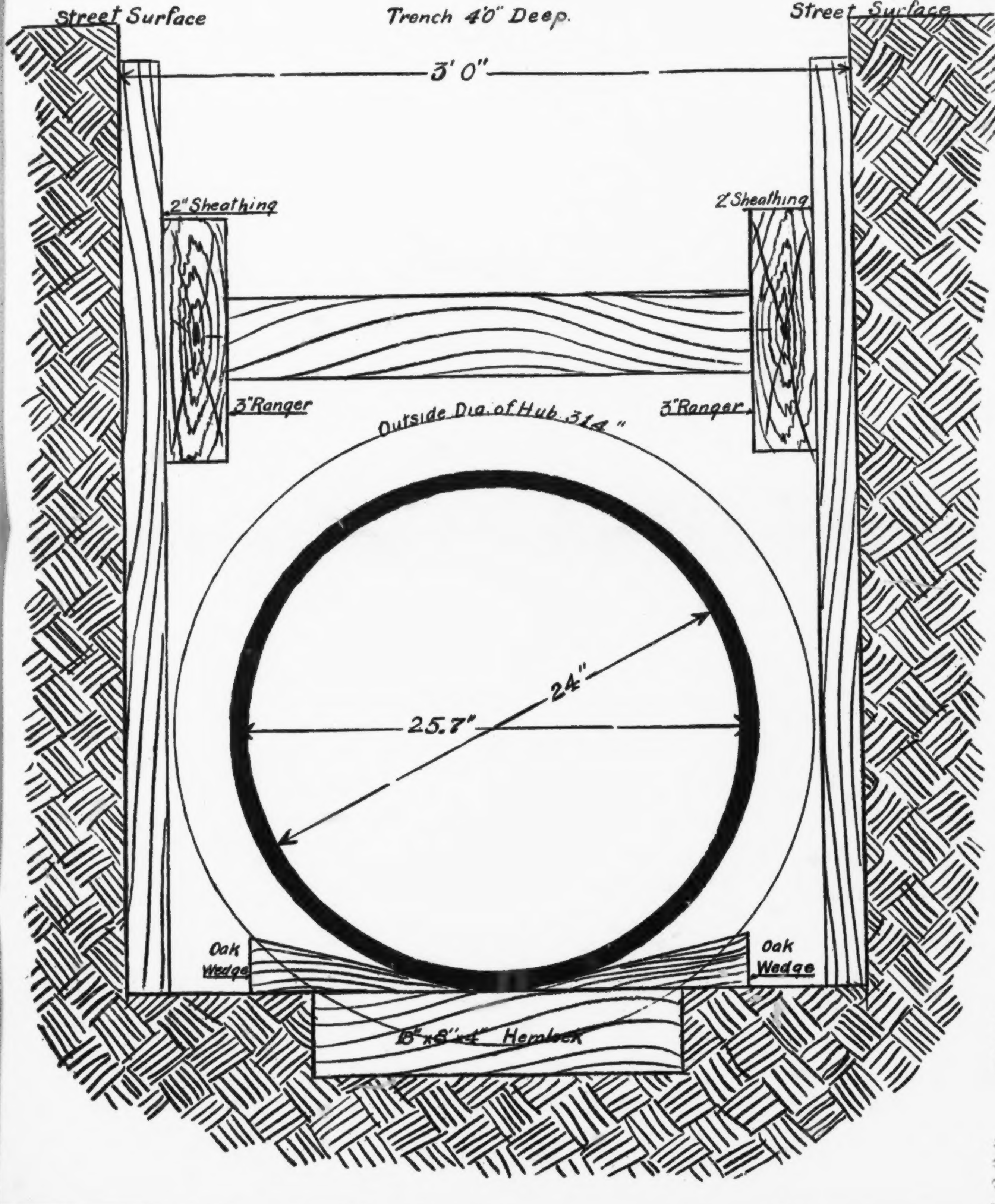
COMPLAINANT'S EXHIBIT 282

January 14, 1907


Street Surface
Trench 3'9½" Dp.
2'6".
2' Sheathing
2' Sheathing
3' Ranger
3' Ranger
Outside Dia. of Hub 27¼"
21¼"
20"
Oak Wedge
Oak Wedge
16'x8"x4' Hemlock.

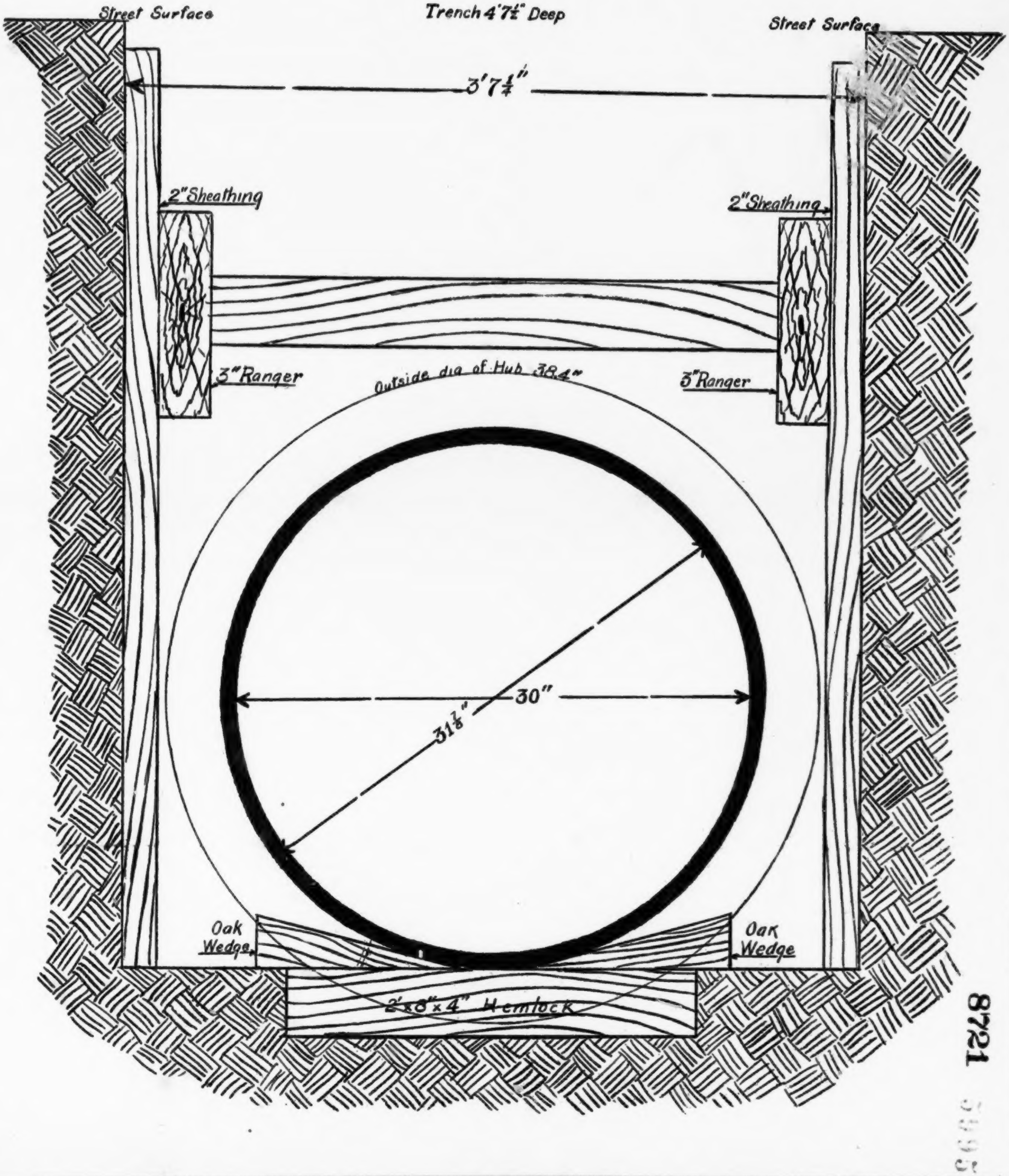
1730 B-1

COMPLAINANT'S EXHIBIT 283


Street Surface
Trench 4'0" Deep.
Street Surface
3' 0"
2" Sheathing
2" Sheathing
3" Ranger
3" Ranger
Outside Dia. of Hub. 31.4"
24"
25.7"
Oak Wedge
Oak Wedge
18" x 8" x 4" Hemlock

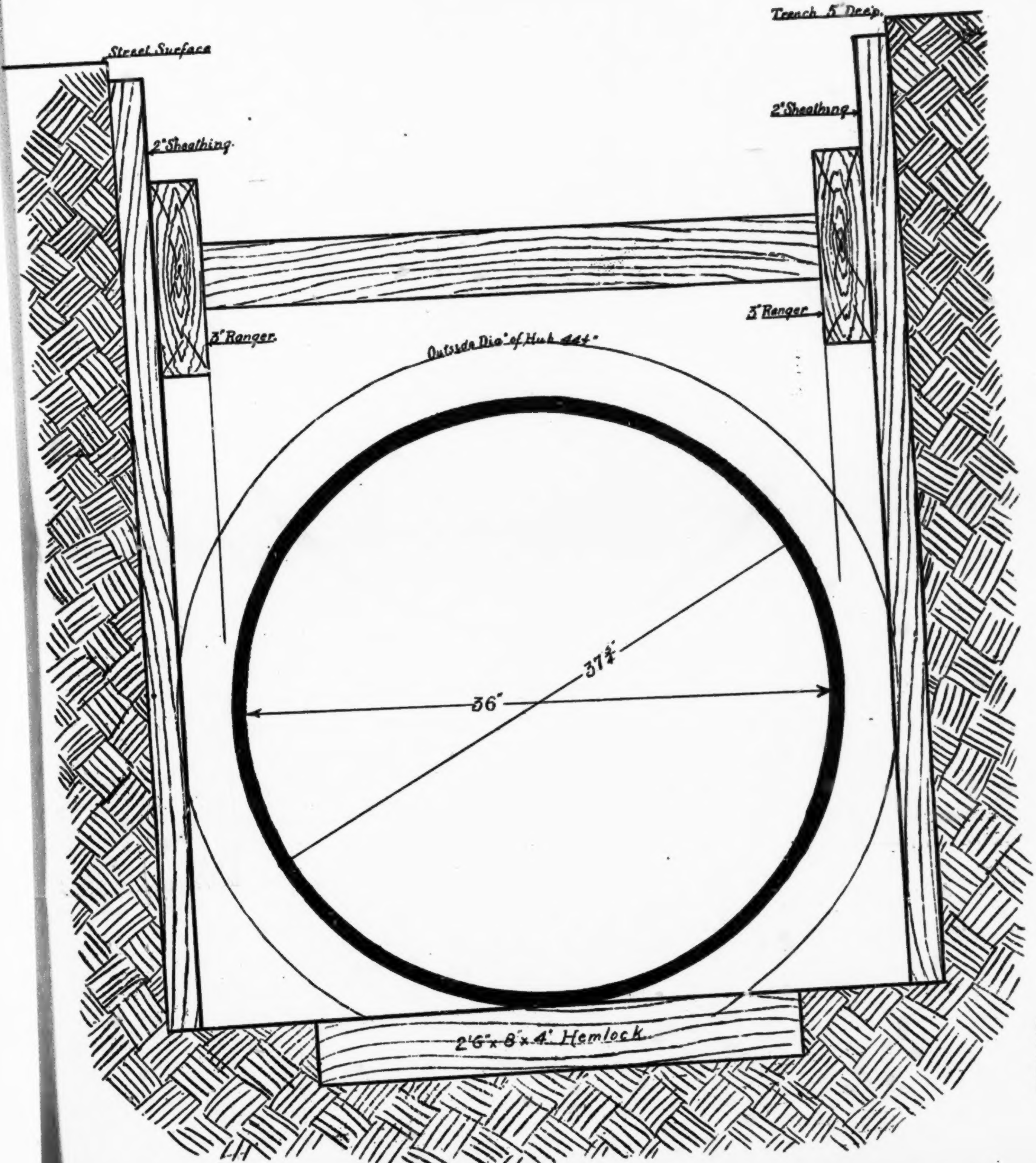
1730 B-2

COMPLAINANT'S EXHIBIT 284

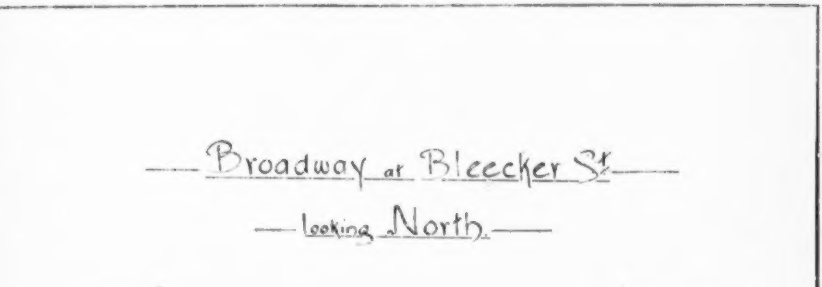

Street Surface
Trench 4'7½" Deep
Street Surface
3'7¼"
2"Sheathing
2"Sheathing
3"Ranger
3"Ranger
Outside dia of Hub 38.4"
30"
31⅞"
Oak Wedge
Oak Wedge
2'x8"x4" Hemlock

1730 C

COMPLAINANT'S EXHIBIT 285


Street Surface
Trench 5' Deep.
2" Sheathing.
2" Sheathing
3" Ranger.
3" Ranger
Outside Dia." of Hub 44"
37¼"
36"
2'6" x 8" x 4" Hemlock.

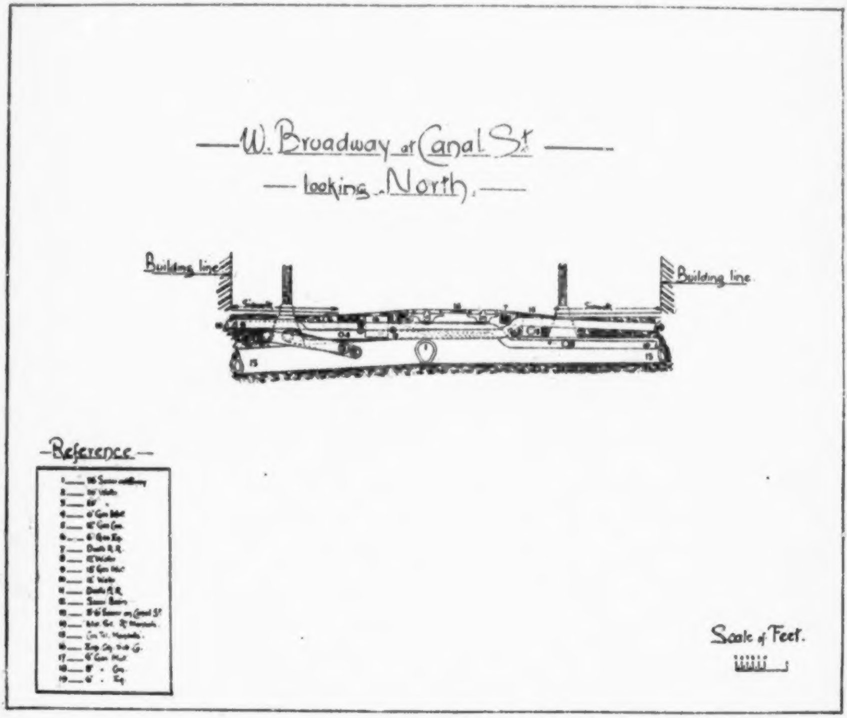
COMPLAINANT'S EXHIBIT 286.


Broadway at Bleecker St.
looking North.
Building line
Building line.
Sidewalk
Sidewalk
Reference
Scale of Feet

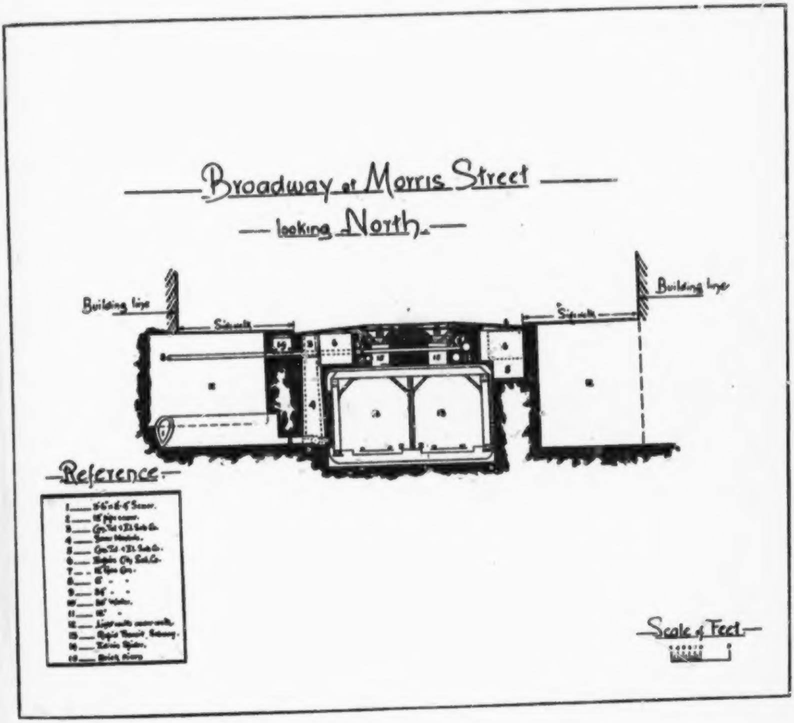
5998

8724

COMPLAINANT'S EXHIBIT 287.


W. Broadway at Canal St
looking North.
Building line
Building line
Sidewalk
Sidewalk
Reference
Scale of Feet.

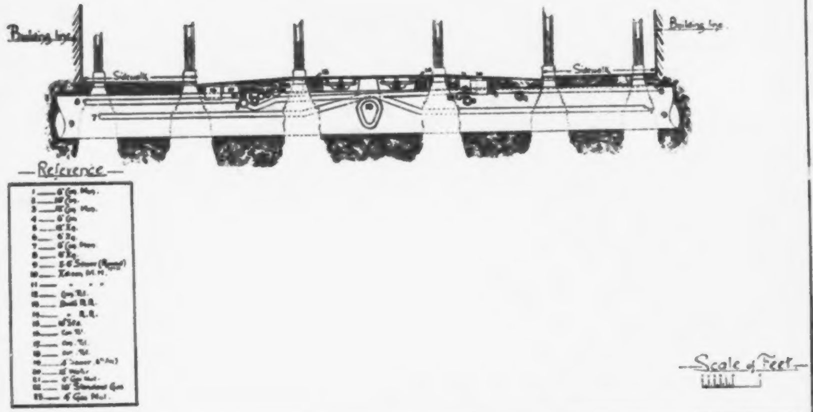
COMPLAINANT'S EXHIBIT 288.


Broadway at Morris Street
looking North
Building line
Sidewalk
Sidewalk
Building line
Reference
Scale of Feet

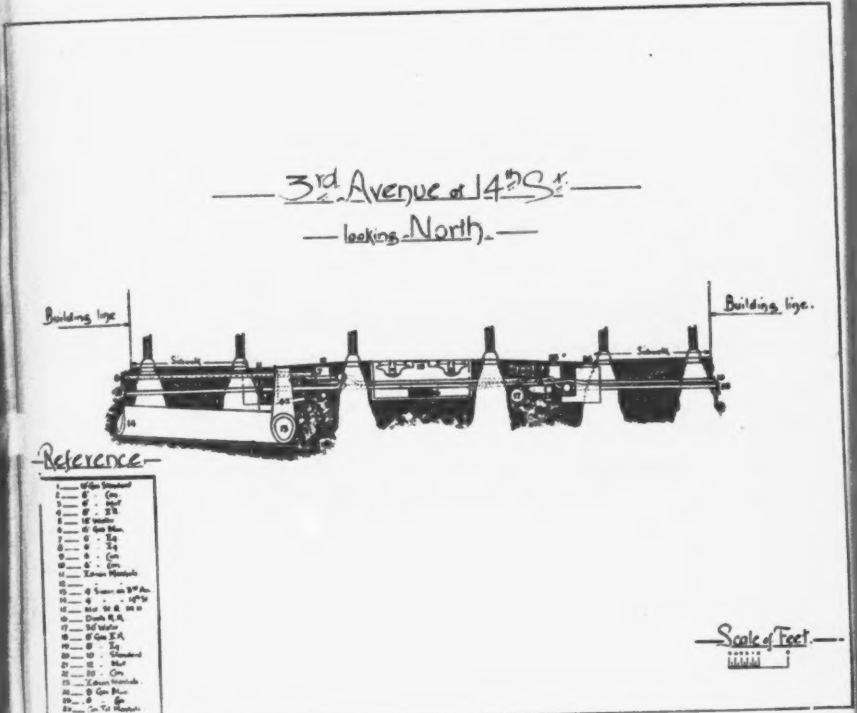
COMPLAINANT'S EXHIBIT 289.

6th Avenue at 14th Street

looking North.


Building line
Sidewalk
Sidewalk
Building line
Reference
Scale of Feet

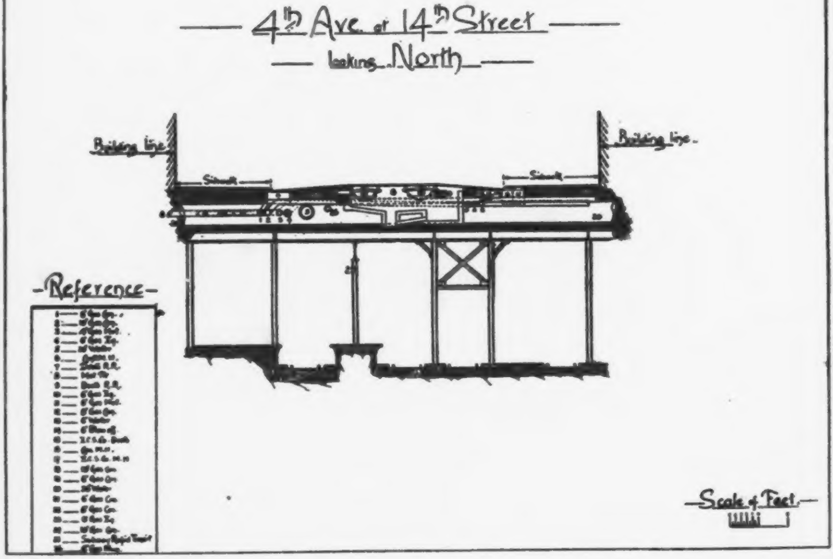
COMPLAINANT'S EXHIBIT 290.



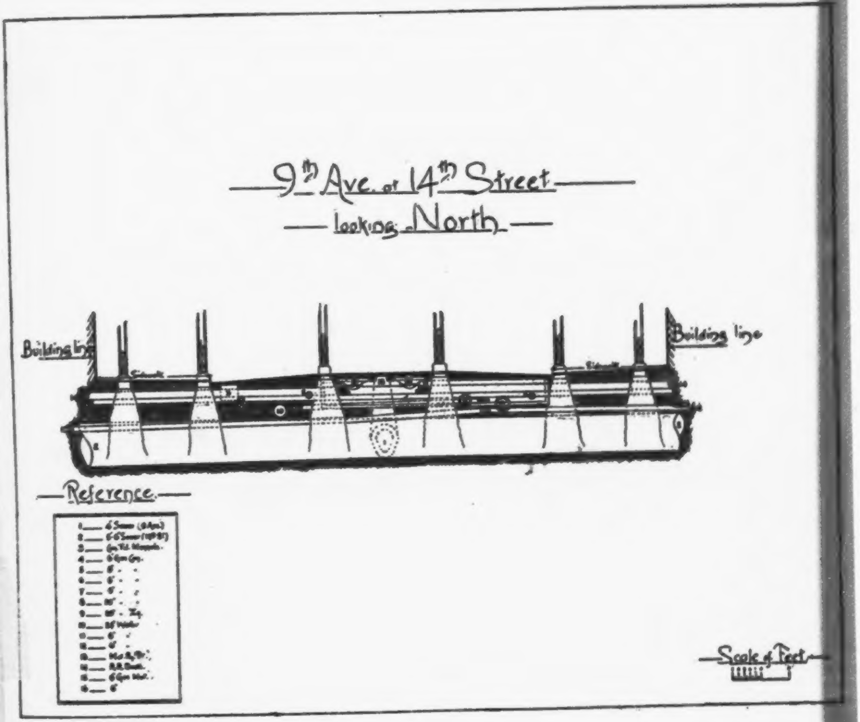
3rd Avenue at 14th St.
looking North

Building line
Building line
Sidewalk
Sidewalk
Reference
Scale of Feet

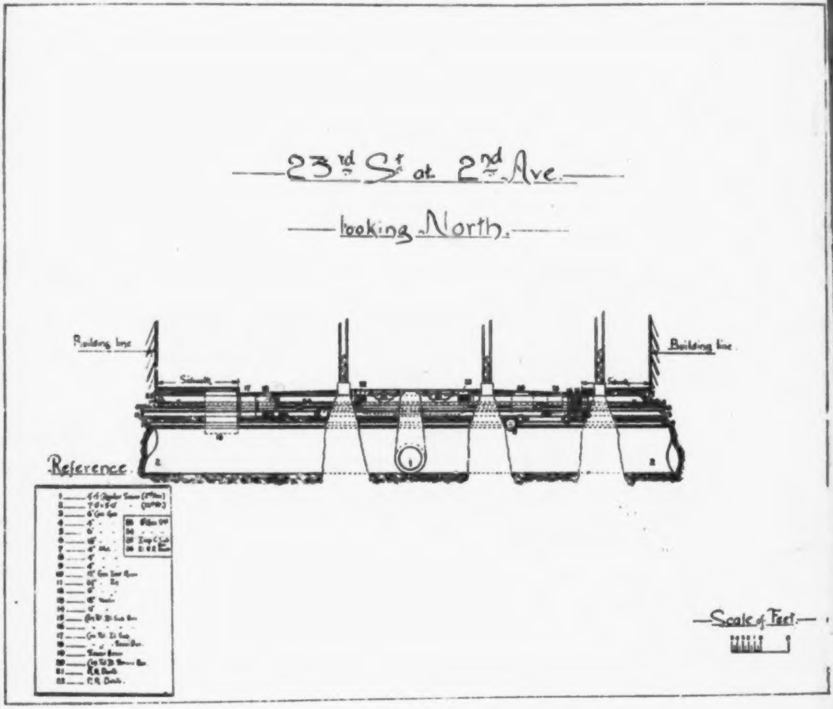
COMPLAINANT'S EXHIBIT 291.


4th Ave. at 14th Street
looking North
Building line
Building line
Sidewalk
Sidewalk
Reference
Scale of Feet

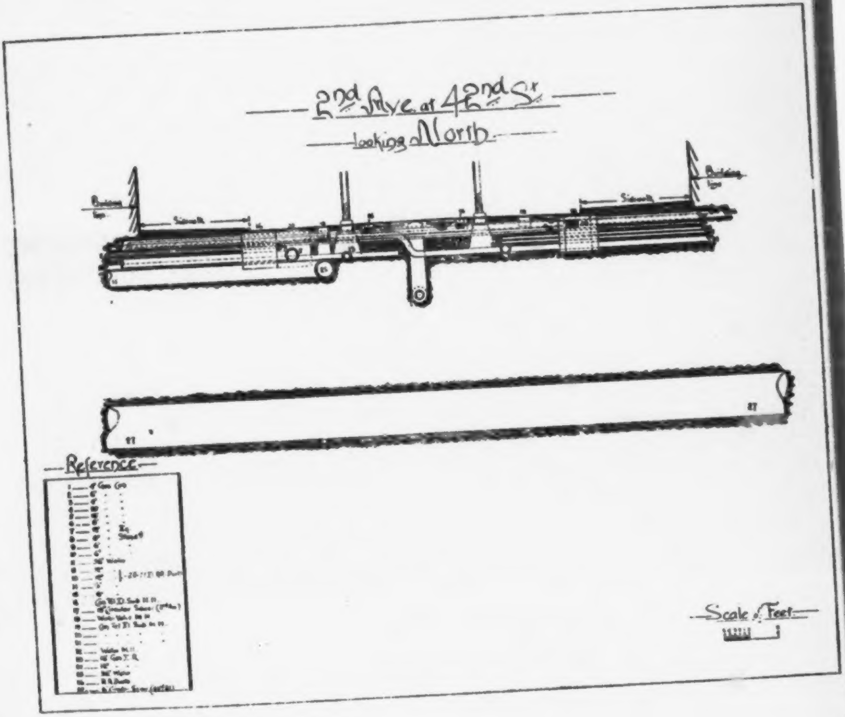
COMPLAINANT'S EXHIBIT 292


9th Ave. at 14th Street
looking North
Building line
Building line
Reference
Scale of Feet

COMPLAINANT'S EXHIBIT 293.

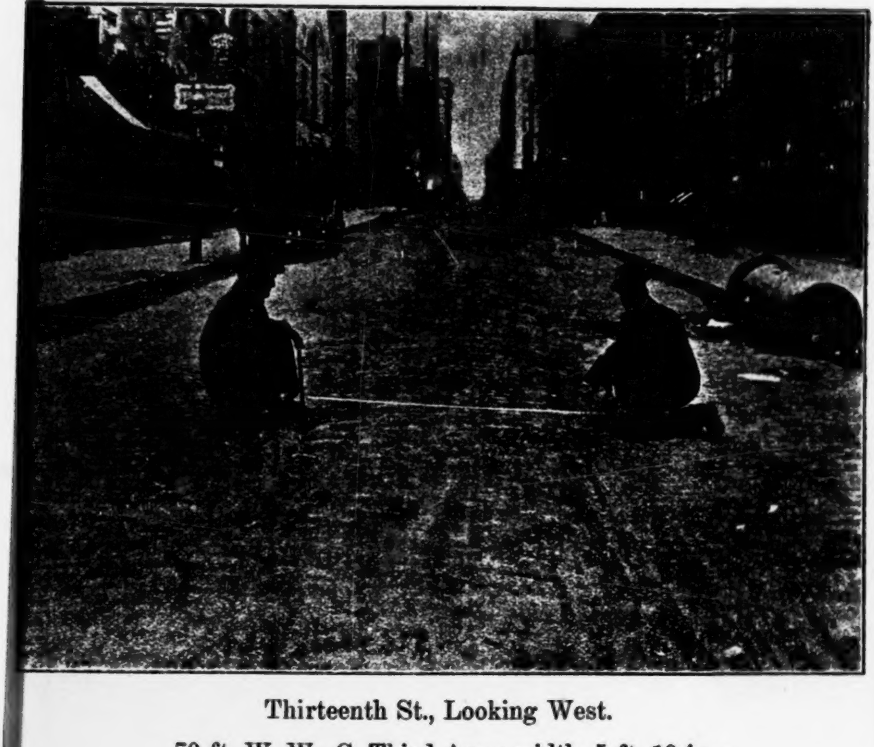

23rd St at 2nd Ave.
looking North.
Building line
Building line
Sidewalk
Sidewalk
1
2
2
Reference
Scale of Feet

COMPLAINANT'S EXHIBIT 294.


2nd Ave at 42nd St
looking North
Building Line
Sidewalk
Sidewalk
Building Line
87
87
Reference
1 — 4" Gas Co
Scale of Feet

COMPLAINANT'S EXHIBIT 295.

November 24, 1906.

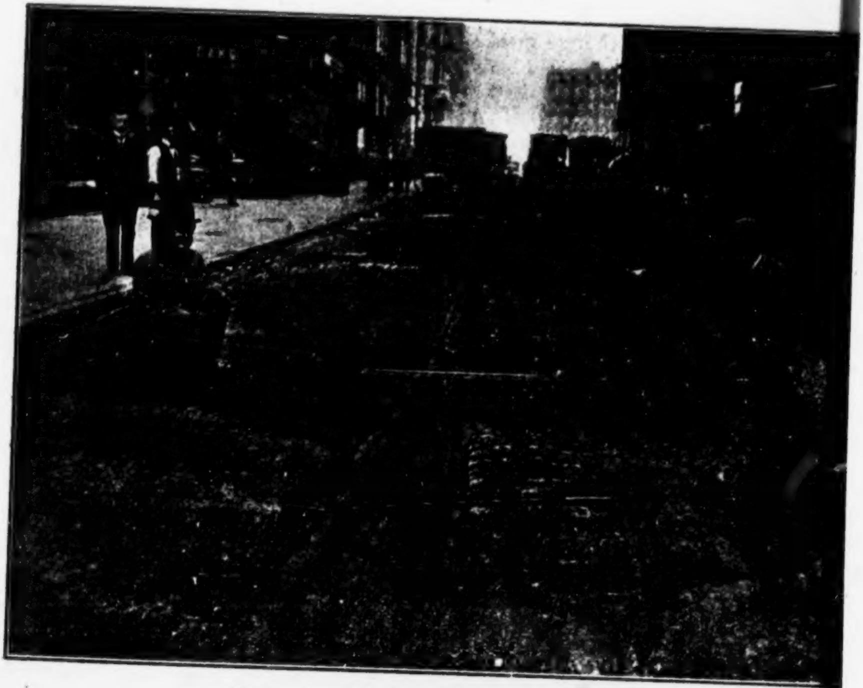


Thirteenth St., Looking West.

70 ft. W. W., C. Third Ave.; width, 5 ft. 10 in.; 24 in. S. W. Main; Edgerton's, width trench, 3 ft. 0 in.; Consolidated Gas Co., width trench, 5 ft. 0 in.

COMPLAINANT'S EXHIBIT 296.

November 24, 1906.



Seventeenth St., Looking East.

280 ft. E. E., C. Fifth Ave.; width—on line of tape, 11 ft. 4 in.; on line of rule, 4 ft. 6 in.; 12 in. S. W. Main; Edgerton's, width trench, 2 ft. 4 in.; Consolidated Gas Co., width trench, 3 ft. 0 in.

6008

POC

8734

COMPLAINANT'S EXHIBIT 297.

303

ROBERT W. LOWBER AND WIFE
TO
THE MANHATTAN GAS LIGHT COMPANY.

Dated 26th Dec., 1855.

DEED.

THIS INDENTURE, made the twenty-sixth day of December in the year of our Lord one thousand eight hundred and fifty-five, Between Robert W. Lowber of the City, County and State of New York, and Elizabeth G. his wife, parties of the first part, and The Manhattan Gas Light Company, of said City of New York, party of the second part, Witnesseth, That the said parties of the first part, for and in consideration of the sum of Thirty-three thousand dollars lawful money of the United States of America, to him in hand paid, by the said part*ies* of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the second part, their successors and assigns, forever released and discharged from the same, by these presents, Have granted, bargained, sold, aliened, remised, leased, conveyed and confirmed, and by these presents Do grant, bargain, sell, alien, remise, release, convey and confirm, unto the said party of the second part, and to their successors and assigns forever "All that certain piece or parcel of land situate, lying and being in the Eighteenth Ward of the City 8735 of New York and bounded and described as follows: Northerly by the center line of Sixteenth Street; Southerly by the center line of Fifteenth Street; Westerly by the center line of Avenue D, and Easterly by the East River; Containing eighteen (18) lots of ground numbered from six hundred and seventy-eight (678) to six hundred and ninety-five (695) both inclusive; Together with the bulkhead built along said East River from said center line of Fifteenth Street to the center line of Sixteenth Street; And also all the right, title, interest, property and claim of the said parties of the first part in and to the water rights, water front, water privileges, wharfage, cranage, rights of wharfage and cranage, land covered with water, pre-emption or other rights to land which may hereafter be gained out of the East River by reason of any Grant or Extension of said City of New York or otherwise between the center lines of said Fifteenth Street and the center line of said Sixteenth Street as continued into said East River in front of the premises hereby conveyed, as laid down in the diagram herein particular reference being thereunto han*d*;"

Together with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in anywise appertaining,

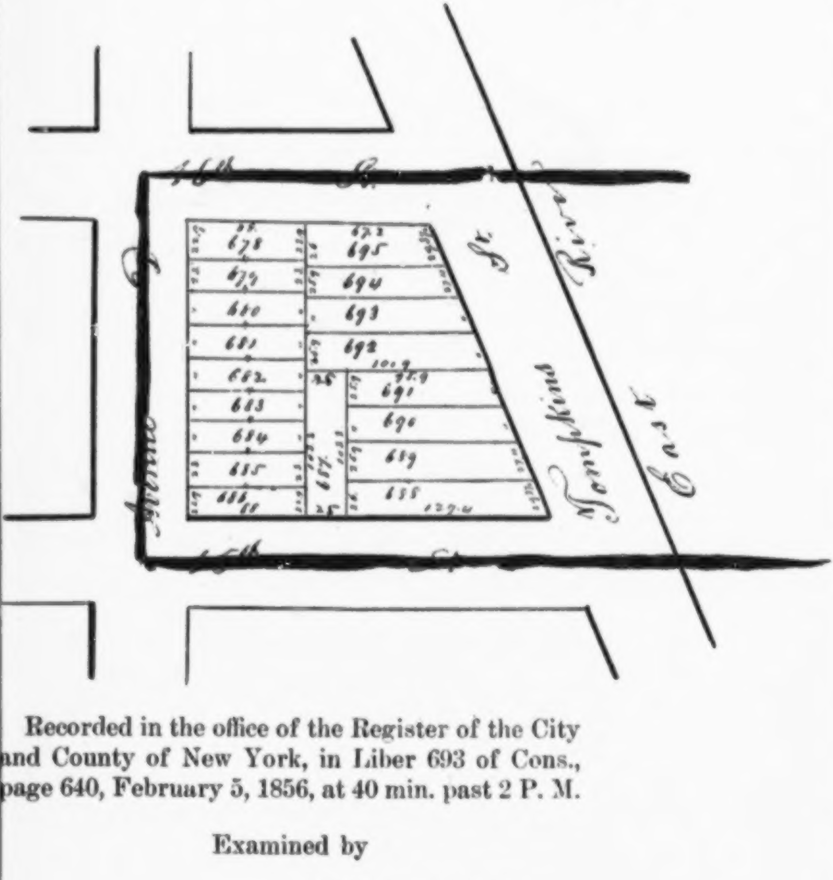
COPY

and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; AND ALSO all the estate, right, title, interest, dower and right of dower, property, possession, claim and demand whatsoever, as well in law as in equity, of the said parties of the first part, of, in and to the same, and every part and parcel thereof, with the appurtenances; To Have and To Hold the above granted, bargained and described premises, with the appurtenances,
8736 unto the said party of the second part, their successors and assigns, to their own proper use, benefit and behoof forever, Subject nevertheless to the operation and payment by said parties of the second part of a certain Indenture of Mortgage made and executed by said Robert W. Lowber to Eliphatet Nott, dated the first day of December, A. D. 1853, given to secure the payment of the sum of Forty thousand dollars and Recorded in the Office of the Register of the City and County of New York, in Liber 480 of Mortgage, at page 199, as will more fully appear, reference being thereunto had, and which is the same mortgage mentioned in a Deed of even date herewith made by the parties of the first part to the party of the second part of the Block of ground between Avenue C and Avenue D and Fifteenth Street and Sixteenth Street.

AND the said parties of the first part for themselves, their heirs, executors and administrators, do covenant, grant and agree, to and with the said party of the second part, their successors and assigns, that the said Robert W. Lowber at the time of the sealing and delivery of these presents, was lawfully seized in his own right of a good, absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted, bargained and described premises, with the appurtenances, and has good right, full power and lawful authority, to grant, bargain, sell and convey the same, in manner and form aforesaid. And that the said party of the second part, their successors and assigns, shall and may at all times hereafter, peaceably and quietly have, hold, use, occupy, possess and enjoy the above granted premises, and every part and parcel thereof, with the appurtenances, without any let, suit,
8737 trouble, molestation, eviction, or disturbance of the said parties of the first part, their heirs or assigns, or of any other person or persons lawfully claiming or to claim the same. And that the same now are free, clear, discharged and unencumbered, of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and encumbrances of what nature or kind soever. And also that the said parties of the first part, and their heirs, and all and every other person or persons whatsoever, lawfully or equitably deriving any estate, right, title or interest, of, in, or to the hereinbefore granted premises, by, from, under, or in trust for them or either of them, shall and will, at any time or times hereafter, upon the reasonable request, and at the proper costs and charges in the law, of the said parties of the second part, their successors and assigns, make, do and execute, or cause or procure to be made, done and executed, all and every such further and other lawful and reasonable acts, conveyances and assurances in the law, for the better and more effectually vesting

COPY

8739


16th St.
Avenue D
15th St.
Tompkins St.
East River
678
679
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690
689
688
687

Recorded in the office of the Register of the City and County of New York, in Liber 693 of Cons., page 640, February 5, 1856, at 40 min. past 2 P. M.

Examined by

JOHN J. DOANE,
Regr.

and confirming the premises hereby intended to be granted, in and to the said parties of the second part, their successors and assigns for ever, as by the said parties of the second part, their successors or assigns, or their counsel learned in the law, shall be reasonably devised, advised or required.

AND the said parties of the first part their heirs, the above described and hereby granted and released premises, and every part and parcel thereof, with the appurtenances, unto the said party of the second part, their successors and assigns, against the said parties of the first part, and their heirs, and against all and every person and persons whosoever, lawfully claiming or to claim 8738 the same, shall and will Warrant, and by these presents forever Defend.

IN WITNESS WHEREOF, The said parties have hereunto set their hands and seals the day and year first above written.

ROBERT W. LOWBER. [L. S.]
ELIZABETH G. LOWBER. [L. S.]

The words "successors and assigns" and "successors" on first and second pages interlined before signing.

Sealed and delivered in presence of

JAMES P. HYATT.

STATE OF NEW YORK,
City and County of New York, ss:

On this Fourth day of February in the year of our Lord one thousand eight hundred and fifty-six before me personally came Robert W. Lowber and Elizabeth G., his wife, to me known to be the individuals described in, and who executed the within conveyance, who acknowledged that they executed the same, and the said Elizabeth G., in a private examination by me, separate and apart from her Husband, acknowledged that she executed the same freely without any fear or compulsion of the said Husband.

JAMES P. HYATT,
Comm. of Deeds.

(Here follows facsimile marked p. 8739.)

8740 COMPLAINANT'S EXHIBIT 298.

303

ROBERT W. LOWBER AND WIFE

TO

THE MANHATTAN GAS LIGHT COMPANY.

Dated 26th December, 1855.

DEED.

THIS INDENTURE, made the twenty-sixth day of December, in the year of our Lord one thousand eight hundred and fifty-five, BETWEEN ROBERT W. LOWBER, of the City, County and State of New York, and ELIZABETH G., his wife, parties of the first part, and THE MANHATTAN GAS LIGHT COMPANY, of the City of New York, party of the second part, WITNESSETH, That the said parties of the first part, for and in consideration of the sum of Ninety-two thousand dollars lawful money of the United States of America, to them in hand paid, by the said party of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the said party of the second part, their successors and assigns, forever released and discharged from the same, by these presents, HAVE granted, bargained, sold, aliened, remised, released and discharged from the same, by these presents Do grant, bargain, sell, alien, remise, release, convey and confirm, unto the said party of the second part, and to their successors and assigns forever ALL that certain Block of ground comprising Fifty-
8741 eight Lots numbered on the diagram herein by the numbers
three hundred and seventy-seven (377) to the number four hundred and thirty-four (434), both inclusive, lying and being in the Eighteenth Ward of the City of New York, and bounded and described as follows:

Westerly by Avenue C, two hundred and six feet and six inches; Easterly by Avenue D, two hundred and six feet and six inches; Northerly by Sixteenth Street, six hundred and seventy-six feet, and Southerly by Fifteenth Street, six hundred and seventy-six feet, as laid down in said diagram, TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; AND ALSO all the estate, right, title, interest, dower and right of dower, property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in and to the same, and every part and parcel thereof, with the appurtenances; TO HAVE AND TO HOLD the above granted, bargained and described premises, with the appurtenances, unto the said party of the second part, their successors and assigns, to their own proper use, benefit and behoof forever, Subject however to the operation and payment of a certain Indenture of Mortgage dated the first day of December, A. D 1853, made and executed by Robert W. Lowber to Eliphatet Nott, to secure the payment of the sum of Forty thousand dollars and interest, and recorded in the Office of the Register of the City and County of New York, in Liber 480 of Mortgages, at page 199, which said sum of Forty thousand dollars and interest thereon from the 1st 8742 day of December, 1855, makes part of the purchase money herein mentioned and the payment thereof hereby assumed; And the said parties of the first part for themselves, their heirs, executors and administrators, doth covenant, grant and agree, to and with the said party of the second part, their successors and assigns, that the said Robert W. Lowber at the time of the sealing and delivery of these presents, was lawfully seized in his own right of a good, absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted, bargained and described premises, with the appurtenances, and has good right, full power and lawful authority, to grant, bargain, sell and convey the same, in manner and form aforesaid. And that the said party of the second part, his heirs and assigns, shall and may at all times hereafter, peaceably and quietly have, hold, use, occupy, possess and enjoy the above granted premises, and every part and parcel thereof, with the appurtenances, without any let, suit, molestation, eviction, or disturbance of the said party of the first part, his heirs or assigns, or of any other person or persons lawfully claiming or to claim the same: And that the same now are free, clear, discharged and unencumbered, of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and encumbrances of what nature or kind soever. And also that the said party of the first part, and their heirs, and all and every other person or persons whatsoever, lawfully or equitably deriving any estate, right, title or interest, of, in, or to the hereinbefore granted premises, by, from, under, or in trust for them, shall and will at any time or times hereafter, upon the reasonable request, and at the proper costs and 8743 charges in the law, of the said party of the second part, their successors and assigns, make, do and execute, or cause or procure to be made, done and executed, all and every such further and other lawful and reasonable acts, conveyances and assurances in the law, for the better and more effectually vesting and confirming the premises hereby intended to be granted, in and to the said party of the second part, their successors and assigns for ever, as by the said party of the second part, their successors or assigns, or their counsel learned in the law, shall be reasonably devised, advised or required.

And the said parties of the first part, their heirs, the above described and hereby granted and released premises, and every part and parcel thereof, with the appurtenances, unto the said party of the second part, their successors and assigns, against the said parties of the first part, and their heirs, and against all and every person and persons whomsoever, lawfully claiming or to claim the same, shall and will Warrant, and by these presents forever Defend.

IN WITNESS WHEREOF, The said parties have hereunto set their hand and seals the day and year first above written.

ROBERT W. LOWBER. [L. S.]
ELIZABETH G. LOWBER. [L. S.]

The words "successors and assigns" and "successors" on first page and the words "successors" in few places on second page interlined before signing.

Sealed and delivered in presence of

JAMES V. HYATT.

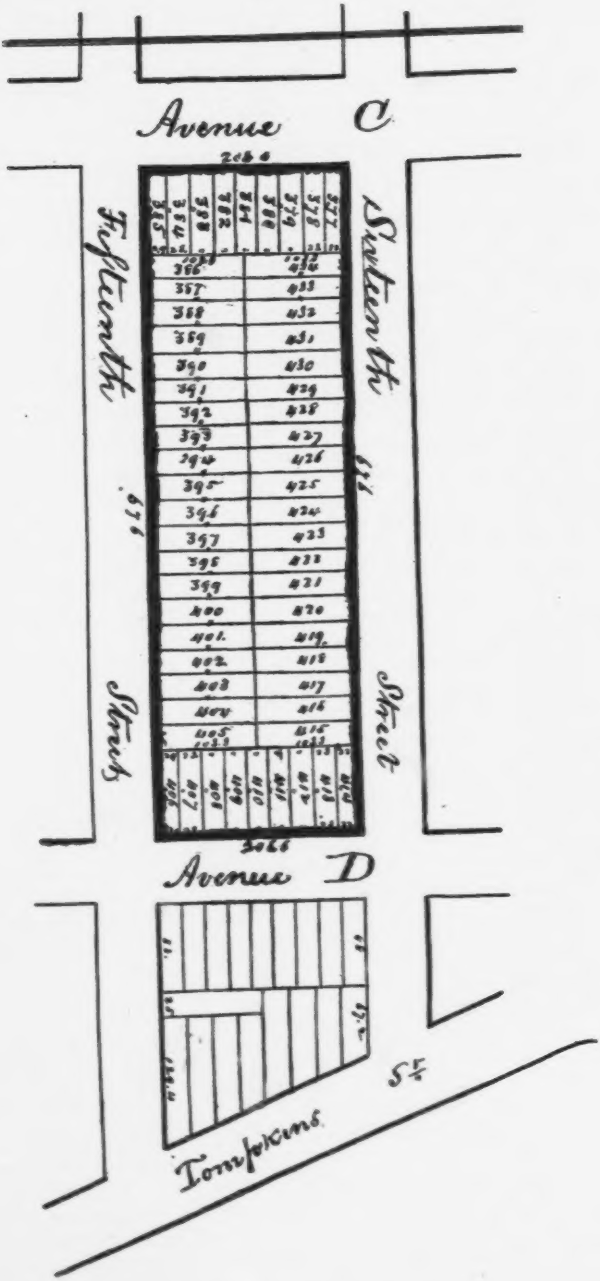
8744 STATE OF NEW YORK,
City and County of New York, ss:

On this twenty-seventh day of December, in the year of our Lord one thousand eight hundred and fifty-five, before me personally came Robert W. Lowber and Elizabeth G., his wife, to me known to be the individuals described in, and who executed the within conveyance, who acknowledged that they executed the same, and the said Elizabeth G., on a private examination by me separate and apart from her husband, acknowledged that she executed the same freely without any fear or compulsion of her said husband.

JAMES P. HYATT.
Comm. of Deeds.

(Here follows facsimile marked p. 8745.)

1753


Avenue C
206.6
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Fifteenth Street
Sixteenth Street
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421
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676
406
407
408
409
410
411
412
413
414
206.6
Avenue D
Tompkins St

8746 Recorded in the office of the Register of the City and County of New York, in Liber 693 of Cons, page 637, February 5, 1856, at 40 min. past 2 P. M.

Examined by JOHN J. DOANE, *Regr.*

8747

COMPLAINANT'S EXHIBIT 299.

MOSES TAYLOR AND CATHARINE A., HIS WIFE,

TO

THE MANHATTAN GAS LIGHT COMPANY. DEED.

Dated 15 June, 1853.

B. W. Bonney, Counsellor, &c., 38 Wall Street, N. Y. City.

THIS INDENTURE, made the fifteenth day of June, in the year one thousand eight hundred and fifty-three, BETWEEN MOSES TAYLOR, of the City of New York, in the County and State of New York, Merchant, and CATHARINE A., his wife, parties of the first part, and "THE MANHATTAN GAS LIGHT COMPANY" in the City of New York, parties of the second part, WITNESSETH, That the said parties of the first parties, for and in consideration of the sum of Forty-two thousand five hundred dollars, lawful money of the United States of America, to them in hand paid, by the said parties of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, Have granted, bargained, sold, aliened, remised, released, conveyed and confirmed, and by these presents Do grant, bargain, sell, alien, remise, release, convey and confirm, unto the said parties of the second part, and to their successors and assigns for ever, ALL that certain piece or parcel 8748 of land, water lot or land covered with water, Situate, lying and being in the Eighteenth Ward of the City of New York, and described and bounded as follows: BEGINNING at a point on the Northerly line of Fourteenth Street, distant two hundred and twenty-eight feet and three inches; Eastwardly from the North Easterly corner of Fourteenth Street and Avenue D, and running thence Eastwardly along the Northerly line of Fourteenth Street two hundred and two feet and eight inches to the Easterly side of the Bulkhead on the East River, as now laid out and built. Thence Northerly along the Easterly side of said Bulkhead two hundred and twenty-six feet and one inch to the Southerly line of Fifteenth Street. Thence Westwardly along said Southerly line of Fifteenth Street two hundred and seven feet and one inch to land now of the parties of the second part. Thence Southwardly along said last mentioned land two hundred and twenty-eight feet to the Northerly line of Fourteenth Street at the point or place of beginning.

AND ALSO all the Bulkhead, being about fifty-four feet and six inches, now laid out and built along said East River between the centre line of and the Northerly line of Fourteenth Street; AND ALSO the said Bulkhead, being about thirty-two feet and ten inches, now laid out and built along said East River between the centre line of and the Southerly line of Fifteenth Street. AND ALSO ALL the right, title, interest, property and claim of the said parties of the first part in and to the one-half of Fourteenth Street and the one-half of Fifteenth Street to the centre lines of said streets, respectively, in front of and adjoining said premises above described, and extending to said bulkhead and in and to the one-half of Fifteenth Street to the 8749 centre line thereof, adjoining or in front of the premises lying Easterly of Avenue D, which were conveyed by Eliphatet Nott and Urania E., his wife, to said Moses Taylor by deed dated the twenty-second day of January one thousand eight hundred and fifty-two. Recorded on 14 February, 1852, and afterwards conveyed by the parties hereto of the first part to said parties hereto of the second part.

AND ALSO All the water front, water rights, water privileges, wharfage and cranage, rights of wharfage and cranage, lands covered with water and pre-emptive or other right to land which may hereafter be gained out of the East River by reason of any grant or extension of the present exterior line of the City of New York into the East River or otherwise between said centre lines of Fourteenth Street and Fifteenth Street, as continued into the East River in front of or adjoining said Bulkhead on premises, as laid down on the diagram hereto annexed:

BEING the same lot of land and premises conveyed by Eliphatet Nott and Urania E., his wife, to the said Moses Taylor by deed dated the second day of June, 1853;

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues, and profits thereof; AND ALSO, all the estate, right, title, interest, dower, right of dower, property, possession, claim and demand whatsoever, as well in law as in equity, of the said parties of the 8750 first part, of, in, or to the above described premises, and every part and parcel thereof, with the appurtenances; TO HAVE AND TO HOLD all and singular the above mentioned and described premises, together with the appurtenances, unto the said parties of the second part, their successors and assigns, for ever.

IN WITNESS WHEREOF, The said parties of the first part to these presents have hereunto affixed their hands and seals the day and year first above written.

MOSES TAYLOR, [L. S.]
CATHARINE A. TAYLOR. [L. S.]

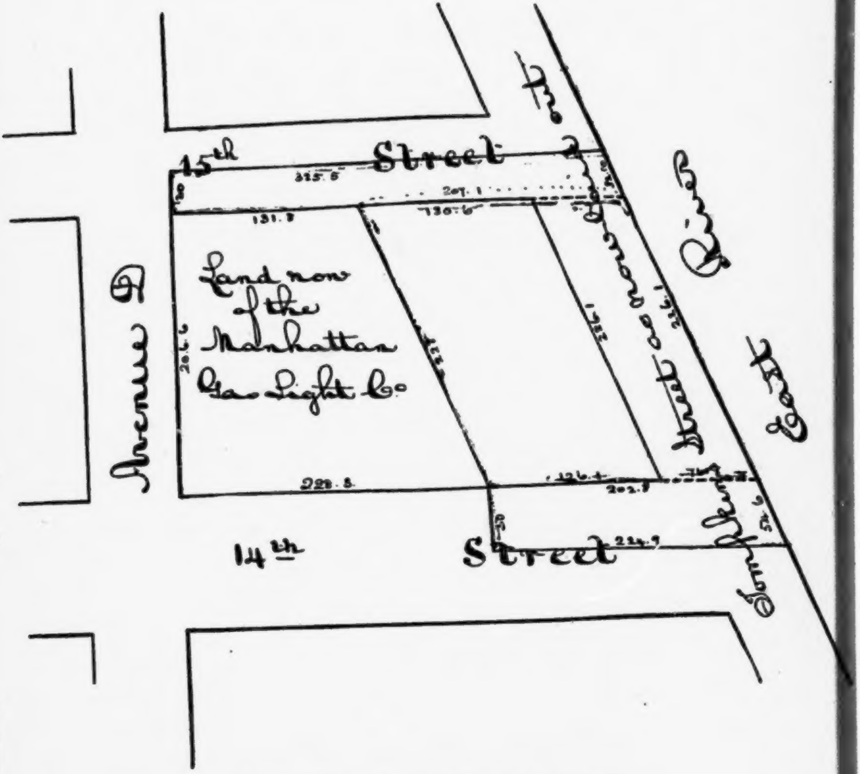
Signed, sealed and delivered in the presence of
THO. T. SOMMERS.

CITY AND COUNTY OF NEW YORK, *ss:*

On this 25th day of June, A. D. 1853, before me came Moses Taylor and Catharine A. Taylor, his wife, both to me personally known to be the same individuals described in and who had executed the foregoing conveyance and severally acknowledged to me that they had respectively executed the same, and the said Catharine A. upon a private examination, separate and apart from her said husband, acknowledged to me that she had executed the same *p*reely and without any fear or compulsion of her said husband.

THO. T. SOMMERS,
Com. of Deeds.

(Here follows facsimile marked p. 8751.)


15th Street
325.6
207.1
131.7
130.6
Land now of the Manhattan Gas Light Co
Avenue D
228.3
126.4
202.7
14th Street
224.9
Tompkins Street as now laid out
East River

Recorded in the Office of Register of the City and County of New York, in Liber 633 of Conveyances, page 585, August 3d, 1853, at 50 minutes past 12 o'clock, noon.

Examined by

G. DYCKMAN,
Register.

8752

COMPLAINANT'S EXHIBIT 300.

MOSES TAYLOR AND CATHARINE A., HIS WIFE,

TO

THE MANHATTAN GAS LIGHT COMPANY.

DEED

Of Block bounded by 14th Street, 15th Street, Avenue D and Tompkins Street.

Dated 19th Feby., 1852.

B. W. Bonney, Counsellor, &c., 38 Wall Street, N. Y. City.

THIS INDENTURE, made the Nineteenth day of February, in the year one thousand eight hundred and fifty-two, BETWEEN MOSES TAYLOR, of the City of New York, in the County and State of New York, Merchant, and Catharine A., his wife, parties of the first part, and "THE MANHATTAN GAS LIGHT COMPANY" of the said City of New York, parties of the second part, WITNESSETH, That the said parties of the first part, for and in consideration of the sum of Twenty-four thousand two hundred and ninety dollars, lawful money of the United States of America, to them in hand paid, by the said party of the second part, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, HAVE granted, bargained, sold, aliened, remised, released, conveyed and confirmed, and by these presents Do grant, bargain, sell, alien, 8753 remise, release, convey and confirm, unto the said party of the second part, and to its successors and assigns for ever, ALL those certain sixteen (16) lots, pieces or parcels of ground, Situate, lying and being in the Eighteenth Ward of the City of New York, designated on the diagram hereunto annexed by the numbers six hundred and fifty-one (651) to six hundred and sixty-six (666), both inclusive, and which taken together are bounded and described as follows: BEGINNING at the intersection of the Northerly line of Fourteenth Street with the Easterly line of Avenue D, thence South Easterly along the said Northerly line of Fourteenth Street two hundred and twenty-eight (228) feet three (3) inches; thence Northerly along the Westerly line of a street to be known as Tompkins Street two hundred and twenty-eight (228) feet to the Southerly line of Fifteenth Street; thence North Westerly along said Southerly line of Fifteenth Street one hundred and thirty-one (131) feet eight (8) inches to said Easterly line of Avenue D, and thence South Westerly along said Easterly line of Avenue D, two hundred and six (206) feet six *inches* (6) inches to the place of beginning be the same more or less.

TOGETHER with all and singular the tenements, hereditaments, and appurtenances thereunto belonging, or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; AND ALSO all the estate, right, title, interest, dower, right of dower, property, possession, claim and demand whatsoever, as well in law as in equity, of the said parties of the first part, of, in, or to the above described premises, and every part and parcel thereof, with the appurtenances; TO HAVE AND TO HOLD, all and singular the above mentioned and described 8754 premises, together with the appurtenances, unto the said party of the second part, its successors and assigns, for ever.

IN WITNESS WHEREOF, The said parties hereto of the first part have hereunto affixed their hands and seals the day and year first above written.

MOSES TAYLOR. [L. S.]
CATHARINE A. TAYLOR. [L. S.]

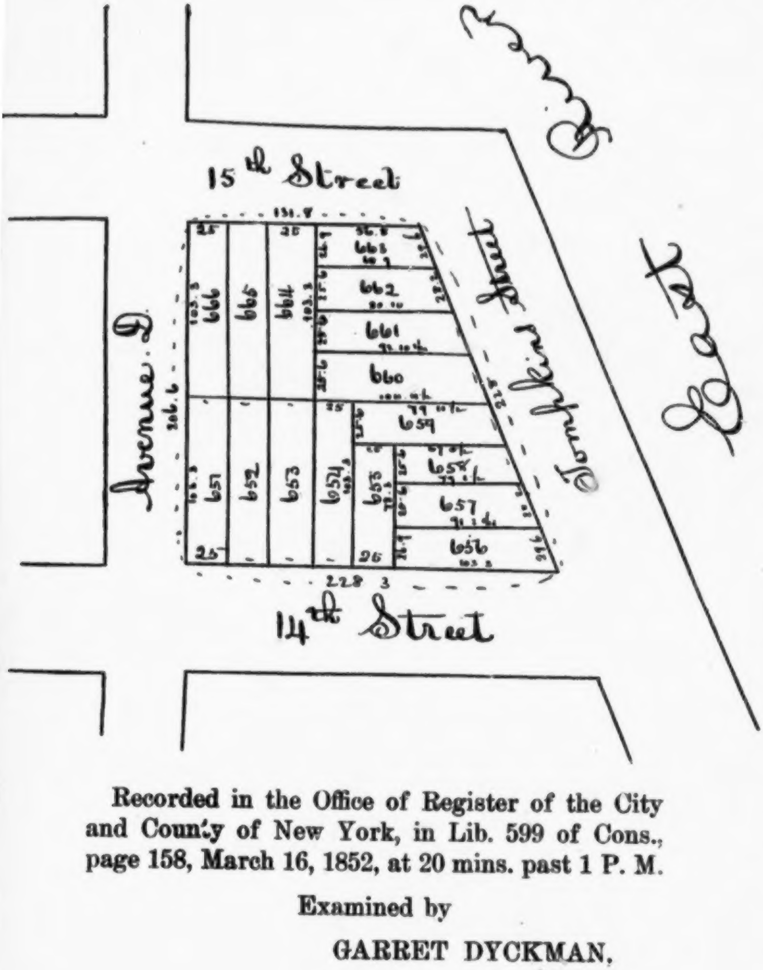
Signed, sealed and delivered in the presence of
ALDEN J. HALE.

STATE OF NEW YORK, *City and County of New York:*

On this tenth day of March, A. D. 1852, before me came Moses Taylor, and on the ninth day of March, A. D. 1852, before me came Catharine A. Taylor, his wife, both known to me to be the individuals described in and who executed the foregoing conveyance, and they severally acknowledged to me that they executed the same, and the said Catharine A., on a private examination by me separate and apart from her husband, acknowledged to me that she executed the said conveyance freely and without any fear or compulsion of her said husband.

ALDEN J. HALE.
Commissioner of Deeds,
No. 38 *Wall Street.*

POOR C


East River
15th Street
131.8
25
25
56.8
663
662
661
660
659
658
657
656
666
665
664
651
652
653
654½
655
103.3
206.6
25
26
228 3
Avenue D
Tompkins Street
14th Street

Recorded in the Office of Register of the City and County of New York, in Lib. 599 of Cons., page 158, March 16, 1852, at 20 mins. past 1 P. M.

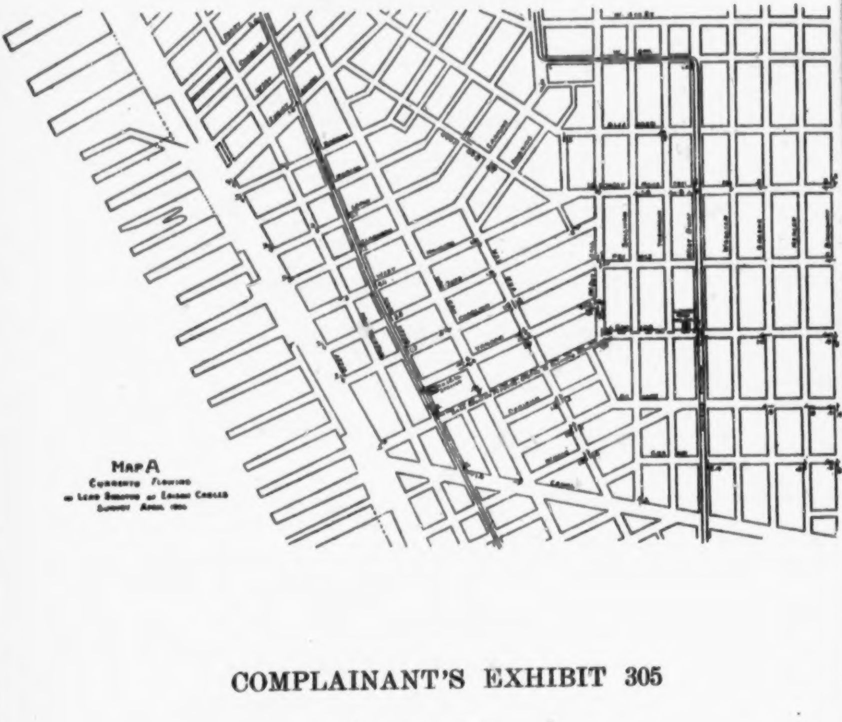
Examined by

GARRET DYCKMAN,
Register.

(See following diagrams & pictures
(marked pp. 8756 to 8770 incl.)

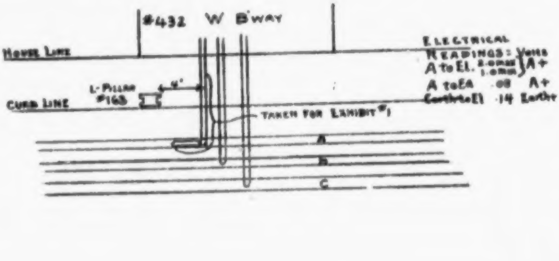
PY

COMPLAINANT'S EXHIBIT 303


Map A
Currents Flowing
in Lead Sheaths of Edison Cables
Sunday April

COMPLAINANT'S EXHIBIT 305

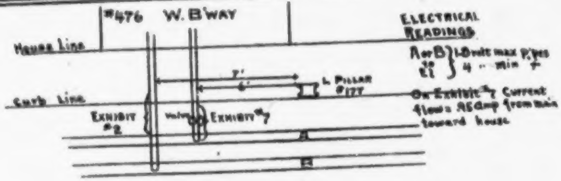
Fig I


#432 W B'way
House Line
Curb Line
L-Pillar #163
4'
Taken for Exhibit #1
A
B
C

Electrical Readings: Volts
A to El. 2.0mm / 1.0mm } A+
A to EA .08 A+
Earth to El .14 Earth

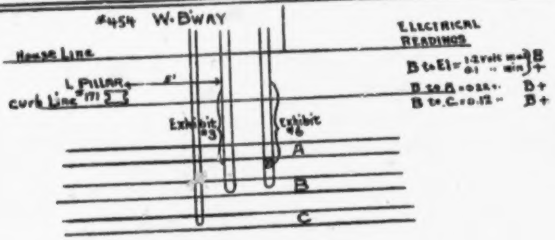
COMPLAINANT'S EXHIBIT 307

FIG II


#476 W. B'WAY
House Line
Curb Line
7'
6'
L Pillar #177
Exhibit #2
Valve
Exhibit #7
A
B
Electrical Readings
A or B to El } 1.0 volt max Pipes 4 " min +
On Exhibit #7 Current flows .85 amp from main toward house

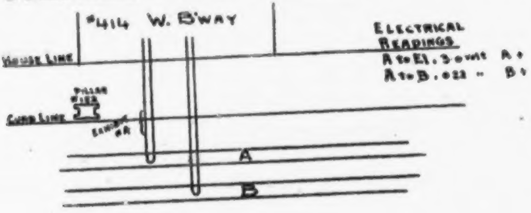
COMPLAINANT'S EXHIBIT 309

FIG III


#454 W. B'WAY
House Line
L Pillar #171
Curb Line
8'
Exhibit #3
Exhibit #6
A
B
C
Electrical Readings
B to El = 1.2 volt max .01 " min } B +
B to A .022 " B+
B to C .0.12 " B+

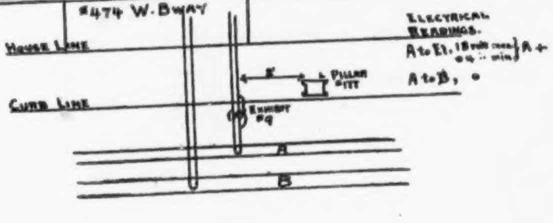
COMPLAINANT'S EXHIBIT 311

FIG IV


#414 W. B'WAY
House Line
Pillar #122
Curb Line
Exhibit #8
A
B
Electrical Readings
A to El. .3 volt A +
A to B .022 " B +

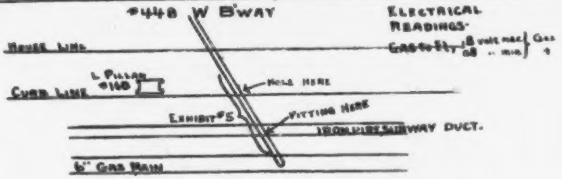
COMPLAINANT'S EXHIBIT 313

FIG V


#474 W. B'WAY
House Line
Curb Line
8'
L Pillar #177
Exhibit #9
A
B
Electrical Readings.
A to El. 1.8 volt max .04 " min } A +
A to B, 0

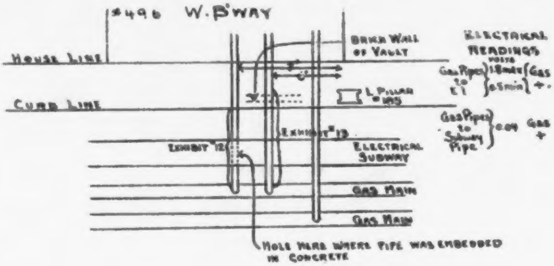
COMPLAINANT'S EXHIBIT 315

Fig VI


#448 W B'WAY
ELECTRICAL READINGS
House Line
L Pillar #160
Curb Line
Hole Here
Exhibit #5
Fitting Here
Iron Pipe Subway Duct.
6" Gas Main

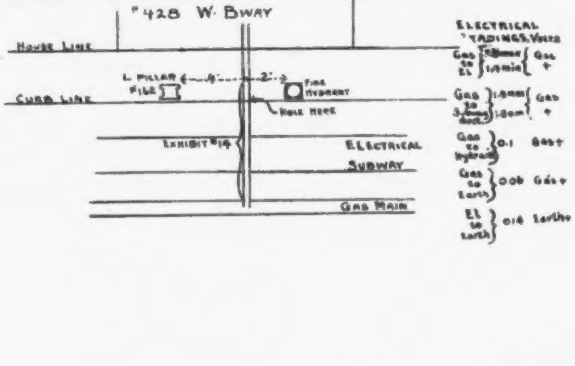
COMPLAINANT'S EXHIBIT 318

Fig VII


#496 W. B'WAY
Brick Wall of Vault
ELECTRICAL READINGS Volts
House Line
Gas Pipes to El
Gas +.
L Pillar #165
Curb Line
Gas Pipes to Subway Pipe
0.04 Gas +
Exhibit #13
Exhibit #12
Electrical Subway
Gas Main
Gas Main
Hole Here where pipe was embedded in Concrete

COMPLAINANT'S EXHIBIT 321

Fig VIII


#428 W. BWAY
ELECTRICAL READINGS, Volts
House Line
Gas to El
Gas +
L Pillar #162
4'
2'
Fire Hydrant
Curb Line
Hole Here
Gas to Subway duct
Gas +
Gas to hydrant
0.1 Gas +
Exhibit #14
Electrical Subway
Gas to Earth
0.06 Gas +
Gas Main
El to Earth
0.14 Earth +

COMPLAINANT'S EXHIBIT 322.

May 8th, 1906.

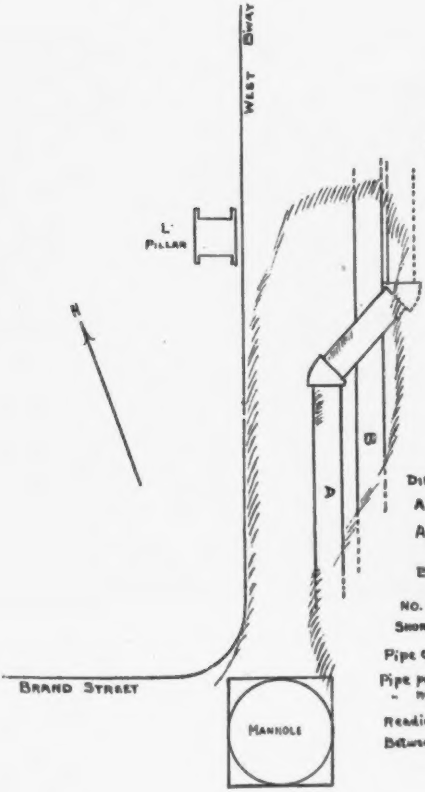


Fig V

N.W. Cor. W. Bway and
Spring St.

Shaded portions show
where casts were
taken

A - 6" wrought iron
B - 6" cast "

Electrical Readings

Diff of Potential:

A to B _ .21 volts, A +

A to "L" structure. { 2.50 volt Pos. To
 1.50 " Neg.

B " " " { 2.50 volt Pos. To
 2.80 " Neg.

No. mkmeter reading

Short circuit Amperes:

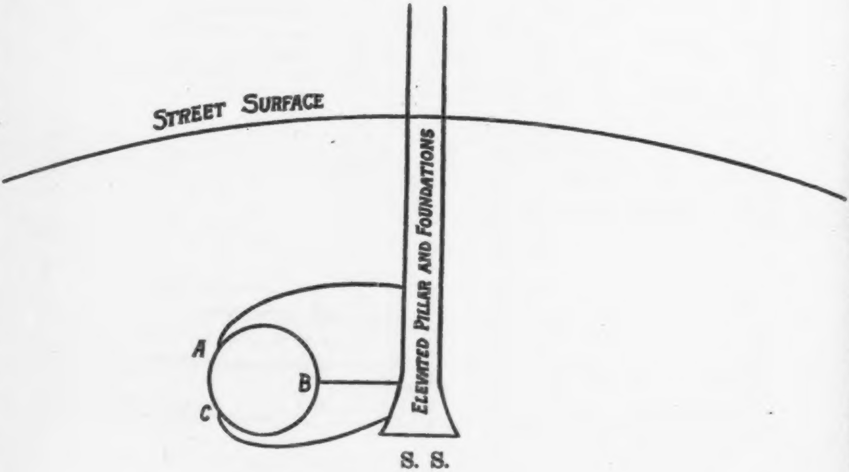
Pipe connected to "L" Pillar through Ammeter,

Pipe pos. 90 Amps., 2.2 volts. Max.
" neg. 10 " .8 " "

Readings practically the same on A and B

Between A and B, no reading

COMPLAINANT'S EXHIBIT 325.


STREET SURFACE
ELEVATED PILLAR AND FOUNDATIONS
A
B
C
S. S.

COMPLAINANT'S EXHIBIT 326.

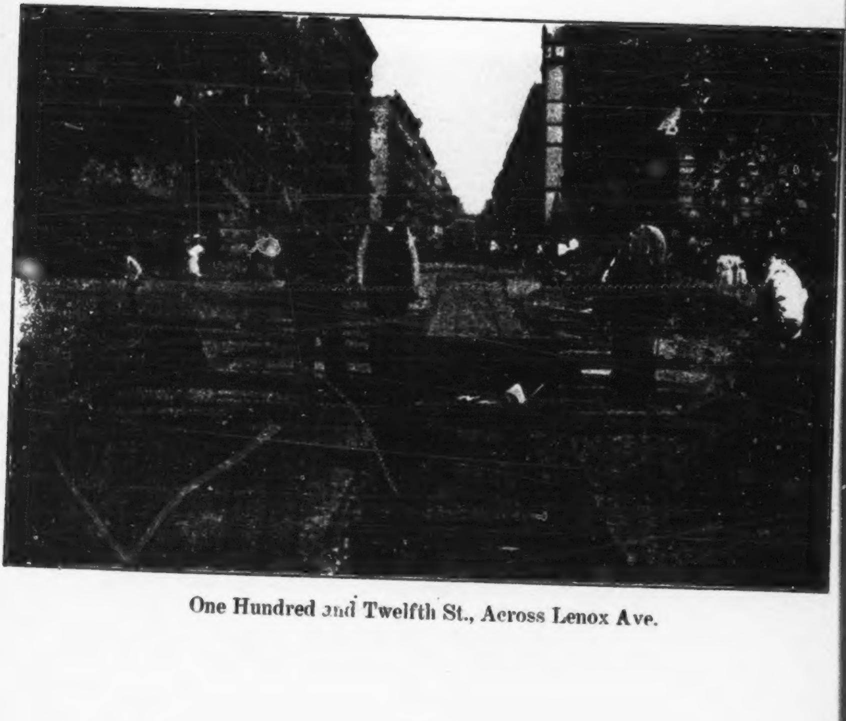
Manhattan St., East of Amsterdam Ave.

COMPLAINANT'S EXHIBIT 327.

One Hundred and Twelfth St., W. of Second Ave.

POOR

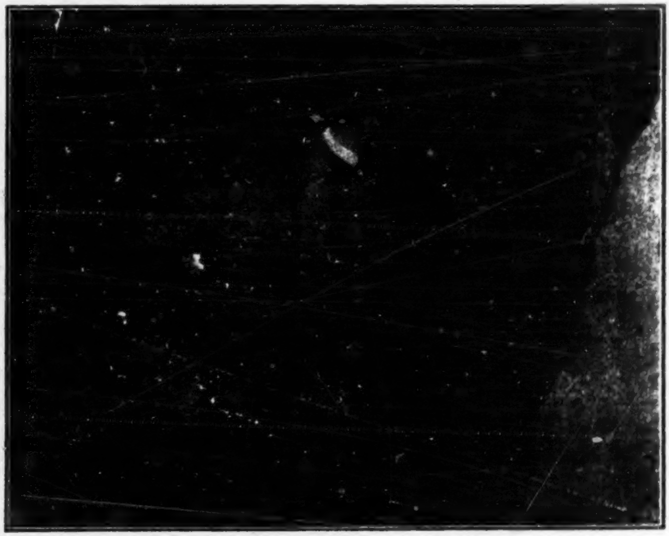
COMPLAINANT'S EXHIBIT 328.



One Hundred and Twelfth St., Across Lenox Ave.

PY

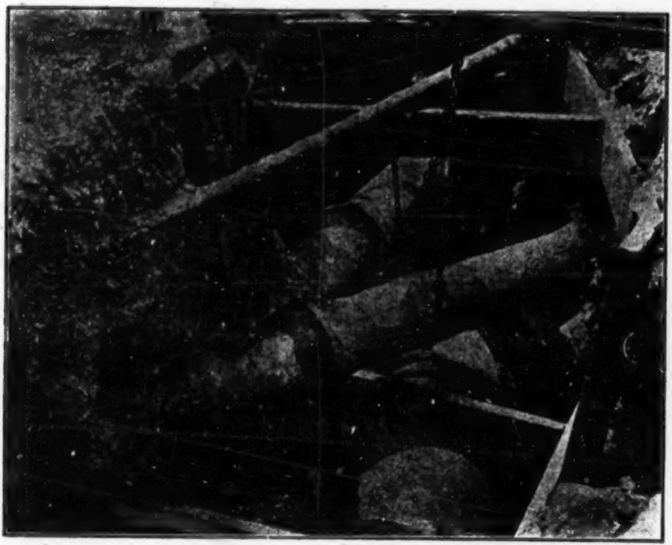
COMPLAINANT'S EXHIBIT 329.



Intersection of One Hundred and Sixteenth St., St. Nicholas and Seventh Aves.

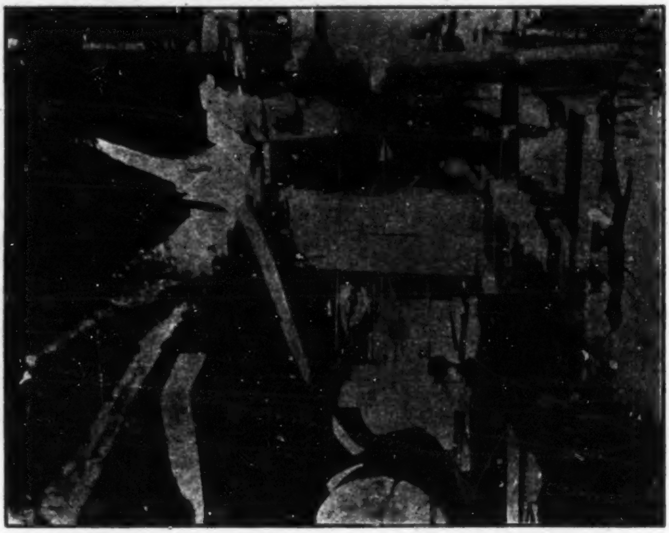
POOR C

COMPLAINANT'S EXHIBIT 330.



St. Nicholas Ave., at One Hundred and Sixteenth St. and Seventh Ave., Looking North.

COMPLAINANT'S EXHIBIT 331.



One Hundred and Eleventh St., East of First Ave.

COMPLAINANT'S EXHIBIT 332.

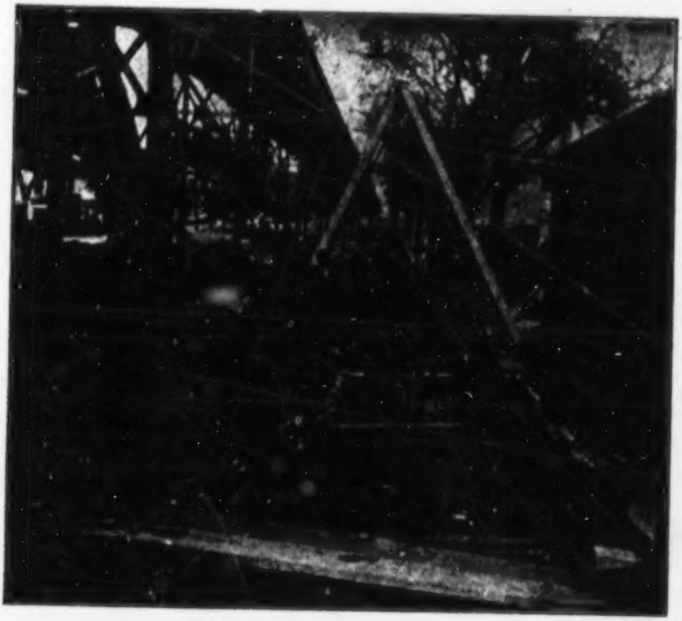
Cor. Manhat St. and Broadway.

PY

COMPLAINANT'S EXHIBIT 333.

Broadway, S. of One Hundred and Thirty-first St., E. S.

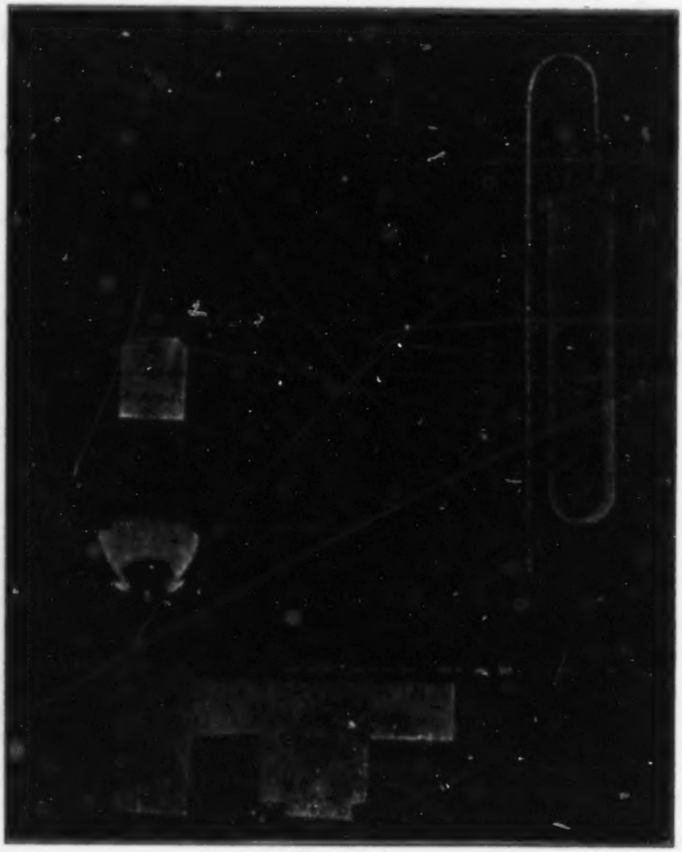
COMPLAINANT'S EXHIBIT 334.



Broadway, N. of Manhattan St., E. S.

COMPLAINANT'S EXHIBIT 341.

January 24, 1907



COMPLAINANT'S EXHIBIT 336

Photometer Tests With Burners Used by Prof. Hallock

STATE'S EXHIBIT X

Commercial 6 ft. Bat-wing Lava Tip Burner

Date.	Pressure at Tip.	Rate of Consumption per Hour.	Candle Power of Flame.	Efficiency Candle Power per Foot.	Remarks.
	Inches.	c. f.			
*12/29/06	0.4	4.26	17.18	4.03	Flame of good shape and stiffness.
	0.5	5.02	20.21	4.02	Flame of good shape and stiffness.
	0.6	5.66	22.68	4.00	Flame shows horns at the base and streaks in the blue portion and is just on the point of becoming serrated on the upper edge.
	0.7	6.25	24.18	3.87	Quite prominent horns at base of flame, blue portion streaked and upper edge serrated.
	0.8	6.87	26.93	3.92	
	0.9	7.52	29.05	3.86	Horns at base of flame almost horizontal. Serrations in upper edge very pronounced.
	1.0	8.13	30.91	3.68	
1/3/07	0.4	4.4	18.90	4.29	Candle power of gas used 24.4.

"Candle power of gas before beginning of series 23.20

*Candle power of gas after end of series 23.98

Without correction for temperature and pressure.

COMPLAINANT'S EXHIBIT 337

Photometer Tests With Burners Used by Prof. Hallock

STATE'S EXHIBIT Y

Commercial 4 ft. Bat-wing Lava Tip Burner Against Candles

Date.	Pressure at Tip.	Rate of Consumption per Hour.	Candle Power of Flame.	Efficiency Candle Power per Foot.	Remarks.
	Inches.	c. f.			
1/2/07	0.4	3.97	17.19	4.33	Candle power of gas used as determined before making tests 24.25 without correction for temperature and pressure.
	0.5	4.50	19.07	4.24	
*1/3/07	0.2	2.37	10.19	4.30	Flame small and flabby, and affected by the slightest current of air.
	0.8	6.13	24.31	3.96	Flame shows horns at base and a somewhat serrated top.
	1.16	7.96	26.93	3.38	Horns at base of flame horizontal, slight roar.

*Candle power of gas used, 24.24 to 24.40.

COMPLAINANT'S EXHIBIT 338

Photometer Tests With Burners Used by Prof. Hallock

STATE'S EXHIBIT Z

Commercial Fish Tail Burner No. 5—Check Removed

Date.	Pressure at Tip.	Rate of Consumption per Hour.	Candle Power of Flame.	Efficiency Candle Power per Foot.	Remarks.
	Inches.	c. f.			
12/31/06	0.14	3.1	13.9	4.48	Flame elongated, curled over on edges, flabby, and easily affected by currents of air. Not good for ordinary commercial use.
	0.21	4.2	18.44	4.39	Flame of fairly good shape but still lacks the stiffness necessary to fit it for the most satisfactory use commercially.
	0.62	7.4	.....	....	Burner blows and flame runs up to a point. No such flame would be used commercially so no determination of candle power was made.
	0.97	9.5	.....	....	Flame roaring so that it could be heard all over a large room.

Candle power of gas before beginning series	24.2	Without correction for temperature and pressure.
Candle power of gas after end of series	23.7	

COMPLAINANT'S EXHIBIT 339

Photometer Tests With Burners Used by Prof. Hallock

STATE'S EXHIBIT A.A.

Commercial Fish Tail Burner No. 5—Checked

Date.	Pressure Behind Check.	Rate of Consumption per Hour.	Candle Power of Flame.	Efficiency Candle Power per Foot.	Remarks.
	Inches.	c. f.			
1/3/07	0.58	3.46	15.80	4.56	Flame elongated, flabby and curled over on the edges. Very easily affected by draughts.
	0.83	4.10	19.19	4.68	Flame still long and slightly curled over on edges but stiffer than at pressure of 0.58 in.
	1.00	4.67	22.57	4.83	Flame in good condition.
	1.18	5.28	24.92	4.72	

Candle power of gas, without correction for temperature or pressure, 24.4.

COMPLAINANT'S EXHIBIT 340

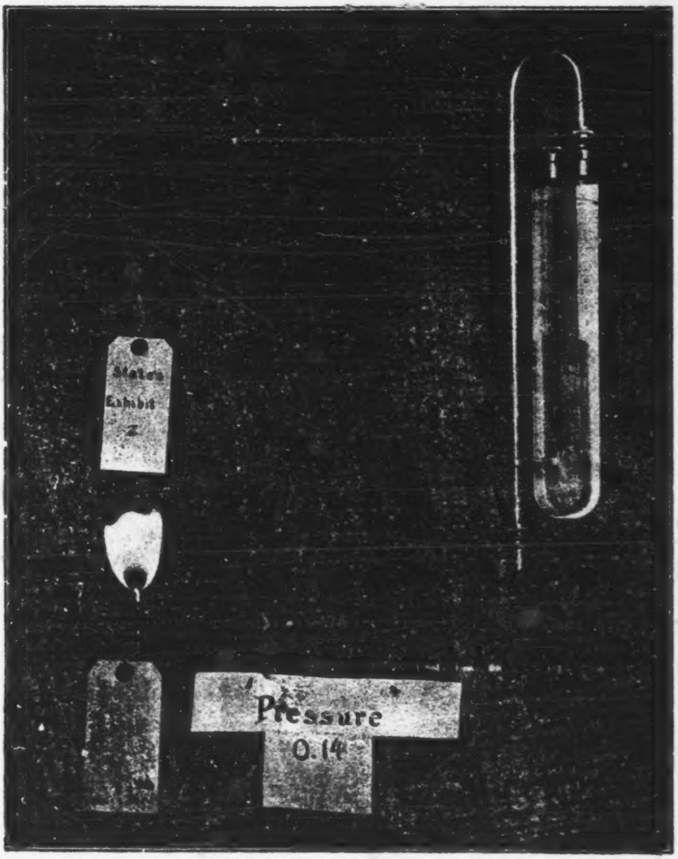
PHOTOMETER TESTS OF BURNERS

Series of Tests Comparing Unchecked and Checked Burners

Date.	Burner.	Pressure at Base of Burner Pillar.	Rate of Consumption per Hour.	Candle Power of Flame.	Efficiency Candle Power per Foot.
		Inches.	cu. ft.		
1/4/07	State's Exhibit Z. Unchecked Burner.	0.14	3.34	14.80	4.43
	State's Exhibit AA. Same as Z except that it is Checked.	1.00	4.78	21.34	4.46
	State's Exhibit X. Unchecked.	0.4	4.52	18.84	4.14
	High Pressure Bray. Slit Union No. 6. Similar to X except that it is Checked.	1.29	4.74	21.43	4.52
	State's Exhibit Y. Unchecked Burner.	0.4	3.82	15.95	4.17
	High Pressure Bray. Slit Union No. 4. Similar to Y except that it is Checked.	1.33	3.64	15.61	4.28

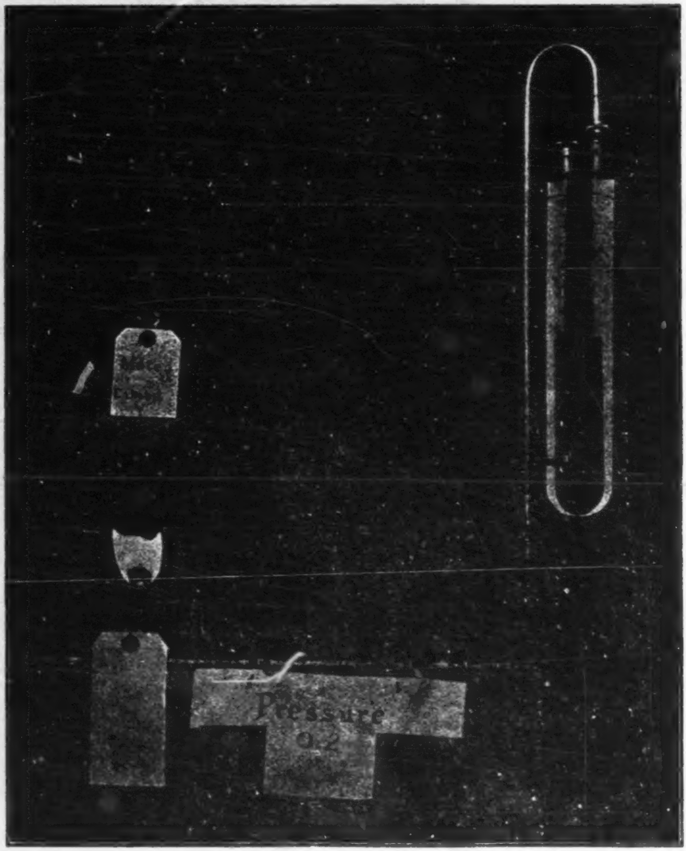
COMPLAINANT'S EXHIBIT 342.

January 24, 1907


State's
Exhibit
Z
Pressure
0.14

COMPLAINANT'S EXHIBIT 343.

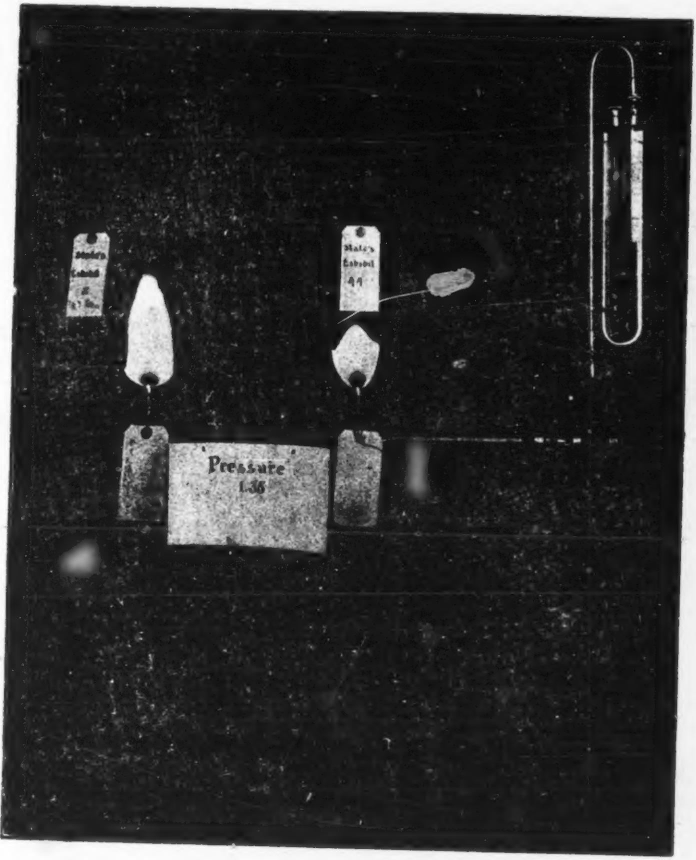
January 24, 1907


Pressure
0.2

POOR

COMPLAINANT'S EXHIBIT 344

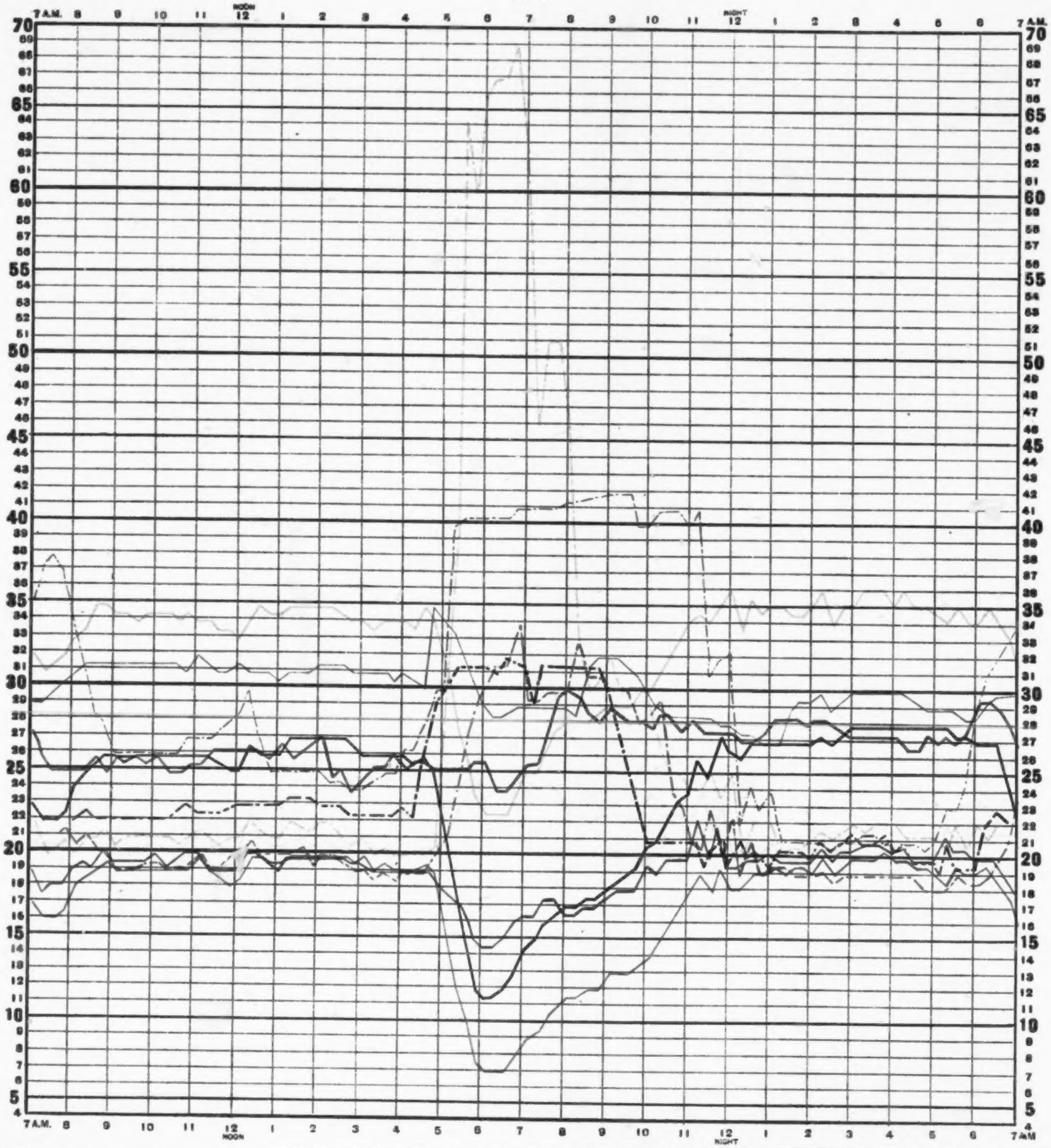
January 24, 1907

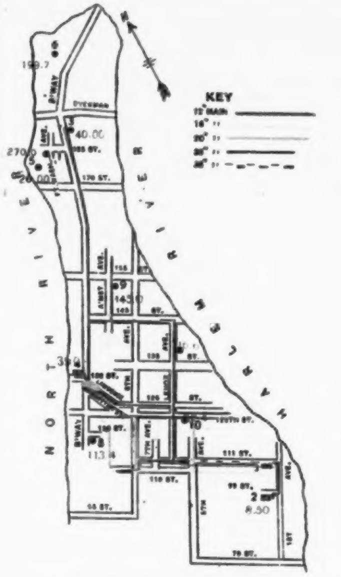

State's Exhibit 44
Pressure
1.36

1782

6043 8779

COMPLAINANT'S EXHIBIT 345





KEY
12" MAIN
16" "
20" "
30" "
48" "
N
B'WAY
DYCKMAN
NORTH RIVER
HARLEM RIVER
199.7
40.00
270.0
26.00
170 ST.
155 ST.
143.0
145 ST.
135 ST.
39.0
125 ST.
125TH ST.
116 ST.
113.4
111 ST.
110 ST.
99 ST.
93 ST.
8.50
79 ST.

TERRITORY SUPPLIED BY 99TH 111TH AND 132ND ST. STATIONS

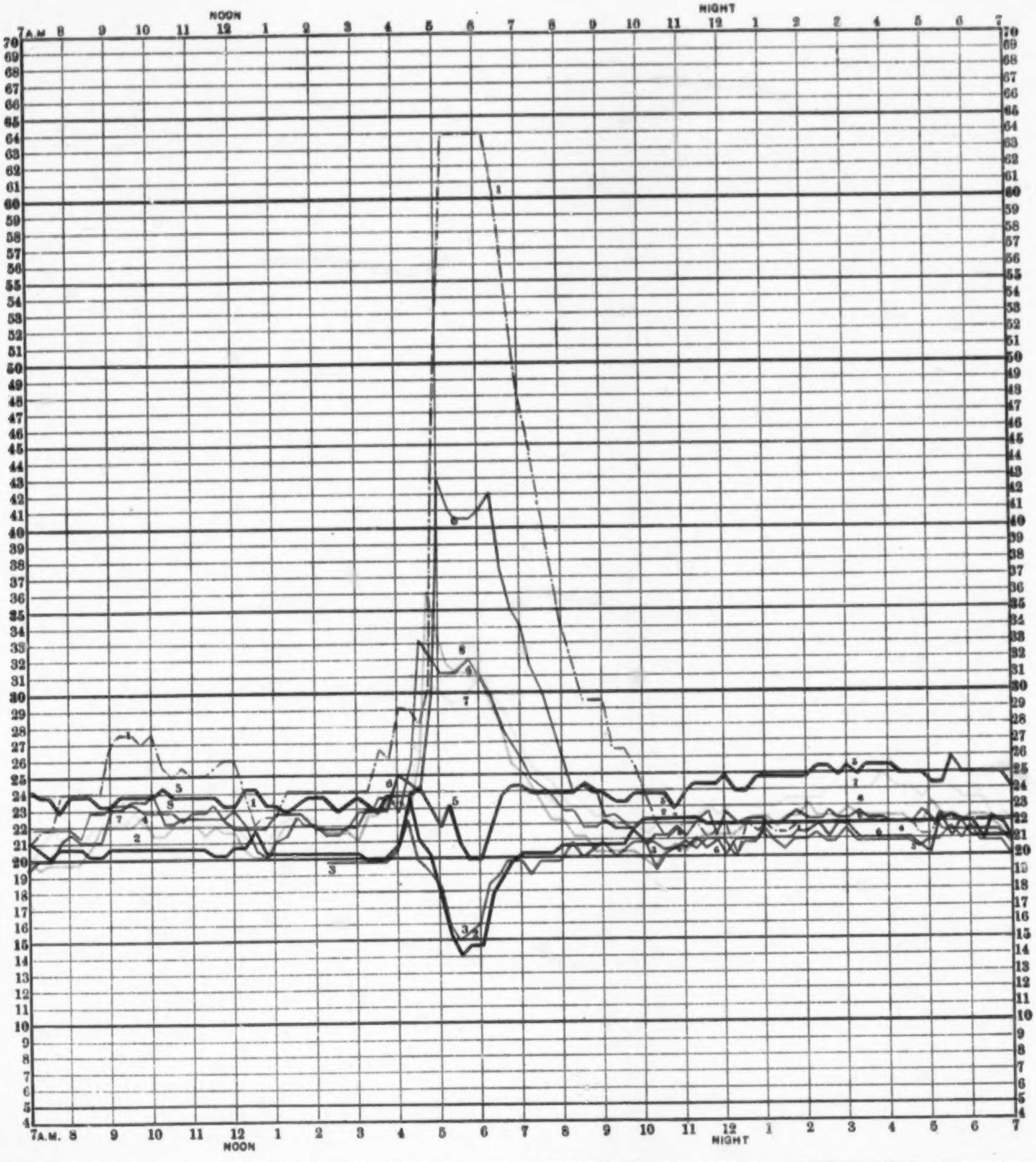
REFERENCE

-111th St. Station	— · — · —
99th " "	—— - —— - ——
-Inwood "	━━━━━
4-132nd St. "	- - - - -
5-176th " —Boulevard Laf.	Green.
6-Bolton Road	Red.
7-533 Lenox Ave.	Brown.
8-B'way-120th St.	Voilet.
9-1911 Amsterdam Ave.	Blue.
10-38 W. 125th St.	Yellow.
11-185th St.-Ft. Washington Ave.	Orange.

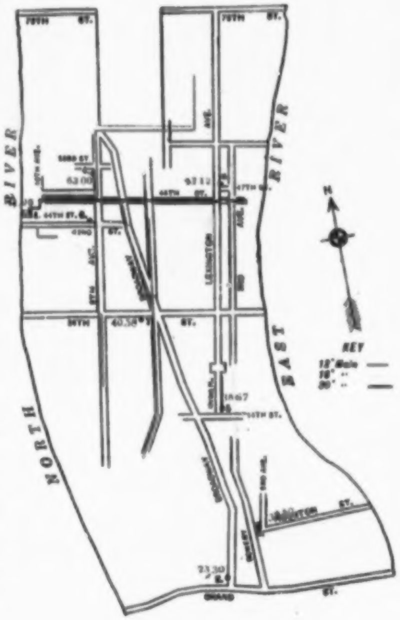
PRESSURE FOR JANUARY. 16. 1907.

NOTE:- RED FIGURES IN DISTRICT SKETCH SHOW ELEVATION ABOVE MEAN HIGH WATER.

POOR COPY



COMPLAINANT'S EXHIBIT 346


79TH ST.
79TH ST.
NORTH RIVER
EAST RIVER
44TH ST.
47TH ST.
42ND ST.
34TH ST.
14TH ST.
GRAND ST.
8TH AVE.
3RD AVE.
LEXINGTON AVE.
6200
6712
4038
1867
2330
N
KEY
12" Main
16" "
20" "

TERRITORY SUPPLIED BY THE 44th ST. STATION.

REFERENCE:

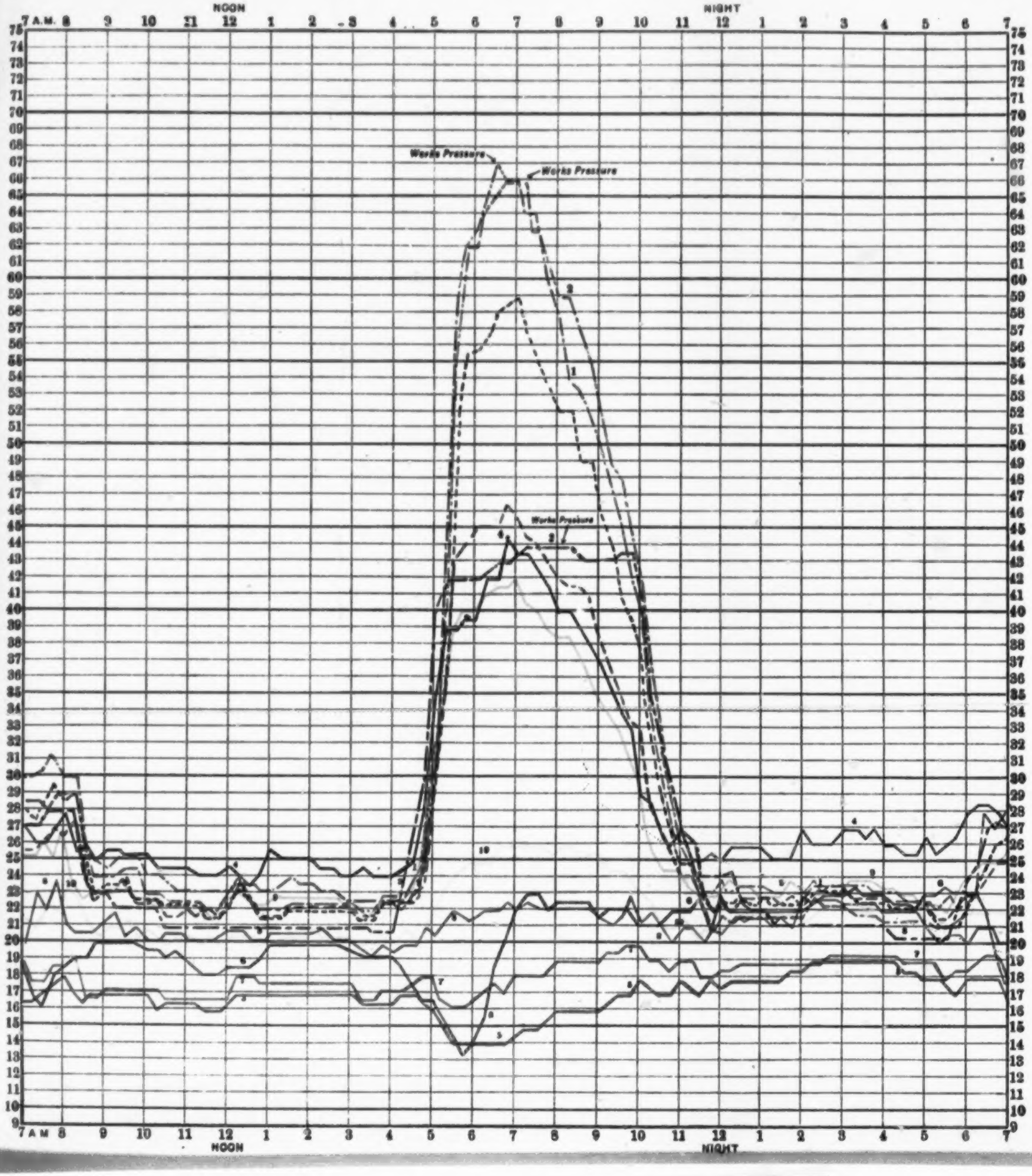
Works Pressure Sta. 1 Pressure shown in — · — · —

District Pressure Charts		"	"	"	
487 Broadway Sta.	*2*	"	"	"	*Blue*
5 Second Ave. "	*3*	"	"	"	*Green*
879 Eighth Ave. "	*4*	"	"	"	*Orange*
4 Irving Pl. "	*5*	"	"	"	*Brown*
317 W.42nd St. "	*6*	"	"	"	*Red*
108 W.34th St. "	*7*	"	"	"	*Yellow*
119 E.47th St. "	*8*	"	"	"	*Violet*

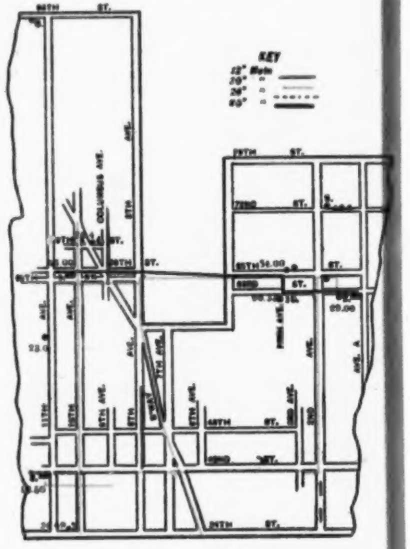
PRESSURE OF JANUARY 16th 1907.

NOTE:— Red Figures at Stations as shown in District Sketch Show Elevations above Mean High Water.

POOR COPY



COMPLAINANT'S EXHIBIT 347


KEY
12" Main
20" "
36" "
48" "
86TH ST.
COLUMBUS AVE.
8TH AVE.
59TH ST.
65TH ST.
79TH ST.
72ND ST.
63RD ST.
11TH AVE.
10TH AVE.
9TH AVE.
8TH AVE.
B'WAY
7TH AVE.
6TH AVE.
PARK AVE.
3RD AVE.
2ND AVE.
AVE. A
48TH ST.
42ND ST.
34TH ST.
23.0
33.00
54.00
69.00

TERRITORY SUPPLIED BY THE {42ND / 63RD ST / 65TH} STATIONS.

REFERENCE·

65th St. Works Pressure Sta. 1. Pressure shown in ▬ · ▬

63rd St. " " " 2. " in " ▬ · · ▬

42nd St. " " " 3. " " " ▬ - ▬

DISTRICT PRESSURE CHARTS.

145 W. 69th St. Sta. 4. Pressure shown in Blue

844 11th Ave. " 5. " " " Green

227 Riverside Drive " 6. " " " Brown

555 W. 35th St. " 7. " " " Violet

311 E. 72nd St. " 8. " " " Red

145 E. 65th St. " 9. " " " Orange

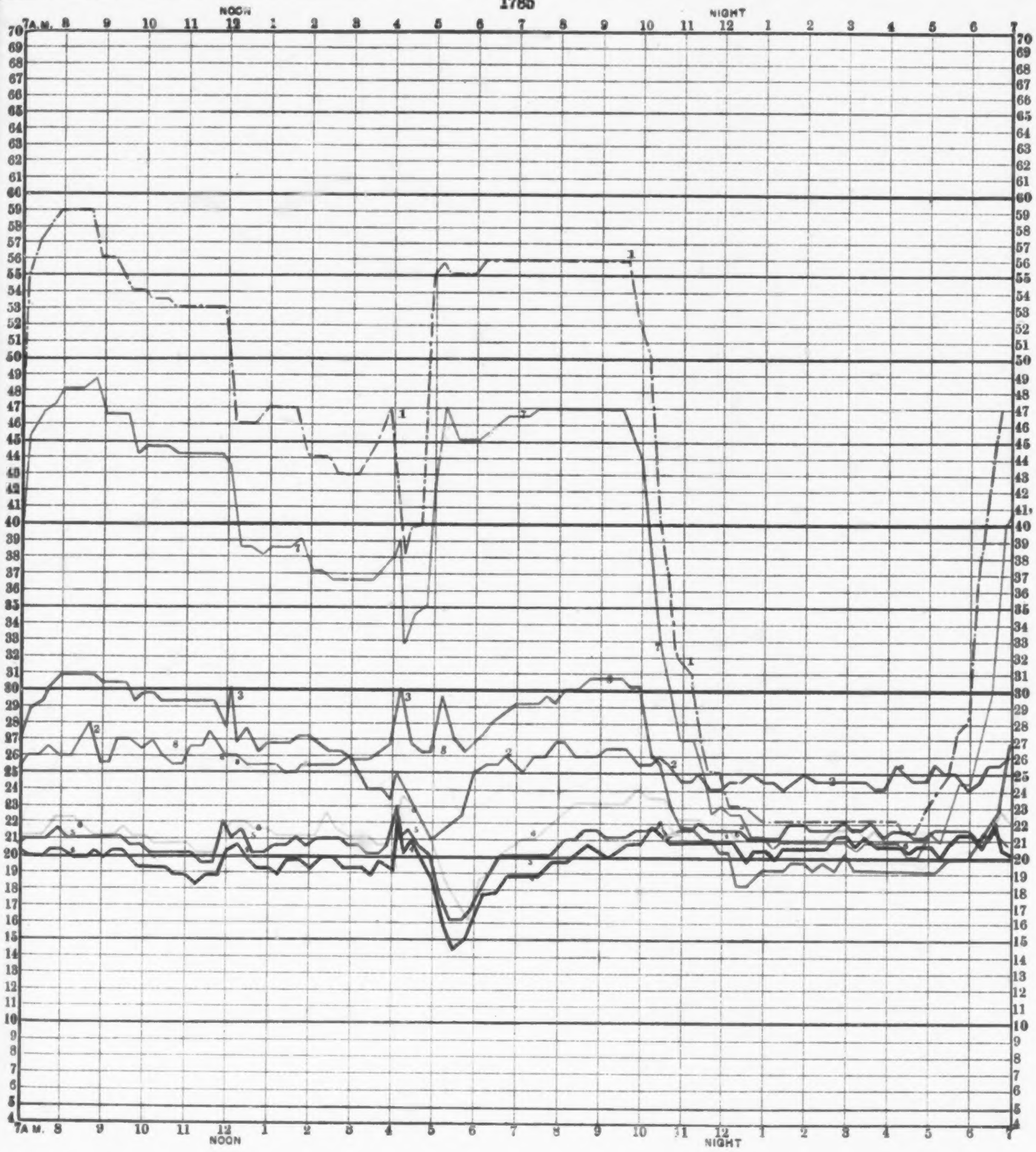
565 Park Ave. " 10. " " " Yellow

406 E. 63rd St. " 11. " " " Blue Broken Line

308 E. 65th St. " 12. " " " Brown " "

PRESSURE FOR JAN. 16TH 1907.

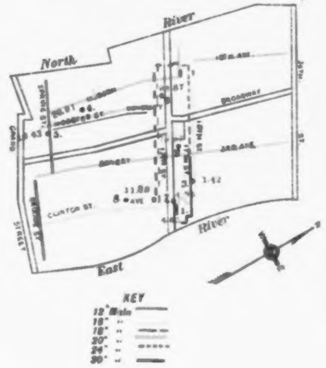
***NOTE.** —Red Figures at Stations as shown in District Sketch Show Elevations above Mean High Water*



COMPLAINANT'S EXHIBIT 348

TERRITORY SUPPLIED BY THE 14th ST. STATION.

PRESSURE OF JAN. 17th 1907.


North
River
East
River
CLINTON ST.
BROADWAY
AVE
STREET
KEY
12" Main
16" "
18" "
20" "
24" "
30" "

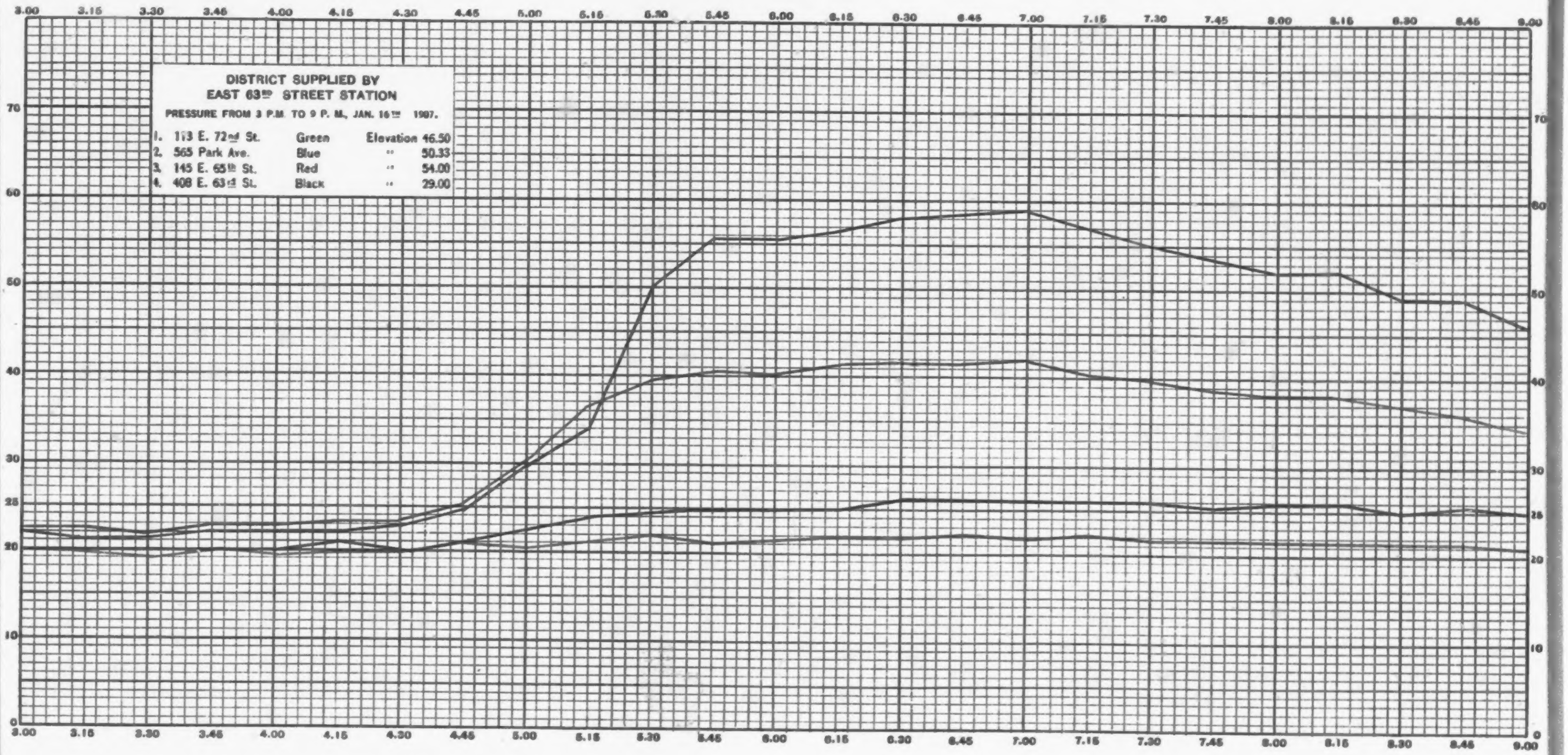
REFERENCE:

Works Pressure Sta. 1 Pressure shown in District Pressure Charts —·—·—

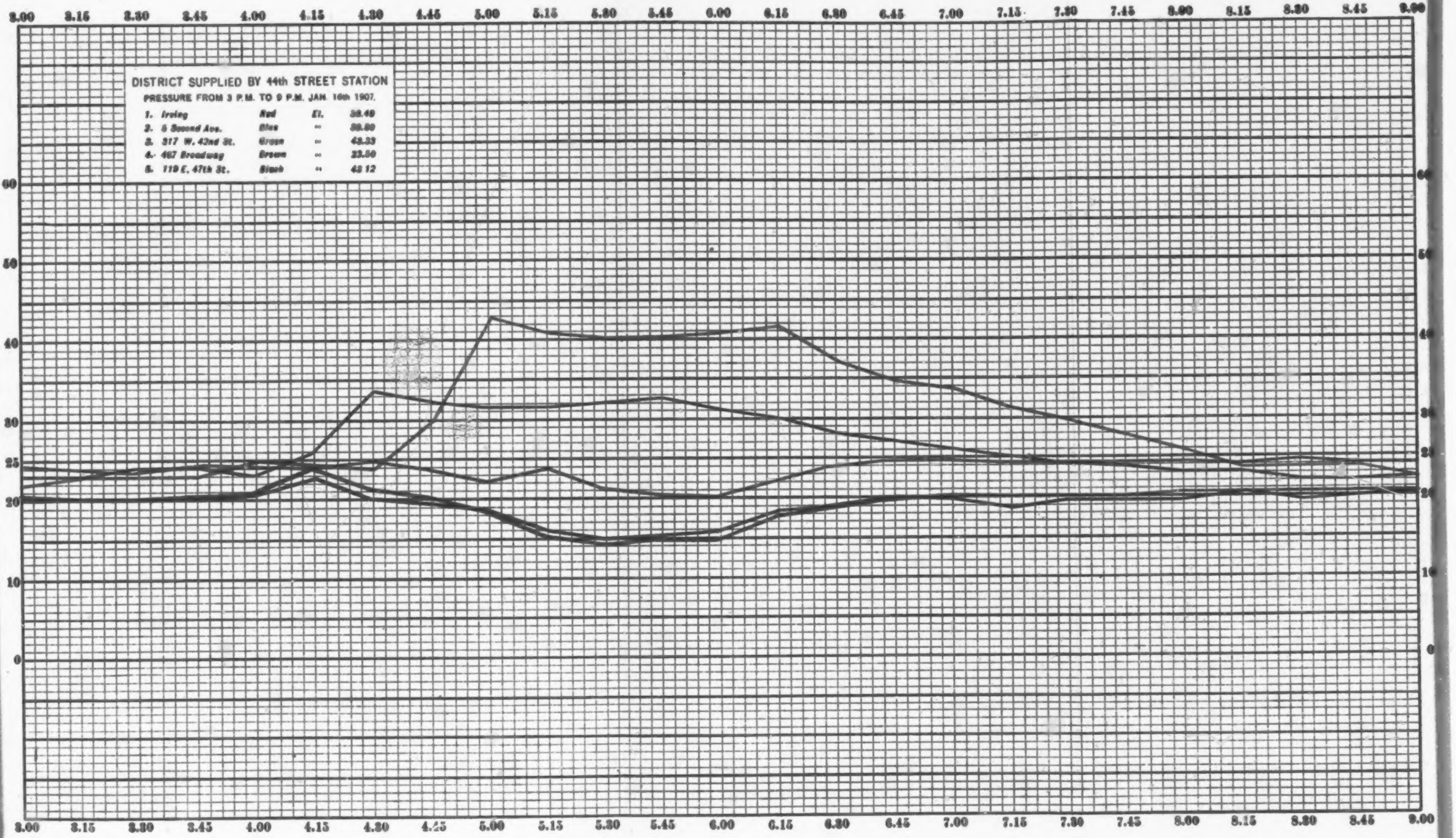
15th St. Irving Pl. Sta.	*2*	"	"	"	*Red*
420 E. 18th St. "	*3*	"	"	"	*Green*
148 W. Houston St. "	*4*	"	"	"	*Blue*
90 Wooster St. "	*5*	"	"	"	*Brown*
78 Fifth Ave. "	*6*	"	"	"	*Orange*
609 E. 14th St. "	*7*	"	"	"	*Violet*
109 Ave. B. "	*8*	"	"	"	*Yellow*

NOTE.— Red Figures at Stations as shown on District Sketch Show Elevations above Mean High Water.

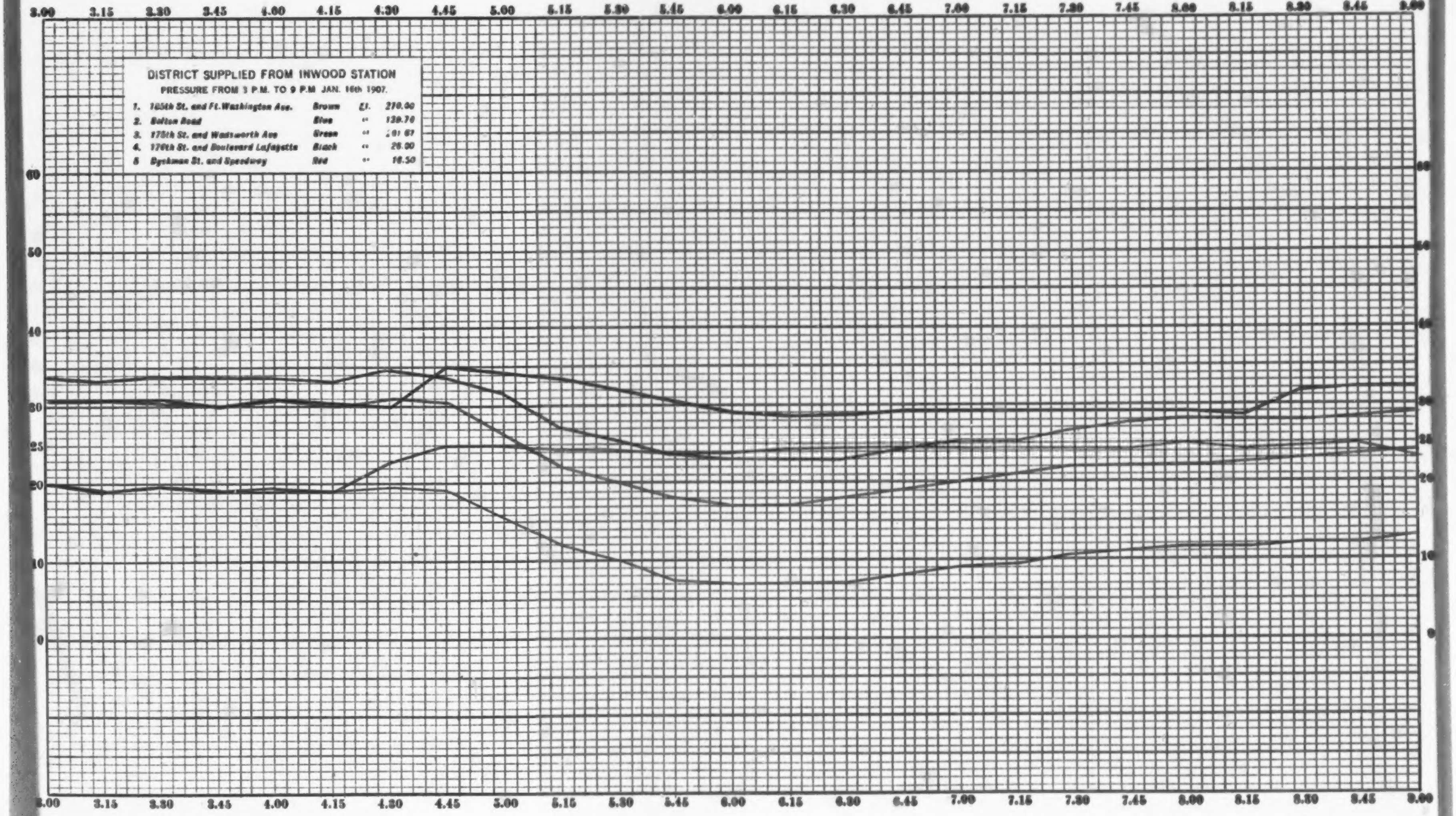
COMPLAINANT'S EXHIBIT 349



COMPLAINANT'S EXHIBIT 350

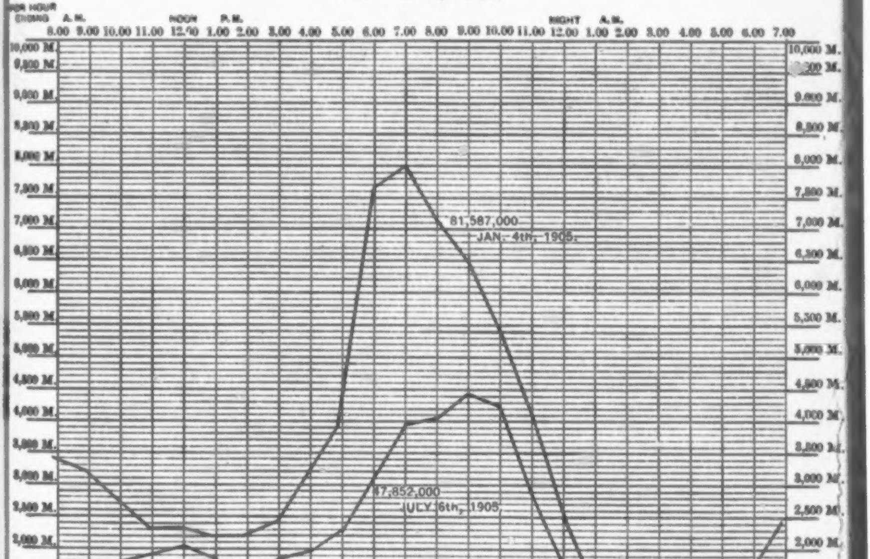


COMPLAINANT'S EXHIBIT 351



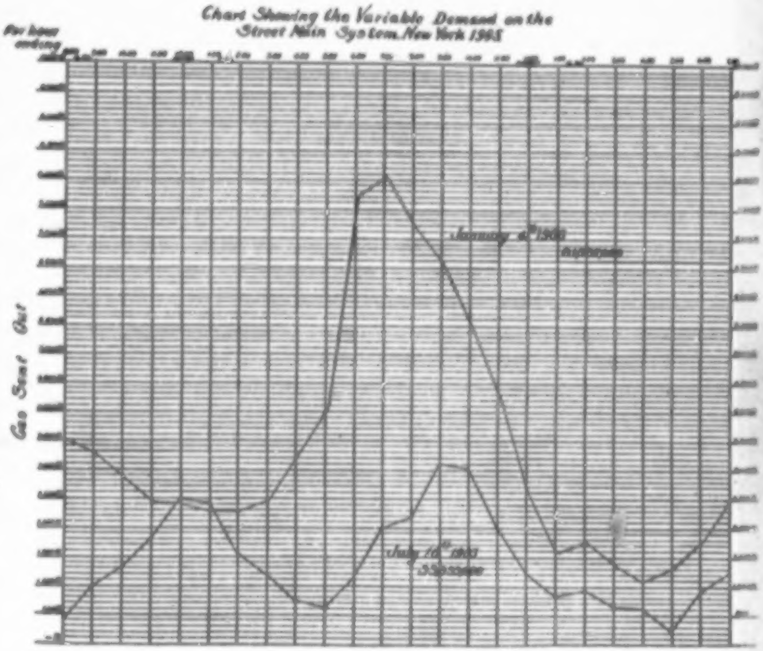
COMPLAINANT'S EXHIBIT 352

CHART SHOWING THE VARIABLE DEMAND ON THE STREET MAIN SYSTEM NEW YORK, 1905.



COMPLAINANT'S EXHIBIT 353

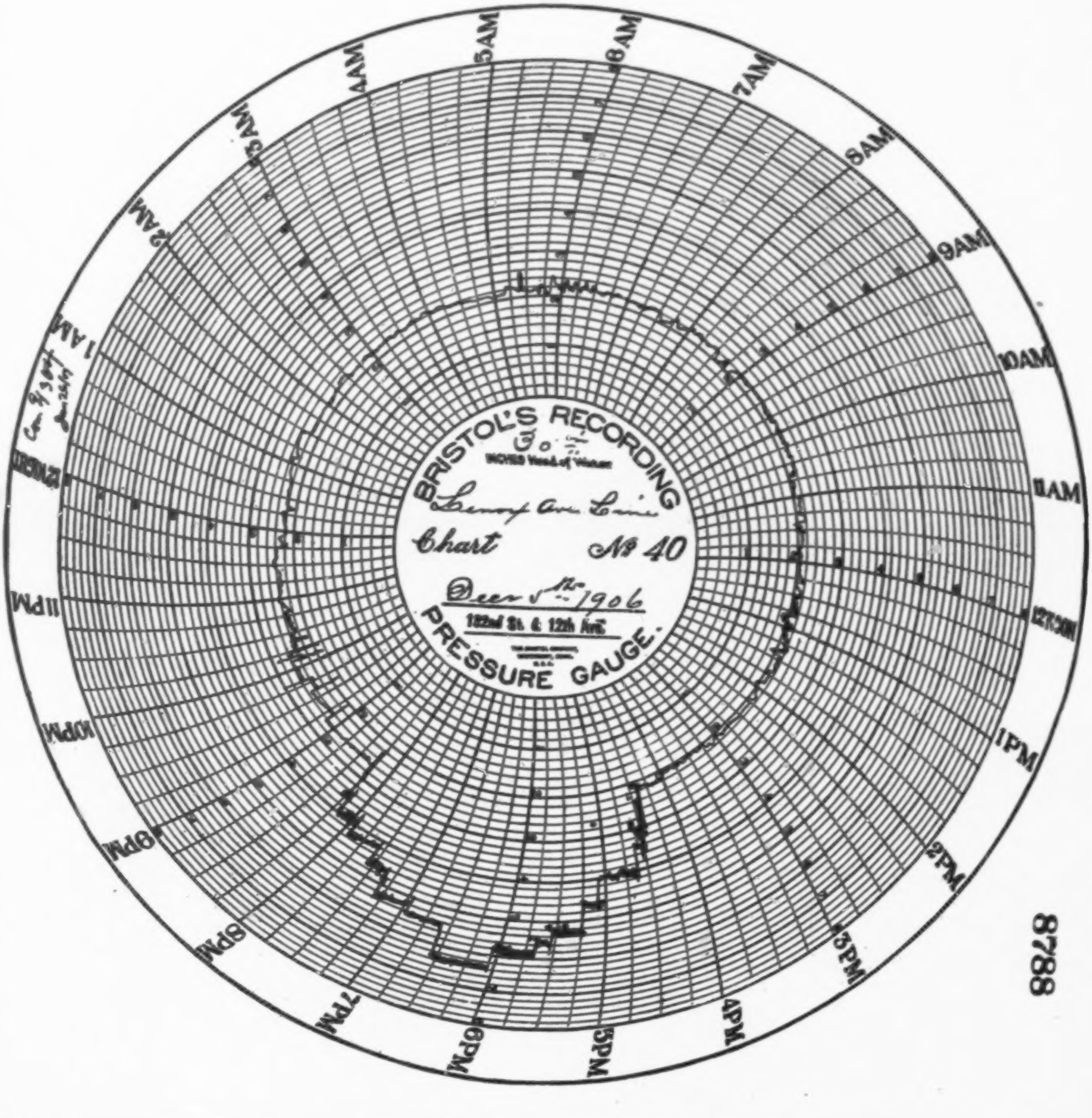
January 26, 1907



1789

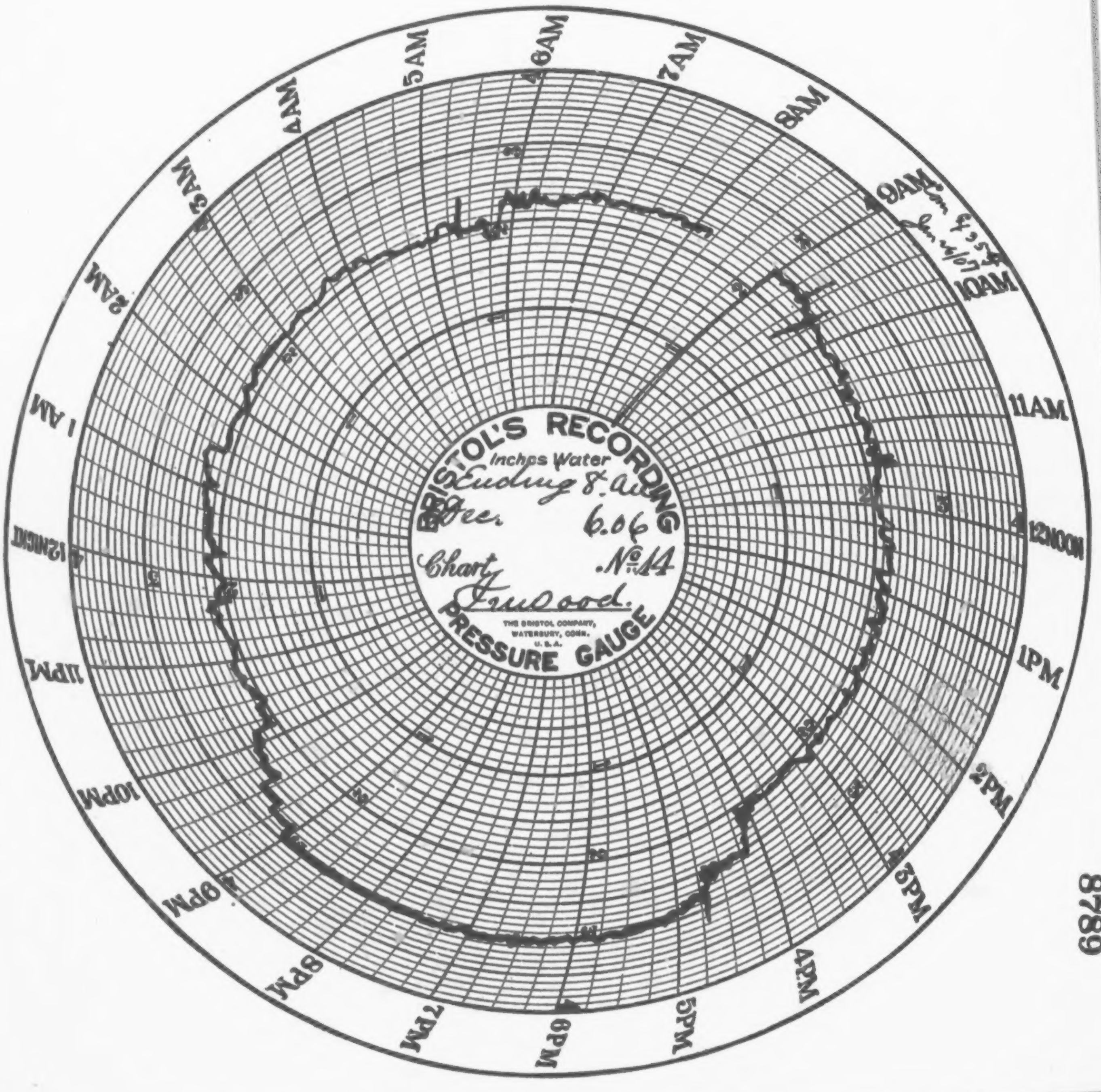
COMPLAINANT'S EXHIBIT 354

January 26, 1907



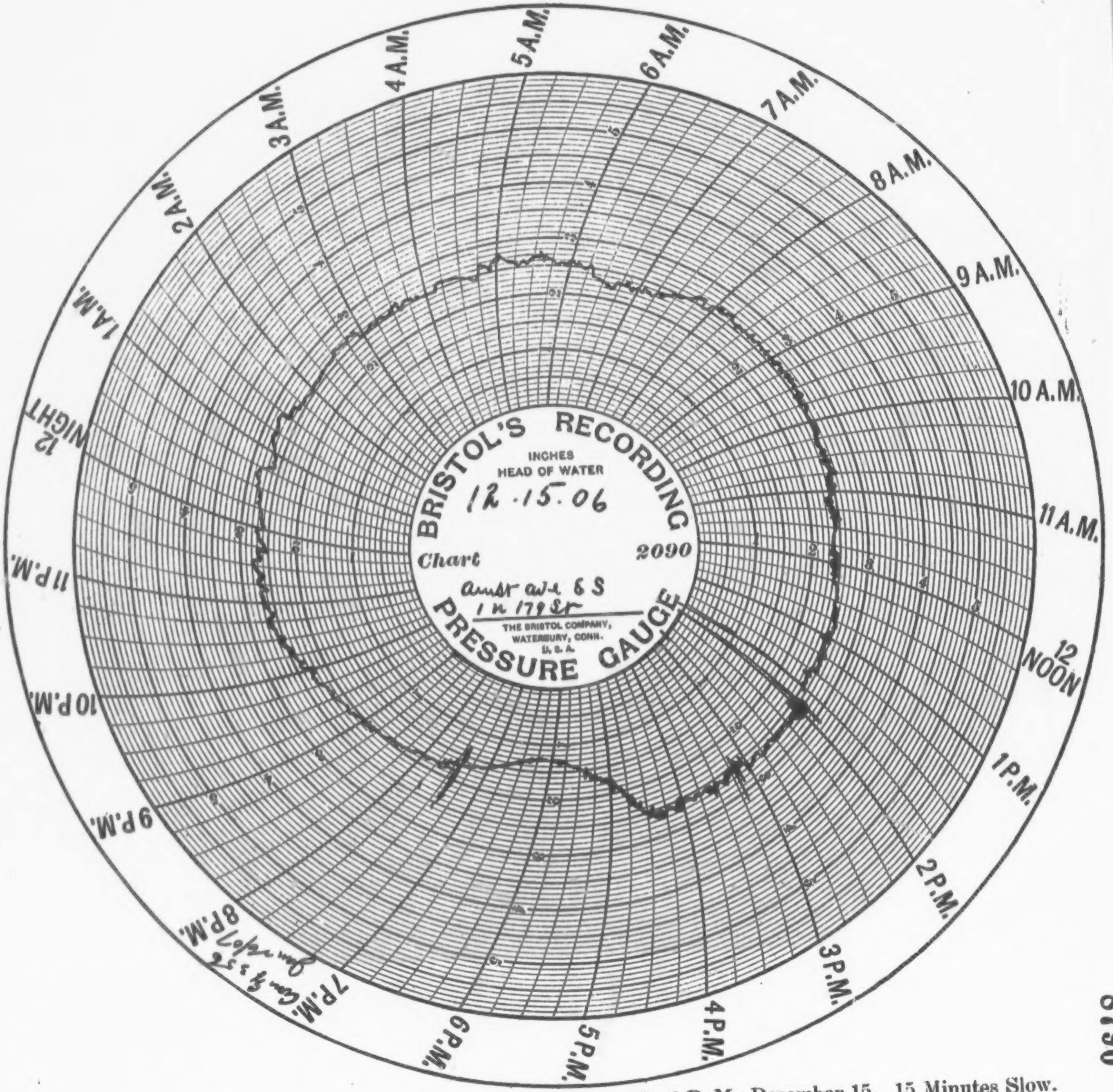
COMPLAINANT'S EXHIBIT 355

January 26, 1907



COMPLAINANT'S EXHIBIT 356

January 26, 1907

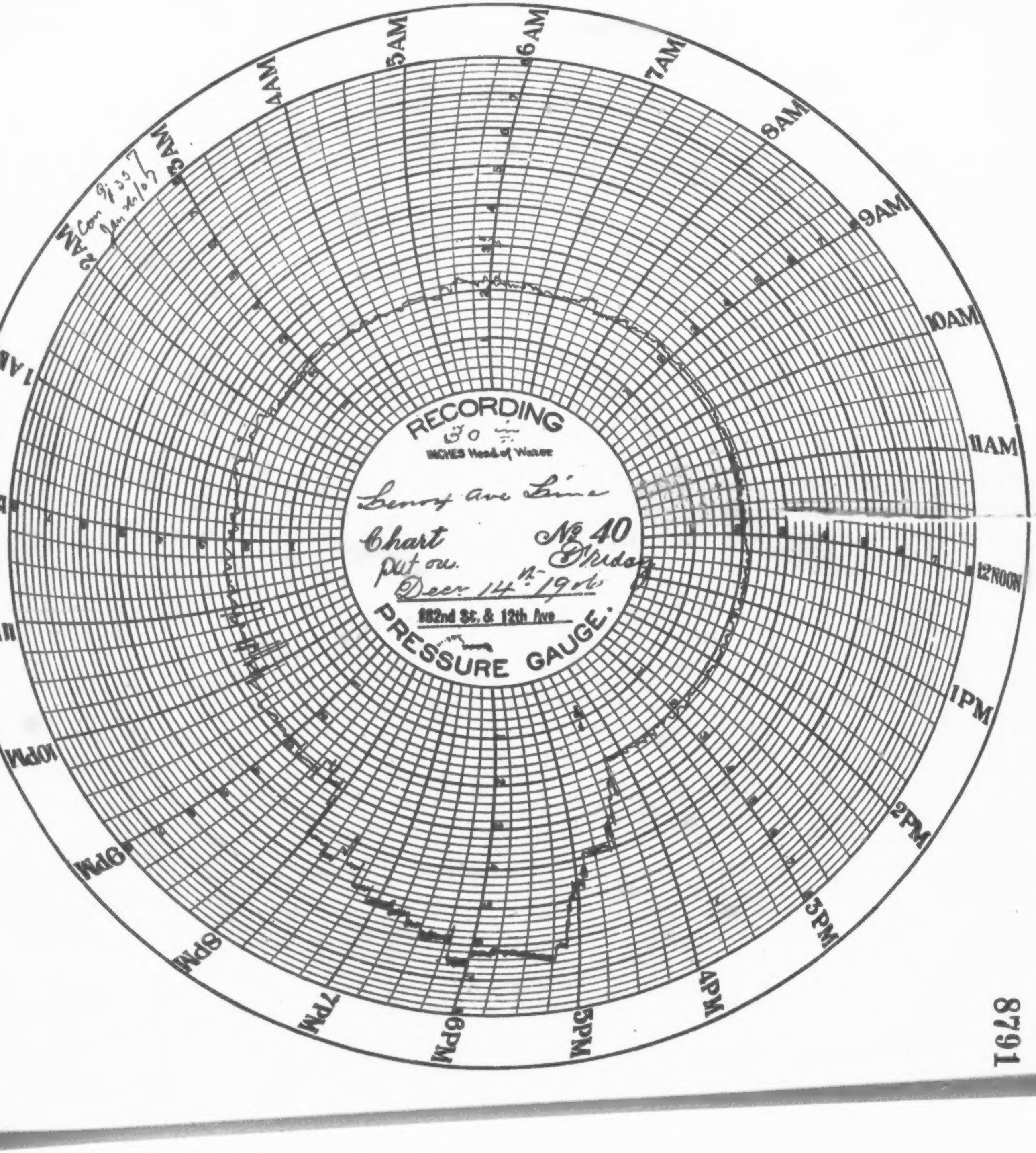


Amsterdam Avenue, E. S., 1 N. 179th Street. Removed—2 P. M., December 15. 15 Minutes Slow. Street Elevation—157.49 ft. Pressure at Lamp—In Street. Recording Gauge Tested—Correct with Water Gauge.

8790

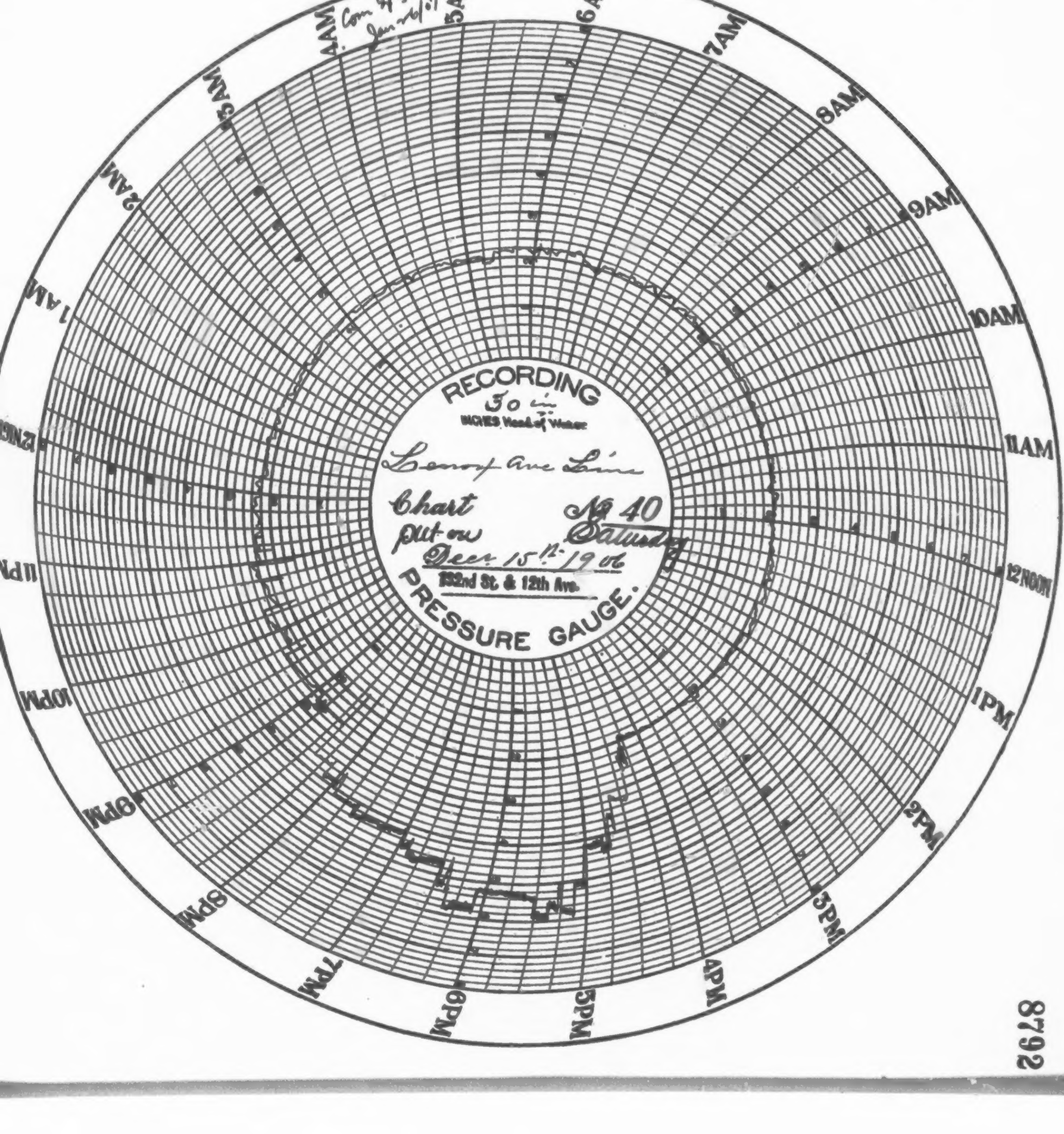
COMPLAINANT'S EXHIBIT 357

January 26, 1907



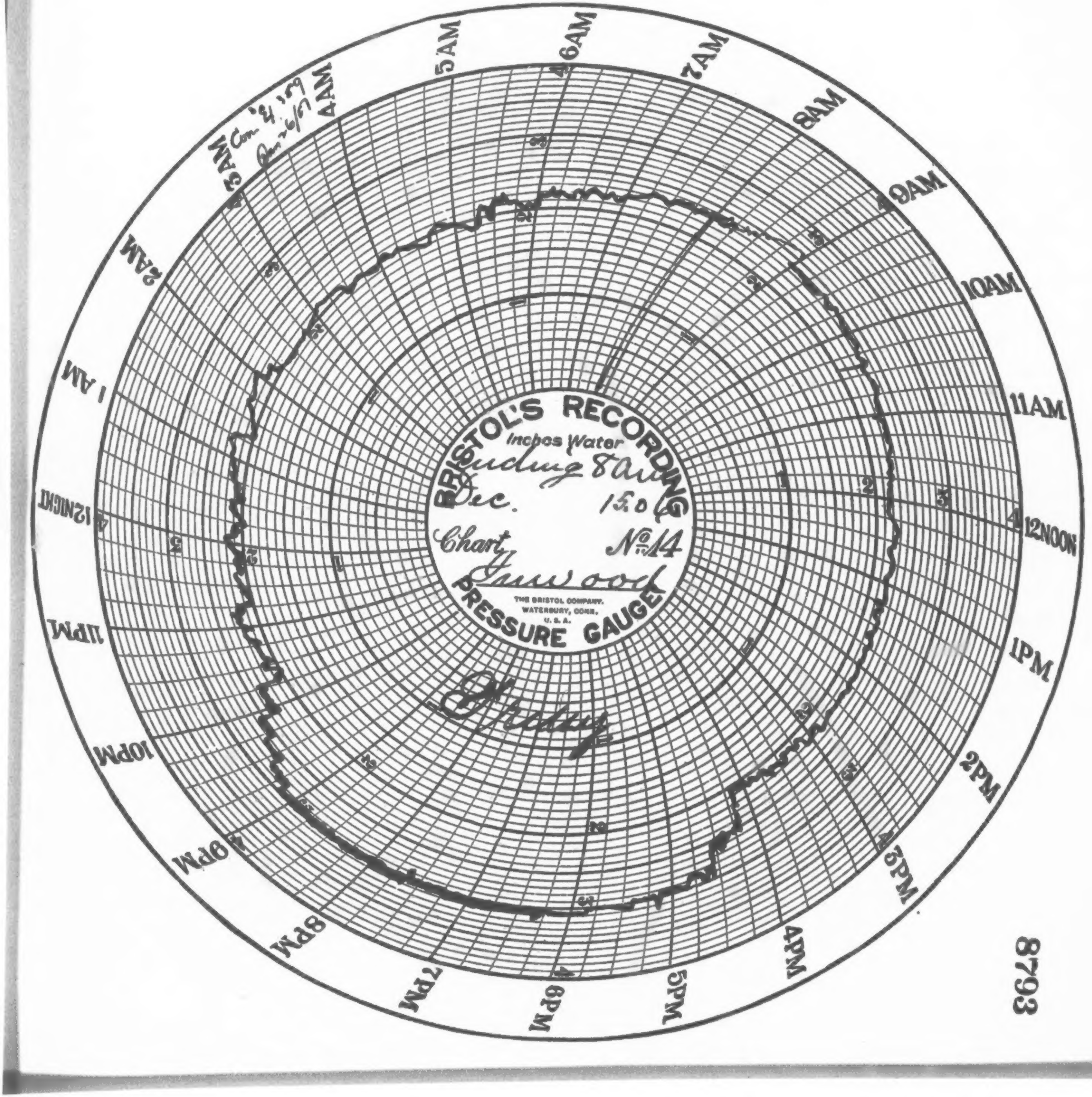
COMPLAINANT'S EXHIBIT 358

January 26, 1907



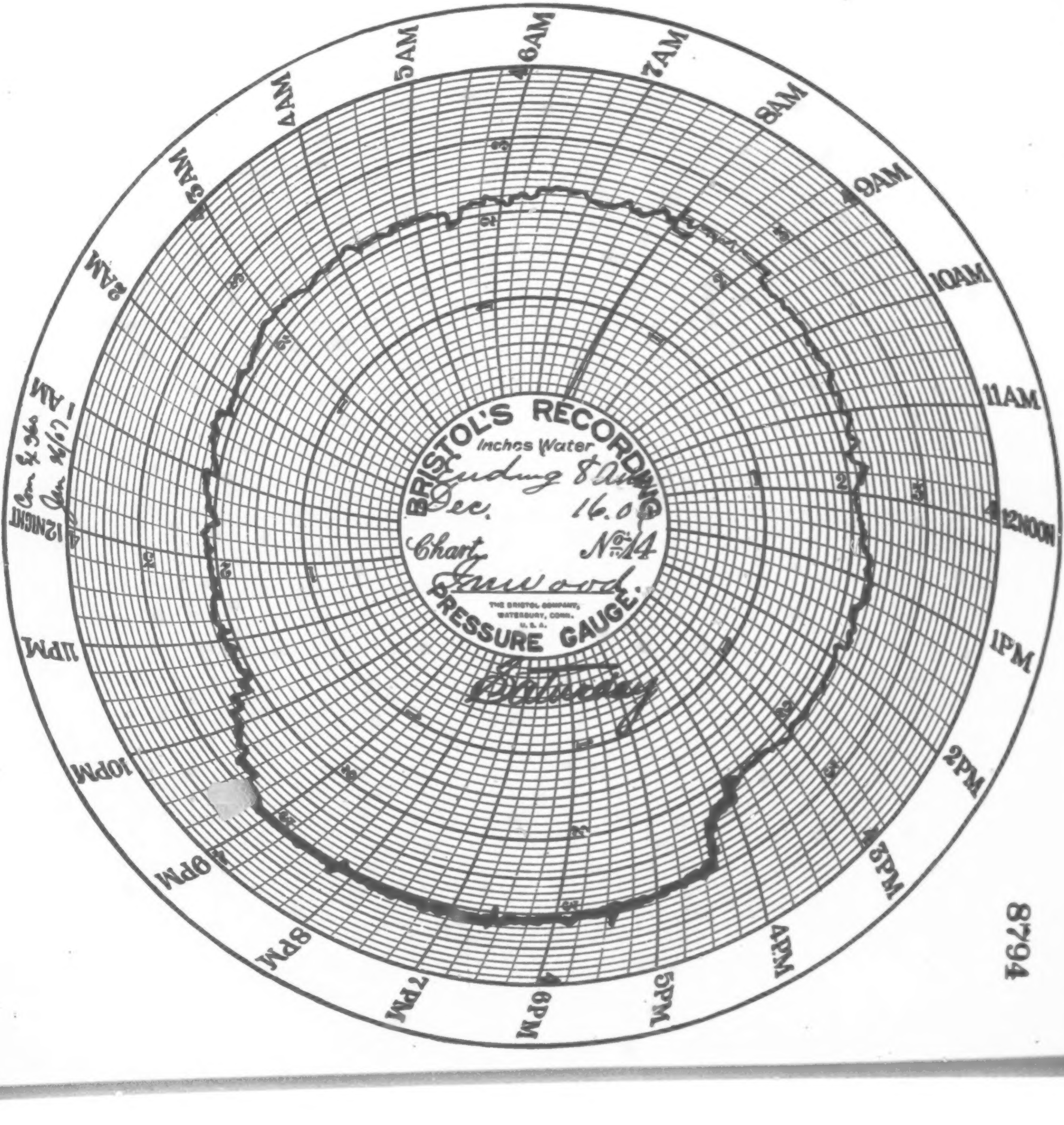
COMPLAINANT'S EXHIBIT 359

January 26, 1907



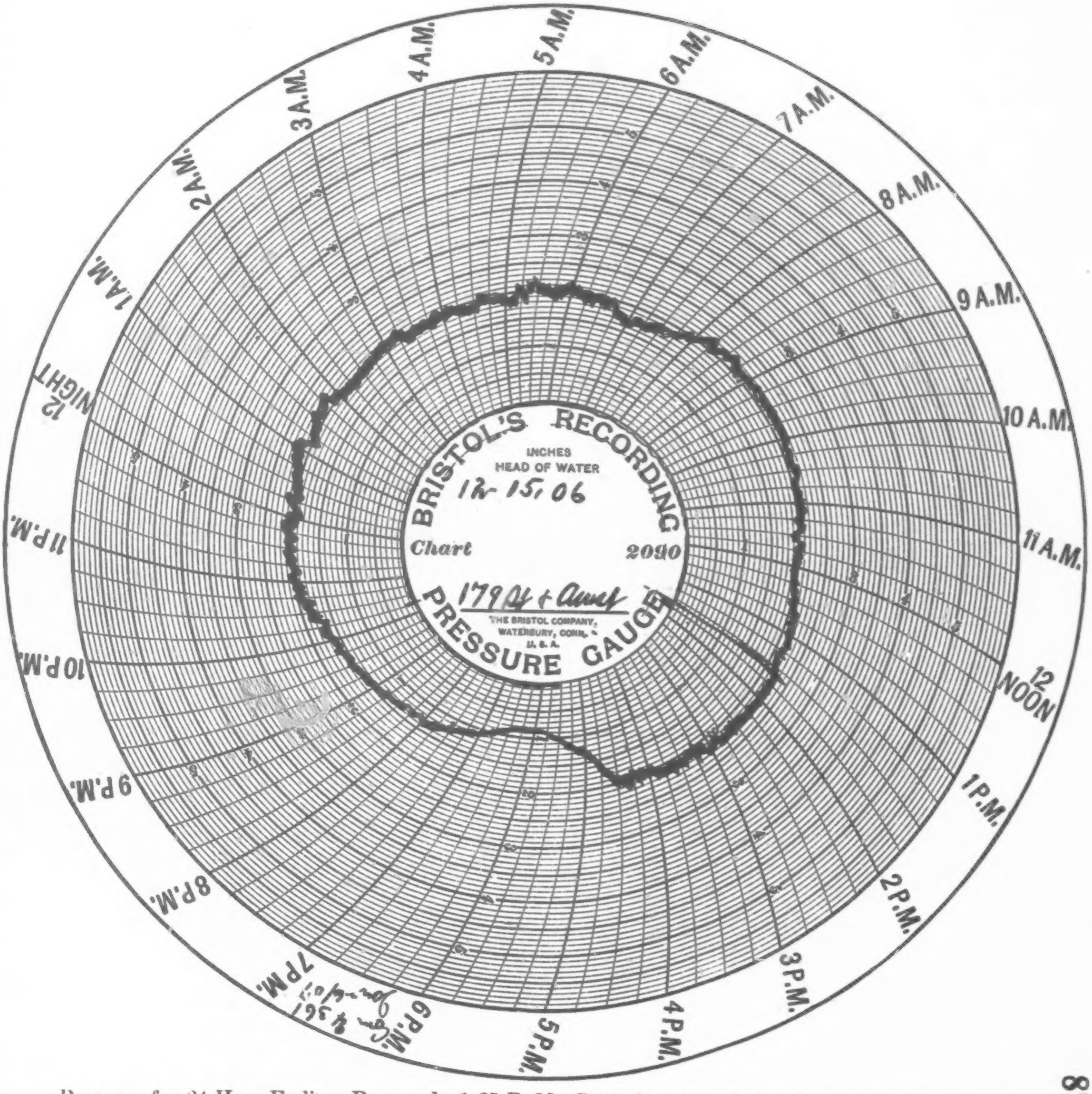
COMPLAINANT'S EXHIBIT 360

January 26, 1907



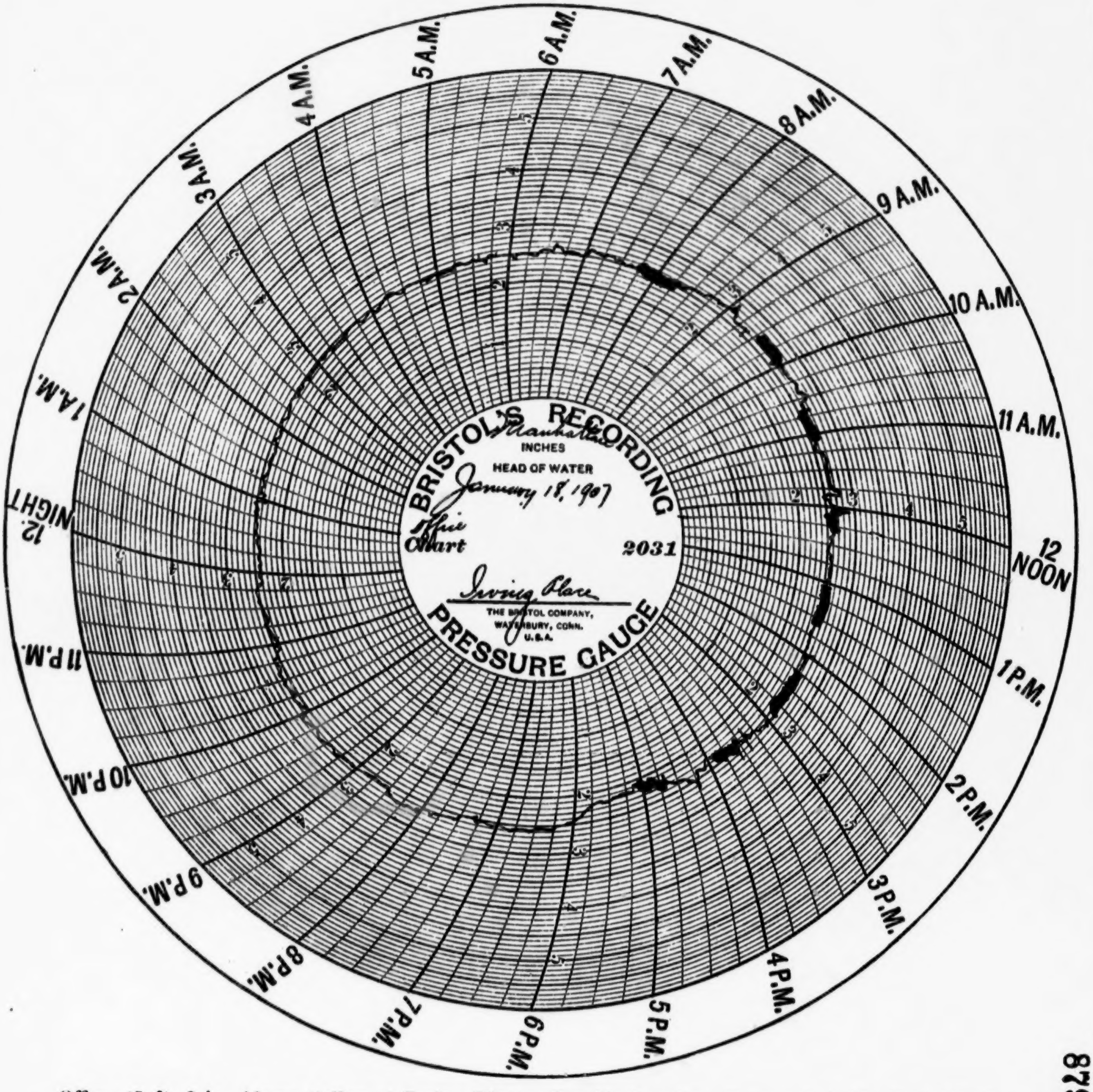
COMPLAINANT'S EXHIBIT 361

January 26, 1907



Pressure for 24 Hrs., Ending, Removed—1:35 P. M., December 15, 1906. Pressure at Head of Service in Pumping Station. Approximate Elevation of Gauge, 40 ft. Below Street Surface at Intersection 179th and Amsterdam. Recording Gauge Tested—Correct with Water Gauge.

COMPLAINANT'S EXHIBIT 363-A.

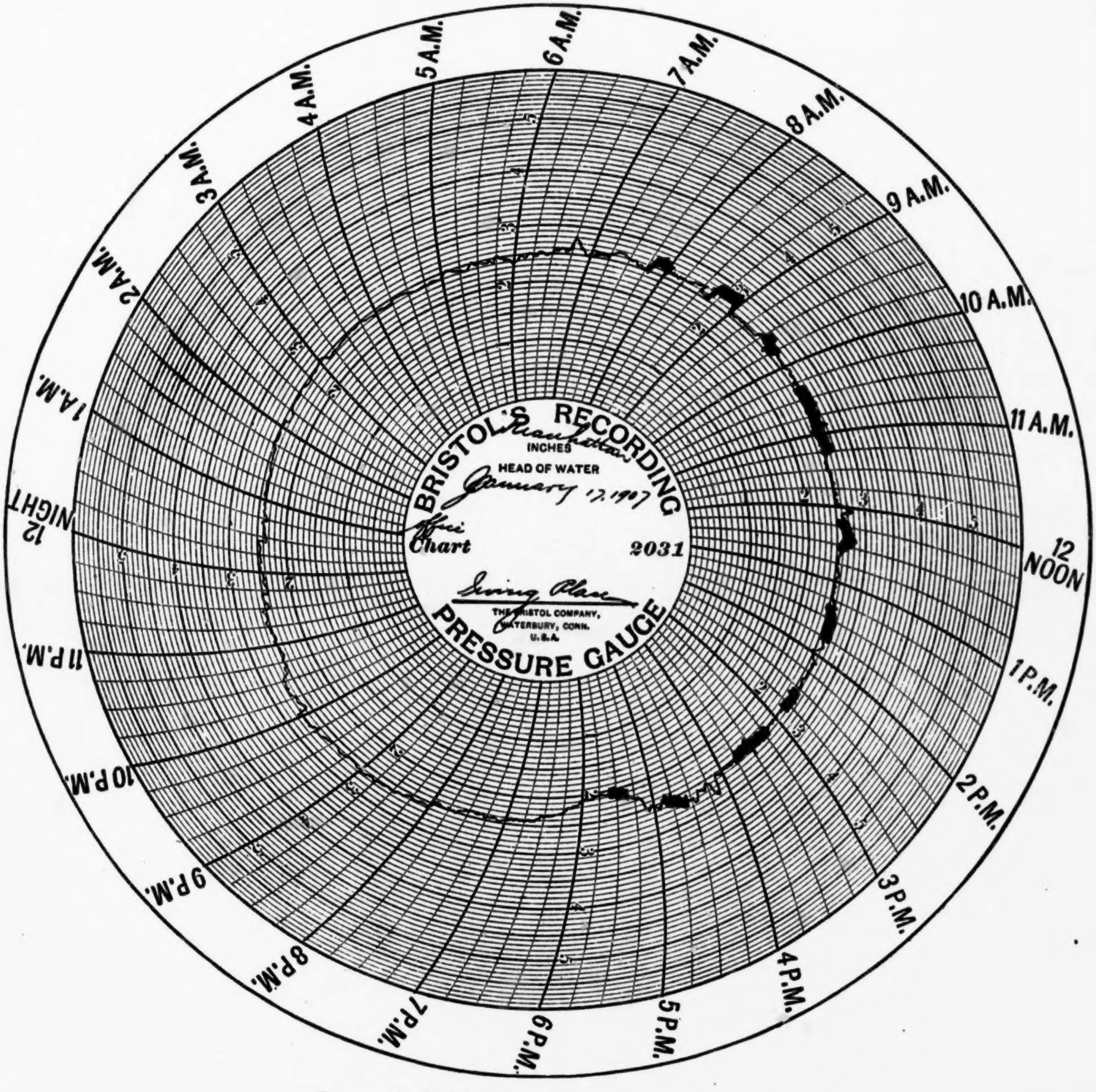


Office, 45 ft. 8 in. Above Cellar at Irving Place. Specific Gravity. Removed, A. M. Tested with Water Guage.

THOMAS J. BYRNE.

POOR COPY

COMPLAINANT'S EXHIBIT 363-B.

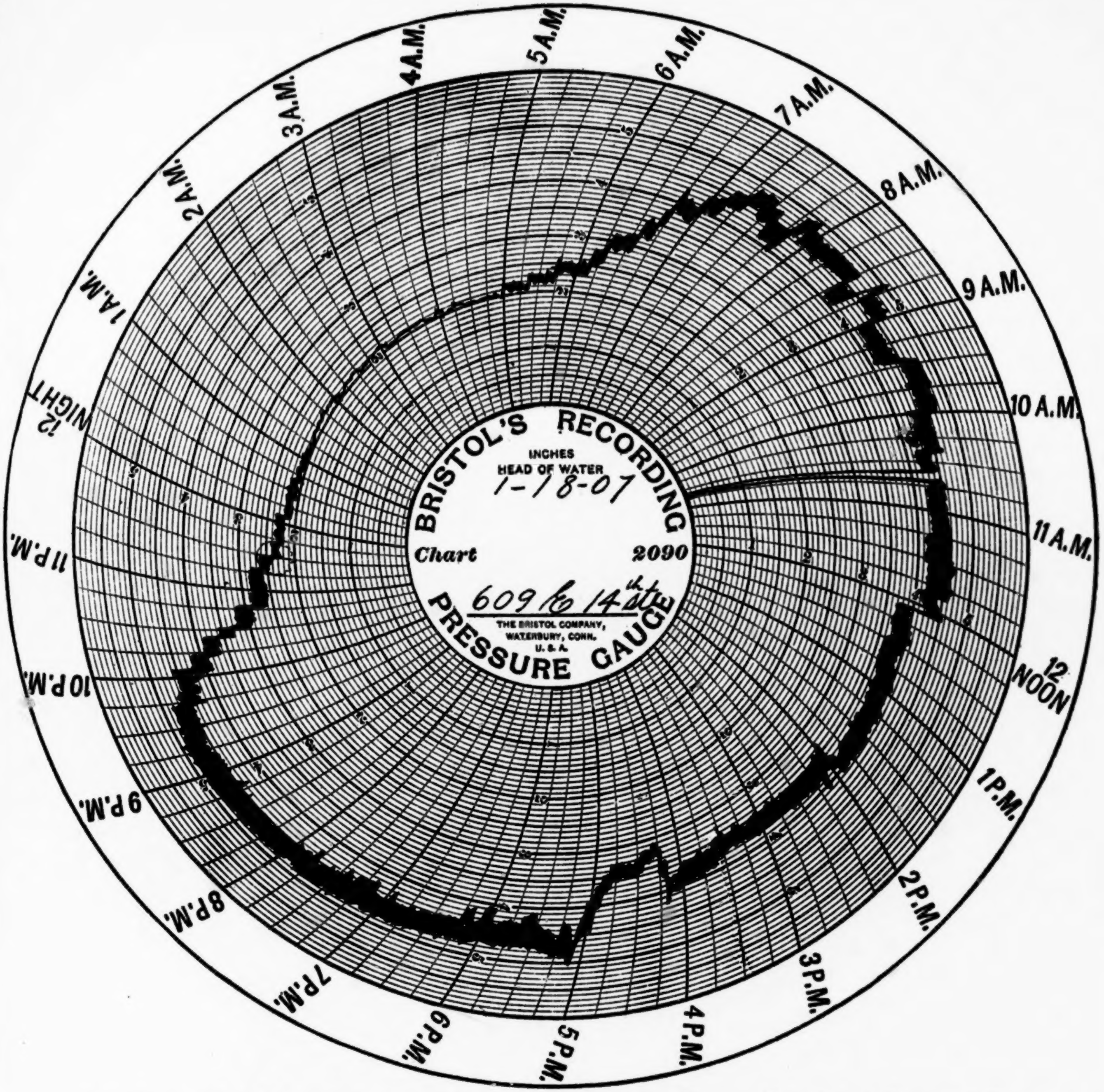


Removed, A. M. Tested with Water Gauge.

THOMAS J. BYRNE.

POOR COPY

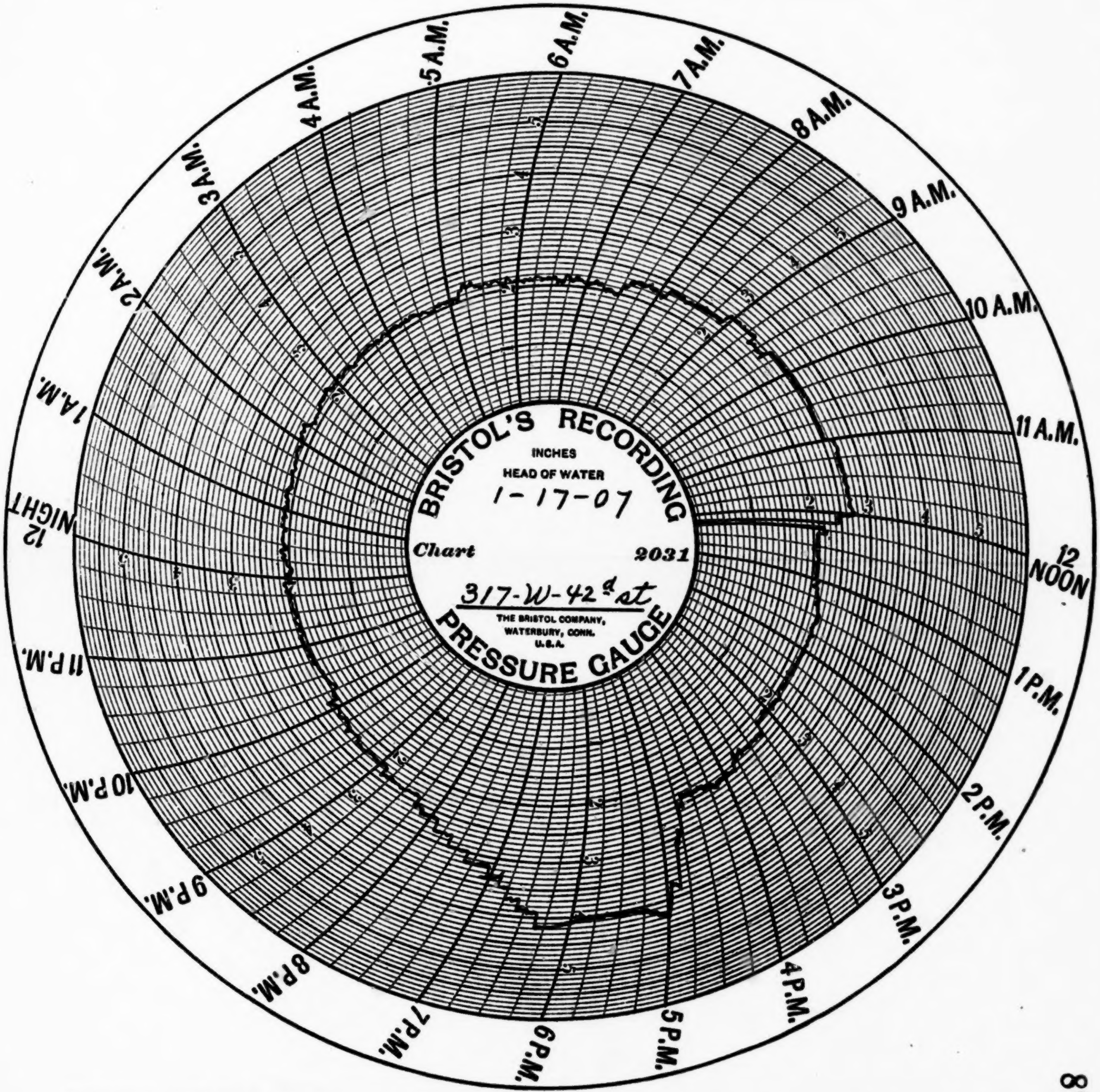
COMPLAINANT'S EXHIBIT 364.



Premises—609 E. Fourteenth St. Style of Bldg.—Apartment House. Location of Gauge—Cellar. Time Removed—10:40 A. M., Jan. 18, 1907. Bristol Gauge, 43. Water Gauge, 43. Special. Time O. K.

DANIEL F. SULLIVAN.

COMPLAINANT'S EXHIBIT 365-A.

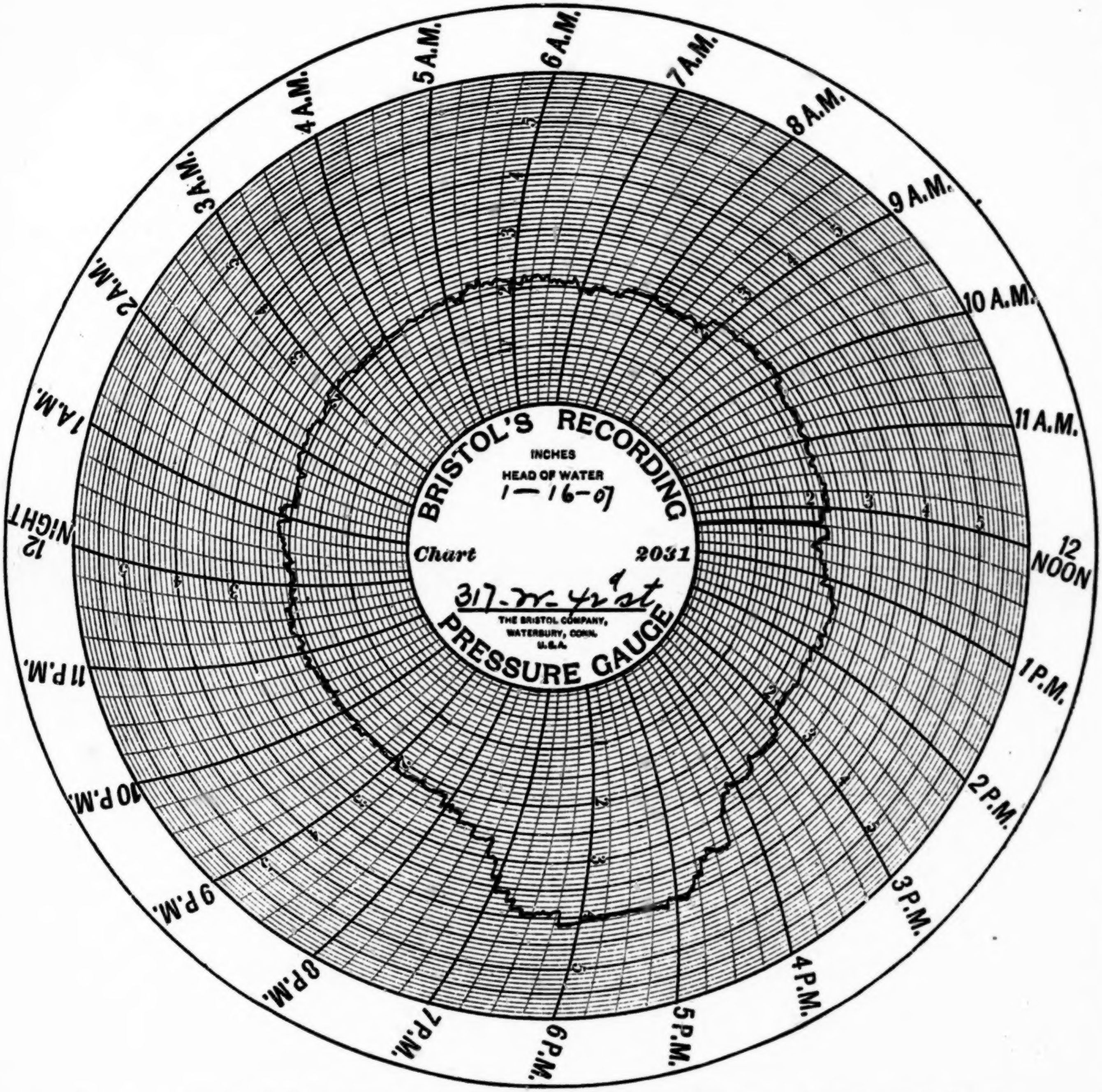


Premises—317 West Forty-second St. Style of Bldg.—Apartments. Location of Gauge—Store Cellar. Size of Service—2 in. Service in Use—Yes. Company's Service—Consolidated. Time Removed—12:15 P. M., Jan. 17th, 1907. Bristol Gauge, 25. Water Gauge, 25 f.

DOUGLAS H. MILLER.

POOR COPY

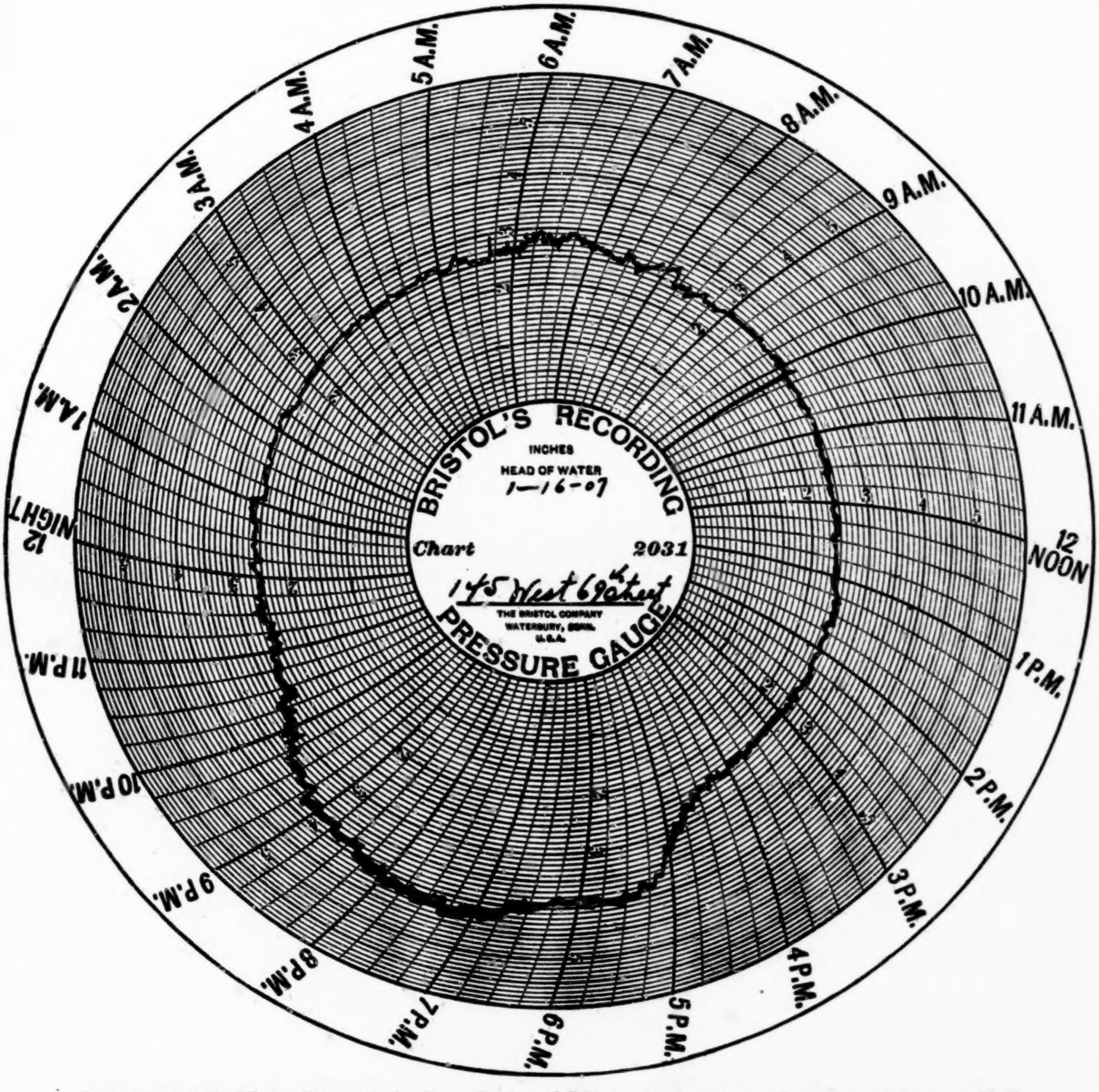
COMPLAINANT'S EXHIBIT 365-B.



Premises—317 West Forty-second St. Style of Bldg.—Apartments. Location of Gauge—Store Cellar. Size of Service—2 in. Service in Use—Yes. Company's Service—Consolidated. Time Removed—12:15 P. M., Jan. 16, 1907. Bristol Gauge, 21. Water Gauge, 21 f. 5 Minutes Slow.

DOUGLAS H. MILLER.

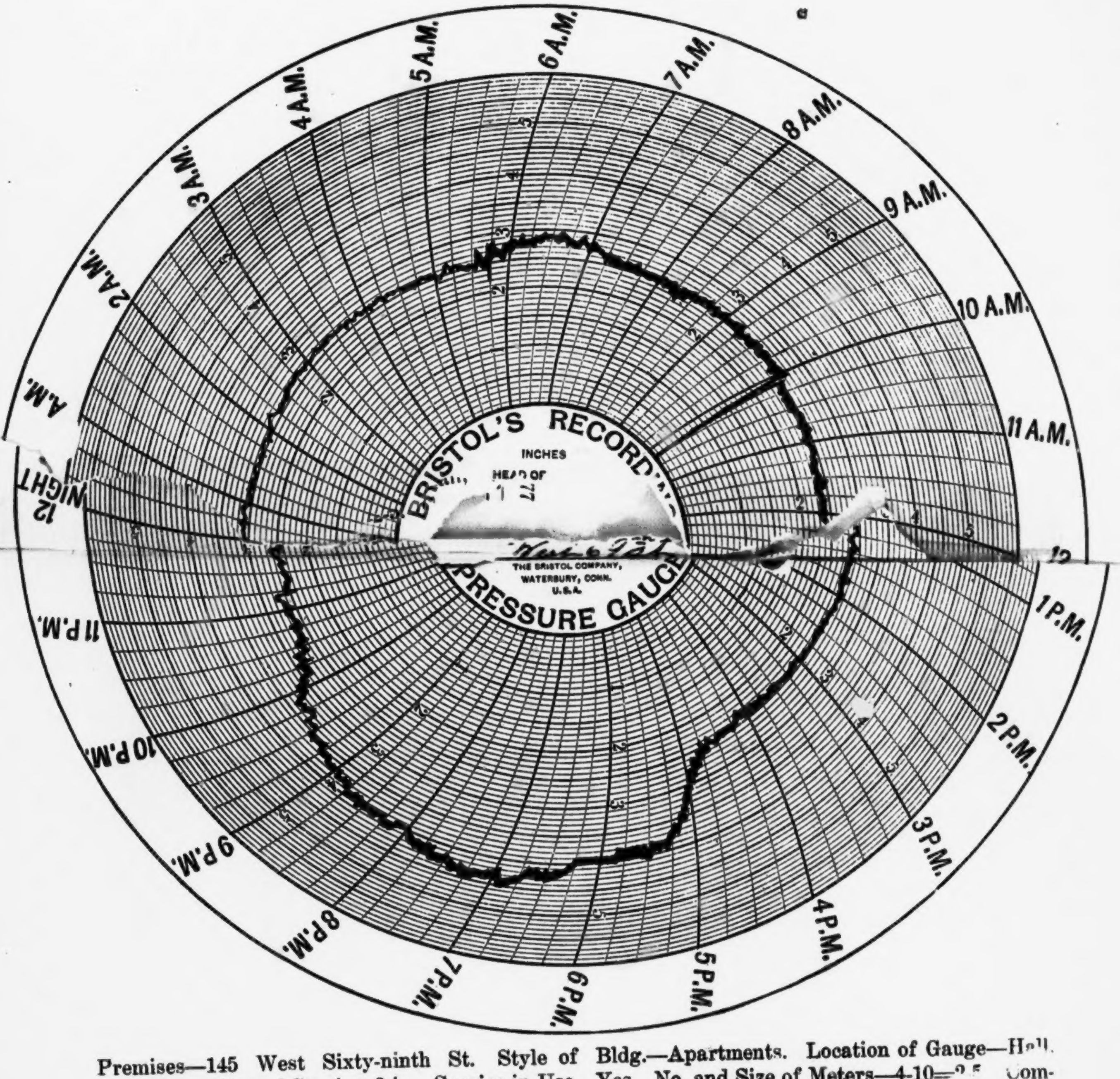
COMPLAINANT'S EXHIBIT 366-A.



Premises—145 West Sixty-ninth St. Style of Bldg.—Apartments. Location of Gauge—Hall, Cellar. Size of Service—2 in. Service in Use—Yes. No. and Size of Meters—4-10=2-5. Company's Service—Consolidated. Time Removed—10:15 A. M., Jan. 16th, 1907. Bristol Gauge, 25 Water Gauge, 25. f 22. 7 Minutes Fast.

DOUGLAS H. MILLER.

COMPLAINANT'S EXHIBIT 366-B.



Premises—145 West Sixty-ninth St. Style of Bldg.—Apartments. Location of Gauge—Hall. Cellar. Size of Service, 3 in. Service in Use—Yes. No. and Size of Meters—4-10—2.5 Company's Service—Consolidated. Time Removed—10:15 A. M., Jan. 17th, 1907. Bristol Gauge, 26 Water Gauge, 26. f 22. 7 Minutes Fast.

DOUGLAS H. MILLER.

POOR COPY

COMPLAINANT'S EXHIBIT 367.

CONSOLIDATED GAS COMPANY OF NEW YORK.

GAS MAKE AND GAS SALES FROM JUNE TO OCTOBER, 1906.

	June	July	August	September	October	
MANUFACTURED:						
14th Street Station	97,809,000	87,495,000	90,694,000	94,565,000	106,143,000	
21st Street Station	296,709,000	227,494,000	245,398,000	303,882,000	416,603,000	
42d Stret Station	88,450,000	84,096,000	86,103,000	85,944,000	95,686,000	
44th Street Station	153,193,000	123,375,000	142,637,000	161,210,000	194,467,000	
99th Street Station	86,778,000	94,624,000	97,464,000	91,188,000	92,880,000	
Total	722,939,000	617,084,000	662,296,000	736,789,000	905,779,000	3,644,887,000
MANUFACTURED UNDER AGENCY AGREEMENT:						
New Amsterdam Gas Company	106,098,400	93,237,000	176,554,700	220,349,900	249,902,500	
Standard Gas Light Company	42,969,060	17,020,140	25,562,850	23,046,000	54,329,527	
Mutual Gas Light Company	5,754,800	208,000	17,160,100	13,528,800	17,926,200	
Central Union Gas Company	5,133,600	5,382,900	6,118,800	6,896,400	8,225,900	
Total	159,955,860	115,848,040	225,396,450	263,821,100	330,384,127	1,095,4
Total Make	882,894,860	732,932,040	887,692,450	1,000,610,100	1,236,163,127	4,740,292,577
SALES:						
General Office	25,697,700	20,322,200	21,881,100	23,324,500	29,748,500	
Hester Street	218,327,600	180,933,800	182,207,600	210,266,200	237,383,300	
Irving Place	258,935,900	202,312,200	190,665,700	232,833,800	264,238,500	
42d Street	223,963,500	165,316,100	150,807,500	186,062,500	225,843,400	
114th Street	281,735,820	227,796,120	219,728,270	269,351,620	307,559,120	
Street Lamps	15,964,000	16,598,890	18,737,369	20,999,058	25,035,364	
Total Sales	1,024,624,520	813,279,310	784,027,539	942,837,678	1,089,808,184	4,654,577,231
Unacounted For	*141,729,660*	*80,347,270*	103,664,911	57,772,422	146,354,943	85,715,346
Actual on Hand, June 1st, 1905					28,660,000	
Actual on Hand October 31st, 1905					27,854,000	806,000
					Unaccounted For..	86,521,346

MANUFACTURED—Including Manufactured Under Agency Agreement 4,740,292,577

Decrease in "on Hand" 806,000 4,741,098,577

Accounted For 4,654,577,231=Unaccounted For, 86,521,346 or 1.8249%.

POOR COPY

COMPLAINANT'S EXHIBIT, 368.

CANDLE POWER—CALENDAR YEAR—1905.

Monthly Averages.

Date 1905	14th Street		21st Street		42nd Street		44th Street		99th Street		Average	
	Works	City	Works	City	Works	City	Works	City	Works	City	Works	City
January	23.05	20.48	25.14	21.24	22.81	23.09	24.85	20.53	25.23	22.41	24.21	21.55
February	22.70	20.49	24.95	20.06	22.90	23.51	24.70	20.37	25.10	21.43	24.07	21.17
March	23.45	20.26	24.83	19.91	23.30	23.81	25.82	20.38	25.31	22.15	24.54	21.30
April	23.89	20.24	25.07	21.69	23.57	23.36	23.47	21.76	24.91	23.13	24.18	22.04
May	24.26	20.22	25.50	20.44	23.50	23.04	24.14	21.47	24.76	23.41	24.43	21.72
June	26.02	22.25	26.86	23.18	23.91	23.06	26.05	23.11	26.03	23.46	25.77	23.01
Avge. 6 Mos...	23.89	20.66	25.39	21.09	23.33	23.31	24.84	21.27	25.22	22.66	24.53	21.80
July	30.38	24.56	27.72	24.57	26.36	25.52	28.06	25.21	29.10	25.66	28.34	25.10
August	28.89	23.72	26.50	23.61	24.84	25.10	26.40	24.10	26.44	25.52	26.61	24.41
September	27.25	23.60	26.20	23.23	25.12	24.16	25.88	23.18	25.47	24.15	25.98	23.66
October	26.57	23.44	26.38	23.39	25.62	24.54	25.77	23.35	24.98	24.31	25.86	23.81
November	25.84	23.53	26.69	23.61	24.61	24.54	24.51	24.25	24.46	24.54	25.22	24.09
December	25.13	23.37	26.51	23.39	24.45	24.49	24.21	24.34	24.42	24.58	24.94	24.03
Avge. 6 Mos....	27.34	23.70	26.66	23.63	25.16	24.72	25.80	24.07	25.81	24.79	26.16	24.18
Avge. Year....	25.62	22.18	26.03	22.36	24.25	24.02	25.32	22.67	25.52	23.75	25.34	22.99

8805 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages, Volume III, Exhibits, numbered from 8394 to 8804 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant-Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office (Volume III, Exhibits).

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. ——— ——— *vs.* ——— ———. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

8805a Circuit Court of the United States, Southern District of New York.

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

vs.

JULIUS M. MAYER, as Attorney General of the State of New York, *et al.,* Defendants.

Before Arthur H. Masten, Esq., Special Master.

EXHIBITS.

VOLUME IV.

U. S. Circuit Court, Southern District N. Y. Filed June 24, 1907. John A. Shields, Clerk.

8805b

EXHIBITS.

VOLUME IV.

8805½

COMPLAINANT'S EXHIBIT 369.

PROCEEDINGS OF THE SENATE COMMITTEE OF 1886,

CONTAINED IN SENATE DOCUMENT FORTY-SEVEN OF 1886,

EXCLUDING THE REPORT OF SAID COMMITTEE, AND THE REPORT OF MR. YALDEN AND THE SCHEDULES OF APPRAISEMENTS, ALL OF WHICH HAVE BEEN HERETOFORE OFFERED IN EVIDENCE AND PRINTED HEREIN.

8806

PROCEEDINGS.

New York City, *October* 15, 1885.

The special committee of the New York State Senate, consisting of Hon. John I. Gilbert, Chairman, Hon. Thos. W. Robinson and Hon. M. C. Murphy, met at the Fifth Avenue Hotel, at 4 o'clock, p. m., this day, J. I. Gilbert and M. C. Murphy being present, by authority of a resolution of the Senate, adopted on May 15, 1885, which reads as follows:

"Whereas, It appears by the records of the Secretary of State, that the New York, Manhattan, Metropolitan, Municipal, Knickerbocker and Harlem Gas Companies are the only corporations that have consolidated, pursuant to the provisions of chapter 367 of the Laws of 1884; and

"Whereas, The total share capital of said companies, prior to said consolidation, was represented by the par value of seventeen millions of dollars; and

"Whereas, It appears in evidence, before a special committee of the Senate, that the said par value is represented in the said consolidation by a nominal share capital of $35,440,000, par value, which, it has been alleged, is beyond "the fair aggregate value of the property, franchises and rights" of the said constituent companies as required by said act; therefore,

8807 "*Resolved,* That a special committee of three Senators be appointed by the President of the Senate and directed to investigate the said consolidation and capitalization, and to report at the next session of the Legislature whether in fact said statute has been evaded, disregarded or in any manner violated, and whether the said consolidation has been capitalized on the said basis of 'the fair aggregate value of the property, franchises and rights' of its constituent companies or otherwise; and what legislation, if any, in respect to lighting companies, is required by the public interests; and that such committee have power to send for persons and papers and to employ a stenographer, counsel and experts for the purpose of aiding in such investigation.

By order.

JOHN W. VROOMAN, *Clerk.*

"*Ordered,* That Senators Gilbert, Robinson and Murphy be such committee."

On motion of Senator MURPHY, Matthew W. Tanner was appointed stenographer to the committee.

On motion of Senator MURPHY, Theodore Desrochers was appointed sergeant-at-arms of the committee.

On motion of Senator MURPHY, the subject of employing counsel and experts to assist the committee was left in the hands of the Chairman, Senator Gilbert, to select whom he pleased.

The committee, after some consultation, thereupon adjourned, to meet at the Fifth Avenue Hotel, at 5 P. M., on the 16th day of October, 1885.

Adjourned.

8808 NEW YORK CITY,
FIFTH AVENUE HOTEL, *October* 16, 1885.

The committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Michael C. Murphy.

Henry E. Tremain appeared as counsel to the committee. James Yalden, as expert accountant. Matthew W. Tanner, as stenographer.

The CHAIRMAN: I regret that one of our number, Senator Robinson, is unable to be present with us this week, but we expect him at subsequent meetings. Senator Murphy and myself thought it best to hold a preliminary meeting this evening. Just at this stage of the proceedings we would be glad to hear from any one who may be present in respect to the purpose for which this committee was organized, then we will go into executive session, if thought best, for the purpose of ascertaining the present status of the inquiry—that is, consider what has already been done, and then consider what work remains for us to do. I see that the president of the Gas Consumers' Association, Mr. Sherwood, is present, and we would be pleased to hear from him on the subject.

Mr. SHERWOOD: Mr. Chairman, and President of the Committee, the Gas Consumers' Association prepared a letter, which was sent to the presiding officer to-day, that contains the substance and the points of what I may say. In it we request that this committee shall investigate this matter thoroughly. The question of the supply of gas to the consumers of the city of New York was pretty well ventilated last winter, although the sessions closed at a late time in the winter, and brought it near the adjournment of the 8809 Legislature, which prevented that committee from going into as thorough an examination as we deemed necessary to bring out all the facts in relation to the making and selling of gas in the city of New York, so that each consumer should understand how much he was paying for it, what profit he was paying for it, and what it might be reasonably made and sold for. As an association I believe the Gas Consumers' Association is composed of substantial citizens of New York, property owners and gas consumers. The object of that association is simply that the people shall have gas supplied to them in the city of New York at a fair compensation, giving the manufacturer as fair and reasonable a profit as any other business that is carried on in the city. We hold that gas should not be any more monopolized in New York than food and clothing. It is just as much a detriment to the laboring class to have gas monopolized as to have a capitalist, like Mr. Astor, for instance, monopolize any other matter in the city of New York. The element of light, where we lengthen out the hours of the day, is a great item to the poor man who is obliged to work into the hours of the night, and if he buys his gas to work by and is paying somebody fifty to one hundred per cent. profit, we contend that as a people, that is a matter of great interest to the prosperity of the city of New York, and we come and ask you to devise some means by which every gas consumer in the city shall receive gas at a proper remuneration, and that every man who has a dollar invested in gas stock shall be thoroughly protected.

The **Chairman**: Is there any one else present who wishes to add anything on the subject? I have no doubt the committee will take
it up in the same spirit in which these remarks have been
8810 made. Just what line of inquiry, and just what method
it will be thought best to adopt is a subject for consideration, and for that purpose we will now go into executive session if desired, and of our subsequent meetings due notice will be given, so that all parties interested in the matter will have an opportunity to be heard.

Will Mr. Tremain indicate what shall be the next line of inquiry as a basis *of* start from?

Mr. **Tremain**: The actual capital of the constituent companies; the shares, and the bonds represented, actual capital in their inception, and in their subsequent enlargement.

The **Chairman**: That is the ultimate end, to see the actual capital that each company contributed to the stock of the consolidated company.

Mr. **Tremain**: Then the distribution of the share capital of the Consolidated Company to these constituent companies—the proportion, and what was done with the remainder, and the history of that share capital from the time of the consolidation to the present time. Do we cover it?

Mr. **Yalden**: I think so, with the cost of the plant and the works, etc., that stand on the books of these companies at a certain sum. In many cases no depreciation has been written off year by year to reduce that cost to the actual cost of the amount. Take the subject of pipes about the streets; it is all very well to say that they last forever. But they don't. None of the companies has depreciated the cost of laying their pipes, and that, I think, should be taken into account.

Mr. **Tremain**: I will read the second paragraph on page 9 of the report of the special Senate committee, of last winter, Senator E. B. Thomas, chairman, which is as follows:

"There was included among the items mentioned in the
8811 New York Company, 121 miles of street mains, rated at
$945,982.45. This appraisement (which yet requires verifi-

cation from the books), covers about sixteen miles more of street mains than appears by the report of the company to the department of public works for the quarter ending December 31, 1884, were in actual use by the New York Company at the time of the consolidation. It further appears that of this sixteen miles, nine miles had actually been taken up, or were abandoned by the company during the year, yet were included as part of the inventoried property on which the capitalization was based. Other instances of this kind may exist."

The CHAIRMAN: Now, if we can get at the point where we can commence, and be sure of that, and move on in a right order from that point, that is about all we can accomplish to-night. Now, where would you begin? On the whole, it occurs to me if we can begin at some point where the expert can take the work up it will accommodate you and me and everybody. What is there we can do in that way?

Mr. TREMAIN: I don't think it is worth while to expend a very

* * * The remaining portion of this discussion is not reported. The committee remained in executive session until,

On motion of Senator Murphy, the committee adjourned subject to the call of the chairman.

The chairman was authorized with the aid of counsel and expert, to proceed with the examination of books and accounts, and otherwise to prepare for further proceedings when such examination had sufficiently progressed.

TESTIMONY.

NEW YORK CITY, FIFTH AVENUE HOTEL,
November 23, 1885.

The committee met upon the call of the Chairman.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

JAMES W. SMITH, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are the treasurer of the Consolidated Gas Company of New York?

A. I am.

Q. Have you brought with you the original schedules or appraisements of properties of the constituent companies entering into the consolidation?

A. Yes, sir.

Q. Will you please produce them so that they may be marked by the committee for conve-ience.

(The books were produced and marked.)

Mr. TREMAIN: The witness produces the appraisements of the New York, which are marked "A 1," being valuation of buildings, gas producing, gas storage, coal storage, tools, fixtures, implements and betterments of every description, constituting the plant at Twentieth street and East river. "A 2," names the meters and services; "A 3," real estate. Manhattan Company, marked "B 1," "B 2," "B 3," and "B 4;" the Metropolitan, marked "C 1," book; Municipal, marked "D;" Knickerbocker, "E;" Harlem, "F."

8813 Q. In this Metropolitan you took out a paper—was not that an abstract of the book itself?

A. I believe it was.

Q. Will you please produce that? What is the latter book?

A. "C 1."

Mr. Tremain: Mark the Metropolitan "C 1," being the book—the paper in it "C 2."

Q. Since the business of the Consolidated Company has been conducted you have been its treasurer?

A. Yes, sir.

Q. And have had charge of its financial accounts and papers?

A. I have had access to them; the financial matters I have charge of.

Q. Have you made any reports whatever to anybody in writing since November, 1884, showing the financial condition of the company?

A. No, sir.

Q. Have you prepared any papers showing the financial condition of the Consolidated Company since November, 1884, to the present time?

A. No, sir.

Q. Have any such been prepared by anybody, under your direction or otherwise?

A. The books show—the balance sheets.

Q. Who has prepared the balance sheets?

A. The chief book-keeper, every month.

Q. What is his name?

A. Mr. Young.

Q. When was the last one prepared?

A. A few days ago, up to the 1st of November; just got through with them.

Q. Does the executive committee keep a minute of its meetings?

A. Yes, sir.

Q. Who is secretary?

A. The secretary of the company.

Q. Does he keep the minutes of the board meetings?

A. Yes, sir.

Q. How many books do those records comprise?

A. A book of minutes for each.

8814 Q. Has there been a paper prepared showing the financial condition of the Consolidated Company from November, 1884, to the present time?

A. A great many memorandums made by the book-keeper to bring it up to that point; as to the financial condition of the company, there has been no preparation made of that; the amount of money paid out, and the amount received.

Q. As a director of the company, have you any knowledge whatever of any paper or papers showing the operation of the company, or its financial condition between November, 1884, and the present time, except those balance sheets?

A. Only the book-keeper's memoranda.

Q. Do you testify that that is all there is on that subject?

A. No, sir; that is as far as I know; if this committee would like to have any information I would like to produce it if you will state what you want.

The CHAIRMAN: The counsel is asking what papers there are.

The WITNESS: All right, go on.

Q. I want to know what other papers there are in existence within your knowledge as director other than those balance sheets, that indicate the financial condition of the company?

A. I think I have answered the question to the best of my ability.

Q. Whether you have any knowledge showing the financial condition of the company?

A. There were bookkeepers' memorandums submitted to me.

Mr. TREMAIN: That does not answer the question.

The CHAIRMAN: Answer the question; do you know of any others?

A. I do not.

8815 Q. When the dividend was declared, or about that time, was not there a statement prepared and submitted to the board of directors?

A. No, sir; not to my recollection.

Q. Did any committee or the board of directors make a report upon that subject?

A. I don't know; I don't recollect.

Q. Will you produce here the minutes of the executive committee, and the minutes of the board of directors, and those monthly balance sheets that you refer to, and other memorandums of the bookkeepers to which you refer?

Mr. Chairman, I think the examination of Mr. Smith had better be suspended until that is done.

The CHAIRMAN: It is understood, Mr. Smith, that you will produce them?

A. Yes, sir.

Mr. TREMAIN: We would like to have them produced immediately, so that they may be examined while the committee is sitting, if practicable.

The CHAIRMAN: Now.

The WITNESS: Our minute-books are in use; there are regular meetings on Wednesdays, and a meeting of the executive committee to-day at three o'clock; on Wednesday the regular monthly meeting takes place.

Mr. Tremain: I think if the committee suspends the examination of the witness we can examine those books in a very short time.

The Chairman: How soon may we expect the books?

A. I want one book this afternoon for use; but between now and three o'clock if you want the general minute-book I can produce it.

Mr. Tremain: Please produce immediately under the direction of
the committee the minute-book of the executive committee,
8816 and the minute-book of the board of directors; and please
cause to be produced as soon thereafter as practicable the
papers that you have referred to, so that the committee may have them for their expert as soon as possible; do you accede to that, Mr. Smith?

A. Subject to the proper use of the books by the company; I should suppose there ought to be no difficulty.

Q. You will produce the books as requested, and we will protect your rights; you accede to that?

A. Yes, sir.

Q. When that dividend was declared in June was not there a recommendation submitted to the board of directors by the executive committee composed of one or more of the officers of each company?

A. I don't recollect.

Q. Was not there any thing in writing?

A. No, sir.

Q. Are there no reports of the executive committee that have been made to the board of directors between November, 1884, and the present time?

A. The minute-books of their meetings are the reports to the board.

Q. There were no reports submitted except the minutes contained in the meetings?

A. I believe that is the fact.

Thomas F. Rowland, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. Tremain:

Q. What is your business?

A. I am an engineer, sir, and follow an engineering business.

Q. You have had some experience in gas manufacturing, have you not?

A. Yes, sir, gas plant manufacturing.

8817 Q. Will you please tell the committee what has been your experience?

A. I built the Municipal Gas-light Company's works, at the foot of Forty-fourth street, and also the Knickerbocker works at Ninety-ninth street and Second avenue; I rebuilt the New York Gas Works almost entirely; I built the Nassau Company's works, of Brooklyn, L. I.; I built a large gas works for the Boston Gas-light Company; I have built a number of small gas works at different parts of the State; I can hardly enumerate them; I don't remember them.

Q. You have been in that line of business for many years?

A. Yes, sir.

Q. Who applied to you in 1884 to value the gas plant of the New York companies?

A. I was applied to to value the New York Gas Company by Mr. Lees; I was applied to to value the Manhattan Company, I think, by Mr. Gawtry, acting as the agent for the Manhattan Company; the Metropolitan Gas-light Company, I was invited to appraise their property by Mr. Zollikoffer, who was then president of that company.

Q. Are those the only three companies whose properties you appraised?

A. I revised the appraisement of the Municipal and the Knickerbocker; the Harlem I did not, nor the Mutual.

Q. Who invited you to appraise the Knickerbocker?

A. Mr. Gawtrey and Mr. Francklyn, I think.

Q. When you revised the appraisements what did you do?

A. The estimates were made when I was abroad. When I came home the Knickerbocker and the Municipal appraisements were submitted to me.

Q. When submitted to you whose direction was upon them?

A. Nobody's.

8818 Q. Whose handwriting was upon them?

A. I couldn't tell you.

Q. Have you seen those appraisements since?

A. No, sir. In the case of the Municipal and Knickerbocker—in those appraisements were the papers upon which I appended my statement.

Q. How particular were you when you revised that list—did you see all the properties yourself?

A. No, sir, not at that time. Taking the amounts and in making the appraisements in any case I was more familiar with them than any other person, especially the Municipal and Knickerbocker; I had rebuilt the New York, which had been a gas company almost five or six years; I commenced in 1867 to rebuild the New York Company; commenced in May, I think, worked at it almost every year until 1883.

Q. State generally what it was that you did in that respect?

A. I have built all the gas holders which they now have, taking down a number of old ones which were almost worn out; I built a building which was 200 feet wide, and about 600 feet long, in which was all their plant for making coal gas. I built them coal storage buildings whose capacity was about 60,000 tons, and which cost about $200,000; I built them new purifying houses, new condenser houses; and perhaps five years ago I took a contract to change their works from coal gas making works to water gas producing works.

Q. Go on and tell what you did under that contract to change from the facilities to make from coal to water gas?

A. It necessitated the raising of one building which had been formerly used as a coke shed, and putting a roof upon it; the building was about 70 feet wide and 200 feet long; within that build-
8819 ing I erected ten gasogenes, or stoves, where the anthracite coal is put under a process for the purpose of decomposing

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water; I erected sixteen benches for the gasification of the naphtha; I provided storage capacity for, I think, 200,000 gallons of naphtha, and I put in the necessary pumps for unloading this naphtha at the dock and depositing it into the tanks, and also the pump apparatus to take it from the tanks and put it into the works where it is gasified.

Q. That was completed when?

A. I think in the spring of 1880; it might have been 1879.

Q. Prior to that time what was the capacity of the New York Company's works for producing coal gas?

A. At a maximum it would be 2,750,000 cubic feet per day, prior to the time it was changed to water gas.

Q. After it had been changed by you so as to produce water gas what, in your opinion, was its fair working capacity?

A. Three millions and a half cubic feet per day; but I afterward made an addition which made it more powerful.

Q. When was that?

A. I should say two years ago.

Q. That increased its capacity to deliver water gas?

A. Yes, sir.

Q. And in doing so you dispensed with a part of the plant which had been used for producing coal gas?

A. Yes, sir.

Q. Is not it true when works are changed from the manufacture of coal gas to the manufacture of water gas that a part of the plant thereby becomes useless?

A. It is pretty near true; it would not be advisable, although it is possible, to use all the old plant in the coal gas works; it is better to dispense with the benches which they use in making coal gas.

Q. What other part of the plant besides the benches thus 8820 becomes useless?

A. That is all.

Q. In the spring of 1884 what was, in your opinion, the fair working capacity of the New York works?

A. Four million cubic feet of gas per day; that was an easy working capacity.

Q. Suppose you were to make an estimate of the value of the benches that, having been used in the manufacture of coal gas, had become comparatively useless when the manufacture of water gas was commenced; how, in your opinion, could the value of those benches be estimated, if they had any value?

A. Without any idea of their using them again? The value of property of that character is very variable, depending entirely upon circumstances.

Q. Those circumstances being the use of those benches?

A. Not necessarily the use, but perhaps the moral effect of the abandoned benches.

Q. After 1882 had those disused benches any value at all?

A. Yes, sir.

Q. How could such value, in your opinion, be estimated; what is the method of estimating such a value?

A. One way is to find out what the cost would be to produce them

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Q. That would be the best way?

A. Yes, sir.

Q. Would not you bring in then an element of depreciation since the cost?

A. Yes, sir.

Q. What would be a fair element of depreciation; take the case of the New York; where the benches had been used in manufacturing coal gas?

A. In the New York case the benches are in just as good order as when they were built, with the exception of the retorts; their displacement would cost about $360 a bench.

Q. I understood you a few moments ago to say that they were pretty nearly worn out?

A. The retorts were, but not the benches.

8821 Q. What would you strike off from the cost by way of depreciation?

A. I could not tell without referring to my books.

Q. What is the life of the benches?

A. Some go down in four months and some not in four years.

Q. What, in your opinion, is a fair percentage of depreciation to be considered in arriving at the present value of benches of that character, and to be taken from their original cost?

A. I think that twenty per cent. of the cost of a new bench, to take the benches of the New York Company, would put them in thorough order.

(By the CHAIRMAN:)

Q. When were the old benches displaced and new ones put in?

A. They were never displaced and new ones put in that position.

(By the CHAIRMAN:)

Q. Why were new benches substituted in place of the old ones?

A. 1880, for the purpose of gasifying naphtha.

Q. Was there any use for the old benches while using the new benches?

A. No, sir.

Q. Why did you substitute new benches for the old ones?

A. One reason was we were obliged to use the old benches, and could not throw them out of use until we got the water gas plant under way.

Q. What was the end in view in making the new benches?

A. To produce a different character of gas, and to produce a better gas.

Q. That is, to produce gas according to a better process?

A. Yes, sir; that was supposed to be the object.

Q. Then the new bench, in practical effect, took the place of the old bench, when the new bench was completed?

A. No, sir.

Q. Did not the new take the place of the old?

A. No; they did not produce the same result.

8822 Q. After the new benches were completed did the company use the old benches at all?

A. No, sir.

Q. Have they used them since?

A. No, sir.

Q. Then the object of changing the benches was to introduce a better method in place of the old method in manufacturing gas?

A. Yes, sir.

Q. And since that took place the old benches have been practically abandoned?

A. Yes, sir; excepting for their moral worth; the new benches played but a small part in the manufacture of gas.

(By Senator Robinson:)

Q. What do you mean by the moral worth of these old benches?

A. It is not well, perhaps, to use that word; I will withdraw the word "moral;" the naphtha which is used by the New York Gas-light Company is sold by one large corporation, and only one; if the New York Gas-light companies were kept in a condition whereby a small expenditure would enable them to sell either coal or water gas, as they elected, the moral effect upon the Standard Oil Company, it would be a check upon them.

Q. You mean that was so in 1880?

A. Yes, sir.

Q. Is it so now?

A. Yes, sir.

Q. In 1880, when this change was made, there had been a short time before successfully introduced in New York water gas which was supplied by the Municipal company, and which was in active competition?

A. Yes, sir; which would have been in competition with the New York Gas Company.

Q. They would have had to change their plant so as to manufacture water gas?

A. I don't know anything about that; I know they did change, and the Manhattan did not change.

Q. The Manhattan has facilities for producing water gas?

A. No, sir.

8823 Q. At the time you made the appraisement?

A. No, sir.

Q. As a matter of opinion, is there any other element in a gas plant besides the benches that is made comparatively useless when the plant has been used in the manufacture of coal gas, and is about to be directed for the manufacture of water gas?

A. I know of nothing unless it may be in the matter of coal storage, but so far as the plant, there is no other.

Q. Is it not true that the least storage room is required for coal?

A. Yes, sir.

Q. What is the proportion of coal, comparatively, that is used?

A. I couldn't tell you; I know only the general fact; anthracite coal is more readily obtained; they get it every few days.

Q. Does it require any more space to produce a given quantity of water gas?

A. No, sir.

The **Chairman**: And less for storage?

Mr. TREMAIN: Yes.

Q. What, in your opinion, is a fair method of estimating the value of a gas plant at the present day, irrespective of the value of real estate or lots without any buildings upon them?

A. I think its value is that sum of money to-day which it would cost to produce it.

Q. To duplicate it?

A. Yes, sir.

(By the CHAIRMAN:)

Q. Supposing one-half of the plant, by the introduction of a better method of producing gas, had become practically useless and had been abandoned, would you say that the fair value of that plant is the cost of producing it?

A. If the plant had been abandoned I should say it was worth simply the price of the old material; and in the case of the New York Gas-light Company's benches, it had simply been put out of commission, and I should say it was worth what it would cost to produce them.

8824 Q. What do you mean by out of commission?

A. I mean not using; I would rate a depreciation of it at twenty per cent.

Q. Has the new method of producing gas proved to be better than the old method?

A. I could not answer that question?

Q. Have you any reason to believe the expectation that it would be better has not been realized by the public?

A. No, sir.

Q. Some of the presidents testified in the last examination that it was better?

A. My opinion is that it is very much better.

Q. You think the new method is a great improvement on the old method?

A. Yes, sir.

(By Senator MURPHY:)

Q. Because of its cheapness in manufacturing?

A. Not so in that, but on account of its greater power of brilliancy.

Q. You say that the fair method of estimating the value of a gas plant is the cost to duplicate it?

A. Yes, sir, at present.

Q. I want to follow that along and ask you your opinion whether by duplicating it you did not mean the duplication of a plant of equivalent working capacity with a less expenditure?

A. Well, no; I mean it would be possible to produce a plant worth half the money, which in the estimation of some people would be the equivalent, but not in the estimation of others; I mean to reproduce that thing as it existed.

Q. Whether it is not, in your opinion, a fair method of estimating the value of a gas plant, irrespective of the cost of the lots and real estate; is it not a fair method of estimating the value of a gas plant to value it according to its producing capacity?

A. I don't know what you mean; any thing is fair that gentlemen agree to; it is not a professional way of doing it; as an engineer I say no.

8825 Q. Have you had any experience in arriving at the commercial value of a gas plant?

A. Yes, sir, I am a builder.

Q. Do you say that it is not in any sense fair to estimate the value of a gas plant by estimating it according to its producing capacity?

A. I say it is not fair to do that thing from an engineering standpoint; it seems not to be fair to me from a commercial standpoint; do I understand your question that the gas producing power is the value?

Q. Yes; is not that one element in measuring its value under any circumstances?

A. Yes, sir.

Q. In your opinion is there any other element to measure the commercial value of a gas plant?

A. I suppose it would boil down to the same thing—its ability to make money.

Q. Now, upon what basis did you make an estimate of the valuation of the Manhattan property, for instance, that you had appraised, taking, to begin with, the gas plant of the Manhattan?

A. Well, we measured the buildings; we found out how many brick there were in the buildings to produce them; we found out how many piles were under the buildings; and in that general way we endeavored to find out all the material in those buildings, and estimated that at about the price it would cost to-day to put those buildings up.

(By Senator Murphy:)

Q. Did you make your estimate of the price it would cost to put up those buildings to-day, based on the price it would cost when they were built?

A. Yes, the present cost.

Q. You say you estimated the brick and piles and material with regard to what you thought it would cost to do it to-day?

A. Yes, sir.

Q. Was there any comparison made as to the cost at the time they were built, and what it would cost to build them to-day?

A. No, sir.

8826 (By Mr. Tremain:)

Q. Is it not true that the cost of erecting a gas plant to-day is very much less than it was twenty years ago?

A. I couldn't tell you.

Q. Is not that true?

A. It is not true that the same character of work can be produced very much cheaper to-day than twenty years ago.

Q. An old-fashioned plant you mean?

A. No, sir, I do not mean that.

Q. Can the old-fashioned plant be made cheaper?

A. No, sir, only a different character and poorer; some parties would charge double what others would; some people think that because the more money is expended and the more durably built, the cheaper in the end.

Q. Is not it a fact that the same thing to build now costs less than it did twenty years ago?

A. No, sir, I am getting more now.

Q. Is it not true you can manufacture a plant for much less to-day than it did twenty years ago?

A. I don't know.

Q. You do know it would not cost any more now than twenty years ago?

A. No, sir, I think not.

Q. With reference to the Manhattan, who participated in the appraisement?

A. My son, Mr. Hill, Charles H. Corbett, William Deming, Charles Rowland, Mr. Trautwein; these gentlemen are all engineers; I also had clerical help in my office.

Q. Who from the Manhattan Company?

A. Nobody.

Q. Who handed you the schedule?

A. Albert M. Smith.

Senator MURPHY: I move that when those books are brought here they be retained in the possession of the committee until we get through with them.

8827 (A vote was taken and the committee were unanimously in favor of the motion.)

Q. Who handed you the schedules?

A. Mr. Smith gave me the schedules of the Manhattan.

Q. These other papers being marked "B 1," "B 2," and "B 3?"

A. No, sir.

Q. What did you do with the papers he handed out?

A. He handed me a schedule of the property; I had copy made, I think, and gave it back to him.

Q. Did you write any thing upon it before giving it back to him?

A. No, sir.

Q. Did you make a copy of it?

A. This is a copy of it; substantially a copy.

Q. Did you make this copy?

A. No, sir; my clerk made it; it was made under my directions; this is my handwriting on that (witness indicating).

Q. Are those the ones you gave back to Smith?

A. No, sir; the one I gave back to Smith was the one he gave me.

Q. Did not the schedules he handed you have some figures upon it of dollars and cents?

A. No, sir; I never got the slightest idea of valuation from him of the Manhattan Company; I know of my own knowledge its value; and that is true of the Knickerbocker and the Municipal; I had no intimation whatever of the Metropolitan Company, as to the supposed value of their property.

Q. You appraised the real estate?

A. No, sir; not of any of the companies.

Q. I observe your appraisement of the mains and meters and services?

A. No, sir; I know nothing about them; I never was invited to appraise them.

Q. Your appraisement in all the companies is limited to the gas plant?

A. Yes, sir.

8828 Q. The buildings are considered a part of the gas plant; will you please state to the committee what, in your opinion, are the items comprising a gas plant proper?

A. I think all the apparatus necessary for the production of gas; I think the buildings which covered it are a portion of the plant; I think the buildings in which are stored the raw material may be considered a portion of the plant; and also the storage holders for the finished material; the office buildings and apparatus used for keeping a record of the works we have never considered as a part of the plant; we call it a betterment or office, and I have so described it here, I believe.

Mr. **Tremain**: Witness reads from Exhibit "B." "The foregoing $1,916,355, setting forth the present value of the buildings, as a gas producing and gas storage plant, coal storage, fixtures, tools, implements and betterments of every description * * * comprising the property of the Manhattan Gas-light Company, known as the Eighteenth street station, has been carefully revised and corrected by me, and I believe the same to be a just and true value therof."

Q. Is that appraisement you made of the Manhattan Company's property, irrespective of, and without the knowledge of their cost?

A. Yes, sir.

Q. The cost it would take to put it there at that time?

A. Yes, sir.

Q. When you made that estimate did you take into consideration the difference between these old works and new works?

A. Yes, sir; they were not new.

Q. Did you estimate what it would take to put a new building there?

A. Yes, sir.

Q. Was there any new apparatus in the Manhattan at all?

8829 A. That is a relative term; some apparatus twenty-five years' old there was there, and other not more than five or ten years.

Q. Was all the apparatus of the Manhattan in use?

A. No, sir; not when we were there.

Q. What part of the Manhattan plant was not in use when you were there?

A. Some of the benches; we were there in the summer, and I suppose not half of the apparatus was in use which is necessary to run in the winter.

Q. Was there any part of the Manhattan that you saw which was not in use during the year?

A. I couldn't tell you.

Q. Did not you see some things on the schedule of the Manhattan plant which were in fact comparatively useless?

A. I saw nothing on the schedule which was not useful.

Q. Do you know how the value of the mains, meters and services were arrived at?

A. No, sir.

Q. Are you a director of any gas-light company?

A. One in Florida.

Q. In Brooklyn?

A. No, sir.

Q. Are you a stockholder in any of the companies?

A. In the Consolidated, and no other.

Q. How long was you in the Municipal?

A. I was one of the original promoters who built that works; always in it.

Q. When did you build the Municipal and the Knickerbocker works?

A. I built two gas works for the Municipal Company; the first one in 1876.

Q. Where?

A. On the block bounded by the North river and Forty-sixth street, and by property on the east—I don't know whose, and by Forty-fifth street on the south; that works was of a half a million cubic feet daily capacity.

Q. For water gas?

A. Yes, sir; in 1877 I built the works for the same company
8830 in the next block south, bounded by the North river,
Forty-fourth and Forty-fifth streets.

Q. What capacity were they?

A. The buildings were large enough for three million cubic feet daily capacity; the apparatus for a one and a half million one was put in; subsequently another million and a half was added.

Q. Making a capacity of three millions?

A. Yes, sir.

Q. From and after what time?

A. The spring of 1880.

Q. Each of these constructions under a contract?

A. Yes, sir; a number of contracts, I think.

Q. All payable in stock?

A. No, sir; not a dollar payable in stock; I never made a contract with a company in the city of New York whereby I ever received a dollar's worth of stock to my recollection.

Q. Bonds?

A. I have received bonds in one case.

Q. Which case?

A. The Municipal.

Q. Which year?

A. I think 1878, when the final payment was due.

Q. That is all the work which you have done for the Municipal?

A. That is all I did for them there; I built the Knickerbocker works as well.

Q. You had completed these other contracts for producing this capacity of three and a half millions before you entered upon the Knickerbocker?

A. No, sir.

Q. When did you enter upon the Knickerbocker construction?

A. I partially built it in 1871.

Q. What was its capacity in 1871?

A. No capacity, for the reason the enterprise failed; the work was stopped and the property sold to other parties.

Q. Do you remember whom it was sold to?

A. Yes, sir.

8831 Q. Whom?

A. I think the Cutting estate had a hand in the purchase of it; I have no knowledge only by hearsay.

By the Chairman:

Q. You understood it was purchased by the Cutting estate?

A. Yes, sir; that is all I know about it.

Q. This was where?

A. Ninety-eighth and Ninety-ninth streets, Second avenue to the river.

Q. What was done at that time when the work was abandoned?

A. I had filled the property in two feet above high-water mark; I built a retort-house, two tanks, I built a condenser, a purifying-house and one set of purifiers, a meter-house, and I put in a meter; and after having done that the payments were stopped; and they made a compromise with me and I abandoned the work.

Q. About what time was that?

A. I think that all occurred in 1871.

Q. Please tell the total amount that was paid you, as near as you can recollect?

A. I said I never made a contract in the city of New York and took stock; that is not true; I made a contract to take the land at Ninety-eighth street, and put thereon a gas producing works, coal gas, which should be capable of making a million feet of gas a day; and my price in stock was $1,150,000; I had a contract with one of the gentlemen of the company, whereby he agreed to give me fifty cents on a dollar for every share of stock which I would deliver to him, and my object, of course, was to sell him the whole of it and get the cash for my work, $575,000, the cash valuation; the scheme failed, he became financially embarrassed, and did not take all the stock which I got.

Q. Now those contracts were in writing.

A. Yes, sir.

8832 Q. You have that contract with the Knickerbocker Company?

A. No, sir; there was no Knickerbocker Company at that time.

Q. With whom did you have that contract?

A. Henry J. Davidson; he took the contract from the company, and I took it from him.

Q. The Knickerbocker was started under a different name?

A. Yes, sir.

Q. What was the name?

A. The Union Gas-light Company.

Q. Who was this gentleman with whom you entered into the contract to purchase some stock?

A. C. S. Bushnell, of New Haven.

Q. He failed?

A. Yes, sir; he was to take my stock, and did take a portion of it, but failed.

Q. With whom was the compromise made that you speak of?

A. I think it was with Davidson; the name of the company was then the Union Gas-light Company of New York, I think.

Q. Do you know at that time whether any bonds had been issued by the Union Gas-light Company?

A. No, sir; I do not know.

Q. Did you surrender the stock back when the compromise was made?

A. No, sir; I think I have some of the stock yet; the company was defunct.

Q. What became of the property?

A. It was sold, as I understood it.

Q. By Davidson?

A. No, sir.

Q. It was sold to whom?

A. By hearsay; to Mr. Cutting.

Q. R. F. Cutting?

A. So I understood, but I don't know any thing about it.

Q. Did you subsequently do some more work on that property?

A. Yes, sir.

Q. When did that begin?

A. Eighteen hundred and seventy-seven; I would not swear exactly to that date; perhaps it was 1878; I made a contract with the Municipal Company of New York, or rather with the president, Mr. Charles G. Francklyn. 8833

Q. Have you that contract?

A. I have it at home, but not with me.

Q. You have no objection to submitting it to the committee?

A. No, sir; I will do so.

Q. In pursuance of that contract, what did you do?

A. I took this establishment which had been turned into another gas works since I first built it, and built over.

Q. What was the producing capacity?

A. Not over 400,000 cubic feet a day, I should judge.

Q. Under the control of the Municipal?

A. No, sir; it was being run by Mr. McKenzie when the Municipal purchased it; he had an apparatus in that place making gas for the Knickerbocker.

Q. Was Mr. Francklyn an officer of the Knickerbocker at that time?

A. No, sir.

Q. Who were the officers?

A. The president, R. N. Graham, and secretary, John Sickles.

Q. Was that contract to be paid for in stock, bonds or cash?

A. Cash; and it was paid by the Municipal in cash.

Q. What was the total cash amount?

A. Between $400,000 and $500,000.

Q. And that payment was made in 1878 or 1879—the last payment?

A. Yes, sir; it was made as the work progressed—made in installments—the last payment was made when the work was completed.

Q. What did you do at that time, and how were the works when you stopped your work and got your pay?

A. I put up a new gas-holder for the storage of illuminating gas, of about 300,000 cubic feet capacity; and I erected a gas-holder for the storage of water gas and apparatus which is necessary for 8834 that process; and put up a building about sixty feet wide and about seventy-five feet long, with an iron roof—a fire-proof building—I put in then six gasogenes or stoves for making water gas; I put in two steam engines for producing heat in the stoves; two others to operate the exhausters; and machines necessary to move the gas through the works'-pumps; I put in a new set of purifiers, new scrubbers; I furnished about 400 horse power boilers; I think there were five of them; I built a complete range of benches, twenty-eight, if I remember right, and generally put the works in a good condition for the production of gas; my contract was to produce 2,000,000 feet per day—the last transaction; at that time the producing capacity had not been tested up to over two million because they had not the storage capacity—they had no place to put the gas.

Q. Did you build a holder subsequently?

A. Yes, sir; two years ago; I took out two holders which I had previously built some ten years ago; the tanks were leaking, and I put the tanks in thorough order and made them deeper; I put in a three-lift holder instead of two lift ones, making a difference of fifty per cent. in storage capacity; since that time they have produced 2,400,000 feet in twenty-four hours.

Q. What, in your opinion, was their proper fair producing capacity in 1882?

A. Two million cubic feet.

Q. It would not exceed that under any circumstances—a fair use of the works?

A. No, sir.

Q. Was that a fair condition of the works in 1884?

A. No, sir; I took down two gas-holders; their producing capacity is measured by their ability to take care of the product.

Q. In 1884 what was their producing capacity?

A. Two million four hundred thousand feet per day.

8835 Q. Was it being used at that time for that amount?

A. I think not at that time.

Q. Is it not true that the plant was not used for producing at that time?

A. When I appraised it, it was at work, in 1884.

Q. What is the total amount that you received for work on those Knickerbocker works up to the time of the appraisement?

A. I couldn't tell you here; I can tell you to-morrow.

Q. Please do so. It was less than a million, was it not?

A. No, sir, more than a million.

Q. Your recollection?

A. My recollection is that I have received over a million dollars since I commenced to build upon that property.

Q. Is it, or not, the fact when you appraised these works in 1884, any part of them that you had previously constructed had been abandoned or removed besides these two holders you have referred to?

A. Nothing else.

Q. Was any part of the plant then useless?

A. No, sir; the gas companies never use precisely the same plant in two consecutive months' work; in the summer they do not use it all, but in the winter they are using all of their plant.

Q. When did you see those works after the time you appraised them?

A. The other day when I was up to see the explosion—Hell Gate explosion; I think it was the tenth of October.

Q. Is there any period during the past year when that plant has not been used?

A. No, sir.

Q. Was there any time that the gas was made elsewhere and conveyed to the Knickerbocker holder?

A. Yes, sir.

Q. When?

A. I should say in 1881, from the time the Municipal Company bought it, until two years ago.

Q. Where was the gas made?

A. At the Municipal gas works.

8836 Q. And conveyed to the holders of the Knickerbocker?

A. Yes, sir.

Q. And stored there, and dealt out from there?

A. Yes, sir.

Q. That was the condition when you commenced to work there in 1882?

A. Yes, sir, and remained so until 1883.

Q. Now did you do any other work for the Municipal except those two works?

A. No, sir, I think not; I don't remember any thing else.

Q. When you went to the Knickerbocker works to appraise them in 1884, had there been any other work of any extent done there except the work which you had constructed?

A. The company had built an office; I don't know whether I appraised it or not; I couldn't say without looking; I did not appraise the Knickerbocker works, but simply revised them.

Q. Did you se- the works?

A. Yes, sir.

Q. If there had been any other work done at that time except your work, what was it?

A. They had built this office and the coal storage shed, and I think something in the way of improving their dock, but what I couldn't say.

Q. That is all you observed?

A. Yes, sir, except what I did.

Q. The coal-sheds—were they very expensive?

A. It is a brick building with the roof having a railroad track and cars on top for depositing the coal.

Q. You saw the Municipal works some time during 1884?

A. Yes, sir.

Q. Had there been any work except yours done there?

A. Yes, sir; considerable building.

Q. What building had they done that you did not yourself construct in the works?

A. They built a very large gas-holder tank.

8837 Q. What other work?

A. Coal-sheds.

Q. What other work?

A. I don't know of any thing.

Q. The apparatus was substantially your construction?

A. Yes, sir; they built the dock.

Q. So far as the apparatus was concerned it was yours?

A. Yes, sir, I built the gas-holder, but not the gas-holder tank.

Q. Who built it?

A. Armstrong & Moran.

Q. Did you estimate its value?

A. No, sir.

Q. You included an estimate of its value when you revised it?

A. Yes, sir; I estimated its value at the time the appraisement was submitted to me.

Q. Who submitted the Municipal appraisement to you?

A. Mr. Gawtry, and I think Mr. Allen was in the room; I was sent for.

Q. When was it you were sent for?

A. I think it was in October.

Q. When you got there who did you see?

A. Mr. Gawtry and Mr. Allen.

Q. What did Mr. Gawtry tell you he wanted you to do?

A. To look it over and see if it was all right.

Q. The paper he submitted to you was a different paper from the one in the book?

A. I think it was in sheet form.

Q. Were there any figures on the paper?

A. Yes, sir.

Q. What did those figures relate to?

A. The value of the article they were set opposite.

Q. What were they explained to you to represent?

A. Nothing; they represented the value of the property.

Q. How do you know that?

A. Because I made it, the property, and received the money; I was in Europe at the time this appraisal was made; Mr. Gawtry was in my office, and probably got some of the information from my books. 8838

Q. Did you write the values on that schedule?

A. Yes, sir.

Q. Were they different from the schedule which was submitted to you?

A. No, sir, I think not.

Q. Who prepared this one—Exhibit "D" relating to the Municipal?

A. I did; that is my handwriting.

Q. And Exhibit "E" also?

A. Yes, sir.

Q. Who prepared those books?

A. Those books were prepared in the office of the Municipal Company; I don't know who prepared them.

Q. Those figures you went over to see if they corresponded with those lists?

A. Yes, sir; and then I wrote that statement on here; this was on September 8th; I came home from Europe the last of August; I will correct it and make it September instead of October.

Q. You did not appraise any piers or bulkheads, the real estate of the Municipal or Knickerbocker?

A. No, sir.

Q. Nor any thing else except the gas plant; was any part of the Municipal structure changed at any time from a coal plant to a water plant?

A. No, sir; it was always a water gas plant, it was constructed so originally; when the Knickerbocker was originally designed it was proposed to use coal in the production of gas. After it was sold, and Mr. McKenzie became the engineer, he used a part coal and a part water gas, mixed in the two; it has never been any thing else but a water gas works under its present ownership.

Q. Or under the Municipal ownership?

A. Yes, sir.

Q. How much of the benches became comparatively useless by that change?

8839 A. None; there never were any benches constructed until I constructed them for the water gas in 1878.

Q. When did those works begin to produce gas—the Knickerbocker works—do you know?

A. No, sir.

Q. You think they produced gas in 1878?

A. Yes, sir.

Q. Did you build the Metropolitan?

A. No, sir.

Q. Did you estimate its value?

A. Yes, sir.

Q. Did you estimate the values of the Metropolitan properties upon the same basis which you have described, in which you estimated the others?

A. I tried to, yes, sir.

Q. You did not include the real estate, or piers, or bulk-heads?

A. No, sir.

Q. What was the producing capacity of the Metropolitan works when you made the valuation?

A. I don't know.

Q. Who submitted to you the list for that appraisal?

A. Mr. Zollikoffer, and the man who had charge of the Forty-second street gas works.

Q. Did these schedules have any figures on them at the time they were submitted to you?

A. No, sir.

Q. You were not made acquainted with the costs?

A. No, sir.

Q. You valued them irrespective of the costs?

A. Yes, sir.

Q. Did you observe any plant there that was useless?

A. No, sir, but lots of it out of commission, or use.

Q. Had the plant been used to make coal gas before?

A. Yes, sir.

Q. When was the change made?

A. No change has been made, to my knowledge; they simply used a little oil in four benches that was intended for use in making gas; the engineer's name which I could not think of was Streiker.

8840 Q. What did you do with the original papers that the Metropolitan representatives submitted to you?

A. The inventory I returned.

Q. Did you make a statement to the Metropolitan?

A. Yes, sir.

Q. Did you make any other statement to the Metropolitan except the one I have shown you?

A. No, sir; I made an explanation to Mr. Zollikoffer; he thought I had not valued his property high enough; I convinced him.

Q. What did you say to him?

A. I couldn't tell you; I wrote a letter to him on that subject in answer to his letter.

Q. Have you a copy of the letter?

A. Yes, sir; at home.

Q. What was your information in respect to the figures?

(By the CHAIRMAN:)

Q. You will produce that letter, will you?

A. Yes, sir.

Q. I show you Exhibit "C 1," and it is produced by Mr. Smith as being the schedule of appraisement of the property of the Metropolitan Company that entered into the consolidation; I suppose it was your appraisement; I want you to look at it; did you ever see it before?

A. I have seen a copy; this is a copy evidently of what was submitted to me, with no figures attached to mine.

Q. What did you do?

A. I put the figures in; the valuation of every item.

Q. Is this Exhibit "C" also in your handwriting?

A. No, sir; I never saw it before.

Q. Is there any certificate of yours in that book?

A. I don't know.

Q. Had you signed a certificate in form the same as signed for the Municipal?

A. Yes, sir.

Q. Please turn in that book to the items which you did appraise, and state the class of items?

A. Store-room, 18x52 feet.

8841 Q. State from where you commenced to appraise, and where you ended?

A. On page 36.

Q. And appraised all the items down to and including what page?

A. I don't want to say that this is a true copy of what I had, but I think it is.

Q. Do you remember the figures of your appraisement?

A. No, sir.

Q. Do you remember the total at which you appraised the plant of the Municipal?

A. I do not; if I can refresh my memory in some way.

Q. Let me suggest the figures; $2,041,000, or about that?

A. No, sir; that is doubtless inclusive of something I did not appraise.

Q. Wherever we find your certificate, then those are your figures?

A. Yes, sir.

Recess until three o'clock.

MONDAY, *November* 23, 1885, 3 p. m.

Examination of Mr. ROWLAND resumed:

Q. What was the subject-matter of difference between yourself and Mr. Zollikoffer, touching the valuation of his company's property?

A. My recollection is there were some few items which he thought I had undervalued.

Q. Of what character?

A. I don't remember what the items were; I objected to altering the valuations which I had given him unless I was authorized to revise all the valuations; and the explanation which I gave him by letter, he wrote me was satisfactory.

Q. Why was it necessary to revise them all in case you revised his figures in that respect?

A. I had delivered them all and I did not think it was right in the sight of the other parties to make a different valuation without having the opportunity to look over the valuations of the other companies.

8842 Q. Have you arrived at the valuations in all cases on the same basis?

A. Yes, sir.

Q. And that basis was on the basis you have already stated?

A. Yes, sir.

Q. In respect to the depreciation of the gas plant, what, in your opinion, is the fair average life of a gas retort?

A. Two years.

Q. And the fair average life of the other apparatus constituting the gas plant?

A. I have no opinion about that, sir; as in my experience of about eighteen years I don't remember any plant having been worn out; in many cases we have taken out but replaced it by a larger one, and in some cases it has proved more effectual.

Q. Taken what out?

A. Gas-holders, condensers and purifiers.

Q. When you take out a gas-holder and put in another one, what do you do?

A. Take it down and rework the iron and sell it to some other company as a new one.

Q. When you take it down has it any value for some other building?

A. No, sir; only to work over; and it requires the expenditure of cleaning the sheets, putting them up, and re-riveting them.

Q. In your opinion is there any depreciation in the value of mains and pipes after they have lain for years?

A. There must be a depreciation as all things wear out; but I cannot conceive how long it would take to wear out a set of mains; I have seen mains replaced by new ones, which have been in the ground for thirty years, and just as good as those replaced.

Q. Is not there a constant wear, especially at the joints?

A. No, sir.

Q. Is not that your experience in this city?

A. No, sir; I think this is the best pipe city in America.

8843 Q. How would you arrive at the value of mains and pipes that have been laid for some years?

A. By estimating the cost of reproducing.

Q. At the time of the estimation?

A. Yes, sir.

Q. That means the gas-mains themselves, and the cost of laying them and opening the streets for that purpose?

A. Yes, sir.

Q. The material of which the mains are made is what?

A. Cast iron entirely in New York.

Q. In that respect the mains would cost more than they would thirty years ago?

A. The cost of mains varies every year; iron is not as low as it was thirty years ago.

Q. The iron of the Manhattan system would cost more than it would fifteen or twenty years earlier to lay it?

A. Yes, sir, the cost of laying the mains now I think would be much larger than it was fifteen years ago.

Q. In what respect?

A. Because labor is very much higher.

Q. For laborers in the street?

A. Yes, sir.

Q. Skilled labor higher?

A. Yes, sir, higher than it was fifteen years ago.

Q. Yes?

A. Fifteen years ago I paid $2 a day for a first-class machinist, and he was thoroughly educated in his business.

Q. The labor required in laying mains, I am speaking about?

A. It requires a man who is rather more skilled than an ordinary laborer, and I think that that character of labor is from thirty to fifty per cent. higher than it was fifteen years ago.

Q. Look at that a moment; what would a laborer employed in excavations in mains receive in 1884, and prior to that time?

A. The difference between $1 and $1.50.

Q. An apprentice—such partially skilled labor as is employed?

A. In about the same ratio.

8844 (By Senator ROBINSON:)

Q. Have you any pay-rolls you had fifteen years ago?

A. Yes, sir.

(By Senator MURPHY:)

Q. You made the remark a moment ago that you employed thoroughly skilled machinists at $2 a day; such a man is capable of building a steam engine, and running it after it is built; do you mean to say that such a man you employed at $2 a day fifteen years ago?

A. No, sir; he may be a thoroughly skilled machinist, but not competent to run an engine.

(By the same:)

Q. A flange turner you might classify as a machinist?

A. No, sir, we do not class him as such; he is simply a flange turner, and nothing else.

Q. Have you ever been informed what the difference is between your appraised value of the plant of the Manhattan values and its actual cost?

A. I have never had the slightest intimation given me.

Q. That circumstance would have no weight in forming your opinion?

A. It ought to have no weight.

Q. If you are now informed what that cost was would it change the opinion you have already given?

A. I think not, sir.

Q. As a matter of opinion simply, and in order that the committee may weigh the opinion you have already expressed, I will ask your opinion on a hypothetical case—Whether it would be a fair method of estimate to take the cost of the plant that you have appraised and deduct twenty per cent. from it for wear and tear and depreciation during the time it has been in use since it was purchased?

A. I think it would not be fair, sir.

Q. Would it, in your opinion, be a fair method of estimate to take the cost of such a plant as you saw in the Manhattan and add 8845 twenty per cent. to that cost and thus arrive at its present value—would that be fair?

A. I don't know whether it would be fair or not, as I know nothing of the basis; I know nothing under what conditions this property was purchased; I think a fair valuation is, that sum of money which it would cost to produce it now, and that sum of money at which it can be sold in the market.

Q. Then are we right in assuming it to be your opinion now that the value of the plant that you appraised of the Manhattan would have brought in the market, if sold, $3,646,403?

A. If that is the sum I appraised it at I think it could be sold for that sum of money; I think that I could furnish a purchaser on condition that the balance of the property can be purchased at as fair a valuation.

Q. You mean by that the real estate?

A. Yes, sir; and their system of mains.

Q. Their mains, services, real estate—and that is all you mean?

A. No, sir; I mean their privileges—their right to open the streets, if they have any, and their right to do business.

Q. You regard those as an element in the valuation?

A. Yes, sir.

Q. Suppose you included that and their right, or assumed right, to furnish the New York community with gas—would the exclusion of those elements make any difference, in your opinion, and your figures?

A. I cannot conceive that the property is worth any thing except what it is worth for old material, under this condition unless applicable for the purpose for which it was built.

Q. So that you include in all the estimates you have made, and in the figures in evidence over your signature, the conditions of doing business in the city of New York—the right to open the streets 8846 for that purpose and supplying the community with gas, as an element for the valuation of that property?

A. No, sir; that is my valuation of that property for the production of gas in the manner which it was used at the time I made the appraisal.

Q. And for each respective company?

A. Yes, sir.

Q. That includes its right to lay pipes and operate them and all that?

A. That is of no use except to have the right to open the streets.

(By Senator Robinson:)

Q. You didn't take into account what it would cost to lay a main of the same kind through the streets only?

A. No, sir; I estimated what the apparatus was worth to that company who were using them at the time.

(By the same:)

Q. And that would depend upon how much money the company is making out of the business?

A. I don't know that.

Q. I find here many items upon which I would like to ask you whether they could not be duplicated for less money; for instance, for the retort house, etc., $6,124?

A. Yes, sir; the Manhattan Gas-Light Company—I believe that

that was a fair valuation of that property at that time; what may be there now I am not familiar with.

Q. Could not that item be duplicated for less than that sum?

A. I think not.

Q. Here is an item—purifying apparatus, elevator, eight purifiers, etc., $59,084?

A. That is for two sets.

Q. Have they no valuation except for the purpose of supplying gas?

A. No, sir; only their weight in old iron.

Q. Your valuation included that?

A. Yes, sir; for purifying gas.

Q. Gas-holder tanks, etc., $198,000?

A. A number of tanks.

8847 Q. 1, 2, 3, 4, 5, and 6, $198,000—you can answer the same as to that?

A. Yes, sir.

Q. Then these gas-holders, purifiers, $198,000, you answer the value is for old iron?

A. I say they have no value except for the purpose of purifying gas; I do not say that in that place they could be sold.

(By Senator Robinson:)

Q. So you say it would cost that to duplicate them?

A. Yes, sir; I say that is a fair valuation.

Q. It would cost that to put others in their place?

A. Yes, sir; as good as they are.

Q. I find an item here of $28,444, coal yard No. 2; what does that refer to?

A. An apparatus for taking the coal from the vessel and carrying it along to the yard, and carrying it across the yard, and piling it in the yard; it is quite a complicated piece of machinery; it requires an engine and boiler; it is useful for no other purpose only the storage of coal.

Q. I find a similar item as to coal yard No. 3; I suppose you answer the same as to that?

A. Yes, sir.

Q. I find here item for gas-holders and tanks?

A. Two gas-holders and frames, $52,000.

Q. Those then in use?

A. Yes, sir.

Q. Any gas-holders over there not in use at that time?

A. Not any; they may not have been in use; there was no gas-holder which was not useful for the storage of gas.

Q. Flagging, bridge stone, etc., and iron covered building, how did you arrive at their val-es?

A. Measured them.

Q. On the whole you valued it as a running concern?

A. Yes, sir.

Q. And its capacity to produce gas supply?

A. To produce gas; we did not come to the supply.

8848 Q. With what other works in the city of New York have you had any transaction?

A. No other; oh, the Harlem gas works.

Q. What did you do to the Harlem, and when did you begin?

A. I began there in 1869 or 1870—the winter.

Q. Was that the Harlem Company then?

A. Yes, sir; I built them a gas-holder, and also built them a gas-condenser; in January, 1884, I enlarged their works with another gas-holder, tank and purifying-house, with two sets of purifiers and some new condensers, scrubbers and steam engine, boiler and exhauster; it was in the spring or summer; I think the contract was taken in January.

Q. What was the producing capacity of those works before you commenced there in 1884?

A. I have no idea.

Q. What was the producing capacity when you completed them?

A. I couldn't tell you; John Belmore had charge of these works at that time.

Q. Did you see any of the engineers' reports?

A. No, sir.

Q. The work that you had to do?

A. I saw the report and this engineer recommending this improvement.

Q. Who showed you that?

A. I think Mr. Morse showed it to me.

Q. Did you have any connection with Rutter?

A. No, sir.

Q. What was the total amount of money that covered the improvement of these works in 1884?

A. I couldn't tell you; I was not in the country when that work was done; I can give it to you from my office.

Q. Do you remember when you ceased to work there in 1884?

A. About the 1st of November.

8849 Q. Was that contract in writing?

A. I think so, but I couldn't say; it no doubt was.

Q. And with the Harlem Company?

A.. Yes, sir.

Q. What were the Harlem works doing at that time, in 1884, when this work was done?

A. They were manufacturing gas and selling it, I think, in the districts all above Seventy-ninth street.

Q. East and west?

A. Yes, sir; they were in competition with the Knickerbocker gas works, who supplied gas in about the same district.

Q. Had both companies their mains laid?

A. Yes, sir; but the Knickerbocker Company had not so many laid as the Harlem.

Q. Is it not true that they were both supplying on the same streets in 1884?

A. Yes, sir, but in different pipes though.

Q. That was the time when the price was uniform by reason of the pool, which the committee will find in the proceedings, from 1880 until the consolidation; there was a competition price to 1880 which resulted in a pool, and while the companies were competing, yet the price was the same in all the streets?

(By the CHAIRMAN:)

Q. The competition consisted in getting each other's customers?

A. Not only that, but the quarterly statements were made upon a basis established by a stipulated agreement.

Q. So that when you entered upon this work in '84 they were supplying some of them with gas in the main streets?

A. Yes, sir.

Q. Describe the work; what was the territorial area, and what did the Harlem works consist of?

A. I couldn't say; I never was in the works half a dozen times in my life; I have no knowledge of their area; they were located on First avenue and One Hundred and Twelfth street.

8850 Q. Have you been there since the summer of 1884?

A. No, sir.

Q. You don't know whether they have been shut down or not?

A. No, sir.

Q. Did you make any estimate of the Harlem?

A. No, sir; I never was invited to.

Q. Have you any knowledge which is sufficient to enable you to form an opinion as to what was the value of the gas plant of the Harlem in 1884?

A. No, sir, not the slightest.

Q. Did you make any appraisement of the Mutual Company?

A. No, sir.

Q. Have you ever been in their works?

A. No, sir, not in their buildings.

Q. Did you have any transaction in relation to their construction of the Mutual works?

A. No, sir.

Q. And also the Equitable?

A. No, sir.

Q. Did you construct the Nassau works in Brooklyn?

A. Yes, sir, in 1872.

Q. Have you been to work on them since then?

A. No, sir.

Q. Would it be convenient to produce the figures you have referred to to-morrow?

A. Yes, sir.

Mr. TREMAIN: We will dispense with the further examination of Mr. Rowland until that time then.

JAMES W. SMITH, being recalled by the counsel to the committee, testifies as follows:

Examined by Mr. TREMAIN:

Q. Have you brought with you all the balance sheets that you alluded to this morning which have been made by the book-keepers of the Consolidated Company between November, 1884, and the present time?

A. Yes, sir.

8851 Q. Have you ascertained definitely whether there are any other papers having reference to the financial condition of the company during that time?

A. I think you will find in connection with these balance sheets every thing you will want.

Q. I want to know whether there are any other papers in existence on that subject?

A. There are no other papers to my knowledge.

Q. Is there a finance committee?

A. Yes, sir.

Q. Who comprise it?

A. Percy R. Pyne, Henry Day, John T. Huggins, H. E. Gawtry and the president *ex-officio*.

Q. When was that committee created?

A. At the organization of the company, or shortly after.

Q. The committee has not been changed since the fall of 1884?

A. No, sir.

Q. Has it made reports in writing?

A. Not to my knowledge, except the minutes of such meetings as they have held, which are reported to the board of directors—the monthly board meetings.

Q. Is there a book containing their report?

A. Yes, sir.

Q. Are there any other reports of that finance committee except the record as shown in their minutes?

A. No, sir; the secretary of that committee is the secretary of the company.

Q. Can you send for that book so I could get it this afternoon?

A. I don't think I could; I have no messenger here; if you will send one of your messengers down with me I will try to get it.

Mr. Tremain: We will send a messenger for you while you are on the stand.

The Witness: If you will wait until morning I will send it.

The Chairman: We will send down for it.

(By Mr. Tremain:)

Q. It is the book of the finance committee; is there any 8852 other committee that reports or has reported to the board of directors since last November?

A. I think several matters in relation to the business of the company have been reported.

Q. Designate the members of this committee who have acted?

A. I could not; it is all on the minutes of the board.

Q. Whether there has been a substitution?

A. I think not.

Q. Is there among those papers a paper showing the financial condition of the company during 1884?

A. Eighteen hundred and eighty-five; I think what you want, sir, is here.

Q. I want your testimony whether there is, or is not?

A. I will answer that in the affirmative, sir.

Q. Those papers may as well be handed to the expert. The stock is registered in the Farmers' Loan and Trust Company?

A. Yes, sir.

Q. Is all the stock that has been issued to stockholders of the Consolidated Company a matter of record in the Farmers' Loan and Trust Company?

A. I presume so.

Q. Don't you know?

A. I don't know that I do.

Q. Don't you know whethere it is, or it is not?

A. I don't know but there have been some omissions in their books; it has been sent down to be recorded.

Q. Is it not a fact that some stock has been issued by the Consolidated Company which is held by the owners or held as collaterals, which is not registered in the Farmers' Loan and Trust Company?

A. No, sir.

Q. There is also a record of the same ownership in the office at Irving Place and Fifteenth street?

A. Yes, sir.

8853 Q. Have you still in your custody, or in the custody of the company, the original list of stockholders transmitted to Consolidated Company from the constituent companies at the time of the consolidation?

A. I think we have the original lists.

Q. In what books will they be found to have been entered?

A. Our stock ledger.

Q. In any other books?

A. The stockholders of the constituent companies—there is a book showing the stock in the old companies, and the amount to which they are entitled in the new.

Q. And also the subsequent transfers in the new?

A. Our transfer books will show the result of the transfers.

Q. Will you place those books at the disposal of the expert this afternoon?

A. No, sir.

Q. Will you produce them here to-morrow morning?

A. No, sir; I think the company should be represented by counsel in the matter, and not have demands made upon us for purposes entirely outside of this investigation; I don't see what difference it makes whether John Jones holds one thousand shares or one share; and I would respectfully ask that this company be allowed the privilege to consult with counsel in the matter before any action is taken upon it.

Mr. TREMAIN: The question and answer are suspended and a new question asked. State what committee, if any, of the board have had the direction of the sale of any stock reserved for the working capital of the Consolidated Company since November, 1884?

A. There is no committee.

Q. State what officer?

A. There is no officer.

Q. State what disposition, if any, has been made of any of the stock not issued to the stockholders, recited in those schedules submitted by the constituent companies which you have designated? 8854

A. The stock is in the custody of the treasurer of the company; all of that stock which you have referred to; it has not been sold nor hypothecated in any way whatever.

Q. Do you mean to state that no stock whatever has been issued by the Consolidated Company since the consolidation except to the parties named in these schedules submitted by the constituent companies?

A. No, sir, I do not mean to say that.

Q. Then to whom as well has any stock been issued by the Consolidated Company?

A. To the treasurer of the company.

Q. Who is he?

A. Myself.

Q. State the total amount that has been issued to James W. Smith, treasurer?

A. $3,647,940.

Q. What book or books, or papers show the disposition that has been made of that stock by James W. Smith, treasurer?

A. There is no book, paper or any thing else showing that.

Q. You mean to say there has been nothing whatever?

A. No, sir.

Q. Is that in one certificate?

A. No, sir, several certificates.

Q. Have you got those certificates?

A. I have them in my custody.

Q. Will you produce them?

A. No, sir.

Q. Will you please state how many certificates there are carrying that $3,647,940?

A. There are two blocks issued; one for the amount reserved for the working capital and one to pay the indebtedness of the old companies as it matured; I think there may be twelve or fifteen certificates altogether, in 3,000 and 5,000 shares and so on.

Q. Have you not an account or a book in which you keep an account, or in which you have proposed to keep an account of that stock and its disposition? 8855

A. No, sir.

Q. Has any of the indebtedness assumed by the Consolidated Company been paid?

A. Yes, sir.

Q. Have some of the bonds been paid?

A. Yes, sir.

Q. Which company's bonds have been paid?

A. The Harlem Company's bonds, and the notes of the Knickerbocker Company which were secured by mortgage.

Q. What other companies?

A. That is all.

Q. No other indebtedness has been paid off by bonds or notes?

A. Nothing of that yet; nothing for which this stock is reserved.

Q. Have any other company's bonds been paid, or notes, are you sure about that?

A. I think not, sir.

Q. What is the total amount of the Knickerbocker indebtedness that was so paid?

A. Four hundred and fifty thousand dollars.

Q. To whom was that paid?

A. To the holders of the notes.

Q. What books will show that in the Consolidated Company, to whom they were paid?

A. I think our check book will show; it was paid in two sums.

Q. Name them.

A. One on the American Exchange Bank of $330,000; a Mr. Brown, a connection of Mr. Cutting's, to whom they were originally issued, $120,000; I think there are only two checks.

Q. What other payments besides those were made?

A. The Harlem; that was paid to the registered holders of the bonds.

Q. In different sums?

A. Yes, sir.

Q. Don't you know the principal men to whom the payments were made?

8856 A. I think there were from twenty to twenty-five holders of those bonds? The book of the registered bonds would show that.

Q. Against that fund $3,647,940, to meet what payments?

A. The notes of the Knickerbocker Gas-light Company, and the bonds of the Harlem Company.

Q. It was to meet those payments and other payments like that that this item of three millions and odds was issued to James W. Smith, treasurer?

A. Yes, sir; a portion of it.

Q. All of those payments were covered by that stock?

A. No, sir; the payments were not covered by it.

Q. Well, some of them were?

A. No, sir; the payment was made by drawing a check on the bank where he had the money.

Q. Was that stock which was issued to you reserved in part or for all those payments?

A. It was reserved to meet them.

Q. Do you mean you held stock to meet payments, and that payments were made as contemplated, and that you kept no account of those payments as against that stock; is that what you mean the committee to understand?

A. I don't want them to understand any thing.

(By the CHAIRMAN:)

Q. Is the way General Tremain puts it the truth of the matter?

Q. If you don't understand the question I will repeat it; is it true that you have got no account of those payments of the bonds of the Harlem, and the notes of the Knickerbocker, in connection with an account of this block of three millions of stock which was issued to you as treasurer?

A. It is.

Q. You testify that there is no book or paper that will show the number of payments that have been made on account of that issue of that three million block of stock?

8857 A. These papers that I have here I think show it—the balance sheets; there is no book—there is no occasion for a book.

(By Senator ROBINSON:)

Q. Is there any book or paper that will show it?

A. I believe I answered the question that the check-book will show it.

Q. Is there any other paper that will show it?

A. No, sir, not that I know of.

Q. Are there any books of the Knickerbocker Company that will show that indebtedness?

A. I think not; nor the Harlem either.

Q. Is it true the check-book will not show to what particular account these payments are to be charged?

A. I testified that the check-book will show that.

Q. Will the check-book show that they are charged against this block of stock?

A. No, sir.

Q. Is there any thing in the Consolidated office, of books or papers, that will show?

A. No, sir.

Q. Is there any thing that will show that, any paper of this block of stock in the Consolidated Company?

A. No, sir.

Q. Has this indebtedness been paid out of the general earnings of the company?

A. Partially so; the general receipts of the company.

Q. Was the dividend of June paid out of the general earnings of the company at that time?

A. Yes. sir.

Q. Where will that account be found?

A. In the balance sheets.

Q. Will you now produce before this committee those original schedules of the shareholders, that were submitted by the constituent companies and were made the basis of the issue of the consolidated stock, and also the stock ledger showing what stock was issued, and the stock transfer books, showing what stock was transferred?

8858 A. I would respectfully ask the committee the privilege to consult with counsel, and I make a very respectful request to that effect.

(By Senator MURPHY:)

Q. How long a time would you require to consult with counsel?

A. I think I could see him to-morrow morning.

Mr. **Tremain**: My suggestion is, that the answer of Mr. Smith now puts the committee in the position of having issued a subpœna *duces tecum*, and not having it responded to. He asks now that the books be not brought here until he has consulted with counsel.

The **Witness**: Allow me to say that these books should not be brought here; they are very large and bulky, and I think the committee will deem that it will be better to have them examined at the office; if the counsel will show to the satisfaction of the committee that those books enter into the scope of this inquiry in any way whatever, I think there will be no difficulty about it.

The **Chairman**: The Court of Appeals has decided that the witness is not entitled to be represented by counsel; that is the settled law now of this State.

The **Witness**: At the same time I do not suppose this committee is going to ask for books which are not of any possible use or benefit to them for the purpose of this investigation; the same question came up last year, and Mr. Thomas decided it made no difference as to whom the stock was issued to.

The **Chairman**: The subpœna did not cover these books?

Mr. **Tremain**: No, sir.

The **Chairman**: Therefore he is not in contempt; you ask to have them produced, do you?

Mr. **Tremain**: Yes, sir; at the same time it would be satis-
8859 factory if the expert was permitted to examine them at the
company's office instead of bringing them to this room; with a view to avoid the necessity of finally bringing the books into this room, will you assent to their examination by the expert under the direction of the committee at the company's office, for the convenience of the company?

The **Witness**: And also the committee.

Mr. **Tremain**: And the committee; what do you say to that?

The **Witness**: If counsel will advise it I shall be very glad to have you do it at the office; I am not a lawyer, and I think I ought to have, at least, an opportunity to consult counsel.

Mr. **Tremain**: I think his request is not unreasonable.

The **Chairman**: It is understood that the witness will produce the books; there is no dispute as to what these books are which are called for?

The **Witness**: No, sir; if it is decided by counsel that we shall produce them, we will make no opposition.

Q. What are the dates of those payments of the Knickerbocker and Harlem indebtedness to which you have just alluded?

A. They show approximately on the balance sheets; the Knickerbocker notes I think are in March, or about that time, and the Harlem indebtedness matured on November 1st; and it is paid; with the exception of $3,000 of the Harlem, they were all paid within fifteen days of the first day of the present month.

Q. When was the Knickerbocker paid?

A. March or April; I think it was in March, or a good portion of it.

Q. Have you the rough memoranda minutes that were made by the secretary of the board?

A. No, sir.

8860 Mr. TREMAIN: I suggest that the examination of Mr. Smith be suspended now until he shall respond to this subpœna *duces tecum,* and that he be deemed a witness on the stand and not yet dismissed, because we shall wish to ask him some questions after the expert shall have made some further investigation.

The CHAIRMAN: We will merely suspend his examination until to-morrow morning.

Q. The Metropolitan schedule does not seem to be the original upon which Mr. Rowland made his certificate; do you know where the original is?

A. No, sir.

Q. Is that the original book which the Metropolitan Company submitted?

A. Yes, sir.

Q. Where is there any authentication that it is the Metropolitan book?

A. There is no authentication.

Q. Where is Mr. Rowland's certificate?

A. I don't think I ever saw it; I don't think it was ever submitted to the company; I have never seen it.

Q. That is the identical book upon which the basis was had?

A. Yes, sir.

H. E. GAWTRY, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are secretary of the Consolidated Company?

A. Yes, sir.

Q. You was in the Municipal Company before that?

A. Yes, sir; I was vice-president.

Q. And for how long?

A. I don't remember whether it was two or three years.

Q. You are actively engaged as one of its officers?

A. Yes, sir.

Q. You are in the office all the time?

A. Pretty much; yes, sir.

8861 Q. You have acted as secretary of the executive committee, for all the committees of the Consolidated?

A. Most of them I think.

Q. For what committee have you not?

A. I don't know as there is any committee I have not acted as secretary for.

Q. Did you keep a memorandum of the minutes of the board before you wrote them in the book?

A. They were all taken in memoranda at the time and as soon as they were copied in the book they were destroyed.

Q. They were destroyed from week to week?

A. Yes, sir; as fast as they were copied in and the papers have been destroyed from month to month.

Q. Were they destroyed before the minutes of the board meeting were read over?

A. No, sir; they were not entered until they were read over and approved.

Q. Did you keep any memorandum book of what was done at the board meetings?

A. Nothing beyond that.

Q. What other books are there containing the records of any committees or any officers, or any records of any character whatever of the operations of the Consolidated Company?

A. There are none but these three books, the minutes of the board of trustees, the executive committee, and the finance committee.

Q. The contract with the Farmers' Loan and Trust Company in respect to registering its stock; is there such a contract?

A. I never heard of it.

Q. When did you first have the stock registered at the Farmers' Loan and Trust Company?

A. I don't remember the date.

Q. Was it before the stock was listed?

A. I don't know.

The committee adjourned to Tuesday, November 24, 1885.

8862 NEW YORK CITY, FIFTH AVENUE HOTEL,
November 24, 1885.

Second Day.

The committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

THOMAS F. ROWLAND, being recalled, testifies as follows:

Examined by Mr. TREMAIN:

Q. You have brought with you the contracts referred to in the testimony of yesterday?

A. Yes, sir.

Q. Referring to those contracts, please state the figures representing the total amounts paid you for the works specified yesterday, which you constructed, beginning with the work which you did in 1871?

A. I have no contract; I have what appears to be a copy of a contract made at that time; the original, I presume, is with the other parties; this contract was made with Henry J. Davison.

(By the CHAIRMAN:)

Q. With Davison as the representative of some company?

A. Davison personally.

Q. Under a contract in November, 1871, with Henry J. Davison you constructed certain works in the Union Gas-light Company's works at what place?

A. I agreed to construct at Ninety-eighth street, between First and Second avenues.

Q. As the result of that contract you entered upon the work?

A. Yes, sir.

8863 Q. And received in total for that work how much?

A. That I have not got here.

Q. This contract is for $1,250,000—was it completed on your part?

A. No, sir; about half completed.

Q. And about half the contract price received?

A. Yes, sir.

Q. Take the next one, if you please?

A. In the order of the dates?

Q. Yes; that is the most convenient; this represents the work done on the Knickerbocker Company, then under the name of the Union Gas-light Company; witness produces a contract made between himself and the Municipal Oxygen Gas-light Company of New York, dated June 13, 1876; this is a contract under which work was done.

A. Yes, sir, between Forty-fifth and Forty-sixth streets, and being the works now used by the Municipal Company.

Q. Under this contract there was paid you how much?

A. One hundred and sixty thousand dollars.

Q. The sum specified in the contract was paid you?

A. Yes, sir; whatever it was specified in the contract they paid me.

Q. Now take the next one; the stenographer will note that this contract provides that Mr. Rowland shall furnish ready for service upon the property of the Municipal Oxygen Gas-light Company, located on the North river, between Forty-fifth and Forty-sixth streets, buildings, tanks, gas-holders and gas-making plant, of such form and dimensions as to be capable of the daily production of half a million cubic feet of gas manufactured by the Tessi-du-Motay process, according to an accompanying schedule, and for the
8864 payment in consideration of $165,000, which the witness says was paid; now the next one, referring to the previous paper, the contract first produced, and dated November 29, 1871, how much, if any, of the payment of about $750,000 was in stock of this Union Gas-light Company?

A. All they paid under that contract was paid in stock.

Q. When you speak of $750,000 you mean stock at its par value?

A. Yes, sir.

Q. Take the next one; the witness next produces a contract dated April 26, 1877, between himself and Charles G. Francklyn, acting for the Municipal Gas-light Company; whereby the witness agrees to construct upon the property of that company, located on the North river, between Forty-fourth and Forty-fifth streets, four gas-holder tanks and a gas-holder of 375,000 cubic feet working capacity.

A. Four tanks and one gas-holder.

Q. According to details described in the contract?

A. Yes, sir.

Q. And for which payments were to be made in all amounting to $155,000?

A. I think that was the sum stated in that paper I received.

Q. And also the sum of $37,000 for an additional gas-holder?

A. Yes, sir.

Q. Did you also build the additional, calling for the payment of $110,000?

A. In case of building three additional gas-holder tanks, I did not at that time do it; but I did it subsequently.

(By the CHAIRMAN:)

Q. Under this contract?

A. Under another contract; under this contract I received only $155,000 and the $37,000.

Q. Making $192,000 under those contracts?

A. Yes, sir.

Q. The next one in chronological order is what?

A. Dated May 28, 1877.

Q. The witness produces a contract dated May 28, 1877,
8865 between himself and Charles G. Francklyn, acting for the
Municipal Gas-light Company, under which he did work on
the same properties.

A. On the same properties as last mentioned, where the four tanks were put in.

Q. You did not increase its capacity by this?

A. That is building simply the gas works; the other is building simply the storage tanks.

Q. This contract calls for the building of gas works, under which payments were provided for to an extent in all of how much?

A. Three hundred and eighty-two thousand dollars.

Q. Is that the total?

A. I think that is the total that was paid—$382,000.

Q. These payments were made in money and not in stock?

A. There was $40,000 paid in bonds of the Municipal Company, and all other payments were made in money; I think the bonds applied to both contracts.

Q. All the rest was in cash?

A. Yes, sir.

Q. Go on and produce the rest of the papers relating to the Municipal Company. The witness next produces——

A. That contract provides for two of those gas-holders.

Q. Dated April 19, 1878, covering one of the gas-holders already shown?

A. That provides for two; it states for two gas-holders.

Q. And for a payment of $216,000 in all?

A. Yes, sir; I did all that work and received that payment.

Q. Was that payment in stock, bonds or money?

A. I received $40,000 in bonds, and all other payments which I have ever received have been in cash.

Q. The next one was an agreement, dated February 20, 1880, be-

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tween himself and the Municipal Gas-light Company of
8866 New York, providing for the construction of a gas-holder of
two million cubic feet capacity, and for the payment under it
of $186,500; you did that work and received that money?

A. Yes, sir.

Q. The witness produces a contract, dated April 24, 1880, between himself and the Municipal Gas-light Company, providing for the construction of a gas-holder similar to the holder now in Forty-fourth street, and for the payment of $39,000?

A. Yes, sir, I did that work and received that money; those are all the written contracts I had with the Municipal Company.

Q. Did you do other work for the Municipal Company which was alluded to yesterday which was not covered by the contract?

A. Yes, sir.

Q. Can you state the amount paid you for that other work?

A. No, sir; not definitely.

Q. Well, approximately?

A. Twenty thousand dollars; I built a boiler-house for a set of boilers and did other work.

Q. What else?

A. Three-thousand five hundred dollars for a water tank.

Q. What else?

A. Repairs from year to year which, I think will average about $1,000 a month, or $12,000 a year, since 1877, up to November, 1884.

Q. Have you covered by your testimony all the work substantially which you did on the Municipal works?

A. All I think of now.

Q. Do you know of any work being done?

A. Yes, sir; $18,000 more; I put in a railway track and elevators for lifting coal.

Q. Does that cover all the work which you did and all the payments you received?

A. I think so; I don't remember others at present at that works.

Q. From your knowledge of these works, please state
8867 whether any other substantial works of construction or of re-
pairs has been done on the Municipal works by anybody else
except by you between 1877 and 1884?

A. Yes, sir; there has been substantial work done.

Q. Tell that which has been done which you did not do?

A. About $10,000 was paid to Smith & Sayres Manufacturing Company for putting in new blowers; I took out two condensers because they were too small and I put in two new ones for about $24,000, and those old condensers I took in part payment.

(By the CHAIRMAN:)

Q. For how much.

A. I believe I allowed $1,000 for the two condensers; they cost about $10,000 when they were built.

Q. Do you mean $1,000 each?

A. Yes, sir; the water got plugged in them and they were not large enough.

Q. Do you know of any other?

A. The retorts have been renewed, I believe, entirely, once.

Q. At about what cost?

A. About $400 a bench; and there are thirty of those benches, I think, a cost of at least $400 each, amounting to about $12,000.

By the CHAIRMAN:

Q. The old retorts, what did you do with those?

A. Threw them in the yard; they were not of any value.

Q. How long had those retorts been in at that time?

A. I think they had been run about thirty months.

By Mr. TREMAIN:

Q. That makes about $14,000 or $15,000 for that work?

A. I should say so.

Q. Do you know of any other work?

A. No, sir; I only know of work continuously going on.

8868 Q. So far as the construction of the gas plant is concerned your familiarity with those works would enable you to say whether there has been any other substantial gas plant except what you have described in your testimony?

A. I would not say that there has not been; I don't remember of any other; I don't remember now of any other expenditure; they had a French condenser put in by Morrison & Tacker of Philadelphia; I think they were the parties; it cost them about $5,000; they paid $3,300 for the condensers; putting it in and making the connections cost about $5,000.

Q. What year was that?

A. I should think it was 1880.

Q. You have been, by reason of making repairs, pretty familiar with those works?

A. Not personally; I have not been in the habit of going there; my assistants go there.

Q. Do you remember any other substantial piece of construction at those works?

A. No, sir; I can't say that I do.

(By the CHAIRMAN:)

Q. In your judgment what you have stated covers substantially the whole?

A. Yes, sir; that is as near as I can recollect.

Q. That covers the Municipal?

A. Yes, sir.

Q. Now let us take the next one?

A. I have given you the foundation of the Knickerbocker; I believe, sir, that paper sets forth the first operation after that as far as I am concerned.

Q. The witness produces *at* the next contract after the first one produced, a contract dated April 1, 1880, between himself and the Knickerbocker Gas-light Company of New York; this contract provides for the construction of buildings, tanks, gas-producing apparatus, pumps, connections, miscellaneous construction as described

8869 in the contract, and for a brick tank for the reception of a gas-holder removed from Forty-fifth street, all to be constructed on the property located between East Ninety-seventh and Ninety-eighth streets on Second avenue, and for the payment in consideration $415,000 in all?

A. Yes, sir.

Q. Was that work done and the payments made for that amount?

A. Yes, sir.

Q. That is what you referred to yesterday?

A. Yes, sir.

Q. That is on the same property covered by that contract between the Union Gas-light Company and yourself?

A. Yes, sir; I wish to have the statement made yesterday corrected.

Q. The witness desires to correct his testimony of yesterday according to these figures as stated here in the contract?

The CHAIRMAN: You only got it $1,000 out of the way; I think you did pretty well.

Q. When was that work completed under this contract now produced?

A. I couldn't tell without getting the date; it was completed in December of 1880, I think.

Q. Has any other work been done there since?

A. Yes, sir.

Q. Was that money paid?

A. Yes, sir.

Q. In cash?

A. Yes, sir.

Q. Who made that payment?

A. It was made at the Municipal office.

Q. From time to time?

A. Yes, sir; I can't say who by; I was not in the habit of collecting the money.

Q. Current amounts under that contract I suppose were received?

A. Yes, sir.

Q. What other work was done at that place?

8870 (The witness produces a contract dated February 7, 1884, between himself and the Municipal Gas-light Company; this contract provides for the construction of two gas-holder tanks upon the same property.)

A. That is for re-construction; they were old tanks.

Q. Re-construction of two gas-holder tanks, what else?

A. And two gas-holders; that's all.

Q. And for payment in consideration thereof of the total sum of what amount?

A. One hundred and sixty thousand dollars and the displaced material.

Q. That $160,000 was paid to you?

A. Yes, sir; in money.

Q. By which company?

A. At the office of the Municipal Company; presumably by that company.

Q. The old material you refer to in part payment it was worth what?

A. About $10,000; it was two gas-holders of two-thirds the capacity of these new ones.

Q. The new ones cost how much?

A. The new ones and the tanks cost $160,000.

By the CHAIRMAN:

Q. The old ones were worth about $10,000?

A. Yes, sir; those tanks had been in about nine years; the reason why they were not worth any more was they were entirely eaten up; at the time they were built, and the original company failed, nobody gave them any care; the water was leaking out of the tanks, and the air circulated through the tanks, and when a gas-holder is subject to the action of dampness and air I have known them to be eaten badly inside of a year.

Q. Their value then was for old iron only?

A. Yes, sir.

Q. As a fact, such tanks do wear out?

A. I have never seen one wear out.

8871 Q. As a matter of fact such tanks do become unfit for use?

A. It would seem so, but that is not my experience.

Q. You have not any doubt but they become unfit for use?

A. They do by being left open; but not if properly treated.

Q. As a matter of fact they do become unfit for use?

A. No, sir; there is not one in one thousand that is thrown out unfit for use if properly treated.

Q. For one reason or another they are superseded?

A. Yes, sir.

Q. And when so thrown out have no value except for old iron?

A. Yes, sir; they have value.

Q. For what?

A. To be removed to other places for use.

Q. Still their value would be very greatly diminished?

A. Yes, sir.

By Mr. TREMAIN:

Q. If you were valuing such property as that on those works, for instance to-day, in order to estimate them, would you require them to be appraised as to whether you would value them for use at that place, or to be put up for some other gas works; that would be an element of your estimation of the value?

A. Yes, sir; I should estimate them for use at the place where I found them unless otherwise ordered.

Q. If for some other place it would be a different standard of value?

A. Yes, sir.

Q. So that when you value property you mean for use at that place?

A. Yes, sir.

Q. What other work have you done—take one of the other works?

A. This is the Harlem.

Q. Witness now produces a contract dated March 12, 1884, between himself and the Harlem Gas-Light Company, the only contract with the Company? 8872

A. That is the only one we seem to have; we did have another contract.

Q. Having refreshed your recollection, are you able to say you did yesterday describe substantially all the work you did?

A. Yes, sir.

Q. This contract provides for the construction upon the property at One Hundred and Eleventh street and First avenue, of a gas plant capable of producing 3,000,000 cubic feet of gas per day?

A. That is not true, sir.

Q. Then correct me; this contract provides for the construction at One Hundred and Eleventh street and First avenue of what?

A. Of gas-making machinery, which, in so far as it goes, is to be capable of handling 3,000,000 cubic feet per day of gas, said gas having been produced by other machinery; that contract was written when I was abroad.

Q. Does that cover all this contract?

A. Yes, sir.

Q. And for payment in consideration thereof of $188,795?

A. Yes, sir.

Q. All the work was done and the money received?

A. Yes, sir.

Q. And subsequently there was received——

A. Previously.

Q. For work done on that same property on another contract?

A. Yes, sir; amounting to about $36,000.

Q. When was that done?

A. Eighteen hunndred and seventy.

Q. Did you do any other work between 1870 and 1884 on those works?

A Yes, sir.

Q. The work which was done in 1870, has it not been described in some of these other contracts?

A. No, sir.

Q. With whom was that work contracted for?

A. With the Harlem Company.

8873 Q. Was any other work done by you on the Harlem property?

A. No, sir; except the gas-holder and the condenser which cost $8,000; that is all the work I have done there.

Q. That makes about $233,000?

A. Yes, sir.

Q. Now do you know of any other work of construction that has been made or performed for the Harlem property?

A. I know that other work has been done there.

Q. A gas-holder was built by Starr & Co., of Camden, N. J., in 1870, in the tank located alongside of one I put my gas-holder in; each one of us had a contract of about the same amount of money.

Q. Do you know of any other work?

A. No, sir.

Q. So far as your knowledge extends, your testimony has now described the work of construction at this property?

A. Yes, sir; so far as I know.

Q. Has that covered the buildings—your testimony?

A. It covers the buildings which I put up—two buildings I put up.

Q. Who made that contract?

A. I did.

Q. Are there any other buildings put up by anybody else?

A. Yes, sir.

Q. What are they?

A. Retorts, purifying-houses, and, I think, a condenser-house and a boiler-house, and coal sheds.

Q. Do you know when they were built?

A. No, sir.

Q. You found them there in 1884?

A. Yes, sir; this gas-holder, which I put up, was not on that property; it was on the next block; I did not have occasion to go into the Harlem works.

Q. Does that cover all?

A. I told you I received a letter from Mr. Streiker.

Q. Who brought the letter?

8874 A. The engineer; and that is the letter he handed me, taking an exception to my estimate of the value of the property.

(By the CHAIRMAN:)

Q. Within the last fifteen years have great improvements been made in the apparatus used in the methods employed in manufacturing gas?

A. That, sir, is a very mooted question; engineers do not agree upon that subject; my judgment is that there has been.

Q. In consequence of such improvements have prior kinds of apparatus been superseded by more recent, and supposed to be better apparatus, to a considerable extent?

A. No, sir; I don't know that they have been superseded; as cities have grown, and greater requirements have been made for gas, the works have ben enlarged, and in these enlargements some new and perhaps novel ways in the way of making gas have been employed; but the old ones have not been thrown out of use; that is my experience.

Q. Is it not a fact that there is among gas producing interests a strong prejudice in favor of the old methods?

A. As a class, yes, sir; there are some exceptions to that; I am simply a maker of gas machinery.

(By Senator MURPHY:)

Q. Which is the most healthful, gas made by water, naphtha or by coal?

A. Neither one is healthful.

(By the SAME:)

Q. Which is the most healthful of the two, or the least injurious?

A. I think, sir, that gas made from the decomposition of water is a more deadly poison than that made from coal; both being poisonous.

Q. Witness produces a letter and says that this is a letter he received at the hands of Mr. Streiker?

A. It was left at my office in my absence.

Q. You suppose he represented Mr. Zollikoffer?

8875 A. Yes, sir; I have written a letter since to Mr. Zollikoffer in response to this.

Q. Have you a copy of it?

A. Yes, sir.

Q. We will mark it Exhibit "G, November 24;" I will read the r-ply, and Mr. Rowland will please make a copy of that letter for the committee?

A. I will; here is an answer from Mr. Zollikoffer.

Q. Please make a copy of that also and send them to the Chairman to-morrow; I observe that your estimate stated in the letter of October 6, 1884, to Mr. Zollikoffer, names the figures $1,798,269?

A. Yes, sir.

Q. As the total of your appraisement?

A. Yes, sir, that was the total.

Q. Will you state what that covers in the Metropolitan Company?

A. I could not do that; I can give you the details of it.

Q. What does it cover—the meters?

A. No, sir.

Q. Nor mains, nor services, nor real estate lots?

A. No, sir.

Q. Does it cover the office building?

A. Yes, sir, the office at the works, I mean.

Q. Does it cover all the property between Forty-first and Forty-second streets between Tenth and Eleventh avenues?

A. Yes, sir.

Q. Does it cover all the property between the Eleventh avenue and Hudson river between Forty-first and Forty-second streets?

A. Yes, sir.

Q. Does it cover all the property between Sixty-fifth and Sixty-sixth streets, Tenth and Eleventh avenues?

A. Yes, sir; all the apparatus.

Q. Does it cover all the property between Sixtieth and Sixty-first streets Avenue A. East river?

A. Yes, sir.

Q. And all the property between Sixty-second and Sixty-third streets, in Avenue A?

A. No, sir.

Q. Does it cover any of it?

A. Block No. 4.

8876 Q. Is that your copy?

A. Yes, sir.

Q. Please turn to Avenue A, and First avenue, Sixty-second and Sixty-third streets?

A. Yes, sir.

Q. Total appraisement of that is how much?

— hundred and three dollars.

Q. It is not $164,525?

A. No, sir.

Q. Take another, Avenue A and First avenue, Sixtieth and Sixty-first streets?

A. We have no such property in our valuation.

Q. Tenth and Eleventh avenues, Forty-first and Forty-second streets?

A. One million one hundred and eighty-three thousand seven hundred and sixty-one dollars.

Q. Is it not $1,269,920?

A. No, sir.

Q. Tenth and Eleventh avenues, Forty-first and Forty-second streets, $8,250, is that right?

A. Twelve thousand two hundred and fifty dollars.

Q. It is not $8,250?

A. No, sir; that is somebody else's valuation.

Q. Now take Tenth and Eleventh avenues, Sixty-fifth and Sixty-sixth streets?

A. Four hundred and forty-three thousand four hundred and seventy-five dollars.

Q. Is it not $387,448?

A. No, sir.

Q. Those valuations did not include the lots?

A. No, sir.

Q. But did include the buildings?

A. Yes, sir.

Q. Show me the recapitulation of the Metropolitan in this book of yours; I see you have street mains there—did you value those?

A. No, sir.

Q. How did it happen you put them on your book?

A. I don't know whether my boy put them in there or not.

Q. Was this a copy made after the consolidation?

A. No, sir; it was made in September.

8877 Q. I observe that the copy of the street mains in this book at page 83, foots up the same as mentioned in Exhibit "C 2;" you can't explain that?

A. No, sir.

Q. Your recapitulation of the property you did value is as follows?

A. On the property of the Metropolitan that I valued, yes, sir.

Q. Your recapitulation of the property of the Metropolitan is as follows: "Block No. 1, $1,183,761; block No. 2, $12,230; block No. 3, $443,475; block No. 4, $158,803; total, $1,798,269." This is from page 83 of the book containing the copy of the valuation made by Mr. Rowland?

James W. Smith, being recalled, testifies as follows:

Examined by Mr. **Tremain**:

Q. The expert of the committee is ready now to enter upon the examination of the books called for yesterday—is it convenient for the company that they be examined at the company's office, or will they be produced here?

A. It would be much more convenient to have them examined at the company's office.

Q. The expert is ready to go to work immediately; then the books are deemed to be before the committee for that purpose now?

A. Yes, sir; for that purpose.

Q. Have any loans been made by the Consolidated Gas Company since November, 1884—any money been borrowed?

A. Yes, sir.

Q. How many such loans have there been.

A. I think three.

Q. When was the first?

A. I could not tell without reference to the books; I think I could tell if you would show me those papers.

Q. Who are they made of?

A. Borrowed of the City Bank.

8878 Q. Do you remember the amounts?

A. The first was, I think, $400,000.

Q. The second?

A. Two hundred thousand dollars.

Q. The third?

A. Three hundred thousand dollars.

Q. Notes of the company given in each instance?

A. Yes, sir.

Q. Are there any other notes of the company out?

A. No, sir.

Q. Are those demand notes?

A. They were; they are not out now; not all of them.

Q. They are call loans?

A. They were.

Q. Any of those notes outstanding now?

A. Yes, sir; the last loan of $300,000.

Q. Those loans were made without security?

A. The notes of the company made on the credit of the company without any other security.

Q. What committee acted authorizing those loans, if any?

A. The finance committee, or the majority of the members.

Q. The finance committee was composed of Messrs. Pyne, Day, Huggins and Gawtry?

A. Yes, sir.

Q. With the president *ex-officio*!

A. Yes, sir.

Q. And secretary?

A. The secretary is one of the number.

Q. Give us those dates, if you can, Mr. Smith; can you tell about what period those large loans were made; from your recollection about when were they made?

A. I think I can; I think the first one was in January or February, for the sum of $400,000.

Q. And the next one was $150,000, at about what time?

A. Two hundred thousand dollars.

Q. At about what time?

A. June or July.

Q. And the last one was for $300,000?

A. Yes, sir; in September.

8879 Q. When was the first loan paid off—about when?

A. My impression is it was paid in the same month in which it was borrowed—within thirty days of the time.

Q. Do the books show?

A. Yes, sir.

Q. And show what interest was paid?

A. Yes, sir.

Q. Was it two per cent.?

A. I think it was.

Q. When was the next loan paid off?

A. I think it was paid off in one or two sums, and within sixty days of its negotiation.

Q. When was the last loan paid off?

A. That has not been paid yet.

Q. Were the proceeds of one loan used in part to pay off the next?

A. No, sir.

Q. The dividend was declared in the meeting in May?

A. Yes, sir.

Q. Why was it necessary to authorize money to be borrowed at or about that same time, as the minutes imply?

A. I don't understand that there was any money borrowed at or about that time; it might have been; if it was, it was for the general uses of the company.

(By the CHAIRMAN:)

Q. Was not the second loan made at or about the same time that the first dividend was paid?

A. It might have been, sir; not at the period he spoke to me about; it might have been about the time the dividend was paid or being paid, but not at the time the counsel made it.

Q. I call your attention to the resolution of the board passed January 28, 1885, by which the finance committee was authorized to borrow money from time to time as might be required to pay the balance due to the constituent companies and their maturing obligations assumed by the consolidation—what, if any thing, was done pursuant to that resolution? 8880

A. The loans that I have just stated.

Q. That is all; were those all the transactions that were had pursuant to that resolution?

A. That is all I recollect, sir.

Q. Who conducted the business relating to those transactions, yourself?

A. Yes, sir.

Q. Did you make the negotiations?

A. Yes, sir.

Q. With whom?

A. The officers of the bank?

Q. With Mr. Pyne?

A. At three different times; once or twice with Mr. Pyne, and once or twice with Mr. Palmer.

Q. Was not the original arrangement made with Pyne?

A. I don't think so; I think he was absent from the city at the time of the negotiations of those loans.

(By the CHAIRMAN:)

Q. You mean to say that you think not all of the loans were negotiated with Pyne?

A. I know they were not, but I could not tell which; I don't recollect; there were three loans; two were made with one party, and one with another, and which the two were made with I don't recollect.

Q. Was not the first loan made with Pyne?

A. I don't recollect.

Q. The minutes of the finance committee at a meeting February 3rd, where you made a report, and immediately afterward the chairman of the committee is recorded as stating that Mr. Pyne would loan the amount required on call at two per cent. per annum—does that refresh your memory so as to say that the original loan was made with Mr. Pyne?

A. No, sir; the negotiation was made with the City Bank, with one of the officers.

Q. Mr. Pyne is an officer of that bank?

A. Yes, sir.

8881 (By the CHAIRMAN:)

Q. Is Mr. Palmer also an officer of that bank?

A. Yes, sir, he was the cashier, and I think he is yet.

Q. Both officers of what bank?

A. The National City Bank.

Q. I call your attention to a resolution directing the officers of the company to take the necessary steps to have the stock of the company listed at the Stock Exchange; did any of the constituent companies, to your knowledge, have their stock listed before that at the Stock Exchange?

A. Not that I know of.

Q. Don't you know none of them were ever listed before?

A. I think not.

Q. They were not listed on the Stock Exchange?

A. I think not; I think they required them to be registered before listing.

Q. At a meeting of February 25th a resolution is found approving the recommendation of the executive committee to close the works of the Harlem station at One Hundred and Eleventh street, and directing them to be closed—was that done?

A. To the extent of the recommendation, yes, sir, so far as the manufacture of gas was concerned.

Q. No gas was produced?

A. It was gradually closed so far as the manufacture of gas was concerned.

Q. Is there any gas in the holders there?

A. Yes, sir.

Q. That is made where?

A. At the Ninety-ninth street station—the old Knickerbocker works?

(By the CHAIRMAN:)

Q. So that now no gas is manufactured at the Harlem works?

A. Not at the One Hundred and Eleventh street station; we adopted the plan of naming them stations.

8882 Q. The One Hundred and Eleventh street station is what was formerly known as the Harlem works?

A. Yes, sir.

Q. As matter of fact, how many gas-holders are in use and contain gas there?

A. All of them, sir, I think.

PAGE 53—MINUTES BOARD OF DIRECTORS.

The following preamble and resolution were presented:

"WHEREAS, The articles of agreement between the consolidating companies, dated September 29, 1884, under which this company was organized, provided that 13,030 shares of the capital stock of this company should be retained to the use of this company, and be disposed of for the purchase of supplies as a working capital; and

"WHEREAS, Money is required to cover the cost of supplies, and for the general purposes of the company.

"*Resolved*, That the shares remaining unsold, of the number so retained to the use of the company, viz.: 12,899.40 shares, be issued to the treasurer, to be disposed of, or pledged for loans, under instructions of the finance committee, and that the money received therefor be applied to the purpose of the company under the direction of the same committee."

Also the following:

"WHEREAS, This company has retained, pursuant to such agreement of consolidation, 23,580 shares of stock, in lieu of, and as satisfaction of certain liens and indebtedness of the consolidating companies, unpaid by them,

"*Resolved*, That all such shares not hereinbefore issued, viz.: 23,580 shares be issued to the treasurer, to be by him disposed 8883 of or pledged, under the direction of the finance committee, to provide means to pay such outstanding indebtedness or obligations as have already been purchased, or may be from time to time purchased, or paid for or off by this company, as contemplated by such agreement.

"Carried unanimously."

Q. The property has not been sold, has it?

A. No, sir.

Q. Nor rented?

A. No, sir.

Q. On page 53 of the minute-book I find a resolution reciting that money is required to cover the cost of supplies, and for general purposes of the company, and directing that the shares not heretofore issued, 23,580, be issued to the treasurer, to be by him disposed of, or pledged, under the direction of the finance committee; prior to that time had any shares been issued to the treasurer? That resolution is dated April 22, 1885.

A. There had not.

Q. In a resolution adopted at the same date there is this pharse: "*Resolved*, that the shares remaining unsold of the number retained for the use of the company, 12,890, 40-100 be issued to the treasurer to be disposed of, or pledged." Were they ever issued?

A. Yes, sir.

Q. In one certificate?

A. No, sir.

Q. How many certificates?

A. From three to six, I think.

Q. Where are those certificates?

A. In the possession of the company.

Q. In your possession?

A. Yes, sir, as treasurer.

Q. Will you produce them?

A. I should be very glad under this demand, for the protection of those shares, as they represent some $3,600,000, if the committee would relieve me from bringing those shares here.

8884 Q. Will you produce them to the expert at the company's office—that is what I mean?

A. Yes, sir, with pleasure.

(By the CHAIRMAN:)

Q. It seems that on the 22d of April certain stocks had been retained by the company for its own use; is that correct?

A. Yes, sir.

Q. How many shares at that time had been so retained?

A. The resolution recites it correctly.

Mr. TREMAIN: I will have this resolution copied.

The CHAIRMAN: He says the minutes will show; we will take a copy of the minutes.

Q. By the terms of this resolution it appears that some of the stock had, previous to that date, been issued—do you wish to make any correction of your testimony?

A. No, sir; I will explain that; that was taken by the constituent companies, the small amount there, the discrepancy, if so, I presume to make a more even division of the percentage of the shares in the new from the old; I think this is about $13,000.

Q. Was that done under a committee adjustment, the settlements of these accounts by which these amounts are arrived at?

A. By representatives of each of the companies.

Q. Who were an adjusting committee who acted for that purpose?
A. Yes, sir.
Q. It commenced to act when—in the fall of 1884?
A. I think at once upon the consolidation.
Q. When did they cease to act—they are acting still?
A. No, sir; they have not taken any action in several months.
Q. Their work is not all completed?
A. Substantially I think it is.
Q. Who comprised that committee?

8885 A. Thomas K. Lees, representing the New York company; James W. Smith, representing the Manhattan Company; Oscar Zollikoffer, representing the Metropolitan Company, I think Charles G. Francklyn, representing the Municipal Company; H. E. Gawtry, representing the Knickerbocker Company; John H. Morse, representing the Harlem company.

Q. That committee met always in Irving Place?
A. Yes, sir; at the office of the company.
Q. The board meetings have been held at 52 Wall street?
A. Latterly.
Q. Always?
A. I think not; I think the meeting when we organized was not.
Q. Since, you always meet at 52 Wall street?
A. I think we had one or two meetings of the board there; for the last few months we have met at 52 Wall street.
Q. At whose office?
A. In the directors' room of the City Bank, with one exception, and then we met in the directors' room of the New York Life and Trust Company.
Q. At what other place than 52 Wall street did you meet?
A. No other place.
Q. This committee on adjustment, were you present at any of its meetings?
A. Yes, sir.
Q. As treasurer you have to be present?
A. As one of the committee.
Q. Who acts as secretary of the committee?
A. Mr. Gawtry.
Q. They keep minutes of their doings?
A. Yes, sir.
Q. An especial account is kept by you as treasurer of the company in liquidation of each of the constituent companies?
A. Yes, sir.
Q. You collected the assets that went to the credit to each of the constituent companies on the various accounts from time to time?
A. Some of them; yes, sir.

8886 Q. And utilized those assets with the general fund of the Consolidated Company?

A. Put to the credit of the constituent companies.
Q. Of the constituent companies, and issued stock based upon it?
A. No, sir.
Q. Did you arrive at the different amounts of each of the constituent companies?

A. Yes, sir.

Q. And they varied from time to time?

A. Yes, sir; but they were credited with the amount of the final adjustment; they were credited at once; the liabilities and assets of the old companies were assumed by the Consolidated Company according to the articles of consolidation.

Q. When was the first account adjusted between the Consolidated Company and any of the constituent companies; when was the first account of any company adjusted, if it has ever been adjusted?

A. I think in January.

Q. What company?

A. Of all of them; they were gradually brought up in different items, so that a final adjustment was made of all the companies.

Q. With all of the companies?

A. I think so.

Q. For what purpose has this adjusting committee since met?

A. I don't think they have met since that time.

Q. What papers will show that action of that committee?

A. I presume the minutes of that committee.

Q. Are all of those accounts closed out?

A. In that way, each of them.

Q. All of the accounts which were the subject-matter of that committee?

A. No, sir.

Q. Which are open?

A. I think there are balances on each of them.

Q. Is any one closed?

A. They are all closed so far as the constituent companies are concerned.

8887 By the CHAIRMAN:

Q. And were closed at what time?

A. In January.

Q. At the time they were closed how did you treat the assets of the several constituent companies?

A. At that time, at the moment of the consolidation they were treated as the property of the Consolidated Company.

Q. Supposing one of the companies has an account with one of its customers of $400,000; how did you treat that account—an uncollected bill?

A. Those accounts were turned over with all other cash assets; they were credited with the amount allowed as so much credit.

Q. The same as if it had been cash or any thing else—you treated all those uncollected accounts as so much cash?

A. All those that were transferred to the company; I think all of the companies, with the exception of the Metropolitan, did turn over their cash assets, and received the amounts to which they were entitled.

Q. Now about the customers' account?

A. That was treated as a cash asset.

Q. Without regard to whether they were collectible?

A. Yes, sir; that was a matter that the committee ruled upon, as to how much cash they were entitled to be credited with.

By Mr. Tremain:

Q. Did not the Consolidated pay on account of the Manhattan Company in December, 1884, a dividend of $400,000 to the Manhattan stockholders?

A. They paid it in January.

Q. That was a dividend of what per cent.?

A. Ten per cent.

Q. That was out of the surplus assets which were turned over
8888 to the Consolidated Company by the Manhattan?

A. Yes, sir, amounts collectible.

Q. Do you know what those consist of?

A. Principally accounts against consumers of gas.

Q. Are you not mistaken in testifying that these accounts are closed with all the companies? Look at your trial balance of October 31, 1885, in the statement of assets and liabilities, and explain the entries of credit balances to the New York Gas-light Company of $2,000; the Manhattan, $10,000; the Municipal Gas-light Company, $30,000?

A. The New York Company, $1,000 is held to pay a liability, as stated by them to the adjustment committee, for a tax on their dividend.

Q. Which is in dispute?

A. Not at all, sir; payable on the 15th of January next.

Q. What about the other thousand?

A. The other thousand is held to meet the contingent liability of the result of a suit against the company for personal damages.

Q. The Manhattan, $10,000?

A. Held to pay a liability to the State tax on their franchise.

Q. Thirty thousand dollars of the Municipal Company?

A. That is held subject to meet some liability unadjusted, comprising a suit.

Q. There is an item in November of the Metropolitan Company, $23,753?

A. The result of the balance due that company in the accounts.

Q. Has that been finally adjusted?

A. It was adjusted in January.

Q. By whom?

A. By that committee.

Q. And assented to by the Metropolitan?

A. Yes, sir.

Q. What has the committee on works and manufactures done by the board of directors appointed?

A. Nothing more than appears upon the minutes.

Q. Did they ever do any thing?

A. Yes, sir. I think they have had some meetings.

8889 Q. Who else besides Mr. Pyne is on the committee?

A. I don't recollect; I could not give the complete number.

Q. Do they ever do any thing at all? Give the names of some of them.

A. I could not give you the names.

Q. Is there anybody else except Mr. Pyne?

A. Yes, sir, you will find it in the minutes.

Q. What did Mr. Pyne report when he reported on the committee of works and manufactures?

A. I don't recollect.

Q. Do you remember any topic that the committee on works and manufactures mentioned at any time?

A. Not sufficiently to quote in words, or the substance of it.

Q. Don't remember any subject-matter?

A. No, sir.

Q. What did the committee do, comprised of Mr. Pyne, Mr. Day, Mr. Sloan, who, from the minutes, appear to have been appointed to devise means to effect a consolidation—what did they ever do?

A. Whatever appears on the minutes, I presume.

Q. Do you know, of your own knowledge, of their doing any thing?

A. No, sir, I never was before the committee.

Q. Did you ever hear of their making a report?

A. I don't recollect of it.

Q. Do you know the subject-matter that they had up before the committee at any time, or that they reported as having had up at any time?

A. I don't recolect.

By the CHAIRMAN:

Q. As an officer of the company you do not know what either of those committees reported?

A. No, sir.

8890 Q. Or that they did any thing—do you say that?

A. No, sir, I do not.

Q. Do you remember whether or not they did do any thing?

A. I do not remember; I was not present.

Q. I find on page 58, at a meeting held July 22d, the following resolution:

"Mr. Zollikoffer offered the following:

"*Resolved*, That that portion of the minutes 'that it is not expedient that the secretary should furnish copies of the minutes to any person or officer of this company,' offered by Mr. Sloan and passed by the executive committee on the 7th of July, be stricken out; said resolution having been offered and adopted in violation of any rights as an officer and chairman of the executive committee, and denying to me such information as I think necessary for the discharge of my duties, which on motion, was laid upon the table."

Q. Do you remember who participated in that discussion when that was adopted?

A. I do not, sir.

Q. That occurred as stated in the minutes here?

A. You have the minutes before you.

Q. Was this resolution offered and laid upon the table?

A. You have the minutes there.

Q. Did that occur as stated?

A. If you will allow me to refresh my memory I presume I can answer; that resolution was offered and took effect, to my recollection, without discussion.

Q. At a meeting held October 22d, some reports are referred to as having been presented, whether they were in writing, viz.: The chairman of the finance committee presented a report, which was offered, and ordered placed on file; is that in writing?

A. I should say so, sir.

Q. Will you produce that?

A. If that is the fact, I will.

8891 Q. Also with regard to the action of the executive committee constituting the committee in salaries; will you produce that?

A. What is the disposition made of the last two reports?

Q. The finance committee's report was that one was ordered placed on file; the other one accepted and the committee discharged; it was referred to the committee on works and manufactures; there was also a schedule of claims against the various constituent companies—has such a schedule been furnished?

A. No, sir; not in pursuance of that resolution.

Q. Of any of the companies?

A. Not in pursuance of that resolution.

Q. Is there such a schedule of claims against the various constituent companies?

A. I think there is.

Q. Will you produce that to the expert?

A. I will so far as I can find them, with an explanation if I do not find them.

The CHAIRMAN: The meeting was when?

Mr. TREMAIN: October 28th.

Q. Can you tell whether $167,000 of bonds of the Harlem Company were paid in pursuance of a recommendation or direction of the executive committee, to that effect, which was adopted at a meeting of October 22d?

A. They were paid $167,000, being the balance of $170,000 assumed by the Consolidated Company.

Q. Is there a dispute concerning the total bulkheads of the same property of the Consolidated Company.

A. Not that I know of, sir.

Q. What was the matter that was referred to counsel in that particular?

A. I think in relation to the proposed action of the department of docks to lay out a street on the east side of the town which was to take a large amount of our property.

8892 Q. Don't you know of any dispute in respect to that total amount of bulk-heads?

A. No, sir.

(By Senator MURPHY:)

Q. That street known as the exterior street, on the East river, on Avenue A?

A. Yes, sir.

(By the SAME:)

Q. A bill of that character was introduced in the Senate a year ago, and also two years ago?
A. Yes, sir.

Mr. TREMAIN: I propose that this examination be suspended until the expert makes examination, if you will deem that Mr. Smith is excused until to-morrow, or possibly next day.

H. E. GAWTRY, being recalled, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are the secretary of the committee of adjustment?
A. Yes, sir.
Q. Has that committee had any meeting since last January?
A. I think so; I am not sure as to the date they ceased.
Q. They have adjusted all of their accounts?
A. Yes, sir, as far as their duties went.
Q. Are there any books or papers showing their official adjustment of the constituent companies, showing the official adjustment by the committee?
A. I think there is such a memorandum.
Q. When was it made?
A. I couldn't tell you.
Q. Have you the minutes of that committee?
A. I have.
Q. Will you produce them?
A. I can do so, yes, sir.
Q. Is there more than one book?
A. No.
Q. That committee required the unanimous action of its members before adjusting an account?
A. I don't remember whether that was the rule, or whether it was an understanding, or whether it was actually so.

8893 Q. Did the committee adopt that as its guide?
A. I don't know of any except such as are in the minute-book.

Q. Do you know of any instance where a difference had arisen between the representatives of the constituent companies whose accounts were under consideration and any other members of the committee?
A. I don't remember any special difference; of course there was a question of difference of values coming up all the time.
Q. How did the difference of values arise?
A. One man would think his property was worth so much, and it was open for discussion, and we would discuss it as to whether it was or not.
Q. How would the result be determined?
A. I presume by a vote; the minutes will show that.
Q. That is, the representatives of the other companies would pass upon the values of the dissenting representatives?

A. No, sir; it was more a matter of agreement.

Q. Of the things which were done, was there an agreement between you all?

A. Yes, sir.

Q. Beside the papers you have referred to as containing the statement of the adjustment of the accounts, are there any other papers which would show the adjustment?

A. Nothing outside if the general books of the companies.

Q. How shall I designate the adjustment?

A. It is in the mintue-book proper; the originals have been destroyed; it is what is known as the adjustment; that contains every thing outside of the books of the consolidated companies.

(By the CHAIRMAN:)

Q. Did they not submit their claims sometimes in writing??

A. Nothing except the schedules; I believe you have all those papers.

Q. Schedules and claims? No?

8894 A. What kind of claims do you allude to? These schedules, as I understand it—we have got there every thing that relates to the property of the consolidated companies.

Q. What was the character of the claims that came before this adjustment committee to liquidate?

A. Some lawsuits as mentioned against the New York and Municipal that came before the committee so as to decide how much should be set aside; that is one item; and the question of supplies of material.

(By the CHAIRMAN:)

Q. On hand, of the several companies which were turned over to the Consolidated Company?

A. Yes, sir.

Q. That is the values were fixed on the items, were they not, at the time of consolidation?

A. Yes, sir; they were agreed upon by the adjustment committee.

(By the CHAIRMAN:)

Q. His question was, were those items agreed upon at the time of the consolidation, November, 1884?

A. On or about that time; whether they were done immediately before or immediately after, I don't remember.

Q. Such items were specified in arriving at the total values according to which each constituent company went into the consolidation; how, then, did any difference subsequently arise in reference to those values? That is what we are asking you about now?

A. The supplies were not included in the original schedules.

Q. Then the subject-matter of difference that came up before your committee to consider were items of properties not included in the original schedules?

A. Yes, sir.

Q. As the result of your deliberations, stock was issued, or payments made?

A. Payments were made; no stock was issued to my recollection for that purpose.

8895 Q. You remember that the consolidation agreement provided that stock might be retained to meet such payments as might arise from the result of the determination of the adjustment committee, in consequence of those adjustments?

A. I believe that it contained something of the kind; I am not familiar with that part of the business.

Q. Was that done?

A. I don't know.

Q. Don't you sign the stock certificates?

A. Yes, sir.

Q. Whether as the result of the determination of the adjustment committee any stock was ever issued in payment for amounts to be paid in consequence of those adjustments?

A. I don't know; my impression is that not a share was ever issued.

Q. When you sign a stock certificate you know the occasion of its issue?

A. Yes, sir.

Q. You signed certificates, did you not, for stock that was issued to the shareholders of the constituent companies?

A. Yes, sir.

Q. And you also signed, did you not, a certificate, or certificates for stock which was issued to James W. Smith, treasurer of the Consolidated Company?

A. I think I did, because the stock certificates are signed both by the secretary and treasurer; in my absence the treasurer might sign.

(By the CHAIRMAN:)

Q. Would the treasurer sign the certificates to himself?

A. He would in my absence; it requires two signatures.

Q. Did you sign a certificate to James W. Smith, treasurer, or certificates amounting to $3,000,000?

A. I don't remember whether I did or not.

Q. Did you receive any direction or authority to issue such certificate?

A. There was such an authority given by the board of trustees that such stock should be issued.

8896 Q. Have you any means of ascertaining now whether you signed any stock certificates in payment of the whole or in part for payments to be made in discharge of obligations of the constituent companies?

A. I signed no certificates except they were issued to shareholders of the company, or this one lot to the treasurer in trust.

Q. By the terms of the consolidation there was allowed as a deduction for the debts, various sums to various companies; for instance, the sum of $137,000, for debts owed by the Knickerbocker and assumed by the Consolidated Company, and by the terms of the agreement the Consolidated Company were at liberty to retain stock sufficient to discharge any such assumed indebtedness; can you testify, or have you any means of ascertaining whether you have signed any certificates for any such indebtedness?

A. I have not signed any such, to my knowledge and belief.

Q. There was allowed under that provision, and of the character of the allowances described in the previous question, the following sums: The New York Company, $6,000; the Metropolitan Company, $688,000; the Municipal Company, $328,000; the Knickerbocker Company, $1,137,000; The Harlem Company, $170,000; making in all a deduction of the debts from the share capital of $2,329,000; whether any of that stock has in fact been issued to anybody?

A. I will correct my answer; I believe that that amount which was issued included the amount set apart of the bonds as well as for the working capital.

Q. There was allowed under that provision and of the character of the allowances in the previous question, the following sums: The New York Company, $6,000; Metropolitan, $68,800; Municipal, $328,000; Knickerbocker Company, $1,137,000; Harlem
8897 Company, $170,000, making in all a deduction of the debts
from the share capital of $2,329,000—has any of the stock been issued of the $2,329,000?

A. Yes, sir.

Q. Some of it has been issued?

A. Issued to the treasurer.

Q. Has it all been issued?

A. I don't know without referring to the books.

Q. Now what book will tell? Some of it has been issued; has it all been issued?

A. I will have to refer to the books.

Q. What books will tell?

A. The ledger of the Consolidated Company.

Q. The stock ledger?

A. No, sir, the general ledger.

Q. What place will tell that fact?

A. The capital stock account.

Q. Now in addition to that stock thus permitted to be withheld for a deduction for debts there was reserved for working capital, shares equal to $1,303,000—has any of that stock been issued?

A. I believe it to be included in the amounts issued to the treasurer.

Q. Now in addition to that stock thus permitted to be withheld for a deduction for the debts, there was reserved for the working capital, shares equal to $1,303,000—has any of that stock been issued—of the $2,329,000?

A. I think that is the amount, if I remember right, which was issued to the treasurer.

Q. Then, to the best of your recollection, all of the stock which it is entitled to issue thus under any circumstances, has been issued?

A. Unless there is some stock from the constituent companies which has not been sent in.

Q. Unless some of the stock due to shareholders has not been issued, then all the stock authorized to be issued has been, to your belief, issued?

A. Yes, sir.

8898 Q. Can you say how much of the $2,329,000 reserved for the deduction of debts has actually been paid off?

A. I think the $450,000 of notes due by the Knickerbocker and $170,000 of bonds of the Harlem have been paid off.

Q. Have the bonds of the Knickerbocker been taken up, all of them?

A. No, sir.

Q. Do you know the amount outstanding now?

A. The original amount was $750,000 of the Knickerbocker, $687,000 were outstanding at the time of the consolidation; there were some sixteen or seventeen bonds purchased on the 1st day of June, according to the trust deed of the Knickerbocker Company—this last June.

Q. Those two companies, the Knickerbocker, $450,000, and the Knickerbocker, $687,000, amounting to $1,137,000, which was reserved?

A. Yes, sir; out of that there was fifteen, sixteen, or seventeen bonds which were purchased under the mortgage-trust; every year there is a payment to be made on them.

Q. Has the indebtedness, $328,000 reserved for the Municipal Company, been paid?

A. A large portion of that was what remained of the first mortgage bonds of the Municipal Company, and those have not been paid; I don't remember what the balance was.

Q. How much was that large portion?

A. At the time of the consolidation it was about $291,000.

Q. Has that been paid yet?

A. No, sir.

Q. The balance of the indebtedness you think has been paid?

A. I don't know.

Q. The $687,000 of the Knickerbocker—no part of that has been paid?

A. No, sir.

Q. The New York Company's item of $6,000, has that been paid?

A. I am not positive; it was a mortgage on some piece of property.

8899 Q. You were a member of the committee of the constituent companies prior to the consolidation, was you not?

A. Yes, sir.

Q. How long did that committee exist?

A. I think about four years.

Q. Did the Mutual have a member of the committee?

A. Yes, sir.

Q. Who was he?

A. I think Arthur Leary.

Q. That committee kept minutes of its doings?

A. I don't remember.

Q. Was not you the secretary?

A. No, sir.

Q. Who was?

A. I think Mr. Smith.

Q. Do you remember when the values were under consideration by that committee in 1884, the values of the properties of the several companies?

A. I would like to state, there is a little confusion in regard to the committee; the committee the counsel is asking about now was not in existence for four years; the same set of men were of the committee you speak of; I received the values of the property and know they were in existence; I could not tell how long, probably six months.

Q. When did they begin?

A. I could not tell you; I think in the summer of 1884.

Q. They were the same men as the members of the pooling committee?

A. Yes, sir.

Q. You was a member of that committee?

A. I was.

(By the CHAIRMAN:)

Q. When you said you didn't know whether any records were made or not you then referred to the pooling committee?

A. Yes, sir.

Q. Don't you know that the minutes of the pooling committee have been in evidence, and many extracts made and put in this book?

A. I don't remember.

8900 Q. What did you call that committee?

A. I am not sure I was a member of the committee.

Q. Give the names of each one comprising that committee, which was formed in the summer of 1884?

A. Mr. Lees, Mr. Zollikoffer, Mr. Smith, either Francklyn or I—I can't say which—and either Mr. Leary or Kennedy—I don't remember which—and Mr. Morse.

Q. What did you call that committee—how was it styled?

A. I don't know as it ever had any name.

Q. What was the first thing that the committee did, to your knowledge?

A. I can't remember.

Q. The last thing?

A. The main business of the committee was looking out values of property, and talking about the matter of consolidation.

Q. What was the last thing the committee did?

A. I suppose the last action of the committee was *d*eporting upon the fact that they had arrived at a basis upon which the company would consolidate.

Q. Was that the basis upon which you did consolidate?

A. Yes, sir.

Q. How, in arriving at that basis, did you estimate the value, so-called, over and above the values, so-called, of the properties, rights and franchises of the constituent companies to the amount of $7,781,000, including the Mutual?

A. That was based upon the amount of business done by the companies, if I remember right.

Q. Give the particulars?

A. I don't remember.

Q. You mean the number of cubic feet of gas?

A. Of gas sold.

Q. How did you get at that—by taking the register, or index of the number of feet produced at the holder?

A. Not the index of the number of feet at the holder; we took the actual number of feet of gas sold.

8901 Q. You took the total amount of gas as reported from the consumers' meters?

A. Yes, sir.

Q. Did not that include street lamps?

A. I believe it did; they are the sales of the company.

Q. Is not that taken at the works, from the index for the street lamps?

A. No, sir; we take an estimate of each lamp.

(By the CHAIRMAN:)

Q. That gas consumed in the public streets is not measured?

A. No, sir, the contract provides that we shall furnish to each burner of a street lamp 12,000 feet each year.

Q. You took the gas product and measured that, not by indexes at the place of production, but by the meters of the consumers?

A. We did not take the gas product; we took the gas sales; that is not an intelligent question; leave out the word "gas product;" the gas made at the works and the gas delivered to the customers is a very different thing; if you will use the word "sales," that will be more intelligent.

Q. Whether the business was based on the product or receipts?

A. The receipts had nothing to do with it.

(By the CHAIRMAN:)

Q. What receipts had nothing to do with it?

A. The money received from the gas sold; the amount of dollars and cents did not enter into the question at all.

Q. State what did form that basis?

A. It was the sales of each one of the companies for a certain period.

(By the CHAIRMAN:)

Q. Measured a certain number of feet of gas?

A. Yes, sir.

(By the SAME:)

Q. Consumed on the streets of the city?

A. Yes, sir.

Q. There is a great difference between the amount of gas in the holders and that consumed?

A. Yes, sir; I should say the average of the difference was over fourteen per cent.

8902 Q. In making this basis for an estimate you did not take the product at the holders in arriving at the number of cubic feet?

A. I think not; all that matter you have in that book before you, I suppose; I have not refreshed my memory on this thing for months.

Q. Now having ascertained the business of each company, what was the next step in arriving at this figure, $7,781,000?

A. I don't remember.

Q. Don't you remember how it was done?

A. I do not.

Q. What was the process of arithmetical calculation?

A. I don't know.

Q. Have you any knowledge on that subject?

A. No, sir.

Q. Is your memory capable of being refreshed by any memorandum?

A. I should want the sales of each company for the time, whatever it was.

K. Given sales for each company for a given period of time, what next?

A. Take the amount of capital over and above the valuations and apportion it.

Q. That is to say you agree on what the capital should be first?

A. No, sir; after the valuations were finished we did.

Q. And the difference between the valuation and the agreed capital was made the subject of estimate and apportionment among the various companies?

A. It was made the subject of apportionment among the various companies.

Q. And after that estimate and apportionment the amount arrived at was put down, and it was upon that basis which you have stated that the capitalization of the Consolidated Company was arrived at?

A. I believe that was so.

8903 Q. The original amount upon which this calculation was made was a capital of $45,000,000, including the Mutual?

A. I think so; I should have to see those figures to refresh my memory.

Q. Take this book (presenting book to witness).

A. Including the Mutual, $45,000,000, yes, sir.

Q. Then it is true that the figures found apportioned to the various companies, viz.: the New York, $1,417,000; the Manhattan, $2,329,000; the Metropolitan, $1,863,000; the Municipal $1,175,000; the Knickerbocker, $528,000; the Harlem, $469,000; comprising the amount of the capital apportioned by that agreement to the several constituent companies,—was the result of an estimate arrived at in the method you have described after the total valuations of the properties had been fixed at $29,994,000?

A. I think so; of course that did not come out in even thousands.

Q. Of course the valuations did not come out in even thousands and the fractions were disposed of by omissions or by adding to other items?

A. That is my impression.

Q. In some the fractions of thousands were made more, and in a few cases, less?

A. That is my recollection.

Q. Can you state whether a calculation was made fixing the percentage of the apportionment to each company for capital by reason of rights and franchises, etc?

A. I believe so.

Q. Do you remember those percentages?

A. I do not.

Q. Any of those calculations extant?

A. Not to my knowledge.

Q. Who had the papers upon which they were made, and who made the calculations?

A. That is a difficult thing for me to answer; no doubt that all of us did more or less figuring upon it.

(By the CHAIRMAN:)

Q. Did not some one have what papers there were upon 8904 which the figures were made?

A. Not the rough memoranda; there was nothing except the ordinary rough calculations.

(By Senator MURPHY:)

Q. A compilation made from those memorandums?

A. That is it.

(By Senator MURPHY:)

Q. The compilation was made from those fragmentary memorandums?

A. The basis was agreed upon some way on an ordinary calculation.

Q. The minute-book of that committee—where is it?

A. I don't know; I haven't seen it.

Q. Did I understand you Mr. Smith was the secretary?

A. Yes, sir.

Q. Will you ask him to hand that to Mr. Yalden?

Senator MURPHY: What do you mean by the minute-book?

Mr. TREMAIN: This committee kept a record of its doings.

Q. Did that committee keep any minutes of its meetings and its proceedings?

A. I don't remember.

Q. Who was its chairman?

A. Mr. Lees.

Q. Who was its secretary?

A. I think Mr. Smith; I wouldn't be positive.

Q. Did that committee agree to invite Mr. Rowland to make any appraisement?

A. Rowland made some appraisements and whether he was invited by the committee proper I don't know.

Q. Whether the committee agreed to invite Mr. Rowland to make some appraisements?

A. I don't know.

Q. Did the committee agree to discuss the propriety of inviting anybody to make the appraisements?

A. There was such a discussion.

Q. Did the committee come to any agreement as to how the real estate should be valued or by whom appraised?

A. I don't remember.

8905 Q. Was there any thing said by the committee on that subject, the appraisement of real estate?

A. Yes, sir, there was a talk about it, and whether the committee came to any conclusion I don't remember.

Q. Any thing said as to how the mains, meters and services should be appraised or valued?

A. Yes, sir.

Q. Was any conclusion arrived at by the committee on that subject?

A. I think the committee took charge of the valuation of the mains and services; I don't think it did have any thing to do with the valuation of the meters.

Q. Did the committee itself, without the aid of any experts or outside assistance, arrive at a valuation of the mains and valves and services?

A. I believe they did.

Q. Do you know how they arrived at that valuaton?

A. There was a general discussion among the committee as to the value of a given sized main, say; and I suppose the views of the different members harmonized, and a valuation was reached.

Q. Was it on the basis of the cost?

A. I think not.

Q. Was it on the basis of the number of miles of mains actually laid?

A. No, sir.

Q. Did it, or not, include any mains that had been abandoned or unused, or that had been unused for a considerable period?

A. I presume not; I don't know that there are any such mains.

(By the CHAIRMAN:)

Q. You don't know that any abandoned mains were not taken into account?

A. I don't know of there being any abandoned mains any way.

(By Senator MURPHY:)

Q. You don't know of any existing at the time of the consolidation?

A. No, sir; I never heard of any.

8906 (By the CHAIRMAN:)

Q. Were there any unused mains at that time?

A. I think not, sir.

Q. You only know about the mains of the Muncipal and Knickerbocker Companies; do you know about any other mains?

A. No, I can't say that I did at that time, I do now.

By the CHAIRMAN:

Q. You don't recollect that any inquiry was made on the subject at that time?

A. I don't know; no such mains were in the amounts.

Q. Do you recollect whether there was any inquiry made at the time of the consolidation?

A. Yes, sir, there was; it would be a very natural one to make.

Q. Who made such inquiry?

A. I couldn't tell you.

(By Senator MURPHY:)

Q. The company would make such an inquiry if any existed?

A. Yes, sir; the abandoned mains would be taken up and used for other purposes.

Q. Presume there were abandoned mains, and if so the company would make a claim on the consolidation for their value?

A. I don't think there were; it would be a very easy matter for the old companies to show.

Q. Was there an estimate made before the committee to ascertain the value of the mains?

A. I don't know that there was; I looked into it myself for my own satisfaction.

Q. You assume that each company looked into the matter of the mains of such constituent companies?

A. I don't know how the others did.

Q. How was the value of the mains arrived at in dollars after you had ascertained the extent of the mains of each company?

8907 A. From the fact that it would cost so much to replace them; I think that is the way they were arrived at; I don't remember distinctly; I think that was it.

Q. As to meters, how was their value arrived at?

A. The price-list, I believe, of the manufacturer was taken, and enough added to that to cover the lead connection and meter-cocks that go with the meters.

Q. After getting the number of meters of each company?

A. Yes, sir; and the size.

Q. And as to the services, the valuation, how was that ascertained?

A. I believe the valuation was arrived at what it would cost to put a service of a given size in the ground.

Q. As to the bulk-heads, piers and water rights, how was that arrived at?

A. I don't remember.

Q. Do you remember what member of the committee gave special attention to that?

A. I do not.

Q. Office buildings, do you know how they were arrived at?

A. No, they went into the real estate; belonged with the real estate.

Q. A part of the real estate; have you given all the information you are able to give to the committee as to the methods of arriving at the value of the properties, rights and franchises of the constituent companies entering into the consolidation?

A. I think I have; yes, sir.

Q. Do you remember when in the summer this committee began to operate—this valuation committee?

A. I don't remember.

Q. About when?

A. I should think it was the early part of the summer.

Q. What else, after the committee got together, did they agree upon—what the combined capital should be?

A. No, sir.

Q. When was that done?

A. Some time toward the first of November, I should say from recollection.

8908 Q. Was it before or after the schedules had been prepared?

A. After.

Q. Was it before or after Rowland's reports?

A. I think that is answered in the previous question; the schedules could not have been prepared; I do not know that Rowland made any reports to the committee.

Q. Then the schedules you refer to are not the ones I refer to; which ones do you mean?

A. Those that are on the table; my recollection is no valuation of the capital was arrived at until these all were completed.

Q. Was not there a preliminary agreement of the consolidation that was prepared prior to the agreement which was finally executed and filed in the public offices?

A. You mean such a draft filed in the office of the company?

Q. No; prior to the time the form of agreement on file was made, was there not a preliminary agreement respecting consolidation?

A. I don't remember any such.

(By the CHAIRMAN:)

Q. Do you remember whether there was or not?

A. No, sir.

Q. Will you testify there was not?

A. To the best of my knowledge and belief I will.

Q. Was there any handed to the committee—I mean this valuation committee—or to the pooling committee that had been in existence, writings suggesting schemes of consolidation?

A. I believe there was—memoranda; no full agreement of any kind.

Q. Memoranda as to proposed basis of agreement?

A. No, sir; it was on a piece of paper written out.

(By the CHAIRMAN:)

Q. Memoranda of a proposed agreement proposed to be acted on?

A. There was some proposed discussions upon paper; there was no formal document.

8909 (By the CHAIRMAN:)

Q. Do you mean to say there was no memorandum, covering the scheme of the proposed consolidation, submitted to the committee until the agreement was submitted, which was finally signed and executed?

A. Not that I recollect of.

Q. Do you not remember of the pooling committee passing a resolution to submit a plan as a basis for each of the companies entering the consolidation?

A. I do not remember.

Q. Was not you on such a committee yourself?

A. No, sir, I was not; I don't remember of any such committee.

Q. Do you remember who were?

A. I don't remember any such committee.

Q. Do you remember, at a meeting of the committee—the pooling committee—held November 23, 1883, the following resolution with regard to reporting a plan:

"*Resolved,* That the report and plan of the sub-committee on consolidation, as submitted at the last meeting, has the approval of the representatives of the New York, Manhattan, Municipal, Harlem and Knickerbocker Gas-light Companies."

A. I don't remember.

Q. Do you remember that there was a meeting December 17, 1883, at which the following resolution was passed:

"*Resolved,* That the plan for a consolidation accepted by this committee be referred as a basis to the committee of one from each company, to report a plan in full detail for the consolidation of all the companies here represented, with power to call in legal counsel, and that this plan be reported to this committee for approval on the call of the chairman."

8910 Do you remember that?

A. This subject of consolidation had been before the committee for a period of four years; I don't remember the occasion.

Q. Having refreshed your recollection by referring you to a copy of the minutes at pages 107 to 114 of the appendix to the Senate committee's report which was made last spring, I ask you whether you have at any time seen any of the papers that are referred to in these minutes as being reports of plans for consolidation?

A. I presume I saw those papers.

Q. In whose custody did you see them last?

A. I have not seen them since they were presented at the meeting.

Q. Who presented them at the meeting?

A. I suppose it is designated here.

Q. To whom were they presented?

A. I presume the chairman of the committee.

Q. His name was Lees?

A. Yes, sir.

Q. Have you any information as to where those papers are now?

A. No, sir.

Q. Have you heard those reports spoken of at any time since December, 1883?

A. I don't remember.

Q. Was there any committee appointed to carry out the resolution that was passed December 17, 1883, or any means whatever adopted to carry it into effect?

A. I don't know, sir; the minutes would show if there was, I presume.

Q. You say that the minutes should show if there were?

A. Yes, sir; I have no recollection.

Q. At a meeting June 12, 1884, it seems to have been determined that the representatives of each company should submit schedules and plans of their respective companies—do you remember when that was first done?

A. I do not, sir.

8911 Q. Is there anybody else on this committee who would have any more accurate knowledge of its transactions than yourself?

A. In answer to that previous question if you will read the clause at page 114——

Q. I have.

A. I do not remember with the exception of that; I don't know as to the last question.

Q. Are there any other papers upon the subject of consolidation by way of a proposed preliminary agreement, that are in existence, or in any way relating to the consolidation, that were made prior to November 10, 1884, that you know of, anywhere?

A. Nothing, except those.

Q. Or are there any such papers in existence that you have any information of, anywhere?

A. No, sir.

Q. Do you know of any such papers having been destroyed?

A. No, sir.

(By the CHAIRMAN:)

Q. Or have you heard of their being destroyed?

A. No, sir.

Q. Did you see any such papers in Mr. Lees' hands at any time?

A. I saw nothing in his hands except what were in the committee.

Q. Did you see any such papers in James W. Smith's hands at any time?

A. No, sir.

Q. Did you see any such papers in Mr. Francklyn's hands at any time?

A. Not more than any of the others; I don't remember any such papers; I would like to state in regard to the question of what General Tremain calls the committee on valuations; I testified it was in the summer of 1884; I am a total blank as to the date; I see in referring to the pooling committee that the subject was up in that committee right along; I may be all wrong about it.

8912 Q. The business that the committee had to do with the adjustment of values was entirely separate as to the values of the committee of the pooling agreement?

A. I believe they were.

Q. You were one of the trustees under a trust agreement with the Municipal, dated March 23, 1880?

A. I was one of the trustees; I don't remember the date.

Q. You, together with Francklyn and Ottendorfer, Allen and Day, assigned 14,995 shares in the Knickerbocker Company?

A. Yes, sir.

Q. You voted on that stock?

A. Yes, sir.

Q. What did you do with that stock?

A. That stock was assigned to the holders of the Municipal Gas-light Company as their interest may appear.

Q. When was that done?

A. About the time of the consolidation.

Q. Was it made in one certificate?

A. Yes, sir.

Q. To whom was the certificate assigned?

A. To the shareholders of the Municipal Gas-light Company as their interest may appear.

Q. Was that the way the certificate was assigned?

A. Certainly; the assignment was made to the people to whom it belonged, and the certificate went with it.

Q. Do you mean to say that the trustees executed a written assignment?

A. That is my recollection of it.

Q. What was done with the certificate itself?

A. It was canceled first, and I suppose it is at No. 4 Irving place.

Q. You were the secretary of the Municipal Gas-light Company?

A. No, sir.

Q. Were you not?

A. No, sir.

Q. Who was the secretary?

A. Philip Allen.

Q. Were you an officer of the Knickerbocker?

A. Yes, sir.

8913 Q. The president?

A. Yes, sir.

Q. When was that certificate, 14,995 shares issued?

A. I could not tell without referring to the books.

Q. Well, do you know what year?

A. My impression is it was 1880; I am not quite sure.

Q. Who issued it—whom was it assigned by?

A. I don't remember.

Q. When was this assignment, that you speak of, made?

A. About the time of the consolidation.

Q. Who signed the assignment?

A. I suppose the trustees, but I don't know.

Q. You signed it for one?

A. I think I did.

Q. Mr. Day signed it?

A. I don't know.

Q. When was the last meeting of the board of directors of the Knickerbocker Company?

A. In the early part of November, 1884.

Q. Have you the record of that meeting?

A. I have not.

Q. Where is it?

A. I suppose at Twenty-sixth street and Fourth avenue, at the Municipal office; I have not seen it since last spring.

Q. You agreed to the valuations of the Knickerbocker Company as they are stated in the articles of agreement of consolidation?

A. I did.

Q. You signed for the Knickerbocker Company?

A. Yes, sir.

Q. How did you get at the value of the real estate, $480,000?

A. My recollection is we took the values of the surrounding property there.

Q. Who made the valuations?

A. I think Francklyn and I.

Q. Who made the valuation of the Knickerbocker plant?

A. Mr. Rowland.

Q. Who else besides Mr. Rowland?

A. I don't remember.

8914 Q. Who furnished the figures to Rowland upon which he made his estimate of the valuation of the plant?

A. I have never heard of any figures being furnished him?

Q. Are you sure about that?

A. I never heard of any figures being furnished him.

Q. Do you know, or do you not, that figures were furnished him?

A. I would be perfectly willing to testify no figures were furnished him; a schedule was furnished.

Q. Did that schedule, representing the figures, represent the cost in the valuation of the items on the schedule?

A. Not to my knowledge.

Q. Who gave him that schedule?

A. I don't know.

Q. Did you?

A. I might have done it.

Q. Did you prepare the schedule.

A. No, sir.

Q. Did anybody else make these values?

A. Using Rowland's name, representing himself and his staff, I would say.

Q. You mean by your testimony to imply that possibly Rowland's representatives may have made figures?

A. They may have.

Q. You don't know whether Rowland made the original figures himself, or simply revised them?

A. I do not know the fact.

Q. How did you get at the value of the services?

A. We knew how many there were, and in one of these two committees an agreement was reached as to the value of each service.

Q. What was that agreement?

A. I don't remember; those books will tell it all.

Q. No; they will not show any such agreement; they show the value of the services as finally agreed upon, but they will not show the basis as to which the services were estimated.

A. I don't know.

8915 Q. You have stated each company knew just what the services were; how did you get at that figure, $181,000, in the Knickerbocker?

A. By the actual record of the number.

Q. How did you get at the figure, $181,000?

A. The price per foot was agreed upon.

Q. What was it?

A. I don't know; that book will show you, if I am not mistaken it will show the record of the services; there is the number of each size that the company has, and the price they were put in at. (Handing the book to the Chairman.)

Q. You refer now to the Knickerbocker only?

A. Yes, sir.

Q. Was it at the same rate by which all of the other companies' services were estimated?

A. Yes, sir.

Q. How much did you say it was?

A. So much for one size, and so much for another.

Q. How did you get at the value of the meters in the Knickerbocker at $69,000?

A. Took the list price and added to it the cost of the lead connections and the cocks.

Q. Was that the way the price was estimated with all the companies?

A. Yes, sir.

Q. How did you get at the figures $744,000 in the Knickerbocker for the price of the mains?

A. The price of each sized main was agreed upon, and we knew the number of feet.

Q. How did you get at the figure $115,000 for bulk-heads, pier and water rights?

A. I don't remember.

Q. About the Municipal—how did you get that item in that valuation of bulk-heads, piers and water rights—$200,000?

A. I don't remember.

Q. How did you get the item of the valuation of the real estate, $889,000?

A. That was done from the valuation of the surrounding property.

8916 Q. Who made that valuation?

A. I think Mr. Francklyn and I.

Q. Who made the valuation of the plant of the Municipal Company, $1,804,000?

A. I find here the valuation $1,797,527 made by Mr. Rowland.

Q. Did anybody else make any valuation of the plant?

A. Not that I know of; not that I can recollect.

Q. How did that figure become $1,804,000? Do you know?

A. I do not.

Q. I refer to page 30; how do you explain that difference?

A. I can't explain it, sir.

Q. How did you get at the value of the services in the Municipal at $103,000? The same as you did in the Knickerbocker?

A. Yes, sir.

Q. And of the meters the same?

A. Yes, sir; there is only a difference of $7,000 and not $20,000.

Q. Yes; can you explain that last item, $6,000?

A. We had two photometer rooms, and quite an expensive laboratory.

Q. Did you ever see Mr. Rowland's valuation of those rooms of the Metropolitan, or of the Manhattan?

A. No, sir.

Q. Or of the New York?

A. No, sir.

Q. You observe your valuations of those items is larger than theirs?

A. Yes, sir.

Q. Any explanation to make?

A. The laboratory is much more expensive; I don't know about his valuation of their laboratory; the laboratory is pretty expensive, and that is the chief part of this item.

Q. Where are the original stock-books of the Knickerbocker?

A. I think at 360 Fourth avenue.

Q. Of the Municipal, extending back to 1865?

A. At the same place; I don't know as to that length of time; extending to 1877.

8917 Q. The stock-books of the Municipal, are they to be found there?

A. They are there, at Twenty-sixth street and Fourth avenue.

Q. Have you the stock books of the Knickerbocker since the organization of that company?

A. I don't know how far they go back; I have all that were turned over to us at the time the purchase was made in 1880; I think they are at Twenty-sixth street.

The committee hereupon adjourned to Wednesday, November 25, 1885.

NEW YORK CITY,
FIFTH AVENUE HOTEL, *November* 25, 1885.

The committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

SAMUEL SLOAN, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are one of the directors of the Consolidated Gas Company?

A. Yes, sir.

Q. And prior to that which of these constituent companies was you associated with?

A. The Manhattan and New York.

Q. Were you a director in both?

A. Yes, sir.

Q. Were you a member of any of the committees that were formed for the purpose of taking into consideration the question of consolidation, prior to November, 1884?

A. No, sir.

8918 Q. Were you interested in any other of the constituent companies than those two?

A. No, sir.

Q. Since the organization of the Consolidated Company on what committee have you acted?

A. I am on the standing committee; the executive committee.

Q. And any others?

A. No, I think not, sir; I am on the standing executive committee; there are special matters that have been referred to special committees, one I think, now in existence; I have been on that committee; we call it the working and manufacturing committee; it is appointed looking to the reduction of expenses and economy of manufacture.

Q. Who comprised that committee?

A. Mr. Pyne, Mr. Day, Charles G. Francklyn and myself.

Q. Are there minutes of that committee's work?

A. Yes, sir.

Q. Who has them?

A. Mr. Gawtry.

Q. Minutes of their meetings?

A. Yes, sir; I refer to that, sir.

Q. Where did that committee meet?

A. They have met at the directors' room of the City Bank for the convenience of the committee down town.

Q. Do you remember when their first meeting was, about what time?

A. No, I do not; I think we have been two or three months—I am not sure about it—going on with the work.

Q. Did that committee make any written reports to the board of directors?

A. They reported one report.

Q. When was that?

A. I think the September or October meeting—I forget which—the September meeting.

Q. They made other reports verbally, didn't they?

A. Yes, sir; and asked to be continued; some difficulty in 8919 the way of getting what we wanted.

Q. On what special topic did they report—which was in writing?

A. It was our intention as fast as possible to reduce the expenses and economize generally in the management of the company; some questions arose as to dispensing with one of the works, looking to that object, and otherwise reducing the expenses of the company.

Q. Was there any plan of reduction in writing submitted to your committee?

A. Yes, sir, two; ex-President Roome and Mr. Zollikoffer gave their views.

(By the CHAIRMAN:)

Q. In writing?

A. Yes, sir.

Q. Who has those papers?

A. I think the chairman of the committee, Mr. Pyne, must have them.

Q. You think Mr. Gawtry has that written report of the committee?

A. I think he has as secretary.

Q. Mr. Gawtry did not remember any thing about any thing that that committee ever reported; what other subject-matter, if any, was before that committee on work and manufacture?

A. Nothing else; the object of the consolidation was to cheapen the production of gas and its distribution; that matter has been before us more or less, and resulted in the appointment of this committee, and that committee met with a difference of opinion between the ex-officers, but that committee submitted their report in writing as far as they could, and they still have the matter in charge, intending to cut down expenses in other ways.

Q. So far as you have gone, the reduction in the expenses is effected in what ways?

A. It is not effected to satisfy me; we really had not accomplished any thing as I would have wished.

8920 Q. What have you accomplished?

A. This report was laid upon the table and has not been acted upon yet; one of the points at issue was the closing of one of the companies to lessen the expense which would be required to keep the works running, and which at that time we thought was not justifiable, and the matter was laid over on that account.

Q. Then it is not yet decided whether that work, whatever it is, will be suspended or not?

A. The committee reported that the large expenditure required at this time did not justify taking the matter up.

Q. As a matter of fact have you suspended any of the works?

A. No, sir, we did not consider it safe to do so.

Q. I understood you to say that it was the object of the consolidation to secure cheap gas?

A. That is my object.

Q. Please explain to the committee how, if that was the object, it was aided in its purpose by increasing the capital stock?

A. The capital stock in the adjustment between the companies the values of the respective properties, was put in upon the statements which the respective interests agreed upon in this committee which had charge of the matter; of course the larger the capital the less dividends to be expected.

Q. What was the price of the Manhattan in 1884?

A. I could not recollect; I think the Manhattan went up over 300.

Q. Three hundred and twenty in the fall of 1884?

A. I don't recollect; I have been in the Manhattan and New York, and keep my interest yet, and was satisfied with my investment; but in the consolidation we looked for the cheapening of gas in a large output.

8921 Q. The price of the Manhattan during the summer of 1884 was between 300 and 320?

A. My memory don't serve me.

Q. What would be the proper way for the committee to ascertain the price of that stock during the summer of 1884?

A. I suppose the price in the stock list.

Q. Was it listed always?

A. I think so, but I am not sure about that.

Q. If we should call a broker accustomed to dealing in that kind of stock we will have no difficulty in making it out?

A. I think not.

Q. How would an increase of capital of the combined companies from about $17,000,000 to about $39,000,000 aid in furnishing cheaper gas to the public?

A. The output would be greater and we would have to take less dividends and probably less profits, and the capitalist would not do as well as he did before; but it was really to meet the outcry about the price which was the chief object.

Q. I think there was a surplus of the manufactured plant in the city of New York on the 11th of November, 1884?

A. I am not prepared to say that; we always thought that with the Manhattan and New York every new company was bothering and interfering with us.

Q. Do you mean to say that the capital stock was increased from $17,000,000 to $39,000,000 for the purpose of satisfying the popular outcry against the high price of gas?

A. I mean to say that by the consolidation of interests we thought the values were properly adjusted; I don't think that by capitalization there is more to be done.

Q. Your answer is not to my question?

A. I should say the capitalization power simply is not what we relied upon for the cheapening of gas.

8922 By the CHAIRMAN:

Q. Very well, that answers that; let me ask you whether, in your judgment, on the 11th of November, 1884, there was more gas plants in and for the city of New York than was needed, and than could be economically worked?

A. I think there was.

Q. There was more capital invested in the manufacture and distribution of gas on the 11th of November, 1884, in the city of New York than was nececsary?

A. In one sense there was, and in another sense the same capital put with all the works consolidated would have worked more economically.

Q. I mean in a plain business sense?

A. No, sir.

Q. There was more capital invested in the manufacture and distribution of gas on the 11th of November, 1884, in the city of New York than was necessary for the economical supply of the city of New York with gas?

A. No, sir. I think not.

Q. If there was more plant at that time than was needed, how can it be that there was more capital invested in the business than was needed—will you explain that?

A. I cannot explain that.

By Mr. **Tremain**:

Q. Will you explain how it tended to cheapen the supply of gas to the consumers of the city by capitalizing the so-called Harlem properties and franchises at $3,000,000?

A. I know nothing about the details of the adjustment; I am simply a director, and was not on the committee, and voted the report of the adjustment committee.

Q. As a director of the Manhattan and New York, you simply voted?

A. Yes, sir; accepting that adjustment.

8923 Q. Then there was a report in writing of the adjustment committee?

A. I think there was; some action that brought it about; I am not sure about it, because when the board of directors meet once a month these papers are put before us and we act upon them at the time.

Q. What papers upon that subject were put before the board of directors of the Manhattan during the early part of the year 1884?

A. I don't recollect.

Q. Do you recollect of any papers being put before the board of directors at any time in 1884?

A. No, sir.

Q. Do you remember of attending any meeting when that subject was up before them on that matter?

A. I attended pretty generally all the meetings.

Q. Did you ever see any papers on that subject?

A. The usual course of the proceedings at the board meeting was for the officers to present their views, and whatever was brought before us we acted upon; I don't recollect what, for I don't charge my mind with those matters.

Q. There appears to have been filed in the Secretary of State's office an agreement of consolidation that is dated September 29, 1884, which says: "The directors or trustees of the company shall enter into this agreement and the stockholders shall, on or before November 10th, 1884, sanction and approve this agreement by a vote of two-thirds of the stockholders"—and it appears to have been executed by the Manhattan Gas-light Company, and to have been approved at a meeting of stockholders of the Manhattan Gas-light Company, November 5th, 1884; were you present at that meeting?

A. No, sir.

Q. You gave your proxy to somebody else to vote upon it
8924 at that meeting, didn't you?

A. I presume I did; I usually do such things.

Q. To whom did you give it?

A. I don't recollect.

Q. Did you ever read or see that agreement?

A. I don't think I read it; I presume I saw it.

Q. Did you ever see any other paper on that subject?

A. I have no recollection other than the resolution usually passed under such circumstances.

Q. Did you ever see any memorandum or calculations of the respective values of the properties of the various companies, or estimated values?

A. I don't recollect except incidental conversation and I couldn't call that to mind as to what that was.

Q. Then, if I understand your testimony, you say you don't recollect having seen any paper on that subject?

A. No, I do not, and yet I may; but I would not like to swear I have seen it; still I may have seen it.

Q. Were you a member of the pooling committee?

A. No, sir.

Q. You received Consolidated stock for Manhattan stock at the rate of 2.98½, did you?

A. At the rate that others received it, sir.

Q. How long have you held your stock in the Manhattan?

A. I couldn't tell you; I bought the first shares from Moses Taylor years ago, went into the direction, and added to my interest afterward.

Q. Is it in your opinion a fair item in fixing the price of gas to consider a reasonable dividend upon stock as an element?

A. I do, sir.

Q. If that is the case how does it tend to lessen the price of gas to consumers if a reasonable dividend is to be paid upon a cap-
8925 ital of $39,000,000 instead of $17,000,000?

A. It depends upon the result of the new action; we cannot determine that without trying it.

(By the CHAIRMAN:)

Q. That is your answer to that question?

A. Yes, sir.

Q. That is as full an answer as you can give—that is as well as you can explain it?

A. Yes, sir.

Q. Has any thing been accomplished in that direction?

A. I am sorry to say, very little; I am hopeful, though.

Q. Upon what grounds have you hope?

A. I cannot answer that question without personally consulting some of my associates.

Q. Why was it necessary to make a consolidation such as was made for the purpose, as you think, of cheapening gas? Why could not that same object have been accomplished by the several companies without this consolidation upon such a basis?

A. I really believe it could; the difficulties that are in the way of consolidating the property—I think it could have been accomplished quite as well one way as the other; it remains to be seen, however.

Q. Asking your opinion and judgment, rather than evidence as to the fact, and for the information of the committee, is there, in your opinion, any public purpose to be subserved by maintaining the present capitalization of the so-called Consolidated Company?

A. Certainly there is, yes, sir; this capitalization you speak of has a capitalization of values properly adjusted; the property has been adjusted, and its values have been fairly adjusted between the respective companies.

Q. I didn't ask that.

A. I only wished to be permitted to make my explanation.

8926 Q. I asked your opinion as a public-spirited citizen, whether you thought there was any public purpose to be subserved by maintaining this present capitalization?

A. I do; I think it will work its way out in the end; but it is a tedious route; there is a great deal to go through with.

Q. Do you think it is fair that the public should be charged as an element in the price, a seven per cent. dividend on $39,000,000?

A. I do, if that is the present capitalization, and if the company has earned it.

Q. Do you know how the valuations of these various properties were arrived at in the consolidation?

A. I don't know the detail.

Q. Was not it explained to the board of directors of the Manhattan?

A. The board had a committee on adjustment of the interests of each, and they were months arriving at its adjustment.

Q. When did that begin?

A. I couldn't tell you; several months ago.

Q. It begun before the act authorizing the consolidation was passed, did it not?

A. I think they were justified in the laws as they then existed.

The Chairman: Strike out the answer to the last two questions and take a new answer to each question.

The Witness: Through the medium of the adjustment committee, that is my answer.

The Chairman: That is not the principal question.

The Witness: The adjustment committee which was appointed, one from each interest, met from time to time.

Q. You are answering the questions as if asked through whom these adjustments were effected—the question is how it was effected.

A. I couldn't tell in any other way except through the committee; they made their report in proper time, and the board acted upon it.

8927 Q. That is not an answer.

A. I couldn't tell; I don't know how it was; I was not on the committee.

Q. Did not the committee which was appointed for that purpose make a report to the board of directors of the Manhattan Company indicating how it was done?

A. I am not aware of any report being made; the facts in a general way may have been stated, and I thought it was best.

Q. What facts were stated?

A. I don't recollect.

Q. How heavy was your interest in the Manhattan and the New York?

A. I forget what they were respectively; in the consolidated interest I think I have about one thousand shares.

Q. Whether having an interest as heavy as you have just described in these two companies you have approved and voted for consolidation without any knowledge at the time of the basis of the capitalization that was agreed to. Do you want the committee to understand that?

A. No, sir.

Q. I did not suppose you did. Now have you any recollection of the basis?

A. I have not, sir.

Q. Please tell the committee who are the men who will explain that basis to the committee from actual experience?

A. I suppose the officials of the respective companies.

Q. Name them—whom you refer to.

A. The president of the Manhattan and the president of the New York—General Roome and Mr. Lees ought to know.

Q. Did General Roome represent the Manhattan on the committee of adjustment?

A. It was Mr. Smith.

Q. Do you know who represented the Knickerbocker in that adjustment?

A. No, sir.

Q. Or the Municipal?

A. No, sir.

8928 Q. Or the New York?

A. I think Mr. Lees did.

Q. Do you know who represented the Harlem?

A. I do not.

Q. The Metropolitan?

A. I think Mr. Zollikoffer; I don't know that, but I think so.

Q. Have you been on the finance committee, or any committee of the Consolidated, whatever?

A. The executive committee only.

Q. Will you please tell the committee what was the necessity of an executive committee authorizing loans and pledging the securities of the Consolidated?

A. The duties of an executive committee—they are the working committee; when the officers require any instruction they usually get it from that committee.

Q. Do you remember about any loans being authorized?

A. No, sir, not now.

Q. Some loans were authorized, the records show?

A. Yes, sir, whatever they were.

Q. Some of them were to pay for the debts of the old companies?
A. Yes, sir; and I guess the most or all of them; the bonds of some companies have been paid, I think; I am not sure about that; the treasurer can tell.
Q. If you recollect the purpose for which the authority was given to raise these loans?
A. For that purpose I should think, the last loan was for the payment of bonds, I think, I am not sure; no, I don't think it was—the minutes will show; my memory may be at fault.

(By the CHAIRMAN:)

Q. Have you any recollection of the purpose for which either of the three loans were effected by the officers of the Consolidated Company?
A. I think it was for the adjustment of the different interests, the payment; and I am not sure but what they had to borrow some money as it stood then for the first dividend; I am not sure about that.

8929 (By the CHAIRMAN:)

Q. Have you now any distinct possible recollection on the subject?
A. I have not.
Q. Were you present when the dividend was declared?
A. Yes, sir.
Q. Was there any report read before the board upon which it voted a dividend?
A. The general statement was made that the dividend had been earned.
Q. Has no officer presented any report upon that subject?
A. I don't think there has.
Q. You are aware that the Harlem works have been shut down?
A. Yes, sir.
Q. Is it the purpose to close any others?
A. I couldn't tell you; we are agitating it.
Q. Is it the purpose to sell the Harlem properties?
A. I don't know.
Q. You have not made any loan to the Consolidated?
A. No, sir.
Q. Has your bank?
A. No, sir; where I am a director they have; that is done by the officers: I know nothing of the details of it.
Q. You are not on the committee there?
A. I am a director only; the officers do as they please.
Q. What officers make these loans?
A. The president and cashier.
Q. Name them.
A. Mr. Pyne and Mr. Palmer.
Q. I want to repeat a question to you and ask you whether you wish this committee to understand that owning as you do a substantial block of stock in the Manhattan and New York Companies, and being a director in both of them, you voted for and approved, and promoted this consolidation, without ever having examined any

paper by way of report, or otherwise exhibiting the properties and proposed values of the constituent companies that were to 8930 compose it, and the basis upon which the consolidation was had?

A. I do, sir; emphatically.

Q. In that respect you relied upon the judgment of your associates?

A. Yes, sir.

Q. Whose judgment did you rely upon in that respect?

A. I don't think that I could say that exactly; I relied generally upon those that I associated with—the other directors of the Manhattan and the New York—and then the market values of the securities; it is a question with me whether I shall sell my stock or continue in a general way.

Q. Will you designate by name the associates you relied upon?

A. I had rather not do that; I rely upon my own judgment generally rather than upon anybody else.

Q. Well, now assuming the value, at the time, of your Manhattan stock to have been 320, and that the proportion of the consolidated stock you received for the Manhattan was, as shown by the books, 298½ for each share of the Manhattan, and assuming the price of the consolidated stock at that time, immediately after it was listed, to have been about eighty-four, which is the price at which it was quoted, there would have been an actual loss on every share of the Manhattan which you exchanged, of 215; explain how that transaction happened?

A. I may have made a great many mistakes; that is one that might have happened; I looked at the future of the enterprise and its results; it may not be as I anticipated; the future must take care of that.

Q. Did not that future depend upon a dividend upon the consolidated stock, and an enhancement of the price of the consolidated stock above eighty-four?

A. Well, that would be a natural consequence.

8931 Q. Do you want the committee to think that it would be your judgment in favor of the consolidated stock at that time?

A. I don't think I thought very much of those circumstances then; I went into this thing with a hopeful view as to the future; it would have been better for me to have sold at 320 those stocks and gone out.

Q. As a man of experience in large affairs, and particularly in gas companies in the city of New York, will you tell the committee whether in your opinion the present situation is calculated to reduce the price of gas to consumers?

A. I think it will if we are permitted to go on with our enterprise and make the necessary economies and changes which will develop themselves.

Q. None of which have been made this past year.

A. No, sir; we have not had much else to do but wait upon your honorable committee.

(By the Chairman:)

Q. You mean by that that you have been preparing for this examination?

A. No, sir; but their time has been taken from their duties.

Q. Preparing for this examination?

A. No, sir; it don't require any preparation.

Q. But not much time has been taken in actual attendance before the committee; it must have been in anticipation of it?

A. Oh, no; perhaps I ought not to have made such a remark, Mr. Chairman; the officers have complained of being called away.

The Chairman: Such a statement should not have been made to the committee.

The Witness: I beg to withdraw it, Mr. Chairman.

The Chairman: It is withdrawn.

Q. Do you expect a ten per cent. dividend on the consolidated stock?

A. No, sir.

8932 Q. Do you expect a seven per cent. dividend?

A. I don't know; I hope so.

Q. You paid three and one-half per cent.?

A. Yes, sir.

Q. Do you know whether a dividend in December is warranted?

A. That is my impression; I hope so, at least.

Q. If you are aware that in order to pay a dividend of ten per cent. for the first year, one and a half millions in economics to which you have referred would have to be attained, would it in your judgment be practicable?

A. No, sir; I don't think it is practicable or reasonable.

Q. You can't get any such economics, can you?

A. No, sir.

Q. Before a dividend is declared is it or is it not reasonable, in your opinion, to allow a certain sum for depreciation of the plant?

A. Yes, sir.

Q. Are you aware that that has not been done?

A. I would be under the impression it was done; well-managed companies would always do that.

Q. Do you know whether it was done?

A. I do not.

Q. As a director you would insist upon its being done if you had the power?

A. I don't know.

Q. That would depend upon circumstances?

A. Yes, sir.

Q. Have you any papers at all relating to this consolidation?

A. None whatever; I attended the monthly meetings and heard the statements and worked for the dividends.

(By the Chairman:)

Q. If instead of making the proper allowances for the depreciation in the value of the property of the company which would in effect reduce the dividend, and the company should neglect to do that, 8933 and should borrow money which would in effect diminish the dividend, would that be conducting the business, in your judgment, according to a legitimate business method?

A. No, sir; I would say I got into this thing in good faith looking at it in the light of an investment rather than the diminishing of the price of gas.

The CHAIRMAN: The stenographer will please note that yesterday the minute-book of the finance committee was produced by Mr. Gawtry, and left with the Chairman.

OSCAR ZOLLIKOFFER, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are a director in the Consolidated Company?

A. Yes, sir.

Q. And what officer are you?

A. Chairman of the executive committee and second vice-president.

Q. And also manager of the Metropolitan branch?

A. No, I have not been appointed yet; I generally take charge of it.

Q. You are president of the Metropolitan?

A. I was.

Q. You was also a member of the pooling committee from 1880 until the time of the consolidation?

A. Yes, sir.

Q. Was you also a member of the committee on consolidation that was formed in the year 1884 with a view of consolidation?

A. Yes, sir.

Q. Who are your associates on that committee?

A. One from each of the other companies.

Q. Name them.

A. Mr. Smith for the Manhattan, Mr. Lees for the New York, Mr. Moss for the Harlem, Mr. Gawtry for the Knickerbocker, and Mr. Francklyn for the Municipal.

8934 Q. Did anybody represent the Mutual?

A. Mr. Kennedy for a time, but not to the end.

Q. Who represented the Harlem?

A. Mr. Moss; I don't know exactly whether he was regularly appointed, but he attended the meetings as such.

Q. What did they call that committee?

A. The pooling committee.

Q. No, the other committee.

A. I don't know of any other name that they have.

Q. During the sessions of the pooling committee do you remember plans of consolidation having been under discussion?

A. They were repeatedly.

Q. Do you remember any written plan of consolidation?

A. Not at all well—there were minutes kept in the regular minute-book, and they submitted also papers—statements.

Q. What was the first paper of that kind that you remember of?

A. I would have to look over my memorandum before I could give any correct reply; they were considered, as much as I know, to be kept by Mr. Smith, who acted as secretary.

Q. By that you refer to what?

A. The minutes of the daily proceedings.

Q. In addition to the minutes, were there statements of valuation?

A. I took a copy for myself from the statements; the same as you find submitted from them; mine is only a copy for myself.

Q. When was that?

(Witness here presented a book to the counsel.)

Mr. TREMAIN: Witness produces a book and states that it is a copy which he retained for himself.

The WITNESS: The different values of the Metropolitan Company—the property and values as they existed before the consolidation.

8935 Q. And according to the schedules that have been submitted here?

A. I am not positive that every thing has been agreed finally as to the value to the same point, but I suppose it was.

Q. I wish to ask your best recollection about any plans of consolidation that you remember having seen or heard read anterior to the preparation of these schedules?

A. There were so many, and I have differed with so many, that I don't know exactly which were adopted from time to time; the minutes must show all that.

Q. The minute-book of the pooling committee shows that there was before the consideration of the committee with a view to consolidation in the year 1884, and also in the year 1883, one or more plans of consolidation—do you remember that?

A. Yes, sir.

Q. Do you remember who had those writings—was it not Mr. Smith?

A. Mr. Smith.

Q. Have you personally any of those writings or plans, or copies of them?

A. I may have; I don't know for certain; I would have to look over again my drawers or papers.

Q. You understand now what papers I allude to?

A. Yes, sir; it must show them to be in the hands of Mr. Smith; he has been secretary of that committee.

Q. If you have any copies you will produce them subsequently?

A. Yes, sir.

Q. Will you please refresh your recollection by looking at Exhibit "C 1," and say whether you have ever seen that before? (Book shown witness.)

A. I suppose that is an exact duplicate.

Q. Of what you have produced?

A. I suppose so.

Q. Have you Mr. Rowland's certificate?

A. I think we have; I must see my son who keeps those 8936 papers; I suppose it was given either at the office of the Consolidated or in the office of the Metropolitan branch; I think it is correct in the duplicate, as much as I recollect.

Q. I observe exhibit "C 1" bears date August 5, 1884, and Exhibit "C 2," a recapitulation of it, bears similar date?

A. Yes, sir.

Q. Do you remember how long before August, 1884, these schedules were prepared with a view to consolidation?

A. For several months; I could not agree at once—they negotiated for several months, but I couldn't tell exactly for how long.

Q. The schedules that were the subject-matter for final consolidation were prepared several months prior to August, 1884?

A. Negotiating or agreed about—agreed on one part and then another part; in that way.

Q. Agreed on different items?

A. Yes, sir; one company and then another company.

Q. The schedules of the companies were agreed upon several months before they were acted upon in November?

A. Yes, sir.

Q. They were the subject-matter of negotiation?

A. Yes, sir.

Q. Was not each company informed of the properties of each of the other companies by these schedules in whole or in part, for the purpose of consolidation?

A. Yes, sir.

Q. Were they not informed also of their values?

A. Yes, sir, in the same way.

Q. Do you now remember that that was the case as early as the year 1883?

A. I could not possibly say; maybe the negotiation was planned unknown to me for a long time, but I couldn't say how long.

Q. Allow me to refresh your recollection by calling your attention to a part of the proceedings at a meeting of the pooling 8937 committee in December, 1883. (Reading from a resolution.) Can you now not say that the schedules as the basis for consolidation exhibiting the properties and their values, were prepared during the year 1883, and submitted?

A. A similar resolution was passed at the pooling committee, and the minutes ought to show it.

Q. These are the minutes?

A. I know that such a thing was passed, but I don't recollect the date.

Q. When that resolution was passed had not these schedules been prepared?

A. I don't think so; I think they were afterward prepared.

Q. Had not something been prepared exhibiting the values of the properties of the various companies?

A. Maybe; I don't know exactly when; a great many statements were submitted and we could not agree upon them, and then they would come up again until they were finally agreed upon.

Q. When were they finally agreed upon—was it when this resolution was passed?

A. There was a resolution that we should try to consolidate but there was no values fixed; nothing of that kind; nor particulars arranged.

Q. With that exception it was substantially agreed upon in December, 1883?

A. I did not consider it agreed upon until I consented to it and I never consented to it except on the final.

Q. Please look at Exhibit "C 2," and tell me whose writing that is?

A. A part of it is my writing.

Q. What is that paper?

A. A preliminary paper; whether this was adopted or not I couldn't say without comparing notes together; at home; but this paper was submitted.

Q. It was dated August, 1884.

(By Senator Robinson:)

8938 Q. Did not other companies submit the same kind of figures to you during 1883?

A. I suppose so; I have not the least doubt but they did.

Q. And submitted them to your company?

A. No, sir; to the pooling committee.

Q. Of which your company had a representative?

A. Yes, sir.

Q. This estimate of their value of the different companies was submitted to the pooling committee as early as 1883?

A. Yes, sir; this is August, 1884.

(By Senator Robinson:)

Q. Is it your recollection that that is the first paper that you submitted to this pooling committee?

A. No, sir; from time to time I submitted one or another; this is only one; I don't know whether we had some before or after.

Q. This was submitted in August, 1884?

A. Yes, sir.

Q. Whether or not you submitted any of that kind before August, 1884?

A. I couldn't tell; I would have to look over the papers.

Q. I find on another exhibit that you had a meeting as early as 1883; I find you was present at a meeting in December, 1883, for a plan of consolidation of these companies?

A. Yes, sir; I was present.

Q. Up to that time had not you drawn some of these schedules, or these proposed schedules, to take with you to some of those meetings?

A. I suppose so; I have not the least doubt of it.

Q. Did not others bring some too?

A. Yes, sir; but they took them back again.

Q. They brought them there to make a basis?

A. Yes, sir; most every one did bring them.

Q. What became of those papers?

8939 A. Some of them we left there; the others,—a great many took them back again with them; changed them from one meeting to another.

(By the CHAIRMAN:)

Q. Did you submit a number of schedules of this sort and leave them with the secretary of the pooling committee?

A. As a general thing, we left them there; it was only a preliminary paper; I think they were all left with the secretary.

Q. Would you expect him to have them now?

A. Yes, sir; if they were in my hands I would have them?

Q. Who valued your real estate, finally?

A. Mr. Rowland.

Q. No, the real estate?

A. Mr. Lewis J. Phillips.

Q. Who valued the real estate of the Manhattan?

A. I couldn't tell exactly who did; informally we had it also done.

Q. Who valued the real estate of the New York and Harlem?

A. I really couldn't say; we had different estimates submitted, and finally they submitted one which was adopted; the value for the New York and Manhattan; ours was valued by Mr. Phillips.

Q. Harlem was valued by whom?

A. I don't know.

Q. During those talks in 1883 the total capital of the properties of the consolidated companies was a subject-matter of conference, was it not?

A. Yes, sir.

Q. And that was upon the basis of the Mutual being in the consolidation?

A. Yes, sir.

Q. In respect to the values—who selected these gentlemen to make the valuations?

A. I think each company had its own selection.

Q. When was it first proposed that they should be appraised?

8940 A. The minutes must show that; the minutes of the pooling committee must be there.

Q. The minutes of the pooling committee don't show any agreement in respect to appraisements; they do show that in December, 1883, it was agreed that they should consolidate and "that the plan for consolidation accepted by the committee be referred as a basis to the committee of one from each company to report a plan in full detail for the consolidation of all the companies, with power to call in legal counsel;" that was at a meeting held in December, 1883; don't you remember some occurrences, during the year 1884, in respect to appraisements of the property?

A. I recollect that it was agreed that we should have one man to appraise one style of gas works and another one to appraise the other style of gas works—I mean coal gas works and water gas works.

Q. About when was that understanding arrived at?

A. I couldn't tell exactly when, but I suppose about March or April.

Q. Who were named as competent men for that purpose?

A. We named William Palmer—our company named him; and others proposed Mr. Rowland; I think it was left to each one of the companies; for instance, the Mutual did not employ either of these two.

Q. Whom did they employ?

A. I couldn't tell; they submitted that this is the statement, and that no other shall stand.

Q. Kennedy submitted such a statement?

A. Yes, sir; their own valuation.

Q. That valuation included all the real estate and plant?

A. Yes, sir; I think so; as much as I know.

Q. You remember about when that was?

A. That was either June or July probably.

8941 Q. How did it happen that Rowland finally appraised the Metropolitan property after you had proposed Palmer?

A. Palmer could not get through so quick as the other; it took a great deal more time, and the company wanted to finish the business quicker.

Q. What gentlemen wanted to finish the business quicker?

A. All of them, I think; most of them; I couldn't exactly recollect; Mr. Palmer appraised the Manhattan too.

Q. He appraised the gas plant of the Manhattan, did he not?

A. Yes, sir.

Q. What else did he do?

A. I don't know whether anybody else did it, but he did it just as I know.

Q. Did you see his appraisement?

A. I saw part of it; not the full; I never saw it completed.

Q. In whose hands did you see it?

A. At the time of the meeting it was submitted.

Q. What meeting?

A. The meeting of the pooling committee.

Q. Do you remember its date?

A. I couldn't tell by heart.

Q. Do you remember the basis by which the value of the rights and franchises, so-called, were arrived at?

A. I don't recollect exactly how; partly by value of stocks as they sold; but I don't know what else.

Q. Don't you think that the price of gas is capable of being cheapened, or likely to be cheapened to consumers of the city, by maintaining this consolidation?

A. I am not sufficiently a judge, but I think competition is always the best thing.

Q. Then this has a tendency to destroy competition?

A. To make it cheaper.

Q. It tends to destroy competition, does it not?

A. Yes, sir.

8942 Q. Do you remember the value of your Metropolitan stock —I mean its salable value in 1884—about what it was worth?

A. It sold at 245 and higher; I bought it myself at 245 100 shares —I paid that for 100 shares; it was before the consolidation; I could not give the date of it.

Q. What was the business advantage, in your opinion, for the Metropolitan to enter into this consolidation upon the basis it did enter it?

A. I may be prejudiced, but I say none whatever.

Q. If, independent of your interests as stockholder or as a director in the Metropolitan, you can express an opinion, what is the public benefit to the gas consumers in the city of New York in entering into this consolidation?

A. That it may prevent too often interrupting the streets by the laying of mains by small companies.

Q. That is all the substantial benefit?

A. That is the main benefit, I think.

Q. In your opinion, by that consolidation was the price of gas to consumers likely to be cheapened?

A. I could not possibly decide on that.

Q. If 100 shares of the Metropolitan stock at the time, or about the time of this consolidation, were worth 250, and 100 shares of the Consolidated stock were worth the price of eighty-four, and the Consolidated was given for the Metropolitan at the rate of 260, as it appears it was given according to the books, there would appear to have been a loss of over $3,000 on 100 shares of stock?

A. Yes, sir.

Q. At the price at that time?

A. Yes, sir, and that has actually been the fact.

Q. In that respect the Metropolitan stockholders at that time were the losers?

A. So far; yes, sir.

Q. Why under those circumstances, and under the circumstances you have already described, did you as an officer of the Metro-
8943 politan, execute this consolidation agreement?

A. Well, I thought that the majority of my directors—their judgment should be mine.

Q. Have you made any propositions or efforts toward inducing the Consolidated Company to lower the price of gas?

A. In a general way.

Q. Has that subject been under consideration by the Consolidated Company at any of the meetings of its directors or its committees?

A. You mean of the original committees, for instance, like myself, selected for the Metropolitan, or the conference pool.

Q. I am speaking since November, 1884; has that been a topic of consideration by any of the directors of the Consolidated or its committees, informally or formally?

A. Yes, sir.

Q. Have any papers been prepared or submitted to any of the directors or officers of the Consolidated Company on that subject?

A. It was moved in conference in the meeting to reduce the price to 175, and to 150 to large consumers, and was passed and adopted.

Q. That appears by the minutes of the Board?

A. Yes, sir.

Q. That does not change the price that previously prevailed, does it, 150 to large consumers?

A. That has been adopted since the consolidation.

Q. That was done in November, 1884, and immediately after the consolidation?

A. Yes, sir.

Q. What was the reason that the price should be lower to large consumers than it was to the general public?

A. It was more advantageous to furnish large consumers; it requires only one meter and one service to a large consumer and the same to small consumers.

Q. Does that make a difference of sixteen per cent. in the
8944 saving?

A. I don't know whether it is exactly sixteen per cent., but it is decidedly a saving; and it would be cheaper to the company to furnish the big ones at 150 than the small ones at 175.

Q. Immediately after the consolidation has there been up to the present time any consideration by the directors of the Consolidated Company, or by its committee, formally or informally, any proposition to reduce the price of gas still further?

A. It was mentioned but no action taken.

Q. When was it mentioned?

A. I couldn't give you any dates—perhaps two months ago.

Q. Who opposed it—anybody?

A. I couldn't tell you.

Q. Who favored it, if anybody?

A. I don't remember; it was not passed; that is the majority was not in favor of it.

(By the CHAIRMAN:)

Q. You don't remember who favored it or who opposed it?

A. I don't remember; no decided action was taken.

Q. The majority was against it?

A. No action was taken; it was left uncompleted.

Q. What was the reason that there is no note of that consideration found upon the minutes of the board?

A. It was only perhaps a motion made and considered and not in regular shape.

Q. At a meeting of the board of directors, held July 22, 1885, which is found on page 28 of the minutes of the board, I find a resolution:

"Mr. Zollikoffer offered the following:

" '*Resolved*, That that portion of the minutes that it is not expedient that the secretary should furnish copies of the minutes to any
person or officers of this company, offered by Mr. Sloan and
8945 passed by the executive committee on the 7th of July, be
stricken out; said resolution having been offered and adopted in violation of my rights as an officer and chairman of the executive committee and denying me such information as I think necessary for the discharge of my duties,' which on motion was laid upon the table."

Q. Do you remember an occurrence of that kind?

A. I should say so.

Q. What was the occasion of it?

A. I wanted to take copies of the minutes myself.

Q. Who didn't want you to take copies?

A. I think Mr. Sloan; I don't recollect who it was.

Q. Did you take copies finally?

A. I was forbidden; I did not take any since.

Q. Are you the chairman of the executive committee?

A. Yes, sir.

Q. Can't you take copies of the minutes of your own committee?

A. It appears not; I have not taken any legal steps to ascertain.

Q. Have you read the minutes of that committee?

A. I read them always.

Q. Do they tell of the proceedings of the committee?

A. I suppose so; I never saw any thing that was missing; they always submitted them to me.

Q. In the minutes of the executive committee concerning a meeting held July 7, 1885, at page 41, it is recorded, "moved and seconded that it is not expedient that the secretary should furnish copies of the minutes to any person or officer of this company," which was carried, Zollikoffer protesting and voting in the negative; do you remember that occurrence?

A. Yes, sir.

Q. Was there any debate on that subject?

A. Well, there was a short debate; I expressed my views.

Q. Who expressed any other views?

8946 A. I couldn't tell exactly who it was; several made remarks that it was not expedient; I didn't ask them to give me the minutes; I took them myself.

Q. Did they say why it was not expedient?

A. No, sir.

Q. Were Mr. Francklyn and Mr. Lees present?

A. I don't remember.

Q. It appears from the minutes that Messrs. Francklyn, Lees, Rutter, Sloan, Smith and Zollikoffer were present; do you remember of any papers whatever being submitted to the board of directors of the Consolidated Company touching the price of gas, or a proposition to lower it, or a proposition to cheapen the cost of its manufacture and supply—any papers whatever on those topics?

A. When?

Q. Since November, 1884?

A. It was discussed; I don't recollect any papers with it; there might be.

Q. Do you not remember some papers having been prepared and submitted specially on that subject?

A. I do not recollect it.

Q. Have you attended all the meetings of the board?

A. Except one.

Q. And of the executive committee?

A. Every one, I suppose; there might be one or so that I did not.

Q. In your opinion, are the gas consumers of the city in any way benefited by the increased capitalization which has attended this consolidation?

A. I can't say positively that they are; I am not positive about it.

Q. Assuming the necessity of paying dividends upon this enlarged capital, is there any probability, so long as it stands, in your opinion, of the price of gas to consumers becoming smaller?

A. Well, it depends on further competition.

8947 Q. If the consolidated companies met with further competition you mean to say it may be obliged to reduce the price of gas?

A. Yes, sir.

Q. The dividends then will disappear?

A. Well, in my view of it.

Q. So long as there is no competition and dividends are declared upon this enlarged capital there is no probability that the price of gas will be reduced, is there?

A. Well, the increase of gas consumers will be enormous, and therefore it would increase in proportion with the capital; it would not be too small in proportion.

Q. If the increase should be very great—I mean the increase of consumption, more works would be necessary, would they not?

A. Yes, sir.

Q. And it would require larger capital to build them?

A. The present capital would be large enough to build more works.

Q. You mean out of the working capital?

A. Yes, sir.

Q. You mean to say that sufficient stock has been reserved and issued to Mr. Smith, treasurer, for that purpose?

A. No, sir; I mean that the capital is large enough.

Q. You mean the nominal capital of the Consolidated Company is largely in excess of that which is required to meet the present demand of gas consumers in the city of New York—that is true?

A. I don't take it that way; I don't think I am a sufficient judge of that.

Q. You have said, however, you think that the capital is adequate—is not that on the presumption that some of it may be made available for increasing the works?

A. I think the capital is large enough to increase the works to a much larger production.

8948 Q. Are you aware that all of the capital has been issued except what has been reserved for working capital, and held by Treasurer Smith?

A. I suppose that is kept as a reserve for future increase.

Q. Is not that for future indebtedness of the company, $1,303,000?

A. Expressly reserved for future increase, I suppose.

Q. Don't you know that the only part of this entire capital that is reserved for the possible future wants over and above indebtedness is $1,303,000?

A. It was so at first.

Q. Has that been increased in any way since?

A. Not that I know of.

Q. No stockholders have contributed to that fund?

A. No, sir.

Q. So that any possible sum that may be utilized for the enlargement of the gas-producing works for the Consolidated Company without increased capital is in this sum of $1,303,000?

A. As much as I know that is so.

Q. Do you mean to say in your opinion that that sum is sufficient to enlarge the works, and for the probable expenditures necessary in this city for gas for many years to come, and to build additional works and gas plant?

A. In all those things it depends very much on what kind of a demand there will be; I think the whole property and everything is sufficient for a large increase.

Q. Do you remember any report of the committee on works and manufacture to the board of directors of the Consolidated on the subject of reducing the cost of gas?

A. No, I don't recollect any; it was mentioned repeatedly I guess, only on discussion.

8949 Q. Do you know of any curtailing of the expenses in conducting the business which has been conducted by the constituent companies that has been attained by reason of this consolidation?

A. Well, I think they have made reductions.

Q. Of what character?

A. At one branch—the Harlem gas works being abandoned in order to save some repairs and expenses and—we have had the intention to do some more.

Q. Of the same sort?

A. The same thing; to have some of the plant given up.

Q. Why should not such property as that then be sold?

A. There are two reasons; one is if there was hereafter an increase they would be very glad to have it again; then it is difficult for a gas company to buy land where it is known it is going to be used for a gas company; every owner asks enormous prices for it; they don't wish to have gas companies adjoining.

Q. Do you not think that if the Metropolitan Company were left alone in the conduct of their business as it was conducted before the consolidation that they could have paid a reasonable dividend to their stockholders and reduced the price of gas to consumers below what it can possibly be had of the Consolidated, with profit to that company?

A. Well, I could not exactly say anything positive about that; I might have that impression, and I have that impression; but there are a great many that always interfere in a business of that kind; I mean fresh competition in one locality where another one is already located brings down the price; therefore my opinion is always that competition is always the sole life of business, and that it is the only thing that brings it to a standard.

Q. Assuming that you had a fair production?

A. I don't know what is fair.

8950 Q. Assuming you had such a production as would enable you to supply the territory to be supplied, exclusive from interference by any other company?

A. We have had a great many ups and downs already in our company; that shows me that it is uncertain what you can do.

Q. In your opinion is the price of gas likely to be any cheaper by this consolidation than it would have been if continued in the Metropolitan?

A. I suppose not.

Q. Have you no memorandum whatever, or has any officer of the Metropolitan any memorandum relating to the basis of consolidation?

A. We must have, because we submitted it to our board.

Q. Will you bring such a memorandum before the committee?

A. Yes, sir; we have the same in the general office.

Q. Any memorandum relating to the consolidation which was submitted to the board. Will the books of the Metropolitan Company show the cost of its plant and real estate?

A. The cost and expense from time to time was added to it; yes, sir.

Q. Your company bought some of the property of the Manhattan, did it not?

A. Yes, sir.

Q. What year was that?

A. Eighteen hundred and fifty-nine, I think, or 1860.

Q. Eighteen hundred and sixty-three?

A. Yes, sir; perhaps so.

Q. It was paid for in stock?

A. Yes, sir.

Q. Of the Metropolitan?

A. Yes, sir.

Q. Issued at par?

A. Yes, sir; it was then at fifty cents.

Q. They took it at fifty cents on the dollar?

A. Something like that.

Q. The price of the property was fixed on that basis?

A. I think so.

Q. Also the bonds?

A. Par, cash.

Q. Was not that cash raised by the bonds?

A. No, sir; we had no bonds at that time.

8951 Q. Was not there a bond and mortgage of $165,000?

A. There was a mortgage.

Q. That was turned into cash?

A. Yes, sir.

Q. They were all paid finally?

A. Yes, sir.

Q. That stock became par and over?

A. Yes, sir.

Q. And it was held by the Manhattan Company?

A. It was divided between the stockholders of the Manhattan Company.

Q. Do you know how it was divided?

A. We bought from them all their services and meters in our district, and that was a consideration, and paid in a mortgage bond.

Q. Do you know the total?

A. I couldn't say.

Q. One million one hundred and seventy-eight thousand dollars for stock?

A. Yes, sir.

Q. Was not that stock sold and divided among the stockholders of the Manhattan?

A. It was delivered to them; what was done after that I don't know.

Q. What was the cost of the property thus sold to the Manhattan?

A. I think the amount of what you mean was $1,178,000.

Q. That property did not cost $1,178,000?

A. Yes, sir.

Q. Is not it a matter of fact it did not cost the company but $600,000?

A. Our company?

Q. Yes.

A. I don't think so.

Q. Please look at your books and see if that is not so. The expert thinks that that is the substance of that transaction.

A. All the meters and the services and pipes that we bought from the Manhattan Company were valued at so much, and then the real estate was valued at a certain amount, and then we had to sell the stock at the then market value.

8952 Q. The cost of that property, on the books of the Metropolitan which was thus transferred, being part of the gas producing plant and real estate of the Manhattan, was $685,301.02; that is made up of real estate, $105,000; Sixty-fifth street station, $213,000; mains, services and pipes, $327,500; also meters, etc., $34,801, making in all $685,301.02—that is what the Manhattan charged the Metropolitan for that property; $1,178,000 was paid for it by a bond and mortgage. What do you know about the $500,000?

A. The stock sold at fifty cents in the market, and by and by it increased its value.

Q. Where is the difference charged to?

A. We had no authority then to issue so much stock; it was in order to have peace with the company.

Q. Was not the difference charged to construction account?

A. I couldn't tell you; most likely it was charged to somewhere.

Q. That increased the cost of the works just to that extent?

A. Yes, sir; but we afterward reduced the cost of carrying on the works, and kept them in repair, and we made the full value up; the business of the company was carefully managed, and had increased in value.

Q. Who got the benefit of this $500,000 of stock—the Manhattan stockholders?

A. Yes, sir; at first.

Q. Did your company get it in any way?

A. It remained in our company.

Q. That $500,000 was added to the value of their plant and real estate when it went into this Consolidated Company?

A. Long before; it made their capital so much more.

Q. When you added betterments to that plant you charged those as they were made from time to time also against cost of construction?

A. Whatever was entirely new we charged to construction account, and we put some to repair account.

8953 Mr. TREMAIN: I think it would save a little time if Mr. Zollikoffer will get those memorandums he has been asked about now.

Q. Have you a sufficient memory of all the things we have asked you for?

A. I wish you would write down what you want.

The witness' examination was here suspended.

Recess to 2:30 o'clock.

Hearing Resumed.

NEW YORK, *Nov.* 25, 1885, 2 p. m.

PERCY R. PYNE, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are a director of the Consolidated Company?

A. Yes, sir.

Q. What of its constituent companies were you interested in?

A. In the Manhattan and the New York.

Q. You were one of the directors of the Manhattan?

A. Yes, sir.

Q. And of the New York also?

A. Yes, sir.

Q. You are a member of the finance committee of the Consolidated Company?

A. Yes, sir.

Q. And of the executive committee?

A. No, sir.

Q. You were also represented in the Metropolitan?

A. As a shareholder I had an interest.

Q. You were one of its directors?

A. For many years prior to its consolidation.

Q. You were in the board of direction of the Manhattan?

A. Yes, sir.

Q. And of the New York?

A. Yes, sir.

Q. You are familiar with the details of the consolidation from 1880 to 1884?

A. Yes, sir.

8954 Q. You know about the discussions preceding the consolidation?

A. Yes, sir.

Q. Have you any memorandums relating to those discussions or to the basis of them?

A. No, sir.

Q. Did you ever have any?

A. No.

Q. Have you any reports of committees upon that subject of consolidation?

A. No, sir.

Q. Never had any?

A. No, sir; I understand you as to the formation of the company?

Q. Have you any papers at all relating to the subject-matter of consolidation?

A. No, sir, I have papers relating to the carrying out the work of the present organization of the company and its working details since last November.

Q. Have you any memoranda whatever on the subject of consolidation?

A. None whatever.

Q. Made prior to November last?

A. No, sir.

Q. Did you ever have any?

A. No, sir.

Q. Did you ever see any such papers?

A. No, sir.

Q. Were none ever submitted to the board of directors of the Manhattan Company?

A. I have no recollection personally; the terms of the consolidation were submitted to the board, and they were then submitted to the stockholders; the articles of agreement of consolidation were acted upon by the respective boards—acted upon by the committee on consolidation; they came to the respective boards and then they were submitted to the stockholders.

Q. Was there not a committee on consolidation appointed by the Manhattan board?

A. Yes, sir.

Q. When was that appointed?

A. This was long ago; I could not give the date.

Q. About 1880 or 1881?

A. I would not give the exact year; I don't remember.

8955 Q. Your best recollection?

A. I have not any.

Q. Is it not true that that subject-matter was before the board, particularly after the pooling agreement was formed, and frequently thereafter—the subject of consolidation?

A. The committee reported substantial progress but reported verbally.

Q. Didn't that committee report as early as during the year 1883?

A. Not as a finality; the reports were continuous; they reported progress over and over again.

Q. In 1883?

A. I could not tell you.

Q. It was a year or two prior to the consolidation?

A. Some time.

Q. Were any of those reports in writing?

A. All the reports which I have recollection of were verbal.

Q. Have you any recollection whatever of any report in writing?

A. The first report I recollect any thing about was the report of the committee on consolidation, which came to us in a shape for us to act upon and vote.

Q. I find in the records of the meeting of December, 1883, a note of a plan of consolidation which had been accepted by the committee, and which was referred to another sub-committee, as a basis for a consolidation. Does that refresh your memory?

A. No, I can't say that it does.

Q. Are you perfectly sure that no paper was ever presented to the board of directors on that subject prior to the fall of 1884?

A. I have no recollection of it.

Q. Have you any recollection substantially of any of those verbal reports that were made by the committee on consolidation to the board of directors of the Manhattan Company at any time prior to the year 1884?

A. I recollect that reports were made verbally.

8956 (By the CHAIRMAN:)

Q. Have you any recollection?

A. I have none; I have no special recollection with reference to it.

Q. Who is the individual that ever made such a report at any time to your recollection?

A. It was made by the members of the committee, I think Mr. Smith and Gen. Roome.

Q. To the best of your recollection, then, no report was made to the board of directors of the Manhattan Company prior to the fall of 1884 upon the subject of consolidation except a verbal report, and such reports were made by Mr. Smith or Gen. Roome?

A. Yes, sir.

Q. Is there any member of the board of directors who would be specially familiar with the substance of such reports, other than Mr. Smith or Gen. Roome, to whom you would refer the committee for that?

A. The report at large? I can't particularize any one; the board had appointed their committee to refer—the reports being made at the general meeting of the board; I can't remember.

Q. Have you any information yourself as to the basis on which the agreement of consolidation was arrived at prior to the summer of 1884?

A. No information except what is set forth in the articles of agreement.

Q. You did not have any thing else except that relating to the basis—I mean the formal articles of agreement?

A. Those are the only ones we ever assented to.

Q. Was any thing ever said upon the subject of the total capital for a consolidation prior to November, 1884?

A. Yes, sir.

Q. As a matter of time when did you first hear that broached?

A. I should think about a month before that.

8957 Q. Don't you know the papers were dated September 29?

A. No, sir.

Q. Don't you know, as a matter of fact, that the subject-matter of capital was discussed early in that year?

A. I was not on the adjusting committee; I could not tell; all my relation to it was in the board.

Q. Was it ever discussed with you except in the board?

A. No, sir.

Q. Did you ever hear that subject-matter discussed except in the board?

A. Yes, sir; certainly.

Q. You had heard the subject-matter of consolidation mentioned, and you had urged it for years?

A. Yes, sir.

Q. During all that period was the subject-matter of capitalization ever alluded to?

A. I could not tell you.

Q. During the period that you had heard this subject discussed touching consolidation you had heard the subject of capitalization alluded to?

A. Yes, sir.

Q. By whom?

A. The members of the board; I said as near as it could be done I was in favor of it on equitable grounds.

Q. Do you remember a plan of capitalization alluded to?

A. In detail?

Q. You know what a plan means?

A. Yes, sir.

Q. Did you hear a plan of capitalization alluded to?

A. Yes, sir.

Q. What plan did you hear first?

A. The only plan I heard was the capitalization of the company upon an equitable basis in regard to the value of its properties.

(By the CHAIRMAN:)

Q. Did you hear any thing said during the period referred to by Mr. Tremain, as to what would be an equitable plan or basis of valuation?

A. No, sir.

8958 Q. When did you first hear any thing respecting a plan of valuation?

A. On the report of the committee it came to me.

Q. Was that report in writing?

A. I mean the articles—the terms which the committee agreed upon and brought to the board for action.

Q. Was there ever any report in writing signed by any of the board of directors?

A. As an agreement of consolidation?

Q. Was there ever any report in writing signed by any of the board of directors?

A. I have no knowledge of any.

Q. So far as you know this last scheme, resulting in the agreement of consolidation, arrived at its perfection in the articles of agreement with out any preliminary papers whatever that ever came before the Manhattan or to your information?

A. Yes, sir.

(By the Chairman:)

Q. Relating either to the valuation or the method of making it; is that true?

A. I heard general desultory remarks or conversation, and nothing else.

(By the Chairman:)

Q. You say you never saw any preliminary plan of consolidation or valuation in respect to either its amount or the method by which it should be reached?

A. I heard from the committees from time to time their report of progress; that's all I heard on the subject.

Q. When is the first time you heard any figures named in that connection?

A. On the report of the committee to the board.

Q. Did you ever consider whether $3,000,000 was a proper and fair valuation for the property, rights and franchises of the Harlem Company?

A. That was considered by the committee and not by me.

8959 Q. Did you ever consider whether $3,000,000 was a proper and fair valuation for the property, rights and franchises of the Harlem Company?

A. I considered it so; the committee reported that they had investigated and I believed it to be correct.

Q. You considered it to be so at that time?

A. Yes, sir.

Q. And not before that?

A. I had no knowledge of that company except through the committee.

Q. You mean to say that prior to the time in November?

A. Or when the committee reported.

Q. You had no knowledge of the values upon which the consolidation was proposed to be based?

A. No knowledge.

Q. No knowledge or information?

A. No.

Q. Did you ever see such papers for instance as Exhibit C. "I." (paper presented to witness)?

A. I believe I never saw that paper.

Q. Did you ever see a paper similar to this, representing the properties of the companies?

A. I have no recollection; I was not on that committee.

Q. You voted to consolidate with a capital of the amount of the fair aggregate value of the property, rights and franchises of the constituent companies?

A. I did most emphatically.

Q. As an item of that capitalization it appears that for the property, rights and franchises $7,781,000 of the capital has been awarded out of a total of $39,078,000. Will you please state to the committee what in your opinion, as a director of the Manhattan and as a director of the Consolidated, that part of the capitalization is based upon?

A. I think the valuation of the franchises made by the committee
and by comparison with what I got for my own stock, which
8960 I certainly would not have sold for less than I got stock for—
I mean my old stock in the old company—I would not have
sold my stock that day for what I got out of the Consolidated Company.

The Chairman: That is not responsive.

Mr. Tremain: I think the answer better stand and let the question be repeated to him; he was asked for his opinion; have you any other answer to give, asking for your own opinion?

A. When I saw the adjustment which was made upon those different companies coming in, those which I had personal knowledge of, I considered they put in but fair valuations, including their property, rights and franchises; I could have sold my old stock for more than I got in the Consolidated when I got it.

Q. You think the valuation was brought up to the market value of the Manhattan stock?

A. It represented it but I didn't think it was brought up in the sense in which you mean it; it represented it.

Q. You think the valuation was brought up to the market value of the Manhattan stock?

A. No, sir; it corresponded nearly with the value, the market value of the stock at the time of consolidation.

Q. Do you mean to say inasmuch as the stock of the Manhattan was at that time worth about 320 in the market, that for that reason the capital was so adjusted that you should receive for the new stock at the rate of 298 and ½ for one share of Manhattan?

A. I did not get that; it was worth 320.

The Chairman: That is not an answer; repeat the question.

Q. Do you mean to say inasmuch as the stock of the Man-
8961 hattan was at that time worth about 320 in the market, that
for that reason the capital was so adjusted that you should
receive for the new stock at the rate of 298 and ½ for one share of the Manhattan?

A. I did not receive it so.

Q. That is not what you mean to say?

A. The valuation appeared to me to be fair.

The Chairman: Repeat the question.

Q. Do you mean to say inasmuch as the stock of the Manhattan was at that time worth about 320 in the market, that for that reason the capital was so adjusted that you should receive for the new stock at the rate of 298 and 1-2 for one share of the Manhattan?

A. I don't mean that it was or *ought* up to that; it was not brought up to meet a market value, but a valuation of course; it did correspond to the market value.

The CHAIRMAN: Then you do not mean to be understood just that way; repeat the question.

Q. Do you mean to say inasmuch as the stock of the Manhattan was at that time worth about 320 in the market, that for that reason the capital was so adjusted that you should receive for the new stock at the rate of 298 and 1-2 for one share of the Manhattan?

A. No, sir; I don't say so.

Q. Was the stock, at that time, worth 320 in the market?

A. I don't know; it may have been so; I think the value of the stock was in the neighborhood of 300.

Q. When?

A. Long in the early part of 1884.

Q. When was it 320?

A. I don't know; I have got my stock and that is all I know about it; I couldn't tell whether it was up or down.

Q. Assuming the value of the Manhattan stock at that time to have been 300, and that you received, as appears by the books, 298 and 1-2 in shares of the new stock for the old, and that the new
stock at that time was worth as it appears to have been
8962 quoted at eighty-four; it appears, therefore, by such a trans-
action to be a loss on one share by the transfer, or about $50;
will you please tell the committee where there was any profit to yourself as a stockholder of the Manhattan?

A. There was none.

Q. Was there ever any consideration, as a stockholder, to do it?

A. No, sir.

Q. Were there any public reasons that influenced your action as a member of the board of directors of the Manhattan Company in accomplishing this consolidation?

A. As a member of the board of directors there was unquestionably.

Q. What public advantage then appeared likely from this recapitulation of $17,000,000 to about $39,000,000?

A. To reduce the price of gas.

Q. Now, will you please state to the committee how, in your opinion, the price of gas to consumers was to be reduced by this enlargement of capital from the capital stock of the constituent companies, which was then $17,000,000, to a capital represented by $39,000,000 in the consolidation?

A. The original capital being simply nominal the values were transferred at a fair price to the Consolidated Company; I mean to say this, that unless we could take some measures to check the constant tendency for new additional gas companies, with new capital, that we never would get the price of gas down.

Q. If you didn't prevent competition it would be impossible to reduce the price of gas?

A. Yes, sir.

Q. You thought that by creating a monopoly for furnishing it that, therefore, the price would be low?

A. We could not create a monopoly; it is the constant addition of capital to keep the price up.

8963 Q. In your opinion is not a reasonable dividend a fair element in the cost of gas?

A. Certainly.

Q. Do you think that the companies forming the constituent companies, at the time of this consolidation, and which appeared to be capitalized at a nominal capital of $17,000,000, were paying enough to make it a reasonable dividend?

A. Yes, on the value of the property; not on the nominal capital.

Q. Do you think there was being paid in 1884 a fair dividend on the $17,000,000 of gas capital represented by the share capital of these constituent companies?

A. Taking that capital at the market price I do.

Q. Do you think that there was being paid in 1884 a fair dividend on the $17,000,000 of gas capital represented by the share capital of the constituent companies?

A. Certainly.

Q. Will you say it tended to lower the price of gas by necessitating as an element of its cost a dividend on a nominal share capital of $39,000,000 instead of $17,000,000?

A. That capital representing the value, and with an element of competition from time to time, I do.

Q. Do I understand you to say that you think it is a fair element in the cost of gas to include a dividend upon the difference between the share capital of $17,000,000 of the constituent companies then represented and the share capital of $30,078,000?

A. If the share capital represents the actual capital I do.

Q. Do you think it is a fair element in the cost of gas to charge the public with a dividend upon the accretions of value which you say existed between $17,000,000 and $39,000,000 because of the absence of competition?

A. The reduction of the dividend being made equal to it I do.

8964 Q. What in your opinion would be a fair and reasonable dividend upon the actual capital invested in a gas plant?

A. In the gas plant, the gas process being constantly liable to change, I should think ten per cent. would be considered a reasonable dividend.

(By the Chairman:)

Q. Does the money and the market value at the time of other property, if there be any put into a concern, represent the actual stock of that concern? Would it, or would it not, represent it?

A. I want to answer the question properly; if you say the present market value——

(By the Chairman:)

Q. I mean the question as it is put?

A. It does so in the Consolidated Company.

Q. Does it make any difference whether it was consolidated or not?

A. I mean to say this, if we bought lots forty years ago and paid

$200 a piece for them and could to-day sell them for several thousand dollars $7,000 a piece, that is the value of what they are worth; if you will put it at the present time; I could not answer it; will you say the existing market value instead of at the time? I don't know how to answer it.

(By the CHAIRMAN:)

Q. Would this be your answer: "Yes, it would, plus the increase, if any, of the value of the real estate, if any was put into the concern?"

A. That increase in value and other properties acquired by the company?

Q. What other properties?

A. Mains and meters, and we are putting in new additional mains.

Q. Do you put in better mains than you had before?

A. New; they are calling upon us all the time for new.

8965 Q. My question covers that; does the money and the market value at the time of other property (if there be any put into a concern, represent the actual stock of that concern? Would it or would it not represent it?

A. It would in valuation of real estate and assets.

Q. What do you mean by assets?

A. All the properties of the companies; if the property was bought a great while ago at a low price the present value should be represented.

(By the CHAIRMAN:)

Q. Is the property put into a gas concern the capital of that concern, in your opinion?

A. Yes, sir, provided the valuation is correct.

(By the CHAIRMAN:)

Q. Is the property put into a gas concern the capital of that concern, in your opinion?

A. Of course it is.

Q. Do we understand that in your opinion the capital of a gas company consists of money that was put into that company and the accretions of value of it ensuing therefrom?

A. And the value of its business.

Q. It constitutes a part of its value. Does it constitute a part of its capital—does it constitute the capital?

A. Yes, in connection with its good-will and franchise.

Q. Would not the good-will and franchise be valued separately from the property in ascertaining such capital in that way?

A. I should think so.

Q. How would you value the property if you were going to value it separately from the good-will?

A. At its actual value; I should get appraisers, disinterested men, to look into and report upon it.

8966 Q. And if their appraisement appraised the property upon the condition that it should be used as a going concern at the place of appraisal would you still add the good-will to the value?

A. I would separate it from the business.

Q. And if their appraisement appraised the property upon the condition that it should be used as a going concern at the place of appraisal would you still add the good-will to the value?

A. I would add the franchise.

Q. How would you arrive at the value of the franchise?

A. By examination and appraisal of competent parties.

Q. You held stock in both of these companies for a great many years?

A. Yes, sir.

Q. You are presumed to have some knowledge of the value of the franchises. You assented to this agreement of consolidation for these reasons, as you have explained. What in your opinion is a fair method of ascertaining the value of the franchises of the Manhattan and New York Companies at the time of this consolidation, if they had any so-called franchises?.

A. The report of experts.

Q. Who would be an expert?

A. The officers familiar with the gas business.

Q. And you would not be an expert?

A. No, sir.

Q. Have you any opinion as to the value of the franchise?

A. I think the franchises was valued very low.

Q. Have you any opinion of your own?

A. I have no separate opinion from the valuation arrived at.

Q. You have no opinion of the value of the franchises separate from the business?

A. Separate from the transaction itself; I mean the terms of consolidation.

8967 Q. Have you any independent judgment as to the value of the franchise of the Manhattan on the 10th of February, 1884, apart from whatever other people may have put it—acting upon your own judgment?

A. No; no separate opinion.

Q. Would it be a fair, reasonable method of arriving, in your opinion, at the fair aggregate value of the property, rights and franchises for the purpose of consolidation, and of the Manhattan and New York Companies to value the street mains, valves, etc., at what it would cost to replace them, to value the meters and services according to their size and by well-established rules and prices, and the value of real estate according to what the lots would bring in open market, and the value of the plant according to what it would cost to duplicate it, to be used as a going concern at the place where it is found and appraised; is that way fair in your opinion in arriving at the fair aggregate value of the property, rights and franchises?

A. That is a very difficult question to answer; I am really not competent to judge; incompetent to answer the question.

Q. Have you held that stock in the Manhattan since 1837?

A. No.

Q. You have not held it any year it didn't pay a dividend except one?

A. We have been without dividends *a* considerable of the time;

I was not a stockholder then when it didn't pay a dividend; I am speaking from information.

Q. There is not any year except one that it didn't pay a dividend, which was about forty years ago?

A. I could not say.

Q. What year were you without a dividend?

A. I could not tell.

Q. Whether there was such a time when it didn't pay a dividend?

A. Yes, sir.

8968 Q. When?

A. The beginning of the company, years ago.

Q. For how long a time?

A. I could not tell.

Q. They were organized in 1831 and they have paid a dividend every year except one to the present time; have you thrown all the light that your experience enables you to give upon this subject of capitalization?

A. I would like to give my reasons why I believe it is for the interest of the public to consolidate.

Q. Would it be a fair, reasonable method of arriving, in your opinion, at the fair aggregate value of the property, rights and franchises for the purpose of consolidation and of the Manhattan and New York Companies, to value the street mains, valves, etc., at what it would cost to replace them; to value the meters and services according to their size and by well-established rules and prices; and the value of the real estate according to what the lots would bring in open market, and the value of the plant according to what it would cost to duplicate it, to be used as a going concern at the place where it is found and appraised; is that way fair in your opinion, in arriving at the fair aggregate value of the property, rights and franchises?

A. I wish I were a lawyer so I could tell how to answer the question I am asked.

Q. Is the question obscure?

A. It is on the subject of capitalization.

Q. Would it be a fair, reasonable method of arriving, in your opinion, at the fair aggregate value of the property, rights and franchises for the purpose of consolidation, and of the Manhattan and New York Companies, to value the street mains, valves, etc., at what it would cost to replace them; to value the meters and services according to their size and by well-established rules and 8969 prices, and the value of the real estate according to what the lots would bring in open market; and the value of the plant according to what it would cost to duplicate it, to be used as a going concern at the place where it is found and appraised; is that way, in your opinion, fair in arriving at the fair aggregate value of the property, rights and franchises?

A. Those are not my reasons for capitalization; I have not given my reasons for capitalization.

Q. Is there any thing else you have to say to this committee on the subject of capitalization?

A. Yes, sir.

Q. You cannot separate the price of gas from the subject of capitalization?

A. You cannot reduce the price of gas——

The Chairman: He is asking if there is any thing further you wish to say on the subject of capitalization.

Q. By that I mean the capital which is represented by the share capital of $17,000,000 and the share capital of the Consolidated Company; is there any thing else you desire to say respecting that capitalization?

A. The capitalization of the companies with which I was originally connected, being nominal, is only fairly represented in the capital of the Consolidated Company.

Q. Is it a fact that the share capital of the Manhattan at the time of consolidation which was represented at $4,000,000, was merely nominal?

A. The nominal value of the property it held.

Q. Is not that all the money that was paid in?

A. The value of the property forty years ago and the property as worth to-day is a different thing.

8970 Q. I understand you to say that the capital of the Manhattan as represented by the share capital was merely nominal and to refer to value in 1884?

A. Only nominally represented its value; the share capital of the Manhattan did not represent its true value, which was much greater.

Q. How did it become so much greater than $4,000,000?

A. It became greater by the increased valuation of property from what it was forty years ago.

Q. What increased in value except the real estate?

A. The increase of value in real estate.

Q. What else, if any other?

A. I think you have the books before you and you can tell pretty well.

Q. Is not that the only element of its property that did in fact increase in value during this long period?

A. I think a very large amount that was in construction.

Q. Do you not know that the construction was paid for by the consumers in the price of gas?

A. No, sir. The original construction, do you mean?

Q. I mean all the construction?

A. There was a capital that was not paid by the consumers.

Q. Don't you know it was kept up, and all the repairs and betterments were paid for out of the price of gas; don't you know that fact?

A. Yes, sir; I suppose so.

Q. What other element of the property of the Manhattan Company, except the real estate, became enhanced in value?

A. Its business became greatly of more value.

Q. I speak of property, sir?

A. You cannot separate the company from its franchises and tools any more than you can the carpenter from his hammer. What would the carpenter do without a hammer?

8971 Q. What other element of property of the Manhattan Company, except the real estate, increased in value?

A. That forms the largest portion of the increase.

Q. Do you not know that the taxes and assessments on the real estate were paid for out of the price of gas?

A. Out of the proceeds of the business of the company.

Q. Do you know what the original cost of the real estate was.

A. No, sir.

Q. The original cost of the real estate appears from the books to have been $865,668.51. The real estate appears to have been valued for the purpose of consolidation at $4,000,163. That represents to that extent an increase of the value of the property that you allude to in this so-called nominal capital?

A. That represents the value of the real estate, I suppose, at the time it was made.

Q. Is not that what you mean by nominal capital?

A. Nominal is in the sense of what it stands for; for instance a silver dollar.

Q. It stands for what it cost on the books, does it not?

A. The cost of the real estate of course.

Q. Having shown you one element, as it appears from the papers already in evidence, where the value of property is estimated, as it is claimed to have been seriously enhanced as the basis of this capitalization, is there any other property of the Manhattan that was enhanced above its cost?

A. Yes, sir, I think the cost of construction and the plant very greatly in excess of what it stands there.

Q. Do you think the plant was worth, at the time of the consolidation, more than what it cost?

A. Why, yes.

(By the CHAIRMAN:)

8972 Q. The mains and retorts were worth more?

A. Yes, sir, the whole property.

Q. Worth more than when built, the mains and retorts, is that what you mean?

A Yes, sir.

(By the CHAIRMAN:)

Q. Is the capital of a business concern what is put into it; for instance, a mercantile establishment; is that what it means?

A. I should say yes.

Q. What had been put into the Manhattan Company prior to this consolidation; how much, if any?

A. I have not got the books here for forty years.

Q. You don't know how much?

A. The books will show.

Q. About how much?

A. I can't tell you.

Q. Do you know whether any was put in?

A. The books will show.

Q. Do you know whether any thing had been put into the Manhattan Company prior to this consolidation?

A. I am unable to answer your question.

Q. Now, when you speak of the nominal capital of the Manhattan you don't know then whether that was more or less than its actual capital, do you?

A. That was the amount of its actual stock.

Q. Do you know whether the $4,000,000 was more or less than the actual stock at the time of consolidation?

A. That represented the capital stock.

Q. That is not my question; was $4,000,000 more or less than the actual capital of the Manhattan at the time of this consolidation?

A. That was the actual existing capital stock of the company.

8973 Q. Do you not know as a fact that while $4,000,000 was the nominal capital stock that of that a considerable portion—about $720,000—was not paid in?

A. I don't know; the books will show.

(By the Chairman:)

Q. Do you know whether or not any part of this $4,000,000 of capital stock was derived from the earnings of the company and received therefore from the gas consumers of the city?

A. I have no knowledge of any thing of the kind.

Q. Do you know?

A. I don't and I don't believe so.

Q. Were you a shareholder in 1855?

A. I think so, yes, sir.

Q. Did you receive a script dividend about that time?

A. If you will give me the book I will tell you; the book will show whether I did or not.

(By the Chairman:)

Q. Have you been a shareholder thirty years?

A. About.

Q. Do you remember that there was an act passed by the Legislature authorizing the Manhattan to increase the capital stock from $2,000,000 to -4,000,000?

A. I don't know.

Q. Do you know whether or not you were a member of the company at the time when this capital was $2,000,000 or less?

A. I could tell you by referring to my book but I could not tell you without.

Q. Do you think it would be right for the gas consumers to contribute to the capital stock of the company and then pay enough so that the stockholders should realize say ten per cent. dividend on the capital stock so increased?

A. I don't know of any consumers who have contributed to the capital stock in that way; I think all business is entitled to a fair, reasonable profit.

Q. Do you think it would be right to charge a consuming public

8974 such a price that from the proceeds additions may be made from time to time to the capital stock and then enough to realize what you call a reasonable per cent., say ten per cent. on the capital stock so increased?

A. I don't know of any such contributions being made.

Q. Suppose there were any?

A. It is not a supposable case.

Q. You can't suppose that anybody would be willing to charge in that way; is that what you mean?

A. I don't know that anybody has contributed to the capital stock.

Q. Supposing they had, would it be right?

A. I could not say.

Q. At the time of the consolidation you held 980 shares of the New York, or thereabouts?

A. No, I did not.

Q. You took 980 shares of the new Consolidated Company for your New York holdings?

A. Yes, sir.

Q. You took 975 shares for your holdings in the Manhattan?

A. I can't recollect what I took.

Q. And 80.60-100 for your holdings in the Metropolitan?

A. Yes, sir, I think so.

(By the CHAIRMAN:)

Q. Whether the reduction in the price of gas has been co-existent with the increase of competition?

A. No, sir.

(By Senator MURPHY:)

Q. Do you think from your thirty years' experience as a stockholder and owner of gas stock that the companies can, if they should be put under State authority or municipal authority, reduce the price of gas and at the same time make it profitable?

A. I have not given that attention so as to say; I mean to say this, if one company supplied the city of New York that gas could be supplied cheaper; in London they have two companies, one on each side of the river, with a population of five and a half
8975 millions; what they regulate there is dividends; you cannot increase on the price.

Q. What was the objection of the gas companies to the legislation of last spring, recommended by the last Senate committee, if you think that a proper method of regulating was to regulate the dividends; what was the objection?

A. I don't know; I did not make any objection; I did not see any objection.

(By the CHAIRMAN:)

Q. You would limit the dividend upon the capital, of course?

A. The dividends to-day ought to be regulated with regard to the valuation of the property, and not the costs forty years ago.

(By Senator MURPHY:)

Q. You have not seen the gas accounts of London. There a dividend has been declared of ten and fifty-seven hundredths per cent.?

Mr. TREMAIN: On a certified capital.

The WITNESS: On the consolidated stock I would be perfectly willing to receive ten per cent. dividend.

Q. It seems by the accounts that the Manhattan Company has been paying for upwards of twenty years an average dividend of eighteen or nineteen per cent. during that period. Why could not the Manhattan have reduced the price of gas?

A. Because the price of gas did not represent the property.

FIFTH AVENUE HOTEL, NEW YORK,
FRIDAY, *November* 27, 1885—3:30 p. m.

Hearing resumed.

Mr. TREMAIN: The stenographer will note that Mr. James W. Smith appears and produces and leaves with the committee
8976 some papers called for during his examination.

I would suggest to the Chairman that Mr. Francklyn's examination be suspended for the present to allow Mr. Day to be examined.

HENRY DAY, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are one of the directors of the Consolidated Gas Company?

A. Yes, sir.

Q. And prior to that you were interested in the Municipal and Knickerbocker Companies?

A. Yes, sir; both of them.

Q. In any other of the constituent companies are you interested?

A. Not in this city.

Q. When did you first become associated with the Knickerbocker, in what year?

A. I would not be able to give that; I should think about five years ago.

Q. Some time prior to 1880, was it not?

A. I could not remember the date; I can remember the circumstances; it was at the time the Knickerbocker was sold out by the parties then controlling it.

Q. At the time the Knickerbocker was allied with the Municipal you first became connected with the Knickerbocker?

A. Yes, sir.

Q. How long before that had you become connected with the Municipal?

A. Sir, I should think two years.

Q. Did you conduct the transaction between the Knickerbocker and the Municipal Companies in any respect?

A. As counsel I gave my advice in regard to it.

8977 Q. Were you a director in the Municipal at that time?

A. Yes, sir.

Q. And did you not act as a director in the conduct of those negotiations and transactions?

A. I did to a certain extent whenever there was a meeting of the board and a vote passed; I acted as director then.

Q. What papers in March, 1885, did you have in your custody respecting the Knickerbocker or Municipal Companies?

A. Well, sir, I am not able to state in detail and confining it exactly to a date.

Q. March, 1885?

A. Do you mean papers that belonged to the two companies—title papers?

Q. Any papers?

A. I think there was a large number of title papers of the Knickerbocker Company, a large box full of them; and I think there were in my office a good many papers or leases which concerned the Municipal Company, but what they are in detail I am not able to state now.

Q. Were all the papers relating to the transactions between the Knickerbocker and Municipal Companies between 1879 and 1884 at your office?

A. I think not any of the original papers.

Q. Or copies of them?

A. If you will give me a chance to look and see I will tell you every thing I have got; I can't remember; I have a large package of papers but precisely what they are I could not say; my rule was to send the originals to the companies for them to have the custody of.

Q. How did it happen that you had the original lease in March between the Knickerbocker and Municipal, and also other original papers?

A. It happened in this way: Frequently I would send for those papers for some purpose for an examination, and they may not have been sent there; I don't remember; they were often kept some time before they were returned to the companies.

8978 Q. Have you any originals in your office now?

A. I have not looked at it for a year; I have a younger man a partner; he takes the charge of those.

Q. Your subpœna, I think, calls for some such papers?

A. I think not, sir; I have not read it through; I went to the wrong place instead of coming here at first; on examination I see it refers to papers, sir; I have no objection to produce any thing I have got, and if you will allow me to produce them Monday morning, any thing I have the custody of, I will be happy to do it.

Q. On the understanding then that you will send them to the Chairman?

A. I would like to know what papers; I have got a box of title papers; if you gentlemen care to see those, referring to real estate transactions, I will produce the papers.

Q. You prepared or caused to be prepared under your direction the agreement between the Knickerbocker and Municipal Companies?

A. Yes, sir, I did.

Q. And also the agreement between R. F. Cutting and the Municipal?

A. I don't think there was any between the Knickerbocker proper; I think it was a transaction between the holders of the stock of the Knickerbocker Company; I would not be positive about that; most of the papers were papers between the holders of stock and bonds of the Knickerbocker Company and other parties to the transaction.

Q. Now, when was the first transaction relating to bonds of the Knickerbocker of which you have any knowledge?

A. The first knowledge and first transaction was at the time the two companies were united in their interests, whatever that was.

Q. In 1880?

8979 A. Yes, sir, the first time I heard of bonds, I examined the titles and found a quantity of bonds outstanding of the Knickerbocker Company.

Q. What was the amount of those bonds that you thus found outstanding?

A. I think it was one and a half millions; it was certainly a million and two or three hundred thousand dollars; and I think it was but one and a half millions, which was the full amount of the mortgage.

Q. Who did you find held the bonds up to the full amount of the mortgage?

A. The estate of Cutting's grandmother, some old lady, to whom they were executed.

Q. Elizabeth Cutting?

A. No, Mrs. Bayard; her estate held all these bonds.

Q. Did you make an injuiry or cause an inquiry to be made at that time concerning the validity and amount of that outstanding indebtedness?

A. Yes, sir.

Q. Of whom did you inquire?

A. The officers of the Knickerbocker Company and their counsel.

Q. The names?

A. I could not tell you now; I talked with William Bayard Cutting about it.

Q. The trustee?

A. Yes, sir, and his brother, Robert Fulton Cutting, and their counsel—his name escapes me now; they assumed the mortgage, the parties did, that took the title, and all the bonds.

Q. Who took title?

A. I think the stock was transferred.

Q. There was no transfer of the real estate?

A. I think not; there was a paper between the parties which recited the mortgage and bonds.

Q. Will you refresh your memory?

(Book containing the report of the last Senate investigating committee, pages 162 and 163, presented to witness).

8980 A. I think that is it; I think the amount of the mortgage was $1,200,000, as it is herein given; and the gentleman that I consulted with was Mr. Cardoza, who was a witness to this agreement.

Q. That was in connection with the transaction of the purchase of 15,000 shares of the stock of the Knickerbocker Company, was it not?

A. I don't remember how much stock it was; it was in connection with the purchase of this stock of the Knickerbocker Company and the transfer of that stock.

Q. By whom was the stock owned?

A. I don't remember.

Q. Did you see the certificates?

A. I don't think I did; I don't remember to have seen them.

Q. Who did see the certificates?

A. I don't know but I did, but there is a great deal of detail about these things and I can't remember it.

Q. Please omit the details and tell the transaction acquiring the Knickerbocker property?

A. The most of my conversation was sometimes with Mr. Francklyn and then with Mr. Cutting and then Mr. Cardoza, and then with the officers; when these titles were passed I was present, and I think I was present when the stock was passed over; I think I examined it but I don't remember it.

Q. To whom was it passed over?

A. Mr. Ottendorfer, Mr. Francklyn, and I could not say who the others were without looking at some papers.

Q. Who individually received their stock or the certificates?

A. I presume I did as counsel for the company; turned it over to some one of this committee, but who it was I don't remember; I mean to say one of these trustees.

(By the CHAIRMAN:)

Q. You were one of the trustees.

A. Yes, sir.

Q. Why should you turn it over to any one else?

A. It was to some one of this committee as custodian.

8981 Q. You had it in your hands; what did you do with it?

A. It went into the hands of one of the trustees who, I suppose, put it at the office of the Municipal Company.

Q. Why should you, being one of the trustees, pass it over to one of the co-trustees?

A. The reason is I have a thousand and one papers in my office and it would be unsafe to leave them there; these papers were sent to the office of the Municipal to be kept; I have not seen them since, but I presume they are there.

Q. Have they been produced when you were on committees there?

A. I would not say that; I think I have not seen it since; I have not seen the stock since—when this consolidation took place this stock by these trustees was all transferred to the Consolidated Company for the benefit of the stockholders of the Municipal Gas-light Company; I signed all the transfers, I think.

Q. Anybody else?

A. I have a recollection of some names ahead of mine on the certificate.

Q. Did Mr. Ottendorfer sign it?

A. I think he did.

Q. Did Mr. Gawtry sign it?

A. I believe he did.

Q. Did Mr. Francklyn sign it? He was the president?

A. I am in doubt about it; I would not swear to it.

Q. Did Philip Allen sign it?

A. I have the same to say; the stock can be produced; it is somewhere in the company.

Q. Was it one certificate or more?

A. My impression is there was one or two certificates; I think one, a small one, was in the name of myself, to constitute me as a director of the company; and for the balance of the stock another certificate was issued; the other was in the name of all the trustees.

8982 Q. That certificate may have been issued at the time the trust was established?

A. I think it was.

Q. Prior to the issuing of that one certificate, where was the stock?

A. In the names of the former holders of the stock, but who they were I could not tell you.

Q. When this transaction was closed that stock was acquired from the former owners?

A. Yes, sir.

Q. In what block was it acquired and from whom?

A. That is beyond my recollection.

Q. Have you any recollection about the transaction whatever that will enable you to say where that stock came from?

A. Yes, sir.

Q. Give it.

A. That the largest amount of that stock stood in the names of one or two of these gentlemen as the executors of Mrs. Elizabeth Bayard.

Q. They also holding the bonds?

A. They held a large amount of bonds; I don't wish to say this certainly; it is only an impression which I have.

Q. How much of it is the question?

A. The books ought to show.

Q. Which books?

A. There ought to be some books showing the stock of this Knickerbocker Company; I don't know where they are.

Q. You certainly would not have approved the title to 15,000 shares of stock for the entire ownership of the Knickerbocker Company if, as counsel in the transaction, you had not been informed who owned the stock?

A. No, sir; I had fair evidence who was the owner of the stock, but I don't recollect it all.

Q. Was there an agreement of transfer, signed by those who owned the stock, other than the indorsement of certificates?

8983 A. I think not; I don't remember of any other paper than a guarantee that I insisted upon some of these gentlemen giving us.

Q. That related to the indebtedness?

A. Yes, sir; I was perfectly satisfied about the stock.

Q. Did you testify anybody else held any of that stock except the same parties who owned these bonds?

A. No, sir.

Q. Is there any paper or book or writing, of any character, that will refresh your recollection?

A. There ought to be a transfer, a stock-book of the Knickerbocker Company.

Q. Did you see such a book?

A. I don't remember the detail of that.

Q. Would you have approved as counsel of this transaction if you had not seen such a book?

A. If such a gentleman as Bayard Cutting told me and showed me a certificate of the Knickerbocker Company, that was as good as a stock-book, and better; the certificate is the real title and not the stock-book proper; and I probably saw the old stock certificates; I think I did, but I could not say whose name they were in.

Q. Are you confident they were all owned by the same party?

A. No, sir.

Q. Who did you pay any money for that certificate?

A. There was considerable money paid at the time, but to whom it was I don't remember.

Q. Do you remember that $50,000 was paid for that stock?

A. Well, I don't remember exactly how much was paid for the stock; there was a large amount paid in the transaction.

(By the CHAIRMAN:)

Q. Is it your best recollection it was $50,000, or about $50,000?

A. It is that it was more than that; I think there was $350,000 of money paid out at that time; precisely to whom it was paid or on what it was paid I don't remember; I know that amount of money was paid in some way.

8984 Q. For what, this Knickerbocker stock?

A. Yes, sir.

Q. And also on account of indebtedness?

A. Either $300,000 or $350,000 was paid in addition to the mortgages which were on the property at the time, and it cost with what was on it, over one and a half million of dollars; that is perfectly certain, but just the details of that I can't give; I can't carry five years of business in my mind; I am able to recollect the large amounts better than I am the details.

Q. Do you remember to whom those papers were made?

A. Either to the Cuttings or those parties that were there at the time the title was passed.

Q. By passing the title you mean the delivering of the certificates?

A. Yes, sir.

Q. Do you remember to whom the money was paid?

A. I think it was paid either to the Cuttings as executors, in some way or other connected with the estate.

Q. Which particular Cutting was there that day and took the money?

A. I believe Bayard Cutting was there, and if he said he was not I would think I was not right but would believe he was.

Q. Was R. Fulton Cutting there?

A. I would not say that he was, but during the transaction I think he was there.

Q. Then that money was paid to one of the Cuttings, to one or the other of these gentlemen, was it not?

A. I don't know; I think it was.

Q. Was Mr. Stephens there?

A. Who is Mr. Stephens?

(By the CHAIRMAN:)

Q. William A. Stephens, the president of the Knickerbocker Company?

A. I believe he was; I think Mr. Stephens and John Sickels, the secretary, were both there.

8985 Q. Did they receive any of that money?

A. I don't think they did; I don't think they had any authority to receive the money which was given for the stock; as I understand, it was a transfer of the stock.

Q. That transaction then substantially was the transfer of the stock and all the property of the Knickerbocker subject to an express indebtedness, with a guarantee that such indebtedness should not exceed a fixed amount, and the payment of money on such transfer?

A. As far as I know it that was the transaction; I don't know any other thing connected with it.

Q. Was any money paid at that time to reduce that indebtedness?

A. I think not; I know there was not any money paid to reduce it.

Q. Did you subsequently acquire any interest in any part of that indebtedness or that payment?

A. No, sir, never.

Q. When, if ever, was that indebtedness reduced?

A. I would have to give you now my best recollection; I think the mortgage was so drawn that it became payable in installments; a certain number of bonds were payable each year, and when those became due from time to time the Municipal Company made the payment; that is my recollection.

Q. Unless the indebtedness was reduced in that way it has not since been reduced to your knowledge?

A. No, sir, not at all; the indebtedness that was paid by the Municipal in that way was assumed by the Consolidated Company when the consolidation was made.

Q. Being a director of that company you would know if since its assumption any of it had been discharged?

A. Well, sir, I don't carry the detail of that in my mind;
8986 I know the fact that it has not been paid except in that way,
paying off the bonds as they became due; and the other
assumed by the Consolidated Company.

(By the CHAIRMAN:)

Q. Were any bonds paid by the Municipal after this transaction which you have given and before the consolidation was effected?

A. My impression is that there were some of the bonds that became due, a few of them each year, but I can't carry that in my mind distinctly.

Q. Then you are not able to swear that any of them were paid during that time?

A. I have a recollection that money was paid.

Q. Do you recollect that any such bonds were paid during that time?

A. I would be willing to swear more positively if you would allow me to look and see; my impression is that some of them were paid; I would not swear to the amount; I have the impression but I would not swear to any thing more.

Q. Are you willing now to swear from your present recollection that any of those bonds were paid during the time designated by me in my previous question?

A. I would not say; I have not a distinct recollection of the occasion but I do have the impression.

Q. Whether from your present recollection you are able to swear that any of those bonds were paid by the Municipal during that time?

A. I should not like to say; that is, that I recollect.

Q. You would have to say no then?

A. Yes, sir.

Q. The answer to that is no?

A. My impression is that at the meeting of the board that question of paying off some of these installments came up when I have been present.

Q. And further than that you don't know?

8987 A. No, sir; if I could be allowed to examine the books of the Municipal to refresh my recollection I could state positively.

Q. What books of the Municipal will show this transaction; designate the books which will refresh your recollection?

A. I should suppose the cash-book and the check-book would show it.

Q. What books of the Knickerbocker, if any?

A. I don't say that the Knickerbocker books would show it.

Q. Did you ever see the books of the Knickerbocker?

A. I think I have seen some.

Q. Did you ever see the stock-book?

A. I never asked for it.

Q. You were a member of the board after the amalgamation?

A. I never had occasion to see it.

Q. Do you know anybody who would be likely to have any more information on that subject than yourself?

A. Yes, sir.

Q. Who?

A. Mr. Gawtry ought to know more about the books, if there are any; my recollection is that when we took this property there were only a very few books in the whole concern.

Q. If Mr. Gawtry is unable to tell us, can you suggest some other individual, except Mr. Gawtry, who can?

A. No, sir.

Q. What information did you obtain in closing this transaction as to the basis of issuing this $1,200,000 of bonds secured by mortgage?

A. I ascertained that they had a large amount of real estate; that they had works erected on that real estate; that they had mains laid down—I don't know how many miles of mains, but a good many; that I knew they had a basis for a capital in that.

Q. Did you inform yourself as to any other basis than that for the issue of such bonds?

A. No, sir; I did not go into the organization of the company, except to see that they had filed their certificates properly.

8988 Q. Did you not go into the validity of those bonds as an existing indebtedness sufficient to inform yourself generally concerning the cause of their issue?

A. No, sir.

Q. Did you not ascertain that those bonds were in part issued to take up a preceding indebtedness arising from the construction of the works, more or less, and that the balance were issued for something else?

A. I would not like to say that I remember that.

Q. Will you not testify that you acquainted yourself at that time with what the facts were in respect to that before approving the assumption of this $1,200,000 indebtedness?

A. No, sir.

Q. Do you mean to testify that this indebtedness was assumed regardless of how it was created?

A. Yes, sir; I would like to say that I considered that the property that they showed to us, the real estate, its mains, meters and its works, were worth all or more than the price that was paid for it in addition to the indebtedness upon it; and that we considered that the indebtedness had not been given for any thing near what the property was worth.

Q. That is to say, you considered that it was worth more than $1,500,000?

A. Yes, sir.

Q. How much more did you consider it worth?

A. A good deal more; worth more to us probably than to anybody else inasmuch as they were competitors with us.

(By the Chairman:)

Q. Did a part of the value of the Knickerbocker property to the Municipal consist of the fact that by acquiring the property of the Knickerbocker the Municipal would get rid of a competitor and of competition?

A. I think not, sir. Our chief object was to get their territory.

8989 Q. The question is the chief part?

A. It is my recollection that there was some agreement between the two companies, that one should not come below a certain line and the other would not go above it; by abrogating that agreement, that was worth something to the Municipal because it extended their territory.

Q. Now, perhaps you can answer directly the question; did a part of the value of the Knickerbocker property to the Municipal consist in the fact that by acquiring the property of the Knickerbocker, the Municipal would get rid of a competitor and of competition?

A. As it then stood there would be no competition; we got rid of the agreement so that we entered into their territory.

Q. You know what the question means and to what it relates, and you have an opinion as to whether that entered into the value of the thing. I would like an answer to that question?

A. Would it not answer if I gave the statement as the fact is?

Q. No.

A. I didn't think they were our competitors then.

Q. Your answer is not to the question?

A. I think I would be justified in answering no; if you will follow it up they were not then competitors as I understood.

Q. Either actual or prospective competitors? Did this purchase in fact remove a prospective competitor?

A. I think not, sir.

Q. Did it in effect get rid of an agreement which would have resulted, if carried out, in a competition with the Municipal?

A. If it had not been made, perhaps you mean?

Q. No, which if carried out would have resulted in a competition with the Municipal?

A. The agreement, if carried out, prevented competition; that is my recollection.

8990 Q. That agreement was prior to the purchase?

A. Yes, sir.

Q. At the time of the purchase there was an existing agreement?

A. Yes, sir; when we took that property in that way it abrogated the agreement and enlarged our area.

(By Senator MURPHY:)

Q. It was to the effect that one company should not encroach upon what they believed to be the property of the other?

A. Yes, sir; it left us free to go on to the property.

(By Senator ROBINSON:)

Q. That agreement which existed prior to the purchase restricted the territory which it should occupy?

A. Yes, sir.

Q. Is there any record of that agreement in the Municipal office?

A. I don't recollect; I was told there was such an agreement.

Q. About what year was that agreement?

A. You must not ask me to carry those things in my mind; I have, perhaps, a thousand such agreements in a year.

(By Senator ROBINSON:)

Q. You think you have seen it?

A. Yes, sir; I am very confident I have.

Q. You think you have seen it, and it was in writing?

A. Yes, sir.

Q. Do you think it was in the office?

A. I am not positive about that; I am a lawyer and I know how it is; I would not like to be put in an improper position; my honor is at stake; if there is such a paper you shall have it; I don't mean to conceal any thing.

Q. Is it not a fact that when this purchase was made, as you have detailed, the Knickerbocker was not making gas, but gas was being furnished to it by the Municipal Company under an agreement in writing?

A. It is my impression they didn't stop making gas until that day; a verbal arrangement was made that this should be 8991 carried out, and we would furnish them the gas, and it was carried out afterward.

Q. That verbal agreement is at page 51 or 61?

A. There is where you would catch me again.

Q. About when was this agreement; the purchase was in March, and the agreement under which the Municipal furnished gas to the Knickerbocker was in February; how long anterior was it that this agreement was that it should not encroach; the paper will show it?

A. I don't remember that paper about not furnishing them gas; while we were talking over this thing we agreed to furnish them gas; I did not read the paper; they had agreed between themselves.

Q. Were you ever present at the meeting of the board of directors of the Consolidated Gas Company when any statement was presented respecting the financial condition of the company?

A. I think there has not been any statement that I recollect; the matter was so recent, and the facts about the consolidation were so fresh in our minds that we didn't need any such reports or statements, and we knew exactly how the properties stood and what we got; there has been a great deal of confusion and the committee has not been able to work up to the ordinary methods of doing the business.

Q. A dividend was declared last May?

A. Yes, sir.

Q. Was there a written statement made before the board when that was declared?

A. No, sir—there was a statement; I asked them whether they had made enough money to declare this dividend, and the treasurer showed the statement that they had.

Q. Who made the statement?

A. The treasurer; he said there was money enough earned 8992 to make a dividend of three and a half per cent. and something more.

Q. The dividend was voted without any further statement being presented?

A. Yes, sir.

Q. Any member of the board ask for further particulars?

A. No, sir.

Q. Any committee appointed to ascertain if the finances would admit of it?

A. No, sir.

Q. As a matter of fact, don't you know that the finance committee never recommended any dividend in May or October?

A. I have no recollection.

Q. You have no recollection of that?

A. No, sir; I think it is not the duty of the finance committee to recommend it; as a member of the finance committee I said I knew how the finances stood.

Q. The subject of a dividend never was mentioned?

A. Not by the finance committee.

Q. They never made a report on that subject?

A. Not as I recollect.

Q. You think that dividend has been earned within the last six months?

A. Yes, sir.

Q. How do you know if you never made an examination?

A. How can I tell anything except from what the officers tell me; I trust my officers.

Adjourned until Saturday, November 28, 1885, at 11 A. M.

NEW YORK CITY, FIFTH AVENUE HOTEL,
November 28, 1885.

The Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain appears as counsel to the Committee.

8993 JOHN H. SHERWOOD, a witness called by the counsel to the Committee, being duly sworn, testified as follows:

Q. It is in view of an incident yesterday that you make your statement as a witness, and as any other witness would make it, and thus repeal what you yesterday stated to the Committee?

A. I think in view of the public attack that was made by Mr. Ottendorfer on me yesterday, stating that half a dozen gentlemen would make such and such assertions, that I made such remarks at Kaaterskill Hotel as he attributed to me, I think they should be put on trial, and that he should bring those gentlemen here to testify; I only made a slight reply to Mr. Ottendorfer yesterday, and I would prefer that personalities in this matter should be kept out; the subject which you are investigating is one of great importance to the public; it seems to me that you are fishing for a minnow this morning, when sharks are to be caught in the water; I am ready to answer any questions.

(By Senator MURPHY:)

Q. I think the only question to be answered is in reference to the charge Mr. Ottendorfer made; he stated that he was informed by reputable citizens that you made a statement which he represented yesterday, and that he could produce the witnesses to substantiate it, that you said the gas company had spent $130,000 at the Legislature last winter, and that they would be forced to spend $500,000 more the coming session?

A. That statement, made in that shape here, is a distortion of facts and untruthful.

(By the CHAIRMAN:)

Q. We have nothing to do with personalities; but it was intimated that somebody had knowledge in relation to corrupting legislators who were in opposition to the gas bill, so called, of last winter; if the witness has any disclosures on that subject which can lead to ascertaining the truth about it, and to the correction of the abuse that is believed to have existed and which ought to be prevented by all proper means, if the witness has any knowledge which can contribute to that result, we would like it? 8994

A. I never have asserted or claimed that I had any personal knowledge of such facts; you say, if it is believed to have existed; I say that it was believed and is believed now that such means were used; the papers were full on the subject; almost every paper; as the president of the Gas Consumers' Association, hearing so much on the subject, it would be impossible for me to go back and tell you which or what gentleman has said these things to me; but I suppose it is within the knowledge of every gentleman in this room that this subject was notorious here last winter—the subject of gas legislation.

Q. Has any one represented to you that he knew anything touching this matter.

A. Yes, sir.

Q. I don't mean whether he had read newspapers or heard people talk, but whether he heard any one represent that he knew about it?

A. Yes, sir, these things: that matter has been stated to me as persons usually state a subject of that kind in conversation with any other person; I didn't go to Albany but once this last winter, and then I was ordered out of the Assembly chamber before I had been there five minutes, and I made up my mind it was not a good place for me, and I didn't go there again; now if you ask me who told me, or said to me that money was being used up there, I can give you a great many names; I will not say that they told me; it was their personal knowledge—personal knowledge is pretty hard to get at. 8995

Q. Have any of the men who are interested as stockholders in these companies, or any member of this Consolidated Gas Company, or stockholder made any statement to you to the effect that money was being used at Albany?

A. Yes; that was in the conversation between myself and a friend of mine, who is a stockholder of the Consolidated Gas Company.

Q. When was that?

A. It was on the piazza of the United States Hotel, at Saratoga, last summer; it brings me in conflict with personal friends to go into this matter, and I don't think it is necessary.

Q. Was he in a position to know any thing about it, whether it was so or not?

A. No; he is a manipulator of stock or manager of the gas company.

Q. Was he director in any of the other companies at any time?

A. I don't know.

Q. Was he in a position that he would be likely to know whether there was money used or not?

A. No, sir; I don't think he would.

Q. You gathered from the talk, what he was saying to you was simply the effect of the newspapers on the subject, a rumor, talk?

A. No, sir, but that it was what he considered to be a part of the scheme for effecting gas legislation.

(By the CHAIRMAN:)

Q. That he gave you to understand that the purchase of legislative votes was a part of their scheme for effecting legislation?

A. Yes, sir.

Q. I would like to know what he said then?

A. It was a casual conversation here last summer; I met Charles G. Landon on the steps of the United States Hotel; he asked
8996 me how I got on with the gas fight; I told him I was not in that now; he says, "if you want cheaper gas why don't you make it yourself;" I says, don't you know I cannot lay an inch of gas-pipe in the city of New York, and I could not supply the gas, and is it possible that you, a large owner of gas stock, do not know that a law was passed in 1883 to prevent any other parties except the present gas companies from laying a foot of gas-pipe in the city of New York, and he said, "no, I never heard of such a thing," and I said, I tell you it is so, and he said, very well, if you say it is so I will believe it and I will put you right at the club; for gentlemen have asked me why you was not man enough to go out and make gas yourself, and he said "I will bring that matter up at the club;" in my conversation with Mr. Landon, I advised him to talk with his associates and see if we could not have a fair adjustment of this gas question, and he said, that he wanted nothing beyond a satisfactory condition of affairs; I says to him, I believe you will be safer to co-operate with the gas consumers of New York than to go to Albany for legislation, and he said "I believe so too;" I said it was reported that it cost a great deal of money at Albany last winter, and he said, "legislation has always cost us money and we expect to pay for it;" that is the substance of the conversation.

(By Senator ROBINSON:)

Q. In this talk at the Kaaterskill Hotel, did you say that your folks proposed to go to Albany and make it cost this gas consolidation money to get legislation?

A. That is utterly untrue.

Q. Did you state anything like it?

A. If you want me to state the circumstances from memory, as near as I can, I will try and give it between me and Mr. Harker; of course I have not tried to think of it until yesterday.

8997 Q. I understood Mr. Ottendorfer to say that the effect of your remark was, your intention to procure legislation which would induce them to spend money to prevent it?

A. I think the substance of Mr. Ottendorfer's assertion yesterday was that the Gas Consumers' Association and myself were making a raid upon the gas monopoly of this city.

Q. You utterly disclaim that?

A. Yes, sir; in conversation with Mr. Harker at the Kaaterskill Hotel, I told him I thought it was a great piece of folly to go to Albany and spend money as I had reason to believe they had last winter, and that I believed it had cost the Consolidated Gas Company in the neighborhood of $200,000 last winter, and if you go there another winter I hope it will cost you half a million; I have been called by one of the largest owners of gas stock in this city a thief, and I have been called a raider, now I shall survive that, and I am willing to submit my action in this matter to the public, and abide the consequences.

Q. You think the trouble will be with the public and not this gentleman?

A. Yes, sir.

(By Senator **Robinson**:)

Q. You say you was shut out of the Assembly chamber?

A. Yes, sir; it was on the floor; a gentleman came and told me there was a resolution passed and that I must go out.

(By Senator **Murphy**:)

Q. Do you know whether there was a call of the house at the time you was excluded from the chamber?

A. I don't think there was.

(By Senator **Murphy**:)

Q. If there was no call of the house, you had a right there.

A. My associates all went out with me into a public room; I am not conversant with the rules of the Assembly chamber; I was
8998 told there was such a resolution passed.

Senator **Murphy**: It was a standing rule of the house.

The **Chairman**: I think it is due to the house to say that it was probably a rule of the house being enforced.

Mr. **Tremain**: The Assembly had been under a call of the house and the call of the house was suspended, and that of course opened it, but it was not opened and the debate proceeded.

Senator **Murphy**: The Speaker of the Assembly evidently forgot to order the house to be opened.

The **Witness**: I was told that I was excluded from the Assembly chamber, and I went out from there.

Henry Day is recalled and testifies as follows:

Examined by Mr. **Tremain**:

Q. Have you brought all the papers in your custody or control of which you have any knowledge relating to the Knickerbocker Gas-Light Company?

A. All that I have under my control and that I had in my office while this Committee has been existing; there are other papers which I have knowledge of which are not here.

Q. What papers have you knowledge of that are not here relating to the Knickerbocker Company?

A. Two or three contracts that I didn't think of, that I have some memoranda of; that I know have existed, and that I have seen them.

Q. Of what date?

A. There is a paper dated November 16, 1880, between the Knickerbocker Gas-light Company and the Municipal Gas-light Company.

Q. Which you didn't have?

A. I think I did find that one.

8999 Q. That which you didn't find?

A. That paper is here; I have got that paper.

Q. What are the papers that you produce—the dates?

A. There is another paper which I have, dated August 2, 1883; that is the one; the McKenzie and Sayre Manufacturing Company to the Knickerbocker Gas-light Company, giving them the privilege of certain renewed patents which the Knickerbocker had purchased of that firm; this paper is dated August 2, 1883; there is an agreement, dated February 13, 1880, between the Municipal Gas-light Company and the Knickerbocker Gas-light Company, in relation to furnishing gas, which I have not got; there is a third paper, dated March 11, 1880, between the Municipal Gas-light Company and the Knickerbocker Gas-light Company, which refers to a contract dated September 25, 1876, and agrees that the Municipal may lay mains and send gas north of Fifty-ninth street, in consideration of $300,000; that is the matter which I referred to yesterday.

Q. To whom was that paper given by you?

A. That was returned April 29, 1883; I sent it to the company.

Q. Have you brought any and all papers that you know of relating to the Municipal Gas-light Company?

A. I think that all the papers that relate to that are here; I don't know of any other papers of the Municipal that I have seen which are not here; I think it is proper that I should explain my testimony of yesterday, arising out of a better knowledge that I got from the contract in respect to the $300,000; I find that there was a contract made in 1876 between the Knickerbocker Gas-light Company and the Municipal Gas-light Company to this effect: The Municipal assigned rights to the Knickerbocker Gas-light Company to use 9000 their water gas patents for illuminating gas to be distributed north of Fifty-ninth street, and gave an exclusive right to all the Tessie-du-Motay patents, such as the Municipal were making gas from at that time; there was a further agreement that between Thirty-fourth and Fifty-ninth streets they should have the privilege, but not the exclusive privilege of using those patents.

Q. That is what the Municipal gave the Knickerbocker?

A. Yes, sir, gave those rights.

Q. Now, what did the Knickerbocker Company do in return for that?

A. They gave them a royalty of five cents a thousand upon all the gas they should manufacture under those patents and distribute, with the privilege that they might satisfy the royalty by paying at any time $50,000; now, sir, in 1879, the Knickerbocker Company commenced a suit against the Municipal Gas-light Company upon that contract; they asked for an injunction to restrain the Municipal going north of Fifty-ninth street with their mains; the Municipal took the ground, as they would not use this patent and were acting under the McKenzie and Sayre patent, they had a right to go into that territory north of Fifty-ninth street; they commenced a suit and asked for an injunction from laying any pipes, as they said we were about to do, in 1880, until the negotiations were completed between the Knickerbocker and the Municipal for the transfer of stock; as a part of the consideration I preferred that this $350,000 should be made up in this way; I was counsel for the Municipal; I said to my client, this $350,000 which you, the Municipal, are about to pay to them it is possible that if any of the stockholders of the Municipal Company should object to this, your paying, they may hold you responsible; I prefer, as there is a suit pending against you,
9001 you should settle that and take the $300,000 and settle that
claim and open the right for you to go north of Fifty-ninth street and leave only $50,000 to be paid into the stockholders of the Knickerbocker; that, I said to my client, will relieve the directors of any claim that the stockholders of the Municipal would make; it was only another method of paying them a portion of that $350,000; it was a lawyer's method of shielding his clients.

Q. To whom was that $350,000 paid?

A. I think $300,000 was given to the Knickerbocker for these damages, to settle this suit.

Q. To whom?

A. I could not say to whom the check was given.

Q. Was it paid in a check?

A. Yes, sir, I know it was, but how it was drawn I could not say; it was given in the office of the company.

Q. Who represented the Knickerbocker in the closing of that transaction?

A. Mr. Sickels and Mr. Stephens, and the Cuttings were there.

Q. Were both?

A. I should be very confident to say that they were both there.

(By the Chairman:)

Q. When this transaction which you have now stated was completed what was the status of the Knickerbocker and Municipal with reference to each other; the instant this was done where did it leave them?

A. It left the Knickerbocker with its stock all transferred to five different men who acknowledged themselves as trustees, holding it for the Municipal Company in order that the corporation should

not be dissolved; the Municipal was left in this way: They had advanced $300,000 in order to get rid of this claim that they made upon this territory north of Fifty-ninth street so that they could go in, and there was an agreement made to that effect, and
9002 which I executed; here is the agreement opening the territory and giving up all claims for damages; both parties then were to use the territory in common, and $50,000 was advanced by the Municipal toward purchasing this stock.

(By Senator ROBINSON:)

Q. The real transaction was that $300,000 does away with all damages and lets them into this territory, and they buy the stock?

A. Yes, sir.

Q. Who advanced this $350,000?

A. The Municipal.

Q. Did the Municipal at or about that time increase its capital stock at all?

A. I don't think they did at that time; they did afterward; they were obliged to build very largely.

Q. What was the nominal share capital of the Municipal Company in 1879?

A. Those facts I don't carry in my head; I think they started with $500,000 and increased to $1,000,000, and then $1,500,000, and then to $2,000,000, and then to $3,000,000; I don't know the dates.

Q. Don't you know in 1879, its capital stock was nominally $2,000,000?

A. I don't recollect at that time; If you say anybody has testified to that I should believe it; I don't remember the dates.

Q. You were counsel for the Municipal Company from 1879 to 1883?

A. Yes, sir.

Q. Do you remember that you took proceedings to increase this capital stock in 1880, from $2,000,000 to $3,000,000?

A. I remember that fact, but I don't remember the date.

Q. Were those proceedings instituted and determined upon before this transaction respecting the Knickerbocker stock?

A. I could not say; in my own mind I had no reference to the Knickerbocker transaction at the time that was done, but I don't know what the officers had.

9003 Q. You know what was done with the million of stock, the result of this increase?

A. Yes, sir; I think I do.

Q. To whom was it issued?

A. The stockholders were allowed to come in and take *pro rata* in the first place, and take the shares which were held, and I think that was all taken up; it was paid for in cash.

Q. What was done with that $1,000,000?

A. We enlarged the works of the Municipal largely; we had to build them all over, and we had to build or enlarge the works of the Knickerbocker at one time; we had spent at the time that we closed this transaction with the Knickerbocker $400,000 and $1,100,000 in putting down mains in their district, and improving the works, and then the works of the Municipal were built over after that.

(By the CHAIRMAN:)

Q. When the Knickerbocker was transferred to the Municipal they manufactured gas by what process?

A. This McKenzie and Sayre process; they had the original patents, and this agreement—there were some improvements they had made, and I drew a contract giving them the right under those additional patents which they had got.

Q. At the same time the Municipal was making gas by what process?

A. By what is called the Du-Motay process, or water gas.

Q. Now, when these works were improved and enlarged, what process was used?

A. The Du-Motay process; all the works were cleaned out, and these new works, entirely new, were put in.

Q. What was done with the old works?

A. I think for old iron; generally those retorts were good for nothing, except for old iron.

Q. Who was the contractor under whom that reconstruction was effected; you say that this $1,000,000 was realized when the
9004 stock increased?

A. Yes, sir.

Q. In cash?

A. Yes, sir.

Q. And that some of the money was spent in enlarging the works?

A. Yes, sir; on the Municipal and also on the Knickerbocker; laying mains I ought to say, because we were extending our mains all over the city.

Q. Who was the man who did that work and received that money?

A. No man received the whole of the money, but Rowland & Company, of Hunter's Point, did the work on both the Knickerbocker and Municipal.

Q. Was any other money expended on the works of the Municipal or Knickerbocker at or about that time, except through Rowland?

A. I don't know.

Q. Any considerable amount, as a director; you have knowledge?

A. I have no knowledge of any bills being brought before the committees from other persons; I remember of his bills being very large ones.

Q. Can you tell me, Mr. Day, how much of that $1,000,000 was spent on the Knickerocker in proportion to the amount spent on the Municipal?

A. I don't know personally of the expenditure of any money; that is done by the officers.

Q. Did anybody have any more knowledge on that subject—did Mr. Francklyn?

A. Mr. Francklyn or Mr. Gawtry; somebody ought to tell you; I think if you put the question in writing, and ask, they will tell; I am interested in that, and if there has been any taken out of it, I have been cheated; I am talking about the increased capital; I am more interested in that than any gentleman here, and I will undertake if the Committee desires to know any specific facts as to 9005 where money has gone; I am a director and in honor bound, if the money has been spent, to try and find it out; I would like to know exactly what you would want because there is a multitude of books, but specific facts I will endeavor to give you honestly and fairly; I have more right on account of my position; I am not only a citizen but a director; you are acting for me just as much as for anybody else.

Q. If you can tell us how to find any books except the ledger in the Knickerbocker Company please do so?

A. I don't believe there are any more; when I was managing their business I asked them once if there were any more books and they didn't appear to have any more; they had a lease of this property from the Knickerbocker to the Municipal; the Municipal did all the business.

Q. Under that lease there appears to have been so-called rent paid; to whom was that $75,000 a year paid?

A. I don't know; if it was paid it was paid to these trustees and they turned it back to the Municipal.

Q. To whom was it paid?

A. I don't know; I don't believe it was paid as a matter of fact; if it was it was only passed around and came back.

Q. Who paid the interest from 1880 on these bonds?

A. The Municipal Company paid it.

Q. Was that in addition to this rent?

A. Yes, sir.

Q. Was that interest paid regularly?

A. Yes, sir.

Q. To whom?

A. To the Cuttings as attorneys or executors of Mrs. Bayard; she died while these bonds were in existence.

Q. You mean that this rent might have been paid to one of the trustees and it went back to the Municipal, and you were one of the trustees?

9006 A. Yes, sir; I never heard of the rent being paid over although there was a form of a lease in order to keep the existence of the two companies and the proper status of the companies, as it was proper we should have a lease to show that it was by the consent of the Knickerbocker, and if there was ever an accounting we should have to account for that rent and the interest and we should have to pay it back.

Q. What special privileges did the Knickerbocker Company own, if any, at the time the Municipal acquired this interest in 1880?

A. They had under one of these contracts the exclusive right to use the territory and distribute gas north of Fifty-ninth street.

Q. Under a contract with whom?

A. The Municipal Company.

Q. With that exception what other privileges, if any, did the Knickerbocker at that time enjoy?

A. They had the privilege—not exclusively—of laying mains and distributing gas between Thirty-fourth and Fifty-ninth streets; that was not exclusive.

Q. That was under a contract of 1876 with the Municipal?

A. Yes, sir.

Q. With this exception, what other privileges, if any, did the Knickerbocker enjoy at the time of this tranaction in 1880?

A. They had I think, three different corporate charters, one of which was an exclusive one to lay mains in the Central park; we have that right now.

Q. What is the chapter of that act or year?

A. I can give it by and by, but not now.

Q. Was it 1869?

A. I think it is earlier than that.

Q. It never has been used?

9007 A. No, sir; but we got it from the Knickerbocker, and I examined the title all through, and also one or two charters they had.

Q. That is one; what other, if any?

A. They had a charter of what is called the Anthracite Gas Company, and then it was changed into another, and they had under that the right to lay mains all over the city; I think it was called the Anthracite Gas Company at first, and it was changed into the Union.

Q. That the Knickerbocker Company had acquired the right of the Union Gas-light Company under its charter with the city?

A. I think it was the right acquired by the Anthracite Gas-light Company.

Q. Did that company ever in fact do any business?

A. I think not.

Q. The Anthracite?

A. I don't know, it is so far back; I never heard whether they did or not.

Q. You never knew of it if they did?

A. No, sir.

Q. Now, what other privileges of any kind did the Knickerbocker enjoy, if any, in 1880, at the time of this transaction?

A. They had the McKenzie and Sayre patents for manufacturing, and the exclusive right for this city; our company has discontinued manufacturing under them, but they held the exclusive right to the city of New York under these patents.

Q. What other privileges or rights of any kind did the Knickerbocker in 1880 enjoy?

A. I don't remember of any others.

Q. Is there any other legislation by special act or contract with the city that the Knickerbocker then had that you have not mentioned?

A. I don't remember of any thing more.

9008 Q. Did they acquire, subsequent to 1880, any other so-called privileges or franchises—the Knickerbocker?

A. Yes, sir, a right in four or five patents that came from the McKenzie and Sayre Manufacturing Company, and which they turned over to us in 1880.

Q. Was any money paid in that transaction?

A. No, sir, but if any improvements were made they should have the advantage of them.

Q. Those improvements were not utilized?

A. No, sir.

Q. With that exception, did the Knickerbocker acquire any other rights or privileges?

A. I don't remember of any thing else.

Q. Is there any method in your judgment by which this Committee can ascertain how much the real estate of the Knickerbocker cost?

A. Yes, sir; I should think so; I think the Cuttings would know who bought it; they ought to; I don't know of anybody else who would know.

Q. At the time of this transaction in 1880, was any other inquiry made by any officer or representative of the Municipal Company, in respect to the value or cost of the real estate and plant of the Knickerbocker Company at that time?

A. I did not do it as a director, nor as counsel; I don't know whether the other officers did it; if they did their duty they did, but I cannot say whether they did or not.

Q. Have you any opinion as to what the value at that time was, what the real estate and plant cost?

A. No one can tell what the cost was of their pipes and meters and manufacturing apparatus, and their bulk-heads and their filling in and their real estate, no one except the man who was inside, and then an officer who was acquainted with their books; it would be impossible; I could only give what was reported to me by their officers as the value of this property.

9009 Q. You mean in 1880?

A. Yes, sir; the time that it was bought.

Q. Who made any statement to you?

A. I talked with the president and secretary.

Q. Name them?

A. Mr. Francklyn and Mr. Gawtry; and then I talked with the Cuttings about it, and I formed my opinion as to what it was worth.

Q. What Cutting was it?

A. William Bayard Cutting, and also Robert Fulton Cutting.

Q. Well, now, did you have anything to do with arriving at the values of the so-called Knickerbocker properties at the time of the consolidation?

A. I saw estimates of the property on paper, how many lots they had, what they were, and the value of the lots; and the bulk-heads and mains I had some consultation in regard to that.

Q. How early in point of time was the first one in regard to that?

A. I don't remember of any values put upon that at all until about a year before the consolidation.

Q. The latter part of 1883?

A. I should think that embraces all the period that we considered values.

Q. The latter part of 1883?

A. I should think that year would cover all our talk on that subject.

Q. When did you first hear the total amount—the aggregate of the proposed capital?

A. It was during that year.

Q. You remember who first named $45,000,000?

A. I think Mr. Smith, the present treasurer; I think he was the first man who spoke about the forty-five millions.

Q. You think that was the latter part of 1883?

A. It was during the time that we considered consolidation; I could not give the dates any closer than that.

9010 Q. You remember a good many occasions when the pooling committee were considering that subject?

A. Yes, sir.

Q. You remember reports of the sub-committee of the pooling committee on that subject which were made from time to time on the subject of consolidation?

A. I don't remember any written reports brought in; I don't know that there were any committees upon that subject except towards the last when the company was asked to bring in values, and we would compare and see what the others thought of it.

Q. There appears to have been a report made to the pooling committee in November, 1883, which was referred to [illegible] a resolution adopted at that meeting, "*Resolved,* that the report and plan of the sub-committee on consolidation as submitted at the last meeting has the approval of the representatives of the New York, Manhattan, Municipal, Harlem and Knickerbocker Gas-light Companies"—does that refresh your memory so as to enable you to say that there were considerations?

A. I don't remember now what sub-committee there was or who was on it.

Q. Do you not remember it was definitely determined during the latter part of 1883 that there should be a consolidation?

A. I would not like to state the date when that was agreed upon; I am indefinite as to the time; I would say that the question of consolidation was the prime question at the time the pooling committee went into operation; they went into that pooling for that purpose; all this before that were the preliminary steps for the purpose of bringing them all into consolidation; there was talk about it little by little and scarcely anything was done until toward the last year.

9011 Q. The last year was 1883?

A. I should think it was from 1883 to 1884; I should judge that that was the time when the thing was talked about most.

Q. At a meeting at which you are recorded as being present, in December, 1883, it appears to have been voted, "That the plan for a consolidation accepted by this committee be referred as a basis to a committee of one from each company to report a plan in full detail for the consolidation of all the companies here represented, with power to call in legal counsel, and that this plan be reported to this committee for approval on the call of the Chairman"—do you remember that occurrence?

A. I should not remember it unless you read it.

Q. Who was the legal counsel who was called in, if any?

A. I was one of the counsel and Mr. H. H. Anderson was another.

Q. Were there any others?

A. I think not.

Q. As a result of calling in counsel under that resolution was the act chapter 367 of the Laws of 1884 drafted, "An act to authorize the consolidation of manufacturing corporations," passed May 28, 1884?

A. I don't think that act was drafted by calling in counsel by this pooling committee.

Q. Was anything done by counsel who were called in under that resolution?

A. I would like to know if I am to be examined as counsel for those companies and to tell the secrets of my clients committed to me; I don't think you ought to ask me questions of that sort.

Q. You are not asked to state any communication or interview of yourself or anybody else that can fairly be deemed privileged communications; you are simply asked what, if any thing, counsel did under that resolution?

9012 A. I think counsel under that resolution simply arranged the methods of the union of these two companies and drew an agreement in regard to the companies, and how they should come in, that these two companies ought to sign.

Q. Was such an agreement drafted?

A. Yes, sir.

Q. Was there more than one such agreement?

A. I think there was only one agreement about consolidation.

Q. And that is the formal one that now exists?

A. I think so.

Q. When you commenced to draw these various agreements that were not signed the law of 1884 was not enacted?

A. No, sir; it is not so; the law of 1884 had been passed six months before there was any attempt to draw any agreement.

Q. Who drafted that act?

A. I had a hand in it.

Q. Do you testify that that act was not drafted until after the articles of agreement were first prepared?

A. Yes, sir; that is so; that I believe to be so.

Q. As the result of employing counsel under this resolution of the pooling committee that was agreed upon in December, 1883?

A. When was the act passed, sir?

Q. I have not the date; it is chapter 367 of the Laws of 1884; I have not got the Session Laws here; was not the act drafted and subsequently became a law and known as chapter 367 of the Laws of 1884?

A. No, sir; it was not.

Q. When was that act first drafted?

A. I don't remember when it was first drafted; I think it was a year before it was passed.

Q. It was drafted in 1883, then?

A. I think it was.

9013 Q. Was it drafted before amendment of the charter of New York city known as the Consolidation Act, which prohibits the laying of mains in the city of New York by gas companies, except by the consent of two-thirds of the owners of property fronting on the streets?

A. It was not drafted before that.

Q. Was it drafted immediately after the passage of that act?

A. No, sir; I had no reference to that act you just read.

Q. Did you draft the other act?

A. No, sir; I never knew of it until I heard of it.

Q. Then this act of 1884 must have been drawn in the summer of 1833, or thereabouts—or late in the spring?

A. Yes, sir; I think it was.

Q. You remember whether it was drawn before the Legislature of 1883 adjourned?

A. Well, sir, I can't remember about that; my impression is now that it was drawn a whole year before it was passed.

Q. Who assisted as counsel in the drafting of that act besides yourself?

A. Mr. Anderson.

Q. Who else?

A. No one.

Q. As passed is there any change in that act?

A. Yes, sir; almost every section was altered after it went from my hands.

Q. When did it pass out of your hands?

A. My impression is that it was the Legislature of the year before, but I would not be certain about it, and I never saw or heard of it again until it was passed; some Senator took it in committee and altered almost every section of it.

Q. Who told you that?

A. I don't remember who did tell me that; somebody said when it was in the committee a certain Senator objected to a great many clauses, and it was amended; I think the amendments were made openly—I don't know.

9014 Q. Do you remember what any of those changes were to which you have alluded?

A. I don't know; there were quite a number, but I don't remember what they are; I didn't know about the changes until the bill was passed, and I compared it with the paper I had.

Q. You retained the draft of it?

A. Yes, sir.

Q. Will you show that draft to the Committee?

A. I have not any great objection; I don't wish to have you make public my professional secrets, because I would never have another client if I should do so; if you would like to see that original draft, I will produce it.

Mr. Tremain: I think it might aid the Committee if you produce it.

The Chairman: It strikes me that the suggestion as to professional confidence is hardly proper here, because the question refers to a paper that has been made public.

The Witness: I prefer to produce the paper rather than have you think there is any secret lying back, but I would prefer that you would not publish my drafts and throw them out to the world unless you find something very bad.

Q. To whom did you give that act after it had been prepared and agreed upon by yourself and associate counsel?

A. Senator Jacobs.

Q. Did you subsequently to that delivery have any conversation with anybody about that act prior to its passage?

A. I don't remember of any conversation, but I may have talked with my own clients about it.

Q. With Mr. Francklyn or the president, General Roome?

A. No, sir.

Q. With Mr. Gawtry?

A. I don't remember.

9015 Q. Do you mean individually when you speak of your clients? It was to ask the name of the individual to whom you alluded when you said you might have talked with your own clients?

A. I don't remember any specific occasion or person that I talked with about that bill; I only made the answer which I did because in the course of two years in matters of that kind I could hardly help talking with somebody, but I don't remember who.

Q. Was this draft of the articles of agreement made before the act was actually passed, but after it was drafted?

A. They were drawn long after the act was passed, the articles of agreement, I think at least six months, or more.

Q. Now in respect to the selection of appraisers, what action, if any, was taken by yourself toward the selection of the others at the time of the consolidation, or before?

A. My recollection is that each company first brought in their own appraisement, and I think that the appraisements of some of the companies were disagreed to, and that there was some arrangement made by which other parties should be called in to make an appraisement which should have that standing similar to arbitrators between all the parties—as to whether that went through or whether it was done afterward, I can't say.

Q. Do you remember the circumstance that the Knickerbocker and the Municipal representatives proposed that their values should be about $8,000,000 in the consolidation?

A. I don't remember the exact amount.

Q. Do you remember that somebody objected to it?

A. I remember that somebody objected to all the appraisements all around; that is relatively—one would say "if you say our property is worth so much it is worth more than you put upon it." It 9016 was a difficult question where there were five corporations to settle the values and put it into a consolidation; it was the most difficult thing in all the transaction.

Q. Do you remember how the amount $7,781,000 was arrived at?

A. Yes, sir. Was that the amount of the Municipal?

Q. No sir.

A. What was the amount that the Municipal went in for in the consolidation?

Q. Five million one hundred thousand dollars, and the Knickerbocker $3,000,000. Do you know how the item $7,781,000 of the so-called rights and franchises, etc., of the Knickerbocker in the total capitalization was arrived at? Can you give me the general basis on which that item was founded?

A. The general basis that I considered to be adapted for the purpose of arriving at the value of the franchise was this: That we should take the values of our stock in market at the time; if the capital, for instance, of the Municipal was $3,000,000, if it stood at 200 it would be worth over $6,000,000; then taking out of that the values of the real estate and the works, the franchise ought to be the difference; that was my view generally.

Q. How was that difference apportioned among the various companies?

A. Well, they apportioned it as well as they could; one had to come down and another had to add a little; they were a long time agreeing upon it, taking all the capital of the companies at their fair valuation in the market and taking out its real estate and its personalty, then the rest of it was the value of the franchises; that, I think, is the law; that is to say, we are taxed on that basis.

(By the CHAIRMAN:)

Q. What basis did you actually adopt?

A. We considered that these properties that were worth, some of them 320, that the franchises must be exceedingly valuable; the Manhattan was worth 320.

9017 Q. The New York, what was that worth?

A. I don't know.

Q. The Metropolitan was worth how much?

A. I don't know anything about the quotations except one or two of them.

Q. The Harlem?

A. I don't know.

Q. How much did you say the Metropolitan was worth?

Mr. TREMAIN: He did not say.

A. I don't know; I think it was selling for about 220 then.

Q. Mr. Zollikoffer says he paid 245 for some about that time; how did you arrive at the gross sum of $45,000,000 as the proposed consolidation by which other values should be gauged?

A. Well, sir, I will tell you a littlee how it came about in the way in which it was put to me; I shall only do it by referring to an example; it is an actual occurrence; the Manhattan people said "our stock is worth 320;" and if the stock is put in at market price into the Consolidated, "we ought to have the new stock at par to measure our capital, at 320, high enough, so that if we simply get on our new stock seven per cent. interest we will be satisfied," and we will not be satisfied with less.

Q. That was actually the basis upon which the proposed capital was stated?

A. As a general rule they said there ought to be enough so that it will cover the fair value of this stock in the market, so much at par.

Q. So that seven per cent. of the new proposed capital should be the dividends on the new stock?

A. I would not like to say that; it is not fair for me to reason the thing out.

Q. It is a fact that the market value of such stock is based upon the dividend it does pay?

A. Yes, sir.

9018 Q. The Manhattan was worth 320 because it had paid such large dividends, twenty-one per cent. at that time?

A. I know they said that they would not receive an equivalent if they did not get $12,000,000--three for one.

Q. Their capital was $4,000,000, and the new was capitalized at about $12,000,000?

A. That is about it; they said they did not expect to get over seven per cent., and they ought to have the stock par for that.

(By the Chairman:)

Q. Supposing the company had charged and received from the consumers of gas such a price as would enable the stockholders of the company to receive an annual dividend of fifty per cent. upon the capital invested, that would proportionately increase, would it not, the market value of the stock of that company?

A. Yes, sir.

Q. Then the theory of this consolidation was this: that if one of the constituent companies has charged the gas-consuming public a price large enough to enable the company to receive an annual dividend of fifty per cent., we must have stock in the new company at par to be equal to the value of the stock of that company and such an annual dividend, that would be it?

A. Yes, sir; that is the theory; may I be allowed to make a statement?

The Chairman: If you will reserve it until we get through with this inquiry.

Q. Don't you know that such a dividend as contemplated by that answer cannot be paid with the price of gas substantially reduced below its present increase?

A. No, sir.

Q. Seven per cent. on $39,000,000?

A. The companies have declared a dividend for a year, and they have earned it; that I believe to be the fact; I know that to be the fact as a director.

9019 Q. Don't you know if the price of gas for this year had been $1.50 a thousand, such a dividend could not have been earned—such a dividend as they have declared?

A. I believe, and I say under oath that they earned it.

Q. I ask you if the price of gas had been $1.50 a thousand whether such a dividend would have been earned?

A. I think it would; I have not made any figures about it.

Q. You mean that during the past year consumers of gas in the city of New York have paid to the Consolidated Company such a price as has enabled that company to make a dividend of seven per cent. upon an amount of stock increased upon the theory as already stated?

A. Well, sir, the question is a little confusing.

Q. You mean that during the past year the consumers of gas in the city of New York have paid to the Consolidated Company such a price as has enabled that company to make a dividend of seven per cent. upon an amount of stock increased upon the theory as already stated.

A. May I make an explanation after I answer the question? I want to have my answers clear and definite; I say, yes; I mean by that I think the gas company has made seven per cent. absolute profit upon its capital, and has earned it all.

Q. Do you remember during the progress of the proposition to consolidate that the values of the so-called franchises were apportioned to the various companies under a plan of this kind; I read from a proposed inchoate plan submitted among other papers by James W. Smith, the following paragraph:

"When all of the values are fixed and determined upon, the amounts thereof shall be aggregated and the difference between the total thereof and the amount of the capital of the new com-
9020 pany, as heretofore fixed, shall be deemed to be the value of the good-will and franchises of the several existing companies and shall be divided between them in proportion to their individual sales of gas as adjusted and confirmed by the present committee of one of each company, to the gross amount of sales by all the companies so adjusted for the period from October 15, 1882, to October 14, 1883, and the sum thus divided shall be added to the schedule value of each of the existing companies, and shall together form the capital of the new company."

Do you not remember the fact to be that the values of the so-called rights, franchises, etc., were apportioned upon that basis?

A. I don't know but that is so, but I don't remember any more than what you read there.

Q. You don't remember that they were apportioned upon any other basis?

A. I have given what was stated here, the argument used in regard to the franchises.

Q. The element of stock was of course considered in addition to what I have just read?

A. The gas which they distributed would show the value of their capital; if one company that year distributed twice as much gas as another, of course its stock would be worth a great deal more.

Q. Referring to the act which was drafted in 1883, and passed in 1884, who had charge of the necessary expenses attendant upon the introduction and passage of that in the Legislature?

A. The necessary expenses there you mean, at Albany?

Q. Anywhere in that connection?

A. I didn't pay any expense to anybody; I gave it to Senator Jacobs and asked him to present it.

Q. Who did in behalf of the company?

9021 A. That I don't know anything about. I asked Senator Jacobs to take charge of the thing, and he said he would do it.

(By Senator MURPHY:)

Q. Was the bill introduced in the Senate or the Assembly?

A. In the Senate by Senator Jacobs.

Q. It was not moved?

A. I don't know.

Q. Was the bill which was introduced in the Assembly passed first or was the Senate bill moved after it was introduced?

A. I don't know; I asked him to take the bill and push it along as fast as he could, and he introduced the bill.

Q. Who represented the pooling committee or consolidation interests in expenses attendant upon the inception of that act in the Legislature?

A. I don't know any thing about any such expense in the pooling committee.

Q. Did any body attend in the interest of that act before the Legislature?

A. I don't know that they did; I gave the bill to Senator Jacobs and asked him to do all that was necessary to push the bill through.

Q. Do you know anybody in the city of New York who was interested in the passage of that act, or who took any interest in aiding its passage?

A. No, sir.

Q. Did you ever hear any name mentioned?

A. No, sir.

Q. Did you ever hear the name of O'Brien mentioned in that connection?

A. No, sir; I never heard his name mentioned.

Q. Was the matter of the passage of that act ever considered before the pooling committee?

A. No, sir; not to my knowledge.

Q. Have you any knowledge who introduced that bill in the Assembly?

A. No, sir; if you are asking for any arrangement at Albany, or money paid, now I don't know any thing of the kind.

9022 (By the CHAIRMAN:)

Q. If that was done, it was not done with your knowledge?

A. No, sir; I don't know any thing about it.

R. F. CUTTING, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You was at one time interested in the bonds of the Knickerbocker Gas-light Company?
A. Yes, sir.

Q. You are still a holder of some of those bonds?
A. Yes, sir.

Q. When did you first become interested in those bonds?
A. As far as my memory serves me I commenced to be interested in the fall of 1878 or the beginning of 1879; I can't answer with certainty without referring to papers.

Q. Had you any interest directly or indirectly before that time?
A. No, sir.

Q. How did you begin then to be interested?
A. Through taking an interest in the formation of the company to be called the Knickerbocker Gas-light Company.

Q. What interest did you acquire in that company?
A. In the shape of bonds and stocks.

Q. Yourself, and who was associated with you in acquiring that interest?

A. I was acting at the time as the representative of an estate.

Q. What estate was that?
A. On the part of my grandmother's estate; I was one of the executors.

Q. What estate?
A. Elizabeth Bayard.

Q. Did the Knickerbocker Company buy property of the estate of Elizabeth Bayard?
A. No, sir.

9023 Q. What was the relation of Elizabeth Bayard to the Knickerbocker Company in 1878 or 1879?
A. Simply that her estate provided the funds for the inauguration of the company; I was one of her representatives, and my brother, William B. Cutting, and my cousin, M. B. Brown.

Q. You three were associated as a unit in that transaction?
A. Yes, sir.

Q. What was that transaction?
A. The first transaction was the purchase of certain properties that had been the property of the Union Gas-light Company.

Q. Whom was that contract of purchase made with?
A. With the representatives of the Union Gas-light Company, assignees.

(By the CHAIRMAN:)

Q. The receiver?
A. Receiver.

Q. What is his name?
A. There were three, if I recollect right—one was Appleby; one was Redfield, or a name similar to that; I could not answer exactly the names.

Q. Charles B. Appleby?

A. I believe that is the gentleman.

Q. Did you buy it at a public or private sale?

A. A private sale.

Q. What did you buy?

A. We bought the property comprising land in Ninety-eighth and Ninety-ninth street, First to Second avenue; and such property as remained between First avenue and the water line of the Harlem river; and also between Ninety-eighth and Ninety-ninth streets.

Q. What was the total cash paid for that property?

A. I don't remember, sir.

Q. To whom was it paid?

A. To the receivers, if I remember right.

Q. Who made the payment?

A. William A. Stephens, trustee for certain persons interested in the purchase of that property.

9024 Q. Who were the persons besides those you have named?

A. Pierrepont Morgan, I think, had a small interest; William A. Stephens and John Sickles.

Q. Stephens was acting under a trust?

A. Yes, sir; I think so.

Q. Who has that writing?

A. I don't know.

Q. Have you a copy?

A. I am not certain; I am not even sure that he was acting under an instrument in writing, but I presume he was.

Q. The person for whom he was acting contributed to him the funds from which he made the payments?

A. Yes, sir.

Q. As the result of that transaction was all the money paid at once or were there securities given for a part of the property purchased?

A. I don't remember definitely.

Q. Give your best recollection as to the amount paid in that purchase?

A. My impression is—it might be very far from correct.

The CHAIRMAN: It is subject, of course, to correction.

Q. You may give your best recollection, and if in error, you may correct it?

A. My recollection is that the sum paid was $2,000, but my impression is very vague indeed; I remember well, it was a sum supposed to be comparatively insignificant to the value of the property at the time.

Q. Do you know to whom the title was taken?

A. Well, I don't remember whether in the name of William A. Stephens, trustee, or to the Knickerbocker Gas-light Company; I presume to the Knickerbocker Gas-light Company.

Q. At that time were there any constructions upon that property?

A. Yes, sir; there were several large buildings; a retort house, and another very large structure needed on the property; beside the docks, and also two gas-holders.

9025 Q. Were they then being used for producing gas?

A. No, sir; I don't think they had ever been used.

Q. Were there any mains that had been laid then, and which were included in the purchase?

A. Practically I think none; I think the Union Gas-light Company had laid a few feet of mains.

Q. Did this purchase include the stock of the Union Company as well as the property?

A. It included the franchise—well, it must have included the stock.

Q. Was the Knickerbocker Company then organized?

A. Yes, sir.

Q. Who were its officers?

A. Mr. Stephens, John Sickles, myself and Mr. Brown; I was a director.

Q. Who were the other directors?

A. Stephens, Sickles and Brown.

Q. Who else?

A. Mr. Howes; he had a small interest in the company also; I had forgotten him entirely.

Q. When you bought this property of the Union Gas-light Company it was free and clear?

A. Yes, sir.

Q. What did you do with the property when you bought it?

A. The Union immediately put in the machinery for gas making and to lay mains.

Q. At the time of this purchase how much capital stock of the amount of the Knickerbocker Gas-light Company—what was its capital prior to the purchase?

A. The capital stock was $1,500,000; I don't remember that any of it had been actually issued.

Q. Now after this purchase—did the Knickerbocker Company make a mortgage on those premises?

A. Yes, sir.

Q. And issued bonds.

A. Yes, sir.

9026 Q. And did they also issue all that capital stock, $1,500,000?

A. Yes, sir.

Q. That was done?

A. To the best of my recollection.

Q. It was done while you was a director?

A. Yes, sir.

Q. And prior to 1879?

A. I couldn't say; I don't remember when the operation was commenced; it might have been in 1879; it was done, however, immediately after the first operation.

Q. To whom was that stock issued?

A. I think it was all issued in the name of William A. Stephens as trustee.

Q. Except enough to qualify the directors, of course, was there not?

A. Yes, sir.

Q. To whom were the bonds issued?

A. William A. Stephens, trustee.

Q. Up to the time that these bonds and that stock had been issued the estate of Elizabeth Bayard, through yourself as its representative, and being associated with the other parties in interest, had advanced the sum of $282,000?

A. I think so.

Q. Prior to 1880 how much money in all had been advanced by William A. Stephens, trustee, for yourself and associates?

A. I couldn't answer that without refreshing my memory as to what the circumstances were.

Q. I think we will take your best recollection up to the 1st of January, 1880.

A. Money was being advanced by Mr. Stephens to the company the whole time, as the mains were being laid, and every month, of course, adds to the total.

Q. Do you know what the total was up to January, 1880?

A. I couldn't tell you how much of the whole amount was advanced up to that time.

Q. When advanced after that?

9027 A. There were advances made up to the time the Knickerbocker sold to the Municipal.

Q. The amount?

A. Something over $1,200,000.

Q. How much of that was advanced through you, either from the estate of Elizabeth Bayard through you or otherwise?

A. It is a matter of private business which I do not wish to have ventilated unless it is absolutely necessary.

Q. Here is a company that has been capitalized and upon which the public are being charged the price of gas to pay a dividend upon a capital of three millions of dollars; so far as the committee has been able to ascertain, there are no books to show except the customers' ledger.

A. William A. Stephens up to that time used for the purpose of the Knickerbocker Gas-light Company something over $1,200,000.

Q. Inasmuch as the stock has been distributed to the parties now holding it, if you will indicate whether there are any book or books of the Knickerbocker Gas-light Company that will throw any light upon this transaction it would aid us very much; how long did you continue to hold any interest in that company?

A. Until the sale of the company to the Municipal Gas-light Company.

Q. Then what did you receive, bonds?

A. Yes, sir.

Q. And stock of the Municipal Company?

A. Yes, sir.

Q. And you have transferred that stock into the stock of the Consolidated Company?

A. Yes, sir.

Q. And you and your associates hold more or less of that stock to-day?

A. I don't hold a single share.

Q. You did at the time of the consolidation?

A. Yes, sir.

9028 Q. You also hold these bonds which have been assumed by the Consolidated?

A. Yes, sir.

Q. You are aware that the stock has been reserved to take them up or pay them?

A. No, sir, I am not aware of it.

Q. Those bonds are secured by a mortgage?

A. Yes, sir.

Q. Who is the trustee of the mortgage?

A. I believe I am one, but I am not certain about it.

Q. How much of this money, $1,300,000, was in fact advanced by the estate of Elizabeth Bayard, or by yourself?

A. I can only answer as far as my recollection goes; well, I should say about—do I understand that the committee want that information?

The CHAIRMAN: It seem- to be possible that it will supply a link which we shall need.

A As far as I can remember, I should say it was about $1,150,000, or a little over that.

Q. Of the $1,200,000 advanced?

A. I may be entirely in error; it is a good many years, and I have discharged it from my mind altogether.

Q. Were there not two sets of bonds issued?

A. Yes, sir.

Q. The first set?

A. Seven hundred and fifty thousand dollars.

Q. When were those issued?

A. I should say in 1878.

Q. To your best recollection they were issued in 1878?

A. I should think so.

Q. The other block of bonds were how much?

A. Four hundred and fifty thousand dollars.

Q. To your best recollection they were issued when?

A. About 1879.

Q. About the time of the improvements made by Mr. Rowland on the works?

A. I think not.

9029 Q. They were issued about the time those improvements were made on those works?

A. They were issued for money that had been actually expended by William A. Stephens.

Q. On the works?

A. Yes, sir; we never knew Rowland at all; any thing that he did was an additional expense over and above that $450,000.

Q. When the first issue of $250,000 was made of bonds were they all given to you personally?

A. If I remember, I said I was one of the trustees; I think my brother was trustee of the mortgage, and I think the bonds were all placed in his hands—$750,000.

Q. How much stock was placed in his hands at that time?

A. I don't know.

Q. How much stock did that transaction contemplate should be issued at the time?

A. I don't remember.

Q. When the $450,000 issue of the bonds was made, who received those bonds—the same gentlemen?

A. Yes, sir.

Q. How much stock was then issued to them.

A. I don't remember.

Q. What stock was it that they then received—Knickerbocker stock, was it not?

A. Yes, sir.

Q. Do those two issues exhaust all the shares of the Knickerbocker capital?

A. If I remember rightly, yes; some shares went other ways.

Q. How many?

A. The promoters of the company received certain stock; I refer to Messrs. Stevens and Sickles; I don't remember the total number of shares thus apportioned.

Q. Is there any book or books that will give us that information?

A. I think not.

Q. Is there any member of the board of direction that would be likely to have any more knowledge on that subject?

A. Mr. Stephens should have a better knowledge of that transaction than I have recollection of.

9030 Q. Well, it was less than $300,000 par value?

A. Yes, I should say it was.

Q. How much less?

A. My impression is that it was about 1,500 shares.

Q. Representing $150,000 at par?

A. Yes, sir.

Q. And all the balance of the stock was issued to the parties who took the bonds?

A. Yes, sir.

Q. You continued to hold that stock until the Municipal Company acquired it?

A. Yes, sir.

Q. You remember a transaction in March, 1880, do you not, when the Municipal Company bought all that stock?

A. Yes, sir.

Q. You gave a guarantee that the indebtedness should not exceed $200,000, did you not?

A. Yes, sir.

Q. How much money was paid in closing that transaction?

A. I don't remember.

Q. Were you present when the transaction was closed?

A. I don't think I was; there was quite a number of meetings held about that time, but I don't remember being present at the final transaction.

Q. Do you remember being present at an occasion when Mr. Day was present at the close of that transaction?

A. I remember of meeting Mr. Day several times; I don't recollect any special occasion, though.

Q. You remember a payment of $50,000 that was made about that time?

A. I do not remember distinctly.

Q. What is your best recollection about that circumstance?

A. My recollection is so exceedingly vague upon the matter, I can't give it.

Q. Do you remember a payment of about $350,000 about that time?

A. I don't remember with any distinctness.

9031 Q. What is your best recollection about that circumstance?

A. There was a cash payment made; my recollection of the final transaction fails me a good deal.

Q. Give your best recollection about it?

A. I really can't give any thing definite what the features of that final transaction were.

Q. How much stock of the Municipal Company, if any, was passed over in closing that transaction?

A. I don't remember.

Q. Do you remember the fact, that some was passed?

A. Yes, sir.

Q. How much did you get of that Municipal stock, as a result of that transaction?

A. As a representative of the estate of Mrs. Bayard?

Q. In any shape.

A. If I remember rightly we received 3,550 shares; I may be incorrect there too.

Q. Was that for the estate of Elizabeth Bayard, or for the associates with yourself and William Bayard Cutting?

A. For the estate alone.

Q. How much did you get for yourself?

A. None.

Q. How much did William Bayard Cutting get?

A. No stock at all.

Q. Do you mean that in this whole transaction that neither yourself nor William Bayard Cutting had any personal interest whatever, either in cash, stock or bonds?

A. None whatever.

Q. And at no time receiving any?

A. No, sir.

Q. Yourself nor your brother?

A. No, sir.

Q. The transaction was entirely a transaction of that estate?

A. Yes, sir.

Q. The accounts of the estate will show, will they not, the amount of stock received?

A. They kept no ledger, and I don't know that there are any figures whatsoever.

Q. You was an executor?

A. Yes, sir, and William Bayard Cutting.

9032 Q. Will not the account of the estate show the number of shares of the Municipal stock that the estate acquired by reason of this transaction?

A. I could not answer that.

Q. Was you an attorney in this transaction?

A. Yes, sir.

Q. Having a power of attorney?

A. She was alive at that time.

Q. Did she give you power of attorney?

A. Yes, sir.

Q. Is it your best recollection of that transaction when the property was passed to the Municipal Company that you retained your bonds and parted with all your Knickerbocker stock, and received Municipal stock to the extent of three thousand five hundred and fifty shares?

A. Yes, sir.

Q. Now where did the $350,000 payment come in—who received that?

A. I don't know, sir; I don't remember what the circumstances of that payment were.

Q. Do you remember the fact that a suit was brought for damages, so called, by the Knickerbocker against the Municipal Company in 1879?

A. Yes, sir.

Q. Did you have anything to do with instituting that suit?

A. If I remember rightly; yes, sir.

Q. Do you know that that suit was settled at the time of this transaction or sale?

A. Yes, sir.

Q. And you think there was a payment of $50,000 made in cash at that time?

A. I did not say that I thought so; I don't remember.

Q. As an officer of the Knickerbocker Company at that time have you no information whatever as to the disposition made by the Knickerbocker Company of the sum of $300,000 or $350,000, which it appears in evidence here was paid by the Municipal Company to the Knickerbocker Company at the time this transaction was closed? 9033

A. I don't remember the disposition of that.

Q. Did Elizabeth Bayard, or her estate, receive any part of that $350,000?

A. I don't remember.

Q. Has any money whatever been advanced by or through you to the Knickerbocker Company in excess of the amount, and still remaining unpaid to you in excess of the amount of bonds which you now hold?

A. Yes, sir.

Q. How much?

A. I don't remember the actual figures.

Q. Has it all been repaid with the exception of the bonds which you now hold?

A. No, sir.

Q. Give your best recollection of what sum remains unpaid or unreturned?

A. My best recollection will not carry me with any certainty; there was a considerable sum expended—over $1,200,000.

Q. And advanced by the estate of Elizabeth Bayard?

A. Yes, sir.

Q. Give your best recollection of how much?

A. My recollection is exceeding vague; perhaps between $30,000 and $40,000.

Q. You continued to hold that block of 3,550 shares of the Municipal Company's stock until the consolidation?

A. Yes, sir.

Q. How soon after the consolidation did you dispose of the stock?

A. I don't remember how soon after; some time after.

Q. Has the trust of William A. Stephens for himself and his associates in the transaction you have just described ever been closed by any accounting or agreement?

A. I think so, yes, sir.

Q. When did that occur?

A. I don't remember the date.

9034 Q. What year?

A. About the time of the sale of the Knickerbocker to the Municipal, or soon thereafter.

Q. Is there any thing in writing on that subject in your custody or possession?

A. Not that I know of.

Q. Why do you say that it was closed by any accounting or agreement?

A. I take it for granted in a matter of that kind it would have been closed as a business transaction, and perhaps no recollection of it.

Q. How could it have been closed without the distribution of securities or moneys that were received by Stephens or his associates for distribution at the time of the closing of that transaction?

A. It probably was not closed until after that.

Q. Have you any recollection whatever of any subsequent accounting or agreement, by which such trust was closed?

A. I don't remember, sir.

Q. When did Elizabeth Bayard die?

A. In 1882.

Q. Did you continue to act under her power of attorney up to that time?

A. Yes, sir.

Q. Did you do any thing toward having that trust closed up before her death?

A. I don't remember, sir.

Q. State your best recollection what, if any thing, you did do from February, 1880, up to her death, in respect to any of these securities for this indebtedness?

A. The question is rather indistinct.

Q. State what, if any thing, you did do under that power of attorney, between February, 1880, and up to her death in 1882, respecting these securities for indebtedness?

A. What indebtedness do you refer to there?

9035 Q. It is clear you held certain bonds which you say did represent an indebtedness, and the question is intended to refer to any securities you have mentioned relating to that transaction?

A. The securities were held in absolutely the same way they were received.

Q. State what, if any thing, you did do under that power of attorney between February, 1880, and up to her death in 1882, respecting those securities for that indebtedness, what you did?

A. Nothing.

By the CHAIRMAN: The counsel refers to the indebtedness—the bonds of the Knickerbocker Company.

A. They were simply held in the estate of Mrs. Bayard?

(By Senator ROBINSON:)

Q. That you held them; the bonds?

A. Simply as representative of Mrs. Bayard's estate.

Q. You held them up to her death?

A. Yes, sir.

Q. Did you hold the Municipal stock?

A. The stock was all held.

Q. Did you take the shares as her attorney?

A. Yes, sir.

Q. Did you hold them as her attorney up to the time of her death?

A. Yes, sir.

Q. You had the certificates?

A. Yes, sir; every one of them.

Q. Did you have any money received from this transaction up to the time of her death?

A. It passed into the bank balance of the estate.

Q. Did you keep that account as her attorney?

A. Yes, sir.

Q. In what bank did you pass that money?

A. The American Exchange Bank.

9036 Q. Can you refresh your recollection from your bank account and tell the Committee how much cash passed to the credit of the estate of Elizabeth Bayard when this transaction was closed in 1880?

A. Yes, sir.

Q. Will you please do so?

A. Certainly.

Q. After 1882 after her death, did you continue to hold these bonds and this stock—you held it personally?

A. Yes, sir.

Q. You have got the bonds yet?

A. Yes, sir.

Q. You continued to hold the Municipal shares until you exchanged them?

A. Yes, sir.

Q. And then you sold them?

A. Yes, sir.

Q. Do you hold any relation to that estate now?

A. As an heir.

Q. Who is the executor?

A. W. B. Cutting.

Q. Anybody else?

A. No, sir.

The Committee hereupon adjourned to Tuesday morning, December 1st, at 11 o'clock.

FIFTH AVENUE HOTEL,
NEW YORK CITY, *December* 1, 1885.

The Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

H. E. Tremain, Esq., appears as counsel to the Committee.

JOHN C. JACOBS, a witness called by the counsel to the Committee, being duly sworn, testified as follows:

Examined by the CHAIRMAN:

Q. I believe you wish to make a correction as to what Mr. Day testified to?

A. Yes, sir; I wish to submit some correspondence I have had with Mr. Day, upon the subject of the evidence which he gave here Saturday last, I think; I addressed Mr. Day the following letter:

9037 BROOKLYN, *November* 30, 1885.

Henry Day, Esq.:

DEAR SIR: I see in the newspaper of Sunday, a statement made by you before the Senate Committee on the gas business, that you delivered the proposed consolidation act to me as a Senator, and asked me to introduce it in the Senate, and it is assumed I did not introduce it. I presume you did not intend to do me an injustice.

The facts are, that you came to Albany, and left me a bill, and asked me to introduce it after I had examined it. I made no promise about introducing the bill, but after keeping it a few days and examining it carefully, I returned it to you with a letter stating my reasons for not introducing it, which I did not do, as the record will show.

I ask, if upon reflection you find my statement to be true, that you will kindly give me a letter to that effect which I may be allowed to use.

Yours truly, JOHN C. JACOBS.

Q. Did you send that letter to Mr. Day?

A. Yes, sir.

Q. Did you receive a reply from him?

A. Yes, sir; the following is his reply:

120 BROADWAY, N. Y., *November* 30 1885.

Hon. John C. Jacobs:

DEAR SIR: I have your letter of the 30th inst. On reflection, I believe you are right in your statement that you returned the bill to my office, which I had left with you, and declined to introduce it. This fact had entirely escaped my memory when before the Committee, or I should have so stated it.

Yours very truly, HENRY DAY.

Q. When was that letter received?

A. Yesterday afternoon.

9038 Q. Are these originals, or copies.

A. This is Day's letter, the original; mine is a copy.

Q. You will put in evidence a copy of your letter, which you say is a true copy, and this which you say is the original?

A. Yes, sir.

Q. You was a member of the Senate in 1884?

A. Yes, sir.

Q. Did you know or hear of the passage of any bill, or the presentation of any bill in the Senate which you at the time understood to provide for the consolidation of the gas companies of the city of New York, or any bill having any relation whatever to that matter?

A. No, sir.

Q. Did you know of the passage of any such law except as you have heard it talked about since, and out of the Senate?

A. No, sir; that is all.

Q. You have been a member of both branches of the Legislature for a good many years?

A. Yes, sir; nineteen years, I think.

Q. It was a matter of surprise to you when you learned that there had been any bill passed, looking toward consolidation of the gas companies of the city of New York?

A. Yes, sir; it was.

(Senator MURPHY:)

Q. In the amendment of general laws it is almost impossible to discover what the object is except you are told, or except by the most expert lawyer and legislator?

A. Yes, sir; and then the most expert lawyer cannot discover the meaning of some legislation in the amending of general laws.

Q. To your mind such amendments are much more dangerous to the public than special legislation?

A. I regard it much more so than special legislation; in special legislation one knows what he is introducing; but in other matters one must take the word of the person who requests the amendment.

9039 Q. And the attention of the locality affected by it is not called to the subject-matter of the proposed amendment?

A. Never.

Q. In your letter which you have put in evidence you state that you examined the bill which Mr. Day put into your hands and found objections thereto, and for that reason returned it to Mr. Day?

A. Yes, sir.

Q. What was that bill?

A. I could not tell you; I could not tell you the title, but my impression is it was an act authorizing the consi*l*dation of corporations or manufacturing corporations, I could not tell; it was something of that general title.

(By Senator Murphy:)

Q. To amend the general law of 1848.

A. I couldn't tell, I paid very little attention to it, I saw there were objections to it and returned it.

Q. Do you now recollect what your objections were to it?

A. I don't; they were stated in this letter to Mr. Day; the letter will show if I can find it.

Q. Did you see Mr. Day at Albany in relation to the matter?

A. Yes, sir; he called on me at my house in Albany; I kept house there that year.

Q. Did he tell you what the object of the bill was?

A. I think not.

Q. Or the interest he had in it?

A. I cannot recollect well enough to state; it is a matter I did not charge my mind with; I think he said it was a bill which was of importance to him and some of his friends.

Q. Do you remember whether he told you in what way it was important?

A. No, sir; I asked him to leave the bill and I would look into it and let him know what I would do about it; I looked into it and found objections and returned the bill.

9040 Q. Did any one else besides Mr. Day talk with you about the bill or the object of its passage?

A. No, sir; that was the first and last I heard of the matter; Mr. Day didn't even answer my letter to him; it didn't require an answer, perhaps.

Q. Do you know who did introduce the bill?

A. I don't.

Q. Do you remember any thing about its consideration in the Senate?

A. No, sir.

Q. Do you know what committee it was referred to?

A. No, sir.

Q. Have you any recollection with reference to the history of the bill in the Senate?

A. None whatever; I don't know what it was or how I voted upon the bill.

Q. Did you retain a copy of your letter to Mr. Day at the time you returned the bill?

A. No, sir; because I am not in the habit of doing so.

Q. Have you any memoranda by which you can refresh your recollection as to when this bill was handed to you?

A. It is possible I may have something among my papers.

Q. What is your recollection?

A. I think it was early in the session; it was not as late as the middle of the session.

Senator MURPHY: The better way to get at the time this bill was introduced would be to get the number of acts that were introduced amending the general manufacturing law; it is just as the Senator has testified; it would be almost impossible to tell whose act it was; they don't amend the title of the general manufacturing act, only a section of the general law to apply to the legislation they are seeking for.

The WITNESS: If that bill was intended to be the gas bill it never was introduced in the Senate; there was no bill like the one sent to me introduced and passed afterward, for the reason I think it may be an amendment to the general law. 9041

Senator ROBINSON: Mr. Day testified that nearly every section of the bill which he put in was amended.

Q. When was this bill offered to you?

A. It is pretty safe to say, within six weeks after the organization of the Legislature.

Q. You retained it how long?

A. Not over a week; my clerk took it to Mr. Day and delivered it to him in person.

Q. It being the bill to provide for the consolidation of companies you would hardly be able to state that the same bill was not introduced and referred to a committee?

A. There is no bill which I can find that would contain such provisions.

Q. Have you examined chapter 367 with a view to compare it?

A. No, sir; I don't know what it is.

Q. It may be the same bill under a modified form?

A. It may be.

CHARLES G. FRANCKLYN, being recalled, testifies as follows:

Examined by Mr. TREMAIN:

Q. The expert reports that he has not been able to find or to receive from any official of the Municipal or Knickerbocker Companies any of the books except the customers' ledger; state to the committee where those books, including the stock book, are?

A. I don't know.

Q. When did you last see them?

A. I have no doubt they are in the office or somewhere about; I have not seen them for years, they are either in the Consolidated office or the branch office.

Q. Will you deliver them to this committee?

9042 A. They are not in my possession; they can be had, there is no doubt about that.

Q. Do you mean to say that the books of the Knickerbocker can be had?

A. You have had all there are, I believe; the customers' books, there are no other.

Q. When did you last see the stock of books of the Municipal?

A. I can't remember.

Q. You are president of that company and you are a director in the Consolidated?

A. I am.

Q. Will you deliver or cause to be delivered to this committee all the stock books of the Municipal Company?

A. I will do my best.

Q. Why has it not been done before?

A. It never was asked for; I have been asked to produce Knickerbocker books, and they do not exist; I cannot make books for the Committee.

Q. The inquiry has reference now to the Municipal stock books?

A. I presume they are in existence.

The CHAIRMAN: The answer about the Knickerbocker books the stenographer will strike out, because it was not relative to our inquiry.

Q. Can you send a messenger and have those books brought here now, and your examination will be suspended for that purpose?

A. I don't know where they are; I can send a messenger to two or three places and find out.

Q. We want the stock books of the Municipal Company?

A. I don't know of any except the certificate book.

Q. And the transfer book?

A. The transfer book.

Q. There was a stock certificate book?

A. I suppose so.

Q. Don't you know?

A. I suppose there are.

Q. Was there a stock transfer book?

A. I presume so.

9043 Q. Don't you know?

A. I don't know that I ever saw it.

Q. Who kept it?

A. Mr. Allen, the secretary.

Q. How many of those books were there?

A. I don't know.

Q. You know there were some, don't you?

A. Yes, sir.

Q. Was there a stock ledger?

A. Yes, sir.

Q. How many were there?

A. It seems to me you have all those books; you have had the stock ledger?

Q. The question is, was there a stock ledger?

A. Yes, sir.

Q. Where is that now, at the Consolidated office?

A. I don't know.

Q. Will you send for that?

A. If the committee so order.

Q. Do you remember preparing or having prepared under your direction at the time of consolidation, or shortly afterwards, a schedule of the cash assets of the Municipal Company?

A. I don't recollect.

Q. What were the cash assets of the Municipal that were turned over to the Consolidated Company?

A. I don't remember; the books will show, I presume; when they were turned over there was a memorandum of some sort; I don't remember what they were.

Q. Was there a memorandum of some sort given to the treasurer of the Consolidated at that time?

A. I really don't know; I presume there was.

Q. Didn't you sign such a memorandum as president of the Municipal?

A. I may have; I don't recollect that.

Q. Did you receive the money for them?

A. As president?

9044 Q. As anybody?

A. I don't remember whether I did or not.

Q. Did you receive stock for the cash assets?

A. Well, no; I think not.

Q. What did you do with the money you received?

A. Distributed it among the stockholders.

Q. What books of account will show it?

A. I think the Municipal dividend books will show it.

Q. Will that show the total amount received from the Consolidated for the cash assets?

A. I think so.

Q. What is your best recollection of that amount?

A. Some six hundred thousand dollars; I don't recollect exactly.

Q. When was that payment made by the Consolidated to you?

A. It was not made to me; it was made to the company.

Q. When?

A. Some time in January, I think.

Q. Were there any cash assets whatever in the Municipal beyond those that were paid for by the Consolidated?

A. I really don't remember whether the Consolidated ever had those or not.

Q. That don't answer the question?

A. I can't distinguish between those and any others.

Q. Were there any cash assets of the Municipal Company which the Consolidated Company didn't receive?

A. I don't know.

Q. Were there any cash assets of the company of which you are president that the Consolidated did not receive?

A. I don't know.

By the Chairman:

Q. You don't know whether or not the Municipal Company of which you are president turned over to the Consolidated Company all of their assets?

A. I don't remember.

Q. Have you any knowledge or recollection of any other disposition of any of the cash assets of the Municipal Company?

A. At what time?

9045 Q. At any time. I refer to assets which there were at the time of the consolidation, the then existing cash assets?

A. Yes, sir.

Q. Have you any knowledge or recollection of any other disposition of any of the cash assets of the Municipal Company existing at the time of the consolidation?

A. I am not sure about the time.

By the CHAIRMAN:

Q. What I suppose Mr. Tremain wants to find out is, the sum of $50,000 which was paid to you personally were any of those assets?

A. I don't know what they came out of; there was $50,000 paid to me as salary for eight or nine years.

Q. Paid to you when?

A. About the time when the Municipal affairs were closed up.

Q. Before or after the date of consolidation?

A. I don't remember.

Q. Was not that payment between November 11, 1884, and February 1, 1885?

A. I should think it was, but I don't remember exactly.

(By the CHAIRMAN:)

Q. If so, out of what funds did it come?

A. Out of the assets of the Municipal Company.

Q. That had been turned over to the Consolidated Company?

A. I don't remember whether they were turned over or not.

Q. Whose check was it you received?

A. The check of the Municipal Company.

Q. Now, having thus refreshed your memory, the question is——

A. I object to the remark "Having refreshed my memory."

Q. I will take that back; are you able to refresh your recollection so as to answer now whether there were any assets of the Municipal Company that were not turned over to the Consolidated Company?

A. I stated already that I don't recollect whether any of

9046 them were turned over; there may have been and there may not.

Q. Do you mean to say you don't recollect whether or not any assets whatever belonging to the Municipal were turned over to the Consolidated?

A. I mean I don't recollect.

Q. Don't you remember, as a fact, that an agreement was signed by the Municipal, pursuant to which certain assets of the Municipal were transferred, or were to be transferred, to the Consolidated?

A. I remember of its being discussed, but whether it was done or not I don't know.

Q. You put your signature, did you not, to the articles of agreement that were filed on November 11?

A. I believe so.

Q. You are recorded as signing that agreement for the Municipal Gas-light Company of New York City "by Charles G. Francklyn, president;" you signed that paper, didn't you?

A. I presume so; my signature is there.

Q. Prior to that time had you turned over any assets whatever to any officer of the Consolidated Company?

A. I don't remember.

Q. After that time did you turn over any assets whatever to any officer of the Consolidated Company?

A. I don't remember.

Q. You received eight or nine thousand shares of the Consolidated stock, didn't you?

A. I did.

Q. Eight thousand eight hundred shares?

A. I don't remember the figures.

Q. What did you give for that stock when you received the Consolidated, what did you surrender?

A. Forty-two hundred shares of the Municipal stock.

Q. Any thing else?

A. Not that I know of.

Q. Did you pay any money for this Consolidated stock?

A. No, sir.

9047 Q. After you signed this agreement, November 11, did you receive any assets whatever of any kind or any money belonging to the Municipal Company?

A. Yes, sir; I received a dividend on my stock.

Q. You received this eight thousand eight hundred shares, when?

A. I don't remember whether it was in the fall or after; the check-book will show.

Q. Did you receive any other?

A. No, sir.

Q. Do we understand you to testify that you don't remember the Municipal Company's transferring any other assets whatever to the Consolidated Company; is that your testimony?

A. I don't remember whether they did or not.

Q. Then that is your testimony?

A. Yes.

Q. Did you retain assets out of the Municipal Company in your own hands?

A. No.

Q. Did you receive any consideration in the way of stock or money from the Municipal Company or from the Consolidated Company in any way connected with the assets of the Municipal, except the $50,000 which you have mentioned?

A. No.

Q. Did you not owe the Municipal Company large sums of money at or about the time of its consolidation?

A. Yes, I think I had a call loan with them; I forget the amount.

Q. More than one?

A. There might have been separate amounts; I don't remember.

Q. Were those loans paid off before the consolidation agreement?

A. I don't remember when they were paid, but they were paid.

Q. To the best of your recollection, what was the amount of those loans outstanding at the time of the consolidation agreement?

A. I should say between $80,000 and $100,000?

Q. No more than that?

A. I don't think so; there may have been more.

9048 Q. Did that sum cover all the loans then outstanding in which you had either directly or indirectly any interest?

A. Yes, sir.

Q. Did you pay those loans to the Consolidated?

A. I think I paid them to the Municipal, but I am not certain about it.

Q. When?

A. I can't remember.

Q. Were there any other loans at that time outstanding, besides yours, owing to the Municipal at or about the time of the consolidation?

A. I don't remember if there were any or not.

Q. Do you not remember that you paid all your loans after the consolidation?

A. I don't remember, no.

Q. What is your best recollection as to when you paid off your loans?

A. The books will show, I can't remember these dates.

Q. Do you not remember that you did not pay off your loans until after you had received your certificates of Consolidated stock?

A. I don't.

Q. Is that the fact?

A. I have already said I did not know the date I paid them; I said no three or four times to the same question practically.

Q. It is not merely as to when it was, but relative to the time of consolidation?

A. I don't remember.

Q. Don't you know you did not pay them until after you received your Consolidated stock?

A. I don't know.

Q. Do you not know as a fact that you did not pay them until after you signed the Consolidated agreement?

A. It was after that, I think.

Q. Do you not know that it was after you had received your Consolidated certificates and sold some of your stock?

A. I don't remember it; it may have been.

9049 Q. Do you testify that your loans did not exceed $18,000 or $20,000?

A. I said $80,000 to $100,000.

Q. I beg your pardon; do you testify they did not exceed $100,000?

A. No, I do not.

Q. Did you have more than one such loan at that time outstanding?

A. I don't remember in what way they were divided in the books.

Q. Did they all stand in your name?

A. Yes, sir.

Q. Were there not some in which you were interested that did not stand in the name of Charles G. Francklyn?

A. Not as I know of.

Q. Was there not one to the amount of $40,000 in addition to the sums which you have already mentioned?

A. There may have been.

Q. What is your best recollection?

A. I don't remember.

Q. Did you have any conversation with any officer of the Consolidated Company in respect to the payment of those loans?

A. Not to my recollection.

Q. To whom, if anybody, did you pay those loans?

A. I think I must have paid them to the Municipal Company.

Q. Paid them to yourself as president?

A. No, paid them to the Municipal Company.

Q. To what individual did you make any such payment?

A. I made it to the Municipal Gas-light Company.

Q. To what individual, if anybody, did you make any such payment?

A. I don't know.

Q. Did you pay it in currency?

A. No.

Q. Paid it by check?

A. Yes, sir.

Q. Have you got the check?

A. I don't know; I suppose so.

9050 Q. Will you produce that check or any other check by which you paid it or assumed to pay your loans, or any other loans in which you are interested, to the Municipal Company; have you any such checks?

A. I presume I have.

Q. What is your best recollection?

A. I don't usually keep any checks; I have the stubs of the check book.

Q. Do you not keep your checks when they are returned?

A. I do for a while.

Q. On what bank was that check drawn to pay any such loan?

A. The bank of New York, or the Chase National Bank.

Q. You had personal accounts in both banks during 1884 and 1885?

A. Yes, sir.

Q. Who had charge of the making of the loans by the Municipal Company in 1884?

A. Mr. Gawtry and Mr. Allen, generally.

Q. Did you not have any thing to do with them?

A. Very little except to borrow some money occasionally.

Q. At whose request was a loan of $250,000 made to the Central Trust Company by the Municipal?

A. It was a part of the assets deposited there.

Q. You kept an account there, did you?

A. We deposited that.

Q. The Municipal kept an account there?

A. They made a special deposit, and they had our assets a short time before distribution; we made a deposit with the Central Trust Company to get some interest on it.

Q. Was that money turned over to the Consolidated Company?

A. I don't remember.

Q. Who was authorized to sign checks on that fund thus deposited with the Central Trust Company?

A. Mr. Gawtry, Mr. Allen any myself.

Q. Could not that money be drawn out of the Trust Company without all three signatures?

A. Two of them.

9051 Q. Do you know what was done with the money which was deposited in the Central Trust Company?

A. I could not tell you the Central Trust Company's business.

Q. Did you sign any checks drawing it out?

A. I think not; I don't know; I think Mr. Gawtry signed them in my place.

Q. Where is the check-book—with the Central Trust Company?

A. I don't think we had a check-book; they issue deposit receipts and they are returned when the money is paid on them.

Q. For that fund there was a certificate of deposit issued?

A. Yes, sir.

Q. In whose name?

A. The name of the Municipal Company.

Q. Was it in fact checked against at all?

A. No.

Q. How many such certificates were there to represent that fund?

A. I don't remember whether it was one or two.

Q. You received those certificates of deposit?

A. They were put in the Safe Deposit Company.

Q. Are they there now?

A. No, sir; they were delivered to the Central Trust Company I presume when the deposit was drawn.

Q. Who was it paid to?

A. The Municipal Company.

Q. To you personally?

A. No.

Q. To whom?

A. I presume the check was drawn to the order of the Municipal Company.

Q. You mean the Central Trust Company's check was drawn to the order of the Municipal Company?

A. I presume so.

Q. Who received that check?

A. I presume Mr. Gawtry or Mr. Allen.

Q. What was done with it?

9052 A. I suppose it was deposited in the bank; either the Chase or the First National Bank, to the credit of the Municipal Company.

Q. Did they have accounts in both banks?

A. Yes, sir; I think they had it at that time.

Q. And you had personal accounts in both banks besides?

A. No, sir.

Q. In which bank did you have an individual personal account?

A. The Chase Bank.

Q. In any other?

A. The Bank of New York.

Q. In any other bank did you have an individual account?

A. Not at that time, I don't think.

Q. In 1884 or 1885, we are asking?

A. I think not.

Q. Then you think that the check of the Central Trust Company for the payment of this loan was deposited in the Chase National Bank, to the credit of the Municipal Gas-light Company?

A. That is my belief.

Q. Who was authorized to and did draw any checks on the Chase National Bank against the deposits or credits of the Municipal Gaslight Company in February, 1885, if any one?

A. I presume the officers of the company; I don't remember of anything special.

Q. That is no answer at all, with all respect to the witness; if you don't know say so; here is a fund of $250,000; you are the president of the company; you say it was deposited in a bank where your company had credit; if anybody drew any check on that fund who did it?

A. If anybody did, it was done by either Mr. Gawtry, Mr. Allen, or myself.

Q. Did you personally sign any checks on the Chase National Bank for this deposit of $250,000, which, you say, it was made for?

A. I said I presumed it was made there; I don't know whether it was made there or not, and I don't remember of signing any checks myself.

9053 Q. Where are the return checks of the Municipal Company?

A. I don't know.

Q. Can you tell what became of that money—that fund of $250,000?

A. Yes, sir; it was divided among the stockholders.

Q. Your source of knowledge as to how that money was deposited?

A. I know the dividend of the Municipal Company was declared and paid to all the stockholders; that was a part of it.

Q. Is that the way you have any knowledge of what became of this particular $250,000?

A. Yes, sir.

Q. What was the total amount in money that you say was divided among the stockholders?

A. Six hundred thousand dollars and odd; I forget the exact amount.

Q. Was it all deposited in one bank?

A. I think it was.

Q. What bank?

A. The Chase National Bank.

Q. And when was that deposit made?

A. I can't tell you.

Q. During what period was it made?

A. I suppose between November and the time it was paid out; I don't remember that.

Q. It was paid between November, 1884 and February, 1885, was it not?

A. I think so.

Q. To that extent the assets of the Municipal Company were not transferred to the Consolidated, were they?

A. I said before I did not recollect whether they were transferred or not; if they were transferred, they were transferred back again for the payment of the dividend.

Q. What book will show such distribution among the stockholders of this $600,000?

A. I think it was nearly $700,000 and something; there is a regular dividend book which I believe contains all the particulars.

9054 Q. What book or books will show the distribution of that $700,000 and odd?

A. The dividend book.

Q. Did the board of directors of the Municipal Company meet and direct that distribution?

A. They did—excuse me; I think the matter was left to a committee for final distribution.

Q. Who comprised the committee of the board of directors having charge of that distribution of $700,000?

A. Mr. Ottendorfer, Mr. Day, and I think Mr. Gawtry, and myself, and I don't know but there was another one; I forget exactly.

Q. Do you know where that dividend book now is?

A. I do not.

Q. When did you last see it?

A. At the time of the dividend.

Q. Was the dividend paid in checks?

A. Yes, sir.

Q. Where are the return checks?

A. I don't know.

Q. You got your check on your 400 shares?

A. Yes, sir.

Q. What did you do with it?

A. Deposited it in my bank.

Q. Did you sign any receipt for that other than the indorsement on the check?

A. I did.

Q. Did all the stockholders, when that $700,000 was distributed, sign receipts in the dividend book?

A. I think separate receipts.

Q. Those were filed in the office?

A. I presume so.

Q. Will you produce them?

A. Those are not in my possession; the secretary can produce them.

Q. That is Mr. Gawtry?

A. Mr. Allen.

Q. The secretary of the Consolidated?

A. Of the Municipal Company?

9055 Q. What security, if any, did the Municipal Company have for their loan in which you were interested to the amount of between $80,000 and $100,000?

A. Various stocks and bonds; I don't remember exactly what.

Q. Name any of them?

A. I can't think of any at the moment.

Q. Was there any security except stock of the Municipal Company?

A. Yes, sir.

Q. What?

A. I don't know that there was any stock of the Municipal.

Q. Name any security?

A. I can't without my papers.

Q. What book or books of the Municipal will show the record of any such security?

A. I think they kept a small book showing all those things.

Q. Who kept it?

A. Mr. Gawtry or Mr. Young.

Q. Were there loans outstanding at that time to anybody else besides yourself, or in which you had any interest?

A. Yes, sir.

Q. To what amount?

A. I don't remember.

Q. What security was there for any such loans?

A. I should have to refer to papers before I could tell you.

Q. What papers?

A. Books in the office.

Q. You mean the record of loans which you have referred to as having been kept by Mr. Young?

A. Yes, sir.

Q. Did he keep a record of the securities which were collateral?

A. I presume so.

Q. Don't you know?

A. I don't know as I ever saw it.

Q. Don't you know who in your company kept the record of collaterals?

A. No.

9056 Q. You have testified that there was about $700,000 of cash assets which, if they were transferred to the Consolidated Company by the Municipal, were, as you say, re-transferred and distributed; were there any other assets of any kind whatever of the Municipal Company that were transferred to the Consolidated Company?

A. I think not.

Q. Was there any material of any kind whatever belonging to the Municipal Company that was transferred to the Consolidated Company?

A. Yes, sir; I think so.

Q. Do you not call that assets?

A. I suppose they are assets.

Q. Were there no customers' deposits that they turned over to the Consolidated Company?

A. I believe so.

Q. Do you call such an item assets?

A. Yes, sir.

Q. Were there any book accounts, being a balance due from customers to the Municipal, transferred to the Consolidated?

A. I believe there were.

Q. Do you call them assets?

A. Yes, sir.

Q. Were they not transferred?

A. Yes, sir, they were.

Q. What was the total amount, expressed either in kind or in dollars, of material that was transferred from the Municipal to the Consolidated after the agreement was signed?

A. I have said already it was somewhere in the neighborhood of $700,000 or more.

Q. That particular sum which you have mentioned will include, will it not, the material?

A. Yes, sir.

Q. How much more than $700,000 was that sum?

A. The figures are before you and they are not before me.

Q. No, they are not before me?

A. I don't recollect the exact sum.

Q. As much as $800,000?

A. I should think so.

9057 Q. And more than that?

A. No, I think not.

Q. Was not the stock issued for that?

A. Who by?

Q. By the Consolidated?

A. No, sir.

Q. You are sure about that?

A. Yes, not to my knowledge.

Q. How much of that was for material turned over?

A. I don't remember.

Q. What book or account of the Municipal books or papers will show that?

A. I don't know.

Q. Who represented the Municipal board on the price or prices for such material?

A. I think I had a hand in it.

Q. And who represented the Consolidated?

A. I think it was done by the adjusting committee, if I remember right.

Q. Was there a schedule of such material made up?

A. I believe so.

Q. Who has it?

A. I don't know.

Q. When did you last see it?

A. I don't remember when I last saw it.

Q. Will you please send for those books and have them brought here immediately that were indicated in the early part of the examination today, and we will suspend your examination until they shall be produced?

A. If you will state what they are.

Q. They are all the stock books of the Municipal, stock and transfer books, stock ledger and check books of the Municipal; if they are at the expert's disposal he will go there?

A. They are at his disposal there.

PHILIP ALLEN, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

9058 Examined by Mr. TREMAIN:

Q. You were the secretary of the Municipal Gas-light Company?

A. Yes, sir; I was.

Q. You have heard Mr. Francklyn's testimony about the books, have you not?

A. Yes, sir.

Q. Do you know of any collateral loan book?

A. No, sir.

Q. Did you ever see or hear of such a thing?

A. No.

Q. Is there any book or books of the Municipal Company that ever did exist that relate to loans?

A. No.

Q. Did you ever have anything to do with the making of the loans?

A. Yes, sir.

Q. What part did you have about it?

A. I occasionally went down town and received securities for loans.

Q. Where?

A. Down town.

Q. Where?

A. Wall street, and wherever it happened to be.

Q. Where?

A. It depended upon whom we were getting the loan from, to anybody's office where it happened to be.

Q. Did you get receipts?

A. No, sir, checks.

Q. Were not the securities written on the back of the envelope?

A. Yes, sir.

Q. What became of them?

A. They were deposited in the Safe Deposit Company in a box.

Q. What record did the company have that you had received those securities?

A. Practically none.

Q. What, if any, record did the company have from you?

A. Practically none.

Q. What do you mean?

A. If they asked me for them, I could give them; I never kept any memorandum further than was on the back.

Q. Still it was a customary thing for you to make loans upon collaterals?

A. Yes, sir.

9059 Q. Did you make a variety of such loans during the years 1882, 1883 and 1884?

A. Yes, sir.

Q. Were any loans made by anybody else except yourself?

A. Yes, sir.

Q. By whom?

A. Mr. Gawtry.

Q. Who else?

A. I can't recollect any one else, sir.

Q. When Mr. Gawtry made loans did he bring a record of the collaterals that were received to the office?

A. Not that I am aware of.

Q. Then these loans were made without any record of them?

A. Except the amounts and the rate of interest.

Q. In what book was the original entry made on that subject?

A. I don't know; I am not a bookkeeper.

Q. What were your duties in the office at that time?

A. Various; kept the minutes and signed the certificates of stock, and kept the stock books.

Q. Did you have charge of making all the deposits?

A. No, sir, I did not.

Q. Who did?

A. The office messenger took them down town.

Q. Who had charge of making them out?

A. They were made up by one of the cashiers.

Q. Who?

A. I could not tell you; I suppose one man sometimes, and sometimes another.

Q. Whose business was it to take charge of the bank account?

A. I could not say exactly who it was.

Q. Who took charge of the bank accounts—yourself?

A. I indorsed the checks sometimes—usually.

Q. When loans were paid off, did you indorse the checks?

A. Either Mr. Gawtry or myself.

Q. Did you go down town then and get the securities and deliver them?

A. Sometimes.

9060 Q. When you didn't, who did?

A. Mr. Gawtry.

Q. Anybody else?

A. No, sir.

Q. Do you remember what security there was for loans to Mr. Francklyn of about $80,000 or $100,000 in the year 1884?

A. I don't.

Q. Do you remember of any other occasion of a loan to Francklyn on collateral security?

A. Yes; he had loans on collateral securities.

Q. Do you remember of any securities?

A. No.

Q. Did you receive the securities in any instance from Mr. Francklyn?

A. Yes, sir.

Q. Did you deliver up any securities to Mr. Francklyn after the consolidation?

A. I don't know; I don't recollect whether I did; as to particular ones I received or delivered them to I could not tell you.

Q. Do you remember a loan to Mr. Francklyn of $40,000?

A. I remember there was one.

Q. Do you remember that it was paid off after the consolidation?

A. No, sir.

Q. Did you ever see any of the books of the Knickerbocker Company?

A. We kept them in the office, yes, sir.

Q. Did you ever see any books except the customers' ledger?

A. I have seen all the books.

Q. Did you ever see any books prior to 1880 of the Knickerbocker Company; any whatever?

A. No, sir; never.

Q. When did you last see the stock books of the Municipal Company—what stock books did you ever see of the Municipal Company?

A. Customers' ledger, stock transfer books, and book of certificates.

Q. Any others?

A. No, sir.

Q. When did you last see them?

A. The last time I ever looked at them was making them up, closing the books, before the consolidation, except I may
9061 have seen the backs of them as they were in the office.

Q. Are those books at the disposal of the experts now?

A. Certainly.

Q. Is there any difficulty about those books, or any books of the Municipal Company, being immediately examined by the expert and his assistants?

A. Not that I am aware of.

Q. Who else was employed in the office of the Municipal during the year 1884, the particular men?

A. Gawtry was the vice-president, I was the secretary, and Mr. Young was there.

Q. He was there attending to business all the while?

A. Yes, sir.

Q. Where does he live—Mr. Young?

A. In Brooklyn somewhere, but where I don't know.

Q. What is his business?
A. It was then bookkeeper.
Q. What is his business now?
A. He is employed by the Consolidated Gas Company.
Q. At what place?
A. I could not tell you.
Q. When did you last see him?
A. About ten days or a fortnight ago; somewhere about that time.
Q. You own Consolidated stock now?
A. No, sir; I do not.
Q. Are you a director?
A. No, sir.
Q. Are you employed in any way by the Consolidated Company?
A. Yes, sir; to take charge of the Twenty-sixth street office.

(By the CHAIRMAN:)

Q. Formerly known as what?
A. The Municipal—the old Municipal office.
Q. Mr. Young is employed in the same office, is he not?
A. No, sir.
Q. He is employed at No. 4 Irving place, in the general office?
A. I believe he is.
9062 Q. Don't you know the fact?
A. I believe he is.
Q. Have you seen him there at work?
A. Yes, sir.
Q. Have you been there in the office within a week?
A. I was there yesterday afternoon.
Q. He was not there?
A. I did not see him there.
Q. Do you remember that you are one of five trustees under the trust agreement, dated March, 1880?
A. Yes, sir; as to the date, I don't know.
Q. I refer to the trust of 14,995 shares of the Knickerbocker stock?
A. Yes, sir.
Q. Did you ever do any thing in respect to that trust further than by accepting it and signing a trust agreement?
A. Yes, sir.
Q. What was the first thing you did?
A. I don't quite understand you.
Q. Who is in charge of that station, at Twenty-sixth street?
A. The office?
Q. Yes, sir.
A. I am.
Q. You have all these books in your charge, the stock books of the Municipal and the check books?
A. They are in the office.
Q. Are they locked up?
A. Yes, sir.
Q. If you are in charge of those books and that office your examination will be suspended in order that you may go to that office with the expert so that they may be examined there?
A. Very well.

H. E. Gawtry, a witness, recalled by the counsel to the Committee, testifies as follows:

Examined by Mr. Tremain:

Q. Do you remember about any loan book of the Municipal Company?

A. No, sir; there never was any such book.

Q. No record kept of collaterals?

A. Nothing except what was in the safe deposit vault or on the back of the envelope, if it was an envelope.

9063 Q. Anybody else except yourself and Mr. Allen have access to that vault?

A. No, sir.

Q. Were any receipts given for the collaterals before they were delivered up on payment of loans?

A. I think not.

Q. In 1880, when the Knickerbocker was purchased and the guarantee of indebtedness given did you personally make any inquiry or see any records pertaining to that indebtedness of $1,200,000 as alleged?

A. No, sir.

Q. You are cognizant of that transaction?

A. Of the purchase of the Knickerbocker Company, yes, sir; I believe there was a guarantee that the floating debts should not exceed $450,000.

Q. And what else?

A. That is the only guarantee that I know of.

Q. Did you ever make any inquiry concerning what that floating debt was?

A. No, sir.

Q. Did you ever make any inquiry concerning the $750,000 of additional indebtedness of the Knickerbocker Company at that time?

A. I was informed that there was a mortgage on the property; I think the lawyer gave me the information.

Q. Who gave you that information?

A. Henry Day.

Q. Anybody else?

A. No, sir.

Q. As an officer of the Municipal Company, purchasing property subject to that indebtedness, did you make any investigation whatever concerning the indebtedness either of the $450,000 or of the $750,000 at that time?

A. I don't think I was an officer of the Municipal Company at that time.

Q. What were you?

A. Manager of the company at that time.

Q. Did you make any inquiry whatever about that?

A. No, sir, I had nothing to do about it.

Q. Were you present when that transaction was closed?

A. No, sir.

9064 Q. Do you know who conducted that transaction for the Municipal Company?

A. I do not.

Q. Do you know where the stock came from that was given to Mr. Cutting?

A. I do not.

Q. Did you contribute any of your Municipal stock?

A. I did not.

Q. Was any schedule of that floating indebtedness of $450,000 ever presented to the Municipal Company?

A. I don't know.

Q. Did you ever see any list of that indebtedness?

A. No.

Q. Did you ever have any information directly or indirectly in respect to the amount of that indebtedness?

A. Nothing beyond the fact that the total indebtedness of the company was $1,200,000.

Q. Did you ever have any information of any schedule of that floating indebtedness?

A. Never heard of it.

Q. Did you ever hear of any inducement leading the Municipal Company to assume that indebtedness and keep the property subject to it?

A. No, sir.

Q. Do you know what the inducement was?

A. Never heard of any.

Q. Do you know about any loans that Mr. Francklyn charged to himself personally, or any which he was interested in in 1884, from the Municipal Company?

A. I do.

Q. You know the total amount of those loans in the summer of 1884?

A. If you will allow me to refresh my memory with papers—the Municipal books will show the records exactly.

Q. Except the collaterals?

A. I don't think they will show the collaterals.

(By the CHAIRMAN:)

Q. No record made and preserved in the office of the Municipal Company of any collateral securities in connection with loans made by the company? 9065

A. I think there was a memorandum of this loan; I am not quite sure.

Q. Made and preserved in the company?

A. At the time the loan was paid, I think it was; I am not sure.

Q. Who kept it?

A. Probably in the safe.

Q. In a book?

A. No, sir, not to my recollection.

Q. Who kept that record?

A. I presume I did.

Q. Is it there now?

A. I could not tell you.

Q. You know the fact whether there exists or not any record of collaterals to loans that were outstanding in the summer of 1884.

A. I don't know; if there is such a record it is in the Twenty-sixth street office and it can easily be obtained.

Q. In what shape?

A. I don't know.

Q. Any memorandum?

A. Probably.

(By the CHAIRMAN:)

Q. Do you say there was no record of that made except memoranda?

A. That is my recollection.

Q. Did you destroy any such?

A. I probably did when the loans were paid off, as being of no value; I don't remember of having done so, however.

Q. Was that generally done when the loans were paid off?

A. Yes, sir.

Q. What books will show when Mr. Francklyn's loans that were outstanding at the time of the consolidation were paid?

A. The cash book.

Q. Do you remember when they were paid off?

A. I do not; as a matter of record that will show.

Q. Will the cash books show when other loans that were then outstanding were paid off?

A. Yes, sir.

Q. Will it show the sources of money by which they were paid?

A. Yes, sir.

9066 Q. What were the sources?

A. Francklyn's check.

Q. Any other?

A. From anybody else who had a loan.

Q. What was done with the money?

A. Deposited to the credit of the company.

Q. Where?

A. In either the Chase Bank or the First National Bank.

Q. Are either of those bank accounts that were in the name of the Municipal Company closed?

A. I think they are both open to-day.

Q. What was the amount of assets of the Municipal Company that were not turned over and retained by the Consolidated Company?

A. The gross amount of assets of the Municipal Company at the time it wound up was $800,000; that of course included any thing that was turned over in the shape of collections, or which the Consolidated Company paid the Municipal Company.

Q. How much did the Consolidated Company pay the Municipal Company?

A. If you will produce those papers of the adjusting committee that I left with you a few days ago——

Q. Refresh your recollection by looking at the schedules of materials and supplies on hand November 11, 1884, of the Municipal

Gas-light Company; how much in all did the Consolidated Company pay the Municipal for its assets after the consolidation agreement?

A. These papers—the amount don't seem to be in here; I could not tell you without reference to the books; it is a matter very easy to get at.

Q. Is this a proper answer; the Consolidated Company paid the Municipal Company in addition to its schedule values, the two sums mentioned there for materials and also the amount of book accounts?

A. Yes, sir.

9067 Q. Any thing else?

A. Nothing that I know of.

Q. And the two amounts which are shown by the schedule of materials and supplies are first, of the Municipal Company, $61,289.50; second, Knickerbocker Company, $45,711.35; we understand you to say, in addition to those two sums, the Consolidated Company paid the Municipal Company the amount of the outstanding customers' accounts?

A. The amount agreed upon.

Q. Was the amount agreed upon—the exact amount shown by the books?

A. No, sir; some allowances were made for bad debts.

Q. That is shown by the books?

A. Yes, sir.

Q. Any other items?

A. Not to my knowledge; there may have been some small accounts.

Q. That was paid not in stock but in cash?

A. I believe all in cash.

Q. Were there any other payments whatever made by the Consolidated Company to the Municipal?

A. No, sir.

Q. From what source was the payment of $50,000 made to Mr. Francklyn?

A. Out of cash belonging to the Municipal Company.

Q. After the consolidation?

A. I don't remember what date it was.

Q. Don't you remember whether it was after the consolidation was agreed upon?

A. I don't know; I could not tell you.

Q. It was after the schedule of values was made up?

A. I think probably about that time.

Q. That was turned over to the Consolidated Company and paid back?

A. No, sir; there was no cash turned over to the Consolidated Company by the Municipal Company.

Q. What was the last dividend paid to the stockholders of the Municipal Company in 1884?

A. I think it was in October, 1884.

9068 Q. Was it not fifteen per cent. on the stock?

A. Yes, sir.

Q. I ask prior to the consolidation?

A. Yes, sir, I think it was in October.

Q. Do you remember the total amount of dividend that went up to that time, during 1884?

A. I do not.

Q. The total percentage?

A. That is fifteen per cent. on the capital stock.

Q. Was that prior to the consolidation in 1884, to the best of your recollection, that the Municipal had paid fifteen per cent. dividend?

A. I presume so.

Q. What percentage has been distributed since that last dividend?

A. Twenty-six and a half per cent.

Q. And when was the distribution?

A. The latter part of February, 1885.

Q. That makes forty-one per cent. distributed during that year?

A. No, sir.

Q. During eleven or thirteen months?

A. I could not tell you what date in 1884 it was payable without referring to the papers.

Q. This dividend of twenty-six and a half per cent. which was paid to the stockholders of the Municipal was of course earned prior to the consolidation, November, 1884?

A. Yes, sir, it was the surplus that the company divided among the shareholders.

Q. That included the Knickerbocker assets, did it not?

A. Yes, sir.

Q. Are you a stockholder in the Consolidated Company now?

A. Yes, sir.

The CHAIRMAN: We will suspend your examination, Mr. Gawtry, until some future time, in order to enable the expert to make the examination.

9069 R. F. CUTTING, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. Have you brought any memorandum—original memorandum or books relating to the transaction of the purchase of the Knickerbocker stock by the Municipal Company?

A. I have the transcript of entry; I will correct my statement which I made the other day; I did not myself conduct the negotiation; it was conducted by W. B. Cutting, but I was cognizant of what was going on at the time; I said that the Knickerbocker received 3,500 shares of stock, in which I was practically correct; I had forgotten about the $350,000, which Mr. Day said had been paid to the Knickerbocker Company at that time; I didn't do the clerical work on the books; that is a transcript made by Mr. Brown from Mrs. Bayard's books.

Q. Who kept that book?

A. At the time M. B. Brown was keeping it.

Q. Did you make any memorandum in respect to that transaction at that time?

A. No, sir; none whatever.

Q. Didn't you receive a deposit of some money?

A. No, sir.

Q. Prior to that time hadn't you personally made payments?

A. Personally?

Q. Yes, sir; have you not personally made payments?

A. No, sir; the estate had made advances.

Q. Hadn't you personally?

A. No, sir; not a cent.

Q. Hadn't you personally made the payments which constituted these advances?

A. You mean drawing the checks; I don't recollect who they were drawn by; all three of us may have drawn them, and they may have been drawn by W. B. Cutting or by Mr. Brown.

9070 Q. Prior to that time were not all the advances made by check?

A. I think so.

Q. Were all the checks drawn on the same bank?

A. Yes, sir; the American Exchange Bank.

Q. Who kept that check book?

A. At that time Mr. Brown.

Q. Do you know the total amount of those checks?

A. I said the other day it was something over $1,150,000.

Q. When was the first check drawn, $280,000?

A. I believe $291,000; I answer from memory.

Q. When was that?

A. I think some time in the fall of 1878.

Q. When was the last check drawn?

A. I think it was—well Mrs. Bayard's estate, as you remember, gave a guarantee that the floating debt should not exceed $450,000.

Q. You gave that personal guarantee, did you not?

A. No, sir; and it didn't exceed that amount, but I don't remember when the last check was drawn.

Q. Is there any schedule of that indebtedness—the $450,000?

A. Not that I remember; there was at that time.

Q. Who had such a schedule?

A. The schedule, I think, was in the hands of William A. Stephens, trustee.

Q. If you will turn to page 163 of the appendix you will find your personal guarantee, and see whether you wish to correct your testimony?

A. Yes, sir; I do correct it; then I had forgotten the matter altogether.

Q. You did personally guarantee that indebtedness?

A. It is very evident from this statement.

Q. By making that guarantee didn't you see a schedule of the indebtedness?

A. Yes, sir—I don't remember it.

9071 Q. Who prepared that schedule?

A. Mr. Stephens, trustee.

Q. Had a second mortgage then been made?

A. I am not sure; I don't think it had been.

Q. It was made for the purpose of covering that indebtedness?

A. I think so.

Q. And it was a part of this transaction to make that second mortgage; was it not?

A. As far as I can remember, yes, sir.

Q. Had the $750,000 of bonds on the first mortgage then been issued?

A. I think so.

Q. Did you have them personally?

A. No, sir.

Q. Who did?

A. They were held by myself, I think, and others as representatives of Mrs. Bayard.

Q. Who individually?

A. They were simply held in my safe belonging to Mrs. Bayard, to which all three had access—W. B. Cutting, M. B. Brown, and myself.

Q. When were the other 450 shares delivered, and to whom?

A. They were delivered to Mrs. Bayard—her representative.

Q. Who?

A. I don't remember whether I received them, or one of the other two.

Q. How long after this guarantee was it when they were received?

A. Well, I answer almost immediately.

Q. You have them yet?

A. No, sir; they have been paid.

Q. All of them?

A. Yes, sir.

Q. The $450,000?

A. Yes, sir.

Q. Were there any notes to represent that $450,000 before the mortgage?

A. Yes, sir.

Q. This mortgage was substituted for these notes?

A. Yes, sir.

9072 Q. Were they surrendered when these bonds were given; these 450 bonds, were they 450 bonds of $1,000, or were they 45 notes?

A. Forty-five notes and a second mortgage, but they were not coupon bonds.

Q. Nor $1,000 bonds neither?

A. No, sir.

Q. Are they paid?

A. Yes, sir; I think they have been paid the first of March, the last.

Q. Now, the $750,000, is that paid?

A. No, sir.

Q. Have you those bonds?

A. Yes, sir; with the exception they have been taken up by the sinking fund.

Q. Have you refreshed your recollection what individual received that $50,000 and the $300,000 which was paid at the time of this transaction?

A. Yes, sir.

Q. State your personal recollection of it?

A. My recollection of the transaction goes nothing beyond what I have here, the entry in Mrs. Bayard's book, but I can give what I think was the practical utility of it.

Q. What is wanted is your recollection of the transaction; refresh your recollection by any thing you choose?

A. The item I have here does not refresh my recollection; it recalls one or two circumstances, but I am not sure I am correct.

Q. Who received the money?

A. It was received by Mrs. Bayard, $350,000.

Q. Who paid it to her?

A. The Municipal Gaslight Company.

Q. Through whom?

A. I suppose its president.

Q. Who?

A. I don't know; I have no record.

Q. What did she do with the money?

A. Returned it to the Municipal Gas-light Company.

Q. Did she deposit it to her own credit in the bank?

A. Yes, sir; and then drew her check to the order of the Municipal Gas-light Company.

Q. To whom was that check given?

A. I don't remember.

9073 Q. Who signed the check?

A. I am not sure whether Mr. Brown—I think it was signed by Mr. Brown on the same date, the account is in the entry that I have.

Q. What is the memoranda that enables you to be sure about this?

A. It is an extract from Mrs. Bayard's cash book.

Q. Well, read it; in whose handwriting was that extract made in that cash book?

A. Mr. Brown's which is as follows:

Memo. from Mrs. Elizabeth Bayard's cash book.

March 16, 1880. To Municipal Gas-light Company, exchanged checks with them in carrying out Municipal G. L. stk. sale...........................	$350,000.00
March 16, 1880. By Municipal Gas-light Company, received two of their checks in exchange for one of mine	$300,000.00 $50,000.00
	$350,000.00

Q. The foregoing extract is copied from Mrs. Elizabeth Bayard's cash book, is it not?

A. Yes, sir; the word "mine" means Mrs. Bayard's, and it means $350,000 check.

Q. The check that was received was signed by Mr. Francklyn as president of the Municipal Company, was it not?

A. I suppose so.

Q. Do you remember on what bank it was drawn?

A. No, sir.

Q. Do you remember who indorsed that check for deposit?

A. Mr. Brown, I suppose.

Q. Do you remember to whose order the two checks in exchange of $300,000 and of $50,000 were drawn?

9074 A. I suppose they were drawn to the order of Mrs. Elizabeth Bayard; Mrs. Bayard only gave one check to the order of the Municipal Gas-light Company.

Q. Who indorsed that check?

A. I don't know.

Q. Where is that check?

A. I suppose among the canceled checks of Mrs. Bayard of that period.

Q. On what bank was that drawn?

A. On the American Exchange Bank.

Q. Who has those return checks?

A. I presume they are in our office, if preserved, but I don't know whether it is preserved.

Q. It is only four or five years ago.

A. We don't generally keep them that length of time; if you desire it, I will try and look it up if I can.

Q. It is either in your custody or Mr. Brown's?

A. It is in the custody of one of us three.

Q. We desire that check?

A. Very well; I will look it up and see if I can find it.

Q. Now, are you correct in respect to the number of Municipal shares of the Municipal stock you then received?

A. I believe I said thirty-five hundred and fifty, which should have been thirty-five hundred; that's all.

Q. Do you remember whose certificates they were?

A. No, sir; I don't.

Q. Do you remember how many certificates there were?

A. No, sir; I don't remember.

Q. Are those original certificates which they issued, as I understand you to say, and that you surrendered last fall to the Consolidated Company?

A. Yes, sir; as belonging to Mrs. Bayard.

Q. How many of them did belong to Mrs. Bayard at any time?

A. I don't remember the exact number, but the bulk of them belonged to her.

9075 Q. Was any distribution whatever made of those thirty-five hundred certificates prior to the time that you surrendered them to the Consolidated Company?

A. Yes, sir; they were divided *pro rata*, I believe, among the various stockholders of the Knickerbocker Company.

Q. Were they not divided by Mr. Stephens under this trust agreement?

A. No, sir.

Q. Who made that distribution?

A. The estate of Mrs. Bayard, her representatives, through Mr. Brown, I believe.

Q. Where is the list of persons who participated in that distribution?

A. I don't believe there is any, sir; there were only three or four; it was a matter of only a pencil figure; I don't think there was a list kept.

Q. Your recollection of what that distribution was in fact?

A. I can only state it was a *pro rata* distribution of the number of shares of stock held by William A. Stephens, trustee, and John Sickels, John W. Ambrose, Mr. Howes, Pierpont Morgan and Mrs. Bayard.

Q. How much did Mrs. Bayard retain of that block, about 2,400?

A. I could not tell you exactly, but I should say about that number.

Q. You have said that Mr. Stephens was trustee for several parties in interest who made advances covering all this guarantee indebtedness, and the estate of Mrs. Bayard made advances to the extent of about $1,150,000; what else besides this advance of $1,500,000 was Stephens trustee for?

A. I don't think he was trustee for any thing else.

Q. Who else was interested in the trust except the Bayard estate?

A. I don't think that anybody else was interested at all in that trust; I didn't know that I had stated anybody else was; I don't remember that he acted for anybody else now; he may have, though.

9076 Q. To what extent did he have any interest in that guaranteed indebtedness—I mean Mr. Stephens?

A. He had no personal interest.

Q. Nor did John Sickels, did he?

A. Not as far as I remember, sir; not that I know of; I don't recall.

Q. Neither he nor Sickels had any interest except in this Municipal stock that was distributed, as you have described?

A. That is all I remember, sir; instead of 2,500 shares, I would state that is 2,400 shares.

(By the Chairman:)

Q. You will have your evidence stand about 2,400 shares?

A. Yes, sir.

The Chairman: The stenographer will make this read "2,400" shares in the witness's evidence.

Q. Were you a stockholder to any extent in the Municipal Company prior to this transaction?

A. What transaction, sir?

Q. This of March, 1880, the sale of the Knickerbocker?

A. No, sir; I had no interest whatsoever.

Recess until 4 o'clock p. m.

TUESDAY, *December*, 1885, 4 p. m.

Hearing resumed.

Mr. TREMAIN: Mr. Cutting, the last witness, sends the following check in response to a demand upon him to produce the same:

"No. 728. NEW YORK, *March* 16, 1880.

The American Exchange National Bank, 128 Broadway.

Pay to the order of Municipal Gas-light Company three hundred and fifty thousand dollars. $350,000.

E. BAYARD,
By R. FULTON CUTTING,
Attorney."

9077 This check being indorsed "for deposit Municipal Gas-light Company, Charles G. Francklyn, president. Indorsement guaranteed. Chase National Bank."

CHARLES G. FRANCKLYN, being duly recalled, testified as follows:

Examined by Mr. TREMAIN:

Q. Look at the check now shown you, dated March 16, 1880, and see if it bears your indorsement?

A. Yes, sir; it does.

Q. You deposited that check, did you, to the credit of the Municipal Gas-light Company?

A. I don't know as I did; I indorsed "for deposit."

Q. With the expectation that it should be deposited, and for all you know it was?

A. Yes, sir; I believe so.

Q. That check appears to have been paid?

A. Yes, sir.

(Check read in evidence as heretofore set forth.)

Q. At or about the time this check was given, you drew a check of the Municipal Gas-light Company for $350,00-, and signed one, did you not?

A. I don't know whether it was one or two checks.

Q. One of $300,000 and one of $50,000?

A. I don't know whether I signed it; it was drawn.

Q. To whom did you give that check?

A. I think *it* to Mr. Day.

Q. Were you present when that transaction was closed with Mr. Cutting?

A. Yes, sir.

Q. Mr. Day was present?

A. I think he was.

Q. Representing the Municipal?

A. Yes, sir.

Q. Who else was present?

A. I think Mr. Allen was there and Mr. Stephens and Mr. Cutting, Mr. Sickels, I think, but I am not sure.

Q. You issued, did you not, on or about March 16, 1880,
9078 3,500 shares of the Municipal stock?

A. Yes, sir.

Q. You deemed this check a payment at par for that stock, did you not?

A. I did.

Q. There was no other payment for that stock, was there?

A. Not any.

Q. You remember the check of March 13, 1880, for $300,000, issued by the Municipal Company and signed by you?

A. No, I don't remember it.

Q. Do you not remember a circumstance of a check of $300,000 being made on the Chase National Bank by the Municipal Company, about March 13, 1880, in connection with this transaction?

A. No, I don't recollect it.

Q. If such a check is found do you remember the purpose for which it was issued?

A. No; my recollection of it is that there were either one or two checks drawn with regard to this transaction; I don't know of any other check with reference to this transaction.

Q. Do you remember a sum of $300,000 being paid by the Municipal Company to anybody else except to the representatives of the Bayard estate at or about March 13, 1880?

A. I do not.

Q. To the best of your recollection there was no other such transaction or check?

A. Not that I know of.

Q. Now, if such a check was drawn at or about that time did it have relation to this transaction?

A. It did not.

Q. Did it have any relation to a settlement of any claim for damages that the Knickerbocker was making against the Municipal Company?

A. There was a check of $300,000 paid in settlement of damages.

Q. To whom?

A. Paid to the Cuttings—to the Cutting estate—given to
9079 Mr. Day; it was to settle a suit and to pay $50,000 for the Knickerbocker Company.

Q. Was that all there was of that transaction?

A. Yes, sir; and Cutting was to pay the company $350,000 for thirty-five hundred shares of stock.

Q. With whom was the arrangement made?

A. With Bayard Cutting.

Q. As the result of that transaction thirty-five hundred shares of stock was given to the Bayard estate?

A. For that $350,000.

Q. And those thirty-five hundred shares was part of the issue of a million dollars when the capital was increased from two millions to three millions?

A. I think so.

Q. Who was paid $50,000 at that time, if any one?

A. No one that I know of except the Cutting estate.

Q. The Cutting estate?

A. Mr. Cutting or the estate.

Q. In your testimony before the last Senate committee on March 4, 1885, you are reported as saying that the stock of the Knickerbocker was acquired by the Municipal in 1880 and paid for out of their surplus earnings with $50,000; to whom was that $50,000 paid?

A. Mr. Cutting.

Q. It was part of the $350,000, was it not, of the check of the Municipal for which this was received in exchange?

A. Yes, sir.

Q. This being the check last above quoted; who, if any one, paid to the Municipal Company a balance of $650,000 of that increased capital from $2,000,000 to $3,000,000?

A. The stockholders took a good deal of it at par; I don't know how much; the books will show exactly.

Q. What became of this money that was represented by this check last above quoted when deposited to the credit of the Municipal Company?

9080 A. Three hundred thousand dollars of it in the settlement of a suit which the Knickerbocker had against us.

Q. Had not that previously been paid?

A. It might have been dated the day before or the day after; I don't know which.

Q. What was the purpose in the Municipal arrangement of an exchange of checks on the 16th of March, 1880, of $350,000?

A. I think that has already been explained; Cutting purchased thirty-five hundred shares of stock and paid for them; the Municipal used the money which Cutting paid to settle the suit which the Knickerbocker had against the Municipal Company and purchased the fifteen thousand shares of stock—$350,000 paid in and $350,000 drawn out; you cannot make any more than that out of that transaction.

Q. What was the purpose of this exchange of checks for $350,000 that appears to have taken place on the 16th of March, 1880? Why were those checks exchanged?

A. Perhaps for convenience in business, I suppose.

Q. Was it not for the purpose of having it appear that the stock was subscribed for at par?

A. It was subscribed for.

W. B. CUTTING, a witness *sworn* by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You were present on or about the 16th of March, 1880, when the transaction was had between the Municipal Company and the Bayard estate, were you not?

A. Do you mean the passing of these checks?

Q. Yes, sir.

A. I cannot say that I was; I don't remember of it.

9081 Q. When was the first knowledge you had of that transaction?

A. It was some time in the late winter or early spring of 1880.

Q. From whom did you gain that knowledge?

A. I think Mr. Francklyn.

Q. Did you conduct a negotiation with Francklyn upon that subject?

A. I did, sir.

Q. Were all the results of that negotiation reduced to writing?

A. I don't know that they were.

Q. You had some understanding with Francklyn in the performance of which this transaction was carried out?

A. Yes, sir

Q. And that understanding was arrived at, was it not, early in March, 1880, or about that time?

A. I should think a little before that time—thereabouts.

Q. You understood that Mr. Francklyn was acting for himself or the Municipal Company?

A. I acted with him personally, sir.

Q. Did he say anything to you during these negotiations about the increase of the capital stock of the Municipal Company?

A. I believe he did; yes, sir.

Q. What did he tell you about that?

A. Well, I could not say what he told me as to the amount; I understood there was to be an increase, however.

Q. And of that increase did he say that some of it should be at his disposal for the purpose of this transaction?

A. I so understood it.

Q. You understood, didn't you, that you should have a part of that stock?

A. I understood that the Knickerbocker stockholders should have a portion of the Municipal stock; I did not care where it came from.

Q. As finally arranged between you what was the understanding between you and Francklyn?

9082 A. The details of the negotiation you would like to have?

Q. Yes, sir.

A. My remembrance of it is that we were to sell to Francklyn a majority of the stock of the Knickerbocker Gas-light Company, with the privilege that all the stockholders were to participate upon the same terms, on the debt being assumed, or left as it was; there was no agreement, I believe, as to the guarantee of the debt; the first mortgage to be left as it was, and the second to be secured by a second mortgage not to exceed $400,000, and that the Municipal stock should be paid for by the Knickerbocker at the rate of thirty-five shares for one hundred and fifty, there being an understanding between Francklyn and me that what work was necessary to complete the Knickerbocker, to make the mains, etc., should be done.

Q. At whose expense?

A. At the future stockholders'.

Q. Of the Municipal?

A. I assumed it to be borne by the future stockholders of the Municipal Company after the Knickerbocker should become the owners in it; what was necessary to put the property and works in condition.

Q. Who was to advance the money?

A. The party who should buy the stock of the then Knickerbocker stockholders.

Q. Who had purchased for the Municipal Company; that is, as you understood it?

A. Yes, sir; but the negotiation was between Mr. Francklyn and myself; I understood that the Municipal took it.

Q. And that the Municipal Company was to pay for those improvements upon the Knickerbocker works?

A. Yes, sir.

Q. Was there any substantial deviation from that understanding in the consummation of the transaction? 9083

A. Not in result; no, sir.

Q. The result then was, was it not, that for fifteen thousand shares of stock of the Knickerbocker Company thirty-five hundred shares of the Municipal stock were issued?

A. Thirty-five hundred shares were received.

Q. I should have used that term, "that you received."

A. The stockholders of the Knickerbocker did.

Q. You received it?

A. No, sir; I don't think I did.

Q. It was either yourself or Stephens, was it not?

A. I have an impression it was Mr. Brown; he received it for the estate of Elizabeth Bayard, who held a majority of the stock; and I believe it was distributed by Brown, or perhaps with the assistance of Stephens, among the stockholders of the Knickerbocker Company.

Q. You mean all above that which was apportioned to Mrs. Bayard?

A. Including her; she was a stockholder.

Q. Was there $50,000 in addition to that stock also received?

A. No, sir.

Q. Your arrangement didn't contemplate anything of that kind?

A. No, sir.

Q. You didn't receive any such check, did you, for $50,000?

A. Yes, sir.

Q. From whom?

A. I could not say.

Q. Have you any recollection as to who it was received from?

A. I have not; it was not in addition to the thirty-five shares of stock.

Q. Independent of any other consideration, do you not remember to have received a check of the Municipal Company, dated on or about March 13, 1880, and drawn to the order of Mrs. Elizabeth Bayard for $50,000?

A. I think there was such a check received; yes, sir.

9084 Q. Was that in pursuance of the arrangement of Francklyn?

A. Yes, sir.

Q. Did that check go on deposit to the credit of the estate of Bayard?

A. Of Mrs. Elizabeth Bayard, yes, sir.

Q. And did you also receive a check for $300,000 of the same tenor?

A. Yes, sir.

Q. That also went on deposit?

A. When I say "I" I mean the estate.

Q. And it was drawn against two checks that this check dated March 16, 1880, was drawn?

A. Yes; this dated March 16, and you mentioned the other, March 13; I would say the transactions were drawn simultaneous.

Q. Were there any other checks received by the Bayard estate at or about that time than the two checks, the one of $50,000 and the one of $300,000, from the Municipal?

A. No, sir.

Q. In respect to closing this transaction did any other money pass either way?

A. I think not; no, sir.

Q. Was that the whole transaction?

A. Yes, sir.

Q. No property passed of any kind whatever?

A. The property of the Knickerbocker Gas-light Company went with the stock.

Q. No other property except the certificates of stock?

A. No, sir; yes, I think I ought to change that answer; there was an abandoned suit for damages against the Municipal Company.

Q. That has been covered as a part of the transaction. There was an agreement that the suit should be abandoned?

A. Yes, sir.

Q. There was no other property that should pass?

A. No, sir; there was no other; that is my recollection of that transaction.

Q. Did you direct that suit to be instituted?

A. No, sir.

9085 Q. Who did?

A. The directors of the company, I presume.

Q. You knew when it was instituted?

A. I could not say that I did.

Q. Don't you know, as a matter of fact, that Mrs. Bayard had already advanced money before that suit was commenced?

A. I don't.

Q. When did you first know of that suit?

A. I could not tell you that, sir; I don't remember.

Q. Who first told you of that suit?

A. I could not say, sir.

Q. Were you a member of the board of direction of the Knickerbocker Company?

A. No, sir.

Q. Your brother was?

A. Yes, sir.

Q. Do you know on what that suit was founded?

A. I can give you my impression that it was an old contract between the Knickerbocker Company and the Municipal, by which the Municipal Company agreed to dispose of the right to use their process to the Knickerbocker Company above Fifty-ninth street, I think; that suit was brought for damages for a breach of that contract by the Municipal Company.

Q. Did you ever hear anybody advising that $300,000 could be recovered in that suit?

A. No, sir.

Q. Was that ever suggested when this transaction was closed in your hearing?

A. I don't remember whether it was or not.

(By the CHAIRMAN:)

Q. I understand you have heard of no such suggestion being made?

A. I don't remember; I presume when you say "when the transaction was closed," you mean my transaction with Francklyn?

Q. March 16?

A. Do you mean when the transaction was closed that it was when these checks were passed?

9086 Q. Either time?

A. I think when the checks were passed there was something said.

Q. By whom?

A. I think by Mr. Day, but I would not be sure; of course I knew when the checks were passed that the Municipal Company had undertaken Francklyn's contract.

Q. Did you make a contract in writing with Francklyn?

A. Yes, sir.

Q. The memorandum—have you the duplicate?

A. It has been destroyed long ago; it was a memorandum on a half sheet of note paper.

Q. Signed by Francklyn?

A. Yes, sir.

Q. You have given us the substance of it already?

A. Yes, sir.

Q. At that time when you commenced to negotiate with Francklyn was not all the stock of the Knickerbocker Company which was not owned by the Bayard estate held in trust?

A. No, sir.

Q. How was it held?

A. By some individual holders.

Q. Whose names have been already mentioned?

A. My brother most of it, and the McKenzie and Sayre Manufacturing Company.

Q. How much did they have?

A. I could not say.

Q. Didn't Stephens hold it in trust for them?

A. I don't think he did; I think he was trustee of the Bayard estate only.

Q. Did you proceed to buy that up, those outstanding shares, before this transaction was closed?

A. No, sir.

Q. On the faith of this agreement with Francklyn did anybody proceed to procure those outstanding shares?

A. All the stockholders were notified of the agreement, and notified to participate.

Q. How were they to participate?

9087 A. By receiving thirty-five shares of the Municipal for every one hundred and fifty of the old stock.

Q. Was not that stock procured and held in trust prior to March 16, 1880, for the purpose of closing this transaction?

A. I don't think so.

Q. There appears to have been a trust agreement executed on or about March 23, 1880, which recites that a block of 14,995 shares of the capital stock of the Knickerbocker Company have been procured; was not that practically accomplished, by agreement or otherwise, prior to the time these checks passed?

A. Yes, sir; there was an agreement to that effect, I should think, before those checks passed.

Q. With all the stockholders of the Knickerbocker Company?

A. Yes, sir; I think so.

Q. And in pursuance of that agreement the shares were subsequently procured and enlarged under this trust?

A. I don't know about that trust; I don't remember it; I don't think I was a party to that.

Q. But the trust was apparently the result of your delivery of that block of stock?

A. I don't know where it went, sir.

Q. What I want to know is, when you became ready to make that delivery what you remember about that?

A. I don't remember; I could not state from actual memory.

Q. You substantially had the control of 15,000 shares or you could not have closed this transaction on March 16?

A. Yes, sir; I think that is true, otherwise the check would not have been for $350,000, unless the whole stock had been delivered.

(By the CHAIRMAN:)

Q. This recites that all the stock of the Knickerbocker except five shares had been transferred to these gentlemen as trustees on

9088 or about March 23, 1880?

A. I don't know that fact; it is the first time I have heard of it; really I cannot remember of it.

Q. There was, therefore, was there not, an apportioning among the stockholders of the Knickerbocker Company, exclusive of the estate of Bayard, eleven hundred shares of the Municipal stock?

A. I could not say, sir.

Q. Well, was the estate of Bayard represented, or in any way interested in the stock held by these five trustees under the agreement or trust of March 23, 1880?

A. I know nothing of the agreement except what I have heard now; I suppose Mrs. Bayard's estate would all have an interest before that check was given.

Q. So that after that time the Bayard estate had no interest and received no advantage or benefit of any kind from the Knickerbocker stock?

A. No, sir, except what it derived as holder of the Municipal Gaslight Company's stock.

Q. You transferred that Municipal stock into Consolidated stock, did you not?

A. Yes, sir, such portion as I inherited from Mrs. Bayard as one of the heirs.

Q. Did you have any other transaction of any kind whatever with the Municipal Company or with Mr. Francklyn?

A. Well, do you mean growing out of this matter?

Q. I mean of any kind whatever?

A. I decline to answer that.

Q. Did you not make a loan to Francklyn?

A. I decline to answer that; that is a matter of personal business of my own, and I don't see the use of testifying to it before the Committee.

Q. Within a few months anterior to March, 1880, had you made any loans to Francklyn, directly or indirectly?

A. I have no remembrance of ever having done it.

9089 Q. Either before that time or afterward?

A. No, sir, I don't remember of it.

Q. Did you purchase any other Municipal or Knickerbocker stock of Francklyn as principal or as representative at any time? — I don't think I ever did, no, sir.

Q. You know what the price of Municipal stock was in March, 1880?

A. Approximately 170, sir; it may have been 150, and it may have been 180; it is simply guess work.

Q. Between March, 1880, and the time you parted with the stock of the Consolidated Company did you have any transaction whatever with Mr. Francklyn?

A. Well, Mr. Chairman, I don't see the necessity of these questions.

Senator MURPHY: It refers to private business connected with gas companies, does it not?

The CHAIRMAN: The question simply calls for yes or no.

A. I presume I have.

(By the CHAIRMAN:)

Q. Your answer will be yes to that?

A. I don't say yes, but I presume I have; I had just leave say yes to it; I have had business with him; yes, sir.

Q. Did those transactions involve the payment or passing of any money?

A. I don't remember, sir.

Q. Did this transaction involve the delivery of any securities?

A. I believe not.

Q. Either to or from yourself?

A. I believe not, sir.

Q. Did this transaction directly or indirectly concern any of the securities of any of the gas-light companies of New York?

A. No, sir.

Q. Did you make any loans to Francklyn on any gas collaterals?

A. I must say I did not do it.

9090 Q. Was there any such transaction by the Bayard estate or by your brother?

A. Not to my knowledge, sir; the checks which we received were not in addition to the stock.

Q. I understand it as you say; then, as I understand your testimony, it is that the stockholders of the Knickerbocker received no other or further money consideration, or any other consideration whatever, than the Municipal shares at the rate of thirty-five of the Municipal for one hundred and fifty of the Knickerbocker?

A. Yes, sir; that was the practical result of the transaction, and nothing else—3,500 shares for 15,000 shares; the transaction was that the stockholders were to receive in the proportion of thirty-five of the Municipal for one hundred and fifty of the Knickerbocker, or 3,500 for 15,000.

Q. Do you know how soon after November 11 you exchanged that Municipal for Consolidated stock?

A. I don't know; the stock books of the Consolidated Company will show that.

Q. How long after you acquired the Consolidated stock did you continue to hold it?

A. I hold some of it now.

Q. I understood your brother to say that he has sold his?

A. I presume by that he has.

Q. The block has been divided between the representatives of Mrs. Bayard?

A. Yes, sir.

Q. Have you sold any part of yours?

A. Is that a fair question?

(By the CHAIRMAN:)

Q. It is proper.

A. You have traced the transaction through the Municipal Company and the Knickerbocker, and it comes into the hands of third parties.

(By the CHAIRMAN:)

Q. You have received your part of the Consolidated stock, and you have a part of it still?

A. Yes, sir.

(By the CHAIRMAN:)

Q. And have sold a part of it too?

A. Yes, sir.

9091 Q. So far as you are concerned through whom did you make the sales?

A. I don't remember, sir.

Q. Were they all sold through the same party?

A. I could not say.

Q. You don't know of an understanding between the holders of the Consolidated stock, since the consolidation, with a view to its sale?

A. I don't.

Q. Or with a view to raising money upon it?

A. No, sir.

Q. Any of this stock used for such purposes?

A. No, sir.

Q. Have you had your certificates all the time?

A. Yes, sir.

Q. Can you name any of the houses through which you made sales?

A. I could by referring to my books.

Q. Have you several accounts with several brokers?

A. I have no accounts through any.

Q. Did you sell that through brokers?

A. Very likely.

Q. Did you give any to Francklyn to sell?

A. No, sir.

Q. Please look at your books to see through whom you made those sales?

A. I should decline to answer that.

The CHAIRMAN: If the Committee thinks the questions are proper I shall sustain them, and if the witness declines you can anticipate our duty in the matter as well as we.

The WITNESS: Yes, sir.

Examination suspended.

9092 FIFTH AVENUE HOTEL,
NEW YORK, *December* 2, 1885.

The Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

JOHN SICKELS, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are secretary of the Knickerbocker Gas-light Company?

A. I was.

Q. From what time to what time?

A. From its organization until it was transferred to the Municipal Company; I can't tell you the dates; the organization papers will show that.

Q. Did you perform any services whatever after March, 1880?

A. Not after the transfer.

Q. Who were the officers in 1876, when it was first organized?

A. I could not tell you without referring to the papers.

Q. Mr. Stephens?

A. No, sir, he was not there in 1876; for two or three years prior to 1880 Stephens was the president and I was the secretary and a director; George Howes, M. B. Brown, R. Fulton Cutting comprised the board.

Q. Did you ever see any books showing the transactions of the Knickerbocker Company during these years?

A. Yes, sir.

Q. When did you last see those books?

A. The day of the transfer to the Municipal Company.

Q. What did you see done with them?

A. I wrote books up, the records of the last meeting, at the time of the transfer?

9093 Q. Was there a ledger?

A. Yes, sir.

Q. Was that written up?

A. Yes, sir, I wrote up all the books; there was a ledger and a transfer book.

Q. Journal or day book?

A. Certificate book and transfer book.

Q. Do you mean stock ledger?

A. Yes, sir.

Q. I mean the general ledger?

A. There was no general ledger.

Q. Didn't the company keep a ledger and cash book?

A. Yes, sir, but I don't think they were ever after in my control.

Q. When did you last see them?

A. I don't think I ever saw them; that is to say, in my control to examine them.

Q. When did you see the books without examining them?

A. I could not tell.

Q. While you were there as secretary was there not a cash book?

A. Yes, sir, it was kept by Stephens.

Q. Was there any kind of a ledger?

A. I think there was.

Q. Was there a journal or a day book?

A. I think the cash book showed all the disbursements, and the bills were the vouchers.

Q. You say the cash book showed the disbursements?

A. There was a check book which you might say was a journal; it would show the disbursements, and then the bills or the notes, whatever were paid, those were kept, the vouchers, and they were handed over by the treasurer to those that furnished the money.

Q. And who was that?

A. The money would be received from the Messrs. Cutting.

Q. Is there any account in the case of what that total amount was?

A. Nothing more than I could generalize, about $1,150,000. 9094

Q. Up to what time?

A. Up to March, 1880.

Q. Will not the check book show all of those moneys?

A. I think it will, every dollar.

Q. What bank?

A. The American Exchange Bank.

Q. Where is that check book?

A. I could not tell you.

Q. When did you last see it?

A. I think on the day of the transfer.

Q. Who had it then?

A. Mr. Stephens could tell.

Q. You signed the statement of debts of the Knickerbocker Company on March 11?

A. Yes, sir.

Q. What information, if any, did you have before you at that time respecting that indebtedness?

A. I knew it to exist.

Q. You mean to say you had personal knowledge of a $750,000 mortgage?

A. Yes, sir.

Q. Did you sign the bonds that were issued?

A. I signed them as secretary.

Q. Can you say when those bonds were issued?

A. There were $750,000 of bonds printed, and as the money was required for carrying on the work then the bonds were issued, and at different dates from the times we started until the transfer; I think that is the way.

Q. Was the money received by the company dollar for dollar?

A. Yes, sir; there was not a dollar of bonds issued that did not represent money spent.

Q. Was it spent before the Cuttings had received the bonds?

A. No, sir; if we wanted $100,000 we would fill up the bonds, then issue them, and the Cuttings would furnish the money to the treasurer, who would furnish the whole amount, if it was $100,000, say.

9095 Q. This floating indebtedness of $450,000, for which a mortgage was made in March, 1880, and which appears to have been represented by forty-five different notes of $10,000 each, made at or about that time, was exhibited to you in what way?

A. Every dollar of it was spent.

Q. At that time?

A. That was the indebtedness that was due; we made it nominally $1,200,000; that included the bonds; the $450,000 was the money that had been expended in material and labor.

Q. Do you know what was the capacity for production of the Knickerbocker works in March, 1880?

A. At that time the works were in ruins—the inside work—the oil had taken fire and set fire to the works and it blew up.

Q. It was not then used for producing gas?

A. It had been up to the time of the fire, and the fire occurred a few days before the transfer; before the money was paid the Municipal Company took the property of the manufacturing department in ruins?

Q. Was it all injured?

A. No, sir, not a dollar; some of it.

(By the CHAIRMAN:)

Q. You say the Municipal took the Knickerbocker property in ruins?

A. They accepted the property as it stood.

Q. How did it stand?

A. The retort house, and the generator and the different machinery there was in ruins; the oil had got fire and blew it up.

Q. At the time the Knickerbocker works were not capable of producing gas?

A. No, sir, not at that time—allow me to correct that; we had some benches that were making 100,000 feet, and the hydrogen generator; we had some benches in the manufacture of coal gas; those were there.

9096 Q. You think that their condition at that time would render them capable of producing from 100,000 to 150,000 feet per day?

A. Yes, sir.

Q. You was not then producing it?

A. Yes, sir, we were mixing gas then and selling it.

Q. As a matter of fact what was the extent of the mains that were then laid?

A. We had about sixty-eight miles of mains laid.

Q. Were they in good order?

A. There was never any such pipe laid down in the United States in any gas company; it was the only gas company that had a thirty-inch main.

Q. Were these mains then in order?

A. Yes, sir.

Q. Is there any record of the services and mains then in use by the Knickerbocker?

A. That could be found at the works, that was in charge of a man who works where the gas is sent out; I could not tell you the exact number of meters, we had some 2,000 meters, I think, set, and how many were in use I could not tell you.

Q. You mean by "set" ready for use?

A. Yes, sir.

Q. How many in use?

A. There was a large number; I could not tell you.

Q. About 600?

A. I think there were.

Q. How many services; is it your best recollection there were about 600.

A. I think more than that; I should say six hundred, and I should judge more than that.

Q. That is your best recollection?

A. Yes, sir; it is some time ago; I could not tell you.

Q. Was there any appraisement of the value of the Knickerbocker property at that time made by any one?

A. All the negotiations were outside of Stephens and myself; we knew nothing about it.

9097 Q. Were you interested in the transaction in question?

A. Yes, sir.

Q. State the extent of your interest at that time in the transaction? You held some stock first in the Knickerbocker?

A. Yes, sir; my interest was 250 shares of the Knickerbocker stock.

Q. For that interest you received what as the result of that transaction?

A. Nothing.

Q. Didn't you receive Municipal stock?

A. Not until after March; then I did.

Q. For that two hundred and fifty shares of Knickerbocker stock you received how much Municipal stock?

A. I think I received about the same amount.

Q. You didn't receive Municipal stock at the rate of thirty-five shares of Municipal for one hundred and fifty shares of Knickerbocker, did you?

A. No, sir; I think I received the value of the amount of the face; that is, $25,000 worth for $25,000 worth of the Knickerbocker.

Q. You mean $25,000 of Municipal at par?

A. No, money; I received the money from Cutting.

Q. You turned over your Knickerbocker stock to Cutting and received the money for it?

A. Yes, sir; I received the stock and turned it back to him in settlement of another matter.

Q. You sold your Knickerbocker stock to Cutting?

A. No, sir; I owed him some $10,000 or $11,000 for another interest, and Cutting took my stock; I forget at what price, and gave me the difference in money.

Q. You did in effect sell him your Knickerbocker stock by the satisfaction of a debt and the balance in money?

A. Yes, sir.

Q. Was that transaction based on the market price of the Municipal stock?

A. I think he gave me more than that for the stock at that time.

9098 Q. But the estimate was based on that?

A. Yes, sir.

Q. I would like to know what was the price of the Municipal stock at that time, as near as you remember it?

A. I think it was about $1.80.

Q. As to your holdings, were there two hundred and fifty shares in your name?

A. No, sir; all the stock was held in trust; I think the stock was in my name, 250 shares, and I think Stephens was the trustee and held the stock, still I am not positive about the amount.

Q. Who else held any stock except yourself, Mr. Stephens and Cutting?

A. Mr. Ambrose and Pierpont Morgan; Stephens held for Ambrose.

Q. Do you know what Morgan received?

A. I could not tell you; I think it was all *pro rata;* he received stock, I think, but I don't state that as being positive.

Q. You have not had any interest in gas stock since then?

A. Not in any of these companies.

Q. Or in the Consolidated Company?

A. Nothing, no, sir.

Q. What, if any, contracts did the Knickerbocker Company have up to March, 1880, with the constituent companies?

A. None.

Q. What if any patents did they own?

A. They owned one patent, the McKenzie and Sayre; they acquired that at the time the Cuttings bought it, in May, 1878.

Q. Was money paid for that or stock?

A. Money; there was an agreement to use that patent and to construct the works; the right to use the patent was paid for through the construction account.

Q. Construction of works?

A. Of the manufacturing works.

Q. Construction of the apparatus?

A. Yes, sir.

9099 Q. In 1878?

A. Yes, sir, or 1880; it ran along there.

Q. That agreement was with whom?

A. McKenzie and Sayre Manufacturing Company and the Knickerbocker Company.

Q. Who had the construction?

A. McKenzie, the patentee.

Q. Who was the engineer?

A. He was the engineer.

Q. He was the engineer who constructed the works?

A. Yes, sir; of the manufacturing department.

Q. Was he paid in stock or cash for that?

A. I think in cash.

Q. That is a part of this $750,000?

A. Yes, sir, and the $450,000; the $750,000 were coupon bonds, and the $450,000 were represented by notes; all the payments to McKenzie were covered in those two amounts.

Q. Who has that contract?

A. I think it is among the company's papers; it naturally would be in the hands of the Municipal.

Q. Have you a copy of it?

A. No, sir.

Q. Do you know the total payments called for by that contract—do you recollect, I mean?

A. No, I could not tell you without reference to the books.

Q. What books?

A. The books of the Knickerbocker.

Q. What account?

A. The account that showed the disbursements.

Q. Mr. Yalden, do you find any such book?

Mr. Yalden: No, sir.

Q. Do you remember any other contract made between the Knickerbocker Company and anybody else for construction?

A. There was a contract made with the Warren Foundry Machine Company.

9100 Q. About what was the total amount of payment called for by that contract?

A. I think it was about $400,000.

Q. That was for what?

A. Pipes.

Q. Was that paid?

A. Yes, sir.

Q. Do you remember any other contract?

A. One made with Mills & Ambrose for laying the pipes.

Q. How much was that?

A. I think about $400,000.

Q. Do you remember any other?

A. One made with the Goodwin Meter Company of Philadelphia.

Q. For 2,000 meters?

A. Yes, sir.

Q. What amount was called for to pay that?

A. Between $70,000 and $90,000.

Q. Do you remember any other contract?

A. The others were small; they were open purchases, the materials, they didn't go into the hundreds of thousands of dollars.

Q. The total amount was what?

A. There was the oil, the pipes and cocks, etc.; I think it would go to quite $150,000 for the whole.

Q. All of those were represented by these two amounts of guaranteed indebtedness?

A. Yes, sir; I want to correct that; there was a large amount paid for filling in and repairing the dock, and I think that was in the neighborhood of $100,000.

Q. To whom was that paid?

A. Mills & Ambrose.

Q. Was not that included in the amount you have mentioned?

A. No, sir.

Q. Are you sure it was as much as that?

A. Yes, sir, I think it was, I think there was one amount of over $30,000, and then it ran along as the needs of the company required it; I think it would go up to about $100,000.

9101 Q. Was the stock ever offered for subscription?

A. No; the whole stock was issued for the payment of the property; there was a large property there, some $1,200,000 had been spent on that property when it went into the hands of the receiver.

Q. All of the stock of the Knickerbocker Company was issued for the property?

A. Yes, sir.

Q. When it was organized?

A. Yes, sir.

Q. You had previously issued the stock of the Knickerbocker Company, and it was all issued for property that was purchased with that stock, the property being the old Union property?

A. Yes, sir, the stock of the Knickerbocker was issued for the properties formerly belonging to the Union Gas-light Company.

Q. Are there any other books relating to the stock of the Knickerbocker Company except the books that are here?

A. I don't know what books are here.

Q. Look at them (witness looked at books)?

A. This is the stock ledger of the Knickerbocker Gas-light Company in my handwriting; and this is the transfer book.

Q. When was that book opened?

A. August 25, 1876.

Q. What book is that?

A. The stock ledger marked "H. 1."

Q. This other book, when was it opened?

A. August 10, 1876, marked "H. 2."

Q. How many check books were there?

A. One check book, I think, sir; if I recollect it correctly there was an ordinary check book for opening an account which you will get at the bank, and there was then one made especially for the companies' use, I don't know of any others.

9102 Q. Do you remember which officer of the Municipal Company took those books?

A. I think the counsel of the company, Mr. Day; he was present.

Q. Do you remember where this transaction was closed?

A. At the office, 35 Pine street.

Q. Whose office?

A. The Knickerbocker Company.

Q. Was the cash-book there?

A. It was in the hands of the treasurer, Mr. William A. Stephens.

Q. What officer of the Municipal Company was that given to?

A. I couldn't tell you.

Q. Were there any other books of the Knickerbocker Company at that time in existence?

A. Besides those you have mentioned?

Q. Yes.

A. No, I don't think there was any; there might have been the letter-book.

Q. With the exceptions of these books which have been marked "H. 1," and "H. 2," there were no other books except the minute book of the board and two check books, a cash-book and a letter-book; do you remember any others?

A. No, sir.

Q. No general ledger?

A. No, sir.

WILLIAM A. STEPHENS, a witness called by the counsel to the Committee, being duly sworn, testified as follows.

Examined by Mr. TREMAIN:

Q. You was the president and treasurer of the Knickerbocker Gaslight Company from 1876 to 1880?

A. From 1878 to 1880.

Q. When the properties of the Knickerbocker Company were turned over to the Municipal, you was cognizant as a party to that transaction, as its president?

A. I was not to the fact that it was turned over to the Municipal Company at that time; I knew that the stock had been sold and transferred.

9103 Q. At that time, please state to the Committee what books of the Knickerbocker Company existed in addition to those that are now before us here, the stock-ledger and the stock-register of transfers?

A. No other books of the Knickerbocker Gas-light Company.

Q. What book or books did exist at that time, exhibiting the amounts paid for construction of various kinds, and for pipe, materials and labor, and moneys expended in and about the Knickerbocker works; just specify the books?

A. There was a cash-book kept by me as trustee, in the interest of Mrs. Elizabeth Bayard's estate, which embraced all of those items which you have just referred to; there was also a check-book kept in my name in trust for that account on the American Exchange National Bank; there was also a bill book, showing the notes which were issued, which formed a part of the item of $450,000, which has been referred to in this testimony.

Q. That is all the books that there were?

A. All that I can think of.

Q. And the vouchers representing those payments; did you have them?

A. The cash-book was given by me to Mr. Brown, as the representative of Mrs. Elizabeth Bayard, as one of the representatives; the cash-book was given by me to him, and the voucher; I am informed that they were afterward delivered by Mr. Sickles to Mr. Brown; that is hearsay; I believe they were.

Q. Is it a fact, between 1878 and March, 1880, in addition to the amount advanced by that estate, there was advanced to the Knickerbocker Company the sum of $50,000, by Pierpont Morgan, represented by bonds?

A. There was $50,000 of bonds sold to Pierpont Morgan for cash, at par and accrued interest directly.

9104 Q. Was that sale made by the Knickerbocker Company directly, or was it a part of the $750,000 previously issued to the Cuttings?

A. The $50,000 which Morgan received was a part of that $750,000 of bonds issued under the first mortgage; the cash for it was received and expended.

Q. Do you know what stock Pierpont Morgan received?

A. Five hundred shares.

Q. When was that issued to him?

A. It was delivered to him at the time he took the bonds, prior to 1880; all the stock belonged to individual stockholders, and it was held by me in trust, to represent them.

Q. And out of that block five hundred shares of Knickerbocker stock was given to Mr. Morgan; is that right?

A. If I am correct, that five hundred shares of stock, delivered to Morgan, was from a small lot of stock which we designated as treasury stock—stock to be used for special purposes.

Q. Nothing more was paid for it?

A. No, sir.

Q. Have you any papers of any kind whatever, relating to the Knickerbocker Company, of moneys expended on its works?

A. None whatever; they were all surrendered by me.

Q. Or to the Municipal Company?

A. Or to the Municipal Company.

Q. How much stock of the Municipal Company did you personally receive for your Knickerbocker interest; or, if money, how much money?

A. I received my *pro rata* share of 3,500 shares of Municipal stock; I cannot recollect the figures.

Q. Did you receive in the proportion of thirty-five shares of Municipal, for 150 shares of Knickerbocker?

A. Yes, sir; I received that from Mr. Brown.

Q. Did you subsequently part with your Municipal stock?

A. Yes, sir.

9105 Q. How long did you hold it?

A. A very little while.

Q. You parted with that to the Cutting estate?

A. No, sir; I sold it in the open market.

Q. State the total you represented?

A. I don't think I held any in my own name, except a sufficient amount to qualify me; it was all held in my own name in trust; all of which I was interested in for myself and others.

Q. That includes the Cuttings?

A. No, sir; I transferred before the Municipal stock was received; I transferred all that I held in trust to Mrs. Bayard.

Q. It appears, in evidence, that 3,500 shares of Municipal stock was issued in March, and received by the Bayard estate, and that about 2,500 shares of that block was retained by the Bayard estate, the balance of 1,100 elsewhere apportioned, some of it to Sickles; the question is how much to yourself and to anybody else?

A. I should have to refer to my memoranda, as to myself, to be exact, and that which was apportioned to others I have no means of knowing; I furnished Brown with the amount of stock held by others.

Q. How much did you hold personally; how many shares?

A. I think I held personally, representing 625, or approximately that.

Q. Did that represent Howe's interest?

A. No, sir.

Q. Did that represent Ambrose's interest?

A. No, sir.

Q. You know the amount of their interest?

A. I think 250 shares for J. W. Ambrose; that is all I know of; and I think the McKenzie and Sayre Manufacturing Company also held 200 shares of Knickerbocker stock, and I am not certain as to the amount.

9106 **Samuel J. Young**, a witness called by the counsel to the Committee, having duly affirmed, testified as follows:

Examined by Mr. **Tremain**:

Q. You were a book-keeper in the Knickerbocker Company?

A. No, sir.

Q. In what company were you a book-keeper?

A. I have kept books in the Municipal Gas-light Company from its original organization until January, 1877, and from June, 1877, until November 11, 1884.

Q. And since that time where have you been kept?

A. At the office of the Consolidated Gas-light Company.

Q. In what capacity?

A. As a clerk.

Q. Having any particular matters in charge?

A. Any I was told to do.

Mr. **Tremain**: I suggest that your examination be suspended until we approach another topic.

James Yalden, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. **Tremain**:

Q. Under the direction of this Committee you have made an examination of certain of the books of the Municipal Gas-light Company, with a view to ascertain what they may show touching its capitalization?

A. I have.

Q. Which books have you thus examined or had examined under your direction?

A. The ledgers, the journals, the books subsidiary, and the stock ledger and transfer book.

Q. The examination that you made extended over what years?

A. From 1876 to 1884.

9107 Q. It is proper to state the Municipal Company was organized in 1876 with a nominal capital of $500,000, and that subsequently its capital was increased in 1877, to $1,500,000; in 1879, to $2,000,000, and in 1880, to $3,000,000; those amounts being nominal share capital; please tell what the books you have examined show in respect to the payments of money touching this capitalization?

A. With regard to the first issue of $500,000 in 1876, on account of that there was $215,300 paid in cash, $100,000 on account of purchase of property, $150,000 for purchase of patents, and $34,700 given for salaries and providing for discounts on certain shares that were sold below par; the next issue of $1,000,000, in 1877, was subscribed for $800,000 in cash, and $200,000 paid for patents; the next issue of $500,000 in 1879, was wholly subscribed for in cash; the next issue, in 1880, was subscribed for in cash; the last issue of $1,000,000, however, the cash received therefor includes the $350,000 for the 3,500 shares allotted to the Bayard estate for the 3,500 shares referred to in Mr. Cutting's testimony yesterday.

Q. If in fact it was paid you mean?

A. It is assumed to be cash, for the reason it was passed through the cash book.

Q. You find that amount drawn out also?

A. Yes, sir.

Q. And concurrently with the payment in?

A. Yes, sir.

Q. And paid out to whom?

A. It was paid out in two amounts; $300,000 in settlement of a claim for damages in a suit by the Knickerbocker Company against the Municipal Company, which was charged to profit and loss account of the Municipal Company, and another check for $50,000 purporting to have been given for the purchase by the Municipal Company of 15,000 shares of the Knickerbocker Gas-light Company;
9108 the latter amount was charged to a special account and stands to the debits of that account at the company's expense November 11, 1884.

Q What is that account?

A. It is called Knickerbocker Gas-light Company's stock.

Q. What became of that item of $50,000 in the adjustment account between the Consolidated and the Municipal?

A. That was incorporated with the value of property and brought into account with the Consolidated Company as against the stock that they received from the Consolidated Company.

Q. Please state to the committee the total amount of moneys paid by way of dividends or distribution to the stockholders of the Municipal Company, during the period covered by your examination of these books, and as shown by these books up to the time of the consolidation?

A. The profit and loss account of the Municipal and Knickerbocker, of the former company from 1875 to 1884, and of the latter company from 1880 to 1884, shows that they paid away on their capital, as before stated, the sum of $2,806,192.50 for dividends in that period.

Q. If you can give the items of that $2,000,000 by years it would be desirable?

A. In the year 1879, $90,000; the year 1880, $353,742.50; 1881, $712,450; 1882, $600,000; 1883, $600,000; 1884, $450,000; that makes the total above referred to.

Q. What else have the stockholders of the Municipal Company received first in money and then in stock of the Consolidated?

A. They received $6,600,000 of stock in the Consolidated Company.

Q. What else in money did they receive by way of distribution?

A. Twenty-six and a half per cent. per share, called distribution of the assets since November, 1884, amounting to $795,000.

9109 Q. That is included in your first item?

A. No, sir; they have received the sum of $795,000, twenty-and a half per cent., $26.50 per share for the distribution of the assets collected other than those transferred to the Consolidated Company.

Q. So that in round figures it is a correct statement, is it not, to say that the stockholders of the Municipal Company have received in money upon their shares $3,600,000 in addition to the shares of the Consolidated stock apportioned among them?

A. Certainly, that is so.

Q. Now, referring to the items upon which this Consolidated stock was based did you make an examination of what is shown by the books respecting the cost of the following items; the plant, real estate, street mains, valves, etc.?

A. I did.

Q. In a schedule found at page 30 of Appendix "D" in the report of the last Senate Committee, appeared the details of values of the constituent companies at the time of consolidation?

A. Yes, sir.

Q. For the purpose of making a comparison between those values and what you may have found shown by the books touching the items which are enumerated, did you make an examination?

A. I have.

Q. State its results in respect to each of the items?

A. The balance as standing, the amount standing as representing the cost of the various investments of the Municipal Company, are as follows:

Q. Lump each item?

A. The outlay of the Municipal Company for the various amounts represented in the table on page 30, before referred to, amount in the aggregate to $4,092,347.86, and the sum of the valuation
9110 on page 30, including the franchise, is $5,100,000, therefore
making an appreciation on that account of $1,007,652.14.

Q. Is not that exclusive of any Knickerbocker items except expenditures made by the Municipal on the Knickerbocker properties after 1880?

A. It is quite independent of any expenditures on the other company.

Q. State what appears by the books of the Municipal Company—its total expenditures upon the Knickerbocker property since 1880 that appear to have been?

A. On account of works, mains and sundries the Municipal Company have expended on the Knickerbocker $810,481.15.

Q. And is that item included in the aggregate of items you have previously just given?

A. No, it is not.

Q. Hence, the total expenditures as shown by the books for those items you have designated, namely, for construction, plant, and other properties, is what figure, the two together?

A. Four million nine hundred and two thousand eight hundred and twenty-nine dollars and one cent, the total expenditures on the two companies' works.

Q. So far as the books exhibit is there any other item to be added to that amount in order to represent the actual aggregate expenditures upon the Municipal property or Knickerbocker properties that enter into the consolidation?

A. No, there is nothing further.

(By the CHAIRMAN:)

Q. Do you mean to say that the entire sum put into the Municipal Company amounts to $4,902,829.01?

A. That is the two together; the amount of money used by the Municipal in the increase of their works and the addition of the Knickerbocker.

Q. Do you mean to say that the property that the Muni-
9111 cipal held on the day next prior to consolidation, including
the Knickerbocker, which had previously been merged in the Municipal, cost the sum last mentioned, and no more, as shown by the books?

A. As shown by the books that was the amount of money they expended, but I take it that the value of the Knickerbocker property, whatever that may be, when it was transferred, is not incorporated there.

Q. Does that include the $1,200,000 indebtedness of the Knickerbocker that was assumed?

A. Oh, no, not that at all.

Q. Can you state how much the Municipal Company had expended in any way upon the works and property which it had at the time of consolidation, which would include of course the Knickerbocker works?

A. Yes, sir; the Municipal expended on their own $4,092,347.86 and upon the Knickerbocker Company's works and plant $810,481.15.

Q. Then what had their total property cost them?

A. Without the value of the Knickerbocker Company $4,900,000 in round numbers.

Q. The whole property that the Municipal had at the time of consolidation cost them how much?

A. Four million nine hundred and two thousand and odd dollars.

Q. How much had the Municipal Company put into the property which it had at the time of the consolidation?

A. Four million nine hundred and two thousand dollars.

Q. What has the Municipal Company, the stockholders as such, taken out of the concern that includes the twenty-six and a half per cent. which was paid after the consolidation but paid from assets of the Municipal remaining in their hands at the time of consolidation and not transferred?

A. In cash $3,601,000.

9112 Q. Have they taken out any thing else?

A. No.

Q. What do they claim to have left in their possession as their own property?

A. The stock, $6,600,000, the total amount $10,201,192.50 and something over yet to come.

Q. What?

A. It depends upon how much the remaining assets are worth, perhaps $30,000 or $40,000.

(By the CHAIRMAN:)

Q. Then since and including the year 1876 they have put in a little less than $5,000,000?

A. A little less than $3,000,000; their capital stock is only $3,000,000.

(By the CHAIRMAN:)

Q. How much did the stockholders put into this concern irrespective of what they got from the public?

A. Nothing; but there was a surplus left after the payment of dividends; they paid for stock $3,000,000, assuming it was paid all in cash.

Q. That is all they have ever put in?

A. Yes, sir.

Q. They have actually taken out of the Consolidated how much?

A. Three million six hundred and one thousand dollars.

Q. And have got left in Consolidated stock how much?

A. Six million six hundred thousand dollars, assuming the Consolidated stock to be worth par.

Q. How much did the shareholders put into the concern and pay for their stock?

A. The capital stock of the Municipal Company was paid in in cash by sundry shareholders, $2,165,000; $350,000 by the Bayard estate in the manner as before explained; $100,000 of stock was given for the original purchase of the property; $350,000 given for the purchase of patents; $8,900 given in payment of salaries; $25,800 was the discount on stock sold at different rates below par.

9113 Q. Is that all that the stockholders of the Municipal Company ever put into the concern?

A. Yes, sir; that's all they ever put into the concern.

Q. And have drawn out upwards of $6,000,000, and have got their $3,000,000 of stock besides?

A. Certainly; in point of fact the actual cash that went into the company's coffers from the stockholders for the use of the company was $2,165,000.

Q. In point of fact the expenditures in and for property to the amount you have already stated were made from ordinary receipts, so far as they are in excess of that sum, $2,165,000.

A. So far as they are in excess.

Q. The construction of the works and the acquisition of properties has been paid by the current receipts?

A. Yes, sir; out of profits made and reserved beyond the dividends made which were at the end of the trading nearly two and a half million dollars.

Q. Explain the whole thing, that last item you gave, so that it shall appear more clearly what you mean?

A. The balance left from the profits of the company after paying the dividends is in round figures $2,500,000, November 11, 1884; that amount added to $3,000,000 of capital has provided the sum for the outlay on works and plant, $4,900,000, and $800,000 in round figures divided among the stockholders since November 11, 1884; and the balance represents future assets to be collected, and other small amounts standing as assets on their books, and various expenses and costs of liquidation in suit; now we must go further than that; there are some liabilities outstanding of the Municipal Company, $328,000.

Q. Were they not assumed by the Consolidated?

A. Yes, sir; but they were incorporated in the Municipal accounts.

9114 (By the **Chairman**:)

Q. Is there any thing of that evidence which modifies or varies the statement already made by you?

A. Yes, sir; there is a sum of $328,000 owing by the Municipal Company for outstanding bonds, the proceeds of which have been used in the general construction and working of the company's business, as before stated, and that is really an addition to the capital and surplus, and went to provide an additional working capital.

Q. That indebtedness appears to have been assumed by the Consolidated Company, does it not, and to have been included in the $6,600,000 of stock apportioned to the Municipal?

A. No, it is not included; it is deducted before the $6,600,000 was given; the total amount of the plant of the two companies was $8,100,000, and there was $1,465,000 deducted from that for debts, and the Municipal Company got $6,600,000 worth of stock for the total value of all their property, less the indebtedness.

(By the **Chairman**:)

Q. Which indebtedness the Consolidated Company assumed?

A. Yes, sir, and assumed so much of the stock when it was due.

(By the **Chairman**:)

Q. I don't see how that modifies your previous statement as to what the stockholders of the Municipal Company put into the concern and what they took out of it, and what is now left in their hands of the stock of the Consolidated Company assigned to them in the act of consolidation?

A. That statement goes to confirm my previous reports upon that, that the Municipal Company's stockholders received $6,600,000, and that they have received as the value of their assets, less their liabilities.

Q. You mean it is the net value?

9115 A. Yes; the course they pursued was $1,800,000, as they appraised them, and they had $1,500,000 liabilities; the Consolidated say then "we will assume them but deduct it."

(By the CHAIRMAN:)

Q. Then the answer is that it does not modify it but rather confirms it?

A. Yes, sir.

Q. Is this testimony which you are now delivering the result of recent examinations, or had you made any such examination when you testified last March?

A. No, I had not; the result of this examination is the result of my labors within the last few days.

Q. Will you now please prepare appropriate tables or digests of the figures showing the results that you have just testified to, so that the Committee shall append it, if they choose, to your testimony?

A. Yes, sir, I will.

Q. Is there any item of depreciation written off in arriving at those results?

A. Nothing very substantial; the depreciation was generally charged to repairs, which was only $27,000 written off the depreciation.

Q. So that in arriving at those results there is no more depreciation allowed in the books than about that sum?

A. No, under that heading, that is all; in my account last March the Municipal Gas-light Company wrote off for repairs a depreciation, $235,000, page 346.

Q. Did you investigate that item?

A. Yes, sir, and ascertained that they had spent that amount of money for repairs; it is an equivalent to writing off the amount for depreciation and spending the amount as they required it; I will correct my figures; the depreciation written off is $53,000 and not $27,000; I took the wrong figures.

(By the CHAIRMAN:)

9116 Q. The cost of repairs then has been made from time to time and came out of the earnings of the company?

A. Certainly.

Q. The money with which bonds have been paid for came out of what?

A. The earnings of the company, and I presume a part of the surplus.

Q. So that the dividends paid have been over and above all those expenditures and earnings?

A. Yes, sir; the dividends paid have been the cash that they have had left that they didn't want for any other purpose.

Recess until 4 o'clock p. m.

FIFTH AVENUE HOTEL, NEW YORK,
December 2, 1885—4 p. m.

(Hearing resumed.)

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the Committee.

THOMAS RUTTER, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. **TREMAIN**:

Q. You are the president of the Harlem Gas-light Company?

A. Yes, sir.

Q. And you are also a director in the Consolidated Gas-light Company?

A. Yes, sir.

Q. Were you present the other day when a dividend was declared?

A. I was.

Q. Was any financial statement submitted to you?

A. There was not, except a verbal statement which was made by the treasurer.

9117 Q. Was the vote to declare a divident unanimous?

A. It was.

Q. What directors were absent, if any?

A. Mr. Pyne; he was the chairman of the finance committee; Mr. Zollikoffer was absent—I am not sure about that.

Q. When did you first hear consolidation considered and valuations referred to for that purpose?

A. I don't remember exactly when that occurred; the question of consolidation was discussed three or four years before it actually took place.

Q. What is your best recollection as to the time that valuations were first considered?

A. I should say six or seven months before the time of consolidation the committee were at work; I am not positive as to that.

Q. Were you on the sub-committee which was appointed by the pooling committee to consider consolidation?

A. No, sir.

Q. Who represented your company on that sub-committee?

A. Mr. Moss.

Q. What, if any thing, did you, as president of the Harlem Company, have to do in respect to the Harlem property entering into that consolidation?

A. Nothing; as a member of the committee Mr. Moss occasionally consulted with me as to values, etc.

Q. When did you first arrive at values in the Harlem Company for the purpose of negotiating for consolidation?

A. I could not tell you the date.

Q. Was it in 1883?

A. I can't tell you whether it was in 1883 or 1884.

Q. Were there any papers or memoranda in existence respecting values other than the schedules which formed the final basis of the consolidation agreement?

A. Not that I know of.

9118 Q. When were the schedules prepared?

A. They were being prepared at the time or immediately after the committee was appointed of one from each company.

Q. It was appointed some time in 1883; in December, according to the pooling minutes?

A. Eighteen hundred and eighty-three or eighteen hundred and eighty-four; I could not tell you the date.

Q. The sub-committee which you referred to, the committee which had power to call in legal counsel?

A. Yes, sir.

Q. Your schedules of appraisements were prepared immediately after that committee was formed?

A. Yes, sir, after that committee was formed.

Q Were there at that time valuations affixed to those schedules by any of the Harlem directors?

A. No, sir; it was left entirely in the hands of that committee.

Q. To anybody else but Moss on that committee?

A. Except occasionally when he consulted with me about prices.

Q. So that we understand you as testifying that the Harlem Company prepared schedules of its property but did not affix to those schedules valuations?

A. We made an inventory of our property.

Q. Did you put valuations to it?

A. Those values were placed there by this committee of which Moss was a member; I presume they did; I don't know from actual knowledge.

Q. Did those values differ from the values affixed upon the schedules finally?

A. I can't give you a different answer from that; I was not at the meeting; there were some changes made no doubt.

9119 Q. Can you say whether there was any substantial change in the values affixed to your properties at the time of consolidation from what those values were as originally represented by the Harlem Company?

A. The figures were cut down; I know that.

Q. Are those original schedules in existence?

A. I could not say; I don't think they are; I don't know whether they are or not.

Q. When did you last see them and with whom?

A. I don't know as I ever saw them; that is, the schedules made by the committee; I would like to correct that; I saw them but when I could not say; of course I saw those figures when they were submitted to me by Moss.

Q. Were you not a member of the pooling committee?

A. No, sir, not at all.

Q. Well, the original schedules that were appraised and were submitted to the Consolidated Company, and that formed the immediate basis of consolidation, are supposed to be now before the committee, and marked exhibits "F, J, S, G." I suppose that is it; is that it? (Paper handed to witness.)

A. That is it, because it is in Mr. Moss's handwriting.

Q. Were those the schedules which formed the final basis?

A. I don't know; it does not seem to cover the ground fully.

Q. What else was prepared?

A. I don't know; there evidently was one.

Q. Look at this and see if this is not it? (Paper handed to witness.)

A. This is another of the same character; it does not cover the ground fully; it is a detailed statement of the different values of the property we had; Mr. Moss can give you all that information correctly.

9120 (Witness refers to paper marked Inventory of the Harlem Gas-light Company, November 10, 1884)

Q. Was there not submitted to the Consolidated Company an appraisement of all your property?

A. I think there was.

Q. Who appraised it?

A. We made an appraisement, at least Mr. Moss did, and made his statement, which was referred to the committee, and then a valuation was made upon his figures; there were appraisers employed for the purpose; their names I can't give you; I don't know; these figures were revised when they were presented to the committee; they were cut down when they thought the figures were too high.

Q. There is a total of $2,500,000; is not that the whole of it?

A. You ask me about the figures, which amount to $1,300,000.

(Witness refers to a paper marked "Exhibit F.")

Q. That schedule covers the Harlem property, does it not?

A. Yes, sir.

Q. Is not that the paper which formed the immediate basis of the consolidation agreement?

A. That did, I think.

Q. Was there any other property owned by the Harlem Company except as detailed in this schedule?

A. I think this covers the whole thing; there may have been another paper; I would not vouch for that.

Q. What you question is, whether there was any other property of the Harlem Company which is covered by that paper or in which it was recapitulated at the end?

A. I could not answer that except in this way, that I don't know.

(By the CHAIRMAN:)

Q. There was no other to your knowledge at all events?

A. I have an impression that there was another paper.

9121 Q. Then it seems there was another paper covering property, was there?

A. I don't remember any other paper, yet I have an impression that there was another paper upon the same subject, but I am not positive about that.

Q. Of what importance is any other paper?

A. Except to get the valuations, to increase the values and bring them up to the point that we went into the consolidation; there is something in these figures I don't really understand.

(By the CHAIRMAN:)

Q. That creates an impression upon your mind that there is another paper?

A. Yes, sir.

Q. This paper recapitulates the valuations of mains, meters, services, works, real estate, etc., at $2,530,917.46; the total capitalization apportioned to the Harlem Company by the consolidation appears to have been $3,000,000?

A. Yes, sir; a little over, I think.

Q. The difference being about $469,000; can you state how that was arrived at?

A. I cannot.

Q. Have you no information whatever upon that subject?

A. No.

Q. Were you not consulted respecting it before you signed the consolidation agreement?

A. No, I don't recollect that I was; it was left entirely to the committee.

Q. Was there any meeting of the board of directors of the Harlem Company at which the matter was considered?

A. No, sir.

Q. Were you present at the meeting of the stockholders of the Harlem Company when that subject was voted upon?

A. Yes, sir, it was not discussed at all there.

Q. Was that vote chiefly by proxy?

A. Yes, sir; the vice-president held them and I held them.

Q. How many did you vote on?

A. I could not tell you.

9122 Q. Didn't you vote on two-thirds yourself?

A. I could not tell you the number.

Q. Didn't Moss and yourself substantially cover by your votes more than two-thirds of the proxies?

A. Moss did not vote; he had not the power to vote; it was Rodman and myself.

Q. Didn't the vote of yourself and Rodman cover more than two-thirds of the stockholders?

A. Yes, sir; I guess it did.

The CHAIRMAN: Strike out what refers to Moss's voting.

Q. Do you testify that the valuation of the Harlem properties was arrived at, so far as this difference of $469,000 was concerned, without any special consideration of that item?

A. No, I would not say that; I have no doubt it was considered, but not by me.

Q. You cannot explain that to the committee?

A. No, sir; had I been a member of the committee I might have been able to answer these questions.

Q. Was there any other property of the Harlem Company or assets of any kind whatever, that were not turned over to the Consolidated Company, or that were distributed among the stockholders of the Harlem Company after the agreement of consolidation; I will refresh your recollection by a paper which bears your signature?

A. I think every thing was turned over.

Q. Was it not paid by the Consolidated Company afterward?

A. I mean this, that we had uncollected bills, and we had stock on hand, coal, etc., which was all turned over by the gas company; the adjustment committee had that in charge.

Q. Didn't the Consolidated Company distribute those assets to the stockholders of the Harlem on account of the Harlem Company?

A. I think they did.

9123 Q. What was the total amount of assets so distributed?

A. I could not tell you.

Q. Does not that paper enable you to say?

A. This is a schedule rather of the indebtedness of the company, a balance due under contract to Rowland, a balance due on bonds, etc., and other indebtedness of the Harlem Gas-light Company.

Q. That paper does not enable you to state what the amount of payments were?

A. No, sir; this states what the company owed at that time and what was transferred to the Consolidated Company who took care of them.

Q. This statement is marked Exhibit I. Was the distribution to the stockholders of the Harlem that was made at or about the time of consolidation, or shortly after, made by the Harlem officers or the Consolidated Company on account of the Harlem in adjustment? What was the fact?

A. I don't recollect at this time how that was done.

Q. In substance do you know the percentage of distribution thus made?

A. No, sir; that is shown by the records.

Q. What?

A. The Harlem books will show.

Q. Whether those payments were made by the Consolidated or the Harlem?

A. I think that that payment was made by our company.

Q. Was any dividend made by the Consolidated to the Harlem stockholders?

A. There was a dividend of the reserved assets which was made by the Consolidated Company.

Q. Thirty-two thousand dollars?

A. Yes, sir; I don't recollect the percentage or the exact amount.

Q. In addition was there any other dividend about that time made by the Harlem Company?

A. A very small one.

Q. What period did it cover?

A. It happened to be left over.

9124 Q. When was that paid?

A. Shortly after the consolidation took place.

Q. You are aware, are you not, that legislation affecting the gas companies of the city of New York was proposed last winter?

A. I only know from what I saw in the papers; I have no other knowledge of it.

Q. No other knowledge than what you saw in the papers?

A. No, sir.

Q. Do you know what the provisions of the proposed bill were?

A. No, sir.

Q. Do you know any thing about it?

A. Absolutely nothing about it.

Q. And didn't down to the adjournment of the Legislature?

A. No, sir; the only knowledge I had was what I saw in the newspapers.

Q. From the papers did you know what the proposed legislation was?

A. No, I did not; I saw that the matter was talked of in the Legislature; that's all.

Q. You heard the matter was talked of and knew it was talked of?

A. In the newspapers.

Q. You knew nothing about it yourself; then of course you were neither friendly nor hostile to the legislation?

A. I took a neutral stand on that point.

Q. Entirely indifferent to the whole thing; then you could not give us your opinion as to the wisdom or unwisdom of the proposed legislation?

A. No, sir.

Q. And yet you are president of one of these constituent companies?

A. Yes, sir.

Q. And director of the Consolidated Company?

A. I had nothing to do with it whatever, that bill at the Legislature.

9125 Q. In your opinion as a business man, experienced more or less in manufacturing and supplying gas, is the dividend a fair element in ascertaining and fixing the price at which it should be supplied to the public?

A. I think it is.

Q. Is there any fair reason in your opinion why that dividend should not be limited and thus the price of gas limited?

A. I don't think there is any fair reason for it—which I can give at least.

Q. What, if any, contracts existed of the Harlem Company, I mean at the time of the consolidation, that were assumed by the Consolidated Company?

A. There were contracts for coal and supplies generally, and also for the addition of our works, which were about completed at the time of consolidation.

Q. The contracts were with whom?

A. The contract for extending the works was with Mr. Rowland.

Q. With whom were the others?

A. The coal companies, the West Penn. Coal Company and the Westmoreland, and there was a company in Western Virginia, it is the Murphy's Run Company, contract for coal.

Q. What other contracts?

A. There may have been a few, but not great contracts.

Q. Were there any other contracts except for materials?

A. Not that I am aware of.

Q. Any for services outstanding?

A. Not that I am aware of.

Q. Were there any other contracts made?

A. No; in regard to contracts you mean people employed by the year?

Q. Yes, sir?

A. Mr. Moss was employed by the year as vice-president and manager; all those services ceased at the time we went into consolidation.

Q. Were not the contracts for salaries outstanding for a longer period?

A. No, sir.

9126 Q. Were there no contracts for salaries whatever that were assumed by the Consolidated?

A. Nothing but what I mention.

Q. Were there any made after the consolidation by the Consolidated?

A. They may have fixed salaries for the management of their offices; I don't know that.

Q. Don't you know of any salaries that were fixed or agreement made and approved by the Consolidated Company after the consolidation?

A. I think not.

Q. Don't you know of any with respect to any of the officers or employees or agents of the Harlem Company?

A. There were not.

Q. Don't you know the fact that there were such contracts in relation to the officers of the other constituent companies?

A. I have no data to form an opinion from.

Q. Did you ever hear that matter come before the board of directors of the Consolidated?

A. No; no recollection of it.

Q. Did you ever vote as a member of the board of directors upon any such contract?

A. There may have been a salary for some officer; I think there was; I can't recollect what it was now.

Q. Do you not know that there were some indebtednesses assumed at the time of consolidation and contracts of that character?

A. I think there were some contracts that were made by the other companies and assumed by the Consolidated Company; but there were none with reference to the Harlem.

Q. None whatever?

A. No, sir.

OSCAR ZOLLIKOFFER, being duly recalled, testified as follows:

9127 Examined by Mr. TREMAIN:

Q. When your examination was suspended you was asked to refresh your recollection by referring to your own memorandum or papers; now do you remember how early you submitted the memorandum of values of the properties of your company, for the purposes of consolidation?

A. October 17, 1883.

Q. Were not the values of the properties and of the other companies, at that time, submitted or considered?

A. They were not quite ready; we had many postponements; many times one was ready and the other was not ready; October, 1883, it was first reported to the board; there was a resolution whether we should consider it or not; I think it was in the beginning of July.

Q. When did you first know, if at any time, that legislation was necessary in order to effect consolidation?

A. I must say I am disappointed; I had a paper and I cannot find it; I don't trust to my memory entirely.

Q. Where is it; at home?

A. I think it is at home, or in my overcoat; I cannot find it.

Q. You can answer that question in the morning, and I will ask you another one on another subject; was the subject of values of the property of the Knickerbocker or Municipal Company, or either of them, considered at any of the meetings of the committee when you was present?

A. Yes, sir.

Q. What, if any thing, was said in your hearing in respect to those values?

A. A difference of opinion; some thought it was higher than it ought to be, and others thought it was not too high.

Q. You know the basis upon which it was valued finally?

A. It was more an agreement than any thing else.

9128 Q. Will you tell the Committee what was the basis by which the values of rights and franchises, so called, were arrived at?

A. I think more or less by the amount of sales of gas, by the quantity sold.

Q. Were you on the committee of appraisement?

A. No, sir.

Q. Did you personally have any thing to do with appraising any of the other properties except your own?

A. None, except our own; afterward in debate, naturally we came together; one thought this was too high, and the other thought to the contrary.

Q. Prior to the actual consolidation in November, 1884, were any steps taken to reduce the price of gas after the pool had been formed?

A. I don't think any steps were taken; but recommendations were made repeatedly.

Q. By whom?

A. Principally by myself.

Q. And who else?

A. I think the Manhattan was favorable to it too.

Q. As the result of investigation by the previous committee, legislation was proposed. Do you remember whether any officers or directors of the Consolidated Company expressed any opinions in respect to that proposed legislation?

A. I think it was spoken of repeatedly, but I don't know that a decided opinion was made.

Q. As an officer of the Consolidated Company at that time, and as president of the old Metropolitan Company, did you inform yourself as to what that proposed legislation was, so as to form an opinion as to its wisdom?

A. I read it all attentively as much as I could.

Q. Have you any opinion to express to this Committee as to the expediency of legislation, such as was then proposed?

9129 A. In respect to controlling the different gas-works, or in what respect?

Q. To such legislation as was proposed, founded on the principle of limiting the price of gas by restricting dividends?

A. Yes, sir; well, I read that too; but I think it works both ways; if a limit should be agreed upon, it ought also to be on a basis to secure protection to the parties as far as competition is concerned; it ought to be working both ways; a minimum ought to be fixed, as well as a maximum.

(By Senator Robinson:)

Q. Do you approve of legislation fixing the price of gas to a certain per cent. dividend on the capital actually invested?

A. I think always, in every thing, competition is the true thing; that brings it down to a level.

Q. But in competition, competitors can enter into a pool to keep the price up?

A. Yes; for a certain time, and competition can go against the pool, and be successful too.

Q. What are your views upon a legislative act which shall limit the price of gas to a certain per cent. dividend upon the actual capital invested in its production and distribution?

A. It would be beneficial to the stockholders, provided always a sufficient capital is allowed for making improvements, because they have always to be made.

Q. Assuming there should be a sufficient capital allowed for working capital and improvements, would you favor legislation that should regulate the price of gas upon a certain per cent. dividend of the capital actually invested for its production?

A. I have no objection, but I think if you have two companies adjoining to each other, they have one or the other the reputation of being the best; I am in favor of competition, and have always found it was the best in various kinds of business.

9130 Q. Assuming a fair protection, have you any opinion as to the wisdom of legislation that limits dividends on actual working capital?

A. In the gas business there are a great many chances, ups and downs; we are exposed to accidents which other companies are not; in any case we lose heavily; therefore I say a company of that kind ought to have a fair limit of capital, and fair allowance for working.

Q. Would you have the allowance made for working capital include sums to be used in extending and enlarging the works of the company?

A. Yes, a certain percentage would allow a regular increase in proportion to the demands for gas.

Q. You would increase the works of the company, the plant, out of the earnings of the company, rather than by the increase of the capital stock of the company?

A. Yes, sir, by the earnings; take our case for instance, a very poor company; at first everybody thought we must break, still it was economy and application at the proper time, and finally we succeeded.

Q. You are in favor of that system that will allow a fair dividend and sufficient working capital to keep the property in as good condition as when you took hold of it?

A. Yes, sir.

Q. You mean in the original capitalization to reserve sufficient capital to cover reasonable increase, and then keep the works in good running order from the business?

A. Yes, sir, and all the increase can be provided for.

Q. Would you enlarge and extend the works out of the earnings of the company, and not by the issue of new stock?

A. The business must increase naturally, and if in laying out $2,000,000 for half the city, for the whole city lay out $4,000,000; it is on that principle.

9131 Q. Where do the $2,000,000 come from, really?

A. To issue new stock; the earnings are sufficient if you have it above a certain limit, and if it is not sufficient, then to authorize an increase of capital.

Q. To extend the works either from the earnings of the company or additional capital?

A. Yes, sir.

Q. Do you think that the working capital of the company ought to be increased out of the earnings of the company, or out of the new capital, or both?

A. I think the stockholders, it ought to be left with them to increase according to the needs of the business.

Q. Increase what?

A. Increase the capital.

Q. Do you think the company ought to have the right to go on extending its works, and building new plant, and laying new mains, etc., out of the earnings of the company?

A. Yes, sir; out of the earnings, a part, if they have a surplus.

Q. Whether they should have the right to do that, the unlimited right to do it?

A. They should in my opinion; if business is good, capital will come; it will be offered at the lowest rate.

Q. And if they should enlarge their works?

A. I think after all it ought to be left to the company to manage its own business; I was never afraid to show any stockholder of our company any thing, but that they should always have the right to come in and see, and why should not the Legislature have the same right at any time; I have no objection to bringing it before the Legislature; I could have no objection whatever; certain parties in high standing ought to be appointed, say a committee of three people who are disinterested.

Q. In such a case as suggested to you, do you think that enlarge-
ment of capital for the purpose of enlarging the works, cov-
9132 ering more territory for instance, should be provided for by
new capital subscribed and paid in, or profits on gas?

A. I would limit the profits of gas to a certain amount, to cover all expenses and everything, and then I would have no objection to increasing its capital according to its necessities, and it should be certainly paid in.

Q. Do you think it is an unreasonable exercise of legislative power to limit the dividends to the capital?

A. I don't think it is any thing wrong, but I say every thing ought to work to all sides favorably.

Q. Was there anything in your opinion substantially wrong or radically inexpedient in the bill proposed last winter by the Senate Committee?

A. I must say I don't recollect all the items of it; I will read it over, perhaps, to-night.

(By Senator Robinson:)

Q. You are speaking of a fair surplus working capital, and being allowed to charge enough for gas so as to keep the works improved; whether or not you think it is a fair dividend; that in 1876 a company put in $3,000,000, and from 1876 to 1884 they charged such a price on gas that their dividends amounted to $3,601,000; is that a fair price for gas?

A. I don't like to say it is or no; I think it was against policy.

Q. Was not the price of gas to allow such dividends for eight years upon that capital simply an outrage upon the consumer?

A. I think it was too much, and always expressed myself to that effect, but I don't want to have a fight with any one of them on that account.

Q. Whether or not a gas company so located that by a capital of
$3,000,000 in 1876 they charged such a price for gas, that in eight
years they took out in dividends $3,601,000; has not the price
9133 of gas to these consumers been simply outrageous?

A. I know our company had no such profits on gas; we had nothing of the kind.

Q. You don't believe in legislation allowing such dividends on stock as that?

A. I don't think it should be allowed; it ought to be limited to an extent; I would make a pretty fair limit.

Q. After they have taken out $3,601,000 in dividends, is it a fair appraisement to turn a property which costs but $3,000,000 over into a company at a valuation of $8,000,000 to pay upon that stock?

A. I don't like to—I don't know how they came to; perhaps they were over wise.

Q. If it was done, was it a fair appraisement in your opinion?

A. If it was done under fair rules; if a man has a chance to buy cheap property and afterward it becomes high, he should be allowed its full value; it is policy I say; these companies would have made more if they had kept their prices down; at the time when the appraisements were made they were in such a position that it had a good income, and therefore had a regular value.

Q. Having paid such a price for gas in eight years, they received in dividends $3,601,000; was the fact that they had paid such enormous dividends taken into account in appraising its value? Was it on that basis?

A. Well, if it had its value, I don't know what it hangs on, whether it was partly made in real estate or whether it was made from the gas profits; I don't know where these gains were made.

Q. On account of its large dividends, your idea is that legislation ought to be so as to allow the company to make a fair dividend upon the property and money actually invested, together with a reasonable amount for working capital?

9134 A. I think at the time, if this was left to the company as they were before the consolidation, it would be right and proper; but here is a property that had its value; each one of those companies at the time could have sold to other companies at its value.

Q. Was not a large element in that value made up of the fact that they had charged such prices for gas that they could make those enormous profits?

A. Certainly that was one of the things; but our people all knew, every one of us, if you will read the minutes of our executive committee, that in every meeting I made the proposition to reduce the price of gas for two years.

Q. Don't you know as a gas director that the value of these privileges comes from the fact that they have been for years charging such a price for gas as to make these enormous dividends?

A. Yes, sir; allow me to say this; that the gas companies were for years and years exposed to every thing, and if they had a good business one week, the next week they had a poor business.

Q. This price of gas was kept up by all the companies going into a pool to keep it up?

A. Yes, sir.

Q. In the city of New York was not the price of gas kept up through this pooling arrangement?

A. It is so throughout the country; it was a business that had its risks.

Q. Was not this price kept up by this pooling being kept up?

A. Yes, sir, here.

Q. As a result in part these large dividends took place?

A. Yes, sir.

Q. Can you name any other business as stable and solid in its risks?

A. I think the railroads are; if you let the gas companies alone they will come down.

9135 (By the CHAIRMAN:)

Q. Up in capital and down in rate per cent., is that the result in consolidation so far?

A. I don't speak of consolidation, I only speak of business in its actual ways.

Q. Do you think that the fact that unreasonable charges have been made by gas companies is a reason for increasing the capital stock on which the public is expected to pay such an income as will give them what you call a reasonable per cent. of profit on this new and increased capital?

A. I think that the property what was on hand in the several companies had actually its market value.

Q. If your company had not entered into the consolidation, and its capital had remained as it existed prior to the consolidation, in your opinion, could it have furnished gas to its consumers cheaper than is now furnished to the same consumers, by this so-called Consolidated Gas Company?

A. I think it might be a little cheaper to the consumer; of course I consider every additional office as more expense.

Q. Could it not have been furnished to the customers of the Metropolitan Company considerably cheaper than is now furnished; and you have paid ten per cent. dividend upon the old capital of the Metropolitan?

A. I suppose so.

(By the CHAIRMAN:)

Q. It is not unreasonable for a gas company to charge the public such a price for gas as will enable the company to receive an annual dividend of twenty per cent.?

A. I think it is; but still it depends on the solidity of the position of the gas company, whether it is for a short time, or whether it is permanent.

Q. If such profits were so unstable and uncertain as to make such a profit reasonable, then that must be taken into account in estimating the value of the property?

A. Yes, sir.

9136 Q. And would greatly reduce its value?

A. Yes, sir; if not guarded.

Q. You would not hardly expect such property, unstable as that, to be worth par?

A. No, sir; if unstable as that I would not consider it worth par.

Adjourned until December 3, 1885, 10 A. M.

FIFTH AVENUE HOTEL,
NEW YORK, *December* 3, 1885.

Met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the Committee.

JOHN P. HUGGINS, a witness called by the counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are a director in the Consolidated Company?

A. Yes, sir.

Q. Prior to that were you a director in the Metropolitan Company?

A. Yes, sir.

Q. How long have you been connected with the Metropolitan Company?

A. I can't say exactly; somewheres in the neighborhood of twenty-five or thirty years.

Q. Have you been interested in any other of the constituent companies?

A. Yes, sir; the Harlem, and I had a little in the Manhattan.

Q. You transferred it all into Consolidated stock?

A. Yes, sir.

Q. You continue to hold the same amount now?

A. I hold all of my own stock; I had two hundred shares which was in trust; every dollar of my own stock I hold.

9137 Q. Were you present at the last meeting of the board of directors?

A. No, sir, you had me here.

Q. Do you know anything about the proposition to declare a dividend at that meeting?

A. No, sir.

Q. Did you understand that was to be voted upon at that meeting?

A. No, sir, I did not know positively.

Q. Have you heard any thing about it?

A. Yes, sir.

Q. From whom?

A. We talked it over at the meeting of the finance committee.

Q. Who is "we"?

A. Myself, Mr. Gawtry, Mr. Pyne—Mr. Day was absent; we didn't recommend any dividend.

Q. When was that?

A. It was at a finance committee a week ago last Monday, I think.

Q. Why didn't you recommend any dividend?

A. The finance committee have never recommended a dividend; they examine the thing and refer the whole thing to the board of directors.

Q. Is it not a fact that you never made any report on the subject whatever to the board of directors?

A. I don't think we did.

Q. Is it not a fact that you didn't formally refer it to the board of directors?

A. I don't think we put it in writing; no, sir, we did not.

Q. Was there any difference of opinion in the finance committee as to whether the dividend of December should be declared or not?

A. I don't think there was any talk much about it; we merely took it up and wanted to know whether they would declare a dividend.

Q. Did they have any statement of the earnings before them?

A. Yes, sir.

Q. Any other statement except the balance sheet of October 31st?

A. I think not; we examined the bills, etc., and compared them with the book accounts. 9138

Q. What has that got to do with the dividend?

A. Nothing, only to see whether we earned it or not; the finance committee is supposed to examine every thing.

Q. You did not, did you?

A. We spent a day and a half there.

Q. State specifically what books and papers you examined?

A. I did not myself; I had the list of bills and called them off; I examined no book myself; Mr. Pyne and others had the books.

Q. During the year has it been the custom to submit lists of all the bills to the finance committee?

A. Yes, sir.

Q. Who compared those lists of bills?

A. I don't know; the copy was before us and the bills all there; who the clerk was who wrote them up I never asked.

Q. Was it done under the direction of the secretary or treasurer?

A. I don't know; the secretary was there.

Q. The secretary had the list and had the bills?

A. Yes, sir; it was on loose paper or law paper, or something of that kind.

Q. Giving the names?

A. Yes, sir.

Q. And what they were for?

A. Yes, sir.

Q. Did you have such list before you in every meeting of the finance committee?

A. Yes, sir, all that I have ever been to; I have been absent most of the time in the country.

Q. Is there any book in which those lists appear?

A. Not to my knowledge.

Q. Were not those lists prepared every month?

A. I think so, every month.

Q. Were they known as monthly lists of bills?

A. Well, I suppose so; I took them to be such.

9139 Q. When was the first one, in January or earlier?

A. I was not here at the first meeting; I don't think I have been to more than two or three finance committee meetings; the first was some time last summer, I think.

Q. Were such lists then presented?

A. The sheets of paper with memorandums upon them.

Q. Did the finance committee audit all these bills on those lists, or only a part of them?

A. These bills are mostly paid before they come to the finance committee; bills for labor and all that sort of thing have to be paid every week, I think.

Q. How about supplies?

A The same, I think.

Q. Including coal?

A. Yes, sir.

Q. Who are the parties of whom any coal has been purchased during this year?

A. I don't remember the names of those coal companies.

Q. At a uniform price?

A. Yes, sir; I don't remember the price now.

Q. Was it always uniform?

A. I think so, yes, sir.

Q. Had you any opinion yourself as to whether the dividend should or should not be declared?

A. Yes, sir.

Q. On what was your opinion based?

A. On the earnings.

Q. Where did you get your information?

A. From the balance sheet, or papers that were presented to us there.

Q. You have not stated that any paper was presented to you on that subject except the balance sheet of October 31st. You formed your opinion on that?

A. Yes, sir.

Q. What was your opinion?

A. That we could pay a dividend.

Q. To what amount?

A. Three or three and a half per cent.

9140 Q. Based on earnings?

A. Yes, sir.

Q. Are you not aware that that sheet exhibits earnings only of $400,000 during that six months?

A. I don't remember what the sheet shows.

Q. Have you any recollection about it?

A. No, sir; I did not charge my memory with it at all.

Q. And yet you based your judgment on that balance sheet?

A. Yes, sir; with some other things that Mr. Smith told us.

Q. What did he tell you?

A. I don't remember what he told us the earnings were.

Q. You cannot tell us anything more than you have on what you based your judgment that a dividend was proper?

A. No, sir.

Q. In order to pay a dividend of three and a half per cent. on what did you found an opinion that it could be paid without intruding upon the working capital or borrowing funds?

A. I could not tell you what it was unless I could have papers to examine.

Q. Did Mr. Smith make any statement whatever in respect to earnings?

A. Yes, sir.

Q. In addition to the balance sheet which was before you?

A. I am not positive, but I think he did.

Q. And you have no recollection what that statement in substance was?

A. No, sir.

(By the CHAIRMAN:)

Q. He is not sure that there was any made?

A. I am not positive that there was.

Q. You were connected with the Metropolitan Company so long we should like to have your opinion as to advantages first to the public, the customers of the Metropolitan, and second to the shareholders of this consolidation; please tell what advantage, if there was any, ensuing to the customers of the Metropolitan Company or calculated to follow as the result of consolidation? 9141

A. We thought that the gas could be made cheaper if it was all under one head; we thought we could sell it cheaper.

Q. Was there any advantage to the shareholders?

A. We never thought it would be any advantage to the Metropolitan shareholders; that is, some of the directors did not; I did not for one.

Q. Was it the idea of consolidation if gas could be supplied cheaper to consumers that there should be any diminution in the advantages to the shareholders?

A. No, sir; I don't know; the most of our shareholders were in favor of consolidation; I don't know what their ideas were.

Q. You expected the same advantages as the other shareholders?

A. Well, I was in hopes to get the same advantages.

Q. The consolidation would not have been entered into by the shareholders of the Metropolitan except in that expectation?

A. No, sir; it would not have been entered into at all by me; I was opposed to consolidation, although the majority of them requested it and I went along with them.

Q. The stock of the Metropolitan appears to have been exchanged for stock of the Consolidated at 260?

A. About that.

Q. Was not that less than the debt?

A. No, that was the exact amount.

Q. For 100 of the Metropolitan you got 260 shares of the Consolidated stock?

A. Yes, sir.

Q. With Metropolitan stock at 260 and Consolidated stock at 84, which was the price when the exchange was actually effected, what was the advantage to your stockholders?

A. I could not see any; still they requested it and they got it.

Q. What was the last dividend declared by the Metropolitan?

9142 A. That I don't remember; that I would have to refer to the books for; I think five per cent.

Q. For what portion of the year?

A. I don't remember; the books will show.

Q. Don't you remember?

A. No, sir.

Q. If it was five per cent., was it for the whole or a part of the year?

A. A part; it strikes me it was for six months; the books show.

Q. Didn't you have regular times for declaring dividends?

A. We declared the dividends when we had the money; we used to declare it twice a year; some years we have not received a dividend.

Q. Will you say that your company has failed to declare a dividend in any year for the last thirty years?

A. Yes, sir.

Q. When?

A. In the early part of the company I held stock there for a long time before I ever got a dividend.

Q. How many years is it since you did not receive a dividend?

A. I could not say.

Q. In 1880 did you receive as shareholder of the Metropolitan a dividend of eighteen and seventy-eight one-hundredths per cent.?

A. I could not tell you without referring to the books.

Q. In 1883 did you receive twenty per cent.?

A. I could not tell you; I don't remember.

Q. Will you now say that you received less than that?

A. I could not tell you for my life what dividend I received in any one year.

Q. The books show you received twenty per cent.; if the books say a dividend of twenty per cent., that is correct?

A. Yes, sir.

Q. You would not be surprised if they showed that?

A. I would not.

Q. If the Metropolitan had sought to cheapen the price of gas they might have done it and thereby reduced their dividend 9143 far below twenty per cent. and yet have received a fair income from their investment, might they not?

A. That depends upon what you say is a fair income.

Q. Say yes or no to it?

A. It would reduce the dividend.

Q. If the Metropolitan had sought to cheapen the price of gas they might have done it and thereby reduced their dividend far below twenty per cent. and yet have received a fair income from their investment, might they not?

A. Not in my opinion.

Q. Then, in your judgment, the gas company ought to receive a dividend of twenty per cent.?

A. I think they had, with the risks they have to take.

Q. If the Consolidated chose such a rate to pay on their capitalization, say a dividend of twenty per cent., what, in your opinion, would the price of gas come to?

A. I don't know.

Q. It would have to be increased very greatly above its present price, would it not?

A. I think it would.

Q. It would be more than double to pay twenty per cent.?

A. I should think so.

Q. Then the gas consumers would have to pay a great deal more than they are now paying to give the company a fair investment?

A. They would, to pay twenty per cent.

Q. Is it your idea when the Consolidated Company only pays seven per cent., it does not pay a fair return on their investment?

A. If they could get it every year, I would be satisfied with it.

Q. Your theory would be to increase the price of gas twenty per cent., so that the company could receive such a dividend on the stock?

A. No, sir.

9144 Q. Is there any reason, in your opinion, why the large amount of property of the Consolidated Company should not be sold, and have so much of its capitalization reduced, and thus save dividend?

A. I never have given that a consideration; I don't know; if they could concentrate their works all in one place, as their works are now scattered as they are, it requires about all of them to do their business.

Q. In your opinion, as a director in the Metropolitan, could not the Metropolitan have furnished gas to its consumers cheaper to-day, without having entered into that consolidation, and yet have given a fair return on its stock?

A. No, sir; I think if the Consolidated is worked properly, and some of these works could be dispensed with, it could be made cheaper than with the individual gas companies, as is shown by the Harlem.

Q. Why should a dividend be paid on that property then from the price of gas?

A. We have the property, and it may be all necessary.

Q. If you could reduce the plant?

A. If we could concentrate it.

Q. That means reducing it?

A. If we could put it under one head.

Q. Would consolidation result in a reduction of the amount of plant required for the production and the distribution of gas?

A. If we could concentrate the works all in one place or two places they could be run for less money.

Q. Is it a matter of fact that consolidation will produce the legitimate result in reducing the amount of plant required for the manufacture and distribution of gas?

A. I think it will in time.

Q. Then would it not properly reduce the amount of capital to be employed in the business?

A. I don't know as it would.

Q. Is it not your opinion that it would?

A. No, sir.

9145 Q. You think it would not?

A. No, sir.

Q. Would the reduction of the plant cause an increase of the capital?

A. No, sir.

Q. You think it would not cause a reduction of the capital?

A. No, sir.

Q. As a matter of fact consolidation has resulted in more than doubling the capital, has it not?

A. Well, there is more capital.

Q. Is that right?

A. Yes, I think so.

Q. What was the objection, if any, that you have heard expressed to the proposed legislation recommended by the Senate Committee last year?

A. I heard no objections to it, sir.

Q. Don't you know there were objections expressed to that measure?

A. No, sir.

Q. Didn't you yourself ever make the remark that these interests had to be protected at Albany?

A. No, sir; I did not.

Q. Did you never hear of anybody say that the interests of the Consolidated Company had to be protected at Albany?

A. I heard Sherwood say so.

Q. Anybody besides Sherwood?

A. No, sir.

Q. Didn't you ever say to O'Connell that you had interests that you are accustomed to have protected at Albany?

A. No, sir; I don't know such a man.

Q Did you ever say to anybody that you had interests that were looked after at Albany?

A. No, sir.

Q. Do you know anything about it; did you ever hear anybody say any thing about protection of gas interests at Albany?

A. Yes, sir.

Q. Anybody besides Sherwood?

A. No, sir.

(By the CHAIRMAN:)

Q. Never heard the subject alluded to by anybody except him?

A. No, sir; I may have heard people talk around at the
9146 hotel; I have often heard people say to me "Go up to Albany
with your boodle," that was a mere matter of joke; I don't
suppose they seriously meant any thing of the kind, sir.

Q. That was not the way you were in the habit of doing it?

A. Not my way of doing business.

Q. Did you ever say to any of the stockholders that the company expected or its friends expected to send money to Albany every little while and expected that you would have to do so again?

A. I have no recollection of saying so; I don't know that there was any money sent to Albany.

Q. Whether you ever made such a statement to any stockholder?

A. No, sir; I have no such recollection that I ever did make any such remark; or of talking with a stockholder about it.

Q. I understand you to say that people occasionally spoke to you in a joking way about taking boodle up to Albany?

A. Yes, sir.

Q. For the purpose of bribing legislators?

A. I suppose so.

Q. Whether in your opinion it is a joking matter and whether you think the law is right that pronounces bribery a crime on the part of him who offers and him who takes it?

A. I do.

Q. Do you think it is a very serious crime?

A. I do.

Q. Do you regard it as a very serious crime and that the man who commits it commits a felony?

A. I do.

By Mr. Tremain:

Mr. James W. Smith, the treasurer of the Consolidated Company, produces to the chairman the original lists of shareholders of the constitutent companies, viz., of the New York, Manhattan, Metropolitan, Municipal, Knickerbocker and Harlem.

9147 John H. Moss, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. Tremain:

Q. You was an officer of the Harlem?

A. I was a manager and a director.

Q. You were in charge of the Harlem station?

A. Yes, sir.

Q. And in the employ of the Consolidated Company?

A. Yes, sir.

Q. That employment was arranged for at the time of the consolidation?

A. It was not; I have not received any special appointment; I have continued as I under-tand it.

Q. Did you have a contract with the Harlem?

A. No, sir.

Q. You are its practical manager at the works and of its business generally?

A. Of the office and of the distribution of gas.

Q. You continue to perform the same duties now that you did prior to the consolidation of the Harlem?

A. With the exception of the works I do; those having been discontinued, I have nothing to do with them.

Q. What date were those discontinued?

A. I think early in March last.

Q. Since that time have they produced any gas at all?

A. No, sir; a portion of the plant is now being used—the holders.

Q. The gas being brought there from where?

A. The Ninety-ninth street station.

Q. Is it the old Knickerbocker works?

A. Yes, sir.

Q. No other part of the plant is being used?

A. Well, we use the engine and boiler and some pumps that are requisite in keeping the tanks filled with water.

9148 Q. You use the mains and services of the old Knickerbocker?

A. Yes, sir.

Q. And meters?

A. Yes, sir.

Q. How long have you been connected with the Harlem?

A. Since the latter part of June, 1879.

Q. What was the condition of their works at that time?

A. Very dilapidated.

Q. Were they producing gas?

A. Yes, sir.

Q. About what quantity?

A. About five or six hundred thousand feet a day at that time; their capacity was one million feet a day.

Q. In their condition at that time, was that their actual capacity?

A. Yes, sir; they could not have produced any more at that time.

Q. When were they increased to a larger capacity?

A. There was a gradual increase; it was a matter of necessity; the growth of the district required a gradual increase.

Q. Have they bought anv more lots?

A. Not since that date.

Q. The increase has taken place on the same lots?

A. Yes, sir.

Q. By construction of plants there?

A. Yes, sir.

Q. Have those lots been filled in?

A. The original property has been filled in east of First avenue.

Q. The expense of that filling in?

A. I had no connection with the company at the time they were filled in; they were filled in from First avenue east to the bulkhead, which is now about 100 feet east of the line of Avenue A; this is based upon my recollection of the formation of the country there, the marsh.

Q. Please state about the distance between First avenue and Avenue A?

A. Well, it is 650 feet about; it may vary a few feet; some of the blocks are longer than others.

9149 Q. These works the land extends from—give the outside boundaries?

A. Near Second avenue the line is shorter on One Hundred and Tenth street than it is on One Hundred and Eleventh; on One Hundred and Eleventh it is about two hundred feet east of Second avenue; on the south by One Hundred and Tenth street; on the west by this gore line east of Second avenue; on the north by One Hundred and Eleventh street, and on the east by the East river; there is other property there, but none on the water.

Q. The other property is bounded how?

A. On the north by One Hundred and Eleventh street, with a gore line running through to One Hundred and Twelfth street; a frontage there of about seventeen feet, and another line running back that is within seventy-five feet of One Hundred and Eleventh street, and then east to First avenue. And another piece, the western boundary is First avenue, the north boundary 175 feet about north of One Hundred and Eleventh street, and that line extends about 110 feet, I think, into the block; then there is a frontage on One Hundred and Twelfth street of fifty feet, and the line on One Hundred and Eleventh street is, I should think, about 300 feet—I am not sure of that line. That is as near as I can recollect, a description of the property of the works.

Q. This part, the first described plot, east of First avenue, that was filled in, it was filled in some years ago?

A. Before I went there.

Q. Do you know who did that?

A. Not to my knowledge.

Q. You have lived in New York long enough to be familiar with that locality, and to know how it was done?

A. Yes, sir; my information is that it was filled in by the gas company.

9150 Q. Was it all done before you went there?

A. Yes, sir.

Q. In what part of the records of the company would be found that expense?

A. It would be found only in the expense account.

Q. It would in the pay-rolls?

A. Yes, sir; it would be in the pay-rolls.

Q. And in the purchase of animals and carts and implements?

A. Yes, sir.

Q. You would probably find it in the construction account, would you not?

A. No, it is not in construction account.

Q. Charged up to expense account?

A. Charged up to expense account.

Q. Building the docks the same?

A. Well, the building of the docks was a special bargain; I think that is in the construction account.

Q. Did you have any thing to do in keeping these accounts?

A. I did not.

Q. Who did?

A. Well, I was one of the committee on accounts while I was there; it was my business to examine the accounts, to see that every thing was correct.

Q. Who was president of the company when you first came there?

A. Mr. Wakeman.

Q. In the construction account were the mains, meters, services and pipes included?

A. Not all. In the construction account, after 1879, the mains were included, and I think a portion of the meters; the services were not, the meters were continued in the construction account.

Q. Did you have a general construction account?

A. There was one.

Q. Did that include all the work done on the property?

A. It depended upon the character of the work.

9151 Q. Such work as filling in the bulk-heads—was it charged to expense account?

A. Yes, sir.

Q. The buildings and retorts were charged to construction account?

A. The original were.

Q. Were any salaries placed in construction account?

A. I think they were all taken out.

Q. When were they taken out?

A. I am not sure of the year; I think it was in 1883.

Q. Do you remember being paid for patents and royalties?

A. Not since I have been there; there was a charge in there.

Q. Do you notice the charge of $12,450 in 1876 for patent?

A. Before I went there there had been some used, as for instance, manufacturing illuminating gas with oil or naphtha.

Q. Who first said any thing to you about valuing the property for consolidation?

A. I have no recollection who it was said it first to me. It fell to my lot from my position. I was a committee of one to represent the Harlem Company in carrying out the agreement.

Q. In 1884 you was on the pooling committee?

A. I was a member of the pooling committee.

Q. When did you first prepare a schedule of the properties of the Harlem, with a view to consolidation?

A. I think it was early in 1884.

Q. Wasn't it in 1883?

A. No, I think not.

Q. Do you remember a resolution of the pooling committee directing the employment of counsel to carry out the plan which was passed in December, 1883?

A. I have no special recollection of such a resolution.

Q. Do you not remember that the capital was a subject matter of consideration during the year 1883? I will refresh your recollection by referring you to an extract from the minutes.

9152 A. You are fixing the time; I cannot say. I say early in 1884 is the first I recollect.

Q. Pages 111 and 112 of the testimony of last year?

(Pages 111 and 112 of last year presented to witness.)

A. If that is a copy of the minutes, it was then, at that time it was done.

Q. Isn't it your best recollection that the subject of capital for the proposed consideration was considered in 1883?

A. That is a question that I do not know as I can answer yes or no. The question of capital was considered at various times; that is all I can remember.

Q. These minutes would indicate it was considered prior to December, 1883?

A. Yes, sir.

Q. But I want the direct testimony whether it was or not?

A. I cannot fix the exact time when that subject was first considered.

Q. The witness says according to his best recollection the capital for the proposed consolidation was considered prior to December, 1883. Do you remember when the proposed capital of $45,000,000, was first suggested?

A. No, I do not.

Q. When you first prepared your schedules of the Harlem properties were values appended to those schedules?

A. Yes, sir.

Q. What did you do with those schedules, those originals?

A. I think they are in the possession of the Consolidated Gas Company.

Q. Are those the identical ones that were submitted finally when the agreements were signed?

A. That is the only schedule I made of it.

Q. Did you have more than one?

A. No, sir.

Q. Were the values always the same from the time they were first fixed by you?

9153 A. From the time they were first approved of by the Committee.

Q. Are those values that you put down the actual values that were finally accepted?

A. Yes, sir, to the best of my recollection.

Q. Who, with you, appraised the property of the Harlem Company?

A. I had the advice of an engineer, Mr. Belmore, in reference to the property; that was based upon the actual cost of the work which was then in construction and not yet completed.

Q. The valuation was made on the basis that it was to be completed?

A. Yes, sir.

Q. Were there no assets of the Harlem Company retained and distributed among its shareholders?

A. Yes, sir.

Q. To what extent?

A. I think it was one and a half per cent.

Q. On what?

A. The capital of two million dollars.

Q. Was this paper marked "Exhibit F" the schedule you alluded to?

A. Yes, sir.

Q. Was there any other?

A. No other except a copy of that which I have on file at the office.

Q. What was this prepared for, dated November 10, 1884 (paper presented witness)?

A. This is the adjustment of the cash assets after consolidation agreement; it left us the coal and gas on hand; the gas we had sold and various other things that could not enter into the original agreement; the schedule is what we call the cash assets.

Q. Were those cash assets turned over to the Consolidated Company?

A. Yes, sir.

Q. Stock was issued to them in addition to the stock apportioned at the rates named in the consolidation?

A. No, sir; the Consolidated Company paid cash for that property or its equivalent.

9154 Q. Then, in addition to the stock of the Consolidated Company, apportioned among the stock-holders of the Harlem Company, the Consolidated Company paid cash to the Harlem Company for distribution among the Harlem stockholders the sum shown here in this paper?

A. I couldn't tell without seeing it.

Q. We want to know what the amount was?

A. They assumed certain liabilities which were deducted from this, if I remember rightly.

Q. This paper may refresh your recollection?

A. That embraces the cash liabilities.

Q. And are they shown by this paper marked "Exhibit J"?

A. Yes, this shows what the Harlem Gas-light Company owed payable in cash at the time.

Q. That paper, marked "Exhibit J," showing the statement of indebtedness of the Harlem Company, exhibits, does it not, the amount of indebtedness that was assumed by the Consolidated Company to be set over against the cash assets shown by this inventory, which foots up $162,126.24?

A. Yes, sir.

Q. So that setting off the indebtedness shown by "Exhibit J," amounting to $86,379.65, there must appear that there has been paid by the Consolidated Company in cash for distribution among the Harlem stockholders the sum of $75,746.59, is that correct?

A. The question is not correct; it was not paid over for that purpose.

Q. If that is not correct, state what the fact is in respect to it?

A. It was paid over, for it was owing the Harlem Company for cash assets transferred to them, and not for distribution among the stockholders.

Q. Is it not the fact that that sum of $75,746.59 was paid over by the Consolidated Company to the Harlem Company, in 9155 addition to the stock that was distributed to the shareholders of the Harlem Company, at the rate of one hundred and forty-two shares of the Consolidated for one hundred shares of the Harlem?

A. To the best of my recollection, yes.

Q. Have those accounts been finally settled between the Harlem and the Consolidated Company?

A. As far as I know, they have; the payments were to be made almost immediately; the Consolidated made some of the payments for us.

Q. That did not affect the transaction?

A. Not at all; it was equivalent to paying the money over to us, if they paid our debts.

Q. Were you interested in any other company except the Harlem?

A. No, sir.

Q. Do you remember what the stock of the Harlem was worth at the time of consolidation or in the summer of 1884?

A. I heard of some being sold at 130.

Q. With stock of the Harlem Company at 130, and exchangeable, as it was exchanged for stock of the Consolidated Company at the rate of 142 shares of the Consolidated stock for 100 shares of the Harlem stock, and with the price of Consolidated stock as it was some time after the exchange, at about eighty-four, what was the advantage, if any, to the shareholders, in that transaction, in view of an arithmetical calculation showing the apparent loss of over $2,000?

A. There would be none; there would be an apparent loss of that.

Q. In what was the expected advantage to the shareholders of the Harlem Company in this achievement?

A. The expected advantage was to make the stock of more permanent value than the Harlem Gas-light Company's stock had been.

Q. Do you think that has been done?

A. I do.

9156 Q. In that respect, you think it has been advantageous?

A. I do, to the Harlem Gas-light Company.

Q. Does not that advantage depend upon the liability of the Consolidated Company to pay a dividend of say seven per cent. upon its stock as now issued?

A. Well, the answer to that question would be yes, although it was not at the time—the question was not raised in the Harlem Company at all.

Q. Are you not aware that the ability of the Consolidated Company to pay seven per cent. on its present capitalization depends upon keeping the price of gas at something not less than its present figures?

A. At the present time.

Q. Were you present when the last dividend was declared?

A. I have nothing to do with the Consolidated Gas Company other than I have stated. If I may be allowed in reference to that question about the dividend, I would like to state that the Harlem Company could not make any dividend at all at 1.75; consequently their benefit is different from that of any other company.

Q. That is caused by the expensive system of distribution that that territory necessitates?

A. Yes, sir, and the necessity of lighting the city lamps which is one-third of the business.

Q. There was a great waste in lighting the city lamps?

A. Yes, sir; there is an extraordinary leakage occasioned by the new streets and building new buildings with the connection of the street sewers undermining our mains. Filling in breaks them off.

Q. For the $2,000,000 of capital stock of the Harlem Company, there was allowed $2,840,000 par value shares of the Consolidated Company?

A. Yes, sir.

9157 Q. Who appraised the real estate of the Harlem?

A. That was done between myself and the vice-president.

Q. Mr. Rodman and yourself?

A. Yes, sir; the values were based upon the price asked for certain property in our neighborhood at that time.

Q. Were you aware at the time of the cost of that real estate to the Harlem Company?

A. Well, no, I have never figured up the cost.

Q. You was aware that all expenses of taxes and assessments were charged to expense account, were you not?

A. Yes.

Q. They were all paid from earnings?

A. Yes, sir; they were paid from earnings.

Q. It is observed that the books of the company show the cost of the real estate to have been $159,000 in round figures and that expenses of taxes, assessments, etc., were paid as you state?

A. Yes, sir.

Q. Your valuation seems to have placed the real estate at $704,000.

A. Yes, sir; that covers quite a number of years, and great changes in property and in the valuation of property in that neighborhood.

Q. With that exception, is there any other substantial item in the appraisement of the properties of the Harlem Company in excess of the cost of such property as it stands upon the books of the company?

A. I think not; it was not intended to be. I have an impression that a portion of the plant is valued less than it cost.

Q. It ought to be?

A. I think not as long as it is maintained in working order.

Q. It is maintained in working order by adding to it from time to time?

A. Not that I refer to.

Q. Yearly expense?

A. Yearly expense to preserve it, but not added to it. The holders are in good condition, just as good as new.

9158 Q. All the plant, as a matter of fact, it has required a yearly expenditure?

A. Precisely.

Q. Is there any fair depreciation to be written off, year by year, in estimating profits?

A. I think not.

Q. Why not?

A. I am speaking in reference now to our company, that the repairs were made in the expense account; the maintenance of work.

Q. The reason you think there should be no depreciation written off is because it has kept up the repairs?

A. Yes, sir.

Q. Does that amount to the same thing?

A. It is equivalent to it.

Q. In any case, the expenditure is written off as it is made?

A. Yes, sir; and charged as an expense.

Q. What is, in your experience, a fair average of depreciation?

A. I could not say, because the expense varied with various years; my experience is too short to tell; the works have been brought up from one million cubic feet to two million since I have been there, and the greater part of that expense has been charged to expense account.

Q. Assuming the works to be in fair running order, I understand, it costs some amount to keep them so?

A. Certainly.

Q. What would be a fair average per year, in a series of years, per cent.?

A. I could not tell that.

Q. As a man of experience in gas manufacture, would you not say that some per cent. should do?

A. Not if it was carried on as we carry on ours; for we charge them all to expense account, as we go along.

Q. If you should do that, do you not think that the amount of expense during a given time, would, in due season, equal the original cost?

9159 A. Yes, sir; but in one instance you take the expense out of the earnings, and in the other you would be knocking it off the value of the property.

Q. You are engaged in increasing your capacity all the time?

A. Yes, sir.

Q. And that is the reason you do not feel like expressing your opinion?

A. I never figured it up; I could not give an opinion without having made a calculation.

Q. Don't you know about what percentage of expense has attended the maintenance of your works?

A. No, I don't.

Q. Did you receive any grants from the Sinking Fund Commissioners of the city for land under water?

A. I could not tell you, the property was all acquired before I was there; I understand there was a purchase of certain rights; I think there was a deed showing that.

Q. That would appear in the cost of real estate on the books?

A. It ought to.

Q. That grant was for one dollar from the city, wasn't it?

A. I don't know.

Q. Do you know of any contracts whatever, that the Harlem Company had, at the time of consolidation, with the city?

A. Contract for lighting the city lamps; that is the only one I recall.

Q. What other special privileges, if any, did the Harlem Company then enjoy?

A. Well, I don't know that they enjoyed that much as a privilege;

but they had the privilege of furnishing the city with gas when they wanted it.

Q. What other, if any?

A. That is all, except the right to do business in the city.

Q. That is to say, they had only such rights as the Legislature gave it?

A. Such as were conveyed in their charter; they had no special rights.

9160 Q. Do you know how this item, $469,000, in rights and franchise of the Harlem Company was arrived at?

A. It was upon the assumed valuation of all the rights and franchises of the company; and the right to sell gas in the city.

Q. How was that parcel *or* apportioned to the Harlem?

A. Because of their right to sell gas to the city.

Q. Their proportion of the difference between the total valuation of the properties of all the companies and the proportion of capitalization?

A. Less a certain amount reserved for working capital.

Q. And that was apportioned to the Harlem Company, according to the amount of gas sold by them for a year or two previous?

A. The sales of a certain year was taken as a basis.

Q. From October, 1882, to 1883?

A. October, 1882, to October, 1883.

Q. During the years 1878, 1879 and 1880 was the Harlem Company subject to competition?

A. It was; the opposition did not begin until 1879.

Q. Then what was it?

A. The Knickerbocker Company began to make gas in that district and lay its mains in a portion of that same territory, and the price of gas was put down in 1878 first, and we had to put it lower; the competition caused it; we sold it as low as 125 to some parties and to 225 after the pool was made.

Q. You paid a dividend in 1882?

A. No, sir, not in 1882.

Q. The books show it?

A. Then we paid it in 1882 and 1883 if the books show it.

Q. They do; the pooling operation in 1880 resulted in increasing the price of gas in the city of New York?

A. Yes, sir; until that price was put up the Harlem Gas Light Company did not pay its expenses.

9161 (By the CHAIRMAN:)

Q. The pooling operation was entered into with a view to ultimate consolidation, was it not?

A. Yes, sir.

Q. In order to render the combination more permanent and effective—is that correct, more stable and effective?

A. I presume that was the reason.

Q. How did it happen that you did not certify, with your co-appraisers, the values of the Harlem properties; I find no certificate among the papers?

A. Well, I don't know; perhaps it was an inadvertence; there is a certificate on the cash assets.

Q. With the others?

A. I don't know.

Q. You say the Knickerbocker Company interfered with you by its competition in 1879?

A. Yes, sir.

Q. Do you not think that if the Knickerbocker had continued from that time on an active competitor instead of becoming absorbed by the Municipal, as it was absorbed and the pooling combination formed, that the price of gas to consumers would have been below its present figure?

A. I do not.

Q. Why not?

A. I am answering now for our district; I cannot say for anybody else.

Q. What territory do your mains cover?

A. North of Seventy-ninth street, from there to King's bridge; not all of the territory is piped.

Q. How much is not piped?

A. I think very nearly one-half; the streets are not opened yet; six to seven miles of mains we are laying every year, we are laying nearly one mile a month since the first of May.

Q. Are half of the streets that are opened piped?

A. Nearly all the streets except those that have been opened for the last year or two.

Q. All that has been done from earnings?

A. No, sir, that has been done from capital stock.

9162 Q. Do you know how much cash capital was paid in?

A. No, I could not answer that question; I presume a greater part of it is cash capital.

Q. Do you know how much money was received for bonds?

A. The books say $170,000.

Q. Was all the money that the books show to have been received for bonds actually received?

A. I think the books show that.

Q. Was that during your management?

A. No, sir, before; I think the books show that the money was actually received from the bonds.

Q. All those bonds held by one person?

A. No, sir.

Q. Do you know who held them?

A. Held among various parties.

Q. The company paid interest on these bonds up to the time of consolidation?

A. Yes, sir.

Q. And charged that to expense account?

A. Yes, sir.

Q. And the consolidation has since taken them up?

A. Yes, sir.

Q. They had reserved stock enough to do that?

A. Yes, sir.

Q. Do you know who had the sale of that stock thus reserved for that purpose?

A. The Consolidated Gas Company.

Q. Do you know to whom that stock was sold?

A. No, sir; I do not know that it was sold.

Q. You know nothing more about the payments of the capital and its expenditure except as the books show?

A. That is all.

Q. And the expenditure for mains, construction and plant and other outlays were made from the sources of capital stock or from loans or from earnings?

A. Yes, sir; only three sources.

James W. Smith, being duly recalled, testified as follows:

9163 Examined by Mr. Tremain:

Q. It has been testified here that at the meeting of the directors of the Consolidated Company, on the 25th of November, a dividend was declared upon your statement that the company had earned it; you made an oral statement to the board of directors upon that occasion. What did you say?

A. I did to that effect. I said that the earnings of the company would warrant a dividend of three and a half per cent. payable on the 15th of December, which was six months from the last dividend.

Q. What else did you say upon that subject?

A. I think that was all, sir.

Q. Did you make any statement of figures whatever?

A. No, sir.

Q. On what did you base your statement?

A. Upon my knowledge of the business.

Q. I call your attention to the balance sheet dated October 31, 1885, and to the appearances thereby indicated that during the period from June 1st since the payment of the last dividend the earnings appear to have been $426,094.87, and that the amount paid in satisfaction of the former dividend appears to have been $1,240,000. Was anything said on either of those items at that meeting by anybody?

A. No, sir.

Q. In view of the fact that it takes over a million of dollars to pay such a dividend of three and a half per cent., and that the earnings up to October 31st appear to have been only $426,094.87, how was the dividend from earnings?

A. At the time you speak of, starting from the earnings, there was a surplus of earnings represented to the credit of profit and loss.

Q. That amount appears on this balance sheet to have been $594,539.08?

A. Yes, sir.

9164 Q. Even considering that amount thus carried over those six months as earnings, the total would be $1,020,632.95, which is less than the amount required to pay the last dividend, which was at the same rate; explain, then, how it was that the company had earned a dividend?

A. Because the balance sheet, which you have mentioned as of October 31st, showed the earnings of the company up to the 20th of October only, and in addition to which they show the total expenditures to which could be fairly added the total amount of expenses of all kinds, of material and everything, between the 20th of October and the 31st of October, because they are charged up as against the cost of gas production and distribution, thus leaving the unindexed gas sold between the 20th of October and the 31st of October as the total profit, as against which there is no charge to be made; in addition to which the amount of profit during the heaviest portion of the year, when our heaviest business is being done, from the 1st of November to the 24th of November inclusive; and, in addition to which, the amount of profit during the period between the 24th of November and the 15th of December, which is six months' dividend at the end of the year; all of which led me to believe, and which I know, amounts to a considerable in excess of the dividends to be declared.

Q. That is, those several items that you have just enumerated were estimated by you as capable of admitting a dividend based on estimated profit, provided that dividends should not be paid upon the 15th of December—is that what you mean?

A. As far as it goes; I had within my absolute knowledge that the earnings on the 24th of November exceeded the sum required to pay three and a half per cent. dividend.

9165 Q. In that estimate how much did it exceed?

A. Up to what point?

Q. The date of the declaration.

A. About $315,000.

Q. When was it expected that such a sum would be realized—this excess?

A. What sum?

Q. The sum necessary to pay.

A. It had been already realized, as I stated, at that time, or nearly so. It would be realized long before the payment of the dividend.

Q. Not more than a few days before, would it?

A. I think so; yes, sir, probably not realized.

Q. In that estimate that you have just given, how much, if any, is allowed for depreciation?

A. The entire depreciation during that time.

Q. You mean to say all that you have actually expended to keep the works up?

A. Yes, sir; that is the amount of depreciation.

Q. But nothing else?

A. Nothing else.

Q. Are you not aware that there was not thus written off for depreciation and repairs from June 30th, to October 31st, any larger sum than $110,000?

A. If that appears to be the amount on the balance sheet, I was aware of it.

Q. It appears on this balance sheet that there was such depreciation between November 11, 1884, and June 30, 1885, of $216,000; and from June 30, 1885, to October 31, 1885, $110,000, making a total of $326,000 for that appearing. Is it a fact that no farther or other sum, in your judgment, in the conduct of the business is necessary to be expended during the ensuing year than another $326,000?

A. I think that might safely be taken as a basis of judgment; it might be more and it might be less, for the sum required.

9166 Q. In your opinion, is that a proper allowance for depreciation and repairs on a gas plant, costing or valued at $12,000,000?

A. I think I should estimate it more to be on the safe side if I was required to estimate it.

Recess until 3 o'clock.

THURSDAY, 3 P. M.

Hearing resumed.

J. YALDEN, being recalled, testified as follows:

Examined by Mr. TREMAIN:

Q. You have had some experience, have you not, in the matter of accounts and arriving at what are, in fact, profits and losses and capital as shown by accounts?

A. I have.

Q. Please state whether you have had experience, and if so, of what character in relation to the proper charges to be made by way of expense or towards depreciation of capital invested in a plant, in a working concern, and whether your experience is of a character to enable you to form an opinion as to what are proper items of expense, or what is a proper amount of depreciation, if any, to be accorded to capital invested in a plant, for the purpose of producing and supplying gas?

A. Well, in the case of a gas company generally, gas companies, as a rule, are so large that it is not always necessary or advisable with regard to the question of writing off an amount for depreciation, if more than that depreciation is equivalent to the average life of the plant; and if the average amount of expense required to repair the plant is equivalent to such depreciation each year, and is charged to expense account, there is no object in charging a stipulated sum to expense for depreciation but in the case of a company where the wear and tear is not evenly distributed yearly, it is proper that 9167 an amount should be reserved by writing against expenses equivalent to the average wear and tear and the amount expended for repairs, and permanent expense should be charged against it; for if there is any balance in one year, of course, it will be expended the next or the year after; for instance, if the average wear and tear is twelve and a half per cent., and if less amount than that is expended in any year, it is bound to be expended in the subsequent year or years, and at the end of the term, say eight years, being twelve and a half per cent., it will be found that the amount expended for repairs, etc., making the works as good as new, will be equal to the amount of their original cost.

Q. That is, assuming eight years to be the life of a plant?

A. Yes, sir.

(By Senator ROBINSON:)

Q. You say twelve and a half per cent.?

A. I think if the works are substantially put up, twelve and a half to fifteen per cent. should be a fair depreciation.

Q. What have you found to have been the practice in these respects in general, in the accounts of the several gas companies now under investigation; I am asking for the character of the accounts which you have been examining in these companies?

A. In years gone by my memory serves me that my former statement of twelve and one-half to fifteen per cent. is a fair depreciation for a gas plant; but if you will look at my statement made last March, on page 58, you will notice that the seven companies expended for repairs to works and depreciation, in the year 1883, the sum of $740,683.26, and that in proportion to the cost of the plant, the actual cost, I mean, is about twelve and a-half per cent., or a little over.

9168 Q. You mean that that figure is about twelve and a-half per cent. of the cost of the plant?

A. To those seven companies, yes.

Q. That is to say, as found upon the books, in making the examination of those seven companies, concerning the business of one year, 1883, you found such an allowance?

A. Yes, sir, in all for the seven companies. I will demonstrate it by this Manhattan Company.

(By the CHAIRMAN:)

Q. The cost of repairs in any year, for one company, would not give any sufficient basis on which to form any calculation, would it?

A. Yes, sir; one gas plant wears out just as much as another.

Q. But not at some periods as much as others in the same plant; you would not have to repair as much the first year as the tenth?

A. No, sir; I have incorporated the seven companies. It would not be fair to take one company as against one plant.

Q. If you take seven companies at different times, your idea is it furnishes something?

A. Yes, sir; I will farther demonstrate it by pointing out to you with the Manhattan Company's plant in the ten years ending 1884, there was expended $1,626,247.56 for repairs to the works and depreciation. Now, the cost of the plant of the Manhattan Company upon which they have spent over $1,600,000, in ten years, was about $2,400,000.

Q. You think that illustrates what you were just stating?

A. When you come to consider the cost of meters I must correct that testimony. In this depreciation account, in lieu of one million six hundred and odd thousand dollars written off for the Manhattan, it should be in round figures $2,030,000, as against a plant costing $2,400,000.

9169 Q. Thus illustrating that in less than ten years a plant costs its value over again?

A. Yes, sir, in less than ten years.

Q. Now, in respect to this matter of expense or depreciation, tell the committee whether there is any recognized standard of principle by which such matters are conceded regular in professional circles?

A. Yes, sir, in this way; in the depreciation of the plant; in factories and manufacturing business generally, the calculation is invariably made upon the life of the plant, and the way that accounts of that nature are generally treated is to credit by charging the profit and loss such an amount as is equivalent to the amount standing to the debit or the cost of such plant; it would be in this way: that if the life of the plant is ten years, and it was stated it cost $200,000, the expense would be charged with $20,000, and reduce the cost of the plant on their books to $180,000; and it would follow on the next year the addition in the nature of a permanent improvement; and then at the subsequent year the ten per cent. of the balance then standing to the debit of the account would be written off and what remained would be the fair average value of the worth of the plant.

Q. Indicate to the committee some standard literature, if any there be, that establishes the principles you have stated?

A. There is a small book called "The Depreciation of Factories and their Values," by Matthewson, which treats very fully of the depreciation of factories and machinery and refers to gas companies.

Q. Do you know what the custom is in respect to the certification of capital, or certification for dividends in the companies that are engaged in supplying the city of London with gas?

A. Yes, sir.

9170 Q. Do they follow these principles?

A. Yes, sir.

Q. On such registered certification?

A. They do.

Q. The uses in that respect with regard to the capital and dividends?

A. It is regulated by law to the amount of what they are to spend in the formation of their companies; the plant, etc.; and no capital can be increased except by cash subscription. Before authority is given to increase that capital evidence must be shown that it is necessary to increase the plant and the business; and as to dividends, they are not allowed to be paid unless they are absolutely earned.

Q. In determining whether they are earned or not, is an account taken of the depreciation of the property?

A. Yes.

Q. How is that depreciation reckoned?

A. The depreciation is taken and written upon the principle I have before related.

Q. Is that ascertained and approved by an officer or officers charged with that duty?

A. Yes, sir; it is.

Q. State what the usage is in that respect under the law for the regulation of gas companies as conducted in the city of London, having special reference to the certification of capital and of dividends?

A. The certification for capital in this way; an increase of capital being applied for, it can only be done under an act of Parliament, and the committee on the bill must be satisfied that such a capital is required, and is necessary, and when it is granted the published balance sheets that are certified to must show conclusively that the money has been actually spent in the way that permission was given; the amounts are published half-yearly, and after being made up they are certified to by the president of the company and other 9171 responsible officers and the engineers; and lastly by the accountants who are the auditors, that the dividend has been fairly earned, and is proper to be paid.

Q. Firms are established for such service?

A. Yes, sir; there are recognized firms; the persons making these audits are the public accountants who are chartered by the government and belong to the Institute of Accountants in England.

Q. Then the law provides for the increase of capital both as to when it is necessary and proper, and as to the amount and as to its expenditure?

A. Yes, sir.

Q. And as to dividends, the law defines the basis on which it is to be declared?

A. Yes, sir.

Q. Which basis puts a limit upon it practically?

A. Certainly.

Q. Does that have any practical effect to prevent the watering of stock?

A. Certainly it does.

Q. Does it secure an actual capital as a basis upon which dividends can be declared?

A. Certainly, that was the intention of the act.

Q. So that the law puts a limitation upon the capital, its amount and upon the dividend, how declared and its amount?

A. With regard to the first three points, it does; and in the case of gas companies, it does; the gas company's stockholders, they are to have a dividend of ten per cent., a fixed dividend.

Q. Does that system protect the consumers against unreasonable and exorbitant charges?

A. Yes, sir.

Q. Is it your observation that it accomplishes the proposed end? Have you the means of knowing about that?

A. Yes, sir; I have been through it years ago; I remember the time that gas in London, before this consolidation took place, 9172 was something double the price it is to-day; before the consolidation of the companies in London took place, before this system obtained.

Q. This governmental supervision has, in effect, reduced the cost of gas very greatly?

A. Yes.

Q. It gives a reasonable profit upon a stable basis?

A. Yes.

Q. It makes profits both reasonable and stable?

A. Yes, certainly.

Q. You formerly lived on the other side, and did for many years?

A. Yes, sir.

Q. Have the several companies in London a limited territory of operation?

A. Yes, sir.

Q. A limited portion of the city?

A. Yes, there are only three of them in London.

Q. Each company secured in its own territory?

A. Yes; no two companies can lay pipes in the same streets, unless there is absolute demand for them.

Q. So that the effect of this governmental regulation, which has proved a security of operation, coincident with the consolidation thereby established, has been to reduce the profits of gas about forty per cent.?

A. Forty to forty-five per cent., and it is beneficial alike to stockholders as well as the consumers.

Q. Do you know what the usage naturally established is in respect to distributing dividends on capital, whether the distribution is made on all the capital that may be authorized, irrespective of whether it is in part raised or not, or whether the dividends are limited to the capital as actually raised and invested in property?

A. The formation of these companies is generally by a stock capital with borrowing powers, which means, that as against so much stock capital they can issue so many bonds at the cheapest rate of 9173 interest they can obtain money for; in the year 1883 the three companies of London had raised upon bonds about eight and a half million dollars, about forty per cent. of their total capital employed, which was subject to a certain rate of interest, less than what the stock of a shareholder received, which was a fixed charge, of course, against the property of the company—really a mortgage against the property of the company.

Q. It did not swell the capital at all?

A. No; it was capital raised by loans.

Q. The dividends are based upon capital?

A. Yes, sir; the ten per cent.

Q. The ordinary capital as used, is exclusive of these bonds?

A. Money derived from them; the operation of that is to reduce the price of gas; supposing the whole of the amount was subscribed for, the consumers would have to pay more for their gas if the whole capital employed was of stock capital at ten per cent., than they would naturally have to do if half the working capital is stock at ten per cent., and the other half loaned capital bearing four per cent. interest.

Q. I would like to know how these bonds were discharged, whether out of earnings?

A. No; they are renewed again; they are generally sold at a premium, and in one case here, where the bonds sold at a rate of interest of four to seven per cent., they realized a premium of about $860,000, which the law compels to be spent in building the works and plant.

Q. Does this power of affecting loans on bonds result in reducing the amount of stock capital in works on which stock capital the dividend is based?

A. It does not result in reducing the amount of capital, used in building the works, but it operates in reducing the interest paid on the whole of the capital.

9174 Q. With this loaning power, can they have a smaller stock capital than they can have without it?

A. Yes, sir.

Q. Does this power of affecting loans on bonds result in reducing the amount of stock capital in works on which stock capital the dividend is based?

A. Certainly.

Q. Now, have you made an examination of the balance sheet of October 31 of the Consolidated Company and of the balance sheet immediately preceding the first dividend of that company, with a view of ascertaining what, in fact, are the profits of that company during its first year of operation?

A. Yes, sir; I have examined the balance sheet to the 31st of October last.

Q. It has been stated here to-day by the treasurer of that company that the figures as they appear on those balance sheets, in his opinion, as reported to the board of directors there was earned a seven per cent. dividend on the capital of the Consolidated Company so far as its stock has been issued up to December, 1885; what is your opinion on that subject from an examination of those sheets?

A. Well, upon paper, I think upon examination of the books, as these papers state it, I think the seven per cent. has been earned; but there is this question in my mind, whether an amount charged off for repairs has any thing at all to do about the average depreciation of the plant.

—. What is the amount charged off for depreciation and repairs?

A. Three hundred and twenty-six thousand dollars to October 31; $216,000 for the first seven and one-half, and $110,000 for the last four months.

Q. Have they written off and made allowance for a sufficient amount of depreciation?

A. No, in my own opinion, they have not.

9175 Q. What per cent. have they written off—you have stated it should be from twelve and a half to fifteen per cent.?

A. Well, for the period, which is eleven and a half months, two and two-thirds per cent. on the value of their plant, as it stands in the Consolidated Company's books, according to their own appraisement; that is not the cost according to their appraisement of the values; they have depreciated instead of appreciated, only spent for the first eleven and a half months about two and two-thirds per cent.

Q. If that is a correct appreciation, don't you think that plant must be much less than twelve million?

A. If they are right, I am wrong; that gives the life of the plant forty years.

Q. Have you any doubt of their having got the appraisal of the property too high, or their depreciation too small; it is one or the other?

A. Certainly, they have one too high or the other too low; even at this cost, that amount of money is not a fair depreciation.

Q. You have ascertained from the books the actual cost of that plant?

A. Yes, in every company; look at page 58 and you will see.

Q. What have you to say in respect to that depreciation of $326,000, in comparison with the depreciation that appears by the books of the same constituent companies for the year 1883 to have been, in total, $740,683?

A. It does not show the same appreciation, on comparison.

Q. State what it did show?

A. The year 1883 by the books of the companies, it cost the seven companies for repairs, $740,683, and the same companies incorporated under the consolidation company in the year 1884 have apparently spent only $326,000; but some allowance must be made in these figures for one or two of the works that are shut up, and then it will even show a very large difference. 9176

Q. Would it be any more than one-half of the actual depreciation, making that allowance for the year 1883?

A. No.

Q. It would be less than half?

A. Yes, I think it would.

Q. According to the balance sheet of October 31, 1885, is it not true that up to the dates therein expressed, the dividend of three and a half per cent., the dividend since June, had not been earned?

A. Certainly, if you consider this depreciation to be a fair charge, as I consider it should be.

Q. Your answers, as last above given, are based upon the trial balance dated October 31, 1885?

A. Yes, sir; they are.

Q. Before passing to another topic, I wish to recur a moment to an item in the capitalization of the Municipal alluded to in your testimony yesterday. Is it not the fact that of the increased capital of the Municipal from $2,000,000 to $3,000,000 there was issued stock of the par value of $350,000, namely 3,500 shares for which, in fact, no money was paid to the Municipal Company?

A. In fact, there was not. The Municipal Company paid $300,000 to the Bayard family for damages and $50,000 for the purchase of the Knickerbocker stock, while concurrent with it came back the same amount from the Bayard estate to the company for subscription to 3,500 shares.

Q. So that it is not the fact to state that $1,000,000 of that capital thus increased was paid up?

A. No, sir; it never enriched the coffers of the Municipal Company in any way.

Q. In fact, did it not deplete the Municipal Company to the extent of 3,500 shares?

A. Certainly it decreased their assets taking out of their 9177 surplus capital charged to profit and loss and they assumed a liability to the stockholders for it in return.

Q. So that while apparently in some of the books there was an increase of capital and of cash and an issue of stock represented, yet, in fact, there was an actual loss of money, was there not, from the Municipal Company, as the result of that transaction, of precisely $350,000.

A. No, there was no loss of money; the transaction had the effect of creating additional capital at their own expense.

Q. There was a loss of 3,500 shares and the assumption of the debt?

A. Yes, the Municipal Company paid for it in the shape of these damages in this action.

Q. Was that, in effect, an increase of the stock out of the proceeds of the earnings of the company?

A. Certainly; the depletion of the company's assets at the expense of increasing the liability of the stock holders.

Q. It increased the capital?

A. Yes, sir.

Q. Without increasing its assets?

A. It depleted the assets.

Q. So that, in effect, it was a depletion of the assets, and increase of the dividend capital?

A. Yes, it was taken out of their surplus and put into their capital stock; it was to the benefit of parties who took the 3,500 shares.

Q. The consumers paid for that capital?

A. Yes, they paid for it in damages.

Q. The consumers paid for that capital?

A. That was the effect of it.

The following is an abstract of the claim upon which this payment appears to have been based according to the papers already 9178 produced in evidence by Mr. Day, viz.: "Summons and complaint in this suit in Supreme Court by the Knickerbocker Company against the Municipal Company; summons dated August 23, 1879, and the answer served in October of that year."

Mr. Tremain: The counsel for the committee claims that upon the papers it does not appear there was any justifiable claim of any merit upon which the damages of $300,000 could in any point of view have been fairly awarded.

New York, *December* 12, 1885.

Under a resolution of the Committee at its last session, Senator Murphy was appointed a sub-committee to take testimony during the recess of the Committee, which adjourned to the call of the chair.

The sub-committee, consisting of Senator Murphy, convened at parlor D R, Fifth Avenue Hotel, New York city.

H. E. Tremain present as counsel for the Committee.

THOMAS K. LEES, a witness, being duly sworn, testified as follows:

Examined by Mr. TREMAIN:

Q. Where do you reside?

A. I reside at 67 Pineapple street, Brooklyn.

Q. And your present occupation?

A. I am vice-president of the Consolidated Gas Company.

Q. Prior to that time you were president of the New York Gaslight Company?

A. Yes, sir.

Q. Is your place of business at the office of the Consolidated Company in Irving place?

A. Yes, sir.

9179 Q. Are you there every day?

A. Most every day.

Q. Were you at the meeting of the board of directors on the 25th of November?

A. Yes, sir.

Q. And were you at the office the ensuing week?

A. Not all of it; no, sir.

Q. When did you receive the dispatch that your attendance was desired here?

A. I never have received any dispatch until I got the subpœna yesterday.

Q. Did you not know that your attendance was desired?

A. I did not know it.

Q. Were you not told in your office that word had been left for you at your office?

A. No, sir.

Q. You were a member of the pooling committee, were you not?

A. Yes, sir.

Q. And you were examined before the Senate Committee last year?

A. Yes, sir.

Q. You were not examined concerning the items of valuations in the capital of the Consolidated Company last year?

A. I don't remember what I was examined upon.

Q. Do you remember seeing the bill that was proposed by the Committee last spring?

A. I saw the bill; yes, sir.

Q. Did you have some conversation with your fellow directors, or any of them, about that bill?

A. Nothing special, that I remember.

Q. Well, did you have any conversation with them about that bill?

A. I could not say that I did or did not; it was a year ago; I have conversed on various subjects, every day almost; I can't remember them; it is very probable I did have.

Q. Did you express any opinion in respect to that bill?

A. I cannot tell you whether I had a conversation; I don't know whether I did or not.

9180 Q. When did the New York company first propose any list or schedule of its properties, with a view to consolidation?

A. I couldn't tell when it was; I don't know.

Q. When did you first do that?

A. I can't tell you what I did two years ago, or one year ago; it was some time prior to the consolidation; that is about all I can say.

Q. More than a year prior, was it not?

A. I would not say that it was; I don't know.

Q. Do you not remember that some memoranda of such property was prepared during the pooling committee?

A. No, I do not; I have no recollection of any thing being presented at the pooling committee on that subject.

Q. Were you not a member of the sub-committee of the pooling committee to consider that subject?

A. I don't know but I was; I don't remember a sub-committee on that subject; there may have been one; I cannot tell; I kept no memoranda of any thing.

Q. Is there anywhere in existence to-day any paper whatever, or book, containing lists of schedules of some or of all of the properties of the New York Gas-light Company, which was prepared by any of its officers or clerks or by any one else to your knowledge during the years 1880 and 1885?

A. A schedule of last year, 1884, on which the consolidation was perfected, I think is on file somewhere; I don't know where.

Q. Is that the only one you know of?

A. That is the only one I know of.

Q. Were there no papers on which that was prepared or based?

A. Memorandums, possibly.

Q. Whose memoranda?

A. Anybody's belonging to the committee; they made their own memorandums; papers laid on the table, and every member made figures.

9181 Q. Indicate any one of such memoranda relating to the New York properties?

A. I don't know of any existing.

Q. Do you mean to testify that any papers from which the schedules that were finally filed, as you narrate, were prepared, are not now in existence; is that your testimony?

A. I don't know of any.

Q. Have they been destroyed?

A. Not recently; if they ever existed, they were never perfected; like all memorandums, they were probably torn up and thrown into the waste basket, when they became useless.

Q. Is that your best recollection in respect to any memoranda of any kind on which those schedules of the New York properties were based?

A. I don't know of any memorandums on which they were based.

Q. Who first prepared, or caused to be prepared the schedule you speak of in respect to the properties of the New York Company?

A. I can't say; it is possible I did.

Q. Don't you know as a fact that it was prepared under your direction?

A. It is very possible; I don't know it as a fact.

Q. What clerk prepared it?

A. I can't tell you that any one prepared it; I may have prepared it myself; I don't know anything about it.

Q. Don't you remember that you prepared it yourself?

A. I think it is very possible that I presented a blank schedule, and when it became a part of the general schedule, the blank was of no use and was destroyed, so far as I know.

Q. Where did the material come from to enter into that schedule, where did you get it?

A. From the books of the company, digging it out—from the valuations; the books show, or at least I suppose that they do;
9182 I have not seen the books within two years; I don't know any thing about the contents of them, except a vague recollection; I should suppose, naturally, I would go to the books to get the base.

Q. Who was the chief book-keeper of the New York Company during 1883 and 1884?

A. Mr. Clark.

Q. What is his first name?

A. William J.

Q. Where is his place of business?

A. Number 157 Hester street.

Q. He is there every day, isn't he?

A. I presume he is.

Q. Isn't he under your orders?

A. No, sir; not under my orders.

Q. Hasn't he charge of that station?

A. No, sir; not specially; I have an oversight over it as I have over all of them.

Q. Are you not under contract with the Consolidated Company?

A. Contract for what?

Q. Any contract with the Consolidated Company?

A. Of the New York Company?

Q. Are you not under any contract?

A. Me, personally?

Q. Yes?

A. Yes, I have had a contract—not with the Consolidated; I had a contract with the New York Company.

Q. In writing?

A. No.

Q. By resolution of the board?

A. By resolution of the board.

Q. The substance of which was what?

A. That I should receive a salary of $10,000 a year for ten years.

Q. That resolution was passed in the fall of 1884, was it not?

A. Yes, sir, the fall of 1884.

Q. And that obligation was assumed by the Consolidated, was it not?

A. Yes, sir.

9183 Q. You are, therefore, under contract with the Consolidated, are you not?

A. You have got the facts.

Q. It is true that that obligation still exists by the consolidation?

A. Yes, sir; they assumed all the contracts of the New York Company.

Q. And you have not canceled that obligation?

A. No, sir.

By Senator MURPHY:

Q. In other words, you are still under contract with the New York Company, and because of the consolidation of the New York Company with the other, you were transferred as a portion of the stock; that is it?

A. Yes, sir.

Mr. TREMAIN: Yes, but the Consolidated Company is under an obligation to pay him $10,000 a year for ten years because of adopting the obligation of the resolution of the board of the New York Company.

Senator MURPHY: He became a portion of the property of the New York Company?

The WITNESS: Yes, one of the chattels.

By Mr. TREMAIN:

Q. Do you remember the date of that resolution?

A. No, I do not.

By Senator MURPHY:

Q. What were the conditions of your transfer to the Consolidated Company?

A. My personal transfer?

Q. Yes.

A. No conditions at all; all there was about it; by resolution of the board of directors of the New York Gas-light Company I was continued at a salary of $10,000 a year for ten years.

Q. For what purpose?

A. The consideration of twenty odd years of service—the company going out of existence at that time.

9184 By Mr. TREMAIN:

Q. Who is the manager of the New York branch of the Consolidated?

A. It has no manager.

Q. Who attends to the business of the Hester street office, at its head?

A. Mr. Doane.

Q. The full name?

A. George W. Doane.

Q. He was secretary of the New York Company?

A. He was treasurer of the New York Company.

Q. What was the date of the resolution of the New York Company?

A. I couldn't tell you, as I said before.

Q. Wasn't it in October, 1884?

A. I couldn't tell you whether it was September or October.

Q. Will you please get the resolution and send a copy of it here to put in your testimony?

A. I can get it.

Q. Did Mr. Doane prepare any schedule of the properties of the New York Company?

A. It is possible he may have done so.

Q. Don't you know whether he did or not?

A. I don't know whether he did or not.

Q. That there may be no mistake about your testimony, do I understand you to mean that, to the best of your recollection, there is no memoranda or paper of any kind whatever except in the regular books of account of the New York Company, showing any of the items of its properties set forth in the schedules on file with the Consolidated Company and utilized as its basis in part of capitalization or consolidation?

A. I don't know whether there is or not; I haven't any; that is all I can say to that.

Q. Is it the best of your recollection that no such papers were ever made or do now exist?

9185 A. I don't know of any existing; I don't know that any were ever made; I think it is likely they were made and destroyed at the time they became a part of the consolidation; that would be the natural course.

Q. In which of the constituent companies were you a stockholder?

A. In the New York.

Q. Only?

A. Only.

Q. Holding how many of its shares?

A. I don't remember how many I did hold at that time; some thing over one hundred, but I don't remember how many.

Q. You received Consolidated stock for it?

A. Yes, sir.

Q. Still hold it?

A. Still hold it.

Q. Do you hold any more than you then held?

A. Yes, sir; I have bought some since.

Q. Whom did you buy it of?

A. I cannot tell you; I bought it in the street; I bought it of any one that came along with it; I don't remember whom I bought it of.

Q. Did you buy it before April, 1885?

A. That I don't know; I don't know whether I did or not; I think likely I bought some before and some since.

Q. Did you ever sell any?

A. I never sell.

Q. Did you appraise yourself, any of the property of the New York Company in 1884?

A. I think I did.

Q. Who with you appraised any of it?

A. I couldn't tell; I made inquiries of one and another as to the values of some of the properties; not only my own but others.

Q. Did you appraise any of the real estate?

A. I made inquiries in regard to the value of real estate.

Q. Who appraised your plant if anybody?

A. I think Mr. Rowland appraised it; that is my recollection; either he did, or was consulted in regard to it.

9186 Q. Did you request him so to do?

A. Yes, I requested assistance from his office in regard to fixing the values of some of the mechanical parts of it.

Q. Didn't you request Mr. Rowland to make an appraisement of the plant of the New York Company?

A. It is very probable I did.

Q. Did you ever request him?

A. I can't say whether I requested him or whether I asked him to help me; I think he did make the appraisement; I am under the impression that he did make one.

Q. Who made the appraisement of your real estate?

A. I have already testified that I made pretty much all that myself, with such information as I could get.

Q. Who was it conducted the business in respect to fixing all the valuations that were fixed of the New York properties at the time of the consolidation; was it not yourself?

A. In regard to the values of all the New York property?

Q. Yes.

A. It is very probable I did.

Q. Isn't it your best recollection that the business was conducted under your direction?

A. Naturally it would be, as president of the company.

Q. And as a fact it was, wasn't it?

A. I don't know of anybody interfering with me in regard to it; at the same time I cannot state as a fact what occurred a year and a half ago; my memory is not good on time.

Q. Then your recollection is that this occurred a year and a half ago at least?

A. At least that; still it may have been a year and a half; it is now December; the consolidation was effected in November; that is thirteen months, and there were sixty days advertising; that carries it very near a year and a half, I guess.

9187 Q. The schedules were prepared early in the summer; were they not?

A. I am not aware of it.

Q. When were they prepared?

A. My impression is they were not prepared until the fall, after we came back from our summer vacations, all of us; that is my impression.

Q. When did you first hear the total capital proposed?

A. That I could not tell.

Q. Did you state to Mr. Rowland, or did you hear anybody say any thing to him on the subject of how he was to appraise the plant of the New York Company?

A. No, sir.

Q. Was it appraised regardless of its cost as it stood on the books?

A. So far as he was concerned, he never knew what it stood at on the books; that is, I cannot conceive how he would know.

Q. Do you know?

A. Do I know what?

Q. Do you know how it stood on the books?

A. No, sir; I couldn't tell now; I have no recollection of the figures.

Q. Did you ever have that ascertained as president of the company?

A. That I couldn't tell you; the valuation on the books, I knew, had nothing to do with the valuation of the property.

Q. What bulk-heads or piers, or water rights so-called, did the New York Company own in 1884?

A. They owned from center line of Twentieth street to the center line of Twenty-second street on the East river, excepting Twenty-first street; Twenty-first street being in between that, the city claimed as a roadway.

By Senator MURPHY:

Q. Half of each block and one entire one?

A. The whole of each front between Twentieth and Twenty-first and between Twenty-first and Twenty-second the property covered two entire blocks on the river.

9188 Q. I understand you to say half of one pier?

A. No, sir; from the center of Twentieth street.

Q. Does that center go down to the pier, or just the street?

A. There are no piers; we had the water-front.

Q. The bulk-head?

A. The bulk-head, the water-grant, out to Avenue C.

By Mr. TREMAIN:

Q. That property was acquired by the New York Company when?

A. I could not tell you; long before my time.

Q. A great many years ago?

A. I have been there twenty-four years, and it was before my time.

Q. Your earliest recollection fixes the water-front at what point, in respect to Avenue A or B?

A. Out to Avenue C; 1,000 feet out beyond where it is filled in now; or 600 feet.

Q. The line runs beyond Avenue C now?

A. Oh, no, sir; it only runs to Avenue B now.

Q. The land runs to Avenue B?

A. Yes, a part of Avenue B; Avenue B runs up to one portion of the property; and if continued would run out into the river again before it leaves us.

Q. Your earliest recollection fixes the land extremity at what point on Twenty-first and Twentieth and Twenty-second?

A. I cannot tell you; I cannot remember those figures.

Q. About what point?

A. I don't know how to get at it, how to describe it.

Q. How much has been filled in?

A. Within my recollection?

Q. Yes.

A. I don't know that any has, in my recollection.

Q. Well, has any?

A. I don't know that there has; I did not go up there in my early days; I only kept books in my early days.

9189 Q. To the best of your recollection, has any been filled in during your connection with the New York Company?

A. I couldn't say whether there was some filled in in the first part or not; I didn't go to the works; had no connection with them, and I didn't know what was being done there.

Q. Whatever was filled in was charged in the expense account to labor and materials, was it not?

A. It would have been charged, I should suppose, but I cannot tell you whether there was any filled in or not; if there was any filled in it naturally would be charged to labor; there would be no material.

Q. When was this water-grant, that you speak of, from the city made?

A. I have said it was so many years before my time I couldn't tell you.

Q. You did not state when the grant was made; you stated when it was filled in?

A. You just asked me when it was filled in.

Q. No; when was the water grant from the city made?

A. Made to us?

Q. Yes.

A. It was made years before I went there; I couldn't tell you when.

Q. You went there when?

A. The beginning of 1861.

Q. Nothing was paid for it, was there?

A. I can't tell what was done before I went there.

Q. Don't you know what the books show?

A. I never looked to see; I don't know anything about it; I only knew we were in possession of it.

Q. What was then the capital of the company?

A. At that time?

Q. Yes.

A. Seven hundred and fifty thousand dollars at that time.

Q. In 1861?

A. In 1861.

Q. Since that time the stockholders have not paid in any cash, have they?

A. No, sir.

9190 Q. The company was reorganized in 1871, was it not?

A. Eighteen hundred and seventy-one.

Q. Under the general laws?

A. The general laws of the State.

Q. The general gas-light laws?

A. Yes, sir.

Q. At that time a new capital was fixed for the new company, was it not?

A. It was organized with a new capital.

Q. Of $4,000,000?

A. Yes, sir.

Q. That capital was distributed among the stockholders of the old company?

A. *Pro rata.*

Q. At the rate of four shares for one, was it not?

A. Yes, sir; two shares of $100 for one of $50; being $4 of new capital, for $1 of old capital.

Q. Your shares were exchanged in the Consolidated Company at the proportion of 189 shares of Consolidated stock for 100 shares of New York stock, were they not?

A. Eighteen hundred and sixty-nine 6-10 I think was the proportion.

Q. What was the stock of the New York Company selling for in the summer of 1884?

A. That is a difficult thing to tell.

Q. Don't you know about?

A. No, I do not.

Q. Over 300, wasn't it?

A. Oh, no; if it had been I would have sold out and left it; it was 160 or 170; somewhere along there; 160, perhaps; I should think 160 was all it was worth, and all it would sell for at that time, on an average; Mr. Smith suggests that I should make a correction as to the conditions of the contract; he has possession of the contract that I should state, in the testimony, what the condition was, that I was to render my best services in return for it; it is not a gratuity.

Senator MURPHY: That is why I asked you the question—why you got $10,000, and you said it was for past services.

9191 The WITNESS: The contract was for past services, but I work for that money, and I earn it, I think.

Senator MURPHY: That will go as a portion of the record, that you work for $10,000.

The WITNESS: And I am obliged to give my best services, and, if I die, it stops.

Mr. TREMAIN: Is there any contract now in writing?

The WITNESS: A copy of the resolution covering that ground.

Senator Murphy directs the witness to attend at a subsequent meeting to be held at the same place, at eleven o'clock on Thursday, December 17, and the witness agrees to attend at that time, and to bring a copy of the resolution above mentioned.

Adjourned to Wednesday, December 16, 1885, at 11 a. m.

NEW YORK, FIFTH AVENUE HOTEL,
December 16, 1885—2 p. m.

The Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

J. YALDEN, being duly recalled, testified as follows:

Q. You are prepared to give evidence with reference to the financial history and condition of the several constituent companies?

A. Yes, sir.

Q. I call your attention to the Manhattan?

A. Yes.

9192 This company was incorporated under the Laws of 1830, chapter 59, passed February 6, 1830, with a capital stock not to exceed $500,000, in $50 shares, and as soon as possible thereafter commenced its business. The first subscription of capital was shortly afterward paid in. Subsequently, under the Laws of 1847, chapter 163, an act was passed April 29, 1847, providing for the increase of the capital of the Manhattan Gas-light Co., to $1,000,000 in $50 shares, and up to January 1, 1851, the sum of $850,000 had been paid into the treasury in cash on account of the said stock of $1,000,000, and again under the Laws of 1852, chapter 50, an act was passed March 25, 1852, to increase the capital stock $1,000,000, at such time as the board of directors might prescribe.

By a later act under the Laws of 1855, chapter 543, passed April 17, 1855, power was given to the Manhattan Gas-light Company to increase their capital stock $2,000,000 at such time as the board of directors might prescribe by resolution of said board, with power to adopt such resolution within six months from the passage of the act.

Under a resolution of the board this issue of $2,000,000 worth of stock was credited by a transfer of $18 per share, amounting to $720,000 (40,000 shares at $18 per share), from the surplus profits of the company, and the issue seems to have been made to the shareholders for the equivalent of their present holdings and the remainder, viz. $32 per share was paid in in cash by the 1st of January, 1866.

To show the particulars of these transactions I have abstracted the details of the capital account on pages — to —. By the books of the company it appears that no business was done by the company until about February 1, 1836, and the details of this for the period 9193 to November 11, 1884, I show upon statement, pages — to —, being an abstract of the profit and loss account for the whole period of their doing business. It gives in totals, by yearly and five-yearly periods, the gross income and total cost of gas, and depreciation with dividends paid, and at the foot of such statement the tabulated amounts.

These particulars show that the company, during its business period, divided among its shareholders the sum of $25,847,675.66, which includes $1,500,000 (part of $2,000,000) of certificates, and the interest thereon paid to the shareholders out of the surplus profits, and likewise includes $720,000, before referred to as credited up for capital on account of the last issue of shares. After this the company had a balance to their profit and loss account of $876,134.67, which really represented the surplus capital to provide for the increased value of the assets, as shown by their books, beyond the amounts which these investments presumably cost.

The properties, etc., of the Manhattan Company were, on November 11, 1884, transferred to the Consolidated Company, at a largely increased value beyond that stated on the books of the former company, and in explanation of this appreciation or increased value of assets, as taken over by the Consolidated Company, the particulars on page — will show the state of the accounts upon the books of the Manhattan Company when they were closed on November 11, 1884, and the value of same as taken over by the Consolidated Company.

The balance as shown thereon being $11,940,000, equal to the stock issued by the new company in payment of the properties, franchises, etc., of Manhattan Company.

9194 The column on the debit side of this account, headed "Appreciation written up," and amounting to $7,093,462.11, gives in detail the increased value placed upon the various properties and franchises beyond the amount of presumed cost or value stated in the books of Manhattan Company.

Statements are also given upon pages — to — of the capital investment for real estate, buildings and improvements, services and mains and meters, showing in detail the outlay, year by year, from the inception of the company to November 11, 1884, and giving the methods and forms the Manhattan Company treated their investment accounts.

A further statement on pages — to — is given of the capital stock and surplus profits, according to the books of the company used in the business, and upon comparison will show that the Manhattan Company was in possession of ample capital, and sufficient to enable them to accumulate very large profits, and so pay the various dividends.

In July, 1863, this company sold to the Metropolitan Gas-light Company, New York, their real estate and station at Sixty-fifth street, together with the mains, services and meters in use above the center of Thirty-fourth street, for the sum of $685,301.02, and received therefor a mortgage for $161,500 and stock in the said Metropolitan Company 2,356 shares of the par value of $1,178,000.

This stock of the Metropolitan Company appears to have been placed in the hands of Moses Taylor and Henry Young in trust, and by them sold for the benefit of the Manhattan Company; the proceeds of this sale were used to pay the fifty-eighth dividend of the Manhattan Company.

The particulars of this sale, as far as I can ascertain at present, are not fully described in the books, but a complete investigation 9195 would no doubt reveal the exact manner in which this transaction was consummated.

In the early part of 1857, and continuing until October, 1863 the company was in the habit of transferring, at certain periods, an amount from profit and loss to the credit of depreciation account, creating a reserve fund to meet the wear and tear of the various properties and works, and during these years the amounts so charged to profit and loss amounted to nearly $1,000,000.

It seems, however, that the company having also provided for alterations and improvements by charging such expenses to the profit and loss account, subsequently by resolution of the board of directors in November, 1863, they re-transferred $756,288.51 to the profit and loss account, and the balance then left, $500,000, was together with $1,500,000, credited to the registered certificate account under date of June 1, 1867, to meet that amount of certificates before referred to.

These registered certificates were paid in cash by the Manhattan Company by redemption and by installment from the period of December 1871, to October, 1877, with interest at seven per cent. from the date of issue until payment.

I have compiled a statement, fol. —, of the dividends paid by the Manhattan Gas-light Company during the period of its business, showing at stated periods the total capital subscribed in cash, and dividends paid, giving a comparison between a calculation of ten per cent. on the capital paid up and the dividends paid.

The results of this shows that, basing it upon the actual cash capital subscribed, amounting to $3,280,000, there was an excess of dividends paid beyond ten per cent. of $15,509,544.13.

9193 In the year 1856, however, I have included in the dividend $18 per share on 40,000 shares, transferred from surplus profits to the credit of these shares, which, with the $3,280,000 cash subscribed, completes the full capital account of $4,000,000, but as the sum of $720,000 was credited to the capital as before stated, and subsequently treated as capital stock, I have deducted this from the amount of dividends, and reduced the excess of dividends over ten per cent., to $14,789,544.13.

From the foregoing statements the following are the benefits derived by the stockholders of the Manhattan Company from the operations from 1836 to 1884 on the subscribed capital as follows:

Total capital subscribed in cash................	$3,280,000
Transfer from surplus profits as before mentioned, $18 per share on 40,000 shares (last issue).....	720,000
	$4,000,000
Dividends paid to stockholders as per account fol. — to —, inclusive, of $1,500,000, part of the issue of registered certificates and interest at seven per cent., until payment......................	$25,847,675 66
Balance of depreciation account included in issue of $2,000,000 certificates......................	500,000 00
	$26,347,675 66
Deduct, credited to capital stock on account of last issue of shares (included in amount of dividends)	$720,000 00
Total dividends, certificates and interest thereon paid in cash..................	$25,627,675 66

9197 Increased valuation beyond stated value of real estate, plant, works, mains, services, etc., in books of Manhattan Company, and the appraisement to the Consolidated Company.

Balances of the separate accounts		$4,872,999 49
Appreciation	$4,764,462 11	
Franchises	2,329,000 00	
Total appreciation on assets		7,093,462 11
		$11,966,461 60
Liabilities of Manhattan Company assumed by Consolidated Company	$620,740 78	
Deduct value of coal, lime, gas, customers' accounts and other assets taken over	594,279 18	
		26,461 60
		$11,940,000 00

For which stock in the Consolidated Company was issued to the stockholders of the Manhattan Company who therefore have received for the original investment of $3,280,000.

Dividends and certificates paid in cash		$25,627,675 66
Stock in Consolidated Company	$11,940,000 00	
Less cash capital subscribed to the Manhattan Company	3,280,000 00	
		8,660,000 00
Total received beyond the original cash investment		$34,287,675 66

9198 (The witness continued:) I have compiled the statement of dividends paid by the Manhattan Company from 1836 to 1884; the former date is when the first capital was paid in.

Q. What have you compiled?

A. A statement of dividends paid by the Manhattan Company during the period of its business, giving a comparison between ten per cent. on the capital paid up and dividends paid; the result of these sheets is, that basing it upon the actual cash capital subscribed, $3,280,000, there was an excess of dividend beyond ten per cent., $15,509,000, the profits over and above ten per cent.; they really paid in round numbers about $15,000,000 more than ten per cent.; $3,280,000 and $720,000, making $4,000,000; the total dividends paid to stockholders amount to $25,847,675.66; the balance of depreciation account included in the $2,000,000, making a total of $26,347,675.66; deducted from that, the capital stock on hand, last issue of stock, leaves the total dividend of $25,062,675.66.

Q. That sum is equal to ten per cent. upon the investment actually made plus about $15,000,000?

A. Yes, sir, the increase of valuation beyond the stated valuation of real estate, plant, etc., in the books of the Manhattan Company, and appraisement of the Consolidated Company, $4,872,999.49; that is the total of what they cost.

Q. That is a difference between what two things?

A. The purchase and what was sold; the purchase of the property, real estate and plant, they sold for a million of dollars to the Metropolitan Company; the appreciation—the amount they were valued at—to the Consolidated Company, in addition to that, $7,093,462.11; $11,940,000, the equivalent of stock issued to the Manhattan Company by the Consolidated Company; the cash capital, $3,280,000; total, $34,287,675.66.

9199 Q. You have spoken of registered certificates; state what they are.

A. The registered certificate is simply one given by the Manhattan Company instead of dividend which represents the accumulation of profits that they had made and which had not been divided in dividends; these certificates, amounting to $2,000,000, were given in the year 1863.

Q. That they had $2,000,000 in 1863 which might have been distributed as dividend among the stockholders of the Manhattan Company, but instead of doing that, they issued these to those stockholders?

A. Yes, sir; the same amount which would have been distributed to them in the form of a dividend.

Q. Did they, during the same year, pay a dividend as divided in the regular way?

A. Yes, sir.

Q. How much dividend did they pay that year?

A. Five hundred and twenty-five thousand dollars.

Q. In the form of dividends?

A. Yes, sir, in 1863 the actual cash capital paid in was $2,780,000 and they transferred from their profits at that time a further amount, $720,000, making three and one-half millions; that year they paid dividends in cash equal to $525,000.

(By Senator Robinson:)

Q. That dividend was on the original $2,700,000?

A. Yes, sir, and they issued at the same time certificates bearing interest at seven per cent. to the amount of $2,000,000.

Q. Which were, in effect, dividends represented by profits accumulated paid by installments at the convenience of the company with interest at the date of payment; now, about your per cent.—what per cent. was it?

A. The two together is equal to seventy-two and one-half per cent. of the actual capital of $3,500,000; and upon the actual cash capital paid in of $2,780,000 which was distributed that year, it was ninety-eight per cent.

9200 (By the CHAIRMAN:)

Q. In 1863 there was in effect distributed among the stockholders of the Manhattan Company ninety per cent. of the amount of cash capital stock actually paid in?

A. Yes, sir; in cash dividends and stock certificates.

Q. Does that finish your report of the Manhattan?

A. Yes, sir.

Q. So that, if for purposes of computation, you add to the cash capital theretofore paid in the accumulated surplus profits represented by $720,000 and treat the capital as if $3,500,000 there was in the year 1863 distributed in cash certificates subsequently paid with interest an entire dividend of about seventy-two per cent. upon such capital so estimated?

A. Yes, sir.

Q. How do you find the item of cost of the plant distributed in respect to the cost of real estate, and did you examine the books with a view of ascertaining exactly what the lots themselves cost the company, independent of plant or structures upon them?

A. Yes. I thoroughly dissected all those items and examined their books from 1831 to 1834 and ascertained what moneys had been paid out from time to time in respect to those properties.

Q. Did you separate the cost of the plant—services, meters, street mains, valves, etc., and office buildings and office furniture and all other expenses so as to be able to tell the committee what the real estate which is given in the schedules of appraisement at the figure of $3,563,000 cost the company as it appears by its books?

A. That is all got out and tabulated on the "A 10" and "A 11."

Q. As a result of that tabulation and examination, is it not true that all of the lots comprising the real estate valued in those 9201 schedules of appraisement for consolidation purposes at $3,563,000 and also the value of bulk-heads, piers, water rights, etc., specified in the same schedules of appraisement at $425,000, and also including the item of office buildings of $175,000, and an item of office furniture, $20,000, and the laboratories, photometric rooms, etc., $5,000, making in all an amount of $4,163,000 as a result of those five items in the schedule of appraisement with a view of comparing those five items with the actual cost of the lots as they appear on the books of the Manhattan Company?

A. Yes, sir.

Q. Is it not true that those lots cost the sum of $865,668.51?

A. Yes, sir.

Q. So that the items I have just specified that are represented by a capital of $4,163,000, appear to have cost $865,668.51?

A. That is so, but it should not include the two items of $20,000 for office furniture and $5,000 for the laboratories.

Q. Is it the fact that it appears from the books, as it apparently does, according to page "A 11" that the lots at Irving Place and Fifteenth street cost $25,000?

A. It did according to the books.

Q. At what amount is that stated in the appraisement schedules?

A. One hundred and seventy-five thousand dollars.

Q. What year was that appraisement?

A. I am afraid I could not tell you without the books. It was in the early part of the company's existence, thirty or forty years ago.

Q. Is it not a fact that the books show that the taxes and assessments were charged to expense account?

A. Yes, sir.

Q. And paid for by current earnings?

A. Yes, sir.

9202 Q. Is it not the fact that the lots at Eighteenth street and North river, that cost $22,986, are valued in the appraisement schedules at $74,738?

A. I could not tell you. In the aggregate I can tell you what it cost, as against its value. They charged everything up to two accounts, under the heads of North river and East river property.

Q. So that, in these two accounts, the items for structures, plant and lots were intermingling?

A. Yes, sir; but I dissected and got the results on "Sheet A 11."

Q. Now, following the comparisons farther, what do you find to have been the cost of the plant,—which, separate from the street mains, meters, and services, appears to have been valued in the schedules at $3,623,000?

A. Three million, six hundred and twenty-three thousand dollars. If you add to that $3,000,000, for office furniture and laboratory, they cost $2,550,309.72.

Q. What are they valued at, total, in the appraisement?

A. Three million, six hundred and forty-six thousand four hundred and three dollars.

Q. What is there on the books to represent that assumed appreciation, of anything, of about $1,090,000?

A. Nothing.

Q. Is it not true that the total amount appearing on the books of the company to have been expended for the construction of buildings and improvements, not plant and apparatus, is only $513,022.94?

A. That is correct.

Q. If it be assumed that such buildings and improvements are real estate, the cost of which is not charged to any other account—even then the real estate would not appear on the books to have cost more than the sum of $4,378,691.45?

A. No, it would not.

Q. But the fact is, is it not, that this first item of $513,022.94 has been paid for out of current earnings?

A. No, capital and earnings.

9203 Q. In your report you did not state that any amount appears by the books to have been paid for in special privileges and franchises; do you find any such item?

A. There is nothing of that kind in the Manhattan Company.

Q. Or for patents?

A. No.

Q. No expenditures of that character appear?

A. Not specifically stated, no; if there are, they are charged in construction, and are minor sums.

Q. But you did not discover any?

A. No, sir.

Q. How did you find the item of depreciation treated upon the books you have alluded to in your report; please explain that item as it appears in your tables more fully, and how the company in their accounts treated it?

A. Well, several years ago the Manhattan Company reserved an amount of profits to meet depreciations, and at the same time apparently continued to make all necessary repairs and additions at the expense of revenue, thereby charging, in point of fact, the depreciation twice over; later on when they discovered this to be so, they credited back the sum of nearly $800,000, to their profit and loss account, and divided up $500,000 of that reservation in the certificate which I previously mentioned.

Q. About what year?

A. About 1863; so in reality at the expense of revenue the works were presumably in good working order and practically as good as new at the time they were transferred to the Consolidated Company.

Q. Is there any thing in the books respecting this item of depreciation that leads you to change the testimony you have already given as to what is proper in that respect?

A. No; I think the study of their figures will approve my figures in the custom of this company.

9204 Q. Excluding the item appearing in the Consolidated schedules of appraisements of rights, franchises, etc., of $2,329,000, what do you find by the books of the company to have been the actual cost of the properties that appear in those schedules to have been valued at a total of $9,611,000?

A. What is represented in the figure of $9,611,000 cost the company $4,873,000, in round figures.

Q. And no more?

A. No more; it could not.

Q. So that for the alleged appreciation of $4,738,000 nothing whatever appears upon the books?

A. Nothing whatever, no representative value.

Q. Do we understand from your report that upon a cash contribution as and for capital of $3,280,000 in all paid in at various times, there has been paid out to the stockholders in cash, in all amounting to $25,627,675.66, regardless of any stock certificates in the Consolidated Company?

A. Yes, sir. That is the aggregate sum that they have received in cash, exclusive of the sum of $720,000 that went into the capital. That $25,000,000 is the actual sum paid in cash by way of dividends and certificates.

Q. Is it also exclusive of the certificates of stock of the Consolidated Company held by the stockholders of the Manhattan Company after exchanging their shares?

A. It is.

Q. The nominal or par value of which is $100 for each share?

A. It is, and to make it clear the present stockholders hold that amount of stock in addition to $25,000,000 that they have received.

Q. What amount?

A. Eleven million nine hundred and forty thousand dollars.

Q. It has already appeared in the testimony that, in addition to the current dividends paid by the Manhattan Company to its shareholders during the year 1884, those shareholders received a
9205 so-called extra dividend or a contribution of some sort realized
from the assets of the Manhattan Company, and that an amount of about $400,000 was distributed among the shareholders of the Manhattan Company shortly after the consolidation, do you find either on the books of the Manhattan Company or on the books of the Consolidated Company any item exhibiting such payments or distributions?

A. There were entries in each company's books in reference to that, and the sum of $400,000 that you allude to is the last dividend that was paid to the stockholders of the old Manhattan Company that was paid by the Consolidated Company and subscribed to November 11, 1884, which was paid for by the Consolidated Company from the realization of assets of the Manhattan Company amounting to $594,000, which consisted of customers' balances, coal, lime and other supplies.

Q. So that in addition to the valuation stated in the schedules of the appraisements, there were enough assets of the Manhattan Company to yield the sum of $549,000?

A. Yes, sir.

Q. And out of that sum there was paid this distribution of $400,000 to the stockholders of the Manhattan?

A. Yes, sir.

Q. What became of the balance of $190,000?

A. That went to pay the current liabilities of the Manhattan Company, taxes and other things, as it appears on statement "A 10."

Q. Was that $400,000 in effect a dividend paid to the stockholders of the Manhattan Company?

A. Yes; it was ten per cent. on their stock and paid from the assets of the Manhattan.

Q. It had not been capitalized in the Consolidated?

A. No, sir.

Q. It was transferred to them?

A. Yes.

9206 Q. They collected them and paid them back to the Manhattan?

A. Yes, sir.

Q. Whether or not it was the diminution of the working capital in the combined properties, to the extent of that distribution of $400,000?

A. Practically that is the effect of it; it was the working capital divided among shareholders.

Q. Is there, as appears by the books, yet a small sum or small percentage to be divided among those same Manhattan shareholders, or is the entire bulk of the assets represented by this $590,000 now exhausted?

A. By these figures the liquidation of the Manhattan is practically effected.

Q. Does that correspond with the accounts of the adjusting committee?

A. Yes, sir; these figures are based upon the figures of that committee.

Q. Do you not find it to be true that the adjusting committee have not concluded their adjustments in respect to all the constituent companies?

A. I do not know but they have; I think they have as far as the Consolidated is concerned; the accounts of the Consolidated Company in each of the constituent companies are balanced off as far as the Consolidated books are concerned; the individual constituent companies having so adjusted their affairs as against their own stockholders.

(By the CHAIRMAN:)

Q. In your report what do you mean by the presumed cost of plant, work, etc.?

A. By that I mean the original outlay for the property plus its additions and improvements, less its deterioration or depreciation; thererfore, the balance represents the fair value of its cost or worth.

Q. Then, by presumed cost you really mean what is equivalent to actual cost?

A. Actual cost.

9207 Q. Have you made an examination of the Metropolitan Company's books also?

A. I have.

Q. Are you able to give evidence to the committee in a similar manner?

A. Yes, sir.

This company was organized in 1858, under a special act of the Legislature with a nominal capital of $2,500,000.

Upon reference to the statement marked "C1," it will be observed that of this capital the sum of $612,700 only was received in cash and the remainder was paid for the charter and construction account. On this latter account the sum of $1,178,000 was paid to the Manhattan Company for the purchase of the Sixty-fifth street property, works, mains, etc. (reference to which is made under heading of that company), and was apparently issued in payment therefor at the rate of about fifty cents on the dollar.

This company commenced business about the year 1862, and was successfully carried on for the next twenty-two years, as will be observed by the profit and loss account on pages C — to —, notwithstanding the fact that dividends were paid upon a large amount of capital issued for property and franchises, a great part of which was issued at a large discount.

The dividend account on page C —, shows that the company commenced paving dividends in the year 1866, and continued doing so with the exception of the year 1873. The sum paid to stockholders in the aggregate including scrip certificates of $1,000,000 with interest thereon of $761,249.36 is $7,573,749.36, and it will be observed from the statement that this is an excess over ten per cent. upon the whole of the capital of $1,973,949.36.

9208 Upon reference to the capital investment account of real estate, property, etc., page C — to —, that although some of the property, plant, etc., was paid by stock issued at a discount, the valuation to the Consolidated Company, including franchises, is largely in excess of the amount so charged as the purchase price of the same, and as detailed upon the account marked "C —," the cost (including the stock) of the various properties transferred to the Consolidated Company according to the books was $5,292,175.35, giving an appreciation between that and the appraisement to the Consolidated Company ($7,175,000) of $1,882,824.65.

At various times this company issued bonds and mortgages for considerable sums upon their property, the interest thereon being charged in the regular way of business to the profit and loss account before the profits were determined; the amounts so outstanding and assumed by the Consolidated Company were for bonds $658,000 and mortgage $30,000, making $688,000, which was deducted from the appraisement of the property value and stock of the Consolidated Company was issued for the net amount which, in round figures, was increased to $6,500,000, as hereafter shown.

In addition to this, however, there was a large amount of assets belonging to the company which were not transferred to the Consolidated Company but subsequently realized and divided among the stockholders to the extent of $525,000, and still remains an undivided surplus of about $160,000.

The benefits, therefore, derived by the stockholders of this company for:

9209 Total capital paid in cash	$612,700 00
Total capital for charter	144,000 00
Total capital for purchase of Sixty-fifth street property	1,178,000 00
Total capital for construction	565,300 00
Making a total of	$2,500,000 00
Dividends paid to stockholders in cash	$6,500,000 00
Scrip and interest issued in 1870, subsequently paid off by instalments	1,073,749 36
Stock in the Consolidated Company	6,500,000 00
Making a total of	$14,073,749 36
To which must be added division of assets since consolidation, paid in cash	525,000 00
Present undivided surplus, say	160,000 00
Making a total of	$14,758,749 36
From which deduct the nominal amount of stock, capital	2,500,000 00
Total received beyond original investments	$12,258,749 36

This company claims to have incurred considerable loss by explosion and fire. By the books, it appears that the loss to the company on this account in 1865, was $108,962.22, $12,000 of which was charged to construction account for new coal sheds, and the balance to profit and loss account, less a small salvage realized upon coal.

9210 In the purchase of the Sixty-fifth street station before referred to, the amount charged to the construction account, as representing the value of the property so taken at cost, and the par value of the stock appears to be the sum of $533,922.62.

Q. I understand you that the stockholders of the Metropolitan paid in $2,500,000?

A. In cash and patents and construction and franchises.

Q. Now, about when was that put in and how much each year?

A. That is shown in "C1."; it was put in in the years 1860, 1861, 1862 and 1863.

Q. I understand you from that investment they have actually taken out $8,258,000 and odd dollars?

A. Yes, sir.

Q. They have left in their hands what?

A. Six and a half million dollars in the Consolidated stock.

Q. Reckoned at par?

A. Yes, sir.

Q. The amount taken out as you have given it includes $160,000 that is ready for and awaiting distribution?

A. Certainly; that is so.

Q. Have you made an examination of the books of the Metropolitan Company with a view to ascertaining the cost as it appears from those books of the real estate, and of the plant and of the items specified in the schedules of appraisement or the totals therefor?

A. I have.

Q. Will you please refer to the item resulting from your previous compilation of the appraisement of the schedules of $5,312,000, being the total of the appraised values of the plant, real estate, etc., of the Metropolitan Company, and state what those items appear on the books to have cost that company?

A. Five million two hundred and ninety-two thousand one hundred and seventy-five dollars.

Q. Does that cost represent money actually expended?

A. Not wholly so.

9211 Q. In so far as it does not represent money actually, detail?

A. It represents $3,405,000 in money and about $1,887,000 in stock, the greater part of which latter amount was given at the rate of fifty cents on a dollar; hence, the reason why the appraisement so nearly approaches the actual stated cost in the books.

Q. That is to say, what appears to have cost $1,887,000 actually did cost $943,500?

A. Yes, sir.

Q. If that which did cost $943,500 was added to the actual cost $3,405,000, wouldn't the total cost thus appear to be $4,348,500?

A. Yes, sir; it would be $994,000 less and the appreciation would be 994,000 more.

Q. If the appreciation was thus $943,500 more than the difference between the cost as stated in that way on the books and the appraised value of the items comprehended by the figure 5,312,000 would be the sum of what?

A. Two million eight hundred and twenty-six thousand three hundred and twenty-four dollars and sixty-five cents.

Q. Is there any thing upon the books of that company to represent an expenditure of such a sum or any part of it?

A. No, there is not.

Q. Is there any thing on the books of that company to represent property resulting from that sum or any part of it except as you have stated that stock was issued for property?

A. No, sir.

Q. Is there any thing on the books of that company to represent an expenditure for so-called rights and franchises, etc., in addition to the expenditures that you have, immediately preceding this question, detailed to compare with the item stated in the appraisement schedules of rights, franchises, etc., $1,863,000?

A. There is nothing beyond the $144,000 that was given for the charter.

9212 Q. Isn't that already included in the expenses you have mentioned?

A. Yes. There is nothing entered on the books of the Metropolitan for the rights, privileges and franchises.

Q. Whatever there has been expended, if any thing, for any such assumed property, appears in the expense resulting in the sums you have already stated, do they not?

A. They do.

Q. Then, as we now understand you, the figures you have above given of $2,826,324.65 include an appreciation for rights, franchises, etc., so called at an estimate of $1,863,000, as stated in the appraisement schedules?

A. Yes, it does.

Q. Referring to the statement in your report just read and to the figures on page "C5" and to the appraisement schedules, it is observed that the total net appreciation is stated by you at $1,882,824.65, and that in the appraisement schedules there is an allowance made for so-called rights, franchises, etc., of $1,863,000, thus leaving an actual apparent net appreciation of $19,824.65—is that correct?

A. That is correct.

Q. Will you explain whether you found anything upon the books of the Metropolitan Company in reference to such a comparatively small appreciation—and by the word comparative, I mean in comparison with the appreciation found with the result of other companies as testified to?

A. Yes. That arises from two causes mainly; first, that the cost of the property is entered at its then double value by reason of stock being given at fifty cents on a dollar. There is nearly $1,000,000 charged up, and, secondly, as I am informed, the Sixty-fifth street property was cut in two by the New York Central Railroad, and what was left was useless to them for the purposes of their business in consequence of their being deprived of their water front.

9213 Q. Which occasioned a depreciation to the front of how much?

A. Five hundred and ninety-eight thousand seven hundred dollars and eighty-six cents.

Q. If that depreciation last mentioned had not occurred as shown by the books, there would have been an actual appreciation in comparison with the cost, in all, of what amount as represented by the appraisement schedules?

A. Well, about two and a half million dollars. The actual sum is $2,481,525.51.

Q. Have you prepared a summary of the accounts of the constituent companies so as to show the results in respect to each of the companies in the same manner as the results you have just shown concerning the Manhattan and the Metropolitan Companies?

A. I have.

Q. Will you please produce them so that the committee may examine them to-night and examine you farther upon them on another occasion?

A. I will.

Adjourned until December 17, 1885.

NEW YORK,
FIFTH AVENUE HOTEL, *December* 17, 1885.

The committee met pursuant to adjournment.

Present: Hon John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain appears as counsel to the committee.

THOMAS K. LEES, being duly recalled, testified as follows:

9214 Examined by the CHAIRMAN:

Q. Did you bring the resolution of the New York Company, referred to in your evidence, on Wednesday of last week?

A. I brought a copy of it. (Witness produces a paper which he says is a copy of that resolution.)

(By Senator MURPHY:)

Q. This is a copy of the resolution which you testified to the other day that you was employed under?

A. Yes, sir.

Q. Can you aid the committee in ascertaining how the sum of $45,000,000 was reached as the capital of the several constituent companies, including the Mutual, which afterward declined to enter into the consolidation?

A. Only by examination of the schedules; if I had them I might possibly.

Q. What schedules do you refer to?

A. The schedules of consolidation in the hands of your committee.

Q. Was the $45,000,000 reached by adding up the original appraisals of the several companies, or was it fixed as the aggregate amount prior to such valuations, if you remember?

A. I do not think it was fixed prior to that.

Q. Do you know how that was?

A. No, I do not.

Q. I see that the capitalization of your company was changed in 1871 from $1,000,000 to $4,000,000?

A. Yes, sir.

Q. When that change was effected was any new capital contributed to the concern?

A. No, sir; it was the abandonment of the charter and the organizing under a general law on a new valuation.

Q. Without any change of intrinsic values?

A. It was the same property.

9215 Q. Prior to that time, the company existed by virtue of a special charter, and at that time you were organized under a general gas law passed in 1848?

A. I don't remember the date of its passage; it was the law at the time.

Q. What special privileges had the company, under its special charter, prior to 1871?

A. I don't know what they had had; it had originally exclusive rights in the city for a few years, but they had expired long before I went there.

Q. Are you able to say that it had any special rights or privileges derived either from the city or the State at the time of the change in 1871?

A. I think it had from the city; I cannot say what; it had right, certainly, to lay mains in the streets.

Q. In passing out of the old condition into the new, did you carry with you, as a company, any special rights, if there were any, which you had theretofore possessed?

A. Yes; I think that law under which it was incorporated by virtue of the act it carried over.

Q. Do you remember what, if any rights and privileges, were transferred prior to the subsequent organization?

A. I do not remember any thing special, sir; I know we had a water grant from the city to keep and fill in lots in Twenty-first street, purchased from the city, but when I don't know.

Q. Where were those water rights—designate by streets and river?

A. Between Twenty-first and Twenty-second streets, east of Avenue A. Another party had the same right to fill in the block below, and we bought that afterward so it now extends from Twentieth to Twenty-second street.

Q. There are no other rights that occur to you?

A. The right to occupy the street with our pipes.

Q. That was derived from the city?

A. Yes, sir.

9216 Q. From the common council of the city—when was that obtained?

A. I could not say; a portion of it must have been taken twenty-five years ago.

Q. Was it an exclusive right?

A. It was at the beginning, but that expired long before my time.

Q. Is the right which you enjoy concurrent, at the time of consolidation, with rights on the part of other companies?

A. I suppose it to be so.

Q. What process was employed by the New York Company in the manufacture of gas?

A. The Tessie-du-Motay.

Q. Is the same process now employed in the same works?

A. Yes, sir.

Q. According to the plan of increasing the capital stock, which was adopted by the New York Company in 1871, or the plan adopted by the constituent companies in 1884, as a matter of theory, at least, would it not be possible to increase the capital stock engaged in the manufacture and distribution of gas to an unlimited extent?

A. I think the stockholders would have something to say about that and object to it.

Q. According to the plan of increasing the capital stock which was adopted by the New York Company in 1871, or by the plan adopted by the constituent companies in 1884, as a matter of theory
t least, would it not be possible to increase the capital stock en-
ged in the manufacture and distribution of gas to an unlimited ex-
nt?

A. That is a matter of theory, sir; I do not know whether it would
e possible or not.

Q. Don't you know it would be?

A. I do not think it would be.

Q. As a matter of fact, would it not be possible to increase it to an unlimited extent?

A. I think not.

Q. What is to hinder it, as a matter of fact?

A. I do not know as a matter of fact; I do not think
9217 it would be possible for I don't think the people would take the stock.

Q. You did, in 1871, multiply the stock by four?

A. Yes, sir.

Q. And in 1884 multiply it by, at least two?

A. Nearly two.

Q. Wasn't it more than two, take it as a whole?

A. I could not say about that.

Q. Then, so far as your company is concerned, without any new contribution to the capital stock of the company, its share capital was increased, as a matter of fact, four-fold in 1871?

A. Yes, sir.

Q. And in 1884 it was multiplied by 1 89-100?

A. Yes, sir; share capital.

Q. Now, upon the same theory, it would be possible, would it not, for the present Consolidated Company to consolidate with—for example, the Equitable Company, and make a new appraisal whereby the aggregate capital of the new company would be still farther increased, might it not?

A. I am not a lawyer.

Q. On the same plan which was adopted that would be?

A. I think the law provides for that; I think it could be done under that law as it stands.

Q. If, from what was done in effecting the consolidation in 1884, it would be lawful also to make a new consolidation and a new appraisal whereby the capital stock should be still farther increased?

A. Is it fair to put me to that question, as a lay-man; I think it is possible, it might be so, and there may be legal objections I know nothing about.

Q. Do you see any reason why, if what I have stated could be done, there might not be still another consolidation, for example, with the Mutual, or with some company hereafter to be formed, and a new appraisal made, and stock still farther increased without the addition of any new capital stock? 9218

A. It is a thing I have not given a thought; I do not know whether it can be done or not.

Q. Do you see any reason why a new company might not be formed for the very purpose of effecting a new consolidation with a new appraisal and a fresh increase of capital stock upon the theory adopted in the consolidation of the companies in 1884?

A. I do not know whether it could be done or not.

Q. At the time of the consolidation were the several constituent companies manufacturing gas of equal power and extrinsic value per thousand cubic feet?

A. There was a difference in the quality of the gas.

Q. The gas manufactured by one works would be intrinsically worth more than gas manufactured at some other works in the city.

A. That was what we all said.

Q. Is it a matter of ascertained fact that the gas manufactured by some of these works is intrinsically better than that manufactured by others in the city of New York?

A. I do not think there is very much difference in them now.

Q. Is it a matter of ascertained fact, and not a matter of opinion, or a statement for the purpose of effecting a sale, that the gas manufactured by some of these works is intrinsically better than that manufactured by others in the city of New York?

A. I do not know really; it is a matter of dispute to this day.

Q. If the gas manufactured at some of the works should have a thirty-candle power, and the gas manufactured at other works should have nineteen-candle power, is it equitable and right that a thousand feet of each of those should be sold to the consumer at the same price?

A. I cannot answer that.

9219 Q. How many distinct gas works are now operated by the Consolidated Company?

A. I think five.

Q. Are they operated by the same process?

A. No, sir.

Q. Are they of equal quality?

A. I have no knowledge.

Q. Has the quality of gas manufactured at each of these five works been ascertained by some scientific process?

A. The city examiner does just that.

Q. Have you never examined or ascertained the result of that examination?

A. I have no data on the subject; it has been ascertained; I do not think I ever saw the figures; they have been published in the "City Record," but I have not seen it for months and months and I don't remember.

Q. If such examinations have been made, you have no recollection that you have ever known the result of the same?

A. I never have examined them.

Q. You have no recollection that you have?

A. No, sir.

Q. No recollection you have paid any attention to it?

A. No, sir.

Q. How long have you been engaged in the manufacture, in any way, in the city of New York?

A. I have been connected with the gas company twenty-four years.

Q. And yet have given no attention to the quality and comparative value of gas manufactured by the several companies?

A. I have paid no regard to that since the consolidation.

Q. Before the consolidation did you?

A. I looked at that occasionally.

Q. Have you any reason to think that the quality manufactured at the several works has been changed since the consolidation?

9220 A. I do not think it has.

Q. Assuming the quality of gas manufactured by these several companies to remain as it was prior to the consolidation, what do you say as to the cost of manufacture at these several works as shown by these official examinations and reports; have you any knowledge?

A. No comparative knowledge as shown by that record as correct.

Q. There is an officer whose duty it is to test the gas made at these several works, and make a report in regard to the same?

A. Yes, sir, in the city.

Q. What is the name of his office?

A. Gas examiner; E. G. Love is his name.

Q. In fixing the price of gas that ought to be paid by the consumers in different parts of the city, do you regard it as a matter of entire indifference as to the different qualities, if there be a difference in gas, furnished to consumers in different parts of the city?

A. Yes, there is no attention paid to that whatever.

Q. And should be none?

A. Yes; some are twenty-five candle power; there is no attention paid to that whatever.

Q. And should be none; that is the answer?

A. Yes, sir.

Q. Why not?

A. It is impracticable to make a price for every candle power.

Q. Wherein is the difficulty; is the practicability difficult?

A. There might be a variation in the candle power in any two hours of the day.

Q. It would be impracticable to fix it with absolute mathematical accuracy?

A. That is what I mean.

Q. There would be no doubt about that?

A. No, sir.

9221 Q. Supposing the average lighting power of gas in one section of the city is much less than the average lighting power of gas furnished at another works for a different portion of the city, should the consumers of gas in those two sections of the city pay the same price for a thousand cubic feet of their gas?

A. I do not know how it can be avoided; I do not see how it can be helped.

Q. Supposing the lighting power in one section was twice what it is in another section, where the gas is manufactured at different works, is there any practical difficulty in saying that one shall pay more than another?

A. That is practically difficult, sir, because it cannot be made always in a fixed quality nor for a fixed cost.

Q. Are you not attempting to adjust it to a scale of mathematical accuracy—is that where the difficulty is?

A. That is one difficulty.

Q. What other?

A. Some people like one better than another.

Q. You mean to say some like gas with less lighting power rather than gas with a greater lighting power per thousand cubic feet?

A. I do not say that; some like a whiter gas and some complain of smoke of richer gases, and they are liable to get it.

Q. Other things being equal, is not the value of a thousand cubic feet of gas measured by its lighting power, its real value?

A. Other things being equal, yes.

Q. What other things enter into and affect the value of a given quantity of gas?

A. Freedom from smoke; a lighter gas smokes less and some people like it better, particularly if they have pictures about the room.

Q. Freedom from smoke is one thing; what else?

A. That is the principal thing.

9222 Q. Does that freedom from smoke sustain any fixed relation to the lighting power of gas; is there more or less smoke according to the power of gas?

A. A richer gas has more smoke and carbon in it.

Q. Could you detect the difference in the smoking?

A. Yes.

Q. So you could say, from your own observation, that the richer gas has more smoke than feebler gas?

A. Yes, sir; if it is too much too rich, it is sure to smoke; some like a lighter gas, for it has less illuminating power and is not so likely to smoke for that reason.

Q. Is there any way by which the smoke in this richer gas can be prevented?

A. Yes, sir; leave out the oil and make it lighter.

Q. You mean a feebler gas?

A. Yes, sir.

Q. Is there any way by which smoking can be prevented in a richer gas and still retain the light?

A. Not if it is too rich.

Q. What was the candle power of gas manufactured by your New York Company at and prior to the consolidation?

A. About twenty-five candles, if I remember; twenty-four or twenty-five.

Q. That was what it was at the time of the consolidation?

A. Yes, sir.

Q. For how long a time had it been so high as that?

A. Since 1880.

Q. Prior to that what had been its candle power—your company?

A. From sixteen to twenty-four.

Q. The average about what?

A. I do not know how it would average; the latter part of the time it was running up; the average I should think about twenty.

Q. At the time of the consolidation it was about twenty-four?

A. Twenty-four or twenty-five.

9223 Q. Was that a better gas than it was when it was twenty-candle power?

A. Yes, sir; I should think it was.

Q. Increase the power, increase in the value you receive?

A. Yes, sir; I changed the process and it came out a better quality of gas.

Q. Better in proportion to the increase of power?

A. No, better light; I had to get rid of that smoke by changing burners; if the burners are too large they must be cut down; the fault is in the gas; if it is too rich it will smoke any way; at times uneven.

Q. If some of the companies, at the time of consolidation, were manufacturing gas of an inferior quality, would not the effect of consolidation be to perpetuate a product of that quality of gas as against competition with a superior article?

A. No, I do not think it would.

Q. As a matter of fact, was that not one of the reasons which induced the New York Company to enter into the consolidation?

A. No, sir.

Q. Are you able to say whether or not that was a reason which entered into the minds of some of the directors of the companies?

A. I do not know what others did; I never thought such a thing.

Q. It did not occur to you, you say?

A. I said it.

Q. The agreement to enter into the consolidation was made, wasn't it, on the 29th of September, 1884?

A. I do not remember the date, whether it was or not; it was about that time.

Q. This resolution by which you were made secure in the enjoyment of $10,000 a year, bore date the same day?

A. You have the dates.

Q. This bears date September 29, 1884, so that it did not make much difference to you personally, what kind of gas was made, or what the price was?

A. Yes, sir; it made considerable.

9224 Q. You would be made secure of the $10,000 to start with?

A. Yes, sir.

Q. As a stockholder, you would be interested?

A. Not that; I would have some little pride, for it was a business I have been in for twenty-five years.

Q. What was the total amount of shares in the New York Company held by yourself or some member of your family?

A. I do not remember; 200 or 300 shares altogether.

Q. Wasn't it between 400 and 500, on recollection?

A. I think not; my wife had about 158, and I had about the same; if there is some standing on the book, it was transferred to somebody else.

Q. How does it happen there is 100 shares more standing in your name?

A. It is held by somebody else; I would get an order from the country, and until it is paid for, I take it in my own name; I held it, but it did not belong to me.

Q. You held it for somebody prior to consolidation?

A. Yes, sir.

Q. When the consolidation was effected and the stock distributed, was that which you held for somebody issued to you, in your name?

A. Issued to me and transferred a block issued to me and divided.

Q. Prior to 1880 what was the candle power of the New York gas?

A. I could not tell you.

Q. Wasn't it always lower than nineteen?

A. No, my impression is it would average about seventeen or eighteen candles; the contract with the city was sixteen, I think.

Q. Have you that contract now?

A. It has been renewed.

Q. Don't you know the candle power was raised in the contract with the city?

A. I did know it was afterward raised to the London standard.

9225 Q. There is no practical difficulty in manufacturing gas at a fair uniform candle power?

A. Not if it is all made on one plant entirely.

Q. How much expenditure was made by the New York Company on their plant at or about the time it commenced to manufacture gas by a new process which you have described to be the Tessie-du-Motay process, water-gas process? How much was expended, if any thing, and when?

A. I think that process cost us something over $600,000 for the process, plant and works.

Q. That money was expended during 1880 or 1879?

A. Both years.

Q. Was a part of that expenditure a payment of $300,000 to the Municipal Company?

A. Yes, sir.

Q. Was that paid in cash or stock?

A. Cash by installments.

Q. Extending over what period—when was the last payment?

A. I could not tell you.

Q. Extending over about how long a period?

A. It might be six months or twelve; I should not think it was over that.

Q. Was any part of the plant or apparatus sold at the time of that change?

A. No, sir; I think not.

Q. State what was done at the works in connection with effecting that change?

A. A new plant was put inside of the old works.

Q. The old plant was thus rendered useless?

A. No, sir, to take up gas if ever it is necessary and reserve it.

Q. You have not used it since?

A. A part of it.

Q. How much?

A. I couldn't tell you how much.

Q. You have not made any considerable quantity of coal gas since?

A. No, sir.

9226 Q. And the plant that had been adopted to coal gas has been held in reserve during the time since water gas commenced?

A. A portion of it.

Q. For which the $300,000 was expended?

A. Not entirely.

Q. How much?

A. I could not tell you; it has been out of my head for the last five years.

Q. You have two works?

A. No, sir; one; Twenty-first street and East river.

Q. And all that was done in respect to that was at these particular works?

A. Yes, sir.

Q. The same retorts used?

A. No, sir.

Q. The same meters were used?

A. Yes, sir.

Q. The same benches used then as now?

A. Retorts and benches are identical; I have answered that.

Q. Are they used now?

A. No, sir.

Q. The accounts that have been taken from your books indicate the sum of about $290,000 expended for plant, apparatus, etc., about 1880, about the time of this change, and that the amount altogether for that purpose was about $440,000, and after the depreciation had been written off, $290,000 appears still charged for that expenditure. Can you tell the Committee what is represented in property by that expenditure, at about the time of this change you refer to in 1880?

A. I have no idea.

Q. As a matter of fact, have you given any practical attention to the manufacture of gas for the last five years?

A. No, I have not given very much.

Q. You have attended to the business of the company?

A. I am the president, and have oversight of every thing.

Q. What is the name of the engineer at your works?

A. William T. Lees, my son.

9227 Q. How long has he been there in that capacity?

A. About five years.

Q. Are the engineers' reports made at stated periods?

A. No, sir.

Q. Is there any officer or subordinate who makes stated reports to the company concerning the quality or cost of manufacture of the gas produced?

A. No, sir.

Q. Do you have engineers' reports?

A. Yes, sir, daily; for instance, use so many pounds of coal?

Q. Do you have the gas tested at the station?

A. Yes, sir.

Q. Is that recorded?

A. Yes, sir.

Q. Are those records sent to the company?

A. They used to be sent to Hester street; I do not know what becomes of them now.

Q. You mean to say that the New York works and the distribution of their product has continued, without the quality of gas being gauged and recorded from time to time for the information and action of the board of directors in fixing the price, or for other business purposes?

A. I have never seen any such.

Q. That is the fact?

A. That is what I suppose to be the fact.

Q. That still continues?

A. I said at the Hester street office such reports used to come in to me every day; they are made in the office.

Q. Is that the only report that is made?

A. Yes, sir; except the daily send-off or manufacture.

Q. Does the business continue under the Consolidated Company in the same methods that it was conducted before the consolidation, so far as the New York branch is concerned?

A. The manufacturing department does.

Q. The distribution department does?

9228 A. No, sir; they make the returns to the Consolidated Company; it did not before; the distribution of gas I have nothing to do with.

Q. As a matter of fact, the gas which is delivered by the New

York branch works is produced and delivered in the same meters as it was before the consolidation, whether it has continued now as it was before.

A. The manufacture is the same, and I said the distribution through the pipes is the same.

Q. You say that the distribution through the pipes is the same; is not distribution to the consumers the same?

A. Yes.

Q. As a matter of fact, the only difference from the general conduct of the business is in the methods of reports and the persons to whom they are made?

A. Yes, sir.

Q. Prior to 1880, during your long experience as a managing officer of the New York Company, upon what principle was the price of gas fixed, if any, by your company?

A. I could not tell you; I do not remember what was done and said.

Q. Isn't it true that it was not fixed on any principle?

A. I could not say how it was fixed.

Q. It was always fixed arbitrarily by your company without regard to its cost or the capital involved?

A. I could not tell you how it was fixed.

Q. Did you ever hear those elements considered in fixing the price of gas?

A. I do not know what I heard five years ago; I could not tell you sir.

Q. About what was the price of the New York stock early in 1884?

A. I could not tell you whether it was 150 or 160, or 140 or 120, somewhere along there, I cannot remember.

9229 Q. What contract, if any, existed at the time of the consolidation between the New York Company and the engineer or superintendent of those works?

A. None.

Q. Was any resolution passed in respect to any other officer of the company than in respect to its president?

A. Not that I am aware of.

Q. Was there any agreement made between the company and any other of its officers or employees?

A. I am not aware of any.

Q. You are one of the vice-presidents of the Consolidated Company?

A. Yes, sir.

Q. Do you not know that there was a similar agreement with each of the officers of the Consolidated Companies?

A. With some of them.

Q. With whom is there not?

A. The Harlem.

Q. There is a similar agreement relating to the vice-president from the Manhattan Company, is there not?

A. No, sir.

Q. The vice-president of the Consolidated Company from the Manhattan Company?

A. He is the president.

Q. There is a similar agreement with an officer of the Manhattan Company who is now an officer of the Consolidated?

A. Yes, sir.

Q. Of the same amount as in your agreement?

A. The same amount.

Q. And also with a representative of the Metropolitan Company?

A. Yes, sir.

Q. And also with the representative of the Municipal and Knickerbocker?

A. The Municipal but not the Knickerbocker nor the Harlem.

Q. Which of the officers of the Municipal?

A. Mr. Gawtry.

Q. He is now the secretary of the Consolidated Company?

A. Yes, sir.

Q. The total of that liability amounts to $400,000, payable at various times?

A. It depends upon how long we live.

9230 Q. The contingency is only upon that?

A. Yes, sir.

Q. The total of that liability amounts to $400,000, contingent only upon life; that is correct, isn't it?

A. Yes, sir.

Q. It having already appeared that the capital stock of the New York Company has been increased from $750,000 to $7,560,000 without the contribution of any new capital by the stockholders; it is true, is it not, that such has come from the earnings of the company?

A. The increase has come from the earnings of the company?

Q. And those earnings have come from the consumers of gas?

A. Not entirely.

Q. Have they chiefly?

A. Those are the earnings; the increase came largely from the improvement in real estate, and in selling down-town property and in buying property up-town.

Q. Has not, by far, the larger part of that increase come from the consumers of gas?

A. Probably.

Q. Then, in effect, the consumers are made to increase the capital stock of the company for the benefit of its stockholders, are they not, and then the consumers are required to pay a price for gas based largely upon this increased capitalization?

A. I do not think it is so.

Q. Why not?

A. I do not think there is any thing to bear it out.

Q. Why not; you have given me the facts and I have got them before me; you said a large portion had been made by investment; is not the price of gas fixed in part with a view to obtain what you call a reasonable profit on the capital invested in the concern?

A. In part yes.

9231 Q. Then, the increase of capital stock from whatever source it comes tends, does it not, to increase the price of gas?

A. It seems not; it is a matter of opinion of course.

Q. Taken as a proposition by itself, do you or do you not think that the increase of capital stock tends to increase the price?

A. I think it does not and I think it has not.

Q. You mean to say that if, for instance, $17,000,000 capital was sufficient to supply the city of New York with gas, that the price charged the customer would not be likely to be less than if that capital stock were increased to $50,000,000?

A. It has not had that effect.

Q. That is not an answer to my question at all?

A. It depends entirely upon condition of affairs.

Q. The stenographer will strike out the last answer; you mean to say that if, for instance, $17,000,000 capital was sufficient to supply the city of New York with gas, that the price charged the consumer would not be likely to be less than if that capital stock were increased to $50,000,000?

A. I could not say.

Q. Then you do not see why you should not want just as much profit to distribute on a capital of $17,000,000, as on a capital of $25,000,000 or $35,000,000?

A. I do not say that; it has not been the effect of that; that is what I argue upon.

Q. You mean to say that what you call a fair dividend to be distributed upon a capital stock of $17,000,000, would not be less than a dividend distributed upon a capital stock of $35,000,000 or $50,000,000?

A. The amount of this would vary the rates very considerably.

Q. What do you think is a fair per cent. for you to receive now from the Consolidated stock which you hold?

A. In the present state of the market about six or seven per cent.

9232 Q. It already appears that the actual capital contributed by the stockholders is only $750,000?

A. That is over sixty years ago.

Q. Supposing that that had remained the same, would you think that a fair per cent. would be about eight or nine times six or seven per cent.?

A. It could not have been the same; the profits from real estate were reserved to build the works and extend the works.

Q. Then the consumers build the works?

A. Yes, sir.

Q. And the stockholders own it and get the benefit of it, don't they?

A. Yes, sir; if they get anything.

Q. Do you think it is right to require the consumers to pay a dividend upon the capital stock which they themselves have created?

A. I have not given that very much thought.

Q. Not prepared to give an opinion upon it?

A. No.

Q. Do you know what the present candle power is of the gas produced by the New York works?

A. About twenty-five.

Q. How does it happen that the photometer report of Dr. Love fixes in the first week of December every day at twenty-two and a fraction of one?

A. I could not say.

Q. Is he likely to be correct about that?

A. He is not in my employ; I know nothing about it.

Q. Have not you any opinion as to his correctness?

A. No; he is able to stand for himself; he may possibly agree with our examiner; I do not know; I have not compared them.

Q. The extract from the photometer report for the week ending December 5, 1885, by Dr. E. G. Love, gas examiner, as I said, in the "City Record," and for the week ending November 30, New
9233 York gas is reported at 22.13, 20.03, 22.35, 22.12, 22.47,
22.30, as taken at the successive six days, the average being 22.23; do you testify that the candle power of your New York gas is more than that?

A. I don't testify; the last account I had of it was about twenty-five.

Q. You used to make it at about sixteen for the city contract?

A. Yes, sir.

Q. Did you ever run it up to twenty-four when you made coal gas?

A. I do not remember.

Q. Whether you have delivered gas as a business?

A. Never.

Q. Would it be practicable to make coal gas of that illuminating candle power?

A. It could be done and delivered.

Q. Could you make it satisfactory to any consumer?

A. I do not know; I never tried it.

Q. Don't you know it has not been done with coal gas?

A. I do not know.

Q. Don't you know it has not been done with coal gas in this city as high as twenty-four?

A. I never did it.

Q. It would cost a great deal to do it?

A. I should think it would.

Q. Would it not cost a great deal more to make coal gas of the illuminating power of twenty-four candle than to make water gas of the same illuminating power?

A. I do not know what it would cost to make twenty-four candle; I couldn't tell you what it would cost; I never made it; naturally it would.

Q. Was that one of the reasons why the New York had to change its method of manufacture from coal to water gas?

A. It might have been; I do not think it was; I am not certain.

Q. You know that at the time you made the change other companies in this city were delivering gas of much higher illuminating power than the power delivered by the New York Company? 9234

A. Some were and some were not.

Q. The Manhattan only was not?

A. The Harlem.

Q. Isn't it true that only the Manhattan works produced gas of a lower illuminating power than the New York?

A. I couldn't tell you whether it was the only one or not. The following is an abstract from Dr. Love's report before mentioned, showing the average illuminating power for the same week, of the following companies, viz.: Manhattan, candle, average, 18.04; New York Company, candle, average, 22.23; New York Mutual, candle, average, 29.28; Municipal Company, candle average, 28.12; Equitable, candle, average, 33.04; Metropolitan, candle, average, 21.16; Knickerbocker, candle, average, 24.16.

Recess until 3 p. m.

DECEMBER 17—3 p. m.

Hearing resumed.

JOHN P. KENNEDY, a witness called by the counsel to the Committee, being duly sworn, testified as follows:

Examined by Mr. TREMAIN:

Q. You are the president of the Mutual Gas-light Company?

A. I am, sir.

Q. That company was organized under a special act of the Legislature, passed in 1866, was it not?

A. It was.

Q. Can you furnish the committee with the names of the original members that, in fact, did organize that corporation, those who acted in forming the organization?

A. Yes, sir.

9235 Q. And you will do so?

A. Yes, sir.

Q. Your action commenced in what year?

A. I became a director in the company in 1872, after the completion of the works.

Q. You were engaged in the construction of the works?

A. Yes, sir.

Q. What was the name of your firm?

A. Hoey, Kennedy & Company.

Q. Are there any book or books in existence that will show what those works cost?

A. I do not think there are; my partner died before the works were finished, and I think the books are out of existence.

Q. Have you any books or vouchers that will show that?

A. No, sir.

Q. Were the payments for those works paid in stocks?

A. Stocks were originally issued to the firm?

Q. To what extent?

A. Five million dollars, but a portion of that stock was returned to the company to be sold by them and the fund turned over to us, which was done.

Q. At what rate?

A. Fifty per cent.

Q. Was the entire amount of $2,500,000 thus realized?

A. Yes, sir.

Q. Was any more?

A. Not at that time; subsequently it became necessary to enlarge the works and there was an issue of bonds made of $1,000,000, which were sold.

Q. One moment—the question was, any more realized? Was it intended to relate to the stock?

A. No, sir; there was no more.

Q. Subsequently there was an issue of bonds?

A. Yes, sir.

Q. To what extent?

A. One million, which was sold at par.

Q. In what year?

9236 A. I think that was the year after the works were started; it was commenced in 1870, and finished in 1872; I think it was the first or second year after they were sold by the company; I was a director

Q. Who was then its president?

A. I think Garrison.

Q. Who was its secretary?

A. Charles Place.

Q. Who took those bonds from the company?

A. The parties in interest took the majority of them.

Q. You mean the directors?

A. Yes, sir.

Q. Garrison took the most of them.

A. No, sir; he took his share; they were divided around *pro rata* among the stockholders and directors; they were sold at par.

Q. Are those bonds still outstanding?

A. No, sir; they were paid off about three years ago.

Q. Are there any bonds outstanding?

A. Not of that issue.

Q. Have any since been issued?

A. Yes, about three years ago some were issued.

Q. To the extent of what amount?

A. One and a half million dollars.

Q. Secured by a mortgage?

A. Yes, sir.

Q. They are still outstanding?

A. The most of them.

Q. One million three hundred thousand dollars?

A. A little less than that, $1,296,000, I think, still outstanding.

Q. Now, with the exception you have stated, nothing else has been received by the treasurer of the Mutual Company, for the present outstanding stock, representing its capital and bonds that are unpaid?

A. I think not.

Q. Was any part of the present outstanding bonds, amounting in all to $1,296,000, issued to replace any part of the $1,000,000 of bonds that was first issued?

A. No, sir.

9237 Q. Was any part of those bonds issued to stockholders for stock held by them?

A. It was all issued in that way, sir.

Q. And what stock thus became turned in, so to speak, to the treasurer of the company; what amount of stock?

A. I got my stockholders to relinquish thirty per cent. of their stock, which would make one and a half millions on five millions, and for that thirty per cent. of stock I issued six per cent. bonds in lieu of them, so that when the stockholders brought their stock they received that, and their stock was canceled, thus making three and a half millions instead of five millions.

Q. That was, in effect, a distribution of one and a half million to those stickholders?

A. Yes, sir.

Q. You have now stated all the securities representing the properties of the company that have been issued, and that are now outstanding?

A. Yes, sir; that is my conviction.

Q. Now, will you please state the real property that is owned by the Mutual Company, and how long it has been owned?

A. You refer to the real estate?

Q. No, sir, the location and what it is?

A. The first purchase we made was from Avenue D to the pier-head line of East river, between Eleventh and Twelfth streets, which were 206 feet front by about 800 feet to the pier-head line; the second purchase was that property known as the Novelty Iron Works, that extended adjoining this lot, and also a piece on the westerly side of Avenue D, extending west 440 feet by about 206 feet, making two blocks and a half of a block about.

Q. These are still owned by the company?

A. Yes, sir.

Q. That is all the real estate?

A. Yes, sir.

9238 Q. Has any been sold since it was originally acquired?

A. No, sir.

Q. Can you state the cost of the real estate to the company?

A. Well, sir; I think it was about $880,000 as near as I can remember.

Q. Eight hundred and eighty-two thousand five hundred and fifty dollars?

A. I think so.

Q. Can you state what was the actual cost of the works which your firm constructed, and for which the stock to your firm was issued?

A. No, sir.

Q. Can you state approximately?

A. You mean what the cost was to the contractors?

Q. Yes, sir.

A. I think the contractors got about $1,500,000 out of each profit, counting the stock at fifty cents on a dollar.

(By the CHAIRMAN:)

Q. They got two and a half million dollars?

A. That was the proceeds from the sale of the stock.

Q. Do I understand you that that was about $150,000 more than it cost to build it?

A. Something like that; I could not be positive; of course, we made a fair profit; we did not build for glory; we made a fair contractor's profit.

Q. What amount of money has been spent in increasing the capacity of those works since that time?

A. A good deal; I could not say; Mr. Yalden has all the figures, and I am perfectly willing to give his figures, his testimony.

Q. Then the amount shown by the books to have been expended since that time went, according to your testimony, for the increase in the producing capacity?

A. Yes, sir, and for improvements; I always tried to keep in advance in the newest plans or method of gas making.

Q. The present capacity of those works is about what?

A. I suppose I could make five or six millions of feet there in twenty-four hours.

9239 Q. Are the works not capable with a small expenditure, so as to increase that capacity very largely?

A. Yes, sir.

Q. As a result of your practical experience, what would be the approximate cost of increasing that capacity there?

A. I will say, to bring that capacity to eight millions of feet, from $1,000,000 to $1,200,000 would do it.

Q. One million to one and a quarter million would make four million cubic feet of gas more?

A. Yes, sir; I say that to venture; though I never figured it.

Q. What would it cost to duplicate your present producing capacity at the place of production?

A. To duplicate what we have got now it would cost considerable less than when it was built; they were built on the top wave when everything was the highest, just after the war; every thing was very high at that time, labor and materials; the company that succeeded took advantage of low prices.

Q. Is it not a fair statement to say that your present producing capacity, at the place of production, could be dpulicated now ot from sixty to sixty-five per cent. of its original cost to your company?

A. Not so wide a difference as that.

Q. Well, at seventy per cent.?

A. I would be willing to say eighty per cent.

Q. You think, do you not, it would be considerable less than eighty per cent.?

A. No, sir; twenty per cent. is a great deal on an amount of that kind.

Q. Is the daily product now five million?

A. No, sir; three million; when I say five million I mean a maximum figure; I think I would be safer to put it at four million; I would like to put it at four million instead of five; the works as they now stand.

9240 Q. So that, as we understand your testimony, the present maximum producing capacity is about four million cubic feet per day?

A. Yes, sir.

Q. And that that capacity is capable of being about doubled by the expenditure of about one million to one and a half million dollars?

A. Yes, sir.

Q. As we understand your testimony, the total amount that has been expended in constructing the works which are capable of the present producing capacity, is covered by the following moneys, viz.: two and a half millions, the proceeds of stock awarded to contractors, and one million dollars in bonds, making in all three and a half million dollars, to which should be added the sum of six hundred thousand dollars subsequently spent for betterments on the property, making in all for the present cost, as it now stands four million one hundred thousand dollars?

A. Yes, sir.

Q. Now that item of six hundred thousand dollars for betterments, which you have mentioned; is it or is it not for the purpose of keeping the property in repair and good working condition, or improving it from time to time so as to keep it up to the necessities of the business?

A. No, sir; the bulk of that was expended for street mains and enlargement of the works and alterations of the works; I made gas of almost every kind of process in order to get the acme of the matter, and it has cost us a great deal of money; and it would be impossible for me to tell just how it was spent; the repairs of the works, of course, have to go on from month to month.

Q. You would not call any part of that item expense account?

A. I think that would be called construction.

9241 Q. You would not call any substantial part of that item substantially an expense account?

A. No, sir; construction account, permanent construction.

Q. This expenditure that you have just spoken of, this last item has been accomplished from the earnings?

A. Yes, sir.

Q. Upon a plant of a producing capacity of about four million cubic feet per day such as you have described, what would be a fair percentage of annual expense to keep it in running order as a going concern, or what should be allowed, by way of depreciation, as representing such an expense, in your opinion?

A. I think ten per cent. would cover it, sir.

Q. As a matter of fact, how have you found it in your experience of ten years with that particular company?

A. I could not answer that, sir, intelligently; I presume Mr. Yalden's account there would show that.

Q. You have, of course, seen the tables that were prepared last spring, by Mr. Yalden, the expert, which were before incorporated in the report of the former Senate Committee?

A. Yes, sir.

Q. By those tables it appears that there was expended or written off as depreciation concerning the works of the Mutual Company, from the year 1876 to the year 1884, in all, the sum of $616,341.43. Have you found any inaccuracy in these figures?

A. No, sir.

Q. That is for nine years, and is, therefore, correct, is it not?

A. I think so, sir.

Q. Now, Mr. Yalden, if you will give us that percentage, it will be convenient at this place in the testimony?

A. The fact is we did not criticise Mr. Yalden's work but took it for granted that it was all right.

9242 Q. Assuming that to be correct, it was proper that the depreciation was about fifteen per cent.?

A. Whatever it is, is correct; I was only, of course, approximating to it.

Q. I make it about fifteen per cent., the depreciation; that which was expended in repairs or written off?

Mr. Yalden: I make it between fifteen and sixteen per cent.

A. I did not think it was so much as that; I thought it was about ten just from my impression.

Q. Assuming those figures to be correct, it would appear that there had been expended for the purposes of keeping the plant in run-ing order, or appropriated for that purpose by way of depreciation written off, a sum about equivalent to fifteen per cent. per annum on the actual cost of the plant?

A. Yes, sir.

Q. As a man of experience in manufacturing gas, isn't that a fair item to allow for depreciation of expense, in considering capital, and profits and cost of production, about fifteen per cent.?

A. I think so.

Q. It would not be safe to go much under that for any practical purpose?

A. I do not think it would, for I hold I have conducted my business very economically.

Q. Then you must have some opinion as to how the economies of other plants have been conducted, if you think yours has been conducted very economically.

A. Well, sir, the fact is, I have had so much to do to attend to my own business, I have not given much attention to my neighbors.

Q. Why have you an opinion that your business has been conducted economically in that respect?

A. For the reason that I am a practical constructor of gas
9243 works and I attend to every detail of the business myself; that is what I mean by that.

Q. If your producing works and the operations of your company had been united with the other constituent companies and formed a part of the consolidation, is it your opinion that that business would have been conducted any more economically?

A. I wouldn't like to say.

Q. Is that item of fifteen per cent. likely to be more economically conducted?

A. That would depend upon whether the consolidated companies reduce the number of their works; the depreciation would be less.

Q. If they did not?

A. I do not think it would be any less, sir.

Q. In fact, so long as the production of gas continues at the various works of the constituent companies which were established before the consolidation, the item of depreciation or expense of keeping the works in running order, is likely to be substantially the same as it was before the consolidation?

A. Most undoubtedly.

Q. You have schedules prepared for consolidation?

A. Yes, sir.

Q. Where are those schedules?

A. I have them somewheres, sir, among the archives of the office.

Q. Will you send them so that the committee can look at them?

A. Yes, sir.

Q. What candle power of gas did your company produce in 1880 about?

A. Well, sir, I think we made at that time our gas—I wouldn't be sure though; I think we made about twenty-five or twenty-six candle gas; the company made gas then from Virginia pine wood and naphtha and coal; subsequently I changed it to water gas.

Q. When was that change made?

A. About that time, sir, in 1880.

9244 Q. Active competition about that time?

A. Yes, sir.

Q. Your company was engaged in it?

A. Yes, sir.

Q. You competed with the coal gas companies?

A. Yes, sir.

Q. The Manhattan and the New York?

A. Yes, sir.

Q. The price of gas went down?

A. Yes, sir, very seriously.

Q. It was kept up by the pool afterward?

A. Yes, sir; after a fight there is always a settlement.

Q. From 1879 to the consolidation, was it not?

A. Yes, sir.

Q. Without that truce your company could have served your customers with gas at a much less price than was actually charged and with profit to the shareholders?

A. Well, I do not think I would like to admit that.

Q. You cannot help admitting it, if it is true?

A. At that time I was paying my stockholders six per cent.

Q. If that is not true, you can say so?

A. That would depend upon the amount of dividend.

Q. Do you really depend upon the amount of dividend?

A. Yes, sir.

Q. Assuming the stockholders got six per cent. dividend on the par value of the stock, couldn't the gas have been furnished by your company, during that truce, at a much lower price than was actually charged?

A. Well, I think it is probable.

Q. Assuming the div-dend should have been paid on the stock, and assuming the stock to have been paid for at fifty per cent. on a dollar, couldn't the price have been still farther lowered?

A. With a small capital, no doubt.

9245 Q. As a matter of fact, the cost of gas to the consumer is largely dependent, is it not, on the rate of dividend, and on the capital on which it is to be charged?

A. That is the whole story in a nut-shell.

Q. Now, with reference to the interest of the consumer exclusively, what advantage, if any, was promised or was likely to accrue, or is yet likely to accrue from the consolidation of the constituent companies into what is known as the Consolidated Gas Company?

A. You are putting me in a hole, asking me such questions as that; I do not want to criticize my neighbors; I run my own machine, and I am willing to let them run theirs; I do not like to express my opinion, if I can evade it.

Q. You will please observe that my question used the word ex*clusively*, so as to call for your opinion solely with reference to the interests of the gas buyers, and not to the holders, of its securities; the question relates exclusively to the interests of the gas consumers, and I cannot see why you hesitate in that respect?

A. I do not think it requires any great stretch of talent to answer that question.

Q. Now, with reference to the interests of the consumer exclusively, what advantage, if any, was promised or was likely to accrue, or is yet likely to accrue, from the consolidation of the constituent companies into what is now known as the Consolidated Gas Company?

A. I do not think it would be to their interest.

Q. Is it not really to the interest of the Mutual Company, as an apparent competing company, to maintain the integrity of the Consolidated Gas Company, in order that the price fixed by it may likewise be maintained. This question relates to those interested 9246 in the stock of the Mutual Gas-light Company, and asked with reference to their interests in your opinion?

A. No, sir; I don't think so.

Q. Why not?

A. Because we have no interest with them at all, in any way, shape or manner, except as would naturally be between different companies in the same business.

Q. Is it not the interest of the Mutual Gas-light Company's stockholders that the present price of gas should be maintained?

A. Of course it is.

Q. So long, therefore, as it is necessary to include in the cost of gas an item sufficient to pay a dividend on $39,000,000 of capital instead of a previous capitalization in the same companies of $17,000,000, that company is not likely to reduce the price of gas?

A. No, sir.

Q. So long, therefore, as that company maintains the present price of gas, it is not likely, is it, that the Mutual Gas-light Company will voluntarily reduce its price?

Q. Nor the Equitable Company?

A. No, sir.

Q. So that the practical operation in the city of New York, of the Consolidation, is that the price of all the companies would be maintained equivalent to the Consolidated Company's price?

A. Why, certainly.

Q. The net income of the Mutual Company is no less this year than it was last year?

A. Yes, sir; very much less.

Q. Is the gross income less?

A. Yes, sir.

Q. The price of gas is different?

A. Yes, sir, but our business is falling off by reason of that Equitable Company.

Q. But not by reason of the Consolidated Company?

A. No, sir.

Q. The Equitable is in your territory?

A. Yes, sir; my pipes extend from Bowling Green to
3247 Sixty-seventh street on the North river and on the East river.

Q. There is no limit of territory?

A. No, sir.

Q. Under your contracts with the city, if you have any, and under your legislative organization, there is no restriction of the Mutual Company?

A. None whatever.

Q. Your outstanding bonds of $1,296,000 will fall due in a year or two?

A. They are five-twenty bonds; if they are called in during the first five years, we pay five per cent. premium on time; if they allow them to remain until the expiration of five years, we can call them in at pleasure at par and interest.

Q. You stated a moment ago where your pipes ran in the city. Where did you get the right to do that?

A. From the board of aldermen.

Q. Do you pay any thing for those rights now?

A. Only in the shape of taxes; we pay about $70,000 a year taxes.

Q. You pay nothing for the right of way on the streets?

A. No, sir; none of the companies do that but the Equitable.

Q. The Equitable is the last contract that was made?

A. Yes, sir.

Q. And it is the only corporation that pays for the right of way?

A. Yes, sir.

Q. It is the last contract of any kind that has been made between the city and gas company?

A. Yes, sir.

Q. Now, it appears that with the price of gas as it did exist up to this year your company, in addition to paying its dividends, accumulated a surplus of about $3,130,000?

A. I am not aware of that, sir.

Q. Or a sinking fund or credit to profit and loss account, as you may choose to style it, isn't that the fact?

A. I think that must be a mistake.

9248 Q. The surplus earnings was three millions and something, last spring, after paying the dividends?

A. Oh, yes, that is probable.

Q. Then, there is a sum of about $3,130,000 which represents earnings after paying dividends?

A. Not after paying dividends.

Q. Yes, after paying dividends; that includes the investment?

A. I have got it now; that is correct.

Q. And part of that sum is invested?

A. Yes, sir.

Q. About how much is invested in United States bonds?

A. Eight hundred and thirty thousand dollars.

Q. The balance is how invested?

A. The balance must be in the works.

Q. The general assets of the company?

A. Yes, sir.

Q. You remember the rates of your dividends for the last few years?

A. Yes, sir.

Q. The last three years?

A. Ten per cent. on $3,500,000 capital in addition to the interest on the bonds; the two together would be about eight per cent. on the capital; we paid ten per cent. on the stock and six per cent. on the bonds.

Q. What you paid on the bonds is charged into the interest account and is thus written off before this item of surplus earnings is stated?

A. I fancy so.

Q. You recognize the copy of an account which you handed a former committee and which has not been printed?

A. Yes, sir.

9249 By Mr. Tremain: Which is as follows:

INCOME ACCOUNT.

DR.

To net earnings	$7,756,627 64

CR.

By interest	$786,321 04
Bonds paid first series	1,000,000 00
Mortgages paid	397,500 00
Construction	986,682 45
Dividends	3,525,000 00
New bonds bought	204,000 00
U. S. governments bought	812,152 71
Gas stock bought	14,626 00
Sundry accounts due us	3,784 27
Cash on hand	26,561 17
	$7,756,627 64

Q. That investment is more than $800,000 in government bonds is it not?

A. Eight hundred and twelve thousand dollars.

Q. There is another item, $204,000.

A. Those are our issue that we retired; that $204,000 was a part of that $1,500,000; that is the redemption.

Q. What else is there?

A. United States governments, $812,152; we have now $830,000 at par.

Q. What other investment is there?

A. We have $14,626 of our own stock.

Q. The par value of what?

A. That is it; when I made the exchange I found it necessary to buy some stock and we had that over.

Q. With the present current earnings, the bonds outstanding of your company are capable of being paid off, are they not, in view of your present investment holdings by the year 1887?

9250 A. Yes, sir; that would be the expiration of five years.

Q. And there would be left an outstanding share capital nominally amounting to $3,500,000 upon which dividends would continue to be paid?

A. Yes, sir.

Q. Assuming a dividend of ten per cent. upon such share capital account and earnings at the present price of gas, $1.75 per thousand feet, there would, in a few years, be a very considerable accumulation of money or funds, unless there was a serious falling off in the account of the Mutual Company's business, or else a very serious increase in the material and labor?

A. Yes, sir.

Q. In the absence of those contingencies it would not take but a few years to accumulate your capital over again of $3,500,000?

A. I don't know about that.

Q. Is not that the inevitable logic on the basis of past business?

A. Yes, sir; at past prices but not at present prices.

Q. At present prices of gas, isn't that so?

A. Half a dollar in one case and seventy-five cents in another is a very serious inroad to profits.

Q. There has been no increase in the cost to the Mutual Company of producing its gas since last spring?

A. No, sir; none whatever; if you will notice by my account you will see that every year I have been reducing the cost of production.

Q. You have it as low as forty-five cents in the holder?

A. Yes, sir; that is a point that puzzles every one and misleads them.

Q. We don't care for that; if there is any thing that should really be explained to render the situation different than what was reported upon before, I have no doubt that this committee would give attention to it; wasn't the accounts put into the last committee so 9251 analyzed as to give the cost of producing it per thousand?

A. Yes, sir.

Q. The cost of manufacturing and putting it into the holder is one thing and the cost of distributing it is another?

A. Yes, sir; the public will hear people say that gas can be made for fifty cents per thousand; they say that is what it costs the company; they ought to add the cost of distribution which is greater than the cost of production.

Q. Is the cost of collection equal to the cost of distribution?

A. The collection comes into the distribution as a part of the expense.

Q. Are you not aware, in the tables covering ten years' business of the New York Mutual Company, that the cost of distribution for ten years is uniformly less than the cost of gas in the holders per thousand feet? (Referring to page 52, 2d column of the appendix of the last Senate Committee's Report.) You had better give those three items for one year, if you wish to make an explanation?

A. That is correct, because it is taken from the book.

Q. In view of the explanation you have just made, and to correct a misapprehension that exists, it is the fact that it appears by the books that the cost of gas in the holder for the year, for instance, 1884, was forty-six and one-half cents, and of the cost of distribution per thousand feet was forty-one and three-fifths cents and that the amount to be written off for expense and repairs is eleven and seven tenths cents and that the net revenue from gas was $1.36, the total income was $2.36.

A. That is correct.

Q. You were a member of the pooling committee?

A. I was, sir.

9252 Q. By the minutes of that committee you appear to have been present at many of the meetings when the subject of consolidation was under consideration?

A. I was, sir.

Q. It appears by a resolution of that committee which was adopted at a meeting held in December, 1883, that a plan of consolidation had been accepted by the committee and was referred to a subcommittee with power to call in legal counsel, to carry it into effect, and that you was present at that meeting—do you remember it?

A. I think I do, sir.

Q. It also appears by those minutes that you was present at meetings held many months before when the same subject was under consideration?

A. Yes, sir.

Q. How early in those meetings were any plans or schedules of property with a view to consolidation, submitted by any of the members of the committee?

A. The matter of consolidation was brought up frequently, and was brought up early in our meetings; after we had our battle and the truce was offered I was sent for to meet a committee of the other companies with a view to coming to some settlement of our difficulties; and I was appointed on a committee to meet these gentlemen; we discussed the subject of settlement; some time after this a proposition for consolidation was suggested and was considered; but I did not view it with favor, and told the gentlemen that I did not want to enter into that matter; I did not think it was politic to do so; but as I was there a member of the committee, I felt it my duty to see what there was of it, and I acted with the committee in good faith, but prefacing my assent to the matter by stating that what ever I should do or say there should not be binding on my company in any manner whatever; that with regard to going into the 9253 consolidation, with them, I would submit it to my directors, and if they accepted it, all right, and if they rejected, that would be the end of it; I think the active business of the consolidation did not occur until the beginning of the last year, 1884.

Q. Do you remember that there was submitted about that time some schedules of property?

A. Well, sir, it was not at the beginning of the year.

Q. When was it?

A. I think it must have been two or three months in the year, as I recollect.

Q. It was during the spring?

A. I think it was.

Q. When did you first know that an act of the legislature was in contemplation with a view to consolidation?

A. I did not know anything more about it than you did until I saw it in print.

Q. Did you see it in print before September 29, 1884?

A. I think I did.

Q. Where?

A. I think it was published in pamphlet form.

Q. The act was?

A. I think it was.

Q. Who published it?

A. I do not know.

Q. Where did you see it?

A. I think I saw it in my office first.

Q. In the summer?

A. I would not be sure.

Q. We would like to see that pamphlet, if there is such a pamphlet in existence; have you it?

A. I do not believe I have; I am not quite sure; I can inquire and see.

(By Senator MURPHY:)

Q. Was the pamphlet other than the simple act itself as it appears in the Session Laws?

A. I think so; it was a paper-covered book, about that size.

Q. Very thick?

A. No, sir; about three-quarters of an inch thick; it had some other laws connected with it.

9254 Q. The statute of 1884 was never printed in such a book, to your knowledge?

A. No, sir; I never saw but one copy; it is about three-quarters of an inch thick.

(By Senator MURPHY:)

Q. It must have contained other matter?

A. I never knew anything about it until I saw it in print; didn't know that any such law was enacted.

Q. Whose schedules did you see or did you know were prepared for consideration as early as the spring of 1884?

A. I saw them all.

Q. The New York and all the constituent companies?

A. Yes, sir; all the constituent companies.

Q. Was any conversation had in your presence as to who should appraise those properties?

A. Yes, sir.

Q. By whom?

A. Well, Mr. Rowland for one, made some appraisements.

Q. By whom was the conversation had?

A. We had a conversation about it; all the members of the companies talked about the plant and method.

Q. What, if anything, was agreed upon formally or uniformally in respect to the method of valuations?

A. Well, the method of valuation was like this,—to ascertain the value of each plant, the value of the street mains and meters, and all the appliances.

Q. Was any thing said as to how the value of the works and plant was to be arrived at—take the New York Company—Rowland who valued the plant?

A. The plan was to obtain experts that were competent to value them.

Q. Was any thing said as to the principle of valuation which those experts should follow?

A. No, sir; they were to give what, in their judgment, would be a fair valuation.

9255 Q. And that was a valuation of the plant as a going concern, or in respect to its producing capacity?

A. I mean the latter.

Q. Who said any thing on that subject?

A. Oh, I don't know; we all talked it.

Q. Did Mr. Lees say any thing about it?

A. Yes, sir.

Q. Did Mr. Gawtry say anything about it?

A. Yes, sir; he had his plant to value the same as Lees, and by the same party, I believe.

Q. Did Francklyn say any thing as to the principle of valuation?

A. Well, I don't remember.

Q. Did Mr. Smith of the Manhattan?

A. Yes, sir; he took charge of the Manhattan valuation; he had that done by Mr. Farmer, who was a gas engineer and constructor.

Q. Before those valuations were made, I understand you to say, do I, that there was a general agreement as to the princip*al* of appraisement?

A. I do not know as to that; we had no principle only to get at what would be a fair valuation of the machinery and pipes in the street.

Q. Regardless of cost?

A. Oh, no; we took them at what would be a fair cost; for instance, how would you reckon to make such an estimate; you would put it at what it would cost to put it there, wouldn't you?

Q. Whether the agreement of the men among the parties in interest called for an appraisement of value according to what it would cost to put the plant there, or according to its producing capacity?

A. It was what it would cost to put it there; to duplicate it.

Q. So that to the best of your recollection, the principle of valuation that was united upon by the officers of the constituent companies as a basis was what it would cost to put the plant there?

9256 A. Yes, sir; that is it; then the real estate was appraised by real estate men.

Q. So that your answer to the previous question relating to the plant has no relation to the appraisement of lots as such?

A. No, sir; that came under two different experts.

Q. Have you any knowledge as to whether the valuations of the real estate, so called, were made to include any of the structures thereupon that by law are deemed real estate, but whether it relates exclusively to the value of the lots without structures?

A. To the value of the lots without structures.

Q. That, in fact, was the supposed basis of the real estate valuation, so called?

A. Yes, sir.

Q. And the basis of the valuation of the plant was what it would cost to duplicate it?

A. Yes, sir.

Q. When you speak of what it would cost to duplicate, do you mean what it would cost for a plant equivalent to the plant to be appraised?

A. No, sir, to duplicate every thing as it was without reference to any thing else.

Q. Without reference to whether it was really necessary to produce a given capacity or not?

A. Yes, sir.

Q. And without reference to whether the plant, or any part of it, had been superseded or rendered more or less useless by reason of the change in the method of production?

A. Yes, sir.

Q. So that the properties that were laid aside as useless, or comparatively so, caused by the change of production in the same works from coal gas to water gas were to be appraised or valued according to what it would cost to duplicate them as they stood?

A. Just as they stood.

9257 Q. In your opinion, would that be a fair way to buy a gas plant for present actual business purposes?

A. No, I don't think it would; if I was going to buy one, I should want to get a modern one, of course.

Q. In your opinion, would that be a fair method of arriving at the value of a gas plant?

A. Everything that was appraised there was competent to perform the service; nothing that was thrown out as useless was appraised; everything that was appraised was an absolute gas-producing machine in some way or other.

Q. The question is not quite answered yet?

A. Your question was whether there were any articles appraised there that had become obsolete or useless for the purpose of gas making?

Q. No, sir; I understood you to say that the basis of appraisement or valuation was to appraise or value all the properties regardless of their present usefulness in producing gas so long as they are found to exist as part of the plant, either coal or water gas producing works, and that they were to be appraised according to what it would cost to duplicate them instead upon the principle of what it would cost to duplicate works adequate to give a producing capacity by more modern construction?

A. That was the principle.

Q. Whether as a practical experienced man, you can give this committee the information that such a method is a fair method of determining the actual values of a gas producing plant?

A. I don't know of any other way to answer the question but this, that if I was to appraise property of that kind, with a view of purchasing it, for the purpose of making gas, I should purchase that of the most modern type of machinery for that purpose.

9258 Q. If you were valuing it for the purpose of purchasing you would not value it on any other basis than the basis you have just now stated?

A. No, sir.

Q. Is there any other fair basis for an actual valuation, in your opinion?

A. Well, that I am not prepared to say, for this reason, take, for instance, coal gas, just now, at this present time, rather old-fashioned. Now, the plant of the Manhattan Company is perhaps as fine a one of the kind as exists, and I must take this view of it, that should this naphtha which we are now using give out—and there has been a great deal of speculation on that subject, whether it would hold out—the companies would be obliged to go back to making coal gas; and in that event, then the Manhattan works would be as good as any other. You see the dilemma I am in to answer that question.

Q. If that should occur, what do you say as to the plant of the Manhattan?

A. The plant of the Manhattan would have a large value, for this reason, that they can be converted into a water gas works, and almost all the appliances used excepting a very small percentage of them; I could take those works and convert them into water gas works for a very few hundred thousand dollars.

Q. You know that that was done in the New York Company for about $600,000?

A. I do, and I would like to have had the contract.

Q. That included the patent?

A. And then I would like to have had the contract. The Manhattan works would not be useless for the reason that every thing pertaining to them could be worked in—gas holders, purifiers, scrapers and exhausters, all of which would be necessary.

Q. To appraise that property at its fair actual value, would you, as a practical man, apply any other basis or principle of valuation than the basis you have stated of what it would cost to produce a given quantity of gas per day? 9259

A. No, sir.

Q. Now, applying that as a basis and exclusive of the mains, meters, valves and services, and referring only to the works proper, so to speak, as a plant of a producing capacity, in your opinion, was the fair actual value of such a plant as the Manhattan, $400,000,-000?

A. Well, sir, I looked over the schedules at the time; I looked at them all and I thought it was a very fair appraisement of the value of the plant; that is, with a view of duplicating it.

Q. That is, with a view of buying the things and placing them there?

A. Yes, sir.

Q. Upon the basis of duplicating the capacity of the works, do you answer the same?

A. Yes, sir; it would amount to the same thing.

Q. Do you mean to say that, as a practical man, to purchase the property you would give a valuation of the plant of the Manhattan of $4,000,000 or thereabouts?

A. Well, I don't remember the valuation, sir.

Q. Or in other words, near that amount?

A. I remember a comparison was instituted of the various plants; they were all read over and discussed.

Q. As early as the spring of 1884?

A. I think it was, although I wouldn't be certain. It took a long time to get the thing up.

Q. What do you say of that as an appraisal to purchase the value of the plant of the Manhattan upon the basis of its producing capacity, to furnish the gas; say either $4,000,000 or $3,000,000?

A. Well, everything was taken separately—gas holders were taken at so much apiece, and tanks, etc.

Q. Strike that out, Mr. Stenographer?

9260 A. It would be impossible for me to approximate to an amount so large as that; I could not answer that question. I could only say that the companies were all estimated upon the same basis of valuation.

Q. That basis was on what it would cost, estimating material and stuff on hand?

A. Yes, sir.

(By the CHAIRMAN:)

Q. That might be a very different thing, getting at its real value, as a purchaser would look at it?

A. Yes, sir.

Q. All you were looking after was to get it relatively right?

A. Yes, sir; compare my own with the others.

Q. To see that they were on the same basis?

A. Yes, sir.

Q. The ultimate object was to get it relatively right?

A. Yes, sir; to get it relatively right.

Q. The appraisement was very difficult from a purchaser?

A. Yes, sir; if the company desired to sell out there would be two parties to the affair.

Q. One of which would look to see whether this particular piece of machinery—what it would cost?

A. Yes; and in this case there was only one party.

Q. And he was the seller?

A. Yes, sir; there was no one there to bid them down.

Q. How can this committee ascertain that the prices which the seller fixed for himself, and at which he did sell, was or not a fair price in relation to its actual value?

A. I think it was a fair appraisement; but, whether we could sell it for that, that is another thing.

Q. Fair to each other?

A. Yes, sir.

Q. No one would pay the cost of a thing which has become partially superseded by some better thing?

A. No, sir; those things were estimated fully.

9261 Q. Yes, that is the trouble; isn't there a well recognized rate of capitalization to produce a thousand cubic feet or a given quantity of gas, up to one or two million capacity per day?

A. Well, I have never figured in that way; I know what you mean.

Q. Is there a well recognized equivalent?

A. Well, I think that all companies vary in that; I think the cost of a thousand cubic feet varies just as much as any thing else; you take a plant in New York city and compare it with a plant in Brooklyn or any other provincial town, and it is a very different affair.

Q. You do not live in Brooklyn?

A. I have been an owner in a gas company there.

(By Senator MURPHY:)

Q. You say provincial in speaking of Brooklyn?

A. I said provincial town in comparing Brooklyn, for the reason that men can work cheaper there than in New York city.

Q. What, in your opinion, would be a fair capitalization for a plant to produce a given quantity in New York city, say for a plant that would produce four million cubic feet per day?

A. It would be in round numbers, as near as you could make it, $4,000,000.

Q. And what, in your opinion, would be a fair enlargement of that capitalization to produce eight million cubic feet—about one and a quarter more million.

A. More than that, sir; for this reason, that you are to build a plant which is competent to produce four million of feet per day; you would be obliged to duplicate it to make four more million.

Q. But in originally building it, if you had provided for a possible enlargement, it would not cost so much?

A. My plant was amply large and I would not have to
9262 duplicate it to that extent; it is just fitted to four million now,
but I have more capacity than that; therefore I stated I thought I could do it for that; that is an opinion; for every thousand cubic feet per day it is a million of dollars as near as you can get it.

Q. In the plan of consolidation, the proposed capitalization of the Mutual Company is set forth at $5,922,000?

A. Yes, sir.

Q. Which included an allowance for so-called rights and franchises, etc.?

A. Yes, sir.

Q. How much in that estimate is included for so-called rights, franchises, etc.?

A. I forget. You have that statement, have you not?

Q. No, sir.

A. I thought you got those schedules.

Q. They wouldn't have this amount; they would have the gross amount?

A. I cannot recall, sir, what it was.

Q. Is *is* not the fact that the amount will be shown by taking the total valuations of your properties from the total share capital allotted to your company?

A. Yes, sir; that would be made a part of the $5,922,000.

Q. Do you remember how that amount was arrived at in this allotment to the several constituent companies?

A. No, I don't.

Q. It has been stated here that it was arrived at, according to the business of the constituent companies, for a designated year, ending in the fall of 1883. Is that your recollection?

A. I think it was, sir; that part of the business I didn't have much to do with.

Q. Because you didn't go into the consolidation finally?

A. No, not that; there was a good many things I didn't know about.

Q. Who did know about them?

A. The other constituent companies.

9263 Q. Who was the prime mover of this consolidation scheme? Who urged it?

A. The Manhattan and New York and Municipal were the active parties in it.

Q. Did you know about the legislation of 1883, in respect to the necessity of securing two-thirds of the property owners on a street before you could obtain authority to open it?

A. No more than what I saw in the papers.

Q. Did you know of that legislation?

A. I do not know whether I did or not at the time.

Q. Was it talked of in the pooling committee?

A. No, sir.

Q. When did you first hear the proposed capital of $45,000,000 named?

A. That was ascertained after the schedules were made up.

Q. When did you first hear that figure named?

A. I think that was during the summer of 1884.

Q. Who first named it?

A. I do not remember.

Q. Wasn't it Francklyn or Smith?

A. It was either or both; I do not remember which.

Q. Was it ever debated at all?

A. Yes, I think it was considerably debated.

Q. Who made the suggestion that the amount should be different than $45,000,000?

A. I do not recall, sir.

Q. Name any of them who did object—if anybody?

A. Well, sir, if I remember right, Mr. Zollikoffer and myself.

Q. What was the objection to that capitalization made by you?

A. There could be only one objection to it, that was, too large.

Q. There is another objection; it would be too small?

A. There is not much danger of that.

Q. Anybody else object that it was too large?

A. No, I don't remember, sir.

9264 Q. Did anybody from the New York Company object that it was too large; did you ever hear an objection from that company to that, that it was too large?

A. I don't remember.

Q. Anybody from the Manhattan?

A. No, sir.

Q. Or Municipal?

A. No, sir.

Q. Was there anything said about the Knickerbocker properties in any of those conferences?

A. Yes, they had their schedules the same as anybody else.

Q. Was there any thing said about their value in gross?

A. If I remember right, I think there was.

Q. Who participated in that discussion?

A. Well, these discussions were held as the schedules were presented and made pro and con.

Q. What objections did you ever hear made to the Knickerbocker properties in valuations?

A. Well, simply that they were pretty well set up.

Q. Were they defended against that accusation?

A. Yes, sir.

Q. Who represented them?

A. I think Mr. Day did.

Q. What did he say about them?

A. I don't recall; the matter went out of my mind; what I remember of it now is just by recalling it.

Q. Did anybody say in the course of that discussion, that the Knickerbocker property was only of a nominal value above its debts?

A. I do not think they did.

Q. Are you aware that in the returns to the tax office the Knickerbocker Company for years successively stated that fact?

A. No, sir.

Q. That circumstance was not alluded to?

A. No, sir.

Q. Well, you know the Knickerbocker properties, do you not?

A. Very well; I looked it over once with a view to purchasing it.

9265 Q. Will you tell the committee what you offered?

A. I made no offer.

Q. When was it?

A. Several years before it came into their possession; it lay idle for several years, unfinished.

Q. You saw them after they were finished?

A. They were not completed; I saw them when the Union Company was running them.

Q. You know the Municipal spent money on those works?

A. Yes, sir; they spent a large amount of money there; they must have, from the condition of them.

Q. Was any objection made to the valuations in gross of the Municipal Company?

A. I think not; they were of so recent a date; Mr. Rowland who built the works could very readily give them.

Q. Any objection from the Metropolitan Company made by anybody to the valuations?

A. I do not remember that.

Q. Any objections made by anybody from the Metropolitan company to the valuations either of the Manhattan or the Knickerbocker?

A. I think I do recollect that Mr. Zollikoffer objected to the valuation of the Manhattan.

Q. And of the Knickerbocker?

A. Yes, I wouldn't be sure about which company it was.

Q. Were the valuations reduced after his objection?

A. No, sir.

Q. Will you tell the committee why, in your opinion and of Mr. Zollikoffer's, this capitalization of $45,000,000, was too large?

A. I couldn't answer for M-. Zollikoffer, but I can for myself; I did not think it was a politic move to make; the best proof of my sincerity in that was reducing my capital from five millions to three and a half millions; I wanted to reduce my capital down; I couldn't see the propriety of increasing it again.

9266 Q. Your capital was reduced by distributing the earnings among the stockholders?

A. I cannot say that.

Q. That is the pracitcal effect of it?

A. They relinquished the stock.

Q. The bonds were to be paid out of the earnings?

A. Yes; the stockholders were entitled to the bonds; they had one and a half millions of stock which they relinquished for one and a half millions of bonds.

Q. The money came out of the earnings to replace it?

A. I suppose so.

Q. You reduced your capital by distribution of the earnings, wasn't it practicable, in your opinion, to have reduced the capital of the constituent companies instead of increasing their nominal share capital at the time of consolidation upon the same method that you reduced yours?

A. Certainly; there is no other answer to that question but that.

(By the CHAIRMAN:)

Q. In your opinion, increasing the candle power of gas has what effect upon its value to the consumer?

A. You mean as between high candle power and low candle power?

Q. Yes, sir.

A. Approximately the advantage to the consumer is in the ratio of the candle power; not exactly but approximately.

Q. For practical purposes it is so nearly enough, isn't it?

A. Yes, sir; there is something behind that; the specific gravity of high candle power gas produces a slower passage through the burner than that of a low candle power gas, and the difference in economy is approximately as the difference of the candle power, besides the increased illumination.

Q. The gas spends itself less rapidly and at the same time produces a better light?

A. Yes, sir.

9267 Q. Then, to the consumer there is the further advantage of its requiring fewer burners?

A. Smaller bills is the grand result; that is what I have been working for in this city for a great many years to make the best light attainable and to make the smallest bills to the consumer.

Q. Do you think it is right to charge consumers the same price for gas without any regard whatever to its illuminating power?

A. That is a difficult question to answer; I do not think that the two gases are worth the same money by any means, but the public will burn whatever gas they please, and it will take pretty good machinery to make them see the difference.

Q. If you wanted to start gas in this city anew, how many gas works would you have for the entire city?

A. Not to exceed three manufactories; in fact, if I was going to furnish gas for this city, and I could do it in my own way, I would build works on the other side of the Harlem river where land is cheaper, and make all the gas there and send it through the city; I would have a main artery to bring the gas down into these various gas holders for distribution, and take down the old works and dispose of the property.

Q. Can you tell us about the daily consumption of gas in New York?

A. I think the consumption of gas in New York is about five thousand million feet now per annum.

Q. The daily consumption?

A. That varies every day.

Q. The average as near as you can estimate it?

A. I should have to do considerable figuring to work out that problem.

Q. Thirteen and one quarter million of feet per day?

A. Something like that.

Q. You incorporate that as being an approximate statement?

A. Yes, sir.

9268 Q. The answer is about thirteen and one-half millions per day or thereabouts?

A. Yes, sir; let me think a moment; well, it would be somewhere there, thirteen to fifteen millions probably.

Q. Now, by increasing the capital employed by your company by $1,220,000, you could produce daily about eight millions, could you not?

A. Yes, sir; but you must observe that if you take the average of fifteen millions daily consumption, in the winter time we get up to twenty-five or thirty millions; so we must have a plant equivalent to make the maximum.

Q. Will you re-cast that in your mind and see—you would want four plants of eight millions each to do it?

A. Yes, sir.

Q. Four plants of eight millions each would supply the city of New York?

A. Yes, sir; I think it would.

Q. And with reasonable regard to the future requirements of the city?

A. Yes, sir; my plant I said could be increased for one and a quarter million or thereabouts approximately; now if you was to construct a new plant, you couldn't do it for that.

Q. Couldn't you construct one that would produce eight million cubic feet per day, and that with the cost of the work mentioned already?

A. I think so; you could do it more economically still if you put it all in one plant.

Q. Would this not be approximately correct, namely, that a capital of five million dollars would be adequate for gas works that would produce eight million of cubic feet per day?

A. I am under the impression that my works cost four million dollars.

Q. Would this not be approximately correct, namely, that a capital of five million dollars would be adequate for gas works
9269 that would produce eight million cubic feet per day?

A. Yes, sir, approximately so.

Q. Then, if there were four gas works of the same capacity, each having a capital of $5,000,000, it would be fair to say that the city might be supplied with gas upon a capital of $20,000,000, approximately?

A. Yes, sir; with new construction.

Q. A moment ago, you said this could be more economically—state how?

A. You understand with one plant, instead of four, it saves the expense of officers, foremen and overseers, which would be very much less; there would be a great economy there.

Q. This capital stock would be very much reduced by having one instead of four works?

A. Well, that is my impression.

Q. Now, what do you say about this; does the increase of the candle power of gas increase the quantity of smoke?

A. Yes, sir; you can go too far with the operation; I think that thirty candles is the limit.

Q. Up to thirty-candle power gas, is there any difficulty with smoke?

A. No, sir.

Q. Is that so with coal gas?

A. It is very risky to go to twenty candles with coal.

Q. When you say you may go to thirty, you refer to water gas?

A. Yes, sir.

Q. What is there to prevent the Mutual Company from enlarging again its capital from $3,500,000 to $5,000,000?

A. Well, I don't know any thing, sir, unless it would be a very stupid thing for them to entertain such an idea.

Q. If they had the surplus, they might do it?

A. They don't anticipate anything of that kind; they do not get the idea from me at all events.

Q. Under your charter, you may go up to $5,000,000?

A. Yes, sir.

9270 Q. I call your attention to section four, of chapter 651, of the laws of 1866, passed April 17th, 1866, and ask you what, if anything, has been done by your company in respect to distributing among those customers who are your stockholders any excess of the earnings above the sum of ten per cent. dividend on the capital?

A. I have not arrived at that point yet.

Q. Why?

A. I think the section there explains that; the words of the section, I think, explain that.

Q. Do you mean to say, in your opinion, that the finances of the company have never made the section applicable?

A. I do.

Q. Previous to the last issue of bonds, was not the section applicable?

A. No, sir; we were not earning ten per cent. then.

Q. Were you not earning more than ten per cent. during the periods you have accumulated from earnings a surplus of the sums already testified to?

A. We had not paid off our indebtedness; we never paid the stockholders to exceed ten per cent.

Q. If you had paid the ten per cent., however, upon the stock at the rate of fifty cents on a dollar, and no more, the section would have applied?

A. Yes, it would have been very different; but it was not so ordered; I would be only happy to divide that surplus when I can get to it.

Q. Will you please explain a little more in detail to the committee why that section is not fairly applicable, if in fact, there were any consumers who were stockholders?

A. That section, I think states that after the works are paid for—indebtedness paid, that any surplus over ten per cent. earned by the company, should be divided among the stockholders and consumers half and half, but we have never reached that point as I understand it. 9271

Q. If the basis be taken to be ten per cent. on the $2,500,000 stock, as a total gross capital and no more, that point has been reached?

A. I should think so.

Q. Then, what interpretation has your company practically given to that section of the statute which reads "whenever the profits shall exceed in any year the sum of ten per cent. upon the whole capital stock of said company"?

A. You want to read the context to that.

Q. I am asking what interpretation your company has practically given to that section?

A. We do not give it any; we did not suppose the time had arrived.

Q. Have you had any written opinions from counsel on that subject?

A. I do not think we have had any written opinions.

Q. Well, if the bonds which were issued to your stockholders when they surrendered thirty per cent. on their holdings, and which bonds were either paid or to be paid out of the current earnings, if you leave these bonds out of consideration, under this section, even then, would it not be applicable?

A. Our stockholders assented to this reduction of capital; they had their choice and they elected to have the capital reduced.

Q. You understand the question?

A. The capital then would remain $5,000,000; I suppose that could have been done but it never was voted. The stockholders, at my suggestion, thought it was a proper move to make, to reduce our capital so that we could be in a condition to sell cheaper gas.

Q. But in reducing it an indebtedness was created which must be paid before that section 4 of chapter 651 of the Laws of 1866, becomes applicable?

A. Yes.

9272 Q. Even conceding that the indebtedness so created is entitled to be considered and deducted before this section shall become applicable, then if the capital shall be taken at $2,500,000, instead of $5,00-,000, would not the section be applicable, in your opinion, so as to divide something among consumers?

A. That is if our capital was still further reduced.

Q. Yes.

A. In that event there would be a surplus, of course, of over ten per cent.

Q. Has this subject ever been considered by your officers or any of your board of directors?

A. I do not recall; it has been referred to, but our understanding of the section is as I stated.

Q. Has any claim been made in your company by any consumer under this section?

A. No, sir.

Q. Or by any stockholder?

A. Not that I am aware of.

J. Pierpont Morgan, a witness, called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. Tremain:

Q. You were the holder of $50,000 of bonds of the Knickerbocker Company at one time, were you not.

A. Yes, sir.

Q. Do you hold those bonds yet?

A. No, I do not.

Q. At what time did you procure them?

A. In 1879.

Q. What month?

A. I think it was November.

Q. Of whom did you procure them?

A. My impression is I took them from Bayard Cutting, although I might have taken them from Mr. Stephens; I don't remember who the party was.

Q. Did you pay money for them?

A. I paid money for the stock and bonds; I think I had stock at the same time.

9273 Q. I am asking for bonds only; you had also 500 shares of Knickerbocker stock?

A. Yes, sir.

Q. Did you have any more?

A. No, sir.

Q. When did you procure those shares, at the same time and of the same person?

A. My remembrance is that I did.

Q. Was it all one transaction; I so understand it?

A. Yes, sir.

Q. Now, in money, how much did you give Mr. Cutting for those bonds and that stock?

A. Fifty thousand and odd dollars.

Q. Did this sum exceed the par value of the bonds and interest to the time of the transaction?

A. I think it did somewhat.

Q. How much?

A. I could not tell you; I have not got the bonds, and I could not tell what the calculation was.

Q. Who made the negotiation with you for the transaction?

A. I think it was Mr. Stephens.

Q. The transaction was closed with Bayard Cutting?

A. That is my impression as I remember it, although it may have been paid to Mr. Stephens; now, I am not certain.

Q. Give your best recollection of the entire transaction?

A. That is what I have done, as I remember the transaction.

Q. Give us the figures, as near as you can recollect?

A. Fifty thousand and some dollars; I think it was about $53,000 or $54,000; about $54,000.

Q. Was not this $4,000 interest?

A. I think it was; very likely; I cannot tell now what it was.

Q. What was the arrangement made, in consequence of which you received 500 shares in addition to your investment?

A. I held 500 shares in the old company prior to that reorganization.

Q. In the Union Company?

9274 A. I think so; the transaction, as I remember it now, the result; it came to on account that I had the stock of the old company.

Q. The stock of the old company was worthless because the property was in the hands of a receiver and the stock valueless?

A. No, I did not understand it was valueless, but it was in the hands of a receiver.

Q. Did you not know at that time the stock of the Knickerbocker was valueless?

A. I did not know that either.

Q. What did you pay for the Union stock that you had?

A. Fifty cents.

Q. How long had you held it?

A. Several years.

Q. Were they 100 odd shares?

A. I so remember it; yes, sir.

Q. You understood that those bonds which you were getting at that time were secured by a mortgage?

A. I think I did; I don't recollect now whether I did or not.

Q. How long did you hold the bonds?

A. I held the bonds; there were occasionally one or two paid off and the balance of them I gave to Cutting, I believe, last year or this year, one or the other; he purchased them.

Q. Purchased them at par and interest?

A. Yes, sir.

Q. Who conducted that transaction and purchase?

A. He did.

Q. Did you continue to hold your 500 shares of Knickerbocker stock until consolidation?

A. No, sir; I gave them to Cutting, and I received 116 shares Municipal Gas stock in the place of it, which I sold at that time.

Q. When did you receive the 116 shares of Municipal?

A. I think it was in 1880.

Q. March, 1880?

A. Yes, sir; about that time.

9275 Q. Did you receive that from Cutting?

A. Yes, sir.

Q. Or Stephens?

A. Cutting.

Q. Had he previously made an arrangement with you by which you agreed to surrender that Knickerbocker stock for Municipal stock?

A. I don't remember, but I have no doubt it was so, or I should not have done it; I know nothing of the transaction; only handed it to Cutting.

Q. Did you continue to hold your Municipal stock until after November, 1884?

A. No, sir.

Q. How long after March, 1884, did you hold your Municipal?

A. A few days.

Q. To whom did you sell it?

A. Some one, some broker or somebody took it from me; I do not remember who it was.

Q. Did Cutting ask you to sell it?

A. No, sir.

Q. Who asked you to sell it?

A. No one.

Q. Do you remember what price it was sold at?

A. No; my impression is it was about 130; I do not remember exactly.

Q. Is this the only transaction you had with Knickerbocker or Municipal stock?

A. The only one.

Q. Have you any connection with the Consolidated Company?

A. Not the least.

Q. This is a part of the Consolidated Company; we want to hear the whole transaction, has your firm loaned on the Consolidated Gas stock?

A. It has very likely, we take all stocks which are quoted at the Stock Exchange.

Q. Who in your firm would know?

A. I do not think of anybody, it is a question of call loan; the broker comes in and brings a pile of securities and perhaps, some of that stock might be with the rest.

Q. Who would know if you had?

A. We would have to hunt up the books, we probably have.

9276 Q. Who would know?

A. Nobody without examining the books.

Q. Will the books tell?

A. The books are there.

Q. Will you please cause your books to be looked at and send a memorandum of any loans that have been made by your house on the Consolidated Gas stock as collateral and the dates and amounts since December, 1884; they are not listed until March, 1884?

A. I have made no time loans at all on that kind of Consolidated stock; if any loans have been made on that stock as collateral, it has been to stock brokers, call loans, in which the Consolidated stock was a small integral part.

Q. It would take considerable labor to ascertain that?

A. Yes, sir; the securities of each call loan are recorded on the backs of the envelopes, and they are frequently changed.

Q. If later on we should want them, we would have an understanding about it?

A. If you will send any one to our office I will see that he gets the information that he wants.

Adjourned to December 18, 1885.

NEW YORK CITY,
FIFTH AVENUE HOTEL, *December* 18, 1885.

The Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain appeared as counsel to the committee.

GEORGE W. DOANE, a witness called by the counsel to the committee, being duly sworn, testified as follows:

9277 Examined by Mr. TREMAIN:

Q. You were the secretary and treasurer of the New York Company?

A. Treasurer, not the secretary; Mr. Clark was the secretary.

Q. In what capacity is Clark acting now?

A. He is chief clerk for the Hester street office.

Q. Under your direction?

A. Yes, sir.

Q. Hester Street Station is the name of the old New York Company's office?

A. Hester Street Branch.

Q. And is now under the direction of the Consolidated Company?

A. Yes, sir.

Q. Are you under an annual compensation?

A. Yes, sir.

Q. State the amount?

A. Four thousand five hundred.

Q. Are engineers' reports made daily to you?

A. No, sir.

Q. Are they ever made?

A. Not to me.

Q. Do they come under your supervision?

A. No, sir.

Q. What do you have to do with it?

A. I have charge of the Hester street office, the collecting of the moneys from the sales of gas.

Q. Have the books been under your direction for many years past?

A. No, sir.

Q. Have you been a member of the board of directors of the New York Company?

A. No, sir.

Q. Have you any knowledge of the financial operations of the New York Company prior to the consolidation?

A. I was the treasurer of the company and custodian of the finances; I must have known all about them, in fact.

Q. Were these schedules of properties of the New York Company prepared under your direction?

A. No, sir.

9278 Q. When, to your knowledge, were any such schedules first prepared?

A. I cannot remember.

Q. More than two years ago?

A. No, I should say it was not so long ago as that.

Q. Who first prepared them?

A. The schedules connected with the list of meters and services and mains was made by some clerk around the office and the memorandum was given to me and I tabulated them and made out the list; it must have been in the spring or summer of 1884.

Q. What else in that respect was done?

A. That is all I know any thing about; the other schedules were not prepared by me or under my direction, and I do not know any thing about those.

Q. To whom did you give these schedules of meters and mains to which you allude?

A. I could not say, probably Mr. Lees.

Q. Did you never see the schedules of the plants of the properties?

A. I don't understand your question.

Q. Did you never see the schedules of the plants of the properties?

A. Well, I probably did, but I cannot state positively; I think I must have seen them.

Q. Who prepared the schedules of the real estate?

A. I don't know.

Q. When was the inventory of the plant taken?

A. I don't know.

Q. As a matter of fact, has it not been the custom of the New York Company for years to keep an inventory of its plant and apparatus?

A. I never knew of any.

Q. You would know if such a thing had existed?

A. I think so; yes, sir.

9279 Q. As treasurer of the company, how did it happen that schedules of its plant and apparatus were prepared in detail and finally acted upon without your knowledge, if that was the fact?

A. As treasurer of the company, I had no connection whatever with the works, and what schedules were prepared probably would not necessarily come to me; it would probably have gone to the president, and the only schedules I would know any thing about would be those prepared at the office where I was of the meters and mains and services; my duties are connected with those at the office with which I am familiar.

Q. Was there a place in the office of the company anywhere where the inventory of this plant and apparatus was regularly kept?

A. I do not think there was; still there may have been.

Q. The books at the Hester street office would not show such detail?

A. No, I do not think they would; nothing of that sort.

Q. Were you present at any meeting of the board of directors of the New York Company at which the subject of consolidation was considered?

A. No, sir.

Q. Is anything on that subject in the minutes of any of the meetings of the board of directors?

A. I cannot say; I never attended the meetings, and I am not familiar with the minutes of the board.

Q. Where is the book?

A. The minute book?

Q. Yes.

A. I think it must be at the Hester street office.

Q. Will you please send the minute book of the board of directors and of the executive committee up for the inspection of the committee?

A. Yes, sir, to the Chairman.

Q. Do you know at whose request any appraisement of the plant of the New York was made?

A. I should think it would be made at the request of either the president or the directors.

9280 Q. Do you do any thing in that respect yourself?

A. The meters, mains and services.

Q. Was you present when any request was made to have them appraised?

A. No, sir; the list I made out was not a price list, it was a list of the properties without any values attached to it.

Q. Did you have any conversation with anybody in respect to fixing values?

A. I could not say.

Q. Did you do any thing at all in respect to fixing values personally?

A. No, sir.

Q. Did you talk with anybody about it?

A. I might, but I don't remember.

Q. Do you know of anybody having been consulted to appraise the values?

A. I think Mr. Rowland was; I am not sure about it; I think he fixed the inventory.

Q. What do you know about his valuation?

A. I don't know anything about it.

Q. Do you know any thing about the amount that was spent upon the works of the New York Company for improvements, betterments or changes or modifications?

A. I know there were large sums of money spent during the time I have been connected with the company; but I could not say from recollection; the book- show.

Q. They will not show, will they, what it was expended for?

A. Yes, sir.

Q. Will they show the character of all the plant thus acquired?

A. The books will show what every dollar was expended for; of course the pay-rolls don't show what it was paid for in detail.

Q. Has any property at all been sold besides residuals by the New York Company, any kind of property?

A. Yes, sir, scrap-iron sometimes, sold coke and little odds and ends, nothing to amount to any thing.

9281 Q. You mean sales of such parts of the plants as had become useless, do you?

A. Well, if I remember, a set of old purifiers was sold for old iron, and when we take up an old main out of the street, we generally sell them for old iron, nothing of any large amount.

Q. Old retorts?

A. No, sir, never sold any.

Q. When were the purifiers sold?

A. Several years ago; I could not tell you when.

Q. About the time you began to make water gas?

A. I think it was prior to that that those purifiers were put in before that.

Q. You remember when the change was made in that respect, do you not?

A. Yes, sir.

Q. Is the business of the Hester street station carried on now substantially the same as it was before the consolidation?

A. You mean the method of transacting business?

Q. Yes, sir.

A. There has been no change in the method of carrying on the business; it goes substantially as it did before.

Q. Were daily reports made at the Consolidated office of receipts and disbursements?

A. Yes, sir.

Q. On what authority are the disbursements?

A. I don't know of any special authority; it requires no particular authority to make such disbursements.

Q. How is material paid for?

A. It is all paid for from the central office; the pay-rolls are made out and a check is given to me for the amount of the pay-rolls.

Q. Do you have duplicate pay-rolls?

A. No, sir.

Q. Does that increase the labor?

A. Of course, but not the clerical labor; more physical labor is required but not more clerical force.

Q. Do you keep a special bank account for that branch?

A. Yes, sir.

9282 Q. Remit the Consolidated by checks on that branch?

A. Money is deposited to the account of the Consolidated Company.

Q. But no other branch can check against that particular account?

A. We cannot ourselves; I have no authority to draw money out of the bank; all checks are drawn from the central office.

Q. If they are drawn for purposes of disbursing at your office, how do you get the money?

A. The check is drawn to my order, and I take it to the bank and get the money.

Q. The currency?

A. Bills.

Q. What year did you begin with the company?

A. In the spring of 1873.

Q. What were the current monthly expenses of the New York Company prior to the consolidation; about, and what are they now?

A. I could not tell you.

Q. Whether they are now smaller or larger?

A. Larger, because we have a great deal more business to transact; I mean that all the business between Grand and Houston streets has been thrown into our office, from the old Manhattan and Municipal Companies.

Q. That means you have more territory and more customers to look after?

A. Yes, sir; more business and more clerks.

Q. As a matter of fact, you do not have more force now in the Hester street office for the business there than the old New York Company had in conducting its business?

A. Yes, sir.

Q. The expense being about how much there, about one-quarter larger?

A. Not as much as that.

Q. One-fifth?

A. The only difference has been the three book-keepers and two clerks.

JAMES YALDEN, being duly recalled, testified as follows:

9283 Examined by Mr. TREMAIN:

Q. Have you made an examination of the books of the New York Company?

A. I have.

Q. Does your examination cover some of the general features of inquiry as the examination made of the Manhattan and the Metropolitan of which you have already testified?

A. It does; this company is the oldest in New York and its business was continued for about sixty-one years with uninterrupted success and proved to be very profitable.

It was incorporated in the year 1823 with a capital of $1,000,000. Of this sum $200,000 was paid in shortly afterward. In 1824, 1825 and 1826 further sums were paid in, making a total of $495,000, and in the year ending November 1, 1837, the balance of $5,000 was received, making a total of $500,000.

In the following year a further $250,000 was paid making a total cash capital of $750,000 which was the entire and total amount of cash capital subscribed by the stockholders.

The capital in this company was subsequently increased to $4,000,000 out of the surplus profits of the company as follows:

There was transferred from the surplus profits to the credit of stock account in the year ending June 1, 1871, a further sum of $3,000,000 when the company was reincorporated under the general laws of the State.

The account marked —— will give the particulars of the creation of the capital. The statement on page — to — gives the profit and loss account of their business for the period of about sixty-one years, the time it was in existence.

9284 The large surplus profits necessary to create this new capital were nominally made up by appreciation of the value of the real estate, plant, etc., but the grounds or basis for so doing do not appear.

The dividends paid by this company, as detailed on page — have been continuous from the year 1825 to 1884, and in some years at a very large per cent. per annum.

The total paid in cash to 1871 is	$11,714,078 50
And from 1871 to 1884	3,520,000 00
A further dividend paid by the Consolidated Gaslight Company	40,000 00
Making a total of	$15,274,078 50
Stock dividends or amounts transferred to the credit of capital stock account	3,250,000 00
Making the total	$18,524,078 50

paid in cash and transferred to the credit of stock account.

This company was many years ago (similarly to the Manhattan Company), in the habit of transferring from their profit and loss account sundry items to provide for depreciation and wear and tear of property which in the aggregate amounted to a very considerable sum.

Finally this was written back by appreciation to the consolidated Company and the balance shown on the profit and loss resume on page — amounting to $3,647,258.19 is in fact the surplus profits of the company beyond the stock capital account.

The following gives the benefits the stockholders derived from the operations of this company:

9285 Net profits, statement No. 1		$4,344,217 78
Net profits, statement No. 2		15,706,437 97
Profits written up direct to depreciation account		66,689 61
Profits on reorganization and consolidation		5,898,302 63
		$26,015,647 99
Paid in dividends exclusive of $40,000 paid by Consolidated Company		$18,484,078 50
Depreciation written off		3,884,311 30
Surplus remaining ($40,000 of this returned to stockholders)		3,647,258 19
Total capital paid in cash		$750,000 00
Transfer from surplus profits as before mentioned		3,250,000 00
		$4,000,000 00
Balance of separate accounts, plant, etc.		$4,670,642 03
Appreciations	$1,512,357 97	
Franchise	1,417,000 00	
		2,929,357 97
		$7,600,000 00

For which stock in the Consolidated Gas Company was issued.

9286 The stockholders have therefore received from their original investment of		$750,000 00
Received in dividends in cash	$15,234,078 50	
Dividends paid by Consolidated Gas-light Company, January 26, 1885	40,000 00	
Received in shares of Consolidated Gas-light Company	7,600,000 00	
		22,874,078 50
Total return to stockholders above their original cash investment during the years 1823 to 1884 in dividends and stock of the Consolidated Company		$22,124,078 50
And a further estimated surplus yet to be divided of		47,258 19
Total		$22,171,336 69

Q. Observing in your report the statement that in 1838 there was an increase of $250,000 of capital we inquire what the books show respecting that transaction—explain it more in detail.

A. November 1, 1862, there is this entry of a special dividend of

$50 per share from the accumulated funds of the company as declared, $750,000; then there is another entry here for an increase of capital from $750,000 to $1,000,000 as per resolution of October 20, 1862, which increased capital is distributed *pro rata* as a stock 9287 dividend to the present shareholders, $250,000; that is, therefore, simply a transfer from the surplus profits of the company to the credit of the stockholders.

Q. It is a dividend in the form of new stock?

A. Yes, sir, and in addition to that, in the same year they paid a cash dividend of $750,000 on their capital.

Q. They really paid that year a dividend of how much?

A. One million and seven hundred and fifty thousand dollars in cash and $250,000 transferred.

Q. That makes what per cent. of dividend that year?

A. One hundred and thirty-three and one-third per cent.

Q. What year was that?

A. Eighteen hundred and sixty-two.

Q. That explains one of the instances of the so-called increased capital stock of the New York Company?

A. Yes, sir, regarding the $250,000.

Q. Was that increased capital stock in effect a dividend distributed among the stockholders of the company?

A. Yes, sir.

Q. It differed from an ordinary cash dividend in what respect?

A. By reason of their taking out with one hand and putting it back with the other.

Q. It was equivalent to a payment to the stockholders of the amount and at the same time an investment of it in capital stock of the company?

A. Certainly, that was the effect of it.

Q. And this new capital stock so obtained became therefore the basis for future dividends to the stockholders?

A. It did and it gave the public the appearance afterward of their not earning so much dividend on their actual capital.

Q. Could you state the amount of dividends paid upon the capital so increased in the year 1863?

A. Yes, sir; $200,000, twenty per cent. on their then million.

9288 Q. That would be what per cent. on the real capital invested?

A. Twenty-six and sixty-six one hundredths per cent.

Q. The next year they paid thirty per cent. on the million, which was what per cent. on the actual capital invested?

A. Forty per cent.

Q. In 1864 what would it be?

A. In 1865 they paid $500,000 on the million, or fifty per cent.

Q. What per cent. on the actual capital?

A. Sixty-six and two-thirds per cent.

Q. Take the next year?

A. They paid $900,000 dividend or ninety per cent. on the million.

Q. What per cent. on the actual capital?

A. One hundred and twenty per cent.; then in 1867 they paid $700,000 or seventy per cent. on the capital of $1,000,000.

Q. That is what per cent. on the actual capital?

A. Ninety-three and one-third per cent.

Q. Take the next year?

A. In the years 1868, 1869, 1870, they paid fifty per cent. on their million each year; sixty-six and two-thirds per cent. on the cash capital; May 31, 1871—the first five months of 1871—they paid a cash dividend of $450,000 and transferred then $3,000,000 as well.

Q. That would be what per cent?

A. About one hundred and thirty-eight and one-half per cent. for five months per annum, on the cash capital.

Q. What was done in 1871?

A. On June 1, 1871, the company reorganized with a capital of $4,000,000.

Q. In that reorganization was any new capital stock contributed?

A. Not in cash.

Q. Was there in anything; if so, what and from what source?

A. The capital stock was increased at that reorganization from the $100,000 which it stood at previously to $4,000,000 by writing up an appreciation upon all their property to their profit and
9289 loss and writing there, say a stock dividend of $3,000,000 the credit of the capital ac-

Q. What was the practical effect of that operation; what does it mean?

A. Well, a sort of raising the wind out of nothing; it is practically creating a capital out of profits in reality.

Q. Now, then, your reasons?

A. According to their books they have a full history of how they created this capital; it comes out of their books; I have the statement before me in this way: In round figures the balance of profit and loss at that time was $925,000; they transferred sundry accounts, such as deterioration, and also, some profit on stock and United States bonds and then appreciated their properties; for instance, their real estate at the works beyond the original costs, $873,500, and their Hester street property $60,000, and their buildings and apparatus $1,208,946, that raised the credit of their profit and loss account to nearly $4,000,000, from which they transferred the $3,000,000 before referred to; now, with regard to the reason why could they do this, the methods they used in keeping their accounts previously by writing to the debit of profit and loss to the credit of appreciation account, and so lessening the actual cost of their property, amounting to such a sum that enabled them to write it back again, and reinstate the property at something like what it cost; and the effect of it is, of course, that it all came out of profits, so that the $3,000,000 came out of profits.

Q. And the profits came out of the consumer?

A. Certainly.

Q. What was done next after that; now we have got a new capital, without any addition of stock, without any contribution of stock from shareholders; you have now the capital set down at $4,000,000?

A. Yes, sir.

9290 Q. And thereafter that became the basis upon which a per cent. of dividend was declared—a new basis?

A. Yes, sir.

Q. What dividend was declared?

A. From June 1, 1871, to the consolidation, and adding thereto a dividend of $40,000, which the Consolidated Company paid, they declared and paid cash for dividends in the thirteen years of $6,560,000 on the $4,000,000 of capital.

Q. Are you able to state what annual rate of dividends that would be upon the stock actually, put into the concern, viz., $750,000?

A. The dividends paid in those thirteen and one-third years will average on the $750,000 cash at the rate of sixty-six and two-thirds per cent. per annum.

Q. On the nominal capital, viz., $4,000,000, it would be then what per cent.?

A. About twelve and one-half per cent. on the nominal capital.

Q. Then they actually received twelve and one-half per cent. of dividend on the nominal capital, or sixty-six and two-thirds per cent. on the actual stock capital paid in by the stockholders in cash?

A. Yes, sir; that is correct.

Q. It doesn't make any difference either to the consumer or the gas companies whether the one pays and the other receives sixty-six and two-thirds per cent. upon the actual investment, or twelve and one-half upon the nominal stock?

A. It is one and the same thing.

Q. If in that consolidation they had doubled the stock, called it $8,000,000, the apparent per cent. of profit would, of course, have been about six and one-quarter per cent?

A. Yes, sir; it is a fact; the New York Company did double the stock.

Q. That four million stock of the New York Company was increased to what by the consolidation in 1884?

A. Seven million five hundred and sixty thousand dollars.

9291 Q. Nearly doubled this time?

A. Yes, sir.

Q. Was any new capital stock paid in by the stockholders of the company in that consolidation?

A. Oh, no; not at all; it represented the property of the New York Gas Light Company that was turned over to the Consolidated.

Q. So that the actual cash paid in by the shareholders not derived from the natural increase of the property still remained what sum?

A. Seven hundred and fifty thousand dollars.

Q. So that now they are in effect in this consolidation, the New York Company receiving a dividend upon a nominal capital stock of how much?

A. Seven million five hundred and sixty thousand and that is nearly ten times the amount of cash actually paid into the concern by the stockholders except as it comes from profits. It is nearly ten times.

Q. So that a dividend of six per cent. now upon that stock would be, in effect, a dividend of what per cent. upon the capital stock actually paid in of $750,000?

A. Nearly ten times as much.

Q. Namely, about sixty per cent?

A. Yes, sir.

Q. As a matter of fact, did the New York Company transfer to the Consolidated Company all of this property?

A. It did except the few remaining surplus assets.

Q. Those amount to about how much?

A. After satisfying their current liabilities about $86,000, $40,000 of which was paid in dividends by the Consolidated Company.

Q. On their account?

A. Yes, for them. That should be seventy and one-half per cent.; it is more than sixty per cent.

Q. The actual dividend declared this year by the Consolidated Company is what per cent. upon the nominal capital?

A. Seven per cent.

9292 Q. Now, so far as the stockholders of the New York Company are concerned, that is really what per cent. upon the share capital paid in by the stockholders of that company and representing their investment so made?

A. On their stock capital of $7,560,000 in the Consolidated they received a dividend this year of $529,200 or seven per cent., but upon the cash capital originally paid in of $750,000 it is seventy and one-half per cent.

Q. Can you state how the subject of depreciation has been treated in the accounts of the New York Company so as to form any conclusion from those accounts in respect to the extent of expenditure for current repairs and keeping the works in good order or of the amount to be allowed for such purposes by way of depreciation?

A. Not accurately, I cannot, for the reason that fifty years ago this company did not keep their books in the same accurate condition that they do now. I think the best guide of that will be my accounts for last March for the ten years.

Q. Have you any reason to indicate a data useful to forming an opinion upon this subject different from the data exhibited in the amount ending in the ten years ending 1884 which was compiled by you last spring?

A. I think the accounts I compiled last spring are accurate; putting the totals against the cost of works, it is about twelve per cent. for the New York Company, and they are all about alike; repairs to the apparatus and works which they have raised and put to that particular account, the aggregate is about $2,750,000; furthermore, there is a depreciation account which was also charged with some of these repairs which I cannot very well get at; this depreciation account, as I before told you, although it was called such, it was really an account for no other purpose practically than to hide 9293 away some of the profits until the opportunity came for them to increase the capital stock from it; they did not spend all this depreciation account; there was a great deal more put to it than was actually necessary, and, therefore, it comes down to my previous remark when I explained how the $3,000,000 was raised, that this depreciation account, a great part, was nothing else but surplus profits; the New York Company kept their account within the period of fifty years in about half a dozen different methods; it would be great labor to get that accurate, but still it all comes down to the same point; you cannot get over the fact that the New York Company benefited in capital stock and cash dividends for the $750,000 that they paid in; they benefited in sixty-one years from two sources, $22,171,336.69—that is actually the amount; there is no getting over that point, but the details of how they treated the inside figures could be by great labor got at.

Mr. **Tremain**: We will suspend the examination of Mr. Yalden for the present for the purpose of examining Mr. Palmer.

David Palmer, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. **Tremain**:

Q. You are an officer of the City Bank?
A. Cashier of the National City Bank.
Q. You have charge of the loans that are made by the bank?
A. Yes, sir.
Q. Are they made by your direction?
A. Mostly.
Q. By anybody else's direction?
A. Not often, sir.
9294 Q. Does Mr. Pyne have any thing to do with it?
A. He is the president of the bank.
Q. Does he make or direct loans?
A. Not very often, sir.
Q. Have you a record of the collaterals upon which loans are made?
A. No, sir; you mean do we keep a record; yes, we do, sir.
Q. In what shape?
A. Keep the items, the name of the party to whom it is loaned, and the collaterals on which the loan is made.
Q. Loan book?
A. Loan book.
Q. Do you always take collateral in making loans?
A. Yes, sir; generally.
Q. Do you remember an offer made by the City Bank to the Consolidated Gas Company of a loan of $300,000, early in 1884.
A. No, sir.
Q. Was there any such offer ever made?
A. No, sir; I know of no offer.
Q. Do you remember of anybody asking for a loan on Consolidated gas stock early in 1885?
A. I cannot say that I do, sir; I know that loans were made.
Q. Do you remember when the first one was made?
A. I do not.
Q. Were you subpœnaed to bring any books here?
A. I was.

Q. What books have you brought—any?

A. None.

Q. Would it have been inconvenient to have brought one of those books?

A. Those books cannot be removed from the bank; none of the books can be removed.

Q. Would it have been inconvenient to have brought the loan book?

A. I could not.

Q. Would it have been inconvenient to have brought the loan book?

A. Yes, sir; it would have been inconvenient.

9295 Q. In what way?

A. I could not take any books out of the bank, sir.

Q. In what way?

A. It would be impossible for me to bring the books, because they couldn't be taken from the bank.

Q. Scratch that answer out. Would it have been any inconvenience to have brought that loan book?

A. Yes, sir.

Q. Why?

A. Because it is in constant use and is required to be there.

Q. Is there only one?

A. Only one.

Q. During what hours is it in contsant use?

A. From the opening to the closing of the bank.

Q. From ten to three?

A. Yes, sir; from ten to three.

Q. Would it be any inconvenience to the practical business of the bank to bring it before the committee after three o'clock to be returned that same day or in the morning before ten?

A. Sometimes the books are used as late as eight o'clock in the evening and sometimes until nine.

Q. Is that so with regard to the loan book?

A. Yes, sir.

Q. Do you need the loan book in balances?

A. Yes, sir.

Q. What particular person in the bank uses the loan book in making out the balances?

A. Some clerk, bookkeeper.

Q. The loan book?

A. Yes, sir.

Q. Would the loan book account be in the ledger?

A. No, sir; only general accounts in the ledger.

Q. How big a book is the loan book?

A. As large as this one.

Q. Have you any personal recollection about the transaction of loans that had been made on Consolidated Gas Stock?

9296 A. I know that loans have been made to the Consolidated Company.

Q. Have you any personal recollection concerning transactions of loans on the Consolidated Gas stock as collateral?

A. Do you mean to any person?

Q. Whether you have any personal knowledge or recollection of such transaction?

A. No, sir; no knowledge except what I take from the books.

(By the CHAIRMAN:)

Q. Whether you now have any recollection of such a transaction as Mr. Tremain has mentioned of loans made upon Consolidated Gas stock?

A. No, sir.

Q. Have you any recollection of any loans made to the Consolidated Company?

A. I know that loans were made to them.

Q. Did you conduct those transactions?

A. Generally; yes, sir.

Q. With whom?

A. With the treasurer of the company, Mr. Smith.

Q. When was the first one?

A. I do not remember.

Q. Can you tell about when it was?

A. No, sir.

Q. How many such transactions did you have?

A. I could not state the number positively, sir.

Q. Did you conduct all of the transactions of that character personally, when loans were made to the Consolidated Gas Company?

A. I think it is very probably I did, sir.

Q. Do you not remember when the last one was?

A. It was in October, I think, sir, of this year.

Q. Was that a payment of a loan or a new loan?

A. That was a new loan.

Q. What collateral was deposited?

A. I think it was the notes of the Consolidated Company.

Q. Time notes?

A. Demand notes.

9297 Q. Any other collateral?

A. No, sir.

Q. Is that what you would call among banks, taking a demand note without collateral?

A. Yes, sir; it is a common thing, sir.

Q. Without any name on it at all?

A. Without any name on it.

Q. Has that been a common thing with the city banks for years past?

A. It has been a common thing with all banks.

Q. Confine the question and answer to the City Bank, has that been a common thing with the City Bank for years past?

A. It is not an uncommon thing, sir.

Q. Have you done that thing more than once during 1885?

A. Yes, sir.

Q. With any other person or company except the Consolidated Company?

A. Yes, sir.

Q. What company?

A. I could not particularize any company or individual.

Q. I ask you to particularize; name any other instance?

A. I could not name any other instance, sir.

Q. How many times have you had a transaction of that kind during the year with the Consolidated Gas Company?

A. I cannot say.

Q. Is that the way that loan stands now?

A. No, sir.

Q. How does it stand now?

A. It has been paid.

Q. When was it paid?

A. Three hundred thousand dollars paid this morning.

Q. Is that the way that loan did stand until to-day?

A. Yes, sir.

Q. Paid since you were subpœnaed?

A. Paid this morning.

Q. You were subpœnaed yesterday?

A. No, sir.

9298 Q. What time this morning were you subpœnaed?

A. I could not tell the time; I did not take note of it.

Q. What time was the loan paid?

A. Shortly after the opening of business this morning, sir.

Q. Who paid it?

A. I charged it to their account, sir.

Q. Who asked you to?

A. I did it myself, sir.

Q. Their account was then good, was it not?

A. Yes, sir.

Q. Their dividend checks are drawn on your bank?

A. I presume so.

Q. Don't you know?

A. No, sir.

Q. Don't you know they were printed and drawn on your bank?

A. I never have seen one, sir.

Q. Don't you know the fact that the dividends of the Consolidated Gas Company were paid by checks on the City Bank?

A. Well, I presume they are; I don't know any thing further than that.

Q. You are the cashier of the bank?

A. Yes, sir.

Q. Haven't seen those checks stamped upon them, dividend checks?

A. No, sir.

Q. Don't you know what the business is that induces the checks to be drawn upon that bank from the Consolidated Company?

A. No, sir.

Q. Have they more than one account there?

A. That I could not say.

Q. Do you mean to say, as cashier of that bank, you do not know whether or not the Consolidated Gas Company have more than one account in your bank?

A. I do not know.

Q. How long would it take you to find out?

A. Perhaps fifteen or twenty minutes.

Q. You charged this loan against their account?

A. Yes, sir.

9299 Q. After you had received the subpœna or before?

A. After.

Q. That loan was made in October, was it not?

A. Yes, sir; I think it was.

Q. At two per cent. or six per cent.?

A. The demand loan was settled and paid this morning for the time it ran at three per cent. per annum.

Q. And at the time that loan was made, in October, was there any outstanding loan then?

A. I do not think there was.

Q. Had there not been a short time before?

A. There had been a loan previous to that time.

Q. Do you not remember that there were at least three other loans during this year?

A. I do not remember the number or loans made this year.

Q. Can you remember any amount?

A. No, sir.

Q. Earlier in your examination you said your bank made no offer to loan to the Consolidated Company?

A. Not to my knowledge.

Q. You remember a loan, do you not, in February, 1885, of $300,000?

A. No, sir.

Q. Wasn't it? Do you remember when the first loan was made of $300,000?

A. I do not.

Q. Do you remember that there was such a loan made in 1885, prior to this last one in October?

A. No, sir.

Q. Well, it may refresh your recollection; for the purpose of asking the question based upon it, I quote an extract from the minutes of the finance committee of the Consolidated Gas Company of a meeting held February 3, 1885, at which it is noted Pyne was present, and also quote that the treasurer of the company stated that the company would probably need $300,000. The chairman of the committee, Pyne, stated he would loan the amount required on call at two per cent. per annum, and thereupon the officers of the 9300 committee were authorized to make such a loan; also $100,000 additional loan. Was such a loan made to the best of your recollection at any time by the City Bank prior to this loan of October 2?

A. I do not remember.

Q. Will you be able to refresh your recollection by looking at your books and then you can testify after doing so, can you not?

A. I presume I can.

Q. Please, look at your books so as to be able to state all the transactions with the Consolidated Company in the way of loans or advances and credits, or any loans made to anybody on Consolidated stock as collateral security?

[Mr. Palmer's examination was at this point suspended.]
Recess until 3 p. m.

Hearing resumed.

James W. Smith, being duly recalled, testified as follows:

Examined by Mr. Tremain:

—. What are the total annual executive expenses of the Consolidated Company?

A. What do you mean to include under that head?

Q. All expenses of the management?

A. I could not say.

Q. If the accounts had been exhibited so that the items could have been abstracted, the question would not have been necessary?

A. I cannot even approximate from memory.

Q. Can't you state to the best of your recollection what the management expenses per annum are, or about what is their present rate?

9301 A. I should suppose they would come within $75,000 a year.

Q. Within that figure what do you include?

A. The salaries of all the general officers and of all the clerks who attend to the general business of the company as distinguished from its branches; there are other items of expense which I presume you do not intend now to inquire about, like taxes which, of course, are not included.

Q. Are there any other items of expense that belong to the general management?

A. The incidental expense of stationery.

Q. Now, as to salaries, the president has how much?

A. Ten thousand dollars a year.

Q. And how many vice-presidents?

A. Two; $10,000 a year each.

Q. The treasurer?

A. Ten thousand dollars.

Q. The secretary?

A. Ten thousand dollars.

Q. And the chief book-keeper?

A. Three thousand five hundred dollars or $3,500; I am not sure.

Q. The head clerk?

A. Well, the others would come under the head of assistants.

Q. The two vice-presidents?

A. Mr. Lees and Mr. Zollikoffer in the order.

Q. Isn't there another vice-president?

A. The first vice-presidents and second; I have named all the officers.

Q. What is Mr. Whitehouse's position?

A. He belongs to the branch—Carpenter.

Q. Connected with the main office is the office of the Manhattan branch?

A. It is in the same building but it is distinct.

Q. Who is at the head of that?

A. Carpenter.

Q. What is his compensation?

A. It is not included in the $75,000 in my estimate; it is a separate branch.

9302 Q. Assuming it to be a separate branch, the Manhattan station?

A. The Irving place branch; $6,000.

Q. By the Irving place branch, you mean the Manhattan?

A. I mean the business which was formerly done by the Manhattan Company.

Q. Who has charge of the Hester street office?

A. Mr. Doane.

Q. Who manages the Twenty-first street station?

A. William T. Lees, I think.

Q. He is the son of the former president?

A. Yes, sir.

Q. Who manages the station at North river and Eighteenth street?

A. A. M. Smith, Wililam Combe, Fourteenth street and East river; Mr. Stricker at Forty-second street station; Mr. Bradley at the Forty-sixth street station and also of the Ninety-ninth and One Hundred and Eleventh, with an assistant.

Q. Does that cover them all?

A. Yes, sir; six stations.

Q. What compensation, if any, do any of the directors receive?

A. No stated compensation except a fee of $10 for attending the meetings.

Q. And also the executive committee members?

A. That is the same; that is, such of the members of the board of directors as receive no other salaries.

Q. And only those?

A. Only those.

Q. In order to close the fractional lots of shares, did the Consolidated buy some stock of the Manhattan?

A. No, sir.

Q. Did they buy any stock of the constituent companies?

A. No, sir.

Q. How did they adjust the fractional shares that are convertible into full shares?

A. When presented in even multiplies amounting to one or more shares they are marketable and purchasable and salable the same as the full shares.

9303 Q. That does not answer the question how did the Consolidated Company treat fractional shares?

A. They issued the certificates in fractional parts.

Q. Was any stock bought for account of the constituent companies?

A. By whom?

Q. By the Consolidated?

A. No, sir.

Q. Or for the Manhattan?

A. There was for the Manhattan.

Q. What stock was bought?

A. Twenty thousand dollars par value.

Q. When was that transaction?

A. Previous to the consolidation.

Q. That does not answer the question?

A. That is all the answer I can give.

Q. About how long previous to the consolidation?

A. Within a very short time, probably within thirty days.

Q. Through whom was that transaction made?

A. I purchased the stock in behalf of the Manhattan Company.

Q. Who did you buy it of?

A. One party I bought 150 of, E. S. Higgins, and I think, some stock was in the name of S. Charles Phelps.

Q. Who was it bought through?

A. I do not recollect; the stock came to me for sale as it frequently does, offered to me.

Q. What was the object of that purchase for the Manhattan?

A. In order to equalize the shares; the amount allotted to us was $11,940,000.

Q. What did those shares cost?

A. About $50000—a little less.

Q. That would be at a price of about $250?

A. I think I paid $240 for a majority of it.

Q. That was paid for out of the funds of the Manhattan Company?

A. Yes, sir.

Q. What was done with that stock?

A. Cancelled.

9304 Q. And do you say that the Manhattan Company paid for that?

A. Yes, sir, and there was no stock of the new company in lieu of it.

Q. You have an account as treasurer of the Consolidated Company with the City Bank?

A. Yes, sir.

Q. With what other banks?

A. Mt. Morris, First National, The Germania, The Bank of The Metropolis; I believe that was all.

Q. Are any deposits made in any of those banks from the original office except in the City Bank?

A. There are none.

Q. In all the other banks the deposits are made by the branch offices?

A. From their collections deposited every day.

Q. No checks are drawn on any of the banks except upon your signature?

A. My own or the secretary, and signed also by the president or vice-president.

Q. Where is the pass-book and check-book on the City Bank?

A. Probably at the office.

Q. Under your direction?

A. Yes, sir; I presume so.

Q. Could not you give a direction now to Mr. Young, the bookkeeper, who is here, to go and get them and bring them here?

A. I do not think the Committee will ask to have them brought here; it would inconvenience the company; they are open to inspection to any person delegated by the Committee, under my supervision.

Q. In the absence of Mr. Gawtry and yourself, no one could sign any of the checks while you are here?

A. That is true.

Q. Are there two accounts in the City Bank?

A. No, sir; but one.

Q. Where is the dividend account kept?

A. In the City Bank.

9305 Q. The checks to pay dividends are drawn on the general account?

A. Yes, sir.

Q. What checks are drawn on that account?

A. All checks for supplies, pay-rolls, taxes and expenses of all kinds.

Q. Are any checks, except transfer checks, drawn on the other bank accounts?

A. No other checks.

Q. Are any deposits made in the City Bank except the transfer check?

A. Yes, sir; any thing that is in receipt from the general office.

Q. You keep an account in the City Bank; do you keep a personal account?

A. No, sir; not in the City Bank.

Q. In any other bank?

A. Yes, sir.

Q. What bank?

A. The Central National.

Q. Since the 2d of October has the Consolidated paid any money to the City Bank in payment of loans?

A. Yes, sir; a loan of $300,000 has been paid by their charging it up.

Q. With that exception, no money has been paid by the Consolidated to the City Bank, since the 2d of October, in payment of loans, has there?

A. To the best of my recollection, there has not.

Q. Do you know the amount—approximate amount—there was to the credit of the Consolidated Company this morning in the City Bank?

A. No, sir.
Q. Did it exceed $300,000?
A. I presume it did.
Q. Did it exceed $500,000?
A. I could not say; I did not look at their books.
Q. Don't you keep the bank balances?
A. Yes, sir.
Q. You began to pay dividends the 15th?
A. Yes, sir.
Q. How much has been paid out on account of that dividend?
A. About $1,100,000 in excess of that probably.
9306 Q. Was it all paid by checks on the City Bank?
A. Yes, sir.
Q. What, if any, loans are outstanding at this moment?
A. The company's notes are out for $600,000.
Q. Who holds them?
A. I don't know; I presume the City Bank.
Q. Demand notes?
A. No, sir.
Q. Discounts?
A. No, sir, hardly a discount; the paper was sold practically.
Q. How old are those notes?
A. I think about three days, that is, since they were issued.

(By the CHAIRMAN:)

Q. The entire $600,000?
A. Yes, sir; they were issued on the 15th.
Q. To whose order were they drawn?
A. James W. Smith, treasurer.
Q. When endorsed to whom did you hand them?
A. I think it was Mr. Palmer, an officer of the City Bank, and received a check for it less the interest.
Q. How long were they to run?
A. They mature at intervals; the first January 10th maturing at intervals of $100,000 about every ten days until the end of February.
Q. At rate of discount?
A. Four per cent.
Q. Per annum?
A. Yes, sir.
Q. Did any collateral accompany them?
A. Not strictly speaking, but there was a pledge of the company's receipts.
Q. A formal agreement or writing to that effect?
A. A letter signed bv me.
Q. By that you mean consumers' balances?
A. No, sir; receipts of the company of every nature, our current receipts.
Q. That includes consumers' payments?
A. Yes, sir.
Q. No other collateral?
A. No other.

9307 Q. When those notes for $600,000 were delivered, did you take up a demand note of $300,000 in place?

A. No, sir.

Q. They were an addition to the demand note for $300,000?

A. They were.

Q. Why was that demand note for $300,000 paid off this morning, if it was?

A. I could not say, sir.

Q. Is that note returned to you?

A. There were three notes returned to me with a note, stating that it had been charged up to our account.

Q. That was to-day?

A. That was to-day.

Q. With interest of three per cent.?

A. Yes, sir; with interest at three per cent.

Q. What was the loan next immediately preceding the $300,000 loan?

A. Four hundred thousand dollars, I think.

Q. What was its date?

A. You will find it in my former testimony.

A. That don't indicate when it was discharged or matured?

A. There was no maturity to that.

Q. What was its date, of the loan of $400,000?

A. I think within the first six days of October.

Q. When was it paid?

A. I don't know.

Q. Is it paid?

A. Oh, yes.

Q. When was the next preceding that one?

A. About the 30th of June.

Q. How much was that?

A. Seventy-five thousand dollars.

Q. When was that paid?

A. This is in correction of my former testimony, where I said $200,000; I think it was paid about the 6th or 8th of July.

Q. Entirely?

A. Yes, sir.

Q. Prior to that when was the next previous loan?

A. The counsel led me in error in putting a question; this
9308 is wrong; strike out with regard to that previous loan of $400,-
000; it is $300,000 I had in my mind; it was paid off to-day.

Q. When was the loan that was immediately preceding that one?

A. If my recollection serves me right, the June loan of $75,000.

Q. What you mean is that no loan was made between June 30th of $75,000, and October of $300,000?

A. Yes, sir.

Q. When was the next preceding the one of June 30th of $75,000?

A. I think it was on the 2nd of February.

Q. That was $330,000?

A. No, sir; it was $300,000 or $400,000.

Q. Four hundred and twenty thousand dollars?

A. No, sir; it was either $300,000 or $400,000; I don't remember which; I think it was $400,000.

Q. Now, when was the loan discharged?

A. Before the end of March, I think, sir.

Q. What did you borrow this $600,000 for?

A. To replace earnings that had been used for other purposes for retiring the bonded obligations of the company, and for money that had been expended for construction.

Q. What immediate obligations did you have to pay?

A. We had our supplies—purchases of coal and naphtha and lime; our pay-rolls and our dividend.

Q. If you had not had to pay that dividend at that time in money, would the loan have been necessary?

A. I don't know, sir.

Q. The dividend took one and a quarter million?

A. Yes, sir; nearly.

Q. And the profits were anticipated to meet it?

A. No, sir.

Q. Well, they were estimated?

A. No, sir; it had been earned.

(By the CHAIRMAN:)

9309 Q. Did you not borrow money on credit anticipating profit to pay a dividend?

A. No, sir.

Q. You did borrow money?

A. On anticipated receipts.

Q. Then you did borrow money based upon anticipated receipts?

A. Well, hardly that, sir; I do not think that is a statement of the case; it is not my evidence, at any rate.

Q. You say then that that was not it?

A. It was a pledge of the receipts to repay it.

Mr. TREMAIN: We will suspend the witness' examination at this point in order to allow the expert to look at those books at the office.

The WITNESS: I will be very much obliged to the Committee if they will allow it to take that course; I am willing to produce the books for examination, but I am not willing to allow them to go out of my custody; I do not know that I have authority or control to bring the books here.

Senator MURPHY: The witness wants protection by means of a subpœna.

The WITNESS: I think I should appeal to this committee to get their opinion upon this subject; I think the books should not go out of the office.

Senator MURPHY: Upon the witness' statement, I think he should be protected by a subpœna.

The WITNESS: I am willing to produce the books and take them back with me, but not to leave them.

The CHAIRMAN: You can produce the books, and if for any reason, it should be desirable to examine them further then we will consider it.

J. YALDEN, being duly recalled, testified as follows:

Examined by Mr. TREMAIN:

Q. You are prepared to give the evidence of the Municipal and Knickerbocker Companies?

9310 A. Yes, sir. The above companies were organized in the year 1876 and subsequently merged and operated under one management up to the time of the consolidation, on November 11, 1884.

The Knickerbocker Company was formerly the Union Gas-light Comapny and passed into the hands of a receiver. It appears that the works of the Knickerbocker Company were partly built and completed from funds supplied by the Bayard estate, and the advances for that purpose amounted to about $1,200,000, which was secured by the lease between the Municipal and Knickerbocker Companies provided for the guarantee for the payment of interest and principal upon the $1,200,000 in bonds. At the same time the Knickerbocker Company stock was purchased by the Municipal for $50,000 in cash, the latter company transferring in trust the whole of its shares capital, viz.: 15,000 shares, at $100, representing $1,500,000 of stock.

The Municipal Company was incorporated July 7, 1876, with a capital of $500,000, and commenced operations by issuing 3,500 shares of stock, at par value, of $350,000, to Mr. R. M. C. Graham, in consideration of the purchase of the New York Oxygen Gas Company. Of this $250,000 was returned to the treasury of the company, to be sold and used as working capital, leaving the actual cost to the company of the property acquired $100,000. The $250,000 stock was disposed as follows:

Cash	$215,300
In payment of expenses	8,900
Discount on stock sold below par	25,800
Making a total	$250,000

9311 And $150,000 of stock was issued to Mr. E. Stearns, agent, in purchase of a certain patent-right, known as the De Motery patent, and this transaction, with the stock issued to Mr. Graham, completed the entire issue of the original $500,000. Of stock, in 1877, a further increase of $1,000,000 was made on the capital stock, of which $800,000 was paid in cash and $200,00- paid for the purchase of patents; and in 1879 a further issue of $500,000; and in 1880 a further issue of $1,000,000, both of which were paid in cash, making the total issue of capital $3,000,000.

The particulars of the capital account are detailed in "D 1."

To enable this company to provide additional capital for its plants and works, an issue was made in 1877, of $750,000 in bonds; $390,000 were sold for cash, and the balance, $360,000, was deposited as security for the purchase of real estate and other property, and of these bonds there remained at the time of the transfer to the Consolidated $291,000, the liability of which was assumed by the Consolidated Company.

In the last issue of $1,000,000 of stock, in 1880, there was included a subscription by the Bayard estate of three thousand five hundred shares, amounting to $350,000, a check for which was paid the company on March 16, 1880. The history of this transaction appears to be that the Knickerbocker Company had instituted a suit against the Municipal Company for damages for the non-fulfillment of a certain contract, which action was settled by payment to the Bayard estate on the 16th March, 1880, of the sum of $300,000 and the $50,000 before referred to for the purchase of the Knickerbocker stock, making a total of $350,000 capital; a check by the Bayard estate for $350,000 concurrently paid to the company as a sub- 9312 scription for the 3,500 shares so issued. This stock appears by the register of stockholders to have been subsequently transferred in part to the shareholders of the original Knickerbocker stock under management between the parties. The above amount of $300,000 for damages was charged to the profit and loss account, and the $50,000 was charged up as an investment for Knickerbocker stock, so that in reality the company had paid damages and invested in the Knickerbocker stock at the expense of their capital account, and the transaction being concurrent, the company in reality parted with no money. In 1880, when the Knickerbocker property was acquired by the Municipal as before stated, the two companies were conducted under one management, and a separate set of books was kept showing the production and profits of each company at their respective works, as likewise the amounts paid out for improvements to works and mains, etc., and the cost of each was provided out of the Municipal funds. The separate profits of the two companies are shown in statement D. — to — and result in a surplus, during the operations of $2,493,543.51 after payment of dividends amounting to $2,806,192.50.

The profit and loss account also contains a credit on June 30th, 1879, of $300,000 paid by the New York Gas-light Company for the right to manufacture gas by the process now in use by the Municipal Company.

The purchase of this patent in the first place was charged up to the purchase of "patent accounts," but the sum received for the right to manufacture from another company was credited up to "income account." The total outlay by the Municipal Company for 9313 real estate, buildings, works, plant, services, mains, meters, etc., is $4,092,347.86, which was appraised in the Consolidated Company at $5,100,000, leaving an appreciation, including the franchise, of $1,007,652.14. The Knickerbocker Company's outlay for improvements, meters, plant, services, etc., provided for the Municipal amounted to $810,481.15, but the works, the value of which is not brought into the books, were appraised to the Consolidated Company at $3,000,000, leaving an appreciation (subject to mortgage bonds) $2,189,518.85, the total amount, therefore, of the two properties transferred to the Consolidated was $8,100,000, from which deducted for liabilities $1,500,000, leaving a net amount of $6,600,-

000 of stock issued to the stockholders of the Municipal Company in consideration of the two properties, less the incumbrances.

In reference to the dividend account, page D —, the Municipal Gas-light Company commenced paying dividends in 1879 and for the six years ending 1884, paid to their shareholders the sum of \$2,806,192.50, by way of dividends, to which must be added the stock of the Consolidated Company amounting to \$6,600,000, making a total of \$9,406,192.50.

To this, however, must be added division of assets since the consolidation already paid, \$795,000, and a further surplus of about \$137,000, making a total amount received and to be received by the stockholders of the Municipal Company for the original capital:

9314 Cash dividends and surplus to be divided...	\$3,738,192 50
And the stock of the Consolidated Company to represent the original investment of \$3,000,000	6,600,000 00
	\$10,338,192 50
Deduct, amount of stock capital paid in..........	3,000,000 00
Net benefits received in cash and stock beyond the original investment	\$7,338,192 50

As before mentioned, the Knickerbocker stock was bought by the Municipal Company for \$50,000, which was charged to an account called "The Knickerbocker stock account." The stock itself, however, was transferred and held in the name of trustees, and arrangements with the old stockholders were apparently made by the subscribers to the Bayard stock of 3,500 shares, a part of the issue of 1880. When the Municipal Company was transferred to the Consolidated Company this stock was divided *pro rata* among the then stockholders of the Municipal Company, and taken at a valuation, to include plant, of \$3,000,000, from which was deducted the bonded debt of about \$1,137,000. The shareholders of the Municipal, therefore, were benefited in this transaction nearly \$1,863, and by the profits accumulated from the manufacture, less the outlay upon the works and the cost of the stock, about \$860,481.15.

Q. Referring to the results of the examination of the accounts of all the constituent companies which you have made, and for the pur-
pose of stating totals, have you prepared a summary which
9315 will show the total nominal share capital at the time of the
consolidation, and how much thereto in all had been contributed in cash, and how much from surplus profits?

A. Yes, I have.

Q. Will your statement also show the total dividends paid in money, and the other total profits in stock of the consolidation as outlined in your testimony, touching the New York and Manhattan Companies?

A. Yes, it will.

Q. Will it also show the total cost of properties entered into the capitalization of the Consolidated Company?

A. Yes, it will.

Q. And can you also state the total amount of the distribution of the assets of the constituent companies, which was made in the shape of extra dividends, or in some other diminution of working capital, in fact, among the old shareholders of the constituent companies?

A. Yes, sir; there is one item, the cost of the property of the Knickerbocker, which is not properly stated perhaps—$800,000—that is not really the cost of the property, but that is all I know that has been spent on it, that there was one and a quarter millions of bonds; presumably those bonds were paid, but I have no means of tracing it.

Q. All you can trace is $110,000?

A. All that I can trace on the books; I have no record to show me any part of the one and a quarter million dollars spent.

Q. At this point I will incorporate in the summary of accounts of the several constituent companies as above indicated?

A. Yes, sir.

Q. Before passing from that summary I shall ask you to state in answer to this question the several accounts of properties or assets of the constituent companies that were distributed among their
9316 respective shareholders and which did not form a part of the capitalization of the Consolidated Company. I want it by companies.

A. On the Manhattan Company it is not mentioned there, but there is $400,000 which was distributed by the Consolidated Company; the New York, $87,258.19; the Metropolitan, $686,988.17; the Municipal and Knickerbocker, $932,843.63. Those three amounts make a total. There is the Harlem $32,000 which the Consolidated paid for.

Q. Those amount in all——

A. That gives a total of $2,139,089.99 surplus assets and dividends distributed among the stockholders of the constituent companies after the date of consolidation. Four hundred and thirty-two thousand dollars of that was paid by the Consolidated Company by way of dividends for the Manhattan and Harlem Company and the remainder collected and distributed by the companies themselves.

Q. So that, as a matter of fact, instead of the actual capital or properties of the Consolidated Companies being greater, in fact, than the aggregate of the entire properties of the constituent companies, the total properties of the Consolidated Companies are less by the sum of $2,139,089 than the total actual properties of the constituent companies as they existed prior to the consolidation and at the time of the consolidation. That is the fact, is it not?

A. Yes. The $2,139,089 is practically the working capital of the constituent companies at the time of the consolidation, for this reason, that the companies turned over nothing else to the Consolidated Company but their plant and properties, services and mains; and, although they had turned over their liquid assets, such as coal and supplies, customers, balances, etc., they were collected by the Consolidated Company for the account of the respective com-
9317 panies, and paid away in part for their account or paid for to them in cash.

Q. At all events, the actual assets were so distributed among the shareholders of the constituent companies as to result in a diminution of total assets in the consolidation below what they were in the constituent companies by exactly that sum of $2,139,089?

A. It resulted in a diminution of the assets of the constituent companies certainly, which were not turned over to the Consolidated Company.

(By the CHAIRMAN:)

Q. The Consolidated Company had less assets than the constituent companies had at the time of consolidation by $2,139,089?

A. Yes, sir, decidedly.

Q. Have you got total of your summary so that you can answer the following questions: the total nominal share capital of the constituent companies at the time of the consolidation was what?

A. The total capital at the time of the consolidation of the whole of the companies?

Q. Yes.

A. Not including $1,500,000 for the Knickerbocker, $15,500,000 exclusive of that of the Knickerbocker.

Q. Of that amount what was the total, by your testimony, already delivered, as found by the books to have been actually in cash capital?

A. Eight million seven hundred and twenty-seven thousand and fifty dollars; that is the actual cash capital paid in.

Q. What did you find to have been the total of such share capital contributed from surplus profits?

A. Four million two hundred and eighty-four thousand and seven hundred dollars.

Q. What do you find to have been the total of that share capital that was issued for the property?

9318 A. Two million four hundred and eighty-eight thousand and two hundred and fifty dollars; those three items make $15,500,000; I think I will make one correction in the Harlem in that amount of $4,284,700; that includes $200,000 of the Harlem which they created by increasing the cost of their property without any value whatever.

Q. For this $200,000 of increase there was a nominal entry made in the books?

A. Yes, sir.

Q. And stock for it created?

A. No, sir; the stock had been created but went to help pay what it ought not to pay.

Q. It helped go to pay what ought not to have been paid because of calls on the stock?

A. Yes, sir; it showed a fictitious payment of capital stock.

Q. Including that item and the three items you have stated make the total $15,500,000, the nominal share capital of those companies?

A. Yes, sir.

Q. What is the total amount of dividends in money that you found to have been paid?

A. Paid by the respective companies, the constituent companies, in cash, $56,741,613.27.

Q. What do you find to have been the profits in excess of those dividends represented by stock now outstanding?

A. That is, you mean the difference exactly in the two stocks?

Q. Yes.

A. The difference of the old stocks in the constituent companies and the stock of the Consolidated representing the sum as $20,970,000.

Q. Now, what are the total benefits?

A. Seventy-nine million four hundred and eighteen thousand seven hundred and three dollars and twenty-six cents.

Q. How did you arrive at that?

A. That is the total cash dividends paid; the difference between the value of Consolidated stock at par and the par value of 9319 stock in the constituent companies, and the surplus assets they have divided since the consolidation, and—the latter amounting to $1,707,089.99, therefore the companies have this seventy-nine and a half million dollars, and in addition thereto, par value of stock in the Consolidated Company equivalent to the stock in the original companies.

Q. In addition to those benefits amounting to $79,418,700 the stockholders retain, do they not, respective shares of stock in the Consolidated Company amounting to $15,500,000?

A. Yes, sir.

Q. So that the total benefits in stock and accretions to the shareholders, including their original investments, was how much?

A. About $95,000,000.

Q. Did you have before you the original returns made to the tax office for the Knickerbocker Gas-light Company from 1877, to 1884, inclusive?

A. Yes, I did last spring.

Q. Are the following true extracts from those returns?

A. Yes, sir.

By Mr. Tremain: They are extracts from the return of 1877: "The company has not done any business as yet; works not yet completed; no actual value to the stock over real estate."—1879. "The company has not done any actual business as yet; the works not yet completed: no actual value to the stock over real estate."—1880. "Stock of the company is of nominal value only beyond its real estate; this process for manufacturing gas is of no practical value, having been tested and its use has been discontinued; the liabilities outstanding as above stated reduce the value of the capital stock to the extent stated, and make its value only that of the real estate. The company is the successor of the defunct Union Gas-light Company which failed"—1881. "The Company's stock is 9320 only of nominal value beyond its real estate. This company is the successor of the defunct Union Gas-light Company which failed, and its works are not now in operation—1882. "The capital stock of the company is only of nominal value beyond its real estate; the company is the successor of the Union Gas-light

Company which failed, and its works are not now in operation"—1883. The capital stock of this company is only of nominal value beyond its real estate; this company is the successor of the Union Gas-light Company, which failed. "This company has leased to the Municipal at a rent of less than the interest on its indebtedness"—1884. "The capital of this company is only of nominal value beyond real estate. This company is the successor of the defunct Union Gas-light Company, which failed. This company has leased to the Municipal at less than the interest on the indebtedness."

Q. You had before you the sworn returns when these extracts were made?

A. Yes, sir.

Q. You may give us evidence with regard to the Harlem?

A. Yes, sir. This company was incorporated in 1855 under the act entitled "An act to authorize the formation of gas-light companies," passed February 16, 1848, and during the first year of its existence, issued and received payment for $85,000 of stock. Within the succeeding four years it issued further capital to the amount of $262,900 of which $150,950 was issued in payment for construction and works. By subsequent issues at different periods the total stock capital was brought up to $2,000,000, of which $1,569,050 was paid up in cash, $150,950 was issued as above in payment for construction and works, $200,000 was credited by appreciation by resolution of the board, May 21, 1866, and $80,000 was issued in July, 1864, by way of scrip dividend.

9321 The particulars of the foregoing are shown by the capital account, pages E, 1 C and 2 C. In 1875 $150,000 in bonds bearing interest at seven per cent. per annum, payable one-half yearly were issued and subscribed for, and in 1879 a further $20,000 were taken up, making a total bonded debt of $170,000.

The company did not enter upon active business until the early part of 1857, and the results up to the time of their amalgamation with the Consolidated Gas-light Company are shown in yearly, and five-yearly periods by the analysis of the profit and loss account, pages 3 C to 7 C.

An examination of the figures contained in the above-named analysis will show that the company during the twenty-seven years of its active business paid to its stockholders dividends to the amount of $2,329,917.25 (inclusive of the $80,000 scrip), and paid interest regularly on their bonds.

From the statement headed "Current Capital Account," pages 11 C to 14 C, it will be noted, that this company, whilst always commanding a steady business had not at all times ample capital at command. This arose to a great extent from a very large portion of the business of the company being the public lighting, which returned but a bare profit, if any, on the cost.

The rate of dividends paid by this company has at no time been excessive, averaging in many years considerably below ten per cent. (See Capital and Dividend Account, pages 15 C and 16 C.)

The transfer of this company's property to the Consolidated Gas-light Company was effected at an appreciation of (in round figures)

$1,313,000, in the real estate, building, retorts, plants, mains and services, and the franchises and rights were charged up at 3322 $469,082.54. (For further full particulars of this, see Particulars of Sales to Consolidated Gas-light Company, page 8 E.) The statement shows $3,000,000 Consolidated stock issued, the actual amount of stock received, however, approximated $2,830,000—$170,000 being retained by the Consolidated Gas-light Company, on account of liability assumed by them of the $170,000 bonds of the Harlem Gas-light Company, which have since been paid off by the Consolidated Company.

From the foregoing, and by reference to the annexed tabulated statements it will be seen that in a condensed form the following figures give particulars of total cash and capital investments and profits derived therefrom by the stockholders of the Harlem Company by way of dividends, and by sale under the Consolidated scheme to the Consolidated Gas Company.

9323 Total capital subscribed in cash, and issued for construction (cash)		$1,720,000 00
Issued by appreciation		200,000 00
Issued by scrip dividend		80,000 00
Total		$2,000,000 00
Total dividends paid to stockholders, as per account page , exclusive of $80,000 scrip dividend		$2,249,917 25
Increased valuation beyond stated value of real estate, plant, mains, services, etc., in books of Harlem Company, and the appraisement to Consolidated Company:		
Balance of separate account		1,243,986 97
Appreciation	$1,312,733 98	
Franchises	469,082 54	
		1,781,816 32
		$3,025,803 49
Liabilities assumed by Consolidated Company:		
Bonded debt	$170,000 00	
Sundry liabilities	168,705 93	
	$338,705 93	
Deduct value of customers' accounts, coal, tools, stores, materials, coke, cash assets, etc	142,902 44	
		195,803 49
		$2,830,000 00

9324 This being the amount of stock issued by the Consolidated Company, viz.: $3,000,000, as shown by statement page , less liability of $170,000 assumed by the Consolidated Company on account of the bonded debt of the Harlem Company hereinbefore referred to.

The stockholders of the Harlem Company have therefore received for their original investment of $1,720,000 represented by stock of $2,000,000,

Dividends	$2,249,917 25
Consolidated stock as above	2,830,000 00
	$5,079,917 25
Deduct cash paid for stock	1,720,000 00
	$3,359,917 25

Received in cash and stock of Consolidated Company for the original investment.

The foregoing gives a succinct history of the constituent companies of the Consolidated Company, and on page H 1 I give a tabulated statement showing the various capital accounts, the benefits to be. On reference to this statement it will be seen that the total benefits derived by the stockholders from their investment have been, in cash dividends, surplus assets, and stock in the Consolidated Company $79,418,703.26, and in addition thereto the equivalent of the original stock of the new company.

On page H 2 are shown the assets and liabilities transferred by the constituent companies to the Consolidated Company, but collected on their account and liquidation of the current liabilities at the time of the transfer.

9325 It therefore shows that the constituent companies really paid back to their stockholders the working capital of their separate concerns, which in the aggregate amounted to (say surplus assets	$1,707,089 89
Dividends paid for the Manhattan and New York Company included under that head	440,000 00
	$2,147,089 89

The various constituent companies were organized in the Consolidated Company at a par value of $39,078,000, which represents, according to the following schedule, the valuation and appraisement of the real estate, mains, services, etc., and other properties and franchises.

9326	New York.	Manhattan.	Metropolit'n.	Municipal.	Knickerbocker.	Harlem.	Total.
Street mains, valves, etc.	$950,000	$1,083,000	$971,000	$749,000	$744,000	$720,000	$5,217,000
Meters	215,000	367,000	273,000	158,000	69,000	113,000	1,195,000
Services	127,000	350,000	233,000	103,000	81,000	111,000	1,005,000
Plant	2,874,000	3,623,000	2,044,000	1,804,000	980,000	826,000	12,151,000
Real estate	1,607,000	3,563,000	1,474,000	889,000	480,000	604,000	8,617,000
Bulkheads, piers and water rights	250,000	425,000	300,000	200,000	115,000	100,000	1,390,000
Office buildings	100,000	175,000	....	....	....	50,000	325,000
Office furniture	15,000	20,000	12,000	16,000	2,000	5,000	70,000
Laboratories, photometer rooms, etc.	5,000	5,000	5,000	6,000	1,000	2,000	24,000
	$6,143,000	$9,611,000	$5,312,000	$3,925,000	$2,472,000	$2,531,000	$29,994,000
Rights, franchises, etc.	1,417,000	2,329,000	1,863,000	1,175,000	528,000	469,000	7,781,000
Totals	$7,560,000	$11,940,000	$7,175,000	$5,100,000	$3,000,000	$3,000,000	$37,775,000

9327 Furthermore, a certain amount of stock was reserved by the Consolidated Company, amounting to $1,303,000, to be hereafter sold to provide working capital, and a sum of $2,329,000 was also reserved from such valuation of $37,775,000, to be disposed of from time to time in providing for the current obligations and bonds of the various companies.

This stock had not been disposed of at the time your committee commenced its labors, but some of the liabilities had been paid, viz.:

The bonds of the Harlem Company	$170,000 00
Notes of the Knickerbocker Company	450,000 00
Total	$620,000 00

Q. State the cost of the real estate of the Harlem without any structures upon it?

A. One hundred and fifty-eight thousand eight hundred and ninety-nine dollars and eighty-one cents.

Q. State the cost of the plant?

A. Cost of the buildings, retorts, bulkhead and plant, $557,418.10. The cost of meters, $123,895.31. Those were inventoried for less in the appraisement to the Consolidated by $2,649.44 less than this amount.

Q. It is the only instance of under valuing, you think, in the appraisement?

A. Strictly speaking, yes.

Q. I forgot to ask you what was the cost of the New York Company's real estate?

A. The first cost I could not give you of the real estate unless I went back to the books of fifty or sixty years ago. The real estate cost on the rorganization of the company in 1871, about one and a quarter millions, that is to say, it cost according to the reorganization.

9328 Q. That includes an appreciation?

A. Certainly.

Q. You mean it is taken by the new company at that estimation?

A. Yes, in the reorganization.

James W. Smith, being duly recalled, testified as follows:

Examined by Mr. Tremain:

Q. Mr. Smith, what have you got there?

A. The dividend lists for the first dividend payable in June; and this the second dividend payable on the 15th, and in progress of being paid now.

Mr. Tremain: You will have the books at 10 o'clock tomorrow morning and come yourself at 12 o'clock?

A. Very well.

Adjourned until December 19th.

NEW YORK CITY, FIFTH AVENUE HOTEL,
December 19th, 1885.

The committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain appeared as counsel to the committee.

DAVID PALMER, being duly recalled, testified as follows:

Examined by Mr. TREMAIN:

Q. Have you refreshed your recollection concerning the loan transactions between the Consolidated Gas Company and the City Bank?

A. I have sir.

Q. Since your testimony yesterday the treasurer of the company stated that there was an additional loan to that mentioned by 9329 you yesterday, namely, the loan of December 15th for $600,000 less the discount?

A. That was not in the nature of a loan; that was a discount of the paper brought in.

Q. Did you know that yesterday?

A. I did.

Q. Is that the reason you did not mention it as a loan?

A. Yes, sir; we make a distinction between loans and discounts.

Q. It is the equivalent of a loan, is it not?

A. Loans are payable on demand and discount paper lays to its maturity.

Q. But they are both loans under different names?

A. Yes, you may call them loans, if you please.

Q. Without reference to such distinction and inquiring about any advances of any kind whatsoever by your bank to the Consolidated Gas Company, and either by credit on your books to the Consolidated Company or by any other way, please state all of such loans or advances that have been made by your bank during the past few months?

A. February 3rd, 1885, we loaned the Consolidated Gas Company $400,000.

Q. Was that on any collateral?

A. Their notes as collateral, their demand notes.

Q. Were those demand notes secured by collateral?

A. No, sir.

Q. When were those notes paid, or any of them?

A. On the 6th of March $200,000 was paid; on the 17th of March $200,000 was paid.

Q. The next such transaction was when?

A. June 30th, a loan of $75,000.

Q. When was that paid ?

A. On the 8th of July.

Q. Was that secured by collateral?

A. Their demand note without collateral.

Q. When was the next one?

A. October 2nd, $300,000.

9330 Q. Was that on collateral? A. Their demand notes.

Q. Three demand notes for $100,000 each, without any collateral to secure them?

A. Yes, sir.

Q. You took the paper without any collateral; by that you mean to imply that among banks a demand note made by the drawer is regarded as a collateral in any well-conducted bank?

A. In some cases it is, sir.

Q. Is that generally the case?

A. No, sir; not generally.

Q. Do you recall any other instance in the past year or two where your bank has loaned on the demand note of the drawer, without any collateral?

A. I cannot recall any particular instance; we may have done so, however.

Q. This loan of October 2d, of $300,000, was repaid yesterday by your charging it up as you yesterday testified—is that the fact?

A. Yes, sir.

Q. After October 2d, was there any other loan or advance?

A. Since October 2d the bank has discounted paper for the Consolidated Gas Company.

Q. What date?

A. December 15.

Q. Who conducted that transaction?

A. The president.

Q. Mr. Pyne?

A. Yes, sir.

Q. With whom was it conducted?

A. I do not know.

Q. With Mr. Smith?

A. I had nothing to do with the transaction; I do not know any thing further about it than the facts I have stated.

Q. Do you know what person saw Mr. Pyne about it?

A. I do not.

Q. Did you see the collateral that was taken for the notes thus discounted?

A. The paper was handed to me and signed by Mr. Smith, treasurer.

9331 Q. You have not that paper with you, have you?

A. No, sir.

Q. Have you any objection to stating its contents, if you are able to do so?

A. No, sir; the purport of the paper was to pledge the current receipts of the gas company for the payment of those notes upon their maturity.

Q. Is that all there was of it?

A. That is all there was of it; yes, sir.

Q. That was the only collateral?

A. The only collateral; I would say, however, that that paper was indorsed.

Q. The notes were indorsed?

A. Yes, sir.

Q. By whom?

A. James W. Smith.

Q. Individually?

A. Individually.

Q. Was that indorsement secured by any collateral?

A. Nothing further than I have stated.

Q. What was the balance yesterday morning when the $300,000 loan was charged off, immediately before it was charged off?

A. I think it was about $360,000 or $370,000.

Q. And if it was charged off, the balance was only about $60,000 or $70,000?

A. Yes, sir.

Q. To the credit of the Consolidated Company?

A. Yes, sir.

Q. Do you know the balance this morning?

A. No, sir.

Q. In any transaction had between your bank and the Consolidated Gas Company, or any of its officers, has stock of the Consolidated Gas Company been received by your bank as collateral?

A. We may have made some small loans to General Roome, I think. He is president of the company; on the stock of the company.

Q. Any others?

A. No, sir.

Q. Ever made any to Mr. Smith?

A. No, sir.

Q. Ever made any to Mr. Francklyn?

A. No, sir.

9332 Q. Ever made any to Mr. Lees?

A. No, sir.

Q. Ever made any to Mr. Day?

A. No, sir.

Q. Ever made any to Mr. Gawtry?

A. No, sir.

Q. Ever made any to Mr. Pyne?

A. No, sir.

Q. When was this made to General Roome?

A. It may have been two or three months ago.

Q. Was it not longer ago that that?

A. I cannot recollect the time exactly.

Q. And the amount?

A. I think it was somewhere in the neighborhood of $5,000 or $10,000.

Q. Have you refreshed your memory since yesterday whether you made loans on Consolidated Gas stock?

A. We have made no loans on Consolidated Gas stock except a few shares of that stock may have been sent in to us by customers with other securities as collateral for loans.

John W. Smith, being duly recalled testified as follows:

Examined by Mr. **Tremain**:

Q. Do you pay for your labor in checks or in currency?

A. It is handed to the workmen in currency; the majority of wages are paid in that way.

Q. The current expenditures every month for wages and materials are generally between, what minimum and maximum?

A. I would say from $250,000 to $400,000, average about $325,000.

*. That includes salaries, expenses, supplies, etc.?

A. Yes, sir.

Q. Have they paid for November, those sums all expenses and all supplies?

A. As usual we get all.

Q. Have they actually been paid at this date?

A. The same as usual, they have been paid.

Q. Have the actual expenses for the month of November for wages, materials and supplies all been paid to this date?

9333 A. They have nearly all been paid; though the supplies for October and for half of September have been waiting for a contract to be completed.

Q. I notice in the bank accounts a considerable irregularity in the total amount of checks drawn apparently for the payment of current expenses, wages, supplies, etc., is not that true?

A. I do not know; there is no irregularity for November, if there is for the other month.

Q. You think they are all paid in the regular way for October and November?

A. Yes, sir.

Q. What is the liability of the company, the present outstanding liability for supplies?

A. It is impossible to state.

Q. Is it not over $200,000, the coal and supplies?

A. I do not think it is over $25,000; thirty days from now I may be able to tell you; the bills are not in; there is nothing irregular in the November payment.

Q. I notice that during the month of November the general drawings on your bank account are in excess of $500,000 and for half the month of December the general drawings are less than $50,000?

A. That is the majority of the bills for supplies are paid at the end of the month.

Q. General drawings I notice for the month of October are in your average monthly expenses as you have stated were about $325,000. It appears that you would require for the balance of the month of December about $275,000 more to meet such expense during that month; is not that so?

A. It probably would not be $275,000; I would say it would be about $250,000 on that hypothesis.

Q. Is the substance of it that it would require about $250,000 to meet the current expense for this month of December if you have paid but $500?

A. I know we have paid more than $50,000.

9334 Q. Is the substance of it that it would require about $250,000 to meet the current expense for this month of December?

A. I cannot answer the question.

Q. Is the substance of it that it would require about $250,000 to meet the current expense for this month of December over and above what has been paid?

A. Yes, sir.

Q. I did not in my previous question imply that there was an irregularity in the monthly expense as appears from the bank account but that there seemed to be a considerable irregularity in the average monthly expense. I have not made it up, but I presume your answer is correct that the general average is about $325,000?

A. Yes, sir.

Q. By the bank pass-book and by the bank check-book it appears that the balance of your company at the bank at the end of the business of December 18th, was $911,000 against which you have issued checks for dividends. Can you say about what the total amount for dividend checks is as now issued?

A. Upwards of $1,100,000, I should suppose.

Q. That balance in the bank of $911,000, that includes, does it not, the discount on the $600,000 in notes of December 15th?

A. Yes, sir.

Q. How is it after paying the demand loan of $300,000 which was charged to the account yesterday with interest?

A. Yes, sir, that would be about right.

Q. Under that situation you have checks outstanding in excess of your balance at the bank of upwards of $200,000?

A. Yes, sir.

Q. Therefore, to meet the supply bills about $250,000, as estimated and to meet those checks outstanding of upwards of $200,000, you would require, would you not, about $45,000?

A. It will take that amount to pay.

9335 Q. Will the receipts from gas sales to consumers meet that?

A. Probably not.

Q. Some of those loans due apparently in January, you will, therefore, require, according to your estimate, will you not, for the month of January a sum in excess of $500,000 to meet the January payments?

A. Yes, sir, including the notes that are payable at that time.

Q. It is nearer six than five hundred thousand dollars?

A. It is probably more than $500,000, not $600,000.

Q. That is regardless of contracts for coal?

A. No, sir, that is included.

Q. Will the receipts from consumers during January probably equal $500,000 or $600,000?

A. They will exceed that amount no doubt.

Q. As the proceeds of the excessive consumption of December?

A. A large consumption by reason of the season.

Q. By this testimony it would appear that the company will require money in December. Has any provision been made for that, or will a loan be necessary?

A. I could not say; I am confident of the ability of the company to provide for their wants.

Q. Has any loan been negotiated?

A. No, sir; no farther loan.

Q. In these calculations there seems to be no reservation of actual funds for working capital. Has there been any action taken in that respect?

A. There has not, sir.

Q. What has the policy of the company designed in that respect?

A. No policy has been formulated as yet.

Q. Are the officers having that matter under consideration?

A. I do not know that any of them are officially; in their minds they may have.

9336 Q. You are authorized to use the stock that stands in your name as trustee for the general purposes of the company?

A. No, sir.

Q. Unless some use is made of that stock, will it not be true that the company will be without working capital?

A. I think not, sir.

Q. That is a matter of your opinion?

A. Yes, sir; that is my opinion.

Q. Is it not true that at the rate of the division of earnings that is exhibited by the present situation, no working capital can be reserved from those earnings?

A. I do not think that is the situation.

Q. Where will the earnings, in your opinion, come from such a reservation. At what period of time will that appear; in your opinion?

A. I have not stated that they would appear from that source.

Q. Have you any opinion as to from what source they will appear?

A. I have, as to what source they might appear.

Q. Explain how it happened that the stock in your name, as trustee or treasurer, was issued in two blocks. It appears by the minutes of the board that two blocks of stock are specifically mentioned?

A. As stated in the resolution, one block of stock was reserved as working capital, and was kept separate for that purpose, and a separate resolution was adopted authorizing this issue.

Q. That was how many shares?

A. Twelve thousand and odd. The other block of stock was reserved according to the articles of consolidation to meet the bonded liabilities of the company, and was kept separate for that reason.

Q. Has any portion of that stock been sold at this time?

A. No, sir.

9337 Q. Have any calls been made or obligations of any character whatever been created for the delivery of any part of that stock?

A. What do I mean to understand by calls?

Q. The question calls for any knowledge or information you may have touching any obligations of any character whatever for the delivery to anybody on any terms whatever of any part of that stock?

A. There is nothing of that sort in existence by any authorized agent or officer or committee or board of trustees of the company.

Q. Do you mean to testify that there has been no paper whatever ever written or given by anybody on that subject within your information?

A. I do.

Q. Are those certificates still held intact as they were?

A. Two blocks of certificates—they are.

Q. Has any application of any kind, or paper purporting to be an obligation, ever been issued by anybody respecting that stock?

A. The answer is the same as the answer to the last question.

Q. It has not.

A. There has not.

Q. Do you know of anything having been issued in paper purporting to be a call upon anybody for Consolidated stock, whether authorized or not?

A. No, I have no knowledge.

Q. Haven't any information whatever?

A. I believe it is a daily transaction in Wall street, as it is in Erie and other stocks.

Q. Name a single party whom you say ever engaged in such a transaction in Consolidated stock?

A. I do not know of any party.

Q. Did you ever hear any party's name mentioned in connection with such a transaction on Consolidated stock?

A. I do not recollect.

Q. What is your best recollection?

A. I have no recollection as to name.

9338 Q. When did you ever hear of such an affair?

A. I do not know that I ever did hear of it.

Q. You was understood to say it was a common transaction in Wall street on the Consolidated stock?

A. I was understood wrong.

Q. Did you ever hear of any such transaction on Consolidated stock?

A. No, sir.

Q. Have you seen Mr. Day within the last two weeks?

A. I do not know that I have.

Q. Have you seen him since the 27th of November, the day after Thanksgiving?

A. I am under the impression I have not seen him since the 25th, the day of the board meeting.

(By the CHAIRMAN:)

Q. Have you any knowledge or information as to where he is or has been for the past week, Mr. Day?

A. I think it was about a week ago I had occasion to consult counsel for the company, and I made inquiries and understood he was away on a visit to his daughter and away on business; and, if I recollect right, it was Chicago; whether he has returned or not, or whether he went there, I do not know.

Q. Did you ever see, last spring, or at any other time, a printed pamphlet containing extracts from various newspapers quoting so-called legal opinions and other extracts relating to legislation that was proposed last spring; did you ever see such a book or pamphlet?

A. Well, I think I did, sir.

Q. Do you know who was concerned in compiling or printing it?

A. Such a book?

Q. Yes, sir.

A. Yes, sir, I do.

Q. To what book do you allude?

A. To a pamphlet of perhaps two or three leaves of the nature of what you described.

Q. What was its title?

A. I do not recollect.

Q. Who was it printed by?

A. I do not recollect.

9339 Q. Where did you see it?

A. In my office, probably.

Q. Do you know who was concerned in preparing it or distributing it?

A. I cannot answer as to the identical pamphlet you are speaking of, but the one I am speaking of, such a pamphlet was prepared or directed to be prepared in our office.

Q. Who directed it?

A. I saw a part of it; I did not protest against it.

Q. Who prepared it?

A. I could not tell you.

Q. Who besides Mr. Francklyn?

A. I do not know that Mr. Francklyn did.

Q. Did Mr. Gawtry?

A. I am quite sure he did.

Q. What was the nature of the pamphlet you speak of?

A. I should describe it as a brief compilation of legal opinions and extracts from newspaper articles.

Q. Concerning what?

A. Concerning the proposed legislation.

Q. Affecting what?

A. Affecting the gas companies.

Q. Concerning the proposed legislation of last spring for gas companies—it did not quote the bill or any bill that was proposed?

A. I could not say. I should say from the size of the pamphlet that the bill was not printed.

Q. How large an issue of that pamphlet was made?

A. I have not the slightest idea.

Q. Who met its expense?

A. I presume the Consolidated Gas Company.

Q. For what purpose?

A. The question is the answer, isn't it, to meet the expenses?

Q. For what purpose was that expense incurred by the Consolidated Gas Company?

A. For the issue of the pamphlet.

Q. What was the purpose of that issue?

A. I do not know the exact purpose.

9340 Q. What was the object of the Consolidated Company issuing a pamphlet of that kind?

A. I do not know; but I presume it was to put the opinions of lawyers and of the public press, so far as they were in our favor before the public and parties whom we thought should know those things.

Q. Now, as a matter of fact, was any legal opinion absolutely quoted, if so, whose, in such a pamphlet?

A. I think there was, but I don't know whose.

Q. Was the opinion printed in full?

A. I presume so.

Q. Don't you know it was not?

A. I do not.

Q. Do you know whether there was more than one opinion printed?

A. I do not.

Q. Can you name any person whose opinion was printed?

A. I cannot.

Q. Is that the only issue of printed matter with which the Consolidated Gas Company or any of its officers were directly or indirectly concerned, according to your information, at or about that time?

A. That is, to my recollection and information.

Q. Did not the Consolidated Gas Company correspond through its officers, or those interested in it, with persons in different parts of this State on that subject; the subject you have mentioned—you have given the object of the pamphlet?

A. I believe there was such a printed circular sent out; no sir, I do not recollect of any correspondence; I do not know of any correspondence.

Q. There were two; one was sent to certain advertising agents?

A. I don't know any thing about it.

Q. Do you not know of a circular or letter sent to various local gas companies through the State?

A. Not during the pendency of the bill.

9341 Q. Well, when was it?

A. I have stated to you that I did not know any thing about it.

Q. Did you know of such at any time?

A. There was a circular that was sent to gas companies, if I recollect right; it was pending the election.

Q. During what month?

A. I should think the latter part of October.

Q. Under whose name?

A. Charles Roome, and entirely unofficial.

Q. Who was occupied or concerned in its distribution?

A. I don't know, sir.

(By the CHAIRMAN:)

Q. As a matter of fact, Charles Roome was president of the company, he did not do it officially, I understand.

A. It was unofficial.

(By the CHAIRMAN:)

Q. The Charles Roome you refer to was the president of the Consolidated Gas Company at that time?

A. Yes, sir.

Q. Did you know of it at the time?

A. I think I saw the draft of the circular before it was printed.

Q. Mr. Gawtry, also?

A. I don't know.

Q. Do you not know that was done through the gas-light association; I mean, that some circular or printed matter was distributed by them?

A. I don't know it; I never heard of it.

Q. Is that the only instance that you have heard of in which any of the officers or persons interested in the Consolidated Gas Company were in any wise concerned, touching the subject-matter of the proposed legislation?

A. That is all I recollect.

Q. Did you never hear of any other matter or thing done, or said, or proposed, in that connection?

A. By the gas company?

Q. By any person directly or indirectly in the Consolidated Gas Company or any other gas company?

9342 A. I do not know; we employed counsel to appear before the committee who had charge of the bill urging the gas companies' objections.

Q. Did you employ more than one counsel?

A. For that purpose, one only.

Q. A counsel resident in Albany?

A. Yes, sir; I believe so.

Q. Any other?

A. None other.

Q. Is that the only matter or thing touching proposed legislation that was ever done, or spoken of, or proposed, or considered within your information by any officer or other person directly or indirectly interested in the Consolidated Gas Companyfi or any other gas company?

A. That is all, to my recollection.

Q. Did you not correspond with the Yonkers Company on that subject?

A. Not to my knowledge.

Q. Or any other gas company?

A. Not to my knowledge.

Q. Or officer thereof?

A. Not to my knowledge.

Q. Do you not know that there was circulated, while the Legislature was in session, some circular on the subject of the proposed legislation, either by the American Gas-light Association, or some other person or persons?

A. I do not know.

Q. Did you ever hear of such thing?

A. I do not recollect.

Q. Do you say there was none?

A. I don't say so.

Q. It has been publicly stated in a widely distributed publication that pressure was brought to bear on members by local gas companies; that the assistance of this instrument was invoked by and through the American Gas-light Association—an organization of gas companies apparently for both offensive and defensive purposes, which professes to see in this bill an entering wedge for
9343 widening legislation; did you never hear of such a matter?

A. Only, I think, as I may have seen it from the book which you quote.

Q. And in no other way?

A. No other way; there is such an association; they are not organized for that purpose; it is composed almost exclusively of gas engineers and for the development of ideas in reference to the manufacture of gas and with regard to new processes and economies; I do not belong to the association; I have never attended any of its meetings although I am fully informed of their aims and objects.

Q. Is that association located here, its headquarters?

A. No, sir; it has met in Chicago, New Orleans, Boston and New York; they have a meeting only annually.

Q. Have they headquarters in any place?

A. I think not.

Q. Who is the president?

A. I think they elect a new president every year.

Q. Who is the president now?

A. I don't know.

Q. Who is the secretary?

A. I don't know.

Q. Who is the treasurer?

A. I don't know.

DECEMBER 19TH—3 p. m.

Hearing resumed.

R. M. C. GRAHAM, a witness called by the counsel to the committee being duly sworn, testified as follows:

Examined by Mr. TREMAIN.

Q. You are president of the Equitable Company?

A. I am, sir.

Q. That company was organized in what year?

A. In 1882.

Q. Under the general Gas Law of 1848?

A. Yes, sir.

9344 Q. On a nominal share capital of what amount?

A. Twenty thousand shares of $100 each.

Q. Representing a nominal capital of $2,000,000?

A. Yes, sir.

Q. Since that time has the Equitable been enlarged?

A. We have commenced the increase of capital to $3,000,000.

Q. Under the statute?

A. Yes, sir; and have called in 45 per cent. of the increase of $1,000,000 which has been subscribed.

Q. When did you begin to deliver gas?

A. About a year ago, sir.

Q. And how many miles of mains are now laid?

A. From 55 to 60; I could not give you the exact number.

Q. In addition to that share capital that you speak of, has any mortgage or have any bonds been made?

A. We have issued and sold a million of bonds, mortgaged the company's real estate and plant and mains and personal property.

Q. What real estate does the company own?

A. Three blocks of land on First avenue, extending from Thirty-ninth to Forty-second street and from First avenue to the river; also, thirty-two lots running between Fifty-eighth and Fifty-ninth street, 300 feet west of Tenth avenue, 100 feet east of Eleventh avenue, which makes the thirty-two lots.

Q. On the latter plot of land have any buildings been erected?

A. We are now excavating for the erection of gas tanks.

Q. The total paid in cash of the original $2,000,000 capital was how much?

A. One and a half million and a balance of stock was issued for the patent process.

Q. Is that a different process from that used by any other company in the city?

9345 A. Yes, sir; we call it the Jerzmanowski lime process, water-gas process; he is our engineer.

Q. The cash that has been paid is represented by what you have stated?

A. Yes, sir.

Q. The balance, fifty-five per cent., of the increased capital, is subject to call, is it?

A. Yes, sir.

Q. When all that which is now subscribed shall have been collected, will all the works which are now [illegible] process of construction be paid for?

A. No, sir.

Q. What is the present producing capacity of those works?

A. Two million five hundred thousand cubic feet per day.

Q. What capacity is under construction?

A. Three million cubic feet; we have not commenced on the construction of those works, because we have not obtained full possession of the property

Q. You mean 3,000,000 more, making 5,500,000?

A. Yes, sir; in the summer we would be delivering only a little over 2,000,000.

Q. Your present maximum capacity is 2,500,000?

A. Yes, sir.

Q. What is the total expenditure to reach 2,500,000?

A. Mr. Yalden has the figures there; I never made the figures.

Q. Give it in round figures for the real estate?

A. Three hundred and sixty-five thousand dollars for that block from Forty-first to Forty-second street; then the property on the west side was $171,000, $536,000 is the unproductive property to-day; about $2,850,000.

Q. So that including the properties of the real estate for that purpose, as recently made by your company, the total expenditure to establish a plant of a maximum capacity per diem of 2,500,000 cubic feet has been in round numbers $2,850,000?

A. Yes, sir.

9346 Q. And this item includes what?

A. Five hundred thousand dollars paid for patents.

Q. By the issue of stock therefor?

A. Yes, sir.

(By Senator ROBINSON:))

Q. To produce 21,000 cubic feet would cost about ten times that—how is that?

A. The increase would be about in the same proportion.

(By the CHAIRMAN:)

Q. So that without the patents it would include $2,350,000?

A. Yes, sir.

Q. Assuming, then, that your plant, upon the basis you have just stated, has cost $2,850,000 for the estimate of a plant of a maximum producing capacity of two and a half million cubic feet per day, would it cost twice $2,850,000 to increase that capacity to 5,000,000 cubic feet per day?

A. It would cost very near that.

Q. Double?

A. It might cost a little less, but pretty near that.

Q. You would not have to pay any more for the patent?

A. No, sir.

Q. It would take $2,000,000 more for you to double your capacity?

A. Yes, sir.

Q. Is that $2,000,000 provided for by the bonds?

A. A very large portion of the bonds were expended; that $500,000 was paid out in cash, and, therefore, a large amount of the bonds had to be sold to do that.

Q. And we understand you to testify you are increasing your producing capacity $3,000,000 more?

A. Yes, sir.

Q. What amount of money do you need to finish them?

A. Seven hundred thousand dollars.

Q. You will more than double the increasing capacity by the expenditure of $1,700,000?

A. No, sir; we will more than double the producing capacity by the expense in all of $2,100,000.

Q. Whether a farther increase would cost about the same
9347 amount of money?

A. Yes, sir; the same ratio, because real estate would always be higher; the last real estate we bought cost us more than the first.

Q. Do you think it practicable to go to the other side of the Harlem river for the establishment of a gas plant, where real estate is less?

A. It has been thought over, but the difficulty of bringing a proper pressure here, the large size mains that would be necessary would more than make up for the price of real estate.

Q. I understood you to say, in answer to Senator Robinson, that the increase would be in about the same proportion when you are doubling or triplicating your producing capacity?

A. Yes, sir.

Q. We understand that you are increasing your capacity from 2,500,000 cubic feet by 3,000,000 more, with the expenditure of only $2,100,000, which is less than double?

A. That difference of $500,000 is only a small difference for one month in the year; because it is only a month; you are brought up in that way.

Q. How much gas do you now deliver?

A. About 2,000,000 cubic feet a night on an average.

Q. And how much of the city *to* you cover by your mains?

A. From Canal street to Fifty-seventh street.

Q. All the way across?

A. No, sir; a very large number of the streets we have not touched as yet, namely, the Third, Second, First, Sixth, Seventh, Eighth and Ninth avenues.

Q. Exclusive of the items that you have incorporated in the total cost of the plant as stated your company has expended, has it not, moneys in the cost of establishing its business?

A. Yes, sir.

Q. Have those moneys thus expended been derived from
9348 current earnings?

A. Latterly during the last year, we have made no profits, for six months in this year; we were two years before we made any gas at all; our expenses are considerably over one-quarter of a million of dollars.

Q. What was your experience in gas manufacturing here in New York?

A. I organized the Municipal Company.

Q. How long were you with that?

A. Until about five years ago; I was president at first, and then a director.

Q. Who succeeded you as the president?

A. For a short time, George W. Gilbert, and immediately afterward Charles G. Francklyn.

Q. What was its capital when you left?

A. One million dollars when I left.

Q. Has that million been paid in cash?

A. Not all, at par; about $800,000 at par was paid in.

Q. You have had practical experience in the establishment of gas plants and the manufacturing and supplying of gas?

A. I don't make too much claim; other people are better judges of that than I am.

Q. You have had practical experience in those departments of occupation?

A. Yes, sir.

Q. Is there in your opinion, any minimum and maximum percentage that would be capable of representing a fair average for an annual depreciation of a plant used in manufacturing and supplying gas?

A. I have figured it at twelve and one-half per cent. from my experience.

Q. The amount would represent a fair proportion of capital or of earnings that must be set apart per annum to represent the expenses of keeping the plant in good order?

A. If it was possible to set it apart, but it is not always done.

9349 Q. But taking one year with the next and assuming that the plant is continually in use, it would have to be replaced according to your calculation about once in eight years?

A. Pretty generally, largely liable in that time; of course, not the real estate.

Q. Do you know of any party of experience in that line of occupation who has, as a matter of record, expressed a different opinion?

A. I do not, sir.

Q. In the estimate of profits, as for instance, in determining what is the actual profit earned you would as a man of experience in such affairs always allow for an estimate at the rate you have stated?

A. I do, sir.

Q. Can you state as the result of experience of the Equitable Company for the past two years?

A. We have only had the experience of one year.

Q. Can you state as the result of the experience of the Equitable Company, what is the fair cost you have found to be the cost of gas in the holder as produced by your company?

A. From forty-five to fifty cents, sir.

Q. The cost of distribution depends, does it not, in a large part upon the number of customers and the extent of distribution?

A. It depends upon the extent and the cost of distribution of gas and the number of customers you have to care for; we have to run at the beck and call of every old woman; sometimes run half a day to collect a thirty-five cent bill; our cost of distribution, I think, I said, last year from sixty to sixty-five cents; what we may reduce it to later on, I do not know.

Q. Does that include an allowance for depreciation, for wear and tear, taxes and expenses?

A. No, sir.

9350 Q. In your opinion, does the diminution in the price of gas increase the custom?

A. No, sir, not below its present price; the people of New York are getting more light for less money than any other people in the world.

Q. Do you know whether the total consumption since the consolidation and since the price has been fixed at $1.75 has been more or less than it was before?

A. The total consumption increases every year whatever the price may be; I think the Consolidated are delivering as much gas today as before the Equitable commenced business.

Q. So that there is plenty of room for competition?

A. Yes, sir, so far as we are concerned.

Q. It is to the interest of the Equitable Company that the present price of gas should be maintained?

A. Yes, sir.

Q. So long as it is necessary, then, for the interests of the Consolidated Company that the price of gas should continue at the price they have fixed it as at present, whether or not, the interest of the Equitable in that respect is in common with the Consolidated?

A. To that extent, yes.

Q. Is it not the fact that the price of gas was fixed at $1.75 at or about the time the Equitable commenced to supply it?

A. It was not until then.

Q. The two events were co-existent in the fall of 1884, were they not?

A. Yes, sir.

Q. The Equitable had previously made a contract with the city?

A. Yes, sir, in which contract the price was fixed at $1.75 to small consumers and $1.50 to the city and the city lamps at $12.

Q. Did your company pay the city for that contract?

A. No, sir, we paid them twenty cents for every foot of trench we opened.

9351 Q. It was after that contract had been made whereby you agreed to supply gas at the price named that the Consolidated price was reduced?

A. Yes, sir.

Q. Heretofore, the price of the constituent companies had been $2.25?

A. Yes, sir.

Q. We understand, then, that you mean the reduction in the price of gas was accomplished by reason of the Equitable competition and that contract which was made?

A. It was in consequence of that contract with the city.

Q. You refer to the reduction in the fall of 1884?

A. Yes, sir.

Q. From $2.25 to $1.75?

A. Yes, sir.

Q. Now, by that contract, was any standard of illuminating power or of quality or of purity or of all three elements established?

A. It was, sir. We were to deliver gas of not less than twenty candle power.

Q. As a matter of fact, you delivered gas from what candle power?

A. From thirty to thirty-two.

Q. What was the standard established as to purity and quality?

A. There was nothing said as to purity or quailty in the contract.

Q. Is there any standard your company has established as to quality and purity?

A. Well, we have no fixed standard, sir; I could give you the component parts of our gas.

Q. I do not mean that?

A. Our thirty-two candle gas is pretty nice gas. There is no such gas in the world that I know of. The test of Mr. Love will tell you of what it is composed.

Q. All of the contracts of the city provide for a standard of purity?

A. No, sir. The contract for lighting the city was given out the other day. The Consolidated bid sixteen candle, $1.50. We bid for twenty-five candle gas at $1.40, but we have to bid for twenty-five candle under our contract.

9352 (By the CHAIRMAN:)

Q. How is the intrinsic value of gas affected by increased candle power?

A. Increase of light, in its intrinsic light, increased by the squares of candle power. Its value is measured by the diminution of light.

Q. Don't you think the illuminating power of gas ought to be taken into account in determining its price?

A. In every account; in London the London Gas-light Company deliver gas of less than sixteen candle power at three and three pence; they might better pay New York companies the prices charged; it would be cheaper than the gas they have in London at three and three pence.

Q. Is there any other company that furnishes gas of equal candle to yours?

A. They don't do it; they can.

Q. There is no motive for it?

A. Not at all.

Q. Is there any reason, in your opinion, why the standard of gas to be delivered should not be fixed by a public officer, or in some other way, established method, by law?

A. It has been fixed in other States, but the laws have always proved a nullity; fixed in New Jersey and Massachusetts, and they do not pay any attention to it.

Q. Is it not true that where the candle power has been fixed by officers charged with that discretion, that the gas supplied has equaled the standard in illuminating power?

A. Yes, sir.

Q. In respect to purity, we observe that in the contract made between the city and the New York Company in the spring of 1884, there was a provision of the following effect: "As regards purity, the gas shall be free within limits not injurious to the public health from ammonia and sulphuretted hydrogen, and of other sulphur and nox-

ious compounds;" is it not, in your opinion, reasonable to
9353 establish, either by law or by some public officers charged with
appropriate discretion, some standard of purity, either of that
sort or of some other character?

A. Perfectly so; no trouble about it.

Q. As a matter of fact, a well regulated company would prescribe for its limits something of that character?

A. Yes, sir; they do in the cities.

Q. If the price of gas is to be regulated in any respect by law, should not, in your opinion, the illuminating power and purity be likewise thus regulated?

A. Most decidedly.

Q. In that respect, so far as your experience is concerned, and your own company also, there would be no objection to adequate provision by law to that effect, would there?

A. No objection; none at all.

Q. In your opinion, is there any reason why, either by law itself, or by the exercise of appropriate discretion vested in proper officers, the price of gas, or at least its maximum price should not, from time to time, be limited by law?

A. I do not think there should be any law about the price of gas; the companies will fix that themselves; it is like bread or any thing else; we pay for our right of way; there are immense dangers affecting gas corporations; immediately works may all be burned up, and the men who put their money in there are taking great risks.

Q. As a matter of experience, have there been any explosions?

A. Yes, sir; the Metropolitan lost nearly a quarter of a million dollars by one explosion, a loss of something like a couple of hundred thousand dollars.

Q. Do you know that to be a fact?

A. Yes, sir; Mr. Zollikoffer swore to it; this is mere hearsay.

(By the CHAIRMAN:)

Q. How many years have you been connected with gas works in New York city?

A. Ten.

9354 Q. What explosion do you know of during that time?

A. We had an explosion the other day at Flood Rock; it knocked the bottom out of one of our gasometers, at an expense of $10,000 or $15,000.

Q. Have you known of any other explosion, in your experience?

A. We arrange our business, so far as we can, not to have them.

Q. In your experience, do you know of any other explosion except that?

A. That is all.

Q. That is all you know of in your experience?

A. Yes, sir.

Q. While upon the subject of illuminating power and quality and purity, I refer you to section 11 of the proposed act reported by the last Senate Committee and ask you whether you know of any practical objection to the application of the standards there designated?

A. Well, that suits both water gas and coal gas; there is no objection to that; that would come within the limits and capacity of every company in the city.

Q. That section would be sufficiently elastic to meet all the practical exigencies within your knowledge in New York business?

A. Yes, sir.

Q. Is there any other objection, in your view, to a maximum limitation to be established from time to time of the price of gas than what you stated?

A. It would be unjust; there you say that a coal gas company shall deliver eighteen and twenty-five candle gas and we are giving thirty that is unfair.

Q. There ought not to be a uniform price of varying value?

A. Yes, varying candle power.

Q. Suppose that the standard was fixed at a maximum price per candle power and that that maximum price of gas was established from time to time as the price of material and labor might
9355 necessitate, is there any objection or any reason, in your
opinion, why that should not be done, provided, of course, that an appropriate profit on the investment is, at the same time, secured?

A. I do not say the price should be touched, sir; we have made a contract with the city of New York at a price which was far below what others charged; we have raised money and induced parties to go into this enterprise and whether it is a success it is their business, and the price was low; that contract which was entered into by the city has been confirmed and if the power exists in the Legislature to make it $1.25, the same power might make it twenty-five cents and we have to go out of business; that is my reason.

Q. If the rate of dividend on the capital actually invested was fixed so that the investor should always be secured first, in their investment and second, in their income upon that investment, is there any reason, in your opinion, why *they* should not be some limitation somewhere upon the price to be charged to the public for a uniform article?

A. I must say I do not want to agree to that; I cannot, because I am a native born American citizen, not a Russian, and I do not feel like having the business interfered with; if we find we can next year reduce the price of gas, we will do it; but I do not like to be crowded into it by legislation; I do not say it is wise to do it.

Q. What rate of income, in your opinion, provided it be reasonably assured to the investors, is fair and equitable upon gas stock?

A. From ten per cent. to fifteen per cent., sir.

Q. What have you to say as to the relative merits of the gas that was furnished by New York and Manhattan Companies, and that is now furnished by those old works under the name of the
9356 Consolidated Companies in the same section of the City?

A. The New York Company is now making water gas; the Manhattan have improved their candle power materially of late.

Q. Do you know of any reason why the candle power of the New York Company should be as low as twenty-two now?

A. About twenty-four.

Q. Twenty-two or twenty-four candle power while that of the Municipal and Equitable and Mutual is in the neighborhood of thirty or thirty-two?

A. I do not know what they are doing; I never was in their works in my life.

Q. Is there any reason practically why there should be that difference in the gas furnished in the different parts of the city?

A. Oh, no, sir; no engineering difficulties.

Q. Has there been any reduction of your capital stock?

A. No, the Equitable owns the patents for the United States.

Q. Does it cost the same to produce coal gas of a given candle power illumination as it does to produce water gas of a higher candle power illumination?

A. I know nothing about the manufacture of coal gas; I never made any of it.

Q. On what element does the cost of producing water gas largely or generally depend?

A. Upon the cost of naphtha.

Q. That ingredient is the chief element of the price?

A. Yes, sir.

Q. The other elements are standard?

A. They are water, labor and coal.

Q. In the manufacture of coal gas the element is coal?

A. Yes, sir; the coke or residuum in Paris and London they sell for all that coal costs; there is not so much coke used here.

9357 Q. The dividends are fixed at ten per cent. on the capital stock actually employed and the price of gas be regulated by the cost of coal or naphtha, or both, and the minimum of expense, is there, in your opinion, any reason why such an arrangement should not be satisfactory to stockholders and to consumers alike?

A. I believe they will make that arrangement, yes, sir; it will be very difficult for them to make over ten per cent.

Q. Couldn't they be made to do it?

A. I think not.

Q. Supposing the stockholders have that protection and guarantee, would there be any objection to it?

A. If the State would guarantee that protection and say: Gentlemen, "you shall have ten per cent.," the Consolidated stock would be worth two hundred right off.

Q. Supposing the State should say it should not be more than seven per cent., what would be the result?

A. The law would be inoperative.

Q. Would the companies go out of business?

A. I do not think they would all go out; some of them; it depends upon how they got in.

Q. In your opinion, does it tend to lessen the price of gas to double the nominal capital on which dividends are to be paid?

A. No, sir.

Q. The opposite tendency, as a matter of course?

A. Yes, sir, the oposite tendency, of course.

(By the CHAIRMAN:)

Q. When you say that a certain per cent. is a reasonable per cent. of profit, you mean a per cent. upon that sum?

A. Upon the capital stock of the company.

Q. Do you mean upon capital stock watered by various devices, or the actual stock?

A. Well, so far as we are concerned, we have no watering.

Q. You mean upon the capital put into the concern?

A. I am not proposing any fixed percentage but that would be my mind upon the stock; it is upon the par value of the stock.

9358 Q. Upon stock fairly issued and paid in, not fictitious stock, of course?

A. If there is going to be any law passed which is going to be operative I should like to organize another gas company and buy out the Equitable before any fixed sum—buy out the Equitable's $10,000,000 stock and then we would be ready; but we don't like any such law passed unless we are fixed.

Q. Suppose you had a capital of $10,000,000 and under full headway, you could supply a pretty good share of the city?

A. Yes, sir.

Q. Supposing you had really a hard-pan capital of $10,000,000 paid into the concern, what portion of this city could you supply with gas?

A. I think we could deliver 10,000,000 feet on the longest night of the year any year.

Q. If you had a capital of $20,000,000 could you supply the whole city and more too; and make considerable allowance for future growth?

A. Well, we would try to do it—struggle.

Q. And rather hopeful you would be?

A. Yes, sir.

The CHAIRMAN: The dividend lists were taken by Mr. Smith and he agrees to bring them back to the committee at nine o'clock Monday morning next, and he agrees to be here at one o'clock.

J. YALDEN, being duly recalled, testified as follows:

Examined by Mr. TREMAIN:

Q. Mr. Yalden you are prepared to give evidence with regard to the Equitable Gas-light Company?

A. Yes, sir. This company was incorporated in 1882 with an authorized capital of $2,000,000, which was subsequently increased to $3,000,000; it commenced business in 1882 by the purchase 9359 of the patent rights belonging to Mr. Jermananski for $1,000,000 in fully paid shares of the capital stock of the company; Mr. Jermananski then donated $500,000 of this stock to the company for the purpose of providing working capital to build works, etc.

This stock was all sold at par, and paid for in cash.

In addition to the above items $190,000 in shares were issued at par in part payment on contract for the erection of works.

The remainder of the capital, $2,310,000, has all been subscribed for, payable in installments, on account of which $1,742,247.68 has been paid in cash up to November 30, 1885, $432.32 interest allowed on anticipated payments, leaving a balance still to be paid in of $567,320.

The company has issued besides $1,000,000 in coupon bonds, and owes on mortgage on its real estate and works the sum of $400,000, making the total capital upon which it is at present operating $3,832,680. On the first of November 1885, to which time the accounts were taken out, this item stood at $3,737,865.

The investments for works, etc., against this capital including the $500,000 for patents, amount to $3,381,850.10, and the difference is made up of cash in bank, value of materials on hand, and bills against consumers, due and unpaid, amounting to $350,614.90. Of this sum, however, considerable amounts are being expended for real estate (over $500,000) to provide additional works to increase production.

The company did not commence to produce and distribute gas until the month of December, 1884, and has sent out during the eleven months about 253,118,800 cubic feet and is now producing a maximum of about 2,500,000 cubic feet per diem.

9360 The Equitable is apparently bound to be a very profitable concern for the following reasons: The expenditure and income account, after charging against it all the interest paid, the commissions on the sale of stock and office expenses, and the legal expenses pertaining to the formation of the company, salaries, labor, allowances and taxes up to date nearly balances. There is practically a deficiency up to November 1st of about $34,000, but against that they have sent out gas from the 15th to the 30th of November which will eventually be credited. So, I think it can be fairly stated of the gas sent out to their customers, there is about $335,000 worth. The profit on it, together with the gas that can be estimated from the 15th to the 30th of November, can be fairly stated to have paid not only the work and expense of cost of the gas, but of the expense for the formation of the company; so practically the Equitable Company to-day is beginning, as it were, with a clean sheet and must, at the present prices, commence to make a great deal of money. The statement I make to show that gas at $1.75 and $1.50, the prices of the Equitable, can be made by that company and show a very considerable profit on the capital invested. I think their profit will average at least with this two and a half million maximum at least forty cents per thousand feet net profit for the company, on an average price of $1.60.

Q. One dollar and twenty-nine cents for the actual cost for making and distributing the gas; the forty you mean is for the first years doing business?

A. The expense of making their gas to-day is about forty-six cents, their distribution sixty-four cents; the repairs ten cents per 1,000; taxes ten cents per 1,000.

Q. It is based upon last year's experience?

9361 A. Yes, sir; that would leave them about forty cents profit.

Q. What about leakage?

A. Next year the presumption is that the leakage will be less and the profit more and the next year's business will be increased and the expense correspondingly less. I qualify my remarks. Here is $335,000 worth of gas charged up to consumers in this period. Here is about the same amount of expense charged against the consumers, but it is inclusive of all the expense for the formation of the company which Graham has testified was $200,000.

Q. So far as the estimate for the year past is concerned, they are all included?

A. Yes, sir; but I am qualifying my remarks for the actual facts of this past year.

Q. So that while they have sold gas for one year they have paid the expense practically for two years?

A. Yes, but their expense account against that gas included all the expense for the formation of the company.

Q. I suppose the accounts show what that preliminary expense includes?

A. Not separately shown; it shows there is nearly $47,000 for leakage expenses.

Q. Have you got anything to indicate what are the items comprising that total of $250,000?

A. No.

Q. An estimated sum to cover preliminary expenses?

A. No, sir; I could tell you nearly what they are.

Q. The subject matter?

A. Interest chargeable from the first day, commissions on sales of stock, office expenses and the legal expenses, and the inspectors for the city and advertising, and taxes; they will amount to $260,000 or $270,000, a good portion of which was spent before they commenced to make and distribute gas.

9362 Q. Many of those items it would seem should be charged to the appropriate accounts to which they relate, should they not?

A. Well, no; I should not say that, not unless they could be held to be a part and parcel of the investment; it should be treated as I before stated.

Q. Was capital stock issued for it?

A. No; not in every instance; the real estate has been paid for wholly in cash.

Q. How, in your opinion, should such an item be treated, as a part of the capital or an expense over one year or more?

A. I am of the opinion that all the expense attending the formation of the company for which there is really no representative value, should form an item of expense to be distributed over a series of years and chargeable yearly against the profits until obliterated; and for the sake of argument, say the one-tenth every year for ten years and not deducted out of the earnings of the first year.

Q. Is it not true that because of the primitive condition of the Equitable business an increase of business that you cannot calculate from their books at what price they could, during the ensuing year, sell gas, and, at the same time, retain for themselves a profit of, say ten per cent. on their investments?

A. It is difficult.

Q. And for the reason stated?

A. It is difficult; the business of the Equitable is increasing very fast and you cannot form an estimate of their income; the records of the Equitable show that the chances were of selling, for the month of December, 60,000,000 feet of gas; but by reason of the Flood Rock explosion injuring their gasometer they had to stop and put in meters and so decreased their index quantity.

9363 FIFTH AVENUE HOTEL,
NEW YORK, *December 21st,* 1885.

Committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain, Esq., appears as counsel to the committee.

W. W. SHARPE, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. What is your residence and place of business, Mr. Sharpe?

A. My place of business is at No. 21 Park Row; my residence is 67 East 130th street.

Q. Who are your partners in the firm?

A. I have one partner, George H. Norman.

Q. What business has been conducted by your firm in the past year?

A. What business?

Q. Yes, sir.

A. The nature of it?

Q. Yes, sir.

—. Advertising brokerage.

Q. I call your attention to a circular to the following effect, and ask you if you remember having sent it out, or having caused it to be sent out by your firm in the spring of 1884. The quotation I read is from the Fulton County *Republican* of November 23d, 1884.

"We have before us a proposition from the advertising agency of W. W. Sharpe & Co., of No. 21 Park Row, New York, offering us four dollars for a publication of the following notice in our own columns as an 'Editorial or Pure Reading Notice:'

"'The New York *Tribune* recently published a letter from that eminent Republican statesman, Clarence A. Seward, opposing the gas consumer's bill now pending in the Assembly, 9364 on the ground that its provisions are self-contradictory. Moreover, as the bill gives the mayor of the city of New York power after four years to appoint three commissioners whose expenses and allowances for clerical hire aggregate $60,000, and as New York usually has a Democratic mayor, Republicans who vote for the bill will be playing into the hands of the Democratic party. Besides, the bill is against public policy, because it is a step towards governmental control of private business enterprises.'

"In this way the Consolidated Gas Companies of New York City are trying to buy the influence of the country press to prevent the passage of bills in the Legislature to restrain this giant monopoly from robbing the people of the metropolis. These companies enjoy unusual privileges, granted by the people, and when they in turn swindle those who use gas, proper measures should be enacted by the Legislature to restrain their greed."

The question is whether you ever sent out any extract from the New York *Tribune,* in a circular or any other form, from your advertising agency last April?

A. I don't remember such a circular.

Q. Is there any way of refreshing your recollection, to say whether it was or was not sent out by your firm?

A. I don't know that there is.

Q. Your firm is in the habit, is it not, of sending out matter to country newspapers?

A. Advertisement; yes, sir.

Q. Well, was any thing on that subject sent out by your firm last April?

A. I can't say.

Q. What book or books would record it in your business ?

A. I don't know that any book would.

Q. What books or book would record any circular sent out last spring?

A. I have no books that would record such a circular.

Q. What books or book would record any circular of any kind?

A. No books.

9365 Q. Well, do you wish to testify before this committee that no such circular was ever sent out by your house?

A. No, sir; I don't remember such a circular; I do an advertising business and send out circulars, but I don't remember such a circular.

Q. Didn't you send out such an extract from any New York paper on that subject last spring?

A. I don't remember that I did.

Q. Will you testify that you did not?

A. No, sir; I don't send out every thing that comes in there.

Q. Who does?

A. My clerk.

Q. Give the name of the clerk who would give me information on that subject?

A. Am I obliged to make that statement about my business?

Q. Have you any objection to state what clerk would know whether that circular or any circular on any subject was sent out by your firm in April last?

A. Well, I have in this, it was something belonging purely to my business.

Q. Well, have you any objection to answering this question now as to what clerk in your establishment, in the usual and ordinary course of business, would have knowledge of circulars or matter, printed matter, sent out by your firm in April last?

A. Well, I don't know that I have.

Q. Well, then will you please give his name to the committee?

A. Well, I have two or three clerks with me that sent out advertisements at that time.

Q. Well, what are their names?

A. One is John Thomas.

Q. Is he now in your employ?

A. Yes, sir; now in my employ.

Q. And another?

A. James McGraw.

Q. Is he now in your employ?

A. No, sir; he is not with me now.

9365 Q. Where does he live?

A. I don't know, sir.

Q. Is there any other?

A. No, I think that's all.

Q. Would not Mr. Norman have any more information on this subject than you have?

A. No, sir, I think not, sir; he is out most of the time, sir; he does not have much to do with the office.

Q. Did anybody ask you to send out any printed matter whatever, on that subject last spring?

A. No, sir.

Q. You testify positively that no such matter was sent out by your firm last spring?

A. No, sir, I don't testify to that.

Q. Did you ever hear of this circular before, that we are now inquiring about?

A. No, sir.

Q. Do you keep a file of papers in which those advertisements appear, that you have sent to them?

A. Sometimes we do; that depends upon whether the contract calls for copies of the papers.

Q. Have you any recollection of the use of your name for such a circular as I have described?

A. No, sir, I have not.

Q. Do you ever send advertisements to the *Fulton County Republican?*

A. Well, I don't know; we take advertisements for any paper that any one wants to advertise in.

Q. Did you ever send out printed matter to be inserted as an editorial or as reading matter?

A. No, I think not; we might; generally a thing of that sort is an advertisement and is sent out as such.

Q. Well, as we understand your testimony then, there is no record or any thing kept by your firm, in the ordinary course of business, that will show upon examination whether any such circular as I have described and just read to you, has been sent out by your firm, or that will show that it has not been sent out; is that so?

9367 A. Well, we keep a record of the advertisement that goes out; that is, a list of the papers, and names we send them for generally, but as to keeping a copy of that particular advertisement I don't believe we did it.

Q. You keep a copy of the names of the persons for whom you do it?

A. Yes, sir.

Q. Can you refresh your recollection between now and to-morrow morning as to whether you sent out any notice whatever, for anybody, on this subject last spring, and if so, at whose request you sent it?

A. I don't know; I can try.

Q. You have no objection to doing it, I suppose, have you?

A. I don't know that I have if it is proper for me to do so in justice to my business.

Q. You observe that the question I am asking you is not in a compulsory way, but to ascertain if you can?

A. I want to find out whether I have to or not.

Q. If you have any objections please state them, but if you have not the committee would be glad to have you state to-morrow morning whether there is any thing upon the records of your books kept in the usual and ordinary course of business that will show of such a circular or of any circular that has been sent out or that has not been?

(By Senator MURPHY:)

Q. As I understand the witness he states that his office is devoted to sending out circulars and advertisements but that he has no recollection or knowledge or having sent out any circular but as an advertisement; do I so understand you, sir?

A. Yes, sir; that is my recollection now; I say there is business that goes into my office and is sent out that I don't know any thing about; people come in and pay and yet I may know nothing about it.

9368 Q. Did Mr. Thomas ever send out editorial matter or printed matter to be published as an advertisement, to your knowledge?

A. Well, that is difficult for me to answer; I have been in the business for a long time; I might have advertisements running where they put in what they call "reading notices."

Q. Any reading notices of a political character?

A. I would not say positively, but, as I remember now, I am not in the habit of sending out reading notices; that kind of advertising is generally regular advertisements; but there are long time notices sent out as reading matter—that are called reading matter.

Q. We have them published in our Sunday papers here, and they are paid for as advertisements; all the Sunday papers publish them?

A. Yes, sir; I have never sent out any thing that has been paid for—if that is the object of the question—except it was paid for as an advertisement.

(By the CHAIRMAN:)

Q. That is one step; now, do you sometimes send out reading matter, but when it leaves you it goes as an advertisement?

A. Yes, sir.

Q. Whatever the form in which it appears?

A. Yes, sir.

Q. It may appear in the newspaper as reading matter?

A. Yes, sir.

A. And it might appear as an editorial?

A. Yes, sir.

Q. But still you are paid for it as an advertisement?

A. Yes, sir.

Q. It goes out in that way but, in the form, it may be an editorial?

A. Yes, sir; I can't tell how it will appear; it may come out as a full editorial.

Q. That is, so far as you are concerned, it may come out as an editorial?

A. Yes, sir; that is my understanding when I take it.

9369 Q. If I understand you, Mr. Sharpe, you could not say whether or not such matter was sent out, through you, to the country newspapers in the form it may be in an editorial, but really as an advertisement for which you have received due compensation; you could not say whether that occurred or not from your present recollection?

A. No, sir; but I think I never sent out anything but has been paid for.

Q. That is the extent of your recollection?

A. Yes, sir.

Q. Whatever was sent out in advertising form and whatever subject you were paid for as an advertisement?

A. Yes, sir; and the papers published it as such.

Q. The papers to which you sent it?

A. Yes, sir; as an advertisement.

Q. Now, could you, by looking at your books, tell whether through you, in the carrying on of our form of business, communications were sent to the country newspapers in respect to the gas bill of last winter?

A. Well, I don't know; I can look; that is the best I can promise without making an examination.

Q. You could not say certainly whether the books will show it or not?

A. No, sir; I could not.

Q. But it is possible that they would?

A. Yes, sir; they might show an advertisement of that kind if such a thing was sent.

Q. And might not; that's about the amount of it?

A. Yes, sir; they would not show any circular, probably, but give some name or some word perhaps.

(By Senator Murphy:)

Q. Just a memorandum?

A. Yes, sir.

(By the Chairman:)

Q. What is the name of that book?

A. The Record.

9370 Q. Any objection to bring that here to-morrow morning for April last?

A. Yes, sir; unless compelled to; belongs to my business and we have to use it all the time.

Q. The Record for April would not be in use for an hour tomorrow morning, would it?

A. It might be and it might not.

(By the CHAIRMAN:)

Q. Is that book now in use, Mr. Sharpe?

A. It might be.

Q. We should not think of putting any thing on the record unless it was something pertinent to the thing we are inquiring about?

A. All right, sir.

C. H. BOTSFORD, a witness, called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You reside in New York city?

A. Yes, sir.

Q. State what time, if any, you have devoted toward the examination and study of topics connected with gas companies?

A. I think about two years of rather close application.

Q. Up to what time?

A. Well, I might say to the spring of 1884.

Q. Have you also written upon that subject?

A. Yes, sir.

Q. Are you the gentleman whose name appears as the writer of an article in the *North American Review* for August, 1885?

A. Yes, sir; of the August item; and also to the New York *Tribune* previous to the spring of 1884, a series of articles on the gas question in this and other cities.

Q. You are called as a witness in consequence of some compilations that appeared in articles in the New York *Tribune* many months ago. In these compilations we observe some statements
touching the market values of the stock of the constituent
3371 companies entering into the consolidation. Did you person-
ally make an examination of the recorded values in 1879, or thereabouts, of the shares or of the capital stock of the New York, Manhattan, Municipal, Metropolitan, Harlem, Mutual and other companies?

A. I had compiled a table on the subject, which in substance appeared in the New York *Tribune,* I have heard, under date of March 14, 1885.

Q. From what sources did you make such compilations or gain any information touching such values?

A. I made an examination of the tax books, tax returns of the different companies, in the tax commissioner's office, and from the sworn statements of the managers of the constituent companies, or of the several companies; compiled figures which I afterward compared with the quoted prices of the stocks at a cotemporary period in the American Gas-light Journal, and the Financial Chronicle and the Daily Indicator.

Q. Was it the fact that the prices of those stocks were currently published in one or more of those publications, and if so how often?

A. The quotations were made weekly in the American Gas-light Journal, and quotations were made weekly in the Financial Chronicle; I think my compilations took the weekly estimates of the reporters of those journals, of those papers.

Q. Was there a wide range in those quotations as respects each of the companies, or individually, at various times, or were they comparatively constant and uniform?

A. Do you refer to a single year or a series of years?

Q. I refer to a short period in any one year at about 1879, or prior thereto?

A. I think that the quotations of the various city gas-light stocks were lowest about, from about the spring of 1880, or say
9372 December, 1879, prior to the formation of the so-called pool; these lowest quotations I take as the basis of my calculations.

Q. And they relate to what period of time?

A. Relating to 1879 and 1880—during the year 1879, I think, I may say; it must be explained that the companies were in the habit of making returns to the tax commissioners at as low a valuation upon their stock as the market gave them, for the purpose of getting the minimum of taxation.

Q. Those returns state the market value of the stock or capital over the signatures of the proper officials?

A. Yes, sir.

Q. And your tables of compilations were made, were they, from that source?

A. Perhaps not entirely.

Q. Partially from that source?

A. Yes, sir.

Q. And also from the stock quotations for the year 1879, is that so; is that the fact?

A. Yes, sir.

Q. Taking an average of those stock quotations?

A. I think I took them at one period, sir.

Q. When you had ascertained the quotations of a particular stock how did you draw that in arriving at the total market value of the other capital?

A. Multiplied it by the alleged number of shares as appear by the statements of the financial officers, of the officials, and the statements of the finanacial papers.

Q. That is the method of your compilation?

A. Yes, sir; that is it.

Q. Now, by that method and from those sources what did you compile the market value of the capital of the New York Company to be?

A. On a par of $4,000,000; market value $3,000,000.

Q. And of the Manhattan?

A. On a par of $4.000.000—$5,300,000.

9373 Q. And of the Harlem?

A. Seven hundred and thirty-eight thousand dollars.

Q. Of the Municipal?

A. The Metropolitan is the next—$2,825,000; I have the figures of the Mutual; do you wish that?

Q. Leave that; the Knickerbocker?

A. The Knickerbocker, as appears by the tax estimate, had no market value; therefore, I did not rate that.

Q. The Municipal?

A. The Municipal, $2,070,000.

Q. Par.

A. The par I am not sure, but I think $2,000,00 at that time.

Q. The Mutual?

A. The Mutual $2,500,000; that is the quoted value.

(By the CHAIRMAN:)

Q. Now, the par value; deducting the Mutual, what is the total of the constituent companies in the Consolidated.

A. According to the dates which I have here $13,933,000; I have not footed them up (footing up figures); that is correct; that total is correct according to my footing.

Q. If you have the same calculations, compiled from the same sources, for the year 1884, the Committee would be glad to have the results?

A. I made the calculation on the first of July, 1884.

Q. From what data?

A. From data of the same sort that I had in my possession, and found them as follows for the same companies: New York $6,080,-000, Manhattan $11,360, Harlem $2,160,000, Metropolitan $5,850, Municipal $6,000,000, making a total of $31,500,000; that excludes the Mutual.

(By Senator MURPHY:)

Q. You got that, Mr. Botsford, from the tax office?

A. These, I believe, were compiled from the quotations of the date which I named, and from the American Gas-light Journal and the Financial Chronicle.

9374 Q. You didn't get them from the tax books?

A. No, sir; these appear to be the right quotations of that day.

Q. Are the quotations made in your book made from the tax books?

A. Principally.

Q. What is the rate or the system of assessment of the Board of Tax Commissioners; do they tax up to the full value, or proportionately?

A. They take the market value of the stock, sir, and then deduct their real estate to fix the basis upon.

Q. On what basis do they assess real estate?

A. I speak not from absolute knowledge but from what I understand to be the case—at about seventy-five or eighty per cent. of its supposed value; that question was brought up in the courts in the taxation of the gas companies; they desired to get as much for their real estate as possible, so when the reduction was made the taxable capital was so much less; so some companies chose that method; they had to pay for the privilege; therefore, in some cases the real estate is figured very close to its absolute value; in order to explain that I might have to go on and say they would take the values, the cost values, of their real estate and plant and carry it in their books, and take those totals on from year to year, adding the accumulations of value every——

Q. That is not what I want to get at; I want to know simply whether the record that you got has been taken from the tax books, and you reply by saying the companies put the estimate upon the real estate at a higher figure in order to balance it in consolidation; is that it?

A. No, sir; that is not what I wish to be understood as saying; you asked me how the date I have was arrived at, and what the method of taxation was, and I said in the case of the gas com-
9375 panies there was an anomalous state of things; that some companies put their real estate in at the cost value on their books, and the other companies didn't quote the——

Q. You say "put in"; where did they put it?

A. In their returns; so, when you asked me if their real estate was put it at its value——

Q. I asked what the Board of Tax Commissioners assessed it at?

A. I would reply that two methods were used, for the reasons I have stated.

Q. I asked you the real estate; there is only one method; that is for the Board of Tax Commissioners to assess it at sixty-five, seventy or eighty per cent.; is that your answer?

A. Yes, sir; from sixty to eighty per cent.; and, although the assessments are made upon actual values, it has been my observation that the alleged values are carried upon the company's books, and enter largely into the calculation.

Q. I am not speaking of the alleged values; of the actual values as carried by the Tax Commissioners——

(By Mr. Tremain:)

Q. We have those returns here, and it will be observed also that the market value is given; the real estate that is put on those returns by the same officers of the company is deducted from that market value, and that real estate of course includes the structures and plant of various kinds, and mains, in many instances, which are held by the gas companies to be real estate and taxable as such; now, how do the commissioners get at the actual value of the real estate; does that appear by this testimony?

A. That does not appear by this testimony; I have made the compilation——

Q. Now, in order that there may be no possible misapprehending, the testimony you have given upon this subject, do we under-
9376 stand that your figures as to values of the other capital are quite independent and exclusive of any consideration whatever touching the values of the real estate, as given either by the officers of the company or by the taxing authorities?

A. Certainly; it is entirely independent; if you will allow me I could explain my testimony about the——

(By the CHAIRMAN:)

Q. You think that will help us, Mr. Botsford, in our work; if you think it will, state it?

A. The Mutual Company in making their tax returns always taxed upon the stock which they issued, not at par, but at fifty cents on the dollar, and that explains what I had to say as to the differences in taxation; they didn't take the market value, but the figures of the stock issued for original.

(By the CHAIRMAN:)

Q. Mr. Botsford, at what time was the market value of the stock of the several constituent companies $13,933,000?

A. Well, sir, as those returns were made to the tax commissioners upon an alleged market value of the stock during the year for which the whole of that tax was to be collected, it would be impossible to say at what date they were at that value. From my own knowledge I should say about the last of December they would have footed up to these totals—the last of December, 1879.

Q. Well, that approximates it?

A. Yes, sir.

Q. Now, I understand you that in July, 1884, the market value or capital stock of the same companies to be $31,500,000?

A. Yes, sir, a difference of $17,567,000.

Q. How do you account for that difference?

A. I account for it by the fact of the increase in the price of gas from $1 per thousand and less to $2.25.

Q. How do you account for that difference in increase?

A. By the combination.

9377 Q. The so-called pooling arrangement?

A. Yes, sir.

Q. And you think that was the object and the effect of the pooling arrangement?

A. Undoubtedly—increase in rates.

EDWARD J. MACNIVEN, a witness called by the Counsel to the Committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are in the employ of W. W. Sharpe & Co., advertising agents, 21 Park Row?

A. Yes, sir.

Q. You have brought here to-day, at the request of the Committee, two books which have been used by them in the usual course of their business?

A. Yes, sir.

Q. How do you designate those two books?

A. One of them is known under what we call the specimen book; samples of our advertisements are kept in that.

Q. Does that contain samples of advertisements that have been sent out during the period it covers?

A. Yes, sir.

Q. Then that book relates to the period of April, 1885?

A. Yes, sir, 1884 and 1885.

Q. You call it a sample ledger, do you not?

A. No, sir, just specimen book.

Q. And the other book, what do you call that?

A. That is the bill-book.

Q. Bill-book?

A. Yes, sir.

Q. Who keeps that book?

A. The bookkeeper.

Q. What period does the bill-book cover?

A. I can't say, gentlemen, having nothing to do with it.

Q. Just look in that book and see whether it relates to the ordinary business done by that house during 1885?

A. Yes, sir, it does.

9378 Q. Look in it and see if there are any entries for May, 1885, relating to the Consolidated Company—Consolidated Gas-light Company, and if so, please state the pages?

A. Pages 386 and 387.

Q. What is the date of this bill on pages 386 and 387?

A. I believe it is May 11; I can only see half of it.

Q. On what page in the specimen book is found the specimen to which this bill on page 386 relates; pages 386 and 387?

A. On page 351.

Q. I would like to have the extract to which you allude on page 351 of the specimen book, and the bill to which you allude on pages 386 and 387 in the bill-book read in evidence, and I request you to give proper instructions to have a copy made so as to have the same put in the record; does not page 322 of the bill-book also relate to the charge to the Consolidated Gas-light Company on April 17?

A. I don't know any thing about that.

Q. Does not that entry in your opinion relate to the specimen in the specimen book at page 335?

A. Yes, sir.

Q. This bill at page 322 of the bill-book relates to an advertisement in the *Commercial Advertiser* of April 17, 1885, does it not?

A. Yes, sir.

Counsel requests that the extract of advertisement alluded to on page 322 of the bill-book, and extract therefrom covering the same, be at the proper time placed in evidence.

FIFTH AVENUE HOTEL,
NEW YORK, *December* 23, 1885.

Met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

9379 Henry E. Tremain, Esq., appears as counsel to the committee.

LOUIS M. BERGTHEIL, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. **TREMAIN**:

Q. Did you make a copy of the several parts of the two books produced by W. W. Sharpe & Co.; book called specimen book and book called bill-book?

A. I did.

Q. Did you compare these copies with the originals that were produced in evidence?

A. Yes.

Q. On Saturday?

A. No, on Monday, the day before yesterday.

Q. Are these copies of the extract that were then identified?

A. Yes.

Q. And read?

A. Yes.

Counsel here produces in evidence the sworn copies of the entries in the books and states that they were shown to the witness Thomas yesterday.

WITNESS adds: I ought to say that two of the copies were made by me and the other by another clerk, but I compared all of them with the originals.

Copy of excerpt from paper pasted on page 351 of specimen book, 1884-1885, of Messrs. W. W. Sharpe & Co., advertising agents, of 21 Park Row, New York City.

Excerpt subscribed. Order of April, 1885.

Republican Assemblymen who vote for the Gas Consumers' bill now pending will be strengthening the Democratic party in New York city, because the bill gives after four years the appointment of the three commissioners created, whose salaries and allowances
9380 for clerk hire aggregate $60,000 to the mayor who, as New
York is strongly Democratic, is usually a Democrat. That eminent Republican, Clarence A. Seward writes to the New York *Tribune* that the provisions of the bill are self-contradictory.

Besides, the bill brings what should be a private business enterprise into politics, and by fixing the price of gas destroys competition.

Copy of excerpt from newspaper pasted on page 335 of specimen book, 1884-1885, of Messrs. W. W. Sharpe & Co., of 21 Park Row, New York city.

Excerpt subscribed, Commercial, April 17, 1885.

RIGHTS OF GAS COMPANIES.

To the Editor of the Commercial Advertiser:

A member of the Gas Consumers' Association argues under the above heading in your issue of yesterday that, because gas is a modern necessity, gas companies should be under legislative control, as provided by the pending Gas Consumers' bill. But why stop at the gas companies, if your correspondent argues correctly. Mr. Sherwood, the president of the association, is in law an inn-keeper, Mr. Thurber, who gives the bill his support, is interested in supplying the public with canned goods. Inns and canned goods are modern necessities. How would Mr. Sherwood like to have a commission run his inn, or Mr. Thurber enjoy having a commission take charge of the sale of his canned goods at prices fixed by the Legislature?

JUSTICE.

Bill-books—pages 386, '7 of bill-book of Messrs. W. W. Sharpe & Co., of 21 Park Row, N. Y. city.

MAY 11, 1885.

Consolidated Gas-light Company, to reading notices, one time, in following papers:

9381	Wellsville, N. Y., Reporter	$6 00
	Olean, N. Y., Times	8 00
	Auburn, N. Y., Advertiser	10 00
	Elmira, N. Y., Advertiser	8 00
	Norwich, N. Y., Telegraph	6 00
	Hudson, N. Y., Republican	6 00
	Delhi, N. Y., Republican	6 00
	Poughkeepsie, N. Y., Eagle	6 00
	Akran, N. Y., Breeze	6 00
	Watertown, N. Y., Times	8 00
	Lowville, N. Y., Democrat	6 00
	Rochester, N. Y., Union	8 00
	Lockport, N. Y., Union	8 00
	Syracuse, N. Y., Journal	12 00
	Canandaigua, N. Y., Times	6 00
	Goshen, N. Y., Democrat	6 00
	Albion, N. Y., American	6 00
	Oswego, N. Y., Times	8 00
	Troy, N. Y., Press	12 00
	Haverstraw, N. Y., Messenger	6 00
	Schenectady, N. Y., Star	6 00
	Schoharie, N. Y., Republican	6 00
	Watkins, N. Y., Express	6 00

Bath, N. Y., Advocate	6 00
Riverhead, N. Y., News	6 00
Monticello, N. Y., Watchman	6 00
Owego, N. Y., Blade	6 00
Ithaca, N. Y., Journal	8 00
Kingston, N. Y., Freeman	6 00
Glens Falls, N. Y., Republican	6 00
Sandy Hills, N. Y., Herald	6 00
Warsaw, N. Y., New Yorker	6 00
Penn Yan, N. Y., Chronicle	6 00
Mayville, N. Y., Era	6 00
Geneseo, N. Y., Republican	6 00
Fonda, N. Y., Democrat	6 00
Utica, N. Y., Herald	24 00
	$270 00

9382 Paid Bangs of Mail Com.

Bill-book, page 322, of Messrs. W. W. Sharpe & Co., of 21 Park Row.

April 17, 1885.

The Consolidated Gas Co., to advertising article in April 17, Commercial Advertiser, nineteen lines, one time........ $19 00

Wm. M. Bangs, a witness called by the counsel, being duly sworn, testified as follows:

Q. What is your business, Mr. Bangs?

A. I am clerk in the *Mail and Express* office.

Q. By the books of W. W. Sharpe & Co., you appear to have received a small commission on an advertisement left by you with them in last April or May, the total of the bill being $270.00; do you remember the occurrence?

A. I never left an advertisement with them at that time; I suppose I introduced some advertiser to them; people sometimes come into our office looking for advertising agents.

Q. Who did you introduce on that occasion?

A. What is that occasion?

By General Tremain:

I will tell you what that advertisement is; I have a copy of it here; it is a copy of advertisement pasted on page 351 in the specimen book of W. W. Sharpe & Co., order of April, 1885. The following is the advertisement:

"Republican Assemblymen who vote for the Gas Consumers' bill now pending will be strengthening the Democratic party in New York city because the bill gives after four years the appointment of
the three commissioners created, whose salaries and allow-
9383 ances for clerk hire aggregate $60,000 to the mayor, who, as
New York is strongly Democratic, is usually a Democrat.
That eminent Republican, Clarence A. Seward, writes to the New York *Tribune* that the provisions of the bill are self-contradictory,

Besides the bill brings what should be a private business enterprize into politics and by fixing the price of gas destroys competition."

Q. I won't swear that I know the man; I do not remember this advertisement; I had introduced a gentleman last spring who told me he had some reading notices, but I did not read them and I have no idea of what they are.

Q. Do you remember that one item?

A. No; I do not.

Q. And as a consequence of that introduction you received an allowance or commission—that is the usual thing?

A. Yes, sir.

Q. What is that gentleman's name?

A. Mr. Gustav Kobbe.

Q. And his place of business?

A. I do not know; he does some thing for us; I do not know where his office is; he is a general newspaper man.

Q. What part of the work does he attend to—editorial?

A. Yes and reportorial, he does either or both.

Q. He is not a counting-room attache?

A. No.

Q. How long have you known him?

A. I do not know how long; he has been connected with us now about three years.

Q. Is he an attache of the *Mail and Express* now?

A. Yes; and paid for what he does on a salary.

Q. Where is his residence?

A. I do not know.

Q. Did he ask you to introduce him?

A. I do not remember the conversation; he stated he had
9384 some advertisements and asked where he should go.

Q. Did he ask you to introduce him to anybody?

A. No; the question is just as I say, where he should go.

Q. Did he himself ask you to do this or some one else?

A. I do not remember.

Q. Did some one else ask you or speak to you about it?

A. No.

Q. Do you mean to testify that no one else but yourself had any knowledge of the occurrence?

A. No; certainly I do not want to say that.

Q. But to your knowledge no body else knew the circumstances but you?

A. No.

Q. In other words, your connection in the matter began and ended with the introduction of Mr. Sharpe to Mr. Kobbe?

A. I do not know if it was Mr. Sharpe or some one else in his office.

Q. Do you know Mr. Sharpe personally?

A. Yes, sir; very well.

Q. It was probably Mr. Thomas?

A. No; probably one of the concern, but I do not know; I do not remember.

Q. Do you know Mr. Thomas, the cashier?
A. Yes.
Q. Was this circumstance ever mentioned by you or in your presence?
A. No, I think not; I do not remember.

(By Senator GILBERT:)

Q. Are you able to say it was not?
A. No; I am not able to say that; I will not say so.

(By General TREMAIN:)

Q. When was it, to the best of your recollection, if ever it was mentioned?
A. I have no recollection of it having been mentioned until this morning.
Q. *Do* you not go twice to Sharpe's office about it?
A. No, only once; I might have introduced Mr. Kobbe by letter, but I am not sure.
9385 Q. Did Mr. Kobbe tell you what the matter was he wished to have inserted?
A. If he did so before or afterwards, I do not know; I will not take my oath as to the time; he told me it was an advertisement relating to the gas question.
Q. What else did he tell you about it?
A. He told me nothing more that I know of.
Q. Who was present when he told you this?
A. I do not think any one overheard it.
Q. Why should he want to insert an advertisement in relation to the gas questien, employed as he was on the staff of the *Mail?*
A. No more than that Mr. Kobbe is a contributor and is paid for what he does.
Q. You did not receive a commission when you first introduced him?
A. No.
Q. That commission could not have been paid until late in May?
A. I do not know when it was paid, sometime afterward.
Q. Who paid it?
A. Mr. Thomas, the cashier.
Q. Directly to you?
A. Yes, sir.
Q. By check or currency?
A. Currency.
Q. What was stated on that occasion?
A. He expressed the wish that I would see him often.
Q. Did he say any thing else?
A. Not that I remember.
Q. What did Mr. Kobbe say at any time about it?
A. I do not know; I do not remember; I- was not of sufficient importance to make a note of it in my mind.
Q. Are you not aware that there was more paragraphs about that time?
A. I am not.

Q. I mean in April?

A. I do not remember.

Q. You have nothing to do with the editorial columns?

A. No.

Q. What is your particular business in the office?

A. Cashier.

9386 Q. You do not write for the paper at all, do you?

A. No, sir.

Q. And did not at that time?

A. No, sir.

Q. Are you positive that these circumstances were never mentioned in your presence to anybody else?

A. I am not positive.

Q. You are not positive?

A. I do not remember.

Q. Is it your testimony that you do not remember any other instance?

A. That is my testimony.

Q. When did you see Mr. Kobbe last?

A. I saw him this morning.

Q. At what time?

A. I do not know.

Q. You do not know; you have an idea, have you not; give the time to the best of your recollection?

A. It was somewhere about 10 o'clock, I guess.

Q. After you were subpœnaed?

A. Yes.

Q. What conversation occurred?

A. I told him I had been subpœnaed and asked him if he had been.

Q. What else occurred?

A. He thought it was a pretty good joke.

Q. What else occurred?

A. Nothing else.

Q. What did he say?

A. As far as I remember he said nothing.

Q. Did he say any thing at all?

A. He said nothing that I can repeat; he did not say any thing that I am willing to repeat.

Q. Now, Mr. Bangs, please tell the committee what he said, to the best of your recollection?

A. He asked me if I had read Sharpe's evidence, and I said yes, and that I had been subpœnaed.

Q. Where did you see him?

A. He passed through the office on his way upstairs.

Q. Your office?

A. Yes, sir.

Q. Is Mr. Kobbe in your employ now?

A. Yes; in the same way; he writes for the paper.

9387 Q. Is he there every day?

A. I think he is.

Q. Is not that the usual way they are employed?

A. They are employed both ways.

Q. And those that are paid according to what work they do are also regularly employed, are they not?

A. His time does not belong to us; he works whenever he pleases and wherever he pleases.

By Senator GILBERT:

Q. But as a matter of fact he works for your paper most of the time?

A. I do not believe he does; he has a great deal of out of town correspondence, I know, in a general way.

By General TREMAIN:

Q. By out of town you mean New York State business, do you not—or what?

A. I do not know, as my knowledge is not exact.

By Senator GILBERT:

Q. His usual place of business is at the *Mail and Express* buildings, is it not?

A. I do not know.

By General TREMAIN:

Q. Is it your opinion as a newspaper man that it is the custom or ordinary course for reading matter to be inserted through advertising agencies?

A. Yes, it is as often that way as any other.

Q. In such cases they are paid for as advertisements, are they not?

A. I do not know, we do not print any of that sort.

Q. I am not asking whether you do or not?

A. Well, I do not know.

Q. How long have you been in the newspaper business?

A. Sixteen years, between sixteen and eighteen years.

Q. Do you know that this was expected to be paid for, or otherwise Mr. Kobbe would not have any interest in it?

A. I do not know to my own knowledge, it is only a case of inference.

9388 Q. In introducing him to Mr. Sharpe you know he would not do so unless he was paid for it?

A. I do not know in what shape the advertisement was, but I knew it was to be advertised; I do not know any thing that I can speak positively about.

Q. Mr. Bangs, did Mr. Kobbe say what this matter was?

A. No, sir.

Q. You did not read it?

A. No, sir, I did not read it.

Q. Was it not an extract from the *Tribune?*

A. I am not aware of that.

Q. Are you or are you not aware whether it was an extract from a newspaper?

A. No, I do not know.

Q. Are you not aware that it was something that Mr. Kobbe had in part prepared?

A. I do not know what my knowledge was at that time, I thought he had prepared it all.

Q. Mr. Kobbe does not prepare advertisements as a general rule, does he? He prepares reading matter, does he not?

A. I do not know all the details of Mr. Kobbe's business.

Q. Say as far as you know to the best of your knowledge?

A. He does not prepare any advertisements for us.

By Senator GILBERT:

Q. So far as you know, or anybody else?

A. So far as I know.

Q. You do not prepare this reading matter yourself?

A. No, sir; I have no connection with this part of the business.

Q. There is a general belief that that sort of advertisements are patent with all newspapers, is there not?

A. I do not know; it is my belief that this rule is not patent with all newspapers; it might be with some, but not all.

9389 NEW YORK CITY, FIFTH AVENUE HOTEL,
December 24, 1885.

The committee met pursuant to adjournment.

Present: Hon. John I. Gilbert, Chairman, Hon. Thomas Robinson, Hon. Michael C. Murphy.

Henry E. Tremain appeared as counsel to the committee.

CHARLES ROOME, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are the president of the Consolidated Gas-light Company?

A. I am.

Q. And you were also president of the Municipal?

A. I was, yes, sir.

Q. General Roome, before commencing the examination, I wish to ask you if there is any line of inquiry which the committee has thus far omitted which you think would be essentially absolute in order to learn the whole truth about the matter under inquiry?

A. I do not know, sir, much about what you have done; I am sure I don't know what you require.

Q. Our object was to see whether there was any side of the question that had occurred to you which had not occurred to us?

A. I can't think of anything, sir.

Q. Do you remember when the first lists or schedules of property of the Municipal Company with a view to consolidation were prepared?

A. I do not.

Q. Well, about how long prior to the summer of 1884?

A. I know nothing about it, General Tremain.

9390 Q. When did you first have any knowledge on that subject?

A. When the committee, the adjustment committee, made their report; I had nothing whatever to do with the adjustment committee.

Q. You mean by the "adjustment," the adjustment of values for the purpose of consolidation?

A. Yes, sir; a committee of one from each company.

Q. You were not a member of the pooling committee, were you?

A. I was not.

Q. Were you not aware that the pooling committee, so-called, had under consideration from time to time, during the years 1880 to 1884, propositions for a consolidation?

A. I believe the pooling committee was formed with the object, if possible——

Q. Well, that I didn't ask—were you not aware of the fact that during 1880, 1883, the pooling committee did consider plans for a consolidation?

A. I did not.

Q. Did you never hear that it did?

A. Never heard that it did.

Q. The pooling committee at a meeting held in December, 1883, appeared to have acted upon or accepted a plan for a consolidation, and to have appointed a sub-committee, with power to call in legal counsel to carry it into effect; did you hear of that at the time?

A. I didn't hear any thing about it; I paid very little attention to the pooling committee.

Q. Well, when it came to a vote in the board of directors, did you vote for the consolidation scheme?

A. I did.

Q. Before voting for it, had you informed yourself of the basis of assessment of valuation of the several constituent companies?

A. I knew nothing except the report of the committee appointed for the purpose of settling all these matters. 9391

Q. You do not know what principle of valuation upon which they acted, do you?

A. I do not exactly know how to answer that question; I do know that the property of the different companies was valued by the process of the adjustment committee, and I know that they reported to the different companies the calculations at which they had arrived; beyond that I am not able to answer the question.

Q. Do you know how the Manhattan Company had its real estate, so-called, appraised or valued, if at all?

A. I have answered that question before; I know nothing about the operations of the adjustment committee, except as they reported to the board of the company of which I was the president.

Q. When, in their report to the board did they not indicate for the consideration of the Manhattan board, whether the value of the real estate, so-called, which is stated in the appraisement schedules for the Manhattan to be $3,563,000, was simply the value of the lots, or the lots with structures upon them?

A. I can't answer that question.

Q. You mean that you never had any information on that subject?

A. I mean to say I have no recollection further than I have told you, being assured that this committee had taken every means in their power to arrive at a just value of all the property submitted to the different companies for consideration.

Q. But you acted, you relied upon that assurance, did you?

A. With perfect confidence.

Q. General, can you give us the name of the engineer of the Manhattan Company?

A. Charles Roome.

9392 Q. Yourself?

A. I am; yes, sir.

Q. And who is the assistant engineer?

A. We have superintendents of work, sir; we have no such officer known now as assistant engineer; we did have, but he died, and since his death we have had none.

Q. Do you know the name of the gentleman who has filled the office since his death?

A. I presume I do, sir.

Q. Is there any practical engineer at the North river station?

A. There is.

Q. What is his name?

A. Mr. Smith.

Q. Mr. A. M. Smith?

A. A. M. Smith.

Q. And at the East river station?

A. Mr. William Combe; both of whom I brought up to business.

Q. How long have you been engaged in the gas business?

A. Since 1837.

Q. With what company, principally?

A. The Manhattan.

Q. You know of the building of the plants?

A. I planned the works and built them.

Q. Are you acquainted, do you know the producing capacity of the Consolidated Companies?

A. I do.

Q. How many cubic feet of gas per day can these Consolidated Companies now put out?

A. Twenty-eight million feet in twenty-four hours.

Q. Have they plants sufficient to do that now?

A. Can do it now this minute.

Q. You know how many cubic feet you have put out since consolidation in any one day?

A. About twenty-two million, sir, I think as near as I can recollect.

Q. Have you any knowledge of the amount of gas required to light the city of New York, in these present evenings, nights, about?

A. I know—I don't know of other companies——

9393 Q. My question is what amount of gas it requires to light this city?

A. At this time?

Q. Yes; this time of night?

A. I suppose about twenty-six or twenty-seven million feet; somewhere along there; that I can't speak positively.

Q. Have you any plants belonging to your company that are not in use?

A. Yes, we have.

Q. And you know about how much?

A. We have the real estate, that is land enough to make fifty million feet a day.

Q. Now, you speak of having land enough; is that land not at present occupied by any tanks or mains or any thing?

A. We can increase our manufacturing with the land we have from twenty-eight million to fifty million, about I think; I have no doubt of it.

Q. Now, you say you built or planned the plants of the Manhattan; are you competent to judge of what it cost to put in a plant at present?

A. I suppose it would——

Q. My question is whether or not you are a competent engineer to testify what plants cost?

A. I suppose a million dollars for a million feet.

Q. That embraces buying the land, and mains and all?

A. Every thing, I believe.

Q. Now, can you estimate or have you estimated what it would cost your company, having the real estate on hand to produce the additional plant necessary, to produce that fifty million feet?

A. That would require a good deal of calculation, but I know and am confident this we can do.

Q. My question is, have you compared the cost at any time since you were president of this company what it would cost you, owning real estate that you have now, to make the addition necessary to make a plant capable of producing in this twenty-four hours fifty million feet?

A. I have not calculated up to fifty million feet.

9394 Q. How far have you calculated?

A. With the expenditure now of $1,000,000, we can make an additional quantity of five million cubic feet a day. We can now furnish five million feet more in addition to the twenty-eight million, with an expenditure of $1,000,000.

Q. Now, you testified before that it would require about a million dollar plant to produce one million cubic feet of gas; now you say you can produce five million with an additional expenditure of $1,000,000; the reason of that is because you have the real estate and other things on hand?

A. Because we have the land, the buildings and the apparatus, and with the expenditure of $1,000,000 we can furnish an additional quantity of five million feet in twenty-four hours.

Q. You say you have made that calculation—that estimate?

A. Yes, sir.

Q. Have you not been president of this company since its formation, this Consolidated Company in question?

A. I have.

Q. Do you have any knowledge of what it is assessed for for taxes; have you any knowledge of that?

A. We are taxed by the State for State purposes.

Q. The answer to my question is—have you any knowledge of what your company is assessed for for taxes; have you a knowledge of it, that's all?

A. No, sir; I do not; I know this, what our personal tax is.

Q. That is assessed in the city?

A. That is assessed in the city.

Q. What is your personal tax?

A. We are assessed in the city on personal $12,700,000, I think; this includes our franchises.

Q. What is your personal property?

9395 A. Our franchises, coal, meters and such matters; the board of assessors did assess us $15,000,000 personal property, and after a good deal of discussion, a long discussion, they reduced it to $10,000,000; now, we——

Q. Reduced what, the personal?

A. The personal from $15,000,000 to $10,000,000.

Q. I thought you said personal $12,700,000?

A. Twelve million five hundred thousand dollars, I think, is the exact amount; they assessed us $15,000,000 on our personal tax, but they reduced that to $10,000,000, and we pay on that; and then I believe we have patent rights worth $2,000,000 or $2,500,000, and that would make it amount to $12,700,000.

Q. So you think your personal tax is $12,700,000?

A. Yes, sir.

Q. And of that personal how much is coal, horses, wagons and things of that kind; what does that amount to, you know?

A. No, sir.

Q. That embraces then this coal and things of that kind, together with your franchises?

A. Yes, sir.

Q. Embraces all the liquid assets according to market value?

A. Yes, sir; I suppose so.

(By Senator Robinson:)

Q. General, I don't suppose that includes the real estate and mains?

A. No, sir.

Q. I think I understood you to say that you planned the plant for the Manhattan Company?

A. Yes, sir, I did.

Q. And superintended the construction of it yourself?

A. I did; they were built under my personal direction.

Q. So you are a practical gas engineer?

A. I am.

(By the Chairman:)

9396 Q. General, when you say it requires $1,000,000 of capital to produce a million cubic feet of gas per day, does it make any difference as to the quantity, that is to say, whether you have a plant that shall produce one million, or five million, or fifteen million, or twenty million, the same would hold good all the way?

A. I suppose it might originally; that would depend perhaps somewhat on circumstances; but that is so. Now, when I say—that I may be understood exactly—the reason why I say that with an expenditure of $1,000,000 we could increase five millions, is because we have in some of our works certain apparatus equivalent to twice their present requirements, and naturally we can now add five million feet of gas a day to our production for $1,000,000; yet to add another five million it would cost, say $1,500,000.

Q. For the second?

A. Yes, sir; then I think we could go on and produce seven million feet for $3,500,000.

Q. The first five million feet $1,000,000?

A. Yes; the second for $1,500,000, and the next seven million feet for $3,500,000.

Q. And then you might go on——?

A. I have not calculated beyond that, sir; you see we have—I have gone over the whole of it; I have reasoned it out all over in my own mind what we can do. We are now sending out twenty-two million feet a day; it depends somewhat on the weather; we will probably send out twenty-four million feet a day during the holidays; but you can't tell; it depends on the weather; if it is foggy and cloudy weather there will be a great deal of gas used in the day time; we can't tell one day what will be required to furnish the next; it is so large a business, it would vary.

9397 Q. Taking the ratio between the capital required and the per diem production, it will vary somewhat according to the quantity of gas produced by a given plant?

A. Yes, the more gas you make the cheaper you can probably make it a thousand feet.

Q. That is what I want to get at, whether or not that is so?

A. Yes, sir; you can do a large business cheaper than a small one.

(By Mr. Tremain:)

Q. Did I understand you, General, that the $12,000,000 of assets, the value of personality that you alluded to was the entire personality of the company upon which you paid taxes exclusive of real estate, or was that the amount from which the read estate was deducted?

A. It had nothing to do with the real estate.

Q. Nothing to do with the real estate?

A. No; I want to be understood, as I stated before, the city consented to place our personal taxes, that is our franchises and meters at $10,000,000, and the State taxes *us* $600,000 a year for State purposes; so I suppose that may be considered as the fair value of our franchise—that is the way I got at it.

Q. And the entire personality?

A. Yes, sir, the franchise, I suppose.

Q. You speak of patent rights. What patents are in use at the Manhattan works?

A. We have patents for charging and drawing retorts and storing away coal, etc.

Q. How many patents have you for charging?

A. Oh, I don't know; we have Ross's patent for charging, drawing, etc.

Q. What else?

A. That's all. Yes, we have—I don't know that you would call it a patent right—there are ways for storing coal.

Q. What others for charging?

A. We have Ross's patent.

9398 Q. No others?

A. The same as used in Cincinnati.

Q. What patents, if any, used in connection with filling the holders or tanks?

A. None that I know of for filling the tanks. I don't know what you mean.

Q. Is there not a patent used in conveying the gas from the tanks?

A. I don't know of any.

Q. For charging the retorts, putting the coal in and taking it out again?

A. Yes, sir.

Q. Is there any patent used from that time until the time the gas reaches the mains?

A. No.

Q. None?

A. No, sir.

Q. Has there never been?

A. You mean after the gas leaves the retorts?

Q. Yes, sir.

A. I know of no patent; the patent is in storing coal and manufacturing the gas; after the gas is made it requires no patent; it takes care of itself.

Q. Is there no patent used in adjusting the pressure?

A. I don't know of any patent for that.

Q. No patent used in recording the pressure?

A. I don't know if there are any patents; there are instruments for that purpose—an apparatus for that purpose; there may be patents; there are some patents, but as we buy of the manufacturers we have nothing to do with those particular patents that I know of.

Q. Is there a stage in the process after the gas is produced before it is consumed when any pumps are used?

A. After the gas is produced? Oh, we use what we term exhausters or air pumps—gas pumps.

Q. Are they patented?

A. Yes, sir; all those things are patented but the company does not own those patents.

9399 Q. You acquire the right to use them when you buy the machines?

A. Yes, sir.

Q. How many are used by the Manhattan?

A. Oh, I don't know; we have patent exhausters that we bought in London forty years ago; and there is the McKenzie patent here, and oh, two or three others; I don't know.

Q. Can you mention the names?

A. No, I don't know; Root, I think, is the name of one, McKenzie was one, and Jones, and I think there was another one, Beals; we use two kinds of exhausters in the Manhattan works; they use in all the works different patents; I can't recollect the names of the owners and patentees.

Q. What did you say the names of the patent exhausters are?

A. I think Root is the last patentee.

Q. Did you ever hear of McIlhinney?

A. I didn't know he had invented any.

Q. The purpose is to relieve the pressure from the retorts and to force it against the weight of the gas holders?

A. Yes, sir.

Q. And by what general process is that done?

A. The exhauster draws the gas from the retorts and forces it through all the intervening apparatus into the gas holders; to explain it further I would have to go into the chemistry of the thing.

Q. A strong pressure of air is created in order to aid in the propulsion of the gas?

A. Strong pressure of air—air has nothing to do with it; the air has nothing whatever to do with it.

Q. You use an air pump?

A. I say it is like an air pump—it is a gas pump; it pumps the gas from the retorts through the intervening apparatus to the gas holder so as to cause the holder to rise; the weight of the holder gives all the necessary pressure on the streets.

9400 Q. If the weight of the holder then can rise that increases the pressure in the mains?

A. What mains?

Q. To which the gas is delivered?

A. Yes, sir; when we speak of mains we speak of large pipes in the streets.

Q. The pressure on the street mains is regulated by the pressure on the tanks?

A. Yes, sir; when you say tanks you mean the holders that hold the gas—the gas holders; if the pressure of the gas holders is greater than that required on the street mains, that is regulated by valves or governors; on regulating that pressure the gas holder would vary in pressure according to the height.

Q. If the weight was stationary, so it could not move up and down?

A. There would be no pressure at all; in that case, if you filled it you could not empty it again.

Q. It would have to be pumped out?

A. Pumped out? That is an absurdity.

Q. You mean that it is not practicable?

A. Impracticable; if you should attempt to pump the gas out of the gas holder you would crush your gas meters in, and in very short order.

(By the CHAIRMAN:)

Q. General, when these companies were brought together, was it found that there were many of the streets in which there were an unnecessary quantity of mains?

A. Yes, sir; that will always be the case where you have opposition companies; the more companies you have the more capital you waste in carrying on the business.

Q. Can you tell us how large a quantity of those unnecessary mains there was at the time of consolidation?

A. I am not sufficiently familiar with the subject to answer the question; I knew there were more large mains than business would warrant.

9401 Q. Could you give us some kind of an estimate that would be approximate?

A. I cannot, sir.

Q. Some complaint has been made that while the price of gas has been reduced the bills for gas have increased; now, without inquiring whether that is particularly so or not, we want to ask you this: What are the conditions which either increase or diminish the quantity of gas registered at a given burner for a given number of hours, if you please?

A. In nine cases out of ten the carelessness of the consumer.

Q. The carelessness of the consumer in what respect?

A. Not paying attention to his light; putting it out when he does not want it; there is an enormous quantity of gas that is wasted unnecessarily through the carelessness of the party burning it; that has always been so, and I think will always be so from now until the day of judgment.

Q. Now, assuming that that carelessness is a fixed quantity, now, what other conditions would either increase or diminish the quantity of gas registered at a given burner?

A. I don't know of any condition that would do it in a properly conducted company as ours is; the pressure by the gas companies is no more or less than just to furnish the quantity of gas required.

Q. I am asking you now what conditions might do it—not in your case, nor in any other particular case—but what conditions might increase or diminish the quantity of gas registered at a given burner, other things remaining equal?

A. I know of none whatever.

Q. Could you not increase the pressure in such a way as to cause the escape of more gas—I don't refer now to any thing you have done?

A. I understand that; no gas company will work under a greater pressure than it is compelled to.

9402 Q. How is your propulsion usually determined?

A. By the requirements; for instance, if we should get a report made of deficiency of light the deficiency of light would arise from the fact of insufficiency of gas; that insufficiency of gas would arise from the fact that it was not sent into the meters with sufficient force to supply the quantity required; we would then increase our pressure; our pressure is increased or diminished every few months.

Q. Would it be a physical possibility to increase the pressure so as to cause the escape of an unnatural amount of gas at the burner?

A. Not at the burner; it would in the street mains; it might in the street lamps; but in the house, if parties pay any attention whatever to their light they may regulate it to suit themselves; but the gas is improperly burned, it is improvidently burned, wastefully burned.

Q. That I understand; I have no doubt it is so. Now, supposing the light is turned on with full force, is it a physical possibility for the company to cause such a pressure to be brought upon the gas as to cause the escape of more gas than is really consumed?

A. Not more than is consumed, but more than is properly consu*em*d. There are some burners so constructed, called fish-tail burners, that will blow when you turn them up, they will go up to a point instead of spreading out the gas; it will whistle, and then the only thing you can do is to turn your gas down, but if you shall let it blow the gas company can't help that.

Q. Would more escape than could be turned into a flame?

A. I don't see how it could escape without being consumed.

(By Senator Robinson:)

Q. General, you have had an experience with meters; is
9403 it just as apt to register so as not to register all that passes
through?

A. Yes, sir; a majority of meters that do not register correctly register against the company; they pass more gas than they register.

(By Mr. Tremain:)

Q. Do you make that statement from the records of the company or is it a matter of knowledge?

A. What?

Q. That statement you have just made?

A. I speak from positive knowledge; it is a matter of positive knowledge.

Q. Is that particular statement you make a statement that is made from the records of the company?

A. Yes, sir.

Q. Those records are records of meters that the company has tested and examined and no others?

A. Yes, sir.

Q. What books will show such records?

A. You can find them by going down to Irving place; there is not a meter that comes into that building and goes out again without being proved, whether it is a new meter from the factory or from a customer that has been sent back to be reconstructed; the record is kept and you are at liberty to look at it; I think we prove certainly ten thousand a year.

(By the Chairman:)

Q. General, how does the illuminating power of gas affect the quantity consumed at a given burner, other things being equal?

A. The illuminating power and the quantity have no reference to each other, if I understand you right.

Q. One witness thought that when the illuminating power of the gas was increased at a given burner that the quantity consumed, other things being equal, was diminished?

A. The quantity consumed might depend on the specific gravity of the gas.

9404 Q. Does not the illuminating power coincide with a certain relative specific gravity of the gas?

A. Not in all gas.

Q. The greater the illuminating power the less the specific gravity ordinarily?

A. It would not follow.

Q. Would the reverse be true?

A. I would have to get at the composition of the gas and go into the details of the manufacture of gas to answer that.

(By Mr. TREMAIN:)

Q. General Roome, inasmuch as Senator Robinson has asked you one question about meters I would like to ask you if it is not the fact that the longer a meter is in use the more apt it is to get out of order and register against the company?

A. The longer it is in use?

Q. The older it gets?

A. To register against the company; yes, sir.

Q. That is generally true, is it not?

A. Oh, yes, that has been my experience, gentlemen.

Q. A great many things might happen; I don't care to go into the subject of meters?

A. I don't care to volunteer any thing; I don't wish to be understood as doing so; but I believe there is no article of consumption sold in this community than the gas sold to the public that will——

Q. I did not ask any information on that subject; this committee has not inquired into that; it is the policy of the company to change the meters about how often, within five years?

A. Oh, yes, all changed.

Q. As a general thing within three years?

A. Yes, sir.

WILLIAM COMBE, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

9405 Examined by Mr. TREMAIN:

Q. What is your occupation?

A. Superintendent of the Fourteenth street station of the Consolidated Gas Company.

Q. That was formerly the East river Manhattan station?

A. Yes, sir.

Q. And you were also there at that time?

A. Yes, sir.

Q. Your profession is that of an engineer?

A. Of a superintendent; I don't claim to be an engineer.

Q. How long have you been in these works?

A. About thirty-one years.

Q. You are familiar with all the details of the work there, are you not?

A. Yes, sir.

Q. Well, what is the process by which the gas is put into the holder?

A. It is made in a retort and goes into the holder by its own pressure and the pumps.

Q. What pumps?

A. Root's and Jones' exhausters.

Q. How long have they been in use?

A. The Jones pump has been in use nearly thirty years.

Q. Thirty years?

A. Yes, sir; and the Root pump about two years.

Q. Are those the only ones that have ever been used?

A. Yes, sir, at that station, at their works.

Q. What special purpose do they preserve?

A. Take the pressure off the gas in the retort.

Q. What else do they do?

A. Put it into the gas holder.

Q. Suppose the pressure of the gas holder is uniform and is not changed, what is the effect, if any, that the pumps have on the gas?

A. No effect at all, but to put it into the gas holder.

Q. Well, if there is an outlet it would put the gas into the street mains, would it not?

9406 A. It has nothing to do with the street mains; that is regulated by another valve that is in our valve house.

Q. Any pump used there?

A. None at all.

Q. What regulates the valve?

A. The gas is regulated going out by the pressure of the gas holder.

Q. My question was, suppose the pressure was not regulated at all, but remained uniform, would not those pumps make the pressure more or less?

A. The pumps have no connection with that pipe at all; they have another in connection with the street.

Q. For forcing the gas into the holder?

A. Yes, sir.

Q. If the valve was open and the pressure uniform, that would force the gas into the mains?

A. The pressure of the gas holders does force the gas into the street mains; we have to change that every five months.

Q. My question was, assuming that, without opening and regulating, it remains uniform at the valve, and that the pressure on the holder was uniform, would it not be possible to force the gas through the holder into the main by that pump?

A. No, sir.

Q. Why not?

A. It pumps directly into the holder; it forces the gas into the holder.

Q. If the valve was open and the force continued it would have to force it out, would it not?

A. No, sir; I can very well explain what I mean; it pumps into the gas holder.

Q. If the top or bottom of the valve was open it would pump it through and out?

A. It would pump it so full it would blow out at the bottom from a separate valve there.

Q. Suppose they are open?

A. When they are open; they are only opened when they are required to be.

9407 Q. Is it not possible for you to answer my question, then? Suppose that the valves are open so that the gas may escape from the holder into the street arteries, and suppose that the pressure at the holder remains constant and uniform, and is not changed at all, and the gas pumped into such a holder thus opened, would not the gas escape by the arteries into the street, under those conditions?

A. Yes, sir.

Q. It would?

A. Yes, sir.

Q. Now, I ask you this question: Is it not possible so to force the gas by the pumps that you use, in order to pump it into the holder that with a uniform pressure at the holder, and the valve open, the gas can be pumped into the artery; that is possible, of course, is it not?

A. It is possible, yes; but at night, when we are using the full quantity of gas, all we make is pumped into the street and the surplus required comes from the gas holder.

Q. Comes from the gas holder?

A. Yes, sir.

(By Senator Murphy:)

Q. Then your theory of it is that you supply the meters, and if the supply of gas in the mains becomes exhausted, then you take it from the holder again to supply what is needed, is that it? Is the valve continually open to supply this?

A. Yes, sir.

Q. The gas is continually open from the holder to supply the mains?

A. Our holder is the surplus for the night, at night time; when there is full consumption going on, all that we make goes out into the street, and if the surplus required is more than we make it comes from the gas holders, which are stored in the day time.

(By Mr. Tremain:)

Q. Assuming the pressure of the holder to be constant and uniform, and the valve open, and constantly open, at what point, 9408 if any, is there a danger of explosion under those conditions?

A. None at all, that I am aware of.

Q. At this station you make coal gas?
A. Yes, sir.

JOHN H. SHERWOOD, recalled, testifies as follows:

Examined by Mr. TREMAIN:

Q. Mr. Sherwood, did you examine the schedule of lands, of lots, that were set forth in the schedules in evidence of the constituent companies entered into the Consolidated?
A. I have.
Q. What is your experience and sources of knowledge and information touching the values of lots in the city of New York?
A. I have been a dealer in real estate and an appraiser for large institutions, also for estates and individuals for the last thirty years.
Q. Name some of the institutions that you have acted in that capacity for at times?
A. Mutual Life, Van Buren estate, Columbia College, Board of Underwriters, and others where I had to let for friends; constantly giving opinions to parties upon real estate.
Q. Is it or not an ordinary thing in forming an opinion touching the value of real estate in the city of New York to estimate separately the value of land or lots as distinct from the structures upon them; is it or not a familiar thing to estimate the value of the land or lots?
A. In valuing for loans I also get at the value of the land and the buildings.

(By the CHAIRMAN:)

Q. Separately?
A. Separately.

(By Mr. TREMAIN:)

Q. And if you have familiarized yourself with the lots upon which the works and structures of the plant of the various constituent companies are located sufficiently to form an opinion, the committee would like to know whether the values, the total values, opposite the terms "real estate," "bulk heads," "piers," etc., set forth in the presumed schedules that are in evidence are or are not in excess of the fair market value of those lots; please state to the committee whether you can express an opinion on that subject? 9409
A. In this case I am called upon to give an opinion upon the value of lots that are stripped of every thing above the paving and the sidewalks.
Q. Take all and value it as improvements?
The CHAIRMAN: You give the value of it as land located where it is?
A. Yes, and occupied for manufacturing gas.
Q. Have you an opinion on that subject?
A. I have, yes, sir.
Q. Please state to the committee whether in your opinion the values upon the schedules are or are not fairly stated there?
A. I think they are excessive and fictitious.

Q. Well, please state more of your information and to what extent they are so excessive?

A. They are estimated beyond what land property could be sold for at this time. It is notorious that wherever gas works are located that it cheapens and is a blight upon the property; the gas property itself necessarily remains cheap property and it cheapens the surrounding property, and in no section where gas plants, to my knowledge, are located do we find high priced property.

Q. I don't think that opinion responds to more than half my question. To what extent in your opinion are these values excessive?

A. I shall say that they were from twenty to thirty-three and a half per cent., and in some few cases more than that beyond their present value.

9410 Q. By present value do you refer to the value in 1885; if you do I understand this question to relate to the period of 1884?

A. By present value I wish to be understood that it was what I could say their present value would be, stripped of every personality that they have, estimated as personal property, just the bare lots, as I am requested to give an estimate.

Q. Would it have been less or more in the fall of 1884 than now?

A. Not that property; property generally I could say in the City of New York has appreciated in the last ten or twelve months; property is considered on the up-grade now in the city.

Q. You base your opinion on the present value?

A. I base my opinion from the values that were given at the time of the consolidation, the figures that I had here.

(By the CHAIRMAN:)

Q. Are your estimates based upon the value of to-day or the fall of 1884?

A. The values that I take in the schedules submitted to me.

Q. At what time of valuation, now or then?

A. When these statistics were made, the data there.

(By Mr. TREMAIN:)

Q. The sections of the city in which these various works appear by the schedules to be located are very well known, are they not?

A. Yes, sir.

Q. Persons at all familiar with real estate are likely to be well informed as to their fair values, are they not, do you think?

A. Yes, sir; I think that is a matter that could easily be got at.

Q. Have you been engaged in buying and selling vacant lots in the city?

A. Yes, sir, and owned a great many of them, almost daily, I think, from its very progress.

Q. If it were known that vacant lots were to be used for gas would not that put up the price for those lots, would they not have
9411 to pay more for that purpose than any other?

A. No, sir; if fifty companies, gas companies, were to start business in the city of New York to-morrow—perhaps that would be an excessive estimate—I say ten companies, they would have no difficulty in finding cheaper property to locate their plant upon; the supply of that is greater than that of any other kind of property.

Q. I understand you to say it cheapens all property around it?

A. Yes, it does; I believe no one will dispute that.

Q. Would it not put up the price of lots for that purpose?

A. I can answer by saying, if the gas companies would pull up stakes and go somewhere else their own property would sell for more and the surrounding property would be more valuable.

(By Senator MURPHY:)

Q. Then you mean to say if the gas companies removed their buildings from the present location that real estate would be of more value than it is now?

A. It would sell for a higher price than it would sell for now.

(By Mr. TREMAIN:)

Q. Would those particular lots sell for more?

A. Well, I don't know how to answer that; perhaps they would sell for more if the gas works were off from it. I will say this much, that if there was a restriction that there should be no gas manufactured on that property it would sell for more than with that restriction taken off.

(By Senator MURPHY:)

Q. What is the value of these properties, how do they compare with the values in the tax office?

A. I have not made that comparison, Senator.

(By Mr. TREMAIN:)

Q. Mr. Sherwood, do you know any thing about what is a proper capital, a fair capital to produce a gas plant of a given 9412 capacity, have you ever had any practical experience or any kind upon that subject in the usual course of business; if you have, the committee would like to have it?

A. I have no practical experience except from paying bills, gas bills, but from information I have obtained this last year, and what I consider very reliable information, in regard to the manufacturing and selling of gas.

Q. Well, if you can give the committee any light on that subject, I have no doubt they would be glad of it?

A. I am assured by reliable gas manufacturers who make it their business to set up works, that if they can have the right to come into the city and set up works and sell gas here, that they can supply it, to begin with, for $1.25, and will do so; and I have not the least doubt that any required capital for that purpose can be obtained.

(By Senator MURPHY:)

Q. Can you give us the names of those gentlemen?

A. I could not without giving you the names of parties who are willing to come here and start gas works; they are personal friends of mine, some of them, and perhaps some of them——

Q. My reason for asking the question is simply this—and all your evidence goes on the record—you stated what you know of several parties who are willing to come into New York, if they have the right of way, to manufacture gas for a certain price?

A. I will give you better reasons, Senator; some of them are interested in the present gas companies.

Q. Now, Mr. Sherwood, there is another clause in your answer that perhaps ought to be explained; what do you mean when you say if they had the right of franchise?

A. I mean to say that no man to-day that does not hold a charter, unless gas companies, can lay an inch of pipe in the city of
9413 New York without getting the consent of two-thirds of the population; could not do it if he furnished gas for ten cents a thousand feet.

Q. You think that that would retard the gentlemen to whom you referred in your evidence would establish gas companies?

A. I have no more doubt of it than I have that you will eat your dinner to-day.

Q. Do you refer to the law of 1883, known as the Thirty-fifth Act?

A. Yes, sir; I think that is the act that shuts out any other companies except the present ones from making or selling gas, and I characterize that as the most infamous piece of legislation that was ever enacted in the State of New York.

Q. Suppose there should be four or five more companies or twenty?

A. If I ever ask you to pass a charter for a gas company I will be willing to have a restricting clause put in prohibiting the company from charging more than $1.25 a thousand feet for gas, and also prohibiting among the shareholders a distribution of more than eight per cent. a year in dividends, which is enough for any reasonable man.

(By the Chairman:)

Q. Eight per cent. on what?

A. On the money actually put in.

(By Senator Robinson:)

Q. Are not the streets nearly full of pipes now?

A. No, sir; there is always room for more in the city of New York; there is room enough to put down a great deal more plant than we have got here; they may not be laid with precise regularity; pipes are put down in the streets very much like a string of country sausages, you know.

(By Senator Murphy:)

Q. Have you ever had any conversation with any of the gas manufacturers in relation to the price of gas?

9414 A. Yes, sir; I met a large manufacturer, one of the best informed manufacturers in this city, on last Saturday evening at the club, and spent most of the evening with him.

Q. That is what I am getting at. Have you and any other members of the Gas Consumers' Association, met with any like number of gas manufacturers in any hotel or room in this county, in this city, for the purpose of talking over the price of gas?

A. Yes, sir.

Q. I don't want to ask the names of the gentlemen who were present—will you give the committee the conversation, the substance of it?

A. Now, must I talk right out in meeting; the meeting was in a measure a private one; it is a question whether it would be proper for me to do so; so far as my part of the conversation is concerned, I would be glad for the committee to know it.

Q. If the subject was a private conversation, the committee has no power to exact it, but if it is any thing that ought to be on the record of this investigation, I would like to hear it.

Mr. Tremain: I don't think it ought to go on the record until the committee has heard it.

The Chairman: I concur in that. The committee has no interest except as the temporary representatives of the public in this matter; we have no friends, no enemies.

Senator Murphy: I will not push the question for the present.

The Witness: I will say however, that the manufacturers and consumers were not able to agree on the subject of dividends to be paid by the gas companies. The consumers thought that the shareholders were unreasonable in wanting so large dividends, and the shareholders who had been educated up to receiving large
9415 dividends, thought that the consumers were unreasonable in wanting the dividends reduced so low as seven or eight per cent.

The Chairman: It is always unreasonable to expect anything less than what you can get.

A. Certainly, sir; I will say right here, if I can succeed in having gas sold in the city of New York by the present gas companies at what it ought to be sold for, for what they are selling it in some other cities for, I will step right out of the way and let the present gas companies occupy the ground as long as I live. I don't want to make gas except in self defense.

(By the Chairman:)

Q. Now, Mr. Sherwood, that the subject has been broached, if you have no objection, I would like to ask this question, whether, as a large property owner and a man familiar with the values of investments, is there in your judgment any doubt that abundant capital to supply New York city with gas can be immediately secured, or would be proffered if a dividend upon it should be limited to eight per cent. on the actual investment, and the price of gas regulated by law or the public authorities?

A. And a charter back of that that was durable, will you say?

Q. I assumed that in my question?

A. No, sir; not at all; there are millions here that are put into investments that pay from four to eight per cent.; millions of dollars.

Q. I was going to ask you about that; would large companies making gas be secure in a dividend in gas of legal interest, or even four per cent.?

A. It is one of the grossest wrongs, Senator, that has even been put upon the people of the city of New York, the enormous 9416 amounts of money that have been wrung out of the people by the present gas monopoly.

Q. Have you any reason to doubt that if a gas company were formed with a nominal capital exactly equal to its actual capital doing a fair business with the people, have you any doubt whatever but what a dividend of five per cent. would be a reasonably remunerative profit upon the investment?

A. If investors knew it was permanent, it would not.

Q. You refer, in a large measure, to the fictitious capital and the manner in which the business is conducted?

A. Mr. Senator, the public in the city of New York know but very little about the works of these companies—these gas companies; it has been manipulated and held by a few favored old substantial people of this city; if the public knew of the profits that have been made out of them, I don't think these persons would ever have been suffered to accumulate profits that way; there is a measure of bad the public know very little about.

(By Senator MURPHY:)

Q. What system would you recommend?

A. I would recommend you to open the streets of the city of New York to any party or to any person who would, under proper legal restrictions, supply gas to the city of New York at any time for the purpose of making better gas or selling it cheaper than the persons who keep up the gas now; I would recommend that.

Q. Would that be done by the common council?

A. By the common council or by the legislature; let us have eight per cent. dividend, and let the people have the gas at cost after that.

(By Mr. TREMAIN:)

Q. Would publicity of accounts have any thing to do with it?

A. I would have the whole management as open as the noonday.

9417 (By Senator ROBINSON:)

Q. Mr. Sherwood, are there any other large corporations based on that principle, the dividend being limited to eight per cent.?

A. Well, yes; I think our savings banks.

Q. The Mutual Insurance Company limit in that way?

A. That is mutual; we don't take a penny for ourselves; let the gas companies adopt the system of the Mutual Insurance Company, nobody will ever make another complaint.

(By the CHAIRMAN:)

Q. Do you not think that corporations that derive their privileges from the public should be under the restrictions and under the eye of the public?

A. I believe any institution or any body of men who are receiving privileges that are likely to be avaricious and overstepping the bounds of reason ought at all times to be restricted by legal enactments; now, when you come to take an article of gas and contrast it with a bank or any thing of that kind it is an entirely different thing; you can buy your gas nowhere else; you can buy your Croton water nowhere else; but you can deposit in any American bank and go to any store.

Q. You have had some seven or eight different companies that were opposed to each other, were they not?

A. It was not a monopoly at all until they made a combination; then it became a monopoly, I never opened my mouth, Mr. Senator, until that law was passed.

Q. During the time you had seven or eight different companies was not gas as high as it is now?

A. Yes, sir; sometimes as high and sometimes higher.

Q. So that competition didn't cheapen the price of gas?

A. It did at one time, and then they bought up the competitors, and now there is no competition; within a few years inventors and discoverers have enabled them to make gas with double the illuminating power at about less than half the cost; gas is made to-day for sixty and seventy cents, but they don't sell it for that; it is made in Jersey City and sold for $1.25; the largest gas companies in Chicago brought the price down to $1 and they never want to see gas higher than that in that city. 9418

(By the CHAIRMAN:)

Q. Is it not true that competition alone is not enough to remove the evil complained of; you have got to have some regulation as to capital and some other matters?

A. Yes, sir; these same companies were competitors some few years ago at seventy-five cents, and by a pooling arrangement they brought it up to $2.25; they were no longer competitors then; you take cities in Germany, you take the place where Krupp makes his guns, those people are making gas there to-day at a cost of sixteen cents; of course the conditions in Germany may be very different from what they are here; labor is cheaper, and we pay better wages.

W. W. SHARPE is recalled, and testifies as follows:

Examined by Mr. TREMAIN:

Q. Referring to your bill-book at pages 386 and 387, a copy of which is before you, and to which the witness who has made that copy is to be sworn, did you or your firm pay or incur the several amounts to the several papers therein named and for which you rendered a bill to the Consolidated Gas-light Company; did you ever pay or incur those amounts, less the commissions?

A. I don't know; I don't know that I rendered a bill to the Consolidated Company; sometimes we do advertising for other agents and we divide the commissions with them and have nothing to do with making the contract with the advertiser. 9419

Q. Assuming that may be so, is it not, however, the fact that the entries in your books that are made in the usual and ordinary course of business are true entries and represent actual transactions?

A. I think so.

Q. Your books do not indicate that a payment was not made or an obligation not incurred when they state the contrary, do they?

A. No, I think not.

Q. You think your books do give a true record of your business so far as they give any?

A. Yes, sir.

Q. Who is the man in your establishment who has personal knowledge of the transactions or of any part of it to which this bill of May 11, 1885, relates?

A. I can't say.

Q. What is your cashier's name? He is bookkeeper too?

A. Yes, sir.

Adjourned to 3.30 o'clock P. M.

HENRY C. THOMAS, a witness called by the counsel to the committee, being duly sworn, testifies as follows:

Examined by Mr. TREMAIN:

Q. You are cashier for W. W. Sharpe & Co., are you not?

A. I am, sir.

Q. You remember a transaction in April by which an advertisement was to be sent through your firm to various newspapers in the city of New York, which newspapers are named in a bill in your bill-book, pages 386 and 387, under date of May 11, 1885?

A. Yes, sir, I conducted the transaction.

Q. You conducted the transaction?

A. Yes, sir.

9420 Q. Were the amounts that are set opposite the names of those different newspapers paid in the usual course of business to those newspapers, less the commissions?

A. Yes, sir, in some cases in making estimates we have to be a little higher in price; I could not say those are the exact prices; there may have been a little variance, higher or lower.

Q. Would you know at the end of the month when bills come in?

A. Yes, sir.

Q. And so far as you know the bills in the usual and regular course of business have come in at the end of the month and been paid or allowed in this particular advertisement?

A. Yes, sir, I am quite sure, but I would not say positively.

Q. Give us the amount of any that came in?

A. Yes, sir, we have a statement made up once a month.

Q. When they come in you are under obligations to pay them?

A. Yes, sir.

Q. Was any advertisement charged for by those papers designated?

A. Yes, sir.

Q. You keep a record of them?

A. Yes, sir.

Q. Have you to check off the advertisements that appear?

A. Yes, sir.

Q. You receive the papers and check them off?

A. Yes, sir.

Q. And this bill was paid as rendered, was it not?

A. Yes, sir, paid as rendered.

Q. What was the name of the man who conducted the transaction with you?

A. Well, that is a thing I can't swear to exactly; the name was Bange or Banze or something of the kind.

Q. A commission was allowed him?

A. Yes, sir, a very small commission.

Q. A commission out of your commission?

A. Yes, sir, probably $10, or may be a little over that.

9421 Q. There seems to be a charge also for an advertisement in the *Commercial Advertiser,* May 17, 1885; you remember about that?

A. Yes, sir; that was brought in by the same party but at a different time. I never saw him before but have seen him again since on the street; that is the only way I have of finding him.

Q. Do you know his business?

A. He told me he was a reporter on some newspaper.

December 28, 1885.

Meeting of the senate committee.

Present: Senators Gilbert and Murphy.

Witness, Dr. W. M. Jackson:

By Mr. Tremain:

Q. Doctor, you are connected with the——

A. I am president of the Gas Consumers' Benefit Company of the United States.

Q. Have you had experience in matters pertaining to light, heat and power, in a scientific way?

A. Yes, sir, I believe I am considered an expert in that respect.

Q. Kindly tell the committee what your experience in matters of that nature has been?

A. Well, sir, there has been a great deal of complaint from consumers regarding artificial light and in my judgment the complaints are largely due to the ignorance of the consumers themselves about gas; a total misunderstanding of the gas system and of the nature of gas.

Q. Have you made a scientific study for some years of the nature of the product of gas for manufacturing purposes, its method of production, distribution and consumption?

A. Yes, sir.

Q. Please tell the committee in what way your experience on these subjects has been gained?

9422 A. Well, it has been gained principally by experimental work on my own part; my investigation in the production and maintenance, and operation of gas works in every state in the United States; building works myself for the manufacture and delivering of gas and going into the works and making gas myself and making scientific tests of — photometrically and otherwise.

Q. So that you have studied the matter in a scientific and tested in an entirely practical sense?

A. Yes.

Q. What cities does this cover?

A. Providence, Boston and New London Gas Works; I built the latter for water gas nearly twelve years ago.

Q. Is your profession that of gas engineer?

A. No, not particularly; I profess to be scientific in this special department.

Q. Did I understand you to say that you were president of the Gas Consumers' Benefit Company of the United States?

A. Yes, sir, I am.

Q. In case that statement might mislead, as there is a Gas Consumers' Association, what is the object of your company?

A. To acquire and offer to the public all things which may cheapen the cost of artificial and effective illumination.

Q. You stated a moment ago there were many complaints by consumers regarding artificial light, do you allude to your general experience in other States or only to New York city?

A. In all cities where I have been brought in contact with the gas question I found the complaint to be universal, not only in New York city but in other cities.

Q. Well doctor from what cause or causes in your experience did such complaints proceed?

A. The main feature as I understand it is excessive pressure at the point of ignition; improper burners; the distribution of gas of unscientific composition; of varied and too high candle power; 9423 ignorance of the public concerning gas meters and general apparatus involved; illogical press comments; things accepted by custom as facts which have no truthful origin. A total misunderstanding of the gas question. A fostering desire to find fault, with no fundamental information from which to draw reasonable and just conclusions. Effects of long accepted, fictitious notions, creating morbid public denunciation of everything connected with gas. Improper regard for the rights of the people by gas companies, their selfishness placed predominant in fact of the franchise, the gift of the people.

These causes, the heads of subjects may be divided and subdivided into particular considerations until they become excessively numerous. Brevity and clearness therefore, in the statement of causes, must be incompatible with the rough conception of all points involved. To understand the gas system embracing its relation to kindred branches of industry, from the moment the pick breaks ground for the erection of works through all its ramifications to a truthful understanding of all modern improvements in chemistry, philosophy, dynamics, mechanics and mercantile diplomacy one must have made the subject a thorough study, and cannot convey his information in connected order unless he resorts to systematic preparation. I know of no subject which combines more humbug in the same receptacle than illuminating gas. There are a thousand

and one processes for its manufacture, each the best. The apparatus for its consumption, burners, stoves and engines may be counted by thousands; to eliminate the true from the false requires a thorough knowledge of the subject; each misrepresented ap- 9424 pliance pushed into popular favor, soon clouds the confidence of consumers and renders so much more difficult the introduction of any thing meritorious—we have thus to deal with an apparently inextricable mass of incongruous matter.

Q. General Roome, who was called here, volunteered an opinion—I do not remember that he was expressly asked upon the subject in reference to the veritability of meters. Now if your experience is of a character that enables you as a scientific and practical man in expressing an opinion upon that subject, the committee would like to have your opinion as to whether gas meters measure and record gas correctly, and if not whether there — any that do?

A. I have had large experience with gas meters; I have had occasion to use all kinds that have been manufactured, both American and foreign; I have tested them in all conditions of temperatures and tested at random those in general use and I draw this conclusion: I know of no instrument in such universal use, which can favorably compare with a gas meter for faithful work—at the factory before it is permitted to leave, it is adjusted with the utmost care and operates as accurately at the temperature of adjustment as a chronometer. Of course it must vary in general use as temperature contracts or expands a cubic foot, but since it is usually located in a cool place, the cellar generally, we may infer that its action will be as fair for the consumer as the manufacturer of gas—take it the year around its record is correct; a gas meter can no more move its machinery without a flame of gas through its substitute cylinders and valves, than can a steam engine with no steam; the dial hands of a meter are connected to the actuating mechanism by positive 9425 gearing, and they cannot move unless the engine be put in motion; the motion cannot take place unless the gas passes in or out of the meter; the metrical devise may be injured in such manner that gas may pass through without actuating the engine, in which case the index is silent and the consumer receives his gas gratuitously; but cannot be so broken that no gas will pass, and the index continue to record; to be plain, the indices of meters mark consumption only when gas passes, and if a record be made upon the dial you may be sure gas has gone somewhere, either consumed by burning or lost by leakage in your pipes; I will not say that all meters in use record correctly, but will assert that I believe if all the meters in this city were tested, the result would show against the Gas Company an average loss, which of course gives the consumer the advantage; meters may be incorrect from improper adjustment after being repaired, or may be read wrong by the indexer, but I firmly believe the meter to be more than fair toward the public, taken as a whole.

By Senator GILBERT:

Q. Is there no allowance——
(Witness interrupting:) No, sir.

Q. You have named improper adjustment as a possible case of meters recording incorrectly, is it not true that the index of the meter may be made to run faster or slower as the gas passes out of the consumer's pipes, according as the radius that is attached to the diaphragm may be lengthened or shortened as the pendulum of a clock?

A. Yes, sir.

Q. So that by lengthening that radius, as the pendulum of a clock is lengthened, the meter may be made to run too slow?

A. Yes, sir.

9426 Q. And by shortening it as the pendulum of a clock is shortened, the meter may be made to run too fast?

A. Yes; that is so.

Q. And that effect may be produced, may it not, while the gas that is passing through the meter is consumed?

A. Yes, sir.

Q. And your evidence as just delivered, is based is it not, upon the theory that the radius is perfectly adjusted?

A. Yes.

Q. Is that practicable?

A. Yes; the meter is adjusted by means of a power which indicates the exact number of cubic inches, and the adjustment continues until the index of the meter and the delivered gas measured by the power correspond; this is exact at uniform temperatures.

Q. Is it not practicable without disturbing the seal to change that adjustment?

A. It would be a very difficult thing to do; you are obliged to take the whole top of the meter off to make the adjustment properly.

Q. Can that be done without disturbing the State seal upon the top of the cover?

A. It might be done; it would show upon inspection to have been done; you can cut a hole through the top of the meter, a small hole, and cut up a square, then reach down with a pair of forceps and change the adjustment, turn it over, solder and paint it, and no one would notice it upon superficial examination.

Q. When the meter is repaired, is it not necessary to get at the nut to make that adjustment?

A It ought to be always.

Q. And in so doing it can be made to run either fast or slow?

A. Yes.

Q. There is no doubt about that, is there?

A. No; that is what Dr. Chandler said in his testimony which is before you.

9427 Q. Will not that meter register so long as any kind of gas passes through it and works the dial hand?

A. Yes, sir.

Q. What do you mean when you state that gas is always measured which went in or went out?

A. The meter is constructed virtually upon the same principle as a low-pressure engine, and gas must pass through the mechanism to actuate it; if there is a hole through the mechanism the gas can pass through without acting.

Q. Any kind of gas will operate through the mechanism, will it not?

A. Yes, sir.

Q. Whether it is illuminating or not?

A. Yes.

Q. Or water?

A. Yes.

Q. Or air?

A. Yes.

Q. Is it not then true that this mechanism will register as though gas was consumed when it passes through, if it does pass through?

A. Yes; it will register a cubic inch as correctly as a cubic foot of gas.

Q. Is there any way of telling by the meter what has passed through the meter, whether air, gas or water?

A. No, sir.

Q. You have stated that one cause of complaint by the consumers is excessive pressure at the point of ignition; will you please explain this?

A. Illuminating gas, whether distilled from coal or other gas-yielding hydro-carbon, or made by decomposing water by means of incandescent carbon and subsequently carburetting the compound, obeys a common law when brought in open contact with the atmosphere and ignited. This common law provides that combustion is the prime factor in the production of light, and to effect combustion the gas must be inflammable and explosive when mixed with its proper co-equivalent of oxygen (an ingredient of air); therefore, all flames are but a series of minute explosions, so rapidly following each other as to present the spectacle of continuity. 9428 These explosions are created by the chemical affinity of oxygen and hydrogen, the former in the air, the latter in the gas; they await only the touch of fire to seize upon each other; the friction created by this rapid union maintains and continues the process, destroying the nature of component parts and sending them into the atmosphere as products of combustion. Meanwhile, the floating or hypothetical carbon is rendered incandescent by the intense heat and light necessarily resulting. Nothing material is lost in chemistry, simply changed to another form or state. Thus if we weigh a cubic foot of gas and burn the same, collecting the products of combustion, we shall find we have a new group of material to deal with, but the same old elements; corresponding in weight exactly with the original quantity of gas plus the weight of air it took to consume the cubic foot; if our combustion has been perfect, we should have light and heat in true proportions; but if imperfect we meet with a loss which, though not material, properly speaking, affects us as such, and so almost contradicts the theory of nothing lost; this union of oxygen with hydrogen involves the chemical change of other ingredients concerned, for instance, hypothetical carbon bisulphide of carbon; sulphuretted hydrogen; carbonic oxide, carbonic acid, component

parts of most all illuminating gases and nitrogen an ingredient of air; the hypothetical carbon is converted into carbonic acid; all compounds of oxygen with carbon in the gas such as carbonic oxide and carbonic acid are changed into carbonic acid and aqueous vapor while sulphur is united with oxygen to create a sulphurous
9429 acid; now if the combustion be partial only, the process is illegal, and its issue a reflection upon our intelligence.

By Senator MURPHY (interrupting):

Q. Please state what that means; you have just stated that it is a reflection upon our intelligence?

A. We have had gas long enough in use to have been enabled by this time to supply mechanical means for its proper combustion—it is our fault if we do not so consume it.

Q. Are there no patents in existence now for consuming gas as you have just mentioned?

A. Yes; hundreds of them.

Q. But they are not in use by any of the companies, are they?

A. No, sir; most of them are utterly impracticable.

(By Senator GILBERT:)

Q. That is to say, there has nothing been found to serve the purpose?

A. No; nothing but an imperfect kind. When a flame smokes, the carbon is not decomposed and lamp black is the result, this being a common fault with gases containing a large percentage of hypothetical carbon and indicating a high candle power. Such gases are generally improperly consumed by any common burner which a consumer may chance to purchase. They may, however, be perfectly handled, provided an expert selects the device for such manipulation; as experts are not always at hand, the results give rise to complaint. Gases smoke as a rule, because the burner exposes too much gas under too low a pressure for the grasping power of the atmosphere, the atmosphere laboring under more or less advantage, according to whether it is still or in motion. It seems to me that a gas of not more than twenty candle power is the only one which can be used with general satisfaction to producer and consumer.
9430 Pressure exerts a particularly active influence upon all gases, relative to combustion. It may be concluded that perfect combustion requires a certain quantity of gas, relative to a certain quantity of air, and the relative quantities depend upon the composition of the gas—therefore, a gas publicly distributed should be as nearly uniform in character as possible. Next we wish to consume this gas in such a manner that the products of combustion will be natural, thus obtaining the full photometrical value and preventing unnecessary pollution of the atmosphere of our apartments. It has been determined by repeated experiments that illuminating gas may be forced through a given size aperture with such velocity that its carbon fails to become incandescent or even luminous, thus we have the example presented, a twenty candle gas distributed and the possibility present of so consuming such a gas as to deprive it of its entire light.

By General TREMAIN:

Q. Is that practicable?

A. Yes; I can demonstrate it.

Q. In other words you can force it through burners which would give a full light, so that it would hardly give any light at all?

A. Yes, sir; it takes a high pressure to deprive it of its entire light.

Q. Can that effect be produced through any length of pipes, or what length?

A. It makes no difference whether the distance is ten feet or ten thousand.

By Senator GILBERT:

Q. Is that statement relatively true?

A. Yes; now just in as much as there may be a point of high pressure to burn gas at the place of ignition, which annihilates its 9431 luminosity, so there is a low pressure at which we may secure the full candle power.

Q. Now the problem is to have the pressure such that the gas, as it passes through, shall all be consumed and give an even continual light; is that it?

A. That is the point I am making; the light being lost proportionally as the pressure varies between the two standards. I think I am correct in the statement; all things considered that fully one-half of all the light indicated by photometrical test, all over the world, is lost by consuming the gas at improper pressure at the point of ignition and in leakages after the gas passes the service meter. We have by this means a much larger quantity of material being converted into gas than required for the amount of light we receive.

(By General TREMAIN:)

Q. When you refer to the service meter, you mean the meter in the house?

A. Yes.

Q. On what do you base that statement?

A. I base it upon the opinion of most all practical gas engineers that I have talked with on the subject; they put the loss of light as high as fifty per cent. with imperfect combustion; I add leakage of service pipes to it.

(By Senator GILBERT:)

Q. In other words, one-half of the gas is practically lost?

A. It is worse than lost; the atmosphere is polluted by the large amount of gas as well as there being a financial loss.

Q. Then there is a financial loss and harm to physical health generally?

A. Yes, it is a fact, and how far it may be concerned in producing epidemic diseases which are prevalent in gas consuming cities, no one can tell, but it is fair to presume that in a room where there are four or five burners there is an atmospheric impoverishment of fifty per cent. by imperfect combustion.

9432 Q. Then it is not only a financial loss but a sanitary one?
A. Yes.

(By General TREMAIN:)

Q. You have stated right here something about financial loss; is it not true that there is really no financial loss to the gas company the loss you have just stated, the consumer loses by the index at the meter?

A. There is no financial loss to the consumer except so far as the doctor's bill is concerned. The gas companies are paid for all the gas that passes through the meter while the consumer receives but one half of the light which is allowed him, besides a loss to his physical health.

Q. It is not true then that there is a larger quantity of material converted into gas than is requisite for the quantity of light we receive?

A. Yes, about double; they use about two tons of coal at the works when they should use one.

Q. That is if it is coal gas?

A. Yes, certainly.

Q. There is a loss by imperfect combustion?

A. Yes.

Q. Explain that loss, please?

A. We have by this means a much larger quantity of materials being converted into gas than required for the amount of light we receive. Now if so large an amount of light is lost by imperfect combustion we must consume as much more gas to secure the illumination to which we are entitled, burning so much more obliges us to rob the atmosphere of an equivalent proportion of oxygen; excessive quantity of products of imperfect combustion, coupled with deterioration of the air by taking from it its oxygen, renders the air which we breathe dangerously obnoxious; imperfect combustion is damaging alike to eyes, health and pocketbook; a violation of natural law, and wanton waste of gas-producing material, a losing game at both ends of the dilemma; careful experiment
9433 has proved that for a twenty candle gas the open burner should expose a flat flame as nearly circular in shape as possible, and the gas emerge at the top at about two-tenths of an inch water pressure (the power the gas exerts to hold a column of water two-tenths of an inch high). For a gas of thirty-candle power three-tenths of an inch may be required, and so the higher the candle power the greater must be the pressure to prevent smoke, and drive the gas through narrow orifices (which are required for high-candle power); fine orifices are undesirable, because liable to stricture; I can offer no argument against an eighteen or twenty-candle gas; experience teaches as it is best and most satisfactory all around, although the great bulk of distributed gas in New York is higher than my standard, and thus might be termed a much superior gas compared with that furnished other cities, still its distribution is attended by complaints of smoke from consumers, and rendered somewhat fractious on cold nights by condensation and other inconveniences.

Efforts have been made to burn super-heated gas, and extravagant claims have been laid to superiority. A series of experiments conducted by me several years ago demonstrated, to my mind, the fallacy of this system, since you cannot superheat without decomposing the gas and precipitating its illuminants, thus losing instead of gaining light, besides filling your conducting pipes with coke and choking the passage of the gas. I have spoken somewhat carefully of pressure, limiting my statement particularly to regulation at the point of ignition. Reasons present themselves to my mind for this exclusiveness.

9434 Q. What is the reason that you have limited your observation to the pressure at the point of ignition and what relation has that pressure to the pressure actually exerted at the holder or immediately preceding the distribution of gas?

A. Because I believe it to be semi-effective only to govern the pressure at remote points from the flame; the place to control pressure is at the point of ignition.

By Senator Gilbert:

Q. And the place where the pressure is created, is where?

A. At the holder, but the place to control pressure is at the point of ignition, and the device should be automatic, changing to suit the varying pressure caused by unequal calls upon the mains for more or less supply, as burners are lighted or extinguished.

By Mr. Tremain:

Q. Perhaps if there was an automatic device at the point of ignition, the consumer would not receive the benefit of that, because the gas at the point of ignition would have already passed through the meter?

A. That would not make any difference if the gas passed through the meter and the device was located at the point of ignition, providing the gas was under a certain pressure, say two-tenths of an inch and therefore instead of burning double the quantity of gas which was the case before, he would burn only the quantity which would pass under that pressure of two-tenths of an inch through the meter, and not register the gas which had not passed.

Q. Then your theory is that a machine of that sort is for preventing that gas from causing to the point of ignition at such a rapid rate as at present?

A. No fixed openings as is the case with check burners, can 9435 never suffice to bring about proper combustion, they serve as additional stop cocks and are superfluous in view of the fact that one gas cock already exists by which you can check the flow of gas as effectively as with the additional one in the burner; the varying pressure of gas in the pipe is a necessity from the nature of the supply and demand, also a necessity from the fact that gas is specifically lighter than the atmosphere and increases its pressure by rising, diminishing by falling but independent of the initial pressure from the gas holder at the works.

Q. Something has been stated about regulating that pressure immediately after the gas passes out of the meter by some appliance?

A. Yes, gas governors; they are used for the purpose of producing automatic regulation of pressure.

Q. And do they not have that effect?

A. Not specially; there are many devices of this character, all operating upon the same principle, varying just enough in mechanical construction to entitle them to limited separate patents; some employ flexible diaphragms, others check valves, and many separate miniature gas holders floating in dead oil, mercury, glycerine and other fluid seals; they serve a fair purpose in the absence of a better thing; the prime objectionable features exist in common defects; the principle on which they operate is founded upon the power of the gas to flex the diaphragm or lift the holder against the atmospheric pressure, and thus draw into position a valve which partially shuts off the supply of gas; when the burners are not in use the gas forces the valve to its seat where it is liable to adhere, owing to a sticky deposit lodged on the face of the valve by the foul nature of the gas; this tendency varying in severity with the character of the gas employed; again these devices are all dangerous,
since they are obliged to have an opening in their upper
9436 chambers above the diaphragm or holder, for the free ingress and egress of air, thus there is nothing between us,
and a fatal leak of gas into our cellars save the diaphragm or the fluid seal; this might be obviated by connecting the upper chamber by a pipe leading out of doors; I have never seen it done, but offer the suggestion gratuitously; now, presuming we have our governor duly connected with an out-of-doors pipe, and located upon such a clean gas that the valve will not stick, and weighted to produce a pressure of say six-tenths of an inch; we cannot set it at a lower standard than this, because our pipes would rarely furnish us sufficient quantity of gas at a less pressure; now the unequal demand upon pipe branches will vary the pressure after the gas passes as will also its tendency to increased pressure upon rising, or diminished upon falling; therefore it does not regulate properly or effectively; again, with the growing demand for gas for heating, cooking and mechanical purposes, we require adequate supply and high pressure; if we cut down the pressure, by a governor, all over our pipes, we are deprived of the convenience of our gas stoves; there seems to be but one way out of the difficulty; automatically regulate the pressure at the point of ignition by some inexpensive device which has no movable parts in contact and will stand the test of time without fouling and becoming inoperative, then the pressure on street mains and pipes will make no difference to our attaining the full value of the gas for illuminating purposes and *we* shall be cocked and primed for the acceptance of proper devices for heating, cooking and other purposes. If the ideal device above pro-
pounded should be forthcoming, we shall not only insure
9437 perfect light, better air and comfortable satisfaction, but in
as much as the pressure at the point of ignition is not to
vary, controlled by the automaton. A one foot burner will burn

one foot, and a five, five feet, so we shall have some means of knowing what we are consuming, whereas now a one foot may burn six feet and a five twenty, according to variation of pressure.

Q. Practically, the pressure is not regulated, is it?

A. It is not regulated. The gas companies furnish a pressure sufficient to supply *its* consumers with the amount of gas they require, beyond that there is no regulation from the holder.

Q. How is that pressure regulated by the gas companies?

A. By the weight of the holder.

Q. Is that not capable of being regulated if required?

A. No, sir.

Q. That weight?

A. It would be impossible to regulate the pressure at the holder in proportion to the demand from the people, because the demand is very variable; it is sometimes more, sometimes less.

Q. Is the pressure constant and uniform?

A. Yes, sir; in most large cities where they use gas for mechanical and heating purposes they maintain a full pressure all the time, although in some cases the pressure is reduced just in proportion as the people are consuming it, and increased when necessary. I will give a case of illustration in regard to pressure. A gas holder distributing gas with a six inch pressure and carrying it through a main six miles long from that city to a neighboring town, would furnish in that neighboring town but one-inch with its six-inch pressure at the holder.

Q. How do you calculate that?

9438 A. It depends upon the density of the gas. It is fair for us to presume that a six-inch pipe one mile long would be reduced in delivering capacity ninety-five per cent. in that distance.

Q. Is that true as a general supposition?

A. Yes, sir, it is.

Q. Is it not true that a large amount of gas is consumed at a distance greater than six miles from the works?

A. Yes, sir.

Q. Measuring by the course of the mains of course?

A. Yes.

Q. In such a case is it practicable to apply an appropriate pressure at a holder?

A. It is a very difficult thing to do; they have to have an excessively high pressure in order to overcome any difficulties that may arise in the working of the pipes; all gas companies are obliged, in fact it is an absolute necessity for them to supply its consumers with a very high pressure.

Q. Of what practicable purpose are the registers of pressure you will find in the engineers' reports of gas works, a report of the New York Company, for instance, the report regarding the register of pressure at the holder gauge; of what practicable value is that record?

A. It is of no practicable value because the pressure indicated by that gauge might be very different than the result indicated in your department. This pressure may be regulated according to the size of the mains, or according to the distance or length of the mains.

Q. As a matter of fact, how do gas companies determine what the pressure shall be at the holder when it is registered in the pressure gauge?

A. Generally at all remote points, they determine what it is there; if the consumers at remote points complain that their pressure is too low, the company increases the pressure for their benefit; but it is generally at remote points where it is determined.

9439 By Senator **Gilbert**:

Q. Is there no practical way of regulating that at the holder?

A. I cannot say; they can carry two *pounds* to the square inch if they wish.

Q. What they want then is some device that would give a correct record, when the person is remote from the holder?

A. Yes, sir, such a device would be of the greatest benefit to the gas companies, and would enable them to give a proper pressure and to correct to some extent excessive pressures.

By Mr. **Tremain**:

Q. What is the pressure that operates the amount of economical consumption and illuminating power?

A. Two-tenths of an inch; you will readily see that in order to maintain two-tenths of an inch the street pressure and main pressure must be very great.

Q. You have spoken of photometrical tests, and yourself and other witnesses have spoken of candle power—will you please explain what is meant by candle power or what it is that is tested by photometrical test so called?

A. We imply a scientific problem which varies the moment we leave the instrument which gives us our result; we compare a standard candle consuming one hundred and twenty grains of sperm an hour with an English standard Argand burner, consuming five cubic feet of gas per hour, the gas measured at a temperature of sixty degrees Fahrenheit scale—by arranging the two lights in a line at either end of a scale beam, the scale beam having a sliding index upon which is placed a double screen provided with translucent spots; we cause the rays of light to pass into the screen; we then move the screen until the diffusive powers of both
9440 lights are equalized, thus establishing upon the scale beam a fulcrum of difference in the penetrating power; this fulcrum of difference shows by leverage the exact number of candles and fractional portions thereof the gas-light is equal to of the candle opposite, according to the ability of our eyes to locate the screen properly on the scale beam, judging the translucent spots to be equal; this instrument is called a bar photometer and is the only one I know of which gives anything like correct results; there are other photometers, which judge the candle power by the height of the flame the gas passing under a given pressure through a fixed or-fice, but they are incorrect and fail utterly to give the penetrating or diffusive power of the light.

Q. Do you know the instrument that is used in this city; do you know if it is the bar photometer; is it used by the companies here also, in their measurements?

A. In their measurements, yes; they use the bar photometer for correct results and another instrument for approximate results; they use both instruments but they use the bar photometer to give result that could be sworn to.

Q. Is it not true that the presence of air in the gas determines its illuminating power?

A. Yes, sir.

Q. Is it not true then that if air can be present in the gas to an amount not sufficient to interfere substantially with the candle power, illuminating power, the consumers suffer a loss?

A. One per cent. of air would show in the candle power, and one per cent. would reduce the specific gravity of the gas, which makes it more dense; it would pass so much slower through the burner and register, so much slower at the meter, and it is suicidal in 9441 the extreme for any company to use air in the gas; it would redound against the gas companies; I do not think gas companies ever mix air with gas except by accident; it is sometimes done by accident, but not intentionally.

Q. In view of your statement, that there is a loss in passing through the pipe at a distance of six miles, I would like to ask you is it practicable, in your opinion, to convey gas a distance of one hundred miles?

A. Yes, it is.

Q. Or two hundred miles?

A. Yes, by using relays.

Q. Would the nature of the gas be of sufficient power to operate here?

A. Yes, by using pumps or relays.

Q. At how frequent intervals?

A. Well, if I was going to do that, I should put my relays twenty-five miles apart—governed by ground conditions.

Q. I understand you that the proper pressure at the burner is two-tenths of an inch?

A. Yes, sir.

Q. If you increased the candle power, that would have what effect upon the pressure at that point?

A. It would make no difference in the pressure but in the combustion; it would have no appreciable effect; for instance a gas under a two-tenths pressure will burn without making smoke; the products of combustion are natural; if that gas be increased to thirty candle power, then the same quantity of gas does not virtually come in contact with sufficient atmosphere to consume it.

Q. A fair illustration in this city would be Equitable gas, would it not?

A. That gas will not burn at two-tenths of an inch at the tip without smoke.

9442 Q. What is their candle power?

A. Thirty candle power.

Q. Then for a gas of thirty-two candle power the proper pressure at the burner should be three-tenths?

A. Yes.

Q. And two tenths would be for what candle power?

A. From eighteen to twenty-two candle.

Q. You have expressed preference for gas of a low candle power, from eighteen to twenty-two candle power; now if you have a gas of thirty-two candle power with a pressure of three-tenths of an inch at the burner, would it not give an equally satisfactory result?

A. Well, you have a better light than twenty-candle power; you have one-third more light.

Q. Is there any reason why it is not more desirable?

A. It is to the consumer, provided he is not inconvenienced by smoke.

Q. Did I understand you to say that they could not regulate the pressure?

A. There is no device by which they can do so. If they had a device to regulate that pressure, then that gas would be more advantageous to the consumer, and the manufacturer would have to make less.

Q. The gas of a thirty-two candle power is worth more than the same quantity of gas of a lower candle power?

A. Yes, one-third more.

Q. Have we any device now by which gas [illegible] eighteen to twenty-two candle power can be properly consumed as it is burned at night?

A. There is no device that I am aware of in the market that will operate effectively or properly; there are a number of so-called automatic check burners, but none that I am aware of that ever operated very effectively.

Q. Does not a proper pressure result in perfect combustion ?

A. Yes, sir; but the devices which already exist for that
9443 purpose have been tried but have failed.

Q. Have you ever tried any experiments to ascertain that the gas is not fully consumed at the burner?

A. Yes.

Q. What is that experiment, and give the results?

A. Destructive analysis of the products of combustion; the results of the analysis would indicate excessive carbonic acid, sulphurous acid, sulphur*a*tted hydrogen, bisulphite of carbon, carbonic oxide, free carbon, carbonic anhydrate, etc.

Q. Is there any other way you can determine the pressure of those impurities?

A. Yes, sir.

Q. Can you, in any way, show that out of the flame there proceeds a gas which can be re-ignited?

A. Yes; by placing a funnel-shaped tube and holding it in the flame of gas from an ordinary burner, with the narrow end upward, the gas can be ignited at the top.

Q. A funnel of about what length?

A. Well, of about four or five inches. Put the large end in the flame and you can see what gas escapes. In trying that experiment you want to get that tube below the top of the flame; if you do not do that you will get products of combustion which are principally carbonic acid.

Q. Doctor, you say that you yourself have constructed some gas plant. Now if you consider yourself competent to say any thing about the amount of capital requisite to produce a gas plant of a given capacity, we would like to have your opinion on that subject, a capacity of at least one million.

A. I could give it approximately including generators, washers, hydraulic mains, purifiers, holders, etc. Beyond that it would be very difficult for me to do so, especially when applied to the city of New York, because here I do not know what it might cost 9444 to lay mains. I do not know what the price of labor is and do not know what they have to pay for the franchise, but as to the virtual plant itself, costs of pipes of putting them together, works of producing one million feet, I could estimate close on to it; it would depend somewhat as to what kind of gas they were going to make; producing one kind of gas costs less than another; coal gas works cost more than water gas works.

Q. Is it true, that if a capacity of ten million is reached, or even five million, that capacity may be doubled, or at all events readily increased at a comparatively small increase of cost?

A. Yes, sir.

Q. In what relation?

A. There has been a marked development in the consumption of gas in all cities during the day; if the night consumption was equivalent to ten million feet, and the amount of gas required for heating, cooking and mechanical purposes should increase the amount to twenty million, the same mains and same holder would be used to distribute that gas, and the same meter would mark the combustion; it would be double the labor of the actual cost of distributing and of material, but I think a gas company can very well afford to sell gas for twenty five per cent. of the present cost for heating purposes alone; gas for day consumption costing less than for night consumption in labor and requiring no extra plant, they could well afford to put separate meters in houses; it would cost so much less to distribute gas for heating purposes, because it would be day consumption principally.

By Senator GILBERT:

Q. For which plant is already at hand?

A. Yes.

9445 Q. Is there a tendency toward the use of gas for heating purposes?

A. Very strong; consumption is increasing very rapidly in that way alone.

Q. That should decrease in itself the price of gas to the consumer?

A. Yes.

Q. They use it to heat rooms and to cook?

A. Yes, sir; very extensively; the treasurer of the gas company in the city of Providence told me within two weeks, that one-tenth of all the gas distributed by the Providence Gas Company was distributed for heating and cooking purposes, and that increase had been developed within three years.

Q. And at about what additional cost?

A. I do not know.

By Mr. TREMAIN:

Q. Then you think it is true that if the producing capacity of five million cubic feet has been secured, that a fair estimate for that capacity of plant is then $1,000,000 for a million cubic feet of gas?

A. No, sir.

Q. Is it true, including real estate?

—. No, sir.

By Senator GILBERT:

Q. It does not cost four times as much to produce twenty million cubic feet, as it does to produce five million?

A. No, sir, it does not.

By Mr. TREMAIN:

Q. Do you know — far that is out of the way?

A. I should say it was considerably out; I do not know as I am able to say exactly, as far as New York city is concerned, because I am not so familiar with gas distribution in New York city, but I know in other cities that twenty-five per cent. per thousand is a fair estimate, that would make it $250,000 instead of $1,000,000.

Q. You mean $250,000 per 1,000,000 cubic feet up to what producing capacity; it is not uniform?

9446 A. No, sir; of course I am going into those large figures without any precedent as to value of real estate.

(By Senator GILBERT:)

Q. You mean to say for instance that to obtain a producing capacity of 5,000,000 cubic feet, the capital would be say $1,400,000 exclusive of real estate?

A. Yes, sir.

Q. And the cost of franchise?

A. Yes; you would then have to fix a standard basis upon 1,000 feet; I would depend upon the standard; I do not know that there is any standard; I do not think that gas companies have any standard as they do not require it; they always find plenty of capital to transact their business.

Q. If it cost a given number of dollars to provide works by which to manufacture 10,000,000 cubic feet per day, representing that number of dollars by "A," how much in your opinion would it cost to provide works which would manufacture 20,000,000 cubic feet?

A. I should not place it higher than "A+¼," if all these things were in proportion exactly it might be figured but there are a great many things that are out of proportion; the day consumption is an important factor in that question; if 20,000,000 feet were delivered in twenty-four hours with a constant run at the holder and the same number of cubic feet were required to be delivered in twelve hours it would make a great difference.

Q. I was assuming that every thing was alike, same proportion by day and by night; do you so understand my question?

A. Yes; that would be the natural increase.

DECEMBER 28, 1885.

GUSTAVE KOBBE, a witness called by the counsel to the Committee, being duly sworn, testified as follows:

9447 Q. Where do you reside, Mr. Kobbe?

A. New York.

Q. Where is your place of residence?

A. One hundred and seven East 45th street.

Q. And your place of business?

A. Twenty-three Park Row.

Q. That is your office?

A. Yes, the office of the *Mail and Express,* I have a desk there, I am not regularly engaged on the paper.

Q. Your general business is what?

A. General writer for newspapers.

Q. Do you remember a paragraph to the following effect:

"Republican assemblymen who vote for the Gas Consumers' bill now pending will be strengthening the Democratic party in New York city, because the bill gives, after four years, the appointment of the three commissioners created, whose salaries and allowences for clerk hire aggregate $60,000, to the mayor, who, as New York is strongly Democratic, is usually a Democrat. That eminent Republican, Clarence A. Seward, writes to the New York *Tribune* that the provisions of the bill are self contradictory. Besides the bill brings what should be a private business enterprise into politics, and by fixing the price of gas destroys competition."

In last April or May, what did you do with it; do you remember the paragraph?

A. I think I wrote that paragraph; in fact I am perfectly sure I did.

Q. What did you do with that paragraph?

A. I believe I took it to the advertising agent; I asked him to insert in certain papers, the names of which I gave him.

Q. What was that gentleman's name; was it Mr. Sharpe?

A. Yes, he has testified here.

9448 Q. Who did you see in Mr. Sharpe's office?

A. I cannot remember.

Q. Would you know the man if you saw him?

A. I simply know it was an advertising office, and I know this man performed some functions in this office; I do not know if it was Mr. Sharpe or his assistant; I had no previous acquaintance with him.

Q. Was it Mr. Thomas, the cashier?

A. I do not know.

Q. Have you seen him since?

A. Yes; on the street.

Q. When?

A. Off and on.

Q. Did you talk to him about this particular occasion and this paragraph?

A. No.

Q. Did you make the arrangements with him to have it inserted in the papers?

A. I believe I did.

Q. A commission has been *said*, and allowed to Mr. Bangs?

A. He sent me to Mr. Sharpe; that is the way I came to go to him.

Q. Did Mr. Bangs go with you?

A. No, sir; he gave me a letter, I believe; the letter was simply introducing me; I think that was the way; I presented the letter indicated.

Q. At whose request did you prepare the paragraph?

A. I prepared the paragraph at the request of the Consolidated Gas Company.

Q. At whose request? Name the person?

A. Mr. Gawtry, the secretary, I believe.

Q. Did you personally see him?

A. I did.

Q. How long before?

A. I cannot say.

Q. Where did you see him?

A. I saw him at various times and various places; I cannot say exactly, whether I have seen him at his office or on the street.

Q. Tell the committee the whole story?

9449 A. I will narrate the whole circumstance, that is the easiest way; it is simply a business transaction and I have nothing to hide. Mr. Gawtry happened to know in some way, whether through conversation with me or not, I do not know, what I thought of the gas bill. He happened to know that I thought it was an impolitic piece of legislation, and he asked me if I could write some editorials from my point of view and I did so, and the question came up as to how and where to put these editorials; on looking over everything that had been written on the subject (Mr. Gawtry had taken clippings of what had been published on the matter *pro* and *con*, from different papers), I saw notes from letters contributed by lawyers and other people of prominence, mostly all in favor of the bill, I believe, and being a journalist my journalistic instincts told me that these were paid for, I had no moral certainty of this but I presumed they were, and that suggested the idea of meeting the case on the same line and the idea was to select a certain number of papers published through the country districts, and to have them publish these editorials; I believe there was one or more, either editorials or as reading matter, and I took these to Mr. Sharpe and handed them to him just as any advertising agent would take an advertisement for patent medicines.

Q. You left the paragraph I have read to you?

A. Yes.

Q. Nothing else?

A. Yes, I believe there were three other editorials; I wrote two Democratic editorials, and two Republican editorials.

Q. Any thing else?

A. Nothing else that I have any recollection of.

Q. In what papers did they appear?

9450 A. I do not remember; I gave Sharpe the list; I took a list of the papers that appeared the most influential, but I cannot tell from memory.

Q. Do you know any Democratic paper that published it?

A. I think I went to Mr. Sharpe's office some time afterward—a few days afterward—and he said papers were beginning to come in containing it; I believe there were some Democratic papers.

Q. Was the New York *World* one of them?

A. No, I never knew it was in New York papers.

Q. Was it in the Albany *Argus?*

A. I doubt if the *Argus* was one; I do not know if it was on my list.

Q. Have you got your list?

A. I gave it to Mr. Sharpe.

Q. Have you a copy of it?

A. No, sir.

(The witness is here shown a copy of the list he gave to Mr. Sharpe, but states that it does not refresh his memory.)

There were thirty-seven papers on the list; I believe that Mr. Sharpe noted on the books; I think I saw in one of the newspapers a report of his testimony; the article was headed "a flood of editorials."

Q. Did that list exhause your list, do you think?

A. I should think it might; I really do not remember; the transaction has almost escaped my memory; I gave Mr. Sharpe the list of newspapers, and asked him to attend to the matter; I selected these papers from a newspaper directory, taking into consideration of course their apparent influence in their locality, and according to their politics.

Q. Were the three other articles after the editorials?

A. They were simultaneous.

Q. But in different language?

A. Yes, four different editorials.

9451 Q. This one that I read was for Republican papers, was it not?

A. Yes, sir.

Q. And the others were for Democratic papers, and in different language?

A. Yes, sir.

Q. You had acquaintances among the stockholders, had you not, of the Gas Company?

A. No, sir, I had not; I had formed opinions upon the subject from what I had in the newspapers.

Q. Was that before you talked with Mr. Gawtry on the subject?

A. Yes, sir.

Q. Did you talk with anyone else, except Mr. Gawtry?

A. No, no person except the people who represented him, I believe; I mean simply messengers.

Q. Who were the messengers?

A. I do not know if you can call them messengers; they went driving around doing collecting.

Q. Do you not know their names?

A. No.

Q. Do you not know at what place you met Mr. Gawtry at one time?

A. No, sir, I do not; I do not think I ever met him down town.

Q. Where did you meet him?

A. I think I went to the company's office; that is my recollection; I am quite sure I did not meet him down town.

Q. Did you never meet him any where else but at the company's office?

A. I think not.

Q. Did you not have a conversation with any one except with Mr. Gawtry or the messenger boy?

A. I don't want it to be understood that I spoke to the messenger boy; it was some one, as I said before, who went around in a buggy collecting bills; he brought me a letter from Mr. Gawtry, asking me to call on him.

Q. Do you know his name?

A. No, sir; I do not know his name.

Q. How many times did you see that person?

A. Not more than once, probably.

9452 Q. Then this compensation, was it exclusive of Mr. Sharpe's commissions?

A. No, sir; I received so much for writing editorials.

Q. That was from the Consolidated Company, by its check?

A. I cannot tell whether it was by check or money; they paid me for their editorials just as a newspaper would pay me.

Q. Was it Mr. Gawtry who made the payment?

A. I cannot tell you; but now when I come to think of it, I think it was Mr. Gawtry.

Q. At the office?

A. Yes, sir.

Q. That is about the whole story?

A. I think it is.

Q. Do you remember when it was that Mr. Gawtry sent this messenger for you?

A. No, sir; I do not.

Q. Well, about how long before that visit to Mr. Sharpe?

A. I presume it was some days before; but I do not remember exactly; I think the whole transaction occupied very little time; no more than two or three days.

Q. The whole affair?

A. Yes, the whole affair.

Q. So that it must have been shortly before you called on Mr. Sharpe?

A. I fancy it was shortly before my call on Mr. Sharpe.

Q. Did Mr. Gawtry by that note ask you to come to his office to see him?

A. I do not know.

Q. But as a consequence of that note you went to the office?

A. Yes—Mr. Tremain, let me tell you here that the first intimation I had was one afternoon while walking up town I met Mr. Gawtry on the street. I think he stopped me and asked me what I thought of the gas bill and asked me to embody my views in an editorial, and a day or two afterward I received this note, perhaps a shorter time than that; it is very hard to remember every detail when so many things have happened since then.

9453 By Senator GILBERT:

Q. In response to that note you met him where?

A. I think at his office.

Q. Was it then and there you made arrangements with him for the insertion of the editorials in those newspapers?

A. It was either there or the subsequent meeting.

Q. Had the article in the *Tribune* then appeared—the article to which I refer?

A. Yes; it must have appeared about that time; that is the letter from Mr. Clarence Seward?

Answer by General TREMAIN: Yes.

(By Mr. TREMAIN:)

Q. Did the other editorial then appear in the *Tribune?*

A. What editorial is that?

(By Mr. TREMAIN:)

Q. There was a short editorial in the *Tribune* which called attention to this letter?

A. That I do not know anything about.

Q. Were you then aware that this letter from Mr. Clarence Seward which has, by some, been styled an opinion, was prepared at the instance of parties interested in the Consolidated Gas Company, and paid for by that company?

A. No, I was not aware of it.

Q. Were you ever informed to that effect?

A. No, sir; I was not.

Q. Mr. Gawtry did not mention that that letter was procured by the officers of the company?

A. As I said before, he simply gave me what had been written on the subject *pro* and *con;* I was interested in the matter from the fact that I followed the newspapers very closely, and even if Mr. Gawtry had not called my attention to the matter, I would have seen it; I was interested in the business as "the *Sun*" took a decided stand in the matter, and as I contributed to the *Sun,* I took an interest in it.

9454 Q. Were you not aware that Mr. Hitchcock, of the *Sun,* was a large shareholder and was interested against the gas bill?

A. I was not aware.

Q. Did you hear of it?

A. I think it was intimated, but I have no regular connection with the *Sun* at all, I simply contributed to it as I did to any other paper.

Q. What else did Mr. Gawtry say about this gas bill?

A. I do not know, as I had no conversation with him beyond what related to my own services in the matter.

Q. Did he not say anything about the company fighting the bill?

A. No, sir.

Q. Or about the investigation that had been held?

A. No, sir.

Q. Did he introduce you to Mr. Smith?

A. No, sir.

Q. Did you never talk to Mr. Francklyn about it?

A. No.

Q. Do you know him?

A. No, sir, except by sight.

Q. Who first mentioned the matter to Mr. Bangs, yourself or somebody else?

A. I did; Mr. Bangs being in the business department of the *Mail and Express,* I thought he might probably know of somebody.

Q. Were these articles that were in the Democratic papers of greater length than the article or paragraph which appeared in the Republican papers.

A. No, sir; all about the same length, four editorials about the same length—two Democratic and two Republican.

NEW YORK CITY,
FIFTH AVENUE HOTEL, *December* 30, 1885.

The committee met pursuant to adjournment.

9455 Present: Hon. John I. Gilbert, Chairman, Hon. Michael C. Murphy.

Henry T. Tremain, Esq., appears as counsel to the committee.

FRANCIS W. SANBORN, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by the CHAIRMAN:

Q. Where do you reside?

A. In Brooklyn, at present.

Q. What is your business?

A. Gas saving.

Q. What, if any experience, have you had with the gas business?

A. I have been in the business for the last ten years of saving gas by attaching regulators and burners, and am manager of a gas saving company.

Q. What do you mean by gas saving?

A. The reduction of the gas bills in large establishments, where gas is consumed in large quantities; of a maximum light with the minimum of gas.

Q. Why do you say large establishments?

A. Because in small private establishments, very rarely the owners can be got to examine the matter; in large establishments it is a matter of great interest to the owners and proprietors.

Q. What do you call the apparatus used for that purpose?

A. A governor, or regulator.

Q. At what point is that governor applied?

A. Near the meter.

Q. What is the immediate effect produced by it?

A. It reduces the pressure in the mains. The pressure of the gas in the mains varies continually. The regulator makes it uniform on each floor in the building.

Q. The effect is to regulate the pressure at the point of ignition?

A. Exactly so.

9456 Q. Does your experience lead you to believe that it is practicable?

A. No well regulated institution should be without a regulator.

Q. Do you agree with a former witness, in the statement that a large per cent. of gas consumed is wasted, that is, produces no light?

A. Yes, from forty to fifty per cent. is wasted.

Q. The effect of that waste upon the quality of the air we breathe is what?

A. Very deleterious. It destroys the oxygen in the air, and fills it with carbonic acid, sulphuretted hydrogen and ammoniacal gases.

Q. What is pure gas?

A. The product of coal distilled and purified hydrogen gas and carbon mixed with oxygen.

Q. Do you know what pure gas is, as a matter of fact?

A. Yes, sir; I do.

Q. What are the component parts of pure gas?

A. Hydrogen and carbon.

Q. For illuminating purposes?

A. Yes, sir.

Q. What elements are liable to enter into that pure gas, rendering it impure?

A. The sulphur and ammonia which are in the coal at the time of distillation, if not properly purified, mingle with the gas.

Q. Those are foreign substances?

A. Yes, sir.

Q. Do you know whether gas varies in respect to purity?

A. Yes, sir, very greatly.

Q. Do you know whether or not the presence of these impurities can be easily detected?

A. Yes, sir; very easily indeed.

Q. Do you know whether as a matter of fact, there are in any places officers, whose duty it is to test the quality of gas and report?

A. I only know that in Washington there is an inspector of gas,
whose duty it is to inspect the gas, and who does it every
9457 morning, and if it is not up to the standard of purity, he
notifies the gas company that it must be brought up to that
standard. That is done daily, consequently the gas company keep their gas up to the standard.

Q. Do you know the market price of gas in the city of Washington?

A. Two dollars and one half a thousand feet it used to be, I would not say what it is now.

Q. Do you know what it is now?

A. I don't.

Q. Do you know what it is in any other large city?

A. In Chicago $1 a thousand.

Q. Do you know what it is in Chicago?

A. Yes, sir, it is $1 a thousand.

Q. Do you know what it is at Pittsburg?

A. I think they use natural gas there, I don't know.

Q. What do you say as to the feasibility of using gas for fuel and power, as well as for light?

A. It should be supplied for from fifty to seventy-five cents a thousand for fuel—for heating purposes, and it is very feasible, and there are a great many stoves for that purpose all over the United States and in Europe; the food cooking on such stoves is about twenty per cent. more nutritious, and it avoids all bad smells and debris.

Q. What effect, if any, does the increased application of gas for various purposes have upon the price?

A. It reduces the price; a small increase of expense in enlarging gas works would render them capable of furnishing a large amount and consequently the price should be reduced.

Q. Do you know about how much gas per hour is consumed by an ordinary burner with the gas turned on, without any regulator?

A. A four foot burner will sometimes consume ten feet of gas an hour and a six foot burner from twelve to thirteen feet an hour.

9458 Q. What do you mean by a four foot burner?

A. A burner which is constructed to consume four cubic feet of gas an hour; we have a regular gauge which is called a regular pressure gauge.

Q. Is it possible for a meter which is well regulated to be so placed as not to actually measure the number of cubic feet escaping from the burner?

A. Yes, sir, very easily.

Q. Without reference to any leakage?

A. Yes, sir.

Q. Tell us how and why?

A. A meter is placed in a heated position, and the gas coming from the cold means in the street is largely extended, and consequently registers considerably more gas; in passing through the meter it is heated and extended.

Q. And after it has passed through?

A. Well, then it is cooled again and consequently condensed in the pipes of the house, and thus it registers largely in excess of the amount of gas which is consumed.

Q. In other words, if the meter is placed in a warm position the gas is extended and the number of cubic feet of gas registered at the meter is correspondingly increased?

A. Exactly.

Q. Would you regard it desirable to have the regulator as near as possible to the point of ignition?

A. Yes, sir; the best effects are produced as near the point of ignition as possible.

Q. What result have you known to be reached by the use of the regulators?

A. I have known as high as sixty per cent. of gas to be saved.

Q. With what effect upon the light given?

A. Increasing the brilliancy of the light.

Q. And saving sixty per cent. of gas without loss of light?

A. Yes, sir, and rather increasing the brilliancy of the light.

9459 Q. That is not common?

A. No, sir; the common percentage that would make is thirty-three per cent.; that is the average of the saving, which is generally effected by a gas burner or governor.

Q. You regard it that there is so much wasted?

A. Yes, sir.

Q. Assuming that your statement is correct, it is conclusive in your mind that that amount of gas is wasted?

A. Yes, sir, and much more; I think fifty per cent is wasted; in putting on regulators we have to combat the idea that a regulator is something unnecessary, and out of the common course of things used by the gas companies, and for that reason we cannot alter the burners as we would like to; we would like to put on the burners with a governor, so that the hold should be uniform.

Q. Are you aware that at the present session of Congress a petition has been introduced from the citizens of the District of Columbia, asking that the price of gas be reduced to fifty cents per thousand cubic feet?

A. I have been so informed, but I do not know personally.

Q. Are you aware that in some cities gas is now being furnished at fifty cents?

A. I am not, no, sir.

Q. What elements are essential to the production of light?

A. Carbon, hydrogen and oxygen.

Q. How many of those elements does water contain?

A. It contains them all.

Q. Water?

A. Yes, sir.

Q. Does it contain oxygen?

A. It does not; oh, yes, it does, too.

Q. Does it contain carbon?

A. Not carbon; it contains hyd*or*gen and oxygen.

Q. That is the difference; the old formula I believe which is (H. O. 2); water contains, then, hydrogen and oxygen?

A. Yes, sir.

9460 Q. And the gas which we consume has to be furnished with the other element?

A. Yes, sir.

Q. Namely, the carbon?

A. Yes, sir.

Q. That is derived from what source?

A. Either from passing it over naphtha, gasoline or passing it through some element which contains carbon; I do not understand the process by which water gas is manufactured.

Q. Coal furnishes the carbon for coal gas?

A. Yes, sir.

Q. And for water gas?

A. Coal furnishes the carbon for that, I believe; I think they convert it into steam; then we have gas machines in which we use simply air, the air over naphtha or gasoline which is in the machine, and which gives a very rich illuminating gas.

Q. The candle power of gas is in proportion to the relative quantity of what element in it?

A. The carbon which it contains.

Q. Carbon?

A. Yes, sir.

Q. You said something about air as furnishing carbon or something of that sort?

A. I think not; the oxygen in the air we use acts in the same way; we enrich gas sometimes to sixty, seventy-five, and sometimes as high as ninety per cent. by passing it over naphtha or gasoline and making that reduction in the gas bills by so doing; but the insurance companies refuse to insure while naphtha or gasoline is used for carburretting purposes in the city.

Q. For what reason?

A. For the the reason of the danger of explosion from naphtha.

Q. How are those gas machines designated which you say are all alike dangerous?

A. All alike dangerous; I do not wish to say that; if the tank
containing the gasoline is placed at a sufficient distance from
9461 the house. there is no more danger from gasoline gas than
there is from coal gas, but where it is placed in houses there
is very much danger on account of the volatile character of the gas of the naphtha.

Q. Distance lends safety as well as enchantment?

A. Yes, sir; there are thousands of them in use; in large mills and manufactories throughout the country.

Q. I will ask you one thing farther; a ton of coal will produce, or is necessary for the production of about how many cubic feet of gas?

A. About 9,000 cubic feet of gas?

Q. Is that coal wholly consumed in the production of the gas?

A. No, sir; there is a caldron of coke or residuum.

Q. Worth how much?

A. About three dollars a ton; and then there is about eleven gallons of coal tar.

Q. Worth how much a gallon?

A. About two dollars a barrel—about seven to ten gallons of ammoniacal liquor.

Q. Worth about how much?

A. Say fifty cents.

Q. What kind of coal is used in the production of gas?

A. Cannel coal or bituminous coal otherwise.

Q. Such coal in the city of New York costs about how much a ton?

A. From twelve to fifteen dollars per ton; I would like to withdraw the statement as to the value of coal; I would say I do not know.

Q. Have you any information as to the public regulation touching the pressure of gas in England?

A. Yes, sir.

Q. What are the sources of that information?

A. The different books published on gas consumption, technical and scientific works.

9462 Q. Name them?

A. Cathell's "Gas Consumer's Guide," "Letchers on Coal Gas," Wilkin's "Management of Coal Gas," Sugg's "Domestic Uses of Coal Gas," Moore's "Gas Consumer's Guide." That is all, I believe.

Q. What is your information?

A. The parliament compels the gas companies to apply regulators to all the meters which furnish gas in the city of London.

Q. At whose expense?

A. At the expense of the gas companies.

Q. Do you understand that those regulators are for the purpose of preventing this waste of which you have spoken?

A. They are.

OSCAR F. ZOLLIKOFFER, a witness called by the counsel to the Committee, being duly sworn, testified as follows:

Examined by Mr. TREMAIN:

Q. You are connected with the Consolidated Gas Company at the present time?

A. Yes, sir.

Q. In what capacity?

A. I don't know that there has been any particular distinction made since the consolidation.

Q. You are performing the same work you performed prior to the consolidation?

A. Not exactly, no.

Q. Where are you kept?

A. At Broadway and Forty-fifth street, the Metropolitan Branch of the Consolidated Company.

Q. Is that branch office the office of the old Metropolitan Company?

A. Yes, sir.

Q. Is the same business conducted there as was conducted formerly?

A. Well, the general work, yes.

Q. The difference in the actual work?

A. The direction of the company is at the main office.

9463 Q. In other respects is there any difference?

A. No.

Q. The same customers?

A. Exactly.

Q. And the same routine of work for collecting for gas sold to consumers continues at that office?

A. Yes, sir.

Q. Prior to the consolidation what was your work in the office?

A. I was secretary of the Metropolitan Gas-Light Company.

Q. What was your duties as secretary prior to the consolidation?

A. Had general charge of the office and attended the board meetings and taking the minutes, etc.

Q. Since the consolidation what do you do?

A. Have charge of the office?

Q. You remember the circumstances, do you not, that schedules of properties of various constitutent companies had been prepared and were under consideration during the summer of 1883 or during the years 1883 and 1884?

A. Yes, sir.

Q. Can you recall how early the first of any such schedules was prepared?

A. Eighteen hundred and eighty-four, probably; 1883 or 1884.

Q. You are cognizant of the fact that negotiations were going on with a view to consolidation?

A. Yes, sir.

Q. If you have any information as to how the item of $1,863,000 par value of stock of the Consolidated Company was awarded to the Metropolitan Company, or as to how the total amount of $7,781,000 of stock of the Consolidated Company was awarded to all of the constituent companies for so-called rights, franchises, etc., over and above the appraised schedules, please state to the Committee what information you have?

A. It was based on the business for the year October, 1882, to October, 1883.

9464 Q. Do you mean to say that having fixed the total capitalization, the difference between that sum and the total appraised values, according to the schedule, was so apportioned as capital among the constituent companies?

A. That is considered a fair value.

Q. Isn't that what you mean, that having arrived at the total proposed capital, the difference between that total and the total appraised values under the schedules, was apportioned among the several companies for their rights, franchises, etc., in proportion to the business of those several companies?

A. That was the method that those figures were obtained.

Q. How was that business estimated?

A. That was the actual business of the companies, the actual sales.

Q. You mean the sales of the gas?

A. Yes, sir.

Q. And the sales of gas for the entire year?

A. The entire year.

Q. Where will be found any record of that computation?

A. I could not tell you that.

Q. Who made it?

A. I do not think I know; in fact, I do not know.

Q. Do you know what percentage that computation exhibits?

A. I could only ascertain it from the quantities there, that is the only way I could determine it, figure it down for each company.

Q. If I take those percentages as they appear from the schedules, they should represent if you are correct, should they not, the percentages of business?

A. The relative business of all the companies for the year from October, 1882, to October, 1883.

Q. Was that capital of $45,000,000 fixed with regard to the market value of the stocks?

A. Not to my knowledge.

9465 Q. Was this apportionment for the balance of capital of the so-called rights and franchises made regardless of the market price of the stocks?

A. Entirely so.

Q. Where did you get your information about that?

A. What is that?

Q. About the apportionment of this balance of capital for franchises, etc.?

A. I was present at all the metings.

Q. Well, with whom?

A. With all the gentlemen who represented the seven companies.

Q. Just designate them?

A. Mr. Lees represented the New York Company, Mr. Smith represented the Manhattan, Mr. Gawtry represented the Municipal and Knickerbocker, I think, or one company, at all events; Mr. Zollikoffer represented our company, and Mr. Moss the Harlem Company.

Q. What was the first step taken to arrive at this capitalization which was under consideration by those gentlemen?

A. This plan was agreed upon and it was carried out.

Q. When was the first time that $45,000,000 was mentioned?

A. That would be very difficult to say, because there were a great many conferences, and it would be difficult to say when it was first mentioned.

Q. What other sum was ever mentioned as the total proposed capital except $45,000,000?

A. There might have been other sums during the negotiation, but I do not remember any of them.

Q. Do you know how that sum was arrived at, or was it done arbitrarily?

A. It was supposed to be the fair value of the property.

Q. Well, for the purpose of distributing the proceeds of the business during the pooling arrangement, there seems to have 9466 been established, according to the books of the pool, a ratio of distribution between the several companies?

A. That is right.

Q. And that ratio appears to have been established by those tables, according to the business done during the quarter ending February, 1880. Do we understand your testimony to mean that no regard was had to those tables in the distribution of this capital?

A. No, sir; none whatever.

Q. What do you know about the persons named or selected by the constituent companies, beginning with the New York Company, for the purpose of appraising the value of the plant with a view to consolidation? Did you ever hear any thing said on that subject?

A. Mr. Rowland was the appraiser of the New York plant.

Q. Who selected him?

A. Every company selected their own appraiser as far as possible; I think the New York Company must have selected him.

Q. Do you know any thing about the plant of the New York Company?

A. I know it in a general way; I am not familiar with it as I am with our own, of course.

Q. Was any other appraiser ever named for the New York Company?

A. There was one spoken of besides Rowland.

Q. Who spoke of him?

A. I am of the impression it was O. Zollikoffer.

Q. To whom did he mention him.

A. He mentioned him to the committee generally.

Q. What was his name?

A. William Farmer.

Q. Was he accepted?

A. He made figures for the Manhattan.

Q. Was he accepted for the New York?

A. That I could not tell you, sir.

9467 Q. What became of the figures he made for the Manhattan?

A. I do not know; I think they are the basis for the appraisal.

Q. Did you ever see them?

A. I saw them.

Q. Did you see Mr. Farmer's certificate?

A. I did not see his certificate, but he made figures for the Manhattan.

Q. The committee have never seen any such paper, and if there is any such thing in existence, we would like to be advised of it, so as to see it; what do you know about Mr. Farmer?

A. He is a gas expert and engineer.

Q. About his acting for the Manhattan?

A. I will correct my testimony; the schedules of value of the plant of the Manhattan were made by Thomas F. Rowland, and not by William Farmer; Mr. Farmer commenced on the schedules; did not finish.

Q. Didn't Mr. Farmer go through the New York works?

A. No, sir.

Q. According to the appraised schedules, the value of the plant, so called, of the New York Company, exclusive of the street mains, valves, meters, services, lots, bulkheads, piers, office buildings, furniture, etc., appears to have been fixed at $2,874,000 in round figures;

is that, in your opinion, a fair and liberal or excessive valuation of that plant in its then condition for the purposes of sale?

A. I should have to be governed by Mr. Rowland's certificate, for he is a credible man and an expert; I do not know sufficiently of the New York Company's plant to give an offhand estimate of it.

Q. The capacity of the New York Works?

A. I could not tell you.

(By the CHAIRMAN:)

Q. Have you an independent opinion as to whether or not the sum of $2,874,922 is an excessive valuation of the property specified by counsel in the last previous question? 9468

A. No, sir; I have not.

Q. Assuming the capacity of the New York works to be about 6,000,000 feet per day, and that the real estate, the lots, street mains, valves, meters, services, bulkheads and the office buildings are separately estimated, have you an independent opinion as to what is a fair price for the plant that will produce that capacity?

A. No, I have not.

Q. Have you an opinion as to the value in November, 1884, of the plant of either of the following companies, viz., the Knickerbocker, Metropolitan, New York or Harlem?

A. I have not; I could speak of our own on that point only, that is the Metropolitan.

Q. Do you know any thing about the method adopted, if any method was adopted, by which the real estate or lots of the constituent companies was valued?

A. I can speak of the Metropolitan.

Q. What was adopted there?

A. We took a real estate expert to value the land.

Q. What was he instructed to value?

A. Simply the land as it was without the buildings on it, and land under water.

Q. Is his report in writing?

A. Yes, sir.

Q. To whom was it made?

A. Mr. Zollikoffer.

Q. Where is that paper?

A. It must be in our office.

Q. Do you know of any real estate expert having been selected by any of the other constituent companies to appraise your real estate or their own?

A. I do not know of any such.

Q. Was any thing said by any of the representatives of the constituent companies as to how the lots should be valued?

A. Well, the general understanding was the market value.

9469 Q. How was that to be arrived at?

A. I suppose they informed themselves of the value of the property in that neighborhood.

Q. As a matter of fact, didn't each company value its own lots?

A. It did.

Q. Your company took no steps to verify the value of the lots of the other companies, did it?

A. Yes, sir.

Q. What did it do?

A. It took information on the values of the others.

Q. From what source?

A. From the same source we took our own.

Q. Sent an expert?

A. Yes, sir.

Q. Did you send an expert to the real estate of all the companies?

A. We did.

Q. Did any other company do the same thing?

A. We do not know; at least I do not know.

Q. If you will kindly get, or send and get those papers for the chairman, relating to the whole valuation of the appraisal of lots to all the companies we will be much obliged. As secretary of the old Manhattan Company, as representing its stockholders, I would like to repeat to you a question which has been asked of some of the officers of the old companies. By the rate of distribution of the Consolidated stock it appears that 260 shares of that stock were awarded for 100 shares of the stock of the Metropolitan Company, that at the time of that distribution the market price of the Consolidated stock was quoted at about eighty-five by that exchange and according to the price of the Metropolitan stock, as testified here to have been about 240 or 250, there would seem to be a loss on the transaction by the exchange of each 100 shares of the Metropolitan stock of about $1,900. Assuming the price of the Metropolitan at 240, will you tell the committee, what, in your opinion, 9470 was the advantage to the Metropolitan stockholders in that transaction?

A. You are asking me now about the market value which was not considered at all. I could not tell you about that.

Q. My question assumes the market value at the prices I have stated, because it already appears in the testimony here and based upon that assumption, was there any advantage to the stockholders of the Metropolitan?

A. The matter of market value was never considered and the market value fluctuated very much during the negotiation. The Metropolitan was 255 at one time and before we went into the consolidation it was down to 225.

Q. It did not fluctuate as much as that in any year?

A. Yes, sir.

Q. During how long a period?

A. Nine months.

Q. Was there any advantage, in your opinion, either to the public or to the shareholders in this consolidation of the constituent companies entering into it at the capitalization adopted by it?

A. We thought there was an advantage in it.

Q. Well, now explain why?

A. The reason is this: That we were liable to compete with one another and have what we would call a gas war, which was probable or possible and rather than have the property of all the companies injured, which it would have been, a consolidation was determined upon.

Q. Well, that was the controlling reason, wasn't it?

A. I cannot say that other companies looked at it in the same light, but our company thought it was best for our stockholders to do it.

Q. For that reason?

A. Yes, sir; but there were other reasons.

Q. Was it the chief reason?

A. We have twelve directors, and every dierctor will look at it from his own standpoint.

9471 Q. Was that your view of it?

A. As far as I could look at it from being a director; that was my view of it.

Recess until 3 P. M.

DECEMBER 30, 1885—3 p. m.

Hearing resumed.

EDWARD G. LOVE, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by the CHAIRMAN:

Q. Where do you reside?

A. Sixty-nine East 54th street, New York city.

Q. Do you hold any official position?

A. I am gas examiner in the department of public works.

Q. Was you appointed under any statute?

A. No, sir; I was appointed by the commissioner of public works under a resolution passed by the board of aldermen.

Q. What are your duties?

A. To make daily tests of the illuminating power of the gases supplied by the seven companies on Manhattan Island; I also keep a record of the pressures at the various photometric stations and make an analysis of the various gases from time to time, to ascertain impurities.

Q. Are you required to do all these things by the resolution under which you was appointed?

A. I think the resolution says merely to test the gases under illuminating power primarily.

Q. You are required to make examinations as to the illuminating power of gas?

A. I am.

Q. And that you do how often?

A. Every day.

Q. Your report is published how often?

A. I make weekly reports to the commissioners and they are published in the *"City Record."*

Q. Are you required under the resolution to test the quality
9472 of gas?

A. As regards purity, I think that may be a part of the resolution; I was asked to do it; I believe I am.

Q. Of course, it is by resolution of the board of aldermen?
A. That is my impression.

(By Senator MURPHY:)

Q. The principal part of the work is done by ordinances; the common council directs how the work should be performed; is there any standard of purity of gas, so far as you know, fixed by law, or by an ordinance of the city, or by contract with the city?
A. There is.
Q. Is there any fixed, specified definite standard?
A. Nothing that is definite; it has a certain standard but it is very indefinite.
Q. No limit set to it?
A. No limit whatever.

(By Senator MURPHY:)

Q. I think that possibly the witness may not rightly understand the question; if I recollect correctly, the testimony was given that in contracting with the city to illuminate the streets there was a set standard, about eighteen or twenty candle power.

Mr. TREMAIN: That is, illuminating power.

The CHAIRMAN: I am speaking now as to purity; do you know whether under any provision of law, a standard is fixed?
A. Not in this State.
Q. Is there anywhere?
A. There is a law in Massachusetts and also in the State of New Jersey; the law in Massachusetts is enforced and I think in New Jersey it is.
Q. You know how it is in London?
A. Yes, sir; there is a very rigid standard there; at present the law allows twenty grains of sulphur to 120 feet of gas, and four grains of ammonia to the same quantity; if at any time it is in excess of these quantities the companies furnishing such gas are liable to a fine.

9473 Q. What, if any, provision is made for testing it?
A. There is a regularly appointed board consisting of three members and the gas is tested by gas examiners in various parts of London.
Q. Is your knowledge to the effect that the law is enforced there?
A. It is very rigidly enforced there.
Q. That serves, then, does it not, as a protection to the consumers to that extent?
A. It does.
Q. What is absolutely pure illuminating gas?
A. The gas which contains no carbonic acid, no sulphuretted hydrogen, or other sulphuretted compounds, and no ammonia.
Q. The pure things?
A. Hydrogen, marsh gas, carbonic oxide and illuminants.
Q. Mention the elements that compose pure illuminating gas?
A. They all contain carbon and hydrogen, with the exception of hydrogen gas, which, of course, is an element in itself, and oxygen,

which is a part of carbonic acid, and sulphur and nitrogen; that is all.

Q. The impurities which you have spoken of are, of course, injurious, are they not? I do not know whether you have analyzed those?

A. I have; the impurities as they exist in the gas are changed in the combustion of the gas.

Q. And produce things which are hurtful to those who breathe it?

A. In the same way that the air is hurtful, on leaving the lungs, from carbonic acid—differing in degrees and also kind, to a certain extent.

Mr. **Tremain**: I think I ought to state to the Committee that the efforts to procure Mr. Day's attendance have utterly failed. The Committee may remember that when Mr. Day was temporarily excused from the witness stand, it was with the understanding
9474 between himself and the Committee that he would attend
when wanted. A day or two afterward he wrote a letter to Senator Jacobs, who produced the letter before the Committee, and whose testimony disputed in part that of Mr. Day. Some of the statements in that letter are not in harmony with Mr. Day's testimony. Day was then notified by the Committee to attend; through his firm a reply was received that he was out of town. Notice was afterward sent to him to attend. Whether he has actually been in the city or not, I do not know, but he has been reported in the public prints as having been in the city since that time. The sergeant-at-arms reports as the result of his efforts to serve a subpœna upon him, that, both at his place and his residence, he has received replies that they did not know where he was. We despair of getting his testimony.

The **Chairman**: I have been informed by the sergeant-at-arms that he has made diligent inquiries and efforts to procure his attendance. We regret very much our -ability to procure his attendance, but it seems impossible to do anything farther about it.

Daniel E. Sickles, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. **Tremain**:

Q. General Sickles, will it be agreeable for you to tell us what was decided by Judge Van Vorst in your suit which you had with the gas company?

A. I will try.

Q. Will you kindly state to the committee what was the point of law that was decided, and what were the facts submitted upon which
that decision was based in the suit which was brought before
9475 Judge Van Vorst in equity in the Supreme Court, where you
was the plaintiff and one of the gas companies was defendant?

A. The issue before Judge Van Vorst was only an issue of fact; the issue at law had been already argued and decided at a Special Term by Judge Lawrence, and afterwards it was decided at the General Term.

Q. I was not aware that it had gone to the General Term; what was determined by that litigation and the facts upon which it was based?

A. Perhaps a short statement of the case will indicate more clearly than any other way what it was about, and what was decided. In 1881 and 1882 I occupied an apartment on the premises 14 Fifth Avenue, an apartment house; gas was supplied to all the occupants by the Manhattan Company; all the consumers there grumbled at what they regarded as excessive and wrongful demands on the part of the company, and we all employed such reasonable remonstrances as occurred to us in vain, as usual, and the other occupants, as usual, submitted to it and paid. I refused, whereupon steps were taken by the company to cut off the supply of gas from my premises. I forbade them, and instructed my servant not to allow any representative of the gas company to have access to my meter or pipes except upon his assurance that his only motive was to ascertain what the meter suggested as to the consumption; threats were made by the company to arrest my servant, and they persisted in their efforts to get access to my premises to cut of the supply, whereupon I applied to the Supreme Court upon a statement of facts that the charges were believed by me to be excessive and extortionate, and they threatened, unless I submitted, to cut off the supply. I represented these facts; an injunction was issued forbidding the company to interfere 9476 with my supply of gas until it should be ascertained what amount was justly due, for what I had consumed. That was a temporary injunction, and the matter came before Judge Lawrence on an order to show cause why it should not be continued until the final hearing; and after argument Judge Lawrence continued the injunction, holding that the company had no right to cut off the supply of gas from a consumer who stood ready and willing to pay for what gas he had actually consumed, leaving the company to establish that fact by such evidence as they could furnish. The intention of the company evidently was that it was my duty to pay their bills as they presented them and to accept their meter as law and without court or jury. And if I found that I had been overcharged, my business was after paying them all that they demanded to commence a suit against them and recover back any extortionate charge I established; that was overruled by Judge Lawrence and he held it was a proper case for an injunction. The Manhattan Company appealed to the general term of the Supreme Court from Judge Lawrence's adjudication. The matter was argued there by John Graham in my behalf and with equal ability by Mr. Anderson for the company; and the general term unanimously confirmed Judge Lawrence's decision, and the gas company did not go to the court of appeals, and thereupon issues of fact were formulated and tried before Justice Van Vorst at a special term. The issue of fact was mainly how much gas I had consumed. The company as usual relied upon the meter. The president of the company was there to explain the meter, and the vice-president and engineers and the manufacturer from the American Meter Company and Mr. 9477 Chandler. All swore that the meter could not lie, but Judge Van Vorst found it did lie and decided against the company, holding that their bills were excessive and that they did not establish their case by their meter, leaving them to proceed by further suit at their discretion to establish their demand, for which I have vainly waited ever since, and have not heard any thing farther.

Q. The issue of fact in the case concerned the quantity of gas consumed and not the rate at which charge should be made?

A. No, sir, no question about rate. Unfortunately, the company have since reduced their rates and my bills are larger than ever.

Q. If your experience in that line leads you to believe that you can throw any light upon the subject matter that this committee has under investigation, they would be pleased to hear it?

A. Well, I do not know that I could guide the committee. I fought my fight and won it, and I suppose any other consumer can do likewise if he chooses. I suppose as a citizen and consumer that it is the right and duty of the legislature to fix the quality of gas that these companies should furnish and the price, and I suppose that if the consumers choose either individually or by combinations to resist these extortionate demands, of which we hear so much complaint, that the law as established in my case, and I believe confirmed in other subsequent cases, would afford adequate remedies. When gas companies combine consumers should unite. And if consumers unite and employ General Tremain to resist unjust demands and go to the courts, they will get justice; that would be my advice; fight it out; they have no power; they threaten most people effectu- 9478 ally—successfully by saying they will cut off the gas if you do not pay the bills, and housekeepers and consumers do not want to have that threat put in force, and they submit. New York is an easy-going town and submits to almost any thing, no matter whether it is a railroad, gas company, telegraph company or any thing else; but whenever a citizen chooses to say to any of these companies "halt, you must not do this," those who go to the courts are protected; that is my experience; for individuals to do that sometimes it costs more money and time than they are willing to give; but consumers, of whom there must be many thousands in New York, could easily unite and organize, and a thousand of them would be a batallion strong enough to fight the Consolidated Gas Company. The legislature, I suppose, can and should fix the price of gas, having in view a reasonable dividend on the stock, and, I think certainly should fix the quality of the illuminating power of the gas furnished.

Q. And the purity of it?

A. Yes, sir; both for sanitary and economical reasons. Now, gentlemen, that is all that occurs to me. I would be happy to answer any question that General Tremain, or any other gentleman, may ask.

General TREMAIN: The only point of immediate inquiry has already been responded to.

(By the CHAIRMAN:)

Q. In speaking of a reasonable profit upon the stock of the gas companies, do you mean the actual paid up stock of the company or the nominal stock of the company fixed according to the pleasure of the company or companies, as the case may be?

A. Oh, sir, the basis for the legislature is the actual value of the plant—cost of the plant, cash or stock paid in, because if you leave the company to fix arbitrarily their own values upon the 9479 plant and their privileges, franchises, the most valuable parts of it are derived from the public—municipal and State. Why, your ground would be taken from under your feet; ten per cent. on a cash capital paid in is as large a dividend as any corporation in this country is expected to earn.

Q. That is the same as five per cent. on capital stock nominally doubled without any actual increase?

A. Yes, sir; this process of watering Elevated stock or gas stock is an abuse calculated to blind the public as to the cost of these properties, and the proper share of the earnings to indemnify the companies for their risk, etc.; but for the legislature, I should say always the real actual money paid in is the proper basis which should determine the value of the property and the amount of dividends fairly to be earned.

Q. Is it, in your judgment, a great evil and a growing one, this watering of corporate stock?

A. Oh, yes, sir; I regard that as one of the most demoralizing perhaps tolerated in this country on the part of corporations.

Q. Demoralizing to the public and the instrument of undue exaction to the public?

A. Yes, sir; it affects our commerce and is very oppressive upon the poor; rich people with large incomes can stand any reasonable amount of that sort of thing; but after all the great burden is borne by the poor who should not be forced to bear it; these great franchises are given for the public good and not for the private benefit of grantees.

Q. You think it is contrary to public policy to permit corporations to water their stock?

A. I do, sir, consider it contrary to public policy and productive of great public evils and producing private injury to citizens.

Q. Both to those who perpetuate it and those who are affected at the other end?

A. Yes, sir.

9480 Q. Investors also are injuriously affected?

A. Yes, sir! it is one of the direct reasons for those fluctuations in values of securities, and causes that uncertainty in price which is a great injury to investors and which also injures the public credit so far as the public credit is affected by the reputation of corporations and the securities they issue.

Q. Like any other wrong it does not fit in the proper state of things at any point?

A. No, sir, and like any other wide-spread public wrong it brings in its retribution upon that community that hovers it.

Q. Cannot come in on the right order of things with impunity anywhere?

A. No, sir; take the farmers, for instance; they have been enjoying a lucrative foreign market for their products—their wheat, corn, cotton, etc., and they are now confronted with competition from India, Egypt, and Australia, which puts them at a disadvantage in the European markets; and if you analyze the cause of that successful competition you will find it grows out of excessive freight charges and excessive terminal charges—the greater cost of transportation and shipments in this country, as compared with the other countries I have mentioned, who are becoming now our competitors in the production of these commodities—and this excess of charge is mainly produced by the necessity or apparent necessity that existed of the earning of dividends upon suppositi-ous values and it has a prejudicial effect upon the producing classes where all our real wealth rests.

Q. This dividend upon fictitious stock enters as an element, of course, in the consumption of the products affected by it, made by it or transported by it, as the case may be?

A. Certainly; the consumer is expected to pay and does 9481 pay, in the long run, a dividend upon whatever value corporations see fit to place upon certificates, if they double and quadruple the supposed capital, they are expected to keep up a high rate of dividends on their capital whatever it may be and to do that, they must earn enough out of their patrons to justify their claims as to the supposed value of their property, and all that comes out of the pockets of the consumer; that is the way I understand it.

Oscar Zollikoffer, being duly recalled, testified as follows:

Examined by Mr. **Tremain**:

Q. Since your testimony was suspended have you found any memorandum or papers by which your recollection has been refreshed touching the various propositions that were under consideration, leading up to consolidation and the proposed capital?

A. I have found some, General; but I must say I don't know which of them has been more or less adopted; it is only discussion that we had.

Q. Well, please show the Committee any memorandums that were in use, whether adopted or not, relative to the total capital proposed at any time?

A. I have found one which was discussed at the different meetings but was not adopted; it was my duty to report to my board what was done there, discussed from time to time as I reported in that way; so I found one on the 9th of September, 1884, in which I insisted that the capital should be not more than $43,000,000, if all the companies joined.

Q. Including the Mutual?

A. Yes, sir, including the Mutual, and it was adopted; it was a memorandum for myself; the book is different.

9482 Q. Prior to that time had not the sum of $45,000,000 been suggested?

A. I think—yes, it was prior to that, but I was always in favor of a great deal less.

Q. How much was you in favor of?

A. At the most, $35,000,000.

Q. Including the Mutual?

A. Yes, sir; but still that don't mean that I set a different valuation; I think it is the same in all this property; it comes to the same whether you make forty-five or thirty-five; they are not injured by it.

Q. That is between the different companies?

A. The different companies.

Q. You mean that the aggregate should not exceed $45,000,000 instead of $35,000,000?

A. Yes, sir; such memorandums I have a number of; but I do not *think* which one afterwards finally came to a negotiation and the other sums were agreed to.

Q. Who proposed to increase it?

A. Well, most every other company.

Q. I understand you to say that as a result of the conferences in the committee you reported in your board what those considerations were?

A. Yes, sir, from time to time; that is one of them and I have perhaps two dozen of them or more.

Q. Up to the 10th of September it would appear by this memorandum, that the companies had not in fact agreed upon the proposed capital?

A. No, sir; they had not agreed up to that time, but did shortly after; but you see I was very decided on my part; I do not like to submit those papers because they are not in shape; I would write them over if you want it; they are merely for my own guide; I reported from time to time to my board.

Q. You say, in your opinion, you did not think the total should have been more than $35,000,000?

9483 A. It was my first opinion that it would be better for the whole company that we make only that rate; I did not want to swell the amount.

Q. On what did you base your opinion?

A. We paid a very small—only two and a half millions in proportion to our business and therefore we paid after a while more dividends in proportion then if we had a swelled capital like the others.

Q. What others?

A. Those that had elegant houses and everything that way; our works are very plain and the machinery is good as I said before.

Q. Which company has got their figures up?

A. Well, I think every one, beginning with the New York, that is the oldest; they remodelled their works entirely; they were formerly simple and plain like ours, and afterwards spent heavy sums in changing their works, and there were some other newer companies who had larger buildings and every thing more elegant than we have.

Q. What were the reasons suggested by any of the companies why the total should be $45,000,000 instead of $35,000,000?

A. That was about the value or the market price of the stocks at that time.

Q. Those market prices depended, of course, upon the dividends that were being paid?

A. By the stability as they expected the business should be.

Q. Is it a fact that the consumption of gas is uniformly increasing?

A. Yes, sir; but we are provided with the electric light, and with the fuel gas which comes out of the ground.

Q. That depends upon the future?

A. Yes, sir.

9484 Q. Considering the age of the companies and their business and the extent of their works and producing capacity were not the valuations for the Municipal and Knickerbocker Companies, in your opinion, excessive?

A. Well, that was my impression.

Q. What is your impression now about that; they were valued in the schedules, $18,100,000; isn't that valuation in its relation to the values placed upon the properties of the other companies, in your opinion, excessive?

A. I think it is; still, I do not want to say that I am an expert in the valuation; I think I understand it; I opposed it as long as I could.

Q. In comparison with your own company, which is a long established and well known property, for which the valuation is fixed at $7,175,000?

A. I claim more to that in proportion; therefore, I must say I was convinced we were not in the same ratio to it as others.

(By Senator MURPHY:)

Q. You believed that your property was worth more than the Consolidated representatives allowed you?

A. Yes, sir.

(By the CHAIRMAN:)

Q. In proportion to their values?

A. Yes, sir, in proportion to their values; this is all an idea in the form of a comparative thing; six months before when we first submitted our values—there would more come to the point, but I must say I have mislaid those papers or torn *must say I have mislaid those papers or torn* them up; I know they were entirely different.

Q. Give your best recollection of what it was as proposed by you?

A. It was considerably less in that paper that you will get to-morrow about the valuation; it will indicate to you more than any thing else what the standard then was, because it was an impartial outside man who knows the business who made the appraisement; I looked for the paper and I think there is no doubt I can find it by to-morrow morning and deliver it to you.

9485 Q. Well, these figures that you speak of as having been proposed six months before September, 1884, bear a different relation, do they not, in the values of the companies' properties to each other?

A. I told you I was for $35,000,000, and I based my first valuation always in proportion to each company, and on the $35,000,000.

Q. In verification of a former answer, and with a view to its farther explanation, if there be any, I call your attention to the memorandum under date of September 9, 1884, that you have just submitted; in that memorandum there appears to be a proposition that the total capital shall be $43,000,000, with a million reserve for working fund and the distribution of that capital shall be as follows:

New York Company	$7,500,000
Manhattan Company	12,000,000
Mutual Company	5,600,000
Municipal and Knickerbocker Companies combined	7,600,000
Metropolitan	7,600,000
Harlem	2,700,000
Total	$43,000,000

The schedules as already in evidence show that upon a larger capital of $45,000,000 estimated there was apportioned $8,000,000, for the Municipal and Knickerbocker combined, and $7,175,000, to the Metropolitan; there is thus a larger allowance to the Municipal and Knickerbocker, and a smaller allowance to the Metropolitan of about half a million, which was on a total smaller capital; explain how that came about?

A. I claimed that ours was too small in proportion, but the majority finally fixed upon the others, and I could not resist it.

9486 Q. You was overruled?

A. I was overruled.

Q. In the value of your own property you made an offer to have your property fixed in the same proportion?

A. Yes, sir.

Q. And that was not granted, and the representatives valued your property, as indicated in the exhibit, against your wishes?

A. Yes, sir.

Q. I want to know who voted upon that?

A. The representatives of the different companies.

Q. Did the Knickerbocker count one vote in getting at that majority and the Municipal count one vote, making two votes?

A. Yes, sir, making two votes; the Mutual could not get in because its charter made it a misdemeanor.

Q. Did the Mutual vote upon that?

A. The Mutual voted upon that, I suppose.

Q. Was your attention called to the excessive valuations of the Municipal real estate?

A. I insisted at many meetings that they should have one appraiser, and I wanted to go by that appraisement that would be submitted.

Q. The same appraiser for all the property?

A. Yes, sir.

Q. Who objected to it?

A. The majority.

Q. Did Mr. Smith?

A. Not exactly so much Smith as the others.

Q. Mr. Gawtry objected to it?

A. Certainly.

Q. Mr. Franklyn?

A. Certainly.

Q. Mr. Lees objected to it?

A. Certainly.

Q. Do you know what become of the appraisement that was made by Mr. Farmer of the Manhattan plant?

A. I never saw it, only at the meetings; I never saw it afterward.

Q. Didn't Mr. Farmer appraise the entire New York plant?

A. No, sir; I suppose he was interrupted when he did; he did a part.

Q. Why was he stopped?

9487 A. They wanted to shove the thing through, and the same time there were certain things he did not appraise high enough.

Q. You do not know how the committee can find any of those memorandums?

A. No, sir.

Q. Who did you hear say that?

A. At the pool meeting.

Q. They were talking about the plant?

A. Yes, sir, about all the plants.

Q. Didn't they get the New York plant high enough?

A. In my opinion, but I was only one out of seven.

Q. Do you think they got it too high?

A. I do not know.

Q. Did they get it too low in your opinion?

A. No.

Q. You think they got the Manhattan plant too low?

A. I must say it was not too high.

Q. You think the New York was too high?

A. I think it was; I was so impressed at the time, and I told them so.

Q. You think they got the Knickerbocker too high?

A. Yes, sir.

Q. There is no doubt about that?

A. No doubt.

Q. Did you tell them so?

A. Well, I must have told them so for I insisted upon another amount.

Q. Did you tell them the Municipal was too high?

A. I insisted also upon that, that it was too high: I never said any thing against the Mutual; it was a fair valuation.

Mr. Tremain: The figures show that there were some of them who did not contend against, and others who did.

Senator Murphy: He says he was outvoted; that is the substance of his evidence.

The CHAIRMAN: Unquestionably undervalued and outvoted.

9488 Q. Did you say any thing about the Harlem?

A. I think that was one I differed with a great deal; there is no doubt I was correct in my views.

Q. You have not had any reason to change your opinion since?

A. No, sir.

(By the CHAIRMAN:)

Q. Did your company pay any thing for any franchise at any time?

Q. When we started in 1858 we had to; not we but the predecessors had to pay for the franchise.

Q. Who?

A. The owners who had the charter.

Q. The franchise came originally from the people?

A. Yes, sir; it was offered here in the market.

Q. Did the people get any thing for those franchises; did the people sell those franchises to anybody?

A. The whole of those franchises?

Q. Did the people sell any of the franchises of any of these companies that entered into this consolidation?

A. Not that I know of.

Q. The franchises were from the people and given by the people?

A. I do not know that the people ever got any thing.

Q. They were given by the people?

A. Yes, sir, and those that made use of it transferred it to us at a certain percentage.

Q. The franchises came from the people; that is true of all the companies so far as you know of?

A. As far as I know of.

Q. In 1858 what did you buy?

A. The whole franchise for the city of New York for the Metropolitan Gas Company.

Q. What did it include?

A. Rights that we could lay pipes anywhere in the city, for the whole Manhattan Island?

Q. Anything else?

A. Nothing.

Q. It was given by the people to somebody and was sold to their successors for a given sum?

9489 A. Yes, sir; that given sum was $144,000, in one place and in another place more; I do not know how that came.

Q. Take the $144,000—of whom did you buy that?

A. There were at that time three parties who were the main holders of it, and stock was issued, but the stock had hardly any value; nobody would buy it at any price.

Q. Then, stock had been issued upon a bare franchise?

A. Yes, sir, before I was connected with it.

Q. No real property was purchased before you went into it?

A. No.

Q. At the time you purchased something for $144,000, there was no real estate?

A. There was a lot at the corner of Forty-second street that was all, but not fully paid for.

Q. Was it a part of the $144,000, purchase?

A. No, sir; that is another thing.

Q. Then that which you purchased consisted simply of a right which had been grat*itu*ously given by the people, upon the consideration for which stock had been issued?

A. Yes, sir.

Q. There was no real estate, no personal property, and no expenditure so far as you know, as the basis of that capital stock; I mean previous to your purchase?

A. Negotiations were begun but not completed.

Q. Did they own any personal property?

A. They had the refusal of it; that is all; they had not bought it.

Q. They had not bought any personal property?

A. No.

Q. They had not bought any thing?

A. No, but they had expenses.

9490 Q. You will pardon me for interfering: at the time that you made this $144,000 purchase, those of whom you got it had not purchased any thing?

A. No.

Q Property of any kind?

A. No, sir; they had not bought any thing, only transferred what they had begun.

Q. They had incurred some expenses?

A. Yes, sir.

Q. For what?

A. Organization, and I don't know what all; they claimed to have a good deal of stock and issued stock already.

Q. But upon the right that the people had gratuitously given them?

A. Yes, sir.

Q. In the schedules of appraisal heretofore submitted, I see there is a sub-division designated "Rights, Franchises, etc." What is meant by rights as distinguished from franchises?

A. I should say it was another expression for franchise: rights means every thing which is comprised in a franchise.

Q. Will you be kind enough to tell us what franchises your company had at the time of the consolidation, bearing in mind that I use the word franchise as you yourself have defined it? Now, what had you at that time?

A. We had a right under the ordinances of the city to lay mains, service pipes, and to furnish gas and collect those bills afterwards under the laws of the State of New York, and to conduct the business in a manner according to the rules; but every thing was guaranteed to us that we should not be interrupted.

Q. By whom?

A. By the city, provided we got the franchise from the State.

Q. Was any thing said as to its duration?

A. It was thirty years from 1859, I think.

Q. So that would expire in 1889?

A. Eighteen hundred and eighty-nine, yes, sir.

9491 Q. That was really all the right you had, or all the franchise you had, your company?

A. Yes, sir; ours was for the whole Manhattan island.

Q. Did you have a water franchise?

A. Yes, sir; a special grant, a special private dock.

Q. Isn't there a contest over that with the city?

A. For a part of it, but not for the whole. Our charter says that the whole front at Forty-third street belongs to us.

Q. There is a law suit about it?

A. Yes, sir.

Q. The city claims the same front?

A. Not the same front; ours is not in dispute.

Q. So far as you are in possession, there is no dispute?

A. No, sir; according to the lines of our property we go farther.

Q. The West Shore railroad couldn't have a right there unless it was granted by the city?

A. No, sir.

Q. Was there any grant given by the city for water rights for your company?

A. Yes, a private pier.

Q. Isn't it a fact that a part of the water right is disputed by the city?

A. The dock at 42d street; it is.

(By Senator Murphy:)

Q. The city of New York gives the West Shore railroad a lease?

A. Yes, sir.

Q. You claim that that property comes under the old grant given you by the common council?

A. Yes, sir.

Q. My information is that your company claim under this right for a pier still more of the water right than is actually used by them for a pier, and that you are in possession, but the city authorities dispute it?

A. Yes, sir.

Q. And the dock department claim water rights in your immediate front?

9492 A. Not where we are now; we want to extend and they made some objection, and at the same time we had the whole in possession.

Q. You wanted it to extend further into the water?

A. Yes, sir.

(By Senator Murphy:)

Q. You became possessed of this water front property before the establishment of the dock department?

A. Yes, sir, I think so.

Q. How long ago was it ceded to you?
A. In 1859 or 1860.

Senator MURPHY: The dock department has been created only since 1870.

Q. Did you pay the city any thing for that ordinance?
A. I do not know; I do not think so, but I am not certain.

(By Senator MURPHY:)

Q. Did you pay the city any rent for the use of that property after the ordinance was granted?
A. Never.
Q. You got it gratis?
A. We had property belonging to us and we built a dock.
Q. You got the property from the common council?
A. No, sir; only the water rights, the right to have a private dock.
Q. And it didn't cost you any thing?
A. I do not recollect.
Q. And you never paid any rent since?
A. No, sir.
Q. The right to collect bills is a right in common?
A. Like any body else, the same as any body who holds property.
Q. That right was not peculiarly to your company or any other company?
A. No, sir.
Q. In fixing the values of the rights and franchises so-called, as apportioned to your company, was the circumstance of your charter expiring in 1889 mentioned in the committee?
9493 A. I think they all knew it; I do no- know that there was particular mention made.
Q. No particular stress made of it?
A. No, sir, but they all knew it.

HENRY A. PERRY, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. TREMAIN:

Q. What is your present residence?
A. Worth House, New York city.
Q. What has been your familiarity with the real estate in New York city and its valuation in past years?
A. I have been a deputy tax commissioner; putting values upon real estate.
Q. For how long?
A. From 1873 to 1882.
Q. During that period have you had occasion to acquaint yourself with the values of real estate in the city of New York so as to enable you, in your opinion, to form a judgment respecting the market value of lots in New York city?
A. Yes, sir.

Q. Have you examined plots of lots indicated in the schedule in evidence of the New York Gas-light Company?

A. Yes, sir.

Q. By those schedules it appears that exclusive of the mains and what of real estate by way of structures may be included under the term of plant, and of other structures exclusive of the bulk heads, piers and water rights, the so-called real estate of the New York Company has been valued at $1,607,000, for the purposes of my inquiry I assume that valuation to relate exclusively to the lots—the lands without any structures; and upon that hypothesis I would like
to ask you what value you think was a fair market value in
9494 the fall of 1884, for the property designated on that schedule
as "Block No. 1.?"

A. I assessed that at $290,000.

Q. How did you get at that?

A. Placing the valuation by taking in a number of lots, that is, between avenue A and avenue B, Twenty-first and Twenty-second streets, placing the value on the number of lots and the surroundings, allowing for the water front and its advantages, and by its market value in November, 1884, a very little allowance; I allowed more for corner lots averag*er*ing them $5,000 each, and $20,000 allowance for the water front; in bulk $290,000.

Q. I ask you the same question respecting "Block No. 2?"

A. I valued that at $325,000.

Q. For the purpose of informing the committee as to the basis of valuation, give the valuation you have placed upon some of the lots; by way of example?

A. Between avenue A and B, Twenty-first and Twenty-second streets, I allowed $5,000 each, with an allowance of $15,000 extra for water fronts; the inside lots I would value about $4,500, and the avenue lots about $6,000 each, and the corner $7,500; but I valued them all in bulk about $5,000 each, putting the regular *pro rata* upon them; just south of them in a better street, and a better locality and better lots, they were sold for $5,000 each.

Q. You know of the sales?

A. Yes, sir; in July, 1884.

Q. Block No. 3, what do you say about that?

A. Between Avenue A and First avenue, fifty lots—I valued those at $6,000 a lot—$[illegible]00,000.

Q. What was block 2d, the valuation?

A. Three hundred and twenty-five thousand dollars.

Q. The third?

A. Three hundred thousand dollars, there were fifty lots; these
valuations which are placed upon this property I allowed
9495 a little extra on account of their being such large plots.

Q. You gave different values to lots differently situated in the same block?

A. Yes, sir; whether single or in bulk.

Q. Block No. 4, what do you say to that?

A. Twenty-first to Twenty-second street, Avenue A to Avenue B, forty lots $240,000, the same reason.

Q. Block No. 5, what do you say to that, eight lots, Twentieth street?

A. I believe there is 175 feet; I make it seven lots, $42,000; what is called a lot is 25x100.

Q. The value of "Block No. 5," is $42,000?

A. Yes, sir; they assess them only at the rate of $6000; this is on the opposite side, they put a value of $7,000; they allow three feet of each lot.

Q. In view of the sales, you know that in that neighborhood you think the company's valuation on those schedules are excessive?

A. Yes, sir.

Q. What do you say about the bulkhead, pier or water rights; what is the usual method of estimating them—by the foot, excluding the pier?

A. Yes, sir; the work that is done to form the bulkheads, the sinking of cribs and piles, and filling in, from $120 to $125 per foot is very fair for a bulkhead.

Q. On that basis, what would you put as the value?

A. Sixty-five thousand dollars to $70,000; I believe the piers belong to the city; they are very valuable; they extend out to the foot of twentieth and to the foot of twenty-second, forty and fifty feet wide and run out some 400 feet.

Q. We do not ask the question concerning the value of the piers because it has already appeared in evidence that the construction of the piers was paid for by labor and material entering into other
9496 accounts; the question concerning this water front of the New York is limited to your appr-isal or estimate on 500 odd feet of water front in front of this particular real estate?

A. Yes, sir; say $125 a foot.

Q. Making about $65,000?

A. I should judge so.

Q. I do not ask you for the same reason to give any estimate of the value placed as appears upon this schedule marked "A. 3, J. I. G." opposite the item $33,505; I have not asked you about that?

A. No, sir, that comes under real estate; you have included the lot in my other values, all the land that they owned you have received a valuation for.

Q. There is a piece of real estate at the corner of Hester street and Elizabeth that is valued in this schedule at $100,000—what do you say as to that valuation?

A. I placed that at $85,000.

Q. We will take up the Manhattan next; refer-ing to the Manhattan, the first item on the schedule of the Manhattan property, the schedule being marked Exhibit "B. J. I. G," four lots of the block bounded by Tompkins and 14th street, Avenue D and 15th street, and numbered on the set of schedules and the plot to which they refer, as lots Nos. 1835, 1836, 1837 and 1838, and I will also ask you about four other lots on the same block, Nos. 1831, 1832, 1833, 1834, being eight lots facing on Tompkins street, what have you to say as to their value?

A. The corner lot of Tompkins, north side—north corner, $9,000;

three lots adjoining, $6,500 each; the three adjoining, $6,000, and on the corner $8,000. I place a little difference between 14th and 15th street lots.

Q. Making a total for those eight lots of how much?

9497 A. Fifty-four thousand five hundred dollars.

Q. We ask the same question now for the eight lots Nos. 1823, 1824, 1825, 1826, 1827, 1828, 1829 and 1830, being eight lots fronting on Tompkins street, between Fifteenth and Sixteenth streets?

A. Fifty-eight thousand dollars.

Q. How did you get at them?

A. In putting a value on the lots on Fifteenth and Sixteenth streets, I valued them at $8,000 for the corners, and $6,000 for the inside.

Q. The next plot I ask you about is a plot of nine lots, numbering 1806 to 1814, inclusive, on Avenue D, from Fifteenth to Sixteenth streets, in the same blocks?

A. Fifty-eight thousand dollars.

Q. The next question is the same and relates to lots Nos. 1797 to 1805, inclusive; No. "1" on block bounded by Fourteenth and Fifteenth streets on Avenue D, east side?

A. Sixty thousand five hundred dollars.

Q. The next plot is the same question, and relates to lots Nos. 1839 to 1844, inclusive, being six lots on Fourteenth street, in the same block?

A. Thirty-six thousand dollars, at $6,000 each.

Q. The next question relates to the four lots, Nos. 3102 to 3105, inclusive, in the same block, on Fifteenth street?

A. Eighteen thousand dollars, $4,500 each.

Q. The next question relates to eighteen lots on Avenue D, Nos. 1779 to 1796, inclusive, and between Sixteenth and Fifteenth and Fourteenth streets, on the west side, a plot of eighteen lots on the avenue?

A. Fourteenth street corner, $9,500; three adjoining lots, $7,000 each; the next four, $16,500 each; corner $8,500.

9498 Q. Total?

A. Sixty-four thousand five hundred dollars; I make a difference between the north corner and south corner on Fifteenth street.

Q. Why?

A. The south corner of Fifteenth street being nearer to Fourteenth street, and it being a little more valuable; on the north corner of Fifteenth street $8,000, and the seven adjoining lots, $6,000 each.

Q. What is the total of these eighteen lots?

A. One hundred and twenty-three thousand dollars.

Q. The next plot you are asked about is a plot of twenty lots Nos. 1845 to 1864, inclusive, north side between Avenue C and D?

A. One hundred and thirty thousand dollars; $6,500 each.

Q. Ten thousand dollars is an excessive value for those lots, is it not?

A. Yes, sir, very.

Q. The next plot to which your attention is called, is a plot of twenty lots, Nos. 3082 to 3101, inclusive, on the south side of Fifteenth street?

A. Five thousand dollars each; $100,000, total.

Q. The next plot is a plot of twenty lots on Fifteenth street, north side, Nos. 3108 to 3127, inclusive, what do you say about those values?

A. One hundred thousand dollars, $5,000 each.

Q. What do you say as to the next twenty lots, Nos. 3408 to 3427, inclusive, on Sixteenth street, south side?

A. The same—$100,000, $5,000 each.

Q. The next one is a plot of eighteen lots on the east side of Avenue C, Nos. 1681 to 1698, inclusive; that is to say lots 1681 to 1689, inclusive, on Avenue C, east side, between Fourteenth and Fifteenth streets, and also lots Nos. 1690 to 1698, inclusive on the same side of the same avenue between Fifteenth and Sixteenth streets, making eighteen lots on Avenue C, east side?

A. On the northeast corner of Fourteenth street and Avenue
9499 C, the corner $10,500; three adjoining lots $8,000 each; the next four adjoining, $7,500 each; and corner $7,500; north corner of Fifteenth street, $9,500; the seven adjoining $7,000, each, and corner $9,500—total $142,500; between Fourteenth and Fifteenth streets, front $6,500 more in value than Fifteenth to Sixteenth streets on account of Fourteenth street.

Q. The next plot is a plot of nine lots on the west side of Avenue C and Nos. 1672 to 1680, inclusive, being lots between Fourteenth and Fifteenth streets on the west side of Avenue C?

A. Fourteenth street, $10,500, north-east corner; three adjoining lots, $8,000 each; four adjoining lots, $7,500 each; corner $9,500; this is appraised the same as the opposite side of the avenue.

Q. The total for those nine lots?

A. Seventy-four thousand and five hundred dollars.

Q. The next plot is a plot of thirteen lots, on Fourteenth street, north side, Nos. 1865 to 1877, inclusive?

A. I make it thirteen and four-fifths lots; I assessed it in bulk $7,000 each, $96,700; that includes that small piece.

Q. Exclude that; does that estimate in your last answer include a value for one lot adjoining 1877, and marked on the schedule "lot 1878"?

A. Yes, sir.

Q. What do you value lot in the rear of lot 1878, and No. 3068 on Fifteenth street, south side?

A. Four thousand and four hundred dollars.

Q. The next question relates to a plot of thirteen lots on Fifteenth street, south side, Nos. 3069 to 3081, inclusive?

A. Five thousand and five hundred dollars each, making $71,500.

Q. The next question relates to three lots on Fifteenth street, south side, Nos. 3048½ to 3053?

A. There is a gore.

Q. One nearly full lot and the gore?

A. I agree with them on the $12,000.

9500 Q. The next question is a plot of fourteen lots on Seventeenth street, north side, Nos. 3774 to 3787, inclusive?

A. Fourteen lots, $5,000 each; $70,000.

Q. Next is a plot of fourteen lots on Eighteenth street, south side, Nos. 4079 to 4992, inclusive?

A. Five thousand dollars each; $70,000.

Q. For those 227 or 228 city lots of which inquiry has just been made your total valuations as just given amount in all to what sum?

A. One million three hundred and seventy-nine thousand six hundred dollars; that is my estimate.

Q. The estimate on the schedule before and in evidence for those same lots appear to be $1,740,500. The next plot to which I call your attention is a plot of nine lots on the south side of Eighteenth street, Nos. 2058 to 2066?

A. Nine lots, $7,000 each, $63,000.

Q. Seven thousand five hundred dollars each is too high?

A. Yes, sir.

Q. The next is three lots on the south side of Eighteenth street, Nos. 2262 to 2264, inclusive?

A. Seven thousand dollars each, making in all $21,000.

Q. The next is twenty-four lots, north side of Sixteenth street, Nos. 1769 to 1746, inclusive?

A. Six thousand dollars each, $144,000.

Q. The next is twenty-four lots on the south side of Seventeenth street, Nos. 1770 to 1793, inclusive?

A. Twenty-four lots, $6,000 each, $144,000.

Q. The next is twenty-four lots on the north side of Seventeenth street, Nos. 2007 to 2030?

A. Twenty-four lots, $6,000 each, making $144,000.

Q. The next is a plot on the south side of Eighteenth street, twenty-four lots?

A. Six thousand dollars each, $144,000.

9501 Q. The next is a plot of seventeen lots, north side of Eighteenth street, Nos. 2274 to 2290, inclusive?

A. Seventeen lots, $6,000 each, $102,000.

Q. The next is a plot of twelve lots on the south side of Nineteenth street?

A. Six thousand dollars each, $72,000.

Q. The next is a plot of eleven lots on the north side of Nineteenth street?

A. Six thousand dollars each, $66,000.

Q. The next is eleven lots on the south side of Twentieth street?

A. Six thousand dollars, $66,000.

Q. The next is a plot of eight lots on the west side of Tenth avenue, Nos. 313 to 320, inclusive, being between Sixteenth and Seventeenth streets?

A. North-west corner of Sixteenth street and Tenth avenue, $10,000; six adjoining lots, $7,500 each, and the south corner $10,000; total $65,000.

Q. The next is a plot of nine lots on the west side of Tenth avenue, Nos. 304 to 312, inclusive, being between Seventeenth and Eighteenth streets?

A. North-west corner of Seventeenth street and Tenth avenue, 8,500; four adjoining lots, $6,000, and three adjoining lots, $7,500 each, and the corner, $10,000; those lots assessed at $7,500 each, were twenty-three feet, making in all $75,000.

Q. The next is a plot of eight lots, Nos. 296 to 303, inclusive, on the west of Tenth avenue, being between Eighteenth and Nineteenth streets?

A. North-west corner of Eighteenth street, $10,000; six adjoining lots, $7,500 each; corner, $10,000; total, $65,000.

Q. The next is a plot of eight lots on the east side of Eleventh avenue, Nos. 161 to 168, inclusive?

A. The corners, $8,500 each; six inside lots, $6,500 each; total, $56,000.

9502 Q. The next is a plot of eight lots on the east side of Eleventh avenue, Nos. 169 to 176, inclusive, being between Seventeenth and Eighteenth streets?

A. Corners, $8,500 each; $6,500 inside lots; total, $56,000.

Q. The next is a plot of eight lots on the east side of Eleventh avenue, Nos. 185 to 192, inclusive, being between Nineteenth and Twentieth streets?

A. Corners, $8,500 each; six inside lots, $6,500 each; 56,000.

Q. The next is a plot of eight lots on the west side of Eleventh avenue, marked "1," between Thirteenth avenue and Eleventh avenue and Sixteenth and Seventeenth streets?

A. Forty thousand dollars; they put it at $50,000.

Q. The next is a plot of eight lots on the west side of Eleventh avenue, marked "9;" what have you to say to that?

A. One hundred thousand dollars; it is a very valuable piece, and it has four fronts.

Q. Of the 224 lots concerning which you have been questioned last immediately preceding this question the total valuation on this schedule before me and already in evidence and marked Exhibit "B. J. I. G." is footed up to $1,823,000, please state what is the total of your footings of the valuations of those 224 lots as last before given?

A. One million four hundred and sixty-five thousand dollars.

Q. What is the value in your estimation, of the office and dwelling at Irving Place and Fifteenth street, stated in this schedule to be valued at $175,000?

A. I will give you the amount of value only for the land; I have not valued the building.

Q. State the value of those lots separately?

A. The plot fifty-nine by ninety-two and fifty by eighty-four, $80,000.

9503 Q. The next is the Metropolitan; five lots situated on the north-east corner of Avenue A and Sixtieth street?

A. Twenty-two thousand dollars; I agree with them fully on that.

Q. Also for eight lots fronting Avenue A and the west side, between East Sixtieth and Sixty-first streets?

A. Corners, $7,000 each, and six inside lots, $5,500 each; total, $47,000.

Q. Also eight and one-half lots fronting on the north side of Sixtieth street, between First avenue and Avenue A, commencing 100 feet west of Avenue A?

A. Four thousand dollars each, total $34,000.

Q. Also eight and one-half lots fronting on the south side of Sixty-first street, between First street and Avenue A, commencing 100 feet west of Avenue A?

A. Four thousand dollars each, total $34,000.

Q. Also eight lots fronting on Avenue A, on the west side between East Sixty-second and Sixty-third streets?

A. Corners, $7,500 each, and six inside lots, $6,000 each, total, $51,000.

Q. Also thirteen and one-fourth lots fronting on the south side of Sixty-third street, and commencing 100 feet west of Avenue A?

A. Four thousand five hundred dollars each, total, $59,625.

Q. Also fifteen and one-fourth lots fronting on the north side of Sixty-second street, and commencing 100 feet west of Avenue A?

A. Four thousand dollars each, $61,000.

Q. Also eight lots fronting on Forty-first street on the north side, between Tenth and Eleventh avenues, commencing 100 feet east of Eleventh avenue?

A. Five thousand dollars each, $40,000.

Q. Also eight lots fronting Tenth avenue on the west side from the north-west corner of Sixty-fifth street to the south-west
9504 corner of Sixty-sixth street?

A. Corners, $8,000 each; six inside lots $6,000 each, $52,000.

Q. Also eight lots fronting Eleventh avenue on the east side, commencing at the northeast corner of Sixty-fifth street and extending to the southeast corner of Sixty-sixth street?

A. Corners, $6,500 each; inside $6,000 each—total, $43,000.

(Reference is here made to the ninth, tenth and eleventh questions following, and also to their answers.)

Q. Also twenty-four lots fronting on the north side of Sixty-fifth street, commencing 100 feet from Tenth avenue.

A. Four thousand dollars each, total $96,000.

Q. Also twenty-four lots fronting on the south side of Sixty-sixth street, commencing one hundred feet west of Tenth avenue?

A. Four thousand dollars each, total, $96,000.

Q. Also six inside lots fronting on the west side of Eleventh avenue between Forty-first and Forty-second streets?

A. Forty thousand five hundred dollars.

Q. Also one lot the north-west corner of Eleventh avenue and Forty-first street?

A. Eight thousand dollars.

Q. Also one lot the south-west corner of Eleventh avenue and Forty-second street?

A. Eleven thousand dollars.

Q. Also twenty-eight lots fronting on the north side of Forty-first street between Eleventh and Twelfth avenues, commencing about one hundred feet west of Eleventh avenue?

A. Four thousand dollars, total, $112,000.

Q. Also the twenty-eight lots fronting on the south side of Forty-second street between Eleventh and Twelfth avenues, commencing about one hundred feet west of Eleventh avenue?

A. Seven thousand dollars, total, $196,000.

9505 Q. Also six lots fronting on the north side of Forty-second street between Eleventh and Twelfth avenues, commencing one hundred feet west of Eleventh avenue?

A. Seven thousand five hundred dollars each, $45,000.

Q. You think there is an error in the schedule here?

A. Yes, sir.

Q. What is here Forty-second street, should be Eleventh avenue?

A. Yes, sir.

Q. Also eight lots fronting on the west side of Eleventh avenue between Sixty-fifth and Sixty-sixth streets?

A. Corners, $6,500 each; inside lots $5,000 each, total $43,000.

Q. Also seventeen and seventy-five one hundredths lots having a frontage of 199 feet and nine inches on the north side of Sixty-fifth street, and 243 feet nine inches on the south side of Sixty-fifth street, between Eleventh avenue and the Hudson River railroad cut, commencing 100 feet west of Eleventh avenue?

A. That railroad cut down there is very bad. Seventeen lots, $60,000.

Q. The total values to which you have just testified of the lots as stated in the questions and answers, of the Metropolitan Company amount to what sum?

A. One million one hundred and forty-seven thousand one hundred and twenty-five dollars.

Q. The total by the schedule in evidence as it appears now before me, and from which the preceding questions were asked, appears to be $1,424,250 unless there be an error in the addition; this amount I find in pencil on the schedules; your amount seems to be less?

A. Yes, sir.

Q. You are satisfied that your values are according to the fair market price?

A. Yes, sir.

Q. Is there room for such difference of opinion as would be indicated upon the schedule before me and your figures?

A. I think not.

9506 Q. The property is of a character whose values are readily arrived at?

A. Yes, sir.

Q. With a degree of certainty?

A. Yes, sir.

(By the CHAIRMAN:)

Q. Also fifty-seven lots bounded by the west side of Twelfth avenue and the center line of Forty-first street and the west side of the former Thirteenth avenue at Third avenue and the centre line of

Forty-second street, with water rights and grants as to wharfage, cranage, etc.?

A. I have put no valuation upon those fifty-seven lots, because the boundary reads as follows:—Bounded by the west side of Twelfth avenue and the centre line of Forty-second street, and west side of the former Thirteenth avenue, and centre line of Forty-second street, with water rights and grants as to wharfage, cranage, etc.

Q. You mean you have not made an estimate?

A. Yes, sir.

Q. How far are those lots filled in?

—. About seventy feet east of Twelfth avenue.

Q. The balance of the lots extend under water, do they not?

A. Yes, sir.

Q. Out to the pier?

A. Yes, sir; they claim that they own even beyond the pier according to this map, but I am told that they wanted to build up and they would not be allowed to. There is a bulkhead line of fifty-seven lots established by the Dock Department of 1871, and the pier line extending into the water. I call your attention to the schedule of the Harlem real estate which has been submitted in evidence heretofore, and on which the value of lots owned by the Constituent Harlem Company is stated at $604,000, and ask you, without going into detail respecting the valuations of the different lots there specified, whether you looked at the property?

A. Yes, sir, each and every appraisal with the exception of
9507 the King's Bridge road plot that I am very familiar with.

Q. What have you to say as to the total value of all the plots that are valued at $604,000 on that schedule—what is your valuation?

A. Five hundred and two thousand five hundred dollars.

Q. How did you arrive at that $503,500?

A. By going over the ground and looking at the same.

Q. State the items of your valuation?

A. Well, first is eight lots on Avenue A, and eight on First Avenue, and nine lots on the north side of One Hundred and Tenth street, and seventeen lots on the south side of One Hundred and Eleventh street—total valuation $203,000. The First avenue lots you might say, $6,000, all told. The avenue fronts each $48,000; $4,500 each on First avenue, first with Pleasant avenue; seventeen lots on One Hundred and Tenth street, $3,000 each—total, $51,000; seventeen lots on south side of One Hundred and Eleventh street, $4,000 each—total, $68,000.

Q. What are the lots on One Hundred and Tenth street assessed at in the tax office?

A. Seven hundred dollars each which is about fifteen per cent. of the valuation put upon the same lots by the gas company.

Q. And on One Hundred and Eleventh street?

A. One thousand two hundred dollars each which is about twenty-five per cent. of the valuation placed by the gas company's expert.

Q. As a general rule, about what proportion to the market value, salable value, is the tax assessed value?

A. That should be sixty per cent.; I don't say they are, understand.

Q. When you say the assessed value for tax purposes of those lots is $700 to $1,200, do you allude to the year 1884 or thereabouts?

A. Yes, sir; I do.

9508 Q. Refer to the next plot that is stated on the schedules and give your valuations?

A. Six lots on First avenue and eight lots on the north side of One Hundred and Eleventh, and two on the south side of One Hundred and Twelfth, between Avenue A and First avenue, avenue lots $6,000 each, total $36,000; One Hundred and Eleventh street, lots $4,000 each, total $32,000; One Hundred and Twelfth street, two lots $4,000 each, total $8,000; all told, $76,000.

Q. Please refer to the next plots indicated on the schedule opposite the words "block 226 valued at $200,000," and give your valuations?

A. Eight lots west side of First avenue, $6,000 each, total $48,000; twelve lots north side of One Hundred and Tenth street, $4,000 each, total $54,000; fifteen lots south side of One Hundred and Eleventh street, $4,500 each, total $67,500; gore, $3,500, total $163,000.

Q. The next plot is a plot marked on the schedule "block 227" and valued at $53,000; what are your valuations?

A. Forty-five thousand five hundred dollars.

Q. The next plot, that is valued at $28,000; what is your valuation?

A. Fifteen thousand dollars.

Q. Why is there such a great discrepancy?

A. I cannot give theirs, my own is full value; I think it is assessed for less than $10,000, including a tank belonging to the company, a large tank up there; they put a value on the tank.

Q. It is real estate, because it is a structure, is it not?

A. Exactly; they assessed it less than $10,000.

Q. We will now inquire concerning the lots of the Municipal that
appear to have been scheduled at a valuation of $889,000,
9509 and using the Exhibit marked "D J I G.," I would first call
your attention to the plot described as block 225 in the
twenty-second ward, bounded by Forty-fourth and Forty-sixth streets, Eleventh avenue and Hudson river, and which also included block "225 A. and block 226 A.;" you recognize the property?

A. Yes, sir.

Q. Have you seen it?

A. Yes, sir.

Q. Been on the ground?

A. Yes, sir; been on the ground.

Q. In the schedule I have just indicated, and opposite the items just read appear the figures with values of $1,083,000; what is your estimate of the values of the four plots just designated?

A. Five hundred and twenty-eight thousand two hundred dollars.

Q. In arriving at that valuation, did you include any structures of any kind whatever?

A. None.

Q. In arriving at that valuation what did you include?

A. All the land above and under water as described on the maps.

Q. You mean the maps in the schedule from which I have just read?

A. Yes, sir.

Q. Did you value the lots separately?

A. Each block by itself.

Q. Did you count the number of lots?

A. Yes, sir.

Q. Did you observe any discrepancy between the number of lots stated in the schedule from which I have just read, and the actual number of lots as shown by the map or by the property?

A. The total of the lots is the same, but they have fifty-four and three fourth lots on their schedule above water when it should read forty lots.

Q. Explain that?

A. If you will look on the map at block 226, and then compare it with a statement of block 226, the statement reading fifty-
9510 four and three-fourth lots, you will see there are but forty; if you will look at "226 A" map, and schedule "226 A" it reads forty lots instead of fifty-four and three-fourths; all with the exception of eight that face Twelfth avenue are under water.

Q. Being less valuable?

A. Very much; 75 per cent. less.

Q. The schedule reads 32 lots under water on block 226 A; there are in fact more under water, are there not?

A. Yes, sir.

Q. How many more?

A. Fourteen and three-fourths lots more.

Q. Under water?

A. Under water.

Q. Block No. 226 in the schedule reads 54¾ lots; how many are there according to the map?

A. Forty.

Q. How did you estimate the lots?

A. Twenty-five by one hundred.

Q. Block 225 reads 53 lots: that is 52, 25x100, and one lot 16x 100?

A. That is 52 2-3; that is correct.

Q. Block 225 A reads, 54¾ lots, eight above water and thirty-two under water?

A. That only accounts for forty.

Q. How many lots were there?

A. Fifty-four and three-fourths lots I allowed.

Q. Were there?

A. I suppose there were; when I came to look out in the water I take that as a guide; I went down to the tax office and they couldn't give me any information about that; I have examined the maps and could not get the exact number of the lots.

Q. Did you give your values assuming the number of the lots existed as stated in the schedule on that block?

A. Yes, sir; I did.

Q. Your values as just given include the values of lots under water?

A. Yes, sir.

9511 Q. What have you to say as to the method of estimating for marketable purposes, the value of such lots?

A. About twenty-five per cent. of the value of upland lots is very liberal.

Q. Does the fact that there is an adjoining lot under water add to the value of the lot that is exposed on land?

A. Certainly.

Q. When therefore you give the true value of the lot that is exposed on land does not such true value include some value for the adjoining lot under water?

A. Yes, sir.

Q. It must, must it not?

A. Certainly.

Q. Did you make the estimate to which you have just testified for the lands or lots out of water upon this basis?

A. Yes, sir; I made quite an allowance.

Q. What is a fair method of estimating the water rights adjoining this property of the Municipal, which you have just valued, if, in fact, there be any value in addition to the value of the lots as you have just given them?

A. I would place it about $100 to the foot.

Q. How many feet front was there in this property?

A. About 520 feet.

Q. That would be about $52,000?

A. Say $65,000.

Q. Now I observe in this schedule an item of 517 feet of bulkhead, valued at $52,500; isn't the value of that bulkhead, in your opinion, fairly included within the value of the lots exposed and out of water which you have already given?

A. No, sir; that is not in my estimate of $1,000 for lots under water.

Q. The estimate which you have just given includes an estimate for lots under water at what figure?

A. One thousand dollars each.

Q. And lots above water exposed at what figure?

A. Four thousand dollars each.

9512 Q. Are such lots as those designated capable of being accurately valued for marketable purposes?

A. Yes, sir.

Q. Do you know of sales in accordance with the values you have given?

A. I found some offers at my figures; they are valued at the price I have placed values on now; I call your attention now to the schedule marked "E. J. I. G." being the schedule of properties of the Knickerbocker Company, which by the books of the Consolidated Company appear to have been valued at $480,000, for their real estate and by this schedule the lots of which inquiry is about to be made of you appear to be valued at $550,000?

A. Yes, sir; that is their estimate.

Q. Have you examined the lots against which that estimate appears in these schedules, which are located in the Twelfth ward, between Ninety-eighth and Ninety-ninth streets, Second avenue and Harlem river?

A. Yes, sir; I have.

Q. What have you to say in respect to the fair values of those lots?

A. Three hundred and sixty thousand dollars, I make them.

Q. Does that include lots under water?

A. No, sir.

Q. Why not?

A. There are no lots under water.

Q. How do you arrive at your item?

A. I valued the lots between First and Second avenues, 201x650 feet in all, fifty-two lots, at $4,500 a lot, total $234,000; the other block from the Harlem river to First avenue, thirty-six lots, at $35,000 a lot, total $126,000; all told $360,000.

Q. Are those lots capable of being valued with any great degree of accuracy?

A. Yes, sir; from sales that have been made surrounding and what they are now valued at.

9513 Q. If there be any water rights in addition to the values just stated by you for that block fronting on the Harlem river between Ninety-eighth and Ninety-ninth streets, what are they?

A. Twenty-five thousand dollars to $30,000; $125 a foot.

Q. Twenty-five thousand dollars to $30,000 is sufficient to cover what?

A. The bulkhead.

Q. Do I understand you have made a personal examination at the request of the chairman of the committee of property surrounding that which you have just testified?

A. Yes, sir.

Q. In doing so it occupied a very considerable time, did it not?

A. Yes, sir.

Q. These values you have testified to are not such values as in the discharge of your duties if you was an official to assess for taxable properties that you would assess these lands at?

A. Certainly not; these are market values.

Q. The assessed values, I understand you would be about sixty per cent. of the market value?

A. Yes, sir; sixty per cent. of my values.

(By the CHAIRMAN:)

Q. Are these lots so situated including their surroundings that they are capable of being valued with a great degree of accuracy?

A. Yes, sir, very readily.

Q. For the most part, they have a recognized market value?

A. Yes, sir.

Q. Which you have stated?

A. Yes, sir.

MICHAEL COLEMAN, a witness called by the counsel to the committee, being duly sworn, testified as follows:

Examined by Mr. TREMAIN:

Q. You are holding what position?

A. Commissioner of taxes.

Q. Do you know Mr. Perry, the last witness?

A. Yes, sir.

9514 Q. What do you know about Mr. Perry's familiarity with real estate values and ability to judge of their market value?

A. Well, he was a clerk in our department for several years and was promoted as deputy; he has had experience in the tenement districts as to the value of lots in those districts and also he has had some experience in the valuing of water fronts on account of the position he had as deputy in the Twelfth ward, and of property adjoining the water front.

Q. Should you consider him a fair expert and competent to estimate the values of lots located in the following described portions of the city of New York, viz: in Fourteenth, Sixteenth and Twenty-second in the twelfth and nineteen- wards?

A. I should consider him rather a competent man to value property generally speaking, without there is some exceptional considerations that ought to be taken out of the line of ordinary property.

Q. Mr. Perry has been asked concerning the values of lots on which various gas properties in the city are located along the east side of the city near Fourteenth, Twenty-third and Ninety-ninth streets and also on the west side of the city in Forty-second, Sixty-fifth and Fourteenth streets taking several plots at each location I have named?

A. I should say that he was competent without as I said there was some extraordinary points that perhaps might be considered by an expert in values taking in some considerations that a competent ordinary man would not really know, unless he was experienced in regard to water fronts, or from whatever the cause might be.

Q. Excluding the costs of water fronts and the costs of their improvements, is there any other qualification you would fix to your answer?

A. No, sir.

9515 Q. My question, of course, relates exclusively to vacant lots?

A. Yes, sir.

Q. I speak of the valuation of lots apart from any structures upon them?

A. That is the way I understand it.

Q. Are you familiar with the properties I have indicated in these questions?

A. Not any more so than I am, generally speaking, throughout the city.

Q. Are you familiar with the values of real estate throughout the city?

A. Yes, sir.

Q. State your degree of familiarity and from what source it is derived?

A. From the experience I have had in the past twenty years in buying and selling, examining and estimating the market values of property on complaint of citizens, generally speaking, who have filed their objections in the tax department since 1868.

Q. As a matter of administration or fact, is there not usually a difference between the assessed value of city lots for taxable purposes and their actual selling value in the market?

A. We generally try to get below the market value.

Q. About how much is the market value above?

A. Throughout the city we are on a basis now of about seventy-eight per cent. but of course there are exceptions in all locations.

Q. There has been considerable testimony delivered this afternoon as to the value of a large number of pieces of property, and without asking you to go over all those values, I will by way of illustration, so as to see whether the testimony is in all respects or in some respects in accord with your judgment; I will inquire of you in one or two instances, calling your attention to the block between Forty-first and Forty-second streets and Eleventh and
Twelfth avenues, twenty-eight lots on one side on Forty-
9516 second street and twenty-eight lots on Forty-first street, I
would like to ask you whether you think $7,000 a lot for the twenty-eight lots on Forty-second street is not a fair and full value?

A. It is a fair value for all ordinary purposes, taking one lot at a time.

Q. Suppose you take twenty-eight lots?

A. You would have to add on a percentage there for connection, it is a very hard matter in New York for parties seeking large plots in that neighborhood and up to Ninetieth street to get twenty-five to thirty lots without paying a percentage over ordinary selling value; $7,000 is as fair a value as any expert could put on one or two lots; but if you could value that, you would have to add on a percentage.

Q. What would you value the entire block at?

A. It is a third rate tenement street or else a factory neighborhood and do you want me to take in these Eleventh avenue fronts?

Q. Yes, sir.

A. Well, as a plot that property would perhaps sell at $390,000; that is add on a percentage for the collections, but separately it would not sell for that price.

Q. From Twentieth to Twenty-second street and from the river to Second avenue; give us an idea of the valuation of the lots?

A. All my answers are for ordinary use; they would run along there for ordinary use in the neighborhood of $5,000.

Q. What do you say about the value of lots between Eleventh and Twelfth avenues and Forty-fourth and Forty-fifth streets?

A. Single lots there perhaps about $4,500.

Q. Worth any more on the avenue than on the side streets?

A. Yes; all avenue lots are worth more; that is the future for business; corners are worth a great deal more in proportion
9517 in tenement neighborhoods than in private neighborhoods.

Q. How do you assess the lots under water, how would you value them at their market value?

A. That is altogether owing to the foundation of river bed, the depth of water, the cost of cribbing out, the cost of filling in, the difficulty of getting the filling, and the current; there are many elements to be taken into consideration.

Q. What do you think would be a fair value?

A. That would be owing to the surroundings.

Q. Between Forty-fourth and Forty-fifth streets for water lots what relation to the upland values would those lots have?

A. It is a very difficult question to answer.

Q. For purposes of assessment what proportion of value is given to such lots under water in proportion to upland lots?

A. We place but small assessments, for the reason they are no expense to the city, and it is a difficult matter to find what will be the necessary cost of filling out and improving them to make them in such a condition as to make them marketable.

Q. If you put a valuation, say of about $4,000, on an exposed lot, about what would you put the valuation of a lot under water adjoining it?

A. It would be a difficult matter for any one to understand, the difficulty of putting values in proportion to upland lots without knowing the location exactly.

Q. At the foot of Forty-fourth and Forty-fifth streets?

A. It would be a difficult matter; I don't know the soundings.

Q. What are they worth, ordinarily speaking, in the market?

A. It is all a matter of what they would be used for.

Q. Would you not say that twenty-five per cent., in comparison with the upland value at that point, would be fair?

A. Very liberal.

9518 Q. Without making any very close examination, can you state about what the value of lots is between First and Second avenues, Ninety-eighth and Ninety-ninth streets?

A. That is all filled in around there, and I should judge they would run for street lots about $3,500; avenue lots, inside, $4,500; and the corners thirty per cent. added on to inside avenue lots. No single lot in that block would hardly be built on without an extra addition of cost on account of its value.

Q. Consequently the values you would put would be too high for a single lot?

A. Yes, sir; no one could afford to buy single lots; in that location it would be necessary for a purchaser to take several lots at once.

Q. Would you not think that taking that block, then, and averaging all the lots at $4,000, or $4,500, would be a very liberal value?

A. Very; of course I am answering in regard to ordinary use.

Q. Would there be any serious difference in the values of the block east of the block just mentioned, viz., between Ninety-eighth and Ninety-ninth streets and east of First avenue?

A. No, there would not be any.

Q. In the last questions that I have asked you concerning these two blocks, I have come within the values as testified to by Mr. Perry—I think considerably within—assuming I have come within, do you see any method by which those values could be made more accurate for that particular plot?

A. No, I do not.

Q. Or for any plots I have mentioned to you?

A. No, I do not; in the ordinary way of speaking about values of upland properties, those locations; but you must remember that in placing values upon large plots, upon river fronts, that what parties pay for them and what parties ask for them some-
9519 times are not the ordinary values but extraordinary values;
the manner in which they are purchased and the use made of them after they are purchased, all those are elements that ought to go in when you are speaking of large plots.

Q. Well, if property is in use for gas making purposes, and it is to be valued on account of a disuse of those purposes or for a continuance of the use of the same purposes, would either of those circumstances argue to increase the value, the salable value, the marketable value of those lots, above what an ordinary expert seeing them in their present use would place upon them?

A. Oh, very much indeed.

Q. Well, how?

A. Gas corporations in New York have selected locations to suit their particular kind of business; their plant is there, their mains are all connected; and privileges of their water-fronts which are special privileges in New York because we have only so much water-front here, and if they were altered to suit their purpose, would have far greater values. If for ordinary purposes or a disuse of property, then Mr. Perry's estimate of value I should consider as good as you could get, with the exception of what I say in regard to the mechanical improvements that ought to be made on bulkheads or the extension of bulkheads.

Q. Mr. Perry has not been asked about that; is there any other way, in your opinion, of arriving at the fair value of any of the plots of ground to which I have called your attention, except to send a competent expert acquainted with the values of the lots, and procure his estimate of appraisal of those lots?

A. Not as single lots.

Q. Is there, in your opinion, any other fair method of obtaining a fair aggregate value of any plot of lots of less than a
9520 block, or if a block except by sending a competent expert to
appraise the lots?

A. Now, you are talking of it as a whole?

Q. As a plot of lots or part of a block say?

A. Not by taking one single lot, or part of blocks, one with another; there is no other way.

Q. Supposing you want to get at the fair value of a piece of property, including real estates and structures upon it, and the fixtures, and a distinction is made between the value of the ground and what is upon it. The fair way is to ascertain the value of the ground, as ground is one element in the total of valuation?

A. Yes, sir; that is the foundation of values, of course.

Q. And the values which Mr. Perry has put upon these grounds seems fair to that extent?

A. Yes, sir.

Q. And then you go on and get the value of the plant, if there is one, and add that to it?

A. Yes, sir; but there is a connecting element that ought to be taken into consideration. The plant that has been put upon those grounds, if it is a prosperous plant, that element enters into its value together with the location, and should certainly be taken into account, and in getting at the value, you should have both together.

Q. You have got to get at the value of the land as one element?

A. Yes, sir.

Q. Mr. Perry has done that fairly, as far as you can see?

A. Yes, sir.

Q. If there is any thing in your testimony that you have not clearly explained, please do so?

A. My testimony is in regard to land in its natural state, and vacant with the improvements of streets surrounding it, the naked land.

Q. When you are getting at the value of land as land, we have it as far as you can see, and Mr. Perry has done it intelligently and fairly?

A. I should judge so, as far as I can see.

APPENDIX K.

Comparison of

Chapter 960, Laws of 1867.	Chapter 367, Laws of 1884.
An act to authorize the consolidation of *corporations organized under the law of February* 17, 1848.	An act to authorize the consolidation of *manufacturing corporations.*
§ 1. Any two or more corporations heretofore organized *under the law of* 1848, *may consolidate as follows:*	Any two or more corporations heretofore *or hereafter* organized *under any general or special law may consolidate as follows:*
The *trustees* shall meet and agree upon details as to name, location, trustees, capital stock (*which shall not be larger in amount than the aggregate amount of capital of the consolidating companies*), number of shares and other details, *not inconsistent with the laws of February* 17, 1848.	The *boards of directors* shall meet and agree upon details as to name, location, trustees, capital stock (*which capital shall not be larger in amount than the fair aggregate value of the property, franchises and rights of the consolidating companies*), number of shares, *term of existence* (*not over fifty years*), and other details. (Last clause, law of 1867, omitted in law of 1884, but see § 4).
§ 2. The agreement of the directors shall become that of the corporations only on the assent of two-thirds of the shares of stock of each company at a meeting duly called and advertised.	Same.
Any stockholder who dissents at this meeting or within twenty days may, or the company may, apply to the Supreme Court for the appointment of appraisers to hear and determine the value of such stockholder's shares.	Same, but the application to the Supreme Court must be *within sixty days after such dissent.*
Upon valuation of such shares, and payment of the amount appraised to the stockholder, the new corporation becomes owner of such shares.	Same.
§ 3. When duplicates of the agreements and verified copies of the proceedings of the stockholders' meetings shall be filed with the county clerk and the secre-	Same.

tary of State, the corporations shall be merged in the new corporation, and the details of such agreement shall be carried into effect. *But such new corporation shall have no larger powers than are granted by the law of February* 17, 1848.	(This sentence, law of 1867, omitted in law of 1884, but see § 4.)
§ 4. New corporation shall possess general powers and restrictions under 1 R. S., title 3, chap. 18, and under law of February 17, 1848.	Same.
§ 5. All rights, franchises and property of old corporations shall belong to the new.	Same.
§ 6. Rights of creditors protected.	Same.
§ 7. New corporation limited to the transaction of *one kind of business authorized by the law of* 1848.	New corporation allowed to carry on *any business authorized to the consolidating corporations or either of them.*
§ 8. This act shall take effect immediately.	Same.

9522

APPENDIX L.

FORM OF REPORT FOR GAS COMPANIES IN USE IN LONDON.

The following is the form of the report provided by law, made for the first half year of the year 1885, for the Gas-light and Coke Company of London, exhibiting the method of stating for public information and for official use the details of capital, dividends, receipts, payments, supplies, materials, cost of manufacture, cost of gas, quantities manufactured, amount of sales, appreciation, depreciation, expenses, and general revenues, and all the general business of the company for one half year.

The capital of this company represents the equivalent of about $54,000,000. It sells gas at a maximum price of seventy-two cents per thousand cubic feet; it pays dividends varying upon different classes of shares, from five per cent. to ten per cent. per annum, and manufactures 8,479,915,000 cubic feet of gas in six months. (See committee's report pages .)

REPORT.

TO BE SUBMITTED TO THE PROPRIETORS AT THE ONE HUNDRED AND FORTY-SEVENTH HALF-YEARLY ORDINARY GENERAL MEETING TO BE HELD ON THE 7TH AUGUST, 1885.

The Directors submit herewith the accounts for the half-year which ended on the 30th of June last. They show receipts amounting to £1,542,586 1s. 2d., and outgoings (including provision for all fixed and preferential charges) amounting to £1,217,016 9s. 9d. The balance of £325,569 11s. 5d., added to the surplus profit, brought forward from the last account, amounts to £517,764
9523 16s. 4d., out of which the Directors recommended a dividend on the ordinary stock at the rate of 12 per cent. per annum.

The sale of gas continues to increase satisfactorily; and the wear and tear account, while every regard has been paid to the maintenance of efficiency, is again reduced. The cost of coal compares favorably with its cost in the corresponding period of last year, but the prices of tar and ammoniacal liquor and their products continue much depressed. There are, however, the Directors are happy to say, indications of improvement in some classes of this branch of their trade.

Parish rates and taxes, which show a still further increase, prove every year more onerous. In view of the growth of parochial expenses, and of the quinquennial reassessment now being made, the Directors have little hope of any diminution of these most serious charges upon the company.

The capital account, it will be observed, has been slightly reduced by the amount received for superfluous land which has been sold.

The application of the Vestry of the Parish of Kensington for a reversal of the judgment of the Court of Queen's Bench in the Steam Roller case has been heard. The Lord Justices of the Court of Appeal unanimously upheld the judgment of the Lower Court in favor of the company on every point raised.

WILLIAM THOMAS MAKINS,
Governor.

HORSEFERRY ROAD, WESTMINSTER, S. W., *24th July,* 1885.

9524 CONSTRUCTION AND CARBONIZING DEPARTMENT.

I hereby certify that the whole of the company's manufacturing and other stations under my charge have been maintained, and are now in good working order.

(Signed) G. C. TREWBY,
Constructing and Carbonizing Engineer-in-Chief.

HORSEFERRY ROAD, WESTMINSTER, S. W., *22d July,* 1885.

Distribution Department.

I hereby certify that the whole of the distribution plant is in good order, and in a thoroughly efficient state of repair.

(Signed) ROBERT HARRIS,
Distributing Engineer.

146 Goswell Road, E. C., *22d July*, 1885.

Products Department.

I hereby certify that the whole of the plant, engines, boilers, stills, trucks, machinery and tools in connection with the company's products works under my charge have, during the past half-year, been maintained in good working order and repair.

(Signed) THOS. WILTON,
Superintendent of Products Works.

Beckton, *24th July*, 1885.

No. 1—*Statement of stock and share capital on the 30th June*, 1885.

Acts of Parliament relating to the raising of capital.	Description of capital.	Standard dividend. Per cent.	Total paid up.	Remaining to be called up and unissued.	Total amount of existing capital powers.	Amount cancelled.	Total amount originally authorized by acts.
The Gas-Light and Coke Company's act, 1868	A. ordinary stock	10	£1,545,390 0 0		£1,550,000 0 0		£1,550,000 0 0
	A. preference convertible stock, 1st issue	5	1,170 0,0				
	A. preference convertible stock, 2nd issue	5	930 0 0				
	A. preference convertible stock, 3rd issue	5	2,510 0 0				
The Gas-light and Coke Company's act, 1872	A. ordinary stock	10	987,410 0 0		1,000,000 0 0		1,000,000 0 0
	A. preference stock, 4th issue	5	7,970 0 0				
	A. preference stock, 5th issue	5	4,620 0 0				
The Victoria Docks Gas act, 1857	A. ordinary stock	10	100,000 0 0		100,000 0 0		100,000 0 0
The City of London Gas Company's act, 1850	A. ordinary stock	10	300,000 0 0		400,000 0 0		400,000 0 0
	B. stock	*4	100,000 0 0				
The companies act, 1862, as applied to the Western Gas-light Company, limited	A. ordinary stock	10	600,000 0 0		600,000 0 0		600,000 0 0
The Imperial Gas act, 1854	A. ordinary stock	10	1,560,000 0 0		1,560,000 0 0		1,560,000 0 0
The Great Central Gas Consumers' act, 1851	C. preference stock	10	200,000 0 0		200,000 0 0		200,000 0 0
The Equitable Gas-light Company's act, 1842	D. preference stock	10	300,000 0 0		300,000 0 0		300,000 0 0
The Independent Gas-light and Coke Company act, 1864	E. preference stock	10	165,000 0 0		255,000 0 0		255,000 0 0
	F. preference stock	5	30,000 0 0				
	G. preference stock	7½	60,000 0 0				
The Imperial Gas act, 1866	H. stock	*7	325,000 0 0		325,000 0 0		325,000 0 0
The Imperial Gas act, 1869	H. stock	*7	975,000 0 0		975,000 0 0		975,000 0 0
The London Gas-light act, 1852	J. preference stock	10	397,000 0 0		547,100 0 0	£2,900 0 0	550,000 0 0
	Prefer'ce stock or shares.	6		£150,000 0 0			
The London Gas-light act, 1857	Prefer'ce stock or shares.	6		26,542 12 6	26,542 12 6	8,358 12 6	34,901 5 0
The London Gas-light act, 1860	J. preference stock	10	69,438 0 0		369,438 0 0		369,438 0 0
	Prefer'ce stock or shares.	6		300,000 0 0			
The Gas-light and Coke Company act, 1876	A. ordinary stock	10	375,000 0 0		1,000,000 0 0		1,000,000 0 0
	Ordinary stock or shares.	10		625,000 0 0			
			£8,108,538 0 0	£1,101,542 12 6	£9,208,080 12 6	£11,258 12 6	£9,219,339 5 0

* Maximum dividends subject to fall only.

No. 2—*Statement of loan capital on the 30th June*, 1885.

Acts of Parliament authorising the loan capital,	Description of loan.	Amount borrowed.			
		Four per ct.	Four and a qu'rter per ct.	Four and a half per ct.	Six per ct.
The Gas-light and Coke Company's act, 1868	Debenture		£300,000 0 0		
	Debenture stock	£80,000 0 0	50,000 0 0	£32,500 0 0	
The Gas-light and Coke Company's act, 1872	Debenture stock.	250,000 0 0			
The Victoria Docks Gas act, 1857	Debenture	1,000 0 0			
	Debenture stock	24,000 0 0			
The City of London Gas Company's act, 1859	Debenture stock.	38,950 0 0		21,050 0 0	
The Companies act, 1862, as applied to the Western Gas-light Company, limited	Debenture stock			200,000 0 0	
The Imperial Gas act, 1854	Bonds*				
	Debenture	6,000 0 0			
	Debenture stock	37,000 0 0			
The Great Central Gas Consumers' act, 1851	Debenture stock.	54,200 0 0		11,800 0 0	
The Imperial Gas act, 1866	Debenture stock.	81,250 0 0			
The Imperial Gas act, 1869	Debenture	60,000 0 0			
	Debenture stock	183,750 0 0			
The London Gas-light act, 1852	Debenture stock	12,185 0 0			
The London Gas-light act, 1866	Debenture stock.			30,562 0 0	
The Gas-light and Coke Company act, 1876	Debenture stock	300,000 0 0			£475,020 4 2
		£1,128,335 0 0	£350,000 0 0	£295,912 0 0	£475,020 4 2

* Bonds for capitalised profits.

TICAL IN BOOK

No. 2—(Continued).

Acts of Parliament authorizing the loan capital.	Amount borrowed. Ten per cent.	Amount borrowed. Total.	Amount remaining to be borrowed.	Total amount of existing borrowing powers.	Amount cancelled	Total amount originally authorized.
The Gas-light and Coke Company's act, 1868	....	£462,500 0 0	....	£462,500 0 0	....	£462,500 0 0
The Gas-light and Coke Company's act, 1872	....	250,000 0 0	....	250,000 0 0	....	250,000 0 0
The Victoria Docks Gas act, 1857	....	25,000 0 0	....	25,000 0 0	....	25,000 0 0
The City of London Gas Company's act, 1859	....	60,000 0 0	....	60,000 0 0	....	60,000 0 0
The Companies act, 1862, as applied to the Western Gas-light Company, limited	....	200,000 0 0	....	200,000 0 0	....	200,000 0 0
The Imperial Gas act, 1854	£130,000 0 0	173,000 0 0	....	173,000 0 0	....	173,000 0 0
The Great Central Gas Consumers' act, 1851	....	66,000 0 0	....	66,000 0 0	....	66,000 0 0
The Imperial Gas act, 1866	....	81,250 0 0	....	81,250 0 0	....	81,250 0 0
The Imperial Gas act, 1869	....	243,750 0 0	....	243,750 0 0	....	243,750 0 0
The London Gas-light act, 1852	....	12,185 0 0	£66,282 10 0	78,467 10 0	£13,200 0 0	91,667 10 0
The London Gas-light act, 1866	....	30,562 0 0	....	30,562 0 0	....	30,562 0 0
The Gas-light and Coke Company act. 1876	....	775,020 4 2	224,979 15 10	1,000,000 0 0	....	1,000,000 0 0
	£130,000 0 0	£2,379,267 4 2	£291,262 5 10	£2,670,529 10 0	£13,200 0 0	£2,683,729 10 0

No. 3—*Capital account for the half year ending 30th June, 1885.*

		Amount expended this half year.	Total expenditure to 30th June, 1885.
Dr.			
To expenditure to 31st December, 1884..............		....	£10,303,814 3 0
To expenditure during the half year to 30th June, 1885, viz.:			
New and additional mains and service pipes....		£5,418 9 10	
New and additional meters and fittings.........		331 0 5	
			5,749 10 3
			£10,309,563 13 3
Cr.			
By refund of deposit on land purchase	11 8 6		
By sale of surplus land.............	19,170 7 7		
By depreciation of plant.............	14,686 2 9		
By depreciation of meters	7,145 1 6		
			41,013 0 4
			£10,268,550 12 11
To balance of capital account.......................................			520,839 8 10
			£10,789,390 1 9

Cr.	Amount received to 31st December, 1884.	Amount received this half year.	Total receipts 30th June, 1885.
By A. Ordinary stock..........	£5,442,620 0 0	£25,000 0 0	£5,467,800 0 0
By A. 5 per cent. pref. convert. stock, 1st issue	1,170 0 0		1,170 0 0
By A. 5 per cent. pref. convert. stock, 2nd issue .... a	1,070 0 0		930 0 0
By A. 5 per cent. pref. convert. stock, 3rd issue .... a	2,550 0 0		2,510 0 0
By A. 5 per cent. preference stock, 4th issue.	7,970 0 0	....	7,970 0 0
By A. 5 per cent. preference stock, 5th issue	4,620 0 0	....	4,620 0 0
By B. 4 per cent. max. stock...	100,000 0 0	....	100,000 0 0
By C. 10 per cent. pref. stock...	200,000 0 0	....	200,000 0 0
By D. 10 per cent. pref. stock...	300,000 0 0	....	300,000 0 0
By E. 10 per cent. pref. stock...	165,000 0 0	....	165,000 0 0
By F. 5 per cent. pref. stock....	30,000 0 0	....	30,000 0 0
By G. 7½ per cent. pref. stock..	60,000 0 0	....	60,000 0 0
By H. 7 per cent. max. stock....	1,300,000 0 0	....	1,300,000 0 0
By J. 10 per cent. pref. stock...	466,538 0 0	....	466,538 0 0
By 4 per cent. deb. stock........	1,061,335 0 0	....	1,061,335 0 0
By 4¼ per cent. deb. stock.....	50,000 0 0	....	50,000 0 0
By 4½ per cent. deb. stock.....	295,912 0 0	....	295,912 0 0
By 6 per cent. deb. stock........	475,020 4 2	....	475,020 4 2
By debentures	367,000 0 0	....	367,000 0 0
By bonds for capitalized profits.	130,000 0 0	....	130,000 0 0
	£10,460,805 4 2	£25,000 0 0	£10,485,805 4 2
By premium capital—ordinary stock	271,311 8 7	31,261 0 3	302,572 8 10
Debenture stock	1,012 8 9	....	1,012 8 9
	£10,733,129 1 6	£56,261 0 3	£10,789,390 1 9

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a £180 of these issues has been converted into ordinary stock during the half year.

No. 4—*Revenue account for the half year ending 30th June,* 1885.

June half year, 1884.	Dr.	£	s	d	£	s	d
	To manufacture of gas:						
£554,730	Coals, including dues, carriage, unloading and trimming (see account No. 10)....	£542,157	7	5			
10,079	Salaries of engineers and other officers at works	9,333	1	6			
107,015	Wages (carbonizing)	110,404	6	2			
23,717	Purification, including £13,046 14s 8d for labor	23,967	19	4			
150,080	Repair and maintenance of works and plant, materials and labor, less received for old materials, £1,121 6s 2d........	138,160	18	11			
					£824,122	13	4
	To distribution of gas:						
24,656	Salaries and wages of officers (including rental clerks)	£25,242	2	2			
35,811	Repair and maintenance of mains and service pipes	37,748	17	1			
22,184	Repair and renewals of meters and fittings	22,461	8	6			
					85,452	7	9
	To public lamps:						
14,694	Lighting and repairing	£15,096	10	8			
100	Experimental street lighting	223	16	1			
					15,320	6	9
	To rents, rates and taxes:						
3,437	Rents payable	£3,686	12	4			
58,223	Rates and taxes	64,884	10	7			
					68,481	2	11
	To management:						
2,750	Directors' allowance	£2,750	0	0			
200	Company's auditors	200	0	0			
6,815	Salaries of secretary, accountant and clerks	6,871	3	2			
13,578	Collectors' commission	13,671	2	3			
4,392	Stationery and printing	3,303	18	5			
2,329	General charges	2,377	0	6			
					29,173	4	4
....	To parliamentary charges	....			102	0	0
4,602	To law charges	....			3,739	17	0
8,639	To bad debts	....			8,074	6	0
750	To depreciation fund for works on lease hold land	....			750	0	0
10,681	To retiring allowances under amalgamation schemes and annuities	....			12,280	1	6
	To public officers:						
855	Gas referees and official auditor........	£873	8	3			
546	Public testing stations	1,024	4	3			
£1,060,932					1,897	12	6
					£1,049,402	12	1
491,712	Bal. carried to net revenue acct. No. 5.				483,183	9	1
£1,552,644					£1,542,586	1	2

No. 4—(Continued).

	Cr.		
	By sale of gas:		
£1,038,418	Common gas, per meter, at 3s and 2s 8d per 1,000 cubic feet	£1,076,363 13 1	
53,048	Cannel gas, per meter, at 3s 9d per 1,000 cubic feet	54,419 14 7	
	Public lighting and under contracts:		
67,270	Common gas	65,616 12 0	
2,923	Cannel gas	2,790 12 6	
			£1,199,190 12 2
£1,161,656			
	(See statement No. 12.)		
23,795	By rental of meters	....	24,334 19 0
	By residual products:		
188,499	Coke, less £29,195 17s 7d for labor, etc.	£189,264 4 1	
5,863	Breeze, less £1,703 14s 1d for labor, etc.	8,809 3 8	
89,523	Tar and tar products	49,718 16 0	
79,135	Ammon. liquor and sulphate of ammonia	67,309 4 1	
			315,101 7 10
3,650	By rents receivable	....	3,454 14 8
220	By transfer fees	....	204 7 6
300	By canteen account	....	300 0 0
£1,552,644			£1,542,586 1 2

No. 5—*Net revenue account for the half year ending 30th June*, 1885.

June half year, 1884.			
	Dr.		
£57,413	To interest on debentures, debenture stocks and bonds, accrued to 30th June, 1885.	....	£57,412 16 6
	To dividend on the preference stock:		
436	A. 5 per cent.	£430 0 0	
10,000	C. 10 per cent.	10,000 0 0	
15,000	D. 10 per cent.	15,000 0 0	
8,250	E. 10 per cent.	8,250 0 0	
750	F. 5 per cent.	750 0 0	
2,250	G. 7½ per cent.	2,250 0 0	
23,327	J. 10 per cent.	23,326 18 0	
		£60,006 18 0	
	To dividend on the maximum stocks:		
2,000	B. 4 per cent.	2,000 0 0	
45,500	H. 7 per cent.	45,500 0 0	
			107,506 18 0
703	To interest on temporary loans	....	2,694 3 2
515,482	To balance applicable to dividend on the ordinary stock	....	517,764 16 4
£681,171			£685,378 14 0
	Cr.		
£529,504	By balance for last account	....	£532,358 18 2
	Less:		
299.300	Dividend on the ordinary capital for the half year to 31st December, 1884	£326,557 4 0	
40.745	Amount carried to reserve fund for the year 1884	13,606 9 3	
			340,163 13 3
£189,450			£192,195 4 11
491,712	By revenue account (No. 4)	....	493,183 9 1
£681,171			£685,378 14 0

No. 6—*Proposed appropriation of balance applicable to dividend 30th June*, 1885.

June half year, 1884.			
£189.450	Net balance brought from last account (see No. 5)	£192,195 4 11	
326,023	Amount of net revenue for the half year (see No. 5)	325,569 11 5	
£515,482			£517,764 16 4
(12 pr. ct.) 326,553	A dividend on the ordinary stock: 12 per cent. on £5,467,800		327,945 8 0
£188,929	Balance carried to next half year's acct..		£189,819 8 4

No. 7—*Reserve fund account for the half year ending 30th June*, 1885.

Dr.

To balance on 30th June, 1885...	£452,572	16	1
	£452,572	16	1

Cr.

By balance on 31st December, 1884	£432,526	6	5
By interest on amount invested..	6,440	0	5
By net revenue................	13,606	9	3
	£452,572	16	1

No. 8—*Insurance fund account for the half year ending 30th June*, 1885.

Dr.

To balance on 30th June, 1885..	£72,705	19	1
	£72,705	19	1

Cr.

By balance on 31st December, 1884	£71,589	10	10
By interest on amount invested..	1,116	8	3
	£72,705	19	1

No. 9—*Depreciation fund account for works on leasehold loads for the half year ending 30th June*, 1885.

Dr.

To balance on 30th June, 1885...	£25,384	13	2
	£25,384	13	2

Cr.

By balance on 31st December, 1884	£24,244	1[illegible]	0
By amount brought from revenue account for the half year......	750	0	0
By interest on amount invested..	389	15	2
	£25,384	13	2

No. 10—*Statement of coals used, etc., for the half year ending 30th June*, 1885.

Description of coal.	In store 31st Dec., 1884. Tons.	Received during half year. Tons.	Carboniz'd during half year. Tons.	Used during half year. Tons.	In store 30th June, 1885. Tons.
ommon	207,813	697,493	782,286	2,021	120,999
annel	79,684	21,206	27,094	....	73,796
Total	287,497	718,699	809,380	2,021	194,795

No. 11—*Statement of residual products for the half year ending 30th June*, 1885.

Description.	In store 31st Dec., 1884.	Made during half year.	Used in man'fact'e during half year.	Sold during half year.	In store 30th June. 1885.
oke, chaldrons	72,207	974,816	197,423	787,436	62,164
reeze, chaldrons	5,833	107,014	45,779	61,711	5,357
ar, gallons	737,220	8,973,393	*8,485,781	616,968	607,864
mmoniacal liquor, butts	17,520	241,803	*227,770	21,134	10,419

* Used in manufacture of tar products and sulphate of ammonia.

No. 12—*Statement of gas made, sold, etc., for the half year ending 30th June,* 1885.

Description of gas.	Quantity made. Thousands.	Quantity sold.			Quantity used on works etc. Thousands.	Total quantity accounted for. Thousands.	Quantity not accounted for. Thousands.	Number of public lamps.
		Public lights and under contracts. Estimat'd. Thous'nds.	Private lights Per meter. Thous'nds.	Total quantity sold. Thous'nds.				
Common	8,149,874	409,358	7,203,339	7,612,697	107,549	7,720,246	429,628	44,603
Cannel	330,041	14,341	290,238	204,579	2,758	307,337	22,704	2,246
Total	8,479,915	423,699	7,493,577	7,917,276	110,307	8,027,583	452,332	46,849
June half year, 1884	8,231,068	415,413	7,233,928	7,649,341	103,080	7,752,421	478,647	45,270

9535 No. 13—*General Balance Sheet, 30th June,* 1885.

Dr.

To capital:						
Balance at credit thereof (account No. 3)				£520,839	8	10
To net revenue:						
Balance at credit thereof (account No. 5)				517,764	16	4
To reserve fund:						
Balance at credit thereof (account No. 7)	£452,752	16	1			
To insurance fund:						
Balance at credit thereof (account No. 8)	72,705	19	1			
To depreciation fund:						
Balance at credit thereof (account No. 9)	25,384	13	2	550,663	8	4
To redemption fund:						
Balance at credit thereof				11,149	1	9
To interest on debentures, debenture stocks and bonds, due on 30th June, 1885				57,412	16	6
To preference and maximum dividends due on 30th June, 1885				107,506	18	8
To unclaimed dividends due on 30th June, 1885				8,992	13	3
To sundry tradesmen and others, for amount due for coals, stores and sundries				155,287	17	5
To benevolent fund				1,667	6	8
				£1,931,284	7	1

Cr.

By cash at bankers				£128,097	6	9
By amount on deposit at interest				300,000	0	0
By amount invested:						
Reduced three per cent consols, £442,233 4s. 1d. stock	£432,526	6	5			
Three per cent. consols, £77,783 18s. 5d. stock	72,705	19	1			
New three per cent. consols, £26,764 9s. 3d. stock	26,049	1	7	531,281	7	1

9536 No. 13—(Continued).

By stores on hand, viz.:						
Coals	£176,403	0	10			
Coke	12,168	6	0			
Tar and ammoniacal liquor and products	78,771	4	6			
Sundry stores	152,971	12	11	£420,314	4	3
By retiring allowances				28,200	0	0

By accounts due to the company, viz.:

Gas and meter rental:

Quarter ending 30th June 1885...	£467,633	9	10			
Arrears outstanding..................	24,735	10	0			
				492,368	19	10
Coke and other residual products..	£26,130	9	9			
Sundry accounts......................	4,891	19	5			
				31,022	9	2
				£1,931,284	7	1

(Signed) WM. THOS. MAKINS, *Governor.*

Examined and found correct, 23d July, 1885,
(Signed) H. W. CHISHOLM,
FRANCIS FARNAN,
Auditors.

I certify that the above accounts are correct,
(Signed) CHAS. H. PARKES,
Official Auditor.

23d July, 1885.
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9537 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing pages, Volume IV, Exhibits, numbered from 8805 to 9536 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant-Appellee, against Julius M. Mayer, as Attorney General, *et al.*, Defendants-Appellants, as the same remain of record and on file in my office (Vol. IV, Exhibits).

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South Dist. New York.]
JNO. A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit ——— *vs.* ———. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

9537*a* Circuit Court of the United States, Southern District of New York.

Consolidated Gas Company of New York, Complainant,

vs.

Julius M. Mayer, as Attorney General of the State of New York, *et al.,* Defendants.

Before Arthur H. Masten, Esq., Special Master.

EXHIBITS.

Volume V.

S. 9431.

U. S. Circuit Court, Southern District N. Y. Filed June 24, 1907. (Seal.) John A. Shields, Clerk.

9537*b* EXHIBITS.

Volume V.

(Here follows Complainant's Exhibit 370, marked p. 9537*c*.)

9538

COMPLAINANT'S EXHIBIT 371.

DR. MARK'S VALUATION OF THE VARIOUS PLANTS INCLUDING ENGINEERING & INTEREST CHARGES, PLUS OMISSIONS FROM MAYER'S SCHEDULE.

RECAPITULATION OF VALUES OF ALL THE PLANTS.

Works Stations.	Mayer.	Marks.
14th Street Station	$2,754,393.00	$3,143,112.00
18th Street Station	614,819.00	449,366.00
21st Street Station	4,265,126.00	3,199,705.00
42nd Street Station	1,816,347.00	1,501,185.00
44th Street Station	2,077,967.00	1,578,665.00
99th Street Station	1,008,610.00	809,565.00
Total	$12,537,262.00	$10,681,598.00
Holder Stations.		
63rd Street Station	$499,273.00	$504,088.00
65th Street Station	1,436,885.00	1,487,058.00
111th Street Station	1,096,360.00	1,079,841.00
132nd Street Station	540,702.00	569,004.00
Inwood Station	26,995.00	23,446.00
	$3,600,215.00	$3,664,037.00
	$12,537,262.00	$10,681,598.00
Total	$16,137,477.00	$14,345,635.00

14TH STREET STATION.

Dr. Mark's valuation, including depreciation.......		$1,469,064.00
Add depreciation		744,847.00
Total value without depreciation................		$2,213,911.00
9539 *Omissions.*		
8 Holders, Mayer's valuation..............		$507,398.00
Total		$2,721,309.00
General engineering 10%.....................		272,131.00
		$2,993,440.00
Interest charges 5%.........................		149,672.00
Total value of plant		$3,143,112.00
Mayer's valuation	$2,754,393.00	

18TH STREET STATION.

Dr. Mark's valuation, including depreciation		$2,236,627.00
Add depreciation		165,290.00
Total valuation not included in depreciation		$388,917.00
Omissions.		
As per schedule		145.00
		$389,062.00
General engineering 10%		38,906.00
		$427,968.00
Interest charges 5%		21,398.00
Total value of plant not including depreciation		$449,366.00
Mayer's valuation	$614,819.00	

21ST STREET STATION.

Dr. Mark's valuation, including depreciation		$2,094,746.00
Add amount of depreciation		612,304.00
Total value not including depreciation		$2,707,050.00
9540 Omission.		
Per schedule		63,258.00
		$2,770,308.00
General engineering 10%		277,031.00
		$3,047,339.00
Interest charges 5%		152,366.00
Total value of plant not including depreciation		$3,199,705.00
Mayer's valuation	$4,265,126.00	

42ND STREET STATION.

Dr. Mark's valuation including depreciation		$821,468.00
Add depreciation		472,182.00
Total value not included in depreciation		$1,293,650.00
Total omission		6,077.00
		$1,299,727.00
General Engineering 10%		129,973.00
		$1,429,700.00
Interest charges 5%		71,485.00
		$1,501,185.00
Mayer's valuation	$1,816,347.00	

9541

44TH STREET STATION.

Dr. Mark's valuation including depreciation		$1,230,336.00
Add depreciation		132,808.00
Total value not including depreciation		1,363,144.00
Omissions.		
Per schedule		3,665.00
		$1,366,809.00
General engineering 10%		136,681.00
Total		$1,503,490.00
Interest charges 5%		75,175.00
Total value of plant including depreciation		$1,578,665.00
Mayer's valuation	$2,077,967.00	

63RD STREET STATION.

Dr. Mark's valuation including depreciation		$392,796.00
Add depreciation		43,644.00
Total value not including depreciation		$436,440.00
Omissions.		
Per schedule		None
		$436,440.00
General engineering 10%		43,644.00
		$480,084.00
Interest charges 5%		24,004.00
Total value of plant not including depreciation		$504,088.00
Mayer's valuation	$499,273.00	

9542

65TH STREET STATION.

Dr. Mark's valuation including depreciation		$1,205,997.00
Add depreciation		81,499.00
Total value not including depreciation		$1,287,496.00
Omissions.		
None		
Total		
		$1,287,496.00
General engineering 10%		128,750.00
		$1,416,246.00
Interest charges 5%		70,812.00
Total value of plant not including depreciation		$1,487,058.00
Mayer's valuation	$1,436,885.00	

99TH STREET STATION.

Dr. Mark's valuation including depreciation		$568,751.00
Add depreciation		129,974.00
		$698,725.00
Omissions.		
Per schedule		2,198.00
		$700,923.00
General engineering 10%		70,092.00
		$771,015.00
Interest charges 5%		38,550.00
Valuation of plant not included in depreciation		$809,565.09
Mayer's valuation	$1,008,610.00	

9543 111TH STREET STATION.

Dr. Mark's valuation including depreciation		$838,147.00
Add depreciation		96,780.00
Total valuation not including depreciation		$934,927.00
Omissions.		
None		
		$934,927.00
General engineering 10%		93,493.00
		$1,028,420.00
Interest charges 5%		51,421.00
Total value of plant not including depreciation		$1,079,841.00
Mayer's valuation	$1,096,360.00	

132ND STREET STATION.

Dr. Mark's valuation not including depreciation		$493,164.00
Omissions.		
None		
Total value not including depreciation		$493,164.00
General engineering 10%		49,316.00
Total		$542,480.00
Interest charges 5%		27,124.00
Total value of plant not included in depreciation		$569,604.00
Mayer's valuation	$540,702.00	

9544 INWOOD STATION.

Dr. Mark's valuation including depreciation		$10,596.00
Add depreciation		9,704.00
Total value not including depreciation		$20,300.00
Omissions.		
None		
Total		$20,300.00
General engineering 10%		2,030.00
		$22,330.00
Interest charges 5%		1,116.00
Total value of plant not including depreciation		$23,446.00
Mayer's valuation	$26,995.00	

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COMPLAINANT'S EXHIBIT 372.

CONSOLIDATED GAS COMPANY.

	Edgerton's Estimate Depr.	Edgerton's Values, New	Omissions	Edgerton's New Value Including Omissions from Mayer's Sched.
14th Street Plant	$1,405,966.00	$1,558,736.00	$13,279.00	$1,572,015.00
42d Street Plant	1,008,801.25	1,169,297.00	11,216.00	1,180,513.00
44th Street Plant	1,110,878.00	1,201,968.00	14,550.00	1,216,518.00
21st Street Plant...............	2,176,492.00	2,408;233.00	1,610.00	2,409,843.00
99th Street Plant...............	544,708.00	590,366.00	50,493.00	640,859.00
18th Street Plant	234,886.00	284,200.00	10,396.00	294,596.00
63d Street Plant	623,740.00	633,228.00	..	633,228.00
65th Street Plant	892,171.00	927,373.00	..	927,373.00
111th Stret Plant	900,406.00	1,003,623.00	20,000.00	1,023,623.00
132d Street Plant	457,524.00	475,779.00	..	475,779.00
Inwood	11,772.00	13,901.00	..	13,901.00
	$9,367,344.25	$10,266,704.00	$121,544.00	$10,388,248.00
Add to above values for engineering superintendence and inspection, 3 per cent...............	281,020.00	308,001.12	3,646.32	311,647.44
Add for interest on money necessary to be used for construction, 4 per cent..............	374,693.00	410,668.16	4,861.76	415,529.92
	$10,023,057.25	$10,985,373.28	$130,052.08	$11,115,425.36
To Edgerton's Cost New, as above computed				10,388,248.00
Add as per Mayer's Schedule, General Enginereing, 10 per cent..				1,038,824.00
				$11,427,072.00
Add as per Mayer's Schedule, Interest, 5 per cent.............				571,353.00
				$11,998,425.00

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

6574

9550

COMPLAINANT'S EXHIBIT 376.

(For Identification, Complainant's Exhibit 374.)

DETAILED

ESTIMATED WEIGHTS OF FIVE LIFT 5,000,000 CU. FT. GAS HOLDER IN STEEL TANK, WITH SPHERICAL CROWN AND PERMANENT FRAME, 20 TRUSSED STANDARD GUIDE FRAME AND FOUR 30″ DIAMETER INLET AND OUTLET PIPES.

DIMENSIONS.

I Section 180′ 0″ dia by 38′ 8″ high,
II Section 182′ 6″ dia by 38′ 8″ high,
III Section 185′ 0″ dia by 38′ 8″ high,
IV Section 187′ 6″ dia by 38′ 2″ high,
V Section 190′ 0″ dia by 37′ 8″ high,
Steel tank 192′ 9″ dia by 40′ 1″ deep.

Pressures.	Air.	Gas. Sp. Gy. 600
I Section	5.25 inches,	4.78 inches.
I & II Section...............	8.28 inches,	7.59 inches.
I, II & III Sections...........	11.07 inches,	10.17 inches.
I, II, III & IV Sections.......	13.62 inches,	12.51 inches.
I, II, III, IV & V Sections.....	15.89 inches,	14.59 inches.

STEEL TANK 192′ 9″ BY 40′ 1″

(20 Sheets in Circumference.)

9551

OPEN HEARTH STEEL.

Sq. Ft.		Lbs.	Sq. Ft.
27800	Interm. bottom 5/16 in.............	12.75	354,578
	5% of laps		17,729
1800	½″ Out. bottom 36″ wide..........	20.4	36,720
	4% of waste		1,469
2504	1⅝″ Rim 1 includ. hz. lap 3′ 10″ h..	66.35	166,140
3030	1½″ Rim 2 includ. hz. lap 4′ 5¾″.	61.25	185,588
3275	1⅜″ Rim 3 includ. hz. lap 4′ 10½″.	56.14	183,859
3652	1⅛″ Rim 4 includ. hz. lap 5′ 8″...	45.93	167,736
3534	⅞″ Rim 5 includ. hz. lap 5′ 5″...	35.73	126,270
3573	⅝″ Rim 6 includ. hz. lap 5′ 7½″.	25.52	91,182
3393	½″ Rim 7 includ. hz. lap 5′ 3″...	20.42	69,285
3028	⅜″ Rim 8 includ. hz. lap 4′ 11¼″.	15.31	46,359
384	1 1/16″ 20 in. butts rim I 63″ w....	43.38	16,658
219	1″ 20 out. butts rim 36½″....	40.83	8,942
379	1″ 20 in. butts rim II 46″ w...	40.83	15,475

192	15/16″	20 out. butts rim 28″......	38.27	7,348
350	15/16″	20 in. butts rim III 46″ w..	38.27	13,395
260	⅞″	20 out. butts rim III 28″...	35.73	9,290
393	13/16″	20 in. butts rim IV 38″ w...	33.17	13,036
217	¾″	20 out. butts rim IV 23½″.	30.60	6,640
271	9/16″	20 in. butts rim V 31½″...	23.96	6,493
193	½″	20 out. butts rim V 19¼″..	20.41	3,939
288	7/16″	20 in. butts rim VI 29¼″..	17.86	5,144
163	⅜″	20 out. butts rim VI 17¾″w	15.31#	2,497#
222	⅜″	20 in. butts rim VII 27½″ N	15.31	3,552
159	5/16″	20 out. butts rim VII 16¾″	12.75	2,027
96	5/16″	20 in. butts rim VIII 11½″.	12.75	1,224
90	¼″	20 out. butts rim VIII 12″.	10.2	918
2161	½″	Top curb 42″ w...........	20.41	44,106
	3% of waste	....		1,323
60	Sets con. plates top curb brkys.......		30.00	1,800
75	Hand hole covers	....	15.00	1,125

Total open hearth steel... 1,611,848

9552

STEEL ANGLE.

609 ft. 8″ x 8″ ⅞″ bot. curb...........	45.8″	27,892#	
608 ft. 5″ x 5″ x ½″ inn. top curb.....	16.2	9,850	
628 ft. 5″ x 5″ x ½″ out top curb......	16.2	10,174	
660 ft. 2½″ x 2½″ x 5/16″ (60 T. c. brks)	5.00	3,300	
120 ft. 3″ x 3″ x ⅜″ lowering angle....	7.2	864	
Total steel angle.........			52,080#

STEEL CHANNEL.

1604 ft. 7″ channel 40 tank guides.....	12.25#	19,649#

STEEL I BEAM.

260 ft. 12″ I 40 landing beams.......	31.5#	8,190#

FLANGED STEEL.

20 butts for 8″ angle..............	25.0#	500#	
40 butts for 5″ angle..............	12.0	480	
Total flanged steel.......			980#
210 ft. 5½″ x ½″ butts for out. botm.	9.35#	1,964#	
365 ft. 3″ x ⅜″ land. beam flags......	3.83	1,398	
64 ft. 5″ x 11/16″ fillers for do......	11.70	749	
144 ft. 5″ x ⅜″ do do...........	6.38	919	
175 ft. 5″ x ½″ do do...........	8.50	1,488	
160 ft. 3″ x 11/16″ do do..........	7.02	1,129	
140 ft. 5½″ x ½″ butts for top curb..	9.35	1,309	
Total steel bar..........			8,956#

GAS PIPE.

1260 ft. 1" dia. 2 hand rails...........	1.67#	2,104#	
80 ft. 3" dia. 2 overflows...........	7.54	603	
Total gas pipe..........			2,707#

9553

MALLEABLE IRON.

60 Mal. iron guard rail posts....	23.00#	1,380#
2 Sets of c. i. overflow pockets..	70.00#	140#
Bolts		750#
Tank rivets		83,270#
Total steel tank		1,789,950 lbs.

STAIRS FOR STEEL TANK.

STEEL CHANNEL.

116 ft. 7" stair carriage	9.75#	1,131#	
12 ft. 7" interm. platform........	9.75	117	
12 ft. 7" top landing	9.75	117	
Total steel channel			1,365#

STEEL ANGLE.

2—Sup. Brackets for interm. platform	240#	480#	
1—Set diag. for do..............		100	
1—Brkt. at stand. top landing.....		210	
1—Brkt. at tank		200	
Connect. angle at do		60	
Hand rail posts at do.............		20	
Knees for 7" channel		15	
Total steel angle			1,085#

TANK STEEL.

1—Top landing, ¼"		330#	
6—Butts for 7" channel..........	12#	72	
Total tank steel			402#

GAS PIPE.

260 ft. 1" hand rail..............	1.67#	438#	438#
20—Malleable iron posts			460#
2—Sets of scrolls	15#		30#

9554 STEEL RIBBED PLATE.

60—Treads	22#	1,320#	
1—Interm. platform		310	
Total steel ribbed plate			1,630#
Bolts		50#	
Tank rivets		80#	
Total stairs for steel tank			5,540#

4—30″ DIA. IN & OUTLET PIPES AND DUCTS.

4—STEEL DUCTS 25′ 0″ LONG.

TANK STEEL.

1000 sq. ft. ⅜″ shell	15.3#	15,300#	
50 sq. ft. ⅜″ heads	15.3	765	
Total tank steel			16,065#

STEEL ANGLE.

380 ft. 3″ x 3″ x ⅜ channel support	7.2#	2,740#	
200 ft. 3″ x 3″ x ⅜ top flg. of duct	7.2	1,440	
85 ft. 3½″ x 3½″ x ⅜″ head flg.	8.5	723	
Total steel angle			4,903#
150 ft. 7″ channel sup. for tank botm.	9.75#		1,463#

STEEL BAR.

110 ft. 5″ x ⅜″ butts for shell	6.38#	702#	
58 ft. 3″ x ⅜″ knees for 7″ chan.	3.83	222	
Total steel bar			924#
Rivets			1,005#
Total, 4 steel ducts			24,360#

9555 4—30″ DIA. STAND PIPES, 40 FT. LONG.

TANK STEEL.

1264 sq. ft. ⅜″ shell	15.3#	19,339#	
5% for laps		961	
Total tank steel			20,300#
Rivets			990#
Total 4—30″ dia. steel stand pipes			21,290#

CAST IRON PIPES AND FITTINGS.

4	30″ flg. pipes 4′ 9″ lg........	1,530#	each	6,120#	
4	30″ flg. pipes 2′ 0″ lg........	830	"	3,320	
2	30″ flg. pipes 10′ 0″ lg.......	2,950	"	5,900	
4	30″ drip pot crosses..........	2,580	"	10,320	
4	30″ pump flanges	345	"	1,380	
4	30″ crosses std.	1,920	"	7,680	
12	30″ c. i. flanges for st. pipe....	300	"	3,600	
2	30″ flgd. tees std............	1,670	"	3,340	
12	30″ blank flanges	290	"	3,480	
	Bolts			1,460	
	Total cast iron pipe and fittings				46,600#

20 STANDARD SUPPORTS 40 FT. HIGH.

STEEL ANGLE.

130	ft. 4″ x 3″ x ⅜″ angle top flg.....	8.5#	1,104#	
1600	ft. 3″ x 3″ x ⅜″ front chord	7.2	11,520	
1630	ft. 3″ x 3″ x ⅜″ back chord......	7.2	11,736	
	Total steel angle.........			24,360#
815	ft. 10″ St. I Beam back chord....	35#		28,525#
235	ft. 6″ St. channel brace to tank..	8#		1,880#
9556				
690	ft. 3″ Z stud. sup. to tank.......	9.7#	6,694#	

STEEL Z BAR.

180	ft. 3″ Z guide rail to tank.......	9.7	1,746	
	Total Z bar.............			8,440#

STEEL BAR.

550	ft. 4″ x ⅜″ up. lattice.........	5.1#	2,805#	
368	ft. 3½″ x ⅜″ interm. lat......	4.47	1,645	
340	ft. 3″ x ⅜″ lower. lat...........	3.83	1,302	
412	ft. 6″ x ⅜″ front web..........	7.65	3,153	
40	ft. 6″ x ¼″ butts for do. to top....	5.10	204	
40	ft. 9″ x ¼″ butts for do. to top base	7.65	306	
482	ft. 6½″ x ⅜″ frt. chord stif......	8.3	4,000	
	Total steel bar..........			13,415#

TANK STEEL.

20	Top webs 5′ 7″ x 15″ x ⅜″	67#	1,340#	
20	Base webs ⅜″	190	3,800	
40	Brace con. plates	12	480	
	Total tank steel			5,620#
	Bolts			400
	Tank rivets			2,360#
	Total 20 standard supports			85,000#

20—TRUSSED STANDARD GUIDE FRAME.

STEEL "I" BEAM.

2050	ft. 9″ "I" front chord sect. 1 to 3	25#	51,250#	
1875	ft. 9″ "I" front chord sect. 4 to 6	21	39,375	
1965	ft. 8″ "I" front web sect. 1 to 3	20.5	40,283	
1875	ft. 8″ "I" front web sect. 4 to 6	18	33,750	
725	ft. 10″ "I" back chord sect. 1	40	29,000	
1240	ft. 10″ "I" back chord sect. 2 & 3	35	43,400	
1880	ft. 10″ "I" back chord sect. 4 to 6	30	56,400	
432	ft. 6″ struts sect. 1 to 6	14.75	6,372	
	Total steel "I" beams			299,830#

9557

STEEL CHANNEL.

3480	ft. 5″ stand. braces sect. 1 to 6	9#	31,320#	
390	ft. 4″ channel ladder	5.25	2,048	
	Total steel channel			33,368#

STEEL ANGLE.

90	ft. 3½″ x 3½″ x ⅜″ base flgs	8.5#	765#	
1610	ft. 3″ x 3″ x ⅜″ hz. gir. sup. flg	7.9	11,592	
1380	ft. 3½″ x 3″ x ⅜″ vert. gir. sup. flg.	7.8	10,764	
340	ft. 6″ x 3½″ x ⅜″ knees at 6″ "I" strut	11.7	3,978	
180	ft. 3″ x 3″ x ⅜″ lug flg. at do. hz. strut	7.2	1,296	
2470	ft. 5″ x 3″ x ½″ gir. chord sect. 1	12.8	31,616	
2470	ft. 5″ x 3″ x ½″ gir. chord sect. 2	12.8	31,616	
2470	ft. 5″ x 3″ x 7/16″ gir. chord sect. 3	11.2	27,664	
2470	ft. 5″ x 3″ x 7/16″ gir. chord sect. 4	11.2	27,664	
2456	ft. 5″ x 3″ x ⅜″ gir. chord sect. 5.	9.7	23,823	
1220	ft. 5″ x 3″ x 5/16″ gir. chord lower sect. 6	8.2	10,004	
1220	ft. 6″ x 3½″ x ½″ up. gird. chord sect. 6	15.5	18,910	

4550	ft. 3" x 3" x ⅜" gird. braces sect. 1-5	7.2	32,760	
690	ft. 4" x 4" x ½" gird. braces sect. 6	12.8	8,832	
190	ft. 3" x 3" x ⅜" brkt. at top stand	7.2	1,368	
7060	ft. 2½" x 2½" x 5/16" hz. tie struts sect. 1 to 6	5.00	35,300	
1790	ft. 6" x 4" x 13/16" diag. sect. 1	25.6	45,824	
1620	ft. 6" x 4" x ¾" diag. sect. 2	23.8	38,556	
1620	ft. 6" x 4" x ⅝" diag. sect. 3	20.1	32,562	
1620	ft. 5" x 3½" x 9/16" diag. sect. 4	15.2	24,624	
1625	ft. 5" - 3½" x ⅜" diag. sect. 5	10.3	16,738	
1625	ft. 3½" x 3" x ⅜" diag. sect. 6	7.8	12,675	
340	ft. 3½" x 3" x ⅜" lower lug. flg. diag. 1	7.8	2,652	
25	ft. 2½" x 2½" x 5/16" lad. braces	5.0	125	
	Total steel angle			451,708#

9558

TANK STEEL.

40	front web base plts. of std. 5/16"	34.00#	1,360#	
20	Back web base plts. of std. 5/16"	12.00	240	
80	Std. web plates girds. 1 to 4 ⅜"	162.00	12,960	
20	Std. web plates girds. 5 ⅜"	140.00	2,800	
20	Std. web plates girds. 6 ⅜"	120.00	2,400	
80	Gird. end pls. sect. 1 & 2	185.00	14,800	
80	Gird. end pls. sect. 3 & 4	170.00	13,600	
40	Gird. end pls. sect. 5	155.00	6,200	
40	Gird. end pls. sect. 6	135.00	5,400	
400	Gird. brace con. pls. to frt. ch. 1 to 5	6.2	2,480	
400	Gird. brace con. pls. to back ch. 1 to 5	7.6	3,040	
240	Hz. tie strt. con. pls. to back chd. 1-6	7.65	1,836	
120	Hz. tie strt. con. pls. to frt. chd. 1 to 6	25.00	3,000	
40	Lower thrust pls. gird. 6	30.00	1,200	
40	Up. inner thrust pls. gird. 6 ½"	150.00	6,000	
40	Up. outer thrust pls. gird. 6 ½"	110.00	4,400	
120	Con. pls. 5" chan. to 6" "I" beam strt. sect. 1 to 6	24.00	2,880	
40	Lower lug. pls. diags. sect. 1	65.00	2,600	
60	Diag. cent. pls. sect. 1 to 3	36.00	2,160	
60	Diag. cent. pls. sect. 4 to 6	32.00	1,920	
20	Brkt. web pls. top of std	27.00	540	
	Total tank steel			91,816#

9559 STEEL BAR.

340	ft. 10" x ⅜" vert. conpls. st. web..	12.75#	4,335#	
280	ft. 2" x ⅜" fillers for do.........	2.55	714	
640	ft. 5" x ⅜"vert. con. pls. do. frt. ch.	6.38	4,083	
220	ft. 5" x ⅜" vert. con. pls. 6" "I" beam strt.	6.38	1,404	
1320	ft. 3" x ⅜" fillers hz. gird. flgs....	3.83	5,050	
300	ft. 4" x ⅜" joint pl. 9" "I" frt. ch. flg.	5.10	1,530	
300	ft. 2" x ¼" fillers for do.........	1.7	510	
300	ft. 6" x 5/16" butt 8" "I" frt. ch. web	6.38	1,914	
125	ft. 4" x ⅜" joint pl. 8" "I" frt. ch. flg.	5.10	638	
250	ft. 5" x ⅜" butts for 10" "I" fl. bk. ch.	6.38	1,595	
300	ft. 7½" x 5/16" butts 10" "I" web bk. ch.	7.97	2,391	
6100	ft. 2½" x 5/16" lattice for hz. tie strt.	2.65	16,165	
475	ft. 5" x 5/16" lattice for hz. tie strt.	5.21	2,022	
8600	ft. 3" x ⅜"gird. lat. sect. 1 to 5...	3.83	32,238	
1730	ft. 3" x 5/16" gird. lat. sect. 6....	3.19	5,519	
390	ft. 6" x ½" diag. con. straps sect. 1.	10.2	3,978	
325	ft. 6" x ½" diag. con. straps sect. 2.	10.2	3,315	
295	ft. 6" x ½" diag. con. straps sect. 3.	10.2	3,009	
275	ft. 5" x ½" diag. con. straps sect. 4.	8.5	2,338	
215	ft. 5" x ⅜" diag. con. straps sect. 5.	6.38	1,372	
170	ft. 3½" x ⅜" diag. con. straps sect. 6	4.47	760	
10	ft. 3½" x ⅜" filler stand. base....	4.47	45	
170	ft. 2½" x ½" ladder braces	4.25	723	
	Total steel bar..........			96,854#
290	ft. ⅞" round steel ladder rounds..	2.04#		594#
240	c. i. fillers bet. 5" channel & bk. ch.	3.00#		720#
	Tank rivets			27,300#
	Total guide frame.... ..			1,002,190#

9560 GUIDE FRAME STAIRS.

STEEL CHANNEL.

423	ft. 7" St. carriages sect. 1 to 5.....	9.75#	4,124#	
85	ft. 7" St. carriages sect. 6.........	9.75	829	
30	ft. 7" Top and botm. land. sect. 1 to 5	9.75	293	
8	ft. 7" Top and botm. land. sect. 6..	9.75	78	
22	ft. 7" Base land. top curb sect. 1...	9.75	215	
35	ft. 7" base land. sect. 2 to 6.......	9.75	341	
	Total steel channel......			5,880#

STEEL ANGLE.

23	ft. 3" x 2½" x ⅜" land. brkt. top curb	6.6#	152#	
18	ft. 3" x 3" x ⅜" land brkt. top curb	7.2	130	
25	ft. 2½" x 2½" x 5/16" land. brkt top curb	5.0	125	
10	ft. 2½" x 2½" x 5/16" cross con. for curb	5.00	50	
205	ft. 5" x 3" x ⅜" sup. angle std. & gird.	9.8	2,009	
20	ft. 2½" x 2½" x 5/16" vert. angle for gird.	5.00	100	
15	ft. 2½" x 2½" x 5/16" lugs for do.	5.00	75	
40	ft. 2½" x 2½" x 5/16" diag. lugs for do.	5.00	200	
25	ft. 3½" x 3½" x ⅜" knees 7" chan. to brkt.	8.5	213	
18	ft. 2½" x 2½" x 5/16" sup. angle for botm. land	5.0	90	
176	ft. 2½" x 2½" x 5/16- gal. sup.	5.0	850	
272	ft. 2½" x 2½" x 5/16" gal. brkt.	5.00	1,360	
380	ft. 2½" x 2½" x 5/16" hand rail posts	5.00	1,900	
52	ft. 4½" x 3" x ⅜" knees for do.	9.1	473	
60	ft. 4" x 3" x ⅜" hangers	8.5	510	
8	ft. 3" x 3" x ⅜" brace for top land.	7.2	58	
	Total steel angle			8,295#
15	ft. 3" x 3" x ⅜" St. tee frt. ch. top ch. brkt.	7.8#	120#	120#

9561

STEEL BAR.

18	ft. 2½" x ⅜" brace for top curb land	3.19#	57#	
6	ft. 6¾" x ⅜" web for do.	8.61	52	
130	ft. 3" x ¼" diag. bet. struts	2.55	332	
8	ft. 5½" x 5/16" con. pl. hz. hd. rail posts	5.84	47	
15	ft. 2½" x ⅜" knees for do.	3.19	48	
30	ft. 3" x 5/16" con. pls. for gird. gal. brkt.	3.19	96	
25	ft. 5½" x 5/16" do.	5.84	146	
10	ft. 3" x ⅝" sep. for sup. brkt.	6.38	64	
10	ft. 5" x ⅝" do.	10.63	106	
17	ft. 4" x ¼" butts for gal. flg. pls.	3.4	62	
	Total steel bar			1,010#
270	Treads st. ribbed plate			4,590#
300	Stirrup bolts for hand rail			150#

TANK STEEL.

Stair:

12	Lower con. pls. ⅜″	15#	180#	
12	Upper con. pls. ⅜″	17	204	
40	Con. pls. sup. brkts	8	320	
10	Back con. pls. do	9	90	
10	Hanger lugs back plate	10	100	
10	Hanger lugs plates	27	270	
98	sq. ft. ¼″ lower land	10.2	1,000	
78	sq. ft. ¼″ upper land	10.2	796	
365	sq. ft. ¼″ galleries	10.2	3,723	
1	Set con. pls. top land. brkts		50	
1	Set con. pls. top land. brkts		33	
40	sq. ft. ¼″ top landing	10.2	409	
	Total tank steel			7,175#

9562

GAS PIPE.

660	ft. 1″ dia. hand rail stairs	1.67#	1,102#	
315	ft. 1″ dia. hand rail gallery	1.67	528	
	Total gas pipe			1,630#

ROUND STEEL.

515	ft. ¾″ stair truss rod	1.5#	773#	
60	ft. 1¼″ stair strut	4.1	246	
290	ft. ⅞″ hanger rods	2.05	596	
	Total round steel			1,615#
	Bolts			50#
	Rivets			1,155#
	Total guide frame stairs			31,670#

HOLDER.

INNER SECTION 180′ 0″ DIA. x 38′ 8″ Hight.

STEEL ANGLE.

566	ft. 8″ x 8″ x ⅞″ top curb	45.8#	25,923#	
550	ft. 6″ x 6″ x ⅞″ inner curb	33.4	18,370	
25	ft. 2½″ x 2½″ x 5/16″ land plat.	5.00	125	
310	ft. 3″ x 3″ x ½″ vert. leg top flg.	9.4	2,914	
375	ft. 2½″ x 2½″ x 5/16″ (80 guard rail stds.)	5.00	1,875	
167	ft. 2½″ x 2½″ x 5/16″ (4 seal bonnet flgs.)	5.00	835	
50	ft. 2″ x 2″ x ¼″ (4 seal bonnet flgs.)	3.2	160	
	Total steel angles			50,202#

STEEL CHANNEL.

571	ft. 10″ channel cup	35.00#	19,985#	
14	ft. 5″ land. platforms	6.5	91	
	Total steel channel			20,076#
576	ft. 2½″ special bead, cup stif	4.25#		2,448#

9563

STEEL BAR.

1561	ft. 18″ x 5/16″ (40 ribband pls.)	19.13#	29,866#	
225	ft. 2″ - ⅜″ guard rail stds	2.55	574	
110	ft. 2″ x ⅝″ cup rest blocks	4.25	468	
10	ft. 2½″ x ¼″ platform lattice	2.13	21	
44	ft. 3″ x ⅜″ for stif. rings seal bon.	3.83	169	
27	ft. 3″ x ⅜″ 3 stif. rings manhole crown	3.83	103	
320	ft. 11″ x 9/16″ (80 out. butts, out. cr. crs.)	21.02	6,726	
280	ft. 11″ x ½″ 80 in. butts, out. cr. crs.	18.7	5,236	
36	ft. 10″ x 7/16″ 20 out. butts top shell	14.88	536	
27	ft. 10″ x ⅜″ 20 in. butts top shell	12.75	344	
50	ft. 5″ x ⅜″ 20 out. butts bottm. shell	6.38#	319#	
30	ft. 5″ x ½″ 20 out. butts cup sheet	6.38	191	
550	ft. 3½″ x 3/16″ butts for vert. legs	2.23	1,227	
230	ft. 4″ x ¼″ butts heads	3.4	782	
	Liners for vert. legs		3,000	
40—	Base plates for rollers	17.0	680	
	Total steel bar			50,242#

TANK STEEL.

28	sq. ft. ⅜″ center crown plate 6′ dia.	15.3#	428#	
1890	sq. ft. ⅞″ out. crown crs. 44″ w.	35.7	67,473	
	6% for laps		4,048	
2250	sq. ft. 7/16″ crs. next out. crwn. 51″ w.	17.85	40,163	
	8% for laps		3,213	
848	sq. ft. ¾″ top shell crs. 21″ w.	30.6	25,949	
1318	sq. ft. ⅜″ botm. shell crs. 30″ w.	15.3	20,165	
	6% for laps		1,210	
855	sq. ft. ⅜″ cup sheet 18″ w.	15.3	13,082	
1659	sq. ft. ¼″ crs. next to top 35″ w.	10.2	16,922	
	7% for laps		1,185	
3	Manhole covers for crown	75.0	225	
88	sq. ft. ⅜″ top for 4 seal bonnets	15.3	1,346	
4	Manhole covers for same	90.0	360	
2	Webs for landing platform	50.00	100	
	Total steel tank			**195,869#**

9564

SHEET STEEL.

2810	sq. ft. No. 7 sec. crs. from out. crown 66" w.	7.65#	21,497#	
	9% for laps		1,934	
226	sq. ft. 3/16" seal bonnet sides	7.65	1,729	
	5% for laps		86	
1697	sq. ft. 3/16" crs. next to bottm. 36" w.	7.65	12,982	
	5% for laps		642	
	Total sheet steel			38,870#

GAS HOLDER STEEL.

14627	sq. ft. No. 10 9 interm. shell crs. 38" w.	5.74#	83,960#	
	5% for laps		4,180	
18517	sq. ft. No. 10 interm. crwn	5.74	106,288	
	11% for laps		11,682	
	Total gas holders steel			206,110#

FLANGED SHEET STEEL.

84	sq. ft. 3/16" seal bonnet cover	7.65#	642#	
	5% for laps and waste		32	
3808	sq. ft. No. 40 vert. legs	7.65	29,131	
480	sq. ft. 3/16" 40 vert. leg heads	7.65	3,674	
	Total flgd. sheet steel			33,480#

FLANGED STEEL.

20	Butts for 8" x 8" angle	27.0#	540#	
20	Butts for 10" channel	20.0	400	
400	sq. ft. ¼" 40 vert. legs	10.2	4,080	
40	Vert. legs stif. heads	25.0	1,000	
	Total flanged steel			6,260#

9565

4628	ft. 1" dia. gas pipe 3 guard rails	1.67#	7,733#
4	Seal bonnet valves	50.00	200
20	St. top carriages with tang. rollers	22.50	45,000
40	C. I. invert. cup rollers	185.00	7,400
	Stirrup bolts		150
	Bolts		1,110
	Gas holder rivets		15,600
	Boiler rivets		14,300
	Total inner section		695,050#

SECOND SECTION 182′6″ BY 38′8″ HIGH.

STEEL CHANNEL.

574	ft. 10″ grip	35.00#	20,090#	
579	ft. 10″ cup	30.00	17,370	
10	ft. 5″ platform	5.00	50	
	Total channel			37,510#

STEEL ANGLE.

568	ft. 3½″ x 2½″ x 5/16″ grip gd.	5.00#	2,840#	
576	ft. 3″ x 2½″ x 5/16″ out, gal. angle	5.50	3,168	
200	ft. 2½″ x 2½″ x 5/16″ 60 interm. gal. brkts.	5.00	1,000	
126	ft. 3″ x 3″ x ⅜″ 60 interm. gal. brkts.	7.2	907	
133	ft. 3″ x 3″ x ⅜″ 40 main gal. brkts.	7.2	958	
84	ft. 4″ x 3″ x ⅜″ 40 main gal. brkts.	8.5	717	
	Total steel angle			9,590#

SPECIAL STEEL BEAD.

573	ft. 2½″ bead grip stif	4.25#	2,435#	
584	ft. 2½″ bead grip stif	4.25	2,485	
	Total special steel bead			4,920#

9566

STEEL BAR.

220	ft. 2″ x ⅝″ cup rest blocks	4.25#	935#	
75	ft. 5″ x ½″ butts for gal. plte	8.5	638	
40	Base con. plates at legs for rollers	17.0	680	
1540	ft. 17½″ x 5/16″ ribband plates	18.55	28,567	
	Total steel bar			30,820#

FLANGED STEEL.

1576	ft. ¼″ 40 vert. in. legs	14.7#	23,167#	
160	Butts for in. & out. legs	5.3	843	
40	Butts for 10″ channel	20.0	800	
	Total flanged steel			24,810#
1540	ft. ⅜″ steel (Carnegie) 40 out. vert. legs	17.75#		27,335

TANK STEEL.

1795	sq. ft. ⅜″ grip sheet 38″ w........	15.3#	27,464#	
868	sq. ft. ⅜″ cup sheet 18″ w.........	15.3	13,280	
957	sq. ft. ⅜″ top shell 24″ w.........	15.3	14,642	
1346	sq. ft. ⅜″ botm. shell 30″ w......	15.3	20,594	
	5% for laps		3,800	
716	sq. ft. ⅜″ gal. & plat. 15″ wide...	15.3	10,955	
	3% for waste....................		380	
60	Interm. gal. brkts. 5/16″.........	22.0	1,320	
40	Main gal. brkts. 5/16″...........	26.0	1,040	
	Total tank steel.........			93,475#

SHEET STEEL.

2955	sq. ft. 3/16″ crs. next top & botm. 34″ wide	7.65#	22,605#	
	5% for laps		1,095	
	Total sheet steel.........			23,700#

9567

GAS HOLDER STEEL.

14874	sq. ft. No. 11 9 interm. crs. 38″	5.10#	75,857#	
	5% for laps.................		3,793	
	Total gas holder steel..			79,650#
1640	ft. 1″ dia. gas pipe 3 gd. rails..	1.67#		2,740#
80	Mal. iron hand rail posts.....	23.0		1,840
20	St. top carriages w. tang. rollers	1400.00		28,000
40	C. I. cup rollers.............	185.00		7,400
	Bolts			710
	Gas holder rivets............			5,300
	Boiler rivets			10,000
	Total second section...			387,800#

THIRD SECTION 185′ 0″ DIA. BY 38′ 8″ HIGH.

STEEL CHANNEL.

581	ft. 10″ grip...................	30.0#	17,430#	
586	ft. 10″ cup....................	30.0	17,580	
6	ft. 4″ platform................	6.25	38	
	Total channel			35,050#

STEEL ANGLE.

576	ft. 2½″ x 2½″ x 5/16 grip gd...	5.0#	2,880#	
584	ft. 3″ x 2½″ x 5/16″ out. gal. angle	5.5	3,212	
160	ft. 2½″ x 2½″ x 5/16″ 60 interm. gal. brkts..............	5.0	800	
126	ft. 3″ x 3″ x ⅜″ do............	7.2	907	
106	ft. 3″ x 3″ x ⅜″ 40 Main gal. brkts.	7.2	763	
84	ft. 4″ x 3″ x ⅜″ do............	8.5	714	
	Total steel angle........			9,275#

9568 SPECIAL STEEL BEAD.

578	ft. 2½″ grip stif................	4.25#	2,457#	
588	ft. 2½″ cup stif.................	4.25	2,499	
	Total steel bead.........			4,955#

STEEL BAR.

220	ft. 2″ x ⅝″ cup rest blocks.......	4.25#	935#	
75	ft. 5″ x ½″ butts for gal. plate....	8.5	638	
40	base con. plts. for legs for rollers..	17.0	680	
1540	ft. 17½″ x ¼″ 40 ribband plates..	14.86#	22,887	
	Total steel bar..........			25,140#

TANK STEEL.

1630	sq. ft. ⅜″ grip sheet, 34″ w........	15.3#	24,939#	
880	sq. ft. ⅜″ cup sheet, 18″ w.........	15.3	13,465	
1075	sq. ft. ⅜″ top shell 24″ w.........	15.3	16,448	
1390	sq. ft. ⅜″ bottom shell 30″ w......	15.3	21,267	
	5% for laps..................		3,690	
723	sq. ft. ⅜″ gal. and platform 15″ w.	15.3	11,061	
	3% for waste..................		330	
60	interm. gal. brkts. 5/16″.........	17.5	1,050	
40	Main gal. brkts. ⅜″..............	21.0	840	
	Total tank steel.........			93,090#

SHEET STEEL.

3005	sq. ft. 3/16″ crs. next top & botm. 34″ wide....................	7.65#	22,988#	
	5% for laps....................		1,102	
	Total sheet steel.........			24,090#

9569

GAS HOLDER STEEL.

15096	sq. ft. No. 11 9 interm. crs. 38″ w.	5.1#	76,990#	
	5% for laps..................		3,850	
	Total gas holder steel....			80,740#

FLANGED STEEL.

40	butts for 10″ channel..........	20.0#	800#	
1576	ft. ¼″ 40 vert. legs............	14.70	23,167	
160	butts for in. & outr. legs........	5.3	843	
	Total flanged steel.....			24,810#
1540	ft. ⅜″ steel (Carnegie) 40 out legs	17.75#		27,335#
1670	ft. 1″ gas pipe guard rail......	1.67		2,790
80	Mal. iron hand rail posts.......	23.00		1,840
20	st. carriages with tang. rollers...	1,250.00		25,000
40	C. I. cup rollers..............	185.00		7,400
	Bolts			645
	Gas holder rivets.............			5,250
	Boiler rivets			9,300
	Total third section.....			376,710#

FOURTH SECTION 187′ 6″ DIA. BY 38′ 2″ HIGH.

STEEL CHANNEL.

589	ft. 10″ grip....................	30.0#	17,670#	
591	ft. 10″ cup....................	25.0	14,772	
4	ft. 3″ platform.................	4.5	18	
	Total steel channel......			32,460#

9570

STEEL ANGLE.

584	ft. 2½″ x 2½″ x 5/16″ grip gd...	5.0#	2,920#	
592	ft. 3″ x 2½″ x 5/16″ out. gal. angle	5.5	3,256	
160	ft. 2½″ x 2½″ x 5/16″ 60 interm. gal. brkts..................	5.00	800	
126	ft. 3″ x 3″ x ⅜″ 60 interm. gal. brkts.	7.2	907	
106	ft. 3″ x 3″ x ⅜″ 40 main gal. brkts.	7.2	763	
84	ft. 4″ x 3″ x ⅜″ 40 main gal. brkts.	8.5	714	
	Total steel angle			9,360#

SPECIAL STEEL BEAD.

586	ft. 2½″ grip stif................	4.25#	2,492#	
596	ft. 2½″ cup stif................	4.25	2,533	
	Total special steel bead...			5,025#

STEEL BAR.

220	ft. 2″ x ⅝″ cup rest blocks.......	4.25#	935#	
75	ft. 5″ x ½″ butts for gal. plts.....	8.5	638	
40	Base con. plates at legs for rollers..	17.0	680	
1520	ft. 17½″ x ¼″ 40 ribband pls....	14.86	22,587	
	Total steel bar..........			24,840#

FLANGED STEEL.

40	Butts for 10″ channel............	20.0#	800#	
160	In. & out. leg butts..............	5.3	843	
1556	ft. ¼″ 40 vert. legs..............	14.70	22,877	
	Total flanged steel.......			24,520#
1520	ft. ⅜″ steel (Carnegie) 40 out legs	17.75#		26,980#

9571 TANK STEEL.

1653	sq. ft. 5/16″ grip sheet 34″ w.....	12.75#	21,076#	
891	sq. ft. 5/16″ cup sheet 18″ w......	12.75	11,360	
1090	sq. ft. ⅜″ top shell 24″ w.........	15.3	16,677	
1414	sq. ft. ⅜″ bottom shell 30″ w.....	15.3	21,634	
	5% for laps..................		3,537	
730	sq. ft. ⅜″ gal. and platforms 15″ wide	15.3	11,170	
	3% for waste..................		336	
60	Interm. gal. brkts. 5/16″........	17.5	1,050	
40	Main gal. brkts. ⅜″............	21.0	840	
	Total tank steel.........			87,680#

SHEET STEEL.

3134	sq. ft. 3/16″ crs. next to top & botm. 35″ w.................	7.65#	23,975#	
	5% for laps		1,195	
	Total sheet steel.........			25,170#

GAS HOLDER STEEL.

14915	sq. ft. No. 11 9 interm. crs. 37" w.	5.1#	76,065#	
	5% for laps			3,800#
	Total gas holder steel			79,865#
1696	ft. 1" dia. gas pipe 3 guard rails	1.67#		2,830#
80	Mal. iron hand rail poses	23.00		1,840
20	St. top carriages w. tang. rollers	1020.00		20,400
40	C. I. cup rollers	185.00		7,400
	Bolts			650
	Gas holder rivets			5,300
	Boiler rivets			9,200
	Total fourth section			363,520#

9572 FIFTH SECTION 190'0" DIA. BY 37'8" HIGH.

STEEL CHANNEL.

597	ft. 10" grip	25.0#		14,925#

STEEL ANGLE.

592	ft. 2½" x 2½" x 5/16" grip guard	5.0#	2,960#	
600	ft. 3" x 2½" x 5/16" out. gal. angle	5.5	3,300	
160	ft. 2½" 2½" x 5/16 60 interm. gal. brkts	5.00	800	
126	ft. 3" x 3" x ⅜" 60 interm. gal. brkts.	7.2	900	
600	ft. 6" x 3½" x ¾" bottm. curb	22.3	12,380	
	Total steel angle			21,340#
594	ft. 2½" special bead grip stif	4.25#		2,525#

STEEL BAR.

110	ft. 2" x ⅝" cup rest blocks	4.25#	468#	
75	ft. 5" x ½" butts for gal. plates	8.5	638	
601	ft. 9" x ¾" bot. curb	22.96	13,801	
1500	ft. 17½" x ¼" 40 ribband plates	14.86	22,290	
	Total steel bar			37,350#

FLANGED STEEL.

20	Butts for 10" channel	20.0#	400#	
160	Butts for in. & out. legs	5.3	845	
1536	ft. ¼" vert. legs	14.7	22,580	
20	Butts for 6" x 3½" angle	15.00	300	
	Total flanged steel			24,125#
1500	ft. ⅜" steel (Carnegie) 40 out. legs	17.75#		26,625#

9573

TANK STEEL.

1675	sq. ft. 5/16″ grip sheet 34″ w.....	12.75#	21,356#	
1104	sq. ft. ⅜″ top shell 24″ w.........	15.3	16,891	
1343	sq. ft. ⅜″ bottom shell 29″ w.....	15.3	20,548	
	5% for laps....................		2,940	
737	sq. ft. ⅜″ gallery 15″ w..........	15.3	11,275	
	3% for waste...................		340	
60	Interm. gallert brkts. 5/16″......	17.5	1,050	
	Total tank steel..........			74,400#

SHEET STEEL.

3000	sq. ft. 3/16″ crs. next to top & bot. 33″ w.	7.65#	22,950#	
	5% for laps...................		1,150	
	Total sheet steel.........			24,100#

GAS HOLDER STEEL.

15137	sq. ft. No. 11 9 interm. crs. 37″ w.	5.1#	77,200#	
	5% for laps		3,860	
	Total gas holder steel...			81,060#
1720	ft. 1″ dia. gas pipe 3 guard rails	1.67#		2,870#
20	Mal. iron hand rail posts.......	23.00		1,840
20	St. carriages w. tang. rollers....	605.00		12,100
40	Cast iron tank rollers..........	195.00		7,800
	Bolts			[illegible]0
	Gas holder rivets.............			5,300
	Boiler rivets			8,900
	Total fifth section......			345,890#

9574

AIR & GAS PRESSURE FOR HOLDER.

Gas Pres. Taken at Bot'm of Tank. Spec. Grav. 600.

1″ pres.				Air pres.	Gas pres.	Deduct for buoyancy.
132,324	Sect. I		695,050#	5.25″	4.78″	62,496#
	Sect. I	695,050#				
	Water in cup	43,830				
	Sect. II	387,800				
136,026			1,126,680	8.28	7.59	93,910
	Sect. I & II	1,126,680				
	Water in cup	44,450				
	Sect. III	376,710				
139,778			1,547,840	11.07	10.17	126,200
	Sect. I, II & III	1,547,840				
	Water in cup	45,050				
	Sect. IV	363,520				
143,581			1,956,410	13.62	12.51	158,950
	Sect. I to IV	1,956,410				
	Water in cup	45,670				
	Sect. V	345,890				
147,835			2,347,970	15.89	14.59	191,750

IRON WORK FOR PERMANENT FRAME.

Cast Iron:

1	Interm. casting at center post	1,180#	
1	Top do do	990	
	Total cast iron		1,970#
89	lugs 6″ x 4″ x 5/16″ steel angle for posts		1,030
96	washer bars 9″ x 7″ x ¼″ (steel)		310
336	washer bars 9″ x 3″ x ¼″ (steel)		650
	Bolts		1,400
	Rivets		50
	Total iron work for permanent frame		5,410#

9575

LUMBER FOR PERMANENT FRAME.

Yellow pine	27,000 sq. ft.
Spruce pine	46,000 sq. ft.

LUMBER FOR SCAFFOLDING.

Spruce pine	88,000 sq. ft.

SUMMARY.

	Steel tank		1,789,950#	
	Stairs for do		5,540	
20	Standard supports		85,000	
20	Truss standard guide frame		1,002,190	
	Guide frame stairs		31,670	
	HOLDER:			
	1st section	695,050#		
	2nd "	387,800		
	3rd "	376,710		
	4th "	363,520		
	5th "	345,890		
			2,168,970	
	Total holder, tank and guide frame.			5,083,320#
	INLET & OUTLET PIPE:			
4	Steel ducts	24,360#		
4	30" steel stand pipes	21,290		
	C. I. pipes and fittings	46,600		
			92,250#	
	Iron work for permanent frame		5,410	97,660#
	Grand total			5,180,890#

LUMBER, PERMANENT FRAME, & SCAFFOLDING:

P. F. yellow pine	27,000 sq. ft.
P. F. spruce	46,000 sq. ft.
Scaffolding, spruce	88,000 sq. ft.

5,180,980# x 6.7¢ per ℔ = $347,125.66.

9576 COMPLAINANT'S EXHIBIT 377.

(For Identification.)

DANBURY, CONN., *November 22nd,* 1905.

W. H. Bradley, Esq., Chief Engineer Consolidated Gas Co.

MY DEAR SIR: The apparently simple questions left for me to answer by Mr. Wood, relative to the results of making oil gas in vertical retorts according to my plan, has led me into a perfect wilderness of figures and reports, extending over a period of 15 years. If Mr. Wood had struck in here about a week after starting; that is to say, about the middle of April, 1890, I could have told him all about it, right away, without any ifs, ands, or buts; but, when it comes to running one machine for 15 years, there's lots of things turn up. There's shortage of naphtha and oil to account for, there's cutting up of gas meters, big ones and little ones; there's leakage of gas to charge up against the machine; the ups and downs of the thermometer, the hoppings of the barometer, the heighth above the sea, and the depth of human cussedness and neglect; now as the only way out of the maze, I shall, as you will see, charge them all up against the machine. There seems to be no other way out. I therefore send you a table of the performance since the beginning. The last six years' running has been on gas oil, with an occasional tank of Texas oil; the first nine years on naphtha. A salient feature is, that the machine is carbonizing more oil per hour under fire, and making more gas per hour than it did in the start; also that it has performed a little better on gas oil than on naphtha, but that is possibly due to improved handling. Under the head of naphtha gas made is included the gas used in purging out at the beginning and end of runs; the analyses will show more correctly the proportion of oil and water gas.

Yours very truly, H. H. EDGERTON.

9577 DANBURY, CONN., *Nov.* 30*th*, 1905.

W. H. Bradley, Esq., Chief Engineer Consolidated Gas Company.

MY DEAR SIR: I enclose you herewith, a copy of some of the analyses of the Danbury Gas, together with an account of the working for the past fifteen years. As before stated, on account of the loss and discrepancies of the naphtha and oil account I have reduced the results to the gallon of oil paid for.

As you might suppose this is a little hard on results from the machine, but under the circumstances, I shall have to stand it.

There is another question or two of Mr. Woods that I have not yet answered, but I will tackle them on my return from N. Y. the first of next week. I have been jogging the boys up to get themselves on dress parade, as the gas has been down a couple of candles, owing to a leak in one of the retorts, but I think they have it in hand, for I notice the gas went up to 36.4 candles, in spite of this cold snap today. What I want to do, is to make a series of analyses of the gas from gas oil, in connection with the yield; after testing the station meters and the small measuring tanks, and see what I can get out of the thing, by watching the running myself, I notice the men have got into a very comfortable way of running things, to suit their own convenience; for instance, when I told Mat the other day that he must keep square up to candle power, to show these New Yorkers what a fifteen old machine would do, he very coolly told me that he thought that 33 candle gas was good enough for anybody!

Yours very truly, H. H. EDGERTON.

9578 RESULTS FROM THE USE OF THE DANBURY PROCESS OF UPRIGHT RETORTS.

At Danbury, Conn., there has been in use since March, 1890, a setting of nine upright retorts, until the present time, November, 1905. The following is an account of the performance of this setting, in regard to the points indicated:

MI-TURE.

Year.	Naphtha used, gallons.	Naphtha gone.	Yield per gallon, cu. ft.	Coal per M.	Candle power.	Hours run.
1890........	158,558	158,558	95.60	45.62	34.38	2,969.7
1891........	162,565	162,600	101.49	45.63	35.30	2,352.0
1892........	191,987	196,500	100.08	39.43	35.24	2,962.8
1893........	164,330	172,480	98.48	41.11	35.83	2,301.2
1894	197,201	209,972	96.57	34.76	35.9	2,824.6
1895........	107,026	217,603	93.98	40.09	34.96	2,909.7
1896........	189,518	200,430	99.10	43.90	34.81	2,533.9
1897........	192,211	208,880	108.73	40.47	35.42	2,426.6
1898........	173,970	190,500	108.66	47.1	35.64	2,279.7
1899........	180,798	212,379	106.61	42.84	35.54	2,581.1
1900........	184,016	202,678	109.38	40.22	34.80	2,635.4
1901........	204,493	218,190	116.59	37.29	34 40	2,961.5
1902........	207,691	228,346	106.97	37.32	32.95	3,098.7
1903........	213,568	238,237	106.17	32.12	33.43	3,351.8
1904........	248,865	273,874	106.86	33.92	34.80	3,501.0
	2,876,797	3,091,227	103.68	40.12	34.89	41,689.7

Remarks:—The yield per gallon of naphtha, or oil, is based upon the amount gone from stock, reduced to a temperature of 60 degrees Fahr., since the time the temperatures were recorded; namely, in 1893.

The use of gas oil began in September, 1899, and has continued since that period, with the exception of the fall and winter of 1902-1903 during which Texas oil was used.

9579 Gallons of naphtha carbonized per hour, Year 1891 ....69.0 gals.
Gallons of gas-oil carbonized per hour, Year 1904......78.2 gals.
Gallons used per hour per retort, Year 1904.......... 8.68 gals.
Size of retort, 12 in. diameter, 8 ft. long, area 31.4 sq. ft.

The candle power is determined by the use of a burner giving a fourteen candle flame; standardized by a burner giving a 22 to 25 candle flame, the rating of the gas would be raised to about 44 candles; or 8.8 candles per cubic foot instead of 7.5 candles.

ANALYSES OF DANBURY GAS MADE AT VARIOUS TIMES FROM 1889 TO 1896.

By Mr. C. H. Hinman, State Gas Inspector, for Massachusetts March 6th and 7th, 1889:

Illuminants	26.46
Marsh Gas	42.88
Hydrogen	18.38
Carbonic Oxide	8.50
Nitrogen	2.41
Oxygen	.09
Carbonic acid	1.28
	100.00

Gas made, 36,500. Naphtha used, 381 gals. Candle power (by 14 C flame)

Total yield per gal., 95.9 ck f. Yield of Naphtha gas per gal., 68.0 cu. ft.

Illuminants per gallon, 25.2 cu. ft.

ANALYSES BY H. H. EDGERTON.

	Dec. 25, 1892.	Dec. 22, 1892.	Oct. 26, 1895.	Feb. 3, 1896.	Feb. 7, 1896.	Feb. 7, 1896.	Nov. 28, 1892.
Carbonic acid	1.38	2.58	3.50	2.54	3.00	2.92	4.43
Oxygen	....	....	....	.46	.39	.21	....
Illuminants	22.27	19.31	20.82	20.30	23.60	23.40	.48
Marsh gas	45.05	33.80	37.72	41.16	39.15	39.06	1.27
Hydrogen	21.19	24 53	21.20	21.36	19 54	19.74	50.70
Carbonic Oxide	9.53	15.75	13.26	10.92	10.54	10.97	39.36
Nitrogen	.53	4 63	3.50	3.26	3.78	3.10	3.87
	99.95	100.6	100.00	100.00	100.00	99.40	100.11
9580 Yield per gal	73.2	79.0	75.6	76.5	81.9	81.9	"Blue Gas."
Illumin'ts pr. gal	24.2	28.8	26.9	25.3	30.8	30.8	
Ill't'g power	35.8	....	36.1	32.9	38.2	38.2	
Temperature	....	....	....	....	....	....	
At Sta. meter	....	....	70.0	59.0	63 0	63.0	
Naphtha used	....	....	....	....	....	....	

Naphtha gone from stock; no comparison can be made on this item, on one day's run: the fall of temperature, or rise, on a large stock of naphtha causes such a difference of volume, as to make comparison impossible.

TAR RESIDUE.

During the year 1904, there were 17,813 gallons tar burned under boiler.

During the year 1905, there were 21,319 gallons tar burned under boiler.

Gas oil gone from stock, 1903, 238,237 gallons; per cent. tar, 7.5% made.

Gas oil gone from stock 1904, 273,874 gallons; per cent. tar 7.7% made.

It is to be noted that the fiscal year ends May 31st, and the year as above named, is that in which the year ends.

DANBURY, CONN., *March 9th,* 1905.

Cost to manufacture gas at Danbury, Conn., year 1902-1903, the cost based upon the thousand cubic feet of 17.6 candle gas sold.

Thousands of cubic feet of 44 candle gas sold	21,273,000
Thousands of 17.6 candle, based upon the light equivalent	53,183,915

At works.	Cost.	Cost per thousand 17.6 candles.	
For Fuel	$3,756.35	7.063 Cents.	
For lime	23.00	.043	
For Gas-oil	9,061.86	17.039	
For Gen'l Expense	2,131.20	4.007	
For Station Repairs	182.90	.344	
For Station Wages	4,098.43	7.706	
Total at Works	$19,254.04	36.202	36.202 Cents.
9581 Distribution:			
For Dist'n Labor	$938.37	1.764	
For Tools	221.39	.416	
For Street Lamps	38.08	.072	
For Services Repairs	101.19	.190	
For Main Repairs	108.76	.204	
For Insurance	266.05	.500	
For Meter Repairs	256.44	.482	
Total Distribution.	$1,930.23	3.628	3.628
Management:			
For Salaries	$3,772.08	7.093	
For Rent	428.54	.806	
For Office Expense	468.00	.880	
Total Management.	$4,668.62	8.779	8.779
For Bad Debts	449.86	.846	.846
For Taxes	1,112.87	2.093	2.093
For Depreciation	2,534.84	4.766	4.766
For Dividends (Gas)	7,875.00	14.808	14.808

Total cost of Gas per 17.6 candle M, including interest	71.122 Cents.
Gas Bills, Less Discounts, $58,849.10; per M, sold 110.657 cents	110.657 Cents.
Surplus, Gas receipts over expenses, depreciation and interest, $21,023.59	39.535

9582 RESULTS AT DANBURY, CONN., FROM THE SETTING OF NINE UPRIGHT RETORTS.

Month. 1890.	Naphtha used.	Naphtha gone.	Naphtha gas per gallon.	After water gas added.	Coal per M.	Candle power.	Hours run.
April	8,999	....	69.3	98.3	.....	34.5	368.4
May	9,761	....	76.2	94.2	66.2#	35.0	239.4
June	8,086	....	75.3	105.1	46.2	37.1	202.7
July	7,922	....	75.3	110.5	49.8	34.7	158.0
August	9,591	....	76.4	112.8	48.1	32.6	221.0
September	12,897	....	77.7	99.5	39.1	33.0	260.0
October	13,993	....	80.0	106 8	48 0	35.1	279.0
November	14,733	....	78 9	102.7	42.7	33.6	281.0
December	16,301	....	78.3	100.1	39.0	32.8	318.0
January	19,815	....	73.6	87.7	41.5	32.1	349.3
February	17,046	....	75.3	90.7	38.2	34.1	279.7
March	15,442	15,460	73.0	85.8	53.8	34.3	275 5
April	11,863	11,749	75.6	94.8	53.9	36 7	186 9
May	10,868	10,974	70.8	97.6	53.9	36.5	158.6
	158,558	....	75.92	95.69	45.62	34.38	2,969.7

Nap. Gas, 12,241.2 M. Total Gas, 15,462.9 M. Generator Coal, 705,600#

1891.							
June	9,745	10,131	74.3	106.8	54.7	37.6	130.6
July	9,373	9,468	77.2	108 3	53.6	35.6	121.1
August	10,965	10,808	76.3	108.0	50.5	35.8	152.7
September	11,978	12,260	71.9	106.3	47.2	35.8	160.0
October	15,204	15,459	71.8	100.3	41.5	35.3	209.2
November	15,512	15,630	76.5	98.0	39.2	34.3	221.0
December	18,632	17,890	71.3	94.8	39.2	34.1	272.8
1892.							
January	19,018	18,960	75.2	95.8	38.8	33.7	287.7
February	15,599	15,594	74.9	99.7	49.4	36.1	243.4
March	14,270	14,290	78.5	103.3	40.7	35.8	221.4
April	11,399	11,370	77.8	102.4	56.0	35.1	171.5
May	10,868	10,700	81.7	106.8	62.1	34.3	160.6
	162,565	162,600	75.27	101.49	45.63	35.3	2,352.0

Naphtha gas made, 12,241.2; total gas made, 16,503.6; coal used, 753,200#

9583

Month. 1892.	Naphtha used.	Naphtha gone.	Naphtha gas per gallon.	Gas total.	Coal per M.	Candle power.	Hours run.
June	10,986	11,535	81.9	108.5	45.6	35.8	168 0
July	12,515	12,680	79.5	106.1	42.5	34 0	204 7
August	15,186	15,512	76.7	102.2	38.5	34.7	250.8
September	17,684	18,088	72.1	97.2	37.5	35.7	288.5
October	18,335	18,949	78.0	101.2	34.5	34.2	291.8
November	18,613	19,468	83.3	105.2	34.0	34.4	280.2
December	21,032	20,413	78.1	97.8	37.3	35.3	315 2
January	18,827	18,990	80.3	98.5	41.6	35.6	285.9
February	16,404	17,040	79.4	98.4	36.2	35.8	245.9
March	16,134	16,123	77.2	96.5	45.5	34.5	235.6
April	13,843	14,390	75.3	99.8	46.0	36.7	211.2
May	12,429	13,300	80.6	108.0	46.0	36.2	185.0
	191,987	196,506	78.72	100.08	39.43	35.24	2,962.8

Nap. gas made, 15,114.0; total gas made, 19,370.7; coal used, 763,900#

RESULTS AT DANBURY, CONN., FROM WORKING OF NINE UPRIGHT RETORT SETTING.

Month. 1893.	Naphtha used.	Naphtha gone.	Naphtha gas made.	Total gas made.	Temp. Fahr., degrees.	Coal used M.	Candle power.	Hours run.
June	10,286	10,530	84.3	113.9	75.9	52.3	36.2	155.0
July........	9,273	10,020	84.6	114.6	80.9	53.3	37.0	131.8
August	10,814	11,680	85.5	116.6	79.6	51.5	36.1	147.9
September..	14,386	15,240	81.6	109.9	7 .3	39.4	35.1	203.8
October	15,336	15,720	82.5	110.5	74.0	37.5	36.2	219.4
November..	15,729	16,080	79.4	108.2	64.9	37.6	34.4	222.6
December..	15,772	16,730	Station meter cleaning, est'd				35.2	215.8
January....	16,999	16,730	77.4	97.6	68.9	39.7	35.6	230.2
February...	16,099	17,390	79.3	102.5	83.8	34.3	35.9	228.1
March	16,369	17,620	81.3	109.2	85.1	35 8	36.9	226.4
April.......	12,776	13,730	89.4	110.5	89.4	41.1	36.9	176.8
May	10,531	11,010	83.5	112 8	80.5	46.4	34.5	143.4
	164,330	172,480	80.08	107.01	77.12	41.11	35.83	2,301.2
Yield on naphtha gone			76.99	102.1				
Corrected to 60 deg. temp......			74.26	98.48				

Nap. gas made, 13,279.4 M; total gas made, 17,606.7; coal used, 723,800 #

9584

1894.								
June	9,354	9,940	85.6	113.2	86.8	49.2	36.4	123.7
July........	9,928	10,890	86.0	118.4	91.4	51.1	37.2	134.5
August......	15,390	16,410	86.5	109.9	89.2	35.1	37.1	207.6
September..	17,458	18,590	86.8	115.2	88.5	31.6	37.1	238.7
October....	19,305	19,420	77.7	111.2	77.7	27.5	35.4	263.7
November..	19,797	22,460	75.4	104.3	60.5	26.2	33.6	277.5
December ..	21,004	22,550	75.4	101.9	64.7	31.0	34.6	295.1
January	21,118	22,550	80.8	101.3	66.0	31.5	34.6	297.7
February....	18,160	19,113	77.8	97.2	68.6	33.0	34.6	252.5
March......	18,268	19,450	79.5	100.8	73.2	35.4	35.8	363.6
April.......	15,312	15,710	79 2	102 4	77.9	39.1	37.2	208.0
May........	12,107	13,100	87.2	112.2	80.7	44.4	37.2	162.0
	197,201	209,973	81.13	106 57	77.1	34.76	35.9	2,824.6
Yield pr. gal. on Nap. gone......			76.24	100.07				
Corrected to 60 deg. temp........			73.53	96.57				

Nap gas made, 16,099.9; total gas made, 21,015.5; coal used, 730,500 #

1895.								
June	10,163	11,210	89.7	116.7	84.5	50.4	38.3	137.4
July........	12,383	13,130	86.3	113.3	87.4	48.0	36.4	161.2
August......	15,825	17,610	85.2	111.4	87.7	37.4	36.7	210.1
September..	19,395	21,070	77.2	101.0	79 8	32.6	34.6	265.2
October.....	20,550	21,070	77.2	101.8	71.7	31.2	36.0	277.4
November..	19,495	20,940	79.4	103.6	71.0	34.3	35.1	257.6
December ..	21,533	19,290	74.9	95.3	69.0	38.6	32.9	317.9
January	22,138	23,040	75.8	96.8	67.5	40.4	35.3	302.8
February...	19,478	20,763	.....	100.0	63.9	37.2	33.0	276.2
March......	19,074	19,990	.....	95.2	61.3	41.2	33.0	269.5
April.......	15,083	15,770	.....	97.1	64.7	48.2	33.0	245.9
May........	11,909	13,260	.....	103.4	73.6	52.3	34.2	198.5
	207,026	217,603	.....	96.69	73.5	40.09	34.96	2,909.7
Yield pr. gal on Nap. gone................				96.69				
Corrected to 60 deg. temp................				93.98				

During Feb., Mar., April and May, gas oil was used; oil and water gas together.

9585 RESULTS AT DANBURY CONN., FROM SETTING OF NINE UPRIGHT RETORTS.

Month.	Naphtha used.	Naphtha gone.	Total gas made.	Temp. Fahr., degrees.	Coal used per M.	Candle power.	Hours run.
1896.							
June	10,056	11,650	112.5	76.3	59.30	35.0	178.7
July	12,703	14,710	103.7	80.8	53.0	34.6	185.9
August	13,229	13,380	110.7	81.7	57.8	36.7	169 7
September	15,824	16,490	107.9	73.3	51.2	35.2	198.0
October	17,135	18,410	102.9	65.0	53.9	33.2	221.5
November	16,534	17,690	108.4	65.0	49.0	34.6	217.6
December	19,725	20,970	105 4	61.8	45.2	33.2	263.6
January	20,923	19,530	103.9	58 2	43.3	33.7	287.2
February	18,038	19,290	105.8	60.6	44.2	34.8	238.1
March	18,532	19,310	106.6	65.9	42.2	33.8	239.3
April	14,681	15,780	110.6	73.2	48.3	36.2	181.4
May	12,138	13,220	113.4	78.4	56.3	36.7	152.9
	189,518	200,430	107.14	70.02	43.90	34.81	2,533.9
Yield pr. gal. of Naphtha gone			101.31				
Corrected to 60 deg. temp			99.10				
Total gas made, 20,306.7 M.; coal used, 991,300 #							
1897.							
June	10,901	11,960	121.6	80 0	55.3	36.3	134.2
July	12,025	13,300	126.6	83.5	51 7	35.5	153.4
August	14,690	16,050	126.3	80.5	45.5	35 7	184.8
September	17,880	16,830	123.8	79.5	42.2	35.0	218.5
October	17,708	19,290	124.9	70.0	37.7	34.8	233.7
November	18,958	20,410	115.9	74.0	41.0	34.1	257.1
December	20,324	22,810	122.6	76.4	34.4	34.5	261.3
January	20,646	22,040	126.5	82.5	32.4	35.0	253.9
February	17,802	19,070	124.9	82.0	31.9	33.8	212.3
March	16,788	17,820	122.2	72.3	34.0	34.2	198.9
April	13,947	14,840	115.9	68.2	38.5	36.0	172.3
May	10,542	11,460	128.6	72.2	60.6	40.2	146.2
	192,211	208,880	122.51	77.08	40.47	35.42	2,426.6
Yield on Naphtha gone			112.73				
Corrected to 60 deg. temp			108.73				
Total gas made, 23,547.9 M.; coal used, 953,000 #							
9586							
1898.							
June	9,502	10,280	127.6	81.5	58.2	38.1	125.1
July	11,135	12,780	125.7	83.6	51.3	35.9	146.5
August	12,809	14,010	130.9	81.8	46.0	37.6	169.5
September	15,057	16,950	131.7	80.0	43.0	37.7	196.0
October	15,706	16,755	119.6	......	45.2	36.4	208.0
November	16,417	18,375	116.0	65 0	45.3	34.1	207.0
December	18,175	19,515	116.8	74.0	41.9	33.5	240.5
January	18,186	20,000	119.2	65.0	43.8	34 8	234.9
February	16,244	17,740	118.4	65.0	41.7	33.4	220.7
March	16,889	18,540	123.1	70.0	44.2	34.2	218.6
April	13,202	13,795	125.3	83.0	49.2	36.2	171.8
May	10,647	11,760	128.4	79.0	61.2	36.0	141.1
	173,970	190,500	122.3	75.21	47.1	35.64	2,279.7
Yield pr. gal. of Naphtha gone			111.22				
Corrected to 60 deg. temp			108.66				
Total gas made, 21,298,240 cu. ft.; coal used, 1,001,300 #							

RESULTS AT DANBURY, CONN., FROM SETTING OF NINE UPRIGHT RETORTS.

Month.	Naphtha used.	Naphtha gone.	Yield gas per gal.	Temp. Fahr., degrees.	Coal used per M.	Candle power.	Hours run.
1899.							
June	10,439	14,835	133.9	90.0	57.0	37.5	136.3
July	14,455	17,700	134.2	91.0	58.8	37.3	146.8
August	13,050	10,130	134.4	87.0	50.7	37.4	176.0
September	14,354	17,765	131.7	83.0	42.7	37.2	199.6
October	16,761	16,735	130.6	80.0	38.3	35.7	238.4
November	17,769	19,520	125.6	70.0	40.7	33.9	261.4
December	20,332	18,000	120.1	65.0	34.5	31.8	313.3
January	21,146	25,000	120.3	67.0	34.6	32.8	322.6
February	17,044	19,725	128.0	69.0	36.8	34.7	237.8
March	16,293	20,204	130.1	69.0	38.5	34.6	226.4
April	12,063	20,875	141.9	80.0	45.7	37.3	171.0
May	10,092	11,890	145.3	74.0	53.0	35.4	151.5
	180,798	212,379	130.0	77.08	42.84	35.54	2,581.1
Yield per gal. Naphtha gone			110.52				
Corrected to 60 deg. temp			106.61				
Total gas made, 23,472.9 M.; coal used, 1,005,700 #							
9587							
1900.							
June	10,312	12,385	139.5	82.0	50.0	36.3	147.0
July	10,300	12,775	154.9	86.0	49.2	36.2	149.8
August	11,976	15,055	152.3	83.0	45.5	34.9	174.1
September	14,545	14,667	134.6	79.1	41.2	33.8	204.5
October	16,517	17,500	132.6	71.0	36.9	35.2	228.4
November	17,821	18,974	126.0	71.0	37.4	34.3	249.5
December	20,768	21,760	126.3	89.0	34.5	34.0	293.1
January	20,352	21,352	119.1	83.0	35.6	34.4	290.4
February	17,226	20,650	126.1	84.0	35 5	34.0	260 0
March	18,292	18,670	122.8	69.6	33.6	33.1	271.9
April	13,707	16,090	127.9	71.5	44.8	34.8	194.8
May	12,100	12,800	132.1	79.7	47.8	36.4	171.9
	184,016	202,678	132.9	79.07	40 22	34.8	2,635.4
Yield per gal. gone			113.88				
Corrected to 60 deg. temp			109.38				
Total gas made, 24,082 M.; coal used, 968,600 #							
1901.							
June	11,620	12,840	138.2	94.6	45.10	35.7	166.6
July	12,450	13,060	138.1	98.8	45.47	35.7	182.2
August	14,572	15,540	135.4	81.7	42 4	34.9	207.6
September	15,737	17,250	132.0	74.0	33.7	34.5	214.2
October	19,446	20,430	129.7	68.8	31.7	32.8	281.4
November	19,980	22,300	124.5	61.5	22.2	31.5	275.9
December	23,293	25,480	124 6	63.1	29.9	33.0	234.5
January	23,951	27,020	115.4	59.8	31.2	34.7	362.5
February	18,155	19,020	122.1	58.5	37.7	33.3	283.8
March	18,162	16,760	126.1	67.8	38.0	34.5	272.6
April	14,744	15,463	130.9	70.9	43.3	35.8	207.1
May	12,363	13,030	134.6	78.2	50.9	35.8	173.1
	204,493	218,190	127.9	73.14	37.29	34.4	2,961.5
Yield per gal. Nap. gone			119.86				
Corrected to 60 deg. temp			116.59				
Total gas made, 26,152. M.; coal used, 975,400 #							

9588 RESULTS AT DANBURY, CONN., FROM SETTING OF NINE UPRIGHT RETORTS.

Month.	Naphtha used.	Naphtha gone.	Yield gas per gal.	Temp. Fahr., degrees.	Coal used per M.	Candle power.	Hours run.
1902.							
June	11,620	12,820	136.13	85.5	47.3	35.3	159.0
July	13,489	14,490	134.6	87.2	41.6	36.1	191.9
August	13,307	14,450	132.3	84 9	38.3	35.7	191.3
September	15,565	16,930	128.2	75.2	38.3	34.5	234.3
October	18,667	19,210	124.9	70.0	41.2	32.7	289.7
November	19,840	20,680	121.0	63.9	32.3	31.9	309.6
December	25,299	26,930	107.2	64.2	29.3	30.4	387.4
1903.							
January	24,618	25,746	104.7	63 6	29.2	34.6	379.2
February	18,354	19,500	120.1	72.7	34.5	34.6	269.3
March	18,582	20,210	131.0	76.3	33.6	34.0	280.2
April	15,849	16,826	119.5	66.2	42.3	32.3	231.5
May	12,643	13,390	130.3	75.0	39.6	35.9	195.3
	207,691	228,346	121.1	73.8	37.32	32.95	3,098.7

Yield per gal. Nap. gone................ 110 14
Corrected to 60 deg. temp.............. 106.97

Total gas made, 25,151. M.; coal used, 938,600#

Month.	Naphtha used.	Naphtha gone.	Yield gas per gal.	Temp. Fahr., degrees.	Coal used per M.	Candle power.	Hours run.
1903.							
June	13,254	13,880	129.7	80.0	38.1	33.9	185.3
July	14,071	15,070	129.4	75.7	35.0	35.0	196.8
August	17,028	17,630	126.1	81.4	31.7	33.6	242.0
September	18,292	19,690	124.0	76.8	28.8	34.4	253.5
October	21,982	22,660	124.2	79.0	26.0	32.7	318.0
November	22,740	26,670	116.9	75.0	29.8	32.0	340.2
December	24,675	26,638	120.9	60.0	29.1	31.4	338.2
January	24,108	25,625	115.2	67.0	33.0	32 8	343.7
February	22,180	24,137	113.0	63.0	34.5	pipe frozen	328.4
March	23,077	27,446	104.6	65.0	35.8	31.3	332.0
April	17,447	20,308	111.7	73.0	40.5	33.2	246.1
May	14,910	14,717	121.3	74.0	41.9	37.4	207.6
	213,568	238,237	122.0	72.49	32.12	33.43	3,351.8

Yield per gal. Nap. gone.............. 109.0
Corrected to 60 deg. temp.............. 106.17

Total gas made, 25,966.0 M.; coal used, 844,200#

9589

Month.	Naphtha used.	Naphtha gone.	Yield gas per gal.	Temp. Fahr., degrees.	Coal used per M.	Candle power.	Hours run.
1904.							
June	13,933	15,923	125.3	76.0	45.2	39.0	205.1
July	14,512	16,750	128.5	85.0	38.8	37.2	207.4
August	15,836	18,276	136.8	86.0	36.8	35.9	223.3
September	18,981	21,388	125.7	80.0	32.1	32.3	261.4
October	23,768	24,671	115.8	60.0	29.9	34.0	329.0
November	25,687	28,866	113.9	67.0	28.1	31.2	360.4
December	29,523	32,216	117.2	57.0	29.7	34.4	416.8
January	28,423	32,800	117.1	63.0	29.4	34.5	405.7
February	22,722	25,265	120.0	61.0	37.7	33.4	319.4
March	22,508	24,057	120.1	67.0	34.4	34.6	300.0
April	18,062	19,436	123.1	69.0	36.4	34.7	250.3
May	16,992	18,558	126.9	72.0	34.7	36.4	222.2
	248,865	273,874	120.9	70.25	33.92	34.8	3,501.0

Yield per gal. Nap. gone................ 109.16
Corrected to 60 deg. temp.............. 106.86

Total gas made, 30,987. M.; coal used, 1,020,500#

(Here follows diagram marked p. 9590.)

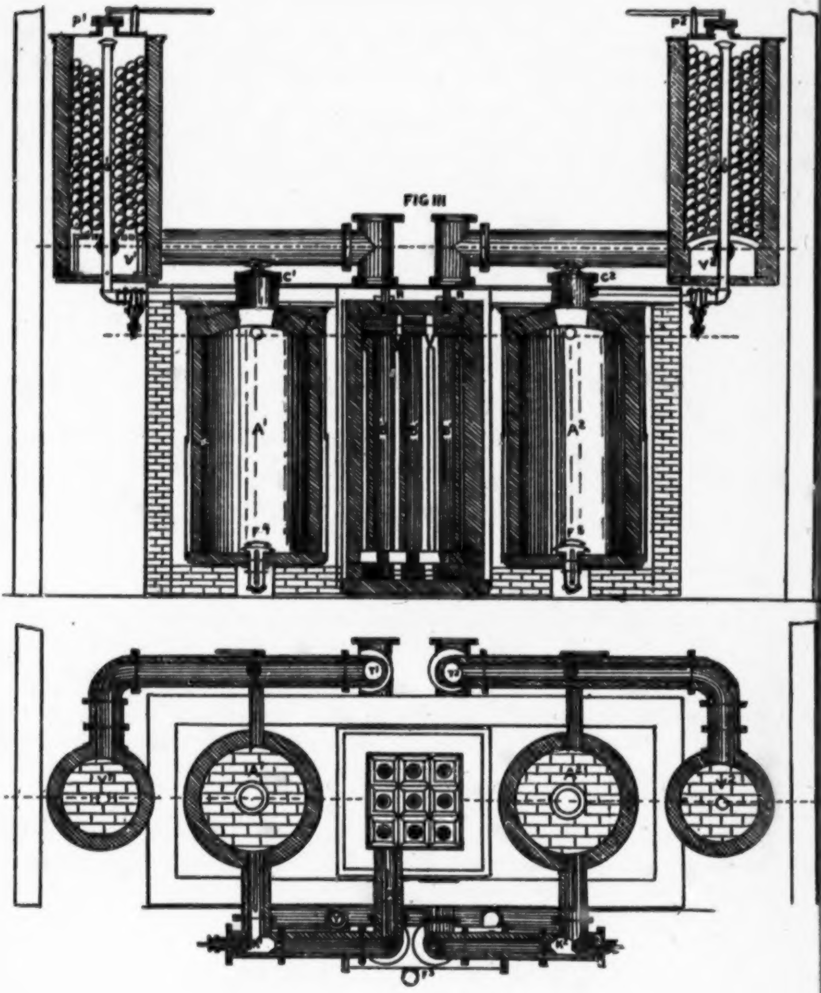

FIG III

P1
P2
V1
V2
C1
C2
A1
A2
F4
F5
T1
T2
K1
K2
F3

WITNESSES

Benj W Cowperthwait
L. H. Cowperthwait

INVENTORS

Henry X Edgerton,
George E Cowperthwait

9591 MAXIMUM RESULTS.

The enquiry has been made as to the maximum results that have been attained by the employment of the upright retort. In view of the want of balance between the oil used, and that gone from stock, there is some difficulty in arriving at any statement of maximum results, that will be free from criticism. Looking only at those from the use of gas oil within the last few years, it will be noted that during a number of months the statement of oil used, and that gone from stock come to a reasonable agreement. Among these may be noted the following:

May 1901	12,363	13,030	134.6	78.2	35.6
June 1903	13,254	13,880	129.7	80.0	33.9
Aug. 1903	17,028	17,630	126.1	81.4	33.6
May 1903	14,910	14,717	121.3	74.0	37.4
	57,555	59,257	511.7	313.6	138.5
Mean			127.9	78.5	34.6
Yield, based on oil gone			124.1		
Reduced to 60 deg. temp			119.5		

Per cent. of illuminants, on the average required for 34.6 candles, is 21.3%.

This, into yield per gallon, equals 25.45 cu. ft. of illuminants per gallon.

While this result can hardly be looked upon as a maximum, as it is the average of four months of working, during which the disagreements between the oil gone from stock, and that measured in the small feed tanks, had come to a minimum. The result is also based upon the oil gone from stock.

A fairer statement of an average maximum may be taken from a test made at Wallingford, in October and November, 1884; this was as far as the writer is aware, the first use of "gas oil," then called intermediate oil, ever made.

9592 The average result was: 107 cubic feet per gallon of 39.95 candle gas, tested according to the Danbury method; that is by ascertaining the durability of a 14 candle flame from 2 cu. ft. of gas. Pro rata yield, at 35 candles, 122.1 cu. ft.; per cent. illuminants, due 35 C. gas, 22.59 per cent.; per cent. of illuminants by yield, in cu. ft. per gallon, 22.59 x 122.1, gives quite approximately cu. ft. illuminants per gallon, 27.6.

MAXIMUM RESULTS FROM GAS OIL.

At Wallingford with Upright Retorts.

Nov. 1st, 1884, yield per gallon 124.5 cu. ft. of 39.72 candle gas.

Pro rata yield of 35.0 candle gas, equal 141.3 cu. ft.

Illuminants required in average 35.0 C. gas, equal 22.59 per cent.

Illuminants per gallon, 141.3 x 22.59 equal 31.8 cu. ft. per gallon.

During the above test, of which a copy is enclosed, the meters were tested, the water level was carefully adjusted and kept correct by means of an overflow, connected with inlet of the meters. There were two meters used, one for the oil gas and one for the water gas.

There was no analysis made of this gas, but analyses made subsequently of gas made from gas oil by the Wallingford machine gave as follows, December 1st, 1892:

	%
Carbonic acid	3.00
Illuminants	27.92
Carbonic oxide	16.14
Marsh gas	30.74
Hydrogen	18.82
Nitrogen	3.33
	99.95

9593 This gas shows the higher ratio of illuminants to marsh gas, which obtains from the gas made from gas-oil, and with the smaller diameter retorts.

It is obvious, that the short runs made during the Wallingford test, were not favorable to uniformity of results, and it is not at all surprising that the results differ. It is to be noted that in this case the water gas did not go through the oil gas retorts, but was drawn off entirely separate; therefore the result is got from oil without the so called preserving effects of the water gas.

The above test of gas oil was undertaken at the instance of Mr. Warden of the U. G. I. Co., and is to be noted as the first successful use of that quality of oil. Tests with the Lowe machine in use at that time had proved unfavorable.

GAS OIL TEST
AT
WALLINGFORD, CONN.

Date		Time Started	Time Ended	Time Run H. M.	Oil Used Gals.	Oil Gas Made	Water Gas Made	Water & Oil Gas Made	Yield per Gal. Oil Gas	Yield per Gal. Water Gas	Quality of [illegible]	Gals. per [illegible] C.P.
Oct.	29	3.00 P.M.	5.00 P.M.	2.00	30	1940	1220	3160	64.6	105.3	39.67	3.60
"	30	2.30 "	5.05 "	2.35	38	2450	1830	4280	64.4	112.6	40.26	3.48
"	31	1.30 "	5.15 "	3.45	42	2580	1850	4410	61.4	105.0	40.53	3.01
Nov.	1	1.30 "	3.50 "	2.20	31	2110	1750	3860	68.7	124.1	39.72	3.21
"	2	2.20 "	4.30 "	2.10	35	2330	1050	3380	66.6	96.4	41.21	4.14
"	3	3.05 "	3.40 "	0.35	12	750	666	1416	62.5	118.0	38.50	3.33
"	4	2.30 "	4.45 "	2.15	24	1460	1250	2710	60.8	113.0	38.81	3.34
"	5	1.30 "	5.30 "	4.00	46	2920	2180	5100	63.5	111.0	40.83	3.60
"	6	2.15 "	4.20 "	2.05	31	2000	1240	3240	64.5	104.5	40.32	3.85
"	7	2.00 "	5.30 "	3.30	40	2540	1660	4200	63.5	105.0	39.63	3.81
"	8	1.30 "	4.50 "	3.20	40	2620	1450	4070	65.5	99.3		4.03
"	9	12.45 "	3.45 "	4.00	38	2490	1580	4070	65.5	107.1		3.75
Totals & Averages				32.35	400	26190	17706	43896	64.2	107.6	39.95	3.72

Water gas

1884

Oil gas + Water gas

4.3 Candles per gal.

9.29 gals ~~per M~~ of 39.95 C

9594 THE DANBURY PROCESS OF GAS MAKING.

The Danbury method of carbonizing oil vapors consists essentially in setting the retorts on end, preferably of cylindrical shape, and the retorts are open, the full diameter both at top and bottom. The setting is heated by "producer gas"; the current of combustible gas travelling from the top downwards; the secondary air for the burning of the gas, is introduced into the top of the setting. The oil or bituminous vapors are turned loose into the common chamber, beneath the lower ends of the retorts, and find their way upward through the retorts, becoming decomposed into fixed gases, on the way up. The theory of the process depends upon the fact that the resultant gases are much lighter in gravity than the vapors from which they are made; not only that, they are made much hotter on the way, through the retorts. From this fact, it is supposed that each retort will draw in proportion to its capacity to heat and gasify; it is supposed that each retort will deliver at the upper end, gases of uniform weight and composition; that in the transit through the retorts the gases and vapors are in perfect equilibrium, and that signifies that they are in all parts proportionally and equally heated, and that being equally heated, decomposition into lighter gases will take place in each retort uniformaly. Although the ascending vapors, which are in immediate contact with the sides of the retort, receive heat in proportion to the square of the distance, inversely, yet it is impossible to suppose the superheated vapor will remain in that position; there is a constant eddying inwards of the heated vapors, as may be seen in fluids under similar conditions. It is practically noticeable that the transition from tarry matter to carbon is sharper and more definite in the case of these vertical re-
9595 torts, than is the case with horizontal retorts. Neither is there required in the case of vertical retorts, a "carrier," as it is sometimes called to preserve the vapors from overheating, or to sweep them out, as it is termed; the extra levity of the "cooked" gases, performs this service. That the action takes place in the manner described is perfectly observable to any one who is practically acquainted with the operation of the upright retort; and if a correct proportion of length to diameter in the retort were observed· it is probable that neither tar nor carbon would be formed in the operation of gasifying. It is probable that the length of the Danbury retorts could be increased somewhat in the use of the intermediate, or "gas oil," with improved results. It has been already noted in the case of the lighter oils, that nearly the total weight of the oils appeared in the form of the resulting gases. It has also been noted that by the use of a smaller diameter retort that the results from gas oil, in the shape of gas, and total luminosity of the gases was materially increased. During the first nine years of service of the Danbury setting the naphtha gases and the water gases were led off separately; that is, there was no water gas sent through the upright retorts along with the naphtha gases. The results during that period can be taken as a demonstration of the

feasibility of sending the vapors through the heated retorts without being "carried" or swept out by an inert, and non-decomposable gas. It is altogether probable that the presence of an inert gas is required in the use of the various superheater systems, heated by direct internal heat, for the reason that there is no ready escape for the cooked gases; and besides the heat at the beginning must be considerably higher than at the end of the operation. Also, in
9596 the use of horizontal retorts, there seems to be an actual advantage in the use of an inert gas, in order to save from overheating, the hydrocarbon vapors; the inert, or non-decomposable gases being lighter than the vapors, can generally be supposed to take the upper part of the retort, or even if supposed to be so thoroughly mixed that no practical separation by gravity takes place, still the effect of dilution will necessarily be preservative, in lessening the time of exposure and intimacy of contact with the heated surface. Judging by the practical results from the working of this Danbury system, it must be admitted that the advantage of allowing the gases to rise freely by the force of increased levity, is fully established, for the results from retorts set horizontally and used without the intervention of inert gases are far below those shown in quality and quantity and regularity. It is notable in the use of the Danbury retorts, no such thing as a stopped retort had occurred during a period of twelve years' use, or until the use of Texas oil was begun; and only then through the inexperience of the men in the handling of such oils. During all this time no especial steps had to be taken to burn out or clean out carbon in the retorts; the ordinary reversals of blast and heating up being sufficient to keep them clean, and it is doubtful in view of the construction, if even that was necessary, to keep the inside of the retorts clean. Each retort was provided with a sight hole for the purpose of watching the heats, and the condition of the retorts, and such was the regularity of the heating under the system that the custom of inspection fell into disuse for years at a time, the practical handling being carried on by the clock, the blast pressures and the color of the issuing gas from a test cock. The machine has run from the starting in 1890, until the present time without letting
9597 down, and such alterations or improvements that have from time to time been made, have been accomplished without letting down the heats, and without any essential repairs. There have been introduced since the start some improvements in running, which in the aggregate have been of considerable importance, and which in the starting of a new machine could be availed of at once, to the considerable advantage of results. As an instance, the method of stopping leaks in the setting was an afterthought, and was of great importance, particularly as to those in the bottom joints, with which in the usual operation of the work, only the hydrocarbon vapors came in contact.

In fact the operation as a process was being continually made over, to suit the different oils, and, as shown by the results, that a fifteen-year-old machine is doing superior work, with an inferior and cheaper quality of oil than at the outset. For instance, the first year's running on naphtha took a gallon of material for 95.69 cu.

ft. of average 34.38 candle gas, while the year ending May 31st, 1905, required a gallon of gas-oil (gone from stock) for 106.86 cu. ft. of average 34.8 gas. It may as well be stated at this point, how the photometry of this gas has been determined and entered in the accounts.

Photometric methods used at Danbury, in reporting candle power. This is an important point, because it is a well-known fact that poor gases can be rated a higher and rich gases at a lower value than is practically obtained by the consumer, even with the best and most suitable burners in each case. The whole matter rests on the fact that the same gas can obtain different ratings, per five cubic feet, according to the greater or less candle power of the flame used to obtain the rating. For instance, if a three-foot rate of con-
9598 sumption is obtained and tested with a suitable flat flame,
and a five-foot rating of the gas given thereby, it will give a decidedly inferior rating to the gas than if burned in a suitable burner at the rate of five feet. For the above reason it was determined to standardize the Danbury gas by a standard candle power flame, and the power of the flame was put at fourteen candles, because at that time, 1879, it was the actual five-foot rating of the gas in use (coal gas). The Danbury gas can be actually burned, and is so used by many customers in flames of 30 to 33 candles. There was no obligation to standardize by so small a flame as 14 candles, save the facility it gave for comparison with the former gas, coal gas. Standardized with a 22 to 25 candle flame the pro rata candle power of Danbury gas is raised from 14 candles for 2 c. f. rate to 17.6 candles for a 2 c. f. rate; and this is the actual comparative value of the gases when with gases using as high as a 22 candle flame to standardize. The Danbury system of testing is practically the same in principle as the system used in Paris, and is carried out in practically the same way, only substituting a 14 candle flame instead of a "Carcel." The rating instead of being reported in litres per hour to give a "carcel," is reported in number of minutes; two cubic feet of gas will last while giving a fourteen candle flame. This system of testing has been introduced into England, after years of haggling, and now legalized. The system was introduced at Danbury in 1879; or, I believe, five years before its advantages were fairly described in an English publication. No particular originality is pretended for it, but it certainly does away with the troublesome incongruity of photometric results, and moreover places the rating of greatly differing qualities of gas on an eminently practical
9599 as well as scientific basis. With the advent of the Welsbach
burner into practical use, came an itching desire to lower quality all round, and along with it came this long suspended recognition of the superior advantages of the improved photometry. Is it possible that scientific thought is entirely moulded by pecuniary considerations? Gas below standard was ill treated by the old 5 cu. ft. an hour plan; Welsbach brought a desire for lower standards to please pocket; pocket wants improved photometry, and gets it; science couldn't, except among "monkeyfied" Frenchmen; pocket beats science in the domain of science! This is a good place

for a word about candles per gallon of oil. Whoever invented the method of rating results from oil in candles per gallon; his name remains unknown. Sensible people took to using it, in the same fashion that scholars are sometimes pleased to use slang. No one seems to know who invented the "French system" of measuring electric lights, so long in use, but it is shrewdly suspected that the candles per gallon man and the French system arc man is either one and the same person or of the same family. Neither practice has any real basis, but both serve a commercial purpose. It will be conceded that the gas product from one gallon of oil, added to 1,000 feet of water gas would give no light, nor would two gallons give any sensible light, not until four gallons per thousand is reached does the light become a practical quantity; the addition of the 5th, 6th and 7th gallon give each an increase per gallon, where the light is tested by the method of equal flame powers in each case. Different experimenters might differ slightly as to the point where a maximum effect was to be obtained from a given quantity of oil, but by using the equal flame power method of photometry the difference would be slight.

9600 FUEL REQUIRED.

As to the fuel required to make a thousand feet of the pure oil gas, the records of operations give us only a clue. During October, 1903, there was required, in the cupolas, 26# per thousand. This amount of coal furnished the heat for making about 700 feet of oil gas, as well as the fuel and carbon for 309 feet of water gas; the latter could not probably have been less than 15# leaving 11# per thousand for seven hundred feet of oil gas, together with the fuel necessary for blowing up a heat to make up for an average of 460 hours lying off during the month.

REGULARITY.

While the quality has generally averaged above the point stipulated the records do not by any means disclose the regularity of which the system is capable. The method generally pursued to regulate the candle power of the gas to one point was as follows: Every morning before the time arrived for gas making, the quality of the gas in the holder as going to the city was determined on a Bunsen photometer, except that a standard light equal to 14 candles was turned on the burner (a 1-in. E. H. Batwing) and the durability of a 14-candle flame, while using at the rate of 2 c. f. per hour, was determined. The result should be 5 minutes for one-twelfth of a cubic foot, or 60 minutes for 2 cubic feet. Whatever the gas lacked, or exceeded this amount was marked on a slip for the guidance of the gas maker.

The gas maker was provided with two burners of equal capacity, one on each limb of a differential gauge. One of these was supplied with gas from the street main, and the other was supplied from

the gas making. The directions were to keep the flames visi-
9601 bly equal, when the quality was right in the holder, and to exceed or diminish the making gas, as the holder gas was below or above the 60 minutes standard. While the above method carefully carried out will give a very fair result, as carried out, there were sometimes intervals of several days between tests at Danbury, on many occasions, thus giving an opportunity for the gas to sag in cold weather or rise above the mean in the spring season. Not only is more oil required in cold weather, but even with the increased quantity shown in the records, the gas would sag below standard, and this is particularly noticeable since the use of gas oil. As before stated the writer believes the length of the Danbury retorts to be too short for cracking up the vapors into their most permanent forms of illuminants; although they probably give a somewhat larger result in light during moderate weather. The analyses of gas made with smaller retorts, and from oil, point forcibly to this conclusion, and while it may not be possible to make a gas which will not require somewhat more of oil during the excessively cold weather of our winter, it will be possible to greatly restrict this difference by means of giving a greater ratio of length to diameter, than obtains in the Danbury plant.

In order to weather the "minimum standard" point in bad weather, close hauled and close to, the plan put in use in New Orleans and very closely watched for fouls from the poop deck of the City Hall, during a period of several months, the enclosed log, or record, is offered.

The plan followed was that of the gas clock, which, according to the recollection of the writer was designed and constructed by Mr. Milsted of the American Meter Co. The "gas-clock" was designed and used on the assumption that in the best practise of gas
9602 making, the quality of the gas could not be prevented from deviating from the given standard, the use of the gas clock was to so record and expose the result of the deviations during a day's make, that the gas could be averaged to the standard by the workmen in charge of the operations. The writer will not go into the details of the working of the gas clock at this time; suffice it to say, the result of its careful use led to an uniformity in the production of a high candle power gas, that has probably never been equalled. The record kept at New Orleans, or rather a certified copy thereof, is offered as evidence of how close the minimum can be shaved by means of the upright retort, worked according to the indications of the gas clock, of Mr. Milstead.

It has been claimed by some that the construction and operations of works under the management of the U. G. I. Co. of Philadelphia, may be taken as models of efficiency, economy, and regularity of product. The writer therefore calls attention to the works at Fall River, Mass., as an example. According to the Inspectors' report, (19th annual) the highest quality was 26.7; the lowest, 18.2; the average, 20.59; a range of 8.5 candles, or a range of 41 per cent., taking the mean as a basis. This, the result of 47 inspectors; less than one per week; therefore the chances were one to six against catching either the highest or lowest quality. Contrast this with Haverhill, employing a retort process; highest, 22.4; lowest, 18.6; range, 3.8, or a range of 18.4 per cent. of the mean quality. But this performance was with naphtha. At New Orleans the extreme range on 96 daily tests was 4.56 candles on average 33.33. or 13.5 per cent. As this extreme range happened within 24 hours, it is altogether probable it was the result of some peculiar derangement at the works, for it occurred but once in six months.

9603 COPY OF THE CITY SURVEYOR'S TESTS OF THE QUALITY OF NEW ORLEANS GAS.

This is to certify that at the request of Mr. H. H. Edgerton, I have made the accompanying copies of the weekly report of the daily tests of gas from the letter book of 1885, in the office of the City Surveyor. These tests extend from July 24th, 1885, to December 1st, 1885, when they were discontinued. These tests were made by me and reported to the Council by D. M. Brosnan, City Surveyor. For identification, I have paraphrased all the accompanying copies, as follows: "O. K. L. M. Brown, Ass't City Surveyor."

(Signed) L. M. BROWN,
Ass't City Surveyor.

NEW ORLEANS, *July 28th*, 1885.

To the Honorable Mayor and City Council of the City of New Orleans:

GENTLEMEN: I have the honor to report on the testing of both gas and electric lights as follows:

The photometer loaned the City by Mr. H. H. Edgerton has been placed in position in the old drafting room on the fourth floor of the City Hall building, and the following tests of the intensity of lights from gas made:

July 24th, 1885.

	At the rate of 3 cu. ft. per hour.	At the rate of 5 cu. ft. per hour.
1st.	19.3 candles.	32.10 candles.
2nd.	20.0 candles.	33.33 candles.
3rd.	19.9 candles.	33.20 candles.
4th.	20.9 candles.	33.60 candles.
5th.	19.6 candles.	32.70 candles.
6th.	19.1 candles.	31.80 candles.

July 27th, 1885.

1st.	20.4 candles.	34.0 candles.

July 28th. 1885.

1st.	20.4 candles.	34.0 candles.
2nd.	20.0 candles.	33.33 candles.
3rd.	19.9 candles.	33.15 candles.

These tests were made with the gas burning at the rate of three (3) cubic feet per hour, although the recognized photometer 9604 test is made on a basis of five cubic feet per hour. As the burners for water gas will not admit of its burning at the rate of five (5) cubic feet per hour, the tests are made with three-foot burners, and by calculation that at the rate of five cubic feet per hour is obtained.

In relation to the testing for brilliancy of electric light, as ordered by your Honorable body, this office having no photometer for the purpose, has availed itself of the use of one owned by the New Orleans Gas Light Co., set up in the residence of Mr. Walton Clark, an employee of the said company, at the corner of Robertson and Canal streets.

NEW ORLEANS TESTS FOR QUALITY OF GAS.

These tests were made on the 8th of June, last, and on the 24th of the present month, on which occasion Honorabe William Moon, Michael Carroll, Peter Farrell and Victor Maubert, members of the Committee of Testing of Lights, were present, also Mr. Shields, Council Committee Clerk and Mr. L. W. Brown. Draftsman, etc., of this office. The following intensities were obtained:

June 8th, 1885.		July 24th, 1885.	
1st.	366 candles.	1st.	768 candles.
2nd.	708 candles.	2nd.	938 candles.
3rd.	780 candles.	3rd.	783 candles.
4th.	162 candles.	4th.	449 candles.
5th.	343 candles.	5th.	431 candles.
6th.	126 candles.	6th.	837 candles.

The method of making these tests is the same as that in testing the gas lights, with the exception, that while the assumed or known power of the lights in the gas tests remained stationary, and the semi-transparent disc used for obtaining one point of equal illumination between the two lights is moved along a bar, they are reversed in testing the electric lights. For further testing of these lights the City should have a similar photometer, and a horse and wagon to move it about.

Very respectfully,
(Signed) D. M BROSNAN,
City Surveyor.

9605 August 4th.

GAS TESTS.

At 3 feet pr hour, candle power.			Calculated to 5 cu. ft. per hour.
July	28th.	19.9 candles.	33.15 candles.
	29th.	19.2 candles.	32.06 candles.
	30th.	19.4 candles.	33.00 candles.
	31st.	19.6 candles.	32.70 candles.
Aug.	1st.	19.93 candles.	33.20 candles.
	2nd.	20.13 candles.	33.51 candles.

August 11th, 1885.

Aug.	3rd.	20.13 candles.	33.51 candles.
	4th.	19.40 candles.	32.30 candles.
	5th.	19.70 candles.	32.80 candles.
	6th.	19.23 candles.	32.00 candles.
	7th.	19.80 candles.	33.00 candles.
	8th.	19.70 candles.	32.80 candles.
	9th.		
	10th.	19.60 candles.	32.60 candles.

August 18th, 1885.

Aug.	11th.	19.50 candles.	32.50 candles.
	12th.	19.80 candles.	33.00 candles.
	13th.	19.93 candles.	33.21 candles.
	14th.	19.80 candles.	33.00 candles.
	15th.	20.23 candles.	33.70 candles.
	17th.	19.90 candles.	33.20 candles.

August 25th.

Aug.	18th.	19.90 candles.	33.20 candles.
	19th.	19.60 candles.	32.66 candles.
	20th.	19.70 candles.	32.80 candles.
	21st.	19.40 candles.	32.30 candles.
	22nd.	19.80 candles.	33.00 candles.
	24th.	19.70 candles.	32.80 candles.

September 1st, 1885.

Burning 3 cu. ft. per. hour.			Calculated to 5 cu. ft. per hour.
Aug.	25th.	20.1 candles.	33.50 candles.
	26th.	19.7 candles.	32.80 candles.
	27th.	19.9 candles.	33.20 candles.
	28th.	20.0 candles.	33.33 candles.
	29th.	19.6 candles.	32.66 candles.
	31st.	19.8 candles.	33.00 candles.

9606 September 8th.

Sept.	1st.	19.70 candles.	32.80 candles.
	2nd.	19.92 candles.	33.20 candles.
	3rd.	19.63 candles.	32.72 candles.
	4th.	19.90 candles.	33.16 candles.
	5th.	19.87 candles.	33.12 candles.
	7th.	19.90 candles.	33.16 candles.

September 15th.

Sept.	8th.	19.97 candles.	33.28 candles.
	9th.	19.80 candles.	33.00 candles.
	10th.	19.90 candles.	33.20 candles.
	11th.	19.70 candles.	32.80 candles.
	12th.	19.80 candles.	33.00 candles.
	14th.	19.85 candles.	33.10 candles.

September 29th.

Sept.	15th.	19.80 candles.	33.00 candles.
	16th.	19.90 candles.	33.20 candles.
	17th.	19.88 candles.	33.10 candles.
	19th.	19.80 candles.	33.30 candles.
	21st.	19.85 candles.	33.00 candles.
	18th.	19.98 candles.	33.10 candles.

September 29th.

Sept.	22nd.	20.04 candles.	33.40 candles.
	23rd.	20.10 candles.	33.50 candles.
	24th.	19.70 candles.	32.80 candles.
	25th.	19.85 candles.	33.10 candles.
	26th.	19.90 candles.	33.20 candles.
	28th.	19.70 candles.	32.80 candles.

October 6th.

Sept.	29th.	19.30 candles.	32.26 candles.
	30th.	19.40 candles.	32.35 candles.
Oct.	2nd.	20.00 candles.	33.33 candles.
	3rd.	19.90 candles.	33.20 candles.
	5th.	19.70 candles.	32.80 candles.

9607 October 20th.

Oct.	6th.	19.80 candles.	33.00 candles.
	7th.	20.00 candles.	33.33 candles.
	8th.	19.30 candles.	33.00 candles.
	9th.	20.00 candles.	33.33 candles.
	10th.	20.10 candles.	33.50 candles.
	12th.	19.80 candles.	33.00 candles.
	13th.	19.92 candles.	33.20 candles.
	14th.	19.89 candles.	33.15 candles.
	15th.	19.95 candles.	33.25 candles.
	16th.	19.80 candles.	33.00 candles.
	17th.	19.98 candles.	33.30 candles.
	19th.	19.98 candles.	33.30 candles.

November 3rd.

Burning 3 cu. ft. per hour.			Calculated to 5 cu. ft. per hour.
Oct.	26th.	19.70 candles.	32.85 candles.
	27th.	19.80 candles.	33.00 candles.
	28th.	19.99 candles.	33.33 candles.
	29th.	19.70 candles.	32.80 candles.
	30th.	19.67 candles.	32.78 candles.
Nov.	2nd.	19.96 candles.	33.20 candles.

November 10th.

Nov.	2nd.	19.95 candles.	32.20 candles.
	3rd.	19.50 candles.	32.50 candles.
	4th.	19.44 candles.	32.40 candles.
	5th.	18.00 candles.	30.00 candles.
	6th.	19.95 candles.	33.20 candles.
	7th.	20.30 candles.	33.96 candles.

November 17th.

Nov.	10th.	19.99 candles.	33.33 candles.
	11th.	20.71 candles.	34.50 candles.
	12th.	20.00 candles.	33.33 candles.
	13th.	19.40 candles.	32.35 candles.
	14th.	19.81 candles.	33.02 candles.
	16th.	19.65 candles.	32.75 candles.

9308

November 24th.

Nov.	17th.	20.00 candles.	33.33 candles.
	18th.	20.74 candles.	34.56 candles.
	19th.	20.50 candles.	34.16 candles.
	20th.	19.65 candles.	32.75 candles.
	21st.	20.30 candles.	33.96 candles.
	23rd.	19.54 candles.	32.57 candles.

November—December 2nd.

Nov.	24th.	19.65 candles.	32.75 candles.
	25th.	19.70 candles.	32.83 candles.
	27th.	20.02 candles.	33.36 candles.
	28th.	19.53 candles.	32.23 candles.
	30th.	20.00 candles.	33.33 candles.

(Signed) D. M. BROSNAN,
City Surveyor.

L. M. BROWN,
Ass't City Surveyor.

EXHIBITS
NOT
SUITABLE
FOR
MICRO-
FILMING

6639

9622 COMPLAINANT'S EXHIBIT 391.

(For Identification.)

AN ORDINANCE

OF THE

CITY OF PHILADELPHIA.

Approved November 12th, 1897, Authorizing a Lease of the

PHILADELPHIA GAS WORKS

TO

THE UNITED GAS IMPROVEMENT COMPANY.

AN ORDINANCE

Authorizing the Execution of a Contract with The United Gas Improvement Company, its successors and assigns, by the City of Philadelphia, for the lease to the former of the gas works, street mains, conduits, pipes. services, meters, and other property, real and personal, of the latter, used for and in connection with the manufacture and distribution of gas in the City of Philadelphia; for the operation, maintenance, enlargement, extension, and betterment of the same; for the manufacture and distribution of gas in said city by said The United Gas Improvement Company, its successors and assigns, and for the exclusive supply, by said lessee and its assigns, of all gas to be supplied to consumers by or with the consent of said city during the term of the lease; and 9623 also consenting to the entry of The Equitable Illuminating Gas Light Company of Philadelphia upon the streets of the City of Philadelphia, in case of its becoming an assignee of the United Gas Improvement Company to such extent as shall be necessary to enable it to perform its duties as such assignee.

WHEREAS, The sole source of supply of gas in the City of Philadelphia, saving of that manufactured and supplied to said city under its contract dated the third day of August, 1888, with the Philadelphia Gas Improvement Company, and also of that supplied by the Northern Liberties Gas Light Company, which latter Company claims a right also to supply gas in portions of said city is certain property known collectively as the Philadelphia Gas Works, owned by said city and now operated by it; and,

WHEREAS, Very large sums of money ought now to be expended in laying additional mains, services, and connections in supplying meters and appurtenances, and in the erection of new and additional apparatus necessary for the economical manufacture, storage, and distribution of gas sufficient to supply the present and prospective demands for gas by the city and its inhabitants; and,

WHEREAS, The requirements of the city for other municipal purposes are of such a pressing character that it would be extremely inconvenient for it to make said expenditures at the present; and,

WHEREAS, It is deemed desirable to secure by contract with a responsible company the maintenance, operation, development, and extension of its gas plant, and of its system of distribution

9624 of gas, for a term of years, and also to resume at the end of said term possession of its works and plant, modernized and fully equipped, without impairment of the exclusive privilege of supplying gas within the limits of said city now vested in it; and,

WHEREAS, Said object can be accomplished by leasing all its property, real and personal, known collectively as the Philadelphia Gas Works, and the appurtenances, for a comparatively long term of years, under a contract insuring to the lessee during said term possession of said works and of the exclusive right, except as hereinafter noted, to supply the citizens of Philadelphia with gas; now, therefore,

SECTION I. *The Select and Common Councils of the City of Philadelphia do ordain:—*

That the Mayor of said city be, and hereby is authorized to execute and deliver on the part of the city to The United Gas Improvement Company, a corporation of the State of Pennsylvania, its successors and assigns, a lease and contract in the words following, and that the same, when delivered, shall be binding upon the City of Philadelphia:—

THIS AGREEMENT, made this day of , 189 , between the *City of Philadelphia* of the one part, and *The United Gas Improvement Company,* a corporation duly organized under the laws of the State of Pennsylvania, having its principal office in said city of Philadelphia, of the second part, *witnesseth:*

WHEREAS, By an ordinance of the City of Philadelphia entitled "An Ordinance Authorizing the Execution of a Contract with The United Gas Improvement Company, its successors and as-

9625 signs, by the City of Philadelphia, for the lease to the former of the gas works, street mains, conduits, pipes, services, meters, and other property, real and personal, of the latter, used for and in connection with the manufacture and distribution of gas in the City of Philadelphia; for the operation, maintenance, extension, and betterment of the same; for the manufacture and distribution of gas in said city by said The United Gas Improvement Company, its successors and assigns, and for the exclusive supply, by said lessee and its assigns, of all gas to be supplied to consumers, by or with the consent of said city during the term of the lease; and also consenting to the entry of The Equitable Illuminating Gas Light Company of Philadelphia upon the streets of the City of Philadelphia, in case of its becoming an assignee of The United Gas Improvement Company to such extent as shall be necessary to enable it to perform its duties as such assignee," duly approved the day of , 189 , it was provided for the reasons therein set forth that this contract should be executed; now,

Therefore, It is agreed between the parties hereto as follows:

Clause I. The City of Philadelphia does hereby lease to the said The United Gas Improvement Company, its successors and assigns, for the term beginning the day of , 189 , and ending December 31, 1927, all the property, real and personal, collectively known as the Philadelphia Gas Works, with the appurtenances, including, *inter alia,* the property particularly described in Exhibit A, hereto attached, which is to be taken as a part of this contract, comprising, generally, the land, buildings, tene-

ments, machinery, apparatus, tools, mains, pipes, services,
9626 meters and other appurtenances possessed or used by or for the City of Philadelphia in the manufacture, storage, sale, distribution, and supply of gas, it being understood that the specification of said leased property in said Exhibit A shall not be construed in such way as to exclude from the list any items omitted which should have been herein included; and that no unpaid bills for gas or liens against real estate for the same nor unpaid accounts for residual products existing at the date when the lessee takes possession are included or intended to be included in the property herein assigned and leased; and it being further understood and agreed that The United Gas Improvement Company, its successors and assigns, shall at its own expense assume and pay any and all ground rents and the rental of any land, building or buildings, of which the city is a lessee, which are used in connection with the city's gas business. Delivery shall be made of all such property to said The United Gas Improvement Company, its successors and assigns, by the City of Philadelphia, as soon as may be after the execution of these presents and antecedently to the date fixed for the commencement of the lease and upon the performance by the said The United Gas Improvement Company of the obligations imposed upon it by Clause 3 of this agreement, it being understood that the City of Philadelphia also must do all necessary on its part to be done to enable said The United Gas Improvement Company to know the amount to be paid under Clause 2. And said lessee hereby agrees that it will pay all rents or other charges for water which shall be used by the lessee upon the leased premises or any part thereof.

The City of Philadelphia does hereby authorize and em-
9627 power the said The United Gas Improvement Company, its successors and assigns, hereafter during the term of this contract to retain possession of, maintain, change, alter, and repair, and to operate said gas works and appurtenances and all the property hereby leased and to lay, repair, remove, relay, extend, and maintain mains, pipes, services, and appurtenances along and beneath the surface of the highways, streets, avenues, lanes, alleys, ways, and public places in said city for the supply and distribution of gas; and said Company, its successors and assigns, during the continuance of this contract, shall have the exclusive right, for said purposes, to enter upon and occupy all said highways, streets, avenues, lanes, ways, alleys, and public places, and to supply and distribute gas through pipes laid therein: *Provided, however,* That to such extent as the Northern Liberties Gas Light Company is now possessed of a right to supply gas within any portion of the City of Philadelphia, this contract shall not be construed as intended to vest in the lessee any right in such territory, except such rights as the City has therein. The City of Philadelphia agrees that during the term of this contract it will do nothing, by ordinance or otherwise, which will in any way interfere with, or limit, restrict, or impair this exclusive right hereby vested in said The United Gas Improvement Company, its successors and assigns. All openings, excavations, and repaving shall be made subject to such general rules and regulations as from time to time shall be in force concerning the opening, excavation, and repaving of streets, and the protection of travel

along same, and the trenches shall be refilled and repaved with the same material and character of paving as before they were 9628 opened. All openings, excavations, repaving and refilling shall be subject to the approval of the Department of Public Works. If at any time The United Gas Improvement Company, its successors and assigns, shall neglect or refuse to refill any trenches and repave over all openings which it or its successors or assigns shall have made, upon notification from the Department of Public Works, said Department is hereby given full power and authority to do such refilling and repaving at the expense and cost of The United Gas Improvement Company, its successors and assigns, and if the City of Philadelphia at any time in the future build and construct a suitable subway that the said lessee, its successors and assigns, shall and will when so requested by the City of Philadelphia place its pipes in such subway at its own cost and expense, and no rental shall be charged therefor by the City of Philadelphia. It shall be unlawful for the said The United Gas Improvement Company to assign this contract to The Equitable Illuminating Gas Light Company of Philadelphia, and to any other corporation of Pennsylvania having power to exercise the franchise, and also to enter into an agreement with said Company, or with any other of said Companies, for the performance in whole or in part, of this contract, or for vesting in such assignee any rights under this contract, and to authorize such other company or companies to do all things necessary in and about such performance, including the occupancy and use of the highways, streets, avenues, lanes, ways, alleys, and public places in laying, repairing, removing, relaying, extending, and maintaining mains, pipes, services, and appurtenances, and supplying gas. Authority is hereby given to the said The Equitable 9629 Illuminating Gas Light Company of Philadelphia, assignee as aforesaid, and to any other corporation which may thus become the assignee or covenantee of the said The United Gas Improvement Company, to enter upon and to occupy the highways, streets, avenues, lanes, ways, alleys, and public places of the City of Philadelphia during the existence of this lease, but no longer, for the purpose of laying, repairing, removing, relaying, extending and maintaining mains, pipes, services, and all other appurtenances and appliances necessary for the distribution of gas to the City of Philadelphia and to the inhabitants thereof. Such assignees, including the said The Equitable Illuminating Gas Light Company of Philadelphia, may manufacture, distribute, and sell gas in all parts of the City of Philadelphia subject to the same limitations and restrictions as are herein imposed in the grant to The United Gas Improvement Company, to said City and to the inhabitants thereof at all times hereafter during the existence of this lease. No assignment of this lease, or of any of the rights or privileges herein granted, nor any contract with the said The Equitable Illuminating Gas Light Company of Philadelphia, or any other company, shall in any way diminish the primary obligation and liability of the said The United Gas Improvement Company to perform all the obligations of this contract. Its obligation hereunder shall in no respect be diminished or impaired by any such assignment or contract, but it shall remain liable jointly with such assignee or covenantee for the performance

of all the obligations hereof to the same extent as if no assignment, sublease, or contract had been made by it. In any case in which an assignment or assignments of this contract shall be made,
9630 written notice that an assignment has been made, giving the name of the assignee and the date of the assignment, shall be filed by The United Gas Improvement Company in the office of the Mayor before the assignee shall acquire any rights under this contract.

Clause 2. An inventory and appraisement shall be prepared by the Director of Public Works of all coal, coke, tar, and lime on hand at said City's Gas Works and of all gas on hand in the holders, mains, and pipes of the City when the property leased shall be delivered to the lessee hereunder, and said The United Gas Improvement Company shall pay to said City the amount of this appraisement at once upon presentation to it of such inventory and appraisement. In making such appraisement the Director shall be guided by the cost (in case of gas in holder, mains, and pipes, it shall be the City's holder cost) of the articles named therein. The appraisement of this inventory shall be made by the Director of the Department of Public Works, or by an appraiser or appraisers appointed by him; said appraisers shall be guided by and bounded by the market price of the articles which will be enumerated in the said inventory at the date this ordinance becomes a law. The current bills for gas shall be collected by the United Gas Improvement Company, which shall pay to the City Treasurer as received the proportion of said receipts to which it is herewith agreed said City shall be entitled, which proportion shall be represented in each case by a fraction having as its denominator the number of days covered by the bill and for its numerator the number of said days during which gas was supplied to said consumer by the City.

Clause 3. Simultaneously with the execution of this agreement, The United Gas Improvement Company shall execute and
9631 deliver to the City of Philadelphia its bond, with surety or securities, in the penal sum of one million (1,000,000) dollars, conditioned for the faithful performance of the obligations hereof. Such bond shall be in such form as shall be approved by the City Solicitor, and the surety or sureties thereon shall be approved by him.

Clause 4. The said The United Gas Improvement Company, its successors and assigns, shall, at the expiration of two years from the date of the lease, surrender, release, and deliver to the City of Philadelphia full and absolute possession of all that part or portion of the property known as the Ninth Ward Station, described as follows, to wit: All that certain lot or piece of ground with the buildings thereon erected, bounded on the south by Chestnut street, on the east by Twenty-fourth street, on the north by Market street, and on the west by the Schuylkill River; and also, all that certain lot or piece of ground with buildings thereon erected, bounded on the south by Market street, on the west by the Schuylkill River, on the north by the Pennsylvania Railroad, and on the east by Twenty-third street: *Provided, however,* That the said The United Gas Improvement Company, its successors and assigns, shall have the right to remove the works, machinery, and appliances located upon the property so to be delivered, surrendered, and released, to other portions of the leased property at any time prior to the surrender of said two above described lots or pieces of ground and buildings thereon erected.

Clause 5. The City of Philadelphia hereby assigns to the said The United Gas Improvement Company, its successors and assigns, all its rights under its contract with the Philadelphia Gas 9632 Improvement Company dated the third day of August, 1888, and it agrees that said Philadelphia Gas Improvement Company may assign the same contract to the said The United Gas Improvement Company, its successors and assigns.

Clause 6. If, on or before the first day of July, 1907, (and time in this respect shall be of the essence of this contract), there shall have been served upon The United Gas Improvement Company a written notice, signed by the Mayor of the City of Philadelphia, of the desire of said City to terminate this contract at the expiration of ten (10) years from the first day of January, 1898, and if, on or before said first day of July, 1907, an ordinance providing for such termination shall have been duly enacted by said City of Philadelphia, then it shall be the right of said City of Philadelphia to terminate this contract at the expiration of ten (10) years from the first day of January, 1898: *Provided,* That on or before December 31, 1907 (and time in this particular shall be of the essence of this contract), the payments herein provided to be made to the said The United Gas Improvement Company, its successors and assigns, shall have been fully and completely made by said City. In case of failure to pass said ordinance on or before said first day of July, 1907, or of a failure to notify The United Gas Improvement Company on or before that date of the desire of the City to take possession of the leased property in pursuance of said ordinance, or of the failure of the City of Philadelphia to pay in full, on or before the thirty-first day of December, 1907, the amount of money herein provided, this option on the part of the City of Philadelphia to terminate this contract prior to December 31, 1927, shall cease and 9633 be forever at an end. The payment which must be so made to The United Gas Improvement Company, its successors and assigns, shall be a reimbursement of all sums of money expended by the said The United Gas Improvement Company, its successors or assigns, subsequent to the date of this contract, in or about the buildings, apparatus, machinery, mains, pipes, services, connections, meters, appliances, and appurtenances of the Philadelphia Gas Works and of the gas works now owned and operated by said Philadelphia Gas Improvement Company, including, however, such sum or sums of money only by said Company, its successors and assigns, paid in and about the alteration, enlargement, removal, extension, betterment, and improvement of all said manufacturing and distributive systems and plants, with interest thereon at the rate of six (6) per centum per annum, simple interest; together with a sum which shall be the equivalent of the appraised value of the property now belonging to the Philadelphia Gas Improvement Company used as aforesaid, and interest thereon at the rate of six (6) per cent. per annum, simple interest, from the date of this lease to the date of payment. Said appraised value shall be ascertained by the report of at least a majority of three (3) appraisers, one to be appointed by the City of Philadelphia, one by the said The United Gas Improvement Company, and the third by the two first chosen. Said report of the appraisers shall be filed with the Mayor of the city within sixty (60) days after the date of this contract. In order to aid in the appraisement last provided for, an inventory showing in detail the property now belonging to the Philadelphia Gas Improvement Company, used for the purpose of carrying out its contract 9634 with the City of Philadelphia, shall be made not later than thirty (30) days after the execution of this agreement. This shall be certified to as being correct by either the President or the Treasurer of The United Gas Improvement Company and the Mayor of the City of Philadelphia, representing the City. Upon the execution and delivery of this contract and of the demised premises, there shall be delivered to the Mayor the agreement of the Philadelphia Gas Improvement Company assenting to, accepting, and agreeing to be bound by the provisions of this Clause 6 relative to the property of that Company. On the first day of February, 1898, The United Gas Improvemnet Company, its successors or assigns, shall file with the Controller of the City of Philadelphia a statement showing in detail expenditures during the year 1897 for alterations, enlargements, removals, betterments, and improvements not including repairs made by it in and about the Gas Works, and for the mains, meters, services, and appurtenances. On the first day of February of each year following during the continuance of this lease the said The United Gas Improvement Company, its successors and assigns, shall file with the Controller of the City of Philadelphia a similar statement of expenditures in and about the same matters made during the calendar year immediately preceding, and on the thirty-first day of December, 1907, shall file such a statement for the year ending on that date. Interest upon the amounts so shown shall be calculated and paid at the rate of six (6) per centum per annum, simple interest, from the first day of the year succeeding that in which the expenditures were made to the date of payment by the City of Philadelphia. The Controller of the City of Philadelphia shall have the right to examine, audit, and verify the 9635 statements so to be filed as herein provided. Said The United Gas Improvement Company hereby agrees that upon the receipts of payments aforesaid it shall and will execute and deliver to the City of Philadelphia good and sufficient deeds and instruments in writing necessary to transfer and convey said property so paid for to said City of Philadelphia. Said option shall only be exercised in the way and manner and upon the terms herein provided. If it shall so happen that the said City cannot exercise or shall not exercise this option upon the terms herein provided, this contract shall be treated as though said option had never been given.

Clause 7. Upon the termination of this lease by the expiration of the term specified in Clause 1 of this contract, namely on December 31, 1927, said The United Gas Improvement Company, its successors and assigns, shall deliver to the said City the property herein leased in the same good order and condition in which the same now is, to such extent as said property shall not have been altered or changed under this contract by the enlargements, extensions, betterments, and improvements made in and about the manufacturing and distributing systems and plants during the period of this lease, and together with all such alterations, changes, enlargements, extensions, betterments, and improvements, all of which shall be so delivered to the City in good first-class order and condition at such termination of the lease. Said The United Gas Improvement Company, its successors and assigns, shall also at the same time deliver to the said City in good first-class order and condition the property now belonging to the said Philadelphia Gas Improvement Company, used under said contract between it and the City of Philadelphia as above provided, and also all extensions, enlargements, improvements, and betterments of said property, free and clear of all debts and obligations of every sort, kind, and description; and together with the right to use all processes of every kind useful in the manufacture of gas then established and in use at any of said works. All the changes, alterations, constructions, removals, and repairs which shall be necessary to be made from time to time in the proper maintenance, extension, improvement, and betterment of the said leased Gas Works and appurtenances and the plant of the Philadelphia Gas Improvement Company, shall be made and done by said The United Gas Improvement Company, its successors and assigns, and the City of Philadelphia shall receive the same, together with the said plants and all the property of the Philadelphia Gas Improvement Company, in an efficient state at such expiration of this lease without any charge or cost to the City of Philadelphia. It is the intent of this agreement that the City of Philadelphia at the end of the term, namely on December 31, 1927, shall, without charge or cost, receive all of the said works in the condition of alteration, improvement, and change in which the same shall then exist, and the same shall be so maintained as to be then in first-class order and condition. Said The United Gas Improvement Company shall at its own cost and expense keep the buildings, machinery, and other property of the City of Philadelphia delivered to it, and which shall be constructed by it under this lease of the character usually insured by gas companies insured to the extent that such properties of gas companies are usually insured (but not less than the total insurance now carried by the City on said property), and shall insure the buildings, machinery, and other property of the City of Philadelphia delivered to it under this lease to an amount not less than the total insurance of the same now carried by the said City, and shall expend all sums received by it under any such policies of insurance upon the repair, replacement, or reconstruction of the city's buildings, machinery, and other property so damaged or destroyed by fire, received by said lessee hereunder. Upon the termination of this contract, either on December 31, 1907, or on December 31, 1927, the City of Philadelphia shall have the option to purchase all the coal, oil, coke, tar, lime, and other gas-making supplies and residual products then on hand at said works at the then market price, or to have the said The United Gas Improvement Company, its successors and assigns, remove the same at its own cost and expense as soon as conveniently can be done. All the gas in the holders, mains, and pipes of said works at the termination of this contract, either on December 31, 1907, or on December 31, 1927, shall be accounted for at holder

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cost by the City to The United Gas Improvement Company when paid for by consumers.

Clause 8. The United Gas Improvement Company agrees for itself, its successors and assigns, that it shall and will within three (3) years from the date of the delivery to it of the said Gas Works, expend in the alteration, improvement, extension, and betterment of the manufacturing and distributive system, and mains, services, meters, connections, and appurtenances of said Gas Works referred to in this ordinance, at least five million (5,000,000) dollars, and thereafter in each year during the continuance of this contract expend such sum of money as may be needed from time to
9638 time to extend the same to provide for the growth of the business so as to supply gas wherever it may be demanded in accordance with the terms, provisions, and conditions of this clause of the lease. It is estimated that the total of such expenditures will be at least fifteen million (15,000,000) dollars, and the said The United Gas Improvement Company hereby agrees and binds itself, its successors and assigns, that it shall and will expend said sum of fifteen million (15,000,000) dollars during said period of thirty (30) years, and that it shall and will also expend all such other amounts over the above fifteen million (15,000,000) dollars, which may be required for the purposes stated above. The said the United Gas Improvement Company, its successors and assigns, shall extend the pipes and mains for the distribution of gas on such highways, streets, avenues, alleys, ways, and public places as may be necessary to meet the demand for gas, provided that at least one (1) consumer for every one hundred (100) feet of the extension of mains or pipe so made necessary shall first in writing agree to take gas from the said The United Gas Improvement Company, its successors and assigns, for a period of not less than one (1) year at the general rates for gas then in force; or in lieu of a consumer so contracting for each and every single building fitted with gas pipes, and for which application for the introduction of gas shall be made, such extension of one hundred (100) feet of mains or pipes so made necessary shall be made accordingly: *Provided, further, however,* In no case shall said Company, its successors and assigns, be required to lay any pipes while frost is in the ground. The laying or extension of pipes and mains for the distribution of gas shall
9639 be at the expense of the lessee and not chargeable to the consumer. Said The United Gas Improvement Company, its successors and assigns, shall at its own expense lay and furnish connecting or service pipes from the main or distributing pipes to the inside of the consumer's property line, and furnish and set the necessary meters (for which no charge or rental shall be made), and shall also at its own expense furnish and place a shut-off or stop-cock inside of the curb line whenever it desires to place the same. The intention of this agreement is that all changes, extensions, improvements, removals, and alterations in said Gas Works in the mains, pipes, and appurtenances thereto, and in the property needed to meet the demands for gas as herein provided, shall be made in such way and manner as shall maintain said Gas Works in first-class condition, with the best and most economical processes in use that are customary in the best regulated gas works. It is the

further intent of this agreement that without cost to the City of Philadelphia all such extensions, improvements, alterations, and betterments in the manufacturing or distributing system of said Gas Works shall, upon the termination of the lease by the expiration of its full term, viz., on December 31, 1927, pass to and vest in the City of Philadelphia upon the terms and conditions herein provided.

Clause 9. Said The United Gas Improvement Company or its assigns shall furnish proper stations for testing the candle-power of the gas, located at a distance of not less than one (1) mile from each point of manufacture and shall equip the same with a bar photometer and other appliances customary and necessary for such
purposes. Tests shall be made and recorded daily by The
9640 United Gas Improvement Company or its assigns, and such
records shall be at all times open to the inspection of the City.
All such tests shall be made in the presence of a representative of the City appointed by the Mayor, who shall have the right to also make such tests himself at such stations in the presence of the Company's representative. Such representative of the City shall be the inspector of meters, if City Councils shall provide by this contract or otherwise for the appointment of such an official. The said The United Gas Improvement Company, its successors or assigns, shall as soon after the delivery to them of said Gas Works hereunder as is possible with due diligence and despatch, supply gas of good quality of not less than twenty-two (22) candle-power, daily average, tested as above, and maintain said supply during the continuance of this lease unless prevented by accidents beyond their control. After the expiration of two years from the date of this lease, for every failure of The United Gas Improvement Company, its successors or assigns, to comply with the terms and conditions of this clause relative to tests, quality, and candle-power of gas, the said The United Gas Improvement Company, its successors and assigns, shall pay to the City of Philadelphia a penalty of five hundred (500) dollars for each day during which such failure continues. In every case of such default and demand made by the city for the payment of the fine The United Gas Improvement Company, its successors or assigns, shall make payment of the fine to the city, but said The United Gas Improvement Company, its successors or assigns, shall be entitled to repayment of the same by the City if it shall be shown
that the default on account of which the fine was imposed
9641 was due to causes beyond the control of the said The United
Gas Improvement Company, its successors and assigns.

Clause 10. The United Gas Improvement Company, its successors and assigns, shall from time to time as the same shall be demanded by the City of Philadelphia, supply to it in each year without charge delivered in its various public buildings, along the line of its mains, such amounts of gas as may be required for illuminating purposes in said public buildings; said The United Gas Improvement Company, its successors and assigns, shall also supply gas without charge to the city's street lamps and lamps in Public Squares, along the line of its mains up to the number that are being lighted at the beginning of this lease; and shall also in each succeeding year supply gas without charge to three hundred (300) street lamps or lamps in Public Squares in each year along the line of its mains in addition to the number supplied in the preceding year when directed so to do by ordinance of Councils, which shall also specify the location of the same. All said lamps shall be furnished with burners which shall give not less than 22 candle-power, and shall be lighted every night and all night. Said The United Gas Improvement Company, its successors and assigns, shall at its own cost and expense run all services and make all connections between said street lamps and its distributing pipes or mains, furnish all burners required on said street lamps, and light, clean, extinguish, and repair all lamps and lanterns, and keep in repair all lampposts, lamps, and lanterns in use during the term of this lease.

Clause 11. The price which shall be charged to all con-
9642 sumers other than the City of Philadelphia by the said The United Gas Improvement Company, its successors and assigns, shall, until otherwise provided by ordinances of Councils, be one (1) dollar per thousand cubic feet. It shall be competent for Councils to reduce these charges from time to time by ordinances; but said ordinances shall not at any time reduce the price below the following: Until and including the thirty-first day of December, 1907, ninety (90) cents per thousand cubic feet. From January 1, 1908, until and including December 31, 1912, eight-five (85) cents per thousand cubic feet. From January 1, 1913, until and including December 31, 1917, eighty (80) cents per thousand cubic feet. From January 1, 1918, until and including December 31, 1927, seventy-five (75) cents per thousand cubic feet. The said The United Gas Improvement Company, its successors and assigns, shall be entitled to enforce the same penalties for non-payment of bills at the offices of the Company within five (5) days after presentation as are now in force in the city of Philadelphia, and the same remedies against consumers for breaches of their contracts for the supply of gas. But it is distinctly understood and agreed that nothing herein contained shall give to said The United Gas Improvement Company, its successors or assigns, any lien or claim upon a property for a tenant's or occupant's gas bills, or give the right to said The United Gas Improvement Company to refuse to furnish gas to any subsequent tenant or occupant of said property by reason of prior tenant or occupant having failed to pay the bill: *Provided, however,* That said The United Gas Improvement Company, its successors or assigns, shall not be required to furnish gas to any person, firm, or body corporate indebted for arrear-
9643 ages due for gas theretofore supplied to them. In order to provide for the amicable settlement of any disputes or disagreements which may arise between consumers and said The United Gas Improvement Company or its assigns, as to the amount of gas for which bill has been rendered and payment demanded, the correctness of which is disputed by the consumer, said The United Gas Improvement Company agrees, for itself and for its successors and assigns, that it will provide a proper and convenient place or places on the leased property at which its meters may be inspected, with the proper and customary apparatus therefor, for the use of the official and his assistants who may be appointed by the Mayor

as inspector of Meters. Upon complaint of any consumer doubting the accuracy of the bill and declining to pay the same, lodged with such Inspector alleging that the amount of gas for which the bill has been rendered and payment demanded is in excess of the amount consumed by such consumer, and upon demand thereafter made by the Inspector in writing to The United Gas Improvement Company or its assigns, said The United Gas Improvement Company or its assigns shall disconnect the meter in question and deliver it to the inspection station for examination, where the testing of the meter for the purpose of ascertaining the correctness of its measurements shall be made by such Inspector in the presence of the representative of said The United Gas Improvement Company or its assigns. Such tests shall be made according to the established and well-known methods used for such purposes. Any such meter shall be disconnected by said Company or its assigns between the hours of eight o'clock A. M. and three o'clock P. M. 9644 within 48 hours of the time when said Company or its assigns shall receive notice to disconnect such meter for such reasons; and the same shall be tested and returned to said The United Gas Improvement Company or its assigns within twenty-four (24) hours from its receipt at the testing station, bearing a seal upon which shall be written the report of the Inspector that the meter in question is correct or incorrect, and if the latter the percentage which it runs fast or slow, and the bill of the consumer about which the complaint has been made shall be corrected, according to such finding and report of the Inspector. Such Inspector of Meters and such assistants as the Mayor shall deem necessary shall be appointed by the Mayor and shall be duly sworn in conformity with the law to faithfully, honestly, and diligently perform the duties of their respective offices. Said The United Gas Improvement Company agrees for itself and its successors and assigns that it will annually and at the beginning of each year of the lease to pay to the City of Philadelphia the sum of ten thousand (10,000) dollars towards paying the salaries and expenses of the Inspector of Meters and his assistants, after the same shall be appointed in pursuance of this clause, and also towards der*f*aying the expenses which the city may be put to in connection with tests of gas made in p*ru*suance of Clause 9 of this lease. When a meter is removed for the purpose of testing, the said Company shall place a meter in place of one removed at their own cost and expense, the object being that no consumer shall be without light. The type of meter used for the measurement of gas shall be such type as shall be in general use in other large cities in the United States. Any consumer desiring such test shall, on making his application 9645 to such Inspector, pay to him the sum of one (1) dollar, taking his receipt therefor, which amount shall be returned to the consumer if the tests and reports of the Inspector shall show that the meter in question is fast, but otherwise shall be paid by the Inspector into the Treasury of the City of Philadelphia. Bills shall not be rendered more frequently than are now rendered to various classes of consumers.

Clause 12. The United Gas Improvement Company, its successors or assigns, shall pay to the city of Philadelphia in each year during the continuance of this agreement as follows, viz.: Upon all gas sold prior to January 1, 1908, all sums received by them in excess of ninety (90) cents per thousand cubic feet. Upon all gas sold after December 31, 1907, and prior to January 1, 1913, all sums so received in excess of eighty-five (85) cents per thousand cubic feet. Upon all gas sold after December 31, 1912, and prior to January 1, 1918, all sums so received in excess of eighty (80) cents per thousand cubic feet. Upon all gas sold after December 31, 1917, and prior to January 1, 1928, all sums so received in excess of seventy-five (75) cents per thousand cubic feet. Statements shall be rendered and payments made under this clause by the lessee to the City as follows: Within twenty-five (25) days after the expiration of each quarter of each year for which any payment is to be made, beginning with the quarter preceding the first day of January, 1898, said The United Gas Improvement Company shall file with the Controller of the City of Philadelphia a statement sworn to by its President or Vice-President, or by its Secretary or Treasurer, which shall state the quantity of gas measured in cubic feet sold hereunder 9646 within the quarter ending with the last day of the preceding month, the amount of money collected for such sales or for sales in any previous quarter and the amount of money due and payable to the City of Philadelphia under the provisions of this clause out of such receipts; and shall make payment to the City Treasurer of such amount so ascertained to be due to the City of Philadelphia hereunder within five (5) days after the expiration of said period of twenty-five (25) days. The City of Philadelphia shall have the right at all reasonable hours during the continuance of this contract, by its proper officers, to examine those books of the lessee which show the amount of gas so sold and paid for, so as to verify the correctness of said statements.

Clause 13. The City of Philadelphia shall have the right at all times, by its proper officers, during the continuance of this lease to enter upon and examine the premises leased, to inspect the same, and to test the candle-power of the gas. Full facilities for these purposes shall be afforded by the lessee.

Clause 14. No indebtedness of the City of Philadelphia for or by reason or on account of the property hereinabove described, or the operations carried on therein or with the same prior to the delivery of the leased property shall be chargeable against the said The United Gas Improvement Company, its successors or assigns. The same shall be chargeable to and payable by the City of Philadelphia: *Provided, however,* That said The United Gas Improvement Company does herewith expressly agree to assume and discharge all contracts made for the Bureau of Gas for the purchase of supplies for the manufacture of gas which have not been delivered prior to the date when this lease takes effect.

9647 *Clause 15.* The said The United Gas Improvement Company, its successors or assigns, shall at all times during the continuance of this lease indemnify and save harmless the City of Philadelphia from all loss, injury, or damage which may be suffered by said City to or for any person, natural or artificial, by reason of any negligence of said Company, its successors or assigns, and the

COMPLAINANT'S EXHIBIT 392

Cost of Danbury Gas of 32.95 c. p. as given in papers accompanying letters of November 22d and 30th, 1905, to Chief Engineer Bradley and *pro rata* cost of 24 c. p. (N. Y.) gas, based upon the light equivalent theory of H. H. Edgerton.

	H. H. E.'s Cost of 32.95 c. p. Gas at Danbury, Year 1902-3. (Cents per M. by A. C. H.)		Cost per M. 24 c.p. Gas, Based on Danbury Cost.
	Amount $	Cents per M. c.	c.
WORKS:			
Fuel	3,756.35	14.935	
Lime	23.00	.092	
Gas Oil	9,061.86	36.030	
General Expense	2,131.20	8.474	
Station Repairs	182.90	.727	
Station Wages	4,098.43	16.295	
Total Works	19,253.74	76,553	55.76
Leakage 3,878 M. x 76.553 / 21,273 M.		13.955	10.16
Cost Mfg. + Leakage		90.508	65.92
DISTRIBUTION:			
Distribution, Labor	938.37		
Tools	221.39		
Street Lamps	38.08		
Service Repairs	101.19		
Main Repairs	108.76		
Insurance	266.05		
Meter Repairs	256.44		
Total Distribution	1,930.28	9.073	6.61
MANAGEMENT:			
Salaries	3,772.08		
Rent	428.54		
Office Expense	468.00		
Total Management	4,668.62	21.946	15.98
Bad Debts	449.86	2.115	1.54
Taxes	1,112.87	5.231	3.81
Depreciation	2,534.84	11.916	8.68
Total Cost	29,950.21	140.789	102.54
Gas Bills—Less Discount	58,849.10	276.637	201.49
Balance to Cover Interest and Dividends	28,898.89	135.848	98.95

Gas Made, 25,151 M. cu. ft. Gas Sold, 21,273 M. cu. ft.

REMARKS.

The method of arriving at the cost of 24 c. p. gas is precisely the same as that used by Edgerton—this is best shown by checking his cost of 36.202c. per M. for 17.6 c. p., he having assumed that the 32.95 c. p. gas was 44 c. p., thus: (44:17.6::90.508:x) X=36.203c., and (32.95:24::90.508:x) X=65.92.

REPAIRS AND DEPRECIATION.

Station	$182.90
Services	101.19
Mains	108.76
Meters	256.44
Depreciation	2,534.84
Total	$3,184.13

Or 14.96c. per M. for Repairs and Depreciation, dividing by amount sold, namely, 21,273 M.

COMPLAINANT'S EXHIBIT 393

Comparison of Costs of Manufacture of Oil and Water Gas, Danbury. Actual Costs of 32.95 c. p. Gas, as compared with Edgerton's Estimated Costs of 28 c. p. and 50 c. p. Gas for New York, and the *pro rata* costs of 28 c. p. and 50 c. p. Gas based upon the light equivalent theory of H. H. Edgerton.

(pp. 5025-7, etc.)

	1	2	3	4	5
	Danbury 32.95 c.p.Gas Cost per M. (See Sheet 1.)	"Pro Rata" Cost per M. Based on Danbury H. H. E. Theory.		H. H. E.'s Estimated Costs per M. for New York.	
		28 c. p. Gas (32.95:28:: Col. 1:x).	50 c. p. Gas (32.95:50:: Col. 1:x).	28 c. p. Gas (Compare Col. 2).	50 c. p. Gas (Compare Col. 3)
	c.	c.	c.	c.	c.
Generator Coke	..	..	..	4.400	3.87
Boiler Coke	..	..	..	1.160	1.16
Total Fuel	14.935	12.691	22.663	5.560	5.03
Lime	..	..	..	.750	.75
Oxide	..	..	..	.250	.25
Total Purification	.092	.078	.139	1.000	1.00
Gas Oil	36.030	30.617	54.674	23.265	37.60
Oil and Waste, Sundries	..	..	..	.370	.37
Water	..	..	..	.170	.17
General Expenses	..	..	..	.500	.50
Total General Expense	8.474	7.201	12.859	1.040	1.04
Repairs	.727	.618	1.103	1.500	1.50
Labor	..	..	..	1.780	1.78
Supervision, etc	..	..	..	.500	.50
Total Station Wages	16.295	13.847	24.737	2.280	2.28
Total Cost of Mfg	76.553	65.052	116.165	34.645	48.45

Comparing Columns 2 and 4 we find the *pro rata* cost of 28 c. p. Gas based on Danbury results almost *doubled* Edgerton's estimated cost for 28 c. p. Gas for New York.

Comparing Columns 3 and 5 we find the *pro rata* cost of 50 c. p. based on Danbury results to be *139.7 per cent. greater* than Edgerton's estimated cost for 50 c. p. Gas for New York.

Comparing Columns 1 and 5 we find the *actual* cost to manufacture Danbury Gas of *32.95 c. p.* to be *28.1c. per M. more* than Edgerton's estimated cost for *50 c. p.* Gas for New York.

The Oil used at Danbury to make 32.95 c. p. Gas was *9.348 gallons* per M. cu. ft. (corrected for temperature by H. H. E.) while in Edgerton's estimated cost of 50 c. p. Gas for New York he shows *8.88 gallons* of oil per M.

Furthermore, the cost of oil at Danbury for the period here considered was *3.97c. per gallon* ($9,061.86 -:- 28,346), while in estimated costs for New York the price is *4.23.*, *showing* that actual cost at Danbury has the benefit of the lower price.

Cupola Coal used at Danbury for 32.95 c. p. Gas averaged *37.32 lbs.* per M., while Edgerton's estimated cost of 28 c. p. Gas only includes *22 lbs.* per M.

In this connection see Edgerton's answer to question, p. 5035: A. Yes, making rich gas. It does not take anything like the amount of coke per thousand to make rich gas that it does to make poor gas—

Q. Do you mean to say this rich gas you use requires less fuel? A. I mean exactly that. A great deal less, that is what is the matter.

NOTE—After completing the above tables it was discovered that the c. p. given by H. H. E. (32.95) and used in the tables for comparison is incorrect upon his own detail figures. Examination of figures for the several years shows that he obtains his yearly averages of c. p. by dividing the sum of monthly averages by 12. This is incorrect as to method as the average should be obtained by multiplying the amount of gas made each month by its average c. p. and dividing the sum of these products by the total make for the year. Following this correct method and accepting the monthly candle powers given by H. H. E. as being true averages, and then calculating the correct averages, the true average for the year is found to be 33.79 c. p. But following his incorrect method the average is found to be (408 -:- 12 =) 34 c. p.

Then the comparisons for costs of manufacture shown above become as follows:

Actual Cost per M. of 34 c. p. Danbury Gas (as before)	76.553c.
Pro rata Cost per M. of 28 c. p. Gas, H. H. E. Theory	63.044c.
Pro rata Cost per M. of 50 c. p. Gas, H. H. E. Theory	112.578c.
Edgerton's Estimated Cost per M. of 28 c. p. Gas for N. Y. (as before,	34.645c.
Edgerton's Estimated Cost per M. of 50 c. p. Gas for N. Y. (as before)	48.450c.

COMPLAINANT'S EXHIBIT 394

DANBURY, CONN., RESULTS.
COAL AND GAS.

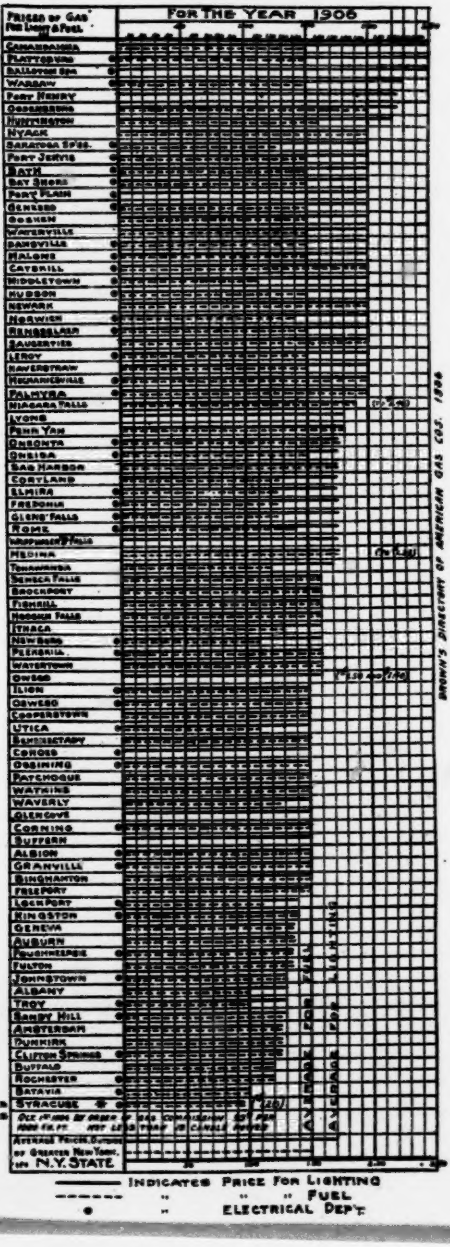
Year Ending May 31st.	Average Mixed Gas Made per Gallon of Oil.	Average Gallons Used per M. of Mixed Gas Made.	Average Candle Power.	Average Candles per Gallon.	Coal per M. of Mixed Gas Made.
1891	(1) 95.69	10.450	34.38	3.29	45.62
1892	(2) 101.49	9.853	35.3	3.58	45.63
1893	(2) 100.08	9.992	35.24	3.53	39.43
1894	(3) 98.48	10.154	35.83	3.53	41.11
1895	(3) 96.57	10.355	35.9	3.47	34.76
1896	(3) 93.98	10.641	34.96	3.29	40.09
1897	(3) 99.10	10.091	34.81	3.45	43.90
1898	(3) 108.73	9.197	35.42	3.85	40.47
1899	(3) 108.66	9.203	35.64	3.87	47.1
1900	(3) 106.61	9.380	35.54	3.79	42.84
1901	(3) 109.38	9.142	34.8	3.81	40.22
1902	(3) 116.59	8.577	34.4	4.01	37.29
1903	(3) 106.97	9.348	32.95	3.52	37.32
1904	(3) 106.17	9.419	33.43	3.55	32.12
1905	(3) 106.86	9.358	34.8	3.72	33.92

(1) Based on Naphtha used, as no record of Naphtha gone for first nine months of year 1890.
(2) Based on Naphtha gone, but not corrected to 60 degrees temperature.
(3) Based on Naphtha used, and corrected to 60 degrees temperature.

Note 1891 to 1899 inclusive used Naphtha.
Note 1900 to 1905 inclusive used Gas Oil.

COMPLAINANT'S EXHIBIT 395

(For Identification)



9654

F. J. G.
March 15, 1905.

CITY'S EXHIBIT 3.

No. 6.

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved Systems of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places in the Borough of The Bronx, in The City of New York, for the term of nine months and sixteen days, from March 16, 1905, to December 31, 1905, both inclusive.

[On the margin:] The bidder's name and residence or place of business must be inserted here, and in case of firms, the name and residence or place of business of each and every member of the firm must be inserted.
347 of Ordinance.

Made this fourteenth day of March, 1905, by Consolidated Gas Co. of New York.

*1. Consolidated Gas Co. of New York do declare that we (are) the only person, persons or corporation interested in this bid or estimate; and that no other person, persons or corporation than are herein named have any interest in this bid or estimate, or in the contract proposed to be taken.

9655 2. We further declare that this bid or estimate is made without any connection with any other person, persons or corporation making a bid or estimate for the same work, and is in all respects fair, and without collusion or fraud.

Chapter 327, Laws of 1900.—3. We further declare that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or any other officer of The

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*NOTE.—In case a bid shall be submitted by or in behalf of any corporation, it must be signed in the name of such corporation by some duly authorized officer or agent thereof having knowledge as to the facts stated in the bid or estimate, and such officer or agent shall also subscribe his own name and office. If practicable, the seal of the corporation should also be affixed.

City of New York, is, shall be or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise, in this bid or estimate, or in the performance of
Charter 1533. the contract, work or business to which it relates, or in any portion of the profits thereof.

349 of Ordinance.—4. We further declare that the names of the persons affixed to the consent hereto annexed were written by said persons respectively, and that said persons are householders or freeholders, in The City of New York, or duly authorized officers or agents of a guaranty or surety company duly authorized by law to act as surety.

5. We have examined the contract (including the specifications) for the supplies and work, in the form approved by the Corporation Counsel, and will contract, in the form so approved, to perform and complete the work mentioned in said contract and specifications, and furnish the supplies on the following terms, viz.:

OPEN FLAME GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

I. For furnishing illuminating gas (of not less than 20 candle-power to burners consuming 3 cubic feet of gas per hour, by
9656 photometric test, made at a distance of not less than one mile from the place of manufacture) for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, and the replacing and repairing of lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of The Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($......) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

OPEN FLAME NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

II. For furnishing illuminating material other than gas for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons,
9657 the painting of lamp-posts and cross-heads, the furnishing,
repairing and replacing of cocks, tubes and burners, burning appliances, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of The Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

OPEN FLAME NAPHTHA LAMPS—LAMP-POSTS FURNISHED BY CONTRACTOR.

III. For furnishing illuminating material other than gas for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lamp-posts, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7*a* and 9, for the term of this contract, in the Borough of The Bronx, to wit:

9658 For furnishing all the above for each lamp, at each lamp,
for .... in number of same, the sum of ....
Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

MANTLE GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

IV. For furnishing and connecting, ready for use, each mantle gas lamp, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it, including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, and repairing and replacing the lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 8 and 9, for the term
9659 of this contract, in the Borough of The Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for 5,723 in number of same, the sum of Twenty-two 9212/10000 dollars ($22.9212) per lamp, or at the rate of Twenty-eight 75/100 ($28.75) per lamp, per annum, burning 3925 hours.

For furnishing all the above for each lamp, at each lamp, for 22,500 or more in number of same, in either the Borough of Manhattan or The Bronx, or both, the sum of Nineteen 7322/10000 dollars ($19.7322) per lamp, or at the rate of Twenty-four 75/100 ($24.75) per lamp, per annum, burning 3925 hours.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

MANTLE NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

V. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-
9660 heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, as

specified and as noted in proposals, clauses Nos. 8 and 9, for the term of this contract, in the Borough of The Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

MANTLE NAPHTHA LAMPS—LAMP-POSTS FURNISHED BY CONTRACTOR.

VI. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts
9661 and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lamp-posts, lanterns, lamp-irons, frames and cross-heads thereto, as specified and as noted in proposals clauses Nos. 8*a* and 9, for the term of this contract, in the Borough of The Bronx, to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

VII. For furnishing, maintaining and putting in place all the abovementioned items, excepting the cost of illuminating gas only, as specified and as noted in clauses No. 7, No. 8 and No. 9 of the proposals, for the period of this contract, the sum of .... Dollars ($.........).

VIII. For furnishing, maintaining and putting in place all the above mentioned items, excepting the cost, of illuminating gas only, as specified and as noted in clauses No. 7*a*, No. 8*a*, No. 8*b* and No. 9 of the proposals, for the period of this contract, the sum of .... Dollars ($.........).

9662 IX. For repair of lamp-posts and erection of new lamp-posts, for the term of this contract, in the Borough of the Bronx, when owned, furnished or hereafter acquired by The City:

(*a*) For each lamp-post straightened, the sum of .... Dollars ($.........).

(*b*) For each column releaded, the sum of .... Dollars ($.........).

(*c*) For each column recalked, the sum of .... Dollars ($.........).

(*d*) For each column refitted, the sum of .... Dollars ($.........).

(*e*) For each service pipe refitted, the sum of .... Dollars ($.........).

(*f*) For each stand pipe refitted, the sum of.................. Dollars ($.........).

(*g*) For each lamp-post removed, the sum of.................. Dollars ($.........).

(*h*) For each lamp-post reset, the sum of...................... Dollars ($.........).

(*i*) For the erection of each new lamp-post, complete (with service and stand pipes when for gas), and with cross-heads, lamp-irons and lanterns in place, stating the price per post, the sum of .... Dollars ($.........).

X. For furnishing illuminating gas of not less than 20 candle-power, when tested, as provided for gas street lamps, including the service pipes from the gas mains to the building and a proper meter for registering the gas, for the term of this contract, for each of the public buildings and offices in the Borough of The Bronx, the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and 9663 Electricity, per 1,000 cubic feet, at a pressure of not less than one and one-half (1½) inches at the meter end of the house service pipe, in the sum of .... Dollars ($.........).

CONSOLIDATED GAS CO. OF N. Y., [L. S.]
By W. R. ADDICKS, *Vice-President.* [L. S.]

COLIN C. SIMPSON,
Ass't Secretary.

[On the margin:] Name(s) of bidder(s). Each and every person bidding and named above must sign here. If the bidder is a corporation the corporate name must be signed, also the name and designation of the officer or agent signing for the corporation, and if practicable the seal of the corporation should be affixed.

THE CITY AND STATE OF NEW YORK,
County of New York, ss:

WALTER R. ADDICKS, being duly sworn, says for himself, that the several matters stated in the above estimate are in all respects true.

W. R. ADDICKS.

Subscribed and sworn to before me, this 15th day of March, A. D. 1905.

CORNELIUS A. LAUGHLIN,
Notary Public, New York County.

(Blanks for consent of Sureties and Affidavits on next leaf.)
[SEAL.]

[On the margin:] Signature(s) of bidder(s). This affidavit must be made by the person or persons bidding for the contract; in case of a firm, by each and every member of the firm; in the case of a corporation, by a duly authorized officer or agent having knowledge as to the facts stated.

SURETIES' AGREEMENT.

IN CONSIDERATION of the premises, and of One Dollar to us and each of us in hand paid by The City of New York, the receipt whereof is hereby acknowledged—

9664 We, the undersigned, consent and agree, that if the contract for which the preceding estimate is made be awarded to the person, persons or corporation making the same, we will, upon its being so awarded, become bound as his, their or its sureties for its faithful performance; and if the said person, persons or corporation shall omit or refuse to execute such contract, if so awarded, and give the proper security within five days after the written notice that the same is ready for execution, we will pay, without proof of notice or demand, to the said The City of New York, or its successors, any difference between the sum to which such person, persons or corporation would be entitled upon the completion of such contract and the sum which The City of New York may be obliged to pay to the person, persons or corporation to whom the contract shall be awarded at any subsequent letting; the amount in each case to be calculated upon the estimated amount of the SUPPLIES and WORK by which the bids are tested.

This consent must be signed by the two sureties, with their places of business or residence added.

IN WITNESS WHEREOF, we have hereunto set our hands, this 15th day of March, one thousand nine hundred and five.

THE UNITED STATES FIDELITY & GUARANTY COMPANY.
By SYLVESTER J. O'SULLIVAN,
Manager.

Name of first surety,
Address of first surety,

Name of second surety,
Address of second surety,

Attest:
GEORGE E. HAYES,
Attorney in Fact.

9665 The adequacy and sufficiency of the above-named sureties approved.

Dated this ...... day of ...., 1905.

..............................,

[SEAL.] *Comptroller.*

THE CITY AND STATE OF NEW YORK, *County of* ...., *ss:*

The above-named .... being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of.................................. Dollars ($..........) being the amount of the security required for the completion of the contract above referred to, over and above all his debts of every nature, and over and above his liabilities as bail, surety and otherwise, that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

....

[On the margin:] NOTE: If the surety is a householder but not a freeholder, the word freeholder must be erased. If a freeholder but not a householder, the word householder must be erased. Each of these depositions must be signed by one of the proposed bondsmen and sworn to.

Subscribed and sworn to before me this .... day of .... A. D. 1905.

..............................,

Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK, *County of* ...., *ss:*

The above-named .... being duly sworn, says that he is a householder or freeholder in The City of New York, and is worth the sum of .... Dollars ($..........) being the amount of the security required for the completion of the contract above referred to, over and above
9666 all his debts of every nature, and over and above his liabilities as bail, surety and otherwise, that he has offered himself as a surety in good faith, and with an intention to execute the bond required by law.

....

Subscribed and sworn to before me, this .... day of .... A. D. 1905.

....

Notary Public or Commissioner of Deeds.

STATE OF NEW YORK, *County of New York, ss:*

On the 15th day of March, in the year 1905, before me personally came Sylvester J. O'Sullivan, to me known, who, being by me duly sworn, did depose and say that he resided in the City of New York; that he was Manager of The United States Fidelity and Guaranty

Company, the corporation described in and which executed the foregoing instrument; that he knew the seal of said corporation; that the seal affixed to said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order. And the said Sylvester J. O'Sullivan, further said that he was acquainted with George E. Hayes, and knew him to be the Attorney-in-fact of said Company; that the signature of the said George E. Hayes, subscribed to the foregoing instrument, was in the genuine handwriting of said George E. Hayes, and was subscribed thereto, by like order of said Board of Directors, and in presence of him, the said Sylvester J. O'Sullivan.

GEO. FRANK SWEENEY,
Commissioner of Deeds, New York City.

9667

STATEMENT.

THE UNITED STATES FIDELITY AND GUARANTY COMPANY.

Home Office:

BALTIMORE, MD.

At the close of Business, September 30, 1904.

Commenced Business August 1, 1896.

ASSETS.

Real Estate	$422,302.27
United States Bonds	84,050.00
Baltimore City, State and Municipal Bonds	1,579,528.92
Railroad Bonds	2,215.00
Bank Stocks	18,310.00
Railroad Stocks	41,800.00
Other Stocks	182,500.00
Cash in Banks and Home Office	440,981.43
Premiums Due from Agents, Less Commissions	322,027.42
Loans on Mortgages	19,050.00
Loans on Collateral	55,103.78
Ground Rents	1,000.00
Due for Subscriptions Dept. Guaranteed Atty's	36,807.00
Advanceel a/c Contracts Secured	162,447.83
Interest Due and Accrued	21,177.34
	$3,389,300.99

LIABILITIES.

Capital Stock Paid in Cash	$1,700,000.00
Re-Insurance Reserve	1,053,623.48
Reserve for Unadjusted and Resisted Claims	213,843.58
Collateral Deposits	111,981.64
Surplus and Undivided Profits	309,852.29
	$3,389,300.99

9668 STATE OF NEW YORK, *County of New York, ss:*

George E. Hayes, being duly sworn, says, that he is the Attorney-in-fact of the United States Fidelity and Guaranty Company, and that, to the best of his knowledge and belief, the foregoing is a true and correct statement of the financial condition of said Company, as of September 30, 1904.

GEORGE E. HAYES.

Subscribed and sworn to before me this 15th day of March, 1905.

[SEAL.] GEO. FRANK SWEENEY,
Commissioner of Deeds,
New York City.

9669 No. ....

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY.

BID OR ESTIMATE

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps, when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of The Bronx, in The City of New York, for the term of nine months and sixteen days, from March 16, 1905, to December 31, 1905.

THE CITY OF NEW YORK.

..........................1905.

........................Estimator.

9670 CITY'S EXHIBIT 3 A.

No. ....

Name of Bidder ....
Address ....

THE CITY OF NEW YORK,

DEPARTMENT OF

WATER SUPPLY, GAS AND ELECTRICITY,

Borough of ....

1905.

PROPOSALS FOR BIDS OR ESTIMATES

FOR GAS AND NAPHTHA LAMPS, ETC.

1. Sealed Bids or Estimates will be received at the office of the Department of Water Supply, Gas and Electricity, Room 1536, No. 21 Park Row, in The City of New York, until 2 o'clock P. M., on .... Day ...., 1905.

[Ordinances, Section 351.]

[Title.]

[Ordinances, Section 354.]

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for Making Certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting on Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of ...., in The City of New York, for the term Nine Months and Sixteen Days, from March 16, 1905, to December 31, 1905, both inclusive.

[Ordinances, Section 346.]

2. The amount of security required is TWENTY-FIVE (25) PER CENTUM of the total amount of bid or estimate.

9671 Furnishing estimate.—3. The person or persons making an estimate shall furnish the same in a sealed envelope, indorsed with the title given above, of the work for which the estimate is made, with his or their name or names and the date of presentation to the head of the Department, at the said office, on or before the date and hour above named, at which time and place the estimates received will be publicly opened by the head of the Department and read, and the award of the contract made according to law as soon thereafter as practicable.

Number of lamps.—4. In the whole Borough of ...., the total number of ordinary gas lamps now burning is about ....; the total number of Welsbach gas lamps now burning is about ....; the total number of Welsbach naphtha lamps now burning is about ....; the total number of ordinary naphtha lamps now burning is about ....; but the Commissioner of Water Supply, Gas and Electricity reserves the right to designate the location and number of the lamps of each kind as to districts, streets, avenues, piers, parks and public places or parts thereof. Bidders must satisfy themselves by a personal examination of the number and kind of lamps required in each Borough, as numbers given above must be taken only as a close approximation of the number of lamps that may be required.

Number of lamps in district to be stated.—5. Bidders are required to state in their estimates the districts or several streets, avenues, piers, parks and places, or parts of streets, avenues, piers, parks and places in which they propose to perform the requirements herein contained, giving also the number of lamps they propose to supply.

9672 Gas and naphtha lamps.—6. The burners for open flame or mantle gas lamps will be of such a kind and construction that they will burn not less than three cubic feet of gas per hour under a pressure of not less than 1½ inches. The gas furnished shall have an illuminating power of not less than 20 candles when tested by photometric test at a distance of not less than one mile from the place of manufacture, and bidders will state the price per lamp for the term of this contract for gas of the illuminating power, and in the quantity and at the pressure specified. If open flame and mantle lamps shall use illuminating material other than gas, then the burners to be used for such illuminating material will be of such kind and construction that they shall give a light (by photometric test) equal to the light given by the three-foot open flame or mantle gas burners of similar type as used in the public lamps in The City of New York, furnished with 20-candle-power gas.

Illuminating power.—Bidders are required to state the illuminating or candle power of the gas they propose to furnish when tested at a distance of not less than one mile from the place of manufacture, and bidders proposing to furnish any illuminating material other than illuminating or coal gas must state distinctly what kind and grade of material they propose to furnish, and the illuminating power of the light they propose to furnish. When the term "illuminating material other than gas" is used in these proposals or the annexed contract and specifications, it shall mean either naphtha or gasolene.

Open flame gas or naphtha lamps, lamp-posts, etc., owned by The City.—7. Bidders will state in their bids or estimates a price per lamp for the term of this contract, for furnishing gas or illuminating material other than gas to the public lamps in the Borough of and for other fixtures or appliances for illuminating material for each open flame gas or naphtha lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, replacing and repairing of the cocks, tubes and burners, the replacing of lamp-posts, cross-heads, lamp-irons and lanterns, which lamp-posts, cross-heads, lamp-irons and lanterns now owned or hereafter acquired by The City of New York, will be furnished to the Contractor by the said City, and put in place by him as required for the amount of this bid, with the exception of lamp-posts. The repairing, replacement or erection of lamp-posts owned by The City to be as per bid on clause No. 10 in this proposal. 9673

Open flame naphtha lanterns, lamp-posts, etc., furnished by Contractor.—*7a.* A price for furnishing illuminating material other than gas to the public lamps in the Borough of , and for other fixtures or appliances for illuminating material other than gas, including lighting, cleaning, extinguishing, reglazing and painting of lanterns, the painting of lamp-posts, lamp-irons and cross-heads, the furnishing, replacing and repairing of the cocks, tubes, burner appliances, lanterns, lamp-irons, cross-heads and lamp-posts, all the above, for each lamp, at each lamp, to be furnished by the Contractor and erected by him as required for the term of this Contract for the amount of this bid.

Mantle gas or naphtha lanterns, lamp-posts, etc., owned by The City.—8. A price for furnishing lanterns complete, including cross-heads, lamp-irons and improved burner appliances and incandescent mantles for gas or naphtha burners to produce a light of not less than sixty (60) candle power each, and including the illuminating material for each lamp, at each lamp, in the Borough of , lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns, lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, replacing and repairing of the mantles, cocks and burning appliances, the replacing of lamp-posts, cross-heads, lamp-irons and lanterns, which lamp-posts, when owned or hereafter acquired by The City of New York, will be furnished to the Contractor by the said City and put in place by him, as required for the amount of this bid, with the exception of lamp-posts. The repairing, replacement or erection of lamp-posts owned by The City to be as per bid on clause No. 10 in this proposal. 9674

Mantle naphtha lanterns, lamp-posts, etc., furnished by Contractor.—*8a.* A price for furnishing lanterns complete, including lamp-irons, cross-heads, incandescent mantles and improved burning appliances for illuminating material other than gas to produce a light of not less than sixty (60) candle power each and including illuminating material other than gas for each lamp, at each lamp, in the Borough of , the lighting, extinguishing, cleaning, reglazing and painting of lanterns, the painting of lamp-posts, lamp-irons and cross-heads, the furnishing, replacing and repairing of mantles, cocks, burning appliances, lanterns, lamp-irons, cross-heads and lamp-posts, all the above to be furnished by the Contractor and erected by him as required for the term of this contract for the amount of this bid.

8*b*. A price for furnishing, maintaining and putting in place all the above mentioned items, excepting the cost of illuminating material in case of gas only, with lamp-posts as above noted, for the period of this contract.

9675 Lamp-posts.—9. All lamp-posts for use with gas or naphtha lanterns to be erected in new locations will be provided for the term of this contract by The City of New York, and the erection of same shall be charged for at the prices given for this item in clause No. 10 of this proposal.

(*a*) In the Boroughs of Manhattan, The Bronx and Brooklyn, the lamp-posts for gas lamps are almost entirely owned by The City, and The City will continue to supply same. In these, or other boroughs where any lamp-posts used for naphtha or gas lighting, either mantle or open flame, may belong to the Contractor, and are not to be replaced by a later successful bidder, the right is reserved to The City of New York to substitute its own lamp-posts for these if it so desires. If The City does furnish these lamp-posts, they shall be erected by the Contractor for the charge specified for this item in the bid on clause No. 10 in this proposal; but when these lamp-posts are now owned or furnished by the Contractor, all repairs and renewals shall be made by him without any charge to The City.

(*b*) Where one contractor shall replace the lanterns or lamp-posts, or both, owned by another, on account of a change in the contractor from the previous successful bidder to the successful bidder on this contract, then the first erection of lamp-posts and lanterns by the successful bidder, lamp-post for lamp-post, replacing those that may then exist shall be made with no further charge to The City of New York, although The City may exercise its right to supply its own lamp-posts.

9676 Lanterns.—(*c*) The cross-heads, lamp-irons and lanterns used for open flame gas lamps in the Borough of Manhattan, The Bronx, and Brooklyn are almost entirely owned by The City of New York, and The City will continue to supply same. In these or other boroughs where gas lanterns may belong to the Contractor, he shall furnish same, including all repairs and renewals, without any additional charge to The City.

Lanterns, burning appliances, lamp-irons and cross-heads for open flame naphtha lamps shall be furnished by the Contractor for the term of this contract for the amount of this bid.

Any other contractor bidding successfully, where lanterns are not owned by The City, must supply same, including all repairs and renewals, without any additional charge to The City.

(*d*) In all boroughs, the above conditions and reservations as to the furnishing, repairing, replacing and painting of lamp-posts, cross-heads, lamp-irons and lanterns in the above clauses, No. 7, No. 7*a*, No. 8, No. 8*a*, No. 8*b*, No. 9, No. 9*a*, No. 9*b*, and No. 9*c* shall apply as the ownership of said lamp-posts, cross-heads, lamp-irons and lanterns shall appear, but nothing in the above shall be construed that The City of New York obligates itself to supply new lamp-posts in place of those now erected, but not owned by it, unless it so desires.

10. Bidders will state in their bids a price for the repair of lamp-posts, owned or supplied by The City, for use with gas or naphtha lamps, including straightening and releading, and for each new lamp-post fitted up, as follows:

(*a*) For each lamp-post straightened, stating the price per post.
(*b*) For each column releaded, stating the price per post.
9677 (*c*) For each column recalked, stating the price per post.
(*d*) For each column refitted, stating the price per post.
(*e*) For each service pipe refitted, stating the price per post.
(*f*) For each stand pipe refitted, stating the price per post.
(*g*) For each lamp-post removed, stating the price per post.
(*h*) For each lamp-post reset, stating the price per post.
(*i*) For the erection of each *new* lamp-post (complete with service and stand pipes, when for gas), and with cross-heads, lamp-irons and lanterns in place, stating the price per post.

Gas for public buildings.—11. Bidders will state in their bids or estimates a price per thousand cubic feet of gas of not less than 20 candle power for all or any of the public buildings or offices in the Borough of ...., the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity. This price will include, in all boroughs, the service pipes from the gas mains to the building, and a proper meter for registering the consumption of gas.

Alterations, etc.—12. Should any alteration, change, replacement or any attachment be required to the whole or any portion of the lamps or lamp-posts, except as mentioned in these proposals and specifications, for which estimates are made, in consequence of the use of improved appliances for the gas or 9678 naphtha lighting under this contract, then such alteration shall be done and such attachment placed on the posts without expense to The City.

Reservation.—13. The right is reserved to the Commissioner to determine and designate in any locality, at any time after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the term of this contract; also, upon such determination, to decline any estimate, or part thereof, for lighting such locality with illuminating material other than that so determined upon; also to decline all estimates for any particular locality, or all localities, if deemed for the best interests of The City.

Time to connect to lamp-posts.—14. If the estimate of any bidder shall include any lamp-posts with which the pipes or conductors of such bidder are not connected at the time of the making of the bid, and a contract for furnishing the illuminating material for any such lamp-posts shall be awarded to such bidder, in that case, **THIRTY DAYS from the date of the execution of such** contract, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, shall be allowed to such bidder in which to connect such pipes or conductors with such lamp-posts, and all such connections shall be made by the Contractor without expense to The City.

Payment reserved.—15. No payment to such bidder, on account of any such lamps, will be made for the time so allowed, nor until the same shall have been connected with the mains or conductors of such bidder, nor except for the time during which all
9679 the requirements in this proposal and in the contract, including specifications, which shall be awarded and entered into under this proposal, shall have been fully performed.

Determination of lights.—16. The number, kind and location of lights to be furnished under the contract to be awarded and entered into under this proposal shall be determined and prescribed by the Commissioner.

Responsibility of bidders.—17. No bid will be entertained unless the Commissioner shall be satisfied that the party or parties bidding are possessed of sufficient plant to carry out the provisions of the contract.

Award of contracts.—18. The award of any and all contracts under this proposal, and all contracts entered into in pursuance of said proposal, will be subject and subordinate to the rights of all persons, parties or corporations under contracts or agreements (if there are any such) which are now binding and obligatory upon The City of New York.

Burning hours.—19. The number of hours the gas or naphtha lamps are to be kept burning during the contract is 2,936 5-60 at the rate of 3,925 hours per year as per time-table attached.

Form of estimate.—20. Bidders will *write out* the total amount of their estimates in addition to inserting the same *in figures*.

Rejection.—21. The Commissioner reserves the right to reject any or all bids or estimates if the Board of Estimate and Apportionment shall determine it is for the public interest of The City so to do.

[Charter, section 530.]

Identity of bidders.—22. Each bid or estimate shall contain the name and place of residence of the person making the same, the names of all persons interested with him
9680 therein, and if no other person be so interested it shall distinctly state that fact; also that it is made without any connection with any other person making an estimate for the same purpose, and is in all respects fair, and without collusion or fraud; and that no member of the Board of Aldermen, head of a department, chief of a bureau, deputy thereof, or clerk therein, or other officer of The City of New York, is, shall be, or become interested, directly or indirectly, as contracting party, partner, stockholder, surety or otherwise in, or in the performance of the contract, work or business to which it relates, or in any portion of the profits thereof. The bid or estimate must be verified by the oath, in writing, of the party making the estimate that the several

[Ordinances, section 347.]

[Charter, section 1533.]

matters stated therein are in all respects true; or, if the bidder is a corporation, by the oath, in writing, of an officer of such corporation, with knowledge of the facts and having authority to make such sworn statement.

Sureties.—23. Each bid or estimate shall be accompanied by the consent, in writing, of two householders and freeholders in The City of New York, or of a guaranty or surety company, duly authorized by law to act as surety, and shall contain the matters set forth in the blank forms mentioned below.

[Ordinances, section 349.]

Check with estimates.—24. No bid or estimate will be considered unless accompanied by money or a certified check drawn on a National or State Bank located in The City of New York, to the order of the Comptroller, to the amount of five per centum of the amount of the bond required, as provided in section 420 of The Greater New York Charter.

[Charter, section 420.]

Particulars of work.—25. For particulars as to the repairs or the quantity or quality of the supplies, or the nature and extent 9681 of the work, reference must be made to the specifications on file in the Department.

Forms for estimates.—26. Bidders are requested to make their bids or estimates upon the blank form prepared by the Commissioner, a copy of which, with the proper envelope in which to inclose the bid, together with a copy of the contract, including the specifications, in the form approved by the Corporation Counsel, can be obtained upon application therefor at the office of the Commissioner of Water Supply, Gas and Electricity, Room 1321, No. 21 Park Row, The City of New York.

THE CITY OF NEW YORK............, 1905.

JOHN T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

9682

THE CITY OF NEW YORK,

DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY,

BOROUGH OF...........

CONTRACT AND SPECIFICATIONS

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining the Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts and for furnishing Burners and Appliances of Improved System of Lighting Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of ...., in The City of New York, for the term of Nine Months and Sixteen Days, from March 16, 1905, to December 31, 1905, both inclusive, per Specifications and Proposals herein contained or hereto attached.

Parties.—THIS AGREEMENT, made and entered into this .... day of ...., in the year one thousand nine hundred and five, by and between The City of New York, by the Commissioner of Water Supply, Gas and Electricity, party of the first part, and ....
....
....
Contractor , party of the second part, pursuant to the provisions of The Greater New York Charter,

9683 Covenant.—WITNESSETH, That the parties to these presents, each in consideration of the agreements on the part of the other, herein contained, have mutually agreed and hereby mutually agree, the party of the first part for itself and its successors, and the party of the second part for itself and its successors, as follows:

Parties described.—(*A*) Wherever in this contract the words "The City," or "The Commissioner," or a pronoun in the place of either of them is used, they shall mean and intend the party of the first part or the Commissioner of Water Supply, Gas and Electricity of The City of New York; wherever the words "Borough President" are used in this contract they shall mean and intend the President of the Borough above mentioned; wherever in this contract the words "the Department," or a pronoun in place of them is used, they shall mean and intend the Department of Water Supply, Gas and Electricity in The City of New York.

(*B*) Wherever in this contract the word "Contractor" or a pronoun in the place of it, is used, the same shall mean and intend the party of the second part to this agreement.

"Engineer" described.—(*C*) Whenever the word "Engineer" is used in this contract, it shall mean and be taken to mean and in-

tend the Engineer of the Bureau of Lamps and Gas of the Department, or the Engineer, or other person or official in charge of the Lighting Bureau of the borough for which this contract is made, acting either directly or through any Assistant or Inspector duly appointed or designated therefor, pursuant to The Greater New York Charter, as amended, by the Engineer or either of the
9684 Engineers, to inspect, test, examine and accept the supplies of gas or other illuminating material, repairs or supplies, which are the subject of this contract, limited by the particular duties intrusted to him.

Subject matter.—(*D*) The Contractor will furnish and deliver to the party of the first part, at the Contractor's own cost and expense, at the times and places and in the manner and under the conditions herein specified, gas or other illuminating material for, and light, extinguish, clean, repair and maintain the public lamps (and supply gas, etc., for new lamps when required), and make certain repairs to lamp-posts, and furnish burners and appliances of improved system of lighting on the streets, public buildings, avenues, piers, parks and public places in the Borough of ...., in The City of New York, for the term of 9 months and 16 days from March 16th, 1905, to December 31st, 1905, both inclusive, and will accept as full compensation therefor the sum or price hereinafter named, which sums or prices are the amounts at which this contract was awarded to the Contractor at the public letting thereof. The said specifications, the proposal for bids or estimates, the bid or estimate and the bond required are and shall be a part of this contract.

No extra compensation.—(*E*) The Contractor will not ask, demand, sue for or recover for any supplies delivered, repairs made, illuminating material furnished, or work performed under this contract, any extra compensation beyond the amounts payable for the several classes of work and supplies herein enumerated, which shall be actually supplied at the price therefor, herein agreed upon and fixed.

Inspection.—(*F*) The Engineer shall inspect and test or
9685 have tested the gas or other illuminating material, lamps, meters, regulators, repairs and supplies furnished, and see that the same strictly correspond with the specifications hereinafter set forth, and the Engineer is hereby authorized and empowered to reject any of the said gas or other illuminating material, lamp-posts, lamps, meters, regulators, repairs and supplies offered under this contract, for the reason that the same do not comply in quality, or quantity, or pressure, or time or place of maintenance, with the specifications herein contained or hereto annexed.

Engineer's substitute.—(*G*) Whenever the Engineer shall be unable to act, in consequence of absence or other cause, then such assistant or other persons as shall be designated by the Commissioner shall perform all the duties and be vested with all the power herein given to the Engineer.

Arbitration.—(*H*) To prevent all disputes and litigations, the Engineer shall, in all cases, determine the amount, quantity and quality of the supplies, illuminating material, and work, which are to be paid for under this contract, and he shall determine all questions in relation to said gas or other illuminating material, repairs and supplies, and he shall in all cases decide every question which may arise relative to the execution of this contract on the part of the Contractor, and his estimate and decision shall be final and conclusive.

Explanation.—(*I*) Any doubt as to the meaning of the contract, including the specifications, or any obscurity as to the wording of them, will be explained by the Engineer, and all directions and explanations required, alluded to, or necessary to complete any of the provisions of these specifications, and give them due effect, will be given by the Engineer.

9686 Time of beginning and completing work.—(*J*) The Contractor shall commence the delivery of the lamps and other apparatus called for by this contract, and the furnishing of the illuminant required, and the lighting of the lamps, as soon as he shall be ordered so to do by the Commissioner; he will carry on such contract as required from time to time, with such force and in such manner and order, and at such times and seasons, as may be directed by the Commissioner, and that he will fully and entirely perform this contract on his part on the 31st day of December, 1905.

[Ordinances, section 354.]

Liquidated damages.—(*K*) In case any lamp shall fail to burn continuously throughout each and every night, during the term of this contract, during the hours specified in the time-table hereto annexed, or such hours as the Commissioner may from time to time prescribe, and such failure shall not be due to any act or omission of The City, its officers, agents, or employees, the Contractor shall and will pay to The City a sum of money equal to one two hundred and ninetieth (1/290) of the contract price of such lamp for the term of this contract, for each and every night or part thereof that such failure shall continue, which said sum, in view of the difficulty of ascertaining the loss which The City will suffer by reason of such failure, is hereby agreed, fixed and determined by the parties hereto, as the liquidated damages that The City will suffer by reason of such failure, and not as a penalty, and The City shall and may deduct and retain the amount of such liquidated damages out of any moneys which may be due or become due to the Contractor under this agreement.

Extension of time.—(*L*) Neither an extension of time, for any reason, beyond the date fixed for the delivery of supply of 9687 gas, or other illuminating material, lamps, repairs and supplies, nor the delivery and acceptance of any said delivery of supply of gas, repairs and supplies, called for by this contract, shall be deemed to be a waiver by the Commissioner of the right to abrogate this contract for abandonment or delay in the manner herein provided.

Skilful workmen.—(*M*) The Contractor will employ only competent, skilful and faithful men to do the work, and he further agrees that whenever the Commissioner shall inform him in writing that any man engaged in the work is, in his opinion, incompetent or unfaithful, he will discharge him from the work and will not again employ him upon the work.

Prices.—(*N*) The Contractor shall receive the following prices as full compensation for furnishing and maintaining the lights, lamps, apparatus and accessories, and performing the services herein provided to be performed by the Contractor, viz.:

9688 OPEN FLAME GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

I. For furnishing illuminating gas (of not less than 20 candle-power to burners consuming 3 cubic feet of gas per hour, by photometric test, made at a distance of not less than one mile from the place of manufacture) for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes and burners, the replacing of cross-heads, lamp-irons and lanterns, and the replacing and repairing of lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of .... to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

9689 OPEN FLAME NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

II. For furnishing illuminating material other than gas for each lamp, at each lamp, including the lighting, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7 and 9, for the term of this contract, in the Borough of .... to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, tne sum of .... Dollars ($........) per lamp.

9690 OPEN FLAME NAPHTHA LAMPS—LAMPS-POSTS FURNISHED BY CONTRACTOR.

III. For furnishing illuminating material other than gas for each lamp, at each lamp, including the light, extinguishing, cleaning, repairing, reglazing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burners, burning appliances, lamp-posts, lanterns, lamp-irons and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 7*a* and 9, for the term of this contract, in the Borough of ...., to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

9691 MANTLE GAS LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

IV. For furnishing and connecting, ready for use, each mantle gas lamp, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it, including illuminant. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, and repairing and replacing of lamp-posts when owned by the Contractor, as specified and as noted in proposals, clauses Nos. 8 and 9, for the term of this contract, in the Borough of .... to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

9692 MANTLE NAPHTHA LAMPS—LAMP-POSTS OWNED OR FURNISHED BY THE CITY.

V. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lanterns, lamp-irons, frames and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 8 and 9, for the term of this contract, in the Borough of .... to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

9693 MANTLE NAPHTHA LAMPS—LAMP-POSTS FURNISHED BY CONTRACTOR.

VI. For furnishing and connecting, ready for use, each mantle lamp, using illuminating material other than gas, with improved burner appliances and incandescent mantles, including cocks, tubes, burners, mantles, globes, chimneys, rods and regulating apparatus, necessary for each lamp, at each lamp, and also operating and maintaining it. The operation and maintenance to include the lighting, extinguishing, cleaning, reglazing, repairing and painting of lanterns and lamp-irons, the painting of lamp-posts and cross-heads, the furnishing, repairing and replacing of cocks, tubes, burner appliances, mantles, chimneys, globes, rods, regulating apparatus, lamp-posts, lanterns, lamp-irons, frames and cross-heads thereto, as specified and as noted in proposals, clauses Nos. 8*a* and 9, for the term of this contract, in the Borough of .... to wit:

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

9694 For furnishing all the above for each lamp, at each lamp, for .... in number of same, the sum of .... Dollars ($........) per lamp.

VII. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating gas only, as specified and as noted in clauses No. 7, No. 8 and No. 9 of the proposals, for the period of this contract, the sum of............. ....Dollars ($........).

VIII. For furnishing, maintaining and putting in place all the above-mentioned items, excepting the cost of illuminating gas only, as specified and as noted in clauses No. 7*a*, No. 8*a*, No. 8*b* and No. 9 of the proposals, for the period of this contract, the sum of...... ....Dollars ($........).

IX. For repair of lamp-posts and erection of new lamp-posts, for the term of this contract, in the Borough of..................., when owned, furnished or hereafter acquired by The City:

(*a*) For each lamp-post straightened, the sum of.............. .... Dollars ($........).

(*b*) For each column releaded, the sum of.................. .... Dollars ($........).

(*c*) For each column recalked, the sum of.................. .... Dollars ($........).

(*d*) For each column refitted, the sum of.................... .... Dollars ($........).

9695 (*e*) For each service pipe refitted, the sum of........... .... Dollars ($........).

(*f*) For each stand pipe refitted, the sum of.................. .... Dollars ($........).

(*g*) For each lamp-post removed, the sum of................. .... Dollars ($........).

(*h*) For each lamp-post reset, the sum of.................... .... Dollars ($........).

(*i*) For the erection of each new lamp-post, complete (with service and stand pipes when for gas) and with cross-heads, lamp-irons and lanterns in place, stating the price per post, the sum of....... .... Dollars ($........).

X. For furnishing illuminating gas of not less than 20 candlepower, when tested, as provided for gas to street lamps, including the service pipes from the gas-mains to the building and a proper meter for registering the gas, for the term of this contract, for each of the public buildings and offices in the Borough of............., the lighting of which is now, or hereafter may be, under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, per 1,000 cubic feet, at a pressure of not less than one and one-half (1½) inches at the meter end of the house service pipe, in the sum of .... Dollars ($........).

9696 Payments only for complete performance.—(*O*) No payment will be made or allowed on account of supply of illuminating materials, repairs and supplies to any lamp, except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

Suspension and relighting.—(*P*) In case the Contractor shall be unable at any time during the continuance of this contract to supply illuminating material to, or light any of the lamps specified in this agreement, then the Contractor shall give immediate notice to the Commissioner of his inability to furnish illuminating material to, or to light such lamps, stating the streets in which the supply of illuminating material to the lamps cannot be furnished and the cause thereof. And in case the use of any of the lamps shall be suspended or discontinued, and other lamps shall be used in consequence of such suspension or discontinuance, then the gas or other lamps which may have been suspended, or discontinued, shall not be supplied with illuminating material except pursuant to an order for such supply by the Commissioner.

Indemnity.—(*Q*) The Contractor shall indemnify and save harmless The City, its officers, agents and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits based on or arising out of the alleged infringement of any patent or patent right, and against, and from all damages and costs to which they or any of them may be put by reason of any such alleged infringement or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under this contract, or otherwise, or from any improper or 9697 defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the Contractor or his agents or servants. So much of the moneys due to the Contractor under and by virtue of this agreement, as shall or may be deemed necessary by the Commissioner, shall or may be retained by The City until all such suits, actions and claims shall have been settled, and evidence to that effect furnished to the satisfaction of the Commissioner.

Failure to perform.—(*R*) In case the Contractor shall fail or neglect to keep the covenants herein contained, or any of them, or neglect to operate, repair, paint, clean or fit up the lamps as before mentioned, or any of them, the Commissioner may and shall have the power to cause such work to be performed by other parties, and to deduct the expense thereof, from any moneys which may be due or may become due to the Contractor, and to hold the Contractor and his sureties liable for the amount thereof, which may be in excess of the prices stipulated in this agreement; and in case such expense is less than the sum which would have been payable under this contract if the same had been completed by the Contractor, he shall forfeit all claim to the difference.

Annulment of contract.—(*S*) If the Contractor shall not well and truly observe, perform, fulfill and keep all and singular the covenants and conditions hereinbefore mentioned and contained, on its part and behalf to be observed, performed, fulfilled and kept according to the true intent and meaning of these presents, then and in that case the Commissioner may and shall have the power, on the part of the said party of the first part, to declare this contract annulled and vacated, and thereupon it shall become and be thenceforth null and void.

9698 Payments.—(*T*) On or after the first day of each and every month during the term of this contract, the Contractor shall furnish proof to the satisfaction of the Commissioner that it has fully performed and fulfilled this contract in all the particulars and conditions aforesaid during the preceding month, and particularly that it has furnished the illuminating material of the quality hereinbefore specified, and that all the lanterns have been cleaned three times in each week of said month, and also that the gas burners have consumed three cubic feet of gas each per hour, as required by this contract, during all the time that the lamps were required to be kept lighted, and also proof to the satisfaction of the Commissioner as to all extinguishments of lamps, including the location of each lamp extinguished, the date and length of extinguishment in each case, whereupon the Commissioner shall certify the fact, and in his certificate state the amount to which the Contractor shall be entitled for all the duties performed by it during such preceding month, and annex thereto a requisition upon the Comptroller to pay the Contractor therefor the sum to which he shall be so entitled; and without such certificate and requisition the Contractor shall not be or become entitled to any payment under and in respect to the terms of this contract, or for the light, lamps and accessories or in respect to services which were required to be done, or should have been done, in such preceding month. On the requisitions above provided being presented to the Comptroller of The City, he shall, within thirty days thereafter, pay to the Contractor the amount thereof in lawful money.

No estoppel.—(*U*) The City shall not, nor shall any department or officer thereof be precluded or estopped by any return or 9699 certificate made or given by the Commissioner, any Engineer or other officer, agent or appointee of The City under any provision of this agreement from at any time (either before or after the final completion and acceptance of the work and payment therefor pursuant to any such return or certificate) showing the true and correct amount and character of the work done and materials furnished by the Contractor, or any other person under this agreement, or from showing at any time that any such return or certificate is untrue and incorrect, or improperly made in any particular, or that the work and materials, or any part thereof, do not in fact conform to the specifications; and The City shall not be precluded or estopped, notwithstanding any such return or certificate and payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the specifications.

Comptroller's indorsement.—(*V*) This contract shall not be binding or of any force unless the Comptroller of The City shall indorse hereon his certificate that there remains unexpended or unapplied, as provided in The Greater New York Charter, a balance of the appropriation or fund applicable thereto sufficient to pay the estimated expense of executing this contract, as certified by the officers making the same.

[Charter, sections 149 and 413.]

Notice to Contractor.—(*W*) The residence or place of business given in the bid or estimate upon which this contract is founded, is hereby designated as the place where all notices, letters and other communications shall be served, mailed or delivered. Any notice, letter or other communication addressed to the Contractor and delivered at the above-named place, or deposited in a post-paid 9700 wrapper in any post-office box regularly maintained by the post-office shall be deemed sufficient service thereof upon the Contractor. The place named may be changed at any time by an instrument, in writing, executed and acknowledged by the Contractor and delivered to the Commissioner. Nothing herein contained shall be deemed to preclude or render inoperative service of any notice, letter or other communication upon the Contractor personally.

Prior rights considered.—(*X*) This contract shall be subject and subordinate to the rights, claims and demands of all persons, parties or corporations under contracts or agreements (if there are any such) which are valid and lawful charges and liabilities against The City of New York, and which the law requires shall be defrayed and answered unto by The City.

Personal attention.—(*Y*) The Contractor will give his personal attention constantly to the faithful prosecution of the work; he will not assign, transfer, convey, sublet or otherwise dispose of this contract, or his right, title or interest in or to the same or any part hereof, without the previous consent in writing of the Commissioner indorsed hereon or hereto attached; and he will not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this contract, unless by and with the like consent signified in like manner. If the Contractor shall, without such previous written consent, assign, transfer, convey, sublet or otherwise dispose of this contract, or of his right, title or interest therein, or any of the money to become due under this contract, to any other person, company or other corporation, this contract may, at the option of the Commissioner, be revoked and annulled and The City shall thereupon be relieved and discharged from any and all liability 9701 and obligations growing out of the same to the Contractor, and to his assignee or transferree; provided that nothing herein contained shall be construed to hinder, prevent or affect an assignment by the Contractor for the benefit of his creditors, made pursuant to the statutes of the State of New York; and no right under this contract, or to any money to become due hereunder shall be asserted against The City in law or in equity, by reason of any so-called assignment of this contract, or any part thereof, or of any moneys to grow due hereunder, unless authorized as aforesaid by the written consent of the Commissioner.

Execution.—IN WITNESS WHEREOF, The Commissioner of Water Supply, Gas and Electricity has hereunto set his hand and seal on behalf of The City, and the Contractor has caused its corporate seal to be hereunto affixed and its President and Secretary hereto to set their hands, and the parties hereto have executed triplicate copies hereof, one of which is to remain with the Commissioner, one other to be filed with the Comptroller of The City, and the third to be delivered to the Contractor, the day and date herein first above written.

..........................[L. S.]
Commissioner of Water Supply,
Gas and Electricity.

Contractor.
....
President.
[SEAL.]
....
Secretary.

Attest..............................
Secretary.

9702 THE CITY, COUNTY, AND STATE OF NEW YORK, *ss:*

On this .... day of .... 1905, before me personally came John T. Oakley, to me known and known to me to be the Commissioner of Water Supply, Gas and Electricity, the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same as such Commissioner for the purposes therein mentioned.

......................,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of ...., *ss:*

On this .... day of .... 1905, before me personally came .... to me known and known to me to be the President of the............................... Company, and ....
to me known and known to me to be the Secretary of the
9703 ....Company, who, being by me severally duly sworn, did depose and say, each for himself, as follows: The said ....that he resided in .... that he is the President of said Company, and the said.......... ....that he resided in............. ....that he is the Secretary of said Company, the Company described in and who executed the above instrument; that he knew the seal of said Company; that the seal affixed to the said instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order he thereto signed his name and official designation.

........................,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of ...., *ss:*

On this .... day of .... 1905, before me personally came .... to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same for the purposes therein mentioned.

........................,
Notary Public or Commissioner of Deeds.

9704 KNOW ALL MEN BY THESE PRESENTS, THAT WE, ... of The City of New York, are held and firmly bound unto THE CITY OF NEW YORK, in the sum of .... DOLLARS, lawful money of the United States of America, to be paid to THE CITY OF NEW YORK, or to its certain attorneys, successors or assigns, for which payment, well and truly to be made, we bind ourselves, and our several and respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals. Dated this .... day of .... one thousand nine hundred and five.

WHEREAS, The above bounden .... by an instrument in writing, under its corporate seal duly attested, bearing even date with these presents, and one part whereof is hereunto annexed, has contracted with The City of New York to furnish the Illuminating Material, Repairs and Supplies to the Public Lamps of The City of New York, as in said contract will more fully and at large appear:

Now, THEREFORE, The condition of the above obligation is such that if the said ....

9705 its successors or assigns, shall indemnify and save harmless The City of New York, its officers, agents, and servants, and each of them, against and from all suits and actions of every name and description brought against them or any of them, including suits and actions based on, or arising out of the alleged infringement of any patent or patent rights, and against and from all damages and costs to which they, or any of them, may be put by reason of any such alleged infringement, or by reason of injury to the person or property of another, resulting from negligence or carelessness in the performance of the work to be done under said contract, or otherwise, or from any improper or defective material, machinery, implement or appliance used in performing the same, or from any act or omission of the said.................................its agents or servants, and if the said.............................or its successors or assigns, shall well and truly, and in good, sufficient and workmanlike manner, perform, fulfill, observe, and keep the said contract, and each and every of the covenants, provisions, conditions and terms in said contract contained, or to be performed, fulfilled, observed and kept, then this obligation to be void; otherwise to remain in full force and virtue.

........................[L. S.]
........................[L. S.]
........................[L. S.]
........................[L. S.]

9706 THE CITY AND STATE OF NEW YORK,
County of ...., *ss:*

On this .... day of .... 1905, before me personally came ....

to me known and known to me to be the persons described in and who executed the foregoing bond, and they severally acknowledged to me that they executed the same for the purposes therein mentioned.

......................,
Notary Public or Commissioner of Deeds.

THE CITY AND STATE OF NEW YORK,
County of ...., *ss:*

On this .... day of ...., 1905, before me personally came ....
to me known and known to me to be the President of the........,

....
Company, and .... to me known and known to me to be the Secretary of the....................
......................................Company, being by me severally duly sworn, did say, each for himself, as follows:

The said .... that he was President of said Company, and the said .... that he was Secretary of said Company; that he knew the corporate seal of said Company; that the seal affixed to the foregoing instrument was such corporate seal; that it was so affixed by order of the Board of Directors of said Company, and that by like order he thereto signed his name and official designation.

......................,
Notary Public or Commissioner of Deeds.

9707 THE CITY, COUNTY, AND STATE OF NEW YORK, *ss:*

I, ..., of said City, being duly sworn, do depose and say that I am a .... holder in The City of New York, and reside at Number ....Borough of .... in said City, and that I am worth the sum of ....DOLLARS, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

....

Subscribed and sworn to before me this ...... day of ...., 1905.

..........................,
Notary Public or Commissioner of Deeds.

THE CITY, COUNTY, AND STATE OF NEW YORK, *ss:*

I, ..., of said City, being duly sworn, do depose and say that I am a .... holder in The City of New York, and reside at Number ....
Borough of .... in said City, and that I am worth the sum of ....DOLLARS, being the amount of security required for the completion of the above-mentioned contract, over and above all my debts and liabilities, including my liabilities as bail, surety and otherwise, and over and above all my property which is exempt by law from execution.

....

Subscribed and sworn to before me this ...... day of ...., 1905.

..........................,
Notary Public or Commissioner of Deeds.

9708

APPROPRIATION.

COMMISSIONER'S CERTIFICATE.

In conformity with the provisions of section 149 of The Greater New York Charter, it is hereby certified that the estimated cost of the work, materials and supplies required by the within contract, amounting to .... DOLLARS ($........), is chargeable to the appropriation of the Department of Water Supply, Gas and Electricity, for the year 1905, entitled "Lamps and Lighting, Borough .... for 1905."

....

Commissioner of Water Supply, Gas and Electricity.

Dated ...., 1905.

COMPTROLLER'S CERTIFICATE.

THE CITY OF NEW YORK, ...1905.

In pursuance of the provisions of section 149 of The Greater New York Charter, I hereby certify that there remains unapplied and unexpended a balance of the appropriation....................

....

....

applicable to this contract, sufficient to pay the estimated expense of executing the same, viz.: $.........

....

Comptroller.

9709

SPECIFICATIONS

For Furnishing Gas or other Illuminating Material for, and for Lighting, Extinguishing, Cleaning, Repairing and Maintaining Public Lamps (and Supplying Gas, etc., for New Lamps when required), and for making certain Repairs to Lamp-posts, and for Furnishing Burners and Appliances of Improved System of Lighting of Streets, Public Buildings, Avenues, Piers, Parks and Public Places, in the Borough of ...., in The City of New York, for the Term of Nine Months and Sixteen Days, from March 16, 1905, to December 31, 1905, both inclusive.

Lighting.—1. The lamps shall be lighted during such times as the public lamps throughout The City of New York may be required to be lighted by the regulations of the said party of the first part, in accordance with a time-table hereto annexed, marked "A," and made a part of these specifications. The Commissioner may direct and require, by notice of that effect, that all or any portion of said public lamps shall be lighted, and kept burning, at any

other time or times during the continuance of this contract; and the Contractor shall and will light the same, and continue them burning, in accordance with any and every direction of the Commissioner to that effect. Provided, that if, in compliance with the direction of the Commissioner, the whole number of hours during which the said lamps, or a portion of them, are kept burning, shall exceed the number of hours specified in the said time-table, which
time-table shall aggregate a total of 2966 5-60 hours for the
9710 term, then, in that case, the Contractor shall be entitled to
claim, and receive, for such additional number of hours during which the lamps, or such portion of them, in the district aforesaid, are kept burning, in accordance with such direction of the Commissioner, an additional compensation, equivalent to a pro rata increase of the compensation allowed by the foregoing contract and proportioned to the increased number of hours beyond the said number, and the number of lamps so kept burning. And also, provided that if, in compliance with the direction of the Commissioner, the number of hours during which the said lamps, or any portion of them, are kept burning, shall be less than the aforesaid number of 2966 5-60 hours per term, then, in that case there shall be deducted an amount equivalent to a pro rata decrease of the compensation allowed by the foregoing contract and proportioned to the decrease of the number of hours below the said number, and to the decrease of the number of lamps so kept burning. If the lamps are to be lighted by means of gas or naphtha, then it is expressly agreed that all the lamps shall be lighted within one hour from the time fixed in the time-table as the time for beginning; and it is also expressly agreed that all the lamps shall be extinguished within fifty (50) minutes from the time fixed in the time-table as the time for the beginning of extinguishing. It is also agreed that they shall be lighted either by means of a torch or the use of a ladder, and that the lamplighters will not be permitted to climb the lamp-posts for such a purpose. The Contractor shall keep the service pipes and stand pipes in said lamps free from all obstructions, at his own cost and expense.

Increasing or diminishing of lights.—2. The Commissioner shall
have the right at any time to increase or diminish the num-
9711 ber of lamps required to be lighted by the Contractor under
this contract, and the right is reserved by the Commissioner, at any time during the continuance of this contract, to increase or diminish the number of hours during which the said lamps or any portion of them are to be kept burning, and to change said time-table in any particular, and to determine and from time to time to change the said number and location of the lights in any public building or office, and the amount and kind of illuminating material used and to be used therein, and the public buildings and offices and parts thereof lighted and to be lighted under the foregoing contract.

Illuminating material, quality of.—3. If the material to be furnished under this agreement shall be illuminating gas, then such gas shall have an illuminating power of not less than twenty candles, when tested at a distance of not less than one mile from the place

of manufacture, on the improved form of the Bunsen Photometer, by means of a Bray slit, Union No. 7 burner, consuming five cubic feet of gas per hour. The testing candle shall be of sperm, of six to the pound, and consuming, as near as possible, one hundred and twenty grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than one hundred and fourteen or more than one hundred and twenty-six grains of spermaceti per hour. And as regards purity, gas shall be clean and of such quality that it will not deteriorate the mantles in the mantle lamps using same so as to shorten their length of life under similar conditions. The gas shall be entirely free, within limits not injurious to the public health, from ammonia, sulphureted hydrogen
9712 and other sulphur of noxious compounds. In case the
illuminating material shall be illuminating material other than gas, then the quantity of light produced by the burner used for such material shall be equal to the quantity (by photometric test) produced by the twenty candle-power gas, above described, consumed by the three-foot gas burners called for in this agreement.

Test of illuminating power of lantern.—4. The City shall have the right at any time to test the quality and illuminating power of the lamps and light as furnished on the street, and for that purpose at least twenty-five (25) lamps may be selected from those in actual use, by the Engineer, in each and every calendar month, and their illuminating power shall be determined photometrically by The City Gas Inspector or the Engineer, at The City's Laboratory, or elsewhere, at the discretion of the Engineer. The average candle-power of the lamp so tested shall constitute the basis for calculating the light furnished by the lamps burning during the month and for which the charge is made. The term "Lamp" herein means the burner complete with mantle and chimney, if any, as found set up for use in any of the streets or public places, and the test herein referred to shall be made through uncolored clear glass of the same character as incloses the lamp on the street, and under the same conditions of supply of gas; the object of the test being to determine that the actual illuminating power, as contracted for, is given on the street, and to determine that each burner is consuming at least the required three cubic feet of gas per hour. Each lamp shall be tested with the gas furnished by the company furnishing gas to said lamp when in actual service on the street, the gas being first tested for candle-power. Twenty candle-power
9713 gas is herewith defined as gas which, when tested, at a dis-
tance of not less than one mile from the place of manufacture, on the improved form of Bunsen Photometer, by means of a Bray slit, Union No. 7 burner, consuming 5 cubic feet of gas per hour, shall give 20 candle-power; the testing candle shall be of sperm of six to the pound, and consuming, as near as possible, 120 grains of spermaceti per hour; and no test shall be recorded in which the candle consumes less than 114 or more than 126 grains of spermaceti per hour.

When desired by the Commissioner, these tests will be applied to each of the different classes of lamps, viz.:

Open flame gas.
Mantle gas.
Open flame naphtha.
Mantle naphtha.

The Contractor operating and maintaining the lamps tested shall replace said lamps whenever they are taken down for test, free of cost to The City, and shall always keep in stock ready for operation, at least 25 lamps of each class.

Lamps using other illuminant than gas will also be tested photometrically as to actual street illuminating power with the illuminating material they may contain when taken down, and they shall furnish the same illuminating power as a lamp of similar type using gas of 20-candle power supplied at the rate of three cubic feet per hour.

9714 The minimum candle power required of each type of lamp consuming not more than 3 cubic feet per hour per lamp, under the conditions herein specified, will be as follows:

Open flame gas	12 candle power.
Mantle gas	60 candle power.
Open flame naphtha	12 candle power.
Mantle naphtha	60 candle power.

The open flame lamps to be supplied with 20 candle power gas at the rate of not less than three cubic feet per hour. The mantle gas lamps to be supplied with at least 3 cubic feet of gas per hour, at 1½ inches pressure as may be required. The naphtha lamps, both open and mantle, shall be supplied with sufficient naphtha to equal the candle power of the similar type of gas lamp when supplied with gas under the specifications given above.

Burners.—5. All burners used for the illuminating material commonly called illuminating gas shall be of the capacity to burn at least three cubic feet of gas per hour in street lamps; and each of said burners shall burn at least three cubic feet of gas per hour at a pressure of 1½ inches as noted during all the time the lamps are required to be kept lighted, and they shall be kept in good order and repair, and renewed whenever required by the Engineer, and he shall also have same tested for consumption of gas when it is deemed necessary.

Should the illuminating material be naphtha, then the burners to be used for such illuminating material shall give a light (by photometric test) equal to the light given by the gas-burners in use in the public lamps of similar type in The City of New York. The burners are to be kept clear at all times, so as to allow a free 9715 and unobstructed flow of illuminating material, and to permit a full and normal flame. All checks or automatic regulators shall be of a type approved by the Engineer, and shall be cleaned at least once in each year, or oftener if ordered by the Engineer.

Change of burners.—6. The party of the first part shall have the right to require that burners of a greater consuming capacity than three cubic feet of gas per hour shall be furnished to the public gas-lamps, or any portion of them, at any time during the aforesaid term of this contract, provided that the party of the first part will pay to the Contractor, for the lamps so furnished, an additional compensation, equivalent to the increase of the compensation allowed by the foregoing contract and proportioned only to the increased amount of gas consumed by each burner over and above three cubic feet per hour.

Sample lamps and burner tips.—7. Sample lamps, showing all burning appliances and connections for each type of mantle or other lamp to be furnished, shall be submitted when called for by the Commissioner to the Engineer for the purposes of comparison and test. Such sample lamps shall be complete in every respect, and shall accurately represent the burner which the Contractor uses on each type of lamp under this contract, and the sample lamp, like lamps in service, shall be so combined and adjusted as to secure, under all ordinary variations of pressure, an intensity of candle power of not less than sixty in the case of mantle lamps and twelve in the case of open flame lamps.

Change of burners and mantles.—8. Incandescent mantles for either gas or naphtha lamps when supplied for the lamps now using same, or for lamps which may be hereafter specified by the
9716 Commissioner, shall be of the very best quality, capable of
producing and maintaining under the conditions of this contract not less than 60 candle power. Whenever the mantles become smoked or deteriorated to such an extent that at least 60 candle power is not obtained, they must be replaced by new mantles by the Contractor. The Commissioner reserves the right to have the lamps and the character of mantles furnished, tested, basing test on the same conditions as those under which they are required to burn on the streets, and to reject any lamps and mantles furnished that do not comply with the above requirements as to candle power. Anti-vibrators for lamps, using incandescent mantles, should be furnished with each lamp, and samples of same should be submitted to the Engineer for approval with the sample of lamp furnished him as mentioned elsewhere.

Street signs.—9. The Borough President or the Commissioner shall have the right at any time to place signs designating the names of the streets on any lamp or lamp-posts situated on the street corners of any street to be lighted under this contract without further expense to The City, whether the said lamp or lamp-posts shall belong to The City or not.

Such glass or other street signs as are at present in place upon the lanterns or lamp-posts shall be retained in their proper places and position.

All the lamps and street signs are to be kept in such a cleanly condition that not more than ten per cent. (10%) of the light of the lamps shall be absorbed or obstructed by the uncolored glass; and the lamps and street signs shall all be cleaned at least
9717 three times in each week, and oftener if the Commissioner
shall direct or require the same; and in each of these cleanings, all the glass of the lanterns, as well as the glass of the street

signs, shall be thoroughly cleaned both on the inside and on the outside, and all dust and dirt shall be brushed from the frames.

Repairing and reglazing.—10. The lamps, including the bottoms, are to be repaired and reglazed within twenty-four hours after any portion of the same shall be broken, and all the work or material for either of said purposes is to be furnished by the Contractor, without cost to The City.

Stained glass of a ruby color of such tint and arranged in a manner approved of by the Commissioner shall be placed in the fire alarm signal lamps, and shall also be required in the tops of the glass lanterns nearest several fire alarm signal boxes and in the tops of the glass lanterns on the street corner nearest said boxes. And in case any of said stained glass should be broken after being placed in the lamps, then the Contractor shall replace the same, but in the Borough of Manhattan, where fire alarm lanterns on mantle lamps, the glass will be provided by The City and put in place by Contractor without further cost to The City.

Cocks, tubes and burners.—11. The cocks, tubes, tips, mantles, chimneys, globes, burners and checks which may become worn out or useless, or which, in the opinion of the Commissioner, are worn out or useless, shall be immediately replaced by the Contractor, at his own cost and expense.

Repairing lamp-posts. —12. Whenever the Commissioner shall require that any lamp-post or posts shall be reset or straight-
9718 ened, or that any column or columns be releaded or recalked,
or that any lamp-post or posts be repaired in any other manner, in this contract specified, the same shall be done within twenty-four hours after the Department shall notify the Contractor of such requirement.

Painting.—13. The lamp-posts, lamp-irons, brackets and lanterns, used for gas or naphtha, are to have one heavy coat of best paint, ground in oil, as follows: The lamp-posts, cross-heads and stand-pipes of open-flame bracket lamps to have one coat of dark green paint, blue shade. The square lamp-irons, brackets, and outside of open-flame lanterns to have one coat of green paint, pea-green shade, the design being to make a strong contrast between lamp-posts and lanterns. The tin work on inside of lanterns to be painted in all their parts with one heavy coat of best white lead paint; the round lamp-irons and under side of the reflectors of the boulevard type of lamps to be painted with one coat of the best white lead paint, and so much of the stand pipes as project above the lamp-posts to be painted in the same manner as the lamp-posts.

The mantle gas or naphtha lanterns shall be painted in such a manner, and of such a color as shall be satisfactory to the Commissioner.

Fire-alarm lamp-posts and lanterns shall be painted as specified above, except as to color, which shall be of such color as the Commissioner may direct. This Contractor, however, is not to paint the telegraph boxes on the fire-alarm posts. All the material shall be of the best quality, and prepared so as to present a gloss finish. While
painting the lanterns care must be taken that the glass shall
9719 not be daubed or smeared with paint. All the painting is to
be completed by the first day of July next and the Commis-

sioner is to be notified when and where the painting is to be commenced. All new lamp-posts to be painted immediately upon erection.

Removing lamp-posts.—14. All lamp-posts shall be taken down which the Commissioner may require to be removed for any purpose.

New gas lamp-posts, service and stand pipes.—15. New gas lamp-posts are to be fitted up on any street, avenue, pier, park or public place, wherever the same may be required by the Commissioner. The butts and columns are to be placed in a strictly perpendicular position, the socket of the butt to be calked with yarn gasket and melted lead, the lead to be tamped and then trimmed even with rim of butt. The service pipe shall be one (1) inch wrought-iron pipe, which shall be properly connected to a one (1) inch wrought-iron stand-pipe, which shall be galvanized upon its outer surface. At the lower extremity of the stand-pipe the service pipe shall make an angle bend of easy curvature, so as to avoid any congestion of any material that may collect within the pipe, and thence have a direct fall to the main. The service pipe shall receive a heavy coat of asphaltic paint before there is any filling-in around it. The service pipe and bend on bottom of stand-pipe shall rest on solid earth to prevent the same from settling and forming a trap; the earth is to be thoroughly tamped about the butt as the same is thrown into the excavation. Bracket lamps are to be fitted up in lieu of lamp-posts, when required, the brackets and stand-pipes to be fastened to the wall in a firm and secure manner. The service pipes, stand-pipes and fittings
9720 are to be furnished and connected by the Contractor.

Lanterns.—16. All lanterns, cross-heads, lamp-irons, service pipes, stand-pipes and lamp-posts used for gas or for naphtha lamps, which, in the opinion of the Commissioner, may become so worn out, broken or useless as to be unfit to be repaired, are to be removed and other lanterns, cross-heads, lamp-irons, service pipes, stand-pipes and lamp-posts substituted in lieu thereof (and globe lamps substituted for square lamps) by the Contractor as noted in the proposals.

Cartages.—17. All supplies, which under this agreement, may be required to be furnished by the party of the first part, will be so furnished, but the cartage thereof shall be done by the Contractor.

Extension of lines.—18. Subject to the provisions of section 469 of The Greater New York Charter, the Contractor will, upon being required so to do by the party of the first part, extend its pipes or conductors, erect new lamps in and along any or all the streets, avenues and public places within the limits aforesaid or adjacent thereto, and will relight the gas lamps situated on the lines of the mains of the Contractor, which are now suspended or may hereafter be suspended, when ordered so to do by the Commissioner.

Illuminant to be used.—19. The Commissioner may determine and designate in any locality, after the estimates are opened, what illuminating material shall be used in the public lamps, or any number of them, in such locality, during the period above mentioned: also upon such determination to decline any estimate or part thereof for lighting such locality with illuminating material other than so determined upon.

9721 Gas to public building meters.—20. In supplying gas to public buildings under the jurisdiction and control of the Department of Water Supply, Gas and Electricity, the Contractor shall supply, put in place and connect the service pipes from the gas mains to the building and install a proper meter for registering the gas consumed. The service pipes shall be extended through any court yards, alleys, open spaces, squares, etc., to the point where the meter is situated, without extra charge to The City; and the gas company shall protect their services when required by inclosing same in proper casing, to prevent condensation, when so ordered by this Department.

The gas supplied shall be of twenty (20) candle power and not less than one and one-half inch pressure at meter end of the house service pipe.

The Department may regulate the pressure inside the building by means of a gas-pressure regulator if it so desires.

No meter shall be installed, changed or replaced in any public building, except in case of emergency, unless due notice shall be given the Bureau of Lamps and Gas twenty-four (24) hours before such new meter is installed or change is made, so that the Inspector of such bureau can be present to check the reading of the meter. All new meters installed shall be installed reading at zero, except when permission is given otherwise. When meters are changed on account of an emergency, the Bureau of Lamps and Gas shall be notified as soon as possible thereafter.

The location of any meter or meters in public buildings shall be finally decided by the Bureau of Lamps and Gas, so as to
9722 avoid, as far as possible, the placing of same in such a position that it is almost impossible for an ordinary man to read the meter without great difficulty.

Meters should be of size satisfactory to the Department of Water Supply, Gas and Electricity, and should be equipped with a key for the purpose of turning on and off the gas.

When more than one meter is installed in a building, each meter should be labelled to show the portion of the building supplied through it.

Meters and tips.—21. All gas meters used for supply of gas to public buildings or public places in The City of New York may be tested by the Engineer whenever the Commissioner may so order, and the Contractor shall replace same during test, if necessary, free of charge. If meter be found defective, same shall also be repaired or replaced by the Contractor without further charge to The City.

Tips for open flame gas burners used in public buildings shall be supplied by the Contractor furnishing illuminating material, and such tips and other burning appliances shall be approved of by the Engineer before being installed and the Contractor shall not furnish such tips or burning appliances to lamps in any public building without first obtaining such approval.

The Engineer may test or have tested such tips or burning appli-

ances whenever he deems it advisable in order to determine their consumption of illuminant. These tips shall not consume more than six cubic feet of gas per hour, unless otherwise especially ordered; and in case they shall consume over this amount, new ones may be
ordered put in their place by the Contractor without further
9723 expense to The City during the term of this contract.

Meter readings.—22. In order that bills, when rendered to The City by the Contractor, shall agree so far as it is possible, with the meter readings as obtained by the City Inspectors, it will be required that on proper notification from The City, the Inspectors of the company will read the various meters on the same day as they are read by The City's Inspectors.

Extension of system.—23. If the requirements of The City, under this contract, include any lamps with which the pipes or conductors of the Contractor were not connected at the time of the making, such estimate or bid, thirty days from the date of the execution of this agreement, and such further time, not exceeding thirty days, as may be deemed reasonable by the Commissioner, will be allowed the Contractor in which to supply and connect service pipes, bends, reducers and stand-pipes, as specified above, to such lamps and all such connections, material and labor shall be furnished by the Contractor without other expense to The City; provided that the Contractor has or shall procure a consent, grant or franchise from the proper municipal or other authority, authorizing the laying of gas-mains or conductors in the streets or parts of streets and public places in which the said lamps are located; and that no openings shall be made in the pavements for the purpose of such connections prior to the first day of March, 1905, nor until permits shall have been obtained from the Commissioner, authorizing such openings.

Payments postponed.—24. No payment on account of any such
lamps will be made to the contractor for the time so allowed,
9724 nor until the same shall have been connected with the mains
or conductors of the Contractor, nor will payment be made on account of supply of gas or other illuminating material at any lamp except for the time during which all the requirements herein mentioned shall have been fully performed in accordance with the specifications.

Patent rights.—25. The Contractor shall indemnify and save The City harmless from any and all claims and suits for damages by reason of any infringement of patent rights in the use under this contract of any illuminating material or any burning appliances connected therewith, or for repairs or supplies to lamps or lamp-posts.

Time or period of lighting.—26. The Contractor shall have the right to lay, subject to the provisions of the laws now in force, pipes or conductors at any time between March 1 and December 31 during the term of this contract, upon giving forty-eight hours' written notice to the Department, and subject to the approval of the Commissioner, of its intention to break up or open any street, avenue, or public place, or part thereof, or to remove any part of the pavement thereof, for the purpose of laying, subject to the provisions of statute, or repairing the pipes or conductors, to conduct the said gas or other illuminating material. And the Contractor shall, whenever it shall break up or open any street, avenue, or public place, replace the earth which may be removed in so doing, before sunset of the day on which such opening shall be made (the earth to be thoroughly tamped as the same is thrown into the trench or excavation), and replace the pavement, and repave and repair the same, in such reasonable time and manner as the Borough President may direct, and in as 9725 good and firm a manner as such street, avenue, or public place, or part thereof, was in before being broken up for the purpose aforesaid, and shall, from time to time, as required by the Borough President, readjust and fill and finish the same as long as, in the opinion of the Borough President, may be necessary on account of the settling of the earth or pavement caused by the opening. Also, all such repairs as shall at any time become necessary to said pavement by reason of laying the said pipes or conductors, shall be made and done by the Contractor, at his own cost and expense. And the Contractor shall furnish to the Commissioner a report weekly, stating therein the location of each and every opening made in the pavements during the preceding week. And no street, avenue, or public place, or part thereof, shall or will be broken up or opened, or the pavement thereof removed, or be again filled up or repaired, except under the direction and supervision of a competent person, to be appointed by the Commissioner; but the party of the first part shall not be called upon to pay any sum, to any party or parties, for the inspection of any pavement which may have been removed and repaved by the Contractor, but the expense of such inspection shall be paid by the Contractor when required by the Commissioner. The Contractor shall and will so conduct the manufacture and manufactories of gas, or stations for other illuminating material, as not to create a nuisance, and it will in all things be governed by such reasonable rules and regulations as the Borough President may from time to time establish or direct, relative to the opening of such streets, avenues, or public places, or parties thereof, and laying down 9726 the pipes and conductors, and for lighting, cleaning and protecting the lamps and street signs aforesaid.

Map of lighting district.—27. In order that the Commissioner and his assistants may determine whether the gas lamps are lighted and extinguished in accordance with the timetable hereinbefore mentioned, the Contractor shall furnish to the Commissioner a map or maps showing the lamps in the district of each lamplighter, and designating the particular lamp at which each lighter commences to light, and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamplighter shall begin and finish at the same lamps as are designated for beginning and finishing the lighting; and the Contractor shall notify the Commissioner of any change which may be made in the beginning and finishing points on any lamp district during the term of this contract. The Contractor shall furnish to the Commissioner a report daily, stating therein the number and location of all new lamps fitted up and lighted, of lamp-posts removed and reset, and of lamps discontinued during the preceding week. Nothing herein contained shall be construed or deemed as granting to the Contractor any sole or exclusive right or privilege, or as preventing the party of the first part from granting the like privileges as are hereby given to the Contractor, to any other company, persons or parties whatsoever, or as preventing any person or persons, residing in or adjacent, or near to any of the said streets, avenues, or public places, or parts thereof, from erecting, in or upon his or their own premises, any building or apparatus, to light with gas or other illuminant his or their own house, store, manufactory or premises.

(Here follows time table, marked p. 9727.)

TIME TABLE

For Lighting and Extinguishing the Public Gas and Naphtha Lamps for the Year 1905.

Begin to Light at Time Given Below and Complete Lighting in One Hour.		Begin to Extinguish at Time Given Below and Finish in Fifty (50) Minutes.		
Jan. 15	4.35 P. M.	Jan. 16	6.30 A. M.	
" 22	4.45 "	" 23	6.20 "	
Feb. 5	4.55 "	Feb. 6	6.05 "	
" 12	5.05 "	" 13	5.55 "	
				31 nights, 413 hours and 5 minutes.
Feb. 15	5.10 P. M.	Feb. 16	5.55 A. M.	
" 26	5.25 "	" 27	5.30 "	
Mar. 11	5.40 "	Mar. 12	5.25 "	
				28 nights, 339 hours and 40 minutes.
Mar. 15	5.45 P. M.	Mar. 16	5.10 A. M.	
" 19	5.45 "	" 20	5.05 "	
" 23	5.55 "	" 27	4.55 "	
Apr. 1	6.05 "	Apr. 2	4.40 "	
" 9	6.15 "	" 10	4.30 "	
				31 nights, 331 hours.
Apr. 15	6.25 P. M.	Apr. 16	4.10 A. M.	
" 24	6.40 "	" 25	3.55 "	
May 7	6.55 "	May 8	3.40 "	
				30 nights, 273 hours.
May 15	7.05 P. M.	May 16	3.30 A. M.	
" 21	7.10 "	" 22	3.20 "	
June 4	7.15 "	June 5	3.10 "	
				31 nights, 246 hours and 45 minutes.
June 15	7.20 P. M.	June 16	3.10 A. M.	
July 14	7.20 "	July 15	3.10 "	
				30 nights, 230 hours.
July 15	7.20 P. M.	July 16	3.20 A. M.	
" 30	7.10 "	" 31	3.35 "	
Aug. 6	7.05 "	Aug. 7	3.45 "	
" 13	7.00 "	" 14	3.50 "	
				31 nights, 252 hours and 5 minutes
Aug. 15	6.55 P. M.	Aug. 16	4.00 A. M.	
" 27	6.40 "	" 28	4.10 "	
Sept. 3	6.20 "	Sept. 4	4.10 "	
" 10	6.05 "	" 11	4.10 "	
				31 nights, 289 hours and 35 minutes.
Sept. 15	6.00 P. M.	Sept. 16	4.25 A. M.	
" 17	5.55 "	" 18	4.25 "	
" 24	5.40 "	" 25	4.35 "	
Oct. 1	5.20 "	Oct. 2	4.45 "	
" 8	5.10 "	" 9	4.50 "	
				30 nights, 326 hours and 10 minutes.
Oct. 15	5.05 P. M.	Oct. 16	5.00 A. M.	
" 22	4.50 "	" 23	5.10 "	
" 29	4.40 "	" 30	5.15 "	
Nov. 5	4.25 "	Nov. 6	5.25 "	
" 12	4.15 "	" 13	5.35 "	
				31 nights, 383 hours and 40 minutes.
Nov. 15	4.15 P. M.	Nov. 16	5.45 A. M.	
" 25	4.00 "	" 26	5.50 "	
Dec. 14	4.00 "	Dec. 15	6.10 "	
				30 nights, 407 hours.
Dec. 15	3.55 P. M.	Dec. 16	6.10 A. M.	
" 24	4.05 "	" 25	6.10 "	
Jan. 14	4.15 "	Jan. 15	6.25 "	
				31 nights, 433 hours.

Total, 365 nights, or 3,925 hours.

Department of Water Supply, Gas and Electricity,
New York, March 4, 1905.

The above table will show the time for lighting and extinguishing the public lamps during the year 1905. See specifications, paragraph 1.

JOHN T. OAKLEY,
Commissioner of Water Supply, Gas and Electricity.

March 16 to December 31, 1905, inclusive, 2,966 hours and 5 minutes.

9727

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CITY'S EXHIBIT 64.

Before the State Board of Tax Commissioners.

In the Matter of the Assessment for Taxation of the Special Franchises of the Consolidated Gas Company of New York.

Assessment of 1905.

Complaint.

The Consolidated Gas Company of New York complains of the assessment and valuation for taxation of its special franchises, such assessment and valuation of said franchises as fixed and determined by the State Board of Tax Commissioners being $30,500,000.

Your complainant alleges that the said assessment is erroneous, unequal and illegal in the following respects:

First. Said assessment largely exceeds the value of complainant's special franchises. The value of complainant's special franchises in the City of New York does not exceed the sum of $4,261,156.00. The extent of the said over-valuation is, therefore, $26,238,844.00. The rights, permissions and franchises of the complainant to occupy the streets in the City of New York exist under certain laws specified in the complainant's report to the State Board for the year ending June 30, 1899, and complainant has acquired no new or different rights, permissions or franchises since the filing of said report. The assessments of complainant's special franchises in previous years were: $13,950,000 in 1900; $13,990,000 in 1901; $16,275,-
9729 000 in 1902; $17,985,000 in 1903, and $21,900,000 in 1904;
although there has been no variation in the value of complainant's special franchises during said years, and the same are not more valuable at the present time than they were in the year 1900.

Second. There is no method or evidence by which the value of the intangible right to lay and maintain mains and pipes in the streets can be determined. There exists no market or demand for such rights, permission and franchises. The price at which complainant's franchises or rights would sell, under ordinary circumstances, is merely nominal. The municipal authorities of the City of New York have never fixed any amount as the consideration for granting such a franchise, and the right to lay mains and pipes in the streets has always been procurable from said municipal authorities without the payment of any monetary consideration therefor. The number of such franchises which may exist at any one time has never been limited by said municipal authorities. The value of the said right to occupy the streets does not exceed the cost of procuring such a right from the City, and that cost is nominal.

Third. Three other gas companies operate and maintain systems of mains and pipes in the streets of the Borough of Manhattan, in the City of New York, namely, the Standard Gas Light Company of the City of New York, the New Amsterdam Gas Company, and the New York Mutual Gas Company. Each of these companies possesses a franchise or right to lay and maintain pipes and mains in all the streets of the said Borough of Manhattan. The franchise of each of the said companies is coextensive with that of the franchise of the complainant. The assessment of the State Board of Tax Commissioners upon the special franchises of each of the said companies in Manhattan Borough, for the year 1905, is as follows:

9730 Standard Gas Light Company	$4,840,000
New Amsterdam Gas Company	6,590,000
New York Mutual Gas Company	4,058,000

Fourth. Complainant's special franchise is, therefore, assessed approximately $25,000,000 higher than any identical franchise of any other gas company in the Borough of Manhattan, of said City of New York.

Fifth. The actual number of cubic feet of space occupied by the mains and pipes of this complainant, in the streets, avenues and public places of the City of New York, is 3,051,210. The assessment of $30,500,000 upon the special franchises of this complainant, including complainant's tangible property in the streets, is, therefore, an assessment of $9.668 for each cubic foot of space occupied. If the value of the tangible property in the streets ($4,261,156) is deducted from the amount of the assessment, the assessment alone is $8.599 for each cubic foot of space occupied by the mains and pipes of the complainant in the streets of said City. The tax based upon this assessment, at the rate of taxation in the Borough of Manhattan in the year 1904, would amount to fourteen and one-half cents (14½ cts.) for each cubic foot of space occupied.

Sixth. On information and belief, on October 9, 1902, the City of New York granted to the Pennsylvania, New York and Long Island Railroad Company a franchise to construct tunnels for the operation of railways under 31st, 32d and 33d Streets, in the Borough of Manhattan, from the North River to the East River. The compensation fixed by the municipal authorities for the right, franchise and license of said railroad company under, on or above the said streets is fifty cents (50 cts.) for each lineal foot of single track constructed by said company in, under, on or above 9731 the said streets, excluding 31st and 33d Streets between Seventh and Ninth Avenues. The compensation fixed as aforesaid for the right, franchise and license in, under, on or above 31st and 33d Streets, between Seventh and Ninth Avenues, is $14,000 per annum. At the said rates of compensation the annual payment to the City of New York will be, as computed upon the plans and specifications for the said tunnels, at the rate of $.00129 per cubic foot of actual space used under the streets for a double track tunnel.

Seventh. The tax based and levied upon the present assessment of the special franchises of this complainant will, therefore, be more than one hundred (100) times as great as the annual compensation fixed by the City of New York itself for the valuable tunnel privileges and franchises under streets of the Borough of Manhattan of the said City, although the franchises and rights of the complainant to lay and maintain gas pipes and mains under the streets and avenues of said City are of very much less value than the said tunnel franchises and rights possessed by the said Pennsylvania, New York and Long Island Railroad aforesaid.

Eighth. The mains and pipes of complainant underlie 3,910,571 square feet of the surface of the streets, avenues and public places of the Borough of Manhattan of said City. The assessment of $30,500,000 upon the special franchises of this complainant, including its tangible property in the streets, is, therefore, an assessment of $7.79 for each square foot of street surface which the mains and pipes of complainant underlie. If the value of the complainant's tangible property in the streets is deducted from the amount 9732 of the present assessment, the assessment upon the intangible element of complainant's special franchises alone is $6.70 for each square foot of street surface which the mains and pipes of the complainant underlie. The complainant possesses no rights, privileges or franchises upon the surface of the streets of the said City, and this assessment for subsurface rights is grossly excessive.

Ninth. Upon information and belief: All of the street railway companies in Manhattan Borough, having underground trolley systems, have rights for the use of the streets similar to those of complainant, and far more valuable, and yet these street railway special franchises have been valued this year, and for several years last past, at proportionately far less than the special franchises of this complainant. On information and belief, that the assessment of the special franchises of the street railway companies in Manhattan Borough does not exceed $9.00 for each cubic foot of space in the streets occupied by the tracks, conduits and other appurtenances of said companies, as compared with the assessment of $9.66 per cubic foot of space occupied by the mains and pipes of complainant. The special franchises of the street railway companies include the right to use and occupy the surface of the streets, which is a right much more valuable than the exclusively subsurface rights of complainant The street railway companies also possess the right to occupy the middle and most desirable and most valuable portions of the streets, while the complainant is compelled by the municipal authorities to lay its pipes near the curb line and in the least desirable portion of the street.

Tenth. All telegraph, telephone and electric companies, 9733 and all companies in Manhattan Borough having rights for the use of the streets similar to those of the complainant, and far more valuable, have been valued by the State Board for this, and for several years last past, at proportionately far less than said valuation of the complainant's said franchises.

Eleventh. The net earnings of complainant from operation, as shown by its report for the year ending June 30, 1904, were $5,039,669.49, being an increase over the earnings of previous year of $111,270—or an increase of 2.25 per cent. The special franchise assessment for 1905, $30,500,000, is an increase over that of 1904, $21,900,000, of $8,600,000, or an increase of 39.27 per cent. The rate of increase in the assessment is, therefore, 17.45 times as great as the rate of increase in earnings. The tax upon the increase of the special franchise assessment, at the prevailing rate of taxation in New York City, will be $137,600, which is greater than the increase in the net earnings of complainant, $111,270; in other words, the increased tax upon the special franchise, based upon the present assessment, will exhaust the increased net earnings. The large increase in the present assessment, therefor, effects a confiscation of the entire amount of the increased earnings of the complainant, and notwithstanding the greater volume of business transacted and the greater profit realized therefrom during the last year, the profits of the complainant, after the payment of taxes, will be less than during the previous year.

Twelfth. Complainant further alleges that said assessment is unequal in that it has been made at a higher proportionate valuation than the assessment of other land, real estate and real property in the City of New York, and especially in the Borough of 9734 Manhattan, in said City, and of other land, real estate and real property in the State of New York outside of said City, and your complainant specifies all the land, real estate and real property in the City of New York and each and every parcel thereof upon the assessment rolls of said City as instances in which such inequality exists, and of the extent thereof; that the said assessment is 25 per cent. higher than the assessment of all other land, real estate and real property in the City of New York on the same roll, made by the Department of Taxes and Assessments of said City. Complainant further shows said assessment and valuation is unequal in that it is far greater than the assessments placed on similar real property in said New York City by said State Board, and complainant cites as instances of said inequality each and every assessment upon special franchises in said New York City, as fixed by said State Board.

Thirteenth. Complainant further alleges that said assessment is illegal and erroneous, not only by reason of the overvaluations and inequalities hereinbefore stated, but also for the reason that Chapter 712 of the Laws of 1899, as amended, under which this Board assumed to and did make such assessment and valuation is unconstitutional and void and confers no power or authority upon this Board to make said assessment or valuation.

Fourteenth. Complainant further alleges that such assessment is illegal and erroneous in that Chapter 712 of the Laws of 1899, under which Act said State Board assumed to and did make this assessment and valuation is unconstitutional and void, in that it violates Article 10, Section 2, of the Constitution of the State of New York; that it attempts to confer jurisdiction, powers and functions 9735 upon the State Board of Tax Commissioners which under the Constitution can only be exercised by local assessors selected by the locality in which the tax is sought to be collected.

Fifteenth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has included therein, not only the value of all franchises, rights, authority and permission to construct, maintain and operate in, under, above, upon or through the streets, highways and public places of the City of New York, the mains, pipes, etc., of the complainant, with their appurtenances for conducting gas, but has also included therein the franchises of said company to make and sell gas. These franchises are all valuable ones, but under Chapter 712 of the Laws of 1899 cannot be included in the assessment and valuation of special franchises.

Sixteenth. Complainant further alleges that said assessment is illegal in that the same is in violation of those provisions of the Constitution of the State of New York and the Constitution of the United States which prohibit the taking of property without the due process of law, for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, which said State Board claims confers upon it the right, power and authority to act in the premises, and to fix and determine the valuation of said rights, permissions and franchises, did not or do not prescribe any definite rule, method or principle of valuation of such rights, permissions and franchises, and is so vague and indefinite that it cannot be administered by the taxing officer or enforced by the courts, and said State Board in fixing and determining the valuation of such rights, permissions and franchises, did not follow or 9736 apply any rule, method or principle of valuation, but fixed said assessment arbitrarily and without evidence of the value of said rights, permissions and franchises.

Seventeenth. Complainant further alleges that said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, is in conflict with and in violation of those provisions of the Constitution of the United States, which provide that no State shall deny to any person within its jurisdiction the equal protection of the laws.

Eighteenth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that this Board has omitted to assess and value separately the tangible and intangible property constituting said special franchises.

Nineteenth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has failed therein to separately fix and determine the valuation of each special franchise of the complainant or to state which special franchise or special franchises of the complainant are included in its assessment.

Twentieth. Complainant further alleges that by reason of said unequal, erroneous and illegal assessment and valuation, it will sustain injury and damage.

CONSOLIDATED GAS COMPANY,
By R. A. CARTER, *Secretary.*

9737 STATE OF NEW YORK,
County of New York, ss:

Robert A. Carter, being duly sworn, deposes and says, that he is Secretary of the Consolidated Gas Company of New York, the complainant above named; that he has read the foregoing complaint, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated upon information and belief, and as to those matters he believes it to be true.

Deponent has been continuously engaged in the gas business since the year 1877, having been employed by the Consolidated Gas Company and one of its predecessor corporations in various capacities from that of junior clerk to that of general accountant; and deponent has also been for several years connected with the Consolidated Gas Company in an official capacity, having served that company as comptroller and as secretary. Deponent is thoroughly familiar with the gas business in the City of New York, and especially in the Borough of Manhattan, in said City. Deponent knows the extent and nature of the special franchises possessed by the Consolidated Gas Company, and by all the other gas companies operating and doing business in the Borough of Manhattan, and is familiar with the business and operations of all said companies. Deponent has made a careful and thorough study of all details of the gas business, and is familiar with the intrinsic and relative values of the special franchises possessed by the different gas companies in the Borough of Manhattan, in said City.

R. A. CARTER.

Sworn to before me this 20th day of March, 1905.

FREDERICK N. GILBERT,
Notary Public, Kings County.

Certificate filed in New York County.

9738

CITY'S EXHIBIT 65.

BEFORE THE STATE BOARD OF TAX COMMISSIONERS.

In the Matter of the Assessment for Taxation of the Special Franchises of the CONSOLIDATED GAS COMPANY OF NEW YORK.

Assessment of 1906.

Complaint.

The CONSOLIDATED GAS COMPANY OF NEW YORK complains of the assessment and valuation for taxation of its special franchises, such assessment and valuation of said franchises, as fixed and determined by the State Board of Tax Commissioners being $31,900,000.

Your complainant alleges that the said assessment is erroneous, unequal and illegal in the following respects:

First. Said assessment largely exceeds the value of complainant's special franchises. The true value of complainant's special franchises in the City of New York and the amount for which the same would sell under ordinary circumstances does not exceed the sum of $14,000,000. The extent of the said overvaluation is $17,900,000. The rights, permissions and franchises of the complainant to occupy the streets in the City of New York exist under certain laws specified in the complainant's report to the State Board for the year ending June 30, 1899, and complainant has acquired no new or
9739 different rights, permissions or franchises since the filing of
said report. The assessments of complainant's special franchises in previous years were: $13,950,000 in 1900; $13,990,000 in 1901; $16,275,000 in 1902; $17,985,000 in 1903; $21,900,000 in 1904, and $27,300,000 in 1905; although there has been no variation in the value of complainant's special franchises during said years, except in the slight increase from year to year of the amount of tangible property in the streets, and the intangible rights are not more valuable at the present time than they were in the year 1900.

Second. Three other gas companies operate and maintain systems of mains and pipes in the streets of the Borough of Manhattan, in the City of New York, namely, the Standard Gas Light Company in the City of New York, the New Amsterdam Gas Company, and New York Mutual Gas Company. Each of these companies possess a franchise or right to lay and maintain pipes and mains in all the streets of the said Borough of Manhattan. The franchise of each of the said companies is coextensive with that of the franchise of the complainant. The assessment of the State Board of Tax Commissioners upon the special franchises of each of said companies in Manhattan Borough, for the year 1906, is as follows:

Standard Gas Light Company....................	$4,793,000
New Amsterdam Gas Company....................	6,175,000
New York Mutual Gas Company..................	4,075,000

Third. Complainant's special franchise is, therefore, assessed approximately $26,000,000 higher than any identical franchise of any other gas company in the Borough of Manhattan, of said City of New York.

Fourth. The actual number of cubic feet of space occupied
9740 by the mains and pipes of this complainant, in the streets,
avenues and public places of the City of New York, is 3,086,870. The assessment of $31,900,000 upon the special franchises of this complainant, including complainant's tangible property in the streets, is, therefore, an assessment of $10.33 for each cubic foot of space occupied. The tax based upon this assessment, at the rate of taxation in the Borough of Manhattan, in the year 1905, would amount to fifteen and two-fifths cents (15 2-5 cts.) for each cubic foot of space occupied.

Fifth. On information and belief, on October 9, 1902, the City of New York granted to the Pennsylvania, New York and Long Island Railroad Company a franchise to construct tunnels for the operation of railways under 31st, 32d and 33d Streets, in the Borough of Manhattan, from the North River to the East River. The compensation fixed by the municipal authorities for the rights, franchises and license of said railroad company under, on or above the said streets is fifty cents (50 cents) for each lineal foot of single track constructed by said company in, under, on or above the said streets, excluding 31st and 33d Streets between Seventh and Ninth Avenues. The compensation fixed as aforesaid for the right, franchise and license in, under, on or above 31st and 33d Streets, between Seventh and Ninth Avenues, is $14,000 per annum. At the said rates of compensation the annual payment to the City of New York will be, as computed upon the plans and specifications for the said tunnels, at the rate of $.00129 per cubic foot of actual space used under the streets for a double track tunnel.

Sixth. The tax based and levied upon the present assessment of the special franchises of this complainant will, therefore, be 9741 about one hundred and twenty (120) times as great as the annual compensation fixed by the City of New York itself for the valuable tunnel privileges and franchises under streets of the Borough of Manhattan of the said City, although the franchises and rights of the complainant to lay and maintain gas pipes and mains under the streets and avenues of said City are of very much less value than the said tunnel franchises and rights possessed by the said Pennsylvania, New York and Long Island Railroad aforesaid.

Seventh. The mains and pipes of complainant underlie 3,975,636 square feet of the surface of the streets, avenues and public places of the Borough of Manhattan, of said City. The assessment of $31,900,000 upon the special franchises of this complainant, including its tangible property in the streets, is, therefore, an assessment of over $8 for each square foot of street surface which the mains and pipes of complainant underlie. The complainant possesses no rights, privileges or franchises upon the surface of the streets of the said City, and this assessment for exclusively subsurface rights is grossly excessive.

Eighth. Upon information and belief: All of the street railway companies in Manhattan Borough, having underground trolley systems, have rights for the use of the streets similar to those of complainant, and far more valuable, and yet these street railway special franchises have been valued this year, and for several years last past, at proportionately far less than the special franchises of this complainant. On information and belief, that the assessment of the special franchises of all street railway companies in Manhattan Borough does not exceed $6.00 for each cubic foot of space in the streets 9742 occupied by the tracks, conduits and other appurtenances of said companies, as compared with the assessment of $10.33 per cubic foot of space occupied by the mains and pipes of complainant. The special franchises of the street railway companies include the right to use and occupy the surface of the streets, which is a right much more valuable than the exclusively subsurface rights of complainant. The street railway companies also possess the right to occupy the middle and most desirable and most valuable portions of the streets, while the complainant is compelled by the municipal authorities to lay its pipes near the curb line and in the least desirable portion of the street.

Ninth. All telegraph, telephone and electric companies, and all companies in Manhattan Borough having rights for the use of the street similar to those of the complainant, and far more valuable, have been valued by the State Board for this, and for several years last past, at proportionately far less than said valuation of the complainant's said franchises.

Tenth. The net earnings of complainant from operation, as shown by its report for the year ending June 30, 1905, were $4,953,051.21, being less than the net earnings from operation of the previous year by the amount of $86,618.28. The special franchise assessment for 1906 ($31,900,000) is an increase over that of 1905 ($27,300,000) of $4,600,000, or an increase of nearly 17%, notwithstanding the decrease in the net earnings from operations.

Eleventh. Complainant further alleges that said assessment is unequal in that it has been made at a higher proportionate valuation than the assessment of other land, real estate and real property in the City of New York and complainant specifies the assessment of all the land, real estate and real property in the City of New York, especially in the Borough of Manhattan, and of each and every parcel thereof upon the assessment rolls of said City as instances in which such inequality exists, and of the extent thereof. That the said State Board in making the aforesaid assessment of complainant's special franchises, has fixed and determined as the value thereof a sum in excess of the full and true value of said special franchises. Upon information and belief that in the City of New York other real property is not assessed at its full value; but the assessment of all other land, real estate and real property in said City by the Department of Taxes and Assessments for the year 1906, is made at a valuation equal to about seventy-five per centum of the full and true value of the land, real estate and real property so assessed. That the said assessment of complainant's special franchises is therefore to the extent of at least twenty-five per centum thereof unequal, disproportionate and erroneous. Complainant further shows said assessment and valuation is unequal in that it is made at a higher proportionate valuation than the assessments placed on similar real property in said New York City by said State Board, and complainant cites as instances of said inequality each and every assessment upon special franchises in said New York City, as fixed by said State Board.

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Twelfth. Complainant further alleges that said assessment is illegal and void in that the same is in conflict with and violates those provisions of the Constitution of the United States and of the Constitution of the State of New York which prohibit the taking of property without due process of law, for the reason that the said State Board in fixing the amount of the aforesaid assessment upon which taxes will be levied and collected from complainant upon its special franchises did not follow or apply any rule, method or principle of valuation and did not determine and ascertain the value of said special franchises, but fixed the aforesaid

9744

amount arbitrarily as the basis upon which said special franchises should be taxed without reference to their value, and that the said assessment is the result of mere guesswork and conjecture on the part of said State Board of Tax Commissioners.

Thirteenth. Complainant further alleges that said assessment is illegal and void in that said State Board has not only included in said assessment the value of all franchises, rights, auhoritty, and permission to construct, maintain or operate mains, and pipes in, under, above, upon or through the streets, highways and public places of the City of New York, and the value of the mains and pipes of complainant with their appurtenances for conducting gas; but has also included therein the value of the franchise of complainant to make and sell gas, the value of the good will of the business of complainant and the value of complainant's contracts with its patrons, over none of which the said State Board has jurisdiction.

Fourteenth. Complainant further alleges that said assessment is illegal in that Chapter 712 of the Laws of 1899, as amended, under which the said State Board assumed to and did make said assessment and valuation, is unconstitutional and void in that it violates Article 10, Section 2 of the Constitution of the State of New York, that it attempts to confer jurisdiction, powers and functions upon the State Board of Tax Commissioners which under the Constitution of the State of New York can be exercised only by local assessors
9745 selected by the locality in which the tax is sought to be collected.

Complainant further shows that by reason of the aforesaid overvaluation, inequality and illegality in the aforesaid assessment it is aggrieved and will be injured.

CONSOLIDATED GAS COMPANY,
By R. A. CARTER, *Secretary.*

STATE OF NEW YORK, *County of New York, ss:*

Robert A. Carter, being duly sworn, deposes and says, that he is Secretary of the Consolidated Gas Company of New York, the complainant above named; that he has read the foregoing complaint, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated upon information and belief, and as to those matters he believes it to be true.

Deponent has been continuously engaged in the gas business since the year 1877, having been employed by the Consolidated Gas Company and one of its predecessor corporations in various capacities from that of junior clerk to that of general accountant; and deponent has also been for several years connected with the Consolidated Gas Company in an official capacity, having served that company as comptroller and as secretary. Deponent is thoroughly familiar with the gas business in the City of New York, and especially in the Borough of Manhattan, in said City. Deponent knows the extent and nature of the special franchises possessed by
9746 the Consolidated Gas Company, and by all the other gas companies operating and doing business in the Borough of Manhattan, and is familiar with the business and operations of all

said companies. Deponent has made a careful and thorough study of all details of the gas business, and is familiar with the intrinsic and relative values of the special franchises possessed by the different gas companies in the Borough of Manhattan, in said City.

R. A. CARTER.

Sworn to before me, this 26th day of March, 1906.

HENRY W. CLARK,
Notary Public, New York County.

9747

CITY'S EXHIBIT 66.

In the Supreme Court of the State of New York.

THE PEOPLE OF THE STATE OF NEW YORK *ex Rel.* CONSOLIDATED GAS COMPANY OF NEW YORK
against
STATE BOARD OF TAX COMMISSIONERS.

To the Supreme Court of the State of New York:

The petition of the Consolidated Gas Company of New York respectfully shows to the Court:

That the petitioner is a corporation, duly incorporated and existing under the laws of the State of New York, having been formed and organized in 1884 by the consolidation of the following named companies or corporations under Chapter 367 of the Laws of 1884: New York Gas Light Company, Manhattan Gas Light Company, Metropolitan Gas Light Company, Municipal Gas Light Company, Knickerbocker Gas Light Company and Harlem Gas Light Company, and located and doing business as such, and having its principal place of business in the Borough of Manhattan, in the City of New York.

9748 That on October 1, 1899, it was and still is the owner of certain mains and pipes laid or placed in certain streets, highways, or public places of the City of New York together with franchises, rights, permissions and consents to construct, maintain or operate in the streets, highways and public places of the City of New York mains and pipes for conducting gas; each of said franchises, rights, permissions and consents with the said tangible property in connection therewith being denominated in the Tax Law of this State as a Special Franchise.

That since January 1, 1902, George E. Priest, J. Edgar Leaycraft and Lester F. Stearns have constituted, and still constitute, the State Board of Tax Commissioners.

Your petitioner further shows that the rights, permissions and franchises so owned and possessed by your petitioner were granted to and acquired by your petitioner or its grantors under and pursuant to contracts with the State and City of New York, and upon conditions and stipulations in reference thereto, which exempt the said rights, permissions and franchises from taxation upon assessments made by said State Board or by any other Board or Officers under the statute hereinafter mentioned, namely, Chapter 712 of the Laws of 1899 and all the amendments thereto.

Your petitioner further shows that, pursuant to Section 43 of the Tax Law of the State, and within thirty days after the said section took effect, it made a written report to said State Board of Tax Commissioners as to each of said Special Franchises owned by it as aforesaid, and as to all matters required by said section to be reported to said State Board, and has, in the manner required by law, made all reports and supplemental reports required by law or by said State Board to be made to it.

9749 Your petitioner further shows that it also reported to said State Board all statutes of the State, general or special, all resolutions of the Common Council of the City of New York relating to said several Special Franchises, and all provisions of law which by said statutes and resolutions made conditions to the acceptance of said Special Franchises and were agreed to by your petitioner and have always been fully performed.

Your petitioner further shows that in said reports and supplemental reports made as aforesaid your petitioner duly reported to said State Board that the tangible property included in Special Franchises consisted of pipes and mains laid under said streets, highways and public places and the value thereof, based upon the cost of reproducing the same, as required by said State Board.

Your petitioner further shows that said State Board, claiming to act pursuant to the Tax Law of this State, and claiming and alleging that the said Special Franchises owned by your petitioner as aforesaid were subject to assessment in the City of New York, proceeded to fix and determine the valuation thereof, and, as your petitioner is informed and believes, did, on or about the 28th day of January, 1903, fix and determine the valuation of said Special Franchises to be the sum of eighteen million three hundred and eighty-five thousand dollars ($18,385,000), and did thereupon make the assessment of said Special Franchises at the sum aforesaid.

Your petitioner further shows that immediately after making said assessment, said State Board gave to your petitioner a notice in writing, stating in substance that such assessment had been made and that the total valuation of said Special Franchises was eighteen million three hundred and eight'-five thousand dollars
9750 ($18,385,000), and that the said State Board would meet
at its office in the City of Albany on the 18th day of February, 1903, at 11.30 A. M., to hear and determine any complaint concerning such assessment. That pursuant to such notice, and at the time and place therein stated, your petitioner attended before said State Board. That your petitioner, upon said hearing, requested to be informed by said State Board as to the amount which said State Board had determined to be the valuation of the tangible property of your petitioner, constructed in, upon, under or above the streets, included in the assessment of said Special Franchises, and as to the amount fixed and determined by said State Board to be the valuation of the rights, permissions and franchises to

construct, maintain and use such pipes under said streets, highways and public places, as aforesaid, but that said State Board refused to give your petitioner such information, and also refused to state, or to inform your petitioner as to the rule or method adopted and applied in ascertaining and determining the said valuation. That your petitioner thereupon complained of said assessment and filed with said State Board a written statement under oath, specifying the grounds of its complaint, a copy of which statement is hereto annexed marked "A," and is a part of this petition.

Your petitioner further shows that thereafter and on or about the 3d day of March, 1903, the said State Board, still claiming to act pursuant to the Tax Law of the State, and still claiming that the said pipes of your petitioner and the rights, permissions and franchises to construct, maintain and use the same were subject to assessment in the City of New York, finally determined the valu-
9751 ation of said Special Franchises to be the sum of seventeen million nine hundred and eighty-five thousand dollars ($17,985,000), and on or about March 3d, 1903, filed with the Department of Taxes and Assessments in the City of New York, a written statement of such valuation as finally fixed and determined by said State Board and duly verified by the Secretary thereof, and at or about the same time gave notice in writing to your petitioner that such written statement had been filed with the Clerk of the City of New York.

Your petitioner further shows that by the provisions of the Greater New York Charter, the Commissioners of Taxes and Assessments of the City of New York constitute the Board of Taxes and Assessments for said City and also are the Department of Taxes and Assessments in the City of New York, and were required by law beginning with the first day of April in each year to prepare assessment rolls for the several parts of said City, containing valuations of real and personal property and to certify and deliver said assessment rolls to the Municipal Assembly of said City on the first Monday of July in each year. That said Commissioners of Taxes and Assessments since the first day of April, 1903, prepared the assessment roll of said real and personal property of the several parts of said City for the year 1903 and entered thereon before the final review or certification of such rolls by them, the valuation of said Special Franchises of your petitioner as so fixed by the said State Board as aforesaid, and having annexed thereto their certificate that the said rolls were correct and in accordance with the entries in the several books of record in the said department, duly verified the same and delivered the said assessment rolls to the Municipal Assembly of said
9752 City, as required by law, on the first Monday of July, 1903.

Your petitioner further shows upon information and belief, that the said State Board in making the assessment aforesaid of said Special Franchises, fixed and determined the value thereof at a sum in excess of the full and entire value thereof.

Your petitioner further shows that the Tax Law of the State defines, declares and makes a Special Franchise for the purpose of assessment and taxation, as and to be land, real estate and real property.

Your petitioner further shows that in the City of New York no land, real estate or real property is assessed at its full value, but that all land, real estate and real property in said City, as elsewhere in the State, is assessed at a valuation equal to about seventy-five per cent. of its full value. That it is the official duty of the said State Board to investigate and examine the methods of assessment through the State and to furnish to local assessors information to aid them in making assessment of real and personal property, and said State Board and each of its members well knew in making the assessment of said Special Franchises as aforesaid, that land, real estate and real property within the State, and especially within the City of New York, was assessed at less than its full value, and notwithstanding such knowledge, and well knowing that to assess the said Special Franchises of your petitioner at their full value would be to assess them at a higher proportionate valuation than other land, real estate and real property in said City, they made the assessment aforesaid.

Your petitioner further shows that, claiming to be aggrieved by said assessment and alleging that it will be injured thereby, it specifies:

9753 *First.* That said assessment is illegal in that the same is in violation of those provisions of the Constitution of the United States which prohibit the taking of property without the due process of law, for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, which said State Board claims confers upon it the right, power and authority to act in the premises, and to fix and determine the valuation of said rights, permissions and franchises, did not or do not prescribe any definite rule, method or principle of valuation of such rights, permissions and franchises, and is so vague and indefinite that it cannot be administered by the taxing officers or enforced by the courts, and said State Board in fixing and determining the valuation of such rights, permissions and franchises did not follow or apply any rule, method or principle of valuation, and by such reason thereof complainant has not been given such a hearing before said State Board as it is entitled to under the Constitution of the United States, and is void.

Second. That said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, is in conflict with and in violation of those provisions of the Constitution of the United States, which provide that no State shall deny to any person within its jurisdiction the equal protection of the laws, and is void.

Third. That said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, impairs the obligations
9754 of the contracts by which said Special Franchises were acquired and are now held by your petitioner, and is therefore

in conflict with and in violation of those provisions of the Constitution of the United States, which provide that no State shall pass any law impairing the obligations of a contract.

Fourth. That said assessment is further illegal in that said State Board refused to inform your petitioner as to the valuation fixed and determined by it of the tangible property included in said Special Franchises, or as to the rule or method adopted and applied by said State Board in fixing and determining the valuation of the rights, permissions and franchises to construct, maintain and use said pipes under said streets, highways and public places as aforesaid, and that by such refusal your petitioner was deprived of such a hearing as it was entitled to by the Constitutions of the State and of the United States, before a final assessment could be made against it, and is void.

Fifth. That said assessment is erroneous by reason of overvaluation, and the extent of such overvaluation is thirteen million nine hundred and seventy-two thousand seven hundred and forty-three dollars ($13,972,743).

Sixth. That said assessment is unequal in that it has been made at a higher proportionate valuation than the assessment of other land, real estate and real property in the City of New York, and of other land, real estate and real property in the State of New York outside of said City, and your petitioner specifies all the land, real estate and real property in the City of New York and each and every parcel thereof upon the assessment rolls of said City as instances in which
such inequality exists, and of the extent thereof; that the said
9755 assessment is 25 per cent. higher than the assessment of all
other land, real estate and real property in the City of New York on the same roll, made by the same officers, to wit, by the State Board of Tax Commissioners or by the Department of Taxes and Assessments of said City, and your petitioner will be injured thereby. That your petitioner will give testimony of such inequality upon the hearing of this proceeding.

Seventh. That said State Board of Tax Commissioners in making the assessment and valuation of your petitioner's special franchises proceeded upon no legal or equitable basis, rule, theory or principle, but, on the contrary, said assessment and valuation is the result of mere guesswork on the part of said State Board of Tax Commissioners.

Eighth. That said State Board of Tax Commissioners has, in making the assessment of the special franchises of your petitioner, failed to assess and value separately each special franchise of your petitioner and to state which special franchise or special franchises are included in said assessment and valuation, and has failed in said assessment and valuation to separately fix and determine the valuation of each special franchise which your petitioner derived from its other constituent companies named in said report, as it is required to do under Chapter 712 of the Laws of 1899.

Ninth. That said State Board of Tax Commissioners has included in said assessment and valuation not only the value of all franchises, rights and authority or permission to construct, maintain or operate in, under, above, upon or through the streets, highways and public

places of the City of New York, the mains, pipes, etc., of
9756 your petitioner, with their appurtenances, for conducting gas,
but has also included therein the franchise of your petitioner to make and sell gas. This franchise is a valuable one, but under Chapter 712 of the Laws of 1899 cannot be included in the assessment and valuation of special franchises.

Your petitioner further shows that fifteen days have not elapsed since the final completion and filing of the assessment roll in said City of New York. That no previous application has been made for a writ herein.

Wherefore, your petitioner prays that a writ of *certiorari* may be allowed and issue out of this Court, directed to the said State Board of Tax Commissioners, commanding them to certify to this Court:

1. All and singular the proceedings herein referred to and had by the said State Board of Tax Commissioners relating to said valuation and assessment, with the dates thereof respectively, together with that part of the record relating to the same.

2. All and singular the papers submitted to your petitioner and filed with the said State Board of Tax Commissioners.

3. Any other evidence or information, if any, before said State Board of Tax Commissioners or considered by it in arriving at the decision aforesaid, and if there was no such evidence or information, a statement to that effect.

4. A concise statement of such other facts as may be pertinent and material to show the value of the property assessed and the grounds of the valuation made by you.

5. Any and all documents, records and papers, if any such there be, not embraced in the above specifications relating to and
9757 concerning the valuation and assessment aforesaid, and a statement of any other matters material to the determination of the application of said petitioner, to the end that the said determination and proceedings of the said State Board of Tax Commissioners in the premises may be reviewed and corrected as shall be in accordance with the law and facts in this matter, and, further, that your petitioner may have herein such other and further relief as to this Court may seem to be just.

Dated, New York, July 15, 1903.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
(Signed) By R. A. CARTER, *Secretary.*

Boardman, Platt & Soley, Attorneys for Petitioner, 35 Wall Street New York City.

9758 CITY AND COUNTY OF NEW YORK, *ss:*

R. E. Carter, being duly sworn, says: That he is the Secretary of the Consolidated Gas Company of New York, the petitioner above named; that he has read the foregoing petition and knows the contents thereof; that the same is true of his own knowledge, except as to those matters therein stated to be alleged on information and belief, and as to those matters he believes it to be true. That the reason why such petition is not verified by the petitioner is that the petitioner is a corporation. That deponent derives his knowledge of the facts herein set forth from the employees, agents and officers of the said petitioner and from information acquired by him in the performance of his duties.

(Signed) R. A. CARTER.

Sworn to before me this 15th day of July, 1903.

[SEAL.] (Signed) WALLACE YOUNG,
Notary Public, New York County.

9759 "A."

Before the State Board of Tax Commissioners.

In the Matter of the Assessment and Valuation for Taxation of the Special Franchises of the CONSOLIDATED GAS COMPANY OF NEW YORK.

Complaint.

The Consolidated Gas Company of New York complains of the assessment and valuation for taxation of its special franchises, such assessment and valuation of said franchises as so fixed and determined being $18,385,000.

Your complainant alleges that said assessment and valuations are erroneous, unequal and illegal in the following respects:

First. Said assessment and valuation largely exceeds the value of said special franchises.

Second. Said assessment and valuation is erroneous and unequal in that the same has been made at a higher proportionate valuation than the assessment of other real estate on the tax rolls of the City of New York, Borough of Manhattan, for the same year. Real estate in the Borough of Manhattan is largely and almost universally assessed at an amount not in excess of 75 per cent. of its full
9760 value, while the special franchises of your complainant are assessed and valued by this Board at an amount greatly in excess of their actual value.

Third. Said complainant further alleges that said assessment is illegal and erroneous, not only by reason of the overvaluations and inequalities hereinbefore stated, but also for the reason that Chapter 712 of the Laws of 1899, as amended, under which this Board assumed to and did make such assessment and valuation is unconstitutional and void and confers no power or authority upon this Board to make said assessment or valuation.

Fourth. This complainant further alleges that said assessment and valuation is also illegal and erroneous in that this Board has omitted to assess and value separately the tangible and intangible property constituting said special franchises.

Fifth. This complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has failed therein to fix and determine the valuation of each special franchise of the complainant or to state which special franchise or special franchises of the complainant are included in its assessment.

Sixth. This complainant further alleges that said assessment is illegal and erroneous in that said Board has failed therein to separately fix and determine the valuation of the special franchises which the Consolidated Gas Company derived from the Harlem Gas Light Company.

Seventh. This complainant further alleges that said assessment is illegal and erroneous in that said Board has failed to separately fix and determine the valuation of the special franchises which the Consolidated Gas Company derived from the Metropolitan Gas Light Company.

9761 *Eighth.* This complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has included therein, not only the value of all franchises, rights, authority and permission to construct, maintain and operate in, under, above, upon or through the streets, highways, and public places of the City of New York, the mains, pipes, etc., of the complainant, with their appurtenances for conducting gas, but has also included therein the franchises of said company to make and sell gas.

Ninth. This complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has included therein the value of the franchises to make and sell gas which said Consolidated Gas Company derived from the Harlem Gas Light Company, and from the Metropolitan Gas Light Company.

Tenth. This complainant further alleges that, by reason of said unequal, erroneous and illegal assessment and valuation, it will sustain injury and damage.

CONSOLIDATED GAS COMPANY OF
NEW YORK,
By R. A. CARTER, *Secretary.*

9762 CITY AND COUNTY OF NEW YORK:

R. A. Carter, being duly sworn, says that he is the Secretary of the Consolidated Gas Company of New York; that he has read the foregoing complaint, and that the same is true to his own knowledge, except as to the matters therein stated upon information and belief.

That the reason this verification is made by deponent is because the complainant is a domestic corporation of the State of New York, and that deponent is the secretary of said corporation.

R. A. CARTER.

Sworn to before me this 16th day of February, 1903.

[SEAL.]

WALLACE YOUNG,
Notary Public, Nassau County.

Certificate filed in New York County.

9763 CITY'S EXHIBIT 67.

Supreme Court, Albany County.

THE PEOPLE OF THE STATE OF NEW YORK *ex Rel.* CONSOLIDATED GAS COMPANY OF NEW YORK

against

GEORGE E. PRIEST, LESTER F. STEARNS and WILLIAM HALPIN, Composing and Constituting THE STATE BOARD OF TAX COMMISSIONERS OF THE STATE OF NEW YORK.

1904 Assessment.

To the Supreme Court of the State of New York:

The petition of the Consolidated Gas Company of New York respectfully shows to the Court:

That the petitioner is a corporation, duly incorporated and existing under the laws of the State of New York, having been formed and organized in 1884 by the consolidation of the following named corporations under Chapter 367 of the Laws of 1884: The New York Gas Light Company, Manhattan Gas Light Company, Metropolitan Gas Light Company of the City of New York, Municipal Gas Light Company of New York, Knickerbocker Gas Light Company 9764 and Harlem Gas Light Company, and located and doing business as such, and having its principal place of business in the City of New York.

That on October 1, 1899, it was and still is the owner of certain mains and pipes laid or placed in certain streets, highways or public places of the City of New York together with franchises, rights, permissions and consents to construct, maintain or operate in the streets, highways and public places of the City of New York mains and pipes for conducting gas; each of said franchises, rights, permissions and consents with the said tangible property in connection therewith being denominated in the Tax Law of this State as a Special Franchise.

That from January 1, 1902, and until the 18th day of March, 1904, George E. Priest, J. Edgar Leaycraft and Lester F. Stearns constituted the State Board of Tax Commissioners; upon said 18th day of March, 1904, William Halpin was appointed a member of said Board in the place and stead of said J. Edgar Leaycraft, and since said date the said George E. Priest, Lester F. Stearns and William Halpin have constituted and still constitute said State Board of Tax Commissioners.

Your petitioner further shows that the rights, permissions and franchises so owned and possessed by your petitioner were granted to and acquired by your petitioner or its grantors under and pursuant to contracts with the State and City of New York, and upon conditions and stipulations in reference thereto, which exempt the said rights, permissions and franchises from taxation upon assessments made by the said State Board or by any other Board or officers under the statute hereinafter mentioned, namely, Chapter 712 of the Laws of 1899 and all the amendments thereto.

9765 Your petitioner further shows that, pursuant to Section 43 of the Tax Law of the State, and within thirty days after the said section took effect, it made a written report to said State Board of Tax Commissioners as to each of said Special Franchises owned by it as aforesaid, and as to all matters required by said section to be reported to said State Board, and has, in the manner required by law, made all reports and supplemental reports required by law or by said State Board to be made to it.

Your petitioner further shows that it also reported to said State Board all statutes of the State, general or special, all resolutions of the Common Council of the City of New York relating to said several Special Franchises, and all provisions of law which by said statute and resolutions made conditions to the acceptance of said Special Franchises and were agreed to by your petitioner and have always been fully performed.

Your petitioner further shows that in said reports and supplemental reports made as aforesaid your petitioner duly reported to said State Board that the tangible property included in its special franchises consisted of pipes and mains laid under said streets, highways and public places and the value thereof, based upon the cost of reproducing the same, as required by said State Board.

Your petitioner further shows that said State Board, claiming to act pursuant to the Tax Law of this State, and claiming and alleging that the said special franchises owned by your petitioner as aforesaid were subject to assessment in the City of New York, proceeded to fix and determine the valuation thereof, and, as your petitioner is informed and believes, did, on or about the 17th day of February,
9766 1904, fix and determine the valuation of said special franchises to be the sum of twenty-two million two hundred thousand dollars ($22,200,000), and did thereupon make the assessment of said special franchises at the sum aforesaid.

Your petitioner further shows that immediately after making said assessment, said State Board gave to your petitioner a notice in writing, stating, in substance, that such assessment had been made and that the total valuation of said special franchises was twenty-two million two hundred thousand dollars ($22,200,000), and that the said State Board would meet at its office in the City of Albany on the 8th day of March, 1904, at 12 o'clock M., to hear and determine any complaint concerning such assessment. That pursuant to such notice, and at the time and place therein stated, your petitioner attended before said State Board and complained of said assessment and filed with said State Board a written statement under oath, specifying the grounds of its complaint, a copy of which statement is hereto annexed marked "A," and is made a part of this petition.

Your petitioner further shows that thereafter and on or about the 21st day of March, 1904, the said State Board, still claiming to act pursuant to the Tax Law of the State, and still claiming that the said pipes of your petitioner and the rights, permissions and franchises to construct, maintain and use the same were subject to as-

sessment in the City of New York, finally determined the valuation of said special franchise to be the sum of twenty-one million nine hundred thousand dollars ($21,900,000), and on or about March 21st, 1904, filed with the Department of Taxes and Assess-
9767 ments in the City of New York, a written statement of such valuation as finally fixed and determined by said State Board and duly verified by the Secretary thereof, and at or about the same time gave notice in writing to your petitioner that such written statement had been filed with the Clerk of the City of New York.

Your petitioner further shows that by the provisions of the Greater New York Charter, the Commissioners of Taxes and Assessments of the City of New York constitute the Board of Taxes and Assessments for said city and also are the Department of Taxes and Assessments in the City of New York, and were required by law beginning with the first day of April in each year to prepare assessment rolls for the several parts of said city, containing valuations of real and personal property and to certify and deliver said assessment rolls to the Municipal Assembly of said city on the first Monday of July in each year, or if said first Monday of July shall fall on a legal holiday, then to certify and deliver said assessment rolls to said Municipal Assembly on the next succeeding day thereafter. That said Commissioners of Taxes and Assessments since the first day of April, 1904, prepared the assessment rolls of said real and personal property of the several parts of said city for the year 1904, and entered thereon before the final revision or certification of such rolls by them, the valuation of said special franchises of your petitioner as so fixed by the said State Board as aforesaid, and having annexed thereto their certificate that the said rolls were correct and in accordance with the entries in the several books of record in the said departments, duly verified the same and delivered the said assessment rolls to the Municipal Assembly of said city, as required by law, on the next succeeding day after
9768 the first Monday of July, 1904, the first Monday of July, 1904, falling upon a legal holiday.

Your petitioner further shows upon information and belief, that the said State Board in making the assessment aforesaid of said special franchises, fixed and determined the value thereof at a sum in excess of the full and entire value thereof.

Your petitioner further shows that the Tax Law of the State defines, declares and makes a special franchise for the purpose of assessment and taxation, as and to be land, real estate and real property.

Your petitioner further shows that in the City of New York no land, real estate or real property is assessed at its full value, but that all land, real estate and real property in said city, as elsewhere in the State, is assessed at a valuation equal to about seventy-five per cent. of its full value. That it is the official duty of the said State Board to investigate and examine the methods of assessment throughout the State and to furnish to local assessors information to aid them in making assessments of real and personal property, and said State Board and each of its members well knew in making the assessment of said special franchises as aforesaid, that land, real estate and real property within the State, and especially within the City of New York, was assessed at less than its full value, and notwithstanding such knowledge, and well knowing that to assess the said special franchises of your petitioner at their full value would be to assess them at a higher proportionate valuation than other land, real estate and real property in said city, they made the assessment aforesaid.

Your petitioner further shows that, claiming to be aggrieved by said assessment and alleging that it will be injured thereby, it specifies:

9769 *First.* That said assessment is illegal in that the same is in violation of those provisions of the Constitution of the United States and of the Constitution of the State of New York which prohibit the taking of property without due process of law, for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, which said State Board claims confers upon it the right, power and authority to act in the premises, and to fix and determine the valuation of said rights, permissions and franchises, did not and does not prescribe any definite rule, method or principle of valuation of such rights, permissions and franchises, and is so vague and indefinite that it cannot be administered by the taxing officers or enforced by the courts, and said State Board in fixing and determining the valuation of such rights, permissions and franchises did not follow or apply any rule, method or principle of valuation, and by reason thereof, complainant has not been given such a hearing before said State Board as it is entitled to under the Constitution of the United States and under the Constitution of the State of New York, and is void.

Second. That said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, is in conflict with and in violation of those provisions of the Constitution of the United States, which provide that no State shall deny to any person within its jurisdiction the equal protection of the Laws, and is void.

Third. That said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all
9770 amendments thereto, under which said State Board assumed to and did make said assessment and valuation, impairs the obligations of the contracts by which said special franchises were acquired and are now held by your petitioner, and is therefore in conflict with and in violation of those provisions of the Constitution of the United States and the Constitution of the State of New York, which provide that no law shall be passed impairing the obligations of a contract.

Fourth. That said assessment is illegal in that Chapter 712 of the Laws of 1899, as amended under which the said State Board assumed to and did make said assessment and valuation, is unconstitutional and void in that it violates Article 10, Section 2 of the Constitution of the State of New York; that it attempts to confer jurisdiction, powers and functions upon the State Board of Tax Commissioners which under the Constitution of the State of New York can be exercised only by local assessors selected by the locality in which the tax is sought to be collected.

Fifth. That said assessment is further illegal and erroneous in that said State Board has omitted and failed to assess and value separately the tangible and intangible property constituting said Special Franchises.

Sixth. That said assessment is erroneous by reason of over-valuation, and the extent of such over-valuation is seventeen million eight hundred twenty-nine thousand one hundred and sixty dollars ($17,829,160).

Seventh. That said assessment is unequal in that it has been made at a higher proportionate valuation than the assessment of other land, real estate and real property in the City of New York, and of other land, real estate and real property in the State of New York outside of said City, and your petitioner specifies all the land, real estate and real property in the City of New York and each and every parcel thereof upon the assessment rolls of said City as instances in which such inequality exists, and of the extent thereof; that the said assessment is 25 per cent. higher than the assessment of all other land, real estate and real property in the City of New York on the same roll, made by the same officers, to wit, by the State Board of Tax Commissioners or by the Department of Taxes and Assessments of said City, and your petitioner will be injured thereby. That your petitioner will give testimony of such inequality upon the hearing of this proceeding. 9771

Eighth. That said State Board of Tax Commissioners in making the assessment and valuation of your petitioner's special franchises proceeded upon no legal or equitable basis, rule theory or principle, but, on the contrary, said assessment and valution is the result of mere guesswork on the part of said State Board of Tax Commissioners.

Ninth. That said State Board of Tax Commissioners has, in making the assessment of the special franchises of your petitioner failed to assess and value separately each special franchise of your petitioner and to state which special franchise or special franchises are included in said assessment and valuation, and has failed in said assessment and valuation to fix and determine separately the valuation of each special franchise which your petitioner derived from its several constituent companies named in its report to said State Board, as said State Board is required to do under Chapter 712 of the Laws of 1899.

9772 *Tenth.* That said State Board of Tax Commissioners has included in said assessment and valuation not only the value of all franchises, rights, authority or permission to construct, maintain or operate in, under, above, upon or through the streets, highways and public places of the City of New York and of the mains, pipes, etc., of your petitioner, with their appurtenances, for conducting gas, but has also included therein the value of the franchise of your petitioner to make and sell gas. This franchise is a valuable one, but under Chapter 712 of the Laws of 1899 cannot be included in the assessment and valuation of special franchises.

Eleventh. That said State Board of Tax Commissioners has also erroneously included in said assessment and valuation the value of the good will of the business of your petitioner and the value of your petitioner's contracts with its patrons.

Your petitioner further shows that fifteen days have not elapsed since the final completion and filing of the assessment roll in said City of New York. No previous application has been made for a writ herein.

Wherefore, your petitioner prays that a writ of *certiorari* may be allowed and issued out of this Court, directed to the said George E. Priest, Lester F. Stearns and William Halpin, constituting the State Board of Tax Commissioners, commanding them to certify to this Court:

1. All and singular the proceedings herein referred to and had by the said State Board of Tax Commissioners relating to said valuation and assessment, with the dates thereof respectively, together with that part of the record relating to the same.

9773 2. All and singular the papers submitted by your petitioner and filed with the said State Board of Tax Commissioners.

3. All other evidence or information, if any, before said State Board of Tax Commissioners or considered by it in arriving at the decision aforesaid, and if there was no such evidence or information, a statement to that effect.

4. A concise statement of such other facts as may be pertinent and material to show the value of the property assessed and the grounds of the valuation made by said State Board.

5. Any and all documents, records and papers, if any such there be, not embraced in the above specifications relating to and concerning the valuation and assessment aforesaid, and a statement of any other matters material to the determination of the application of said petitioner.

To the end that the said determination and proceedings of the said State Board of Tax Commissioners in the premises may be reviewed and corrected as shall be in accordance with the law and facts in this matter, and, further, that your petitioner may have herein such other and further relief as to this Court may seem to be just.

Dated New York, July 18, 1904.

CONSOLIDATED GAS CO. OF NEW YORK,
By R. A. CARTER, *Secretary.*

BOARDMAN, PLATT & SOLEY,
Attorneys for Petitioner, 35 Wall Street, New York City..

9774 CITY AND COUNTY OF NEW YORK, *ss:*

R. A. Carter, being duly sworn, says: That he is the Secretary of the Consolidated Gas Co. of New York, the petitioner above named; that he has read the foregoing petition and knows the contents thereof; that the same is true of his own knowledge, except as to the matters therein stated to be alleged on information and belief, and as to those matters he believes it to be true. That the reason why said petition is not verified by the petitioner is that the petitioner is a corporation. That deponent derives his knowledge of the facts herein set forth from the employees, agents and officers of the said petitioner and from information acquired by him in the performance if his duties.

R. A. CARTER.

Sworn to before me this 18th day of July, 1904.

[SEAL.]

WALLACE YOUNG,
Notary Public, No. 5, Kings County.

Certificate filed in New York County.

9775 "A."

Before the State Board of Tax Commissioners.

In the Matter of the Assessment and Valuation for Taxation of the Special Franchises of THE CONSOLIDATED GAS COMPANY OF NEW YORK.

Complaint.

The Consolidated Gas Company of New York complains of the assessment and valuation for taxation of its special franchises, such assessment and valuation of said franchises as so fixed and determined being $22,200,000.

Your complainant alleges that said assessment and valuation are erroneous, unequal and illegal in the following respects:

First. Said assessment and valuation largely exceeds the value of said special franchises. The extent of said overvaluation is $18,129,160. The valuation which has been so placed upon the special franchises of the complainant and the tangible property connected therewith is far in excess of the value which the State Board has placed this year and for several years on similar rights and property of other persons and corporations. All of the street railroad companies in Manhattan Borough having underground trolley systems have rights for the use of streets similar to those of the complainant, and far more valuable, and yet these have all been valued by the State Board for this and for several years last past at proportionately far less than said valuation of the complainant's said rights. All telegraph, telephone and electric companies and all companies in Manhattan Borough having rights for the use of the streets similar to those of the complainant, and far more valuable, have been valued by the State Board for this and for several years last past at proportionately far less than said valuation of the complainant's said rights.

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Second. Complainant further alleges that said assessment is unequal in that it has been made at a higher proportionate valuation than the assessment of other land, real estate and real property in the City of New York, and of other land, real estate and real property in the State of New York outside of said city, and your complainant specifies all the land, real estate and real property in the City of New York and each and every parcel thereof upon the assessment rolls of said city as instances in which such inequality exists, and of the extent thereof; that the said assessment is 25 per cent. higher than the assessment of all other land, real estate and real property in the City of New York on the same roll, made by the Department of Taxes and Assessments of said city. Complainant further shows said assessment and valuation is unequal in that it is far greater than the assessments placed on similar real property in said New York City by said State Board, and complainant cites as instances of said inequality each and every assessment upon special franchises in said New York City, as fixed by said State Board.

Third. Complainant further alleges that said assessment is
9777 illegal and erroneous, not only by reason of the overvaluations
and inequalities hereinbefore stated, but also for the reason that Chapter 712 of the Laws of 1899, as amended, under which this Board assumed to and did make such assessment and valuation is unconstitutional and void and confers no power or authority upon this Board to make said assessment or valuation.

Fourth. Complainant further alleges that such assessment is illegal and erroneous in that Chapter 712 of the Laws of 1899, under which act said State Board assumed to and did make this assessment and valuation is unconstitutional and void, in that it violates Article 10, Section 2, of the Constitution of the State of New York; that it attempts to confer jurisdiction, powers and functions upon the State Board of Tax Commissioners which under the Constitution can only be exercised by local assessors selected by the locality in which the tax is sought to be collected.

Fifth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has included therein, not only the value of all franchises, rights, authority and permission to construct, maintain and operate in, under, above, upon or through the streets, highways and public places of the City of New York, the mains, pipes, etc., of the complainant, with their appurtenances for conducting gas, but has also included therein the franchises of said company to make and sell gas. These franchises are all valuable ones, but under Chapter 712 of the Laws of 1899 cannot be included in the assessment and valuation of special franchises.

Sixth. Complainant further alleges that said assessment is illegal in that the same is in violation of those provisions of the Constitu-
tion of the State of New York and the Constitution of the
9778 United States which prohibit the taking of property without
the due process of law, for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, which said State Board claims confers upon it the right, power and authority to act in the premises, and to fix and determine the valuation of said rights, permissions and franchises, did not or do not prescribe any definite rule, method or principle of valuation of such rights, permissions and franchises, and is so vague and indefinite that it cannot be administered by the taxing officers or enforced by the courts, and said State Board in fixing and determining the valuation of such rights, permissions and franchises, did not follow or apply any rule, method or principle of valuation.

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Seventh. Complainant further alleges that said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, is in conflict with and in violation of those provisions of the Constitution of the United States, which provide that no State shall deny to any person within its jurisdiction the equal protection of the laws, and is void.

Eighth. Complainant further alleges that said assessment is further illegal for the reason that said statute, viz., Chapter 712 of the Laws of 1899, and all amendments thereto, under which said State Board assumed to and did make said assessment and valuation, impairs the obligations of the contracts by which said special franchises were acquired and are now held by your petitioner and violates contracts with the State of New York and with the City of New York under which complainant is operating, and is, therefore, in 9779 conflict with and in violation of those provisions of the Constitution of the State of New York and the Constitution of the United States, which provide that no law shall be passed impairing the obligations of a contract.

Ninth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that this Board has omitted to assess and value separately the tangible and intangible property constituting said special franchises.

Tenth. Complainant further alleges that said assessment and valuation is illegal and erroneous in that said Board has failed therein to separately fix and determine the valuation of each special franchise of the complainant or to state which special franchise or special franchises of the complainant are included in its assessment.

Eleventh. Complainant further alleges that by reason of said unequal, erroneous and illegal assessment and valuation, it will sustain injury and damage.

CONSOLIDATED GAS CO. OF NEW YORK,
By R. A. CARTER, *Secretary.*

9780 CITY AND COUNTY OF NEW YORK, *ss:*

R. A. Carter, being duly sworn, says: That he is the Secretary of the Consolidated Gas Company of New York; that he has read the foregoing complaint, and that the same is true to his own knowledge, except as to the matters therein stated upon information and belief. That the reason this verification is made by deponent is because the complainant is a domestic corporation of the State of New York, and that deponent is the Secretary of said corporation.

R. A. CARTER.

Sworn to before me this 7th day of March, 1904.

WALLACE YOUNG,
Notary Public, Nassau County.

Certificate filed in New York County.

(Here follow maps marked pages 9781 & 9782.)

(NOTE.—Pp. 9783 to 10561 incl., taken from their numerical position here and arranged in chronological order in front of the record, per stipulation.)

10562 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby Certify that the foregoing (Appendix) pages, numbered from 10326 to 10561 inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the cause entitled Consolidated Gas Company, Complainant, Appellee, against Julius M. Mayer, as Attorney General, Defendants-Appellants, as the same remain of record and on file in my office, and inserted in this transcript as an Appendix by consent of respective counsel.

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of May, in the year of our Lord One Thousand Nine Hundred and eight and of the Independence of the said United States the One Hundred and thirty-second.

[Seal of U. S. Circuit Court, South. Dist. New York.]

JOHN A. SHIELDS, *Clerk.*

[Endorsed:] United States Circuit Court of Appeals for the Second Circuit. —— —— *vs.* —— ——. Transcript of Record from the Circuit Court of the United States for the Southern District of New York.

Endorsed on cover: File No. 21,176. S. New York C. C. U. S. Term No. 396. William R. Willcox *et al.*, constituting The Public Service Commission of the State of New York for the First District, appellants, *vs.* Consolidated Gas Company of New York. File No. 21,177. Term No. 397. The City of New York, appellant, *vs.* Consolidated Gas Company of New York. File No. 21,178. Term No. 398. William S. Jackson, as Attorney General of the State of New York, appellant, *vs.* Consolidated Gas Company of New York. Filed May 16th, 1908. File Nos. 21,176, 21,177, and 21,178.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1907.

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Office Supreme Court, U. S.
FILED.
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JAMES H. McKENNEY,
CLERK.

WILLIAM R. WILLCOX, *et al.*, constituting the Public Service Commission of the State of New York for the First District,
Appellants,

vs.

MINNESOTA STATE LIBRARY

CONSOLIDATED GAS COMPANY OF NEW YORK,

No. — 39

THE CITY OF NEW YORK,
Appellant,

vs.

SAME.

No. — 397

MOTION TO ADVANCE.

B. H. TYRREL, PRINTER, 206-208 FULTON STREET, NEW YORK.

Supreme Court of the United States,

OCTOBER TERM, 1907.

WILLIAM R. WILLCOX *et al.* constituting the Public Service Commission of the State of New York for the First District,
Appellants,

against

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 773.

THE CITY OF NEW YORK,
Appellant,

vs.

Same

No. 774.

APPEALS FROM THE CIRCUIT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK.

5 Motion to Advance.

The appellants above named respectfully move to advance this cause, and to set the same for argument at the earliest date convenient to the court.

The matter involved, briefly stated, is as follows: By a statute of 1905 the State of New York reduced the price of gas supplied to the City of New York by the gas companies therein from 90 to 75 cents per thousand cubic feet. By a statute of 1906 it reduced the price of gas sold to private consumers in said city from $1 to 80 cents per thousand cubic feet. By the final decree in this cause the defendant Jackson (who also appeals), the Attorney General of the State, and another are enjoined from enforcing said statute of 1906 by actions for penalties or otherwise. The appellants Willcox *et al,* constituting the Public Service Commission, are enjoined from applying for a mandamus or injunction to compel compliance with said statute. The appellant The City of New York is enjoined from enforcing by penalty or otherwise said statute of 1905. The finding of the Circuit Court upon which said decree is mainly based is that said statutes are void as taking property without due process of law, because the net income obtainable by this appellee under said statutes, as estimated by the court, is but little above 5% upon the present value of its property as so estimated.

No private consumer of gas is a party or privy to this suit; but the expense of litigating the question involved is so great that it is not within the power of any private consumer so to do. This suit was commenced May 1, 1906, and since that date nearly all of the private consumers have paid the dollar rate for their gas. Up to the entry of the final decree herein, this appellee deposited with the Clerk of the Court, for the protection of said private consumers, the sum of $4,823,485.68, stated by it to represent the difference between the 80 cent rate and the dollar rate on their gas from May 1, 1906, to March 30, 1908. Since the final decree no further deposit has been made. The number of such consumers was stated by the appellee at the commencement of the suit to be over 390,000. There is no adequate remedy to the individual consumer, who either must pay the dollar rate, relying or the good faith of the company for its repayment in case these appellants shall be successful, or must submit to having his gas supply stopped, or must enter into litigation with this appellee at an expense practically prohibitive. The number of citizens interested in this litigation, as well as the amount involved, is, therefore, unusually large.

Similar questions of law arise also in several similar cases involving other gas companies in the same city, in which preliminary injunctions have been granted, and deposits made with the Clerk which amount to several millions of dollars.

The cause involves also very important questions which have never yet been passed upon by this court, and which have been little considered anywhere. For complainant's property is valued in this record at a sum vastly greater than the amount of capital which has been actually invested by complainant therein. This is because, first, the present value of the land upon which the appellee's plants are situated is greater than its original cost; second, the expense of laying pipes underground in New York City streets has increased by reason of modern pavements, as well as occupation of the soil under the streets for other purposes, so that to duplicate appellee's present mains and services would exceed what it paid for putting them in; and third, the Circuit Court has found that the appellee owns franchises in the public streets which it values at a large sum, although nothing was paid for them.

The learned judge at Circuit thought the franchise item alone to be sufficient in amount to control the decision of the cause. He states (see record and also 158 Fed. Rep. at pp. 872-7) that as an individual he regards the inclusion of such franchises as a separate element of value to be fallacious, but that he considers himself obliged to give them a separate valuation by reason of certain passages in judicial opinions which he cites. The question has never arisen for determination here, the franchise in the Monongahela case, 148 U. S., 312, having had a conceded value by reason of its including a right to take tolls up to an amount securing an 8% dividend upon the stock of the corporation which owned it. No element of this kind is included in any of the franchises claimed by the appellee. The franchises being valued by the trial judge at $12,000,000, their elimination would so far reduce his estimate of capitalization as to raise the appellee's net income under said statutes to a sum over 6¼%. If further deduction be made so as to reduce the valuation of the land, mains and services to the capital originally invested therein, the rate of return is over 8%. The rate of return on the nominal capitalization of the appellee, minus the book value of its investments in stocks of other companies, is over 7%.

Upon the facts above recited the court will perceive that this case raises certain fundamental questions, as yet undecided, which are of the great-

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est importance, and which were not involved and could not be decided in cases where present value was less than original cost.

It is contended that under such circumstances the duty of the state legislature on the one hand is very different from that of a Federal court, applying the Fourteenth Amendment, on the other. It is believed to be the duty of the state legislature to allow a fair rate of profit to a gas company upon the money which it has actually invested in the enterprise; that in estimating the rate of profit the special risks of the business as well as the general rate of return expected by investors in similar enterprises should be considered; and that true public policy requires the rate thus allowed to be not simply fair, but so liberal as to attract investment of capital in similar enterprises, as well as in other businesses that are specially subject to state legislation. It is contended to be the duty of a Federal court, on the other hand, simply to see that property is not taken without due process of law. It is contended that property is not taken within the meaning of the Fourteenth Amendment to the United States Constitution, so long as it is allowed to receive as high a return as is received by property safely invested; in other words, that there is a wide margin between the rate of return guaranteed by the Fourteenth Amendment and the rate of return which a state legislature ought to permit; this margin representing the difference in responsibility as to local affairs between the United States and the State, between the legislature and the judiciary. If this contention be correct, the Federal Constitution guarantees only the minimum average rate of interest on permanent investments of money, said rate to be computed upon the present value of the capitalization of the company; although the state should permit a much higher rate, computed however upon the money actually invested by the company, and omitting any increment of value that has cost it nothing. Furthermore, it is contended that a separate valuation, for the purpose of increasing prices to the consumer, of a franchise such as those claimed by the appellee (as distinguished from a franchise such as that under consideration in the Monongahela case), not only is fallacious as argued by the court below in its opinion, but also, when the franchise was given without compensation, contravenes the implied understanding of the parties.

In addition to these fundamental questions, various other questions of general importance are raised by this record, as well as questions whose importance is more peculiar to the present case; which questions are set forth in the assignments of error of the respective appellants.

Notice of this motion has been accepted by the appellee.

Alton B. Parker,
Francis K. Pendleton,
William P. Burr,
Of Counsel for the City of New York, appellant.

Edward B. Whitney,
Of Counsel for William R. Willcox *et al.*, appellants.

May 18, 1908.

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Supreme Court of the United States,

No. ~~[illegible]~~ 398

OCTOBER TERM, 1907.

WILLIAM S. JACKSON, as Attorney General of the State of New York,
Appellant,

against

CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

MOTION TO ADVANCE.

WILLIAM S. JACKSON,
Attorney-General of the State of New York,
Capitol, Albany, N. Y.

Alfred B. Page,
William A. De Ford,
Of Counsel.

Martin B. Brown Co., Printers, 49-57 Park Place, N. Y.

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Supreme Court of the United States.

WILLIAM S. JACKSON, as Attorney-General of the State of New York,
Appellant.

against

CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

No. 775
October Term,
1907.

Notice of Motion to Advance.

Please take notice that upon the record and all the proceedings herein this appellant will move the Supreme Court of the United States, at the capitol in the City of Washington, District of Columbia, upon the 18th day of May, 1908, at the opening of the Court upon that day or as soon thereafter as counsel can be heard, to advance this cause upon the docket of the Court for the October Term, 1907, and to set the same for argument at as early a date as may be convenient to said Court.

Dated New York, the 14th day of May, 1908.

WILLIAM S. JACKSON,
Attorney-General State of New York,

ALFRED R. PAGE,
WILLIAM A. DE FORD,
Of Counsel for Appellant.

To Messrs. SHEARMAN & STERLING,
Solicitors for Appellee,
No. 44 Wall street,
New York City.

Supreme Court of the United States.

WILLIAM S. JACKSON, as Attorney-General of the State of New York,
Appellant.

against

CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

No. 775
October Term,
1907.

Notice of Motion to Advance.

Please take notice that upon the record and all the proceedings herein this appellant will move the Supreme Court of the United States, at the capitol in the City of Washington, District of Columbia, upon the 18th day of May, 1908, at the opening of the Court upon that day or as soon thereafter as counsel can be heard, to advance this cause upon the docket of the Court for the October Term, 1907, and to set the same for argument at as early a date as may be convenient to said Court.

Dated New York, the 14th day of May, 1908.

WILLIAM S. JACKSON,
Attorney-General State of New York,

ALFRED R. PAGE,
WILLIAM A. DE FORD,
Of Counsel for Appellant.

To Messrs. SHEARMAN & STERLING,
Solicitors for Appellee,
No. 44 Wall street,
New York City.

SUPREME COURT OF THE UNITED STATES.

WILLIAM S. JACKSON, as Attorney-General of the State of New York,
Appellant.

against

CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

No.
October Term,
1907.

Motion to Advance.

And now comes the appellant and moves this Court, upon a certified copy of the transcript of the record herein, to advance this cause upon the docket of the Court for the October Term, 1907, and to set the same for argument at as early a date as may be convenient to this Court.

Statement of Matters Involved.

The matters involved and the reason for this application are as follows:

This cause presents the question whether or not the statute of the State of New York known as chapter 125 of the Laws of 1906, which fixes the price that may be charged for illuminating gas in the City of New York at eighty cents per thousand cubic feet, takes the property of the appellee without due process of law and without due compensation and denies to the appellee the equal protection of the law, in contravention of the Fourteenth Amendment to the Constitution of the United States; and involves the determination of the following questions:

First—Whether the matters and things charged in the bill of complaint show that the complainant had a complete and adequate remedy at law.

Second—Whether the allegations of the bill of complaint and the facts disclosed by the record show that this suit, although in form brought by a citizen of the State of New York against the appellant as an officer of the State of New York is not, in fact, brought against the State of New York, to test the constitutionality of the said statute.

Third—Whether the record contains sufficient evidence to show that the rate of eighty cents per thousand cubic feet for gas sold in the City of New York does not afford a fair and reasonable return to the companies doing business in the said City, the evidence being limited to the valuation of property of the complainant alone, and further that record does not show but that the said rate would afford a fair and reasonable return upon the value of property employed in the making and distributing gas, in the same territory as complainant, by a company well located and equipped and economically managed.

Fourth—Whether the record contains sufficient evidence to show the reasonable and necessary operating expenses of the complainant. The evidence being limited to its actual receipts and disbursements during a period from November 1, 1904, to December 31, 1905, supplemented in part only by the experience of other periods and being entirely insufficient for that purpose.

Fifth—Whether the valuation of this complainant's property upon which the Court's calculation is based, is correct, it being an estimate of present value, arrived at by a valuation of the reproductive cost of complainant's identical plant and each part thereof, without regard to whether the same was originally economically produced or commercially and economically worth reproducing, or as to obsolence of the type or advancement of the art. And whether the same should not be based either upon the cost thereof or the reproduction of an economically constructed modern plant that would produce the same kind, quantity and quality of gas.

Sixth—Whether the finding the valuation of the complainant's real estate was not erroneous as being (a) in excess of its original cost to complainant and its predecessor companies; (b) in excess of the true valuation thereof, having been valued as vacant lots, and not in conjunction with the buildings thereon, and for the uses and purposes to which it was devoted; (c) in excess of the value at which it was carried on complainant's books.

Seventh—Whether the valuation of the real estate, plants, mains and services and each of them are correct, being in excess of the sworn valuation made by the officers of the complainant in the return to the State Board of Tax Commissioners, for the assessment of the franchise tax, and of the testimony of its officers before the joint committee of the Senate and Assembly of the State of New York, and being based entirely upon the testimony of complainant's experts.

Eighth—Whether the Court erred in finding that complainant's special franchises should be valued at $12,000,000 and that it was entitled to earn a return thereon.

Ninth—The consideration of various exceptions taken to specific findings as to the estimated profits of the complainant; the existence and validity of franchises; and the total valuation of its tangible property and together with its intangible property.

Tenth—Whether the Court erred in finding that six per cent. is the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and selling gas, and that the net annual income which complainant can earn on its gas business as aforesaid is less than six per centum.

Eleventh—Whether a judgment for costs can be given against this appellant as Attorney General of the State of New York.

Reasons for Advancement.

The questions involved are of great public interest and concern the validity of an act fixing the price of a necessity to the four million inhabitants of The City of New York. Many of the questions involved have not been considered by this Court, and have an important bearing on all cases involving rate regulation by States. Pursuant to the preliminary injunction there has been deposited with the Clerk of the Circuit Ccurt for the Southern District of New York twenty cents on each thousand cubic feet of gas sold by the complainant, which at the time of the entry of the final decree amounted to the sum of $4,823,455.68. And there are seven cases similar to this cause brought by gas companies other than complainant that have not yet been tried and are awaiting the decision of this case, in five of which preliminary injunctions have been granted and deposits made with the Clerk which amount to several millions of dollars.

William S. Jackson,
Attorney-General of the State of
New York,
Appellant.

Alfred R. Page,
William A. De Ford,
Of Counsel.

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Supreme Court of the United States

OCTOBER TERM 1908.

WILLIAM R. WILLCOX, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District,
Appellants,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 396.

Appeal from the Circuit Court for the Southern District of New York.

APPELLANTS' BRIEF.

In this brief page references, not otherwise stated, are in the record.

This is one of three appeals taken from the final decree in the suit originally entitled *Consolidated Gas Company of New York* vs. *Julius M. Mayer as Attorney General etc. et al.*

There have been changes of parties defendant during the pendency of the suit, and the present appellants do not hold the same relation toward the controversy that was held by the defendants for whom they were substituted. The statement as to their position in the opinion of the Circuit Court (p. 389) is erroneous. They hold office under a statute which took effect July 1, 1907, succeeding to certain functions of the original defendants Frederick E. Gunnison, John C. Davies and Lucien L. Shedden, constituting the New York State Commission of Gas and Electricity, who went out of office on that day by repeal of the statute under which they had been appointed, and also to certain functions theretofore belonging to the defendant William S. Jackson as Attorney General of the State of New York.

The relations of the parties defendant are a little complicated, owing to three peculiarities of the case: first, that the complainant joined in its bill of complaint two entirely independent controversies, although no point was made by the defendants on the ground of multifariousness; second, that the statutory provision by reason of which Gunnison *et al* were originally joined as defendants has since been declared unconstitutional by the New York Court of Appeals; and third, because the powers pertaining to the office of Attorney General of the State of New York during the first year of this litigation were thereafter divided, and a part transferred to these appellants.

Statement of the case.

This is one of the suits, now so familiar, by which state officials and a municipality are sought to be enjoined from enforcing a maximum rate imposed under authority of a state statute, upon the ground that the statute violates the Fourteenth Amendment to the constitution of the United States.

The statutes complained of.

The complainant below, Consolidated Gas Company of New York, was one of four companies supplying gas to the public and to private consumers within the territory known as the Borough of Manhattan. Up to the time of the passage of the statutes next hereinafter set forth, it was restricted to maximum rates of $1 per thousand cubic feet as against private consumers and 90 cents per thousand cubic feet as against the muincipality (Statute of May 7 1897, ch. 385, Record, p. 5264).

A further reduction was made by the New York legislature by statute of June 3, 1905, which reduced the maximum price for gas sold the City of New York to 75 cents per thousand cubic feet, and provided a *penalty* for violation of the statute to the amount of "one thousand dollars for each offense *to be sued for and recovered in the name of and by the city of New York* for its benefit" (Record p. 21). The defendant the City of New York is interested in the case by reason of this statute only; it has no duty or power to represent the consumer (Richman *v.* Consolidated Gas Co. 114 App. Div. at p. 224; and see, as to exclusive functions of Attorney General and Public Service Commission, People ex rel. Lehmaier *v.* Interurban Street Ry. Co. 85 App. Div. 407; affd. 177 N. Y. 297); and the other defendants have no interest in the statute except so far as any of them may happen to be taxpayers in said city.

On the same day, by Chapter 737 of the Laws of 1905, the state established the Commission of Gas and Electricity, and gave this commission the power to fix maximum rates (Record pp. 22, 27). The commission was given power to enforce its orders by application to the state courts for a writ of mandamus (p. 28). It was given no power to enforce rates not fixed by itself. The original defendants Gunnison *et al.*, having been appointed commissioners under this statute, investigated the rates charged for gas in the Borough of Manhattan, and by order dated February 23, 1906, directed this complainant company to charge no rate higher than 80 cents per thousand cubic feet (pp. 28-30). That portion of Chapter 737 under which this investigation was held and order made were subsequently, however, declared by the Court of Appeals to be unconstitutional under the constitution of the State of New York (Village of Saratoga Springs vs. Saratoga Gas Co., 191 N. Y. 123).

On April 3, 1906, by Chapter 125 of the laws of that year, the state fixed certain maximum rates for gas furnished to consumers other than the City of New York within the territory of that city. The rate fixed for the Borough of Manhattan (with which alone we have to deal) was 80 cents per thousand cubic feet, and the statute was therefore familiarly known as the "80-cent gas law". The act imposed a *penalty* for its violation of "one thousand dollars for each offense *to the people of the state*" (pp. 30-31).

This statute (substantially following like provisions of Chapter 736 of 1905) contained the following provision as to the *candle power* and *pressure*:

> § 2. The illuminating gas furnished by any such corporation, association, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour * * *. The pressure of illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch, nor more than two and one-half inches.

The portion of the section which we have omitted related to the standard of purity of the gas, and is not here complained of. The provision as to *candle power* is the same as the prior law except that the words "distributing holder" are substituted for the words "place of manufacture" (Record p. 5265). The provisions as to *pressure* are new.

The original and present defendants.

(*a*) *The Attorney General.* The defendant originally first named was Julius M. Mayer, sued "as Attorney General of the State of New York". He pleaded that the suit was against the state (p. 54). Mr. Mayer's term of office having expired on December 31, 1906, his successor William S. Jackson was substituted as defendant upon his own application (p. 321). The Circuit Court held that the suit was not against the state (pp. 421-2) and this question is not raised or argued by the present appellants; but the final decree is entered against Mr. Jackson as Attorney General and the costs are awarded against him as such, with an apparent suggestion that an appeal be taken upon the point (p. 434); and he has assigned error accordingly (pp. 481, 484). As to the Attorney General *the decree* is that he be (p. 434)——

> "perpetually enjoined and restrained *from suing for the penalty or forfeiture* described in said chapter 125 of the Laws of 1906 or in any way enforcing or attempting to enforce the said Act or the order of the Commission of Gas and Electricity aforesaid against this Complainant."

(*b*) Defendants Gunnison *et al.*, constituting the old Commission of Gas and Electricity, were sued to enjoin them from enforcing their own order aforesaid. The decision of the Court of Appeals in the Saratoga case shows that this joinder was unnecessary. They may be disregarded.

(*c*) *The Public Service Commission.* The present appellants succeeded not only to the functions of the old Commission of Gas and Electricity but also to some of those of the Attorney General, as appears by the following provision of the statute under which the Public Service Commission was established (Laws of 1907, Chap. 429, § 74):

> "Whenever either commission shall be of opinion that a gas corporation * * * is failing or omitting or about to fail or omit to do anything required of it *by law* * * * or is doing anything or about to do anything * * * contrary to or in violation *of law*

> * * * it shall direct counsel to the commission to commence an action or proceeding in the supreme court of the state of New York in the name of the commission for the purpose of having such violations or threatened violations stopped and prevented either by mandamus or injunction. Counsel to the commission shall thereupon begin such action or proceeding [etc.]."

Prior to this statute the Attorney General by virtue of his office had implied authority to commence proceedings of the nature stated in a proper case. This implied authority is superseded by the express authority now given to the Public Service Commission. The Public Service Commission law took effect July 1, 1907, and on October 2 of that year these appellants were substituted as parties defendant by consent (p. 379). By *the decree* they are (p. 434):

> "perpetually enjoined and restrained *from applying for a mandamus or injunction* to compel compliance with said chapter 125 of the Laws of 1906 or with said order of the Commission of Gas and Electricity or in any other way enforcing or atempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this Complainant."

So far as this suit and the final decree refers to the order of the Commission of Gas and Electricity it is of course unnecessary, in view of the decision of the Court of Appeals; but the motion for reargument of the Saratoga Gas case in that court was not finally disposed of until after the entry of the decree.

(*d*) *The City of New York* is by the decree (p. 434)

> "perpetually enjoined and restrained *from suing for the penalty or forfeiture* described in said chapter 736 of the Laws of 1905 or in any other way enforcing or attempting to enforce the said Act against this Complainant."

(*e*) William Travers Jerome as District Attorney of New York County was also a defendant in the case by reason of his statutory authority to sue for penalties in the name of the state, an authority which he shared with the Attorney General. The decree joined him with the Attorney General, but he considered it unnecessary to join in the latter's appeal.

Omitted Defendants.

The parties really and beneficially interested in the enforcement of the 80 cent gas law—the private consumers of gas in the Borough of Manhattan—are not joined as defendants herein. It does not even appear that any one of the official defendants is a resident of that Borough. The omission was not accidental, but was called to the attention of the Circuit Judge, who purposely refrained from enjoining the consumers, although recognizing that they would probably leave the defense of their rights to their statutory protectors (pp. 136, 145). But the latter were not sued as their representatives in the sense of the term used in equity procedure (p. 136), and this has been recognized by the State courts and has an important bearing upon the question of jurisdiction, as will be seen.

History of the Litigation.

We have had no actual experience under the 80-cent gas law, because its enforcement was immediately enjoined by Judge Lacombe by a temporary restraining order (pp. 36-7). The injunction was continued by a further order made upon affidavits of both sides (pp. 145-7). The opinion of Judge Lacombe is to be found in the record at pages 135-45 and is reported at 146 Fed. Rep., 150.

On July 5, 1906, Judge Lacombe referred the case "to Arthur H. Masten, Esq., one of the Standing Masters of this Court to take the testimony, make all needed computations and fully find the facts, all in conformity to the practice indicated by the Supreme Court in Chicago M. & St. P. R. R. *v.* Tompkins, 176 U. S., 179." He directed the Master to serve a draft report in accordance with the local practice, and to "be careful in taking the testimony to conform to the practice indicated in Blease *v.* Garlington, 90 U. S., 1." He apportioned among the parties the ninety days allowed for taking testimony; directed the Master when necessary to sit from day to day and hold two sessions a day; required leading counsel to provide competent junior counsel if they should wish to take a summer vacation; and authorized either party to read the testimony of any witness from the record of the Gas Commission upon producing the witness for further cross-examination (pp. 148-9, 150). The Master in pursuance of the court's policy in pressing the suit expedited the complainant's case by permitting it to introduce confessedly incompetent evidence, compiled from sources not open to the defendants for a deliberate outside investigation or fishing excursion except so far as complainant chose to open them in such a way as to enable it to get in its side of the case with greater speed than the ordinary rules of evidence permit, and putting a burden upon defendants from which they are usually much relieved by the necessities of the complainant, from which a fair working compromise can be evolved (see for instance pp. 537-8, 632, 743-4, 778-9, 803, 840, 1043 and the Master's explanation at pp. 1859 and 2356-7). The case was conducted all the way through under great pressure from the Master and the Court, as to the taking of testimony (see for instance pp. 1130, 1558, 1661, 3160, 3250-1, 3555-6, 3579, 3598-9, 4512) and yet without corresponding pressure as to supplying the defendants with information (see for instance pp. 1047, 1856), and under circumstances which seemed to us to have put the complainant, which had also of course the original advantage of being the insider, in a position of great advantage. But these appellants were not before the court at that stage of the case, and we understand that counsel for the City of New York will discuss this phase of the case, so far as it may warrant discussion in this court.

The cause was argued before Judge Hough, and the final decree is to be found at page 430. His main opinion is to be found at page 388, and his supplementary opinion at page 422. He disallowed some of the large items of capitalization allowed by the Master, largely reduced others, and recalculated the expenses and income. The Master, whose main report covers pages 151-250 of the record and whose rulings on questions submitted by the parties cover pages 252-91, reached the conclusion that "the property on which complainant is entitled to a return" (termed in the final decree its "capitalization") is $83,357,000, and that its net earnings under the legislation in question would be $2,327,328.31, or 2 $^{8}/_{10}$% (pp. 247-8). Judge Hough found "the true valuation as of the time of the beginning of this suit of the complainants' property actually employed in its business of manufacturing and supplying gas" to be $59,831,435, and its net income under this legislation to be $3,024,592.45 (p. 432), a little over 5%.

The oral testimony.

For the purpose of this brief nearly all of the testimony on behalf of the defendants, occupying the whole of Volume III and the first portion of Volume IV of the record, or from page 1890 to page 3854, may be passed over.

The bulk of this consists of testimony of three witnesses, Messrs. Bemis and Marks on behalf of the city and Mr. Edgerton on behalf of the Attorney-General. The testimony of these gentlemen was not accepted by the Master. Without discussing whether or not any part of their testimony ought to have been given weight for the purposes of this appeal, we shall accept the Master's view and base no argument upon anything in it. The complainant in its argument below made much of a few concessions contained in this testimony, concessions which were generally steps in a calculation that it would have found disastrous to accept *in toto,* and which are entitled to no more weight than the rest of their evidence. The Master (doubtless owing partly to his helplessness under the rule in Blease v. Garlington) permitted a very large amount of so-called expert testimony on both sides, which a tribunal having power to exclude testimony would probably have excluded. We shall submit this case upon the facts proved, and not upon the speculations of witnesses as to their effect.

Most of the other witnesses for the defendants were called upon points as to which the Master decided in defendants' favor, or upon points as to which we acquiesce for the purposes of the appeal in his decision.

The oral testimony in this portion of the record to which we shall direct the court's attention will be practically confined to brief extracts from the testimony of the three experts produced on behalf of the defendants upon the present valuation of the complainant's real estate, and one or two admissions made by complainant's officers or witnesses in previous testimony, which were allowed to be read into the evidence by the city's expert, Prof. Bemis.

Certain of the counsel before the Master seemed to be under the impression that documentary matter could be got upon the record by asking some witness upon direct or cross-examination whether he knew of it. Passages alleged to have been extracted from scientific publications or elsewhere, and which were read to witnesses without being recognized by them, were subsequently used as if they were facts proved in the case. Caution is to be observed in the treatment of this class of material.

Our argument will be based upon three classes of testimony: First, that of the complainant's main witnesses, (particularly its Vice President, Walter R. Addicks; its Secretary, Robert A. Carter; its Chief Engineer, William H. Bradley; its Superintendent of Mains, Colin C. Simpson; and its leading expert, Alexander C. Humphreys; its real estate experts, William H. Wheelock and Edmund C. Preiss; and its construction expert, Frederick J. Mayer) especially as developed in their cross-examination by Mr. Page, whose previous experience both as a member of the Stevens Committee of 1905 and as counsel in the Gas Commission investigation of 1905-6 had familiarized him with the facts of the case, so far as they had become accessible to outsiders; second, certain exhibits prepared at the request of its own counsel or of Mr. Page by officers of the complainant company; and third, the facts developed in the legislative investigation of the complainant company by the Gilbert Committee of 1885-6.

We do not wish to be understood, however, as conceding that this court for the purposes of the present appeal should regard all of the complainant's witnesses as trustworthy. The contrary is especially the case with regard to the testimony of Mr. Carter, its secretary. The sworn statements made by him to the tax officers, and his attempts at explanation of them, deprive him of any standing as an expert witness, although we have no reason to doubt the correctness of the extracts which he furnishes from the books of the company. The value of the expert testimony of Dr. Humphreys is also much weakened by his unsuccessful attempt to explain satisfactorily the testimony which he had given in the Holyoke investigation, when called to testify by the city.

The Exhibits.

Certain of the most convenient and valuable of the exhibits, although introduced by the state or city, are admissions of complainant, such as its tax report of 1905 (State's Exhibit C) and its complaint against the assessment of 1906 (City's Exhibit 65); or else statements made up by its employees at defendants' request, such as the statement of book valuations of its investments in securities of other companies (State's Exhibit B), and its tabulation of repairs and renewals, State's Exhibit L). Other useful exhibits are certain tabulations prepared from the complainant's books by defendants' experts, such as that setting forth the monthly record of gas purchased, made and sold for the calendar year 1905 (Vol. V, City's Exhibit 87B), that of the complainant's real estate (Vol. VI, City's Exhibits 87 A, B, C, D, E), and those made from the books of complainant's predecessor companies in 1885 by Mr. Yalden (City's Exhibit 48). Some slight corrections were made by complainant in the first of the tabulations just referred to from City's Exhibit 87, but they were not sufficiently important to affect materially the calculation.

The Yalden account (City's Exhibit 48) would of course have been of doubtful competency had it been objected to, as Mr. Yalden was long since dead, and some of the books from which his figures were drawn have disappeared. It is in evidence without objection, however. Another exhibit to which objection might have been made upon the ground of competency, but which has been admitted by consent and is for some purposes valuable, is Complainant's Exhibit 369, comprising pages 6071-6561 of the record. This is the entire testimony taken before the Gilbert committee of 1885, containing the evidence of many witnesses since deceased. There are also a number of other exhibits introduced by the complainant to which objections that seem to us well founded were taken at the time, but which are convenient and seem to be correct, and which we have accepted as such.

There are certain exhibits in the case, however, which together occupy considerable space, which seem to us to be entirely improper, upon which we shall base no argument, and upon which it seems to us that no argument should be based by any of the parties hereto.

The real estate assessments of 1906. These are set forth in State's Exhibit A (pp. 4922-4). The history of this exhibit is as follows: Complainant undertook to prove from its first witness the appraised value of its respective parcels of real estate for the current year. The assessments were offered "as some evidence of the value of our real estate." Objection was made to the competency of the evidence, and it was very properly excluded by the Master. Nevertheless, under the rule in Blease *v.* Garlington, it had to go into the record (p. 503). It appeared that the witness had been abstracting the records, and he produced from his pocket a memorandum from which he read off certain figures (pp. 504-5). Counsel for the state desired to have the memorandum marked in evidence as part of the cross examination, but without prejudice to the objection already made. It seems to us that that course was proper, and that the procedure under Blease *v.* Garlington is impossible without such a privilege to the objecting party. The Master however said that the defendant could not "offer it with strings tied to it," but admitted it and marked it a state exhibit (p. 520). The Master then seems to have considered that the state had waived its objection to the asesssed values, and proceeded to use them in the decision of the case. Their introduction led to the subsequent introduction by the city of a large mass of petitions verified by the complainant and objecting to many of these assessments as too high (pp. 2103-62).

Gilbert Committee Report of 1886. This appears as Complainant's Exhibit 227 at pages 5325-88 of the record. The facts are these: An investigating committee was appointed by the State Senate in 1885 for the purpose of inquiring whether the statute under which the complainant company had then just organized had been violated, and whether the capitalization of the company was fair. The committee consisted of Senators John I. Gilbert, Chairman; Thomas Robinson and Michael C. Murphy. It appointed counsel and an accountant, and the testimony and accountant's report are to be found in full in the record. The committee failed to agree. The chairman reported adversely to the company. Messrs. Robinson and Murphy reported in its favor. Their reports were lengthy, and merely expressed the variant views of these gentlemen on matters as to which this court now has all the information that they had, and considerably more. It is conceivable that the opinion of the chairman may have outweighed in the estimation of their neighbors and contemporaries the combined opinion of the other two members, or *vice versa.* It seems to us that there were some mistakes in both reports, and that they are incompetent for any purpose.

Affairs of other localities. A large amount of evidence, oral as well as documentary, has been introduced as to the capitalization, earnings and dividends of particular companies in other localities, and as to the regulations and forms of accounts prescribed elsewhere, and particularly in England and in the State of Massachusetts. This line of testimony originated, indeed, from the defendants' side, but had the natural effect of a bad example. The capitalization, gross and net earnings and dividends of another company, situated in another city, raise a collateral issue, whose fair trial requires a volume of testimony and exhibits of its own. None of the collateral issues thus raised were actually tried out in the present case, for defendants used up their allotted time in their main case, and there was no time left for surrebuttal. The position of the present complainant is so immensely stronger than that of almost any other gas company in the world, and the few whose situation is comparable in strength are so differently situated in various respects, that trial by analogy, which can sometimes (however improper under the rules of evidence and however oppresive by way of expense) lead to fairly good results when applied to one of a group of similar cities of similar size, is useless here. The laws, regulations and forms of action prescribed by other states and nations are also useless as well as incompetent. They are not prescribed for the purpose of ascertaining the net earnings of the companies from the point of view of the Fourteenth Amendment to the Constitution of the United States. These remarks apply to all such exhibits as Reeson's Complete Gas and Water Acts (City's Exhibit 53), the Boston Graphic Record (City's Exhibit 58), the Massachusetts tabulations (Complainant's Exhibits 378-390), the Philadelphia ordinance (Complainant's Exhibit 391), the estimates of gas cost in Danbury, Conn. (Complainant's Exhibits 392-4), and the considerable number of similar papers scattered through the oral testimony.

Complainant's history.

Complainant was organized in the fall of 1884 by consolidation of six existing gas companies.

These companies, and the dates of the franchises then owned or claimed to be owned by them, were as follows:

New York	Gas	Light	Company	1823
Manhattan	"	"	"	1833
Metropolitan	"	"	"	1858
Harlem	"	"	"	1855
Municipal	"	"	"	1874
Knickerbocker	"	"	"	1865 and 1871

The Knickerbocker Company was then owned by the Municipal. The charter of the Municipal Company has since confessedly expired. It is contended by the state and city that the original franchises of the New York, Manhattan, Metropolitan and Harlem companies have also expired, and that they are now holdovers, either on sufferance or, at the best, as tenants from year to year. It is also contended by the state and city that the franchise of 1865 claimed by the Knickerbocker Company was invalid, and that neither of the two franchises claimed by that company ever became its property. The law and facts as to these franchises are set forth in Appendix A to this brief.

Complainant's manufacturing plants were derived as follows:

14th	St.	plant	from	Manhattan	Co.
18th	"	"	"	"	"
21st	"	"	"	New York	"
42d	"	"	"	Metropolitan	"
44th	"	"	"	Municipal	"
99th	"	"	"	Knickerbocker	"
111th	"	"	"	Harlem	"

Of these the 18th St. and 111th St. plants have been partly condemned by the city. The former has been altogether abandoned and the latter is in disuse (pp. 1713-14). The old 65th St. plant, purchased by the Metropolitan of the Manhattan company, had before the consolidation been destroyed in a similar manner (pp. 6343-4). It is now represented by a holder station, and there is a holder also at 111th St.

After the consolidation, the complainant continued as a gas company, without other complications, until the year 1900. It then became also a holding company on a large scale, this being partly the result of a gas war between itself and the other companies operating in the Borough of Manhattan. Its principal outside investments are now in the form of stock, bonds and securities of the three rival gas companies (the New York Mutual, Standard and New Amsterdam, the latter in turn owning the stock of the Central Union, a company operating in the Borough of the Bronx); similar securities of electric companies; and similar securities of the Astoria Light, Heat and Power Company, a corporation which commenced manufacturing gas just before the termination of the testimony before the Master herein. It also holds various securities as temporary investments of a fund derived from the issue of debentures for the purposes of the Astoria enterprise.

Complainant's capitalization.

Nominal capital. Complainant's original capitalization was $39,078,000. It had been originally intended to be $45,000,000, but the New York Mutual Gas Light Company, to which was allotted $5,922,000, did not join (see pp. 4821, 4825). The manner in which these figures were arrived at was described in the testimony before the old Gilbert committee (pp. 6078, 6084-5, 6124, 6134, 6138-9, 6144-6, 6161, 6308, 6372-3, 6513, 6521-2, 6524). The tangible property was first appraised. Each company employed its own appraiser, both for its own property and, where desired, to estimate upon the property of the others. It was recognized that, as long as the appraisements were proportionately fair, it was of no particular importance as between the companies whether they were high or low. There was a difference of opinion as to whether the capitalization should be made high or low, but the majority of the committee (which had been to a certain extent packed by giving the Municipal and Knickerbocker each one member, although the latter company was owned by the former,) decided to have it high. One of the appraisers originally employed was dropped because he did not appraise quick enough or high enough;

but Mr. Rowland, who took his place and who either prepared or revised the appraisements of all of the manufacturing plants except that of the Harlem Company, was concededly a man of standing. The basis of the appraisal, however, was not what the properties were intrinsically worth, but a larger amount representing what they could have been duplicated for at the time. The real estate, mains, services and meters were appraised by the members of the committee themselves.

The day after the appraisement of the tangible property was completed, the total capitalization was taken up for consideration (pp. 4925, 5012, 6140, 6377, 6520-1). Complainant contends that this total valuation was arrived at by taking the total valuations of the stocks of the various companies as they then stood in the market, plus the bonded indebtedness. This was indeed the statement of one or two of the witnesses, and is followed in the report of the committee, but it is not true, and the total valuation was very much larger than the combined values of the capital stocks and bonds (pp. 84-88, *infra*). Having reached by agreement a figure for the total capitalization, an amount equal to one thirtieth thereof was reserved for working capital. The difference between the remaining twenty-nine thirtieths and the total appraised valuation of tangible property was then put down as "Rights, franchises, etc.," and was divided up among the companies on a somewhat arbitrary basis (pp. 88-91, *infra*).

The following tabulation, taken from pages 4821 and 5605, gives the appraised valuation of the tangibles of each company, its finally allotted share in the "Rights, franchises, etc.," its actual allotted share (being the sum of the two preceding figures) and its nominal share (being the last figure plus its nominal contribution to the working capital):

	Tangibles.	*Intangibles.*	*Actual share.*	*Nominal share.*
N. Y. Co.	6,143,000	1,417,000	7,560,000	7,821,000
Manhattan Co.	9,611,000	2,329,000	11,940,000	12,352,000
Metropolitan Co.	5,312,000	1,863,000	7,175,000	7,422,000
Municipal Co.	3,925,000	1,175,000	5,100,000	5,276,000
Knickerbocker Co.	2,472,000	528,000	3,000,000	3,104,000
Harlem Co.	2,531,000	469,000	3,000,000	3,103,000
	29,994,000	7,781,000	37,775,000	39,078,000

The capitalization has been increased to $80,000,000 in two stock issues of March and July, 1900 (pp. 5018, 5020), besides an issue of nearly $20,000,000 of convertible debenture bonds for the purposes of the Astoria enterprise (p. 855).

Complainant is now, however, as just stated, a holding corporation as well as a gas corporation. The book value of its outside holdings, apart from the securities of the Astoria Company, is $53,041,134.52 (State Exhibit B, p. 5052). This book value represents their actual cost (see pp. 847-9, 852-3, 855-6), except that the New York Edison Co. stock cost only $15,517,200 instead of the amount stated. As thus corrected it is as follows:

Brush Electric Illuminating Co., bonds	$275,000.
New Amsterdam Gas Co., stock and bonds	4,814,608.03
New York Edison Co., stock	15,517,200.
New York Mutual Gas Light Co., stock	5,703,290.65
Standard Gas Light Co., stock	14,587,495.23
United Electric Light & Power Co., stock, bonds and loans	9,452.063.48
Westchester Lighting Co., stock and bonds	5.707.50
National Coke & Coal Co., stock	50,000.
	$50,405,364.89

To the $80,000,000, however, must be added $1,387,000 for bonds outstanding, $32,518.76 for premiums on bonds, and $14,322,217.95 for premiums on capital stock (State Exhibits F, S, pp. 5075, 5260). On the other hand there was reserved in 1884 from the original issue a sum of $2,329,000 to pay off obligations of the old companies. These were paid off by 1899 (p. 5037), presumably out of the item last above stated. Its nominal capital invested in the gas business is therefore as follows:

Present stock, par value	$80,000,000.00
Premiums on bonds and stock	14,354,736.71
Debenture bonds of 1888	1,387,000.00
	$95,741,736.71
Deduct bonds paid off	2,329,000.00
Present nominal total capitalization	$93,412,736.71
Less stockholdings as above	50,405,364.89
Present nominal gas capitalization	$43,007,371.82
Less original capitalization of 1884	39,078,000.00
New capital since 1884	$3,929,371.82*

Probably this last figure is somewhat too high, and should be subject to further deductions on account of outside investments. For instance, it appears that there is an outstanding loan to the East River Gas Company, part of which was made prior to the issue of the Astoria debentures, and therefore should apparently be charged to this account (See p. 856 and State's Exhibits Q, R, p. 5260).

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* Of the $14,354,736.71 item, $11,205,975 are premiums on the stock issues of 1900 (p. 849). The balance, added to the $1,387,000 item and subtracting the $2,329,000 item, gives the amount of new capital that came in before 1900—$2,206,261.

Capital actually invested. The amount actually invested by the stockholders of the constituent companies out of their own pockets is very much less than $39,078,000, the difference representing, first, arbitrary writing up of intangible property at the time of the consolidation of 1884; second, appreciation in the value of land; and third, extensions of the plant purchased out of surplus earnings.

Mr. Yalden's tables showing the capital actually contributed by the stockholders of the constituent companies are liberal, since some of the capital was paid for in property and not in money. $1,178,000 of Metropolitan stock was issued for property at fifty cents on the dollar (pp. 6168-9, 6332). The figures are as follows (pp. 5615, 5646, 5672, 5690, 5703):

	Issued for cash.	*Issued for property.*	*Stock dividend.*	*Total.*
N. Y. Co.	750,000		3,250,000	4,000,000
Manhattan Co.	3,280,000		720,000	4,000,000
Metropolitan Co.	612,700	1,887,300		2,500,000
Harlem Co.	1,569,050	150,950	280,000	2,000,000
Municipal Co.	2,515,300	458,900	25,800	3,000,000
	8,727,050	2,497,150	4,275,800	
		Total stock		$15,500,000
				4,275,800
		Stock paid for in cash or property		$11,224,200
Deduct for Metropolitan stock issued at fifty cents				589,000
				$10,635,200

The $17,000,000 capitalization sometimes spoken of includes the $1,500,000 stock of the Knickerbocker company (see p. 5731); but the assets of this company belonged to the Municipal company at the time of the consolidation, and are represented by the last one million dollars of the cash capital of the Municipal (pp. 5600-1, 5690).

The $25,800 of the Municipal company represents a discount on stock sold below par; $100,000 of the stock issued for property was paid for stock of an old corporation whose advantage to the company is not shown; and the balance of $350,000 was issued in 1876 and 1877 for patents, which have now of course expired (pp. 5599-5600). The $25,800 is treated by Mr. Yalden as equivalent to a stock dividend (p. 5726); and probably the figure $10,635,200 is somewhat larger than the actual value contributed by the subscribers to the stock of the constituent companies.

There were some bonds and other obligations outstanding at the time of the consolidation, which were assumed by the complainant company, amounting to $2,329,000 (p. 5606). These it subsequently paid off, and they are not now represented in its capitalization.

If, therefore, stock issues representing surplus earnings over and above dividends are to be regarded for the purpose of a case like this as contributions by the consumers rather than contributions by the stockholders, the amount of capital actually invested is as follows:

Investment of constituent companies, not over............	$10,635,200.00
Subsequent additions	3,929,371.82
Capital actually invested..	$14,564,571.82

The additions to the nominal capitalization which represent stock dividends, or other sums representing surplus earnings over and above ordinary dividends, all date from periods when very large actual dividends were being declared (pp. 28-9 *infra*). Indeed the old companies were deliberately hiding away the amount of their profits by their bookkeeping, as complainant's counsel pointed out below, citing Mr. Yalden's conclusion as expert accountant to the Gilbert committee, at page 6396.

Complainant's Net Earnings and Dividends.

There has been no real investigation into the complainant's net earnings except those for the fourteen months ending December 31, 1905. This was not by consent, as might be inferred from the Master's language on pages 155, 216, but because the complainant insisted, and the Master ruled, that the year 1905 should be taken as the standard, on the ground that the time allowed by the court for the trial of the case did not permit more thorough investigation. The Master permitted complainant to introduce evidence from other years for the purpose of changing certain figures in the 1905 account, and finally permitted to defendants full investigation as to these particulars, but did not permit them to make a "fishing excursion" to see if any other corrections should be made (see pp. 565, 632, 779, 803, 1043, 1047-8, 2175, 2198-9, 2286-8, 3275-8), and excluded information as to other periods when they picked up any (pp. 3579, 3598-9).

The Court, after allowing to the complainant some considerable items which were contested, has found that its total net income for the calendar year 1905 was $5,891,597.45 (p. 407). It finds that if the complainant company during the calendar year 1905 had been upon the 80 cent basis, its net income would have been $3,224,592.45.*

The former figure was at the rate of over 13½% on the nominal capitalization employed in the gas business, and over 40% on the capital actually invested and employed in the gas business. The latter figure would have been at the rate of about 7½% on the nominal capitalization employed in the gas business, and nearly 23% on the capital actually invested and employed in the gas business (see pp. 23, 25 *supra*).

Complainant was permitted to put in evidence a tabulation purporting to show its rate of dividend since 1884 (Complainant's Exhibit 83, p. 5035), but the tabulation is valueless and misleading. For instance, from 1900 on the complainant was not only a gas company, but also a holding company. Nearly $37,000,000 is represented by its stock holdings (p. 23 *supra*), on which it nets less than 3% (State Exhibit B, p. 5052). It is also now paying interest on nearly twenty millions of 6% debenture bonds issued for the purpose of raising money for its investments in the stock and securities of the Astoria Company. Part of the cash thus obtained is being held in temporary investments, but the balance is not at present bringing in any actual return (pp. 742, 749, 865, 5034, 5077). The present abnormally low dividend rate due to these heavy outside commitments is being used on the court and the public for the purpose of giving the impression that the fear of 80 cent gas is keeping down present dividends.

But when we go back of 1900 to the period when the complainant was a gas company and not a holding company, the table is misleading because it is computed upon a valuation which exceeds the total value of its property, exclusive of the fictitious items included in the capitalization of 1884. The total dividends for the 15 1-3 years from November 11, 1884, to March 15, 1900, appear as $33,345,598.50, or a little over $2,100,000 per annum. This is at the rate of over 7% on the $29,994,000 appraised value (see p. 22 *supra*). The assets increased nearly $7,775,000 during this period (p. 5032), of which about $2,206,261 came from new capital (p. 23, *supra*). Hence over $5,500,000 must have been contributed from earnings. So that more than an 8% dividend was earned, of which one-sixth was reinvested.

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* $3,234,997.45 (p. 407) *minus* $10,405 (p. 423).

Dividends of the constituent companies before 1884. These are fully tabulated in the report of Mr. Yalden.

The New York Gas Light Company was the oldest of the constituent companies. It was created in 1823 and commenced paying dividends in 1825. In that year it paid 6.33%; in the following year 11.58%; and it thereafter averaged over 10% for the next twelve years. It paid 9% from 1839-1849 inclusive; then 10% until 1856, with an extra dividend of 10% one year; it paid 30% in 1857, 15% in 1858, 40% in 1859, 41% in 1860, 45% in 1861 and a regular dividend of 110% with a stock dividend of 33.33% in 1862. Mr. Yalden's figures after this date are too low for this company, because (unlike his tabulation in the case of the Manhattan Company) he computes the dividends upon the inflated capital instead of upon the genuine capital. Applying his figures to the genuine capital of $750,000, the dividends for the succeeding years are as follows: 1863 26.66%, 1864 40%, 1865 66.66%, 1866 120%, 1867 93.33%, 1868-70, each year, 66.66%, 1871 506.66%, and for the period from 1872 to 1884 an average yearly dividend of over 60% (pp. 5668-70).

The Manhattan Gas Light Company obtained no franchise until 1833 (p. 5089). Its first substantial contribution of capital was made in that year, and it seems to have been first ready to do business in 1836 (pp. 5612, 5626, 5630). It paid dividends averaging less than 4% for its first seven years, but thereafter averaged a much higher rate, and in 1856, beside the regular dividend, declared a stock dividend, the two together amounting to 44.17%. Thereafter the dividends ranged all the way from 9.76% in 1880, after a gas war, to 42.68% in 1876 and 1884, 46.95% in 1872, 48.78% in 1875 and 53.76% in 1873. The average dividend for the entire period from the charter of the company to the consolidation was over 25% (pp. 5642-4).

The Metropolitan Gas Light Company appears to have been first equipped to do business in 1863 (p. 5684). It began dividends in 1866, with a dividend of 8%, and as early as 1870 was able to declare one of 53%. It passed the dividend in 1873, but in other years paid at so high a rate that its average for the whole period from the date of its organization, in 1860, was over 13½% (pp. 5688-9).

The Municipal Gas Light Company commenced in 1876 and declared its first dividend in 1879; yet in 1884 it had already averaged about 14½% (p. 5701).

The older books of the Knickerbocker Gas Light Company are lost (pp. 6228-9, 6242). In 1880 it was absorbed by the Municipal.

The Harlem Gas Light Company was the least prosperous of the lot. It averaged considerably over 10% up to 1872, then reduced to 8% for four years, to 6½% in 1877, suspended for four years, paid 6% for two years, and at the rate of less than 5% for 1884 (pp. 5716-17).

Complainant's valuation as of May, 1906.

This valuation, called by the court "the capitalization of complainant for the purposes of this suit" (p. 430) is found by the court to be as stated in the following tabulation (p. 432):

Real estate	$11,985,435
Plants	15,500,000
Mains	12,636,000
Services	1,994,000
Meters and miscellaneous	4,100,000
Working capital	1,616,000
Total of tangible assets	$47,831,435
Special franchises	12,000,000
Total	$59,831,435

The court reached this result by reducing the Master's estimates of real estate and working capital, and striking out its investments in other companies, together with the item of goodwill (pp. 430-1).

We now take up these various items separately:

Real Estate.

This phrase is used in the record as describing all of the complainant's real property outside of the manufacturing plants and holders and the mains and services. It includes land, bulkheads, office buildings, buildings rented to tenants, sheds, &c. It was capitalized by the Master at $13,461,000 (pp. 160, 165, 247). The Court did not disturb any of his valuations, but disallowed certain items as not pertaining to the gas business, thus reducing the total figure to $11,985,435 (pp. 394, 422-3, 430, 432). This is merely an approximate figure, reached by a sort of compromise, the court considering that absolute accuracy was impossible and that any errors unfavorable to complainant were offset by corresponding errors unfavorable to defendants (pp. 423-4). Appellants' objections are set forth at page 436 (Assignment II).

Book Value.—Complainant's book valuations were made in 1884 by the consolidation committee. They were based in part on appraisements, in part on figures made by the officers of the consolidating companies, whose correctness was disputed (pp. 6144, 6145, 6161, 6308, 6513, 6523). They total $10,332,000. Subsequent transactions have increased the amount to $10,929,789.87 up to October 31, 1905 (Complainant's Exhibit 79, p. 5032), as certain of the original land has been sold or condemned since 1884 (p. 516), while other land has been purchased (pp. 499-500). The book value is also to be diminished by reason of the land which is still included because it has not yet been paid for, although it has been taken by the city (p. 156), and by reason of the lots disallowed by the Master and court (pp. 165, 394).

Assessed Valuation.—The Master excluded the assessed values of the various parcels as incompetent (pp. 503-9). Nevertheless, under the rule in Blease *vs.* Garlington, they went into the record. They total $8,508,100 (p. 509). The city therefore introduced a series of petitions, signed by the complainant and verified by its Vice-President, complaining of assessments as "in excess of what the property would sell for under ordinary circumstances" (pp. 2103-62). Upon the hearing there was a conflict of testimony as to these assessments, complainant's real estate experts claiming that it was the general custom to assess at less than true value, while defendant's experts considered them as often too high, Mr. Thompson stating that since 1903 at least "the assessed valuation *of the Gas Company* in almost every instance has been very high indeed" (p. 2219). This would seem to be in line with complainant's theory as to the malicious intent of the public authorities, but the assessments are incompetent, the assessors not having been called nor their expertness as valuers of real property shown. The Master's ruling to that effect is supported by the weight of authority (Flint *v.* Flint, 6 Allen, 34-37; Randidge *v.* Lyman, 124 Mass., 361; Anthony *v.* R. R. Co., 162 Mass., 60, 65; Martin *v.* R. R. Co., 62 Conn., 331, 343; Hanover Co. *v.* Ashland Co., 84 Pa. St., 279, 285; Nelson *v.* Village of West Duluth, 55 Minn., 497, 499; Lockhart *v.* Woods, 38 Ala., 631; 2 Lewis on Eminent Domain, § 448, and cases cited). The assessed valuation in the Jasper case seems to have been considered by this court because it was in the nature of an admission by the company (189 U. S., at pp. 443-4). These assessments are for local taxes, in which the State does not share. They are not made by State officers, and are not admissions of the State.

Cost of Reproduction or Duplication.—If the correct measure is to be "the amount required for complainant's gas business upon the basis of cost of reproduction,"—or its equivalent, the amount which a rival company would have to pay in order to duplicate complainant's outfit with another equally effective,—complainant has not supplied us with sufficient evidence to reach an exact figure, but has supplied us with enough to show that a large cut would have to be made in the court's valuation. The burden was here, as everywhere else, of course upon the complainant.

All of the manufacturing plants, including the "relief holders" at the respective works, would undoubtedly be located outside of the Borough of Manhattan, and connected by a tunnel; in other words, a rival company would doubtless do precisely what this complainant until very recently intended (if it does not now really intend) to do.

We quote as follows from the cross-examination of Mr. Bradley, complainant's chief engineer (p. 625):

> "Q. There is room on your vacant land in the City of New York for the construction of some other plants and some other holders, is there not? A. We might make a piece of patchwork gas plant; there is room for holders, and we might continue to patch, and keep patching up indefinitely, but it will be more expensive both to the company and to the consumer to undertake to do that.
>
> Q. You do not call 'patching up' the construction of a new plant, do you? A. When I say 'patching up' I mean patch on to some

> other works. Where the site is not desirable, or the site is too valuable, or too much surrounded by dwelling houses.
>
> Q. Then the value of the site does have something to do with the question. You say the site might be too valuable? A. Yes, in that respect.
>
> Q. What do you mean by that? A. *Because where a site is sufficient to build one plant in the City of New York, it is probably worth more than the whole Astoria plant, where there will be twelve plants* [sic],

Hence a tract in the Borough of Manhattan (the witness is evidently using "the City of New York" in its archaic sense) would be worth for gas purposes but a small fraction of its value for other purposes.

But while the manufacturing plants would be placed by any company in some location like that in which complainant intends to place them, for the reason stated by Mr. Bradley, the distributing holders would be left in Manhattan (the distinction between a relief and a distributing holder being explained at pages 656-7 by him). An economical distributing holder will have a capacity of at least 5,000,000 cubic feet. Comparing this with four of the old fashioned holders of 500,000 feet each, he says that it will "occupy the same ground space, therefore it is much more economical to build large holders than small ones" (p. 640). They have been growing steadily larger since 1884, and none have been built since then of less than 3,000,000 feet, except one small one in a suburb. Their total capacity (excluding one that has been condemned) is 29,200,000 feet (pp. 587-8). The latest is at 132nd Street near the Hudson river, with a capacity of 5,000,000 feet, finished in 1906 (pp. 541-2). The land upon which it is built cost $235,000 in 1892, is assessed at $265,000, and is valued by the Master at $445,000 (pp. 500, 509, 4896, 160). The total holder capacity is 44,270,000, but this includes all of the relief holders at the various stations (pp. 540-1). The holders up to three-quarters of the daily manufacturing capacity of coal gas plants and one-half of the daily manufacturing capacity of water gas plants must be regarded as relief holders (pp. 1639-40). The required capacity for the distributing holders is the balance of the total manufacturing capacity of the plants (p. 1640). This as to coal gas is 9,500,000 feet and water gas 41,500,000 feet (pp. 1714-5). Hence the distributing holders required would have a capacity of 23,125,000 feet, and on the basis of the 132nd Street holder site would require real estate of only $2,058,125 in value even at the Master's very high figure. To this should be added the Irving Place headquarters valued at $300,000; also the properties described at pages 1150-1, 1152-3, used for office and local purposes, valued at $182,000 (p. 159), making in all $2,540,125.

The real estate at Astoria actually cost the complainant $1,132,558.28 (p. 1646) although it is much larger than necessary to supply the gas now being made by the company (p. 577). A tunnel large enough to carry 60,000,000 feet (see p. 543) would cost about three-quarters as much as the one actually built at Astoria (p. 577), the corrected cost of which, including the lining, is $2,650,000 (pp. 1645-6). The total real estate investment for duplicating the manufacturing plants may therefore be set down at not over $3,120,000.

A liberal duplication figure would therefore be

$5,660,125, or about $6,325,310 less than the value stated in the decree herein.

Original cost. An attempt was made by Mr. Yalden, the accountant of the Gilbert committee of 1885, to ascertain the original cost of the property of the six consolidating companies. This was partially unsuccessful as to the properties in general, but practically complete as to the land, except as to the Knickerbocker company, whose books were even then missing. A computation was also made in this proceeding by Marwick, Mitchell & Co., accountants, but is based on insufficient data. Complainant made no attempt to supply the information, although it could probably have been easily done, as the true consideration was generally stated in early deeds. The Master ruled that the burden of proof was upon the defendants (p. 167).

The land conveyed to complainant by the New York Gas Light Company is described at pages 4868-71, 5877-8, and the state of the real estate investment account of the old company for each year from 1824 to 1884 is to be found in Mr. Yalden's report at pages 5661-3. There was a considerable reduction in the account in 1840, but there is no indication of any policy of writing off actual assets. Hence the reduction may be assumed to mean a sale of property. There was a gradual reduction, totaling about $27,500 from 1842 to 1847, but here again there is nothing indicating a policy of writing off. There was a good deal written off the value of the plant in 1850-2, and again in 1863-70; but nothing written off the value of the real estate. Marwick, Mitchell & Co. report, however, that during this early period there was written off in depreciation the sum of $66,803.67 which is to be added to the $366,500 at which the account stood in 1870 (p. 5873). In the following year an arbitrary appreciation was written up as part of the plan of increasing the nominal capital to $4,000,000, when the company was reorganized (see pp. 4856, 5654, 5662, 5667, 5670, 6329-30). In 1882-3 $20,000 more real estate investment was made (p. 5663), bringing the genuine amount up to $453,303.77 (p. 5873). Of this sum about $182,000 represent additions after 1860 (pp. 5662-3), although all of the present land, including the water right, then already had been acquired (pp. 6328-9). So far as appears, the works were still on the original site, purchased in 1824 at an expense of about $18,000 (p. 5661), the $453,303.77 representing partly bulkhead, partly grading and filling, partly old buildings which may now no longer exist, and partly value now duplicated under the heading of "plant." We shall assume it, however, as a maximum figure.

The land conveyed to complainant by the Manhattan Gas Light Company is described at pages 4871-5, 5874-5, and the cost is given in Mr. Yalden's report at pages 5624-8. No depreciation was ever written off. The trifling sum referred to by the Master at page 269 as representing "depreciation marked down by the Manhattan company" was off "buildings and improvements," which column seems to have included part of what is now called "plant" (p. 5624). It probably was upon property since condemned and not entering into the present calculation (compare pp. 5554, 5564). (*a*) The cost of the "East River property," now called the "14th Street property," is put down at $367,495.* The buildings left in 1884 on this parcel, exclusive of "plant" were stables then appraised at $6413 (p. 4935). The office building, sheds, walls, etc., are embraced in the "plant" (pp. 1314-17). (*b*) The cost of the "North River property", now called the "18th street property", is put down at $473,173.51. Part of this has however since been condemned by the city, and taken, and does not enter into the present calculation. The part thus taken is now valued by complainant at $1,392,500 (p. 156), and the Master disallowed another parcel of $400,000 (p. 165). The rest is valued by the Master, who substantially adopts complainant's figures, at $1,270,000 (p. 160). As complainant does not tell us how much of the original purchase price represents the real property now capitalizable, we can best approximate it by taking the ratio of $1,270,000 to $3,062,500. The figure thus obtained is less than $197,000. We have a description of the buildings on this parcel in 1884 at pages 4925-30, and of those still remaining there at pages 517-18. The only ones to be found upon both lists, and not belonging to the "plant", are the stables, appraised in 1884 at $10,552 (p. 4930). The Irving Place parcel with the buildings and improvements cost $90,203.94 (p. 5625). The total cost of the Manhattan real estate was therefore greatly overstated by Marwick, Mitchell & Co., who included much of the plant in their figures. It should be put at $671,663.94.

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* Mr. Yalden includes the bulkheads in his statements of cost of real estate. This appears from the deed of the bulkhead from 15th to 16th street with other property, bought in 1856 for $125,000, which entire amount is set down in the "cost" column. The deeds conveying the bulkheads are at pp. 6009, 6012, 6015-16.

The land conveyed to the complainant by the Metropolitan Gas Light Company, including bulkheads, is described at pages 4880-6, 5879-80, and the cost is given in Mr. Yalden's report at pages 5679-82. Excluding the New Jersey property, which is not involved in this case, it was $848,601.36.

The land conveyed to the complainant by the Harlem Gas Light Company is described at pages 4877-80, 5877, and the cost is given in Mr. Yalden's report at pages 5710-11, amounting to $158,899.81. A piece was sold to the city in 1875 for over $23,000 (p. 5873), but its original cost does not appear, and as it may have been very small we make no deduction. The bulkhead in the case of this Company is not included in the real estate account, but as a part of the plant. It was built after 1870 (see pp. 4878-9), and was valued in 1884 at $100,000 (p. 5014). The valuation of this company was especially questioned (p. 6525); but assuming that it cost that amount, the real estate may be put down at $258,899.81. The office building is regarded as part of the plant (pp. 1337-8).

The land conveyed to the complainant by the Municipal Gas Light Company is described at pages 4875-6, 5876. Mr. Yalden does not give the cost of the real estate. Its book value was $561,462.83, which seems to have included the bulkhead (p. 5698). There is nothing to indicate that this is not a full, or more than full, figure.

The land conveyed to the complainant by the Knickerbocker Gas Light Company is described at pages 4876, 5876. Mr. Yalden was unable to state its cost or book value as the books of the company had already been lost (p. 4465). The real estate was appraised in 1875 by the President and Secretary and by one of the principal creditors of the old Union Gas Light Company at from $150,000 to $200,000. This apparently includes the bulkhead, which appears to have been then already built, although not yet fully protected by filling in (pp. 3544, 3546, 3547-8). Precisely in what way the property passed to the Knickerbocker Company does not appear, but it seems to have been through a foreclosure or judgment sale at or about the time when the other assets were sold to that company for the sum of $1,000 (pp. 5108-14). The bulkheads, piers and water rights were afterwards turned over to complainant at an estimated valuation of $115,000 (p. 5697). It would appear from the above facts that a liberal estimate of original cost would be $250,000.

The original cost of the real estate purchased in 1884 by complainant from the original companies may therefore be estimated as follows:

New York Gas Light Co......	$453,303.77
Manhattan Gas Light Co....	671,663.94
Metropolitan Gas Light Co....	848,601.36
Harlem Gas Light Co.......	258,899.81
Municipal Gas Light Co......	561,462.83
Knickerbocker Gas Light Co..	250,000
	$3,043,931.71

There may be further items that should be allowed if complainant supplied us with better information, but they would be small, and undoubtedly with all the evidence attainable, especially from the consideration clauses of the old deeds, the total would be greatly reduced.

After the consolidation the present company purchased various properties at a total cost (after deducting a parcel in New Jersey) of $651,396.18 (p. 5880). It is also credited by Marwick Mitchell & Co. with certain real estate expenditures, some of which are doubtless proper for the present purpose; but no such item appears in the testimony as the "New Shop, 66th St." (see pp. 5559, 1147, 1282). It would seem to be something subsequently taken down. The nature of the "Sundry Expenditures" allowed by these accountants does not appear, but allowing everything but the "New Shop" and deducting the item of "Assessments Recovered" (p. 5880) we reach a net amount representing cost of "real estate" since 1884 of $1,271,626.61. On the other hand, four parcels of land have been sold by the company (pp. 5874-5, 5877, 5878, 5879-80). (*a*) The first of these sales was of a part of the plot bought in 1855 for $92,000 (see pp. 5553, 6012-14). The part sold consisted of one half of the forty street lots marked on the map opposite page 6014. The other half were retained, together with the four corner lots and the fourteen other avenue lots. Reference to the tabulation at page 5874 will show that the proportion of the 1855 cost price represented by the lots sold was as $130,000 to $403,000. Hence the cost of the lots sold was about $30,000. (*b*) The appraised value in 1884 of the lots sold out of the Harlem parcel was over 12% of the total land and bulkhead value (p. 5877) so that its original cost was over $31,068. (*c*) The appraised value in 1884 of the bulkhead and appurtenant rights, partly transferred to the city out of the New York company's parcel, was over one eighth of the total real estate value (p. 5879) so that its original cost was over $57,912. The bulkhead itself was taken away (pp. 2278, 4432) which is regarded as a great injury by the company's engineer (p. 647). It would therefore be fair to deduct $50,000 for this transaction. (*d*) The portion sold out of the 62d St. parcel was over 52½% of its 1884 appraised value (pp. 5879-80). The parcel originally cost $212,993.14 (p. 5679). The part sold therefore originally cost over $111,670.

Substracting the total estimated cost of these four parcels, or $222,758, from the real estate expenditures since 1884, the net addition in cost since that date is $1,048,868.61.

A further deduction must be made, because the court has disallowed certain items included in the Master's valuation, namely, the "land leased," "land vacant" and "land unimproved" (see pp. 161-4, 165-6, 394). The record is obscure as to the details of this deduction, but an approximate figure can be reached by the method above used. The deduction lowered the Master's figure from $13,861,000 to $11,985,435, taking off $1,875,565, or 13.53%. A sufficiently close approximation to the original cost of the "real estate" for the purposes of this appeal is therefore made by the following table:

Purchases before 1884 ...	$3,043,931.71
Purchases since 1884	1,048,868.61
	$4,092,800.32
Deduct 13.53%, or	553,755.84
Cost of "real estate" ...	$3,539,044.48

The "unearned increment" which has been allowed by the court is therefore about $8,446,000.

The Master's basis of valuation.—As to bulkhead values the Master closely followed Mr. Greene (pp. 158, 160) and as to other values Mr. Preiss (pp. 422-3). There is a radical difference in character between the bulkheads and the other properties. The former can be sold as they are and bring nearly or quite full value for land and improvements. The latter can be sold only if the plant be scrapped, and the improvements are as likely to diminish the price as to increase it.

Mr. Greene's method was, in the absence of other indications of value, to estimate the rental value of the bulkhead and capitalize that at five per cent. (pp. 1257, 1263, 1265, 1267, 1270, 1272-4).

Mr. Preiss states his basis of valuation as follows (pp. 1295-8):

> Q. Your valuation of the land is what the land would be worth if those buildings were removed? A. The land value without any buildings on.
>
> Q. How much does this building on there depreciate the value of the land as it stands to-day? A. That I cannot tell you, because I do not know the value of the buildings.
>
> Q. I know; but if you valued these as lots, you would have to remove the buildings? A. Yes.
>
> Q. To get what they would be worth without any buildings on them? A. In that case you would have to give a much higher figure probably. I give you the value as it is to-day, provided possession of the land is given. What you do with the buildings—that is a matter that does not enter into my calculations at all.

Q. You are valuing what the vacant plot of ground would be worth in that particular locality? A. This block of ground would be worth in this locality, yes.

Q. Without any buildings on? A. Without any buildings on.

Q. Now, if they were to sell them, in their present condition, they would have to pay something for taking away these buildings, would they not? A. They might use the material. *There is nobody else that would buy these buildings.* That is a matter that I cannot judge about, what they would do with the buildings in that case.

Q. I am asking, what would be the effect on the land having those buildings on there? A. It would be worth just as much to-day as it is, because nobody will buy the land with the buildings on. They would buy the land for the purpose of improving, and not with the gas houses on.

Q. Therefore, for the purposes of sale those gas houses on there are a detriment, are they not? A. The gas houses are a detriment, certainly.

* * * * * * *

[p. 1297] "Q. Then you have not valued, as you have just testified, the land as it would be with the buildings all removed? A. I have, but conditionally. For instance, if a man were to come and buy that whole plot to-day and the gas houses were to be removed, my figures would be altogether too low, but if a man would come along and buy only a portion, not objecting to the presence of the gas houses, or what might be left of them, then my figures are correct.

Q. Then, as I understand it, your figures are based on a partial removal of the plant and with the gas plant in operation? A. To some extent, yes, sir.

Q. And it is not the value of the land with the building entirely removed, as you have

> testified here a few moments ago? A. It is, conditionally, but not simultaneously, not the whole block.
>
> Q. As I understand it, your value of the land is a progressive one; as the buildings are torn down your value attaches, and when the buildings are all removed then there would be a still greater value? A. There would be on account of the whole neighborhood being benefited and attaining an entirely different character. * * * [p. 1298]. I believe that you could get 15 per cent. at least more for the property."

Mr. Wheelock, complainant's other real estate expert, also testified he was "only concerned in the land alone," and was valuing it at "what it would sell for as vacant land to-day" (p. 1154). Mr. Bradley, its chief engineer, also testified to the worthlessness of the plant as an increment in value to the land (p. 1703), saying in defense to his valuations in reports to the tax officers (pp. 1719-20)——

> "I know perfectly well that a block of ground with a gas holder on it is worth less than it would be with the gas holder not on it, because whoever purchases it would have to remove the gas holder.
>
> Q. If it has a gas manufacturing plant on it, anyone who purchases it will have to remove that, won't he? A. Exactly.
>
> Q. And so to that extent, you think the existence of the plant depreciates the value of the real estate? A. Within certain limits.
>
> Q. What limits would you say? A. I suppose the assessed valuation would be less; the actual valuation might be the same.
>
> Q. Well, then you mean that the existence of a gas plant on property is valued at a depreciating factor for taxation purposes? A. Yes, sir.

> Q. But not for any other purposes? A. Not for any other purposes; that is what I gathered from the counsel's instructions.
>
> Q. And what counsel was it that advised you? A. The general counsel of the company.
>
> Q. Mr. Sterling? A. Mr. Sterling."

So Mr. Carter, complainant's secretary, testified that its tax report was (p. 1243)——

> "A. Made up on the theory that the property of the company occupied by its gas plants sold under ordinary circumstances would practically bring nothing more than the value of the land. It is pretty well established by our own experience and by other people who have occasion to sell property of that sort.
>
> *Mr. Burr.*—I move to strike that out.
>
> *The Master.*—Strike it out.
>
> *Mr. Mathewson.*—Cannot that stand? Isn't that fair to state our experience?"

Thus it will be perceived that the Master has valued the land at a sum which is only sustained by the evidence if he gives no value to the plants; yet he gives the plants their full value.

The Master's figures.—Contrary to what we contend to be the rule of this court, the Master treated the case as if it were to be tried *de novo*, as if the state had never passed on the matter at all, and therfore followed the witnesses who impressed him the more favorably, although all the witnesses on both sides were qualified experts and none of them were impeached. The court considered the burden to be as usual upon the side excepting to the Master's report, thus allowing him to outweigh the legislature (p. 391). The difference in valuation between the two parties was about $3,200,000 (p. 157). The question involved is an important one. Our contention being that in such a case the action of the state is conclusive unless the proof to the contrary is so strong that failure to find in accordance therewith would afford a presumption of unfair-mindedness in the tribunal to which the decision is confided, we shall discuss briefly the grounds upon which the Master states that his decision was based, believing that we can show him to have read the testimony with rather slight care.

We take up first the grounds stated at the top of page 158.

Standing and Qualifications of the Various Witnesses.—Complainant's witnesses were Messrs. Wheelock, Greene and Preiss. The City's were Messrs. Thompson and McHale. The State's was Mr. Wells.

Wheelock. His qualifications are stated at pages 1136-8, 1171-4. He was thirty years old, and had been in the real estate business over eight years, of which about five years were spent in work such as would qualify him for testifying. During these five years he had had valuable experience, being an employee and afterwards a director of one of the most important real estate concerns in the city. He had been a commissioner in a number of condemnation proceedings, and had acted for many of the most influential and powerful interests. He was testifying for a fee yet to be fixed (p. 1195).

Greene. He was a civil engineer, called to prove waterfront values only. He had been Chief

Engineer of the Dock Department of the old city from 1875 until 1898, and as such in constant conference with the Commissioners of Docks in fixing rentals. This was his only experience, but he had also been called to testify in other cases as to waterfront values, and this was his only direct experience, but he had "some knowledge of the very few sales there are" of such property (pp. 1248-9, 1252-3, 1273).

Preiss. He is spoken of by the Master as "a real estate dealer and appraiser of many years' experience," in contradistinction to the City's witnesses, who are treated as persons of less experience outside of judicial proceedings (p. 158). He was sixty-five years old, and had had thirty-nine years' experience. He describes his own business as "Buying and selling, exchanging, appraising, procuring loans, testifying in courts and before Referees" (p. 1275). Being asked to specify, however, he disclosed no buying, selling or exchanging (pp. 1275-6):

> "Q. Will you state some of the clients for whom you have acted in appraising real estate, or purchasing or selling? A. I have been and still am employed by the elevated railroad companies and *have testified for them in about four hundred and sixty cases* on the different lines, and especially on the easterly lines, Third Avenue, Second Avenue, First Avenue, 23rd Street, 34th Street and 42nd Street. I have been employed very extensively by the New York Central & Hudson River Railroad in appraising all their holdings on Manhattan Island—I have the papers here—for the purpose of testing the tax assessments; went over that twice. All of their property on the westerly side. I have here the map.

> Q. We do not care for the map, just give the names? A. Then I have been testifying in insurance proceedings for the New York Life Insurance Company; I have been testifying and also appraising property for the Ayer Estate in Boston. I have been appraising and testifying for the New York Edison Company, their holdings in the city; in condemnation proceedings of the Bellevue Hospital site, and extension; condemnation proceedings for the Chanler Estate, 14th to 15th street, between 10th Avenue and the river. I have been appraising for John Pierpont Morgan; I have been appraising for different members of the Jay Gould family, in a variety of instances.
>
> Q. And for the Gould Estate? A. Yes."

His own counsel dropped the matter here, but it was taken up again on cross examination (p. 1284):

> "Q. I understand you to say that you have appraised real estate for purposes of testimony five hundred times? A. Yes, sir.
>
> Q. And four hundred and sixty of those were in elevated railroad cases? A. Well, I am permitted to tell you, I have appraised and testified on Fourth Avenue for the New York Central and Harlem Railroad Company and the elevated, I put them altogether, as a rough guess, perhaps it is not five hundred and not five hundred and fifty; it would be between that, between five hundred and six hundred anyway, five hundred and fifty at least."

and again (pp. 1286-7):

> "Q. How many years since you sold property on Third Avenue? A. That I cannot tell you. It may be ten years and fifteen

> years that I have not sold anything on Third Avenue in that section. Most of my time has been taken up *with all this*, and I am all alone.
>
> Q. Most of your time has been taken up in preparing these books that you have prepared? A. Well, how could I prepare my cases and get through with it *for fourteen years* if I didn't get posted? It is pretty hard work to be posted.
>
> * * * * * * *
>
> Q. I understand from your testimony that for the last ten or fourteen years your business has been that of an appraiser rather than as a broker? A. No, well, I have been selling property whenever I had the time to do it.
>
> Q. Your time has been so engaged in making appraisals that you have not had much time to sell? A. I have not been extensively engaged in selling property for the last few years, that is true. *I have not had the physical time to do it.*"

Thompson. He was forty-two years old and had been in the real estate business in New York for fourteen years, coming from Nashville. His work had been about equally divided between appraisements and actual transactions. He had bought and sold property all over the island (pp. 2176-7). He had been retained by the city as expert in many important cases, including *certiorari* cases (p. 2163); and had also appraised for many large estates and corporations which he named (pp. 2163-4). He was retained also in over three hundred *certiorari* cases on the other side, to contest assessments (p. 2189). Among these were a number for this complainant, the Consolidated Gas Company, concerning property here under consideration. In all of these he was retained to appraise, report and testify. He had reported his appraisements to the complainant, and had actually testified on its behalf in half or two-thirds of the cases, testifying for it, indeed, to lower values than are now given by him, as there has been an increase in value meanwhile (pp. 2216-20). The cross-examining counsel seemed to think that there was something inconsistent in his testifying a second time to the truth of his appraisements, after the interests of the respective parties had been reversed; that consistency would require him to follow the custom of complainant's officers, and have two sets of valuations. The Master does not advert to this, and it seems to us on the contrary that an expert should feel bound in duty to testify the second time under such circumstances, when called upon by the other party to do so.

McHale. He is concededly considered to be a competent expert (pp. 3993-4). He is the superintendent of real estate of the United States Mortgage and Trust Company, appraising property to be sold by it as trustee and looking after its loans, leases, etc. He has been twenty-one years in the real estate business in New York City, and is an appraiser, but not a broker. He gives a partial list of his clients (pp. 2221-2). Like Mr. Thompson, he had appraised and testified for this complainant in its *certiorari* proceedings concerning property here under consideration. In some he had advised a discontinuance of the proceedings. In some his present figures were very much higher than those which he had given to the company on the appraisement (pp. 2234, 2247-9, 2251-

2). He was not cross examined upon his qualifications.

Wells. He had been a real estate auctioneer, broker and appraiser in New York City for thirty-three years. He had been a member of the Board of Taxation and Assessment for nearly three years under Mayor Strong, and its president for two years under Mayor Low (pp. 3066-7, 3127). The Master refers to him as not engaged in as extensive current transactions as those in which Wheelock was engaged; but this simply means that the state's counsel made no attempt to have him enumerate his clients on the direct, and that complainant's counsel considered it wise not to cross-examine upon his qualifications. Quite possibly he could not have enumerated as many extensive current transactions as Wheelock. A clerk of thirty in a large corporation law office is often engaged in more extensive current cases than a leader of the bar at sixty.

Degree of care devoted to their investigations and familiarity with general real estate conditions. —These phrases of the Master at the top of page 158 are partially particularized by the following remark on the same page concerning Messrs. Thompson and McHale, the city's experts:

> "Their cross-examination disclosed numerous instances in which they disclaimed knowledge of *actual sales* in the immediate vicinity of the parcel under consideration, *notwithstanding such sales were matters of public record.*"

and by the following remarks at pages 158-9 in discussing the evidence of Mr. Wells, the state's expert:

> "Like the other witnesses called by Defendants, he was not familiar in many instances with recent sales of property in the immediate neighborhood of the particular parcel under consideration."

The italicized clauses in the first of these passages show that it was intended to refer, as to Mr. Thompson, to his alleged failure to bring with him to the trial any memoranda of certain sales claimed by complainant's counsel to be material. At pages 3990-2 a list of these sales is read to Wheelock, who answers that they were reported in the *Record and Guide* or *City Record,* as the case may be. As these pages read, they certainly look black for Thompson. Referring back to Thompson's testimony, the blackness fades out.

Premising, it is to be noted that all of the questions asked of Wheelock might have been objected to, and upon citation of authority would doubtless have been excluded, for the prices and circumstances of the sales of properties not in suit raise collateral issues, and can be asked about only upon cross-examination (Kerr *v.* South Park Commissioners, 117 U. S. 379; Matter of Thompson, 127 N. Y. 463; Jamieson *v.* Kings Co. El. Ry. Co. 144 N Y. 322). Witnesses, however, are often cross-examined about sales of particular pieces of neighboring property, although they cannot be asked about them by their own counsel if the opposing counsel is alert, and hence they generally take to court with them memoranda of the transactions upon which they have based their appraisements, and of those which they anticipate will be relied upon by the other party. Such an expert as those produced by the defendants keeps a set of real estate maps on which his clerks mark down every reported or known sale, with the prices when ascertainable (the latter being a minority, as the considerations stated in deeds are now generally either nominal or fictitious). When retained to appraise a piece of property he examines it, and also goes over the recent transactions in the neighborhood as shown upon his maps. When called to testify, he directs his clerks as to what class of transactions shall be transcribed for him to carry along.

Complainant's counsel at pages 3990-2 represents Mr. Thompson as having had no record of any one of seven different sales reported in the publications mentioned. Reference to his testimony fails to disclose any reference to first and fifth of these transactions. The second, a sale six years old, he had at his office, but had not brought it along. The third was missed by the fault of the examining counsel himself, who named the wrong street. The fourth the witness had considered, although he could not recall the price while upon the stand. The sixth related to a sale of two lots in 1901 at $8,000 each. He had brought along a note that one of them had sold in 1900 and again in 1901, and that the former sale was for $8,000. He regarded the sales as irrelevant, for reasons stated by him. Of the seventh he had no memorandum. It was a sale of an inside avenue lot at $10,000. Its bearing was upon an adjacent avenue lot of similar character. This he had appraised at $10,000, *and both of complainant's experts had already testified to the same figure about it* (pp. 1166, 1305, 2210, 3992). Is there any reason why he should have brought any memoranda to sustain this particular appraisement?

As to the other transactions about which Mr. Thompson is stated by complainant's counsel at pages 3990-2 to have been questioned, he had a note of the first. The second he was not asked about, because counsel had the wrong figure on his notes (compare pp. 2771, 3137). The third and fourth were not publicly known, and counsel learned of them through confidential information of Wheelock's.

Mr. McHale was asked about no particular transactions except with relation to bulkhead property. He testified that the sales of this class of property were so few, and the circumstances surrounding each sale so peculiar, that he did not base his testimony upon them or consider them of any value, and showed but moderate ability to state from memory the exact figures, but based it on capitalizing rentals (pp. 2260, 2269). He thus took the same course as complainant's expert Greene. He was extensively cross-examined as to sales of particular pieces of property, and also about a class of transactions upon which complainant for obvious reasons (as they carry generally large figures) much relied upon, but which are not universally respected, namely, awards of commissioners in condemnation proceedings instituted by the city. Complainants made a particular point of one of these, namely, a supposed award of $900 per foot for a bulkhead at 22nd street. The nearest property here in question is at 42nd street, a mile away. Mr. Greene thought such an award had been made (pp. 1254-5). Mr. McHale did not know of it and doubted it, but thought it too far away to be important (p. 2261). Mr. Thompson denied the fact of the award, having searched the record and been unable to find it (pp. 2280-1, 4011). He also said that it would not modify his opinion if it had been made, as the property could not be made to pay on that basis (p. 2601). Mr. Wheelock testified that such an award had been made (p. 3987), thus making a conflict of testimony. The best evidence was not produced. Is the Master justified in condemning the city's witnesses for not searching independently for a paper which both of them thought immaterial, whose existence is not proved, and which if it existed was a matter of record in the office of their own counsel, so that they had a right to rely on him to inform them about it?

Taking up now the case of Mr. Wells, he is stated in five questions at pages 3990-2 to have been unable to find upon the notes that he had brought with him to the trial any record of certain transactions reported by the *Record and Guide.* His testimony fails to disclose any reference to the transactions mentioned in the first, third or fourth question. The fifth related to a portion of the city, his notes of which he did not bring with him to the trial. As to the second, the facts were as follows: The property as to which he was testifying consisted of inside lots on 20th, 21st, and 22nd streets. He gave values of $7,500 per lot, based partly on a sale of 426 East 19th street in 1905 and a sale of 508-10 East 19th street in 1906. The sale which he did not bring with him was an earlier and therefore less important one, of 436-8 East 19th street in 1904, for $8,050 a lot. He had had the sales of 1904, 1905 and 1906 culled out of the records, but this one had failed to be noted (pp. 3140-1).

As to the other transactions about which Mr.

Wells is stated by the examining counsel to have been questioned, the first, second and fourth he had, but correctly said that the reported price was nominal. As to the third he was not asked. It does not appear that the fifth, in which Wheelock was concerned as broker, was publicly known.

Whether complainant's witnesses would have had a larger proportion of transactions at their tongues' ends if cross-examined on this line, nobody can tell. They were not put to the test. Quite possibly they would have had their ammunition nearer at hand. Cross-examinations of this kind are more valuable as exhibitions of skill by counsel than for elucidation of the issue. It is more a test of preparation by counsel than of preparation by witnesses; but a first-class real estate appraiser, whose judgment is highly relied upon by dealers, seldom cuts as brilliant a figure in expounding theories by use of collateral transactions on the witness stand as that cut by a professional witness like Preiss or a capable and active young assistant like Wheelock.

Demeanor Under Cross-examination.—This is a thing which is not apparent on the record. The remark has been attributed to the late Mr. Justice Blatchford that in print all witnesses are six feet high. But within this court's rulings as to the burden of proof, can a state statute be declared unconstitutional upon a Master's report as to the impression made upon him by the demeanor of paid experts?

Assessed Valuations.—Having already, and properly, excluded these from evidence (pp. 31-3, *supra*), the Master actually used them in making up his report, and to the extent of discrediting the city's witnesses because "in a dozen or more instances their valuations approximated, or were substantially below," the assessment (p. 158). Yet these very assessments were being contested by complainant, who had retained these very witnesses to testify that they were too high, having first itself, upon oath of its Vice-President, filed petitions to that effect (p. 32, *supra*). Yet the city charter requires the assessments to be at full value (pp. 4918-19), and complainant is here complaining that the public authorities do not treat it fairly.

Plottage.—The Master also discredits the defendants' witnesses because they hold a different theory from complainant's, which he considers to be the proper and prevailing one as to "plottage" (p. 159). Perhaps upon this point it is sufficient to say that one of the most experienced and skilled judges of the state Supreme Court has since decided that the complainant's theory of plottage was wrong (Matter of City of New York, 56 N. Y. Misc., 306, 310).

Plant.

This term includes the manufacturing and distributing system, except the mains, services and meters.

Book value.—This also is based upon the appraisement of 1884, with subsequent variations which we shall describe when we come to state the facts as to Repairs, Renewals and Depreciation. It was thus increased from $12,182,491.41 in 1884 to $16,087,428.72 on October 31, 1905 (complainant's Exhibit 79, p. 5032), and $16,319,811.69 on June 30, 1906 (p. 754).

Tax reports.—Complainant's valuations of its plant in its verified reports to the public authorities, and its explanations thereof on various occasions, are as follows:

On May 17, 1904, nearly a year before the investigation by the Stevens committee, Secretary Carter presented to the Corporation Counsel a statement giving the total valuation of the gas works excepting street mains at $8,593,694.54 (p. 1033). He was examined upon this figure in connection with an application for revision of the taxes of the complainant, and testified as follows (pp. 1034-5):

> "Q. What does that represent? A. The valuation placed upon the plant by the Chief Engineer.
>
> Q. Who is he? A. Mr. William H. Bradley.
>
> Q. Is this supposed to include all your machinery or gas tanks, everything which constitutes the plant for the manufacture and transmission of gas? A. Yes, except the mains.
>
> Q. Everything except the mains? A. Except the mains and what would be classified as personal property."

On November 30, 1904, complainant filed according to law its written report to the State Board of Tax Commissioners. This report was verified under oath by the same gentleman as follows (p. 5074):

> "R. A. Carter, Secretary of the Consolidated Gas Co. of N. Y., being duly sworn, deposes and says that the foregoing statements have been compiled from the books and rec-

> ords of this company, and after careful examination of the same, declares them to be a true, full and correct statement of the property of said company and the value thereof at the close of the year ending June 30, 1904, as well as of its financial condition and affairs on the said date, to the best of my knowledge and belief."

The prescribed form contains a schedule headed "Schedule D, Statement of Assets and Liabilities, June 30, 1904." The first item entered herein is "Real Estate and Plant $19,673,075.42" (p. 5068).* Mr. Carter was examined the following spring about this item by Mr. Hughes, counsel to the Stevens committee, and testified as follows (pp. 859-61; we omit what did not form part of the Hughes examination).

> "Q. Will you please take the item in that report, the first item of real estate and plant, $19,673,075.42. Now, that is a statement of the value of the real estate and plant of the Consolidated Gas Company to June 30, 1904, is it not? A. That is exactly what it is.
>
> Q. That is exactly what it is? [A.] As near as we could determine.
>
> Q. That is what I am asking you? A. That was the value of the property at that time.
>
> Q. That's it exactly. In other words when you came to make up the report to the State Commissioners for the year ending June 30th, 1904, you sought to ascertain fairly what the value of the property of the company was? A. Precisely.
>
> Q. And you took the various properties of the companies with which you were familiar and you fixed what you decided to be the fair value of the properties and stated these values in your report? A. Precisely.

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* The plant valuation included herein is $8,456,595.71 (p. 5276).

Q. And under the head of Real Estate and Plant you put down the figures $19,673,075.42 as the value of the real estate and plant of the company? A. Yes, sir.

Q. Before you get to that as suggested, is that the value that was arrived at after consideration of the matters by others besides yourself? A. That is the case, Mr. Hughes.

Q. And with whom did you advise in making the determination of value? A. The engineers of the company.

Q. Who were they? A. Mr. Bradley and Mr. Woods.

Q. And who else? A. The Assistant Secretary who has charge of the distributing system of the company.

Q. Who was that? A. Mr. Simpson, Mr. C. C. Simpson.

Q. Anybody else? A. I think if we were in doubt I would have consulted with the President from time to time with regard to the figures that went into these reports.

Q. Yes, sir, and probably with other counsel? A. Probably—always—always with counsel. Reports are always submitted to counsel and fully approved before being filed.

Q. You sought in this way to get from all persons connected with the company who had expert information as to the value of the property what would be a proper valuation thereof on that day? A. Yes, sir.

Q. And the amounts which are stated in this Schedule B that you have before you, and that report of 1904, were those arrived at and stated? A. Yes, sir.

Q. And with the concurrent judgment of these various men familiar with the facts? A. Yes, sir.

Q. Taking then the first item of real estate and plant $19,673,075.42, and taking that as the value thus arrived at of the real estate and plant, state whether or not that covered

> all the real estate and plant of the company; that is to say, the land, the buildings thereon, and stoves, the holders and various apparatus which are connected with your business of gas making and apart from the items which are separately mentioned later on, such as mains and services and meters, stoves and personal property; is that correct? A. That is correct."

The assets contained in Schedule D aforesaid, after deducting the items representing Bonds, Obligations and Stocks of other companies, Accounts and Bills Receivable, Cash on Hand, Unclaimed Dividends, Metropolitan Fund, and Contracts, Rights, etc., foots up $27,298,576.50, and Mr. Carter was further examined by Mr. Hughes about this total (pp. 1007-17). The witness stated that Schedule D purported to be "a statement of the assets and liabilities at their actual value as nearly as we could ascertain it," and further testified on examination by Mr. Hughes as follows (pp. 1014, 1016):

> "Q. * * * I am anxious, however, to ascertain, and I believe you have testified that the figures in there are the values on June 30, 1904, of that property. Is that not so? A. That is true.
>
> Q. That is true? A. Yes, that is the value, as we estimate it."

* * * * * * * *

> [p. 1016] "Q. It was what you believed it to be worth? A. Yes, sir.
>
> Q. That is what we mean by value, is it not? A. Practically.
>
> Q. What we mean by actual value? A. I only want to make it very plain, Mr. Hughes.
>
> Q. When you were trying to make up this statement, in consulting the other gentlemen

> who knew about the matter your effort was to make a statement of the actual value, was it not? A. Yes, sir.
>
> Q. And you believed that was the statement? A. We believed that, sir.
>
> Q. And that statement of the real estate and the plant—— A. Always.
>
> Q. The meters and services and everything outside of the cash assets and securities foots up $27,289,576? A. Yes, cost of reproduction, less depreciation."

Further explaining, the witness drew a distinction between "estimated actual value" and "worth", the latter including "its use, application, good-will of the people with whom the company was doing business, its relation with the public. That would contribute somewhat to its worth, but that would not figure in its value on the basis of cost of reproduction, less depreciation. * * * Those figures you are showing amounting there to $27,000,000, represented our estimated value of this plant on the basis of the cost of reproduction less depreciation" (p. 1017. In this last sentence the word "plant" is used as including also the real estate, mains and services, material and supplies, meters, stoves and other personal property. See Schedule D, p. 5068).

After the report of the Stevens committee, on the following November 30, complainant filed its next annual report, likewise verified under oath by Mr. Carter with the same form of verification (p. 5063). The figure given for Real Estate and Plant in the same schedule was $19,678,612.76 (p. 5057).

This report was filed after the proceeding before the Gas Commission had already commenced (see p. 5). In his testimony before the commission Mr. Carter testified that his memory had been refreshed by talking to Mr. Bradley, and that he had obtained this valuation by "taking one-half of the value of the plant as representing the value of the holders, plus some scrap value of the plant which would be dismantled in connection with the removal of the [*sic*] Astoria" (p. 1036). The president and Mr. Woods were not called, but Mr. Bradley, being recalled on behalf of the company, testified as follows (p. 1702):

> "A. Mr. Carter applied to me for a figure, and I took advice with our general counsel on the subject and was informed as to what the law was in the case. Acting upon that advice I simply cut the book value in half and added to that—the absolute figure I cannot give you; I have not got them—but I added to that, if my recollection serves me, between $600,000 and $700,000 as the scrap value of the plants to be dismantled, understanding that we were going on with our Astoria business and that within a very short time practically the works would be dismantled and simply scrapped, as we had no market for them. The resulting figure from that, half of the book value and the six or seven hundred thousand dollars that I added, was the figure that Mr. Carter used in the tax report."

The Master refers to the explanations as "not altogether satisfactory," and (disregarding Mr. Carter's oral testimony on the Hughes' examination) says that tax reports "are, in the case of large corporations, ordinarily prepared by counsel" and "in the nature of pleadings, and are so drawn as to support the theory on which it is hoped to secure the most favorable results" (which in the case of large corporations, in the

Master's opinion, apparently permits their being disregarded where they would not lead to the results aforesaid), and he adds "Under these circumstances, when, as in the present case, it appears that taxes are being constantly contested, it must very commonly occur that views are expressed on behalf of the corporation more or less inconsistent with the valuations it would put upon its property for purposes of sale, condemnation or such an action as the present" (p. 216).

He therefore brushes these admissions aside as "of no particular value as evidence", because on his theory the valuation of the plant is to be "its structural value" (p. 216); and he thinks that the state violated constitutional rights by allowing for the depreciation which the complainant itself has continued to claim in its tax reports based upon an intended early removal to Astoria and consequent early scrapping of the plant.

Value as Real Estate.—Like most manufacturing plants, this plant is conceded to add little or nothing to the cost of the land (see p. 215; also *supra,* pp. 43-6).

Cost of reproduction or duplication.—If the measure of value of the present plant is to be the amount which a rival company would have to pay in order to duplicate complainant's outfit with another equally effective, we have no sufficient information about it. The state took the objection that this should be the point of the inquiry (p. 1515) but the objection was overruled, and complainant proceeded on the same theory as in the case of the land values, as will appear.

We can not take the cost of the new Astoria plant as a measure, because that is expected to do much better work, by saving by-products and otherwise. While it is more costly per thousand cubic feet of estimated output, there is no present means of estimating the savings to be effected by such matters as "better equipment," the manufacture of cyanogen and other "by-products that have never been recovered by any gas company in this country," the placing of machinery "that is not in any other plant in this country" (Bradley, pp. 579, 642, 1722, 1732) which will make the Astoria plant worth more in proportion to its cost.

The present plants on the other hand, in the language of Chief Engineer Bradley, "are too much cut up into small units that are impractical to be placed on a modern up to date works. Everything is too small" (p. 1718). The coal gas plants have retorts "that are small, they require a great deal of labor, and the use of a great deal more coke under the benches to keep them going than the type of furnace they have in the Bronx" (Wood, p. 2339; Carter, p. 4525). These plants, in Bradley's words, are "out of date and somewhat antiquated" (p. 1732). Their apparatus is not "inefficient; simply comparatively inefficient" (p. 1733). It requires more labor and "brings up the cost of production" (p. 1733). To extend them would be "patchwork" (p. 626). As to the 14th St. station, "Nobody else would want to buy it for a gas manufacturing plant" (p. 1738).

Various figures have been named as representing standard cost of plants per thousand cubic feet of maximum daily output, as $400 per thousand for coal gas and $200 for water gas (Addicks, pp. 1639-40, Bradley, p. 1721), or $340 and

$123 respectively, excluding the holders (Mayer, pp. 1455-6, 1458-9) or 30 cents per thousand cubic feet of annual sales (Humphreys, pp. 1684-5) but these are exploded by actual experience. The capacity of complainant's own works, coal and water gas together, was increased 31,500,000 feet at an expenditure of $5,132,620.41 (p. 1716), or at the rate of less than $165 per unit (and see as to 21st St., pp. 538-9, 1715). It is plain on reflection that there must be a great variance between different works, and that there are many parts of the works that do not vary in expense in the ratio either of daily output or of annual sales.

Original cost. Our assignments of error do not make this question material in relation to the plant.

The Master's basis of valuation. He mainly follows the figures of Mr. Mayer, although Dr. Humphreys makes depreciation greater (pp. 1801-2), and it is therefore important to ascertain the theory upon which they are based.

Mayer testifies on cross-examination as follows (pp. 1347-8):

> "Q. And you computed then that works that produce one million feet are worth so much, and works that produce five million are worth five times as much, is that the way you did it? A. No, sir, I did not.
>
> Q. Well, how did you? What figure did you use as a multiplier? A. I figured on each and every apparatus and each and every connection throughout the entire works, separately, and applied as a factor the particular cost of each apparatus."

And again (pp. 1394, 1396):

> "Q. Then, as I understand it, you are not attempting to find the capital of the company that was invested in the plant, but what someone would have to pay if they got you to build them a plant somewhat similar to this to-day, is that it? A. That is the idea exactly, with the exception that it would be *an exact duplicate of the plant as it exists to-day.*
>
> Q. If, however, you were going to build a coal gas plant to-day of a capacity of 9,500,000 cubic feet per day, *would you reproduce this identical plant? A. I would not.*
>
> * * * * * * * *
>
> [p. 1396] Q. I understand that if you were to produce a plant to-day which would produce the results that this plant does, that you would not build this kind of a plant; is that right? A. Not if I were asked to build a plant with the total maximum capacity as it exists to-day.
>
> Q. And you could build such a plant cheaper could you not than the estimate which you have given? A. No, it would cost more, but it would be better. It would include a great many apparatus which these plants do not include.
>
> *Q. But your result in the cost of gas produced at that plant would be very much less, wouldn't it? A. Yes."*

And again (p. 1460):

> "Q. If you were called upon to construct a plant for the use of the Consolidated Gas Company, to-day, would you scatter the works around as they are here? A. No, sir, I certainly would not.
>
> Q. The works divided into five manufacturing stations require a much larger investment in plant, do they not, than it would to

bring them together into one station? A. Decidedly.

Q. And also the cost of operation is very much more in the scattered stations than it would be in the one station? A. Yes, sir.

Mr. Mathewson.—This witness has not operated plants. I don't think he should be asked that."

And again (pp. 1481-2):

"Q. Now, as I understand you, in examining the 14th and 42nd Street plants, for instance, you did not take into consideration whether they were commercially or economically worth replacing, did you? A. No, sir; I only figured on what I found there.

Q. That is what it would cost to reproduce that apparatus, whether or not it was commercially and economically an apparatus that would be built to-day? A. I paid no attention to that whatever.

Q. And did you take into consideration whether gas could be reproduced at those particular plants at $1.50 or 50 cents per thousand cubic feet? A. I did not consider it at all because it had no bearing whatever on the apparatus as I found them.

Q. As you valued it? A. As I valued it.

Q. Now where a plant was of an old type which, owing to the advance in the science of gas engineering, would not be built to-day, did you allow anything for depreciation by reason of that fact? A. No, sir."

And again (pp. 1495-6):

"If I had to build that plant over again new, of course, as I said, I would construct it differently, for the full capacity that it is now. For that particular district where that plant was originally intended to supply gas, the location was very favorable.

Q. Would you say, that taking all these plants together as a whole, they are up to date construction?

A. I have said the other day that if I was to construct them new for full capacity, I would construct upon different lines than those laid out, which is due to the fact that they were built in small units at the time and added to from time to time until they finally reached their present capacity, but if built for the whole capacity the basis of construction would be an entirely different one of course.

* * * * * *

Q. And those circumstances under which they were developed to their present size did not operate to make them up to date construction, did it?

A. Why no, it could not be so, because some of those plants originated away back in the fifties, when the plants as used to-day were not known, and the buildings were arranged for that character of apparatus. In order to change them, as I said before, it would cost tremendously to do it on the present site as compared with a new site.

Q. Is there anything to prevent the company from taking these plants one by one and reconstructing them and bringing them up to date, as far as construction is concerned, and increase the capacity of each one as it is rebuilt?

A. There is no chance for any decided increase in capacity. As I said before, they can be improved with modern apparatus, but it would cost a great deal more to do it on the present site, as compared with a new site."

And on re-direct examination (p. 1504):

"Q. Now, as a matter of fact in your experience, is a plant which has been built up for the last sixty or eighty years to supply gas, being increased in capacity from time to time as the requirements of the consumers increase, in any instance exactly the same as a new plant which you would install for the full capacity if you were to do it over again to-day?

A. No, sir. If I should build a plant for the full capacity it would be built on different lines.

Q. But where a plant is built up in this way, is it ever possible to get it exactly on the lines as you would produce it to-day?

A. Not at all."

And again on re-direct (p. 1510):

"Q. I finally ask you whether from your observation of these plants, knowing that they have been built up during the last sixty or eighty years, you consider the plants as efficient and in good condition or otherwise?

A. I believe I have already stated that in my testimony. I think that all of the plants that are operated to-day for the manufacture of gas are as perfect as can be made under the conditions under which they were built and developed."

And on re-cross (p. 1512):

"A. I did not examine the operating results at all."

Of course this method did not result in a figure representing what it would cost to build other plants that would produce the same amount of gas and by-products at the same expense, nor have we the material for such a computation. If complainant has the burden of proof, then complainant must suffer for the omission. The point was taken at the close of Mayer's testimony, by motion to strike out (p. 1515).

What value is to be attached to calculations based upon Mr. Mayer's method may be illustrated from the case of the holder cover. In ancient times it was considered necessary to put a gas holder into a building. There is one of these venerable buildings on complainant's property, and it is in very good preservation.

In Rowland's appraisement of 1884 it appears as follows (p. 4928):

"BLOCK No. 2.

West 18th Street, above 10th Avenue, two inclosed gas holders, also well.

1. Gas holder building, 188 x 92, brick, with heavy stone trimmings, extra heavy roof and internal posts, framing, etc. .... $45,251"

In Mr. Mayer's appraisal of the 18th St. plant we find the following (pp. 1451-2):

> "Brick and brownstone building used as enclosure for holders, $169,328 without depreciation; $155,784 with depreciation.
>
> Q. What do you mean by that, that the holders are put inside of a brownstone front or not?
>
> A. Well, there it is, a large building in which are located two holders as a protection for the holders against snow and inclement weather, and the man that has to go on top of the holder to clean it. *It is an old construction that would not be carried out in these days.*
>
> Q. It is absolutely useless is it?
>
> A. No, it is not absolutely useless. The building is there and contains the holders, and the holders are distributing holders.

Q. Well, I say the building does not serve any purpose. You say a holder will last forever if left exposed to the elements. Then what necessity is there for enclosing it in a brownstone front?

A. *I would not build it to-day, but it was built in the days when they considered it necessary to have a building around it to protect it.*

Mr. Mathewson.—And it is not necessarily a brownstone front, Senator?

Mr. Page.—He says it is a brownstone front.

The Witness.— No, brownstone — brown trimmings around the windows and things like that. In Chicago the holders were enclosed up to the year about 1880, in very large circular buildings, and it has only since 1880 been abondoned; the use of those holders there, and the weather was very severe.

By Mr. Kirby:

Q. They do not enclose holders now where the climate is severe, do they?

A. Yes.

Q. All over the world except in Canada and in England?

A. None enclosed in England and none in Canada.

Q. None in Canada that you know of?

A. Yes.

Q. Old construction?

A. Yes.

Q. No new construction?

A. No, sir.

Mr. Mathewson.—It depends upon the section; there are some sections still using them and erecting them.

By Mr. Page:

Q. If you were erecting this plant, which I understand the company wishes to have valued and for which purpose you have been

> retained to testify, as to what you could produce this plant for to-day, you would eliminate this brick and brownstone building from any such estimate, would you not?
>
> A. If I was asked to make a valuation of that now? No, I should not eliminate it because it is there and represents the value that I have given it in my schedule. I have valued everything that I found on the premises that was in actual operation or use.''

He had added ten per cent. engineering charge and five per cent. interest on capital pending construction, so that the holder cover was valued at $179,151 (pp. 1332-3, 4660), at least $146,662 of which the Master and court have allowed (see p. 175). On re-direct examination he said (pp. 1507-8):

> ''Q. You were questioned as to a building at 18th Street enclosing some holders there. Is that form of construction, enclosing holders in a building, in use anywhere to-day?
>
> A. No, I believe it has been universally abandoned, even in severer climates.
>
> Q. Was it formerly a construction that was recognized by engineers?
>
> A. Well, yes, it was used many times. I have constructed some of those buildings myself.
>
> Q. Does not that reduce the cost of taking care of apparatus inside?
>
> A. Yes, sir.
>
> Q. Saving the expense of cleaning snow off the holders and doing various other things?
>
> A. It was not so much the expense entailed in cleaning the holders from snow, but at that time it was considered dangerous or almost an absolute impossibility to clean holders in severe climates as Canada or Chicago from snow during heavy storms. By better

and improved construction of the holder recently we have applied complete stairways extending from the ground level to the top, so any portion of any holder, no matter how large, can be conveniently reached by the men that go on top to shovel off snow."

Thus this obsolete building, on which even Rowland, back in 1884, allowed a very heavy depreciation, is now capitalized against the consumers by the Master at $100,000 more than the amount at which it was put into the owners' capitalization, nearly a quarter of a century before.

We understand that elsewhere, in view of the appreciable, although very slight, convenience afforded by such structures, they have been appraised at cost less ninety-seven per cent. discount.

Of course we have selected the most striking *reductio ad absurdum* of the theory on which the court's decree is based, but there are others.

Mains and Services.

Book Value. This also is based upon the appraisement of 1884, with subsequent variations as in the case of plant. The valuation of the mains was increased from $5,233,962.10 in 1884 to $7,852,151.03 on October 31, 1905. The corresponding valuations of the services are $1,034,241.41 and $1,212,071.09 respectively (Complainant's Exhibit 79, p. 5032).

Tax Reports. Complainant's valuations of its mains and services in its verified reports to the public authorities and its explanations thereof, are as follows:

In Mr. Carter's verified tax report of November 30, 1904, in Schedule K, he gave as "Present value of property in streets, highways, and public places on basis of cost of reproduction (new)" $5,613,221.12, and as "Present value of property in streets, highways and public places (allowing depreciation)" $4,261,156.39; and in Schedule D, under "Mains and Service", $4,261,156.39 (pp. 5068, 5072). The same figures with a slight increase were repeated in 1905 (pp. 5057, 5061). Carter was examined about this by Mr. Hughes, and testified that the figures were decided upon after conference with the parties who were acquainted with the facts, with his own experience and knowledge of the facts, and that the present value of the pipes, allowing for depreciation, would be $4,261,156.39 (p. 1009). The explanation given was that he got these figures from Mr. Simpson, the Superintendent of Mains and Services; and the latter testifies they represented the value of the material, taking the cost of laying the pipe under the most favorable conditions, including only the bare cost of material, and the labor for laying in soft dirt streets; ingenuously saying "I did it for taxation purposes, and I thought those were the right kind of conditions to take" (pp. 719-20). Simpson denies however that he gave the estimate for services in the tax report, saying "It is an absurd figure" (p. 1680).

Original Cost. The charges and credits since 1884 have been at cost. The appraisement of that date was made at a time when the cost of material and labor were both high (Rowland, pp. 6084, 6095).

Hence the book values, aggregating $9,064,222.12, represent the actual cost of the mains and services, as nearly as it is now ascertainable.

The Master's Basis of Valuation. In the case of the mains and services the cost of duplication at the present time becomes a favorable measure for the complainant. The Master adopts it.

In this way the actual cost or book value of the mains is raised from $7,852,151.03 to $12,636,150, and that of the services from $1,212,071.09 to $1,994,034.35, the figures stated in the decree. The total increase is thus $5,605,962.23.

Simpson's testimony was to the effect that the price of iron pipe rose from $25.50 to $28.90 from 1885 to December, 1905, as of which date the valuation was made, and that the additional labor cost is 20% (p. 691). The labor figure is probably exaggerated (p. 706). The price of pipe is $1.70 higher than the average for 1904 (p. 5313). The total tonnage is 122,018.4 (p. 3895). Hence by taking the price of 1905 instead of the price of 1904 complainant gained over $200,000; exactly half, indeed, of the total gain over 1884.

Simpson further testified, and it is undoubtedly the fact, that pipe laying has become in recent years more expensive in many streets on account of other subsurface occupation (pp. 672-3), and in most of the streets on account of the laying of new pavement (pp. 670-1).

He had indeed testified before the State Commissioners of Gas and Electricity in the proceeding which was pending before them from November, 1905, to February, 1906 (p. 5), that the value of the mains was $11,687,466.41, based as he then stated upon a mileage of 880 miles (pp. 1750-1).

In the present proceeding, in July, 1906 (p. 666), as above stated, he raised his figure about $1,000,000, although upon a mileage of only 822 miles (p. 668). His explanation when confronted with his former testimony was that he did not know that about seventy miles had been "written off the books." Nevertheless he insisted that his former estimate had been based on 822 miles, "whatever that testimony was" (pp. 1751-2). Assuming this insistence to be correct, he nevertheless failed to account for the difference in figures, and was not fully cross-examined about it. This could not have arisen from differences in cost of pipe. Not only is the increase nearly five times as much as the total increase of this item from 1904 to 1905, but the prices upon which his present valuation purports to be based are prices contemporaneous with the proceeding before the State Commission (p. 691). But Simpson's higher figure was endorsed, upon his statements, by complainant's expert Dr. Humphreys (pp. 1695-6) and adopted by the Master. It includes 27 miles of disused mains, but he testifies that these amount only to $103,207.01 (p. 4498). Simpson, who was a somewhat elastic calculator, got a little margin by estimating on the assumption that 90% of the street mileage was covered with new pavement, although the actual figure was 88% (see pp. 671, 684).

Present Condition. Simpson, whose testimony has been followed by the court testifies that the mains and services are as good as new. "They are absolutely physically as good as the day they were laid," and he has found no deterioration "in a single instance" (p. 669, see pp. 699-701, 703). They have indeed been injured at two points by electrolysis (as to which see pp. 129-30, *infra*), but these have been repaired. The mains are subject only to the risk of being superseded by larger mains, or relaid to conform to the city's requirements as to use of the subsurface; the services, to supersession when private dwellings are superseded by apartment houses.

Franchises.

It was conceded by us that complainant had franchises to operate in the streets, and all of the valuations involve this assumption, as without franchises it could not be valued as a going concern. But for some years past there has been much discussion as to whether or not these franchises are revocable, so that they can be terminated by the state or city, at will or upon not over a year's notice. The subject was not formerly considered an immediately important one, although interesting as bearing upon the price to be paid if the city should ever conclude to condemn the property and take it over; but the present case brought it prominently forward by Judge Lacombe's holding that the franchises, if not revocable, could be made the basis of a very large exaction from the public in the matter of gas rates; and immediate litigation seemed to be challenged by the Master's extraordinary ruling that complainant's claims must be conceded because the city and state had not exercised the right of revocation or brought any judicial proceedings to oust the complainant from the streets (p. 192). It was the opinion of the undersigned that there was neither legal necessity nor propriety for an arbitrary and immediate revocation, nor for an ouster suit; that complainant should be left in possession, although we believed it to be but a holdover tenant, subject to reasonable regulation of its rates, until the city should, if ever, desire to operate a municipal plant; that in that case reasonable notice should be given and an equitable adjustment arrived at; and that meanwhile the Master's ruling was too revolutionary and ill reasoned to be the basis of any action, until it should have been reviewed by the court; and the court did not sustain it (p. 419 top). The Attorney General, however, had felt called upon by the language of the report to bring a *quo warranto* action, and asked leave of court to do so. Leave was denied on the ground that whatever rights might exist were in the city, not the state. The *status* of these franchises has therefore never yet been determined by the state courts.

Existence of the Franchises.—Annexed hereto is an Appendix in which the law and facts bearing upon this subject are fully set forth.

The Special Franchise Tax.—This, which Judge Lacombe and Judge Hough regarded as so important a matter, amounting to an estoppel upon the state, seems to us to have no bearing whatever, because neither the incidence of the tax nor its measure is at all affected by the question whether the franchises are or are not revocable. We shall set forth the state law and its practical construction in the body of the brief (pp. 233-4, *infra*).

Valuation of the franchises.—Dr. Humphreys' valuation of the good-will at $7,500,000 seems to have been intended to include the franchises. It was a valuation of "the good-will of that business, including the value of the established business, and its connections with consumers and other elements which go to make up good-will as distinguished from its tangible plant" (p. 209). Complainant's only other direct evidence was the assessment of the "special franchises" by the State Board of Tax Commissioners in 1906. The amount of the assessment was $31,900,000, which includes the mains and services as well as the intangible property. William Halpin, the chairman of that board, was called as a witness. He was not qualified as an expert, and the assessed value had already been ruled out as incompetent, but he was permitted to state without objection that in his opinion this was a fair and reasonable value (p. 1848). The testimony was irrelevant, because the state treats the special franchise tax as in the nature of an income tax. It is not regulated by the length of the franchise, but is the same whether the franchise be revocable or irrevocable (pp. 233-4, *infra*). This tax was fixed "as of the second Monday in January, 1906, when all taxes are determined" (p. 1850). At that time the legal rate for gas was one dollar, at which rate the complainant made an income justifying a very much larger assessment (pp. 26-7 *supra*).

The complainant filed on March 28, 1906, a complaint against this assessment, verified by the oath of its secretary, Mr. Carter, in which it furnished a valuation as follows (p. 6697):

> "The true value of complainant's special franchises in the City of New York *and the amount for which the same would sell under*

> *ordinary circumstances* does not exceed the sum of $14,000,000.'"

Mr. Carter had shortly before testified before the State Commission of Gas & Electricity that the value of the tangible portion of the special franchises, that is, of the mains and services, was $11,687,466.41 (p. 1751). Hence his valuation of the intangible portion of the franchises is at a figure not over $2,312,533.59.

In his oath to the complaint, whose truth he reiterates on the trial (p. 3085), after stating his experience as an employee of the complainant and one of its predecessor corporations in various capacities since the year 1877, he testifies as follows as to his expert qualifications (pp. 6700-1):

> "Deponent is thoroughly familiar with the gas business in the City of New York, and especially in the Borough of Manhattan in said City. Deponent knows the extent and nature of the special franchises possessed by the Consolidated Gas Company, and by all the other gas companies operating and doing business in the Borough of Manhattan, and is familiar with the business and operations of all said companies. Deponent has made a careful and thorough study of all details of the gas business, *and is familiar with the intrinsic and relative values of the special franchises* possessed by the different gas companies in the Borough of Manhattan in said City."

The Master remarks that this is "of but slight assistance in arriving at a satisfactory conclusion," and pursues his general policy not "to attach particular importance to statements of the character appearing in the complaints above quoted,'' since "they do not, under the authorities, constitute an estoppel, although sometimes valuable as evidence'' (p. 203). The Court considers it as no evidence at all (p. 416). Neither Master nor Court adverts to the qualification clause or considers complainant's act in presenting this valuation as coming from an expert valuer to be an important admission.

The Court raises the valuation of the intangible portion of the franchises to $12,000,000 by a train of reasoning which (assuming the inferences correctly to follow from the facts stated) is based upon mistake as to the facts. Judge Hough states that upon the origination of the company in 1884 "it then issued stock of the par value of $7,781,000, representing the franchises it then acquired *and nothing else*'' (p. 417); and then, without any evidence whatsoever to support him, and in square opposition to the repeated oath of the complainant (pp. 6691, 6697) makes them grow *pro rata* with the growth of the tangible property in valuation. The history of this $7,781,000 valuation is detailed at considerable length in the record, and must be set forth in some detail, in view of the importance attributed to it by the Court.

The $7,781,000. This, together with the $1,303,000 working capital, forms the residuum of the total capitalization as arbitrarily fixed by the consolidation committee in 1884. With all the liberality applied to the appraisement of the tangible property, it had reached only $29,994,000 *plus* the valuation of the New York Mutual Company, which subsequently refused to join (pp. 20-2 *supra*). There was a sharp difference of opinion as to whether the capitalization should be made high or low (pp. 6377-8). Mr. Zollikoffer, President of the Metropolitan Company, favored a capitalization of $35,000,000. On the day after the date of the appraisements he put a motion on the committee record to the effect that the capitalization should be $43,000,000. He was overruled, and it was made $45,000,000 (pp. 6520-1). The Mutual also objected (p. 6377).

Judge Hough in his supplementary opinion states that defendants moved to correct his franchise valuation by having it "declared that the $7,781,000 valuation of 1884 was fixed by ascertaining the then market value of the share capital of the constituent companies and deducting therefrom the appraised valuation of the tangible property of the same" (pp. 424-5). The motions do not appear in the record. No motion involving that proposition was made by these appellants. They, as well as the Attorney General, denied that the capitalization had any relation to the market value of the share capital, and argued that on the contrary it was very much inflated even over that figure.

Judge Hough, when dealing with the question of the "rate of return," has assumed the right to take judicial notice of the market values of gas stocks and bonds and securities of a similar nature; a right as to which we are not aware of a precedent either way. If the right exists, it can only be accurately exercised by following the advice of Mr. Samuel Sloan (p. 6149), and examining "the price in the stock list." The standard publication for such matters in New York is the *Commercial & Financial Chronicle.* If it is proper to examine the quotations for the purpose of taking judicial notice of the rate of return a year or two back on similar securities, we take it to be equally proper to take judicial notice of the quotations of twenty-four years back, for the purpose of testing this claim of the complainant that its capitalization was but equivalent to the sum of the market values of its stocks at the time. If so, the question can be quickly settled, for the bid and asked prices are set forth in the *Commercial & Financial Chronicle* for those dates. We annex hereto as Appendix B a tabulation showing the combined valuations of the stocks of the five companies (the Knickerbocker stock being included in the valuation of the Municipal stock) as near as obtainable to the beginning of each month from July, 1883, to August, 1884, inclusive, with the valuations for each week from September 6, 1884, to November 22, 1884, inclusive (it being remembered that the negotiations for consolidation began in 1883, the capitalization was determined after September 9, 1884, and the consolidation agreement dated September 29 and filed November 10). It will be remembered that the total capitalization, after the New York Mutual dropped out, was $39,078,000, from which should be deducted the obligations of the various companies amounting to $2,329,000 (p. 23 *supra*). The total market values of the capital stocks, if made the basis of the nominal capitalization, should therefore have been $36,749,000. But they did not reach $30,000,000 until January, 1884; and even in the speculative period immediately preceding the consolidation they were below $33,000,000. When the deal was consummated and the capitalization fixed, the bid price ran up for a moment to nearly $34,500,000, while the asked price was marked up over $35,500,000, but both bid and asked prices ran off rapidly, and in five weeks even the latter had fallen below $33,000,000.

But there is enough in the record to show that the capitalization was not based upon market values, although the quotations appear there as to one date only (July 1, 1884, p. 6450).

Thus Mr. Lees, the President of the New York Gas Light Company, testifies that the stock of that company "was 160 or 170; somewhere along there; 160, perhaps; I should think 160 was all it was worth, and all it would sell for at that time, on an average" (p. 6330). The amount outstanding was $4,000,000. The indebtedness was $6,000 (p. 6132). It should therefore, on complainant's theory, have appeared in the total capitalization at $6,406,000. It did appear at $7,821,000 (p. 4821).

Mr. Zollikoffer the younger, secretary of the Metropolitan Gas Light Company, testifies that before the consolidation the stock of that company was down to 225 (p. 6513). The amount outstanding was $2,500,000. The indebtedness was $68,800 (p. 6132). It should therefore, on complainant's theory, have appeared in the total capitalization at $5,693,800. This stock had been falling in value, and some time previously had sold at from 245 to 255 (pp. 6162, 6513). Even upon the latter basis its capitalization should have been $6,443,800. It actually appeared at $7,422,000.

In the testimony of Mr. Moss of the Harlem Gas Company it appears that the stock of that company stood at 130 (p. 6307). The amount outstanding up to the time when the consolidation took effect was $1,800,000 (pp. 5702, 5717). The indebtedness was $170,000 (pp. 5602, 6132). The amount apportioned to the Harlem Company, on complainant's theory, should therefore have been but $2,510,000. It was really $3,103,000 (p. 4821).

The Manhattan seems to have been the only company whose stock was not grossly overvalued, even on the basis of the very much inflated valuations of September, 1884. The company put in a claim for $12,000,000 in order that it should get 7% interest thereon. For this purpose it was only necessary to rate its stock at 300, which was about the actual value. It put in a claim at 320 and got a little above 300 (See pp. 6176, 6211-12, 4821).

Complainant's contention and the court's mistaken supposition as to the basis of the capitalization are based on a mistaken statement in the old Gilbert committee report, which itself is based on the statement of President Zollikoffer that the $7,781,000 item was arrived at "partly by value of stocks as they sold; but I don't know what else" (p. 6162) and that the reason suggested for fixing $45,000,000 as the total amount was that that "was about the value or the market price of the stocks at that time" (pp. 6521-2), and partly upon the statement of Mr. Day, counsel for the Municipal (which came out best in the transaction) that "that was my view generally" and that the committee took "all the capital of the companies at their fair valuation in the market" (p. 6211). Mr. Gawtry, who was the secretary of the committee of adjustment (p. 6129) and Vice-President of the Municipal Company (p. 6107), gives a different reason (p. 6134), and the younger Zollikoffer, who was present at all of the meetings of the committee, testified that the capital was not fixed with regard to the market value of the stocks to his knowledge, and that its apportionment was made entirely regardless of market price (p. 6510).

The actual facts above shown with relation to the values of the New York, Metropolitan and Harlem stocks show the latter testimony to be correct, and that if there was any understanding among any members of the committee as to matching values of the new stock against values of the old stock, the value of the new stock must be taken at some figure below par. The new stock seems to have been quoted at 84 at that time (p. 6176).

It thus appearing that the capitalization was fixed without any reference to the market values of the stocks, but by a majority report of a committee of adjustment it remains to ascertain what the surplus, over and above the appraised values, was supposed to represent. This of course is best ascertainable by inquiry into the method by which the amount was divided up among the different companies. The evidence makes the truth of the following statements perfectly clear: first, *that the surplus was $7,084,000, not $7,781,000*; second, *that it did not represent franchises except nominally;* third, *that it involved no valuation of franchises;* and fourth, *that it was a mere stockwatering operation, divided up in proportion to the actual sales of gas for a selected period.*

Among the papers submitted to the committee was a resolution providing for a certain plan for dividing up this balance. It was read to a witness who was inclined to assent to it as the plan actually adopted, and it seems by the other evidence to have been the plan adopted. It is as follows (p. 6213):

> "When all of the values are fixed and determined upon, the amounts thereof shall be aggregated and the difference between the total thereof and the amount of the capital of

> the new company, as heretofore fixed, shall be deemed to be the value of the good-will and franchises of the several existing companies, and shall be divided between them in proportion to their individual sales of gas as adjusted and confirmed by the present committee of one of each company, to the gross amount of sales by all the companies so adjusted for the period from October 15, 1882, to October 14, 1883, and the sum thus divided shall be added to the schedule value of each of the existing companies, and shall together form the capital of the new company."

The younger Zollikoffer, who was present at all the meetings of the committee (p. 6510) testifies that the division was based on the business for the year October, 1882, to October, 1883, and continues as follows (p. 6509):

> "Q. How was that business estimated? A. That was the actual business of the companies, the actual sales.
>
> Q. You mean the sales of the gas? A. Yes, sir.
>
> Q. And the sales of gas for the entire year? A. The entire year."

Mr. Gawtry testified as follows about it (pp. 6134-6):

> "Q. How, in arriving at that basis, did you estimate the value, so called, over and above the values, so-called, of the properties, rights and franchises of the constituent companies to the amount of $7,781,000, including Mutual? A. That was based upon the amount of business done by the companies, if I remember right.
>
> * * * * * * * * *
>
> [p. 6135] Q. You mean the number of cubic feet of gas? A. Of gas sold. * * *

Q. You took the total amount of gas as reported from the consumers' meters? A. Yes, sir.

* * * * * * * * *

Q. You took the gas product and measured that, not by indexes at the place of production, but by the meters of the consumers? A. We did not take the gas product; we took the gas sales; that is not an intelligent question; leave out the word 'gas product'; the gas made at the works and the gas delivered to the customers is a very different thing; if you will use the word 'sales', that will be more intelligent.

Q. Whether the business was based on the product or receipts? A. The receipts had nothing to do with it.

By the Chairman:

Q. What receipts had nothing to do with it? A. The money received from the gas sold; the amount of dollars and cents did not enter into the question at all.

Q. State what did form that basis? A. It was the sales of each one of the companies for a certain period. * * * * *

[p. 6136] Q. Now having ascertained the business of each company, what was the next step in arriving at this figure, $7,781,000? A. I don't remember.

* * * * * * * * * * * * * *

Q. Is your memory capable of being refreshed by any memorandum? A. I should want the sales of each company for the time, whatever it was.

Q. Given sales for each company for a given period of time, what next? A. Take the amount of capital over and above the valuations and apportion it.

Q. That is to say you agree on what the capital should be first? A. No, sir; after the valuations were finished we did.

> Q. And the difference between the valuation and the agreed capital was made the subject of estimate and apportionment among the various companies? A. It was made the subject of apportionment among the various companies.
>
> Q. And after that estimate and apportionment the amount arrived at was put down, and it was upon that basis which you have stated that the capitalization of the Consolidated Company was arrived at? A. I believe that was so."

Mr. Moss testified as follows (p. 6310):

> "Q. Do you know how this item, $469,000, in rights and franchise of the Harlem Company was arrived at? A. It was upon the assumed valuation of all the rights and franchises of the company; and the right to sell gas in the city.
>
> Q. How was that parcel apportioned to the Harlem? A. Because of their right to sell gas to the city.
>
> Q. Their proportion of the difference between the total valuation of the properties of all the companies and the proportion of capitalization? A. Less a certain amount reserved for working capital.
>
> Q. And that was apportioned to the Harlem Company, according to the amount of gas sold by them for a year or two previous? A. The sales of a certain year was taken as a basis.
>
> Q. From October, 1882, to 1883? A. October, 1882, to October, 1883."

That the franchises claimed by the companies had nothing to do with this item is further shown by the testimony regarding certain of these franchises, which shows that they were not considered as a matter of any importance.

Mr. Lees, the President of the New York Company, who had been with that company since the beginning of 1861 (pp. 6322, 6329) did not know what special privileges his company had had prior to 1871 except that "it had originally exclusive rights in the city for a few years, but they had expired long before I went there" (p. 6345). It will be borne in mind that whatever rights the company had, were derived from the original grant in 1823. He thought that they had some rights; "I cannot say what; it had a right, certainly, to lay mains in the streets" derived from the city, but he could not say when; an exclusive right "at the beginning, but that expired long before my time" (pp. 6345-6). If the franchises of the various companies had been looked into, Mr. Lees would hardly have been so vague about it, only one year later.

But the most striking testimony with relation to the immateriality of the franchises was that of the elder Zollikoffer, President of the Metropolitan Gas Light Company. It will be borne in mind that the franchise of that company, according to the argument now advanced by the complainant, was precisely the same as those of the New York and Manhattan companies, and was perpetual. Mr. Zollikoffer testifies as follows (pp. 6526-7, 6528):

> "A. We had a right under the ordinances of the city to lay mains, service pipes, and to furnish gas and collect those bills afterwards under the laws of the State of New York, and to conduct the business in a manner according to the rules; but every thing was guaranteed to us that we should not be interrupted.
>
> Q. By whom? A. By the city, provided we got the franchise from the State.

Q. Was anything said as to its duration? A. It was thirty years from 1859, I think.

Q. *So that would expire in 1889?* A. *Eighteen hundred and eighty-nine, yes, sir.*

Q. That was really all the right you had, or all the franchise you had your company? A. Yes, sir; ours was for the whole Manhattan island.

* * * * * * *

[p. 6528] Q. In fixing the values of the rights and franchises so-called, as apportioned to your company, was the circumstance of your charter expiring in 1889 mentioned in the committee? A. I think they all knew it; I do not know that there was particular mention made.

Q. No particular stress made of it? A. No, sir; *but they all knew it."*

If the respective franchises had had anything to do with the question it would be impossible to explain why the New York, Manhattan and Metropolitan companies (each now claimed to have had a franchise unlimited in time and space) got $1,417,000, $2,329,000, and $1,863,000 resuectively; while the Municipal company, whose franchise confessedly was to expire in twenty-three years, and had been rendered very doubtful by the then recent decision in Anderson *v.* Equitable Gas Light Company (12 Daly, 462), was allowed $1,175,000. The Knickerbocker Company, which claimed a franchise to the whole city running six years longer than the Municipal's, and also claimed a permanent franchise north of 79th Street, was allowed only $528,000 in all.

The companies almost certainly had valuable patents, but these were not taken into consideration in fixing the capitalization, possibly because at the end of their respective terms of seventeen years each they would expire. It is barely possible that they may have all run out by 1884, and that those spoken of by Mr. Roome at page 6465 may not then have been acquired; but if those mentioned in the record as having lately belonged to these companies were still in existence in 1884, their value may be inferred from the fact that the right to use one of them had been sold by the Municipal company to the New York company for $300,000, the patent rights of the former company having been purchased at an expense of at least $350,000 in capital stock (p. 5600).

Other capitalizable property.

Meters and miscellaneous.—This item in the Master's report we did not contest before the court, nor have we filed any assignment of error thereon. As to this and the next item our course was determined by the general policy of raising in this court no questions not involving a very considerable amount.

Working capital.—This item in the Master's report was modified by the court to $1,616,000 (see p. 396), and we have filed no assignment of error to its conclusion. According to the Master's report, it would seem that this subject was not fully argued before him (p. 180). The reserve for working capital was arrived at in 1884 by taking one-thirtieth of the book value. It was at first $1,500,000 (p. 4821), and then proportionately reduced to $1,303,000, which is the nearest round sum to one-thirtieth of $39,078,000. One thirtieth of the present book value (p. 5032) would be about $1,590,000.

National Coal & Coke Co.—This was merely an investment in stock of a company with which the complainant did business. As the complainant held all of its stock, the company could conceivably be used as an instrument for creating fictitious apparent expenses, or as a cover for the concealment of actual profits. In either case the misuse could be corrected in ascertaining the complainant's true net income; but the court perceived the impropriety of including the stock as part of the capital, and struck the item out.

Goodwill.—The Master allowed $20,000,000 for franchises and goodwill as a single item (pp. 205-10). The court struck out $8,000,000 as representing the goodwill, which was disallowed (pp. 410-11).

Both the Master and the court recognize that complainant, being in the nature of a monopoly and not being subject to competition under the laws as they at present exist, has no goodwill in the ordinary sense of the term. In a competitive industry, the word denotes the probability of the customers' continuing to trade at the old stand. In a non-competitive industry like this one, it can mean nothing more than the probability of holding the customers if competition should be established. The Master used the term in substantially the same sense as that in which the term "going concern" is used in the Knoxville water case, now before the court, although he then proceeded to cite as authorities two cases which related to genuine goodwill (pp. 208-9). He admitted that none of the methods suggested by the evidence or otherwise afforded a satisfactory basis for a specific finding (p. 210).

The only testimony in the record on the subject came from two witnesses called by the complainant, and in both cases was admitted over the defendants' objection and exception; but of course, in view of the subsequent action of the court, the exception became immaterial.

Vice-President Addicks, being asked what concessions in his experience are necessary to draw business from an established company, named a minimum of 10% on the selling price of gas to private consumers (pp. 1580-1). He had not shown any experience on the subject. He had come into the employ of the complainant long after competition ceased in its own territory, and it does not appear that there was any gas war in Boston or Chicago during his previous experience there (pp. 1562-3); nor would a consumer have the same temptation to permit the introduction of a new service and meter during an ordinary gas war (expectedly to be of short duration and then terminate by a merger of some kind) which he would have in case of the establishment of a permanent municipal plant.

Dr. Humphreys fixed the goodwill at $7,500,000. He gave no reasons and was not cross-examined about it; but complainant's counsel stated in their argument below that the valuation was "at $20 per consumer". Both the Addicks and Humphreys calculations (and, it seems to us, all possible calculations of the kind in a maximum rate case) are based upon the assumption that the consumer can be made to pay more cents per thousand feet for his gas than would otherwise be proper, because of an expert opinion as to what his own future action would probably be, if he and the other consumers should join together in establishing a municipal plant. Dr. Humphreys thinks that on the average each consumer should pay a reasonable rate of return per annum on $20, not on account of any outgo on the part of the complainant, but on account of this supposed probability about his own possible future action.

It has already been noted that Dr. Humphreys' valuation seems to have included the franchises as well as the goodwill (pp. 80-1, *supra*).

"Astoria, i. e., capital invested in production of gas secured from other companies." This rather singular item in the Master's report was stricken out of the complainant's capitalization by the Court, but the Court allowed deductions from income by reason of the same matter which, capitalized at 6%, would amount to about $3,333,333 (p. 99, *infra*), in addition to the item it allowed (and which we do not contest) as part of the operating expenses which on the same basis would amount to nearly $1,000,000 more (p. 102, *infra*).

Since the decree (very properly, it seems to us), treats the matter as one belonging not to capital but to income account, we shall discuss it at that place.

Complainant's Net Income.

On account of the Master's ruling that the year 1905 should be taken as the basis of computation, except so far as complainant should claim or defendants be able to establish (without the privilege of a preliminary examination of complainant's books) that it was an abnormal year, all calculations must necessarily start with Complainant's Exhibit 94, which is set forth in full, and with the items of operating expense conveniently numbered, at pages 217-20 of the Master's report.

This shows the output and sales of complainant for 1905 to be as follows:

Gas made by itself........	10,657,810,000	cu.	ft.
Gas purchased from other companies	2,929,210,322	"	"
Gas made and sold......	10,419,461,426	"	"
Gas purchased and sold..	2,863,702,341	"	"
Total sales	13,283,163,767	"	"

The small differences are due mainly to leakage, and to gas consuméd by complainant itself. Nearly all of the sales were at the rate of one dollar per thousand cubic feet, or as it is commonly called, "per M." The City of New York, however, paid ninety cents per M upon 398,525,978 cubic feet, or about 3% of the whole, besides various amounts for special services which complicate the calculation and make an apparent return of over one dollar (pp. 5052, 5076). The gas actually sold at the dollar rate was 12,884,637,789 cubic feet. The gross profits (gas sold but not paid for, being treated by complainant as an operating expense) were therefore about $13,243,110.

The operating expenses disallowed by the Court are those numbered by the Master as 54 and 69, and portions of items 58, 61, 66 and 67. Items 47, 53 and 62 are misleading as stated in the table. They represent expenses incurred by complainant, but expenses which either were reimbursed or else related to items of Miscellaneous Income, and not to the price of gas. The final columns in the exhibit, headed "Cost per M. c. f. made," and "Cost per M. c. f. sold" are for this and other reasons entirely worthless (see Judge Hough's remarks at pp. 400, 428). The inclusion of these columns is part of the general policy adopted by this complainant and gas companies in general to obscure the situation with misleading statistics of operating expense, as will be otherwise illustrated further on.

Deducting the operating expenses disallowed, the Court found the net income in 1905 from complainant's own product to have been $4,015,475.02, and from purchased gas $1,865,117.43, making a total net income of $5,881,192.45, which at eighty cents would have been, as the Court calculates, $3,224,592.45 (pp. 404-5, 407, as corrected at pp. 423, 430).

From this figure, and on the assumption that in 1906-7 the purchased gas will be made at Astoria, he proceeds to make a deduction of $200,000, (which would be the income at 6% of a capitalization of $3,333,333,) substantially to represent what the Master put down as "Astoria, *i. e.*," &c. (pp. 406-8). To this deduction we assign error.

The main operating expense disallowed by the Court was contained in item 67 (p. 220) of ten cents per M on total sales under the heading of "Contingent Expense (includes renewals)." This, generally called the "Ten Cent Item," is sustained by the Master after a long discussion to be found at 224-38, a discussion replete with the fallacies inherent in all arguments based upon the theory that operating expense varies per thousand cubic feet of sales. The Court threw out most of it, and substituted an "Eleven

Cent Fund," or an allowance of eleven cents per thousand cubic feet of complainant's own output, to take the place of items 34, 35, 36, 47, 48, 49, 50, 51, 52 and 67 (pp. 401-4).

The Purchased Gas.

This gas is purchased from four other companies in the Borough of Manhattan, whose stocks are held by complainant as follows (p. 184):

New Amsterdam Gas Co.	99%
New York Mutual Gas Light Co.	51%
Standard Gas Light Co.	92%
Central Union Gas Co., owned by New Amsterdam Co.	

The gas is really purchased, and is so treated by the court, but for some reason the contracts for its manufacture are in the form of, and are called—

Agency Agreements. There is no such agreement with the Central Union Company, which is under no written obligation to supply the gas (p. 1096). The written agreements with the other companies are in most respects the same. They are all dated December 31, 1902, *and they all run to December 31, 1907* (pp. 5047, 5049, 5050), or until eight months after the expiration of the period specially in contemplation by the court (Decree, p. 432), provided, that in each case either party could terminate the agreement upon one year's notice. It does not appear that notice had been given by any company, although the testimony herein did not close until 1907.

The other important clauses of the three agreements are as follows (pp. 5047-51):

I.—The Consolidated Gas Company of New York hereby employs the Company as its agent and upon the terms hereinafter mentioned to manufacture, produce and deliver to it for the term of five (5) years, such illuminating gas of the illuminating power required by the laws of the State of New York as it may require during each year, for the said term of five (5) years, estimated to be equal to at least cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York in such quantities and at such times as may be reasonably required by it.

The Company agrees to manufacture [&c.]

II.—The Company shall, as agent for the Consolidated Gas Company of New York, and at reasonable rates, purchase all the constituent materials and furnish the labor necessary to such manufacture, production and delivery, and employ in such manufacture, production and delivery its own plant and appliances.

III.—At the expiration of each month, the Company shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent materials and labor made by it, as aforesaid, during such month, and the Consolidated Gas Company of New York agrees to pay to the Company, within ten (10) days thereafter, the amount due, according to such accounts, together with an additional ten per cent (10%) which shall be in full for its services and the use of its plant and appliances during the said month.

The agreement with the New Amsterdam Company contained also the following provision, which has been overlooked by the Master and court (pp. 5049-50; see pp. 4459-60):

> 5. The Consolidated Gas Company of New York further agrees that it will at the end of every period of six months during the term of this agreement pay to the New Amsterdam Gas Company interest at the rate of five (5) per cent per annum for the previous six months upon the amounts expended by the New Amsterdam Gas Company in making additions to its Ravenswood Works since March 1, 1901, for the purpose of increasing or facilitating the manufacture of gas.

During 1905 the New Amsterdam Company was still engaged in making additions to its plant, as is shown by the fact that the interest paid under this clause for the year ending October 31, 1905 was $56,132.72 (p. 1090), while for the year ending December 31, 1905, it was $58,149.04 (p. 5778). For the latter period it represented at the five per cent a capitalization, in cost of additional construction, of $1,162,980.

Gas Furnished Under the Agreements.—The amounts estimated in the "agency agreements", and the amounts actually furnished during the year ending October 31, 1905, are as follows respectively (pp. 5047-50, 5299):

	Amount Estimated.	Amount Furnished.
New York Mutual Co..	100,000,000	319,210,100
New Amsterdam Co...	500,000,000	2,112,227,300
Standard Co.	500,000,000	447,756,300
Central Union Co......	....	93,555,400
Total	1,100,000,000	2,972,749,100

For the year ending December 31, 1905, the total purchased gas was a little less, but the falling off was in the Mutual gas, in which complainant was interested only 51%, while the supply from the New Amsterdam, in which it was interested 99%, increased to 2,173,196,400. The new additions, just above referred to, so increased the capacity of the latter company that it supplied in each of the last four months of 1905 far more than the complainant's two coal gas plants, the 14th and 42d street stations, combined (p. 5807).

Necessity of the Purchased Gas to Complainant. —Its use was undoubtedly profitable, or complainant would not have taken nearly three times as much gas as it was obliged to take. But it had works of its own to fall back upon, as for instance the 111th street works with a capacity of 2,420,000 feet daily maximum (p. 1467), or 484,000,000 feet per annum, or more than the total gas purchased from the Standard Company. These works the court has capitalized against us despite our objection that the plant was idle (see pp. 175, 423, 1467, 4430; and as to other reserves see pp. 636, 1431-2, 1446, 3788).*

These idle works must be regarded as held in reserve, because gas can be purchased more cheaply than it can there be made.

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* There is no sufficient basis for the Master's statement that the complainant's maximum daily sales during 1905 were about 70,000,000 feet. It had daily station records showing the facts (p. 1647) but did not produce them. The figure was taken from assumptions in questions of the city's counsel, not very positively assented to even by Mr. Addicks (p. 1654). They are opposed to probability. The average daily sales varied from about 45,275,000 down to less than 26,000,000 (p. 5807). Mr. Bradley is reported as saying that the maximum variance is 6,000,000 (p. 547). He probably meant a variance between two days in the same month (see pp. 556-7). The statement that its maximum capacity was but 51,000,000 feet is also misleading. The figures relate only to *rated* capacity. In emergencies, a much larger output can be obtained. The 14th Street plant, rated at 3,500,000, averaged over 4,500,000 in January (pp. 1714, 5709). *There is no probability that complainant was ever called upon for more than its own rated capacity.*

Profitableness of the Business to the Other Companies.—The court assumes that it is not a paying business to them, but only continued from necessity; overlooking their unexercised option to terminate the relation, and the fact that they are furnishing three times the supply that the agreements call for.

The New Amsterdam is indeed under complainant's thumb, but of the Mutual stock complainant owns but a bare majority, so that that company cannot be imposed upon without a remedy; yet it is supplying three times the gas estimated in the agreement.

The explanation of the transaction is that the selling companies are no longer expanding in territory. They "are confined within a limited area" (p. 4499), so that their main opening for increased output is in selling to complainant. Judge Hough admits that "possibly" this "has afforded to the selling companies a method of disposing of surplus product"; but if so, why does he say that the business "cannot and ought not continue"? (p. 406).

The special clause which we have quoted from the New Amsterdam agreement (p. 102, *supra*) proves that at least the New Amsterdam gas is actually surplus product; for when it requires an extension of plant, the Consolidated pays to have the extension built. The clause also proves that to this company at least the transaction is profitable; for *when the extension is built it buys from the New Amsterdam, of which it owns 99%, in preference to the Mutual, of which it owns but 51%* (p. 103, *supra*).

Astoria.

This name for short is given to the property of the Astoria Light, Heat & Power Company, whose stock is held by the complainant.

We have already made some use of the figures given as the cost of the land, tunnel and plant of this company, and adverted to the fact that its ratio of operating expense cannot be foretold (pp. 35, 65-6, *supra*). It is located in the old village of Astoria, in the Borough of Queens, across the East River from the Borough of Manhattan.

The land and tunnel are intended for a collection of separate plants or "units" (p. 546), but at present only one "unit" is under construction, which will have a capacity of 20,000,000 cubic feet a day, or 4,000,000,000 annually (pp. 542-3, 546).

Time of Construction.—Work began on a small scale perhaps as early as 1902, but not seriously until the summer of 1903 (pp. 1573-4). The first "unit" was still under construction on January 30, 1907 (p. 4570), although it had then already been putting out some gas. The testimony having closed immediately after that day, we are uninformed as to whether it was completed during "the year beginning May 1, 1906."

Commencement and Extent of Operation. It started to produce gas on December 3, 1906, about 11.50 A. M. (p. 4226). Being still unfinished, it naturally could accomplish but little. Being asked as to the daily output, Vice-President Addicks testified on January 23, 1907, as follows (p. 4292):

> "A. Commencing with about 200,000 feet on the 3rd of December and increasing grad-

> ually to about 500,000 I should say, or possibly 800,000, and then the second house was started, as I remember it, and that was allowed to come up gradually to possibly a corresponding amount.
>
> Q. By the second house you mean part of the first unit? A. Yes, the second house of the first unit, and then they were both gradually increased, so that now they are making over 4,000,000 feet a day, the two of them.
>
> Q. You have been receiving that gas since the 3rd of December without any agreement as to what is to be paid for it, is that true? A. None whatever.
>
> Q. No agreement whatever has been made? A. No agreement whatever. The amount in December was something like between 40 and 50 million feet for the whole month, so that the average, you see, was a little over a million feet."

It will be noticed that even on January 23 the unit was turning out only one-fifth of its rated capacity. In December it turned out only from 40,000,000 to 50,000,000 feet as against 324,000,000 feet of purchased gas in December, 1905. When the testimony was given, it was only supplying at the rate of 124,000,000 feet per month as against 320,000,000 feet of purchased gas in January, 1905 (p. 5807).

This gas was sent through the new sixty inch main to the New Amsterdam works at Ravenswood, and thence through that company's tunnel under the East River to the Borough of Manhattan (pp. 3861, 3981-2, 4292).

No price was fixed; but as the complainant owns the whole of the stock of the Astoria company, this would be a mere matter of bookkeeping (pp. 4292, 4568, 4581). In fact it would appear from Mr. Addicks' testimony that, up to January 23 at least, the operation was experimental only (pp. 4292-3):

> "A. Sooner or later we will have to arrange for the payment of the expenditure to make the gas.
>
> Q. Well, if that is the price, you will sooner or later have to arrange it? A. Yes, they cannot run on forever without getting something for their product."

This, it will be noted, was nearly three-quarters through the "year beginning May 1, 1906," during which the court finds that four billion cubic feet of gas was supplied from the Astoria works (pp. 408, 425-7, 432).

Probable Use of the First Unit. There is some indication of unsettled purpose on the part of the complainant, and even of a desire to threaten retention of the unpopular coal gas plants in Manhattan as a means of getting rid of the eighty cent gas law (Addicks, p. 1587).

The ostensible plan at the time of the trial in 1906 was to use the first unit as a substitute for the purchased gas. Complainant's counsel, often afraid to trust his witnesses to testify uncoached, interrupted the cross-examination of the Secretary (p. 944), and led the Vice-President (p. 1573), to be sure that this should be matter of record; and the court follows them in its opinion (p. 406).

But if this be really the plan now, it is a new and changed one. When the Astoria construction was begun in 1902, it was with the purpose of scrapping the existing plants and using gas made over there (Bradley, p. 577). Plainly this was to be the use of the first unit, for after work was begun at Astoria the "agency agreements" above described were made, and made to run until long after the first unit should be completed. The same purpose was publicly announced in the spring of 1904, to make public sentiment in support of a bill then before the Governor for his action, which bill was for the purpose of confirming a claim to a franchise to lay pipes in Long Island City (p. 2300, see pp. 3161, 3792, 5961). That bill was indeed vetoed (p. 3161); but the required pipe was laid just the same, and is the conduit by which the gas is conveyed to Ravenswood (Bradley, p. 545; Simpson, pp. 3861, 3981; see p. 895). The purpose was the same when the "Ten Cent Item" was hurriedly introduced into the accounts after the Stevens Investigation of 1905 (see pp. 871-6, 943); and during 1905 new construction was being done at Ravenswood to permit the manufacture of additional gas for sale to the complainant (p. 102, *supra*), which would hardly have happened if it had been intended to discontinue use of the new construction in the following year.

But a mere purpose in the minds of the directors of one of the gas companies affected will not, we suppose, be held enough to annul a statute. If the company can reasonably conform to the statute without suffering a deprivation of property, due process of law is respected. Hence the question is not what the directors really intend to do, whether they mean what they say or are trying to hoodwink the public and the court, but what they may reasonably be asked to do by the state.

The two coal gas plants on Manhattan Island are the 14th St. plant with a daily rated capacity of 5,000,000 cubic feet, and the 42d St. plant with a daily rated capacity of 4,500,000 (pp. 1714-15).

Multiplying these figures by 200 (pp. 546-7) gives their respective annual capacities at 1,000,000,000 and 900,000,000.

The New Amsterdam plant, which is practically owned by complainant, has by an expenditure of over one million dollars for that purpose been enabled to supply complainant with gas at the rate of 2,173,196,400 feet per year, or fifteen per cent more than the rated capacity of the other two plants combined, and it is now actually producing in proportion (pp. 102, 103, *supra*).

The cost of manufacture at the two Manhattan stations was 37.88 cents and 34.87 cents respectively (pp. 3357-8, 3360, 5976-7). The cost of manufacture at New Amsterdam was 29.01 cents for the year ending October 31, 1905 (p. 3489, see p. 4469).

This gives us the following tabulation, showing what would be the cost of producing 1,900,000,000 cubic feet of gas, at the old works, and the cost of producing the same amount at New Amsterdam:

14th St. (1,000,000 Ms at .3788)	$378,800
42d St. (900,000 Ms at .3487)	313,830
	$692,630
1,900,000 Ms at .2901..........	551,190
Saving at New Amsterdam....	$141,440

This is a saving of six per cent on a capitalization of over $2,350,000 or of five per cent on a capitalization of over $2,825,000. In addition, the complainant would be able to realize the present value of the land under the 14th St. and 42d St. plants. This is valued by the Master at $3,620,000 (pp. 159-60); from which sum should be deducted the comparatively small items disallowed by the court as lands vacant, &c., and the value of the land under the large holder at 14th St. if that is desired to be retained as a distributing holder; and to which sum should be added the value of the land at 21st St. which is occupied by an oil gas plant for enriching the coal gas. These savings amount to far more than the combined value of the two plants to be scrapped (p. 175).

It may be suggested that growth of its own business may cut off future assistance from New Amsterdam. But there is no evidence to support such a finding. What evidence we have is the other way; and the burden of showing it if true was upon complainant, which does not seem to have overlooked any point of advantage to itself.

It may be further suggested that we are taking the actual cost at New Amsterdam, while the complainant will pay cost plus ten per cent. This is true, but it will get back the ten per cent through its ownership of the New Amsterdam stock, so that this figure will not enter into the calculation.

Probable Increase of Sales. The court, as part basis for deducting $200,000 per annum from complainant's net income, assumed that there would be *an increase of sales which would increase the net cost of production.* This increase he figured roughly at one billion cubic feet for "the year beginning May 1, 1906" over the calendar year 1905, saying that he "preferred to rest the assumption upon normal increase of population and advance of business as being better justified [than increase from diminution of price] by the evidence before the court" (pp. 406, 427).

But the "evidence before the court" directly opposes this theory, instead of supporting it. The increase from 1904 to 1905 was less than one-eighth of that amount, or 112, 404,000 (Complainant's Exhibit 85, p. 5039), considerably less than one per cent of the total sales. As Dr. Humphreys points out (p. 1825), *per capita* it was a falling off (p. 1593). *The sales in 1906 were very likely even less than in 1905.* Vice-President Addicks testifies as follows in September, 1906 (p. 1607):

> "Q. Are you selling more gas this year than you did last year? A. I am a little in doubt whether we are selling a little bit less or a little bit more. Some months I remember we have sold less. Month before last we had a material gain, evidently on account of the very dark weather we had during one month.
>
> Q. Are you buying more gas this year than you did last year? A. I have not got that figure in my mind."

As to the expected increase in 1907 over 1906 (p. 1592):

> "Q. Then you agree with the statement in which he concludes 'that the people are consuming about as much per capita as they will be likely ever to consume?' A. I think it is very probable, taking conditions as we see them existing to-day in the island of Manhattan."

In fact New York already consumes almost 9,200 feet *per capita*, or more than any other city in the world, London coming next at from 8,000 to 8,500 feet (p. 1591). The population of the Borough of Manhattan is now increasing but slowly, and Mr. Addicks endorses the theory of Dr. Humphreys that the "point of saturation" is "about reached"; in other words, "that the people are consuming about as much *per capita* as they will be likely ever to consume" (pp. 1591-2).

Complainant took the position all through the hearing that, because the point of saturation had been so nearly reached, no considerable increase could be expected even from a lowering of price; that the experience of the gas war of 1899 and the anthracite coal strike of 1902 can not be repeated. This is a matter of pure speculation, since Judge Lacombe's injunction prevented the experiment from being made. A vast amount of guesswork about it, and of argument based upon remote analogies, has been put into the record. It seems to us to be a region where the state can guess to a limited extent, but where a Federal court can not guess for the purpose of annulling a state statute.

Cost to Complainant of the Astoria Gas. As the Astoria is a separate company, we must figure on the theory that the gas is purchased, even though the complainant owns one more per cent of its stock than it owns of that of the New Amsterdam. On the other hand, it is matter of indifference to complainant's directors whether they put the purchase price high or low. Hence we must reach an equitable adjustment of the price of whatever gas if any we assume to be bought during the year 1906-7. This price should represent the cost of manufacture and an adequate return upon that part of the Astoria capitalization which is applicable to the purchased gas.

For the purposes of this appeal we are willing to accept the court's estimate of fifty cents per M for the product of the first Astoria unit (p. 407), the court's miscalculation being as to the amount of output.

Repairs, Replacements and Contingent Expense.

The standard method, theoretically considered. This is expounded by Dr. Humphreys, who is introduced to us as the leading living authority in Europe or America; nor have we any criticism to make of it as a system adapted to the standard (that is, the average) gas company. Our objection to it here is one of inadaptability to the very peculiar history and circumstances of this particular company.

The method is not presented as a mere theory of Dr. Humphreys, but as one generally approved by the gas pundits (p. 1819), and (although it does not adopt it) by the complainant in particular.

The *maintenance* ("total maintenance" he calls it) of a gas plant involves expenses for *current repairs, current renewals,* and *deferred renewals* (p. 1832). The first two items make no difficulty here, as they have been always paid for out of operating expenses (p. 1797; State's Exhibit L, p. 5078). The deferred renewals, or *final renewals,* are often but inaccurately called *depreciation* (p. 1806). They do not represent normal and expected *deterioration,* as do the current renewals, but depreciation from causes previously unknown, like electrolysis, loss of undeteriorated plant by obsolescence or "supersession", extraordinary accidents, increase in the general rate of wages, unexpected legal restrictions as to candle-power, &c. (pp. 1692-5, 1827-8, 1845).

To take care of these risks, this standard method provides two funds: first, a *depreciation* or *renewal fund* of so many cents per M of sales, or so much per cent *of depreciable capital,* each year; and second, a *reserve fund* equaling ten per cent. *of the total capital invested in the business,* to be accumulated by setting aside five cents per M per year until the required amount has been reached (pp. 1692-5).

The amount to be set aside for the former purpose is ascertained by estimating the life of the plant. In this case he estimated the life of the manufacturing plant at 33 years, and of the distributing plant at 60 years, and averaged them up at 40 years (p. 1803). He therefore took 2½% of the depreciable capital as an amount which would replace it in forty years (p. 1694). He included Astoria in the capital, thus raising it from $26,919,418.38 to $34,919,418.38 (p. 1818). This called for a depreciation charge of $860,480 annually (p. 1826) or .65592 cents per M for 1905 (p. 1692).

Assuming the constitution of such a fund, what is to be done with it until it is needed? One of the city's experts said "Put it aside at compound interest." This, as he and Dr. Humphreys agree, would make the annual charge for the first (or depreciation) fund only 1.05 cents per M instead of 2.50. Dr. Humphreys advises *that it be put into extending the plant,* but *that the additional plant thus acquired should not be regarded as part of the capital of the company.* He says (pp. 1797-1800):

> "I advocate taking the reserve for depreciation and putting it back into the business, keeping very careful track of that reserve and how it is spent, so it cannot be considered as a warrant for extra capitalization. In other words, it is against the depreciation to the limits of my estimate. * * * Now the question is how shall we invest that

money. If the business is lying dormant and is not extending and there is no use for further capital, then of course we will put it out to accumulate at compound interest and of course the day of the death of the business is coming. If we do not go ahead, we will go back very shortly. But if the business is active and there is use for capital to cover extension of business, I claim it is the wise policy to take that depreciation fund so far as it will go—you will probably require a good deal more, but so far as it will go—and use that depreciation fund not only for the current renewals and even the deferred renewals, but for the final renewals, to offset the final renewals and invest it in extensions so as not to draw in that extra capital which otherwise would be necessary for those extensions. * * * Now, if you are not ready to use the surplus from depreciation charges for exhausted part of the plant, at any particular moment, you have the opportunity to use it for extensions, and you put it into extensions. How much you will have in forty years, of course, is problematical.

Q. On those extensions you get an increased busines?

A. Yes, and you need it.

Q. That goes on to your general earnings on gas sales?

A. Yes.

* * * * * *

[p. 1799] Q. Where are you going to get your money from to build your new plant, or old plant?

A. So far as you had used that money in advance for extensions, in lieu of depreciation, you would have to put out capital at that later day rather than at the earlier day. You would have saved yourself capital charges in the meantime.

* * * * * *

Q. But you are putting it into extensions,

so at the end of this time you have a larger plant and you may have reproduced a plant that was the same value of your original plant, but you have nothing back to take care of your original plant which has given out?
A. We will take a simple case and say that there is no necessity for renewals in the meantime and that the plant ceases to exist at the end of 40 years and goes out of existence at once. In the meantime I have taken my 2½ per cent., which multiplied by 40 is 100, and at the end of 40 years I have reproduced that much more property, and my original plant goes out. I have got the 100 per cent. for the old 100 per cent."

And again (p. 1807):

"Q. A final renewal fund—is it for a fund which will replace a plant when it wears out? A. Not entirely, no, sir. It is to maintain the asset of plant at par. Now, it may not be used for renewals at all. We have fulfilled our duty as managers if we have kept our plant asset at par and can do that by placing certain moneys as I have explained in extensions, *and do not recapitalize them,* but have that piece of extension take care of that piece of depreciation. Of course that is practically being done all over the world in every business."

And again as to the second or *reserve fund* (p. 1826):

"A. I would invest it the very best way I could, whether in the business or any other way.
Q. Well, the best way—— A. *It would not be capitalized,* and would not be given out as dividends.
Q. The best way you could discover to invest your $2.50 was to put it back into the gas

business, it being one of the most productive things you could think of? A. Yes.

Q. Would you put this back in the same way? A. I don't know whether I would or not. There would be no objection to doing it in my mind.

Q. And if you did and there should come some of these untoward circumstances which you think might possibly happen, where would your money be to take care of them? A. You would not have invested that in the business unless you needed that extra capital. You would simply have then deferred the bringing in of the extra capital. When the trouble occurred you would now get that capital which otherwise you would have obtained outside in the first instance."

And again, on further cross-examination as to the status of the property bought with moneys out of these funds (p. 1830):

> "I should say it would be obtained from the depreciation of the capital already invested. In other words, you would impair your capital to that extent *but it would not be new capital.*
>
> * * * * * * * *
>
> It would be obtained from new money brought into the business but it would not be from my standpoint new capital. *I should not feel warranted in considering it new capital.* I should simply consider it money obtained somehow to repair losses I had made.
>
> Q. And not new capital being received it is not an extension of the present business? A. Not an extension, no, sir."

And again as to the reserve fund (pp. 1836-7):

> "Q. You would consider that if it were put into extensions of plant or a new unit added,

that would be proper business management? A. It would temporarily take the place of moneys that would otherwise have to be brought in.

Q. A new unit would be an extension of plant, would it not? A. Not necessarily.

Q. You consider the Astoria plant is an extension of the Consolidated Gas Company, do you? A. Yes.

Q. And you consider this 5 per cent. reserve might properly be invested in that plant, would you not? A. Temporarily invested until needed, when they so defer the day for borrowing money for that.

Q. And when needed capital would have to be obtained from other sources to take its place?

A. That is right.

Q. And put into the Astoria plant in place of that which you take out, for the purposes reserved and set aside?

A. That is one way.

Q. And you expect this 5 per cent. invested in the Astoria plant would be earning as much return as is reasonably to be expected from a plant of that kind?

A. Yes.

Q. And then, if a company had the good fortune to have created at the end of forty years a plant of the same size as that which it started with, out of this depreciation fund, paying for those renewals which would otherwise have to be taken out of depreciation, out of its current repair account, you would have a plant of twice the value of the original plant, would you not?

A. If you were able to take from what I call, for present purposes, my final renewal fund of 2½ per cent., and you were able to keep up the present plant, not only in full working order, but so as to take care of all exhaustion of life, and also build a plant of the same value, you would of course have a plant of double value.

Q. And that plant would have been paid for without any increase of capitalization of the company?

A. Yes, sir.

The standard method, considered in the light of experience. Is this method, which may be good for the average company, applicable to one which holds the strategic position of this complainant? This question can best be answered by actually applying it *nunc pro tunc,* and seeing how we come out.

The total of the new construction, together with all additions to real and personal property up to October 31, 1905, amounted to $9,693,595.90 (Complainant's Exhibit 79, p. 5032). The amount contributed toward this expense by new capital can not have been more than $3,929,371.82 (p. 23, *supra*). Hence current net earnings must have contributed at least $5,764,224.08, over and above all current and final renewals found necessary for the first twenty-one years of the company's existence. The $9,693,595.50 increased the manufacturing output to two and one-half times that of 1884, and increased the distributing capacity to an extent enabling complainant to more than quadruple its sales. But none of this amount would have been required from Dr. Humphrey's two funds, which are intended only to keep capacity and condition at par.

If it were now the intention of complainant to continue in business as a manufacturer of gas, its 21 years of experience should afford the best test of the annual contribution necessary to establish and keep up a depreciation or final renewal fund.

As we have seen, Dr. Humphreys estimates the life of complainant's manufacturing plant at 33 years; much of it was pretty old at the time of the valuation of 1884, so that its depreciation must have been considerable; it has been very largely renewed during the past few years; and the new plant makes two and a half times as much gas as the old. Mr. Mayer, whose appraisement has been accepted by the Master and court and is the basis of this decree, finds a present depreciation in this plant of but 3½%, or $604,988. The court deducts from Mayer's total valuation but $32,489, whether for additional depreciation does not appear (pp. 175, 1342, 4587). The mains and services are practically eternal under the conditions prevailing in New York, barring supersession and electrolysis (p. 78, *supra*). Simpson values them without depreciation. The court, in adopting his figures, necessarily finds that they are as good as new, past renewals having provided for electrolysis and for maintenance of past value upon supersession.

How much per cent per year then has to be put aside by a company in the extraordinarily favorable position of this company, in order to provide a fund that will provide against all contingencies reasonably to be expected?

Complainant's "depreciable capital" at the beginning was about $20,000,000 (this excludes the real estate and franchise items), and at the end about $29,000,000 (Complainant's Exhibit 79, p. 5032). The increase was more rapid during the first years of the period (Complainant's Exhibit 78, p. 5032). Hence we may assume $25,000,000 to be about the average amount for the whole period upon which Dr. Humphreys would have based his depreciation or renewal fund.

Assuming the court's correction of the Mayer valuation, just above noted, to be due entirely to depreciation, we find that the following amount, by the actual experience of this complainant, had to be provided for:

Renewals 1884-1904 (p. 5079)......	$4,663,838.32
Renewals to Oct. 31, 1905 (p. 5080)..	194,666.87
Depreciation allowed by Mayer....	604,988.00
Depreciation allowed by the court..	32,489.00
Total	$5,496,982.19

A depreciation fund of $1.05 per annum per $1,000 of depreciable capital would have yielded the following result:

$25,000,000 at .0105, each year......$	262,500.00
Same for 21 years without interest..	5,512,500.00
	5,496,982.19
Surplus, Oct. 31, 1905..........	$15,517.81

It may be suggested that $1.05 per $1,000 was the figure of Prof. Bemis, the city's expert; but Prof. Bemis was expecting to lay his $1.05 up at compound interest, and the basis of his calculation was the same as that of Dr. Humphreys. The fact is that both these gentlemen have been going about the country testifying in various tribunals about necessities of the average company, and they figured here on the same theory, without noticing how different the conditions of a New York City company are. Averages taken from other cities' experience are inapplicable in New York, and Dr.

Humphrey's calculation of depreciation was as wide of the mark as the similar calculations of the City's expert.

To keep up this $1.05 annual fund, the sum necessary in 1905 would be calculated upon a depreciable capital estimated by complainant at $29,000,000 (*supra*, p. 120; Dr. Humphreys at page 1818 makes it only $27,000,000 exclusive of Astoria) and would be $304,500, or about 2.29 cents per M upon the total sales for that year. The actual renewals were $282,219.67 (p. 5080), *a difference of only $22,220, or less than .0017 per M.*

But if a depreciation fund of uniform constitution, pursuant to Dr. Humphreys' plan, would require a charge of only 2.29 cents per M in 1905, why were the actual renewals for the whole 21 years' period 3.01½ cents per M, as he points out at pages 1692-3 (10.60 for repairs and renewals, less 7.5858 for repairs)? Simply because the whole calculation based on average repairs and renewals per M, by which the Master was misled although the Judge was not, is based upon the favorite fallacy of all gas company accountants, and of this complainant in particular—the fallacy included in the assumption that expenses vary per M. The fallacy is exposed by analysis of State's Exhibit L (pp. 5077-80), which is an annual account of repairs and renewals, prepared by the complainant (p. 939; and see Humphreys, p. 4775).

It is sufficient to set forth a few comparisons in the following tabulation:

REPAIRS AND RENEWALS.

Year.	Total cost.	Do., cost per M.
1885	$338,510.33	8.59
1905	$974,286.65	7.34

Year.	Total cost.	Do., cost per M.
1891	$1,028,278.60	16.40
1904	$1,079,941.74	8.19
1896	$938,042.58	13.71
1900	$976,700.35	9.87
1905	$974,286.65	7.34

If the company had kept up a depreciation fund from 1884 on Dr. Humphreys' plan, it would have come out as follows:

Interest on $25,000,000 for 21 years at 2½%, uncompounded.........		$13,125,000.
Renewals, &c. (p. 121, *supra*)	$5,496,982.19	
Additions (p. 119, *supra*)	5,764,224.08	
		$11,261,206.27
	Surplus	$1,863,793.73

It would thus have paid not only for all the renewals (the purpose for which it was intended), but as well for all the additions that actually have been made out of net income, besides nearly half of those made out of new capital (p. 23 *supra*).

This may suggest that at least $5,764,224.08 should be deducted from the capitalization as representing what was actually collected out of the consumers for use as a depreciation fund, invested as such funds are properly invested, and according to complainant's leading expert non-capitalizable; but no assignment of error has been based upon this theory by any of the defendants.

The company has never found necessity for a reserve fund, if a full depreciation fund and an eight per cent. dividend on non-imaginary capital keep a company out of a necessitous condition.

In view of the facts just set forth, there is no probability of any increased rate of repairs and renewals in the future, if the manufacture of gas be continued.

But the complainant intends to discontinue the manufacture of gas, and instead buy its gas from the Astoria Light, Heat & Power Company; and it complains that this will involve a depreciation in the form of plant-scrapping in the Borough of Manhattan, estimated by Vice-President Addicks at $10,400,000, a figure for which no definite detail is given (p. 1588).

But this step is not taken on account of any depreciation or supersession. Retirement from business is not depreciation, when it does not appear that the business is becoming less profitable. Complainant is not going out of manufacturing gas perforce. It is abandoning that branch of its business for motives of policy. This can only be because in the long run the change will prove profitable, for the reasons already stated (p. 66, *supra*); to which may be added that the change will release real estate which will sell for 15% more in the opinion of the experts to whom the Master gave credence than their own figures; and which on that basis should net a greater sum than the plant-scrapping loss (pp. 159-60; *supra*, pp. 35, 45); most of this being "unearned increment" of which complainant has never yet taken the advantage (see pp. 42-3, *supra*).

No depreciation fund has been laid aside unless, if we adopt Dr. Humphreys' method now as against the consumer, we adopt it *nunc pro tunc* as of 1884. In that case it must be stricken out of the court's capitalization of the depreciable property (see pp. 114-17, *supra*).

Complainant's former method. — Until the Stevens investigation of April, 1905, no depreciation fund, final renewal fund or reserve fund was created. A "depreciation account" was kept. This was simply an account of articles "scrapped" for any reason. They were set down at their book value, (that is, their appraised value if inherited in 1884, their cost if bought since). The amount of the "depreciation account" was offset by the amount spent for renewals. Any amount spent for renewals over and above the amount of the "depreciation account" was treated as "additions" or "new construction." No distinction was made between "current renewals" and "final renewals", between those required by current wear and tear and those due to "supersession," although so large a part were due to the latter cause, as the works have been rebuilt and their capacity more than doubled (pp. 1713-16). The system is described by Mr. Carter at pages 4506-8.

Complainant's new method—the "Ten Cent Item."—The Stevens investigating committee held its first session on March 30, 1905, and its last public sitting on April 21 of that year (p. 1673). It shortly thereafter reported that complainant could afford to furnish gas at 75 cents. The complainant at once began to prepare to weather the storm and this "Ten Cent Item," being an entry among operating expenses of ten cents per M on the total sales of gas, was conceived. It was adopted in May (p. 871). A new account was opened under sary to guard agains accidents any further than by its fire insurance account. The damage claims against the company were, and still are, treated as an item under the general head of "Expenses, General Office," amounting in 1905 to $30,438 (p 5788). Mr. Carter and Dr. Humphreys both tried to think up extraordinary precedents of accidents, but in the whole history of gas making they were only able to remember the Boston case, mentioned by the Master at page 224, and explosions in Philadelphia, London and Liverpool. They remembered none in over eighty years' experience in New York. Of course, if an accident of great magnitude should occur here, the company would be at liberty to make application for relief under Mr. Justice Brewer's provision, approved by this Court, in Smyth *v.* Ames (169 U. S., pp. 477, 549-50; see also Hough, J., at pp. 403-4, 426-7, 434).

Fluctuations in business.—It is difficult to conjecture the meaning of this item of Mr. Addicks. It does indeed appear that the rate of increase in the business was considerable at some periods, although scarcely perceptible in 1905 and possibly succeeded by a slight decrease in 1906 (pp. 110-11, *supra*). But the output of this company is flexible and conforms itself to the demand. If there be any extraordinary fluctuation, like the supplanting of gas by electricity on a scale not now foreseen, it can be dealt with on the principle of Smyth *v.* Ames, just above cited.

Cost of materials. Complainants have presented their accounts for 1905 on the theory that that is a typical year, and the Master has refused defendants leave to examine its books for the purpose of showing that it was really untypical (p. 26. *supra*). If it is a fairly typical year, it is an average year, so that if the expenses happen to be higher than next year they will presumably be compensatingly lower later on, and *vice versa.* Hence if it is assumed to be a typical year—and if it is not a typical year there is no evidence to support a decree in this case—there is no reason why the state should make provision for a contingency fund against increase in cost of materials.

Such evidence as we have is to the effect that 1905 was a year of particularly high prices, and therefore one in which operating expenses in this particular were presumably above the average, which indeed is so well known that perhaps it can be judicially noticed. We have already pointed out that the increase in price of iron pipe was as great from 1904 to 1905 as it had been from 1884 to 1904 (p. 77, *supra*). But nearly all of the machinery is iron and steel, and its value is estimated by its weight (pp. 171-3). In 1906, the year as to which the calculations in the decree are made and during which the testimony was taken, the price of steel at least was lower than in 1904 (Mayer, p. 1442). Hence we have proof that 1905 was a particularly high year for all expenses of replacement. The price of iron and steel is commonly an index of the price of all materials, and there is nothing to the contrary here.

Electrolysis. This is the name given to the action of stray currents of electricity in the street, which under certain conditions will corrode the iron pipes. This is a trifling danger. Complainant admits that there is no danger from the electric light pipes belonging to the Edison system (Lieb, p. 4090), and that none has been experienced from the subway. Up to this time only two cases of injury from electrolysis have been noticed. One of these is at the Brooklyn Bridge, where there are various electric currents, and the other at West Broadway and Spring Street, the elevated railroad having a power house at that point (pp. 674-5, 677, 687, 707, 4104). The latter is one of the most dangerous spots in the city (p. 4158). The electrification of the elevated road had been completed from three to five years before the testimony was taken, so that past experience shows the danger from electrolysis to be small. Prof. Sever of Columbia, who testified for the state, said that the danger was decreasing (p. 2892). The complainant's witness Lieb also admitted that conditions on the elevated railroad were improving (pp. 4106, 4108). Superintendent Simpson testified in the strongest terms that the mains were all as good as new in 1906 (p. 78, *supra*). Upon this testimony the Master must have come to the conclusion that the danger from electrolysis is too small to be considered; for he capitalizes the mains and services at their full value without depreciation. If they had been injured by electrolysis, this finding would of course have been impossible.

Having considered the reasons stated by Messrs. Addicks and Carter for the Ten Cent Item, and stated by the Master, we now take up the three further reasons assigned by him.

Candle power. The old Gas Commission in its estimate allowed an increase of 1.81 cents to the operating cost on account of the increase from 20 to 22 candle power, and Vice-President Addicks claimed 1.83 before the Master (p. 231). The court having stricken out the Ten Cent Item, complainant unsuccessfully attempted to have the 1.83 allowed as a special item of itself (p. 424). The facts about it are as follows:

The 22 candle power provision was introduced into the law in 1897, but by some oversight no penalty for its violation was provided (Act of 1897, chapter 385, p. 5264). The act was enacted subsequent to the city charter, which had provided for 20 candle power with a penalty, and it was conceded before the court that the charter provision, although re-enacted in 1901 in the revised charter, did not prevent the continued effect of the 22 candle power provision (Greater New York Charter of 1897, chapter 378, § 578). The complainant however disregarded the law until it was re-enacted with a penalty in 1905, the new statute taking effect on July 1 of that year (Bradley, p. 648). Except for the insertion of a penalty provision, the only new requirement in the act of 1905 was that the city tests were now required to be made within a mile of the "distributing holder" instead of within a mile of the "place of manufacture" (p. 5, *supra*).

The complainant urged before the court that it should be allowed to charge a higher rate to the consumer on account of the imposition of this penalty, just as the street car conductors are said to have demanded a raise of salary when they were first made to ring up their fares.

The average candle power found by the city tests during the first six months of 1905 was precisely 22. The average during the last six months was 24.19 (City's Exhibit 47, p. 5540). The average for the whole year was therefore over 23. There was considerable controversy on the trial as to whether an average of 23 allowed sufficient margin to the company, and the company claimed that there was so much variation in the amount of loss between the works and the testing point as to make so small a margin unsafe. On the contrary, Mr. W. H. Gartley of Philadelphia, for whom Dr. Humphreys had "the highest respect" and "would hesitate a long time before I doubted anything that he stated," claimed that actual experience under the Philadelphia 22 candle power requirement showed that by adopting a proper method an almost uniform candle power could be supplied. Mr. Gartley's paper was evidently most important, but the record is very blind about it. Dr. Humphreys states that it was "a new proposition which Mr. Gartley has brought forth," and one about which he himself would not as yet express any opinion (pp. 4785-8). Complainant introduced a tabulation, got up by Mr. Carter (p 4498), purporting to show that there was a very great and very irregular loss in candle power between the works and the testing place (Complainant's Exhibit 368, p. 6068); but the tabulation is entirely misleading. It is misleading because the gas tested by the city is not gas purely of complainant's manufacture, but a general mixture of its own gas and that purchased from other companies. The purchased gas, which is between one-third and one-quarter of the whole, is delivered by the other companies into complainant's holders or mains, so that it is impossible even for the companies as between themselves to keep any account of how much of the mixture passing under the streets comes from the companies other than the complainant, except by estimates based on their total output and the total demand of their other consumers (Carter, pp. 894-5, 1666; Bradley, p. 1729; Simpson, pp. 1759-60). The new Astoria gas is all delivered by the Astoria Company to Ravenswood, and thence comes into the Borough of Manhattan mixed with the New Amsterdam gas; mixed, therefore, with the gas which the New Amsterdam is furnishing to its own consumers as well as with the gas which it is selling to the complainant (Simpson, pp. 3861, 3981).

Vice-President Addicks' estimate of 1.83 cents as the cost of enrichment (p. 1613) seems to be as erroneous as the rest of complainant's testimony on this point. The most direct evidence which we have is that of complainant's own experience, comparing November-December 1904 with November-December 1905. This comparison we are able to make by reason of the fact that we have in Complainant's Exhibits 93 and 94 detailed statements of operating expense for the year ending October 31, 1905, and for the year ending December 31, 1905, respectively. The reliability of these statements is not conceded by the defendants, but complainant is estopped from claiming that they do not give in every particular (except as otherwise stated by it) a perfectly fair estimate of the expense of making gas. The conditions remained almost the same, as complainant's output for the two periods varied only in the percentage of .0002. The proper way to arrive at the cost of the unit candle power in gas is to divide the cost of one gallon of oil by five for each candle power (Bradley, pp. 663, 658-9). In other words, an increase of two candle power requires two-fifths of a gallon of oil per M; and to raise 10,657,810 Ms from 20 to 22 candle power would therefore require 4,263,124 gallons. But the actual increase was only 371,763 gallons (pp. 979-80, 2050).

Hence either the actual increase in candle power was less than 0.18, or else there was some economy introduced which lessened the amount of oil required to make a thousand cubic feet of gas.

Taxes. The Master's estimate of an increase of 1.13 cents per M on taxes is based upon testimony of Secretary Carter at page 1667. He divides the expected increase into two items.

The first item is a special franchise tax of $68,563.87 or a percentage of .0052 per M. These special franchise taxes are all contested, so that the items are simply reserved for payment at some future day. The business done by the company during 1905 was practically the same as during 1904, and in 1906 may be less (p. 111, *supra*). Hence there is no probability that the special franchise tax, whatever it may be, will be higher in either of the two latter years than in the former. Furthermore, the tax is assessed as of the month of January. Hence the tax assessed in 1906 belongs to the year ending April 30, 1906, if years are to be computed on the basis assumed in the decree herein. If the 80-cent gas law is sustained, complainant will be assessed very much less for the year 1906-7 (pp. 233-8, *infra*).

The other item is $81,307.81 or .0061 per M, on account of the fact that there has been an increase in assessments aggregating $5,455,000. It appears from the question of complainant's counsel that the new assessments are being contested. It does not appear whether the increase is on real property or personal property. This item is not as gross an improbability as the increase in special franchise tax, but as it constitutes an increase of nearly one-third in the rate in a single year, either complainant was already grossly over assessed or else it will be probably reduced. The item is quite speculative; and we may add that if it was not grossly under-assessed in 1905, its real estate has been grossly over-estimated by the Court below; for the tax rate being 1.490519 (p. 1002), and the real estate tax in 1905 $179,778.95 (p. 223), it would follow that the real estate assessment was under $12,065,000 for that year. But this includes all of the real estate rejected by the Master and Court, and also all of the plant which by law is regarded as real estate, although not so called by this company; and assessments in New York City are at the sum for which the property would sell under ordinary circumstances (pp. 4918-19).

Labor cost. There is nothing in the evidence to indicate that labor cost is likely to increase. So far as appears, the tendency is the other way. Care should be taken to distinguish between *labor cost* and the *rate of wages.* It is a familiar fact that labor cost often goes down when wages go up; in other words that people getting better wages do better work, and that the improvement in output is more rapid than the increase in wages; also that the improvement in wages is often accompanied by an increase in labor saving machinery, so that the number of employees is less. It is not claimed by complainant that the general rate of wages was reduced in 1905. It is matter of common knowledge and of proof in this case that wages were rising; yet Vice President Addicks testifies that the labor cost in 1905 was less than the average labor cost for the previous five years by an amount equalling .78 cents per M. (p. 1639), although the winter of 1904-5 was so severe a one that Simpson's payrolls were one-third higher than in the winter of 1905-6 (p. 716). Every labor item was lower in November-December 1905, than in November-December 1904, although the output was less by a percentage of .0002 only (Complainant's Exs. 93, 94, p. 5050). The reduction in 1905, in face of the heavy payroll, must have been due to increased efficiency of the working force, or to the introduction of labor saving machinery. The latter is the explanation given by complainant's expert Mayer, whose testimony was accepted by the Master. He says (pp. 1478-9):

> "Q. I thought you said that within the last two years there has been no material increase or decrease in the rates of steel or labor, didn't you? A. If I remember my testimony correctly, I think I stated that the material at present was perhaps slightly less and the labor slightly more, so that one would compensate the other approximately.
>
> Q. It would amount to about the same thing? A. Yes; now, when I speak of labor I mean total labor for the entire construction. Of course you understand that the wages are very much higher at present than they were at that time.
>
> Q. At what time? A. In 1903 and particularly 1904. From 1903 to 1904 the rates were jumping very fast.
>
> Q. When did they cease to jump—in 1904? A. They have not ceased to jump yet, and God only knows when they will, nobody knows.
>
> Q. Then, as I understand you, as labor jumps up, material jumps down, so that they keep about an equilibrium? A. Not absolutely. No, that was merely an opinion that I

> gave you off-hand, because I had that condition in my mind at the time I said that. I believe that it is approximately correct. For instance, *the reason that the total cost of labor is less at the present time than it was in 1903, is due to the fact that we were compelled to improve our field machinery in order to offset the constantly increasing demand for wages.*
>
> Q. That has been the experience of every line of manufacture, hasn't it? A. Yes, I presume so.
>
> Q. That is, as wages increase the inventive genius of man on the other hand produces labor saving machinery and therefore we arrive at the result that we can produce cheaper although we pay more for labor? A. Yes, I presume that the same conditions exist in other branches of business the same as ours."

In rebuttal, over defendants' objections, complainant introduced testimony to the effect that there has been an increase (not of labor cost, but) of wages, of "substantially 10 per cent," at some date not stated, but apparently in 1906. Based on 1905, this increase is estimated at $180,000 a year, alleged to wipe out the above difference of .78 in labor cost and make .62 additional. But the .78 was a percentage of decrease of labor cost, while wages were rapidly increasing up to 1905, as has just been shown. The two radically different items, wages and labor cost, are confused. We can find in the record no information warranting a finding as to the labor cost of 1906, one way or the other.

Mr. Mayer admits that while labor was "*a little bit* higher" on August 31, 1906, than two years previous, building material was "a little bit less," so that in his line at least the total averaged about the same (p. 1442). Exclusive of the slight increase in consumption of oil, attributed by complainant to the new candle power requirement, and of the increase in its price, due to a contract with the Standard Oil Company as to whose propriety there was a great deal of evidence and dispute before the Master and Court, the materials enumerated in Exhibits 93 and 94 (p. 5050) decreased in cost slightly from November-December 1904, to November-December 1905; but this was mainly due to improved methods whereby an equal amount of gas could be made with a little less raw material.

General summary.—Complainant characteristically picks out a few items where it claims an increase in 1906-7 over 1905, while keeping its books closed and supplying no general account for any period after December 31 of the latter year.

It does not even give an item showing what it claims to be the general expense of 1906, or any part of that year, as compared with 1905.

It does inadvertently show in the Exhibits last referred to the general result of November-December 1904, as compared with November-December 1905. Notwithstanding the fact that the candle power and pressure provisions were in force after July 1, 1905, in the later period the cost of manufacturing gas was .0026 less per M than in the earlier. Probably if there are any small items of increase in 1906 over 1905 they would be offset if a proper reduction were made in the item of "Expense, General Office," whose increase of $63,176.29 in November-December, 1905, over November-December 1904, an increase of nearly one-quarter of the whole, or of .006 per M, can hardly be due to anything but work at Astoria; thus showing that this large item should be heavily cut down for the whole year; a fact suspected by the city's accountants, but which they unaccountably failed to follow up (p. 5789).

Items not claimed by Complainant.

There are two items which are often allowed, but which this complainant does not claim.

Going concern.—In case of condemnation by the city, this item would be included. It would not be included because complainant had incurred any expense which ought to be reimbursed, but because the state or city would be trying to get a valuable property without losing the time necessary to build it up. The state or city would be trying to save not only the item of "interest pending construction," but also the item of interest after completion of the construction and up to the time when a fair rate of income is earned on the investment. "Going concern value," in the true sense of the term, has been discussed in the Knoxville water case now pending before this court, and the phrase has been defined by the President of the appellee company in that case as "a summation of the deficiency of earnings in the first years of business to provide for a fair return on the capital invested therein"—an extension of part (a diminishing part) of the item of interest pending construction. This item is discussed and allowed in a condemnation proceeding by Mr. Justice Brewer in National Water Works Company *v.* Kansas City, quoted by the Master at pages 206-7.

This "going concern" expense, in fixing rates, can conceivably be capitalized for all future time, or else satisfied by allowing an extra high rate of profit during the first years after the concern becomes actually profitable. It seems to us that the latter should be regarded as the most satisfactory method of dealing with the item, both from the point of view of the public and from that of the promoters of the new enterprise. There should be no variance in the permanent capitalization of two companies otherwise similar, only because one took longer to get agoing than the other. In the case of the present company the item received the latter treatment, as we have already shown (pp. 28-9, *supra*).

Amortization. When the public grants a franchise for a limited term, it ought to permit the recipient to charge a sufficient extra rate for his gas to make up for the property that he is going so soon to use. The public pays more for its gas in order to keep better control. According to the opinion generally held until recently, and the opinion which we maintain to be correct, this complainant's franchises, so far as it owns them and they are valid, were limited in term and therefore good cause for an amortization item; but complainant's progenitors, who obtained the franchises, charged rates sufficient to cover this item (pp. 28-9, *supra*). Complainant's new theory is that some of these franchises are perpetual; and if so, there is of course no amortization item.

Skill of officials. The Master quotes from a report of another Special Master certain *obiter dicta* to the effect that the skill of the employees of a company is a proper item of capitalization (p. 207). Complainant, so far as we are aware, has made no claim of such startling novelty. The officers and employees of a corporation are not the corporation itself in any sense. They are hired by it, and can be hired away by another company by offer of a little higher wages; and whatever rate of wages is necessary to pay, the corporation must pay and is entitled to charge up as against its customers. Rates for gas cannot go up and down according as expert witnesses swear before a commission or a court that the corporation is more or less fortunate in securing skilled employees. The state must fix rates on the theory that the employees are competent, and take measures to enforce proper service if it turns out that they are not competent.

Rate of return.

The Circuit Court did not decide the question of the reasonable rate of return upon the evidence, but "in part by taking judicial cognizance of local business conditions"; concluding therefrom that 6% is not "a profitable, satisfactory or attractive rate for the investment of capital in a gas business," but "the lowest rate which in the City of New York can be considered legislatively fair," etc. (p. 428).

If the court can take judicial notice of the fair local rate for gas investments, the right must be exercised by examining the actual quotations for the stocks and bonds of corporations engaged in that business; and this is practically impossible so far as the Borough of Manhattan is concerned, because the complainant has been since 1900 largely a holding company, holding securities of other companies at a very low rate of profit (State's Exhibit B, p. 5[illegible]), and because all of the other companies doing business therein are controlled, and all but one are almost entirely owned, by the complainant.

The facts upon which the court based its judicial notice do not appear. So far as they are represented by market quotations, the present post-panic prices can be found in the Bond and Quotation Supplement of the *Commercial & Financial Chronicle,* published monthly. By examining these quotations it will be perceived that any mortgage bond issued by a company comparable with complainant, running for a considerable time in the future, will net the investor somewhat less than 5%,* although prices have of course fallen a little in the last two years. Market quotations of gas stocks are so much affected by special considerations that it is difficult to get much use out of them. Moreover, quotations for the past year are abnormally low, while the state legislates with relation to the conditions of the average year. The stock of this complainant stands in the market as a security of the same class as the stocks of the highest class of railroad companies, and can be compared with them as to the relation between market price and customary and expected dividend.

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*See for instance, Bridgeport Gas Light Co. 4s, 1952, 86 bid; Brooklyn Union Gas Co. 5s, 1945, 107 asked; Consolidated Gas Co. of Baltimore 5s, 1939, 110⅛ bid; do, 4½s, 1954, 92 bid; Laclede Gas Co. 5s, (St. Louis), 1919, 101½ bid; Newark Gas Co. 6s, 1944, 128 bid; Newark Consolidated Gas Co. 5s, 1948, 103½ bid; Troy Gas Co. 5s, 1939, 106 bid; Washington Gas Co. 4s, 1927-9, 98 bid. The bonds of the minor New York companies are on about a 5% basis (B. & Q. Suppl., Oct. 3, 1908, pp. 44-5).

The only reported cases of which we are aware, where the court has taken judicial notice of the rate of return, are New Haven Trust Co. *v.* Doherty, 74 Conn., 468, where it noticed that 1¾% was below the current rate, and Collins *v.* Wardell, 63 N. J. Eq., 371, where it noticed the fact that the return upon safe investments had been continually diminishing for many years, and had come down to a 4% basis.

Complainant's testimony intended to bear upon the rate of return was considered by the Master to be of little value (pp. 243-4). The witnesses were bond brokers or gas men.

Their testimony was objected to by the defendants.

Mr. Halsey expected at least 10% upon the value of the property (p. 1697). On cross examination, however, he said (pp. 1698-9):

> "A. It depends entirely upon the conditions, but I should think that a stock that paid 5 per cent. and was certain to continue to pay 5 per cent. would sell very much better than that; sell close to par.
>
> Q. It would probably sell at 102 or 104? A. It might; it might sell at 75, depending on all the conditions, franchise and the location, permanency of the business; all of those things enter into it."

He said that "you can buy a great many securities to-day on an 8 or a 10% basis if you wish to," but would not deny that a 4% basis might apply on "securities that have paid their dividends for the last twenty years, where the company has a monopoly of the business and has paid its dividends regularly" (p. 1699). Messrs. McMillin, Bertron and Forbes testified to various high rates expected by persons investing in gas enterprises. The city called Secretary Carter to the same effect, and other similar testimony, in the shape of extracts from affidavits, was admitted over objection. (See pp. 807-8, 1676-8; Complainant's Exhibits 225-234, pp. 5281-8.)

It does not appear that any of these witnesses or affiants had in mind, or had had in their experience, any enterprise approaching in value that of this complainant.

Defendants' testimony.—The state presented no testimony on this point, relying upon the insufficiency of the complainant's case. The city called two statisticians, and put in certain stock quotations indicating that gas securities of established companies were sold upon a basis averaging less than 5%. These quotations are set forth by the Master at page 245. He justly observes that in each case there may be many special elements tending to inflate the market value; but complainant, while putting in a good deal of testimony as to some of the companies referred to, presented none tending to show that there were any companies in cities comparable with New York whose gas stocks stood on a higher basis than those produced. The testimony therefore seems to be entitled to some weight, unless it is to be assumed, in the absence of all evidence to that effect, that it is the universal custom of such companies to hold back a very large proportion of the earnings, for the purpose of cutting melons in the future. The Master also fails to call attention to the fact that two of the stocks mentioned by Professor Bemis are preferred stocks, which therefore cannot increase their returns by melon-cutting. These are the preferred stock of the Massachusetts Gas Companies, which was quoted in September, 1906, on a 4.52 basis, and the preferred stock of the Laclede Gas Light Company of St. Louis, which was then quoted on a 5.26 basis (p. 2672).

The Master also omits entirely the significant quotations of gas bonds, which are set forth at page 2673, being abstracted from the *Commercial & Financial Chronicle* for September 8, 1906 (see pp. 2348, 2530-2). Taking the quotations of 5% bonds of companies in large cities, having twenty-five years or more to run, we obtain the following abbreviated tabulation (p. 2673):

City.	Date of Maturity.	Return on Investment.
Baltimore	1939	4.5
Brooklyn	1945	4.4
Buffalo	1947	6.4
Chicago	1947	4.7
Montreal	1933	5
Newark	1948	4.7
Paterson & Passaic	1949	4.9
St. Paul	1944	5
Syracuse	1946	5
Troy	1939	4.4
Westchester	1950	4.4

Certainly the Consolidated Gas Company could issue bonds that would stand as well as those of the companies in Brooklyn, Troy and Westchester, and which therefore would sell on a 4.4% basis.

The Buffalo company, by the way, is managed by complainant's witness Dr. Humphreys (p. 4759).

Complainant's experience. Complainant's stock has been too speculative an article to afford very much assistance. While earning an average dividend of 8% (p. 28, *supra*), and prior to the purchase of securities of the other companies, it ranged from 111 up to 168 during the hard time years 1894-6, and from 136½ up to 241½ during the years of recovery 1897-9 (pp. 5034-5).

Other testimony bearing on the rate of return. There is quite a little testimony in the record bearing on this question, which was not introduced for that purpose, and which therefore possesses a special value.

The rate of return regarded as sufficient by the stockholders of the old Manhattan Company in 1884 was 7%, as appears from the following testimony of Mr. Day (p. 6212):

> "the Manhattan people said 'our stock is worth 320'; and if the stock is put in at market price into the Consolidated, 'we ought to have the new stock at par to measure our capital, at 320, high enough, so that if we simply get on our new stock seven per cent. interest we will be satisfied,' and we will not be satisfied with less. * * * they said they did not expect to get over seven per cent., and they ought to have the stock par for that.'

Mr. Mayer testifies in effect that the rate of interest on capital used in construction is 5% (p. 1321). Dr. Humphreys puts it lower (p. 1685).

Dr. Humphreys also testifies quite extensively about the rate of return to be expected from extensions to the plant, paid for out of earnings and offsetting depreciation (see pp. 114-119, *supra*). He makes the rate 4% (pp. 1674, 1798, 1823); or probably more than 4% (p. 1801); 5% (pp. 2762, 4762).

In a controversy between the Holyoke Water Power Company and the City of Holyoke, he based his valuation upon the earnings of the company, taking them at the rate of 5%. His testimony proceeded as follows (p. 2353, as corrected at p. 424):

> "Q. Why do you take 5 per cent. as the sum at which you capitalize the net earnings of the company? A. In my judgment that was a fair return on that kind of an investment.
>
> Q. By that do you mean annual return to the persons who put their money into it? A. Yes.
>
> Q. And if the investment were represented by stock, you would mean that dividends should be paid at the rate of 5 per cent? A. Yes, sir. * * *
>
> Q. And I understand you to say that you valued this plant on the same basis that you valued the plants which you were employed to appraise in New York and New Jersey and other States? A. The same conditions generally. * * *
>
> I did not go into that very specifically, but I reinforced my opinion as to the values by my general impression that gas properties and lighting properties in Massachusetts are perhaps a little better protected than in other parts of the country. I did not make any special allowance, but I thought that reinforced my judgment as to the values."

Dr. Humphreys tried to explain away this testimony when called in rebuttal. The court may judge whether he succeeded in doing so (p. 4708).

Dr. Humphreys' testimony referred to by the Master at page 243 is to be found at pages 1689.

1836, It is to the effect "that *the original investors up to the time the business is well established* are entitled to 10%, and the final average must be made up on the basis of what the new capital can be brought in at in view of the natural hazards," and figures out a return of 10% on a capitalization of 3.50 per thousand of annual sales; or at the rate of 10% for forty years upon all of the capitalization except "the reinvestment covering depreciation" (see pp. 1689, 1836). This testimony does not seem to be applicable to the present controversy, in view of the antiquity of this complainant's predecessor companies, their very large early dividends, and their large reserve funds accumulated out of earnings (pp. 28-9, *supra*).

Another interesting piece of testimony is that of Mr. Greene, complainant's expert on bulkhead values. There are very few sales of that class of property, and all the witnesses used the rentals to a considerable extent as a basis of capitalization. Mr. Greene testified as follows (p. 1257):

> "Q. What did you base your valuation of $4 per square foot of that land under water upon? A. Because land under water is rented, leased for platforms and things of that kind at various prices, sometimes downtown and on the North River at 25 cents per square foot per annum, and further uptown at less prices, and my judgment is that land under water at that locality could be leased for 20 cents per square foot per annum, which, *capitalized at 5 per cent.*, makes $4 for the value."

And again (p. 1263):

> "Q. Now, you give a valuation there of five dollars a square foot? A. Yes, sir.

Q. On what basis did you arrive at that figure? A. Because land under water on the North River will rent for platform purposes or things of that kind for twenty-five cents per square foot per annum which *capitalized at five per cent.* gives five dollars."

And again (p. 1265):

> "Q. You say you capitalized the 25 cents per square foot at 5½ per cent.? A. Five per cent.
>
> Q. Why do you capitalize it at 5 per cent.? A. Well, a matter of custom and a matter of somewhere near right; *between 4 and 5. I use 4½, sometimes 5.*
>
> Q. You regard that as a fair return on the investment? A. I think it would be fair in this particular case."

And again (p. 1267):

> "Q. And you testified that in your opinion the land under water at this particular point, Pleasant Avenue, between 110th and 111th Streets, is fairly valued at $3 per square foot? A. I do.
>
> Q. What consideration entered into your mind in forming that opinion? A. That it would rent for 15 cents per square foot per annum, which *capitalized at 5 per cent.*, would amount to $3."

And again (p. 1270):

> "Q. Is there any relation between rental value and the real value? A. I think so. I think that the real value is ascertained by capitalizing the net rental value at a given percentage, 4 or 4½ or 5."

He seems to have followed an established custom of the Dock Department in giving these figures (p. 1273).

The Master and Court have followed Mr. Greene's valuations, obtained by capitalizing rental values on a 5% basis, and then held that the State will be guilty of confiscation if it did not permit complainant to net 6% on property thus capitalized.

Pressure.

The Attorney General has undertaken to brief the question of pressure, and we therefore do not go into the facts as to that branch of the case. The Court should be cautioned, however, that, as we are informed, the State never relied upon the testimony of Mr. Edgerton, which is the basis of the remarks of the Circuit Court in its opinion. It relied upon the system of district governors discussed in the cross-examination of Mr. Bradley by Mr. Page; as to which complainant did not assume the burden which the law casts upon it, of showing that the expense of such a system would be prohibitory.

Summary of Facts.

The following are the more salient facts bearing upon complainant's history and finances:

Original capitalization of complainant.—This company was formed in 1884 by consolidation nominally of six old companies (one of which, however, owned all the stock of another), on which occasion there was a recapitalization. The plants were appraised on the basis of duplicating them as they stood, and the real estate was appraised by agreement. A valuation for the tangible property of each old company being thus obtained, the total capitalization of the new company was then fixed by agreement at $45,000,000. The difference between the latter figure and the total value of the tangibles was next divided up among the various old companies in proportion to their sales of gas for the year ending October 14, 1883. One-thirtieth of the share of each old company was then set aside as working capital. The balance was set down as "rights, franchises, &c.," but was merely an arbitrary figure, not based upon any theory or estimate. The resulting capitalization was as follows:

Tangibles at appraised value as of 1884	$29,994,000
Working capital	1,303,000
Rights, franchises, &c	7,781,000
Nominal capitalization of complainant	$39,078,000
Assigned to N. Y. Mutual Gas Light Co., which failed to come in	5,922,000
Total valuation as originally agreed	$45,000,000

Out of the shares of the various old companies the new company retained an amount sufficient to pay off their obligations, amounting to $2,329,000.

Capitalization of the original companies. This consisted of the stocks of the five companies*............$15,500,000
The amount actually invested by the stockholders was not over......... 10,635,200

The balance is made up by stock issued at fifty cents on the dollar, and by stock dividends made out of net earnings, the regular dividends also being very large.

Present capitalization of complainant.—This is now nominally fixed at................$80,000,000 besides debenture bonds, convertible but not yet converted into stock, and invested in certain outside enterprises, and besides certain other bonds, to the amount of......................$1,387,000

The stocks and bonds were partly sold at a premium, however, and on the other hand the new capital was mainly invested in the securities of other companies. The new capital brought in since 1884 and invested in the complainant's own business is not over............$ 3,929,371.82
Original nominal capital........... 39,078,000.00

Present nominal capital in gas business $43,007,371.82

Of this the amount actually invested by the stockholders is as follows:

Before 1884 (as above)............$10,635,200

---

*The stock of the sixth company was owned by one of the five, which paid for it $1,000,000 out of the above $15,500,000.

Since 1884 (as above)	3,929,371.82
	$14,564,571.82
Complainant's investment in securities of other companies is	$50,405,364.89

Net earnings of complainant.—Down to March 15, 1900, when it began investing in stocks of other companies, its dividends were......$33,345,598.80
And its earnings invested in addition to the plant are............... 5,500.000

This shows a net return of over 8% on the appraisement of 1884, after throwing out the fictitious items of $1,303,000 and $7,781,000. Since March 15, 1900, its capital has been largely tied up in other enterprises. Its return on the stocks represented by securities of other companies has been under 3%, and on part of the debentures it has had no income at all.

Its net income during the year 1905 is estimated by Judge Hough at................$5,891,597.45
or if 80 cents had been the price of gas 3,224,592.45

The 80 cent price would have yielded a return as follows in 1905:

On the $43,007,371.82 nominal capitalization about	7½%
On the $14,564,571.82 capital actually invested nearly	23%

Defendants contend that these estimates of net income should be increased in order to make them applicable to conditions after May 1, 1906, as the annual value of the complainant's permission to do business will be diminished by the reduction in the price permitted to be charged for the sale of gas. This will require some reduction in the "Special Franchise Tax" item of.....$406,909.23

Complainant's real estate. This originally cost about	$3,539,044.48
To duplicate it with real estate sufficient to accomplish the work which complainant is doing would cost about	$5,660,125.00
The present value is found by the Court to be	$11,985,435.00
but if the appraisements of the city's and state's witnesses (woh are qualified and unimpeached experts) were taken, the amount would be diminished by about	$3,200,000.00

In reaching its estimate of present value the Court has taken the price which would be paid for each plot if the company's plant were removed from that plot but left on the adjoining plots. If the plot were sold with the plant on it, the plant would in no case add materially to the value, and would sometimes slightly diminish the value on account of the cost of removing it. If the plot were valued on the assumption that ail of the plants in the vicinity were removed, its valuation would be increased about 15%.

Complainant's manufacturing plant. The original cost is not shown. The amount necessary to duplicate it with another plant capable of an equal output at equal expense is not shown. The Court has valued it as it was valued in 1884, namely, on the theory of duplicating it as it stands today. It would not, as matter of fact, be so duplicated by a new company, but would be replaced by one more economical. The Court

estimates its value at.............. $15,500,000
The complainant in verified reports to the taxing officers, and its secretary under oath, have recently valued it at about............ $8,500,000
apparently on a theory of depreciation due to a forced early abandonment of gas manufacture in the Borough of Manhattan.

Complainant's mains and services. Their book value, representing actual cost, is.. $9,064,222.12
To this the Court adds the sum of.. $5,605,962.23
to represent value added by the city in putting improved pavement over them, so that they cannot be duplicated for their original cost. Nevertheless the complainant in verified reports to the taxing officers, and its secretary under oath, have recently valued them at........... $4,261,156.39

Complainant's franchises. It is conceded by these appellants that complainant has franchises, but contended that they are all revocable upon short notice. Their book value of $7,781,000 was reached in the manner above stated.

Complainant's capacity, output and sales. Complainant has a rated capacity of 51,000,000 cubic feet of gas per day, but can produce more than this in a day upon an emergency at its regular plants, besides having a reserve plant. The highest average demand for gas in 1905 was under 46,000,000 feet per day in January, and probably the highest demand in any day was not above its rated capacity.

It buys, however, over one-fifth of its total product from other companies. This course of business is profitable to both parties and not likely to be altered in the immediate future.

The increase in sales is now very slight from year to year, and there was very likely a decrease from 1905 to 1906.

Astoria. Complainant owns the stock and securities of a company which is putting up a gas manufacturing plant at Astoria, in the Borough of Queens.

The Court deducted $200,000 a year from its estimate of the complainant's net income for the year beginning May 1, 1906, on the theory that it would have an increased demand for one billion cubic feet and would cease buying three billion cubic feet from the companies whose gas it had been previously buying, would buy it from Astoria at a higher price. This was a theory invented by the Court and questioned by both sides on a rehearing, but adhered to. It was founded on various misapprehensions. The four billion cubic feet would be the total capacity of the Astoria plant for an entire year. The plant did not commence producing until the year was seven months gone. It was uncompleted when the testimony closed two months later still. It was even then supplying but a fraction of the amount customarily purchased. The proof also showed that complainant could put the new supply to a more profitable use than by substituting it for the gas previously purchased; and it indicated a decrease rather than an increase in sales for 1906.

Specification of Errors.

While believing that, if it were customary for this court to analyze all the evidence and review all the findings of the court below, its decision would be modified in other respects also, we have confined our assignment of errors to certain particulars wherein it seems to us that the court below has very clearly departed from the general principles that should guide a court of equity in a controversy like this. We have not assigned error to any rulings upon conflicting evidence, except (1) so far as it seems to us that the court was bound by the rules governing this class of controversies to follow the testimony for the state, or (2) where the complainant's witnesses adopted an erroneous basis of valuation, or (3) where the valuation was contradicted by complainant's own admissions, or (4) where the testimony in support of it was clearly and substantially improper as well as incompetent.

Besides the general assignments of error (I *e*, XI, XIII, XVI and XVII) we specify particularly the following (the errors being all assigned to the final decree, the paragraphs referred to being paragraphs of that decree, pp. 435-439):

I. * * * * * * * * *

(*a*) Because the record does not contain sufficient evidence to show whether or not the price of eighty cents per thousand cubic feet for gas, permitted by said statute, afforded a sufficient rate of return upon the capitalization of any of the other companies doing business in the same territory with the complainant, or upon that of a company well located and equipped, economically managed and not overcapitalized, but the case was decided on the theory that if a statutory maximum price does not afford in the opinion of the court a sufficient rate of return upon the present capitalization of a particular company doing business in the territory, the statute is void as to that company, irrespective of its effect upon the other companies doing business therein, or upon a company well located and equipped, economically managed and not overcapitalized.

(*b*) Because the record does not contain sufficient evidence to show the reasonable and necessary operating expenses of the complainant, evidence of its actual disbursements during the period from November 1, 1904, to December 31, 1905, inclusive, supplemented in part only by experience of other periods, being insufficient for that purpose.

(*c*) Because the capitalization upon which the court's calculation is based is an estimate of present value, or of cost of reproduction, or of partly present value and partly cost of reproduction, not limited to the cost of complainant's property, or to the amount actually invested as capital by complainant and its predecessor companies.

(*d*) Because, it is accompanied by no condition that the complainant reduce its rate to such sum as the court finds to be constitutional.

* * * * * * * *

II. In fixing (Paragraphs I*a*, II) the valuation of the portion of complainant's "real estate" actually and necessarily employed by it in its gas business at $11,985,435 (it appearing that its plants, mains, services, and special franchises are not included in its real estate as such term is used in the decree); said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such real estate to the complainant and its predecessor companies.

(*b*) It is in excess of the amount required for complainant's gas business upon the basis of cost of reproduction.

(*c*) It duplicates in part the valuation given by the court to the plants, since it could not be realized until the plants thereon were removed.

(*d*) In estimating value the court adopts valuations given by testimony for the complainant, whereas the valuations testified to by unimpeached expert witnesses for the defendants, as well as complainant's own book values, and those stated by it in its Tax reports, were lower.

III. In finding (Paragraphs I *e*, II) that the valuation of the intangible special franchises of the complainant is at least the sum of $12,000,000, whereas

(*a*) The complainant owns no special franchises not terminable at the will of the State of New York or of the City of New York.

(*b*) The franchises claimed by it, if owned, are not proper subjects of valuation for the purpose of ascertaining its capitalization.

(*c*) The record does not sustain the valuation given.

IV. In finding (Paragraph I *h*) that the sum of $1,865,717.43, therein stated, represents more than a normal profit upon the volume of purchased gas, and in particular

(*a*) In finding that the amount paid by complainant to other companies for the same was paid under temporary and expiring agreements, whereas only a part of said gas was supplied under said agreements, and whereas said agreements did not expire until after the termination of the year beginning May 1, 1906; and (*b*) In finding that said amount did not include any reasonable recompense or return upon the value of the investment required to produce said gas, which finding is not supported by the record.

V. In finding (Paragraph I *h*) that while the total net income for the year beginning May 1, 1906, would remain the same upon the basis of the prices charged for gas during the calendar year 1905, yet if the price for gas were reduced as provided by the statute of 1906 and by chapter 736 of the Laws of 1905 the net income of complainant for said year would be reduced to the sum of $3,024,592.45, on the ground that such finding is speculative and not supported by the record; and, in particular also

(*a*) In finding a probable increase in sales of gas tending to a reduction as aforesaid.

(*b*) In finding a probable increase in cost of gas obtained from other companies, leading to such reduction.

(*c*) In finding a probable change in the source of manufacture of some portion of such gas, leading to such reduction.

(*d*) In overlooking the decrease in "Expenses" due to the reduction in the complainant's special franchise tax, payable to the State of New York, which would result from the diminution of its net profits through reduction of its rate for gas, said special franchise tax item being included by the court in the "Expenses" of 1905 to the amount of $406,909.23, as shown by the Master's report.

VI. In failing to make an express finding as to the present existence of the franchises claimed by complainant by derivation from the following corporations respectively (such failure in the case of each of such companies being separately assigned for error), whereas the court should have found that as to each of said franchises the complainant is no more than a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York;

(*a*) The New York Gas Light Company.

(*b*) The Manhattan Gas Light Company.

(*c*) The Municipal Gas Light Company; and this alleged franchise was at all times invalid on account of lack of authority in the Mayor, Comptroller and Commissioner of Public Works to grant it.

(*d*) The Metropolitan Gas Light Company.

VII. In finding (Paragraph I *h*) that the following franchises claimed by complainant exist and are owned by it and are sufficient to meet all its requirements (such finding in the case of each of such companies being separately assigned for error), whereas

(*a*) The alleged franchise claimed by derivation from the Anthracite Gas Lighting and Heating Company through the Knickerbocker Gas Light Company was invalid on account of lack of authority in the Board of Aldermen to grant it, and the alleged assignment thereof to the Union Gas Light Company was also invalid for lack of authority to assign it, and said alleged franchise in any case expires on September 17, 1913.

(*b*) The franchise claimed by derivation from the so-called State Grant through the Knickerbocker Gas Light Company was not assignable to, and did not even purport to be assigned to, complainant or either of its alleged predecessor corporations, and said franchise did not cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

(*c*) The franchise claimed by derivation from the Harlem Gas Light Company expired February 1, 1905, and as to that franchise complainant is but a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of the City of New York, and said franchise did not cover any part of the City of New York, Borough of Manhattan, south of 79th Street.

VIII.—In finding (Paragraph II) the valuation of the complainant's plants actually employed in its business of manufacturing and supplying gas to be $15,500,000; said valuation being excessive, being based upon an estimate by complainant's witnesses of the cost of reproducing the plants as they now stand, instead of the lesser cost of replacement with plants of more modern character, which would perform equal service, and being greater than the cost thereof, and than the value thereof as stated by it in its tax reports.

IX.—In finding (Paragraph II) the valuation of complainant's mains to be $12,636,000, said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such mains to the complainant and its predecessor companies.

(*b*) In estimating value the court adopts the highest valuations given by complainant's witnesses, which valuations are greater than other valuations previously given by said witnesses and than complainant's own book valuations, and than the valuations stated by it in its tax reports.

X.—In finding (Paragraph II) the valuation of complainant's services to be $1,994,000, said valuation being excessive for each of the following reasons:

(*a*) It is in excess of the original cost of such services to the complainant and its predecessor companies.

(*b*) In estimating value the court adopts the highest valuations given by complainant's witnesses, which valuations are greater than other valuations previously given by said witnesses and vastly greater than complainant's own book valuations, and than the valuations stated by it in its tax reports.

XII.—In finding (Paragraph III) that the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent.

XIV.—In finding (Paragraph IV) that compliance with the requirement in the statute of 1906 and in chapter 736 of the Laws of 1905 as to pressure is commercially impossible under the rates for gas prescribed therein.

XV.—In finding (Paragraph V) that complainant has no adequate remedy at law for the injury which would result from the threatened enforcement of the statute of 1906 and that such injury would be irreparable; whereas complainant would have an adequate remedy at law as against the enforcement of said act by these appellants, the members of said Public Service Commission, by defense to any application brought by them in the courts of the State of New York for a mandamus or injunction to compel compliance; complainant's remedy as against the enforcement of penalties (as to which these appellants have no right, duty or interest), if said penalties are so great as to render proceedings for their enforcement at present inequitable, being by injunction against the enforcement of the clause concerning penalties, said clause being separable.

The city's assignments of error. As the City of New York has filed a much larger number of assignments of error, a paragraph seems to be necessary as to them. They mainly consist of assignments directed to language in the Master's report. We do not understand that it is necessary, in a reference of this kind (if anywhere) to assign errors to a Master's report (see p. 160, *infra*). We understand the assignments to be properly directed either to the decree or to important rulings upon questions of evidence. This report is not in a form adapted to the raising of questions thereon by exception or assignment. The proper practice seems to us to be like that of the courts of many states, where the judge or referee writes an opinion, not subject to exception, and files also a series of separately stated and numbered findings of fact and of law. The Master here has hopelessly mixed opinion and findings all up together. The city has raised various questions which we have not raised, because we have confined ourselves to questions which could be passed upon without weighing the testimony of witnesses in the ordinary sense of the term, as well as which involved each a very large amount of money. Our failure to raise such inquiries as, for instance, the cost of oil, should not be taken as indicating a difference in opinion between ourselves and the city upon that subject. We disagree with the city at some points, however, as to what the Circuit Court has actually held; the city conceding that it has held adversely to us, while we understand that it has held partly if not wholly in our favor, as for instance the Eleventh assignment at page 449. Thus the Ninety-ninth assignment, at page 472 (see pp. 204, 252-3), states in effect that the court sustained a train of reasoning based on the assumption that complainant claimed its net earnings on gas sales only to have been in round figures $4,588,000 in 1905. The Master's sentence is merely *arguendo,* for the purpose of an illustration. The court does not consider the matter, and actually estimates the net income from gas sales at $5,891,597.45 (p. 407). We also disagree with the city at some points as to what the facts actually are. Thus in the Thirteenth assignment, at page 450, the city takes the position that the $7,781,000 item of 1884 had a relation to the market prices of the stocks of the constituent companies; a position which we have shown to be untenable, and which was opposed by the Attorney General as well as ourselves before Judge Hough.

ARGUMENT.

I.

The questions raised by this assignment of errors are all properly cognizable by this court.

We are of course aware that as a general rule this court does not reverse rulings of the Master which have been confirmed by the Circuit Court, upon questions as to which there is a conflict of testimony.

In a *consent* reference indeed, such as those under consideration in Kimberly *v.* Arms, 129 U. S., 512, 523-5, and Davis *v.* Schwartz, 155 U. S., 631, 636-7, the Master's report is equivalent to that of a referee, or to the special verdict of a jury, or to findings under Rev. St. § 649, and therefore are reviewable only in the most limited sense.

In ordinary references to a Master the rule, and the exception thereto, are stated in Tilghman *v.* Proctor, 125 U. S., 136, 149, and Callaghan *v.* Myers, 128 U. S., 617, 666-7, to be that

> "the conclusions of the master, depending upon the weighing of conflicting testimony, have every reasonable presumption in their favor, and are not to be set aside or modified unless there clearly appears to have been error or mistake on his part."

Here, as will hereinafter appear, the Master and the Circuit Court have persistently overlooked the weight of the burden of proof that rests upon a complainant in a case of this nature, and indeed frequently overlooked the burden of proof altogether, or rather assumed that it was upon the defendants. Hence it is submitted that their findings, so far as in complainant's favor, are not entitled to any favorable presumption at all.

We do not discuss the voluminous exceptions to the Master's report, because we do not understand that exceptions are necessary to the various reasonings, illustrations and computations of a Master in a reference like this one. This is not like the ordinary reference to a Master on an accounting, where he has a large number of separate and independent questions to pass upon. Here there was but one ultimate question of fact before him, namely, "Under the conditions existing on May 1, 1906, what rate of return can be earned, at the rate of 80 cents for gas, by a company reasonably capitalized and properly equipped and managed?" Every other question was evidential, not ultimate.

The points raised by our specification of errors against the valuations which have been confirmed by the court below may be classified as follows:

(*a*) Either the property of the complainant is valued upon a wrong basis (I*c*, II*a*, *b*, VIII, IX*a*, X*a*),

(*b*) Or the same value is counted twice (II*c*),

(*c*) Or the court has followed complainant's witnesses in points where it was bound, according to the legal burden of proof, to follow those of the state (II*d*, III*c*, IX*b*, X*b*),

(*d*) Or the testimony is too speculative to be considered (III*c*, IV, V*a*, *b*, *c*),

(*e*) Or it is contradicted by complainant's own admissions (VIII, IX*b*, X*b*, XIV),

(*f*) Or an item is omitted from the calculation (V*d*).

In main, these specifications of error may be defined as a demurrer to certain of the complainant's evidence.

II.

Complainant has an adequate remedy at law, and there is therefore no equity in the bill.

This defense is duly pleaded in the answer of the state (p. 54). But the court will dismiss in such a case, although the defense is not pleaded

(Allen *v.* Pullman Palace Car Company, 139 U. S., 658).

A simple allegation that a statute is unconstitutional is not sufficient to give jurisdiction to equity, even if the allegation be true. This is no exception to the rule that equity can only be resorted to when there is no adequate remedy at law (Cruickshank *v.* Bidwell, 176 U. S., 73; Indiana Manufacturing Co. *v.* Koehne, 188 U. S., 681, 684).

This is unmistakably clear as regards the Public Service Commission and the City of New York. The only thing which the Public Service Commission can do to the complainant is to bring an action of mandamus or for an injunction under the New York Code of Civil Procedure. To either of these forms of action the constitutional objection could be interposed as a defense. The question could then be tried out in the New York State courts under the protection of the constitution of that state, which does not permit (except by consent) that the testimony should be taken before one officer while the decision is made by another (New York Constitution, Art. VI., § 3). There could not be any multiplicity of suits, or other hardship calling for equitable relief.

Complainant's case as against the City of New York is in no better position. It depends entirely upon the statute of 1905. There could be no multiplicity of parties. The statute applies to no other consumer but the city. The city, on the other hand, has no interest in or function in respect to the statute of 1906, and is not enjoined in respect thereto by this decree. It is not claimed to be insolvent. The question would naturally arise in the state courts by the complainant suing the city upon a *quantum meruit* for its gas bill. The city would defend by basing itself upon the statute of 1905, and the company would rebut by claiming that statute to be unconstitutional. The question would then be tried out according to the state practice. Complainant would render no bill to the city until it was ready to sue. Thus, if it failed in its suit, it would suffer but one $1,000 penalty.

The suit can not be maintained on the ground that it prevents *multiplicity of actions* by private consumers. None of them were made parties, in which respect among others this suit differs from that under consideration in *Ex parte* Young, 209 U. S., 123, 129, which joined "individual defendants representing the shippers of freight upon the railroad." Moreover, that case, as well as Smyth *v.* Ames, 169 U. S., 466, 469, 517-18 (referred to by Judge Hough at page 422 of the record) were stockholders' suits, thus basing themselves upon an independent ground of equitable jurisdiction. Judge Lacombe expressly excludes suits by individuals from the scope of the injunction (pp. 136, 143), and their suits are actually now pending in large numbers in the state courts (See Richman *v.* Consolidated Gas Co., 114 App. Div., 216, 224; 186 N. Y., 209). The rights of A and B as against C can not be affected by C's suing D to declare that there are no such rights, even if D is given some power and duty to protect them. A and B must be sued personally, or through some representative.

Judge Jones in Alabama has announced a novel principle of equity jurisdiction, namely, that the state executive authorities represent each citizen for the purpose of an action such as this, even if the legislature has repealed all statutes giving them any power or duty to protect him, and left the entire enforcement of its maximum rate laws to the citizen himself. He treats the suit as *quasi in rem,* although citing no authority (Central of Georgia Ry. *v.* Railroad Comm. of Ala., 161 Fed. Rep. at pp. 981-2). No such doctrine was relied upon by Judge Lacombe. It has no basis in anything heretofore decided, or in any principle of equity procedure. It is unnecessary because the complainant, if it have otherwise a proper case for injunctive relief, may get jurisdiction of the parties by joining some of the citizens to represent the rest, as illustrated in the Young case. Judge Jones' innovating spirit is in striking contrast with Judge Hough's conservatism when the state asked a new application of the rules of procedure, as discussed in the last point of this brief.

It is of course a convenience to have a single test case made, but we do not understand that mere convenience, unaccompanied by other bases of equitable jurisdiction, is enough to justify the interference of the Chancellor, although it is a good reason for interfering if there are such other bases in the record.

As to the Public Service Commission complainant may urge, however, that it succeeds to certain of the functions which at the time when this suit was brought pertained to Julius M. Mayer as Attorney General of the State of New York, one of the original defendants; and that if equity had jurisdiction over him it retains that jurisdiction over his successors, notwithstanding the division of his functions between the present Public Service Commission and the present Attorney General. It may be further contended that one of his functions (namely, the one retained by the present Attorney General), is the bringing of civil actions for penalties, and that that involves hardship and multiplicity of actions, and is therefore a ground of equitable relief.

Hence we proceed to discuss the penalty aspect of the case, as to which Judge Lacombe and Judge Hough seem to us to have fallen into a clear error through misconstruction of the state law upon that subject.

The penalty clause (which is misprinted at p. 138 of the record) is as follows:

> "§3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars for each offence *to the people of the state.*"

Judge Lacombe indeed, at pages 138 and 139 of the record, refers to another and more drastic penalty clause, contained in section 21 of the old Gas Commission law. This is immaterial for various reasons. It is indisputably unconstitutional in itself, for the reasons stated by the learned judge. It is therefore a nullity (Norton *v.* Shelby County, 118 U. S., 425, 432). It was severable even from the rest of the old law (Reagan *v.* Farmers' Loan & Trust Co., 154 U. S., 362, 394-6), as was stated orally from the bench by the Chief Judge of the State upon the argument of the Saratoga Gas case, 191 N. Y., 123, in which case the rest of the old law was held unconstitutional, so far as interests us here. So far as the consumers in New York City are concerned, the clause was never applicable, because (as a penalty clause in an older and general act) it was *pro tanto* superseded by the later and special act (United States *v.* One Bay Horse, 128 Fed. Rep., 207). It was a sporadic legislative freak, never seriously treated and never repeated, and altogether contrary to the general course of the legislation of our state.

Returning then to the penalty clause above quoted from the statute of 1906, in the first place it is clearly separable from the rest of the statute, under the Reagan case, *supra.* Hence whether it is constitutional or unconstitutional in itself cannot be material in deciding whether a court of equity has jurisdiction. If it is unconstitutional, that is a defense to any action that may be brought by the Attorney General or the District Attorney in a state court to collect penalties; and if the state court decides erroneously, a writ of error lies to this court from its decision.

This brings us to the position considered by the court in *Ex parte* Young, 209 U. S., 123, 147-8, 163-5; namely, whether prosecutions for penalties would be so harassing, and produce such multiplicity of litigation, and risk of such enormous loss, that equity has the right to interfere although the penalty clause in itself be valid. It may be suggested that if the law be upheld the injunction will be dissolved, and the penalties will then become collectible from the beginning, so that unless the whole statute be void the injunction is no benefit. But this suggestion seems to have been overruled by the court in the Young case, and the whole question is an academic one here, as we shall now proceed to show.

The distinction between this case and *Ex parte* Young is in the penalty clause itself. Whether or not penalties are multiplex and harassing depends upon the construction of the clause which provides for them. Judge Lacombe and Judge Hough have construed the penalty clause in the present statute, and if the construction which they have given it were correct, and the assertion of a constitutional right mulcted to the extent of $390,000,000 a month, not even to indemnify the individual consumers against costs of litigation, but as a fine into the state treasury, then it would indeed be an enormity; and this court (209 U. S., 147) evidently supposing that construction to be the admitted and intended one, have referred to the present case as a striking example of undue penalties. But that construction has never been contended for by the state, in this action or out of it. On the contrary, it has been expressly disavowed. Our contention is that it was manifestly wrong, and that neither of the learned judges would have permitted it if the statute had been concededly constitutional and the company had come before him merely on the question how many penalties it must pay.

It ought to be sufficient to refer to the general rules of construction that a statute should never if possible be construed so to be unconstitutional or so as to be absurd (Oates *v.* National Bank, 100 U. S., at p. 244; Grenada County *v.* Brogden, 112 U. S., at pp. 268-9). But there are state decisions in point.

In Cox *v.* Paul, 175 N. Y., 328, the statute under consideration, which gave to stockholders a right of examination of corporate books, provided a penalty for "*any* refusal to allow such books to be inspected" (Stock Corporation Law, § 53). Plaintiff made three applications. One of them was refused by the secretary, the other two by the president. In the lower court he recovered one penalty against the secretary, two against the president, and three against the corporation. The Court of Appeals reduced the judgments to one penalty as against each, drawing a distinction between the imposition of a penalty for "*any* refusal" and an imposition for "*each and every* refusal" (p. 330), and saying "that this court is committed to the doctrine that a party suing for penalties can recover but for one violation or one default prior to the commencement of the action."

In Topham *v.* Interurban Street Railway Co., 96 App. Div., 323, 325, the question arose upon the "free transfer" provision relating to street railways in New York City, which was accompanied by a penalty provision for the benefit of passengers to whom free transfers were refused. The statute provided a penalty "for *every* refusal." This was held by the intermediate appellate tribunal of the state to be equivalent to the words "for *each* offence," words which had already been held by one of the other intermediate appellate courts to permit recovery of cumulative penalties, and distinguishing Cox *v.* Paul, *supra.* While the plaintiff's judgment was reversed upon other grounds, the judgments, similar in this respect, in Griffin and Scudder against the same defendant, were affirmed (96 App. Div., 340, *id.,* 636). The Court of Appeals however modified both these judgments, reducing their amount so as to permit a recovery for one penalty only, following Cox *v.* Paul and other previous cases, and holding the words "for every refusal" to be no better than the words "for any refusal" (179 N. Y., 438, 448-9). Motions for reargument were entertained, but resulted only in adherence to the decision already made. Referring to a case where cumulative penalties had been sustained under a statute imposing a penalty "for each offence," it was indeed remarked "that 'every' is not always *necessarily* the synonym of 'each' " (180 N. Y., 538); but if the present statute had said "for every offence" instead of "for each offence", the meaning would not have been different.

Two of the New York precedents cited by the Court of Appeals in the Griffin case are cited and approved by this court in *In re* Snow, 120 U. S., at p. 286; and many other cases are there cited to the same point; and the ruling has been followed in the New York courts in the later case of United States Condensed Milk Co. *v.* Smith, 116 App. Div., 15, affirmed without opinion at 191 N. Y., 536.

It is therefore clear that only one penalty at a time could be sued for by the Attorney General or the District Attorney for failure to observe the requirements of the statute of 1906 as to candle power, or as to pressure, or for overcharging the consumer. There is no allegation or proof indicating that the Attorney General or the District Attorney threatened to bring an unreasonable number of penalty actions, or that there was any reason to suppose that either of them would do so.

But even if they should sue every month, the total penalties recoverable for overcharges from the beginning of the controversy up to the date of this argument would not have amounted to $30,000—surely a most moderate penalty in a business of this magnitude. For the penalty would not be $390,000,000 a month, but $1,000 a month, for sending out the 390,000 monthly bills to private consumers, or for receiving payment for the same. Judge Lacombe assumes that each constitutes a separate offence, punishable by a separate penalty; an assumption based upon the remarks of Mr.

Justice Brewer in the Cotting case, 183 U. S., at pp. 99-102, but which remarks were made tentatively, and not after hearing argument (p. 102). *The assumption might be true if the penalty were recoverable by the individual to whom the bill is sent, to redress the violation of his rights and pay his expenses of litigation in asserting them; but it is not. It is recoverable by the state, and is for the purpose of punishing an offence, although one not even amounting to a misdemeanor.* There is no presumption that a penalty is multiplex when it can equally well be construed as single. On the contrary, no principle of statutory construction is more familiar than the strictness of construction of a penalty law (France *v.* United States, 164 U. S., 676, 682-3; Bolles *v.* Outing Co., 175 U. S., 262, 265; United States *v.* One Bay Horse, *supra*). A construction involving 390,000 penalties in such a case as this would be abhorrent, and we venture to say that if this case came before a court as a simple case of construction of the penalty clause, there would be no hesitation in saying "The fault is the same, whether the company may happen to have 9,000 or 90,000 or 390,000 customers. Under the rules of construction of penalty laws, you must show me some reason for it, before I adopt a construction that puts so enormous a sum into the state treasury without benefiting a single consumer."

In United States *v.* Patty, 2 Fed. Rep., 664, the defendant was indicted in the first count, for sending on each and every secular day from November 1, 1879, to February 10, 1880, a certain unlawful communication in large quantities through the United States mail; in the second count, for sending 100 unlawful printed circulars through the mail; and in the third count, for so sending 500 circulars. A motion was made to quash the indictment for duplicity, on the ground that the first count charged 45,000 offences, the second count 100, and the third count 500. That the case was well and fully argued is a safe inference from the fact that L. S. Dixon was counsel for the defendants. Judge Dyer, in denying the motion said (p. 666):

> "I think there can be no doubt, although it might be, under this statute, an offence to deposit a single letter or circular concerning a lottery in the post-office to be carried by mail, that if a number of deposits are charged as made at or about the same time, so that they consist of a single act, or of successive stages in a single transaction, then we may properly say that one offence has been committed."

Can there be any doubt about this? Can a man be indicted 10,000 times for stealing 10,000 peanuts? Or for printing a 10,000 edition of a copyrighted book?

A packer was convicted of shipping at an unlawful rate 67 tierces of oleo oil from Kansas through various states to New York. "This is a single continuing offense, not a series of offenses," as this court said (Armour Packing Co. *v.* United States, 209 U. S., 56, 77). The *innuendo* was indeed that it was not a single offense in each state. Even the Attorney General did not claim that it was 67 offenses. Could he have done so?

In United States *v.* Eagan, 30 Fed. Rep., 498, Judge Thayer held on demurrer for duplicity that placing a number of fictitious names on the registration list at the same time and place constitutes but one offense.

In Taft *v.* Stephens Lithographic Co., 38 Fed. Rep., 28, plaintiff sued as informer under the copyright law to recover $1,000,000 for printing and circulating 10,000 pirated copies of a copyrighted chromo. Judge Brewer held that "when the printing of many copies is a single continuous act, only one offense is committed thereby," citing the Eagan case.

The principle is indeed as old as Creeps *v.* Durden, Cowp. 640, where a baker had been convicted of 4 crimes for selling 4 small hot loaves of bread on a Sunday. Lord Mansfield said: "It is but one offense, whether longer or shorter in point of duration; so, whether it consist of one, or a number of particular acts. The penalty incurred by this offense is five shillings. There is no idea conveyed by the act itself, that if a taylor sews on the Lord's day, every stitch he takes is a separate offense; or if a shoemaker or carpenter work for different customers at different times on the same Sunday, that those are so many separate and distinct offenses."

In Central R. R. Co. *v.* Green, 86 Pa. St., 427, the railroad company excluded at the same time two colored people. Each recovered the $500 penalty for exclusion "of any person or persons on account of color or race"; but one penalty only was allowed on appeal.

See also Gimbel *v.* Hogg, 97 Fed. Rep., 791, 793; United States *v.* Central Vt. Rway., 157 Fed. Rep., 291, 293; Parks *v.* Railway, 13 Lea, 1.

Hence the Attorney General and District Attorney could institute but one proceeding every month for the $1,000 penalty. But even if they could sue every day, the penalty would be but $365,000 a year, and is that an amount sufficient to warrant equitable interposition of a Federal court when the state court has not been applied to, and when the total demand of the company is $13,000,000, and the sum in controversy $2,500,000?

Nor is it alleged or proved that the Attorney General or District Attorney threatened to be unreasonable about it. The bill of complaint does not even charge distinctly that the statute can bear the construction which Judge Lacombe and Judge Hough have put upon it. It only alleges (p. 18) that—

> "*If* it should be held that every charge in excess of the 80 cent rate is a violation of the provisions of Chapter 125 of the Laws of 1906, for which a forfeiture of one thousand dollars should be imposed, and your orator should make such a charge in excess of the 80 cent rate each month to each of its consumers, numbering, as hereinbefore stated, over 390,000, the aggregate of the penalties so incurred during one year would amount to over $4,680,000,000 and would be over fifty-four times as great as the value of all the tangible assets and franchises belonging to your orator," [etc.]

It is moreover settled in the New York courts that a succession of actions for penalties, when only one penalty can be recovered in each action, is not sufficient multiplicity of litigation to give jurisdiction to equity (Wallack *v.* Society, 67 N. Y., 23, 29); and we respectfully submit that this is a reasonable ruling, which should be followed in the Federal Court. In Mississippi Railroad Commission *v.* Illinois Central Railroad Co., 203 U. S., this point was not brought to the attention of the court, and the answer did not plead lack of equity. That the New York legislature construed this penalty clause as we do is indicated by the similar clause in the Public Service Commission Law (N. Y. Laws of 1907, Ch. 429), under which our clients hold their office. Section 73 of that law, in providing for the enforcement of lawful orders of the Public Service Commission, imposes this same penalty of "not to exceed the sum of one thousand dollars for each offence"; but follows it up with the following significant explanation, evidently in view of the decision in the free transfer cases:

> "Every distinct violation of any such order or of this act, shall be a separate offense, and in case of a continuing violation each day shall be deemed a separate offense. * * * In any such action all penalties and forfeitures incurred up to the time of commencing the same may be sued for and recovered therein, and the commencement of an action to recover a penalty or forfeiture shall not be, or be held to be, a waiver of the right to recover any other penalty or forfeiture."

The section then proceeds to provide, as to remission of penalties, that—

> "if the defendant in such action shall prove that during any portion of the time for which it is sought to recover penalties or forfeitures for a violation of an order of the commission the defendant was actually and in good faith prosecuting the suit, action or proceeding in the courts to set aside such order, the court

> shall remit the penalties or forfeitures incurred during the pendency of such suit, action or proceeding."

Another example of the language used by the New York legislature, when such a result is intended as that supposed by Judge Lacombe in the present case, is shown by People *v.* Koster, 121 App. Div., 852, 854.

III.

Assuming equity to have had jurisdiction, it should not have been exercised, but jurisdiction should have been declined and the controversy remitted to the state courts.

In *Ex parte* Young, 209 U. S. at pp. 166-7, this court said:

> "Finally it is objected that the necessary result of upholding this suit in the Circuit Court will be to draw to the lower Federal courts a great flood of litigation of this character, where one Federal judge would have it in his power to enjoin proceedings by state officials to enforce the legislative acts of the State, either by criminal or civil actions. To this it may be answered, in the first place, that *no injunction ought to be granted unless in a case reasonably free from doubt.* We think such rule is, and will be, followed by all the judges of the Federal courts."

Even had Judge Hough's findings as to ascertainable values been supported by a preponderance of evidence, was he entitled to rest upon this, and then indulge in the speculative guesses upon which he founded this permanent injunction? Was he entitled to hold this to be "a case reasonably free from doubt"?

He finds a corporation doing an annual business which, after paying operating expenses, would have netted during the past year about $3,235,000 at the 80 cent rate (p. 407). He figures its tangible assets at about $47,830,000 (p. 423), upon which the rate of return would therefore be 6¾%. But without any definite figures he speculates, first, that the lower rate will increase the sales; second, that present arrangements (which are all under complainant's own control) will be altered in such a way as to increase the expense of the business; and third, without any definite evidence about it, that $200,000 will be the net extra expense of the new business; and this sum he accordingly deducts (pp. 406-8, 425-8). This reduces the net income item to about $3,025,000 (p. 430). He then takes an alleged intangible franchise item, as to whose value there is no competent evidence, puts it at $12,000,000 "in a finding opposed to the settled opinion" of himself (p. 425), and by adding this item gets the reduced income figure almost down to 5%. He then holds this figure confiscatory, citing as his authority a judge in a San Francisco water case (p. 418), who said that a 5% return should not be held confiscatory (124 Fed. Rep., at pp. 598-9, 601). And yet this is one of the oldest and most assuredly profitable establishments in the New World. It is, in his own words, "as nearly a conservative an investment as any private manufacturing enterprise can furnish" (p.

409); and its return, after all of his speculative reductions, is within one per cent of what this court had held "more than is necessary" for the risky business of a California irrigation company (192 U. S., at pp. 213, 216).

We respectfully submit that upon such a state of facts he should have dismissed the suit as not being one of so grave a nature as warrants the interposition of the Federal power in purely local affairs. The state courts are open. They can enjoin, as well as try mandamus cases. Had jurisdiction not been seized by the Federal court, the case would have been tried by a judge or referee in the state court,—by an officer with judicial powers, who could exercise some control over the proceedings, could confine the record within the limits of reason and intelligibility, and who would under the state constitution see and hear as well as decide.

The question is twofold.

It is in the first place a question between one man in a gown and three or more men without gowns; a question whether a judge is better qualified to pass on such a question than a commission, or a legislature and governor. We say "better qualified" because we are not here considering the subject of plain, mathematically demonstrable and indisputable violations of common right. We are considering questions of some difficulty, involving the weighing of testimony, the choice between different degrees of probability, the exercise of prophecy, and the application of business experience. We believe that the majority of thinking people, taking the general average rather than any particular case, would consider a commission as the best qualified, a judge as the next best, and a legislature as the least. A commission generally is, and theoretically ought to be, a body of men chosen, so far as it is composed of lawyers, from the same class of material as the judges, including however members of corresponding rank and prominence from other professions or from the business world. It spends all of its time in studying the particular subject, and acquires both from independent study and from contact with the leading men of the railroad and gas and electric world a vast store of information as to practical as well as theoretical questions. Upon difficult questions, like those involving maximum rates, it is able to take plenty of time to decide. The judge on the other hand is no better a man than the commissioner when appointed. He is at least as busy a man, most of his time being taken up in the study of other questions. He can give but a limited time to the hearing of the case. When the number of hours allotted to each counsel is exhausted, counsel is cut off sharp and heard no more. He cannot even calculate beforehand how best to use the time allotted, for much of it is often exhausted in answering questions of the court about some minor detail. The judge then finds the voluminous papers on his desk, piled up among a mass of other papers equally pressing; and he has to decide without the knowledge and experience which had aided the commissioners. Upon questions of fact and discretion he is especially at a disadvantage. He is less likely to know which witness is lying, and is more apt to be misled by a false assertion of impracticability.

In the second place the question is between the State and the Federal judge. In this aspect it is a question of comity and a question of public policy. It seems to be assumed by many financiers and many lawyers that only Federal judges are capable of deciding fairly in such a case. State judges are classed in with the despised commissioners and legislators. We respectfully submit that the judges of the state courts of this country should be accorded the same respect as the judges of the Federal Circuit and District courts, and that in matters of purely local interest the Federal Circuit and District judges should as a rule, out of comity, refrain from interposing; instead of leaving the state judges, as in this case, to exercise the comity and refrain from administering justice in their own proper sphere.

And municipal trolley lines and lighting plants are on a different basis in this respect from interstate railroads. Rate cases on interstate railroads involve interstate problems. It is often charged that the state is trying to load the expense of its local traffic onto interstate traffic, or onto the local traffic of other states. When a conflict is suggested between state and nation, or between two or more states, there is more reason for the Federal courts to interfere. It may be wise for Congress to enact further legislation for the protection of interstate as against local traffic, and put its execution into the hands of a Federal tribunal, independent of the Fourteenth Amendment. But it is submitted that the Federal courts should be slow indeed to issue injunctions against the enforcement of state laws regarding the rates of fare or other details of management of local trolley lines or gas companies or electric light companies or water companies or irrigation companies. If the action of a state legislature or a state commission is to be annulled or suspended by the fiat of a single man, it is submitted that in local matters it would be more in accordance with public policy to put that responsibility upon a man elected by the people of the state or appointed by its own governor, rather than upon a man appointed at Washington; that the traditions and the habits of local self-government should be observed as far as compatible with modern conditions; and that therefore the full jurisdiction of the Federal judiciary, like the full jurisdiction of the Federal executive and legislature, should be most cautiously and sparingly exercised in matters of purely local concern.

It is important not only to have cases decided right, but also to have them so decided as to inspire public confidence in the decision. Public confidence in such a decision, if the decision involves an overturning of the work of a state commission in which the community have confidence, is greater when reached after trial in open court than when the real trial is *in camera* before a Master of whose existence the people had been previously unaware. To one brought up under the New York constitution, which for sixty years past has guaranteed to the defendant in an equity suit the right to have his case tried in open court and decided by a judge who has actually seen the witnesses, the public feeling in this regard seems a natural one.

We submit that the action of the Federal court in this case has been unduly precipitate, and does not contrast well with the dignified posture of the state judiciary in deferring to the jurisdiction which the co-ordinate tribunal had stepped in front of them to take. In his unreported Special Term opinion in Richman *v.* Consolidated Gas Co., Justice Leventritt said of this complainant "That it did not originally invoke State jurisdiction, where the same questions might have been passed upon, may be a matter of regret, but it is not one for condemnation, nor should it be permitted to influence the Court to disregard well-established principles of comity. * * * The Circuit Court has by its preliminary injunction taken unto itself the determination of the same questions that underlie these motions, and accepted practice, founded on very wise rules, forbids indirect interference by the State courts" (and see opinions on appeal at 114 App. Div., 216).

It may be asked why, after so strenuous a litigation and upon so voluminous a record, this court should be asked to remit the case and dismiss the bill upon a point that does not reach the merits of the controversy. Our answer is, that we do not think that the course of the proceeding before the Master was such as to bring out the full and fair merits of the defendant side of the case. We should prefer that the decision of this court should involve a ruling upon more specific propositions, but think that in no event can it be anything but a reversal and dismissal of the bill.

IV.

There is no unconstitutional or improper discrimination in fixing the 75 cent rate for the City of New York, while making the rate higher for other consumers within the same territory. Quite to the contrary, the rate for the city is unquestionably constitutional, irrespective of the fate of the private consumers.

This discrimination in price between gas furnished the municipality and gas furnished to its constituent members, the private consumers, is one of long standing, and was never before brought into court by the gas companies. The table of rates from 1897 down, in the Borough of Manhattan, under Chapter 385 of the Laws of 1897 (Record, p. 5264), and under the acts in question, is as follows:

	Consumer.	*City.*
1897	1.20	1.
1898	1.15	.97½
1899	1.10	.95
1900	1.05	.92½
1901-5	1.	.90
1905-6	1.	.75
1906	.80	.75

The complainant relied upon Lake Shore Railway *v.* Smith, 173 U. S., 684, where the Michigan Mileage Book Act was held unconstitutional because it discriminated in favor of married men against single men, and in favor of persons who could afford $20 investments against persons who could not; and this although the point was not made on the part of persons discriminated against. That case is not an authority to the effect that a legislature cannot establish discriminations which are neither arbitrary nor unreasonable. This discrimination between gas furnished the inhabitants of the city in their corporate capacity and gas furnished them as individuals is one whose propriety seems self-evident, and is confirmed by the fact that it was so long acquiesced in by this complainant and its sub-companies. If the price of the gas bought by the municipality were raised, the taxpayers would have to pay the difference; and theoretically the consumers who were not taxpayers would pay their share by way of rent.

The character of the service is also different. The municipality burns of course considerable gas in its public buildings, notwithstanding the fact that in most of them the occupants lock up and go home at a pretty early hour; but the vast bulk of its gas is burned in the street. It is unmetered. Special services are specially paid for. As to all of the city gas, the companies are saved the risks and many of the annoyances involved in its dealings with the 390,000 individual consumers.

Quite to the contrary, the 75 cent gas law is constitutional under the principles which have been laid down by this court in the railroad rate cases, irrespective of the validity or invalidity of the subsequent 80 cent law. The gas furnished the city amounted in all to about 400,000,000 cubic feet (p. 5076). A reduction of 15 cents on this would amount to the sum of about $60,000. The total net income of the company under the old law is found by Judge Hough to be $5,891,597.45 (p. 407). Deducting the loss by reduction of the city's gas from

90 to 75 cents the total net income was still about $5,831,500 under the law of 1905, or nearly 10% upon Judge Hough's $59,831,435 capitalization. Thus the decrease in price to the city amounted only to a reduction of about 1% in the net receipts of the complainant, and left them still nearly 4% over the standard fixed by him.

Nor did the statute of 1905 require the gas company to furnish any of its gas at a loss. The company's only complaint is that this particular portion of the gas did not pay its full proportion of profit. Its cost is not claimed even by Mr. Addicks to approach 75 cents (pp. 231-2).

If the statute of 1905 was valid when passed, notwithstanding the very slight fractional deduction made in the net profits of the company, it of course could not be made unconstitutional by the passage of the subsequent 80 cent law. If that law is invalid the consumer loses the benefit of the reduction which the legislature intended for his benefit, but retains his share of the benefits of the earlier and previously constitutional act. For if the statute of 1906 were unconstitutional, it would be a nullity. It could not be void in itself and at the same time make a prior statute void *nunc pro tunc.*

Is it then a violation of the Fourteenth Amendment to the Constitution of the United States for a state to require of a public service corporation a certain service to be performed at a rate which, though affording a large margin over expenses of operation, does not pay its full share toward profit on capital? This question is answered by the authorities in the negative, and they go even so far as to sustain statutes that require certain services to be rendered at a loss, provided the company is left on the whole with a fair profit.

This point is first noticed in the concurring opinion of Mr. Justice Harlan in Ruggles *v.* Illinois, 108 U. S., 526, 538 and is implied in the decision of the Wellman case, 143 U. S., 339. In both these cases the court was dealing with an act simply regulating passenger fares, and was not informed whether the railroad would not earn a sufficient return out of its freight.

In the Gill case, 156 U. S., 649, 665-6, this court held that a railroad company could not claim the right to earn a net profit from every part of its line.

In Smyth *v.* Ames, 169 U. S., 466, 541, it was indeed held that losses from low rates on local transportation could not be put upon the interstate business, but that was on account of lack of power in the state to cast a burden upon the latter class of business.

In San Diego Land Co. *v.* National City, 174 U. S., 739, 760, the court say that a case attacking rates must be decided by "looking at them in their entirety—and we cannot properly look at them in any other light."

The question was squarely presented for decision in Minneapolis & St. Louis R. R. Co. *v.* Minnesota, 186 U. S., 257. The railroads contested the rate fixed by the State Commission for the transportation of hard coal in carload lots. The company showed that the new rate, if applied to all the freight, would not pay operating expenses. This court said that the undisturbed rates for other merchandise "may be sufficient to earn a large profit to the company, though it may earn little or nothing upon coal in carload lots"; that a state comission may "reduce the freight upon a particular article, provided the companies are able to earn a fair profit upon their entire business, and that the burden is upon them to impeach the action of the commission in this particular" (p. 267).

In Atlantic Coast Line *v.* North Carolina Corporation Commission, 206 U. S., 1, one step further was taken. The order in question directed the railroad to change its schedule so that close connection could be made with another railroad at a certain point in the afternoon of each day. Assuming that to run this train would result in a loss, the railroad's contention was that this established a case under the Fourteenth Amendment (pp. 23-4), relying on Smyth *v.* Ames. The latter case, and those preceding it, were distinguished however on the ground that they only involved a general scheme of maximum rates, and are inapplicable to a case "when the question is as to the validity of an order to do a particular act, the doing of which does not involve the question of the profitableness of the operation of the railroad as an entirety," relying on the Gill and Minnesota cases above referred to (p. 25). The court further say that a carrier may be compelled to furnish adequate facilities "although by doing so as an incident some pecuniary loss from rendering such service may result."

V.

The burden of proof is upon the complainant, and is so strong that it must show that the state authorities could not fairmindedly have come to the result which was reached.

From the first judicial assumption of the power to declare a statute unconstitutional, it has been uniformly held that every presumption is in favor of its constitutionality.

In the Gettysburg Park case, 160 U. S., 668, 680, the court said of an act of Congress:

> "In examining an act of Congress it has been frequently said that every intendment is in favor of its constitutionality. Such act is presumed to be valid unless its invalidity is plain and apparent; no presumption of invalidity can be indulged in; it must be shown clearly and unmistakably. This rule has been stated and followed by this Court from the foundation of the government."

The same rule holds with respect to a State statute. Thus in Sweet *v.* Rechel, 159 U. S., 380, 392-3; the court said:

> "But in determining whether the legislature in a particular enactment, has passed the limits of its constitutional authority, every reasonable presumption must be indulged in favor of the validity of such enactment. It must be regarded as valid unless it can be clearly shown to be in conflict with the constitution. It is a well settled rule of constitutional exposition, that if a statute may or may not be, according to circumstances, within the limits of legislative authority, *the existence of the circumstances necessary to support it must be presumed.*"

In the final clause of this paragraph the Court follows the language of the Supreme Court of Massachusetts in Talbot *v.* Hudson, 16 Gray, 417, 422, which in turn adapted that of Chief Justice Shaw in Wellington, Petitioners, 16 Pick., 87, 96-7.

The presumption being in support of the defendants, and being so strong, it follows not only that the burden of proof is upon the complainant at every point, but that it is a burden to be lifted only by production of evidence of a peculiarly clear and convincing nature.

This court has ascribed to the findings of the Interstate Commerce Commission "the strength due to the judgments of a tribunal appointed by law and informed by experience" (Illinois Central R. R. Co. *v.* Interstate Commerce Commission, 206 U. S. 441, 454, and cases cited). The findings of a state railroad or gas or public service commission will doubtless receive the same ascription; and in the present instance, while the rate was finally fixed by act of the legislature, it was the same rate that had previously been fixed by a state commission after long investigation, and was higher than the rate recommended by an able legislative committee after the investigation of the year previous (p. 132).

It is not necessary to prolong the argument, because this court has recently considered in a series of cases the weight of the burden of proof which rests upon a corporation challenging a maximum rate fixed by state authority.

In San Diego Land Co. *v.* National City, 174 U. S. 739, 754, speaking by Mr. Justice Harlan, the court said:

> "But it should also be remembered that the

> judiciary ought not to interfere with the collection of rates established under legislative sanction unless they are so plainly and palpably unreasonable as to make their enforcement equivalent to the taking of property for public use without such compensation as under all the circumstances is just both to the owner and to the public; that is, judicial interference should never occur unless the case presents, *clearly and beyond all doubt, such a flagrant attack upon the rights of property under the guise of regulations* as to compel the court to say that the rates prescribed will necessarily have the effect to deny just compensation for private property taken for the public use."

In Chicago, Milwaukee etc. Railway *v.* Tompkins, 176 U. S. 167, 173, speaking by Mr. Justice Brewer, the court said:

> "The case must be a clear one in behalf of the railroad company or the legislation of the State must be upheld."

In San Diego Land Co. *v.* Jasper, 189 U. S. 439, 441-2, speaking by Mr. Justice Holmes, the court said:

> "In a case like this we do not feel bound to re-examine and weigh all the evidence, although we have done so, or to proceed according to our independent opinion as to what were proper rates. *It is enough if we cannot say that it was impossible for a fair-minded board to come to the result which was reached.*"

Applying the test thus established to this 80 cent rate, adopted after the Stevens-Hughes investigation of 1905 and the Gas Commission's re-investigation of 1906, and not discussing for the present what this court would do if it were willing to "sit as a general appellate board of revision for all rates and taxes in the United States" (189 U. S. at p. 446), we proceed to inquire whether Judge Hough has upon each point of the discussion of this problem kept in view—

The test:

Could a fairminded board have sustained the defendants' contention upon this point?

The present decree is based upon findings made by a master with whose methods satisfaction is expressed (p. 391), except so far as they are specially disapproved; and all the Master's valuations as to items capable of anything approximating to an exact valuation have been adopted and confirmed without further discussion by the court. *But the Master considered the burden to be upon the defendants,* and to be so strong that their contentions are sustainable only if "so decisively settled for all purposes as to admit of no further question" (p. 164, foot); that complainant's title to property "cannot be adjudicated in this action," but must be conceded as to all property "occupied by complainant under a claim of title and used by it in connection with its business of gas making" (*id.*); that the burden is on defendants to disprove the necessity of complainant's real estate holdings, even if complainant did not see fit to prove the use to which they are put (pp. 165-6); that if the original cost of the complainant's real estate was relevant to the inquiry, the burden was upon the defendants to show it (p.

167); that the burden was upon the defendants to show that the franchises of the complainant had ever been attacked, if they were here to be claimed to be revocable (p. 192); that the validity of a state statute purporting to grant a franchise to the complainant "must be assumed for the purposes of the present proceeding" (p. 194, foot); that if complainant contradicts itself, however immorally, and the state has believed its less self-favoring statement, he may believe the other (p. 216); that complainant may be excused from adopting appliances required by statute when the evidence affords no sufficient basis for an estimate of the cost of their installation (p. 250).

So too the Judge, while he refers to the true rule as to burden of proof, forgets it in his action. Thus he allows land to be capitalized as to which "very serious doubts are entertained", because he is trying "to reach an average favorable to the complainant" (p. 423).

It is submitted that both the Judge and the Master have been willing, if we may use the language of Chief Justice Marshall in Fletcher *v.* Peck, 6 Cranch at p. 128, to set aside a statute "on slight implication and vague conjecture."

Corollaries of the rule.

The rule in the Jasper case has the following corollaries, whose application to various points in the present case will be discussed elsewhere in this brief.

(1) As between two unimpeached and qualified expert witnesses, the valuations most favorable to defendant must be adopted.

(2) Under the well settled rule that the testimony of experts or employees is not binding (as to which very familiar rule of evidence we need only cite Chicago & Grand Trunk Railway Co. *v.* Wellman, 143 U. S. 339), a statute cannot be declared unconstitutional upon such testimony, unless the state admits its correctness.

(3) Complainant is entitled to no higher valuations than those which it has itself fixed under oath.

(4) Items incapable of exact valuation must be put down at the minimum amount that a fair-minded state board could fix.

(5) The judgment of the state must be taken as to the rate of return to be allowed, so long as that rate of return is above the limit of confiscation. Above that limit responsibility must be left with the state; and whatever power of judicial review there may be is confided to the state judiciary.

VI.

The following additional rules are applicable to the determination of the maximum rate question:

(1) *At least as to all items of capitalization over and above the actual cost of the property, the test must be this: Is it logical or equitable that the consumer should pay more cents per thousand cubic feet of the gas he burns because of the inclusion of this item?*

The present case is the first in which this court has been called upon to deal with a case of *appreciation*—with the case of a corporation which can win only by proving a capitalization vastly greater than its investment—which can win only upon unearned increments. All of its discussions of rate questions have been in cases where the company has fought for the standard of actual cost, and where the state has fought for the standard of actual value—where the case was one of *depreciation.*

While the language of this court in these discussions has been general in form, we understand it to have been particularly directed to the facts in each case respectively, and that it should be read in the light of those facts (Cohens *v.* Virginia, 6 Wheat 264, 399; Carroll *v.* Lessee of Carroll, 16 How. 275, 286; Woodruff *v.* Parham, 8 Wall. 123, 138; Barney *v.* Rickard, 157 U. S. 352, 364; Pollock *v.* Farmers' Loan & Trust Co., *id,* 429, 574-5).

In all these discussions it has been recognized that the subject cannot be treated from the standpoint of the company alone, any more than from the standpoint of the consumer alone, but it has not been necessary to analyze this out further than to hold that the company can rely neither upon its nominal stock and bond capitalization nor upon its original cost of construction, if these standards would result in a rate unreasonably high from the consumer's point of view.

In Covington Turnpike Co. *v.* Sandford, 164 U. S. 578, 596-597 the court said:

> "It is alleged here that the rates prescribed are unreasonable and unjust to the company and its stockholders. But that involves an

> inquiry as to what is reasonable and just for the public * * * . In short, each case must depend upon its special facts; and when a court, without assuming itself to prescribe rates, is required to determine whether the rates prescribed by the legislature for a corporation controlling a public highway are, as an entirety, so unjust as to destroy the value of its property for all the purposes for which it was acquired, its duty is to take into consideration the interests both of the public and of the owner of the property, together with all other circumstances that are fairly to be considered in determining whether the legislature has, under the guise of regulating rates, exceeded its constitutional authority, and practically deprived the owner of property without due process of law."

In Smyth *v.* Ames, 169 U. S., 466, 544, 546-7, discussing the company's contention that it was entitled to earn operating expenses, fixed charges, and some dividend, the court said:

> "It is unsound in that it practically excludes from consideration the fair value of the property used, omits altogether any consideration of the right of the public to be exempt from unreasonable exactions, and makes the interests of the corporation maintaining a public highway the sole test in determining whether the rates established by or for it are such as may be rightfully prescribed as between it and the public. * * * (p. 546). We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent

> improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case."

Certain contentions of complainant, by which a considerable part of the capitalization in this decree is defended, are based on a very literal interpretation of the second sentence in the passage last quoted. It is maintained that complainant must be allowed an income upon the fair value of its entire property now used in the gas business, even though as between itself and the consumer of gas that result would be inequitable by reason of elements existing in this particular case which were absent in Smyth *v.* Ames, and whose possibility elsewhere could hardly have occurred to the mind of the court. We take it that no proposition here advanced by us will be held to have been overruled in Smyth *v.* Ames, for "no proposition of law can be said to have been overruled by a court, which was not in the mind of the court when the decision was made" (Woodruff *v.* Parham, *supra*).

The rule of "the fair value of the property" was adopted as an equitable one. When it is not equitable, the reason of the rule fails and an exception thereto is called for.

In fact, in the Ames case itself Mr. Justice Brewer contended for the original cost as the equitable basis of ratemaking, when it was expended in good faith (Ames *v.* Union Pacific Ry. Co., 64

Fed. Rep., 165, 178). It was unnecessary to decide the question and the remarks of this court above quoted are *obiter*. The equitable solution of the difficulties involved in this question between original cost and present value we shall endeavor to find, when we come to discuss the unearned increments on land, mains and services, and the hypothetical franchise values, and also the duties of the state authorities as distinguished from those of the Federal courts. Suffice it to say here that the Circuit Courts seem to regard the question as still an open one. Judge Seaman in the Milwaukee Electric case (87 Fed. Rep., 577), and Judge Lacombe in the case at bar (p. 137), seem to regard as the basis, in the words of the latter, "what has been adventured in the enterprise on the faith of the state's franchises." (And see to the same effect San Diego Water Co. *v.* San Diego, 118 Cal., at pp. 569-70, 572, 573.)

(2) *While as a general rule the valuation for ratemaking purposes is the same as in condemnation proceedings, there are exceptions to the rule.*

An element, whether tangible or intangible, may be properly taken into consideration in a condemnation proceeding by the city, when it could not equitably be allowed as capitalization for the purpose of increasing the price to be charged for gas furnished the inhabitants of that city. It may be taken into consideration in a condemnation on behalf of some government or corporation other than the city, when it would not be taken into consideration in a condemnation by the city.

Thus suppose, as we contend here, that some of the property used by the company is more than necessarily expensive. Thus the company's plant may be built upon land which could more properly be devoted to some other purpose. In condemnation proceedings, the land could not be taken away without allowing its value; but as between the company and the consumer, the company would be entitled to capitalize it at no greater figure than would represent a necessary expense in the manufacture of gas.

Another instance is the "going concern" item (p. 139, *supra*).

(3) *Values and charges should not be duplicated in favor of the company and against the consumer.*

There was a good deal of such duplication in the Master's report, which has been stricken out by the court.

For instance, the Master, besides allowing practically the highest sworn value of the plant, added also the value of the investment at Astoria, although when the latter investment should become effective it was the intention of the company to scrap part of the older plants (p. 215).

He also allowed the so-called "ten cent item" which included indeed renewals, a proper charge, but most of which was intended as insurance against the general risks of business. These are the same risks, however, which are insured against by the rate of profit allowable to a business enterprise over and above the interest earned by capital loaned on safe security.

Both the Master and Judge Hough have, as will be shown, allowed a duplication by adding to the value of each plant the full value of the land under the plant, although that valuation could not be realized unless the plant were scrapped.

(4) *The period to which attention must be directed is the month of May, 1906. If 80 cent gas was profitable under the conditions then existing, it cannot be held unconstitutional on account of any inferences or speculations as to changes in conditions at a later period.*

This would seem to go without saying, if it were not that Judge Hough has adopted a different rule. He has deducted $200,000, or the interest on a capitalization of $3,333,333, from complainant's net income, on the assumption that there would be an increase of sales which (together with the most profitable part of the present business) he supposes would be provided for by gas made at Astoria.

Yet the testimony in September 1906 indicated a falling off instead of an increase in sales; and Astoria gas had not yet passed the experimental stage, or reached more than a fraction of the estimated output, at the end of January, 1907 (pp. 105-6, *supra*).

A new legislature was in session from the beginning of January, 1907, and if conditions had changed so that 80 cent gas was not longer profitable, *non constat* that the legislature would not have dealt fairly with the situation; or, in case of its failure fairly to deal therewith, that would be the time for the interposition of a court.

This bill was filed May 1, and the temporary restraining order was filed May 18, 1906 (pp. 34, 38). They can be sustained only by reference to the conditions existing at that time.

Yet the decree bases its calculations upon the supposed experience of the complainant during the year ending April 30, 1907, and largely turns upon what is supposed to have happened after February 2, 1907, the day on which the testimony closed and after which we have no information on the subject whatever.

The legislature of 1906 had a right to infer that the conditions of 1906 would continue for the immediate future, and at least until the next session of the legislature; so far as appears in this record they did so continue; and this court in Smyth *v.* Ames, at 169 U. S., 549-50, has provided a remedy if they should change and not be otherwise remediable.

VII.

Applying the foregoing rules to this record, we find that 80 cent gas will give complainant a return of over 9½% upon its proper present capitalization, according to the experience of 1905.

We now proceed to take up for consideration the various items of capitalization and income as to which we have assigned error. These items are as follows: (1) the "real estate"; (2) the plants; (3) the mains and services; (4) the franchises; (5) the supposed loss of earnings from increase of sales; (6) the special franchise tax.

(1)

The "Real Estate."

For the facts as to this, see *supra*, pp. 30-58.

While believing that the decree capitalizes certain large items that should be omitted or reduced for reasons special to themselves, we have not asked the court in our assignments of error to assume that task. Judge Hough imposes on us a compromise (p. 423) which we shall not complain about in that respect. We shall discuss only three points of general application, which involve from $3,200,000 to $8,446,000 apiece.

(*a*) *The basis of valuation should not exceed the cost of the property.*

Suppose two gas companies long established in the same community. Each serves half the consumers of that community. With one exception the circumstances and conditions of the service are alike. That exception is an accidental one. When the companies started, they bought sites for their respective plants which were of equal area and equally well located for the purpose. The locations of the plants are still equally well located for the purpose for which they were originally bought, and for which they are now used. But owing to movements of population—movements upon which nothing done by either of the companies had any influence—Company A's site is in a region now much more valuable for general business purposes than Company B's. The value of B's still remains at the figure which it originally cost. The value of A's has risen so greatly as to increase the expert valuation of that fortunate company's total property 15%. The experts value that company's property at 15% more than the property of its equally deserving but less fortunate companion. Otherwise the two are alike. Each has the same capital stock. Each has the same gross sales and the same operating expenses.

Is the lucky company entitled to charge 3½ cents more for its gas than the unlucky company? Or rather, is its unlucky consumer to pay more for his gas than the lucky consumer of the unlucky company? If the state undertakes to fix maximum rates, must the maximum rate in the one case be 3½ cents greater than in the other?

We speak of an increase of 15% in the total valuation, because the actual increase which Judge Hough has made in his capitalization by reason of the unearned increment on real estate is about 15%. We say 3½ cents increase in rate, because Judge Hough's increase of 15% in capitalization results in an increase of over 3½ cents in what he considers a constitutional rate, as will appear by calculation. To an equity lawyer or an equity judge it seems to us that but one answer to this question should occur. He must instinctively appreciate the inequitable character of the result which has been reached by the Master and by Judge Hough. But while it is plainly inequitable, it is very plausible. It seems at first glance to follow naturally from the principle that the basis of calculation "must be the fair value of the property being used by it for the convenience of the public." The real estate is being used. Why not allow its fair value?

The fallacy seems to us to lie in the assumption that the company must necessarily be allowed the full value of the property which it uses, whether or not it is requisite that so valuable a property be used. Only so much of the value of the property as was covered by the original investment is really used as capital in gas making. For that purpose the value has never increased. The extra valuation which the expert swears to represents wealth that is being hoarded for enjoyment at some future time, when it shall be released by the removal of the gas plant.

The stockholders of the Consolidated Gas Company are undoubtedly entitled to obtain the full value of each parcel of land, whenever that parcel shall be sold or otherwise disposed of. This they have recently done as to one of the parcels, since it has been condemned by the city and its present value paid. Indeed, they will probably in each case get more than the present full value, because they will be removing a nuisance. The increment in value is indeed unearned by them. It is due to the industry of the whole community, which has built up this great city and enhanced the value of the land upon which the city is built. It is the result of the combined work of the inhabitants of the city; in other words, of the consumers of gas therein. It is in no sense the result of any special wisdom on the part of the managers of this complainant and its predecessor companies. They selected the sites for the various plants of the company, not on account of their estimated salability as building lots in another century, but on account of their appropriateness for the special purpose for which they were to be used in the company's business.

The stockholders of the complainant company will be entitled to their shares in the unearned increment of this real estate, just as they will be entitled to their shares in the increased value of the stock of the New York Edison Company, if that stock shall ever be sold. There is no claim that the present market value of the stocks held in the New York Edison Company is to be taken as part of the property upon which complainant is entitled to a return by joint contribution of the gas consumers of the city. Does the unrealized profit that lurks in the market value of this real estate stand in any better position?

Clearly it does not, because the difference between the present market value of the real estate (if vacated) and its original cost *does not represent property used in the manufacture and distribution of gas.* The proof of this proposition lies in the fact that the difference in value can never be realized until the property ceases to be used for the manufacture or distribution of gas, and is either transferred to general investment account or is disposed of to other parties. So long as the property is occupied by manufactories or holders or for storage it represents for gas purposes no greater investment than its original cost. The difference in value is not wealth used in the manufacture and distribution of gas, *but wealth which the manufacture and distribution of gas keeps out of use.*

This can be illustrated by putting a case.

Suppose that the company had two plants for the manufacture of the gas, one within a quarter of a mile of the corner of Wall and Broad Streets, and the other on the Bronx Kills, and that the same amount of gas was made at each, at the same expense. Suppose now that one plant was about to be scrapped upon removal to Astoria. Would it make any difference to the consumer which plant was scrapped? Suppose the downtown plant should be scrapped, the land sold, and the money put in bank. Would the consumer be asked to pay six per cent thereon? But suppose that the company should scrap the uptown plant, thinking that the other would rise so rapidly in value that some time it would sell for double its present market price. Is the consumer to pay the six per cent upon this *latent* increment of value, although he would not have had to pay it if the latent element had been realized?

Again: Suppose that the company should invest its present surplus in a land speculation, buying vacant lots in the newer portions of the city and holding them for a rise. So long as they were allowed to remain as land entirely vacant, there would certainly be no claim that they could be included as part of the invested capital upon which the people of the city must pay toll. Suppose, however, that the company should make some use of them, "as, for example" (in the language of the Master) "the storage of coal, coke, pipe fittings tools and castings" (Report, p. 166 top). Suppose that the speculation, (owing to its management by gentlemen having such intimate knowledge as some of the directors of this company have with respect to the future lines of development of the city) should be very successful, and should add millions of dollars to the wealth of the company, which should thereupon clear away the coal and the pipe fittings and realize upon the land. Is the price of gas to be raised when this deal is closed, in order to represent a reasonable return upon its profits? And if it is not to be raised at the termination of the period, is it meanwhile to be raised so long as the speculation is going on, revaluing the property every year so as to add that year's increment to the total valuation, thus making the gas consumers of the city not only carry the speculation (as they do now by paying the taxes), but pay in addition a reasonable dividend every year upon its estimated although as yet unrealized profit? This is just what the Court holds in the present case.

The fact (if it be a fact) that somebody pays taxes on an assessment equalling or approaching the present valuation, does not affect the correctness of our analysis any more than does the payment of taxes on other investments of the company. Complainant is of course taxed upon its investments necessary to its gas business and also upon its investments unnecesary to its gas business. But all the taxes on the land covered by the gas plant, coal and pipe fittings are in fact paid by the consumer, and so treated in this decree.

The original cost of the land, which should be taken as its valuation for the purposes of this proceeding, is of course its cost to the original company, not the nominal amount at which it was put in to the capitalization when the consolidation was effected in 1884. The price of gas to the consumer cannot be increased simply because the gas company recapitalizes and revalues its property from time to time. The consolidation of the six old companies, by which this complainant was formed, was not equivalent to the purchase of the property by an outsider. No one was interested to cut the figures down. The reason for the valuation was to get figures which would give each "constituent company" its *proportion* of the total stock to be issued. It was immaterial as between the parties whether the valuations were high or low, if all were high or all were low alike; and in fact parties arranged to have them high. Such a transaction affords no competent evidence.

Nor even (to complete the discussion by putting a case not relevant here) if the property as a whole had been purchased by a new company, would the purchaser thereby be authorized to charge a higher price for gas than the person from whom it purchased. The new purchasing company would simply buy the right that its predecessor had. It could not buy a right to charge more than he could charge. The increased amount which it might have to pay, by reason of the fact that the land owned by the vendor company had accumulated a large unearned increment of value, would simply stand as an investment to be realized upon whenever the purchaser company should abandon business or move its plant. It would be an example of the very common situation where one company, determined to buy out another, has to buy and pay for a good deal of property which it cannot immediately use and is not strictly necessary for which the purchase is made; but which will ultimately be worth its cost, and is bought because the buyer would rather purchase than compete.

(b) If the basis of valuation is to exceed the cost of the property, it should still not exceed the estimated cost of replacing it with other property capable of accomplishing the same result.

The decree is based upon valuations which are made on the theory that the plant is removed and the land thus freed for other purposes, but that the plant is replaced in the same immediate neighborhood. In other words, the valuations are based on the value of property otherwise similar in the immediate neighborhood of the plant, but not covered by the plant. This is a situation which there is no reason to suppose will ever occur. There is no reason to suppose that the company will ever scrap a plant in order to remove it to another place in the same immediate neighborhood. There is no reason to inflate its capitalization upon any such hypothesis. It would doubtless go to the cheapest property which would be available for its purposes; that is, to the cheapest property which could be brought into near connection with its trunk lines of pipe.

The method of valuation proposed by complainant's experts and adopted by the Master and Judge Hough duplicates the valuation of the plant, which admittedly would be destroyed if the land were sold in the market for the prices which they have fixed. Market value, in the heart of a great and rapidly growing city, the sum of the value of the land considered as vacant *plus* the value of the building thereon. If the land has increased rapidly in value since the building was erected, the increase can only be allowed to appear in the total valuation by deducting an equivalent amount from the valuation of the building. This is especially the case when the building has been used for a manufacturing purpose. It is most especially the case when, as with a gas holder, the purpose is one that would not be useful for any purchaser of the property. The valuations of manufacturing property generally put the building down at little more than a nominal sum.

To take a simple case, suppose that a man buys a lot of land in a residence district, and puts up a handsome house. If he was wisely advised, the total value of his house and land at the start is the sum of the values of the house and the lot considered separately. Suppose however that the character of the neighborhood changes, and that it becomes very valuable for business purposes. The valuation of his lot alone often runs to a figure far surpassing what had been the total valuation of his house and lot; but at the same time the valuation of his house, although it may be as good as new, or even immensely improved, becomes *nil*. The reason of this is that the great value of the lot is due to the fact that it can be used for a different class of improvement. It is no longer wanted for a handsome house, but for a handsome store. A gas plant is much like a handsome house that has been built in the taste of a rich proprietor, whose taste is shared by nobody else. In such a case the house adds nothing to the value of the land upon which it is built. This was illustrated when the two million dollar mansion of the late A. T. Stewart, once one of the wonders of New York, was pulled down a few years ago.

In the present case the complainant wanted to have credit for the full valuation of its plants, and in our computation we shall give it credit for what the Master and court have put it at, although the figure seems too high; but it also wanted to have credit for the full value of the land, just as if the plants were not there. In other words, it wanted to have its cake and eat it too, and it is being given that permission.

It is well settled in the New York courts, in accordance with common sense and with the prevailing views among real estate men, that the land and improvements are to be valued as a unit, and not each independent of the other; so that if the building does not enhance the value of the land it is to be disregarded altogether (Matter of Blackwell's Island Bridge, 118 App. Div., 272; Matter of Town of Carmel, 56 N. Y. Misc., 311, 318).

(*c*) *The valuations of the witnesses for the state and city should have been followed.*

The fundamental vice of the position of Judge Hough was in assuming that it was simply a Master over whom he was sitting in review. He was reviewing the action of a state. He could increase its figures only by showing that it acted upon figures which would not have appealed to a fairminded man. A fairminded man could have believed the testimony of Messrs. Thompson, McHale and Wells. That is sufficient to dispose of this branch of the case.

The judgments of this court have been upon actual facts proved as to cost and expenses, not upon anybody's guesses as to matter of opinion. "Is the validity of a law of this nature dependent upon the opinion of two witnesses, however well qualified to testify?" (Chicago & Grand Trunk Ry. Co. *v.* Wellman, 143 U. S., 339, 343). Can a law be set aside by one man who has not seen the witnesses, acting upon the impression which they made upon the mind of another man?

If the state produced no witnesses at all upon the point, or if its witnesses proved entirely incompetent, or grossly unprepared, or dishonest, and no application was made to produce qualified testimony, a different case from this would be presented. It is respectfully submitted, however, *that a statute cannot be declared unconstitutional because persons employed and paid by complainant swear that in their opinion it is unconstitutional, or, what is equivalent, that in their opinion certain valuations ought to be given to certain pieces of property, from which valuations unconstitutionality of the statute would be inferable.*

In other words, it is respectfully submitted that when the complainant pays gentlemen to express opinions as to the value of its property, and the state and city pay other gentlemen, honest and qualified, to testify to a smaller valuation, the presumption in favor of the constitutionality of a statute is strong enough to sustain it, unless the state concedes figures from which the contrary deduction must be made.

Complainant is also bound by its own tax return values, which are almost precisely the same as those given by the state's expert witness. It is not bound by a technical estoppel, but because a fairminded board could have believed that its tax reports were true (p. 189, *supra*).

(2)

The plants.

For the facts see *supra,* pp. 58-75.

One fallacy inherent in the valuation is in the fact that they would never be reproduced as they now stand. If a new and rival company should be established, or if the municipality should itself go into the gas business, modern and not ancient plants would be built. The present company would then undoubtedly have to reduce its rates to meet this new competition, and it would therefore appear that the present plants are not really worth what it would cost to reproduce them as they stand, but the very much smaller price which it would cost to produce plants of modern construction which could do the same amount of work.

There is no very satisfactory evidence as to the amount which should be stricken off on this account. If it were the turning point of the case, the record would therefore have to be returned for further testimony. But this seems unnecessary, in view of the tax valuation.

A fairminded committee had the right to believe Secretary Carter's testimony (p. 189, *supra*), and that would reduce the valuation of the plant by about $7,000,000. Whether this belief, being fairminded, was also justified, a Federal court can not inquire, if our understanding of the cases is correct. In other words, if a company gives low figures to a tax officer, and repeats them to an investigating committee, it has estopped itself from going into a Federal court to deny them, whatever remedy it may have before the state judiciary.

Whether the tax valuation is correct or not depends upon whether the early destruction of the plants is, by necessity or for profit—that is whether it is a case of genuine depreciation. In our computation we assume that it is not by necessity but for profit (p. 124, *supra*). This assumption gives a higher valuation to the plants, but also bars out all "Astoria" items; for if Astoria will be so much more profitable as to cause such a change in policy, it means that all expense incurred there, including loss of interest pending construction, will come back in reduced cost of operation.

(3)

Mains and services.

For the facts, see *supra*, pp. 75-9.

The book value and the value given to the tax commissioners of the mains and services fairly represents the original cost, and fairly represents their present value if the streets had not been repaved over them, and if the expense of laying down other pipes under otherwise similar circumstances and conditions had not been increased by the increased occupation of the streets for other purposes. On account of this greater occupation of the streets at present, and most particularly on account of the new pavements, the value of the mains and services has been so largely raised.

If cost of reproduction (that is, cost of duplication by a new rival company, or by the municipality if it should go into the gas business,) is the proper standard of valuation, there may be still some question about the correctness of complainant's figures, which are increased every time that its witness goes on the stand; but conceding the figures to be correct, why is not the same principle applied to the plant? Why is that not also valued on the basis of what it would cost to build another plant doing the same work? Why is it not applied to the real estate? Why it that not also valued on the basis of what it would cost to buy other real estate, in a more appropriate neighborhood, to hold that other plant?

Taking the matter up in another light, what equity is there as between the company and the consumer in raising the latter's price of gas because the city has repaved the streets? The company has not paid a cent for the improvement. It is even excused under the state law from paying assessments (Matter of Anthony Ave., 46 N. Y. Misc., 525; Matter of West Farms Road, 47 *id.*, 216). The paving is paid for by the property owners of the vicinity; that is, by the consumers or their landlords; and if by the landlords, the cost is presumably collected out of the consumers by way of rent.

Under what principle of equity are the gas consumers of the city, having paved it at their own expense, required thereafter to pay to this gas company, on account of those improvements, an annual bonus in the shape of increase in the price of gas?

Suppose there to be two gas companies in the same city, each serving half the inhabitants. Each has put up plants at the same cost and is operated under the same conditions. Then the city, with money collected out of the inhabitants of the territory served by one of the two companies, puts an improved pavement on the streets occupied by the mains of that company. Is that company, although it has not contributed a cent to the expense, to be permitted thereafter to charge a higher rate for gas than can be charged by the other company to the inhabitants of the other half of the city? Must its consumers, who have paid for the repaving, pay it tribute because the streets have been repaved?

It may be suggested that the new pavements increase the expense of repairs to the mains. Very true. But this increased expense is paid by the consumer, not by the gas company. It appears on page 219 of the Master's report as "Repairs to Mains, "$126,110.31" and "Repairs to Services, $89,033.46." The cost of renewing mains and services, when they have to be renewed, is also paid by the consumer (p. 404).

(4)

The franchises.

For the facts and for the law as to the validity and duration of the franchises which complainant claims, see Appendix A hereto.

For the facts bearing upon their value, see *supra*, pp. 20-22, 80-94.

Judge Hough admits, or rather we should say insists, that in his own individual opinion the question of franchises on such a valuation is without justification and reason, and is a judicial fallacy (pp. 411-13); and he refers to his inclusion of the franchise valuation (although that inclusion forced him to decide in complainant's favor instead of dismissing the bill) as "a finding opposed to the settled opinion of the Judge who happens to constitute the Court" (p. 425). He came to the conclusion however that he was forced to the contrary ruling by a supposed "trend of decision," by "methods of reasoning pursued in well considered cases dealing with kindred topics," and "by the *dicta* of courts of approved authority," indicating "a train of thought" opposed to his own and our view as to what the law ought to be; that on the principle by which "private citizens may acquire vested property rights through a series of even erroneous decisions," he is obliged, in order not to be "doing violence to theories of law and habits of legal thought fairly discoverable in these cases," to allow complainant $12,000,000 which he does not believe belongs to it, "because to refuse would disregard views expressed by higher courts" (pp. 413-14).

We have carefully examined the cases which are referred to with this mixture of respect and disrespect. In only one of them (namely, the Spring Valley Water Works case, which he has refused to follow upon the question of the rate of return to be allowed by a Federal court) do we find any justification for his application of them. In that one exceptional case, we find that Judge Morrow has fallen into the same error with Judge Hough—he has failed to observe the distinction between two entirely different classes of franchises. Neither this court nor the New York Court of Appeals have made an erroneous decision, or fallen into bad habits of legal thought, or made *dicta*, or taken a trend, or expressed views, which justify the conclusion which the learned District Judge has reached.

We think that he has been misled, both at this point and in his insistence elsewhere upon the state's so-called "special franchise tax" as having a bearing on this part of the controversy, *because he has been using the term "franchise" as if there were only one species of franchise.*

He has overlooked the fact that the word "franchise" is commonly used in a broad sense, to include rights whose limitations as well as duration are quite diverse.

There are three distinctions whose observation will clear away the fog which has obscured the vision of the learned judge.

First distinction. Between a franchise with, and a franchise without, the right to charge a minimum toll, or earn a minimum dividend.

Customs have differed widely in different states as to the breadth of franchises, as well as their duration. Some states incorporate in their franchises some provision as to the minimum rate of toll or dividend, often at the same time putting a time limit on the entire franchise. Other states generally put no express limitation on the franchise, but on the other hand accompany it with no special guarantee against future legislation limiting the earnings. New York belongs to the latter class.

Hence an argument as to whether or not a "franchise," *per se,* should be separately valued, is an argument based upon insufficient information. It is necessary first to ascertain whether any particular rate of return is guaranteed.

When the "franchise" includes a provision by which a company is privileged always to charge a toll of not less than a given amount, or to charge such tolls as will enable it always to earn a dividend of 8%, there is of course a contract which the state can neither directly nor indirectly break.

Such a case was Monongahela Navigation Co. *v.* United States, 148 U. S., 312, relied upon by Judge Hough at page 414 of his opinion. This case arose under a statute providing for the condemnation and removal of a certain lock and dam. The statute expressly provided that no compensation should be awarded for "the franchise of said corporation *to collect tolls*" (p. 313); and this franchise "to collect tolls" was excluded from consideration by the court below (p. 319). Mr. Justice Brewer speaks in his opinion of "*both* the right of the company to have its property there *and* the franchise to take tolls" (p. 341), and refers to the latter again as a separate affair at pages 342 and 344; and he says that "*these tolls,* in the nature of the case, *must enter into and largely determine the matter of value*" (p. 329). Judge Hough's misinterpretation of the case was due to his erroneous assumption that in speaking of "*both* the right of the company to have its property there, *and* the franchise to take tolls," the court was not speaking of two separate provisions in the charter of the company whose property was being condemned, but was discussing a charter in the common New York form, like those claimed by this complainant. Justice Brewer says that "the amount of compensation was subject to the determination of the State of Pennsylvania" and that the "prices which may be exacted under this legislative grant of authority are the tolls" (p. 329); and by examination of the legislative grant of authority, which was both pleaded and proved and was printed in the record before the court, it will be perceived that the company was originally created with a statutory right to a nine per cent toll, afterwards raised to twelve per cent besides the permission to establish a contingent fund of not over $50,000, afterwards altered by providing that one-half of the tolls above ten per cent dividends should be paid to the commonwealth (Monongahela Record pp. 33, 39, 50). By a subsequent agreement between the state and the company it was provided that "no reduction shall be made at any time so as to afford a less dividend than eight per cent per annum on the capital stock" (p. 53). The report of the case contains a full statement of the argument by the United States; and it will be perceived that no question arose as to whether or not the franchise to collect tolls was in itself a right of independent value. The only points made were that the state franchise was not good as against the United States, and that the state had reserved an option, which the United States might exercise, to take over the property at a fixed sum (pp. 320-3).

The other Federal cases upon which Judge Hough relies have no bearing on the point, except Judge Morrow's opinion in the Spring Valley case, 124 Fed. Rep. at p. 594, which has no independent discussion but simply follows what he erroneously supposes to be the Monongahela ruling. In the Reagan case it is clear that tangible property only is in mind in the Court's discussion (154 U. S. at pp. 402-3, 405-7, 411). The Reagan case had nothing to do with what he seems to cite at p. 415 of his opinion (Rates from St. Louis to Texas Common Points, 11 I. C. C. Rep. 238, 264). That is an opinion of Mr. Prouty about a valuation of railroad property under a Texas statute of 1894, for the purpose of limiting the issuance of stocks and bonds.

The New York Court of Appeals opinion upon which he relies is that in the famous Broadway Railroad case, People v. O'Brien, 111 N. Y. 1, 41. It received the concurrence of three judges only, doubtless because in its *obiter dicta* it went a little too far. For instance, a franchise can hardly be inheritable if granted only for a term of years; nor is it strictly accurate to speak of it as alienable if granted in language which does not permit of voluntary alienation. The franchise then under consideration was practically if not literally perpetual, and was also alienable. All the adjectives and descriptive phrases used in the opinion were properly descriptive of the case in hand, and their inapplicability to other conceivable situations was not perceived. The question involved was whether the legislature had the right, by arbitrarily repealing the charter of the company, to deprive its bondholders and stockholders of the right to have its tangible property maintained as a going concern; in other words, to realize more than its scrap value.

With franchises of the Monongahela class however, which carry a right to charge a minimum compensation and therefore are capitalizable at a valuation additional to that of the tangible property, this court has had frequent information, as in the Detroit case, 184 U. S. 368.

Second distinction. Between short and long term franchises.

This is an obvious distinction. A franchise originally granted for fifty years, and terminable to-morrow, is protected by the constitution until to-morrow, but is negligible in a condemnation or rate making case, even if it carries a guaranteed 10% dividend.

Third distinction. Between revocable and irrevocable franchises.

This distinction also is one which hardly needs consideration. A revocable franchise is equivalent to a revocable license; and the courts have recognized that no value need or should be assigned to such a franchise or license, when the sovereignty which has granted the license concludes to condemn the property. Condemning the property involves the revocation of the license (Kingsland *v.* The Mayor, 110 N. Y. 569, 583). In the Monongahela case, *supra,* this principle was indeed unsuccessfully relied upon by the United States; but the court held that the United States could not avail itself of a power of revocation reserved to itself by the state.

Bearing in mind these distinctions, let us now proceed with the main argument.

(*a*) *The franchises claimed being unconstitutional, or not the property of the complainant, or revocable immediately or upon short notice, they cannot be capitalized as against the city or its inhabitants.*

(*b*) *A franchise to build and operate, without any special contract as to rates of fare, has no value cognizable in ratemaking or condemnation proceedings except that it gives the company the right to have its tangible assets valued at a sum higher than their scrap value.*

We are speaking now of the *simple* franchise to build, operate and make reasonable charges, as distinguished from what may be called a *compound* franchise guaranteeing also a minimum rate.

Of course if the company had no franchise—if it could be turned out of the streets at any moment—its plant, mains and services could not be valued at anything approaching original cost, or cost of reproduction. They would be almost a total loss, except so far as covered by the unearned increment on the real estate, which the removal of the plant would enable the company to realize. The franchise has indeed an enormous value so long as it is not terminable or terminated by expiration or revocation, "because" in Judge Hough's words "it authorizes the gainful use of private property in a particular manner" (p. 413); "because" to use his language again, it is "an attempt to protect those investing their property upon the faith thereof, * * * the property which it renders fruitful" (*id.*).

In the main case under the New York "special franchise tax law" (*People ex rel Metropolitan Street Railway Co.* v. *Tax Commissioners,* 174 N. Y., 417, subsequently before this court at 199 U. S., 1), Judge Vann, in discussing the tangible property in the streets, says that it is "so incidental to and dependent upon the special franchises as to have no substantial value unless used in connection with them" and therefore to have a relation with them "so intimate as to be inseparable in any practical system of estimating values," and that all the "mains and pipes, poles" etc., "when separated from their special franchises, have no value except as firewood or old iron. Their only substantial value is the right to use them in connection with the franchise, and hence they are incidental to the franchise. As part of the franchise they are worth something, but severed from it nothing to speak of"; and hence that the tangible and intangible property in the streets constitute "a new entity, which as a going concern *can neither be assessed* nor sold to advantage, *except as one thing, single and entire.*" This is substantially Judge Hough's reasoning. Judge Vann does not hint that a special franchise can have any value *additional to* the immense value to which it thus contributes, when there is no charter or contract right to charge any particular rate.

Judge Vann's reasoning but adopts that of Thomas F. Rowland, who built parts of complainant's plant and appraised other parts of it in 1884. Being asked to value the franchises, he said that without them he could not "conceive that the property is worth anything except what it is worth for old material," and that his valuation of tangible property is a "valuation of that property in the manner which it was used at the time I made the appraisal. * * * That is no use except to have the right to open the streets" (p. 6097).

In *Brunswick Water District* v. *Maine Water Co.*, 99 Me., 371, 375-81, cited in Beale and Wyman on Railroad Rates, § 362, as opposed to the separate valuation of franchises, the court discuss the franchise question at considerable length, and come to the conclusion that the franchise is what makes the structure legally "a going concern structure" and "that some difficulty in discussion has arisen from attempting to differentiate in logic what is inseparable in fact," and that the property cannot be valued "separate from its inherent characteristics" and therefore cannot "be valued in entire disregard of its franchise characteristics," and that even when the statute does not specially mention franchises "it must have been implied that the property was to be valued as rightfully where it was, and rightfully to be used, for what are pipes in the ground worth as pipes, or reservoirs or dams or fixtures, unless they can be rightfully used, and reasonable tolls charged? And these rights are the franchise, at any rate, the most important ones" (pp. 376-8). The court concludes "that the value of money invested, in whatever form it now is, is affected by the right to use it in that form. That is, by the franchise" (p. 380). This also is substantially Judge Hough's reasoning.

Summing up the doctrine of these cases as we understand them, we may say—*A simple franchise is the right to operate as a profitable going concern what would otherwise be a job lot of second hand material.*

That a simple franchise can not be given a separate and independent value, for the purpose of increasing the price of gas against the consumer, is obvious.

There was no implied agreement or understanding, when the franchises were granted, that the grantees should earn a reasonable return on anything more than the capital invested. The grants were made subject to the state's right to so limit the return. It was for this very reason that compound franchises, guaranteeing a higher return, have been so commonly asked for, and so often granted. They were asked because that was the only method by which a specially high return could be secured.

It is now well settled that, whether a franchise be exclusive or not, whether it be perpetual or not, it is subject to the right of the sovereign, in the exercise of the policy of power, to fix a maximum reasonable rate. The right to fix such a rate has been long settled, and is complete unless there has been a most clear and accepted contract between the sovereign and the grantee, by which the right is waived or limited (Smyth *v.* Ames, 169 U. S., at pp. 545-6).

Since then a franchise is granted subject to the fixing of a reasonable maximum rate, it is a matter of mathematical demonstration that no value of the franchise itself can come into the calculation by which that reasonable rate is arrived at. The franchise is held subject to a servitude, and a servitude cannot be got rid of indirectly by any process of computation based on the assumption that it does not exist. The very large return which is received by the owners of many franchises is due partly to the fact that sovereigns recognize the right of people who have risked their money in such enterprises to receive a higher rate of return than is received by persons who invest in safer securities, and partly because ignorance and inertia and preoccupation often delay for a long series of years any action (indeed any investigation) by the sovereign upon the matter at all. The immense sums at which the so-called public service franchises in our large cities have been recapitalized by promoting syndicates have been based upon the doctrine of chances; the chance that the sovereign will not find out how much the company is really making (if that can be concealed by over-capitalization, especially through bond issues and consequent low dividends upon the stock), or that it will not enact or enforce a system of reasonable rates.

The absurdity of complainant's theory is well illustrated by the court's calculation that the value of the franchise has so enormously increased since 1884. Certain testimony elsewhere criticized by us is to the effect that in that year the difference between the agreed value of the tangible property and the agreed total capitalization, being $8,084,000, was divided up arbitrarily into $1,303,000 "Working Capital" and $7,781,000 "Rights, Franchises, &c.," and that the latter figure has been accepted as a valuation of franchises by the Master and court. Assuming the figure to be a correct valuation as of that date, then if a reasonable maximum rate had been fixed by the state in the year 1884, and since then maintained, the item could never have grown above that figure. But the court now finds that this same intangible property (it is not claimed that any new franchise has been since acquired) has increased in value by a sum exceeding $4,200,000, *this increment in value constituting more than one-fifteenth of what is fixed as the present capitalization.* And this burden upon the consumer who has got to pay six per cent upon the increment results from no action taken by complainant for his benefit, but only because the number of consumers and their necessary use of gas have increased, and *because the public authorities for so long a period lay idle,* whether from ignorance, indolence, corruption, or from a *bona fide* desire to let an enterprise earn a high rate of interest as long as it should be in any sense an "infant industry."

What doctrine could be more absurd? What doctrine could be more pernicious to our government? What doctrine could have a greater influence and effect in putting railroad companies and gas companies into politics? For every year that by manipulating primaries and conventions, and arranging deals, and diverting the attention of legislators and municipal officers, they can postpone the evil day of state regulation, they can gain an eventual increase of income when that evil day shall finally arise. *And what they shall thus have gained will be protected by the Federal Constitution and will be a perpetual asset.*

A new company starts off with its real property, construction, equipment, and working capital. It has permission from the public to operate for a definite or indefinite future time, charging tolls. Sometimes a charge is made for the permission, which the company pays as a commission for getting the business, as part of its initial expense. There is an implied understanding that the tolls shall be high enough to give the company a fair return. A fair return on what? Suppose the charter guaranteed a profit of 6%, but failed to mention the amount upon which the profit should be calculated. What would counsel advise a proposed purchaser about it, the day after the company opened for business? According to our contention it would be calculated upon the capital invested, which has been spent in obtaining the aforesaid real property, construction, equipment, working capital, and permission. But if it is to be the capital invested *plus* something further, then *plus* what amount? Surely the sum must be knowable, if it is to be taken into a calculation. If there is an implied agreement about it, there must be some way of finding out what the public agreed to.

Again, suppose the sum to be ascertainable, so that the public could be told "You have given away $1,000,000", or "$7,781,000". How does this gift grow afterwards? How does it get to be $12,000,000? In the earlier years of the industry a company like this ought to be allowed to earn a specially high return, a return higher than would be permitted to concerns engaged in older and better understood kinds of business, because it is good policy to attract the investment of capital in novel enterprises. *But by what process does the allowance of this specially high rate during the period of special risk increase the capital as well as the income of the company?* If there were any result like this to be feared, would it not deter the state from encouraging new enterprises, for fear of their levying tribute on posterity? Is there any equity or reason or public policy or common sense in a doctrine which permits the gift to grow in capitalized value as against the giver, after it is given? Is there any of either in a doctrine which values the gift as a separate item even at the start?

What then is the item which nowadays we see so often capitalized by promoters under the head of "franchise and goodwill"? This item is not peculiar to public service companies. It is as common in "industrials". It is merely the promoters' estimate of what the purchasers of the stock will consider the chance of being able to sell goods at such rates as to make an extra high profit, over and above a satisfactory rate of profit on the rest of the capitalization of the company. In the case of an "industrial", there is no appreciable risk of state reate regulation, but there is risk of competition. The "franchise and goodwill" represents probability of making that extra high profit, notwithstanding the risk of competition. In the case of a public service corporation there is no longer now much risk of competition, but there is risk of state rate regulation. Here again the "franchise and goodwill" represents the same probability—a probability that for some reason the company will be permitted to make a profit that is over and above a reasonable and satisfactory percentage on the capital actually invested. In either case the item represents a commercial wager that may be lost.

Complainant put much reliance upon Matter of Water Commissioners of White Plains, 71 App. Div., 544, 176 N. Y., 239. This is an obscure case and a border case; a reversal by a bare majority of the Court of Appeals, the present Chief Judge dissenting, of a unanimous opinion of the Appellate Division, in which one of the present judges of the Court of Appeals concurred. As we understand it, it does not affect any question here, and as Judge Hough did not cite it, we presume that he read it as we do. It was a condemnation proceeding by the Village of White Plains. The company's tangible property had cost nearly $330,000, but was assessed by the commissioners at only $103,000, upon the theory that the franchise which gave it its value was about to expire. This theory the Court of Appeals held to be erroneous. That court has no jurisdiction to consider any question of fact, and upon holding the commissioners' theory to be erroneous could only reverse and direct further proceedings. Judge Vann concurred in the opinion, and there is nothingg in the case to indicate that he regarded the franchise in any other light than that described by him in the special franchise tax case (p. 221, *supra*).

We have already pointed out that there is no judicial precedent sustaining a separate franchise valuation except Judge Morrow's misreading of a decision of this court (p. 218, *supra*), which is disapproved by Beale and Wyman (Railroad Rates, § 362); while in the Stanislaus County case that afterwards came to this court (192 U. S., 201, 216), a claim for such a valuation, having at first been put forward, was afterwards formally withdrawn by the complainant's counsel (113 Fed. Rep., at p. 935), undoubtedly because discussion had convinced him of its indefensibility. In Judge Seaman's very careful discussion of the Milwaukee Electric case no franchise item was taken into consideration, although the franchises had twenty-six years to run (87 Fed. Rep., at p. 583).

(*c*) *The "special franchise tax" has no bearing upon the question.*

It was the existence of this tax that seems to have mainly influenced both Judge Lacombe (pp. 142-3), and Judge Hough (pp. 416, 425). That they acted under an entire misconception of the New York statute and of the proceedings thereunder will be shown when we come to the discussion of the special franchise tax item.

(*d*) *If the franchise is susceptible of separate valuation, only a nominal sum is allowable.*

Complainant claims no exclusive franchises. Hence considerations with which this court is already familiar show that a franchise valuation must be small, if at all allowable. The state can at any time authorize or direct the city to build its own lighting plant. This would be equivalent to the abolition of all advantage to the complainant, except its monopoly during the time necessary for the city to build and equip. When it builds and equips, the company must drop its claim for a profit on its alleged franchise or lose all its customers. It will doubtless drop part of its charge, even if it can compete at all. This was conceded and assumed by everybody in the litigations over the statutes permitting municipalities to go into competition with other public service corporations, as for instance the Skaneateles Water case, 161 N. Y., 154, 184 U. S., 354, and the Newburyport cases, 168 Mass., 541, 555, 103 Fed. Rep., 584, 193 U. S., 561.

Judge Hough substantially concedes that there is no direct evidence of value (p. 416). His fanciful method of valuation (pp. 417-8, 424-5) is without support in facts, as we have shown in the statement of facts (pp. 83-93, *supra*). The state has valued these alleged franchises at zero, or at a nominal sum. Under the rules laid down by this court (pp. 188-9, *supra*) it was incumbent upon complainant to show that this ruling of the state was "a flagrant attack upon the rights of property" and one which would be "impossible for a fairminded board." Yet this very complainant, just before the passage of this 80 cent gas law and the commencement of this suit, had filed with the state a paper sworn to by an officer whom it presented as a fully qualified expert, stating that all its property in the streets, tangible and intangible, would sell for less than the amount at which the tangible part is put down in the decree. This is as good testimony as any other testimony in the case. *Could not a fair-minded board believe it?*

Never has a state statute been denied enforcement upon reasoning so speculative. Indeed, if this court has ever affirmed a case overthrowing a rate law on any speculative reasoning at all, we have overlooked it. This suit, if it terminates in a decree for the complainant, will be a long step forward in the movement for substitution of the judicial for the legislative discretion. Would this be in accordance with the traditions of the comity of the judiciary to the legislature? Or of the comity of the Federal to the state government? Would it be in accord with a true public policy?

(5)

The supposed loss of earnings from increase of sales.

For the facts as to this, see *supra*, pp. 100-112. The facts need no comment.

So far as they are disclosed, they disfavor complainant's contention. So far as they are undisclosed, we know only that they are facts which the complainant might have furnished had it chosen to do so, but which it prevented defendants from getting, by successfully shutting off investigation both into its own operations after December 31, 1905, and into the affairs of the other companies. The year 1906-7 was three quarters over when it closed its case in rebuttal and successfully objected to any surrebuttal. It did not offer to show how much gas it had had to supply, or where that gas had come from. It is subject to the presumption against a party who will not show his books, but relies upon friendly experts instead (Sturgis v. Clough, 1 Wall. 269, quoted in The Conqueror, 166 U. S. 110, 128, 134).

The whole mix-up is an illustration of the juggling made possible by the recent legislation permitting one company to control the stock of another, which controls the stock of a third, and so on. Here the main company gets a $200,000 income allowance, which is equivalent to an allowance of $3,333,333 on the capital side of the account, as representing capital invested in Astoria stock. It gets the allowance on the theory that it will transfer its patronage to the Astoria subcompanies from the older subcompanies. The latter have 80 cent cases of their own, just like this case. When their cases come up for trial, we shall probably find that the 1906-7 gas was really made by them, so that there should have been no $200,000 allowance here; that in effect its allowance here represented capital invested in their stock; but that they are entitled to disregard the decree here, not having been technically parties to it, and to be allowed for all of their own capital against their own consumers. Thus $3,333,333 of the capital of the Standard and the other companies will have been counted once against their own customers, and once against those of the complainant.

Even if we lay aside all evidence tending affirmatively to discredit this deduction, it is entirely speculative, for complainant has the burden of proof, and nothing in the record supports it; while on the other hand, *a considerable amount should be added to the net earnings in the calculation, because the state is entitled to assume an increase of profits from increase of sales at the lower price, and this assumption can not be overthrown by mere speculation on the part of the court.*

In any event the $200,000 should be subject to a deduction of $58,149.84, interest on cost of New Amsterdam construction (p. 102).

(6)

The special franchise tax.

The Master and the learned judges below have discussed this tax as if they had only read its name, and not its definition. They have assumed that a franchise must necessarily be something of a permanent nature. Yet the language of the New York special franchise tax law is set forth in the Master's report at page 201.

The words "special franchise" include not only a "franchise", but other things also. They are defined as follows:

> A franchise, right, authority or *permission* specified in this subdivision shall for the purposes of taxation be known as a "special franchise."

The words "specified in this subdivision" refer to the paragraph also quoted by the Master as follows:

> The value of all franchises, rights, authority or permission to construct, maintain or operate in, under, above, upon or through any streets [&c.] any mains, pipes, [&c.] for conducting * * * gas, &c.

Thus a company that has no franchise, but holds an annual license or simple permission,—whose status is that of a tenant from year to year, or at will, or by sufferance—is just as fully taxable as if it had an exclusive franchise in perpetuity.

A *permission,* so long as the permission continues, yields just as large an *income* as a perpetual franchise for the same number of mains and pipes. The annual value being the same, the assessment and tax should be the same; and the statute so evidently contemplates. A man ninety years old pays the same tax upon the land which he holds in life estate as his grandson will pay when he comes into its ownership in fee simple absolute.

The way in which the tax is assessed, as described by the Master in his report at page 204, makes it in effect a tax upon the total earning capacity of the company, *minus* such an amount as may properly represent its tangible property otherwise assessed.

The statute has received a practical construction, both from the state assessors and from the various referees who have dealt with it in certiorari proceedings. *The tax is the same whether the company has a franchise or right, or only an authority or permission.* The question whether the streets are occupied under a perpetual contract, or long term contract, or revocable license, has never cut any figure. *It is only the annual value which is taxed,* and the actual net profits are the basis of the valuation. Of course the rate of fare, or the price per cubic foot or kilowatt, is one of the principal factors governing the net profits, and through them the rate of tax. For if the state and city permit a company to occupy the streets *pro tempore* with what is for the time being an exclusive privilege of supplying gas to the community, and do not, on the other hand, put any limitation upon the price which it may charge, *the permission tax,* called in the statute a *special franchise tax,* will be very considerable. But if, on the other hand, the state reduces to the extent of twenty per cent the rate charged, the tax will be very much less.

This shows the fallacy of the idea that the state is estopped, when it lays an annual tax upon a permission to occupy the public streets, from denying that that permission constitutes a perpetual franchise. The Constitution gives the power to grant franchises to the legislature. No action of a tax officer can constitutionally grant a franchise. Any franchise granted by a tax officer would be a nullity. A franchise granted indirectly by levying a tax under that name would be no better. The tax officer cannot even give right of possession (Consolidated Ice Co. *v.* The Mayor, 166 N. Y., 92, 101-2) unless he is the duly authorized agent of the State for that purpose.

People frequently have tried to claim grants from the state by getting tax officers to tax them upon pieces of land; but they never succeeded in doing so, so far as we are aware. If the taxing officers try to tax a man upon some piece of property which he does not own, his remedy is to prove that he does not own it. This would have been the complainant's proper method of relief, if it were being taxed upon a franchise which it did not possess. It did not dispute, but admitted, that it had a franchise taxable under the act if the act were constitutional. Consequently no decision of any court in any proceeding under that act is a decision upon the question whether the complainant had a franchise or not. But that is immaterial; *for we concede that it has franchises, taking issue only as to their duration.*

Furthermore, how can the complainant assert an estoppel as against the consumers, based upon a tax *which the consumers pay,* and from whose payment the complainant is relieved? There has never been any dispute in this case over the proposition that whatever special franchise tax might be payable in 1907 or 1908 must be charged as an operating expense against the consumer (see pp. 223, 383).

Hence there would be no estoppel on the State, as stated by Judge Hough at p. 425, even if the tax officials had acted on a theory of permanence of franchises. Upon what reasoning the estoppel idea was based, we have never been able to discover.

In view of complainant's insistence upon the assessment of 1906, however, it may be well to analyze just what happened. Assessments are made every year as of the second Monday of January, under the practical construction given to the Greater New York Charter (Ash's edition, 1906, pp. 578-9), read in connection with section 42 of the Tax Law as amended. The present assessments were in fact made as of that date (p. 81, *supra*). On the second Monday of January the rate was a dollar, and the value of the special franchise at that period was such as the net earnings based upon a dollar rate would indicate. The 80-cent gas law was not enacted until May. Immediate objection was made to the assessment, and it is not claimed that the question has been as yet finally settled either by compromise or adjudication.

Not only in 1906 however, but in 1907 and 1908 as well, it has been the duty of the State Assessors (whether they have done their duty or not) to assess the "special franchise" on the theory that the dollar rate continues. They must assume that it continues until this suit is otherwise decided. It is the duty of complainant's counsel, on the other hand, to resist payment of a tax upon this basis. The consequent litigation must remain pending until the final settlement of the present controversy. Each party to the litigation must act as if the other were going to win. This is the uniform experience of a tax upon the exercise of a privilege which the owner considers more valuable than the state admits. The main controversy is over the value of the privilege. The tax upon it must temporarily remain unadjusted.

The tax rate is under .015% (p. 1002). Assuming the tangible special franchises, that is, the mains and services, to be finally assessed at their full cost or book values (p. 77, *supra*) or together at $9,064,822.12, the tax would be under $136,072. If assessed at the Master's values, or together at $14,630,184, the tax would be under $219,452. If the 80 cent gas rate should turn out to give the company only a reasonable return on its tangible property, then there would be no intangible special franchise to tax, and the balance of the $406,909.23 special franchise tax item of 1905, after deducting the tax on the mains and services, would have to go out of the calculation. For the figures of 1905 are only relevant so far as they afford a presumption that the expenses will be the same thereafter (p. 399).

How far the $406,909.23 item will be wiped out is a matter that can not be calculated until we have calculated the probable return to be earned under the 80-cent gas law. The method is shown by People *ex rel.* Jamaica Co. *vs.* State Board, App. Div., 3d Dept., Sept. 1908☆(S. P. Chicago Union Traction case, 114 Fed. Rep., 557, 561). The calculation is as follows: First ascertain the value of the tangibles, excluding the tangibles in the streets (mains and services) which are classified as part of the special franchise. Next ascertain the net income, assuming there to be no special franchise tax. Subtract from the latter sum 6% on the former sum. Capitalize the remainder on a 6% basis to give the real value of the permission for the current year. Equalize this by reference to the general basis of assessments, if it is not customary to assess at full value. Then about 1½% on this sum (p. 1002) will be the special franchise tax to be paid during the current year.

Summary.

Capitalization (Judge Hough's) less than		$59,831,435
Deduct real estate values not part of the wealth employed in supplying gas (p. 43, *supra*) about	8,446,000*	

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*If other theories are adopted instead of the one which we believe to be the correct one, the figure to be deducted would be $6,325,310, (p. 36), or $3,200,000 (p. 47). Even with the latter modification the net income would be over 8%.

☆112 N.Y.Supp.392.

Mains and services, excess over book value (p. 77, *supra*) about	**5,605,962**	
Franchises	**12,000,000**	
		26,051,962
		$33,779,473

The net income for 1905 at the 80 cent rate according to Judge Hough would have been about $3,225,000.* This is over 9½% on the above capitalization.

If we regard the removal to Astoria as a forced one, there is to be deducted about $7,000,000 as representing depreciation in plant, as shown by the tax report.

VIII.

The basis of the maximum rate regulation should not be a figure exceeding the capital actually invested in the enterprise, and upon that basis 80 cent gas will give complainant a return of over 22% according to the experience of 1905.

In the summary statement just given, the capitalization of the company has been estimated upon the basis of present value, less certain items

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*This is his figure *for 1905*. He deducts $200,000 on account of supposed variations *in 1907*. We base our calculation on the date as to which the evidence was taken.

But the $3,225,000 should be largely increased owing to the reduction in the special franchise tax due to reduction in price of gas. This, as well as the fact that complainant has been grossly underassessed in the past, is shown by the Jamaica case, cited on the previous page.

not equitably capitalizable as against the consumer for the purpose of increasing the price which he should pay for his gas. The elimination of these inequitable items practically reduces his capitalization to actual cost. We believe that there should be a still further reduction, and in order that the discussion of the subject should be complete we set it forth, although we believe that we have already reduced Judge Hough's figures to an extent several times sufficient to require the dismissal of this bill of complaint.

If the capital actually invested in the enterprise be taken as the basis of discussion, its amount is considerably smaller than the original cost of the present property. The difference arises from the fact that *part of the cost was paid by the consumer, and is properly to be credited to him and not to the company.* Eliminating that portion of the capital which was the contribution of the consumer and not of the company, would reduce the capitalization to about $14,564,571.82 (p. 25, *supra*) upon which the return (without any allowance for special franchise tax) would according to the experience of 1905 have been over 22%.

This raises two questions: (*a*) whether the capital actually invested in the enterprise is the true basis of capitalization for the purpose of establishing maximum rates; and (*b*) whether amounts secretly expended out of surplus earnings in extension of the property, during periods when very high dividends are being paid, and without the real facts being known to the public, are to be regarded as contributed by the stockholders or by the consumers.

(*a*) *Where the present value of the property is greater than the capital actually invested therein, the latter and not the former is the proper basis of capitalization.*

The cases which have previously come up to this court have been all cases of *depreciation* in value. No case of *appreciation* has appeared here. If we are to be content with purely superficial reasoning, and not really look into the equities of the situation, it is of course easy to say that if the company is going to lose the benefit of part of its investment when values depreciate, it must get the benefit when values appreciate. Like much other superficial reasoning, this is plausible and sounds fair, and the Master has cited *obiter dicta* of Judges Ross and Thayer in its support (pp. 168-9); while Judge Hough seems to regard any argument to the contrary as a reflection upon the state (p. 393).

The problem does not seem to us to be one that can be so easily disposed of. It seems to us that there are more factors in the situation than have been allowed for.

Maximum rate legislation is based on the assumption that the companies whose rates are to be regulated are practically monopolies. So long as real competition exists, government interference is unnecessary and as a matter of fact does not occur. The period for maximum rate regulation arrives when as here one company has a monopoly, or when competition between two companies is avoided by an alliance between them.

For the result is the same in either case, and we may therefore consider the subject on the assumption that there is but one company, which holds a practical monopoly because (whether on account of the constitutional prohibition, or legislative policy, or local policy) no franchise is given to a competing company. We also assume that there is no express or implied agreement preventing the state from giving a franchise to a competing company, and no moral obligation upon it not to do so.

In case the values of the company's properties appreciate by reason of circumstances over which it has no control, and without expense to itself, the question is as we have previously stated, one of equity as between itself and the consumers. In case of depreciation of values, the state is free to grant a franchise to a competing company, or to permit the municipality to enter the business; and such a course, as frequently held by this and other courts, is perfectly legitimate; and it has been conceded by counsel and recognized by the courts in all cases in which such a situation has been considered that the establishment of the new company will at once destroy any ability of the old company to charge a higher sum than a reasonable rate upon the present value of its property, after charging off the depreciation.

Nevertheless there would seem to be often considerable equity in favor of the original company. For instance, it may have been a pioneer in the new business, and rapid progress of invention may have caused great waste by destruction of fixed capital for the purpose of improving service and keeping it up to date. The Milwaukee case was such a one, this class of waste being estimated by the court at two-sevenths of the entire investment. It seems to us that on the one hand the state rate-making body ought to recognize an equity in favor of the company and as against the public, and therefore for a reasonable period of time permit a higher toll to be exacted by the company than would otherwise be proper; but on the other hand that expense thus unfortunately wasted should not be allowed to be permanently capitalized as against the consumer. The equities should be worked off within a limited time, and the consumers not subjected for all eternity to the payment of higher rates than they could get from a competing company.

Let us now turn to the company whose property has appreciated in value, owing to the growth of the community about it. It seems to us that its basis of capitalization for the purpose of fixing maximum rates should be *the capital actually invested*, or so much thereof as has been actually expended for its lawful purposes.

In the first place, that conforms the calculation to the original implied contract between the public and the company at the time of the granting of the franchise. The franchise is granted subject to the right of the community to fix reasonable rates, but the implied understanding is that a reasonable return will be allowed upon the capital invested, in view of the risks of the enterprise. If assured that the public will protect him to the extent of allowing him to make, if successful, a profit proportionate to the special risk of the enterprise, the investor will take that risk; and the percentage of expected profit which he has in mind is a percentage upon the amount of money which he is putting at risk. It may be that he calculates also on a speculative profit in real estate; but if so, he does not expect to get it until he sells the real estate and moves his works somewhere else.

In the second place, from the point of view of public policy, this basis of calculation is well adapted to the encouragement of new enterprises. If assured in case of success a reasonable return, proportionate to the risk, upon the money which is put at risk, the adventurer will adventure his money. He will not refrain from adventuring it, simply because he is told that the public will not pay him a profit in addition on any imaginary amounts that he is not putting at risk.

In the third place, this basis is a practical one, and not dependent on the guesses of paid experts. If accounts are properly kept, the amount of capital invested and the way in which it was invested are matters of permanent record. The ratemaking official cannot make a finding of present value except upon testimony which is notoriously unreliable.

(b) Properties purchased out of surplus earnings over and above high dividends, the facts not being disclosed to the consumer, should be regarded as having been contributed by the consumer and not by the company, and hence should not be treated as capital for the purpose of fixing maximum rates.

The subject is one which has been much discussed recently, and a broader rule than that above formulated has been contended for by counsel in a case before the Interstate Commerce Commission, in which it is claimed that a certain railroad company has doubled its own capitalization out of the proceeds of overcharges to the consumer, and is now insisting upon a constitutional right to earn a 6% profit upon the capitalization thus doubled.

During the period to which we allude, the old companies (complainant's predecessors) were paying just as high dividends as they dared to allow the public to know about. In order to dispose of the surplus profits they were using them to extend their lines, leaving the public to suppose that the dividends covered all that the properties made, over and above operating expenses.

It does not seem to us to need argument to demonstrate the correctness of the proposition that purchases which the consumer was led to believe were made out of operating expenses are to be treated, as against the consumer, as having been so made. *Non constat* that otherwise the rates would not have been then regulated.

IX.

Assuming Judge Hough's capitalization, however, complainant would have earned in 1905 at the eighty cent rate a return within two-fifths of one per cent of that which has already been sustained by this court.

Here again we calculate without any allowance on account of special franchise tax. Judge Hough has allowed a depreciation item of which about $156,000 should be charged against the 6% percentage of return.

It is true that no assignment of error has directed special attention to this item, but the whole question of the rate of return to be allowed upon this enterprise is brought up by Assignment XII. We now discuss merely the question whether risk of depreciation over and above the past experience of the company should be considered as a separate item of operating expense or whether such risks are covered by the five, six, seven or higher percentage of return which the State allows on the investment.

The depreciation items allowed in the Milwaukee and San Francisco cases, (87 Fed. Rep., at p. 583; 124 id. at p. 599) corresponded to the item of repairs and replacements in this complainant's accounts (except that the repairs and replacements had been neglected, so that the item referred to a future expense caused by a past omission) and were not, as the Master seems to think (pp. 228-9) a general contingent allowance. While these cases do not sustain the Master, those which he cites from State courts do, as he admits, oppose his ruling. In Cedar Rapids Water Co. *v.* Cedar Rapids, 118 Iowa, 234, 263, the court say that setting aside a depreciation fund may be good business policy, but it is in no just sense a charge affecting the net earnings of the works. The interesting opinion of Judge Garoutte in the San Diego Water case, 118 Cal., at p. 583, reaches the same conclusion.

These last two cases (a fact which the Master overlooked) are sustained by a recent decision of this court. In San Diego Co. *v.* Jasper, 189 U. S. 439, the rates of which the water company complained, which were fixed by the county board of supervisors, permitted a net return of 6% according to the calculation made by the courts, and that calculation did not make any allowance whatever for depreciation over and above repairs. Complainant claimed 6% per annum on the cost of its pipes, and 2% per annum on the cost of its reservoir and dam, claiming that they would be in time ruined by peculiarly destructive agencies in the soil. Mr. Justice Holmes said (p. 446):

> "We will say a word about the opposite contention of the appellant, *that there should have been allowance for depreciation over and above the allowance for repairs.* From a constitutional point of view we see no sufficient evidence that the allowance for six per cent on the value set by the supervisors in addition to what was allowed for repairs is confiscatory."

It will hardly be claimed that the business of supplying gas in the Borough of Manhattan is not considerably less risky than the business of supplying water to San Diego. Judge Hough himself concedes it to be "as nearly a conservative investment as any private manufacturing enterprise can furnish" (p. 409). If 6 per cent including depreciation is a sufficient return for the latter business, surely a much smaller per cent including depreciation is a sufficient return for the former.

This ruling of the court is but an application of long settled and universally recognized principles of political economy. All corporate profits over and above the average rate of interest upon loans on safe security—say 3½% plus taxes—represent insurance against the risks of the business in which the corporation is engaged. If the business is an old, well established and reputedly safe one, the margin between that average rate of interest and the corporate profit tends to become low if the business is competitive. Riskier businesses call for proportionately higher rates of profit. If the corporation provides a sinking fund of just the right size to take care of the special risks of its own business, that fund represents its normal profit, less the average rate of interest. It matters not how much of the normal profit over and above the average rate of interest goes into the sinking fund and how much into dividend. This depends on the conservatism of the management of the corporation. A conservatively managed corporation makes some provision against contingencies, and takes some risk in order to declare a dividend. We quote from John Stuart Mill's classic work on Political Economy, Book I, Chapter XV, §1, (See also Prof. J. Lawrence Laughlin's Elements of Political Economy, ed. 1902, p. 202):

> "Of the gains, however, which the possession of a capital enables a person to make, a part only is properly an equivalent for the use of the capital itself; namely, as much as a solvent person would be willing to pay for the loan of it. * * * * * What a person expects to gain, who superintends the employment of his own capital, is always more, and generally much more, than this. The rate of profit greatly exceeds the rate of interest. The surplus is partly compensation for risk. By lending his capital, on unexceptionable security, he runs little or no risk. But if he embarks in business on his own account, he always exposes his capital to some, and in many cases to very great, danger of partial or total loss. For this danger he must be compensated, otherwise he will not incur it. He must likewise be remunerated for the devotion of his time and labor. * * * * * The gross profits from capital, the gains returned to those who supply the funds for production,

> must suffice for these three purposes. They must afford a sufficient equivalent for abstinence, indemnity for risk, and remuneration for the labor and skill required for superintendence. * * * * * And the three parts into which profit may be considered as resolving itself, may be described respectively as *interest, insurance,* and *wages of superintendence.*"

This division of profits has not been disturbed by subsequent authorities, although "abstinence" is not now regarded as the basis of the interest charge.

The last item, wages of superintendence, is not a part of *corporate* profits. It is not now generally reckoned as part of the profits of a business at all by political economists, although it is so reckoned by individuals who conduct their own business. In the case of a corporation it does not belong to the stockholders, but to the officers. It is a part of the operating expense. In the case of this complainant, it is paid by the consumer with the other operating expenses and taxes. If the consumer were also to contribute to the contingent fund a sum sufficient to represent the risks of the business, he would thus make the business as safe as a loan upon good security, and as he pays the taxes, he could not be charged with a greater sum on account of profits than enough to enable the company to pay a 3½% dividend.

We have shown in our statement of the facts of the case (pp. 119-24, *supra*) that the Master was entirely misled in allowing a large depreciation item; that nothing in the past experience of the company warranted it; that there was no probability of any new element coming into the calculation except the removal to Astoria; and that if this is a voluntary and not a forced renewal (as must be assumed if no depreciation is marked off the manufacturing plants) that gives no color to a depreciation item. Judge Hough evidently felt these things by instinct, and for that reason abandoned the Master's basis of calculation, undertaking to substitute the complainant's actual experience in the past for baseless speculation as to new risks for the future. Nevertheless, while modifying the Master's figures, he failed to get away entirely from one of the fallacies which underlay them—the fallacy of assuming that expenses of repair and renewal vary per M, a fallacy which he himself pointed out at pages 402, 403 and 428. He bases his computation on the fact that the average expenditure for repairs and renewals from 1885 to 1905 was 10.89 cents per M of gas sold, taken in connection with the fact that it is between that figure and 11 cents per M of gas manufactured by the complainant (p. 402). He accordingly makes an allowance of 11 cents per M "on the maximum production of complainant's own works to cover repairs, renewals and depreciation mediate and ultimate" (p. 404).

This allowance swelled the operating expenses and to the same extent decreased the net income, although it is not separately mentioned in the decree.

The true method of calculation is by taking, not the percentage per M (see p. , *supra*), but the proportion which the repairs and replacements of each period bear to the total property of the companies which is subject to repair and replacement. We have accordingly made an estimate based on State's Exhibit L (p. 2078), and on

Complainant's Exhibits 78 and 79 (p. 5032). We have made a separate estimate for each of the three periods 1890-4, 1895-9, and 1900-4. We have taken the average of repairs and replacements from Exhibit L and the average value of the complainant's property from Exhibit 78. As the "real estate" was a nearly constant item, and not subject to repair and replacement we have deducted each year (except 1905) from the total valuation the sum of $10,630,894.78, being the average valuation of the real estate as shown by Exhibit 79, and each year also the arbitrary $7,781,000 valuation of intangible property.

This gives us the following tabulation:

Date	*Plants, &c.*	*Rep. and rep.*	*Prop.*
1890-1894	24,099,626.80	881,175.53	.0365
1895-1899	26,358,982.95	893,276.79	.0339
1900-1904	28,221,316.69	996,792.94	.0353
1905	28,954,195.34	974,289.66	.0336
1890-1905	average for sixteen years		.0351

It will be noticed how little variation there is between these five year periods. The average of the five years ending 1904 is about equal to the average for the previous ten years. If we take .0351 as the proper percentage on the valuation of October 31, 1905, in order to conform to the sixteen year average, we find that the amount which should be credited to complainant is $1,016,292.25. The amount credited by Judge Hough is $1,172,359.10, leaving a difference of $156,066.85, which represents the amount which Judge Hough must be taken to have allowed for "depreciation mediate and ultimate" as distinguished from average yearly repairs and renewals. Hence we have the following figures:

Capitalization	$59,831,435.00
Net income	3,224,592.45
Depreciation	156,066.85
Total net income	3,380,659.30

This shows that, if the 80 cent gas law had gone into effect January 1, 1905, complainant would have actually made under it a profit of over 5.65% during that year, even upon Judge Hough's full capitalization.

X.

If property earns 3½%, or at the most from 4 to 4½%, it should not be deemed to be "taken" within the meaning of the Fourteenth Amendment.

The whole subject of the non-confiscatory rate has been in a fog up to this time. Each judge at Circuit has practically adopted the old measure of the length of the Chancellor's thumb. It seems important that some consistent measure should be adopted, which should be capable of reduction everywhere to approximate certainty, and which should mark the upper limit of the jurisdiction of the Federal court to interfere with state local regulations, leaving upon the state the responsibility of giving to each public service corporation the protection to which it is equitably entitled above that limit.

This limit, it seems to us, should be either the rate of *net interest,* which averages about 3½% all over the country, or the rate of *gross interest,* which varies in different parts of the country, and in New York City averages probably about 4%, although some might put it a little higher.

It is now admitted by everybody that there is some percentage below which the state can not go. What it is, by what form of research or reasoning it is to be ascertained in a given case,—is a question thus far left open.

It is generally admitted that there is a difference between the lower limit of reasonableness, below which the state ought not to go, and the upper limit of confiscation, where the Federal courts may and should interfere and stop it.

We believe that the question of fairness and propriety is a very difficult and delicate one for the ratemaking power, but that the question of constitutionality is a comparatively simple one for the Federal court.

In Dow *v.* Beidelman, 125 U. S., 680, 690, the distinction between the merely unreasonable and the confiscatory rate was first noticed by this court, Mr. Justice Gray saying that—

> "the court has no means, if it would under any circumstances have the power, of determining that the rate of three cents a mile fixed by the legislature is *unreasonable. Still less* does it appear that there has been any such *confiscation* as amounts to a taking of property without due process of law."

In the next rate case (Chicago, Milwaukee & St. Paul R. R. Co. *v.* Minnesota, 134 U. S. 418) Mr. Justice Blatchford said that it was unconstitutional to deprive a company "of the power of charging *reasonable* rates" (p. 458). Mr. Justice Miller said that a legislative rate must not be "*so unreasonable* as to practically destroy the value of the property" &c.; and this latter and more accurate language was used in the opinion of the court, by Mr. Justice Shiras, in the Gill case, 156 U. S. at p. 657.

In the Reagan case (154 U. S. at p. 397) Mr. Justice Brewer drew the distinction between the inquiry "what under all circumstances would be fair and reasonable as between the carriers and the shippers," which the courts do not undertake, and the inquiry whether the body of rates "is unjust and unreasonable, *and* such as to work a practical destruction to rights of property."

In Smyth *v.* Ames, Mr. James C. Carter observed that no case necessitating a decision of the point had as yet arisen (169 U. S. at p. 515). In that case (p. 547) and in San Diego Land Co. *v.* National City (174 U. S. at p. 757) Mr. Justice Harlan uses the phrase "fair return," but each time the capitalization and not the rate of return was under consideration; and "fair return" is a phrase used by Mr. Justice Holmes in the Jasper case, 189 U. S. at p. 442, in which case the rate of 6% to include depreciation was held sufficient (pp. 445-6).

In Cotting *v.* Kansas City Stock Yards Co., 183 U. S. at p. 91, Mr. Justice Brewer stated the authorities up to date as follows:

> "As to parties engaged in performing a public service, while the power to regulate has been sustained, negatively the court has held that the legislature may not prescribe rates which, if enforced, would amount to a confiscation of property. But it has not held

> affirmatively that the legislature may enforce rates which stop only this sidé of confiscation and leave the property in the hands and under the care of the owners without any remuneration for its use.''

The Stanislaus County case (192 U. S. 201) was that of a rural irrigation company. This is a business which is far more risky than an old established gas business in a metropolis. It is liable to destruction, for instance, by the giving way of a dam (see 208 U. S. at p. 367). This court found that 6% was earned under the rates fixed by the local authorities, and Mr. Justice Peckham said (pp. 213, 216):

> ''It is not confiscation nor a taking of property without due process of law, nor a denial of the equal protection of the laws, to fix water rates so as to give an income of six per cent upon the then value of the property actually used, for the purpose of supplying water as provided by law, even though the company had prior thereto been allowed to fix rates that would secure to it one and a half per cent a month income upon the capital actually invested in the undertaking. If not hampered by an unalterable contract, providing that a certain compensation should always be received, we think that a law which reduces the compensation theretofore allowed to six per sent upon the present value of the property used for the public is not unconstitutional. There is nothing in the nature of confiscation about it. * * * * Much of the capital was invested between twenty and thirty years ago, and to be able still to realize six per cent upon the money originally invested is more than most people are able to accomplish in any ordinary investment, and more than is necessary in or-

> der to give just compensation for property at the time it is used for the public purpose originally intended."

The Circuit Court rulings are little more than attempts to ascertain and apply the decisions of this court. The most elaborately reasoned is the Milwaukee Electric case, 87 Fed. Rep., 577. Both that and the Spring Valley Water case, 124 Fed. Rep., 574, were based largely on evidence as to local rates of return on investments.

In the Milwaukee case, which was one of a company that had spent $7,000,000 wisely and economically in construction and equipment, but the present reproduction value of whose property was not over $5,000,000, Judge Seaman says (87 Fed. Rep., at pp. 585-6):

> "The interest rate fixed in the bonds issued by the company is 5 per cent. The rate which prevails *in this market*, as shown by the uncontroverted testimony, is *6 per cent. for real estate mortgages and like securities.* If the $5,000,000 basis be adopted, surely a better rate must be afforded for the risks of investment than can be obtained on *securities of this class,* in which there is no risk. Upon the basis of $7,000,000, which is more logical and just, the 5 per cent. named in the bonds is clearly not excessive, and should be accepted by a court of equity as the minimum of allowance."

In the Spring Valley case many affidavits as to the prevailing rate of return were received, but the evidence seems to have related to corporate investments instead of real estate mortgages as above. An abstract of them is set forth at 124 Fed. Rep., 582-4. Only one affiant put it at less than 6% in San Francisco, and nearly half of them put it higher. Judge Morrow said (pp. 598-9):

> "The weight of evidence is clearly in favor of a rate of not less than 6 per cent. per annum. * * * But in the present inquiry all doubts as to facts in controversy should be resolved in favor of the defendants, having in view what was said by the Supreme Court in San Diego Land Co. *v.* National City, 174 U. S., 739, 754, 19 Sup. Ct., 804, 43 L. Ed., 1154, that judicial interference should never occur unless the case presents clearly and beyond all doubt a flagrant attack upon the rights of property. In view, therefore, of all the circumstances, the court is of the opinion that the complainant is entitled to receive at least 5 per cent. as the net compensation it is entitled to receive on the value of its property."

On page 601 he says again that "6 per cent. per annum is the smallest income that can be considered reasonable for the investment under consideration, and 5 per cent. per annum the smallest income which the court can, under all the circumstances of this inquiry, consider as reasonable and just"; holding therefore that 4.40 per cent "is unreasonably low and confiscatory, and amounts to the taking of private property for public use without just compensation, thereby depriving the complainant of its property without due process of law."

In his extensive opinion in the pending Alabama case (169 Fed. Rep., at pp. 992-6), Judge Jones thinks that the state usury law should afford the standard; but the fallacy of that theory is exposed by Judge Hough at p. 408 of this record.

The state usury law is generally ancient in date, representing conditions long past. It is intended mainly to establish a maximum rate, and not to discourage the loaning of money at lower rates. In New York it represents the rate of loans on weak security, while time loans on good security range all the way from four and one-half per cent down under ordinary conditions.

The British case of Canada Southern Ry. Co. *v.* International Bridge Co., L. R., 8 App. Cas., 723, merely relates to the question of a reasonable charge to be judicially fixed as between two public service corporations, in the absence of any statute on the subject. This rate is often higher than the *minimum* rate that a statute may fix; and this again higher than the confiscatory rate which brings the Fourteenth Amendment into play.

In the San Diego case, three of the California Supreme Court judges put the confiscatory limit at from 3½ to 3 per cent (118 Cal., at pp. 581-2. 584, 587).

Summing up these authorities, it appears that this court is as yet uncommitted on the subject of the rate of return, except that 6% is high enough for a California water supply or irrigation company, and that the Circuit Courts disagree about it.

Let us now consider first the function of the Federal court, and then that of the state ratemaking body.

The court acts solely under the Fourteenth Amendment. It acts only when it finds that property is being "taken" without due process of law.

We contend that property is not "taken" as long as it is allowed to earn the current rate of interest on money loaned upon good security; that hence if that rate is allowed the Fourteenth Amendment is not violated; and that the present case can be disposed of upon this ground alone, as well as those to which Judges Seaman and Morrow refer upon the question of the standard rate, namely, to the doctrine of comity, and to the principle that Federal courts will intervene only in a flagrant case.

We do not of course wish to be understood as arguing that a state ought ever to cut down the net earnings of a public service corporation to the confiscatory limit; or as conceding that the State of New York ever has done so, or has threatened to do so, or that there is any reason to fear that she ever will do so. But the Federal court gets jurisdiction only if the property is *taken* without due process of law. Until property is *taken* the matter remains one purely of state jurisdiction. The state police power may intervene to cut down the normal income of property in the most serious degree so long as the property is not *taken*. It may do so even in the case of property not devoted to a public use, as is illustrated by the recent tenement house case (*infra*, p. 275).

This distinction between property *taken* and property whose enjoyment is unreasonably interfered with is the distinction between confiscation and unreasonable but non-confiscatory regulation, discussed in some of the cases.

The question is not one which has ever been discussed with anything resembling exact reasoning, and we do not know that it is capable of such discussion; but the best reasoning of which it is capable seems to sustain the contention which we have set forth.

Suppose a man to have a sum of money in hand to invest. He may put it in a safe non-taxable security on a 3% basis sometimes, on a 4% basis at other times, on a 3½% basis on the average. He can invest it at ½% or 1% higher interest if he is willing to take the risk of the tax collector, and incur a little personal trouble and annoyance. He can get a higher rate still by putting it into an established business, and a much higher rate by putting it into a pretty risky business. The state ought not to interfere with whatever investment he wishes to make, except for some valid reason of public policy. But is this money *taken* as long as it is earning the average customary rate for safe investments? When *money* is not taken, *other property* of equal value is not taken. The same rate of return must be void or valid, to whichever form of capital it applies. If the money or property are already invested in a business, and are allowed to earn the same rate of interest, are they *taken?* It seems to us that they are not *taken,* but only, if the business is appreciably risky and the amount of return is not correspondingly higher than the ruling rate of interest, *put to undue risk;* and this the state should not do; its constitution, and the laws, ordinances and decisions of its three departments should make such a thing impossible; but none of the three corresponding departments of the Federal government have jurisdiction of the matter. We have some remnants left of Anglo-Saxon local self government; and where there is local self government there is local responsibility. Is it wise that the sense of responsibility be taken away?

It will naturally be asked "What will be the event if a company has bonded itself at 5%? Is it to be wiped out because it can not earn interest on its bonds?" We may answer "What if the city authorities unlawfully pull down my house as a nuisance, when it is not one? Am I to have no remedy?" There is a remedy, but it is in the State courts, because the Federal constitution has not yet been amended so as to centralize all remedial justice at Washington.

The application of the Fourteenth Amendment must be the same, whether the company has built and equipped itself with borrowed money or not. If the stockholders have borrowed nothing and built with their own money, they are entitled to as good a return as if they had borrowed everything and used none of their own money. And whether they borrowed or not, they ought to have a return which will repay all interest that a normal company would pay on as much of the property as would represent the normal company's loan, and handsome returns on the balance. But that is not the question in this case.

It will naturally be suggested that this reasoning puts the stockholders of a local corporation to a serious risk—a risk of pecuniary loss by the action of the local authorities, without any really efficient relief. They have long been subjected to a similar risk—that of being imposed upon by their own managers without any really efficient relief. These are risks of corporate investment, and there are other risks in all investment and in all life. Dividends occasionally stop, just as a house sometimes stands empty. A man who has lost his life by arson or his brother by murder could in some parts of the country get better justice from the Federal than from the local government. And yet we have not yet reached the stage of preferring an efficient bureaucracy at Washington to a perhaps less efficient administration of justice at home. A State which does not treat its corporations fairly will soon suffer and soon repent, and will not the education that it will have received compensate in the long run for the temporary loss that investors will have suffered?

Experience has shown that the line we draw is one that still, however unfortunately, leaves to the judicial branch of the Federal government a great deal of work to do. States sometimes take property, within our definition. But to draw the line at any higher point seems to us to involve an unnecessarily loose construction of the Fourteenth Amendment, and to throw upon the Federal courts a burden that they are not as yet equipped to bear. The public service corporations throughout the nation have reached the stage of practical monopoly. The era of competition has disappeared. Inevitably they are being subjected to government regulation, a thing almost unheard of until the public realized that competition was a thing of the past. If the Federal district judges (subject to appeals to this court) are to sit as courts of general appellate jurisdiction over the state commissions, there must be more circuit and district judges—perhaps more Supreme Court judges—than there are now, or parties interested in other forms of litigation will feel the consequent delay and disturbance of business to an increased extent. They are already beginning to feel it now. Nor is it seemly that a single man, whatever be his title and by whomsoever elected or appointed, shall have general appellate jurisdiction over a tribunal of specialists established by a state,—a judgment practically final upon questions of fact, for is this court able to read the record and review his work?

The state legislature or commission, on the other hand, should endeavor to reach a result which is fair and equitable and in accordance with the best public policy, both from the point of view of the public and from the point of view of the public service corporation. From the latter point of view there are two main objects which it seeks to attain: first, adequate compensation for the risk involved; and second, encouragement for the investment of new capital in the state. To encourage new capital, special consideration must be given to new enterprises. Generally speaking there is more risk in a new enterprise than in an old one. Hence the new enterprise should be allowed a higher rate of profit, according to the rules of political economy, and according to the customs which have been almost universally observed. As an enterprise becomes old and its profitableness becomes established and generally recognized, and its risk turns out to be comparatively small, political economy teaches that its profit must decline, and practical experience confirms the teaching. Additional capital is obtainable at a comparatively low rate of return, and the market value of the stock rises.

If the recognized analysis of corporate profits (pp. 248-9, *supra*) is correct, and if our theory that the Fourteenth Amendment guarantees to the corporation the element of *interest on capital* is correct, then the function of the state ratemaking officials is to ascertain in the case of each corporation or class of corporations what rate of return should be allowed as representing the element of *insurance against risk.* For the element of *wages of superintendence* is, as we have shown (p. 249, *supra*), no part of the profits of a corporation, because the wages of superintendence belong to the officers and not the corporation, and because they are paid by the consumer as part of the operating expenses.

When the return realized by a corporation which is relieved from payment of wages of superintendence includes full interest on the capital invested, and full insurance against the special risks of the investment, then the rate of return is reasonable. There is of course a considerable margin of doubt as to where the line should be drawn; but the upper limit of the margin is the maximum reasonable rate. Anything which the company might earn above that would be a monopoly figure. For if there were competition, the company would be unable to earn the amount.

How is the capital to be estimated, upon which this reasonable rate is to be figured? Is it the original cost of the property, or some figure which experts may swear to as its present supposed value, or the probable present cost of reproducing the property as it stands, or the probable present cost of producing other property which would accomplish equally good results. This we have already considered (pp. 200-9, *supra*).

If there be any serious question about the contention which we have set forth, it seems to us that it is a question of detail, which is immaterial to the present appeal—namely, whether the interest rate which is to be the limit of the jurisdiction of the Federal courts is the *gross interest* or the *net interest* rate. "Interest on capital" in the economical sense represents the amount of return for which the investor will let some one else use his money when the risk is at the *minimum.* It is approximately uniform at any given place and time. It is considered to average about 3½%, although higher at times. Interest is nominally higher on many classes of good security, because, as the word is commonly used, it includes an element of insurance against risk,—risk of the personal property tax—a risk not run by complainant, whose taxes are paid by the consumer. Interest is also nominally a little higher on certain good securities, such as bond and mortgage on local real estate, because it includes an element of "wages" for the annoyance of looking after the investment and collecting the money. On the other hand it is nominally lower on United States bonds because it is offset by the advantages of those bonds to national banks; and on certain other forms of wealth because of their advantage for social distinction or other reasons. This 3½% interest is called at present by political economists *net interest,* while the current rate of interest upon local loans involving a little risk and a little trouble is called *gross interest,* and of course is much more variable (Alfred Marshall, Principles of Economics, Book VI, Ch. VI, §§ 4, 5). It is the *gross interest* which was assumed by Judge Seaman to be the maximum limit of the jurisdiction of the Federal court; and he overlooked the fact that this included the risk of paying taxes, which is one of a pretty deterrent character. The gross interest is not very far off from the rate of profit on an established business, for "capital cannot be permanently loaned at rates much higher or lower than the returns to capital actually engaged in production" (J. L. Laughlin, at p. 206).

It is unnecessary for the purpose of the present appeal to fix precisely the average rate of *net interest,* or even *gross interest* in the City of New York. Of course both vary. Recently they have been very high; but the constitutionality of a statute of the State of New York certainly does not vary with the timidity of capital from year to year. It does not contract when the money market goes up and expand when the money market goes down. It is the average rate and not the rate for the moment that must decide.

Reference to any standard publication showing rates in New York, whether as to state or municipal bonds, or railroad bonds, or stocks of companies such as the complainant, or loans on first mortgage on improved real estate will show, we are confident, that the *net interest* rate averages about 3½%, while the *gross interest* rate is from one-half to one per cent higher. Just now all rates are particularly high, but for a long period of time the rates for first mortgage loans on good improved property had been 4 to 4½%, although the individual investor ran a risk of being taxed from one-third to one-half of his income therefrom, and although there is some risk (especially of delay) and some trouble about such an investment.

If the rate of *net interest* (say the average rate paid in average times upon good municipal bonds) be taken, then we have a standard which is the same all over the United States, and which can be applied without taking testimony in a particular case.

If the rate of *gross interest* (say that upon approved local first mortgage bonds) be taken, then each Federal judge will have to receive testimony as to that rate, or else take judicial notice of it.

If any higher rate than this be taken, where can the line be drawn, short of giving the Master, and the District Judge on appeal from him, and this Court, on final appeal, a general appellate jurisdiction to decide not only the question of fact "What will this company make?" but also the question of business judgment "On the whole how much, in view of its special risks, ought it to be permitted to make?" And has not this Court already in effect decided negatively as to this general appellate jurisdiction, in the Jasper and Stanislaus County cases?

XI.

Assuming complainant to have been entitled to 6% on any of its investment, it should not have been given 6% on the whole.

Judge Hough states that he treated it is a "private manufacturing enterprise" (p. 409, foot). Assuming that this entitled it to 6% on the value of its plants, it does not follow that it was entitled to 6% upon the rest of its property. To some extent the evidence is to the contrary.

Much evidence upon these points has been collected from the record (pp. 144-9, *supra*). Thus

Mr. Greene, complainant's own expert as to bulkhead properties, fixes the value of the bulkhead by multiplying its income by twenty; and he explains this by saying that the accepted rate of return upon bulkhead property is 5%. Yet Judge Hough, having accepted his valuation, then holds that the property is *taken* from the complainant within the meaning of the Fourteenth Amendment unless complainant is allowed to make 6% *on the capitalization thus fixed.* It seems to us that the consumer rather than the company is entitled to appeal to the Fourteenth Amendment as to that item.

Companies not approaching complainant in strength of position can borrow in ordinary times at 4.40% (p. 145, *supra*). Surely then complainant could borrow for half its tangible property at 4¼.

There is no evidence justifying a return of 5%, or 4%, on the $12,000,000 franchise item.

Hence what criticism could be made by the company on a schedule allowing 4¼% on half the tangible property, 7% on the balance, and 3½% on the franchise item? Yet that would give an income of $3,120,000, or less than it would have earned in 1905 at the eighty cent rate.

XII.

The information contained in this record is not sufficient to permit the court to make an affirmative decree in favor of the complainant.

The burden was upon complainant to produce sufficient evidence to form the foundation of a decree. Insufficient facts being found, the decree can not be sustained.

(*a*) *Too short a period was selected as the test.*

It might be inferred from the language of the Master (pp. 155, 216), that the calendar year 1905 was selected as the test by consent of the parties. The contrary is true. The selection was made by the complainant's counsel and by the Master himself, against the strenuous and persistent protest of the defendants, and the reason why all the witnesses used the operation of this calendar year 1905 as the basis of their calculations was that they had no other period to use, except the last two months of the year 1904, which seem to have made no particular difference. Defendants insisted that the complainant's book entries and vouchers for the fourteen months ending December 31, 1905, covered a period neither long enough nor typical enough to afford a sufficient or safe test of the expense of making gas; and they also protested against the special exception granted to the complainant by the Master, whereby the complainant was permitted to increase its estimate of operating expenses in the matter of repairs and replacements, while the defendants were not permitted to examine the complainant's books for other periods of time in order to see whether corresponding or greater deductions should not be made in other items (see pp. 779, 802-3, 876-8, 1042-3, 2197-8, 2286, 2288, 3275-8). What evidence they were able to pick up as to the other years was excluded from consideration by the Master when objected to (pp. 3578-80, 3598-9).

It appears in the bill of complaint and in the testimony that during the year 1905 the rates charged by this complainant were under investigation by a legislative investigating committee, and that an act was actually passed in the spring of that year largely reducing the rate which it was allowed to charge the City of New York; while before the end of the year an investigation appears to have been commenced by the State Commission of Gas and Electricity for the purpose of ascertaining what should be the reasonable rate charged to private consumers. There was, therefore, every temptation for the complainant to pad its books for the year 1905. It did admittedly change its form of accounts immediately after the investigation.

The complainant took, and the Master sustained, the position that it had the right to select whatever periods and whatever items in its past history it should choose to disclose, and to confine defendants' inquiry to those particular periods and those particular items; that it might increase the operating expenses as shown by 1905 by proving that the average expenses for some particular item were higher, but that it was not obliged to permit an examination by defendants to ascertain whether they could not prove that the average of some other item was lower. In refusing defendants' request for leave to make such an examination the Master held that it would be "something far beyond the scope of any *judicial inquiry*", and impossible because "*this case has to be closed in ninety days under the equity rule*" (Testimony, pp. 1047-8). If this be true, it is a concession that *judicial* methods are insufficient to really ascertain the cost of gas, and that this can only be shown by a legislative committee or an administration commission. Certainly it is an extraordinary situation if, when it comes into court, the state, in defense of the consumer, can only look into the particular doors which the gas company thinks it advisable to leave open. The Master's remarks show the need of most extreme caution in attempting to review a system of rates by the machinery of a Federal court.

We have not assigned particular rulings during the trial for error, because the result of the Master's whole course of proceeding seems to us to be a fatal defect of proof.

In Smyth *v.* Ames, 169 U. S., 466, upon which complainant and the Master largely rely, the court based its conclusions upon a careful review of three years' past experience of all the railroads of Nebraska.

In the Reagan cases (154 U. S., 362) it examined three and a half years' experience of all the railroads of Texas.

In the Tompkins case (176 U. S., 167), it went back four years.

In the Covington Turnpike case the experience of "a number of years" was given (164 U. S., 578, 595).

Defendants insisted, as we have above pointed out, that a longer period than fourteen months should be taken for special investigation; claiming the right to go back to 1900, or at least to 1903, on the one hand, and down to the middle of 1906 on the other. It seems to us that the precedents given by the Supreme Court in the cases just followed should have been followed, and that both requests of the defendants should have been granted; and especially the last one, since the first six months of 1906 included the period when the eighty cent gas law went into effect.

Taking the experience of a single year alone is reasoning but from one particular. Even if complainant were entitled to the presumption that its strenuous opposition to the examination of its books for earlier and later periods was opposition in good faith, it is easy to pad the accounts of any one year without knowing it. Thus a man who makes up his annual household accounts on the first of July may have ordered his next winter's coal supply and paid the bill in June, or the bill may come in and be paid in July. A company may, like the individual housekeeper, pay for its coal or its oil twice as much in one year as in another. It may, as it seems to have done here, make much fewer repairs and replacements in one year than another. It may come out worse on its by-product account. It did admittedly have unusual items, such as the expenses of the first legislative investigation for twenty years, and the expenses, and arrears of interest, incident to an unsuccessful attack upon a new form of taxation.

Moreover there may be a "lean year." The constitution does not guarantee a profit at every moment of time, any more than it guarantees a profit at every mile of route, or from every class of traffic (See Harlan, J.'s opinion in Ruggles *v.* Illinois, 108 U. S., 526; opinions of the court in the Wellman case, 143 U. S., 339, and the Reagan case, 154 U. S., at p. 412). There may be a time when old equipment does not do the best work, or when prices and wages are especially high. If over a considerable time there is profit enough to carry the company over the lean year, the constitution is satisfied.

(b) The experience of the other companies, as well as of this complainant, should have been shown.

The New Amsterdam Gas Company during the year ending October 1, 1905, seems to have made gas at 29 cents, or, allowing for loss in distribution, at 30 cents; and the corresponding figures of the Central Union Gas Company for the same period were about 26½ cents and 28½ cents, respectively, although the New Amsterdam's candle power was higher than complainant's (pp. 2325-6). The Master explains these figures in various ways (pp. 241-2). The testimony as to these matters is in dispute and we do not go into them further than to point out that even the Master admits an advantage to the New Amsterdam Gas Company as against the complainant, of 1.61 cents per thousand, "which is practically all accounted for by difference in cartage, as to which the New Amsterdam Company has special advantages. The item of station cost, which is less because of the New Amsterdam Company having but one station as against several used by complainant, and other similar items."

It is also to be noticed that during that year its item of "cost of gas mfg. under agency agreements" is 34.04 for gas "made," that is, bought from the subcompanies, and 34.82 for gas "sold", as against 32.42 and 33.17 respectively for its own gas (p. 219). But the subcompanies' figures include a profit of 10%. This shows that their average rate of production (including those less advantageously situated as well as the New Amsterdam and Central Union Companies) was about a cent and a half less per thousand than that of the complainant.

Complainant's view seems to be that whether by reason of its having an old-fashioned plant, or a disadvantageous location, or too great a subdivision of plants, or inferior facilities in other respects, it could not make gas in 1905 as cheaply as its subcompanies; that the result of its new facilities in 1906 is as yet speculative, or at least is not before the court; that its capitalization is very large, owing to the unearned increments aforesaid; and that therefore an eighty-cent rate would not give *it* as much net profit as *it* ought to receive in order to rank as a prosperous company. From this premise it deduces the conclusion that the statute is unconstitutional as to *it;* in other words, that a statute establishing a uniform maximum rate for the sale of gas in a given locality is unconstitutional unless *every* gas company, well or ill situated and managed, can make a good profit; or else the statute is unconstitutional *as to the ill situated or ill managed company,* so that it must be permitted to go on charging a higher rate while better situated or better managed companies are held down to the statutory reduced rate; thus establishing as against the latter what is known in the railroad business as a "differential." This is surely absurd. *It would violate the rights of the well-managed company under the Fourteenth Amendment, as construed in the Cotting case,* 183 U. S., 79, 114-15.

To quote the words of this Court in the Gill case, 156 U. S., at p. 657:

> Given the case of a general law prescribing rates to all companies, can the courts inquire whether such rates are reasonable, and may they find that as to one company the prescribed rates permit it to do business at a profit, and as to another, whose facilities are inferior, or where expenditures are greater, the rates afford no profit? And will the fate of the law, as to its validity, depend, in each case, on the result of such an inquiry?

We are not aware that the courts have ever gone to this extent. It must be remembered that in the railroad rate cases the subject of discussion is a schedule establishing, not a general rate as if the whole state were a single "zone" under the Austro-Hungarian system, but a special rate as between each pair of localities. Hence as a usual thing each special rate applies to but a single railroad company; and for this reason each railroad company, as in the Reagan case (154 U. S., 362), is to a large extent to be considered separately. But in that case, as in Smyth *v.* Ames, 169 U. S., 466, the experience of the other companies, as well as of the complainant, was made the basis of consideration.

The question is analogous to that decided in Moeschen *v.* Tenement House Department, 203 U. S., 583. There was no opinion filed by this court, but the opinions of the state courts in the same case are cited as authorities, and therefore are to some extent adopted (89 App. Div., 526; 179 N. Y., 325); and the remarks which we shall quote were not *obiter*, but essential to the decision. It appeared that the state regulation under consideration in that case would in some cases impose slight hardship, while in other cases it would almost or quite wipe out the owner's equity in the property affected. The plaintiff's case was one of the latter class. In one of the opinions thus referred to by this court, Judge O'Brien said (89 App. Div., at p. 538):

> "We have not overlooked the contention based upon the relation of the cost of removing the school sink and replacing it by other accommodations, to the equity which the defendant has in the property. It would appear that the effect of the change would be to practically wipe out the defendant's equity and thus, so far as she is concerned, the law will if enforced be a great hardship. It will be noticed that her equity is about one-third of the full value of the premises; but, apart from this, if the extent of the injury which would be inflicted upon a particular individual was controlling upon the constitutionality of the act, then it would be difficult if not impossible to have any fixed criterion for determining its constitutionality, because, with respect to the value of certain premises on which a school sink was required to be replaced, *the cost as compared with the value of the property might be very small, whereas in the case at bar it equals and we can conceive of instances where it might exceed the equity of the owner.* We have examined the affidavits upon the subject of the character of the premises, the conditions prevailing and the advisability of the changes, but think that they present considerations which are proper

> to be addressed to the Legislature and not to the court."

In the other of these opinions, Judge Bartlett said (179 N. Y., at p. 330):

> "It is not the hardship of the individual case that determines the question, but rather the general scope and effect of the legislation as an exercise of the police power in protecting health and promoting the welfare of the community at large."

Upon the argument below we stated the *ultimate fact* to be the percentage of return which a well-equipped and well-managed company would earn upon its capitalization under present conditions at the eighty cent rate; the *ultimate question of law* to be whether that percentage of return is confiscatory.

We criticised the Master's handling of the case because it did not afford us an answer to this question. The court answered with a counter-criticism; namely, that we were dealing with an ideal company, and that there might be no actual company which met the requirement (from which we suppose the inference to be drawn that there might be no company well enough equipped to be able without considerable change in its equipment to earn the necessary percentage of return, and that therefore there might be a lean year during which little or no return would be had, while the equipment was being adjusted to modern conditions). Our reply to this counter-criticism was twofold: First, that so far as appears one or more of the subcompanies may be well enough equipped and managed to earn the necessary percentage. We are not fully informed about their cost of operation. We have no evidence at all upon the other necessary element, to wit, their genuine capitalization. And secondly, it is not necessary for the purposes of the constitution that they make any particular return the first year, provided that within a reasonably short future period they do earn on the average a constitutional compensation, including the first year in the average. In the history of all corporations there are periods of time, just as in the history of all corporations there are departments of business, in which no compensation is earned, or in which even a loss is made. It is the average which the constitution deals with, as has been more than once shown when complaint was made by railroad companies that statutory passenger rates were insufficient to pay for the passenger business, considered by itself.

The majority of the cases in this court upon the question of rate regulation of public service corporations, as affected by the Fourteenth Amendment to the Constitution, have involved the consideration of railroad rates, or rates of water companies. But different railroad companies are not carrying on business under the same conditions; they run through different territory; the classes of traffic required by the different territories are different; the population to be served is different; the necessary cost of construction differs in accordance with the gradients, the number of rivers to be bridged, and generally the character of the country over which the railroads operate. So also as to water companies; the source of their supply is different; the cost of obtaining it is different; so that what is a reasonable charge for one company would not necessarily be for another, even in the same city. Gas companies, stock yard companies, and electric lighting companies, on the other hand, operate under substantially the same conditions, serving customers in the same territory, with no necessary difference in the cost of production and with no necessary difference in the cost of plants. Hence while a rate which might be reasonable as to one railroad company might be unreasonable as to another; and a rate which might be reasonable as to one water company might be unreasonable as to another; yet, generally speaking, the same rate would be reasonable for all gas companies serving the same territory and under the same conditions.

When, therefore, the question arises as to the reasonableness of the railroad rate prescribed by the Legislature or by a Commission, it may be solved by a showing of the facts which are peculiar to such company, namely, the proper capitalization of its plant and business facilities, the amount which will be realized on its traffic, and its operating expenses; so that the rate on one railroad from A to B may differ from the rate on another railroad from C to D, the distances being the same. But as to gas companies a different situation arises. If there is any reason why a certain rate is remunerative to one company and not to another, that reason would depend upon matters which cannot properly govern the amount of the rate, namely, the amount of its capitalization, the economy of management, the exercise of good business judgment as to the selection of the locality and construction of its plants, and other matters of the same kind.

This reasoning leads to the result that there is not sufficient evidence to sustain a decree in favor of the complainant. The experience of a particular company during a particular year (the test year being selected by itself), is insufficient—even when supplemented by evidence about its experiences for other years as to a certain item (that item being also selected by itself). It is merely a reasoning from particulars—in fact, from a single and suspicious particular. It is as if a real estate expert for the valuation of property were to base his opinion upon the sale of a single piece of other property somewhere in the neighborhood.

Cases have sometimes been sent back to a Master under such circumstances for the purpose of taking further testimony.

Complainant is estopped from asking any such favor here. The defects in its case were due to its own deliberate withholding of further information, and its successful attempt to put the state and city into the dilemma of either having to go without information of the experience of other companies and other periods of time, or else blindly putting in evidence the books of the gas companies, on the chance of being able thereafter to find out what they contained which the companies were preferring to withhold, and the certainty of their being used by the companies, so far as they might favor their side of the litigation. The state and city, put in this dilemma, wisely refrained from disturbing the *status quo.*

By so refraining, they allowed complainant to subject itself to an estoppel from which there is no escape. It has deliberately refused to produce sufficient evidence to make out a case for itself. It has disregarded all warnings. It has refused to permit the state and city to inquire into the true facts. It must stand upon the record which has been made, and that record can result only in a dismissal of the bill.

XIII.

The provision as to pressure is severable from the rest of the statute, and therefore does not affect the foregoing argument.

It is in form an entirely separate and independent provision. The provisions as to rates are in section 1. The first sentence of section 2 concerns candle power. The second sentence is the pressure provision, and is as follows (Record, p. 31):

> "The pressure of illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch, nor more than two and one-half inches."

The report of the Stevens Investigating Committee of 1905, which gave rise to this legislation, shows that the pressure provision was intended for an additional guarantee to the consumer, in order that the candle power provision should not be evaded by increasing the pressure (p. 132). The report is annexed to one of the answers. We do not claim the right to refer to it because it is annexed to an answer, but because it is a document which forms part of the history of the statute, and of which the court can therefore take judicial notice (Holy Trinity Church *v.* United

States, 143 U. S., 457, 463-5; Johnson *v.* Southern Pacific Co., 196 U. S., 1, 19).

The test of severability is laid down in Reagan *v.* Farmers' Loan & Trust Co., 154 U. S., 362, 395, as follows:

> Any independent provision may be thus dropped out if that which is left is fully operative as a law, unless it is evident from a consideration of all the sections that the legislature would not have enacted that which is within, independently of that beyond its power.

The tests as stated in the Employers' Liability Cases, 207 U. S., 463, 501, are whether "effect may be given to the legal provisions by separating them from the illegal", and whether "it is plain that Congress would have enacted the legislation with the unconstitutional provisions eliminated." In the case last cited the provisions under consideration were held not to be severable; but the argument in support of the decision particularly well illustrates our contention here (see pp. 491-502). The pressure provision being merely an additional guarantee to the consumer that his gas shall be cheapened without loss of illuminating power, striking it out would be simply striking out one provision for the enforcement of its main purpose, and it is therefore a case parallel to that of the penalty clause which was eliminated from discussion in the Reagan case, *supra.*

XIV.

The pressure clause is constitutional.

The main point insisted upon during the hearing by the complainant was that the pressure could not practically be kept uniform on account of the difference in height above sea level of the different parts of Manhattan Island. Defendants' theory was that the complainant could regulate the pressure in these cases by means of district governors. Complainant's expert insisted that this method was unpractical, although he admitted that it was in use in other cities. How expensive the construction and maintenance of the necessary district governors for the elevated portions of the island would be, does not appear. The burden of course was upon complainant to show that it would be too great. Afterwards Edgerton, a witness on behalf of the State, proposed an alternative system which the Master reports would cost $4,000,000.

The master sums up the evidence as follows (p. 250):

> "Under the distributing system as now existing and in operation, it is not possible to fulfill the statutory requirements as to pressure. It would, however, apparently be possible to remedy this condition, at least to some degree, by dividing the city into different districts, according to the varying levels and by regulating the pressure in each by district governors. The efficacy and safety of such governors is not free from doubt and the evidence affords no sufficient basis for an estimate of the cost of their installation or the

> expense of making the necessary changes in the system of mains."

Under the rule respecting the burden of proof in such cases (pp. 188-9, *supra*) this finding would seem to settle the question. If complainant has not succeeded in providing the court with a "sufficient basis for an estimate" as to the expense involved, it is the necessary inference, in support of the action of the state authorities, that the expense is not so great as to render the provision unconstitutional. The court has no jurisdiction to consider doubts as to efficacy and safety.

Judge Hough however takes the Edgerton alternative proposition alone, disregarding the district governors altogether; and he seems to think that the state is without power to compel the complainant to adopt any new appliances that will not bring it additional profit. His remarks are as follows (p. 420):

> "By the expenditure of about $4,000,000 for construction of mains and valves alone, exclusive of any pumping stations or other apparatus it might be possible to establish and maintain the pressure called for by these acts. Such a thing is commercially impossible, and even if it were done (of course at complainant's expense), it remains commercially impossible since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible, because when made it would not add a dollar to income."

The position that a state cannot compel a citizen to incur expense upon his property without receiving compensation therefor has been so long exploited that its reappearance here is difficult of explanation. The more recent cases are cited in Moeschen *v.* Tenement House Department, 203 U. S., 583. That case involved the constitutionality of a provision in the New York Tenement House Act (set forth in full at 179 N. Y., 326) requiring tenement house owners to remove school sinks and put in water closets of prescribed construction. The constitutionality of the law was contested under both the State and Federal constitutions. The plaintiff in error owned a tenement house valued at $16,500, in which her equity was only about $3,500 (p. 329). The expense to which she was being put might range from $750 to at least $1,750 (p. 333). It was not claimed that there would be any corresponding increase in rental, if indeed there would be any increase at all. The constitutionality of the statute was sustained by every judge of every court before whom it came for consideration. Among the cases cited by this court in affirming the judgment were Gardner *v.* Michigan, 199 U. S., 325, where owners of garbage were required to part with it without compensation, although it could have been sold for a substantial price; Health Department *v.* Rector, 145 N. Y., 32, where tenement house owners were required to put in running water, and in which the subject is extensively considered in an opinion of Judge Peckham, often since quoted; and Commonwealth *v.* Roberts, 155 Mass., 281, where judgment was ordered upon a verdict against a property owner for refusing to put a water closet into his house upon order of the Board of Health. Mrs. Moeschen was doubtless obliged to make the improvement to her house "by means of new capital"; for the Tenement House Department was hardly willing to permit delay until $1,750 should have been saved out of the surplus income of a $16,500 house. Statutes requiring railroads to put in safety appliances may not correspondingly increase the net income of the railroads, but they must be complied with by all railroads, poor or rich, and the expense of complying with them is properly capitalizable as new construction or equipment.

If it be true that the Edgerton plan would cost $4,000,000, the other plan can be adopted; but complainant can raise even the amount named, and pay the necessary interest thereon, without having its property taken without due process of law. There is plenty of margin after the necessary corrections have been made in the other figures.

XV.

Assuming that an injunction were proper in this case, it should have been conditioned upon complainant's reducing its charge for gas to whatever sum would be deemed constitutional, nunc pro tunc as of May 1, 1906, and paying back to the consumers all amounts which it had collected from them over and above that figure.

Under Judge Hough's opinion, an 84-cent rate would have been constitutional. Nevertheless he entered a decree upon which complainant is entitled to retain all amounts that have been paid in at the old dollar rate, and to collect at that rate from the consumers who have not yet paid.

Whatever may be the finding of the court upon this tangled record, the 80-cent gas law is not an absolute nullity. It merely stands suspended in operation until conditions change so that the court is able to find that the rate is remunerative. Any decree enjoining the enforcement of the statute would therefore contain a clause permitting an application at its foot for the reopening of the case (Smyth *v.* Ames, 169 U. S., at pp. 447, 550; 64 Fed. Rep. at p. 189); and this is recognized by Judge Hough both in his opinion and in his decree (pp. 403-4, 434). The word "void" is therefore a misnomer in connection with this statute, whatever be the result of this suit.

On the other hand, an application for an injunction is to a certain extent an application to the discretion of the court. If Judge Lacombe had enjoined only the collection of the penalties, the Attorney-General, or later the Public Service Commission, would doubtless have commenced a proceeding for mandamus or mandatory injunction in the State courts. A defense of unconstitutionality would have been interposed. The question would have been tried out in the State courts under the state constitutional right to trial before a judge or referee to hear and determine, without the intervention of a Master. Very likely different findings of fact would have resulted; but the whole case could have come here upon writ of error. The decision of this court in the Young case has given to the public service corporation a choice of forum, while the state has no choice of forum, but must sue in its own court. In the Young case this court has said that the jurisdiction should be but cautiously exercised. We respectfully submit that to give such a complainant its choice of forum, to try the case in a manner which the state constitution disapproves, to reach upon the findings thus obtained a conclusion that the statutory rate is four cents too low, and then to make a decree which requires the payment by the consumer of an amount of twenty cents above the statutory rate for the whole period of the litigation and until the legislature can again act on the controversy, is contrary to comity, contrary to equity, and a conclusion at which the public mind has good right to be shocked.

The power to enjoin being discretionary, the court has the right to place any proper condition upon its exercise. What condition can be more proper than to say to the complainant—"It is discretionary with us to remit you to the state tribunal. It is discretionary with us to remit you to a trial at law. As a condition of coming into equity and having your case tried by the Federal procedure, you must do equity by charging no higher a sum than is found by that procedure to be constitutional?"

There is no decision exactly in point, but the conditions which have been placed upon equitable relief under the maxim "He who seeks equity must do equity" are discussed in 1 Pomeroy's Eq. Jurispr., §§ 385-6, 389-93, and particularly in the passage quoted from him in De Walsh *v.* Braman, 160 Ill., 415, 420-1 (see also Veazie *v.* Williams, 8 How., 134, 161; Willard *v.* Tayloe, 8 Wall., 557, 567-9; People's Bank *v.* Marye, 191 U. S., 272, 281-2, 285-8, and cases cited; 3 Dill., 19, 34; Farmers' Loan & Trust Co. *v.* Denver Co., 126 Fed. Rep., 46, 51; Thomas *v.* Evans, 105 N. Y., 601, 615;

Fanning *v.* Dunham, 5 Johns., Ch. 122, 142-7, and cases cited; Stanly *v.* Gadsby, 10 Pet., 521; Tiffany *v.* Boatman's Inst., 18 Wall., 375, 385; Knoth *v.* Manhattan Railway Co., 109 App. Div., 802, 807-10, affirmed 187 N. Y., 243).

Judge Hough thought that the state's equity to the enforcement of a constitutional law was not strong enough to warrant the imposition of a condition upon the complainant, and also advanced the singular proposition that the litigation might terminate if he imposed the condition, so that this court would not decide a legal question which interested him (p. 429).

If this court agrees with him, as to the equity of the state, the question still remains as to the procedure to be adopted when the Federal courts are asked to take cognizance of local controversies of this nature, ousting the state tribunals and the state procedure. They can impose what conditions they please upon the exercise of such a jurisdiction. It seems to us that the condition which we propose is eminently proper, would tend to prevent disharmony between state and nation, and should be adopted *ut sit finis litium.*

Federal jurisdiction over this case can be sustained only by adopting a new principle of equity procedure. Why not accompany the new principle, if adopted, with a condition so equitable, and so analogous to what has already been decided under circumstances somewhat similar?

Respectfully submitted,
Edward B. Whitney,
George S. Coleman,
Of Counsel for Appellants.

APPENDIX A.

FRANCHISES CLAIMED BY COMPLAINANT.

It is not until very recently that complainant has claimed the ownership of perpetual franchises; although it has claimed the right to operate north of 79th Street in perpetuity under an old Tweed franchise commonly called the State Grant of 1871.

As recently as the time when the testimony was taken in the case reported as Matter of City of New York, 56 N. Y. Misc., 306, 309, no perpetual franchise was claimed to exist south of 79th Street, nor were the present claims as to the extent and perpetuity of the New York, Manhattan and Metropolitan franchises as yet advanced. The question then arose in a proceeding for the condemnation of a portion of the 18th Street plant, within the territory formerly belonging to the Manhattan and Metropolitan companies. Nevertheless, complainant claimed only under the Municipal company's grant. That was a thirty year grant which confessedly expired on March 22, 1907. Its approaching expiration seems to have incited the complainant to a voyage of discovery among the old franchise documents whose importance had been supposed to have ceased.

Of the grants now put forward by complainant, we contend that the first four (the New York, Manhattan, Metropolitan and Harlem) have expired; that the fifth (the Anthracite) was void *ab initio;* and that the sixth (the State Grant of 1871), which is not claimed to have become complainant's property, was so framed that it could not pass into the management of a corporation.

As applicable to some or all of these various grants, we refer to the following well settled principles:

(1) In construing a grant of lands, franchises or privileges by the State, every intendment is to be taken in favor of the public and against the grantee, as the grantee is presumed to have drafted the paper, and to have made it as strong as he could in his own interests (Charles River Bridge *v.* Warren Bridge, 11 Pet., 420; Coosaw Mining Co. *v.* South Carolina, 144 U. S., 550, 561-2; Freeport Water Co. *v.* Freeport, 180 U. S., 587, 599; Cleveland Electric Co. *v.* Cleveland, 204 U. S., 116, 129-30). It is also laid down by the courts of the State of New York (Auburn & Cato Plank Road Co. *v.* Douglass, 9 N. Y., 444, 451; *In re* N. Y. & H. R. R. Co. *v.* Kip, 46 N. Y., 546, 551; People *v.* Broadway Ry. Co., 126 N. Y., 29, 37; People *ex rel.* 3d Ave. Ry. *v.* Newton, 112 N. Y., 396-399; Trustees *v.* Vail, 151 N. Y., 463, 472; Skaneateles Case, 161 N. Y. at p. 163, and cases cited).

(2) The application of the foregoing rule is not affected by a provision in the grant that it is to be benignly construed (People *v.* Chicago Theological Seminary, 174 Ill., 177, 181; 189 Ill., 439; 188 U. S., 662, 675, 676-7).

(3) A person to whom real property has been granted, demised and to farm let, if he holds over after the expiration of his term, becomes a tenant at sufferance or from year to year (Schuyler *v.* Smith, 51 N. Y., 309; Morgan *v.* Wm. Harison Lim. (1907), 2 Ch. 137). By holding over he cannot get adverse possession (Driggs *v.* Phillips, 103 N. Y., 33, 41; Deshong *v.* City of New York, 74 App. Div., 234). This principle applies to a

tenant of incorporeal real property, such as an easement or franchise to lay pipes and mains, as much as to a tenant of any other real property.

The grants should be considered in chronological order, as the practical construction of the first grant in order of time was undoubtedly in the minds of all parties at the time of the later grants; although complainant ingeniously reversed the order in its discussion of these grants in the court below.

The New York Gas Light Company.

This company was incorporated by the Act of March 26, 1823, chapter 85. Certain gentlemen were incorporated under the above name and it was provided that "by that name they and their successors may have *perpetual* succession." The powers of the corporation were to be as follows (p. 4826):

> "and by the name and style aforesaid, the said corporation shall have full power and authority to manufacture, make, and sell gas, to be made of coal, oil, tar, peat, pitch or turpentine, or other materials; and to be used for the purpose of lighting the said city, or the streets thereof, and any buildings, manufactories, or houses therein contained and situate; and to enter into, make and execute any contracts, agreements or covenants in relation to the objects of this incorporation, and of enforcing the same, and be capable of purchasing, taking and holding any estate or property, real or personal, as shall be necessary to give effect to the purposes of this incorporation, or for the accommodation of their business and concerns."

The grant was limited by the following proviso (pp. 4826-7):

> "*And provided, also,* That no public street, lane, or highway in the city of New York, shall be dug into, or in any wise injured or defaced without the permission of the corporation of the said city first had and obtained."

It will be noticed that no franchise for the occupation of the streets was granted by the legislature. It is clear that the proviso was intended as confining the question of street franchise to the proper authorities of the City. No restrictions upon the action of these local authorities is expressed or implied. They had the right to affix to their permission for digging up the streets such conditions as they should see fit, so far as such conditions would not contravene any of the provisions of the statute.

There is no better indication of the true construction of a document, whether a statutory grant or a contract, than its contemporaneous construction (Insurance Co. *v.* Dutcher, 95 U. S., 269, 273; Steinbach *v.* Stewart, 11 Wall., 566, 576; Woolsey *v.* Funke, 121 N. Y., 87, 92; United States *v.* Pugh, 99 U. S., 265, 269; United States *v.* Alabama R. R. Co., 142 U. S., 615, 621).

The statute became law on March 26. The incorporators immediately applied to the city authorities for a franchise thereon, and this franchise was granted by an agreement dated May 12. signed by the Mayor and accepted by the grantee. By this agreement the city did "hereby grant, demise and to farm let" to the corporation and its successors the sole and exclusive privilege of "laying or placing underground pipes" in that part of the city south of Grand and Canal streets "to have and to hold and to enjoy the same" until May 12, 1853 (pp. 5081-2).

By accepting this grant, the corporation accepted the time limitation thereof, and the joint action of the Common Council, the Mayor and the gas company confirmed what in its absence would have been the natural construction of the statute, namely, that the power to fix the extent and duration of the franchise was in the city authorities. The city authorities had the same jurisdiction over the franchise limits as to time that they had over franchise limits as to space; and it was never claimed, during its sixty years of operation as an independent company, that the grantee could extend its mains north of Grand and Canal streets.

In 1853 the franchise expired. Its possession of the streets was not disturbed, and it went on as before until the consolidation, when it merged with a company which had a franchise still running.

The Master adopted the extraordinary theory that the complainant must be held entitled to whatever it might claim to own, so long as the contrary had not been adjudicated in some other form of action, although its claim might be entirely baseless, or might be terminated by immediate revocation of its rights. This theory, first applied to the real estate (p. 164) was again applied to the franchises (p. 192). Judge Hough disapproved it (although not until it had already led to the litigation next hereinafter mentioned), but made no ruling as to the validity of either the New York, Manhattan or Metropolitan franchises.

It will be remembered that the state is the sole legal protector of the individual consumer, and that the city has no right or duty to represent him (pp. 3-4, 162-3, *supra*). The Master's decision seemed to put the defendants into a curious position. The city had the right to grant franchises, was obtaining its own supply of gas from the complainant, had no other source of supply, was not asked by any consumer to interfere with the present arrangements, and had no reason for modifying existing arrangements except as to the price of gas to be furnished to itself. The state on the other hand was the protector of the consumers, but had granted to the city the right to grant franchises by a statute over which the Attorney-General had no control. The upshot was that the Attorney-General, after considering the Master's opinion, applied for leave to bring an action in the nature of a *quo warranto* to vacate the charter of this complainant. The opinion of the Appellate Division sustaining the denial of such leave (the matter could not be appealed to the Court of Appeals) is reported as Matter of Attorney-General, 124 App. Div., 401, 407-8). It is applicable to the four grants which have expired (the Anthracite Grant and the State Grant of 1871 having been for some reason omitted by the Attorney-General in his application). Justice Scott discusses the matter as follows:

> "The several statutes under which the constituent companies were organized gave to them power and authority to manufacture, distribute and sell gas, with incidental power and authority to lay pipes or mains in the

public streets and avenues, subject, however, to the qualification that no street or highway should be dug into for the purpose of laying such mains without the consent of the municipal authorities first had and obtained.

The franchise to be a corporation and to transact business comes from the State, as does also the right, incidental and necessary to the enjoyment of the franchise, to lay pipes and mains in the streets, to maintain them when laid so long as necessary for the beneficial enjoyment of the corporate franchise, and for that purpose to dig into and open the streets. The State might have given authority to open the streets without any consent from the local authorities and has done so in many cases, but in general and particularly in the case of the constituent companies mentioned in the petition it has required the consent of the local authorities to be obtained before a street surface should be disturbed for the purpose of laying gas mains.

In these cases the right to lay mains comes from the State, *permission to exercise the right being made dependent upon the consent of the local authorities. It was competent for the local authorities to give a general consent covering a fixed period of time, or running during the life of the corporation,* or to give consents from time to time as the necessity for opening the street surface arose. *The first alternative was chosen,* and to each company was given a general consent, *limited as to areas to which it applied, and as to the time during which it should remain effective.* These periods of time have expired, and while it was undoubtedly competent for the local authorities to extend the time, or to have granted new consents, it appears that this had not been done, unless acquiescence amounts to such a consent (People *ex rel* New York & Richmond Gas Co. *v.* Cromwell, 89 App. Div., 291). The contention of the At-

> torney General is that with the expiration of the time limited by the municipal consent for the laying of pipes then also expired the right to maintain and use those already laid. Although we do not consider it necessary to pass upon this question, we may say that the argument in favor of the Attorney General's contention in this regard appears to us to be far from conclusive. It is sufficient to say that the matter is one for consideration by the municipal authorities, and is no concern of the State" [etc.].

The dissenting judge concurred in the proposition that a corporation by holding over in possession of such an easement or franchise after the expiration of its term afforded no ground for forfeiture, and that the questions arising in respect thereto are to be adjusted between corporation and city without the intervention of the State (*Id.*, p. 409).

This case leaves open the question whether the thirty year limit in the city's franchise grant relates to the maintenance of the pipes, or only to the right to put them in. The latter construction is unnatural in view of the language of the grant, which is that of a lease of real property. It is hard to conceive why a time limit should have been put on at all, if it did not apply to the maintenance of the pipes. Moreover the grant was exclusive so far as it existed at all, and it was understood by the company that so far as it was exclusive it lapsed at the end of the charter period (p. 92, *supra*; and see the Metropolitan franchise, p. 303 *infra*). The whole question is settled by the presumption against the grantee in such a conveyance (p. 292, *supra*). The case also leaves open the question whether acquiescence in holding over by a corporation amounted to a new consent. But there is no reason for any distinction between the rights of a holdover after the expiration of a limited term in an easement to lay gas pipes, and those of a holdover after the expiration of a limited term in a corporeal hereditament. If one holding over by tacit consent after the expiration of the term in possession of an easement acquires any further right therein than as tenant at sufferance or from year to year, what right does he obtain?

An easement may of course become vested by adverse possession if the tenant is proved to have set up an adverse claim, and the period of the statute thereafter expires. No such claim was ever made by this complainant or any of its constituent companies. The testimony of Mr. Lees (p. 92 *supra*) makes it extremely improbable that any such thing could have occurred at any time; and the company's own reliance on the Municipal franchise, in a controversy between itself and the City of New York (p. 291, *supra*), is an admission that no adverse claim was outstanding.

The Cromwell case, cited in the opinion above quoted, does not concern the status of a company holding over after a limited tenancy. It held that in the absence of any other evidence, the fact that a corporation had been supplying gas to three towns and their inhabitants for a period of nearly fifty years authorized an inference that the necessary consents had been obtained from the local authorities of those towns.

The Manhattan Gas Light Company.

This company was incorporated by an Act of February 26, 1830, with the following power (p. 4830):

> "with full power and authority to manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch and turpentine, or other materials, and to be used for the purpose of lighting the city of New York, or the streets thereof, and any buildings, manufactories or houses, therein contained and situate, and to lay pipes for the purposes of conducting the gas in any of the streets or avenues of the said city."

The act incorporated (although not in the form of a proviso) the proviso above quoted from the Act of 1823 (pp. 4826-7):

> "and that no public street, lane, or highway, in the city of New York, shall be dug into, or in any way injured or defaced, without the permission of the corporation of said city first had and obtained."

If the first of the two passages above quoted contained a legislative franchise for the purpose of conducting gas in any of the streets and avenues of the city, it could not be restricted by the city authorities, and their permission would only be a right to regulate such use of the streets. They would have had no more right to limit the legislative grant as to space than as to time.

The other construction, leaving it free for the city authorities to limit their permission both as to space and as to time, is supported by the similarity of much of the language to that of the Act of 1823; for there is much indication that the legislature intended to grant to the Manhattan company the same nature and extent of power which it had granted to the New York company, and to put into the hands of the city the same power which it had, and had exercised, in the New York company's case.

The practical construction given to the statute by the parties under the act of 1823 had been, as we have shown, that the statute delegated to the city the right to restrict the street franchise both as to space and as to time. In quoting the exact language of the former statute as to the city's powers, it was therefore to be presumed that the legislature intended the construction previously adopted to apply to the new statute (Copper Queen Mining Co. *v.* Arizona Board, 206 U. S., 474, 479; New York, New Haven & Hartford R. R. Co. *v.* Interstate Commerce Commission, 200 U. S., 361, 401; United States *v.* Falk, 204 U. S., 143, referring to 20 Op., 80, 82; Kealoha *v.* Castle, 210 U. S., 149, 154).

The practical construction given by the parties in interest to the Manhattan statute was the same which had been given to the former statute. Three years elapsed before the city made any grant at all. Then, on May 8, 1833, it did "grant and demise" to the Manhattan company "the privilege and right to lay or place underground pipes in any and all of the streets, avenues and public places of the City of New York" north of the north line of the grant of 1823, "to have, hold, use and enjoy the said right and privilege" until May 12, 1853, the day on which the New York company's grant was to expire (p. 5089).

On May 5, 1848, the Manhattan company obtained from the city an extension of its franchise until May 5, 1868; and as a condition of this time extension it submitted to a limitation as to space, accepting 42nd Street as its future northerly line (pp. 427-8).

The stockholders of the company reincorporated themselves for a period of fifty years under the Act of April 20, 1867 (p. 4834), but obtained no further franchise grant.

The Metropolitan Gas Light Company.

This company was incorporated by the statute of April 17, 1855, with the following power (pp. 4852-3):

> "with full power and authority at any time hereafter to manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch and turpentine or other materials, and to be used for the purpose of lighting the city of New York, and the streets, avenues, lanes, alleys and squares thereof, and any building, manufactories or houses therein contained and situate, and to lay pipes for the purpose of conducting the gas in any of the streets, avenues, lanes, alleys and squares of the said city, and to adopt any other necessary means to furnish gas to any inhabitant of said city."

This statute expressed explicitly the power of the city to limit the use of the franchise (p. 4853):

> "and that no public street, avenue, lane, alley, square or highway in the said city shall be dug into or defaced or other means adopted in regard thereto for the purpose aforesaid, without the permission of the two boards of the Common Council of said city first had and obtained, and the said boards are hereby authorized to grant and vest exclusive permission and authority to and in said company for said purposes to such extent and under such regulations as to them shall seem expedient, and such permission

> and authority shall be conclusive, *and shall continue as thus fixed during the period designated by said boards at the time of granting the same.*"

The grant by the city of a franchise "to lay pipes" was made over the Mayor's veto on December 22, 1858. It expressed no space limitation, but a time limitation of thirty years. It referred to the New York and Manhattan grants, and was clearly intended to carry similar and equal privileges (p. 5094). Yet this is the franchise which Mr. Zollikoffer, President of the company, referred to as expiring in 1889 (p. 93, *supra*).

The Harlem Gas Light Company.

This company was incorporated under the Gas Light Corporations Act (p. 309, *infra*), on February 7, 1855, its term of existence being fifty years (p. 4857). Its grant from the city was approved by the Mayor on April 25, 1855. It was restricted to that portion of the city lying north of the centre line of 79th Street, and contained no time limitation. It contained a reservation of the right of the city to purchase at any time from the company all its personal and real property upon payment of the cost of the same *plus* 10% (pp. 5092-4)

The value of the franchise, while it existed, could at any time have been reduced by the legislature to an amount not exceeding 10% of the cost of the real and personal property of the company, by authorizing the city to purchase as required in the contract, if such authorization were followed by a purchase thereunder.

But it is unnecessary to consider this, because the Harlem grant expired on February 1, 1905, having been made to a company whose term of existence was fixed at the time of the charter as expiring on that day.

There is no presumption of perpetuity in the grant of a franchise, and when a grant is made to a corporation incorporated for a limited term of years it is presumed that the franchise was intended to last for that term of years. This principle has just been enforced in a very important case by this court (Blair *v.* City of Chicago, 201 U. S., 400, 481, 488; S. C. below as Govin *v.* City of Chicago, 132 Fed. Rep., 848, 855; and see cas. cit. at 161 Fed. Rep., 771; S. P. State *ex rel.* Walker *v.* Payne, 129 Mo., 468).

The principle upon which these decisions proceed, and which is a mere application of the general rule that franchises are construed most strongly in favor of the public and as against the grantee, is best explained in Coosaw Mining Co. *v.* South Carolina, 144 U. S., 550, 561-2.

There is a remark by Parker, C. J., in the Ghee case, 158 N. Y., 510, 513, to the effect that a gas franchise granted under the Transportation Corporations Act is perpetual. This remark was unnecessary to the decision of the question before him. The case was decided against the gas company. The authority from which he cites expressly reserves the question, saying that such franchises are for a long term of years, for the life of a corporation, or in perpetuity (Deehan case, 153 N. Y., 528, 533). The argument which the Chief Judge was making would have been equally satisfied by assuming the franchise to be for fifty years. The question, moreover, is not the same under the Transportation Corporations

Act as under the statutes existing in 1871. Gas corporations are now permitted to extend their corporate existence, and also to transfer their franchises. Hence the presumption that the Legislature intended the franchise to be limited to the fifty year term of the life of the corporation grantee is not nearly so strong, if it exists at all. For present purposes it is sufficient to say that the Court of Appeals will not be embarrassed by this remark, as the court itself said in the Colonial City Traction Case, 154 N. Y., 493, 495:

> "If, as sometimes happens, broader statements were made by way of argument or otherwise than were essential to the decision of the questions presented, they are the dicta of the writer of the opinion and not the decision of the court. A judicial opinion, like evidence, is only binding so far as it is relevant, and when it wanders from the point at issue it no longer has force as an official utterance. The failure to read the opinions of courts with this fact in mind gives rise to much fruitless litigation."

We quote again from the Matter of Attorney-General, 124 App. Div., 401, 407:

> "It was competent for the local authorities to give a general consent covering a fixed period of time, *or running during the life of the corporation.*"

The complainant has relied mainly upon remarks of the Chief Judge in the Broadway Railroad case, People *v.* O'Brien, 111 N. Y., at page 38. Those remarks related to street railroad franchises, and are subject to five comments. First, the history of these railroad franchises in the city is quite different from that of gas companies. Gas franchises were always until a comparatively late period, restricted to comparatively short terms. Street railroad franchises on the contrary had been considered perpetual, as shown by the cases cited in the Broadway case. Second, the argument of the court in the Broadway case, at pp. 41-2, was largely based upon legislation peculiar to railroad corporations and which in 1871 and for nearly twenty years thereafter was not applicable to gas companies. Gas companies had no power to transfer franchises or (until 1884) to consolidate with other companies, or to lease, as I shall show a little further on. Third, that portion of the discussion which related to the question of perpetuity was not concurred in by the majority of the court. Two judges did not sit, while two judges concurred upon grounds separately stated by them. Fourth, the discussion as to perpetuity was entirely unnecessary to the decision of the case. It was sufficient for the purposes of the case to hold as the concurring judges said, that the property and franchises "survived" the annulment of the corporation. It made no difference to the result whether the franchises were granted in perpetuity or for a long term of years. The Court of Appeals does not feel bound by expressions used under such circumstances (Colonial City Traction case, *supra*). Fifth, the cases cited by the chief judge as authorities for the statement that the estate was in perpetuity are themselves *obiter dicta*.

The recent Miner case, 123 N. Y., at pp. 249-51, which very hesitatingly lays down that the franchise of a steam railroad is perpetual, is of course based upon entirely distinct grounds. An ordinary steam railroad (as distinguished from a street railroad) is a structure permanent in itself and requiring acquisition of the fee of real property by eminent domain. It will therefore be perceived that there are reasons for inferring a legislative intent that a steam railroad franchise should be perpetual which do not exist in the case of an ordinary street franchise, especially a franchise for the maintenance of mains and pipes, which, as all users of the public streets know to their sorrow, are continually being taken up and replaced.

Some confusion in mind seems to exist as to the effect of an extension of the life of a corporation to which such a franchise has been granted. It is of course true that the legislature, as in the Detroit case, 184 U. S., 368, 395, may grant to a corporation a franchise which will by its terms outlive it; and in such a grant it is necessarily implied that the franchise may be assigned to a successor, or may be enjoyed by the grantee for the full term if its life be thereafter extended. This does not affect the construction of the original grant. The limitation of the grant to fifty years for instance, in a corporation whose life is limited at that time to fifty years, is a rule of construction of a written instrument. It is presumed that the legislature considered the corporation as a being whose existence was to terminate upon a certain date, and intended to do no more than to give it a franchise which also would expire upon that date. It is not presumed, unless the contrary be in some way expressed, that the grant is for the fifty years *plus* such further period as may be covered by any extension of life that may be obtained in the future under a general or special statute not yet enacted.

The Knickerbocker Gas Light Company.

This company was incorporated under the General Law on June 24, 1876. It claimed two franchises. One of these—the Anthracite franchise—was for the whole city, but to expire September 17, 1913. The other—the State Grant of 1871—was perpetual, but confined to the territory north of 79th Street.

The Anthracite Franchise.—Nothing had ever been done under this. The company to which it was granted never did any business (p. 6205). It was bought up by the Union, on whose collapse the Knickerbocker was organized, but the business was confined to the territory north of 79th Street, claimed under the State Grant (p. 6099).

The local authorities on September 17, 1863, over the Mayor's veto, had granted a fifty-year franchise for all the streets in the city of New York to a corporation by the name of the Anthracite Gas Lighting and Heating Company. On May 26, 1865, this franchise was amended by making it run to the assigns of that company (pp. 5095-7). The franchise was sold on the following day to another corporation which had been organized under the name of the Citizens' Mutual Gas Company of New York (p. 5101). This corporation again, on November 22, 1871, assigned the franchise to another corporation which had then just been formed under the name of the Union Gas Light Company of the City of New York (p. 5104). Charles E. Appleby was subsequently ap pointed receiver of this last named company in an action brought by the people of the State of New York (pp. 5105-7) and upon his petition he was directed to sell "all the right, title and interest" which it or he "may have" in this franchise (pp. 5108-9). Under this sale the franchise if any passed to the Knickerbocker Gas Light Company (pp. 5110-14).

The fatal objection to this Anthracite franchise was that it was not granted to a gas light company but to a manufacturing company. The certificate of incorporation is set forth in the record (p. 5097), and expressly states the statute under which the company was organized.

There was no general authority to the Common Council of the City of New York to grant gas franchises, nor did the Manufacturing Corporations Act of 1848 (which was Chapter 40 of the laws of that year) contain any such authority. The right of the local authorities to grant franchises to gas companies is contained in the Gas Light Corporations Act of 1848, which was passed before the Manufacturing Corporations Act (being Chapter 37 of the Laws of that year) and was contained in section 18 thereof, as follows:

> "Any corporation *formed under this act* shall have full power [etc.] to lay conductors [etc.] with the consent of the municipal authorities of such city, village or town, and under such reasonable regulations as they may prescribe."

The Manufacturing Corporations Act did not contemplate the incorporation of public service corporations, although corporations for the purpose of *manufacturing* gas could properly have been incorporated under it.

The Anthracite charter is just one of those numerous charters obtained in order to be hawked around, which were until recent years so common, and to such a large number of which the state courts have given their quietus. The fact that the company was organized under the wrong act shows that it was not a serious enough project even to have been submitted to competent legal advice.

It may be added that the Citizens Mutual Gas Company, to whom the first assignment was made, was also incompetent for the same reason, having been incorporated under the Manufacturing Corporations Act (p. 5098).

The next claimant by way of assignment, the Union Gas Light Company, was organized under the right act; but no action was ever taken by the state or municipality to recognize the Union Company as owner of any such franchise, or in any other way to validate the claim. So far as appears, no such action was ever asked.

The State Grant of 1871.—This is the franchise granted by the statute of June 12, 1871, chapter 944, entitled "An Act to authorize the construction of gas works, and the manufacture and sale of gas for the purpose of lighting a portion of the City of New York, and the streets, avenues, squares and buildings therein, and to lay pipes for that purpose." This statute provided that Isaac P. Martin and others, and their assigns, were authorized and empowered to manufacture, make and sell gas for the purpose of lighting that portion of the then city lying north of the centre line of 79th Street, with power to lay pipes in the streets, etc. It provided that "the rights and privileges hereby granted are exclusive." It contained no power to incorporate, but provided that the persons named should select an executive committee of not less than seven, nor more than thirteen members "who shall have the control and management of the business authorized to be done and carried on by the provisions of this act" (pp. 5119-21).

The true inwardness of this statute was speedily disclosed by a series of assignments whereby whatever rights there might be thereunder passed to William M. Tweed, Richard B. Connolly, Thomas C. Fields, A. Oakey Hall, Peter B. Sweeney, Henry W. Genet and certain gentlemen associted with them (pp. 5123 *et seq.*). A long series of further assignments vested the property in its present owners, who are not the complainant or any of its predecessors, but certain gentlemen named at pages 5244-52.

An executive committee was appointed, and the chain of title contains a curious series of assignments whereby the members of this committee from time to time "do hereby release, relinquish, assign and set over" to the persons mentioned "all the rights, powers and control which we have acquired or can in any way exercise or have as such executive committee." The chain of title does not show who were the original executive committeemen elected, or whether they were properly and validly elected, although it contains a call for a meeting for that purpose (p. 5122). There is an affidavit annexed to this notice, signed by one William Foster, Jr., stating that he was for a long time chairman of the executive committee, and that certain persons at one time elected members of it were ineligible; but this was an affidavit made many years afterwards, and its competency does not appear (pp. 5122-3). A few months after this original meeting occurs the first release, relinquishment and assignment, signed by certain persons claiming to be members of the original executive committee, including Messrs. Genet, Connolly, Fields, Sweeney and Hall. Although the membership of this committee is prescribed by the statute to be from seven to thirteen, Genet and his fellow claimants to that office undertook to "release, relinquish, assign and set over" to Cornelius S. Bushnell, Henry J. Davison and Gordon H. Waddell "and their assigns, all the rights, power and control which we have acquired, or can in any way exercise, or have, as such executive committee" (pp. 5199-5200)! On December 5, 1876, an entirely new set of claimants to the position of executive committeemen appear, namely, Charles E. Appleby, William Foster, Jr., James M. Townsend, Eben F. Bacon and Samuel J. Young; and these release, relinquish, &c., to seven other persons mentioned (p. 5225). The Union Gas Light Company consents to this assignment (pp. 5225-6). Five of these seven, on May 20, 1878, release, relinquish, etc., to William Bayard Cutting, Robert F. Cutting, M. Bayard Brown, O. P. C. Billings and William W. Moir (p. 5234). These five assignees, together with the other two members of the original executive committee, on March 11, 1880, release, relinquish, etc., to O. Ottendorfer, H. E. Gawtry, Henry Day, Philip Allen, Charles G. Francklyn, Peter Gardner, L. C. Thompson and their assigns (p. 5254). There is no provision in the statute for the assignment of their powers or duties by the executive committeemen.

On February 25, 1874, William Foster, Jr., and six others, by an indenture reciting that they "now constitute the executive committee for the control and management of the business authorized to be done and carried on by the provisions of said act" (although there is no evidence that any one of them was ever elected to that position), grant and assign to the Union Gas Light Company, for and during the whole term of its corporate existence (namely, until October 26, 1921), "the right to do, exercise and perform as the agents and attorneys of the parties of the first part and their successors, hereby irrevocably constituted all and every the rights, privileges, franchises and immunities given and granted or created" by the statute of 1871; and covenanting to hold these, together with any franchise that they may thereafter get, and on request of the corporation or its successors to elect a new member in place of any member of the committee who may die or resign, etc.; and that upon request of the corporation to "grant and delegate to any other corporation or association the right as the agents and attorneys *of such executive committee* to manufacture, make and sell gas," etc., with covenant for further assurance (pp. 5212-14).

Its interest having been sold by its Receiver (pp. 5108-14), the Union Gas Light Company requested certain persons stated to be the executive committee to grant and delegate all their rights and privileges to the Knickerbocker Gas Light Company (pp. 5225-6). Thereupon, and on the same day, a new agreement was made between the pretended executive committeemen of that date and the Knickerbocker Gas Light Company, similar to the former agreement with the Union Gas Light Company (pp. 5229-32).

The complainant has failed to prove title in the executive committeemen who made these extraordinary contracts. It is always incumbent upon a party claiming a franchise to prove that he has got it; and a franchise emanating from Tweed and his associates is a particularly fit object for the application of this rule.

Furthermore, this very sweeping franchise was to be exercised by individuals appointed in a certain way, and without power to choose their own successors. It may have been the object of the legislature to have the franchise, if accepted, managed by men who would be personally individually responsible. However this may be, the duties devolved upon the executive committee could not be delegated by them to a corporation (Phelps *v.* Mayor, 112 N. Y., 216; People *v.* Brooklyn Cooperage Co., 187 N. Y., 142; People *ex rel.* Comatus *v.* Willis, 9 App. Div., 214; Providence Retreat *v.* City of Buffalo, 29 App. Div., 160, 165; Day *v.* Green, 4 Cush., 433; *In re* Jetter, 78 N. Y., 601; Matter of Presbytery of N. Y., 9 Daly, 116; aff'd no op. 80 N. Y., 642).

The case is equivalent to the leasing of a railroad without the consent of the State (in New York the State consents in that particular case), which is an illegal delegation.

Thomas *v.* Railroad Co., 101 U. S., 71, 83.

APPENDIX B.

MARKET VALUES OF GAS STOCKS, 1883-4.

These figures are taken from the *Commercial and Financial Chronicle* of the dates named.

The Knickerbocker securities were held by the Municipal and their value is therefore reflected in the value of the stock of that company. The amount of Harlem stock outstanding is given by the *Chronicle* as $1,850,000, although Mr. Yalden gives it at only $1,800,000. Assuming the higher figure as more favorable to the company, we have the following tabulation showing the amounts of stocks outstanding:

Harlem Co.................	1,850,000
Manhattan Co..............	4,000,000
Metropolitan Co............	2,500,000
New York Co...............	4,000,000
Municipal Co...............	3,000,000

The following tabulation gives the bid and asked prices of the various companies at the dates mentioned, and the total valuation of the stocks of the various companies outstanding, at the dates named respectively:

	July 7, 1883		Aug. 4, 1883		Sept. 1, 1883	
	bid	asked	bid	asked	bid	asked
Harlem Co.	102	105	104		104	
Manhattan Co..........	230	235	228	231	225	230
Metropolitan Co.......	187	189	188	192	185	190
New York Co..........	122	124	125	130	125	130
Municipal Co.	180	182	182	185	182	185
Total valuation	$26,042,000		$26,204,000		$26,009,000	

	Oct. 6, 1883		Nov. 3, 1883		Dec. 1, 1883	
	bid	asked	bid	asked	bid	asked
Harlem Co.	110	115	110	115	110	115
Manhattan Co.........	225	230	229	231	235	240
Metropolitan Co.	188	190	188	190	190	200
New York Co.........	128	130	128	130	134	136
Municipal Co.........	189	190	189	190	190	192
Total valuation	$26,525,000		$26,685,000		$27,245,000	

	Jan. 5, 1884		Feb. 9, 1884		Mch. 1, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	115	118	117	120	120	125
Manhattan Co.	260	265	274	277	270	273
Metropolitan Co.	205	215	225		235	240
New York Co.........	145	148	154	160	154	157
Municipal Co.	195	197	210	215	210	215
Total valuation.....	$29,302,500		$31,209,500		$31,355,000	

	Apr. 5, 1884		May 3, 1884		June 7, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	120	122	120	122	115	120
Manhattan Co.	265	267	275	280	280	285
Metropolitan Co.......	222	225	230	235	227	232
New York Co.........	150	151	154	156	150	154
Municipal Co.	206	210	213	215	207	210
Total valuation.....	$30,550,000		$31,520,000		$31,212,500	

	July 5, 1884		Aug. 2, 1884		Sept. 6, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	120	122	120	122	121	123
Manhattan Co.	285	290	300	305	295	300
Metropolitan Co.......	234	237	234	237	230	235
New York Co.........	152	154	160	163	159	161
Municipal Co.	202	207	205	210	204	207
Total valuation.....	$31,610,000		$32,620,000		$32,268,500	

	Sept. 13, 1884		Sept. 20, 1884		Sept. 27, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	121	123	122	124	124	126
Manhattan Co.	297	301	297	301	302	305
Metropolitan Co.	233	237	230	233	234	240
New York Co.........	158	161	160	163	162	165
Municipal Co.	206	209	206	210	215	220
Total valuation.....	$32,443,500		$32,467,000		$32,154,000	

	Oct. 4, 1884*		Oct. 11, 1884		Oct. 18, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	131	135	125	133	125	133
Manhattan Co.	315	325	305	310	305	310
Metropolitan Co.	240		240	250	240	250
New York Co.	163	167	165	167	165	167
Municipal Co.	230	240	230	235	225	231
Total valuation	$34,443,500		$34,012,500		$33,862,500	

	Oct. 25, 1884		Nov. 1, 1884		Nov. 8, 1884	
	bid	asked	bid	asked	bid	asked
Harlem Co.	130	135	115	125	120	125
Manhattan Co.	298	301	285	287	280	285
Metropolitan Co.	240	250	215	230	215	225
New York Co.	167	171	150	155	150	155
Municipal Co.	220	227	205	215	210	215
Total valuation	$33,605,000		$31,052,500		$31,095,000	

	Nov. 15, 1884		Nov. 22, 1884	
	bid	asked	bid	asked
Harlem Co.	115	125	115	120
Manhattan Co.	275	285	265	270
Metropolitan Co.	225	232	230	235
New York Co.	150	155	155	158
Municipal Co.	205	210	205	210
Total valuation	$30,902,500		$30,827,500	

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*Consolidation Agreement made Sept. 29 (p. 4819).

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SUPREME COURT OF THE UNITED STATES.

October Term, 1908.

No. 396.

WM. R. WILLCOX ET AL., Constituting the Public Service Commission of The State of New York for the First District, Appellants,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

REPLY BRIEF FOR APPELLANTS.

Edward B. Whitney,
George S. Coleman,
Of Counsel for Appellants.

ERRATUM.—The $1,303,000 reserved for working capital was originally a fictitious item, but was contributed to the treasury and sold as treasury stock, bringing its full value besides a part of the premium which has been allowed in our calculations. Hence the calculation of dividends up to March 15, 1900, at page 28 of our main brief, should be made upon the basis of $29,994,000 + $1,303,000, which would reduce the average dividend rate to a trifle under 7 per cent., and the average rate of net earnings to a trifle under 8 per cent. A corresponding correction should be made at page 150*c*.

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CONSOLIDATED GAS COMPANY OF NEW YORK.

REPLY BRIEF FOR APPELLANTS.

The appellee refers to our brief of 317 pages as "voluminous," apparently with reference to the common notion that the party with the longest brief has the laboring oar. We do not dispute the correctness of the notion, but notice that the appellee feels obliged to file 423 pages, which, if it had supplied the court with as good print and liberal margin, would have been 504. As, however, so much reading matter is being imposed upon the court by all of us, we shall make this reply as terse as possible.

The page references are to the record, except those headed "App. Br.," which are to the main brief filed by us on behalf of the Public Service Commission.

We take up first Mr. Mathewson's brief on the facts, second Mr. Beck's general brief, and third Mr. Garver's brief on special franchises and good will.

Mr. Mathewson's Brief.

It would too much expand this brief to make all necessary corrections as to statements of alleged fact. We have made a very careful and we think accurate statement in our own main brief, while upon some matters we shall comment when we come to discuss Mr. Garver's, but make the following specific corrections here:

(Page 3, top:) It might be inferred from this statement that Mr. Rowland appraised all the tangible property. He appraised only manufacturing plants, and not all even of them. His appraisals were not on the basis of what they were intrinsically worth. The appraisals by others were not made in a manner deserving very serious consideration (pp. 6078, 6083-5; App. Br., pp. 20-1). The plants have been so largely changed since then that Rowland's own estimates are for present purposes practically valueless.

(Pages 15-17:) This is a discussion of Yalden's estimate of $20,942,632.85 as the cost of the tangible property turned over to complainant by the constituent companies in 1884. We have not based any calculations on this figure, as it seemed to us that all points presented by the assignments of error could be brought out by much simpler calculations.

The discussion is summed up in a tabulation claiming to show an original cost of $29,106,098.56 in addition to certain items unknown; a tabulation introduced as part of the testimony of complainant's secretary, Carter (p. 4490). To begin with, we object to the use by complainant of any evidence by that gentleman which is not supported by other testimony, unless complainant concedes the correctness of his most deliberate sworn statements, statements accompanied by an oath to his own expertness, concerning the valuation of the plants, mains, services and special franchises, and the course of value of the latter items since 1900 (App. Br., pp. 59-60, 76, 81-3). The Master seems to think that his oaths should be condoned, in view of the fact that he was making them on behalf of a large corporation which was interested in having him swear as he did (p. 216); but surely if his former testimony is to be disregarded when it is no longer self-serving, his present self-serving testimony must go with it.

In order to make up this tabulation, he twists a phrase out of Yalden's testimony at page 6394, concerning certain appreciation written up by the New York Gas Light Company—an operation which Yalden had just previously described as "a sort of raising the wind out of nothing." The appreciation written up by that company during its whole career of sixty years was $500,000 more than all the depreciation written off (p. 5657); and Yalden's testimony, quoted by Carter and again in the brief, does not refer to the writing up in 1884, but to a previous writing up in 1871 (p. 6394; compare pp. 5657, 5660).

In the same tabulation the Manhattan company is credited with an additional value of $2,030,000 as having been charged off on a plant that was still as good as new; the impression intended to be conveyed being that the plant then was worth $2,030,000 more than its book value. Yalden's testimony at pages 6315 and 6338 is referred to as authority for this. At the former page it will be found that he simply testifies that the Manhattan company wrote off $2,030,000 as against a plant costing $2,400,000, as illustrating that in less than ten years a plant costs its value over again (a proposition now denied by complainant). At page 6338 he testifies that a large depreciation item had been charged twice over by the Manhattan company, but that on discovering the error it was corrected; and that items scheduled by the complainant at $9,611,000 cannot have cost more than $4,873,000 in round figures. Carter seems to have put down this item of $2,030,000, which really represented repairs and replacements, as part of the original cost of the property, thus duplicating the value of the existing plant to that extent.

The two page references given for the paragraph about the Municipal company are entirely misleading. The first is a quotation from Carter, not Yalden. The second refers to the New York company, not the Municipal. The testimony referred to at page 20 of our main brief shows that the Municipal company was claimed in 1884 to have obtained an unduly high appraisal.

We can find no basis for Carter's statement that the Harlem company had practically doubled its plant capacity out of operating expense. Mr. Moss, who is referred to, only says (upon hearsay) that prior to his own time the lots east of First Avenue were filled in up to the bulkheads out of expense account.

(Page 18:) The paragraph as to mains and services is inaccurate. Two of defendant's experts are referred to as testifying that "pipe actually cost during *the* period in which a large part of the systems were laid, cost as high as $76 a ton." Marks' testimony is simply "that products of iron, such as pipe," were even higher than $50 or $60 a ton "in the 70's." Edgerton says that he does not know the price in New York city, but that he "paid $72 to $76 a ton for pipe in the 70's"; but that he was surprised to find "that the pipe laid was very little *less* than it is now"; that pipe at $76 is more expensive than pipe at $28.90, but that "I saw the actual figures of the cost of laying the Mutual pipes, and it differed very little from what it is today"; that the period of laying this pipe was from 1870 to 1872 (p. 2992). The sole ground for the statement in the brief is therefore that pipe at some other point than New York went as high as $76 a ton at some time during the 70's, according to the recollection upon cross-examination of an expert whose main testimony complainant discredits. As against this we have the contemporary testimony of Rowland that when the appraisals were made in 1884 the cost of manufacturing a plant was no greater than twenty years ago (p. 6084); that the cost of iron (in respect to mains) "is not as low as it was thirty years ago"; that the iron of the Manhattan system would cost more than fifteen or twenty years earlier to lay; and that "the cost of laying the mains now I think would be much larger than it was fifteen years ago" (p. 6095). The correctness of Edgerton's recollection as to the date when the cost of laying the pipes of the New York Mutual Company was less than the 1906 figures, when he testified, is shown by Yalden's report. It appears that the bulk of these pipes were laid about the year 1871 (pp. 5608, 5722). It is a familiar fact that prices went down after the panic of 1873. The period referred to by Marks and Edgerton must have been a very brief one, probably just before the panic. There is no proof that "a large part of the systems were laid" at this epoch, nor anything so indicating. The mains and services laid by the Manhattan company during 1872 and 1873 were only a trifle over $25,000 in cost (p. 5633). Those of the New York company do not separately appear, but would probably, in view of the geographical location of that company, be even less in proportion. The Municipal company did not begin construction until after the panic (p. 5690). The Knickerbocker had only in part constructed its works at that time (p. 6087), and there is no indication that it had as yet put in any mains and services. The Harlem company invested about $66,000 in mains and services in 1872 and 1873 (p. 5710), and the Metropolitan company invested about $142,000 therein in those years (p. 5684). The total appraised valuation of mains and services at the time of consolidation having been about $6,225,000 (p. 5730), it will be perceived what a very trifling figure can have been cut by these temporary high prices, and why they were disregarded by Rowland in his contemporary testimony.

At the foot of page 18 there is another quotation from Carter, and similar quotations appear from time to time witnesses if they be honest, no matter how incompetent or uninformed they may be demonstrated to be." If they are demonstrated to be incompetent or uninformed, they cannot be believed by a fair-minded commission, and that is the test. Counsel deems it proper to make a statement outside the record as to what occurred at the trial, which perhaps makes it proper for us to say that complainant's counsel before the Master submitted a series of propositions claimed to establish the alleged ignorance of the defendant's experts, and which as stated gave that appearance, and which we believe to have caused the Master to make the statements quoted on page 33, but which are not repeated here, although we had made statements which challenged their repetition (App. Br., pp. 54-7).

(Page 42:) Let us see whether appellants overlooked anything as to appellee's two coal gas plants. Complainant's witness testifies that an up-to-date plant would be worth $71.50 more per M. of daily rated capacity. The rated capacity of the two plants is 9,500,000 per day, or 1,900,000,000 per year. If the saving in cost at the up-to-date plant were five cents per M. (see p. 642 and App. Br., p. 109), it would be $95,000 per year, and would save six per cent. on an additional construction of $1,583,333. The additional cost of an up-to-date plant would be only $679,250 (9,500 × $71.50). And the new plant could be built on cheap land, releasing very valuable land, which could then be sold (App. Br., p. 109).

(Page 51:) This repeats from page 18 the unfounded statement upon which we have already commented with relation to the original cost of the mains.

(Pages 56-8:) The market value of complainant's stock has fluctuated in the most violent manner. It is immaterial upon a question like this, although we have discussed the market values of the stocks of the old companies for the purpose of showing that the capitalization of the present company was not based upon them. The finding at the bottom of page 56 was claimed by the complainant and held by the Master to be immaterial, and we agree with them. The price of complainant's stock represented the probability of its being allowed to overcharge for gas, *plus* the supposed future value of its outside investments. The comparison with conditions in other cities was introduced into this case by one of the other defendants, and in our opinion raises collateral issues which have not been fully tried out in this case, were incompetent, and would probably, if competent, help the defendants more than the complainant, as so many cities supply gas at 80 cents or less.

(Pages 59-64:) Complainant's discussion of its tax reports fairly states Mr. Carter's excuses for having sworn to them, and a portion of the Master's remarks thereon, but all of the latter should be read, for they show the Master's point of view, which was an obstacle that defendants were unable to overcome. Counsel seems to think that the complainant and its secretary acted justifiably, and that no fair-minded State board could have discredited the explanations and credited the reports. We have already expressed our views of Mr. Carter, and we cannot agree with counsel as to the amount of honesty which should be required from corporations and their officers and attorneys. A corporation which is guilty of such reports should, under the tests laid down by this court, be remitted to the tribunals of the State for any remedy. The State legislature is entitled, in our opinion, to a higher degree of respect than such a corporation.

(Page 65, foot:) The city's witness Marks is represented as stating that Simpson's figure of $12,636,150 "is a 'moderate and fair' estimate of present value" of mains. The language used by him at that point was "moderate and fair, but unnecessary," and was qualified by stating that Simpson's figures were assumed to be correct (p. 2786). After making the affidavit from which this statement was taken, the witness came to the conclusion "that an allowance should be made for excessive capital investment in mains" on account of "a duplication and triplication of mains in the streets" (p. 1961); thus pointing out the fallacy in complainant's figures if cost of duplication is the test. He afterwards testified that the cost of laying the mains under cobble pavement would appear to be $7,141,231.51.

Complainant then proceeds to state that the estimate of the State's witness Edgerton amounted to a still larger sum "when supplemented by items of cost omitted by him." The reference is not to any testimony of Edgerton, but to a tabulation made by complainant's own superintendent of mains, Simpson, of whom the best that can be said is that he stands a little better than Carter as a witness. Testifying twice within a few months, he succeeded in raising his own valuation nearly $1,000,000 (App. Br., p. 77). Edgerton's estimate was $8,919,792.55 (pp. 2983-4). The rest of Simpson's figure represented what he claimed to be Edgerton's errors and omissions (p. 2926).

(Page 67:) Here begins a series of attempts to offset errors of the court below by claims that it had erred in rulings against the complainant upon other points. Complainant's right to this form of defense will be more conveniently discussed in connection with page 68 of Mr. Beck's brief.

(Page 69:) A tabulation is here given, alleged to be a bill of particulars of the parcels of land which were allowed by the Master, but disallowed by the court. If the complainant had desired to go into this question upon the appeal, it should have seen that a bill of particulars was in some manner incorporated in the final decree. We can find no warrant for such a tabulation in the record. The theory of the court below was that if it had made any mistake as to any of these lots, the mistake was offset by the inclusion in capitalization of certain parcels as to which "very serious doubts are entertained" and "particularly the so-called 111th Street plant;" and that taking the real estate as a whole the corrected figures "represent all that complainant can justly ask" (p. 423). Following our general plan of not raising questions in this court which did not involve a very considerable item of capitalization, we accepted the compromise thus forced on us, and filed no assignment of error to the inclusion of the 111th Street manufacturing plant and the real estate on which it stands, although that plant is not in use and does not appear to have been in use since 1884. This portion of complainant's brief calls upon the court to examine a large number of trivial items, without sufficient information to figure out the allowance made by the Master for any one of them. As we do not understand the question to be properly before the court, we do not go into its details, which would require a brief of considerable bulk.

(Page 75:) In view of the remarks just made, it is unnecessary to discuss the alleged concessions by the city's witnesses. It is our contention that such concessions should not be treated as of much value, as they form parts of calculations the result of which would be fatal to complainant (App. Br., p. 11); which seem to us to be frequently based on insufficient information or insufficient consideration, although not generally approaching the corresponding calculations of complainant's witnesses in these respects.

(Page 77:) In its discussion of the item of Working Capital, complainant concedes that the court below was unfamiliar with the record. This we agree to as a general proposition, but this particular matter was fully argued. He allowed more working capital in proportion to the total book value of the property than was allowed by complainant itself at the time of its organization, and it was computed upon the book value, not upon the sales of gas (App. Br., p. 94). This should be the best evidence, as expressing deliberate judgment of persons familiar with the business. The amount needed for working capital is very small, because complainant can force prompt payments from its customers by threat of shutting off their gas. Hence the bad and doubtful debts amount to a trifling figure, as pointed out by the court at page 396. As against these figures, claims of complainant's witnesses and claims of its counsel as to the effect of his cross-examination of the city's experts were properly disregarded by the court. Dr. Humphreys' estimate involves the persistent fallacy that expenses vary per M. (see App. Br., pp. 122-123). A vastly greater amount of gas may be driven through the mains for delivery to consumers who have got to pay up every month, without much increase in the requirements for working capital.

(Pages 81-4:) Complainant claims that all stock held by it in companies engaged in the manufacture of gas which it uses, or in the carting of supplies which it purchases or sells, must be regarded as part of its capital engaged in the gas business; and characteristically rests itself, as to this legal proposition, in part upon supposed admissions of the city's non-legal experts. Its claim that such a concession was made by counsel is not sustained by its references to the record.

The amount involved in the National Coal & Coke Company item was comparatively trifling, and had not attracted the attention of counsel in drawing the original exceptions to the Master's report, but the omission was promptly supplied when the present appellants came into the case (pp. 382, 386). The error in this respect was pointed out to the court, citing Noyes on Intercorporate Relations, § 299; 2 Cook on Corporations, § 709, and auth. cit., and 1 Morawetz on Private Corporations, §§ 232, 233; to which we may add Peterson *v.* Chicago, etc., Railway Co., 205 U. S., 364.

391. **It is now common for one person to hold all of the stock of a corporation, but it would be a new doctrine to make him responsible for its debts. When one corporation acquires control of another, the two continue to exist as before, and are legally distinct.** Complainant may manufacture its own gas or buy from another company. Complainant may cart its own coal, or pay another company to do the carting. In either case, the expense appears among operating expenses. It may afterwards invest in the stock of that other company; but if it does so, the stock simply stands as an investment. The item of operating expense is unchanged. The only change in the situation is that the expense item must be more carefully looked into by the public, in order to see that an overcharge is not being made for the purpose of reducing the apparent amount of complainant's net profits

To the Astoria investment—the stock held in the Astoria Light, Heat & Power Company—is applicable the foregoing discussion of the National Coal & Coke Company investment. We have already discussed at length the facts concerning the purchased gas and the Astoria investment (App. Br., pp. 97-112).

Suppose that complainant sells its stock in the Astoria company and invests the money in other speculations; that it then realizes on part of those speculations and buys back half the Astoria stock; that it then realizes on the rest of those speculations and buys back the rest of the stock; that our fellow-defendant, the Attorney General, then sues it as a monopoly, and it divides the stock among its stockholders *pro rata;* that when the storm blows over it buys the stock back, except part which has been sold to others in the market. At each of these steps is the price of gas to fluctuate?

(Page 86:) We do not simply seek "to throw doubt" on the Master's statement as to complainant's maximum daily output, but have shown that it is contrary to most conclusive evidence. Complainant endeavors to avoid the natural inference from its failure to produce its daily station records, by saying that it was not asked to produce them. It was for complainant to produce them voluntarily, if it regarded the matter as important. They would undoubtedly, in connection with the record of gas purchased, show with substantial accuracy the amount of daily sales. The average daily sales for the heaviest months being but little over 45,000,000 cubic feet, and the maximum variation between two different days being 6,000,000 cubic feet, the statement that the maximum daily sales are 70,000,000 feet is clearly absurd, and a maximum of even 50,000,000 is altogether improbable. The Master was plainly misled on reading over the record, and the court was misled by the Master.

(Page 87:) The tabulation at this page is based upon some statements of complainant's chief engineer Bradley, who has frequently had to qualify his testimony, although he stands much higher as a witness than Carter or Simpson. He is responsible for the capacity ratings of the various plants which have been accepted in the case, and we have shown that the plants can actually for a considerable period be worked far above their rated capacity (App. Br., p. 103*n*). The capacity rating evidently allows for a very considerable reserve; indeed, for all or most of the twenty per cent. reserve claimed by Bradley. In the case pointed out by us, the reserve was over the twenty per cent.

(Pages 88-9:) This argument is based on the fundamental error as to the maximum daily requirement.

(Page 90:) The argument that legislative acts "necessarily look to the future" is disposed of by the obvious proposition that so long as they do not violate constitutional rights as to present conditions, they cannot be enjoined on expert testimony as to what may be expected to happen at some future time (App. Br., pp. 198-9).

(Page 91:) Here begins an attempt to justify the Master's capitalization of the "Astoria" item, which was stricken out by the court. We pressed below, as we are pressing here, the argument that the record is defective in not showing the actual facts regarding the other companies doing business in this complainant's territory (App. Br., pp. 273-80); and to this extent the action of the court in effect sustains the argument. It will be perceived that complainant's contention calls upon the court to speculate about facts of which it was in its power to supply full information, such as the probable value of the land and plants of the other companies, their holder capacity, reserve capacity, etc.

(Page 95:) Here again complainant picks one item out of a computation by one of the opposing witnesses, although the acceptance of his computations in general would be fatal to itself; and in this instance although it concedes his figures to be upon an erroneous basis. He was not a State's witness, and is not claimed or conceded by the State to be an expert. The matter is not particularly important, because the whole argument is without legal basis. We have shown that the purchase of this gas was mutually beneficial to the purchasing and selling companies (App. Br., pp. 100-104); and as above pointed out, the fact that complainant has within a few years past bought control of the stocks of these companies cannot affect the situation.

(Page 96:) Complainant persists in its statement that the calendar year 1905 was selected with the concurrence of all parties, and its insistence that the defendants were allowed full privilege of looking into other periods and putting the results in evidence. Comment is made on the fact that we were not present at the trial; but we have examined the record and made some inquiry for an explanation of it; and our former source of information is the sole source that can be availed of by the court. The page references for the statements which we make are to be found at pages 10, 26 and

270 of our main brief. Under this heading, as often elsewhere, complainant insists on referring to the city's witnesses as witnesses for the "appellants"; and here it goes outside of the record to quote from documents not in evidence. A good deal of the information finally opened up to the defendants was opened up at a comparatively late period of the hearing; and at the same time they were under pressure from what seems to us a very extraordinary action of Judge Lacombe in accompanying a preliminary injunction with provisions that imposed conditions upon the persons against whom the injunction was granted; conditions which the Master himself substantially admitted to be inconsistent with a thorough investigation (p. 1047).

(Page 105*a*:) Objection to the court's computation of the amount of income from purchased gas seems to be admitted to be an objection in form only. It therefore does not need consideration. The concession as to candle power makes it unnecessary to consider the facts stated by us (App. Br., pp. 130-4).

(Pages 106-8:) The argument at this point has been answered by us (App. Br., pp. 100-12, 198-9, 231-3).

(Page 108:) The special franchise tax matter has been discussed by us (App. Br., pp. 233-8), and will be further discussed in connection with Mr. Garver's brief.

(Pages 109-16:) This is a series of speculations based upon the theory that there will be an increase of sales of over 1,000,000,000 cubic feet during the year commencing May 1, 1906. We have shown that this period is not one which it is proper to speculate about (App. Br., pp. 198-9), and that it is probable that there will be a decrease rather than an increase of sales (*Id.*, pp. 110-11). The course of speculation about this mythical item is characteristic of the brief. It begins with repeating a comparison between the average sales per meter in 1885 and those in 1905; a comparison upon whose basis certain words were put into the mouth of the expert witness Forstall before the Master (pp. 4331-2). The figures were entirely misleading, because the falling off had been caused by some cause which ceased to operate in 1898, and from that time there had been a very rapid rise in consumption per meter, terminating in a period of comparatively slight decline (pp. 5040-41). Most of the latter decline was from the nominal year to the calendar year 1905. The items of distribution and general expense cannot be compared from Exhibits 93 and 94, because the accounting system was changed, and because the item of "Expense—General Office" was very largely increased, evidently because it is stuffed with items improper in this case, as we have pointed out (App. Br., pp. 138-9). It is noticeable, however, that while the amount of meters considerably increased, and while the total consumption of gas diminished, the item of "Repairs to Meters" remained substantially at a standstill. The items of "Expense" and "Distribution," which include part of the work on the meters together with the bookkeeping and collecting charges (pp. 5778-80), decreased considerably. The increase of meters does not mean corresponding increase of services, in a borough whose additional population lives in tenement and apartment houses. The book value of complainant's services declined substantially from 1903 to 1905 (State's Exhibits Q.-S., p. 5230). Many expenses must be very much reduced per M. by such a situation; as, for instance, repairs to mains. The testimony of complainant's own books cannot be neutralized by expert testimony as to experience in London or St. Louis. Under this heading again, complainant undertakes to build up an argument on figures derived from the report of the Stevens Investigating Committee. It did not introduce these figures in evidence, and we do not understand that a report which was not put in evidence can be referred to for such a purpose. We have referred only to its final recommendations, as being judicially noticeable in corroboration of what otherwise would be presumably the legislative intent of the pressure provision (App. Br., pp. 281-2). There is nothing to indicate that the items upon which complainant's computations at pages 112-13 are based, are made up of the same particulars in 1901 as in 1905. For instance, the latter figure includes the large item of repairs to city lamps, which is plainly improper (p. 428), and was very likely omitted by the committee. We have pointed out that the item of general office expenses has been in all probability stuffed with expenses belonging to Astoria. The conclusion finally drawn by complainant's calculator from this tabulation is that there is a great increase of proportionate expense when there is a great increase in sales; but the very table which he quotes from the Stevens report shows just the contrary. It shows that the great increase in sales from 1901 to 1904 was accompanied by a very substantial diminution in proportionate distribution and general expenses (p. 73). Complainant's calculator then proceeds to figure out that there would have to be an increase of investment in distributing system and apparatus of $1,670,358 in order to handle this mythical additional output, which he estimates at 1,136,298,000 feet. The increase from 1903 to 1905 was about 517,000,000 feet (p. 5041). The valuation of the mains remained almost stationary. That of the services substantially decreased. That of the meter cocks and connections decreased. That of the entire "plant, property, and construction," deducting the "real estate," manufacturing plant, franchises and rights, increased during the two years only about $335,000 (State's Exhibits Q-S, p. 5260). Tabulations prepared by complainant's expert and referred to at the foot of page 115 of its brief are conclusions from facts not stated, and which, if stated, would be incompetent (App. Br., pp. 17-18, and cases cited at p. 53). We do not think that the private consumers or their statutory protectors should be held responsible for the city's assignments of error (App.

Br., p. 158); but the quotation from one of those assignments at page 116 is misleading. The inadequacy there complained of was in the matter of protection against improper pressure.

(Page 116:) We are somewhat surprised at complainant's attempting to base a calculation on a statement of ours in our "Brief below." Our statement was that the mains and services increased in value only $137,004.43 from 1904 to 1905, referring to Carter's sworn statements in the tax reports, to be found at pages 5057, 5068. The balance of the $200,000 was a guess at the probable increase in meters. The source of this calculation was stated, so that complainant's counsel when he read this brief knew precisely the source of the figures which he quotes from us. We, like the State officials who had preceded us, had put some reliance on the statement of Secretary Carter. State's Exhibits R and S, however (p. 5260), show the precise figures. They show that the mains and services greatly decreased, and that the total increase in mains, services, and meters was according to complainant's own balance sheets, but about $100,000 during that year. The figures on the balance sheets are for December 31, and those on the tax reports are for June 30; but this does not greatly affect the calculation. The figures quoted from our brief below were part of a calculation which we did not think worth making here, in view of other facts which we had ascertained from the record, and which make the whole topic academic; but it seems to us that in dealing with an opponent's brief a higher degree of ingenuousness should be observed than is observed in complainant's treatment of the testimony and exhibits in the record.

(Pages 116-17:) The propriety of the item of interest on taxes was conceded by the court below (p. 401), but not by us. It would have been perfectly feasible for the complainant to pay its taxes and assure their recovery in case they were held excessive. It was not because of lack of protection that their payment was withheld. Furthermore, it was the almost unanimous opinion of the bar, justified by the unanimous decision of this court, that the appeal here was dilatory and unfounded, and that there was no propriety whatever in charging any direct or incidental expense thereof to the consumers. Furthermore, the decision of this court was made May 29, 1905 (199 U. S., 53), before the sample year was half over. There has been no propriety in contesting the subsequent assessments, because, as we have already pointed out (App. Br., p. 239*n*), and shall set out more particularly in connection with Mr. Garver's brief, all the special franchise taxes up to and including that of 1906 have been grossly underassessed.

The above remarks apply also to the item of franchise tax litigation expense.

As to the third item, of legislative investigation expense, there had been no previous legislative investigation for twenty years, and there has been none since. To refer to the expenses of the present suit begs the question. If the present suit ought not to have been commenced, its expenses would not be properly charged as against the consumer.

Complainant's counter-claim as to taxes and wages has been answered by us (App. Br., pp. 134-9).

(Page 119:) This point of complainant's is based on the unsustainable assumption that the first unit of Astoria must be treated by the State as affording a substitute for the purchased gas. This we have fully discussed (App. Br., pp. 100-12, 231-3).

(Page 122:) This is an appeal to the judgment of an engineer, whom the complainant has insisted all through the trial to be an incompetent person, upon a question not of engineering but of law. He was not hired by the State, and the State has always taken the same view of his qualifications as the complainant. His testimony shows that he had not the faintest conception as to the legal effect of a holding of stock by one company in another company. Hence he fell into the blunder of giving an allowance for the so-called "Astoria" item. The allowance which he gave was $5,097,-389.56 (p. 1940). This is a trifle more than what in effect the court itself has given, namely, an allowance of income which is equivalent to a capitalization of $3,333,333, *plus* another item just short of $1,000,000 (App. Br., pp. 232-3). We venture to disagree with complainant and the court as to the propriety of the former figure, even when corroborated by the legal opinion of Mr. Marks. Mr. Marks is here (as he and Prof. Bemis at so many places are elsewhere) referred to as "appellants'" witness. We cannot call attention to the impropriety of this designation at every place where it occurs, but we trust that the court will bear it in mind. They were retained solely by the city, which is not jointly interested with the State, has no power or duty to protect the individual consumer, is not interested in the same statute, and could probably not have been joined as a defendant in this suit, had any of the defendants taken objection thereto (App. Br., p. 3). The city hired its own experts, and conducted its case in its own way, frequently disagreeing with the counsel for the State as to what ought to be done (as for instance see page 807). Its expert witnesses were permitted to submit tabulations of figures whose preparation required considerable knowledge of law, and which the counsel for the State thought involved mistakes of law that were favorable to the complainant; which were protested against in the court below, and which have been protested against here (App. Br., p. 11). To the city these concessions of its experts are of comparatively small importance, because the city can not only accept Judge Hough's figures but concede a large part of the Master's additional figures and still win its own case (*Id.*, pp. 183-4). We welcome the very valuable assistance of the counsel for the city upon this appeal, but object to all attempts to identify us with the vague errors of its experts upon the trial.

These remarks are of course applicable to the opening sentence of complainant's next point, at page 123.

(Page 124, top:) The statement as to the purchased gas is incorrect. The amount paid for this gas was as follows (pp. 5777-8):

Cost of labor and materials	$854,459.57
10% thereon	85,445.96
	939,905.53
Less gas sold	1,014.68
	938,890.85
Interest on capital invested in procuring said purchased gas	58,149.04
	$997,039.89

In this as in various other places, the Master and court fell into a plain error; and through an erroneous calculation came to overlook the fact that interest was actually being paid by complainant on capital invested in the manufacture of the purchased gas.

(Page 125:) It is rather absurd for complainant to submit such calculations as this, when it has not submitted all of the facts relating to the capitalization, income, expense, and physical condition of the other companies. One of our grounds of objection to the decree is that this information should have been given us (App. Br., p. 273); and we have pointed out that the transaction is doubtless a profitable one to those companies (*Id.*, p. 104). When a corporation is already earning enough in its own natural territory to pay expenses and give a reasonable profit on fixed capital, it is very common for it to sell gas at a much reduced rate in other territories. This is because its fixed charges are already provided for, so that they may be disregarded, and the profit computed upon operating expenses alone. It is for this reason, as well as on account of the operation of the tariff laws, that so many of our manufacturers sell their surplus output abroad at a lower rate than at home. This is doubtless the case with these subcompanies, which are so anxious for a business that pays a profit of ten per cent. over operating expenses, when it requires no additional fixed capital on their part; while on the other hand a return of five per cent. is required by them on all such capital necessitated.

Complainant's argument at page 129 has no basis in the record. It nowhere appears that the subcompanies (except the New Amsterdam) were worked up to the limit of their previous capacity, even when they supplied all their respective shares of this purchased gas. The fact that the New Amsterdam company is paid interest on the new construction which the "agency agreement" renders necessary—paid by the complainant and the amount charged up against its consumers—is conclusive to the contrary.

It is very evident that complainant is trying to get out of its own consumers a profit on its investment in the stocks of the other companies: while when the similar suits of those companies come on to be tried, it will see that they get credit for their whole capitalization and are not debited with any more income than they actually earn out of this purchased gas. The same capitalization will thus be charged twice, once against the consumers of the complainant and once against the consumers of the other companies.

The foregoing discussion covers everything in the brief under consideration up to page 135.

(Page 136:) The ten cent. item involves only matters of fact, and not of law. Complainant's argument is as usual based on statements of experts, which in turn are based on insufficient or incorrect information. We have stated the facts, which are much more simple than they seem (App.

Br., pp. 113-26). Instead of underestimating the depreciation, the court has overestimated it (*Id.*, pp. 250-2).

(Page 139, foot:) These alleged additional items—candle power, taxes, labor cost—we have fully considered (*Id.*, pp. 130-9). The last of the three items relates to an increase of wages, which may have occurred after May 1, 1906 If so, it could not be considered in support of this injunction (*Id.*, pp. 198-9).

(Pages 141-3:) A collection of alleged admissions on the part of the defendants is here furnished to the court. The first of these admissions is in the introduction of State's Exhibit L; but State's Exhibit L confutes complainant's claims (App. Br., pp. 122-3, 250-1). The next admission is in obtaining from the Master a finding that complainant expended an average of 10.89 cents per M. of gas sold during the twenty years preceding 1905. This is a fact, but it does not carry the conclusion of law which complainant desires We hardly need discuss the quotation from the Attorney commission (p. 14). The State's answer denies that the New York State Gas Commission is a quotation from complainant's own complaint. That complaint annexes an exhibit which it alleges to be an opinion or statement of the commission (p. 14). The State's answer denies that the paper "was rendered by the said commission in connection with its said order," and avers that it "is a statement made to the public press merely" (p. 50). It is not, however, inconsistent with anything in our argument, since we concede that a slight increase was necessary to bring the expenditures for repairs and replacements up to the average of the previous twenty years (App. Br., p. 251). Here again complainant attempts to charge the State with the vagaries of the city's witness, Prof. Bemis. We have already shown how he was misled by using in this case ideas derived from testimony in other parts of the country, without sufficient examination of the experience of the complainant itself (*Id.*, p. 121). In what way a report of a "Chicago Committee" of undefined origin and character is an admission binding our clients, we are unable to guess (p. 144). Here again complainant concedes that the court below was unable to grasp clearly the facts of the case, on account of the limited time at its disposal and the size of the record. This agrees with our own views, that the time which is actually allowed by a Federal judge for the discussion before him of a record made up before a Master is totally inadequate to the proper handling of such a case, especially in view of the rule in Blease *v.* Garlington. In our opinion at least treble the time allowed by the judge was necessary to the proper hearing of this case; although the time (a little over four days) which he did allow might have been sufficient had the Master been able, as a State commission or a State court would have been able, to keep incompetent and irrelevant testimony out of the record.

(Pages 146-7:) Having stated that its sales of gas through its mains had reached "the enormous amount of about one hundred and sixty-four billion cubic feet," complainant criticises us for not accepting the test of average cents per M as "the most safe and accurate guide" as to repairs and renewals. Yet it presents testimony to the effect that these same mains are as good as new, and will not depreciate in a century, and obtains a decree for a sum very much larger than the original cost of the mains, based upon that proposition (App. Br., p. 78). It is stated somewhere in the case that the repairs to mains in the small city of Holyoke, where most of them are laid in soft earth and not covered with pavement, are higher per M than in the city of New York. The tabulation on page 251 of our main brief shows how the proportion of repairs and replacements has been reduced, notwithstanding the fact that during the later period the distributing portion of the plant has been used for purchased as well as home-made gas. It is interesting to see how complainant, when struggling for the life of its favored fallacy, for the first time concedes that there are "practical witnesses on both sides of this case." We believe that this is the first instance of such a concession. Defendants on the hearing before the Master felt obliged to meet complainant with counter-testimony upon its own theory of proof, although the State at least disputed the correctness of the theory. The Master followed complainant's line of argument on this, as on almost every other point, but the judge recognized the fallacy and endeavored to keep clear of it by using "as the basis for computation, not the cost per thousand of gas, but the cost per annum of complainant's whole gas business" (p. 428); consequently miscalculating (if our reasoning is correct) only to the amount stated at page 251 of our main brief.

(Pages 148-9:) It is not shown that the agreement to open the new account with the ten-cent item, or the vice-president's testimony in Boston, was prior to the introduction of the resolution under which the Stevens committee was appointed, or that its first discussion was prior to the time in 1903 when the city stopped payment on all its gas bills upon the claim that they were too high (see Brooklyn Union Gas Co. *v.* City of New York, 188 N. Y., 334).

(Pages 149-50:) The court will find our computation to be correct. It is all taken from complainant's own figures. It shows the amount of new capital brought in from the outside since 1884, and the amount of that new capital which was expended in other enterprises. The balance is not over the sum mentioned, $3,929,371.82 (App. Br., pp. 22-3). The basis for our statement that the sum shown by complainant's Exhibit 79 increased the manufacturing output to the extent named is to be found in the cross-examination of defendant's chief engineer by Mr. Page at pages 1714-16 of the record and in complainant's Exhibit 85, page 5039. The words "more than" in our brief, at the place quoted, should read "nearly." The sales of 1884 were probably on the basis of something less than 3,900,000,000, while those of 1905 were 13,283,164,000 (p. 5039).

(Pages 152-3:) The testimony does not show, as stated, that the other companies "do business wholly in the more congested part of the Island of Manhattan." It does state that the complainant has to maintain candle power in the "most remote districts of the city:" but this is a use of the word "city" in the old sense of the term. Complainant is practically confined to the Island of Manhattan. If the facts as to the other companies had been put in evidence, as we contend that they should have been, any special factors in the situation would doubtless have been brought out.

(Pages 153, 154:) We respectfully protest against Dr. Humphreys and Mr. Carter being described as "the witnesses of both appellee and appellants." On the contrary, we have already protested against the acceptance of any statement of Mr. Carter unless otherwise corroborated; and this would be peculiarly applicable to estimates of station cost of gas of other companies, made in rebuttal without opportunity of surrebuttal.

(Page 157:) This point of complainant's brief is entirely in line with our own argument (p. 17). We therefore do not discuss it, although we do not understand that all of its statements of fact would have stood if the collateral issues had been fully tried out. But for Blease *v.* Garlington we would probably have been spared this large section of the record.

(Page 162:) The question of pressure we shall discuss in connection with Mr. Beck's brief.

(Page 176:) This is an attack by complainant's counsel upon the Stevens Investigating Committee of 1905, extracted from an affidavit sworn to by Secretary Carter.

It may cause surprise that an *ex parte* statement of this kind should get into evidence at all.

This is one of a set of extracts from affidavits which came into the record in a very singular way, over the objection and exception of the counsel for the State, and by a ruling which as against them seems to us to be grotesque (pp. 807-8, 952-3, 957, 1669, 1670, 1676-8).

These *ex parte* reflections on the Stevens committee were so entirely irrelevant to any question in the case that the defendants seem to have left them, as complainant here states in italics, "uncontradicted."

In speaking of the Senate Committee Report of 1886, it omits to state that the committee consisted of three members, of whom the chairman most vigorously dissented.

The affidavit states that the investigation by that committee was one "lasting nearly a year." The committee convened on October 15 (p. 6071). The last hearing was on December 30 (p. 6514). The minority and majority reports are dated on February 26 following (pp. 5382, 5388).

In stating the completeness of the investigation, it fails to note the fact that one of the most important witnesses left the State before his examination was completed, and stayed away until the committee adjourned (p. 6516).

As to the Stevens investigation, the fact that the companies had no "right" to participate by counsel is mentioned. It is admitted that the "courtesy" of the committee permitted "brief addition of questioning or data" and (while evidently endeavoring to give the contrary impression) carefully refrains from stating whether or not the courtesy was so exercised as to permit the necessary facts to be brought out. Had the affidavit been more frankly and less cautiously drawn, it might have appeared that extensive cross-examinations were permitted on the part of the counsel to whose brief we are replying. The force of the statement that the company was not permitted to address the committee at the conclusion of the investigation is somewhat broken by the fact that the Master subsequently declined to hear oral argument of this case until after he had filed his report. The witness was incompetent to state whether the committee had "time or opportunity to consider written memoranda submitted, prior to preparation of its report to the legislature." We have just commented on the fact that complainant claims the court below to have had insufficient familiarity with the present record; and we believe that we have shown remarkable unfamiliarity with certain portions of it, on the part both of the Master and of the court.

It seems to us that it would be extraordinarily improper to give any weight to the general statements of Mr. Carter as to evidence before the committee. It would seem sufficient that he reproaches the committee with believing his own statements under oath; statements which we have quoted at some length at pages 59-63 of our main brief. The fact is that the Stevens committee as to nearly all of the facts reported relied upon the admissions of the complainant's officers and employees; admissions which under the advice of counsel they afterwards disavowed, but which fully justified the recommendations of the committee as to the reasonableness of a seventy-five cent rate for gas, and which are supported by the actual facts as we understand them, and as we have stated them to this court.

(Page 177:) This sets forth another part of the same Carter affidavit, containing reflections on the Gas Commission.

It is not charged that the commission took insufficient time to consider the case, which is admitted to have been pending before it for about three months and a half (p. 5). It is not claimed that either party before the commission was forced to proceed without sufficient preparation or to rest before the testimony was all in; or that there was any such extraordinary pressure upon counsel as characterized that period of the present suit when the record was being made up.

The first paragraph quoted from the Carter affidavit charges the commission with excluding certain items, part of which were excluded by Judge Hough, and most of the rest of which we believe this court will exclude.

The second paragraph states the newspaper criticisms upon the commission for not more promptly reporting in favor of 80 cent gas; criticisms of a nature not infrequent with relation to courts as well as other tribunals (except so far as they are restrained by fear of punishment for contempt of court) and which in themselves show that the commission insisted upon proper deliberation before it acted. It then goes on to set forth the efforts made to obtain the passage of an 80 cent bill by the legislature, based on the Stevens committee report, without waiting for the conclusion of the proceedings before the commission. It ends by stating that a bill was introduced in the legislature by Senator Stevens to abolish the commission. There is nothing in this paragraph that would afford a ground for inference that the commission, who as Carter admits were deliberating when outsiders were pressing for immediate action, were affected by outside pressure in coming to their decision; and the fact that they fixed the rate at eighty cents instead of seventy-five cents as had been recommended by the Stevens committee, together with the admissions that had been made by the complainant and the facts that had been brought out in this record, give such ample justification for the decision to which they finally came, that the reflections which counsel makes under cover of the Carter affidavit seem to us to be grossly improper; and the Master should not have stretched or reversed the rules of evidence to admit such a paper into the record of this case. Had Carter been asked by his own counsel the questions commencing at the foot of page 178 of

Mr. Mathewson's brief, they would doubtless have been objected to by the State.

The act of 1906 establishing the 80 cent rate was passed because of the threats of the gas companies to attack the constitutionality of the act establishing the Gas Commission, as unlawfully delegating legislative power. After two investigations, and with this doubt existing, it was thought that there was enough evidence to justify the reduction to 80 cents, and that all technical obstacles should be removed by act of the legislature.

(Page 179:) The Stevens report, that complainant's "gas making plant, including whatever franchises it may own, does not exceed the sum of $30,000,000" (p. 80), is accompanied by the figures upon which it is based; and these figures are those which were sworn to by Mr. Carter himself, in the affidavit and oral testimony set forth in full upon our brief (p. 78; App. Br., pp. 59-63, 76). This showed a total value of the tangible properties at $27,298,576.50. The reasons stated for giving but a small value if any to the franchises are set forth at pages 78-80. We respectfully submit that this report (which was reputedly drawn by a lawyer of the highest standing at the bar of New York) shows better consideration of the subject than those of the Master or of the court below upon the same question, and are fully supported by the facts and law as set forth in our main brief.

The final climax at the foot of this page is a reference to the special franchise tax assessment. We should hardly regard this claim of relationship between the so-called special franchise tax and the franchise valuation for rate-making purposes as worthy of notice, if it had not been endorsed by Judge Lacombe and Judge Hough. We have dealt with it in the main brief, and shall consider it again in replying to the brief of Mr. Garver.

Mr. Beck's Brief.

I. JURISDICTION.

(Page 21:) We are not aware of any such practice as moving to dismiss a bill for want of jurisdiction, because there is an adequate remedy at law. There is no record, so far as we are aware, of the oral argument before Judge Lacombe, and we do not know what questions were selected to be pressed on that occasion; but whether or not the preliminary injunction had been granted, we presume that the complainant would have persisted, and the defendants would have had "to take their chances before a Master." It is difficult to guess how Mr. Beck thinks that the adequacy of remedy at law could have been disputed until after the Master's report.

(Pages 27-8:) Cleveland *v.* Cleveland Railway Co., 194 U. S., 517, 531, states cogent reasons for the exercise of jurisdiction by a court of equity, when it has jurisdiction; but the decision is expressly based upon, and states the case to be within, Detroit *v.* Detroit Railway Co., 184 U. S., 368, 381. The same considerations are fully set forth there, and are held as sufficient reason for exercising equitable jurisdiction when the defense that there is an adequate remedy at law was not seasonably taken; Mr. Justice Peckham saying that "we do not feel compelled, under the peculiar circumstances of the case, to ourselves take notice of it." The peculiar circumstances of these street railroad cases are that if the question cannot be tried out in court, the passengers will be refusing to pay the fare demanded, upon penalty of being ejected and keeping the car service in continual turmoil and confusion, with "probably frequent breaches of the peace" (184 U. S., 379). The relations between a gas company and its consumers are very different. There has been no confusion and no breach of the peace incident to the considerable litigation which has arisen in the State courts of New York, owing to the fact that this complainant saw fit not to join as defendants any representatives of the consumers, and that consequently Judge Lacombe did not enjoin the consumers from suing the company to protect their gas meters. Had Judge Lacombe not interposed with this suit, the question would have been immediately tried under the State procedure, although this complainant might have been a defendant.

(Page 29:) While the Public Service Commission Act provides for mandamus, it but transfers to the commission a function which previously belonged to the Attorney General. The remedy already existed (People *v.* N. Y. C. & H. R. R. Co., 28 Hun., 543). We have made no concession to the contrary.

(Page 30:) Section 962 of the New York Code of Civil Procedure has always been practically construed as directory, and we do not believe that any court in any State or country would construe such a clause as mandatory without much more positive language to that effect. No public prosecuting officer in any State, so far as we are aware, is obliged to sue for all penalties recoverable, when such action would be unreasonable. "Must" is very frequently interpreted as "may." Various New York cases to this effect are quoted at 28 Cyc., 780.

II. THE ELEVENTH AMENDMENT.

This point was not waived, but properly taken by answer (Illinois Central R. R. Co. *v.* Adams, 180 U. S., 28, 38-9). The Eleventh Amendment is not in term applicable to a suit against a State by one of its own citizens, but has always been held applicable by analogy, as in Hans *v.* Louisiana, 134 U. S., 1, 10. In view of the decision in *Ex parte* Young, 209 U. S., 123, we did not raise the point in our assignments of error, although a judgment for costs is granted against Mr. Jackson *as* Attorney General. This seems to concede that the suit is one against the State. It cannot be intended as a judgment against him personally, since the main costs were incurred during the administration of his predecessor in office. It must be therefore intended as a judgment against the State as such, and not upon the theory of the Young case. If it is a judgment against the State, the suit is a suit against the State. However, we have waived the point so far as we are concerned, while the Attorney General has raised it only by an assignment of error as to the judgment for costs.

III. Pressure.

(Page 35:) Complainant calls attention to the fact that the act of 1906 took effect within a month after its passage, thus probably allowing insufficient time for the alterations necessary in complainant's distributing system. The answer to this suggestion is that the provision as to pressure was copied from a statute of the previous year. Complainant had had a year within which to conform itself to the requirements of this law, and it does not appear that this was not sufficient time. On this page complainant quotes the language of one of its own requests to find, which was found by the Master (p. 255). Singularly enough, it selects for quotation a passage referring to the Edgerton proposition, upon which we stated in our brief that the State had never relied; its reliance is upon the system of district governors discussed in the cross-examination of Mr. Bradley by Mr. Page (App. Br., p. 150). This cross-examination is to be found at pages 565-576 of the record. The Master's discussion of the subject is to be found at pages 248-250, of which only seven words are quoted by Mr. Beck. The Master refers to Mr. Bradley's admission that it was practicable to put district governors at different points; that they were used in many cities; and that theoretically it was practicable to use them here; but that he had doubts of their reliability; and the Master summed up in the paragraph quoted by us at page 283 of our main brief. Mr. Bradley does not pretend to claim that the expense of the district governor system is prohibitory. He states that "in my opinion district governors do add to the dangers of interruption and difficulty with gas supply;" and, while admitting their use in other cities, says: "Perhaps where they have more nerve than I have."

The provision as to pressure is the provision in this gas legislation which was not based upon admissions by the complainant, but upon testimony of outside experts, like Professor Hallock (pp. 2846, 2863). It is the only point as to which it seems to us that there can be very serious question as to whether the legislation is wise; but the question, as Mr. Bradley admits, is one where experts differ, and where the practice of different cities differs. Does the Fourteenth Amendment require the court to review the legislative decision as to whether the engineers whose advice has been followed by the legislature have too much "nerve"? The case seems to us quite analogous to that of the Federal safety appliance laws. "It is scarcely necessary to say that courts do not sit in judgment on the wisdom of legislative or constitutional enactments. This is a general principle; but it is especially true of Federal courts when they are asked to interpose in a controversy between a State and its citizens" (Louisville & Nashville R. R. Co. *v.* Kentucky, 183 U. S., 503, 512).

(Page 43:) We are somewhat surprised to learn the names of the decisions upon which we "rely principally" (see App. Br., p. 282).

(Pages 46-7:) Mr. Beck's argument at this point assumes that the decree of the court below is correct in every particular apart from the question of pressure, that the district governors would involve an expense of many millions of dollars, and that Mr. Bradley is in error in admitting, and the Master in error in reporting, that their use is physically a possibility. If these assumptions be made, we concede the result which Mr. Beck reaches.

IV. Penalties.

(Page 48:) The order appointing the Master did not, as we construe it, authorize him to make any findings about this branch of the case. This is a question of law, and his business was with the facts. He so construed it (p. 152), and said nothing about the penalties in his draft report. Subsequently complainant submitted a request that he find that the penalties "so far as the evidence shows are unexampled in extent and severity." There having been no issue about it, there had been no evidence about it, unless something bearing on the point may have been slipped in, in connection with some other subject. The draft report had given no notice to the defendants that such a point would be raised. The request, and the granting of the request, seem to us to have been improprieties. In the first sentence of this point, Mr. Beck seems to endeavor to give the impression that the penalty question was discussed before the Master, and that no attempt was made to defend the statute in the court below. The briefs and stenographic minutes of the discussions below are not in the present record; but in view of this statement of the brief we may be permitted to say that the penalty provisions were defended in the court below with entire seriousness, and to the extent which the very limited time allowed for discussion permitted. That discussion is the basis of pages 165-175 of our main brief.

V. Discrimination.

(Pages 52-4:) Since so much stress is laid upon the Lake Shore case, 173 U. S., 684, we desire to say a few words more about that case. It was supposed by many, when first decided, to lay down a very drastic rule in favor of uniformity of rates. It is now settled that any reasonable classification may be adopted. The Lake Shore case was one of a very peculiar and ill-constructed statute, whose provisions seem to have been so severe that they were regarded by the majority of the judges in this court as capable of unconstitutionally reducing the net income of the appellant company. This court has since stated, in explanation of the case, that "there was no reasonable ground upon which the legislation could be rested, unless the simple decision of the legislature should be held to constitute such reason" (Wisconsin, etc., R. R. *v.* Jacobson, 179 U. S., 287, 302).

Our interpretation of this case seems to us to be necessary, since otherwise it would be difficult to explain how the railroad could be heard to complain of a discrimination by which it was not the sufferer. The later cases cited by us show that it cannot complain of special classifications, if on the whole it is permitted to earn a rate of return that protects its constitutional rights. Yet the point that the railroad itself was not discriminated against, and that the persons discriminated against did not complain, was not discussed by the court, or apparently even by counsel. It seems to be well-settled that a person will not be heard in court to argue that a statute is unconstitutional, unless his own constitutional rights were violated. The doctrine dates from as far back as Sinclair *v.* Jackson, 8 Cowen, 543, and is sustained by the cases cited in Brown *v.* Ohio Valley Railway Co., 79 Fed. Rep., 176, 178, and in 8 Cyc., 791.

There is a reason for this, which is at once obvious when suggested. It is well settled in this court, in those of the State of New York, and everywhere else, so far as we are aware, that a constitutional right of this kind can be waived (Pierce *v.* Somerset Railway, 171 U. S., 641, 648; People *ex rel.* McLaughlin *v.* Police Commissioners, 174 N. Y., 450, 456, and cases cited; cases cited in 8 Cyc., 791-3). Hence nobody can appeal to it who could not waive it.

The discrimination between the city as a whole and its inhabitants as individuals has existed ever since 1897. It is less since 1906 than at any time during that whole period (App. Br., p. 182). It is not claimed that any single individual has complained. Nobody before Mr. Beck has had the ingenuity to discover the discrimination in favor of proprietors of hotels who do not use gas at all.

(Page 57:) The Wilson case, which held that a railroad could not be forced to carry a policeman free of charge, did not turn upon any discrimination in favor of the public, but upon the ground that a railroad company could not be forced to carry any person without recompense.

VI. THE TECHNICAL POINTS.

(Page 62:) Counsel seems to misunderstand the passage which he quotes from our main brief. The misunderstanding would have been avoided if we had said "every other question *of fact* was evidential," etc. There are questions of law as well as of fact in the case, and this is an appeal, not a writ of error; wherefore all questions of fact are before this court, although we have submitted only certain questions, for the reasons stated at pages 159-161 of our main brief.

(Page 66:) None of the questions which we have assigned for error are "infinitely complicated," or as complicated as many which reach this court upon appeal. The complicated questions are imported by the appellee, although, anticipating the probability of some such action on the appellee's part, we devoted a part of the statement of facts in our brief thereto. Most of the facts which we state as bearing upon our own assignments of error are undisputed.

(Pages 67-9:) As to our alleged admissions, it would seem sufficient to refer the court to the pages cited by complainant from our main brief.

(Page 70:) Apparently complainant has been misled as to the Blackfeather case, to which the Attorney General intended to refer, by a mistake in the page reference. We understand the reference to be to United States *v.* Blackfeather, 155 U. S., 180, 186. Certain of the points urged by the appellee in that case seem to bear the same relation to the record as the points urged by the appellee in the present case. The complainant here also omits to notice Landram *v.* Jordan, 203 U. S., 62, referred to in the brief of the city of New York. In that case it would appear that the appellee was not only attacking a portion of the decree which was unfavorable to himself, but also was trying to sustain the decree so far as favorable by an argument as to which he had been overruled below. We have been unable to find any authority directly in point, as to whether under the practice of this court an appellee can sustain the decree below by specifying errors in matters altogether unconnected with those brought to the attention of the court by the appellants, requiring this court to open portions of the record that are not referred to by the appellants, and requiring it to make findings of its own upon matters not passed upon or matters adversely disposed of by the court below. If any such practice were permitted, it certainly seems as if there should be a rule requiring the appellee to assign errors. In this case, with so voluminous a record, the appellee has specified errors in a brief which did not reach the appellants until the day after the case had actually been called for argument, and it is only by a happy chance that the unusual length of the cases ahead of it has allowed several days' time for examination of the points thus raised. Certainly an affirmance under such circumstances would not be consonant with equity, even if the points were well taken. It seems to us that the only thing that the court could equitably do if (while sustaining the appellants' assignment of errors) it took jurisdiction of appellee's contentions, and considered that they were sustained to the extent of offsetting the errors on the other side, would be to remand the case for further proceedings.

In the present case, if our appeal is to be regarded as opening the whole record so that the case is to be heard *de novo*, there are many questions which we could bring up, although (on account of the fact that it would only be by adding a good many small items together, each involving more or less complication, that a large correction could be made either in the capitalization or in the net income as computed by the court below) we did not feel either that it was necessary for us to do so or that we would be justified in troubling this court with the matter. We have not had time since receiving the appellee's briefs to bring these matters before the court, and if the Master and court have (as for the purposes of appellee's argument at this point they must be assumed to have) committed flagrant errors prejudicial to the appellants, their findings on other points should not be assumed to be correct without remitting the case for a further hearing and report.

We are confident, however, that the independent points urged by the appellee will not be found to require serious consideration.

VII. Reviewability of Rates.

(Page 72:) We never made any such contention as is set forth here, and do not understand that there is any question about the correctness of appellee's proposition.

VIII. Rate of Return.

(Pages 76-9:) Mr. Beck uses a picturesque phrase, which he modestly admits having coined himself, to describe the margin that has been pointed out by Justices Gray, Miller, and Brewer (App. Br., pp. 253-4) between the rate which is merely so low that the State authorities ought to permit it to be raised and the rate which is so much lower that its enforcement would amount to confiscation. We do not understand whether Mr. Beck affixes to this zone the appellation "twilight" as indicating his own state of mind about it or because one reason for its existence is that the unreasonableness of the rates comprised within the zone is not clear enough to warrant interposition by a Federal court. The distinction seems to us a clear and necessary one, and it has been generally regarded as an established one. Our endeavor has been to obtain a more clear definition of its upper and nether limits.

Mr. Beck's whole treatment of this question seems to us to confuse two essentially different subjects, namely, the taking of property within the meaning of the Fourteenth Amendment and the allowance of a fair compensation with reference to the risks of a particular business. His reasoning is that if the complainant owns certain property, no matter where the property came from or how inequitable to the public the allowance of a return thereon would be, nevertheless the language of the Fourteenth Amendment requires that a full return should be allowed, just as much as in the case of a corporation which has an equity to a full return. He demands a return on the present value of the property, even if the property were a gift from the public,* accompanied by no understanding that any return should be permitted upon it; and he demands a return upon all increments of value, whether earned or unearned, and whether temporary or permanent. The rate of gas must go up and down according as the market for iron pipe varies, although the bulk of the pipe has been underground for a generation.

He finds some color for this position in language heretofore used by this court; language used in cases whose facts did not suggest the possible future appearance of a case like this. We have assumed that the language upon which he relies will be construed by this court in the light of the facts of the cases in which the language was used. If not, then the court will feel obliged to give to all the property of complainant, valued according to its present value, such rate of return as shall be non-confiscatory; in other words, as shall prevent the property from being taken (for we are unable to distinguish between "taking" and "confiscation").

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* The illustration, so harped upon, of a gift from an individual, is no embarrassing. When the gift is from some individual interested in the enterprise, and not from the public, it stands like any other contribution of capital.

But such a result would not be equitable as between the complainant company and the persons whom these appellants are charged with the duty to protect, to wit, the consumers of gas. It would be the result, not of equitable considerations, but of the language used in a certain clause of the constitution. It will be within the power of our clients the Public Service Commission, and it may be their duty, to allow a rate of return which is much higher than that which according to our contention is enough to satisfy the Fourteenth Amendment; but on the other hand they will not be forced to allow more than a non-confiscatory return upon property as to which there is no equity to any returns at all.

Hence, in our motion to advance this cause, we joined with counsel for the city in laying down the proposition that the functions of the Federal and State tribunals were altogether different: that the function of the State tribunal was to allow a fair and liberal rate of return on that as to which the company had an equity to a return, namely, the *capital actually invested;* while the function of the Federal court, according to complainant's interpretation of the previous decisions of this court, is to see that at least the minimum non-confiscatory rate is earned upon the *present value* of all the property employed in the business.

If this position be taken by the court, and the cost of duplication by a plant equally effective be taken as the test of present value, then this court will be obliged to allow the full unearned increment on the mains and services, however inequitable that allowance may be as against the consumers; and it will be obliged to allow upon the cost of real estate something more than the original cost of the real estate. But they will not be obliged to allow more than 3½ per cent., whereas the Public Service Commission would never for a moment think of cutting a corporation down to any figure approaching that limit, as to any capital actually invested.

(Page 80:) The Fourteenth Amendment does not contain the provision of the Fifth Amendment that private property shall not be taken for public use "without just compensation." Mr. Beck seems to be under a misapprehension as to this. We do not understand the point to be material, as the "just compensation" provision is not applicable to a rate regulation case.

(Page 87:) We do not remember the remarks of the city's counsel as quoted here from the stenographic minutes. The position of the city at that time somewhat differed from our own as to the rate of return. Mr. Beck can hardly have been much surprised by our position, as it was fully argued before Judge Hough a year ago, and restated both by ourselves and by the counsel for the city in the motion to advance the case, filed in this court at the close of the last term.

IX. Rate of Return.

(Pages 88-90:) Mr. Beck takes what seems to us the singular position that because the New York usury law fixes a maximum rate of return of 6 per cent.—its justification, in Mr. Beck's words, being the "prevention of extortion"—therefore it would be unconstitutional to put the earnings of a public service corporation at a lower figure, while it might be unconstitutional not to permit it to earn more. His reason for the latter proposition is that the corporation adds "to the mere use of money all the resources of science, industry and business sagacity to serve the public interest." But the resources of science are represented by property which forms part of its capital, and the industry and business sagacity are hired and paid for, and charged to the consumer as part of the operating expenses.

Any argument drawn from the usury law is fatal to the complainant. The usury law fixes 6 per cent. as the very highest rate of interest that can be earned from the very riskiest kind of loan. It is admitted by everybody that the complainant's business is about as safe as any business can be; that its risks are risks inherent in all business enterprises. Hence by the reasoning underlying the usury law, a return of 6 per cent. upon the complainant's investment would be unreasonably high.

It seems to us that the court below was right in throwing the usury law out of consideration altogether. Usury laws are disapproved by the great mass of thinking people. The rates are changed only at long intervals. The rate in New York was lowered from 7 per cent. to 6 per cent. in 1879. Did the enactment of the statute of that year change the constitutional rights of public service corporations?

In our opinion it is quite possible that the State authorities will ultimately come to the conclusion that 6 per cent. is the minimum rate of return that should be allowed to a public service corporation under present conditions; that it should be allowed to declare at least 5 per cent. dividends and lay up at least 1 per cent. against contingencies.

On the other hand, it is altogether probable that a much larger return would be regarded as not extortionate in a large class of cases; to this extent disapproving the law which prevents an individual from risking his money in a business enterprise for a greater return than 6 per cent., unless he becomes a partner or stockholder.

Mr. Beck claims his proposition as to the usury law to be sustained by "the highest courts of some of the States." His use of the phrase "some of the States" is analogous to the royal "we"; for it means nothing but his own State of Pennsylvania. The rule laid down in the first Pennsylvania case which he cites was so unreasonable that it was confirmed in the later case by only a bare majority of the court.*

(Page 92:) The case here cited from the Appellate Division of the Supreme Court of New York is the Jamaica company case referred to at page 238 of our main brief. The referee in assessing the special franchise of the little water company which was appealing, estimated as the profits of the tangible property an amount equal to a 5 per cent. return on its value. This of course left a very large balance of income to be attributed to the intangible franchise. In fact, the computation was made upon the lines adopted by the referee whose opinion is quoted by the Master in his report in this case (p. 204). It seemed to the court, and seems to us, that this made the franchise assessment unduly high. If a 6 per cent. return is reasonable for a little company like the appellant in that case, certainly 5 per cent. is reasonable for this complainant; but for the purposes of the special franchise tax it is altogether probable that a uniform rule will be adopted for the whole State, and that the rate of return will be put at 6 per cent., irrespective of the particular circumstances of the particular company under consideration.

(Pages 93-4:) Mr. Beck's reasoning would not permit a State ever to conform its laws to a fall in the general rate of interest, or to reduce the rates of a corporation which had passed out of the stage of an "infant industry." His position is inconsistent with the ruling of this court in the Stanislaus County case.

In referring to the report of the Senate Committee of 1886, he forgets that the chairman of the committee (which had but three members) was considering a return upon tangible property alone; and that the report was never acted

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*Pennsylvania R. R. Co *v.* Philadelphia County, 220 Pa. St., 100; Mitchell, C. J., Fell, Brown, and Elkin, JJ., concurring; Mestrezat, Potter, and Stewart, JJ., dissenting.

upon. The committee was doubtless affected by the fact that to limit the return to 10 per cent. would be a vast reduction from the rates prevalent up to that time. The New York Mutual company was chartered in 1866, when rates were particularly high. No contract was made by which it should be permitted for all time to earn 10 per cent. dividends, but the limit was put high for the benefit of an "infant industry" from which effective competition was hoped; a hope that was finally destroyed by the purchase of a majority of its stock by this complainant. The 8 per cent. rates assumed by the Stevens committee of 1905 and the Gas Commission of 1906 were assumed in connection with a theory of capitalization from which complainant dissents; nor was this rate assumed to be the lowest reasonable rate, but only to be the lowest rate to which it would be fair, all things considered, to reduce this complainant, in view of the much higher rates which it was then enjoying. We believe that if this case could be submitted to the court upon the report of a Master who did not believe that the burden of proof as to every item was upon the consumers as against the company, even on the present record it would appear that the complainant would be making far above 8 per cent. at the 80-cent rate.

The paragraph quoted from the railroad law merely incorporates in a revision of the statutes a provision adopted in the early period of railroad construction (New York Laws of 1850, Chapter 140, § 33). Its effect has been radically modified by subsequent legislation. At the 80-cent rate this company would earn over 20 per cent. per annum on the capital actually invested.

X. Basis of Calculation.

(Pages 98-9:) Our illustration referred to by Mr. Beck at this point was not drawn from a comparison of one "plant" with another, and assumed that the two companies compared were equally provident, equally prudent, equally wise, and equally thrifty.

(Pages 99-100:) In considering the next proposition in our main brief, Mr. Beck overlooks the fact that it is unnecessary for the complainant to continue the use of the $10,000 tract which has become worth $1,000,000; that another $10,000 tract would do just as well; that the very reason for complainant's continued use of the tract is that it only cost $10,000, so that complainant can afford to stay there until its plant wears out, without having to carry a heavy capital charge; that nobody would pay $1,000,000 for the land except for the purpose of applying it to entirely different uses, so that if we assumed that the land could only be used for the purposes of a manufacturing establishment, no expert would ever think of valuing it at $1,000,000. Many investors, waiting for a rise, keep cheap buildings on valuable land and collect only enough rents to pay the carrying charges; but no investor other than a public service corporation ever thought of collecting from anybody else an annual income on the probable value of the land, if it should be cleared off and sold at once.

(Page 100:) We fear that we shall never agree with Mr. Beck as to what is "socialistic." His use of the word at this page, as in most other places, seems to us to make it synonymous with "equitable." His proposition here is that a company which is understood by the public to be capitalized at say $10,000,000, and which is permitted by the public (in view of its conducting a valuable infant industry) to pay very high dividends on this capitalization, may "hide away"* further profits which the public does not know that it is making, by paying them out in what the public believes to be operating expenses, but which are really additional construction; the purpose of the whole thing being to prevent the public from knowing how much money the company is really making; and then capitalize this additional construction against the public, and collect tolls thereon for the rest of eternity. It seems to us that to permit permanent capitalization of an original fraud, and make it the basis of a monthly charge against every vote in the community, is the very way to spread the spirit of socialism in the community. We believe that it has already had that effect in the city of New York upon a considerable scale; and that no one thing has occurred in that city for a generation past which has so encouraged the spirit of socialism as the Master's report in this very case. We believe that a corporation which has led the public to believe that its earnings, over and above handsome dividends declared, have been absorbed in operating expenses is equitably estopped from asserting that the property thereby purchased is really additional capitalization. It is specious, but not more than specious, to say that the hiding away of earnings in this manner is equivalent to declaring dividends and investing the proceeds in a further issue of stock. It is not the equivalent, because the public might have regulated the rates and reduced the net earnings, if the latter had not been hidden away. In fact, the very reason for hiding away the profits was to prevent the public from regulating the rates.

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* See Mr. Mathewson's brief at page 16.

We do not expect the court to reach this point in its investigation of the present case, because the rule of present value, when applied by the correct test of cost of duplication by another company, and by a plant sufficient to accomplish the same result with up-to-date methods, is far more than sufficient to decide the case. It would be manifestly improper for us to ask the court to decide questions whose decision is not necessary to a disposition of the controversy now before it; but in discussing the questions involved, we have felt that the subject should be discussed as a whole, and from all points of view; and we believe that the position which we have taken will ultimately be decided to be correct.

The passages quoted by Mr. Beck at pages 101-2 do not conflict with our argument, since they relate to the construction of the Fourteenth Amendment, while our argument was a consideration of the true basis for the liberal percentage of return which the State ought to allow, although the Fourteenth Amendment does not so require.

(Page 103:) We do not think that Mr. Beck would find that the doctrine of basing the return upon the capital actually invested would result in a destruction of railroad values comparable to the San Francisco earthquake. No case has as yet reached the Federal courts which would indicate such a state of affairs. So far as we remember the judicial precedents, they always disclose the case of a railroad whose original cost is greater than its present value. We believe, however, that a revaluation such as is here suggested would show (so far as a valuation based upon expert testimony can be said to show anything) that in many cases the present value approximates the original cost. This will be largely on account of the enormous present value of the terminals, and of the rights of way through cities. But there are few railroads, and few corporations of any kind, which approximate to the situation of the complainant.

XI. The Costs.

(Page 104:) This point, which indeed does not concern us except as taxpayers, we have already referred to in connection with Mr. Beck's point II.

XII. The Condition upon the Injunction.

(Page 108:) Probably the most extraordinary proposition laid down by Mr. Beck is that a Federal court may enjoin the enforcement of a State law, but cannot put a reasonable condition upon its injunction because this would be "to exercise a State function." We contend that the Federal court, which has entire discretion to leave the initial stages of the controversy to the State tribunals, may require, as a condition upon a complainant in a suit of this kind, that it reduce its charge to the minimum constitutional rate, and in that way conform to the orders of the State authorities so far as the orders are not in conflict with the Federal Constitution. We supposed that this proposition was one of comity as well as of equity. Yet Mr. Beck says that comity to the State authorities requires that they be unconditionally enjoined.

He now discloses the real motive of the complainant for applying to Judge Lacombe instead of suing or standing suit in the State court; for he says that "even if a judge of the State court had the undoubted power which the defendants asked the trial court to exercise, yet the mere fact that the court exists as part of the Federal Government deprived it of that power." In other words, assuming that the State court could have made an equitable disposition of the matter by an injunction conditioned on the reduction of the rate from 100 to 84 cents (to assume the correctness of Judge Hough's calculation), Mr. Beck thinks that it was proper for the Federal court to oust the State court of jurisdiction, and thus prevent the citizens of the State from saving the difference.

(Pages 110-12:) Mr. Beck's remarks about the Stevens committee and the Gas Commission are based upon the Carter affidavit, which we have already discussed in connection with the final pages of Mr. Mathewson's brief; and we have already expressed our surprise that counsel should indulge in reflections upon the officers of the State of New York, based upon nothing better than the insinuations of a professional affiant.

Nor is there any foundation for the reflections upon administrative tribunals, as to the impartiality of their judgments. Probably no case before an administrative tribunal puts it more distinctly in the position of being both court and prosecutor than a contempt case puts a judge; yet it is the opinion of the great majority of the bar that the powers of the court in contempt cases should be fully preserved. We believe it to be a fact that the rights of the public as against a public service corporation will be better protected when the public is represented by counsel and the administrative tribunal sits in a judicial capacity only, than when that tribunal is acting of its own motion, and the public is not otherwise represented.

(Pages 112-13:) If circumstances had not forced Mr. Beck to prepare his brief with extreme haste, he would hardly have set forth our seven propositions as indicating the rules of testimony which should govern an administrative commission. There is not a single one of the seven propositions which is stated by us to be tenable as a rule of evidence in the administrative tribunal.

On the other hand, the first rule stated is one well-settled and frequently referred to by this court, and the other rules are necessary corollaries of this court's opinion in the Jasper case.

Mr. Garver's Brief.

(Page 26:) We have submitted no such proposition as that special franchises should "now be absolutely ignored in the regulation of rates." They are to be given the weight which is attributed to them in New York cases (App. Br., pp. 221-2); and when they are what we have called compound franchises (*Id.*, p. 221) they must receive a still greater valuation. Within the past dozen years, following the precedent set by this complainant, there has been a great deal of improper over-capitalization, pretending to be based upon franchises; but the public has been in no way responsible unless the public becomes an accessory to every improper act that is committed, until the legislature expressly prohibits it.

(Page 28:) The Public Service Commissions Law of New York, in forbidding further capitalization of franchises, did so in order that there should be no further imposition by promoters upon investors, and no further excuse for keeping up rates on the ground that otherwise ignorant investors would lose expected profits. The primary object was to protect the investor. The object of this provision has been stated as follows: "Furthermore, the holding corporation is the most effective instrument of over-capitalization, with the consequent injury to the public interest. It is the favorite method of capitalizing the unearned increment coming to a public service company as a great city grows in population. As fast as the street railroad company's, or the gas company's, or the electrical company's earnings thus increase, its old stock is converted into bonds and new stock issued to represent that increment. The new stock is sold to the public, with fabulous profits for the syndicate managers. Legislative regulation of rates is then resisted on the ground that the unfortunate stockholders would lose their dividends. The State is put into a dilemma in which it ought not to be—a dilemma between doing justice to the public who have made the increment, and doing mercy to the ignorant stockholders who have invested their savings in the new stock. The profit of the promoters is unreachable."

Even if the main or only object of the statutory provision had been to prevent overcharges by way of rates, enacting the provision would not be an implied concession, as Mr. Garver argues. The statute was passed while this suit was pending, and after Judge Lacombe had decided that simple franchises could be capitalized and made the basis of rates. It is very common for a legislature under such circumstances to pass a law that will settle the question for the future, leaving the courts to decide what was the law in the past. One of the parties to the controversy always thereafter insists that the new legislature was a concession that he was right; and this court has frequently been called upon to listen to such an argument, particularly tariff cases; but the fallacy of the argument has, so far as we are aware, been always recognized.

(Pages 29-33:) Mr. Garver here sets forth more at length than anywhere else the complainant's contention that the legislatures of 1884 and 1886 authorized and approved its inclusion of special franchises at a certain rate as part of its capitalization. The facts upon which this curious claim is based are as follows: The statute of May 28, 1884 (c. 367) under which complainant was formed was the result of what is now commonly called a "sneak bill." It was entitled "An act to authorize the consolidation of manufacturing corporations" and referred at two places to the general act under which those corporations were generally organized, and which act did not authorize them to receive what are now called special franchises (App. Br., p. 309). It in terms authorized the consolidation of corporations "organized under any general or special law of this State for the purpose of carrying on any kind of manufacturing business of the same or of a similar nature," and provided that the "capital shall not be larger in amount than the fair aggregate value of the property, franchises and rights of the several companies thus to be consolidated." There was nothing in the act to call attention to the fact that these so-called special franchises could be capitalized thereunder; but the astute counsel who drew the bill undoubtedly had in mind the case of Nassau Gas Light Co. *v.* City of Brooklyn, 89 N. Y., 409, decided two years previously, which held that a company organized under the Gas Light Act was within the meaning of a certain tax law a manufacturing corporation.

The circumstances connected with the passage of the law were so suspicious, and the use to which it was put by this complainant was so contrary to what had been supposed by others to be its intent, that the means used to pass the law were investigated by the Gilbert Committee of 1885; but the counsel who obtained the passage of the bill absented himself until after the evidence was closed (pp 5365, 6214, 6225-8, 6516). Complainant's papers were filed in November, 1884. Immediate efforts were made to secure action from the legislature. The complainant took steps to accelerate public sentiment in country districts against the bill (pp. 6452-61). The Gilbert investigating committee, appointed at that session, filed its report on March 1, 1886 (p. 5325). The committee was appointed simply for the purpose of ascertaining what legislation should be adopted in the premises. The chairman reported that in his opinion the statute, strictly construed, did not permit the formation of this complainant, and also that it was unconstitutional (pp. 5351-5), and said that the company ought to be "annulled by the legislature" (p. 5355); but this was in the preliminary portion of his report, and when he came to make his recommendations, he recommended only legislation to prevent similar performances in the future (pp. 5381-2). It does not appear that the facts were ever brought to the attention of the Attorney General. The only thing that he could have done would have been to bring an action in the nature of a *quo warranto*, and have the corporation wound up. This would have been a drastic remedy. The members of the committee not being able to agree, and the Broadway railroad scandal then occupying the attention of the legislature and dominating the public mind, nothing was ever done about it. Since the legislature never did anything about a matter as to which it could not have done anything, complainant has during recent years insisted that its capitalization had some kind of legislative confirmation, which estopped the State from disregarding the appraisals which its promoters made of its tangible and intangible assets. We never heard of a similar claim in any other case, and no reason or authority was ever assigned for it. One of the reasons why the whole subject was dropped was undoubtedly because it was the general opinion of the bar that the nominal capitalization of the company could have no influence on the matter of rates. The recent case referred to by Mr. Garver (Matter of Attorney General, 124 N. Y. App. Div., 401), was a case where the Attorney General did not bring before the court any question relating to the original organization of the company. He questioned this right to purchase the stocks of the competing companies in 1900. The second paragraph of the syllabus contains a curious blunder. in stating that the case decided that the consolidation of 1884 did not violate a statute of 1892.

(Page 45:) There is no doubt that a special franchise, like any franchise, is property, and cannot be taken without compensation; but the cases cited do not consider the question what the compensation should be. If the State had undertaken to condemn the Broadway railroad franchise before a rail had been laid, instead of arbitrarily annulling it, interesting questions would have been raised, upon which the cases cited by us in our main brief at pages 217-23 and 228-9 throw what light we as yet have. We do not think that much of value is added to these cases by the utterances of any of the gentlemen quoted at pages 47-8 of Mr. Garver's brief.

(Page 52:) If the Attorney General is to be understood as stated here, we do not concur with him. The cases cited by us, as we construe them, do not permit the legislature to "ignore the special franchises in fixing a rate." These franchises are what entitle the various portions of the tangible property to be valued together as a going concern, instead of separately as second-hand material, as seems to have been done by the condemnation commissioners in the White Plains case. The franchises are not destroyed by giving them no further value than this.

(Page 53:) Mr. Garver maintains that there cannot have been an implied condition, in granting the special franchises of the constituent companies, that they were subject to the legislative right to regulate rates, because these franchises "were granted long before the days of universal rate regulation;" but twenty pages before he had pointed out that the right to regulate rates had "long been recognized at common law" and "been the subject of legislation from the earliest days of parliamentary history." It is impossible to tell whether the members of the legislature kept this primeval principle in mind while they were voting, but they must be presumed to have done so, as grants of this kind must be construed in favor of the people (App. Br., p. 292). Certainly nobody until long after the period of these old grants ever thought of making such items the basis of separate capitalization.

(Page 59:) Here again we cannot agree with the quotation from the Attorney General, if rightly to be understood as Mr. Garver understands it. Mr. Garver bases upon it the claim that special franchises must be valued according to the maximum rate permitted to be charged, using what seems to us the very extraordinary opinion in the Brooklyn Union Gas case, 188 N. Y., 334, which holds that a maximum limit, fixed for all gas companies in a general statute, is so conclusively presumed, until its repeal, to be reasonable, as to each particular company, that the question of reasonableness cannot be tried in an action on a *quantum valebat*. The logical result of Mr. Garver's argument would be that the legislature could never reduce a maximum rate once permitted; and this is confuted by the Stanislaus County case.

GOOD-WILL.

(Pages 69-78:) The questions of good-will and "going concern" are discussed in our main brief at pages 95-7, 139-40, and 196-7.

To what we have said in relation to the "going concern" element, we may add that a considerable "going concern" item is really included in the Master's valuations and is part of the basis of the decree of the court. These valuations are based upon the testimony of Messrs. Mayer and Simpson. Mayer's figures as to the manufacturing plant and holders included an allowance of 10 per cent. for expenses of supervision of, and 5 per cent. as average loss of interest on capital pending construction (pp. 1320-1). Simpson, as to the mains and services, also allowed for these items, together with all others which might be incidental to building up a "going concern." He "added for engineering expenses, clerical expenses, city inspection, interest, and wear and tear on tools and appliances, obstructions on the street which would delay the work, serious obstructions met with underground, suits for damages and other undistributed expenses" (p. 1747). This would be sufficient to duplicate the present plant of the complainant, if the city should undertake this work itself or authorize a rival company to do so; and as soon as that work was completed, the complainant would have to abandon all claim to a return on any fictitious item, or go out of business; as was recognized by everybody in the cases cited at page 230 of our main brief.

It is difficult to reconcile Mr. Garver's position at page 70 as to the permanence of the use of gas (which is indeed involved in the court's valuation of the manufacturing and distributing plant, practically without depreciation) with Mr. Beck's argument (at pages 89-90 of his brief) that we shall speedily be lighted by radio-activity.

The tax cases cited at page 74 do not help complainant. As long as a company is permitted to have a monopoly and charge high rates, it is proper to tax the company on that basis, and during the period of high rates the stock of the company will stand very high. The State is estopped from taxing it on this high valuation if it begins to regulate the rates and thereby reduce the market price of the stock, but it is not estopped from allowing high rates to an infant industry, taxing it proportionately, and then, when the industry has passed out of the period of infancy, reducing the rates and the taxes simultaneously. This is a manifest corollary from the Stanislaus County case, 192 U. S., 201. When the rate of return on the irrigation company which was then before the court was reduced from 18 per cent. to 6 per cent., the market value of the stock must have fallen, and under the California constitution the taxes must have been reduced, yet the reduction of rates was unhesitatingly sustained.

EXISTENCE OF THE SPECIAL FRANCHISES.

(Pages 79-80:) Mr. Garver attempts to save his client by statements of facts unproved; by claiming that consents are being given to open the streets, which amount to a renewal for perpetuity of franchises which had expired. We are dealing with the facts in the record, and if any such proof had been offered, it would have been dealt with at the time of its offer. It may be added, however, that the Metropolitan grant, under which we concede it to be lawfully in possession of the streets of the whole borough as a hold-over tenant from year to year (App. Br., pp. 292, 302-3), the company has a right to extend its system of mains through any street within the borough under the Deehan case, 153 N. Y., 528; and that it is the duty of the proper authorities under proper regulations to issue permits accordingly.

(Pages 80-1:) This passage, like many others in Mr. Garver's brief, is based on the theory that we have denied the present existence of special franchises. We simply deny that there are any franchises which could not be made to expire within one year after May 1, 1906, at the option of the city, and which therefore, in a suit against the city and its inhabitants, based upon them, should not be treated as then expiring (Kingsland *v.* The Mayor, 110 N. Y., 569, 583). The complainant had had no occasion, up to the time of the submission of this case to the Master, to ask for the continuance of any franchises, since the grant to the Municipal company did not expire until March 22, 1907 (pp. 5116-19), and the grant, although its validity was always doubted, had never been actually contested by the city.

(Page 83:) The first case cited here is explained in our main brief at page 299. The second case has no application. In Wakefield *v.* Village of Theresa, 125 App. Div., 38, the plaintiffs were hold-overs under an electric lighting franchise granted in 1895 and expiring in 1903. The village authorities had no power to grant such a franchise for more than five years under the statutes cited by the court. The franchise was given by a contract which provided for a purchase of the grantees' electric appliances in case it should not be renewed. The grantees held over "from year to year," as the court states. In the middle of one of the years the village suddenly demanded a removal of the poles and wires, without even offering to purchase the appliances. An injunction was of course granted.

(Page 85:) Mr. Garver, like his colleagues, brings up the special franchise tax as a proof that his client had special franchises. This fact needs no proof, for we have conceded it. The question between us is as to the duration of the franchises, as we have shown both in our main brief and in this reply, and the franchise tax is laid without any reference whatever to the question of duration, nor does the assessment for any one year have any bearing upon the rate of return or the assessment for the next year.

So far from the position of the State being a harsh one, we have called attention to the fact that it has been very mild indeed (App. Br., p. 239*n*). To test this, let us apply the computation approved in the Jamaica case to the assessment for 1906, based on the experience of 1905, as found by

Judge Hough. The assessment would be worked out as follows:

Total tangible property	$47,831,435
6% thereon	$2,869,886
Income at $1	5,891,597
Income from intangible special franchises	$3,021,711
Or 6% on	$50,361,850
Total tangible special franchises (mains and services)	14,630,000
Proper special franchise valuation for 1906 at $1 rate	$64,991,850

It should therefore have been considerably more than double what it actually was.

(Page 85:) There is no doctrine in New York of perpetuity of special franchises in general when granted to corporations. The question upon every special franchise grant is as to the intent of the grantor, with the presumption against the grantee. In the first two cases cited the grant under consideration was made to individuals, so that the question whether if a grant is made to a corporation it is intended to be for a time longer than the life of the corporation was not involved. The remarks to which Mr. Garver refers discussed the effect of granting such a franchise to individuals and their associates, accompanied by a provision "that the association should not be deemed dissolved by the death or an act of any associate, but his successor in interest should stand in his place" (27 N. Y. at p. 614). It is difficult to consider such a grant as anything but one in perpetuity, if it is so drawn as to be irrevocable. Both of these cases held the grant to be void. The next two cases cited by Mr. Garver are fully discussed in our main brief at pages 305-7. The Roby case, (142 N. Y., 176, 180) merely follows the case next before cited. Trustees of Southampton *v.* Jessup, 162 N. Y., 127, also turns upon the effect of a grant of a franchise to an individual. Being a grant to an individual it was held to be permanent, but was construed with extreme strictness (see S. C., 173 N. Y., 84; 195 U. S., 624). The case last cited is also of a grant to individuals, although the remark referred to scarcely amounts even to a *dictum.*

Replying at page 89 to our remarks upon the authorities concerning the nature of the New York Central & Hudson River Railroad Company's title to real estate, Mr. Garver says that to ascribe any less permanent character to the mains of his clients "is to make light of the facts." We need only refer to the testimony of Mr. Simpson that he had actually seen 95 per cent. of the complainant's mains, although some of them had been in the streets since 1824; that 27 miles of the mains were disused, 70 miles abandoned within the past year, and 222 abandoned in all, besides those replaced (pp. 668, 1681, 1746-7).

(Page 92:) There is nothing in the Deehan case authorizing the inference that the Harlem franchise, granted when the city limits were confined to the island of Manhattan, was extended northward by the large annexations of territory made long subsequent thereto. The Missouri case cited by Mr. Garver is doubted in New York (People *ex rel.* Brooklyn Union Gas Co. *v.* Littleton, 110 N. Y. App. Div., 720). Franchises are often sold for what is at the time their supposed value. If the city or village which has sold such a franchise subsequently absorbs all the neighboring counties, does the grantee get a franchise in those counties for nothing? And if this is not the case when the franchise has been sold for a consideration, is it the case when the franchise was given away?

(Page 95, top:) The complainant has never "been in undisputed enjoyment of" the franchise known as the State grant, in such a sense as to give it rights which that grant did not intend a corporation to have. The Harlem grant did not expire until 1905, and the Municipal grant did not expire until 1907; and under the Metropolitan grant the company has been a hold-over during the whole period.

(Pages 95-6:) The *dicta* in the Long Acre case, 188 N. Y., 361, 366, 368, did not overthrow the general principle that franchises are non-assignable unless the power to assign is expressly granted; a principle well recognized in New York as well as elsewhere (Troy & Boston R. R. Co. *v.* Boston, Hoosac Tunnel & Western Railway Co., 86 N. Y., 107, 117; Bath Gas Light Co. *v.* Claffy, 151 N. Y., 24, 34-6, 44; Central Transportation Co. *v.* Pullman Car Co., 139 U. S., 24, and cases cited; Snell *v.* Chicago, 152 U. S., 191, 199; Rochester Co. *v.* Rochester, 205 U. S., 236; 10 Cyc., 1091; 20 Cyc., 1158; 14 Am. & Eng. Encyc. of Law, 2d Ed., p. 921). The point decided was that an unauthorized assignment is at worst "voidable at the election of the State or city" (188 N. Y., 369). The point seems not very important here, because the Anthracite company never had a valid franchise (App. Br., pp. 308-10).

(Page 101:) We concur in Mr. Garver's proposition that "The right to lay mains necessarily includes the right to use them for conducting gas, when laid;" and this is precisely what we have argued as to the complainant's franchises (App. Br., pp. 298-9).

(Pages 103-6:) It is undoubtedly true that the local authorities cannot lawfully prescribe terms or conditions not authorized by statute, when granting franchises. If they were allowed to do so, they might easily impose such conditions that there would be only one competitor, when the legislature intended that there should be free competition. Such a case was Beekman *v.* Third Avenue Railroad, 153 N. Y., 144, cited by Mr. Garver. The court held such an attempt on the part of the public authorities to be illegal, and enjoined proceedings thereunder.

But it is a very different proposition to say that a corporation which has accepted a franchise offered under such conditions can claim to hold the franchise and at the same time repudiate the conditions. We quote from the Pennsylvania Supreme Court, a later case than Pittsburg's Appeal, so much relied upon by Mr. Garver. In Allegheny City *v.* Railway, 159 Pa. St., 411, 418-9, the court says: "The conditions in the present case being within the power of the city to prescribe, and therefore entirely valid, the other question raised becomes unimportant. It may be well to say, however, that the ordinance of consent was an entirety, to be accepted or refused just as it was, and acceptance was expressly made a condition precedent. Nothing therefore could make the ordinance a consent but the performance of the condition, the acceptance of the whole. Even if any part of the condition was impossible or *ultra vires,* the result would only be that the consent could never become effective. No amount of hardship, or impossibility, or illegality, will avoid the bar of a condition precedent unperformed. Co. Litt., 206; 2 Blackst., 157."

This ancient and very proper rule, dating from Coke and Blackstone, is not denied in New York, as we construe the authorities, although complainant endeavors to torture a contrary ruling out of some of them (Dusenbury *v.* Traction Co., 46 App. Div., 267, 272. See also Staten Island Railroad case, 34 App. Div., 180).

(Page 117:) Here Mr. Garver restates the remarkable proposition that the State is estopped by its preliminary and provisional assessment of special franchises, while complainant itself is not estopped by its solemn oath that the franchises are worth nothing above the value of the mains and services (see App. Br., pp. 81-3). But we have already shown that the assessment was far too low. The company's modest valuation of its franchises was correct, from the point of view of a person endeavoring to sell them; for they were revocable. The State's assessment was not half large enough, because until revoked they are taxable in proportion to the income which they permit the complainant to earn.

Respectfully submitted,

EDWARD B. WHITNEY,
GEORGE S. COLEMAN,
Of Counsel for Appellants.

No. 398.

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1908.

WILLIAM S. JACKSON, as Attorney-General of the State of New York,

Appellant,

against

CONSOLIDATED GAS COMPANY OF NEW YORK.

Office Supreme Court, U. S.
FILED.
NOV 5 1908
JAMES H. McKENNEY,
Clerk.

BRIEF FOR APPELLANT.

WILLIAM S. JACKSON,
Attorney-General for Appellant,
The Capitol,
Albany, New York.

New York:
MARTIN B. BROWN COMPANY, PRINTERS AND STATIONERS,
Nos. 49 to 57 Park Place.

1908.

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Martin B. Brown Co., Printers, 49 to 57 Park Place, N. Y.

(19100)

Supreme Court of the United States.

OCTOBER TERM, 1908.

William S. Jackson, as Attorney-General of the State of New York,
Appellant,
vs.
Consolidated Gas Company of New York.

No. 398.

BRIEF FOR APPELLANT.

(*References are to pages of Printed Record.*)

PART I.

Statement.

This is one of three appeals from the final decree of the Circuit Court of the United States for the Southern District of New York, Hon. Charles M. Hough, District Judge, entered April 3, 1908, upon the report of the Special Master, Arthur H. Masten, Esq., to whom the case had theretofore been referred "to take all the testimony herein, make all needed computations and fully find the facts" by Hon. E. Henry Lacombe, United States Circuit Judge.

The cause was entitled below:

CONSOLIDATED GAS COMPANY OF NEW YORK,
Complainant,
against
WILLIAM S. JACKSON as Attorney-General of the State of New York; WILLIAM TRAVERS JEROME, as District Attorney of New York County; WILLIAM R. WILLCOX, WILLIAM McCARROLL, EDWARD M. BASSETT, MILO R. MALTBIE and JOHN E. EUSTIS, constituting the Public Service Commission of the State of New York for the First District, and The City of New York,
Defendants.

The parties are the same as originally, except that William S. Jackson, as Attorney-General, has been substituted in place of his predecessor in office, Julius M. Mayer, and the Public Service Commission of the State of New York for the First District has been substituted in place of Frederic E. Gunnison, John C. Davies and Lucian L. Shedden, constituting the New York State Commission of Gas and Electricity, the latter Commission having been abolished and the Public Service Commission having been created by chapter 429, Laws of New York, 1907.

The appeals were taken by William S. Jackson, as Attorney-General of the State of New York (No. 398, Assignments of Error, 481-484); William R. Willcox *et al.*, constituting the Public Service Commission of the

State of New York (No. 396, Assignments of Error, 435-439), and City of New York (No. 397, Assignments of Error, 444-477). The District Attorney of New York County took no appeal.

History of Litigation.

On May 1, 1906, the complainant, a corporation organized under the laws of the State of New York for the purpose of manufacturing and selling gas in the City and County of New York, filed a bill in equity against said defendants, asking:

> " 1. That it be adjudged and decreed that chapters 736 and 737 of the Laws of 1905, and chapter 125 of the Laws of 1906, and the order of the Commission of Gas and Electricity of the State of New York, of February 23, 1906, are illegal and void, because in contravention of the Fourteenth Amendment to the Constitution of the United States, as aforesaid, and of section 10 of article I., of the Constitution of the United States, in that it impairs the obligation of the contract rights of your orator hereinbefore referred to.
>
> 2. That it be adjudged and decreed that your orator has no adequate remedy at law from the injury which would result from the threatened enforcement of said acts and order, and that such injury would be irreparable.
>
> 3. That it be adjudged and decreed that your orator be granted writs, both temporary and permanent, of injunction, issuing out of and under the seal of this Honorable Court, against the defendants, restraining them and each of them, and each of their officers, agents, servants and employees, and any and every person acting under and by virtue of the authority of said acts and order from in

> any way enforcing or attempting to enforce said acts and order, or any of the provisions thereof against your orator, etc."

Chapter 736, Laws of 1905 (to take effect July 1, 1905) restricted the charge for gas sold to the municipality of New York to seventy-five cents per thousand cubic feet, and provided minimum candle power and pressure, and for violations of the act imposed a penalty of one thousand dollars "for each offense, to be sued for and recovered in the name of and by The City of New York for its benefit" (21).

Chapter 737, Laws of 1905, established the Commission of Gas and Electricity, with general powers of supervision over persons and corporations engaged in supplying gas and electricity to the public; to investigate and ascertain the quality and fix the standards of illuminating power, purity and pressure of gas, and require conformity to such standards; to examine the books and affairs of such persons and corporations and to compel the production before it of books and papers pertaining to the affairs under investigation, to subpoena witnesses, take testimony and administer oaths to witnesses upon such investigations, and upon complaint of municipal officers or consumers, and after hearing and investigation, to fix the maximum price of gas or electricity (22).

The Commission, Gunnison et al., appointed under this act, having been complained to and having held an investigation, issued its order dated February 23, 1906, and to take effect May 1, 1906, fixing the maximum price to be charged by the complainant for gas in the Borough of Manhattan at eighty cents per thousand cubic feet. The order provided for candle power and pressure, as in Chapter 736, Laws of 1905. (29 Opinion of Commission, 31.)

But the New York Court of Appeals recently has held that the provision of Chapter 737, Laws of 1905, to the effect that the rate fixed by the Commission should continue for three years and thereafter indefinitely until fixed anew *upon complaint made by municipal officers or consumers,* no authority to make complaint and no opportunity or right to apply for a new adjustment of rate having been given to the company, was in violation of the Fourteenth Amendment to the Federal Constitution, as denying equal protection of the laws. (Village of Saratoga Springs *vs.* Saratoga Gas Company, 191 N. Y., 123, 149.) Therefore, the question before this Court as to the validity of the order of the Commission of Gas and Electricity mentioned in the decree has been eliminated, although the facts as to the Commission's investigation and fixing a rate, etc., remain in the case.

Chapter 125, Laws of 1906 (the "Eighty-Cent Gas Law," to take effect May 1, 1906), restricted the price of gas to consumers in the Borough of Manhattan, other than the City, to eighty cents per thousand cubic feet. The provisions for candle power and pressure were the same as in Chapter 736, Laws of 1905 (30).

The "Eighty-Cent Gas Law" and the order of the Commission were to go into effect May 1, 1906. On that day the bill of complaint was filed.

On May 18, 1906, before the new law was in any respect operated under or sought to be enforced, Judge Lacombe, upon motion of complainant for an injunction *pendente lite,* issued a temporary injunction, restraining defendants "from in any way enforcing or attempting to enforce the said Acts and order or any provisions thereof, against the complainant." The order authorized the complainant to continue its former charge of one dollar per thousand cubic feet to consumers other than the City of New York, notwithstanding said Acts and order, provided it pay weekly into a designated bank, subject to the further order of the

Court, twenty per cent. of the amount received for gas so furnished (36).

June 4, 1906, the defendants filed their answers. (Attorney-General, District Attorney and Commission, 38-57. City of New York, 57-135.)

June 16, 1906, Judge Lacombe continued the injunction order during the litigation. (145 Opinion, 135.)

July 5, 1906, Judge Lacombe appointed the Special Master (148).

May 20, 1907, after taking 6,956 printed pages of testimony and 2,771 printed pages of exhibits, the Special Master submitted to counsel his so-called draft report (151-252), and after receiving and passing upon (252-291) or filing (291-320) written suggestions for amendment, filed his final report on June 24, 1907 (291). (Exceptions to report, 324-386.)

The argument of the motion to confirm the Special Master's report was had before Judge Hough, and his opinion was filed December 30, 1907 (388-422).

On application of all parties, additional findings were made (422-430) and the final decree was filed April 3, 1908 (430-434).

The Decree.

The Court decreed:

> "I.—The report of the Master herein is confirmed except in the following particulars, as to which the exceptions to said report are sustained and its findings modified:
>
> "(a) The real estate, valued by the Master at $13,461,000, included certain parcels held by complainant for future use, but not at the date of the beginning of this action actually in use by it in

its gas business; and omitting from the capitalization of complainant for the purposes of this suit such unused parcels, the valuation of the portion of such real estate actually and necessarily employed by it in its gas business at said date is hereby fixed at $11,985,435.

"(b) The valuation of the 'working capital' must be reduced from $3,616,000, at which it was fixed by the Master, to $1,616,000, at which amount it is hereby fixed.

"(c) The capitalization as fixed by the Master must be further reduced, by striking out therefrom the item 'Coal & Coke Co. $50,000'; and from the statement of net earnings for the year 1905, as contained in the Master's Report, there must be correspondingly deducted the 'National Coke & Coal dividend $5,000.'

"(d) The capitalization as fixed by the Master must be further reduced, by striking out therefrom the item, 'Astoria *i. e.,* capital invested in production of gas secured from other companies, $12,000,000.'

"(e) The capitalization as fixed by the Master must be further reduced, by striking out therefrom the item, 'Franchises and good will, $20,000,000'; and for said item there should be substituted the sum of $12,000,000, the Court finding that the valuation of the intangible special franchises of the complainant is at least that sum.

"(f) The following items allowed by the Master in his estimate of the complainant's operating cost must be disallowed:

Interest on taxes................	$94,506.29
Legislative investigation expense...	25,671.74
Franchise tax litigation expense....	63,401.65

"(g) The following items, amounting in all to $2,013,393.84, were allowed by the Master in his estimate of the complainant's operating cost, to wit:

Repairs to apparatus...........	$169,197.39
Repairs to buildings............	24,900.69
Repairs to tools and implements..	16,228.48
Repairs to gas stoves...........	55,954.35
Repairs to mains..............	126,110.31
Repairs to services.............	89,033.46
Repairs to meters..............	172,925.52
Repairs to buildings...........	15,116.68
Repairs to tools and implements..	15,610.59
Contingent expense (includes renewals)	1,328,316.37
Total	$2,013,393.84

"The fact and propriety of said expenditures for 'repairs' is not questioned, but the final item of $1,328,316.37 is believed to be larger than required; and in place of said aggregate sum of $2,013,393.84, there should be an allowance of eleven cents per thousand cubic feet on the actual production of complainant's own works to cover repairs, renewals and depreciation, mediate and ultimate, amounting to $1,172,359.10.

"(h) The Court finds the gross income, operating expense and net income of complainant's gas business for the calendar year 1905, upon the basis of the prices charged for gas during that year, to be as shown in the following tabulation, in lieu of the Master's tabulation of 'net earnings for the year 1905' result in the figure $4,983,928.31:

Income from complainant's own product, gross	$10,825,027.30
Expenses	6,809,552.28
Net	$4,015,475.02
Net from purchased gas	1,865,717.43
Total net income	$5,881,192.45

"The Court finds that said sum of $1,865,717.43 represents more than a normal profit upon the volume of purchased gas, in that the amount paid by complainant to other companies for the same ($997,039.80) was paid under temporary and expiring agreements, and did not include any reasonable recompense or return upon the value of the investment required to produce said gas.

"The Court estimates that owing to a probable increase in sales of gas and in cost of gas obtained from other companies, and probable change in the source of manufacture of some portions of such gas, while the total net income for the year beginning May 1, 1906 (being the date when chapter 125 of the Laws of 1906, of the State of New York, took effect, and when this action was begun) would remain the same upon the basis aforesaid, yet, if the price of gas were reduced as provided by chapter 736 of the Laws of 1905 and chapter 125 of the Laws of 1906, both of the State of New York, the net income of complainant for said year beginning May 1, 1906, would be reduced to the sum of $3,024,592.45.

"The Court deems it unnecessary to make express findings as to the present existence of the franchises claimed by complainant by derivation from the New York Gas Light Company, the Manhattan Gas Light Company, the Municipal Gas Light Company and the Metropolitan Gas Light Company, and therefore does not pass upon the Master's findings as to the same, but finds that those claimed by it by derivation from the Knickerbocker Gas Light Company (including the Anthracite Gas Lighting and Heating Company and the so-called State Grant) and the Harlem Gas Light Company exist and are owned by the complainant, and are sufficient to meet all its requirements.

"II.—The true valuation, as of the time of the beginning of this suit, of the complainant's property actually employed in its business of manufacturing and supplying gas is as follows:

Real estate	$11,985,435.00
Plants	15,500,000.00
Mains	12,636,000.00
Services	1,994,000.00
Meters and miscellaneous	4,100,000.00
Working capital	1,616,000.00
Total of tangible assets	$47,831,435.00
Special franchises	12,000,000.00
Total	$59,831,435.00

"The foregoing items do not include the amount of complainant's investment in the securities of other gas companies, from which companies it was obtaining a large part of the gas which it delivered to its customers, nor the value of the property of such other companies or any part thereof employed in the production and delivery to complainant of such gas.

"III.—The lowest rate of return which can be considered legislatively fair, just or reasonable upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in the City of New York; and under the two acts and the order, copies of which are annexed to the bill of complaint as Exhibits 'A,' 'D' and 'C,' to wit, chapter 736 of the Laws of 1905 of the State of New York, chapter 125 of the Laws of 1906 of said State and the order of the Commission of Gas and Electricity of the State of New York, made on the 23d day of February, 1906, and directed to the complainant, the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent.

"IV.—The pressure required by said two acts and the order aforesaid is not physically impossible if the entire system of gas distribution in the City of New York be reconstructed; but compliance with such requirement is commercially impossible under the rates for gas prescribed by said two acts and order.

"V.—Complainant has no adequate remedy at law for the injury which would result from the threatened enforcement of either of the aforesaid acts or of the aforesaid order, and such injury would be irreparable; and, this suit is not a suit against the State of New York, either as against the defendant Attorney General or as against the defendant District Attorney, or as against the defendants the Public Service Commissioners aforesaid.

"VI.—The two said acts and the order mentioned in the bill of complaint: Chapter 736 of the Laws of 1905 of the State of New York, entitled, 'An Act in relation to the price of illuminating gas furnished or sold to The City of New York, and providing a penalty for violation'; chapter 125 of the Laws of 1906, of said State, entitled, 'An Act in relation to illuminating gas in the City of New York, and regulating the quality and pressure thereof and the price to consumers, other than said city, and providing a penalty for violation'; and an order of the Commission of Gas and Electricity of the State of New York, made on the 23d day of February, 1906, and directed to the Consolidated Gas Company of New York, copies of which were annexed to the bill of complaint herein, are each of them hereby declared and adjudged to be illegal and void, because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that they take complainant's property without due process of law and without just compensation, and deny to complainant the equal protection of the law.

"VII.—The defendant The City of New York and each of its officers, agents, servants and employees are perpetually enjoined and restrained from suing for the penalty of forfeiture described in said chapter 736 of the Laws of 1905, or in any other way enforcing or attempting to enforce the said act against this complaint.

"VIII.—The defendants William S. Jackson, as Attorney General of the State of New York, and William Travers Jerome, as District Attorney of New York County, and each of them, and each of their agents, servants and employees, are perpetually enjoined and restrained from suing for the penalty or forfeiture described in said chapter 125 of the Laws of 1906 or in any other way enforcing or attempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this complainant.

"IX.—The defendants William R. Willcox, William McCarroll, Edward M. Bassett, Milo R. Maltbie and John E. Eustis, constituting the Public Service Commission of the State of New York for the First District, and each of them, and each of their agents, servants and employees, are perpetually enjoined and restrained from applying for a mandamus or injunction to compel compliance with said chapter 125 of the Laws of 1896, or with said order of the Commission of Gas and Electricity, or in any other way enforcing or attempting to enforce the said act or the order of the Commission of Gas and Electricity aforesaid against this complainant.

"X.—It is further adjudged that the complainant recover of the defendants its costs and disbursements, to be taxed by the Clerk, one-half thereof to be paid by The City of New York and one-half thereof to be paid by defendant William S. Jackson, as Attorney-General of the State of New York; and that said costs, so to be taxed, include the repayment to the complainant of the amount of fees and disbursements of the Special Master paid from a fund heretofore directed to be paid into Court by orders dated May 18, 1906, and June 16, 1906.

"XI.—Any party hereto may make application at the foot of this decree, making such application by supplemental bill or otherwise, as such party may be advised, for any relief to which such party feels lawfully entitled b[illegible]eason of change of circumstances since the beginning of this suit—C. M. Hough, *D. J.*

"The Public Service Commission is, so far as costs are concerned, but another name for the City.

> This suit has been defended in equal parts by representatives of the State and City, and the costs should be divided accordingly. If the Attorney-General can be sued as such, costs can be awarded against him also as such. This question had better be settled—C. M. Hough, *D.J.*"

March 31, 1908.

History of Complainant.

Organization.

The complainant was organized in 1884 (claiming authority under chapter 367, Laws of 1884) as a consolidation of six theretofore existing companies:

New York Gas Light Company, incorporated 1823.
Manhattan Gas Light Company, incorporated 1830.
Metropolitan Gas Light Company, incorporated 1848.
Harlem Gas Light Company, incorporated 1855.
Municipal Gas Light Company, incorporated 1874.
Knickerbocker Gas Light Company, incorporated 1876.

These, with the New York Mutual Gas Light Company, were the only companies manufacturing and selling gas in the then City of New York. The intention had been to include the Mutual in the consolidation, but it was prevented by its charter.

Other companies subsequently became engaged in the manufacture and sale of gas in the Boroughs of Manhattan and The Bronx of the Greater City of New York, and in time the complainant secured control of them all (with the unimportant exception of The Bronx Gas and Electric Company), as well as of all the companies engaged in those boroughs in the production and sale of electric current for light, heat and power purposes, to wit:

Gas Companies.

The New York Mutual Gas Light Company, incorporated 1866.

The Standard Gas Light Company, incorporated 1886.

New Amsterdam Gas Company, incorporated 1898.

Being a consolidation of:

Equitable Gas Light Company of New York, incorporated 1882.

New York and East River Gas Company, incorporated 1893 (controlling East River Gas Company of Long Island City, incorporated 1890).

New Amsterdam Gas Company, incorporated 1897.

Central Union Gas Company, incorporated 1897.

Northern Union Gas Company, incorporated 1897.

Electric Companies.

The New York Edison Company, incorporated 1901.

Being a consolidation of:

Edison Electric Illuminating Company (which included a merger of Harlem Lighting Company and Manhattan Electric Light Company).

New York Gas and Electric Light, Heat and Power Company (which included a merger of Mount Morris Electric Company, North River Electric Light and Power Company, Borough of Manhattan Electric Company, Block Lighting and Power Company No. 1 and Manhattan Lighting Company).

The United Electric Light and Power Company, so named in 1889.

(Formerly N. Y. Safety Electric Light and Power Company, including a merger of United States Illuminating Company.)

The Brush Electric Illuminating Company, incorporated 1881.

Gas and Electric Companies.

Westchester Lighting Company.

So, in the boroughs of Manhattan and The Bronx, to which the 80 cent rate applies, the complainant has a virtual lighting monopoly.

Capitalization.

Appraisers were employed by the constituent companies to appraise their respective properties and see that each company obtained its proportionate share in the new organization. The agreed appraisal of the aggregate tangible property was (153):

Real estate	$10,332,000
Plant	12,175,000
Mains	5,217,000
Services	1,005,000
Meters	1,195,000
Office furniture and fixtures	70,000
Total capitalization of tangible property	$29,994,000

Inflation by Capitalizing "Rights, Franchises, etc."

The consolidation agreement (4280) provided for a total capitalization of $45,000,000, but this contemplated the inclusion of the New York Mutual Gas Light Company, whose charter was found to prohibit its entering the consolidation. (Later it entered through another door,—the purchase of its stock by the Consolidated.) The Mutual had been assigned a share in the $45,000,000 amounting to $5,922,000, and upon its elimination left a balance of capitalization of $39,078,000 to be apportioned among the other companies as originally intended.

Of the $45,000,000, intended capitalization, $1,500,000 was to be retained as "a working capital," which was one-thirtieth of the total intended capitalization. When the Mutual was dropped, one-thirtieth of the $39,078,000 balance, or $1,303,000, was set aside for working capital, leaving $7,781,000 of the inflation, which was ascribed to "Rights, Franchises, etc.," and was divided among the companies in the proportion that their individual sales of gas bore to the gross amount of sales by all companies from October 14, 1882, to October 14, 1883. (Complainant's Exhibit 227, pp. 921 and 922.)

The total capitalization was :

Tangible property (as above)...........	$29,994,000
Working capital.......................	1,303,000
Rights, franchises, etc..................	7,781,000
Total capitalization...............	$39,078,000

Stock was immediately issued to the amount of $37,775,000, less $2,329,000 retained to retire obligations of constituent companies and $15,940 for sundry adjustments, a net amount of $35,430,060 (154). The obligations of the old companies were subsequently paid.

Inflation in Capitalizing Tangible Property.

A committee of the Senate of the State of New York of 1885-1886 ("Gilbert Committee") authorized to investigate the organization of the complainant by the consolidation of its constituent companies, caused an audit of its books to be made by Mr. Yalden, an expert accountant of high standing. He reported to the committee the cost of the properties of the constituent companies, as shown by their books, totaling $20,942,632.85. This would make a total inflation of excess over cost of tangible property and rights, franchises, etc., of upwards of $15,000,000.

Further Increases in Capital Stock and Holdings.

The capital stock was increased in April, 1900, to $54,595,200, and further increased in July, 1900, to $80,000,000 (5018, 5020). Authority for a further increase of capital stock to $100,000,000 was obtained in July, 1904. The additional shares have not been issued, but 6 per cent. debentures have been issued and taken by the stockholders to the amount of $19,857,600, which are convertible into the company's stock at par at the option of the holder (855). The proceeds of such increases and sale of debentures have been chiefly used in the purchase of securities of the other companies mentioned; also for all the capital stock of the National Coke and Coal Company, a corporation organized for the purpose of attending to complainant's cartage and sales of coke; also for all the capital stock of the Astoria Light, Heat and Power Company, a corporation organized to construct a generating gas plant at Astoria, Long Island, which when completed is intended to take the place of the complainant's generating stations in the borough of Manhattan, whereupon the latter stations will be abandoned or "scrapped."

In addition to the securities of the Astoria company, the complainant holds securities of other companies of the following actual cost:

Brush Electric Illuminationg Company, bonds	$275,000 00
New Amsterdam Gas Company, stock and bonds	4,814,608 03
New York Edison Company, stock	15,517,200 00
New York Mutual Gas Light Company, stock	5,703,290 65
Standard Gas Light Company, stock	14,587,495 23
United Electric Light and Power Company, stock, bonds and loans	9,452,063 48
Westchester Lighting Company, stock and bonds	5,707 50
National Coke and Coal Company, stock	50,000 00
	$50,405,364 89

Increase of Tangible Property and Business.

Since 1884 the company has expended for replacements $4,663,838.32, and a corresponding amount has been written off for depreciation. There have also been added for betterments $9,431,198.52, which represents the net increase of the plant account according to the books. The actual book cost of the present plant thus appears to be $30,373,831.37, as follows:

Original cost as shown by the books of the constituent companies (Senate document 86, 47, page 776).......	$20,942,632 85
Increase since 1884, as shown by company's books (Exhibit 387).......	9,431,198 52
Book cost of present plant....	$30,373,831 37

In 1885, sales, 3,942,433,000 cubic feet of gas.

In 1905, sales, 13,283,163,767 cubic feet of gas.

(Of which 10,419,461,426 feet were produced by complainant, and 2,863,702,341 feet purchased from other companies.)

Valuations of Court and Master.

The property upon which complainant is entitled to a fair return was found and valued by the Court below and Master as follows:

	Master.	Court.	Reduction by Court.
Real estate..............	$13,461,000	$11,985,435	$1,475,565
Plants	15,500,000	15,500,000	....
Mains	12,636,000	12,636,000	....
Services	1,994,000	1,994,000	....
Meters and miscellaneous.	4,100,000	4,100,000	....

	Master.	Court.	Reduction by Court.
Working capital..........	3,616,000	1,616,000	2,000,000
National Coke & Coal Co.	50,000	....	50,000
Astoria, i. e., capital employed in production of gas secured from other companies	12,000,000	....	12,000,000
Total of tangible assets	$63,357,000	$47,831,435	$15,525,565
Special franchises and good will..............	20,000,000	....	....
Special franchises........	....	12,000,000	8,000,000
Total................	$83,357,000	$59,831,435	$23,525,565

The Master found complainant's net annual income under the laws complained of would be $2,327,328, a return of 2.8 per cent. upon his valuations. The Court found an increase in the net income to $3,024,592, a return of 5.5 per cent. upon the Court's valuations, and held that a return less than 6 per cent. was confiscatory.

Specifications of the Errors Relied Upon.

The errors assigned upon which this defendant relies are as follows:

I.—That the record does not contain sufficient evidence to show that the rate of eighty cents per thousand cubic feet for gas sold in the City of New York does not afford a fair and reasonable return to the companies doing business in the said city, the evidence being limited to the valuation of property and operations of the complainant alone, and, further, that the record does not show but that the said rate would afford a fair and reasonable return upon the value of property employed in the making and distribution of gas by a company in same territory with the complainant, well located and equipped, and economically managed, but that the case was decided on the theory that if the statutory maximum price does not afford, in the opinion of the Court, a sufficient rate of return upon the value of the property employed in its business of making and distributing gas by the complainant, the statute is void as to that company, irrespective of its effect upon other companies doing business in the same territory (481).

II.—That the record does not contain sufficient evidence to show the reasonable and necessary operating expenses of the complainant. The evidence being limited to its actual receipts and disbursements during a period from November 1, 1904, to December 31, 1905, inclusive, supplemented in part only by experience of other periods and being entirely insufficient for that purpose (482.)

III.—That the valuation of the complainant's property upon which the Court's calculation is based is an estimate of present value, arrived at by a valuation of the reproduction cost of complainant's identical plant and each part thereof, without regard to whether the same was originally economically produced or commercially and economically worth reproducing, or as to obsolescence of type and the advancement of the art. And not either upon the cost thereof, or the reproduction of a plant that would produce the same kind, quantity and quality of gas in an economically constructed modern plant (482).

IV.—That in finding the valuation (paragraphs I. and II.) of complainant's real estate actually employed in its business of manufacturing and supplying gas at $11,985,435, is erroneous, as being

(a) In excess of the original cost of such real estate to the complainant and its predecessor companies.

(*b*) In excess of the true valuation thereof, having been valued as vacant lots and not in conjunction with the buildings thereon, and for the uses and purposes to which it was devoted.

(*c*) In excess of the value at which it was carried on complainant's books (482).

V.—That the valuation (paragraph II.) of the real estate, plants, mains and services and each of them are in excess of the valuation sworn to by the officers of the complainant in the return to the State Board of Tax Commissioners for the assessment of the franchise tax and the testimony of its officers before the joint committee of the Senate and Assembly of the State of New York, and are based entirely on the complainant's testimony and its experts (482).

VI.—That in finding (paragraphs Ic. and II.) that the valuation of the intangible special franchises of the complainant is at least the sum of $12,000,000; whereas

(*a*) The complainant owns no special franchises not terminable at the will of the State of New York or of the City of New York.

(*b*) The franchises claimed by it, if owned, are not proper subjects of valuation in ascertaining the value of the property upon which it is entitled to earn a return.

(*c*) The record does not sustain the valuation (482).

VII.—That in finding (paragraph Ih.) the sum of $1,865,717.43, therein stated, represented more than a normal profit upon the volume of purchased gas, and in finding that the amount paid by complainant was paid under temporary expiring agreements, and did not include any reasonable recompense or return upon the value of the investment required to produce said gas, which findings are not supported by the record (482).

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VIII.—That in finding (paragraph Ih.) that while the total net income for the year beginning May 1, 1906, would remain the same upon the basis of the prices charged for gas during the calendar year 1905, yet if the prices for gas were reduced as provided by the statute of 1906 and by chapter 736 of the Laws of 1905 the net income of complainant for said year would be reduced to the sum of $3,024,592.45, on the ground that such finding is speculative and not supported by the record; and, in particular also

(*a*) In finding a probable increase in sales of gas tending to a reduction as aforesaid.

(*b*) In finding a probable increase in cost of gas obtained from other companies, leading to such reduction.

(*c*) In finding a probable change in the source of manufacture of some portion of such gas, leading to such reduction.

(*d*) In overlooking the decrease in "Expenses" due to the reduction in the complainant's special franchise tax, payable to the State of New York, which would result from the diminution of its net profits through reduction of its rate for gas, said special franchise tax item being included by the Court in the "Expenses" of 1905 to the amount of $406,909.23, as shown by the Master's report (483).

IX.—In failing to make an express finding as to the present existence of the franchises claimed by complainant by derivation from the following corporations, respectively (such failure in the case of each of such companies being separately assigned for error), whereas the Court should have found that as to each of said franchises the complainant is no more than a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or of The City of New York.

(*a*) The New York Gas Light Company.

(*b*) The Manhattan Gas Light Company.

(*c*) The Municipal Gas Light Company; and this alleged franchise was at all times invalid on account of lack of authority in the Mayor, Comptroller and Commissioner of Public Works to grant it.

(*d*) The Metropolitan Gas Light Company (483).

X.—In finding (paragraph I.) that the following franchises claimed by complainant exist and are owned by it and are sufficient to meet all its requirements (such finding in the case of each of such companies being separately assigned for error), whereas,

(*a*) The alleged franchise claimed by derivation from the Anthracite Gas Lighting and Heating Company through the Knickerbocker Gas Light Company was invalid on account of lack of authority in the Board of Aldermen to grant it, and the alleged assignment thereof to the Union Gas Light Company was also invalid for lack of authority to assign it, and said alleged franchise in any case expires on September 17, 1913.

(*b*) The franchise claimed by derivation from the so-called State Grant through the Knickerbocker Gas Light Company was not assignable to, and did not even purport to be assigned to, complainant or either of its alleged predecessor corporations, and said franchise did not even cover any part of The City of New York, Borough of Manhattan, south of Seventy-ninth street.

(*c*) The franchise claimed by derivation from the Harlem Gas Light Company expired February 1, 1905, and as to that franchise complainant is but a holdover occupant, whose right of occupancy is terminable at the will of the State of New York or The City of New York, and said franchise did not cover any part of The City of

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New York, Borough of Manhattan, south of Seventy-ninth street.

XI.—In finding (paragraph II.) the total value of complainant's tangible assets employed in its business of manufacturing and supplying gas to be $47,831,435 and of its total property so employed to be $59,831,435.

XII.—In finding (paragraph III.) that the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent. (484).

XIII.—In finding (paragraph III.) that the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent. (484).

XIV.—That in finding (paragraph VI.) that the statute of 1906 is void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that it takes the complainant's property without due process of law and without just compensation, and deny to the complainant the equal protection of the law (484).

POINTS.

I.

The evidence fails to show that it was impossible for the Legislature fair-mindedly to come to the results reached.

> "In a case like this we do not feel bound to re-examine and weigh all the evidence, although we have done so, or to proceed according to our independent opinion as to what were proper rates. It

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> is enough if we cannot say that it was impossible for a fair minded Board to come to the result which was reached."

San Diego Land Co. *vs.* Jasper, 189 U. S., 439, 441, 442.

We believe that the errors of the Court below are manifest and that this Court will find no difficulty in applying the foregoing rule without the necessity of an examination of all the voluminous evidence.

We wish to show, briefly, the situation as it was presented to the Legislature.

Investigations Prior to Legislation.

The legislative acts and Commission's order complained of were designed to remedy a condition causing widespread complaint by the inhabitants of the City of New York as to the quality, pressure and price of gas being furnished them, and were not formulated until after long and complete investigations, at which the complainant was represented by counsel and produced evidence. The statutes and Commission's order were based upon information derived from examination of complainant's books and the testimony of its officers.

There were three separate investigations pursuant to legislative authority:

1. By a Committee of the State Senate appointed by resolution adopted May 15, 1885, called the "Gilbert Committee," from its Chairman.

2. By a Joint Committee of the State Senate and Assembly, appointed pursuant to joint resolution adopted March 16, 1905, called the "Stevens Committee," from its Chairman.

3. By the State Commission of Gas and Electricity in 1905-06.

"Gilbert Committee."

The Gilbert Committee employed the expert Mr. Yalden, who examined the books and evidence was offered upon behalf of the Company.

It appears from the evidence taken by this committee that the cost of the properties of the constituent companies as shown by their books, exclusive of franchises, was $20,942,632.85, as follows:

Cost of Property.

Manhattan	$4,872,999 49
New York	4,630,642 03
Metropolitan	5,292,175 35
Municipal	4,092,347 86
Knickerbocker	810,481 15
Harlem	1,243,986 97
	$20,942,632 85

But evidence was offered on behalf of the company to the effect that the fair cost of the real estate and plant necessary to produce and deliver gas in The City of New York was about $1,000,000 for every million of feet produced and distributed daily. Upon this basis, the majority of the committee concluded that a valuation of $29,994,300 was not too high. The majority report upon this point was as follows:

The question for your committee to examine was: Was this capitalization thus obtained more than the fair aggregate value of the property, franchises and rights of the constituent companies at the time of the consolidation. The street mains, valves, meters, services, plant, office building, office furniture, laboratories appear to have been appraised at the value of what it would cost to reproduce them at the time of the consolidation, and there is no evidence that any of these items were appraised too high except the evidence of the expert, Mr. Yalden, who finds that they were valued higher than they appear to have been charged as costing in the company's books. As to the value of the real estate, bulkheads, piers and water rights, there is a conflict of testimony. It is a difficult question to determine, owing to the various opinions of real estate dealers. It appears from the evidence given by the three presidents of the Equitable, Consolidated and Mutual companies that it costs for real estate and everything necessary for a capacity to produce and deliver gas in The City of New York about $1,000,000 for every million of feet produced and distributed daily.

'The Consolidated Gas Company can now produce and deliver 28,000,000 cubic feet daily, and having a large amount of plant not now in use by the additional expense of $1,000,000 it can produce and deliver thirty-three million feet per day. If the above basis is a correct one then the aggregate value of the real estate and plants of the several companies given at $29,994,000 is not too high'

(Senate Document (86) No. 47, page lxxvi).

From this conclusion Senator John I. Gilbert dissented vigorously, saying, after an examination of the evidence in detail:

'Thus, it is indisputable that upon the evidence the fair capital of the combined constituent companies, having regard to their actual and prospective capacities and present output of gas, should stand at less than twenty millions of dollars.' (*Ibid.*, page 48.)

To the valuation of $29,994,000 covering tangible properties there was added $7,781,000 for franchises and rights. As to this addition, the majority of the Committee said:

'There certainly seems to be a great injustice to the people in permitting the value of the franchise conferred by the State to form a basis of capitalization for the purpose of organization as a corporation and that the consumers of gas should be required to pay such a price for it as would pay a dividend upon the value of these franchises which are a gift to the people. But it is a fact that the Laws of 1884, under which these companies consolidated, expressly authorized this to be done. * * * Thus the question for your committee to decidewas this: Was $7,781,000 more than the fair aggregate value of the franchises and rights of these six companies? We are forced to the conclusion that it was not; that the franchises of the New York, Manhattan, Metropolitan and Municipal were worth more than that sum, and if these companies saw fit to give a part of the value of their franchises to the stockholders of the Harlem and Knickerbocker, it was matter that interested only the stockholders of those companies (*Ibid.* (77) LXXIX.).

"As to this Senator Gilbert, in his dissenting opinion, said:

" 'One fictitious item of $7,781,000.

" 'With no limitation by law on the price of gas, or regulation as to its quality or measurement, the effect of adding arbitrarily $7,781,000, the last scheduled item, to the capitalization of six companies already capitalized excessively for the business they are conducting, is to tax gas consumers for an unrestricted profit on an apparent investment of $7,781,000, when in honest truth that $7,781,000 does not represent one dollar.

" 'Seven per cent. on this sum is over half a million dollars per annum. More than four times that amount has already been distributed as dividends and collected by the consolidation from the gas-paying public of New York.

" 'This item alone of $7,781,000 is a significant badge. The public wrongs its approval would perpetuate justifies the Legislature in disintegrating the transaction of which it is an essential element (*Ibid.*, page 406).' "

" Stevens Committee."

The Joint Committee appointed pursuant to a joint resolution of March 16, 1905, immediately proceeded to investigate as directed and reported to the Senate and Assembly on April 29, 1905. (Report 66-135.)

The history of the gas companies was reviewed, schedules of properties, values, expenditures, costs, etc., were presented and the committee's conclusions and recommendations were submitted, in part as follows:

> ### *Conclusions.*
>
> Prices of gas, pressure and quality:
>
> From the evidence which has been presented we are satisfied that a price of seventy-five cents per thousand cubic feet will be fair to the consumer and will afford the companies, after allowing the proper costs for manufacture and distribution, taking into consideration all the elements of such cost, a reasonable return upon their capital investment in their gas-making business. This applies to the Borough of Manhattan, the Borough of Brooklyn and a large part of the Borough of The Bronx. In our opinion it would not be just to make such a rate applicable to the more sparsely settled sections of the City of New York, in which, owing to local conditions, the cost of manufacture and distribution is necessarily higher.
>
> The investigation has shown clearly that by increasing the pressure a quality of gas poorer than the standard required by law may be made to fur-

nish the required degree of illumination, thus entailing an increased consumption at an increased cost to the consumer. In order that the consumer may benefit by the reduction of the price of gas, it is important that the degree of pressure should be effectively regulated. The evidence has also shown that there is at present no official inspection in any Borough of the City except Manhattan, and that the inspection in the last named Borough is too infrequent to be adequate. Provision should be made for a system of inspection insuring a supply of pure gas in accordance with the legal standard and its accurate measurements at the meter. This inspection should be made by officials of the City at the City's expense.

* * * * * * * * * * *

Franchises.

As had been noted, serious questions are presented to the extent to which the companies are entitled to use the streets of the City. This is a matter peculiarly within the control of the City authorities, and the validity of the franchises that are claimed is a subject for judicial determination. No action by the Legislature is recommended, as the laws already in force, if properly invoked by the local authorities, are adequate to meet the demands of the situation.

Supervision of Public Service Corporations.

It is manifest that the conditions disclosed by the testimony make it necessary that the operations of the companies supplying gas and electricity, as well as those engaged in other public service, should be the subject of constant and effective supervision by a body paid by the State and clothed with power to execute its orders, subject to suitable review by the courts upon appeal. The gross abuse of legal privilege in over-capitalization and in the manipulation of securities, for the purpose of unifying control and eliminating all possible competition, shows clearly that there can be no effective remedy by general legislation or through ordinary legal proceedings, and that for the protection of the public there should be created a commission with inquisitorial authority, competent to make summary investigations of corporations, to supervise issues of securities and investment in the stocks or bonds of other companies, to regulate rates and secure adequate inspection, and otherwise to enforce the provisions of law. The history of the subway companies affords an apt illustration of the futility of carefully phrased contracts executed in pursuance of express legislation in the absence of an effective scheme for regulation. The failure of general provisions prohibiting the consolidation of corporations is conspicuously shown by the manner in which the provisions of the charter of the New York Mutual Gas Light Company and the Act of 1886 regarding the Standard Gas Light Company has been evaded. The investment of millions in securities earning no dividends and intrinsically worthless solely for the purpose of securing monopoly control points to the necessity of strict supervision in this regard. The plan of providing a commission paid by the State and invested with ample power has worked most satisfactorily in other States, and there is every reason to believe that a similar plan put in operation here will prevent a recurrence of the mischiefs revealed in this investigation.

Specific Recommendations.

We therefore recommend—

(1) That the price of gas sold in the Boroughs of Manhattan and Brooklyn and in that part of the

Borough of The Bronx west of the Bronx River should be fixed at a maximum of seventy-five cents per thousand cubic feet.

(2) That the pressure of gas in any of the street mains should not be permitted to exceed 2½ inches or to be less than 1 inch.

(3) That the standard of purity and of illuminating power of gas be fixed.

(4) That a proper system of inspection be provided to secure the enforcement of the law with reference to pressure, purity, illuminating power and accurate measurement of gas delivered. * * *

Bills to carry out these recommendations will be presented.

Respectfully submitted,

FREDERICK C. STEVENS,
Chairman.
ALFRED R. PAGE,
JAMES K. APGAR,
GEORGE B. AGNEW,
EDWIN A. MERRITT, JR.,
Committee.

At the same session the Legislature enacted chapter 736, fixing the maximum price of gas to the municipality of New York at seventy-five cents per one thousand cubic feet, and chapter 737, establishing a Commission of Gas and Electricity, both becoming laws June 3, 1905.

Investigation, Order and Opinion of the Commission of Gas and Electricity.

The Commission of Gas and Electricity, appointed pursuant to chapter 737, Laws of 1905, having been complained to in writing by not less than one hundred customers or purchasers of gas, as provided by the statute, held public hearings and took testimony, upon notice to and attended by counsel for complainant. The result was the order complained of (28), made on February 23, 1906, in part as follows:

> "And the said Commission having investigated as to the cause for such complaints, and inspected the works, system, plants and methods used by said Consolidated Gas Company in manufacturing and distributing such gas, and having examined the books and papers of said company pertaining thereto; and, pursuant to a further notice duly served upon the said Consolidated Gas Company of New York, the Commission at said hearing having inquired into, examined and investigated the illuminating power, purity and pressure of gas supplied by said company, and having examined the methods employed by it in the transaction of its business and inquired into the methods and means employed in manufacturing, distributing and supplying gas for light, heat and power; now, after such hearings and upon such investigations and upon the evidence and argument of counsel, and due deliberation having been had, it is
>
> Ordered, That on and after the first day of May, 1906, the maximum price of gas which shall be charged by the Consolidated Gas Company of New York, in the Borough of Manhattan, City of New York, State of New York, be and is hereby fixed at eighty cents per thousand cubic feet; and it is further
>
> Ordered, That the gas furnished, sold and delivered by the Consolidated Gas Company of New York shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceit per hour, tested at a distance

> of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour, as is now provided by law. * * *
>
> As the gas supplied to all customers of the Consolidated Gas Company is delivered through the same service mains as gas supplied to The City of New York, and as the pressure of gas so supplied is fixed by law at not less than one inch nor more than two and one-half inches in any service mains in said city at any distance from the place of manufacture, said law fixes the pressure of gas at which all customers and consumers of the company must be furnished in said city—Frederick E. Gunnison, John C. Davies, Lucian L. Shedden, Commission of Gas and Electricity of the State of New York."

The opinion of the Commission (31) shows the extent of this investigation. It is in part:

> " The Consolidated Company is the largest company operating in New York and on October 31, 1905, had issued an outstanding $80,000,000 capital stock, and bonds and convertible debentures amounting to $21,245,000. During the nominal year ending October 31, 1905, it sold to consumers 13,037,164,550 cubic feet gas; street lamp use, 271,199,223 cubic feet gas; total, 13,308,363,773 cubic feet gas.
>
> " The company received an income from consumers, $13,012,206.09; street lamps, $559,823.11; total, $13,572,029.20.
>
> " The cost of manufacturing and distributing the gas sold to consumers amounts to $7,920,077.46, or 60.75 cents per thousand cubic feet, not including fixed charges of the company amounting to $936,883.24. This cost per thousand cubic feet includes not only the actual repairs and replacements for the

year ending October 31, 1905, but an additional sum sufficient to bring the expenditures for repairs and replacements to the average expenditure by the company for twenty years for these items.

"Upon the hearing the Consolidated Gas Company produced its contracts for the purchase of oil, coal and other materials used in the manufacture of gas, and also its contracts for the sale of its residuals.

"On the 1st day of July, 1905, a law passed by the Legislature of 1905 went into effect, which compelled the Consolidated Gas Company to furnish gas of an illuminating power of twenty-two candles, which was an increase of two candle-power over that formerly prescribed by law.

"The nominal year ending October 31, 1905, included four months only of operation under the higher candle-power requirement. As these months were during the warmer weather, when the cost of enrichment is least, the Commission found that 1.81 cents per thousand cubic feet should be added to the actual cost of gas as found for the nominal year to obtain the cost of manufacturing and distributing gas of twenty-two candle-power for twelve months.

"The value of the property of the Consolidated Gas Company actually employed in the manufacture and distribution of gas on October 31, 1905, did not exceed the sum of $30,000,000.

"Evidence taken before the Committee appointed by Senate by resolution adopted May 15, 1885, was introduced, showing the cost of the properties of the constituent companies, exclusive of franchises, as appeared on their books, to be in 1884, $20,942,632.88. The net additions for construction from 1884 to October 31, 1905, amounted to $9,693,-

565.90. To this should be added value of materials on hand October 31, 1905, $616,470.08, making a total of $31,252,668.83.

"Recently property at Eighteenth street, formerly used as a coal gas manufacturing plant by the Consoildated Gas Company, was condemned by the City of New York, and while an award has not yet been made by the Commissioners appointed to condemn said property, title has passed to the City and the amount of the award, when made, will carry interest at the rate of six per cent. from the date the City took title. The value of the property so taken is not actually used by the Consolidated Gas Company in the manufacture and distribution of gas. The value of said property, as testified to by the Consolidated Gas Company on the condemnation proceedings, was $2,655,000.

"The Commission also had before it the return of the Consolidated Gas Company made to the State Board of Tax Commissioners for the purpose of taxation, which return was duly verified. The value of the property of the company, as shown by the return to the State Tax Commissioners June 30, 1905, exclusive of franchise, allowing for depreciation of the real estate, plant, mains, services and material and also meters, supplies and other personal property, was $27,408,700.91. It was contended by the company that the amount so returned to the State Board of Tax Commissioners did not represent the true value. But all of this testimony, with other pertinent evidence, was considered by the Commission in arriving at the value of the property of the Consolidated Gas Company actually used in the manufacture and distribution of gas.

"In allowing a fair return upon the value of the property actually employed in the gas making business, account has been taken of the nature and hazard of the business and of the return allowed on similar investments.

"The Commission thinks that 8 per cent. is a reasonable return upon the actual value of the property owned by the company and used in the manufacture and distribution of gas. It will be remembered that this return is not based upon the capitalization of the company, but upon the actual capital engaged in the manufacture and distribution of gas.

"It was strenuously urged before the Commission on behalf of the company that the Commission should allow the capitalization of the company's franchise as it was assessed by the State Board of Tax Commissioners at $7,781,000. And upon this the company paid a yearly tax, which entitled the company as a matter of law to such capitalization. On the evidence before the Commission it is questionable whether the Consolidated Gas Company has franchises of any considerable value. The Commission believes that these franchises, granted by the people without compensation, should not be capitalized against the public, thereby compelling the public to pay a profit upon the value of the favor granted by it. The seeming injustice of requiring a corporation to pay taxes upon a franchise and at the same time refusing to allow the capitalization of that franchise is sophistical, not real. The franchise tax is paid by the corporation, but charged against the public as an expense of operation, and in reality is therefore paid by the consumer, not by the company.

"The Astoria Light, Heat and Power Company is building a plant at Astoria, Long Island, and proposes building a tunnel under the East River, connecting its works with the distributing system of the Consolidated Gas Company in Manhattan. The Consolidated Gas Company is the owner of all the capital stock of the Astoria Company. Large expenditures have already been made in the construction of its first unit, which unit will have a total capacity of 20,000,000 cubic feet per day, while the plant when completed will eventually produce an amount of gas equivalent to that now sold by the Consolidated Gas Company on the Island of Manhattan, including that purchased from other companies by it. Considerable evidence was taken in reference to the Astoria plant and the proposed removal of the Consolidated manufacturing plant thereto. The company claims that such removal from the Island of Manhattan is made in obedience to a public demand therefor. In any event the Commission believes that the prospective economies in the cost of manufacture and the increase in the sale of gas by reason of the reduction in price will enable the company to pay a reasonable return on any necessary investment in Astoria.

"This conclusion was arrived at by the Commission after a most exhaustive and painstaking hearing and investigation covering a period of nearly three months, in the course of which the plants of the company were examined and over 5,000 pages of testimony taken. * * *

"The Commission believes that the natural increase in gas sales will be greatly stimulated by the reduction in price, and is satisfied that the price fixed is fair to the consumer, the public and the company."

Then followed chapter 125, Laws of 1906 (became a law April 3, 1906), fixing the maximum price in the Borough of Manhattan at 80 cents.

II.

The legislative acts were upon evidence presented by com ant.

The Legislature had before it the complete history of complainant and the value of its property as shown by its books and by the oaths of its officers.

Upon those values the legislative acts were based.

Could a fair-minded board rely upon complainant's books and the oaths of complainant's officers?

And in addition the witnesses for the State and the City before the Master sustained the values upon which the Legislature acted.

Valuations in complainant's reports to State Board of Tax Commissioners.

Section 43 of the Tax Law (chap. 712, Laws 1899) provides that any person or corporation subject to taxation shall make a written report to the State Board of Tax Commissioners, containing a full description of any special franchise possessed or enjoyed by such person or corporation, "together with any other information relating to the value of such special franchise required by said board. The State Board of Tax Commissioners may from time to time require a further or supplemental report from any such person * * * or corporation, containing information and data upon such matters as it may specify. Every report required by this section shall have annexed thereto the affidavit of the president, vice-president, secretary or treasurer of the association or corporation * * * making the same to the effect that the statements contained therein are true." The act further provides that the State Board of Tax Commissioners shall prepare and furnish a blank form for the report.

Pursuant to this act the complainant, by its Secretary, Robert A. Carter, on the forms prescribed by the State Board of Tax Commissioners, made and filed in the [illegible] of December, 1904 and 1905, the report for the year ending June 30th in each year respectively (State's Exhibits C and D, Exhibits, pp. 5053, 5064).

Schedule D sets forth in detail the assets and liabilities of the company, in which it stated the value of the property used by it in the manufacture and distribution of gas as follows:

COMPARATIVE STATEMENT OF PROPERTY.

Values as per reports to State Tax Commissioners, 1904, 1905.

	June 30, 1904.	June 30, 1905.
Real estate and plant.	$19,673,075 42	$19,678,612 76
Mains and services..	4,261,156 39	4,398,160 82
Contracts, rights, etc.	7,781,000 00	7,781,000 00
Meters, stoves and other personal property.........	2,667,329 77	2,736,516 90
Materials and supplies............	697,014 92	595,410 39
	$35,079,576 50	$35,189,700 00

Schedule K in these reports is headed "Statement of cost to reproduce new property in streets, highways, etc., value less depreciation and same outside, with assessment in each tax district," and is as follows:

	Present value of property in streets, highways and public places, on basis of cost of reproduction (new).	Present value of property in streets, highways and public places (allowing depreciation).	Present value of property outside streets, highways and public places, on basis of cost of reproduction (new).
1904,	$5,613,221.12	$4,261,156.39	*$89,310,586.54
1905,	5,801,466.10	4,398,160.82	*106,065,283.38

* The details of this item appear in Schedule D.

Thus showing that the valuation of all the property of the complainant used in its gas making and distributing business was given on a basis of cost of reproduction (new).

These reports were verified as follows:

State of New York, } ss.:
County of New York, }

R. A. Carter, Secretary of the Consolidated Gas Company of New York, being duly sworn, deposes and says that the foregoing statements have been compiled from the books of the company, and after a careful examination of the same he declares them to be *a true, full and correct statement of the property of said company and the value thereof* at the close of the year ending June 30, 1904 (5), as well as of its financial condition and affairs on said date, to the best of my knowledge and belief.

R. A. Carter.

Sworn to before me this
day of November,
(seal.) Wallace Young,
Notary Public No. 5,
Kings County.

Certificate filed in New York County.

Deducting $7,781,000 for contracts, rights, etc., leaves a sworn valuation for the tangible property:

June 30, 1904	$27,298,576 50
June 30, 1905	27,408,700 00

Before the Legislative Investigating Committee of 1905 (Stevens Committee), Mr. Carter again swore to the truth of these valuations.

He testified as follows (859-61):

> "Q. Will you please take the item in that report, the first item of real estate and plant, $19,673,-

075.42; now, that is a statement of the value of the real estate and plant of the Consolidated Gas Company to June 30, 1904, is it not?

"A. That is exactly what it is.

"Q. That is exactly what it is?

"A. As near as we could determine.

"Q. That is what I am asking you.

"A. That was the value of the property at that time.

"Q. That's it exactly; in other words, when you came to make up the report to the State Commissioners for the year ending June 30, 1904, you sought to ascertain fairly what the value of the property of the company was?

"A. Precisely.

"Q. And you took the various properties of the companies with which you were familiar and you fixed what you decided to be the fair value of the properties and stated these values in your report?

"A. Precisely.

"Q. And under the head of real estate and plant you put down the figures $19,673,075.42 as the value of the real estate and plant of the company?

"A. Yes, sir.

"Q. Before you get to that as suggested, is that the value that was arrived at after consideration of the matter by others besides yourself?

"A. That is the case, Mr. Hughes.

"Q. And with whom did you advise in making the determination of value?

"A. The engineers of the company.

"Q. Who were they?

"A. Mr. Bradley and Mr. Woods.

"Q. And who else?

"A. The Assistant Secretary, who has charge of the distributing system of the company.

"Q. Who was that?

"A. Mr. Simpson, Mr. C. C. Simpson.

"Q. Anybody else?

"A. I think if we were in doubt I would have consulted with the President from time to time with regard to the figures that went into these reports.

"Q. Yes, sir, and probably with other counsel?

"A. Probably—always—always with counsel; reports are always submitted to counsel and fully approved before being filed.

"Q. You sought in this way to get from all persons connected with the company who had expert information as to the value of the property what would be a proper valuation thereof on that day?

"A. Yes, sir.

"*Q.* And the amounts which are stated in this Schedule D, that you have before you, and that report of 1904, were those arrived at as stated?

"*A.* Yes, sir.

"*Q.* And with the concurrent judgment of these various men familiar with the facts?

"*A.* Yes, sir.

"*Q.* Taking then the first item of real estate and plant, $19,673,075.42, and taking that as the value thus arrived at of the real estate and plant, state whether or not that covered all the real estate and plant of the company; that is to say, the land, the buildings thereon, and stoves, the holders and various apparatus which are connected with your business of gas making and apart from the items which are separately mentioned later on, such as mains and services and meters, stoves and personal property?

"*A.* That is correct (pages 859-861).

"*Q.* Then the amount that you have read of real estate plant which were carried in the books at $26,762,591.09 appear in the balance sheet of June 30, 1904, at that total, you decided were of the fair value of $19,663,075.42?

"*A.* Yes, sir (page 1008).

"*Q*. Will you give the total of those mains and services, please?

"*A*. $8,799,740.69.

"*Q*. And then mains and services which appeared in the balance sheet of June 30, 1904, at the book value of $8,799,740, you decided to be of the actual value of $4,261,159.39, and so entered them under the heading, 'Mains and Services,' in the report to the State Board of Tax Commissioners?

"*A*. Based upon the cost of reproduction, less depreciation.

"*Q*. Whatever it was based upon, you entered it as actual value?

"*A*. Yes, sir.

"*Q*. Of those mains and services?

"*A*. Yes, sir.

"*Q*. And as you stated a moment ago, in another part of your report, you set forth the extent in feet of the pipes of your company, which appears in the separate schedule verified by you under date of November 30, 1904, annexed to said report, in which the total feet are given as 4,605,681?

"*A*. Yes, sir.

"*Q*. And you would state the present value reproduced new would be $5,613,221.12, and the present value, allowing depreciation, was $4,261,156.39?

"*A*. Yes, sir.

"*Q*. In other words, you decided after your conference with the parties who were acquainted with the facts, with your own experience and knowledge of the facts, that it would cost on June 30, 1904, to reproduce new the mains and services of the company the sum of $4,261,156.39?

"*A*. That was the estimate; yes, sir (page 1009)."

In this case the company has made its statement, under the oath of one of its principal officers as to the actual present value of its property, and who has again testified that the valuation was the fair value of the property of the company at that time, arrived at after consultation with the engineers of the company, assistant secretary in charge of the distributing system, the president and counsel of the company, with all persons connected with the company who had expert information as to the value of the property, and that the amounts which are stated in Schedule D were those arrived at, with the concurrent judgment of these various men familiar with the facts.

This report was not for the purpose of fixing an assessment value on the complainant's tangible property but for the purpose of assessing the value of its franchises or intangible property.

The value of a franchise is based on the earning capacity of the plant over and above a fair return on the value of the tangible property. Therefore, it was not in the interest of the complainant to undervalue its tangible property, for the less amount of value assigned to tangible property the greater the return upon the intangible property, the larger the valuation of the franchises, and hence the greater tax.

In this case the complainants tried to overcome the effect of the testimony of Carter, given before the legislative committee. Mr. Carter testified (pp. 1239-1247) that after he had testified before the joint legislative investigating committee he had a talk with Mr. Bradley and that thereby his recollection was refreshed. That in preparing the statement for the State Tax Commissioners he had estimated the property at what it would sell for to some one who did not want to carry on the gas business, and also that they had in contemplation the removing of the manufacturing plant to Astoria, and therefore that they took half the book value of the plant and added something to it as salvage. That in making up the value of mains and services they took off 25 per cent. of the book value because "the company was constantly replacing its mains and its services with mains and services of a larger size, at a considerable loss. The value of the mains or services taken out of the ground or abandoned, as the case might be, being a total loss practically." On the meters, stoves and other personal property about 25 per cent. was taken off "the amount represents a portion of the book value of that property that was written off to reduce it to such an amount as that would probably realize from the sale of that property under ordinary circumstances * * *. I do not mean that it was written off the books, but in making up the figures for the tax report." (Complainant's Exhibit 223 was then put in evidence, from which the following extract is taken:

Complainant's Exhibit 223.

(Exhibits, p. 5276.)

CONSOLIDATED GAS CO. OF N. Y.

June 30, 1904.

	Investment as Shown by Ledger Accounts.	Values Stated in Franchise Tax Reports.	Difference.
Real estate	*$11,216,479 71	$11,216,479 71	....
Plant	*15,755,462 88	8,456,595 71	$7,298,867 17
Mains	†7,571,808 83	3,666,531 38	3,905,277 45
Services	†1,227,931 86	594,625 01	633,306 85
Franchise and rights	7,781,000 00	7,781,000 00	....
Stocks of other companies	46,674,034 27	46,674,034 27	....
Bonds and obligations of other companies	8,686,744 70	8,686,744 70	....
Material and supplies	697,014 92	697,014 92	....
Accounts and bills receivable	1,944,968 09	1,944,968 09	....
Cash on hand	1,146,866 87	1,146,866 87	....
Unclaimed dividends	39,052 50	39,052 50	....
Metropolitan redemption fund	500 00	500 00	....
Meters, stoves and other personal property	3,630,772 12	2,667,329 77	963,442 35
Totals	$106,372,636 75	$93,571,742 93	$12,800,892 82

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* Stated as a single item at $19,673,075.42 in Schedule "D" (volume 2 of Exhibits, page 751).

† Stated in the Tax Report under the heading "Present value allowing for depreciation." "Reproduction" value stated as $5,613,221.12 for mains and services.

Detail not asked for and not given in Tax Report to State Board:

For mains	$4,829,925 82
For services	783,295 30
Total	$5,613,221 12

Mr. Simpson, assistant secretary of the company in charge of distributing system, testified with respect to the data furnished to Mr. Carter for the preparation of the 1904 report, as follows: "Mr. Carter came to my office and told me that he had to report to the Tax Commission the value of our mains and services, and asked me to give him some figures as to the value" (pp. 678-679). "I did not give him any statement of values on which to base his calculations. I gave him a price per foot for each size of main, and he from his own books took the mileage of mains and multiplied the number of feet by the price per foot, and made his calculations from that" (pp. 679-680). "He had charge of the books of the company and he had the number of feet in his possession" (pp. 679-680). "I have a set of figures as to the number of feet of mains in use, and the company or the general bookkeeper of the company has a set of figures" (p. 683). "I am not familiar with the totals, as they appear in the Tax Reports, for I have never seen them" (pp. 678-679). And further, "I took the mileage of the various sizes of mains we had at that time, and computed the total amount, taking the cost of laying each size of pipe under the most favorable conditions. I did it for taxation purposes, and I thought those were the right kind of conditions to take. Q. Did you, in your unit figures, include anything but the bare cost of material and the labor for laying in soft dirt streets? A. No, sir, I did not" (pp. 719-720). (See also pages 1753-1756.)

W. H. Bradley, engineer for complainant, testified as follows (pp. 1701-1702):

> "Q. Mr. Bradley, it has been shown in evidence that by the reports of the company filed with the local tax assessors or with the State Board of Tax Assessors, the plant and real estate of the company had been inserted at something like $19,000,000 for several years past, which it is testified is made up of the land or real estate at the book value, and the

figure for the plant of the company, amounting in 1904 to $8,456,595.71, whereas the book was $15,775,462.88, or nearly twice as much; do you remember any conversation with Mr. Carter in the year 1902 in reference to the basis of placing the value of the plant for the purpose of the tax report?

"*A.* Mr. Carter applied to me for a figure, and I took advice with our general counsel on the subject and was informed as to what the law was in the case; acting upon that advice, I simply cut the book value in half, and added to that—the absolute figure I cannot give you; I have not got them—I added to that, if my recollection serves me, between $600,000 and $700,000 as the scrap value of the plants to be dismantled, understanding that we were going on with our Astoria business and that within a very short time practically the works would be dismantled and simply scrapped, as we had no market for them; the resulting figure from that, half of the book value and the six or seven hundred thousand dollars that I added, was the figure that Mr. Carter used in the tax report."

He further stated:

"I went into no detailed valuation, because I assumed that the book value was very nearly, if not practically correct.

"I assumed that one-half of the plant would remain in New York long enough to be subject to the payment of taxes; the other half would be simply thrown away; I took the scrap value of the other half, which would be a few hundred thousand dollars; this scrap value, plus one-half the full value, equalled the figure that I gave Mr. Carter at that time; the advice that counsel gave me was that the assessors were instructed that the value of the plant was the value of the land; that there was nothing to be added to the value of the land except such improvements as were valuable to the land, and the plant added no value to the land; if it was a detriment to the land it was not to be assessed" (pp. 1702-1703).

> "I am willing to stand by the statements that I made before the Gas Commission and that I have made here, that I took half the book value, about $15,000,000, and added to that between $600,000 and $700,000 for the figure that I gave to Mr. Carter.
>
> "We were then (in 1902) intending to remove the plant to Astoria; I understood that the figures I prepared for Mr. Carter were to be submitted by him to the State Board of Tax Commissioners to assist them in arriving at some tax for that year; the plans of the Astoria plant were then pretty well drawn, but little physical work had been done; I did not anticipate that we would be able to remove the plant during that year, or in any particular year" (pp. 1717-1718).
>
> "When I had arrived at this valuation I felt that I had valued the plant of the company for taxation purposes" (p. 1721).

The reports of complainant to the State Board of Tax Commissioners, in 1904 and 1905, were for the purpose of special franchise tax assessments. It was to the interest of complainant then to value its tangible property proportionately high in order that the franchise values might appear to be less. Under these specially favorable conditions the oaths of complainant's officers ought to be credible, but the Master thus comments upon the increased valuations sworn to before him:

> "It is a matter of common knowledge that reports, petitions and similar papers required in connection with matters of taxation are, in the case of

> large corporations, ordinarily prepared by counsel. To some extent they are in the nature of pleadings, and are so drawn as to support the theory on which it is hoped to secure the most favorable results either before the tax officials or the courts.
>
> "Under these circumstances, when, as in the present case, it appears that taxes are being constantly contested, it must very commonly occur that views are expressed on behalf of the corporation more or less inconsistent with the valuations it would put upon its property for purposes of sale, condemnation or such an action as the present."

A comparison of the valuations by the witnesses for the State and City, (as reported by the Master), the 1905 tax report valuations, and the Courts' valuations is as follows:

	Witnesses for State.	Witnesses for City.	1905 Tax Report.	1905 Court.
Real estate	$10,504,355 95	$10,587,685 00	$19,678,612 76	$11,985,435 00
Plant	9,318,692 00	9,348,692 00		15,500,000 00
				12,636,000 00
Mains and services	7,383,533 00	7,751,263 00	4,398,160 82	1,994,000 00
Meters and miscellaneous property	3,802,544 00	3,261,687 00	2,736,516 90	4,100,000 00
Materials and supplies	....	....	595,410 39	....
	$31,009,124 95	$30,949,327 00	$27,408,700 87	$46,215,435 00
Contracts, rights, etc.			7,781,000 00	12,000,000 00
Working capital			....	1,616,000 00
			$35,189,700 87	$59,831,435 00

III.

The legislative acts were invalidated by improper methods of valuation, involving property not entitled to a return, gross overvaluations and duplications.

FRANCHISE AND GOOD WILL.

An important question here is presented, whether the franchise and good-will of a public service are property upon which the owner is entitled to a return in a rate regulated by the State.

The Master valued the franchises and good-will of complainant at $20,000,000. The Court reduced the amount to $12,000,000 and assigned it to franchises alone, and included it in the determination of the property upon which complainant is entitled to a return.

Complainant claims by analogy to the decisions that franchises and good-will are property and proper subjects of valuation in condemnation cases.

Appellant contends there is no analogy in this respect between rate regulation and condemnation cases, and that the item should have been excluded, for the reasons:

1. Franchises and good-will are not property upon which the complainant is entitled to a return in its rates.

2. The franchises claimed by complainant amount only to a tenancy by sufferance or from year to year, and, therefore, only have a nominal value for any purpose.

Judge Lacombe, in his opinion upon granting the temporary injunction ( ) substantially ordered the Master to find large values for franchises and good-will, before any evidence was taken or the cause at issue or the Master appointed. When the evidence was submitted and defendants assumed the question to be open for argument, the Master said ( ):

> "The question is not open for discussion, however, as it is fully disposed of for the purposes of this report by the expressions of the Court in deciding the question for preliminary injunction in this cause."
>
> Citing Judge Lacombe's opinion, reported in Consolidated Gas Company *vs.* Mayer, 146 Fed. Rep., 150, 157.

The Master's report treated the subjects of franchises and good-will separately (186-211), but he confessed his inability to differentiate their values. He said (210):

> "It is clear that a new company, in addition to a substantial outlay for its franchises under existing laws (Greater New York Charter of 1897, as amended by Laws of 1901, chap. 466, and Laws of 1905, Chap. 629, sections 73-74) would be subjected to enormous expense before it could perfect its organization as to supplant a powerful competitor already in the field. The relative cost of its franchises and good-will might in such a case be to some extent apportioned. But in the present instance, their reproductive value is wholly in the realm of conjecture, and the two elements are so interwoven that there is no apparent basis for their separate appraisement. It is clear, however, that each is of substantial value and contributes very materially to complainant's earning capacity.
>
> As I do not find it practicable to differentiate in figures the value of complainant's franchises and good-will, I have concluded to consider all of the in-

> tangible assets together as a single item, the reasonable value of which I think may be fairly fixed at the sum of $20,000,000."

The Court below considered the good-will inseparable from the franchises and valued only the latter (410-419). He said (410):

> "From the testimony I might think it apparent that what is here meant by good-will is the organization of complainant, long established and doubtless well manned and equipped. Such organization is clearly of value, because without it neither its tangible nor intangible property can be profitably managed. Yet the organization itself is but a method of utilizing that which is invested. It is really dependent for its existence and continuance upon the franchise, without which there can be no useful organization.
>
> Tangible property has a certain value entirely apart from franchise, or right to continue business, or method of transacting business; but good-will in the sense of organization for the business of furnishing gas can have no existence whatever apart or detached from the franchise conferring the necessary privilege."

The Court included a valuation upon franchises against his judgment, but feeling impelled thereto by the "trend of decisions," although recognizing this as a "pioneer case." He said (412-414):

> "As an original proposition I believe this claim unsound. Return can be expected only from investment, and he that invests must part with something in the act of investing. He that hath not sown shall not reap; and can it be said that complainant here or any other corporation similarly situated has invested its franchises in its business? It did not invest *in* its franchise, because it did not pay for it; it

did not invest its franchise because it did not part with it in the same way that it parted with money or money's worth in acquiring or creating mains or plants. The investment of property was made not *in* the franchise, but *under* the franchise and on the faith thereof. The franchise is but a part of the power or privilege of sovereignty, allotted to a private person for the benefit of all and only incidentally given for private emolument. * * *.

" It is familiar doctrine that private citizens may acquire vested rights through a series of even erroneous decisions—rights so firmly vested that it becomes unconstitutional for the Court which persisted in error, suddenly to rectify its mistakes to the detriment of those who had securely rested upon the decisions sought to be invalidated. A Trial Court is in somewhat such a case when confronted with a proposition concerning which as *res nova* it entertains no doubt, but finds it impossible to enforce the opinion entertained, without doing violence to theories of law and habits of legal thought fairly discoverable in preceding decisions of superior jurisdictions. In this case I am compelled to the conclusion that it is necessary to allow the discoverable value of complainant's franchises as part of that capital upon which a fair return must be allowed, because to refuse would be to disregard views expressed by higher courts regarding the general nature of franchises and regulation proceedings. Instead of attempting to minimize and distinguish the decisions to which I have been referred and many others, it is my duty to follow the method of reasoning there clearly indicated, leaving it to the higher tribunals to make distinctions which, if drawn by the lower court, would in my opinion savor of presumption.

* * * * * *

" If franchises are to be reckoned with and paid for in condemnation proceedings, must they also be

> reckoned with and allowed for in cases of rate regulation? The rights of condemnation and regulation are both confessedly exercises of police power. If regulation is to be regarded as *pro tanto* condemnation, then the same train of reasoning which requires compensation for franchises when all the property protected by the franchise is taken away, requires that some compensation shall be left when the earning power only is reduced. This is the crucial point of inquiry, and the highest tribunal has not yet encountered the necessity of answering."

As to the method of valuing the franchises the Court said:

> " Again, as a method of valuation applied not to taxation, but to rate regulation, the system is reducible to an absurdity, for at what point of time is the inquiry to be made? Clearly before the reduced rate goes into effect. Yet by this method, since the fair rate of return upon tangible property is a constant figure, the capitalization of the residue at the same figure will always give a valuation for the franchise rendering reduction impossible. * * *
>
> " The Master reports that the record contains little direct evidence as to the value of the franchises, and he might have added that if by direct evidence is meant testimony of the same kind regarding their value, as has been offered regarding every item of tangible property, there is none at all.
>
> " I think it obvious as I have endeavored heretofore to point out, that either for the purpose of condemnation or regulation the value of a franchise depends wholly upon what is earned under it, and I believe the best way of finding out how much a franchise separately considered is worth is to ascertain what those persons desirous of continuing operation under it consider it to be worth. * * *

"These considerations applied to the testimony herein enable me to find that this complainant did at the beginning of its career measure the value of its franchises. It does not appear how it was done, nor why the figures selected were chosen, but it is true as matter of fact that when complainant was organized in 1884 under a statute which in terms permitted it to acquire the property and franchises of the older gas companies consolidating to form it, it then issued stock of the par value of $7,781,000, representing the franchises it then acquired and nothing else; and this stock is still outstanding and has since 1884 been in the hands of purchasers, who I am compelled to think have a right to rely upon legal protection for legally issued stock.

"There is no direct evidence that complainant's franchises in 1884 were worth $7,781,000, or are worth that much to-day. I do not see how such evidence can exist; but because complainant made an arbitrary valuation so long ago, issued stock on the faith thereof, did that lawfully, and has maintained dividends upon that stock ever since, I find it *presumptio juris* that complainant's franchises in 1884 were worth $7,781,000; and to that extent it is certainly entitled to protection against confiscatory legislation.

"No capital stock has since been issued upon the faith of franchises only. If, however, complainant's franchises were worth $7,781,000 in 1884, and its tangible property at the same time was appraised (as appears in evidence) at $30,000,000 (in round figures), then since complainant's business (in sales volume) has in twenty-three years almost quadrupled, and its tangible assets grown to $47,000,000, it appears to me that a fair method of fixing value of the franchises in 1905 is to assume the same growth in value for the franchise as is demonstrated by the evidence in the case of tangible property. If,

> therefore, the franchise valuation of 1884 was proportioned to personalty and realty of $30,000,000, a franchise valuation similarly proportioned to $47,000,000 in 1905 would be over $12,000,000. * * *
>
> "The overruling consideration is that in 1884 there were issued shares of stock of the par value of $7,781,000; and that stock is outstanding yet, and that it represents a certain fractional part of a business which has enormously increased. Inasmuch as everything in that business is accounted for except the franchises, I have taken that figure as indicating the nearest approach to franchise value, given by the evidence, and a proper starting point for computation."

After receiving the criticisms of counsel upon the method of valuation, the Court stated in an additional opinion (425):

> "It is not difficult to detect flaws in a finding opposed to the settled opinion of the Judge who happens to constitute the Court; and as to the history of the stock whose par value is $7,781,000, I think enough has been said in the opinion already filed, to give the higher Court a fair view of the way in which it was issued and the manner in which it was viewed by those who created it.
>
> "But it does not advance the discussion at all to elaborate the history of such creation and issue. For all that I can see the franchises of 1884 might as well have been valued at twice the amount of the stock then issued on the faith thereof. It was nothing but an attempt to capitalize expected profits; but the attempt now has twenty years' success to justify it."

So, must an arbitrary valuation, placed by complainant upon its fran-

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chises as a stock inflation, be counted thereafter as an investment entitling a return in rates, not because it was right to do, but because it was done?

Future enterprises of this character should heed the lesson; for, if the valuation of $7,781,000 and the growth to $12,000,000 can be maintained, there is nothing to prevent an original valuation of $50,000,000 and corresponding growth.

All that is necessary is to keep off the hand of the law for a time—what length of time does not appear—and then the hand of the law will be used to pick the public pocket forever.

The complainant arbitrarily capitalized expected profits in 1884 at $7,781,000, and the Court now adds its own arbitrary capitalization of $4,219,000 in 1908.

Our concern is not as to the legality of capitalization of franchises or good will, but as to the right to receive a return in rates upon such capitalization.

In discussing the subject of good will the Master said (206):

> "It is not necessarily the ordinary commercial good will, such as attaches to an old firm name or place of business and is based in large degree upon the personal standing of the founder of the house. The modern decisions have recognized its proper scope as including that species of intangible value which comes of the gradually building up of a complete organization in the successful operation of a going concern."

And the Master quotes Justice Brewer, in National Water Work Company *vs.* Kansas City, 62 Fed. Rep., 853, as follows:

> "Nor would the mere cost of reproducing the water works plant be a fair test, because that does

not take into account the value which flows from the established connections between the pipes and buildings of the city. It is obvious that the mere cost of purchasing the land, constructing the buildings, putting in machinery and laying the pipes in the streets—in other words, the cost of reproduction—does not give the value of the property as it is to-day. A completed system of water works, such as the company has, without a single connection between the pipes in the streets and the buildings of the city, would be a property of much less value than that system connected, as it is, with so many buildings, and earning, in consequence thereof, the money which it does earn. The fact that it is a system in operation, not only with a capacity to supply the city, but actually supplying many buildings in the city—not only with a capacity to earn, but actually earning—makes it true that 'the fair and equitable value' is something in excess of the cost of reproduction. The fact that the company does not own the connections between the pipes in the streets and the buildings—such connections being the property of individual property owners—does not militate against the proposition last stated, for who would care to buy, or at least give a large price for, a water works system without a single connection between the pipes in the streets and the buildings adjacent? Such a system would be a dead structure rather than a living and going system. The additional value created by the fact of many connections with buildings, with actual supply and actual earnings, is not represented by the mere cost of making such connections. Such connections are not compulsory, but depend upon the will of the property owners, and are secured only by efforts on the part of the owners of the water works, and inducements held out therefor. The city, by this purchase, steps into possession of a water works plant—not

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merely a completed system for bringing water to the city and distributing it through pipes placed in the streets, but a system already earning a large income by virtue of having secured connections between the pipes in the streets and a multitude of private buildings. It steps into possession of a property which not only has the ability to earn, but is in fact earning. It should pay, therefore, not merely the value of a system which might be made to earn, but that of a system which does earn."

For purposes of rate regulation, neither franchise nor good-will can be valued separately from tangible property.

The National Water Works Company case was a condemnation case and while, under the rule there stated, good-will is a proper factor for consideration in cases of condemnation or sale, the very description of the qualities of good-will shows that it canont be separately assessed in rate regulation.

We agree with the Court below that in rate regulation good-will is inseparable from franchise, and the same logic would lead to the further deduction that in rate regulation good-will cannot be valued apart from the tangible property.

Upon condemnation or sale there is a value to the tangible property which exists and can be valued apart from the good-will; the business can be considered and valued either as a " not going " business or as a " going " business.

But there can be no such thing as a rate regulation unless the business be a " going " business. The business must be " going " before a rate can be contemplated. The idea of fixing a rate necessarily assumes that the business is " going." **A rate for a " not**

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going" business is impossible of ascertainment or of conception. If the quality of "going" must exist in tangible property before the property can be the subject of consideration for valuation in rate regulation, that quality cannot be separately valued, any more than the tangible property can be separately valued. **If good-will cannot be separately valued, it gives no additional value to the tangible property, but must be regarded merely as the prerequisite to any valuation whatever.**

In fact, the **rate is the earning,** and the **earning is the going.**

No more is good-will separable from franchise in rate regulation valuations. The franchise is merely the **permission to work** given by the public to the company. It is the contract between the State or the municipality and the company, which once having been entered into may become, as such, the subject of valuation upon breach, condemnation or sale, depending in amount upon the terms of the contract.

But, in the performance of a contract, for one party to charge the other party the price, as per contract, for doing the work and then add a bonus for the contractual relation itself—the opportunity to do the work—and then add another charge because the work is done, is so preposterous as not to be seriously contended outside a court of law.

[Of course, a franchise tax is not such an action upon the part of the State, but is an assessment for governmental purposes upon this property as upon any other property.]

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The franchise or permission is the right or opportunity of the complainant to do a service—to put its tangible property to this particular use. **The fact that the company is operating or "going" necessarily presupposes (for purposes of rate regulation) the opportunity and right to operate.** It is doubtful if even the complainant would have the effrontery to invoke the powers of injunction as an *acknowledged* trespasser.

Judge Hough used the illustration of the personal service of the town crier or herald, thus (412):

> "Again, let it be supposed that a citizen be granted a franchise of being a town crier or herald, as an historical illustration. Such franchise is not different in kind from that here under consideration. Is there any value attached to that franchise beyond the right of working under its protection for a fair wage? And would the herald be justified in charging two prices for his proclamation—one for his service and the other as return or income on his franchise?"

The illustration might be amplified to show the difference in the valuation of good-will and franchise in condemnation or sale and in rate regulation.

The herald having been given permission by his sovereign to be a herald (and thereby becoming entitled to the wage of a herald) might choose and be permitted to transfer his occupation and sell his uniform to another. And, depending upon the other's views of the advantages of the position, the franchised herald might be able to collect a bonus for the permission—the right—the opportunity to this particular occupation, and perhaps another bonus to represent the good-will of the business, *i. e.,* the being a "going" herald instead of a dream. **But could the herald, holding his employment, turn about and charge his sovereign, in addition to a herald's wage, a bonus for his sovereign's permission, or a bonus for being a live herald instead of a dead one?**

The State Controls Price and the Public Shares Profits.

Two points especially must be borne in mind in distinguishing principles governing valuations upon rate regulation from other valuations:

1st. The control of the price or rate is not in the owner of the goods to be sold, but in the State.

2nd. Increased economies and increased profits are bases not for increased valuations, but for decrease in the price or rate.

The complainant took all its franchises subject to the State's right of rate regulation, with none but constitutional limitations and no other limitation should be implied to nullify that right.

The franchises, subject to that right, had a value as offering a field for investment,—the furnishing of a public necessity to an immense and congested population with greatly restricted or no competition,—which has readily attracted surplus wealth. The Constitution guaranteed against confiscation. The prodigality of the public and general inefficiency of public servants assured at least a fair return.

In addition to this value, as an investment with reasonably certain prospects of a fair return, which might command upon a sale more or less of a bonus according to the supply and demand of capital and all the circumstances, the franchises would have a further value in proportion to the ability of the investment to secure larger returns.

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But the value of the franchises depends entirely upon the earnings and in this respect differs from the value of tangible property.

If the company were allowed to fix its own price for its product, as in private enterprises, it might advance and maintain the price, and by larger profits enhance the value of its opportunity to operate the franchises. But, through the nature of the service, the control of the price having passed from the company to the State, the company has lost its power to place any actual valuation upon the franchises.

And the issuance of stock against an arbitrary franchise valuation cannot force the State to allow a return upon that valuation any more than the State would be forced to consider capitalized instead of actual valuations of tangible property.

The State is to determine the earnings. The franchise values are dependent upon the earnings. Manifestly a computation cannot be based upon quantities that it is the purpose of the computation to determine.

The value of a "going" business over a "not going" business consists simply in the greater assurance of profit. As the business progresses the "going value" increases simply because more extensive operations and more efficiency mean greater economy, and greater economy means greater profit. **The right reserved by the public to regulate the rate was meant to be exercised in behalf of the public, as well as in behalf of the company. That right meant nothing to the public if it did not mean that the public should share in the benefits of increased economies by reduced rates, instead of having the increased profits go to the company.**

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The principle of valuation upon condemnation or sale is that the purchaser pays more as profits increase.

The principle of valuation for rate regulation is that the purchaser pays less as profits increase.

Surely the public with an unlimited supply of ungranted permits upon the shelf never expected by mere silence to have to pay eternal tribute for what it overgenerously gave away.

Franchise and Good Will Are Paid for in Operating Expenses.

Again, in valuations upon condemnation or sale, "operating expenses," are not charged as in rate regulation.

Every cent of the cost to the company of all those qualities which distinguish a "going business" from a "not going" business, has been paid for, is being paid for and will be paid for by the consumers in the rates, under the charge for operating expenses.

To a purchaser, including the municipality that purchases through condemnation, the company may say that the established, operating, earning business has an added value over the value of the bare tangible property,—the result of experience, knowledge, skill and accomplishment; but every one of these items of cost have been represented in the salary list, from the president to th office boy, and including the legal advice that seems so essential to a profitable gas business, especially at such crucial times as when the officers are called upon for a plain truthful statement from the books, upon the making of a tax report or upon a rate regulation inquiry.

And this salary list, together with repairs and replacements, the consumers have paid and will continue to pay in the charge for operating expenses. **And the**

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charge for operating expenses is not for a "non-operating" business, or a business as it was operating, but for a business as it is operating NOW, with all the aggregated advantages of experience, knowledge, efficiency and accomplishment of the past and present included.

Once establish in the highest court of the land the right of a corporation to capitalize franchise and good-will against the public right to regulate rates and the resultant wrongs under protection of the law will be inestimable and irreparable.

This device of the valuation of franchises and good-will would serve effectually to prevent the public from ever sharing in increased economies, for the greater profit the greater value of the franchise and good will.

State's Power to Reduce Rates Would Be Nullified.

The valuation of franchises and good-will would nullify the State's power to reduce rates once established. But that power has been upheld by this Court in Stanislaus County *vs.* San Joaquin C. & I. Co., 192 U. S., 213, 214, where it held:

> "It is not confiscation nor a taking of property without due process of law, nor a denial of the equal protection of the laws, to fix water rates so as to give an income of six per cent. upon the then value of the property actually used, for the purpose of supplying water as provided by law, even though the company had prior thereto been allowed to fix rates that would secure it one and a half per cent. a month income upon the capital actually invested in the undertaking. If not hampered by an unalterable contract, providing that a certain compensation

should always be received, we think that a law which reduces the compensation theretofore allowed to six per cent. upon the present value of the property used for the public is not unconstitutional. There is nothing in the nature of confiscation about it.

"The original cost may have been too great; mistakes of construction, even though honest, may have been made, which necessarily enhanced the cost; more property may have been acquired than necessary or needful for the purpose intended. Other circumstances might exist which would show the original rates much too high for fair or reasonable compensation at the present time. Notwithstanding such facts, are the shareholders of the company to be forever entitled to eighteen per cent. upon this cost, and does a reduction in amount as provided for in the Act of 1885, take away property in violation of the provision of the Federal Constitution? We think not."

(As to ownership of franchises, Part II., 156-170.)

Real Estate.

The Court accepted the Master's report as to the value of complainant's land and the buildings thereon, which it held to be devoted to the public use. The experts who testified for complainant determined the value of the buildings on complainant's land upon the basis of the cost to reproduce them at the present time, less depreciation; they estimated the value of the land itself upon the basis of its market value, as vacant land, at the present time. We concede the method adopted for the valuation of buildings to have been the right method, but we contend that the land should have been valued subject to the servitude of its occupancy by a gas plant. It is reasonable to assume that if complainant's land, occupied by gas plant, were thrown upon the general market, were offered for sale to purchasers who did not want to operate the plant, complainant would either have to (1) scrape the plant, and hence practically lose its value, or (2) sell it at a greatly reduced figure for use elsewhere. We urge, therefore, that (there being no competent evidence of record of the value of complainant's land subject to the servitude of its present use, or of an available site suitable for complainant's purposes and capacity), complainant should be allowed the full return of its plant and disallowed the value of its land except so far as that value is represented in cost of the land.

The public cannot be charged for high class residential or congested business district property. Such property would not be selected as a site by a company that expected profits only from the gas business and such profits are all the public is to pay. The excess in value over an available suitable site cannot be realized upon until the gas business is discontinued and, therefore, such excess does not represent property invested in the gas business.

Inasmuch as our contention in this respect will be presented as a subject of special consideration in the brief of the Public Service Commission, we have contented ourselves with a bare statement of the principle which we think should govern the determination of the value of complainant's land and plant.

Plant.

The term plant includes all the machinery, tanks, everything which constituted the plant for the manufacture and transmission of gas except the mains, services, metres and personal property (1034, 1035).

Appellant contended that the method of valuation should be the actual cost less depreciation, or the present cost of a modern plant of like capacity.

The method employed was the present cost to reproduce the identical plant.

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Upon this subject the learned Judge at Circuit said:

> "It appears by undisputed evidence that some of these last items of property cost more than new articles of the same kind would have cost at the time of inquiry; that some are of designs not now favored by the scientific and manufacturing world, so that no one now entering upon a similar business would consider it wise to erect such machines or obtain such apparatus. In every instance, however, the value assigned in the report is what it would cost presently to reproduce each item of property in its present condition and capable of giving service neither better nor worse than it does now. * * * Upon authority, I consider this method of valuation correct."

A corporation engaged in a public service is entitled to a return only upon property necessarily devoted by it to that service by the operation of a reasonably efficient plant, conducted with reasonable economy and ability.

Regan *vs.* The Farmers' Loan & Trust Co., 154 U. S., 362.
Smith *vs.* Ames, 169 U. S., 543.
San Diego Water Company *vs.* City of San Diego, 62 American State Reports, 275.
Covington, etc., Turnpike Co. *vs.* Sanford, 165 U. S., 478.

The question of whether or not a particular plant is reasonably efficient, or is being conducted with reasonable economy and ability, must necessarily depend upon the "state of the art" of gas manufacture and distribution. If a gas company's plant is to-day of an obsolete type, requiring twice as large an investment to manufacture and distribute gas as would be required if it were employing modern and efficient plant, which was used by other companies engaged in business in the same

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field, and which was accessible for its use, it obviously would not be entitled to charge a rate which would enable it to yield a return upon an investment much larger than would be required to produce the same output.

The test of reasonableness of a given rate, which includes the reasonableness of the investment and plant upon which it is predicated, must necessarily be—whether the company's investment in plant is reasonably necessary in consideration of the state of the art, for the production of its output, for rendition of its service to the public.

It would be obviously absurd to hold that a law was unconstitutional which did not yield to *every company affected by it* a return upon its investment, the return upon the cost of reproduction of the plant which it employed, however unreasonable the investment or however inefficient and obsolete the plant might be.

The evidence in this case was limited to the valuation of the plant of the complainant alone. It, therefore, will not sustain a finding that the rate fixed by the statute is an unreasonable and confiscatory rate because of its failure to yield a fair return on the company's plant, unless it be shown that the company's plant is an economical and efficient plant from the standpoint of the present state of the art, available for use in the field of the company's service.

The record shows what it would cost to reproduce the complainant's plant and every part thereof as it now stands. The record tends to show that a large part of such plant is obsolete, is grossly inefficient from the standpoint of the present state of the art, and that the cost of production thereby is greatly in excess of what it would be if the company employed modern methods and appliances available for its use in the field of its operation. The record does not show what it would cost

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to construct a modern plant of the capacity of that now in use by complainant.

The State and the City produced before the Master Dr. Marks and Mr. Edgerton as experts. Dr. Marks made a personal examination of the plant and detail, including buildings, apparatus, holders and tanks, and appraised them at a total value of $9,348,692 (5058-5018). The valuations for each plant made by him on which this total is based appear on pages 5063-5013. The method used by Dr. Marks in arriving at the valuation was to have the total actual first cost of buildings and structures based upon original inventories, using actual cost for additions, less depreciation in proper amount; also to add first and subsequent costs in each case of yard and holder connections, less proper depreciation; also to add the actual cost of foundations for holders and steel tanks without depreciation where same has not appeared; also to add the actual cost of new buildings added without depreciation where same has not appeared; also to add actual cost of new buildings added without depreciation, and by the above method to arrive at the actual value of buildings and apparatus (5063).

Mr. Edgerton examined all the plant and apparatus and gave a total valuation of $10,023,057.25, the details of which will be found (5119-5238). He adopted the inventory furnished by Complainant's witness, Mr. Mayer, and used Mr. Mayer's measurements with the exception of a few where he made his own and checked them. He found that in same instances the measurements given by Mr. Mayer were not correct (5116). In his appraisal and preparation of same he took station by station and aggregated the buildings, then the apparatus, following the divisions adopted by Mr. Mayer; then calculated out the details and corrected by himself and had a typewritten copy made (5118). In certain instances he adopted Mr. Mayer's figures because he did not have an opportunity to make a calculation of him own as to

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certain machinery and various small items and some large ones (5118). He figured as to each item the depreciation by reason of physical deterioration.

There were also the sworn statements of Complainant's officers in the Tax Reports of 1904 and 1905.

However, the Master chose to disregard this evidence and he relied upon the appraisal of Mr. Mayer ($15,532,489, reduced to a round $15,500·000) as the basis for defeating the legislative act, and the Court has sustained his finding.

Yet complainant's witnesses admitted that the identical plants would not be reproduced at the present time. It is apparent that the separate scattered plants of the constituent companies would not have been so constructed for the consolidation even twenty years ago. They were constructed for six companies instead of for one, and since have become antiquated and of less efficiency than a modern plant of less cost.

The plants would not have been reproduced, even in 1884.

Mr. Bradley, the chief engineer of the company since 1886, testified:

> " *Q.* If you were going to reproduce to-day a gas plant to produce the entire amount of gas that is now manufactured by the Consolidated Gas Company, would you reproduce these plants? *A.* I think that question is answered by the very work I am engaged on now in the Astoria plant. It is not a reproduction " (995).

Mr. Mayer testified:

> " *Q.* If you were called upon to construct a plant for the use of the Consolidated Gas Company today, would you scatter the works around as they are here? *A.* I certainly would not. *Q.* The

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> works divided in the five manufacturing stations require a much larger investment in plant, do they not, than it would to bring them together in one station? *A.* Decidedly. *Q.* And also the cost of operation is very much more in a scattered station than it would be in the one station? *A.* Yes, sir" (1570).

Some further detail upon this subject is given in Part II.

The decision of the Circuit Court thus squarely puts to this Court the question, whether a maximum rate of charge for gas fixed by the Legislature of the State is confiscatory because it does not allow to complainant a return upon unnecessary investment, upon a much greater investment than, in the light of the present state of the art of gas manufacture and distribution, would be required to produce its output; whether such a company is entitled to earn a fair return on obsolete machinery, the present reproductive value of which is greater than would be the cost of moden efficient machinery of the same productive capacity.

(Further details concerning plant valuation are given in Part II., 133-148.)

Cost of a Modern Plant.

Complainant offered no evidence upon the theory of the value of a modern plant capable of complainant's output and the valuations of the Master and Court below were not upon that basis.

We have presented an estimate, the argument of which is set forth in Part II. hereof, pp. , which shows that, upon the basis of the cost of the construction at Astoria, coal and water gas plants of complainant's present daily capacity of 51,000,000 cubic feet would cost $11,738,518, as against the Court's finding of $15,500,000, a saving of $3,761,482.

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This would show:

Real estate (less deductions)..........	$10,422,106 30
Plants	11,738,518 00
Mains and services (book value)......	7,852,151 03
A total of....................	$30,012,775 33

Master's valuation, same items.......	$43,591,000 00
Court's valuation, same items........	42,415,435 00
Original cost, same items............	29,266,757 46
Carter swore to truth before Legislative Committee	27,408,700 00

Assuming a plant of 70,000,000 daily capacity on Astoria land, 20,000,000 coal gas and 50,000,000 water gas, and allowing the full value of land, tunnels, etc., designed for a plant twelve times the present unit, and we have:

Astoria land, tunnel and plant, including 15,000,000 holder and tank for a second one of same capacity, everything as per complainant's Exhibit 235	$13,250,739 60
Water gas plant, 50,000,000 capacity.	6,150,000 00
Holders and holder stations..........	4,109,048 00
Total plant value and Astoria real estate	$23,509,787 60

The total realized by srapping of Manhattan plants would be $5,869,770, which should be deducted from the Manhattan real estate, and we have:

Real estate, Manhattan..............	$4,533,336 30
Real estate and plant, Astoria, holders and holder stations, Manhattan...	23,509,787 60

Mains and services (book value)......	7,852,151 03
Meters and miscellaneous............	4,100,000 00
Working capital.....................	1,616,000 00
	$41,611,274 93

Astoria, *i. e.,* capital invested, etc., included above in plant, as against the Master's finding of $63,307,000.

On the Master's finding as to the net return for 1905, this would give a return of 5.33 per cent. But in addition to this we have the testimony of Mr. Bradley that he expected to manufacture gas five or six cents per thousand cheaper in Astoria than he could in Manhattan (1730-1731). If we allow five cents per thousand on the $13,283,163.767 we would add to the $2,327,328 the sum of $664,158.18, making a total of $2,991,486.18, or a return of 6.87 per cent.

And this on a plant that is capable of producing 14,000,000,000 cubic feet per annum, and has sufficient real estate to allow an extension of the plant to 48,000,000,000 cubic feet per annum, or twice as much as is to-day consumed in the Boroughs of Manhattan and The Bronx (577-578).

(Further details are given in Part II., 148-156.)

Mains and Services.

The method of valuation was an estimate of the present cost to reproduce the identical mains and services, without allowance for multiplicity by reason of being laid by six companies instead of one, and, notwithstanding the charges for current repairs and replacements already covered, the additional expense of laying under modern conditions of pavements and use of streets.

This method differed from the method employed for valuing the plant, which was cost of identical plant less depreciation. The methods of valuation shift according to the varying advantage to the complainant against the public, and this method adds $4,783,848.97 in excess of original cost, without allowance for depreciation from use.

There have been four valuations upon the mains and services by complainant:

1. The book value which is supposed to show the actual cost, and that is $7,852,151.03.

2. The value reproduced new, given to the State Board of Tax Commissioners, less depreciation, $4,398,-106.82. (Exhibits, p. 311.) This valuation was calculated upon the information furnished by Colin C. Simpson, assistant secretary of the company in charge of the mains.

3. The testimony of Colin C. Simpson given before the Gas Commission that there were 880 miles of mains valued at $11,687,466.41. (1751.) A value of $13,-281.21 per mile; and

4. The value given by Simpson in this case, that there were 822.2 miles of active mains at a value of $12,-636,150. (1747.) A value of $15,368 per mile. As a matter of fact, there are only 795.47 miles of active mains (1746), making a difference in favor of the company in the last valuation of $426,173.05.

The Master and Court found that the mains should be given the highest value testified to by Simpson, namely, $12,636,000, at the full cost of relaying all the mains under present conditions, assuming that it would cost the same price to relay the pavements on the entire work that they have to pay for repair jobs. For instance, the Master allows for granite block pavement $8 for the first square yard and $4 for each additional yard, while

Simpson testified: "I can contract for the same pavement for $1.90 per yard. We are permitted now this last year; if an opening is over 250 feet long we are permitted to contract with the contractor to replace the pavement for us, but we have only just started on that." (671.) Q. For any smaller jobs you are still—A. Paying $8 for the first yard and $4 for the additional yards; in small openings it is generally only one yard. (671.) Mr. Simpson further testifies: "The total mileage is a little over 880 miles. Of that 880 miles at least 90 per cent. are either brand new or put in condition to be as good as new. That is, they have been restripped, re-examined and recaulked. (1752.) That the mains stripped and new laid amounted to 95 per cent. of all (668), and that since he had been general superintendent he had seen practically all of such mains." (700.) Therefore, in the book value of the mains, or in the repairs and replacement account we find that the consumer has been charged with the expense of the laying of the mains and the expense of the repairing and the expense of repavement, and to now add $4,783,998.97 as the additional cost, because of pavements and other modern conditions, is to compel the consumer to pay twice on this item.

IV.

Only property necessary for the particular use may be valued.

The owner is entitled to a return only upon the fair value of the property necessary for the particular use.

Covington and Lexington Co. *vs.* Sanford, 164 U. S., 578.

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For there may "have been extravagant and needless expenditure of money" in construction; it may have been invested in a plant "unwisely built" (Reagan *vs.* Farmers' Loan and Trust Company, 154 U. S., 362); "it may have been invested in property that cost more than it should have cost" (San Diego L. & T. Co. *vs.* National City, 174 U. S., 739). "Great mistakes of construction, even though honest, may have been made, which unnecessarily enhance the cost; more property may have been acquired than necessary and needful for the purpose intended" (Stanislaus County *vs.* San Joaquin C. & I. Co., 192 U. S., 201); and "reckless and unnecessary expenditures, not legitimately incurred in the acquisition, construction or preservation of so much of the plant as is necessary for the purpose, may have been made (San Diego City Co. *vs.* City of San Diego, 62 Am. St. Rep., 273).

The question of reasonableness of a rate involves the element of reasonableness, both as regards the company and as regards the public.

Chicago, etc., Railroad *vs.* Minnesota, 134 U. S., 450.
Turnpike Co. *vs.* Sanford.

V.

Rate Must Be Just to the Public.

"That the utmost that a corporation, operating a public highway can rightfully demand at the hands of the Legislature, when exercising its general powers is, that it receive what, under all circumstances, is such compensation for the use of its property as will be just to it and to the public."

San Diego Land Co. *vs.* National City, 174 U. S., 757.

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"The company is entitled to a fair return upon the reasonable value of the property at the time it was being used for the public."

San Diego Land & Town Co. *vs.* Jasper, 189, U. S., 442.

"The owner is not entitled to earn a fair return upon the money invested in the property, *but only upon the amount necessarily invested in the enterprise upon the fair value of the property necessary for the particular use.*"

Covington & Lexington Turnpike Co. *vs.* Sanford, 164 U. S., 578.

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public, and in order to ascertain that value, (a) the original cost of construction, (b) the amount expended in permanent improvements, (c) the amount and market value of the stocks and bonds, (d) the present as compared with the original cost of construction, (e) the probable earning capacity of the property under the particular rates prescribed by the statute and (f) the sums required to meet operating expenses, are all mattters of consideration and may be given such weight as may be right in each case."

Smyth *vs.* Ames, 169 U. S., 546.

"It is not confiscation or the taking of property without due process of law, nor the denial of the equal protection of the laws, to fix water rates so as to give an income of six (6%) per cent. *on the prop-*

erty actually used for the purpose of supplying water as provided by law."

San Diego Land & Town Co. *vs.* Jasper, 189 U. S., 442.
San Diego Co. *vs.* National City, 174 U. S., 739; Chicago, Mil. & St. P. Ry. *vs.* Smith, 176 U. S., 167; Stanislaus *vs.* San Joaquin, 192 U. S., 201.

VI.

The public has the right to the benefit of progress in the art.

The constitutionality of a law establishing a maximum rate for a public service within a field of operation where the same conditions with respect to cost prevail, does not depend upon the cost of gas to a particular company which challenges the law.

Complainant offered its own tabulation exhibits taken by its experts from its books of account for a single year (1905) as proof of the cost of the manufacture, distribution and sale of gas in the field of its operation. The Attorney General objected to such evidence upon the ground that proof of such cost to complainant for a single year was not proof of what it would reasonably cost to produce gas in that particular field of operation, and that such cost could only be shown by proving (1) that complainant was operating a reasonably modern, efficient plant with reasonable economy and ability, and (2) by so doing, what it had cost it to produce gas during a period of several years preceding the date when the laws challenged took effect.

It would seem clear that the single year selected might have been abnormal in respect of cost, because of violent fluctuations in the cost of labor and materials necessary for the manufacture and distribution of gas, or (stating the reason conversely) that proof of the average cost for the period of several years would be better evidence of normal cost than the proof of cost for a single year. There was just as much reason for the Court's taking evidence of the average cost of labor and material (subject to fluctuation in cost) for a period of several years, as for its taking evidence of the company's expenditures to cover repairs and renewals, or depreciation, for periods of eleven and twenty years; just as much reason for taking the average cost of labor and materials for a period of years and adopting it as a normal cost, as taking the average expenditures on account of depreciation for a period of years and adopting that average as normal annual depreciation.

Complainant's counsel, replying to defendants' contention that proof of cost should cover a period of several years, rather than a single year, urged that evidence of the cost of gas to complainant for the years 1903 and 1904 had been submitted to a legislative investigating committee of the State by an expert employed by it, and that such evidence was available to the defendants if they thought it material. The contention of counsel for complainant, which was accepted by the Master and approved by the Court, was based upon the assumption that the burden of proof was upon the defendants to show that the rate challenged was a reasonable rate, and not upon the complainant to show that it was an unreasonable rate.

The record fails to show that the several manufacturing plants of the Consolidated Gas Company were reasonably modern and efficient or that they were conducted with reasonable economy and ability; in other words, the record fails to show that what it cost the Consolidated Gas Company to manufacture gas in the year 1905 is what it would have cost a company operating a reasonably modern, efficient plant with reasonable economy and ability, to manufacture gas of the same quality and quantity in the same field and subject to the same conditions.

If the standard of efficiency in the year 1823 is to be used to defeat legislation based upon the state of the art in 1908, the public would be forever precluded from receiving the benefit of economies due to progress in this art.

The State has the right to secure to the public the benefits of the advancement in the particular science affected by the law, and its power so to do is not to be restricted by the employment of obsolete apparatus or the use of methods which that particular science has long since discarded.

The State has the right to require that gas be sold to the public by a public service corporation at a rate which would yield an owner employing plant and methods which are modern and efficient at the time of the enactment of the law, a fair return upon the property necessarily employed by the owner in the rendition of that service.

The idea is clearly expressed by this Court in the Gill case, 156 U. S., at page 657:

> "Given the case of a general law prescribing rates to all companies, can the courts inquire whether such rates are reasonable, and may they find that as to one company the prescribed rates permit it to do business at a profit, and as to another, whose facilities are inferior, or where expenditures are greater, the rates afford no profit? And will the fate of the law, as to its validity depend in each case on the result of such an inquiry?"

The complainant having failed to show that the cost of gas to it is what it would be to any well equipped and well managed company operating in the same field under the same conditions, there is not sufficient evidence to sustain a decree in its favor.

VII.

Complainant is not entitled to duplicate values.

Land is given enhanced value as vacant land, which would require scrapping of plant, yet the plant is given its full value.

Plant is allowed present cost of identical plant, with an allowance for current repairs and renewals, designed to keep it presently efficient, and in addition an allowance to periodically repay the present cost of the identical plant in the 11-cent item.

Mains and services are allowed an appreciation over cost due to added expense of relaying; they also are allowed the expense of present relaying in current repairs and renewals, designed to keep the mains and services presently effective, and an additional allowance to periodically repay the present enhanced valuation in the 11-cent item.

Operating expenses are allowed, which presume a "going" business and a "right" to go; yet an additional allowance has been made for the mere fact of operating.

Ultimate renewal allowance is made, including insurance against remote risks, inexperienced in over eighty years.

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VIII.

The eighty-cent rate will be held to yield complainant a fair return unless it is plainly and palpably confiscatory.

This Court has held that it will not interfere with a rate of charge for a public service established by a statute unless it is so plainly and palpably unreasonable as to make its enforcement equivalent to taking complainant's property for public use without such compensation as, under all the circumstances, is just both to complainant and the public; that is, unless the case presents, *clearly and beyond all doubt,* such a flagrant attack upon complainant's right of property under the guise of regulation as will compel this Court to say that the rates prescribed will *necessarily* have the effect of denying complainant just compensation for the property taken for the public use.

Chicago, etc., *vs.* Wellman· 143 U. S., 339, 444.
Reagan *vs.* Farmers' Loan and Trust Co., 154 U. S., 362, 391.
Smyth *vs.* Ames, 169 U. S., 466, 529.
Henderson Bridge Co. *vs.* Henderson City, 173 U. S., 592, 614, 615.
San Diego Land Co. *vs.* National City, 174 U. S., 739, 754.
San Diego Land Co. *vs.* Jasper, 189 U. S., 439.
Ball *vs.* Rutland R. R. Co., 93 Fed., 19.
Palatka Waterworks *vs.* Palatka, 127 Fed., 161.

The rule declared justifies the deduction that this Court, in its use of the phrase "*so plainly and palpably* *unreasonable,"* intended to distinguish between a rate of charge that *may be* confiscatory and one that *is clearly and palpably confiscatory;* that this Court intended to declare the rule that where there was any doubt as to whether the rate fixed would yield a fair return on the property devoted to the public use, it will be presumed to yield such a return, and that such presumption will continue, notwithstanding uncertainty and doubt, until *it is clearly and palpably shown that the rate is confiscatory.*

The doctrine enunciated justifies the further deductions: (*a*) It will be presumed that every item of investment of gas cost which we here challenge (the elimination of which will tend to support the rate complained of) was determined by the Legislature, when it established the 80-cent rate, not to be a proper element of such investment or gas cost; and (*b*) it will be presumed, where there is doubt about the propriety and reasonableness of the allowance of *items* of investment or gas cost, that the Legislature held them to be improper and unreasonable allowances, where the constitutionality of the rate cannot be sustained upon any other rational hypothesis.

We have challenged in this case the propriety and reasonableness of the Master's allowing complainant a return upon the value of its alleged franchises, the value of the Astoria first unit, an unearned increment in the value of complainant's real estate, and upon the excess of the reproduction value over cost of complainant's mains and services, and we have opposed the allowance of certain items of cost heretofore stated.

Unless the eliminations for which we have contended are plainly and palpably so unreasonable as to be equivalent to taking complainant's property for public use without such compensation, as under all the circumstances is just both to the complainant and to the public, then our contention should be sustained, and these several items should be eliminated.

IX.

The maximum rate fixed by chapter 125 of the Laws of 1906, will permit complainant to earn a fair return upon the property employed by it in its gas business.

(1) If this Court should affirm the findings of fact contained in the decree, namely (*a*), that the value of the property of complainant devoted to the public use, inclusive of the value of its special franchises, is $59,831,435, and (*b*) that complainant's net income under the eighty-cent rate established by chapter 125 of the Laws of 1906 would be $3,024,592.45, then the finding of this Court will be that the complainant will earn, under the eighty-cent rate established by chapter 125 of the Laws of 1906, a return of five and five-tenth (5.5) per cent. per annum upon its investment, or upon the property devoted by it to the public use, inclusive of the value of the permission to devote that property to the public use.

We contend, upon the authorities and for the reasoning heretofore advanced, that such a per cent. of return constitutes a fair return on the property employed by defendant on its gas business. We contend, that a statute which permits a public service corporation to earn a return of five and five-tenth (5.5) per cent. per annum upon investment in constantly appreciating realty, in plant and property in the streets protected against depreciation, and upon intangible property, which is constantly appreciating in value, *does not constitute confiscation* of that property.

(2) If this Court should affirm the finding of fact contained in the decree that the value of the tangible property devoted by complainant to the public use was $47,831,435, and should hold that complainant's special

franchises were not property on which it was entitled to earn a return, and should affirm the finding of fact contained in the decree that complainant's net income, under the eighty-cent rate established by chapter 125 of the Laws of 1906, would be $3,024,592.45, then the finding of this Court will be, that complainant will be able to earn, at the rate established by chapter 125 of the Laws of 1906, a net income on such property of six and 3/100 (6.03) per cent. per annum.

We contend, upon the authorities and for the reasons heretofore advanced, that a six and 3/100 (6.03) per cent. return per annum upon such property would not only not be clearly and palpably confiscatory but would constitute more than a " fair return " thereon.

Under methods of property valuation adopted by the Court, the provisions for keeping the appreciated property intact and replacing same, and the advantages of monopoly in an unparalleled degree, we submit that complainant has failed to sustain its burden of proof of showing the legislative rates clearly and palpably confiscation.

X.

The provisions as to candle power, pressure and penalties do not invalidate the acts and they are separable.

Reagara *vs.* Farmers' Loan and Trust Co., 154 U. S., 362, 394-6.
Consolidated Gas Co. *vs.* Mayer, 146 Fed. Rep., 155.

These provisions are discussed more in detail in Part II.

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XI.

The eleven cent allowance by the Court was excessive.

We submit that all this allowance in excess of 7.70 cents for current repairs and replacements is excessive. The 7.70-cent charge keeps the plant at all times presently efficient. The average for twenty years has been 10.89 cents, and the development of the capacity under that average shows that it was much more than necessary for the purpose now pretended.

"Even if the 'depreciation' which this item represents was 'depreciation proper,' or depreciation accrued, or definitely to accrue by reason of actual abandonment and substitution, it is not a proper charge against operation.

"In Cedar Rapids Water Company *vs.* Cedar Rapids, the Court said:

> "'So also, we may say, we see no reason why the plaintiff, in addition to operating expenses, repairs and other ordinary charges, should be allowed to reduce the apparent profits by deduction for a restoration or rebuilding fund. The setting aside of such a fund may be good business policy, and if the company sees fit to devote a portion of its profits to that purpose (*though, as we understand the record, no such fund has as yet been carried*), no one can complaint; but it is, in no just sense, a charge affecting the net earnings of the works. To hold otherwise is to say that the public must not only pay the reasonable and fair value of the service rendered, *but must in addition pay the company the full value of its works every forty years,* the average period estimated by plaintiff, for all time to come.'

"The same subject was considered by Garoatte, *J.*, concurring, in San Diego Water Company *vs.* San Diego, *supra,* where he said:

> " ' The theory of the plaintiff in this regard seems to be that the life of a plant of this character may be approximated at thirty years, and that a sinking fund of one-thirtieth of its value should be collected from the rate payers annually and be laid aside to be handed to the stockholders upon the sad occasion of its demise, as an alleviating salve to their sorrow. But such a thing is all wrong, for it results in the consumers of water buying the plant and paying for it in annual installments. Consumers of water cannot be charged with *the cost of construction.* They are only to pay a fair interest upon such cost, and as we look at this matter, if this 3½ per cent., is to be stowed away in the vaults as a sinking fund to make glad the hearts of the stockholders upon the expiration of thirty years, which theory cannot be tolerated for a moment, then it must go to the plant as cost of construction, and, therefore, not chargeable against the consumers.'

" Van Fleet, *J.*, who wrote the prevailing opinion in the same case said:

> " ' With regard to the question of the depreciation of the plant by use it is sufficient to say that *ordinary repairs* should be charged to current expense, that *substantial reconstruction,* or replacement, should be charged to the construction account, and that depreciation should not otherwise be considered. It is doubtless difficult, in many cases, to properly discriminate between current and ordinary repairs and such repairs as amount in effect to new construction. Such difficulties when they arise must be solved by the application of the principles on which ordinary business enterprises are conducted.'

"The true theory of the bookkeeping of the cost of operating is as stated in the excepts above. Operation should only be charged with ordinary repairs, and as such

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should be reckoned as an element in the cost of product delivered, or of the public service. Substantial renewals, or replacements—a new building for an old—new apparatus for new and modern apparatus— new pipes for old—should be charged to construction, but should not be reckoned as affecting the cost of the delivered product, or the public service, the principle being that where anything unserviceable is replaced by a thing serviceable, it should be treated as *new* construction—the company simply saving, as another business enterprise would, the scrap value of the thing discarded to be reinvested in the thing replaced.

[Further consideration of this in Part II, 112-123.]

Correction.

We desire to correct a seeming misunderstanding among counsel as to the powers, etc., of the Attorney General. He is the constitutional law officer of the State and has the power and duty to represent the people of the State in all actions and proceedings wherein they are interested. The creation of the Public Service Commissions may have given them some co-ordinate functions, but in no wise as superseding the Attorney General.

Part II.

Being an argument of some subjects more in detail, as presented by our counsel in the court below, David B. Hill, Esq., Alfred R. Page, Esq., and William A. Deford, Esq.

The Penalties do not invalidate the acts.

Judge Hough said:

> "I am of the opinion that the penalty clauses in both statutes are clearly obnoxious to the remarks of Brewer *J.*, in *Cotting* vs. *Kansas City Stock Yards Co.,* 183 *U. S.,* 79."

In this he followed Judge Lacombe, who, upon granting the preliminary injunction herein, cited the same case, and said:

> "It is difficult to see in what respect the provisions of the two acts now under consideration differ from those passed upon in the Kansas City Stock Yards case, except that they are perhaps more drastic. On this branch of the case there is no controversy as to the facts, and, under the opinion last quoted, these provisions seem obnoxious to the Fourteenth Amendment to the Constitution of the United States."

We respectfully submit that this opinion does not accord with the construction the New York Court of Appeals has placed similar provisions in the statutes of that State, in Griffin *vs.* Interurban Street Ry. Co., 179 N. Y., 438; 180 N. Y., 538, and in Jones *vs.* Rochester Gas Co., 168 N. Y., 65, 68, and Cox *vs.* Paul, 175 N. Y., 328.

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In Cox *vs.* Paul, the opinion states: " That this Court is committed to the doctrine that a party suing for penalty can recover but for one violation and but one default prior to the commencement of the action."

The Griffin case arose under the so-called " Free Transfer Law " (N. Y. Railroad Law, sec. 104). That statute requires the street railroad company under certain circumstances to give a free transfer to each passenger at any point of intersection between two of its lines. The remedy is as follows:

> " For every refusal to comply with the requirements of this section, the corporation so refusing shall forfeit fifty dollars to the aggrieved party."

The Appellate Division held that cumulative penalties were recoverable under this provision, but the Court of Appeals reversed the ruling, and held that only a single penalty was recoverable, no matter how many separate violations may have occurred of the rights of the passenger suing.

There is even less ground of objection in this act than in the free transfer act. The free transfer act gives the penalty to the passenger whose rights are violated. This eighty-cent gas law, however, provides the penalty not as a remedy to the consumer (whose remedy is to refuse to pay the bill and resist the removal of his gas meter), but " for each offense to the people of the state." It belongs to the class of quasi-criminal as distinguished from that of remedial penalties.

If the penalty of the act challenged be construed in accordance with the doctrine of the New York cases cited, then the penalty provisions complained of are not excessive and are not calculated and could not have been intended to deter the complainant from litigating its rights, nor did they operate to deny to complainant the equal protection of the laws.

PY

We submit, therefore, that the penalty provisions of the statute are so definitely separable from the maximum rate provision that each can stand alone, and that it is clear that it is the intention of the Legislature that the maximum rate provision should stand and should be enforcible, even though the penalty provision should fail.

Pollock *vs.* Farmers' Loan Company, 158 U. S., 601.
Poindester *vs.* Greenhow, 114 U. S., 270.

PRESSURE.

The provisions of the laws as to pressure were not shown by complainant to be either physically or commercially impossible.

Chapter 736 of the Laws of 1905 and chapter 125 of the Laws of 1906 contain the following provision in regard to pressure:

> " The pressure of illuminating gas in any service " main in said city at any distance from the place of " manufacture, shall not be less than an inch nor " more than two and one-half inches."

The bill of complaint, at paragraph 23, avers:

> " It is an absolute physical impossibility for your " orator to comply with the provisions in regard to " pressure. The pressure must of necessity vary " beyond the limits prescribed thereby in the mains " of your orator, owing to differences of elevation " of the city mains and the consequent difference of " atmospheric pressure, and owing to the laws of " nature these differences of pressure cannot be obviated by your orator."

Thus it will be observed that the complainant rests its case solely upon the increase of pressure occasioned by higher altitudes.

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Mr. Bradley showed that in so far as distance from the works was concerned the company could control the pressure by delivering gas through a trunk main at high pressure and by means of a district governor reducing it and delivering it into the service mains within the district at any given pressure (567, 568).

The complainant's claim as to altitude is that the pressure of gas in the mains increases one-tenth of an inch in every seventeen feet of altitude. But they fail to make allowance for the reduction in pressure by reason of the friction of the gas in the pipes, which is the reason that gas works are always placed at the lowest possible level; that by reason of the rise in the mains the levity of the gas will overcome the friction in the pipes. Mr. Bradley admitted this and stated that the loss in pressure was considerable; that he had tables that would show just what it was (570, 571), but he never produced them. That the loss in pressure by reason of friction in the pipes is considerable is shown by the fact that in delivering gas in a twenty-four inch main from Twenty-first street to Beaver street, starting with a pressure of four pounds, "it reduces itself; we do not get any more pressure there "than we require with that initial pressure at Twenty- "first street. That is the friction" (570, 571). Professor Humphreys gave an elaborate formula for obtaining the loss or absorption of pressure (1780, 1781), and stated that in a forty-eight inch main that an initial pressure of two and one-half inches would be reduced to one inch in forty-eight feet of pipe, but on carrying the subject to its legitimate conclusion he substantially changed his testimony (1781-1783), that in a forty-eight inch main you would lose an inch and a half of pressure in a mile of main (1783), and further that if the main had a gradual upward rise of ten feet to each 700 feet of pipe, that this would tend to offset the loss of pressure (1783, 1784). And, furthermore, that an automatic governor placed at any point would maintain an equal pressure in the mains by admitting more gas as the pressure fell and closing down to admit less gas as the pressure rose (2091), and also that pressure could in some respects be equalized by carrying a trunk main for a considerable distance and then connecting it with the distributing main in which the pressure had been reduced by friction and the drawing off of gas by consumers. We have, however, in the testimony of Mr. Edgerton two comparisons, one taken at Columbia University, which is 150 feet above the sea level, and the other taken at No. 386 West One Hundred and Twenty-fifth street, at the bottom of the hill, and we find by comparison of the charts of the two experiments, Exhibits JJ 1-16 with KK 1 and 2, that there is a difference in the pressure of three-quarters of an inch less at the bottom of the hill than at the top (2924). That Edgerton's experiments throughout the city show that it is entirely within the power of the gas company to regulate its pressure within the limits prescribed by law, and that with certain changes in the company's system of distribution a pressure in any service main at any moment of not less than one inch nor more than two and one-half inches could be complied with, with less care and attention and less risk of a momentary compliance, than under the present system (2928), a system of districting the city and placing higher altitudes in a district regulated and controlled by an automatic governor is a well-known device of gas engineering to regulate and control pressure, as is stated in Newbigging handbook for gas engineers and managers, which, Mr. Bradley stated to be a standard authority, as follows: "For the supply of gas "to varying levels, therefore, separate leading mains with "a station governor upon each are highly advantageous "and should be employed wherever practicable" (570). And at page 570 of the testimony Mr. Bradley stated that it was theoretically practicable to divide the city into districts, and place district regulators or governors at each district, and that in many cities this system is used, and that the reason that Mr. Bradley has not used them is that he is afraid to trust a machine to work automatically and that he supposes that in the other cities the managing engineers have more nerve than he has.

Therefore, it would appear that the difference in pressure occasioned by a difference in altitude may be entirely regulated and controlled by devices well known to gas engineering science and which are in practical operation in many cities of the United States, and, therefore, on the one ground stated by the complainant on which it attacks the pressure provision of the law, that because in difference of elevation it is impossible to comply, they have entirely failed to establish their case and that the contrary has been conclusively shown. As to the necessity for regulating the pressure at which gas may be delivered to consumers, it is only necessary for the Court to take into consideration the exhibits put in evidence by the complainant (Exhibits 345-366-b, inclusive), in which it will appear that in the instances of greatest variation the company has attached service pipes and are delivering gas to consumers upon pumping mains as shown by the rapid fluctuation in pressure upon the chart (see Exhibit 364), as compared with exhibit showing the corresponding fluctuations charted, and the testimony of Edgerton, Hallock and Humphreys as to the efficiency of gas delivered at a uniform pressure.

The evidence is very well summarized by the Master (Master's report, 248, 249). He, however, fails to draw a conclusion, but from his statement it is very clear that the question of pressure at which illuminating gas should be delivered is clearly within the police power of the State, and in order to set aside the regulation prescribed by the Legislature, it will be necessary for complainant to show that it was impossible to comply, and that by the application of no known device could the pressure be regulated. The complainant's witness admitted that the pressure could be regulated by the installation of district governors, which was a method recommended by Newbigging, an eminent English authority.

Upon the subject of pressure the Circuit Court said:

> "By the expenditure of about $4,000,000 for construction of mains and valves alone, exclusive of any pumping stations or other apparatus, it might be possible to establish and maintain the pressure called for by these acts. Such a thing is commercially impossible, and even if it were done (of course at complainant's expense) it remains commercially impossible, since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible, because when made it would not add a dollar to income."

The Court, therefore, found that (*a*) the compliance with pressure regulation was *physically possible,* but (*b*) that it was commercially impossible.

If compliance with the pressure regulation was *physically possible,* then the regulation is not obnoxious to the Constitution because of complainant's inability to comply with it.

If compliance with the pressure regulation is *commercially impossible;* that is to say, impossible except by the reconstruction of complainant's distributing system and by the investment of additional capital, it cannot be obnoxious to the Constitution, except upon the ground that the eighty-cent rate will not yield complainant a fair return on its investment, *i. e.,* its present investment plus the investment necessary to enable it to comply with the regulation; and complainant *cannot complain of its unconstitutionality on that ground until it has made the investment necessary to enable it to comply with the provision.*

The Circuit Court said in its opinion that "for changed circumstances, either of production or consumption, there must be new applications for relief; the business of the Court is to deal with circumstances discoverable in the present and by the evidence." Applying that doctrine here, we contend that when complainant has made the investment necessary to enable it to comply with the pressure regulation and has thereby devoted additional property of definite value to the public use, and it should find that the rate prescribed by the statute did not yield it a fair return on its total investment, then, under the "changed circumstances" brought about by its new investment, it might make a new application for relief.

If this Court should, however, find that compliance with such pressure provision is physically and commercially impossible, and is therefore obnoxious to the Constitution, as being legislatively unreasonable, then we contend that the provision is clearly independent and severable.

Candle Power.

The Master reported that, while by complainant's Exhibit No. 94 the cost of gas production in 1905 was fully shown, such cost only covered the expense of enrichment from twenty to twenty-two candle power for the last six months of that year, "while for a full year (there would be required) the addition of 1.83 cents per thousand feet to the cost as stated."

Complainant moved the Court below upon its application for a supplemental expression of opinion, that it might be allowed an additional cost allowance of 1.83 cents per thousand cubic feet to cover the expense of enrichment from twenty to twenty-two candle power for the other six months of the year, contending that 1.83 cents per thousand cubic feet would be necessary for that purpose.

The defendants resisted complainant's motion for the reasons set forth in their brief submitted to the Court, as follows:

The Master reports that the Gas Commission allowed 1.81 per thousand cubic feet "for cost of enrichment due to 22 candle-power law," but that Mr. Addicks claims 1.83. It appears at page 1821 of the testimony that the former figure was based upon Addicks' statement to the Gas Commission.

The complainant does not claim that the 22 candle power was not required by law during the first six months of 1905, just as much as during the last six months of that year. Its present motion refers to the year 1905 as one, "during only the last six months of which complainant was operating under the legislative acts in question *imposing penalties* for each failure to maintain at least 22 candle power"; and the complaint is that the year 1905 cannot therefore be regarded as affording a "basis of a full year's production under said 22 candle power provision as compared with the lower enrichment previously maintained by complainant."

The candle power requirement was just as clear before the legislation of 1905 as it has been since then. In fact, the words used were the same, except that the words "place of manufacture" were used instead of the words "distributing holder." The difference was in the fact that there was no penalty in the original act, whereas a penalty of $1,000 for each offence was inserted in the laws now complained of.

Act of 1897, c. 385, Exhibits, p. 5264.
Act of 1905, c. 736, Exhibits, p. 5262.
Act of 1906, c. 125, Exhibits, p. 5263.

The charter provision as to 20 candle power test and penalty dates also from 1897 (chap. 378, sec. 578), and of course did not repeal the 22 candle power provision in a subsequent statute of that year; nor did its re-enactment in 1901 in the revised charter so operate.

There appears from the evidence five plants (Testimony, pp. 535-540), where enrichment is necessary in order to reach a required candle power. For each failure at any station, the statute provided a penalty of $1,000 (the total number of customers, exclusive of the City, being 390,000); but the Court has held the penalty void at request of the complainant. If it is void, what ground have we for any inference that the complainant will furnish any better gas than it did before? Why then should the price of gas to the consumer be raised? If the rule by which street car conductors were made to ring up their fares had been held unconstitutional, would it have been necessary to raise their salaries?

It is respectively submitted that every presumption should be entertained against a complainant who puts forward such a ground for a motion to increase the cost of gas to the consumer; and that this is especially the case when it is a matter as to which it is very difficult to get at the truth, and the truth is best known to the company which avows its disobedience to the law.

The most reliable evidence that we can find assists the defendants' contention. It is to be found in the tabulation of actual candle power tests made by the City during the year 1905.

City's Ex., 47, Exhibits, p. 5540.

This exhibit shows that for the first six months, when there were no penalties, the average City test was 22, and that in the second six months, when there were supposed to be penalties, the test showed 24.19. The average for the year is estimated on the exhibit at 23.1. Indeed, the average as between the tests for the first six months and for the tests for the second six months is somewhat higher; but considearably more gas was sold during the first six months than during the last six months.

Exhibits, pp. 5753-5756.

Such reliable evidence as we have tends to confirm the deduction from the actual City tests. Complainant's Exhibit 93 gives the summary of operations for the year ending October 31, 1905. The manufacturing cost was 32.84. Its Exhibit 94 gives a similar summary for the year ending December 31, 1905. The manufacturing cost was but 32.77. In other words, the difference between November and December, 1904, on the one hand, and November and December, 1905, on the other, was trivial; and such difference as there was showed less cost of production under the 22 candle power penalty regime. If there was really an additional cost of 60 cents or so for enrichment, *it was masked by some new economy which complainant has not thought it wise to confess.*

It was entirely within the power of the complainant to give us a better basis of inferences than an Addicks hypothesis. It could, as was observed on the argument, have supplied the Court with a calculation of manufacturing cost for the year beginning July 1, 1905. It did not complete its direct testimony until September 14, 1906. It might have been inconvenient to make the calculation; but complainant has spared no inconvenience, either to itself or to the other parties, when it saw inconvenience joined with advantage to itself. It did not desire to show its figures for the first year of the 22-candle-power penalty, and it refused to allow its books for the last six months of that year to be looked over. Mr. Addicks' testimony need not be followed.

Chicago & Grand Trunk Ry. Co. *vs.* Wellman, 143 U. S., 339, 343.

The presumption against the party unwilling to show his books, and trying instead to help out his case with opinions of friendly experts, must be applied.

> Sturgus *vs.* Clough, v Wal., 269; quoted in The Conqueror, 166 U. S., 110, 128, 134.

It appearing that during 1905 the average candle power, as actually tested by the City (thus allowing for all loss of candle power in distribution), was more than one point above that required by law, the matter being one so obscure and subject to such difference of opinion, and the complainant being in so inequitable a position, it was respectfully submitted that the Court has properly disregarded the testimony of its experts and presumed that its experience in 1905 is a fair test of what it can do under the legal requirement.

The Court denied the complainant's motion for such an allowance for the reasons set forth in its supplemental opinion, as follows:

> "Complainant now urges that by the Court's treatment of the 'Ten-Cent Item' in the opinion, this cost of additional enrichment has been taken away from it, inasmuch as the Master did not specifically allow said 1.83 per thousand, but permitted it to be included in the ten-cent reserve for future contingencies.
>
> "It also appears that during the last six months of 1905 complainant's gas was maintained at a tested candle power of 24.19, and for the whole year the average was 23.1. Yet complainant declares that inasmuch as the status attacked in this litigation require that 22 candles be maintained not only at the testing stations so long used, but at any point on the line and at all times, it became necessary for it to maintain an initial strength of much more than

> 22 candles in order to meet the requirements of the law. Upon this, as upon all other points involved in this litigation, the burden of proof is upon it; and for the purposes of this application I must regard the penalty clauses regarding pressure of the acts in question as unconstitutional and void. The question therefore is whether complainant has shown, first, that 1.83 is the certain necessary expense of the required enrichment, and, second, whether remembering the unconstitutionality of the penalty clauses, an average of 23.1 candle power be not sufficient for its purposes and reasonably satisfactory to the law. On both of these points my opinion is adverse to the complainant. I do not think that complainant satisfactorily proved that 1.83 cents was the necessary cost of additional enrichment, and do not think that the average candle power of 1905 will be found sufficient to satisfy both the law and commercial requirements. The complainant's request for modification of the opinion in this regard is denied."

We contend that upon the grounds set forth, *supra,* including those stated in the Court's supplemental opinion, the application for such allowance was properly denied, and that the decision of the Court below, being a decision upon the question of fact purely, should stand.

The lesser rate to the City than to private consumers does not invalidate chapter 736, Laws of 1905.

The Legislature could not, as between private consumers, provide as to one particular class that the rate should be eighty cents and another particular class seventy-five cents per 1,000 cubic feet. But as to the City an entirely different question arises. The lighting of a private residence is for the private convenience of the owner. The lighting of the streets and public buildings is in the interest of all the public. The lighting of the streets makes for the safety and convenience of all and therefore is within the police power; it is a duty that the City would have to perform did it not permit the complainant to do it. Hence the Legislature could require the complainant to perform the duty on the same terms as the City itself might do it. The complainant uses the public streets to distribute gas to private consumers and earns a profit thereby. If there had been attached, to the right to exercise that privilege, the condition that gas should be sold to the City for its purposes five cents cheaper than to private consumers, it cannot be contended that such a requirement would have been unjust or an unequal condition for the use of public property. If the Legislature could have imposed that condition originally, it can now.

The right to impose burdens for the public good and in favor of the municipality, upon public service corporations, has been repeatedly held constitutional. The recent case in the New York Court of Appeals, Rochester *vs.* Railway Co., 182 N. Y., 99-112, affirmed in 205 U. S., 236, held that under the reserve power in regard to corporation, the police power and the taxing power, the Legislature could compel a street railroad company to keep in repair the pavement between its tracks and for two feet each side, although no obligation rested on other users of the street to do so.

In the case of L. S. & M. S. Ry. *vs.* Smith, 173 U. S., 684, held that the railroad company could not be required to issue one-thousand-mile tickets at a less rate per mile than its schedule, on the ground that it was justified by no public purpose. But the Court in L. S. & M. S. *vs.* Ohio, 173 U. S., 285, held that as public convenience was served by requiring a certain number of trains daily to stop to receive and deliver passengers at towns of a certain size that it was not an unconstitutional regulation.

The discrimination which is repugnant to the Constitution is for the same service to different individuals. A different charge for a different service is not discrimination.

For service to private consumers the complainant has to have meters and maintain a force of meter inspectors and collectors.

The service to the city is in great bulk—it is wholesale against retail delivery.

As far as street lighting is concerned, which is by far the larger item, no meters are used, and no inspectors required, and no collectors have to be employed to collect for the gas sold, and there is no risk of nonpayment; taking these differences between the private and public service it is submitted that an allowance of five cents per thousand is reasonable. (See cases under next subdivision.)

The Legislature having taken all the foregoing reasons into consideration:

" It suffices that it is practical, and is not reviewable, unless palpably arbitrary."

Orient Insurance Co. *vs.* Daggs, 172 U. S., 557, 562.

The failure to limit price in localities other than The City of New York, does not invalidate chapter 125, Laws of 1906.

> "The fourteenth amendment to the Constitution of the United States does not prohibit legislation which is limited either in the objects to which it is directed or by territory within which it is to operate. It merely requires that all persons subjected to such legislation shall be treated alike, under like circum-

stances and conditions, both in the privileges conferred and in the liabilities imposed."

Hayes *vs.* Missouri, 120 U. S., 68.

"Class legislation, discriminating against some and favoring others, is prohibited, but legislation which in carrying out a public purpose is limited in its application, if within the sphere of its operation it affects alike all persons similarly situated, is not within the amendment."

Barbier *vs.* Connolly, 113 U. S., 27.

"The clause in question means that no person or class of persons shall be denied the same protection of the laws which is enjoyed by other persons or classes in the same place and under like circumstances."

Missouri *vs.* Lewis, 101 U. S., 22.

"Certainly it cannot be claimed that this prevents the State from regulating the fares of hackmen and the charges of draymen in the City of Chicago, unles it does the same thing in every other place within its jurisdiction."

Munn *vs.* Illinois, 94 U. S., 126-135.

Cost Items Which the Court Should Have Rejected.

Item No. 66, Sub-Item, Tax on Special Franchises, $406,909.23.

The Court, in its computation of cost for the future, makes complainant an allowance of $406,909.23 on account of operating expenses due to the payment of a tax on its special franchise. It [illegible] apparent that if complainant's earnings be reduced by action of the State, an allowance on account of special franchise tax heretofore paid, predicated upon the old rate, must be proportionately reduced.

We adopt the argument of counsel for the Public Service Commission with respect thereto, which is as follows:

> " It must be assumed that the franchise tax will be assessed upon the basis which, as between the parties hereto, shall have been adjudicated and fixed by the decree in this suit. The tangible property, excluding the tangible property in the streets, is worth $33,500,000. An income of 6 per cent. on this would be $2,010,000 (see Chicago Union Traction case, 114 Fed. Rep., at p. 561). Subtract this from the 'net income under legislation here attacked' (Opinion,) and we get about $1,225,000 as the income which is the measure of the 'special franchise tax.' Assuming a capitalization of the special franchise at 6 per cent., then the rate of taxation in this city, being 1½ per cent. (Testimony, pp. 1002-1003), we have as the probable franchise tax one-quarter of this income, or $306,250. Correcting these figures to accord with complainant's allegation as to the equalization of assessments (Exhibits, p. 2734), we must reduce them 25 per cent. The special franchise tax will therefore be something below $230,000. (On the basis quoted by the Master, the tax would be about $308,570, but, as above remarked, the rule adopted by this Court would be an adjudication which would doubtless govern). The Court's figures, however, are based upon the assumption that the tax for 1907 will be $406,909.23" (Master's Report).

The method of reducing the franchise tax employed above is in harmony with the method of assessing special franchises for taxation employed by the State Board of Tax Commissioners. The effect of the reduction is simply to eliminate from complainant's capital account so much of the value of its franchises as is based on its earnings over and above so much thereof as would represent a fair return on its tangible property. it is obvious that if the reduction of rate results in the elimination of all profit except such as would constitute a fair return on complainant's tangible property, then there will be left for assessment and taxation no franchise value whatever predicated upon earnings over and above a fair return on the tangible property, and hence there will be no such value to tax.

It must be assumed by this Court that complainant's special franchise tax will be assessed upon a basis established by the decree in this suit, and hence will not be levied upon any value which shall be eliminated by a decree sustaining the constitutionality of the eighty cents rate fixed by the statute.

Alleged Inconsistency of Taxation of Franchises.

The complainant contends that it is unreasonable to tax this franchise as property, as they have been taxed since 1900 in this State, and refuse to allow complainant a return upon the value of the property so taxed.

It will be seen upon analysis that there is no unreasonableness in our contention in that respect.

In 1905, the year which has been adopted as the test year for the determination of cost (as per Exhibit 94), the company's special franchises were taxed as of the value of $27,300,000, inclusive of the value of certain personal property described in the act authorizing the imposition of the tax (202); and complainant paid thereon a tax of $406,909.23 (Ex. 94), which tax is computed by the Master as an item of cost and so allowed.

The Master assumes that the value of the franchises for that year were determined by the State Board by the method which he adopted; that is to say, by the capitalization of the complainant's capacity to earn a profit over and above a fair return upon property actually used in its business (204).

The tax was justly levied in that year, upon that principle, and under that law, for complainant's earning capacity under the dollar rate, which it was then permitted to charge, was 25 per cent. greater than it would be under the rate established by the law here challenged.

The tax was levied in a year when the franchise values taxed (predicated upon its *then* earning capacity) existed. The complainant could not be taxed in any sum on account of its special franchises, if the 80-cent gas rate be upheld and its effect be to reduce the earnings of complainant to the margin of a return *only* upon the tangible property used in its business.

The franchise values which existed in 1905 were taxed as of that year, and complainant, as a matter of bookkeeping, entered the tax as an item of gas cost for that year, and the Master and the Court in reviewing the cost of gas for that year, for the purpose of arriving at the probable cost of gas in the future, accepted the tax as a proper item of gas cost.

It should be noted that the inconsistency complained of could relate, in any event, only to the particular year when the franchises were assessed as property and the tax paid thereon, and could have no bearing whatever upon a future year when, if the 80-cent gas rate is upheld, there will be no franchise value to tax, and hence no tax (as an item of gas cost) to pay.

The Court below has neither criticised nor challenged our argument that the inevitable effect of the enactment of a law which fixed a rate of charge that would yield complainant a fair return on the value of its tangible property only, would be to destroy the franchise value based upon the earning capacity or franchise value determined by the capitalization of the excess profits eliminated. The Court, however, did criticise our contention that the value of complainant's franchises so determined, being so destroyed by regulation, the complainant would not in the future be put to the expense of paying tax thereon. The Court said:

> "As an illustration of the difficulty of the subject, the argument is admirable, but to ask the Court to remove from the operating expenses of the company a tax lawfully laid in pursuance of existing statute, on the ground that a subsequent statute extinguished that upon which the tax operated, notwithstanding that the only apparent effect of the 80-cent tax (gas?) law was to increase the franchise tax, is a considerable demand upon credulity."

The learned Judge refers to the 80-cent tax law when he doubtless intended to refer to the 80-cent gas law, the error being a typographical one.

How the 80-cent gas law can have the effect of increasing the complainant's franchise tax, we are unable to see, for certainly a law which reduces complainant's rate of charge, and hence its earnings, cannot have the effect of increasing the value of its franchises predicated upon the capitalization of those earnings. It may be that the learned Judge's observation is predicated upon an increase in the company's assessment on its franchises by the State Board of Tax Commissioners since the passage of the law, but such an increase could not be in any sense an effect flowing from the enactment of the 80-cent rate law. The franchise taxes assessed on complainant's franchises prior to the enactment of the 80-cent rate law, have been allowed both by the Master and the Court as operating expenses. The State Board of Tax Commissioners were doubtless influenced to increase the amount of their assessment on complainant's franchises in order to conserve the interests of the public pending the determination of this litigation and its decision by this Court.

We do not consider it a considerable tax upon credulity to urge upon this Court that the State Board of Tax Commissioners will not continue in the future to assess the company upon franchise values predicated on the earnings under a dollar rate after the State has established an 80-cent rate; that such Board will not continue to levy a tax on complainant's franchises based on the profits realized from the 20 cents per thousand cubic feet which the State has taken away from complainant by the enactment of the "regulating statute." It is reasonable to presume that the State Board will continue to do its duty and follow in the future the method which it has employed in the past for determining the value of complainant's franchises, and that if this Court shall uphold the constitutionality of the 80-cent rate law, and thus eliminate the profits upon which complainant's franchise values are predicated, it will cease to assess a tax on so much of the value of complainant's franchises as the regulatory statute upheld destroyed. If the Board should attempt to levy a tax upon franchise values that had been "eliminated" by a law of the State of New York upheld by this Court, the Court would afford complainant speedy and adequate relief.

Item No. 67—"Contingent Expenses (includes renewals), $1,328,316.37."

(Complainant's Exhibit 94, p. 217.)

The account which this item represents was first opened upon the books of the complainant in May, 1905 (224), during, or at the end of the Stevens legislative investigation into the cost of gas in New York City, which was had in that year (228), for the avowed purpose of determining whether the cost of gas therein, or to complainant, would justify the legislative reduction of the price of gas from the dollar rate then prevailing.

This item, however, was first entered by complainant at a time when it became apparent that it would be compelled to show (contesting the validity of the law reducing its rate of charge) that it could not sell gas at less than $1 per thousand cubic feet and earn a fair return upon its investment in the gas business.

Prior to the Stevens investigation a "depreciation account" was kept, in which "scrapped" articles were set down at book value. Excess in renewals over the "depreciation account" were treated as "additions" or "new construction." There was no distinction made between "current renewals" and "final renewals" (4506-8).

The item amounted to an allowance of ten cents per thousand cubic feet of sales, in addition to the actual expenditures for repairs during 1905, represented by items Nos. 34 and 47 to 52 of Exhibit 94 (which amounted to 5.58 cents per thousand cubic feet of sales), and inclusive of a current replacement charge of 2.12 cents per thousand cubic feet of sales.

The Court rejected the item as found by the Master and substituted a total allowance of 11 cents per thousand cubic feet of sales.

Complainant's Claim.

Mr. Carter, the secretary of complainant, was first questioned with respect to this item during the investigation by the State Commission of Gas and Electricity, held upon the complaint of certain consumers in the winter of 1905-1906, and was subsequently examined with respect to it in this case. He explained the nature of the item, and the reasons for the entry thereof as follows:

> "The account was established out of consideration of the possible contingencies that might at any time arise or would require the employment of such

> reserve as we undertook to acquire by that means. I might say that we put into the account such considerations as fluctuation in the cost of material, liability to serious and expensive accidents, having in mind the case of a very grave one which occurred in Boston not long ago, which cost the company there a great deal of money to settle in the way of damages; the possibility of variations in the volume of the business might render the presence of such a fund very serviceable to the company; and many considerations of that sort were canvassed very thoroughly in determining the amount that we should reserve (224-225). I would say, too, that one of the principal considerations, but not necessarily the primary one, that we foresaw the loss incidental to the removal of our plant to Astoria of something approximating $10,000,000, which had to be taken care of. It was one of the purposes for which a portion of that fund would ultimately be used (876).
>
> "Our intent, of course, was to cover by that ten cents such extraordinary loss as the company would sustain in the removal of the plant to Astoria, among other things, as well as to cover the cost of current replacements and renewals that would take place independently of any transfer of the plant to Astoria from New York" (224).

Mr. Addicks, vice-president of the complainant, justified the entry by the explanation that it was to cover

> "any minor extensions, renewals on account of extraordinary wear and tear, depreciation not covered by repairs, all supersession, accidents of larger moment than usual, fluctuations in the business, changes in the cost of all materials, and electrolysis and other contingencies" (224).

It became obvious to complainant that, for the purpose of maintaining its cause of action herein, or similar issues elsewhere, it would have to fortify its explanation of this allowance as an isolated entry, made under circumstances that rebutted its integrity, by expert proof as to the propriety of making the allowance for the reasons advanced by complainant's employees in explanation thereof.

Accordingly it produced Mr. Addicks and Dr. Humphreys, who testified as experts to the proper allowance to be made on account of depreciation and reserve, in order to compute the reasonable cost of the manufacture, distribution and sale of gas in the City of New York.

Definitions of "Final Renewals" and "Reserve."

Complainant's experts defined a "final renewal fund," which definition is adopted by the Master in his report (226), as "a fund in addition to current expenditures for 'repairs and renewals,' such as are embraced in Items 34 and 47 to 52 of Exhibit 94, and the current replacement charge of 2.12 cents per thousand cubic feet included in Item No. 67. It is intended: (a) To cover physical deterioration which has taken place and which has not been met, by current repairs and renewals, and (b) to provide for the loss or displacement of plant, in whole or in part, in the future from any cause" (224).

These experts define "reserve fund," which definition is adopted by the Master (228) "to cover such contingencies as increase in cost of labor and materials, hazards of strikes, damage from electrolysis or by reason of explosion and unforeseen events of any description which may tend to increase the cost of production."

The Allowance of the Experts on Account of "Depreciation" and "Reserve."

Dr. Humphreys deducted from total operating cost, as shown by Exhibit 94, complainant's actual expenditures, on account "of repairs, production and distribution" (5.2.1 cents), and Item 67 (10 cents)—a total of 15.21 cents—and substituted therefor the average of complainant's actual expenditures on account of repairs and renewals for a period of twenty years preceding 1905, which was 7.5858 cents, plus an allowance on account of estimated final renewals in manufacture and distribution of 6.5592 cents—a total of 14.14 cents.

Mr. Addicks, in place of the 10-cent item, added to the item of 5.58 cents, actual repairs and renewals for 1905, 2.12 cents actual replacement (included in 10-cent item), 4.62 cents (the difference between the sum of last two allowances—7.70 cents—and the average expenditure therefor from 1895 to 1899, exclusive—12.31 cents), an allowance for labor of .78 cents, and an allowance for "reserve fund" of 3 cents, making a total for depreciation and reserve of 16.10 cents (231, 232).

The Master's Reasoning.

The Master said (   ):

> "I am satisfied that the charge of 10 cents per thousand feet for 'contingent expenses,' including renewals and replacements, as shown by Item 67, is not excessive, but, on the other hand, rather conservative. I have not deemed it necessary to differentiate between the amount to be allowed for final renewals and for contingencies, nor to determine that any fixed amount should be added to the current expenditures for repairs and renewals to bring them up to the average of former years. It is sufficient to say on this subject that the annual expenses for repairs and renewals have been very considerably less per thousand feet since the year 1900 than during the period between 1884 and 1899, inclusive. The renewals for 1903 were $237,576.96, as against $282,219.67 for 1905. With this single exception, the renewal charges for the five years from 1900 to 1904, inclusive, were very considerably larger than for the year 1905. The testimony as to the amount of depreciation now observable in

the plants, or for which allowance should be made in appraising their value, indicates with reasonable certainty that the annual expense for renewals and replacements is likely to be over, rather than under, the 2.12 cents per thousand of the year 1905. This takes into account no extraordinary charge due to abandonment or 'scrapping' of plant, in consequence of anticipated removal at some later date to Astoria."

"As regards the elements to be taken into account in fixing a proper amount of reserve for contingencies, the direct testimony was confined chiefly to the matter of electrolysis. That this is a danger which may be reasonably apprehended is evident from the fact that it has received very considerable attention from electrical experts throughout the country and has been made the subject of special investigations on behalf of interests having capital invested in sub-surface construction. No special damage gas has been shown to have thus far resulted in this City, and the evidence indicates that all possible precautions are being taken to prevent it, and with a reasonable assurance of success. In view, however, of the increasing number of electrical installations now in progress in this city, with currents of unusual power, it canont be wholly disregarded. The danger of explosion is more immediate. Experience has shown that such catastrophies are not at all uncommon in the experience of this and other companies, and may occur without fault of the companies' servants. Under existing conditions, the chance of their occurrence is likely to increase rather than decrease. It is also apparent that, in view of the increasing number of sub-surface structures in New York City, the expenses to which complainant must be subject in the care and maintenance of its mains and connections are likely to increase, and this fact, in connection with the continued rise in the price of labor and materials, indicates strongly the necessity in prudent corporate management for maintaining a reserve in excess of the actual expenditures called for by known requirements."

The Court's Reasoning.

The Court below said ( ):

" This may be conveniently called the ' Ten Cent Item.'

" It is admitted that some allowance must be made for the accidents and contingencies of this, as of any other business; and complainant therefore demands that in addition to treating as permanent disbursements what it actually paid out during the period of inquiry for repairs and renewals to its plant, mains, services and meters, there should be allowed to it a reserve and contingent fund of ten cents per thousand feet of gas sold; or, at the existing price of a dollar a thousand, substantially ten per cent. of its gross income.

" This method of stating the ten per cent. reservation is misleading, and I think unjust to the State. The more gas complainant buys from other companies, the greater its volume of sale; but, as pointed out, the expense of maintenance does not increase *pari passu* with increased sales; and the allowances, if granted at all, should be upon the sale price of the maximum production of complainant's own works. This deduction alone would amount to more than $150,000.

" The nature of this ' ten cent item ' may be seen by observing that during 1905 there was actually expended for repairs and renewals, and included in station and distribution cost, the sum of $685,077.47; and this item is to be considered as a permanent allowance for repairs and renewals, amounting, according to the report, to 5.58 cents for every thousand feet of gas sold, including, of course, the gas purchased from other companies. Yet in addition to this allowance, there is demanded, in permanence, an additional ten cents per unit sold, amounting to $1,328,316.37, to cover the probability of annual repairs and renewals in excess of $685,077.47, and depreciation mediate and ultimate; by which is meant the final replacement of plant and apparatus owing to irreparable decay. This item has been the subject of bitter contest, and after much hesitation I am unable to concur in the report.

" It appears upon a review of sales of gas, and cost of repairs and renewals actually made, between 1885 and 1905, that the average expenditure for such purposes during that time was 10.89 cents per thousand feet of gas sold. Since 1899 the produce of complainant's factories has not been sufficient to satisfy its consumers, and the average, if computed only upon gas manufactured, is somewhat higher, but not over 11 cents per thousand. This average of repairs and renewals has for twenty years been sufficient, not only to maintain the plant in a condition of ordinary excellence, but to enable complainant to-day to make more and better gas than ever before, while owning a better plant than ever. The actual payments for these purposes, have often, as in 1905, fallen far below this average. This shows that the expenditure is not constant; while the retention of the large percentage demanded would be so under the plan urged on the Court.

" There are certainly legitimate and gainful purposes to which temporarily unexpended balances can be put; and if they are so used an 11 cent reservation on gas manufactured will mean, during the years, much more than 11 cents kept, pending larger demands from the works, without profit from its use.

"Again, the ten cent item may be thus analyzed: In 1905 there was charged to depreciation $282,219.67, while there was expended on new construction $261,264.36, a difference of $339,044.69. Construction represents actual outgo, is chargeable to principal, and must be provided for either by new capital, or—what is the same thing—a capitalization of earnings, or by borrowed money. It is not pretended that, as against a regulatory statute, new construction must be allowed for out of current earnings. Yet under the system of bookkeeping above outlined and shown in the evidence, what happened in 1905 was this: *The* $621,264.36 *was expended; then a year's depreciation was fixed by estimate at* $282,219.67; *and that amount of construction expenditure was charged to income as depreciation, and is sought to be covered in this ten cent. allowance.* (Italics ours.) The distinction between depreciation of that kind and new construction seems to me very shadowy.

"On considering the twenty-year average of repairs and renewals, it is observable that the consumption of gas has in that time nearly quadrupled, and the capacity of complainant's own works very largely increased. It follows that the 10.89 percentage, if computed upon the sales for 1885, represents a much smaller sum than does the same percentage on the product of 1905. Yet the number of plants has not increased with increased production. Neither, proportionately, have miles of mains and most other parts of distributing property. Each plant turns out more gas, through interior enlargement and improved methods of production, and there is nothing in the evidence to compel the belief that the same proportion of repair and renewal expenditures to value of product, existed in 1905 as did in 1885, or that the proportion of earlier years is legitimately to be required in the future. And this is true, although the amount of money lately expended, and to be expended, is much larger than twenty years ago.

"The actual result of this demand, as applied to the facts of 1905, is as follows:

"If the 10 per cent. reserve were computed only on gas manufactured, it amounted to $1,065,781.03 of cash in hand. Of this $282,219.67 passed to depreciation, and was actually used to lessen expenditure for new construction, and the balance of $783,561.36 should have been credited to reserve against future contingencies. This means that if repairs and renewals could be kept at the figure of 1905, and no more be called depreciation than was used to aid in construction in that year, there would be produced without the aid of investment at interest a fund sufficient to reconstruct complainant's entire plant in twenty years.

"No such thing will probably happen, and counsel have argued that this apparent surplus is propectively dissipated by future increased expenses, and losses of many kinds. The constant rise in the price of most materials and most kinds of labor is something of which even judicial cognizance may be taken, but this inquiry is solely into the reasonableness, and therefore the legality, of the regulatory action in 1906. It is not to be presumed that if circumstances change the regulation will remain unchanged. And if such a regulation does remain unchanged, there is nothing in the law as developed down to this time to prevent application to the Courts, years after the passage of the regulative statute, upon the ground that what was just when the statute was passed has become unjust by lapse of time and change of circumstances.

"As to future losses of a kind not known in the past, such may well be encountered; it is said, probably with truth, that the crowded condition of underground New York increases for the future the danger of explosion, and introduces a new peril in electrolysis resulting from the multiplication of underground electric currents. These are dangers possible; so, somewhat more remotely, are lightning and earthquake. *But it cannot be said, as matter of law, that a corporation, even as against its shareholders, has the right to horde income for the sake of maintaining dividends in years when extraordinary disasters may occur* (italics ours). If a prosperous private corporation chooses to set aside for such contingencies an annual fund of 10 per cent. of gross earnings, discontented minority stockholders might not be able to coerce the discretion of the directors by judicial proceedings, but their complaint would be entitled to a hearing, and the alleged abuse of discretion strictly inquired into. The case of the company or its directors is far weaker where the endeavor is *to capitalize a large proportion of yearly earnings against the undoubted regulatory power of the State* (italies ours).

"I am of the opinion that some such capitalization of income is proper, but can it be said in this case that a 10 per cent. reserve is so universally or even generally approved in manufacturing circles, so necessary for this corporation in the light of its past history, and so clearly shown to be all these things by the evidence herein, as to require the

Court to uphold the claim and accordingly seek to limit the regulatory power?

"In my view the statement of this proposition is a sufficient answer to it, and I find that complainant has not sustained the burden of showing the general acceptance and reasonable necessity, and therefore the legality, of the reserve demanded.

"An allowance of eleven cents per thousand feet on the maximum production of complainant's own works to cover repairs, renewals and depreciation mediate and ultimate is in my judgment sufficient."

"Astoria, etc., Capital Invested, Gas Purchased from Other Companies."

In the Master's statement, reporting the property upon which the company is entitled to a return, appears an item of $12,000,000, on account of "capital invested in the production of gas secured from other companies" (247).

It will be noted that the item does not represent capital invested in gas production by the complainant or property devoted to the public use by complainant, but purports to represent "capital invested in gas production by other companies." Such an allowance is *prima facie* not justified by the rule, and should not be confirmed except after close scrutiny of the reasons by which the Master seeks to justify it.

The defendant objected to the allowance of this item upon the grounds following:

First—That the property of the Astoria Company was not the property of the complainant; and,

Second—That the property of the Astoria Company has never been, and is not now, devoted to the public use.

To the first objection of defendants, that an investment in gas property by the Astoria Company was not an investment in gas property by complainant, the Master answered that "there would seem to be no ground, for the purposes of the present inquiry, for drawing any distinction between a plant built and operated directly by the complainant, and one built and operated by a subsidiary corporation of which it owned the entire capital stock; no reason is apparent why the capital invested in the plant of such subsidiary corporation is not to be treated precisely as if invested in any of the manufacturing stations of complainant on Manhattan Island" (183).

Apparently it did not occur to the Master that complainant was only a holder of, or investor in, the stock of the Astoria Company, entitled to such dividends upon its holdings as the Astoria Company might declare, and that complainant might, at any time, dispose of a part or all of its holdings; that, in contemplation of law, the Astoria Company was as much an independent corporate entity as the Consolidated Company, and as such entitled to earn a fair return upon the property devoted by it to the public use, whether in the manufacture or distribution of gas, or both.

The defendants objected to the allowance of the Astoria item upon the second ground, that, even if the investment of the Astoria Company in gas property was, in law, an investment of the Consolidated Company, the gas property itself has never been, and is not now, devoted to the public use; that is to say, never has, and does not now, manufacture or distribute gas (183).

The Master justified his overruling of this objection as follows:

> "The second objection suggests a question which requires a consideration of complainant's relations with other gas companies in The City of New York whose product forms a part of its annual output. The complainant owns about 99 per cent. of the

capital stock of the New Amsterdam Gas Company, about 51 per cent. of that of the New York Mutual Gas Light Company, and about 92 per cent. of that of the Standard Gas Light Company, which it carried upon its books at the respective valuations below stated:

"New Amsterdam Gas Company.	$4,814,608 03
"New York Mutual Gas Light Company	5,703,290 65
"Standard Gas Light Company..	14,587,495 23

"All of the above companies operate in the Borough of Manhattan. The Central Union Gas Company and Northern Union Gas Company, operating in the Borough of The Bronx, are owned or controlled by the New Amsterdam Gas Company, which holds the entire capital stock of the former and about 56 per cent. of the stock of the latter. These five corporations and complainant comprise all the companies engaged in the manufacture of gas in the Boroughs of Manhattan and The Bronx. For some time past it has been the custom of the complainant to obtain gas from certain of these corporations, which is delivered into the holders or mains of complainant in any part of the city as it may be required. The gas so delivered is measured as furnished, and paid for in due course under the terms of certain so-called agency agreements, generally similar in their terms, which have been placed in evidence. In the case of the New York Mutual Gas Light Company, for example, the agreement provides that the complainant employs the latter company as its agent 'to manufacture, purchase and deliver to it for the term of five years such illuminating gas and illuminating power required by the laws of the State of New York as it may require during each year for the said term of five years, estimated to be equal to at least 100,000,000 cubic feet per year, and to deliver the same to the gas holders, mains or meters of the Consolidated Gas Company of New York in such quantities and at such times as may be reasonably required by it.'

"The agreement further provides as follows:

"'II. The New York Mutual Gas Light Comshall, as agent for the Consolidated Gas Company of New York and at reasonable rates purchase all the constituent materials and furnish the labor necessary to such manufacture production and delivery, and employ in such manufacture, production and delivery its own plant and appliances.

"'III. At the expiration of each month, the New York Mutual Gas Light Company shall render to the Consolidated Gas Company of New York an account of all expenditures for constituent materials and labor made by it as aforesaid during such month, and the Consolidated Gas Company of New York agrees to pay to the New York Mutual Gas Light Company, within ten (10) days thereafter the amount due, according to such accounts, together with an additional ten per cent. (10%) thereof, which shall be in full for its services and the use of its plant and appliances during the said month.'

"The gas purchased under the above arrangement for the nominal year ending October 31, 1905, aggregated, approximately, 3,000,000,000 feet. The entire sales of complainant for the year 1905 aggregated 13,283,000,000 feet, so that the amount purchased constituted about 22 per cent. of complainant's entire output.

"In estimating the amount of capital invested in gas manufacture upon which complainant is entitled to a return, the capital required for the production of this 3,000,000,000 feet of gas has not been specifically appraised by any of the witnesses and manifestly is not susceptible of exact determination. *Obviously, however, it must be taken into account in some form, for the complainant is quite as much entitled to a return upon its capital employed in the purchase and distribution of gas made by some outside company as on capital employed in the manufacture of gas at its own works.* The relations of complainant with the companies in question are entirely different from its relations with the Astoria Company and National Coal and Coke Company, of which it owns the entire stock. While it holds the practical control, it does not own them in a legal sense, and, in the case of the New York Mutual Gas Light Company, there is a very substantial outstanding minority interest.

"The producing capacity of the first Astoria unit (20,000,000 feet per day), is equivalent to 4,000,000,000 feet per annum, or about 1,000,000,000 feet more than the gas actually purchased from these companies during 1905. The maximum daily output of complainant during 1905 was about 70,000,000 cubic feet, while the maximum capacity of its own plants was but 51,000,000 feet. Adding to this the maximum capacity of the first Astoria unit would give a maximum daily capacity of 71,000,000, or only 1,000,000 more than complainant's maximum daily output. This surplus, according to the testimony of Mr. Bradley, which was uncontradicted, is insufficient for purposes of a reserve. He stated that, in his opinion, it was not safe to operate gas plants for lighting large cities like New York with less than 20 per cent. reserve of their manufacturing capacity.

"Furthermore, with an output so closely approximating the maximum daily capacity, it is clear that no allowance is made for increased sales of gas consequent on the growth of population. That such increase is to be naturally expected is conceded by all parties. It appears, therefore, that the amount of gas to be produced by the first unit of the Astoria plant is under, rather than over, what was actually required in addition to complainant's own output to meet the reasonable demands of its business in 1905.

"In default of any better method of estimating the amount of capital employed in the production of the 3,000,000,000 feet of gas purchased by complainant in 1905, it seems entirely proper to measure it by the standard of the known cost of the Astoria first unit. Equipped as it is with the most modern machinery and located on a site much less expensive than could be procured on Manhattan Island, the cost of the first unit seems a perfectly fair and safe basis of valuation. Mr. Marks concedes the propriety of an allowance for the cost of producing the gas purchased in 1905, and admitted that it made no difference whether the source of the gas so purchased was located in other Manhattan plants or in Astoria. He computed its value at $5,096,000 on an assumed cost of only $1.78 per thousand cubic feet of annual capacity, but this would appear to be inadequate. The testimony of other witnesses indicates that a coal gas plant would cost more than double that amount to construct.

"I, therefore, allow Item No. 8 as claimed by complainant, although, as the Astoria plant was not in operation and delivering gas in 1905, such item should, for the sake of accuracy, be designated as "Property of other companies employed in the production of gas delivered by them to the complainant."

The learned Circuit Judge, passing upon defendants' objections to this allowance, said:

"Complainant therefore claims that * * * the Astoria Company will be no more than a gas plant capable of supplying it with what it has hitherto been obliged to buy from others, therefore both (it) should be here regarded as much a part of complainant's assets as any retort or holder of its plant.

" To me it is clear that this procedure is without warrant of law. Complainant does not employ in its gas manufacturing business a single tool of the coal and coke company, nor a single machine of the Astoria Company. Its investment in those companies is represented legally by so many certificates of stock; its relation to them is that of a stockholder only; each is bound by law to maintain a separate existence and conduct a separate business.

"The argument *ab inconvenienti* is often strong, and it has been inquired here, why should complainant be bound to go through the idle form of taking money out of one pocket merely to put it in another, and treating (for example) the Astoria Company as an independent organization, when it really is not. The sufficient answer to this argument is that the law does not permit this species of convenience, and while it still does permit the existence of many controlled corporations, it is highly necessary for the proper investigations and possible regulation of all corporations affected by a public use or engaged in interstate commerce, that the affairs of the controlling and controlled organizations shall be kept distinct. And just what complainant, doubtless, from very good business motives, is endeavoring here to have recognized by the Court is in my judgment plainly against public policy.

"In the case of the Astoria Company it is also, I think, a sufficient answer to the capitalization proposed that there was no such company actually doing

> any business during the period inquired into. It had a legal existence, and the complainant was in effect subscribing to its stock, but it had no manufacturing agreement with complainant, and was an enterprise incomplete and merely projected.
>
> "Further, there is no better reason for this suggested capitalization than there would have been had the Astoria plant never been planned, and complainant looked forward to permanent purchases from its other controlled corporations. In the New Amsterdam Gas Company complainant is almost the only shareholder, and from that corporation much of complainant's extra gas was obtained. It might just as well be asked that some portion of the plant of the New Amsterdam Company (*i. e.*, that part which by hypothesis was sufficient to manufacture the gas sold by it to complainant) should be capitalized, as representing something upon which complainant was entitled to a fair return from its gas manufacturing and distributing business.
>
> "Because, therefore, the proposed capitalization of the two items now under consideration is contrary to law, is not, in the case of the Astoria Company, based upon any actually existing investment at the time of the inquiry, and because it is misleading, in not truly stating the facts; these capital items are excluded."

The Court accordingly eliminated the item of $12,000,000 on account of "capital invested, gas purchased from other companies," but charged complainant, in computation of its gross and net earnings for the year 1905, with the profit that it had made from the sale of gas purchased from other companies, which the Court found amounted to $1,865,717.43.

The complainant contended, conceding that its profits from the sale of purchased gas in 1905 were in the amount stated, that such profit was not normal profit, *i. e.*, that it had no reasonable expectation of being able to continue in the future to purchase gas from the controlled companies under the terms of the agency agreements, and it asked the Court to charge it only such profits as it might *normally* expect to realize in the future.

The Court, conceding complainant's contention (see Decree), assented to its request, and eliminated *as such* the item of complainant's profit from the sale of purchased gas, or $1,865,717.43, as not being a *normal profit* which complainant expected or could reasonably expect to continue to make, but substituted therefor the same amount as a *normal* profit which complainant expected and could reasonably expect to make from the estimated increase in its sales of gas to be manufactured by its Astoria first unit.

The complainant urged, on the hearing of its application to the Court for a supplemental expression of opinion, that accepting the view of the Court that the Astoria enterprise must be regarded as an independent legal entity, the assumed cost of gas at Astoria is much too small, or, what is the same thing, the profits derivable from the Astoria investment are grossly overstated.

The learned Circuit Judge, discussing this contention in his supplemental opinion, said:

> "The inquiry is preliminary and important—if it was not expected that Astoria would furnish gas at lower rates than either complainant's own Manhattan factories or those of its controlled companies, why was Astoria built? For so far as the capacity of the first unit is concerned, it is also clear that the productive capacity of existing plants owned or controlled would have furnished the additional gas needed.
>
> "Yet it was deemed advisable, and could have only been advisable if profitable in expectation—to

borrow $12,000,000 at 6 per cent. in order to put up the Astoria plant.

" To restate the problem, adopting in part complainant's present figures: If the annual capacity (four billion feet) of Astoria first unit were sold at a dollar per thousand, gross sales would amount to $4,000,000. If the cost of production at holder be 32 cents per thousand, such cost annually would amount to $1,280,000.

" Interest on price of plant at 6 per cent. would amount to $720,000, leaving $2,000,000 for profit and general expenses.

" Repairs to apparatus, buildings, tools and implements are included in holder cost; if Astoria sold its entire produce to complainant, the expense of distributing three billion feet annually is already included in cost of gas to complainant as allowed by the Master and the Court, and there is no evidence requiring the belief that the distribution of a billion feet more would appreciably increase such distribution expense.

" It is asserted in the opinion (in effect) that whereas from the purchase at about 34 cents and sale at a dollar, of three billion feet of gas, complainant in 1905 reaped a net profit of $1,865,717.43, it is the Court's belief that the sale of four billion feet procured from the Astoria plant, would yield as large a net profit.

" As shown above, such net profit is $2,000,000, subject to deduction for general expenses and taxes.

" In other words, there is a difference between the probable profit charged against complainant in the opinion, and the $2,000,000 above stated of $134,282.57, and the real question raised by the application now made is whether this sum is sufficient to cover the taxes and general expenses of a controlled corporation which has but one customer, distributes no gas, and requires no actively employed officials other than those directly concerned with manufacturing.

"The estimated annual taxes of the Astoria Company are $90,000, and the question then remains whether some $44,000 be a sufficient annual reservation to pay general expenses. It is to be remembered that the plant is new, that the repair items already included in holder cost of gas ought not for some years to be as large as they normally are in older establishments; and that the Court is not required to decide what is legally fair for all time, but only for the present, and some reasonable period of the immediate future. I can only reiterate my belief, after a painstaking reading of complainant's able argument, that unless the expectation of the builders of Astoria be falsified, the sale of four billion feet derived from that plant will yield as large a profit as did the sale of three billion feet purchased in 1905. If such expectation be not realized under careful management, there must be a new application. The Court is bound to apply to the conditions of 1906 not only the facts of that time, but the reasonable expectations then entertained and expressed by men of business sagacity; and while it is impossible to assert that the fears expressed by complainant and reproduced in the figures submitted in argument may not come true, complainant cannot expect any Court to hold back the hand of the Legislature because of fears of what the future may bring forth."

Plant (Further Details).

Antiquated Apparatus.

An instance of antiquated apparatus is the benches in the coal gas plants which are of old type of six retorts to the bench, called "sixes," except in Forty-second street there are twenty benches of "sevens"; those of the Fourteenth street plant are "direct fire." That is, the retorts which hold the coal are heated by direct contact with the fire from the furnace, while some of the Fourteenth street are quarter depth, some are half depth and three are full depth. In these the furnace fire is farther removed from the retort and the retort is heated by the combustion of the gases from the furnace, while in Forty-second street there is one range of twenty benches of "sevens" and forty benches of "sixes," which are the modern type of full depth regenerative benches, that is have "recuperative flues to heat the secondary air required for the combustion in the benches * * * with the same amount of fuel you can carbonize a greater amount of coal" (1453). Mr. Mayer said: "If I were going to build a coal gas plant to-day of a capacity of 9,500,000 cubic feet per day I would not reproduce this identical plant" (1469). "I would not manufacture a bench without regenerative furnaces" (1472). "If I would build a plant for the total capacity at once I would put up larger benches. If a plant of this size I would put in benches of 9's." 1457.)

Another striking instance is the reproduction of the brick and brown-stone building used to enclose two gas holders at the Eighteenth street station. When gas plants were first built it was supposed that the holders had to be protected from the elements, but fifty or more years ago it was found that if a gas holder was kept painted it was not affected by exposure to weather, and they ceased to enclose the holders. One of these relics of antiquity was still in existence at the Eighteenth street station, and Mr. Mayer carries that into his appraisal as worth $169,328 without depreciation; $155,784 with depreciation. "It is an old construction that would not be carried out in these days," he says, but "the building is there and contains the holders, and the holders are distributing holders. Q. You say a holder will last forever if left exposed to the elements. Then what necessity is there for enclosing it in a brownstone front? A. I would not build it to-day, but it was built in the days when they considered it necessary to have a building around it to protect it" (1556-1557), and on redirect examination he testified: "Q. Is that form of construction, enclosing holders in a building, in use anywhere to-day? A. No, I believe it has been universally abandoned, even in severer climates." (1644.)

And this absolutely worthless building was given a value as of to-day of $155,784, and complainant's assets on which it was entitled to earn a return were increased thereby. This item is illuminating in another way, and has a direct bearing on the trustworthiness of Mayer's valuation. This building was taken over at the time of consolidation in 1884, and was then valued at $45,241. Mr. Mayer says that this building, which is absolutely worthless in a gas plant, is worth, after twenty-two years' use, $110,543 more than it was then. In other words, it should be charged against the consumer of to-day at an advance of 344 1-3 per cent.

This is characteristic of the entire appraisal.

Abandoned Plant and Apparatus.

The unfairness and unreliability of Mr. Mayer's appraisal is further shown in his treatment of abandoned plant and apparatus.

In regard to the One Hundred and Eleventh street station on direct examination he gave the values to be: Buildings, $107,981; apparatus, $103,446; holders, $704,737; connections, $27,068; 5 per cent. engineering charge on buildings, apparatus and connections, $11,924; 5 per cent. interest charge on same, $12,520; on holders 5 per cent. engineering charge, $35,236, and 5 per cent. interest $36,998, making a total of $1,039,910, and the Master allows this value.

On cross-examination he gave the generator house, $18,307 without depreciation; $9,154 with depreciation. "That house was in bad condition and it would have required just that amount to fix it up and put it in proper condition. I do not know when that generator house was erected, but it required an entire new roof to put it in good condition." Retort house, $50,499 without depreciation, $37,874. (1578), and he gave the contents of these two houses as follows: Retort house: one stack, sixteen benches, six retorts, $70,720 without depreciation, $53,040 with depreciation. One stack, five benches of five retorts, $20,000 without depreciation, $14,000 with depreciation. "Q. Are those retorts in use to-day. A. They were not when I examined the plant, no, sir. It is an old coal gas works near the river side. They were not being used when I examined the plant, but these benches were all new, had just been rebuilt. I don't know when. Q. Still you crossed 25 per cent. off for depreciation, A. The arches were old and the iron work was old. These benches can be operated at any time. Q. But they were not being operated? A. Not when I examined the plant. They were all ready to be fired, but I don't think they had a fire in them. Q. And you don't think they had a fire in them for a number of years, do you? A. I don't think that they did. Q. You know as a fact that this plant is not used as an operating plant by the Consolidated Gas Company? A. Yes, sir, it is used as an operating plant.

By Mr. Matthewson: Q. You mean as a manufacturing plant? A. I mean as a manufacturing plant, yes, sir.

By Mr. Page: Q. But it could be operated if necessary? A. Yes, sir, at any time. Q. What is the capacity of the plant? A. In these benches could be produced a total of 2,420,000 cubic feet of coal gas."

When questioned as to further apparatus he gave an atmospheric condenser, $5,926 without depreciation,

$4,444 with depreciation oil tank, $3,105 without depreciation, $1,652 with depreciation. "Q. Is there any further apparatus? A. No, sir, that is all. Q. There is no purifying apparatus is there for this plant? A. No, sir, nothing of any kind. The gas would have to be purified at some other station. Q. What else is there that would have to be cared for at some other station? A. Everything except one condenser, one atmospheric condenser. Q. Then this plant could not be operated, could it, as a manufacturing plant? A. Except with some other plant not by itself, no. Q. How could you operate it with some other plant? A. By pumping the gas to some other station and purifying and condensing it there. Q. That is pumping it as it comes from the benches? A. Yes, sir. Q. Would that be a practical operation? A. No; it would answer in a case of necessity only. Q. Then, as a matter of fact, these are abandoned works, aren't they, and dismantled, aren't they, partially? A. Practically, yes (1580-1582). Q. How about connections running from this old abandoned retort house? Are any of those included? A. There are none included because there are no exhausters to take the gas away from the retort house. There is no other plant to which there is any connection" (1583).

And he reluctantly admitted that if this was to be used as a distributing station you could do away with buildings and apparatus valued by him at $121,942, with depreciation (1582).

Mr. Mayer at first said the retorts were not in use when he examined them, they were all ready to be fired, but he didn't think they had a fire in them. It was used as a manufacturing plant, and can be operated at any time, and then when cornered, by it appearing that there was no condensing or purifying apparatus, he made the matter worse by saying that the gas would have to be pumped to some other station, and then had to admit that that was not a practical operation, and that there was no connection with any other station. And then was forced to admit that this manufacturing plant that could be operated at any time was a dismantled and abandoned plant.

As a matter of fact, and Mayer knew it from the first, the city had condemned a portion of this plant and rendered it useless as an operating station, and it had been abandoned.

The complainant petitioned for a reduction of taxation on this block in 1903 and 1905, and stated in the petitions: "This lot is occupied by works of the company which have been rendered useless, as the city has condemned the land in the block above, on which a part of the same system of works was located. Accordingly, this land no longer has a value as a gas plant and would not sell for more than the value of the land as vacant property." (2711, 2714.)

Bradley testified that this plant had been taken by the city and that no gas was produced there (1983), and yet the Master refused to reject the manufacturing portion of the One Hundred and Eleventh street plant, on the ground that it had not been shown to be abandoned, and included Mayer's total valuation of this plant, $1,039,910, whereas he should have eliminated therefrom, buildings, $61,923, 5 per cent. engineering, $3,096.15, 5 per cent. interest, $3,250.96; apparatus, $83,136, 5 per cent. engineering, $4,056.80, 5 per cent. interest, $4,164.64, making a total of $159,627.55.

The statements of counsel in the arguments that gas could be taken from the benches and condensed and purified at another station were equally disingenuous. The gas as it comes from the benches is hot, and it is cooled (condensed) for the purpose of precipitating the tar. If it were piped to any substantial distance it would cool in the pipes and they would become clogged with the tar.

The statement that these are reserve works is not founded in any testimony, and counsel's statement that Mr. Bradley testified that a 20 per cent. reserve should be maintained is an absolute perversion of the testimony. It is good gas engineering, when you build a plant, to allow in excess of the required capacity 20 per cent. in the generating apparatus, so that if there should be a breakdown in a portion of that apparatus you could draw on the reserve, but no one would think of carrying an entire plant idle as a reserve; the more rapid depreciation of a manufacturing plant, when it is idle, is a sufficient deterrent.

Mr. Matthewson forgot that he had himself stated in this argument that at the time of the consolidation the Knickerbocker plant was so large that the Harlem plant (One Hundred and Eleventh street) was closed down. If this plant was carried as a reserve, why had it not been operated instead of buying the gas; the capacity of this plant, 2,420,000 cubic feet, would have practically produced the gas they bought. If the court would view these premises, the absolute unfairness of any claim of the complainants to have this plant valued would appear. We request that the court do this in order that it may not be misled as was the Master by complainants' counsel's smooth and plausible misstatement of a patent fact.

Eighteenth street station. Mr. Mayer states that the Eighteenth street station is not now in use as an operating plant, and that building and apparatus that he testified to on his examination in chief, except the valve-house, several holders, the boiler-house and the exhauster-house, are the remnants of a manufacturing plant. (1555.) He gives a total value to buildings excluding engineering and interest charges, $218,907. (1560.) This includes the brick building for holder, heretofore discussed, valued at $155,784 (1556) and for coal storage, $18,357 (1558, 1559), making a total of

$174,141 which should be deducted. The other apparatus, he says, is all needed for the distributing plant. The Master has allowed the full value given by Mayer, with the addition of the engineering and interest charges at $588,873.

Objection was made and exceptions duly taken. There should be excluded on buildings, $174,141, engineering charge 10 per cent., $17,414.10, interest charge, $9,577.75, making a total of $201,132.85.

Forty-second street station. Mr. Mayer testified: "In retort house No. 4, four benches of sixes, I found that all the settings had been torn out, and on my second visit I found that new settings had been delivered at the grounds and they were going to put them in; they were getting the arches ready for repairs. I thought at first they had been abandoned." (1460-1461.) His first suspicion would seem to have been well founded. For when Mr. Edgerton visited the works six or eight months later, he testified: "I noticed that there had not been anything done there toward doing the setting, and I thought if they had not done it up to that time, they were possibly reconsidering it. I made no allowance in that case. I saw it was not done, and if they had the material when Mr. Mayer was there, it was still there, and what material I saw piled up in the empty arches has not anything to do with that setting at all." (5349, 5350.)

These benches were valued by Mayer at $3,325 per bench (1452), making $13,300, which should be excluded.

Forty-fourth street station. This station manufactures water gas, altered long ago from a coal gas station. There is a retort house with ten benches of sixes back to back, which makes twenty benches, $44,200, without depreciation $39,780. Mayer's testimony with reference to these benches is illuminating, showing his earnest desire to swell the total valuation, and is in part as follows: Q. Those are coal gas benches, are they not?. A. Yes, they were entirely reset in 1896. Q. But they are water gas stations; they don't manufacture any coal gas, do they? A. They can use these benches for the production of oil gas, the same as the Twenty-first street station. Q. Well do they? A. They did not do it at the time I examined the plant, but I presume they do it in the winter time to get up their candle power. Q. Candle power of what gas? A. Of their water gas. Q. Do you mean to say that you would enrich the water gas—A. (Interrupting) mixture of water gas and coal gas; this gas may be taken from the Forty-second street works. Q. Is it arranged now for use as an oil gas generator? A. Yes. Q. There is no difference in the retorts that would be used for the production of oil gas and those that would be used for the production of coal gas? A. It is absolutely the same retort. All you have to do is put a pipe inside of it, vaporize it, and turn it out in the shape of gas instead of coal. Q. Is there any evidence of this having been done for that purpose? A. I do not recall that exactly. It was not in use when I was there. (1527-1528.)

There is absolutely no evidence in this case that any oil gas is made or ever has been made at this station. If the court will refer to Mr. Bradley's testimony as to the method of the manufacture of water gas (150-154), the utter absurdity of Mr. Mayer's suggestion that they used these retorts to enrich their water gas in winter will become evident. If Mayer had dealt honestly with the court, he would have stated the fact as it was, that these twenty benches of retorts were a portion of the abandoned coal gas plant.

Therefore, there should be deducted from his valuation $39,780.

We also find a Pelouze & Andouin condenser, which can only be used for coal gas. Mr. Mayer says: "I presume it is only used in the winter time when they are making coal gas." (1523.) Since he had to admit that they didn't make coal gas and shifted to a possibility of oil gas, this old Pelouze & Audouin condenser is useful for only one purpose, to clearly demonstrate that these are the relics of an abandoned coal gas plant still remaining at this station. How much of the apparatus which is included in Mayer's appraisal belongs to this class he would not, and we cannot, say. But this type of condenser could not be dressed up by Mayer as water gas apparatus and should be excluded. Value, $1,260 without depreciation, $1,197 with depreciation. Therefore, at least the following should be deducted from the appraisal: Retort house, $58,408 (1516); 10 per cent. engineering, $5,840.80; 5 per cent. interest, $3,212.44 (1518); benches, $39,780; condenser, $1,197, 10 per cent. engineering, $4,097.70, 5 per cent. interest, $2,253.73, making a total of $114,789.67.

Ninety-ninth street station. This also is a water gas station, but we find Mr. Mayer giving a value of reproduction of eleven through benches of sixes back to back, making twenty-two benches, $43,758. These benches are just being rebuilt with all the new material on the ground. They are in a state of repair now, and will be finished before the fall. (1549.) Six months or more later Dr. Marks finds these eleven benches double length retorts not used, six vacant arches in this stack (5084). Coal gas benches are of no more use in a water gas station than is a steam whistle on a water wheel. There should be deducted from the appraisal $43,758. Unfortunately, the retort house is not appraised separately, but is given with a number of smaller buildings (1535), but as the number of benches are practically the same as in Forty-fourth street, there ten, here eleven, if we assume the same value here as for the Forty-fourth street retort house, it will certainly be fair to complainant, $58,408.

At this plant we find another attempt by Mayer to value old abandoned apparatus, which, when discovered, he fought valiantly to retain, although the amount was comparatively insignificant, $1,485 with depreciation. On his schedule were two hydrogen scrubbers marked "(out of commission)" which he explained to mean "They are not used at the present time." There are a great many apparatus which are not used at the present time because the production of the amount of gas at the present time does not require it.

Mr. Matthewson: Summer production; that has been gone all over." (1546.) First he admitted that the hydrogen scrubber was a part of the old Tessaè du Motay plant, in which the hydrogen gas was manufactured separately and enriched, like coal gas, with the oil gas, whereas now the hydrogen and oil gas are manufactured as one process (p. 1606) to make the carburetted water gas. But he says they could use it. He presumed they did when they make the full amount of gas. When asked to calculate the scrubbing surface of the scrubbers, leaving out those two hydrogen scrubbers, after making several erroneous calculations, he found that there was sufficient scrubbers without these to take care of the maximum output of the plant. (1606-1611.) He is still in doubt, but no one else is; these two scrubbers were a part of the old water gas plant which had been removed and were honestly entered on his schedules as out of commission. These should be $43,758, scrubbers, $1,485, 10 per cent. engineering, $5,840.80, 5 per cent. interest, $3,212.44; benches, $43,758, scrubbers, $1,485, 10 per cent. engineering, $4,524.20, 5 per cent. interest, $2,488.36, or a total of $119,716.90.

Inwood station. Mr. Mayer reproduces a little abandoned holder at Inwood of 60,000 cubic feet capacity. Valuation of entire station, $26,173. No gas is sent through this holder. Mr. Oscar H. Fogg who had charge of the regulation of pressure for the complainant, says: That no gas comes from the Inwood holder. "I have seen an old frame holder there; I don't know whether the holder is in the tank or not (6217). Prof. Marks states: "Holder not in use (boarded tank), counter weights taken off." (5103.) This station should be excluded; so small a holder would be of no service under the present condition, and then it has actually been abandoned. Therefore, the further sum of $26,173 should be deducted.

In Mayer's appraisal and in the Master's and the Court's allowance there should be deducted for abandoned plant as follows:

111th street	$159,627 55
18th street	201,132 85
42d street	13,300 00
44th street	114,789 00
99th street	119,716 00
Inwood	26,173 00
	$634,739 97

No Allowance for Obsolete Type.

Mr. Mayer testified:

Q. Now, as I understand you, in examining the Fourteenth and Forty-second street plants, for instance, you did not take into consideration whether they were commercially or economically worth replacing, did you? A. No, sir; I only figured on what I found there. Q. That is, what it would cost to reproduce that apparatus, whether or not it was commercially and economically an apparatus that would be built to-day? A. I paid no attention to that whatever. Q. And did you take into consideration whether gas could be produced at those particular plants at $1.50 or 50 cents per thousand cubic feet? A. I did not consider it at all, because it had no bearing whatever on the apparatus as I found them. Q. As you valued it? A. As I valued it. Q. Now, where a plant was of an old type, which, owing to the advance in the science of gas engineering, would not be built to-day, did you allow anything for depreciation by reason of that fact? A. No, sir. (1605.) Q. You stated that in going through these plants you observed that they were operating efficiently. What did you mean by that? That they were making gas? A. That they were making gas without any apparent difficulty, in the ordinary manner in which it should be produced * * * Q. You did not take into consideration the amount produced of gas per pound of fuel used, or anything of that sort that would go into the cost of operation, did you? A. I did not examine operating results at all. (1561.) When questioned about three Rowland engines at Twenty-first street station, he said: Q. Do you know how old those engines are? A. No, sir, but they are in perfect condition. Wherever I find a machine in perfect condition and up to date in operation—Q. No matter what its age is? A. No, I don't care what its age is. Q. Nor do you care what the type may be? A. No, not as far as the condition is concerned. Of course the type has a bearing upon valuation (1506-1507), and again—Q. Is it your idea that gas making machinery by use enhances in value? A. Some of them do. Q. What particular part of the gas machinery becomes more valuable by use? * * * We are talking about the coal gas stations? A. You want nothing but new engines, exhausters and apparatus of that kind. Those which have moving parts, they are better operated after they have been submitted to some wear and tear and have the proper bearings and do not heat and do not bind. * * * Q. But if it has run for a few weeks and has "found itself," as they express it, I believe, does it continue to increase in value? A. No, it does not increase in value, but it maintains its value (1468-1469). Q. If it should appear that this very apparatus cost the company very much less than these estimates which you have given, would you change your estimate or your appraisal at all? A. No, I would not. Q. Why not? A. My estimates are based upon my own personal knowledge of these matters for a good many years, and therefore I cannot be wrong. I am not attempting to find the capital of the company that was invested in the plant, but what some one would have to pay if they got me to build an exact duplicate of the plant as it exists to-day. If I were going to build a coal gas plant to-day of a capacity of 9,500,000 cubic feet per day, I would not reproduce this identical plant. I do not know how much of this plant came to the Consolidated Gas Company at the time of its consolidation in 1884. I do not know what particular portions of the plant have been added since that time. That is, I mean to say, I do not know at the present time. I have been figuring on the work myself for some years, but I cannot state just now what they are. In making this appraisal I did not state the actual amount received by me for making these additions. I can't tell whether I took a larger or smaller amount, because I did not refer to the figures which they received at all. (1469-1470.)

In the valuation of the One Hundred and Thirty-second street holder which was completed during the pendency of this suit, built by Bartlett, Hayward & Company under Mayer's supervision, yet he testified that he "did not give the figures from the estimate or contract price. My present figures came to more because at that time we had under consideration the construction of four holders of the same capacity, under which condition we gave a low price." (1598.)

In regard to buildings he stated: "In estimating the value of the buildings I took the buildings of the Kings County Gas & Illuminating Company in Brooklyn, which were constructed in 1899. The class and character of buildings are very similar to the buildings of these various works. That was a coal gas pant of a million and a half capacity; that is, originally a million and a half, laid out for three million; all the matters and principal details were arranged for three million, so it could be extended to that capacity. I took each building by itself and ascertained the cost of such building per cubic foot of contents, figured from the basement line to the eaves of the roof; these were my unit figures applied in the other buildings of the various gas works now under consideration. I did not measure the walls and compute the number of bricks that would be in those walls and the price of brick laid. I ascertained what was the cubic contents of the building; what is the cubic air space within that building. I divided the price by the number of cubic feet and that was the price per cubic foot * * * Q. If you were going to make figures to put in a bid to the Consolidated Gas Company for building a building, is that the way you would figure the original cost, the way you have testified here? A. No." (1398-1401.)

It will be noted that this does not purport to be an appraisal based upon what it would cost to produce the plant new to-day. The reason for failing to give such an appraisal is very evident. It would be necessary then to give the value of a modern, up-to-date plant that would produce the amount of gas that the plants of the Consolidated Gas Company do. Therefore, instead of doing this, Mayer guessed at what it would cost to reproduce this identical plant and then guessed what depreciation should be allowed.

We submit that the complainant was required to prove either what it would cost a competitor, having the right to sell gas to the city of New York, to build a plant that was capable of producing the same quantity and quality of gas that the complainant did, or that the actual cost of complainant's plant should have been proven and a proper allowance made for depreciation on account of age, obsolescence and wear and tear, but they failed to do either, and therefore we submit that, as far as the plant is concerned, the complainant failed to prove, under the rules laid down in the decisions upon this subject, the value of its property actually and necessarily used in the business of making and distributing gas.

Cost of a Modern Plant (Further Details).

We present an estimate from the evidence at hand:

The plants of the complainant have a daily capacity to produce 9,500,000 cubic feet of coal gas and 41,500,000 cubic feet of water gas.

Mr. Mayer testified that a 3,500,000 coal gas plant could be produced without holders for $340 per 1,000 of daily capacity, a 4,500,000 for $330, a 5,000,000 for $327, a 6,000,000 for $315. When pressed for this ratio in a 9,500,000 he said he could not give it, that the ratio changed as you advanced, but the rate of change alters when you get to small plants, and he does not believe any plant can be built for less than $300 per thousand (1454-1458).

These unit figures of Mayer's on the coal gas plant are derived from his figures on the value of the Fourteenth and Forty-second street plants.

Mr. Mayer testified (1457):

> "*Q.* It would cost less per unit of capacity to build one coal gas plant that would produce 9,500,000 cubic feet, wouldn't it, than it would to add together these two Fourteenth and Forty-second streets?
>
> "*A.* Oh, yes; you mean in one plant, yes, sir."

Unit from Astoria Plant.

We have better evidence derived from the actual cost of the construction of the most modern and up-to-date plant in America. There are two retort houses, one with inclined and the other with horizontal retorts; these are designed to produce 10,000,000 feet each day, a total of

20,000,000 for the two houses; the purifying houses for each retort house are complete. "I might say by way of explanation," said Mr. Bradley, "which will save a little time afterward, that each house is connected as an independent gas works; that is, there are two retort houses, and two purifying houses—duplicates of everything right through—so when I speak of two houses I mean one unit. It is all one plant. It is a duplicate manufacturing plant. I call it one unit, but it is divided into two parts, and each part is a complete gas works" (542-543).

Taking the various buildings and contents on cross-examination, he having on direct given the cost of the plant, Mr. Bradley was asked the cost of one of those gas plants with a 10,000,000 capacity, with the following result (1705-1713 to total on 1713 includes holders):

Retort house	$302,304 03
Apparatus	933,291 09
Purifier house	159,430 48
Apparatus	200,142 80
Condenser house	25,960 03
Apparatus	83,405 72
*Tar extractor house	41,965 24
*Apparatus	124,617 79
†Exhauster house and contents	40,000 00
†Meter house and contents	32,179 30
†Boiler house and contents	34,866 01
†Tar tanks	7,000 00
†Ammonia tanks	20,000 00
†General connections	43,500 00
Electric power house	77,000 00
Tools, implements, horses, office furniture, *boats, *scows, **pennant* fresh water fixtures	65,353 32
Coal and coke handling	250,000 00
Total	$2,441,015 81

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*Not in Manhattan plants.

†Estimated for 10,000,000 capacity.

or a unit of $244.10, which would make a 9,500,000 plant cost $2,318,950, for a modern, up-to-date coal gas plant, as against Mr. Mayer's valuation of $3,121,241 for the Fourteenth and Forty-second street plants (1319-1320, 1370-1374).

Mr. Matthewson claimed on the argument that items were omitted from the above statement, and the Master found: "From the record as cited it appears that the witness expressly stated the figures regarding the Astoria cost, which he then gave at counsel's request, were not complete or accurate. They were supplemented later by a statement of items omitted, amounting in the aggregate to $4,327,930.67." To this refusal to find, as requested, these defendants duly excepted (83d exception).

The Court will find, referring to Mr. Bradley's testimony, that at the end he stated that he thought this was unfair, that we had taken certain things and divided them by two. His attention was then called to the fact that the only things that he had divided by two were the meter house, tar and ammonia tanks, boiler house and contents and general connections (1712). These amounted, out of a total of $2,191,015, to $137,545.31. Then he complained that there were other things omitted and he was asked:

> "*Q.* * * * Now you stated you thought this was unfair to you as an engineer to arrive at an estimate in this way; in what way would it be dealing unfairly with you?
>
> "*A.* You omitted all the grading, filling and the necessary work or real estate to produce this plant; you omitted the bridge that was necessary to prepare the docks for the receipt and discharge of coal; you omitted the wharves; you omitted the coke-handling plant; it is not anything like up to where it should be.
>
> "*Q.* Well, I think, your criticism on the whole, as to the coal storage and coke plant is probably well

founded, and we will take that; what would be the value of a coal storage and coke plant necessary to handle those articles in a 10,000,000 daily capacity plant? * * *

"A. The coke and coal handling business would be $500,000 or $250,000 for the half" (1712-1713).

The Court will observe that everything except the coal and coke handling plant would be referable to real estate and to the particular Astoria real estate, whereas what was sought was the value of the plant, exclusive of real estate and holders. If we turn to Complainant's Exhibit 235 (Exhibits, p. 5289), we find the coal and coke handling plant to be as follows:

Coal-handling machinery...............	$232,506 22
which, divided by two, equals.........	116,253 11
Coal-handling machinery, horizontal retort house	87,526 30
Coke-handling apparatus, horizontal retort house	71,260 72
	$275,040 13

—which makes Mr. Bradley's estimate of $250,000 appear too low by $25,040.13.

Also probably should be added:

Pumphouse building to tar tanks........	5,513 75
Pumphouse building to ammonia tanks...	6,149 07
One-half of electric power station contents (Mr. Bradley estimated one-half building)	74,904 37
	$111,608 32

And we submit that these are all the items that should be added to find the cost of a manufacturing plant to be erected on Manhattan Island on the present property of the company. The other matters in Complainant's Exhibit 235, Astoria tunnel, $2,650,000, railroads, railroad equipment, temporary structures, etc., all have reference to the Astoria plant, or to the other one-half of the unit, which would not be reproduced; therefore, we will take these corrected items and add to the former total:

	$2,441,015 81
Corrections as above—	
Cost of 10,000,000 daily capacity modern coal gas plant	$2,552,624 13
Cost of 9,500,000 daily capacity of present coal gas plants at the same unit value ($255.26 per thousand)	$2,424,970 00
Mr. Mayor testified (pp. 1517-1518), and the Master has found (VII. request, p. 175, Master's rēport) that the water gas plants could be reproduced, capacity 41,500,000, for	5,104,500 00
Total, coal and water gas plants present 51,000,000 daily capacity	$7,529,470 00

To this amount, holders, building, apparatus and connections at holder stations must be added as follows:

The present capacity of the complainant's holders are 43,600,000. Mr. Bradley testified that the 5,000,000 holders had been built for the past ten years. Steel tanks have been built within the past ten or fifteen years; it may be twenty years; due to the advance in the art of steel construction (pp. 657-659). He stated the reasons why a large holder is more economical to make than a small holder are: Take a small holder 100 feet in diameter and another of 200 feet in diameter, the holding capacity of the latter increases four times; if you take one holder of 100 feet in diameter the circumference of the tank of that holder will be 314 feet; four times 314 feet will be 1,256 feet; one holder of 200 feet diameter will be 628 feet; four small holders built in that way, that double the quantity of tank surface will hold about 2,000,000 feet; the large holder will hold 5,000,000 feet and occupy the same ground space; with a large holder there are five lifts and with a small holder it is impossible to put more than two or three on account of the disproportion between the diameter and the height (pp. 640-641). Therefore, in reproducing the holders to-day we would build eight 5,000,000 holders and one 3,600,000 instead of forty-five holders ranging in capacity from 205,000 to 5,000,000 feet. Complainant has three comparatively new 5,000,000 holders—two at One Hundred and Eleventh street, and one, just finished, at One Hundred and Thirty-second street. We find the two One Hundred and Eleventh street holders valued by Mr. Mayer, with interest and engineering charges added, at $776,971 (pp. 1399-1340), and the one at One Hundred and Thirty-second street valued at $434,346 (pp. 1340-1341). The latter Mr. Mayer says that he had valued at more than it cost the Consolidated; therefore, to allow for all possible contingencies it would be fair to complainant to take the average valuation of these three by Mr. Mayer, or $403,773, as the reproduction cost of these eight holders, which would amount to $3,229,184. As to the 3,600,000 holder; at Fourteenth street there is a 3,250,000 holder in a steel tank which Mr. Mayer valued at $314,248, or $96.69 per thousand of capacity; this unit cost would be larger than for the 3,600,000; therefore, if we should take that unit, complainants would not complain, 3,600 by 96.69—$348,084. We would have to provide, however, for the five distributing stations, taking Mr. Mayer's valuation of One Hundred and Thirty-second street for buildings, apparatus and pipe connections, $106,365 (pp. 1340-1341), it being the most modern and, likewise, the most expensive, we would add $531,780, and we have produced plants, modern and up-to-date in every particular, at the following cost:

Cost of Modern Plant.

Plant	$7,529,470 00
Holders	3,577,268 00
Building, apparatus and connections at holder stations	531,780 00
A total of	$11,738,518 00
As against the Court's	15,500,000 00
A saving of	$3,761,482 00

If we assume that they should be allowed for the land and they would use the land they use to-day, we would have the land, plant, mains and services valued as follows:

Real estate (less deductions)	$10,422,106 30
Plants	11,738,518 00
Mains and services (book value)	7,852,151 03
	$30,012,775 33

as compared with the Master's valuation of $43,591,000 and the Court's valuation of $42,415,435 for these same items; and that of capital investment of $29,978,060, and original cost $29,266,757.46, and the sworn value as given by Mr. Carter of $27,408,700.

We repeat that the allowance by the Legislature of $30,000,000 was a fair and reasonable allowance for the value of complainant's plant. And when we consider that in the above total valuation of $30,012,775.33 is included the real estate on which stands the five manufacturing stations, it is evident that real estate of a greater value than the difference between that figure and the $27,408,700 would be eliminated. The testimony of Mr. Carter before the legislative committee that that was the value of the plant reproduced new was the truth.

To escape the charge that the estimate on the Astoria plant is not fair, and considering that, for the purposes of this argument, the Master's contention that the Astoria investment is to be allowed, is well founded; and furthermore, to give the complainant an up-to-date plant, capable of producing all the gas which they manufacture and sell with a margin of surplus to take care of the normal growth in their business, we will consider the value of a plant 70,000,000 cubic feet daily capacity placed on the Astoria land—20,000,000 coal gas and 50,000,000 water gas—and to be liberal in every way we will allow the full value of the land and not consider that it was designed for a plant twelve times as large as the present unit, and that the tunnel and a great deal of the grading, filling in, docks, water supply and other matters are referable to the larger plant, and we have the following result:

Astoria land, tunnel and plant, including 15,000,000 holder and tank for a second one of same capacity, everything as per complainant's Exhibit 235...	$13,250,739 60
Water gas plant, 50,000,000 capacity..	6,150,000 00
Holders and holder stations as above...	4,109,048 00
Total plant value and Astoria real estate	$23,509,787 60

The complainant would then scrap the works on Manhattan Island. If they reserve at each works sufficient land for the erection of two 5,000,000 holders, of the same size as that occupied by the One Hundred and Eleventh street distributing plant, 475 feet by 200 feet, at the valuations given by the Master for the real estate, they could on a sale realize as follows:

Fourteenth street blocks 988, 989, 991	$1,156,000 00
Forty-second Street, 325 feet of block 1089	507,812 00
Twenty-first street, blocks 951, 953, 978, 979, 987	1,912,000 00
Forty-fourth street, block 1092	645,000 00
Ninety-ninth street, 175 feet of block 1670 and block 1692	448,958 00
	$4,669,770 00
Scrap (estimated by Bradley at 600,000 or 700,000 for one-half plant)	1,200,000 00
Total realized scrapping Manhattan plants	$5,869,770 00

This amount should be deducted from the Manhattan real estate of the company and we have the following:

Real estate, Manhattan	$4,533,336 30
Real estate and plant, Astoria, holders and holder stations, Manhattan	23,509,787 60
Mains and services (book value)	7,852,151 03
Meters and miscellaneous	4,100,000 00
Working capital	1,616,000 00
	$41,611,274 93

As to Complainant's Ownership of Franchises.

The New York Gas Light Company was incorporated by chapter 85 of the Laws of 1823, and was endowed with perpetual succession and with

> "full power and authority to manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch or turpentine, or other materials, and to be used for

> the purpose of lighting the said city, or the streets thereof, and any buildings, manufactories or houses therein contained and situate, and to enter into, make and execute any contracts, agreements or covenants in relation to the objects of this incorporation, and of enforcing the same, and be capable of purchasing, taking and holding any estate or property, real or personal, as shall be necessary to give effect to the purposes of this incorporation, or for the accommodation of their business and concerns: *Provided,* the value of such real estate shall not exceed $100,000. *And provided also,* that no public street, lane or highway in the City of New York shall be dug into or in anywise injured or defaced, without the permission of the corporation of said city first had and obtained."

The permission—constituting its Municipal Franchise—was obtained from the Common Council on May 12, 1823, but by its very terms it expired on May 12, 1853, and there is no evidence or claim that it was exer extended, renewed or any other permission obtained.

We have then a gas company possessing only a franchise to be a corporation, but without any existing Municipal Franchise whatever, and its occupancy of the streets being merely on sufferance and liable to be divested or terminated at any moment at the pleasure of the City.

It is preposterous to assert that such an uncertain and unsubstantial municipal privilege—a mere occupancy based upon acquiesence—possesses any definite or ascertainable value as an existing or valid franchise.

The Manhattan Gas Light Company was incorporated for no definite period by chapter 59 of the Laws of 1830, to manufacture gas and to lay pipes for that purpose, but without authority to disturb the streets without permission from the City first had and obtained. By an agreement with the City of May 8, 1833, the company was authorized to lay underground pipes in the streets, which agreement by its terms expired on May 13, 1853; on May 3, 1848, a similar agreement was entered into, which by its terms expired on *May* 5, 1868, and which has never been renewed or extended. The legal and practical status of this company is therefore the same as that of the New York Gas Light Company as stated above.

The Metropolitan Gas Light Company was incorporated by chapter 545 of the Laws of 1855, wherein it was permitted to manufacture gas and to lay pipes in any of the streets *when authorized to do so by the Common Council,* and in 1858 such authority was given by the Common Council for thirty years, which period expired in December, 1888.

The Municipal Gas Light Company was incorporated on May 29, 1874, under the provisions of an act entitled " An Act to authorize the formation of Gas Light Companies," passed February 16, 1848, and its term of corporate existence was fifty years.

No municipal franchise was ever directly conferred upon it *by name.*

On December 21, 1876, the Common Council passed a resolution giving general permission " to *all* incorporated gas companies to lay gas mains and pipes in the streets, avenues and public places " in said City upon such *conditions* as might be prescribed by the Mayor, Comptroller and Commissioner of Public Works, and on March 22, 1877, the said Commission of officials prescribed the conditions of said general permission. The permission aforesaid given by the Common Council was limited to a period of thirty years, which term expired on *March* 22, 1907.

There can be no question but that such franchise was invalid in its inception because of the attempted delegation of the authority of the Common Council to a commission of City officials to determine the conditions thereof.

It was a power which could not be delegated. The conditions which accompany a grant must be regarded as a part of the grant itself.

This has been the settled law of the State for many years.

> Anderson *vs.* Equitable Gas Light Co., 12 Daly, 462.
>
> Matter of Pet. of Emigrant Ind. Savings Bank, 75 N. Y., 388.

The general statute of 1848 which provided for the organization of gas light companies was framed upon the theory for which we contend. It declared that the corporations created thereunder should have *power* to manufacture and sell gas and "to lay conductors for conducting gas through the streets, lanes, alleys and squares in a city, village or town, *with the consent of the municipal authorities thereof,* and under such regulations as they may prescribe."

Upon the repeal of the 1848 Act in 1890, and the substitution of the Transportation Corporations Act (chap. 566 of the Laws of 1890), substantially the same provisions were enacted whereby a gas company may lay conductors in the streets, squares and highways in any city, village or town "with the consent of the municipal authorities thereof and under such reasonable regulations as *they* may prescribe."

The "municipal authorities" mean the Common Council and not subordinate officials.

> The People *ex rel.* W. S. El. Co., *vs.* C. T. & E. S. Co., 187 N. Y., 58.

The franchise was incomplete and could not vest in the grantee in the absence of the "conditions" or "regulations" on which it was granted. The power to fix the conditions could not be delegated because they must necessarily accompany the grant before it could become vested.

Realizing, or at least fearing, the invalidity of any franchise which had been granted by or through the said Municipal Commission, the "franchise-grabbers," (so-called) induced the Legislature to pass chapter 530 of the Laws of 1885, whereby all grants made by said Commission were declared ratified and confirmed; but as this act was simply an *amendment,* and the title of which amended act being only as follows, viz.: "An Act to amend chapter 410 of the Laws of 1882, entitled 'An Act to consolidate into one act and to declare the special and local laws affecting public interests in The City of New York,'" and as the amendatory act was local in its character and embraced more than one subject which was not expressed in its title, it was invalid and void because in violation of section 16 of article III. of the Constitution.

Cahill vs. Hogan, 180 N. Y., 304.

The Master at page of his report, says that,

> "Although this statute is claimed to be unconstitutional, its validity *must* be assumed *for the purposes* of the present proceeding."

We answer that no such *"assumption"* is permissible or can it be justified. When the complainant asserts that it owns existing franchises of great value and relies upon a statute recognizing, "ratifying and confirming" their legality, it is a perfect answer to the complainant's claim to show in this proceeding that the statute relied upon is unconstitutional. No better answer could be made; and besides the Master cites no authorities to sustain his unwarranted assumption.

But irrespective of the question whether the municipal franchise of this Municipal Gas Light Company was void in its inception, it expired by its terms on March 22, 1907, and therefore in December, 1905, it had only about one year and four months to run, which fact unquestionably deprived it of any substantial value in December, 1905.

The Knickerbocker Gas Light Company was incorporated on June 24, 1876, and its term of existence was limited to fifty years, which corporate existence will not expire until June 24, 1926.

No municipal franchise was ever *directly* conferred upon it. The Master in his report (pages) states the further *claims* of this company as follows, viz.:

> "The company *claims* to have become vested through *mesne* assignments with all the rights and privileges conferred by chapter 944 of the Laws of 1871, passed June 12, 1871, whereby there was granted to certain individuals therein named, and their assigns, authority to make and sell gas to be used for the purpose of lighting all that portion of The City of New York lying north of the centre line of Seventy-eighth street, including all of the Central Park, and to lay pipes for the purpose of conducting the gas in any streets, avenues, lanes, alleys, squares and parks of the said City and of the said Central Park; * * *
>
> "It was further provided therein that nothing therein contained should be construed to authorize the laying of gas pipes within the Central Park or any of the parks or other territory within the control of the Department of Public Works, without the consent of the Department of Public Works first had and obtained."

It does not appear that any consents were ever given by the Department of Public Works or by the Common Council of The City of New York for the laying of gas pipes in any of the parks of said City or in any of the streets of said City; and therefore the said Knicker-

bocker Gas Light Company acquired no municipal franchise whatever *via* the 1871 legislative act.

The Master in his report (p.   ) states the further *claims* of the said Knickerbocker Company as follows:

> "The Knickerbocker Gas Light Company also *claims* to have succeeded to the rights of the Anthracite Gas Lighting and Heating Company of New York, a corporation organized under the *General Manufacturing Act* of 1848. Its certificate of incorporation was filed on May 28, 1863, and provided that the corporate existence should continue for the period of fifty years. By resolution of the Boards of Councilmen and Aldermen, adopted respectively on June 18 and 22, 1863, said corporation was granted the right to lay pipes and mains for conducting gas through the streets, etc., in The City of New York for a period of fifty years."

The Harlem Gas Light Company was incorporated on February 1, 1855, for a period of fifty years. Its State franchise to be a corporation therefore expired on February 1, 1905, before the passage of the Act of 1905, reducing the price of gas. The Boards of Aldermen and Councilmen, respectively, on March 26, 1855, and April 23, 1855, granted to said company the privilege to lay pipes in all the streets north of Seventy-ninth street in The City of New York (unlimited as to period of use) and reserved the right to purchase at any time from the said company all its property by paying to the said company therefor the cost of the same and ten per cent. additional.

Its municipal franchise was worthless in 1905, at the time of the passage of the Gas Reduction Act, because that franchise had necessarily expired with the termination of the company's corporate existence on February 1, 1905.

The learned Master in his report (pages   ) has confused or conglomerated the mere State franchise or authorization to be a corporation with the municipal franchises, which were granted by the local authorities for the use of the streets.

The reasoning of the learned Master in his report (pages) is clearly unsound wherein he assumes that the mere fact that the complainant has not been prevented or disturbed by the City in the use of its pipes in the streets, and had not prior to the commencement of this action, brought any action or proceeding to oust it from such streets or otherwise directly attacked, cancelled or revoked the privileges theretofore granted, therefore the City is estopped from insisting that the said franchises have expired and lapsed, and that they have no substantial value, being dependent upon the acquiescence or supineness of the City authorities.

Such facts do not constitute any legal estoppel to prevent the City from *now* assuming its rights. The Legislature has the conceded right to reduce existing rates for the sale of gas, provided such reduction is not unreasonable, and the presumption being that the legislative price *is* reasonable, the complainant when it comes into Court and asserts that it owns valuable franchises upon which it must earn large profits, the City has a perfect legal as well as moral right to insist that the franchises in question have expired and therefore they are now of no substantial value and cannot now be taken into consideration in securing a higher price for gas than that permitted by the act of the Legislature—a rate fixed after a thorough, careful and painstaking legislative investigation in which the complainant was fully and patiently heard.

If the fact that the whole or a majority of the complainant's municipal franchises have lapsed or expired would actually reduce or destroy their value, then it follows that the City had a right to avail itself of that fact in reduction of the valuation claimed by the complainant herein, and neither the circumstance that the City did not promptly oust the complainant from the use of such franchises upon the expiration thereof, or did not otherwise diligently proceed to assert the rights of the municipality, does not constitute an estoppel either in law or in equity. The Master asserts that the mere omission of the municipal authorities to institute legal proceedings to oust the complainant from the streets, which he terms an " acquiescence " in such use, present considerations which " would appear to be sufficient *for the purposes of the case,* and render necessary a discussion of the elaborate arguments presented by counsel " (Master's Report, page).

We deny the correctness of the Master's conclusion. The ascertainment of the value of franchises " for the purposes of the present case " requires no different application of legal rules than in any other case where values are involved. If a lease for a term of years has existed, but the lessee is still in possession, holding over after the expiration of his term with the mere acquiescence of the lessor, the lease itself cannot be deemed to have any real value capable of estimation, as the lessee may be ousted at any time, and there is no fixed or definite unexpired term of tenure to which a substantial value can attach.

The situation, then, thus far presented is briefly this:

(1) The municipal franchise of the *New York Gas Light Company* expired in 1853.

(2) The municipal franchise of the *Manhattan Gas Light Company* expired in 1868.

(3) The municipal franchise of the *Metropolitan Gas Light Company* expired in 1888.

(4) The municipal franchise of the *Municipal Gas Light Company* expired on March 22, 1907, having only a term of about sixteen months of permission left after the Gas Reduction Act of 1905 went into operation.

(5) The *charter* of the *Harlem Gas Light Company* expired in February, 1905, and therefore its municipal franchise (which was limited to the streets and squares of the City above the centre line of Seventy-ninth street) *necessarily* expired with the expiration of its charter.

(6) The status of the Knickerbocker Company will be stated later.

This, then, is the precise situation summarized—that the municipal franchise of three out of six of the constituent companies had absolutely expired before the enactment of the gas legislation of 1905, and that before such legislation the *charter* of the fourth one had already expired, which necessarily deprived the municipal franchise of any value; and that in 1905 the municipal franchise of a fifth company had only about sixteen months of corporate life remaining, so that it may again be safely asserted that the said five franchises in 1905 were practically valueless.

AS TO THE KNICKERBOCKER CHARTER.

The sixth and remaining company (the Knickerbocker Gas Light Company) has only a franchise to be a corporation which will not expire until 1926, but as no municipal franchise has ever been directly bestowed upon it, it is sought by the complainant, in the first place, to establish such a franchise through various assignments from the individuals named in chapter 944 of the Laws of 1871.

The Master, while admitting that numerous objections have been made to the title of the Knickerbocker Company to the rights, if any, conferred by that act, then declares that they "need not be stated in detail," and that "they are for the most part highly technical and many of them could obviously be cured" (Master's Report, page).

We deny either their technical character or that they can be cured at all.

The Master further observes that:

> "Irrespective of this, however, the complainant has such broad powers derived *from other sources* as to render the technical validity of the Knickerbocker charter a matter of slight moment for the practical purposes of its operations (Id.).

We deny that the Knickerbocker Company has any such "broad powers derived from other sources" as conferred upon it by any substantial municipal franchise.

The "broad powers" to which the Master refers must indeed be looked for from "other sources," as they certainly are not discernible in the Knickerbocker charter itself.

There is no satisfactory evidence that the Knickerbocker Company ever acquired the privileges which were conferred by the Act of 1871 (chap. 944) upon the grantees therein named "and their assigns." Those grantees were forty individuals in number, consisting of Isaac P. Morton and thirty-nine others, mostly connected directly or indirectly with the City government, while under "ring rule," so-called.

The powers conferred upon them were to manufacture and sell gas for the purpose of lighting streets and public places in the City (including Central Park) north of Seventy-ninth street, and to lay pipes therefor in such streets and parks; the control and management of the said business was to be by an Executive Committee consisting of not less than seven nor more than thirteen of their number; but it appears that instead of conducting said business themselves as contemplated by the act aforesaid, seven of their number, under date of February 25, 1874, styling themselves the "Executive Committee" as well as "the owners as joint tenants of the franchise granted by said act, purported to assign to the Union Gas Company" the right to do, exercise and perform *as the agents and attorneys of the Executive Committee* and their successors all the rights, privileges and franchises granted or created by the said act of 1871 in the same manner as the grantors themselves might do (Exhibit 188, pages); and this contract or assignment was subsequently assigned by the Receiver of the Union Gas Light Company to one Clark Bell (Exhibit 197, page), and by Clark Bell to the Knickerbocker Gas Light Company (Exhibit 116, page).

It further appears that afterwards and on December 11, 1876, seven other gentlemen styling themselves the "Executive Committee," and also "the owners as joint tenants" of said franchise, made a similar assignment, as in Exhibit 199, to the Knickerbocker Company the right to exercise the franchise as agent or attorney (Exhibit 198, page).

Without going into the details of other assignments, it is sufficient that the evidence shows that the Knickerbocker Company did not possess at any time either the State or municipal franchise as direct assignee or owner, but if anything merely possessed the right to use the franchise as agent or attorney of the Executive Committee of the owners.

We insist that the individual owners of the franchise of 1871 had no right to delegate to any other body than an Executive Committee of their own number the actual "control and management of the business," and especially no right to delegate the same to any corporation, and that the Executive Committee had no right to delegate the control and management vested in them by the owners.

Besides it is respectfully submitted that the numerous and various assignments relied upon by the complainant to show its title to the franchises claimed to have been conferred under the Act of 1871 were not satisfactorily proved by the evidence produced before the Master.

Without going much into detail, it is sufficient to state that the record shows that there was no competent or sufficient evidence of the following material and essential matters:

First—That the persons who assumed to act as an Executive Committee were ever legally chosen as such.

Second—That the persons named in the first section of the Act of 1871 ever met within ninety days after the passage of the act, or at any other time, and by ballot selected by a majority vote an Executive Committee consisting of not less than seven nor more than thirteen of their number, or that due notice of the time and place of such meeting was ever published in two daily newspapers of that city, as was required by section 3 of the Act of 1871 (page).

Third—That there were ever any minutes of the meetings, if any, of the persons named in the first section of the Act of 1871, or any legal evidence that any such meetings were ever held.

Fourth—Of the authenticity, execution or delivery of the instrument (Exhibit No. 103, page) purporting to be a grant to the Manhattan Gas Company (No. 109, page), and of the instruments purporting to be resignations of various persons describing themselves as an Executive Committee (No. 201, page) purporting to be a general release from Walter Osborn and others to the Knickerbocker Gas Light Company.

Fifth—Of many other material matters essential to show a complete chain of title to the alleged franchises claimed by the complainant to have been acquired by the Knickerbocker Gas Light Company by assignments and transfers through various persons and corporations under the Act of 1871, and through, from and under the charter of the Anthracite Gas Lighting and Heating Company.

Facts which were improperly or insufficiently proved before the Master must be regarded before the Court as not having been proved at all.

Neither did the Knickerbocker Company derive any municipal franchises from the Anthracite Gas Light and Heating Company, for the simple reason that the latter company had none to confer. The latter company was incorporated in 1863 for fifty years, and a municipal franchise was granted to it in 1863 for fifty years, and in 1905 it had only eight years more of life. It was not incorporated under the Gas Light Companies Act of 1848, but under the Manufacturing Companies Act of that year (Exhibit 107, page), and was invested with no power to perform any public function nor any power to lay pipes in the public streets, even with the consent of the municipal authorities.

Hence the action of the municipal authorities in attempting to confer upon a strictly manufacturing company a grant which it could not lawfully use rendered such franchise void in its inception.

The attempted transfer or assignment of the Anthracite Company's alleged municipal franchise in 1865 to the Citizens Mutual Gas Company (Exhibit 109, page) and by that company to the Union Gas Light Company in 1871 (Exhibit 11, page) and by the receiver of the latter company to Clark Bell in 1876 (Exhibit 115, page), and by Clark Bell in the same year to the Knickerbocker Gas Light Company (Exhibit 116, page), was each legally ineffectual to confer upon said assignees a valid title to said franchise because the original recipient of such franchise had no power to receive or to use or to assign it, not being itself a public service corporation. But even if the said franchise should be deemed valid if subsequently assigned to a public service corporation, such a corporation had not at that period any power to abrogate its public functions and delegate the performance thereof to an individual, and an individual receiving such a franchise could not assign it to any other person or corporation, not even to a public service corporation. Such a contract was *ultra vires* as well as against public policy. The Supreme Court of the United States has so decided.

> Thomas *vs.* Railroad Company, 101 U. S., 71.

It therefore seems clear that as the Knickerbocker Company never directly received from the municipal authorities any franchise whatever, and as the attempts to confer franchises upon it through various assignments from individuals *via* the Anthracite Lighting and Heating Company, a corporation created under the General Manufacturing Act of 1848, have proved futile to confer any valid and existing franchises in the said Knickerbocker Company, it was in 1905 and is to-day without any municipal franchises whatever.

We ask this Court to reverse the judgment of the Circuit Court and dismiss the bill of complaint, with costs.

Respectfully submitted,

William S. Jackson,

Attorney General.

OCT 13 1908
JAMES H. McKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1908.

No. 396.
WILLIAM R. WILLCOX, *et al.*, CONSTITUTING THE PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK FOR THE FIRST DISTRICT,
Appellants,
against
CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

No. 397.
THE CITY OF NEW YORK,
Appellant,
against
CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

No. 398.
WILLIAM S. JACKSON, AS ATTORNEY-GENERAL OF THE STATE OF NEW YORK,
Appellant,
against
CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

BRIEF OF CITY OF NEW YORK, APPELLANT.

FRANCIS K. PENDLETON,
Corporation Counsel,
Solicitor for City of New York,
Appellant,

ALTON B. PARKER,
WILLIAM P. BURR,
Of Counsel.

NEW YORK:
MARTIN B. BROWN COMPANY, PRINTERS AND STATIONERS.
NOS. 49 TO 57 PARK PLACE.
1908.

Supreme Court of the United States.

October Term, 1908.

No. 396.

William R. Willcox, *et al.*, constituting the Public Service Commission of the State of New York for the First District,
Appellants,
against
Consolidated Gas Company of New York,
Appellee.

No. 397.

The City of New York,
Appellant,
against
Consolidated Gas Company of New York,
Appellee.

No. 398.

William S. Jackson, as Attorney-General of the State of New York,
Appellant,
against
Consolidated Gas Company of New York,
Appellee.

Brief for The City of New York, Appellant.

Appeals from the Circuit Court for the Southern District of New York. In Equity.

Statement.

These three appeals are brought to this Court on a single transcript by stipulation among the solicitors for the respective parties (see Record 487), and are to be heard together on the several Assignments of Error of the respective appellants.

This is a suit in equity. The bill of complaint (Rec. pp. 1-20), was exhibited by the Appellee in the Circuit Court, May 1, 1906. Its object is a decree declaring that certain enactments of the Legislature of New York are in contravention of Amendment XIV. and of section 10 of Article I. of the Constitution of the United States, and also to have declared null and void a certain order made by the Commission of Gas and Electricity created by chapter 737, Laws of 1905, hereinafter mentioned.

The enactments in question are printed in full as exhibits to the bill of complaint (pp. 21 to 31, Rec.). They are chapter 736, Laws of 1905, entitled "An Act in relation to the price of illuminating gas furnished or sold to the City of New York, and providing a penalty for violation," chapter 737, entitled "An Act to establish a Commission of Gas and Electricity, with power to regulate the price of gas and electric light and certain other electric service, and to provide for the control and supervision of gas, electric light and other electric corporations, and making an appropriation therefor," and chapter 125, Laws of 1906, entitled "An Act in relation to illuminating gas in the City of New York, and regulating the quality and pressure thereof and the price to consumers other than the said City, and providing a penalty for violation."

Chapter 736 was approved June 3, 1905, and became effective by its terms July 1, 1905. Chapter 737 was approved June 3, 1905, and became effective immediately. Chapter 125 was approved April 3, 1906, and became effective by its terms the first day of May thereafter. The order made by the Commission of Gas and Electricity became effective by its terms the first of May, 1906.

Section 1, chapter 736 (Rec., p. 21) provides as follows:

> "A corporation, association, copartnership or person engaged in the business of furnishing or selling illuminating gas in the City of New York shall not charge said City or receive therefrom for such gas a sum in excess of 75c. per thousand cubic feet."

Section 2 prescribes the quality and illuminating power of the gas to be manufactured, and regulates the pressure in the service mains.

Section 3 prescribes a penalty of $1,000 for each offense in violating any provisions of the Act.

Chapter 737 creates a Commission of Gas and Electricity, to consist of three commissioners, to be appointed by the Governor, and prescribes their terms of office, mode of conducting business and other general powers.

Among these powers is the power (Section 15, p. 26, Rec.):

> "Upon the complaint in writing of the Mayor of the City, the Trustee of the village or the Town Board of the town in which a person or corporation is authorized to manufacture, sell or supply gas or electricity for heat, light or power, or upon the complaint in writing of not less than one hundred customers, and after (Section 17) a public hearing shall be had upon such complaint at which the complainants and the person or corporation complained of shall have an opportunity to be heard and may be represented by counsel * * * the commission * * * may fix the maximum price of gas or electricity * * *. The price so fixed shall be

to 75c., the provisions with reference to illuminating power and standard of purity, the pressure of the gas and the penalties therein prescribed, and also the provision of chapter 737, creating the Commission of Gas and Electricity, the order of the Commission, made February 23, 1906 (copy of which is annexed as Exhibit C—p. 29), limiting the maximum price of gas to customers other than the City of New York to 80c. and prescribing the standard of illuminating power, and making provision in regard to the pressure of gas, and also the provision of chapter 125, limiting the price of gas to 80c., and prescribing a standard of illuminating power, and fixing the pressure and providing penalties for any violation of its provisions.

It is claimed in the complaint that the said acts and the said order are unconstitutional and in violation of the Fourteenth Amendment to the Constitution of the United States, because they deprive the appellee of its property without due process of law and take its property for public and private use without just compensation, and deprive it of the equal protection of the law. It is further claimed that it is an absolute physical impossibility to comply with the provisions in the said statutes and orders in regard to pressure, that there is an unjust discrimination in favor of The City of New York, that the penalty clauses in both statutes are so oppressive as to be unconstitutional, and that the creation of the Commission of Gas and Electricity is a delegation of legislative power.

The answer of the defendant, City of New York (Rec., p. 57) puts in issue every material allegation of the bill of complaint, and by way of separate defense sets up an investigation made by the Commission of Gas and Electricity, avers that full and ample opportunity was afforded to present all the facts, that all the facts were duly considered, and that the actions taken by the Legislature and the said Commission were just and reasonable; that a full and complete investigation into the affairs of the company (appellee) was made under an act of the Legislature passed in 1885, another in 1886 and another in 1905, and by the said Commission of Gas and Electricity in the years 1905 and 1906, and annexes (Rec., pp. 66-135) to and makes part of its answer a copy of the report of the joint committee of the Senate and Assembly of New York, dated April 29, 1905; alleges that it is the largest consumer of gas supplied by the appellee and that the price of gas to it of 75 cents is more than sufficient to repay the appellee a fair and reasonable profit; that the appellee owns and controls every corporation with one unimportant exception (to wit, Bronx Gas and Electricity Company), engaged in manufacturing and supplying gas or electricity for illuminating purposes or distributing the same in the Boroughs of Manhattan and The Bronx in The City of New York, and regulates and controls as a monopoly the price of gas and electricity in the said boroughs.

The answer denies that the appellee is or ever has been a corporation duly incorporated, and denies that the several constituent companies were corporations duly organized and existing, with powers, property and franchises, as claimed by the appellee, at, prior to, or since the time of the consolidation, and denies that the appellee became the owner of the franchises or consents of its predecessor companies; denies that it has become the owner or entitled to maintain and operate the mains, pipes, etc., of its said predecessor companies; denies that it laid additional main, pipes and conductors in The City of New York with the consent of the municipal authorities of said City; avers that the appellee has not made out any title to the relief prayed.

On the coming in of the report of the Master and after the hearing of exceptions to the report, the final decree (pp. 430 to 434) was entered, confirming the report of the Master except in certain particulars as to which the exceptions to the report are sustained and its findings modified, and adjudging that chapter 736 of the Laws of 1905 and chapter 125 of the Laws of 1906 and the order of the Commission of Gas and Electricity, made the 23d day of February, 1906, are each of them illegal and void because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that they take complainant's property without due process of law and without just compensation and deny the complainant the equal protection of the law.

History of the Consolidated Gas Company.

See

Report of Senate Committee 1905 (p. 66, Record).
Report of Senate Committee 1885 (p. 5325, Record).
Yaldens Report (p. 5591, pp. 5726-5728, Record).
Pooling agreement (p. 5541, Record).
Masters' Report (Record, p. 152).

The Consolidated Gas Company has a monopoly of the gas and electric lighting business in the Boroughs of Manhattan and The Bronx, in the City of New York.

It sells more gas per capita and per mile of main than any other gas company in the world. The sales per capita in London, the next largest consumer, are between 8,000 and 9,000 cubic feet per capita annually. The Consolidated Gas Company sold dur-

ing the year 1905 about 9,250 cubic feet per capita (Record, p. 1591).

It supplies over 400,000 customers.

These appeals present for final and definite settlement by the supreme arbiter under our system important questions in the *science of economics* and in the realm of constitutional limitations upon the exercise of the police power possessed by the several sovereignties that compose the greater Commonwealth. And these questions vitally concern the people of the whole country, both the humblest person of the most limited means, and the greatest aggregations of wealth and power in exceptional enterprises especially authorized by these sovereignties, for the public convenience; aptly described as *public utility* or *public service* corporations. We hope, as we believe, that the counsel engaged are animated by the spirit of faithful adjutants to this supreme tribunal, not less than by the spirit of upright advocates for the client that called them into the particular service. We are sure that we are actuated by no sentiment of hostility to that combination of money, intelligence, experience, ability, high character and zeal for the public good and regard for the law of the land which is not altogether wanting in every corporate body organized to promote the public convenience. Many—many more than is commonly supposed—of the executives of these bodies recognize duty to the public as well as to the corporation whose affairs they are called to manage, and execute their several functions under a high sense of mutual obligation. Our learned associates as well as the distinguished lawyers and accomplished gentlemen who represent the appellee are, we have no doubt at all, animated by the like spirit, while the record bears ample testimony to the learning, patience, industry and fidelity of His Honor, from whose conclusions we appeal, and of the Master to whose findings we except.

And so, we felicitate ourselves and we congratulate the whole people that we are now come under such auspicious circumstances to perhaps the last important stage in the evolution of the law regulating the reciprocal rights and obligations, on the one hand of the people for whose service and convenience public utility corporations are created, and, on the other, of the rights and duties, with their limitations and conditions, granted to and imposed upon these useful bodies.

It is not claimed that chapter 736, fixing the rate for the City at 75 cents, would operate to deprive the appellee of its property without due process of law, but that such would be the effect of the two statutes operating together; so we treat them as though they were contemporaneous enactments.

Upon a review of the adjudications which have had to do with rate regulations we find none which undertakes to point out every element that may be considered as comprising the investment on which the corporation is entitled to demand a fair return, nor any precise rule by which the value of each is to be ascertained. None of the decisions of this Court from *Munn* vs. *Illinois* (94 U. S., in 1876), down to and including the latest deliverances has undertaken to formulate such a rule. We are all familiar with what was said in *Smyth* vs. *Ames*, A. D. 1897), 169 U. S., on p. 547:

> "What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it. * * * than the services rendered by it are reasonably worth. And (p. 546) in order to ascertain that value, the original cost of construction, the amount expended in permanent improvement, the amount and market value of its

> bonds and stock as compared with original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses are all matters for consideration and are to be given such weight as may be just and right in each case. We do not say there may not be other matters to be regarded in estimating the value of the property."

That was said in reference to a railroad corporation maintaining a highway, but later cases relating to rates of water companies and of gas companies have not formulated any rule more definite, each case having been disposed of according to its own peculiar facts and circumstances.

One rule clearly established by this Court is that no return can be exacted from the public on palpably unwise expenditures; but IF THE COURT REFUSES TO ALLOW A RETURN ON MONEY ACTUALLY BUT IMPROPERLY SPENT, HOW CAN IT BY ANY DISTORTION OF REASON DECREE (AS WAS DONE IN THE CASE AT BAR) SUCH A RETURN ON MONEY NEVER EXPENDED?

The cases seem to justify the following propositions:

> *To take the actual investment less depreciation as the basis for present value, can work no injustice to the Company in any event, and may only work injustice to the consumer where such cost exceeds the duplication value basis;*

Where the actual investment is *less,* to take the duplication value, *must* work an injustice on the consumer by requiring him to pay a return on money never expended.

The rule is that *the investment shall be taken.*

The exception or limitation is that the investment shall be disregarded only where *equity to the consumer* requires it.

It would serve no useful purpose to review all the cases here. In none of them is the valuation of real estate, as a separate and distinctive element, nor of franchise, involved.

But in the cases now before the Court two of the principal factors included by the Court below in the computation of value as a basis of return, are real estate, mains and services, and, as described in the final decree (p. 432), "special franchises."

The constitutionality of the legislation involved in these appeals depends, so far as the reasonableness of rates and pressure in the gas mains of the appellee are concerned, upon extraneous facts which had to be ascertained. Hence the reference to a Special Master "to take all the testimony herein, make all needed computations, and fully find the facts." So far as affects the question of rates, all the findings of the Court below embodied in its final decree are in accord with the findings of the Master, excepting the item of *good will* and that of *franchises,* but not all the findings of the Master as to what should be allowed to the appellee as part of its capital employed in the public service are approved by the Court. Some items are disallowed as not being part of such capital, and the item of *franchise* is valued at $12,000,000 in lieu of $20,000,000 assigned by the Master to good will *and* franchise, and the item of $3,616,000 working capital allowed by the Master is reduced from $3,616,000 to $1,616,000; and thus the capital employed, according to the report of the Master, $83,357,000 (Record, p. 247), is by the decree reduced to $59,831,435 (Rec., 432, tangible assets, $47,831,435; and special franchise, $12,000,000).

The Master and the Court concur also in the finding that a return of 6 per cent. on the capital employed is a fair return; and the Court finds (p. 408) that, if only the tangible "property is to be considered, this return is sufficient to satisfy the law," that is—to protect the statutes from the charge of unconstitutionality in so far as they regulate rates.

But adding (p. 418, Rec.) $12,000,000 for the intangible asset described as "special franchises" to the $47,831,435, the Court finds, as the capital on which the appellee is entitled to a return, $59,000,000 (in round figures), upon which the probable return is $3,024,592 (Rec., p. 432), or "very considerably less than 6 per cent.," (*it is $565,295 less than 6 per cent.* and is *a little more than 5 per cent.*) and that "this return is neither fair nor reasonable" (Rec., p. 418). Upon this finding of fact—*and solely upon this finding*—the sentence of condemnation of the statutes in question is based, in so far as they fix rates.

The appellee acquiesces in these findings of the Court—the valuation of the tangibles and the intangible and the rate of return. Only the appellants complain thereof. Hence, the appellee cannot now be heard to question either of them.

> "Appellee cannot go beyond supporting the decree and opposing every assignment of error (*Landram* vs. *Jordan,* 203 U. S., October Term, 1905, on p. 62).

It follows, therefore, that if the finding as to any of the items entering into the sum of $47,831,435, or the item of $12,000,000, or the rate of return is, according to the evidence, palpably erroneous, and that the reduction of either or all to such sum as is plainly required by the evidence, or the disallowance thereof, would enable the appellee to earn a fair return, or the return of 6 per cent. found by the Court to be fair, the decree must be reversed. And the decree must be reversed if it is not *made clear by the record* what this item of value and this rate, or either, should be, *the burden of proof being on the appellee.*

Passing, for the present, the valuation of tangibles, and conceding, only for the sake of the argument on this point, that 6 per cent. is a reasonable rate of return, we submit:

Brief of the Argument.

Under Specification I. (p. 17) and the Assignments of Error there mentioned, it is contended (a) that the Court below erred in assigning to the franchises acquired by the appellee under the consolidation agreement a money value as part of the *investment* on which it is entitled to a return. It was *solely* on the finding by the Court of a value of $12,000,000 for these franchises that the Court decreed the enactments to be unconstitutional in respect of the rates fixed. We contend in the argument that whatever monetary value might, for any purpose, be assigned to these franchises, it disappears when the rate of charge for service is so reduced as to yield no more than a fair and reasonable return on the investment in the means employed in rendering the service; (b) that the Court having found $47,831,435 (Record, p. 432) as the value of the tangible assets employed by the appellee, and six per cent. to be a reasonable return, and that the return the appellee would probably realize at the reduced rate would be $3,024,592.45, which is *more* than six per cent. on the valuation so found—the Court erred in adding to that valuation $12,000,000 for *franchises,* thus increasing the *investment* to $59,831,435 (p. 432 Record), on which the probable return would be *less* than six per cent.—though the return would even then be reasonable as is urged under Specification III.

Under Specification II. (pp. 33 to 40) and the Assignments therein mentioned, we maintain that the Court below erred in assigning to the tangible assets any value *in excess of their original cost to the constituent corporations of the appellee and the cost of any additions thereto since* 1884, *the time of consolidation.* We point out in the argument that the entire cost of the real estate employed in its business by the appellee was only $4,118,267.38 as against $11,985,435 allowed by the decree

(Record, p. 432), being a difference of $7,867,167.62, which, being deducted from the total valuation of $47,831,435 (Rec., p. 432), would reduce that total to $39,964,268.38, on which the return of $3,024,592.45 (Rec., p. 432) would be more than *seven* per cent. We point out further that, if the valuation for franchises be excluded, whether we take original cost to constituent corporations, or appraised valuation by the constituent corporations in 1884 for the purposes of consolidation and additions thereto since then, or *even present values* as found by the Master and approved by the Court, the result is the same; the net return of $3,024,592.45 exceeds six per centum; when the item *franchises,* valued by the corporations in 1884 at $7,781,000, and not separately valued by the Master, but increased by the Court, *through a process of reasoning,* to $12,000,000 is added that even then the return is over five per centum. And we show, further, that $5,555,761.63 has been unwarrantably added for *reproductive cost of mains and services* and that deducting this sum and the excessive allowance for real estate from the total found by the Court, the return to the appellee on its investment would be more than eight per cent.

Under Specification III. (p. 60), we endeavor to show that the return of six per cent. adopted by the Court, is more than a fair return to the appellee, that is more than is usually obtained or expected from equally safe investments.

Under Specification IV. (p. 66), it is pointed out that the finding of the Court as to the impossibility of the appellee fulfilling the requirement as to pressure in its mains is predicated of the erroneous valuations of the property of the appellee, and that these being corrected the appellee would be able to make the requisite changes and still have a fair return; and that the requirement is separable from the other provisions.

Under Specification V. (p. 67), we show that the legislation complained of is not unjustly discriminatory, that the discrimination is just and reasonable, the City standing in the relation of a wholesale consumer or buyer; that the cost of supplying the City is greatly less than the cost of supplying other consumers; and that the difference of five cents per thousand feet in favor of the City when spread over the entire sales of the appellee results in a difference of only fifteen one-hundredths of a cent per thousand feet in favor of the City.

Under Specifications VI. (p. 69), it is submitted that the appellee has an adequate defence at law against proceedings to enforce performance of any of the provisions of the statute, if they are not enforcible, and, by injunction, against the separable provisions for penalties.

Under Assignments of Error First, Second, Third and Fourth (Record, pp. 444-446), and *Thirteenth* (Record, p. 450), and *Sixty-third* (Record, p. 465), we submit:

SPECIFICATION I.

For the reasons stated in Assignments of Error Sixty-second to Sixty-fifth, both inclusive, the Court below erred in assigning to the franchises of the appellee a valuation of $12,000-000 (Record, p. 432), and in assigning thereto any valuation, and adding such valuation to its investment in the means of manufacturing and supplying gas to consumers, and in overruling in this respect this appellant's second exception (Record, p. 340) to the Master's report.

The first, second, third and fourth assignments (Record, p. 445) assign as error the decree of the Court in Paragraph 6, page 433, adjudging and decreeing that the several acts of the Legislature of New York complained of are unconstitutional upon the ground that the rates fixed by these several statutes do not allow to the appellee a just and proper return upon its properties employed in the production and distribution of gas and therefore deprive the appellee of its property without due process of law and without just compensation and deny to it the equal protection of the law.

The Thirteenth Assignment of Error (Record, p. 450) is: "In sustaining the report of the Master in Chancery, refusing to find in accordance with the written request of this appellant, as follows:

> "'That the cost to the constituent companies of its several classes of property, without appreciation or depreciation, was as shown by the books of the constituent companies, $20,942,632.85, and that the

> item of $7,781,000 did not represent anything of value, but was an arbitrary figure used for the purpose of equalizing stock values, as shown by the market prices between the constituent companies';

and in overruling in this respect this appellant's second exception to the Master's report."

The Sixty-third Assignment of Error (Record, p. 465) is: "In adjudging and decreeing in Paragraph II. of said decree that the value of the franchises of the complainant employed by it in the manufacture and distribution of gas was the sum of $12,000,000."

The Master, in his report (Record, p. 247), found a valuation of $20,000,000 for franchises *and* good will, "being unable (he says) to *differentiate in figures* the complainant's franchises and good will." The Court (Record, pp. 411, 412) disallowed good will, and, instead of $20,000,000 for franchises *and* good will, allowed $12,000,000 for franchises alone (Opinion, Record, p. 418, and Decree, p. 432).

There can in this case be no franchise value included in the means employed by the appellee in its business except such as is predicated of a return in excess of a fair and reasonable return upon its investment. When the rate of charges yields no more than a fair and reasonable return, there is no franchise to be valued. But the Court finds (Record, p. 408) that the return upon the property or investment of the appellee, excluding the franchise, would be, at the rates fixed by the statute, a fair and reasonable return—that is, the Court finds as total of tangible assets $47,831,435 (Record, 432), and that the net income at the reduced rate would be $3,024,592.45, and more than (p. 433) 6 per cent., which is $2,869,886. The very claim of a return upon franchise value involves an admission that the appellee has been receiving more than a fair return upon its investment for the public. The claim in effect is that there has been an *accretion to the investment* of the appellee by reason of the omission of the State during so long a time to exercise in behalf of the public the right to regulate the return; that because the appellee was able, through the inaction of the Legislature, for so long a time to exact an excessive return, that *permission* has matured into *a right,* of which it cannot now be deprived unless its value be ascertained and that value converted into capital on which it shall have a permanent return; that when the State deprives it of that to which, against the will of the State, it has not and never had the right; which it had only so long as the State—it may be—was in ignorance of it, or for some reason chose to permit it, the appellee is then deprived of its property without due process of law; a mere toleration, at best, by the State, subject at any time to be abated by the State, has matured into a right, and it can only be taken away by condemnation of the property being used under its protection, and it must then be paid for; or if not taken away, but only the excessive charge of which it is predicated is reduced or regulated, then what was the value to it of that excess must be ascertained, and then added as a permanent *investment.* Through such a process of reasoning, if sanctioned by this Court, a principle would be evolved whereby an intangible asset representing no investment whatever, may be, against the policy of the law, created by courts and imposed on consumers and a return exacted from them on millions of dollars not one of which was ever invested by any one in anything; a burden built up, perhaps—possibly—by the cleverness of officials in concealing the truth, or possibly on the legislative policy to foster for a time a particular enterprise of public moment, until it should become sufficiently profitable to be subjected to regulation.

In the opinion of the Court below (Rec., p. 412) "this claim as an original proposition is unsound." "Return," says the Court, "can be expected only from investment, and he that invests must part with something in the act of investing. Can it be said that complainant or any other corporation similarly situated has invested its franchises in its business? It did not invest in its franchise because it did not pay for it. It did not invest its franchise because it did not part with it in the same way that it parted with money or money's worth in acquiring or creating mains or plants. The investment of property was made not in the franchise but under the franchise and on the faith thereof."

This quotation is made, not for the mere sake of arraying the presiding Judge against the decree of the Court, but because of its inherent manifest soundness.

His Honor therefore believes that "*on principle*" a franchise should be held to have no money value as against consumers, and should not be treated as an *investment* or as any part of the *capital employed for the public convenience*. He reaches the conclusion, however (Rec., 413), that it must be so treated because of "the trend of decisions and methods of reasoning pursued in well-considered cases dealing with kindred topics, and even by the dicta of courts of approved authority where such dicta indicate, as they often do, a train of thought necessarily suggested by the exact matter in hand."

But we submit that none of the cases referred to in the opinion (Rec., 414, 415)—and we will not trouble the Court with a discussion of them—involves the thought that the franchise of a public utility corporation can ever be considered in the regulating of rates as an item of *investment*. One of the controlling considerations of the Court below in assigning a value to the franchises of the appellee seems to be based on a supposed identity between regulation and condemnation proceedings (Rec., 414, 415). But regulation is not condemnation nor "*pro tanto*" condemnation. It is not condemnation at all. It is only, simply, and cannot otherwise be described than *regulation* of rates for service rendered. The franchise is not taken away. The franchise is not impaired. The corporation is left in the exercise of its full rights under the franchise. *Nothing* is taken away *to which the company had a right.* It never had a *right* to earn any more than a reasonable return on its investment. If the rate allowed will yield that return, it is deprived of no right whatever.

The vice of His Honor's view of the trend of decisions is in the impression received by him that franchise is always regarded as synonymous with property; property and franchise reciprocally enhance each other through this association. We are so accustomed to the collocation of property and franchise in speaking of corporations that we unconsciously come to treat the words as synonymous. As all property is held on the implied condition that it may at any time be taken for public use by condemnation proceedings, so every franchise of a public utility corporation is held and exercised on the implied condition that its rate of earning may at any time in the discretion of the Legislature be regulated down to a fair and reasonable return upon the actual investment without the slightest reference to its earning power or capacity, or to what it may be actually receiving, though its earning capacity and *the exercise thereof* may be the very provoking cause of the regulation.

The Court in its opinion says that the question is *res nova,* and so it is, in the sense that it has never been directly adjudicated by any of the courts, so far as we know. "How novel it is," says His Honor, "exactly as presented, is shown by the silence of most of the textbooks concerning regulatory rates, and the summary and insufficient treatment accorded the question in the valuable treatise of Messrs. Beale & Wyman."

So far from being "summary and insufficient," they, we beg to say, in one paragraph treat the subject *fully and exhaustively*. We quote section 362:

> "It must be clear that in estimating the capital upon which a public service company is entitled to a fair return, the value of a franchise enjoyed by the company cannot be considered. The value of the franchise is itself based on the capacity of the company to earn profits and it becomes greater when the earnings of the company are increased. If therefore a high rate of income could be justified on account of the great value of the franchise, this fact would in turn enhance the value of the franchise itself and so justify a still higher charge, and there would be no limit to the legal charge of the company until the limit of charge which was possible as a matter of business had been reached. In one case there is a dictum that the value of the franchise may be considered in arriving at the proper basis for just compensation, but it is submitted that the suggestion is unsound."

It seems to us, as we have indicated, that this statement by these learned authors, who had evidently carefully reviewed all the decisions then extant on the subject, furnishes an unanswerable reason why there can be no such thing as a capitalization of the franchise by the appellee so as to enable it to exact a return thereon from its customers. The method by which the Court below ascertained a valuation of $12,000,000 for this item furnishes in itself striking evidence that no value as *invested capital* can be assigned to the franchise. Surely, if it has a value, there must be some standard of valuation; there must be some means of ascertaining the value. Surely it is not to be left to be guessed at by the Court which is called upon to determine it, or to be determined *in some arbitrary and unascertainable way by the corporation itself* and then *built upon by the Court* on account of the increase of business. The latter method is the one adopted by the Court in this case. The Court says of the foundation of this item of $12,000,000, *the allowance of which has alone resulted in the condemnation of the statutes:*

> "That the complainant (p. 417) did at the beginning of its career measure the value of its franchises. It does not appear *how it was done nor how the figures selected were chosen*, but it is proven as a matter of fact that when complainant was organized in 1884 under a statute which permitted it to acquire the property and franchises of the older gas companies consolidated to form it, it then issued stock of the par value of $7,781,000, representing the franchises it then acquired and nothing else; and this stock is still outstanding, and has since 1884 been in the hands of purchasers who, I am compelled to think, have a right to rely upon legal protection for legally issued stock" (by which is only meant that chapter 367 of 1884 provides that the capital of a consolidated company shall not be larger than the fair aggregate value of the property, franchises and rights of the several companies to be consolidated. But that is a *general law* and applies to franchises that *have* a value as part of capital). "There is no direct evidence that complainant's franchises in 1884 were worth $7,781,000 or are worth that much to-day. I do not see how such evidence can exist, but because complainant made an arbitrary valuation so long ago, issued stock on the faith thereof, did that lawfully and has maintained dividends upon that stock ever since, I find it *presumptio juris* that complainant's franchises in 1884 were worth $7,781,000; and to that extent *it* is certainly entitled to protection against *confiscatory* regulation."

We beg to analyze this remarkable deliverance, which, as we have said, is the foundation upon which is built an *investment* by the appellee of $12,000,000 for the public convenience, on which therefore the public must pay interest.

In the first place, these large figures—$7,781,000—are adopted by the Court as a basis of franchise value, without knowing how or by what means they were ascertained, only and simply because they *were* ascertained *by this appellee* or by its constituent corporations, and *stock issued therefor.* "No evidence," he says, "exists that they were *worth that much then or are worth that much to-day,*" but somebody holds certificates issued on account of that valuation, and therefore the consumer must pay an annual return of 6 per cent. interest on it; and this, be it observed, in order to "prevent confiscatory regulation." Regulation confiscatory of what? Of something for which the appellee never paid anything nor parted with anything, for something which represents no value ever *invested* by it in anything for the public convenience, but simply and only stock which the appellee saw fit to issue for reasons satisfactory to itself, and which is now held by "innocent" persons. Yet there can be no innocent holder of any such stock any more than there can be—of course, we speak legal language—an innocent holder of a forged promissory note which has passed through many successive hands, each believing it to be genuine. The original issue was purely fictitious, every share of it and every share outstanding to-day that represents a certificate of that issue is equally tainted, however innocent of the taint the holder may be.

We take occasion to observe here that *there are no rights of stockholders, as such,* involved in this litigation or any aspect of it. If stockholders have suffered injury in any way at the hands of the corporation they must seek through proper means for their redress. No wrong done to them by this appellee can justify an additional wrong on its part to its consumers. In no conceivable aspect can this $7,781,000, which this appellee added to its capital upon its organization, be made the basis for a return from its consumers, and yet the Court below not only charges the consumers in behalf of "innocent" shareholders with a return upon this $7,781,000, but adds to it the further sum of $4,219,000, making $12,000,000 in all, by this singular process:

> "If," (?) says he (Rec., p. 418), "plaintiff's franchises were worth $7,781,000 in 1884, and its tangible property at the same time was appraised, as appears in the evidence, at $30,000,000 in round figures, then since complainant's business (in sales volume) has in twenty-three years almost quadrupled and its tangible assets grown to $47,000,000, it appears to me that a fair method of fixing the value of the franchises in 1905 is to assume the same growth in value for a franchise as is demonstrated by the evidence in the case of tangible property. If therefore the franchise valuation of 1884 was proportioned to personalty and realty of $30,000,000, a franchise valuation similarly proportioned to $47,000,000 in 1905 would be over $12,000,000."

(As we have heretofore indicated, this is a mutual or reciprocal, progressive method of valuing franchise—if it could be valued at all—which would preclude any limit of return below that which as a matter of business is possible.)

He therefore finds that the value of complainant's franchises at the date of inquiry was not *less* than $12,000,000, making the total valuation $59,000,000, upon which the probable return is $3,030,000, or "very considerably less than 6 per cent." (It is a little over 5 per cent.) "This return," says his Honor (Rec., 418), "is neither fair nor reasonable," and therefore this legislation under consideration is unconstitutional.

We cannot refrain from remarking upon the extraordinary proposition that a statute of a sovereign State is to be condemned as violative of the Constitution of the United States by means of a manufactured item of investment, manufactured in a way unknown to the Court which adopted it, by persons acting solely in their own interest, without the cost to them of a single dollar, and then increased nearly two-fold by a process of reasoning that assigns to it no possible use or value in the business of manfacturing for and supplying to the public an article of necessity. Some light, however, is shed upon the *origin* of this *item,* now *grown* to this dimension, by testimony to be found in the record. The president of the company, a witness for appellee, explains it before the State Board of Tax Commissioners as "representing the *good will* of the consolidated companies, the right *to exist as a corporation, contracts with the City, etc., the right to make and sell gas,* and the *right to occupy the streets*" (Rec., 3107).

In the report of the Senate Committee, March 1, 1886, the minority report explains this item as follows (Rec., 5340):

> "Having determined upon the aggregate amount of share capital (that is, $39,078,000, p. 5325), the next and most difficult matter was to distribute it.
>
> "* * * Finding that the predetermined amount of share capital could not be reached by a liberal appraisal of some of the property and by nothing deserving the name of appraisal as to other properties, a further sum of $7,781,000 was added for franchises, that being the difference between the proposed sum and that which had been reached without it."

In short, according to Senator Gilbert, one of the three members of the committee, $7,781,000 was the difference between what was determined upon, *at the consolidation,* for the *capital stock* of the company, and the valuation which the committee appointed for the purpose had assigned to the assets of the constituent companies. The report of the majority of the committee (p. 5384) furnishes practically the same explanation.

> "The value of this property finally agreed upon by the six constituent companies comprising the consolidation was $29,994,000, but as the value of the stock of the same six companies had been agreed to be $39,078,000, after setting apart $1,303,000 for working capital, it left $7,781,000, which they called the value of the franchises and rights of the several constituent companies."

The presiding Judge in the Court below says (p. 416):

> "The Master reports that the record contains little direct evidence as to the value of the franchises, and he might have added that if by direct evidence is meant testimony of the same kind regarding their value as has been offered regarding every item of tangible property, there is none at all."

And so it is, that notwithstanding the inability of the Senate Committee, either the minority or the majority, or of the Special Master, or his Honor, upon considering the report of the Special Master, and the exceptions thereto, to assign any certain value whatever to the special franchise, and notwithstanding the inability of the Court with all the evidence before it to ascertain why $7,781,000 was chosen to represent this franchise value, it was adopted by the Court merely as a basis upon which, through the extraordinary process of reasoning which we have quoted, there has been built a capital of $12,000,000 upon which the consumers of the gas of the appellee are to be taxed, and by virtue of which, enactments of the Legislature are to be denounced as unconstitutional and the enforcement of their provisions inhibited; and which, according to the logic of His Honor, must continue to increase with increasing value of tangibles and increasing sales—a perennial plant of constantly increasing growth, without seed or root.

With reference to the argument based on the taxation of franchises, it seems to be quite enough to say that this tax only exists where, and to the extent that, a public service corporation is earning more than a fair and reasonable return upon the values employed by it for the public convenience, and that whenever, either by the voluntary action of the company, or by legislative regulation, this excess disappears, there is nothing to be taxed and nothing is taxed in such case.

Recurring in conclusion to the argument derived from a comparison of or from the supposed analogy between condemnation proceedings and regulation rate proceedings, we quote, because of the conciseness and intrinsic force of the statement, " Beale & Wyman on Rate Regulations," section 364:

> " Whether when the plant of a public service company is taken by a city, by eminent domain or by contract compensation is to be made for the franchises of the company, is not entirely clear on the authorities. The question, of course, should be determined according to whether, in view of the purchase or taking, any value remains in the franchise. Although the company may be compelled to submit to statutory rates, which make no account of the existence of the franchise, the franchise may nevertheless be of some value. Even when the rates are so limited, the company is still permitted to receive a return on its capital which is greater than on a government bond; the ownership of the plant may therefore have a certain value which the fran-

chise gives. And if the franchise actually has a value, compensation for it should be made."

But, we repeat, the fixing of a rate—a fair and reasonable rate—takes nothing to which there is a legal right.

A final analysis of this item of $12,000,000 for special franchises will disclose that it is a charge against the consumers *to the credit of Investment,* merely—*solely*—to secure a *dividend on shares of capital stock* of the par value of $7,781,000 which, by the process discovered and used by the Court below, has appreciated to $12,000,000 or a little more than 54 per cent. To this extent and only to this extent, in this case, has share capital been considered in estimating the investment. But the Court said it *had to be done* in order to *protect "innocent" shareholders;* and these "innocent" shareholders have been specially favored over all other shareholders by more than 54 per cent. There seems to be no reason why the other shares should not be equally favored. They were issued at the same time as part of the same share capital. But if they were so favored the *investment* would be swollen to nearly $86,000,000 as against $47,831,435, *present* value of tangibles as found by the Court. Not only so, but according to the process of the Court, the value of the share capital would continue to increase, *pari passu,* with increasing sales and increasing market value of neighboring lands and, with the added increment of realty, would be aded to the *investment,* and so the only limit to *investment* would be, *not investment,* but market value of real estate, capacity of production and consumers to take it. Such is the monstrous and intolerable result of the theory and reasoning on which *alone* is based the verdict of the Court that, palpably and beyond all doubt, these statutes will deprive the appellee of its property without due process of law.

It seems perfectly clear, therefore, that there is no basis whatever for the value assigned to franchise or franchises in this case, or for any value at all. But if it is not allowed, then, according to the opinion of the court, and to the finding of the court, which is acquiesced in by the appellee, it must follow that the enforcement and operation of the statutes in question will not inevitably deprive the appellee of a fair return upon its investment, as the same was ascertained in the court below, *and the decree must be reversed.*

Now, what say our adversaries?

(1) The appellee is "securely and *perpetually* in possession of the streets by virtue of the charters of one or more of its constituents;" (2) "the provision of the present charter of the City of New York, under which charters may now be granted for only twenty-five years and imposing onerous conditions for their procurement, enhances the value of appellee's franchises by eliminating the possibility of a competitor procuring a perpetual or unburdened franchise." This was their argument in the Court below.

Now, we ask, in all simplicity, how such conditions *add anything to the investment* by complainant for the public convenience? But it is only on investment that it is entitled to demand a return. Fortuitous circumstances, pre-existing conditions and later legislation which it is absolutely certain was not by the legislative department designed to that end, and a consolidation of substantially all the corporations thus *securely possessed of the streets,* have resulted in a monopoly, "in eliminating," say the learned counsel, "*the possibility of a competitor procuring a perpetual or unburdened franchise*" ("Brief for Complainant before the Special Master," p. 100). Shall the inherent value to the appellee of this impregnable fortification against any invader of its field, the unintended issue in part of legislation by the people *in the interest of the people,* be made the means of *oppressing the people* and enabling the appellee to exact a return on something which represents no investment whatever by it? Surely not, unless by a return on investment is meant a return not only on money and property employed by the Corporation, but on all the incidental advantages, no matter how inimical to the public convenience or the public service; a money value for which is to be guessed at or arbitrarily fixed. Counsel for the appellee invoked in their support the action of the State Board of Tax Commissioners in 1906, fixing the value of appellee's special franchises for the purpose of taxation under Chapter 712 of the Laws of 1899, and cited the opinion of the Court of Appeals of New York in *People ex rel. Met. Street Ry. Co.* vs. *Tax Commissioners,* 174 N. Y., 417. But that opinion affords not a remote intimation that what is there defined as a special franchise is to be treated as a part of the *investment* of a corporation. It was not so regarded in that case. Beyond disposing of the question of home rule—the principal question—involved in the assessment by the State Board instead of by local assessors, it only decides that a franchise, whether general or special, is taxable the same as other property, overruled the contentions that the act is incapable of execution, that *the special franchises should have been separately assessed,* that the State Tax Commissioners adopted no rule in making the assessments, that the relators did not have a proper hearing, and that due process of law was not observed in the taxation of relator's property. But all this is very far from deciding that special franchises have ascertainable value as part of the *capital on which a return can be demanded from the customers of a public utility corporation.* As the opinion declares, the Legislature simply creates a new chara of property, hitherto unknown, viz., the privilege of using the public highway in constructing, maintaining and operating structures intended for the public use, which property includes such tangible as are " in, upon, under or above any street, highway, public place or public waters * * * and excludes all power houses, depots and structures without the line of the streets."

It is apparent that only part of this "new character of property" thus "created for purposes of revenue" *represents any investment* by the corporation for which it may levy a tax on the consumer. But it is sought to show by the method of assessment used in that case, through the testimony of the Chairman of the Board of Tax Commissioners (Rec., pp. 1848-1850) that the State Board of Tax Commissioners did, in its assessment *of the appellee,* affix a value "for intangible rights **alone of over $17,000,000."** The testimony referred to does not sustain that statement. It is, however, immaterial for the reasons already stated, as well as because if appellee had shown, or if it had appeared, that its returns from its investment were not *in excess of what was fair,* there would have been no assessment at all of the franchise, or on account of the franchise; and in any view simply adds to *expenses of the business which are charged to the consumer and not to investment.*

And so, we repeat that this item of $12,000,000 should be rejected because (1) the Master and the Court agree that it is not supported by the evidence; (2) it is built up on a figure ascertained by means unknown to the Court—which the Court was unable to discover—in the language of the Court "arbitrarily selected" by the appellee at its consolidation, and it was accepted by the Court against the consumers in the interest of stockholders whose rights are not involved in this suit; (3) whatever tax the State may impose by any method of valuation the State may adopt for that purpose, is borne by the consumer and adds nothing to the investment of the appellee for the public convenience, nor (4) does the circumstance that in case of a condemnation of the property employed by the appellee under the protection of the franchise, a value would be assigned to the franchise, *add anything to the investment;* because finally the allowance would establish a principle that would effectually preclude regulation in the case of every corporation that might get the start of or steal a march on the Legislature.

The decree should be reversed because of the error in allowing this item for franchise, or franchises, or special franchises.

SPECIFICATION II.

It is submitted under the Assignments of Error First, Second, Third and Fourth (pp. 445 and 446) that the Court below erred in assigning a valuation of $47,831,435 (Record, p. 432) to the tangible assets of the appellee, and that such valuation was erroneous for the reasons stated in Assignments of Error Fifth to Fifty-fourth, both inclusive, and in sustaining to that extent the Master's report and overruling this appellant's exceptions thereto in said several assignments stated.

We think the following rule may be deduced from the opinions and decisions of this Court: **The Company is entitled to a fair return upon all the money expended by it for the means employed in the service of the public (outside of what is included in operating expenses) and obligations incurred for such means; unless it plainly appears that such expenditure and obligations are in excess of**

what they should have been under all the circumstances, in which case they should be reduced.

Assignments of Error.

Under Specification I., p. 17, was stated Assignments First, Second, Third and Fourth. While we respectfully invite the Court to consider each of the Assignments from Fifth to Fifty-fourth, we trust it will be held to be a sufficient compliance with the rule of the Court if we repeat here only the following as being essential to the argument we offer under this specification.

The Sixth Assignment of Error (Record, p. 450) is: "In assigning to the properties of the complainant employed by it in the production and distribution of gas, in reaching the valuations set forth in paragraph II. of said decree, upon which a return is to be allowed, their present values based on the cost of duplication, less depreciation, instead of their present values based on their actual cost, less depreciation, the former admittedly exceeding the latter, and such excess representing money never actually expended; and in sustaining the report of the Master in Chancery in this respect and to this extent in overruling in like respects and extent the exceptions of this defendant to the report of said Master in Chancery."

The Fourteenth Assignment of Error (Record, p. 450) is: "In sustaining the report of the Master in Chancery finding that the complainant is entitled to a return on the present value of its real estate, as distinguished from its original cost, that although

> 'By far the greater part of the real estate belonged to the constitutent companies before the con-

> solidation and was purchased many years ago at prices much below its present value,'

still complainant was entitled to a fair return upon the amount of the increase in value of its real estate holdings or of the unearned increment thereof.

Whereas he should have found that the value on which the complainant was entitled to a return was such cost value to the six constituent companies up to consolidation and to the complainant since then for such land acquired since, less the amount received for sales of any real estate; that the difference between such cost and such present value represents the appreciation thereon, due to local conditions in Manhattan, and not to any increase in investment by the complainant, and amounts to an unliquidated surplus, which can be determined as soon as the property is sold, and both before and after such sale cannot be treated as other than a surplus, and it is not proper to allow a return thereon as against the consumer; and in overruling in this respect and to this extent this defendant's Fourth Exception to said Master's report."

The Fifteenth Assignment of Error (Record, p. 450) is: "In sustaining the report of said Master in Chancery finding that there was no competent proof showing that the original cost of the real estate owned by the complainant was as stated, only the sum of $4,118,267.38, and that so far as the record discloses it is quite evident that the actual cost was in excess of that sum.

Whereas he should have found that said sum did represent substantially the cost of such real estate as carried on the books of the constituent companies; and in overruling in this respect the Fifth Exception of this defendant to said Master's Report."

The Sixteenth Assignment of Error (p. 450) is: "In sustaining the report of said Master in Chancery finding:

> 'In the second place, if the question of original cost is to be considered, it should be the cost to the complainant, the Consolidated Gas Company, and not the cost shown on the books of its constituent companies, some of which had acquired their property fifty years and more before the complainant was organized. The cost to the Consolidated Company was represented by the amount of stock it issued to the constituent companies for their real estate, which, as already stated, was $10,332,000. It may possibly be that this amount was in excess of the fair market value of the property at that time, but the record indicates that the discrepancy, if any, was by no means as large as the defendants have argued.'

whereas he should have found that such value did not represent the true cost of the real estate on which, if at all, the complainant was entitled to a return, but that such true cost was the original cost to the constituent companies of the real estate acquired before consolidation; and as to real estate acquired since consolidation the cost to the complainant. That by the mere act of consolidation in 1884 the complainant was not entitled to increase its real estate investment on which a return is demanded, without any additional outlay of cash; and in overruling this defendant's Sixth Exception to the Report of said Master in Chancery."

The Seventeenth Assignment of Error (p. 450) is: "In sustaining the Report of the Master in Chancery finding:

> 'Whatever enhancement there may have been in its value since the date of purchase was the result of no efforts on the part of consumers of gas, and they are not equitably entitled to a return thereon. Whether it was the result of mere good fortune or was due to the shrewdness and foresight

> of the management of the company is immaterial; in either case, the justice of permitting the general public to share its benefits at the expense of complainant's stockholders is not apparent.'

whereas he should have found that whatever enhancement there may have been in its value since the date of purchase was the result of no effort on the part of the complainant, but, according to complainant was due to "Divine providence and the growth of The City of New York," for the reason that the complainant is not entitled to include such enhancement in the gas investment on which the consumer must provide a return, but may get the benefit of such enhanced value upon the sale of such property when it will be treated as a surplus and it must be so treated prior to liquidation, that to do so imposes no burden upon the complainant, as the taxes are paid by the consumer during the time the property is held, and that to do otherwise would be to impose a greater burden upon the consumer, which would in time enable even a dollar rate to be held confiscatory, since the investment on which the return is figured would be continually enhancing; and in overruling this defendant's Thirteenth Exception to said Master's report."

The Nineteenth Assignment of Error (Record, p. 452) is: "In sustaining the report of said Master in Chancery finding that the complainant is entitled to a return on the present value of the plant, based on the cost of reproduction, and not on the original cost less depreciation, whereas he should have found that where such present value based on the original cost less depreciation, is less than the present value based on the reproduction cost, that the complainant is entitled to a return as against the consumer only on the smaller amount. Otherwise the consumer is burdened with paying a return on money never spent, and deprived of benefits accruing from duplication by an ideal plant, while no injustice can accrue to complainant in allowing a return on its actual investment in its present condition; and in overruling this defendant's Fifteenth Exception to said report of said Master in Chancery."

The Twentieth Assignment of Error (Record, p. 453) is: "In sustaining the report of said Master in Chancery finding the value of the mains of the complainant on which it is entitled to a return as against the consumer, to be the replacement value based on the cost of reproduction of the same. Whereas, said Master should have found said value of the mains to be the actual cost of investment therein by the complainant, less the depreciation, as the only fair basis between the complainant and the consumer, otherwise the consumer is charged with the burden of providing a return on an amount in excess of the actual investment of the complainant due to increased cost resulting from modern conditions, pavements, etc., without the consumer receiving the benefits which replacements, at the present time, under the present conditions, would give. That in no sense can the mains of the complainant, many of which have been in the ground for fifty years, be said to be at the present time of a greater value than the actual cost merely because modern conditions would not permit duplication of such identical mains at the same cost at the present time; and in overruling this defendant's Eighteenth Exception to the said report of said Master in Chancery."

The Twenty-first Assignment of Error (Record, p. 453) is: "In sustaining the report of said Master in Chancery refusing to find that the appraisal value of both mains and services at the time of consolidation in 1884, was far in excess of their cost; and that the value of mains and services devoted by complainant to the public use was as of December 31, 1905, $6,359,324.46, which represents the original cost of mains and services transferred by the constituent companies to the complainant plus the expenditures of the complainant since 1884 on account of new construction thereof. Whereas, he should have found that such figures represented the then value of such mains and services on the basis of cost less depreciation, as carried on the books of the constituent companies, and that any figure in excess of such amount which the complainant claimed therefor at that time was in excess of the real value of such mains and services and such excess should not be included in the investment on which a return is to be allowed, for the reason that it does not represent a cash outlay by the complainant, and any capital stock issued for such excess by complainant was unwisely and wastefully issued; and in overruling the Twentieth Exception of this defendant's report of said Master in Chancery.

The Twenty-second Assignment of Error (Record, p. 454) is: "In sustaining the report of said Master in Chancery finding that the complainant is entitled to a return from the consumer on an amount for services based on the cost of reproduction at present prices; whereas he should have found that if the basis of present values is to be taken, no amount at all could be charged by the complainant, as such services are no longer owned by such complainant, inasmuch as so much thereof as are in the public streets are considered as separate from the franchises, and the balance thereof are on private property and belong to the owners of said property, and that it is only when the basis of actual cost, less depreciation, is adopted that any amount for services can be included by the complainant in the amount on which a return is to be provided by the consumer; and in overruling this defendant's Twenty-second Exception to said report of said Master in Chancery."

The Thirtieth Assignment of Error (Record, p. 457) is: "In sustaining the report of said Master in Chancery disallowing and refusing to find:

> 'That the properties of the constituent companies, so as aforesaid transferred to complainant

> as of the value of $29,994,000, cost the constitutent companies new, without allowance for either appreciation or depreciation of its several classes of property, the sum of $20,942,632.85, as shown by the books of account of the several companies.'

Whereas the same should have been allowed, and in overruling this defendant's Seventy-fifth Exception to said report of said Master in Chancery."

The Thirty-first Assignment of Error (Record, p. 457) is: "In sustaining the report of said Master in Chancery disallowing and refusing to find the Sixth Special Finding of Fact requested by the Attorney General of the State of New York and adopted by this defendant, as follows:

> 'That the constituent companies, for the purposes of consolidation aforesaid, by appraisers selected by them, appraised their land in excess of the then market value thereof and appraised their buildings, plants, mains, services and other tangible property at what it would then cost to produce the same new, as a part of a going concern; and that if the Master should find the facts to be otherwise, he find and state the basis and method of such appraisal.'

Whereas, the same should have been allowed; and in overruling this defendant's Seventy-sixth Exception to said report of said Master in Chancery."

To point out the error under Specification II. it is not necessary, in our judgment, to take up any of the items other than that of real estate ($11,155,845, p. 398), —though we shall advert to others—nor is it necessary to perform the labor ourselves of reviewing, nor weary the Court with a review of the evidence to show that this valuation is not sustained by the evidence. It is not necessary, because of what we conceive to be a fundamental error in the basis of computation. The valuations of the real estate assigned by the Master in his report are concurred in by the Court below, but his valuation is reduced to the amount mentioned, by the elimination of certain portions of that real estate as not being used or employed by the appellee in its gas business. The valuation is according to the *market* value of other properties similarly situated and *adaptable* to *such use* as the owners thereof may *see fit to apply them.* In short, the valuation is according to what would be the market value of these lands if they were on the market. It would seem to be unnecessary to say more than that these lands are not marketable. They were not in the market. They could not be put upon the market in the condition they were in at the time of this reference to the Master, and are still; so that it is simply impossible to assign to them a market value. They have no conceivable money value to the appellee upon which to base a charge against the consumer except their cost to the appellee as an investment in the business of manufacturing and supplying gas for the public. Indeed, were the appellee to seek a purchaser, and were it to find a willing purchaser, that purchaser would be unwilling to pay any more for the real estate than what he would be allowed to charge for it as capital invested in the business upon which he might have a return from the consumer, and this could not be more than the original cost to the appellee, or its *present value as used* in the business. No matter how it is turned around, it comes to the same thing. No other value can be assigned to this real estate than its cost value so long as it is covered by gas holders and gas apparatus and devoted exclusively to the purpose of manufacturing and supplying gas. If any additional value is to be realized out of it, it cannot be at the expense of the consumers of gas. It cannot be realized even by the appellee as an entity except by disposing of it, converting it into money and distributing the surplus among the stockholders, or investing it again in other property for their benefit. It cannot be said that there was any such sale and conversion when these lands became the property of the Consolidated Gas Company by means of the merger of the six companies, for there was an entire absence from that transaction of the antagonizing elements of sale and purchase, *the only purpose being to ascertain a capital for the new company upon which stock might be issued to the several constituents in proportions satisfactory to them severally.* The transaction was by and amongst the several companies. It was not a purchase from or a sale by them or either of them. It was, as it purported to be, a *consolidation,* or *pooling, of the several investments already made, only that and nothing more.* Nobody, human or corporate, added as much as one dollar or the value of a dollar to what had been already invested. True, the several properties were appraised, but they were appraised presumably at what would have been their market value if marketable. This we have endeavored to show, though entirely unobjectionable as among the constituent companies, was absolutely unjust to consumers.

To do otherwise than to take the cost, is to capitalize against the consumer all the appreciation, that is unearned increment of the real estate, which advance bears no relation to the gas business.

All this appreciation is no more than surplus capital, which at some time must be realized upon, and which meanwhile the consumer carries by paying the taxes, and a return on the cost. Suppose, for instance, a parcel were sold at a greatly advanced price, would not the excess over the cost of that parcel be surplus not engaged in the gas business just as logically as if it were invested in electric light or other stocks, or in unnecessary real estate? Why not, then, before it is realized—when it is tied up in real estate in use?

We submit therefore that there is no justification for an assignment of any value to the real estate of the appellee beyond that of its actual cost. But the testimony found at page 3635 and pages 5871 and 5872 of the record shows that the original cost to the six merged companies was $3,377,971.10 *and the additional cost to the Consolidated Company was* $740,296.28, *making a total of* $4,118,267.38, which represents *every dollar which has ever gone out of the pockets of the stockholders or of any body or from the treasury of any company for any land that is being used by the appellee for the public convenience.* If at the very time of the purchase of this land by the original companies and as each company acquired it, a rate had been fixed based upon the then cost, obviously the rate could not have been questioned on that ground. The proposition, however, by the appellee, is that the rate of return must increase by adding to the cost value of that land used in that business, not by reason of any *additional investment* on the part of the company, but from time to time as the values of land *in the vicinity, adaptable to and used for other purposes,* shall increase; thus making the consumer pay interest not only on the investment, but on the silently accruing uninvested *profit* of the investment (profit on profit), until the corporation shall see fit to convert the real estate and re-invest the surplus or distribute it among the shareholders. It would not be easy, however, to find a safer or more remunerative investment of this accretion. There would be no incentive for seeking less costly land if the corporation could exact interest on the increased and increasing value.

It seems to us that the statement of the proposition exposes—as fully and effectually as any process of argument could do—its sheer injustice to the consumer. If our contention under this point be just, then as a matter of law the valuation assigned to the real estate should be reduced by the difference between $11,155,845 and $4,118,267; that is, $7,037,578, making tangibles $40,793,857 and the income of $3,024,592 over 7 per cent., which, however, as we have seen, is unnecessary to rescue the statutes.

The Master says in his report (Record, p. 167):

> “There was no competent proof showing that the original cost of the real estate was only $4,118,267.38.”

We think that we have shown there is, but if the Master is correct, then the appellee has *failed to show the cost and must fail on that account.*

As we have already indicated, this sum is shown in the report of Marwick, Mitchel & Co., the defendants' accountants, to be made up as follows (p. 5872):

“Purchase price, including additions and improvements to November 11, 1884	$3,377,971 10
“Purchase price, including additions and improvements from November 11, 1884, to December 31, 1905	740,296 28
	$4,118,267 38”

The Master disallows this figure on the grounds that the cost to the constituent companies was much in excess of $3,377,971.10, because (pp. 268-269):

> “These figures do not include the real estate of the Knickerbocker Company nor a considerable expenditure made on real estate account by the Harlem Company, and the proof shows that certain real estate of the Manhattan Company was carried on the books at less than cost.”

As to the Knickerbocker Company, there is no precise figure in the record. It was taken over in 1884 at $595,000 consisting of real estate $480,000, and bulkhead, piers and water rights $115,000. This figure, however, contained all the appreciation prior to November 11, 1884, and all the appreciation given on the transfer at that time. From the table of accountants (p. 5871) it appears that the total of such appreciation in the case of the other constituent companies averaged over 100%. It is then a safe inference that the Knickerbocker real estate did not cost over $300,000.

To offset this, however, it should be remembered that the figure $4,118,087.38 *covers the cost of all the real estate excluded by the Court.*

As to the expenditures made by the Harlem Company which it is claimed do not appear in the cost figure, the only evidence in the record is at pages 6303-4-9-12, where Mr. Moss, manager and director of the Harlem Company, testifying before the Committee of 1885, testified that he was *informed* that at some time prior to his incumbency in 1879, the plot east of First avenue was filled in by the Gas Company and that the expense thereof so far as it was contained in payrolls, and in the purchase of animals, carts and implements was contained in the expense account, not in the contingency account. But that did not apply to the building of the docks.

For all we know, this may have been regarded, and properly so, as the expense of removing ashes, rubbish, etc., rather than a construction item. But the fact remains that the figure of Marwick, Mitchell & Co., for the cost of the Harlem real estate is $313,211.62 (p. 5871) purporting to be "Original cost, buildings and *improvements*" as against Yalden's $158,899.81 (p. 5709) and Marwick, Mitchell & Co.'s appreciated figure of $754,000 (p. 5877), includes a valuation for this block (140 on Avenue A, now Pleasant avenue) and a valuation for the bulkheads. It is not to be assumed, then, that the figure of $313,211.62 omitted anything.

As to the claim that certain of the Manhattan Co.'s real estate was carried on the books at less than cost, an examination of Mr. Yalden's report (p. 5624) shows that the only item of "depreciation written off" was $21,706 on an item of "Buildings and Improvements" *not cost*. It will also be noted that Marwick, Mitchell & Co. allow for buildings and improvements on the Manhattan real estate an amount of $513,022.94 over Yalden's figures (p. 5625).

As to the item of $740,296.28 for real estate including additions and improvements from November 11, 1884, to December 31, 1905, the Master says (p. 296):

> "The sum of $740,296.28 is *less* than the *entire* amount paid by complainant for real estate, including improvements and additions thereto, for the reason that it represents a net sum, the receipts from real estate sold having been deducted from real estate expenditures, as previously stated."

This statement is not borne out by the accountant's report (pp. 5871-3); the only deduction made from the book values taken from complainant's exhibits is the item of $142,378 representing *profit* on real estate sold. Surely that is no part of the cost.

It is submitted that under no conditions can the figure $4,118,267.38 be considered unfair to appellee.

What we have said of real estate is equally true of all other tangibles, and especially it is true of the item, *mains;* for which an allowance of $12,636,000 was made by the Master (Record, p. 247) approved by the Court (Record, p. 432). That was allowed as "the *present* value of the mains based on what would be, according to the testimony of witnesses for complainant (the appellee) (Record, p. 177), the cost of *reproduction.*" The Master, however, says in his report (Record, p. 176): "They are carried on the complainant's books at the sum of $7,852,000." Therefore, $4,784,000, *never expended* or *invested* by the corporation, is charged against the consumer, for no other reason than this: *If the corporation shall have to reproduce the mains*, or *if it had now to purchase and lay them*, it would then cost that additional sum. So also, as to the services: "The capital *invested* in the services, says the Master (Record, p. 178), as shown by the books as of December 31, 1905, is $1,222,228.37," but "the cost of *reproducing* these services at *present prices*, according to complainant's witnesses, would be $1,994,000, and the record discloses no testimony to the contrary" (Record, p. 178). That amount is accordingly allowed by the Master and (Record, p. 432) approved by the Court; which is $771,771.63 in excess of any *cost to* or *investment* by the company on that account. These two allowances in excess of cost aggregate $5,555,771.63. Add that to $7,037,558 excess allowed (*ante*, p. 43) over cost of real estate and we have consumers charged with $12,593,329.63. Add this $12,593,329.63 to the $12,000,000 charged up by the Court for franchises and we have $24,593,329.63 charged to consumers, *not one dollar of which* was ever *expended* or in *any wise invested.* Deducting this total from the "total of tangible assets, $47,831,435" and $12,000,000 for franchises, or $59,831,435 *charged up in the decree* (p. 432) and we have $35,238,106 on which the probable return at the rates fixed by the statutes would be, as found by the Court (Record, p. 432) $3,024,592.45, and that return would be more than eight (8) per cent. on the *entire cost* to the appellee of, and its *whole investment* in the means employed by it and its constituent corporations for the convenience of the public.

But in this allowance for mains and services, an important factor in the reasoning and conclusions of the Master (last par.) (Record, pp. 177, 178) is the changed conditions, since the laying of these mains and services, in the streets of the City. Says the Master (p. 177, last paragraph):

"The fact that reproduction cost is so greatly in excess of the cost of original construction is due largely to changes in the character of the City's pavements. Formerly, when the gas companies had occasion to open the streets for the purpose of laying new mains or repairing old mains or services, it was their custom to replace the pavement at a cost of from 15 to 25 cents per square yard. Now about 88 per cent. of the streets are covered with new styles of pavement, chiefly asphalt. The gas companies are permitted to open the streets only on condition that the pavements shall be relaid by the contractors for asphalt paving. The expense of this work is paid by the gas companies and amounts to from $2.70 to $7 per yard, the latter price being for pavement on Broadway. Pavements consisting of granite blocks on concrete are replaced by the City's employees and for this work the complainant is charged $8 for the first square yard and $4 for each additional yard. Another source of additional cost is the congested condition of the subsurface of the streets, in view of the multiplication in recent years of various forms of underground construction. In addition to sewer and water mains, there are now conduits for electric light, telephone and telegraph wires, underground trolley ducts, and salt water mains, besides, in certain streets, the elevated railroad columns and structures of the rapid transit railway. The result is that in many streets the entire subsurface is so filled with these structures that the replacement or repairing of existing mains is attended with great difficulty and consequent expense.

Taking the testimony on this subject as a whole, the preponderance of evidence is very clearly with the complainant, and its estimate of the replacement value of the mains may be taken as reasonable."

We submit it will be time enough to make this charge for replacement, when the replacement shall have been made; especially as the very conditions of which it is predicated may render the replacement unnecessary; or, if ever necessary, only so, at some indefinite and remote period. This is a fair specimen of the reasons for the striking down by a Federal Court of the deliberate enactment of a Sovereign State in respect of an article of necessity to its people; for which they are totally dependent on a monopoly; statutes enacted only after investigations, most painstaking and impartial, extending over a period of nearly twenty-five years.

But the conclusive answer to this charge against consumers, of increased cost of replacement of mains and services is that it would be charged under Expense Account, or some subdivision thereof, to the consumer, and, so, be deducted from gross income in ascertaining the net return. By the decision of the Court, the consumer is charged with $5,551,771.63 *never expended,* and which, *if ever expended,* the company will get back because the consumer will be charged with it *again* as part of the operating expenses.

His Honor says (p. 391 Rec.):

> "As to all of the items from real estate to meters, the complainant demands a fair return upon the reproductive value thereof, which is the same thing properly considered as present value. Upon authority I consider this method of valuation correct."

But we dare say, with deliberation, that no such general rule has ever been declared by this Court, nor can any other than the one we have stated be deducted from the decisions. There is not to be found, we believe, an opinion of this Court which authorizes *a debit to the consumer of one dollar beyond actual expenditure on the consumer's* account for property used in the business, and a reasonable working capital, and a reasonable reserve for repairs and replacements—not one. In every instance where cost was not adopted, and where reproductive value was, the reason has been that only reproductive value would be just *to the consumer.* No doubt had it appeared that the outlay was justified under all the circumstances, it would have been allowed, notwithstanding through later advances in the art of construction, improvement on appliances, decline in cost of materials and of labor, etc., all might be reproduced at less (Field, *J.*, in Railroad Commission cases, 116 U. S., 307, 344). The rule would be otherwise, however, if it should appear that there had been extravagance, waste, unwise construction, etc. (*Chicago Grand Trunk Railway Company* vs. *Wellman*, 143 U. S., [illegible]).

The rule limiting the return to actual cost, where it is not apparent that there was improvident purchase, injudicious location, extravagance, waste, unwise construction, etc., has the merit of definiteness, of being a workable rule, and the only workable rule. By no other can justice be done to the corporation and to the consumer alike. We repeat: To take the cost of the investment *can work no injustice to the company in any event,* and may only work injustice to the consumer where such cost exceeds the present value or duplication value. Where the cost is *less* to take the present value *must* work an injustice to the consumer by requiring the consumer to pay profit on profit to the company. But according to the evidence in the record the cost (by appraisement—not in money—of the constituent companies) to *appellee* of its plant and all property used for the public as nearly as can be ascertained from its own books did not exceed $30,656,198.75 ($20,942,632.85, Rec., p. 5737, and $9,693,565.90, Appellee's Ex., 79, p. 5032). The net income of the appellee, as found by the Court below, $3,030,000, is more than nine per cent. on this investment.

If appellee is entitled to return on "market" values of the tangible properties of its constituents at time of consolidation, that value *fixed by the companies themselves was only* $30,656,198.75, as we have seen (Rec., pp. 5726-32), on which the return of $3,024,592.45 would be more than nine per centum. In fine, whether we take, as to the property which the Court finds is employed by appellee, original cost to constituent companies or appraised valuation of all tangibles in 1884, *for purposes of consolidation* and addition thereto since then, or *even present* values *as found by the Master* and *approved by the Court*, the result is the same; the net return of $3,024,592.45 exceeds six per cent., and it only becomes less than six per cent. when the item, "franchises," valued by the corporations in 1884 at $7,781,000, and not separately valued by the Master, but increased *by the Court* to $12,000,000, is added, and even then the return is *over five per cent.*

The conclusion of the whole matter of investment is this: Franchise can never find a place in the bookkeeping of a public service corporation, unless on the opening of the books of the corporation there can be written down Investment to Cash, or to Bills Payable and against it an amount actually paid for franchise, or incurred, and the truthful explanation: *This amount paid out for franchise,* or our note, etc., executed for this. There are absolutely but five accounts that concern the consumer or the public, viz.: Investment, Expense, Cash and Bills Receivable, and Bills Payable; and, as against the consumer or the public, no item is to be entered in either except money actually paid or payable for property employed in the business, or expended or payable, and money taken in or receivable, on account of the business, and the items for money paid out or payable can be allowed only to the extent that they accord with fairly good business sagacity, all the circumstances being considered and duly weighed.

There must be an investment of money in the franchise, or franchise can never become an item of investment on which a return is to be had. If in the course of the company's business it shall have to pay money on acount of the franchise, as, for instance, *on account of a tax imposed,* the amount expended goes into *Expense Account* or some other subdivision and is repaid by the public or consumers, just as salaries and wages are, in ascertaining the net return or percentage on the investment. How for an original entry would this do; Investment to Profit and Loss—it couldn't be credited to any other account—$12,000,000: *Estimated value of franchise taken from us by the State through an act of the Legislature reducing our net earnings to a fair and reasonable rate.* That is precisely what has been done by the Court. How would it impress the Court to find this original entry in the appropriate book of accounts of the appellee: *Investment to Profit and Loss.* $7,781,000; *being estimated value of special franchises of our several constituent companies, being the difference between the amount of capital stock agreed upon for this company and the appraised value of the assets of the several constituents;* or the same explanation found in the stock ledger, and, later, the other entry.

Yet, in some form or other, the substance of these entries must appear, if that item is a proper charge against the public.

As we have endeavored to illustrate in respect of the item, Franchise, so in regard to real estate and all tangibles. As against the consumer there can be no entry except for money paid or obligation incurred in its acquisition. Every other expense in respect of real estate as, for instance, taxes, goes into Expense Account, or into some other subdivision and comes back from the consumers in the striking of the balance of expenses and income. If this be not true, then from time to time as there is a reasonable increase of market value in neighboring real estate adaptable to such purpose as may suit investors generally, such increase may be written into Investment Account to Profit and Loss; "this account being for increase in market value of real estate."

That is, in effect, what has been done by the Court. Yet if the real estate were disused by the company, put on the market and sold, the surplus would not be credited in any of the accounts representing income, so as to increase the net returns and lessen the rate to the public. It would be distributed among the stockholders or reinvested for their exclusive benefit, or put out for the improvement of the service; in which last case only could it be charged to the consumers.

REPRODUCTIVE VALUE.

Let us suppose this entry under some one of the accounts—we scarcely know to what one it could be assigned, but let us say, *Investment Account to Profit and Loss, $* , "being estimated excess over cost, of reproducing plant." That is what was done by the Court, though the company has not parted with or incurred an obligation to part with a dollar on that account.

And, so, there has in effect been, by the Court below, written into the Investment Account to the credit of Profit and Loss three items agregating $24,593,329.63. This deducted from the totals, tangible and intangible, found by the Court, $59,831,435, would leave as total investment, $35,238,105.37, on which the net income found by the Court would be more than nine per cent.

If valuation of its property based on cost of reproduction is allowed the company it should be the cost of reproduction of a modern up-to-date plant. Such a plant would reduce the cost of gas and thus inure to the benefit of the consumer.

Thirty years ago the gas companies engaged in the manufacture and sale of gas in the Borough of Manhattan (old City of New York) were keen rivals and competitors for the business. They sought to invade each others territory. They laid their mains and services in the same streets. The new companies, with their new plants, outbid the old companies for the public service. This competition cut down profits and resulted in the Secret Pooling Agreement (Record, p. 5541). Speaking of the condition which existed in 1879, the Senate Report of 1885 (Record, p. 5362) says:

> "Gas was then furnished as low as one dollar per thousand cubic feet; new capital was seeking to supply it, and the old companies sought to defeat the endeavor by destroying the new companies and by impairing the confidence of capitalists in them. But the expensive methods of the old companies and low candle power of the gas produced by them threatened their business and profits in competition with the new rivals. So a truce was agreed upon * * *.
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> "The truce agreed upon (Record, p. 5363) when the price of gas was restored and the gas pool established was the organization of consolidation. An agreement was made April 5, 1880, between all the companies at that time supplying gas in New York City, fixing the price of gas at $2.25 per thousand cubic feet, providing that there should be 'no canvassing or soliciting of customers.' That no new mains should be laid in streets where mains were already laid, 'it being the intention that no competing mains be laid'; that all sales shall be pooled

> and the proceeds distributed in established proportions, and that the agreement should continue for five years 'unless sooner terminated by consolidation' * * *. The immense profits immediately enjoyed by the combination, and the fact that within less than six months from its perfection the quoted value of the shares of the companies participating had more than doubled intensified the possibilities of the future (Record, p. 5363).
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> * * * * * * *
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> "Four years and a half of successful operations under the pooling agreement, assisted by friendly legislation, culminated in the consolidation of November, 1885, formally announced to the public with a reduction in the nominal price of gas per thousand cubic feet" (Record, p. 5369).

This consolidation took over the five plants of the constituent companies and their mains and services. Some of the plants even then being old and obsolete, and the mains of some of the companies being in the same street, an unnecessary duplication, triplication and quadruplication of mains, which still exists (see Record, p. 5997-6007, and City's Exhibit 102, p. 5919).

These plants were valued at the time of consolidation in 1884 on the basis of reproduction (Record, p. 2359, and Report of 1885).

All this property has now been valued for the purpose of exacting a return on the basis of the cost of reproduction new.

The consumers of gas have all these years paid for renewals and repairs to these plants an average of over ten (10) cents for every 1,000 cubic feet of gas manufactured and sold since 1884 (Record, State's Exhibit "L," p. 5078, Report of Marwick & Mitchell, p. 5771; Comp. Ex. 85, p. 5039).

Frederick J. Meyer, the expert for the gas company, who appraised the plants for the company, and was familiar with them to the minutest detail (Record, p. 4649) testified on cross-examination (see Record, p. 1394):

Q. Now, as I understand, you did not make your appraisal by finding out how much this property actually cost the company and then making an allowance for depreciation?

A. No, sir; I never saw any figures of that kind.

Q. Then, if it should appear that this very apparatus cost the company very much less than these estimates which you have given, would you change your estimate or your appraisal at all?

A. No, sir; I would not.

Q. Why not?

A. My estimates are based upon my own personal knowledge of these matters for a good many years, and therefore I cannot be wrong.

Q. And therefore, if the company actually paid less you think the company must have been wrong?

A. Well, I don't know how they established their selling prices, but my values are based upon actual facts as they exist to-day.

Q. Then, as I understand it, you are not attempting to find the capital of the company that was invested in the plant, but what someone would have to pay if they got you to build them a plant somewhat similar to this to-day. Is that it?

A. That is the idea exactly, with the exception that it would be *an exact duplicate of the plant as it exists to-day.*

Q. If, however, you were going to build a coal gas plant to-day of a capacity of 9,500,000 cubic feet per day, would you reproduce this identical plant?

A. I would not (Record, p. 1394).

Q. Would you not say that the more improved a plant is in construction, the better the gas and the lower it cost to manufacture?

A. As to the quality of the gas I should say no. There is no reason why the quality of the gas should not be as good in a plant that was constructed some time ago as compared with construction to-day. *As to cost of production I should say it would be less when you consider the application of machinery to replace manual labor in connection with improved apparatus* (Record, p. 1514).

He made no allowance for depreciation on account of the fact that a more economical or efficient apparatus was in use (Record, p. 1513).

I think that all the plants that are operated to-day for the manufacture of gas are as perfect as (they) can be made under the conditions under which they were built and developed (Record, p. 1510).

"A great many apparatus cost less to-day than in 1884" (Record, p. 1506).

Q. Now as I understand you, in examining the Fourteenth and Forty-second street plants, for instance, you did not take into consideration whether they were commercially worth replacing, did you?

A. No, sir, I only figured on what I found there.

Q. That is what it would cost to reproduce that apparatus, whether or not it was commercially and economically an apparatus that would be built to-day?

A. I paid no attention to that whatever.

Q. And did you take into consideration whether gas could be reproduced at these particular plants at $1.50 *or 50c. per thousand cubic feet?*

A. I did not consider it at all because it had no bearing whatever on the apparatus as I found them.

Q. As you valued it?

A. As I valued it.

Q. Now, where a plant was of an old type which owing to the advance in the science of gas engineering would not be built to-day did you allow anything for depreciation by reason of that fact?

A. No, sir.

See also Record, p. 1460.

Yet the Fourteenth and Forty-second street plants are capitalized at $4,000,000.

Yet Meyer added to his cost of reproduction of these plants 10 per cent. for engineering and 5 per cent. for interest (see Record, pp. 1323-1326, 1329).

See testimony of Simpson, the company's superintendent of mains (Record, pp. 669, 698, 700, 703). At page 698 he says: "Each of the constituent companies has a different system of mains, * * *. It is unquestionably preferable to have a uniform system."

Yet he added to his valuation of the mains 10 per cent. for engineering supervision, "wear and tear of tools," etc., as the basis of reproducing the different systems of mains of the constituent companies, which no one would think of doing to-day.

This item of 10 per cent. alone amounted to $417,318.85 (Record, p. 3927).

Bradley, the chief engineer of the company, testified (Record, p. 1732):

> "*Q.* What are the circumstances which enable you to figure on reduced cost at Astoria?
>
> "*A. Better equipment; modern equipment,* an endeavor to use all the modern appliances in the shape of labor-saving and recovery of some by-products that have never been recovered by any gas company in this country, and little economies of that character; I do not know that I can enumerate all of them" (see Record, pp. 641, 642, 1731-1733).

And Dr. Humphreys, the company's expert-in-chief, admitted regarding the reproduction cost of real estate (see Record, p. 4740):

> "Increase and appreciation in value of real estate would not pay for anything until that real estate

was sold and the real estate could not be sold until the property was vacated. It would add to the value of the assets of the company, but would not add to its earning capacity as long as it was occupied by a manufacturing plant."

The company's attitude with regard to the appreciation in the value of the land is stated by counsel (Record, p. 2833) as follows:

> "We accept the gifts the gods provide as they provide them, without protest.
>
> "Mr. Burr—At the expense of the consumer?
>
> "Mr. Matthewson—No, because nothing comes out of the consumer in increasing the value of our land. It is due to Divine Providence and the growth of the City of New York."

Query. If this gift of God is capitalized and a return paid on such capitalization, why is it not at the expense of the consumer?

Even in the case of supplies the consolidation has resulted in increased cost.

Because of the enormous amount of oil required—255,000,000 gallons—the company claims it is required to pay more per gallon to the Standard Oil Company than other companies in Greater New York (see Record, pp. 1564, 3574, 4284, 4289, State Exhibit LLL, p. 3574), and this increases unnecessarily the apparent cost of gas by about five cents per 1,000 cubic feet (Record, Exhibit 94, pp. 2312 and 3574).

It was by the valuation so made by the paid experts and employees of the gas company the law of the State is overthrown and rendered void. See appendix at end of brief, showing 1884 valuation and Complainant's Exhibit 79.

SPECIFICATION III.

Under Assignments of Error First, Second, Third and Fourth, for the reasons set forth in Assignments One Hundred and Third to One Hundred and Fifth, both inclusive, we maintain that the return of six per cent. adopted by the Court is more than a fair return to the appellee.

The one hundred and third assignment of error (Record, p. 473) is:

"In adjusting and decreeing in Paragraph III. of said decree that the lowest rate of return which can be considered legislatively fair, just or reasonable, upon the value of the property employed by complainant in the business of manufacturing and supplying gas, is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in The City of New York; and under the two acts and the order, copies of which are annexed to the bill of complainant as Exhibits A, D and C, to wit, chapter 736 of the Laws of 1905 of the State of New York, chapter 125 of the Laws of 1906 of said State, and the order of the Commission of Gas and Electricity of the State of New York, made on the 23d day of February, 1906, and directed to the complainant, the net annual income which the complainant can earn upon the property employed in its gas business as aforesaid is less than six per cent."

Every expenditure, on every account, as it has been borne in the past, so it will be borne in all time to come by the consumer and come back, in short periods, from the consumer to the company. Every conceivable expenditure is charged to us and the other consumers.

without a shadow of risk—as to the City, the wholesale buyer, and practically none as to the retail buyers; and, so, is almost as secure as loans to The City of New York. And the same is true of all its investment. All is money put out, we may correctly say, on absolutely safe security, "as nearly a conservative investment," says the Court below (p. 409), "as any manufacturing enterprise can furnish." At the valuation found by the Court, *including the* $12,000,000 allowed for special franchises, viz., $59,831,435, the net return of $3,024,592.45 is a *little over 5 per cent.*, while, as we have seen, it would be over 6 per cent. if the $12,000,000 be excluded, as we are confident it must be.

The courts have established no definite rule, but this Court has declared in *Covington vs. Sanford*, 164 U. S., 578, 597:

> "It cannot be said that a corporation is entitled as of right and without reference to the interest of the public to realize a given per cent. upon its capital stock."

Of course the same is true of its investment.

> "The question in each case is," as said the Court in that case, "whether the Legislature, under the guise of regulating rates, exceeded its constitutional authority, and practically *deprived the owner of property without due process of law.*"

We suppose this Court judicially knows that a return of 4 to 5 per cent. on investments not better secured than is the return to appellee are regarded as eminently satisfactory by the investing public. It certainly would seem to be a fair return for "the most favorably situated gas business in America." The business of this appellee is so characterized in the opinion of the Court below. Says Peckham, *J.*, in *Stanislaus Co. vs. San Joaquin C. & I. Co.*, 192 U. S., p. 216:

> "Much of the capital was invested between twenty and thirty years ago, and to be still able to realize 6 per cent. upon the money originally invested is more than most people are able to accomplish in any ordinary investment, and *more than is necessary* (italics ours) in order to give just compensation for property at the time it is used for the public purpose originally intended";

which observation is peculiarly applicable to the appellee.

The net return to the investor in those stocks and bonds in all the large cities of the United States is less than 6 per cent. (Bemis, pp. 2672-3). This means that one who buys a share of stock or a bond of almost any of these large companies must pay so much above par, if the dividends or interest exceed 6 per cent. as to make the real return less than 6 per cent. on the market price which the investor must pay.

The complaint has not attempted to dispute the accuracy of this statement, fortified as it was by an exhaustive survey of the securities of all the large gas companies in North America east of the Mississippi River. Thirty-seven companies were analyzed (pp. 2672-3).

It is no reply to assert, as some witnesses for the complainants have done, that a person could not organize a new gas company on a 6 per cent basis. We are not dealing with new gas companies just starting out in a small city, or endeavoring to compete in a large city. We are dealing with a company that has had a virtual monopoly since 1884, *and which to-day controls even the electric lighting on Manhattan Island.*

When the city of Holyoke was endeavoring to purchase the electric lighting company of that city eight years ago Dr. Humphreys, the Consolidated Gas Company's chief expert witness in this case, a man who acts as adviser to over fifty gas companies and whose business it is to put money in their pockets (see his testimony, pp. 4759-4761), called as a witness by the company, capitalized the net earnings at 5 per cent. He says now that he did this because he believed that any gas property was worth twenty times its net earnings (Humphreys, p. 4762). Unfortunately for his contention, he did not give this as his reason when testifying at Holyoke, but there gave quite a different reason, viz., *that from the standpoint of the investor in gas securities, 5 per cent. was a good return.* Let us quote his exact words:

> "*Q. Why do you take 5 per cent. as the sum of which you capitalize the new earnings of the company?*
>
> "*A. In my judgment that was a fair return on that kind of an investment.*
>
> "*Q. By that do you mean annual return to the persons who put their money into it?*
>
> "*A. Yes.*
>
> "*Q. And if the investment were represented by stock, you would mean that dividends should be paid at the rate of 5 per cent.?*
>
> "*A. Yes, sir.*
>
> "*Q. And I understand you to say that you valued this plant on the same basis that you valued the plants which you were employed to appraise in New York and New Jersey and other States?*
>
> "*A. The same conditions generally*" (Testimony, p. 2353).

Dr. Humphreys subsequently attempted to lessen the effect of this statement, saying he was testifying regarding "small works in a cheap town" (p. 4734), but later on we find him stating "In these days of low interest bearing securities five per cent. seems hardly attainable" (Record, p. 4761).

Mr. Emerson McMillen has testified for the appellee that when he buys a gas works he expects to realize 9 per cent., or 10 per cent. net earnings, not necessarily dividends, on the price he pays. A few others have given somewhat similar testimony with respect to new gas works just started, but the experience of the Consolidated completely answers this testimony.

It is interesting to note in this connection that Mr. McMillan, who is President of the American Light and Traction Company, which controls the gas companies of Milwaukee, Detroit and Grand Rapids, testified that in all three cases his companies, which had been selling gas for less than 90 cents, had just made reductions to 77 cents in Milwaukee (p. 3267), to 79 cents in Detroit (pp. 3268-9) and to 80 cents in Grand Rapids (p. 3269). He further testified:

> " *Q.* Where you have reduced your prices it has been your experience, has it not, that the amount of gas sold would increase, owing to this reduction?
>
> " *A.* Nearly universally; yes.
>
> " *Q.* If it did not increase you would consider that an exception to the general rule, would you not?
>
> " A. Yes" (p. 3269).

Mr. Carter has testified (p. 543), that the average price of the stock during the five years ending December 31, 1905, was 204⅛, and the dividends during the same time were 8 per cent., with the exception of 1904 and 1905, when they were 8.5 per cent. (Complainants' Exhibit 84, pp. 356-7). This means an average dividend of 8.2 per cent. Now 8.2 per cent. on stock costing the investor 204⅛ is only 4 PER CENT. on the purchase price of the stock.

Again, Mr. Carter testifies (p. 581), that the Consolidated has issued $20,731,200 of stock since 1900, in order to purchase stocks of other gas and electric light companies in Greater New York, and that this stock was sold at $150 cash. Stock costing $150 and paying 8.2 per cent. dividends nets the investor only 5.47 PER CENT. on the price he pays.

Finally, Mr. Carter states that between 1884 and 1900 the company sold $3,647,940 of stock at an average price of $192.40 (p. 583), while he tells us that the average dividends from 1884 to December, 1905, were 6½ per cent. (p. 532).

An examination of Complainants' Exhibit 84 (pp. 356-7), shows that prior to 1900 the average price was not over 6 per cent. Yet the stock sold at $192.40, thus netting the investor *less than* 3¼ *per cent.*

The appellee itself in its dealings with the New Amsterdam Company allows a return of but 5 per cent. (See Agency Agreement, p. 5049.]

And for the vast sum of over $50,000,00 invested by appellee in other companies it receives a return of less than 2 per cent. (See State's Exhibit "B," facing p. 5052.)

Finally, the $1,500,000 of 5 per cent. bonds issued in 1888 were sold at a premium of $75,000, *or* 5 *per cent.* (p. 585).

THE EVIDENCE, INDEED, WOULD SHOW THAT ALL THE CAPITAL IT LEGITIMATELY NEEDS CAN BE SECURED ON A 5 PER CENT. BASIS, EVEN THOUGH THE COMPANY IS NOW TREMENDOUSLY WATERLOGGED BY THE INCREASE OF ITS CAPITAL STOCK, MOSTLY FOR OTHER PURPOSES THAN THE GAS BUSINESS, DURING THE LAST FIVE YEARS FROM $39,077,900 MARCH 15, 1900, TO $80,000,000 OF STOCK AND $19,857,600 OF DEBENTURES OCTOBER 31, 1905 (COMPLAINANTS' EXHIBIT 84, PP. 356-7, AND 80, P. 348).

There is, in the Record *testimony* as to what is a fair rate of interest on investments of the sort under consideration. It has not seemed to us needful to quote it, but if your Honors should look into the testimony on that subject we beg to refer to that found on pages of the Record, 2347-2354, 2530-2540, 2658, and, especially, the *Tables on* pages 2672 and 2673.

SPECIFICATION IV.

Under Assignment of Error 107th.

The Court decreed in Paragraph IV., page 433, that the pressure required is not physically impossible if the entire system of distribution be reconstructed, but compliance with such requirement is commercially impossible under the rates prescribed by the two acts and order; which, we say, for the reasons stated in Assignment 107, constitutes error.

The counsel for the Public Service Commission will take care of this point. But we beg to observe that in the opinion of the presiding Judge (p. 420) he says:

> "By the expenditure of about $4,000,000 for construction of mains and valves alone, exclusive of any pumping stations or other apparatus, it might be possible to establish and maintain the pressure called for by these Acts. * * * It remains commercially impossible, since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible, because when made it would not add a dollar to income."

That leaves the question an unsettled one, the item of $12,000,000 for franchise being eliminated and the real estate valuations to say nothing of other items being reduced to cost; and therefore the complainant has not made it appear by evidence, nor does the evidence in the Record show, that the appellee cannot comply with this requirement in regard to pressure. If with the reduction claimed it should appear that under the rate allowed the income would not be sufficient to permit of the necessary change, relief from that requirement could be had, and impossibility of compliance, if shown, would be a complete defence to any proceeding under that provision. In any view of this provision—it being separable from, and the other provisions of the statute not being necessarily dependent thereon—it may be rejected without invalidating the remaining portions of the statute.

Reagan vs. *Farmers' Loan & Trust Co.*, 154 U. S., 362, 395.

SPECIFICATION V.

While the Court below does not pass upon the appellee's objection to the legislation as discriminatory, and therefore there is no assignment of error in this regard, it may be that the Court will nevertheless consider the question.

It is not necessary to argue the proposition that all differences are not discriminatory.

> "Of course," says the Court (*W. U. T. Co.* vs. *Call Pub. Co.*, 181 U. S., 92) "the quality of right does not prevent differences in the modes and kinds of service and different charges based thereon. There is no cast-iron rule of uniformity which prevents a

> charge from being above or below a particular sum, or requires that the service shall be exactly along the same lines."

All that is required is that rates must not discriminate without a just and reasonable ground for discrimination. This is a proposition so universally recognized as not to require the citation of authorities. By the provisions of the Interstate Commerce Act "it was not intended to ignore the principle that one can sell at wholesale cheaper than at retail" (*Interstate Com. Commission* vs. *B. & O. R. R. Co.,* 145 U. S. (1891), 263, 276). "* * * Any fact which produces an inequality of condition and a change of circumstances justifies an inequality of charge" (*Id.,* bot. pp. 283, 284).

The judicious authors on Railroad Rate Regulations, referring to the subject, and citing numerous authorities in support of the propostion, say (Beale & Wyman, sec. 735):

> "But it is not unjust discrimiation—it is not contrary to the common law, and it is not contrary to our statute—to make a difference in rates where the expense or difficulty of performing the services renders such discrimination fair and reasonable."
>
> (Sec. 736): "It follows from what has been said that the differences may be made proportionate to the cost of service without the making of any illegal discrimination; indeed, in such cases it would be unreasonable not to make such differences upon that basis."

Applying this principle to the case under consideration, the classification is a reasonable one, because obviously the City is the largest consumer of the plaintiff, though the proportion of the whole supply is so small as to be almost negligible; and secondly the expense of furnishing gas to the City is far less in proportion to the cost than in the case of the individual consumer, with no risk whatever, and therefore the price should be less. "Of the 13,283,163,767 cubic feet of gas sold and delivered by complainant, 398,525,978 were delivered and charged to The City of New York and 12,884,637,789 to private consumers" (Rec., p. 248). The difference of five cents per thousand feet is only $20,000, which, spread over the 13,283,163,367 feet of sales to all consumers, means only 0.15 per thousand feet, in favor of the City, which is so small that it may be properly ignored.

SPECIFICATION VI.

We submit, under Assignment One Hundred and Eighth, that against proceedings by mandamus to enforce any of the provisions in either of the acts of the Legislature of New York which are under consideration, the defense available in such proceedings affords appellee adequate protection, and that as to the penalties imposed, the provisions in regard thereto being separable, it has an adequate remedy by injunction.

(*Reagan* vs. *Farmers' Loan & Trust Co.*,
154 U. S., 362, 395.)

SPECIFICATION VII.

In conclusion, we confidently affirm that the appellee has not shown, nor does all the evidence in this immense record prove clearly and beyond all doubt, that the enforcement of the legislation involved in these appeals would inevitably deprive the appellee of its property without due process of law or just compensation; or deny to it the equal protection of the law; or impair the obligation of its contract rights.

In passing the sentence of condemnation recorded in the Court below, the presiding Judge resolved *his doubt against the Legislature of the State of New York, and in favor of the appellee.* The proceedings before the Master seem, on the face of the record, to have been conducted from start to finish on the theory that the burden of sustaining the constitutionality of the statutes beyond a reasonable doubt was on the appellants. The period to which the Master limited the investigation of the business transactions of the appellee was selected by the appellee, and adopted over the protest of the appellants as being too short a period within which to ascertain the truth; the testimony of the witnesses for the appellee when conflicting with that of the appellants was preferred without any apparent good reason (Opinion, Rec., p. 422); the appellants were denied access to material evidence in the exclusive possession of the appellants; *twenty million of dollars* of capital for good will and franchise were allowed by the Master without even an effort to assign a specific value to either, and without any evidence of the specific value of either, and there are many other indications in the record, some of which are pointed out in our Assignments of Error, of the burden which the appellants had to carry. We are not impugning the motives of the Master. On the contrary, we entertain no doubt whatever of his uprightness. We simply, under a sense of duty, state facts tending to show that, as the main issue was decided by resolving doubt against the statutes, so the case was tried on a wrong theory, to the manifest disadvantage of the defendant. For that reason, if there were no other, the decree, we think, should be reversed. We bespeak for the Assignment of Errors (pp. 444-477) a careful consideration, because they present concisely, in our judgment, unanswerable reasons why this Court should issue its mandate for the dismissal of the complaint with costs to appellants.

As already intimated, we have not deemed it worth while to analyze kindred cases that have been before this Court, because the underlying and general principles by which the decisions were governed are now well understood, and each case has depended on its own peculiar facts. But beneath and above all the difficulties of applying the underlying principle to legislation enacted under the police power, there stands the presumption in favor of the enactment. The violation of the organic law must be made to appear so plainly as to leave no room for doubt.

These laws were not enacted in an arbitrary or capricious spirit. They are the outcome of patient, exhaustive, conscientious investigation, beginning nearly a quarter of a century ago, soon after the organization of the appellee. At the session of the Legislature of New York of 1885 three Senators were appointed under a resolution of the Senate and directed to investigate the organization and capitalization of the appellee and to report at the next session of the Legislature. On March 1, 1886, the committee, having completed its labors, made report to the Senate. How patient, exhausting and discriminating were its labors is attested by the minority and majority reports found in the record now here (pp. 5325-5388). We respectfully commend it, and the exhaustive report of Public Accountant Yalden (p. 5591), and the other report herein mentioned to the consideration of this Court for luminous and helpful information pertinent to these appeals.

Again during the year 1905 there was general and widespread complaint in The City of New York against the prices charged by the gas and electric lighting companies operating therein and of the quality of the service supplied by them, in consequence of which action was taken thereon by the Legislature, and a resolution was introduced in the Senate and concurred in by the Assembly, providing for an investigation into the organization and operation of the gas and electric light companies.

This resolution is as follows:

> "Whereas, There is general and widespread complaint in The City of New York of the prices maintained by the gas and electric lighting companies operating therein, and of the quality of the service, and
>
> "Whereas, The Board of Estimate and Apportionment in December, 1902, adopted a report declaring the prices of said companies for public lighting to be unreasonable and excessive, and that the interests of the companies had been so combined as to eliminate competition, and rejected their bids for public lighting; and
>
> "Whereas, The same prices for electric lighting in all the Boroughs and for gas lighting in all the Boroughs, except Manhattan and The Bronx, having been again bid for 1904, and the Commission

of Water Supply, Gas and Electricity having, notwithstanding a report of the Engineer of Surface Construction that said bids were exorbitant and should be rejected, entered into contracts with said companies for services between March, 1904, and March, 1905, at the prices named in said bids; and

"Whereas, An excessive price for lighting service in said city involves a great waste of city funds, and imposes a wrongful burden upon the taxpayers and inhabitants of the city;

"Resolved (if the Assembly concur), That a joint committee be appointed, consisting of three members of the Senate and four members of the Assembly, which committee shall as speedily as may be proceed to investigate and examine into the organization and operation of the gas and electric lighting companies; the reasonableness of the charges maintained by the gas and electric lighting companies operating in the City of New York for services rendered the city and its inhabitants with reference to the cost of the service and the capital actually employed therein; the conditions under which the business of the companies is conducted with reference to competition; the quality of the service; the circumstances connected with the negotiation and execution of the city light contracts of 1904; and any other phase of the gas and electric lighting business as conducted in the City of New York deemed by the company to be germane to the purpose of such investigation; that the committee report to the Legislature as soon as possible the results of their investigation, with such remedial measures as it may deem proper.

"Further Resolved, That the said committee be, and it hereby is authorized and empowered to re-

> quire and enforce the attendance of witnesses, and the production of books and papers, to administer oaths, and to employ counsel, stenographers, clerks and such other employees as may be necessary for the purposes of the investigation. And a sum not exceeding twenty-five thousand dollars is hereby appropriated out of any moneys in the treasury not otherwise appropriated, for the purposes of said committee."

Accordingly, on March 30, 1905, an investigaton of said companies by a joint committee of the Senate and Assembly of the State of New York, under said resolution, was begun in the City of New York, and continued until April 29, 1905, when a report was made by said joint committee.

A copy of this report is annexed to and made part of the answer of the defendant, The City of New York, and the special attention of the Court is called thereto Record, p. 66) for a concise statement of the facts relating to the appellee deemed by the committee to have been established by the evidence.

In consequence of this report, and after an extended debate in the Legislature, the acts, chapter 736, Laws of 1905, and chapter 737, Laws of 1905, were passed.

Thereafter, and on or about the 20th day of November, 1905, the Commission of Gas and Electricity, established by chapter 737, Laws of 1905, on complaint of a hundred or more customers of the Consolidated Gas Company, began an investigation into the affairs of said company, and on the 23d day of February, 1906, said Commission made an order that "on and after the 1st day of May, 1906, the maximum price for gas which shall be charged by the Consolidated Gas Company of New York, in the Borough of Manhattan, City of New York, State of New York, be and is hereby fixed at eighty cents per thousand cubic feet."

This was followed in April, 1906, by the passage of chapter 125, Laws of 1906, by the Legislature.

A great mass of testimony was taken, and a large number of witnesses were examined by the joint committee of the Senate and Assembly in 1905. The Consolidated Gas Company was represented by the same counsel who appeared on its behalf in the trial of this action.

Again, before the Gas and Electric Light Commission, voluminous testimony was taken, many witnesses were examined, and the interests of the complainant company were again looked after by the same counsel.

The subject of the reduction in the charges of the complainant company by law was discussed at great length in the Legislature both at the sessions of 1905 and 1906.

Everything that could be said or done for or against the proposition was apparently said or done. The company put forward its protest and its reasons against such reduction to the best of the ability of the eminent counsel by whom it was represented.

The passage of these laws was not a capricious arbitrary act. It was the result of long and patient investigation after thorough consideration and discussion.

The record of both these investigations shows the most painstaking effort on the part of the Joint Committee in 1905, and on the part of the Commission in 1906 to ascertain what is the actual cost of the manufacture and supply of gas in The City of New York and what would be a fair and reasonable profit to the companies carrying on that business in that locality.

If, therefore, this high Court, in the discharge of the grave responsibility and delicate function involved in the arraignment at the bar of a Federal Court of a co-ordinate department of one of the confederated sovereignties, shall be constrained to declare that the evidence in the record makes it clear—palpable—beyond all doubt—that the inevitable result of the enforcement of these enactments would be to deprive citizens of their property—if this shall become the inexorable duty of this high Court—the Legislature of New York must nevertheless be acquitted of heedlessness, capriciousness or factionalism in its action. On the tomb of its legislation should be inscribed "*Humanum est errare.*"

VIII.

Assignments of Error Nos. One Hundred and Nineteenth and One Hundred and Twentieth (Record, p. 476).

> "In sustaining the report of the Master in Chancery denying the motion of this defendant at the end of complainant's case to dismiss the Bill of Complaint and overruling the exception of this defendant to such denial."
>
> "In sustaining the report of the Master in Chancery denying the motion of this defendant at the end of the whole case to dismiss the Bill of Complaint and overruling the exception of this defendant to such denial."

The appellee wholly failed to prove the rates fixed confiscatory as alleged in its Bill of Complaint and the motion to dismiss the Bill of Complaint should have been granted and failure to do so was error.

See Corporation Counsel's motion to dismiss (Record, pp. 1868, 4815).

IX.

The final decree made and entered herein in favor of the appellee should be reversed and jugdment rendered in favor of the appellants, with costs.

FRANCIS K. PENDLETON,
Corporation Counsel,
Solicitor for City of New York,
Appellant.

ALTON B. PARKER,
WILLIAM P. BURR,
Of Counsel.

Appendix.

(Record, page 5726, old page 1397).

EXTRACTS FROM CITY'S EXHIBIT 48.

YALDEN'S REPORT DATED DECEMBER 31, 1885.

II. Summary of the Accounts of the Constituent Companies of the Consolidated Gas-Light Company of New York.

Letters of Accounts.	Name of Company.	Capital at Time of Consolidation.	Paid in Cash.	Paid in from Surplus Profits.	Issued for Purchase of Property.	Number of Years in Existence.	Dividends Paid.	Profit in Stock on Consolidation or Difference in Par Value of Old and New Stock.	Surplus Assets.	Total Benefits.
A.	Manhattan	$4,000,000 00	$3,280,000 00	$720,000 00	....	54	$26,347,675 66	$7,940,000 00	....	$34,287,675 66
B.	New York	4,000,000 00	750,000 00	3,250,000 00	....	60	18,484,078 50	3,600,000 00	$87,258 19	22,171,336 69
C.	Metropolitan	2,500,000 00	612,700 00	....	$1,887,300 00	24	7,573,749 36	4,000,000 00	686,988 17	12,260,737 53
D.	Municipal .... Knickerbocker ..	3,000,000 00	2,515,300 00	25,800 00 *8,900 00	450,000 00	9	2,806,192 50	3,600,000 00	932,843 63	7,339,036 13
E.	Harlem	2,000,000 00	1,569,050 00	80,000 00 †200,000 00	150,950 00	30	2,529,917 25	830,000 00	....	3,359,917 25
		$15,500,000 00	$8,727,050 00	$4,284,700 00	$2,488,250 00	....	$57,741,613 27	$19,970,000 00	$1,707,089 99	$79,418,703 26

* Expense account.

† Appreciation or increased valuation of property.

Dividends paid in cash..................................	$53,491,613 27	
Profits, etc., transferred to capital.......................	4,250,000 00	
		$57,741,613 27
Surplus assets divided..		1,707,089 99
Stock of Consolidated Company amount issued to stockholders	$35,470,000 00	
Deduct original stock at par...........................	15,500,000 00	
Profit on stock..		19,970,000 00
		$79,418,703 26

H.—Summary of the Accounts of the Constituent Companies of the Consolidated Gas-Light Company of New York—(Continued).

(Record, page 5727; old page 1398).

Letters of Accounts.	Name of Company.	Amount Paid by Consolidated Company for Property.	Cost of Property.	Appreciation of Profit.	Stock Issued by Consolidated Company in Payment. of Property.	Liabilities Assumed by Consolidated Company, Bonds, Interest, Taxes, Dividends, etc.	Cash Paid by Consolidated Company.	Balance Due by Consolidated Company Unsettled.	Total.	Less Assets Taken Over.	Balance B Amount Purcha Money.
A.	Manhattan	$11,966,461 60	$4,872,999 49	$7,093,462 11	$11,940,000 00	$590,724 08	$30,016 70	....	$12,560,740 78	$594,279 18	$11,966,46
B.	New York...........	7,560,000 00	4,630,642 03	2,929,357 97	7,600,000 00	131,741 76	108,694 51	$1,000 00	7,841,436 27	281,436 27	7,560,00
C.	Metropolitan	7,175,000 00	5,292,175 35	1,882,824 65	6,500,000 00	825,763 46	23,753 46	....	7,349,516 92	174,516 92	7,175,00
D.	Municipal	5,100,000 00	4,092,347 86	1,007,652 14	6,600,000 00	402,410 33	236,565 72	30,000 00	8,444,247 53	344,247 53	8,100,00
	Knickerbocker	3,000,000 00	810,481 15	2,189,518 85		1,175,271 48					
E.	Harlem	‡3,025,803 49	1,243,986 97	1,781,816 52	2,840,000 00	289,239 65	49,466 28	....	3,178,705 93	142,902 44 ‡10,000 00	3,025,80
		$37,827,265 09	$20,942,632 85	$16,884,632 24	$35,480,000 00	$3,415,150 76	$448,496 67	$31,000 00	$39,374,647 43	$1,547,382 34	$37,827,26

II.—Summary of the Accounts of the Constituent Companies of the Consolidated Gas-Light Company of New York—(Continued).

(Record, page 5727; old page 1398).

Name of Company.	Amount Paid by Consolidated Company for Property.	Cost of Property.	Appreciation of Profit.	Stock Issued by Consolidated Company in Payment of Property.	Liabilities Assumed by Consolidated Company, Bonds, Interest, Taxes, Dividends, etc.	Cash Paid by Consolidated Company.	Balance Due by Consolidated Company Unsettled.	Total.	Less Assets Taken Over.	Balance Being Amount of Purchase Money.
hattan	$11,966,461 60	$4,872,999 49	$7,093,462 11	$11,940,000 00	$590,724 08	$30,016 70	....	$12,560,740 78	$594,279 18	$11,966,461 60
w York...........	7,560,000 00	4,630,642 03	2,929,357 97	7,600,000 00	131,741 76	108,694 51	$1,000 00	7,841,436 27	281,436 27	7,560,000 00
ropolitan	7,175,000 00	5,292,175 35	1,882,824 65	6,500,000 00	825,763 46	23,753 46	....	7,349,516 92	174,516 92	7,175,000 00
nicipal	5,100,000 00	4,092,347 86	1,007,652 14	6,600,000 00	402,410 33	236,565 72	30,000 00	8,444,247 53	344,247 53	8,100,000 00
ckerbocker	3,000,000 00	810,481 15	2,189,518 85		1,175,271 48					
rlem	‡3,025,803 49	1,243,986 97	1,781,816 52	2,840,000 00	289,239 65	49,466 28	....	3,178,705 93	142,902 44 ‡10,000 00	3,025,803 49
	$37,827,265 09	$20,942,632 85	$16,884,632 24	$35,480,000 00	$3,415,150 76	$448,496 67	$31,000 00	$39,374,647 43	$1,547,382 34	$37,827,265 09

(Record, page 5729.)

On the 11th of November, 1884, all the companies before named, excepting the New York Mutual Gaslight Company, were organized under the name of the Consolidated Gaslight Company, with a capital of................	$45,000,000 00
By reason of the Mutual not joining in the consolidation, the amount was reduced by...........................	5,922,000 00
Reducing the original amount of stock to..	$39,078,000 00
Of this there was apportioned to the various companies in payment of their plant, works, real estate, franchises, etc..	37,775,000 00
Reserving for working capital..	$1,303,000 00

The following gives the details of the valuation:

	New York.	Manhattan.	Metropolitan.	Municipal.	Knickerbocker.	Harlem.	Total.
Street mains, valves, etc.....	$950,000 00	$1,083,000 00	$971,000 00	$749,000 00	$744,000 00	$720,000 00	$5,217,000 00
Meters	215,000 00	267,000 00	273,000 00	158,000 00	69,000 00	113,000 00	1,195,000 00
Services	127,000 00	350,000 00	233,000 00	103,000 00	81,000 90	111,000 00	1,005,000 00
Plant	2,874,000 00	3,623,000 00	2,044,000 00	1,804,000 00	980,000 00	826,000 00	12,151,000 00
Real Estate..................	1,607,000 00	3,563,000 00	1,474,000 00	889,000 00	480,000 00	604,000 00	8,617,000 00
Bulkheads, piers and water rights	250,000 00	425,000 00	300,000 00	200,000 00	115,000 00	100,000 00	1,360,000 00
Office buildings..............	100,000 00	175,000 00	....	....	....	50,000 00	325,000 00
Office furniture..............	15,000 00	20,000 00	12,000 00	16,000 00	2,000 00	5,000 00	70,000 00
Laboratories, photometer room, etc.	5,000 00	5,000 00	5,000 00	6,000 00	1,000 00	2,000 00	24,000 00
	$6,143,000 00	$9,611,000 00	$5,312,000 00	$3,925,000 00	$2,472,000 00	$2,531,000 00	$29,994,000 00
Rights, franchises, etc.......	1,147,000 00	2,329,000 00	1,863,000 00	1,175,000 00	528,000 00	469,000 00	7,781,000 00
Totals	$7,560,000 00	$11,940,000 00	$7,175,000 00	$5,100,000 00	$3,000,000 00	$3,000,000 00	$37,775,000 00

(Record, page 5731.)

The Consolidated Company having assumed the liabilities of the several companies, the issue of stock to the various stockholders of the old companies was further reduced by the amount of such debts, and finally adjusted at $35,430,060, as follows:

Companies.	Gross Value of Properties.	Deduction of Debts.	Amount of Stock to be Issued.	Amended Amount of Stock Issued Per Journal, Fol. 21.
New York	$7,560,000 00	$6,000 00	$7,554,000 00	$7,560,000 00
Manhattan	11,940,000 00	....	11,940,000 00	11,940,000 00
Metropolitan	7,175,000 00	688,000 00	6,487,000 00	6,500,000 00
Municipal	5,100,000 00	328,000 00	4,772,000 00	6,600,000 00
Knickerbocker	3,000,000 00	1,137,000 00	1,863,000 00	
Harlem	3,000,000 00	170,000 00	2,830,000 00	2,830,860 00
Totals	$37,775,000 00	$2,329,000 00	$35,446,000 00	$35,430,060 00

The following statement will show the capital stock of the old companies, and the value of the stock in the Consolidated Company given in exchange therefor:

Companies.	Capital Stock.	Capital Stock in the Consolidated Company.	Proportion of New Stock to Old Stock.
New York	$4,000,000 00	$7,560,000 00	189
Manhattan	4,000,000 00	11,940,000 00	298½
Harlem	2,000,000 00	2,840,000 00	142
Metropolitan	2,500,000 00	6,500,000 00	260
Municipal	3,000,000 00	4,750,000 00	158 1/3
Knickerbocker	1,500,000 00	1,850,000 00	123 1/3
	$17,000,000 00	$35,440,000 00	

Complainant's Exhibit 79.

(Record, facing page 5032.)

CONSOLIDATED GAS COMPANY OF NEW YORK.

VARIATION IN REAL ESTATE, PLANT, PROPERTY AND CONSTRUCTION FROM DATE OF CONSOLIDAT NOVEMBER 11th, 1884 to OCTOBER 31, 1905.

	Valuation at Consolidation Nov. 11th, 1884.	Construction Since Consolidation	Depreciation (Renewals) Since Consolidation	Net Increase	Valuation October 31, 1905.	Expended in Repairs Since Consolidatio to October 31st, 1905.
Real Estate	$10,332,000.00	$597,789.57	....	$597,789.57	$10,929,789.57	$1,275,749.03
Buildings, Machinery, Holders, } Plant	12,182,491.41	5,132,620.41	$1,227,683.10	3,904,937.31	16,087,428.72	4,865,362.51
Mains	5,233,962.10	3,459,249.15	841,060.22	2,618,188.93	7,852,151.03	2,131,176.37
Services	1,034,241.41	711,502.55	533,672.87	177,829.68	1,212,071.09	1,297,653.12
Meters	1,231,753.98	2,460,066.34	750,783.25	1,709,283.09	2,941,037.07	1,864,717.53
Meter Cocks and Connections	11,926.53	622,347.60	320,559.66	301,787.94	313,714.47	....
Pipe and Specials	88,398.43	105,667.28	80,806.07	24,861.21	113,259.64	....
Office Furniture and Fixtures	70,000.00	64,503.02	94,794.29	**30,291.27*	39,708.73	....
Horses, Wagons and Harness	1,115.00	105,535.34	82,521.99	23,013.35	24,128.35	....
Automobiles and Accessories	....	6,915.15	....	6,915.15	6,915.15	....
Tools and Implements	3,273.70	394,875.02	341,803.55	53,071.47	56,345.17	558,214.89
Gas Stoves	1,256.45	783,661.04	497,297.72	286,363.32	287,619.77	338,793.23
Scows	....	19,816.15	....	19,816.15	19,816.15	....
	$30,190,419.01	$14,464,548.62	$4,770,982.72	$9,693,565.90	$39,883,984.91	$12,331,666.68
Franchises and Rights	7,781,000.00				7,781,000.00	
	$37,971,419.01				$47,664,984.91	

* Figures in *italics* in red ink in original.

Complainant's Exhibit 79.

(Record, facing page 5032.)

CONSOLIDATED GAS COMPANY OF NEW YORK.

VARIATION IN REAL ESTATE, PLANT, PROPERTY AND CONSTRUCTION FROM DATE OF CONSOLIDATION NOVEMBER 11th, 1884 to OCTOBER 31, 1905.

	Valuation at Consolidation Nov. 11th, 1884.	Construction Since Consolidation	Depreciation (Renewals) Since Consolidation	Net Increase	Valuation October 31, 1905.	Expended in Repairs Since Consolidation to October 31st, 1905.	
....	$10,332,000.00	$597,789.57	....	$597,789.57	$10,929,789.57	$1,275,749.03	Repairs to Buildings.
....	12,182,491.41	5,132,620.41	$1,227,683.10	3,904,937.31	16,087,428.72	4,865,362.51	" " Apparatus.
....	5,233,962.10	3,459,249.15	841,060.22	2,618,188.93	7,852,151.03	2,131,176.37	
....	1,034,241.41	711,502.55	533,672.87	177,829.68	1,212,071.09	1,297,653.12	
....	1,231,753.98	2,460,066.34	750,783.25	1,709,283.09	2,941,037.07	1,864,717.53	
Connections.....	11,926.53	622,347.60	320,559.66	301,787.94	313,714.47	....	
....	88,398.43	105,667.28	80,806.07	24,861.21	113,259.64	....	
nd Fixtures....	70,000.00	64,503.02	94,794.29	******30,291.27*	39,708.73	....	
nd Harness....	1,115.00	105,535.34	82,521.99	23,013.35	24,128.35	....	
Accessories......	....	6,915.15	....	6,915.15	6,915.15	....	
ents...........	3,273.70	394,875.02	341,803.55	53,071.47	56,345.17	558,214.89	
....	1,256.45	783,661.04	497,297.72	286,363.32	287,619.77	338,793.23	
....	....	19,816.15	....	19,816.15	19,816.15	....	
	$30,190,419.01	$14,464,548.62	$4,770,982.72	$9,693,565.90	$39,883,984.91	$12,331,666.68	
ghts...........	7,781,000.00				7,781,000.00		
	$37,971,419.01				$47,664,984.91		

* Figures in *italics* in red ink in original.

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JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States.

OCTOBER TERM, 1908.

Nos. 366, 367, 368.

WILLIAM R. WILLCOX ET AL., constituting the Public Service Commission of the State of New York for the First District, THE CITY OF NEW YORK and WILLIAM S. JACKSON, as Attorney General of the State of New York,
Appellants,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

BRIEF FOR APPELLEE

UPON THE FACTS.

SHEARMAN & STERLING,
Solicitors for Appellee,
44 WALL STREET,
New York.

CHARLES F. MATHEWSON,
Of Counsel.

C. G. BURGOYNE, 72 to 78 Spring Street, New York.

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Supreme Court of the United States,

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX ET AL, Constituting the Public Service Commission of the State of New York for the First District,

Appellant,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK,

No. 397.

THE CITY OF NEW YORK,

Appellant,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, as Attorney General of the State of New York,

Appellant,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Brief for Appellee upon the Facts.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

This Brief will deal with the questions of Fact, suggested by the Assignments of Error.

The general legal propositions involved in the appeals, and also the subject of Franchises and Good Will, will be considered in separate Briefs.

ORGANIZATION AND HISTORY OF APPELLEE.

The Appellee, the Consolidated Gas Company of New York, came into existence on November 10, 1884, pursuant to Chapter 367 of the Laws of 1884 of the State of New York, through the consolidation of six Companies then operating on the Island of Manhattan (*Record*, pp. 152, 4819).

Said six Companies, The New York Gas Light Company, The Municipal Gas Light Company, The Metropolitan Gas Light Company of the City of New York, The Manhattan Gas Light Company, The Knickerbocker Gas Light Company, and The Harlem Gas Company, had been organized at different dates from 1823 down (*Record*, pp. 153, 4826, 4829, 4830, 4852, 4857, 4862, 4863, 4867).

Original Assets and Capitalization.

Said Act of 1884 authorized the capitalization of the Consolidated Company at an amount not exceeding "*the fair aggregate value of the property, franchises and rights of the several Companies thus to be consolidated.*"* The authorized capital was fixed in the Consolidation Agreement (exclusive of the New York Mutual Gas Light Company, which was named therein but did not enter) at $39,078,000, being the market value of the Capital Stock and securities of the six constituent Companies at the time of consolidation (*Record*, pp. 153, 5384). This amount was apportioned (*Record*, pp. 153, 5018) as follows:

Value of tangible property, to wit: Real Estate, Plants, Mains, Services, Meters and Office Furniture, as appraised in the summer of 1884, *exclusive of working capital*	$29,994,000
Franchises and Rights	7,781,000
	$37,775,000
Leaving for acquisition of working capital	1,303,000
Total authorized capital	$39,078,000

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* *All italics* in this Brief are ours.

Said appraisal of the tangible property at $29,994,000 was made by an expert contractor of high character and experience (*Record*, p. 796), was painstaking and in great detail (*Complainant's Ex. 70*, *Record*, pp. 4925-5017), and was affirmed by a Committee of the New York Senate appointed to investigate the subject and reporting in 1886 (*Record*, pp. 5325, 5384, 5387); while said Committee found that the franchises of *four* of the six constituent Companies were "worth much more than" said sum of $7,781,000 (*Complainant's Ex. 227*, *Record*, p. 5386).

Capital Stock to the amount of $37,775,000 was immediately issued by Appellee in acquisition of said assets,—less $2,329,000 thereof retained by Appellee to retire outstanding obligations of the constituent Companies to a like amount and $15,940 for sundry adjustments,—or to a net amount $35,430,060 (*Record*, pp. 153, 4496, 5731).

Increase of Capital Stock.

In the year 1900, Appellee's Capital Stock was increased to $54,595,200, and then to $80,000,000, the greater part of such increase being employed in the acquisition of securities of other gas and electric lighting Companies in the City of New York. The entire $80,000,000 were issued and outstanding at the time of the beginning of this action (*Record*, p. 154).

It is impossible to measure the cost to Appellee, and much less the present value, of Appellee's assets, whether property employed in its gas business or securities of other Companies, by the par value of its Stock issued to acquire the same; for all of its Stock, except that issued as aforesaid at consolidation in 1884, has been issued at $150 or above—some of it as high as $232—per share (*Record*, pp. 154, 849, 854).

In 1904, Appellee's authorized capital was further increased to $100,000,000, for the purpose of taking up about $20,000,000 in Debentures issued by it in 1904, and convertible on and after July 1st, 1907 into its Stock at par at the option of the holder. None of this additional $20,000,000 of Stock was outstanding at the date of the trial (*Record*, pp. 154, 5047).

Growth of Gas Business and Assets.

The sales of Appellee for the first year of its operation (1885) were 3,942,433,000 cubic feet; and for the year 1905 were 13,283,163,767 cubic feet, of which the Appellee produced in its own plants on the Island of Manhattan 10,419,461,426 feet, and acquired from subsidiary Companies 2,863,702,341 feet (*Record*, pp. 217-20, 5039).

The record shows, as would be expected, that the assets of Appellee, employed in its gas business, have likewise increased largely, but not in the same proportion, since Appellee's plants in 1885 considerably exceeded in capacity the amount of its sales for that year (*Record*, pp. 1714, 4580, 6079, 6086, 6115, 5039, *post*, p. 116), while at present its sales have far surpassed their capacity.

Estimates of the value of the property employed in Appellee's gas business were presented in behalf of both the Appellee and the Appellants, but differed widely in the aggregate, since Appellants wholly excluded various large items (such as "franchises") which were included by Appellee (*Record*, pp. 155, 199). These estimates were the subject of most careful consideration by the Master and the Court (*Record*, p. 155),—with the result that they each reached a total valuation considerably less than claimed by Appellee, but much above that urged by Appellants.

The claims of Appellee, and each of the Appellants, as to the property employed in Appellee's gas business, and as to the value thereof, are set forth in an "Appendix" to this Brief.

A.

THE ASSIGNMENTS OF ERROR.

The questions of fact raised in the Assignments of Error will be discussed in what seems to be a natural and logical order.

It is impossible to consider them in numerical order, since Assignments of the various Appellants relating to the same subject matter are not arranged in like order. The important Assignments of The City of New York, and all the Assignments of the other Appellants, so far as they deal with the *Special Facts* in this case, as distinguished from general legal principles, are—however—believed to be covered in this Brief.

We do not understand any Assignment to question the finding that the "*present value*" of Appellee's existing "Real Estate", "Plants", "Mains", "Services" and "Meters and Miscellaneous", *on the basis of cost of reproduction*, are as found by the Court and stated in the Decree.

Affirmative Contention of Appellee.

It is the contention of Appellee that not only are the Assignments in relation to the findings of the Court, as incorporated in the Decree, unsustainable, *but that such findings as to the value of Property, Net Income and Return earned are much less favorable to Appellee, than the established facts upon approved legal principles justify.*

It will be submitted that, in important particulars, *the Master and not the Court reached the true conclusion ;* and that, accordingly, the return in reality earned by Appellee, under the legislative Acts in question *is much less than the 5 per cent. computed by the Court.*

B.

CONCLUSIONS OF THE COURT AND MASTER.

Both the Court and Master held that the "present value" of the property employed in production and distribution of the volume of gas sold by Appellee was the true criterion, and on the subject of such value, the Net Income of Appellee from its gas business, and the Rate of Return earned and required, they found respectively as follows (*Record*, pp. 247, 432):

	Court.	Master.	Difference.
Real Estate	$11,985,435.	13,461,000	1,475,565
Plants	15,500,000	15,500,000	
Mains	12,636,000	12,636,000	
Services	1,994,000	1,994,000	
Meters & Miscellaneous	4,100,000	4,100,000	
Working Capital	1,616,000	3,616,000	2,000,000
National Coke & Coal Co.	----------	50,000	50,000
Astoria, *i. e.* Capital employed in production of gas secured from other Companies	----------	12,000,000	12,000,000
Special Franchises	12,000,000	----------	8,000,000
Special Franchises & Good Will	----------	20,000,000	
Total	$59,831,435.	$83,357,000	$23,525,565
Net Income	$3,024,592.	$2,327,328.	$697,264.
Return earned	5%	2.8%	2.2%
Return legally required	*At least* 6%	*At least* 6%	

Important To Be Noted.

The Court does not, in reality reject the "Astoria" item, $12,000,000, using that term generally to represent the value of "property of other Companies" employed in producing the gas acquired by Appellee from them; but instead of including the same with the assets of Appellee, the Court has preferred to include a return thereon in the cost of such gas, as will hereinafter appear. The ultimate effect, in computing the proper charge per thousand for the volume of gas distributed by Appellee to cover cost and return on capital, is identical by either method.

Thus the value of investment upon which the Court holds that *a return must in some form be computed*, is in reality $71,831,435 instead of $59,831,435; and the actual difference between the Court and the Master is reduced from $23,525,565 to $11,525,565,—of which $8,000,000 represents the exclusion by the Court of Good Will, which was included by the Master.

C.

SYNOPSIS OF BRIEF.

The chief elements considered, in passing upon the validity of the Statutes in question, were :

(a) The Value of the Assets employed in the production and distribution of the gas sold by Appellee, including the assets of subsidiary Companies producing a large portion of such gas ;

(b) The normal cost to Appellee of the gas so sold by it, and the resulting "Net Income."

(c) Whether such "Net Income" produced a reasonable return upon the value of the assets, so employed in the production and distribution of said gas ;

(d) The possibility of maintaining the pressure at every point and at all times in Appellee's mains, within the limit prescribed by the Statutes, and especially in view of the lowering of the charge for gas to 80 cents.

For the convenience of the Court, we have inserted a comparative statement, in tabular form (*ante*, p. 6) of the

"Conclusions of the Court and Master"

on the subjects of "Value of Assets," "Net Income" of Appellee, and "Rate of Return" earned and required.

In discussing the questions at issue, it has seemed preferable—to promote simplicity—to number "Points" in this Brief consecutively ; but the Brief will be divided into the following parts, the paging therein referring to the pages of this Brief* :

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*Note.—See "Table of Contents" for *full sub-headings* under Points. Only the most important sub-headings are given in this synopsis.

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PART FIRST.

Valuation of Assets of Appellee, Employed in the Production and Distribution of Gas, and allowed by the Court at $59,831,435 (*ante*, p. 6).

POINT I.

"Original Cost" not Controlling or Fully Ascertainable.

Appellants have assigned error in that the Court was not governed by the "original cost to the Complainant and its predecessor Companies" of such items as "Real Estate," "Mains" and "Services", rather than by their "present value." It is submitted that no error was committed.

1. Such "Cost" Not True Criterion.

The "original cost" of property now devoted to the public use is, as argued by Appellee in another Brief, not the true criterion.

As was said by Mr. Justice Brewer in *National Water Works Co. vs. Kansas City* (62 Fed., 853, 865):

> "The original cost of the construction cannot control, for 'original cost' and 'present value' are not equivalent terms."

It is submitted that there is no inherent right in certain individuals, because they happen to be consumers of gas, to the use of a parcel of real estate (for example), at less than the fair value at which it might now be sold or leased to other members of the community.

2. Such " Cost " Too Remote.

The "original cost" of the property to the six constituent Companies in the present case, is too remote to be of advantage in fixing "present value".

The first of the six Companies was incorporated in 1823, the second in 1830, and the other four at different dates from that time down (*Record*, pp. 152, 4826-4867). On this subject the Court said (*Record*, pp. 398-9) :

> "I do not find that the original cost (where ascertainable) of Complainant's tangible property affords any assistance. The time of acquisition is too long ago, and conditions have so wholly changed, as to render comparisons useless."

3. Entire " Cost " Not Ascertainable.

If a finding of "original cost" were desirable, it is impossible; for it clearly appeared that no data existed from which it may be accurately computed, *so far as relates to the property acquired by Appellee, from the six constituent Companies in 1884* (*Record*, pp. 269, 270).

The only information available on this subject was the record of the New York Senate Committee of 1886 (*Senate Document 47 of 1886*) as presented before the Master (*Record*, p. 5325), and the books of *five* of the six constituent Companies—the books of the Knickerbocker Company, which had been leased years before to the Municipal Company, not being then or now discoverable (*Record*, pp. 3184, 5870).

Special Findings by Master

The Appellants offered from said Document a certain table made by accountant Yalden of said Committee, totaling $20,942,632.85, which sum the Master was requested to find to have been the "cost to the constituent Companies" of the *tangible* property taken over from them by Appellee in 1884 at $29,994,000; but the Master declined, saying—

> "The evidence clearly shows that the actual cost to them, of property of the constituent Companies was in excess of the $20,942,632.85 shown in their books" *(Record*, p. 256).

And thereupon refers to a preceding portion of his Report *(Record*, p. 178) where he said:

> "It clearly appears that the term "cost of property" as used by the expert accountant, whose tabulations form part of the Report of the Senate Committee of 1886, did not represent the actual cost, but the amount at which the properties were carried on the books of the constituent Companies, *so far as they were before him.* In many instances the figures thus appearing on the books were reached after charging down as depreciation very large sums which represented the actual cost. Such charging down was in addition to and exclusive of expenditures for current repairs and renewals necessary to keep the plants of the Companies in efficient condition."

The Master likewise, for conclusive reasons stated by him, declined to find that the "original cost" to Appellee and the six constituent Companies, of Appellee's "real estate," was $4,118,267.38, as requested by Appellants *(Record*, pp. 167, 268).

4. Evidence of Cost to "Predecessor Companies."

In support of these findings of the Master, which have been approved by the Court *(Record*, p. 430), it is pointed out that—

(a) The books of the Knickerbocker Company were not before Mr. Yalden at all, and the sum of $810,000, specified for the Knickerbocker in his schedule, merely represented the amount expended by the Municipal Company on the Knickerbocker system after the former had leased the latter *(Record*, pp. 4478, 4479). In fact, Mr. Yalden testified (*Record*, pp. 6410, 6204) that while this sum was spent by the Municipal on the Knickerbocker property—

> "*The works, the value of which is not brought into the books*, were appraised to the Consolidated at $3,000,000—

the works, of course, including the buildings, machinery and land, which are the most expensive part of a gas property, and which were so extensive that for years after the consolidation of 1884 they supplied the entire upper part of the City of New York *(Record*, p. 4580).

And at a later page, Mr. Yalden repeated that the $810,000 " is not really the cost of the property ", and that, in addition to that amount and its Capital Stock, it was " subject to Mortgage Bonds of the Knickerbocker Company to the amount of $1,137,000 " *(Complainant's Ex. 369, Record*, p. 6411), substantially all of which were outstanding and assumed by Appellee in 1884 *(Record*, p. 4480).

Indeed, the $20,942,000 in question excluded at least $2,400,000 of " cost " so far as the Knickerbocker property was concerned *(Record*, p. 4480).

(**b**) In addition to this, the New York Gas Light Company had arbitrarily written off $2,929,357.97, which it was necessary to write back at consolidation in 1884 to

> " reinstate the property at something like what it cost " *(Yalden, Complainant's Ex. 369, Record*, p. 6394);

(**c**) Likewise the Manhattan Company had charged off, in ten years, at least $2,030,000 on a plant which originally cost only $2,400,000, in addition to expenditures keeping the property " as good as new " *(Yalden, Record*, pp. 6315, 6338). The sum of $768,517.96 was charged off for " Mains ", which left the " book value " of Mains over $600,000 less than at the beginning of the period *(Record*, p. 5633).

(**d**) And the Municipal Company had also written off $804,107.74,—it having been the practice of all the Companies in their prosperous days " to hide away some of the profits " by writing down the value of their property *(Yalden, Record*, pp. 4490, 6396).

Thus by correction in only the four items mentioned—and we do not know how many other like

items there may be—the $20,942,632.85, relied on by Appellants as " cost," was raised to over $29,000,000 (*Record*, p. 4490). Thus :

Figures at which property transferred to Appellee in 1884, was carried on books of constituent Companies (excluding those of Knickerbocker), as per Yalden		$20,942,632.85
Knickerbocker Company—Cost	$3,210,000	
On books of Municipal Company	810,000	
		2,400,000.00
N. Y. Gas Light Company—Amount property was written down below cost, and written back at Consolidation, as per Yalden's statement, to bring it back to "something like what it cost"		2,929,357.97
Manhattan Company—Amount likewise written off, although plant was " as good as new," as Yalden states		2,030,000.00
Municipal Company—Amount likewise written off but written back at Consolidation, as Yalden states, as in the case of the New York Company		804,107.74
Total		$29,106,098.56

But in addition to these, it appears that the Harlem Company had practically doubled its plant capacity, including the filling in of its water front and construction of its bulkheads,—all at a charge to operating " expense ", without appearance in the property account at all (*Record*, pp. 4490, 6302-6304, 6308); while the New York Company carried nothing in property account for " Services, Meters, Gas Stoves and Furniture and Fixtures " (*Record*, pp. 5659, 5660), the cost of all which it had obviously charged to " operating expense ".

(e) It is undoubtedly true that " original cost " of real estate to the constituent Companies was less than the value at which it was appraised and taken by Appellee in 1884, and less than its value today,—although just what such cost was, is not known, in the absence of the Knickerbocker books ; but on the other hand, it is undoubted, —as indicated by the evidence and found by the Master (*Record*, pp. 269, 270, 4480, 4481, 4482)—that the plant stood *even on the books* of the constituent Companies at an amount greater than their appraised value in 1884, in spite of the arbitrary and enormous "charging down" to "hide away profits" as above pointed out.

And doubtless the same is true of Mains and Services, since they were appraised in 1884 on the basis of the then value of $25 per ton for pipe (*Record*, p. 691), whereas pipe actually cost during the period in which a large part of the systems were laid, cost as high as $76 a ton (*Marks, Record*, p. 2046 ; *Edgerton, Record*, p. 2991).

Findings of the Master.

While, therefore, it is the finding of the Master that :

> "It is not possible from the evidence to state the *total* cost to the constituent Companies of their plants, mains or similar tangible assets" (*Record*, p. 270)—

and while such total cost could not be ascertained in the absence of the Knickerbocker books,—and even with those books could not be ascertained without going over the entire construction and expenditure vouchers (if in existence) of the Companies, back to 1823, to see what other "capital expenditures," in addition to those above enumerated, had been charged to "operating expense,"—sufficient appeared so that the Master was able additionally to find that :

> "As regards Mains and Services, therefore, as well as Real Estate, Plants and other tangible property, *it does not appear that any sufficient ground exists for the suggestion that the appraised value of 1884 was materially, if at all, in excess of the aggregate cost* of the tangible property to the constituent Companies" (*Record*, p. 252)—

and such "appraised value" was $29,994,000 (*ante*, p. 2).

Indeed, Vice-President Carter, who has been connected with Appellee since its creation (*Record* p. 767), after a careful investigation emphatically asserted that the "original cost" of the tangible properties of the six Companies *was undoubtedly and very largely in excess of the $29,994,000 at which it was appraised and taken by Appellee, in 1884* (*Record*, p. 4487).

Amount Contributed "by Stockholders."

The Public Service Commission suggests (*Brief*, pp. 24-5) that the "Capital invested" by stockholders of the "original companies" was only $14,564,571.82,—$4,275,000 of which represented "earnings" which went into the plant and were capitalized by the issue of stock. For all that appears, Stock of constituent Companies—in view of the high dividends being paid—may have been issued at substantial premiums.

But in our view, it makes no legal difference from what source the funds producing the property were received,—whether from stockholders for Stock, or borrowed on notes or bonds from stockholders or outsiders, or paid from earnings which belonged to stockholders and might have been paid to them in dividends and thereupon returned to the property for further issues of Stock, or *whether the property was a gift* to the Companies. It is undoubtedly true that, earning heavy dividends from a useful business, many of the Companies did enlarge their property very heavily from earnings, without going through the form of paying dividends to stockholders and then receiving the money back for investment.

5. Total "Original Cost" So Far as Computable.

The expenditures of Appellee, on capital account, in extension of its system since 1884 ,are accurate and available ; and this is as far as it is possible to secure exact *data* on the subject of "original cost" of production of the property which it now owns. But we can rely on *at least* the following "cost" :

Cost of *tangible* property to "constituent Companies" *at least (ante,* p. 18) ----------------	$29,994,000.00
Added by Appellee to November 11, 1884 *(Record,* p. 5018)-------------------------------	196,419.01
Added by Appellee since November 11, 1884 *(Original Record,* p. 7303)-------------------------	9,693,565.90
Workin g Capital, at amount allowed by Court *(Ante,* p. 6)------------------------------------	1,616,000.00
Total *known* cost of production---------	$41,499,984.91

And this is exclusive of " Franchises " and " Good Will," and assumes for " Working Capital " 2,000,000 less than allowed by the Master and claimed here by Appellee (*post*, p. 77).

6. Appellants' Fallacious Estimates.

A.

Appellant The City of New York endeavors to find " original cost " by deducting from the Court's total valuation of property, $59,831,045 (*ante*, p. 6), what counsel considers " appreciation " in the items of Real Estate, Mains and Services which enter into said total, above the " *cost* " of said items respectively; and obtains $35,238,106.

Without consideration of minor errors, it is sufficient to say that said method is fundamentally wrong and incapable of reaching a just result.

> (**a**) In the first place, counsel takes as the " original cost " of installation, Appellee's " book value " of mains ($7,852,000) and services ($1,212,000); but these valuations were, as above pointed out, based in large part on the *low price of pipe and inexpensive pavement in 1884*, and undoubtedly much less than the original cost of installation of said mains, when pipe ran as high as $76 per ton (*ante*, p. 18).
>
> (**b**) Counsel also, while making such unsound assumption as to difference between cost of installation and present value of Mains, Services and Real Estate, makes no note of other items entering into said total of $59,831,045, whose " present value " is certainly *less* than the original cost of construction.
>
> Thus, it has appeared, that the valuation at which the plants of the six constituent Companies were taken over by Appellee in 1884, was less than the figure at which they were carried on the books of said Companies, *even after said Companies had charged them down millions of dollars* to conceal profits, as previously indicated (*ante*, p. 16).
>
> The same conditions which made iron pipe for mains expensive, likewise made all other iron and steel construction, machinery and apparatus expensive at the same time.

B.

Appellants, the Public Service Commission, give an estimate of "original cost" at $33,779,472 (*Brief*, p. 239), Pursuing the same method as the City, they reach an equally inaccurate result; indeed, a result somewhat wider of the mark.

What counsel for the Public Service Commission has in mind in suggesting that "Complainant made no attempt to supply the information as to original cost," we cannot conceive; for Appellee expressly consented to the examination by Appellants' Accountants of Books and Records of the original Companies, back to the formation of the New York Gas Light Company in 1823, and they availed themselves of the opportunity (*post*, p. 97).

Counsel excludes a parcel of land included by Marwick, Mitchell & Company covered by "New Shop, 66th Street" on the ground that no such item appears in the testimony, and that the "Shop" has probably been torn down (*Brief*, p. 41). He is in error. Mr. Mayer inadvertently omitted in his valuation two buildings and contents (*Record*, p. 1422), and this "New Shop" was one of them (*Record*, p. 4604).

C.

It is not at all apparent that, if total original expenditure in constructing Appellee's system as now in use were available, it might not equal or even exceed the "present value" found by the Court for Appellee's tangible property taken as a whole, $47,831,435 (*ante*, p. 6; *Record*, p. 423).

POINT II.

" Book Value " or " Cost to Appellee."

Appellants have also assigned error in that the Court was not governed by the " book value " of Appellee's property.

Such " book value " merely represents the *cost to Appellee* of such property; that is to say, the cost to it of the property acquired in 1884 from the six constituent Companies (*Record*, p. 153), plus its capital additions since that time (*Record*, p. 254).

It is not clear on what theory Appellants assert that such " book value " is to be conclusively taken as present value—for it is well understood that " book values " frequently and inevitably differ —sometimes very largely—from actual values. In the matter of " Real Estate," for example, it would be strange if present values did not exceed the " cost to Appellee " in 1884, since real estate values have largely increased in recent years in the City of New York, even 25 to 30 per cent. in some parts *within the past five or six years*, as all witnesses concede (*Record*, pp. 1177, 1180, 1288, 2183, 2253, 3132, 3137).

1. Erroneous Computation of Appellee's " Gas Capitalization."

The Public Service Commission computes what it denominates Appellee's present " Nominal Gas Capitalization," to be $43,007,372.82 (*Brief*, p. 22–3). It reaches this sum by taking the aggregate of Appellee's " present Stock, par value," " premiums on Bonds and Stocks " and " Debenture Bonds of 1888 " (less Bonds paid off), to wit $93,412,736.71; and deducting therefrom what Counsel computes to be the amount of capital invested in securities of other Companies (exclusive of the Astoria Company), to wit: $50,405,364,89 (*Brief*, pp. 22–3); and as a second step, deduces Appellee's " New capital since 1884," to be only $3,929,271.82.

The whole process is fundamentally unsound. Appellee's actual "gas capitalization" is as follows :

"Capital" cost of tangible property and franchises acquired in 1884 (*ante*, p. 3)	$37,775,000
Other property acquired to November 11, 1884 (*ante*, p. 19)	196,419.01
Acquisition of permanent plant since consolidation, (*ante*, p. 19)	9,693,565.90
Total *permanent* plant (*Record*, p. 5032)	$47,664,984.91
Working Capital allowed by Court (*ante*, p. 6)	1,616.000.00
Total "Gas Capitalization"	$49,280,984.91

This is the true amount in place of the $43,007,371.82 assumed by Counsel, and shows "New Capital since 1884" far beyond the $3,929,371.82 asserted by him.

The fallacy of Counsel's computation arises from his assumption that "*capitalization*" can be represented by nothing but *Stock, Bonds and the premiums thereon.* It may be represented in many forms. Thus Appellee is employing in its gas business nearly One Million Dollars of capital representing "consumer's deposits" upon which it pays 6 per cent. interest (*Record*, pp. 809–10) ; and this interest was excluded in operating expense (*Record*, pp. 222, 248), for the very reason that the principal was so used by Appellee. So, too, its "surplus" of $1,547,697.38 has gone into its gas business, as well as part of the proceeds of the $20,000,000 of "Astoria" Debentures of 1904—so called by Counsel. All this appears in the Record (*Complainant's Exhibit* 80, *Record*, p. 5033).

In this connection it may be noted that while the amount of Stock issued by the Appellee in 1884 was only $35,430,060 (*ante*, p. 3), its capital assets are now represented in part by "Stock" to a *par* value of $41,356,409.86 (*Complainant's Exhibit* 80, *Record* p. 5033),—an addition of $5,926,349.86 in Stock, $3,647,940 of which was sold at $192.40 per share *and realized $7,019,811.73*, to say nothing of the balance which was sold at *not less than $150 per share* (*Record*, pp. 849–50).

It will be noted, that the amount of "gas capitalization" on the previous page, $49,280,984.91, is the sum of the following items in Exhibit 80 (*Record*, p. 5033)—to wit: "Plant and Property, Manhattan" ($47,664,984.91), and Working Capital, composed of $1,000,000 cash, and $616,000 (round amount) of "Materials and Supplies."

It will also be observed from Exhibit 80, that *no part of such assets were derived from earnings*, other than the divisible Surplus Earnings which belonged to the Stockholders.

2. Master's Finding of "Cost to Complainant" of Property Employed in its Gas Business.

The Master, deducting from Real Estate and Plant held by Appellee in its Gas Capital, such portions as he conceived not to be at the moment legally "employed" in its gas business, made the following finding for the information of the Court:

> "the *actual cost to Complainant* of the *tangible property and Franchises* employed in its gas business (including the amount found by me to be the capital invested in production of gas for Complainant outside Complainant's Manhattan works) is at least $60,214,000"

—classified as thereupon indicated by the Master (*Record*, p. 254).

It will be observed that the "cost to Complainant" of some of these items is less, and of some is greater, than the amount fixed by the Court as "present value" thereof respectively, as employed by Appellee in its gas business.

Excluding the item "Astoria," or Capital invested in the production of gas by subsidiary Companies for Appellee, there still remains on the Master's estimate a valuation of $48,214,000 of gas capital at "*Cost to Appellee*,"—although the amount would be somewhat reduced in the items "Real Estate" and "Working Capital," if the Court's view be accepted in lieu of the Master's, which Appellee argues should not be the case (*post*, pp. 68, 77).

POINT III.

Valuation of Real Estate.

A schedule of Appellee's holdings appears in the Master's Report *(Record,* p. 159), totaling in value $14,161,000.

Appellants charge error in the valuation of the items of real estate allowed by the Court (*ante*, p. 6) at $11,985,435 (aside from any controlling effect of "original cost," "book value" and "tax valuation," elsewhere discussed), in that:

> *(a)* It is in excess of the true valuation thereof, land having been valued as "vacant lots," and not in conjunction with the buildings thereon and for the uses and purposes to which it was devoted.
>
> *(b)* It duplicates in part the valuation given by the Court to the plants, since it could not be realized until the plants are removed.
>
> *(c)* It is in excess of the amount required for Appellee's gas business, upon the basis of the cost of reproduction.
>
> *(d)* In estimating value, the Court adopted the valuation given in testimony for Appellee, whereas the valuations testified to by unimpeached expert witnesses for the Appellants were lower.

The term "Real Estate" as employed in the evidence and findings comprises:

> "Land and water rights, including only such appurtenances as offices, stables and the like, and excluding all buildings and structures which are a part of the manufacturing or distributing plant of the Company. The structures included being of slight value as compared with the value of the land, the term 'Real Estate' as thus used is practically synonymous with 'Land.'" *(Record,* p. 156).

1. Method of Valuation.

The suggestion that such "Real Estate" was in any proper sense valued as "vacant" land, is misleading.

(**a**) Certain plots employed for storage of coal and street department supplies, and for other purposes not requiring a roof against the weather, were "vacant" in that there were no buildings thereon (*Record*, pp. 534, 554, 1232, 1233). They were valued, of course, by all witnesses as "land only."

(**b**) Certain other plots were covered by buildings of ordinary character and common usefulness, such as offices, dwelling houses and stables. All witnesses for all parties, as to each of these plots, stated the market value of the land with the buildings thereon; and also a separate valuation for land and for buildings, which together, in each instance, exactly equalled such market value of the two combined.

Land Covered by Plant.

(**c**) This leaves to be considered only those plots covered by manufacturing and distributing stations.

These "plants" consist of apparatus and machinery, holders with their brick or steel tanks, pipe connections, and "buildings" (*post*, p. 35).

The "buildings" are of unusual and extraordinary design, wholly incidental to and designed for the support and protection of said apparatus and machinery, and include special elaborate and expensive "foundations" for such apparatus and machinery (*Record*, pp. 3770-3772). They are concededly useless and valueless, except in conjunction with such apparatus and machinery. They are an integral part of the "plants" as much as the "apparatus" itself, and were so valued and treated by *all witnesses for all parties.*

The *real estate* experts for all parties stated the market value of the land covered by these "plants"; but not one attempted to state the value of the apparatus and machinery, holders and tanks, pipe connections, and buildings aforesaid. No real estate dealer (and only a practical gas-plant constructor) was competent to do so.

Accordingly, *engineers and contractors experienced in such matters* were introduced by the Appellee and Appellants to testify as to the present value, based on cost of reproduction (less depreciation observed) of the "plants"; and these men would have been as incompetent to testify to the value of the land in the City of New York upon which the "plants" rested, as were the real estate witnesses to testify to the cost of reproduction of the "plants" in operation upon such land.

The combination of the land values and plant values thus obtained would give the correct value of *the land in conjunction with the plants thereon*, as part of an operating concern; for if Appellee were in any way (as by condemnation) to lose them, it could not replace them for a less expenditure.

Certainly the special value of the land covered by "plant" (whether located on the Island of Manhattan or in a small town) is to be considered in fixing the total value of a gas property in use; and it is more than doubtful whether any one person could be found so versed in values of both New York City realty and gas machinery and construction, as to be able to state an aggregate value for Appellee's gas plants with the blocks of land covered thereby,—even if they would be of any value or sell for anything beyond the bare value of the *land alone*, except in conjunction with the Mains, Franchises and other assets constituting the operating system.

> NOTE. It is suggested in the Brief of the Public Service Commission (p. 58) that Appellee's "theory of plottage," in valuation of the large parcels of real estate was disapproved in *Matter of the City of New York*, 56 Misc. (N. Y.) 306–310.
>
> This is a mistake. The Court in that case merely held that the Report of Commissioners would not be sent back, because they did not include a "plottage" value for the land in bulk, beyond its value if sold in individual lots; but the Court, however, pointed out that in that case the Commissioners *found no such additional value to exist*, while in the present case an added value for "plottage" was admitted and included, not only by Appellee's witnesses but *by both of Appellant's witnesses* as well (*Record*, pp. 1193, 3136, 2245, 2177).

2. Method of Valuation Approved.

In important and leading rate cases considered in this Court and in the New York Court of Appeals, witnesses have primarily testified to the value of land employed, as distinct from value of plant thereon, in reaching present or reproductive value.

Smyth v. Ames, 169 U.S., 466 :
Trustees of Saratoga Springs v. Saratoga Gas Company, 191 N. Y. 123 :

In *Smyth v. Ames* (Union Pacific Company) the Complainant's witness gave separately exact statements of value of land occupied by Omaha terminals, the value of buildings thereon, and value of the track, ballasting, bridges, etc. forming part of the terminals. He then gave a general estimate of the value altogether, which was considerably in excess of the three items *(Record of that case, pp. 1379–82).*

The expert of the defendants, the Nebraska Board of Transportation, gave separately the cost of reproduction of the track and sidings, the land, the general buildings, the shop buildings including machinery and furniture, the expense of engineering and contingencies ; and gave the exact total of these individual valuations as " the cost of reproducing " the terminal properties *(Record of that case, pp. 1642–3).*

In reference to the *Chicago, Burlington & Quincy Company* and the *Chicago and Northwestern Company,* Complainants also gave separately the valuation of lands and buildings ; and the total valuations were merely the sum of these individual valuations *(Record of that case, pp. 1266–7, 1563–4, 1573–8).*

In *Trustees of Saratoga Springs* v. *Saratoga Gas Company,* in which an important section of the New York Gas Commission Act was recently declared unconstitutional, the land, the buildings thereon belonging to the " plant ", and the machinery and apparatus constituting the balance of the "plant", were each valued *separately and by separate witnesses* on behalf of the defendant Company; and the same is true of the witnesses for the plaintiffs, except that (as in the case at bar) the same witnesses testified to the value of the buildings with apparatus and machinery, constituting the plant *(Record of that case, fols. 220-41, 495-505, 760-778, 790-833, 858-863, 1207-1220).*

We do not observe that the manner or value of such proof has been heretofore questioned. Indeed, by no other method than that pursued can the reproductive cost, which is presented as the true test of value in such a case as the present, be reached. As the Master well said *(Record*, p. 176):

> "While the real estate has a substantial value irrespective of the purposes for which it is now held, *the plants, mains, etc.* are of value only when used by a going concern. For any other purpose they are merely scrap, or second-hand machinery, and their intrinsic worth is inappreciable. As to their *market* value, there is no means of judging."

3. Less than Reproduction Value of Land.

The value of "real estate" as computed and found in this case, is, in reality, considerably less than the cost of reproduction, and therefore less favorable to Appellee than should have been.

All the real estate witnesses valued the land at its depreciated selling price, due to the presence of the gas plants. They all conceded that, if the plants were to be removed, their estimates of market value of land covered would be increased from 10 to 25 per cent. *(Record,* pp. 1180, 1296, 1298, 2250, 3156),—that is to say, if the land were really "*vacant*".

To reach the actual "reproduction" value of the land, it would be necessary to estimate the cost of acquirement of equivalent land, similarly situated, by a new Company, under ordinary circumstances and it was undisputed that such land could not thus be procured for "anything like" the valuation placed upon the land under present conditions (*Record*, pp. 1180, 1193).

It is, accordingly, Appellee's contention that the valuation of "real estate", as returned by the Master and Court, is by several million dollars too low.

4. Valuation not Duplication of Plant Value.

It is not perceived how the valuation of the land as made, duplicates the valuation given by the Court to the plants.

It is not true that the valuation of the land could not be realized until the plants thereon were removed; for the property, both land and plants together, might be acquired by another Company desiring to continue the same business,—in the same manner as Appellee, in 1884, acquired the plants and property of six then existing companies at a value based on the *cost of their reproduction at that time*, to wit: the market value of the *land* as then appraised, plus the cost of reproducing the *plants* thereon, as separately estimated. (*Record*, pp. 4925, 4939, 4941, 4942, 4955).

Nor do we understand, and much less accept, the theory that value may not exist independent of a sale consummated, or that a piece of real estate or other property purchased years ago cannot now be considered as worth more than cost, if and while unsold, although its market "value" may now be twice such cost.

Would such a proposition be entertained in a proceeding to take the property for a public use under the power of eminent domain? Would not a gas Company in such case be entitled to an award sufficient to represent the market value of the land, plus an amount sufficient to reproduce thereon a plant of the character and capacity taken? Would anything less be "just compensation," or make the Company whole? Would the State be heard to say that such an award was a "duplication" of value, or that no value beyond "original cost" (and the land may have been donated *gratis*) could be allowed, because the increment of value had not been realized by a sale, or that the Company must be limited to what the land and plant together would bring at a forced sale to a purchaser designing the plot for *ordinary* improvement, for which the "plant" would be unfitted and worthless? And would not such a proposition, if put in practice, amount to confiscation of a large part of the investment of the Company?

As said by Mr. Justice BREWER in *Ames v. Union Pacific Railway Company* (64 Fed., 165, 176; affirmed in *Smyth v. Ames*, 169 U. S. 466), after declaring the safeguards of the Constitution in the appropriation of private property by "condemnation proceedings":

> "The same general ideas must enter into and control legislation of the kind before us."

5. Real Estate Not in Excess of Requirements.

The valuation of the Court covers only land "actually in use" by Appellee "in its gas business"; all other land was excluded (*Record*, pp. 393, 423, 430).

There is nothing which can be called evidence, much less any finding, that this is "in excess of the amount required by Complainant in its gas business, upon the basis of the cost of reproduction".

On the contrary, it was affirmatively proven that there was uch an overcrowding of apparatus at some stations (21st Street, or instance), that a greater area would be properly required f a plant of like capacity were now to be constructed (*Record*, pp. 290, 1507); while additional holders in the distribution system re being constantly required, with growth of sales (*Record*, p. 587).

The Court considered, and expressly declined to find as a fact, he proposition here advanced by Appellants (*Record*, p. 423).

Appellant, The City of New York, presented to the Master a equest for a finding based on a theory as to the amount of land equired for a large water-gas plant, deduced from the land used er unit of production at the crowded 21st Street plant (*Record*, p. 288, 289); but it will be observed that this land is simply that covered by *buildings* and nothing more. The computation assumed that a gas plant could be built with no space for general connections; no space between buildings, either for the purpose of gangways, or to afford such prudent segregation as to prevent the entire plant from being destroyed if one building should get on fire; no space for contiguous yards for loading and unloading supplies, making repairs or providing shops, or for storage of coal or coke which must be immediately at hand; no space for tar tanks, ammonia tanks or oil tanks, none of which can be located under the buildings.

And furthermore the request made no allowance for a *pro rata* of lands used for general holder purposes, and not located immediately at the 21st Street station, but employed and necessary for handling the output of that plant with other works (*Record*, p. 290).

6. Acceptance of Valuations of Appellee's Witnesses.

Nor is it believed to be good ground of objection that the Master and Court accepted the valuations of Appellee's witnesses, rather than the estimates of Appellants' experts which "were lower."

It is suggested that the Appellants' witnesses were "unimpeached". If it is meant that their character for veracity was not attacked, it is true; but if the term relates to their demonstrated knowledge, competency and reliability in their estimates, they were thoroughly "impeached."

Referring to the exhibition of Appellants' witnesses on the stand, the Master said (*Record*, p. 158):

> "Their cross-examination disclosed numerous instances in which they disclaimed knowledge of actual sales in the immediate vicinity of the parcel under consideration, notwithstanding such sales were matters of public record.
>
> "In a dozen or more instances, their valuations approximated or were substantially below the assessed valuation of the land. It is, of course, true that the assessed valuation of real property is often equal to or higher than its actual value, but it is generally understood and *was in fact admitted on the record* that as a rule, tax values are substantially lower

than the prices that can be realized for property sold under ordinary conditions. When, therefore, in so many instances defendants' witnesses made their valuations approximate closely the assessed valuations, some question is suggested as to the weight to be given to their judgment.

"Mr. Wells * * * like the other witnesses called by defendants, * * * was not familiar in many instances with recent sales of property in the immediate neighborhood of the parcel under consideration. *Taken as a whole, the testimony of these defendants does not show that they gave to their appraisals the amount of care and study that characterizes the work of Complainant's witnesses.* For example, one witness in valuing the property occupied by the Company at 42nd Street and 44th Street, excluded that portion of it comprised within the lines of 12th Avenue, on the ground that the Company had no title thereto. He failed, however, to make any allowance for the fact that on this theory certain of the lots remaining would have an enhanced value as corner lots, which, according to well known rules, make them worth often 50 or 60 per cent. more than interior lots in the same block. In another instance no allowance was made for the circumstance that the parcel in question had a frontage both on an avenue and a side street. * * *

"In repeated instances, defendants' witnesses were unable to specify any transactions in the neighborhood at unit figures so low as those given in their valuations, *whereas Complainant's in the great majority of cases were able to substantiate, or at least to some extent support their estimates by reference to actual transactions.*"

(a) Appellants' Explanations.

Counsel for the Public Service Commission endeavors (*Brief*, pp. 47-58) to minimize the want of knowledge and of reliability exhibited by Appellants' witnesses, as compared with Appellee's, pointing out what he claims to be explanations of the fact that they were not posted as to well known sales in the section under appraisal. A re-reading of the Master's report will indicate whether the attempt has been successful. How does one account for the failure of a witness to value a corner lot at an increase over the interior lot, after he has established it as a corner lot by his own theory? Moreover, since Counsel, who was not present at the trial, goes without the record to state what he conceives to have been the practice as to bringing to the hearing slips recording contiguous and contemporaneous sales, it may be proper for Counsel, who was present throughout, to say in reply that (with the exception of few parcels) witnesses for Appellants did have present with them all the *data* which they claimed to possess respecting such sales; their ignorance of recent sales, recorded in what were conceded to be the recognized real estate guides, and with which Appellee's witnesses were entirely familiar from those records, could hardly have been more complete, as the testimony shows.

We suppose there can be no better evidence of the value of parcels of real estate, than actual recent transactions therein,—the very *data* with which it would seem that Appellants' witnesses, if competent and painstaking, would have taken measures to acquaint themselves; and it appeared that such transactions—with which Appellants' witnesses were rarely familiar—almost invariably confirmed the valuation of Appellee's witnesses, and condemned those of Appellants' as insufficient.

Moreover, Messrs. Thompson and McHale *gave identically the same valuation for virtually every parcel*,—a most unusual circumstance where witnesses were supposed to be exercising an independent judgment.

And finally, their evidence showed a present valuation of only 11 to 13% over the valuation of 1884,—an incredible figure in view of the heavy increase in the values of real estate in the City of New York within the last twenty-five years, often amounting to from twenty-five to thirty-five per cent. even within the past five or six years. (*Record*, pp. 1177, 1288, 2183, 3132, 3137).

(b) Conclusion.

If Appellants' Assignments intend to suggest that, in a rate case, the Court is bound to accept the valuations of a defendant's witnesses if they be honest, no matter how incompetent or uninformed they may be demonstrated to be, we are content to leave the proposition with the Court without argument.

POINT IV.

Valuation of Plants.

The term "plant" as employed in the evidence and findings includes (*Record*, p. 169):

> "*(a)* Buildings and foundations of apparatus, forming part of the manufacturing and distributing stations;
> *(b)* Apparatus;
> *(c)* Holders; and
> *(d)* General connections at the stations."

The valuation of Engineer Mayer is summarized by the Master as follows (*Record*, p. 175):

21st Street Plant including all Holders----	$4,162,021	
44th " " " " " ----	2,000,205	
99th " " " " " ----	963,011	
14th " " " " " ----	2,549,545	
42d " " " " " ----	1,744,660	
18th " " " " " ----	588,873	
Totals for all plants --------------------		$12,008,315
63rd Street Holder Station Complete ----	$490,072	
65th " " " " ----	1,427,317	
111th " " " " ----	1,039,910	
132nd " " " " ----	540,702	
Inwood " " " " ----	26,173	
Total for all Holder Stations------------		3,524,174
Total for Plants and Holders now in use--		$15,532,489

Appellants charge error in the valuation of this item by the Court (*ante*, p. 6)-at $15,500,000 (aside from any controlling effect of "original cost", "book value" and "tax valuation", elsewhere discussed), in that it assumes the reproduction,—

> *(a)* Of Appellee's "identical plant and each part thereof"
>
> *(b)* "Without regard to whether the same was originally, economically produced," "or economically and commercially

worth producing," "or as to the obsolescence of type and the advancement of the art;"

(c) And not "of a plant that would produce the same kind, quantity and quality of gas in an economically constructed, modern plant."

1. Not of "Identical Plant and Each Part."

The sum of $15,500,000 found by the Master and Court as the value of the plants *(ante,* p. 6), does not represent the value of the "identical plant and each part thereof," but is a less sum.

The Master took the valuation of the witness Mayer as a general guide *(Record,* p. 171); but Mr. Mayer's total valuation was $16,137,477, and deducting depreciation to the amount of over $604,988, for which sum the plants could be made in all respects as good as new *(Record,* p. 174), his net was $15,532,489. This sum was further reduced by the Master to $15,500,000 "to allow for possible over-valuation in some details" *(Record,* p. 175); and besides, Mr. Mayer had inadvertently omitted two entire buildings with their contents, in his estimate *(Record,* pp. 4604–5).

The Court finds that the valuation of the Master was based "upon competent and persuasive evidence" *(Record,* p. 391).

(a) A Much Higher Valuation Sustainable.

Indeed, there was ample evidence to sustain a much higher valuation. The estimates of Chief Engineer Bradley, of Vice-President Addicks and of Dr. Alexander C. Humphreys, President of the Stevens Institute of Technology, who has been "continuously engaged in the gas business for 35 years, both as a Consulting Engineer and in construction, * * * concededly a leading authority on the subject" *(Record,* pp. 170, 2575),—all men of the highest competency and thoroughly familiar with the plants,—ran substantially above Mr. Mayer's, Mr. Bradley's being $16,812,915, or more than $1,300,000 higher than the finding of the Master *(Record,* p. 169).

(c) Insignificant value of items criticised.

Indeed, all the items of plant (and they are few and not relatively important) specifically criticised below by Appellants,—chiefly (*a*) certain *generating* apparatus at Complainant's 111th Street holder station, practically new and now properly held as a reserve apparatus *(Matter of Mayor, 39 Appellate Division Reports, N. Y., 589, 592), and only valued at $140,853, according to Appellants' Brief below;* (*b*) housing for holders at 18th Street, which was approved construction when erected and which now reduces operating expense by eliminating painting and repairs required on exposed holders, while adding on the other hand to investment; and (*c*) a few "benches" at water-gas plants, which the defendants erroneously and without proof assumed to be abandoned "coal-gas benches", instead of water-gas benches, as they are ;—*might be excluded from the computation and a valuation much higher than $15,500,000 for the balance be still sustained upon ample evidence.*

Appellants' contentions as to those items were, moreover, thoroughly presented below and overruled by the Court and Master (*Record*, p. 258, 423).

2. No Evidence that Plants were not "Economically Produced."

There is no evidence that the plants, or any part of them, were not "originally economically produced." On the contrary, the testimony so far as it touches that point, is directly the reverse, and thereon the Master made the following finding:

> "There is no satisfactory evidence that the cost to Complainant of said property was unreasonable or excessive; or that the cost of production of said property was enhanced through faulty construction or waste; or that the various sums expended from time to time by Complainant or its predecessor Companies in permanent improvements and betterments were not intelligently and properly expended; or that any such expenditure was made otherwise than providently and honestly." (*Record*, p. 254).

Moreover, as the present value of the property as it is being devoted to the public service, is conceived to be the proper factor, the question of economy in original production does not seem important.

3. No Evidence that Plants are Not Worth Reproducing.

Nor does the evidence show that the existing plants are not "commercially and economically worth reproducing". On the contrary, again the evidence shows, and the Master has found *at the request of the Attorney General and other Appellants,*—

> "That several of the coal-gas plants which were transferred to Complainant by its constituent Companies in 1884, have been replaced with water and oil gas plants of the *latest and most improved methods;* that the maximum daily capacity of the water and oil plants of the Complainant is 41,500,000 cubic feet, out of a total capacity of the Complainant's plants in operation, amounting to 51,000,000, which does not include the 18th Street plant; that *all of the manufacturing plants of the Complainant are in good and efficient condition and that four-fifths of the present generating capacity thereof are in the shape of modern-up-to-date water gas plants which could not be improved upon anywhere;* and that one-fifth of the generating capacity thereof, or the coal gas plants, while possessed of some apparatus which is not of the latest pattern, *are efficient and in shape to operate for an indefinite period without impairment;* that the plants of Complainant were in good condition, operating continuously and successfully when they were taken over by Complainant in 1884, and are in good condition now,—better than they were at that time,—and are producing about twice as much gas, at a lower rate." (*Record*, p. 276).

(a) Inconsistency of Appellants.

We present in this connection the following remarkable statement in the *Brief* of the Attorney General (p. 87):

> "The record tends to show that a large part of such plant is obsolete, is grossly inefficient from the standpoint of the

> present state of the art, and that the cost of production thereby is greatly in excess of what it would be if the Company employed modern methods and appliances available for its use in the field of its operation."

The attitude of the Appellants respecting the quality of the plants, seems to vary with the angle at which they approach them. When opposing, and successfully, the allowance of a sum for "upkeep", in addition to average actual expenditures for twenty years, the plants are, in their view, of approved type, "efficient", "in good condition" and producing gas at a "lower rate than ever" as stated in the above finding; but when it comes to the valuation of the same plants to determine the amount of the investment upon which a return is to be computed, they are "inefficient", "obsolete" and altogether of no account.

(b) The Actual Situation.

The matter reduces itself to this:—that in Appellee's coal-gas plants, constituting less than one-fifth of its total capacity, there is "*some* apparatus which is not of the *latest* pattern," although "*efficient* and in shape to operate for an indefinite period without impairment;" that is to say, there is found (as would be the case in any plant long in operation) a set of benches or other apparatus smaller or different in type from that which might be installed as an original proposition if the plants were to be now constructed of their present great capacity.

Thus, Appellee (**a**) has some retorts in "benches of sixes," while "benches of nines" might now be installed in so large a plant if newly built, but "benches of sixes" are perfectly good construction and are now being installed in new plants (*Mayer, Record*, pp. 1513, 1514), and it would be economically indefensible to discard them, while operating efficiently, for "benches of nines" (*Humphreys, Record*, p. 1844; *Mayer, Record*, p. 1505); (**b**) there are also some ordinary furnaces, which have not been replaced by the new "regenerative" furnaces which require two stories and a more expensive "building" construction in operation (*Record*, p.

1738); and (c) finally, there is in use, at the Forty-second Street plant, "hand charging" apparatus for retorts, instead of the more expensive "charging machine", which requires a larger building and adds to the requirement of "return on capital" on the one hand while saving certain pay-roll labor on the other.

Practically every new device means additional capital investment; it is obvious that it would raise the cost of gas production to an extravagant figure, involving substantial charges to operating expense to make good the value lost, as well as additions to capital account to an amount equal to the excess value of the new apparatus over the old, if a Company were recklessly to scrap and charge off apparatus—no matter if still operating unimpaired—every time some improvement was designed; and whether in any particular case immediate substitution thereof is justifiable, is a matter which must be left to the discretion of the operating staff of a Company, with the presumption that they will exercise (and in Appellee's case have exercised) such discretion competently and wisely.

Of course, the valuation of the Court and of the Master *is of the existing apparatus*, and not of the more expensive "latest pattern" as to the items noted.

(c) Evidence of Efficiency From Cost of Gas Production.

The cost of production in Appellee's water gas plants, constituting over four-fifths of its capacity, is shown to be several cents less than the cost to the New York Mutual Gas Light Company which alone compares in age with Appellee (*Record*, pp. 4584-5); and to be substantially identical with the cost to the other and newest water-gas Companies operating in the City of New York,—and where there is any difference against Appellee, it is but slight and such as would naturally occur between Companies operating in the same district (*Record*, pp. 241, 3360), and is due to circumstances (such as the fact that Appellee's plants have been cut off from the water front by marginal streets) having no relation to efficiency in operation (*Record*, pp. 241, 647, 2406, 2413, 4436, 4437, 4472, 5287).

And while there is no other coal-gas, of 22 candle power or otherwise, produced on the Island of Manhattan with which to compare Appellee's, it is seen to be but a fraction of a cent beyond the cost of water gas to the Mutual Gas Light Company operating the same territory. Furthermore, as subsequently appears (*post*, p. 42) any small increase in cost of production is offset by lesser return required on the less expensive coal-gas apparatus employed.

The only Company in or about the City of New York, claimed by Appellants to be producing gas at less than Appellee and its subsidiary Companies above mentioned, was the Central Union Gas Company, which operates in the Bronx; and the reason of its apparent divergence is set forth by the Master and has no relation to operating efficiency (*Record*, p. 241). Among other things, it was not maintaining the candle power required by Appellee and other Manhattan Companies; and as soon as it was compelled to do so, the cost of its gas immediately rose "to substantially the same figures as the gas delivered by all other Companies" (*Record*, p. 241).

Counsel for the Public Service Commission quotes Mr. Bradley as saying of the 14th Street Coal Gas Works—"Nobody else would want to buy it for a gas manufacturing plant" (*Brief*, p. 66). The quotation might mislead. The context clearly shows that Mr. Bradley merely meant that, if the Manhattan plants were removed to Astoria, the sites would be sold to some outsider for "ordinary" improvement and not for use as "gas plants." *He did not refer to 14th Street alone.*

4. Assumed Reproduction of the Most "Modern" Plants of Same Individual Capacity.

Nor is there merit in the suggestion that the valuation of plant would have been more favorable to Appellants, if based on (*a*) the cost of "reproduction of a plant that would produce the same kind, quantity and quality of gas in an economically constructed modern plant" (*Record*, p. 482), (*b*) or, as the Public Service Commission puts it, the "lesser *(sic)* cost of replacement with plants of more modern character, which would produce equal service" *(Record*, p. 438).

(**a**) So far as concerns Appellee's **water-gas capacity,** representing more than four-fifths of the total capacity, no question can be raised that it is not now in the shape "of modern, up-to-date water-gas plants which could not be improved upon anywhere" (*ante*, p. 38; *Record*, p. 276).

(**b**) As to Appellee's **coal-gas plants,** it will be observed that the valuation of Mr. Mayer is $327 for the 14th Street and $330 for the 42nd Street plant, per thousand feet of maximum daily capacity (*Record*, p. 1454), while the cost of a new coal-gas plant (such as "Astoria") equipped throughout with the latest type of machinery, will easily run to $400 or more per thousand *(Mayer, Record*, pp. 1456, 1721, 1724, 1727; *Master's Report*, *Record*, pp. 181-3); and the additional capitalization of $70 or more per thousand feet, would require an additional amount on each thousand feet of gas produced, to pay a reasonable return thereon,—to say nothing of the "replacement" charge which such gas must also carry to cover the value of the old plant scrapped, or the "depreciation" on the $70 additional plant value.

This is a circumstance which Appellants seem wholly to have overlooked.

5. Assumed Reproduction of Appellee's Present Capacity, in Larger Units.

The Assignments do not directly suggest, as a proper basis of valuation, the cost of the replacement of Appellee's three water-gas plants by a single larger water-gas plant, or its two coal-gas plants by a single larger coal-gas plant.

Such a proposition was, however, presented below and is now advanced in the Brief for the Attorney General.

It is submitted to be without merit.

(a) The Proposition Unsustainable in Law.

A Company which has been built up to meet the needs of a community as they have developed, with plants in many instances supplying distinct sections, should not be despoiled of its property, even if a single larger plant might now be produced at less cost per unit of capacity.

(b) Great Size of Appellee's Present Plants.

If, however, we examine the proposition on its merits, it is important not to overlook the immense size of each of Appellee's present plants. Their maximum day's capacity, and annual capacity based upon the recognized formula (*post*, p. 122), are as follows:

	Cu. Ft. Maximum Daily	Cu. Ft. Annual Capacity
21st Street	27,500,000	5,500,000,000
44th Street	8,500,000	1,700,000,000
99th Street	5,500,000	1,100,000,000
14th Street	5,000,000	1,000,000,000
42nd Street	4,500,000	900,000,000

It will be observed that the capacity of the 21st Street plant alone (probably the largest water gas plant in the United States with the exception of the New Amsterdam, which exceeds it but slightly) has an annual capacity equal to nearly twice the entire sales of the City of Boston in the year 1905 *(Daily capacity of 21st St. Plant, Record, p. 1326 ;— Boston yearly sales, Record, p. 212).*

And even the smallest, the 42nd Street plant, has a capacity equal to nearly one-third the requirements of the same city in that year.

(c) No Economy in Gas Production in Larger Plants.

Mr. Cowdrey, who was invited by the Committee of the Chicago Council upon the recent investigation in that City, to advise them as a practical gas engineer, there said :

> " I doubt if one could distinguish between the cost of operating a plant of 20,000,000 capacity and the operation of four plants of 5,000,000 capacity each " ((*Record*, p. 2589).

And Appellants' witness, Professor Bemis, in substantiation of this view, which does not seem anywhere to be questioned, testified that when a plant had reached so large a capacity as 700,000,000 cubic feet per annum, there was little, if any, economy in production in a larger plant (*Record*, pp. 1509, 2417).

It will be observed (*ante*, p. 43) that Appellee's smallest plant has a capacity substantially in excess of the capacity stated by Professor Bemis.

(d) Cost of Larger Plant in Place of Present Plants.

In point of fact, it does not appear that a larger manufacturing plant (excluding holders, separately considered below), could be produced at less cost per unit of capacity than the present ones.

Water-Gas.

As to water-gas capacity, the Master has found, *upon the request of Appellants*, that the valuation, per thousand of capacity, placed upon Appellee's water-gas plants, in Mr. Mayer's valuation, which the Master generally followed, is " a fair unit to assume " as the value of a water-gas plant, *no matter what the capacity might be* " ; and, accordingly, that the cost of a collossal water-gas plant equal to Appellee's total water-gas capacity of 41,500,000 per day, would be $5,104,500 (*Record*, p. 264).

Indeed, Mr. Mayer's valuation of the three water-gas plants (at 21st, 44th and 99th Sts.) aggregated $5,112,000, exclusive of holders (*Record*, pp. 1326, 1329, 1331), as compared with the Attorney-General's figure of $5,104,500 (*Attorney-General's Brief, p. 92*), or substantially identical.

Coal-Gas.

But in his computation as to a single coal-gas plant (*Attorney General's Brief*, pp. 88-92) the Attorney General is completely in error.

(**a**) As to Appellee's existing coal-gas plants, Mr. Mayer's valuation was for the 14th and 42nd Street plants, $327 and $330 respectively per thousand feet of maximum daily capacity (*Record*, p. 1454); while for a plant of the combined capacity of the two, 9,500,000 feet per maximum day, he declined to make an offhand estimate, but declared that he did not believe "that any plant can be built *for less* than $300 per thousand" (*Record*, p. 1457). At even $300 per thousand feet this would mean an average difference in value between Appellee's existing plants and the proposed plants, of less than $30 per thousand feet, or of less than $285,000 in the aggregate.

But Chief Engineer Bradley testified that in his judgment a coal-gas plant would cost $400 per thousand feet of capacity (*Record*, pp. 1721, 1724, 1727), which in any aspect would give a valuation for a coal-gas plant of 9,500,000 feet maximum daily capacity, much beyond the aggregate valuation of Mr. Mayer even for the two existing plants.

(**b**) Realizing, perhaps, the insufficiency of his argument in this aspect, the Attorney General proposes to measure the cost of the 9,500,000 plant by the cost of the Astoria plant, with which method we are quite content; but for this purpose he suggests Chief Engineer Bradley as estimating, *on the basis of the unit cost at Astoria*, the cost of a plant of 10,000,000 feet capacity to be $2,441,015.81, or $244.10 per thousand feet of capacity,—upon which ratio a plant of 9,500,000 feet would cost $2,318,950, as against Mr. Mayer's valuation of $3,124,241 for Appellee's Fourteenth Street and Forty-second Street coal gas plants together.

The evidence not only fails to sustain, but clearly contradicts, such assumption. The Master expressly refused to find that a plant of 10,000,000 cubic feet could be constructed at the aggregate or unit cost thus advanced by the Attorney General (*Record*, p. 264), calling attention to the fact that Mr. Bradley " expressly stated that the figures regarding the Astoria cost, which he then gave at counsel's request, were not complete or accurate." (*Master's Report*, p. 264–5).

Mr. Bradley had testified that a coal gas plant would cost $400 per thousand cubic feet (*Record*, pp. 1721, 1724, 1727); Mr. Mayer had testified that the Astoria plant would run up to $400 easily (*Record*, p. 1456); and the final cost of the Astoria plant had already been presented and, even exclusive of land and tunnel, was much beyond $400 per thousand cubic feet (*Master's Report*, *Record*, pp. 181–3).

The facts are that counsel for the Attorney General himself prepared a blank upon which were indicated various items of coal-gas apparatus (State's Ex. V, *Record*, p. 5278), and requested Mr. Bradley to state the cost of such apparatus at Astoria, which was done (*Record*, p. 1705). Thereupon, he asked Mr. Bradley to estimate, offhand, the cost of similar apparatus for a plant of one-half the Astoria capacity, or 10,000,000 cubic feet. The total thus reached was $3,360,021.93, but one has only to read the Record (pp. 1711–13) to note the worthlessness of this figure as an accurate statement of the cost, even of the apparatus which it covered,—Mr. Bradley repeatedly indicating that it was impossible without consideration to give an accurate estimate, and that the cost of the smaller capacity could not necessarily be *pro rated* from the larger.

Mr. Bradley also protested that the figures in State's Ex. V were only a part of the total Astoria cost (*Record*, p. 1711), that it lacked many items of apparatus constructed at Astoria (*Record*, pp. 1711, 1712, 1736–7); and subsequently (*Record*, p. 1741–2), he presented a schedule (Ex. 235, *Record*, p. 5289) showing a list of items omitted from State's Ex. V, aggregating (as the Master states) $4,327,930.67 (*Record*, p. 264).

The Attorney General now suggests (*his Brief*, p. 91) that only $111,000 out of Exhibit 235, is to be added to the items of Exhibit V; and adds that the Court will observe that, of the list given by Mr. Bradley (Ex. 235), "everything except the coal and coke handling plant would be *referable to real estate* and to the particular Astoria real estate, whereas what was sought was the value of the plant exclusive of real estate and holders." Nothing could be more erroneous.

The cost of production of a plant, includes any number of items which are "referable to real estate" in the sense that they ultimately become part of the real estate, even buildings and the foundations of apparatus; and in Exhibit 235 we find such items as "fences," "land drainage system," "engineering department," "temporary structures," "repairs," "handling cement," storeroom, sundry and general "expense," "insurance," "legal expense," "taxes," and doubtless many others, which analysis will show to be equally inevitable in the construction of a plant—to say nothing of interest on investment in plant during construction, which item, for Astoria, amounted at the time of the trial to upwards of $1,000,000 (*Record*, p. 1560), and many other items included in "grading, filling and the *necessary work on real estate to produce this plant*" (*Record*, p. 1712).

Moreover there are conditions on the Island of Manhattan, which make plant construction there in many respects more expensive per unit than at Astoria, such as the presence of marginal streets between the docks and the property to be improved, the necessity of heavy masonry walls about the gas plant instead of lighter fences, the general congestion of traffic and restrictions upon building in the midst of a great City, and the fact that the plants must be cut up by intersecting streets only 200 feet apart, which are certain to increase the expense of construction, *ceteris paribus*, beyond expense at Astoria.

It follows from the foregoing that the estimate in the Attorney General's Brief for coal-gas plant, $2,424,970 (p. 92), cannot possibly be accepted.

(e) Reproduction of Holders.

As to holders,—no fair valuation could be based except upon them as they exist. They have been constructed to meet the requirements of the growing business and vary in capacity from two hundred thousand cubic feet to five million cubic feet *(Record*, pp. 624, 1319, 1323, 1325, 1329, 1333).

The larger holders cost less to construct per unit of capacity than the smaller ones; but it is only within the last few years that the progress of the art has made it possible to construct the largest holders *(Record*, p. 658); and it would be plainly confiscation to value Appellee's holders constructed prior to that date, upon the cost of reproducing its entire holder capacity in five million foot Units.

Moreover, the sizes of holders are adjusted to the requirements of special districts; and it would obviously be uneconomical to establish an immense distribution holder in a section representing a relatively small consumption of gas, even though such a holder might cost less per unit of capacity than the smaller one which would meet the requirements of the community.

The Attorney General, however, not only takes as his unit the largest holders now in existence on Manhattan Island, but his value of his single 3,600,000 foot holder includes no engineering or interest charge, which together amounted to 15% and were added by Mr. Mayer in lump, as a final item of his computation *(Record*, pp. 1320-1).

(f) Other Items of Assets.

The valuation of real estate is reduced by the Attorney General to $10,422,106.30 (*his Brief*, p. 94), upon the theory that the immense holders assumed in place of Appellee's present holders, will release some land; and of course it falls with the objection to that method of valuing such holders.

Moreover, in his tabulation (p. 94) the Attorney General includes $7,852,151.03 as the value (book value or cost to Appellee) of "mains and services"; whereas, this sum is the book value of "*mains*" *alone* (*Record*, p. 5034),—the present value of services being $1,994,000 additional, and even their book value $1,212,000 (*Record*, pp. 432, 5034).

6. Assumption of Transfer of Capacity to Astoria.

It is not considered necessary to enter upon a criticism of the Attorney General's estimate of the expense of the construction at Astoria of a water-gas plant of 50,000,000 cubic feet of daily capacity, which, with the first Unit at Astoria already constructed, would meet Appellee's maximum day's sales of 70,000,000 cubic feet *in 1905*.

The construction of such a capacity at Astoria would take so many years, and the cost would be subject to so many considerations, that it is not seen how any aspect of such a speculative discussion can be of interest in the present action.

It will be observed, however, that this would involve the abandonment of all Appellee's Manhattan plants, with a loss of $10,400,000 in efficient apparatus, as shown by Vice-President Addicks (*Record*, p. 1588); and to make good such enormous depreciation would require charges in the operating cost of gas, which it would be impossible to consider with gas at 80 cents (*Record*, p. 1587).

As to the propriety of such a summary and wholesale slaughter of existing plant, we quote from the Attorney General's Brief (p. 115), on another point, as follows:

> "*Neither the Consolidated Gas Company nor any other company has the legal right to abandon efficient and modern plants for the purpose of substituting therefor modern and efficient plant of greater capacity, at the expense of the public under the cover of the charge 'on account of depreciation.' * * * Abandonment, as here, is the arbitrary scrapping of plant that could serve the public for years to come. It is in a sense willful destruction of plant.*"

And so far, too, as concerns more than four-fifths of Appellee's capacity, now in water-gas, it can hardly be claimed that Appellee could realize any economies in production by a transfer to any other site.

It may be observed in closing, that in his computation of cost of reproduction at Astoria, the Attorney General has again (p. 95) included, under the heading "Mains and Services", the book value (and not even the present value) of "mains" alone.

POINT V.

Valuation of Mains.

That the present value of Appellee's 822 miles of mains based on cost of reproduction is at least $12,636,000 (*ante*, p. 6), was found by the Master and Court upon overwhelming testimony (*Record*, pp. 176–8, 390, 398, 432). It did not rest upon the testimony of Superintendent of Mains Simpson, but was corroborated by Dr. Humphreys and admitted by Appellants' witness Marks to be "moderate and fair" (*Record*, pp. 177, 2786).

Appellants object to this valuation and argue for the substitution of " original cost ", which they place at $7,852,000.

> Note: Referring to the 822 miles of mains valued, counsel for the Public Service Commission (*Brief*, p. 78) refers to 27 miles thereof, valued at $103,207.01, as "disused mains." They were merely temporarily cut out but still a part of Appellee's useful gas property. Some mileage of mains will, at any time, be found cut out for the purpose of putting in new joints, or on account of interruption of their operation by City construction of water pipes, or of some other contingency. All "*abandoned*" mains had been charged off on Appellee's books, leaving the 822 miles remaining (*Record*, p. 1681).

1. " Original Cost " of Installation.

At the outset it may be noted that the *cost of installation* of the mains " in the first instance," is not shown to have been only $7,852,000. It was certainly in excess of said sum, which is the " Cost to Complainant " thereof (*Record*, p. 254).

(**a**) Said $7,852,000 represents, in large part, mains taken over by Appellee in 1884, at an appraised value based on the then price of $25 a ton for pipe (*Record*, p. 691), laid under the inexpensive pavements then existing. The balance represents mains laid since, under similar inexpensive conditions for pipe, and largely so for pavements.

Indeed, the $12,636,000 representing present value, was based on a valuation of pipe of only $28.90 per ton (*Record*, pp. 691, 2994).

(**b**) But the six constituent Companies began business at various times from 1823 to 1876, and installed their main systems in large part while pipe was $60 or even $76 per ton (*Record*, pp. 2046, 2991).

The books of the constituent Companies gave no line on the cost of the Mains. Referring to the subject of Mains with other tangible property, and the amount at which they were carried on the books of said Companies, the Master said (*Record*, pp. 178-9) :

> " In many instances the figures thus appearing on the books were reached after charging down as depreciation *very large sums which represented the actual cost.* Such charging down was in addition to and exclusive of expenditures for current repairs and renewals necessary to keep the plants of the Companies in efficient condition. For example, in the case of the Manhattan Company, it appears that during a period of 10 years there was written off on account of mains, meters and services alone the sum of $768,517.96, while during that period the additions to those accounts amounted to but $147,630.70."

(**c**) In summary, it may be said that the mains were in large part originally laid under conditions of *expensive pipe* and *cheap* *pavement;* while the present valuation of $12,636,000 is based upon *cheap pipe* and *expensive pavement.* It is impossible to say with certainty, at this time, which basis would result in the higher valuation.

2. No Ground for Exception of Mains from "Present Value" Rule.

If, as both reason and authority indicate, "present value" based on cost of reproduction generally governs, no reason is perceived why Mains should be excepted. The valuation must be consistent throughout. "Cost of installation" can not be accepted as to one item, and "present value" as to another. And if "cost of installation" were found to be the true rule, it would appear that Appellee's "plants" cost more than the Master's valuation, which is practically the same as Appellee's "book value" therefor; for the appraised (Appellee's "book") value, at which Appellee took over the plants of the constituent Companies in 1884, *was less than they were carried on the books of the constituent Companies, even after the latter had charged them down by millions of dollars to "conceal earnings"* (*ante*, pp. 17-18).

If the "present value" of Appellee's entire property becomes, from what may be called "natural developments," less than original cost of creation,—*and there is no clear evidence that, taken as a whole, the present valuation may not be so,*—the loss is Appellee's, and consumers of its gas can not be required to make up such loss; and, conversely, if from like "developments" it has become more valuable than such original cost, that is Appellee's gain, and such consumers can not demand free enjoyment of the increment.

Nor, is this proposition original with Appellee. It has been asserted in this Court, in cases of the highest importance, by State authorities in defense of rate legislation. Thus, in *Smyth v. Ames,* the Nebraska Board of Transportation and Attorney General, strenuously maintained that the only proper basis of valuation of the Union Pacific Railway System was the *cost of reproduction*, and *not the higher cost of construction*, of the same.

And a good rule does not become a bad one if, in some other case, cost of reproduction exceed original cost.

3. Assumed Allowance for Future "Restoration."

It is suggested as one of the chief grounds of Appellants' contention that cost should prevail over present value, as to Mains, that—

> "Complainant has demanded, and the Court has allowed, a large amount on account of depreciation of Complainant's property, including mains, out of which they *are to be restored* (to wit: 11c. per thousand cubic feet), and it would be absurd to charge the public with a *fund to restore the mains*, and at the same time make the public pay Complainant a return upon the value predicated upon the additional expense that will be incurred thereby." (*Attorney General's Brief*, p. 101).

This statement would convey the impression that Appellee, in addition to actual current expenditures to repair and replace mains as use requires, had been allowed to lay up a reserve or other out "*fund*" of which the mains at some time in the future "are to be restored."

(a) As will be hereinafter noted, *no such accumulating fund has been allowed.* Indeed, not even enough to meet the *average* of Appellee's *current expenditures for repairs and renewals* in the up-keep of its property, including mains, for the last twenty years, *which the Attorney General concedes (post*, p. 141); although such expenditure, as to Mains, was based chiefly upon the old and inexpensive pavement which could be replaced at from 15c. to 25c. per square yard, whereas the expense of replacing the new pavement is from $2.70 to $8 per yard (*Record*, p. 178).

(b) Nor is it true that 11c. per thousand cubic feet was allowed, on Appellee's sales. This allowance was made *only on the gas made by Appellee*, and not on all the gas which it sold and which went through its mains and general distribution system.

(c) And if a "fund" had been allowed, of the formidable character imagined by Counsel, it might have furnished grounds for the reduction of the "fund," but not for a lower valuation of investment or a reduction in the reasonable rate of return thereon.

4. Present System of Mains Normal.

It is said that the six constituent Companies, by whose consolidation Appellee was formed in 1884, had independent systems of mains. This of course is true, but in general they covered *independent territory.*

We do not find in the Record the statement of Mr. Simpson quoted by the City (*Brief*, p. 58) as to be found at page 698 of the Record. But Mr. Simpson does in substance say (*Record*, p. 698) that it is possible, but he "*does not think it is practicable*" on account of the vast expense involved, to make all the mains of Appellee "uniform." That would be true of any Company, anywhere.

The mains of no Company in business for nearly a hundred years, or much less period, will be found "uniform" in size at every point. Mains might now be installed 30 inches in diameter where seventy-five years ago a diameter of 8 inches would have been ample; and no Company would have been justified in installing 30 inch mains for the consumption of that day.

Appellee's system of mains has grown up naturally to meet increasing consumption; over 56% of the City blocks have only one main and over 86% have two mains or less (*City's Exhibit* 102, p. 1653 of Exhibits); duplications "beyond a line on each side of the street "occur " mostly on the avenues and on Broadway" or on the " crosstown streets in the lower end of town * * * particularly large and important streets like Canal", where there is heavy consumption (*Record*, p. 3330); a "*single pipe*" system of mains would involve services of great length, often diving under subway obstructions, and *involving greatly increased cost of maintenance* (*Record*, pp. 673, 3914, 3972, 4182), *the City not permitting Appellee to lay its mains in the middle of the street*, even if the centre of most avenues and many cross streets were not already occupied by street railway and other construction (*Record*, pp. 719, 3953); and in short, in New York City above all places, such a single pipe system, involving one big main in place of two smaller ones, would even *de novo* be unwise and uneconomical, *and cost more than the present system* (*Record*, p. 3972).

That all present mains are required is indicated by the City's "One hundred and Seventh" Assignment, where it declares that the Court "should have found that the distribution system as now existing is *inadequate for the output of Complainant*" (*Record*, p. 475).

POINT VI.

Valuation of "Services," "Meters and Miscellaneous," "Working Capital" and "Special Franchises," as allowed by the Court.

1. "Services" and "Meters and Miscellaneous."

The same observations apply to present valuation of "Services," $1,994,000, as to the allowance of mains at present value.

As to "Meters and Miscellaneous," $4,100,000, we understand no objection to be raised by the Assignments.

2. "Working Capital" and "Special Franchises."

We understand no objection to be raised by the Assignments to the allowance by the Court of $1,616,000, for "Working Capital." *The Appellee, however, believes that as a matter of law the finding of the Master for "Working Capital," $3,616,000, should be accepted*; and that phase is considered hereafter (*post*, p. 77).

The subject of "Special Franchises," $12,000,000, as allowed by the the Court, is considered in a separate Brief.

POINT VII.

Corroborative Evidence of Conservatism of Valuation of Appellee's Property, taken as a whole.

At the conclusion of his review of the valuations of the Master, the Court said that the method of estimate adopted by itself and the Master it believed to be—

> "The only method of valuation practicable in this case." (*Record*, p. 399).

But, while it was the judgment of the Court that exact figures could not be reached by any other method, it was able to say that Appellee's—

> "entire capitalization does not seem disproportionate to its entire business." (*Record*, p. 399).

The Court draws attention to the fact that the Stock has apparently been "at times the subject of speculation," so that "recorded prices have varied so widely as to render any safe conclusion impossible;" and that, furthermore, its capitalization involves the ownership of electric lighting Company and other securities, so that the capitalization devoted to the gas business cannot be segregated. (*Record*, p. 399).

1. Market Value of Appellee's Stock.

If, however, it is considered by this Court that the market value of Appellee's capital securities is, nevertheless, of some significance, it will be noted that the market value of Appellee's Stock at the time of the trial was found, *on request of Appellants*, to be $192.33 per share (*Record*, p. 277); at which rate the amount of capital stock alone, invested in Appellee's gas business, $41,356,000 (*Record*, p. 260), would show a total market value of $79,539,994.

And if, to eliminate the effect of investments in other Companies, e go back to the year 1899, before Appellee had made such inestments and while its capital had not been increased beyond the 39,078,000 authorized in 1884 *(Record*, pp. 153, 211), the Master nds an average market value in that year of $193 per share, at which rice Appellee's share capital *at only $39,078,000,* represented a aluation of $75,420,540; while, at the average price between 1885 nd 1899, $155.80 per share, the Master finds that said share apital of $39,078.000 would represent a value of $60,883,000 *Record*, p. 211).

Each one of said valuations, exceeds the "present valuation" of ppellee's property, under the Decree (*Record*, p. 432).

. Comparison with Assets of Other Gas Companies.

The Master also finds that the valuation found by him (and uch more would it be true of the lower valuation reached by he Circuit Court) is most conservative when compared with the alue of property of other Companies furnishing a similar service in ther large Cities; and this is the case in spite of the fact that, as he Master finds,—

> "There is no City, not even Chicago or Boston, where land is so expensive as in New York, nor, as it would appear, is the cost of construction elsewhere so high" *(Record*, p. 212).

The valuation of Appellee's "permanent plant and property" excluding franchises and good will) as found by the Court, represents only a trifle over $3.60 per thousand feet of Appellee's sales; nd only $4.60 of sales of Appellee's *own production alone*, although hat divisor is clearly inadequate and unfair so far as its distributing system is concerned.

(**a**) The Master finds that the capitalization of the Boston Company, under an Act which expressly provided that the acceptance of such capitalization should not be an admission on the part of the Company—

> "for any purpose that the par value of such capitalization is equal to the value of its property or to the value of the property necessary for the conduct of its business"—

was "a little over $5.00 per thousand feet" of sales; while the value of the assets of the Boston Company as then appraised approximated "$8.00 per thousand feet" (*Record*, pp. 212, 2084).

(**b**) The capital of the Chicago Companies was found to be over $6.00 per thousand feet, upon the testimony of the Appellants' witness Professor Bemis (*Record*, p. 2569); and the Chicago Committee, in charge of the recent investigation—

> "found $5.00 per M. of sales to be a fair valuation for 'structural value and working capital only'" (*Record*, p. 213).

(**c**) So, too, in Baltimore, the same witness testified that the value of the entire property of the company there could be fairly computed at twenty times the net profits of the company from its gas business (*Record*, p. 2571)—the charge in Baltimore then being $1.00 per thousand (*Record*, p. 213); at which rate, taking even the net profit of Appellee as found by the Court, $4,015,475.02 from Appellee's own product only (*Record*, p. 432), Appellee's assets would be valued at upwards of $80,000,000.

(**d**) And the Laclede Gas Company, supplying the City of St. Louis, has a capital of $8 per thousand feet of production (*Record*, pp. 2532–3).

(**e**) While according to the statistics of the United States census for 1900, respecting the value of property employed in the gas industry, the "average structural value per thousand feet sold" throughout the United States, was "$7.23" per thousand feet (*Record*, p. 214).

POINT VIII.

Appellee's Tax Reports, and Testimony before the Legislative Committee in that Connection.

This subject was thoroughly considered by the Master (*Record*, pp. 214–216). It was also exhaustively presented by the Appellants, in the Court below, but does not seem to have been considered by the Court of sufficient importance to require comment.

So much stress seems, however, to be laid by Appellants upon it, that a brief reference thereto is thought proper.

1. The "Tax Reports."

The first Tax Report incorporating the items criticized, was made to the *local Assessors* of The City of New York in 1902; and subsequent ones to the local Assessors, and to the State Board of Tax Commissioners under the "Franchise Tax" law, followed the same form—adjustment being made in each case for additional property meanwhile acquired (*Record*, pp. 1245, 1246).

As illustrating all, the Master quoted as typical the Report to the State Board for the year ending June 30, 1904 (*Record*, pp. 214, 5276), as follows:

	Investment as shown by Ledger.	Value stated in Franchise Tax Report.	Difference.
Real Estate	$11,216,479.71	$11,216,479.71	
Plant	15,755,462.88	8,456,595.71	$7,298,867.17
Mains	7,571,808.83	*3,666,531.38	3,905,277.45
Services	1,227,931.86	*594,625.01	633,306.85
Franchises and Rights	7,781,000.00	7,781,000.00	
Stocks of other Companies	46,674,034.27	46,674,034.27	
Bonds and obligations of other Companies	8,686,744.70	8,686,744.70	
Material and Supplies	697,014.92	697,014.92	
Accounts and Bills Receivable	1,944,968.09	1,944,968.09	
Cash on hand	1,146,866.87	1,146,866.87	
Unclaimed dividends	39,052.50	39,052.50	
Metropolitan Fund	500.00	500.00	
Meters, Stoves and other personal property	3,630,772.12	2,667,329.77	963,442.35
Totals	$106,372,636.75	$93,571,742.93	$12,800,893.82

*Stated in the Tax Report under the heading "Present Value allowing for depreciation." "Reproduction" value stated as $5,613,221.12 for Mains and Services, detail of which (not asked for and not given in Tax Report to State Board) is as follows :

For Mains	$4,829,925.82
" Services	783,295.30
Total	$5,613,221.12

It will be observed, that the figures in the tax report differ from their "book value" *in only four items; (a)* "Plant," *(b)* "Mains," *(c)* "Services" and *(d)* "Meters, Stoves and other personal property."

The first two items in the second column, $11,216,479.71 and $8,456,595.71, appear in said Tax Report at one point or another as a single item, $19,673,075.42, for "Real Estate and Plant."

(a) As to Plant.

Referring to "Plant," which is the principal item of difference, the Charter of The City of New York *(Chapter 466, Laws of 1901, § 889)* provides in relation to assessments for taxation, that there shall be reported to the Commissioners of Taxes and Assessments by their deputies, a description of real estate with the sum for which in their judgment said property "under *ordinary* circumstances would sell".

A gas plant cannot be transported to another point; and upon sale of the land for "ordinary" improvement would be of value simply as "scrap", no matter how great its original cost or value as an operating concern, except for the salvage of a small amount of water gas apparatus *(Record*, p. 1702). Hence, as Appellee knew by experience *(Record*, p. 1703) and Appellants' witnesses admitted *(Record*, pp. 2451, 2822), if the land on which a gas plant is located be sold for "ordinary" use, it will bring only *the value of the land with an insignificant addition for the plant thereon.*

The Tax Reports, made up in view of this statute, under advice of counsel *(Record*, pp. 1702-3), assumed that sooner or later one-half of the land with the plant thereon might be sold upon Appellee's removal of its generating plants to Astoria, which was then contemplated for some time in the future; and the total valuation of land and plant for the Tax Report was accordingly computed on the following basis: *The full value of the land as appearing on the books*, plus the book value of *one-half the plant*, plus a few hundred thousand dollars to represent the possible *scrap* value of the other half of the plant when the land on which it stood should be sold *(Record*, pp. 1702, 1703).

These figures as to "Plant" were made up by Chief Engineer Bradley, for the use of Vice-President, then Secretary, Carter, who executed the Report *(Record*, p. 1702), and were based *solely* on the special provisions of said § 889 of the Charter as construed by counsel *(Record*, p. 1246).

The result, as pointed out by the Master (*Record*, p. 215), was the figure for "Plant" shown in the Tax Report.

(b) As to Mains.

The amount of $4,829,925.82, or rather the unit rates upon which it was computed, were prepared by Superintendent of Mains Simpson for the use of Mr. Carter (*Record*, pp. 689, 1755). This amount represented *bare cost of laborand material in laying the mains in soft earth* (*Record*, p. 720), excluding all allowance for rock excavation, sub-surface obstructions, asphalt or new block pavement, engineering expenses, wear and tear on apparatus, and various other items which go to make up the total cost and value of the mains as actually laid and existing under the pavements of the City of New York to-day (*Record*, pp. 690, 1753–1755).

Mr. Simpson knew that the figures were desired for a tax report, and believed that the most favorable basis of installation might be assumed in that connection (*Record*, p. 1754); for the extra cost of Mains, due to obstructions and expensive conditions, adds nothing to their *earning power*, beyond what would exist if they were all laid under the least expensive conditions.

It appears that 25 per cent. was taken by *Mr. Carter* from the total of Mr. Simpson's figures, to produce the amount of $3,666,531.38 shown in the Tax Report; but this was not based on any assumption of a physical deterioration of the property, but on Mr. Carter's theory that the smaller sizes of mains would from time to time in the future be replaced by larger ones (*Record*, p. 1242).

(c) As to Services.

The figures for "Services" were not made up by Mr. Simpson or the Engineering Department *(Record*, pp. 1241, 1242). They were prepared by some one before Mr. Carter had anything to do with the Tax Reports, and he continued to use them without question; but they are now conceded to be incorrect "even for the purposes of taxation" (*Record*, pp. 1241, 1242).

(d) As to Meters and Miscellaneous.

The tax figures represent in this case the "book value" (cost to Appellee), less 25 per cent. deducted by Mr. Carter as an estimate of what might be obtained for them at a "forced sale," and not as an estimate of value to a going concern (*Record*, p. 1241).

(e) In General.

It is obvious from the facts before the Master that the valuations in the tax reports *did not and were not intended to show the structural value of the property as an operating concern, or the cost of its reproduction* (*Record*, p. 1243).

As the Master has said (*Record*, p. 216).

> "It is a matter of common knowledge that reports, petitions and similar papers required in connection with matters of taxation are, in the case of large corporations, ordinarily prepared by counsel. To some extent they are in the nature of pleadings, and are so drawn as to support the theory on which it is hoped to secure the most favorable results, either before the tax officials or the Courts. Under these circumstances, when, as in the present case, it appears that taxes are being constantly contested, it must very commonly occur that views are expressed on behalf of the corporation more or less inconsistent with the valuations it would put upon its property for purposes of sale, condemnation, or such an action as the present. This has been recognized to a certain extent by the Courts."

It has been in terms held, in the lower Federal Courts, that such reports constitute no estoppel, when the question in controversy is "actual value or cost of reproduction"; and that, when explained by credible testimony, they may be disregarded.

Louisville R. R. Co. vs. Brown, 123 Fed. Rep., 946, 949;
Southern Pacific R. R. Co. vs. Board of Railroad Commissioners, 87 Fed. Rep., 22.

2. Testimony Before Legislative Committee.

The only officer examined before The New York Legislative Committee of 1905 (Stevens Committee) respecting the tax reports, was Vice-President, then Secretary, Carter who executed them; and only *a part* of his testimony before that Committee was read into this record by Appellants.

It appears that Mr. Carter was called before the Committee from a sick bed (*Record*, pp. 1239, 1240), without any notification of the subject upon which he was to be examined, or opportunity to refresh his memory, or ascertain the exact method of making up the data in the Tax Reports (*Record*, pp. 1240, 1247); that he is not an engineer, and that the figures therein as to "Plant," "Mains," and "Services" were made up and handed to him by other individuals as above stated (*Record*, pp. 1239, 1702, 1703, 1753-1755); and that, with the meagre information derived from them, he did assume the figures in the tax reports to be the true "value" for the purposes therein stated (*Record*, pp. 859-861, 1008-1010).

But he made it quite clear to the Committee before leaving the stand, that the valuations of plant given in such reports represented neither "cost" nor "reproduction value" thereof (*Record*, p. 1243), but were figures which "took into consideration the removal to Astoria and abandonment of the generating plant" in Manhattan (*Record*, pp. 1243), which was the fact (*ante*, p. 61).

It is to be borne in mind that the investigation of the Stevens Committee was *ex parte*, hasty and incomplete (*Record*, pp. 952, 953; *post*, p. 176); and that the Company neither had opportunity to go into the subject later before the Committee, nor did it occur to the Company that any one could assume that the tax figures represented the structural value of the property as an operating concern (*Record*, pp. 1246-1247).

Basis of "Tax Valuations" Promptly Explained.

It also appears that, at the first opportunity, which developed before the Gas Commission a few months later, and in view of the weight which had been laid by the Stevens Committee on the tax reports (*N. Y. Senate Doc. 30 of 1905*), Messrs. Bradley, Simpson and Carter explained in detail the basis on which the reports had been made up, being then able, after investigation and reference to proper data, to testify with exactness on that subject (*Record*, pp. 720, 721).

This was, of course, before the Order of the Gas Commission, which was made February 23d, 1906, and also long before the passage of the "80 cent gas Act" here in question. *Hence, neither the Legislature nor the Commission could have been in any manner misled as to the basis of the "tax report" figures.*

3. Appellants' Witnesses on the "Tax" Valuations.

It is unnecessary to argue here whether the methods of computation employed in making up the tax reports were legally sound; it is sufficient to show that they did not indicate the value of the Appellee's property as an operating concern devoted to the public service,—*and this is shown and conceded by Appellant's own witnesses.*

Thus, after deducting theoretical and impossible depreciation,—

> (**a**) as to "Plants," the valuation of both Appellants' witnesses was much above the figures of the Tax Report (*Record*, p. 175);
>
> (**b**) as to "Mains," witness Marks declares that $12,636,150 is a "moderate and fair" estimate of present value (*Record*, p. 2786), and Edgerton's estimate, when supplemented by items of cost omitted by him, amounted to $13,510,299.86 (*Record*, pp. 3926, 3927);

(**c**) as to "Services," Marks admits that a "book value" of $1,212,000 is "moderate and correct", even for original "cost of installation" (*Record*, p. 2786);

(**d**) and as to "Meters and Miscellaneous," no one contradicts Mr. Carter's statement of present value at $4,100,000 (*Record*, p. 748).

It is difficult to see on what theory Appellants can hope to advance as controlling in this action, these "tax report" figures, *which are repudiated by their own witnesses as less than the true valuation of the items in question on any basis.*

Appellants' Further Inconsistency.

It will be observed, too, that while Counsel for the Public Service Commission strenuously asserts that the valuation of Appellee's Plant should be reduced by the "depreciation," which he says, Appellee itself has "continued to claim in its tax reports, based upon an intended early removal to Astoria and consequent scrapping of the Plant" (*Brief*, p. 65), he also contends with equal vigor against the inclusion in Appellee's assets of a *corresponding part of the Astoria Plant, which would in such event take the place of this Manhattan property scrapped*, or the inclusion in the computation of cost of gas to be derived by Appellee therefrom, of any return on said Astoria investment.

PART SECOND.

Items of Property of Appellee, aggregating $11,361,565, included by the Master but excluded by the Court, which Appellee contends should as a matter of law be reckoned in its gas assets, thereby increasing the $59,831,435 allowed by the Court *(ante,* p. 6) **to $71,193,000.**

POINT IX.

Items of Property Included by the Master but Excluded by the Court, which Appellee Contends should, as a matter of law, be reckoned in its Gas Assets.

The Appellee submits that the following deductions by the Court, from the Master's statement of property properly held by Appellee in its gas business (*ante*, p. 6), were not legally justifiable and should be restored to the computation :

Real Estate (Land)	$1,311,565
Working Capital	2,000,000
National Coke & Coal Company	50,000
Franchises and Good Will ($20,000,000), in place of Franchises alone ($12,000,000)	8,000,000
Total additions	$11,361,565
Valuation of Property already allowed by the Court (*ante*, p. 6)	59,831,435
Total valuation here claimed by Appellee	$71,193,000

In addition to which it is contended that the value of the "Astoria plant" (or "Property of other Companies" producing gas sold by Appellee), $12,000,000, must be directly included in the capital upon which a return is to be earned, *unless* such return be included in the computation of cost to Appellee of the gas derived by it from subsidiary Companies.

The foregoing items represent *the entire difference between* the allowance by the Master and the allowance by the Court, as indicated in the table hereinbefore set forth (*ante*, p. 6); except that the additional item of "Real Estate" as above claimed, $1,311,565, is less than the difference between the Court and the Master ($1,475,565), by the sum of $164,000 explained below, on this page.

A. Additional Real Estate $1,311,565.

The Master found the entire real estate of Appellee to be of the value of $14,161,000. (*Record*, p. 160); from which he excluded a piece of water front property at Shadyside ($300,000), and a block formerly of the 18th Street plant ($400,000), finding that Appellee was entitled to include as real estate held in its gas business the balance of $13,461,000 (*Record*, pp. 165-166, 247).

A few parcels included by the Master were not actually covered by apparatus, though in most cases acquired for a distinct purpose in connection with Appellee's business,—some of them for immediate use; *and these the Court excluded as not "actually in use"* (*Record*, pp. 395-396, 423), the Decree (*Record*, p. 430) reading as follows:

> "The real estate valued by the Master at $13,461,000, included certain parcels held by Complainant for future use, but not at the date of the beginning of this action actually in use by it, in its gas business; and omitting from the capitalization of Complainant for the purposes of this suit such unused parcels, the valuation of the portion of such real estate actually and necessarily employed by it in its gas business at said date is hereby fixed at $11,985,435.00."

The difference between the Court and Master amounts to $1,475,565; but of this $160,000 represents a piece of land under water (*Record*, p. 396), and $4,000 a clerical error in substraction (*Record*, p. 396). Without waiving its claim as to said land under water, Appellee contends here that at least the net balance of $1,311,565, represents land reasonably acquired and held by Appellee and either in use or prudently held for subsequent use, and should be allowed as a proper investment in its gas business.

The items constituting said $1,311,565 consist of certain parcels designated in Appellants' Briefs below as " Land Leased," " Land Vacant " and " Land Unimproved," and deducted by the Court originally at a value of $2,141,155 (*Record*, p. 394); but it was subsequently pointed out that $829,590 thereof had not been included by the Master in his total of $13,461,000 (*Record*, p. 423), which left a corrected balance thereof deducted by the Court of $1,311,565, constituted of the following parcels :

Lots in Block	Master's Valuation.	Referred to as
985	$42,500	" Land Leased."
690	55,000	" "
978	59,500	" "
1092	30,500	" "
1156	14,500	" "
1692	7,500	" "
952	31,000	" "
1683	18,000	" "
1643	85,000	" Land Vacant."
1455	220,000	" "
1156	25,600	" "
1999	261,800	" "
2175	65,415	" "
972	22,000	" "
1474	25,000	" "
690	55,000	" Land Unimproved."
715	12,250	" "
952	10,000	" "
987	114,000	" "
1071	57,000	" "
1683	100,000	" "
	$1,311,565	

It is respectfully submitted that the important question is : **Has the Company acquired, and does it hold, land beyond the requirement of fair business prudence, considering the character of its business and the probabilities of its expansion?**

The plots in question were, as the evidence shows and the Master notes, almost without exception small fractions of a large block, the remainder of which was actually covered by the Company's operating plant (*Record*, p. 1232).

1. "Land Leased."

Of the so-called "*Land Leased,*" the lots in block 985 adjoin two gas holders and property used for storage (*Record,* pp. 161, 1232); in 690 form part of Appellee's Eighteenth Street works, part of which had been taken in condemnation by the City (*Record,* pp. 161, 539–540, 1232, 1579); in 978 form a part of a large parcel, the balance of which is used for gas works (*Record,* pp. 161, 1231); in 1092 and 952, are fractions of large plots the balance of which is used for gas-making (*Record,* pp. 161, 1231), and are occupied in part by workmen of the Company (*Record,* pp. 161, 1234–1235); in 1156, are part of a plot intended for a valve house (*Record,* pp. 161–162, 1232); in 1692, are part of the Ninety-ninth Street works and are occupied by a foreman of Appellee's Street Department (*Record,* pp. 162, 1232); and in 1683, are lots contiguous to Appellee's stable and intended for the enlargement thereof, a part being now used to turn out horses in (*Record,* pp. 162, 531, 1233).

Referring to said "*Land Leased*" the Master says (*Record,* pp. 162–3):

> "The leases of the foregoing parcels are, as a rule, terminable on 30 or 60 days' notice. In almost every case the lots in question are *fractions of a large plot, the remainder of which is actually covered by the Company's operating plant, or they are immediately adjacent to portions of such plant.* They are available at any time for purposes of extension by reason of the termination clause in these leases.
>
> "The tenement houses are to a considerable extent occupied by employees of the Complainant, *whose advantage it manifestly is to have its employees near at hand in case of emergency.* The proper conduct of Complainant's business requires a large land area and when the property was originally acquired by Complainant or its constituent Companies, it can hardly be doubted that it was sound business policy to purchase these entire tracts, notwithstanding the whole area of each block purchased might not be immediately required. Ordinary business prudence required the Company to anticipate the growth of the Company and the requirements of increased business. If odd lots occupied at the time by tenement houses, for instance, had been cut out, they would detract from the value of the balance of the block and hamper

the Company in making such necessary extensions or additions as might from time to time be required. In plants as large as those of Complainant it is inevitable that there should be here and there a small lot not covered at the moment with material or apparatus, but which, *in view of the requirements of the business* it would be extremely poor policy to sell. Its use may at any time be required. The Company would not, of course, be justified in buying and holding real estate merely because of the fact that it was likely to enhance in value and irrespective of any necessity therefor in the business of gas making. On the other hand, *it seems clearly unreasonable to require that every plot of land owned by the Company should be occupied to its utmost capacity and in constant use, in order that such property should be considered as part of the Company's gas making investment. In my judgment, none of the property in question can properly be regarded as unnecessary, under the circumstances.*"

2. So-Called "Land Vacant."

As to the so-called "*Land Vacant,*" the lots in 1643 were bought and intended for an office building (*Record*, pp. 163, 531, 532, 534, 554); in 1455, are held for building holders (*Record*, pp. 163, 552–553, 1232, 1580); in 1156, for a valve house (*Record*, pp. 163, 531, 534, 554, 579), *plans for which were already filed* (*Record*, p. 556); in 1999, were bought for holders, one already of which has been built, there being room for two more (*Record*, pp. 163, 535, 553–554); in 2175, are part of a plot where there is already a small holder and valve house, and only "portions of that property are unoccupied" (*Record*, pp. 163, 531–532); in 972, contain a pump house and well, although they were not "used much of late" (*Record*, pp. 163, 532); in 1474, were "unoccupied and unimproved" (*Record*, pp. 163, 531), and not yet appointed to any specific use (*Record*, p. 553).

It will be noted that as to one of these parcels plans for a "valve house" had already been filed, and that practically all of the balance had been acquired and held for some definite purpose.

As to said "*Land Vacant,*" the Master says (*Record*, p. 164):

> "Of the seven plots above described *only two are* wholly vacant. In view of their proximity to other property of the

> Company, and in default of further evidence of unavailability than is shown by the record, I find that they may reasonably be considered as a proper part of its operating plant. In the single instance where the evidence gives no indication that the property is not used or intended to be used in some way in connection with the gas business, namely, the parcel on the south side of 15th Street, Block 972, the amount involved is not large. Its value, according to the witnesses for the City, is about $12,000. Under the circumstances and in view of the numerous uses to which the property of this sort can properly be put for storage and other purposes by Complainant, I am not disposed to exclude it."

3. So-Called "Land Unimproved."

As to the so-called "land unimproved," the lots in block 690, five in number, are used for "storing gas material" (*Record*, pp. 1232–1233); in 715, a single lot, is occupied as a wagon shed and paint shop (*Record*, pp. 1332, 1451), and was accepted and valued by Appellants' own witnesses as part of Appellee's gas property (*Record*, p. 3722); in 952, a small lot, is temporarily rented (*Record*, p. 1232); in 987, are adjacent to the Twenty-first Street works and are "used for storing coal" (*Record*, p. 533); in 1071, four lots, are used for storing coke (*Record*, p. 534); and in 1683, are occupied by Appellee's "stable and wagon yard" (*Record*, pp. 534, 535, 1233–34), being exclusive of the two "leased lots" above mentioned in that block.

It will be observed that all but one of these so-called "unimproved" parcels *were actually in use.*

As to said "*Land Unimproved*," the Master, after excluding the 18th Street Block to the value of $400,000 as aforesaid, continues (*Record*, p. 165):

> "As to the remainder of the property in respect of which a deduction is claimed, part of which has already been considered under Land Leased, the only proof introduced by the City consisted of a statement showing its assessment for purposes of taxation for the year 1906 as vacant land. The mere description of a particular parcel as 'unimproved' or 'vacant' in an assessment roll is not sufficient foundation for

the conclusion that the property is not used by Complainant in its gas making business. It may very well be, and the *proof in many instances showed that the parcels assessed as vacant land were used for purposes necessary in connection with Complainant's business, as, for example, the storage of coal, coke, pipe fittings, tools, and castings.*"

Use of Said Lots.

The necessity of the "unimproved" blocks for storage of material was questioned below by one of the Appellants, on the ground that Appellee's coal contracts called for delivery *as required ;* but in such a vast business it would be indefensible conduct, for Appellee to live by hand to mouth delivery, and take the risk of blizzards, coal strikes and other contingencies which might result in the complete closing down of its works. No "damages" could mend such a situation.

Nor do we overlook the observation of the Court (*Record*, p. 423), upon Appellee's Supplemental Application to include $338,500 of the "unimproved" land as "actually used" (*Record*, p. 423), that the $11,985,435 of real estate allowed by it was intended to cover all real estate *used* by Appellee and could not be "translated into an exactly accurate statement by metes and and bounds", making reference in this regard to contentions advanced by Appellants as to the necessity of the use of the land occupied by the 111th Street plant (*Record*, pp. 423–424). But the *distributing* station there was in full operation, and the Court apparently overlooked the fact that there is at said station only $140,853 of *manufacturing* apparatus (we quote the figure from the Brief of one of the Appellants below), and that the land there—except so far as covered by that small amount of apparatus—is actually in use for Appellee's Street Department (*Record*, pp. 534–535).

And, of course, the observation of the Court does not touch the balance of said $1,311,565 of land, which is not "in use," but *purchased and held for use and some of it actually at the point of improvement*, which the Court does not purport in any way to include.

4. Necessity of Seasonable Acquisition of Lands.

To construct a common holder of even three million feet capacity will take a year at a minimum, and probably longer *(Record*, p. 553); and if Appellee were to wait until the moment when it must begin the construction of such apparatus, and then rush into the market to procure a large plot for the purpose under compulsion of paying whatever price might then be exacted from its necessities, instead of exercising ordinary prudence and taking advantage of a favorable opportunity to purchase at a lower price in good season, *Appellants and all consumers of gas might well complain of the Company's action, and assert that it should not be entitled to a return upon the exorbitant cost of real estate, which—by the exercise of common foresight—might have been seasonably acquired at a lower figure*

5. No Appreciable Burden on Consumers.

There is no appreciable burden on present consumers, by reason of these parcels. The Master said *(Record*, p. 163):

> " It may be pointed out further that the fact that these properties are rented as above described does not necessarily impose any additional burden upon the consumers of gas, notwithstanding their value is included with the assets of the Company on which it is entitled to a return. The real estate rents appear as part of the miscellaneous income of the Company and as will hereinafter appear, they are taken into account in determining the net profits of the Company applicable to dividends."

Thus such rentals, amounting to $37,000 per annum *(Record*, pp. 1922, 2341, 2759*)*, were credited by all witnesses, to reduce the cost of gas *(Record*, pp. 1575, 1691, 1910, 2341); and to return 6% on the entire value of the excluded land, would require an additional sum equalling only a small fraction (less than 4/10) of one cent per thousand feet of gas sold.

6. Admission by Appellants.

Appellant, *The City of New York, in effect concedes* Appellee's *entire position*, when it asserts *("Third Exception" to Master's Report, sub-division II.—Record*, p. 346), that Appellee is entitled to include only "such real estate as required by the present state of manufacture," with a "*reasonable margin for growth.*"

And all Appellants' witnesses *(Bemis, Record*, p. 2341, *and Marks, Record*, p. 2341) deduct the rentals derived from such excluded parcels (as part of Appellee's Miscellaneous Income) in their computations of the operating cost of gas—*thus, by necessary corollary, conceding the propriety of the inclusion of said real estate in the gas capital of the Company.*

7. The Court's Exclusion Based on a Misconception.

The Court, while recognizing that "many of the pieces of land just considered are adjacent to portions of the plants of Complainant" and "that as to some a definite purpose of utilization is testified to", excludes them because (among other things) of—

> "Recent actual occurrences in respect of the Astoria plant; which consideration convinces me that there is no intention on Complainant's part to extend or enlarge its gas business on Manhattan Island in such manner as to require any substantial addition to the lands already *actually applied* to the necessities of that business *(Record*, p. 394),"—

and the Court further intimates that the fact that the present value of Appellee's real estate now employed in its gas business exceeds the value, at one dollar per thousand feet, of the entire annual production of its Manhattan plants, is evidence that any increase in the use of Manhattan Island land would be "a business misfortune."

It is respectfully submitted that these assumptions and deductions upon which the Court apparently acted, are supported by no evidence whatsoever and are wholly erroneous.

(**a**) The fact that the land is worth more than the gross annual product therefrom, is not shown to differentiate the gas business from many other businesses conducted on the Island of Manhattan, which require land in their operation. Indeed, dividing the valuation of Complainant's land in Manhattan as found by the Court (a little less than $12,000,000) by its total sales (a little less than 13,300,000,000 cubic feet), the land valuation adopted by the Court will be found to represent only 90 cents per thousand cubic feet,—six per cent. return upon which amounts to only $5\frac{4}{10}$ cents per thousand feet of sales, to be paid by the consumer of gas as return on capital represented by land.

The amount permitted to be earned by Massachusetts Gas Companies, as return on their total gas investment, averages in the vicinity of 30 cents per thousand (*Record*, p. 6620), at which rate $5\frac{4}{10}$ cents for so important an item as "land," looks very small.

(**b**) And again, the theory that there will be no extension of Appellee's Manhattan plants because it is erecting a generating plant at Astoria, is based upon a complete misapprehension of the situation.

It is in evidence, as will be hereinafter indicated, that Appellee's Manhattan plants are unable to produce all the gas which it sells, and that its Astoria Unit, as just completed, is barely sufficient to *make up the deficit* in Appellee's own *manufacturing* capacity in Manhattan.

But the greater part of the land excluded by the Court has been acquired for extension of its *distributing system*, which must always be maintained on the Island of Manhattan under any circumstances, that is to say, for holders, valve houses, stables for its horses and the like. It is common knowledge that to accomplish a properly uniform distribution of gas, pressure holders must be located within the area of distribution ; and they and similar appliances will necessarily be increased in the Island of Manhattan as Appellee's sales increase. Additional holders have been constantly required (pp. 587–8, 1719). It would be impossible, *and has been suggested by no witness as possible*, that such distribution could or should be efficiently effected by holders located on Long Island, sending gas through miles of tunnel under the East River before reaching the distribution area.

It is submitted that the excluded parcels should be restored to the computation, and the allowance by the Court for "Real Estate," $11,985,435 (*ante*, p. 6), *should be increased by the value of the above described parcels, $1,311,565* (*ante*, p. 67).

B. Additional Working Capital, $2,000,000.

"Working Capital", or "active capital" to use the term of Appellants' witness Marks (*Record*, p. 1942), exists in the form of current supplies, cash and accounts.

It is submitted that the finding of the Master ($3,616,000) as to Working Capital required (*Record*, pp. 179, 180), should be accepted in place of the conclusion of the Court ($1,616,000).

In making the deduction of $2,000,000, the Court again, from unfamiliarity with a great record, apparently acted under a misapprehension as to the evidence. Its conclusion was not only not based upon a preponderance of evidence, but (it may be fairly said) is supported by no evidence whatever.

1. Mr. Carter's Testimony.

It rests, it would appear, upon the supposed testimony of Vice-President (formerly Comptroller) Carter (*Record*, p. 396), whose actual testimony was *directly to the contrary of that assumed by the Court.*

On amount of "working capital" required, the Court says that Appellee's

> "own Comptroller should * * * be the best judge of its own necessities; and his measure of working capital *in the sense of cash* is $1,000,000. $616,000 is taken as a *fair average of outstanding bills payable;* and the aggregate of these two sums is as much as the Comptroller claimed, until on suggestion he added $2,000,000 thereto, to represent the average amount of outstanding bills receivable."

We agree that the Comptroller is the best judge of Appellee's necessities, and that his measure of working capital "in the shape of *cash*" is $1,000,000; but in the balance of the statement the Court is completely in error.

The $616,000 is not "a fair average of outstanding bills payable," *nor is it "bills payable" at all!* That sum was the value of current *gas material* on hand (*Record*, p. 179); so that the Court allowed nothing for accounts, although evidently thinking it had done so.

Nor did the Comptroller advance the $2,000,000 of accounts as an afterthought, or "on suggestion," to quote the words of the Court. *It has been Appellee's claim throughout*, that, in addition to $616,000 of material on hand, it requires $3,000,000 of working capital in the shape of cash and accounts,—about $1,000,000 in cash and $2,000,000 in accounts.

Exactly this was claimed in the Bill of Complaint herein (*Bill of Complaint, Record*, p. 7); and the Record shows that Mr. Carter, before going upon the stand, had prepared an Exhibit showing in convenient form the "book-value" of working and other capital, employed by Appellee in its gas business (*Record*, pp. 942, 946), that this Exhibit showed current supplies of $616,470.08, an amount of $1,000,000 in cash *and $2,000,000 in accounts* (*Record*, pp. 748-50, 5033, 5034), that said exhibit had been offered and received in evidence (*Record*, p. 744), and that he was *testifying in support of this very Exhibit prepared by himself* at the point at which he said (as quoted by the Court) that $1,000,000 *in cash* was required (*Record*, pp. 749, 750). The inquiry as to whether the $2,000,000 in accounts shown on said Exhibit, was also required, was merely to spread upon the record his statement as to the necessity of that item of his Exhibit and on that point Mr. Carter testified (*Record*, pp. 750-751):

> Q. Do you consider Two million dollars as a fair amount of accounts which may be outstanding in your business, and in that shape as capital? * * * A. I think that would be the fair amount, or would be the usual amount, I might say, due to the company from various parties for that kind of service.

Q. Capital that is tied up? A. Permanently tied up.
Q. Or included in the accounts? A. Yes.
Q. Continuously tied up? A. Yes, continuously would be better.
Q. It is always there; can never be paid out, can it? A. No, sir.
Q. You have to have that margin? A. Exactly.

These amounts were a fair average; the amount of working capital actually tied up in cash and accounts at that time *greatly exceeded* the $1,000,000 and $2,000,000 respectively (*Record*, pp. 749-750, 5034).

2. The Other Evidence.

(**a**) Dr. Humphreys, from vast experience, testified that 30 cents per thousand feet was a fair requirement for working capital (*Record*, pp. 1684, 1685), and on this basis Appellee, for 1905, would require $3,974,000.

(**b**) Appellants' expert Marks advanced *no independent opinion*, but selected four Massachusetts Companies, whose requirements he declared to be entirely comparable with those of Appellee as to active capital (*Record*, pp. 179-180, 1941-1942). The active capital of these four Companies he first testified to be 13 cents per thousand feet, equivalent to $1,726,000 for Appellee (*Record*, pp. 180, 1942); but in his later examination he admitted that he had inadvertently omitted a considerable part of the capital of those Companies evidenced by "notes payable" (*Record*, p. 2078), and thereupon corrected his computations and *upon his own theory* computed that such Companies were employing about 48 cents per thousand cubic feet for active capital, and that Appellee upon that basis would require a working capital of $6,375,000 (*Record*, pp. 180, 2077-2078). *This was his final expression on the subject.*

NOTE.—Mr. Marks' method was to take the entire assets employed, and to deduct therefrom the value of *permanent* plant as shown by the Companies' reports—the balance being necessarily "active" or working capital (*Record*, pp. 1941, 2078).

Appellants' Counsel sought below to parry Mr. Marks' blow, by the suggestion that the proceeds of said "notes payable" were invested in "permanent" plant. That feature is, of course, wholly immaterial, and has no bearing on the result.

Having found the active capital to be $852,246, or 52c. per M. of sales *(Record*, pp. 1941–2), he proceeded to deduct therefrom all sums which appeared to have been contributed by *others than stockholders;* whereas, the *source* of derivation of working capital is a matter of no importance whatever.

(c) Dr. Humphreys, analyzing five Massachusetts Companies mentioned in another connection by Professor Bemis (which included the four cited by Mr. Marks), ascertained that they were employing as working capital 43 cents per thousand feet of sales, equivalent to $5,961,690 for Appellee *(Complainant's Ex. 385, Record*, p. 6624).

(d) Professor Bemis, who had no experience in the gas business, in his computation allowed the current supplies, $616,000, and also cash to the amount of $1,000,000 (*Record*, p. 2394) for working capital—a total of $1,616,000 ; and stated as his only reason for not allowing the additional $2,000,000 in accounts, that accounts due to Appellee might be considered in the "nature of a surplus" (*Record*, p. 2394). *He did not deny that the $2,000,000 was required*, but excluded it because of its supposed *source*, which was no reason at all. But even this was exploded, for it was subsequently shown that such $2,000,000 was in no sense a "surplus," but that the resources of the Company had been employed and were bound up in the delivery of the product for which these accounts were due (*Record*, p. 4449).

(e) It may also be noted that the Company reserved $1,303,000 of working capital at its creation in 1884 *(City's Ex. 48, Record*, pp. 5729-5730) ; although its sales of gas at that time for the following year (1885) were only 3,942,433,000 cubic feet *(Complainant's Ex. 85, Record*, p. 5039). The $3,616,000 of working capital allowed by the Master is substantially less per unit of sales than provided in 1884.

3. Summary.

The foregoing summarizing the entire evidence on the subject, it is obvious that the Court's reduction of working capital to $1,616,000 was not only unsustained by any evidence, but was in direct conflict with all the evidence, both individual opinion and experience of Companies in other cities.

It is respectfully suggested that the amount required for Working Capital in the gas business is best known by those experienced therein ; and that the Court was not justified in disregarding their evidence and experience, as it did in lopping off more than one-half the Working Capital of $3,616,000, found by the Master to be required.

The Court to be sure suggests, as one reason for the reduction, " that Complainant's credit is of the highest," but this has no relation whatever to the amount of working capital required. It merely renders more easy to Appellee the acquirement of " working ", or any other, capital which its necessities demand.

Moreover, it is submitted that Appellee is not legally bound to travel on " credit " ; it is entitled to capital sufficient to pay its way as it goes.

It is submitted, therefore, that the Court's allowance for " Working Capital," $1,616,000 (ante, p. 6), should be increased by the sum of $2,000,000, as above claimed (ante, p. 67), making a total of $3,616,000 as found and included by the Master (ante, p. 6).

C. National Coke & Coal Company, $50,000.

Until recent years, Appellee directly sold and delivered its surplus coke, arising from its production of coal-gas.

Some years ago, however, for its convenience it incorporated the National Coke & Coal Company, with a capital of $50,000, which amount Appellee paid in, receiving the entire Stock of that Company in return (*Record*, pp. 753, 814). It is in fact the " Cartage Department " of Appellee.

The method pursued has resulted in higher receipts from its coke residual (*Record*, pp. 2341, 2409); and while the investment of $50,000 was included by the Master in Appellee's capital, the earnings of the National Coke & Coal Company, paid back to Appellee in dividends ($5,000, amounting to 10% on the capital, in 1905) were credited by it to reduce by so much the operating cost of gas (*Record*, pp. 2341, 2552).

Counsel acting for some of the Appellants expressly conceded on the Record that this $50,000 investment must be included in Appellee's gas capital (*Record*, pp. 753, 754, 813-814); and the experts representing the City (Marks and Bemis), in their computations *deducted the dividends received by Appellee from the National Coke & Coal Company*, in reaching their cost of gas (*Record*, p. 2341),—which could only be on the theory that the investment was part of Appellee's gas capital.

It is submitted that the Master was right in including this item of $50,000 in Appellee's capital, and crediting the income therefrom in computing Appellee's profit from its gas business; and that the amount should be added to the items allowed by the Court, as above claimed (ante, p. 67).

D. Good Will, $8,000,000.

It is also Appellee's contention that there should be included in its gas assets, the value of the "Good Will" of its business; and that, accordingly, there should appear in the schedule thereof (*Record*, p. 432), $20,000,000 representing "Special Franchises and Good Will" as found by the Master, instead of $12,000,000 representing Special Franchises alone.

This subject is treated in a separate Brief; and will not be pursued here beyond the foregoing statement of position.

If Appellee's contention be sustained, it will add to the Court's allowance (ante, p. 6), the sum of $8,000,000.

E. The Astoria Plant (i. e. Capital Invested in Production of Gas Secured from other Companies).

The Court, as hereinbefore noted, while excluding this item ($12,000,000) at this point, conceded that a return thereon should come into the cost of gas by another route,—to wit: by inclusion in the cost of gas to be derived by Appellee from other Companies (*Record*, pp. 406, 407, 425, 426).

To avoid misapprehension, the Decree—following the valuation of Appellee's assets at $59,831,435 (*Record*, p. 432)—continued (*Record*, p. 433):

> "The foregoing items do not include the amount of Complainant's *investment in the securities of other gas Companies*, from which Companies it was obtaining a large part of the gas which it delivered to its customers, nor the *value of the property of such other Companies* or any part thereof employed in the production and delivery to Complainant of such gas."

The subject will be considered at length below. Nothing need be added here to the statement of Appellee's contention that its investment in its Astoria plant should be included in *some form* in its capital, upon the same principle that it claimed (and Appellants admitted before the Master) that its investment in The National Coke and Coal Company should be so included.

PART THIRD.

Gas Purchased from Subsidiary Companies, and Valuation of the Property of Subsidiary Companies Employed in the Production Thereof.

POINT X.

The Astoria Investment of $12,000,000.

In approaching this subject, it will be instructive to review the situation existing at the time of the passage of the Acts in question, and of the beginning of this action in May, 1906.

Appellee's sales for the year 1905 amounted to 13,283,163,767 feet, representing a production of 13,587,020,322 feet before deduction of leakage or "unaccounted for" gas (*Record*, p. 220); and such sales were expected to increase, and Appellants' experts believed they would largely increase, from the growth of population alone.

But Appellee's 18th Street *manufacturing* plant had recently been taken by The City of New York for public improvements (*Record*, pp. 511, 1703), a part of its 111th Street manufacturing plant had been in part taken even earlier by the same authority (*Record*, pp. 516, 4578, 5561), and the possibility of extension of its other plants on Manhattan Island had been curtailed by the laying out of marginal streets, cutting them off from the water front (*Record*, p. 511); so that Appellee had been able to manufacture at its own plants only 10,419,461,426 feet of such sales of 1905, or nearly 3,000,000,000 cubic feet less than its total requirements,—which balance it procured from certain controlled Companies under temporary arrangements hereinafter defined.

It is apparent, therefore, that Appellee's property alone did not represent the entire investment required to produce and distribute the said 13,283,163,767 feet of gas.

1. Construction and Capacity of Astoria Plant.

The conditions which it saw advancing, although it could not then foresee the condemnation of its 18th Street plant or the great increase in consumption consequent upon the "coal-strike" of 1902-3, induced Appellee, about 1900, to begin the construction of the first Unit of a coal-gas plant at Astoria on Long Island, which should be capable of a maximum day's production of 20,000,000 feet of gas, representing (under a well-recognized formula—*Record*, p. 1511) a capacity of about 4,000,000,000 cubic feet per annum. This Unit was intended to supplement Appellee's manufacturing capacity on the Island of Manhattan; and subsequent Units, if and when constructed (except so far as they also might be required to provide for increased sales), were to replace an equal capacity in Appellee's Manhattan plants,—although such replacement, involving an abandonment of Manhattan plants at a loss of over $10,000,000 for good apparatus discarded (*Record*, pp. 876, 1239, 1588), is not to be thought of with gas at 80 cents (*Record*, p. 1587).

Referring to this situation as existing in 1905, the Master says (*Record*, p. 185):

> "The producing capacity of the first Astoria Unit (20,000,000 feet per day) is equivalent to 4,000,000,000 feet per annum, or about 1,000,000,000 feet more than the gas actually purchased from these Companies during 1905. **The maximum daily output of Complainant during 1905 was about 70,000,000 cubic feet, while the maximum capacity of its own plant was but 51,000,000 feet.** Adding to this the maximum capacity of the first Astoria Unit, would give a maximum daily capacity of 71,000,000, or nearly 1,000,000 more than Complainant's maximum daily output. This surplus, according to the testimony of Mr. Bradley, which was uncontradicted, is insufficient for purposes of a reserve. He stated that, in his opinion, it was not safe to operate gas plants for lighting large Cities like New York with less than 20 per cent. reserve of their manufacturing capacity.
>
> "Furthermore, with an output so closely approximating the maximum daily capacity, it is clear that no allowance is made for increased sales of gas consequent on the growth of population. That such increase is to be naturally expected, is conceded by all parties. *It appears, therefore, that the*

> *amount of gas to be produced by the first Unit of the Astoria plant is under, rather than over, what was actually required in addition to Complainant's own output to meet the reasonable demands of its business in 1905."*

And so, too, the Court, in reviewing the situation, says (*Record*, p. 407).

> "The 3,000,000,000 feet purchased in 1905 *was not enough for Complainant's wants.* The Astoria plant was calculated for 4,000,000,000 feet, without any reference to a decrease in the price of gas. The increase in consumption during the years when prices were steady at a dollar per thousand, was such as *reasonably to justify this provision ;* entirely apart from the necessity for a reserve, which the demands of the consumer have lately made impossible."

The Astoria plant was not completed and in operation in 1905, although it was so far completed in December, 1906, while this action was on trial, that it then began operation and delivery of gas to Appellee (*Record*, pp. 4226, 4292) ; and it is now in position to furnish to Appellee the gas which in 1905 the latter acquired from other sources.

Its total cost and value is found, without contradiction, to be $12,000,000 (*Record*, pp. 183, 254, 390),—all of which has been advanced by Appellee, and largely raised by sale of Appellee's 6 per cent. Debentures, convertible into Appellee's Stock (*Record*, p. 742) at the option of the holder.

> NOTE—Counsel for the Public Service Commission seeks to throw doubt on the finding that Appellee's sales amounted to about 70,000,000 per maximum day, and suggests that Appellee had " daily station records " showing the facts, but did not produce them *(Brief*, p. 103). He is entirely in error. All " station records " requested for the period in question were presented. Indeed, *the entire operating records of Appellee were put in evidence* for the period from November 1st, 1904, to December 31st, 1905, so that all the information Appellee had was available to the Appellants *(Post*, p. 97). The " daily station records " of Appellee show the daily *production of Appellee's plants*, but not Appellee's maximum day's *sales*, since such sales include a large additional amount of gas received from subsidiary Companies which is not recorded at Appellee's stations. The statements of subsidiary Com-

panies show the amount delivered by them *monthly*, and not daily; but, presumably, Acting President Addicks would be able to approximate very closely the amount of the maximum day's demand. The Master so concluded, and so did the Court below, as the above expressions indicate. Appellee's Chief Executive certainly ought to be in a position to make as reliable an estimate as any Counsel in this case.

2. Necessity for Present Construction.

Objection was made below, to consideration of the Astoria plant, on the ground that its construction was unnecessary, *in view of the capacity of other subsidiary Companies.*

In point of fact, the capacity of Appellee and its subsidiary Companies combined, was inadequate without Astoria. The maximum day's capacity, assuming that each Company could reach its *full theoretical capacity on the same day*, is as follows:

Appellee (*Record*, pp. 616, 636)	51,000,000
All other Companies combined (*Record*, pp. 616, 636)	60,200,000
Total	111,200,000

The maximum output of all Companies in 1905, according to the testimony of Chief Engineer Bradley, was about 100,000,000 cubic feet (*Record*, p. 636), which left a reserve on basis of sales *of three years ago* of only 11%, or a trifle over one-half of the 20% reserve without which Mr. Bradley testified that it would not be "safe to operate" (*Record*, p. 1708).

Indeed, had the New Amsterdam plant, with its capacity of 30,000,000 cubic feet, been incapacitated by any accident shutting down the works or blocking the East River tunnel, or even been reduced in output one-half, the combined production of all other Companies would not have been sufficient to meet the requirements of consumers on the maximum day.

Moreover, a coal strike or other mishap which would compel the use of coke instead of coal in Appellee's water-gas plants, would reduce their capacity 20% (*Record*, p. 1655), and likewise leave a deficit.

No Ability in Appellee's Manhattan Plants to Meet Deficit.

(a) As to Appellee's own plants in Manhattan, it has already been shown that in 1905 they produced 10,419,461,426 cubic feet of gas, or more than their rated annual capacity (*ante*, p. 84); and the only manufacturing capacity unused was the *generating apparatus* at 111th Street, of a value of only $140,853 (*ante*, p. 73), and of a capacity of only 2,420,000 cubic feet per day (*Record*, p. 1467), or only about one-eighth of the deficit between the theoretical maximum day's capacity of Appellee's other plants (51,000,000 feet—*Record*, p. 616) and its maximum day's sales of about 70,000,000 feet (*Record*, p. 1654). Indeed, it would make up but a small part of the difference between the actual maximum day's *production* of Appellee in 1905, which was 42,459,000 cubic feet (*Record*, p. 1586), and such theoretical capacity of 51,000,000 cubic feet. It, therefore, in any circumstances would be of insignificant importance in dealing with the deficit in question.

But this 111th Street apparatus consists of *generating apparatus only* (*Record*, p. 1468), the nearest purifiers, condensers, scrubbers and other auxiliary apparatus, which would be used to refine the gas made at 111th Street,being located and in use at the 99th Street station; and the value of such 111th Street apparatus is as a "reserve" against a breakdown of *manufacturing* apparatus at 99th Street, in which event the production of the 99th Street generators would be cut out and would offset the 111th Street generators which would come in.

(b) The point was also made that when one of the experts of Appellants viewed the plants in 1906, a considerable number of coal gas retorts at 14th and 42nd Streets were not in use; and Appellants proceeded to argue that they were available for any deficiency.

If they had been so available, they would only at the utmost have raised the production to the theoretical maximum capacity of 51,000,000 cubic feet; but they were out of action at the time of the visit in question, because Appellee—on account of the coal famine—*was unable to secure coal to operate them* (*Record*, p. 4227). Appellants overlook the facts that these contingencies are *incidents of the gas business;* that shut-downs from one reason and another are constantly occurring in such a vast enterprise; and that if these retorts had been in action, on the doctrine of averages some other retorts or apparatus somewhere else would have been out of service, on account of repairs or other contingencies.

(c) In short, the suggestion that there was any surplus "capacity" in Appellee's Manhattan plants, which would have rendered unnecessary the construction of the Astoria plant or made it possible to produce in its own plants more than the 10,419,461,426 feet of sales which it did manufacture, is fanciful, based upon strained deductions, takes no account of the character of the business, and is fully disposed of by the findings of the Master and the observations of the Circuit Court in relation to capacity, to which attention has already been drawn.

3. Form of Appellee's Ownership.

Instead, however, of building said plant in its own name, Appellee, for convenience, constructed it through the medium of a subsidiary corporation formed by it under the name of The Astoria Light, Heat & Power Company, Appellee receiving from said Company all its Stock, Bonds and other obligations, representing and as evidence of Appellee's investment and ownership (*Record*, pp. 183, 752).

As the Court says (*Record*, p. 397):

> "Such projected addition to the gas-making equipment of New York and vicinity was to be, and was while in process of construction, the property of The Astoria Light, Heat & Power Company, all of whose Stock was and is owned by the Complainant, and whose works will, when completed, *be as completely identified with Complainant's enterprises, as is the comparatively insignificant Coke & Coal Company.*"

Indeed, so completely was said Astoria plant created, owned and controlled by Appellee that the Master, regarding the rule that "the abstraction of the corporate entity should never be allowed to bar out and pervert the real and obvious truth" (*Seymour* v. *S. F. C. Association et al.*, 144 N. Y., 333, 340; *Anthony* v. *American Glucose Company*, 146 N. Y., 407, 413), said (*Record*, p. 183):

> "There would seem to be no ground for the purposes of the present inquiry, for drawing any distinction between a plant built and operated directly by Complainant and one built and operated by a subsidiary corporation, of which it owned the entire Capital Stock. No reason is apparent why the capital invested in the plant of such subsidiary corporation is not to be treated precisely as if invested in any of the manufacturing stations of Complainant on Manhattan Island."

4. Legislative Acts Look to Future.

The Court held in substance that the Acts of 1905 and 1906, here in question, necessarily look to the future; that in testing their validity, the value of the plants which will produce and distribute the gas sold by Appellee (whether made by itself or by others for it) should be considered in determining the value of assets employed; and that consequently the *Astoria plant*, whose cost and value are exactly ascertained,—rather than the plants of other Companies, which supplied the excess requirement in 1905,—should be considered in fixing the value of the plant which, under the Acts in question, will produce the gas to be acquired by Appellee outside its own Manhattan plants (*Record*, pp. 400, 407, 432).

POINT XI.

Property of Subsidiary Companies Actually Employed in Producing Gas, Received by Appellee from them in 1905.

But if it is desired to consider the value of the plants in reality employed in 1905, for the production of the 3,000,000,000 cubic feet (more or less) in that year delivered to Appellee by other Companies, this also is covered by the findings of the Master (*Record*, pp. 185–186) :

> " In default of any better method of estimating the amount of capital employed in the production of the 3,000,000,000 feet of gas purchased by Complainant in 1905, it seems entirely proper to measure it by the standard of the known cost of the Astoria first Unit. Equipped, as it is, with the most modern machinery, and located on a site much less expensive than could be procured on Manhattan Island, the cost of the first Unit *seems a fair and safe basis of valuation.*"

And he therefore finds and allows Item No. 8 ($12,000,000—*Record*, p. 155), not as the Astoria plant, but explicitly as the value of " *Property of other Companies employed in the production of gas delivered by them to the Complainant" in 1905* (*Record*, pp. 186, 253–4).

The Master had before him ample data upon which to reach this conclusion.

1. Value by Comparison With Accepted Units.

It appeared that all the Companies from which Appellee was obtaining gas (New Amsterdam, Standard, Central Union and Mutual) were manufacturing in the City of New York under generally similar conditions, and producing the like kind of gas at practically the same holder cost (*Record*, p. 241); but the land of the other Companies was likely to be more valuable on the average than Appellee's, since they were operating chiefly in the more congested part of Manhattan, while Appellee was operating also in the outlying districts (*Record*, p. 4471).

(a) That the value of Appellee's plants would be a fair index to the value of the plants of such other Companies, per unit of capacty, would be a fair assumption; and it is also testified that the cost of any standard gas plant of a given capacity may be closely estimated by comparison with similar plants, and the use of cost units well established and understood (*Mayer*, *Record*, p. 1457).

Thus water-gas *apparatus* (with necessary buildings) costs (depreciation deducted) to produce, from $120 to $124 per thousand feet of capacity (*Mayer*, *Record*, pp. 1424, 1458); and the Master, *at the request of Appellants*, has found that—holders excluded—"$123 per thousand feet of capacity * * * is a fair unit to assume as the value of the water-gas plant, *no matter what the capacity might be*" (*Record*, p. 264).

As to *holders*, they run in cost from about $100 for a few enormous holders, to $250 or more for smaller holders, per thousand feet of capacity (*Record*, p. 1727). Taking all the holders of Appellee, an average assortment, we find their value with accompanying apparatus to have been (depreciation deducted) $7,046,074.00 (*Record*, pp. 1320, 1323, 1326, 1329, 1331, 1333, 1334, 1336, 1337, 1340-2, 1473-5), with an aggregate capacity of 45,142,500 cubic feet (*Record*, pp. 540-1, 1319, 1323, 1324, 1326, 1329, 1331, 1333, 1336, 1337, 1339-41), showing an average value of $156.10 per thousand cubic feet of capacity.

This valuation for standard holders rests not only upon Mr. Mayer's testimony, but upon the testimony of Appellants' only witness (Logan) who had any practical experience in building holders in the City of New York, whose valuations virtually concurred with Mr. Mayer's (*Record*, p. 173), and of their expert Marks, who likewise confirmed Mr. Mayer's (*Record*, p. 3753), and finally upon the admission of counsel who, when Appellee proposed to introduce further evidence on the subject, conceded that Mr. Mayer's valuation of holders was acceptable (*Record*, p. 4602).

The holder capacity should at least equal the maximum day's output (*Addicks*, *Record*, p. 1644; *Bradley*, *Record*, p. 1707), and it is advisable to have it 50% larger (*Bradley*, *Record*, p. 1707). It will be observed that Appellee's total holder capacity as above recited exceeds the maximum day's *production* of its works in 1905 (*Record*, p. 1587).

As to *land*, even upon the valuation of the Court ($11,985,435), which excludes all land not now *actually used* in manufacture and distribution, we find the same to amount to about $237 per thousand cubic feet of Appellee's maximum day's theoretical capacity, which, as elsewhere said, is more than any actual or possible day's output,—although Appellee's land is overcrowded with apparatus in some plants (*Record*, p. 1507).

(**b**) Assuming an outside plant capacity of 20,000,000 cubic feet per maximum day as found by the Master and Court to be required (*ante*, pp. 85–6), although the hiatus between Appellee's maximum day's sales as found by the Master and the amount of its own actual day's maximum output was much greater, the computation of the value of such a plant on the foregoing basis is as follows:

Water-Gas Apparatus and Appurtenances at $123.18 per M. of capacity	$2,463,600.00
Holders equal only to a single day's capacity of the works at $156.10 per M. of capacity	3,122,000.00
Land at $237 per M. of capacity	4,740,000.00
Total	$10,325,600.00

But this is not the entire valuation, for it includes—

(*a*) No valuation of *Mains* and *General Distribution System* of the outside Companies necessarily employed in delivering gas to Appellee's Mains and Holders;

(*b*) No amount for *Working Capital* necessarily employed in producing and delivering this gas;

(*c*) No allowance for the expensive tunnel of the New Amsterdam Company, through which it delivers its gas from its Long Island plant to Appellee (*Record*, pp. 181-3, 3981)—the cost of Appellee's similar tunnel being shown to be $2,650,000, including lining (*Record*, pp. 182, 1642, 1645-6);

(*d*) No holder capacity beyond the capacity of a single day, although Mr. Bradley says that it should be 50% greater (*Record*, p. 1707);

(*e*) No allowance for the fact that a part (though small) of the gas obtained by Appellee from other Companies was coal-gas. Appellee buys from the Central Union Gas Company (*Record*, p. 5287). That Company makes coal and water-gas (*Record*, p. 2328). A coal-gas plant costs much more per unit of capacity than a water-gas plant (*Record*, p. 1728).

(**c**) Moreover, as above suggested, a plant of 20,000,000 cubic feet per day is *much below the capacity actually required to be maintained in subsidiary Companies* for Appellee's account in 1905, as was clearly indicated by both the Master and Court in discussing the like capacity of the Astoria plant (*ante*, pp. 85-6).

Thus, Appellee's actual maximum day's production did not exceed 42,459,000 cubic feet (*Record*, p. 1587), which meant a deficit of over *27,500,000* feet in relation to the maximum day's sales of 70,000,000 feet,—*excluding all "reserve" capacity which safe operation requires.*

The 51,000,000 feet mentioned by the Master is the theoretical day's maximum, *taken separately for each of Appellee's five plants*, and added together (*Record*, p. 1586); and it is utterly impossible in practice to rely upon all said plants being at the same moment in operation at their maximum. Hence *on no single* day can Appellee be expected to produce 51,000,000 feet of gas. Something is always happening in such enormous plants. In 1905 some retorts were shut down because the western coal famine prevented delivery of the usual quantities of gas-coal in the East (*Record*, pp. 4059-4076); and it is impossible to foresee when, to what extent, or how long a particular plant must be shut down or limited in production for one cause or another (*Record*, p. 643).

Nor should it be overlooked that said subsidiary Companies in 1905 carried in behalf of Appellee all the "reserve capacity", required by Appellee above its actual sales. Such reserve is at least 20% for safe operation, as the Master points out upon undisputed testimony *(Record*, p. 185), and this means 14,000,000 feet more of plant capacity maintained by subsidiary Companies for the benefit and safety of Appellee and its consumers.

Doubtless the Master had these considerations in mind in his finding that "the amount of gas to be produced by the first Unit of the Astoria plant" (20,000,000 feet per day), was "*under, rather than over, what was actually required in addition to Complainant's own output, to meet the reasonable demand of its business in 1905.*"

2. Estimate and Admission of Appellants' Engineer.

Mr. Marks, Appellants' Engineer and expert witness, computed the value of the plants producing said 3,000,000,000 feet, at $5,097,389, which he added to his valuation of Appellee's own property, upon which a return must be earned *(Record*, pp. 1940, 2787).

He reached these figures by employing a unit value of $1.78 per cubic foot of annual capacity, deduced from four Massachusetts Companies which he declared to be entirely comparable with Appellee *(Record*, p. 1940) ; but this unit was shown to have been based on an erroneous assumption as to the capacity and assets of the Companies examined, and far too low *(Record*, pp. 186, 6623-8).

3. Conclusion.

The Master's findings as to the daily capacity required outside of Complainant's plants in 1905, and the value of the property employed in meeting it, $12,000,000 (*Record*, pp. 186, 155), were based on substantial *data*. They were confirmed by the Court by the general clause at the opening of the Decree *(Record*, p. 430).

PART FOURTH.

Cost of Gas and "Net Income" to Appellee under the Statutes in question.

POINT XII.

Period and Scope of Examination as to Operating Results.

The calendar year 1905 was selected for special study, with the concurrence of all parties.

As this action was brought on May 1, 1906, the year 1905 was the last calendar year available for examination; and it was also Appellee's last fiscal year (*Record*, p. 840).

Moreover, *the year 1905 was the first and only year available, which would in any degree give a definite line upon the effect of the Statutes in question on the cost of production.* Chapter 736 of the Laws of 1905 took effect July 1, 1905. That Act penalized Appellee for each failure to maintain 22 candle power in its gas (the penalty had before applied only to failure to maintain 20 candle power,—*City Charter, Chap. 466 of the Laws of 1901, § 522)*, and also imposed additional burdens in the line of "pressure" restriction as well as in the elimination of sulphur and ammonia.

The showing of previous years would, therefore, be of much less value than had the candle power, purity and pressure standards in those years been the same as provided in the Acts under examination.

1. Period Covered for "Operating Cost."

For convenience, however, detailed expenditures of Appellee were presented for examination, not only for the calendar year 1905 (*Complainant's Ex. 94, Record, Original page* 7337), but also for the year November 1, 1904 to October 31, 1905 as presented to the Gas Commission (*Complainant's Ex. 93, Record, Original page* 7336), in order that the mass of detail in the Gas Commission record might be available in testing and checking, as suggested by Judge LACOMBE in his memorandum (*Record*, p. 144).

Thus the Master had before him complete results of the period November 1, 1904 to December 31, 1905; and in concluding its direct case Appellee placed in evidence all its original " operating ledgers " and other books of account, covering every detail of its operation for that period (Record, pp. 1861–1864, 5298).

But Appellants were not limited to this period in their examination. They were permitted in numerous instances and fields to go long distances back for the purpose of checking or pertinent information. In illustration:

(a) The Master required the production of balance sheets of Appellee for the years 1903 and 1904 as well as 1905 (*Record*, pp. 930, 931; original, pp. 7688, 7689, 7690).

(b) The great items in the cost of gas are the expenditures for coal and oil, and receipts from residuals; and the coal contracts were produced as far back as 1903 (*City's Ex. 16*, *Record*, p. 1066; also pp. 1057–1079); the oil contracts as far back as April, 1904 (*City's Ex. 10; Record*, p. 1055*)*; and the coal tar and ammonia contracts as far back as June, 1898, June, 1899, and July, 1901 (*City's Exs. 29-a, b & c; Record*, p. 1080*)*: and *these were all the contracts which Appellants then requested or expressed any wish to see,* as an examination of the Record will disclose.

(c) Moreover, Appellee produced for examination the book containing the oil and coal accounts, with detailed records of shipment and deliveries, covering a period as far back as 1903 (*Record*, pp. 1103–1114),—the price paid for such oil and coal being also shown in this record (*Record*, pp. 1103–1115).

(d) Furthermore, Appellants offered in evidence the monthly station-cost sheets of Appellee's manufacturing plants for the years 1903 and 1904 (*Record*, pp. 1530, 5298).

(e) One of Appellants' experts went over records of oil consumption and candle power as far back as 1902, and offered in evidence the figures and his deductions for that period (*Record*, pp. 5922, 5924).

(f) Appellee consented to the examination of its construction account (including its real estate transactions) *as far back as 1884*, and all of the books of the original six Companies in its possession in a similar manner *back to 1823* (*Record*, p. 2286); and the report of Appellants' accountant shows that they made such examination so far as they desired (*Record*, p. 5870).

(g) Appellee also consented to the examination of its records of repairs and renewals (including its depreciation charges) as far back as the Company's incorporation in 1884; and so well satisfied were Appellants on this score, that the annual record of "repairs and renewals" for the entire period was offered *by Appellants (State's Ex. L, Record,* p. 5078); and the Master, *at the request of Appellants,* found that 10.89 cents per thousand of sales were expended annually on the average by Appellee for current repairs and renewals for the twenty years prior to 1905 covered thereby *(Record,* p. 276*)*.

2. Particularity of Examination.

(a) Messrs. Marwick, Mitchell & Company, expert accountants selected by the Appellants, were in Appellee's offices for five or six weeks, with 25 to 35 men, engaged in the work of examination of Appellee's books and papers (*Record,* p. 4425). Every voucher, record and document of the Company relating to the subject was examined by these accountants (*Record,* p. 4424), and the thoroughness of their work is apparent from an examination of their report, abstracting and summarizing their labors *(City's Ex. 87, Record,* p. 5769*)*. The last named Exhibit shows that in some important lines of investigation they went far back of 1905 (*Record,* p. 5794).

(b) The mass of vouchers, and the time and labor involved in the examination of the items of Appellee's expenditures for a single year *(Record,* pp. 2286-2287*)*,—not to speak of the volume of the Record in this case,—indicate the impossibility (independent of the non-necessity) of the examination in equal detail of Appellee's operations for previous years, within any reasonable limit of time in the trial of this action. This was recognized by counsel for Appellants *(Burr, Record,* p. 1044*)*.

The learned Justice who appointed the Special Master, expressed in his memorandum on that occasion the expectation that the case could be tried so that the Master's Report could come up before the Court as early as the fall of 1906 (*Record,* p. 148);

while, in fact, with the utmost diligence, the case was not tried and the Master's Report submitted until the end of June, 1907, and argument was not had thereon until November following.

(c) It will be noted that as a further check upon the "operating expense" of Appellee, the station cost of its gas was carefully compared with that of other Companies operating in New York City and elsewhere (*Record*, pp. 241–242).

The Court, on full consideration of the Appellants' arguments, expresses the Opinion that the "*Court has been furnished with sufficient facts*" (*Record*, p. 399).

3. Cost of Gas in other years available.

Had Appellants been desirous to cite the results of Appellee's operations prior to 1905, or had they found such results in any way modifying deductions drawn from the periods specially examined here, they had the information at hand in the testimony and report of Arthur W. Teele, expert accountant for the Stevens Legislative Committee of 1905, who tabulated such operating cost in detail as found by him for the years 1901, 1902, 1903 and 1904 (*New York Senate Document 30 of 1905*, pp. 2555, 3027-3038).

The cost as found for the years mentioned, was as follows (*Record*, p. 84) *per thousand feet of sales :*

1901	61.55c.
1902	60.86c.
1903	61.71c.
1904	61.01c.

During no part of this period was the 22-candle power penalty provision, or were the present requirements as to purity and pressure, in operation ; nor did the figures include any allowance for "depreciation" or "contingencies" beyond *actual expenditure.*

The Gas Commission, for the year November 1, 1904 to October 31, 1905, found the cost of gas to be 60.75c per thousand feet of sales, in addition to which they allowed 1.81c. per thousand for additional enrichment required by the new law, or a total of 62.56c. per thousand (*Record*, p. 32).

It will be observed that all these costs were substantially above the cost per thousand of Appellee's sales as found by the Court for 1905, to wit, practically 58 cents. This result is reached by deducting from the cost as found by the Master 65.84c. (*Record*, p. 237) the amount of items *ultimately* disallowed by the Court, $1,043,280.42 (*post*, p. 104), equal to 7.85c. per thousand feet sold.

4. Conduct of the Case before the Master.

Counsel for the Public Service Commission, who came into the case long after the trial of the action, and consequently had not the advantage of personal observation and touch, complains of the method in which the case was conducted before the Master, suggesting in substance that Appellee presented or withheld information at will.

The facts above recited, with the disposition made by the Circuit Court of a similar plea, might stand alone as a reply; but it may not be inappropriate to call attention to a few features.

(**a**) When Appellee, at the outset, for convenience of all concerned, presented summaries in much detail, of its receipts and operating expenses, it was always under the ruling of the Master, assented to by Appellee, that such summaries were received *subject to verification, either by examination of Appellee's books before the Master, or out of Court*, as might be arranged between the parties.

That this was understood, accepted and acted upon by the Master and all counsel, appears by reference to the Record (pp. 633, 735, 736, 778, 803, 866, 871, 875, 892, 893, 932, 1046, 1048, 1058-64, 3248 and many others). And before the conclusion of its case, Appellee (as above said) offered in evidence all its *original* books and records relating thereto.

(**b**) As the action was brought and the statute took effect on May 1, 1906, and the trial of the cause began on July 16, 1906, pursuant to Judge LACOMBE's order, it was not a matter of inconvenience to select July 1, 1906, as a basis of examination,--it was *simply an impossibility* to have Appellee's voluminous records, in detail required for examination, brought up and tabulated as of July 1, 1906. Only one who has gone through such an experience, and knows the days and nights and weeks required to get such accounts and tabulations condensed, verified and in shape,—even when the ledgers are *written up* to a given date,—can fully appreciate the situation.

As Mr. Carter shows, considerably later than the beginning of the trial, Appellee's books had not yet been brought up to June 30, 1906 (*Record*, p. 905); and the very labor and strain under which all the office of Appellee were laboring, in preparation of data for presentation on the trial of this cause,—*much of it prepared (as the record shows) at the request of the Appellants and as an accommodation to them*,—made it doubly impossible to do so.

(**c**) Moreover, if it had been possible, it would not have given an equally intelligent and accurate result, to have taken a year which does not coincide with Appellee's fiscal year. The result instead of being absolute, is only approximate in such a case, since taxes for different years have to be apportioned and many items divided on a mere estimate,—as appeared before the Gas Commission,—instead of being exact figures which are worked out upon settled methods of entry for the fiscal year.

In fact, nothing would have been more satisfactory to Appellee than to have taken the year 1906, had it been feasible; for, it was in evidence that the assets of the Company *were increasing*, and its assets on July 1st, 1906, would have been greater than on December 31st, 1905,—thereby entitling Appellee to a larger allowance for return on capital.

(**d**) It is not the fact, as was intimated below, that examination of Appellee's books to July 1st, 1906, was demanded or refused. Moreover, the Master was in charge of the trial, and if Appellants had made any proper demand, he would no doubt have made a proper order, no matter what Appellee's attitude might have been. Certain requests were made of Mr. Carter to *prepare a lot of tabulations for Appellants for use on cross-examination* running down to July 31st, 1906, and he stated that the books had not been even written up to June 30 yet. We declined to undertake the labor of such *tabulations*, and the Master properly ruled that the presentation of such matter was a part of *Appellant's* and not of Appellee's case (*Record*, pp. 777–80).

(e) Counsel suggests that Appellee was allowed to prove the cost of additional items of "enrichment," "taxes" and "labor" occurring or foreseen in 1906. These items were not shown for the purpose of having them included *per se* in the operating cost of 1905. They were presented only as an illustration of the character of items *which Appellee had been claiming were and should be covered by the "reserve" or "contingent" fund* already included in its operating charges for 1905; and that the Master fully understood this and so treated it is entirely clear from the language of his Report (*Record*. p. 228).

The items were suggested as "illustrations" only, the same as samples of pipe were presented showing the effect of electrolysis.

(f) An examination of the Record will demonstrate that the Appellants were treated with the greatest liberality by the Master in relation to the introduction of evidence, and cross-examination of witnesses, the Master repeatedly stating in substance that as this was an equitable cause he would give great latitude to Appellants in the nature of evidence produced; and he accepted many items offered by them, against Appellee's objections, on the ground that they might throw some light on the issue although not strictly competent by ordinary rules of evidence (*Record*, pp. 1100, 1900, 1924, 1925, 1926, 1955–6, 2975, 3193–5).

(g) The suggestion that during the period specially examined, Appellee might have been getting its house in order by reason of the Stevens Committee Investigation, or in any way "padding" its accounts, is wholly gratuitous, and is supported by not a shred of evidence. *It could not be so.* The Stevens Committee did not begin its investigation until April, 1905,—six months after the beginning of the period which the above statements of operation covered; and absolutely the only change, in 1905, from previous years was the segregation of the ten cent "Contingent and Renewal" fund from the general Profit and Loss account of Appellee, Appellee's books showing precisely its exact receipts and expenditures as before (*Record*, pp. 4503–4); and when Appellee presented its statement of operations for 1905 (Exhibit 94), it *stated at the outset, through Mr. Carter, the nature, reason and analysis of this particular item* (*Record*, p. 840).

POINT XIII.

Computation by which Court reached "Net Income," $3,024,592.45 *(ante*, p. 6), for year beginning May 1, 1906.

In determining the operating cost of gas as a factor in such profit, both the Court and the Master took as their basis Exhibit 94 (printed in full in *Master's Report*, *Record*, p. 217), showing Appellee's complete expenditure in its gas business for the year 1905,

totaling	$9,936,910.42
From which the Master deducted Fixed Charges and other items (*Record*, p. 248)	1,190,645.23
Leaving Operating Expenses as found by the Master (*Record*, p. 248)	$8,746,265.19

1. Preliminary Computation based on Sales of 1905.

The Receipts and Expenditures, and the Profit to Appellee, *according to the computations of the Court*, **the method of which we do not accept,** may accordingly be summarized as follows:

Receipts as found by Master (*Record*, pp. 248, 5052)	-----------	-----------	$13,730,193.50
Deductions by the Court from Income (*Record*, p. 405):			
Dividend from National Coke & Coal Company	$5,000.00		
Rental from Lands Leased, but excluded from Complainant's assets by the Court	37,408.88		
Receipts from gas acquired from other Companies	2,862,757.32	-----------	2,905,166.20
Income from sales of gas of Appellee's manufacture (*Record*, p. 405)	-----------	-----------	10,852,027.30
Operating expense, as found by the Master (*Record*, p. 248)	-----------	8,746,265.19	
Deductions by the Court from Expense (*Record*, pp. 404-5):			
Taxes on land excluded by Court from capital (*Record*, p. 423)	18,666.00		
Interest on Taxes for the year 1905	94,506.29		
Legislative Investigation Expense	25,671.74		
Franchise Tax Legislation Expense	63,401.65		
Contingent expense, including renewals	841,034.74		
	$1,043,280.42		
Net Cost of gas received from other Companies	893,432.40	1,936,712.91*	
Operating expense found by Court in production and distribution of gas			

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* This is the $1,947,117.91 found by the Court (*Record*, p. 405), less subsequen correction for taxes, $10,405 (*Record*, p. 423).

of Appellee's own manufacture (*Record*, p. 423)			$6,809,552.28
Net profit on sale of gas of Appellee's manufacture (*Record*, p. 423)			4,015,475.02
Receipts from sale of gas secured from other Companies, as above	2,862,757.32		
Payments to other Companies for such gas (Item, 43 of Ex. 94—*Record*, p. 219)	997,039.89		
Apparent profit on acquired gas (*Record*, p. 405)			1,865,717.43
Apparent profit of Appellee at $1 rate, on all gas sold by it in 1905 (*Record*, p. 432)			5,881,192.45
Loss at 20 cents per thousand under the 80 cent rate, (*Record*, p. 248)			2,656,600.00
Apparent profit on Appellee's total gas sales in 1905, under the Acts in question			$3,224,592.45*

But the Court does not find that $3,224,592.45 is the fair or normal profit upon Appellee's sales for the year 1905. On the contrary *(Record*, p. 432) :

> " The Court finds that **said sum of $1,865,717.43 represents more than a normal profit** upon the volume of purchased gas, in that the amount paid by Complainant to other Companies for the same ($997,039.80) was paid under temporary and expiring agreements, and *did not include any reasonable recompense or return upon the value of the investment required to produce said gas.*"

Hence Appellee's *normal profit* on its total business, if computed on the basis of the sales for 1905, must *(under the Court's view)* be reduced from $3,224,592.45, by the amount of the " reasonable

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*This is the $3,234,997.45 first found by the Court (*Record*, p. 407) less subsequent correction for taxes $10.405 (*Record*, p. 423).

recompense or return" upon the value of the investment required to produce nearly 3,000,000,000 of such gas, as hereinafter computed.

Introductory.

(a) *It should be clearly noted at the outset,* that the Court made an error, most important in principle, in designating the sum of $1,865,717.43, obtained by deducting from Appellee's *income* from sales of gas received from other Companies ($2,862,757.32) the amount *paid* by it to such Companies ($997,039.89), as "*profit on purchased gas*" *(Record,* p. 432). The Court should also have deducted, *at least* a *pro rata* proportion of the distributing and general expense attendant upon Appellee's total sales,—to wit, 25.25c. per thousand *(post,* 113); which upon the sales derived from such Companies (2,863,702,341 feet), amounts to $723,084.84,—reducing said apparent "profit on purchased gas" to not exceeding **$1,142,632.39,** in place of $1,865,717.43. *This is clearly demonstrated (post,* pp. 112–114).

The erroneous theory which induced the Court to attribute no part of the distribution and general expenses of Appellee to such "purchased gas" *of 1905,* was also responsible for its failure to allow for *any additional distributing expense on assumed additional sales of 1,131,298,000 feet in 1906,* while charging Appellee with the receipts from such additional sales, as hereinafter pointed out *(post,* pp. 110–4).

The Court, it is true, included Appellee's *entire* general and distribution expenses, for 1905, in operating cost of gas of Appellee's manufacture only; but it is none the less important to note the error in principle.

(b) As to "**candle power,**" the Master recognized that 1.83c., in addition to Appellee's "operating expense" for 1905, would be required for a full year to maintain "candle power" consistently above 22 candles (*Record,* p. 228); and even the Gas Commission allowed 1.81c. for that purpose (*Record,* p. 32). The Court concluded otherwise (*Record*, p. 424); and while Appellee believes that injustice is done, it will not take the time of this Court to present the subject here.

2. Final Computation, for Year Beginning May 1, 1906, Based on Assumed Increase of Sales Over 1905.

But in estimating the real profit in Appellee's gas business, the Court, instead of proceeding upon the sales of 1905, assumes a year beginning May 1, 1906, assumes that the output and profits of Appellee's plants in Manhattan will remain the same as in 1905 ($4,015,475.02), and further assumes an increase in gas acquired from other Companies from the 2,863,702,341 feet of 1905 to 4,000,000,000 cubic feet *(increase 1,131,298,000)*—all to be obtained from the new Astoria plant whose value is fixed at $12,000,000 and whose total capacity would be consumed by said 4,000,000,000 cubic feet. The Court estimated that said 4,000,000,000 feet could be delivered to Complainant at 50 cents per thousand, including "station-cost" of manufacture and a fair return on said investment of $12,000,000, 6 per cent. on that valuation ($720,000) representing 18 cents per thousand on said capacity, and the "station-cost" being reckoned at about 32 cents *(Record*, p. 426).

The computation of the Court on this basis may be summarized as follows:

Receipts from 4,000,000,000 feet at $1 per M. *(Record*, p. 426)		$4,000,000.00
Holder Cost and Return on Capital at 50 cents per M. *(Record*, p. 426)	$2,000,000.00	
Taxes on Astoria Plant, as estimated by the Court *(Record*, p. 426)	90,000.00	
General Expenses, including officers and staff of Astoria Company, Insurance, and other items (*Record*, p. 426), say,	44,282.57	
Total payments to Astoria Company		2,134,282.57
"Apparent" Profit to Appellee *(Record*, p. 432)		$1,865,717.43

Profit on sales of gas of Appellee's own manufacture, as above computed *(ante*, p. 105)		$4,015,475.02
Appellee's total profit on all gas sold by it, at $1 per M. *(ante*, p. 105)		$5,881,192.45
Loss at 20 cents per M. under 80 cent rate, on amount of Appellee's sales for 1905, as above (*ante*, p. 105)	$2,656,600.00	
Loss at 20 cents per M. under 80 cent rate on 1,000,000,000 feet of such assumed increase in sales of gas acquired from other Companies over such sales in 1905 *(Record*, pp. 408, 428	200,000.00	
Total loss under 80 cent rate		2,856,600.00
Net profit on total sales of Appellee as stated in Decree *(Record*, p. 430)		$3,024,592.45

3. Assignments of Error Respecting said Final Computation.

Appellants assign error in substantially every element of this computation, to wit: to the assumption of such increase in sales, of the increase in cost of gas acquired from other Companies, of change of source of manufacture of some portion of such gas, and in the overlooking of an assumed decrease in expense due to a conjectural reduction in Appellee's "special franchise" tax.

In short, Appellants take the ground that the assumptions of the Court, as to increase of sales and otherwise for the assumed year beginning May 1, 1906, are speculative and legally inadmissible; and that the fixed results for the year 1905 form the proper basis of computation *(Assignment V of Willcox et al. and X of Jackson,—Record*, pp. 437, 482).

We reply that, *if the Court pursued a proper course in adopting the year May 1, 1906 and in assuming said increase of sales therein,* the other Assignments are certainly not well based.

(a) Future Source and Cost of "Purchased" Gas.

Thus, no part of this "purchased" gas, 4,000,000,000 feet, could be expected to come from Appellee's Manhattan plants, since the amount there produced in 1905 (10,419,000,000 feet) substantially exceeded their rated "annual" capacity, which all witnesses stated should be about 200 times their maximum day's capacity of 51,000,000 feet (*Record*, pp. 546, 642, 1511, 1655, 1708, 3792, 4783).

It is in evidence, too (*Record*, pp. 461, 426, 4226, 4292), that the Astoria plant was delivering gas to Appellee in December, 1906—a source from which no gas was received in 1905; and after this plant has been constructed by Appellee at a cost of $12,000,000 to supplement its Manhattan capacity, it would be a violent assumption that it will be allowed to remain idle.

It is likewise inconceivable that the Astoria plant will, in effect, (bookkeeping forms disregarded), deliver its gas to Appellee at the "bare station-cost" of 34.04 cents per thousand (*Record*, pp. 400, 405), at which Appellee apparently received its outside gas in 1905, and thus waive all "return" on the $12,000,000 investment.

Moreover, it is of course true, that upon the view that the price of gas must include a return on the value of the *property employed to produce it*, it is immaterial whether the 4,000,000,000 feet assumed comes from the $12,000,000 plant at Astoria, or from other outside plants in Manhattan of like value.

(b) The Suggested Reduction in Franchise Tax.

Nor is there merit in the suggestion of a possible reduction of the Franchise Tax for 1906 and subsequent years, below the $406,909.23 of 1905 (*Record*, p. 223). Both the Court and Master declined to indulge in such speculation,—the probabilities being directly contrary.

The assessment of Special Franchises for 1905 was $27,300,000. The tentative assessment for 1906, made as of the second Monday of January, *but to cover the entire year*, was $31,900,000—an increase of $4,600,000 (*Record*, p. 202). The amount is not finally determined until after March 31, prior to which date complaints are heard by the Commissioners.

Under the New York practice, a notice was sent to Appellee in March, 1906—*after the Order of the Gas Commission here in question, reducing the rate for gas to 80 cents had been made* (February 23, 1906), and before this action was begun (May 1, 1906), in order that Appellee might be heard on said assessment before the amount was finally fixed. Appellee appeared and was heard, but said assessment was nevertheless—in spite of the 80 cent rate—permanently fixed by the Tax Board " under Appellee's objection and protest " at $31,900,000 (*Record*, p. 1850); and there is no doubt that it was considered in fixing the assessment.

This experience, coupled with the fact that the assessments of the *identical* Franchises have been raised from $13,950,000 in 1900 (*Record*, p. 6691) to $31,900,000 in 1906 (*Record*, pp. 1848), while the charge for gas has remained stationary at $1, certainly presents no ground upon which a Court might judicially determine that the assessment will be in future reduced in any circumstances.

POINT XIV.

Such " Net Income," $3,024,592.45 (*ante*, p. 6), **for the year beginning May 1, 1906, much higher than legally justifiable.**

In fixing that figure, the Court overlooked various items which must go to reduce it.

1. Initial Error in Tabulation.

The assumed increase in "purchased" gas to 4,000,000,000 feet, involves an increase of 1,136,298,000 feet over 1905 *(Record,* p. 220), but, while including receipts from *sales* of the entire 4,000,000,000 at the $1 rate, the Court deducts the 20 cents per thousand loss due to the 80 cent rate on only 1,000,000,000 feet in excess of the sales of 1905 *(ante, p.* 106–7)—or 136,298,000 feet too little.

The loss on this amount, at 20 cents per M., amounts to $26,259, thereby reducing the "profits" computed by the Court to *$2,997,996* (*See Tabulation, post,* p. 118).

2. Omission of "General" and "Distribution" Expense.

While assuming this enormous increase of 1,136,298,000 feet beyond the experience of 1905,—an additional output equal to *more than one-third the entire sales of the City of Boston for that year* (*Record,* pp. 2083–4), and greater than the *entire sales* of all except a very few of the largest Cities in America,—the Court computes no additional expense whatsoever for the handling and distribution thereof. We assert that this cannot be; that if such a vast increase of sales is assumed, the Court must estimate and allow for the increased expense surely attendant.

No witness on either side claimed that such an increase could take place without additional expense; and the action of the Court in omitting any allowance therefor is accordingly not only unsupported by any evidence, but directly in conflict with the evidence of every witness who testified on the subject, as well (we respectfully submit) as with common knowledge on the subject. The only question is as to the *amount* of such additional expense.

(a) Rate of Increase of General and Distribution Expense with Increased Sales.

It was pointed out that an increase in sales usually means the procuring of many smaller consumers, whose patronage is less profitable relatively than the larger customers already on the books (*Record*, p. 4361).

Appellee's experience in this regard is in evidence. It appears that while the consumption of gas *per meter*, in 1885, was 36,000 feet on total sales of less than 4,000,000,000 cubic feet, at a charge of $1.70 per thousand, the consumption per meter in 1905, with sales of 13,283,164,000 feet, at a price of only $1 per thousand, was only 34,000 cubic feet (*Record*, p. 5040).

Vice-President Carter testified respecting the existing situation:

> "The Company is losing large units of business, and taking on a number of small units of business, which cannot fail to increase the cost per thousand of distribution, as well as decrease the average sales per meter in use" (*Record*, p. 4426).

Mr. Forstall showed that this was the common experience; that after a "certain point" is reached, the increase in sales is bound to come from smaller consumers who are relatively more expensive than the larger ones (*Record*, pp. 4361–2).

Mr. Cowdrey, head of the Laclede Gas Light Company of St. Louis, said in Chicago, in speaking of cost of gas production:

> "Increasing the number of consumers to each mile of mains does not materially cheapen the cost of gas. This is especially true after reaching a certain point (*Record*, p. 2589).

And Dr. Humphreys showed that in the City of London, whose *per capita* consumption is highest next to New York of any City in the world (*Record*, p. 4728), the distribution and general expenses of the three metropolitan Companies are showing constant increase *per unit* of increased output. Indeed, from 1901 to 1905, while sales had increased 3.79 per cent., the items of "distribution" and "management" had increased 18.8 per cent., or nearly five times as fast (*Record*, pp. 4728–9).

It is obvious that substantial additional output requires the installation of more appliances, the reading of more recording dials, the indexing and repair of many more meters, the maintenance of more services, the increase of bookkeeping due to the accounts of additional consumers, the employment of additional collectors, an increase in the taxes which are laid upon the "gross earnings" of the Company (*"Tax Law" of New York*, § 186)—in short a *very general* increased activity with necessary attendant expense. Appellee's force in 1905 was presumably sufficient only to meet its requirements at that time; none of Appellants' witnesses indicate any point at which it had idle employees, or its pay-roll could be cut.

(b) A Demonstration From Appellee's Experience.

The data accumulated by the Stevens Committee of the New York Legislature (*Senate Document 30 of 1905*), to which we have above referred, shows Appellee's sales, with distribution and general expenses for the year 1901, which is as far back as its examination extended; and a comparison with the like items for 1905, *strikingly confirms the foregoing conclusions as to rate of increase in such expenses with increased sales.*

Arthur W. Teele, expert accountant of that Committee, found Appellee's "Distributing" and "General Expense", and sales, for the year 1901 (*New York Senate Document 30 of 1905*, pp. 2560–2), which were as follows (*Record*, p. 83):

Distributing	$1,408,258.38
General expense	950,032.28
Total	$2,358,290.66

Sales, 10,296,955,761 cubic feet.

The similar items, with sales, for 1905, appear as follows:

Distributing and General Expense, as found by the Court, in two items aggregating (*Record*, p. 400)		$4,396,741.33
Deductions by the Court, items from $94,506.29 to $841,034.74 inclusive (*Record*, 404–5), aggregating	$1,053,685.42	

Less item restored by Court (*Record*, p. 423)	$10,405.00	$1,043,280.42
Allowed by the Court (25.25c. per M.)		$3,353,460.91
Allowed by Court ("Eleven Cent Fund") for "Repairs and Renewals" (*Record*, p. 405)	$1,172,359.10	
Actual Expenditures for "Repairs and Renewals" (*Record*, p. 5080)	$974,289.65	
Allowed by Court beyond actual expenditure for 1905		198,069.45
Actual expenditures for "Distributing" and "General Expense" in 1905		$3,155,391.46

Sales 13,283,163,000 cubic feet. (*Record*, p. 220).

The above amount of $198,069.45 is deducted from the "Distributing" and "General Expense" allowed for 1905 by the Court, since an examination of Mr. Teele's testimony discloses that his figures deal only with actual expenditures, and include *no allowance to bring the average of repairs and renewals for any one year up to the average for a period, or other "reserve" margin which is commonly conceded to be necessary;* so that a fair comparison requires the reduction of the Court's computation for 1905 to the same basis.

Comparing the foregoing results, for the years 1901 and 1905 (*Record*, p. 5039), we have:

	Sales in feet	Distributing and General Expense	Cost per Thousand
1905	13,283,163,000	$3,155,391	23.75c.
1901	10,296,955,000	2,358,290	22.41c.
	2,986,208,000	$ 797,101	26.69c.

It appears, therefore, that the increase of sales from 1901 to 1905, 2,986,208,000 feet, which closely approximates the amount (2,863,702,341 feet) of sales derived by Appellee in 1905 from subsidiary Companies (*Record, p. 220*), was accompanied by an increased expense of $797,101, which is equal to 26.69 cents per thousand feet of such increased sales. This strikingly illustrates the proposition that an increase in volume of sales *beyond "a certain point"* is attended by a *disproportionately* large increase in such expense. This is the more convincing since, *during the entire period in question* (1901–1905), the "Agency Agreements" were in operation under which Appellee was receiving from outside Companies a large portion of the gas which it sold *(Record*, pp. 5047, 5049, 5050).

This covers the period of an extraordinary increase in sales due to the great coal strike of 1902–3, which compelled the substitution of gas for other fuel to a large extent *(Record*, pp. 1991–2), and should accordingly be an extreme test on the point under discussion.

It is idle for Appellants, in the face of such evidence, to point to this item and that item in "Distribution" and "General Expense," and argue that *it* will not increase on account of increased sales. While some items do not increase proportionately, others increase more than proportionately, so that the net result according to experience, is that when a Company pushes its sales beyond a "certain point," which Appellee has obviously reached, the *entire* expense beyond the holder *increases—as it is now doing in New York and as it has done in London—at a more rapid ratio than sales.*

And certainly the added receipts resulting from the assumption of such a vast increase in sales cannot be charged against Appellee, with no deduction for the expense which will inevitably accompany their distribution.

(c) Conclusion.

The Court below should, therefore, have reduced its estimate of Appellee's probable profit, by the amount of "General" and "Distribution" Expense attendant on the assumed increased output of 1,136,298,000 feet, at a rate not less than that found by the Court for 1905 (25.25 cents per M.). This would amount to $*286,915 (See Tabulation, post*, p. 118).

3. Omission of Return on Additional Plant Required.

Nor did the Court compute or make any allowance for a return on such increased investment in distributing system and apparatus, as will inevitably accompany the handling and delivery of such an enormous volume of gas as 1,136,298,000 feet.

Again, no witness questions that such increase must occur; it is only a question of amount of increase.

Not only are meters, meter cocks and connections, services and similar property bound to increase, but as consumption per meter decreases on the whole with increased output (*Record*, p. 5040), they must increase more than proportionately with sales. Additional or larger mains, too, may be required; and additional holders will certainly be needed to handle such a vast increase in volume of gas, and this will require the use of *additional real estate as well.*

We know of no better basis of estimating the increase of distributing plant required, than a *pro rata* basis. Appellee's investment in distributing system and apparatus, as found by the Court, *excluding real estate, plants and half of working capital* (*ante*, p. 6), is computed to be $19,538,000 for the distribution of 13,283,000,000 feet; and on this basis, the investment required in distributing plant to handle the additional output of 1,136,298,000 feet would be $1,670,358,—6 per cent. upon which would amount to *$100,221.* This looks small, and undoubtedly is too small, especially as no increase in land for holders is reckoned; but it is not a negligible sum (*See Tabulation, post*, p. 118).

Ratio of Distributing Plant Increase.

Prof. Bemis, for the Appellants, advanced certain theories as to profits from increased sales, and illustrated his point by statistics of certain Massachusetts Cities; but it was shown on rebuttal that in those very Cities the "*gas assets increased more rapidly than the gas profits*" (*Record*, pp. 4722–3).

So, too, it was suggested that many classes of Appellee's assets have not increased since 1884 in proportion to increase of output; but this is due largely to the fact that, in 1884, the plants of the six consolidating Companies were, in the aggregate, of a much greater capacity than the output at that time, there being land enough on hand for a maximum daily capacity of about 50,000,000 cubic feet per day (*Record*, p. 6464), almost the present capacity of Appellee's plants (51,000,000 cubic feet); while, with the addition in 1884 of only $1,000,000, the entire system could have been brought to a capacity of 33,000,000 feet per day (*Record*, p. 6464),—far beyond any demand at that time (*Record*, pp. 1714, 6364, 6464).

But when a Company's output is straining the capacity of its distributing system,—and the Appellant, The City of New York, assigns error in that the Court below "*did not find that the distributing system as now existing is inadequate for the output of Complainant*" (*City's* "*One Hundred and Seventh*" *Assignment, Record*, p. 475)—the situation is distinctly different.

Counsel for the Public Service Commission computed, in his Brief below, that the increase in Appellee's distributing assets in 1905 over 1904 "would not exceed $200,000," accompanying an increase in output of only 112,404,000 feet within the same period (*Record*, p. 5039). With an increase of 1,136,298,000 cubic feet as assumed by the Court, Appellee's estimate of additional investment in "Distributing Plant" at $1,670,358 appears conservative by comparison.

4. If the Court Excludes Expenditures of 1905 As Not Recurring in 1906, it Must Consistently Include Items of 1906 Not Occurring in 1905.

Appellee's operating expense of 1905, was reduced by the Court by the following items, among others (*ante*, p. 104):

"Interest on taxes for the year 1905" ----------	$94,506.29
"Legislative Investigation Expense" ----------	25,671.74
"Franchise Tax Litigation Expense" ----------	63,401.65
Amounting in the aggregate to --------------	$183,579.68

The propriety of these charges in the 1905 account is conceded by the Court (*Record*, p. 401). They were excluded as *temporary and not likely to recur in subsequent years.*

As a matter of fact, the investigation of the Gas Commission was not completed and its Order entered until February 23d, 1906; this suit has been in progress since May, 1906; and while the validity of the Franchise Tax of 1899 has been settled by this Court, taxes since are in litigation in view of the fact that the State has progressively increased the assessment of the identical Franchises from $13,950,000 in 1899 to $31,900,000 for the year 1906,—all of which appears in the Record *(Record*, pp. 6691–6718), but was apparently overlooked by the Court.

It is suggested, therefore, that the Court *was not justified* in *excluding* these, or equivalent, items as a probable expense in 1906 when the last Act attacked took effect; for every evidence indicates that such items of expense are continuing, and are likely to continue, for a considerable time to come.

But if the Court is to exclude these items on the ground that they will not recur in 1906, it must consistently include items which are shown to have occurred in 1906 but did not appear in 1905.

The rule must work both ways; otherwise the computation is one sided and could not fail to work injustice.

Thus it was shown that in the year *1906*, additional taxes were laid over those of 1905 to the extent of 1.13 cents per thousand feet *(Record*, pp. 1667–8), and that wages increased to extent of 1.40 cents per thousand feet, of Appellee's *total sales (Record*, p. 4224), and the Master has so found *(Record*, p. 228). This would amount to *$336,059;* and must be included, we submit, if the Court looks to the year 1906 to exclude the items first mentioned.

5. Summary.

It is submitted, therefore, that the computation of the Court, for the year May 1, 1906, should be substantially readjusted and corrected, and the following basis is suggested as a legitimate and fair one:

Net Profits as computed by the Court (*ante*, p. 107)		$3,024,592.45
Deduct:		
Loss, at 80 cent rate, on 136,298,000 feet (*ante*, p. 114)	$ 26,259	
General and Distribution Expenses on 1,136,298,000 feet (*ante*, p. 110)	286,915	
Return on additional distributing plant required (*ante*, p. 115)	100,221	
Additional Taxes and Wages in 1906 over 1905 (*ante*, p. 117)	336,059	
		749,454.00
Actual Net Profits for year in question		$2,275,138.45

Deductions of the foregoing character, we contend, must *as a matter of law be made*, if the Court assumes an increase of 1,136,298,000 feet of sales over 1905; and the amount of such deductions is based upon Appellee's own experience, than which no better criterion can be found.

If, however, Appellee's experience were not considered conclusive, then it is submitted that the Court, by some other method, should have determined the amount of the additional expense to be allowed.

POINT XV.

Normal Profit of Appellee, on the Basis of Known Sales and Expense of year 1905, favored by Public Service Commission, also much less than said $3,024-592 found by the Court for the later year.

The Appellants, objecting to the Court's computation based on the year beginning May 1, 1906 on the ground that it is "speculative", assert that the results of 1905,—for which sales, income and operating expenses are fixed and certain,—are the proper basis for deduction.

The Court, as seen *(ante, p.* 105), has found $3,224,592.45 to be the apparent profit for 1905, with the statement (in effect) that **this was not a "normal profit,"** since in that computation there has not been deducted a "*reasonable recompense or return upon the value of the investment required to produce the gas*" received in that year from other Companies *(Record*, p. 432).

It was not difficult to compute a "reasonable recompense or return," and thereupon to determine a "normal profit" for Appellee.

1. Based on Return on Value of the Astoria Unit.

(a) If, looking to the future source, as the Court has done, we regard the amount of 3,000,000,000 feet of gas acquired by Appellee from other Companies, as normally to be produced at the Astoria plant, we have a recognized valuation of $12,000,000,—a 6 per cent. return upon which calls for $720,000.

It is proper and necessary to include the entire valuation; for the Master has found that the maximum day's capacity at Astoria is only 20,000,000 feet, that the maximum day's sales of Appellee, in 1905, exceeded its own producing capacity by 19,000,000 feet, exclusive of any reserve capacity which should be at least 20% in excess of its sales for safe operation, and accordingly that—

> "The amount of gas to be produced by the first Unit of the Astoria plant is *under*, rather than over, what was actually required in addition to Complainant's own output to meet the reasonable demands of its business *in 1905*" (*Record*, p. 185).

Judge Hough, referring to the construction of the Astoria plant, remarked that the situation existing was "such as reasonably to justify this provision, entirely apart from the necessity of a reserve" (*Record*, p. 407).

Indeed, as before shown, Appellee's deficiency in actual producing capacity at any one time (as distinguished from the aggregate theoretical capacity of all its plants) below maximum day's sales, was much more than 20,000,000 (*ante*, pp. 85, 94).

(**b**) Moreover, to make the computation just, we must either include in Appellee's operating expense the items of "interest on taxes," "legislative investigation expense" and "franchise tax litigation expense," aggregating. in 1905, $183,579.68, excluded by the Court as not likely to recur, or in lieu thereof the items of additional taxes and wages in 1906, which did not occur in 1905, amounting to $336,059, as hereinbefore set forth (*ante*, p. 117). Perhaps it is fairer in this connection to include the smaller amount, because it has been suggested that the Court's reason for excluding it was not well founded (*ante*, pp. 116-7), and also because we are at this point specially considering Appellee's operating expense in 1905.

(**c**) The computation of "normal profit" for 1905 may, therefore be stated, as follows :

Apparent profit, as stated by the Court (*ante*, p. 105)--		$3,224,592.45
Deduct : Return on value of Astoria property to produce acquired gas (*Record*, p. 426) -----------------	$720,000.00	
Items of Tax Interest and Legislative and Franchise Tax Expense excluded for 1905 on the assumption that they would not recur in 1906 (*ante*, p. 107)-	$183,579.68	903,579.68
"Normal" profit for 1905-------		$2,321,012.77

2. Based on Value of Plants Actually Producin Acquired Gas in 1905.

If we consider the plants of other Companies actually employe to produce the 3,000,000,000 feet of sales manufactured in 1905 outside Appellee's own plants, the computation is not changed.

For the evidence indicates, and the Master has distinctly an repeatedly found (*ante*, p. 91), that the value of the Astoria plan ($12,000,000) is also a fair valuation of the " property of other Com panies employed in the production of gas delivered by them to Com plainant" in 1905 (*Record*, pp. 186, 254), and this finding is con firmed by the Decree (*Record*, p. 430).

3. Based on a Smaller Capacity than 20,000,00 Feet per Maximum Day.

While the Master and Court thus found, upon undisputed fact that an outside capacity equal to that of the Astoria Unit (20,000,00 feet) was required, on the basis of Appellee's sales in 1905, th valuation of that Unit, or of the equivalent " property of othe Companies " actually delivering gas to Appellee in 1905,—could b *pro rated*, were it believed that Appellee's output of 1905 did n require so great a capacity outside its own plants.

(**a**) Thus if, *allowing for no reserve*, we were to take the pr portion of the entire plant (19/20), which Appellee's maximum day requirements from outside Companies (19,000,000 feet according the Master—*Record*, p. 290), bore to the *maximum day's* capacity the Astoria plant (20,000,000 feet), the return at 6 per cent. there would be reduced from $720,000 to $684,000, and " the norm profit" for 1905, as above computed (*ante*, p. 120), would be increas to $2,357,012.77.

(**b**) And even if, still allowing for no reserve, we were to take t proportion (practically ¾), which Appellee's actual sales of gas quired from other Companies in 1905 (about 3,000,000,000 feet) b to the entire *annual* capacity of Astoria plant, the interest at 6 per cent. thereon would be reduced from $720,000 to $540,000, and said "normal profit" for 1905 (*ante*, p. 120) would be increased to $2,501,012.77.

NOTE. The so-called "annual" capacity of a plant is merely an estimated annual output, based on the consideration that a plant cannot and will not be run at its maximum "daily" capacity throughout the entire year; but that during some part of the year it will be shut down in whole or in part for repairs and other contingencies, and during the summer months the daily call upon it will be far short of its maximum daily capacity. This "annual" capacity is estimated, according to all the engineers who testified, at 200 times the maximum daily capacity of the plant (*Record*, pp. 546, 642, 1511, 1655, 1708).

The fact that the "annual" capacity of the Astoria plant as thus computed is 4,000,000,000 cubic feet, while Appellee required only 3,000,000,000 cubic feet outside its own works in 1905, will not mislead; for it is the *maximum day's* capacity as compared with *maximum day's sales* which governs. If Appellee's maximum day's sales in 1905 had been 72,000,000 feet instead of 70,000,000 feet, so that its requirement above the maximum daily capacity of its own plants had been 21,000,000 feet instead of 19,000,000 feet, the Astoria Unit would have been *insufficient* to meet the demand, although Appellee's *annual* "aggregate" requirements outside its works might have proven to be less than 4,000,000,000 or even 3,000,000,000 cubic feet.

Admission of Appellants' Witness Marks.

Appellants' expert witness on this subject, Mr. Marks, *flatly accepted and asserted the principle for which Appellee here contends.* He admitted that a return on the value of the property of other Companies employed in producing the gas delivered by them must be included in the cost of gas sold by Appellee, and that it made no difference whether such capacity was located at Astoria or at other plants in Manhattan (*Record*, p. 2787); he computed the value of such a plant at $5,097,000; and *he added this amount to Appellee's own assets* to find the total upon which a return must be computed (*Record*, p. 1940).

As before noted *(ante,* p. 95), this computation was "inadequate" as the Master found (*Record*, p. 186), but **a return at 6% on even this valuation would amount to more than $300,000.**

POINT XVI.

Basis of Appellants' Opposition to Inclusion in Cost of Gas, of a Return on the Property of Subsidiary Companies, Employed in Production of Gas Delivered to Appellee.

Appellants, in spite of their original position as evidenced by the testimony and admissions of their witness Marks, now object to the inclusion in Appellee's charge for gas of any return upon the value of either the Astoria plant, or of the plants of other Companies producing the gas actually delivered to Appellee in 1905.

In effect, they would *compel* delivery of gas by Appellee to its customers, at a rate which would include a return on property producing only 10,419,461,426 feet, out of the 13,283,000,000 feet actually sold by Appellee in that year; and they rest their entire contention upon the terms and effect of certain "Agency Agreements" under which, *in the emergency existing pending the completion of the Astoria plant,* the New Amsterdam, Standard, Mutual and Central Union Companies delivered to Appellee said 3,000,000,000 feet.

1. The "Agency Agreements."

Such "Agency Agreements," a sample of which is quoted by the Master *(Record,* p. 184), provided for the delivery by said subsidiary Companies to Appellee of said gas at *bare cost of labor and materials employed by the producing Company, plus about 10 per* *cent.*; and the amount paid to the subsidiary Companies by the Appellee thereunder, in 1905, was $997,039.89, of which $893,432.49 represented cost of labor and materials, and the balance of $103,607.40 was said 10 per cent. (*Record*, pp. 184, 400, 407).

It will be noted at the outset that Appellee owned practically all of the Stock of the New Amsterdam Company (over 99 per cent.), which delivered *more than 70 per cent.* of the entire 3,000,000,000 feet (*City's Ex. 36*, *Original paging*, 7756), while the New Amsterdam in turn owned all the Stock of the Central Union Company (*p. 453*); and that Appellee also owned about *92* per cent. of the Stock of the Standard Company, and a majority of the Stock of the Mutual Company.

> NOTE—It is stated by Counsel for the Public Service Commission (p. 109), that the New Amsterdam Plant had by the expenditure of over One Million Dollars been enabled to supply Appellee with 2,173,196,400 feet per annum; but, of course, this is not all the expenditure necessary for the production of such gas. It was merely an additional expenditure, supplementing the extensive plant already existing. It has, moreover, been pointed out that the aggregate *sales* of Appellee and its subsidiary Companies were so close to their full *capacity*, that the immediate construction of the Astoria Plant was imperative (*ante*, pp. 94–5).

2. No "Return on Investment" to Subsidiary Companies.

If said $103,000 had been "profit" to the producing Companies in any sense, and available for application as "return on capital," it would have represented only about *8/10 of one per cent. on the value of the Astoria plant*, or (in the alternative) on the value found by the Master for the "property of other Companies" producing the 3,000,000,000 feet of gas for Appellee in 1905 (*Master's Report*, *Record*, pp. 185–6, 254); while even upon the sum of $5,097,000 *which Appellants' expert Marks concedes to be the value of such "property* of the other Companies," it would mean only 2 per cent.!

The Court was, therefore, fully justified in its conclusion stated in the Decree that said sum

> "did not include any reasonable recompense or return upon the value of the investment required to produce said gas" (*Record*, p. 432).

3. No "Profit" to Subsidiary Companies.

But said $103,000 was not "profit" to the producing Companies; *it was obviously more than consumed by items of expense outside labor and material*, such as Taxes, Insurance, Depreciation and Administrative Expenses necessarily attendant on a plant necessary to produce and deliver such an immense volume of gas—a volume substantially as great as the entire sales of gas in the City of Boston in 1905 (*Record*, pp. 2083–4), and approaching the *aggregate output* of the six constituent Companies at the time of their consolidation to form Appellee in 1884 (*Record*, p. 5039).

Thus, *depreciation* beyond "ordinary repairs" was fixed by Appellants' expert, Professor Bemis, at a minimum of 2% (*Record*, pp. 2485–6) on depreciable plant and this, upon depreciable property of only $8,000,000, which is less than the value of such property in the Astoria plant (*Master's Report, Record*, p. 182), would amount to $160,000; while, applied even to the inadequate estimate of Appellants' other expert (Marks) of the value of the "property of other Companies" producing said 3,000,000,000 feet in 1905 ($5,097,000), it *would consume practically the entire $103,000*, without considering Taxes and Insurance and Administrative Expenses in general.

The Court concluded that *Taxes* alone on the Astoria plant would amount to $90,000, and plus Administrative Expenses would amount to $134,000, on the Astoria plant (*Record*, p. 426); and, at that, the Court assumed a tax assessment of only $6,000,000 on Astoria, since the tax rate was about 1.50 (*Record*, p. 1002).

It is obvious, therefore, that not a dollar of real "profit" was included in said $997,000 paid by Appellee to the subsidiary Companies in 1905.

And the Court, recognizing this, characterized the payment as "bare station-cost" *(Record*, p. 400).

4. Contention of Appellants.

Notwithstanding this situation, clear and indisputable upon the Record, Appellants contend that the charge of Appellee for gas, in the present and future, is irrevocably bound by the amount paid to the subsidiary Companies under these temporary (and now expired) emergency agreements; which in effect, would compel Appellee to continue to sell at a price which will afford no return on its $12,000,000 investment in the Astoria plant, or any equivalent plant, from which it is now procuring gas.

POINT XVII.

Property "Employed" in the Public Service, the True Basis for Return.

Appellants overlook what we conceive to be the true principle, sanctioned by this Court in many cases. "The basis of all calculations as to the reasonableness of rates" is, as we construe the decisions, the fair value of the property being "*used*" for the "convenience of the public" *(Smyth v. Ames, 169 U. S. 466, 546; San Diego Land Co. v. National City, 174 U. S. 739, 757; Cotting v. Kansas City Stock Yards, 183 U. S. 79, 89).*

The basis of calculation is not the value of the property "owned" by the corporation delivering the service or the product, but the property which is "employed" for the public convenience; and this includes all the property which the corporation, by *direct ownership or lease or other arrangement, necessarily and reasonably* *employs or procures to be employed,* in performing the service or procuring or delivering the product.

> NOTE. It will be observed that the "Agency Agreements" in this case, provide as to each subsidiary Company that it shall "*employ* in such manufacture, production and delivery its own plant and appliances," (*Record,* p. 5049).

1. Value, Not Amount Paid, Controlling.

(a) If Appellee holds a piece of real estate under lease, the reasonable return upon the *value* of such real estate is allowed to Appellee in its operating cost of gas. It may be called "rental", but it is "return" upon the value of the land; and if Appellee pay an exorbitant rental, the fair rental and *not the rental paid,* will be the measure of the allowance for the use of such land, in computing a proper charge for gas.

On the other hand, if Appellee be in possession of lands leased fifty years ago, at a fair rental on the then value thereof, it—as the owner of an estate in lands—would be entitled to include the leasehold in its assets employed in the gas business, and receive a return upon it based upon the *present value* of the land.

(b) No more is Appellee or the State, concluded by the amount which Appellee pays or agrees to pay to subsidiary Companies for gas acquired,—than they (or either of them) are concluded as to value of land owned by the cost thereof, or of land leased by the amount of rental paid therefor.

Had the amount agreed to be paid by Appellee for the gas delivered to it by other Companies been excessive, as representing more than the cost of the production thereof *plus* a proper return on the property employed in producing and delivering it, *the amount would certainly be subject to reduction by the Court;* and if it be too little, computed on the same basis, Appellee is as surely entitled to the benefit of a computation which shall include such fair return, and the consumer is in no wise injured by that procedure.

(c) The question as to gas purchased by Appellee, as well as land used by it, is (in such legislation as now involved) not what it *costs*

Appellee, but what it is *worth ;* and that means the expense of production plus a fair return on the property producing it. If the manufacturer takes payment therefor in any other way than by acceptance of such amount, or chooses as a temporary and accommodatory measure to let Appellee have gas at "bare station-cost" or *gratis*, that is no concern to the consumer and is not controlling in the determination of the "*reasonable* price" for gas delivered to or by Appellee.

2. The Fair Rule.

In short, we take it to be axiomatic that a fair return upon the value of all the property required and employed to produce the gas delivered by a public service corporation to its consumers, *must be paid by such consumers ;* and *how this profit is distributed among the various parties or agencies who own or employ such property, is a matter wholly between them, with which neither the consumer nor the general public has any concern.*

The consumer cannot evade this proper payment by seizing upon a peculiar and special situation such as prevailed temporarily between Appellee and its subsidiary Companies pending the completion of the Astoria plant, any more than he could take advantage of the situation if he found such Companies temporarily delivering to Appellee gas gratuitously. **One may voluntarily sacrifice his property, but no legislature can compel him to do so by rate fixing or otherwise.**

If this were not the true principle, it would have been possible for the Legislature to seize the situation existing when Appellee and other Companies in New York were engaged in the "gas war" eight or ten years ago, and were selling gas to consumers at 50 or 60 cents per thousand,—less than enough to cover cost of production, to say nothing of return on capital,—and to enact a valid Statute compelling the continuance of that low rate, on the ground that the actual selling price of gas, and not the "reasonable price" as above defined, was controlling as to the power of the Legislature, to fix future rates.

The only rule surely working justice to the consumer and to the producer alike, is that including in the cost of gas a fair return upon the value of all the property reasonably and necessarily employed in the production and distribution of the product; and that, we submit, is the true rule in construing such Acts as are here in question.

3. The Theory of a "Surplus Product."

Thus falls the suggestion that the "Agency Agreements" may have given to the subsidiary Companies an opportunity to dispose of their "*surplus product*" *at a* "*profit.*"

(a) But it seems to have been overlooked that said Companies have no "surplus product" unless they make it; and that they cannot make it without proportionate manufacturing plant and land for that purpose.

For every hundred million feet of additional output, a Company is obliged to establish so many additional units of producing apparatus in the shape of generators, purifiers, condensers and scrubbers, which cover just so much more ground, and are *in exact proportion per thousand of capacity to the same apparatus thus supplemented.*

And again it requires just so much more material (oil and coal, as illustration) and labor *pro rata*, to produce each extra million feet of gas from this additional apparatus. Thus, it takes about one ton of gas-coal to produce each 10,000 feet of coal-gas, and about five gallons of oil to produce each 1,000 feet of water-gas, whether we produce in the aggregate a *million* or a *billion* feet (*Record*, pp. 1734, 4301).

In fact, as elsewhere said, it is conceded by Appellants' witness that after plants have reached a maximum annual capacity of say 700,000,000 cubic feet (and all the subsidiary Companies delivering gas to Appellee have surpassed that), there is substantially no economy in greater production (*Record*, pp. 1509, 2417).

If a gas Company were like a mineral spring, from which the product runs continuously without expense or effort, the theory of a "surplus product" might be more plausibly advanced.

(**b**) If the New Amsterdam Company has a maximum daily demand for 15,000,000 cubic feet of gas from its own customers, and also delivers 15,000,000 cubic feet to Appellee, thus employing its total capacity of 30,000,000 cubic feet, it is clearly using one-half its plant for the benefit of Appellee and its consumers. It would be idle to speak of its delivering such 15,000,000 cubic feet to Appellee to get rid of a "surplus product, which it would not possess unless it made it *for that very purpose.*

The very thought that, *as a business proposition*, Companies are delivering to Appellee 3,000,000,000 feet of gas at "*bare station cost*,"—with no "profit" or return on capital included,—is too repugnant to ordinary experience to justify discussion.

A Remarkable Argument.

Realizing, perhaps, the weakness of the argument as to "surplus product," Counsel for the Public Service Commission advanced in the Circuit Court a proposition so remarkable that (to avoid chance of inaccuracy) we quote his Brief :

> "It must be remembered that this eighty-cent gas litigation includes a suit against the State by *each one* of the sub-companies, as well as the present suit. Profits which the Complainant makes on the purchased gas by reason of the agency agreements, are profits which the sub-companies fail to make. **If their appropriation by Complainant makes it harder for Complainant to escape the eighty-cent gas law, by just so much that appropriation makes it easier for the sub-companies to escape."**

This suggestion well illustrates the situation into which the acceptance of the theory would lead. If, in the case above assumed, the New Amsterdam Gas Company's total manufacturing plant be of the value of $18,000,000, one-half of which is employed in producing the gas delivered to Appellee at "station cost" with no return on capital, and the other half is employed in producing the gas delivered by the New Amsterdam to its own consumers, the New Amsterdam Company (on Counsel's theory) will be entitled to charge *to the consumers of its own gas* a return on the *entire $18,000,000 of plant value,* which might raise the selling price to them to $1.20 per thousand; and on the other hand, *Appellee's* customers are to get their gas at a figure which includes a return on *Appellee's own* plants, but no return on the $9,000,000 of New Amsterdam property which produced a great part of it, thereby reducing the price of gas to Appellee's customers (at the expense of the New Amsterdam's customers, of course) to perhaps 90 cents!

How would such a proposition be received by the Circuit Court, upon the trial of the New Amsterdam case? Would the proposition be seriously advanced by Counsel in that case? Would not Counsel object to saddling upon the consumers of the New Amsterdam gas, a return upon one-half the plant used exclusively for the benefit of Appellee and its consumers; and strenuously claim that the New Amsterdam should be allowed to compute the return which it may charge against its own consumers, only upon the reasonable capacity (including reserve) which *their* requirements justified it in maintaining?

We submit that these questions answer themselves; and if they do answer themselves, it is obvious that *no consumers of any gas will pay a return on the value of that portion of the New Amsterdam plant* (as typical) *producing the gas delivered by it to Appellee, unless it be the customers of Appellee who consumed that gas.* And if such return is ever to be allowed, *it must be allowed now and in this suit.*

POINT XVIII.

Appellee's Investment In Subsidiary Companies, from which it received Gas in 1905 at "Bare Station-Cost."

While, therefore, it is Appellee's contention that, if, as an emergency accommodation, gas had been delivered to it as a pure gratuity, such a condition could not be presumed to be permanent, and a compulsory rate for gas could not be sustained which would exclude a fair and normal return on the capital producing it; nevertheless, *in view of the theory of Appellants* that the legal price of gas should include only amounts which Appellee was actually "out of pocket" in procuring gas in 1905 from subsidiary Companies, it may be appropriate to point out the fallacy of their assumption that Appellee and its stockholders were actually "out of pocket" no other or greater amounts than the $997,000 *paid directly to producing Companies.*

1. Appellee's Control of Producing Companies.

Appellee, as above noted, owns a majority of the Stock of each of the four subsidiary Companies (New Amsterdam, Standard, Central Union and Mutual), which delivered to it gas at "station-cost" in 1905; and of two (New Amsterdam and Central Union) it owns over 99%, and of one (Standard) above 92%.

It may also be noted that the Stock of these Companies was acquired by the issue of Appellee's own Stock in and after July, 1900; and all thereof was issued at $150 and upwards per share (*Record*, pp. 154, 848-9).

1. The Court says, referring to the acquisition of gas by Appellee from said Companies (*Record*, p. 406):

> "The three billion feet purchased in 1905, were obtained from Companies all but one of which are almost as completely dominated by Complainant as is The Astoria Light,

> Heat & Power Company; and in that one, it owns a majority of the Stock. *It has used that control or ownership to obtain gas at about holder cost plus ten per cent*".

It is impossible to suppose that these Companies would have delivered to Appellee such an amount of gas with no return on the investment employed, *had not Appellee so controlled them that any payment to said Companies representing a return on the value of the plant producing such gas, would have come (practically all) back to Appellee as the owner of their Stock.* The conclusion is so legitimate and inevitable, that it requires no argument to emphasize it.

2. "Bookkeeping" Treatment Not Controlling.

Had Appellee paid to such subsidiary Companies station-cost, *plus* a return on the investment producing the 3,000,000,000 feet, and thereupon received back in dividends the whole or any part of the amount paid as such "return", Appellants would not have questioned the propriety of including such "return" in computing the proper charge for gas sold by Appellee; and exactly the same point is reached if Appellee pays to the subsidiary Companies "*station-cost*" *alone*, neither paying such "return" to them nor receiving it back in dividends.

Again, if Appellee as the owner of all the Stock and obligations of the Astoria Company, which it received in exchange for $12,000,000 in cash raised by issue of Appellee's obligations, were to receive gas from the Astoria plant as a matter of bookkeeping at "bare station-cost", would it not be necessary in fixing the charge which Appellee might legally make to consumers, either to include said $12,000,000 of Debentures in Appellee's capital upon which it might earn a return, or to add to the station-cost of the Astoria gas a return (say at least 6%) on the value of the Astoria plant? And would it make any difference in law (**a**) whether Appellee paid to the Astoria Company the return ($720,000) on the value of the Astoria plant in addition to the station-cost of said gas, this amount being thereupon paid back by the Astoria Company to Appellee as dividends or interest and applied by Appellee to pay the 6% due on the $12,000,000 of its own obligations outstanding, or (**b**) whether the $720,000 was not thus sent about the circle, and Appellee paid for said gas only station-cost and then paid directly the interest on its Debentures ?

Is the principle in any way different where Appellee owns somewhat short of the entire capital of a Company, as in the case of the four subsidiary Companies above named, which delivered to it gas in 1905 ? And is its right to a return on its investment therein, by virtue of which it obtained this gas (as the Court repeatedly recognizes) at "bare station-cost" (*Record*, pp. 400, 406), to be governed by a method of "bookkeeping" instead of by the substance and effect of the transaction ?

3. The Circuit Court's Reservation.

It was pointed out by the Court in the Decree (*Record*, p. 432) that the $59,831,435 of assets found by the Court as the valuation of "Complainant's property actually employed in its business of manufacturing and supplying gas" did not include—

> "*the amount of Complainant's investment in the securities of other gas Companies*, from which Companies it was obtaining a large part of the gas which it delivered to its customers, *nor the value of the property of such other Companies* or any part thereof employed in the production and delivery to Complainant of such gas."

That the Court, as well as the Master, considered Appellee to be entitled to a return upon one or the other, to be computed either as return on its own capital or in the cost of gas delivered to it, is quite clear from the Court's action in including in such cost a return on the value of the Astoria plant, which it considered to be the proper source of supply hereafter.

Appellants, however, utterly ignore Appellee's investment and decline to admit that Appellee is entitled "in a charge for gas" to include a return, either on its investment in such other Companies or on the value of the plants producing the acquired gas.

4. Conclusion.

And unless the Court either (**a**) adds, *in some form*, to Appellee's own assets the value of the plant of outside Companies employed in producing gas for Appellee in 1905, representing the value of the property employed in the public service, as was done by the Master, or (**b**) includes in *cost to Appellee* of such gas a return upon the value of such plant, as was done by the Court, Appellee and its stockholders are denied any return on the entire investment (whether at Astoria or in other Companies in Manhattan from which gas is procured), which, as the Circuit Court clearly indicates (*Record*, p. 406), alone made it possible for Appellee to obtain gas from them at a bookkeeping charge covering only "station-cost".

There is, of course, no difference in principle whether the money for such investment was advanced by Appellee's *stockholders* or was financed by Appellee's Debentures, or whether Appellee's ownership of such plant be direct or indirect, or whether the dividends on Appellee's Stock or interest on its Debentures be derived (in so far as this investment is concerned) from net operating earnings, or from income from securities owned. It all comes to the same point,—that Appellee's *stockholders* would be in either case *out of pocket* the interest on the investment which made possible the procuring of gas from other Companies at station-cost.

POINT XIX.

Item "Contingent Expense (Includes Renewals)" $1,328,316.37—being Item 67 of Exhibit 94—allowed in whole by the Master, but only in part by the Court, as an operating charge in 1905.—No Fund for "ultimate disintegration" allowed.

The Attorney General, as bearing upon the propriety of adopting the present valuation of mains as distinguished from original cost, and also upon the proper rate of return on investment, asserts *(Brief, p. 101)* that—

> "Complainant has demanded and the Court has allowed, a large amount on account of depreciation of Complainant's depreciated property including mains, out of which they *are to be restored* (to wit, 11c. per thousand cubic feet)"—

and again, under the heading "Depreciation Should Have Estimated on the Whole Property" *(Brief, p. 176-7)*, suggests that there has been allowed to Appellee by the Court—

> "as an operating charge, a sum to provide for the *final* renewal of its plant—to conserve its plant against *ultimate* disintegration through natural wear and tear."

The Attorney General's assumptions in this regard are wholly erroneous. Instead of an allowance having been made to Appellee sufficient to provide for "*final*" (in the sense of *future*) renewal or "*ultimate disintegration*" of its plant, or any fund out of which mains (or any other property) "*are to be*" restored, the allowance actually made is insufficient to cover the *average actual expenditure* of Appellee for *current* "*upkeep*," as an examination of the Record will show.

A. Nature of 10c. Item, and Finding of Master.

Appellee's operating expenses for the year 1905, as shown by its books of accounts, and Exhibit 94 abstracted therefrom, include an item called "*Contingent Expense* (*includes Renewals*)," computed at 10c. per thousand cubic feet of Appellee's sales, amounting to $1,328,000.

This item of expense was thus intended to provide (**a**) for "*renewals*" of apparatus lost or worn out in any year (it will be observed that in the operating cost of gas—Exhibit 94—"*repairs*" are covered in various other items, but *no* "*renewals or replacements*," as the Decree recognizes—*Record*, p. 431); and it was also to cover, as the Master states, (**b**) an

> "allowance sufficient to bring the amount chargeable for *current repairs and renewals* for the year 1905, *up to the average of the Company's past experience*, and also of (**c**) a sufficient reserve fund to cover *final renewals and contingencies*" (*Record*, p. 253).

The cost of gas to Appellee as found by the Master, 65.84c. per thousand feet, included the "Contingent Expense" item referred to *without deduction;* the Master saying, after a most painstaking and careful consideration of the subject, to which we specially invite the attention of the Court (*Record*, pp. 224-238):

> "*I am satisfied* that the charge of 10 cents per thousand feet for "contingent expenses" *including renewals and replacements*, as shown by Item 67, is not excessive but, on the other hand *rather conservative*" (*Record*, p. 238).

Indeed, the testimony clearly established the fact, as Appellee believes, that this amount was required to meet (1) Appellee's *expenditures* for renewals during the year 1905, (2) to make up the *difference* between its expenditures for "Repairs and renewals" in 1905 and the average expenditures for the preceding twenty years, and (3) for *additional expenses* which *actually accrued in the year 1906* before the completion of the hearing. Thus—

(a) Actual Renewals and Replacements.

It was shown that the actual "Renewals" of property for the year 1905 were $282,219.67, or **2.12c. per thousand** cubic feet of gas sold (*Record*, p. 224).

This sum represented property actually worn out, lost and gone from Appellee's property account. It merely recorded what *had already happened in the year 1905*,—loss that had occurred "during the year" (*Master's Report, Record* p. 226). *It was in no way an allowance for future loss or abandonment.*

> In the case of "Plant," "Mains," "Services" and "Meters," which are the most important classes of Appellee's property, the individual items lost from them respectively, in 1905, appeared in Appellee's books and the amount was exactly stated (*Master's Report, Record*, p. 225). Thus, in "Mains" each item of pipe abandoned or removed, with its length, size and location, is entered in Appellee's books (*Record*, pp. 3861–3863).
>
> The other property items (*Record*, p. 226) are largely composed of many small individual parts or pieces; and accordingly the loss is stated in a percentage established by the experience of the Company, which is *none the less a practically exact amount and represents property value actually lost during the year in question.* It would be useless bookkeeping to attempt to define each piece of harness and each tool or implement disappearing from use.

(b) Amount to be Added, to "Average" 1905 with Appellee's Experience.

It also appeared that the amount *spent* by Appellee for "Repairs and Renewals" combined, in 1905, was only $974,289.65, or 7.34c. per thousand cubic feet sold (*State's Ex. L, Record*, p. 5080).

But the average expenditure for "Repairs and Renewals" for the twenty years preceding 1905, was 10.89c. per thousand feet sold (*Record*, p. 5079)—the amount spent in different years varying from 7 to 16 cents or over (*Record*, pp. 5078–80); and the difference, required to bring Appellee's allowance for "Repairs and renewals" in 1905 up to said average, was **3.55c. per thousand feet** sold (*Record*, p. 253).

The necessity of adopting an "average" amount for "Repairs and renewals", in computing normal operating cost in any one year, was—in view of the wide fluctuations of those items—universally recognized and conceded.

As the Master says—

> " A Company may in one year abandon, or suffer damage to, considerable quantities of apparatus with the result of placing the repairs and renewals for that year at a very high figure, whereas in the following year there may be a minimum of loss and the repairs and renewals be much less" (*Record*, p. 229),

and at a later page (*Record*, p. 253)—

> " *It is * * * the fact that the propriety of an allowance sufficient to bring the amount expended for current repairs and renewals for any one year up to the average covering a period of years, is fully established by the evidence.*"

(c) "Contingencies" Met in 1906.

Moreover, before the year 1906 had passed, three more items of expense materialized as found by the Master (*Record*, p. 228), the first estimated and the other two certain, as follows:

Additional cost of enrichment in order to maintain for a full year the standard of candle power provided by the statutes in question, the 22-candle power penalty having applied to only half the year 1905, whose operating cost was before the Master	1.83c.	
Increased taxes over the year 1906	1.13c.	
Increased cost of labor over the year 1906	1.40c.	
		4.36c.

B. Summary.

(**a**) Summarized, the situation, which in the view of Appellee justified the inclusion by the Master of the contingent expense item to the full amount of 10c., was as follows:

Actual cost of Renewals and Replacements in 1905		2.12c.
The difference between the average cost of *Current* "Repairs and Renewals" for twenty years	10.89c.	
and the cost of "Repairs and Renewals" in the year 1905	7.34c.	3.55c.
Allowance for Current Expenditures		5.67c.
Additional cost of Enrichment for 1906	1.83c.	
Increase in Taxes—for 1906	1.13c.	
Increase in Labor— " "	1.40c.	4.36c.
Total		10.03c.

Thus is consumed the entire 10 cents and a trifle over.

(**b**) Or, presented possibly in a clearer way, the computation appears as follows:

Expended for "Repairs" as shown in State's Exhibit L (*Record*, p. 5080), $692,069.98, equalling, on Appellee's total sales	5.22c.
Ten-cent item "Contingent expense (includes renewals)"	10.00c.
Total of said two items	15.22c.
Average for "Repairs and Renewals" (*ante*, p. 138)	10.89c.
Balance	4.33c.

(**c**) Thus it appears that after allowing for repairs and renewals in operating cost of 1905, and an amount equal *only to average annual expenditures for repairs and renewals* for the Company's experience, there was left but 4.33c. of said 10-cent item; which, as above seen, was more than consumed by the three items of enrichment, taxes and labor, 4.36c., *all occurring as early as 1906*, as found by the *Master* (*Record*, p. 228); and all of which, *except 1.8c.* would be consumed, even if we exclude from consideration the enrichment item (1.83c.), which the Court thought not sufficiently sustained by the evidence (*Record*, p. 424).

And this leaves nothing (or at most only 1.8c.) for " future" renewals or " contingencies."

C. Allowance by the Court less than Admission of Appellants.

Not only did Counsel for the Attorney General and the State Gas Commission introduce State's Exhibit L (*Record*, pp. 5078-80) showing in detail Appellee's expenditure for repairs and renewals from the beginning of business in 1884, and the average to be 10.89c. per thousand sold; and request the Master to find—as the Master did find—

> " That the Complainant *has expended* on account of repairs and renewals for the twenty years preceding 1905, an average of *10.89 cents per 1,000 cubic feet* " (*Record*, p. 276)—

but we find the following concession in the Attorney General's Brief (p. 194) in this Court:

> **" We concede to Complainant for the purpose of this memorandum an allowance of 10.89c. per thousand cubic feet to cover repairs and cover renewals, current and final."**

1. Indeed, the findings of the Master, and the concession of the Attorney General to that effect, are supported by overwhelming, if not unanimous, testimony—even excluding Appellee's witnesses who all supported them.

(**a**) The New York State Gas Commission, in the investigation resulting in the Order of February 23rd, 1906, which is here in issue, included in said computation not only the amount actually spent in repairs and renewals for the year examined by them, but also—in their own words—

> "*an additional sum sufficient to bring the expenditures for repairs and replacements to the average expenditure by the Company for twenty years for those items*" (*Record*, p. 32).

(**b**) Appellants' own expert, Professor Bemis, likewise allowed in his computation of Appellee's operating cost for 1905, *both before the Gas Commission and in this suit*, an additional amount sufficient to bring the repairs and renewals for the year under consideration up to the twenty year average of 10.89c. per thousand feet of gas sold (*Record*, pp. 2346, 2496).

(**c**) The Chicago Committee, in their recent investigation of gas operations there, likewise added about 4c. to the expenditures for renewals for the year which they examined, to bring the "repairs and renewals" for the year up to a normal figure which they found to be the fair average there—10 cents (*Record*, p. 2573).

And Professor Bemis, after *there* accepting 10.16c. for "Renewals and Repairs", *and allowing 3c. per thousand feet as a "reserve" fund* in addition, said (*Record*, p. 2706)—

> "It must be remembered that exclusively water-gas plants like that of Chicago *do not require as large repairs and renewals as do the mixed coal-and water-gas plants of New York.*"

2. The following computation shows the amount thus conceded by Appellants as compared with the amount allowed by the Court:

Average annual expenditure for "Repairs and renewals" conceded by Appellants as properly chargeable, to wit: 10.89c. on 13,283,000,000 feet of gas sold in 1905 (our multiplication)	$1,446,536.45
Allowance by the Court on account of "Repairs and Renewals" (*Record*, p. 405)	1,172,359.10
Allowed by the Court, below amount conceded by Appellants	$ 274,177.35

That is to say, the allowance by the Court for "Repairs and Renewals" was nearly $275,000 less than conceded by said Appellant; and a simple computation shows that the allowance by the Court was only *8.88c. per thousand*, although the actual average expenditure by Appellee for repairs and renewals even in the last eleven years of its experience, *during a great part of which there appeared in its operating cost no allowance for renewals attendant upon the production of the billions of feet of gas obtained from subsidiary Companies*, was *9.73c. per thousand* feet of total sales (*Master's Report*, *Record*, p. 229).

D. The Ground of Action of the Court.

This result came about, from the Court's mistakenly applying the accepted unit of 10.89c. (the Court took the round figure of 11c.) to the gas *of Appellee's make only*, 10,657,810,000 feet, on the theory that the distribution of the 2,929,210,000 feet of gas derived from other Companies (*Exhibit 94*, *Record*, p. 220), *had contributed nothing to the requirement for repairs and renewals* in Appellee's distributing system.

This may be gathered from the following statement of the Court below (*Record*, p. 400):

> "It appears, however, that it would have cost substantially as much to distribute the ten and one-half billion feet which Complainant made as it did to distribute the thirteen and a half billion feet sold during the period of inquiry; it entailed no measureable expense to pass the additional three million feet through holders, mains and services."

—in other words, that Appellee's *gross expenses* ought to be no greater under sales of 13,500,000,000 feet, than when its business amounted to only 10,500,000,000—a theory so startling as to command attention, but elsewhere shown to be wholly unsound (*ante*, pp. 110-4).

But it seems to have been overlooked that, even if the theory were sound, the fact would remain that the expenditure for "Repairs and renewals", as shown in State's Exhibit L, *averaged, 10.89c. on Appellee's total sales;* and a computation of the requirement for "repairs and renewals" for any one year on *any other basis* could not possibly bring a just result or provide the amount required for average expenditures of this character.

3. In short it is most respectfully suggested that the learned Court below failed—in the limited time at its disposal and with such a great record to consider,—to grasp clearly the facts and the principles applicable in the situation.

> (**a**) Thus it speaks of the repair items of Exhibit 94, aggregating $685,077.47 (*Record*, p. 402) as "Repairs *and Renewals* of 1905, stated in Station and Distribution Cost" (*Record*, p. 405); whereas examination of Exhibit 94 shows that they are "*Repairs*" *alone*, no renewals being covered except in the "10 cent item" in question.
>
> (**b**) Again, it refers to the item "Contingent expense (includes renewals)" as a "*ten per cent. reserve*" (*Record*, p. 403); whereas, as above pointed out, over $282,219 thereof represents actual losses in 1905, and all but 4.33 cents thereof was consumed by *average actual expenditure* from year to year, without laying aside any "reserve" or "ultimate disintegration fund";—and the Court did not allow even such *average expenditure.* And, moreover, said 4.33c. would have been all or substantially all consumed within the next year by actual additional expenses (*ante*, p. 139).
>
> (**c**) And again referring to the expenditure in "construction" account of the sum of $282,219, to offset and make good said property loss of $282,219 in 1905, it said (*Record*, p. 403):
>
> > "The distinction between depreciation of that kind and new construction seems to me very shadowy"—
>
> apparently overlooking the fact that every expenditure in "upkeep" of property—*whether it represents a new bolt and*

is classed as a repair, or a new boiler in place of a worn out one and is called a "renewal" or "replacement"—is "new construction" in the sense that it is new material; but is nevertheless chargeable to operating expense *to the extent of the loss which it makes good.* The Master was entirely clear on this point *(Master's Report, Record,* pp. 224–7).

(**d**) And also, referring to the sum of $783,561.36, unexpended in 1905, the Court remarks *(Record,* p. 403) that such sum repeated for twenty years would "produce a fund sufficient to reconstruct Appellee's entire plant", apparently overlooking the fact that the depreciable property of Appellee as found by the Court represents about $35,000,000 of value (*Record,* p. 432), so that instead of "twenty years" the period for the reconstruction of Appellee's entire plant affected by "depreciation" would be over 45 years; and also the fact that the greater part of said $783,561.36 is consumed by the 3.55c. above conceded to equalize Appellee's expenditures for "Repairs and renewals" for 1905 with the Company's average current expenditures for these purposes, and therefore could not represent a "*reserve*" fund for "ultimate disintegration," or scrapping.

(**e**) Nor can it be said that "the business of selling gas purchased was proportionately far more profitable than that of selling gas of the vendor's own manufacture" *(Record,* p. 400), *except as this may be made to appear by denial of any return on the property of subsidiary Companies manufacturing such gas,* and the attributing of the *entire distribution* and *general expense* to Appellee's own gas, as was done on the erroneous theory above pointed out *(ante,* p. 105*a*).

Dr. Humphreys' Testimony.

Counsel for the Public Service Commission devotes much space to an analysis of the views of Dr. Humphreys on the subject of "depreciation," and to a computation as to what would have resulted if the Doctor's theory had been accepted by the Court (*Brief*, pp. 113–123). It is not necessary to traverse Counsel's argument, in view of the fact that the point is academic. Dr. Humphreys favored a fund amounting to 14.145c. per thousand feet "for repairs, renewals and depreciation," and in addition "a reserve to cover contingencies" of 5c. (*Master's Report*, p. 233); but the Court allowed only 8.88c. to cover everything (*ante*, p. 143).

E. Appellee's Total Expenditures for "Repairs and Renewals," since Organization.

Appellants refer to the total amount expended by Appellee for "Repairs and Renewals" from its organization to 1905 *inclusive*, $17,392,512.68, as a very large sum; but they overlook the fact that it had relation to **sales reaching the enormous amount of about one hundred and sixty-four billion cubic feet** (*Record*, p. 5039); and that in proportion to sales such expenditures are only a fraction over 10 cents per thousand,—a rate considered by Appellant's own witnesses as moderate.

Erroneous Basis for Estimating "Repair and Renewal" Requirements.

It is suggested that the true method for calculation in determining the amount required for "Repairs and Renewals," is by taking, not the percentage per M. of sales, but the proportion which repairs and replacements for each of several five year periods, bore to the total property of the Company which is subject to repair and replacement (*Brief for Public Service Commission*, p. 251). And Counsel points out that the proportion is nearly constant at three and a fraction per cent. for each five year period examined, beginning with 1890–1894.

This is plausible, but not sound in practice. The amount of "repairs and renewals" required, depends not alone on the amount of depreciable property, *but very largely upon the amount and severity of use of the property.*

Hence, during the last five year period taken, 1900–1904, when Appellee was making and distributing more gas than ever before and working its plants to the utmost, the percentage of wear and tear should have *exceeded* the earlier period, 1890–4. That it apparently did not, requires an explanation; and it is found in the fact that Appellee's accounts do not include any expenditure for replacements in *the property of the subsidiary Companies, which were employed in the production of nearly twenty-five per cent. of the gas which Appellee had been in the last period distributing.*

The best criterion as to the amount of "*use*" of a gas system, is the amount of gas that it puts out; and hence a certain number of "cents per M." on each thousand, as determined by average experience, is the most safe and accurate guide for "repairs and renewals."

Counsel for the Appellant is not, we assume, experienced in the gas business, and it might fairly be presumed, that *when all the practical witnesses on both sides of this case* unite in estimating in "cents per M."—they are following a rule which experience has taught to be the most reliable.

F. The Expressions of this Court on "Depreciation" Charges.

As we understand the expressions of this Court, they have recognised the value to the public, as well as to the Company concerned, of a not too constricted allowance for maintenance, depreciation and contingencies,—even in the case of a Public Service Corporation.

The position is thus stated by this Court in *Union Pacific Railway Company vs. U. S.* (99 U. S., 35, 421–2):

> "We think that the true interest of the government in this case is the same as that of the stockholders; and will be subserved by *encouraging a liberal application of the earnings to the improvement of the works.*"

And in this connection attention may be called to the fact that the Interstate Commerce Commission, and other Public Service Commissions, doubtless following what they understand to be sound policy approved by the courts, *require* the corporations under their jurisdictions to set up an appropriate "liability depreciation account" for each of their several classes of depreciable property, including an amount for "accrued depreciation"; and to charge into said account *monthly* the amount of such depreciation, which thereby becomes an item in "operating expense."

In the present case Mr. Mayer found depreciation in Appellee's plants of over $604,000, which amount he deducted in his valuation; but this $604,000 is nowhere covered unless a "depreciation" or "reserve" account be allowed to Appellee (*Master's Report*, p. 227).

G. The Institution of the Account not an "After-Thought."

It has been suggested in this Court, as it was suggested to the Master, that the institution of this special 10c. account to cover contingencies and "renewals," was an afterthought, due to the investigation of the Stevens Committee in April and May, 1905.

As the Master says (*Master's Report*, *Record*, p. 228):

> "If the account in question is in itself a proper one, the fact that it was not opened until 1905 has little bearing upon the issues now to be determined."

But the Record clearly shows that the suggestion is wholly baseless.

(**a**) The opening of such an account was discussed by the officers *in 1904* (*Record*, pp. 1665-6), the Vice-President of the Company *testified in Boston* that such an allowance of 10 cents was required (*Record*, p. 1656), and it had been *agreed among the officers* of the Company that an account of this general character should be opened *(Record*, pp. 1665–6),—**all before the appointment of the Stevens Committee,** which was not made until March, 1905 *(Record*, p. 1673).

Indeed, the only detail which was left undecided before the appointment of said Committee, was the amount to be required by this account, *it being argued by some officers that 10 cents would prove to be inadequate* to cover actual expenditures for renewals and other items above enumerated (*Record*, p. 1666), as it has in fact proved to be. It was finally decided in May, 1905, to limit it to 10c., and it was entered in the books for *each month*,—dating back to January, 1905, so as to cover the fiscal year.

(**b**) The opening of this definite "10-cent" account did not in fact alter the practice of the Company at all. Theretofore it charged the cost of property *actually and currently lost*, to a "depreciation" account, and *carried unexpended allowances* (whether to make good such *current* loss or provide for *future* loss, *in its general "profit and loss" surplus account.* There was just as much money on hand, and just as much protection afforded by that method; and the present method was introduced merely for greater definiteness, transferring to the special 10-cent account items and allowances which had been theretofore carried *for the very same purposes* in profit and loss "surplus."

(**c**) Appellee, in its segregation of said "10 cent item," from its "profit and loss," account, adopted the practice *required* by the Interstate Commerce Commission, and New York Public Service Commission, above pointed out *(ante*, p. 148).

H. Erroneous Assertion as to Increase of Property From Earnings, and as to Cost of Increase in Capacity.

Counsel for the Public Service Commission, in discussing depreciation (*Brief*, p. 119), says:

> "The total of the new construction, together with all additions to real and personal property up to October 31st, 1906, amounted to $9,693,595.90 (Complainant's Exhibit 79, p. 5032). The amount contributed towards this expense by

> *new capital cannot have been more than $3,929,371.82* (p. 23, *supra*). Hence *current net earnings must have contributed at least $5,764,224.08*, over and above all current and final renewals found necessary for the first 21 years of the Company's existence. *The $9,693,595.50 increased the manufacturing output to two and a half times that of 1884 and increased the distributing capacity to an extent enabling Complainant to more than quadruple its sales.*"

Nothing could be farther from the facts.

(**a**) We have already pointed out (*ante*, p. 23) the complete inaccuracy of the assertion that the entire amount of " New capital " of Appellee introduced in its gas business since 1884 was $3,929,371.82. Consequently the argument that " current net earnings must have contributed at least $5,764,224.08 " to said sum of $9,693,595.90 falls with it (*ante*, p. 23) ; and all computations involving the erroneous figures are valueless.

Nor did any part of the said sum of $17,392,512.68, charged for " repairs and renewals " since 1884, go for anything but " upkeep " of property ; not a dollar thereof was spent to increase the investment. The line was rigidly drawn, as explicitly testified (*Record*, pp. 4446–7).

(**b**) Nor is there any better foundation for the suggestion that said $9,693,565.90 " increased the manufacturing output to two and one half times that of 1884 " ; and " increased the distributing capacity to the extent of enabling the Appellee to more than quadruple its sales."

As elsewhere said, Appellee's system, in 1884, had in every direction *a capacity far beyond its sales* (*Record*, pp. 1714, 5039). It had land sufficient for a capacity of 50,000,000 cubic feet per day, or practically equal to its present capacity of 51,000,000 feet ; while by the expenditure of only a million dollars, its manufacturing plant could have been brought up to a capacity of 33,000,000 feet (*Record*, p. 6464), many items being already up to that capacity.

The $9,693,565.90 by no means, therefore, increased capacity, either at works or in distribution system, as assumed.

PART FIFTH.

The Rate of Eighty Cents per thousand as related to Other Companies in the City of New York; Comparison of gas charges, or operating expense, as between different Companies; the Question of Pressure; and the Investigations of the Legislative Committee in 1905 and Gas Commission in 1905-6.

POINT XX.

The Rate of Eighty Cents per Thousand Feet, as Related to other Companies in the City of New York.

Appellants complain that the Record does not contain sufficient evidence

> "to show that the rate of eighty cents per thousand cubic feet * * * does not afford a fair and reasonable return to the [*other*] *Companies* doing business in the said City," the evidence being limited to the valuation of property and operations of the Complainant alone; and further that the record does not show but that the said rate would afford a fair and reasonable return upon the value of property employed in the making and distribution of gas by a Company in same territory with the Complainant, well located and equipped and economically managed, but that the case was decided on the theory that if the statutory maximum price does not afford * * * a sufficient rate of return upon the value of the property employed in its business of making and distributing gas * * * the statute is void as to that Company irrespective of its effect upon other Companies doing business in the same territory" (*Record*, pp. 481, 436).

Why Appellee should be obliged to try in this action, the cases also of the three or four other gas Companies operating in the Borough of Manhattan, to say nothing of the many others operating in the other Boroughs of the City of New York, is not apparent. It might very well be in many cases (although there is nothing in the present record to indicate it to be true here), that a rate which would permit a just and reasonable return to one gas Company, would under sound legal principles not afford such return to another, even in the same territory; and the theory that all Companies must be fitted to one "Procrustean Bed" (to employ the term of the Court below on the argument), is a novel one.

1. Coal or Water-Gas?

Of the two best known kinds of gas, coal-gas and water-gas, one is manufactured largely from gas-*coal* and the other from gas-*oil* When coal is high, coal-gas may cost the more; and when oil is high, water-gas may be more expensive.

Moreover, the initial cost of a coal-gas plant is much greater than that of a water-gas plant *(Record*, pp. 3747–8), and the amount required to pay a return thereon per unit of capacity, correspondingly greater.

Is it seriously contended that the assets of a coal-gas plant are to be valued on the basis of cost of a water-gas plant of the same capacity, or *vice versa?* And is the ideal "station-cost" of gas to be computed upon the basis of a water-gas production, or a coal-gas production, or a mixed water and coal-gas production such as Appellee's?

2. Uniformity Within What Area?

Again, within what territory must all Companies conform their assets and charges to the "ideal" Company? The City of New York, even the Island of Manhattan alone, comprises a territory greater than that occupied by Troy and Albany, with the territory between the two. Would it be claimed that the capital or expenses of the Troy Company should be irrevocably governed by those of the Albany Company?

Moreover, in the Island of Manhattan, it appears that the Standard and New Amsterdam Companies (whose organization was comparatively recent), and The Mutual Company which is an old one

(*Record*, pp. 527, 4318, 817, 5292), do business wholly in the more congested part of the Island of Manhattan (*Record*, p. 4499), while Appellee has its mains in every opened street in the City, having extended its service to the outlying and sparsely settled sections where consumption per mile of main is the least (*Record*, p. 4499). Must Appellee, thus operating a service of different character, be arbitrarily conformed as to assets and operating expense to the other three Companies, if their assets or cost per thousand should be found to be less than Appellee's?

3. The London Companies.

In London there are three great Companies,—the London Gas Light & Coke, the South Metropolitan, and the Commercial,—and no two of these charge or are required to charge the same rate for gas (*Record*, p. 4741).

The land of one may be more valuable than another, for one reason or another; no two Companies in the nature of things can exactly duplicate each other's advantages, disadvantages and personal equations.

Indeed, it was conceded in this case by the witnesses of both Appellee and Appellants, that no two Companies, even in the same City and under similar conditions, can produce gas at exactly the same cost, a difference of a cent or two between them being not at all unusual or significant (*Record*, p. 4470).

4. Appellee's Five Plants.

It was said below that Appellee had five "scattered plants" instead of one colossal plant; but if that were a disadvantage, it would be a circumstance directly related to the natural and necessary growth of Appellee and its predecessors, in meeting the requirements of the community as pioneer Companies, and would afford no legal ground for confiscation of any part of its properties.

But individual plants of the size of Appellee's, are equally economical with larger plants in production of gas. Professor

Bemis, Appellants' expert, testified that when a plant has an annual capacity of 700,000,000 cubic feet per annum, there is practically no economy in greater production in a single plant (*Record*, p. 2417); and the *smallest* one of Appellee's plants (42nd Street) has a capacity of 4,500,000 cubic feet per maximum day (*Record*, p. 1393), equivalent to an annual capacity far beyond 700,000,000 feet.

Indeed, examining the figures of all Companies operating on the Island of Manhattan, it appears that Appellee's station-cost (about 31 cents per M. for water-gas) is substantially less than that of the old Mutual Company, for the same kind of gas (*Record*, p. 4472); and but a trifle in excess of station-cost to the more recent Standard and New Amsterdam Companies, due to advantages possessed by them which have no relation to efficiency of plant or operation (*Record*, pp. 4472, 4469).

5. Location, Equipment and Management.

There is no finding, nor is there any evidence to support the suggestion, that Appellee was not well located and equipped, or not "economically managed."

(**a**) Substantially the only criticism on Appellee's operating account, related to the price paid for oil, and the price received for coke and other residuals; and the Master has fuly considered and found directly against Appellants' contentions in that regard (*Record*, pp. 239-40).

The matter of "oil" is briefly discussed under another Point (*post*, p. 160).

Finding of the Master.

The general question of "management" is fully met by the following finding of the Master (*Record*, p. 255):

> "Nor is there any satisfactory evidence that any of the expenditures of Complainant for material, labor, or otherwise, in the manufacture and distribution of gas, have been improper, unnecessary, or unreasonable."

(**b**) The character of Appellee's "equipment" has been fully discussed, at another point (*ante*, pp. 38–50).

It may be generally observed, however, that the fact that it produced gas at less than the Mutual, and at substantially the same rate as the New Amsterdam and Standard Companies, is of itself significant evidence on the subject; and the finding of the Master *at the request of Appellants (Record*, pp. 276–7), that more than 4/5 of Appellee's capacity is in the shape of "*modern, up-to-date water-gas plants, which could not be improved upon anywhere*," and that the balance of the capacity (coal-gas) is "*efficient and in shape to operate for an indefinite period without impairment*" (*Record*, p. 277), covers the whole ground.

6. General Principles Applicable.

It is respectfully urged that a lighting Company which has made its investment *reasonably and prudently*, cannot be deprived of its property by being compelled to sell its product at a rate which will not allow a "just and reasonable" return upon that property.

If several Companies are allowed to charge a price for gas which will return to each 8 per cent. upon the value of its investment, *reasonably acquired and devoted to the public service*, they have the "equal protection of the law"; whereas if one Company were allowed to charge $1.00 and make 6 per cent. return, while all other Companies were limited to $1.00 but could only make 3 per cent. return, in each case on the *reasonable value of their respective properties prudently produced*, they would be clearly denied such "equal protection".

A Company may be compelled, in self defence, to reduce the return earned on its property to less than a "reasonable one", or may be put entirely out of business, by the discovery of a new process which may result in a great reduction in the cost at which the product can be made and marketed, as compared with the cost to the former Company; but this affords no authority to the *State* to take the property of such original Company *vi et armis* without "just compensation".

If it had been shown that Appellee's property was in excess of the requirements of its business, instead of being insufficient therefor, or that such property had been extravagantly or imprudently acquired or established, or that the present value thereof was less than the valuation actually placed thereon by the Master, a different situation might arise; but the Master has found *(Record,* p. 254):

> "There is no satisfactory evidence that the cost to Complainant of said property was unreasonable or excessive; or that the cost of production of said property was enhanced through faulty construction or waste; or that the various sums expended from time to time by Complainant or its predecessor Companies in permanent improvements and betterments were not intelligently and properly expended or that any such expenditure was made otherwise than providently and honestly."

Therefore the authorities cited by Appellants, holding that the public may not be compelled to pay a return upon property extravagantly or unreasonably produced or valued, or held in excess of the fair requirements of the business, have no application whatever to the present situation, and it is not considered necessary to distinguish them individually.

Economic laws may do that which the State has no power to do. It may be that a process will be devised by which, in an inexpensive plant and by a newly discovered method, gas may be sold at 25 cents per thousand feet and produce a reasonable return on the value of the investment; but certainly no Legislature would in that event have the power to *compel* every coal- and water-gas plant now operating to sell its product at that rate. The *situation* might force an old Company out of business, but the *State* could not do so by legislative Act directing it to sell its product at less than cost; and if it still found the community, from "love and affection" or other motive, willing to purchase its product at a rate which would produce a reasonable return on its investment, it would be entitled (if possessing continuing franchises) to continue its business and to sell at that rate,—regardless of the fact that the new Company might be profitably selling *its* product at one-fourth the charge, or of any Act of the Legislature attempting to establish that as the maximum price for gas.

POINT XXI.

Comparison of gas charges of different Companies, or elements of operating expense, valueless without adequate data and analysis.

A.

Charge for Gas.

As Mr. Cowdrey, of the Laclede Gas Light Company of St. Louis, said, in the Chicago investigation (*Record*, pp. 2512-16) :

> " There are *no two places probably in the United States* where the conditions are the same. * * * The only way that one can get at the proper cost in any particular place is by making a *careful investigation in that particular place*, and by taking *all the conditions* into consideration that exist *there*."

And yet Appellant, The City of New York, calls attention to the " McMillan Companies " operating in—

1. Detroit, Milwaukee and Grand Rapids—

with the remark that they were selling gas at the time of the trial at considerably less than the $1.00 rate charged in New York (*Brief*, p. 64).

Dr. Humphreys, referring to these very Cities, declared that as a general proposition he would not—

> " consider it possible to achieve the same results in New York City as to the cost of gas as can be achieved in the Lake region * * * in which those Cities are located " (*Record*, p. 4704),

continuing—

> " Q. I will ask you whether you think it possible to make any comparison or to draw any deductions as to the price in New York, or the prices charged in those Cities, without a complete analysis of accounts and costs of other items?

> "A. It would have to be made with an expert analysis, and when I say 'expert' I mean expert both from the operating standpoint and the accountant's standpoint; an analysis other than that would not be of any special value. We would have to know as to the exact classification of all the items" (*Record*, p. 4704).

If, however, we consider these Cities, upon what pertinent data appears in the *Record*, we find that at the time of the trial their average selling price was 84.95 cents per M. (*Record*, p. 4494):

(a) But these are "Lake Cities", where *coal* is *cheaper* and *residuals* are *higher* than in the City of New York (*Record*, p. 4702). A ton of gas-coal produces about ten thousand feet of gas; so that if gas-coal be *even one dollar per ton* cheaper in those Cities than in New York, it would make 10 cents difference in the cost per 1,000 feet of coal-gas (*Marks*, *Record*, p. 2030).

(b) Oil also is cheaper in the Lake Cities, being only 2¾ cents at Cleveland (*Record*, p. 2437), as against an average cost to Appellee of 4.52 cents (*Record*, p. 4205), or about 1.77 cents less. As it requires about five gallons of oil to produce 1,000 feet of water-gas (*Record*, p. 2030), *this item alone* would mean a difference of 8.88 cents in cost of water-gas, on the assumption (which is a fair one) that oil costs the McMillan Companies approximately the same as the Cleveland Company.

(c) Moreover it appears that the candle power at the works in those Cities was only 18, as compared with 24 for Complainant (*Record*, pp. 3267, 4583), representing a difference of about 5 cents additional for *candle power alone*.

Cost to Consumers Per Candle Power.

As to consumers of the gas, a simple computation makes it appear that (cost of production ignored), consumers in those Cities were paying *$1.23 per thousand feet* to procure the same illumination (24+ candles) which the New York consumer obtains at $1.00 (*Record*, pp. 4538–9),—in other words, illumination *per unit* was costing those consumers nearly 25% more than consumers in Manhattan.

2. Boston.

Professor Bemis stated that, at the time of the trial, Boston was the *only City in the East* (*i. e.* east of Ohio) where a rate of less than $1.00 was established *by law* (p. 3418).

That City, as is well known, is operating under a recent "sliding scale" Act, which starts with a 7% return on capital with gas at 90 cents, allowing the Company to increase its dividends 1% for each 5 cents reduction in the price per M of gas.

The Company, in trying out this plan, had reduced the price to 85c. at the time of the trial, and possibly has reduced further since; but *it may increase to 90c. at any time* (*Record*, p. 2712).

The situation in Boston, as to cost of production, is, however, peculiarly favorable for the East, and its selling price is no criterion for other Cities.

(**a**) In the first place, the legal candle power in Massachusetts is *16 candles*, as against Appellee's 22. Thus 85 cents in Boston, would therefore mean at least *90 cents*, if adjusted to 22 candle power.

(**b**) Further than this, the Boston Company received over one-half its gas from the New England Gas and Coke Company (a *coke* and not a *gas* Company), *as a by-product*, at *23 cents per thousand feet* (*Record*, p. 2654),—such price being made possible by the fact that said Coke Company was formerly controlled by the same interests which owned the Dominion Coal Company, and had received an exclusive contract for its gas-coal at about *$1.95 alongside in Boston* (*Record*, p. 2509), as against $3.18 per ton paid by Complainant (*Record*, p. 217).

And Professor Bemis necessarily concedes (as is clear enough anyhow), that the cost of the gas sent out by the Boston Company would be higher "*if it did not buy so much in bulk from the New England Gas and Coke Company*" (*Record*, p. 2711).

(**c**) Moreover, it appeared that the earnings of the Boston Company included profits from its electrical and outside gas operations;

and even including these, there was no evidence that the Company was able to earn even five per cent. upon the appraised value of its property, which is greatly in excess of its share capital (*Record*, p. 12).

3. Conclusion.

Without taking space for reference to other Cities mentioned in the Record, it may be generally stated:

> (**a**) That in *every one* of the few cases where gas was being sold for less than $1.00, there appeared a difference in the cost of oil or of gas-coal due to the local conditions, or of candle-power maintained, or of both together, which accounted for the lower price.
>
> (**b**) That in *every case* consumers in those Cities were paying more, *per candle-power*, for illumination than consumers pay in Manhattan at $1.00.
>
> (**c**) That no price for gas, prevailing in any City cited justifies a rate in New York of *eighty cents for twenty-two candle-power gas or anything approaching it*; but, on the contrary so far as the prices in other Cities quoted were in anyway of value, *they condemn an eighty cent rate for a 22 candle-power gas as without precedent.*

B.

Price Paid by Appellee for Oil, Compared with Other Companies.

It was stated by Appellant, the City of New York (*Brief*, p. 59), that the Appellee "claims it is required to pay more per gallon to the Standard Oil Company than other Companies in Greater New York," * * * and this increases unnecessarily the apparent cost of gas by about five cents per 1,000 cubic foot.

It should be said at the outset that the citations "(*Record*, *Exhibit* 94, pp. 2312 and 3674)" *in no way bear out the statement that the "cost of gas"* ("apparent" or otherwise) to Appellee is about "five cents" per thousand more than to other Companies in the City of New York. On the contrary, as hereinbefore pointed out, its station cost *is substantially the same as that of all other Companies operating in Manhattan Island* (*ante*, pp. 40–1).

1. The oil used by Appellee costs from 4.29c. to 4.875c. per gallon (*Record*, p. 239). In their discussion of the subject, Appellants apparently fail to recognize, that "*gas-oil*" is a generic term, including *many grades and qualities;* so that for one "gas oil" a Company may better afford to pay 5 cents, than to pay 3 cents for some inferior grade.

2. Appellants' witness, Marks, quoted from "Brown's Directory" *data* indicating that certain Companies in New York State outside the City paid in 1905, an average of 3.65c. for oil (*Record*, p. 1916). It is obvious that in the absence of *data* as to *quality* these figures convey no argument; and Appellee's Vice-President, from the same authority, showed that the Companies in New York State omitted by Mr. Marks paid from 4.12c. to 7c. per gallon, and a mean of 5.035c. (*Record*, p. 4212).

3. As to the Companies cited by Appellants within the City of New York, as procuring oil at a cheaper price than Appellee, it appears at the outset that each of them consumes an amount of oil which is insignificant as compared with Appellee's requirements (*Record*, p. 4203), and might probably be supplied by any number of individual producers. Thus—

Brooklyn Borough..........	670,760	gallons per annum:
Kings County..............	1,395,408	" " "
New York & Richmond.....	832,405	" " "
Queens Borough............	421,346	" " "

while Appellee's contract calls for the delivery of *255,000,000 gallons in two years and eight months (Master's Report, Record*, p. 239).

It is true that the immense requirements of Appellee can be met only from one source. Even Appellants' "independent" oil witness from Ohio was unable to name any other producer which had ever undertaken to fill such an order (*Record*, p. 3263).

And moreover, it was shown that the small outlying Companies cited by Appellants *were using oils of cheaper grade, and in several instances not of a quality able to maintain the minimum of 22-candle power* required by law (*Record*, pp. 4212–44).

4. All the Companies operating on Manhattan Island receive the same grade of oil at the same price as Appellee, except the Mutual; and it appeared that the Mutual, which used a lower grade and paid a less price, had *a higher cost per candle* than Appellee and the other Companies, which used more expensive oil (*Record*, p. 4495).

5. The contentions of Appellants below on the subject of oil were fully met in behalf of Appellee (*Record*, pp. 4203-4215); and the Master, after a review of the evidence, concluded (*Record*, p. 1240) :—

> "It would appear further that from the standpoint of economy, the greater efficiency of the higher grade oil more than offsets the difference in its cost per gallon."
>
> "* * * Nor, making due allowance for varying local conditions and differences in grade, is there any satisfactory evidence that the price paid by Complainant is on the whole excessive as compared with that paid by various other Companies to which reference was made."

POINT XXII.

The Question of Pressure.

The Acts in question provide that Appellee shall maintain a pressure in its "service mains" at every point, and at all times, of not less than one inch or more than two and one-half inches; and impose a penalty of $1,000 for each failure in this regard. Service mains obviously mean distribution mains, through which gas is delivered to the "service" pipes of consumers (*Record*, pp. 666, 1619, 1696, 1791); indeed, the te[illegible] "service mains" is employed by witnesses for the Appellants as synonymous with "distribution mains" (*Record*, p. 2915), and could mean nothing else.

The finding of the Decree on this subject is as follows (*Record*, p. 433):

> "The pressure required by said two Acts and the Order aforesaid, is not physically impossible, *if the entire system of gas distribution in the City of New York be reconstructed;* but compliance with such requirement is *commercially impossible under the rates for gas prescribed by said two Acts and Order.*"

1. Evidence as to Possibility of Compliance.

(a) It appeared that differences in elevation alone on Manhattan Island, would account for the entire variation (1.5 inches) allowed (*Record*, pp. 1784, 1623, 1810); but the demands of consumption are so varied and unaccountable, from many different causes, that it was testified that Appellee could not comply with the requirement, even if there were no variations in level to deal with (*Record*, pp. 650, 1779, 4373, 4414).

It was also testified that such modern appliances as Welsbach burners, gas logs and gas ranges required a minimum pressure of at least 2 inches at the burner, which means about 2½ inches at the main, for efficient operation, and that the efficiency is increased by a pressure substantially beyond that (*Record*, pp. 1840, 4020, 4025).

(a) **Chief Engineer Bradley** testified as follows (*Record*, pp. 549–51):

> "Q. Is it in your judgment as an expert, physically possible for the Company to comply with this requirement of the Statute? A. *It is absolutely impossible.*
>
> Q. Why do you say that? A. Because of the physical conditions and the action of the gas in the mains over which the Company has no control, the variations of pressure caused by the consumers, opening up and shutting off gas; all this we cannot control.
>
> Q. Do atmospheric conditions affect it? A. Atmospheric conditions affect it, they are apt to interfere with it, and I say further that we cannot control it because I have tried faithfully for over a year to do it and have not succeeded.
>
> Q. Did you mention variations in elevation? A. Variations in elevation, of course they have their effect (p. 549). * * *

Q. At the intersections of the streets, how are the mains arranged for the purpose of equalizing pressure? A. *The mains are connected together at the cross-streets by running through what is technically termed a cross into the main.* That is, with four openings, and the gas mains are simply common; they are all commonly connected.

Q. Does the effect of that tend to equalize the pressure? A. Yes, only for that we could not supply the gas.

Q. You have had charge of the pressure of the gas have you not? A. Yes.

Q. Ever since you became Chief Engineer? A. Yes, ever since I became Chief Engineer.

Q. And have you maintained any greater pressure than has been necessary to supply the demands of consumers? A. No, sir.

Q. Has not the complaint been the other way, that the pressure has not been sufficiently great to supply the demands? * * * A. I have known of complaints, hundreds of complaints, from consumers that they did *not get gas enough*, and we always try to supply them (p. 550). * * *

Q. Suppose you should never exceed the pressure of two and a half inches; what would be the effect of that? A. I would not like to say what the effect would be. There would be an absolute loss of business; we would get out of business.

Q. I mean would there be sufficient pressure in that case to supply the consumer? A. *No, sir; we could not supply the consumer; absolutely no.*

Q. Would there be any danger to life from that cause? A. Yes, if we should reduce the pressure to that point, at no point in the mains to more than two and a half inches, there would be a great many other points where there would be absolutely no pressure at all, and, *the burners being opened, the supply would come on again, and it would probably result in the death of a great many people*" (p. 551).

(b) Vice-President Addicks (Acting President), a graduate of the United States Naval Academy at Annapolis and Chief Engineer for a considerable time of the Boston Companies (*Record*, pp. 1561–2) testified as follows (*Record*, p. 1563):

> "Q. I will ask you, based on your knowledge as an engineer, and particularly in the gas business, whether it is possible in your judgment to observe those requirements and furnish your customers with gas in the City of New York? * * * A. My judgment is that it is *practically impossible to conform to the requirements of that law as to pressure.*"

(c) **Dr. Alexander C. Humphreys,** President of Stevens Institute of Technology, whose experience as a gas engineer is undoubtedly unequalled in this country (*Record*, p. 1681–3), on having his attention called to the pressure requirement of the Statutes, testified (*Record*, p. 1683–4):

> "Q. What is your view as to the possibility of complying with that provision? A. *Practically impossible.*"

The foregoing opinions denied the ability of the Company to comply with the law, *as a general proposition and without limitation to the present condition of the system.*

(d) **Mr. Marks,** Appellants' original witness on the subject, admitted that, under the existing conditions and connections of the mains of the Consolidated Gas Company, it was impossible to comply with the law, and testified additionally (*Record*, pp. 1985, 2786–7):

> "Q. Now, did you also say that it is to the interest of gas Companies to keep their pressures in their mains just as low as possible, in order to avoid a great loss by breakage [obviously error for "leakage"—Ed.] and excessive use of gas in street lighting? A. I did.
>
> Q. That is true, isn't it? A. It is true. (*Record*, p. 1985).
>
> * * * * * *
>
> Q. And in connection with the cost of gas as well as pressure did you state that while you considered it mechanically possible by isolating the gas mains of the Island of Manhattan according to their levels, *and feeding each level by means of a separate feed main or mains,* with the use of governors to come within the limitations of the law of June 3, 1905, *it did not appear to you to be*

> *necessary, and that any such attempt as this would be found to be commercially expensive and technically very troublesome in operation, without giving any return in real advantage or economical results to consumers* (page 48 of affidavit)? A. I did.
>
> "Q. And of course if it is commercially expensive and fully possible to be done, the expense, so far as return on capital necessary to accomplish it is concerned, or the expense of operation of the system when installed, would be a charge against the consumers of gas to be reckoned with in fixing the price at which that gas could be sold? That is a fair proposition, isn't it? A. It is so" (*Record*, pp. 2786–7).

(e) And **Mr. Edgerton**, Appellants' own witness on the general subject, while not pretending that compliance with the requirements of the statute was possible in the existing situation, advanced the following plan as a remedy (*Record*, pp. 3461–2):

> "Q. In what way should the gas be delivered to the mains from which services are taken off at a more uniform pressure than it is now? A. The system would involve a few **high pressure mains** running up to 15 or 20 pounds or to such a pressure as would not impoverish the gas to any appreciable extent, and *govern the pressure of the gas* into the *service* mains of the Company by means of a **governor** or by means of valves, regulated by hand or a workman if preferred, although the **governor** would be the most equal method and its action could be watched by a watchman at the important points.
>
> Q. Taking into consideration the New York condition, where would you place those high pressure mains? A. **The high pressure mains run on each side of the City,** being made of the largest diameter near the most important and congested districts, and running parallel with the shore, running from the Battery to the Ship Canal. I have estimated on the delivery of 8,000,000 cubic feet per hour under a pressure of 15 pounds in two mains of 24 inches diameter. The mains could be reduced from 24 inches to 20 inches, 16 and 12 inches towards the ends. And from these mains deliver by the **governors** into the larger mains and also into the service mains. There would be no need in this provision of which I speak to lay pipes *across* the City

> having any considerable pressure at all. The present piping being so nearly adequate to delivering an equal supply, that governing them into the large cross-mains would be all that is required.
>
> Q. And do you think that those *pressure mains* could be connected with the present system of pipes without great changes in their distributing system? A. It would not require any change at all in the distributing system, only a due regard to the points of introduction of the gas by means of the **governor** and the selecting of a governor of a reliable character to handle the gas."

And Mr. Edgerton subsequently admitted that his proposed pressure of 20 pounds in his "high pressure mains" would, if the "**governor**" at the entrance of the service mains failed to work and allowed the pressure to get through, be sufficient to "blow the meters out," which "would be a pretty serious situation * * * if anything of the kind could happen" (*Record*, p. 3471); and he was unable to name any City where so high a pressure as 20 pounds was used, his most definite suggestion being "New Orleans", where the pressure main runs "**around**" the City (*Record*, p. 3471-2),—not through the congested portions.

(f) Superintendent of Mains Simpson testified on that point (*Record*, pp. 3927-8, 3931):

> "Q. Have you been dealing with pressure in mains and seen the effect of the pressure, and of gas escaping from mains under pressure, during the last twenty-five or thirty years? A. I have, yes sir.
>
> Q. What have you to say as to the feasibility of distributing or putting gas through the City of New York under a pressure of twenty or thirty pounds as suggested by Mr. Edgerton? A. *I should be very sorry to have charge of the mains when we had such pressure as that, as he is dealing with.*
>
> Q. Have there been accidents to the mains of the Company which have allowed the escape of gas within recent times? A. A great many accidents to the mains *with the present pressure* we are carrying. * * * The most recent one I recall was on October 13th at Forty-third Street and First Avenue. In that case the Consolidated Telegraph and Electric Subway Company

> were laying a subway along one side of our twenty-inch gas mains. They fired an unusually heavy blast, it broke the mains and the gas immediately caught fire and *blazed to the very top of the tenement houses* alongside, and except for the promptness of our men—the watchman we had there was seriously burned and had to be taken away in an ambulance—and we had some men working around the corner a block away, and the Superintendent of the district happened to be crossing First Avenue and saw the blaze from a mile away, and drove right down.
>
> So by a combination of circumstances, being ready, we were able to put the fire out nine minutes after it happened. * * * The pressure on the gas in that main was *two inches or* $\frac{1}{14}$ *part of a pound* Now, the only reason that the block was not put on fire was on account of the prompt work of our men who happened to be there. By the time we had the stoppers in and the gas turned off, the windows of the tenement house alongside and a saloon—the glass was all cracked and ready to break in. In another two minutes the windows would have gone, and the whole place also, and you wouldn't have been able to get near the place. * * * I know in this case here with a pressure of two inches, the matter would have been very serious indeed if our men had not been on the spot and put it out. **If the pressure was twenty pounds, or 560 inches, I don't know what would have happened. * * * I don't believe the firemen themselves could have got within 300 feet of the place, and nothing in the world could have possibly saved that block** " (p. 3927-8).

For Mr. Simpson's further testimony on this point, see *Record*, p. 3931.

We have quoted at considerable length the testimony of the various witnesses, in order that the arrangement of the proposed system, **and the office of the automatic "governors" involved,** might be clear in considering

(a) Appellants' Present Position.

This proposition of Mr. Edgerton, which was advanced and elaborated with so great pains below by Appellants, has been abandoned by them in this court

(*Brief of Attorney General*, pp. 201–7; *Brief of Public Service Commission*, p. 283); and they now apparently rely upon certain testimony of Mr. Bradley, assuming that he therein admits a plan by which the pressure requirements can be met *without the great and prohibitive expense attendant on the Edgerton proposition*. A brief consideration of that assumption shows its utter fallacy. The vital part of Mr. Bradley's testimony is as follows (*Record*, p. 571):

> Q. Now, it is perfectly practicable, is it not, to divide your City *into districts* and place district regulators or **governors** at different places throughout the City? A. Theoretically it is practicable. Practically there are serious objections to it.
>
> Q. Well, what are they practically? A. The defendants are forcing the consumers in a great City like New York to depend upon the automatic action of an **automatic governor** buried somewhere in the street, or an automatic governor situated in the basement or on the first floor of a building. If the City was *districted off* in that way and *each district supplied through a governor*, it would be a matter of very grave doubt whether at times this governor would not fail to operate, like all automatic machinery, and with an important, and I might state a dangerous element, as gas is, it is not wise to introduce any element that adds to the danger. And in my opinion district governors do add to the dangers of interruption and difficulty with gas supply.
>
> Q. Well, are they used in many Cities? A. They are used in many cases. Perhaps where they have more nerve than I have."

This clearly involves the proposition that the City be "districted off," and "each district" be supplied through a "governor," which would separate the distribution mains from the "high pressure mains." It contemplates and requires *a system of precisely the character advocated by Mr. Edgerton*, to wit, a system of "trunk mains," with the City divided into "districts" and a "governor" from such trunk mains, at the point where the gas under such pressure is admitted into each "district." Indeed, the **Attorney General** in his Brief (p. 202) states that Mr. Bradley shows that "the Company could control the pressure" by delivering gas—

> "through a trunk main at **high pressure** and by means of a district **governor,** reducing it and delivering it into the service mains within the **district** at any given pressure."

Mr. Edgerton chose to run such "pressure mains" up and down the sides of the City, as *obviously the simplest* and *most economical mode of construction to reach the "districts" which must be established,* instead of running such "mains" through the heart of the City.

Any form of "district" regulation by means of governors involves the installation of independent "trunk mains" from the point of supply, to the point of control. Of course the ordinary "distribution" mains, could not be used as "trunk mains" for this purpose, for the pressure at the entrance to the first district can not exceed 2½ inches.

Any departure from the lines of Edgerton's "high pressure" plan, would simply involve more mileage of "trunk mains," through the more congested parts of the City, and consequently an even greater expenditure.

(b) Important to Be Noted.

It will be observed that Mr. Bradley *in no wise, by statement or implication, modifies his emphatic testimony above quoted (ante,* p. 163) *as to the "absolute impossibility of compliance* with the pressure requirements of the Statute, even if he were assumed to have "nerve" (to use his own word) to install such "high pressure mains" with the "automatic governors" in the City of New York.

It is apparent that such "automatic governors" are employed merely to fix the *initial* pressure at which the gas enters the distribution mains, from the "high pressure" mains; and they have no relation to what happens in the "distribution" mains after the gas has entered them. It has been the contention of Appellee throughout, that the varying demands of consumption within the "district" from moment to moment and hour to hour, from causes beyond Appellee's control, are such that with an initial pressure of only 2½ inches at the entrance to the district it would be impossible to prevent the pressure at the extremity or some other point in the district from falling at some time below one inch ; and Mr. Bradley has stated it as his distinct opinion (*ante*, p. 164), that with an initial pressure of no "more than 2½ inches," the supply of gas might be, at some point in a district, completely exhausted so that lighted burners would expire, and probably "*result in the death of a great many people.*"

In Illustration.

Thus pressure charts were presented by Appellee, showing pressure at different points as related to the pressure at the distributing stations at the same moment (*Complainant's Exs.* 345–8, *Record*, pp. 6043–6046). Such charts proved that, while at *one* point in the district the pressure was *rising*, at *other* points the pressure was at the same moment *falling ;* so that any man or governor would be unable to adjust the pressure to follow both.

And in further illustration it appears that, during the trial, the City Engineer having complained that the pressure at the City Water Station was insufficient, pressure gauges were, on December 14th, 1906, placed in said City Station and on a lamp post just outside, and the results of the pressure observations there and at Appellee's 132nd Street Station supplying that point were as follows:

			Inches.	
	Page of Record.	Hour.	Minimum.	Maximum.
In City Station	(*Record*, p. 6059)	6 P.M.	.85 inches	2.35 in. 1 A.M.
On Lamp Post	(*Record*, p. 6054)	6 "	1.3 "	2.9, 12:38 P.M.
Appellee's 132nd Street Station	(*Record*, p. 6055)	5.15 A.M.	1.95 "	6.5 in. 6 P.M.

And it appeared that at 6 o'clock P. M., when the pressure was *lowest* at the City Station (.85 in. inside and 1.3 in. on lamp-post), it was highest at Appellee's station (6.5 inches) (*Complainant's Exs.* 356 and 357, *Record*, pp. 6054–5).

(c) Conditions in Which "High Pressure" Mains are Used.

It should also be noted that the "cases" in which such "high pressure" system is employed are distinctly different from a congested City like New York.

The distinction as to New Orleans has already been pointed out, and the purposes and circumstances existing there and elsewhere for the employment of such a system are defined more at length in other parts of the *Record* (pp. 3930-1; 4704-5). Its common use is well known to be to "deliver gas to *small country towns* through *small* high pressure mains," the pressure being then "*reduced* inside the towns" (*Record*, pp. 3930-1).

And that the system is not in use for the purpose of maintaining any such extraordinary pressure requirements as provided in the present Statute, is apparent from the fact that *in no other City in the world* are such limitations of pressure required (*post*, p. 175), nor have Appellants attempted to show that in any City in the world the pressure is in fact maintained within the limits prescribed in the Statute under consideration.

It is the view of the Appellee that the Court went to an extreme not justified by the evidence, in finding compliance with such pressure regulations to be possible even by a reconstruction of Appellee's "entire system of gas distribution in the City of New York."

This was further than the Master went, whose statement was that it might be possible "to remedy this condition, *at least to some degree*," by establishing districts, with a "district governor" for each,—the Master obviously recognizing that this meant a "high pressure" system, since he states that there is some doubt as to the "*safety* of such governors."

2. Expense of Reconstruction.

The Master, after full consideration of the subject, having found that—

> " Under the distributing system as now existing and in operation it is not possible to fulfill the statutory requirements as to pressure " *(Record*, p. 250)

further finds that the installation of Mr. Edgerton's high-pressure mains would at the outset cost—

> " 4,000,000 *for main and valve construction alone*, in addition to which would be required pumping stations and apparatus, the annual charges and operating expense in connection with which Mr. Addicks testified would amount to several cents per thousand feet of gas sold, and would involve a corresponding increase in operating cost or proper selling price of such gas " *(Record*, p. 255).

(**a**) Mr. Edgerton himself stated the proper location for his high pressure mains (*Record*, pp. 3461, 3473, 3931), and Mr. Simpson showed without contradiction that the cost for main and valve construction alone would be $4,198,425 (*Record*, p. 3930). The streets of New York are now so congested with pipes and other sub-surface structures that laying large mains is a matter of immense expense, and sometimes an impossibility without going to great depths to avoid structures already there (*Record*, pp. 418 9, 4174–6, 6025–32); and " high pressure " mains must additionally be of special and powerful construction (*Record*, pp. 3930, 4320).

(**b**) In addition, Mr. Addicks, after declaring that it would be neither " safe or wise or economical " to instal such a system in the City of New York, stated that there would be other expenditure, to wit *(Record*, p. 4229) :

> " Installation of the power plant and pumping machinery necessary to supply the gas to the high pressure main system that Mr. Edgerton has testified to, and unless many of our stations should be wiped out entirely, I don't know whether Mr. Edgerton had any idea of concentrating them at one or two points or not, I do not think it is feasible, and I presume he

> did not,—but it would require such plants at our various distributing stations, the larger ones, that would cost a very large fixed charge annually which would run up into *the hundreds of thousands of dollars.* I am in the midst of that investigation now.
>
> "Q. It would amount then to several cents a thousand on the present output of gas? A. Yes, I think so."

In other words, in addition to the return on the $4,198,000 cost for "high pressure main and valve construction," there would be imposed a fixed charge of several "hundreds of thousands of dollars," amounting to "several cents a thousand" feet of sales, on account of the property specified by Mr. Addicks.

(**c**) *And in addition to this*, it is obvious that in order to establish the independent "districts," it would be necessary to go down under the present expensive pavement at the corner of every street marking the border of each district, *in order to "seal" or cut off the mains at that point* so that the "district" should have no communication with other sections; for, as above noted (*ante*, p. 164), *all the mains are now interlocked at every street intersection.* The expense of this work would, of itself, obviously be enormous, would add a further large sum to capital account, calling for corresponding increase in annual fixed charges therefor.

On the evidence it is difficult to conceive how the Court could have reached any other conclusion than that the aggregate expense would be so great, that compliance with the pressure requirements was—

> "Commercially impossible under the rates for gas prescribed in the two acts and order."

3. Period Required for Reconstruction.

Moreover it would be a matter of common knowledge that the reconstruction of the entire system of gas distribution in the City of New York, would not only involve an enormous capital expenditure, but would require so great a time for the work that it would be physically impossible between the date of the passage and taking effect of the respective Acts requiring it. The first Act was approved June 3, 1905, and took effect July 1, 1905; and the second Act was approved April 3, 1905, and took effect July 1st, 1906.

Indeed, it appeared that it would take "a very considerable time" to instal even the "high pressure" mains (*Record*, p. 1658); and, for a long time, compliance with the Act in question would be impossible in any event.

4. A Unique Law.

No witness was able to name any other City in the world, where a maximum pressure for gas had been established, to say nothing of a maximum pressure so low as 2½ inches (*Record, pp. 1658, 1843*).

It appears that in some English Cities a *minimum* pressure of .6 of an inch to one inch is established, but no maximum (*Record*, p. 1840).

POINT XXIII.

The "Legislative Committee" of 1905, and the Gas Commission of 1905-6—The Facts as to their "Investigations."

In view of the contentions of the Appellants in the Circuit Court, which will probably be here repeated, as to the presumptions and weight which should be given to the Statutes and Order in question, in view of the investigations of the Legislative Committee of 1905 (the "Stevens Committee") and of the Gas Commission in 1905–6, it is thought proper to point out the facts in reference to such investigations.

Especially is it pertinent in view of the suggestion in the Brief for the City of New York, that the Statutes in question are "the outcome *of patient, exhaustive, conscientious investigation*" (p. 71); and that the "record of both these investigations shows the most painstaking effort on the part of the Joint Committee in 1905, and on the part of the Commission in 1906" (p. 75).

1. The Legislative Committee.

Vice-President Carter, who made an affidavit respecting the investigations of the Stevens Committee, upon the motion for preliminary injunction in this case, was asked in substance by *Counsel for Appellant, The City of New York*, as to the making of such affidavit and the truth of substantial statements therein, to which he replied in the affirmative (*Record*, pp. 952–3). Mr. Carter's statement of the facts, *uncontradicted*, is as follows (*Record*, p. 5281):

> "The Senate Committee of 1886, Senate Document 47 of that year, completely sustained the valuation of the Company's assets at the time of consolidation, as above appears. They had before them on their investigation, lasting nearly a year, substantially every person connected with the consolidation and were able to learn, at first hand and on the spot, all the facts in regard to amount and character of property and its value. The same data is not accessible to-day with the same fullness.
>
> As to the Legislative Committee of *1905 (known as the Stevens Committee)*, the resolution appointing it contained no provision, authorizing the Companies interested to be heard or to produce evidence or examine witnesses or participate in any way. Said Committee did not recognize at any stage the right of the Companies to participate by counsel, this Company's participation being confined to such brief additional questioning or data, as the *courtesy* of the Committee permitted. The investigation covered such a vast field and was conducted in such haste, limited in taking its testimony to *less than three weeks altogether*, that the elements entering into the question could be neither fully presented nor deliberately considered by said Committee, several members of which were absent from illness or other cause during a great part of the Committee's sittings. This Company was not permitted to address the Committee at the conclusion of the investigation, nor did the Committee have time or opportunity to consider written memoranda sub-

> mitted, prior to preparation of its report to the Legislature.
>
> "We hazard nothing in saying, that the *members of the Committee themselves* will concede the insufficiency of the time at their disposal, thoroughly and in detail to investigate, weigh and determine such important matters. The result was that, upon some most material points, *no evidence at all* was before the Committee; upon other points evidence was in such *incomplete* shape that the situation was gravely misapprehended or misconstrued by the Committee. Said Committee fell into the error of taking the figures of the *tax* report of the Company, as representing the actual value of the Company's assets as a going concern or as the Company's investment therein; and furthermore, said tax report, as summarized by said Committee, included *none of the cash working capital* of the Company, none of the *accounts receivable* which formed part of its capital, *no part of Astoria investment*, and took no note of *other assets of great value.*
>
> "The Gas Commission of the State of Massachusetts consumed more than a year in 1904-5 in consideration of the capitalization and cost of making gas as to the Boston Companies alone."

2. The Gas Commission.

In like manner Mr. Carter had, in said affidavit, set forth the facts respecting the investigation of the Gas Commission which led to their Order here under review; and he was also asked by *Counsel for Appellant, the City of New York*, as to the truth of substantial statements therein relating to such investigation, to which he replied in the affirmative (*Record*, pp. 952-3). Mr. Carter's statement of the facts, *uncontradicted*, is as follows (*Record*, p. 5282):

> "As to the action and report of the Gas Commission, filed February 23rd, last, in favor of 80 cent gas, it will be observed, that said Commission in their estimate of the value of the Company's property *wholly excluded its working capital* of $1,000,000 and its accounts receivable of $2,000,000 to say nothing of *its investment at Astoria*, then amounting to nearly $6,000,000, *its franchises capitalized under express authority* of the Act of 1884 and *other items* of great value.
>
> "No sooner had said Commission began its investigation than certain journals of the City of New York declared and reiterated in caustic terms, that said Commission had no other duty to perform than to report in favor of 80 cent gas,

> as recommended by the Stevens Committee, and criticised said Commission in unmeasured terms for not at once so reporting. Before the petitioners in favor of the reduction of the charge for gas had completed their case, and *before this Complainant in defense had had an opportunity to present a word of evidence*, the Governor of the State of New York (whose appointees the members of said Commission are) *recommended in his message* the passage of an Act, reducing the price of gas to eighty cents; promptly thereafter the Senator from New York, who was then *chief counsel for said petitioners* before said Commission, introduced a bill to reduce said rate to eighty cents, being substantially the bill which finally passed. And finally, *when it was rumored*, that the Commission did not see its way clear to reduce the rate to eighty cents, a bill was introduced in the Legislature *by Senator Stevens*, Chairman of the Legislative Committee of 1905, *to abolish the Commission.*
>
> "Thus the minds of the Commission from the very outset, instead of being left free to flow to a natural and unbiased conclusion upon the evidence, were at every step and by every influence pressed toward a finding, which would justify the report of the Stevens Committee; and thus the Complainant, instead of receiving that fair and unprejudiced hearing, to which it was entitled, suffered grave prejudice and has never received that judicial consideration of its property rights, in behalf of which it has sought the interposition of this honorable Court."

3. General Observations.

The foregoing statements are quoted as a convenient and fair statement of undoubted facts, and as an illustration of the position which Appellee has maintained from the outset on the subject of said Investigations; but the record and circumstances of the Investigations are so far a matter of general knowledge and public record, and so clearly a part of the history of the enactment of the Statutes and Order in question, that they are regarded—independent of testimony—as subject to judicial notice.

The contention of Appellee as summarized in the evidence, through its Vice-President and Secretary, was as follows (*Record*, p. 953):

> "So that you conclude that at neither of these hearings did you receive that fair and unprejudiced hearing that your

> Company was entitled to? A. That was my belief as e
> pressed in that affidavit.
>
> " Q. And in consequence you suffered grave injustice an
> grave prejudice ? A. Yes, sir.
>
> " Q. *And that your Company has never received th
> judicial consideration of its property rights in behalf of whic
> it has sought the interposition of this honorable Court ?
> We were very sure of it."*

It need only be pointed out, in conclusion, that said Committe
reported that they found that the entire value of Appellee's "ga
making plants, *including whatever franchises it may own,* does n
exceed the sum of $30,000,000" *(Record,* p. 80), and that the Com
mission found that the value of Appellee's tangible property "di
not exceed the sum of $30,000,000" *(Record,* p. 32), while the
doubted whether its franchises were "of any considerable value"
although Appellee's *tangible property alone,* when it began busines
in November, 1884, was valued at $30,190,419.01 *(Record,* p. 501
and its "special franchises" for the year 1905 (including tangib
rights plus mains and services in the streets) stood assessed by th
State authorities, for taxation, at a value of $27,300,000 (*Recor*
p. 202).

Washington, October, 1908.

SHEARMAN & STERLING,
Solicitors for Appellee.

CHARLES F. MATHEWSON,
Of Counsel.

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APPENDIX.

Itemized Statement of Values.

	Complainant.	State.	City.	Master.	Circuit Court.
1 Real Estate	$14,558,000.*	$10,504,355.95	$10,587,685.	$13,461,000.	$11,985,435
2 Plant	15,532,489.*	9,318,692.	9,348,692.	15,500,000.	15,500,000
3 Mains	12,636,000.	7,383,583.	6,529,035.	12,636,000.	12,636,000
4 Services	1,994,000.		1,222,228.	1,994,000.	1,994,000
5 Meters & Miscellaneous property	4,200,000.	3,802,544.	3,261,687.	4,100,000.	4,100,000
6 Working capital, to wit:					
Current supplies	616,470.08			3,616,000.	1,616,000
Cash and accounts	3.000,000.				
7 National Coke & Coal Co.	50,000.			50,000.	
8 Astoria Plant	12,000,000.			12,000,000.	
Total, excluding franchises and good will	$64,586,959.08			$63,357,000.	$47,831,435
9 Franchises	24,000,000.			20,000,000.	12,000,000
10 Good will	7,500,000.				
Total assets actively employed	$96,086,959.08	$31,039,124.95	$30,949,327.	$83,357,000.	$59,831,435
Proceeds of Debentures, not yet in "Plant", but temporarily invested pending such investment	$5,500,000.00				
Total investment, active and inactive	$101,586,959.08			$83,357,000.	$59,831,435

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* Exclusive of 18th St. property condemned by the City.

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IN THE

Supreme Court of the United States.

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THE CITY OF NEW YORK, Appellant, AGAINST CONSOLIDATED GAS COMPANY OF NEW YORK.	No. 397.
WILLIAM S. JACKSON, as Attorney-General of the State of New York, Appellant, AGAINST CONSOLIDATED GAS COMPANY OF NEW YORK.	No. 398.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK, SITTING IN EQUITY.

BRIEF FOR THE APPELLEE ON THE LAW.

This brief will discuss the legal questions involved in the present appeals, with the exception of the

inclusion of franchises and good will as a property right, which will be the subject of a separate brief.

The disputed findings of fact, and the evidence which supports the contention of the Consolidated Gas Company, will also for the convenience of the Court be the subject of a separate brief.

PART I.

STATEMENT OF FACTS.

I.

The Nature of the Proceedings.

This is an appeal by the Public Service Commission of the State of New York, The City of New York and the Attorney General of New York (each appealing separately) from a decree of the Circuit Court of the United States for the Southern District of New York, entered April 3, 1908, and fully reprinted in Vol. I, page 430 of the Record.

The decree was entered pursuant to the prayers of a bill in equity, filed on May 1, 1906, which sought to declare unconstitutional the following laws of the State of New York:

(1) Chapter 736 of the Laws of 1905.

(2) Chapter 737 of the Laws of 1905.

(3) Chapter 125 of the Laws of 1906.

The pertinent provisions of the said Acts, which were adjudged unconstitutional by the Circuit Court, are as follows:

Chap. 736 of the Laws of 1905, provides as follows:

> "Section 1. A corporation, association, copartnership or person engaged in the business of furnishing or selling illuminating gas in the city of New York, *shall not charge said city or receive therefrom for such gas a sum in excess of seventy-five cents per one thousand cubic feet.*
>
> "§ 2. The illuminating gas furnished or sold by any such corporation, association, copartnership or person to said city shall have an illuminating power of not less than twenty-two sperm candles of six to a pound burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour

> and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. *The pressure of said illuminating gas in any service mains in the said city at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches.*
>
> "§ 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars *for each offense* to be sued for and recovered in the name of and by the city of New York for its benefit."

Chap. 737 of the Laws of 1905, after providing that upon formal complaint by persons therein specified, the Commission created by the Act shall investigate the price of gas and the manner of its supply by public hearing, further provides (Sec. 17)

> "After such hearing and upon such investigation as may have been made by the commission or its officers, agents or inspectors, the commission, within the limits prescribed by law, may fix the maximum price of gas or electricity which shall be charged by such corporation or person in such municipality, or may order such improvement in the manufacture or supply of such gas or in the manufacture, transmission or supply of such electricity, or in the methods employed by such person or corporation, as will in its judgment improve the service. *The price so fixed by the commission shall be the maximum price to be charged by such person or corporation for gas or electricity in such municipality for a term of three years and until, after the expiration of such term such commission shall upon complaint as provided in this section again fix the price of such gas or electricity.*"

The portion of the Act, above quoted, under which as subsequently stated the Gas Commission created thereby made an order that the complainant sell its gas to customers other than the City of New York at a maximum rate of 80 cents per thousand feet, has since the filing of this bill and the decision of the Circuit Court,

been adjudged unconstitutional by the Court of Appeals of New York in Saratoga Trustees vs. Saratoga Gas Company, 191 N. Y., 123, as operating to deny to all gas companies the "equal protection of the laws" (see *post*, p. 17).

Further discussion, therefore, of this last quoted Act, and the order made by the Commission of Gas and Electricity thereunder, is unnecessary, for the Supreme Court will accept under its uniform rulings this decision by the highest Court of New York upon the constitutionality of a statute of the State of New York.

Chapter 125 of the Laws of 1906 provides:

> "SECTION 1. A corporation, association, copartnership or person engaged in the business of manufacturing, furnishing or selling, illuminating gas in the city of New York, except in the fifth ward of the borough of Queens and in that portion of the borough of the Bronx formerly contained in the towns of Eastchester and Pelham, *shall not charge or receive for gas manufactured, furnished or sold in said city a sum per one thousand cubic feet in excess of the following rates:*
>
> "1. *In the borough of Manhattan*, in the first ward of the borough of Queens, in the borough of Brooklyn, except the thirtieth and thirty-first wards thereof, and in the borough of the Bronx, except that portion of it formerly contained in the town of Westchester outside of the villages of Wakefield and Williamsbridge, *eighty cents.*
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> * * * * * * *
>
> "§ 2. The illuminating gas furnished by any such corporation, association, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of one hundred and twenty grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour and each one hundred cubic feet of gas shall not contain more than five grains of ammonia nor more than twenty grains of sulphur nor more than a trace of sulphuretted hydrogen. *The pressure of illuminating gas in any service mains in the*

said city at any distance from the place of manufacture shall not be less than one inch, nor more than two and one-half inches.

"§ 3. Any corporation, association, copartnership or person violating any provision of this act shall forfeit the sum of one thousand dollars *for each offense* to the people of the State.

"§ 4. This act shall not apply to gas furnished or sold to the City of New York."

The Acts in question are printed in full in the Record (Vol. I., pp. 21–31).

The bill in equity prayed that these Acts be adjudged in contravention of the Constitution of the State of New York and of the Constitution of the United States, in that they—

(1) Deprived the complainant of its property without due process of law.

(2) Took its property for public and private use, without just compensation.

(3) Deprived it of the equal protection of the law.

(4) Impaired the obligation of the contract rights of the complainant, under the terms of Chapter 367 of the Laws of 1884, pursuant to which the complainant acquired its assets and in reliance upon which its shares were issued and are now held.

The averments of the bill are too lengthy for adequate summary. The main averment was that the complainant possessed property, invested and used in the sale of gas, aggregating $86,000,000, upon which it is reasonably entitled to a return of 10% and that the inforcement of the legislation above referred to would yield the complainant less than 1½ per cent. profit on its actual investment. It was further alleged that compliance with the pressure provisions was "physically impossible" and that the statutes being unduly discriminating, and containing oppressive penalties, operated to deny the complainant the "equal protection of the law."

The defendants made no formal appearance, but filed answers, in which they denied the main averments of the bill.

Replication having been filed, the Court thereupon entered an order, which referred the cause to ARTHUR H. MASTEN, ESQ.,

> "one of the Standing Masters of this Court, to take all the testimony herein, make all needed computations and fully find the facts."

Before the Master the hearings extended from July 17, 1906 to June 12, 1907. The voluminous testimony will be found in Vol. II. to VI. inclusive of the Record and comprise with the Exhibits over 6000 printed pages.

Julius M. Mayer, the Attorney of the State of New York, having been succeeded in office by Willam S. Jackson, the latter was duly substituted as a party defendant in his place, and the suit was revived as to him by an order entered herein on June 15, 1907.

On June 6, 1907, the State of New York enacted a new and comprehensive Public Service Commissions Law, which became operative July 1, 1907. It repealed Chap. 737 of the Laws of 1905, constituting the Commission of Gas and Electricity, and substituted for that body the new Public Service Commission. Under Section 85 of the new Act it was further provided:

> "This Act shall not affect pending actions or proceedings, civil or criminal, brought by or against the Board of Railroad Commissioners or the Commission of Gas and Electricity or the Board of Rapid Transit Railroad Commissioners, but the same may be prosecuted or defended in the name of the Public Service Commission, provided the subject matter thereof is within the statutory jurisdiction of such Commission."

Pursuant to the new law the Public Service Commission was on October 1, 1907 substituted as defendants for the former "Commission of Gas and Electricity" and the suit

> "continued against them as parties defendant herein without prejudice to the proceedings already had herein, the answer

> of said last named defendants heretofore filed herein to stand as the answer of "

the new Public Service Commission.

The Master's Report, which was filed on June 24, 1907, after full opportunity had been given to all counsel to correct his findings of fact and law, is also too lengthy for adequate summary. It will be found in the Record (Vol. 1, pp. 151-291). Further detailed reference will be made to the respective findings of the Master and the Circuit Court in a separate brief upon the facts. For the purposes of this argument on the law, it will suffice to state very briefly the main findings of the Master and those of the Circuit Court.

1. The value of complainant's property.

The Master found that the real value of the complainant's property, upon which under the Fourteenth Amendment a reasonable return should be allowed was $83,357,000. The Circuit Court found such value to be $59,831,435.

Upon this property as thus valued the Master found (Record, Vol. 1, p. 255) that

> " in view of the character of complainant's business and other features, which are to be taken into consideration, a just and reasonable rate of return upon the value of the investment in complainant's gas business is not less than the legal rate of six per cent. per annum."

2. The rate of return under the legislative rates.

The Master further found that the net earnings of the Company were $4,983.928.31 and that if the statutory rate of 80 cents per cubic thousand were enforced, the net earnings would be only $2,327,328.31, which, upon the Master's valuation of the property invested, would return 2.8%. This return the Master found was not " a fair or reasonable return on the value of the property."

The Circuit Court, while differing with the Master in some of the details of the calculation and while reducing the aggregate valuation of complainant's property more than $23,000,000, sustained the finding of the Master that the complainant was entitled, upon its invested property, to *at least* 6%, and that the enforcement of the statutory rate would result, even upon the reduced valuation of the Circuit Court, in a return to the complainant company of less than 6%. It held that the complainant Company would in the event of the enforcement of the rate receive about 5% upon its investment, and this the Circuit Court held to be legislatively unfa and unreasonable.

The Court said (Record, Vol. 1, p. 428):

> "Defendant's urge that under Milwaukee etc. Co. vs. Milwaukee, 87 Fed. Rep., 577, and Spring Valley Water Works vs. San Francisco, 124 Fed. Rep., 574, the rate of return should be fixed at 5 per cent. instead of 6 per cent. Beyond stating my belief that such is not the necessary result of these cases, nothing need be added to the discussion of this subject in the opinion already filed, wherein I believe the reasons for the conclusion arrived at are plainly set forth. It is, however, fair to add, as suggested by some counsel, that the 6 per cent. rate has been arrived at in part by taking judicial cognizance of local business conditions.
>
> It has not been asserted, and is not believed, that 6 per cent. is a profitable, satisfactory or attractive rate for the investment of capital in a gas business. In my opinion it is none of these things, *but it is the lowest rate which in the City of New York can be considered legislatively fair to those who are already engaged therein and cannot readily escape.*"

In its final decree, the Circuit Court found (Record, Vol. 1, p. 433):

> "The *lowest* rate of return, which can be considered legislatively fair, just or reasonable, upon the value of the property employed by Complainant in the business of manufacturing and supplying gas, is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in the City of New York; and under the two Acts and the order, copies of which are annexed to the bill

of complaint as Exhibits A, D and C, to wit, Chapter 736 of the Laws of 1905 of the State of New York, Chapter 125 of the Laws of 1906 of said State and the order of the Commission of Gas and Electricity of the State of New York, made on the 23rd day of February, 1906, and directed to the Complainant, the net annual income which the Complainant can earn upon the property employed in its gas business as aforesaid *is less than six per cent.*"

3. The Question of Pressure.

As to the question of pressure, the complainant contended that, owing to the variations of pressure, caused by differences in elevation and by atmospheric and barometric conditions in connection with the varying consumption by consumers, it is necessary at times to exceed a maximum pressure of two and a half inches at certain points; that some of the mains are at an altitude of 250 feet above tide level, and that a difference in altitude results in a difference of pressure (owing to the levity of gas), and it is therefore impossible to maintain the pressure required by the statute "at every point and at every time."

The Master found (Record, Vol. I., p. 250):

> "*Under the distributing system as now existing and in operation, it is not possible to fulfill the statutory requirements as to pressure.* It would, however, apparently be possible to remedy this condition, at least to some degree, by dividing the city into different districts according to the varying levels and by regulating the pressure in each by district governors. The efficacy and safety of such governors is not free from doubt and the evidence affords no sufficient basis for an estimate of the cost of their installation or the expense of making the necessary changes in the system of mains."

The Court sustained this finding as follows (Record, Vol. I., p. 420):

> "On this point I think the testimony amply supports the Master's finding, which is in substance that the pressure

required by law is not physically impossible, *if the entire system of gas distribution in this City be reconstructed.* It is a scientific fact, incapable of change even by legislation, that pressure in a gas pipe varies with altitude. By the expenditure of about $4,000,000 for construction of mains and valves *alone*, exclusive of any pumping stations or other apparatus, it might be possible to establish and maintain the pressure called for by these Acts. *Such a thing is commercially impossible, and even if it were done (of course at complainant's expense) it remains commercially impossible, since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible because, when made, it would not add a dollar to income.*"

4. The Effect of the Penalty Provisions.

As to the oppressive character of the penalties, the Master found (Record, Vol. I., p. 255) :

> " I find that the complainant has about 390,000 customers in the City of New York, to whom bills are sent monthly ; that the penalty imposed by Chapter 125 of the Laws of 1906 is $1,000 for each charge for gas in excess of eighty cents per thousand feet to customers other than the City of New York, and that the penalties accruing against complainant, if it charged more than eighty cents, would amount in the aggregate to about $390,000,000 per month, and over $4,680,000,000 per year, or fifty times as much as the value of the entire assets, employed in complainant's gas business, as found by me.
>
> " I also find that by Chapter 737 of the Laws of 1905 it is provided that where a price in excess of the statutory rate is demanded, that fact shall constitute a complete defense to an action for a recovery for the amount of gas delivered, and that no recovery shall be had therein.
>
> " I also find that the penalty of $1,000 for each offense, violating Chapter 736 of the Laws of 1905 and Chapter 125 of the Laws of 1906, which provide that the pressure of illuminating gas in any service main in the City of New York

> at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches, would aggregate $5,000 per diem upon evidence recorded at each of the five city testing stations of only a single violation per diem of said laws, or at the rate of $1,800,000 per year, under complainant's distributing system as now existing and in operation, which amounts are liable to be increased by additional or more frequent tests.
>
> "*I also find that said penalties, so far as the evidence shows, are unexampled in extent and severity.*"

The Circuit Court thus sustained this finding (Record, fol. 1, p. 420):

> "The Master enters upon a computation of the effect of these penalty clauses in the case of a corporation having about 390,000 customers and concludes that 'said penalties so far as the evidence shows are unexampled in extent and severity'. This is but confirmation of the finding based on affidavits made when the preliminary injunction herein was granted. I think there is nothing to add to the statements of facts and law set forth at 146 Fed. Rep., p. 154. I am of the opinion that the penalty clauses in both the statutes are clearly obnoxious to the remarks of BREWER, J., *in Cotting vs. Kansas City Stock Yards Co.*, 183 U. S., 79."

The final decree of the Court will be found in the Record, Vol. 1, p. 430. Its ultimate findings are:

5. The Ultimate Findings of the Court.

> "IV. The pressure required by said two Acts and the order aforesaid is not physically impossible, if the entire system of gas distribution in the City of New York be reconstructed; *but compliance with such requirement is commercially impossible under the rates for gas prescribed by said two Acts and order.*
>
> "VI. The two said Acts and the order mentioned in the bill of complaint, viz: Chapter 736 of the Laws of 1905 of the State of New York, entitled, 'An Act in relation to the price of illuminating gas furnished or sold to The City of

> New York, and providing a penalty for violation'; Chapter 125 of the Laws of 1906 of said State, entitled, 'An Act in relation to illuminating gas in the City of New York and regulating the quality and pressure thereof and the price to consumers, other than said City, and providing a penalty for violation'; and an order of the Commission of Gas and Electricity of the State of New York, made on the 23rd day of February, 1906, and directed to the Consolidated Gas Company of New York, copies of which were annexed to the bill of complaint herein, are each of them hereby declared and adjudged to be illegal and void, because in contravention of the Fourteenth Amendment to the Constitution of the United States, in that they take Complainant's property without due process of law and without just compensation. and deny to Complainant the equal protection of the law."

Permanent injunctions were therefore decreed to restrain the defendants from enforcing or attempting to enforce these unconstitutional statutes, and from this decree the present appeals are taken.

II.

History of Gas Legislation.

Before discussing the questions of law, it may be important to review very briefly the history of the legislation, which, by successive stages, has threatened to destroy complainant's earning power.

The complainant company was organized in November, 1884, under the provisions of Chapter 367 of the Laws of 1884, by which authority was given (p. 17)

> " to form a single corporation, which might be capitalized and issue its shares to an amount not exceeding the fair aggregate value of the property, franchises and rights of the several companies thus to be consolidated."

It was formed by a consolidation of six existing gas companies. By an appraisal made during the summer of 1884, the tangible property of these six companies was found to aggregate $29,994,000, and the intangible property, consisting of franchises and rights, was then estimated at $7,781,000. Upon these assets, aggregating $37,775,000, the complainant company fixed its capital stock at $39,078,000, that being "the actual market value of the shares of the constituent companies at that time," leaving a balance of $1,303,000 to provide working capital. Stock to the aggregate of $37,775,000 was thereupon issued to the six constituent companies in purchase of the shares of the constituent companies.

Subsequently, by successive increases, the complainant's capital was with the expansion of its business increased by authority of law to $80,000,000, all of it representing either the retirement of existing obligations or new cash capital.

In July, 1904, authority was obtained for a further increase of the capital stock to $100,000,000. The additional shares have not been issued, but six per cent. debentures have been issued, which are convertible into stock of the company at par.

Hardly had the complainant been incorporated than the Senate of New York appointed in 1886 a Committee to investigate the "consolidation and capitalization" of the six constituent companies. The Committee held that the valuation given to the franchises of $7,780,000 was not more than their "fair aggregate value" and that "any attempt to upset such value would be futile." It also concluded :

> "The stock has been issued and circulated and by virtue of law ; about one-sixth of it is held by innocent holders and nothing but the clearest proof of fraud and violation of the law, by virtue of which it was issued, would justify any attempt to render such stock worthless."

The Committee further recommended that the Company should receive a return

> **"not exceeding 10% with a reserve fund of 10% of the capital in addition."**

These conclusions were apparently accepted by the Legislature and the public as sane and reasonable, and no attempt was made until 1897 to interfere with the complainant's business as to rates, which, responsive to public needs, rapidly grew in facilities until to-day it is probably the greatest gas plant in the world.

The Company had already anticipated the demand for cheaper gas, and, although at the time of its formation, the cost of gas was $2.25 per thousand cubic feet, it voluntarily reduced its charges for gas to $1.75 per thousand, and subsequently to $1.50 and later to $1.25, the latter being fixed as a maximum by Statutes of 1886 (Ch. 322) and 1890 (Ch. 566, § 70) in all Cities of over 800,000 inhabitants.

In 1897 the Legislature, by chapter 385 of the Laws of 1897, provided that gas should be sold " for the remainder of that year at $1.20, for 1898 at $1.15, for 1899 at $1.10, for 1900 at $1.05 and during each year thereafter at $1.00." It was thus evidently contemplated that no further reduction was possible and that $1 was an " irreducible minimum."

As these changes were not confiscatory (although with the increased cost of labor and materials the Company's earnings were substantially reduced), the complainant accepted the legislation and reduced its price accordingly.

On March 6, 1905 the Legislature appointed a joint Committee to investigate all of the gas and electric companies of the City of New York. Said Committee proceeded to investigate, with the fairness characteristic of such inquisitorial bodies and which strongly reminds the student of history of the Court of the Star Chamber. Although the Companies were virtually all on trial, the Committee *refused* to recognize their right to participate by counsel, and their right to defend themselves was confined " to such brief additional questioning or data as the *courtesy* of the Committee permitted."

Although it took the present experienced Master *nearly one year* to take the testimony and make his findings as to the complainant's gas lighting business alone, this Committee finished its investigation *of all the gas and electric lighting companies* of New York *in less than* *three weeks!* The complainant was not permitted to make any argument before the Committee at the conclusion of the investigation.

In its report the Committee made recommendations as to the price of gas and the maximum pressure, which were substantially embodied in Chapters 736 and 737 of the Laws of 1905.

The Gas Commission, created by the latter Act, next proceeded to investigate the complainant company, and on February 23, 1906, made an order directing the complainant to sell its gas to the City of New York for public lighting at 75 cents and to all individual consumers at 80 cents.

As this order has been adjudged void by the Court of Appeals of New York in the Saratoga gas case *(post*, p. 17), it seems unnecessary to show from that testimony how little real opportunity was given this complainant to safeguard its great property rights.

Under the Act, creating the Gas Commission, any Gas Company, aggrieved at the action of the Gas Commission in reducing the price of gas, was permitted an appeal to the Appellate Division of the Supreme Court.

This complainant appealed to the Appellate Division of the First Department to review said Order, and, although the Legislature had expressly provided for such a review, it promptly destroyed *as to the complainant* the right of appeal by passing on April 3, 1906, Chapter 125, which converted the appealable order of the Commission into an arbitrary legislative fiat. As this only applied to New York City, the complainant was thus denied an appeal, to which every other Gas Company in New York State was entitled as of right.

The Commission of Gas and Electricity did not long survive its action, for the Legislature repealed Chap. 737 of the Laws of 1905, and constituted by chapter 439 of the Laws of 1907, the Public Service Commission, with the proviso that the orders and decisions of the previous Commission should be unaffected by the repeal. These orders were, as previously stated, nullified when the Court of Appeals of the State of New York, on February 18, 1908, decided that so much of Chap. 737 of the Laws of 1905, as conferred power upon the Commission of Gas and Electricity to fix the maximum price of gas was unconstitutional in having denied to the Gas Companies the "equal protection of the laws." (See Trustees of Saratoga v. Saratoga Gas Co., 191 N. Y., 123).

The Court of Appeals said:

> "What we do hold is that a statute of the character of the one before us to be valid must confer equal rights on both parties, the consumers and the companies. It was said on the argument that the omission in the statute to give the companies an equal right with the consumers occurred through inadvertence. If so the inadvertence is to be regretted, for it constrains us to declare invalid the portion of the statute before us which we would otherwise uphold. It, however, is an objection that can be readily remedied by legislation giving all parties in interest an equal right to appeal to the commission for a readjustment of rates.
>
> The order of the Appellate Division should be reversed *and the order of the commission vacated* and set aside, with costs in both courts."

The only questions, therefore, which are longer open on this appeal are whether Chap. 736 of the Laws of 1905, which required us to sell gas to the City of New York at 75 cents per thousand feet, and Chap. 125 of the Laws of 1906, which required us to sell gas to other consumers at 80 cents per thousand feet, are constitutional.

Apart from the findings of fact of the Master and the Court, as to the unremunerative character of the return if these Statutes should be enforced, the complainant below has at all times contended and still contends that these statutes *are void upon their face and without respect to any evidence taken in the case.* So far as the penalties are concerned, the Circuit Court, both in the preliminary opinion of Judge LACOMBE and the final opinion of Judge HOUGH, sustained this contention. Unless the penalty provisions are separable, the Acts in question must be declared void, but if separable, there yet remain legal objections to the constitutionality of these Statutes *upon their face* upon which the Court below did not find it necessary to pass and which will be discussed later in this brief.

III.

The Assignments of Error.

Having thus briefly reviewed the facts of the case, we pass to a discussion of the legal questions involved in the many assignments of error, and here we are impressed, as the Court is likely to be impressed, by the unnecessary duplication of such assignments in the three appeals. In this case, the Public Service Commission has filed 17 assignments of error, the Attorney General 20 and the City of New York 122. Many of these are not assigned in conformity with Rule 21 of the Supreme Court and to all the assignments collectively may well be applied the criticism of the Supreme Court in Phillips Construction Co. v. Seymour, 91 U. S., 648, where this court said of only fifty-two assignments :

> "The object of the rule requiring an assignment of errors is to enable the court and opposing counsel to see on what points the plaintiff's counsel intend to ask a reversal of the judgment, and to limit the discussion to those points. *This practice of unlimited assignments is a perversion of the rule, defeating all its purposes, bewildering the counsel of the other side, and leaving the court to gather from a brief, often as prolix as the assignments of error, which of the latter are really relied on. We can only try to respond to such points made by counsel as seem to be material to the judgment, which we must render.*"

For us to treat the assignments of error *seriatim* would unduly expand this brief and would be more confusing than illuminating.

Many of them relate to questions of fact, which will be discussed in a separate brief. As to the questions of law, we prefer to follow the example of the Supreme Court in the case last cited and "respond to such points made by counsel as seem to be material to the judgment." We shall therefore submit and discuss affirmative points and we believe that these will fully answer all of the questions of law involved in the many assignments of error.

In this brief, therefore, we shall discuss the following points:

I. The complainant was without adequate remedy at law and a Court of equity had jurisdiction.

II. The Eleventh Amendment does not forbid the institution of this suit.

III. The provisions in the said statutes as to pressure are unconstitutional and invalidate both statutes.

IV. The provisions in the statute as to penalties are unconstitutional on their face and invalidate both statutes.

V. Both statutes are unduly discriminatory and therefore unconstitutional upon their face.

VI. The finding of the Circuit Court that the rates prescribed would yield this complainant less than a just and reasonable rate of return is a finding of fact and not a conclusion of law, and this Court therefore should give to such finding the controlling weight of a special verdict of a jury and not reverse such finding except for clear and indubitable error.

VII. Where the rate is prescribed by the Legislature and not by an administrative body, it is equally subject to judicial review as to its confiscatory character.

VIII. The Fourteenth Amendment invalidates a rate, if it yield less than just "remuneration," even though it yield some return.

IX. The rule that the fair return must not be less than the legal rate of interest is justified on reason and authority.

X. The basis of the calculation is the present value of the property and not its original cost.

XI. The costs were properly imposed upon the respondents, including one-half thereof upon William S. Jackson, as Attorney General of the State of New York.

XII. The Circuit Court was without power to make relief from an unconstitutional statute conditional upon the acceptance by complainant of a new rate to be fixed by the Court.

XIII. The Circuit Court properly assumed jurisdiction of the controversy.

PART II.

THE ARGUMENT ON THE LAW.

POINTS.

I.

The complainant was without adequate remedy at law and a Court of Equity had jurisdiction.

Until the Master decided against appellants upon the facts, the respondents below did not attempt to question the jurisdiction of the Court, except in a very formal and perfunctory way. They did not file any special appearance or motion to dismiss the bill for want of jurisdiction, but appeared generally and *joined issue with complainant on the merits.* They did incidentally raise the jurisdictional questions by their answers, but on the oral argument before Judge Lacombe as to whether a preliminary injunction should issue, the jurisdictional questions were not pressed and the respondents apparently preferred to take their chances before a Master of disproving the allegations of complainant's bill. It was not until the Master found in favor of the complainant that the jurisdiction of the Court was vigorously questioned.

Primarily that jurisdiction is assailed on the ground that the complainant had an adequate remedy at law and that therefore a Court of equity was without jurisdiction. The suggested adequate remedy at law is that the Company shall charge the price of gas which existed before the legislation in question was enacted and shall then await the suits by the State and the consumers and then asserts its Constitutional rights by way of defense. Both the bill and the proofs disclose the undisputed fact that the complainant has 390,000 customers in the City of New York, to whom it renders monthly bills, and that if it followed the remedy suggested by the respondents, it would then become the *imperative duty* of the Attorney General of New York and the District Attorney of

New York County, under Section 1962 of the Civil Code, to commence actions against the complainant for the sum of $1,000 *for each charge in excess of the statutory rate.* The institution of these suits for penalties is not discretionary with the officials named. Section 1962 of the Civil Code provides:

> " Where real or personal property has been forfeited, *or a penalty incurred* to the people of the State, or to an officer for their use, pursuant to a provision of law, the Attorney-general, or the District Attorney of the county in which the action is triable, **must** bring an action to recover the property or penalty in a court having jurisdiction thereof."

Had this course been followed, moreover, it is not unreasonable to assume that the consumers would have refused to pay in excess of the statutory rate and as monthly collections are essential to the Company's operations, it would have been under the necessity, either of bringing separate suits against 390,000 customers or of threatening to remove their meters unless they paid the price demanded by the Company, in which event many of the customers would in turn have instituted suits against the Company to enjoin it from such removal.

Thus interminable litigation, clogging the Courts, and burdening both the company, its customers and the public with wasteful court expenditures, would have resulted, with confusing and contradictory results, for in each case this complainant could have asserted and sought to prove anew its contention that the statutes were unconstitutional because of their oppressive operation. Moreover, no course would have been more prejudicial to the consumers than the one indicated. If the Company had threatened to take the meters out of the houses unless its bills were paid, many would have paid to avoid expensive litigation and immediate inconvenience. Thus, if the statutes are sustained as constitutional, many would have paid the excess without any protection as to repayment. Under the present suit, the whole controversy is litigated without expense to the consumer, whose interests are fully protected by the impounding in the registry of the Court of the disputed excess. WHAT COULD BE MORE EQUITABLE?

The Appellants, however, without questioning that the avoidance of a multiplicity of actions is a ground for equitable jurisdiction contend that in the case at bar the possible multiplicity of actions is more imaginary than real.

As to the suits for penalties, which, as previously stated, the Attorney General and District Attorney "*must*" bring to enforce the statutory rate, Appellants claim that although this Company should charge the excess rate in 390,000 separate instances, the State could only bring a single action to recover a single penalty of $1,000.

In support of this contention they cite

Jones v. Rochester Gas Co., 168 N. Y., 65, 68;
Cox v. Paul, 175 N. Y., 328;
Griffin v. Inter-Urban St. Ry. Co., 179 N. Y., 438; 180 N. Y., 538.

These cases do not sustain Appellant's contention. They arose under other Statutes with very different provisions.

Jones v. Rochester Gas Co., *supra,* was an action to recover penalties under Section 65 of the Transportation Corporation Law (L. 1890, Ch. 566), which provided that if upon application of the owner or occupant of a building to a Gas Company, for the use of gas or electricity,

> "the corporation shall refuse or neglect to supply gas or electric light, as required, such corporation shall forfeit and pay to the applicant the sum of ten dollars and the further sum of five dollars for every day thereafter during which such refusal or neglect shall continue."

The Court simply held that while the plaintiff was "entitled to recover *for the whole period up to the time when the defendant supplied the premises with gas*", yet the cause of action, being single, was indivisible and but one recovery therefor could be had.

In Cox v. Paul, 175 N. Y., 328, plaintiff sued under Section 53 of the Stock Corporation Law, providing for the inspection by the stockholder of the stock book of the corporation, under a penalty of $250 "upon each officer who refuses to exhibit the stock book, and also a like penalty on the corporation". Plaintiff brought three separate actions for the penalties against the Secretary, the President and the corporation.

The language of the statute is:

> "For any refusal to allow such book to be inspected, such corporation and the officer or agent so refusing shall each forfeit the sum of $250, to be recovered by the person to whom such refusal was made".

Under the Statute, the plaintiff recovered one penalty against the Secretary, two against the President and three against the corporation, on the ground that he had made *continuing* demands on several consecutive days. The Court held, however, that

> "there was really but *one* demand, *one* refusal, *one* occasion and *one* transaction, though continuous as to time."

The distinction between these cases and the case at bar is clearly shown in Griffin and Scudder v. Inter-Urban St. Ry. Co., 179 N. Y., 438, s. c. 180 N. Y,, 539, upon which the Appellants chiefly rely. In that case, two separate plaintiffs sued for penalties, under Section 104 of the Railroad Law, providing for free transfers on street railways, which *inter alia* provided that

> "*for every refusal* to comply with the requirements of this section, the corporation so refusing shall forfeit fifty dollars to the aggrieved party". * * *

The two plaintiffs in question sued for cumulative penalties, Griffin for four penalties of $50 each for four refusals, and Scudder for five such penalties. The Court of Appeals held:

> "It is no doubt the rule to be deduced from the decisions of this Court that no action for cumulative penalties is

> permissible unless it is clear from the language of the Act inflicting the penalty that it was the intention of the Legislature to provide a penalty *for each and every violation of the Statute*".

It will be noted that both plaintiffs recovered penalties. To make this decision applicable to the case at bar, the learned counsel for Appellants must logically contend that when Griffin recovered his penalty for a refusal of the Street Railway to give him a transfer, this operated as a waiver of the right of every other passenger in the City of New York, who was similarly refused a tranfer, to sue for a penalty. As both Griffin and Scudder were each allowed to recover penalties, it is obvious that the Court of Appeals did not intend, where penalties might accrue to several millions of passengers, that the recovery of one was a waiver of the rights of all the others.

Indeed the Court of Appeals expressly distinguished between the words "for *every* refusal" and the words "for *each* refusal", and cited Suydam v. Smith, 52 N. Y., 383, where the Statute contained the words "for each offense", and *cumulative penalties were permitted.*

On re-argument of the Griffin case, the Court said (180 N. Y., 539):

> "In Suydam v. Smith, 52 N. Y., 383, where the recovery of cumulative penalties was upheld, the statutory words imposing the penalty were "for each offense". We think that "every" is not always necessarily the synonym of "each".

Both Chap. 736 of the Laws of 1905 and Chap, 125 of the Laws of 1906 provide that any person or corporation violating any provision of this Act

> "shall forfeit the sum of $1,000 **for each offense** to the people of the State."

This language is unequivocal and admits of no other construction. It was obviously designed, not simply to prevent a uniform overcharge to all the customers, but to prevent an overcharge as against *any one of them* and, however drastic, it admits of but one interpretation and that is that the State could recover a penalty of $1,000 *on each occasion* that the Consolidated Gas Company charged *any* of its customers a sum in excess of the statutory rate. The Statute was punitive in character and designed to compel the Company to adhere to the provisions of the Act. It therefore borders on the ridiculous to assume that the Act meant that if the Consolidated Gas Company violated its provisions in 390,000 different instances, each of which constituted by the words of the Act a separate offense, the State could only recover one penalty of $1,000.

Moreover, decisions affecting penalties due *individuals* can hardly apply to a penal Statute, where *the State* seeks to enforce a measure of public policy. The provisions in the gas Statutes were undoubtedly passed to compel the Gas Companies, *as to each of their customers*, to comply with the legislative provisions as to price, pressure and illuminating power. The Consolidated Gas Company might violate these as to all of its 390,000 customers or as to any number thereof. Is it credible that the Legislature intended only one penalty of $1,000, irrespective of the number of violations of the Statutes, or did it not intend that "for each offense", as it plainly said, the Gas Company should pay the penalty?

The clear purpose of the State to make these penalties cumulative is further shown by Section 21 of the Gas Commission (Chap. 737 of the Laws of 1905), which provides:

> "*Defense in cases of excessive charges.* If it be alleged and established in an action brought in any court for the collection of any charge for gas or electricity, that a price has been demanded in excess of that fixed by the Commission or by statute in the municipality wherein the action arose, no recovery shall be had therein, but the fact that such excessive charges have been made shall be a complete defense to such action."

The purpose was thus shown to individuate each overcharge as to each of the Appellee's 390,000 customers. If, therefore, under the terms of these two Statutes, complainant charged more than 80 cents, it forfeited as to each of its customers the right to make any charge whatever, and it further forfeited to the State the sum of one thousand dollars. If, as contended by Mr. Whitney, this Company can violate the Acts 390,000 times and only pay one penalty of $1,000, such insignificant penalty would not in itself have any deterring effect and the effort of the Legislature to compel the Gas Companies to comply with its mandate by punitive penalties of a drastic character is too clear to be gainsaid. The legislation may be ridiculous in its severity. It however does not stand alone in this respect, as is readily seen by reference to the Stock Yards Case (183 U. S., 79), and *Ex parte* Young (209 U. S., 123), where similar drastic penalties were construed in accordance with the fair import of the language used by the Legislature.

Even were the penalties due the State non-cumulative, there still remain—unaffected by the question of cumulative penalties—the interminable litigation and possible stupendous losses, to which the Company would be subjected if it had to sue its 390,000 customers to recover a rate in excess of the statutory rate. It is true that Mr. Whitney in his brief for the Public Service Commission (p. 164) suggests that we could sue a few of our consumers as the representatives of all, but as there is no legal joinder of interest, such suits would only have concluded the actual defendants therein. Of necessity, each would have to be a separate suit, and if the Company failed in such a suit, under the very terms of the Act, it forfeited even the amount which the Statute allowed as the price of gas. If, on the contrary, it asserted its right to remove the meters unless it received the sum it claimed, interminable litigation would necessarily result, for the householder would not do without gas but would either assert the statutory charge by an injunction suit or submit to the Company's demands.

For this reason the jurisdiction of a Court of equity can be justified upon the broader ground of the "public interests". This was done in City of Cleveland v. Cleveland St. Ry. Co., 194 U. S., 531, in which Mr. Justice White said:

> "Respecting the contention that the case presented by the record was not within the jurisdiction of a court of equity, it suffices to say that, in view of the controversies, confusion, risks and multiplicity of suits which would necessarily have been occasioned by the resistance of the complainant to the enforcement of the ordinance, **and in view of the public interests and the vast number of people to be affected, the case was one within the jurisdiction of a court of equity.**"

We confess we did not think this question of equitable jurisdiction even debatable in view of the repeated and uniform rulings of this Court, until we find it again raised by counsel of unquestioned ability and sincerity.

We content ourselves with quoting the language of this Court in Smyth vs. Ames, 169 U. S., 466:

> "The transactions of a single week would expose any company questioning the validity of the statute to a vast number of suits by shippers, to say nothing of the heavy penalties named in the statute. *Only a court of equity is competent to meet such an emergency and determine, once for all, and without a multiplicity of suits, matters that affect not simply individuals, but the interests of the entire community as involved in the use of a public highway and in the administration of the affairs of the quasi-public corporation, by which such highway is maintained.*"

To this leading case may be added a reference to the most recent case in this Court (*Ex parte* Young, 209 U. S., 123, 153, decided March 23, 1908, where Mr. Justice PECKHAM, speaking for the Court, said:

> "It is further objected that there is a plain and adequate remedy at law open to the complainants and that a court of equity, therefore, has no jurisdiction in such case. It has been suggested that the proper way to test the constitutionality of the act is to disobey it, at least once, after which the company might obey the Act pending subsequent proceed-

> ings to test its validity. But in the event of a single violation the prosecutor might not avail himself of the opportunity to make the test, as obedience to the law was thereafter continued, and he might think it unnecessary to start an inquiry. If, however, he should do so while the company was thereafter obeying the law, several years might elapse before there was a final determination of the question, and if it should be determined that the law was invalid the property of the company would have been taken during that time without due process of law, and there would be no possibility of its recovery. * * * From all these considerations it is plain that this is not a proper suit for investigation by a jury. Suits for penalties, or indictment or other criminal proceedings for a violation of the act, would therefore furnish no reasonable or adequate opportunity for the presentation of a defense founded upon the assertion that the rates were too low and therefore the Act invalid. * * *
>
> All the objections to a remedy at law as being plainly inadequate are obviated by a suit in equity, making all, who are directly interested, parties to the suit and enjoining the enforcement of the Act until the decision of the Court upon the legal question."

Mr. Whitney's brief for the Public Service Commission (p. 162) suggests that as the Public Service Commission Act provides for an institution by that body of an action for mandamus to enforce the provisions of the legislation, the Complainant's true remedy was to await such action and defend therein. The answer to this argument is that the Public Service Commission Act was passed on June 6, 1907, and became operative July 1, 1907, while this bill was filed on May 1, 1906. Assuredly the jurisdiction of the Court cannot be ousted by an event which took place more than a year after the filing of the bill. It is true that the Gas and Electric Commission Act of 1905 also contained a provision for mandamus, but Mr. Whitney concedes (p. 4) that this only referred to rates prescribed by the Gas and Electric Commission and their power to prescribe any rate was annulled by the Court of Appeals in the Saratoga Gas Case (*supra*, p. 17). It is therefore true, as conceded by Mr. Whitney, that no power to try this case in a mandamus proceeding existed at the time the bill was filed, but even i it had, the Commission might never have invoked the remedy o mandamus and in the meantime the Gas Company, if it stood on it constitutional rights, was threatened not only with stupendous penalties in suits by the State but interminable litigation by its customers.

Mr. Whitney further suggests (p. 169) that jurisdiction is als lacking because there was

> " no allegation or proof indicating that the Attorney Genera or the District Attorney threatened to bring an unreasonabl number of penalty actions or that there was any reason t suppose that either of them would do so."

The answer to this is that under Section 1962 of the Civil Cod *(ante*, p. 22), the Attorney General and District Attorney have n discretion whatever but " MUST BRING " such an action where a penalty has been incurred.

II.

The Eleventh Amendment does not forbid th institution of this suit.

(a) The Eleventh Amendment does not apply to a suit against State official, who is seeking to enforce an unconstitutional statute.

In the Court below, counsel for Appellants contended that thi suit was one against the State within the meaning of the Elevent Amendment. This contention was made, however, before th Supreme Court, in *Ex parte* Young, 209 U. S., 123, definitely settl the question and closed it to further forensic controversy. W infer from the Appellant's briefs that they have now practicall abandoned the assignments of error which raised this question, and we content ourselves with simply quoting the language of this Court in Smyth vs. Ames, 169 U. S., 466:

> "But to prevent misapprehension, we add that within the meaning of the Eleventh Amendment of the Constitution the suits are not against the State, but against certain individuals charged with the administration of a State enactment which, it is alleged, cannot be enforced without violating the constitutional rights of the plaintiffs. **It is the settled doctrine of this Court that a suit against individuals for the purpose of preventing them, as officers of a State, from enforcing an unconstitutional enactment to the injury of the rights of the plaintiff, is not a suit against the State within the meaning of that amendment."**

See also,

Pennoyer v. McConahey, 140 U. S., 1.
Scott v. Donald, 165 U. S., 58.
Cotting v. Stockyards Co., 183 U. S., 79.
Prout v. Starr, 188 U. S., 537.
Miss. Ry. Com. v. Illinois R. R. Co., 203 U. S., 335.
Ex parte Young, 209 U. S., 123.
Scully v. Bird, *id.*, 481.

In Fitts vs. McGhee (172 U. S., 516), upon which defendants relied in the Court below, there was nothing in the Act in controversy or any other law of Alabama, which made it the special duty of the defendants to enforce the statute, the penalty for which was, as stated, recoverable by the party overcharged as a penal debt due him. Mr. Justice HARLAN, speaking for the Court, said (p. 530):

> *"In the present case, as we have said, neither of the State officers named held any special relation to the particular statute alleged to be unconstitutional. They were not expressly directed to see to its enforcement."*

The case at bar is thus plainly distinguishable from Fitts v. McGhee, for in each of the Acts, which we claim to be unconstitutional, penalties are provided, for which, under Section 1962 of the Code the Attorney General and District Attorney "**must**" **bring civil actions** (see *ante*, p. 22).

In *Ex parte* Young, this Court, distinguishing Fitts vs. McGhee, said :

> "It is objected, however, that *Fitts v. McGhee*, 172 U. S., 516, has somewhat limited this principle, and that, upon the authority of that case, it must be held that the State was a party to the suit in the United States Circuit Court, and the bill should have been dismissed as to the Attorney General on that ground.
>
> We do not think such contention is well founded. The doctrine of Smyth v. Ames was neither overruled nor doubted in the Fitts case. In that case the Alabama legislature, by the act of 1895, fixed the tolls to be charged for crossing the bridge. The penalties for disobeying that Act, by demanding and receiving higher tolls, were to be collected by the persons paying them. *No officer of the State had any official connection with the recovery of such penalties.* * * * As no State officer who was made a party bore any close official connection with the Act fixing the tolls, the making of such officer a party defendant was a simple effort to test the constitutionality of such Act in that way, and there is no principle upon which it could be done. * * *
>
> In making an officer of the State a party defendant in a suit to enjoin the enforcement of an Act alleged to be unconstitutional it is plain that such officer must have some connection with the enforcement of the Act, or else it is merely making him a party as a representative of the State, and thereby attempting to make the State a party.
>
> *It has not, however, been held that it was necessary that such duty should be declared in the same Act which is to be enforced.* In some cases, it is true, the duty of enforcement has been so imposed. (154 U. S. 362, 366, section 19 of the Act) but that may possibly make the duty more clear ; if it otherwise exist it is equally efficacious. The fact that the State officer by virtue of his office has some connection with the enforcement of the Act is the important and material fact, and whether it arises out of the general law, or is specially created by the Act itself is not material so long as it exists."

It is obvious that the case at bar is on all fours with the decision f *Ex parte* Young and the preceding cases, and is plainly disinguishable from Fitts v. McGhee.

(b) Even if this suit be, within the meaning of the Eleventh Amendment, against the State, it has waived its immunity.

The Attorney-General did not appear specially to question the urisdiction of the court; on the contrary, he joined with the other lefendants as "Attorney-General of the State of New York" in iling an answer, which took issue with the complainant on the nerits and only incidentally suggested, not by way of demurrer, hat the suit was in effect a suit against the State of New York.

That such an appearance is in effect a waiver was expressly ruled in the very recent case of Gunter, Attorney-General v. Atlantic Coast Line (decided January 15, 1906), 200 U. S. 273, in which it appeared that the State of South Carolina passed a law for the assessment and taxation of property, and under it the C. & D. Railroad was assessed in the counties of Darlington and Chesterfield. It became the duty of the respective treasurers of those counties to collect *the state* and county taxes. A stockholder of the road filed a bill to enjoin the railroad and the treasurers of the two counties from collecting both taxes. An answer was filed for the two County Treasurers, signed by "the Attorney-General of the State of South Carolina for defendants." The Supreme Court held

> "*although a State may not be sued without its consent, such immunity is a privilege which may be waived, and hence where a State voluntarily becomes a party to a cause, and submits its rights for judicial determination, it will be bound thereby and cannot escape the results of its own voluntary act by invoking the prohibitions of the Eleventh Amendment.*" (Citing Clark v. Bernard, 108 U. S., 436, 447).

In Gunter v. Atlantic Coast Line, as in the case at bar, the State was not a party *eo nomine*, but as the proceeding was to enjoin the collection of State taxes, the appearance of the Attorney-

General, as "Attorney-general of the State," if in effect an appearance for the State, was a waiver of its immunity. Similarly, if a suit against the Attorney-General to restrain him from enforcing an unconstitutional statute is a suit against the State, *which we do not concede*, yet his general appearance "as Attorney-General" in that case, and his taking issue with the complainant upon the merits of the case, is a waiver by him of any possible immunity, which the State enjoys under the Eleventh Amendment. If it had a right to assert immunity, it was necessary to assert it in accordance with equity procedure, which was to appear specially and moved to dismiss the suit, before great expense had occurred in its prosecution. Instead, the Attorney-General joins issue with the complainant on the merits of the cause, participates in all the proceedings before the Master, and it is too late for him now to assert, after the Master has found the facts against him, that the State can shield itself behind the Eleventh Amendment.

III.

The provisions of said statutes as to pressure are unconstitutional and invalidate both statutes.

Having discussed the jurisdiction of the Court, we now pass to the first objection to the constitutionality of the legislation in question.

Each of the Statutes, in specifying the price and candle power of the gas to be manufactured and delivered to the consumer, further require as an essential part of the same "legal standard" that it be delivered to the consumer under a certain pressure. Such pressure is described in each Statute by the following provision:

> "The pressure of illuminating gas in any service main in the said city, at any distance from the place of manufacture, shall not be less than one inch nor more than two inches and a half."

It will be noted that in the Act of 1906 (the eighty cent statute), the provisions as to candle-power and pressure are both contained in second section, fully quoted on page 5 of this brief.

Each of these Acts became operative the first day of the month next succeeding its passage, a period in each case of about twenty-seven days.

The testimony before the Master disclosed two views as to the practicability of complying with this pressure provision.

All the witnesses for the complainant and some of those for the defendant agreed that it was a physical impossibility to comply with these provisions, owing not merely to natural laws which could not be overcome by any appliances, but also to the fact that the amount of pressure was somewhat dependent upon the action of the consumers themselves. One of the defendants' experts, however, testified that compliance with these provisions was possible, provided that the "entire system of gas distribution in this city be reconstructed", and new and larger mains be laid with new pumping stations and other special apparatus.

Both the Master and the Circuit Court accepted the theory of defendants' experts that compliance was physically possible, if radical changes were made in the method of distribution. The complainant had 800 miles of mains which were valued on the basis of cost of duplication at over $12,000,000. The Master concluded that to install the new pressure mains would involve a cost

> "in the neighborhood of $4,000,000 for main and valve construction alone, in addition to which would be required pumping stations and apparatus, the annual charges and operating expenses in connection with which Mr. Addicks testified would amount to several cents per thousand feet of gas and which would involve a corresponding increase in operating cost or *proper selling price of gas.*"

The Circuit Court in its opinion fully sustained this conclusion. It said:

> "On this point I think the testimony amply supports the Master's finding, which is in substance that the pressure re-

> quired by law is not physically impossible if the entire system of gas distribution in this City be reconstructed. It is a scientific fact incapable of change even by legislation, that pressure in a gas pipe varies with altitude. By the expenditure of about $4,000,000 for construction of mains and valves alone, exclusive of any pumping stations or other apparatus, it might be possible to establish and maintain the pressure called for by these Acts. Such a thing is commercially impossible, and even if it were done (of course at complainant's expense) it remains commercially impossible since the other parts of the statutes cut off the surplus income out of which alone complainant could be expected to perform the work. A change by means of new capital would be impossible because when made it would not add a dollar to income."

In its final decree the Circuit Court said (Record, Vol. I., p. 433):

> "IV. The pressure required by said two Acts and the order aforesaid is not physically impossible if the **entire system** of gas distribution in the City of New York **be reconstructed; but compliance with such requirement is commercially impossible under the rates for gas prescribed by said two Acts and order."**

The testimony upon this question of pressure is fully reviewed in Mr. Matthewson's separate brief on the facts. It suffices for the present discussion to say that four conclusions from the testimony were undisputed and indeed indisputable.

1. Assuming that compliance with the pressure provisions was practicable at any time or by any method, it would involve the expenditure of at least $4,000,000, a substantial increase in operating charges and a reconstruction of the Company's distributing system throughout the city.

2. That such compliance was physically impossible before the Act became operative and the penalties for non-compliance accrued.

3. That such increased fixed charges and operating expenses

could not be incurred under the Eighty Cent gas rate, and leave a fair return.

4. The penalties for failure to comply

> " would aggregate $5,000 per diem upon evidence recorded at each of the five city testing stations, of only a single violation per diem of said laws, or at the rate of $1,800,000 per year under complainant's distributing system as now existing and in operation which amounts are liable to be increased by additional or more frequent tests". (See Findings of the Master, *ante*, pp. 11 and 12).

In the Court below no attempt was made by counsel to dispute these conclusions of the Master and the Circuit Court. The unconstitutionality of the pressure provisions was virtually conceded. In the present briefs, only a perfunctory attempt is made to question these findings, and the Appellants rely upon the contention that, if unconstitutional, the pressure provisions are severable from the maximum rate provision.

Mr. Whitney, it is true, attempts to evade the whole question by a suggestion (p. 150) that he is " informed " that " the State " (which he does not represent) " never relied upon the testimony of Edgerton ", (who testified as to the practicability of larger mains for the purpose indicated,) but upon the testimony of Mr. Bradley, the Chief Engineer of the Consolidated Gas Company. Mr. Bradley, however, testified that compliance with the pressure provisions by any method was a physical and scientific impossibility. (Vol. I., p. 549 of the Record).

The only question, therefore, open to discussion is whether this pressure provision is so severable from the maximum rate provision that the Court can eliminate it as invalid, without nullifying the maximum rate provision.

To show how interwoven the subject of price, quality and pressure are, we first call attention to the statutes themselves, the pertinent provisions of which we have already quoted (*supra*, pp. 3-5). Each statute presents a *single* "standard" of gas, whose three interdependent elements are price, candle power and pressure.

It is obvious that the price, the candle power and the pressure were interdependent. As to candle power, this could not possibly be denied, for the higher the candle power necessarily the greater the cost, and the Legislature necessarily in fixing the maximum price of gas inseparably connected with it the quality of gas that was to be delivered. Equally interwoven with the price of gas and candle power was the requirement as to pressure, about which latter there had been some public complaint. The reports of the legislative committees clearly show, and the statutes themselves corroborate, that the Legislature was at least as much concerned in compelling the Company to observe a certain minimum and maximum pressure in its mains as it was to furnish gas of a certain candle power, and it presumably but erroneously believed that both could be furnished without injustice to the complainant at the maximum price which it prescribed. The brief for the Public Service Commission admits (p. 281)

> " That the pressure provision was intended for an additional guarantee to the consumer in order that the candle power provision should not be evaded by increasing the pressure."

It was therefore an integral part of the candle power provision and of the *standard* of gas which the Company should sell for 80 cents.

In fixing the price of gas of a special quality and pressure the Legislature must have considered, as integral factors in the problem, the burdens of expense thereby imposed upon the Company.

It now appears that even if 80 cent gas were otherwise compensatory, it would be confiscatory, if complainant has the added burdens of new fixed charges and increased operating expenses, necessary to comply with the pressure provisions. As the Circuit Court pointed out in its opinion, the great additional expenditure, due to a radical reconstruction of the mains and pumping stations, would yield no additional income, as no additional charge for gas to compensate for vastly increased fixed charges is permissible under the present Statutes.

While the Courts may hold portions of a Statute valid, while invalidating others, the portions must be clearly separable, and upon the face of the Statute it must be reasonably clear that the legislature would have separately enacted the valid portions. The burden is upon him, who seeks to disentangle the valid from the invalid portion of an unconstitutional statute, to satisfy the Court that the Legislature would have enacted the valid portion as a separate law. The presumption is otherwise. (See cases cited and quoted, *post*, pp. 43–45.)

We fail to see how this Court can hold that the Legislature would have prescribed the maximum rate, even though the pressure provisions were eliminated. It would be as reasonable to claim that if gas of the required candle power could not be furnished at 80 c., that such standard of candle power would be treated as separable and the 80 c. rate held valid, without any legislative conditions as to the quality of the gas to be sold. The Gas Commission showed how interwoven candle power was with price by allowing an increase of 1.81 to the operating cost as compensation for raising the candle power from 20 to 22. (Whitney's Brief, p. 180.) The Court below has found that gas of twenty-two candle power cannot be sold at 80 cents and yield a "fair return." There is and can be no contention that the Court could emasculate from the Act the provision as to candle power to save the maximum charge. *If it cannot do so as to candle power, how can it do so as to pressure, which also was an element of the quality of the gas to be delivered to the consumer.*

If the Legislature should provide that hereafter the Consolidated Gas Company should furnish acetylene gas to the public at a given price and to do this it was necessary to reconstruct its whole plant, the Court, if it reached the conclusion that such an Act was confiscatory, would be unable to determine whether the Legislature would have preferred to drop the provision requiring the acetylene and retain the maximum price or whether it would have preferred to drop the maximum price and insist upon the acetylene. Of necessity the entire Statute would fall. Similarly, if the Legislature should provide that a railroad should run trains from given points, at not less than fifty miles an hour and that the maximum charge for such express service should be so much per mile, if it were shown that such a speed requirement imposed a burden that was confiscatory, the Judiciary could not determine whether the Legislature would drop the minimum rate of speed or the maximum price.

We earnestly submit that it is equally true that as the Legislature has required by Section 2 of the Act of 1906 (*supra*, p. 4) the complainant to sell and deliver gas of a certain candle power and with a certain pressure at the price specified in Section 1, and as it is substantially conceded that this is at the present time a physical impossibility and that it would be at any time a commercial impossibility with the maximum price prescribed for the sale of gas, this Court cannot safely determine whether the Legislature would have retained the pressure provision and to that end increased the maximum price of gas, to make compliance possible, or whether it would have retained the maximum price of gas and eliminated the inconsistent pressure provisions. Even if the Court could separate the question of price from pressure, yet how can it separate from Section 2 of the Act of 1906 the provisions as to candle power and pressure? *Non constat*, that the Legislature would have preferred to reduce the candle power (as in Boston) to 16 and have retained the pressure provisions. The only safe course for the Judiciary is to leave to the Legislature the task of reconstructing its unconstitutional legislation and determining for itself which of several incompatible provisions it will re-enact as the public policy of the State.

The legislative history of the statutes clearly shows the interdependence of the provisions as to pressure and price and the importance attached by the Legislature to the question of pressure.

The relation of pressure to the cost of gas had been the subject of investigation as early as 1885, and the legislative investigating Committee of that year investigated the subject, as did the later Legislative Committee of 1905, whose recommendations were embodied in the legislation now under attack. Its report clearly shows that the Committee of 1905 believed that the price of gas was necessarily interwoven with the question of candle power and pressure in the mains, by each of which it was believed that the cost to the consumer would be increased or lessened. The Committee recommended as follows:

> "From the evidence which has been presented we are satisfied that a price of seventy-five cents per thousand cubic feet will be fair to the consumer, and will afford to the Companies *after allowing the proper costs for manufacture and distribution taking into consideration all the elements of such cost,* a reasonable return upon their capital investment in their gas making business. This applies to the Borough of Manhattan, the Borough of Brooklyn and a large part of the Borough of the Bronx. In our opinion, it would not be just to make such a rate applicable to the more sparsely settled sections of the City of New York, in, which owing to local conditions, the cost of manufacture and distribution is necessarily higher.
>
> *The investigation has shown clearly that by increasing the pressure a quality of gas poorer than the standard required by law may be made to furnish a required degree of illumination, thus entailing an increased consumption at the increased cost to the consumer. In order that the consumer may benefit by the reduction of the price of gas, it is important that the degree of pressure should be effectively regulated.* The evidence has also shown that there is at present no official inspection in any borough of the city except Manhattan and that the inspection in the last named borough is too infrequent to be adequate. Provision should be made for a system of inspection insuring a supply of pure gas in accordance *with the legal standard* and its accurate measurement at the meter. This inspection should be made by officials of the city at the City's expense."

As a result of and *pursuant to these recommendations* the Acts of 1905 and 1906, whose constitutionality is now assailed, were passed by the Legislature. When chap. 737 of the Laws of 1905 was passed, which created the Gas Commission and which was intended to legislate comprehensively for the gas situation, it gave the Commission, *inter alia*, the following power :

> " 3. Fix the standard of illuminating power and purity of gas manufactured and sold by persons, corporations and municipalities for lighting purposes, not less than that prescribed by law, and require the gas so manufactured and sold to equal the standard established by law or by it, *and establish a standard of pressure at which gas shall be delivered*, where such standard is not otherwise prescribed by law."

It is clear, therefore, why the Legislature were so careful in prescribing the price of gas also to prescribe *as integral parts of the same " legal standard,"* the candle power and the minimum and maximum pressure.

For the purposes of this argument, it is, however, not important whether the Stevens Committee or the Legislature regarded the two factors as interdependent with the price of gas, *if in point of fact they were thus interdependent*, and it is the undisputed evidence in this case that compliance with the Statute will involve the expenditure of many millions of dollars, which, as found by the Court, is rendered impossible by the very " *rates for gas prescribed by said two Acts and Order* ". The Legislature therefore has, under the findings of the Court, required the Company to do simultaneously two things which it is impossible to do concurrently.

The Company is directed, simultaneously, to reduce its revenues by a stupendous sum and increase its fixed charges to a very considerable extent. This the Court finds to be, with the statutory rates now prescribed, " commercially impossible ", which fairly implies that to observe the Statute would not merely

confiscate the earning power of the corporation but involve it in almost immediate bankruptcy and financial ruin.

This Court is under no obligation to determine for the Legislature which of two impossible alternatives is to be eliminated. *Non constat* that the Legislature may not prefer to retain the old maximum price of $1 to enable the complainant to reconstruct its plant; *non constat* that it may not prefer to repeal the provisions as to pressure in order that the price of gas may be reduced. How can this Court, without embarking upon a sea of conjecture, without chart, compass or rudder, determine what the Legislature will do in view of conditions which it is apparent it did not forsee?

We fully accept the decisions cited by the learned counsel for the Appellants, but they do not sustain the severability of the provisions in question. They rely principally upon the following decisions of this Court:

Pollock v. Loan Co., 158 U. S., 601;
Employee's Liability Cases, 207 U. S., 463, 501;
Field v. Clark, 143 U. S., 649;
McPherson v. Blacker, 146 U. S., 1;
Baldwin v. Franks, 120 U. S., 685;
Huntington v. Worthing, *id.*, 97;
Allen v. Louisiana, 103 U. S., 80.

In Pollock vs. Farmers Loan Co., 158 U. S., 601, the Court, quoting with approval Poindexter vs. Greenhow, 114 U. S. 270, said:

> " 'It is undoubtedly true that there may be cases where one part of a statute may be enforced as constitutional, and another be declared inoperative and void, because unconstitutional; **but these are cases where the parts are so distinctly separable that each can stand alone, and where the Court is able to see, and to declare, that the intention of the Legislature was that the part pronounced valid should be enforceable, even though the other part should fail.** To hold otherwise would be to substitute for the law intended by the Legislature one they may never have been willing by itself to enact.' "

In the more recent Employers' Liability Cases, 207 U. S., 463, 501 (1908), where a Statute provided a rule of liability in case of negligence for all carriers who are engaged in interstate commerce, but did not confine its operation to accidents happening in the course of interstate commerce, the Court thus stated the rule :

> " Moreover, even in a case where legal provisions may be severed from those which are illegal, in order to save **the rule applies only where it is plain that Congress would have enacted the legislation with the unconstitutional provisions eliminated.** All these principles are so clearly settled as not to be open to controversy."

In Field v. Clark, *supra*, the Court said :

> " It is an elementary principle that the same Statute may be in part constitutional and in part unconstitutional *and that if the parts are wholly independent of each other*, that which is constitutional may stand and that which is unconstitutional will be rejected."

And again :

> " It is only when different clauses of an Act are so dependent on each other that it is evident the Legislature would not have enacted one of them without the other—*as when the two things provided are necessary parts of one system*—that the whole Act will fall with the invalidity of one clause. When there is no such connection and independency, the Act will stand though different parts of it are rejected."

As it has been shown that the Legislature had in mind that the question of price to the consumer was interwoven with the question of pressure and candle power, how can it be said, in the language of Field v. Clark, that " *the parts are wholly independent of each other*," and is it not clear that pressure, candle power and price are " *necessary parts of one system*," by which the reasonable cost of gas is determined ?

In Allen v. Louisiana, *supra*, this Court quoted with approval the following language of Chief Justice SHAW, in Warren v. Mayor, 2 Gray (Mass.), 84:

The severability of different portions of a Statute is a question of construction, and as in this case a New York Statute is being construed, the New York decisions should be controlling. These decisions strongly support our contention that the pressure provision is not severable from the body of the Statute. See

People v. Porter, 90 N. Y., 68;
Trustees Saratoga Springs v. Gas Co., 191 N. Y., 123.

In the last named case, the full power of the Gas Commission to fix maximum rates for gas was nullified because the Legislature had made the rate permanent as to the Gas Company and subject to revision at the instance of the consumer (*ante*, p. 17). Although the permanence of the rate was a mere incident to the general scheme of rate regulation, and could have been eliminated without destroying the machinery of such regulation, yet the Court of Appeals declined to speculate as to whether the Legislature would have retained any power to fix rates by a Gas Commission, if it had known that it could not constitutionally make the rate permanent as to one class and not permanent as to the other.

attempts to answer our contention by the following remarkable suggestion:

> "When complainant has made the investment necessary to enable it to comply with the pressure regulation and has thereby devoted additional property of definite value to the

> public use, and it should find that the rate prescribed by the Statute did not yield it a fair return on its total investment, then, under the 'changed circumstances' brought about by its new investment, it might make a new application for relief.'

To this objection there are two obvious replies.

The first is that the Legislature has not given the complainant time to reconstruct its entire distributing system and then comply with the pressure provisions. It required that there should be compliance with each of the Acts on the first of the month following its passage, and this gave the complainant twenty-seven days to reconstruct its entire system of mains and to introduce other complicated and expensive machinery. Had this mandatory provision been unaccompanied by drastic penalties, its immediate enforcement would not have been serious, but, as previously stated *(supra,* pp. 11–12), the Act provides that each time, obedient to the laws of gravitation, the complainant exceeds the pressure, it becomes indebted to the State in the sum of $1,000 and, as found by the Master and not disputed by the Appellants, this would mean, if the Company only exceeded the maximum one time each day, a daily fine of $5,000 and an annual loss of $1,800,000. Can it be said, therefore, that the complainant is *premature* in asking relief, when the Legislature has been premature in punishing the complainant for its inability to do that which is, for the time being and for a long time to come impossible?

Even if the complainant has an abstract legal right to apply for relief, after it has made the necessary expenditure to reconstruct its entire system, yet the legislation has made it impossible to make such expenditure. The present rate for gas is a legislative rate without any limitation of time. It yields a return which, after paying expenses, returns less than 6% upon the value of the property. To destroy its present distributing system and build a new one, it would be necessary to incur new debts or increase its capital stock. It can do neither without he consent of the Public Service Commission, and if it obtained such consent, it would, under the circumstances, be unable to find the means to meet the additional fixed charges thereby occasioned without destroying entirely the small return. As its income cannot grow any larger under the legislative rates, how can it increase its expenses, without destroying the little that remains, for when reconstructed, the Company would receive no additional income whatever from its great additional expenditure. The Company is thus invited by the Attorney General to destroy the little earning power it still has, and then "apply for relief" either to the Legislature or the Courts. It may be safely said that while the Legislature progressively reduces maximum charges for gas, it never increases them, and the abstract right of an appeal to it "for relief" would be too hazardous to finance the new undertaking. The Court was therefore right in finding that such a suggestion was commercially impossible *and made so by the very maximum charges now under consideration.* Maximum rate charges are never retroactive. The Company is therefore under no obligation to bankrupt itself first and then ask either the Legislature or the Court to make good the loss.

The further and complete answer to the Attorney General's suggestion, however, is that the mandate of the Legislature, fortified by drastic penalties, is not that the complainant shall at some future time and under a different scale of rates reconstruct its entire distributing system, but that it shall *with the rates now prescribed and with the system as now constructed immediately to do that which, by reason of the system of distribution and the maximum rates of gas permitted the Company, is both physically and commercially an impossibility.*

While, for purposes of argument, we have assumed that compliance with the pressure provisions was abstractly a physical possibility, yet the Appellee's contention was and is that compliance with these provisions, now or at any future time, with or without the expenditure of many millions of dollars, is by reason of natural laws, which cannot be wholly overcome, a physical impossibility.

IV.

The provisions of said acts as to penalties are unconstitutional on their face and invalidate both statutes.

No serious attempt was made in the Court below, and we believe none will be made in this Court, to justify these penalties, which the Master, with ample justification found to be " UNEXAMPLED IN EXTENT AND SEVERITY." The effect upon this Company of an enforcement of these penalties, if it charges in excess of the statutory rates, is clearly stated in the supplemental findings of the Master, and has been already quoted (*supra*, pp. 10, 11).

In Cotting v. Stock Yards Co., 183 U. S., 79, Mr. Justice BREWER expressed his conviction that such penalties operate as a denial of the "equal protection of the laws" and what was merely *dictum* in that case became the SETTLED DOCTRINE of this Court in *Ex parte* Young, 209 U. S., 123. In that case, Mr. Justice PECKHAM said:

> " *A law which indirectly accomplishes a like result by imposing such conditions upon the right to appeal for judicial relief as works an abandonment of the right rather than face the conditions upon which it is offered or may be obtained, is also unconstitutional. It may therefore be said that when the penalties for disobedience are by fines so enormous and imprisonment so severe as to intimidate the company and its officers from resorting to the courts to test the validity of the legislation, the result is the same as if the law in terms prohibited the company from seeking judicial construction of laws which deeply affect its rights.*
>
> It is urged that there is no principle upon which to base the claim that a person is entitled to disobey a statute at least once, for the purpose of testing its validity without subjecting himself to the penalties for disobedience provided by the statute in case it is valid. This is not an accurate statement of the case. Ordinarily a law creating offenses in the nature of misdemeanors or felonies relates to a subject over which the jurisdiction of the legislature is complete in any event.

> In the case, however, of the establishment of certain rates without any hearing, the validity of such rates necessarily depends upon whether they are high enough to permit at least some return upon the investment (how much it is not now necessary to state), and an inquiry as to that fact is a proper subject of judicial investigation. If it turns out that the rates are too low for that purpose, then they are illegal. Now, to impose upon a party interested the burden of obtaining a judicial decision of such a question (no prior hearing having ever been given) only upon the condition that if unsuccessful he must suffer imprisonment and pay fines as provided in these acts, is, in effect, to close up all approaches to the courts, and thus prevent any hearing upon the question whether the rates as provided by the acts are not too low, and therefore invalid. The distinction is obvious between a case where the validity of the act depends upon the existence of a fact which can be determined only after investigation of a very complicated and technical character, and the ordinary case of a statute upon a subject requiring no such investigation and over which the jurisdiction of the legislature is complete in any event."

In the Court below, the Appellants attempted to sustain the constitutionality of these penalties upon two grounds:

1. That they were not cumulative.
2. That they were not more severe than penalties provided in other Statutes.

We have already discussed the first ground and shown that by the plain letter of the Statutes and under the accepted decisions of the Courts of New York these penalties are unquestionably cumulative. No other conclusion is reasonably possible (*supra*, pp. 23–27).

As to the second objection, we are referred to instances of higher penalties for acts, which in their very nature could be committed on comparatively few occasions. Thus we are referred to the penalty for usurious interest, the failure of an insurance company to file a report, the failure of a tax-payer to pay his taxes, the failure of a corporation to submit its stock books to the inspection of stockholders, and similar cases. It is plain that in those cases the aggregate of the penalties could only be small; whereas, in the very nature of maximum rates, as applied to public utility corporations, the penalties for charging in excess of the maximum rates must of necessity be oppressive in amount and must inevitably deter the corporation from asserting its constitutional rights unless it can have the Federal Courts as a "city of refuge" and the Fourteenth Amendment as a rock of defense.

The only question which seems to us open to discussion is as to the effect of such oppressive penalties upon the Statute, whose provisions they seek to enforce. We admit that the severability of the penalty provisions from the maximum rate is more debatable than the question already discussed of the interdependence of the maximum pressure provisions and prices; nevertheless, we believe it to be a logical conclusion that where a Legislature enacts a scale of rates and as to such rates denies the corporation equal access to the Courts by holding stupendous penalties over it *in terrorem*, the Statute *as a whole* denies the equal protection of the laws and not merely the penalty provisions. We so understand this Court in *Ex parte* Young, *supra*. Referring to the italicized portion of Mr. Justice PECKHAM's opinion, which we have already quoted (*supra*, (p. 48), it would seem that the Court spoke of the law as a whole and not merely of the penalty provisions, although in a subsequent part of the opinion this conclusion is not so clear.

In previous cases, the Court had already held that where maximum rates were provided and no opportunity was granted for a judicial review of the reasonableness of those rates, the law as a whole was unconstitutional.

Thus, in Chicago Ry. Co. vs. Minnesota, 134 U. S., 418, the Legislature of Minnesota passed a law which provided that for certain railroad rates, which should be "final and conclusive as to what are equal and reasonable charges." The State Court granted a writ of mandamus against the appellant railroad to compel it to comply with the law, and the railroad company set up as its answer that the rates were unreasonable. Testimony to support this defense was excluded by the State Court, and on appeal the Supreme Court held that the mandamus granted by the Court below should be dismissed " if the Court should

We repeat our contention (*ante*, p. 17) that in determining the severability of the penalty provisions, the decisions of the New York Courts will be controlling upon this Court, and these decisions leave no doubt that the New York Courts would hold that the penalty provisions were not separable from the maximum rate provisions (See cases cited, *ante*, p. 17).

In People v. Porter, 90 N. Y., 68, the Act created inferior magistrates and also contained provisions which provided penalties as to punishment for crime. It was held that the invalidity of the provisions for the appointment of the inferior magistrates invalidated the penalty provisions. Said Chief Justice ANDREWS:

> " We cannot assume under these circumstances that the Legislature would have passed the Act except as a whole, and if the part relating to the appointment and jurisdiction of the police justices are invalid, the whole Act fails."

See Saratoga Gas Case (*ante*, p. 17).

the sale of gas in New York City, was $1.00 per thousand, and this rate had been acquiesced in by the gas companies (including the complainant). Thereupon the Legislature, by the Act of 1905, above referred to, provided that all gas sold by the complainant and other New York companies to the City of New York should be at a rate not greater than 75 cents per thousand. Since the passage of that Act it has provided, by order of the Gas Commission, passed in pursuance of the Act of Chapter 737 of the Laws of 1905, and by the direct mandate of Chapter 125 of the Laws of 1906, that the price of gas to the individual consumer shall be 80 cents per thousand. Whether, therefore, consideration is had to the conditions that preceded the passage of Chapter 737 of the Laws of 1905, or those that succeeded, it appears that by law the complainant is compelled to sell its gas to the city of New York at a less rate than it is permitted to charge to other consumers, notwithstanding that the ordinary rate is presumptively reasonable. (See Lake Shore R. R. Co. vs. Smith, 173 U. S., 684, quoted *post*, p. 53).

It has, as every corporation and individual, the liberty of contract guaranteed by the Fourteenth Amendment (Lochner v. N. Y., 198 U. S., 53 ; Allgeyer v. Louisiana, 165 U. S., 589). The State, therefore, has no general and *unlimited* right to interfere between the producer and the consumer as to the price upon which they would otherwise mutually agree, and while, as to public utility corporations the supervisory power of the State, subject to the guarantees of the Constitution, has been recognized since Munn v. Illinois, yet the State, when it seeks to interfere with the rights of property and the liberty of the citizen to contract for the sale of the products of his labor, **only has power to prevent extortion by maximum charges of general and uniform application.**

It has been expressly held by this Court that under the police power to regulate rates, the State is without power to direct a public utility corporation to sell to one customer at a less price than to another. Its power to step between the public service corporation and its customers is exhausted when it fixes a **general and uniform** maximum price for the public service. It is as powerless to distribute unequally the burdens of such service as it is to direct a corporation to exempt one class of the community from any burden and to impose the entire expense upon another class.

Such is the undoubted doctrine of this Court, as declared in the case of Lake Shore R. R. Co. v. Smith, 173 U. S., 684. In that case it was contended that the power to discriminate was incident to the power to regulate. This Court denied this contention and said:

> "It does not seem to us that this claim is well founded. We cannot regard this exceptional legislation as the exercise of the lesser right which is included in the greater one, to fix by Statute maximum rates for railroad companies. The latter is a power to make a general rule applicable in all cases and **without discrimination** in favor of or against any individual; it is the power to declare a **general law** on the subject of rates, beyond which the company cannot go, but within which it is at liberty to conduct its work in such a manner as may seem to it best suited for its prosperity and success."

In that case, the Legislature of Michigan passed a law that one thousand mile tickets should be sold by the railroad company, for the benefit of the purchaser and his wife and children, and this was held to be a violation of the Fourteenth Amendment, on the ground that such discrimination between different classes of consumers was not within the police powers of the State. The Court further said:

> The power of the Legislature to enact general laws regarding a company and its affairs does not include the power to *compel it to make an exception in favor of some particular class in the community and to carry the members of that class at a less sum than it has the right to charge for those who are not fortunate enough to be members thereof. This is not reasonable regulation.* * * *
>
> If the maximum rates are too high in the judgment of the legislature, it may lower them, provided they do not make them unreasonably low as that term is understood in the law; but it cannot enact a law, making maximum rates, and then proceed to make exceptions to it in favor of such persons or classes as in the legislative judgment or caprice may seem proper. * * * *The legislature, having fixed a maximum rate at what must be presumed, prima facie, to be also a reasonable rate,* we think the company then has the right to insist that all persons shall be compelled to pay alike,

> *that no discrimination against it in favor of certain classes of married men or families, excursionists or others, shall be made by the legislature.* If otherwise, then the company is compelled at the caprice or whim of the legislature to make such exceptions as it may think proper **and to carry the excepted persons at less than the usual and legal rates, and thus to part in their favor with its property without that compensation to which it is entitled from all others, and therefore to part with its property without due process of law."**

The doctrine of Lake Shore v. Smith (*supra*) is in no respect modified by the Interstate Street Ry. v. Massachusetts (207 U. S., 79), where a street railway company was chartered subject to all existing laws relating to street railway companies, and among such *pre-existing* laws was one that required the conveyance of school children at half price. Mr. Justice HOLMES, in his opinion, says:

> "A majority of the Court considers that the case is disposed of by the fact that the Statute in question was in force when the plaintiff in error took its charter and confines itself to that ground."

The case having thus been decided, Mr. Justice HOLMES, "speaking for myself alone," discusses the possible application of the amendment and "hesitatingly" agrees with the Massachusetts Court that the legislation was not necessarily invalid. It is apparent from the opinion, therefore, that a majority of the Court declined to affirm the validity of the Statute on that ground; and we further believe that the *dictum* of Mr. Justice HOLMES was not intended to express his personal dissent to the doctrine of Lake Shore v. Smith, as he does not even refer to it.

That a municipality is no exception to this rule of equality in rates is decided by the case of Wilson v. United Traction Co., 72 App. Div., 233, where a New York statute was under consideration, which required any city railway to transport a policeman or fireman in the employ of the municipality, free of charge, *while such em-*

ployee is travelling in the performance of his duties. In this case, the Court, while conceding that under the police powers a service railway might be required to *carry* such public officers, held that it was no part of the police powers to carry them *free of charge.* The Court said :

> " Such an advantage may be a public convenience, but the right to take the property of the individual citizen or of a class for the sole reason that the proceeds of it would be convenient to aid the municipality in defraying its general expenses, has not been yet conceded as a legitimate exercise of the police power, and we are not disposed to concede it now."

By analogy, we submit that while the State is competent to compel the complainant to furnish gas to the municipality, it cannot be compelled to furnish it free or at any less rate than to other consumers.

In Beardsley v. R. R. Co., 162 N. Y., 230, the Court of Appeals of this State considered the constitutionality of Chapter 1027 of the Laws of 1895, which required the issuance of mileage books, and the Court, on the authority of Lake Shore R. R. Co. v. Smith *(supra)* held that the statue was invalid.

The city is no exception to the rule as thus laid down, which forbids excepted classes in maximum rate laws. It cannot claim, as matter of right, that it should receive its gas at a less rate than any other consumer. In giving assent to the use of its streets, it might have stipulated with the corporation for gas for municipal purposes at any price. Having given such use, it cannot afterwards insist that it should have gas more cheaply than any other consumer. In tbe brief of the Attorney General for the Appellants it is suggested that because either the Legislature or the City could, in granting their respective franchises or permits, have made a contract with the Gas Companies as to a special rate of gas for the City, therefore it has equally the power to do so now. This is an obvious *non sequitur.* If the Legislature or a municipality can impair its contract with a public service corporation by subsequently injecting new conditions, then such contracts are unilateral arrangements and of no value or protection. *Indeed, the City has made no such claim by any legislation.* The enforced reduction is an act of the State legislature, which has arbitrarily intervened between the complainant and its consumer.

A city, in contracting for a supply of gas for corporate purposes, acts as a private corporation.

Smith v. Brooklyn, 160 N. Y., 357;
People v. Coler, 166 N. Y., 120;
Western Fund Co. v. Phila., 31 Pa., 175, 183.
Bailey v. New York, 3 Hill, 531;
Byrns v. Cohoes, 67 N. Y., 204;
Lynch v. Springfield, 174 Mass., 430.

It has been broadly held that, where powers are given to a municipal corporation for merely corporate purposes and not for strictly governmental purposes, the city acts as a private corporation.

Missano v. New York, 160 N. Y., 123;
Walsh v. New York, 41 Hun, 299;
Scott v. New York, 27 App. Div., 240.

The rate fixing power is one of prohibition. In strictness, it does not fix rates, but simply provides that any sum beyond a given maximum is unreasonable. In so doing, it in effect declares that the maximum is a reasonable price.

Brooklyn Union Gas Co. v. N. Y., 188 N. Y., 334;
Lake Shore Ry. Co. v. Smith, 173 U. S., 684, 695.

When, therefore, the State provides that as to all other consumers, 80 cents per thousand feet is a reasonable charge, and provides that, as to one consumer, no greater charge than 75 cents shall be made, **it in effect declares that to the favored consumer gas must be sold at less than a reasonable rate. This the State cannot do.**

The appellants may attempt to avoid the controlling effect of these decisions by two suggestions.

The first is that exceptional rates for the city is not a discrimination, for it is the representative of all the citizens.

The second is that as the city consumes gas in larger quantities than the individual, it is entitled to a better rate.

To the first suggestion, the answer is that, while citizens presumably get an equal share of the benefit of public lighting, they do not share *equally* the benefits and burdens which attend the use of gas by both the city and the citizens as individuals. Many citizens of New York, as, for example, the proprietors of hotels, do not use gas at all. The citizens who do use gas and who presumably pay more for its use because the city pays less, are in this way the subject of unfair discrimination.

Mr. Whitney, in his brief for the Public Service Commission (p. 183) suggests in this connection the following justification of this palpable discrimination :

> " If the price of the gas paid by the municipality were raised, the taxpayers would have to pay the difference and theoretically the consumers, who were not taxpayers, would pay their share by way of rent."

This suggestion is too fanciful to be of value. It still fails to distribute equally the cost of gas between the taxpayer and the non-taxpayer, the man who rents his property and the man who owns it, the man who uses no gas and the man who does.

In any event, the case of Wilson v. Traction Co., *supra*, answers this suggestion, because in that case the policeman, whose free carriage on the passenger railway was directed by legislation, was also a servant of the city and his free carriage relieved the public, as a whole, of burdens, and therefore enured to the collective benefit of all the citizens ; nevertheless, the Appellate Division held that an ordinance compelling the passenger railways to carry him free " had not yet been conceded as a legitimate exercise of police power," and the Court refused to concede that it was. If the servant of the city, in one of its purely political or governmental functions, like the keeping of the peace, cannot be the subject of an unfair discrimination, it is true *a fortiori* that the city, in purchasing gas for the lighting of its streets (in which, as stated, it acts as a private corporation) cannot claim any immunity from the rule of "equal rates for all, special privileges to none."

As to the second suggestion, assuming that the State could prescribe a scale of rates graduated by the quantity consumed. As this would be of general application, it would be less objectionable. The discrimination in favor of the city, *as such*, is not based upon the amount it consumes, but because it is the City. Indeed the Lake Shore case, *supra*, squarely rules that there can be no legislative discrimination based upon quantity, for in that case the purchaser sought to buy transportation in "wholesale" quantities and this Court declined to recognize that the party who bought the thousand mile ticket was entitled to any special favor by fiat of the Legislature as against the man who purchased a single ticket for a few miles. It said:

> "The Legislature, having established such maximum as a general law, now assumes to interfere with the management of the Company while conducting its affairs pursuant to and obeying the Statute regulating the rates and charges, and notwithstanding such rates it assumes to provide for a discrimination, an exception in favor of those who may desire and are able to purchase tickets at what might be called *wholesale* rates, a discrimination which operates in favor of the *wholesale* buyer and leaves the others subject to the general rule."

This the Court held to be unconstitutional.

Mr. Whitney, in his brief for the Public Service Commission (p. 183), attempts to justify the discrimination on the ground that "the character of the service is also different". But he simply relies upon the fact that the city consumes more than the individual consumer, and we have shown that a legislative rate cannot discriminate between "wholesale" and retail consumers. If so, the Legislature could discriminate between all of the citizens who purchase gas, for all consume it in infinitely varying quantities. If this be so, why was not the twenty dollar mileage ticket justified as a rate regulation in the Lake Shore Case *(supra*, p. 58)?

Mr. Whitney, however, suggests that some of the gas furnished to the city is "unmetered" (referring to the street lamps), but it is nevertheless paid for per cubic thousand, and the mere method of its measurement is wholly unimportant. The fact is that far from being any ground for discrimination because of any difference in service, in favor of the city, the reverse, if anything, is true, for the Gas Company furnished its gas to the consumer in one place, while the service to the city requires the distribution of gas not only to widely scattered public buildings but to every street lamp throughout the length and breadth of the many thousand miles of streets which compose the City of New York.

The question, however, is not one as to the equitable distribution of the cost of gas, but it is a question of *power* on the part of the Legislature to interfere with the management of the Company in such distribution, and the Lake Shore Case is conclusive that while the Legislature has power to establish a "maximum as a general law," it is powerless to further interfere with the management of the Company by unequally distributing the fair return among the various consumers *(ante*, p. 53).

Unless it can be shown that the Lake Shore case has been reversed, the unconstitutionality of the 75c. rate necessarily follows, and the only question open for discussion is as to the effect which such invalid rate has upon the general maximum charge of 80 cents.

In this connection it will be noticed that in enacting the 80 cent law, the Act of 1906 contained a direct exception of the city of New York, which should still have the 75 cent rate, and thus the two rates were made a part of the same scheme of rate regulation. The two rates are thus interdependent. Each must be presumed to have been enacted in view of and with respect to the other. Both form a system of maximum charges and the invalidity of the one is fatal to the validity of the other.

This Court cannot say that the Legislature of New York would have made the rate 80 cents to the individual consumer if it had known that it could not make an exception in favor of the City. The two charges are inseparable parts of the same Act, and one cannot be eliminated and the balance of the law sustained, without compelling the Court to guess at what would have been the intention of the Legislature, if this want of constitutional power had been recognized. The two charges are parts of a *single system of charges*, and when one is eliminated, the Court is left to float without rudder or compass upon a wide sea of conjecture as to what the Legislature would have done with the other charge. To quote again the language of the Supreme Court, in Pollock v. Farmers' Loan (158 U. S., 601) (*ante*, p. 43), an unconstitutional statute cannot be sustained *in a mutilated form*, unless it clearly appears that

> **" the parts are so distinctly separable that each can stand alone and where the Court is able to see and to declare that the intention of the Legislature was that the part pronounced valid should be enforcible, even though the other part should fail."**

In many cases where a single act deals with many clearly separable matters, such separation is free from difficulty; but in the matter of fixing rates, the ways of a Legislature are like those of Providence " mysterious and past finding out ", and the relation of one rate to another is beyond the wisdom of the Judiciary to fathom. Its only safe course is to pronounce an unequal system of rates void as an entirety, leaving the Legislature to reenact it in such form, as will show at least a passing respect for constitutional limitations.

The cases cited by Mr. Whitney in his brief (pp. 185, 186) were all different charges for services which differed in *kind* as well as extent.

VI.

The finding of the Circuit Court that the rates prescribed would yield the complainant less than a just and reasonable rate of return is a finding of fact and not a conclusion of law, and this Court should therefore give to such finding the controlling weight of a special verdict of a jury and not reverse such finding except for clear and indubitable error.

The learned Master, after full consideration of all the testimony, found that the rates would not yield a " fair or reasonable return on the value of the property." In so doing it incidentally found that

> " a just and reasonable rate of return upon the value of the investment in complainant's gas business is **not less** than the legal rate of six per cent. per annum."

The Circuit Court found that six per cent. was

> " the **lowest rate** which, in the City of New York, can be considered legislatively fair to those who are already engaged therein and cannot readily escape."

This conclusion was thus embodied in its final decree :

> " The **lowest rate** of return which can be considered legislatively fair, just or reasonable upon the value of the property employed by complainant in the business of manufacturing and supplying gas is six per cent., at which conclusion the Court has arrived in part by taking judicial notice of local conditions in the City of New York."

It is of primary importance to determine whether this be a question of fact or of law. We contend that it is a finding of fact. Undoubtedly it is a question of law whether, under this finding of fact, the Fourteenth Amendment invalidates the legislation, but the ascertainment of what is a just and reasonable return upon a given investment is of necessity a question of fact.

In his brief for the appellants, the Attorney General frankly admits (p. 22) that the question whether the legislative rates are reasonable presents "*issues of fact.*"

Mr. Whitney, in his brief for the Public Service Commission, (p. 160) also admits that the question was one of fact by the following concession:

> "Here there was but one *ultimate question of fact* before him, namely 'under the conditions existing on May 1, 1906, what rate of return can be earned at the rate of 80 cents for gas by a Company reasonably capitalized and properly equipped and managed.' Every other question was *evidential, not ultimate.*"

The recognition by this Court that the reasonablenesss of return is a question of fact is shown by the statement of this Court in Covington Turnpike Road Company v. Kentucky (164 U. S., 578), when it said that an Act could not be declared unconstitutional (p. 596),

> "merely because the Company (as was alleged and as the demurrer admitted) could not earn more than four per cent. on its *capital stock*. It cannot be said that a corporation is entitled, as of right and without reference to the interests of the public, to realize a given per cent. upon its capital stock".

It is significant that the Court thus concluded its reasoning (p. 597):

> **"Each case must depend upon its special facts."**

The Court thus declined to lay down any rigid uniform rule and recognized that the capital stock and the real value of the Company's assets might not be identical in amount. It has never decided that any given percentage is required as matter of law, even upon real value, for obviously the rate of return in a settled community would hardly be just in a Nevada mining camp, and thus of necessity the question remains one of fact.

The same conclusion is fairly deducible from the pointed analogy which the Supreme Court has drawn between rate regulation cases and cases which involve the actual taking of property under the right of eminent domain. It held that the principles governing compensation were similar in both cases and it is obvious that in a given case the amount to be awarded by the State for property, which it physically takes under the right of eminent domain, is always a question of fact.

It has further recognized that the problem is largely a mathematical one, when it ruled in Chic., M. & St. P. R. R. Co. v. Tompkins, 176 U. S., 167 that the proper practice was to refer the matter to a Master to "make all needed computations and fully find the facts". As was once said of the tariff, the reasonableness of return is of necessity **"a local issue"**, for the compensation for the hazard of capital must necessarily shift from State to State and community to community, in accordance with the economic conditions which there prevail. Many questions of fact further enter into the complex problem—the original cost, the structural value, the reproduction value, the favorable location, the length of the franchises, the possibility of competition, the duration of the business, its good will as a going concern and the rate of similar investments in the same community. These and other purely economic factors enter into the composite result which is, for want of a better term, denominated a "fair return". It must therefore conform not merely to statutory laws but to those laws of business, whose operation, owing to irresistible economic forces, is often independent of Statutes. When, therefore, after a careful examination of these and other factors entering into the problem, a Court of first instance has determined that a given rate in a given case would not yield a fair return, an appellate tribunal is not reviewing a question of law but one which in its last analysis must necessarily be a question of fact.

As such a finding of fact, we respectfully submit that this Court should accord to it all the controlling effect which would be given to a verdict of a jury in a case at law. In the latter case, an appellate tribunal would not consider whether upon the testimony they would necessarily have reached the same conclusion, nor would it consider whether every detail of the reasoning, through which the ultimate finding was reached, commended itself. It would only reverse the finding if upon the entire testimony it was clearly erroneous.

As previously stated, these findings, reached after so much patient labor and after the fullest opportunity had been given to all counsel to present their evidence or views to the contrary, should be given, under the accepted doctrine of the federal equity courts, *all the force and effect that the verdict of a jury would be given at common law, where there is more than a scintilla of testimony.* Theoretically, the matter should be treated as though all the disputable questions of fact had been framed into specific issues and upon competent testimony a jury had impartially reached certain conclusions. Indeed, the findings of the present Master should be given far greater weight than the verdict of a jury, for the latter would only be the result of the average intelligence of twelve men, drawn at random from the community, who would doubtless have been confused by the intricate and complex facts and possibly swayed by prejudices or interest. (See *Ex parte* Young, 209 U. S. 123.)

In this case, however, the findings are those of a distinguished member of the bar, enjoying, as a Standing Master in Chancery, the special confidence of the Court, and who brought to a discussion of these questions the trained mind of an experienced and very capable lawyer. He was not a mere examiner to take testimony perfunctorily, but in accordance with the practice indicated in C. M. & R. Ry. Co. v. Tompkins, 176 U. S., 180, he had been selected "*to make all needed computations and fully find the facts*".

In Davis v. Schwartz, 155 U. S., 631, 636, an equity suit, the case was referred by consent of parties to a Master "to hear said causes and to report to this court his findings of fact and conclusions of law."

The Supreme Court thus stated the general rule:

> "1. As the case was referred by the Court to a Master to report, not the evidence merely, but the facts of the case, and his conclusions of law thereon, we think that his finding, so far as it involves questions of fact, is attended by a presumption of correctness similar to that in the case of a finding by a referee, the special verdict of a jury, the findings of a Circuit Court in a case tried by the Court under Rev. Stat., Sect. 649, or in an admiralty cause appealed to this court. In neither of these cases is the finding absolutely conclusive, as if there be no testimony tending to support it; but so far as it depends upon conflicting testimony, or upon the credibility of witnesses, **or so far as there is any testimony consistent with the finding, it must be treated as unassailable."**

1 Foster's Fed. Prac., Sec. 315, p. 690;
Green v. Bishop, 1 Cliff., 186, 194;
Mason v. Crosby, 3 Woodb. & Minn., 258, 269;
Donnell v. Columbia Ins. Co., 2 Sumn., 366, 371;
Welling v. La Bau, 34 Fed., 40;
Moline Plow. Co. v. Carson, 72 Fed., 387, 388;
Fidelity, etc., Co., v. St. Matthew's Savings Bank, 104 Fed., 858, 860;
Paddock v. Commercial Ins. Co., 104 Mass., 521, 531;
Richards v. Todd, 127 Mass., 167, 172.

The weight to be given by the Supreme Court to these findings of the Master is strengthened by the affirmance of the Circuit Court of the substance *and final result* of these findings. While the Master and the Court differed in some details of the calculation, yet in the ultimate finding they agree that the complainant cannot receive, if the statutory rates are enforced, a just and remunerative return.

We submit that this Court should not disturb, except for the clearest error, these careful conclusions of the learned Master, as re-examined and in substance affirmed by the Circuit Court. The Fourteenth Amendment has put a stupendous burden upon the Federal Judiciary in the matter of these rate-making cases, and, so far as the Supreme Court is concerned, the burden will be intolerable, if it must re-examine as an appellate tribunal the infinitely complicated questions of fact, which are necessarily involved in such cases. We do not claim that there should be no re-examination, but we do claim for the finding of the Court below as to questions of fact the controlling weight in a complicated matter, which would be given to the verdict of a jury in one of extreme simplicity. Possibly Mr. Justice HOLMES, speaking for this Court, had this in mind when he said, in San Diego Land & Town Co. v. Jasper, 189 U. S., 439, 446:

> "We do not sit as a general appellate board of revision for all rates and taxes in the United States. We stop with considering whether it clearly appears that the Constitution of the United States has been infringed, together with such collateral questions as may be incidental to our jurisdiction over that one."

In Chicago, M. & St. P. R. R. Co. v. Tompkins, 176 U. S., 167, this Court indicated that the labor of determining the complicated facts in this class of cases should at least primarily devolve upon a Master, and with the enormous growth of this class of litigation, the Supreme Court may sooner or later be compelled, from necessity if not from choice, to apply the law to the facts *as ascertained by the trial Court*, and, as previously stated, this involves no departure from accepted legal principles as to the weight to be given to the findings of a trial Court.

In a very recent and important rate case (Pennsylvania R. R. v. Philadelphia County, 220 Penn., 114), which determined the validity of the two-cent railroad rate law of Pennsylvania, the highest Court of that State took this view of the subject and held that the findings of the lower Court were those of fact and of controlling weight in an appellate court. The Court said:

> "The court below after receiving much evidence and giving it a most painstaking and elaborate consideration found that the Act does injustice to the corporators in that it reduces the returns from the property to such an extent

> as to render it unremunerative. *As this is a question of fact the findings of the court cannot be disturbed unless shown to be clearly erroneous*, and as this has not been shown we might well abide by the general rule and rest the case on this finding, but as the method of reaching the fact in a case of such complicated elements is complained of, it is proper to discuss some special objections."

Mr. Whitney in his brief gives a substantial reason why this controlling weight should be given by this appellate Court and indeed by the Circuit Court below, to the findings of the Master. He freely concedes (pp. 57 and 178) that the Master, who saw the witnesses, was in a better position to judge of the weight of their testimony than either the Circuit Court or this tribunal.

On page 57, he disputes the power of a Court to declare a Statute unconstitutional on the impression which witnesses made upon a Master appointed to find the facts. If the question of demeanor be thus important, and in determining credibility and weight of testimony demeanor is, as Mr. Whitney says, of importance, it follows that the very greatest respect should be given to the Master's findings, who had an advantage which neither the Circuit Court nor this appellate Court can possibly have.

Again, on p. 178, Mr. Whitney says in his general attack upon the ability of the judiciary—and especially the Federal judiciary—to dispose of this class of cases:

> " The Judge then finds the voluminous papers piled up among a mass of other papers equally pressing, and he has to decide without the knowledge and experience which aided the Commissioners. Upon questions of fact and discretion he is especially at a disadvantage. He is less likely to know which witness is lying and is more or less misled by a false assertion of impracticability."

If this be true, it follows that this Court has not the same advantage, in weighing the credibility of the testimony in this case, as the Master. If, as Mr. Whitney says, any of the witnesses were "lying," the Master could determine that better than this Court can, which reads the testimony in cold type.

These practical demonstrations, freely conceded by Mr. Whitney, demonstrate the wisdom of the rule that where the testimony is conflicting, the findings of fact of a Master or jury are virtually "unassailable."

In this case, both the Master and the Circuit Court reached the same conclusion, but not always with the same reasoning as to all the factors of the problem. As previously stated, the Master valued the complainant's property at $83,357,000, while the Court, by eliminating many important property holdings of the complainant and reducing others, reduced the value of its property to $59,831,435. Both valuations were, we think, unjust to the complainant, for we claimed below and claim now that complainant's property as used in the gas business, was reasonably worth over $96,000,000. The Supreme Court, therefore, could not justly overturn the special verdict in this case, because some of the reasoning might not commend itself, unless it was prepared to hold that neither the complainant's claim nor the Master's finding nor the Circuit Court's decree was reasonably justified by any testimony in the case.

In this connection we challenge the soundness of the contention in the Attorney General's brief (p. 23), that as the Appellee did not take an appeal from the decree entered,

> "it will not be heard to challenge the correctness of any of the findings contained therein".

The present decree consists in part of the remedial relief, to which the Court held the complainant entitled, and in part of the findings of fact, which justified such relief, and these findings of fact are themselves divisible into the *ultimate* findings of fact and to those subordinate findings upon which the former were based. Mr. Whitney, in his brief for the Public Service Commissions, admits (p. 160) that the remunerative character of the return is the "ultimate question of fact," to which the other questions were merely "evidential." He further agrees (p. 245) that the whole question is before the Court on his XII Assignment of Error. So far as the remedial relief is concerned, the Appellee is unquestionably bound by the decree and, in the absence of a cross-appeal, cannot be heard to ask for further and different relief. The Appellee took no cross-appeal because it received all the remedial relief which it sought.

As to the findings of fact, which are contained in the decree, whether subordinate or final, we submit that the Appellee has a right to sustain the decree in its favor by any argument that can be legitimately drawn from the testimony, even though such argument may be negatived by one or more of the subordinate findings of fact. The Appellee's position is precisely that of a litigant who claims that a verdict in his favor, and the resultant judgment, is sustained by the testimony in the case. Such Appellee may not agree with all the reasoning of the jury. He may believe that the same result could have been reached by a different process of reasoning; nevertheless, when the sufficiency of the evidence to support the verdict is the question, the Appellee is at liberty to sustain the verdict from the entire testimony in the cause. For example, the present Appellee has the right to show that the Court was in error in eliminating many elements of value, such as the Astoria plant, which, had they been included, would have materially strengthened its right to the present remedial relief.

The cases which the Attorney General cites to the contrary are not in point.

In Chittenden v. Brewster (2 Wallace, 191) the complainant in an equity suit was dissatisfied with the *relief* granted him, and appealed. The defendant took no appeal from the relief granted, but on the argument claimed that no relief should have been granted. The Court held that such failure to appeal from an adverse decree was a waiver of any right to attack its propriety.

The "Stephen Morgan" (94 U. S., 599) was an admiralty case, where the decree divided the loss resulting from a collision at sea between the libellant and the respondents. Only the respondents appealed. The Court simply held that the libellant, who did not appeal, "cannot be heard in opposition to the decree" but "may be heard in support of the decree *and in opposition to every assignment of error filed by the appellees*".

In Clark v. Killen (103 U. S., 766), Clark filed a bill to declare null and void conveyances of six separate lots of ground. The Court adjudged that *three* of said conveyances were invalid. The complainant appealed because of the insufficiency of the relief as to the remaining parcels and on the argument the Appellee, who had not appealed, attacked the sufficiency of the decree as to the three lots first mentioned. This Court therefore held that he could not attack the decree, from which he had not appealed.

In Cherokee Nation v. Blackfeather (155 U. S., 218), the appellee sought "for a modification of the decree increasing" the award. This the Court denied.

Appellants also cite New Orleans Mail Co. v. Fernandez (94 U. S., 597), but we find no such case reported.

The cases referred to are plainly distinguishable from the case at bar. The Appellee is not questioning the sufficiency of the decree as to remedial relief. It simply contends that such decree is amply sustained not only by the findings of fact, upon which the Court and the Master expressly based it, but upon other facts disclosed by the testimony.

The propriety of that decree must be determined from the whole record and the Attorney General's contention that every reasonable conclusion, which might have been drawn from the evidence in favor of the decree or any part thereof, is to be ignored, finds no warrant in any ruling of this Court.

The unreasonableness of such contention is shown by the fact that the Appellee could not have appealed from this decree. Had it done so, and assigned for error the failure of the Court to find all the facts, which would have *cumulatively* supported the decree, it would have been met by the answer that, as it obtained the only *ultimate* finding which it desired and *full* remedial relief, that the errors assigned were academic. *Indeed, who ever heard of a litigant appealing from a decree, which granted him full relief on the ground that the Court could have reached the same result by different reasoning?*

It has been expressly ruled that a litigant who has obtained

> " a judgment or decree which is so favorable to him that it secured him all the relief he seeks,"

cannot bring a writ of error or take an appeal to review such judgment or decree.

> Guarantee Co. v. Ins. Co., 124 Fed., 170, 173;
> Rogers v. Mining Co., 154 Fed., 606, 609.

Because the Appellee in this case could not have taken a cross-appeal, having secured full relief, it does not follow that he may not fully sustain his decree from the entire record.

The true rule is that an appeal in equity brings the entire case before the Court of review and while the appellant is entitled to his assignments of error, the appellee may defend the decree upon any reason which the record justifies.

In Hendryx v. Perkins, 123 Fed. Rep., 268, 270, Putnam, J. said:

> " This is in substance ' that the finding and statement of facts by the Circuit Court ' in the case before us is conclusive on us, notwithstanding this is an appeal in a cause in equity and not a writ of error to a common law judgment. * * * For us to admit his proposition * * * would clearly reverse the rules of procedure in the federal courts from the time of Judiciary Act of 1789; and this could not possibly be permitted. It may be well to state here that the law is thoroughly settled that a mere opinion of a judge in the Circuit Court in an equity case is not a ' finding and statement of facts.' "

Both in equity and at common law the true rule therefore is that a judgment or decree will not be reversed unless the appellate court is satisfied upon a review of the entire case that the judgment or decree was erroneous.

> McLemore v. Louisiana State Bk., 91 U. S., 27, 28.
> Mobile, etc. R. Co. v. Jurey, 111 U. S., 584, 593.
> Chic. &c. R. Co. v. Ross, 112 U. S., 377, 395.
> Lancaster v. Collins, 115 U. S., 222, 227.
> Tua v. Carriere, 117 U. S., 201, 210.
> Fulkerson v. Holmes, 117 U. S., 389, 401.

In Blythe Co. v. Hinckley, 111 Fed., 827, 837, the rule was thus stated by Ross, J.:

> " In equity an appeal brings up the whole case, and any matter of law apparent upon the face of the bill of review is upon such an appeal open to the consideration of the Court. If the decree dismissing the bill of review was right, it should be affirmed, regardless of the reasons assigned by the Court for its judgment. Many a right judgment is given for a wrong reason."

VII.

Where the rate is prescribed by the Legislature and not by an administrative body, it is equally subject to a judicial review as to its confiscatory character.

Had this question not been raised by capable and eminent counsel in the Court below, we would have assumed that the proposition was so clearly established by the decisions of this Court that any discussion would be an idle superfluity. In the Court below, however, Appellants contended that

> " the reasonableness of a rate regulation is a judicial question only when prescribed by a subordinate body by virtue of delegated authority."

Subsequently they so far modified their position as to claim that while a legislative rate was subject to review, *if no return whatever were allowed*, it was not the subject of judicial review, if any return, however inadequate and unjust, were allowed.

The logical effect of such contention is that while the Fourteenth Amendment is effective to prevent total confiscation of property by a State Legislature, it is wholly ineffective to prevent partial confiscation. If so, the Fourteenth Amendment, so far as rate regulation cases are concerned, is little better than waste paper, for, as pointed out by the lower Court on the oral argument, it would in such event be easy for the Legislature to regulate rates almost to the vanishing point and thus for all practical purposes confiscate the earning power of a corporation.

If the Courts are constitutionally powerless to review a rate law, which yields one per cent., even though such one per cent. be most unjustly unremunerative, it is then logically true that a rate law would be beyond judicial attack, which would yield one-thousandth of one per cent.

Appellant's contention, however, needs no detailed argument, for it has been conclusively answered by the decisions of this Court, which uniformly have held that no Department of the Government, whether legislative, executive or judicial, can override the Constitution of the United States. Indeed the earlier cases, in which the right of judicial review was asserted, were in many cases legislative rates. The Appellants' contention is therefore best answered without further argument by a few quotations from the opinions of this Court.

In Reagan v. Farmers L. & Tr. Co., 154 U. S., 362, 397, this Court said of this duty of the Judiciary :

> " Still there can be no doubt of their (the Courts') power and *duty* to inquire whether a body of rates *prescribed by a Legislature or a commission* is unjust and unreasonable and such as to work a practical destruction to rights of property and if found so to be, to restrain its operation ".

In Smyth v. Ames, 169 U. S., 466, where a schedule of legislative rates was sought to be enforced, the Court said that the power to regulate was

> "not without limit and that under pretense of regulating fares and rates the *State* cannot require a railroad corporation to carry persons or property without reward".

The Court summarized the authorities as follows (p. 526):

> "2. A State enactment, *or* regulations made under the authority of a State enactment, establishing rates for the transportation of persons or property by railroad that will not admit of the carrier earning such compensation as under all the circumstances is just to it and to the public, would deprive such carrier of its property without due process of law and deny to it the equal protection of the laws, and would therefore be repugnant to the Fourteenth Amendment of the Constitution of the United States".

Again the Court said, anticipating the present contention (p. 527):

> "No one, we take it, will contend that a *State enactment* is in harmony with that law simply because the *legislature* of the State has declared such to be the case; for that would make the State legislature the final judge of the validity of its enactment, although the Constitution of the United States and the laws made in pursuance thereof are the supreme law of the land, anything in the Constitution or laws of any State to the contrary notwithstanding."

In Covington Turnpike Co. v. Sandford, 164 U. S., 578, 598, this Court said:

> "The utmost that any corporation, operating a public highway, can rightfully demand at the hands of the *Legislature, when exerting its general powers*, is that it receive what, under all the circumstances, is such compensation for the use of its property as will be just both to it and to the public".

Again in San Diego Land Co. v. National City, 174 U. S., 739, 753, the Court said:

> "It is equally clear that this power could not be exercised arbitrarily and without reference to what was just and reasonable as between the public and those who appropriated water and supplied it for the general use; for the State cannot **by any of its agencies, legislative, executive or judicial,** withhold from the owners of private property just compensation for its use."

Again in C. B. R. R. v. Chicago, 166 U. S., 226, 234, the Court said:

> "But a State may not **by any of its agencies** disregard the prohibitions of the Fourteenth Amendment."

And again in Chicago Ry. Co. v. Tompkins, 176 U. S., 167, 173, the Court said:

> "It is often said that the Legislature is presumed to act with full knowledge of the facts upon which its legislation is based. This is undoubtedly true, but when it is assumed from that, that its judgment upon those facts is not subject to investigation, the inference is carried too far."

And again, in Cotting v. Stock Yards Co., 183 U. S., 79, 91, the Court said:

> "As to parties engaged in performing a public service, while the power to regulate has been sustained, negatively the Court has held that *the Legislature* may not prescribe rates which, if enforced, would amount to a confiscation of property. But it has not held affirmatively that the Legislature may enforce rates which stop only this side of confiscation and leave the property in the hands under the care of the owners without any remuneration for its use."

We concede that in the Granger cases (94 U. S., 113 *et seq.*), where the abstract power of a Legislature to regulate rates at all was alone in question, the Court did say, in 1876, that the rates prescribed by the State were beyond judicial review and conclusive, but this pure *dictum* was unanimously overruled by the Court in Railroad Commission Cases, 116 U. S., 307, decided in 1886, and this was reaffirmed in Chicago R. R. Co. v. Minnesota, 134 U. S., 418 (1889), in which last case the three dissenting Judges clearly indicated that the majority opinion overruled the Granger Cases. Since then the right of judicial review to prevent confiscatory rates has been uniformly recognized and appellant's present contention, that an Act of the Legislature has some peculiar sanctity to nullify the Fourteenth Amendment, comes a quarter of a century too late.

VIII.

The Fourteenth Amendment invalidates a rate, if it yield less than "just remuneration," even though it yield some return.

Both the Circuit Court and the learned Master found upon the evidence that a just and remunerative return to the complainant could not be less than six per cent. That was found to be an "irreducible minimum." Appellants now contend in effect that even if this be so, the Fourteenth Amendment is inapplicable because there is no confiscation in the constitutional sense, if the return yield *any* compensation to the complainant, however inadequate it may be. As the denial of anything less than a full and adequate return is manifest injustice, the Appellants' contention logically seeks to establish "a twilight zone" of injustice, within which the State can freely confiscate the greater portion of a public service corporation's earning power. In its last analysis, the contention is that while the Fourteenth Amendment is effective to prevent *total* confiscation, it is ineffective to prevent *partial* confiscation.

As applied to the present case, the contention, therefore, is that even if less than six per cent. is a denial of just and adequate remuneration, the Federal Constitution is powerless to prevent partial confiscation and that the State is therefore, as to legislative rates, in the position of Warren Hastings in his administration of India, in that it can take a substantial part of private property, but is free from interference if it "stop only this side of confiscation" and thereby "marvel at its own moderation". If this be so, as previously stated, the Fourteenth Amendment is of little value, for the Legislature can always exempt itself from the inhibition of the Bill of Rights by allowing the unfortunate public service corporation to retain a small, although grossly inadequate, part of its just earning power.

Mr. Whitney, in his brief for the Public Service Commission (p. 260) is more merciful than his associate counsel and can therefore with greater justice "marvel at his own moderation". While he agrees with them (pp. 258, 267) that there is a "twilight zone of injustice" (the phrase is ours), within which the State can confiscate the just earning power of a public service corporation, without any interference under the Fourteenth Amendment, he yet narrows the zone somewhat by a suggestion (for which there is no warrant or justification in the decisions of this Court) that the limit of Federal power is to give to the much harassed public service corporation the current net rate of interest on a safe non-taxable security of a gilt edge variety. This percentage he fixes at from 3 to 4 per cent., and while he admits that the Company is justly and reasonably entitled to an additional profit, which would represent the "insurance against risk", he thinks such additional profit is beyond the protective power of the Fourteenth Amendment. He admits (p. 260) that this profit, which represents the profit of the risk, is one that the State should not "reasonably" take away under the guise of regulation, but he denies that the Federal Government has any jurisdiction in the matter. He says (p. 259):

> "The State police power may intervene to cut down the NORMAL income of property IN THE MOST SERIOUS DEGREE so long as the property is not 'taken.'"

He admits (p. 261), that this lack of protection under the Fourteenth Amendment puts the stockholders of such a corporation "to a serious risk—a risk of pecuniary loss by the action of the local authorities--without any real efficient relief". He, however, gives them the soothing balm that "dividends occasionally stop, just as a house sometimes stands empty", and that (p. 262)

> "a State which does not treat its corporations fairly will soon suffer and soon repent, and will not the *education* that it will have received compensate in the long run for the temporary loss that investors will have suffered?"

Of course the drawback to this argument is that the State gets its education at the expense of individual investors and that it is of little satisfaction to the latter, when their just income is destroyed and they are reduced to possible penury, to learn that the people as a whole are somewhat wiser by reason of their (the individual investors') misfortunes.

This ingenious theory also ignores the practical consideration that the public service corporation may have built its works by borrowed money, upon which it is paying far more than the net interest rate on non-taxable securities, and it further asserts the indefensible proposition that there is a substantial element in the "just return," namely, the insurance against risk or profit for the hazard, WHICH THE STATE IS AT LIBERTY TO CONFISCATE. All rates, therefore, according to Mr. Whitney, are like ancient Gaul of our school days, divided into three parts: (1) The confiscatory. (2) The unreasonable. (3) The reasonable.

To support this argument, he makes a distinction between a "taking" of property and a regulation of rates, but as we will hereafter show, the "taking" of property, which is meant in this class of cases is not the taking of the capital itself but the taking of the *earning power* for the supposed benefit of the public.

Indeed this whole question has been somewhat confused by the use of the misleading word "confiscation". There is no such word as "confiscation" in the Fourteenth Amendment. It simply provides not only for the equal protection of the laws in the pursuit of gainful occupation (which equal protection is wanting when the

State can arbitrarily deprive any corporation of its just earning power), but also prohibits the taking of property "without due process of law," which means, unless the uniform decisions of this Court are wholly wrong, that no corporation can be compelled to serve the public without "just compensation" for its service.

This contention of a "twilight zone of injustice", which is as unsound in ethics as it is in law, and as wanting in reason as in authority, finds no warrant whatever in the decisions of this Court.

In Cotting vs. Stock Yards, 183 U. S., 91, this Court said in 1901, of this very contention, that this Court

> "has not held affirmatively that the Legislature may enforce rates *which stop only this side of confiscation* and leave the property in the hands and under the care of the owners without any remuneration for its use."

The rule, as uniformly laid down by this Court, has been one of "just compensation."

The meaning of that phrase, as familiar in legal phraseology as in common speech, is so clear that a volume of words would not amplify its meaning. Compensation means **full** compensation and can mean nothing else, and a man is never compensated when he receives less than that which is due him, any more than the laborer has the payment of his hire when he receives a fractional part thereof. The laborer is worthy of his full hire, and the public service corporation is entitled to full remuneration for the service which it renders. *Nothing more and nothing less.*

The appellant's contention is an inversion and also a perversion of the common law rule as to reasonable rates.

The Granger Cases were simply declaratory of the common law and were based on the *dictum* of Lord Hale, that he whose business is affected by a public interest shall "take a reasonable toll". The Court further quoted Lord Ellenborough in Aldnutt v. Inglis, 12 East, 527, that those who enjoyed a public monopoly are "obliged to limit themselves to a *reasonable compensation* for such ware-housing". Compensation, therefore, was the rule at common law, and it is inherent in the very word "compensation" that the hire must be *equivalent* to the service.

In the Railroad Commission Cases, 116 U. S., 307 (1886) decided ten years after the Granger Cases, the Court said that the authority of a railroad carrier to carry persons and property, and to "fix, regulate and receive tolls," **"itself implies authority to charge a reasonable sum for the carriage"**, and added that "this would have been implied if there had been no such provision." In the same case, the Court repudiated the doctrine of Chief Justice WAITE, in the Granger Cases, that a legislative rate was beyond judicial review, and said (p. 331):

> "From what has thus been said, it is not to be inferred that this power of limitation or regulation is itself without limit. This power to regulate is not a power to destroy, and limitation is not the equivalent of confiscation. Under pretense of regulating fares and freights, the State cannot require a railroad corporation to carry passengers or property **without reward.** Neither can it do that which in law amounts to a taking of private property for public use without **just compensation** or without due process of law".

"Just compensation" therefore became the rule, to which this Court has adhered without shadow of turning. In so doing it used a well recognized legal term of constitutional law, for with only three exceptions, the constitution of every State in the Union provided in substance that private property should not be taken for public use without "just compensation."

The Fifth Amendment uses the same term and the Supreme Court in Monongahela Navigation Co. v. U. S., 148 U. S., 312, 326, thus defines its significance:

> "The noun 'compensation', standing by itself, carries the idea of an equivalent. Thus we speak of damages by way of compensation, or compensatory damages, as distinguished from punitive or exemplary damages, the former being the equivalent for the injury done, and the latter imposed by way

> of punishment. So that if the adjective 'just' had been omitted, and the provision was simply that property should not be taken without compensation, the natural import of the language would be that the compensation should be the equivalent of the property. And this is made emphatic by the adjective 'just.' **There can, in view of the combination of those two words, be no doubt that the compensation must be a full and perfect equivalent of the property taken.**"

Nor as to just compensation is there any sound distinction between the value of capital and the value of its earning power.

In Monongahela Navigation Co. v. U. S. (p. 328), *supra*, the Court further said:

> " How shall just compensation for this lock and dam be determined? What does the full equivalent therefor demand? The value of property, generally speaking, is determined by its productiveness—the profits which its use brings to the owner."

To the same effect is Mr. Justice FIELD's vigorous statement in Munn v. Illinois, 94 U. S., which, though contained in the dissenting opinion, became subsequently the accepted doctrine of this Court. He said (p. 141):

> " All that is beneficial in property arises from its use and the fruits of that use, and whatever deprives a person of them deprives him of all that is desirable or valuable in the title and possession. If the constitutional guaranty extends no further than to prevent a deprivation of title and possession and allows a deprivation of use and the fruits of that use, it does not merit the encomiums it has received."

From the ruling of " just compensation " as thus stated, this Court has never departed. Moreover, it wisely declined to amplify it by further definition.

In Chicago R. R. Co. v. Minnesota, 134 U. S., 418, 458, it said :

> " If the Company is deprived of the power of charging **reasonable rates** for the use of its property and such

> deprivation takes place in the absence of an investigation by judicial machinery, it is deprived of the lawful use of its property and thus in substance and effect of the property itself without due process of law ".

In his concurring opinion, Mr. Justice MILLER said (p. 461):

> " But when the question becomes a judicial one and the **validity and justice** of these rates are to be established or rejected by the judgment of a Court, it is necessary that the railroad corporations interested in the fare to be considered should have notice and have a right to be heard on the question relating to such fare, which I have pointed out as judicial questions ".

Can it be doubted that the "justice" of rates requires full, and not partial, compensation?

Again, in Reagan v. Farmers Loan & Trust Co., 154 U. S., 362, 397, it was said that it was the Court's

> "power and duty to inquire whether a body of rates prescribed by a Legislature or a commission is **unjust and unreasonable**, and such as to work a practical destruction to rights of property, and if found so to be, to restrain its operation ".

Can it be questioned that an inadequate rate is " unjust and unreasonable," even though it give *some* compensation?

Again the Court said, in the same case (p. 399):

> " The equal protection of the laws which, by the Fourteenth Amendment, no State can deny to the individual, forbids legislation in whatever form it may be enacted, by which the property of one individual is, **without compensation,** wrested from him for the benefit of another, or of the public ".

In the same case it was held that it was competent for the Courts,

> " to enter upon an inquiry as to the **reasonableness and justice** of the rates prescribed by the Railroad Commission ".

Can less than full compensation be in any legal sense in accord with "reasonableness and justice"?

In the same case, this Court pointedly indicated by analogy its recognition that compensation necessarily implied full compensation. The Court said (p. 410):

> "The equal protection of the laws, the spirit of common justice, forbids that one class should by law be compelled **to suffer loss that others may make gain.** If the State were to seek to acquire the title to these roads under its power of eminent domain, is there any doubt that constitutional provisions would require the payment to the corporation of **just compensation,** that compensation being the value of the property as it stood in the markets of the world and not as prescribed by an Act of the Legislature? Is it any less a departure from the obligations of justice to seek to take, not the title but **the use for the public benefit at less than its market value?**

Applying the analogy, would the requirement of the Fourteenth Amendment be satisfied if the State Court of New York had taken possession of complainant's property under the right of eminent domain and by legislative act given it a grossly inadequate sum therefor? Could it in such case be said with reason that as long as the Legislature allowed it *anything* for its property it had received some compensation and the question as to *quantum* was so far a legislative question as to be beyond judicial review? This Court has itself answered in the negative by this pointed declaration *that* **"just compensation" in rate regulation cases is "just compensation" in condemnation cases.**

In Smyth v. Ames, 169 U. S., 466, the Court, reaffirming the Railroad Commission Cases, again held that no public service corporation can be obliged to discharge its public functions "without reward" or without "just compensation", and thus again used the language of the Constitution, as already interpreted in the Monongahela Bridge Case, *supra*, as meaning **full compensation.**

In Covington Turnpike Co. v. Sandford, 164 U. S., 578, 598, the Court held that a public service corporation had the right to require rates that were "just both to it and the public", and this it later defined in the opinion as "**the fair value of the services rendered**".

Again, in Smyth v. Ames, 169 U. S., 466, 547, it summed up the rule as follows:

> "What the Company is entitled to ask is **a fair return upon the value** of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

Could the rule of full compensation be more clearly stated? To conform it to appellant's contention, it would be necessary to paraphrase it thus:

> "What the Company is entitled to ask is some return, however inadequate, upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that as little be exacted from it as will be required to pay expenses and make some return, however small and inadequate, to the Company for the use of its capital and the employment of its skill".

In San Diego Land Company v. National City, 174 U. S., 739, 757, the Court thus stated the rule:

> "What the Company is entitled to demand in order that it may have just compensation, is **a fair return upon the reasonable value of the property** at the time it is being used for the public".

In Chicago R. R. Co. v. Tompkins, 176 U. S., 167, 173, this Court again referred to the analogy of condemnation proceedings and said:

> "It is within the competency of the legislature to determine when and what property shall be taken for public uses. That question is one of policy over which the courts have no supervision; but if after determining that certain property

> shall be taken for public uses the legislature proceeds further, and declares that only a certain price shall be paid for it, then the owner may challenge the validity of that part of the Act, may contend that his property is taken without due compensation; and the legislative determination of value does not preclude an investigation in the proper judicial tribunals."

In Minneapolis R. R. Co. v. Minnesota, 186 U. S., 257, the Court again affirmed the doctrine of Smyth v. Ames, that just compensation was "**a fair return upon the value** of that which it employs for the public convenience."

The most recent statement of the rule is found in Atlantic Coast Line R. R. Co. v. No. Carolina Corp. Com., 206 U. S., 1, where Mr. Justice WHITE said (p. 24):

> "In a case involving the validity of an order enforcing a scheme of maximum rates of course the finding that the enforcement of such scheme will not produce an **adequate return** for the operation of the railroad, in and of itself demonstrates the unreasonableness of the order."

In the same case, he speaks of rates "*as a whole adequately remunerative,*" and again, of an order "*for a wholly inadequate compensation.*"

The threefold iteration of the word "*adequate*" is significant.

A composite statement of this Court, therefore, is that legislative rates, to be constitutional, must yield a "compensation" that is "full," "fair," "just," "reasonable" and "adequate" and one that is not less than the "market value" of such use.

Of course, as pointed out in the Covington Turnpike Case, *supra*, there is no rule of law that there must be a return *upon the capital stock*, for the capital stock may be fictitious; nor is there any fixed rule that there must be a return upon *original cost*, for this may be largely in excess of present value. The only rule of the Court is that the fair present value shall yield a fair and full return, and whether it does so is a judicial question, even though the primary declaration of the Legislature creates a presumption of reasonableness.

In view of recent developments, we need not emphasize to this Court that any other rule would not only work injustice in individual cases, **but would be a public calamity.** It would largely nullify the Fourteenth Amendment in rate regulation cases. Rate regulations, often passed under the pressure of public clamor and with little opportunity of defense by the public service corporation, would simply be so adjusted as to yield a slight return in order to be immune from judicial review. To the unfortunate investor, it would matter little whether his property was totally confiscated or whether his company received but one per cent. upon the fair value of his property, *for so small a return could yield no dividends whatever*, and thus the investors in public service corporations, whose holdings aggregate many billions of dollars, would, for all practical purposes, be beyond the great protective power of the Fourteenth Amendment. That this Court, after the developments of the last two years and under present conditions, should declare this to be the law, is to us inconceivable.

In the very recent and important rate case of Central R. R. Co. vs. Georgia Railroad Commission (161 Fed. Rep., 995), the Circuit Court well said of a railroad carrier:

> "He must have 'just' compensation. Any schedule of rates is forbidden which produces injustice. **The quantum of injustice is immaterial. There must be 'no injustice.'"**

It is true that the rule for which we contend does impose upon the Judiciary in rate cases the same burden as in condemnation cases, of determining what is full compensation for property taken, and undoubtedly this important duty is "difficult and perplexing." But, as was stated by this Court in Chicago Ry. Co. vs. Tompkins, 176 U. S., 167, 172:

> **"This difficulty affords no excuse for a failure to examine and solve the questions involved.**

* * * **Difficult as are the questions involved in these cases, burdensome as the labor is which they cast upon the Courts, no tribunal can hesitate to respond to the duty of inquiry and protection cast upon it by the Constitution."**

In Southern Pacific R. R. Co. v. Commissioners, 78 Fed. Rep., 261, Mr. Justice McKenna thus forcibly stated the question:

> " When the power of judicial review was asserted and entertained, the Fourteenth Amendment of the Constitution was bound to be firmly and accurately applied. There could be no middle ground. Middle ground would satisfy neither legislative prerogative nor judicial prerogative. Certainly not the judicial prerogative. That must apply justice as it is understood of men, and, in its clear light, it was inevitable that it would come to be seen that the Fourteenth Amendment of the Constitution would be a composition of delusive words if it forbade only the taking of the physical property, while it permitted the taking of its value,—if its guaranties of the law's equal protection to all persons would be satisfied as to railroads by leaving them a microscopical profit. If so, the pool of Tantalus would lose its force to illustrate excited and disappointed expectation when compared with the organic law of this great land. We should keep in mind that the regulation of a railroad affects, in reality, the natural persons who own it, not the insensible, legal artificiality and abstraction called a ' corporation '. For the natural persons the protection of the Constitution is intended, and would any one say that justice is done them if their investment be allowed only an infinitesimal fraction of 1 per cent., while all other investments are expected to return, at least, legal interest, with freedom, besides, of unlimited advantage."

The lower Federal Courts and the highest Courts of some of the States have so far developed a legal rule as to hold that the maximum return must not be less than the legal rate of interest.

For this rule there is ample justification. Usury laws are simply maximum charges for the loan of money. The authority of the State as to them is precisely the authority of the State as to the maximum charges of public service corporations. In each case the justification is the prevention of extortion. Beyond that the State is powerless to interfere in that which is essentially a matter of private contract. The liberty of contract gives the borrower and the lender full freedom to contract between themselves for the loan of capital, subject only to the power of the State to prevent extortion. The maximum legal interest, therefore, is the legislative declaration of a rate that is not unreasonable and within which the borrower and the lender have full freedom of contract. In Lake Shore v. Smith (*supra*, p. 52), this Court has ruled that the legislative rate is *prima facie* a reasonable rate and that while the Company cannot go beyond it, yet within it

> " it is at liberty to conduct its work in such a manner as may seem to it best suited for its prosperity and success ".

We have, then, a legislative declaration that for the ordinary loan of money upon collateral, six per cent. is legislatively reasonable and that the borrower and the lender are at liberty to contract for at least that sum. If this be true of the ordinary loan of money, it is doubly true of an investment in a public service corporation, which in a sense is a loan of capital to a public enterprise. There are, however, at least two important differences between the two, which strengthen the legal rule that the investor should not receive less for the use of his money than the ordinary creditor.

(1) The creditor has no further labor than the exercise of judgment in the selection of his collateral. With him, to use the phrase of Aristotle, " money breeds itself."

Those, however, who unite in a public service corporation to serve the public, add to the mere use of money all the resources of science, industry and business sagacity to serve the public interest.

In Brunswick Water District v. Maine Water Co., Mr. Justice SAVAGE well said :

> " Those who engage in a public service cannot be put upon the same level as those who make mere investments. They are not like the depositors in a savings bank, whose right to draw out is limited to precisely what they have put it, with its earnings. They are, on the contrary, engaged in a business, with the ordinary incidents of a business, with some of the hazards and the hopes of a business. To be successful, they must be wise and prudent, thrifty and energetic. These virtues, if they have them, they impress upon the property, making it more valuable than it otherwise would have been. Is it to be said that they can have no return for skill and good management ? We do not think so. They are entitled to charge reasonable rates. (Beale and Wyman on R. R. Rate Regulation, Sec. 401.) "

(2) A better reason, however, is that the ordinary creditor, in the case of a call loan, can withdraw his money at will and, in the case of a time loan, can, upon the maturity of his obligation, withdraw his money for any more profitable use which may present itself. The money which is contributed to the capital of a public service corporation, on the contrary, remains permanently dedicated to that use. Practically it cannot be withdrawn, and if in the progress of society the use is superseded by a better use, the investor may not recover more than a fraction of his investment. The property of a gas plant is at the hazard of any inventor who may be able to supply a better means of illumination. As gas succeeded oil and as the electric has materially lessened the demand for gas, similarly a superior illuminant may at any time be discovered, which will supersede the use of both. It is well known that upon this problem distinguished scientists are working in all

the laboratories of the world, and many believe that the wonderful discoveries in radio-active substances will yet result in an illuminant produced at little cost and without heat.

It therefore follows that the maximum rate for the hazardous use of money cannot reasonably be less than the maximum rate for an ordinary loan on good collateral.

The legal interest rule has been recognized in a number of cases.

In Brymer v. Water Co., 179 Pa., 251 :

> " They are entitled to a rate of return, if their property will earn it, *not less than the legal rate of interest ;* and a system of charges that yields no more income than is fairly required to maintain the plant, pay fixed charges and operating expenses, *provide a suitable sinking fund for the payment of debts* and pay a fair profit to the owners of the property, cannot be said to be unreasonable ".

The same Court reaffirmed this ruling in the very recent and important case of Pennsylvania R. R. Co. v. Philadelphia County, 220 Pa., 100, 115, where the Court passed upon the validity of the two-cent rate law of that State. The Court said :

> " What was said in Brymer v. Water Co., 179 Pa., 231, was that the company was entitled to a fair return, not less than the legal rate of interest. *In naming the legal rate the court was naming a minimum not maximum rate. Six per cent. is the legal estimate of the legitimate profit from the ordinary safe use of money.* No business man in 1846, even if now, went into a new and extensive venture of uncertain outcome without the hope of more than common interest. Because his judgment or foresight was good is no reason that he should be shorn of his profits in the result."

In Chicago Union Traction Co. v. State, 114 Fed. Rep., 557, 561, where the valuation of corporate franchises for the purposes of taxation was under consideration, the Court said :

> " Several other elements in a fair calculation, based on net earnings, have raised questions to which we have given

> careful consideration. The first of these is upon what rate of the true net earnings the aggregate value of the property should be capitalized. We have fixed the rate at *six per cent.* That is the rate adopted in States where assessments are made upon the basis of net earnings. It is less than the rate that some advanced advocates of municipal ownership are willing to guarantee to investors in securities of this character".

In Louisville Ry. Co. v. Brown, 123 Fed. Rep. 946, the Court said as to maximum railroad rates (p. 951):

> " I think it will be conceded that as long as the rates are reasonable and do not unjustly discriminate, the Company is entitled to earn some amount, and it seems reasonably clear to me that if entitled to earn something, under the above conditions, it is entitled to earn, under the same conditions, *a compensatory amount equal at least to the usual and legal rate of interest in the locality where the railroad is situated*".

In the very recent case of Central R. R. of Georgia v. Alabama, 161 Fed. Rep., 925, the Circuit Court, in its exhaustive opinion upon the Railroad Rate Law of that State, adopted the "legal rate of interest rule". Judge JONES said:

> "The best standard which the courts and business men have been able to find for testing such questions is to ascertain whether, when the service is done at just and reasonable rates, the carrier obtains for the service as a whole a fair return upon the value of all the property employed in the business. The courts have, therefore, generally taken as the standard of proper return the legal rate of interest, contrasted with the current rate of profit from the use of other property in like kinds of business. While the percentum of profit allowed upon loans of money between private individuals is not, in many respects, a fair standard for determining just profits from the use of other kinds of property under conditions of greater hazard, yet the rate is the result of long experience, and is tantamount to a legislative declaration that such measure of profit is in general a just return upon investments in property. The evidence shows that the cur-

> rent rate of profit upon property used in business enterprises similar to railroads gives a net income, upon the value of such property, not lower than 8 per cent. per annum Whether we take the legal rate of profit by way of interest on loans of money, or the rate of profit which common experience shows to be the average, and, therefore, approximately a just return from the use of other forms of property, both modes lead to the same result."

In Milwaukee Ry. & Lt. Co. v. Milwaukee, 87 Fed. Rep., 577, 585, four and five-tenths per cent. was held confiscation.

In Columbus Lt. Co. v. Columbus (Referred to by the Master, Record, p. 207), the Master allowed, and the District Court confirmed, a finding that "*at least six per cent. should be allowed*".

In Southern Pac. R. R. Co. vs. Com., 78 Fed. Rep., 236, 261 (*ante*, p. 86), Mr. Justice McKenna said:

> " All other investments are expected to return *at least* legal interest with freedom besides of unlimited advantage."

In People *ex rel.* Water Supply Co. v. State Board of Tax Commissioners, the Appellate Division of the Supreme Court of New York for the Third Department, in a case involving the true assessment of a special franchise tax, repudiated the reasonableness of a five per cent. return for a public service corporation, and said:

> " Six per cent. should then be deducted as a fair return upon the value of the real estate and other valuable property. The surplus earnings should then be capitalized at six per cent. and the result represents the fair value of the intangible rights in the streets, to which rate should be added the value of the tangible property in the streets, and the result represents the value of the special franchise."

In Spring Valley Water Works v. San Francisco, 124 Fed. Rep., 598, the Court held that

> " The weight of evidence is clearly in favor of a rate *not less than six per cent. per annum*",

and therefore held 4.40 per cent. to be confiscatory.

In International Bridge Co. v. Canada Southern Ry. Co., 7 Ont. App., 226, the Court of Appeal of Canada passed upon the reasonableness of the tolls charged by a Bridge Company. The Court, after agreeing that the creation of a sinking fund to safeguard against possible casualties to the bridge was reasonable, added :

> "To speak of six per cent. upon capital laid out in such an enterprise, is *most unreasonable.*"

This decision was affirmed by the highest judicial authority of England (8 Appeal Cases, 723).

In that case the hazard of the capital, due to the possibility of an accident to the bridge was recognized, and the Court by way of illustration referred to the great disaster which befell the bridge across the Tay.

A gas company operating in a large city *and especially in a congested city like New York,* is subject to as great a hazard as any bridge company. Gas conduits and electric wires are necessarily laid in close proximity and the consequent danger is recognized by the most competent gas engineers. That such danger is not imaginary can be illustrated by the immense damage done to the Boston Gas Companies by an explosion, which destroyed a large number of lives and much property. The gas business, therefore, is more hazardous than a water company or turnpike company or even a bridge company. It bears a close analogy to a railroad or steamship company, where the accident of a day, against which the highest engineering talent cannot wholly guard, may consume the profits of many days or even years.

The State of New York has uniformly recognized that a public service corporation should receive more than six per cent.

A return not exceeding 10%, with a reserve fund of 10% of the capital in addition, was recommended for *this Company* by the Senate Committee of 1886 (Complainant's Exhibit 227, Record, pp. 5325, 5388).

The New York Mutual Gas Light Co., by its Charter from the Legislature, is permitted to earn 10% dividends, and to share with its customers any earnings beyond that point (Chap. 651 L. 1866, Comp. Ex. 239, Record, pp. 1854, 5292).

The lowest rate assumed, by the Stevens' Committee of 1905, was 8%.

And likewise the Gas and Electric Commission in 1906, found that 8% was a reasonable return upon the actual value of the property owned by the Company and used in the manufacture and distribution of gas (Bill of Complaint, Record, p. 33; Opinion admitted in Answer).

Most significant is the provision of the "Railroad Law" of the State of New York. It provides (§ 38) that the Legislature may, from time to time, alter or reduce the "rate of freight, fare or other profits upon such roads;" but that the same shall not, without the consent of the Corporation, be so reduced as to produce with such profits "*less than* 10% *per annum on the capital actually expended.*

Aside from the evidence of this Section as to the Legislative view of the "fair and reasonable" rate of return allowable to a public service corporation, could it be said that the Complainant was receiving the "equal protection of the laws," if it should be limited to a lower return than other public service corporations, with no ground whatever evident for such a discrimination?

In Massachusetts, the Legislative Committee of 1900, in discussing the situation of the New England Gas and Coke Association and the dividend, which might be permitted to be paid by it if brought under the jurisdiction of the Gas Commission, referred to such return as "*the* 10% *heretofore recognized by custom*" (Bemis, Record, p. 2541; Mass. House Document, No. 1405 of 1900).

Even municipal plants in Massachusetts, owned and operated by public capital, which customarily receive and expect a lower return than private capital, are permitted to return as high as 8 per cent. upon such capital, in addition to setting aside a sinking fund for existing obligations and three per cent. for a final renewal fund (Revised Laws Mass., Vol. 1, Ch. 4, § 22).

Even in England, where the return expected upon capital is substantially lower than in America, Gas Companies pay dividends from eight to ten per cent.; and, among others, Mr. Marks, the chief witness and expert for the appellants, admits that the three Metropolitan Companies of London pay an average of $8\frac{24}{100}\%$ on their capital (Record, p. 2097).

It is stated in the report to the Committee of 1886, that the South Metropolitan of London was at that time paying 12%.

It would unduly expand this brief to attempt any adequate summary of the expert testimony given in behalf of the appellee to sustain its claim of a return of 8% to 10%.

Dr. Humphreys, probably the most experienced gas engineer in this country, and a witness for the appellee, testified from a large practical experience in the appraisal and purchase of gas properties as well as from a special study of the subject, that 10% is a fair return upon the investment of a gas company (Record, p. 1689).

Messrs. McMillin, Halsey and Bertron, gentlemen not only well acquainted with matters financial, in general, but with exceptional experience in dealing in public lighting securities, testified that investors will not advance capital to purchase gas properties, unless they can see a present or reasonably immediate *earning* power of at least 10% on the *purchase price;* and such price includes of course not only *tangible* property but any franchise and good will, which go to make up the entire value of the going concern (Record, pp. 1697, 1765–1771).

Mr. Bertron, on the general subject pointed out that even the Pennsylvania Railway, which is generally regarded as the standard transportation company in the United States, was earning about 10% on the market price of its shares, then around 140; and that the stock of the Atchison Railway, selling at par, was earning about 12.

Appellants presented no witness to rebut the testimony of Messrs. Humphreys, McMillin, Halsey and Bertron, as to the rate of earning, which must be visible on the investment to induce the investor to embark his capital in the enterprise.

They presented a schedule, showing that on the market value of certain selected gas stocks the net return *paid* to the investor was less than 5% in many instances. Mr. Whitney, in his brief (p. 112) for the Public Service Commission, admits that such market quotations are so affected by special considerations as to be of little, if any use.

The fallacy of such market quotations is obvious. The market price of a stock is dependent upon the earning possibilities of a Company far more than its present distribution of dividends. The stock market, usually optimistic, always discounts the future by paying more than the dividend value in the hope of larger dividends or other advantages. Moreover, the market price is necessarily affected by the surplus of a corporation, and often by the strategic importance of the Company in a given locality. The Appellee's experts analyzed this schedule and showed some of the special circumstances which caused the securities of different localities to sell temporarily at a price which, in dividends, yielded a small return of five per cent. It is, however, unnecessary to repeat this analysis in this brief, for this Court will not decide the question on what Judge HOUGH happily called "the vagaries of speculation."

As the Master has stated (Record, p. 255), Dr. Marks, the chief expert for the Appellants below, "expressed the view that a *dividend rate* of 8% was fair" (Record, p. 2037).

It was also shown that the Boston Consolidated Gas Company by a recent Act was authorized to pay 7% dividends with gas at 90 cents; but it may increase its dividends to *8% or anything higher*, if and when it is able to reduce the price of gas 5 cents per thousand feet for each additional 1% of dividend.

In very rare instances has the Massachusetts Commission reduced the price of gas, where a Company was then paying less than 10%, and in each such instance the Commission has felt it necessary to explain in a written opinion the special and peculiar reasons, upon which is based its action (Dr. Humphreys, Record, p. 4723; copy of Opinions). The action, in no case, was based on the general proposition that a well managed and reasonably capitalized Company, was entitled to earn less than 10%.

Complainant has never paid excessive dividends; the most that it has ever paid in any calendar year under the old rate is 8½%. It has paid as low as 3%; it is now paying at the rate of 4%; and for the entire period of its existence it has under the old rates paid only a fraction over 6% (Complainant's Exhibit 83, Record, p. 5034). To pay an average dividend of even 8%, it must be permitted a maximum earning power of at least 10% in good years. From 1884 down to the hearing before the Master, the stockholders of Complainant have received in dividends an aggregate sum *less by over $11,000,000* than would have been required to pay average dividends of even 8% during that period (Complainant's Ex. 84, Record, p. 5036), and an even greater deficit below 8% (exact figures $10,401,671.50) appears if we consider only the period up to 1900, when *the capital of the Company was first increased* from the original $39,078,000, at which it was fixed at the time of consolidation in 1884.

A small surplus, much less than the deficit below 8% dividends above shown, was accumulated by the Company; but within every one of the last six years it has been drawn upon to pay dividends, the earnings of the Company being insufficient to pay even the moderate ones declared. Stockholders thus merely took "their own," which they might have distributed to themselves earlier. Thus for the year ending October 31st, 1905, *the Company under the old rates failed to earn its dividends by $2,005,552.62*, and drew that sum from surplus to make up the deficit (Complainant's Ex. 95, Record, p. 5052); so that Complainant's total surplus appeared on October 31, 1905 at $1,546,697.38 (Complainant's Exhibit 80, Record, p. 5033) or less than $74,000 per annum in the 21 years of the Company's operations, being only 1.03 cents per thousand on the total sales of the Company for that period.

If these results have followed under the old rates, what would have resulted if the earnings had been reduced 20% by the reduction of $1.00 to .80 per cubic thousand?

X.

The basis of calculation is the present value of the property and not its original cost.

An argument was addressed in the Court below, which in its last analysis is pure socialism. It contended that the appreciation in the value of complainant's property was an "*unearned increment*", upon which the complainant should be denied any return. It was therefore claimed that the true basis was the original cost of the property.

The complainant Company was formed by the consolidation of six existing gas companies. Among the present real estate holdings of the Consolidated Company are some which were originally acquired by some of the constituent companies as early as 1823, when New York City was little more than a village. During all these years the Company has held this property, having at all times the legal right and the opportunity to convert it into cash at the steadily enhancing prices of real estate due in part to the extraordinary growth of the City of New York. It is now seriously claimed that the rate should be fixed upon the cost value of this property in 1823, and not upon its fair present value.

Mr. Whitney's brief for the Public Service Commission illustrates this socialistic idea of State regulation, by an illustration set forth in full on page 200 of his brief. He imagines two gas companies starting with separate locations of equal value. One plant, with the changes incident to the growth of a community, increases in value, while the other remains stationary. Other things being equal, he then asks whether the fortunate company is entitled to a higher price for gas by reason of such appreciation in value than the less fortunate company.

We confess that if this argument for the legislative equalization of fortunes had been addressed to a Single Tax Society, we would feel no surprise, but addressed to the Supreme Court of the United States, in a judicial proceeding under the Fourteenth Amendment, we can only rub our eyes and say:

"Can such things be
And overcome us as a summer cloud,
Without our special wonder?"

Why should the Legislature, in preventing extortion in the sale of gas, attempt to equalize improvidence with providence and to deny to the prudent investor and wise business management the profit of their sagacity, or even good fortune, simply because another competitor has been less fortunate? This doctrine in its last analysis is simply an attempt to penalize thrift and to take away one man's property (or what is equivalent, its earning power) because another has not been equally fortunate.

Fully appreciating that this Court has ruled to the contrary by holding that the basis of the calculation is "the fair value of the property being used by it for the convenience of the public." Mr. Whitney proceeds to point out the "fallacy" of this "basis" by asserting that (p. 202):

> "Only so much of the value of the property as was covered by the original investment is really used as capital in gas making. For that purpose the value has never increased."

This certainly is novel doctrine. If the Consolidated Gas Company, through one of its predecessor companies, bought in 1823 a piece of ground for $10,000 and has in the course of years built a plant upon it and the ground is to-day worth $1,000,000, then Mr. Whitney asserts that all that the Gas Company actually uses in the business is $10,000, and not $1,000,000, although as matter of fact, the million dollar property is actually used for the purpose of making gas and is appropriate for such use. This reasoning is worthy of the scholasticism of the Middle Ages.

Mr. Whitney adds, however (p. 202), that we are not wholly denied the appreciation of value, because we can realize on such value *when we sell it.* In the meantime, however, if we are denied a just return on such increased value, it is idle capital in our hands.

Moreover, Mr. Whitney's theory results in a strange paradox. If we devote our property to the public use, we are denied any return except upon the original cost, but if we withdraw it from the public use, we are then graciously permitted to obtain some return upon it in other ways. This theory would effectually put a penalty and not a premium upon public service and radically reverses the theory of public service corporations, under which they are entitled to gain a profit upon what they use and not upon what they cease to use.

Mr. Whitney further says (p. 203) that because we make no claim for a return on the stocks of the Edison Electric Company, the enhanced market value of the real estate stands in no better position. The fallacy of this is obvious, for the stocks of the Edison Company are not employed in the manufacture and distribution of gas, while the real estate in question is.

Still more socialistic in its reasoning is Mr. Whitney's remark (p. 244), that if a company has, under authority of law, made profits and has not distributed them to stockholders in the way of dividends but has re-employed them in the business for the public good, and these facts have not been disclosed to the consumer, such investment of surplus earnings

> " should be regarded as having been contributed by the consumer and not by the company and hence should not be treated as capital for the purpose of fixing maximum rates."

If this be true, then not only can our present property be taken without a reasonable return but profits heretofore paid us, under maximum rates fixed by the Legislature are to be taken from us and treated as contributions of the consumers to the capital of the business. Whether we are obliged to capitalize these invested profits and distribute them in the form of new stock among the consumers, whose contribution it is claimed they are, Mr. Whitney does not say. If this be so, not only is the present and future uncertain for public service corporations, but even the past is not secure.

However convincing this argument might be in a Single Tax Society, it surely can find no place in this last and great citadel of property rights, the Supreme Court of the United States.

Passing by these fanciful and untenable suggestions, we will briefly discuss Mr. Whitney's main proposition, from which they are deduced, that the basis of calculation for rate regulation purposes is not the present value but the original cost.

Such a contention is absolutely without any sanction by this Court. On the contrary, this Court, in the case of San Diego Land Co. v. National City, 174 U. S., 739, 757, thus stated the rule:

> "What the Company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property **at the time it is being used for the public.** The property may have cost more than it ought to have cost and its outstanding bonds for money borrowed and which went into the plant may be in excess of the real value of the property. So that it cannot be said that the amount of such bonds should in every case control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just both to the Company and to the public."

Again, in Cotting v. Stock Yards Co., 183 U. S., 79, 91, the Court said:

> "It has declared that the **present value** of the property is the basis by which the test of reasonableness is to be determined, although the actual cost is to be considered, and that the value of the services rendered to each individual is also to be considered."

Again in Smyth v. Ames, 169 U. S., 547, the Court said:

> "What the Company is entitled to ask is a fair return upon the value of that which it **employs** for the public convenience."

Again in San Diego Land Co. vs. Jasper, 189 U. S., 439, 442, the Court said:

> "It no longer is open to dispute that under the Constitution 'what the Company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property **at the time it is being used for the public.'** San Diego Land Co. vs. National City, 174 U. S., 739, 757. That is decided, and is decided as against the contention that you are to take the actual cost of the plant, annual depreciation, etc., and to allow a fair profit on that footing over and above expenses."

Again in Stanislaus County vs. Irrigation Co., 192 U. S., 201, 215, the Court said:

> "After taking such facts into consideration, the Company might still be directed to receive rates that would be nothing more than a fair and just compensation or return upon the reasonable value of the property **at the time it was being used** for the supplying of the water to the public."

The lower Federal Courts have uniformly so understood the doctrine of this Court.

> The owner of property devoted to a public use " is entitled to the benefit of any appreciation in value above the original cost and the cost of improvements, which is due to what may be termed natural causes," such as "improvements made in the vicinity of the property, the growth of the City or town where it is located, the building of railroads, the development of the surrounding country and like causes." The owner would be deprived of the increased value so produced, " by legislative action which prevents him from realizing an income commensurate with the enhanced value of his property."
>
> Thayer, J., in Cotting v. Kansas City Stockyards Co., 82 Fed. Rep., 850, 854.

If the property " has since enhanced in value, those who invested their money in it, like others who invest their money in other kinds of property, are justly entitled to the benefit of the increased value," in determining a reasonable rate of return upon the investment.

San Diego Land & Town Co. v. National City, 74 Fed. Rep., 79, 83 ; Affd. 174 U. S., 939.
San Diego Land Co. v. Jasper, 89 Fed. Rep., 274, 281.
San Diego Land Co. v. Jasper, 110 Fed. Rep., 702, 714.

That the Company loses a return upon any depreciation in value is reasonably settled. "It is a poor rule that does not work both ways," and therefore a return on the appreciation of value necessarily follows.

We invite the earnest consideration of this Court to the irreparable damage which would be done to railroad investments in this country, if the doctrine for which the Appellants contend were sanctioned by this Court. Billions of dollars are invested in railroad properties and there is insistent public demand for a revaluation of railroad properties as the basis of determining the reasonableness of their charges. Most of these railroads have been built for many years and some, like the Baltimore & Ohio, for nearly three-quarters of a century. Many of them occupy in part their original roadbeds and still use in part their original terminal facilities. If these are to be valued on the basis of their original cost, there will be a destruction of values which may justly be compared to the San Francisco earthquake. If capital is freely loaned to these corporations on the basis of the present value of their property, why should this Court hold that while, in determining the reasonableness of railroad rates their fixed charges must be recognized, nevertheless the rates may only yield a return upon the original cost of the property?

Certainly the economic phrase "unearned increment" can be applied with poor grace to the railroads, for manifestly they have not only in great part created the enhanced values which they themselves enjoy but have immeasurably appreciated the property holdings of the community. This is also true of gas companies, for if their real estate holdings have grown in value with the growth of the community, it is equally true that the real estate holdings of every citizen have been immeasurably enhanced by the ability of the owner to have such indispensable conveniences of civilization as light, water and power.

XI.

The costs were properly imposed upon the respondents, including one-half thereof upon William S. Jackson, as Attorney General of the State of New York.

It is not seriously questioned that the costs in this expensive litigation should have been imposed upon the respondents. The State, to the prejudice of the complainant's property rights, has enacted certain unconstitutional legislation, which, even with the collection of these costs, will impose a very heavy burden of expense upon the complainant company. The complainant has sustained its contention in all respects and has established to the satisfaction of the Court that its property rights have been invaded by a violation of the Fourteenth Amendment. Under the circumstances, it would have been most inequitable had the costs not been imposed upon the defendants.

It is claimed, however, that so much of this decree as imposed costs upon William S. Jackson, as Attorney General of the State of New York, is erroneous. It is obvious that either William S. Jackson, as an individual or in his official capacity, must bear his proportionate share of the burden of a losing litigation. As he was conducting the litigation for the supposed benefit of the State, it would be[more equitable if the State should assume the burden imposed upon him. Under ordinary circumstances, this would give rise to a debatable question whether if the suit be not a suit against the State, the State can in turn be made to pay its proportionate share of the expense.

But in the case at bar it is not necessary for this Court to determine this question, for we have already shown *(supra,* pp. 33 and 34) that when the Attorney General entered a general appearance as "Attorney General of the State of New York" and filed an answer which took issue with the complainant on the merits, he, under the authority of Gunther v. Atlantic Coast Line, 200 U. S., 273, waived any immunity which the State might have otherwise enjoyed and thereby made the State responsible for its share of the costs in attempting to enforce an unconstitutional Statute.

XII.

The Circuit Court was without power to make relief from an unconstitutional statute conditional upon the acceptance by complainant of a new rate to be fixed by the Court.

Counsel for the Public Service Commission by their XV. Point (p. 286) ask that relief be granted us on condition that we accept a rate, not fixed by either Legislature or Commission but to be fixed by the Court. They therefore asked the Court to fix a rate, by threatening to deprive the Company of part of its property unless it consented to the rate as so fixed. This the Court had no power to do. The power of the court, in a case of this kind, is limited to ascertaining whether an established rate is reasonable. If it finds that it is not reasonable, the legislative Act establishing it must be declared void. The court has no power to fix the rate which, in its judgment, would be reasonable, as such power is exclusively legislative. The court cannot, therefore, refuse relief except on condition that it shall be allowed to do that which the law says it has no power to do.

> Cotting v. Kansas City Stockyards Co., 82 Fed. Rep., 839, 845;
> Western Union Tel. Co. v. Myatt, 98 Fed. Rep., 335, 342-3;
> Chicago etc. R. Co. v. Wellman, 143 U. S., 339, 344;
> Reagan v. Farmers L. & Tr. Co., 154 U. S., 362, 397, 399;
> Steenerson v. Great Northern R. Co., 69 Minn., 353, 375;
> State v. Sioux City &c. R. Co., 46 Neb., 682, 702;
> State v. Johnson, 61 Kan., 803, 817;
> San Diego Water Co. v. San Diego, 118 Cal., 556, 581.

The maxim, "He who seeks equity must do equity," invoked by the appellant, has no application to a case of this kind but only to those cases where the granting of equitable relief is *within the discretion of the court.* The maxim, "Equity follows the law," is superior, in the present case, to that invoked by the appellant. Equity must follow the law; and courts of equity have no greater right to disregard contract relations or statutory or constitutional provisions than have courts of law. The constitution of the United States is the supreme law of the land and is binding on all judges alike, whether sitting in equity or at law. No discretion whatever is vested in courts of equity, in a case involving the constitutionality of a statute. If, on the facts found, a law is unconstitutional, the court must declare it void; and it has no discretion in the matter.

> Magniac v. Thomson, 15 How., 281.

In that case, the Court stated it as a postulate or legal truism, "admitting of no dispute", that (p. 299):

> "Wherever the rights or the situation of parties are clearly defined and established by law, equity has no power

> to change or unsettle those rights or that situation, but, in all such instances, the maxim, *equitas sequitur legem*, is strictly applicable."

If an Act of the legislature, by its extreme terms, deprived a citizen of his liberty or inflicted cruel and unusual punishments, it would not for a moment be contended that any court under our system of jurisprudence would have power to require him to agree, as a condition of having the law declared void, to submit to such punishment or conditions as the court might consider reasonable. The point has been passed upon by this Court.

Hedges v. Dixon County, 150 U. S., 182.

In that case, suit was brought by the holders of a large number of bonds issued by Dixon County, where the constitutional limit had been exceeded and where the bonds were, therefore, not enforceable at law. The complainants asked the court to determine how many bonds were issued in excess of the constitutional limit, to declare bonds to that amount held by the complainant void and to enforce the liability of the County on the remaining bonds. Held, that as the power of the Court was limited by the constitution, the issue of a greater number of bonds than was authorized rendered all of the bonds void and that a court of equity had no jurisdiction, as the transaction, being void at law, was equally void in equity; and in discussing the principle involved, the Court said (p. 192):

> "Where a contract is void at law for want of power to make it, a court of equity has no jurisdiction to enforce such contract, or, in the absence of fraud, accident or mistake, to so modify it as to make it legal and then enforce it. Courts of equity can no more disregard statutory and constitutional requirements and provisions than can courts of law. They are bound by positive provisions of a statute equally with courts of law; and where the transaction, or the contract is declared void because not in compliance with express statutory or constitutional provision, a court of equity cannot interpose to give validity to such transaction or contract, or any part thereof."

The business of the Appellee is not interstate commerce and it is, therefore, beyond the sphere of federal legislation. The rate can be prescribed only by the state legislature. But neither the federal government nor any of its departments is permitted in any manner to exercise a state function. In other words, even if a judge of the state court had the undoubted power which the defendants asked the trial Court to exercise, yet the fact that the Court is here only applying the Constitution and is without general jurisdiction shows its want of power. To require the complainant, as a condition of declaring these statutes void, to assent to a rate fixed by the Court, would be

> " an invasion by the judiciary of the federal government of the legislative functions of the state government. It is a most extraordinary request; and a compliance with it would involve consequences no less out of the way of judicial procedure, the end of which no wisdom can foresee."
>
> Heine v. The Levee Commrs., 19 Wall., 655, 661 (MILLER, J.).

XIII.

The Circuit Court properly assumed jurisdiction of this controversy.

This brief was necessarily prepared without the advantage of seeing the full and very able brief of the learned counsel for the Public Service Commission (herein referred to as Mr. Whitney's brief), which, in substantial interest, is the chief Appellant. Its brief was not served upon us until October 23rd, at which time it was impossible to reconstruct this brief so as to follow the points in Mr. Whitney's brief in the order in which they are made. We believe, however, that this brief on the law, together with Mr. Garver's brief on the franchises and goodwill and also Mr. Mathewson's brief on the facts, have anticipated and fully answered every pertinent question—whether of law or fact—advanced by Mr. Whitney. One feature of his brief seems to justify a further answer, and that is the repeated and continuous attack upon the propriety of the Federal Court's assumption of jurisdiction in this controversy.

Mr. Whitney does not and can not suggest that this court is without jurisdiction, for he concedes that as the ultimate question involved is the application of the Fourteenth Amendment, that the controversy presents essentially a federal question. Nevertheless, he vehemently expresses his opinion that the enforcement of the Fourteenth Amendment in this case should have been left to an administrative tribunal whose decision should have been a finality. In his Third Point, (page 175), Mr. Whitney also asserts that the Federal Court should have declined jurisdiction and remitted it to the state courts. He claims that this should have been done upon the ground that the controversy is not (page 177)

> " one of so grave a nature as warrants the interposition of the federal power in purely local affairs,"

as if the application of the Fourteenth Amendment was a purely local affair and as if the confiscation of the earning power of a business, whose assets according to the findings of the Circuit Court amounted to nearly sixty millions of dollars, was not " grave " in its character. He asserts that the state courts have some superior power to (page 177) " confine the record within the limits of reason and intelligibility," and therefore that the federal courts are incapable of trying the case within such limits. His attack, however, is not only upon the federal judiciary, but upon the assumption of jurisdiction by any court, state or federal. He states, page 177, that this is

> " a question between one man in a gown and three or four men without gowns,"

and he believes that

> " the majority of thinking people, taking the general average rather than any particular case, would consider a commis-

> sion as the best qualified, a Judge as the next best and a legislature as the least."

As the rates now under consideration are purely *legislative* rates, this concession does not advance the Appellant's argument.

Mr. Whitney then proceeds to demonstrate the inferiority of the Federal court in determining the application of the Fourteenth Amendment to that of a state commission by asserting (page 178) that the man in the gown

> "can give but a limited time to the hearing of the case,"

and that therefore counsel have not adequate time to argue the case.

The record in the present case is a striking exhibit of the relative fairness of legislative and administrative bodies and the judiciary. The Stevens Legislative Committee of 1905 refused to recognize the *right* of counsel for this Company to be heard in the investigation, and limited counsel in showing the Company's side

> "to such brief additional questioning or data as the courtesy of the Committee permitted."

At its conclusion, any opportunity to argue the questions involved orally was denied. Its investigation of all the companies, gas and electric, lasted only three weeks.

Still more striking is the comparison between the care taken by the Gas and Electric Commission of 1906 on the one hand and the Circuit Court upon the other. The former investigated all of the gas companies of Manhattan *in less than three months*, while the Master appointed by the Circuit Court took testimony for over seven months, and considered the matter for four months more before filing his report. Mr. Whitney complains that a Court does not give counsel sufficient time in this class of cases. The fact is that Judge HOUGH gave nearly a week to the oral argument of this case.

Mr. Whitney, on page 262, does not regard it as

> "seemly that a single man, whatever be his title and by whomsoever elected or appointed, shall have general appel-

> late jurisdiction over a tribunal of specialists established by a state—a judgment practically final upon questions of fact, for is this Court able to read the record or its work?"

He is of opinion that injustice by state tribunals will be fully corrected by the consequential damage done to its general prosperity, for he says,

> "a State which does not treat its corporations fairly will soon suffer and soon repent, and will not the education which it will have received compensate in the long run for the temporary loss that investors will have suffered?"

We admit that the developments of the last few years have been an "education" in the matter of arbitrary action by the states in confiscating the earning power of corporations, but we fail to see how such "education" can afford any compensation or even consolation to the unhappy investor for his loss, which is permanent and not, as Mr. Whitney intimates, merely "temporary."

Whatever may be said as to the comparative ability of the federal judiciary and a state tribunal to intelligently determine when the Fourteenth Amendment is violated—and, as Mrs. Malaprop says, "comparisons are odorous"—there is one manifest advantage of the judiciary over an administrative tribunal, and that is in the impartiality of their judgment. The judiciary is trained by habit and tradition to hold the scales of justice even, but an administrative tribunal is not only Court but prosecutor as well, and it would be unnatural if the same man or body of men could be both litigant and Judge without affecting their judicial poise. Moreover, it cannot be ignored that an administrative bureau necessarily desires to satisfy public opinion—often ill advised—and to please the electorate. This is admirably illustrated by the Gas Commission of 1905, which prescribed this 80 cent rate. They conducted their all too brief deliberations under the pressure of newspaper clamor, which vehemently insisted upon 80 cent gas. While they were considering the rate and before the gas company had presented any evidence, the then

Governor of the State of New York (who appointed the members of said Commission) recommended in his message the passage of an 80 cent gas bill. As the Commission was a part of the Governor's administration, the effect of this executive policy could not have been negligible, but this recommendation was promptly followed, when a bill was introduced in the State Legislature to carry the Governor's recommendation into effect. This was followed, before the Commission reached its conclusion, by the introduction of another bill by Senator Stevens, Chairman of the Legislative Committee of 1905, to abolish the Commission altogether. All these facts will be found in the record. (See Carter's testimony.)

We do not question the motives of the officials to whom reference has been made; we have no question that they sincerely and honestly believed that 80 cent gas was due to the consumer, but when we see an administrative tribunal, reaching a finding under pressure of this character, we must emphatically dissent from the claim that such a tribunal has superior qualifications to the federal judiciary in enforcing the Fourteenth Amendment.

Our preference in litigating our rights under the Federal Constitution in the Federal courts is further strengthened by the rules of evidence which Mr. Whitney, as the legal representative of the Public Service Commission, lays down as the true method of determining the compensatory or confiscatory character of a rate. If we are remitted to the tender mercies of Mr. Whitney's favorite tribunal, it is reasonable to assume that we will be confronted with the rules of testimony which its distinguished counsel has laid down. These rules are (page 187):

> 1. The burden of proof to establish the non-compensatory character of a rate is upon the public service corporation, which must prove every fact in its own relief.
>
> 2. The corporation must therefore prove the value of its property, (which can only be done in part by expert testimony,) BUT
>
> 3. No expert testimony can be given by the gas company because a rate "cannot be declared unconstitutional

because persons employed and paid by complainant swear * * * that in their opinion certain valuations ought to be given to certain pieces of property from which valuations the unconstitutionality of the statute would be inferable" (page 210).

4. As between two unimpeached and qualified expert witnesses, the valuations most favorable to the consumers must be adopted (page 191).

5. Where the experts for the consumers testify to one value of the property and those for the public service corporation to another, the former must be accepted, "unless the state concedes figures from which the contrary deduction must be made."

6. A statutory rate "cannot be declared unconstitutional" upon the testimony of experts or employees "unless the state admits its correctness."

7. Items of value "incapable of exact valuation, must be put down at the minimum amount that a fair minded state board could fix."

Short will be the shrift of a public service corporation if Mr. Whitney's administrative board conducts its proceeding according to these novel and remarkable laws of evidence. In rate regulation cases, the primary question is value, and value necessarily depends to a large extent upon expert testimony, and yet we are told that the courts should refuse the public service corporation the right to call in expert testimony, and that even if it is given the privilege, a conclusive presumption follows that such experts are wrong and that those called by the consumers are necessarily right. If this be so, there is assuredly no "equity stirring."

We cannot believe that it is necessary for us to defend the right of the Federal courts to intervene in this class of cases. Upon this point this Court has spoken in no uncertain tone. In Reagan vs. Farmers Loan & Trust Co., 154 U. S., 362, 397, this Court (page 369) asserts that it is not only the "power" but also the "**duty**" of the courts

> "to inquire whether a body of rates prescribed by a legislature or a commission is unjust and unreasonable."

Recognizing the difficulty of this most important duty, it said, in Chicago Railway Co. vs. Tompkins, 176 U. S., 167, 172,

> " this difficulty affords no excuse for a failure to examine and solve the questions involved * * * Difficult as are the questions involved in these cases, burdensome as the labor is which they cast upon the courts, *no tribunal can hesitate to respond to the duty of inquiry and protection cast upon it by the Constitution.*"

The governmental power to regulate rates, even though demanded by the public interests, is nevertheless in its last analysis experimental state socialism. Its exercise would be intolerable unless the judiciary, as in the past, shall continue to restrain the oppressive use of such power. This truth found felicitous and significant expression in the words of an honored justice of the Court below,* who, on retiring from the bench about a year ago, after thirty years of continuous service, gave to his brethren of the bench and bar this message, as the ripened fruit of his judicial experience :

> " At no time in the history of this nation has the adherence of the national judiciary, to its best traditions of independence and courage, been put to the test so severely as it is likely to be in the days of this generation. The times are near when the courts of this country are to be, more than ever before, the sanctuary of that justice, which consists in administering the law of the land according to the ordained principles of our present form of government. The will of the majority is not law when it transcends the constitutional limitations upon its exercise of power. In many of the States, that will is now threatening the rights of the minority, and has already compelled or instigated legislatures, under the guise of protecting the public interests, to arbitrarily interfere with private business, and to impose unusual and unnecessary restrictions upon lawful occupations. Not a few of the measures proposed invade the freedom of

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* Judge WALLACE.

> the individual to manage his own legitimate concerns without unwarranted governmental domination, and to enjoy the fruits of his enterprise or of his good fortune without the risk of governmental confiscation. Assuming to act under the authority to make reasonable regulations respecting the use of property which has been clothed with a public interest, many legislatures, by establishing tariffs of rates, or imposing new duties or responsibilities upon the owners of such property, have already subjected them to such onerous exactions as practically to destroy the value of their investments."

To defeat this wise exercise of judicial power, counsel for Appellants insist that the judiciary should not declare any law invalid if there be any possible doubt as to its validity. Where the question of constitutionality is purely one of law and not dependent upon the ascertainment of facts, this doctrine has some justification, although as the occasion for the exercise of federal power to defeat socialistic attacks upon property grows greater, the reluctance of the federal courts, in applying the great limitations of the Constitution, has become markedly less.

The doctrine of the exclusion of all doubt must not be taken too literally. This Court has repeatedly adjudged legislation invalid even though the constitutional question (as in the Income Tax Cases) was so difficult and doubtful that the conclusion could only be reached by a divided Court and after repeated arguments. It therefore cannot be literally true that no Statute can be declared invalid if there be any doubt, however unreasonable. If such were the real attitude of this Court, the wise limitations of the Federal Constitution—without which popular government in our heterogeneous democracy would inevitably break down—would be sacrificed again and again to the supposed exigencies of State legislation, especially where the validity of the latter depends, as in rate cases, upon the ascertainment of facts as to which the exclusion of all doubt is in many cases an impossibility.

This Court is as much concerned in the vigor and efficiency of the Federal Constitution as in that of a State enactment. Its great purpose—so nobly pursued for more than a century—is to uphold in all its vigor and power each part of our dual system of government, and in doing so, it must decide every question as, upon full consideration, seems just. To hold that it can render no adverse judgment in a constitutional cause, unless it can exclude all possibility of error, would be a virtual abdication of its high office: "With firmness in the right," as it is given to see the right, it must enforce in all its vigor and efficacy the wise limitations of the Constitution on state and federal legislative action, and it cannot, if our institutions are to endure, avoid this duty on the ground that the ascertainment of either laws or fact cannot be wholly free from possible error.

The spirit, with which it approaches these great cases, was well expressed by the great Chief Justice in Marbury v. Madison. It was there contended that the sanctity of a statute was such that the judiciary should sustain it at all hazards, as the deliberate act of the people, but Marshall said that these advocates of a peculiar sanctity of a Statute are

> "reduced to the necessity of maintaining that Courts must close their eyes on the Constitution and see only the law. This doctrine would subvert the very foundation of all written Constitutions. It would declare that the act which, according to the principles and theory of our Goverment, is entirely void, is yet in practice completely obligatory."

He added impressively:

> "Why does a judge swear to discharge his duties agreeable to the Constitution of the United States, if that Constitution forms no rule for his government; if it is closed upon him and cannot be inspected by him; if such be the real state of things, this is worse than solemn mockery".

Shearman & Sterling,
Solicitors for Appellee.

James M. Beck,
Of Counsel.

Supreme Court of the United [illegible]

OCTOBER TERM, [illegible].

Nos. [illegible], [illegible], [illegible].

WILLIAM R. WILLCOX ET AL., constituting the Public [illegible]
Commission of the State of New York for the First [illegible]
THE CITY OF NEW YORK and WILLIAM S. [illegible]
as Attorney General of the State of New York,

[illegible]

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

APPEALS FROM THE CIRCUIT COURT FOR THE SOUTHERN [illegible]
OF NEW YORK.

BRIEF FOR APPELLEE
upon special franchises and good will.

SHEARMAN & STERLING,
Solicitors for Appellee,
44 WALL STREET,
New York.

JOHN A. GARVER,
Of Counsel.

C. G. [illegible], [illegible] Spring Street, New York.

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Supreme Court of the United States.

OCTOBER TERM, 1908.

No. 396.

WILLIAM R. WILLCOX, *et al.*, constituting the Public Service Commission of the State of New York for the First District,
Appellants,
vs.
CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE CITY OF NEW YORK,
Appellant,
vs.
CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, as Attorney General of the State of New York,
Appellant,
vs.
CONSOLIDATED GAS COMPANY OF NEW YORK.

Brief for Appellee, upon special franchises and good will.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

Preliminary Statement.

The Special Master, who tried the issues of fact in this case, found that the reasonable value of all the property of the Gas Company devoted to the business of manufacturing and supplying gas was $83,357,000 (Record, p. 247). In this valuation, he included the sum of $20,000,000 as the reasonable value of the special franchises and good will of the Company, without attempting to apportion the value between those two items (Record, p. 247).

Upon the entire valuation of $83,357,000, the Special Master found that, at the rate of eighty cents per thousand cubic feet, the Gas Company would receive a return of only 2.8% (Record, p. 248). Even if the $20,000,000 allowed for the special franchises and good will were thrown out altogether, the return upon the remaining $63,357,000 would be only 3.6%. This would be equivalent to 6% on $38,788,805, thus leaving $24,569,000, upon which the Company would receive no return (Record, p. 248).

Upon the final hearing, the Court refused to allow anything for the good will of the business; but it held that two of the special franchises owned by the Company were worth *at least* $12,000,000 (Record, p. 431), deeming it unnecessary to pass expressly upon the findings of the Special Master as to the other franchises (Record, p. 432), though indirectly confirming such findings (Record, p. 430); and this sum was included in the total value of the property of the Company, upon which it was adjudged to be entitled to a return (Record, p. 432).

The special franchises of the Company (which included the mains and services in the streets) were assessed for the year 1906, for the purposes of taxation, at $31,900,000 (Record, p. 5291). The mains and services were valued at about $7,900,000 (Record, pp. 202, 1849, 5061), thus leaving for the intangible franchises, the sum of $24,000,000. The Chairman of the State Board of Assessors testified, without contradiction, that, in his opinion, the reasonable value of those franchises was $31,900,000 (Record, p. 1848), in which was included about $7,900,000 for the value of the tangible property, consisting of the mains and house connections (Record, p. 1849).

The appellants assail the allowance of any sum for special franchises or good will, not only on the ground that the amount is excessive, but that the Company does not possess any special franchises and that, even if it did, such franchises cannot be included among the assets upon which the Company is entitled to a return.

The Company has its mains in every paved street in the Borough of Manhattan (Record, p. 566). Its total mileage, in 1905, exclusive of abandoned mains, was 822 miles (Record, p. 668), through which it furnished to its 390,000 consumers (Record, p. 1675) 13,283,163,767 cubic feet of gas (Compl. Ex. 94, Record, p. 5051).

POINTS.

PART I.

SPECIAL FRANCHISES MUST BE INCLUDED AMONG THE ASSETS UPON WHICH THE COMPANY IS ENTITLED TO A RETURN.

FIRST.

Unanimity of opinion in the lower Court as to special franchises.

That the special franchises of the Company should be included among its assets, upon which it is entitled to a return, was the opinion of the Circuit Judge (Lacombe, J.), who granted the motion for a preliminary injunction (Record, p. 143); it was the opinion of the Special Master, who was appointed (Record, p. 199) on account of his peculiar qualifications, pursuant to the suggestion of this Court in Chicago, etc., Ry. Co. v. Tompkins (176 U. S., 167, 180), that "the most competent and reliable master" should be selected in a case of this kind; and it was also the conclusion of the District Judge before whom the case was tried. While the personal views of the learned District Judge were at variance with the conclusion which he reached, he nevertheless felt constrained to yield his own convictions to the weight of authority on the subject (Record, p. 414).

In regard to these special franchises, Judge Lacombe said (p. 142):

> "The Commission reached the conclusion that the franchises, under which it has laid mains and is delivering gas and which are a part of its property, should be considered as of no value whatever, although the State, through the action of its taxing officers, has declared that they are worth several millions of dollars. It is suggested that some of these franchises have expired or lapsed in some way. That proposition need not be considered because it is not asserted that all of them have lapsed. The complainant has taken over the franchises of many different corporations

granted at different times. So long as a substantial part of these still remain, the argument is not affected, except as to details of result. The reason assigned by the Commission for not including the value of the franchises is that 'they were granted by the people without compensation.' That is so: these franchises were granted very many years ago at a time when there seems to have been no intelligent appreciation of the fact that they might become enormously valuable; when reckless improvidence was the rule and all sorts of franchises were given away without any provision for securing to the State its fair share of unearned increment thereon. Nevertheless, when the State offers a franchise to whomever will take it, without requiring any money return thereon, and for the sole consideration that the taker shall promptly, continuously and fully develop it by the expenditure of his own money, and such offer is accepted and the terms of the agreement carried out by the taker, there results a contract, which—with due consideration of all proper conditions and limitations inherent in the nature of the particular contract—is as much within the protection of the Constitution as are all other contracts. If the State, twenty-five or fifty years thereafter, should say to the taker: 'We were very improvident in not providing that you should pay us something each year for this franchise; therefore, hereafter you shall pay us eight per cent. annually on $10,000,000 or $20,000,000 or we will evict you from the franchise'—it might find itself embarrassed by the provisions of the Constitution in thus undertaking to avoid the results of its own improvidence.

"*A franchise*, whatever its value may be, which has not expired, nor lapsed, nor been in some way forfeited, *is property in the hands of its holder*. There is force in the argument that when the State says: 'We will value this property at several millions of dollars when we tax you on it, but at nothing at all when we fix the rate you may charge for your product in order to receive an eight per cent. return on your property'—it is seeking to accomplish by indirect methods what it might not be able to accomplish directly."

SECOND.

Meaning of the term, "special franchises."

At the outset, it should be clearly noted that the franchises which are in controversy in this case are not *corporate* franchises.

They are special rights or easements, which may be granted to individuals as well as to corporations. An instance of such a grant to individuals is contained in the present record. The Legislature of New York, in 1871, granted to Isaac P. Martin and others the right to make and sell gas and to lay pipes in the streets of New York, north of 79th Street (L. 1871, Ch. 944; Record, p. 5119).

As applied to a gas company and as used in this brief, the term "special franchises" signifies the right to occupy with its mains the streets of the municipality where it carries on its business, as distinguished from the corporate franchise and the general franchise to engage in the business of manufacturing and supplying gas.

People v. Tax Commissioners, 174 N. Y., 417, 435.

This distinction is frequently overlooked in the briefs filed by counsel for the appellants.

The special franchises which are involved in the case at bar are *the identical franchises* which were under consideration by this Court in the Special Franchise Tax Cases.

Metropolitan Street Ry. Co. v. New York, 199 U. S., 1; affirming 174 N. Y., 417;
Consolidated Gas Company v. New York, 199 U. S., 53.

THIRD.

Law of New York controls as to nature of special franchises.

This Court will accept as controlling the law of New York upon the question of the property rights that exist in special franchises. Whether the right to use the streets constitutes property in the full sense of the term, how that right may be acquired, its extent, duration, assignability, etc., are all questions which depend upon the law as it exists in the State of New York.

Ohio Oil Co. v. Indiana, 177 U. S., 190, 205, 207;
Muhlker v. Harlem Railroad Co., 197 U. S., 544;
Vicksburg v. Vicksburg Waterworks Co., 206 U.S, 496, 509.

In New York, it is the law, as declared by the Court of Appeals in the Elevated Railroad Cases, that the owner of property fronting on the streets of a city possesses easements of light, air and access, which are impaired by an elevated railroad structure in such streets. New York is almost alone in the recognition of this principle. Yet, in Muhlker v. Harlem Railroad Company (*supra*), this Court not only applied that doctrine to the Harlem viaduct in Fourth Avenue, but it went to the extent of reversing the New York Court of Appeals, which had held to the contrary, on the ground that the decision of the Court of Appeals was at variance with the previous decisions of that Court, under which it had been held that the principle of the Elevated Railroad Cases was applicable to the Harlem viaduct; and this Court decided that the New York Court of Appeals was not at liberty to ignore its previous decisions on the subject and thus impair the obligation of contracts entered into on the faith of those decisions. The Court of Appeals has since then recognized the binding force of the decision of this Court in the Muhlker case.

Sander v. New York, 182 N. Y., 400, 403.

FOURTH.

In New York, special franchises are property in the fullest sense.

I. That, in New York, special franchises are property, in every respect, is well settled.

Sixth Ave R. Co. v. Kerr, 72 N. Y., 330;
People v. O'Brien, 111 N. Y., 1, 40;
Suburban Rapid Transit Co. v. New York, 128 N. Y., 510, 520;
People *ex rel.* Woodhaven Gas Co. v. Deehan, 153 N. Y., 528, 532;

Parker v. Elmira, C. & N. R. Co., 165 N. Y., 274;
People v. Tax Commissioners, 174 N. Y., 417, 437;
Matter of White Plains Commissioners, 176 N. Y., 239;
Matter of Long Acre El. L. & P. Co., 188 N. Y., 361;
Hatfield v. Straus, 189 N. Y., 208, 219;
Coney Island etc. R. Co. v. Kennedy, 15 App. Div., 588, 592;
Rochester etc. Turnpike Road Co. v. Joel, 41 App. Div., 43, 45;
Wakefield v. Village of Theresa, 125 App. Div., 38.

1. In People v. O'Brien (*supra*), Chief Justice RUGER, who delivered the opinion of the Court, said, in referring to the Broadway Railroad franchise to construct a street railroad on Broadway (p. 40), that such franchises "have been uniformly regarded as indestructible by legislative authority and as *constituting property in the highest sense of the term.*"

In that case, a right to lay the tracks of a railroad in Broadway had been conferred upon the Broadway Surface Railroad Company. Before any tracks were laid, the Company mortgaged its property and franchises to secure an issue of bonds, which were duly purchased by investors. Subsequently, the charter was revoked by the Legislature. Held, that the right to amend or repeal did not give the Legislature the right to deprive the Company of its franchise to occupy the streets. On the part of the State, it was contended that a franchise of that kind was a mere license or privilege, enjoyable during the life of the grantee only and renewable at the will of the State. To that suggestion, the Court said (p. 41):

> "We believe this proposition to be not only repugnant to justice and reason, but contrary to the uniform course of authority in this country."

2. In Suburban Rapid Transit Co. v. New York (*supra*), where the right to construct its railroad over a certain highway had been conferred upon the Railroad Com-

pany, which, however, had not instituted any proceedings to acquire ownership of the right of way, it was held that this right could not be impaired by a subsequent statute appropriating the land for a public park. In the course of its opinion, the Court said (p. 520):

> "How can a franchise thus conferred by the legislature be deemed inchoate and defeasible? Is not its possession an element of the security upon which capital has been subscribed and loans have been made to the Company?"

And, referring to the special franchise in People v. O'Brien, the Court added:

> "The corporate franchise * * * was held by us to be a right indestructible by the legislature *and to ocnstitute property in the highest sense of that term.*"

3. In the Woodhaven case (*supra*), the Court said, referring to the franchise of a gas company to occupy the streets of a municipality with its mains (p. 532):

> "Such a franchise is property that cannot be destroyed or taken from it or rendered useless by the arbitrary act of the village authorities in refusing the permit to place the conductors under the streets."

4. In Parker v. Elmira, C. & N. R. Co. (*supra*), the Court said (p. 280) that a franchise was "*entitled to the same protection from invasion as any other species of property.*"

5. In the Long Acre case (*supra*), the Court of Appeals has recently said (p. 366):

> "It cannot be disputed that a franchise to operate electrical conductors in the streets is property, taxable, alienable, subject to levy and sale under execution and to condemnation under the exercise of the power of eminent domain."

6. Still more recently (October, 1907), in Hatfield v. Straus (*supra*), the Court said, referring to a franchise giving the right to use the streets (p. 219):

> " A franchise is property, assignable, taxable and transmissible ";

and the Court made it very clear that a franchise was something much more substantial than a mere license, thus following the conclusion previously reached by the Court of Appeals.

Milhau v. Sharp, 27 N. Y., 611, 622;
People v. O'Brien, 111 N. Y., 1, 41;
Trustees of Southampton v. Jessup, 162 N. Y., 122, 126;

and also by this Court.

Monongahela Nav. Co. v. United States, 148 U. S., 312, 343–4.

7. In Wakefield v. Village of Theresa (125 App. Div., 38), the Court (all five Justices concurring) said (p. 42):

> " In reliance upon the contract, the plaintiffs and their predecessors in interest expended money in erecting, extending and operating the plant, and the privilege granted to use the streets became *a valuable property right*, of which the owners cannot be deprived, unless there has been a forfeiture on their part, or unless the plant has become a nuisance."

II. That a special franchise, such as those under consideration in this case, is property, with all the attributes of property, is the law of nearly every State in the Union and has repeatedly been recognized in this Court.

West River Bridge Co. v. Dix, 6 How., 507, 534, 543;
Wilmington Railroad v. Reid, 13 Wall., 264;
Morgan v. Louisiana, 93 U. S., 217, 223;
New Orleans, etc., R. Co. v. Delamore, 114 U. S., 501;
Monongahela Nav. Co. v. U. S., 148 U. S., 312;
Detroit v. Detroit Citizens St. Ry. Co., 184 U. S., 368, 394;
Metropolitan St. Ry. Co. v. New York, 199 U. S., 1, 39.

" A large portion of the wealth of the community consists of intangible property."

Adams Express Co. v. Ohio, 166 U. S., 185, 218–19;
Metropolitan St. Ry. Co. v. New York, 199 U. S., 1, 39.

Even the value of the tangible property of public service corporations depends largely upon the special franchises owned by such corporations. Without such franchises, the right of way or tracks of a railway company would possess only a nominal value, and the pipes and mains of a gas company would be mere junk for the scrap heap.

People v. New York, 174 N. Y., 417, 437, 441;
State Railroad Tax Cases, 92 U. S., 575, 606.

In the Court below, the learned counsel for the Attorney General (Hon. David B. Hill), in referring in his brief (p. 27) to the statement contained in the opinion of Judge LACOMBE (*ante*, p. 5), that "a franchise * * * is property in the hands of its holder," made this unqualified concession:

"*No one doubts the latter proposition.*"

Not so laconic was the utterance on this point of the Attorney General of New York, in the Franchise Tax Cases (the very last cases coming to this Court from New York, in which the nature of special franchises was under consideration), in which the State of New York was contending that they were property of the most valuable kind. In the report of that case (199 U. S., 1, 25-26, 53), the following admirable summary of the nature and attributes of such franchises was made in the brief submitted by the Attorney General and his able associate:

> "These special franchises have all of the attributes of property. They are vendible and transferable. They cannot be taken away, even under the power of eminent domain, without due compensation. They may be leased or mortgaged. *They survive the existence of the corporation upon which they are bestowed.* They are the life and soul of the tangible property to which they appertain. They bestow an earning capacity upon physical properties, which, without them, would corrode and decay, and be utterly useless. While the tangible property employed for the utilization of the intangible franchise is destructible, the latter is indestructible. While the former requires renewal and reparation, the latter does not; and, yet, the two are inseparable, and together constitute a species of property, the aggregate of

> which, in the United States, is valued in the exchanges of the country at figures which almost paralyze the imagination."

In his Brief now filed in this Court, the Attorney General makes substantially the same admission (*post*, p. 56); and this is also conceded in the Briefs filed by counsel for the other appellants (*post*, pp. 62, 68).

As long ago as the Dartmouth College case, Mr. Justice STORY said (4 Wheat., 518, 684) that "a grant of a franchise is not, in point of principle, distinguishable from a grant of *any other property*."

FIFTH.

In New York, special franchises cannot be repealed or impaired, under the reserved power.

While, under the reserved power, the legislature may revoke the corporate and general franchises of a corporation, it cannot, in New York, by repealing the charter, annul or impair its special franchises.

People v. O'Brien, 111 N. Y., 1, 36, 37.

SIXTH.

Special franchises are easements or interests in real property.

When authority is given by the State to a corporation to use the streets of a municipality and the franchise has been accepted and acted upon by the corporation, a contract has been made which, during its continuance, cannot subsequently be impaired by the legislature.

People v. Sturtevant, 9 N. Y., 263, 273;
Milhau v. Sharp, 27 N. Y., 611, 620, 622;

New Orleans Gas Co. v. Louisiana Light Co., 115 U. S., 650, 660 ;
New Orleans Water Works v. Rivers, 115 U. S., 674, 681.

But the contract thus entered into for the use of the streets is something more than a mere personal right. It is a grant of an incorporeal hereditament; it is an easement or right of way in the streets, and hence is real property.

Milhau v. Sharp, 27 N. Y., 611, 620-1 ;
People v. O'Brien, 111 N. Y., 1, 40, 55 ;
Ghee v. Northern Union Gas Co., 158 N. Y., 510, 513 ;
People v. Tax Commissioners, 174 N. Y., 417, 435-6 ;
Matter of White Plains Commissioners, 176 N. Y., 239, 249 ;
Kronsbein v. Rochester, 76 App. Div., 494 ;
Matter of East River Gas Co., 122 App. Div., 890 ;
Bowman v. Watham, 2 McLean, 376 ;
Detroit Citizens' Street Ry. Co. v. Detroit, 64 Fed. Rep., 628, 643, 644, 646 (C. C. A.) ;
West River Bridge Co. v. Dix, 6 How., 507, 534 ;
Gue v. Tide Water Canal Co., 24 How., 257 ;
East Alabama Ry. Co. v. Taggart, 114 U. S., 340, 353.

1. In Milhau v. Sharp, the Court, in referring to a franchise to use the streets for a surface railroad, said, by SELDEN, J. (p. 620) :

> " It amounted also to an immediate grant of an interest, and, it would seem, of a freehold interest in the soil of the streets to the defendants. The rails, when laid, would become a part of the real estate, and the exclusive right to maintain them perpetually is vested in the defendants, their successors and assigns."

2. In People v. O'Brien, in referring to the Broadway Railroad franchise, the Court said (p. 40) :

> " We are, therefore, of the opinion that the Broadway Surface Railroad Company took an estate in perpetuity in Broadway, through its grant from the City under the authority of the Constitution and the Act of the Legislature ; "

and it also added (p. 55):

> "We are, therefore, of the opinion that the Broadway Surface Company took an indefeasible title to the land necessary to enable it to construct and maintain a street railroad in Broadway and to run cars thereon for the transportation of freight and passengers, which survived its dissolution."

3. In Ghee v. Northern Union Gas Co., the Court, in the course of its opinion, which was written by PARKER, C. J., in referring to the street franchise of a gas company, said (p. 513):

> "It operates to create a franchise, by which is vested in the corporation receiving it *a perpetual and indefeasible interest in the land constituting the streets of a municipality.*"

4. In the Franchise Tax Cases (174 N. Y., 419, 435), the Court referred to a special franchise as a "*right of way over a public street.*"

5. In the Matter of White Plains Commissioners, the Court referred to the franchise of a water company to use the streets of a municipality as "a perfect *grant*" (p. 249).

6. In Kronsbein v. Rochester, the New York Appellate Division (five Justices) unanimously decided that the special franchises of corporations appearing upon the assessment rolls, pursuant to Chapter 712 of the Laws of 1899 (the Special Franchise Tax Law), are to be considered as part of the assessable real estate of the city, in ascertaining the amount of the real property upon which the debt limit is computed, *within the meaning of the State Constitution*, which limits the power of a municipality in contracting debts, to ten per cent. of the assessed value of the real estate. In the course of its opinion, the Court said (p. 501):

> "It is to be observed that the Legislature did no violence to the settled principles of the law in designating these franchises as real property. They are inseparably connected with real estate and appurtenant to it, like a fixture or an incorporeal hereditament, and the

exercise of the privilege requires a disturbance of the soil of the physical body of the land. The statutory definition runs in harmony with that of the common law."

6. The Matter of the East River Gas Company is not reported in full. That was the unanimous decision of the Appellate Division of the First Department (five Justices), in a proceeding instituted to perpetuate the testimony of a witness, pursuant to Sections 1688*a* and 1688*i* of the New York Code of Civil Procedure, which provide a system for perpetuating testimony upon a matter "involving a question as to title to *real property* in the State of New York." The testimony which it was desired to perpetuate was with reference to the assignment of a street franchise from one gas company to another. The application was opposed by the City of New York, on various grounds, including the ground that the special franchise was not real property. The Supreme Court, in granting the application, and the Appellate Division in affirming the order, thus necessarily passed directly upon the point that the special franchise of a gas company is real property.

II. The same conclusion has been reached in other States, where the question has arisen.

Chicago v. Baer, 41 Ill., 406;
Stockton Gas Co. v. San Joaquin County, 148 Cal., 313.

III. That a franchise of this kind is real property was decided in England, in the early days of gas lighting.

Rex v. Brighton Gas Light Co., 5 B. & C., 466.

IV. Counsel for the Public Service Commission concede, in their Brief, that these franchises are "incorporeal real property" (*post*, p. 62).

SEVENTH.

A corporation cannot be deprived of its special franchises, except under the power of eminent domain and upon payment of their full value.

That a corporation cannot be deprived of its special franchises, in condemnation proceedings, without just compensation, is now the firmly established law.

Sixth Ave. R. Co. v. Kerr, 72 N. Y., 330;
Matter of White Plains Commissioners, 176 N. Y., 239;
Coney Island etc. R. Co. v. Kennedy, 15 App. Div., 588, 592;
Spring Valley Water Works v. San Francisco, 124 Fed., 574;
Monongahela Nav. Co. v. U. S., 148 U. S., 312.

I. In the Matter of White Plains Commissioners, the Village of White Plains instituted proceedings to condemn the property of a water works company. The Commissioners did not allow anything for the special franchise and good will of the company, on the ground that, in the contract between the village and the company, the village had expressly consented to the franchise only on condition that it should have the right to purchase the property at the expiration of any period of five years, and that the special franchise and good will therefore had only a nominal value. The Court of Appeals reversed the order confirming the award and held that the village authorities had no power to impose such a condition, that the condition was consequently void, although expressly assented to by the company, and that the village should pay the company the full value of all its property, "*including its good will and franchise*"(p. 252).

II. In the Monongahela Navigation Company case, this Court, after a very careful consideration of the nature of a special franchise, reached the conclusion that even under its unlimited power to regulate commerce, Congress could not appropriate property in a navigable stream, without paying to the owner not only the value of the tangible property but also that of the special franchise under which the tangible property was operated. Congress had passed an Act, authorizing the United States to acquire by condemnation proceedings a lock and dam, constructed by the Navigation Company pursuant to authority derived from the State of Pennsylvania, which had authorized the Company to collect tolls for the use of the lock. A provision was inserted in the Act of Congress, that, in estimating the sum to be paid, nothing should be allowed for the franchise to collect tolls. The Attorney General attempted to sustain this provision under the commerce clause of the Constitution; and he urged that, as Congress had the absolute power to regulate commerce, the right to take tolls must necessarily have been granted by the State and accepted by the Company subject to this superior power of regulation. This argument was pressed with great confidence, in reliance upon the undisputed power of Congress to direct the removal of any obstruction to commerce, without compensating the owner. But this Court held that even the unlimited power to regulate commerce would not authorize the Federal Government to destroy a franchise of this kind without making just compensation for it; and it has since then reiterated the conclusion thus reached.

> United States v. Bellingham Bay Boom Co., 176 U. S., 211, 216.

Counsel for the Public Service Commission contend that the Monongahela case is not in point, because the franchise in that case had a conceded value, by reason of its including a right to take tolls up to an amount securing an 8% dividend upon the capital stock of the corporation, and also because the franchise could not be ignored by the United States, although it might possibly have been ignored by the State, under its reserved power. It is not, however, a question of how much value a franchise may have, but whether it has any value. This will necessarily vary with each case; and that there are various elements of value was expressly recognized in the Monongahela case (p. 328). In New York the reserved power does not include the right to disregard a special franchise (*ante*, p. 12).

III. Half a century ago, this Court was urged to make a distinction, in condemnation proceedings, between tangible and intangible property, just as it is urged to do so in the present case.

West River Bridge Co. v. Dix, 6 How., 507.

In that case, a bridge company had erected a bridge, under a franchise granting it that right and the right to take tolls. Subsequently, the town authorities laid out a highway, which included this bridge; and proceedings were instituted to acquire the property and franchises of the bridge company for that purpose. An award was made, which included the franchises. The bridge company contended that its franchise to take tolls was a special kind of property, more sacred than mere corporeal property, and that it could not be appropriated under the exercise of the power of eminent domain, as it was a contract which could not be impaired, owing to the prohibition of Section 10 of the first Article of the Constitution. To this, the Court answered (p. 534):

> "We are aware of nothing peculiar to a franchise which can class it higher or render it more sacred than other property. A franchise is property, and nothing more; it is incorporeal property, and is so defined by Justice BLACKSTONE, when treating in his second volume, c. 3, p. 20, of the Rights of Things. It is its character of property only which imparts to it value and alone authorizes in individuals a right of action for invasions or disturbances of its enjoyment."

As to the distinction between corporeal and incorporeal property, the Court said (p. 534):

> "A distinction has been attempted, in argument, between the power of a government to appropriate for public uses property which is corporeal, or may be said to be in being, and the like power in the government to resume or extinguish

a franchise. *The distinction, thus attempted, we regard as a refinement, which has no foundation in reason.*"

This language was quoted with approval in Long Island Water Supply Co. v. Brooklyn (166 U. S., 685, 693).

EIGHTH.

Special franchises cannot be taken or disregarded under the power to regulate rates.

I. If special franchises are "entitled to the same protection from invasion as any other species of property" (165 N. Y., 274, 280), and if a corporation cannot be deprived of its special franchises except under the exercise of the power of eminent domain and upon payment of their full value, it necessarily follows that a corporation cannot be deprived of its special franchises indirectly, through the exercise of the legislative power of regulating rates; for, as this Court observed, in the Railroad Commission Cases (116 U. S. 303, 331), the power to regulate rates "*amounts to a taking of private property for public use.*"

If, in the exercise of the sovereign power of eminent domain, a power which is essential to the very existence of government, a special franchise cannot be taken without making just compensation for it, and if, in the exercise of the great constitutional power to regulate commerce, a special franchise cannot be ignored, it is not possible that such franchises may be disregarded in the exercise of the power to regulate rates, a power the extent of which has not yet been satisfactorily determined. The power of a state legislature to regulate the rates of a public service corporation is inferior to the power to direct changes in the tangible structures of a public service corporation (Atlantic Coast Line v. N. Car. Corp. Com'n, 206 U. S., 1) and is insignificant compared with the vast power expressly conferred upon Congress to regulate commerce between the

States, before the exercise of which, State legislatures stand powerless. On what possible ground can it be contended that this comparatively subordinate power of a State legislature to regulate rates, can rise superior to property rights, which must be respected even in the exercise of the unlimited power of Congress to regulate commerce ?

The contention is advanced in the present case that the special franchises of a public service corporation are granted upon the implied condition that they are subject to the right of the legislature to regulate rates and, therefore, that the effect upon the value of such franchises may be ignored in such regulation. That was also the contention in the Monongahela case ; but this Court held that no legislature could ignore the mandatory prohibition of the Federal Constitution and that even the power to regulate commerce was subject to the prohibition against taking private property for public use without just compensation. The power of a State to regulate rates is necessarily limited to the extent that such regulation shall not impair the obligation of contracts, nor deprive a person of his property without due process of law, nor deprive him of the equal protection of the laws.

If the City of New York should decide to go into the lighting business upon its own account and to supply light to its inhabitants, and if power to acquire the properties of the existing lighting companies were conferred upon it, and if it exercised that power, it would have to pay for the special franchises, in condemnation proceedings, as well as for the tangible property taken. In other words, it would start out with a capitalization which would include the value of the special franchises of the existing companies ; and it would have to charge a sufficient price for its gas to obtain a return upon the amount paid for the franchises ; otherwise, it would lose money in the undertaking and would be forced to collect by general taxes what it had not received in the price of gas.

II. If, in the regulation of rates, the value of the special franchises could be disregarded, an easy method would be afforded of accomplishing indirectly what could not possibly be done directly. Because, if it were desired to give the City power to acquire the properties of the existing gas companies, without paying for the special franchises, all that would be necessary to do would be, first, for the legislature, or the City (if it had the express power), to regulate the rates, so as to permit a return only upon the value of the tangible property and thus eliminate largely the value of the special franchises, and, having done that, to acquire the property of the gas companies in condemnation proceedings, including the special franchises, which could thus be obtained at a nominal valuation. The Attorney General, in his Brief filed in this Court (p. 6), seems to approve of such a course; but its iniquity was pointed out in the opinion of Judge HOUGH, in the Court below (Record, p. 414); and it was also alluded to by this Court, in the Monongahela case (148 U. S., 312, 337):

> " It would seem strange that if, by asserting its right to take the property, the government could strip it largely of its value, destroying all that value which comes from the receipt of tolls, and having taken the property at this reduced valuation, immediately possess and enjoy all the profits from the collection of the same tolls."

In Knoxville Water Works Co. v. Knoxville (189 U. S., 434), the Court said (p. 438) that " an attempt to affect the price of the company's plant in that way (by the regulation of rates), if the City should elect to purchase, would not be allowed to succeed."

III. The right of the legislature to regulate rates is based upon the principle that the patrons of a business affected with a public interest are entitled to all the benefits derived from the business, over and above a reasonable return upon the value of the property employed. In other words, such patrons virtually become partners in the enterprise. They stand in the position of holders of deferred shares, who are entitled to all the profits of the business in excess of a fixed return upon the value of the common property. Accordingly, to ignore the special franchises as to those who had actually invested their capital in the enterprise and made it profitable, would be to bestow those franchises exclusively upon the holders of these deferred shares, who had not contributed any capital to the common venture.

It is sought to conceal the injustice of such a result, by asserting, in general and vague language, the right of the " public " to the franchises, on the ground that those franchises belong to the public and should never have been parted with without compensation. As a matter of fact, if the actual shareholders were deprived of all return upon the value of the special franchises, the general public would not get the benefit of the return on such franchises, but such benefit would be enjoyed only by that very small and limited portion of the public which happened to patronize the particular company owning the franchises.

IV. While the point has not been directly passed upon by this Court, yet, wherever it has been referred to in the general discussion of the subject of rate regulation, it has been stated or assumed that, in fixing a rate, the value of the special franchises must be included in valuing the property of a public service corporation.

Smyth v. Ames, 169 U. S., 466 ;
Reagan v. Farmers L. & T. Co., 154 U. S., 362 ;
Chicago etc. Ry. Co. v. Tompkins, 176 U. S., 167 ;
Detroit v. Detroit Citizens St. Ry. Co., 184 U. S., 368.

1. In Reagan v. Farmers L. & T. Co., the Court said (p. 410) :

> " If the State were to seek to acquire the title to these roads, under its power of eminent domain, is there any doubt that constitutional provisions would require the payment to the corporation of just compensation ; that compensation being the value of the property as it stood in the markets of the world and not as prescribed by an act of the legislature ? Is it any less a departure from the obligations of justice to seek to take not the title but the use for the public benefit, at less than its market value ? "

2. In Smyth v. Ames, the Court, in considering the method of ascertaining the value of the property, employed language which necessarily included special franchises, stating (p. 547) that there should be included "the amount and market value of its bonds and stock, . . . the probable earning capacity of the property"; and the meaning of this language is made clear by reference to the language previously used (p. 544):

> "The apparent value of the property *and franchises* used by the corporation, as represented by its stocks, bonds and obligations, is not alone to be considered when determining the rates that may be reasonably charged".

3. In Chicago etc. Ry. Co. v. Tompkins, the Court said (p. 173):

> "It is within the competency of the legislature to determine when and what property should be taken for public uses. The question is one of policy over which the Courts have no supervision; but if after determining that certain property shall be taken for public uses, the legislature proceeds further and declares that only a certain price should be paid for it, then the owner may challenge the validity of that part of the act, may contend that his property is taken without due compensation; and the legislative determination of value does not preclude an investigation in the proper judicial tribunals. *The same principle applies, when vested rights of property are disturbed by legislative enactment in respect to rates.*"

4. Detroit v. Detroit Citizens Street Railway Company holds that the legislature is precluded from exercising its power to regulate the rates of a corporation, which will interfere with a maximum rate previously agreed upon. If that is so, as to a contract price, it must be so with respect to the general principle that no rate can be fixed which precludes a reasonable return upon the value of *all* the property.

There is a marked difference between the exercise of the police power in the regulation of rates and its exercise where the public health, safety or morals are concerned.

The regulation of rates is an exercise of the police power.

People v. Budd, 117 N. Y., 1;
Budd v. New York, 143 U. S., 517, 544-5.

In all cases involving the public health, safety or morals, the exercise of the police power is paramount to property or contract rights. All property is held subject to the exercise of that power; and the owner has no remedy, if, as a result, his contract rights are changed or the value of his property is impaired.

Butchers Union Co. v. Crescent City Co., 111 U. S., 746, 750-1;
New Orleans Gas Co. v. Louisiana Light Co., 115 U. S., 650, 668-673;
New Orleans Gas Light Co. v. Drainage Commission, 197 U. S., 453;
Chicago etc. Ry. Co. v. Illinois, 200 U. S., 561;
Northern Pacific Ry. Co. v. Duluth, 208 U. S., 583, 596.

But that principle is not recognized in the regulation of rates; and contract and property rights cannot be ignored in such cases. A contract for a specific rate will be protected.

Detroit v. Detroit Citizens St. Ry. Co., 184 U. S., 368;
Cleveland v. Cleveland City Ry. Co., 194 U. S., 517, 536;
Vicksburg v. Vicksburg Water Works Co., 206 U. S. 496, 508, 515-6.

All the decisions of this Court, in the rate regulation cases, are based upon the proposition that the legislature cannot ignore property or contract rights in establishing a rate. A rate must be allowed which will permit a reasonable return upon the fair value of the property devoted to the public use.

San Diego Land Co. v. National City, 174 U. S., 739, 753-6.

V. In the lower Federal courts and in the State courts, wherever the point has been suggested, the conclusion has also been reached or intimated, that special franchises cannot be ignored, in fixing rates.

Ames v. Union Pacific Ry. Co., 64 Fed. Rep., 165, 176;
Spring Valley Water Works v. San Francisco, 124 Fed. Rep., 574;
San Diego Water Co. v. San Diego, 118 Cal., 556.

1. In Ames v. Union Pacific Ry. Co., Mr. Justice BREWER expressly referred to the stronger reason which exists for allowing for the value of franchises in the case of rate regulation than in condemnation proceedings, saying (p. 178):

> "Is there not an element of equity which puts the reduction of rates in a different attitude from the absolute taking of the property by virtue of eminent domain? In the latter case, while only the value is paid, yet that value is actually paid, and the owners may reinvest and take the chances of gain elsewhere, whereas, if the property is not taken, the owners have no other recourse than to receive the sum which the property they must continue to own will earn under the reduced rates."

2. In Spring Valley Water Works v. San Francisco, Judge MORROW expressly included the franchises in the property of the company, which he valued for the purpose of ascertaining the return permitted by the rate. In referring to the Monongahela case, he said (p. 594):

> "It is true this was a condemnation proceeding, and the question was to determine what was just compensation for the appropriation of corporate property to a public use, while the case before this Court relates to the fixing of water rates which shall be a just compensation for the appropriation of complainant's property to a public use. It is not perceived that there is any difference in the principles applicable to the two cases; and this appears to have been the view of the Supreme Court in San Diego Water Co. v. San Diego, *supra*."

3. In the San Diego case, the Court said, with reference to fixing a maximum rate (p. 567):

> "The question what is just compensation in such a case is, *in all respects*, analogous to the question which arises *in every case* of appropriation under the power of eminent domain."

NINTH.

Gross injustice of disregarding value of special franchises in rate regulation cases.

Throughout the country, these special franchises have been capitalized with the sanction of the state authorities; and millions of dollars have, accordingly, been invested in the stocks and bonds of public service corporations, both here and abroad, the principal security of which are the special franchises of those corporations. To hold that such franchises can now be absolutely ignored in the regulation of rates and that rates may be reduced to a point which will permit a return only upon the value of the tangible property would be to set the seal of sovereign approval upon wholesale repudiation and to favor particular classes of the community (in the case of a gas company, its consumers) at the expense of the investing classes, to whose contributions all public utilities owe their existence and their value.

TENTH.

Special considerations affecting the question in New York.

In addition to the fact that these franchises are regarded as "property in the highest sense", in New York (People v. O'Brien, 111 N. Y., 1, 40), there are some special considerations which would make it peculiarly flagrant for the Legislature of that State to disregard them, in establishing a maximum rate for a public service corporation, and particularly for the appellee.

I. *Assessment for taxation.*

In New York, special franchises are assessed for the purposes of taxation, under a special statute passed for that purpose.

L. 1899, Ch. 412.

As the Court of Appeals observed, in construing that statute, its effect was to subject to taxation "property scattered all over the State, worth nearly two hundred millions of dollars".

People v. Tax Commissioners, 174 N. Y., 417, 437.

Under the authority thus conferred, the State of New York assessed the special franchises of the Consolidated Gas Company for the year 1906, at $31,900,000, which included about $7,900,000 for the tangible property (the mains and connections) and $24,000,000 for the franchises to occupy the streets (Record, pp. 202, 1849, 5061). That valuation was placed upon these franchises by the State Board, a body whose exceptional skill, in the opinion of the Court of Appeals, justified the disregard of the home rule principle in the State Constitution, in the appointment of a state board to value local franchises.

People v. Tax Commissioners, 174 N. Y., 417, 437-8.

Can the Legislature of the State of New York say to this Gas Company: "We will value your special franchises at the sum of $24,000,000 for the purposes of taxation, as measuring your obligation to contribute to the support of the government; but we will place only a nominal valuation upon them in determining the price which you may charge to your consumers"? And would it be any justification for such Janus-like action by the State, if it made the magnanimous concession suggested by appellants' counsel, that the tax paid should be allowed as an operating expense in ascertaining the net receipts of the business? On "concessions" of that kind, it would be entirely proper to deprive the Company of all return upon the value of its real estate, by permitting it to treat the tax levied upon such real estate as an operating expense. That kind of logic would lead to the conclusion that a public service corporation should be content to serve the public gratuitously, if the legislature should benevolently concede to it the right to pay its taxes out of the operations of the business.

The appellants contend that the taxation of special franchises does not prove that they constitute property, because, under the

Tax Law, not only is a franchise taxable, but also the "authority or permission" to maintain mains. But the "authority or permission" to maintain mains is a franchise. The existence of a franchise does not depend upon the extent of its duration; and permission to occupy the streets for one year is just as much a franchise and property right (irrespective of its value) as permission to do so for thirty years, or perpetually. A lease, for a year, of a city lot, no matter how small, is property just as much as ownership of the fee of an entire block.

II. *Express recognition of right in New York to capitalize special franchises.*

The Public Service Commissions Law of New York (L. 1907, Ch. 429, Secs. 55, 69), by which the power to regulate rates has been conferred upon a Commission, provides that "the commission shall have no power to authorize the capitalization of any franchise to be a corporation, or to authorize the capitalization of any franchise or the right to own, operate or enjoy any franchise whatsoever in excess of the amount (exclusive of any tax or annual charge) actually paid to the State or to a political subdivision thereof, as the consideration for the grant of such franchise or right."

This provision is significant, for two reasons: first, because, in prohibiting the capitalization of franchises for the future, except where they are actually paid for, the validity of the previous capitalization of franchises is impliedly conceded; and, second, because a corporation may even now capitalize its franchises to the extent of the amount paid for them. In other words, it is to-day the declared policy of the State to permit the capitalization of such franchises; and, consequently, they must be taken into consideration in the regulation of rates. But, in the absence of legislative prohibition or limitation, it cannot make the slightest difference what consideration was given for the franchises, whether it was in the form of a cash payment or the expenditure of capital in reliance upon a contract with the State. This question of the consideration will be referred to again (*post*, p. 37), in considering the unfounded contention of the appellants, that no return should be permitted upon the special franchises, because nothing was paid for them.

III. *Capitalization of special franchises expressly sanctioned in 1884.*

While it is clear on principle that, in New York, special franchises must be included in any valuation of the property of a public service corporation in the regulation of rates and while that is a principle which can be invoked by the other New York gas companies mentioned in the record, which are affected by the legislation assailed in this case, there is a special fact in the history of the appellee which is decisive on this appeal.

The Consolidated Gas Company was organized in November, 1884, by the consolidation of six gas companies, which, at that time, were in active operation in New York City: the New York, the Manhattan, the Metropolitan, the Harlem, the Municipal and the Knickerbocker (Record, p. 4819). The new Company was capitalized at $39,078,000, in which was included $7,781,000 for the intangible property, including the special franchises (Record, pp. 5325, 5340). This consolidation was made in accordance with a statute which permitted the consolidation of the property *and franchises* of manufacturing corporations (L. 1884, Ch. 367).

Section 5 of that Act was as follows:

> "Upon the consolidation of the said corporations, and the organization of such new company, as hereinbefore prescribed, all and singular the rights, privileges, *franchises*, and interests of every kind belonging to or enjoyed by the said several corporations so consolidated, and every species of property, real, personal and mixed, and things in action thereunto belonging, mentioned in said agreement of consolidation, shall be deemed to be transferred to and vested in and may be enjoyed by such new corporation, without any other deed or transfer; and such new corporation shall hold and enjoy the same, and all rights of property, privileges, *franchises* and interests in the same manner and to the same extent, as if the said several companies so consolidated had continued to retain the title and transact the business of

> such corporations, and the title to real and personal estate, and rights and privileges acquired and enjoyed by either of the said corporations shall not be deemed to revert or be impaired by such act of consolidation, or anything relating thereto."

Section 1 of the Act provided that the agreement of consolidation should specify the amount of the capital, "*which capital shall not be larger in amount than the fair aggregate value of the property, franchises and rights of the several companies thus to be consolidated.*"

In 1885, a Committee was appointed by the Senate to investigate this consolidation, as the result of charges made that there was an over-capitalization (Record, p. 5325). A large amount of evidence was taken; and, as a result of the investigation, a report was made, sustaining the capitalization (Record, pp. 5382–8). With respect to the valuation of $7,781,000 placed upon the franchises, the report expressly called attention to the injustice of permitting the franchises to be capitalized, as the legislature would thus, in effect, make it inevitable that "the consumers of gas should be required to pay such a price for it as would pay a dividend upon the value of these franchises" (Record, p. 5385). After referring to the fact that about *one-sixth* of the entire capital stock had even then passed into the hands of innocent purchasers (Record, p. 5387) and that the franchises of only four of the Companies were worth *much more* than the sum of $7,781,000, at which the franchises of all six Companies had been capitalized (Record, p. 5386), the majority of the Committee said (Record, p. 5387):

> "Nothing but the clearest proof of fraud and violation of the law, by virtue of which it was issued, would justify any attempt to render such stock worthless. We are compelled to say that we have not been able to find such proof. If injustice has been done to the gas consumers of New York City, it has been done by the legislature passing a law allowing consolidations to be effected in this manner. These companies did simply what the law expressly said they might do."

Few issues of stock have been subjected to a more rigid scrutiny than that made by the Legislative Committee in the case of this Company, when the facts were still fresh and when complete and accurate proof was readily obtainable. The validity of that issue was thus investigated under the most exacting conditions and in the most public manner; and the right of this stock to a return can no more be questioned than the right of any other share of stock of the Company.

If one sixth of the capital stock of the Company had passed into the hands of innocent purchasers within a little more than a year after the consolidation, there can be little doubt that substantially all the stock now held by nearly five thousand investors (Record, p. 760) has, during the quarter of a century that has since elapsed, been purchased on the faith of this legislative recognition, that the stockholders of the Company were properly entitled to a return upon the value of the franchises. It is, of course, impossible, at this late date, to set apart specific stock, of the par value of $7,781,000, and say that it alone of the entire capital stock is entitled to a return. The capitalization of the franchises enters into the value of every share; and it does not now make the slightest difference at what sum the franchises were then valued. Having been capitalized with the sanction and approval of the legislature, the Company is entitled to a return upon their present value, whatever that may be. The capitalization of the franchises is a fact just as substantial and firmly based as the contract in the Detroit Street Railroad case (Detroit v. Detroit Citizens St. Ry. Co., 184 U. S., 368), where this Court held that, in the regulation of rates, the City of Detroit could not disregard a thirty year contract, which had been made with the Company, permitting it to charge five cent fares. The only difference between the two cases is that, in the Detroit case, the exact return had been definitely fixed by agreement of the parties, while, in the case at bar, it is determined or fixed by law.

In the Broadway Railroad Case (People v. O'Brien, 111 N. Y., 1), the special franchises of the Company had been mortgaged before the road was constructed. The Legislature subsequently repealed the charter of the Company and terminated its existence;

but it was held that the Legislature had no right to do an act which would work an injustice upon the persons who had purchased the mortgage bonds of the Company. What the Court said in that case would apply with much greater force to the facts of the present case, in view of the express legislative recognition of the act of the Company, a quarter of a century ago, and the vast number of purchases and sales of the stock of the Company that have necessarily taken place since then (p. 53):

> "Creditors, contractors and stockholders had a right to rely upon the promise of the state, that the annulment of the corporate charter should not affect the remedies existing in their favor against the corporation, and this promise is a contract protected by the provisions of the Federal Constition."

In the Court below, counsel for the Attorney General attempted to avoid this awkward fact, by claiming that the appellee was not a corporation at all, because, under the Consolidation Act of 1884 (L. 1884, Ch. 367), only manufacturing corporations could consolidate, and gas companies were not manufacturing corporations, and, therefore, the consolidation of 1884 was a nullity. Such a fanciful contention would never have been advanced, had it not been considered absolutely necessary to escape from the effect of the consolidation in the capitalization of the franchises. But it is a singular argument for the Attorney General to advance. For if there was any merit in the contention, the many illustrious predecessors of the present incumbent of that office were strangely remiss in their official duty, in allowing the years to slip by without trying to have the existence of this great corporation declared a nullity. And after all these years of acquiescence and especially after the legislative investigation, when the Act was still fresh on the statute book and the Legislature must be assumed to have known what corporations were intended to be included in the statute, and thousands of innocent investors have been led to purchase the stock, it is little short of flippancy to advance an argument so trivial and so inequitable. This is especially true, in view of the fact that gas companies are undoubtedly manufacturing companies and have been held to be such, even under tax statutes, which must, of course, be strictly construed.

Nassau Gas Light Co. v. Brooklyn, 89 N. Y., 409.

That the organization of the appellee by the consolidation of 1884 was legal and valid was the affirmative contention of the present Attorney General, in a recent application made by him to the Supreme Court of New York, for leave to bring an action to have the corporate existence of the appellee annulled, on the ground that it was exercising franchises which it did not possess. That application was denied, and the Company was recognized as having a valid existence by the Appellate Division of the Supreme Court (five Justices concurring).

Matter of Consolidated Gas Co., 124 App. Div., 401.

The contention that the consolidation was not duly made, in 1884, has been abandoned by the Attorney General in his brief submitted to this Court.

ELEVENTH.

The principle involved in the regulation of rates.

I. Much of the apparent difficulty in the discussion of this subject is due to the failure to recognize the essential principle which is involved in the regulation of rates and which has been lost sight of to some extent in the complexity of the facts to which such cases give rise.

The right to regulate rates has recently become a subject of such conspicuous importance, that it is naturally inferred that the regulation of rates is a matter of recent origin. But rate regulation is merely the enforcement of a principle which has long been recognized at common law and which has been the subject of legislation from the earliest days of parliamentary history. This principle is, that a business which, as Lord HALE long ago expressed it, is "affected with a public interest," by reason of the fact that the public are compelled to patronize it, must make a reasonable charge for its services or product. Legislation became necessary when the persons engaged in the business exceeded their legitimate rights and made *unreasonable* charges. The legislature did not interfere, so long as the charges were reasonable. It merely prohibited unreasonable charges, by fixing a limit of reasonableness. It did not in any way attempt to interfere with property rights, but merely sought to prevent imposition and extortion.

Lake Shore, etc., Ry. Co. v. Smith, 173 U. S., 684, 698.

At common law, however, the reasonableness of a rate had very little to do with the amount of return received by the owner of property upon the capital invested in the business. Whether or not a rate was reasonable depended principally upon the nature of the service rendered and the charges that were usual in that class of business. The value of the property employed or the return realized upon the property was so slight a factor that it was virtually ignored.

Canada Southern R. Co. v. International Bridge Co., 8 App. Cas., 723, 731;
Transportation Co. v. Parkersburg, 107 U. S., 691 699;
Interstate Commerce Commission v. Railroad Co., 145 U. S., 263;
Cotting v. Kansas Stock Yards, 183 U. S., 79, 95-7.

1. In Canada Southern R. Co. v. International Bridge Co., Lord Chancellor SELBORNE thus expressed the opinion of the House of Lords (p. 731):

> "It certainly appears to their Lordships that the principle must be, when reasonableness comes in question, not what profit it may be reasonable for a company to make, but what it is reasonable to charge to the person who is charged. That is the only thing he is concerned with. They do not say that the case may not be imagined of the results to a company being so enormously disproportionate to the money laid out upon the undertaking as to make that of itself possibly some evidence that the charge is unreasonable, with reference to

> the person against whom it is charged. But that is merely imaginary. * * * It seems to their Lordships that it would be a very extraordinary thing indeed, unless the Legislature had expressly said so, to hold that the persons using the bridge could claim a right to take the whole accounts of the company, to dissect their capital account, and to dissect their income account, to allow this item and disallow that, and, after manipulating the accounts in their own way, to ask a court to say that the persons who have projected such an undertaking as this * * * are to be regarded as making unreasonable charges * * * because the Bridge Company gets a dividend which is alleged to amount at the utmost to 15%. Their Lordships can hardly characterize that argument as anything less than preposterous."

2. In Transportation Co. v. Parkersburg, this Court said (p. 699):

> "It is also obvious that since a wharf is property and wharfage is a charge or rent for its temporary use, the question whether the owner derives more or less revenue from it, or whether more or less than the cost of building and maintaining it, or what disposition he makes of such revenue, can in no way concern those who make use of the wharf and are required to pay the regular charges therefor; provided, always, that the charges are reasonable and not exorbitant."

3. The language employed in the International Bridge case *(supra)* was quoted with approval in the Cotting case (183 U. S., 96), where Mr. Justice BREWER, in commenting upon it said (p. 97):

> "The question is always, not what does he make as the aggregate of his profits, but what is the value of the services which he renders to the one seeking and receiving such services. Of course, it may sometimes be, as suggested in the opinion of Lord Chancellor SELBORNE, that the amount of the aggregate profits may be a factor in considering the question of the reasonableness of the charges; but it is only one factor, and is not that which finally determines the question of reasonableness."

II. Had this common law principle of reasonableness been kept clearly in view, many of the perplexities of the subject in regard to the valuation of the property and the amount of the return would have been avoided. Chief Justice WAITE, for instance, would never have suggested, as he did in the Granger Cases (94 U. S., 178), that the power of the legislature in the regulation of rates was supreme and was not subject to review by the court.

But when, in the later cases, the point was clearly presented, that such a power as that which was claimed by the legislature might destroy a business or deprive a property of its productive capacity, the courts were brought face to face with the constitutional limitations imposed upon state legislatures, instead of approaching the question from the common law point of view of what was reasonable in view of the services rendered and the charges which prevailed in that kind of business. From the constitutional point of view, it was so obvious that the fixing of a rate which would not permit *any* return upon the property would be a deprivation of property rights and of the equal protection of the laws, that the courts were driven to the conclusion that a regulation which would produce such a result was void. If, in considering the constitutional question of the effect of the state legislation upon property rights, the proper criterion is that such legislation must permit a return upon the value of the property invested in the business, it must follow that the legislature cannot discriminate between different classes of property or determine for itself that, on some kinds of property, the owner shall be entitled to a return but that upon other kinds of property, he shall have no return. That being so and it being conceded that special franchises are property " in the highest sense of the term " (111 N. Y., 1, 40), the Federal Constitution protects it from invasion, no matter what form that invasion may assume (165 N. Y., 274, 280).

TWELFTH.

Difficulties suggested by the trial Court.

In the course of his opinion, Judge Hough gave full expression to the difficulties which he encountered in reaching the conclusion that special franchises must be included in the assets upon which the Company is entitled to a return. He felt compelled, however, to disregard his own doubts on the subject, "because to refuse would disregard views expressed by higher courts regarding the general nature of franchises and regulation proceedings"; and he, therefore, followed "the method of reasoning there *clearly indicated*" (Record, p. 414).

The "views expressed by higher courts" and the "method of reasoning" to which he referred were those which have heretofore been set forth, namely, that special franchises are property and, therefore, cannot be disregarded by the legislature in the regulation of rates or in any other manner. Economic doubts and metaphysical speculation on the subject are, therefore, idle, as was conceded by the learned trial Judge, after he had given expression to them (Record, p. 414). To enter upon a discussion of them under the circumstances is scarcely necessary; but inasmuch as the doubts expressed in the opinion reflect some of the reasons relied upon by counsel for the appellants, a brief reference to them may not be out of place.

I. The reason upon which the greatest stress was placed in the Court below and that which apparently made the deepest impression upon the trial Judge was that the Company did not give a valuable consideration for its special franchises. How far the Court was carried by this suggestion is best shown in its own language (Record, p. 411):

> "It is not asserted that any right such as above described (special franchise right) was ever *bought* by complainant from either State or City, or that for such right any valuable consideration was ever paid *in the usual legal sense of those words.*"

And again (Record, p. 412):

> "Return can be expected only from investment, and he that invests must part with something in the act of investing. He that hath not sown shall not reap."

Such utterances sound strangely at this hour of the day. Views of that kind may have been entertained a hundred years ago with respect to corporate franchises; but since the Dartmouth College case, they have rarely been indulged in by the Courts. To assert that no valuable consideration was ever paid, "*in the usual legal sense of those words*", for the special franchises of the appellee, is to ignore one of the most common elements of a legal consideration, recognized from the earliest days of the common law and forming a well settled principle of the Roman Law.

2 Blackstone Com., 444.

1. There is no affirmative evidence of any kind in the record to show that the constituent companies of the appellee did not make substantial cash payments for their franchises. Assuming, however, that they did not make such payments, the consideration they actually gave for their franchises was no less valuable and substantial. The important contribution made to civilization by the introduction of gaslight has been frequently dwelt upon by historians and courts. Thus, in New Orleans Gas Co. v. Louisiana Light Co. (115 U. S., *650), Mr. Justice HARLAN, in writing for a unanimous court, characterized the business of manufacturing gas as (p. 669) "one of the most important agencies of civilization, for the promotion of the public convenience and the public safety"; and he quoted with approval (p. 658) the statement made in Knight's History of England, that "the adventurers in gas lights did more for the prevention of crime than the government had done since the days of Alfred".

And the New York Court of Appeals employed equally impressive language in Harlem Gas Co. v. Mayor (33 N. Y., 309, 327):

> "In our northern latitudes, when darkness prevails over half the twenty four hours for a large part of the year, light diffused through the public streets and avenues is a predominant and urgent necessity, which no well governed city can do without. This beneficient application of artificial light is one of the distinguishing characteristics between the city of modern times and those of the middle ages, when darkness reigned supreme for no inconsiderable portion of the time, broken only to become more visible by the occasional torch of the linkboy or the lantern of the solitary watchman. The modern gaslight, diffusing its rays over every part of the public thoroughfare, is a source of pleasure and comfort and convenience, as well as a security against crime and disorder, which no other agency can supply. It is indispensable at all times; and no municipality can be said to be well governed which is not able to command its presence under all circumstances."

Some of the constituent companies of the appellee date back to the early part of the last century, when the business of attempting to supply gas for illuminating purposes was an untried and extremely precarious one. Many enterprises in which the public are interested owe their origin to the generous disposition of public spirited citizens, who contribute their capital, not for the sake of investing it advantageously but to advance the general welfare. Many enterprises require to be encouraged in order to induce capital to embark in them. In the case of the New York Subway railroad, for instance, capital could not be induced to invest in the enterprise, at the outset.

Sun Publishing Co. v. Mayor, 152 N. Y., 257, 273;

and the same timidity existed when the construction of an elevated railroad was originally contemplated.

Mayor v. Manhattan Ry. Co., 143 N. Y., 1, 30-32 (PECKHAM, J.).

Railroad companies have not only, in numerous instances, been given free rights of way through the streets of villages and cities, but large tracts of valuable land and other property have frequently been made exempt from taxation for a period of years; and, in the early days of railroad construction, it was a matter of common occurrence for municipalities to bond themselves for large amounts, in order to raise the capital required for the construction of the roads; and similar inducements were given to gas companies.

New Orleans v. Clark, 95 U. S., 644;
New Orleans Gas Co. v. Louisiana Light Co., 115 U. S., 650, 670.

And the general gas Act of New York, passed in 1848, conferred power upon the municipal authorities to exempt gas companies from taxation on their personal property for three years.

L. 1848, Ch. 37, Sec. 18.

This principle of fostering infant industres is relied upon as the complete justification of the protective tariff, a policy to which the nation has long been committed.

When, therefore, these gas companies originally furnished the capital for a new and uncertain enterprise, they were giving a consideration for the right to occupy the streets, which, at the time and until recent popular agitation on the subject, was considered by every one to be ample.

The adequacy of such consideration has been expressly recognized by the New York Court of Appeals and by this Court.

Mayor v. Manhattan Ry. Co., 143 N. Y, 1, 30, 31;
Bridge Proprietors v. Hoboken Co., 1 Wall., 116, 146;
Re Binghampton Bridge, 3 Wall., 51.

In the latter case, the Court said (p. 74):

> "The legislature, therefore, says to public spirited citizens: 'If you embark with your time, money and skill in the enterprise which will accommodate the public necessities, we will grant to you for a limited period or in perpetuity privileges that will justify the expenditure of your money and the employment of your

> time and skill.' Such a grant is a contract, *with mutual considerations*; and justice and good policy alike require that the protection of the law should be assured to it."

2. Even if the constituent companies gave no consideration for their franchises and those franchises should be considered as a gift, that fact would not deprive them of their character as property. On the theory that it would, any property presented by one person to another would have no value to the donee; and our laws of descent and distribution would cease to have any significance, if they did not confer full property rights upon the beneficiaries.

As Mr. Justice STORY said, in the Dartmouth College case (4 Wheat., 518, 683):

> "When a contract has once passed, *bona fide*, into grant, neither the King nor any private person who may be the grantor can recall the grant of the property, although the conveyance may have been purely voluntary. A gift completely executed is irrevocable."

Much of the right of way and frequently the terminals of our railroad companies were donated to them, the national government making extensive donations of federal lands to the transcontinental railroad companies. It not only granted a right of way to the Union Pacific Railroad Company but also made enormous land grants to it, and timber rights; and it lent to the Company the credit of the nation, to the extent of $16,000 a mile for the entire line. In referring to the contention subsequently made, that the conditions on which these grants were made could be disregarded or changed by Congress, this Court said, in the Sinking Fund Cases (99 U. S., 700, 719):

> "They cannot legislate back to themselves, without making compensation, the lands they have given this corporation to aid in the construction of its railroad."

On the appellants' contention, it would be improper, in fixing the maximum rates for railroad companies to include such of these lands as were devoted to railroad purposes among the assets on which the companies are entitled to a return. But there is not a rate case where such a suggestion has been made. That it makes no difference how or on what terms the property was acquired was expressly recognized in Ames v. Union Pac. Ry. Co. (64 Fed. Rep., 165), where it was contended by counsel for the State Board of Transportation that no return should be permitted on the right of way, because it had been donated by the Government. In that case, Mr. Justice **Brewer** applied the rule which prevails in condemnation proceedings to the case of rate regulation, and said (p. 176):

> "No inquiry is open as to whether the owner has received gifts from the state or individuals. * * * It is enough that he owns the property—has the legal title; and so owning, he must be paid the actual value of that property. If he has done any wrong in acquiring or using the property, that wrong must be redressed in a direct action therefor, and cannot be made a factor in condemnation proceedings. These propositions in respect to condemnation proceedings are so well settled that no one ever questions them. *The same general ideas must enter into and control legislation of the kind before us.*"

The notorious scandal connected with the acquisition of the Broadway Railroad franchise resulted in the repeal by the Legislature of the charter of the Company; and yet the Court of Appeals, in discussing the question of the franchise, said (111 N. Y., 1, 31):

> "We know not only from contemporary history but from cases which have already reached this Court, that serious questions have arisen with reference to the propriety of the means by which the corporators of the company obtained this consent from the municipal authorities; but they are not involved in this case and have no bearing upon the questions presented for discussion by the record."

In the same case, the Court of Appeals quoted with approval (p. 52) the following remarks of Judge **Cooley**

(City of Detroit v. Detroit etc. Plankroad Co., 43 Mich., 140):

> "It cannot be necessary at this date to enter upon a discussion in denial of the right of the government to take from either individuals or corporations any property which they may rightfully have acquired. In the most arbitrary times, such an act was recognized as pure tyranny, and it has been forbidden in England ever since Magna Charta, and in this country always. It is immaterial in what way the property was lawfully acquired, whether by labor in the ordinary avocations of life, by gift, or descent, or by making a profitable use of a franchise granted by the State; it is enough that it has become private property and it is thus protected by the 'law of the land'."

Even if it should be assumed that the special franchises of all the public service corporations in New York were the free gift of the State, the people of the State are reaping the benefit not only in the multiplication of conveniences, which have become necessities, but in the fact that these franchises, estimated by the Court of Appeals to be worth $200,000,000 (174 N. Y., 437), are now returning to the State a large revenue in the shape of taxes.

3. The suggestion of Judge Hough (Record, p. 412), that the appellee did not invest any property *in* the special franchises, but *under* them, is an obvious misconception, resulting from his confusing a special franchise with a general franchise and from assuming that nothing has value for which a cash payment has not been made. If even a small cash payment had been made, he would have been forced to say that there had been an investment *in* the franchise. Manifestly, if services or risks equivalent to cash payments were performed or assumed, the investment is equally *in* the franchise. In either case, a correct balance sheet of the Company would include among its assets the value of its special franchises.

4. *Analogies relied upon.*

The illustrations employed by the learned trial Judge, to emphasize the difficulty of treating special franchises as property, show a misconception of both economic and legal principles. He conceived that there was a difference between such property and "land or money," because, in the case of a franchise, he could not perceive that there was any property right in the franchise "before a main is laid or a foot of gas manufactured" (Record, p. 412). But special franchises do not differ in this respect from any other kind of property, even such tangible property as "land or money." Definite and precise value is confounded with value in general. The wild lands granted by the national government to the Union Pacific Railroad Company, remote from any settlement, had no market value before the railroad was projected; and many experienced business men regarded the project as visionary and believed that it would not succeed. But such lands were property, in the legal sense, just as completely as the most highly improved land in the heart of a city. Money in the pocket of a wrecked mariner on a desert island has no present value; but it would be property even if it were certain that the unfortunate possessor of it would spend the remainder of his days alone on the island. Value varies necessarily with the use, but is not solely dependent upon the use. The historical illustration of a town crier or herald (Record, p. 412) illustrates very well the confusion in which the Court became involved, as will appear by following the illustration to its logical conclusion. The Court asks whether any value is attached to such franchise, "beyond the right of working under its protection for a fair wage", and whether the herald would be justified in charging two prices for his proclamation, one for the service and the other as return for income on his franchise. The essence of all property rights is to permit their exercise for a profitable return; and there is no difference in principle between the right of a public herald to exercise his calling and the right accorded to every citizen to pursue his chosen vocation. If the right granted to the herald was recognized by the law to be assignable (as is the case with special franchises), then it is something which could be sold or exchanged for "money or land."

The essence of a property right is not its actual exercise, but the authority to exercise it. There is, therefore, no greater difficulty in the case of a special franchise than there is in the case of wild land. The fact that no capital has been invested in its development makes no difference either in the economic or legal sense.

All doubt on this point has been set at rest in New York.

People v. O'Brien, 111 N. Y., 1;
Suburban Rapid Transit Co. v. New York, 128 N. Y., 510;
People v. Neff, 19 App. Div., 590, 592-3.

The Broadway Railroad franchise had been mortgaged for millions of dollars before a rail had been laid; and yet the Court of Appeals, with unusual warmth, repudiated the suggestion that it was not property, in every sense of the term; and in the case of the Suburban Rapid Transit Railroad Company, the Railroad Company had not even acquired its right of way; yet its property rights in the franchise were held to be inviolable, even as against the exercise of the power of eminent domain by a municipality.

In People v. Neff, Mr. Justice CULLEN (now Chief Judge of the Court of Appeals), in delivering the opinion of the Court, made a statement which affords a complete answer to Judge HOUGH's suggestion, that there is no property right in a special franchise "before a main is laid or a foot of gas manufactured":

> "In the case of Coney Island, Fort Hamilton and Brooklyn R. R. Co. v. Kennedy, *et al.* (15 App. Div., 588), we held that *though the plaintiff had not laid a rail nor entered upon the street*, its franchise was as absolutely property as the land abutting on the street, and that the former could no more be taken for public purposes without compensation than the latter. This was the law laid down in the case of Suburban Rapid Transit Co. v. Mayor (128 N. Y., 510)."

The learned District Judge was of the opinion that "the concepts of the nature and value of franchises are seen dimly and confusedly because of the failure to distinguish between productive and non-productive property" (Record, p. 412).

The confusion is not due to the failure to distinguish between productive and non-productive property, because property rights do not depend upon the productivity of the property; it is due to the failure to note the essential nature of property. The Court thought that the great distinction between "land, money and chattels," on the one hand, and franchises on the other, was that the former could be made productive without a franchise. But there are many chattels, such as works of art, which have a large property value and which are not productive at all. Money itself is not productive, its value depending upon its service as a convenient medium of exchange; and land is, in its ultimate analysis, nothing but a right or franchise recognized by the state.

The conclusion of the Court (Record, p. 413), that a franchise "possesses no more economic value for the investor than does an actual shield possess fighting value, apart from the soldier who bears it," is no more true as applied to franchises than it is as applied to land or chattels or any other kind of property. In every case, the law which protects the individual in his claim to a particular portion of the earth's surface is a shield, without which there would be no value. All property rights are dependent upon the shield of the law. Remove that protection and the conception of property and property rights, which is the basis of our system of jurisprudence, would cease to exist.

Throughout this discussion by the Court, it is noticeable that the word franchise (as applied to the public herald, for instance) is frequently employed in the sense of general franchise or right to engage in a particular business. No contention is made, in the present case, that the appellee is entitled to a return upon the value of its general franchise to manufacture and supply gas.

To assert that, " on every private sale of franchise property, the price paid is so much *money* lost to the public by official incompetence or worse " (Record, p. 413) is to make a statement which has no more point economically speaking, as applied to franchises, than it has as applied to any other species of property. In the sphere of government, it may be that the incident of taxation should properly fall heavier on that class of property, the use of which brings the greatest benefit to the owner and imposes the heaviest burden on the public; but such considerations are wide of the mark in a discussion of the legal principles involved in the recognition of fundamental property rights.

How far this sentiment, as expressed by the Court, may carry its adherents, is illustrated by the radical utterance of a highly respected member of the Public Service Commission of New York for the Second District (Mr. Thomas M. Osborne), who, in an article in the Atlantic Monthly for April, 1908 said (p. 553) :

> " A franchise granted by the legislature of fifty years ago belonged then to us of today quite as much, if not more, than to our grandfathers who handed it over to some railroad in perpetuity; it belongs to us now, as it will belong to our grandchildren in their turn. The action of the legislature of two generations ago in giving away our birthright is not morally a binding contract upon us today, when it comes in conflict with the present or future public interest, and the vested rights of the private inheritors of that franchise will not finally stand when they come in conflict with the vested rights of the State."

That is the view which Mr. Henry George entertained with respect to real estate; but even Mr. George was not bold enough to declare that such a policy should be forthwith put into effect. He was of the opinion that the

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That is the view which Mr. Henry George entertained with respect to real estate; but even Mr. George was not bold enough to declare that such a policy should be forthwith put into effect. He was of the opinion that the desired result should be attained by concentrating taxation upon that form of property.

Mr. Osborne's advanced views produce the effect upon the reader which the New York Evening Post, of February 24, 1906 (an habitually severe critic of the public service corporations of New York City) expressed, in referring to the conclusion of the former Gas Commission, that, in estimating the value of the properties of gas companies, their special franchises should *not* be included:

> " Whatever may be said of the other reasoning of the Gas Commission, its deliverances about the value of a franchise *leave the reader gasping.* * * *
>
> " The value of the franchise is an indestructible part of the property to be acquired. The fact that it was given for nothing is an excellent reason for giving no more in that way, but once granted, the franchise is property, which not even the legislature can confiscate."

THIRTEENTH.

Other imaginary difficulties.

Other reasons for disregarding the special franchises were suggested in the Court below, which were apparently not deemed worthy of comment by the Court, in its opinion.

I. One of these has already been alluded to (*ante*, p. 27), namely, that the franchises should not be included in the assets of the Company, because the tax upon the franchises had been allowed as an operating expense. But, as has already been observed, that kind of reasoning would be equally applicable to the real estate and all other property of the Company, none of which is exempt from taxation. Such reasoning would lead to the conclusion that the Company is not entitled to any return upon any of its property, so long as it is permitted to earn enough to pay taxes.

II. It was also suggested that the special franchises were acquired subject to the right to regulate rates. That is equally true of all the other property acquired by the Company. The right to regulate, however, is limited to allowing a fair return upon the reasonable value of *all* the property of the Company.

III. An additional reason advanced for not including the franchises among the assets is that, to do so, would prevent any regulation of the rate.

This reason seems to have been suggested by Messrs. Beale and Wyman, in their recent publication of "Railroad Rate Regulation" (Sec. 372). But the only authority cited in the work in support of the statement is Brunswick, etc., Water District v. Water Co. (99 Me., 371). The case is not at all in point, as it was a condemnation proceeding, where the Legislature had expressly directed that the value of the special franchises should be taken into consideration. Messrs. Beale and Wyman state that there is "one" case (Spring Valley Water Works v. San Francisco, 124 Fed. Rep., 574), which contains a *dictum* to the contrary of their assertion. It was not a *dictum*, as the point was carefully considered and passed upon in that case, and the value of the franchises was included in estimating the value of the assets of the company upon which it was entitled to a return (124 Fed. Rep., 574, 596).

The *dicta* to the contrary, to which the learned authors might have referred are those of this Court, which have heretofore been given (*ante*, p. 22). The treatment accorded the subject by these authors is, as the Court below observed, "summary and insufficient" (Record, p. 413); and this is illustrated by their statement (Section 364), that it "is not entirely clear on the authorities" whether compensation must be made for the franchises of a public service corporation taken in the exercise of eminent domain. There is certainly no doubt on that point in the courts of New York or in the Federal courts.

Matter of White Plains Commissioners, 176 N. Y., 239;
Monongahela Nav. Co. v. U. S., 148 U. S., 312.

The reason advanced by these authors for not including the franchises is evidently unsound as applied to special franchises in New York. It assumes in the first place, that a special franchise has no value except as shown by the net earnings of the company. While it is the productive use of property which produces a return upon the investment, the failure to put it to such use does not render the property worthless. A vacant piece of land may be worth just as much per square foot as adjacent land upon which there is the most adequate and costly improvement. A gas or railroad company, which had an undoubted franchise to use the streets of New York in perpetuity, could dispose of that right for a very large amount, even though it had never attempted to exercise it; or it could be mortgaged for the purpose of raising money to construct the plant of the company, as was done in the case of the Broadway railroad.

People v. O'Brien, 111 N. Y., 1, 31.

The fallacy of the argument is in assuming that the value of a special franchise cannot be considered without giving it a value based upon the unregulated rate or the highest possible rate. That is not necessary in the case of franchises any more than in the case of any other property of the corporation. Inasmuch as the legislature has the power to regulate rates, manifestly, the value of the franchises of a public service corporation is governed and limited by the existence of that legislative authority. No public service corporation has an absolute right to any continued fixed rate, in the absence of an express contract to that effect; and the value of its franchises must be estimated in view of the possibility of a regulation of the rate. That the value of these special franchises is not to be determined from the net earnings alone but from all the circumstances and conditions under which they are exercised was expressly declared in the Franchise Tax Cases.

People v. Tax Commissioners, 174 N. Y., 417, 440.

The argument has no greater force as applied to franchises than it has as applied to tangible property. The value of the plant of a going concern, which is in successful and profitable operation, under favorable conditions, is very much greater than the value of the same plant, if the business is conducted at a loss or is discontinued. In the latter case, the plant may cease to have any value, except to the dealer in second-hand materials. If a company is permitted to earn 20% a year on the value of its plant, that value is much greater than if the company should be permitted to earn only 6% upon the same plant. The record shows (pp. 511, 1703) that the Eighteenth Street plant of the Company has recently been taken by the City, in condemnation proceedings, for the North River water front improvement. It was of great value to the Company; but it probably did not add anything to the market value of the land, when it ceased to be used in connection with the gas business. The manufacturing plant of every gas company is more valuable with gas at a high rate than at a low rate; but that fact does not prevent a reduction of the rate. It is not the value of the property at any given rate that the court ascertains in these cases, but the reasonable value of the property under all the existing conditions, including the fact that the legislature has the power to reduce the rate if the price charged is unreasonable. There is no greater difficulty in allowing for this element of reduction in the rate in the case of special franchises than there is in the case of the manufacturing plant. Even if there were, it would not affect the legal principle involved. Where there is a breach of contract, it may be extremely difficult to ascertain the damages sustained by the injured party; but that does not affect his right to recover damages, even though they may be largely conjectural.

Wakeman v. Wheeler & Wilson Co., 101 N. Y., 205.

And this is true in substantially all cases where actions are brought to recover unliquidated damages, whether arising in tort or growing out of contract.

IV. Another fanciful argument was advanced in the Court below, partly as a reason for not including the special franchises among the assets of the Company and partly as an apology for the manifest injustice of imposing a tax of $24,000,000 upon a right which the Legislature defined as "real property" and ignored when it attempted to regulate the rates to be charged by the Company.

This "argument" was, in effect, that if the legislature should ignore the special franchises in fixing a rate, such franchises would cease to have any value and, therefore, would not be subject to taxation, and consequently no injustice would be done. In other words, as one of the counsel for the Attorney General forcibly expressed it, the franchises would be "annihilated". In the Brief filed by him in this Court, the milder term, "destroy", is employed (Brief, p. 58).

The learned counsel failed to point out that this "argument" would be just as effective if applied to the manufacturing plant of the Company. Ignore the plant in fixing your rate, and all will be well, because then you will not have to pay any tax upon it.

But even if that were a sound conclusion as applied to real estate, it would not be so as applied to the special franchises, for the very simple reason that, in spite of the fact that no return was permitted upon them, they would continue to have a substantial value, so long as any return whatever was received from the tangible property; because, it is the exercise of the franchises that gives value to the tangible property, and the franchises would, therefore, have value, so long as it was profitable to operate the plant of the Company.

> People v. Tax Commissioners, 174 N. Y., 417, 440; 199 U. S., 1;
> Gue v. Tidewater Canal Co., 24 How. U. S., 261, 263;
> State Railroad Tax Cases, 92 U. S., 575, 606.

Even if the business of the Company were, for a year or more, conducted at a loss, it is perfectly certain that the special franchises would continue to be assessed under the statute.

The only manner, therefore, of completely "annihilating" the special franchises would be by "annihilating" the value of the tangible property also. In other words, confiscate all the property, and the luckless property owner will have nothing to complain of, because he will no longer have to pay any taxes.

A curious consequence of this "argument", which the counsel did not call attention to, would be that if it were applied to the appellee, so that it would be relieved of paying the taxes upon $24,000,000 worth of property, the citizens of New York would have to tax themselves to make good the difference and would thus be compelled to pay out for the support of the government what they had saved in their gas bills.

FOURTEENTH.

Proposed impairment of contract rights.

The appellants contend that no return should be permitted upon special franchises, because, in granting those franchises, the legislature reserved the right to ignore them in the regulation of the rates to be charged by the Company.

I. The burden rested upon the appellants to show such reservation. No attempt of that kind was made, and no such attempt could possibly have succeeded, because the special franchises of the Company were granted long before the days of universal rate regulation and long before the full possibilities of that potent and at present popular power had dawned upon the legislative mind.

In the Dartmouth College Case (4 Wheat., 518, 712), Mr. Justice Story said:

> "In my judgment, it is perfectly clear that *any* act of a legislature which takes away *any* powers or franchises vested by its charter in a private corporation, *or which restrains or controls the legitimate exercise of them* * * * is a violation of the obligations of that charter. *If the legislature mean to claim such an authority, it must be reserved in the grant.*"

II. An unconditional grant by a State constitutes a contract, which is entitled to protection under the Constitution just as fully as a grant made by an individual.

Fletcher v. Peck, 6 Cranch, 87 ;
Sinking Fund Cases, 99 U. S., 700, 719;
New Orleans Water Works Co. v. Rivers, 115 U. S., 674, 681 ;
People v. O'Brien, 111 N. Y., 1.

Fletcher v. Peck was decided several years before the Dartmouth College case; and the reason for the conclusion reached by the Court was set forth with characteristic lucidity and point by Chief Justice MARSHALL, who, in the course of his opinion, said (pp. 137-8) :

> " The contract between Georgia and the purchasers was executed by the grant. A contract executed, as well as one which is executory, contains obligations binding on the parties. A grant, in its own nature, amounts to an extinguishment of the right of the grantor, and implies a contract not to reassert that right. A party is, therefore, always estopped by his own grant. * * *
>
> " If, under a fair construction of the constitution, grants are comprehended under the term 'contracts', is a grant from the State excluded from the operation of the provision ? Is the clause to be considered as inhibiting the State from impairing the obligation of contracts between two individuals, but as excluding from that inhibition contracts made with itself? * * *
>
> " What motive, then, for implying, in words which import a general prohibition to impair the obligation of contracts, an exception in favor of the right to impair the obligation of those contracts into which the State may enter ? * * *
>
> " The legislature is then prohibited from passing a law by which a man's estate, or any part of it, shall be seized for a crime which was not declared, by some previous law, to render him liable to that punishment. Why, then, should violence be done to the natural meaning of words for the purpose of leaving to the legislature the power of seizing, for public use, the estate of an individual in the form of a law annuling the title by which he holds that estate ?"

III. The grant in the present case was the right to occupy the streets of the city with the mains and pipes of the Company. Suppose these had been laid through private property, under grants or easements obtained from individual owners, could it reasonably be contended that it would be no impairment of the contract rights of the Company, if, in the regulation of rates, the State should ignore these easements in private property? Is it conceivable that, under such circumstances, all that the Company would be entitled to receive would be a return only upon the reproductive value of the mains and pipes and not upon the much greater value of the easement in the streets, by which it acquired the right to lay and use the mains and pipes and the continuous right of access to them for the purpose of keeping them in repair? If not, then, under the decision in Fletcher v. Peck, there is not a particle of difference, in legal effect, between an easement obtained from an individual and one obtained from the State; in the one case, it is carved out of private property belonging to the individual and, in the other, out of public property owned or controlled by the State. In both cases, the very fact that the right is possessed necessarily permits it to be exercised in the same manner as any other property right, that is, for the purpose of obtaining a profit from its use. Such use is an attribute of ownership.

Case of the State Freight Tax, 15 Wall., 232, 277-8.

To deprive the appellee of all return upon its special franchises would, in the language of this Court, in Pearsall v. Great Northern Ry. Co. (161 U. S., 646, 673), be "so far destructive of the original grant as to render it valueless, although there might, in neither case, be an express repeal of any of its provisions."

That the special franchises of the appellee would be rendered valueless if no return were allowed upon them is the insistent contention of the appellants.

IV. The regard which a State should have for its fair name ought to make it even more reluctant to ignore a grant made by it than one made by an individual, to which it was not a party. If an individual had granted the right to the Company through his private lands, the State might contend, without the taint of personal dishonor which attaches to the repudiation of a contract by a party to the contract, that the only property actually employed in the business was the tangible property and that the right to maintain the mains was merely the right to put the tangible property to profitable use and, therefore, had itself no intrinsic value. But for the State to make that contention, when it had not reserved the right in its grant, would be to repudiate its own contract obligations. In the absence of an express reservation, the State has no greater power to deprive its grantee of all return upon the value of an easement, than it would have, in the case of a grant of land for the exclusive use of a gas manufacturing plant, to insist that the land was granted merely to enable the gas to be manufactured and distributed and that, as the land was thus a mere instrument to carry out the main object of the Company's business, no return should be permitted on its value, although the State placed a large valuation upon it for purposes of taxation.

FIFTEENTH.

The Brief of the Attorney General.

I. In the brief filed by the Attorney General in this Court, it is conceded (Brief, p. 68) that, in the Special Franchise Tax Cases, the Court of Appeals held special franchises to be property; and the further concession is made (Brief, p. 20, Sub. 9) that special franchises "*are property which the public cannot condemn and take over without paying a reasonable compensation therefor.*"

No attempt is made to explain why the State must treat these franchises as property for one purpose and why it may ignore them for another purpose. It is true that the suggestion is made, that the franchises were granted subject to the right of the State to regulate the rates to be charged by the Company. But no reservation is referred to; and regulation means reasonable limitation, not confiscation or total disregard of existing property. Special franchises are, of course, granted subject to the legislative power of regulation; but they do not differ in that respect from any other property. The real estate of a public service corporation is also subject to the power of rate regulation, and its value will depend, to some extent, upon the maximum rate allowed; but that does not mean that such real estate may be ignored when the legislature establishes the rate.

II. In discussing the question of franchises in his Brief, the Attorney General repeatedly employs the term in the sense of general franchises, that is, the right to engage in the business of manufacturing and supplying gas to the public, as distinguished from special franchises, or the right to maintain mains in the city streets. This general sense is that in which the term is used in the Fourth, Fifth and Thirteenth Points (pp. 27, 54). It is this confusion which causes him to assert, in his Third Point (p. 27), that the only property which the Company uses in manufacturing and supplying gas is its tangible property. Would he say that, if the Company had acquired a right of way through private property instead of through the city streets?

The East River Gas Company of New York condemned a right of way for a tunnel under the East River, so as to enable it to bring its gas from the Brooklyn side of the River to the Manhattan side (Matter of East River Gas Co., 119 App. Div., 350). Can an expensive conduit of that kind be disregarded in fixing the price of gas for that Company? Or, suppose a gas company had its manufacturing property in the centre of a block and could obtain connection with its mains in the streets only through land owned by private individuals; could its right of way through such lands be disregarded in fixing a rate of return upon its property? The tunnels under the East River and the smaller tunnels under the streets constitute the right of way of the East River Gas Company; and such right can no more be disregarded than the right of way of a railroad corporation. On the contention of the Attorney General, he would be forced to assert that a railroad company should not be permitted to include its right of way among its assets, upon which it is entitled to a return, but only the cost of reproducing the ties and rails. It is no answer to this conclusion to say that the railroad company owns the fee of the land constituting its right of way. That is presumably not the law in New York, where only such interest is taken as is required (Sixth Ave. Ry. Co v. Kerr, 72 N. Y., 330, 332–3); but even if it were, the exact nature of the title or interest owned is of no consequence, in considering whether that which is actually owned is property. In the case of a street railroad in Broadway, for instance, what is the value of the rails as compared with the right to lay and use them?

III. The attempt is made to show that Smyth v. Ames (169 U. S., 466) holds that a return is permitted only on tangible property. What the Court was considering in that case was the return on tangible property; and its remarks were, of course, primarily applicable to that kind of property. That it did have in mind also the value of the property of the company as an organic whole, including the intangible property, is evident from a consideration of the entire opinion and also from the expressions of the Court heretofore quoted (*ante*, p. 23).

IV. In the discussion by the Attorney General of "the method of valuing special franchises", contained in the Eighth, Ninth and Tenth Points of his Brief (pp. 32–37), the same confusion is observable, of treating special franchises as synonymous with general franchises. The assertion that "there is absolutely no measure of the value of a franchise", except the profits derived from its use, is contrary to the conclusion reached by the Court of Appeals in the Special Franchise Tax Cases (174 N. Y., 417, 438-9). As heretofore stated (*ante*, p. 45), a franchise may have great value before the Company has acquired any tangible property. Indeed, no prudent investor would contribute capital for the construction of a costly plant for a gas or street railroad company until it had obtained the right to use the streets.

To assert that if a return should be permitted on the value of the special franchise of a company, an *excessive* rate once established could never be reduced, because the value of the franchise depends on the rate charged, is to ignore the fundamental principle of rate regulation, that all property is held subject to the right to limit a return, upon the basis of a reasonable rate; and there is no difference in this respect between special franchises and any other kind of property (*ante*, p. 50). The suggestion of the Attorney General is effectively answered by himself, when he refers to the method of valuing the special franchises of a corporation in condemnation proceedings (Brief, p. 60):

> "If the franchises of a gas company were appropriated in condemnation proceedings, it would be entitled to compensation thereof at a valuation determined by the capitalization (at a reasonable rate) of the net earnings of the Company (under the prevailing *lawful* rate charged), over and above the sum which would represent a fair return on its tangible property."

On that basis, there would be no difficulty whatever in valuing the special franchises of the appellee; for the maximum rate which it could charge has been fixed by the Legislature ever since 1886.

L. 1886, Ch. 322;
L. 1890, Ch. 566, Sec. 70;
L. 1897, Ch. 385, Sec. 1.

Such maximum rate is a reasonable rate.

Brooklyn Union Gas Co. v. New York, 188 N. Y., 334;
Lake Shore, &c., Ry. Co. v. Smith, 173 U. S., 684, 695.

It was, therefore, scarcely worth while to indulge in such declamation as that which is found in the Attorney General's Brief (p. 72), where the actual facts are ignored and the appellee is charged with an attempt to capitalize "a prescriptive right of extortion."

V. The discussion in the Sixteenth Point of the Attorney General's brief (pp. 61-65), of the effect of the consolidation of 1884, shows a misapprehension both of the position of the appellee and of the nature of the Act under which the consolidation was made.

1. It has never for a moment been conceded nor suggested on the part of the appellee, that its constituent Companies

would not have been entitled to include among their assets, upon which they were entitled to a return, the value of the special franchises respectively owned by them.

2. Whether the Act under which the constituent Companies were consolidated contemplated a technical sale of the property and franchises to the new Company created by the consolidation is of no consequence, because the effect was precisely the same, inasmuch as a value was placed on the property and franchises of each Company, which was to be paid for by stock of the new Company. This transaction, however, did constitute a sale, as distinguished from mere barter, where no value is placed upon the articles exchanged. The consolidation agreement was not a purely formal agreement between these Companies for the operation of the business and the division of earnings. It was an actual sale and transfer of the title of the assets of each Company to the new Company, for a sum to be paid by the latter Company in its capital stock. Not only was each Company vitally interested in the valuation of its own property, but, as the Attorney General concedes (Brief, p. 63), if any stockholder objected to such valuation, he was entitled, under the Act (L. 1884, Ch. 367, Sec. 2), to have the value of his stock determined and paid for *in cash* by the new Company. The Act (Sec. 1) expressly provided that the capital of the new Company should not exceed "the fair aggregate value of the property, franchises and rights of the several companies thus to be consolidated."

The special franchises of the consolidating Companies were thus permitted to be sold to the new Company in precisely the same manner as any of the other property; and it was because of the complaint of the valuation which had been placed upon the property and franchises by the constituent Companies, that the legislative investigation took place, resulting in the report that such valuation could not be disturbed.

SIXTEENTH.

The Brief of the Public Service Commission.

I. The voluminous Brief (317 pages) filed on behalf of the Public Service Commission carries rate regulation into the clouds and leaves us in the region of dreamland and moonshine (166 U. S., 171, 222), where practical business considerations cease to have any influence. Is it possible, for instance, that the Consolidated Gas Company is actually receiving more than 22% upon the full value of all its property which is devoted to the public use (Brief, p. 239), and that the investing public has failed to grasp that fact? Is it a part of the scheme of present day government, that the legislature shall be regarded as a school of education in economics, to be supported by its unfortunate victims (Brief, p. 262)? Can it be that, in these times, a company is not properly managed, unless it borrows its capital instead of obtaining it in the old-fashioned way of issuing stock (Brief, p. 268)? Is it true that earnings devoted to the development and extension of a business belong to the patrons of the business and not to the stockholders, whose dividends were curtailed in order that the business might thus be developed and its facilities increased (Brief, pp. 244-5)?* How would this doctrine impress investors abroad, especially in England, where the application of earnings to betterments is universally capitalized? Is it reasonably conceivable that when individuals invest their money in a new public service business they are calculating for part of their return on the speculative profit to be realized from the real estate acquired for the business (Brief, p. 243)? And does a public service corporation fail to show that a given rate is confiscatory unless it also shows that the rate will be confiscatory upon all other corporations affected by it (Brief, p. 273)? Is it true that all of the gas companies in the city of New York are operating under the same conditions (Brief, p. 279), and that the conditions in the sparsely settled districts of the upper Borough of the Bronx are the same as those in the densely populated business and residential districts in the Borough of Manhattan? Is it possible to say that a board which values some of the property of a public service corporation at zero is fair-minded and does not make a flagrant attack upon the rights of property (Brief, p. 230)?

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* *Contra*, Brymer v. Butler Water Co., 179 Pa. St., 231.

II. That the special franchises of the appellee are property and "*incorporeal real property*" is expressly conceded in this Brief (p. 293).

III. That the appellee possesses special franchises is also expressly conceded (Brief, pp. 79, 150*e*, 236). While it is asserted that these franchises have ceased to exist, that contention is obviously inconsistent with the admission that they do exist. If it is urged that they exist but can be terminated on notice, then it is no longer a question of their existence but of their value; and in another part of their argument (p. 81), counsel assert that a revocable franchise is valued in New York at as great an amount as if it were perpetual.

Attention is called by counsel to their sixth assignment of error (Brief, p. 154), on the ground that the Court failed to make an express finding as to the present existence of the New York, the Manhattan, the Municipal and the Metropolitan franchises. Counsel overlook the fact that the findings of the Special Master, that three of these franchises were perpetual, was confirmed by the Court (*post*, pp. 97, 110, 112).

Counsel seem to think that some ingenuity was shown by the appellee in discussing the validity of the Manhattan franchise before considering that of the New York franchise, which was earlier in point of time (Brief, p. 293). The reason this was done was because the Manhattan franchise contained an express grant of the right to lay mains (*post*, p. ~~99~~ 77); and this provision was absent from the New York grant. It has been our contention that the intention of the legislature was the same in each case and that this could be more clearly shown by taking up first the grant where the intention was actually expressed. In spite of their criticism, the learned counsel reach the same conclusion, as they concede (Brief, p. 300) that "there is much indication that the legislature intended to grant to the Manhattan Company the same nature and extent of power which it had granted to the New York Company."

The provision permitting the city to purchase the property of the Harlem Company at 10% more than the cost, upon which reliance is placed (Brief, p. 303), was, as we shall show later (*post*, pp. 91, 92), a nullity.

IV. It being conceded that the special franchises are real property and that the appellee possesses such franchises, recourse is had to the old argument that these franchises were granted subject to the condition that the grantee should receive a return only upon the actual investment. This suggestion has already been dealt with (*ante*, p. 53). No attempt is made to point out such a condition; but if, in making a grant, it was intended that the grantee should have a return on some of his real property but not on all of it, the exception should be clearly expressed. That no thought of such an exception was in the mind of the legislature when these grants were made is conceded by counsel for the Public Service Commission, when they state that the regulation of rates was "a thing almost unheard of until the public realized that competition was a thing of the past" (Brief, p. 262). Suppose it were shown that, in the case of each one of these grants, a large sum of money had been paid to the State or City for them; would it then be contended that there was an implied condition that no return should be received on the capital actually invested? But if not, where a money payment has been made, no more can it be implied where the grant was a gift or where the consideration was the acceptance of the grant and the investment of capital in the public enterprise.

The contention is again advanced that if the eighty cent rate should permit a return only upon the value of the tangible property, there would be no value left for the special franchises. The fallacy of this has already been exposed (*ante*, p. 52).

It is also contended (Brief, p. 220), that the grant of a special franchise which does not fix the rate to be charged cannot be valued. It might as well be claimed that if land is granted to a railroad company for its right of way, and a schedule of the rates to be charged by the company is not appended, no return can be permitted on the value of the land. If a five cent fare is permitted, as in the Detroit case, or an 8% return, as in the Monongahela case, counsel would concede that the special franchise had a value which could not be ignored. But the mere statement of a specific amount can make no difference, if there is an amount which can be ascertained. In the present case, that amount is one which will permit a reasonable return upon all the property employed (6% or 8%, or 10%, or whatever the special facts may warrant); and while it may be more difficult to estimate the value of the franchise in such case, the difficulty does not affect the principle (*ante*, p. 51); and this is also shown by the fact that these franchises are universally valued for purposes of taxation.

The right to fix a maximum rate does not, as counsel contend (Brief, p. 224), preclude the special franchises from being valued on the basis of a reasonable rate, any more than it does in the case of the real estate or plant of the Company. The franchise is no more held subject to this servitude of regulation than any of the other property. All of the property is so held.

V. *The capitalization of 1884.*

Counsel treat this subject as if the details of the capitalization of 1884 were one of the issues in the case; and extracts from the testimony of the witnesses who appeared before the legislative Investigating Committee are quoted and the testimony is discussed with an amplitude of detail that would scarcely have been permitted even before that Committee. The most refined calculations are entered into to show that the value placed upon the special franchises did not represent the exact difference between the market value of the capital stocks of the Company and the appraised value of their tangible property; and there is a perfect riot of figures on these minute points. But why all this burrowing into the past, when the only point involved is the fact that the franchises were capitalized with the sanction of the legislature? The complaint that they were over-capitalized was the occasion of the legislative investigation; but the Committee reported that the franchises of only four of the six companies were worth *much more* than the amount at which all of them had been capitalized (*ante*, p. 30).

VI. *The special franchise tax.*

Counsel set up a bogey in connection with the State Franchise Tax and proceed to annihilate it. They insist that we contend that the taxation of the special franchises constitutes an actual estoppel against the State, both as to their existence and duration and as to their value (Brief, p. 235). Our contention is that the taxation recognizes the existence of the franchise and that it is a property right (*ante*, p. 27; *post*, p. 85) and that the valuation by the State Tax Board, which is the only expert body capable, in the opinion of the Court of Appeals, of assessing such property (*post*, p. 118), is entitled to great weight in considering the value of these franchises. In New York, the State shares in the local taxation of real estate (Tax Law, Sec. 173).

VII. *Value of the special franchises and good will.*

There are no questions of fact which are more frequently referred for hearing and determination by courts of chancery to masters and referees than those involving the title of property and its value. In foreclosure and partition proceedings, this practice is universal. No court would have the time to consider the details involved in such questions. Much more is that applicable to the case at bar, brought before the highest appellate tribunal in the land, where the conclusions of the Special Master and Court rest upon an examination and consideration of many different instruments and acts and where local conditions and considerations have become a part of the learning and experience of those tribunals.

An elaborate attack is made upon the findings of the Court as to the value of the special franchises. How elaborate that attack is may be inferred from the contention (Brief, p. 230), that the State may "at any time authorize or direct the city to build its own lighting plant" and that consequently the value of the special franchises are only nominal, because the Company could not compete with the City. In other words, because something may possibly happen in the indefinite future, which has never yet happened, to reduce the value of the franchises, one must act as if it had already happened, with the resultant loss. It is apparent that the State Tax Board does not take that contingency into consideration in assessing the franchises. Counsel do not stop to consider that the argument, if it is valid at all, inevitably leads to the conclusion that the value to be placed upon the real estate and plant must also be nominal; because, it is elsewhere urged that the plant can have no value except for the scrap heap (Brief, p. 219), if the special franchises cease to have value. On this basis of valuation, the Company is undoubtedly receiving a return of several thousand per cent on the actual value of its investment.

The main attack made upon the findings of value by the Court below is because the Court assumed an increase in value since 1884. Inasmuch as the population of the City and the consumption of gas have increased enormously since 1884, it is very obvious that the special franchises of the appellee, which the Court below found to be perpetual, have also greatly increased in value; and this is conceded in the Brief, where it is admitted (p. 221) that "the franchise has indeed an enormous value, so long as it is not terminable or terminated by expiration or revocation."

Even if, for the sake of the argument, the contention of counsel should be conceded, that the special franchises of the appellee are revocable, yet if, notwithstanding that fact, the State values them at $24,000,000 (and the method of valuation is not claimed by counsel to be erroneous), the finding by the Court that they are worth $12,000,000 cannot be regarded as excessive.

This question of value is treated more fully in a subsequent point (*post*, p. 116).

SEVENTEENTH.

The Brief of the City of New York

No proposition has been advanced in the Brief filed on behalf of the City of New York, which has not already been considered. So far as the question of good will is concerned, the Brief is silent. On the question of special franchises, it furnishes numerous examples of the common fallacies pointed out in elementary treatises on logic. Thus, on p. 18, there is an example of *petitio principii* :

> "The very claim of a return upon franchise value involves an admission that the appellee has been receiving more than a fair return upon its investment for the public."

Here is another example of the same fallacy, in which the italics are those of the authors (p. 21) :

> "*Nothing* is taken away *to which the Company had a right.* It never had a *right* to earn any more than a reasonable return on its investment."

An illustration of the *ad hominem* argument is found on p. 19 where it is surmised that the "cleverness of officials in concealing the truth" may have had something to do with the fact that the rates of the appellee were not sooner regulated ; and this conjecture is re-enforced by allusions to the "excessive" charges heretofore made ; thus entirely ignoring the fact that a maximum, and hence reasonable, rate fixed by the legislature of New York, has prevailed since 1886 (*ante*, p. 59).

The definition of "regulation" affords an interesting example of the luminous manner in which the subject is treated in this Brief (p. 21) :

> "It (regulation) is only, simply, and cannot otherwise be described than *regulation* of rates for services rendered."

In other words, regulation is regulation.

The statement is several times repeated, that if a rate should be fixed which would permit only a reasonable return upon the capital actually invested, the special franchises would have no value (pp. 18, 28, 32) ; and this statement is forthwith demolished by a quotation from Messrs. Beale and Wyman, which is made "because of the conciseness and intrinsic force of the statement" (p. 28).

"The vice" of the decision of the lower Court is attributed to the fact that a franchise was held to be synonymous with property (p. 21). "We are so accustomed to the collocation of property and franchise, in speaking of corporations, that we unconsciously come to treat the words as synonymous." In the very next sentence, the learned counsel give a striking illustration of this "collocation", by including in the phrase, "all property", the term, "franchise"; and, later (p. 31), it is asserted that "a franchise, whether general or special, is taxable *the same as other property*."

Having stated that a special franchise is no part of the investment of a gas company, counsel chance to remember that such a franchise must be paid for in condemnation proceedings; and they dispose of this awkward fact, by concluding that that does not add anything to the investment (p. 32). The Court of Appeals, however, differed from that conclusion, when it reversed the report of the Commissioners in the White Plains Water case (176 N. Y., 239). If the amount subsequently allowed for the special franchise and good will in that case was not part of the capital investment, to which the stockholders were entitled, to whom did it belong?

Many of the other erroneous contentions advanced in the lower Court, which have heretofore been commented upon, are brought forward in the present Brief; such as the confusion of terms in failing to distinguish between special and general franchises (p. 20), the gratuitous assumption that no consideration was given for the special franchises of the appellee (pp. 19, 24), the alleged insuperable difficulty in valuing special franchises (p. 22) etc.; and the counsel "take occasion to observe", impressively (p. 24), that "there are no rights of stockholders, as such, involved in this litigation or any aspect of it". The corporate entity is the real and only culprit and victim. The thousands of stockholders and bondholders, who are anxiously waiting to see whether their incomes from investments in public service corporations are to be cut down to a bare return upon the reproductive value of the tangible property alone, may possibly demur to this solemn observation of counsel.

PART II.

GOOD WILL, OR THE VALUATION OF THE PROPERTY AS AN ORGANIC WHOLE.

The Special Master included good will among the assets upon the value of which the Company was entitled to a return (Record, p. 205). The Court rejected this item; and its primary reason for so doing was because the ordinary legal definition of good will was not applicable to the Company's business (Record, p. 410). It is a case where a general principle has been summarily disposed of by a narrow and precise definition. But, as Mr. Chief Justice Fuller observed, in Metropolitan Bank v. St. Louis Dispatch Co. (149 U. S., 436, 446):

> "Undoubtedly good will is in many cases a valuable thing, although there is difficulty in deciding accurately what is included under the term."
>
> See, San Francisco Nat. Bank v. Dodge, 197 U. S., 93, 95.

I. It may be true that good will, in the strict mercantile sense, is somewhat of a misnomer as applied to public service corporations. But, in a broader sense, good will is a valuable property right, growing out of the successful establishment of a business, over and above the actual capital invested and employed in the business. In this sense, good will may be regarded as the momentum of a well established business in successful operation; and the value, in the case of a public service corporation, is more substantial and more permanent than that of the good will of a mercantile business. The good will of a manufacturing or mercantile establishment may be of great present value, but with no certainty of its continuance for any extended period. The article manufactured may cease to have any commercial value, through a caprice of fashion or because it has been superseded by another article more novel or serviceable, while the continuing prosperity of a mercantile establishment or business of any kind depends so largely upon the personal element that, in estimating such good will, the courts have refused to consider that it has a value greater than the net profits of the business for two or three years.

> 1 Lindley on Partnership (5th Eng. Ed.), 447;
> Mellersh v. Keen, 28 Beav., 453.

But, in the case of a gas business, the conditions inevitably make for greater permanence. Nothing is more certain than that large quantities of illuminating gas will continue to be used for many years to come; and this was expressly found by the trial Court, in limiting so strictly the allowance to be made for depreciation (Record, p. 407); and the merely *personal* element in the management of the business has very little to do with the use of gas.

Thus, the successful continuance of the appellee's business does not depend upon influences which are subject to sudden change. It depends primarily upon the existence of a long established business in a public necessity, and upon existing connections made with its vast army of consumers; and the longer this connection has existed and the greater the number of consumers, the greater will be their reluctance to have new connections made with an untried company, and the more substantial will be the value of the good will of the old company.

II. Judge Hough was of the opinion that "tangible property has a certain value entirely apart from franchise or right to continue business, or method of transacting business; but good will, in the sense of organization for the business of furnishing gas, can have no existence whatever apart or detached from the franchise conferring the necessary privilege" (Record, p. 111).

That view, so far as the tangible property is concerned, is at variance with the one expressed by the Court of Appeals in the Franchise Tax Cases (174 N. Y., 417, 424), as well as with those of this Court.

> Gue v. Tidewater Canal Co., 24 How., U. S., 261.
> State Railroad Tax Cases, 92 U. S., 575, 606.

That good will may not have any value apart from the franchises does not detract from its substantial character as property any more than it detracts from the substantial character of the manufacturing plant to say that its value is dependent upon the franchises.

Neither can it make any difference that the business may be a monopoly, though the record in this case shows the contrary. That is true, to some extent, of all public service corporations, and is the fundamental reason why they are subject to regulation by the legislature.

III. Judge Hough also expressed the opinion that the "most ingenious financier" would not think of capitalizing the good will of the gas business. But even if it were absolutely certain that the appellee had no franchises whatever or that all of its franchises would shortly expire, there is no doubt that the mere fact of having an established business, in active operation, would be of very great value. The municipal authorities would be extremely reluctant to compel the Company to remove its hundreds of miles of mains from the streets; and, by the very fact of the existence of those mains in the streets and their connection with the buildings along their line, the Company could afford to pay more for an additional franchise than any new company, which would require several years to construct its works and make its connections; and it cannot reasonably be doubted that if the Company were forced to retire from business and dispose of its manufacturing plants and mains, it could obtain for its property much more than the actual estimated profit of the business during the period required for the construction of new mains and connections. A new company, which purchased the business of the appellee with all its existing connections and the improvements and special facilities resulting from long experience, would have to pay for them and would, therefore, be forced to capitalize them.

There is no greater difficulty in capitalizing this value than there is in capitalizing the good will of an ordinary mercantile business. That is done every day; and it is an entirely proper thing to do. The only objection to it is that it is frequently abused by excessive capitalization. But that objection applies to patents and mining properties and indeed to property of every kind, in varying degrees.

IV. In New York (the law of which is controlling in this case), good will, or the added value derived from an established business, is property, which, in the case of a partnership, constitutes a partnership asset and does not pass to the surviving partner.

Slater v. Slater, 175 N. Y., 143.

But the New York courts have gone further and held, even in the case of a water works company (a public service corporation) that its good will must be paid for in condemnation proceedings.

Matter of White Plains Commissioners, 176 N. Y., 239.

V. In New York, under the system of taxation which exists, corporations are required to pay a state franchise tax, under which good will is taxable.

Tax Law, Sec. 182;
People v. Roberts, 154 N. Y., 101;

and, in the case of gas companies, they are required to pay one-half of one per cent. of their gross earnings, in addition to a sum dependent upon the rate of the dividend (Tax Law, Sec. 186); and, as the earning power is necessarily dependent upon the good will of the company and the extent to which its business has been established, this tax necessarily includes a tax upon the good will and other intangible property of the Company.

If good will is property for the purposes of taxation, it is necessarily property for every other purpose.

VI. In the opinion of the Court below, a conclusive reason for not allowing anything for the so-called good will of the Company was that the price of gas has for many years been regulated by law (Record, p. 411). For many years, the maximum rates charged by railroad companies in New York has been regulated by law (L. 1848, Ch. 140, Sec. 30). Is there any doubt that the property of the New York Central and Hudson River Railroad Company has a value far beyond anything which could reasonably be attributed to its tangible property and special franchises? The same is true of all public service corporations and of all business affected with a public interest. It is just as applicable, for instance, to warehouses or grain elevators owned by *individuals* (Munn v. Illinois, 94 U. S., 113, Brass v. Stoeser, 153 U. S., 391, People v. Budd, 117 N. Y., 1), where there is no special franchise, as it is to the business of a public service *corporation*. But it would scarcely be claimed that an individual who had built up a valuable elevator business, as in the Budd case, could have his charges limited, without taking into consideration the value of the business as a whole, that is, the value of the good will, which, in such a case, where there was no special franchise derived from the state, would be the main element of value in the business.

A suggestion of that kind was thus answered by Mr. Justice BREWER, in Cotting v. Kansas City Stock Yards Co. (183 U. S., 79, 104):

> " Is it true, in this country, that one who by his attention to business, by his efforts to satisfy customers, by his sagacity in discerning the probable courses of trade, and by contributing of his means to bring trade into those lines, succeeds in building up a large and profitable business, becomes thereby a legitimate object of the *legislative scalping knife ?*"

VII. It would be the application of the legislative knife to a more vital part than the scalp, if the legislature were permitted to regulate a business, either as it should be under ideal conditions, or as it would be if it were a mere lifeless aggregation of different pieces of property. What the legislature regulates, and all that it has the power to regulate, is a going business, one actually devoted to the public use, *an organic whole*; and it is the value of that whole, in active operation, which must be taken into account. This vital principle has been repeatedly recognized by this Court, in its reference to " present " value, that is, value under the conditions which actually exist when the regulation is attempted and not under conditions which might possibly exist in Utopia. The regulation of rates in New York City must depend upon values as they exist at that place, not as they exist in some other part of the country. The value of any manufacturing plant depends largely upon whether it is in successful operation. An artificial gas plant might be rendered worthless, if natural gas were found in the vicinity in sufficient quantity to make it impossible to supply artificial gas in competition.

The present record shows that the valuation placed upon the real estate and plant of the Company was merely the market or reproductive value. Nothing was allowed for the fact that all of this property has a largely enhanced value by reason of the fact that it is operated as a single entity, although the parts are physically separated. It is the great value of this business as an organic whole, and not the nominal value of its dismembered and lifeless parts, upon which its owners are entitled to a return; and that principle is universally recognized in assessing property for taxation.

Cleveland, &c., Ry. Co. v. Backus, 154 U. S., 439;
Express Company Cases, 166 U. S., 171, 185;
Western Union Tel. Co. v. Gottlieb, 190 U. S., 412;
Fargo v. Hart, 193 U. S., 490;
San Francisco Bank v. Dodge, 197 U. S., 70.

1. In Cleveland etc. Ry. Co. v. Backus, the Court said (p. 444):

> "The true value of a line of railroad is something more than an aggregation of the values of separate parts of it operated separately."

2. In the Express Company cases, Mr. Justice Brewer said (p. 219):

> "Now whenever separate articles of tangible property are joined together, not simply by a unity of ownership, but in a unity of use, there is not infrequently developed a property, intangible though it may be, which in value

exceeds the aggregate of the value of the separate pieces of tangible property."

And he further said (p. 221):

> "But if the State comprehends all property in its scheme of taxation, then *the good-will* of an organized and established industry must be recognized as a thing of value. The capital stock of a corporation and the shares in a joint stock company represent not only the tangible property but also the intangible, including therein all corporate franchises and all contracts, privileges *and good-will* of the concern."

And he further said (p. 222):

> "The value which property bears in the market, the amount for which its stock can be bought and sold is the real value. Business men do not pay cash for property in moonshine or dreamland."

3. In Fargo v. Hart, the Court, in an opinion written by Mr. Justice HOLMES, said (p. 499):

> "The sleepers and rails of a railroad, or the posts and wires of a telegraph company are worth more than the prepared wood and the bars of steel or coils of wire, from their organic connection with other rails or wires and the rest of the apparatus of a working whole. This being clear, it is held reasonable and constitutional to get at the worth of such a line, in the absence of anything more special, by a mileage proportion. The tax is a tax on property, not on the privilege of doing the business; but it is intended to reach the intangible value due to what we called the organic relation of the property in the State to the whole system."

4. In San Francisco National Bank v. Dodge, in the dissenting opinion in which four of the Justices participated, it was expressly recognized (pp. 93, 95) that good will is a property right, protected by the Constitution; and there was apparently no difference of opinion on this point in the case of the other Justices.

VIII. A similar conclusion has been reached by the Federal Courts in rate regulation and other cases.

National Water Works Co. v. Kansas City, 62 Fed. Rep., 853, 865;

Metropolitan Trust Co. v. Houston etc. R. Co., 90 Fed. Rep., 683, 687;

Spring Valley Water Works v. San Francisco, 124 Fed. Rep., 574, 595.

1. In National Water Works Co. v. Kansas City (62 Fed. Rep., 853, 864), Mr. Justice **Brewer** said:

> "On the other hand, the city insists that the franchise has ceased and that basing the value upon earnings is in effect valuing a franchise which no longer exists, and which the city is not to pay for; that the true way is to take the value of the pipe, the machinery, and real estate, put together into a water works system, as a complete structure, *irrespective of any franchise*—irrespective of anything which the property earns or may earn in the future. * * * The original cost of the construction cannot control, for 'original cost' and 'present value' are not equivalent terms. *Nor would the mere cost of reproducing the water works plant be a fair test, because that does not take into account the value which flows from the established connections between the pipes and the buildings of the city.* It is obvious that the mere cost of purchasing the land, constructing the buildings, putting in the machinery, and laying the pipes in the streets—in other words, the cost of reproduction—does not give the value of the property as it is to-day. A completed system of waterworks, such as the Company has, without a single connection between the pipes in the streets and the buildings of the city, would be a property of much less value than that system connected, as it is, with so many buildings and earning, in consequence thereof, the money which it does earn. The fact that it is a system in operation, not only with a capacity to supply the city, but actually supplying many buildings in the city,—not only with a capacity to earn, but actually earning,—makes it true that 'the fair and equitable value, is something in excess of the cost of reproduction.' The fact that the company does not own the connection between the pipes in the streets and the buildings—such connections being the property of the individual property owners—does not militate against the proposition last stated; for who would care to buy, or at least give a large

price for, a waterworks system, without a single connection between the pipes in the streets and the buildings adjacent. Such a system would be a dead structure, rather than a living and going business. The additional value created by the fact of many connections with buildings, with actual supply and actual earnings, is not represented by the mere cost of making such connections. Such connections are not compulsory, but depend upon the will of the property owners and are secured only by efforts on the part of the owners of the waterworks, and inducements held out therefor. The city, by this purchase, steps into possession of a waterworks plant—not merely a completed system for bringing water to the city and distributing it to pipes placed in the street, but a system already earning a large income, by virtue of having secured connections between the pipes in the streets and a multitude of private buildings. It steps into possession of a property which not only has the ability to earn but is in fact earning. It should pay, therefore, not merely the value of a system which might be made to earn, but that of a system which does earn."

2. In Metropolitan Trust Co. v. Houston etc. R. Co. (90 Fed. Rep., 683), Judge McCormick gave expression to the same idea, in holding that, in estimating the value of a railroad, its favorable location should have been considered, in view of the advance in prosperity of the country through which it ran, as well as " the increment of its value due to the settling, seasoning and permanent establishment of the railways and to the established business and the good will connected with its business, which has been established through a long series of years and all of which should reasonably be considered in fixing the value of the property and the capitalization upon which at least it is entitled to earn and to pay some return."

It is an elementary economic truth, which has been recognized by this Court (San Diego Land Co. v. National City, 174 U. S., 739, 757) that, in any form of business enterprise, a return must be allowed for the services of those who engage in it, as well as upon the capital actually employed. What return shall be permitted for such services is dependent upon their value, and a test of the value is the result accomplished. If the value of the services is great, the capital employed and the property used has an added value, which, for lack of a better term, may be called good will, and which is universally recognized as one of the most valuable assets of a successful business. An enterprising man may build up an elevator business so successfully, that, in course of time, it is patronized to such an extent by the public as to become " affected with a public interest." To " regulate " his business, by allowing him a return only upon the actual value of his land and plant, without considering its value as an organic whole, would be to rob him possibly of the rewards of a lifetime of intelligent effort and successful achievement.

What is the value of the tangible property of an express company, compared with the value of its business as a going concern? Would anyone seriously contend that an express company would receive a reasonable return from its business, if the legislature merely permitted a return upon the value of its horses, wagons and office furniture?

Upon the theory which the appellants seek to establish in this case, all business must first be brought to a standstill, in estimating the value of the investment. If that theory should be accepted, it would require no prophetic vision to foresee the time when legislative zeal would cause the abandonment by individuals of all forms of enterprise affected with a public interest, leading inevitably to the assumption of such business by the state.

PART III.

THE APPELLEE POSSESSES SPECIAL FRANCHISES.

FIRST.

Every presumption in favor of the appellee's rights.

I. The Appellee owns 822 miles of mains in the streets of New York, through which it supplies about 13,000,000,000 cubic feet of gas every year to nearly 400,000 consumers; and it has been engaged in this business continuously since 1884. Prior to that date, its constituent companies, the earliest of which reached back to 1823, had been engaged in the same business. To carry on this business properly and to maintain its mains in good condition, make needed repairs, supply new connections and provide further extensions as the service was extended into a wider territory, required the continual opening of the streets. But before any opening can be made in a street, special permission to make it must first be obtained, as required by the City Charter (Sec. 528):

> "It shall be unlawful, after the passage of this Act, for any person or corporation to take up the pavement of any of the streets, avenues, highways or other public places of said city * * * unless permission in writing therefor shall have been first obtained from the said Commissioner of Water Supply, Gas and Electricity, with the written approval of the President of the Borough within which it is desired to lay such conduits."

The City is thus continually giving to the Company its consent to open the streets in connection with its business; and this course of dealing has been going on from time immemorial. The Court will certainly not assume that all of those who now represent and for so long a period have represented the City in these matters, have been derelict in the performance of their duty, especially since the new Charter took effect in 1898, establishing the definite policy that no new franchise shall be consented to without some consideration, and then only for a limited period.

City Charter, Secs. 73, 74.

II. Moreover, if, as the appellants contend, the appellee has a monopoly in the City of New York, the Legislature has, in the Acts complained of, regulated the business of the appellee and thus recognized the existence of its right to occupy the streets.

Owensboro v. Owensboro Waterworks Co., 191 U. S., 358; Southern Pacific Co. v. Board of Railroad Commissioners, 78 Fed. Rep., 236, 251 (McKenna, J.).

In Owensboro v. Owensboro Waterworks Co., Mr. Justice McKenna, in delivering the opinion of the Court, said (p. 372):

> "*The appellee is in possession of the waterworks, and is supplying the inhabitants of the city with water.* It is that service which the city desires to regulate, and it is to "every person, firm, company and corporation" engaged in that service the ordinance of March 21, 1900, is addressed. No other person, firm or corporation than the appellee is so engaged in Owensboro, or has been so engaged for some years. *We do not think the legality of the ordinance can be questioned or measured by either the company or the city by the defects or perfections of the title of the company to its franchises or property.*"

In their Brief filed in this Court, counsel for the Public Service Commission, which has special jurisdiction in those matters, concede that the appellee possesses special franchises (*ante*, p. 62).

SECOND.

Question of actual existence and duration of special franchises unimportant.

The New York City Charter (Secs. 73, 74), providing for the purchase of special franchises, gives every public service corporation the right to acquire such franchises upon the payment of a sum to be fixed by the proper authorities. If, therefore, the Consolidated Gas Company does not now possess any franchises, as is contended by the appellants, it can readily acquire them by paying for them. Section 69 of the Public Service Commissions Law (L. 1907, Ch. 429) permits the capitalization of the amount thus paid:

> "The Commission shall have no power to authorize the capitalization of any franchise to be a corporation or to authorize the capitalization of any franchise or the right to own, operate or enjoy any franchise whatsoever in excess of the amount (exclusive of any tax or annual charge) actually paid to the state or to any political subdivision thereof as the consideration for the grant of such franchise or right."

If the Company should now acquire special franchises by paying for them, the sum fixed by the municipal authorities would probably not be less than the valuation which has been placed upon the franchises by the State Board for the purposes of taxation. The consumers would thus be obliged to pay a price for the gas supplied by the Company which would permit a return upon this capitalization. The insistence of counsel for the appellants, that the Company does not possess any special franchises is, therefore, difficult to understand; because, if such were the case, the consumers would be no better off and possibly not so well off; for if the Company were now required to purchase its special franchises from the City, the amount paid might be larger than the valuation which has been placed upon them in this case, inasmuch as the assessed valuation by the State Board is greater than that found by the Court.

THIRD.

Special franchises from acquiescence.

I. The franchise to lay mains is derived from the state and not from the municipality, though its exercise is, of course, subject to reasonable control, supervision and regulation by the local authorities, as part of their general police power.

Barhite v. Home Telephone Co., 50 App. Div., 25, 32;
Rochester v. Bell Telephone Co., 52 App. Div., 6, 9;
People *ex rel.* Nassau Electric Lines v. Squire, 107 N. Y., 593.

II. The legislature has absolute and exclusive control of the streets of the cities and villages of the state. All franchises or rights in the streets have their source in the sovereign power. The municipalities have only such control (aside from the ordinary police regulations for the use of the streets) as is *expressly* conferred upon them by the legislature.

Dillon on Municipal Corporations (4th Ed.), Sec. 89, 680;
Milhau v. Sharp, 27 N. Y., 611;
Rhinehart v. Redfield, 93 App. Div., 410, 413; affd. 179 N. Y., 569;
Potter v. Collis, 156 N. Y., 16, 30;
Matter of White Plains Commissioners, 176 N. Y., 239;
Carthage v. Central N. Y. Tel. Co., 185 N. Y., 448;
Paige v. Schenectady Ry. Co., 178 N. Y., 102, 115;
Detroit v. Detroit Citizens Street Ry. Co., 184 U. S., 368, 382;
Blair v. Chicago, 201 U. S., 400, 457, 492.

III. In New York, the only statutory power conferred upon municipalities, in the case of gas companies, is to give their consent to the exercise of the legislative authority to lay mains for the purpose of carrying on the business of manufacturing and supplying gas. That is, of course, a very important power, the exercise of which is essential before the legislative authority can take effect.

Ghee v. Northern Union Gas Co., 158 N. Y., 510, 512.

But no particular method of giving the consent is prescribed by the legislature. It need not even be in writing. Any such conduct on the part of the municipality as is equivalent to acquiescence in the use of the streets by a corporation having the legislative authority will be held to constitute the statutory consent.

People *ex rel.* N. Y. & Richmond Gas Co. v. Cromwell, 89 App. Div., 291;
People *ex rel.* Brooklyn Union Gas Co. v. Littleton, 110 App. Div., 728, 729;
Wakefield v. Village of Theresa, 125 App. Div., 38 (1908).

1. In the case of the New York and Richmond Gas Company, a gas company had been organized under the general Act of 1848, which conferred full power upon such corporations to manufacture and sell gas and "to lay conductors for conducting gas through the streets, lanes, alleys and squares in such city, village or town, *with the consent of the municipal authorities of said city, village or town* and under such reasonable regulations as they may prescribe." A corporation had been organized, in 1856, under that Act, and the Company had been engaged for nearly half a century in supplying gas to the inhabitants of the town specified in the certificate of incorporation. In 1903, the municipal authorities refused to grant permission to the successor of this company to lay mains in certain streets not previously occupied. Upon application to the court, a peremptory writ of mandamus was issued, requiring such permission to be given, although it was not shown that there had ever been any formal consent on the part of the municipal authorities to lay the mains. The court held that such authority would be implied from the acquiescence of the local authorities in the conduct of the business of the company; and it reached this conclusion, on the ground that authority to lay conductors was conferred by the general gas Act, above quoted, which did not prescribe the form of the local consent or even require it to be in writing, and that the consent could, therefore, properly be inferred

from the failure to object. In reaching this conclusion, the court followed the principle recognized by the Court of Appeals, in Jennings v. Van Schaick (108 N. Y., 530, 532), where it was held proper to infer municipal permission to construct an opening in the sidewalk from an acquiescence of eighteen years, without objection.

2. The principle recognized in the New York and Richmond Gas Company was followed in the case of the Brooklyn Union Gas Company, *supra.*

3. In Wakefield v. Village of Theresa, a contract had been entered into between the Village and certain individuals, whereby the privilege of occupying the streets with wires and poles for electrical lighting was granted, for a period of five years, with privilege of renewal. After the expiration, in 1900, of the five years, there was no formal renewal but the business was continued and extended. Subsequently, in 1906, the Village determined to construct a lighting plant of its own, and notified the owners of the private lighting plant to remove their poles and wires from the streets. Held, that this could not be done, owing to the acquiescence on the part of the Village. In regard to this, the Court said (p. 42):

> " It is claimed that the privilege expired in 1900 by the terms of the contract. The plaintiffs did not become vested with the title to the plant until 1903, and it was then in operation with the acquiescence of the defendant. They equipped the plant, adding to it materially, and the claim was not then made that a renewal of the contract was essential to give validity to the privilege of keeping the poles and wires in the streets. The contract contemplated the extension of the franchise beyond the five year period, unless the municipality elected to purchase the appliances. In a rather loose way, and yet with the approval of all parties, the plaintiffs have continued to avail themselves of their franchise, from year to year, without any formal renewal. Consequently, it is too late now for the defendant to make the omission to renew the agreement a ground for impeaching its validity, or to claim that the plaintiffs are in the streets unlawfully."

The same principle is recognized in other States.

Altanta v. Gate City Gas Light Co., 71 Ga., 106;
Spokane City R. Co. v. Spokane Falls, 6 Wash., 521, 33 Pac., 1071;
Commercial Elec. L. & P. Co. v. Tacoma, 17 Wash., 661, 50 Pac., 592;
Chicago v. Union Stockyards Co., 164 Ill., 224.

FOURTH.

The possession of the special franchises will be inferred from their assessment for taxation.

The mere fact that the special franchises of the appellee have been assessed by the State Board necessitates the conclusion that it possesses such franchises; because, if it were occupying the streets without due authority, it would have no franchise which could be made the subject of assessment.

People *ex rel.* Retsof Mining Co. v. Priest, 75 App. Div., 131; affd. 175 N. Y., 511.

FIFTH.

Special franchises perpetual.

In New York, a special franchise is perpetual, unless its duration is expressly limited by the consent or grant conferring it.

Davis v. Mayor, 14 N. Y., 506, 532;
Milhau v. Sharp, 27 N. Y., 611, 620;
People v. O'Brien, 111 N. Y., 1, 38, 40;
Miner v. N. Y. Centl. etc. R. Co., 123 N. Y., 242, 249;
Roby v. N. Y. C. H. R. R. R. C., 142 N. Y., 176, 180;
Trustee of Southampton v. Jessup, 162 N. Y., 122, 127;
Rhinehart v. Redfield, 93 App. Div., 410, 414; affd. on opinion below, 179 N. Y., 569.

I. In Davis v. Mayor, where there was no limitation upon the duration of the special franchise granted by the municipality, which had no power to grant a franchise in perpetuity, the Court said, per COMSTOCK, J. (p. 532) :

> "These rights are in effect granted in perpetuity, because the only provision for their termination is in case the associates, after ten years, shall decline to pay such license fees 'as the corporation, with the permission of the legislature, shall prescribe.'"

II. In Milhau v. Sharp, the Court, per SELDEN, J., said, with reference to a similar franchise, in holding that it was perpetual (p. 620) :

> "I say *perpetually*, because there is no limitation in point of time to the continuance of the franchise, and no direct power is reserved to the corporation to terminate it. * * * The title to the rails, when permanently attached to the land, and such right in the land as may be requisite for their *perpetual* maintenance, are, therefore, granted to the defendants by the resolution."

III. In People v. O'Brien, the Court said (RUGER, Ch. J.), with respect to a similar franchise (p. 38) :

> "Grants similar in all material respects to the one in question have heretofore been before the courts of this state for construction, and it has been quite uniformly held that they vest the grantee with an interest in the street, *in perpetuity*, for the purposes of a street railroad."

And again (p. 40) :

> "We are, therefore, of the opinion that the Broadway Surface Railroad Company took an estate *in perpetuity* in Broadway, through its grant from the city under the authority of the constitution and the act of the legislature."

Counsel for the Public Service Commission attempt to break the force of the decision in People v. O'Brien, by asserting that the remarks of Chief Judge RUGER in that case were purely *obiter*, because it was not necessary for the court to hold that the franchise granted was perpetual. The statement quoted, however, expresses the view of the law on the subject which had been entertained by the most eminent jurists of the State. But the point was directly involved in the Broadway case. The whole question at issue was whether the special franchise of the Company, the duration of which was not specified in the grant (p. 39), expired with the life of the corporation. If it was the legislative intention, in granting the franchise without any limitation as to the time, to confine it to the life of the corporation, manifestly, with the cessation of that life, the special franchise would also cease to exist. But the Court unanimously concluded that the special franchise was not limited by the life of the corporation. There was no possible ground for contending that it was limited for a definite term of years, and the Court (p. 41) scouted the idea that it was a mere license or tenancy at will, terminable on notice. Therefore, in asserting that the special franchise was perpetual, the Court directly passed upon the vital point in the case.

Counsel for the Public Service Commission assert that the conclusion of the Court on the question of the perpetual character of the franchise was not concurred in by the majority of the Court, because two Judges (ANDREWS and EARL, JJ.) "concurred upon grounds separately stated." All of the Judges who took part in the case (including DANFORTH and FINCH, JJ.) did concur with the Chief Judge; and the grounds "separately stated" by ANDREWS and EARL, JJ., assume (p. 65), as their fundamental premise, the correctness of the statement of the Court (p. 40), that the Railroad Company "took an estate in perpetuity in Broadway."

SIXTH.

Duration of special franchises not affected by life of the corporation.

The mere fact that the life of a corporation to which a special franchise is granted is limited, does not limit the franchise itself.

People v. O'Brien, 111 N. Y., 1, 41;
Miner v. N. Y Cent. etc. R. Co., 123 N. Y., 242, 249;
Detroit Citizens Street Ry. Co. v. Detroit, 64 Fed. Rep., 628, 635 (C. C. A.);
Detroit v. Detroit Citizens Street R. Co., 184 U. S., 368, 394.

Blair v. Chicago (201 U. S., 400) is relied upon as an authority holding that where the duration of a corporate franchise is not specified, it is presumed to be limited to the life of the corporation. But this Court distinctly held in that case (p. 481), in referring to a number of similar ordinances, all of which were expressly limited to twenty-five years, with a single exception, that it would presume that the intention had been to limit all in the same manner. It was the case of the recognition of the principle, *noscitur a sociis.* And as to the ordinances of another municipality, the Court (p. 488) merely followed the law of Illinois on the subject. In New York, a different view is entertained.

Even though the life of a corporation may be limited by the original charter or certificate of incorporation, the term of the corporate existence may be extended.

Gen. Corp. Law, Sec. 32;
L. 1867, Ch. 937;

and in the case of a public service corporation, whose business grows more valuable with the passage of time, it will be presumed that such extension will be made.

Miner v. N. Y. C. etc. R. Co., 123 N. Y., 242.

In that case, the Court said (p. 249):

> "While the life of the corporation was limited to fifty years, it could not have been expected that it should really cease to exist at the end of that period. While the legislature reserved the right to cut its life short, it also had the power to extend it. It is the experience of mankind that such quasi public corporations never come to an end by mere effluxion of time. A railroad corporation which had, during fifty years, rendered public service and properly discharged its corporate functions, would, with the passage of years, become more and more useful and more and more a necessity."

A similar view was taken by this Court, in

Union Pacific R. Co. v. Chicago etc. Ry. Co., 163 U. S., 564, 592.

Counsel for the appellants attempt to distinguish the Miner case, on the ground that railroad companies must acquire the fee to their right of way, and their tracks are more securely attached to the land than gas mains. But it is not true that railroad companies must acquire the fee, in condemnation proceedings. They should properly take only such interest as is necessary for their purposes.

Sixth Ave. R. Co. v. Kerr, 72 N. Y., 330, 332-3.

And to assert that the tracks of a railroad company are of a more permanent character, because more securely attached to the realty, than the mains of a gas company, which are buried under paved streets, is to make light of the facts.

SEVENTH.

Special franchises assignable.

It is the settled law of New York that franchises are assignable.

People v. O'Brien, 111 N. Y., 1, 40;
Parker v. Elmira, C. & N. R. Co., 165 N. Y., 274;

and the title may be transferred, even by a voluntary assignment, to an individual, and by him to a corporation.

Matter of Long Acre El. L. & P. Co., 188 N. Y., 361.

This Court has held that, in the absence of a statutory prohibition, such franchises are assignable.

New Orleans etc. R. Co. v. Delamore, 114 U. S., 501.
See also, Gue v. Tidewater Canal Co., 24 How., 257.

EIGHTH.

The special franchises of the Company.

Under the Act of 1884, all the franchises of the six constituent Companies passed to the appellee (L. 1884, Ch. 378, Sec. 5), whose corporate existence will not expire until 1934 (Record, p. 4820).

The Companies, in the order of their incorporation, were as follows:

The New York Gas Light Company (1823);
The Manhattan Gas Light Company (1830);
The Metropolitan Gas Light Company (1855);
The Harlem Gas Light Company (1855);
The Municipal Gas Light Company (1874);
The Knickerbocker Gas Light Company (1876).

Inasmuch as the franchises of all the Companies were merged into one company, it is not important to consider the validity of each, if the right to occupy the streets with its mains is possessed by the Company under one or more special franchises. A single company needs but one franchise. The duplication of franchises is, therefore, immaterial, in considering the right of the appellee to occupy the streets; and the court below deemed it unnecessary to pass expressly upon the findings of the Special Master with respect to any of the franchises except those of the Harlem and Knickerbocker Companies, which it found were "sufficient to meet all its requirements" (Record, p. 432). Inasmuch, however, as the Master's Report was confirmed, except where otherwise expressly indicated (Record, p. 430), the finding of the Master, that the New York, Manhattan and Metropolitan franchises were existent and perpetual (Record, pp. 195, 197), was not disturbed.

NINTH.

The Harlem Franchise.

The franchise of the Harlem Gas Light Company was unlimited in time and embraces all that portion of the City north of 79th Street.

I. The appellants contend that because the corporation was organized for only fifty years, therefore, the franchise was limited to the corporate existence. As we have already seen (*ante*, p. 88), that is not the law.

II. The consent granted by the City authorities contained the following provision (Record, p. 5093):

> "THIRD: The Mayor, Aldermen and Commonalty of said City hereby reserve the right to purchase, at any time, from the said Company, all the materials, pipes, fixtures, buildings and all and singular all the personal and real property owned by said Company, by paying to the said Company the cost of the same, and ten per cent. over and above said cost."

The appellants contend that, as the City can exercise this right at any time, the franchise of the Company is terminable at will, and has, therefore, no value for the future. This conclusion would not be correct even if the premise were sound, as there is no proof that the City is now committed to the doctrine of municipal ownership and operation of gas plants, or is ever likely to be; and, as no special legislative authority has been conferred upon the City to engage in the gas business, it has no power to purchase a gas manufacturing plant.

Matter of White Plains Commissioners, 176 N. Y., 239, 251.

The entire provision above quoted is, however, an absolute nullity; because no power to make it was conferred by the Legislature; and it makes no difference that the Company may have expressly entered into a contract which imposed such condition.

Beekman v. Third Ave. R. Co., 153 N. Y., 144;
Potter v. Collis, 156 N. Y., 16;
Matter of White Plains Commissioners, 176 N. Y., 239.

This principle will be considered further, in discussing the Manhattan franchise (*post*, p. 103 *et seq.*).

The Harlem franchise thus clearly is perpetual and unlimited as to all that part of the City north of 79th Street. It would, therefore, certainly extend as far north as the Harlem River, that is, to Spuyten-Duyvil (220th Street); and there is no reasonable doubt that, with the enlargement of the City limits in 1873 (L. 1873, Chap. 613), and in 1895 (L. 1895, Ch. 934), the franchise extended to the Twenty-third and Twenty-fourth Wards, now forming the Borough of the Bronx.

People *ex rel.* Woodhaven Gas Light Co. v. Deehan, 153 N. Y., 528;
St. Louis Gas Light Co. v. St. Louis, 46 Mo., 121;
Grand Rapids v. Hydraulic Co., 66 Mich., 606;
Illinois Centl. R. Co. v. Chicago, 176 U. S., 646, 666.

The question involved is somewhat analogous to that once raised as to whether the Federal Constitution applied only to States in existence at the time of its adoption.

Town of Pawlet v. Clark, 9 Cranch, 292.

The Grand Rapids case (*supra*) is precisely in point. A water company was given a franchise to lay its pipes in the village of Grand Rapids. Subsequently, the village became a city, and its territory was enlarged. The city attempted to enjoin the Water Company from using the streets of the additional territory. The application was denied. The Court said (p. 612):

> "It is claimed that the village has ceased to exist and the defendant's privileges fell with it. It is also claimed that if this is not so, defendants are confined to the land covered by the village. * * * It has never been supposed that a city or any other public corporation changed its rights or its identity by gaining or losing territory. The same principle has been applied to the relations of special corporations which are connected with city arrangements, whether educational or for business purposes, and no new legislation is generally needed to adjust their new relations. This is illustrated in Trustees of Erie Academy v. Erie, 31 Pa. State 515, and in St. Louis Gas Lt. Co. v. St. Louis, 46 Mo., 121; the latter case being one relating to a supply of gas. * * * Had the village remained a village and been enlarged, the question would hardly have been raised. * * * If the charter had been granted a year after, instead of a year before the village became a city, it would not be reasonable to construe it as referring to then existing boundaries. There is no more reason for doing so now."

The mere extent of the territory annexed is immaterial. If only a few lots were annexed and an existing street were extended through them, no one would think of questioning the duty of a gas company occupying the original street to furnish gas to the occupants of the additional lots. But if there is a duty, there is a reciprocal right; and the principle would necessarily be the same if the additional territory comprised several blocks or an entire ward instead of a few lots.

In order to guard against the application of this well recognized legal principle, it was expressly provided in the Greater New York Charter (which took effect January 1, 1898), that no franchise previously granted should be extended by the enlargement of the City but should be confined to the existing territory.

City Charter, Sec. 1538.

The Harlem franchise is thus perpetual and unlimited in that part of the City where the greatest increase of population will necessarily take place.

TENTH.

The Knickerbocker Franchise.

At the time of the consolidation, the Knickerbocker Company owned two franchises, one known as the "State Grant" and the other as the "Anthracite" franchise.

I. The State Grant.

This was a direct and perpetual grant by the State to various individuals, giving them an unlimited right to manufacture and sell gas and to lay mains in that part of the city north of 79th Street (Complt's. Ex. 119, p. 5119).

L. 1871, Ch. 944.

The rights thus granted were, by various mesne assignments, vested in The Knickerbocker Company in 1876 (Complt's. Exs. 112-114, 116, 119-215; Record, pp. 5105-5110, 5113-5115, 5119-5254).

The appellants objected to many of these assignments, on the ground that there were technical defects in their execution. But such assignments are not required to be recorded, nor are they required to be in any particular form; and it is not necessary that they should even be in writing. There is no evidence in the case that the individual grantees claim any interest in the grant as against the appellee.

The conclusion of the Special Master was, therefore, properly confirmed by the Court, that, under the State Grant, the Company acquired a perpetual right to lay and maintain its mains north of

79th Street (Record, p. 432); and, in view of the lapse of time during which the Company has been in undisputed enjoyment of this franchise, this Court will be reluctant to disturb a finding of fact made after full consideration of all the evidence on the subject.

Thus, under both the Harlem franchise and the State Grant, the Company has a perpetual right to lay mains anywhere above 79th Street.

II. The Anthracite grant.

The Anthracite Gas Lighting and Heating Company was organized in 1863, under the General Manufacturing Act of 1848, for a period of fifty years (Complts. Ex. 107, Record, p. 5097). In June, 1863, the City duly gave its consent to the Company to lay mains *in all the streets*, for the period of fifty years, that is, until 1913 (Complts. Ex. 106, Record, p. 5095).

The validity of this franchise is attacked, on the ground that, as the Anthracite Company was organized under the General Manufacturing Act, and not under the General Gas Act of 1848, the City had no power to allow the Company to use the streets.

But the Company was empowered by the Legislature, under the General Manufacturing Act, to manufacture and sell gas in the City of New York and to purchase, hold and dispose of real and personal property (Chap. 40, L. 1848; Record, p. 5097). If the City, which owned the fee of the streets, chose to permit the Company to lay conduits in the streets for the purpose of delivering the gas, no one but the State could object, and such objection could be taken only in a direct proceeding instituted for the purpose.

Starin v. Edson, 112 N. Y., 206, 215;

Matter of Long Acre El. L. & P. Co., 188 N. Y., 361, 367.

Whatever force the objection may ever have had has been entirely removed by the recent decision of the Court of Appeals in the Long Acre case (*supra*), where the point now urged by the appellants was definitely passed upon. In that case, the American Electric Manufacturing Company was organized under the General Manufacturing Act of 1848 (188 N. Y., 368). The City conferred upon that Company the right to use the streets ; and this right was voluntarily assigned to an individual, and, by various mesne assignments, became vested in the relator, the Long Acre Company. It was contended on behalf of the respondent that the relator had not shown any legislative authority to use the streets. The Court of Appeals, however, held that, as, under the Manufacturing Act of 1848, corporations had power to purchase, hold and convey real and personal property, and as the right granted by the City was property, it could dispose of that property even to an individual. In the present case, therefore, the Anthracite Company had the undoubted right to assign the franchise granted to it ; and, by various mesne assignments, the franchise passed, in 1876, to the Knickerbocker Company (a corporation formed under the general gas Act), and, through the consolidation, to the appellee.

Under the Anthracite franchise, the appellee, therefore, has the right to lay and maintain its mains, *throughout the entire City*, until 1913.

III. Between 1876 and 1884, the Knickerbocker Company, which, as above stated, was organized under the general gas Act, occupied the streets and carried on its business ; and the Legislature recognized its right to enter into the consolidation of 1884 and to capitalize its franchises. Thus, both the City and the State recognized that it possessed franchises.

ELEVENTH.

The Manhattan Franchise.

While it is unnecessary to consider the validity of the Manhattan franchise, inasmuch as it merely duplicates the Harlem and Knickerbocker franchises, yet the right under that franchise is so clear that a brief reference to it will not be out of place.

The finding of the Special Master, that this franchise was owned by the appellee and was perpetual (Record, pp. 195, 197), was confirmed by the Court (Record, p. 430).

The Manhattan Gas Light Company was organized in 1830, and received a direct charter from the Legislature (Complt.'s Ex. 5, Record, p. 4830).

L. 1830, Ch. 59.

No limitation was placed upon the duration of its corporate existence. Its charter contained this language (Sec. 9):

> "This Act shall be deemed a public act and shall be benignly and favorably construed for the purposes therein expressed and declared in all courts and places whatsoever."

This express provision thus negatives the principle that, in construing a grant by the State, every intendment is to be taken in favor of the public and against the grantee, though that principle is never applicable unless there is ambiguity in the grant.

Trustees of Southampton v. Jessup, 162 N. Y., 122, 127.

There was granted to the Company "full power and authority" to manufacture and sell gas in the City of New York, "and to lay pipes for the purpose of conducting the gas in any of the streets or avenues of the said City" (Record, p. 4830). It was, however, provided, "that no public street, lane or highway in the City of New York shall be dug into or in any way injured or defaced without the permission of the corporation of said city first had and obtained."

The City gave its consent to the use of the territory between Grand and 42d Streets; and it attempted to limit the duration to the year 1868 (Record, p. 5085).

This attempted time limitation by the municipality was a nullity.

The authorities on the subject have already been considered, to some extent (*ante*, p. 92).

I. The legislative authority was a direct and present grant, complete in itself, unqualified and unlimited.

The grant to lay mains took effect at once, without requiring any consent on the part of the municipality. The only proviso was that no streets should actually be dug into, that is, opened for the purpose of laying mains, without the permission of the City. In other words, the legislature intended to reserve to the City the right to determine whether any gas mains should be laid in a particular street or locality, and to prevent the duplication of mains in a street already occupied by the mains of another gas company; and it was doubtless because the City had previously given its consent to the occupation by the New York Gas Light Company of the streets south of Grand Street (Record, p. 5081), that it limited its consent, in the case of the Manhattan Company, to the territory north of Grand Street.

What was said by this Court, in New Orleans Waterworks Co. v. Louisiana Sugar Refining Co. (125 U. S., 18, 32) is in point:

> "The legislature itself thus defined the class of persons to whom, and the object for which, the permission might be granted. All that was left to the city council was the duty of determining what persons came within the definition, and how and where they might be permitted to lay pipes, for the purpose of securing their several rights to draw water from the river, without unreasonably interfering with the convenient use by the public of the lands and highways of the city. The rule was established by the legislature, and its execution only committed to the municipal authorities. The power conferred upon the city council was not legislative, but administrative, and might equally well have been vested by law in the mayor alone, or in any other officer of the city."

While the authority to lay mains in the streets of the city was directly conferred by the legislature, it was intended to permit the City to designate the streets in which it might be exercised, to control the physical opening of the various streets and avenues, from time to time, and to regulate the manner in which they should be opened.

II. That it was not intended to confer power upon the local authorities to impose conditions or to change the nature of the legislative grant appears more clearly by a reference to some of the contemporaneous legislative grants, in which the language employed varies slightly but where the legislature evidently had precisely the same object in view, in each instance.

1. Thus, in the charter of the Albany Gas Light Company (L. 1833, Ch. 135), it was provided (Sec. 9) that the corporation should " conform to all reasonable regulations which may be made by the Mayor, Aldermen and Commonalty of the City of Albany as to the time and manner of laying their pipes and to prevent the works from becoming a nuisance."

2. The charter of the Buffalo Gas Light Company (L. 1856, Ch. 734) contained this provision :

> " But before digging up or removing *any* of the streets or avenues of the said city, the said corporation shall first give notice to and obtain the consent of the common council of said city for that purpose."

This assumes that the authority to lay the mains was granted by the State and that the company could proceed to lay its mains but before actually opening any particular street or avenue, it should first give notice to the municipal authorities and obtain their consent as to that street. In other words, the municipal consent did not apply to a general authority to occupy the streets, which might be given once for all ; but the notice was to be given and the consent obtained every time that a new street or avenue was opened.

3. By L. 1841, Ch. 74, a charter was granted to a gas company to supply gas in Albany. Section 10 of the Act provided that it should not take effect until the municipal authorities had filed their consent to it with the Secretary of State. Obviously, the municipality could not vary the terms of the grant. It was merely given the power to say whether the Act, as passed, should take effect. It was a veto power, similar to that usually conferred upon the Governor of the

State as to bills passed by the legislature. While the Governor may approve a particular bill, he cannot, as a condition of his approval, vary the terms of the Act.

4. The same thing is illustrated in the charter of a Buffalo company (L. 1845, Ch. 254, Sec. 10), which provided that before commencing to lay conductors, the *assent* of the local authorities should be filed with the Secretary of State. It was also provided, by the same section, that the laying of the mains should be exercised in conformity with the regulations made by the common council; from which it is obvious that the control of the actual physical opening of the streets, from time to time, was vested in the local authorities.

5. The so-called State Grant, or franchise acquired by the Knickerbocker Company, contains a striking illustration of the same fact; as it was provided in its charter that it was not to be construed to authorize the laying of gas pipes within any territory under the control of the Department of Public Works, without the consent of that Department. That this refers merely to the physical act of laying the pipes is obvious, because the Board of Aldermen or Common Council, and not the Department of Public Works, exercise the legislative power of the municipality.

Ghee v. Northern Union Gas Co., 158 N. Y., 510.

6. In the very recent case of Carthage v. Central New York Telephone Co. (185 N. Y., 448), it was contended that the general Village Law, which conferred power upon villages " to regulate the erection of telegraph, telephone or electric light poles or the stringing of wires in, over or upon the streets or public grounds, or upon, over or in front of any building or buildings ", was broad enough to make it competent for the village to compel the Telephone Company to place the extension of its existing lines in underground conduits. But the Court of Appeals said that there was no such implied power; and it clearly pointed out the distinc-

tion between the power to regulate and the power to impose conditions (p. 452):

> "It is clear that the intention of the legislature was to permit villages to regulate the erection of telegraph, telephone or electric light poles and the stringing of wires on these poles. The right to erect these poles and string the wires is not derived from the village authorities, but they are permitted to regulate the erection of the same, that is to say, the location of the poles and the streets to be occupied are doubtless within the reasonable power of the village to regulate".

This distinction was also pointed out in the Ghee case.

Ghee v. Northern Un. Gas Co., 158 N. Y., 510, 525.

The language of the Manhattan Charter makes it clear that what the Legislature intended was that every time the Company desired to lay its mains in a street not previously occupied, it should first obtain the permission of the local authorities. That has always been required, even in the case of companies which had expressly obtained the general consent of the City to the occupation of the streets.

City Charter, Secs. 469, 528;

and, prior to the present City Charter, the matter was regulated by municipal ordinance.

L. 1870, Ch. 137, Art. Third, Sec. 2, Subd. 5;
L. 1873, Ch. 335, Art. Two, Sec. 17, Subd. 5;
L. 1882, Ch. 410, Sec. 86, Subd. 5, Sec. 322.

III. The right to lay mains necessarily includes the right to use them for conducting gas, when laid. In other words, the phrase, "to lay," is a compendious one, which carries full authority to occupy the streets in the operation of the business. The law requires the mains to be maintained, after they have been laid; and any one injured by the failure to perform that duty has a good cause of action against the corporation.

14 Am. & Eng. Encyc. of Law, 936;
Siebrecht v. East River Gas Co., 21 App. Div., 110;
Washington Gas Co. v. District of Columbia, 161 U. S., 316, 325.

A gas company, being a public service corporation, is obliged to furnish gas to all consumers along its lines.

11 Am. & Eng. Encyc. of Law, 928;
Thornton on Oil and Gas, Sec. 525;

and this duty has been statutory in New York since 1859.

L. 1859, Ch. 319, Sec. 6;
Transportation Corporations Law, Sec. 65.

Having once laid its mains, under legislative authority, a gas company not only has the right to use and maintain them, but it is obliged to do so.

IV. It is noticeable that the same words, "to lay," are employed in the consent of the City, in the case of the Manhattan Company (Record, p. 5085), the words "use" or "maintain" not being employed; and that was so in the case of every consent granted by the City to any of the constituent Companies (Record, pp. 5092, 5094, 5095, 5116, 5119); and it is the language which has usually been employed in the case of all gas companies throughout the State, as appears in the charters of the Albany and Buffalo Companies, to which reference has heretofore been made (*ante*, pp. 99, 100).

Similar language was employed in the State Grant (Exhibit 119, Record, p. 5120), and is used in the Transportation Corporations Law with reference to gas companies (Sec. 61, Subd. 1) and waterworks companies (Sec. 82, Subd. 2). In the numerous charters granted to turnpike and bridge companies, the power granted is to "build" or "construct," the subsequent operation being implied.

L. 1830, Ch. 200;
L. 1830, Ch. 227;
L. 1830, Ch. 229;
L. 1830, Ch. 271;
L. 1831, Ch. 108;
L. 1831, Ch. 235;
L. 1831, Ch. 259;
L. 1831, Ch. 263.

And, in the Railroad Law, the authority conferred is to lay out and construct a railroad (Sec. 4, Subd. 3), nothing being said about operating it subsequently; and similar language is employed in the Constitution of the State (Art. III, Sec. 18).

In the case of every grant of a franchise, whatever is required by necessary implication for its enjoyment passes with the grant.

Langdon v. The Mayor, 93 N. Y., 129, 151–2.

V. Where full and unlimited authority is conferred directly by the legislature upon a public service corporation, and there is no limitation in the grant, and no power is expressly given to the local authorities to impose conditions, the local authorities cannot limit the authority or prescribe terms or conditions upon which it may be exercised. In this respect, municipalities have no greater power than any other administrative body of the State.

1 Dillon on Mun. Corp., Sec. 55;
People *ex rel.* West Side Ry. Co. v. Barnard, 48 Hun, 63; affd. 110 N. Y., 548;
Gaedeke v. Staten Island R. Co., 43 App. Div., 514;
Dusenberry v. N. Y. etc. Traction Co., 46 App. Div., 267;
Wright v. Glen Telephone Co., 112 App. Div., 745;
Davis v. The Mayor, 14 N. Y., 506, 523–4;
People v. Kerr, 27 N. Y., 188;
Milhau v. Sharp, 27 N. Y., 611, 619–20, 622;
Matter of Kings Co. El. R. Co., 105 N. Y., 97;
Beekman v. Third Ave. R. R., 153 N. Y., 144, 152;
People *ex rel.* Woodhaven Gas Co. v. Deehan, 153 N. Y., 528;
Potter v. Collis, 156 N. Y., 16;
Ghee v. Northern Union Gas Co., 158 N. Y., 510;
Matter of White Plains Commissioners, 176 N. Y., 239;
Rhinehart v. Redfield, 93 App. Div., 410, 414–5; affd. on opinion below, 179 N. Y., 569;
Carthage v. Central N. Y. Tel. Co., 185 N. Y., 448;
Pittsburgh's Appeal, 115 Pa. St., 4;
Peoples Railroad v. Memphis Railroad, 10 Wall., 38, 50–52;
New Orleans Waterworks Co. v. Refining Co., 125 U. S., 18, 32;
Walla Walla v. Walla Walla Water Co., 172 U. S., 9.

1. In Pittsburgh's Appeal (*supra*), a case most carefully considered by the Court, after it had been argued by eminent counsel, the Court said (p. 21):

> "So far as the limited authority to legislate on these peculiar subjects" (opening streets) "has been delegated to Councils, *and to that extent only*, can the corporate powers, rights and privileges of natural gas companies be qualified or limited. Councils are authorized to give or withhold their assent without more. They have no right to couple their assent with any condition or restriction not imposed by the Act, unless the company agrees to accept the same and be bound thereby; and even then the conditions or restrictions so accepted by the company must harmonize and in no wise conflict with the provisions of the Act. The assent of councils being given, the regulations they are authorized to adopt are such only as relate to the manner of laying pipes, altering, inspecting and repairing the same, and the character thereof with respect to safety and public convenience. These regulations must also be reasonable and not in conflict with any of the provisions of the Act. In all other respects, the powers of such companies are clearly defined and their duties and liabilities prescribed by the Act under which they are incorporated."

That case was tried before Judge WHITE, whose decision was unanimously affirmed and whose opinion is given in full in the report of the case in the Supreme Court. Referring to the legal effect of the word "assent", Judge WHITE said (p. 12):

> "The word 'assent', in the 13th section, must be understood in its ordinary sense, as consenting or agreeing to. Something is stated or proposed to another; he assents to it, that is, accepts it, agrees to it. If he asserts or proposes something else, it is not assenting to what was asserted or proposed, but offering something else. A corporation with its charter under the Act of May 29th, 1885, comes to the city and asks consent to enter with its chartered rights and privileges. The statute says to the city: You may consent or not, as you please. It does not say you may refuse and then make the best bargain you can with the company. You may assent or dissent, that is all. If you assent, it must be with the rights the company has under the

> statute, and you can do nothing more than ordain such reasonable regulations as are secured to you in the 11th section."

2. In Beekman v. Third Ave. R. R. (*supra*), a franchise was granted to a railroad company by the municipality, which, in addition to requiring the payment of a certain percentage of the gross receipts, as required by statute, also required the payment of a cash sum into the city treasury. This was not expressly authorized, *but the Company assented to it and agreed to make the payment.* Held, a nullity, as it was against public policy to permit a municipality to impose conditions which had not been expressly authorized by the legislature.

3. That an agreement to a condition which the municipality had no power to impose is a nullity was also expressly held in Potter v. Collis and Matter of White Plains Commissioners (*supra*).

The reason why such an agreement is a nullity was clearly stated in Town of Golconda (108 Ill., 419), where the Court said (p. 427):

> "The complainants owned a ferry franchise, which they had a right to enjoy and use until they should commit some act which might authorize the State to interfere and forfeit the franchise. While in the enjoyment of this right, the act of 1859 was enacted by the legislature, which conferred a franchise for twenty years, but this act conferred no additional rights upon complainants. At the time the act was passed, they had, under the law of the land, all that the act of 1859 professed to confer, and much more, and we are unable to perceive how it is that complainants lost all rights held by them under the grant to Daniel Field in 1823, and confirmed by the act of 1827, by merely accepting the provision of the act of 1859. Suppose a certain person is in the possession of a tract of land under a regular chain of title from the government. Another person holds a tax title on the land, which the owner in possession buys, and obtains a a deed. Is the owner, when his title may be called in question, estopped from asserting title to the land from the government from the fact that he purchased an outstanding tax title and after the purchase occupied under

> such title in connection with the original title? Surely not; and yet there is no substantial difference between the supposed case and the position of complainants. The complainants, when the act of 1859 was passed, were in the possession of the ferry franchise which had been conferred originally on Daniel Field, and descended to them. They had an undoubted right to hold and operate the ferry under the original grant. They did no act indicating an intention to abandon title to the ferry, but when the act of 1859 was passed, they accepted its provisions and held under it in connection with the original title. We do not think they waived any rights held under the original grant by accepting the provisions of the act of 1859, nor were they estopped from claiming under the original grant. If they thought the act of 1859 might strengthen their title to the ferry, we perceive no reason which would preclude them from accepting its provisions and at the same time retaining the original title held by them when the act of 1859 was passed."

4. In Dusenberry v. N. Y. etc. Traction Company (*supra*), the Court said (p. 270):

> " Where the legislature, in the exercise of its sovereign power, has regulated the subject matter, it is not competent for persons charged with the duty of giving their consent to the performance of a particular act to impose other or different conditions."

VI. While there are many decisions holding that a municipality may prescribe conditions and limit the period during which the authority conferred by the legislature may be exercised, it will be found that in every one of such cases, the authority granted by the legislature to the corporation was not immediate and absolute but that power was *expressly* conferred upon the municipality to prescribe the conditions under which the authority should be exercised. For instance, in People v. O'Brien (111 N. Y., 1), the Court recognized the right of the City to fix the duration of the grant (p. 38); but the Act in that case expressly imposed the duty on the City to prescribe conditions and give notice of the conditions prescribed before granting the consent.

L. 1884, Ch. 252, Sec. 7.

The same was true in the case of Blair v. Chicago (201 U. S., 400, 457-8) and in Louisville Trust Co. v. Cincinnati (76 Fed. Rep., 296).

The appellants contend that the mere fact that the consent of the municipality is required to the occupation of the streets, before a gas company can exercise the special franchise granted by the legislature, confers upon the municipality the power to impose terms and conditions and to limit the duration of the legislative grant and that otherwise the requirement of the municipal consent would be meaningless. But the evident purpose of the legislature was merely to confer a veto power upon the municipality and to permit it to determine for itself whether the streets should be occupied by any corporations other than those already in existence ; in other words, whether the needs of the public had not already been fully supplied.

In the absence of express legislative authority, a municipality which does not own the fee of the streets has no greater power to grant the right to occupy the streets than the individuals whose property abuts on the streets. In the case of street railroad companies, the right to lay tracks in the city streets is derived from the legislature ; but that right cannot be exercised without the consent of one-half in value of the adjacent property owners and of the municipality.

New York Constitution, Art. III., § 18.

In other words, it requires the consent of a certain proportion of the property owners before the company can exercise its franchises. The property owners are given a veto power and are permitted to determine (subject to review by the court) whether the streets shall be occupied for such purpose. But no one would contend that this veto power would permit the property owners to prescribe the terms and conditions upon which the streets shall be occupied or to limit the duration of the legislative grant.

VII. This Court has recently noted the distinction between the words " power " and " authority." The grant of power has often been construed to mean nothing more than capacity to acquire a property right, not the acquisition of the right itself. "Authority," however, is the appropriate word by which an immediate right is conferred. In Blair v. Chicago (201 U. S., 400, 457), where full power to prescribe the terms and conditions of franchises had been expressly conferred on the municipality, the Court said:

> "The company must be 'authorized' by the city council before it can lay tracks or operate railways in the streets. This is more than to designate that for which authority has already been given. To authorize is to 'clothe with authority,' Webster's Dict.; 'to give legal power to,' Century Dict. It is an additional grant of right and power which the legislature requires the corporation to obtain as a condition precedent to its use and occupation of the streets."

In the case of the Manhattan Company, both power and authority are expressly conferred.

VIII. The practical construction which has been placed on the Manhattan franchise is conclusive as to its meaning and intent.

On the theory of the appellants, that the City had the right to limit the franchise which had been granted by the Legislature and that the Manhattan franchise, therefore, expired in 1868, manifestly that Company would have had no right to use the streets subsequently. As a matter of fact, however, its business was continued down to 1884, when it entered into the consolidation agreement with the other operating Companies. There was, therefore, a period of sixteen years when it was permitted to do business without objection. In other words, the municipal authorities conceded that the Company did have the right to occupy the streets ; that is, they recognized the Company's right to continue its business, in spite of the attempted limitation to 1868 ; and they, therefore, properly treated that limitation as a nullity. This was a practical construction placed upon the Act by the parties affected by it, which would resolve any doubt the Court might have, if the question was one of first impression.

Power v. Village of Athens, 99 N. Y., 592, 601–2 ;
Des Moines Ry. Co. v. Des Moines, 151 Fed. Rep., 854, 861.

It is well settled, that the construction placed upon a statute by those upon whom rests a duty concerning it is entitled to great weight.

Cohens v. Virginia, 6 Wheat., 264 ;
Easton v. Pickersgill, 55 N. Y., 310, 315 ;
People v. Dayton, 55 N. Y., 367, 377 ;
Matter of Washington St. R. R. Co., 115 N. Y., 442, 447 ;

and where this has been long continued, the courts will recognize it as conclusive.

U. S. v. Hill, 120 U. S., 169, 180 ;
Robertson v. Downing, 127 U. S., 607, 613 ;
U. S. v. Alabama R. R. Co., 142 U. S., 615, 621.

IX. The existence of the Manhattan franchise subsequent to 1868 was expressly recognized by the Legislature.

The Act of 1884, under which the consolidation was effected, provided that the amount of capital of the consolidated company should not exceed " the fair aggregate value of the property, franchises and rights " of the consolidating companies (L. 1884, Ch. 347, Sec. 1) ; and the Senate Committee of 1886 found that, in assigning $7,781,000 for the franchises of the constituent companies, this restriction of the statute was not disregarded (Record, p. 5386). There was included in this item the sum of $2,329,000, allotted as the value of the Manhattan franchise, representing the proportion of the said $7,781,000 which the sales of the Manhattan Company bore to the total sales of all the consolidating companies (Record, pp. 186, 6418). Obviously, there would not have been any franchise of the Manhattan Company, if, as the appellants contend, that franchise had previously expired ; and the Legislature itself thus adopted the construction which had been placed upon the franchises by the Company and by the municipality.

TWELFTH.

The New York Franchise.

The finding of the Special Master, that the New York franchise was owned by the appellee and was perpetual (Record, pp. 195, 197), was confirmed by the Court (Record, p. 430).

The New York Gas Light Company was incorporated by a special Act of the Legislature in 1823 (Complts. Ex. 2, Record, p. 4826), with the right of "perpetual succession."

L. 1823, Ch. 85.

That Act also was required (Sec. X.), as in the case of the Manhattan franchise (*ante*, p. 97), to be "benignly and favorably" construed.

What has been said about the Manhattan franchise is applicable to the New York franchise, with the exception that the latter does not contain a specific grant of authority to lay mains. But the Company is authorized (Sec. I.) to manufacture and sell gas, "for the purpose of lighting the said city or the houses thereof and any buildings, manufactories or houses therein contained and situate."

The charter contains a proviso similar to that contained in the Manhattan Charter, that no streets should be dug into without the permission of the local authorities.

I. While the authority "to lay mains" is not expressly conferred by this New York charter, there can be no doubt that that is what the Legislature intended to grant.

In 1823, the use of gas for illuminating purposes was a novelty; and in granting a special charter to a company organized for that purpose, the Legislature evidently intended to give it full power to engage in the business of manufacturing and supplying gas, including the right to lay mains, under such reasonable regulations as to opening the streets as might be prescribed by the local authorities.

The Company was organized to manufacture and sell gas for lighting the buildings of the city, and, as it could not light the buildings without conducting the gas through the streets to the buildings, the authority to lay mains was necessarily conferred. At that time, the City had no power to grant a franchise. It merely had the ordinary police power of regulation; and the provision was added, that the Company should not actually dig into the streets without first obtaining the permission of the City, so as to prevent the Company from claiming that the City had been deprived of its usual right to regulate the manner in which the streets should be dug into or opened, from time to time.

II. The authority conferred is expressly made perpetual, in providing that the Company should have the right to perpetual succession (Record, p. 4826).

III. For the reasons stated in discussing the terms of the Manhattan Charter, the local authorities had no power to limit the exercise of the franchise to thirty years. *But they did not attempt to do so.* They affirmatively consented to the occupation of all streets south of Grand and Canal Streets (Record, p. 5081); and as to this particular territory, they expressly conferred upon the Company the "*sole and exclusive* privilege and right" to lay mains for a period of thirty years. In other words, there was no attempt to limit the *general* right, but merely a limitation on the *monopoly* right to thirty years. While the Legislature had not conferred power to grant an *exclusive* right, it undoubtedly intended to ratify the exercise of the power by the City, when it subsequently granted the Manhattan Charter in 1830, the first section of which contained this provision (L. 1830, Ch. 59, Record, p. 4830):

> "But the rights and privileges hereby granted, shall not be construed to impair or affect any *exclusive* rights or privileges heretofore granted to any incorporated company in said city."

That could have had reference only to the New York Company, which was the sole incorporated gas company then engaged in business in the City.

Similar language, recognizing this exclusive right, was used in the Act incorporating the Metropolitan Gas Light Company (Record, p. 4853).

L. 1855, Ch. 545, Sec. 1.

IV. The City authorities openly conceded the right of the New York Company to occupy the streets of the city for thirty-one years after the expiration of this thirty year *exclusive* limitation ; and, as in the case of the Manhattan Company, the special franchise of the New York Company was valued at the time of the consolidation, in 1884, with the approval of the Legislature; the substantial sum of $1,417,000 being allowed for it (Record, pp. 186, 6418).

Moreover, in 1858, five years after the New York franchise had expired, as claimed by the appellants, the municipal authorities, in giving their consent to the Metropolitan Gas Light Company to occupy the streets, did so "subject to the same restrictions as to the mode of laying down said conductors as apply to and govern the New York and Manhattan Gas Light Companies in that respect" (Record, p. 5094); thus formally recognizing that the New York and Manhattan Companies did then have the right to use the streets.

THIRTEENTH.

The Metropolitan Franchise.

The finding of the Special Master, that the Metropolitan franchise was owned by the appellee and was perpetual (Record, pp. 195, 197), was confirmed by the Court (Record, p. 430).

The Metropolitan Gas Light Company was organized under a special charter granted in 1855 (Complts. Ex. 10, Record, p. 4852).

L. 1855, Ch. 545.

Its corporate existence was unlimited ; and the Company was expressly authorized (Sec. 1) to exercise, "at any time hereafter", that is, in perpetuity, the powers conferred upon it. The language of the first section, by which the authority was granted, is obviously modeled after the similar section in the Manhattan charter of 1830, although there are various provisions more favorable to the Company, evidently inserted for the purpose of preventing any possible doubt as to the construction of the Act.

"Full power and authority" are conferred to engage in the business of manufacturing and supplying gas and to lay mains. After the provision that no street should be dug into without the permission of the local authorities, this further provision is added, which is not contained in the charters of the older Companies :

> "And the said Boards are hereby authorized to grant and vest *exclusive* permission and authority to and in said Company for said purposes, to such extent and under such regulations as to them shall seem expedient, and such permission and authority shall be conclusive and shall continue as thus fixed during the period designated by said boards at the time of granting the same. But the rights and privileges hereby granted shall not be construed to affect or impair any exclusive rights or privileges vested in any incorporated company in said City."

Section 11 of the Act (Record, p. 4855) contains a provision similar to those in the New York and the Manhattan Charters, that the Act shall "be favorably construed for the purposes herein expressed, and declared in all courts and places whatsoever."

I. There having been a direct legislative grant to the Metropolitan Company, which was expressly made perpetual, and no power having been given to the local authorities to limit the duration of the grant or to impose conditions upon its exercise, any attempted limitation of it would have been a nullity, under the decisions heretofore cited (*ante*, pp. 92, 103 *et seq.*).

II. The only power granted to the municipality, aside from giving it the right to prescribe the usual regulations in connection with the opening of the streets, was to confer "*exclusive*" authority upon the Company, for such period and upon such conditions as might be prescribed. The Legislature thus gave the municipality power to *enlarge* the rights of the Company, by granting an *exclusive* franchise to territory not previously occupied; but it gave no power to limit the franchise. Doubtless, the incorporators of this Company hoped to induce the local authorities to grant them an *exclusive* franchise for some portion of the City, for some definite period of time, and had been advised that the City had no power to do this unless the Legislature expressly granted the power. The City did not attempt to exercise the power to confer "exclusive" authority upon the Metropolitan Company; and its attempt to limit the *general* rights of the Company was a nullity.

Des Moines Street Ry. Co. v. Des Moines, 154 Fed. Rep., 854, 862.

In that case, the Railroad Company had been given an *exclusive* right to occupy the streets of the defendant for thirty years. At the expiration of that period, the City undertook to compel the Company to remove its tracks. Held, that the franchise was not limited to thirty years, but was perpetual, and that the thirty year limitation applied only to the exclusive or monopolistic feature of the franchise.

III. The power conferred by the legislature upon the City to grant an *exclusive* right to the Metropolitan Company did not in any way detract from the general authority directly conferred on the Company by the legislature.

Abbott v. Duluth, 104 Fed. Rep., 833.

In that case, Judge LOCHREN said (p. 837):

> "These rights and powers, being unlimited in respect to duration, were valuable property rights, not merged nor excluded by the special acts referred to, which granted in addition the *exclusive* monopoly of occupying the streets, etc. of Duluth, and later of West Duluth, with telephone poles and wires for a limited time. This monopoly, which was the only real grant made by the special acts, ceased with the lapse of the prescribed time; but the unlimited right to oc-

> cupy the highways of the city remains and continues. The acceptance by the company of the special *exclusive* rights granted by the special acts for a fixed time, and presumably of value, cannot be construed as a refusal, disclaimer, or surrender of the rights and powers granted to and vested in the company by the general law. There was no inconsistency. The company could receive and enjoy all the rights and powers given by the general law and the special acts. No election or disclaimer was required or expected. Both the general law and the special acts were beneficial, and will, therefore, be presumed to have been equally acted on and relied upon".

IV. It is thus evident that the appellee has a perpetual right to use the streets under the Metropolitan charter.

FOURTEENTH.

Summary as to the special franchises now owned by the appellee.

The Consolidated Gas Company now has the following rights, under the franchises of its constituent Companies :

I. A perpetual right, under the New York franchise, for the Boroughs of Manhattan and the Bronx.

II. A perpetual right, under the Manhattan franchise, for the Boroughs of Manhattan and the Bronx.

III. A perpetual right, under the Metropolitan franchise, for the Boroughs of Manhattan and the Bronx.

IV. A right under the Anthracite franchise (acquired by the Knickerbocker Company), for the Boroughs of Manhattan and the Bronx, until 1913.

V. A perpetual right, under the State Grant (acquired by the Knickerbocker Company), for that portion of the City north of 79th Street.

VI. A perpetual right, under the Harlem franchise, for that portion of the City north of 79th Street.

PART IV.

VALUE OF FRANCHISES AND GOOD WILL.

The Special Master allowed $20,000,000 for the combined value of the franchises and good will, not attempting to apportion the value between the two (Record, p. 210). The trial Court rejected the item of good will, and found that the value of the special franchises of two of the constituent companies was *at least* $12,000,000 (Record, p. 431). The finding of the Master was an ultimate fact, resulting from the consideration of many complicated and difficult questions of fact; and it should not have been disturbed by the Court, unless it was improper to include in the assets anything for the so-called good will. That it was not improper to include this item has heretofore been shown (*ante*, p. 69).

It is immaterial that the Master did not separately find the values of the special franchises and good will, if the evidence shows that the value of the one added to that of the other is equal to or exceeds the sum of $20,000,000. He valued the intangible property as an entirety. In valuing the intangible property of the Company, it is manifestly very difficult to draw the precise line between the value of the special franchises and the value of the good will.

FIRST.

The value of the special franchises.

On the evidence in this case, the special franchises alone are reasonably worth much more than was found either by the Special Master or by the Court.

I. The universal practice to assess property for purposes of taxation at less than its actual value is a matter of general knowledge, which has been recognized and rebuked by the courts.

People *ex rel.* Equitable Gas Co. v. Barker, 144 N. Y., 94, 99-100;

People *ex rel.* Manhattan Ry. Co. v. Barker, 146 N. Y., 304, 313;

Railroad Companies v. Board of Equalizers, 85 Fed. Rep., 302, 308;

Cummings v. Bank, 101 U. S., 153;

New York State v. Barker, 179 U. S., 279, 286.

II. For the year 1906, the special franchises of the Company were assessed at about $24,000,000, exclusive of the mains and connections (Record, pp. 202, 1849, 5061). The Tax Law requires the State Board to fix the value of these franchises (Sec. 42) and to hear all complaints in regard to values so fixed (Sec. 43), before making them final. In the absence of any evidence to the contrary, that valuation should be accepted by this Court as conclusive.

Railroad Companies v. Board of Equalizers, 85 Fed. Rep., 302;

Adams Express Co. v. Ohio, 166 U. S., 185.

1. In Railroad Companies v. Board of Equalizers, the Court said (p. 315):

> "Where true value is a constitutional requirement, as in Tennessee, it would seem to follow logically that such value, for the purposes of taxation, must be substantially the same thing as when value is inquired about for the purposes of regulation."

While true or full value is not a constitutional requirement in New York, it is a statutory requirement, which has been enforced by the courts.

Tax Law, Sec. 21, subd. 3, Sec. 37;

People *ex rel.* Manhattan Ry. Co. v. Barker, 146 N. Y., 304, 312-313.

2. In Adams Express Co. v. Ohio, Mr. Justice BREWER, in delivering the unanimous opinion of the Court, said (p. 220):

> "Now it is a cardinal rule, which should never be forgotten, that whatever property is worth for the purposes of income and sale, it is also worth for purposes of taxation."

That equation must necessarily remain true, if it is stated conversely.

III. Owing to the peculiar character of the property right in such franchises, the difficulty of valuing them is very great. So great did it seem to the Court of Appeals, when it passed upon the validity of the Act providing for the assessment of such franchises for purposes of taxation, that it gave this as the sole reason for holding that the home rule provision of the Constitution had not been violated, in conferring the power to assess local franchises upon a State Board; and it expressly held that only such a Board of highly trained and experienced men was competent to fix a value upon this class of property.

People *ex rel.* Met. St. R. Co. v. Tax Commrs., 174 N. Y., 417, 438.

On this point, the Court said (p. 439):

> "This property was *sui generis*, and from its nature could not be valued by local officers. Unless it escaped taxation in the future as it had in the past, it was necessary to commit the power to other officers, with new functions, wider experience and greater opportunities for observation * * *. They (the franchises) were specialties and had no market value. * * * The value depends upon so many conditions, existing frequently in localities widely separated, and upon such a complication of facts and figures, that the valuation cannot be safely entrusted to men of common knowledge and experience."

IV. In the present case, the appellee did not rely upon the assessed value of its franchises, but called the very best possible expert on the subject, the Chairman of the State Board of Tax

Commissioners, who had taken part in the assessment of 1906; and it proved affirmatively by him that $24,000,000 was the reasonable value of the intangible part of the franchises of the Company (Record, pp. 202, 1849, 5061).

The appellants *did not call a single witness to testify on the point;* and the only manner in which they attempted to break the force of this positive and uncontradicted testimony was by asserting that it did not appear that the witness knew what the franchises of the Company were, when he made his estimate. But that was for them to expose, on cross-examination, if they believed that the witness had no information concerning the Company's franchises at the time when he acted in an official capacity in assessing their value. A single question would have elicited the information.

The Court will certainly not assume that a State officer, of such exceptional experience, occupying a position of such great importance and responsibility, would attempt to make an assessment of millions of dollars upon property about which he knew nothing. It will presume that the officer performed his full duty and completely acquainted himself with all the facts.

Seaboard Air Line v. Florida, 203 U. S., 261, 270.

That the State Board was fully possessed of all the facts concerning the franchises is clearly evident from the provisions of the Tax Law (Sec. 43), which require every corporation, under very severe penalties, to report under oath to the Board every special franchise possessed or enjoyed by it; and the Board has power to require supplemental reports, from time to time.

The very best evidence which, in the opinion of the Court of Appeals, could possibly be adduced was thus given affirmatively by the complainant; and no attempt was made to contradict it or to discredit the witness, who was entirely disinterested, except in so far as his official position would naturally lead him to sympathize with the defendants. Neither the Special Master nor the trial Court was at liberty to disregard that evidence; and the finding should have been in accordance with it, for the sum of $24,000,000.

V. The value of at least $12,000,000, found by the Court for two of the franchises, was arrived at by a process of reasoning based upon the valuation of the franchises at the time of the consolidation in 1884, at $7,781,000, and the natural increase in the value since that time.

If the franchises were worth $7,781,000, in 1884, it is evident that they are worth vastly more than that to-day. Under these franchises, the Company has a perpetual right to use the streets of the City. During the past twenty-three years, the City has more than doubled in population, while the relative increase in the amount of gas consumed has been even greater than the increase in population, the consumption in 1905 being more than 13,000,000,000 cubic feet, as against less than 4,000,000,000 cubic feet in 1885 (Record, p. 5039).

Furthermore, the physical space available for gas mains has practically all been disposed of on Manhattan Island; and that condition has largely come about since 1884, first, by the introduction of lighting by electricity, involving the use of underground conductors, second, by the statute of 1884 (L. 1884, Ch. 534), which required all telegraph and telephone companies to remove their wires from the surface of the streets before November, 1885, and, third, by the construction of subway railroads.

Even had these exceptional and peculiar conditions not existed in New York, the continuous growth of the city and the occupation of all the available space in the streets would have rendered an existing occupation of the streets of constantly increasing value. This was recognized by the Court of Appeals, in the recent case of Western Union Telegraph Co. v. Syracuse Electric Light Co. (178 N. Y., 325), where the Court said (p. 330):

> "Space beneath the surface of the streets in our large cities is becoming more valuable every year for the purpose of conducting water, heat and light to the dwellings of the inhabitants as well as for the construction of sewers, underground railroads, subway lines, pneumatic tubes and other agencies of great public utility";

and in Ghee v. Northern Union Gas Company (158 N. Y., 510), the Court said, with respect to the streets of New York City (p. 514):

> "The use of the space in the streets of New York, whether on the surface or beneath it, has been steadily growing in importance and value and will probably so continue for many years to come."

The fact was also referred to by this Court in New Orleans Gas Co. v. Drainage Commission (197 U. S., 453), where the Court said (p. 461):

> "The need of occupation of the soil beneath the streets in cities is constantly increasing, for the supply of water and light and the construction of systems of sewerage and drainage."

In 1884, the population of New York City, north of 79th Street was confined almost entirely to a few straggling villages. To-day, that population is probably nearly as great as was that of the entire City south of 79th Street, in 1884; and the values south of 79th Street have also increased enormously.

VI. The method pursued by the Court is criticised by the appellants, on the ground that the valuation of 1884 included patents, contracts and good will, in addition to the special franchises. That fact, however, was taken into consideration by the Court (Record, p. 419). The valuation of $7,781,000 was reached, in a general way, at the time of the consolidation of the Companies, by taking the approximate difference between the market value of their stock and the appraised value of the tangible property, after setting aside $1,303,000 for working capital (Record, p. 5384). The Court will take judicial notice of the fact that the year 1884 was a period of financial panic and widespread depression throughout the country, when all quotations were affected by the disturbed conditions. No stocks were quoted at as high figures as they would have been quoted had not such conditions then existed.

In discussing this subject, the appellants also entirely ignore the fact that the constituent companies paid off a considerable portion of their floating indebtedness prior to the consolidation and that a permanent indebtedness of $2,232,000 was transferred to the new Company (Record, pp. 573, 4496, 5731). This, of course, represented value or capital assets in addition to the market value of the stock.

The appellants assert that there was included in the valuation at that time a sum of from $2,000,000 to $3,000,000 for the patents of the Companies. The only foundation for such an assertion was the statement of the Vice-President of the Company as to what the patents of the Consolidated Company were worth *in December, 1885* (Record, p. 6465), more than a year after the consolidation had taken place; and there is no evidence that the Company had not acquired those patents subsequent to the consolidation. Neither is there any evidence tending to show that any patents owned by the constituent companies in 1884 were taken at more than a nominal valuation in the consolidation.

As the Court below observed (Record, p. 417), there was no attempt to place an accurate and precise valuation upon the franchises, in 1884.

The franchises of all corporations have been treated, until recently, very much in the manner that a healthy person regards the vital functions of his body; he is scarcely conscious of their existence and virtually ignores them until something goes wrong and he is aroused to a sense of their importance. It is only recently that attention has been directed to the special franchises exercised by public service corporations; and, in 1884, there was no attempt to appraise the value of the franchises of the constituent companies with mathematical exactness nor to apportion that valuation among the Companies, except, approximately, on the basis of their earnings. Undoubtedly, as the Senate Committee reported, the franchises alone (excluding all other intangible property) *of only four of the Companies* were worth *much more* than $7,781,000 (Complainant's Ex. 227, Record, p. 5386).

As to the contracts referred to by the Vice-President of the Company, in December, 1885, the evidence shows that these were contracts between the constituent Companies (Record, p. 6269), which obviously could not have been considered in the consolidation.

VII. Independently of all testimony in the case, the Court cannot but conclude that the right to lay and maintain gas mains in the streets of New York (that is, in the present case, in the Boroughs of Manhattan and the Bronx) is one of enormous value; and that is expressly conceded by counsel for the Public Service Commission (Brief, p. 221). As to what value shall be ascribed to it, probably no two persons would be found to agree exactly.

In the Court below, the appellants contended that the difficulty of accurately estimating the value of the franchises was so great that no attempt to value them should be made, because any valuation would be a mere " guess ". A guess is a conjecture, indulged in without sufficient facts upon which to base a rational judgment. When there are facts and considerations upon which a judgment can be based, the conclusion reached is no longer a mere guess; and the fact that there may be difficulties in the way of reaching an exact conclusion and that two persons of equal intelligence may differ in their conclusions, does not, in the eye of the law, impair the value of the result. That is so, in varying degrees, in all matters affecting human conduct; and, it is peculiarly so where a tribunal is required to estimate the uncertain damages resulting from a tort, or from a breach of an executory contract, where the damages are largely conjectural.

If the difficulty of valuing special franchises were insuperable, they could never be taxed; and the Special Franchise Tax Law, which was held by this Court and the Court of Appeals to be valid (199 U. S., 1), would have been a nullity. The fact that special franchises are now universally taxed shows that there is no serious difficulty in valuing them. In New York City, under its present Charter, (Section 74), before a special franchise can be granted, the Board of Estimate and Apportionment must pass upon the adequacy of the price to be paid for it. These franchises are, therefore, now disposed of in such manner as to give them a recognized market value. There is thus a substantial basis for estimating their value, which does not exist in the innumerable cases which are constantly being disposed of, where it is necessary for a court or jury to determine the very uncertain and problematical damages resulting from the loss of life or limb.

VIII. The fact that the Company, in *certiorari* proceedings instituted by it, has contested the right of the State to tax its special franchises and, in some of its returns to the State Board, has given the value only of its tangible property, is of no consequence in a case of this kind. Acting under the advice of counsel (Record, p. 1246), the Company made such statements for the purpose of taxation as would raise the issues of fact and law and protect its legal rights in having the assessment reviewed.

The petition and return, in *certiorari* proceedings, are the formal pleadings, corresponding to the complaint and answer in an action.

People v. Stilwell, 190 N. Y., 284.

In other words, the petition merely sets forth the legal position asserted by the petitioner; and it was a statement of this kind, made by Mr. Carter (Record, pp. 1239–1247), which the appellants criticise, but which the Special Master found was not improper (Record, p. 216).

The record shows that in spite of the protests made by the Company against an increase in the assessed value of its franchises, the assessments have been increased from $13,950,000, in 1900, to $31,900,000 in 1906.

If the figures given by the Company in its returns had been adopted by the State Board, there might be some ground for claiming that the Company was bound by them. But they were not adopted. On the contrary, they were entirely disregarded; and the value of the special franchises of the Company has been increased from year to year, by the State Board, ever since the

Special Franchise Act took effect (Record, pp. 1667, 3101, 6702, 6710).

Even, however, if the State Board had specifically adopted the Company's figures, that would not have created an estoppel against it. It would merely be evidence, to be taken into consideration with all the other facts, in ascertaining the "actual value of cost or reproduction".

> Southern Pacific R. Co. v. Board of Railroad Commissioners, 87 Fed. Rep., 21, 22;
> Louisville R. Co. v. Brown, 123 Fed. Rep., 946, 949;
> San Diego Land Co. v. Jasper, 189 U. S., 439, 443.

IX. The Court below did not specifically pass upon the value of the New York, Manhattan and Metropolitan franchises, because it did not consider it necessary to do so (Record, p. 432), as it found that the value of the other franchises owned by the Company was "*not less than*" the sum of $12,000,000 (Record, p. 418). But each one of those franchises is perpetual and coextensive with the entire City, as has been heretofore shown; and each one is undoubtedly worth a very large sum, in addition to the amount expressly found by the Court.

SECOND.

The value of the good will.

While it may be difficult to estimate the value of the good will with mathematical precision, the substantial basis of value is much more solid in the case of the business of the appellee than it is in the case of an ordinary mercantile business.

I. There is no doubt that the combined property of the Company has a value which is largely in excess of the separate values of the properties of its constituent companies.

In Cleveland Ry. Co. v. Backus (154 U. S., 439, 444), the Court referred to the New York Central Railroad as an illustration of the additional value given to a combined property over that of the properties of the separate companies. A railroad constitutes just as complete a monopoly as a gas business.

II. The estimate of Dr. Humphreys (a most eminent authority upon the subject) of $7,500,000 for the good will (Record, p. 1689) was extremely conservative. Mr. Addicks, on a more definite mathematical basis, estimated the value, on a 7% return, at $18,975,000 (Record, pp. 209, 1766).

Even without these estimates, there cannot be the slightest doubt that a very substantial sum should have been allowed for the value resulting from a long established and extensive business of this kind, in successful operation in the metropolis of the country; and the finding of the Special Master was abundantly supported by the evidence.

PART V.

THE SPECIAL FRANCHISES AND GOOD WILL SHOULD BE INCLUDED AMONG THE ASSETS UPON WHICH THE APPELLEE IS ENTITLED TO A RETURN, AND A VALUATION AT LEAST EQUAL TO THAT PLACED UPON THEM BY THE SPECIAL MASTER SHOULD BE ADOPTED BY THIS COURT.

Washington, October, 1908.

SHEARMAN & STERLING,
Solicitors for Appellee.

JOHN A. GARVER,
Of Counsel.

FILED.
NOV 4 1908
JAMES H. McKENNEY,
Clerk.

IN THE

Supreme Court of the United States.

OCTOBER TERM, 1908.
No. 398.

WILLIAM S. JACKSON, AS ATTORNEY-GENERAL OF THE STATE OF NEW YORK,
Appellant,

against

CONSOLIDATED GAS COMPANY OF NEW YORK,
Appellee.

BRIEF.

W. BOURKE COCKRAN,
Amicus Curiæ,
31 Nassau Street,
New York.

THE EVENING POST JOB PRINTING OFFICE, 156 FULTON ST., N. Y.

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IN THE

Supreme Court of the United States.

OCTOBER TERM, 1908.

WILLIAM S. JACKSON, as Attorney-General of the State of New York, *et al.*, Appellants, AGAINST THE CONSOLIDATED GAS COMPANY OF NEW YORK, Appellee.	Number 398.

The undersigned, representing an ownership of Twelve hundred and ninety shares of the capital stock of the Brooklyn Union Gas Company, and Twenty-six thousand dollars of its bonds, convertible on March 1st, into stock at par, making a total interest of Fifteen hundred and fifty shares, respecfully asks leave to file this brief *amicus curiæ.*

The Brooklyn Union Gas Company is situated in the City of New York, and is subject to the same legislation of which the appellee complains. It has instituted a suit identical in character with this action which has not been pressed to trial, but of which the result here will undoubtedly be decisive.

It is apprehended that if the decision of the Circuit Court in this action should be affirmed, any regulation of corporations exercising public franchises in the City of New York would be made so difficult as to be practically impossible, and the community or municipality in the face of such a condition will very probably feel impelled to take the manufacture and distribution of gas into its own hands,—building its own plant and furnishing the commodity by its own agents,—a course which must work great injury to stockholders of the different companies by imperilling, if not wholly destroying the value of their investment. Leave of this Court is craved, therefore, to submit certain reasons which appear to have been overlooked below for holding Chapter 125 of the Laws of 1906 to be well within the constitutional authority of the New York Legislature.

Most of the elements entering into this cause —nearly all of them—the value of the plant and real estate, the cost of producing gas, the earnings gross and net, the right to consider its franchises as property used in its business and on which, therefore, the company is entitled to some return—have been argued elaborately by counsel on both sides and considered exhaustively by the Court at Circuit. No attempt will be made here to amplify the discussion in these respects.

Three features of this question, however, it is ventured to suggest, should be made clearer than the Court below has left them:

First: The exact meaning, significance and extent of the security guaranteed by the Constitution to property of corporations employed in operating public franchises.

Second: The right of the Legislature to ascertain for itself facts necessary to the exercise of powers undoubtedly belonging to it, and the extent to which a Court may substitute its own judgment on questions of fact for the judgment of the Legislature reached not capriciously or recklessly or corruptly, but after exhaustive inquiry, full hearing and elaborate discussion on matters admittedly affecting legislation and

Third: The authority of the Courts to set aside completely a law reducing rates to be charged by a public service corporation, and to restore the original rates exacted from the community where three-fourths of the reduction are conceded to be within the competence of the Legislature,—if not incumbent on it as public duty,—and its authority was exceeded—if at all—only as to one-fourth.

FIRST POINT.

It was error in the Court at Circuit to hold that no rate can be constitutionally enforced on this public service corporation which does not allow the company to earn six per cent. upon the property employed in its operation.

Ever since attempts were first made to regulate by legislation rates charged by public service corporations, this Court has always held unvaryingly to two principles: (1) Power to regulate the charges and operations of such corporations is an incident to sovereignty which the State has power to exercise through its political department, Munn *v.* Illinois, 94 U. S., 113, but (2) *"this power to regulate is not a power to destroy, and limitation is not the equivalent of confiscation. Under pretence of regulating fares and freights, the State cannot require a railroad corporation to carry persons or property without reward; neither can it do that which in law amounts to a taking of private property for public use without just compensation, or without due process of law."*

Stone v. *Farmers Loan & Trust Co.,*
116 U. S., 307-331.

Thus while admitting the power of the Legislature to regulate charges of a railroad company, the right of the corporation to a judicial hearing as to whether the rates so fixed were so low as to be confiscatory was held to be a constitutional privilege of which it could not be deprived.

Chic., M. & St. P. R. Co. v. *State of*
Minn., 134 U. S., 418.

The duty of the Courts to interfere in certain cases to prevent confiscation of property employed in operating public franchises under pretence of regulation having been established, it has become necessary to determine with some degree of preciseness the circumstances and conditions under which that power should be exercised. While it is thoroughly well settled that a rate which is confiscatory cannot be enforced, it is by no means settled which department of government is authorized in every case to decide whether a rate is fair and reasonable, or by what standard its fairness and reasonableness is to be measured.

On this head Mr. Justice Harlan, writing the opinion of a unanimous Court, says:

> "It should also be remembered that the judiciary ought not to interfere with the collection of rates established under legislative sanction unless they are so plainly and palpably unreasonable as to make their enforcement equivalent to the taking of property for public use without such compensation, as under all the circumstances is just both to the owner and to the public; that is, judicial interference should never occur unless the case presents, clearly and beyond all doubt, such a flagrant attack upon the rights of property under the guise of regulations as to compel the Court to say that the rates prescribed will necessarily have the effect to deny just compensation for private property taken for the public use."
>
> San Diego L. & T. Co. *v.* National City, 174 U. S., 739, at p. 754, and cases there cited.

And at page 756, the Court further said:

> "This Court had previously held in Covington & Lexington T. R. Co. *v.* Sandford, 164, U. S. 578, 597, 598 (41: 560, 566, 567), —which case involved the reasonableness of

> rates established by legislative enactment for a Turnpike Company,—that a corporation performing public services was *not entitled, as of right* and without reference to the interests of the public, *to realize a given per cent. upon its capital stock;* that stockholders were not the only persons whose rights or interests were to be considered; and *that the rights of the public were not to be ignored.* * * * The utmost that any corporation operating a public highway can rightfully demand at the hands of the Legislature, when exerting its general powers, is that it receives what under all the circumstances is such compensation for the use of its property as will be just both to it and to the public."

It is respectfully submitted that the logical deduction from these decisions and all others rendered by this tribunal is that the courts are concerned *solely in maintaining the security of property, not with guaranteeing a profitable use of it.*

This distinction between the *security of property and the profitable employment* of property seems to have been overlooked by the Court at Circuit, which appears to have considered itself bound not simply to protect the property of the stockholders of the appellee from positive loss or injury, but to secure some degree of "attractiveness" for their investment (see the Original Opinion, fols. 134-135, and Supplemental Opinion, fol. 41).

An expression of Mr. Justice Harlan in Covington & Lexington Turnpike Co. *et al. v.* Sandford *et al.* 164 U. S., 588, to the effect that in considering the fairness and reasonableness of a rate "*each case must depend upon its special facts,*" seems to have been construed by the Court at Circuit as authority for declaring that cases of this character are not to be governed by any fixed rules.

The exact language of the Circuit Judge on this head is: *"I believe the decisions end to-day about "where they began,—declaring only that 'each case "must depend upon its special facts,' Covington "&c. Turnpike Co. vs. Sandford, supra,* (Opinion of judge at Circuit, fol. 128)."

It is submitted that nothing could be more erroneous than such an interpretation of Mr. Justice Harlan's language. This court has not labored to so little purpose in the long line of decisions rendered by it on this and kindred subjects.

The proposition, as Mr. Justice Harlan states it, is perfectly clear and absolutely unanswerable. Indeed it is self evident. Every case involving rates turns upon some distinct and peculiar state of facts. To say that these facts must form the basis on which its disposition depends is far from affirming or intimating that in dealing with them no fixed rule is to be observed, and that where a rate fixed by the Legislature is challenged, its reasonableness must in every instance be determined by the Court as an entirely independent original proposition, without regard to precedents established by other cases or in other proceedings.

Throughout opinions rendered by this Court in many different cases, especially those contributed by Mr. Justice Harlan and Mr. Justice Brewer, the assertion frequently recurs that *"this is a government of laws not of men,"* a principle vital to the constitutional system of which this great tribunal has always been the faithful depositary and its members vigilant guardians. But surely if the mere discretion of a man, even though he be a judge, not governed or controlled by any fixed rule, but free to dispose of each case "upon its special facts," as they appear to him, is the final authority to decide a question so momentous, fraught with such consequences to the community and the corporations chartered to serve it, then in this respect at least our government emphatically *is* a government of men, *not* of laws.

The opinion expressed by the learned judge at Circuit that it is impossible to fix by a definite rule the respective limits of legislative and judicial authority on this subject, it is respectfully submitted, is an erroneous conception of our constitutional system. The proper field of the Legislature on one hand, and of the Judiciary on the other, will not be impossible or even difficult to ascertain if we take the whole tide of decisions by this court and in the light of them examine carefully the relations which public service corporations bear to the community they are chartered to serve and the stockholders by whose capital they are operated. In the light of such an examination, opinions that appear to be contradictory will be reconciled, and doubts that appear most perplexing will be solved.

In Chic., M. & St. P. R. Co. *v.* State of Minn., 134 U. S., 418, quoted above—a leading case—Mr. Justice Blatchford, writing the opinion of the majority, says:

> "The question of the reasonableness of a rate of charge for transportation by a railroad company, involving as it does the element of reasonableness both as regards the company and as regards the public, *is eminently a question of judicial investigation, requiring due process of law for its determination.*"

Mr. Justice Bradley, writing the minority opinion (Mr. Justice Gray and Mr. Justice Lamar concurred with him) begins by saying:

> "I cannot agree to the decision of the Court in this case. It practically overrules Munn *v.* Illinois, 94 U. S., 113 [24:77], and the several railroad cases that were decided at the same time. *The governing principle of those cases was that the regulation and*

> *settlement of the fares of railroads and other public accommodations is a legislative prerogative and not a judicial one. This is a principle which I regard as of great importance."*

And farther on he says:

> "But it is said that all charges should be reasonable, and that none but reasonable charges can be exacted; *and it is urged that what is a reasonable charge is a judicial question. On the contrary, it is pre-eminently a legislative one,* involving considerations of policy as well as of remuneration; and is usually determined by the legislature by fixing a maximum of charges in the charter of the company, or afterwards, if its hands are not tied by contract."

Here appear to be two radically irreconcilable positions,—one it would seem wholly erroneous if the other be correct. And yet it is submitted both these eminent jurists were entirely correct, except that instead of the same question, as they supposed, they were really discussing two different questions or rather, they were discussing two different aspects of one question.

It is respectfully submitted that in one aspect what constitutes a fair and reasonable rate is a judicial question, to decide which the Courts alone are competent, while in another aspect it is a political question over which the Legislative Department has exclusive control—a control which it cannot abdicate or share with any body or other department of government.

The sense in which the question what constitutes a fair and reasonable rate is judicial, and the sense in which it is legislative will be made perfectly clear by recurring to a few elemental propositions which in these days are not questioned anywhere.

Under our industrial and political system there are two elements entering into a public service corporation: One the right to operate it—what is known as the franchise, the other the capital by which the franchise is placed in operation. The franchise—which includes the right to exercise the power of eminent domain—being an attribute to sovereignty, the right to control it must, always, remain with the sovereign, that is to say, with the state—the government. On the other hand, the capital by which the franchise is operated is the property of individuals who contribute it. It is private property dedicated to a public purpose.

The corporation in return for the special opportunities of profit which it enjoys, owes to the sovereign efficient service; and the sovereign—that is to say, the state or government—is bound to protect, from all manner of assault, or injury—under color of law or in open violation of it—the capital—the private property—dedicated to this public service. Stated in the narrowest compass, the corporation owes the people the most efficient service within the reach of human endeavor, consistent with security of the capital—not the fictitious amount at which it may be capitalized, but the real capital, the genuine property—actually embarked in it.

The right of all property—property engaged in operating public franchises no less than property otherwise employed—to security being absolute, it is the province of the courts to see that the security is complete, whether threatened by violence that is unauthorized, or by legislation that is unconstitutional.

But what is actually meant by this security of property? What does it involve? What are its essential features? What rights does it embrace?

While it is now settled beyond question that a rate which compels a public service company to do business at a loss would impair the value of the capital embarked in it, and therefore, would be a taking of property without due process of law, which the Courts must condemn as confiscatory, it has not yet been held affirmatively by this Court that a rate which though it did not entail actual loss in operation, nevertheless was so low as to prevent the possibility of earning any profits would be beyond the *constitutional* power of the legislature to impose, and therefore the Courts would be bound to set it aside. Discussing the authority of the United States Courts to review the action of a Legislature in the regulation of rates, as established by the decisions of the United States Supreme Court, Mr. Justice Brewer distinguishes between corporations engaged in business of *"a public character,"* and those engaged in business *"not strictly of a public character,"* but in which *"the public have an interest,"* and says:

> "As to parties engaged in performing a public service, while the power to regulate has been sustained, negatively the Court has held that the Legislature may not prescribe rates, which, if enforced, would amount to a confiscation of property. *But it has not held affirmatively that the Legislature may enforce rates which stop only this side of confiscation, and leave the property in the hands and under the care of the owners without any remuneration for its use."*
>
> *Cotting* v. *Kansas City Stock Yards Co. et al., 183 U. S., 79, at p. 91.*

The time has arrived, it is respectfully submitted, when the necessities of commerce and of orderly government make it important if not vital that the courts should go a step further in defining constitutional security of property by holding it to include not merely safety of the principal—the right to hold its *corpus* intact—but in addition the right of the owner to employ it so as to secure some return.

Unless property can be employed at a profit it won't be employed at all, and unless it can be employed it is not worth holding. A right of property, which did not embrace the right to employ it for the benefit of the owner, would be a mere right of custody, utterly valueless, a burden rather than a benefit, a penalty rather than a privilege, a hollow mockery, a trap for the unwary baited by delusive and misleading words.

Security of property, even in the narrowest and most literal sense, must include the right to earn some return. Property, whatever its form, cannot be preserved except at some expense. This expense, if not earned by employment of it at a profit, must be defrayed from principal, and the cost of maintenance being continuous would involve steady diminution of the property itself and finally its entire extinction.

Clearly then a rate, which even though it did not entail actual loss in operation—that is to say, an immediate, direct impairment of the property invested in corporations of this character,—yet was so low as to prohibit the possibility of earning any return on it—would be confiscatory, and the courts must intervene to forbid its enforcement.

If property embarked in public service corporations is entitled to any return, it must be an actual return—a return that is at least tangible.

What now is the return the courts are bound to see that no legislation will prevent a public service corporation from earning?

The Court below seems to have considered the legal rate of interest allowed in New York State to be, if not the measure, at least an indication of the profit which capital engaged in operating public franchises should always be permitted to earn in order to maintain its constitutional security. But the legal rate of interest is the maximum profit that can be collected for the use of money in that State. The great majority of transactions on credit are at a much lower rate. The maximum rate of interest is profit, the minimum rate is security. And with security alone are the courts concerned.

The profit which the courts should fix as essential to the constitutional safety of property employed in operating public franchises, it is respectfully submitted, is simply that which will equal the minimum rate of interest paid for the use of money in the open market.

This rule is entirely consistent with all the decisions on this subject rendered by this august tribunal.

Mr. Justice Harlan has pointed out in Covington & Lexington Turnpike Road Co. *et al., v.* Sandford *et al., supra*, that a corporation performing public services is not entitled *"as of right and without reference to the interests of the public* to realize a given per cent. upon its capital stock."

And this observation is weighty, timely, unanswerable. Should, for instance, a public service corporation be shown to have been extravagant, corrupt or reckless, in disposing of its resources or employing its capital, the community should not be subjected to exactions in order that such profligate expenditures may be made to yield substantial returns. But for every dollar expended in good faith and with reasonable discretion in making its service effective, the courts will see that a company be allowed to impose such rates as will enable it to earn returns sufficient at least to maintain the security of its property.

Whether a rate is fair and reasonable in this sense—that is to say, *whether it violates or respects the security of property* embarked in the operation of public service corporations—is clearly a question which the courts must determine, in the proper exercise of a most important function imposed upon them by the Constitution.

But there is another aspect of the question what is a fair and reasonable rate which is not judicial but legislative, which concerns not the constitutional security of property, but a great question of public policy, with which the political side of the government alone is competent to deal.

In this country it always has been a policy of government to enlist private enterprise in the operation of public franchises. Now, the only way by which private individuals can be induced to invest capital in this form of public service is by offering them opportunity to earn adequate profits.

How much that profit should be—what constitutes the fair and reasonable rate that will allow such a profit to be earned—and thus encourage the investment of capital in making public franchises effective—is a question of policy to be decided by the political or legislative department, with which the Courts could not deal effectively, even if the legislative sought to bestow the power upon them.

Not only is this the boundary between judicial and legislative functions fixed by our Constitution, but it is the natural boundary between them, as will be apparent if we conceive for a moment the essential functions of a Court.

The function of a Court is to declare and establish the law, constitutional or statute. The law to be law must be fixed, certain, and definite. The Courts, therefore, can have no power to relax, change or modify it.

The Legislature, on the other hand, is created expressly to prescribe new enactments or relax existing statutory provisions, as it may think will serve the public weal.

The function of the Courts is to ascertain what the law is and then declare it; the function of the Legislature is to ascertain what the law ought to be and then enact it.

A Court can never consider policy in the sense of squaring its decision by it. But policy is a thing the Legislature is bound always to consider. The Court must declare the law, whatever consequences the judges may apprehend from their decision. In this respect no discretion is open to them. The discretion sometimes given to judges in dealing with individuals—especially in imposing penalties on offenders against the State—they can never exercise when interpreting the law under which they act. They must always and everywhere declare the law, not perhaps as they would have framed it or as they might like to make it, but as they find it—as it is—as the framers made it.

The Legislature, on the other hand, being required to deal with all matters of policy is preeminently a field for the exercise of discretion. Instead of ignoring considerations of policy, it should be governed by them.

While, therefore, it remains a policy of the country to invite the employment of private property in the operation of public franchises, the Legislature must fix the condition by which owners of capital may be induced to engage in this form of service. The profits which should be allowed investors with this object might be six per cent. at one time, at another ten per cent., or twelve per cent., according to the varying rates of interest for money and the requirements of public convenience. Fixing these rates is distinctly a matter of public policy, and therefore it is a function essentially and exclusively legislative. The Courts could not discharge it effectively even if they tried, and if all other departments of government were willing they should assume it.

The duty of this Court, it is respectfully submitted, is to recognize these separate spheres, and by clearly defining them, establish in the judiciary complete power to decide what is the reasonable rate necessary to maintain the *constitutional security of property,* while acknowledging in the Legislature equally unquestioned power to fix the fair and reasonable rate necessary to encourage the investment of capital in such enterprises.

The rate at which the law of 1906 requires the appellee in the case at bar to sell its product ensures it a net return of over five per cent. on its property, including as property the franchises it holds from the State, and this being ample to maintain its property in security every constitutional requirement necessary to the validity of such legislation has been met and the decision of the Court at Circuit adjudging the statute unconstitutional and void should be reversed.

SECOND POINT.

The Legislature, having inquired into the cost of gas and having concluded after full investigation where every interest was heard, that a rate of eighty cents per thousand feet is adequate to allow the companies, engaged in furnishing this commodity, a fair and reasonable profit on the capital actually employed in the business, its conclusions in that respect should be controlling. At least, they should be held controlling in the absence of any assertion, pretense or shadow of proof that the course of the Legislature had been governed by recklessness or any unworthy or improper motive.

It is respectfully submitted that, unless a conclusion of the Legislature on a question of fact reached after full inquiry properly authorized and honestly conducted, concerning a matter admittedly within the scope of its authority, be binding on all other departments of government, including the judiciary, the legislative department is not an independent or co-ordinate branch of the Government, but a subordinate and inferior body.

All proceedings of a public body clearly within its competence are entitled to credit by every other public body. This is the very essence of a separate or independent jurisdiction.

In the case at bar, the Legislature having investigated the manufacture and supply of gas in

New York City for the avowed purpose of ascertaining the rate which would allow companies engaged in this business a fair return on their property, while prohibiting them from imposing extortionate rates on the community, passed a law fixing eighty cents per thousand feet as the maximum price that might be charged for this commodity, whereupon a judge of the United States, sitting at Circuit, undertook an entirely independent inquiry into the same subject, and having reached a conclusion on this question of fact slightly different from that of the legislative body, he proceeded to adjudge the law invalid and set it wholly aside.

If the position assumed in this respect by the Court at Circuit be sustained by this Court, it is difficult to see how the legislature can be considered a co-ordinate branch of government, or how it can be held to retain even a measure of independence.

Nothing in the prior judicial decisions of this country would justify such an emasculation of legislative independence and importance. On the contrary, the courts hitherto have always been careful to recognize that wherever the Legislature is given authority to deal with any subject it is the fullest authority, including authority to decide for itself all matters of fact incident to the exercise of its functions.

> "The Courts must, of necessity, presume (whatever may be averred to the contrary) that no general statute is ever passed either for want of information upon the part of the legislature or because it was misled by the false representation of lobbyists or interested parties."
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> Farmers' Loan & Trust Co. *v.* Chic. P. & S. Ry. Co., 39 Fed., 143.
> Angle *v.* Chicago, *Id.*, 912.

Where an act of the Legislature appropriating money to an individual for services rendered the State under appointment by the Governor is valid on its face, the Court will not look into evidence aliunde to determine whether it violates the Constitution, Art. 4, Sec. 25, Sub. 29, and Secs. 31 and 32, which provide respectively that the Legislature shall not pass any law affecting the fees or salary of any officer, make any gift of the public money, or award extra compensation to an officer after the service has been rendered.

Rankin *v.* Colgan, 92 Cal., 605.

Story, in his work on the Constitution, Vol. 2, Sec. 1342, says:

> "It would seem, as the power is given to Congress to suspend the writ of *habeas corpus* in cases of rebellion or invasion, that the right to judge whether exigency had arisen must exclusively belong to that body."

Surely, if the Legislative Department has *exclusive* power to decide for itself facts which authorize it to take action, affecting individual liberty so profoundly as a suspension of the *habeas corpus* act, it should not be denied practically ail power to decide for itself facts which justify it in taking action affecting property to the moderate extent of fixing rates that a corporation exercising a public utility may exact from the community it serves.

This Court in all its decisions affecting legislative regulation of public service corporations has always recognized the right of a Legislature to ascertain for itself facts necessary to the effective discharge of this function.

> "But the Courts cannot, after the Board has fully and fairly investigated and acted, by fixing what it believes to be reasonable rates, step in and say its action shall be set

> aside and nullified because the Courts, upon a similar investigation have come to a different conclusion as to the reasonableness of the rates fixed. There must be actual fraud in fixing the rates, or they must be so palpably and grossly unreasonable and unjust as to amount to the same thing."
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> Spring Valley Water Works *v.* S. F., 82 Cal., 286, cited with approval in San D. L. & T. Co. *v.* National City, 174 U. S., 739, at page 750.
>
> "It should also be remembered that the Judiciary ought not to interfere with the collection of rates established under legislative sanction unless they are so plainly and palpably unreasonable as to make their enforcement equivalent to the taking of property for public use without such compensation as under all the circumstances is just both to the owner and to the public; that is, judicial interference should never occur unless the case presents, clearly and beyond all doubt, such a flagrant attack upon the rights of property under the guise of regulations as to compel the Court to say that the rates prescribed will necessarily have the effect to deny just compensation for private property taken for public use."
>
> San Diego L. & T. Co. *v.* National City, 174 U. S., 739 at page 754, and cases there cited.

If the Legislature have any power to investigate conditions with a view to legislation clearly within its power, its conclusions of fact must be entitled to some weight. If they have any weight, they are entitled to full weight, at least in the absence of any proof that the Legislature has acted in bad faith. They are either entitled to full weight and authority or they have no force or significance whatever.

The right to inquire and ascertain facts is an indispensable prerequisite to wholesome legislation. If the Legislature be not competent to ascertain for itself a fact essential to its own procedure and if its conclusions on such a matter be not entitled to any consideration by other departments of government, it is idle to speak of it as a legislative body. It is not even a commission to propose legislation, much less a body competent to enact laws. This Court, it is confidently believed, will hesitate long before rendering a decision which must reduce the legislative branch to such insignificant proportions.

It is not open to question that the power to regulate public service corporations, if it exist anywhere, is in the Legislature. Before that power can be exercised effectively certain questions of fact must be decided. Before a reasonable rate can be fixed it is necessary to ascertain what is reasonable. This information can best be obtained by thorough and complete investigation of the whole subject. Such an inquiry concerning the cost of gas in New York City the New York Legislature undertook and prosecuted exhaustively (Record, p. 66, *et seq.*). It found that a rate of eighty cents would be sufficient to afford a reasonable return on the property employed in the manufacture and distribution of gas. That rate was fixed by a statute passed after all the testimony offered had been received and weighed; after prolonged and exhaustive arguments had been heard. (Record.) In the absence of any suggestion that hate, violence, fraud or other unworthy motive governed the Legislature its action, like the action of every official body, should be presumed to have been taken in strict obedience to the constitutional oaths of its members. Yet the Court at Circuit seems to have completely ignored this inquiry, and the proceedings based on it.

If the conclusion of a legislature based on careful inquiry be of no value—entirely negligible—then legislative investigations and examinations preliminary to legislation are a waste of time and funds, senseless and indefensible.

Failure to inquire before acting is the complaint most generally brought by thoughtful men against legislative bodies. Is this Court prepared now to declare such preliminary investigations wholly useless and indeed improper—by holding a conclusion reached after exhaustive inquiry, entirely negligible—so utterly useless that the expense of conducting it must have been an unjustifiable waste of public revenue.

If the valuation of real estate, plant and mains of the Company made by the Legislature be correct, a rate of eighty cents for its product would assure a return of more than six per cent. on its property. It would, therefore, have been, according to the opinion of the Court a fair and reasonable rate within the meaning of the Constitution. It was by fixing a different valuation of its own that the Court has reached the conclusion that an eighty-cent rate would yield a return of less than six per cent, though exceeding five per cent on the property of the corporation. By what principle of construction is the judgment of a Court on the value of real estate to be held so superior to the judgment of the Legislature on the same subject as to justify the complete nullification of a law solemenly enacted after deliberate consideration and careful investigation?

Conclusions as to the value of real estate are essentially speculative. In no sense can they be considered capable of demonstration. If a slight difference in estimating the value of real property between the Legislature and the Court be sufficient to render unconstitutional a law reducing rates which admittedly were too high, then legislative power to regulate corporations can hardly be said to exist. It can be undertaken only under conditions that make it practically inoperative.

But if the community cannot regulate public franchises entrusted to private corporations—if its attempts at regulation be surrounded by such difficulties as to make them almost inevitably foredoomed to failure—there is still one remedy open to it—and that is to exercise these franchises itself by its own agents. It would be intolerable if corporations furnishing a commodity absolutely essential to the convenience and even the necessities of life be suffered to exist—to occupy public highways—to exercise the power of eminent domain—without being subject to governmental regulation of any kind.

Regulation of public service corporations being essential to the public welfare, it will be established, somehow or other. If it cannot be enforced against corporations to whom public franchises have been granted, then these franchises must be exercised by the community itself.

If this attempt at regulation fail, it is difficult to conceive how any can succeed. In that event, nothing can be clearer than that the community will very likely be driven to establish its own gas plant. On such a proposition, if submitted to him as a citizen, even a stockholder in a gas company whose sense of civic duty outweighs regard for his personal interests, would probably feel bound to vote in the affirmative.

The courts, it is believed, will be slow to sanction a doctrine which must result in placing citizens well-disposed and law-abiding in a position where the condition of performing loyally their full civic duty must be a sacrifice of their property interests.

THIRD POINT.

Even if the action of the Legislature in fixing a rate of eighty cents per thousand feet be unconstitutional, the Court erred in enjoining enforcement of the law to any extent whatever. The decree should have been limited to enjoining the State officers from enforcing any reduction below eighty-five cents per thousand feet, which rate the opinion of the Judge shows would have been ample to ensure full protection of the company's property according to the standard of constitutional security fixed by the Judge himself.

The opinion of the Court clearly shows that had the Legislature reduced the price of gas from a dollar to eighty-five cents, instead of eighty cents, a profit of over six per cent. would have been left to the company on all the capital actually employed in its operation—including its franchises as property—and this according to the standard fixed by the judge himself would have been sufficient to maintain the constitutional security of the property. Yet the judgment sets aside the law absolutely and wholly.

It is a familiar principle of construction that where certain features of a law transcend the constitution, yet others are within the power of the Legislature to enact, those features that are constitutional will be upheld. (Cooley on Constitutional Limitations, 7th Ed., p. 247.)

In the case at bar, even according to the valuation of real estate and other conclusions of fact reached by the Court at Circuit, the Legislature had unquestioned power to order a reduction in the rate from one dollar to eighty-five cents. Its action, therefore, should have been held invalid only to the extent that it ordered a reduction below that rate.

The attention of the Judge evidently having been called to this before final settlement of the order, and a request apparently having been made that before any injunction be issued, and as a condition of its becoming effective, the company should be required to reduce the price of its product to eighty-five cents per thousand feet, as of the date on which the law was passed, that request was refused on three grounds.

FIRST.—Because such an order might lead all the parties herein to accept the decision of the Circuit Court, and thus prevent an appeal to this Court, it being considered important in the highest degree that the questions raised in this litigation be finally determined.

SECOND.—Because that question had not been raised in the pleadings.

THIRD.—Because such modification would in effect be fixing a rate by the Court and it would operate as coercion of the Company into conceding a rate of eighty-five cents to consumers, through fear that otherwise a rate of eighty cents might be imposed on it (Supplemental opinion, Fol. 47, Record, p. — *et seq.*).

Clearly, the first reason is no longer operative. The case is here in this court, which will undoubtedly pass upon it, and every feature of it.

The second ground, it is respectfully submitted, seems to be inconsistent with every principle of equity jurisprudence.

The testimony on which the Court was able to conclude that a rate of eighty-five cents would have been well within the constitutional power of the Legislature was admitted without question or objection. It is part of the record now. It is hardly conceivable that a motion to amend the pleadings so as to make them conform to the proof in this respect could have been denied. Indeed, it is passing strange that the Court, of its own motion, did not order such an amendment.

Moreover, this cause is not an issue affecting two private individuals, one of whom might fairly be made to bear any adverse consequence that flowed from his own neglect. The appellants have no personal interest in these proceedings. They are here purely as representatives of the community. That four millions and a half of people must continue to pay for a commodity essential to their comfort, at a rate more than fifteen per cent. higher than the Court itself holds reasonable, and that they should be left subject to these unreasonable exactions merely because of a defect in pleadings so purely technical and unimportant that it did not operate to prevent the admission of any testimony, is a proposition scarcely to be reconciled with any theory of equity announced, sanctioned, or accepted by this Tribunal.

It is the very essence of equity that its operations are always for justice.

It embodies in our system that ultimate prerogative of justice which in some form or other has been found necessary in every state of society to prevent the law itself from becoming perverted or distorted at times to the perpetration of injustice by rigid, unbending and unvarying enforcement of fixed rules.

This high prerogative in its nature is essentially discretionary, but discretion, as it is exercised by a court of equity, *"must not be arbitrary, fanciful or "capricious; it must be legal and regular; governed "by rules, not by humor."*

The distinctive characteristic of equity is that never under any circumstances can it be made to aid in the perpetration of injustice or to connive at it, whatever the consequences. If there be a wrong which cannot be redressed except at the cost of perpetrating another wrong, equity prefers to let the one it finds and for which it is not responsible continue rather than soil its own hands by stooping to an injustice, however slight, in an attempt to correct it. Yet here a law seeking to reduce rates which admittedly were too high, because the reduction slightly exceeds the limit considered reasonable by the Court, is nullified, not merely to the extent of the excess, but wholly and completely. The Court is not content to save the company from a rate which it considers too low by five cents, but it goes further and imposes on the community, for the benefit of the company, a rate too high admittedly by fifteen cents.

If it were absolutely necessary to inflict so severe an injury on the community in order to save the corporation from a much slighter injury, it might well be questioned whether a Court of Equity would under such circumstances feel itself justified in granting a permanent injunction. But this question does not arise here. To restore the dollar rate admittedly excessive, is not the necessary alternative to sustaining the eighty-cent rate which the Court holds inadequate. The Court, in its discretion, can forbid the enforcement of any rate below eighty-five cents—the rate found by itself to be just and reasonable—and thus do full justice to both the corporation and the community.

It is an elemental principle of equity that it will not take cognizance of a controversy, unless it can do complete justice to every one concerned in it or affected by it. Surely the community, the consumers of gas, are deeply affected by this controversy. And the Court of Equity which proclaims itself powerful enough to relieve a gas company from a rate that it considers slightly too low, should not be suffered by this great tribunal to confess itself powerless to grant such a measure of relief except at the cost of imposing on the community rates that are admittedly very much too high.

The suggestion of the learned judge at Circuit that to attach a condition to the issuance of this injunction order which would effect substantial justice between the community and the gas company by compelling the corporation to concede the rate which he himself held reasonable would in effect be fixing a rate by the Court—seems to be based on a misapprehension of his own decision. As matter of fact what the Court actually does by this very decree is to fix a rate. Whatever words, terms or formula may be employed to describe the result, nobody can question that a rate of one dollar per thousand feet for gas in the City of New York will be fixed in fact if this decision be upheld. And how will it be fixed? Not by legislative enactment—the Legislature has done everything in its power to lower the rate—but in spite of the Legislature, by order of the Court. The Court seems able to fix a rate that is unreasonable if not unconscionable, and to fix it so firmly that every consumer of gas in New York City must feel the burden of it, but a rate that by its own conclusion is reasonable and fair it professes itself unable to fix even as a condition of granting relief against a rate attacked as unfair. A conclusion so incomplete is not consistent with equity, as it has been developed and amplified by the American Judiciary.

If eighty-five cents would have been a reasonable rate, according to the opinion of the Court itself, surely the community should not be sentenced to an exaction of fifteen cents beyond this reasonable rate, simply because of a mistake on the part of the legislative body in estimating the value of many different elements—constituting the property of the corporation.

LAST.

It is respectfully submitted that the judgment of the Court below should be reversed or at least modified, so that an injunction against the enforcement of Chap. 125 of the Laws of 1906, of the State of New York, will be issued only on condition that the plaintiff furnish its product at a rate not exceeding eighty-five cents per thousand feet.

W. Bourke Cockran,
Amicus Curiae,
31 Nassau Street,
New York City.

SUPREME COURT OF THE UNITED STATES.

October Term, 1908.

No. 396.

WM. R. WILLCOX ET AL., Constituting the Public Service Commission of the State of New York for the First District, Appellants,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 397.

THE STATE OF NEW YORK, Appellant,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

No. 398.

WILLIAM S. JACKSON, as Attorney General of the State of New York, Appellant,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK.

Brief Submitted by Nathan Matthews, as Amicus Curiæ, Tremont Building, Boston, Mass.

The undersigned, representing the complainant in the case of *Haverhill Gaslight Company vs. Barker*, depending since February, 1900, in the Circuit Court of the United

States for the District of Massachusetts (see —, Federal Reporter, page —), in which case are involved some of the issues before this court in the case at bar, respectfully asks leave of court to file as *amicus curiæ* the following brief or memorandum:

I.

The Franchise Question.

If the court is of the opinion that, under some circumstances, the value of a public service company's franchises should be disallowed as an item upon which the company is entitled, under the Fourteenth Amendment, to just compensation by way of income, the undersigned submits that a contrary result should be reached in cases where:

(*a*) the franchise has been paid for by the company in cash; or where

(*b*) the franchise has been granted for a definite period; or where

(*c*) the franchise specifically authorizes the company to charge a particular rate; or

(*d*) the franchise has been indirectly paid for under the compulsion of State laws, such for instance as those which obtain in some States prohibiting the issue of capital stock except at its market value. In such cases the subscribers to the new stock of a prosperous company are obliged to pay a premium representing the capitalized value of the earning capacity of the company, which is based, of course, in part on the company's franchises; and it would be grossly inequitable to permit the State to compel a purchaser of stock to pay a franchise value for it, and then to eliminate this value through a reduction of rates.

II.

On the Relation Between Share Capital and Investment in a Rate Case.

There can be no relation, useful for consideration in a rate case arising under the Fourteenth Amendment, between the complainant's investment and the par value of its share capital; for

(*a*) the share capital of the company may have been watered, and may thus be far in excess of the fair value of the company's assets; or

(*b*) the stock may have been issued at a premium, and may thus represent at par much less than the value of the company's assets; or

(*c*) the company may have obtained the money to build extensions and improvements from its surplus earnings rather than from the issue of stock, in which case the total outstanding amount of stock would be less than the value of the company's plant; or

(*d*) the stock may have no par value at all, for, as was frequently the case in the early part of the nineteenth century, the company may have been incorporated with so many shares of stock, but without a par value for the same (see as instances many aqueduct, canal, and other franchise companies incorporated in Massachusetts between 1783 and 1830); or

(*e*) there may be no company in the case at all. Public service franchises, such as are necessary to the exploitation of a water works, gas plant, electric light plant, etc., are frequently operated under legislative authority by individuals and firms, in which case there is no company and of course no stock.

III.

The Relation Between the Company's Assets and the Amount of Money Paid into the Plant from the Proceeds of Stock and Bonds.

There is no relation, useful for consideration in a rate case arising under the Fourteenth Amendment, between the physical assets of a public service company and the amount of money which has been raised by the sale of stock and bonds; for.

> (*a*) the franchise may, as noted above, be operated by a private individual or firm without any corporation, stock, bonds, or dividends; or
>
> (*b*) the company may have been financed largely from surplus earnings which might have been paid out in dividends, but which in fact have been turned into the plant, with the result that the outstanding stock and bonds have been kept down to a nominal amount.

In amplification of the point last noted, it is submitted that the surplus earnings of a public service company above the amount needed for operating expenses, depreciation, etc., belong to the stockholders, and may, at their election, either be paid out as dividends, or used for extensions, additions and other purposes for which fresh stock may be issued if the stockholders so desire.

There are two ways of managing a corporation. According to one method all surplus earnings as above defined are paid out as interest or dividends, and the cost of extensions, additions and improvements is met by the issue of fresh stock or bonds; the result being that the nominal or share capital of the company is increased from year to year and is generally approximately equal to the fair cash value of the company's physical plant. The other method, more common in the past than now, and more common in the case of strictly private corporations than in the case of public franchise companies, is to keep the capital as small as possible by devoting the surplus earnings so far as they go to defraying the cost of extensions, additions, and improvements; the result being that while the physical assets of the company increase from year to year exactly as under the other method, the capitalization of the company is kept at a nominal or fairly constant figure.

Both these methods are entirely legitimate. and it can make no difference to the State or the consumers which of them a particular company sees fit to adopt.

When a rate case arises it may be competent in the case of a company managed under the first system to base the rate upon the amount of capital stock and bonds outstanding; but this is because this amount will generally be found to be approximately equal to the company's assets. In the case of a company managed under the second plan it is necessary, to prevent confiscation of a whole or a part of the earning value of the company's physical assets, to ignore the amount of the stock and bonds outstanding and to look solely to the physical assets.

If it be contended that the basis of a valid rate under the Fourteenth Amendment is only that part of the company's assets which has been paid for out of the proceeds of stock and bonds, this contention is equivalent to an admission that it is entirely legitimate for a public service company, as against the public, to pay for all its extensions, additions, and improvements out of earnings, and then the rate must be high enough to pay for the estimated annual amount of such extensions, additions, and improvements. The consumers cannot be heard to say in one breath that the company cannot treat as part of its capital or investment the value of the physical assets which have been paid for out of surplus earnings, and in the next breath that in striking the account of earnings the company is not to be allowed a rate sufficient to cover operating expenses, depreciation, and the annual cost of extensions, additions, and improvements. The practical result is probably much the same either way—that is to say, if a company spends $50,000 a year on extensions, it makes little or no difference whether it is permitted to charge a price high enough to cover this item, or whether this item is disallowed, but the rate is based upon the value of the extensions which have previously been defrayed from revenue. Whichever rule be adopted, it seems clear that the consumers cannot have the benefit of it without taking the burden also. If a company has lost the right, as against the public, to capitalize its extensions because they have been paid for out of earnings, it must be permitted to continue the process and be given a rate sufficient to meet the extensions of the future.

Although the actual difference in dollars and cents in any particular case would probably be small, or perhaps nothing at all, it seems clear that by far the simpler and more consistent method is to allow the company a reasonable return upon the present value of its physical assets, but nothing for annual extensions in excess of the amount needed to cover current operation, repairs, and depreciation.

It is submitted that the only rule applicable with strict justice to all cases, as well as the only rule consistent with the language of this court in the decisions from Smyth *vs.* Ames to the present time, is that the complainant is at least entitled to such a rate as will leave it a reasonable return, above the cost of operation, repairs, and depreciation, on the fair present cash value of the physical assets owned and employed by it in the business.

IV.

The Rate of Return.

It is suggested by the appellants, or some of them, that a price which allows the complainant the minimum rate of interest current in the community in question is not obnoxious to the Fourteenth Amendment.

The undersigned submits that the smallest return which can be allowed without violating the provisions of the Amendment is a rate which represents the value of money for investment in property of the kind in question in the part of the country in question.

A rate less than this deprives the company of a part of the income or annual value of its property, and to that extent is without due process of law.

This rate will vary for different sections of the country, for communities of different size, and perhaps for other reasons; but in any particular case, it ought not to be difficult to ascertain. It is what a purchaser would expect to earn if he bought the company's assets. It is the prospective profit which he would expect the company would be able to earn before he would be willing to pay a definite price for its physical assets. This sum cannot possibly be the minimum rate of interest in the community in question; for everybody knows that a gas, electric light, or other similar plant, with all the business hazards attached to it, cannot be sold on the same terms on which a mortgage upon real estate can be placed, or a market found for municipal bonds. It is possible that some part of the purchase money might be financed by loan at perhaps 5 per cent., or more or less, dependent upon the circumstances of the case; but it is idle to suppose that the whole purchase money could be procured on any such terms. The purchaser would expect to earn on that part of the money which he did not borrow certainly more than the rate at which he could borrow the other part.

In estimating the value of money for investment in the business in question, it is, we take it, the average value or cost of the total amount required. If, for instance, half of the purchase money could be borrowed at 5 per cent., and a purchaser could not be found unless he could be shown an earning capacity of 7 per cent. for the remaining half, the average rate for the whole investment would be 6 per cent.

Applied to gas companies, large or small, the figure which represents the annual value of money for that part of the investment which cannot be placed in the shape of a loan would, it is submitted, be considerably more than 6 per cent. The undersigned does not know to what extent the record in this case shows the current dividends which are paid by gas companies in the State of New York; but in other parts of the country there can be little doubt that dividends ranging all the way from 8 to 15 per cent. of a capitalization approximating the cash value of the company's physical assets is earned and paid without protest on the part of the public.

The court at circuit in this case has found that 6 per cent. should be allowed upon the whole investment of the company. As the question is one of the rate at which money can be found for investment in the business in question in the community in question at the time in question, and as the decision of this question depends upon the evidence in each particular case, it is submitted that the decision of the lower court in this particular case should not be set aside. It is submitted that this court cannot fairly say upon the record that 6 per cent. is more than the value of money for investment in the gas business in the city of New York at the present time.

Respectfully submitted by

NATHAN MATTHEWS.

OPINION

WILLCOX *et al.*, CONSTITUTING THE PUBLIC SERVICE COMMISSION OF NEW YORK, *v.* CONSOLIDATED GAS COMPANY.

CITY OF NEW YORK *v.* CONSOLIDATED GAS COMPANY OF NEW YORK.

JACKSON, ATTORNEY GENERAL OF THE STATE OF NEW YORK, *v.* CONSOLIDATED GAS COMPANY.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

Nos. 396, 397, 398. Argued November 4, 5, 6, 1908.—Decided January 4, 1909.[1]—Opinion filed January 12, 1909.

It is not a question of discretion or comity for the Federal court to take jurisdiction of a case; it is the duty of that court to take jurisdiction when properly appealed to; and it should not be criticized for so doing even though the case be one of local interest. *Cohens* v. *Virginia*, 6 Wheat. 264, 404. The right of a party plaintiff to choose the

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[1] On January 4, 1909, MR. JUSTICE PECKHAM made the following announcement:

First. At the time of the consolidation, the value of the franchises of the constituent companies was fixed by them at $7,781,000 and that amount formed part of the capital of the complainant for which it

Federal court cannot be properly denied. *Re Metropolitan Receivership*, 208 U. S. 90, 110.

Rates, when fixed by legislative authority, for public service corporations, should allow a fair return upon the reasonable value of the property at the time it is being used, but the legislative act will not be

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issued stock. The consolidation was effected pursuant to the state statute and the State has never questioned the validity or fairness of the valuation. Since the consolidation the stock so issued has been dealt in up to the present time as valid stock of the consolidated company, capitalized pursuant to the statute at not more than the fair aggregate value of the property, franchises and rights of its constituent companies. The State should not now be heard to question the value of the franchises at the time of the consolidation. The method of arriving at the value of these kinds of franchises, and how they should generally be tested in the fixing of rates, are questions not now before the court and are left undecided. The case before the court is decided upon its own peculiar facts.

Second. The estimated increase in the value of these franchises as made by the trial court at the time of the commencement of this suit is only an estimate and is not based upon evidence sufficient to warrant the finding of any increase whatever over the amount agreed upon at the consolidation.

Third. The evidence leaves it in doubt whether the value of the property used by the company in its business is as great as found by the trial court after reducing the value of the franchises to the sum agreed upon at consolidation.

Fourth. But taking the value as found by the court, after reducing the value of the franchises the result gives a return of almost 5½ per cent. A reduction in the value of the real estate, plants, etc., of a small amount only would bring the return to, if not more than 6 per cent. A possible increased consumption of gas would probably increase the earning of the company without a corresponding increase of cost. Under all the circumstances the complainant has failed to make out its case with that degree of clearness necessary to warrant the interference of a court of equity before an actual and *bona fide* test has been made under the practical operation of supplying gas at the rates mentioned in the statutes.

Fifth. There is no rule as to any particular rate which any corporation subject to legislative control in the matter has a right to obtain without legislative interference. It depends upon circumstances and locality. In this particular case with reference to the risk attending the business and the locality where it is carried on, the complainant declared invalid by the courts unless the rates are so unreasonably low that their enforcement would amount to taking the property for public use without compensation. *San Diego Land and Town Co. Cases*, 174 U. S. 739; 189 U. S. 439.

Except in very clear cases, courts should not interfere with state rate

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is entitled to a return, if it is possible, of 6 per cent upon the fair value of its property actually used in its business of supplying gas.

Sixth. There is no discrimination between the individual consumer and the city, by fixing the price of gas for the city at five cents per thousand cubic feet less than is permitted in the case of individual consumers, so far at least as the complainant is concerned. If the amount obtained from the total gas sold to the city and the individual is enough to secure the requisite return upon the property, it is all the complainant can require and the question of discrimination between city and individual is one in which the complainant can have no interest.

Seventh. The rate proposed must be with reference to the value of the property at the time when the rate takes effect. The company is entitled to the benefit of any increase in value at that time. This at least is the general rule, and if there be any exception to the rule, this case does not come within it.

Eighth. Any increased expense arising from the increased candle power of the light demanded by the statutes, was included substantially in the expenses of the year (1905) with reference to which the inquiry was made.

Ninth. The provision in the acts requiring a certain pressure is unconstitutional. The proof unquestionably shows great possible if not probable danger of explosion in the mains or other pipes, if the pressure demanded were applied to them as they now are. To eliminate such danger would require strengthening all the mains and other pipes, which would involve an expenditure of many millions of dollars upon which no return could be obtained at the rates prescribed by the acts. The provision can be separated, however, from the rest of the statute and the balance thereof made valid. The pressure must be sufficient to produce a light of the candle power mentioned in the acts.

Tenth. If the court below is right in its construction of the penalties, as to their amount, etc., such penalties are void, but are separable from the rest of the acts and the balance can be effectually carried out.

Eleventh. This is not a case for the valuation of good will. The complainant has in fact a substantial monopoly of the gas business in the city of New York and those who wish to use gas must take it from complainant. In this case, as there is no possibility of competition there should be no allowance for good will.

legislation before the legislation goes into effect. *Knoxville* v. *Water Co., ante*, p. 1.

Value of the property employed being an essential element in determining whether a rate is or is not confiscatory, and being also largely a matter of opinion, where the determination of the question depends upon such value, a court of equity should hesitate to interfere by injunction to suspend the rate before it goes into operation and a fair trial has been made.

Franchises of public service corporations are property and cannot be taken or used by others without compensation, and, where a State has by legislative enactment permitted such corporations to capitalize such franchises, their value at the time of such capitalization should be included in the value of the property as an element for fixing rates; but no increased value of such franchises should be allowed.

Public service corporations, such as gas companies, are subject to the legislative right to fix rates which permit not more than a fair return on the property used.

Whether a rate yields such a fair return as not to be confiscatory depends upon circumstances, locality and risk, and no particular rate can be established for all cases.

Under all the circumstances of this case this court concurs with the court below that six per cent is a fair return on the value of property employed in supplying gas in the city of New York, and a rate yielding that return is not confiscatory.

In estimating value of franchises for the purpose of fixing rates, it is immaterial that the corporation is taxed on a greater value than that allowed if it charges its taxes as operating expenses in determining net income.

Where a public service corporation has a monopoly, such as of supplying gas in a large city, "good will" cannot be considered as an element of value of the property employed.

For purpose of fixing rates the value of property employed should be determined as of the time when the inquiry is made, and, as a general rule, the corporation is entitled to the benefit of increased value since acquisition.

Twelfth. As it may possibly be that a practical experience of the effect of the acts by actual operation under them might prevent the complainant from obtaining a fair and just return upon its property used in its business of supplying gas, the complainant, in that event, ought to have the opportunity of again presenting its case to the court. Therefore the decree is reversed with directions to dismiss the bill without prejudice.

A provision in a state statute, requiring a public service corporation to perform its service in such a manner that its entire plant would have to be rebuilt at a cost on which no return could be obtained at the rate fixed, deprives the company of its ability to secure such return and is unconstitutional and void.

Ex parte Young, 209 U. S. 123, followed as to the unconstitutionality of provisions in a state statute for penalties for violations so enormous as to be overwhelming.

Provisions in a gas rate bill for rate, pressure and penalties for violation, may be, as held in this case, separable and the unconstitutionality of the provisions as to pressure and penalties will not affect the provisions as to rate.

Provision in a gas rate act establishing one rate for the municipality and another for individual consumers is not an unreasonable classification and does not render the act unconstitutional under the equal protection clause of the Fourteenth Amendment.

Where none of the different classes of consumers complain of different rates the corporation cannot complain of such differences provided the total receipts are sufficient to yield an adequate return.

Where, as in this case, in an action brought before the rate takes effect, complainant fails to sustain the burden of clearly showing that a rate act is confiscatory, the bill should be dismissed without prejudice to right of the complainant to bring another action after the rate goes into effect if it then proves to be confiscatory.

So held in regard to the New York Eighty-Cent Gas Law.

157 Fed. Rep. 849, reversed.

THE appellee, complainant below, filed its bill May 1, 1906, in the United States Circuit Court for the Southern District of New York against the city of New York, the Attorney General of the State, the District Attorney of New York County and the Gas Commission of the State, to enjoin the enforcement of certain acts of the legislature of the State, as well as of an order made by the Gas Commission, February 23, 1906, to take effect May 1, 1906, relative to rates for gas in New York City.

Since the commencement of the suit the Gas Commission has been abolished and the Public Service Commission has been created by the legislature in its stead. The official term of Attorney General Mayer has also expired, and Attorney General Jackson, his successor, has been substituted in his place.

The ground for the relief asked for in the bill was the alleged unconstitutionality of the acts and the order, because the rates fixed were so low as to be confiscatory. Upon filing the bill a preliminary injunction was granted (146 Fed. Rep. 150), and after issue was joined the case was referred to one of the standing masters of the court to take testimony, in conformity to the practice indicated in *Railroad* v. *Tompkins*, 176 U. S. 167, 179.

A hearing was had before the master, who reported in favor of the complainant. The case then came before the Circuit Court, and, after argument, a final decree was entered, restraining defendants from enforcing the provisions of the acts and the order relating to rates or penalties. 157 Fed. Rep. 849. These various defendants, except the District Attorney, have taken separate appeals directly to this court from the decree so entered. The acts which are declared void as unconstitutional are chapter 736 of the Laws of 1905, which limits the price of gas sold to the city of New York to a sum not to exceed 75 cents per thousand cubic feet. The act also requires that the gas sold shall have a specified illuminating power, and a certain pressure at all distances from the place of manufacture. Penalties are attached to a violation of the act. The other act is chapter 125 of the Laws of 1906, limiting the prices of gas in the boroughs of Manhattan and the Bronx, to other consumers than the city of New York, to 80 cents per thousand cubic feet, with like penalties as in the act of 1905, and with the same provisions as to illuminating power and the pressure in the service mains. The order which was declared invalid was one made by the Gas Commission created under and by virtue of chapter 737 of the Laws of 1905, the order providing that the price of gas in the city should be not more than 80 cents to consumers other than the city of New York. The order had the same provisions as to illuminating power and pressure as the acts above mentioned. The master and the court below found that the 80-cent rate was so low as to amount to confiscation, and hence the acts and the order were invalid as in violation of the Federal Constitution.

Mr. Edward B. Whitney, with whom *Mr. George S. Coleman* was on the brief, for appellants Willcox *et al:*

A simple allegation that a statute is unconstitutional is no exception to the rule that equity can only be resorted to when there is no adequate remedy at law. *Cruickshank* v. *Bidwell*, 176 U. S. 73; *Indiana Manufacturing Co.* v. *Koehne*, 188 U. S. 681, 684. The suit cannot be maintained on the ground that it prevents multiplicity of actions, since no representative consumers were made parties, as in *Ex parte Young*, 209 U. S. 123, 129. See *Richman* v. *Consolidated Gas Co.*, 114 N. Y. App. Div. 216, 224; *S. C.*, 186 N. Y. 409. A statute should never if possible be construed so as to be unconstitutional or absurd. *Oates* v. *National Bank*, 100 U. S. 244; *Grenada County* v. *Brogden*, 112 U. S. 268. Penalty laws are strictly construed. *France* v. *United States*, 164 U. S. 676, 682; *Bolles* v. *Outing Co.*, 175 U. S. 262, 265; *United States* v. *One Bay Horse*, 128 Fed. Rep. 207. The penalty clause in this act was not properly construed by the court below, but as properly construed is reasonable. *Cox* v. *Paul*, 175 N. Y. 328; *Griffin* v. *Interurban Street Railway Co.*, 179 N. Y. 438, 448–449; *S. C.*, 180 N. Y. 538; see cases cited in *In re Snow*, 120 U. S. 286; *United States* v. *Patty*, 2 Fed. Rep. 664; *Armour Packing Co.* v. *United States*, 209 U. S. 56, 77; *United States* v. *Eagan*, 30 Fed. Rep. 498; *Taft* v. *Stephens Lithographic Co.*, 38 Fed. Rep. 28; *Creeps* v. *Durden*, Cowp. 640; *Central R. R. Co.* v. *Green*, 86 Pa. St. 427. Assuming equity to have had jurisdiction, it should have been declined and the controversy remitted to the state courts.

The 75-cent rate as to the city is not an unconstitutional discrimination. On the contrary, since the 75-cent statute was passed in 1905, and under it the complainant could still earn nearly ten per cent according to the Circuit Court figures, it was valid when enacted, and therefore could not be made invalid by the passage of a subsequent law, even if the latter were unconstitutional.

Under the rule laid down in *Sweet* v. *Rechel*, 159 U. S. 380, 392 (derived from *Wellington, Petitioners,* 16 Pick. 87, 96–97, and *Talbot* v. *Hudson,* 16 Gray, 417, 422), and the test laid down in *San Diego Land Co.* v. *Jasper,* 189 U. S. 439, 441–442, as between two unimpeached and qualified expert witnesses, the valuations most favorable to defendant must be adopted; a statute cannot be declared unconstitutional upon testimony of experts or employés (see *Chicago & Grand Trunk Railway Co.* v. *Wellman,* 143 U. S. 339), unless the State admits its correctness; complainant is entitled to no higher valuations than those which it has itself fixed under oath; and items incapable of exact valuation must be put down at the minimum amount that a fair minded state court could fix. At least as to all items of capitalization over and above the actual cost of the property, the test must be this: Is it logical or equitable that the consumer should pay more cents per thousand cubic feet of the gas he burns because of the inclusion of this item?

The period to which attention must be directed is the month of May, 1906, when the suit was begun. If conditions thereafter change, the remedy is under *Smyth* v. *Ames,* 169 U. S. 466, 549–550.

The basis of valuation of the land occupied by complainant's plants should not exceed its cost to the company. Of two gas companies, long established in the same community, neither should be permitted to charge a higher rate than the other to its consumers for the sole reason that, on account of movements of population uninfluenced by either company, the site of its plant would be the more valuable if vacated and sold. The fortunate company is entitled to obtain full value of the land when sold, but meanwhile the unrealized profit does not represent profit used in the manufacture and distribution of gas; it represents wealth which the manufacture and distribution of gas keeps out of use. But if the basis of valuation is to exceed the cost of the land it should still not exceed the estimated cost of replacing it with other land capable of accomplishing the same result.

The manufacturing plants should be valued not at what it would cost to reproduce them as they stand, but at what it would cost to produce a modern construction which could do the same amount of work. The complainant is estopped from disputing in such a case as this the valuation which it has itself given to the state tax officers and investigating committee.

The complainant is not entitled to any allowance of increased value over original cost of the pipes in the streets, due to the fact that the streets have been repaved with money raised by assessments upon the consumers, complainant being excused under the state law from paying assessments.

A franchise with, is to be distinguished from a franchise without, the right to charge a minimum toll or earn a minimum dividend. *Monongahela Navigation Co.* v. *United States*, 148 U. S. 312, belongs to the latter class (see original record in that case, pp. 33, 39, 50, 53, and brief for appellee therein). A revocable franchise is not entitled to be valued at a substantial sum. *Kingsland* v. *The Mayor*, 110 N. Y. 569, 583. The franchises claimed by complainant are either unconstitutional, or not complainant's property, or revocable immediately or upon short notice. Moreover, a franchise to build and operate, without any special contract guaranteeing a minimum rate, has no value cognizable in rate-making or condemnation proceedings except that it gives the company the valuable right to have its tangible assets valued as portions of a profitable going concern, instead of merely as a job lot of secondhand material. See *People ex rel. Metropolitan Street Railway Co.* v. *Tax Commissioners*, 174 N. Y. 417; *Brunswick Water District* v. *Maine Water Co.*, 99 Maine, 371, 375–381. Such a franchise must be construed as having been granted subject to the fixing of a reasonable maximum rate. There is an implied understanding that the tolls shall be high enough to give the company a fair return. A fair return on what? What would counsel advise a proposed purchaser about it, the day after the company opened for business? According to our contention it would be calculated upon the capital invested. Moreover, the State can at any time authorize or direct the city to build its own lighting plant. If this be done, the company must drop its claim for a profit on its alleged franchise or lose all its customers. *Skaneateles Water Case*, 161 N. Y. 154; *S. C.*, 184 U. S. 354, and the *Newburyport Cases*, 168 Massachusetts, 541, 555; 103 Fed. Rep. 584; 193 U. S. 561.

The basis of the maximum rate regulation should not be a figure exceeding the capital actually invested. At the time of the granting of the franchise the implied understanding is that a reasonable return will be allowed upon the capital invested, in view of the special risk of the enterprise. If assured that the public will protect him to the extent of allowing him to make, if successful, a profit upon that investment proportionate to that risk, the investor will take it.

As to the rate of return, it has been already decided that six per cent, including an allowance for depreciation, is sufficient. *San Diego Co.* v. *Jasper*, 189 U. S. 439, 446. But it is submitted that property is not taken under the Fourteenth Amendment if the owner is allowed, over and above a proper contingent fund, a sum sufficient to cover the elements known in political economy as interest on capital and wages of superintendence; the element of insurance against the special risks of the business not being protected by the Fourteenth Amendment, but one as to which the responsibility is upon the State. Mill's Political Economy, Book I, Ch. 15, § 1; J. L. Laughlin's Elements of Political Economy, ed. 1902, pp. 202, 206; Marshall's Principles of Economy, Book VI, Ch. 6, §§ 4, 5. If complainant is entitled to six per cent upon any part of its investment, it is not so entitled as to the whole of the investment; for companies so situated could borrow in ordinary times at considerably lower rate to the extent of half the tangible property, nor is there evidence justifying the return at any particular rate upon the franchise item.

The bill should be dismissed because the experience of the other companies doing business in the same territory, as well as of this complainant, should have been shown. If one of two companies doing business in the same territory can make a reasonable profit at the statutory rate, then that rate is constitutional as to both companies, since to apply it to that company alone would violate its rights under the Fourteenth Amendment. See *Gill Case*, 156 U. S. 657; *Cotting Case*, 183 U. S. 114. Applying the same rate to the company less well equipped would not violate its rights, although it might force reconstruction, temporarily cutting off any return. *Moeschen* v. *Tenement House Department*, 89 N. Y. App. Div. 526, 538; 179 N. Y. 325, 330; 203 U. S. 583.

Assuming that an injunction were proper in this case, it should have been conditioned upon complainant's reducing its charge for gas to whatever sum would be deemed constitutional. 1 Pomeroy's Eq. Jurispr., §§ 385–386, 389, 393; *De Walsh* v. *Braman*, 160 Illinois, 415, 420; see also *Veazie* v. *Williams*, 8 How. 134, 161; *Willard* v. *Tayloe*, 8 Wall. 557, 567; *People's Bank* v. *Marye*, 191 U. S. 272, 281, 285, and cases cited; *S. C.*, 3 Dill. 19, 34; *Farmers' Loan & Trust Co.* v. *Denver Co.*, 126 Fed. Rep. 46, 51; *Thomas* v. *Evans*, 105 N. Y. 601, 615; *Fanning* v. *Dunham*, 5 Johns. Ch. 122, 142, and cases cited; *Stanly* v. *Gadsby*, 10 Pet. 521; *Tiffany* v. *Boatman's Inst.*, 18 Wall. 375, 385; *Knoth* v. *Manhattan Railway Co.*, 109 App. Div. 802, 807, affirmed 187 N. Y. 243.

Mr. Alton B. Parker, with whom *Mr. Francis K. Pendleton* and *Mr. William P. Burr* were on the brief, for the city of New York, appellant in No. 397:

The court below erred in assigning to the franchises acquired by the appellee under the consolidation agreement a money value as part of the investment on which it is entitled to a return. It was solely on the finding by the court of a value of $12,000,000 for these franchises that the court decreed the enactments to be unconstitutional in respect of the rates fixed. Whatever monetary value might, for any purpose, be assigned to these franchises, it disappears when the rate of charge for service is so reduced as to yield no more than a fair and reasonable return on the investment in the means employed in rendering the service; the court having found $47,831,435 as the value of the tangible assets employed by the appellee, and six per cent to be a reasonable return, and that the return the appellee would probably realize at the reduced rate would be $3,024,592.45, which is more than six per cent on the valuation so found—the court erred in adding to that valuation $12,000,000 for franchises, thus increasing the investment to $59,831,435, on which the probable return would be less than six per cent, though the return would even then be reasonable.

The court below erred in assigning to the tangible assets any value in excess of their original cost to the constituent corporations of the appellee and the cost of any additions thereto since 1884, the time of consolidation. The entire cost of the real estate employed in its business by the appellee was only $4,118,267.38 as against $11,985,435 allowed by the decree, being a difference of $7,867,167.62, which, being deducted from the total valuation of $47,831,435, would reduce that total to $39,964,268.38, on which the return of $3,024,592.45 would be more than seven per cent. Further, if the valuation for franchises be excluded, whether we take original cost to constituent corporations, or appraised valuation by the constituent corporations in 1884 for the purposes of consolidation and additions thereto since then, or even present values as found by the master and approved by the court, the result is the same; the net return of $3,024,592.45 exceeds six per centum; when the item franchises, valued by the corporations in 1884 at $7,781,000, and not separately valued by the master, but increased by the court, through a process of reasoning, to $12,000,000 is added that even then the return is over five per centum. And further, $5,555,761.63 has been unwarrantably added for reproductive cost of mains and services and deducting this sum and the excessive allowance for real estate from the total found by the court, the return to the appellee on its investment would be more than eight per cent.

The return of six per cent adopted by the court, is more than a fair return to the appellee, that is more than is usually obtained or expected from equally safe investments.

The finding of the court as to the impossibility of the appellee fulfilling the requirement as to pressure in its mains is predicated of the erroneous valuations of the property of the appellee, and these being corrected the appellee would be able to make the requisite changes and still have a fair return; and the requirement is separable from the other provisions.

The legislation complained of is not unjustly discriminatory; the discrimination is just and reasonable, the city standing in the relation of a wholesale consumer or buyer; the cost of supplying the city is greatly less than the cost of supplying other consumers; and the difference of five cents per thousand feet in favor of the city when spread over the entire sales of the appellee results in a difference of only fifteen one-hundredths of a cent per thousand feet in favor of the city.

The appellee has an adequate defense at law against proceedings to enforce performance of any of the provisions of the statute, if they are not enforcible, and, by injunction, against the separable provisions for penalties.

Mr. William S. Jackson, Attorney General of the State of New York, for appellant in No. 398:

The evidence fails to show that it was impossible for the legislature fair-mindedly to come to the results reached.

The legislative acts were based upon evidence presented by complainant.

The legislative acts were invalidated by improper methods of valuation, involving property not entitled to a return, gross over-valuations and duplications. For purposes of rate regulation, neither franchise nor good-will can be valued separately from tangible property. The valuation of franchises and good-will would nullify the State's power to reduce rates once established. But that power has been upheld by this court in *Stanislaus County* v. *San Joaquin C. & I. Co.*, 192 U. S. 213, 214.

The owner is entitled to a return only upon the fair value of the property necessary for the particular use. *Covington & Lexington Co.* v. *Sandford*, 164 U. S. 578. For there may "have been extravagant and needless expenditure of money" in construction; it may have been invested in a plant "unwisely built." *Reagan* v. *Farmers' Loan & Trust Co.*, 154 U. S. 362; "it may have been invested in property that cost more than it should have cost." *San Diego L. & T. Co.* v. *National City*, 174 U. S. 739. "Great mistakes of construction, even though honest, may have been made, which unnecessarily enhance the cost; more property may have been acquired than necessary and needful for the purpose intended." *Stanislaus County* v. *San Joaquin C. & I. Co.*, 192 U. S. 201; and "reckless and unnecessary expenditures, not legitimately incurred in the acquisition, construction or preservation of so much of the plant as is necessary for the purpose, may have been made." *San Diego City Co.* v. *City of San Diego*, 62 Am. St. Rep. 273. The question of reasonableness of a rate involves the element of reasonableness both as regards the company and as regards the public. *Chicago &c. R. R.* v. *Minnesota*, 134 U. S. 450; *Turnpike Co.* v. *Sandford*, 164 U. S. 578.

The rate fixed must be just to the public as well as to the public service corporation. *San Diego Land Co.* v. *National City*, 174 U. S. 757; *San Diego Land & Town Co.* v. *Jasper*, 189 U. S. 442; *Turnpike Co.* v. *Sandford*, 164 U. S. 578; *Smyth* v. *Ames*, 169 U. S. 546.

The State has the right to secure to the public the benefits of the advancement in the particular science affected by the law, and its power so to do is not to be restricted by the employment of obsolete apparatus or the use of methods which that particular science has long since discarded. *Gill Case*, 156 U. S. 657.

The 80-cent rate will be held to yield complainant a fair return unless it is plainly and palpably confiscatory. *Chicago &c.* v. *Wellman,* 143 U. S. 339, 444; *Reagan* v. *Farmers' Loan & Trust Co.,* 154 U. S. 362, 391; *Smyth* v. *Ames,* 169 U. S. 466, 529; *Henderson Bridge Co.* v. *Henderson City,* 173 U. S. 592, 614, 615; *San Diego Land Co.* v. *National City,* 174 U. S. 739, 754; *San Diego Land Co.* v. *Jasper,* 189 U. S. 439; *Ball* v. *Rutland R. R. Co.,* 93 Fed. Rep. 19; *Palatka Waterworks* v. *Palatka,* 127 Fed. Rep. 161.

The maximum rate fixed by chapter 125 of the Laws of 1906, will permit complainant to earn a fair return upon the property employed by it in its gas business.

A statute which permits a public service corporation to earn a return of five and five-tenths (5.5) per cent per annum upon investment in constantly appreciating realty, in plant and property in the streets protected against depreciation, and upon intangible property, which is constantly appreciating in value, does not constitute confiscation of that property.

The provisions as to candle power, pressure and penalties do not invalidate the acts and they are separable. *Reagan* v. *Farmers' Loan & Trust Co.,* 154 U. S. 362, 394–396; *Consolidated Gas Co.* v. *Mayer,* 146 Fed. Rep. 155.

The eleven-cent allowance by the court was excessive.

We submit that all this allowance in excess of 7.70 cents for current repairs and replacements is excessive. The 7.70-cent charge keeps the plant at all times presently efficient. The average for twenty years has been 10.89 cents, and the development of the capacity under that average shows that it was much more than necessary for the purpose now pretended. *Cedar Rapids Water Co.* v. *Cedar Rapids,* 199 U. S. 600.

Mr. James M. Beck, Mr. John A. Garver and *Mr. Charles F. Matthewson* for appellee:

Mr. Beck: In the statutes here in question the provisions as to pressure are unconstitutional, and invalidate both statutes. The undisputed and indisputable conclusions from the testimony upon this point are:

Assuming that compliance with the pressure provisions was at all practicable, it would involve the expenditure of at least $4,000,000, a substantial increase in operating charges and a reconstruction of the company's distributing system throughout the city; such compliance was physically impossible before the act became operative and the penalties for non-compliance accrued; nor could such increased fixed charges and operating expenses be incurred under the eighty-cent gas rate, and leave a fair return.

The penalties for failure to comply would aggregate at $5,000 per day, $1,800,000 per year under complainant's distributing system as now existing and in operation.

The subjects of price, quality and pressure are so interwoven in these statutes that the requirements as to pressure cannot be severed from the other provisions so that the court can reasonably believe that the legislature would have enacted the provisions as to price and candle power with the provision as to pressure eliminated, and this being so, the whole scheme of legislation is invalidated. The legislative history of the statutes plainly shows the interdependence of the provisions.

This court is under no obligation to determine for the legislature which of two impossible alternatives is to be eliminated. *Non constat* that the legislature may not prefer to retain the old maximum price of $1 to enable the complainant to reconstruct its plant; *non constat* that it may not prefer to repeal the provisions as to pressure in order that the price of gas may be reduced.

The cases cited by counsel for appellants upon the question of severability do not sustain their contentions. *Pollock* v. *Loan Co.*, 158 U. S. 601; *Employer's Liability Cases*, 207 U. S. 463, 501; *Field* v. *Clark*, 143 U. S. 649; *McPherson* v. *Blacker*, 146 U. S. 1; *Baldwin* v. *Franks*, 120 U. S. 685; *Huntington* v. *Worthing*, 120 U. S. 97; *Allen* v. *Louisiana*, 103 U. S. 80, discussed and distinguished.

The severability of different portions of a statute is a question of construction, and in this case a New York statute should be construed by New York decisions under which the pressure provision is not severable from the body of the statute. See *People* v. *Porter*, 90 N. Y. 68; *Trustees Saratoga Springs* v. *Gas Co.*, 191 N. Y. 123.

The provisions of said acts as to penalties are unconstitutional on their face and invalidate both statutes. Such penalties operate as a denial of the equal protection of the laws. *Cotting* v. *Stockyards Co.*, 183 U. S. 79; *Ex parte Young*, 209 U. S. 123; *Chicago Ry. Co.* v. *Minnesota*, 134 U. S. 418.

Both statutes are unduly discriminatory, and therefore unconstitutional upon their face.

This corporation has, as every one has, the liberty of contract guaranteed by the Fourteenth Amendment. *Lochner* v. *New York*, 198 U. S. 53; *Allgeyer* v. *Louisiana*, 165 U. S. 589. The State, therefore, has no general and unlimited right to interfere between the producer and the consumer as to the price upon which they would otherwise mutually agree, and while, as to public utility corporations the supervisory power of the State, subject to the guarantees of the Constitution, has been recognized since *Munn* v. *Illinois*, yet the State, when it seeks to interfere with the rights of property and the liberty of the citizen to contract for the sale of the products of his labor, only has power to prevent extortion by maximum charges of general and uniform application.

Under the police power to regulate rates, the State is without power to direct a public utility corporation to sell to one customer at a less price than to another. Its power to step between the public service corporation and its customers is exhausted when it fixes a general and uniform maximum price for the public service. *Lake Shore R. R. Co.* v. *Smith*, 173 U. S. 684. See also *Wilson* v. *United Traction Co.*, 72 App. Div. 233; *Beardsley* v. *Railroad Co.*, 162 N. Y. 230.

The rate fixing power is one of prohibition. In strictness, it does not fix rates, but simply provides that any sum beyond a given maximum is unreasonable. In so doing, it in effect declares that the maximum is a reasonable price. *Brooklyn*

Union Gas Co. v. *New York*, 188 N. Y. 334; *Lake Shore Ry. Co.* v. *Smith*, 173 U. S. 684, 695.

When, therefore, the State provides that as to all other consumers, 80 cents per thousand feet is a reasonable charge, and provides that, as to one consumer, no greater charge than 75 cents shall be made, it in effect declares that to the favored consumer gas must be sold at less than a reasonable rate. This the State cannot do.

The finding of the Circuit Court that the rates prescribed would yield the complainant less than a just and reasonable rate of return is a finding of fact and not a conclusion of law, and this court should therefore give to such finding the controlling weight of a special verdict of a jury and not reverse such finding except for clear and indubitable error. *Turnpike Co.* v. *Kentucky*, 164 U. S. 578; *C., M. & St. P. R. R. Co.* v. *Tompkins*, 176 U. S. 167; *Davis* v. *Schwartz*, 155 U. S. 631, 636; 1 Foster's Fed. Prac., § 315, p. 690; *Green* v. *Bishop*, 1 Cliff. 186, 194; *Mason* v. *Crosby*, 3 Woodb. & Minn. 258, 269; *Donnell* v. *Columbia Ins. Co.*, 2 Sumn. 366, 371; *Welling* v. *La Bau*, 34 Fed. Rep. 40; *Moline Plow Co.* v. *Carson*, 72 Fed. Rep. 387, 388; *Fidelity &c. Co.* v. *St. Matthew's Savings Bank*, 104 Fed. Rep. 858, 860; *Paddock* v. *Commercial Ins. Co.*, 104 Massachusetts, 521, 531; *Richards* v. *Todd*, 127 Massachusetts, 167, 172; *Penna. R. R. Co.* v. *Philadelphia County*, 220 Pa. St. 100.

The Fourteenth Amendment invalidates a rate if it yield less than just remuneration, even though it yield some return. *Cotting* v. *Stockyards Co.*, 183 U. S. 91; *Railroad Commission Cases*, 116 U. S. 307; *Monongahela Navigation Co.* v. *United States*, 148 U. S. 312, 326; *Munn* v. *Illinois* (dissenting opinion of Field, J.), 94 U. S. 141; *Chicago R. R. Co.* v. *Minnesota*, 134 U. S. 418, 458; *Reagan* v. *Farmers' Loan & Trust Co.*, 154 U. S. 362, 397; *Smyth* v. *Ames*, 169 U. S. 466; *San Diego Land Co.* v. *National City*, 174 U. S. 739; *Minneapolis R. R. Co.* v. *Minnesota*, 186 U. S. 257; *Atlantic Coast Line R. R. Co.* v. *N. C. Corp. Com.*, 206 U. S. 1.

A composite statement of this court, therefore, is that legislative rates, to be constitutional, must yield a "compensation" that is "full," "fair," "just," "reasonable" and "adequate" and one that is not less than the "market value" of such use.

The rule that the fair return must not be less than the legal rate of interest is justified on reason and authority. *Brunswick Water District* v. *Maine Water Co.*, Beale and Wyman on R. R. Rate Regulation, § 401; *Brymer* v. *Water Co.*, 179 Pa. St. 251; *Pennsylvania R. R. Co.* v. *Philadelphia County*, 220 Pa. St. 100, 115; *Chicago Union Traction Co.* v. *State*, 114 Fed. Rep. 557, 561; *Louisville Ry. Co.* v. *Brown*, 123 Fed. Rep. 946; *Central R. R. of Ga.* v. *Alabama*, 161 Fed. Rep. 925; *Milwaukee Ry. & Light Co.* v. *Milwaukee*, 87 Fed. Rep. 577; *Southern Pacific R. R. Co.* v. *Commonwealth*, 78 Fed. Rep. 236; *Spring Valley Water Works* v. *San Francisco*, 124 Fed. Rep. 598; *Bridge Co.* v. *Canada Southern Ry.*, 7 Ont. App. 226.

The basis of calculation should be the present value of the property and not its original cost. *San Diego Land Co.* v. *National City*, 174 U. S. 739, 757; *Cotting* v. *Stockyards Co.*, 183 U. S. 79, 91; *Smyth* v. *Ames*, 169 U. S. 547; *San Diego Land Co.* v. *Jasper*, 189 U. S. 439, 442; *Stanislaus County* v. *Irrigation Co.*, 192 U. S. 201, 215; *Cotting* v. *Kansas City Stockyards Co.*, 82 Fed. Rep. 850, 854.

Mr. Garver: Special franchises must be included among the assets upon which the company is entitled to a return. The special franchises which are involved in the case at bar are the identical franchises which were under consideration by this court in the Special Franchise Tax Cases. *Metropolitan Street Ry. Co.* v. *New York*, 199 U. S. 1, affirming 174 N. Y. 417; *Consolidated Gas Co.* v. *New York*, 199 U. S. 53.

The law of New York controls as to nature of special franchises. *Ohio Oil Co.* v. *Indiana*, 177 U. S. 190, 205, 207; *Muhlker* v. *Harlem R. R. Co.*, 197 U. S. 544; *Vicksburg* v. *Vicksburg Water Works Co.*, 206 U. S. 496, 509.

In New York, special franchises are property in the fullest sense. *Sixth Ave. R. Co.* v. *Kerr*, 72 N. Y. 330; *People* v. *O'Brien*, 111 N. Y. 1, 40; *Suburban Rapid Transit Co.* v. *New York,* 128 N. Y. 510, 520; *People ex rel. Woodhaven Gas Co.* v. *Deehan,* 153 N. Y. 528, 532; *Parker* v. *Elmira, C. & N. R. Co.,* 165 N. Y. 274; *People* v. *Tax Commissioners,* 174 N. Y. 417, 437; *Matter of White Plains Commissioners,* 176 N. Y. 239; *Matter of Long Acre El. L. & P. Co.,* 188 N. Y. 361; *Hatfield* v. *Straus,* 189 N. Y. 208, 219; *Coney Island &c. R. Co.* v. *Kennedy,* 15 App. Div. 588, 592; *Rochester &c. Turnpike Road Co.* v. *Joel,* 41 App. Div. 43, 45; *Wakefield* v. *Village of Theresa,* 125 App. Div. 38.

A corporation cannot be deprived of its special franchises, except under the power of eminent domain and upon payment of their full value. *Sixth Ave. R. Co.* v. *Kerr,* 72 N. Y. 330; *Matter of White Plains Commissioners,* 176 N. Y. 239; *Coney Island &c. R. Co.* v. *Kennedy,* 15 App. Div. 588, 592; *Spring Valley Water Works* v. *San Francisco,* 124 Fed. Rep. 574; *Monongahela Nav. Co.* v. *United States,* 148 U. S. 312.

While the point has not been directly passed upon by this court, yet, wherever it has been referred to in the general discussion of the subject of rate regulation, it has been stated or assumed that, in fixing a rate, the value of the special franchises must be included in valuing the property of a public service corporation. *Smyth* v. *Ames,* 169 U. S. 466; *Reagan* v. *Farmers' L. & T. Co.,* 154 U. S. 362; *Chicago &c. Ry. Co.* v. *Tompkins,* 176 U. S. 167; *Detroit* v. *Detroit Citizens' St. Ry. Co.,* 184 U. S. 368.

In addition to the fact that these franchises are regarded as "property in the highest sense," in New York there are some special considerations which would make it peculiarly flagrant for the legislature of that State to disregard them, in establishing a maximum rate for a public service corporation, and particularly for the appellee. *People* v. *O'Brien,* 111 N. Y. 1, 40.

In New York, special franchises are assessed for the purposes of taxation, under a special statute passed for that purpose. Laws 1899, Ch. 412; *People* v. *Tax Commissioners,* 174 N. Y.

417, 437. The right to capitalize special franchises has been recognized by the law of New York. Laws 1907, Ch. 429, §§ 55, 69. The capitalization of special franchises was expressly sanctioned in 1884. Laws 1884, Ch. 367.

An unconditional grant by a State constitutes a contract, which is entitled to protection under the Constitution just as fully as a grant made by an individual. *Fletcher* v. *Peck*, 6 Cranch, 87; *Sinking Fund Cases*, 99 U. S. 700, 719; *New Orleans Water Works Co.* v. *Rivers*, 115 U. S. 674, 681; *People* v. *O'Brien*, 111 N. Y. 1.

Good will should have been included among the assets upon the value of which the company was entitled to a return. Good will is a valuable property right, growing out of the successful establishment of a business, over and above the actual capital invested and employed in the business. *Franchises Tax Cases*, 174 N. Y. 417, 424; *Gue* v. *Tidewater Canal Co.*, 24 How. 261; *State R. R. Tax Cases*, 92 U. S. 575, 606; *Slater* v. *Slater*, 175 N. Y. 143; *Matter of White Plains Commissioners*, 176 N. Y. 239; *People* v. *Roberts*, 154 N. Y. 101; *Cleveland &c. Ry. Co.* v. *Backus*, 154 U. S. 439; *Express Company Cases*, 166 U. S. 171, 185; *Western Union Tel. Co.* v. *Gottlieb*, 190 U. S. 412; *Fargo* v. *Hart*, 193 U. S. 490; *San Francisco Bank* v. *Dodge*, 197 U. S. 70.

Mr. Matthewson dealt exclusively with the facts in the cases.

By leave of court, *Mr. W. Bourke Cockran*, representing certain interested parties, and *Mr. Nathan Matthews*, representing the complainant in the case of *Haverhill Gas Light Company* v. *Barker*, pending in U. S. Circuit Court for the District of Massachusetts, filed briefs herein, as *amici curiæ*.

MR. JUSTICE PECKHAM, after making the foregoing statement, delivered the opinion of the court.

At the outset it seems to us proper to notice the views regarding the action of the court below, which have been stated by counsel for the appellants, the Public Service Commission, in their brief in this court. They assume to criticise that court for taking jurisdiction of this case, as precipitate, as if it were a question of discretion or comity, whether or not that court should have heard the case. On the contrary, there was no discretion or comity about it. When a Federal court is properly appealed to in a case over which it has by law jurisdiction, it is its duty to take such jurisdiction (*Cohens* v. *Virginia*, 6 Wheat. 264, 404), and in taking it that court cannot be truthfully spoken of as precipitate in its conduct. That the case may be one of local interest only is entirely immaterial, so long as the parties are citizens of different States or a question is involved which by law brings the case within the jurisdiction of a Federal court. The right of a party plaintiff to choose a Federal court where there is a choice cannot be properly denied. *In re Metropolitan Railway Receivership*, 208 U. S. 90–110; *Prentis* v. *Atlantic Coast Line et al.*, 211 U. S. 210. In the latter case it was said that a plaintiff could not be forbidden to try the facts upon which his right to relief is based before a court of his own choice, if otherwise competent. It is true an application for an injunction was denied in that case because the plaintiff should in our opinion have taken the appeal allowed him by the law of Virginia while the rate of fare in litigation was still at the legislative stage, so as to make it absolutely certain that the officials of the State would try to establish and enforce an unconstitutional rule.

The case before us is not like that. It involves the constitutionality, with reference to the Federal Constitution, of two acts of the legislature of New York, and it is one over which the Circuit Court undoubtedly had jurisdiction under the act of Congress, and its action in taking and hearing the case cannot be the subject of proper criticism.

An examination of the record herein, with reference to the questions involved in the merits, shows that the act under which the Gas Commission was appointed was subsequently to the commencement and trial of this suit, declared, on grounds not here material, to be unconstitutional by the Court of Appeals of New York. 191 N. Y. 123, February 18, 1908. The order made by the commission must therefore be regarded as invalid. It is not important in this case, because the act of the legislature of 1906, makes the same provision as to the price of gas to consumers other than the city that the order does. We have as remaining to be considered the above-mentioned two acts of the legislature.

The question arising is as to the validity of the acts limiting the rates for gas to the prices therein stated. The rule by which to determine the question is pretty well established in this court. The rates must be plainly unreasonable to the extent that their enforcement would be equivalent to the taking of property for public use without such compensation as under the circumstances is just both to the owner and the public. There must be a fair return upon the reasonable value of the property at the time it is being used for the public. *San Diego Land & Town Company* v. *National City*, 174 U. S. 739, 757; *Same* v. *Jasper*, 189 U. S. 439, 442.

Many of the cases are cited in *Knoxville* v. *Water Co.*, just decided, *ante*, p. 1. The case must be a clear one before the courts ought to be asked to interfere with state legislation upon the subject of rates, especially before there has been any actual experience of the practical result of such rates. In this case the rates have not been enforced as yet, because the bill herein was filed and an injunction obtained restraining their enforcement before they came into actual operation.

In order to determine the rate of return upon the reasonable value of the property at the time it is being used for the public, it, of course, becomes necessary to ascertain what that value is. A very great amount of evidence was taken before the master upon that subject, which is included in five large volumes of the record. Valuations by expert witnesses were given as to the value of the real estate owned by the complainant, and as to the value of the mains, service pipes, plants, meters and miscellaneous personal property.

The value of real estate and plant is to a considerable extent matter of opinion, and the same may be said of personal estate when not based upon the actual cost of material and construction. Deterioration of the value of the plant, mains, and pipes is also to some extent based upon opinion. All these matters make questions of value somewhat uncertain; while added to this is an alleged prospective loss of income from a reduced rate, a matter also of much uncertainty, depending upon the extent of the reduction and the probable increased consumption, and we have a problem as to the character of a rate which is difficult to answer without a practical test from actual operation of the rate. Of course, there may be cases where the rate is so low, upon any reasonable basis of valuation, that there can be no just doubt as to its confiscatory nature, and in that event there should be no hesitation in so deciding and in enjoining its enforcement without waiting for the damage which must inevitably accompany the operation of the business under the objectionable rate. But where the rate complained of shows in any event a very narrow line of division between possible confiscation and proper regulation, as based upon the value of the property found by the court below, and the division depends upon opinions as to value, which differ considerably among the witnesses, and also upon the results in the future of operating under the rate objected to, so that the material fact of value is left in much doubt, a court of equity ought not to interfere by injunction before a fair trial has been made of continuing the business under that rate, and thus eliminating, as far as is possible, the doubt arising from opinions as opposed to facts.

A short history of the complainant, as to its incorporation and its capital, and the method by which the value of its franchises was arrived at, will render the further examination of the case more intelligible.

Prior to 1884 there were seven gaslight companies in New York City, each operated under separate charters, granted at different times between the years 1823 and 1865 or 1871. They each had the right to use the streets of certain portions of the city for the purpose of laying their mains and service pipes in order to furnish gas to the city and the citizens. Not one of the companies had ever been called upon to pay a penny for such right, but the grant to each was in that aspect a gratuity. It was not, at the time of granting franchises such as these, the custom to pay for them.

In 1884, by chapter 367 of the laws of that year, authority to consolidate manufacturing corporations was granted upon conditions mentioned in the act. The directors of the corporations proposing to consolidate were to make an agreement for consolidation, embracing, among other things, the amount of capital and the number of shares of stock into which it should be divided, the capital not to be in amount more "than the fair aggregate value of the property, franchises and rights of the several companies to be consolidated." The agreement was not to be valid until submitted to the stockholders of each of the companies and approved by two-thirds of each. The constituent companies, which were afterwards consolidated under their agreement, and pursuant to the act mentioned, were six in number, the seventh, the Mutual Company, withdrawing. The companies agreed upon the valuation of their property, which was to be paid for in the stock of the consolidated company, and the original stock held by the stockholders of each company was surrendered to the consolidated company. The value of the franchises of all the companies was set at the figure of $7,781,000. The court below said that the master reported there was little direct evidence before him as to the value of the franchises, to which the court added that if the master, by direct evidence, meant testimony of the same kind regarding their value as had been offered regarding every item of tangible property, there was none at all.

The court further stated "that it does not appear in the evidence how the valuation of the franchises was measured, or why the figures selected were chosen, but that it was true that when complainant was organized, in 1884, under the consolidation statute, which in terms permitted it to acquire the property and franchises of the other companies, it issued stock of the par value of $7,781,000, representing the franchises it then acquired and nothing else, and that the stock was held by purchasers, who, I am compelled to think, had a right to rely upon legal protection for legally issued stock." It is not, of course, contended there was special stock issued for this particular item, but it was included in the total sum for which the consolidated company issued its stock and upon its receipt the stockholders in the various companies surrendered their stock in those companies. The result was that the amount of the stock issued by the consolidated company was increased by $7,781,000, representing a value of franchises which was agreed upon by the stockholders in the companies, and which had never cost any of them a single penny.

It cannot be disputed that franchises of this nature are property and cannot be taken or used by others without compensation. *Monongahela Co.* v. *United States*, 148 U. S. 312; *People* v. *O'Brien*, 111 N. Y. 1, and cases cited. The important question is always one of value. Taking their value in this case as arrived at by agreement of their owners, at the time of the consolidation, that value has been increased by the finding of the court below to the sum of $12,000,000 at the time of the commencement of this suit. The trial court said: "If, however, complainant's franchises were worth $7,781,000 in 1884, and its tangible property, at the same time, was appraised (as appears in evidence), at $30,000,000 (in round figures), then since complainant's business (in sales volume) has, in twenty-three years, almost quadrupled, and its tangible assets grown to $47,000,000, it appears to me that a fair method of fixing value of the franchises in 1905 is to assume the same growth in value for the franchises as is demonstrated by the evidence in the case of tangible property. If, therefore, the franchise valuation of 1884 was proportioned to personalty and realty of $30,000,000, a franchise valuation proportioned to $47,000,000 in 1905 would be over $12,000,000. This, I think, a logical result from the assumption I am compelled to start with, *i. e.*, that franchises have a separate and independent value. But there is, however, no method of valuing franchises, except by a consideration of earnings; earnings must be proportioned to assets; and both kinds of assets, tangible and intangible, must stand upon the same plane of valuation; having, therefore, a measure of growth of tangible assets from 1884 to 1905, the franchise assets must be assumed to have grown in the same proportion. I find that the value of complainant's franchises at the date of inquiry was not less than $12,000,000, making a total valuation of $59,000,000, upon which the probable return is $3,030,000, or very considerably less than 6 per cent." The judge stated his own views as opposed to including these franchises in the property upon the value of which a return is to be calculated in fixing the amount of rates, but held that he was bound by decided cases to hold against his personal views.

We are not prepared to hold with the court below as to the increased value which it attributes to the franchises. It is not only too much a matter of pure speculation, but we think it is also opposed to the principle upon which such valuation should be made. This corporation is one of that class which is subject to regulation by the legislature in the matter of rates, provided they are not made so low as to be confiscatory. The franchises granted the various companies and held by complainant consisted in the right to open the streets of the city and lay down mains and use them to supply gas, subject to the legislative right to so regulate the price for the gas as to permit not more than a fair return (regard being had to the risk of the business) upon the reasonable value of the property at the time it is being used for the public.

The evidence shows that from their creation, down to the consolidation in 1884, these companies had been free from legislative regulation upon the amount of the rates to be charged for gas. They had been most prosperous and had divided very large earnings in the shape of dividends to their stockholders, dividends which are characterized by the Senate committee, appointed in 1885 to investigate the facts surrounding the consolidation, as enormous. The report of that committee shows that several of the companies had averaged, from their creation, dividends over sixteen per cent, and the six companies in the year 1884 paid a dividend upon capital which had been increased by earnings, as in the case of the Manhattan and the New York, of eighteen per cent, and, had it been upon the money actually paid in, it would have been nearly twenty-five per cent.

The committee also said in the same report that these "franchises were in force November 10, 1884, the time of the consolidation, and the money invested in them was earning the same enormous dividends. So far as the evidence shows, there was nothing in the condition of affairs on the 10th of November to indicate that these franchises would not be as valuable for the next twenty years as they had been in the past. There were gas companies enough in the city with a capacity capable of supplying the demands for the next twenty years. A law was on our statute books that virtually prohibited the laying of any more gas pipes in the streets. The gas companies had an agreement among themselves, fixing the price of gas at a figure that paid these dividends. The people were paying this price, as they had in the past, without objection or protest. This price may have been too high, and the dividends were excessive, but they were not illegal, and the valuation of the franchises computed upon these dividends, and that state of facts cannot be called a violation of a law that expressly authorized it to be done, unless such valuation was too high."

The committee, upon these facts, were of opinion that the valuation of $7,781,000 for the franchises was not more than their fair aggregate value.

Assuming, as the committee did, that the company would be permitted to charge the same prices in the future which in the past had resulted in these "enormous" or "excessive" dividends, it need not be matter of surprise that a franchise by means of which such dividends had been possible was not regarded as overvalued at the sum stated in 1884.

We think that under the above facts the courts ought to accept the valuation of the franchises fixed and agreed upon under the act of 1884 as conclusive at that time. The valuation was provided for in the act, which was followed by the companies, and the agreement regarding it has been always recognized as valid, and the stock has been largely dealt in for more than twenty years past on the basis of the validity of the valuation and of the stock issued by the company.

But although the State ought, for these reasons, to be bound to recognize the value agreed upon in 1884 as part of the property upon which a reasonable return can be demanded, we do not think an increase in that valuation ought to be allowed upon the theory suggested by the court below. Because the amount of gas supplied has increased to the extent stated, and the other and tangible property of the corporations has increased so largely in value, is not, as it seems to us, any reason for attributing a like proportional increase in the value of the franchises. Real estate may have increased in value very largely, as also the personal property, without any necessary increase in the value of the franchises. Its past value was founded upon the opportunity of obtaining these enormous and excessive returns upon the property of the company, without legislative interference with the price for the supply of gas, but that immunity for the future was, of course, uncertain, and the moment it ceased and the legislature reduced the earnings to a reasonable sum the great value of the franchises would be at once and unfavorably affected, but how much so it is not possible for us now to see. The value would most certainly not increase. The question of the regulation of rates did from time to time thereafter arise in the legislature, and finally culminated in these acts which were in existence when the court below found this increased value of the franchises. We cannot, in any view of the case, concur in that finding.

This increase in value did, however, form part of the sum upon which the court below held the complainant was entitled to a return. That court found the value of the tangible assets actually employed at the time of the commencement of this suit in the business of supplying gas by the complainant to be $47,831,435, to which it added the $12,000,000 as the value of the franchises as found by it, making the total of $59,831,435, upon which it held that the company was entitled to a return of 6 per cent, being $3,589,886.10. It also found its total net income for the year 1905 amounted to $5,881,192.45, almost 10 per cent upon the sum above named. Altering the finding of the court so far only as to place the value of the franchises at the time agreed upon in 1884, $7,781,000, the total value upon that basis of the property employed by the company would be $55,612,435, upon which 6 per cent would be $3,336,746.10, while the sum, estimated as the return on 80 cent gas would have been $3,024,592.14, which is nearly 5½ per cent on the above total of $55,612,435.

What has been said herein regarding the value of the franchises in this case has been necessarily founded upon its own peculiar facts, and the decision thereon can form no precedent in regard to the valuation of franchises generally, where the facts are not similar to those in the case before us. We simply accept the sum named as the value under the circumstances stated.

There is no particular rate of compensation which must in all cases and in all parts of the country be regarded as sufficient for capital invested in business enterprises. Such compensation must depend greatly upon circumstances and locality; among other things, the amount of risk in the business is a most important factor, as well as the locality where the business is conducted and the rate expected and usually realized there upon investments of a somewhat similar nature with regard to the risk attending them. There may be other matters which in some cases might also be properly taken into account in determining the rate which an investor might properly expect or hope to receive and which he would be entitled to without legislative interference. The less risk, the less right to any unusual returns upon the investments. One who invests his money in a business of a somewhat hazardous character is very properly held to have the right to a larger return without legislative interference, than can be obtained from an investment in Government bonds or other perfectly safe security. The man that invested in gas stock in 1823 had a right to look for and obtain, if possible, a much greater rate upon his investment than he who invested in such property in the city of New York years after the risk and danger involved had been almost entirely eliminated.

In an investment in a gas company, such as complainant's, the risk is reduced almost to a minimum. It is a corporation, which in fact, as the court below remarks, monopolizes the gas service of the largest city in America, and is secure against competition under the circumstances in which it is placed, because it is a proposition almost unthinkable that the city of New York would, for purposes of making competition, permit the streets of the city to be again torn up in order to allow the mains of another company to be laid all through them to supply gas which the present company can adequately supply. And, so far as it is given us to look into the future, it seems as certain as anything of such a nature can be, that the demand for gas will increase, and, at the reduced price, increase to a considerable extent. An interest in such a business is as near a safe and secure investment as can be imagined with regard to any private manufacturing business, although it is recognized at the same time that there is a possible element of risk, even in such a business. The court below regarded it as the most favorably situated gas business in America, and added that all gas business is inherently subject to many of the vicissitudes of manufacturing. Under the circumstances, the court held that a rate which would permit a return of six per cent would be enough to avoid the charge of confiscation, and for the reason that a return of such an amount was the return ordinarily sought and obtained on investments of that degree of safety in the city of New York.

Taking all facts into consideration, we concur with the court below on this question, and think complainant is entitled to six per cent on the fair value of its property devoted to the public use. But assuming that the company is entitled to six per cent upon the value of its property actually used for the public, the total value fixed by the court below is, as we have seen, much too large. We must first strike out the increased value of the franchises asserted by the court over the amount agreed upon in 1884, when the companies were consolidated. We also find that the total value of the tangible property is made up of several items, two of which are—

Real estate.	$11,985,435
Plants.	15,000,000

Both depend largely upon the opinions of expert witnesses as to the value of that kind of property. Where a large amount of the total value of a mass of different properties consists in the value of real estate, which is only ascertained by the varying opinions of expert witnesses, and where the opinions of the plaintiffs' witnesses differ quite radically from those of the defendants', it is apparent that the total value must necessarily be more or less in doubt. It, in other words, becomes matter of speculation or conjecture to a great extent. It may be, as already suggested, that in many cases the rates objected to might be so low that there could be no reasonable doubt of their inadequacy upon any fair estimate of the value of the property. In such event the enforcement of the rates should be enjoined even in a case where the value of the property depends upon the value to be assigned to real estate by the evidence of experts. But there may be other cases where the evidence as to the probable result of the rates in controversy would show they were so nearly adequate that nothing but a practical test could satisfy the doubt as to their sufficiency.

In this case a slight reduction in the estimated value of the real estate, plants and mains, as given by the witnesses for complainant, would give a six per cent return upon the total value of the property as above stated. And again, increased consumption at the lower rate might result in increased earnings, as the cost of furnishing the gas would not increase in proportion to the increased amount of gas furnished.

The elevated railroads in New York when first built charged ten cents for each passenger, but when the rate was reduced to five cents it is common knowledge that their receipts were not cut in two, but that from increased patronage the earnings increased from year to year, and soon surpassed the highest sum ever received upon the ten cent rate.

Of course, there is always a point below which a rate could not be reduced and at the same time permit the proper return on the value of the property, but it is equally true that a reduction in rates will not always reduce the net earnings, but on the contrary may increase them. The question of how much an increased consumption under a less rate will increase the earnings of complainant, if at all, at a cost not proportioned to the former cost, can be answered only by a practical test. In such a case as this, where the other data upon which the computation of the rate of return must be based, are from the evidence so uncertain, and where the margin between possible confiscation and valid regulation is so narrow we cannot say there is no fair or just doubt about the truth of the allegation that the rates are insufficient.

The complainant also contends that the State having taxed it upon its franchises cannot be heard to deny their existence or their value as taxed.

The fact that the State has taxed the company upon its franchises at a greater value than is awarded them here, is not material. Those taxes, even if founded upon an erroneous valuation, were properly treated by the company as part of its operating expenses, to be paid out of its earnings before the net amount could be arrived at applicable to dividends, and if such latter sums were not sufficient to permit the proper return on the property used by the company for the public, then the rate would be inadequate. The future assessment of the value of the franchises, it is presumed, will be much lessened if it is seen that the great profits upon which that value was based are largely reduced by legislative action. In that way the consumer will be benefited by paying a reduced sum (although indirectly) for taxes.

We are also of opinion that it is not a case for a valuation of "good will." The master combined the franchise value with that of good will, and estimated the total value at $20,000,000. The complainant has a monoply in fact, and a consumer must take gas from it or go without. He will resort to the "old stand," because he cannot get gas anywhere else. The court below excluded that item, and we concur in that action.

And we concur with the court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property, which legally enters into the consideration of the question of rates, has increased in value since it was acquired, the company is entitled to the benefit of such increase. This is, at any rate, the general rule. We do not say there may not possibly be an exception to it, where the property may have increased so enormously in value as to render a rate permitting a reasonable return upon such increased value unjust to the public. How such facts should be treated is not a question now before us, as this case does not present it. We refer to the matter only for the purpose of stating that the decision herein does not prevent an inquiry into the question when, if ever, it should be necessarily presented.

The matter of the increased cost of the gas, resulting from the provisions of the acts, as to making the gas equal to 22 candle-power, is also alleged as a reason for inadequacy of rate.

It appears that the average candle-power actually produced in the first six months of the year 1905 was 22, while but 20 candle-power was exacted by law, and for the last six months of that year, while 22 candle-power was exacted, the average amount was 24.19. This expense was included in the operating expense of that year, which resulted in the net earnings above mentioned, while the company was complying with the requirements of the act in this particular.

It is unnecessary, therefore, to further inquire as to the additional expense caused by this requirement.

Again, it has been asserted that the laws are unconstitutional, because of the provision as to pressure, and also by reason of the penalties which a violation of the acts may render a corporation liable to.

The acts provide that the pressure of the gas in the service mains at any distance from the place of manufacture shall not be less than one inch nor more than two and a half inches.

The evidence shows that to put a pressure such as is demanded by the acts upon the mains and other service pipes in their present condition would be to run a great risk of explosion, and consequent disaster. Before compliance with this provision would be safe the mains and other pipes would have to be strengthened throughout their whole extent, and at an expenditure of many millions of dollars, from which no return could be obtained at the rates provided in the acts. This would take from the complainant the ability to secure the return to which it is entitled upon its property, used for supplying gas, and the provision as to the amount of pressure is therefore void. This particular duty imposed by the acts is, however, clearly separable from the enactments as to rates, and we have no doubt that the remainder of the statute would have been enacted, even with that provision omitted.

The obligation would remain upon the company to have a pressure sufficient to insure a light of 22 candle-power, as provided in the acts.

We are of the same opinion as to the penalties provided for a violation of the acts. They are not a necessary or inseparable part of the acts, without which they would not have been passed. If these provisions as to penalties have been properly construed by the court below, they are undoubtedly void, within the principle decided in *Ex parte Young*, 209 U. S. 123, and the cases there cited, because so enormous and overwhelming in their amount.

When the objectionable part of a statute is eliminated, if the balance is valid and capable of being carried out, and if the court can conclude it would have been enacted if that portion which is illegal had been omitted, the remainder of the statute thus treated is good. *Reagan* v. *Trust Co.*, 154 U. S. 362, 395; *Berea College* v. *Commonwealth of Kentucky*, 211 U. S. 45, 54. This is a familiar principle.

Lastly, it is objected that there is an illegal discrimination as between the city and the consumers individually. We see no discrimination which is illegal or for which good reasons could not be given. But neither the city nor the consumers are finding any fault with it, and the only interest of the complainant in the question is to find out whether, by the reduced price to the city, the complainant is upon the whole unable to realize a return sufficient to comply with what it has the right to demand. What we have already said applies to the facts now in question.

We cannot see from the whole evidence that the price fixed for gas supplied to the city by the wholesale, so to speak, would so reduce the profits from the total of the gas supplied as to thereby render such total profits insufficient as a return upon the property used by the complainant. So long as the total is enough to furnish such return it is not important that with relation to some customers the price is not enough. *Minneapolis &c.* v. *Minnesota*, 186 U. S. 257; *Atlantic Coast Line* v. *North Carolina Commission*, 206 U. S. 1.

Upon a careful consideration of the case before us we are of opinion that the complainant has failed to sustain the burden cast upon it of showing beyond any just or fair doubt that the acts of the legislature of the State of New York are in fact confiscatory.

It may possibly be, however, that a practical experience of the effect of the acts by actual operation under them might